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Cystic Tumour of Suprarenal Body Successfully Removed by Operation (Alban H. G. Doran) (Two Figures) 1559
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A Clinical Lecture

ON

MODIFICATIONS IN THE MOVEMENTS OF THE KNEE-JOINT DIRECTLY CONSEQUENT UPON INJURY.

DELIVERED AT THE LONDON SCHOOL OF CLINICAL MEDICINE (SEAMEN'S HOSPITAL).

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[WITH SPECIAL PLATE.]

GENTLEMEN.—The remarks which follow are intended to apply only to cases in which modification of movement at the knee occurs, either immediately upon the receipt of injury, or supervenes after an interval without the intervention of any organic disease of the joint. The primary excessive mobility occasionally met with in complete dislocation and in extensive lacerations is outside my present purpose, and I am not now concerned with impairment of motion from paralysis following upon nerve injury.

I.—MODIFICATION OF MOVEMENT FOLLOWING IMMEDIATELY UPON INJURY.

For clinical purposes this variety may be divided into two types: (*a*) That in which the joint is completely locked no movement of any kind being possible; and (*b*) that in which flexion to a limited degree, which differs in different cases, is possible; the restriction of movement in each case being due either to mechanical obstacle or to pain, as the case may be; in none of these cases is complete voluntary extension possible unless the limitation be due merely to effusion into the joint, a matter to which further reference will be made.

Cases in which Complete Locking of the Joint Occurs.

1. From mechanical obstacle. The commonest cause of this condition, in which the leg is usually fixed at some point between extension and semiflexion generally nearer to extension than to the other position, is in patients up to 30 or 35 years of age displacement of one or both semilunar cartilages. After that age displacement of the semilunars becomes a less frequent cause, as it gives way to intrusion between the bone ends of hypertrophied synovial fringes, especially in osteo arthritic subjects.

A certain number of cases may arise from anatomical peculiarity in the arrangement of the tissues behind the ligamentum patellae and in a few instances to the implication of an abnormal flap of synovial membrane, etc., underlying and dependent from the patella. This last condition which I do not remember having seen mentioned in surgical literature, is well illustrated by the following case: A man 23 years of age who had from time to time noticed a "catch" in the left knee whilst walking, slipped when running and found the knee completely locked in a slightly bent position; in the course of hobbling home the knee suddenly became free. Similar happenings repeated themselves and I finally saw him with the knee locked. An operation being obviously indicated I opened the knee and found the cause of the trouble to be an apron-like flap of synovial membrane quite normal excepting at its free end, which had been squeezed between the bones. Removal of this flap of course entirely cured the symptoms. The structure removed was clearly a mere abnormality and not a pathological product. I have since noticed in other knee-joints a similar flap but smaller springing from the same situation. In only one case have I seen the knee locked in a position of flexion, the calf of the leg being almost in contact with the thigh. This occurred in a man 50 years of age or thereabouts, the subject of osteo arthritis, who fell downstairs and found the limb fixed in the position indicated; no manipulation with or without anaesthetics availed, and upon opening the joint an irregular loose body as large as an ordinary marble was found wedged in between the tibia and femur, just in front of the point of crossing of the crucial ligaments. The remaining causes are for the most part completely loose bodies ("loose cartilages") or bodies attached by long pedicles.

Other causes are met with, such, for example, as a piece of bone broken off from one of the condyles of the femur acting on a wedge between the bone ends, an example of which was at one time in the museum of St. George's Hospital. Conditions of this kind are, however, so rare as to be of little importance, excepting that they emphasize the value of the use of the *x* rays in the diagnosis of these cases. The causes already mentioned are all intra-articular, and produce mechanical obstacles to movement which may or may not produce great pain.

Fixation of the joint as a consequence of displacement of the tendon of the popliteus muscles is, I believe, sometimes thought to occur, and in two cases at least such a cause has been given by surgeons of repute in cases which have afterwards come under my observation. Although the diagnosis naturally excites admiration, I am compelled to confess that I have never been able to arrive at it myself, nor have I met with anything in the course of operations upon the knee or in the dissected subject which would lead to the conclusion that displacement of the popliteus tendon without displacement of the external semilunar cartilage could provide a mechanical obstacle sufficient to lock the knee.

Locking of the knee-joint, which may in the absence of anaesthesia be apparently complete, may arise from conditions outside the joint, the fixation being due to muscular spasm secondary to pain. The most striking of these which I have seen, the diagnosis having been corroborated by the *x* rays, were oblique fracture of the head of the tibia, fracture of the fibula immediately below the head and spontaneous detachment of a pedunculated osteoma from the femur, just above the inner condyle. The case of fracture of the fibula below the head is worth a brief notice. The patient was a man 28 years old who in slipping off the kerb felt an acute pain on the outer side of the knee which at once became slightly flexed and could not be moved. I saw him within a few hours of the accident. The knee was somewhat bent; any attempt at movement in the joint was impossible on account of the pain. There was marked tenderness on pressing along the line of the joint just above the head of the tibia, such as is often present in displacement of the external semilunar, no crepitus could be felt, but an *x*-ray examination readily detected the lesion.

With regard to the treatment of these locked cases, it is essential that means should at once be taken to make the diagnosis sure and to rectify the defect. There is no excuse whatever for delay, whether there is great swelling or not. An anaesthetic should be administered as soon as possible; if, when the patient is fully under its influence the limb drops spontaneously into the extended position, the question of a foreign tissue between the bone ends may be set aside, but if the knee remains bent, no matter how slightly, there is almost certainly something out of place, which must be replaced by manipulation if possible.*

It should be noted that the main part of the limitation of movement in these cases is due to muscular spasm, the amount actually caused by the structure wedged between the bones being often comparatively small. Profound anaesthesia removes the spasm of the muscles and reveals the real amount of limitation produced by the mechanical obstacle. This limitation is at times so little that an inexperienced person may easily be led to think that the obstacle no longer existed because the limb, unless compared very carefully with that on the opposite side, may seem to be straight. This very careful comparison of the two limbs under the circumstances is especially called for, because extension in its extremest degree is not possible naturally in all subjects—the knees in such persons seeming to be a little bent even when the limb is straightened to the fullest extent so far as they are concerned.

It would seem needless to insist on immediate action in cases of this kind, but it still remains a fact that even in these days there is a tendency with some people to postpone attempts to rectify defects of this kind for insufficient reasons. Whenever available, the x rays should of course be used and not set aside because it may seem unlikely that they will give any information. Although the spontaneous straightening of the limb to its normal extent under the anaesthetic shows that nothing is wedged between the bones, it by no means proves that the fixation previously existing was not due to impaction of a loose body, because these bodies are notoriously elusive, and very liable to slip back into the joint as the patient becomes unconscious

Cases in which Restriction of Movement follows immediately upon Injury without Complete Locking of the Joint.

In certain cases in which a foreign body becomes wedged between the bone ends, some amount of movement is possible if the intruded tissue is very small or so situated that it exercises its wedge like influence in certain positions only; but as a rule cases in which movement is limited only, are caused by conditions either outside the joint, or, if intra articular, are unconnected with structures intruded between the bone ends, such, for example, as may occur when a semilunar cartilage is so completely loosened as to lie in the intercondyloid notch, a not altogether rare condition. The commonest, perhaps of all intra articular changes, although it is one which has not received much attention, in cases of this kind is, I believe, more or less laceration of one or both crucial ligaments. It is noteworthy that in nearly all the cases in which defective movement of the kind we are considering follows after an interval upon injury, the main difficulty is in flexion, and not in extension as happens when locking at first has been complete. The injury leading to lesion of the crucial ligaments is generally a violent forcing backwards at the knee-joint. In a case of this kind, in which gangrene followed on account of damage to the popliteal vessels, the anterior crucial ligament was torn three parts across. Injury to these ligaments as a cause of defective movement in the knee is probably commoner than is usually supposed. I shall refer to a notable instance presently.

Beyond the causes already mentioned the most common are extra articular such as laceration of muscle close to the joint, the inner head of the gastrocnemius being, perhaps, the commonest part affected; thrombosis from injury to a vein; the formation or rapid increase of a popliteal bursa in osteo-arthritic subjects with effusion in the knee joint in connexion with which a suggestive clinical fact sometimes occurs which is best illustrated by a case. A patient 53 years old, who had long suffered from osteo arthritis with effusion in both knees, which were continually painful, whilst under my observation fell heavily with the right knee bent under him; acute pain followed, and when I saw him an hour or two later he was able to bend the knee only very slightly without intense pain; there was no increase of effusion, and extension to the full degree was easy. The popliteal space was full and tender. In the course of a few days the general fullness in the popliteal space had gone, leaving a well defined bursa easily detectable which had not, I know, been previously perceptible. By degrees flexion became painless, but never so complete as before the injury; the acute pain, however, from which the patient had continually suffered before entirely disappeared. The case affords an excellent illustration of the way in which the formation of a bursa in connexion with an osteo-arthritic condition with effusion will, by relieving tension in the articulation, relieve pain which has resisted all attempts at cure—a fact which, although familiar to those who are much concerned in treating joints of this type, is not often so well demonstrated by injury. The diagnosis of these cases raises one or two practical points. Speaking generally, it will be found that in intra-articular conditions following injury in which defective movement immediately ensues, whether it be complete locking or mere limitation, if the main difficulty is in extension there is a mechanical obstacle of some kind between the bone ends or wedged somewhere in the joint. Exceptions to this occur rarely in the event of loose bodies being caught in the suprapatellar pouch. If extension is free, the question of foreign bodies between the bones may be for practical purposes set aside. In relation to pain upon flexion after injury the effect of effusion into the joint is of moment. In the majority of cases like those which we are discussing, acute effusion occurs in a greater or less degree, and acute effusion unless very trivial always presents an obstacle to flexion, but not to extension unless great tension from an excessive amount of fluid exists. In determining whether pain on flexion under these circumstances is due merely to effusion or to some form of damage to the joint mechanism the principal means of diagnosis lies with the distribution of the pain. If the obstacle to flexion be due to effusion only the pain will be felt intense across the joint at about the level of or a little above the upper end of the patella—being caused, in fact, by the tension in the suprapatellar pouch; if, on the other hand, it be due to intra-articular damage it will be most acutely along the lateral line of the joint, across the ligamentum patellae or deep in the popliteal space. Loose bodies in the patellar pouch, such as are sometimes met with in osteo arthritis, may produce pain during flexion like that caused by effusion and for the same reason. The decision as to whether the defect is due to extra-articular damage or not must depend largely upon evidence of injury to the soft parts, as shown by swelling, bruising, tenderness, and so forth.

II.—Modification of Movement following upon Injury after an Interval.

In this type of case the interval between the receipt of injury and interference with movement may vary from an hour or two, or even less, to weeks or perhaps months. In the former case the defect may usually be regarded as temporary and readily curable; the latter the defect is generally permanent unless remedied by some radical measures. When the oncoming is quick the difficulty is generally in effecting extension, flexion being comfortable and easy. In the defect which supervenes after a long interval, with the exception of cases in which improper splitting has led to adhesions, or in which laceration of the crucial ligaments has occurred, the cause is usually extra-articular and often quite remote from the joint, flexion as a rule being restricted movement. In the cases in which the symptoms follow soon after injury the interval may be so short as to be misleading unless the history of the patient is carefully weighed. As an example of this the following case will serve: A man, 38 years old, who from time to time for several years suffered from slight pain in the right knee after much exercise, noticed some discomfort for a distance of a mile and a half, with some increase of effusion after playing a couple of rounds of golf. He came home,

* This observation applies only to cases dealt with very soon after the injury; when replacement has not been effected until some days later, temporary slight flexion of the knee may remain after reduction in consequence of swelling about the parts concerned.

TO ILLUSTRATE SIR WILLIAM BENNETT'S LECTURE ON KNEE-JOINT INJURY.



Fig. 1. — *X*-ray photograph of the middle third of the thigh, showing myositis ossificans of the deeper portion of the quadriceps extensor femoris, which caused abrupt arrest in flexion of the leg at a right angle, the knee-joint being normal.



Fig. 3. — Faulty union of fracture of the femur immediately above the condyles, showing the mechanism by which extension of the leg upon the thigh would be rendered impossible, in spite of the knee-joint being normal.



Fig. 2. — Faulty union after fracture at the lower end of the femur, causing the leg to assume a position when completely extended suggestive of genu recurvatum.

TO ILLUSTRATE MR. HURRY FENWICK'S PAPER ON RADIOGRAPHY IN STONE IN THE KIDNEY.

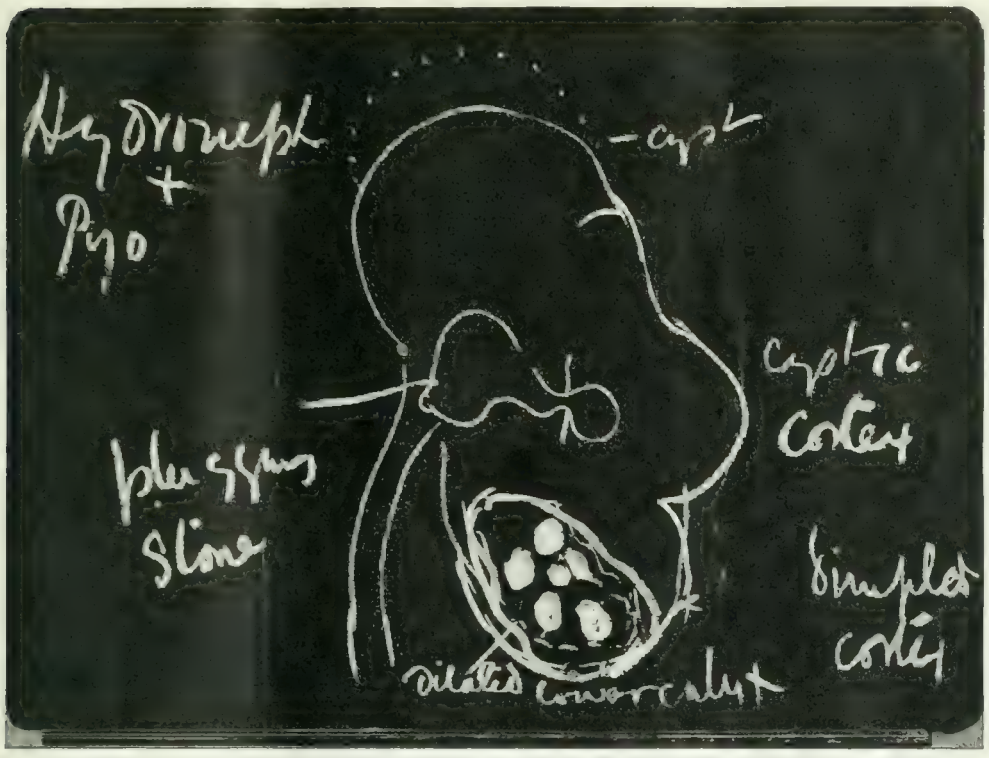
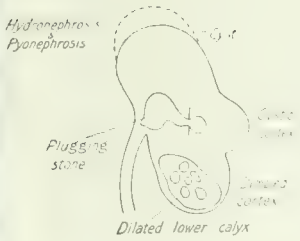


Fig. 1. — Blackboard sketch of kidney made before operation.



Key to blackboard sketch.

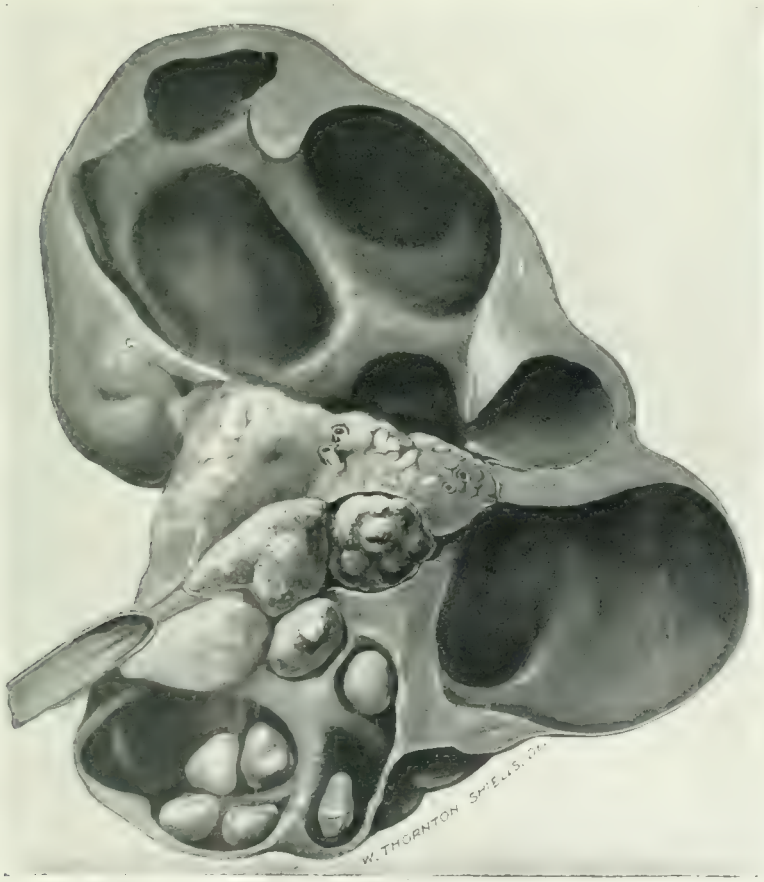


Fig. 3. — Section of kidney removed, showing stones and cystic dilatation.

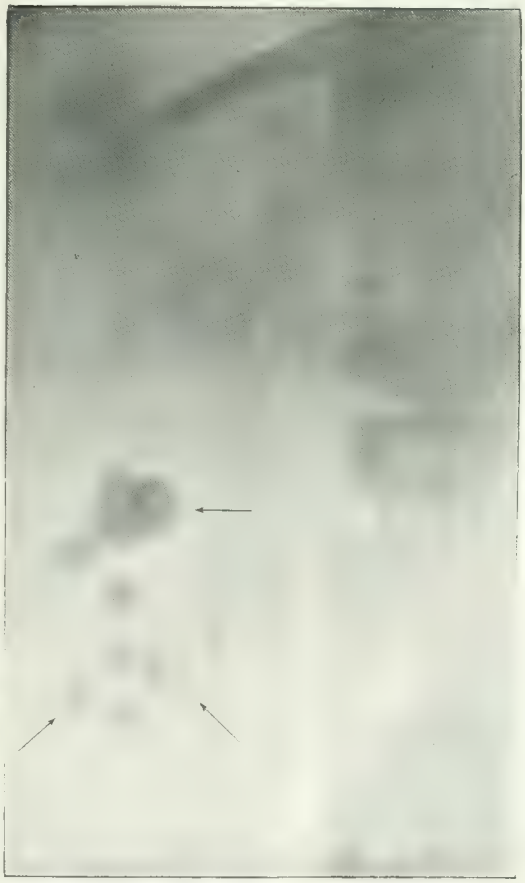


Fig. 2. — Radiograph showing stones of kidney.

and increasing stiffness. He sat down to dinner with a slightly painful knee, and found, on attempting to rise from his chair later on, that the leg was fixed in a bent position, and could not be straightened on account of the pain. He consulted me a few days later. On examination the leg was bent at a position midway between extension and semiflexion. At the inner side of the knee, in connexion with the hamstring tendons, was an extremely tense bursa, which upon any attempt at extension became intensely painful; flexion was easy and comfortable. This was clearly a case of gradual strain of the knee, resulting in the distension of a pre-existing bursa. An interesting and deceptive symptom in the case was a painful and tender area over the external semilunar cartilage, which, had the history been misinterpreted, might easily have led to an impression that the cartilage had been displaced.

In all cases of limitation of movement, especially if it be flexion, supervening at any considerable interval after injury, the liability of the defect being due to lesions remote from the joint is a very important consideration; indeed, in any case of the kind it is essential that a careful examination of the whole limb should be made before a definite line of treatment is decided upon. The following case is an excellent object lesson in this respect: A man, 26 years old, fell across a plank, striking his thigh and damaging the knee. Some swelling of the joint followed which under treatment subsided, and for a time he got about his usual business. A few weeks afterwards, however, he began to feel some pain about the knee and thigh when the leg was acutely flexed, and by degrees he found the bending of the leg more and more difficult, until any bending beyond a right angle became impossible. At this stage the defect caused very little inconvenience in a general way, but after walking more than a mile or two the limb felt heavy and weary, some aching pain being at the same time felt in the thigh. He therefore consulted a bonesetter, who proposed to break down the "adhesion" by forcible flexion, but fortunately before submitting to this treatment he sought further advice, although he said he had already been told by a medical man that if there were adhesions, he did not think they gave enough trouble to justify their being broken down. Upon examination I found the following condition: The patient was a healthy-looking subject, who walked well, and without any suggestion of lameness. Flexion of the leg upon the thigh was abruptly checked at a right angle; there was no pain, and the movements of the joint were perfectly smooth and natural up to the point of locking. Upon examining the thigh its middle third was rather full and very hard, altogether unlike the opposite side. On seizing the quadriceps muscle at this spot it seemed for the most part to consist of a solid mass. I came to the conclusion that the injury to the thigh had led to myositis ossificans of the quadriceps, which accounted for the abrupt arrest of flexion of the leg at a right angle, as I had seen happen in other cases. An *x*-ray photograph by Mr. Mackenzie Davidson, corroborating the diagnosis, is reproduced in Fig. 1.

Had the breaking-down treatment been adopted and the leg violently flexed upon the thigh, one of two things would have happened—namely, rupture of the quadriceps just above the knee, or fracture of the patella. I was present at a case of a similar kind in which the latter accident occurred. Should no cause remote from the joint be detected some intra-articular condition must be considered. There is little doubt that the most inveterate of intra-articular causes of limitation of movement of the kind under consideration is laceration of the crucial ligaments. A few years ago a case of this kind afforded me one of the few opportunities which have in my experience justified a transpatellar investigation of the knee-joint after injury. The patient was a robust man, whose knee when flexed came to a dead lock at a right angle; there was no pain or other trouble, but, for reasons sufficient for the patient, it was thought absolutely necessary that an attempt should be made to obtain a freely-movable joint at any cost. A transpatellar examination was therefore made. Nothing abnormal was found beyond complete matting together of the crucial ligaments, which had evidently been badly torn in an accident three years previously. An attempt was made by splitting the matted tissues to reproduce something approaching a normal arrangement, but it could hardly be described as successful so far as the ultimate result was concerned; the patient was, in fact, neither better nor worse for the operation.

In the investigation of cases in which complete extension at the knee-joint is apparently impossible some time after a severe injury it should not be overlooked that the defect may be due not to any lesion in the knee itself but to the union in a faulty position of a fracture in its immediate neighbourhood, a condition well shown in Fig. 3, to which I shall refer again. The most deceptive condition of all in this respect, the mechanism being precisely the same as that seen in Fig. 3, occurs occasionally in young subjects in consequence of overgrowth of the anterior segment of the lower epiphysis of the femur, which leads to a slight turning backwards of the articular surface of the condyles and leaves the leg slightly bent upon the thigh although it is fully extended at the knee joint. This condition of the epiphysis seems to be produced by some trivial injury. The cases which I have seen have been in patients about 12 years old who had been suffering a good deal from "growing pains" in the affected limb. I have in my possession an excellent *x*-ray photograph of one of the cases, but at this moment I cannot place my hand upon it.

Abnormal Mobility in the Knee-joint after Injury.

In a certain number of cases of severe injury in the region of the knee-joint excessive mobility, apparent or real, is found either upon removal of splints or other retaining apparatus, or slowly develops in course of time.

In cases where there has been extensive laceration of the capsule or ligaments, notably the posterior, the development of such abnormal mobility should excite no surprise. The unnatural lateral movement associated with almost all displacements of the semilunar cartilages, increasing in degree with each recurrence, is too familiar to require notice here, and there are other causes, with which time does not allow me to deal. In a number of cases of this kind the cause of the apparent abnormality lies altogether outside the joint, and it is to these, the most interesting of all, to which I wish to call your notice, as they have, so far as I know, received too little attention. It more often happens, I think, than is commonly thought that after fracture of the lower end of the femur there is a certain amount of over-extension "in the knee"—that is to say, in extreme extension of the lower limb; the leg, instead of forming a straight line with the thigh, inclines forward at an angle which varies in degree in different cases, sometimes to an extent hardly noticeable, at others to a degree which is not only noticeable, but which completely cripples the patient. The position assumed by the leg in the slighter cases of deformity is sometimes attributed to elongation or relaxation of the posterior ligament, etc., whilst the extreme degrees lead to a condition which might, upon superficial or careless examination, suggest exaggerated genu recurvatum.

As a matter of fact, the knee-joint in these cases is of course not involved at all, the abnormal position being due to the lower femoral fragment having united in a faulty or vicious way. The following is a typical, although exaggerated, example:

A man, 28 years old, sustained a compound fracture of the lower end of the femur from gun-shot wound. Firm bony union followed in due course. When he commenced to walk about he found that "the knee" was inclined to bend backwards, at first, whilst the limb was still stiff, only slightly, but to such an extent when the joint had become supple that it would, unless he was very careful, suddenly "give" in a backward direction and bring him to the ground. With great care, whilst his attention was concentrated on the limb, he could walk fairly well in a rather stilted fashion, but if his attention was withdrawn, back would go "the knee," with the result described. The condition being an impossible one for active purposes, he was sent to me for advice. It was at once obvious that the knee-joint was quite natural in all respects, and that the defect complained of was due to the lower fragment of the femur having united so that the condyles pointed forwards, with the result that when the knee was fully extended the leg was bent forward, as if in a position of hyperextension. When walking, so long as he kept the knee-joint sufficiently flexed to correct the faulty axis of the lower fragment, he got along pretty well, but the moment he was off his guard the leg became automatically

extended at the knee and down to the ground he came. The treatment offered only two alternatives, the rectification by operation of the faulty position of the lower fragment of the femur, or the use of an instrument so constructed as to prevent complete extension of the leg at the knee; the latter course was chosen.

Fig. 2 is an *x* ray photograph of the case which will explain itself, and should be contrasted with Fig. 3, which shows exactly the reverse condition, the lower fragment having united with the condyles pointing backwards in such a way that when the leg was fully extended at the knee it was still bent upon the thigh. I quote this case particularly in some detail, not because it would be likely to deceive any but a very careless or inexperienced person, but because it demonstrates so well (especially if taken together with that shown in Fig. 3), a condition which if it occurred in a very slight degree might readily be misinterpreted unless the importance were realized of bearing in mind the fact that apparent abnormal movement in the knee-joint may be due to causes outside the articulation, and to show the supreme importance of the use of the *x* rays in all of these cases.

AN OPERATIVE DEMONSTRATION OF THE OCCASIONAL DIAGNOSTIC ACCURACY OF THE *X* RAY IN URINARY STONE.

By E. HURRY FENWICK, F.R.C.S.,

SURGEON TO AND A LECTURER ON CLINICAL SURGERY AT THE LONDON HOSPITAL.

[With Special Plate.]

Some surgeons are rather disposed to undervalue the use of the *x* ray in the diagnosis of urinary disease, because the method is only occasionally helpful in obscure cases, and because it is only an atom and not the entire molecule of clinical investigation.

Others, again, do not seem to be guided by any rules for the interpretation of the shadows which are shown on the plate, and are quite content to accept the opinion of the radiographer, upon whom no responsibility should rest. No wonder such casualists are disheartened by the mistakes and failures which must necessarily occur. But surely there is a middle course. Let us admit many failures, some fallacies, and very decided limitations for the *x* ray, but let us employ it routinely when it is possible, and control its findings by operative work. Upon some such sound basis as this let rules of shadow interpretation be framed. If this be done, it will be found that the accuracy of clinical detail occasionally revealed by the shadows will be simply startling. I have given you certain rules which have guided me in my estimation of the character of *x*-ray shadows, and these are based on 1 000 radiographs of urinary disease. I admit they are merely tentative, but I can give no greater evidence of my dependence on them than by utilizing three or four of them this afternoon to draw for you on the blackboard a rough sketch of the left kidney of the patient who has just been brought into this theatre for operation. I only ask you to remember I cannot do this in every case; it is merely done now in this exceptional instance to show you how valuable the clinical evidence of a radiograph may occasionally prove.

This young man is sent by Mr. Richard Whitelam, of Fulham, with a note that there is probably a stone in the left kidney accompanied by serious destruction of that organ. The patient has but few symptoms. He has had a slight pain in his left loin on and off for ten years, which he ascribes to "wind," but his urine contains ¼ to ½ acid pus, which is obviously pyelitic, and on examining the left loin an enlarged but fixed kidney is distinctly to be felt. I will first sketch this kidney on the board, and show the changes in its contour and texture; I then propose to do nephrectomy, which I think will be necessary. If so, the section can be compared with the diagram, and finally I will explain to you the steps by which the clinical assumptions were arrived at.

This radiograph (Fig. 2) was taken by Mr. Harnack, of our radiographic department, and from the negative, for I do not believe in prints, I gather the following facts, which I illustrate diagrammatically (Fig. 1): The left kidney is dilated by back pressure. This was originally a hydronephrosis, but as much pus has latterly appeared in the urine, I take it the kidney is now in a state of hydro-pyonephrosis. I therefore draw the kidney dilated, and write the diagnosis at the side. *You notice especially that I do not mark a dilated pelvis; there is no pelvis.* Secondly, I know the lower pole of the kidney is transformed into a smooth-surfaced, thin-walled cavity, which is merely a dilated lower calyx, and within it six smooth oxalate of lime stones are lying free. I mark this cavity off and put six little circles to represent the stones in it. To prove to you the thinness of its wall, I shall raise the lower pole in a few minutes to the surface of the wound, and you will see that the cortex will dimple under the slightest touch of the finger. This, of course, indicates thinning. To remind you, I will write "dimpled cortex" opposite this area. Thirdly, higher up on the convex edge of the cortex in the lower middle part of the kidney is an independent projecting cyst. I draw a bulge at this spot and put "cystic cortex." On incising this I shall release a quantity of inodorous pus, and on inserting my finger I shall find another dilated calyx so over-distended as to form a projecting cyst. The mouth of this cyst-forming calyx is blocked by the knob end of an oxalate of lime stone. I mark this stone, drawing two little curved lines from its neck. Fourthly, higher up again the cortex of the kidney may be thicker, but the upper pole is also transformed into a cavity which contains no stones. I cannot say if there is a real cyst at the upper pole or not; I can, however, assure you that it is extremely dilated, so I will just dot the convexity of the pole to denote this. Lastly, an oxalate of lime stone is in the pelvis, and it has a nose or conical projection in front. I know that this nose of the stone has blocked the pelvic outlet and back pressure has resulted. It is, in fact, "a plugging stone," so I write this at the side. I may finally add that the oxalate of lime stone in the pelvis of the kidney is somewhat dumb-belled in shape, so I draw it of this shape; its surface is rough with phosphatic deposit.

The operation was now carried out. The cortex was exposed, and the lower lobe was raised and shown to dimple under the pressure of the forefinger; higher up the projecting cyst was demonstrated, and 6 oz. of inodorous pus and urine were sucked out from it. Nephrectomy being found necessary, the organ was removed. After the wound was closed the kidney was cut lengthwise for demonstration (Fig. 3). The changes in it were proved to be as depicted in the diagram on the board. The kidney was dilated greatly in all parts, the cortex being extremely thin. The lower pole was much hollowed, and contained five instead of six stones, the sixth being found in an adjacent cavity. An oxalate of lime stone was found in the pelvis; it was firmly gripped by the pelvic mucous membrane, its front projection (the nose) blocked the ureter, and the one towards its posterior aspect (a boss) was tightly embraced by the mouth of a deep calyx, and the back pressure exerted by it had created a cyst which projected from the cortex of the lower middle third of the organ. The upper pole of the kidney was much dilated, but there was no true cyst projection, and there were no stones in this portion of the organ.

Now, what clinical and radiographic data gave me such confidence that I could draw exactly beforehand a condition of kidney which was unrecognizable to touch? Permit me to enumerate them.

The shadows in the left loin space of the radiograph are very sharp, and the man is young, therefore they are oxalate of lime stones (Rule 3). There is acid pyuria, hence they will have a slight coating of phosphate of lime (clinical rule).

The six isolated shadows are grouped near the mid-ileo-costal vertical (the mid-vertical line), hence I conclude they are in a calyx (Rule 8*), and as they are seen below the main large shadow, which must be a stone in the pelvis, they must be in a calyx of the lower pole. The shadows are clearly separate, hence there is fluid between them

* Rule 8.—Discrete shadows ranged along the mid-ileo-costal vertical (a line running vertically from the centre of the iliac crest-shadow to the rib, the lamp being mesial) usually denote stones in dilated calyx.

(Rule 11*), and thus I know the kidney is distended with fluid. The urine contains ¼ to ½ pus acid and inodorous. I then know I have a hydro-pyonephrosis. A distended lower pole means ureteric block or pelvic outlet block; but when I notice a large dumb-bell shadow above the isolated collection I realize at once that this is a pelvic oxalate, and in order to produce distension of the kidney it must have a nose or projection upon it, and that this nose must be grasped firmly by the pelvic outlet. With such an extreme back pressure the upper pole nearly always suffers in the same way as the lower pole, Hence I mark the upper pole as dilated. But how do I know there is a general distension? The shadows of the stone are well in the loin space, and not high up under the ribs; moreover, the kidney can be felt bimanually, and it is fixed, not mobile—therefore it is displaced. A displaced fixed kidney in a young man means a distended kidney (clinical rule). There are no shadows in the upper pole; hence no stones are in the upper pole. But how do I know that there is a cyst projecting from the cortex of the lower middle third? This is as easy of inference as the rest of the picture. I notice a boss projecting backwards on the stone shadow in the pelvis; clinically I recognize that the outer part of the dumb-bell must be tightly fitted in the mouth of a deep calyx. With such a tight fit there will be no exit for the urine in that calyx, and a cyst must be formed and must project.

The blackboard was photographed by Mr. Harnack, and the kidney was then drawn by Mr. Shiells (Fig. 3).

A Clinical Lecture
ON
CANCER OF THE OVARY.

DELIVERED AT MIDDLESEX HOSPITAL.

BY J. BLAND-SUTTON, F.R.C.S.ENG.,
SURGEON TO THE HOSPITAL.

IN a lecture on secondary carcinoma of the ovary published in the BRITISH MEDICAL JOURNAL of May 26th, 1906, I recorded some cases which were thought to be primary carcinoma of the ovary, but on careful examination a primary focus was found either in the colon or in the breast. Since then some other examples have come under my observation which further support the views expressed in that lecture, and also the opinion I have long entertained that primary cancer of the ovary is a rare disease, and one concerning which we know very little. We cannot form an opinion on this matter simply by studying reports issued from pathological laboratories dealing merely with the histology of an ovarian tumour; it is necessary to combine such reports with the clinical observations, and especially a statement from the surgeon that in the course of the operation he made a careful examination of the gastro-intestinal tract and gall-bladder for a primary carcinoma. The most remarkable feature of these secondary masses in the ovaries is the dimensions they sometimes attain—so big, indeed, that they often rival a football in point of size, whilst the primary growth is so small and inconspicuous as to be overlooked unless the surgeon, suspecting the nature of the case, makes a special search for it. How easy it is to overlook a small primary cancer in the colon when masked by a large solid ovarian tumour is illustrated by the following case:



Fig. 1.—An ovary converted into a solid mass of carcinoma secondary to a focus of cancer in the sigmoid flexure of the colon. It weighed 5 lb.

An emaciated woman, 64 years of age, was placed under my care in the Middlesex Hospital by Dr. Badcock, Gillingham, on account of a large abdominal tumour associated with threatened intestinal obstruction and vomiting. The tumour exceeded a football in size, the abdomen above the tumour was distended and the patient vomited the foul smelling fluid met with in cases of intestinal obstruction. On vaginal examination a rounded lump the size of a cricket ball could be felt in the pelvis behind the uterus. The large tumour was quite hard and had grown rapidly. A careful consideration of the symptoms made it fairly clear that the vomiting indicated intestinal obstruction rather than peritonitis, and I came to the conclusion that the case was very probably an example of secondary cancer of the ovary associated with a primary cancer somewhere in the gastro-intestinal tract. The patient urgently needed relief. I operated in July, 1906, and succeeded in removing the large tumour which replaced the right ovary; the left ovary, enlarged to the size of a cricket ball, was also easily removed. As soon as the pedicles were secured, and the oozing stopped I made an examination of the intestines. The ileum was thrice its usual size and its walls thickened; this was due to a growth around the margins of the ileo-caecal valve which obstructed the communication between the ileum and the caecum. The growth was small, contracted, and so inconspicuous that unless I had made a careful search it would not have been detected. The patient was too ill to permit resection of the caecum, so I joined the ileum, about 50 cm. above its termination, to the middle of the ascending colon by a lateral anastomosis. The patient recovered from the operation, and thinking that she could not live long, arrangements were made to transfer her to the Cancer Asylum. In the course of six weeks the woman had improved so much in health and strength that she preferred to go home. I have since learned that she died in September, 1907, having survived the operation fourteen months.

The tumours were carefully examined in the Cancer Research Laboratories connected with the Middlesex Hospital, and found to be composed of carcinomatous masses derived from columnar epithelium. The sections were examined by several pathologists actively engaged in research work on malignant disease in general, and they had no doubt that the histological structure of the ovarian masses accorded with a primary mass arising in the colon. Of course the great defect in this case is my inability to produce microscopic evidence of the nature of the primary growth in the caecum, but this is due to the unexpected good consequence of the operation.

Concerning another patient recently under my care in the hospital I am able to give a complete account.

An urgent request was received to admit a single woman, 32 years of age, on account of acute abdominal pain. On admission the patient complained of frequent actions of the bowels and pain. Examination disclosed a large hard tumour in the belly reaching as high as the umbilicus; its lower end filled the pelvis. The uterus was mobile, and did not appear to be enlarged, but it was difficult to decide whether the tumour belonged to the uterus or not. The diarrhoea of which the patient complained was spurious, and consisted mainly of mucus. I came to the conclusion that the tumour was too hard for a uterine fibroid, and I thought it might be an ovarian fibroid which had become impacted in the pelvis and obstructed the rectum. The patient was definite in her statements that the tumour had only attracted her attention during the last few months. Two days after her admission coeliotomy was performed and a big red tumour removed; in shape it resembled a huge kidney, and had replaced the right ovary; the surface of the tumour was beset with small

* Rule 11.—Discrete cortical shadows when grouped together denote a calyx distended by fluid, either urine or thin puriform urine.

knobs (Fig. 1). The pedicle was easily controlled, but much blood was lost from a sessile adhesion at the brim of the pelvis. The uterus and the left ovary appeared normal. On examining the abdominal organs before closing the incision I came across a hard mass in the sigmoid flexure of the colon, at the point where it comes into relation with the brim of the pelvis. The implicated piece of the colon was quite hard, and the mesocolon appeared to be infiltrated; it was quite clear that the bowel was obstructed, and that I had stumbled on the cause of the intestinal symptoms, namely, cancerous obstruction of the colon. I at once resected about 10 cm. of the bowel, and joined the cut ends of the colon by suture. The whole operation lasted forty minutes. The patient made an uneventful recovery.

The parts removed were examined in the laboratories connected with the hospital. The mass in the colon is a true cancer arising in the mucous membrane and obstructing the gut. It offers no features which distinguish it from the common form of carcinoma which so frequently arises in this part of the intestinal tract.



Fig. 2.—The same ovary as in the preceding figure, cut in its transverse axis to show the conglomerate nodules of cancer.

The tumour which replaced the right ovary measures in its long axis 25 cm. and in its narrow axis 15 c.m. It weighed 5 lb., and is practically a mass of cancer composed of columnar cells. The appearance of the cut surface of the tumour shows that it consists of isolated nodules, irregular in shape, which tend in the central part of the lump to become confluent, but remain more or less isolated in the periphery of the tumour.

The microscopic examination of the primary and secondary growths shows that they have the same structure.

The view that these large malignant bilateral tumours in the ovaries are secondary to carcinoma in other organs rests on the fact that the structure of the ovarian mass varies according to the situation of the primary cancer. Some of these large tumours may be explained by the fact that the cancer cells may engraft themselves on a pre-existing ovarian cyst. Recently I was removing an ovarian cyst as big as a pregnant uterus at term from a woman 52 years of age. The tumour had been noticed two years; it was adherent to the pelvic brim, not by an ordinary adhesion but by an infiltration of new growth. I also noticed the Fallopian tube to be thick, distended, and hard. The whole mass, after careful removal and hardening, was submitted to microscopic examination, because I suspected, from its naked-eye characters, that it was a case in which a patient with a pre-existing ovarian cyst had also become the victim of primary cancer of the Fallopian tube, and the cancer, spreading from the tube, had implicated the cyst growing from the corresponding ovary. The microscopic examination supports this view completely; the growth in the ampullary portion of the tube presents the characters of the papillary variety of cancer which arises in the tubal mucous membrane. The thick mass in the wall of the ovarian cyst adjacent to the tube exhibits the same structure. The right ovary is as big as a child's fist, and contains a soft mass of new growth identical in structure with that in the tube, and in the cyst which replaced the left ovary.



Fig. 3.—The sigmoid flexure of the colon cut transversely. The mass below the bowel is fat in the mesocolon, thickened by cancerous and inflammatory exudation.



Fig 4.—An ovarian cyst infiltrated with cancer from a primary focus of cancer in the corresponding Fallopian tube.

Our knowledge of primary cancer of the Fallopian tube has grown up in the last twenty years, and we have come to realize that it is a very fatal disease. Some years ago I published the details of two cases to show that the baneful effects of primary tubal cancer are greatly modified according to the condition of the coelomic ostium of the tube. When this ostium remains open the cancer cells quickly infect the pelvic peritoneum; if it becomes occluded—and this is, I fear, a rare circumstance—the infection of the peritoneum is greatly delayed. From an operative point of view these opposite conditions are of great importance. The removal of a cancerous Fallopian tube with a patent coelomic ostium is usually followed by recurrence in a few months. A patient from whom I removed the uterus which contained a large fibroid, one of the Fallopian tubes being stuffed with cancer, but with an occluded coelomic ostium, was alive and in good health three years later. In the specimen under consideration the coelomic ostium of the tube is not occluded, and is incorporated with what had the appearance of a stream of new growth flowing from the mouth of the tube over the wall of the ovarian cyst, when the specimen was fresh from the pelvis. A number of cases have been reported of primary cancer of the Fallopian tube associated with a large, and presumably ovarian, cyst; perhaps the conditions prevailing in the specimen represented in Figs. 4 and 5 offer an explanation of these hitherto somewhat puzzling specimens, which have been collected by Doran in the *Journal of Obstetrics and Gynaecology of the British Empire*, 1904, vi, 285.

We are apt to forget that the lethal effects of a carcinoma are not so much due to the primary tumour as to the accidents which arise from it. Cancer will attack an organ and cause no symptoms until it interferes with the function of the organ affected—as, for example, the colon or the pylorus. In many instances it pursues its course unnoticed, and even unsuspected, until it becomes infected with micro-organisms; then sepsis and sloughing follow, and in due course produce the general toxic conditions which our seniors used to call cachexia, and regarded as something characteristic of cancer, whereas it is merely an indication of the onset of the terminal affections by which the lives of so many cancerous patients are terminated. Cancer of the body of the uterus sometimes illustrates in an excellent way these points. For example, the specimen represented in Fig. 6 shows a section through the uterus of a spinster, aged 56, containing a solid tumour mass attached to its fundus; the uterine walls are expanded

and thin, resembling the urinary bladder rather than the uterus. The tumour resembles to the naked eye a fibroid, but in the cervical canal it becomes pointed



Fig. 5.—A section through the cyst wall and Fallopian tube represented in the preceding drawing.

and a process projects at the mouth of the womb; this process is ragged and sloughy, and during life bled freely. Microscopically, the whole of this body in the uterus is a mass of typical carcinoma. The course of events here is not difficult to follow: a carcinoma arose in the endometrium at the fundus and gradually distended the organ. The patient being a spinster with a narrow cervical canal free from septic organisms, the cancer grew in security until a portion of it made its way through the "os" into the vagina; then infection and sloughing were the consequences, with the usual concomitant bleeding, which led to the discovery of the disease. When an ovary becomes infected with secondary cancer it is free for a long period from the usual liability to septic infection, and the cancerous masses may attain such unusual sizes as in the specimens which form the subject of this communication.

It is easy to understand, now the matter is explained, why the true pathological conditions underlying bilateral carcinoma of the ovary have been misunderstood. Few of us can have realized that metastatic cancerous masses could attain such large proportions in so small an organ as the ovary; there must be something favourable in this gland to allow cancer cells to engraft themselves and form such a large tumour. That the primary growth in the gastro-intestinal tract should be overlooked is not altogether a matter of surprise, for they are often small and inconspicuous in the colon, and, as a rule, in an ordinary ovariotomy the stomach is not seen. Even in patients in whom there is dissemination throughout the abdomen this is usually regarded as arising from the ovarian tumour, instead of it being realized that the masses in the ovaries, like the nodules on the intestines and viscera are secondary deposits.

It should also be remembered that the slow and insidious manner in which carcinoma grows in the colon, and especially in the gall-bladder, tends to make diagnosis difficult and uncertain.

To my mind it is quite clear that we must begin anew our studies of ovarian carcinoma; no case can now be accepted as primary cancer of the ovary merely on a laboratory report; it will be necessary to supplement the microscopic examination of tumours removed at operations, by statements that the operator examined carefully the gastro-intestinal tract, the gall-bladder and the mammae, to assure himself that they do not contain a primary focus of carcinoma. This method is also essential in reporting cases obtained after death.

It is also desirable on surgical grounds to carry out this investigation and follow up the post-operative history of such patients who have had cancerous ovaries removed; if this be done, we should in a year or so accumulate a large number of valuable facts which would serve for our

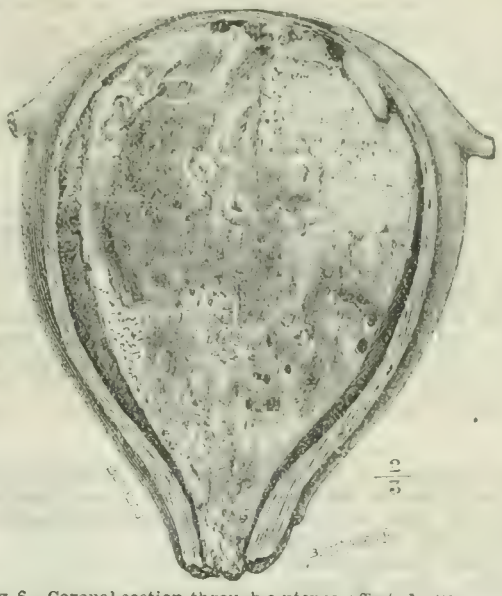


Fig. 6.—Coronal section through a uterus affected with primary cancer of the corporeal endometrium, and resembling to the naked eye a submucous fibroid. The mass measures 10 cm. transversely and 12 cm. vertically.

guidance in this matter, for I am sure the conditions are unfortunately more frequent than some at this moment may feel inclined to admit.

An Address

ON SOME

RECENT EXPERIENCES IN THE SURGERY OF THE LIVER AND GALL BLADDER.

DELIVERED BEFORE THE SOUTH WALES AND MONMOUTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY J. LYNN THOMAS, C.B., F.R.C.S.,

SURGEON TO THE CARDIFF INFIRMARY; PRESIDENT OF THE BRANCH.

THE subject which I have chosen is one which has grown so rapidly since my student days that it seems hardly credible to-day that it was at that time practically non-existent, and I cannot find in my annotated copy of Holmes's *Surgery, its Principles and Practice* (1882), any reference to the gall bladder, except in the following passage:

When the laceration of the liver extends into the gall bladder the injury must prove fatal;

whilst in Roberts's *Theory and Practice of Medicine* (1883) one can detect evidence of the commencing growth of the incursions or raids of surgery into medicine from the following quotation in the chapter on treatment of gall stones and other diseases of the gall bladder:

Cholecystotomy has also been performed for removal of gall stones retained in the gall bladder or impacted in the cystic duct,

and

Inflammation of the gall bladder, from whatever cause, requires the application of poultices and fomentations. If pus forms, or if in chronic cases much fluid collects, it is sometimes requisite to puncture the gall bladder.

Although very great progress has been made since that time, there are still at the present moment many problems that require to be solved. It is as difficult to tear oneself away from time-honoured traditional conclusions handed down by generations of observers, as it is to grasp the real truth from the flood of unripe assertions which now overflow the banks and temporarily hide the true

bed of the river of progress. The result is that we have two schools of thought, both, in my opinion, walking on stilts in the flood. On the one hand we have the sceptical physician waving his white banner of faith in the potency of drugs and diet, and on the other we see the red banner of the over-confident surgeon who looks upon an operation as a short cut to salvation. When the flood subsides and the stilts are removed we shall find that the colour of both banners is wrong. You cannot by drugs or by operation, or by a combination of both, make a patient digest veal and pork when he is by nature not built that way.

I therefore desire to bring before your notice some practical observations gathered from opportunities of seeing the work of distinguished surgeons in this branch of surgery, and also from a personal experience of over a hundred operations performed on the liver, gall bladder, and bile ducts. These include those done on the liver for hydatids, abscess, hepatoptosis, cirrhosis, and rupture by injury; and upon the gall bladder for gall stones, empyema, hydrops, acute infective cholecystitis with and without calculi, and blocking of the common bile duct from calculi, carcinoma, and chronic pancreatitis.

INJURIES OF THE LIVER.

Before relating to you my first case of interest in connexion with partial rupture of the liver, I would remind you that the liver is clothed by peritoneum derived from the larger and the lesser sac which communicate with each other through the foramen of Winslow; the caudate and the Spigelian lobes of the liver derive their peritoneal investment from the lesser sac, and consequently enter into the formation of its boundaries and limitations, and the significance of this anatomical fact is well shown in the following case:

CASE I.—*A Case of Rupture of the Liver with Effusion into the Lesser Peritoneal Cavity through the Spigelian Lobe.*

Mr. C. E. Cochrane, M.B., Porth, Glamorgan, sent to me for consultation a miner aged 15 with a history of injury to the upper part of his abdomen about a month before I saw him. After the accident he was for a time slightly collapsed, and in the course of some days a fullness was noticed in the epigastrium, which gradually increased without much inconvenience. On examination, there was found to be a cystic swelling occupying the outlined shaded area in Fig. 1. It was dull on percussion, and a thrill could be elicited in each loin, but over an area much more extensive in the left than in the right loin. The physical signs in this case reminded me of one that I fully reported in the *Lancet* (January 6th, 1894) as "a case of traumatic pancreatic effusion into the lesser peritoneal sac" cured by aspiration. On April 18th, 1903, I operated at the Porth Hospital with the assistance of Mr. Cochrane, opening the abdomen to the right of the middle line above the umbilicus; the surface of the liver at once bulged prominently into the wound, and the stomach and duodenum were stretched in front of the tense cystic swelling; the space between the lower edge of the liver and the viscera was so small that no opening could be made into it through the gastro-hepatic omentum. The area on the upper surface of the liver immediately to the left of the gall bladder was so distended and thin from intrahepatic effusion that I made an incision through it and drained away about 2 pints of chocolate-coloured fluid. After emptying the fluid I demonstrated the existence of a rupture through the Spigelian lobe of the liver about 1½ in. to 2 in. long, opening directly into the lesser peritoneal sac. The foramen of Winslow had been closed by adhesions. The posterior wall of the stomach could be invaginated into the opening through the liver after emptying the contents of the pseudo-cyst. A drainage tube was put in for a few days, and the patient recovered, and has remained well. The fluid removed contained bile and traumatic exudate. The case is, I believe, unique, because, as far as I know, traumatic effusions into the lesser peritoneal sac have hitherto been associated with injury to the pancreas (Jordan Lloyd). Effusions into the lesser sac of the peritoneum were mistaken for pancreatic cysts until Mr. Jordan Lloyd first drew attention in 1892 to the true nature of the so-called cysts. This case adds a new source to the causation of effusions into the lesser peritoneal sac.

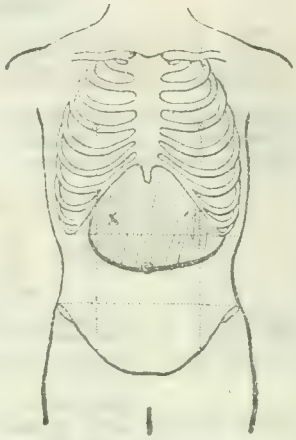


Fig. 1.—Effusion into the lesser sac from ruptured liver; × indicates point of insertion of drainage tube through the liver.

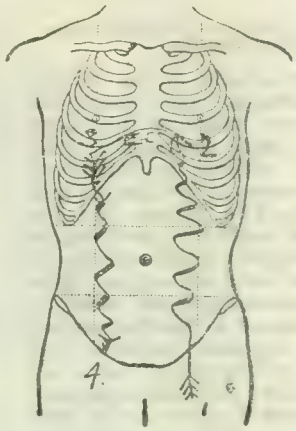


Fig. 2.—Method of palpation of abdomen; start at 1 and finish at 4.

CASE II.—*Narcolepsy Lasting One Week Following Excision of a Hydatid Cyst from the Liver.*

The following case was sent me by Mr. John James, Borth, Cardiganshire, in 1904, with a history that the patient had had for some years a growth projecting downwards from the lower border of the liver towards the umbilicus, which had caused pain and discomfort for two years. It was dull on percussion moving upwards and downwards with the respiratory movements of the diaphragm. It had some of the characters of hydrops of the gall bladder or of a Riedel's lobe, and I was uncertain of the nature of the swelling until the abdomen was opened. It turned out to be a case of a single hydatid cyst, the size of a fetal head, growing from the anterior border of the liver immediately to the left of the gall bladder, pyriform in shape, very tense, with an attachment to the liver of about the size of a man's wrist. The cyst was removed by cutting out a wedge from the anterior border of the liver. Haemorrhage having been stopped by tampons and thermocautery, the raw seared edges of the liver were brought together by sutures, and the abdominal wall closed in tiers. Recovery was uneventful except for the curious fact that the patient could not be kept awake, either by day or night, for over a week after the operation. It was with difficulty that she could be roused and kept awake during the time she took nourishment, and she would drop off to sleep during conversation. After the sleepiness had passed off she was quite herself again. I do not know what the cause of the uncontrollable desire to fall asleep was, but it is quite possible that a narcotic toxin was formed during the healing process of the coapted cauterized surfaces of the liver.

CHOLELITHIASIS AND CHOLECYSTITIS.

Judging from my experience, I would state that mistakes are oftener made in the diagnosis of cases of gall stones confined to the gall bladder, and also in cases of acute cholecystitis uncomplicated by the passage of gall stones through the common duct than in any other common affection; this is almost entirely due to the fact that when we as students were taught, the presence of gall stones was only diagnosed from the symptoms of "typical biliary colic" with jaundice; and we were also told that gall stones in the gall bladder alone gave rise to no trouble, for behold! it was the common experience to find gall stones present in *post-mortem* examinations without there ever having been any suspicion of their existence during life. We now know, however, thanks to modern surgery, that typical biliary colic and jaundice exist only in certain particular conditions. By careful inquiry into the symptomatology of the various pathological conditions discovered whilst operating upon the right upper quadrant of the abdomen, one has obtained the correlation of an additional assemblage or group of symptoms with a definite pathological condition, instead of ignorantly attributing them to "suppressed gout," "gastritis," and "liver out of order." Whilst the above remarks are true concerning a large percentage of cases, there still obtains a small number of cases where a combination of pathological conditions coexist in the same individual, and mistakes must occur in every one's practice when definite diagnoses are made before the abdomen is opened. We know from experience of operations that typical biliary colic with jaundice may exist without the presence of a gall stone, and may arise from bands or adhesions anchoring the gall bladder, the cystic duct, or the liver to the duodenum, transverse colon, stomach, or appendix, in years after the subsidence of their cause of origin. However, I think I cannot do better than quote from Dr. Ochsner's *Clinical Surgery* (1905) the following important observations upon this subject:

The symptoms which most constantly lead to a correct

diagnosis when gall stones *are present in the gall bladder* are not biliary colic, jaundice, and passing of gall stones with the faeces, but

1. *Digestive disturbances*, a feeling of weight or burning in the vicinity of the stomach after eating; gaseous distension of abdomen.
2. A dull pain extending to the right from the epigastric region around the right side about at a level with the tenth rib, passing to a point near the spine and progressing upwards under the right shoulder blade.
3. A point of tenderness upon pressure between the ninth costal cartilage on the right side and the umbilicus.
4. A history of having had one or more attacks of appendicitis or typhoid fever.
5. In many of these cases there is a slight tinge of yellow in the skin, not sufficient to be recognized as icterus, but still sufficient to be perceptible upon close inspection, especially on the days on which the patient is not feeling very well or "bilious."
6. There is usually an increase in the area of liver dullness.
7. There may be a swelling of variable size opposite the end of the ninth rib.

When gall stones pass through the common bile duct the symptoms are too well known to call for comment. Still, we occasionally find that mistakes are made on the interpretation of these classical symptoms; I have had three such cases during the last four years.

CASE III.—*Malignant Stricture of Common Hepatic Duct.*

This case, which was sent to me in 1903 by Dr. D. Havard, Newport, Pembrokeshire, turned out to be malignant stricture of the common hepatic duct just above its junction with the cystic duct. I split the cystic duct into the common hepatic duct right up to the stricture, but failed to excise it, and I had to be content with closing the duct and draining the gall bladder. The patient was relieved for a time, but in twelve months I heard from Dr. D. Havard that a well-marked tumour could be felt over the liver, and the patient had ascites.



Fig. 3.—Mayo Robson's position. Dorsal flexion of loins.

CASE IV.—*Impacted Gall Stones.*

This was a case of three stones impacted in the common hepatic duct about 1 in. above its junction with the cystic duct. There were no other stones present in the gall bladder or in the common bile duct.

CASE V.—*Compression by Adhesions.*

A medical practitioner had suffered for some years with violent biliary colic; I saw him in one of the attacks, and he had jaundice; for about two years after that attack he had a constant gnawing pain during the intervals of colic. At the operation I found the cause of the trouble to be two firm broad bands or rather curtains of adhesions, one on each side of, but free from, the gall bladder, on the one side tying the liver to the pyloric end of the stomach and on the other to the junction of the first and second portions of the duodenum. After dealing with the adhesions I opened the gall bladder, but found nothing in the bile channels. The pylorus and duodenum were normal in calibre, and on that account I left the stomach alone. The fourth and fifth cases have remained well.

The spasm of the gall bladder (cystospasm) in the above three cases must have been of reflex origin, and not due to any direct irritation within the gall bladder. It is a matter of interest to note that pain comes on very soon after taking food, and is due to the fact that cystospasms are generated simultaneously with contractions of the stomach.

CHOLECYSTITIS.

The diagnosis of cholecystitis is sometimes extremely difficult, and the greatest care should be taken in getting a full history of previous attacks of illnesses. The patient should be examined by daylight, as I have often seen the symptoms of slight cholaemia overlooked on account of examination by artificial light. Cholecystitis is sometimes relapsing in type, and treated medically as a case of appendicitis. The mistake is not a serious one as long as the treatment is within the realm of medicine, but when a surgeon is called in to remove the appendix during the "interval" in such cases it is a serious matter. It is imperative that the surgeon should be called in to form his own diagnosis when his services are required, and not to be invited to act upon the diagnosis made by others.

Methodical palpation of the abdomen is an important factor in the differential diagnosis of localized peritonitis due to extension of inflammation either from the gall bladder, the appendix, duodenal, pyloric, or gastric ulcers. These may be easily mistaken, and, indeed, they do coexist in certain cases; but still, palpation of the abdominal wall, carried out in a gentle and methodical fashion, is of great value. In the first place, I would advise never to start palpation of the abdomen in the region where the pain is complained of. It is well to start examination in that area where trouble is least likely to occur; by so doing one gains the confidence of the patient by not causing pain at the start. We must remember that the region of the vermiform appendix is the one most commonly involved, and on that account examination of that neighbourhood should be left to the last. The abdomen should, I think, be palpated in the following order: Start by placing your right hand away from the attachments of the abdominal muscles, and gently glide it from just below the left Poupart's ligament upwards over the left half of the abdomen. The region of the gall bladder should next be approached from above, and finally the region of the appendix examined, then the two sides compared. Palpation by one finger is useful in localizing the point of *maximum* tenderness.

The arrows and numerals in Fig. 2 indicate the direction and order of examination that I would recommend. By this means the muscular tension of each half of the abdominal walls is observed progressively from thigh to chest and from chest to thigh, in an order which is least likely to throw the muscles into protective contraction.

TREATMENT.

The surgical treatment of gall stones and cholecystitis varies according to the conditions and circumstances existing in each case. The technique of this branch of surgery has been greatly developed since Lawson Tait, by his daring and genius, opened out a new region for the

cure of these distressing and painful affections. I will confine my remarks as far as possible to some practical points that are not to be readily gleaned from ordinary textbooks. I personally did not appreciate the value of starvation by mouth in the treatment of peritonitis until I visited the clinic of Dr. Orr Ochsner in Chicago. He introduced this method in 1892 for that secondary to appendicitis. I have already referred to the method in a previous communication upon peritonitis[1] secondary to perforation of gastric and duodenal ulcers, and I desire to-day to draw attention to its value in gall-stone colic and cholaemia. The agonizing pain and vomiting of biliary colic rapidly cease when starvation and gastric lavage are employed and the patient is sustained solely by food and drink per rectum. Rest to the stomach must be thorough and absolute; not a single drop of fluid nor a morsel of food must be given, otherwise the whole scheme of treatment breaks down; normal peristalsis of the stomach means spasm of the gall bladder in these cases. I have often been told, when suggesting starvation treatment in the vomiting of peritonitis or of gall stones, that it has already been tried or is being carried out, whilst under cross-examination I am informed that "only a small bit of toast" or "only a teaspoonful of fluid" is taken by the mouth. In such cases the "only this" and the "only that" absolutely wreck the whole principle of the treatment. It is a most valuable preparation before an operation is contemplated in many cases.

Last year I operated upon a patient of Mr. Robert Simons, Bridgend, who had had undoubted recurrent attacks of appendicitis, and in one of these attacks I saw the patient in consultation, and diagnosed it as a case of cholecystitis. (There was no history of biliary colic.) He subsequently saw a London surgeon, who advised appendectomy, but eventually he placed himself under my care, and I removed the appendix (obliterative appendicitis) and performed cholecystostomy after emptying the gall bladder of its thick, dirty, cream-coloured contents. After some weeks the patient had an attack of cholangitis, and a biliary fistula persisted which would not yield to drugs and diet. A few days' starvation treatment was carried out by Mr. Simons, when the fistula healed up and the cholaemia disappeared.

As a rule cases of infective cholecystitis without the presence of gall stones should in the first place be treated by drainage. Subsequent removal of the gall bladder should be done if pain or fistula persist; relapsing cholecystitis complicated by the presence of gall stones but with the absence of cholaemia should as a rule be dealt with by performing cholecystectomy when the gall bladder it much thickened.

IDEAL OPERATIONS SOMETIMES UNSATISFACTORY, AT OTHERS DANGEROUS.

The following cases illustrate the necessity of alertness and openmindedness, and also of the difference that may exist between the ideal or theoretical and the practical considerations of practice.

CASE VI.—*Ideal Cholecystotomy, followed by Cholecystectomy, Appendectomy, and Removal of a Right Ovarian Cyst.*

A woman, aged 35, was sent to me in 1901 with the request that I should perform a nephropexy for a movable right kidney. She had a movable tumour suggestive of a normal kidney in the region of the gall bladder which could be pushed upwards and backwards out of reach into the right loin, but on account of the fact that it would not stop there when lying down I disagreed with the diagnosis, and made an incision over the gall bladder, performed the so-called "ideal cholecystotomy of Bernays," removing one single pear-shaped gall stone, 2½ in. by 1½ in. In two years' time she returned again, suffering from pains over the gall bladder and with the history of having suffered since the operation from an attack of appendicitis. I again operated and removed the gall bladder with six gall stones in it, faceted, and of unequal sizes, together with the appendix which was adherent to the great omentum. Later on she had more trouble in the right half of the abdomen, and in 1905 I removed a right ovarian cyst.

This patient was highly neurotic, and if one had not taken a serious view of the case the result to her would have been disappointing. "Ideal cholecystotomy" is now almost universally condemned, and drainage of the gall bladder recommended.

CASE VII.—*Cholecysto-duodenostomy for a Gall Stone in the Retroduodenal Portion of the Common Bile Duct.*

An American lady had suffered on and off from biliary colic and dull aching gnawing pain in the back for some years and had had well-marked jaundice before her arrival in Cardiff, when she consulted Dr. R. Pritchard, with whom I saw her in consultation, and advised operation. Owing to the difficulty of bringing the gall stone from its position behind the duodenum towards the field of operation, and on account of the safety and comparative ease with which a short circuit could be performed, I considered it was too risky to attempt removal of the stone by an incision from the loin, and I consequently performed cholecysto-duodenostomy. Recovery was uneventful, and all the symptoms disappeared in a short time. Three years afterwards Dr. R. Pritchard informed me that he had heard from America that she was well, and had not had any further trouble. The ideal operation was to remove the cause, but I considered that the operation of least risk to life was the better.

In cases of malignant disease of the common bile duct or of the head of the pancreas, intense jaundice with dilatation of the gall bladder very commonly exist, but unless these conditions are accompanied by suffering from formication, I question whether it is worth while to perform an operation, as, by its adoption, life is not very much prolonged, and patients only lose their jaundice to die from inanition in a few weeks or months. When an operation is undertaken in these cases cholecystotomy should not be performed, as it drains the constitution of much fluid; thirst is created, and is almost impossible to quench under the circumstances; besides, the constant wetting of the dressings is a source of great discomfort to the patient; therefore one should always, whenever possible, perform anastomosis between the gall bladder and the duodenum or the transverse colon, whichever happens to be the easiest to perform, as the absorption of fluids by the large intestine takes place right up to the splenic flexure of the colon (Dr. William Mayo).

The photograph here reproduced of my portable operating table shows how dorsal flexion of the loins (Mayo Robson's position) can be easily obtained for operations on the gall bladder and bile channels. I have employed it for two years, and the surgeon himself, without assistance, can adapt it for the purpose. It is convenient for operations in private houses, and I can venture its recommendation from personal experience.

REFERENCE.
BRITISH MEDICAL JOURNAL, 1907.

An Address

ON SOME

RECENT DEVELOPMENTS IN OUR KNOWLEDGE OF SYPHILIS IN RELATION TO DISEASES OF THE NERVOUS SYSTEM.

DELIVERED BEFORE THE
SOUTH WALES AND MONMOUTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY F. W. MOTT, M.D., F.R.S.,

DIRECTOR OF THE PATHOLOGICAL LABORATORY OF THE LONDON COUNTY ASYLUMS, AND PHYSICIAN TO CHARING CROSS HOSPITAL.

WHEN your president, Dr. Crawford Treasure, asked me to give an address to the South Wales and Monmouthshire Branch of the British Medical Association, he intimated that the subject of parasyphilis would be an acceptable one. Certainly, the subject of the causation of syphilis and the immediate and remote effects of the living virus is second to none in importance to the medical profession. It has been my work mainly to study its effects on the nervous system, and my address will be principally devoted to this subject, but the effects of the syphilitic virus are protean, and we can only prognose the effects by experience, and then only in a limited measure. For in the equation so many factors come in, that the result of infection must necessarily vary in almost every individual.

There is reason to suppose that the virus itself (which we now believe to be a specific organism—the *Spirochaeta pallida*) may vary in its virulence and in its toxicity;

possibly there may be a certain form of virus which produces a special neurotoxin. The following facts seem to warrant this conclusion: (1) Certain instances have occurred in which the specific virus seems to have a special neurotoxic influence. Gille de la Tourette and others have recorded a series of cases of nervous disease following infection from the same woman. Babinski says it seems that a syphilitic virus may sometimes be endowed with a particular aptitude for attacking the nervous system; he reports the case of two students who were infected the same day by the same woman; both died fifteen years later of general paralysis; these students, however, were related. Marie and Bernhard relate the instance of two men who were infected from the same source, and ten years later suffered with tabes. Erb narrates the instance of four patients infected by the same woman, who later became the subjects of either tabes or general paralysis; whilst a fifth, who had had connexion with the woman, but who was not infected, did not suffer with any disease later. Familial tabes, conjugal tabes—using the term "tabes" to include all forms of parasyphilitic degenerations of the nervous system—might be cited as supporting the existence of a neurotoxic virus. But conjugal tabes is relatively infrequent when the number of cases where the husband is affected and the wife is not, is taken into consideration.

Probably the most striking example supporting the theory of a special neurotoxic virus has been afforded by Brosius, who relates that seven glassblowers suffered with chancre of the lip, and out of five who ten years later came under observation, four suffered either with tabes or general paralysis.

Analogy also supports the conclusion; just as we know there are many forms of trypanosomes which are morphologically very difficult to distinguish, yet only two of these forms are known to produce striking changes in the nervous system, and these changes closely resemble in many respects the changes observed as the result of syphilitic infection; I refer to the sleeping sickness of man and the *mal de coit* of equines—the latter, indeed, in the mode of infection, adenopathy, secondary eruptions and affections of the nervous system, may be almost regarded as the syphilis of horses.

When the characteristic vascular lesions met with in general paralysis, syphilis, and sleeping sickness are compared, no difference is observed in the perivascular infiltration by lymphocytes and plasma cells characteristic of these diseases; the specific virus in each produces a similar effect. Schaudinn and many proto-zoologists believe that the *Spirochaeta pallida* is allied to the trypanosomes, and is a protozoon, not a bacterium. It multiplies by longitudinal fission, and has certain special morphological characters which distinguish it from other spirochaetes; unlike bacteria, it has not so far been found capable of culture outside the body. The virus produces the same changes in the cells at the point of inoculation as in the metastases. The histological reaction of the syphilitic virus is always the same whether we examine the primary sore, the secondary eruptive papules or tubercles, or the gumma in its first stage. Essentially the lesion consists of a proliferation of the endothelial, epithelial, and conjunctival fixed-tissue cell elements, with a tendency to form cicatricial tissue—a defensive reaction on the part of the tissues to the specific virus.

The spirochaete can be found in the enlarged glands and in the papular eruption, whether of the skin or of the mucous membranes. It is found with less readiness in the blood, and it is presumed that for a short time, perhaps some hours, the organism remains in the lymph clefts and spaces of the tissue at the point of inoculation; it there multiplies, and in a short time extends into the lymphatics and produces microscopic changes, when macroscopic changes are not visible. The virus extends in about ten days to the nearest lymphatic glands, where the organism multiplies in the lymph sinuses and spaces, setting up adenitis. In the meanwhile changes in the nature of defence have taken place at the primary point of inoculation and in the lymph tracts; the virus eventually passes into the thoracic duct, and a general infection of the blood stream takes place, with the development of the secondary eruption. A general infection of the whole of the lymphatic system and a polyadenitis results. Lang first pointed out that a meningitis may occur very early, and cases have been reported where symptoms of meningitis occurred simultaneously with the roseolar rash. I have myself seen such a case in which the primary sore was yet unhealed; another has recently been reported, but no spirochaetes were found in the cerebro-spinal fluid, although the meningeal affection was doubtless due to the same cause as the skin eruption.

Whereas the spirochaete can be found with difficulty in the blood, it can frequently be found with readiness by scarifying the papules. Clearly, then, the organism has migrated from the blood stream and multiplied in the perivascular lymph spaces, and no doubt this is the cause of the lesion. As showing the analogy with trypanosome infections I may mention that it was observed by Lingard that in the *mal de coit* of horses scarification of the plaques, which come out in successive crops—commencing forty days after infection—yielded blood and serum containing numbers of trypanosomes, whereas they were found with difficulty in the peripheral blood. Nattan, Larier, and Tanon likewise found in the fluid obtained by scarification of the erythematous spots in a white person suffering from trypanosomiasis numbers of trypanosomes, whilst none could be found in the peripheral blood stream.

In both these diseases the lymphatic glands generally become enlarged, and in sleeping sickness puncture of the swollen glands and examination of the fluid reveals trypanosomes; so also Metchnikoff was able to demonstrate the spirochaetes in the enlarged glands of the infected chimpanzee. It therefore follows that there is this analogy between the virus of syphilis and the beforementioned trypanosome diseases—that the protozoon multiplies in the lymph with much greater readiness than it does in the blood; this may be due to the presence in the blood plasma of lysins similar to the bacteriolysins or haemolysins. Moreover, there is so close a similarity in the reaction of the fixed tissue elements to the presence of the trypanosomes or spirochaetes, that either the organisms themselves or the toxins generated by them give rise to a similar hyperplasia characterized by proliferation of the nuclei of the fixed connective tissue cells forming the embryonic cells or lymphocytes, and proliferation of the endothelial cells forming plasma cells or epithelioid cells. In trypanosome diseases, however, there is no proliferation of the subendothelial cells of the arteries, leading to endarteritis, vascular occlusion, and necrobiosis of the central cells, as in a gumma. It is, moreover, remarkable that, unlike bacterial infection, trypanosome affections and syphilis are, if uncomplicated by secondary microbial affections, unattended by polymorphonuclear invasion.

To sum up, then, the specific virus of syphilis is probably a protozoon, and possibly there may be varieties of this protozoon, some forms of which may be attenuated in their virulence owing to the passage of the organism through the bodies of certain individuals; while other forms may be especially virulent for the same reason, and even acquire a special neurotoxic action accounting for some of the facts above mentioned. We are, however, on much more certain ground in discussing the variation of the symptom-complex which will follow infection, when we refer it to the vital resistance of the individual himself; and we may represent this in the form of an equation, thus:

$$\text{Symptom complex } x = \frac{V}{R} = \frac{\text{virus}}{\text{resistance.}}$$

But R is made up of a number of factors, some of which we can ascertain, but it is generally impossible to decompose R into all its constituents. Roughly speaking, we may say that it is made up of what a man is born with, what has happened after birth, and what will happen in the future to resist the action of the specific virus, which in the majority of instances is of lifelong duration.

Now the resistance of the animal tissues against the virus of a living contagium depends first upon the laws of heredity, as they affect the specific energies of the fertilized ovum derived from the conjugation of the two germ cells each with its own specific energies, depending upon species, race, sex, and ancestral stocks, together making a complex which it is impossible to analyse. The importance of each is, however, clearly seen in the case of syphilis.

For example: (1) *Species*—The nearer we approach to man the more nearly can the symptomatology of syphilis

be reproduced by inoculation of the virus; thus, in the chimpanzee, the secondary eruptions, the polyadenitis, and other symptoms are reproduced, but the lower we descend in the zoological scale the less marked are the symptoms.

(2) *Race.*—Most authorities agree that, with the widespread syphilization of the people, owing to the conversion of a rural into an urban population, the effects of the disease are not so severe, and it is possible that a correspondingly widespread tendency to immunity has been brought about; but with it there is an increase in those late manifestations of the disease which are especially met with in the populations of large cities, the degenerative types, or parasyphilitic affections, the most important of which are general paralysis and tabes.

(3) *Sex.*—It is a well-known fact, though the reason is not explained, that women infected with syphilis show less frequently residua on the body than men, notwithstanding the fact that antisyphilitic treatment must of necessity be less frequently carried out than among men. Possibly in certain cases this may be due to graduated doses of toxins from a syphilized fetus.

(4) *Ancestral Stocks.*—The children of parents who have suffered with syphilis, and who have been cured, would in all probability inherit some degree of immunity, and this would lead to mild symptoms following infection, or in some cases to complete resistance to infection; whereas in a family in which for generations no syphilitic infection had occurred infection would lead to a serious disease; in fact, I have heard of a case occurring in a Quaker family which illustrates this point.

A study which I have made of a large number of family histories of juvenile general paralytics, tabetics, and cases of other diseases of the nervous system occurring in the children of syphilitic parents is most instructive and yet most bewildering in the attempt to solve the question of why one is taken and the other left.

If it were not for the fact that the usual history is either sterility or miscarriages, stillbirths, infants surviving a short period, followed by children which die in early life, there would doubtless be a far larger number of cases of parasyphilis due to congenital disease. At present I reckon that about 2 per cent. of the general paralytics dying in the asylums are certainly of the juvenile type. Now, we know that about ten years after infection on an average, the adult who has acquired syphilis may develop tabes or general paralysis; but the period may be much shorter or much longer. The juvenile general paralytic may show signs as early as 7, but usually it is the stress of puberty that determines the onset of the disease. I will cite a few examples, but before doing so I may remark that I have been struck with the fact that, with a certain number of these patients, the father usually, but occasionally the mother, has died in an asylum of general paralysis; much more often, I am convinced, than could be explained by coincidence. The following case is of interest in several respects. A man, aged 28, died in one of the London County Asylums of advanced general paralysis. The disease was first manifested at the age of 18, when he had a fit. His character was strange, but he showed no marked symptoms till he was 25. He married, had one child born dead; separated from his wife, but had no signs of syphilis on the body. I found that his father had died about eight years previously in one of the London Asylums.

Although on examination of notes obtained from the asylum often no mention is made of syphilis in the parent, yet frequently the offspring give the most emphatic evidence thereof. Since attention has been called to the importance of syphilis as a cause of general paralysis in the London County Asylums further evidence has been forthcoming in a remarkable manner. Yet for all that, a considerable number of the cases of juvenile general paralysis—quite 50 per cent.—and a like number of the adults show no syphilitic residua on the body, The question may naturally be put, Is syphilis the essential cause of general paralysis and tabes? My answer is that all the facts tend towards that conclusion. It may be answered, If so, why do not antisyphilitic remedies cure the disease or arrest its progress? The reply I give is, that the disease differs essentially from the syphilitic brain and cord disease characterized by gummatous inflammation, inasmuch as there is a primary degeneration of the nerve cells—a lack of durability of these highly complex perpetual cell elements which are incapable of regeneration; and, when once decay has set in, no drugs can hope to arrest it, except they help to improve the nutrition of the nerve cells and restore in them metabolic equilibrium.

I shall return later to the cause of this disturbance of metabolic equilibrium, but I will now refer to a few facts which seem to me to show that syphilis is the essential cause of tabes and general paralysis.

1. The remarkable statistics of Erb.

2. Very few eminent neurologists or psychiatrists now believe otherwise—vide Dr. Ferrier's Lumleian lectures.[1]

3. The cerebro-spinal fluid of tabes, general paralysis, and syphilitic meningitis invariably contains lymphocytes, often plasma cells, and no polymorphonuclears. This condition practically occurs in no other * *chronic affection* of the nervous system, excepting sleeping sickness, and in this respect it affords another important analogy.

4. The recent work of Morgenroth, Wassermann, Plaut, Stertz, Marie, and Levaditi, by Bordet and Gengou's method shows the existence of antisyphilitic bodies in the serum and cerebro-spinal fluid of tabes and general paralysis, the quantity increasing in amount as the disease progresses.

5. The experiments of Krafft-Ebing. He noticed, as most observers have done, that, in spite of the promiscuous sexual intercourse of paralytics in the early stages of their affection, a primary sore, or even secondary eruptions, were extraordinarily rare. I do not remember seeing a case on the *post-mortem* table, and only one in all my eleven years' large asylum experience. He was convinced that the reason was that they had an immunity from previous inherited or acquired infection. Consequently nine advanced general paralytics, without any signs of syphilis on the body and with no history of the same, were inoculated with the virus of a hard chancre and watched 180 days. Not one exhibited any signs of the disease. Put this fact now by the side of the last I have mentioned, and they fit very well.

6. It is said that sexual excesses, alcoholism, and all those conditions of town life which lead to neurasthenia are essential, and that syphilis cannot of itself produce the decay of the nervous system. Very true is this statement, if it means that syphilis is the necessary basis, and that these are factors which increase the liability to a destruction of the metabolic equilibrium of the neurons and cause their premature decay.

7. In 80 per cent. of 40 cases of juvenile general paralysis I found syphilitic antecedents were determinable and the influence of congenital syphilis firmly established; in the remaining cases, either no history was obtainable or syphilis could not be excluded. Now, alcohol, sexual excesses, and the conditions leading to neurasthenia, *except those due to inheritance*, could not play an active part. I will show photographs of a few of these cases. A case which recently came under my observation is instructive in showing the importance of obtaining a history in elucidating the causal connexion of syphilis and general paralysis. A boy, aged 16, of the better class, died in an asylum. At the autopsy no sign of congenital syphilis was found on the body, but the most advanced morbid condition characteristic of general paresis. I interviewed the father, who told me that he had suffered with syphilis five years before marriage; he had been treated by eminent men and told that there was no fear of unfortunate results in marriage. The first child died within twenty four hours of birth, the second within two days; the third at 10 developed interstitial keratitis, and later specific nerve deafness; and the fourth was the patient.

8. The Argyll-Robertson pupil and the irregular pupil are practically only met with in general paralysis, tabes, and syphilis; it may be the sole sign of syphilis.

9. Whereas the proportion of males to females affected by tabes and general paralysis depends upon the social status—that is, the liability to syphilis—in the juvenile cases, where the chances of infection are equal, one does not find this difference of the sexes. With regard to tabes it is more frequent in females than is generally believed from hospital practice. I found a large number bedridden in the infirmaries in London, and an analysis of the birth incidence of tabetic and general paralytic women shows an enormous number of points suggestive of

* Tuberculous meningitis is rapidly fatal, moreover polymorphonuclears are mingled with mononuclears.

syphilitic infection, although the signs on the body are not found in more than 25 to 30 per cent. Sterility, stillbirths, miscarriages, and children dying in early infancy is the rule. Again, I have found on the *post-mortem* table that adhesive inflammation of the oviducts occurs in 50 per cent. of the female general paralytics.

If, on the one hand, we take 100 people infected with syphilis, and treat them with mercury in a thorough manner, experience shows that a smaller percentage will develop syphilitic disease of the nervous system, or the so-called parasyphilitic affections; but yet a certain number in spite of thorough treatment develop one or the other; moreover it does not seem to prolong the average interval between infection and the development of the disease. If, on the other hand, we take 100 people infected with syphilis who have either not been treated at all or but imperfectly, only a certain percentage will suffer seriously. Experience shows that the number of syphilitic and particularly late parasyphilitic affections of the nervous system will be greater than in those treated. Statistics of various authorities differ in percentages as regards this question. Unfortunately, the comparison is not quite fair, because the people who are not treated are generally those who have a mild attenuated form of the disease in which the primary sore and secondary symptoms are not well defined. How can we explain these facts? We must assume that the mercury acts as a specific agent in preventing the multiplication of the living virus, and by lowering the resistance of the spirochaete to the defensive reaction of the blood and tissues. Now, those who when infected show little signs of the effects of the virus must possess an inherent or acquired resistance. Immune bodies are produced at once by the cells of the human body, and in sufficient quantity to neutralize the toxic effects of the virus, and lysins probably are also produced in sufficient quantity to destroy the organisms themselves.

We know that it is the mild cases of diphtheria which develop post-diphtheritic paralysis, and Hitzig and Bazzard have argued that the chancroid introduces a toxin of different virulent activities. However, in the light of modern facts based upon the epoch-making researches of Ehrlich regarding immunity, it is desirable to re-examine this question. Should we regard these late manifestations of degeneration of the nervous system caused by the syphilitic virus as quaternary syphilis, a very late manifestation of the poison comparable with syphilitic orchitis, glossitis, and other sclerous lesions? Such is apparently the view of Lesser, Bose, and others. We should, according to this view, be compelled to consider the perivascular infiltrations with lymphocytes and plasma cells, and the glia proliferation as the primary cause of the degeneration. But there are many reasons why we cannot accept this conclusion, although there can be no doubt that *acute* cell degenerative changes causing seizures are brought about by vascular congestion and stasis often induced by secondary or terminal microbial infection.

The view I take of the process is that parasyphilitic disease of the nervous system depends upon two factors, intrinsic, innate, and extrinsic, acquired—the soil and the seed; the vital resistance and the specificity of the virus, $\frac{V}{R}$. All those conditions, which may be inherited or acquired, and which tend to active metabolism of systems, communities, and groups of neurons functionally correlated, and which, owing to those conditions of stress which in one individual would cause spinal neurasthenia, in another cerebral neurasthenia, will, in conjunction with the stimulating effect of the syphilitic poison, cause the nerve cells to exercise an abnormal metabolic activity in the production of the side-chain molecules necessary for immunization against the toxic effects of the virus.

Ehrlich points out that we cannot suppose that the cells of the body possess *per se* an executive defensive capacity to neutralize the noxious effects of all forms of organisms, and his work on haemolysins shows that the haemolysin for the corpuscles of a particular animal only occurs after incorporation of the molecules of those corpuscles. But we may suppose that there is an *inherent* aptitude for the cells of the body of certain individuals to readily adapt themselves to defence against the action of the syphilitic virus in a race that has been widely syphilized for generations; consequently a larger number will have a mild form of the disease.

The nerve cells are perpetual elements incapable of regeneration, highly differentiated and complex in structure and function, their centre of nutrition is the nucleus, and when decay sets in, the regressive process attacks first the fine twigs and branches of the tree, the dendrites and dendrons, and the rootlets; in fact, the process is an inversion of its growth and development. But what should cause this premature decay and lack of durability? for the specific energy of the whole of the neurons in the healthy body is sufficient to last until the vital spark dies out.

We know that one attack of syphilis confers immunity during the rest of the individual's life, and the experiments of Krafft-Ebing are important to remember in this respect. The nerve elements being perpetual, having acquired a habit of throwing off side-chain molecules, will continue to do so during life and will contribute largely to the immunity produced. When there is no longer metabolic equilibrium, and decay sets in, these immune bodies are thrown off in increasing numbers; this seems probable from the fact that in general paralysis and tabes the quantities increase with the progress of the decay. The process of decay will manifest itself in the earliest stages by an increased irritability and functional activity of the nervous structures, often manifesting itself in a *hyperaesthesia sexualis*, and not infrequently in striking intellectual activity, followed in each case by exhaustion and loss of function.

The uselessness of antisyphilitic remedies is thus easily accounted for; indeed they are generally positively injurious in true tabes and general paralysis, because they lower the vital energy in a system which has over-immunized itself against the syphilitic virus. The only hope of doing any good is by an early diagnosis of the disease and suppression of all those exciting causes which use up the nervous energy and tend to overturn the metabolic equilibrium of the central nervous system, causing its premature decay. This may explain a well-known fact, first pointed out by Benedikt, that tabetic patients who become blind from optic atrophy remain in the preataxic stage a great number of years. Neuro-potential or nerve energy is for the most part used up in mental processes involving attention. The loss of sight necessitates mental inactivity provided the patient does not worry. My experience is that these cases of optic atrophy generally either remain in the preataxic stage or develop general paralysis. I have found in the history of the latter great mental depression arising from the loss of sight. Possibly some remedy may be found which will allay this hypernutritive and metabolic activity of the nervous system. It is in my opinion a fact that general paralytics and tabetics are very frequently mentally and physically superior to the average individual who belongs to the same social status, and I have always considered it probable that the frequent indulgence of abnormally strong sexual desires stimulated by many causes, especially alcohol, is, after syphilis, the most important factor in the production of tabes and general paralysis. It acts in two ways (1) directly by exhaustion of neuro-potential; (2) indirectly in the male by the excessive loss to the body of highly phosphorized nucleo-proteids contained in the sperm. These are bio-chemical substances possessed of great specific energy and are not easily replaced.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, 1906, vol. i, pp. 721, 792, 851.

SAN FRANCISCO seems to appreciate the advantages of having trained medical men among its municipal officers and advisers. At the recent election, we learn from the *Pacific Medical Journal*, by an overwhelming majority under most difficult political conditions of labour strife, commercial and social unrest, Dr. Edward R. Taylor was elected Mayor of San Francisco; Dr. Washington Dodge, Assessor; Dr. T. B. W. Leland, Coroner; and Dr. A. H. Giannini, Member of the Board of Supervisors. We should be glad to see the doctor taking a larger share in municipal government in our own country, but we hope a series of earthquakes will not be necessary to teach the average Briton the usefulness of special knowledge in the direction of public affairs.

A NOTE ON EXCESSIVE PATELLAR REFLEX OF FUNCTIONAL NERVOUS ORIGIN, AND ESPECIALLY THE "TREPIDATION" OR "SPINAL EPILEPSY" FORM.

By F. PARKES WEBER, M.D., F.R.C.P.,

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I THINK that too much value is sometimes attributed to the phenomenon of excessive knee-jerks as suggestive of the presence of organic nervous disease. It has been stated that in patients who have had syphilis the presence of excessive knee-jerks should lead one to suspect the commencement of syphilitic disease of the central nervous system; but in examinations for life assurance and in ordinary medical examinations one so frequently finds excessive knee-jerks* apart from any nervous disease whatever that I now regard the mere presence of excessive knee-jerks apart from other symptoms as practically without any pathological significance. I quite admit, however, that this "functional" excess of patellar reflex is especially likely to be found in individuals with a neurasthenic tendency and in persons of a rather weak habit of body who are easily thrown into a state of nervous excitement, and that it is more frequently found in persons of Jewish than of Northern European descent. The class of so-called "hysterical malingerers" will doubtless also be found often to show excess of patellar reflex.

Extreme exaggeration of patellar reflex, especially what I would term the "trepidation" or "spinal epilepsy" form† (when in addition to a violent knee-jerk there is also a kind of "knee clonus") is, I believe, far more often due to functional than to organic nervous disease. In these extreme forms there is generally, likewise, ankle clonus present, and I would here state that I cannot recognize the existence of any infallible distinctions between "functional" ankle clonus and ankle clonus due to organic disease. In some functional cases the associated absence of plantar reflex might help one in diagnosing functional nervous disease, whilst the presence of Babinski's phenomenon would of course practically negative the disease being merely functional. I have heard, however, of a plantar reflex of the extensor type (Babinski's phenomenon) accompanying attacks of hystero-epilepsy, and I have myself met with this sign present on one side shortly after the occurrence of cerebral embolism (of cardiac origin) on the other side, so that the original idea that Babinski's phenomenon is a really absolute sign of the presence of "organic" change in the descending motor tracts cannot be maintained.

In a young man whose case I described elsewhere[1] the slightest tap over the patellar tendon caused the leg to be violently jerked forward. Similarly, if the patient lay on his side a tap anywhere on the Achilles tendon caused great contraction of the calf muscle, but the movement of the foot was somewhat less sudden than that of the leg on tapping the patellar tendon. The triceps jerks and supinator jerks were exaggerated in the same way. There was sometimes great ankle clonus to be obtained, but this varied considerably on different occasions, like the clonus often met with in functional nervous affections. On one occasion, when the patient was on his side in bed and temporarily supporting the upper part of his body with one hand on the bed, I noticed a clonus of the upper extremity (from the flexed elbow-joint) resembling the ankle clonus in the lower extremity. The symptoms in this case appeared to be of uraemic (or toxaemic) origin, connected with double hydronephrosis and calculus in the urinary bladder. Probably increase of knee-jerks (though without the extraordinary exaggeration of all the deep reflexes just noted) is not rare at the commencement of uraemia, and it is quite natural that nervous symptoms of the "functional" class should be sometimes induced by general toxic or toxaemic conditions, just as mental symptoms are (for instance, the various abnormal mental states induced by alcohol, cannabis indica, septic pyrexial conditions, etc.).

The "trepidation form" of patellar reflex is of course closely allied to the trepidation of an extremity induced in some functional nervous cases by handling the limb. Even where there is obviously "organic" disease the presence of such trepidation probably signifies that one has likewise to deal with a functional nervous element, and this supposition is supported by the fact that the trepidation may pass off, whilst the obviously organic disease remains. In a man aged 25 years, with a remarkable and severe trophic disorder of the left foot, whose case I described in 1901,[2] the left leg was affected not only with persistent spasticity, but at times also with violent rhythmical clonic movements. This trepidation of the extremity was very well marked on the patient's admittance to the German Hospital, and was easily excited by handling the foot. He seemed, however, to be able to some extent to stop it at will, and it disappeared whilst the patient was in the hospital. The plantar reflexes were absent in that patient.

With such "trepidation cases" some cases of persistent hysterical tremor of an extremity may be compared. The functional tremor (or trepidation) is sometimes influenced by the state of the patient's emotions, and an occasional curious feature of it is its tendency to "spread" when the joints involved in the movement are kept motionless by force. Thus, in a woman under my care at the German Hospital, the tremor in the left lower limb could be stopped by holding the foot firmly in a position of extreme dorsal flexion, but then the right lower extremity would commence to tremble. If some one else prevented this by grasping the right foot in the same way, the trembling tendency in the left limb became so great that the foot could no longer be kept still.‡

I now come to the question, What part of the nervous system is chiefly responsible for excessive knee-jerks, ankle clonus, and the trepidation (sometimes misleadingly called "spinal trepidation") of functional nervous origin? The not uncommon connexion of these phenomena§ (at all events in their extreme form) with well-known symptoms of functional nervous disease, such as hysterical hemianaesthesia, hysterical monoplegias and hysterical spasms suggests that the nervous action or functional change on which the phenomena in question depend is in the brain, probably in the cerebral cortex.‖ This suggestion, moreover, derives support from the decided influence of temporary emotional states on the phenomena in question.

My view is that the excess in the patellar reflex in the class of cases under consideration is due to a peculiar functional condition of the cerebral cortex, which when present in greater degree gives rise to the "trepidation" form of patellar reflex, and to the so-called "spinal trepidation," and to "functional ankle clonus"; that this functional condition of the cerebral cortex may be excited or modified by temporary emotional factors, and that a similar state may be induced by toxaemias, such as uraemia; that the signs (exaggerated knee jerks, etc.) of the functional cerebral condition in question may be imitated by organic nervous disease¶ (cerebral haemorrhage,

* Incidentally I would remark that examination of knee-jerks in ordinary routine cases teaches one also not to rely too much on the absence of knee-jerks as a sign of there being organic nervous disease (especially tabes dorsalis) present. Whatever may be said to the contrary, there are a certain number of healthy persons in whom knee-jerks cannot be obtained even by the help of devices such as making the person who is being examined lock his hands together and pull apart. Of course, it can always be objected that the absence of knee-jerks is only temporary in such cases; but it must be admitted that there are apparently healthy persons in whom the knee-jerks are either persistently (congenitally?) or temporarily absent.

† In some of these cases a gentle tap on the bone (that is, periosteum) anywhere near the patellar tendon is sufficient to produce a violent knee-jerk with "trepidation."

‡ I showed this patient at the Medical Society of London when the tremor of the left foot had lasted on and off for ten years. See *Transactions of the Medical Society of London*, 1905, vol. xxviii, p. 293.

§ Kernig's sign is probably intimately allied to these phenomena, and the probable cerebral (as opposed to the formerly generally supposed spinal) origin of this sign has lately been discussed by Paul Sainton and Roger Voisin at the French Medical Congress held at Paris in October, 1907. (*Presse Médicale*, October 23rd, 1907, p. 692.)

‖ S. J. Sharkey (*Brain*, Spring, 1904, p. 4) has summed up the main reasons why the cerebral cortex is to be considered the part chiefly at fault in hysteria. He suggests in particular that the reason why patients with hysterical hemianaesthesia are not usually conscious of their loss of sensation is that the cortical centres are the parts affected, whereas in hemianaesthesia due to gross brain disease the sensory fibres in the internal capsule are generally diseased and the cortical centres are sound, so that the patient perceives his anaesthesia.

¶ I believe in this regard it is better to speak of the symptoms due to the functional state of the brain being imitated by organic changes in the nervous system than (conversely) to speak of the functional disease imitating the symptoms of organic disease, as is usually done.

sclerosis in the lateral columns of the spinal cord, disseminated sclerosis, etc.), but that it is just possible that in some rare cases of organic nervous disease (for instance, some cases of early disseminated sclerosis) the organic changes may give rise to the phenomena of increased tendon reflexes, etc., merely by inducing the above-mentioned (hypothetical) functional cerebral change.

To illustrate my meaning further, I shall now allude to the analogous question of the nature of functional nervous vomiting. In an article contributed to *Brain* in 1904[3] I endeavoured to show that functional nervous vomiting, like the hemianaesthesia, palsies, and spasms of hysteria, must be regarded as due to an abnormal state of the brain (cerebral cortex), and is just as much a symptom of functional brain disease as the vomiting in cases of cerebral tumour is of organic brain disease. We know that violent vomiting is frequently a result of organic disease (tumours, etc.) and injuries (involving concussion) of the brain, and that vomiting of cerebral origin often occurs in the absence of any gross change in the brain (for instance, in simple concussion and in ordinary sea-sickness, and from toxic causes acting on the cerebral cortex, such as uraemia and from the inhalation of chloroform and ether), and may even be due to purely psychical causes—such as ideas connected with disagreeable smells and sights, the view of blood and surgical operations, and various mental emotions. Now, patients with functional nervous vomiting mostly exhibit characteristic signs of hysteria, and it is generally recognized, I believe, that the main symptoms of hysteria, such as hysterical hemianaesthesia, hysterical monoplegias, and hysterical spasms, owing to their characteristic distributions, etc., are of cerebral cortical origin, just as much so as the mental symptoms of hysteria are. I believe, therefore, that in vomiting of functional nervous origin the main site of the disturbance in the nervous system is most probably likewise in the brain (cerebral cortex), and, practically speaking, I regard the vomiting of organic brain disease as an imitation of that due to functional brain disease (hysteria). The vomiting due to functional disease may in rare cases—true faecal vomiting of functional nervous origin—be more violent than any vomiting caused by organic disease. With regard to the violence of the symptoms in such exceptional cases, I wrote in the paper above referred to:

"Why the vomiting in functional brain disease should be sometimes actually more violent and severe (faecal vomiting) than it is in organic cerebral disease (faecal vomiting practically never occurs in organic brain disease) I cannot understand, unless it be that disturbance of function can show itself in a more pronounced form in a brain without any gross organic disease than it can in a brain the finer mechanism of which has already been impaired by severe organic disease, such as cerebral tumour. In connexion with such a supposition one may remember that a delusion is apt to be less stable (and not so well organized) in a general paralytic, whose brain is the site of grave organic disease, than in a patient with chronic paranoia, whose brain, could it be examined, would probably show no obvious organic changes."

In conclusion, I maintain that in functional nervous vomiting we probably have to deal with a peculiar functional change in the brain (cortex), analogous to the cerebral condition that produces the exaggerated tendon reflexes and "trepidation" of functional nervous origin, and which, like it, may be excited or modified by emotional factors, and is analogous to certain states induced by toxaemias—such as uraemia. The symptoms produced by these abnormal functional states may equal or even exceed those produced by organic disease.

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THE *Deutsche medizinische Wochenschrift* announces, on the authority of the German Ambassador at Tokyo, that foreign doctors who wish to obtain the right to practise their profession in Japan may pass the necessary examination in English, French, or German, or may employ the services of an interpreter. Moreover, the interval which in the case of Japanese candidates must elapse between the two parts of the medical examination may be dispensed with in the case of foreigners holding a medical diploma.

TYPHOID CARRIERS.

BY

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DURING the past two years the important question of "chronic typhoid carriers" has received a large amount of attention at the hands of German hygienists and bacteriologists.

Hitherto the importance of the subject from the point of view of public health has been insufficiently realized in this country. Recently an American worker has recorded one very interesting case to which reference will be made later. It is not proposed here to discuss in detail the various published cases, which after all present so many points of similarity. It will suffice to refer briefly to the more important articles, after which we shall record our own experiences in this matter.

German Experiences.

For a large part of our knowledge of the subject we are indebted to hygienists in Strassburg. The now classical case of the Strassburg female baker was described by Kayser in 1906. The facts of the case were briefly these: It was observed that practically every new employee in the bakery became sooner or later seriously ill with intestinal typhoid-like symptoms. In two persons the disease proved fatal. The faeces of the woman who owned the bakery and who had had typhoid fever ten years previously, were found to contain typhoid bacilli in large numbers. Her serum also agglutinated the *Bacillus typhosus* up to 1 in 100. Kayser (1906) was also able to isolate another carrier in the person of a female engaged in the milk trade. She was apparently responsible for a small typhoid epidemic due to infected milk, in which 17 cases were involved, with two fatalities.

Further, several epidemics in a household were traced to a female who had had typhoid fever complicated with jaundice thirty years previously. In all, twelve carriers were found (9 female and 3 male). The ratio (3 to 1) probably also expresses the incidence of gall-stone disease in the female and male respectively. Klinger (1906), in an examination of the stools of 482 cases of typhoid fever, found that 27, or 13.1 per cent., harboured the bacilli; of these 27, however, 8 only continued to harbour the bacilli longer than six weeks after the temperature had become normal, so that altogether 1.7 per cent. became chronic carriers. These cases were followed up for varying periods up to eleven months. Klinger places in a separate group a series of 11 cases (6 male and 5 female), who were found to pass typhoid bacilli in the stools for a short time only. These people had not had typhoid fever, but had been closely associated with typhoid patients. These temporary harbourers of the bacillus, or "acute typhoid carriers," he does not consider to be relatively so dangerous as the chronic or persistent carriers. It seems unjustifiable to dogmatize on this point, as the passage of bacilli in the stools probably takes place intermittently, and repeated examination at intervals would be required to settle this question.

Lunatic asylums appear to yield a considerable number of the cases recorded; and, as our experience has been obtained with material from this source, it may be well to summarize the chief evidence.

In the course of an investigation into the causes leading to a succession of typhoid epidemics which had occurred in an asylum containing 250 patients, Nieter and Liefmann (1906) were able to isolate seven typhoid carriers. They had commenced with an examination of the stools of patients who had recovered from typhoid fever, but none of these were found to harbour the typhoid bacillus. A certain patient, however, happened to be suffering from dysentery, and in her stools typhoid bacilli were found, along with dysentery bacilli of type "Flexner." In the faeces of another patient who had the characteristic symptoms of dysentery, typhoid bacilli were found, but no dysentery bacilli. After death typhoid bacilli were found, not only in the intestine, but also in the bile. The blood of this patient also agglutinated *B. typhosus* up to

1 in 50, and the *B. dysenteriae* (Flexner) up to 1 in 100. Old typhoid cicatrices were found in the small intestine, while the large intestine showed chronic catarrh.

Probably the infection of these dysentery cases with the *Bacillus typhosus* was due to the fact that, owing to lack of room, the typhoid and dysentery cases were not isolated in separate buildings. The transference of infection from one patient to another is readily conceivable when the filthy habits of many of these cases are remembered.

Further notes on the conditions prevailing in this asylum were recently recorded by Nieter (1907). The asylum contained altogether about 900 females, and the previous 7 cases had been discovered in one building containing 250 female inmates. In addition to these 7 cases, 4 others were found, and it was hoped that with the isolation of these no more outbreaks would arise. However, during the course of December, 1906, and January, 1907, 3 cases of typhoid fever occurred among female attendants. In the room in which these attendants had served was found another carrier. This female harboured the paratyphoid bacillus (type B) in addition to the *Bacillus typhosus*.

Four or five months later an outbreak occurred in another department. This led to the discovery of yet another chronic carrier who had had typhoid fever two years previously. Altogether in this asylum 13 cases were brought to light.

The experience of Friedel (1907) is especially interesting, as the outbreaks occurring in a similar institution were clearly traced by him to an imbecile patient who did work in the kitchen department. This person had never suffered from typhoid fever. It is important to note that her work in the kitchen consisted chiefly in the preparation of various salads.

In an asylum at Hördt as described by Klinger, two carriers were found and isolated. It happened that in the typhoid-infected building there was a washerwoman who had suffered from typhoid fever one year previously. Her stools were examined three times, and found to be free of typhoid bacilli (February and March, 1905). However, in September, 1905, other cases broke out in her department, and she was now found to be a carrier. Her serum agglutinated the *Bacillus typhosus* up to 1 in 1,000.

Other carrier cases isolated in asylums at Saargemünd and Klingemünster are mentioned by Nieter. The American case described recently by Soper (1907) of New York concerned a female cook, in apparently perfect health, who, so far as her history could be traced, had in the course of five years been responsible for the occurrence of typhoid epidemics in seven different households. Her stools were found to contain typhoid bacilli in large numbers, and her serum gave a positive Widal reaction.

Cause of the Present Investigation.

A certain lunatic asylum in Scotland, containing at the present time 92 male and 53 female patients, 8 male and 6 female attendants, and 4 female servants, has since 1893 been visited by a succession of small outbreaks of typhoid fever. Similar outbreaks have occurred during the same time in a smaller detached institution situated about five minutes' walk from the main building. Female patients only, to the number of 32, occupy at present this smaller asylum. Prior to the adoption of the Notification Act in 1891 no authentic records of typhoid fever in this institution are available.

Thirty-one cases in all have occurred, and 24 of these have been females. Nine cases have proved fatal, giving a fatality rate of 29 per cent. Included in the accompanying table are 4 cases among the attendant staff (3 female and 1 male). It will be observed from the table that the cases occurred at no special time of the year, but that in any one year the notified cases followed each other as a rule very closely. During 1894, 1898, 1902, and 1905, no cases were notified.

As might be expected, the mysterious cropping up of typhoid cases has been a source of great anxiety to the authorities, who have done everything in their power to make the sanitary arrangements of the institution as complete as possible. Repeated analyses of the water supply, both chemically and bacteriologically, have thrown no light on the etiology of the outbreaks. The sewage is conveyed direct to the sea. The dairy arrangements are in excellent order. The same water supply is enjoyed by several families residing on a farm near the source of the supply, but at no time have cases of typhoid occurred among them. These and other considerations suggested that the source of the infection was possibly to be found among the patients themselves, and in the light on recent German work on the occurrence of typhoid carriers, one of us (A. L.) proceeded to investigate the whole question from this point of view. As three-fourths of the cases had occurred among the female inmates, his attention was confined solely to these. In February of this year a start was made by testing the Widal reaction in a group of 43 female patients. The serum of 6 cases, 2 of whom had had typhoid fever previously (in 1903 and 1904 respectively) gave a well-marked reaction. In the course of this investigation, however, A. L. himself contracted an attack of typhoid fever, and nothing further was done in the matter till September, when it was determined to make an exhaustive bacteriological examination of the stools of all the female patients in the asylum. The samples were forwarded to one of us (J. C. G. L.) at the Lister Institute, London.

Table Showing the Incidence of Typhoid Fever in Successive Years since 1893, when the First Case was Notified.

Year.	Total Number of Cases.	Month of Notification.	Main Asylum.	Small Asylum.
1893	2	March, July	2	0
1894	0	—	0	0
1895	6	July (2), August (3), December (1)	1	5
1896	2	April, May	2	0
1897	1	November	0	1
1898	0	—	0	0
1899	4	August (1), November (3)	4	0
1900	3	January, June, August	1	2
1901	2	February, May	2	0
1902	0	—	0	0
1903	4	February, March, April, October	4	0
1904	3	June, July, August	3	0
1905	0	—	0	0
1906	1	April	1	0
1907	3	February, April, October	2	1

Bacteriological Investigation.

The samples were received in sterile bottles, great care being taken to avoid any admixture of urine, as the latter markedly inhibits the growth of intestinal organisms on the plates. From each sample two separate loops were taken and emulsified in two broth tubes. Two plates of bile salt lactose-neutral-red agar (MacConkey's medium) were spread with a loopful from each broth tube, four plates in all being prepared from each sample of faeces.

On the following day the colourless colonies were picked off and inoculated in mannite-peptone water. If gas production occurred (as in the great majority of the cases), no further consideration was necessary. Where acid production only occurred, a further series of sugar tubes were inoculated (glucose, lactose, cane sugar, and dulcite), also litmus, milk, and gelatine. Indol was tested for by Ehrlich's method on the third day. Agglutination tests were made with an antityphoid horse serum, also with serum from positive cases of typhoid fever.

From the main asylum fifty-seven samples of faeces from female patients were examined. One patient, G., was found to be passing typhoid bacilli in enormous numbers in the faeces. In fact, the plates contained typhoid colonies to the almost complete exclusion of *B. coli* and other lactose fermenters. This patient, G., has been in the asylum since 1896. She is 35 years of age, suffers from dementia, and there is no record of her having had typhoid fever. Her personal habits are exceedingly filthy, and she has never been employed in the laundry or kitchen. Her serum agglutinated the *Bacillus typhosus* up to 1 in 200. (Time, 1½ hours at room temperature.)

For this test the laboratory strain was employed. Curiously enough, her own strain was agglutinated very slowly by G.'s serum, but was agglutinated by antityphoid horse serum in dilution of 1 in 8000. The G. strain had also considerable virulence for the guinea-pig; 2 c.cm. of a twelve-hour bouillon culture inoculated intraperitoneally caused death within twenty-four hours.

The patient G. was isolated on September 24th and treated with intestinal antiseptics. On October 12th samples of faeces and urine of G. were received. Typhoid bacilli were not found in either. On October 21st the *B. typhosus* was readily isolated from the faeces, and a fourth sample received on November 29th was also positive. The urine remained negative.

With the isolation of G., it was hoped that no more cases of typhoid fever would recur, but this did not prove to be the case. Towards the end of October a case of typhoid fever occurred in the small asylum, and accordingly we proceeded to examine the faeces of all the female patients systematically (34 in number). Another carrier was thus brought to light. This patient, M C., is about 60 years old. She had an attack of typhoid fever in 1895, and has been continuously in the small asylum since that time. She is able to walk about and do a little work, but she has never been employed in the kitchen. Her habits are cleanly, and she has occasionally assisted in the laundry. It has to be noted that though there are two separate blocks, they are really one, from the extent of communication that goes on between them. The dinners are cooked at the main asylum and brought over to the smaller block. The clothes are washed also at the main asylum, but patients from the small asylum would occasionally assist. As in G.'s case, the plates of M'C. showed almost pure typhoid to the exclusion of lactose fermenters.

The strain obtained from M C. was agglutinated by antityphoid serum in dilution of 1 in 7,000. The serum agglutinated the laboratory strain, her own strain, and the G. strain up to 1 in 200. The M C. strain had also the same degree of virulence for the guinea-pig as the G. strain. On November 29th, the *Bacillus typhosus* was again isolated from the stools of M'C. but not from the urine.

So far the blood has not been examined for typhoid bacilli in either G. or M'C.

All the females in both buildings had now been gone over, but it was felt advisable to repeat the examination in some of them, especially those who had suffered from typhoid fever in recent years.

A third carrier negative on the previous occasion was thus revealed.

This patient, C., is about 30 years old and had typhoid fever in 1904. She is not of dirty habits, and has never been employed in kitchen or laundry. The plates prepared from C. showed very few colonies, and in this respect differed from those of G. and M'C. The serum gives a marked Widal reaction, and the strain obtained from the stools is agglutinated by antityphoid serum in dilution of 1 in 7,000.

Up to the present time, therefore, we have succeeded in isolating three typhoid carriers out of a total of ninety females examined. The male patients have so far not been investigated, but we are at present considering this step.

Prophylactic Measures.

We shall conclude with some observations as to the treatment adopted in these cases. In addition to isolation and disinfection of excreta, so-called intestinal and urinary antiseptics have been employed in our cases, but it is not at all likely that they will do the slightest good. Other workers have recorded quite negative results with milk diet, chloroform, hepatic cholagogues, salol, etc.

It seems probable that in these cases the bacilli vegetate in the gall bladder, from which they are intermittently ejected into the intestine. An interesting case, showing the importance of the gall bladder as the seat of vegetation of the *Bacillus typhosus*, is recorded by Levy and Kayser (1907). A female asylum patient who had been isolated as a typhoid carrier on October 17th, 1905, died on October 18th, 1906 after a short illness, in which fever, pulmonary trouble, and stupor were marked symptoms. At the necropsy, hypostatic pneumonia was found, the spleen was slightly enlarged, and a gall stone was present in the fundus of the gall bladder. Typhoid bacilli were isolated from the liver, spleen, bile, gall bladder wall, and interior of gall stone. In view of the general distribution of the typhoid bacillus in this case, the authors conclude that death was due to an autoinfection from the gall bladder, where the bacillus had so far led a saprophytic existence.

Dehler (1907) has actually performed cholecystostomy and drainage of the gall bladder in two asylum carrier cases, though in neither were there symptoms pointing to gall-bladder disease.

Numerous examinations of the stools were made after the operations, and it was found that in a few months the typhoid bacilli ceased to appear in the faeces, and the patient's serum failed to agglutinate the typhoid bacillus.

It cannot, however, be expected that this form of treatment will become popular, at least where otherwise healthy carriers are concerned.

The appropriate treatment of these cases presents many difficulties, but one conclusion is clear—that a person who is found to be a typhoid carrier should be kept constantly under bacteriological supervision. Perhaps also many typhoid epidemics would be avoided if the excreta of recovered typhoid cases (especially female cases) were examined systematically (say once a month) up to six months after recovery.

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THE CONTENTS OF IRREDUCIBLE INGUINAL HERNIAE IN FEMALE SUBJECTS, AND TRUE HERMAPHRODITISM.

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THERE is a condition of inguinal hernia found in females which deserves much more attention than has hitherto been given to it. It is concerned with the irreducibility of the hernia, and differs in a most marked manner when found in adults from that when found in children. This condition is the presence of some of the female internal genitalia in the hernia sac. In order to arrive at extensive information on the subject, I asked Mr. S. G. Allen, F.R.C.S., of the Children's Hospital, Great Ormond Street, to obtain for me some figures of the irreducible herniae in female patients admitted at that institution. He looked through 11 800 cases, and amongst them found 103; 90 were reducible, 4 were irreducible, and 9 were strangulated. Of the latter 13, the contents of the hernia were recorded, every one containing some of the internal genitalia of the female. The uniformity of the condition in them is most striking.

To contrast with this, Mr. L. E. C. Norbury, F.R.C.S., Surgical Registrar to St. Thomas's Hospital, made for me a list of the irreducible inguinal herniae of female patients admitted to the hospital. Since 1878, 52 such cases have been admitted and operated upon. Of these 52, 3 were children, and have been added to the 13 of Great Ormond Street, bringing the total up to 16. These two groups of hospital cases, children and adults, possess distinctive features as regards the age of the subject and the contents of the hernia.

Age.

Class 1.—All were infants, the youngest being 9 weeks and the oldest 13 months.

Class 2.—All were adults, the youngest being 15 and the oldest 19. The generality of the patients were between 40 and 50.

Contents of the Hernia.

Class 1.—Some of the internal generative organs were found in 15 out of 16 cases, approximately 94 per cent. of the infants.

Class 2.—Amongst the irreducible herniae of female adults, the internal generative organs were only found four times, approximately 8 per cent.

In order to direct further attention to the striking characters of the irreducible inguinal hernia in infant and adult females, the cases are recorded likewise in tabular form, and to this I have added four met with by myself.

The tables demonstrate the fact that an irreducible hernia in a female infant is almost sure to contain some of the internal genitalia; whilst in an adult, though it may, it is unlikely to do so. An irreducible hernia may be present under one of four forms—simple irreducible, inflamed, incarcerated, or strangulated. As the two middle conditions are of the very rarest occurrence, there is no practical use in discussing them. But simple irreducibility and strangulation are not infrequently found, so that it is worth while to discuss the peculiarities they possess.

1. When *irreducible*, the hernia of a female child will be felt to contain a small rounded body, about the size of a small pea, which is freely movable upon its pedicle. It is the ovary.

2. When *strangulated*, there is an irreducible non-translucent mass over the external abdominal ring through which it protrudes. If it does not contain bowel, as was only found in 15 per cent. of the irreducible female herniae of infants, there need be no sickness and the bowels will act. The lump gets larger and larger, but, strange to say, may cause the infant very little inconvenience. This seems to be accounted for by the strangulation of the tube and ovary causing the distension of the ovary and tube with blood and serum, producing in time a kind of an infiltration anaesthesia. Otherwise it is hard to understand the apparent painlessness of the hernia.

A *diagnosis* is easily made. In fact, it is more than suggested by the fact that the case is one of an irreducible inguinal hernia in a female infant. When the hernia is simply irreducible, the ovary and tube can be easily felt. When the hernia is strangulated and has no impulse on crying, the diagnosis is easily made by the non-translucence of the swelling and the association of it with no more symptoms than, perhaps, some slight irregularity of the bowels and the digestion.

The formation of these herniae is of some interest, and is doubtless connected with an excess of the natural descent of the ovary we know to occur, like that of the testicle—a fact demonstrating that the hernia is of truly congenital origin. But the hernia contents need not be, and in fact are not necessarily, present at birth. For instance, I saw a child in whom the mother was certain that the irreducible lump came on the left side when the baby was a fortnight old, a similar swelling appearing on the right side when she was 4 to 5 weeks old; so that it may be said that the ovaries appear not at, but shortly after, birth. Their irreducibility to some extent depends on the difficulty that there may be in manipulating a small movable body through a small hole. I believe it to be unusual, but I have certainly seen one of these organs undergo spontaneous reduction. But it is unwise to wait in expectation of this, because the mobility of the ovary lends itself to torsion of its stalk, leading to swelling by impeding the return of blood in the veins, attacks of inflammation, which may destroy the gland entirely, and, in any case, will prevent its full maturation and development at puberty. The use of a truss is absolutely contraindicated on account of the injury it may do to the gland. Operation, then, is the only treatment for these cases. With simple irreducibility the gland may be returned to the abdomen and the hernial sac removed. With strangulation, owing to the lateness when usually the diagnosis is made, it will be necessary to remove the ovary in the majority of the cases, but if the diagnosis is made early the gland need not be sacrificed.

Before concluding this brief notice, there is another imperfectly known and most interesting feature of the generative glands found in the inguinal hernial sacs of female children. If they are removed and examined with the microscope, in some cases they will be shown to be immature testicles, and not ovaries. When this is so, the case is truly hermaphrodite—male generative glands and female generative organs. On this account it has been advised that these glands be removed, so as to avoid the

TABLE I.—CONTENTS OF IRREDUCIBLE INGUINAL HERNIA (INFANTS).

—	—	Age.	Side of Hernia	Contents of Sac.
1	Great Ormond St. Hospital	6 months	R.	Tube and ovary.
2	Ditto	9 weeks	R.	Ovary.
3	Ditto	8 months	R.	Tube and ovary.
4	Ditto	6 months	L.	Uterus, ovary, tube, and small bowel.
5	Ditto	3 months	L.	Tube and ovary.
6	Ditto	6 months	L.	Ovary.
7	Ditto	5 months	R.	Ovary.
8	Ditto	7 months	L.	Tube and ovary.
9	Ditto	11 weeks	R.	Ovary.
10	Ditto	5 months	L.	Fallopian tube.
11	Ditto	12 months	L.	Tube and ovary.
12	Ditto	13 months	R.	Ovary.
13	Ditto	12 months	R.	Tube and ovary.
14	St. Thomas's Hospital	3 months	L.	Ovary, tube, and bowel.
15	Ditto	12 months	L.	Ovary.
16	Ditto	9 months	R.	Small bowel.
17	Edred M. Corner	11 weeks	R.	Ovary and tube.
18	Ditto	11 weeks	L.	Ovary.
19	Ditto	6 months	R.	Ovary.
20	Ditto	9 months	L.	Ovary and tube.

The percentage of those which contained female generative organs for these 20 cases is 95.

TABLE II.—CASES ARRANGED ACCORDING TO THE CONTENTS OF THE HERNIA.

Infants (Great Ormond Street).

Contents of Hernia.	No. of Cases.	Per-centage.
Ovary	8	40
Ovary and tube	8	40
Ovary and tube and bowel	1	5
Ovary, tube, uterus, and bowel	1	5
Fallopian tube	1	5
Bowel	1	5
Female internal generative organs present	—	95
Bowel present	—	15

Adults (St. Thomas's Hospital).

Pyosalpinx	1	2
Hydrosalpinx and ovary	1	2
Fimbriae of Fallopian tube with hydrocele in the sac	1	2
Fallopian tube, ovary, small bowel, and omentum	1	2
Small bowel	19	39
Small bowel and omentum	9	18
Omentum	12	25
Omentum with secondary carcinomatous growth	1	2
Omentum with large bowel	1	2
Fatty appendix epiploica	1	
Containing internal female generative organs	—	8
Containing bowel	—	65

child growing up to be an imperfect man. This is extremely doubtful advice, because an emasculated being is not female but of a neuter sex, and has been deprived of certain perfected secondary characteristics, such as bodily and mental energy.

A NOTE ON NEPHROPEXY.

By FREDERIC EVE, F.R.C.S.,
SURGEON TO THE LONDON HOSPITAL.

The subject of the methods of performing nephropexy having been opened by Mr. Billington and others in recent numbers of the Journal, I send a description of an operation which I have performed for some years.

The principles underlying the operation which I have taught are as follows:

1. That owing to the friability of the renal tissue the capsule only should be used for its fixation.
2. That a decorticated surface of the kidney should be brought into immediate relationship with the quadratus lumborum and psoas on which it normally lies without the intervention of any connective tissue.
3. That no sutures should be affixed to the capsule of the kidney in its upper third, as when passed through the parietes they would as a rule fix the kidney in a position below that which is normal.

The Operation.

The kidney is exposed through a vertical incision, with a slight inclination outwards, running parallel with the outer edge of the quadratus lumborum. The fatty capsule is opened and stripped from the kidney, which is then brought out through the wound. An incision is made through the kidney capsule on its posterior surface parallel to and about three-quarters of an inch internal to the convex border. This is carried from above, at the junction of the upper with the lower two-thirds, downwards to the inferior pole. The capsule is then stripped off the posterior surface from the incision as far as the hilum. And again it is stripped from the incision in a forward direction over the convex edge to the middle of the anterior surface. The detached flaps of capsule are then rolled or folded together, so that there are two rolls parallel with the axis of the organ, one lying on the posterior surface just external to the hilum, the other about the middle of the anterior surface of the kidney. Through these rolls of capsule silk sutures are passed at equidistant points, three on the posterior and three on the anterior surface; they range from the inferior pole to the junction of the upper with the lower two-thirds of the kidney. To ensure a firm hold each suture is carried two or three times through the rolled-up capsule. Each suture is then clamped with a separate pair of artery forceps, the needle—a small curved one—being retained in the suture; and to prevent confusion a different pattern of forceps is placed on the anterior from those on the posterior row of sutures. The kidney is then replaced in the abdomen. The fatty capsule posteriorly is pushed inwards or cut away, and the loose cellular tissue is stripped from the surface of the quadratus lumborum. The kidney is held forwards by a broad retractor, while the operator passes the three needles carrying the posterior sutures transversely through the substance of the quadratus lumborum, the uppermost suture being placed as high as possible. To do this properly the operator must be provided with an electric forehead lamp. These sutures are then tied so that the roll of capsule posteriorly is firmly fixed to the anterior surface of the quadratus lumborum. Next the anterior lip of the wound is retracted and the three anterior sutures are carried through the fascia transversalis and subjacent muscle as far towards the middle line as possible. The anterior row of sutures I consider of little importance, and have sometimes omitted them. The wound in the muscles is closed with catgut, and the skin wound with silkworm gut. The operation is rendered easy by the method of passing sutures through the detached capsule before the kidney is replaced in the abdomen.

I have seen several of my patients at intervals of some years after the operation, and have always found the kidney firmly fixed, and in good position.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF INJURY TO THE SHOULDER.

The following case, being of an uncommon character, seems worth recording. The patient, a laundry vanman, aged 18, consulted me on October 3rd, 1907, stating that he had fallen from his bicycle on to his outstretched hand.

On examining him the head of the humerus was very distinctly felt, resting in the subspinous position. The dislocation was reduced with very little difficulty by Kocher's method. After reduction no shortening could be detected. The arm was fixed to the side for five days, after which massage and passive movements were commenced. As considerable difficulty occurred in movement, the humerus getting apparently "locked" with the arm at an angle of 30° from the vertical, my friend Dr. Nuttall kindly skiagraphed the case. The picture obtained revealed an impacted fracture of the anatomical neck, and showed that the locking was due to the greater tuberosity impinging on the coracoid process.

Nevertheless the upward movement of the arm is only slightly lessened, the patient being able to bring the hand well above the head and to reach the back of the neck. He has now returned to his work and with the exception of difficulty in raising parcels high with the right hand, he complains of no inconvenience. In the skiagram the line of fracture can be distinctly seen, together with the callus thrown out around the shaft of the humerus.

Colwyn Bay. CRAUFURD MATTHEWS, M.B., Ch.B.

DIABETES MELLITUS IN THE CHINESE.

In reference to the discussion on diabetes in the tropics at the last annual meeting, and to the question raised thereat as to the immunity from the disease which the Chinese as a race are supposed to enjoy, the following cases may prove of interest.

In 1902 I had under my care at Tamsui, North Formosa, a well-to-do Chinese farmer, aged 55, who presented most of the symptoms of typical diabetes mellitus. He passed daily between 150 and 200 oz. of urine of specific gravity 1036, containing 2 to 3 per cent. of sugar. He suffered from pruritus, eczema, and boils, and after about four months of treatment double cataract developed rapidly. His condition went from bad to worse, and he eventually died six months after I first saw him. Drug treatment did not benefit him in the slightest degree, while dieting proved too irksome.

His sister, a married woman aged 45, next consulted me for dyspepsia and increased secretion of urine. She also was found to be suffering from diabetes mellitus, and passing approximately the same percentage of sugar daily as her brother. The after-history of her case was not obtained, she having attended the dispensary but twice.

Neither brother nor sister indulged in European food; they were typical Chinese of the moderately well-off class. Formosa is but ninety miles from the mainland of China, and has been occupied by the Chinese for at least 300 years, the customs and habits of the present population differing little, even under Japanese rule, from those of the mainland dwellers.

Glycosuria is not an infrequent cause for refusal of life insurance risks in China. Out of some 200 examinations personally made in widely-separated districts I have come across 3 examples, 2 of which showed the presence of albumen in addition to sugar, the applicants being over 50 years old. The other case was an intermittent glycosuria in a man aged 30. In the out-patient department of a native hospital in Nanking one typical case of diabetes mellitus was detected out of some 24,000 individual surgical and medical cases drawn almost entirely from the very poor and the labouring classes. Perhaps the idea that diabetes was an unknown disease amongst the Chinese arose from the fact that until comparatively recently foreign medical treatment was better appreciated by the coolie class than by the wealthier and more conservative merchants and officials, and because examinations of wealthy natives for insurance were not so common in China ten years ago as they are to day.

Nanking, China. A. C. LAMBERT, M.D., C.M., Trin. Univ., Toronto, Canada.

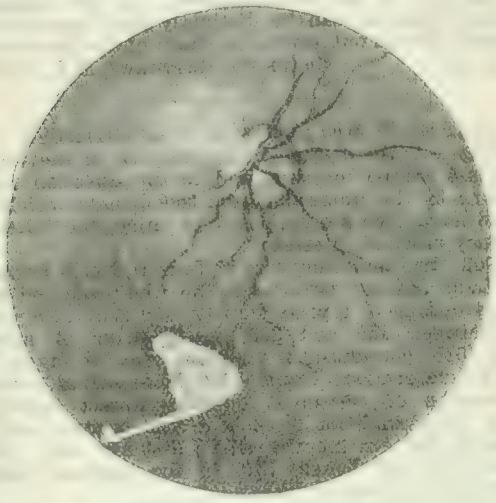
FOREIGN BODY IN THE EYEBALL.

THE following case may be of some general interest as a sequel to the able paper of Mr. Simeon Snell contributed to the JOURNAL of December 7th, 1907.

The patient, a youth aged 20, while playing with a toy gun belonging to his small brother, on December 28th, 1905, accidentally placed two copper percussion caps on the nipple and pulled the trigger. He immediately felt a blow on the right eye, and when I saw him, two hours after the accident, the iris was prolapsed, through an angular wound of the cornea, the two limbs of which were each about 3 mm. long.

I removed a portion of the iris and replaced the corneal flap without finding any foreign body in the eye, and the wound healed uneventfully. The aqueous, which was at first turbid, cleared slowly, and on January 10th, 1906, I first observed on the temporal side of the disc a shimmering crescentic body placed at the back of the globe, and apparently in its longest diameter about one and a half times the breadth of the disc. As it seemed to me unlikely that so large a fragment of metal would pass through the cornea and to the back of the eye without apparently injuring the lens, I sought the opinion of Mr. Dykes Bower of Gloucester, who saw the patient on January 28th, and felt no doubt as to the body being a piece of the percussion cap.

The ophthalmoscopic appearances then were very much



Fragment of copper cap in eye.

as shown in the accompanying sketch, which I made on February 16th, the patient sitting while it was done; it does not, however, do justice to the beauty of the bright, highly reflecting metallic object contrasted with the red retina and vessels; it will be noticed that the object had shifted its position since first observed. As the fragment could not be extracted by the aid of a magnet and it seemed unlikely that it could be removed through the sclerotic and leave a useful eye, I agreed with Mr. Bower to await developments. The patient could at this time read newspaper type with difficulty with the right eye; there was slight haziness of the retina and slight swelling of the papilla.

By April 10th opacity of the lens began to appear, doubtless owing to the capsule having been slightly injured by the passage of the fragment; there were no further symptoms, but the lental opacity increased, and on October 22nd, 1907, Mr. Bower removed the eye as it was useless and a source of possible danger. The eye was immediately put in formalin, and on opening it on October 30th I found the fragment caught in a fold of the hyaloid membrane, after having shifted its position to lie much nearer the front of the globe and just behind the ciliary body on the temporal side. The vitreous was fluid.

Thus the piece of sheet copper was retained in the globe for almost twenty-two months without giving rise to any symptoms but a traumatic cataract, and the eye was finally enucleated as a matter of expediency.

Cheltenham. A. F. R. CONDER, M.D.

POISONING BY MERCURIC POTASSIUM IODIDE.

DR. SEYMOUR W. DAVIES, in a memorandum in the BRITISH MEDICAL JOURNAL of December 21st, 1907, p. 1775, on a case of poisoning by mercuric potassium iodide, points out the apparent innocuousness of the drug compared with mercuric perchloride. This is not my experience, as the following will show.

Many years ago, when a student, I was suffering from a slight sore throat, and was given by mistake a mercuric potassium iodide soloid (containing 8.75 grains), the donor thinking that it was a red gum tabloid. I only kept it in my mouth for a few seconds, as the taste was very unpleasant, yet within a quarter of an hour I suffered from very profuse salivation, pain in the upper abdomen, and constant vomiting. For an hour or more I felt very ill, the symptoms then passed off and I felt no more bad effects. I cannot have absorbed as much as a grain, as the soloid when ejected looked its usual size, yet the absorption of so small an amount was followed by very severe symptoms. I think this will show that mercuric potassium iodide is not so innocuous, at least in some cases, as Dr. Davies believes.

Woking. R. THORNE THORNE, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GENERAL HOSPITAL, BIRMINGHAM.

A CASE OF SPORADIC DYSENTERY IN A CHILD.

(Reported by Professor SAUNDBY and W. H. WYNN, M.D.Lond., M.R.C.P.Lond., Assistant Casualty Physician and Clinical Pathologist.)

REPORT OF CASE.

WILLIAM V., aged 3½ years, was admitted on July 14th, 1907, collapsed.

History.

He had been treated for three days in the casualty department for diarrhoea. On examination the temperature was 102° F., pulse 163, respirations 36. He revived after getting warm in bed, and in the course of the next twenty-four hours passed four stools which were thin and yellow, but did not contain blood or mucus. At night the temperature rose to 103°, and his face was flushed. The spleen was not enlarged, but there was some tenderness over the lower part of the abdomen, more marked on the right side. There were a few harsh sounds to be heard over the base of the right lung, but there was no dullness. On the night of July 16th, the temperature rose to 103.6°, and was 103° on the morning of July 17th, when the pulse was 160 and the respirations 60. No urine could be saved. He died at 1.20 on the afternoon of July 17th.

Treatment.

The diet was milk and lime water only; at first he was ordered ice-water enemata and a hypodermic injection of normal saline solution with small doses of grey powder and opium every four hours. The next day the medicine was changed to a mixture containing a few grains of bismuth and sodium bicarbonate suspended in mucilage. The diarrhoea was never severe after admission, and was not the cause of death, which was evidently due to some toxaemia.

Necropsy.

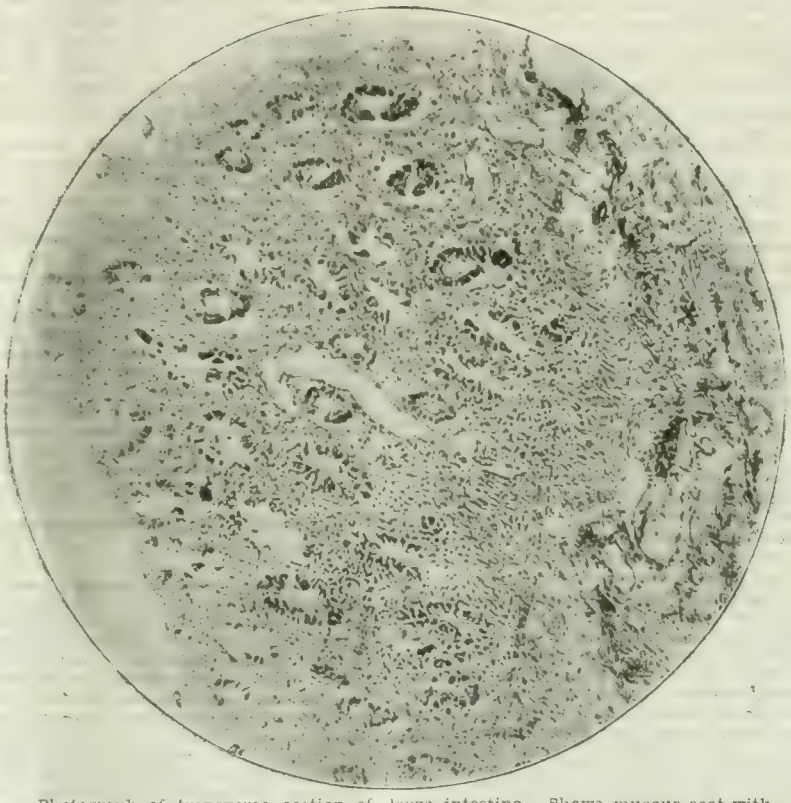
At the *post-mortem* examination, which was performed on July 18th, the heart was normal; the lungs were congested but not consolidated, and there was a quantity of pus in the trachea and larger bronchi, which contained quantities of pneumococci. The liver showed no naked-eye change, but under the microscope there was cloudy swelling of the cells with patches of commencing fatty degeneration. Both kidneys showed cloudy swelling. The spleen was soft, pulpy, congested, and slightly enlarged. The stomach and intestines showed nothing abnormal. The mesenteric glands were large and congested. The colon and rectum from the ileo caecal valve to the anus presented marked swelling and congestion, the surface of the mucous membrane being irregular, pink

in colour with scattered white necrotic patches, as if there had been extensive sloughing of the epithelium, the white patches being necrosed remnants still *in situ*. The changes were more marked in the rectum, and were less intense on passing up to the ileo-caecal valve.

Microscopical Examination.

The mucous membrane shows coagulative necrosis and destruction of the glands with exudation of fibrin and polymorphonuclear cells. This fibrin and cellular exudation almost replaces the glandular layer, remnants of glands being scattered here and there, the epithelium of which has been destroyed or is desquamating. The superficial layers of the mucous membrane stain badly. A few blood vessels are seen in the deeper layers, and red blood cells can be found in the exudate. Many short bacilli can be found in the exudate.

The submucous coat is thickened from infiltration with cells and fibrin, and here and there small haemorrhages. The cellular infiltration is most marked beneath the muscularis mucosae. The cells are mostly mononuclear plasma cells found singly or in groups around the vessels; lymphoid cells and polymorphonuclear cells are also present; the blood vessels and lymphatics are dilated; the muscular coat shows slight cellular infiltration; the serous coat is apparently unaffected.



Photograph of transverse section of large intestine. Shows mucous coat with destruction of glands and fibrinous and cellular exudation. Superficial layer stains badly. Shows coagulative necrosis of the cells.

BACTERIOLOGICAL EXAMINATION.

Cultivations were made from scrapings of the surface and mucus of the large intestine, and from the spleen and mesenteric glands. The material was suspended and well shaken in sterile broth tubes, and from these agar tubes were inoculated and plated. The colonies on the plates were picked off and inoculated in glucose-agar stab tubes.

The cultures from the spleen and mesenteric glands showed the presence of (1) cocci, which were not further investigated; (2) a slightly motile bacillus showing active gas production in glucose media, rapid reddening and coagulation of litmus milk, and the formation of indol. Its characters agreed well with those of the group *B. coli communis*.

The cultures from the large intestine in addition showed the presence of a third organism, the colonies on agar plates appearing later than those of *B. coli*. This organism has the following characters: It is a slender rod with rounded ends about the size of *B. coli*. The individuals are usually separate, sometimes united in pairs, but not in filaments. It is non-motile, but shows active Brownian movement. It does not stain by Gram, and is non-sporulating.

Cultural Characters.

Growth occurred on all media at room temperature, but was better at 37° C.

Agar Stroke.—In twenty-four hours a delicate semi-opaque white line, spreading at the margins after forty-eight hours. The growth is rather denser than that of typhoid in the same time, but less so than *B. coli*. Viewed with transmitted light, there is an appearance suggesting the branches of a fir tree.

Gelatine.—No liquefaction. The growth has a faint yellow tint.

Broth becomes cloudy and a sediment forms. There is no production of indol.

Litmus Milk.—No coagulation. In forty-eight hours a faint lilac taint, and after ten days the litmus becomes a deeper blue.

Potato.—A slightly membranous and elevated growth.

Glucose Agar.—No gas formation. Yellowish-white growth along line of stab spreading slightly in medium and at the surface. In glucose agar containing litmus there is slight reddening.

Agglutination.—For this purpose the patient's serum was taken *post-mortem*. The bacillus isolated from the intestine was clumped in a dilution of 1 in 40 within one hour. A culture of Shiga bacillus obtained from Vienna was also clumped in the same dilution within one hour. Typhoid serum failed to clump the bacillus obtained from the case, and the patient's serum did not clump the typhoid bacillus.

Inoculation Results.—Dr. Hewetson kindly tested the pathogenicity upon guinea-pigs. Two guinea-pigs were used. Animal A: Half an agar slope culture was rubbed into the mucous membrane of the rectum after the latter had been lightly curetted. Result, *nil*. Animal B: A pure broth culture was injected into the peritoneal cavity. The animal looked ill for two or three days, but recovered. After five days its blood was found to agglutinate both the bacillus isolated from the intestine and the Shiga bacillus. The blood of A showed no agglutination, and a pure broth culture was then inoculated subcutaneously under the skin of the abdomen. A swelling appeared at the site of inoculation. After three days the animal was killed and examined. There was a phlegmonous inflammation in the abdominal wall and the peritoneum beneath showed a fibrinous exudation. The bacillus was recovered in pure culture from the pus. The rectum showed intense congestion but no ulceration. The large intestine showed slight congestion but no ulceration, and the other organs were healthy.

COMMENTARY.

From its morphological and cultural reactions and the agglutinative phenomena there can be no doubt that the organism isolated from the large intestine of the case was Shiga's bacillus.

The Shiga bacillus obtained from Vienna was clumped by Dr. Wynn's blood in a dilution of 1 in 20 and the bacillus isolated from the case in a dilution of 1 in 10. It would appear, therefore, that it is necessary to work with dilutions of at least 1 in 30. Kruse pointed out that there was a marked variation in the degree of agglutination between the different strains of dysentery bacilli, and Hewlett (*Trans. Path. Soc.*, 1904) has shown that the blood of cases of dysentery may clump one variety of the bacillus but not another, although the two were indistinguishable

morphologically or culturally. It would appear necessary, therefore, to test the agglutinative powers of the blood of a suspected case with cultures obtained from several sources. In this case we were fortunate in obtaining agglutination with the one strain tested.

Shiga, Flexner, Kruse, and others have reported favourably upon the use of antidysenteric serum, but it appears that beneficial results may only be expected if injections are made within the first few days of the disease. Protective vaccination in man has not passed the experimental stage although the injection of vaccines into animals is followed by active immunity. In the light of Sir A. E. Wright's researches and the success of vaccine therapy in other infections, it would be interesting in future cases to test the opsonic index to the Shiga bacillus with a view to vaccine treatment.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Professor J. T. J. MORRISON, M.Sc., M.B., in the Chair.

Birmingham, Friday, November 29th, 1907.

Ruptured Spleen.—Professor LEITH showed a specimen of ruptured spleen. His remarks were as follows:

Dr. —— wrote me to-day that he was called on Sunday, 24th inst., at 3 p.m., to see a woman, aged 23, whom he found to be in a state of extreme collapse, as the result of, in his opinion, a severe internal abdominal haemorrhage. No history of haematemesis or injury could be elicited. She died at 6 p.m. on the same day. At an autopsy on the 27th inst., he found the abdominal cavity to be full of partly clotted blood. The stomach was healthy, and the spleen alone is mentioned as being abnormal. He found it to be enlarged and to show a rupture of about 1 in. in length on its anterior border, from which the haemorrhage had come. There was no sign of bruising, either of the skin, ribs, or elsewhere. The spleen, which he sent to me for examination, reached me to-day. It weighed 10 oz., was 5½ in. long, 3½ in. broad, and 1½ in. thick. The tissues of the hilum were infiltrated with blood, and about the middle showed a nodular hard mass about the size of a hazel nut. Opposite it, on the lower margin of the organ, the capsule was of a dark-red colour over an irregular area of about ¼ in. in diameter, but not raised above the surface. Some of the venous radicles of the splenic vein issuing from the spleen are detected in the blood of the hilum. They were empty. One or two small arterial twigs are seen, but it is difficult to follow all the venous and arterial branches. No aneurysm can be found. On cutting into the spleen from the hilum, opposite the nodular mass already referred to as lying partly in the hilum and partly in the splenic substance, it is found to be infiltrated with blood over an area nearly an inch thick, running backwards for about 2½ in., and forwards for 1¼ in., to end in the rupture already mentioned. It looks as if the splenic substance had been ploughed up by haemorrhage starting in the hilum. The splenic substance, though soft, probably from *post-mortem* change, looks otherwise healthy. The increased size and weight of the spleen is apparently entirely due to this haemorrhage. Many small vessels, and one large vessel (probably a vein) are full of clot, the large one being very close to, if not continuous with, the above-mentioned nodular mass in the hilum. Two small glands, somewhat enlarged, are also present in the tissues of the hilum. It is not easy to trace the sequence of events which led to the rupture in this case. There is a thrombosis of some of the veins partly outside and partly inside the capsule, with which the haemorrhage into the splenic substance seems connected. It may, therefore, be a haemorrhagic engorgement and infiltration of the splenic tissue drained by these veins, a form of infarct, which burst through the capsule. If so, I have never previously known it occur, nor do I know of any similar case in literature. Rupture of an intracapsular aneurysm might account for the condition, but no trace of this aneurysm can be found. It is a very rare and startling case.

Ischaemic Paralysis.—Mr. FRANK BARNES showed a case of ischaemic paralysis, occurring in a young child who, ten weeks previously, had had a fracture of the lower end of the humerus. To counteract the backward displacement of the lower fragment this had been put up in the completely flexed position of the forearm, with an angular piece of millboard back and front of the elbow. The swelling was considerable and resulted in a pressure sore on the front of the forearm, opposite the elbow joint, and the limb was in this condition when he first saw it. About three weeks or a month later it was noticed that the fingers seemed stiff, and the hand and forearm cold and somewhat congested. The condition now was that the fingers were flexed on the palm and somewhat swollen, the little finger having a small sore (trophic) appearing on it. The muscles of the forearm were hard and the tendons at the wrist as if they were matted. There was practically no movement of the fingers, and the pulse was imperceptible at the wrist. The treatment had been up to the present applications of the battery and massage. He also showed a case of traumatic myositis ossificans, occurring as the result of a fall in a man of 42. When first seen the patient had a very swollen arm from what appeared to be a haematoma on the front and outer side of the lower half of the arm. No fracture of the humerus was to be made out. This swelling to some extent disappeared, but in its place a hard bony substance was deposited, giving the feeling of a bony tumour, casting a shadow with the *x* rays, and appearing to fill up the hollow between the ante-cubital fossa and the belly of the biceps, partly involving this, and appearing more prominent on the outer side. This tumour did not seem to grow, but got harder week by week.

Myxoedema with Symptoms of Graves's Disease.—Dr. EMANUEL showed two cases of myxoedema exhibiting symptoms of Graves's disease, namely, exophthalmos in the first and tachycardia in the second case.

The milder case, a single woman, aged 44, first noticed a great increase in the size of the breasts, and a fullness of the neck and face, of six months' duration. At first she thought she was merely getting unusually stout, but later she began to fear the swelling was due to dropsy. The skin was dry, the hair unaltered, the memory good, and speech unchanged. She was able to carry on her work, that of a domestic servant, but any exertion made her breathless, and if she sat down to rest herself she would fall into a drowsy state. The pulse was slow; the bowels were constipated; there was a definite amount of exophthalmos, and occasionally the sclerotic became visible above the iris when the eyes were lowered; the thyroid was enlarged, and firmer and harder than normal—in fact, the patient herself had noticed a "lump in her throat" for the past three months. Under four weeks' treatment by tabloids of thyroid extract the circumference of the neck had diminished by 1 in. (from 15½ in. to 14½ in.), and that of the chest by 3 in., and there was considerable improvement in her general health.

The second case was a more severe one, and occurred in a widow, aged 49:

Since an attack of influenza a year ago, she had gradually changed from a very thin woman to a very stout one, and instead of her usual bright and cheerful character, was now in a very depressed and melancholic state. Her face had the typical myxoedematous expression, with the bright malar flush. There were prominent supraclavicular pads of fat. The skin was very dry, and the hair was losing its lustre. Her chief symptom was excessive breathlessness on the slightest exertion, and when left to herself she would lie and doze all day long. The weakness was so marked that talking was an exertion, and as she sat her head fell listlessly to one side or the other or forwards on to her chest. She complained, too, of feeling too hot. Cold things felt very cold and warm things so hot that it was very unpleasant for her to touch them. Her pulse varied from 108 to 120 before thyroid extract was administered. There had been little or no improvement after a month's treatment, and the prognosis of the case was regarded as grave.

Aneurysm of Anterior Communicating Artery.—Dr. STANLEY BARNES showed a specimen of this condition.

Trans-sacral Excision of Rectum.—Mr. MORRISON showed: (1) A man, aged 56, upon whom he had operated at the Queen's Hospital on April 17th, 1907, for carcinoma recti by the sacral route, the anus being left intact; 5 in. of gut were resected, and the peritoneal wound having been closed, the divided ends of the bowel were directly united with silk sutures, free drainage being provided for posteriorly by tubing and gauze. The junction of bowel yielded at the back part, leaving a faecal fistula, which closed after some weeks. He was discharged on June 1st, and has since resumed work. At the present time he is in excellent health, has good control over defaecation, and is able to correct the tendency to contraction around the line of sutures by the occasional passage of a large bougie. (2) A woman, aged 41, upon whom he had performed a similar operation on October 2nd, 1907, removing 6 in. of gut and a mass of infected glands. In this case also a faecal fistula formed, but this was now nearly closed, and apart from

the slight leakage, she has good control over defaecation. Prior to the operation this patient had wasted from 15 st. down to 10 st. in a few months. She is now steadily regaining weight and strength.

Sciatica Cured by Nerve-stretching under Lumbar Anaesthesia.—Mr. MORRISON read a note on the case of a charwoman, aged 45, upon whom he had operated on October 9th, 1907, for severe sciatica of eight months' duration. The disease had totally disabled her from work, and the neuralgic pain had become so intense that she feared she would become insane. Other treatment having failed to give more than transient relief, tropacocaine (1 c.cm. of a 5 per cent. solution) was injected into the dural sac in the lumbar region, the nerve exposed by incision at the lower border of the gluteus maximus, and forcibly stretched with the finger. The disease was thereby abruptly cured, and there has not been the slightest recurrence of pain.

Card Specimens.—The following were shown: (1) Thyroid cyst from unobliterated portion of the thyroglossal duct; (2) keratin cell-nest from infected gland in Scarpa's triangle secondary to epithelioma scroti. These specimens were prepared by Dr. L. Mackey, Pathologist to the Queen's Hospital, from cases operated upon by Mr. Morrison.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, December 6th, 1907.

Dr. A. R. PARSONS in the Chair.

DIPHTHERITIC FEVER.

SIR JOHN MOORE gave details of an outbreak of sore throat, to which he gave the name diphtheritic fever, which came under his observation in a large girls' school in Dublin during the autumn of 1906. Bacteriological examination proved the outbreak to be due to an infection with a form of Klebs-Loeffler *Bacillus diphtheriae*, but the resulting illness failed to present the typical features of classical diphtheria. From October 2nd, 1906, to November 11th 18 out of a total of 43 girls in the school were attacked, that is, 41·9 per cent. There were five distinct outbreaks. In the first, one girl sickened on October 2nd; in the second, one girl sickened on October 10th; in the third, nine girls sickened, two on October 19th, two on October 21st, two on the 22nd, two on the 23rd, and one on the 24th; in the fourth, five girls were attacked, one on October 28th, two on October 29th, one on November 1st, and one on November 2nd; in the fifth, three girls were seized, one on November 7th (for the second time), one on November 8th, and one on November 11th. There were two sequels—(1) Diphtheria was carried home to the country in two instances by the girls when, nearly two months after their illness, the school broke up for the Christmas holidays. (2) Nearly twelve months afterwards a little epidemic of a precisely similar nature occurred in the school. The patients in these outbreaks presented the following symptoms: (1) A more or less severe coryza; (2) a moderate tonsillitis, usually one-sided, and unattended by high fever or by much exudation; (3) thickly coated tongue and foul breath, the tongue desquamating as in scarlatina; (4) a patchy or punctate rash on the roof of the mouth and buccal mucous membrane; (5) swelling of the cervical lymphatic glands; (6) a roseolar rash on the skin (in 12 out of 18 cases—in 4 cases early in the attack; in 8 cases on the fifth to the seventh day from the first symptoms, or invasion); (7) distinct desquamation (in 3 cases), the peeling being particularly marked on the hands.

Dr. KIRKPATRICK said that sometimes ten or eleven recruits came into Steevens's Hospital in one day from the Constabulary Dépôt, complaining of symptoms resembling those described by Sir John Moore. They usually got well in a short time. In no case had there been any suspicion of membrane, and bacteriological examination showed no trace of the diphtheria bacillus in many cases. The organism in the majority of cases was some form of coccus. The condition was looked upon as an epidemic of catarrh, and in no case had been seen the roseolar rash, or the cervical glands materially enlarged.

Dr. DAY said it was not necessary to have a membrane to diagnose diphtheria. He had pointed out in a paper some years ago that cases having soft tonsils, coated tongue, and enlarged glands had given the diphtheria bacillus on a swab. Diphtheria was much commoner in the city than people supposed, and there were two main predisposing causes—bad teeth and constipation. The latter would explain the outbreak after the holidays. He thought the only way to get people free from the diphtheria bacillus was to give them change of air and occasional injections of, say, 900 units of antitoxin prior to discharge from hospital. Since the antitoxin treatment had come in, paralysis had been postponed. It was necessary to swab cases before applying any antiseptic treatment to the throat, and it was also more advisable to touch the red injected parts than to swab whatever membrane was seen. If there was nasal discharge it was preferable to swab it than the throat.

Professor WHITE said it was well to remember that the diphtheria bacilli were exceedingly susceptible to desiccation; they died more quickly than any organism of the same degree of virulence that he knew. Hence, in most cases that were swabbed in the membrane, it was possible that they got little away except some dry necrotic material which might contain bacilli alive and capable of reproducing themselves, but which would have died in a few hours because there was probably no moisture put in the swab. That might be the explanation of negative results of swabs taken from cases of severe diphtheria.

Dr. BOXWELL said he would like to exonerate Sir John Moore and Professor White for the use of the word "attenuated" in his report. It was he, Dr. Boxwell, who had used it simply to describe a type of organism which he had often found in mild cases of sore throat. It was somewhat smaller than the typical bacillus, and in appearance like what was described as Hoffmann's bacillus. Not knowing whether it was the real diphtheria organism or not, he had called it an attenuated form.

The CHAIRMAN instanced an outbreak at a school in which definite membrane appeared in some cases. It was pronounced to be undoubted diphtheria. One boy admitted having had a slight sore throat at home during the preceding holidays. On examination, diphtheria bacilli were isolated. His own practice was to have a culture made in cases of follicular tonsillitis. He would like to know if, in any of the cases which developed in the country afterwards, there was a bacteriological examination.

Sir JOHN MOORE, in reply, said that constipation was very prevalent at the time of the outbreak of diphtheria. The toilet of the mouth was carefully attended to from the outset. He had found quinine to be a powerful disinfectant of the mouth. In nearly all cases the rash appeared before the antitoxin was injected. Although Dr. Boxwell had used the term "attenuated," he submitted that the country cases which followed were perfectly conclusive as to the infecting organism.

ROYAL SOCIETY OF MEDICINE.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

AT a meeting on December 17th, 1907, Dr JAMES MACKENZIE, in a paper on the action of digitalis in cardiac disease, said the results of animal experiments must be accepted with caution. In man the effect of digitalis was entirely dependent upon the particular lesion. If dilatation was absent, and if the tonicity of the heart was preserved, then no good resulted from the use of digitalis. If the heart was of normal size, dropsy was not of cardiac origin. The irregular pulse of mitral disease was to be explained by the observation that there was a ventricular inception of the heart beat. Professor CUSHNY said that the difficulty of the subject was very great; even in experimental work, with the same dose of digitalis, given in the same way to the same animal, the results varied widely from time to time. Dr. CAMERON asked whether Dr. Mackenzie's work had led him to form any opinion as to the rapidity with which digitalis acted. Dr. MACKENZIE in reply stated that as a rule the characteristic changes in tracings due to digitalis did not become apparent for about ten days. Dr. SOPER read a paper dealing with reminiscences of an apprentice fifty years ago. The system of apprenticeship, he maintained, had many advantages.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 19th, 1907, Dr. R. GORDON in the chair, the following were among the exhibits:—Professor J. M. BEATTIE: Specimens from cases of delayed chloroform poisoning; haemochromatosis of liver in "bronzed diabetes"; a lung full of "sand," which the microsection showed to be due to calcified corpora amylacea; and section of liver from a case of argyria showing silver deposit. Dr. ARTHUR HALL: Specimens of haemorrhage into the cerebellum and cerebrum due to purpura haemorrhagica. Dr. W. HARWOOD NUTT: Skiagram of a child, showing absence of cervical vertebrae. Dr. PERCIVAL HAY: An equatorial staphyloma of the sclera; a primary glioma of the optic nerve; and hydrophthalmos due to ophthalmia neonatorum. Mr. MILES PHILLIPS: Specimens showing "red degeneration" of a fibroid during pregnancy. Dr. F. H. WADDY: A six-months hydrocephalic fetus, with deficiency in the fingers of one hand, possibly due to intrauterine amputation.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 13th, 1907, Dr. L.W. MARSHALL, President, in the chair, Dr. THOMSON HENDERSON gave a lantern demonstration illustrating some of his recent work on the *Anatomy and pathology of the eye*. He pointed out that the unity of pathological processes throughout the body was an important fact, and pathological conditions in the eye obeyed the same laws that applied elsewhere. The only clinical or pathological differences observable resulted from the anatomical conditions peculiar to the eye as a special sense organ. After describing in detail the anatomy of the angle of the anterior chamber and the formation of the aqueous by the ciliary body, it was demonstrated how the fluid drained away by Schlemm's canal assisted by the iris. By means of crypts on its surface the latter allowed the aqueous fluid to penetrate its stroma and so come into direct contact with the iris veins. When the pupil contracted these crypts were widely open, but when it dilated these openings were closed and outflow by way of the iris prevented. After demonstrating the venous connexions of Schlemm's canal, Dr. Henderson discussed their bearing on glaucoma. He stated that the open network or cribriform ligament on the inner side of the venous sinus of Schlemm's canal became thickened in this disease, so that the interspaces were reduced and free outflow of the aqueous hindered and intraocular tension raised. This thickening was a physiological process going on throughout life, and only in its results was the effect pathological. In virtue of its crypts the iris was an absorbing surface, and the operation of iridectomy produced a large crypt, namely, three sides of a square, through which the aqueous readily escaped as the cut surface of the normal iris never healed. The reason for this apparently startling fact was clear when one considered that cicatrization was a protective process, resulting from the reaction of the cells of a tissue to irritation or to altered conditions of life. As a successful iridectomy did not alter the relation of the severed tissue-cells to their immediate surroundings, but left them still bathed by the aqueous, no stimulus was imparted to them to cause them to lay down a dense and protective layer. The iris tissue thus remained unaltered and presented a large raw surface by means of which the aqueous could readily drain away, provided the operation was done before atrophy and damage to its structure had proceeded too far.

LIVERPOOL MEDICAL INSTITUTION.—At a pathological meeting on December 12th, 1907, Mr. FRANK PAUL, President, in the chair, Dr. STOPFORD TAYLOR and Dr. F. C. WILSON showed a specimen from a case of *Enchondroma cutis*, the patient being a female child aged 3 months. The mother had had a haemorrhage during pregnancy, and had been delivered a month before full time. When the child was about 5 months old the mother noticed a bluish stain on the inner side of the left leg just above the knee. This gradually developed into a hard plate. Similar plates subsequently appeared in the skin of other parts of the body. The specimen shown was taken from a plate over the right costal arch. It was so calcified in parts that a considerable effort was required to cut through it with the scalpel. A microscopical examination showed that the epidermis was normal. The corium was somewhat thickened, and contained sweat glands with rudimentary hair follicles. In the deepest part of the corium were large irregular blocks of cartilage containing small cartilage cells, and fenestrated here and there by spaces filled with a vascular connective tissue. In parts the cartilage seemed to merge indefinitely with the fibrous tissue of the corium. It was pointed out that there were present in the case an exceptional number of new growths, and that clinically the disease was one of cartilaginous plates embedded in the corium at various depths, and that in one plaque, on the outside of the left thigh, distinct ossific spicules could be seen and felt, stretching the epidermis. Dr. R. W. MACKENNA said that the plaques were distinctly cartilaginous, but were undergoing ossification. The condition was an extremely rare one, and he had only been able to find one similar case in literature; it was associated with fragilitas ossium, and ultimately degenerated into sarcoma. Dr. F. H. BARENDT believed the growth to have originated in the subcutaneous tissue and to have grown into the cutis vera. The fact that the corium was implicated in the growing ends supported this view, as well as the islets of sweat glands and adipose tissue embraced by the tumour. It appeared to him bony in nature, and there were distinct appearances of attempts at a Haversian system. Other portions of the section no doubt favoured the cartilaginous view which Dr. Wilson and others held. Possibly dislocation of temporary cartilage during the development of the bones was the primary source of this rare condition and subsequent ossification. Dr. NATHAN RAW showed a specimen of *Carcinoma* of both suprarenal glands and of the root of the left lung. Dr. GULLAN considered the specimen of importance, because, although the suprarenals had been almost completely replaced by new growth, the patient had not shown symptoms or manifestations of Addison's disease. The case thus supported the view that Addison's disease was the result of tuberculous lesions of the suprarenal and their sequelae, and was not due to other pathological affections of the organ. Dr. BRADSHAW said that in the case of a patient with malignant disease it was not an easy matter to determine whether the symptoms of Addison's disease were present or not. Pigmentation was not a constant symptom in Addison's disease, and the other symptoms of that condition—asthenia and gastric irritability—if they were met with in a patient known to be suffering from malignant disease in any part of the body would probably be looked on as symptomatic of the cancer, and not as due to the involvement of the suprarenal bodies. Dr. DAVID MORGAN (1) read a note on *Plastic Roentgenography* and showed several photographs and lantern slides of this new method. He described fully the method of producing the plastic effect the discovery of which is due to Dr. Béla Alexander of Kesmark, Hungary. (2) Demonstrated the method of inflation of the bladder with oxygen for the purpose of diagnosis in vesical trouble, and showed a photograph of stone in the bladder obtained by this method. The radiograph displayed the structure of the stone and the outlines of the bladder with remarkable distinctness. The author considered the oxygen inflation of great value in elucidating obscure affections of the bladder, because owing to the transparency of the medium any irregularity of the vesical mucosa would be readily discernible.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting on December 17th, 1907, Dr. H. R. HUTTON, President, in the chair, the following were among the exhibits:—Mr. STANMORE BISHOP: Four cases of *Gastro-enterostomy*. Two of the operations had been performed for gastric ulcer, one for duodenal ulcer, and one for hyperchlorhydria. One of these cases was that of a young woman who, at the time of operation, was much emaciated from constant vomiting and loss of blood. After operation all symptoms disappeared, and she gained 3 st. in weight in four months. In another symptoms of perforation had been noted a month previously. When the abdomen was opened the omentum was found adherent to a thickened ulcer in the anterior wall of the stomach. Posterior gastro-enterostomy was done, and the patient lost all previous symptoms, and rapidly increased in weight. Dr. G. H. LANCASHIRE: (1) A case of hereditary syphilis in a girl of fourteen, rapidly responding to 5-grain doses of potassium iodide. (2) A case of *Molluscum contagiosum*. The back had been covered with an enormous number of

lesions. Cure had been effected within a fortnight by expressing the tumour contents and rubbing in a 40 per cent. resorcin ointment. Dr. KNOWLES RENSHAW: (1) A case of *Laryngeal papilloma* in a woman, aged 30. She had suffered from hoarseness for three years; there had been no cough nor discomfort; during the last year the hoarseness had not been so noticeable. On examination a small pedunculated growth was seen arising from the lower surface of the right cord, at the junction of the anterior and middle third. On phonation the growth rose above the cords. The improvement in the voice which had latterly occurred was due no doubt to the increase in length of the pedicle, which allowed the free movement of the growth. (2) A case of *Ethmoiditis* and ulceration of septum of the nose in a woman, aged 32, who had complained of obstruction of right nostril and swelling over the right nasal bone, which she attributed to a blow on the nose eight months since. There was a large amount of infiltration in the ethmoidal region, the middle turbinal bone being especially thickened. Over the septal cartilage was a shallow irregular ulcer, on the anterior edge of which were several small masses of granulation tissue. Although no definite history could be obtained, the general appearance was strongly suggestive of specific disease. (3) A case of *Chorditis tuberosa*, in a woman, aged 25, who had overstrained her voice by talking amid loud machinery. The node on the left cord was much larger than that on the right, and was semi-translucent, having the appearance of a small myxoma.

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting on December 11th, 1907, Dr. A. D. ROE, President, in the chair, Dr. HECTOR MACKENZIE, in a paper on the treatment of pneumonia and its complications, after defining pneumonia as a local infection of the lung by the pneumococcus accompanied or followed by the entrance of the micro-organism into the blood-stream, emphasized the importance of an abundant supply of fresh air in the treatment of all cases. In the past there had been three main forms of treatment, each of which had been successful in a measure—bleeding, brandy, and the expectant treatment. The use of alcohol as a routine treatment was diminishing, but there were cases, especially among the old, where alcohol was of great benefit. Though bleeding was now out of fashion, it was indicated in cases of marked cyanosis with cardiac dilatation; leeches, a dozen or more, might be employed in its place. Where there was prune-juice expectoration indicating oedema of the lungs and a watery condition of the blood, calcium chloride should be given; in other conditions the citrates were generally beneficial. Oxygen had been much administered and greatly overrated, but it did no harm if no good. As to local applications, the lecturer preferred hot to cold for the relief of pain. Sleeplessness was best met by veronal or trional. There was no evidence that any good result had been so far obtained from serum treatment. The vaccine treatment was more encouraging, but there was much work to be done before any definite conclusion could be reached.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on December 10th, 1907, Dr. HELEN BOYLE in the chair, Miss GARRETT ANDERSON read a further report on a case of sarcoma of intestine. The primary growth was removed two years ago. Numerous enlarged mesenteric glands were present. During a laparotomy recently performed (on account of chronic diarrhoea which was thought to be suggestive of recurrence of growth) it was ascertained that there was no recurrence, and that the enlargement of the glands had completely subsided. The cause of the diarrhoea was not ascertained.—Miss BLAIR reported a case of vesicular mole removed from a uterus the size of a four and a half months pregnancy. There had been amenorrhoea for ten months, but no other sign of pregnancy. No further symptoms developed after curetting, but the patient was being kept under observation.—MRS. SCHARLIEB, in a paper dealing with the attitude of medical women to the social life of the nation, laid stress on the point that women should receive the same remuneration as men for doing the same work, and then referred to the work done by medical women as school inspectors or as health visitors. In the latter capacity they gave instruction to the young expectant mother, and did much to reduce infantile mortality. They should endeavour to secure a pure and adequate milk supply, and to teach their poorer patients how to prepare and store milk in their homes. Medical women were often asked advice with regard to the limitation of families by artificial methods. This meant social suicide, and was injurious to the health of the woman. The speaker urged that self-denial in married life was the only suitable mode of limitation. The questions of the care of girls of the factory class after leaving school, and of the harm done by the abuse of physical exercise by girls, were also dealt with. Miss DE STEIGER emphasized the desirability of keeping under control girls belonging to the class of moral imbeciles. MRS. DICKENSON BERRY and others raised the question whether artificial prevention of pregnancy was justifiable where the younger children already born were delicate, or where the mother's health unfitted her for further child-bearing, or where husband or wife had been insane or existing children were imbecile.

REVIEWS.

THE PREVENTION OF INFECTIOUS DISEASES.

IT is curious how few books having in them anything of the personality of the author have been written in the department of public health. Of textbooks on the subject there are many, but of books written about the subject, telling something of what the author himself thinks and why, we can recall only Sir John Simon's *English Sanitary Institutions* and the memorials of Dr. Russell of Glasgow. Now Dr. J. C. MCVAIL presents us with his opinions upon many vexed questions in the volume to which he has given the title *The Prevention of Infectious Diseases*.[1] It consists of the ten Lane lectures delivered at Cooper Medical College, San Francisco, but the original text has been carefully revised, and the finished work will appeal not only to the specialist but also to every one, whether medical or non-medical, who takes an intelligent interest in public health administration, and would like to know what a past master of the art has to say about it.

As Dr. McVail was addressing an American audience he was free to state some elementary facts which his politeness might have induced him to assume that every citizen of these Isles knew well already, but with regard to which a good many of us are in a condition of hazy half-knowledge. The first lecture deals with public health organization in Britain, and Dr. McVail has some incidental observations to make in which important expressions of opinion are implied. For example, he lays it down that for the most successful kind of public health administration the main requirements are:

> Sufficiently large sanitary areas; whole-time health officials; security of tenure of such officials; the possession of diplomas in public health by medical officers: and sufficient control of the inspectorial staff by the medical officer. I do not say that no success is obtainable where some of these conditions are absent, or that the greatest success is invariably achieved where all these conditions are present, but I do say that, taking a broad view of the facts, these are the conditions best calculated to yield the best results.

At the very beginning of his lectures he combated the fallacy rooted, as he asserted, in the public mind, that sanitation is restricted to the prevention of infectious diseases, and that it is very effective in preventing all diseases of this class. He stated that while on the one hand sanitation was useful quite outside the region of epidemic infection, had a good influence on all the ills that affect the human frame, and served to prolong life quite independently of checking the prevalence of infectious disease, yet, on the other hand, since each preventable disease requires special preventive measures, in the case of those diseases as to which it was not yet known what these measures ought to be, sanitation had "not been very successful in controlling the spread of the disease."

We turn, therefore, with some curiosity to learn what Dr. McVail has to say about measles and whooping-cough. We find that he has nothing to say about whooping-

[1] *The Prevention of Infectious Diseases.* Being the Lane Lectures delivered at Cooper Medical College, San Francisco, in August, 1906. London: Macmillan and Co., Limited. 1907. (Demy 8vo, pp. 306. 8s. 6d.)

cough, because, as he tells us in the preface, it hardly yet comes within the category of those infectious diseases "whose control is more or less thoroughly attempted by public health authorities." This is logical, but a little disappointing. On the other hand, he has a good deal to say about measles, starting off with the confession that it is "a malady towards the diminution of whose prevalence sanitation has been practically powerless." After pointing out that it is a disease of high mortality but low fatality—that is to say, that the high mortality is due not to a high ratio of deaths in a few cases, but to a low ratio among a very large number of cases—he discusses the causes of the sanitarian's failure, putting first, of course, the great infectivity of measles in the earliest stage, from which fact flows the uselessness of notification and hospitalization. He notices the fact, so well established by statistics, but so commonly ignored by the public, that the disease is far more fatal to young children than to those over 5 years of age, and gives a concrete example which we will venture to quote:

In London schools it is found that 75 per cent. of children 5 years old have already had measles. The 75 per cent. are those who have recovered from a disease which has already killed 10 to 20 per cent. of their brothers and sisters under 3 years old, and about 5 per cent. of those who were in their fourth year. But if these children had not been attacked until they had reached the age period 5–10 years, only 1 per cent. would have been slain, and if the attack had been deferred until they were over 10 years old, practically all would have recovered.

He therefore goes on to consider the influence of the elementary schools, and justly says that the figures of age fatality of measles emphasize the lesson that "very young children should not be sent to school." Where needful in the interests of working mothers he would have public nurseries established, but he does not say how the dissemination of measles, and other infectious diseases common in early childhood, among the infants and young children frequenting them is to be prevented. He speaks in justifiably strong terms about the inadequate ventilation of schools, and recommends artificial ventilation, though not without a certain obvious regret as to the acceptance of an unpalatable proposition. As to school closure, he says: "If a first case has been present, say, in the infant department, red-eyed and sneezing, that first case is an indication for closure of the department." All the children infected by this first case will show signs of the disease within fourteen days, so that the department need only be closed for fifteen days, provided, Dr. McVail implies—though he does not say it as clearly as he might—that the children as they come back are carefully inspected.

It will not be necessary to follow the author so closely through his other lectures, for what has been said of the lecture on measles will show that he does not shirk awkward questions, but rather fastens attention upon them to the avoidance of commonplace. The lecture on small-pox contains an admirably brief statement of the value of vaccination and the uses of hospitals, while the last lecture, on tuberculosis, contains a discussion of the precautions which should be taken in abattoirs and dairies, in the home, and in sanatoriums. The volume is well illustrated by maps, plans, drawings, and photographs. It is written from the fullness of expert knowledge, but is free from the faults of most books by experts. The author not only sees clearly the wide extent of his domain but sees clearly also its limits.

THE MICROSCOPE: CHOICE AND USE.

IN writing his book upon *Microscopy*,[2] Dr. E. J. SPITTA appears to have had several objects in view. In the interests of the amateur, he has endeavoured to explain the use, construction, and theory of the microscope in the simplest possible terms, without presupposing any previous acquaintance with the subject. Then he has much to say which will particularly engage the attention of that special class of enthusiasts, the "microscopists," who love the microscope for its own sake and delight in intricate arguments concerning the significance of numerical aperture, the advantages of apochromatic condensers, and, in general, the practical application to microscopy of what physical scientists have to tell us about the theory of light and vision. Dr. Spitta also desires to make his book useful to many classes of men who regard the microscope merely as an instrument subservient to the particular occupation in which they are engaged, such as medicine, botany, brewing, bacteriology, or petrology. The natural consequence is that the book, being designed to meet this diversity of requirements, makes somewhat diffuse and polymorphous reading. In the pages specially devoted to the selection of a microscope for medical purposes the author lays much stress on the importance of obtaining an instrument by means of which we can examine the contents of a Petrie dish; and for this purpose it is essential, as he says, to make allowance for the extra length of arm required by the instrument in order to hold the tube farther from the body. He also recommends, for the same reason, that the medical microscope should have a very large stage. "Its dimensions should never be less than 6 in. square, and larger would be of greater convenience still." These are useful considerations, but we think Dr. Spitta exaggerates their importance. "It is a subject of regret," he says, "that manufacturers do not grasp this necessity, and we very earnestly call their attention to it, for in some of the stands we are recommending now the stages are far too small." Probably the manufacturer has found by experience that the majority of his medical customers do not usually select their microscope with a view to the ideal requirements of the Petrie dish, but consider a microscope with a very large stage inconvenient for ordinary pathological work with medium and high powers. In the advice to the medical student on the choice of his objectives, we find no mention of a very important subject in clinical pathology, the counting of blood corpuscles. This is an omission which ought to be rectified, as much disappointment is frequently caused by the discovery that a medium power lens has been purchased which has not a sufficiently large working distance to penetrate the thick cover-slip of the counting chamber. But, though not altogether satisfactory in the special department of medical microscopy, Dr. Spitta has written a thoroughly interesting book on the structure and technical employment of his favourite instrument. The work has the genuine flavour of the expert microscopist and is made particularly attractive by the introduction of many exceptionally good microphotographs.

HYPNOTISM.

DR. TUCKEY, the President of the recently formed Medical Society for the Study of Suggestive Therapeutics, in this the fifth edition of his book, entitled *Treatment by Hypnotism and Suggestion*,[3] brings the subject matter up to date. Dr. Tuckey is an exponent of the Nancy School, whose teaching under the hands of Liébault, Bernheim, and others has done so much to put the phenomena of suggestion on a rational basis, to cut away the fanciful excrescences produced by a belief in mysterious influences passing from the operator to the subject, and to define the practical utility of treatment by suggestion. There can be no question to-day that hypnotism is a reality, but in this country at least it is still looked at askance by the majority of medical practitioners as of doubtful value and possible danger. As a general guide to those seeking information on the practical side this readable volume may be recommended. As to the possible danger of its employment for criminal purposes Dr. Tuckey states that as hypnotism acts chiefly "by immensely increasing the capacity for receiving, and the desire to act upon suggestion," therefore in precisely the same way that it is used to re-enforce favourable tendencies—as, for example, the desire to get rid of alcohol or morphine habits—it may be employed to strengthen evil impulses; that is, that whilst it would be vain to make criminal suggestions to the disciplined man, it would be an easy task to corrupt the naturally weak and evil-disposed. Nevertheless, he states that there is hardly one authenticated case of its being used for a criminal purpose in the countries where it is most frequently practised by medical men. There is one point of which we feel bound to take notice. Dr. Tuckey says on

[2] *Microscopy: The Construction, Theory, and Use of the Microscope.* By Edmund J. Spitta, L.R.C.P., M.R.C.S., etc. London: John Murray. 1907. (Medium 8vo, pp. 488, with 47 half-tone reproductions from original negatives and 241 text illustrations. 12s. 6d.)

[3] *Treatment by Hypnotism and Suggestion, or Psycho-Therapeutics.* By C. Lloyd Tuckey, M.D.Aberd. Fifth edition. With an introductory chapter by Sir Francis R. Cruise, M.D., D.L., K.S.G. London: Baillière, Tindall and Cox. 1907. (Demy 8vo, pp. 446. 10s. 6d.).

p. 404 that certain experiments "seem to show that under special circumstances and in rare instances a subject who has been hypnotized a great number of times by the same operator may be sent to sleep *by the hypnotizer exerting his will from a distance*" The italics are our own. Dr. Tuckey says he has come to this conclusion with extreme unwillingness, a reluctance which we can understand, for the possibility of such an occurrence is entirely inconsistent with the author's expressed opinion as to the nature of hypnotism and the whole tenor of his book.

In the book just referred to hypnotic suggestion is advocated, not as a supplanter of ordinary medical treatment, but merely as an auxiliary in combating many forms of disease not readily reached by other means, and from the list of affections successfully treated by the author we see that these are never actual organic diseases, but either neuro-psychic disorders or the neuro-psychic accompaniments of organic disease. A book permeated by very different conceptions of hypnotism, and consequently as to the cases in which hypnotic treatment is indicated, is furnished by Dr. PAUL JOIRE,[4] for whom—every part of the organism being under the dominance of the nervous system, and hypnotic suggestion acting upon all nervous centres—every function of the body, and in consequence every bodily disorder, functional or organic, may be successfully treated by suggestion. Further, for Dr. Tuckey, as for that redoubtable opponent of modern witchcraft, Mr. Ernest Hart, hypnotism is a subjective clinical reality; but for Professor Joire it is that and much more, it is a state in which mental transference—or, to use the modern jargon, telepathy—is an ascertained and integral part. This is evident from the very beginning of his book, where he not only, with Charcot, recognizes (1) lethargy, (2) catalepsy, and (3) somnambulism—stages, by the way, which Dr. Tuckey has completely failed to find in his somnambulistic patients—but adds two more states—namely, (4) *état médianique passif*, and (5) *état médianique actif*. These last two are revivals of the occult. In the *état médianique passif* the author states that he has been able to prove the transmission of thought and mental suggestion; that is, the state being brought about by means which he describes, he claims to be able by his own mental exertion to attract the subjects blindfolded to himself in whatever part of the room he places himself, precautions being taken to prevent their knowing where he is, and without contact with the subjects to direct their movements—for example, in following exactly the course of an irregular line traced upon the floor, of which course the blindfolded subjects are entirely ignorant. These results are, however, insignificant when compared with those of the active state. In this state, which the author admits to be very rare, (1) the hypnotized subjects may affect the persons in their *entourage* in such a way that they may have feelings of attraction, or of repulsion, or of contact *à distance*; (2) the inanimate objects which surround them at a distance more or less considerable may be attracted or repelled; and (3) the hypnotized subject may act upon surrounding persons in such a way as to provoke in them mental suggestions amounting in certain cases to veritable hallucinations. Professor Joire is thus an exponent of the "fluid theory" of hypnotism, of the "exteriorization of force," the force in question being neither sound, nor light, nor electricity. He thinks that he has actually demonstrated and measured this force by an instrument called a sthenometer. We may state, however, for the guidance of possible experimenters that this exteriorized force may be stored up in wood, in water enclosed in vessels, but not in tin, or iron, or cotton! Notwithstanding all this fanfaronade the book is interesting, and contains many excellent clinical descriptions of classical hypnotic states.

VOICE TRAINING.

DR. WESLEY MILLS's book on *Voice Production*[5] sets us thinking over a problem which comes up periodically for consideration, and, it must be admitted, without any very material progress being made towards its solution. The importance of the subject, whether viewed from the intellectual or from the hygienic standpoint, it would be difficult to overstate. As far back as 1893 the British Medical Association did not fail to recognize the need for more scientific attention to the training of voice and speech, both for the young and for adults. The Council of the Association at that time, acting on the suggestion of the Section of Laryngology at the Annual Meeting held at Nottingham in the previous year (vide BRITISH MEDICAL JOURNAL, vol. ii, 1892, p. 304), caused a memorial on voice training to be forwarded to the public schools, the universities, and other public bodies interested in the question. The memorial pointed out that for some years past it had been a matter of common observation among those of the medical profession who practised in diseases of the throat that clergymen, persons engaged in teaching, barristers, singers, etc., were frequently disabled from following their vocation by affections of the throat which were due to improper use of the voice, and that even those with strong throats were not proof against the evils produced by this cause; while those whose throats were naturally weak performed their daily work under a constant strain and the fear of breaking down. The memorial went on to state—and this is important in the light thrown on the subject by the book before us—that inquiry and observation had taught those who were interested in such matters that a large number of teachers of singing were not themselves acquainted with the best methods of using the voice, and were therefore not able to impart it to their pupils. The memorial concluded by drawing attention to the distress occasioned by the lack of proper instruction and to the valuable time and suffering that might be spared by devising a remedy for what appeared to be a grave defect in the education of our youth of both sexes.

Unfortunately difficulties have stood in the way of devising such a remedy. Many tendencies of the present day, as Dr. Wesley Mills points out, work against successful voice training—namely, the spirit of haste, the desire to reach ends by short cuts, the aim to substitute tricky for straightforward vocalization. Not the least amongst the difficulties to be contended against, in our opinion, must be numbered the multiplicity of methods of teaching voice production and the diversity of opinions as to which of these is the correct one. The controversies which have arisen from time to time on the teaching of the subject appear to have this in common: that the assertions made by either party are not based on scientific facts of the structure and workings of the mechanism employed. This lack of scientific knowledge has undoubtedly been responsible for a considerable amount of dogmatism and confusion of thought in the terminology alone. The present work is a valuable asset against this deficiency.

The author modestly states that the book is based on a life-study of the voice, and has grown out of the conviction that all teaching and learning in voice culture, whether for singing or speaking, should as far as possible rest on a scientific foundation. It is all this and more. It is from the pen of a physiologist and laryngologist who can correctly apply the fundamental principles which these sciences teach to the art he loves and which he has made a life-study.

Here and there, perhaps, are passages which, possibly through not being more fully explained in a manual, lend themselves to criticism. To dwell upon these with so much before us that is good would be meticulous if not ungracious. The book should go a long way towards bringing about a much-needed reform in voice training, more particularly needed in the training of the speaking voice, which, in the words of Sir Morell Mackenzie, may almost be called one of the lost arts.

Mr. CHARLES LUNN's book on the *Philosophy of Voice*[6] may be conveniently noticed here. It has now reached its tenth edition, and is based upon the relationship of mind and body; results founded on this relationship, in the opinion of the author, are reached in far less time, with greater certitude, than by the usual unphilosophical and tentative methods in vogue. Much new matter has been added to the present edition of interest to the vocalist and to the physician. The first chapter in the book is

[4] *Traité de l'hypnotisme, expérimental et thérapeutique.* By Dr. Paul Joire. Professor of the Psycho-physiological Institute of Paris. Paris: Vigot Frères. 1908. (Post 8vo, pp. 458 Figures 44. Fr. 4.)

[5] *Voice Production in Singing and Speaking, Based on Scientific Principles.* By Wesley Mills, M.A., M.D., F.R.S.C. London: J. Curwen and Sons, Ltd. (Demy 8vo, pp. 301. 7s. 6d. net.)

[6] *The Philosophy of Voice, showing the Right and Wrong Action of Voice in Speech and Song, with Laws for Self-culture.* By Charles Lunn. Tenth Standard) edition. London: Baillière, Tindall and Cox. 1906. Demy 8vo, pp. 227. 6s.)

entitled "The reign of anarchy," from which we may perhaps be permitted to quote the opening paragraph in support of what we have already said on voice production:

Everyone must admit that in voice-production the reign of anarchy has been reached—*Quot homines, tot sententiae.* There is no uniformity of thought nor acceptance of first principles; it is, therefore, our first step to investigate the state of affairs, and show the need of scientific uniformity.

The reference, in a footnote in the chapter on oratory, to a disease which has come to be known as "School Board laryngitis," is in itself convincing evidence, if such be required, of the necessity for correcting faulty methods of voice-production.

TREATMENT BY ARTIFICIAL HYPERAEMIA.

So much interest has been shown in the method of treatment by hyperaemia instituted by Professor Bier of Bonn, respecting which we have received inquiries from more than one correspondent, that we welcome the appearance of a French translation of Dr. SCHMIEDEN'S pamphlet[7] giving instructions for carrying out the method. The translation has been made by Mme. FORTOUL, and Professor TUFFIER has written a preface. As Dr. Schmieden is the surgeon in charge of the University wards at Bonn, no one is in a better position to explain the methods followed by Professor Bier; and although there is little doubt that actual experience alone can teach the beginner how to carry out successfully the various procedures, yet he will receive valuable assistance from the information given by Dr. Schmieden. The cases for which the treatment is said to be especially fitted are acute suppurations, abscesses, diseases of joints, boils and carbuncles, and rheumatic and neuralgic affections. We hope that a method which has been spoken of in Germany in terms of almost extravagant laudation will not fail to receive a proper trial in this country from those who are in a position to test its value.

NOTES ON BOOKS.

THE volume[8] recording the *Transactions of the American Laryngological Association* at its twenty-ninth annual meeting at Washington, in May, 1907, includes some twenty-four papers and several interesting discussions. In one paper, dealing with massage of the larynx, is figured an instrument for this purpose which was devised and used, on his own initiative, by a well-known American actor, famous for his powerful flexible voice. The author, however, indicates reason to believe that an English admiral, *mirabile dictu*, was the first, about a century ago, to suggest massage of the mouth and throat, and to urge its use as a prophylactic and curative treatment. From another paper, dealing with the difficulties of asepsis in consulting room practice, laryngologic and other readers may perhaps gain a useful hint. One of those who contributed to the discussion mentioned that his practice was to keep on hand a number of sheets of ordinary window glass, one of which his nurse-assistant held between himself and the patient during instrumental procedures. Another useful paper and discussion deals with systemic infection through the tonsils.

The fortieth volume of the *Transactions of the Clinical Society of London*[9] which has just been published, is the last of the series, for the Society has now been merged in the Royal Society of Medicine. The report of the Council contains an account of the proceedings which led up to the dissolution of the Society. One of its last acts was to congratulate Lord Lister, a past President of the Society, on the 80th anniversary of his birth, and his reply, dated April 19th, 1907, in the course of which he said that he looked back upon the period of his Presidency of the Clinical Society with peculiar pleasure, has been reproduced in facsimile.

The twenty-ninth volume[10] of the *Transactions of the Ophthalmological Society of the United Kingdom* covers its work during the session 1906-7, and includes nearly 60 papers and records of cases. Many of these are well illustrated by plates, figures and diagrams: the Bowman Lecture on the pathology and treatment of myopia delivered by Professor Sattler being particularly fortunate in this respect. There is an excellent paper dealing with hue perception by Mr. Edridge-Green, and an interesting record of night-blindness running through nine successive generations, by Mr. E. Nettleship.

The rapid advances that are continually being made in the domain of organic chemistry render necessary the production of new textbooks of this subject at rather short intervals. In their *Course of Practical Organic Chemistry*,[11] Messrs. T. SLATER PRICE and DOUGLAS F. TWISS, of Birmingham University, have produced a book which covers all the work included in the revised syllabus of the Board of Education for this subject. The student is led in an orderly sequence from the most elementary matters, such as the determination of melting points and the preparation of marsh gas, up to the determination of molecular weights, quantitative ultimate analysis, and determination of organic radicals, identification of alkaloids, etc. Good working directions are given throughout; the preparation of a large number of organic compounds is described in detail, although more attention is given to tests and analytical methods than to synthetic operations. The book should prove very useful to students taking a course of laboratory work in this subject.

The way in which the subject of hygiene should be taught in elementary schools is still a matter upon which scholastic and medical opinion is unsettled, and any assistance in forming a clearer view is welcome. Dr. DAVID NABARRO has written a small volume, *The Laws of Health*,[12] intended primarily for the use of the older pupils in elementary schools. There are twelve chapters. The first is introductory, the second, third, and fourth deal with the bones, the muscles, and the chief organs of the body respectively, the fifth with the heart and blood vessels, the sixth with the lungs and respiration, the seventh, eighth, and ninth with the alimentary canal and food, the tenth and eleventh with the nervous system and sense organs, and the twelfth with the skin. The method throughout is didactic, and the book reads like a report of a course of lectures. At the end is a summary of each chapter, which may prove very useful to a teacher as a guide in teaching a class. Whether the volume is one which can be usefully placed in the hands of school children is a matter upon which opinions will differ, but we are disposed to think that the subject is one which should be taught orally by a teacher sufficiently well grounded in physiology and hygiene to be able to adapt the teachings to the age and intelligence of the class and the circumstances of the neighbourhood.

Dr. CARSTAIRS DOUGLAS[13] has written a handbook with the very similar title, *The Laws of Health: A Handbook on School Hygiene.* Only a few pages are devoted to anatomy and physiology, but they contain sufficient information to enable the subsequent sections on ventilation, nutrition, the physically defective, the functions of the skin, etc., to be understood. At the present time the views of Dr. Douglas upon medical inspection of school children are of interest: he considers that such inspection should include a general scrutiny by the inspector of all the children, with consideration in detail of all those who are under the standard of weight and height, the latter data to be collected by the teachers. In addition to this periodical and systematic inspection of all children, the medical inspector should attend daily and examine suspected and special cases picked out for him by the teachers. Some of these would be sent home at once with an explanatory note to the parents, while others would receive a note indicating that treatment was necessary for, say, defective vision, bad teeth, or other ailment. Dr. Douglas considers that after two years of systematic medical inspection the whole level of health of the school would be distinctly raised, and that much better attendance would be secured.

The *Index of Archaeological Papers, 1665–1890*,[14] edited by GEORGE LAURENCE GOMME, has been published under the direction of the Congress of Archaeological Societies, in union with the Society of Antiquaries, by Messrs. A. Constable and Co., Limited. Mr. Gomme states in his

[7] *Instruction pour le traitement par l'hyperémie.* Du Privat Docent Docteur Schmieden. Traduit de l'allemand par Mme. Fortoul. Preface de M. le Dr. Tuffier. Paris: Vigot Frères. 1907. (Demy 8vo, pp. 46. Fr. 1.25.)

[8] Published by the Association at New York.

[9] *Transactions of the Clinical Society of London.* Vol. 40. London: Longmans, Green and Co. 1907. (Demy 8vo, pp. 361.)

[10] *Transactions of the Ophthalmological Society of the United Kingdom*, vol. xxvii. London: J. and A. Churchill. 1907.

[11] *A Course of Practical Organic Chemistry.* By T. Slater Price, D.Sc., Ph.D., F.I.C., and Douglas F. Twiss, M.Sc., A.I.C. London: Longmans, Green, and Co. 1907. (Demy 8vo, pp. 252. 3s. 6d.)

[12] *The Laws of Health.* By David Nabarro, M.D., B.Sc., D.P.H. Third impression. London: Edward Arnold. (8vo, pp. 192.)

[13] *The Laws of Health: A Handbook on School Hygiene.* By Carstairs C. Douglas, M.D., D.Sc., F.R.S.E. London: Blackie and Son, Limited. 1907. (Cr. 8vo, pp. 247.)

[14] (Demy 8vo, pp. 922. 25s.)

preface that the Index was begun twenty-five years ago, with the assistance of his wife, under the impression that it could be completed in a few years, but the work proved to be laborious beyond all expectation, and Mr. Gomme is to be congratulated on having brought his self-imposed task to a successful conclusion in the intervals between other and more pressing labours. He acknowledges the assistance he has had from the library of the Society of Antiquaries, and from Mr. St. John Hope, the assistant secretary, in particular. He also expresses his special indebtedness to his wife for her assistance during all the early parts of the book, and to other helpers who have given assistance in various ways. The main object of the work is to assist in the co-ordination of local archaeological work by enabling the student to get at least a clue to what has been done in the field of local research.

The Writers' and Artists' Year Book for 1908,[15] uniform with the *Who's Who Year Book*, contains lists of British and American journals, with some particulars as to their scope, lists of publishers in England and America, as well as of colour printers and Christmas-card and post-card firms. Finally, there is a classified index of the sort of manuscripts which various periodicals are understood to prefer.

Messrs. Sands and Co. of London and Edinburgh have issued a *Nurse's Day and Night Report Book*, giving a page for the day and a page for the night for sixteen days. Upon the cover are printed particulars with regard to weights and measures, baths, enemas, and sterilizing, and one or two other matters which a nurse may be glad to have for ready reference. The publication costs 6d.

[15] *The Writers' and Artists' Year Book, 1908.* London: A. and C. Black. 1s.

MEDICAL AND SURGICAL APPLIANCES.

Ear and Chin Straps.

DR. BRYAN REYNOLDS, Hornsey Rise, writes: The simple apparatus which is represented in the accompanying illustration is designed to aid in overcoming the mouth-breathing habit so common in children and others who have suffered from adenoids or other nasal obstruction. Every practitioner must have experienced the difficulty of teaching these patients to breathe properly through the nose after the obstruction has been removed. It is usually worn only at night, but in the case of quite young children I often advise that it should be used also during a part, at least, of the waking hours, until the habit of breathing normally has been acquired. It is light and cool and comfortable, and produces just sufficient upward elastic pressure on the skin to make it easier to keep the mouth shut than open. Little children, I find, tolerate it well, and will wear it while at play without making any attempt to displace it. It is also a very comfortable way of keeping prominent ears flat, or for keeping dressings in the region of the ears in place. I use three sizes—a small size for infants, a medium for children from about 5 to 15, and a large size for adults. The apparatus has been made for me by Messrs. Arnold and Son, of West Smithfield, London, E.C.

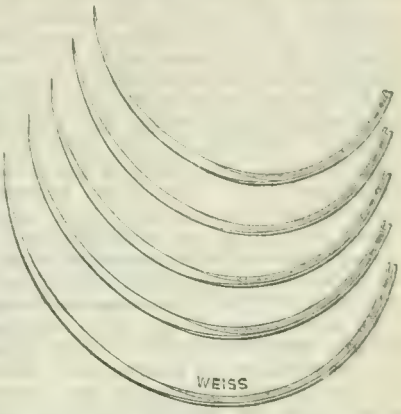


A Non-Slip Carpet.

We have received for examination from Mr. A. AMBROSE of Loughton, Essex, a sample of what he terms a "Non-Slip Carpet," and as the readiness with which ordinary rugs slip on a polished floor makes them to a certain extent dangerous, we examined it with some interest. To determine its value, the non-slip carpet and others of ordinary make were placed on a smooth surface, and the same degree of lateral pressure applied to each of them. It was found that whereas the pieces of ordinary carpets were very readily displaced, this non-slip carpet resisted any but extreme pressure; we therefore conclude that the term "non-slip" is justified, and hence that carpets prepared in the same fashion are likely to prove specially desirable for use in wards, and other places with polished floors. The non-slipping quality would appear to depend upon the under-surface of the carpet being treated with a solution of india-rubber, but we have not tested it.

A New Pattern of Needle.

MR. T. GELSTON ATKINS, M.D., M.Ch., Surgeon, Cork, South Infirmary, writes: The accompanying woodcut shows one of the large series of sizes of a new pattern needle that I have devised, and which I have now worked with for over a year. The "needle curve" consists of two curves, the anterior two-thirds being the segment of a larger curve than the posterior third. This gives the needle its peculiar boat shape. Its advantages are that when passed through the tissues the point is thrown back "boomerang-like" into the fingers which make it much more easily grasped than an ordinary curved needle; and, further, it throws the sharp point of the needle away from the tissues once it is through them—a matter of the greatest importance when working at gastric and intestinal anastomoses, as it prevents the accidental pricking of the bowel, which may be unexpectedly pushed towards the needle point by forced respiration or other accidental circumstances. It is made by Weiss and Son in several sets of sizes; the two larger sets are intended for through and through suture by the abdominal walls; those made for gastric and intestinal work are round, and are made in three sizes.



Improved Stethoscope.

DR. THOS. H. PINDER (Manchester) writes: Should Dr. J. Inman Langley have an opportunity to refer to the catalogue of surgical instruments of Messrs. Jas. Woolley, Sons, and Co., Manchester, he will find on page 354, Fig. A 5157 (1903), an exact illustration of the binaural stethoscope recommended by him in the BRITISH MEDICAL JOURNAL of December 14th, 1907. I made the original one with aluminium tubing, and lent it to Messrs. Woolley as a pattern some years, I believe, before 1903.

MEDICINAL AND DIETETIC PREPARATIONS.

V. P. Grape Juice Cordial.

MANY persons who object to alcoholic beverages appreciate the value of some of the other constituents of wine, and a demand has arisen during recent years for unfermented grape juice for ordinary consumption. A considerable number of such juices have been placed on the market in response to the demand; in the V. P. Grape Juice Cordial, the VINE PRODUCTS COMPANY (74, Great Tower Street, E.C.) have put forward a concentrated grape juice, to be mixed with about five times its volume of plain or aërated water for production of a beverage. A sample of the cordial which we have examined was a liquid of pleasant acid taste, containing 41 per cent. of grape sugar; fixed acid, reckoned as tartaric, 1.35 per cent.; and volatile acid, reckoned as acetic, 0.21 per cent. Most or all of the fixed acidity is actually present as tartaric acid and not as potassium bitartrate, which is accounted for by a statement of the company that the latter salt is largely removed in course of concentration and replaced by tartaric acid to avoid crystallization subsequently occurring. No foreign colouring matter was found in the cordial. A trace of salicylic acid and a little sulphite were present.

THE Weymouth and District Medical Club has recently been formed to promote social intercourse and mutual support in any difficulties which may arise affecting the profession or any individual members. A meeting will be held once a month, and any two members can bring any matter to the consideration of an early meeting of the committee, which consists of all the resident medical men in active practice. All resident medical men, active or retired, are eligible for membership, and members of the Royal Navy and army medical services can attend ordinary meetings as honorary members. The member who has been longest in practice in the district will take the chair, and under this rule Dr. Palgrave Simpson presided over the first meeting on December 17th, 1907, which was attended by nearly all the medical men in the district. After dinner the toast of Dr. Simpson's health was enthusiastically received and suitably acknowledged.

LITERARY NOTES.

GEHEIMRAT DR. EWALD has resigned the editorship of the *Berliner klinische Wochenschrift*, which he has held since 1881. For the first eight years of his long tenure of that office he was sole editor; since 1889 he has had the advantage of the co-operation of Professor Posner. In recognition of Dr. Ewald's services as a journalist he was elected an Honorary Member of the Free Association of the German Medical Press. He is also distinguished as a physician, and has made valuable contributions to medical science, especially in the domain of diseases of the stomach. Dr. Hans Kohn, prosector to the Jewish Hospital, has been appointed to co-operate with Professor Posner in editing our contemporary. His name is well known by his writings on anatomical and clinical subjects, and he has had a long experience of medical journalism in connexion with the *Muenchener medizinische Wochenschrift*.

We have received the first number of *Folia Neuro-Biologica*, published by Dr. Werner Klinkhardt of Leipzig. It is described as an international central organ dealing with the general biology of the nervous system. The editor is Dr. E. Hekma, Assistant in the Institute of Physiology and Pathology of the University of Gröningen. Among the contents, which are of great scientific value, is a paper on the biochemistry of nervous tissues by Professor Halliburton. The journal is well arranged and excellently printed.

The *Journal of the Anthropological Institute of Great Britain and Ireland* (January to June, 1907) contains some interesting notes on the Natives of Nyassaland, North-East Rhodesia, and Portuguese Zambezia, Their Arts, Customs, and Modes of Subsistence, by Captain C. H. Stigand, "The Queen's Own" Royal West Kent Regiment. Speaking of medicines he says they may be divided into two classes: (1) Real medicines, which are said to be often wonderfully efficacious; (2) charm medicines; such as putting horns in the way of a man to cause his death, tying a small cube of bango round his neck to cure blindness, or bad eyesight; a medicine made of a bundle of sticks slung up over a patch of tobacco in a village which has been left, to prevent it from being stolen. A snake-bite antidote is made of roots and leaves. A different medicine is made for each snake and mixed together. Natives are afflicted with a kind of madness which causes them to rush into the bush and wander about. They sleep out in the bush, and, when hungry, come into a village and take what they want, but are not able to recognize their own village from any other. People are usually very good to them, and put out food for them. They, however, prefer uncooked food, and will generally take maize or cassava from the fields. If they are offered cooked food they will generally throw it back in the face of the person who gives it. The natives have certain medicines they give for madness, which are said to cure it. A man who had been mad was questioned about it. He said he could remember first running out into the bush, and nothing since, till he had an idea that he felt better. Other natives said that he had been found in the bush by some men, who brought him back and gave him medicine, and after a short time he was cured.

We have received a copy of the *Records of the Ulster Hospital for Children and Women, Belfast*, edited by H. H. B. Cunningham, M.D., F.R.C.S.I. In an editorial introduction it is stated that "with this number, the staff inaugurates a journal wherein will be contained the results of their labours, in order that all followers of the art of Galen, who should be so inclined, may participate in the medicine and surgery as practised in this hospital to-day." To "any embryonic Aesculapius" who may peruse its pages they commend the following words of John Halle, who wrote in 1564:

> Hark and draw near ye younge studentes,
> Your eares loke ye unclose,
> The worthy art chirurgerie,
> That practice do propose.
>
> And marke what the greate masters saye
> That here before have wroughte,
> And did to their disciples leave
> In wryting what they toughte.

The number contains an article on haematuria due to cystic kidney, cured by nephrectomy, by Mr. A. B. Mitchell; one on adenoids by the editor; one on cancer of the uterine cervix, based on twenty cases studied in relation to the "Crusade against Cancer of the Uterus," by Dr. Marion B. Andrews. The author calls for the co-operation of the entire medical profession in recognizing that cancer is curable, and that the slightest suspicious symptom calls for immediate careful examination, with the use of the curette and microscope if necessary; and for the co-operation of the Education Authorities in securing that no girl shall leave school without simple sensible knowledge of matters of ordinary health, and a well grounded conviction of the need of skilled advice in all departures from the normal. Mr. Howard Stevenson contributes notes on a case of congenital lymphangeioma, and Dr. J. D. Williamson deals with cerebro-spinal meningitis complicated by parturition. We congratulate the staff of the Ulster Hospital for Children and Women on the successful initiation of a scheme which is likely to prove useful in the advancement of knowledge in the province of medicine with which it is concerned. The periodical is well printed and the illustrations are excellent.

New editions of two important books are to be issued by Messrs. J. and A. Churchill in the first week of the New Year. The *Theory and Practice of Hygiene*, by Notter and Firth, has been almost entirely rewritten by Lieutenant-Colonel R. H. Firth, who has not only remodelled the text, but added new coloured plates and illustrations. Dr. Jellett's *Short Practice of Gynaecology* has been enlarged by the author, who has added much new matter; there are also 130 new illustrations, some of which are coloured.

In the *Student* of November 29th, 1907, Sir Alexander R. Simpson contributes to the series of "Famous Undergraduates," an account of Sir James Young Simpson, who entered as a medical student in the session of 1827-28, when he was a boy of 16. John Reid, who afterwards became famous from his investigation into the functions of the eighth pair of nerves, and occupied for some years the Chair of Medicine in the University of St. Andrews' who like Simpson came from Bathgate, was two years older than his young townsman. He had already passed two years at the Arts classes, and was just beginning his medical career when he was joined by Simpson, who paid 3s. a week for the rent of a room in the upper flat of a tall tenement. There they lodged with Dr. Macarthur, who had been assistant master in the Bathgate Parish School, himself a strenuous worker, who stimulated to the utmost the energies of the lads. He wrote during James's first session to his brother Alexander:

> I can now do with four hours' sleep, John Reid can do with six, but I have not been able to break in James yet.

Sir Alexander proceeds:

> Mindful of the *res angusta domi*, one of the first purchases James made on his arrival in Edinburgh was of a small nine-penny book on "The Economy of Human Life," from which he copied the following motto in his little cash-book, "Let not thy recreations be expensive, lest the pain of purchasing them exceed the pleasure thou hast in their enjoyment." That cash-book had sometimes curious entries. Under one date stand, "Munro's Anatomy, shoes mending, stakes and stock." Under others, "Vegetables and Byron's Beauties"; "Finnen Hadies, 2d., and Bones of the Leg £1 1s"; "Subject, £2, Spoon, 6d., and Bread and Tart, 1s. 8d."; "Duncan's Therapeutics, 9d."; "Snuff, 1½d.," and "Early Rising, 9½d."

Sir Alexander goes on to speak of how diligently Simpson took notes, and how frequently he interspersed these with queries, except in the case of Liston's lectures; how he was led to study medicine; how, horrified by the shrieks and groans of a poor woman undergoing excision of the mammae, he rushed from the infirmary to the Parliament House with some thought of taking to law, but returned to consider, for the rest of his days, how human suffering could be relieved, essaying the practice of hypnotism and the use of various drugs, till he discovered the anaesthetic property of chloroform; and on till the last time he had a pen in his hand on his sick-bed, when, writing of anaesthetic agents, he said:

> In all likelihood some will yet be discovered of types superior to any we yet know.

Simpson qualified as a surgeon at the age of 19, and failing to obtain the appointment of parish doctor at Inverkip, he continued his studies until he earned the degree of M.D. in 1832 with a thesis, *De causa mortis in quibusdam inflammationibus proxima*, which led the Professor of Pathology to offer him the position of Assistant at £50 a year.

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(Continued from Vol. II, 1907, page 1886.)

ANTIVIVISECTIONIST TESTIMONY.

Evidence of the Hon. Stephen Coleridge.

MR. COLERIDGE, whose evidence occupies about sixty-five pages of the Blue Book, said he had been Honorary Secretary of the National Antivivisection Society since 1897. The society was founded about 1875 or 1876, just before the passing of the Act. It was by far the largest society in the world. To illustrate its increasing importance, he gave the income for each five years since 1887: £8 651 for the first five years; £15,712 for the next; £26,352 for the next; and £36,097 for the last five years. They had a great number of honorary members whom they had elected, and a very large number of their branches had each very large numbers of members. Mr. Coleridge read a statement to the following effect:

He had put down, so that there should be no question about the claim of his society really to represent the antivivisectionists, the force and strength of the other societies. The income of the London Antivivisection Society, which was next in importance to the National, amounted to about a quarter, and that of the British Union to about one-eighth of that of his society. There were the Manchester Society for the Protection of Animals from Vivisection, with an office at 9, Albert Square, Manchester, and an annual income from donations and subscriptions of £205 3s. 8d.; the Parliamentary Association for the Abolition of Vivisection, with an office at Parliament Mansions, Victoria Street, London, and an annual income from donations and subscriptions of £174 9s. 6d.; the Bristol and West of England Antivivisection Society, with an office at Bank Chambers, Clifton, Bristol, with an annual income from donations and subscriptions of £164 10s. 9d.; the Friends' Antivivisection Association, with no official address, and an annual income of £118 5s. 5d.; an Electoral Antivivisection League, with an address at 92, Ladbroke Grove, W., and an income of £83 6s. 4d.; the Society for the Abolition of Vivisection, founded by the late Mr. Jesse, who left it some money on condition that it never associated itself with any other antivivisection society, had an income from donations and subscriptions of £60 9s. 6d. a year, together with the interest from Mr. Jesse's bequest. There were 79 members of that society. Then there was the Scottish Society for the Suppression of Vivisection. That was another very old association, but the membership was not nearly so large as was the membership of the Scottish Branch of his own society. There was a World's League of Opponents of Vivisection, which addressed its letters from 32, Sackville Street, which, according to the published report, had 63 members, with a total yearly subscriptions and donations of £56 0s. 1d. There was a Church Antivivisection League, with no official address in its yearly report and an income from donations and subscriptions of £39 1s. There was a Society for United Prayer for the Prevention of Cruelty to Animals, especially with regard to the practice of vivisection: it appeared to have no office; its income was £33 16s. 11d. There was the Pioneer Antivivisection Society with no official address, and an annual income of £6 17s. 6d. He could not give the exact membership of his own society. The Birmingham Branch was very large, but they subscribed, some of them, only a penny or twopence, or sixpence. The first striking achievement of his society was the prevention of a public meeting held at the Mansion House in 1889, the object of which was to start a fund to erect a Pasteur Institute in England. The result was that no Pasteur Institute was set up. England to-day was one of the few European countries of importance that was spared a Pasteur Institute, and in England there was no rabies. Another remarkable achievement of his Society had been the long agitation against the diversion of hospital funds in London to medical schools, which were places registered for vivisection under the Act of 1876. They conducted that agitation with such persistence that King Edward's Hospital Fund were at last obliged to appoint a Committee, composed of Sir Edward Fry, the Bishop of Stepney, and Lord Welby, to inquire into the charges they had publicly formulated. That Committee, after hearing evidence from all parties, made a report which confirmed the statements they had published. It was stated that where money was paid over to schools out of hospital funds, the schools remained "debtors to the hospitals in respect of these pecuniary contributions made to them," and recommended that in future the funds of hospitals and schools should be kept entirely distinct. In spite of that report, however, no school had repaid a penny of the money diverted to it from the hospital; and in some cases the deliberate diversions of money subscribed for the sick poor to schools registered for vivisection continued, with the knowledge of and without any effective protest from King Edward's Hospital Fund, which thereby contemptuously disregarded the recommendations of the distinguished Committee appointed by itself. He presented to this Commission a publication, for which he took the entire responsibility, briefly called his *Guide to the Charitable*, which set out the financial diversions of hospitals to schools up to the present date. In the last few years they had conducted public controversies in the *Fortnightly*, *National*, and *Contemporary Reviews*, and many other periodicals; they had held mass meetings in the largest halls in London; they had founded thriving and earnest branches all over the three kingdoms. They had conducted a parliamentary campaign in favour of the Bill he had drafted, and had kept the question of vivisection so prominently before the public that it had been found necessary to appoint this Royal Commission to inquire into it. They claimed to represent the consensus of opinion of almost all the greatest names that had adorned the history of England in the field of thought. In *Cymbeline* the Queen suggested to Cornelius, her doctor, a process of investigation similar to the modern inoculator's experiments under Certificate A. He said:

> I will try the forces
> Of these thy compounds on such creatures as
> We count not worth the hang ng (but none human),
> To try the vigour of them, and apply
> Allayments to their act; and by them gather
> Their several virtues and effects.

Upon which Cornelius, in a spirit far different from the modern vivisector, replied:

> Your Highness
> Shall from this practice but make hard your heart;
> Besides, the seeing these effects will be
> Both noisome and infectious.

His attention was first called to that passage by Sir Henry Irving, himself an ardent antivivisectionist. After quoting Andrew Marvel and Dr. Johnson, the witness went on to say that the cause of antivivisection had counted among its supporters, living and dead, Cardinal Manning, Lord Tennyson, Browning, Ruskin, Carlyle, Froude, Freeman, Lord Shaftesbury, who was the first President of the Society, and filled that office till he died; George Meredith, General Booth, the Lord Chancellor, Mr. John Morley, Cardinal Gibbons, James Martineau, Spurgeon, Lord Brampton, Wagner, Leslie Stephen, Sir Edwin Arnold, Mark Twain, Tolstoy, Victor Hugo, Dean Stanley, and a host of distinguished men and women in every walk of life, and the late Queen Victoria, who was in favour of the total abolition of vivisection. He added that, as four generations of his family before him had earnestly supported this cause, his own convictions had come down to him as a consecrated inheritance. His society desired to see vivisection totally abolished by law, but it would strive for and accept any measures that had for their object the amelioration of the condition of vivisected animals. They based their objections to vivisection as sanctioned and protected by the Act of 1876, on the plainest moral ground. They were prepared to show that, under the existing law, there was no limit to the agony that might legally be inflicted upon animals. They said that to keep an animal alive and torture it was a wicked act, that no profession of lofty motives will ever make that wicked act right. The whole question of man's rights over and duties towards the helpless animals given into his dominion by the Ruler of the Universe was a moral question, and had nothing to do with science. They maintained that if there were any cruelty inseparable from this particular science, every thoughtful man who took a wide view of human well-being must conclude that it was far better for them all to do without physiology than to be without pity. The evidence of Mr. Byrne on behalf of the Home Office had, in his opinion, justified to the fullest extent the expressed and published conviction of his society, that the whole truth about the administration of the Act of 1876 by the Home Office could never be elucidated without cross-examination by counsel properly instructed. They would have preferred to substantiate their charges against those officials out of the mouth of Mr. Byrne; but as that was now apparently impossible, he would endeavour to prove the indictment they had drawn by unimpeachable evidence. (1) He charged the Home Office officials with repudiating the most important duty deputed to them by Parliament, namely, that of protecting animals from unjustifiable suffering. (2) He charged the Home Office officials with having constituted themselves the injudicial defenders of the vivisectors from criticism by his society in the past, and in their evidence tendered before that Commission. (3) He charged the Home Office officials with having appointed inspectors who had displayed such bias that they had thought it their duty not to make detective efforts to protect animals from illegal treatment. (4) He charged the Home Office officials with having made entirely disingenuous statements in their official utterances, and with having constituted themselves the mere spokesmen of the vivisectors. (5) He charged the Home Office officials with accepting the suggestion made to them by some nameless adviser that to starve animals for days was not cruel when they must know perfectly well that if any one of them starved their own horses (if they had any), the nearest policeman could successfully prosecute them for cruelty to animals under Martin's Act. (6) He charged the Home Office officials with suppressing in the Annual Parliamentary Return the names of those who took upon themselves the very grave responsibility of signing the certificates exempting licensees wholly or in part from the obligation to employ anæsthesia in their

vivisections, although in the Report of the former Royal Commission there was this clear direction: "We recommend that his (the Home Secretary's) advisers be from time to time elected and nominated by himself. Their names should be made known to the profession and the public." (7) He charged the Home Office officials with shielding the names of such licensees as they know to have broken the law, although the former report contained the words: "Abuse of the power conferred by the licence must, of course, render the holder liable to its withdrawal, but this will involve great disgrace," a phrase that clearly indicated that the framers of that report contemplated the publication of offenders' names, for no great disgrace could appertain to a secret remonstrance of a secret withdrawal of a licence. (8) He charged the Home Office officials with preparing for the Home Secretary evasive and insufficient replies in the House of Commons to plain questions on the administration of the Act, and with making evasive and insufficient replies themselves in official correspondence with his society, and with leaving perfectly proper questions unanswered altogether. (9) He charged the Home Office officials with putting forward annually a Parliamentary return in which it was asserted, on the official authority of the Government Department, that not a single experiment in thousands inflicted upon animals in Great Britain with its permission could be specified as entailing any pain at all, an assertion based upon no better evidence than the bare assertion of the vivisectors themselves. (10) He charged the Home Office officials with placing a certain vivisector year after year beyond the reach of the safeguards erected by the Act to protect animals from illegal treatment by licensees, by giving him permission to vivisect in private places, thereby placing him beyond the possibility of legal inspection; because by Clause 10 of the Act of 1876 the Inspector had no right of entry into, or inspection of, any unregistered place. The name of that person was Victor Horsley. (11) He charged the Inspectors certainly, and the Home Office officials apparently, with having made no inquiries, public or private, into the character for humanity of the licensees, although those officials must be aware that the Report of the Royal Commission in 1876 contained this warning: "It is not to be doubted that inhumanity may be found in persons of very high position as physiologists," and although the Act of 1876 placed upon the Home Secretary the responsibility of personally protecting animals from that undoubted inhumanity. (12) He charged the Home Office officials with having placed themselves in improper private confidential relations with a private society composed of supporters of vivisection, entitled to no more consideration than the National Society composed of opponents of vivisection. That was the Society for the Advancement of Medicine by Research. These charges, which he was prepared to substantiate, justified, in the opinion of his society, the imputation that the Act which was intended by Parliament to constitute the Home Secretary the guardian of the vivisected creatures, had been so administered that this responsibility had not been impartially fulfilled. So safeguarded were the vivisectors from the possibility of anybody but themselves knowing what happened in the laboratories, that the opportunity of raising the impenetrable veil that covered their doings could never occur but through their own initiative. Through the hasty temerity of Mr. Bayliss, who brought an action against him, they did for once ascertain from the evidence of that vivisector and his friends the history of the life and death of one at least of the victims of the laboratory. Their evidence proved that under the present law a deep incision could be made into the body of a live dog, and it could be deprived, by the tying up of a duct in its inside, of the proper use of one of its internal organs; it could then be sewn up again and put in a cage, and left in that cage from December to February to see what the result would be of that operation. In February it could be taken out of the cage and a fresh incision could be made into its body to see whether what had been done to it produced inflammation or not. The wound could then be closed up again with a pair of steel forceps. Then with the steel forceps closing up this wound, the living dog could be handed over to a second vivisector, who proceeded to fasten it down tight on to a board and to open its neck with another deep incision, exposing the gland; he could then fix little pipes on to the end of the arteries, he could put a tube into its windpipe, and attach electrodes to its cut-out nerves. The dog in that condition could be tied down on that board for about an hour, and then handed over by this second vivisector to a third operator, who finally put an end to the dog's life by plunging a knife into its heart. Now the anaesthetics during these prolonged and fearful mutilations could legally be applied by an automatic pump in another room, connected to the dog under the floor by a tube, and this pump, on which alone the insensibility of the dog depended, could be left in the sole charge of a laboratory boy. The vivisectors said this automatic pump was sufficient to maintain the unconsciousness of the dog throughout the whole operation; but, inasmuch as the dog could not tell them whether it was unconscious or not, and as no analogy could be set up with human anaesthesia, because no surgeon in his senses would attempt to anaesthetize a man or a woman with an automatic pump in another room under the management of a laboratory boy, he maintained that they might reasonably refuse to accept the opinion of these vivisectors that such means were efficient to maintain total unconsciousness. Further, they had a perfect right to hold the opinion—and they did hold it—that the sufferings of the dog between these vivisections when it was in that cage were very grievous. To procure this priceless information from the vivisectors themselves in the witness box cost altogether about £5,000; but in his opinion this revelation of what vivisection really was in this country under the present administration of the law was well worth the expenditure. As to the assertions of the vivisectors who had come before the Commission, that they individually had never inflicted pain in their experiments, he was not there to ask the Commissioners to believe them or to disbelieve them; but he asserted that the present law, as administered, could not possibly protect animals from the extremest torture at the hands of any licensed vivisector who happened not to be humane. The comfortable hypothesis of the Home Office appeared to be that a person who applied for a licence and received certificates was necessarily humane. To that hypothesis they distinctly demurred. Neither the dignatories of the physiological circles nor the vivisectors who were banded together in the private society for the advancement of their practices, nor the Inspectors appointed by the Home Secretary, testified to the personal character or humanity of the applicant for licences and certificates. They averred nothing but the applicant's scientific fitness. Scientific fitness was no guarantee of humanity, nor was the habit of cutting into living animals necessarily the concomitant of a tender heart. Therefore, they asserted that the present law and the present administration of it did not protect animals from the worst conceivable fate. The sufferings of dumb creatures appealed with overwhelming force to an ever-increasing proportion of their countrymen and countrywomen, and, as he believed, to those who were the truest judges of right conduct. He might, perhaps, be permitted to say that the permission recently given to a vivisector (Professor Schäfer) to drown, resuscitate, and drown again dogs without any anaesthetics, had been regarded by his society with particular detestation. He knew not how many thousand upon thousands of men, women, and children had been saved from drowning the world over by dogs since they became attached to mankind as their faithful friend. Not long ago he read of a dog that had saved ten lives from drowning, and perished in a gallant but unsuccessful attempt to save an eleventh. It seemed to him inexplicable that any man could be found to do such dreadful business. He desired to bring before the Commissioners the sixteen experiments performed by Dr. Crile in Sir Victor Horsley's laboratory, in one of which the foot of a dog was deliberately crushed "under incomplete anaesthesia." Apart altogether from the question of pain, this series of experiments, involving the most repulsive operations, in which every conceivable outrage was perpetrated upon the bodies of the victims, had filled decent people who had faced their perusal with disgust and horror. He was there to say on behalf of his society that if physiology could not be pursued without such loathsome practises it was high time it were abandoned. Physical pain was, perhaps, not the worst evil that could afflict mankind. But to animals physical pain was the worst of all evils. Therefore it was that they said that to pursue knowledge through the agony of animals was an act only possible to a man whose heart was dead. Grievous and terrible as were the physical sufferings now permitted by law to be inflicted upon dumb animals, that was not all for which the physiologists and the Act of 1876 were responsible. The knowledge that horrible mutilations might be daily and hourly executed upon the bodies of living creatures with no adequate security for their insensibility made very many humane people profoundly miserable, deprived them of joy in this world which otherwise might be theirs. He asked that this mental anguish should not be regarded as of no account by the Commission. He was there to tell the Commissioners that the 300 odd vivisectors in the kingdom were responsible for a rising and widespread feeling of bitterness against the whole medical profession, with which in the public eye they were confused. The Commission by recommending Parliament to afford a real protection to vivisected animals had it in their power to check the spread of a deep and abiding enmity to a whole profession, which would be as deplorable as it would be inevitable if the law remained as it was. His society had been forced to the conclusion that, by placing the interests of the animals in the hands of the Home Secretary, the framers of the Act of 1876—unwittingly, no doubt—made a fatal mistake. The Home Secretary had practically delegated much of his responsibility to the Home Office officials, who had, in their turn, delegated their responsibility largely to a private association of vivisectors called into existence for the very purpose of representing their own interests as opposed to the interests of the animals as represented by his society. A state of things had thereby been created and maintained for years which they invited all impartial people to condemn as little short of a public scandal. Under the present law, what had happened in the past and what legally might happen in future filled those he represented with indignation and alarm; and they earnestly invited the Commission to consider with care and to recommend to Parliament the Bill which he had drawn. He protested against the exclusion of the press from the Commission and the exclusion of counsel to represent his society

The ultimate publication of those proceedings would not contain much that the public might rightly claim to know, and of which the presence of the press would have kept them informed.

Mr. Coleridge said, with regard to his first charge against the Home Office, he maintained that when they were reading the Act of 1876 it was essential to read it in conjunction with the recommendations made by the Commissioners who reported in 1876, and upon whose report that Act was passed; therefore, he said that the Act of Parliament clearly laid upon the Home Secretary the duty of seeing that suffering should not be inflicted if it could possibly be avoided, and in fact placed the whole question of pain in his hands. In reply to the Chairman, who said he thought no lawyer could say that was his duty under the statute—it might be an independent duty—the witness said the whole Act placed the regulations protecting animals from unjustifiable suffering in the hands of the Home Secretary and his officials. Therefore, he said that if the Act were read as the result of that Royal Commission, it must be taken that the duty was placed upon the Home Secretary to protect animals from unjustifiable suffering. Referring to Question 129, to which the following reply was given by Mr. Byrne,

> The Secretary of State has not to decide whether an operation is painful or not,

he said that the Home Secretary repudiated in the words of his representative the duty which in the witness's opinion was placed upon him under the Act. Referring to Question 162, in regard to inoculation, Mr. Byrne said:

> It is not a painful procedure, but it is considered a painful experiment.

Asked if it was so classed Mr. Byrne replied:

> There is no classification of experiments in the last Report into painful and not painful; but it is regarded as undoubtedly painful by the Home Office.

Thus, said Mr. Coleridge, on one page the Home Office repudiated all responsibility about pain, and on the next page they said they did regard a certain class of experiments as painful. Therefore, they did not altogether speak consistently upon this matter. Mr. Byrne had admitted that formerly there was a classification into painful and painless, but it was evident that the Home Office had abandoned all attempt to take upon themselves the duty which he maintained was theirs. While he was on Certificate A he might say that before 1888, when Mr. Busk was the Inspector, in all the annual reports there was no allusion of any kind to any conditions being attached to Certificate A. Therefore, it was a fair deduction that down to 1888, under Certificate A, any amount of torture might have been inflicted, because it relieved the operator altogether of the necessity of using anaesthetics in his operations. Certificate A represented Subproviso *a*:

> Experiments may be performed without anaesthetics on such certificate being given as in this Act mentioned, that insensibility cannot be produced without necessarily frustrating the object of such experiments.

In 1888 Mr. Erichsen became Inspector, and in his report for 1888 these words occurred:

> The "inoculation condition" introduced last year, by which it was rendered imperative on the part of the experimenter to destroy the animal under anaesthetics, provided pain had been developed as the result of the conditions to which the inoculation gave rise, has been in all cases enforced.

He regarded that as a very proper and humane proviso which should be added to Certificate A, and it clearly was added to Certificate A in 1887; in the Report of 1889 there was an announcement to the same effect. In 1890 he found a grave alteration was slipped into this Report. The "inoculation condition" was thus defined:

> This condition renders it imperative on the operator to destroy the animal under an anaesthetic if severe pain has been induced, so soon as the result of the experiment has been obtained.

That let in any amount of pain, provided the experimenter was of opinion that the result of his experiment had not been obtained; before that there was nothing about the result of the experiment having been obtained. In 1891 the words were:

> The animal shall be killed if pain result.

That appeared to be a reversion again to the more humane conditions. It seemed that Erichsen reverted to his more humane condition before he retired, or died—whichever it was, he forgot. In 1892 came in Dr. Poore, and he maintained the mystery of silence as to the conditions under which Certificate A was issued, and in 1900 he retired. In 1901 Mr. Thane took office, and this was what he said in his first report:

> In the event of pain ensuing, the animal to be killed as soon as the main result of the experiment has been attained.

That, in the witness's opinion, let in any amount of pain under Certificate A. The vivisector had only to form the opinion that the result of his experiment had not been obtained, and the animal could be subjected to as much pain as he thought fit to inflict upon it. Mr. Coleridge next charged the Home Office officials with having constituted themselves the injudicial defenders of the vivisectors from criticism by his society in the past, and in their evidence tendered before the Commission. He put the blame on the permanent officials. He regarded the Department as his adversaries in this matter. The witness proceeded to refer to Dr. Crile's book on *Surgical Shock*. Dr. Crile was an American who had a licence given him from the Home Office to perform certain experiments, and he did them in Sir Victor Horsley's laboratory. The first sixteen were done in England, and he would not allude to the others, except that just in passing he must allude to two which were not done in England; but he wanted to show that the personal taste of Dr. Crile did not prevent his torturing animals. In Experiment cxxxiii it was stated that the experiment lasted two and a half hours. Flame was applied to the dog's paw, and they were told, in the control experiments, as well as in this, the dog was not under full anaesthesia. In the former the animal struggled on application of the flame. There was one other experiment, No. cxxvii:

> The animal did not take the anaesthetic well, and a part of the experiment was made under incomplete anaesthesia; the anus and rectum of this dog were then "dilated."

Coming to what was done in Sir Victor Horsley's laboratory, on page 23 of Dr. Crile's book, Experiment V, performed on May 8th, 1895, was thus described:

> Healthy male fox-terrier, three years old. Central pressure in femoral. Preliminary section of the inferior branches of the right stellate ganglion, by dissection between the scapula and the spinal column, resecting two ribs. Under incomplete anaesthesia, crushing of foot caused a very sharp rise, followed by an equally sharp decline of pressure. This was repeated several times.

That was done by Dr. Crile under a simple licence, which provided that the animal must be under complete anaesthesia during the whole experiment, and be killed before it recovered consciousness. In Dr. Poore's report these sixteen experiments were not described as painful, and therefore it must be assumed that the Home Office regarded or chronicled them as painless. Asked by the Chairman if the words "incomplete anaesthesia" were in the account given in by Dr. Crile to the Home Office, the witness said he did not know whether it was sent in to the Home Office or not. He (the witness) laid the book before the Home Office afterwards. On its being put to him that Dr. Poore's report would presumably be founded upon the report sent in to him by Dr. Crile, and that they did not know whether at the time the book was before Dr. Poore, the witness said that was a matter for the Home Office to answer. He could not tell. On Sir Mackenzie Chalmers pointing out that it was an American book, and seemed to have been an essay which was awarded the Cartwright Prize for 1897, that was to say, two years afterwards, the witness replied, Yes. Proceeding, Mr. Coleridge said he drew the attention of the Home Office to these experiments done in Sir Victor Horsley's laboratory. In reply to Sir Mackenzie Chalmers, who said that was four years afterwards, the witness said, "It may have been." He did not have those books sent to him. Somebody at last sent him a thing, and he at once acted when he saw it. Then the Home Office asked him to lend them the book, and their answer was:

> The Secretary of State caused investigations to be made into these experiments, and the information he has received from competent persons, who either witnessed most of the experiments or have read the account of them, is to the effect that in no instance had the animals experimented upon been subject to pain.

He drew the attention of the Home Office to the experiments which Dr. Crile had done in Sir Victor Horsley's laboratory, and to their own statement in the corresponding statement for the same year alluding to complete anaesthesia, and pointed out the discrepancy. The investigations which the Home Office made could, so far as he could see, have had no other nature than inquiry from the persons responsible, and, therefore, on their defence. Human nature being what it was, one could not expect anything else. They went on to say:

The use of the term "incomplete anaesthesia" has probably given rise to the misunderstanding. With regard to this (the Home Secretary says, through the hand of Mr. Cunynghame) the Secretary of State is advised that there are various degrees of anaesthesia. In "incomplete anaesthesia" the narcosis is very profound, and the "reflex movements," that is the involuntary movements in response to an external stimulus, are suppressed. One of the last of these reflex movements to disappear is the blinking of the eyelids when the surface of the eyeball is touched, thence called the "corneal" or "conjunctival reflex." But short of this is the condition termed by Dr. Crile "incomplete anaesthesia," in which the creature is quite insensible to pain, although the corneal and other reflexes can still be obtained. Now "it is quite usual for even severe operations to be performed on man in this state of 'incomplete anaesthesia.'"

That was the statement of the Home Office, presumably advised, he supposed, by Dr. Poore. Dr. Poore was a man of very strong bias, wholly incapable, unless through very serious and strenuous effort, of forming an unprejudiced opinion on such a matter as this. On the Chairman putting it to the witness that there were a great many of those people on both sides, he said, No doubt, but not, he hoped, in an official position. He was not in an official position. He admitted all sorts of prejudices. Proceeding, Mr. Coleridge said that, having received that letter, he proceeded to test the statement that it was "quite usual for severe operations to be performed on man in this state of incomplete anaesthesia," and he wrote a letter to a certain number of the most important and eminent surgeons of the day. He put it exactly as the Home Office put it to him. His letter was as follows:

Dear Sir,—A statement has recently been made to me in writing by a very respectable authority that surgeons now frequently perform severe operations on man under incomplete anaesthesia, that is, before the corneal reflexes are abolished. I know of no way of answering this statement but by obtaining definite information from persons like yourself, whose large experience renders their authority on such a matter conclusive. I should, therefore, really be very much obliged to you if you would be so good as to enable me clearly to assert on your authority that, provided complete anaesthesia can be given with safety to a patient, and provided the nature of the operation itself does not render it dangerous to the patient's life, complete anaesthesia is always administered in *severe* surgical operations. You may possibly be aware that I am one of those who on humanitarian grounds oppose the vivisection of animals as practised in this country, but I hesitate to believe that patients in hospitals are treated with inhumanity. I hope you will pardon this intrusion upon you, which arises from the pronounced position you occupy in your profession.—Believe me to remain, very faithfully yours. (Signed) Stephen Coleridge."

Of the answers received there were only two who associated themselves with the Home Office view, and those two replies were from licensed vivisectors, who were unconnected with any hospital. The first was from Dr. Bond, F.R.C.S., Senior Surgeon and Lecturer at the Westminster Hospital. He said:

I think you have been very much misinformed, and it would be very interesting to me to know the very high authority on which your information is based. Hundreds of operations are performed yearly at Westminster Hospital, and never to my knowledge is the operation commenced under incomplete anaesthesia.

He informed Dr. Bond afterwards that the information reached him in a letter from the Home Office.

Dr. Edmund Owen, F.R.C.S., Member of the Council of the Royal College of Surgeons, Senior Surgeon at St. Mary's Hospital, and Senior Surgeon at the Hospital for Children in Great Ormond Street, said:

Certainly, in my experience complete anaesthesia is *always* secured in severe surgical operations.

In reply to Mr. Tomkinson, who asked if those were the whole of the letters, Mr. Coleridge said, "No." Asked if the first letter did not refer to the question of the eye, he said, No; they answered his letter. He defined incomplete anaesthesia in his letter, "that is, before the corneal reflexes are abolished." Asked if there was no allusion to that in the reply, he said: No, they had taken his definition and used the words, "incomplete anaesthesia."

Dr. Timothy Holmes, F.R.C.S., Vice-President of the Royal College of Surgeons, and Treasurer and Consulting Surgeon at St. George's Hospital, said:

I differ entirely from your informant who says that it is quite usual for even severe operations to be performed on man in a state of incomplete anaesthesia. . . . Never did I hear of performing serious operations with incomplete anaesthesia, and if you know anything of operative practice you would know that it would be as embarrassing to the operator as painful to the patient. . . . If you accept this statement as true you are quite at liberty to make use of it to your informant; or if your informant will, in his own name, repeat his statement in any respectable paper, I will in my own name repeat the above.

Dr. Jonathan Hutchinson, F.R.C.S., late President of the Royal College of Surgeons, consulting surgeon at the London Hospital, and consulting surgeon at the Royal London Ophthalmic Hospital, said:

I have not the least doubt that when complete anaesthesia is considered safe, and on the patient's part desirable, it is always secured.

Dr. G. May, Consulting Surgeon at the Royal Berkshire Hospital, said:

I have been attached to the Royal Berks Hospital about forty-five years, and have never known a case of operation where anaesthesia was not complete. This is done not only to spare pain, but because it is thought to be less dangerous.

Dr. T. J. Walker, M.R.C.S., who had been for a very long time Senior Surgeon at the Peterborough Infirmary, said:

Taking my authority for what it is worth, you may assert on my authority that, provided complete anaesthesia can be given with safety to a patient, and provided the nature of the operation itself does not render it dangerous to the patient's life, complete anaesthesia is always administered in severe surgical operations.

Dr. Thomas Bryant, F.R.C.S., Surgeon Extraordinary to Her Majesty the Queen, Consulting Surgeon at Guy's Hospital, and late Examining Surgeon at the University of Cambridge, said:

I have received your circular, and read it with surprise, as you clearly have been hoaxed.

The witness said he replied to that letter that the august quarter from which the information emanated seemed to him to preclude such a hypothesis. He had two replies from two licensed vivisectors—one from Professor Horsley to the effect that he was out of the country, and the other from Professor Schäfer, that the Home Secretary's advisers were quite correct, and that incomplete anaesthesia "is consistent with complete unconsciousness." In its being pointed out to him that he had said there were two who differed, he said: "I thought that there was. I see one did not answer; it is my mistake." Asked by the Chairman if these were the whole of the letters, he said, Yes, except one which he left out. Asked if he had read the whole of each letter, he said he believed so, but he could get the originals. He did not read one from Dr. Herbert Snow, Surgeon at the Cancer Hospital, who said:

You must have been misinformed so far as my knowledge goes upon the point at issue,

as he had been a witness before the Commission. He placed all the replies before the Home Secretary in a letter to the Home Office, and he received no further reply from them. He remained of the opinion that those collected opinions of those great men outweighed the anonymous advice received by the Home Office. With those letters before them the Home Office ought to have recognized that they were of great weight. But they never answered him in any way, and, so far as he knew, Dr. Crile was never censured. Asked if he knew when Dr. Crile returned to America, he said, No. He would not be quite certain, but he thought that even subsequently to those experiments, and subsequently to the receipt of all those letters by the Home Office, Sir Victor Horsley, in whose laboratory the crushing of that dog's foot under incomplete anaesthesia took place, still received permission from the Home Office to vivisect where he liked and not in any registered place. Dr. Crile had issued another book since in America.

(To be continued.)

Nova et Vetera.

AN OLD STORY AND A NEW HOSPITAL.

Few of the many Londoners who within the past few years have seen the fine new building of Charing Cross Hospital rise in King William Street, off the Strand, know that it is connected by a kind of historical continuity, if not by organic development, with a famous old monastery in the North of Spain. It is a "far cry" from Charing Cross—where, even in Samuel Johnson's day, the "full tide of human existence" rolled in London—to the Pass in the Pyrenees, which was a death-trap for Charlemagne's paladins and for the rearguard of the army with which he had victoriously invaded Spain in 778. Cultured persons nowadays profess to admire only verse in which the meaning—when there is any—has to be laboriously sought for in words as cryptic as the symbols of the cabala. But there are doubtless still educated people who have read Scott, and some of these will remember the lines in *Marmion*:

> O, for a blast of that dread horn
> On Fontarabian echoes borne
> That to King Charles did come,
> When Roland brave, and Ollvier,
> And every paladin and peer
> On Roncesvalles died.

The fate of these heroes was commemorated in the *Chansons de Geste*, and has formed the subject of song and legend for more than a thousand years. We know they found a grave in the Pass of Roncesvalles, but of the story of that fatal day we know little else. One can only say of Roland:

> The knight's bones are dust,
> And his good sword rust;
> His soul is with the saints, I trust.

But what, it may fairly be asked, has the death of the famous paladin to do either with Charing Cross or with the hospital which takes its name from that centre of the busy life of to-day? The answer to this question is supplied by an accomplished physician now on the working staff of the hospital, Dr. James Galloway, in the form of a narrative interesting, not only to all in any way connected with Charing Cross Hospital, but to all students of the history of London and to all lovers of the records of antiquity. Probably many of us have hitherto thought of Charing Cross Hospital only as a modern foundation which was the Alma Mater of Thomas Henry Huxley, Sir Joseph Fayrer, and other men who have won fame in the realm of science. To any Charing Cross men who may have been tempted to envy the historic fame of Saint Bartholomew's, Dr. Galloway's booklet[1] will be as the discovery of an ancient pedigree to one who had believed himself a *terrae filius*, or what the Scots call a "kinless loon." To him it has clearly been a labour of love to trace out the history of the old convent at Charing Cross, which was the offspring of the mother house—in technical language, a "cell" of the Priory—established by Charlemagne at Roncesvalles as a memorial of Roland, who was his nephew, and his ill-fated companions in arms. Like many of the mediaeval monasteries, it was a hospital as well as a religious house. A sketch of its history as told by Dr. Galloway will, therefore, not be out of place here. Much antiquarian literature shows no sense of perspective; one cannot see the forest for the trees. But Dr. Galloway does not handle his material like Dryasdust. He has evidently taken great pains in gathering up the scattered and often slender threads of fact from records in this country and in Spain, and has woven them into a narrative which, like the Thames, according to the poet, is, "without o'erflowing full." A particularly praiseworthy feature of his work is that he has gone to living sources for some of his information; hence it is not disfigured by the absurd blunders which one finds in writers about mediaeval ecclesiastical matters who have disregarded Hood's advice:

> Never go to France
> Unless you know the lingo.



Fig. 1.—Effigy in the Temple Church of William Marshall, Senior, Earl of Pembroke (obiit 1219).

The Pass of Roncesvalles has played a part in our own history, as well as in that of France. It was traversed by the Black Prince when he invaded Spain, and it was the scene of a fierce struggle between the British and the French towards the close of the Peninsular war. But the connexion of Saint Mary Ronceval with Charing Cross dates from the time of Charlemagne. Before the Reformation the name was very familiar to Londoners. Among Chaucer's Canterbury pilgrims was "a gentil Pardoner of Rouncival."

The name "Roncevall" came into use as a family name in England, with the usual variants, one of which, we may point out, is familiar to readers of Dickens as that of Mrs. Rouncewell, the housekeeper of Chesney Wold in *Bleak House*.

Charlemagne's original foundation was situated in the village of Ibañeta, at the neck of the Pass, near the scene of the great battle; a raid by the Moors in 921 led to its removal to the village of Roncesvalles, a mile or two further south. At first the community consisted of Knights and Companions, as well as of Religious of both sexes. The Knights of Roncesvalles fought the Moors, while the Brethren and Sisterhood, besides discharging the ordinary duties of the religious life, according to the Augustinian rule, served in a hospital established for pilgrims and travellers in distress. The community as it won fame throughout Europe for its good deeds was enriched by gifts from the great as well as the common folk, and in time came to own property not only in Spain but in France, Portugal, Italy, England and Wales, Ireland and Scotland. At the height of its prosperity the community is said to have distributed yearly from 25,000 to 30,000 rations, each consisting of a loaf weighing 16 oz., half a pint of wine, with sufficient portions of soup and meat, or fish on days of abstinence. The hospitals were served by a staff of physicians, under whom were surgeons and an apothecary; one of the distinguishing features of the hospital was that it included Sisters.

It is a pity that there seems to be little in the records about the hospital as an institution of medical charity. We know that through the Dark Ages the manuscripts of ancient medical writers and such traditional and practical knowledge of healing herbs were preserved. We know, too, that the monks, finding the practice of physick a profitable business, invaded the domain of surgery, till they were warned off it by the Church. It was at the practice of surgery by the monks that the well-known and much-misunderstood pronouncement *Ecclesia abhorret a sanguine* was aimed. Of the medical practice in the Hospital of Saint Mary Roncevall we must be content to know nothing.

The House of Roncesvalles appears to have owed most of its property in England to the munificence of William Marshall, Earl of Pembroke, the eldest son of the great William Marshall, *Rector regis et regni*, Protector of the King after the death of John, from whom Richard Coeur de Lion, when disarmed by him in fair fight, was once fain to beg his life. The elder Marshall, who was a great benefactor of the Knights Templars in London, died in 1219 and was succeeded by the younger, who was

[1] *The Story of Saint Mary Roncevall.* (Privately printed.)

an Associate of the same Order. During the lifetime of both father and son the Pass of Roncesvalles was the main line of communication by land on the western frontier between France and Spain. Warriors were constantly passing through it to fight the Moors in Spain or on their way to the Holy Land, and pilgrims to the Shrine of Santiago de Compostella were frequent wayfarers through the defile. To them the Hospital of Saint Mary in the Pass of Roncesvalles often gave shelter, and it may be that the two Marshalls had themselves experienced its benefits in their travels and expeditions.

The Roncesvalles community appears to have made its first appearance in England in 1229. They seem to have been under the patronage of the younger William Marshall, who as soon as they arrived gave them an establishment in the country. He died in 1231, but in the following year Henry III confirmed at Wenlock "the grant to Saint Mary and the Hospital of Roncevaux (Roscida Vallis) of the gift which William Marshall, sometime Earl of Pembroke, made to them of all his houses at Cherring and the Hospital of Roncesvalles appointed Henry, son of William de Smalebrok, his attorney. This shows that the management of the English estates of the Roncesvalles community had to be entrusted to agents in this country, with the result pointed out by Dr. Galloway, that maladministration was not infrequent, and thus opportunities were frequently given for the interference of national authorities in the affairs of these foreign houses.

The year 1290 was a notable date in the records of the community. In that year Eleanor of Castille, wife of Edward I, died at Harby, near Lincoln, and the King in pious memory built a sculptured cross at every place where the body of his consort rested during the journey to Westminster. The last station in this progress was at the village of Charing. The hospitality of the Brethren must have been taxed to the utmost to provide accommodation for the funeral retinue accompanying the King, even if supplemented by the exertions of the clergy of the Hermitage of St. Catherine, on the northern side of the way. The cross at Charing was completed in the year 1294, and the Brethren, no doubt, had many opportunities of conversing with the architects and sculptors who built this, the most ornate of the Eleanor memorial crosses.

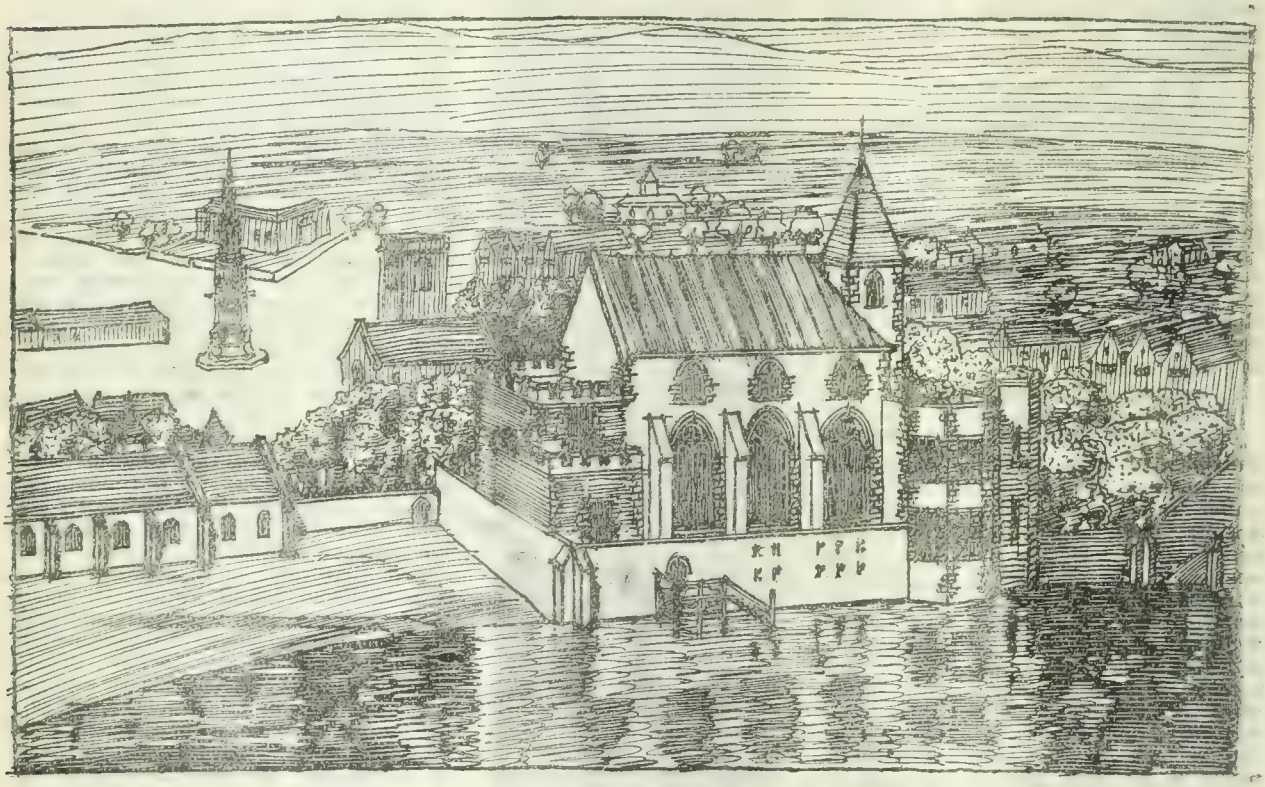


Fig. 2.—The Chapel of St. Mary Roncevall on the bank of the Thames previous to 1544. The chapel is of the middle of the thirteenth century, in two stories with Tudor additions at the south-west end and at the south-west angle; it is roofed with a steep-pitched leaden roof. The tower and belfry are at the north-east end. The upper story may have been used by the canons as cells or as a school or hospital, and access would have been gained by a newel stair in the north-east tower. The chapel is built on an embankment flanked by a high wall pierced by a door giving access by steps to the river. The sketch gives indications of the portions of the conventual buildings remaining at this date. The Cross at Charing, St. Martin's Church of that period, and other features in the village of Charing can be distinguished. (After van den Wyngaerde's sketch of London.)

houses and curtilages adjoining them formerly belonging to William Briwere, and of 100s. at Suthanton payable from the houses of the said Earl there, of 13 l. of land in Netherwent in the moor of Magor, and of a carucate of land in Assandon which he bought from Robert de Rochford."

Thus did the brethren obtain possession of the land on the banks of the Thames in the village of Charing where they afterwards built their convent, their chapel, and their hospital for the sick, which were to continue for more than three centuries.

After this the history of Saint Mary Roncevall is a blank for many years; even Dr. Galloway's industry has failed to unearth much information about the community. That they flourished and won golden opinions—and gifts—from all sorts of people is shown by the fact that they acquired property in Norwich, in Canterbury, in Oxford, and also in Ireland and Scotland. The few records which can be discovered are confirmations of bounteous gifts of Henry III and Edward I to the mother house in the Pyrenees. In 1278 and again in 1280 the Prior of the

The Brethren of St. Mary Roncevall at Charing did their best to defend their rights when attempts were made to cheat them out of their property. But during the long period England was waging war on the Continent communication with the mother house must have been difficult. Another thing which increasingly troubled the peace of the Community was the constant acute need of money on the part of the King. "If" (says Dr. Galloway) "it could be represented that the property of the alien religious houses was used for the support of the King's enemies, or if it could be urged in extenuation that funds sent abroad by alien communities, whose mother houses were not actually in a hostile country, might be captured in transit by the enemy, it is evident that the King would have little scruple in levying heavy contributions on the property of the alien clergy, or even of confiscating it entirely."

It was in the second quarter of the fourteenth century that the community of St. Mary of Roncevall in this country appears to have been most prosperous. The Convent at Charing Cross was the head quarters of the Brethren in our islands. The procurator for the prior had his residence there; he managed his estate and collected the revenues. The property in London was the most valuable, and consisted of plots of land in various parts of the suburbs as well as at Charing Cross; but the convent also possessed a considerable amount of property in Canterbury and at Oxford. There is evidence that they derived revenue from property in Norwich, and that lands elsewhere in England, in Wales, in Ireland, and in Scotland, yielded income more than was requisite for the upkeep of the settlements in these various places. At Charing Cross itself the Priory possessed a wedge-shaped piece of land, fronting on the river, and extending back to the roadway between London and Westminster. The frontage to the open space where Charing Cross then stood—that is to say, on the site now occupied by the

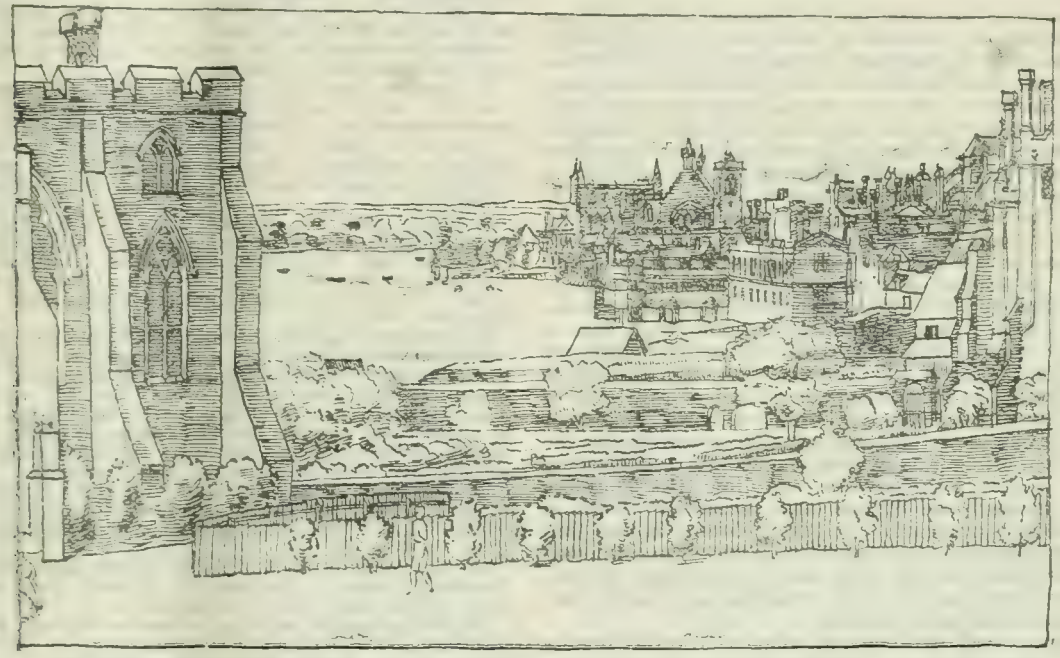


Fig. 3.—A copy of an ancient drawing in the possession of Mr. F. Gardner. This drawing is supposed to be contemporary, and to have been the work of an early Italian artist in England. It was purchased at the Strawberry Hill sale by Dr. Wellesley for the Gardner Collection. The Marquis of Salisbury is stated to have several drawings by the same early Italian artist. The sketch seems to show part of an aisle along the north-west face of the Chapel of St Mary Roncevall, with later Tudor additions. The Tudor battlements shown were probably added to the north aisle when the addition was built. The Tudor chimneys, which show their tops over the battlements, are reminiscent of the contemporary work of Cardinal Wolsey at Hampton Court, and would have been in brick, as were probably the battlements. The building on the extreme left of the sketch is probably the corner of a north porch. The sketch also shows the gardens of the convent at the riverside, and in the distance the buildings of Whitehall and of Westminster.

statue of Charles I—was more extensive than that facing the river. It must, however, be borne in mind that at that time the waters of the river extended much nearer to Charing Cross than they do now. The position of Inigo Jones's well-known Water Gate at the foot of Buckingham Street, the last remaining relic of York House, indicates the line of the river bank at a date over two hundred years later than the time with which we are dealing. Occupying the most easterly part of the river frontage was situated the church of the convent. This was probably built soon after the foundation of the convent, but there is evidence that considerable alterations and additions were made much later—perhaps at the end of the fourteenth century and again during the last phase of the existence of the house in the fifteenth and sixteenth centuries.

Some idea of the appearance of the chapel and the neighbouring buildings may be gained by studying two ancient drawings, still in existence, made while the conventual buildings were standing. One of these (Fig. 2) is the well-known sketch of London by Anthony van den Wyngaerde, dating from the middle of the sixteenth century: the other (Fig. 3) is a sketch in the Gardner collection, which shows a portion of the south-western end of the chapel, the gardens of the convent, and in the distance Whitehall and Westminster. Dr. Galloway gives a description of the chapel, which occupied a position corresponding approximately to the middle section of Charing Cross railway station, in alignment with York Gate, and extending towards the land now occupied by Craven Street and Northumberland Avenue. Immediately to the west of the chapel were the convent gardens, which extended in the direction of the roadway to Westminster, and were partly terraced to the river bank. Lying back from the chapel were the convent and other buildings belonging to it, which seem to have been arranged on both sides of a street which opened on the high road, close to the Cross. Over the doorway of each of these houses was sculptured a cross after the use of Roncesvalles; that is to say, one combining in itself the Cross, the Crozier, and the Sword. Fig. 4 is taken from a stamp now used in the Real Casa at Roncesvalles. The exact position of the hospital is not known.

In the fourteenth century the fortunes of Saint Mary Roncevall began to decline. The Black Death, which first visited England in 1349, swept away vast numbers of the clergy, as is told by Abbot Gasquet and Canon Jessopp, and thus paved the way for far-reaching changes both in the Church and State. The Charing Cross community suffered very severely, and the affairs of the convent were

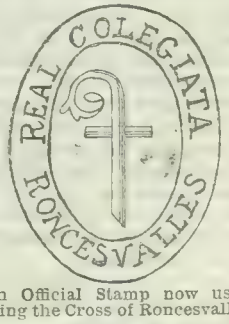


Fig. 4.—Copy of an Official Stamp now used in this Priory, showing the Cross of Roncesvalles.

thrown into confusion. Amongst other changes the native clergy seem to have got possession of the Saint Mary Roncevall Church and Hospital, and its property was looked upon by the King as a convenient source of revenue. The chapel and property were, however, restored

to the Prior of Roncesvalles in 1383. But in 1414 Saint Mary Roncevall finally passed into the hands of English clergy. The hospital continued its useful work throughout the fifteenth century, and Dr. Galloway thinks there can be little doubt that gradually its functions as a place of cure for the sick poor became more developed. The co-operation of nursing sisters, in continuance of the old tradition of the Order, must also, he thinks, have become customary in the hospital. In 1475 a Royal Charter of Edward IV records the "foundation of a fraternity or perpetual gild of a Master, two Wardens, and the Brethren and Sisters who may wish to be of the same in the chapel of St. Mary Rounsidevall by Charyng Crosse, and of a perpetual chantry of one chaplain to celebrate divine service at the High Altar in the said chapel." In 1478 a grant in mortmain is recorded to the Master, Wardens, Brethren, and Sisters of the fraternity of the said chapel or hospital and of its property, revenues, and privileges, for the sustenance of the Chaplain and two additional clergy, who now seem to have been required for the services in the chapel, and of "the poor people flocking to the hospital."

After various vicissitudes the Convent of Saint Mary Roncevall shared the fate of other similar institutions when Henry VIII, inspired by motives which it is not our business here to inquire into, dissolved the monasteries of England. Its death warrant was signed in 1544. In 1550 the site, with the buildings that still remained, were granted to Sir Thomas Cawarden, from whom they passed into the hands of Sir Richard Brett. The site was purchased early in the seventeenth century by Henry Howard, Earl of Northampton, who with the stones of the old convent built himself thereon a "sumptuous palace." Completed in 1605, this was known at first as Northampton House. Additions were afterwards made by Thomas Howard, first Earl of Suffolk, who called it Suffolk House. In 1642 it passed by an heiress to Algernon Percy, Earl of Northumberland. Another heiress brought the property to Charles Seymour, Duke of Somerset, and through a third heiress it came into the possession of the Duke of Northumberland. Middle-aged Londoners will remember the great house with the noble gateway surmounted by the Percy Lion, which was a conspicuous object at Charing Cross. It was in regard to that lion that Theodore Hook performed one of the most remarkable feats of "suggestion" on record. By gazing fixedly at the lion he gathered around him a vast crowd, whom he persuaded not merely that he, but they, saw the lion wag his tail! The story throws light on the value that is to be attached to popular belief and testimony.

Last scene of all, that ends the strange eventful history of Saint Mary Roncevall, Northumberland House disappeared before the devastating hand, "improvement," and Northumberland Avenue, with its huge caravanseries, clubs, and offices, stands on the site so long occupied by the old convent and hospital.

The Charing Cross Hospital of to-day owes its existence to Dr. Benjamin Golding. First housed (in 1823) in Villiers Street on the northern boundary of the property previously possessed by the Priory of St. Mary, it soon afterwards was moved to its present site.

In addition to a number of *pièces justificatives* in the form of copies of original deeds, and some interesting notes supplied by Don José Urrutia, the present Abbot Prior of the Convent at Roncesvalles, Dr. Galloway's little book is illustrated with plates showing the chapel of St. Mary Roncevall on the banks of the Thames before 1544, effigies of the tombs of the two Earls of Pembroke in the Temple Church, an ancient drawing which seems to show part of an aisle along the north-west face of the Chapel of St. Mary Roncevall with later Tudor additions, the gardens of the Convent, and in the distance the buildings of Whitehall and Westminster; the official stamp now used by the Priory; and the common seal of the Fraternity and Guild of St. Mary Roncevall, affixed to the deed of surrender. We are enabled by the courtesy of Dr. Galloway to reproduce four of these plates.

In conclusion we heartily congratulate the author on having produced a valuable contribution to the literature relating to the history of London.

Dr. Henry Willson, of Weybridge, has been placed upon the Commission of the Peace for the county of Surrey.

BRITISH MEDICAL BENEVOLENT FUND.

At the December meeting of the Committee twenty-two applications for assistance were received, and grants amounting to £177 voted in relief, four cases being passed over and one postponed for further inquiries. Appended is an abstract of the cases which were helped:

1. Widow, aged 56, of F.R.C.S.Eng., has been a confirmed invalid for the last two years. Only income a small pension, which is quite insufficient for the bare necessities of life. Voted £5.

2. Daughter, aged 62, of late M.D. Earnings very small and decreasing. Has recently been defrauded of a few pounds she had saved. Voted £5.

3. M.R.C.S., L.S.A., aged 62, who used to practise in London, but whose receipts greatly decreased owing to changes in the neighbourhood and competition. For some years past has endeavoured to support himself as a locumtenent, but finds increasing difficulty in obtaining work. Wife receives boarders. Children unable to help. Voted £10.

4. Widow aged 60, of M.R.C.S., L.S.A., who practised in Lincolnshire, and whose estate yielded barely 5s. in the £. Only certain income £12 10s. a year; children at present unable to help. Voted £6.

5. M.R.C.S., L.S.A., aged 64, who has been quite incapacitated for the last three months. Wife's income £23 a year. children only able to give occasional and very slight help; Relieved twice, £20. Voted £10.

6. Daughter, aged 60, of late M.D Edin. No income, and unable to earn for herself because an invalid sister requires constant attention. Relieved twice, £24. Voted £12.

7. M.R.C.S., aged 53, who for more than a year has been totally incapacitated. No income; no children; wife takes paying guests, but at present has none. Relieved once, £15. Voted £15.

8. Widow, aged 59, of L.R.C.P., L.R.C.S.E. No income: earns about 2s. 6d. a week by needlework. Only child barely self-supporting. Relieved nine times, £93. Voted £12

9. Daughter, aged 57, of late M.R.C.S., L.S.A. Income £16 a year. Health will not permit of continuous work. Relieved once, £8. Voted £6.

10. Daughter, aged 61, of late M.D Edin. Has just lost a situation through the death of her employer. Is allowed £6 by a charitable society. Eyesight very defective. Relieved three times, £36. Voted, £12.

11. Daughter, aged 63, of late L.S.A. No income; used to be a governess, but has had bad health for years. A small weekly allowance from a sister-in-law but insufficient for board and lodging. Relieved six times, £62. Voted, £6.

12. Widow, aged 69, of M.R.C.S., L.R.C.P. Endeavours to support herself by taking boarders or resident patients. Slight, irregular help from children. Relieved fifteen times, £156. Voted £12.

13. Widow, aged 58, of M.R.C.S. Quite unprovided for at husband's death. Receives 2s. a week from relations. Relieved four times, £46. Voted £12.

14. Widow, aged 41, of L.S.A. Acts as lady help, but salary insufficient for maintenance of her boy and her own unavoidable expenses. Relieved twice, £24. Voted £12.

15. M.R.C.S., L.S.A., aged 68, who is quite incapacitated by hemiplegia. Only income a pension from the Kent Medical Benevolent Fund. No children. Relieved twice, £24. Voted £6.

16. Widow, age 62, of L.R.C.P.Edin. Is the owner of a small house, but rent barely covers the necessary repairs, and lease expires in a few years. No children. Relieved eight times, £90. Voted £12.

17. Widow, aged 65, of M.D.Edin. Unprovided for at husband's death, and for several years acted as matron to a large institution. Is now dependent on a married daughter who can ill afford to assist. Relieved six times, £62. Voted £12.

Science and humanity alike score heavily if a story reported from America by the *Daily Express* be true. It is to the effect that while the *Pannonia*, a Cunard steamer, was on its way recently from the Mediterranean to New York a stoker was found to be in need of an immediate operation for appendicitis. On the fact being reported by the ship surgeon to the captain, the latter at once stopped the ship, and as this did not sufficiently steady it to make the performance of an operation of delicacy possible, further rose to the occasion by causing the ship to be surrounded by a layer of oil, and thus broke the force of the heavy sea which was running. The operation was then duly performed, and with such success that on arrival at New York the patient was convalescent. The whole story is such a pleasant one that we must hope it is true, and although it comes from America it is reported in such fashion as to make this probable. The name of the surgeon is given as J. F. Orr, while it is said that as soon as he had completed his task he practically collapsed. This is quite comprehensible, as the strain upon his nerves during such a procedure in the confines of a rolling ship must have been exceedingly severe.

MEDICAL NEWS.

THE next session at the West London Post-Graduate College commences on January 13th, and will last twelve weeks.

THE Lord Chancellor has, on the recommendation of the Lord-Lieutenant of the County (the Duke of Fife, K.T.), added the name of Dr. R. J. Collie to the Commission of the Peace for the County of London.

THE KING has sanctioned the acceptance by Captains S. L. Cummins, M.B., B.Ch., and G. S. Nickerson, M.B., both of the Royal Army Medical Corps, of the Fourth Class of the Imperial Ottoman Order of the Osmanieh, conferred upon them by the Khedive of Egypt, in recognition of valuable services rendered by them.

THE second Hunterian Lecture, dealing with some important aspects of suppuration of the middle ear, will be delivered by Dr. Dundas Grant at a meeting of the Hunterian Society on January 8th, at the London Institution. On the occasion of this lecture, which commences at 8.30 p.m., the Society will, as usual, welcome any member of the medical profession who desires to be present.

THE opening lecture of the Mount Vernon Hospital Post-Graduate Course will be given by Sir Thomas Clifford Allbutt, K.C.B., F.R.S., consulting physician to the hospital, in the lecture room at the Central Out-patient Department, 7, Fitzroy Square, W., on Thursday, January 9th, at 5 p.m. The subject of the lecture, to which medical practitioners are invited, will be angina pectoris.

THE annual dinner of the Metropolitan Hospital Saturday Fund will be held at the Holborn Restaurant on Saturday, February 1st, at 6.30 p.m. The chair will be taken by Sir George Bartley, K.C.B., one of the Vice-Presidents of the Fund. Applications for tickets should be made to the Secretary of the Fund, or the Chairman or Honorary Secretary of any of the Standing Committees, not later than Tuesday, January 28th.

THE second annual dinner of the past and present students of the Royal London Ophthalmic Hospital will take place at the Trocadero Restaurant, Shaftesbury Avenue, W., on Wednesday, January 29th. Sir John Tweedy, F.R.C.S., Consulting Surgeon to the Hospital, ex-President of the Royal College of Surgeons of England, will take the chair at 7.45 p.m. Each student is entitled to introduce two guests. Tickets (price 10s. 6d. each, exclusive of wine) may be had on application to either of the honorary secretaries, Mr. Arnold Lawson, 12, Harley Street, W., or Mr. J. Herbert Parsons, 27, Wimpole Street, W.

THE least-known and least-visited, perhaps, of all our colonies, British Honduras, contrives to show a certain amount of progress in every way, not excepting the sanitary condition of its towns. Last year, as we learn from the Colonial Office report, there was no yellow fever—an unusual circumstance, for there was an epidemic in 1905, and epidemic years have hitherto always been followed by a less severe outbreak in the succeeding year. All the neighbouring countries suffered, but a strict system of fumigating all the small vessels coming from infected ports had probably not a little to do with the immunity Belize enjoyed. An ordinance enforcing the covering of all butts, tanks, and cisterns with wire gauze came into force in Belize on January 1st, 1907, and later on in every town in the country. It was noticed that directly the cisterns of any block were finished, neighbouring houses were visited by flights of *Stegomyias* evidently looking for new breeding grounds, and these migrations continued until the cisterns were all covered. The population of British Honduras is 41,007, and the males are in excess of the females by 877; the male births also exceeded the female by 27 during the past year. The birth-rate was 32.9 per mille, and just two-fifths of those born were illegitimate. The death-rate was 29.9, and fevers of malarial type apparently accounted for 10 per cent. of the deaths. The vital statistics of the Carib seem to show better than those of any other people in the colony; for while the "Indian"—it is not stated whether the East Indian is meant by this term—has the ominous figure of 114 deaths for every 100 births, the negro 58, and "other races" 79, the Carib deaths number only 48.

CAIRO WATER SUPPLY.

IT was mentioned in the BRITISH MEDICAL JOURNAL some months ago that Dr. A. C. Houston, Director of Water Examinations to the Metropolitan Water Board, had been granted permission to take part in the examination of the Cairo water supply. Of this there have been a good many complaints, and it was therefore deemed desirable by the Egyptian Government that the sources of the supply, the methods of collection and distribution, and the suitability of the water for drinking and domestic purposes, should be inquired into. Accordingly an International Committee of three experts, consisting of Dr. Houston, Professor Gartner, and Dr. Dienert, was appointed. This Commission was at work from November 21st to December 7th, 1907, and its report will shortly be published in Arabic. According to the *Times*, while criticizing the methods of filtration of the Ghizeh and Abbassieh supplies, which are derived from the Nile, and in a less degree of the Rod el Farag supply, derived from wells in the neighbourhood of the river, the experts pronounced favourably, on the whole, as regards the freedom of the supply from chemical and bacterial pollution. The methods of distribution on the east bank of the Nile are declared to stand in need of drastic improvements in the immediate future. A number of recommendations as to the methods of filtration and distribution that should be adopted are appended to the report, which, while in some respects unsatisfactory, disposes of the frequently absurd charges—for example, of causing barrenness and loss of hair—brought against the Rod-el-Farag well supply by the native population, which, being accustomed to soft water derived from the Nile, had a strong prejudice against the hard water supplied by the new wells. Our contemporary adds that it is believed that the Government will shortly appoint a commission to consider the question of how best to give effect to the recommendations of the commission.

HOSPITAL AND DISPENSARY MANAGEMENT.

GARTLOCH ASYLUM, GLASGOW.

THE tenth annual report of the Glasgow District Asylum, Gartloch, covers the twelve months ending May 15th, 1907. During this period the number of patients increased from 684 to 745, an addition of 61 (33 males and 28 females); 240 patients were discharged or died, while 301 were admitted. The average number in residence was 722.3, and the total number under treatment was 981. The number that died was 81, while 99 patients were discharged as recovered, and a further 60 were discharged as relieved, either transferred to other asylums or handed over to the charge of friends and relatives or boarded out. The admissions numbered more than in any previous year, and from the prognostic point of view represented very unfavourable types of insanity; thus over 66.1 per cent. had either been ill over a year or had previously been ill or were congenital imbeciles. This is in large measure due to the fact that many acute curable cases are now treated in the observation wards of the parochial hospitals. It is also owing to this factor, perhaps, that the recovery-rate, 32.89 per cent., is this year considerably below the usual rate for this asylum. Dr. Parker would like to see an attempt made to dispose of boarded-out cases in groups, so that for every couple of hundred or so an experienced inspector might be appointed as advisor and supervisor. With such an arrangement he thinks that the boarding-out system might be greatly extended and made suitable for many cases which at present cannot be so treated. A very useful innovation has been made by the Brabazon Association, which has started an after-care association to assist patients in getting a fair start after their discharge from treatment. The number of deaths was 81, or 8.23 per cent. of those under treatment during the year. As on former occasions, the chief mortality occurred from general paralysis. In 48 instances a *post-mortem* examination was obtained, but Dr. Parker regrets that the Glasgow district has not yet seen the advisability of supporting the conjoint laboratory scheme of the Scottish asylums. The chief etiological factor is again found to have been parental alcoholism, more especially in the case of patients whose mental breakdown occurred before the age of 26. Despite the fact that the period under review was a bad one for the farm and garden, the net maintenance expense per patient—£28 15s. 5d.—was lower than in the previous year. Of this £1 10s. 1d. represented the deficit on the garden and farm owing to the unusually bad weather. Despite this reduction in the maintenance cost the comfort and well-being of the patients was in no way diminished. The Commissioners' reports are highly satisfactory.

British Medical Journal.

SATURDAY, JANUARY 4TH, 1908.

MUNICIPAL MATERNITY HOMES.

SIR WILLIAM SINCLAIR is a knight-errant who, when he sets out on an adventure, does not consider too nicely upon whose head his blows may fall, or who may be the opponent to be unhorsed. His latest battle-axe is a pamphlet,[1] issued at a price that makes pecuniary profit from its sale impossible, with which he lays about him with his customary vigour. It is not written to advertise a new treatment, or to chronicle the number of successful operations performed by the author. Nor is it in the least a bid for personal popularity; if it were, the author has chosen the most singular means to attain this end. A large part of the pamphlet is a denunciation of his own profession; and another considerable part is an attempt to persuade the local authorities to increase the burden on the ratepayers. Sir William Sinclair displays an independence and courage as well as literary skill which command our highest respect.

Sir William Sinclair censures members of his own profession for two things. The first, their want of either knowledge of antiseptics, or faith in them, or diligence in using them. Dr. Boxall, Dr. Cullingworth, and others have tried to drive home the truth that, although by the use of antiseptics puerperal fever has been practically banished from lying-in hospitals, yet the death-rate from parturition among patients delivered at their own homes remains nearly what it was in pre-Listerian days. We in England have for many generations enjoyed freedom of opinion and freedom of speech. But there are limits to such freedom. Any Englishman may, if he pleases, believe and say that the earth is flat like a plate, and that Sir Isaac Newton was altogether wrong about the law of gravitation. No policeman will arrest him, and no judge will sentence him, so long as his nonsense is limited to talk. But if he happens to be captain of a ship he must navigate his vessel in accordance with current opinion. If he loses his ship and the lives of persons on board, and is in consequence tried for manslaughter, it will not in the least excuse him if he says that he conscientiously holds opinions different from those of the persons who edit the *Nautical Almanack*.

The importance of asepsis, and the value of antiseptics in securing and maintaining asepsis, Sir William Sinclair evidently thinks are now beyond the stage at which medical men may act on their own individual judgement or caprice. They may think as they please, but they ought to use antiseptics in practice. One object of his pamphlet is to press this home. The real value of what it is a pleasure to us to call "Listerism" has now been demonstrated in every civilized country. It is a disgrace that British mothers should not always receive the protection from death and disease that their great fellow countryman has taught doctors all over the world how to give. A great amount of puerperal sepsis is not directly the fault of doctors themselves. Much of it is from infection by dirty midwives and monthly nurses. The Midwives Board is slowly and with difficulty removing from the scene of childbirth one dangerous midwife after another. Sir William Sinclair is a pessimist as to the monthly nurse, as to whom he says, "We must abandon hope of improve-"ment." We do not see why. It is the duty of medical men to instruct their patients in the importance of antiseptics, and to insist that the monthly nurse shall not only be a pleasant attendant skilled in the duties of the toilet, but shall understand surgical cleanliness. In this respect medical men are perhaps too often subservient to their patients' liking. If they would insist on having nurses well drilled in antiseptic routine, they would get them. Professor Sinclair asserts that while among some of those to whom the lives and health of lying-in women are entrusted adequate knowledge of antiseptics is lacking, in others there is an overweening confidence in antiseptics, which makes them imagine that the artificial extraction of the child as quickly as possible is better than waiting for the uterus to expel it. He repeats a former assertion of his: "It is universally recognized that all obstetric "operations add to the mortality and morbidity of "childbed." This, he says, is especially true "of forceps "and of manual removal of the after-birth; the first as "the bloodiest of all the obstetric operations, the other "as that operation which of all the obstetric operations "is most conducive to infection." We must with regret admit that we think there are practitioners to whom Sir W. Sinclair's condemnation applies. But we hope they are few, and that those of them who read these lines may be induced to part with a threepenny-bit in exchange for this pamphlet, and ponder the advice of the author.

Faulty midwifery practice is one thing in which Sir W. Sinclair finds fault with his professional brethren. The other matter is the spirit which has induced a small section of the medical profession in Manchester to demand the abolition of certain hospital officers. He states that at present a midwife in that city who has a case in which signs of difficulty or danger are present can send for a hospital officer, who will advise her, and if necessary take the patient into hospital. If this arrangement did not exist the midwife would have to send for a general practitioner, who would receive a fee. Sir William Sinclair argues that the action desired would, if carried out, level down the midwifery fees of all medical men to the lowest possible point. He says: "If the poor woman knows that a "doctor is at the beck and call of every midwife, why "should she engage any one except the midwife?" The tendency of democracies is always to undervalue superior intellectual ability, and a popularly-elected body will never make a mistake in the direction of overpaying doctors. He then expresses his opinion as to the defective midwifery education in England. But as the General Medical Council has taken very strong measures to alter the present system, and in former issues we have freely commented on these measures, we have little further to say about them now. It would be rash to predict what will be the effect of the General Medical Council's new requirements.

The latter part of Sir William Sinclair's pamphlet is, as we have said, an attack upon the pockets of the ratepayers, in the shape of a demand for the establishment of municipal maternity homes. He adduces the experience of every civilized country to show that the safest place

[1] *A Plea for Establishing Municipal Maternity Homes for Cases of Abnormal Labour and Puerperal Fever.* By Sir William J. Sinclair, M.D., Professor of Obstetrics and Gynaecology, Victoria University of Manchester. Manchester and London: Sherratt and Hughes. 1907. (Demy 8vo, pp. 97. 3d.)

in which a woman can be delivered of a child is a properly managed lying-in hospital. He points out that many poor women are delivered in rooms so dirty that it is difficult to ensure asepsis, and therefore, if operative delivery is necessary, the mother is safer if taken to a hospital. This is so, but we are disposed to think that Professor Sinclair and those who agree with him rather over-estimate the danger from ordinary dirt, and under-estimate the power of antiseptics. The excellent results obtained in some lying-in hospitals where it is customary for the women to be delivered in their ordinary clothes show that, with thorough local disinfection of the genital passage and the operator's hands and instruments, dirty clothing does not produce septic infection. Before Lord Lister's time the mortality in hospital out-door maternities, and in private practice, although higher than it ought to have been, yet was low enough to show that the chances of septic infection from what we may call "ordinary dirt'—that is, dirt not contaminated with discharges from human beings—are but small. But as Sir William Sinclair entertains no doubt that a woman in childbirth is safer in hospital, he asks where is she to go? Some would say, "the workhouse infirmary." But that involves the social stigma of pauperism; and the respectable poor will not submit to this. There are the lying-in hospitals. But in Manchester, as in many other towns, there are not enough lying-in beds. And in the present state of things, when the patient goes into a hospital, she passes from the care of her own doctor, and the change is not always welcome, either to patient or doctor. The remedy Sir W. Sinclair proposes is the provision by the municipality of maternity homes. He means not a palatial building with a large staff, but a small house furnished like an artisan's dwelling and differing from the home of a poor mother only in being kept surgically clean. He asks not for a resident medical officer, or a medical staff, but simply for nurses (we presume there must at least be two) who understand what surgical cleanliness is, and how to attain it. If a few such houses were provided in different quarters of a large city then a medical man called upon to deliver a woman in conditions of difficulty and danger would have a place to which he could send the patient and be sure that the gravest risk that attends operative delivery would be removed.

The provision of such homes would, we cannot question, be a good thing. We will leave to economists the question whether it is a proper function of the municipality to provide such homes. There are those who think it would be a great misfortune for hospital management to be handed over to the State, either to Imperial Parliament or to county or borough councils: but this is a large question which we cannot here enter upon.

We have only one thing more to say, which is that we do not see how the provision of small isolated maternity homes will further the practical midwifery education for which Sir William Sinclair so eloquently pleads. The meddlesome doctor who thinks he does right in pulling out the child as quickly as he possibly can, and immediately afterwards extracting the placenta, will be nearly, though not quite, as dangerous in a maternity home as in the patient's house. Antiseptics protect the patients from the immediate risks of such practice, but not from the consequences which follow months or years afterwards. Midwifery can be properly taught to students only in a large hospital. We hope that those who, like Sir W. Sinclair, have the power of influencing public opinion in this matter will study the report on the conditions appertaining to the teaching of practical midwifery to students which was published in this JOURNAL on November 16th last.

DIETETIC CURES.

THERE is no novelty about the treatment of disease by diet; it has, indeed, formed a principal part of therapeutic methods whenever these have shown enlightenment, and if well considered and based on scientific grounds deserves to occupy a high rank; even when purely empirical it is as worthy of attention and at least as respectable as the routine administration of drugs. Although at the present time systems of diet occupy a good deal of space in the halfpenny newspapers, they are even more considered and practised in Germany, where the so-called *Naturheilkunde* is extremely popular, and is a formidable rival to scientific medicine. German doctors have been obliged to investigate the merits of popular methods, whatever their origin; and in a recent lecture, Dr. A. Albu of Berlin[1] has passed in review the various systems, orthodox or otherwise, and his account of them is not without interest to English readers.

The employment of methodical overfeeding which has proved useful in such conditions of malnutrition as phthisis, visceral ptosis, neurasthenia, and hysteria, was due to the recognition of the possibility of excessive quantities of food being assimilated in spite of the diminished functional (motor) capacity of the alimentary canal. It is not necessary to follow slavishly the plan of Weir Mitchell and Playfair, but the object to be aimed at is the administration of a large amount of highly nutritious food in a relatively small volume at short intervals; the quantity is gradually increased to two or three times the customary *quantum*, and may reach the value of 4,000 heat units in special cases. In sanatoriums for phthisis excessive feeding is carried out successfully without rest in bed. A considerable addition of body fat, as much as 15 lb., may be gained in the first four weeks; afterwards the increase is slower; but there is no evidence that the albuminous tissues of the body can increase in consequence of the administration of albuminous foodstuffs as advertised. Cures with milk, kefir, and whey must not be classed with fattening methods, as it is usually impossible to give more than 3 litres of milk daily, which afford only 1,800 heat units. The value of a milk diet is its blandness; it diminishes putrefaction in the alimentary canal, and is of value in gastric ulcer, catarrh of the intestine, heart and kidney diseases, neurasthenia, and hysteria. It is occasionally beneficial in diabetes and obesity, but is not suited for chlorosis. Kefir has practically the same food value as milk, but may be preferred for its taste. Whey is only a weak solution of milk-sugar with a feeble diuretic action, and affords a minimum of nutriment.

The converse of overfeeding is the methodical reduction of diet to cure corpulence. This was first systematically carried out by Brillat-Savarin. The method published by Banting fifty years ago was ordered by his physician, and practically consisted of meat diet, containing as much as 180 grams of proteid. This is too much, and Oertel reduced the proteid to 160 grams, allowing in addition 75 to 120 grams of carbohydrates and 25 to 45 grams of fat. Ebstein still further reduced the meat to 100 grams, carbohydrates to 50 grams, and raised the fat to 60 to 100 grams, an impossible quantity of fat, while the albumen is, in Dr. Albu's opinion, too low, causing a danger of wasting of the tissue albumen. He holds

[1] *Deutsch. med. Wochenschr.* 1907, No. 50.

that the proteid should not fall below 120 grams, but Chittenden's experiments have proved that health and strength may be maintained on considerably less. It matters little whether the carbohydrates or the fats are most reduced, but the quantity of both must be diminished. It has not been proved that the withholding of liquids at meals has any definite effect, but highly nutritious fluids like beer and thick soups must be forbidden, and buttermilk or lemonade sweetened with saccharine may be substituted with advantage.

The vegetarian system as pursued by some of its more fanatical disciples is essentially one of underfeeding. For example: breakfast—buttermilk, brown bread and a little butter; mid-day—lentils, potatoes cabbage, stewed fruit, salad; evening—potatoes, radishes, brown bread and butter, fruit, lemonade. The occasional use of meat, fish, and eggs in small quantities will not affect the result of such a diet. The potato cure of G. Rosenfeld consists of 200 to 300 grams (7 to 10 oz.) of potatoes three times a day; it has the advantage of filling the stomach, but most patients strike after a short trial. All reduction cures must be continuous, as no permanent good can follow a course of four or six weeks if the patient reverts to his former habits. A vegetarian diet is sometimes recommended in gout and diabetes—in gout, on the experimental ground of the comparative poorness of vegetables in nuclein and richness in alkali; in diabetes (Kolisch) it is held that vegetables and fruit, which contain comparatively little starch, effectively allay excessive hunger. Vegetarian diet has also been recommended in recent times for chronic constipation, Graves's disease, arterio-sclerosis, neuroses of the heart, neurasthenia, neuralgias, chlorosis, many skin diseases, (especially psoriasis and urticaria), while a lacto-vegetarian diet is usefully employed in stomach and bowel complaints, in spastic constipation, and neuroses.

Of the special vegetarian diets the grape cure has a limited value in chronic constipation; the patient eats about 3 lb. of grapes daily, divided into three portions; the first in the morning fasting, the second before the mid-day meal, and the third before going to bed. It has recently been recommended for gout and kidney diseases (Laqeur), and in obesity to stay the cravings of hunger. The lemon cure is an ancient practice recently revived; it has no scientific basis, but is really useful as it has an energetic action on the bowels and influences favourably gout and obesity, especially when combined with steam baths and other means. The juices of two or three lemons are taken in sugar water (*eau sucré*) three times a day, milk and fatty foods being avoided; preserved lemon juice does not seem to be equally effective.

We cannot, in accordance with our present knowledge of the pathology of diabetes, any longer describe the diet as uniform, since it ought to be adjusted to individual requirements and tolerance. The basis is proteid and fat, meat, fish, eggs, cheese, and butter in large quantities, salads, cucumbers, cabbages, spinach, mushrooms and the like, but such a diet must not be continued for more than four to six weeks, and meanwhile large doses of sodium bicarbonate should be administered to ward off acidosis. After the period of strict diet carbohydrates must be added, especially the much-missed bread, then potatoes and fruit. The quantity of proteid food should be limited, but should not fall below 100 grams daily, or collapse may follow; alcohol need not be wholly withheld. Fast days on which the patient abstains from all carbohydrates, and vegetable days on which he abstains from meat, should be introduced once or twice a week. The oat cure of von Noorden may be alternated with the proteid-fat diet, but not for more than three to five days at a time. It consists of 250 grams (8 oz.) of oatmeal gruel two or three times a day, with six or eight eggs, and 200 to 300 grams (7 to 10 oz.) of butter with coffee and alcoholic drinks.

The system of dry diet is as old as the Greeks, but has been revived by Schroth in the so-called *Semmelkur*. It is a combination of hydropathy with a diet of dry rolls, five or six of which are eaten in the course of the day, while liquids are abstained from; at the end of five or six days the sufferer is allowed a certain amount of wine and a kind of porridge in the middle of the day. Jürgensen found this diet useful in pleural and peritoneal effusions, and in old syphilitic and joint troubles, but it causes great distress.

Withholding liquids was formerly used by van Swieten in the treatment of dilated stomach, and is approved by Albu, Riegel, and others; it has been recommended recently in kidney and heart disease, especially with dropsy. But even more important is the withdrawal of salt; retention of chlorine in the body having been shown to be a cause of oedema. Complete elimination of salt from the diet is impossible, but it may be reduced by not adding any in cooking or at table, by having bread baked without it, and by using fresh butter. Toulouse and Richet have employed this diet with benefit in the treatment of epilepsy, their patients tolerating larger doses of bromide, which they believe to be substituted for chloride in the juices and tissues of the body.

Finally, Dr. Albu refers to the fasting cures lasting from three days to three weeks which have at different times in the history of medicine been recommended as remedies for any and every disease; these have lately reappeared in America under various guises, but Dr. Albu finds this theory the last straw and refuses to discuss it. His account, indeed, falls considerably short of completeness, as it omits to mention the minced meat and hot water diet, which has many warm advocates here; the purin-free diet, which was recently criticized by Dr. Chalmers Watson in these columns,[2] but has rendered real service in special cases; and the fruit diet followed by certain communities in California, and described by Dr. Jaffé.

HOSPITALS AND THE WORKMEN'S COMPENSATION ACT.

Among the many by-effects of that revolutionary social measure, the Workmen's Compensation Act, 1906, is a disturbance in the relation of hospitals to patients who may have a right to benefit under the new Act. The object of the Act is to compensate the sufferer for loss and injury incurred during the course of employment, and it may be assumed that the Legislature intended to assess the compensation at a rate which would not only make up for loss of time, but also repay the expenses of adequate treatment. The matter is, we believe, receiving the attention of many hospital committees at the present time, but the Executive Committee of the Worcester Infirmary is the first which, as far as we know, has dealt with the matter practically in a specific case. A domestic servant at Malvern was injured in the pursuance of her duty, and an operation became necessary. She applied to the Malvern Hospital, where she was told that she would be required to pay; subsequently she procured admission to the Worcester Infirmary, where the operation was performed, and

[2] December 21st, 1907, page 1759.

it is anticipated that after a reasonable period she will be as well or better than ever. It came to the knowledge of the Committee of the Worcester Infirmary that the patient had received £40 compensation, and the matter was thereupon referred to the honorary medical staff. The staff recommended that the fee for the operating surgeon should be 10 guineas, for the assistant 2 guineas, and the anaesthetist 1 guinea, making 13 guineas in all. The House Committee approved the suggestion, and recommended that in addition the patient should be charged £1 a week, the expenses of her maintenance in the infirmary, and £1 for the use of the operating theatre and sterilizer. The Chairman of the Executive Committee observed that this would leave the patient a sum to keep her during convalescence, and recommended that the course proposed should be approved. His motion was carried, after it had been pointed out that the surgical charges were less than would have been charged if the operation had been done privately. The question thus raised will, we understand, be one of the points which will be submitted for consideration at the United Kingdom Hospitals Conference to be convened, according to instructions, early this year by the Committee appointed at the last meeting of the Conference.

A correspondent has recently drawn our attention to another matter which affects hospitals in their relation to the Workmen's Compensation Act. It appears that some insurance companies require a medical certificate before they will pay compensation, and that one company, to the knowledge of our correspondent, has offered to pay fees to the authorities of a hospital with which he is connected for granting certificates of disablement. "My Board," he writes, "refused on two grounds, the first being that it would be an abuse of the hospital to compete with outside practitioners, and the second that it must in the end bring the Board into conflict either with employer or employed." The refusal of the hospital authorities to accept the fees was altogether proper, but the facts stated incidentally raises the further question as to whether and how far an insurance company has power to demand a medical certificate. He points out that, upon receiving notice of accident, the company in question addresses the following letter to the employer: "If the injured "person has not returned to work and makes a claim "under the Workmen's Compensation Act, 1906, we "shall require him to furnish you with a medical "certificate in the enclosed form, which please forward "to us." To the form of certificate accompanying this letter is appended the following note: "The fee for this "certificate (if any) to be paid by the injured person." There is nothing in the Act of 1906 which imposes upon a claimant any liability to supply and pay for a medical certificate; if such a certificate is deemed necessary or desirable, the cost of it must be a matter of arrangement between the insurance company and the employer. The incidence of the expense would depend, of course, upon the terms of the policy of insurance. The duty of the workman is very clearly delimited. Thus, by Section 2 (2): "Notice in respect of an injury "under this Act shall give the name and address of "the person injured, and shall state in ordinary "language the cause of the injury and the date at "which the accident happened, and shall be served on "the employer, or if there is more than one employer "upon one of such employers." Having given this notice, which need not, of course, be accompanied by anything in the nature of a certificate, the workman may have to take certain other steps. Thus, by Schedule I (4): "Where a workman has given notice "of an accident, he shall, if so required by the "employer, submit himself for examination by a duly "qualified medical practitioner provided and paid by "the employer, and, if he refuses to submit himself to "such examination, or in any way obstructs the same, "his right to compensation, and to take or prosecute "any proceeding under the Act in relation to com-"pensation, shall be suspended until such examination "has taken place." This passage from the schedule clearly imposes upon the employer the duty of paying for any medical examination which the claimant may have to undergo.

It is only at a later stage that the workman may become liable for a fee. A workman who is in receipt of weekly payments may be required by the employer to submit himself to periodical examination by a duly-qualified medical practitioner provided and paid by the employer. If he has so submitted himself, "or has been examined by a medical practitioner selected by himself," and fails to agree with the employer as to his condition or fitness for employment, the registrar of a county court, on application being made to the court by both parties, may "on payment by the applicants of "such fee, not exceeding £1, as may be prescribed, refer "the matter to a medical referee." It would appear that the fee of the medical referee would be part of the costs of the arbitration, and would be paid by either party according to the result of the arbitration.

It is manifest that no hospital would undertake the duty of examining injured workmen at the request of employers of labour. To make any such examination for a fee would be to compete with private practitioners. If a hospital ought not to undertake this duty for an employer it certainly ought not to undertake it for an insurance company, and as we have endeavoured to show, it is certainly under no obligation to make an examination on behalf of any one.

NEW YEAR HONOURS.

THE only member of the medical profession in the United Kingdom whose name appears in the list of New Year Honours is that of Mr. Malcolm Morris, on whom is conferred the distinction of K.C.V.O. Sir Malcolm Morris is well known as a dermatologist, having been for many years in charge of the Skin Department of St. Mary's Hospital, to which he is now consulting surgeon. He is also Surgeon to the Skin Department of the Seamen's Hospital, Greenwich, and lecturer on dermatology in the London School of Clinical Medicine. He holds the office of dermatologist to the King Edward VII Hospital for officers, and was formerly a lecturer at the London School of Tropical Medicine. Sir Malcolm Morris has contributed largely to the literature of his speciality, and is the author of a *Manual of Skin Diseases* which has gone through several editions, and of a monograph on ringworm. In collaboration with Dr. Dore he has produced a treatise entitled *Light and X Rays in the Treatment of Skin Diseases* which was recently reviewed in the BRITISH MEDICAL JOURNAL. He delivered the Lane Lectures at San Francisco in 1901, and took a prominent part in the organization of the British Congress on Tuberculosis held in London in that year. He was also one of the initiators of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, of which he was for some time honorary treasurer. The other members of the profession whom the King has delighted to honour all belong to the Indian services. The distinction of Commander of the Indian Empire (C.I.E.) has been bestowed on Major John Norman Macleod, I.M.S., Civil Surgeon of

Quetta. He is a graduate in arts and medicine of the University of Glasgow, and entered the service in 1893; he was promoted to the rank of Surgeon-Captain in 1896, and became Major in 1905. The Kaisar-i-Hind medal for public service in India has been awarded to Major Robert Charles Macwatt, I.M.S., Residency Surgeon, Jodhpur, Rajputana; he is a graduate of Edinburgh, and was promoted to the rank of Surgeon-Captain in October, 1887, becoming Major in October, 1899. The Kaisar-i-Hind medal has also been given to Honorary Captain James Morrison, Indian Subordinate Medical Service (retired), Special Plague Medical Officer for the Central Provinces.

THE ROYAL IRISH ACADEMY.

WE are informed that the Royal Irish Academy—*not*, be it noted, the Royal Academy of Medicine in Ireland—was asked if it desired to send a representative to give evidence before the Royal Commission on Vivisection. The President of the Academy is one of the persons entitled to sign applications for licences to perform experiments on animals. Dr. J. M. Purser, M.D., Sc.D., formerly King's Professor of Physiology, Trinity College, Dublin, was accordingly nominated to lay the views of the Council of the Academy before the Commission. At the same time the following resolution was passed unanimously and forwarded to the Secretary of the Commission: "The Council, fully "recognizing the vital importance of experimental "investigations carried out on living animals, believes "it is desirable that licences to perform such experi- "ments should continue to be granted to qualified "workers. The Council believes that the restrictions "at present regulating the granting of licences are "adequate. The Council would desire to set licences "granted by the Home Secretary on the recommen- "dation of (1) the head of any of the Universities of "Great Britain and Ireland: (2) the head of any of the "medical licensing corporations; (3) the head of any "of the chartered scientific societies; (4) the head of "any of the veterinary colleges."

THE VACCINATION ACT, 1907.

A GENERAL ORDER was issued on December 23rd, 1907 by the Local Government Board, dealing with the modifications of the Board's existing regulations, instructions, and forms rendered necessary by the Vaccination Act, 1907. In September last a temporary Order was issued for the purpose of meeting the special circumstances of the period comprising the last four months immediately preceding January 1st, 1908, on which day the new Act came into force. The temporary Order is now rescinded. A fresh form of notice of requirement of Vaccination—Form A—is prescribed containing the necessary references to the new method of obtaining exemption from penalties by means of a statutory declaration. The form of declaration is printed in full in the notice of requirement of vaccination. Form A was already a somewhat complicated document to place in the hands of the average parent. It is now even more cumbersome. Essentially a Notice of Requirement of Vaccination, this form can now be used (1) as a notice to the public vaccinator to visit the home of the child before it is 4 months old for the purpose of vaccinating the child; (2) as a declaration of conscientious objection; (3) as a medical certificate of postponement of vaccination owing to the state of the child's health; (4) as a medical certificate of postponement of vaccination owing to the condition of the house or the recent prevalence of infectious disease in the district; (5) as a medical certificate of insusceptibility, of successful vaccination, or of the child having had smallpox; (6) as a medical certificate of successful vaccination. Copies of this form have now been issued by the Registrar-General to the registrars of births and deaths. The recent Order makes no other change except a slightly modified form of the vaccination officer's report book. The operation of the easy process of "statutory declaration" will doubtless be watched with some concern by those interested in public health.

LORD KELVIN.

ALL that was mortal of William Thomson, Baron Kelvin found a fitting resting-place in Westminster Abbey in the grave next to that of Sir Isaac Newton. So universal was Lord Kelvin's genius, that there is scarcely a branch of scientific work, theoretical or applied, which was not very materially advanced either by his theoretical speculations or by one of the many instruments which he designed and brought to perfection. Though the degree of M.D. which he held was purely honorary, conferred on him by a German University which wished to do him honour and give him some degree other than those he already possessed, the medical profession owes to him the mirror galvanometer, which has made possible the development of the modern science of electro-physiology. The chief workers in this field, in which British research stands pre-eminent, would be the first to admit how much they owe to Lord Kelvin's instrument. It plays the part of the balance in chemistry, enabling electro-physiologists to claim that they have founded a physiology of exact measurement, and have in so far evolved order out of chaos. The development of this branch is one of the most instructive examples of the manner in which the discovery of a new instrument—one might almost say of a new method of measurement—almost inevitably leads to a large advance in knowledge. Electro-physiology in its elementary form appears to the student as a series of curious and interesting facts, accompanying the stimulation of muscle, of nerve, of sense organ, and so forth, but as possessing little or no practical importance. Its interest and importance, however, lie in the fact that this branch forms common ground between physiology and psychology, and should, as time goes on, lead to the establishment of a sound material basis for the elucidation of psychological phenomena. Among the other work of Lord Kelvin's for which medicine is indebted must be included the establishment of the absolute electrical units, as it was largely owing to his representations that they were determined.

METROPOLITAN MEDICAL CHARITIES.

MR. W. F. HOWE, editor of *The Classified Directory to the Metropolitan Charities*, has sent us an advance copy of his annual table of statistics relating to the approximate income for 1906-7 of charitable institutions having their head quarters in the metropolis. It appears from this that the total sum received by hospitals, dispensaries, convalescent institutions, and others of a more or less obviously medical character, amounted to £1,147,105; of this amount 24 general hospitals received £560,547 and 23 convalescent institutions, £90,373. The sum received by metropolitan medical charities of all sorts is, according to this estimate, about 15 per cent. of the total amount given in charity, foreign missions alone receiving some £300,000 more than all the medical charities; it should be added, however, that charities for the blind, the deaf and dumb, for incurables and for idiots, received nearly a quarter of a million in addition, so that the total amount given for our own sick, halt, and maimed was not far short of the amount given to foreign missions. Of the continual efforts which must be made to raise this large sum Mr. Sydney Holland affords an example by the quinquennial appeal for the London Hospital which he launched on New Year's Day. There is probably no

more successful beggar than Mr. Holland, but he pathetically tells us that 55,000 personal letters received only 2,500 answers, and that in his actual experience it takes one mile of writing to get £200. He claims that the London Hospital is efficient to do its work really well, and in a way of which England may be proud, and this we believe to be in the main thoroughly true. It is not only a great and well-appointed hospital, but it is one of the finest clinical schools in the world, and Mr. Holland has the courage to put this aspect of the matter forward. He says: "The general public are apt "to forget how much they owe to the work done at the "voluntary hospitals. I say, with due consideration, "that a big hospital is as beneficial to the rich who "never see it as to the poor who use it; the work "done is, in fact, national and not merely local. "Disease is studied, and researches made at the big "voluntary hospitals and nowhere else; doctors "and nurses are trained there and nowhere else." This is true; it has been said often before, but we are glad that the chairman of a large hospital should say it again. Still, it is a little unfortunate that it is true; the policy of excluding students, both before and immediately after receiving their diplomas, from the great municipal infirmaries is short-sighted, and sooner or later will be altered. Finally, we would say, as we have said before, that while we entirely agree with Mr. Holland's view, that it is the bounden duty of hospitals to provide for their patients the best treatment known to medical science and practice, we believe that the out-patient system is a mistake; it is costly to the hospital and to patients in money and time, and the treatment cannot be as efficient as that given to in-patients. Would any real hardship be inflicted by abolishing the out-patient department, retaining only an emergency department and those special services such as the Finsen light cure, in which proper treatment demands special apparatus and is necessarily prolonged?

SIR THOMAS WATSON AND ASEPTIC GLOVES.

AN instructive discussion on disinfection of the surgeon's and obstetrician's hands has taken place during the past year in the German medical papers. It was set going by the publication of a monograph by Dr. Cohn of Breslau on the entire subject,[1] which included a copious table of references and deserves to be studied by every operator. One statement made by Dr. Cohn has been challenged, or rather proved to be inaccurate. He attributes to Halster the honour of being the first to recommend gloves. This recommendation was made public in 1891, Dr. Conitzer of Hamburg[2] has shown that the credit of the suggestion belongs to Sir Thos. Watson. Dr. Conitzer quotes from the German translation of our great physician's *Lectures on the Principles and Practice of Medicine*, published in Leipzig in 1855, the passage which contains that suggestion. The original is to be found in the third English edition, which was published in 1848; as the fourth did not appear until 1857 it is clear that the translation was made from the third ssue. We find, however, that the recommendation is to be found in the first edition of the famous *Lectures*, that is to say, as early as in 1843. The passage is well known to obstetric teachers, as it refers to the use of gloves not for surgical operations but for midwifery. "In these days of ready invention," says Watson, "a "glove, I think, might be devised, which should be "impervious to fluids and yet so thin and pliant as not "to interfere materially with the delicate sense of "touch required in those manipulations. One such "glove, if such should ever be fabricated and adopted, "might well be sacrificed to the safety of the mother "in every labour. Should these precautions all prove "insufficient, the practitioner is bound, in all honour "and conscience, to abandon for a season his vocation."[3] We may add that 1843 is long past, and that although since the Seventies the great cause of asepsis has made giant strides, the generation to whom Watson spoke showed no alacrity in taking up his most reasonable suggestion. Yet the prophet, unlike his contemporary Semmelweis, did not personally suffer for advocating that which was not adopted until another generation of surgeons and obstetricians had come to the front.

[1] "Ueberblick über die Leistungen auf dem Gebiete der Händedesinfection." *Monats. f. Geb. u. Gyn.*, May, 1907, p. 589.
[2] "Kurze historische Notiz zur Handschuhfrage." *Zentralbl. f. Gynäk.*, No. 49, 1907, p. 1537.
[3] Loc. cit., vol. ii, p. 349.

LEGAL RESPONSIBILITY IN CASES OF DEATH DURING ANAESTHESIA.

A SOMEWHAT novel point was raised during an inquest recently held by Dr. Waldo, coroner for the City of London and Southwark, as to the legal responsibility of the operating surgeon and the anaesthetist respectively, for the fatal result. Dr. Waldo holds that the legal responsibility rests with the person by whom the operation is controlled, that is, the surgeon, and he has maintained that if the operator could be justly accused of selecting an assistant who had not had sufficient experience to enable him to give the anaesthetic properly, and was himself so engaged in the operation as to be unable personally to supervise the administration, then, in case of accident, he could be held liable under the law; and in case of a charge of *malpraxis* or verdict of culpable neglect by a jury, he is of opinion that it might be the duty of the coroner to commit the operator and not the anaesthetist for manslaughter, except in cases where the anaesthetist happened to be in an unfit condition at the time, or showed gross carelessness. Applying these *obiter dicta* of the coroner to the case he was investigating at Southwark, and which was reported at the time in the BRITISH MEDICAL JOURNAL, we shall see at once how difficult it would be to get any commonsense jury to accept or act upon such a view of the law, even if it be a true one, a point on which we express no opinion; for in that case the operator had not commenced to operate, and the patient was not fully under the influence of the anaesthetic when the fatal failure took place. The point raised, however, is one of importance, and we shall be glad to hear what both operators and anaesthetists have to say on the subject. Commenting on this matter, the *Law Journal* says that "Where patients submit, or are sub- "jected to, operations which require, or are better done, "under anaesthetics, they, and those whose subscrip- "tions maintain the hospitals, are entitled to some "guarantee that the utmost skill and care shall be "used, and it is well that an inquiry has been instituted "with reference to the very frequent deaths in hos- "pitals under anaesthetics, for it is not desirable to "have these matters decided by a prosecution of doctors "for malpraxis or manslaughter. As regards the "apportionment of responsibility between the opera- "tor and anaesthetist doctors differ, and lawyers have "not yet been called upon to decide, if, indeed, the "question is one of law rather than one of simple fact. "In our opinion it really depends on who controls the "operation. The necessity for an operation is usually, "but not always, decided on by the operating surgeon. "When it takes place the control of the operation must "be in the operator's hands, but with a skilled anaes- "thetist the fitness of the patient to take the anaes- "thetic must, as a matter of medical judgement and "skill, be largely with the administrator."

THE MARY KINGSLEY MEDALS.

WE have received from Sir Alfred Jones, Chairman of the Liverpool School of Tropical Medicine, a copy of an official letter from the Foreign Office with reference to

the six Mary Kingsley medals awarded to distinguished scientists abroad. It states that the medal intended for Senator Professor Golgi was duly presented to him through the Italian Government, and that the recipient desired that an expression of his great appreciation of the exceptional distinction conferred upon him should be conveyed to the Liverpool School of Tropical Medicine. It goes on to say that His Majesty's Minister at Havana reports that he has been requested by the Cuban Government to transmit a copy of the *Official Gazette* of the Republic of Cuba containing an official report of the ceremony at which the medal was handed to Dr. Carlos Finlay by the Provisional Governor of Cuba. That report states that the Government of Cuba, in transmitting the medal to Dr. Finlay, "taking into consi-"deration the incalculable benefits which his fruitful "labours have bestowed upon humanity and upon the "scientific name of Cuba, has deemed it its duty to "embrace the opportunity afforded to make public "acknowledgement of the high esteem which his re-"searches and discovery merit at the hands of the "Cuban people and their Government." An address was then delivered by Dr. José Varela Zequeira, Professor of Anatomy in the University of Havana. After returning thanks in the name of the University to the Provisional Government for departing from conventional forms and exercising the highest of its prerogatives, that of rewarding and doing honour to one of the most glorious of their country's sons, he went on to say that the medical societies of the island, the Academy of Science, and the Society of Clinical Studies, had fittingly recognized Dr. Finlay's great services. He was acclaimed at a memorable meeting of the last Cuban Medical Congress. The Jefferson Medical College, of which he was formerly a student conferred upon him the title of Doctor of Science *ex honore*. The University of Havana had resolved to present him with a plaque in commemoration of the occasion. Dr. Finlay's theory was the most important discovery ever made in Cuba; one of the most remarkable facts in the annals of contemporary medical science, because, like the investigations of Pasteur, the antiseptic treatment of Lister, and the antidiphtheria serum of Behring, it annually saved the lives of thousands of human victims. No one could dispute with Patrick Manson the glory of having been the first to establish on a definite basis the part played by the *Anopheles* mosquito in malaria as the disseminating agent and as the temporary host of the haematozoon of Laveran. This famous theory enunciated by Manson in 1894,[1] and that propounded by Finlay thirteen years earlier (1881) respecting the *Stegomyia* mosquito, presented a singular analogy; but while the evolution of the malaria parasite was known to-day with scientific accuracy, the pathogenic agent of the yellow fever had so far foiled the efforts of the most skilful and most patient investigators, and there was accordingly every reason to suspect that the germ of that disease might be an ultramicroscopic microbe. Consequently the pathogeny and the treatment of yellow fever were unknown; on the other hand, the Finlay theory of its dissemination had been more productive of practical results as regards prophylactic measures than the analogous theory of Manson respecting malaria. The Government of Intervention established by the United States, firmly determined as it was to improve the sanitary condition of the island, would have failed in its efforts if it had not devoted all its energies to the practical application of the method recommended by Dr. Finlay as soon as it had become convinced of the uselessness of the sanitary measures hitherto adopted. This was the dawn of a period which had been most fruitful in its scientific results. The American Military Commissioners, presided over by the lamented Major Reed, produced at the camp of Quemados de Marianao the first experimental cases of yellow fever in December, 1901. Dr. Agramonte, who had been a member of the Commission, carried out further experiments in Mexico in 1902. Since that date all the commissions of investigation—the American Commissions at Vera-Cruz, the French Commission of the Pasteur Institute at Rio de Janeiro, the German Commission of Hamburg, also at Rio Janeiro, and the Commission of the Liverpool School of Tropical Medicine in Brazil, had confirmed the original theory of the etiology and prophylaxis of yellow fever, by giving it a more definite character and increasing its technical value. Professor Varela Zequeira referred to the co-operation of Dr. Claudio Delgado, of whom Dr. Finlay himself said that had it not been for his assistance he could scarcely have brought his task to a satisfactory conclusion. The Rector of the University then presented the plaque to Dr. Finlay with a few appropriate words. Dr. Carlos Finlay expressed his thanks in a modest speech, and the proceedings ended. Finally, the letter from the Foreign Office mentions that due acknowledgements of the medals had been received through official sources from Professor Danilewsky of St. Petersburg and Professor Theobald Smith of Harvard.

[1] British Medical Journal, December 8th, 1894.

AN INNOCENT VICTIM OF THE ANTHROPOMETRIC SYSTEM.

We take from *Le Scalpel* an account of an amusing adventure which befell the late Dr. Victor Vleminckx, formerly President of the Belgian Academy of Medicine. In the early days of the anthropometric system he went to Paris with a number of other Belgian doctors who wished to study the Bertillon method for the identification of criminals. By way of illustration M. Bertillon offered to make a *fiche* of M. Vleminckx. In the course of the various operations for the purpose a photograph of the distinguished Belgian physician's head was made without his knowledge by means of a camera in another room on which the light fell through a small opening. The measurements made by M. Bertillon were transmitted to an assistant who had been let into the secret, and he recorded them on another *fiche*. When the process was completed, the assistant who was helping Bertillon suddenly looked at Vermínckx from head to foot, as if struck by a startling idea. Then he said, hesitatingly, to the President of the Belgian Academy, "I think, sir, you are not "unknown to us; I fancy we have your *fiche* here." Dr. Vleminckx unsuspectingly gave his full name and all the other particulars usually required by the police. The assistant then went to one of the drawers where the *fiches* of criminals were kept, and there sure enough were his portrait and a record of his anthropometric measurements. After a moment of surprise, Dr. Vleminckx saw the joke and congratulated M. Bertillon on the rapidity of his procedure.

THE HEALTH OF LONDON.

The report of the Public Health Committee of the London County Council submitting the report of the Medical Officer of Health for the County of London for the year 1906[1] has just been issued. The Committee refers with satisfaction to the fact that the death-rate, 15·1, which was the same as that for the previous year, was the lowest on record, and points out that the rate has fallen nearly 30 per cent. since the coming into action of the Public Health London Act, 1891. Comparing the rate for the years 1905 and 1906 with the decennial period 1891–1900 it results that there has been an estimated gain to the community in each of the two

[1] London: P. S. King and Son. 1907. 3s. 6d.

recent years of some 19,000 lives, representing a gain in life capital of some three quarters of a million years of life. Sir Shirley Murphy states that the infant mortality-rate, though below the average, was slightly in excess of that of the previous year, and that the deaths from diarrhoea were above the ten years average and slightly in excess of that of the previous year. This is attributed by the Committee to the less favourable meteorological conditions of 1906. The number of deaths from phthisis, diphtheria, and measles, though below the average, showed an increase upon the number in the preceding year, but the deaths from whooping-cough were the lowest on record. The birth-rate was also the lowest on record, and the decline affected every sanitary area in the metropolis except the City of London, where, however, the number of births—355—was so small that no significance can be attached to the increase. The number of legitimate births per 100 married females between the ages of 15 and 45 also showed a decrease, with again the same exception in the City of London. In this connexion, and as possibly throwing some light on the decline, it may be noted that the age of marriage appears to be slowly but steadily increasing for both sexes. The report has six appendices, among which the most generally interesting is that of the medical officer to the Education Committee for the year ending March 31st, 1907, to which reference has already been made in these pages at considerable length. We hope to refer more fully to the various matters in Sir Shirley Murphy's report in future issues.

THE PUBLIC HEALTH ACTS AMENDMENT ACT, 1907.

THE Local Government Board issued a circular on December 23rd, 1907, to councils of municipal boroughs and urban and district councils on the subject of this Act, which came into force on January 1st (see SUPPLEMENT, p. 4). The object of the Act is to enable sanitary authorities to obtain additional powers based on provisions in local Acts passed in recent sessions of Parliament. Hitherto the process involved in obtaining such powers was often slow, expensive, and troublesome, and involved promoting Bills for local Acts. In the circular the provisions of the Act are set forth which prescribe the procedure for applying enactments in it to any particular locality. A local authority desiring to declare any part or any section of the Act to be in force in the district of the authority must in the first place advertise its intention to apply for authority in the local press two weeks at least before applying to the Local Government Board for an Order. The Board will require a statutory declaration from the clerk verifying the fact of the issue of the necessary advertisements. Provision is made giving power of appeal in certain cases to a court of quarter sessions.

TREATMENT OF ANKYLOSTOMIASIS.

DON JOSE CASTELLVI, in an article on the treatment of ankylostomiasis,[1] remarks that the efficacy of beta-naphthol is not yet properly recognized, either in Europe or America. He has recently been treating a number of cases from the lead and silver mines of Linares (1) exclusively with beta-naphthol, (2) with benzo-naphthol, and then with beta-naphthol, and (3) with salol, and then with beta-naphthol, and the results shown are instructive. Commencing with the first method, 2 grams of the naphthol (divided into two doses with an hour's interval between them) were administered eight hours after a strong saline purgative, and then followed two hours later by rhubarb and senna. The treatment was not carried out every day, but at intervals of four or five days or a week, and in 70 per cent. of the cases only three such days of treatment were necessary to effect a cure, the patient showing neither the parasite nor ova in the faeces. In no patient were more than five days of treatment needed. With regard to the number of ankylostomes passed, 83 per cent. were got rid of at the first time of treatment, and 12 per cent. at the second, or a total of 95 per cent. in the two courses. The second method of commencing the treatment by benzo-naphthol seems from the cases tabulated to be by no means so efficient, a number of patients showing no response to the drug. Salol is evidently of still less service as an ankylostomicide. As a result of his observations D. Jose Castellvi claims that the most efficacious drug for the purpose is undoubtedly beta-naphthol.

[1] *Revista de Medicina*, Madrid.

THE BROWN DOG.

THE public must, we should think, be getting as tired of the Brown Dog as the Royal Commission on Vivisection was (as is apparent from the minutes of evidence) of Mr. Coleridge. The dog is, as any one might have foreseen, being used as an advertisement of antivivisectionism; and this makes it the more deplorable that any medical students should have given such a chance to the enemies of science. We cannot say we take any particular interest in the legal aspect of the case, which has lately been debated in the *Times*; the inscription may or may not be libellous in the legal sense, but there can be no doubt that it is, in the moral sense, a lie, for it insinuates what is false. But after all it is only one lie more added to the heap which makes up the antivivisectionist cause. It would be better to leave the grotesque effigy alone, for the time must come when the good people of Battersea will be ashamed of the monument of falsehood put up in their midst. In the meantime, let Mr. Coleridge snivel over the mythical sufferings of the dog, like Sterne over the dead donkey; he is only playing the character he has made his own, and if he overacts his part, he hurts no one but himself and the cause of which he poses as the leading champion. Mr. Stephen Paget has dealt faithfully with him in a trenchant style that has had the effect of making him more than usually "scurrilous"—to use the word of which he was wont to be so fond. But our readers have so often seen Mr. Coleridge in the part of Orlando Furioso that it is not necessary to give any detailed account of his latest rendering thereof. To us it is more interesting to note that the "demonstration" recently held as a testimony against vivisection was, by the admission of its "organizer"—a Mr. Edwin Drew—a fiasco. We know nothing of Mr. Drew, but we venture to warn him that if he aspires to organize victory in this field he will probably bring upon himself the august displeasure of Mr. Coleridge, who would, we imagine, like to have it thought that "within that circle none durst walk but he."

PUERPERAL MORTALITY.

WE are informed by Dr. Toogood, the Medical Superintendent of the Lewisham Infirmary, that the information which he gave to our Commissioner with regard to the deaths from puerperal fever occurring at the infirmary, and which we published in the JOURNAL of November 16th, 1907, p. 1410, was given from memory. He has now succeeded in tracing the histories of the three deaths. They occurred in 1895. Two of the three patients were confined in their own homes, and were brought into the infirmary for subsequent treatment, while the third was confined in the workhouse. He therefore claims that his record should stand at about 1,300 confinements conducted in the infirmary without a death from puerperal infection.

England and Wales.

[From our Special Correspondents.]

BIRMINGHAM.

Tuberculosis and the Milk Supply.

The Health Committee has issued to the City Council the report of the medical officer of health (Dr. Robertson) and the veterinary superintendent (Mr. Malcolme) upon the investigations which have been made with regard to the infection by tubercle bacilli of the milk supplied to Birmingham. The collection of the samples of milk was undertaken by the assistant veterinary surgeon of the Corporation, and the subsequent examinations were made by Professor Leith and his staff in the bacteriological department of the University. Between September 13th, 1906, and July 31st, 1907, 261 samples of milk were examined. In 175 samples taken from churns at the railway stations and other places, of milk derived from outside Birmingham, tubercle bacilli was present in 14 per cent. In 5 samples taken from the mixed dairy milk of Birmingham cowkeepers, tuberculous infection was not found in any. In 81 samples, one a duplicate, taken from individual cows at cowsheds inside or outside Birmingham, 6 per cent. were found to be tuberculous. Wherever a mixed milk was found to be infected a visit was paid to the farm and samples taken from individual cows. There were 24 infected samples of mixed milk, but the 74 subsequent samples taken from the individual cows only proved that 4 were tuberculous. The failure to find the infection in the subsequent samples was probably due: (1) To the intermittent presence of tubercle bacilli in the milk of individual cows. (2) To the source of infection of the mixed samples. The digestive tract is probably the main channel by which the tubercle bacilli leave the body of cattle, and so the faeces may be a source of milk infection. Therefore any tuberculous animal on the farm living with the dairy cows may infect the milk. (3) The failure to find the tuberculous cow may be due to its removal before the subsequent examinations were made. The cows kept in Birmingham are much less likely to give infected milk, as a monthly inspection of them is made by a veterinary surgeon. The same conditions seem to be present in Liverpool, for during the six years, 1901 to 1906, 2,212 samples of mixed milks were examined, and of 220 samples from Liverpool cowsheds 0 91 per cent. were tuberculous, and of 1,992 samples from country cowsheds 14 5 per cent. The report concludes by drawing the Health Committee's attention to the following points:

1. That Birmingham milk, to the extent of probably over 10 per cent., is infected with tuberculosis.
2. That there is a decided amount of danger to human beings from the consumption of this milk.
3. That recommendations have been made by a Royal Commission as to available means of reducing the prevalence of the disease.
4. That no direct steps are being taken at the present time, other than the operation of the milk clauses in local Acts, to combat this source of human tuberculosis.

Sanatorium for Consumptives.

A scheme has been prepared by the Health Committee for erecting a sanatorium on the Salterley Grange Estate on the Cotswold Hills, near Cheltenham, which was purchased by the Corporation for £17,000. It is proposed to provide for 40 patients in four blocks of chalets, two blocks being for 16 patients each and two smaller ones for 4 patients each. The buildings are to be erected in local brick and faced with rough-cast stucco. The chalets will be erected near the present house, which will be the administrative block They will be situated on gently rising ground, which is protected from north and east winds, and the general aspect will be south. The water supply will be obtained from a well situated on the hill behind the house, and a small machine-driven pump, oil engine, and a storage tank of 5,000 gallons capacity will be erected. A scheme has been drawn up for the disposal of the sewage, which consists of a septic tank to hold 1,200 gallons, and bacterial treatment. The effluent will discharge on land of a very suitable character for the purpose. The Local Government Board has sanctioned the borrowing of the necessary money for a period of forty-six years, and the Committee has entrusted Mr. W. H. Ward with the preparation of the plans.

Hospital Sunday Fund.

The result of the Hospital Sunday collection was made known on December 16th. The total church collections, exclusive of allocated donations, amounted to £4,769; the special donations were £789, and the subscriptions promised and received brought the total to £5,602. The expenses amounted to £335. The General Hospital received £1,518; the Queen's Hospital, £1 504; General Dispensary, £181; Children's Hospital, £185; Eye Hospital, £191; Women's Hospital, £121; Deaf and Dumb Institution, £172; Blind Institution, £283; Homœopathic Hospital, £126; Royal Orthopaedic and Spinal Hospital, £150; Birmingham and Midland Counties Sanatorium, £145; Lying-in Charity, £143; Skin and Urinary Hospital, £115; Ear and Throat Hospital, £91; Dental Hospital, £20; District Nursing Society, £125; Moseley Convalescent Hospital, £116; and Jaffray Hospital, £35. A special donation of £14 was allocated to the Crippled Children's Union. The sum collected was about £300 more than in 1906.

MANCHESTER AND SALFORD.

Joint Committees of the Divisions.

Some very important work has just been done by the Lancashire and Cheshire Branch Council, having for its object the better organization of the Divisions of the Branch. Some months ago a special organization and finance committee was formed, which has met a number of times and made some valuable suggestions, all of which have been endorsed by the Branch Council, and will be carried out in due course. Among other matters the Branch Council has decided to give its support to the joint committee of the Manchester and Salford Divisions, and also to a similar committee of the Liverpool and Birkenhead Divisions. The Manchester joint committee has already done much good work in co-ordinating the business of the Divisions, and still more in presenting the united views of the profession to public bodies. At the same time, there can be little doubt that this joint committee system is by no means ideal, though unfortunately it seems to be the best that is possible under the present constitution of the Association. It may be that more is being aimed at than it is possible to attain, for while on the one hand in many public questions one large united body has more influence with the public than a number of small bodies, on the other hand there are great objections to any interference with the autonomy of the separate Divisions. Thus it is always possible that the joint committee may by a large majority decide on a certain course of action, and yet any one Division is at liberty to act in the opposite way. Divisions may delegate only certain of their powers to the joint committee, and difficulties arise from the fact that the joint committee has no legal standing in the Association. All Association business is bound to go through the Divisions, and it is quite impossible to determine exactly what is and what is not Association business. Thus the question often arises, Are the separate Divisions bound by the decision of the joint committee in a particular matter? The answer must be always or nearly always in the negative; and, that being so, the function of the joint committee becomes mainly advisory when it deals with anything that might be called in any way Association business. A far better plan in many respects would be to have only one large Division for the whole of Manchester and Salford, but there is the fatal objection to this that such a Division would have only one Representative in the Annual Representative Meeting instead of the five which the present Divisions have. Nevertheless, there can be no doubt that, even under its present disadvantages, the joint committee has proved itself a most valuable means of helping on the work of the separate Divisions, and no money that the Branch Council can spend will be better spent than the grant to the joint committees in Manchester and in Liverpool. It ought not to be impossible, if there is to be a new Constitution, to make some satisfactory arrangements, even if it involve a special ordinance, by which the needs of large towns may

be better met than at present, and the difficulties under which the Manchester and the Liverpool joint committees at present labour should be a good guide to the framing of any such ordinance. The whole subject ought to receive special attention before the next annual meeting.

MANCHESTER EAR HOSPITAL.

At the annual meeting of the Manchester Ear Hospital on Thursday, December 19th, 1907, Mr. Harry Nuttall, M.P., presided. He pointed out that there was a deficit on revenue account for the year of £179, while last year it was £210, making a total on the wrong side for the two years of £389. The work of the hospital was being carried on in a quiet and economical way, but more subscriptions were needed for the increasing number of patients that had to be dealt with. The out-patients during the year numbered 3,370 and the in-patients 333, an increase of 62 as compared with the preceding year. The Hospital Board in its fifty-second annual report expressed regret that the appeal for funds for the new building had so far met with a quite inadequate response. At present the hospital contains only twelve beds, and the pressure of work in connexion with the in-patient department continues to be very great. Enlarged premises are almost a necessity if the staff is to keep up with the work. Moreover, the lease of the present building will expire in 1910, and it is absolutely necessary that before then fresh accommodation should be provided. A sum of between £13,000 and £15,000 will be required to provide land, building, and equipment, and up to the present time the amount promised is only £3,346. The chairman endorsed the appeal for funds for the new building, and thought there should be no difficulty in a wealthy community like Manchester in obtaining the amount required.

LIVERPOOL.

LIVERPOOL MEDICAL FACULTY.

PROFESSOR B. MOORE has resigned the office of Dean of the Medical Faculty, and Mr. K. W. Monsarrat, Lecturer on Clinical Surgery, has been appointed to fill the vacancy thus created.

WEST YORKSHIRE.

BRADFORD AND ITS MEDICAL CHARITIES.

A LARGE number of ladies and gentlemen met the Lord Mayor and Lady Mayoress at the Christmas dinners given to the inmates of the various Bradford charities last week. At the Royal Infirmary and the Royal Eye and Ear Hospital speeches of great interest to the profession were made by members of the medical staffs. In the case of the Royal Infirmary the lament of the Vice-Chairman of the House Committee (Dr. H. J. Campbell) was that the building was old and somewhat out of date. Excellent work was being done by the medical staff, but it was performed under some difficulties. There is no doubt whatever of the truth of Dr. Campbell's contention. The Royal Infirmary has been "patched up" on several occasions; but no alterations that are possible can make the present structure into a first-rate modern hospital. The only way to provide Bradford with such a hospital is to sweep away altogether the present building and put up a new infirmary on another site. This is perhaps not so hopeless as it looks. Bradford is a wealthy city, and if every one put his shoulder to the wheel it would soon be done. Otherwise a millionaire is sadly wanted.

At the Royal Eye and Ear Hospital Drs. Bronner and Little, the Honorary Surgeons, both made strong pleas for an extension of the accommodation for in-patients. Since 1885 the out-patients have increased from 2,000 to 8,000, but there has been no increase of beds for in-patients. Numerous cases requiring treatment in the hospital had to attend as out-patients, often with very unsatisfactory results. The knowledge of the excellent work done in this institution will act as a strong incentive to Bradfordians to support the appeal.

CARDIFF.

CARDIFF INFIRMARY.

AT a former meeting of the Board, Colonel E. M. Bruce Vaughan severely criticized the apparatus in the electrical department and other matters, and urged that in the public interest the department should be brought to the highest state of efficiency attainable both as regards equipment and staff. Dr. Sequeira of the London Hospital was asked to make a report and recommendations. This report substantiated in a remarkable degree the criticisms of Colonel Bruce Vaughan. Dealing with the apparatus, Dr. Sequeira describes the rooms in the pavilion as admirable, the motor transformers just giving the amount of current required. The apparatus calling for criticism was that used for the *x*-ray work. He recommends that the Gaiffe-d'Arsonval apparatus should be entirely discarded for *x*-ray work, having been given up except for the production of high-frequency currents, while much less is being done with these currents than formerly. He does not think it would be worth the Board's while to sell it, for it is of some value in neurasthenia and allied nervous conditions, and in certain forms of naevus, lupus, etc. In regard to the radiographic and radiotherapeutic work, the trouble in the past appeared to have been a want of reliability in the apparatus, and suggestions were made as to the apparatus required. The Finsen-Reyn apparatus appeared to be of the right type, and the trouble in connexion with it has been largely due to the fact that the carbons had not been placed at the right angle. After making further suggestions with regard to the use of this apparatus, he stated that at the London Hospital the failures with the treatment were only 3 per cent. while 71 per cent. were cured. With regard to the general management of the department, he suggested that there should be a medical officer in charge of the electrical pavilion, and that he should attend daily for certain hours to be fixed by the Board. It was unreasonable to require so much time without giving the medical officer some remuneration, but it was important that the hospital should have a definite claim upon him for the hours prescribed. The Medical Board adopted these recommendations, and at the next meeting of the Board of Management a long discussion took place. Eventually it was resolved to purchase apparatus to cost 100 guineas, and that a medical officer be appointed in charge of the electrical department under the following regulations:

(1) The appointment shall be made annually at the first meeting of the Board of Management after January 1st.
(2) The medical officer's salary shall not exceed £150 per annum.
(3) The medical officer shall attend daily every week-day at an hour to be subsequently fixed, and shall also attend at such other times as his services may be required.
(4) The medical officer shall not in his private practice hold any Poor-law or club appointment or engage in pharmacy.

The resignation of Dr. Mitchell Stevens as Pathologist to the Infirmary was accepted with regret.

SWANSEA.

SWANSEA HOSPITAL.

AT a meeting of the Swansea Hospital Board of Management, held on December 20th, 1907, Dr. Brock presiding, the questions of the appointment of house-surgeon and house-physician were considered. To the former position Dr. Hamilton Quick was elected. A long discussion ensued with respect to the appointment of house-physician; Dr. Hector Jones, of Newcastle Emlyn, was the only applicant, the Chairman remarking that Dr. Florence Price had decided not to seek re-election. Dr. Lancaster moved that Dr. Florence Price be asked to reconsider her resignation, and that she be re-elected. He urged that they should go on for another year as they were, and get the present house-physician to add to her work the duties of honorary bacteriologist to the hospital. In default of some such arrangement, the bacteriological department which was being built up would have to be abandoned. Dr. Frank Thomas seconding, Colonel Morgan then proposed:

> That the post of bacteriologist be separated from that of house-physician, and that Dr. Florence Price be appointed temporarily at a salary of £75 a year.

This proposal was received with cries of "No."

Dr. Lancaster said there might be a certain increase of work in training a new occupant to discharge the duties in the bacteriological department, but he reminded the Board of the right of young surgeons to get experience in the eye department. Three young surgeons had gone

away from that hospital without having any training in the eye department, and he asked the Board to put a stop to it by appointing Dr. Hector Jones to the physicianship. Dr. Lancaster having withdrawn his amendment in favour of Colonel Morgan's proposal, the Rev. Talbot Rice seconded it. Colonel Morgan thought it would be a shame if they stopped a department of this importance. Mr. Aaron Thomas said he would pay half the salary of a bacteriologist for six months to see how it would work if Colonel Morgan would pay the other half. Colonel Morgan said he would agree, and then the Board decided to appoint Dr. Hector Jones physician and to convene a special meeting to discuss the appointment of Dr. Florence Price as bacteriologist. The Finance Committee reported that there was due to the Treasurer £3,182, as compared with £2,647 this time last year.

Ireland.

[From our Special Correspondents.]

Teaching of Midwifery in Ireland.

A meeting of Masters, Ex-Masters, Assistant Masters and Ex-Assistant Masters of the Dublin Maternity Hospitals was held recently in the Royal College of Physicians, Dr. Hastings Tweedy, Master of Rotunda Hospital, in the chair. The following resolution was proposed by Dr. R. S. Purefoy, Ex Master of the Rotunda Hospital, seconded by Dr. Gibson, Master of the Coombe Hospital, and passed unanimously:

> That this meeting, consisting of the Masters and Assistants, past and present, of the Dublin Maternity Hospitals, is unanimously of opinion that the proposed shortening of the course in practical obstetrics from six to three months would seriously interfere with the work of the maternity hospitals; that it would increase, rather than lessen, the difficulties in providing each student with the required number of cases; and that, at the same time, it would materially diminish his opportunities of obtaining practical instruction.

It was then proposed by Sir William Smyly, Ex-Master of the Rotunda Hospital, seconded by Dr. A. J. Horne, Master of the National Lying-in Hospital, and passed unanimously:

> That, in the opinion of this meeting, it is most desirable that the recommendations of the General Medical Council, with regard to a clinical and practical examination in Obstetrics and Gynaecology, be adopted; especially as the meeting has been assured that the Masters of the Maternity Hospitals will further the scheme by every means in their power.

The Tuberculosis Exhibition in Cork.

The Countess of Aberdeen opened a Tuberculosis Exhibition at Cork on December 31st, 1907. The Lord Mayor of Cork, the Bishop of Cork, Dr. Brown, R.C. Bishop of Cloyne, Dr. Kelly, R.C. Bishop of Ross, Lady Carberry, Dr. Cremin, Dr. Fitzgerald, Dr. Browne, Professor Moore, and a large number of the general public attended. Lady Aberdeen, in the course of an interesting address, explained the objects which the promoters had in view, and urged upon her audience the need of energetically fighting tuberculosis in Ireland.

Death of Dr. W. H. Middleton.

We regret to announce the death of Dr. W. H. Middleton, Surgeon to the Westmeath Infirmary, Mullingar. He was a Licentiate of the Royal College of Physicians and Surgeons, 1872. He was very popular, and he enjoyed a large practice extending to the adjacent counties. His death is regretted by a large circle of friends.

Recently the Chicago Health Department inspected again 84 milk dépôts previously reported to be in bad sanitary condition. Seventy-two had carried out the improvements recommended, and the 12 that failed to do so are to be prosecuted. Of 269 other milk dépôts inspected at about the same time, no fewer than 152 were found to fall short of the standard required by the department.

A hospital for nervous diseases has been established at New York by the Commissioner of Public Charities. It has accommodation for 250 patients, and provision for 100 more is being made. The hospital will be equipped with laboratories for diagnostic and therapeutical research, and will afford ample facilities for the teaching of neurology. The institution, which is to be called the Hospital for Nervous Diseases of New York, is the first of its kind in America.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Lannelongue on the Treatment of Tuberculous Hip-joint Disease in Its Initial Stage.—Elections at the Académie de Médecine.—Vital Statistics for France for 1906.—Presentation of Commemorative Medal to Dr. Hallopeau at St. Louis Hospital.

At a recent meeting of the Académie de Médecine Professor Lannelongue read a paper on the treatment of tuberculous hip-joint disease in its initial stage, when the most striking characters are the intermittence of the symptoms, especially the contraction, that is to say, the limping, until the time that the hip becomes permanently immobilized in a bad position. This period precedes the appearance of tuberculous abscesses. The earlier the treatment was commenced the quicker was the cure obtained, and under infinitely better conditions. The proportion of actual cures was certainly between 80 and 90 per cent., and even more when the rules of treatment were faithfully followed. The method of Lannelongue, which dates from 1902, and which he has called the "method of successive intra-extra-articular injections" has as its objective the shortening of the duration of the disease, reducing it to a certain number of months, instead of two, three, four, or five years, and with the help of complementary methods the preservation of the whole or a part of the movement. The following is the formula of the injections: Olive oil, 90; ether, 40; iodoform, 10; creosote, 2. Professor Lannelongue places the thigh in forced flexion and adduction, and approaches the joint from above and posteriorly; by palpation the head of the femur is easily felt, and the needle is directed from above downwards and from behind forwards on to it. Dr. Mayet had used either the method intra-extra-articular or the intra articular method alone in 33 cases; 15 of the cases have not yet been published—tuberculous hip, 2; knee, 6; elbow, 5; ankle, 2. All the cases were cured in six or eight months. Dr. Villemin, Surgeon to Bretonneau Hospital, had applied the treatment in 19 cases. The injections were only a part of the treatment; rest in the horizontal position was necessary, but was not sufficient alone; continued extension must be applied as soon as there was contraction—that is, lameness. Continued extension by weakening and overcoming the contraction and separating the head of the femur from the acetabulum, rectified the attitude, restored partially if not entirely the lost movements, and stopped the aggravation of disorders produced by compression and direct infection. The imprisonment of the hip in a plaster apparatus in the early stage was a grave mistake, for an ankylosed limb resulted. The limb being in extension, the injections were given every eight or ten days in doses of 4, 8, 10, or 15 grams, according to the age of the patient and the degree of the disease. To obtain a cure, two, three, four, six, or more injections were required. They were not followed by any reaction. After the period of injections extension was continued for eight, ten, twelve, or perhaps fifteen months. The criterion of a cure was that on methodical examination of all the bones of the hip there was no pain or tenderness; inspection of the lymphatic glands should show but few, and those small and hard; the movements of the joint should be easy and without pain. Recovery with preservation of all the movements was rare. Professor Lannelongue had seen 20 cases. As to the substance injected, (*a*) the ether carried the iodoform and creosote over the whole of the internal surface of the joint, the fungosities and the cartilaginous and bony ulcerations; extension by separating the articular surfaces helped in this; (*b*) iodoform was not a specific for the bacilli, but it weakened their virulence and diminished their harmful effects, thus favouring evolution towards a cure; (*c*) creosote helped by producing sclerosis.

M. Léon Labbé has been elected vice-president of the Académie de Médecine for 1908, and will in 1909 succeed M. Bucquoy as president. M. Léon Labbé has been a member of the surgical pathology section since 1880.

The vital statistics for the year 1906 for France have recently been published. There were only 26,651 more births than deaths, about one-fourth less than in 1905, when there were 37,120 more

births than deaths. The diminution in the excess of births as compared with 1905 is due in part to a lesser number of births (444 less), but chiefly to an increase in the number of deaths, namely, 10,025 more in 1906 than in 1905; a higher figure was reached in 1905 than in either 1904 or 1903:

Births.—In 1906 the births of 606,847 living children were registered; there were in addition 37,326 stillborn or infants who died before registration, making a total of 844,173 births. The living infants were 411,311 males and 395,536 females—that is, 1,044 males for 1,000 females. There were 806,847 legitimate and 70 866 illegitimate living births. There were 444 less living births in 1906 than in 1905, and 32,996 less than the annual mean for the decennial period 1896–1905. The proportion of living births to the population for 1906 is 2 06 per 100 inhabitants, instead of 2.07 in 1905, 2 10 in 1904, 2 12 in 1903, 2 17 in 1902, and 2 20 in 1901. In comparison with 1905, forty-four departments show a decrease in the number of births.

Deaths.—During 1906, 780 196 deaths were registered, being 10,025 more than in 1905—406,274 males, 373,922 females. Forty-five departments showed an excess of deaths in 1906, as compared with forty-four in 1905 and only thirty-six in 1904 and 1903.

The proportional increase in the population in 1906, calculated in ratio to the legal population after the census of March 4th, 1906, was only 0 07 per 100, as compared with 0.10 in 1905, 0 15 in 1904, and 0.19 in 1903.

It will thus be seen that the steady decrease in the number of births continues, while there was a large increase in the number of deaths.

On December 22nd, 1907, an interesting ceremony took place at the St. Louis Hospital when more than 400 friends and pupils of Dr. Hallopeau assembled as a mark of esteem and regret on his retiring from active duties at the hospital where he has had wards for twenty-four years. Professor Lannelongue was in the chair, and in addition to most of the Paris professors and M. Mesureur, the Director of the Assistance Publique, there were present M. Terebinski, the Delegate of the Dermatological Society of St. Petersburg and M. Masotti of Bologna. Professor Lannelongue handed to Dr. Hallopeau the commemoration medal, engraved by the sculptor Chaplin, representing Dr. Hallopeau in profile, while the obverse shows him bending over and examining the arm of a patient. The medal is engraved with the words "*Primum multos cognovit cutis morbos.*"

BERLIN.

Fatal Accident to Professor Lassar.—Death of Professor v. Tobold.—Home for Congenital Syphilitics.—Increase of Doctors in Prussia.—The War Against Tuberculosis.

On December 22nd, 1907, Professor Oscar Lassar, the distinguished dermatologist, died, from the effects of a carriage accident, at his residence in Berlin, aged 59 years. That Lassar has done good and solid work in his special branch of the profession is universally admitted; still, he will probably be remembered by posterity as having been leader and chief moving spirit in the German crusade for "Baths for the people," a cause into which for many years he threw the full energy of a temperament that seemed not to know fatigue. Again and again he would travel about and across Germany even to the most out-of-the-way little places, in order to preside at meetings, explain the hygienic and economic advantages of well-planned peoples' baths, and fan sparks of interest into blazing enthusiasm. Nor did he hesitate to devote funds, as well as work, to this as well as to other causes that he had at heart. Possessed of a large private fortune, he delighted in employing it *ad majorem medicinae gloriam*. His lavish Congress hospitality had become proverbial, and will be remembered by many foreign medical visitors to Berlin. Lassar was keenly interested in politics, and had latterly become prominent as a working member of the Central Committee of the National Liberal party. He was a lover of sport, too, and known as a fearless rider. All in all, a man of uncommon versatility and energetic thoroughness, whose bright and stimulating presence and unfailing helpfulness will be sorely missed in the professional and social life of Berlin.

Another specialist of great distinction died just before Christmas—Professor v. Tobold, once famed as a laryngologist, and known, in fact, as "the Father of Laryngology." He was of great age. Years ago he retired from all public work, and since then was rarely seen at medical gatherings, so that even before his death he was hardly more than a memory to the present generation. The newspapers, in their obituary notices, recall the circumstance that v. Tobold was the first authority called in by the German Crown Prince, afterwards Emperor Frederick, when the throat disease began to declare itself, and that he recognized its malignant nature.

An influential committee has been formed in Berlin for the erection of a "home for children suffering from inherited syphilis," where the little patients are to be watched over carefully and specially treated for a lengthened period—a period extending over years if necessary. The example has been set by the Stockholm Institute, which was opened seven years ago, and has achieved excellent results. Not one of the 32 children dismissed from the Home during that period show any remaining symptom of the disease, and there is every hope that they may all grow up healthy and useful members of society.

The number of doctors in Prussia has again increased in spite of the repeated warnings regarding overcrowding of the profession. In September, 1907, 18,777 were counted, as against 18,433 in September, 1906, that is, an increase of 1.9 per cent. within a year. Of these 3,376 are domiciled in Berlin, with its suburbs; in Breslau 596 were counted; in Frankfurt-on-Main 427; in Hanover 297; in Königsberg 283; in Wiesbaden 261; in Halle 226; and so on—in decreasing numbers. Taking the provinces of the monarchy, Brandenburg (which includes Berlin) has 4 734 medical men, as against 4,524 a year ago, an increase of 4 4 per cent. The Rhine province comes next, its number being 3,050 (2,984 in 1906); then Silesia with 1,923 (a fall here, for in 1906 the number was 1 973); Hessen with 1,475 (1,460); Hanover with 1,450 (1,435); and the remaining provinces in numbers proportionate to their sizes.

The Berlin Municipality has subscribed 50 000 marks (£2 500) to the Robert Koch Fund for the combat against tuberculosis.

CORRESPONDENCE.

THE ROYAL SOCIETY AND THE TESTS FOR COLOUR BLINDNESS.

SIR,—I have read with interest the letter in your issue of December 28th, 1907, by Mr. N. Newman, and I hasten to assure him that he need have no fear that the letter by Dr. Edridge-Green, published in your issue of November 23rd, contains any exaggerated statement whatever, for in his letter he quite fairly states facts, with all of which I am perfectly familiar.

It is almost incredible that a body of scientists, as represented by the Fellows of the Royal Society who had the matter referred to them, could have taken up the position they did with regard to the tests used for the detection of colour blindness. When Dr. Edridge-Green explained his ideas, and offered to show cases in support of his theory, all they did was to tell him that he must be wrong, because his ideas did not fit in with those of Helmholtz and other distinguished workers who promulgated their views thirty or forty years ago, and they refused to examine his cases.

Even the Ophthalmological Society showed no undue haste in taking the matter up, but in 1903 a Committee was appointed to examine cases, and to report on "the alleged inefficiency of the Holmgren wool test." The Committee comprised five of the most distinguished members of the Society, with myself as Secretary.

We had many meetings, and we examined all sorts of cases before we made our report, which was published in volume 24 of the Society's *Transactions* for the year 1904. We came to the following conclusions:

That if Holmgren's test (which is that used by the Board of Trade) was "used with knowledge and care, and in the spirit, but not necessarily according to the letter, of the instructions," it was "sufficient for the detection of a large number of cases." "But," we stated, "we agree with Dr. Edridge-Green that some cases of colour blindness cannot be detected by Holmgren's test however skilfully and fully used." We also agreed "that some, at least, of the cases just referred to, when tested with the signal lantern, make mistakes that at once disqualify them."

I cannot go on quoting from the report, which any one can read for himself; but it is sufficient to say that it agreed with all the statements put forward by Dr. Edridge-Green, and that each member was convinced of the excellence of his work.

Now this brings out the important fact that in order to detect even those cases which could be discovered by the Holmgren test, that it had to be used "with knowledge and care, and in the spirit, and not necessarily according to the letter, of the instructions." Now, the instructions state that no naming of colours is to be allowed, and all that candidates are to be asked to do is to match the wools. We fully upheld the statement of Dr. Edridge-Green that if this only were done, any number of normal-sighted persons would be rejected and heaps of colour-blind individuals would pass. I cannot here go into the question as to why this is; but it is a fact, and I would undertake myself to educate in the course of a week many varieties of colour-blind people to such a pitch of perfection in wool matching that by this test alone it would be impossible for even the most skilled examiner to detect the defect. How much easier would it be for such candidates to deceive the Board of Trade examiners, who are seamen, etc., and not medical men at all. Most of those people of whom I am speaking would never know a port light from a starboard, or either from the masthead light, unless they were so near that the difference of illumination would tell them which was which, though they would still not see the colours. There is a further class of case which is even more dangerous still, for it is impossible by any wool test in the world to find the defect out. I refer to those cases in which there is abnormal shortening of the red end of the spectrum. Such people may have perfect vision for all sorts of colours, but show them a lantern with a dark-red shade in it and they will see nothing whatever, and will not know there is a light in the lantern at all, and so such a person may be within sight of a dim red light for any length of time and not see it; he might run a train straight past a danger signal without ever being aware of its existence, whereas to a normal-sighted person the light would be perfectly visible.

The result, on account of this most unsatisfactory state of affairs, is that there are scores of people at sea at this moment who ought not to be there at all, and who are a source of great danger on account of their defective colour vision. How many collisions at sea are due to this fact, when one vessel runs into another on a perfectly clear night, we shall never know, though we might get much useful information if the colour vision of all those on the look-out in the colliding ships were adequately tested at the earliest possible time after the disaster, as has been so often insisted upon by Mr. Bickerton of Liverpool. I feel convinced that, if this were done, many an unexplained collision would be readily accounted for.

I cannot but consider it a disgrace to a maritime country like England that the Board of Trade should still persist in using a test which by their own records they must see is most unsatisfactory. There are scores of normal-sighted men who have been rejected at one examination and passed at the next, and it is equally certain that there are any number of colour-blind men who have never been detected at all by the examiners and are thus a standing danger to the lives of hundreds of people and to thousands of pounds worth of property.—I am, etc.,

London, W., Dec. 30th, 1907. C. DEVEREUX MARSHALL.

THE TUBERCULIN TREATMENT OF GENITO-URINARY TUBERCULOSIS.

SIR,—In his admirable Bradshaw Lecture on Prognosis in relation to Treatment of Tuberculosis of the Genito-urinary Organs, published in the JOURNAL for December 21st, 1907, Mr. R. J. Godlee has succeeded in finely focussing a number of difficult and delicate points on the borderland between medicine and surgery. The lecture abounds in wise thought and suggestion. I should gladly have been allowed an opportunity of discussing several of his passages. The exigencies of time and your space forbid this for the present, and I content myself with referring to one point which seems to me of great importance.

When Mr. Godlee touches on the application of tuberculin to genito-urinary and other visceral tuberculosis, he seems to me unnecessarily to limit the issue by the use of the term "opsonic treatment." He pays a just tribute to the energy and originality of Sir A. Wright in relation to his work on opsonins. No one who is interested in the subject of tuberculosis can fail to admire the significance and beauty of the procedure. The possession of an exact gauge for the regulation of tuberculin dosage is desirable. An approximation to this seemed promised by the determination of the opsonic index. But some of us who have worked longest with tuberculin as a diagnostic and therapeutic agent feel that the amount of help and guidance afforded by the regular determination of the opsonic index is less than many statements of its more enthusiastic advocates would suggest, while its practical value is meantime greatly neutralized by the length and minuteness of the process with its undoubted risks of error. Like Mr. Godlee, I too, while watching my assistants, have frequently felt content that my duty did not lie that way.

It must be kept in view, however—and this is the point that seems to me obscured by Mr. Godlee's statement of the case—that the application of tuberculin to the treatment of tuberculosis is not *dependent* on the determination of the opsonic index. For many years past, indeed since the first announcement of tuberculin, I have regularly made use of tuberculin in the treatment of selected cases of tuberculosis affecting different organs. My list includes tuberculosis of nearly every organ, and many examples of most. More particularly, genito-urinary cases are represented, and most of these cases have shown marked improvement. Some have become perfectly well, presumably as a result of the treatment. Several such cases are under observation at the present moment. I may be allowed especially to cite one remarkable case of continuous rectal discharge of pus, amounting to some 8 to 10 oz. per diem, during three years, which resisted several surgical operations, but yielded to tuberculin treatment in six months. I had occasion to see the lady the other day, and learned that, for more than a year, there had not been a trace of discharge. This is but one out of numerous striking instances.

The greater number of the cases—indeed all up to the last year or two—were treated by tuberculin necessarily apart from opsonic guidance; and yet the results were good in the great majority of instances. I may add that during the last year I have made a point of grouping such tuberculin cases into (*a*) those with opsonic readings and (*b*) those without opsonic readings. I cannot say honestly that the additional procedure, although carried out laboriously and conscientiously by careful assistants, has improved results or aided certainly in any other way.—I am, etc.,

Edinburgh, Dec. 16th. R. W. PHILIP.

NOTIFICATION OF BIRTHS ACT, 1907.

SIR,—In common with a large number of our profession, I have up to this been in sympathy with the opposition that has been so marked all over the country to the adoption of this Act; but now, owing to being Chairman of the Health Committee as well as medical practitioner, I have found it necessary to read the Act carefully, and consider my position in both these capacities.

Briefly, my Committee have decided to adopt the Act, and I, as Chairman, have to propose its adoption. Naturally, then, I do not desire to propose an Act distasteful to my brother practitioners; nor can I oppose one of the best of the modern sanitary reforms unless I am convinced the harm it will inflict on the medical profession is real.

After mature consideration I have decided it is my duty to propose the adoption of the Act in this town.

My reasons for coming to this conclusion are as follows:

1. I do not agree, as a medical practitioner, that there is anything derogatory to the dignity of the profession in the Act. It would perhaps have been better if the medical practitioner had been exonerated from notification entirely, but, as he is not, it cannot now be helped. But it must be observed that in Section 1 (1), which is the clause that enumerates those who are compelled to notify, the medical practitioner is not specially named, although he is certainly included under the words "any person in attendance." Again, the words "medical practitioner" only occur twice in the Act—namely, in Section 1 (2) and Section 2 (3), and on both these occasions he is mentioned

with reference only to provisions for the working and adoption of the Act.

I take it, therefore, that the so-called compulsory notification of births by medical men, and consequent breach of professional secrecy, is not actually insisted upon in the Act, and is only feared by those of our profession who have not thoroughly read the Act; because Section 1 (3) goes on to say, after naming the penalty:

Provided that a person shall not be liable to a penalty under this provision, if he satisfies the court that he had reasonable grounds to believe that notice had been duly given by some other person.

Which to my mind means that, if the medical practitioner explains to the relatives that it is their duty to notify the birth within thirty-six hours, and in proof of which hands to the father, or some relative, or person in charge, a card for notification, his duty is at an end, and that any health committee or court would at once admit that, having done so, he had "reasonable grounds to believe" that notice had been given.

2. I believe this Act is intended to do, and will do, great good in securing the early notification of births in slum and insanitary areas. Health authorities are not going to send health visitors to good class, middle class, or good working-class patients, it is only to those, in the words of the memorandum of the Local Government Board, where "if necessary, advice may be given to the mother in regard to the rearing and nurture of the child." These are not the cases that are attended, as a rule, by medical practitioners; I doubt if 20 per cent. of them are so attended; it means, therefore, that if the medical profession oppose this Act they are against the health committees getting information of the greatest importance to the health of the community, concerning cases 80 per cent. of which they do not attend, and I cannot conceive a profession which has always been known as a noble profession, because of what may be termed an injustice to their code of professional etiquette, opposing an Act which will be one of the best means of reducing infantile mortality.—I am, etc.,

Stockport, Dec. 17th, 1907. HENRY G. SMEETH.

SIR,—Numerous objections have been urged against the adoption of this Act, many of which deal entirely with side issues and are consequently not worth discussing. The members of the profession have, however, in my opinion, raised two valid objections to the Act, and in regard to these I desire to state, in the outset, that I am in entire sympathy with them.

The objections I refer to are:

1. Compulsion under a penalty to do work without a fee.

2. The notification of illegitimate births.

Adequate payment for the necessary certificate would overcome the former difficulty, but I do not see how the provision of a fee could remove the latter objection. That being the case, it seems to me that nothing short of the definite exclusion of medical practitioners from the obligations imposed by the Act can be completely satisfactory to them.

Of course, this cannot be done in reality until Parliament amends the Act; but the question I wish to urge is, Will it, or can it, not be made to work out in practice to a great extent in such a way?

The parent is liable under a penalty to notify the birth, and I am advised that under the Act, as it stands, the parent is the proper person to proceed against for failure to do so, even in those cases where a doctor is in attendance. The local authority can surely under this Act elect to proceed for default against the parent in preference to the doctor, more especially as he is by law made primarily responsible. Surely there is no need to proceed against two different persons for one offence.

There is a precedent for such a procedure in the case of the Notification of Infectious Disease Act, under which, although the parent in that case is made responsible for reporting cases of infectious disease in his family, the doctor alone is held so by the sanitary authorities. The obvious reason of this is that technical knowledge and skill is needed to diagnose a case of infectious disease, which even the law cannot presume is possessed by the parent. Such a difficulty does not arise under the Notification of Births Act. Then, even after a case has been declared to be a notifiable disease by the medical attendant, the authority does not require a duplicate certificate from the parent, because this is entirely unnecessary; and if the medical man fails to report the case, he alone is proceeded against.

I hold, therefore, if the procedure obtaining under the Notification Act is reversed in the administration of this Act and the parent is held responsible, as he ought to be, the objections of the medical profession to the Act must be greatly mitigated, though, of course, they cannot be completely removed, apart from an amendment of the Act.

I quite think the above method will be the simpler way of administering the Act, because the first intimation to the medical officer of health of a non-notified birth will, no doubt, be received from the Registrar of Births and Deaths in his weekly returns. The certificate of the Registrar would be sufficient evidence against the parent to convict, and most readily obtained; whereas, if the local authority decided to proceed against some other person rather than the parent—for example, the doctor—inquiries would have to be set in motion to find out who was actually in attendance at the birth. Such attendance would have to be proved in court, etc., and altogether the process would be a much more complicated one than that suggested above.

I think, therefore, on the score of both convenience and simplicity, the parent will be made responsible.

Should this be the case, the doctor could further protect himself in any case by drawing the attention of the parent to his obligation under the Act.—I am, etc.,

JAS. T. NEECH, M.D.,
Medical Officer of Health, Halifax.

Halifax, Dec. 23rd, 1907.

SIR,—I trust all your readers will consider carefully the thoughtful letter of Dr. Price Williams in your issue of December 21st, 1907, p. 1805. Considering the history of the introduction of this measure into the House of Commons, and the manner in which our profession was there treated, it seems to me that it is incumbent on us to protest in the strongest manner against it.

It cannot be for the public good this increasing tendency to compel medical practitioners by legislative enactment to play the part of informers in the homes of their patients, and it ought to be met with the most strenuous resistance. I cannot help thinking that if we show a sufficiently united front, we shall not lack political strength for our defence. But protest is not enough; we ought to act. The first thing to be done is to use all our influence with the local authorities to induce them to postpone the adoption of the Act. I do not think there is any great desire on their part to adopt it, and a little activity on our part would often prevent it. If the matter is taken out of their hands by the Local Government Board, then the only attitude we can adopt is one of passive resistance.

If the enactment in some respects is a good one, as competent authorities appear to think, it is, to say the least, a pity that it has been weighted with this grave professional injustice. Every medical practitioner would have been willing to further the cause which this enactment professes to promote; it is quite another thing, however, to be compelled to do so in this way, under the pain of fine or imprisonment.—I am, etc.,

London, N.E., Dec. 21st, 1907. MAJOR GREENWOOD.

SIR,—There is no mistaking the fact that this Act has aroused the opposition of medical men throughout the country on the grounds of injustice, which cannot be denied. That the Legislature should use private citizens for a public service, penalizing them for infraction of the Act, paying them nothing for its execution, is a tyranny which could be sanctioned by no really liberal Government. But the advantage of the Act under certain circumstances is equally beyond dispute; and at a season of peace and goodwill I would venture to ask medical men to reconsider the practical results of the Act.

By Section 1 (1) and (2) "the necessary information of the birth" is to be given to "the medical officer of health of the district" [or county] "in which the child is born," and to none other. The Act does not stipulate for the names or even the addresses of the parents. Professional secrecy need not necessarily be infringed.

By Section 1 (3) it is "Provided that a person shall not be liable to a penalty under this provision if he satisfies the court that he had reasonable grounds to believe that notice had been duly given by some other person." The medical man has only to convince the father, midwife, or other attendant or friend of their duty under the Act in order to free himself. A copy of the Act in his pocket will be sufficient.

Moreover, it is only the medical officer of health who will receive the notifications; it is only he that can in the first instance report any practitioner for failing to give satisfactory notification of a birth.

If an authority, in adopting this Act, were explicitly to declare this to be their interpretation of it, there would seem to be no reason for the further hostility of medical men to its adoption; and on public grounds they would enhance their credit by appealing to their authorities in this sense.—I am, etc.,

F. E. FREMANTLE,
Medical Officer of Health, County of Hertford.

December 21st, 1907.

SIR,—The important aspect of this Act is being lost sight of. Rightly enough is it objected that poor destitute women will not seek help in their distress from fear of publicity. Rightly enough is it objected that we are not the proper people to notify. Rightly enough is it objected that secrets entrusted to us should not be revealed under a penalty. My contention is that the Act will do no good at all, that it will not reduce infant mortality, and that it will prevent the woman from obtaining the help so necessary in her distress. I not only refer to the help at the time of her accouchement, but the moral help previous to it, which is such a strong factor in the saving of the child's life, and which I believe will be endangered by the Act.—I am, etc.,

London, S.W., Dec. 26th, 1907. H. KAY RAMSDEN.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

SIR,—In the BRITISH MEDICAL JOURNAL of September 28th last there is a lecture by Dr. Peter Horrocks on "The Instruction of Midwives," and this contains a paragraph on "the child's eyes."

In this he says "No germicide should be dropped into the child's eyes . . . as a matter of routine." Further on he says, "where there is gonorrhoea of the mother, a single application of a germicidal solution used as a routine measure will not prevent ophthalmia." He says that "this is a more effective agent than a solution of mercury perchloride, of which several drops, 5 or 6 of a strength of 1 in 4,000, are dropped into each eye and repeated two or three times a day." In another place he says that "if there is gonorrhoea or a vaginitis or a purulent discharge or a well-grounded suspicion of these things, as soon as possible drop one drop of a 2 per cent. solution of silver nitrate into each eye, carefully wiping away all secretion from about the eyelids, eyelashes, and corners of the eye. A good plan is to wash away the secretion thoroughly by a stream of warm salt and water (℥ij ad Oj). The silver nitrate solution should be dropped into each eye every eight hours at least."

The prevention of ophthalmia neonatorum is a matter of great public importance, for it means the preventing of loss of sight to many. Crédé prevented ophthalmia by dropping a 2 per cent. solution of silver nitrate into each eye immediately after birth. So far as my knowledge goes, this treatment has never yet failed to prevent ophthalmia. Dr. Horrocks says it will not prevent ophthalmia. Can he, or any reader of your paper, mention a lying-in hospital in which Credé's method has been literally understood and practised as a routine method, and ophthalmia has nevertheless been prevalent?

The objection to the Credé method is that it produces slight temporary conjunctivitis. This will be more severe and last longer if the eyelids, eyelashes, and corners of the eye are to be first wiped out and the silver nitrate dropped in every eight hours. The midwife's troubles will be increased and her mind perplexed if she is also to prepare a ℥ij to Oj solution of sodium chloride and warm it.

Dr. Horrocks says: "Some authorities believe in using both these germicidal solutions, using the silver nitrate and the mercury perchloride alternately." May one ask who?

Dr. Horrocks's ability and his position as the principal teacher of midwifery in a great medical school give his words an influence which in this instance appears to me likely to do harm—in one direction by shaking confidence in the one proved effective way of preventing ophthalmia; in the other, by encouraging unnecessary and harmful meddling with the eyes. Therefore it is that I ask attention to the matter, and I hope some oculist may be induced to give the nurse guidance.—I am, etc.,

L. H.

ETHER ADMINISTRATION BY THE OPEN METHOD.

SIR,—In the discussion on intraspinal anaesthesia in the Section of Surgery at the annual meeting at Exeter Dr. Levy strongly advocated the open method of administering ether as practised in America. Since then numerous letters and articles have appeared in the JOURNAL on this method. From some of the opinions expressed one would almost wonder why so much time and ingenuity had been expended in the devising of apparatus for the limitation of air. Ether, I believe, was originally given on a towel; and I can only suppose that it was because this method did not in many cases provide a satisfactory anaesthesia that resort was made to a closed apparatus. That this apparatus may be open to abuse I am quite free to admit. Cyanosis, violent respiratory movements, excessive secretion of mucus, and post-operative headache and vomiting must be expected when the patient is allowed to breathe backward and forward into the bag continually. But surely this is not the usual practice. My custom for some years has been to allow a breath of air every fourth or fifth inspiration, and frequently to empty the bag of stale expired air. Since hearing Dr. Levy I have tried, after the induction, to dispense with the bag altogether, but almost invariably find that movements or retching supervene, unless it is reapplied at fairly frequent intervals, during the first twenty minutes or half-hour at any rate. After this time one can, in most cases, manage without it. How the exponents of the drop method succeed in inducing anaesthesia in from three to ten minutes I confess I don't know, as I have not tried it, and indeed it seems hardly worth while, as by means of the ethyl-chloride-ether, or gas-ether, sequence anaesthesia can generally be induced in about two minutes with the minimum of discomfort to the patient. Although I have not adopted the drop method for induction, I have frequently had occasion in delicate women and children, where symptoms of collapse have threatened, to change from C.E. to pure ether dropped from an ordinary drop-bottle on to the mask. With the head on one side—the usual position—there is no risk of any ether dropping into the mouth. I have simply regarded this as quite an ordinary procedure, and found it quite satisfactory in suitable cases. But I think he would be a bold anaesthetist who omitted, when asked to give ether, to pack some form of closed inhaler in his bag. By all means let us give as much air as we can allow our patient without unduly lightening the anaesthesia; but I trust the open method, as a means of induction, will not be generally accepted. I am sure it will mean in many cases discomfort for the patient, delay for the surgeon, and disappointment for the anaesthetist.—I am, etc.,

London, W., Dec. 24th, 1907. G. A. H. BARION.

SIR,—In his article on this subject (BRITISH MEDICAL JOURNAL, December 28th, 1907, p. 1824), out of 257 administrations, on presumably picked cases, Mr. Brownlee reports two deaths from ether-pneumonia, equivalent to 8 per 1,000. If this be the normal death-rate with this anaesthetic in the hands of a skilled administrator, chloroform with its one fatality in 1,300 cases (see Hewitt's *Anaesthetics*, p. 148) would appear to be the safer drug, the difference being that in the former case the anaesthetist escapes the coroner's inquiry with its excessive publicity.—I am, etc.,

L. KIRKBY THOMAS,
Anaesthetist to the Women's and Dental Hospitals,
Dec. 30th, 1907. Birmingham.

ALBUMINURIA FROM A LIFE-INSURANCE POINT OF VIEW.

SIR,—With reference to Dr. Wilkinson's excellent summary of this perplexing subject, I would like to suggest that the examiner finding albumen is not justified in making a report until he has examined several speci-

mens. The applicant should not be allowed to leave until the urine has been examined, so that the examiner may be able to make a subsequent appointment if necessary, and thus save the office considerable clerical work and also the risk of losing business. A report stating that albumen has been found on one occasion is of very little value to the head medical officer in assessing the risk.

Again, the system of a decreasing lien on the policy, though in reality a very equitable method, is quite unsuited to that very numerous class in which the insurance is being effected to cover a loan. A borrower, for instance, may wish to take out a policy for £1,000 to cover a loan of that amount, but, if the lender is only to recover £500 in the event of death occurring in the ensuing year, it is obvious that, to give sufficient security, the borrower must insure for £2,000. This, of course, amounts to doubling the premium—an "extra" out of all proportion to the risk involved.—I am, etc.,

London, E.C., Dec. 12th, 1907. R. L. GUTHRIE, M.D.

HAS A PURIN-FREE DIETARY ANY SPECIAL THERAPEUTIC VALUE?

SIR,—In the abstract of Dr. Chalmers Watson's lecture published in the JOURNAL of December 21st, 1907, p. 1759, it seems to me that the conclusions were arrived at with insufficient experience. In the first place, Dr. Watson states that the lady cured by this diet had been carrying it out for fifteen months, and remained well for eighteen months longer. The patients whom he put on a purin-free diet are reported on after a period of "from a few weeks to over ten months," and two failures are recorded, one being a case of paroxysmal headaches of twenty-five years' standing.

I can speak of a personal experience of over twenty-six months on a purin free diet. This principle alone, however, did not satisfy me, as I found that though some troubles were relieved by abstinence from purin, intestinal and digestive troubles continued. In the case of a purin-free diet I feel sure that many beginners eat to excess of starchy foods at first, and drink largely with meals, which leads to flatulence and constipation, the latter being aggravated by the quantity of cheese and milk they consume. My experience was that when after twelve months I attended to these points—curtailed the number of meals, attended better to mastication, reduced my proteid intake, this being mostly derived from ground roasted nuts in moderation, biscuits, vegetables, dried and fresh fruits—an all-round improvement was very rapid. Whereas some three years ago I was constantly subject to chills of various kinds, coryzas, muscular rheumatisms, lumbagos, headaches, and intermittent constipation, the sum total of the last twelve months' ailments has been a coryza of two days' duration. I do not attribute these results entirely to the avoidance of purins, but they must have some bearing on the matter, as I cannot now take an isolated cup of tea, however weak, without a little gastric disturbance, and meat, when taken, is followed by a diminished well-being on the next day. Nevertheless, I think that persistence with these foods would very soon get one over these slight troubles, but would also in time induce headaches and rheumatism. I know of another case in which the series of events has been very similar.

It was necessary to go into this at some length in order to show that the short time of Dr. Chalmers Watson's experiments is insufficient, and to prove that in most cases something more than a purin-free diet is necessary for the attainment of improved health. If gout, etc., is the result of a deficiency in or inhibition of a uric acid destroying ferment, is not one of the safest courses, perhaps, the avoidance of purins, together, if necessary, with a general reconstruction of the diet on scientific lines, as we know of no drug which can permanently assist us?—I am, etc.,

December 23rd 1907. EXPERIENTIA DOCET.

"THE DOCTOR IN THE NEWSPAPERS."

SIR,—Your remarks upon my recommendation of a proprietary food give me the opportunity of expressing my regret for a blunder at which I now marvel. When I was asked to write a recommendation of this preparation I was flattered, and none the less willing, since it had been of service in my own house; nor did it occur to me for a moment that there was any objection to my so doing. You may be astonished that I was so "green"; I can only say that, once bitten, I shall be always shy, and though I do not hold myself discountenanced by either the intentional or the utilitarian ethics, I shall in future avoid what appears evil to other people.

The description of me as "a member of the medical profession" is not correct, I think, in any admissible sense of the words. I ceased to practise nearly four years ago, not because that was my desire, but solely in order to be able to say whatever I believed wherever I pleased. I must have publicly stated a score of times that I do not practise, but my correspondence shows that the mistaken belief still obtains. I hope this may help to dispel it.—I am, etc.,

London, N.W., Dec. 30th, 1907. C. W. SALEEBY.

*** Dr. Saleeby may possibly have heard of the proverb, *Qui s'excuse s'accuse.* If he wears the white flower of a blameless life—speaking, of course, "in a professional respect"—why should he don the white sheet and stand before our readers with the penitential candle in his hand? If he does not wish to be described as a member of the medical profession, why does he continue to append the title "M.D." to his name? Even the verdant innocence which he seems to claim can scarcely prevent his knowing that it is only his character as a medical man that gives his opinion the special value which appears to be attached to it by certain advertisers.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PARTNERSHIP AGREEMENTS AND APPOINTMENTS.

A CORRESPONDENT writes that he is selling his practice for two years' purchase on the following terms: One-third now, with the option of retiring at the end of three years, or the third share to be one-half in four years' time, and the whole to pass at the end of seven years. A difference has arisen with regard to an appointment of £130 per annum, and it is contended that this appointment should not be counted in estimating the value of the practice, unless the successor gets the appointment.

*** This is a matter entirely for the vendor and purchaser, but it is usually considered that a purchaser should take his chance of getting the appointments in the same way as in the case of private patients. The vendor can neither sell his patients nor his appointments, but only the "good will" of his practice, and in this transaction he stipulates to do his best to introduce his successor to his patients and to endeavour to put him into his own place, as far as possible, with regard to all his professional emoluments. No doubt there are special cases where a modification must be made in the general rule, but according to the data this does not seem to be one of them.

SUPERSESSION.

TWENTY YEARS A G.P. writes, under the heading "Medical Etiquette": For the sake of our own dignity and the protection of the public, is it not time that the so-called rules under the above misnomer should be simplified? The demands the displaced practitioner makes on the patient and the doctor about to be called in are ridiculous. One rule, and one rule only, I would suggest. It should be the duty of the medical man on attendance in a fresh case to notify the previous practitioner. The public would soon learn the rule, and it would apply all round, including consultants and the public would not be able to discuss our wretched professional squabbles, the basis of which, after all, is £ s. d.

*** We are somewhat at a loss to know to what "so-called rules" our correspondent refers. The only rule that has been insisted upon in these columns is that the superseding practitioner should make it his business to ascertain that his predecessor has been duly notified of the change; but we think that, for reasons that must be obvious, this notice should be sent by the patient, or some one representing the patient, and not by the practitioner.

SECRET COMMISSIONS.

Brum. sends us a circular he has received offering medical men a commission on the sales to their patients of articles purchased from a certain firm. He expresses his astonishment that any firm should think it worth while to make such an offer to medical practitioners, presumably because he cannot conceive that any member of the medical profession would stoop to earn money by such means. It is even more surprising, however, to think that a respectable business firm should think it worth while to run the risk of a prosecution under the Prevention of Corruption Act, which was expressly passed to check this kind of thing.

Medico-Legal.

A QUESTION OF FEES.

At the Brighton County Court, on December 13th, 1907, an action was heard in which a medical man claimed from the executors of a late patient a sum of £47 5s., for medical services rendered and money paid, and was finally awarded by the jury £44 2s. The plaintiff in his evidence, on examination and cross-examination, stated (according to the *Sussex Daily News*) that during an illness previous to that which ended in the death of the patient he had charged her half a guinea a visit, throwing one visit in because he usually took off something, and received a cheque for his account with a letter of thanks. His attendance during the second and fatal illness covered sixty-four visits in all; he often had to make two visits a day, the second one between 7 and 9 p.m. An operation had to be performed, subsequent to which there were from six to ten visits in consultation with the operating surgeon. For these visits he would have been entitled, strictly speaking, to charge a guinea, but did not charge more than his ordinary fee of half a guinea. Before the operation was performed he had stated what the fee of the operating surgeon would be, but no other question as to fees had ever been raised. The operation was a very serious one, but successful. He had acted as the assistant of the surgeon who performed it, and for doing so had charged £10 10s. This was his usual charge for assisting at an operation of that nature. He had paid the anaesthetist, who was a specialist, £5 5s. During a portion of the time over which the sixty-four visits extended eleven visits had been paid on his behalf by another medical man. He considered that any general practitioner would make much the same charge as he had. He was aware that in *Whitaker's Almanack* there was a statement that it was a custom amongst medical men to charge fees in accordance with the rent of the house in which the patient lived, but he did not go by that book nor admit that the custom indicated was generally followed. The fees to be charged depended upon the whole circumstances of the case; in some cases he charged nothing. Some rich patients lived in small houses and poor patients in large ones. There were about twenty evening visits, but only for one had he charged a double fee.

Evidence was also given by other medical men, being to the effect that the plaintiff as a general practitioner held a very good position in Brighton, and that half a guinea was quite a fair and reasonable charge for him to make. The majority of medical men did not take the exact rental value of a patient's house as a basis for their charges, but the nature of the illness, the age of the patient, and similar considerations, together with his position and means. The operating surgeon stated that the operation, for which he charged 50 guineas, could not have been carried out without the plaintiff's assistance, and that the fee which the latter charged for so doing, as also the fee which he paid to the anaesthetist, seemed to him reasonable. The anaesthetist stated that the fee of £5 5s. was one which he had received frequently.

For the defence evidence was brought to show that in other towns persons living in more expensive houses and with larger incomes than that of the deceased had been charged smaller fees than half a guinea a visit. The judge ruled that *Whitaker* could not be put before the jury as an authority for the charges of medical men. After a short consultation the jury gave the verdict which has already been stated.

A PARTNERSHIP DISAGREEMENT.

H. J. B.—If the vendor made any use of the collector for his own private interest without the knowledge and consent of the purchaser, after the expiry of the introduction, it would be a breach of the clause quoted, but not otherwise. The matter, however, appears to be one that ought to be placed in the hands of a solicitor for advice.

At the December examination for midwives of the Central Midwives Board there were 213 candidates, of whom 179 passed, the percentage of failures being 16. Of the successful candidates 67 received their training in hospitals, 15 in workhouse hospitals and infirmaries, 19 in maternity charities, 7 in trained nurses' institutes, 6 in district nurses' societies and associations, 8 in mothers' homes, 9 in missionary institutions, and 48 under private tuition.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

The following candidates have been approved at the examinations indicated:

Third M.B. (*Surgery, Midwifery, and Medicine*).—J. B. Banister, M.A., Jes.; J. W. B. Bean, B.A., H. Selw.; E. Beaton, B.A., Cai.; H. S. Berry, M.A., Cla.; C. W. Bowle, B.A., Trin.; D. W. A. Bull, B.A., Cai.; B. P. Campbell, B.A., Cla.; J. R. C. Canney, B.A., Christ's; H. B. Carlyll, B.A., Joh.; R. G. Chase, B.A., Trin.; R. N. Chopra, B.A., Down; F. Clayton, B.A., Trin.; H. N. Coleman, B.A., Christ's; G. H. Davy, B.A., Cai.; A. W. C. Drake, B.A., Pemb.; N. M. Fergusson, B.A., Magd.; G. B. Fleming, B.A., King's; R. L. Gamlen, B.A., Cai.; G. Graham, B.A., Trin.; F. W. W. Griffin, B.A., King's; O. Heath, B.A., Trin.; E. B. Hinde, B.A., Emm.; A. F. Jackson, B.A., Pet.; K. A. Lees, B.A., King's; S. G. Luker, M.A., Pemb.; M. W. B. Oliver, B.A., Trin.; E. V. Oulton, B.A., Christ's; B. H. Palmer, B.A., Pemb.; W. G. Parkinson, B.A., Emm.; B. A. I. Peters, B.A., Jes.; J. H. Ryffel, M.A., Pet.; L. Shingleton-Smith, B.A., Joh.; E. Slack, M.A., Pemb.; E. C. Sparrow, B.A., Trin.; H. H. Taylor, B.A., Pemb.; C. H. Treadgold, M.A., Cla.; F. B. Treves, B.A., Cai.; P. J. Verrall, B.A., Trin.; K. M. Walker, B.A., Cai.; A. Wilkin, B.A., King's.

M.C.—E. W. Sheaf, Down.

APPOINTMENTS.

Dr. W. H. L. Duckworth has been appointed Senior Demonstrator of Anatomy, and Mr. D. G. Reid, M.B.Edin., Junior Demonstrator of Anatomy for five years.

Erratum.—The initials of Mr. Paton who, as stated in the issue of the Journal for December 28th, 1907, has been appointed an additional examiner in surgery at Cambridge University, are E. P. He is Surgeon to Out-patients at Westminster Hospital.

UNIVERSITY OF LONDON.

MEETING OF SENATE.

A meeting of the Senate was held on December 11th, 1907.

Recognition of Teachers.

The following teachers were recognized as teachers in the University in the subjects indicated at the institutions stated:

University College Hospital Medical School.—Dr. Francis Hugo Thiele (Pathology).

St. Bartholomew's Hospital Medical School.—Mr. William Douglas Harmer and Mr. Frank Atcherley Rose (Laryngology); Mr. George Ernest Gask (Surgery).

Guy's Hospital Medical School.—Dr. Arthur Edwin Boycott (Pathology).

St. George's Hospital Medical School.—Mr. Walter Fedde Fedden (Surgery).

Titles appropriate to Teaching Posts.

The Senate considered the question of the titles appropriate to teaching posts in University College and the titles of appointed teachers in the University elsewhere, and decided that the titles of the undermentioned teachers at University College should be as follows:

Cushny, Arthur Robertson, M.A., M.D., C.M., F.R.S., Professor of Pharmacology.
Hill, James Peter, D.Sc., Jodrell Professor of Zoology and Comparative Anatomy.
Kenwood, Harry Richard, C.M., M.B., D.P.H., Chadwick Professor of Hygiene.
Ramsay, Sir William, K.C.B., Ph.D., LL.D., Sc.D., F.R.S., Professor of General Chemistry.
Spearman, Charles, Ph.D., Reader in Experimental Psychology.
Starling, Ernest Henry, M.D., B.S., F.R.S., Jodrell Professor of Physiology.
Thane, George Dancer, LL.D., M.R.C.S., Professor of Anatomy.

Essay Papers at M.D. Examination.

It was resolved that the following heading for the essay papers at the M.D. examination for internal and external students be approved, and that the regulations be amended accordingly:

The candidate is expected to set forth his ideas in a clear and orderly manner, and to examine critically the various views and suggestions that have been put forward with regard to the subject selected. Account will be taken not only of knowledge of detail, but also of the power to construct a lucid and well co-ordinated essay.

Proposed Transfer of King's College.

The Bill designed to effect the transfer of King's College to the University, as agreed upon by the Senate of the University and the Council of the College, has been deposited in the Private Bill Office of the House of Commons.

Advanced Lectures in Physiology.

The following advanced lectures in physiology will be given during the coming term:

In the Physiological Laboratory of the University.—(1) Eight lectures on Intracellular Enzymes, by H. M. Vernon, M.A., M.D., on Tuesdays at 5 p.m., commencing January 14th.

At University College.—(2) Eight lectures on the Chemical Constitution of the Proteins, by R. H. Aders Plimmer, D.Sc., on Wednesdays at 5 p.m., commencing on January 22nd. (3) Eight lectures on the Chemistry of the Fats and Carbohydrates and some other Constituents of the Animal Body, by S. B. Schryver, D.Sc., Ph.D., on Fridays at 5 p.m., beginning on January 24th.

At King's College.—(4) Four lectures on Tissue Respiration, by T. G. Brodie, M.D., F.R.S., on Mondays at 4.30 p.m., beginning on January 20th. (5) Two lectures on the Physiology of the Emotions, by F. W. Mott, M.D., B.S., F.R.S., on Mondays at 4.30, beginning February 17th. (6) Two lectures on Degeneration and Regeneration of Nerves, by W. D. Halliburton, M.D., B.Sc., F.R.S., on Mondays at 4.30 p.m., commencing March 2nd.

At Guy's Hospital Medical School.—(7) Eight lectures on The Physiology of Muscular Work, by M. S. Pembrey, M.A., M.D., B.Ch., on Thursdays at 4 p.m., beginning on January 16th.

At the London Hospital Medical College.—(8) Eight lectures on Inheritance in its Physiological and Pathological Aspects, by W. Bulloch, M.D.; G. P. Mudge, A.R.C.S.; Major Greenwood, M.R.C.S.; and A. Bacot, F.E.S., on Wednesdays, at 4.30 p.m., beginning on January 15th.

Courses numbered (1), (2), (3), and (7) have been recognized by the Senate as advanced lectures which a candidate at the B.Sc.(honours) examination in physiology may name for part of his practical examination.

Advanced Lectures in Zoology.

Mr. F. E. Beddard, M.A., F.R.S., will begin on January 20th, at 5 p.m., in the Zoological Lecture Theatre, University College, a course of four lectures on the circulatory system of reptiles. The lectures are addressed to advanced students of the University, and to others interested in zoology; there is no fee for the course.

The following candidates have been approved at the examinations indicated:

M.D. (*in Medicine*).—H. T. Gillett, C. E. Iredell, *B. A. Richmond (Guy's Hospital), H. H. Scott, C. E. Tangye.
M.D. (*in Pathology*).—*C. A. Pannett (St. Mary's Hospital).
M.D. (*in Mental Diseases and Psychology*).—E. B. Sherlock.
M.D. (*in Midwifery and Diseases of Women*).—Elizabeth Bolton, A. R. Finn, Louisa Martindale, E. B. Smith, Ethel M. Townend.
M.D. (*in State Medicine*).—T. E. Francis, M. de L. Robinson.
M.S.—H. Chitty, *T. B. Layton (Guy's Hospital), J. G. French.
* University medal.

UNIVERSITY OF GLASGOW.

THE following additional Examiners have been appointed: *Anatomy:* Professor A. H. Young (Manchester). *Medical Jurisprudence:* Professor J. T. J. Morrison (Birmingham). *Medicine:* Dr. C. O. Hawthorne (London). *Surgery:* Mr. J. H. Nicoll (Glasgow). *Midwifery:* Dr. S. Sloan (Glasgow).

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

ANNUAL ELECTION MEETING.

AT a meeting on December 5th, 1907, Dr. C. E. Underhill was re elected President of the College, and Dr. John Playfair, Vice-President; and Sir Thomas R. Fraser, Sir John Batty Tuke, Dr. W. Allan Jamieson, Dr. James Ritchie, and Dr. R. W. Philip were elected to the Council, with the President and Vice-President. The Council subsequently made the following appointments for the ensuing year:

Treasurer: Peter A. Young, M.D., till January 31st, 1908*; Norman Walker, M.D., from January 31st, 1908. *Secretary:* Harry Rainy, M.D. *Librarian:* D. Berry Hart, M.D. *Curator of Research Laboratory:* Sir John Batty Tuke, M.D.

* Dr. Young has intimated his resignation as Treasurer as at January 31st, 1908.

I. EXAMINERS FOR THE LICENCE.

FIRST BOARD.—*Physics:* Dawson Turner, M.D., and Alfred Daniell, D.Sc. *Chemistry:* Edwin Matthew, M.B., C.M., and John Gibson, Ph.D. *Biology:* John Macmillan, M.B., and W. Blackley Drummond, M.B.

SECOND BOARD.—*Anatomy:* Sir James A. Russell, M.B., and Joseph R. Whitaker, M.B. *Physiology:* Percy Theodore Herring, M.D., and A. Goodall, M.D.

THIRD BOARD.—*Pathology:* Robert A. Fleming, M.D.; Wm. Thomas Ritchie, M.D.; and Stuart MacDonald, M.D. *Materia Medica:* G. Lovell Gulland, M.D.; Francis D. Boyd, M.D.; and Harry Rainy, M.D.

FINAL BOARD.—*Medicine:* James O. Affleck, M.D.; Chas. E. Underhill, M.B.; W. Allan Jamieson, M.D.; Alex. James, M.D.; Byrom Bramwell, M.D.; G. A. Gibson, M.D.; J. Murdoch Brown, M.D.; J. Graham Brown, M.D.; Alexander Bruce, M.D.; Wm. Russell, M.D.; G. H. Melville Dunlop, M.D.; and R. W. Philip, M.D. *Midwifery:* D. Berry Hart, M.D.; A. H. F. Barbour, M.D.; F. W. N. Haultain, M.D.; J. W. Ballantyne, M.D.; James Lamond Lackie, M.D.; and Wm. Fordyce, M.D. *Medical Jurisprudence and Public Health:* James Andrew, M.D.; P. A. Young, M.D.; James Carmichael, M.D.; J. Allan Gray, M.D.; R. S. Aitchison, M.D.; and W. G. Aitchison Robertson, M.D. *Insanity:* Sir John Batty Tuke, M.D.; T. S. Clouston, M.D.; John Macpherson, M.D.; and John Fraser, M.B.

II.—EXAMINERS FOR THE MEMBERSHIP.

Sir A. R. Simpson, M.D., Sir Thomas R. Fraser, M.D., John Wyllie, M.D., James Andrew, M.D., Sir John Batty Tuke, M.D., T. S. Clouston, M.D., J. J. Kirk Duncanson, M.D., P. A. Young, M.D., James O. Affleck, M.D., John Playfair, M.D., W. Allan Jamieson, M.D., Alex. James, M.D., Peter M'Bride, M.D., Byrom Bramwell, M.D., G. A. Gibson, M.D., D. Berry Hart, M.D., Sir James A. Russell, M.B., W. S. Greenfield, M.D., J. J. Graham Brown, M.D., A. H. F. Barbour, M.D., Alex. Bruce, M.D., William Russell, M.D., G. H. Melville Dunlop, M.D., N. T. Brewis, M.B., R. W. Philip, M.D., John Thomson, M.D., F. W. N. Haultain, M.D., John W. Ballantyne, M.D., G. Lovell Gulland, M.D., W. G. Aitchison Robertson, M.D., John Macpherson, M.D., Norman Walker, M.D., William Elder, M.D., Charles James Lewis, M.D., Harry Rainy, M.D., K. Mackenzie Downie, M.D., Claude Buchanan Ker, M.D., James Ritchie, jun., M.D.

III.—EXAMINERS FOR DIPLOMA IN PUBLIC HEALTH.

FIRST EXAMINATION.—*Chemistry:* W. G. Aitchison Robertson, M.D. *Bacteriology:* James Taylor Grant, M.D. *Physics:* Dawson Turner, M.D. *Meteorology:* Charles James Lewis, M.D.

SECOND EXAMINATION.—*Epidemiology and Endemiology:* Claude Buchanan Ker, M.D., and W. Leslie Mackenzie, M.D. *Practical Sanitation:* J. Allan Gray, M.D., and Wm. Robertson, M.D. *Sanitary Law, Vital Statistics, and Statistical Methods:* Sir James A. Russell, M.B., and Jas. Craufurd Dunlop, M.D.

Registrar: Harry Rainy, M.D. *Superintendent of Laboratory:* James Ritchie, jun., M.D. *Clerk:* Alex. Sholto Douglas, W.S. *Auditor:* John Wilson Brodie, C.A. *Sub-Librarian:* F. C. Nicholson, M.A.

EXTRAORDINARY MEETING.

At an extraordinary meeting of the College held on Tuesday, December 17th, 1907, the College unanimously appointed Sir A. R. Simpson and Dr. John Playfair to be Representatives of the College on the Board of Management of the Royal Infirmary.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following candidates were approved at the examination held at the end of the twenty-fifth session, October-December, 1907.

*G. U. Smith, *W. Westropp White, Major I.M.S., *H. L. Deck, *J. Cross, †G. H. Hustler, M. J. Quirke, Captain I.M.S., †F. L. Henderson, †T. L. Craig, †W. R. Larbalestier, A. E. Oakeley, W. R. Gibson, F. A. Wille, T. F. Macdonald, R. FitzHerbert Johnson, †W. S. Snell.
* With distinction. † Colonial service.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

SURGERY.—†T. Campbell, *†E. S. Cooke, †A. C. J. Elwin, J. Jones.
MEDICINE.—*†R. Beesley, H. J. Clutterbuck, †W. J. G. Gayton, *M. Rathbone.
FORENSIC MEDICINE.—R. Beesley, M. Fisher.
MIDWIFERY.—H. J. Clutterbuck, H. B. Waller, S. H. Watton.
† Section I. * Section II.

The diploma of the Society has been granted to Messrs. R. Beesley and E. S. Cooke, entitling them to practise.

PUBLIC HEALTH.

ISOLATION HOSPITAL ACCOMMODATION IN THE COUNTY OF MIDDLESEX.

WITH only a few exceptions the sanitary authorities in the county of Middlesex have been persuaded to provide hospital accommodation for the isolation of cases of infectious disease. The population of the urban districts of the county was estimated at the middle of 1906 to be 966,000, and of this number all but 27,000 lived in districts in which some form of hospital isolation had been provided. In four rural districts there is no accommodation for one-half of the 50,000 persons resident in them. The most pressing need for further provision is in the south-western portion of the county, which includes the urban districts of Feltham, Staines, and Sunbury, and the rural district of Staines, where there is a combined population of nearly 40,000 persons. These districts are in the same Poor-law union, and are one district for registration purposes. As long ago as 1905 the county medical officer of health (Dr. C. W. F. Young) urged the erection of a joint hospital, and in his report for 1906 he again brought the matter prominently forward. During the past few months the question has been before the Local Government Board, and the report of one of the Board's medical inspectors (Dr. E. P. Manby) fully endorses the advice which was given not only by Dr. Young, but by the medical officers of health of the districts concerned. Dr. Manby says that there can be no doubt that a certain amount of hospital provision permanently available is needed for the district, and he points out that it is always important to remove to hospital cases of infectious disease from premises where milk and other foods are sold, and where people congregate together—for example, hairdressers' shops, public-houses, and the like. Some of the councils in the registration district occasionally arranged for parents to remain at home during the illnesses of their children, and the councils paid the parents for loss of work thus occasioned, but the auditor objected to such expenditure of money being made from the rates.

TENURE OF MEDICAL APPOINTMENTS IN THE POOR-LAW AND SANITARY SERVICES.

FLAGSTAFF asks whether A's two appointments—namely, district medical officer and surgeon to a workhouse (both permanent)—would be altered by his being appointed medical officer of health in the same town? Would the two first-mentioned then become yearly appointments?

*** There is no reason on general grounds to think that the holding of the sanitary appointment would in any way endanger the permanency of the other two. We are, of course, unacquainted with any special local circumstances.

OBITUARY.

Sir ALFRED BARING GARROD, M.D., F.R.C.P.Lond., F.R.S.,

CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL.

Sir Alfred Garrod, who was born at Ipswich on May 13th, 1819, was the son of Mr. Robert Garrod, of that town. He received his earlier education at the Ipswich Grammar School, and having early manifested strong scientific tastes, he chose the profession of medicine as his life's work. He entered as a student at University College, London, and after a successful student's career, in the course of which he was awarded the Galen medal given by the Society of Apothecaries for proficiency in botany, he graduated M.B. at the University of London in 1842, and M.D. in 1843, being awarded the gold medal at each examination.

In 1847, at the age of 28, he was appointed Assistant Physician to University College Hospital, and became full Physician and Professor of Therapeutics and of Clinical Medicine at the College in 1851. In 1862, having resigned these offices, he was appointed Physician to King's College Hospital and Professor at King's College, and in 1874, when he gave up his active hospital work, was appointed Consulting Physician to King's College Hospital. In 1858 he had been elected to the Fellowship of the Royal Society.

He married, in 1845 Miss Elizabeth Anne Colchester, of Ipswich, who died in 1891, and of their six children three survive him. His eldest son, Alfred Henry, a distinguished zoologist, who was a Fellow of St. John's College, Cambridge, Professor of Zoology at King's College, and, like his father, a Fellow of the Royal Society, died in 1879, at the early age of 33 years.

Dr. Garrod became a Member of the Royal College of Physicians in 1851, and was elected a Fellow in 1856. He delivered the Goulstonian lectures in 1858, and the Lumleian lectures in 1883. Having served as Censor some years previously, he was made Senior Censor in 1887, and when two Vice-Presidents were appointed to help the then President, Sir William Jenner, was one of those selected for the office. At the time of his death he was, with the exception of Sir Henry Pitman, the oldest living Fellow.

In 1887, on the occasion of Queen Victoria's first Jubilee, Dr. Garrod received the honour of knighthood, and not long afterwards was appointed one of the Physicians Extraordinary to her late Majesty.

In 1891 the Royal College of Physicians paid him the honour of making him the first recipient of the medal, then recently founded in memory of the late Dr. Moxon, for observations and research in clinical medicine. His most recent honour was his election as an honorary member of the Verein für innere Medicin in Berlin.

In his earlier years Sir Alfred Garrod took an active part in the work of the profession, as a member of the *British Pharmacopoeia* Committee, as a frequent attendant at the medical societies, and as a contributor to their transactions. In 1860 he served the office of President of the Medical Society of London.

His contributions to medical literature were numerous and important. Diabetes formed the subject of his Goulstonian lectures, and in his Lumleian lectures he dealt with the physiology and pathology of uric acid. In a paper read before the Royal Medical and Chirurgical Society in 1848, he described his discovery of uric acid in the blood of gouty patients by means of the well-known thread test, and his researches on gout were embodied in his *Treatise on Gout and Rheumatic Gout*, first published in 1859, a third edition of which appeared in 1876. This work was translated into French and German, and gained for its author a European reputation. The well-known *Essentials of Materia Medica and Therapeutics*, which was the first textbook of its kind, and passed through many editions, the later ones under the able editorship of his successors in the chair at King's College—the late Dr. Baxter and Dr. Nestor Tirard—long held the field, and was extensively read by students and others. Among other writings may be mentioned several articles in *Reynolds's System of Medicine*, and lectures and papers on cholera, scurvy, the treatment of rheumatic fever by alkalies, on rheumatoid arthritis, and on the therapeutic uses of lithia, sulphur, and guaiacum. His most recent contribution to medical literature was a paper on the uses of guaiacum, published in the *Medico-Chirurgical Transactions* in 1896, forty-eight years after that on uric acid in the blood. Even when advancing years brought relief from the stress of professional work, Sir Alfred Garrod still pursued the chemical investigations which had so long engaged his thoughts, until the infirmities of age rendered it no longer possible to do so.

For some years he had completely retired from practice, had been unable to take any further part in the life of the profession, and was no longer seen in public. He passed away peacefully on Saturday, December 28th, 1907, at the age of 88 years and 7 months.

The work by which Sir Alfred Garrod will be chiefly remembered is that on the chemical pathology of gout, and on the conditions classed under the name of "rheumatoid arthritis," which name was suggested by him as a substitute for the term "rheumatic gout," previously applied to them in this country. His discovery of the presence of uric acid in the blood of the gouty was the starting point of the scientific study of that disease, which has since engaged the attention of so many able investigators. This observation has been abundantly confirmed by others, and remains one of the few established facts in an obscure field of pathology.

Von Noorden, in his article on gout in his recent work, *Metabolism and Practical Medicine*,[1] opens his discussion of the pathology of the disease by referring to "Garrod's historically important theory of gout," and further on, after making the statement that in gout the blood contains increased quantities of uric acid, he writes: "It is Garrod's immortal service to have recognized this fact, in spite of imperfect methods of detection"; and, again, in formulating his own theory of gout, von Noorden writes: "The more exact investigations of the purin metabolism continue to enhance the value of Sir A. Garrod's observation that retention of uric acid is present in gout. . . . I consider it of practical importance to insist, as a physician, on the point that gouty patients have a tendency to uric acid retention—that is, the uric acid which they form is excreted less easily than is the case with healthy subjects."

In the first edition of his treatise Garrod formulated his views on the pathology of gout in nine propositions, and his position may best be shown by quoting the following:

"*First*, in true gout uric acid is invariably present in the blood in abnormal quantities, in the form of urate of soda, both prior to and at the period of the seizure, and is essential to its production, but . . . this acid may occasionally exist largely in the circulating fluid without the development of inflammatory symptoms. . . . Its mere presence, therefore does not explain the occurrence of the gouty paroxysm. *Secondly*, . . . True gouty inflammation is *always* accompanied with a deposition of urate of soda in the inflamed part. *Sixthly*, the kidneys are implicated in gout, probably in its early and certainly in its chronic forms, and this affection is not only functional but subsequently becomes structural. . . . *Seventhly*, an impure state of the blood, arising principally from the presence of urate of soda, is the probable cause of the disturbances which not infrequently precede the seizure, and of many of the anomalous symptoms to which gouty subjects are liable. *Eighthly*, the causes which predispose to gout, independently of those connected with individual peculiarity, are either such as produce an increased formation of uric acid in the system, or which lead to its retention in the blood. *Ninthly*, the causes exciting a gouty fit are those which induce a less alkaline condition of the blood, or which greatly augment the formation of uric acid, or such as temporarily check the power of the kidneys for eliminating this principle."

To them was added, in a later edition, another proposition: "*Tenthly*, in no disease but true gout is there a deposition of urate of soda in the inflamed tissues."

The late Sir William Roberts, in discussing the nature of the primary error which predisposes to urate precipitation[2] said, "The most defensible view is in the direction indicated by Sir Alfred Garrod, that it consists in a defective capacity in the kidneys for the excretion of uric acid. This view does not imply the existence of a general renal inadequacy, but a special inadequacy with regard to this particular point."

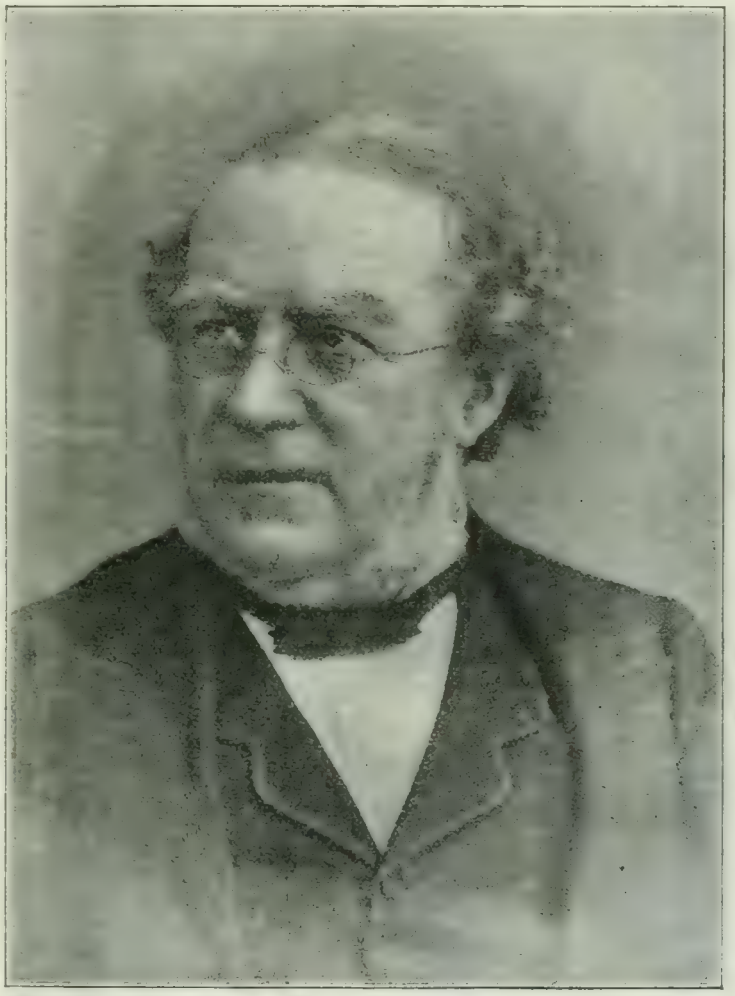
[1] English translation by Professor Walker Hall, vol. iii.
[2] Croonian Lectures, 1892.

Garrod, it may be added, was probably the first to call attention to the relationship of lead poisoning to gout; in the same treatise from which we have already quoted he pointed out that uric acid was frequently present in the blood in cases of lead poisoning, "not only in those who have previously suffered from gout, but even where no symptoms of the latter disease have ever shown themselves; and this fact is of much importance, inasmuch as its presence in abnormal quantities is necessarily rare except in cases of gout."

Although more recent work by methods far superior to any available in the middle of the last century has shown that some of the minor observations upon which his hypothesis was based will not stand the test of time, and that his theory, which for many years held the field, requires important modifications, yet of quite recent years opinion has tended back in the direction of views which are not very different from his main conception. His work on the clinical pathology of gout led him to draw a sharp distinction between it and what was then commonly called rheumatic gout. He introduced the term rheumatoid arthritis, and emphasized the distinction between it and gout when such emphasis was badly needed. The distinction he drew caused him to urge the adoption of a liberal dietary, with no special restrictions, such as are called for in gout, in the treatment of rheumatoid arthritis

For the following note on the influence which he exerted for many years as a clinical teacher and lecturer we are indebted to

Dr. NESTOR TIRARD (Physician to King's College Hospital who writes: As an old pupil of the late Sir Alfred Baring Garrod, I feel that it is fitting that a few words of grateful appreciation should come from me. Dr. Garrod was appointed Physician to King's College Hospital in 1862, and at the same time was elected Professor of Materia Medica and Therapeutics in the medical school. His predecessors in this chair were Dr. Bissett Hawkins, Dr. John Ayrton Paris, Dr. John Forbes Royle, and Dr. George Johnson, who had all done much to favour the study of the intelligent employment of drugs, but already Garrod's book on the *Essentials of Materia Medica and Therapeutics*, first published in 1855, had been recognized as the standard textbook, and his lectures and his demonstrations in the wards did much to encourage a sound system of rational therapeutics. The lectures were delivered at eight o'clock in the morning during the summer session; and, in spite of the early hour, they were attended with zeal by those who recognized that the difficulties of the subject disappeared before the wealth of illustration derived from clinical experience. The lectures were, however, delivered too early in the curriculum for full appreciation of their excellence, and it was when we met Garrod later in the wards that we felt in the presence of a wizard who could predict with certainty the effect of the remedies he prescribed. Those who came as sceptics were speedily convinced by the success of his work. He was always so keenly interested, so ready with explanations, and so evidently drawing from a well-assorted store of knowledge, that his class soon became equally keen. His textbook was deservedly popular, and passed through many editions, those of later years being edited by Professor E. Buchanan Baxter, and by myself when I had succeeded to the Chair of Materia Medica at King's College. A change in the curriculum then tended to separate and develop a new branch of study termed pharmacology, which took little heed of therapeutics, and accordingly newer textbooks devoting more space to applied physiology were found to be more successful for examination purposes. Though he had long since resigned his active connexion with teaching, Sir Alfred Garrod had not lost his interest in materia medica when the *British Pharmacopoeia* was last under revision, and he was Chairman of the Committee appointed by the Royal College of Physicians; in that capacity he was ever ready to champion the cause of drugs which, perhaps, found little favour with those who doubted their efficacy on experimental grounds. On the other hand, his experience often provided amusing illustrations of clinical importance or of practical value in prescribing. On one occasion we were discussing the proposed deletion of the acetic extract of colchicum, and to our surprise he favoured the omission, explaining that some one had once prescribed this preparation in a pill with grey powder, and the pills becoming damp had swollen up like Pharaoh's serpents. Of Sir Alfred Garrod's kindness to former pupils, and of the readiness with which he helped them when anxious about their own health or that of some member of their family, it is difficult for me to speak here. My debt of gratitude to him for invaluable help at an early stage in my career can be but briefly mentioned though it can never be forgotten.



Photograph by Elliott & Fry] SIR A. B. GARROD. [55, *Baker Street, W.*

A memorial service was held at All Souls' Church, Langham Place, on January 2nd, and was attended officially by the President and officers of the Royal College of Physicians as well as by many other representative members of the profession in London. The interment took place at the Great Northern Cemetery, Southgate, on the same day.

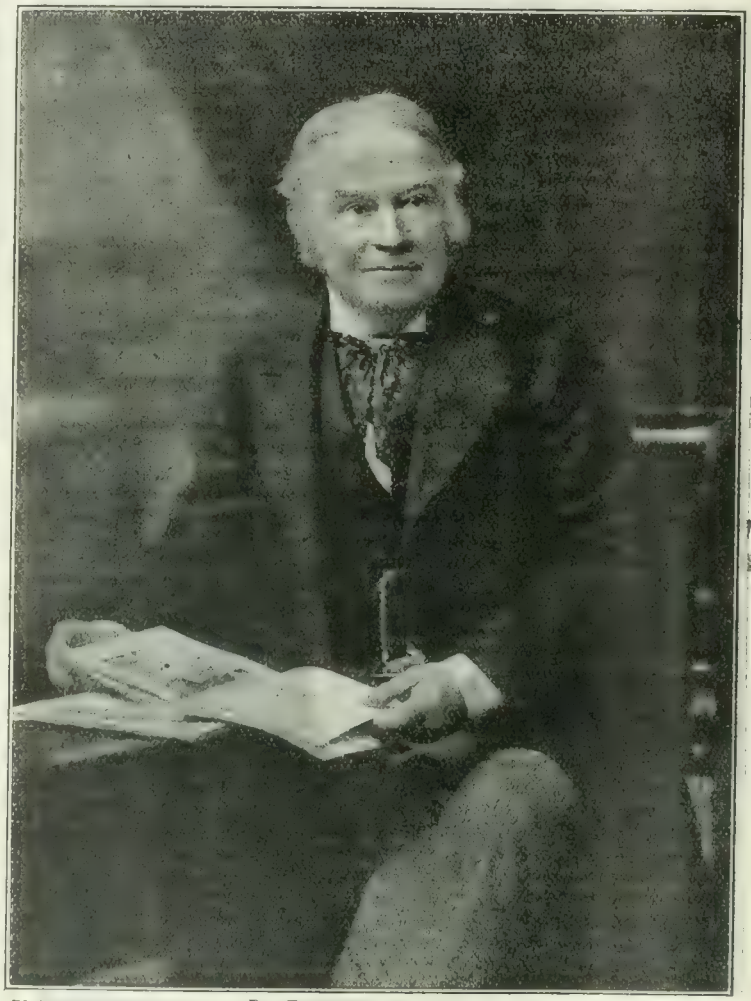
WE regret to announce the death of the Hon. Dr. PARKER, of Halifax, Nova Scotia, who died on Nov. 4th, 1907, aged 85. Dr. Parker was one of the best known physicians in the Maritime Provinces of Canada. He graduated in medicine at Edinburgh in 1845. In 1867 he was made a member of the Legislative Council of Nova Scotia from which he retired in 1899 on account of ill health. He was a man of great ability, and was highly respected by all classes.

THOMAS ANNANDALE, M.D.Edin., D.C.L Durh., F.R.C S Edin., F R.C.S.Eng., F R.S.Edin.,

SURGEON-GENERAL TO THE ROYAL ARCHERS, H.M. THE KING'S BODYGUARD FOR SCOTLAND; REGIUS PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

Mr Thomas Annandale, who since 1877 has occupied the Chair of Clinical Surgery in the University of Edinburgh, died suddenly, as already announced in the Journal, in the morning of Friday, December 20th. Late in the afternoon of the previous day he was operating at the Royal Infirmary, with all his usual alertness. He dined at home, and next morning, soon after 7 o'clock, he was found dead in bed.

Thomas Annandale was born in Newcastle on November 2nd, 1838. Among notable surgeons associated with the Edinburgh School few occupied a higher place. Surgical aptitude came to him early. He has himself told that at the age of 15 years he was attending at an English hospital, and was able to assist his father in his practice as a surgeon. Educated at Bruce's Academy in Newcastle, he acquired the rudiments of his professional knowledge at the Newcastle Infirmary. In 1856 he matriculated at the University of Edinburgh. Graduating at the end of his student career, with the highest honours, he received a gold medal for his thesis on *The Injuries and Diseases of the Hip-joint*. In 1859 he became M.R C.S.Eng. In 1860 he was appointed House-Surgeon to the Edinburgh Royal Infirmary, where he served one year under the late Professor Syme, who formed a high opinion of Mr. Annandale's zeal and capacity. At the end of his year of office in the Royal Infirmary he became, in 1863, one of the junior demonstrators of anatomy in the University of Edinburgh under Goodsir. Such was Syme's opinion of the young surgeon that he asked him to become his private assistant; this was probably the turning point in Mr. Annandale's career, and, if there was any doubt in his mind as to the line he should pursue, Professor Syme's invitation set it at rest.



Photograph by] DR. THOMAS ANNANDALE. [*Swan Watson, Edinburgh.*

In 1863 he was appointed a Lecturer on the Principles of Surgery in the Extra-Mural School of Medicine, and gave yearly courses of lectures, which were admitted as qualifying by the university and all other examining boards. When in 1871 he became one of the acting surgeons of the Royal Infirmary, he resigned his former lectureship and became a lecturer on Clinical Surgery. In addition to these lectures, he instructed in all the practical departments of surgery large classes of students in the wards of the Royal Infirmary.

When in 1877 Lord Lister went to King's College, London, the chair of Clinical Surgery in the University of Edinburgh became vacant. From the distinguished men who might have been deemed qualified to succeed Lister Mr. Annandale was selected, and after-events fully justified the appointment. As a lecturer, his constant good humour and fund of anecdote were used to enhance the value of his teaching. His facts and experience were thus presented in a manner that gave them permanency in the memory of his hearers. Professor Annandale's relations with his students were of the happiest character.

Mr. Annandale greatly enriched the literature of his profession. His publications, amongst others, were: *On the Malformations, Diseases, and Injuries of Fingers and Toes, and their Surgical Treatment; Surgical Appliances and Minor Surgery; Abstracts of Surgical Principles; Pathology and Operative Treatment of Hip-joint Disease; Diseases of the Breast; Value of Dependent Position of Head in Operations on the Mouth and Throat; On Some Injuries of the Elbow-joint; On the Operative Treatment of Popliteal Aneurysm*, etc.

In 1874 Mr. Annandale married the eldest daughter of the late Mr. William Nelson, the well-known publisher, and has left a widow, three sons, and three daughters.

Mr. J. M. Cotterill writes: When we first had the privilege of knowing him, some thirty-six years ago, Professor Annandale was then one of the ordinary Acting Surgeons in the Old Royal Infirmary. His clear and practical method of teaching, his operative dexterity, and his kindly and sympathetic manner to all about his wards, whether patients, nurses, or dressers, had already collected a considerable band of admiring and devoted students about him, all of whom felt that in Thomas Annandale they had gained a true friend. And even in those comparatively early days he had shown that kindly interest in the welfare of the students, whether in their work or their play, which, developed as it was in later years, may be said to have been one of the most outstanding features of his relations to University life. As a surgeon Mr. Annandale has for many years past had a reputation which may truly be said to have been world-wide. To almost every corner of the world his old students have penetrated, carrying with them not only the surgical knowledge gained in his classroom, but a love and veneration for their old chief. His early training in surgery was perhaps the best which at that time could have been obtained anywhere. Syme's great reputation brought an enormous number of patients of all classes and from all quarters to Edinburgh, and Mr. Annandale, being closely associated for some years with Professor Syme, enjoyed very special opportunities of thus gaining experience and instruction from his illustrious master.

We are told by one who had many opportunities of judging that Mr. Annandale, in his earlier days, particularly excelled as an assistant, a large share of the conduct of many operations being left in his hands during the last few years that Mr. Syme was in active work. Possessed as he was of an alert and receptive mind, of a shrewd sagacity and untiring tenacity of purpose, Mr. Annandale turned his

unique opportunities to good account. He possessed the *tactus eruditus* of the surgeon in a marked degree, and he developed a power of diagnosis which, though possibly rather of the intuitive and empirical than of the laboriously scientific kind, very rarely led him astray, and many were the occasions when we have known him upset the diagnosis of other celebrated surgeons, the correctness of his opinion being eventually verified by the course of events. As an operator he was possessed of great manipulative skill. Neat-handed, deft and purposeful, full of resource when difficulties occurred, with a cool head and a firm determination to do the best possible for his patient, Thomas Annandale was a surgeon whom, particularly some years ago when at his best, it was a great privilege and education to watch. He excelled particularly in certain operations, and especially in some of those in which he had very frequently assisted his old master, Syme. Among these one would specially mention extensive plastic operations on the face and neck after removal of malignant tumours, large amputations such as at the hip and shoulder joints, the removal of massive tumours from difficult positions, the treatment of formidable aneurysms, the passage of a bougie through very difficult strictures, and, while his sight lasted, the operation for cleft palate. It should never be forgotten, as we fear it is often apt to be, that fairly to appraise the best of Annandale's surgery one must go back to the time when the above-named and similar operations formed the bulk of major surgical procedures, and when the surgery of the abdomen and brain, only made possible in its present shape by Lister's epoch-making discovery, was still in its infancy. Judged from this standpoint, Annandale was in his time a brilliant, original, and successful surgeon. He deserved more credit than ever fell to his share for originating and being the first to carry out the method of cutting away the sac in cases of operation for the radical cure of hernia. To him alone we owe the idea of opening the knee-joint in order to deal with a damaged semilunar cartilage. There are also many other departments in which he led the way. The undeniably good results that he achieved in many cases were more the outcome of his purposeful, rapid, and neat operating, than of strict attention to antiseptic and aseptic necessities, as we generally deem them. There was, however, no part of his armamentarium as a surgeon which conduced more to his success than his charming personality. His kind and genuinely sympathetic nature, his cheery optimism, his absolute honesty of purpose, his abhorrence and scrupulous avoidance of all forms of quackery or deceit—these and similar qualities at once gained him the entire confidence and affection of his patients, and conduced in no small degree to their mental and bodily welfare and comfort. His presence in the sick-room was truly like a ray of sunshine, and many are the grateful patients who would subscribe to this statement. His kindly consideration and courtly demeanour were equally evident and genuine whether he was dealing with a pauper from a city slum or with a patient in the highest social position.

In Mr. Annandale the students of Edinburgh University have indeed lost a firm friend. During the whole of his professorial life—that is for exactly thirty years past—he has been an enthusiastic leader in all movements for the students' good. He was deeply interested in the University Union from its earliest days, and to his initiative and energy we owe in a large degree the extinction of the debt upon the Union and the completion of the building. To him again is due to a large extent the acquisition of the University field at Craiglockhart. He grudged neither time nor money to further any scheme of the sort. His regular attendance at the meetings of the Field Committee was evidence of the keen interest he took in the athletic life of the University. His courteous and upright bearing made his relations with his colleagues in the Infirmary, in the medical school, and in the profession throughout the country, of a most amicable and cordial nature.

The slight brusquerie, which one has been told was apt to characterize his relations with some of his professional brethren in his early days, had completely disappeared, and mellowed as he was by time, there was no more acceptable consultant or colleague possible. He took great pride and interest in his connexion with the Royal Archers, holding as he did the honourable position of Surgeon to the King's Bodyguard in Scotland. His death will cause a great blank in the profession in Edinburgh. He loved his work, and one can well imagine that it would have been his wish to die in harness. This wish was literally fulfilled, for he was operating as late as five o'clock in the afternoon of the day preceding his death, and at ten o'clock that night, a few hours before his death, he was telephoning to the Infirmary to arrange his work for the next day. By his death Edinburgh has lost a well-known and highly respected citizen; the University and its students have lost an able professor and a loyal friend; and the Infirmary a skilful and faithful servant.

"Tommy Annandale" as he was affectionately called, and as he loved to be called, by his students, will long live in the memory of those who had the privilege of being brought in contact with him. Everybody liked him. Nobody said an unkindly word about him.

The funeral, from the Church of St. John the Evangelist (where Canon Cowley Brown and the Bishop of Edinburgh read the Burial Service) to the Dean Cemetery, was on Monday, December 23rd, at noon. It was one of the largest funerals Edinburgh has seen for many years, and spoke to the warm appreciation of and affection for the dead surgeon. There was a large number of University professors in their robes, headed by the draped mace. The Royal College of Physicians, the Royal College of Surgeons, and the Students' Representative Council, all in their appropriate robes, were fully represented, as were the medical profession, other professions, and the public. From the church to the graveyard the roadway was lined by the police, a detachment of whom walked in the procession.

Mr. FREDERICK PAGE, Consulting Surgeon to the Royal Infirmary, Newcastle-on-Tyne, writes: The professional career of the late Professor of Clinical Surgery in the University of Edinburgh has been amply and fittingly recorded above. It is no part of my intention even to allude to the history, but I am well satisfied to have the opportunity of referring to some of the characteristics of the man. We became acquainted, as fellow medical students, in the year 1857. The acquaintanceship ripened into a very intimate friendship, which continued till his death. During all these fifty years, and it seems but as yesterday that we were boys together, his object in life never varied, nor his methods. His character developed and strengthened, but never altered. He loved his work and was ambitious to do it well and thoroughly, to do it to his own satisfaction, indifferent alike to praise or blame, "reverencing his conscience as his king." Reliable, true to his friends, invariably kind, sympathetic and cheery, it is not to be wondered that all with whom he was brought into contact, whatever their position in life might be, yielded to the glamour of his charming personality. You saw the man at his very best perhaps in his wards, which he visited every day of his life. Each case was to him a patient, a suffering fellow-creature to be cured, if that were possible, to be cheered and comforted and helped under any circumstances. The nurses, from Mrs. Porter, who in the old days when Mr. Syme was at his zenith, taught him, as she did us all, a good deal, down to her latest successor, every one of them had a great and affectionate regard and respect for the chief, as he was sometimes called, but who was also known and spoken of by another and much more familiar name. With his house-surgeons and students he was always on the happiest terms. There is not one of them, in whatever part of the world he may be practising, who will not look back upon his connexion with Annandale and the clinical wards of the Edinburgh Royal Infirmary with feelings of affectionate recollection, who will not read with regret and sorrow the obituary notice in this day's JOURNAL of the man to whom he was indebted for many acts of kindness. In private life his conduct left nothing to be desired. Never happier than when surrounded by his children, a devoted husband, a model host, his hospitable house was free to all and sundry, an ever open door to a large circle of friends and acquaintances. There was no commercial element in his character. Over and over again he inveighed against quackery, in all its forms, in no measured terms. His transparent honesty and sincerity made him a foe to anything approaching sharpness or humbug, and every practitioner knew that he and his

patient were safe in his hands. Annandale belonged essentially to that professional class of which, in Edinburgh, Allison, the Begbies, John Brown, Syme, Christison, and John Duncan were types. All of striking personality, fearless, straightforward, and universally acknowledged natural leaders of men, they were pillars of strength, and did much to preserve the high social standing medical men have always occupied in modern Athens, one of the most intellectual cities in the world. What more need be said in appreciation of this good man? Has he not lived for seventy years, working hard and successfully all the days of his life? Has he not been spared a long and painful illness and died in harness a peaceful, painless death? Has not all that was mortal of him been carried to the grave by his own pupils and placed there by the hands of those nearest and dearest to him amid signs of mourning from his colleagues and a vast number of sympathetic friends? It is not given to all of us to live the blameless, useful life this man lived. To a certain extent, no doubt, the reputation a man leaves behind is that which he has earned, and all lives are not successful as this man's was.

> Brother and friend, this life brings joy and ease,
> And love to some; to some the lack of these—
> Only the lack; to others tears and pain:
> But at the last it brings to all the peace
> That passes understanding.

SIR PATRICK HERON WATSON, D.L., M.D., LL.D.,

F.R.C.S.E. and I., F.R.S.E.,

HONORARY SURGEON TO THE KING IN SCOTLAND.

WE announced last week the death of Sir Patrick Heron Watson, M.D., LL.D., at his residence, 16, Charlotte Square, Edinburgh. He had suffered for six months from weak action of his heart, the actual cause of death being angina pectoris.

He was a son of the manse, one of the four surviving sons of the Rev. Charles Watson, D.D., Minister of Burntisland, all of whom attained distinction in different walks in life. He was born in Edinburgh in 1832, and received his education chiefly at the Edinburgh Academy, and subsequently at the Edinburgh University, where he took the degree of M.D. in 1853. On the outbreak of the Crimean War he went to Woolwich, and thence as Assistant Surgeon in the Royal Artillery to the Crimea, where, however, typhus and dysentery attacked him and rendered his return home a necessity before the war ended. At the time it seemed as if he were returning home only to die, but his vigorous constitution finally triumphed.

He became assistant to Professor James Miller (Professor of Surgery in Edinburgh University) in his private practice. On his early death Dr. Watson became Professor Miller's successor in all but the Professorship, and began to make his own definite mark and place as a surgeon. He became F.R.C.S.Edin. in 1855, a Lecturer and Teacher in the Medical School, Assistant Surgeon, and finally full Surgeon, in the Royal Infirmary, Edinburgh. There he speedily became noted for his power of diagnosis, his clinical teaching, and his extraordinary skill in operations. He was a singularly able surgeon, and his success was so great and so widely known that he had the largest clientèle in the Royal Infirmary, where a great number of patients daily awaited his arrival. He was also highly popular with the students, who crowded round him in his wards to admire his power of diagnosing cases and to profit by his teaching. His lectures on surgery at the College of Surgeons were also largely attended, and he had the largest following in the extramural school. As an operator he was unsurpassed. One who knew him well informs us that he has seen all the Edinburgh surgeons operate (and many others), from Syme, Miller, and Spence onwards, and has no hesitation in saying that Watson was the most brilliant. He was quick, even dashing sometimes, yet careful and accurate, and very successful. The most wonderful operation our informant ever saw was performed by Watson. The case was one of aneurysm, for which he tied the external iliac. The vessel was so diseased that the ligature would not hold. He tied the common iliac; this bled also. He put his left hand on the aorta and with his right cleared the vessel, passed a ligature, arrested the haemorrhage, and the patient was removed alive from the theatre and survived a short time. During this wonderful performance Watson seemed as cool as if he were performing lithotomy. He was a very skilful and very successful lithotomist. He was the first to remove the thyroid successfully by the modern plan, having realized the importance of ligaturing the arteries at an early stage of the operation. He improved the operative procedure in incisions of the knee, wrist, and elbow. In the case of the last, his lateral incision, by saving the triceps attachment, was a great advance on the old method. He was one of the first also to amputate the scapula along with the arm, the case being one of injury by machinery. When Sir James Y. Simpson suggested acupressure to replace the ligature, Sir Patrick, with his usual quickness at grasping the good in new methods, saw the advantage of the method and adopted it. Many came to see him use the needles, and his success made the procedure popular for a time. There were, besides, many other improvements in surgery introduced or inspired by him. He was a ready and eloquent speaker and writer. Many were the papers that he read and specimens that he demonstrated at meetings of the Medico-Chirurgical Society. He assisted the late Professor James Miller in preparing his *System of Surgery*. He was an authority on venereal diseases, on which he gave a series of special lectures in his early days, when he advocated the views of Ricord, whose lectures he translated. He also made a speciality of eye diseases at one time, and was Surgeon to the Eye Infirmary. In all his dealings with students, and notably as an examiner, he exacted a high standard; and although truly kind, and on occasion lenient, woe betide the candidate who hedged or who attempted to veil real ignorance from his keen insight.

Apart from all these facts of his career, his personality was one that under any circumstances would have been an outstanding one. He had a marvellous power of impressing all those who came in contact with him with his own absolute self-control and his power to control others. Calm, dignified, and never in a hurry, he impressed the patient with the fact that he knew exactly what was wrong, that he would certainly do everything in his power and skill to help, and that he would see to it that whatever form of treatment he deemed best would be carried out in its entirety. As a consequence he was worshipped by his patients, whose faith in his opinion enabled him to make them persevere in whatever he ordered; and those who know what such perseverance involves, and how the lack of it lies at the root of most difficulties of treatment, will fully realize how much that "virtue going out of him" meant. As a professional brother once said of him, "Nobody in Scotland is willing to die till they have seen Watson." His position was unique, because he was able long after other men had found themselves obliged to confine their attention to one special branch, to continue medicine as well as surgery, and therefore his experience continued to be of a universality and ripeness seldom ordinarily attained to. This combination, however, was to be the cause of his loss of a University Chair. In how many instances his care and skill were bestowed without any possibility of reward will never be known. To quote some remarks made the day after his death from the pulpit of his own church:

> The generous kindnesses which marked his practice were unending. Obscure people and their cases engaged his attention in these overcrowded days, and some of them got more of his attention than greater people because they were solitary. He had an admirable gift of consuming his own smoke. *Secretum meum mihi* might have been his maxim.

His religious views were the outcome of his early training, and to them he adhered steadfastly to the last, preferring always the earlier fashions of his youth to any more recent innovations; withal to those who knew and loved him best, at heart, his was an extraordinarily simple nature with intense affections. Of recreations he had but one—foreign travel, and this he kept up every summer till within eighteen months of his death.

He was one of the pioneers of the movement for the medical education of women, and one of their staunchest allies, thereby drawing upon to himself much obloquy at the time; but opposition was to him rather a stimulus than a deterrent when he considered that any principle was at stake, and his weighty advocacy of the claims of women was crowned with success.

The Royal College of Surgeons of Edinburgh appointed

him its representative on the General Medical Council after the death of Professor Spence, and for almost a quarter of a century he took part in its deliberations, his views being always clearly and incisively expressed. He was the doyen of the Council when he retired from it about two years ago. The President of the General Medical Council on that occasion spoke of Sir Patrick as "their Senior Member, *magnum et venerabile nomen*," and said that they were the poorer for the loss of a counsellor whose grave wisdom and stately eloquence upon the occasion were but the expression of his high conception of professional duty and of his sterling personal character. He also sat on the Universities Commission for Scotland (1889) as the only medical member of that body. For years, also, he was a member of the Edinburgh University Court and one of its Curators of Patronage. His public duties were attended to with most absolute thoroughness, and nothing whatever was allowed to stand in the way.

After his return from the Crimea he became an enthusiastic Volunteer, and was an original member of the Queen's Rifle Volunteer Brigade, retiring with the rank of Brigade Surgeon-Lieutenant-Colonel.

In mentioning the many honours bestowed upon him, it should be noted that he was twice President of the Royal College of Surgeons of Edinburgh, first in 1878 and on the last occasion in 1904-5 during the quatercentenary of that ancient corporation. He was Surgeon-in-Ordinary to her Majesty the late Queen Victoria in Scotland, and Honorary Surgeon to his present Majesty the King. He was a Deputy Lieutenant of the County of the City of Edinburgh, an Honorary Fellow of the Royal College of Surgeons, Ireland, and an Honorary LL.D. of the Edinburgh University (1884). In 1878 he accompanied the late Earl of Rosslyn as Attaché to the Special Embassy sent to Spain on the occasion of the marriage of Alphonso XII to the Princess Mercedes, receiving the order of Carlos III of Spain. He had the Crimean, Turkish, and Sardinian medals and the Royal Household and Volunteer Decorations. He was Consulting Surgeon to the Royal Infirmary, Edinburgh, Leith Hospital, Chalmers Hospital etc., and had been President of many medical societies. He received the honour of Knighthood from his present Majesty in 1903.

He married in 1861 Elizabeth Gordon, the eldest daughter of Professor James Miller, who predeceased him by nearly eight years. He leaves a family of two sons and two daughters.

The funeral took place on December 24th, and was very largely attended. The Royal Colleges of Physicians and Surgeons were represented by Presidents, Vice Presidents, and Fellows in their robes. The Queen's Volunteer Brigade, the University Court, the Royal Infirmary, the Life Association of Scotland, etc., were represented.

Mr. RUTHERFORD MORISON, F.R.C.S., Senior Surgeon, Newcastle-on-Tyne Royal Victoria Infirmary, sends us the following appreciation:

The death of Sir Patrick Heron Watson must leave in the minds of his old pupils a sense of painful bereavement, for his was a unique and impressive personality. To his old house surgeons he was a hero they worshipped, for to work with him was an inspiration which could not fail to leave its mark on the least plastic of men. It was my privilege to act as his resident surgeon in the year 1875 in the old Royal Infirmary at Edinburgh. His reputation was then made, and he was universally recognized as one of the foremost operators in the world. He had already performed most of the abdominal operations which are now common property, and had excised the spleen, the kidney, ovarian and uterine tumours, and portions of intestine at a time when it was thought impossible to bring such undertakings to a successful issue. He had then also excised the whole larynx for malignant disease, and had performed several successful thyroidectomies by a new and original method, since generally adopted, of ligaturing the arteries of supply before interfering with the gland itself. It has indeed often seemed to me in looking back to the time when I was working with him that most of what he did then is the operative surgery of to-day, and was at least twenty years in advance of that period. That he has not received the recognition as a surgical pioneer he deserved is due solely to the fact that he failed to avail himself, as so many of the strongest and ablest men of that generation did, of the revolution in wound treatment which was being brought about by Lord Lister. It was impossible for him to accept the new principles in the wholehearted fashion necessary to carrying out the details with success. Operations, such as lateral lithotomy, excision of the jaw and tongue and return, which he performed with a skill I never saw equalled, gave brilliant results; many others, more dependent on attention to antiseptic detail, were, in spite of his diagnostic ability and manipulative dexterity, doomed to failure. At the time previously mentioned (1875) and for twenty years afterwards, his whole time was busily occupied by professional work. In addition to the largest surgical practice in Scotland, consulting and operating, he constantly had medical patients with all sorts of ailments under his care, and how he managed to get through all he had to do was a mystery to his friends. Yet he never appeared to be in a hurry, and always found time to spare for his hospital work and surgical lectures and private pathological museum. Patients came from all parts of the world to consult him, and with such faith it was a common saying in Edinburgh "that most of them would rather be killed by Dr Watson than cured by any one else." Small wonder that patients trusted him. Everyone who saw him felt at once his strength and capacity. Every surgeon must have experienced, after finishing an anxious and difficult operation, doubt as to whether he did the best that could be done to meet some sudden and unforeseen emergency, but nobody ever doubted this of Sir Patrick Heron Watson. He seemed to have considered every possibility beforehand, and any difficulties were so quietly met and so methodically dealt with that they could not appear, except to the initiated, as difficulties at all. There was a stronger individuality about Dr Watson than about any one else I have known and though this cannot be conveyed to strangers his old house-surgeons will remember his military walk, his correct attire, his neat plainly-written notes, his method of interviewing and prescribing for out-patients, his courteous manners, his independence of character, and his ready command of language, which might not always be to their satisfaction, but was always to their lasting advantage, as peculiarly his own. There are many of us who will revere these memories, for we loved the man.

THE death took place on December 24th, 1907, of Dr. HENRY ALCOCK DIXON a Burnley man by birth and a Burnley practitioner of long standing and much popularity. By his death is broken a link with the past, for, although of no great age—since he was only born in the year 1849—he was the last of the senior apprentices of the Manchester Royal Infirmary, and one of the few remaining medical men who in recent times have contented themselves throughout their whole professional career with the Membership of the Royal College of Surgeons, and have seen no need to seek any other title to practise. Dr. Dixon, a grandson of a medical man, was the second son of the late Mr. John Alcock Dixon, a solicitor in Burnley, by his second wife, and after the completion of his general education at Burnley Grammar School, Rossall School, and elsewhere, was apprenticed, as stated, to Manchester Infirmary for the long period of seven years. On the termination of his articles he became M.R.C.S., and eventually settled down in his native town some twenty-eight years ago, marrying Miss Simm, of Standish, who predeceased him. The practice which Dr. Dixon built up was large, and he will be greatly missed, more especially in the Burnley Wood district of the borough. He played a considerable part in the affairs of St. Stephen's Church, and was an active Freemason, while in politics he was a Conservative, and some years ago missed election to the municipal council by only a few votes. He interested himself a good deal also in ambulance work, and, in spite of the fact that some years ago he lost the use of one eye, he carried on his practice with activity until about a week before his death. His funeral took place on the Friday after Christmas, and was attended by representatives of the Burnley and District Medico-Ethical Association, the Freemasons, and the Order of Oddfellows, to which he belonged, wreaths being sent by many medical men and nurses with whom he had been associated during his work. Dr. Dixon had two sons, one of whom he took into partnership a year or two ago.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

R.N. would feel obliged for information as to employment of fibrolysin in Dupuytren's contraction of palmar fascia. In a patient with valvular lesion after rheumatic fever would its use be contraindicated? What effect, beneficial or otherwise, would it have on cardiac vegetations? It is said to be a cardiac depressant.

P. Q. R. asks: In what book can I find an account of the procedure in tying the internal jugular vein for thrombosis of the lateral sinus?

*** *The Operations of Surgery*, by W. H. A. Jacobson and R. P. Rowlands, fifth edition, vol. i, p. 313 (London: J. and A. Churchill. 1907. 2 vols., 42s.).

CRACKING KNEES.

MEDICUS writes: A patient aged 50 complains that his knee-joint is heard to give a dull, snapping sound on going upstairs almost at every step. To appearance the knee is normal; there is no pain, but there is a stiffness associated with the tendons behind the knee and radiating down the calf. The sound is quite audible on pronounced flexion of the knee; the range of flexion, although considerable, is limited. On grasping the knee with the hands back and front during flexion this sound corresponds with a distinct *riding* or *rubbing sensation*—not crepitus—which is particularly elicited on flexing the knee while adducting the leg. The rubbing sensation is comparable to rubbing the knuckles of one hand over those of the other. Is the case likely to be a chronic deforming inflammation or a dislocation of the menisci? What treatment would be beneficial?

ANSWERS.

R. W.—We believe that most of the principal life assurance offices pay their chief medical officers a fixed salary; some have one medical officer to attend twice a week, but most have two, each of whom attends twice a week, the salaries paid varying, we believe, from £100 to £400 a year.

B.—The belief that there is something noxious about a menstruating woman is a groundless superstition. A statement was made in an Australian newspaper some years ago to the effect that Lord Lister had investigated this matter, and we were then able to state, on the best authority, that the statement was without any foundation.

TREATMENT OF RHEUMATOID ARTHRITIS.

DR H. J. THORP (Ipswich) writes in answer to a question in the JOURNAL of December 21st, 1907, to suggest to "Alteche" the following treatment: R Guaiacol. ℥j, tr. iodi ℥vij. to be painted on the joints twice daily. R Ammon. chloridi gr. xv, tr. iodi gr. v, ac. carbolici gr. ij, glycerini ℥j, aq. menth. pip. ℥j; three times a day.

DR. P. W. LATHAM (Cambridge) writes: In to-day's BRITISH MEDICAL JOURNAL (December 21st), page 1812, "Alteche" asks for a remedy to relieve the terrible pain in rheumatoid arthritis. Morphine is inadmissible, and the ordinary drugs of little or no use internally or externally. No reason is given why morphine is inadmissible. This is unfortunate, for the same or other reasons such, for instance as the existence of Bright's disease, might contraindicate the use of other suggested remedies. I will, however, assume that the kidneys are sound, and I will suggest to "Alteche" to try the effect of continuous counter-irritation of the spine by means of blisters applied in the neighbourhood of the cervical and lumbar enlargements. For reasons which I have fully set forth in the *Lancet* of April 6th, 1901,* I have been led to infer that the changes in the joints and muscular wasting which are characteristic of rheumatoid arthritis are due to irritative and destructive lesions located in the spinal cord, and especially in the cervical and lumbar enlargements. This being the case I concluded that the progress and effects of these lesions would most advantageously be counteracted by the application of leeches or cupping glasses and *continuous* counter-irritation near the section of the spine corresponding to the part involved; a plan of treatment which was suggested to me by a paper published so long ago as 1831 by Professor J. K. Mitchell in the *American Journal of Medical Sciences* on a new practice in acute and chronic rheumatism, and which properly carried out, has been most successful, not only in my own experience but in that of other medical practitioners. If "Alteche" will refer to a recent paper in the *Lancet* for September 28th, 1907 by Mr. W. J. Midelton, on the treatment of rheumatoid arthritis, he will there find full details of the mode of treatment as well as an account of the striking results which followed it. Bearing upon this, Dr. R. Llewellyn Jones, in an extremely interesting letter in the *Lancet*, September 14th, 1907, p. 793, chiefly on the pathology of the disease says: "I should like to add my testimony to the very great value of counter-irritation of the spine in rheumatoid arthritis. I have had the opportunity of seeing one of Dr. W. J. Midelton's cases both before and after treatment by Dr. Latham's method had been adopted, and I can truthfully state that the results more than justified his strenuous advocacy of the method." In "Alteche's" case it is unfortunate that narcotics are inadmissible, because in the general run of cases it is very advantageous to lessen the pain during the first few days of treatment by giving 10 drops of tinctura opii every six or eight hours. Possibly he has already tried liquor hydrarg. perchlor. ℥j pot. iodidi gr. iij to v, infus. gent. co. ad ℥j with or without tinct. belladonnæ ♏v to vij twice or three times a day. If not, and the mixture is not otherwise contraindicated, it might be tried. It is often of marked service in conjunction with the blisters in the treatment of the disease.

*See also *Pathology and Treatment of Rheumatoid Arthritis*, by P. W. Latham, M.D. (Deighton, Bell, and Co. 1905), which contains a reprint of Professor J. K. Mitchell's paper.

ANAESTHESIA FOR OPERATIONS ON HAEMORRHOIDS.

In reply to "Beta" and "Anaesthesia" it may be said that local anaesthesia is not well suited to operations for haemorrhoids, and should not be employed unless there are very definite contraindications to the use of other methods. In such cases infiltration by Schleich's method gives fair results, using a ½ per cent. solution of cocaine; 10 c.cm. of this solution may be injected, with the addition of 3 drops of a 1 in 1000 adrenalin solution. It is injected around the anus into the cellular tissue, and chiefly laterally and behind, in order to reach the inferior haemorrhoidal nerve branches. The injection should be made at least half an hour before the operation is begun. Either general or spinal anaesthesia is much preferable to local anaesthesia; the latter is especially well adapted to the operation.

LETTERS, NOTES, ETC.

"JUDGEMENT."

DR CHAS. MERCIER (London, W.) writes: Allow me to thank you for your support of the correct spelling of "judgement." I, too, have been taken to task, and by a very high legal authority, for insisting upon the median "e." We owe the corruption of its omission to the lawyers entirely. In law reports it is always "judgment" that is pronounced and "judgment" that is signed; but, oddly enough, the official who performs these ceremonies is not usually styled a "judg."

HUMAN AND BOVINE TUBERCULOSIS.

DR NATHAN RAW (Liverpool) writes: I have been greatly interested in reading in the BRITISH MEDICAL JOURNAL of December 21st, 1907, the very able and valuable article on tuberculosis in childhood and its relation to milk. It is gratifying to me to know that a clinician of such wide experience in the diseases of children as Dr. McCaw should so conclusively support my original work on the differentiation of human and bovine tuberculosis as it occurs in the human subject, and which was first published in the BRITISH MEDICAL JOURNAL in April, 1903. Since the publication of that paper I am more and more convinced by recent research that bovine bacilli play a most important part in causing tuberculosis in children, and there can now be no possible doubt that milk from tuberculous dairy cows is the medium by which it is conveyed. I therefore emphasize as forcibly as I can the suggestion that it is a matter of first importance that all tuberculous dairy cows should be removed from dairies as the first step towards the extinction of the surgical forms of tuberculosis in children.

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Valedictory Address

ON

HOSPITAL TREATMENT OF MORBID PREGNANCIES.

DELIVERED TO THE EDINBURGH OBSTETRICAL SOCIETY.

BY J. W. BALLANTYNE, M.D., F.R.C.P.E.,

PHYSICIAN, ROYAL MATERNITY HOSPITAL, EDINBURGH; LECTURER ON MIDWIFERY AND DISEASES OF WOMEN, MEDICAL COLLEGE FOR WOMEN, EDINBURGH.

A FEW weeks ago I received a letter from an obstetrician in England in which he asked me what was the present state of my project for the establishment of pre-maternity hospitals; and some time before that I had a request from the editor of one of our medical journals that I should furnish him with some records of cases of diseases of pregnancy treated in the Royal Maternity Hospital here under my care. It seemed to me, therefore, that I might give the information required and comply with the editorial suggestion in this valedictory address; and I was the more anxious to do so as it happens that I have never up till now brought before this Society the subject of pre-maternity hospitals at all.

In November, 1900, I first touched upon the subject of the hospital accommodation of pregnant women suffering from one or other of the diseases incident to gestation, in a clinical lecture on abortions given in the Royal Maternity and Simpson Memorial Hospital here. This lecture was afterwards published in the *International Clinics* (Series XI, vol. ii, p. 231, 1901), and I quote the concluding paragraph. It ran thus:

Finally, I may perhaps be allowed to say that it has seemed to me that there is a want in our hospital system—the necessity for some special institution in which cases of recurring abortion, habitual premature labour, habitual fetal death, hydramnios, and pathological pregnancies in general might be both studied and treated. Such cases are not at present welcome in general hospitals, for there is an objection to turning the wards into maternities; neither are they acceptable to the maternity staff, for they are "not at the full term of pregnancy." There ought, I think, to be some such hospital—it might be called a "pre-maternity"—in which the investigation of the morbid states of pregnancy might be carried on and their treatment elaborated and placed upon a sure basis founded upon experience.

Soon after this, on April 6th, 1901, the BRITISH MEDICAL JOURNAL published my Plea for a Pre-Maternity Hospital, in which I stated, at greater length and with all the persuasive force of which my pen was capable, the necessity I thought there was for such an institution, and the advantages, scientific as well as humanitarian, which I fancied would accrue from its establishment. I may quote a few sentences from this article, for it contained all the principles I had to enunciate, anything further that has appeared since having been elaboration of details:

The pro-maternity hospital need not be a separate establishment; it may quite well be an annexe of the maternity. In time it may come to be of equal size with the maternity, but it must be distinct from the maternity; it will be for the reception of women who are pregnant, but who are not yet in labour. In the first place, doubtless, it will be for the reception of patients who have in past pregnancies suffered from one or other of the many complications of gestation, or in whose present condition some anomaly of the pregnant state has been diagnosed; but in time it may be taken advantage of by more or less normal ambulants—working women, for example, who ought to rest during the last weeks of pregnancy. . . . When labour pains came on they would be transferred to the adjoining maternity, and it would therefore be advisable that the two buildings communicated by a covered way; for example, it might be a system of linked hospitals. . . . One of the principles of the pro-maternity would be the conservation of fetal life, although, of course, not at the expense of maternal safety; the result aimed at would be the continuance of the pregnancy with safety to the mother; that would be the ideal. . . . In a pro-maternity we might be able to study with scientific exactness, not only the pre-eclamptic, but also the pre-albuminuric modifications of the urine, and we might also discover the relationship which exists between the absence of normal thyroid hypertrophy and the presence of albumen in the urine.

In May, 1901, the editor of the *American Journal of Obstetrics* kindly published my vision of the twentieth century, entitled, "A Visit to the Wards of the Pro-Maternity Hospital." It was my dream of what such a hospital might be: an international institution, situated somewhere between France and Germany, manned by a staff of medical experts of various lands; and with, at the head of it, Dr. Anthony Nathan Patholcg, while under him worked Dr. Geburtsmal and Dr. Mondkalb, Germans, Dr. Loeufmalade, a Frenchman, Dr. Embryanowsky, a Russian, Dr. Feto of Florence, Dr. Teras Teratos of Athens, and Dr. Ariston Hudor, the last named being in charge of the ward for habitual inebriates who were being kept from all alcoholic preparations during their pregnancies. There were to be wards also for the prevention of habitual abortions and fetal death, for the treatment of syphilitic pregnant women with the view to lessen the risk of infection of the fetus, and for the prophylaxis of such hereditary maladies as haemophilia. This article was of course nothing more than a *jeu d'esprit;* but it unexpectedly served a useful purpose, for it was translated in full into German by Professor Kleinwächter, and appeared under the title of "Ein Besuch in den Sälen des Pro-Maternité-Hospitales" in *Der Frauenarzt* for September 20th, 1901.

Meanwhile several criticisms of the suggested pro-maternity hospital had reached me. It was suggested, for instance, that the name was rather misleading; that the term was in point of fact a hybrid word. I intended it to be understood as meaning a hospital into which pregnant women, suffering from some of the maladies of gestation, or pregnant of infants who might be diagnosed as deformed or diseased, should be admitted prior to their delivery in a maternity hospital. I used the word "pro" in its Greek sense of "before" or "in front of," not in its secondary Latin one of "in favour of." I therefore changed the name to "pre-maternity," which more clearly indicated my meaning, and I have since then continued to employ this word. Other criticisms which reached me were that I was not proposing anything new; that I was advocating a place for the reception of unmarried pregnant women, where they might get every attention, medical and hygienic; that I was thus making things easier for fallen women, and possibly even encouraging what every one wished to hinder. It was pointed out by Professor Kynoch in the BRITISH MEDICAL JOURNAL (April 13th, 1901) that pre-maternity hospitals had existed as far back as the seventeenth century, there having been wards for the *femmes enceintes* in the Hôtel-Dieu at that time. Professor Kynoch, however, admitted that patients entered the Hôtel-Dieu at an early date of their pregnancy to ensure secrecy as to their condition, and not to obtain pro-treatment. These criticisms led me to take up the subject of Hospital Accommodation for the Pregnant Woman in an introductory lecture to my class in October, 1901. In a summary of that lecture, published in the BRITISH MEDICAL JOURNAL for October 19th, 1901, it is stated:

That Dr. Ballantyne did not ask for an asylum, or reformatory, or secret maternity; such institutions already existed, and doubtless had their function. What was required was a medical institution or part of one, a hospital or part of a hospital, in which the medical wants of the pregnant patient and of her unborn child would be considered first.

Let me say again, now, that I fully appreciate the good work that is being done in such places as the Edinburgh Rescue Shelter at 18, Graham Street, and at the Lauriston Home for Maternity Rescue Work; indeed, through these institutions I have, on several occasions, received into the Maternity Hospital cases of morbid pregnancy which might otherwise have not been recognized as pathological until labour supervened, and which might therefore have had much less satisfactory terminations from the medical standpoint. But my intention was not to agitate for the establishment of another home of that kind. What I asked for was a hospital for the reception of women suffering from the diseases of pregnancy, a hospital the entrance into which was not given to a woman because she was married, nor yet because she was unmarried, but solely because she was ill and pregnant. It was my hope that, just as the Maternity Hospital contains married women as well as unmarried, so the pre-maternity hospital's beds would be open to all women suffering from the maladies incident to gestation, whether they were legitimately or illegitimately pregnant. The ideal would be a hospital in which all the beds were

occupied by married women, but no woman would be refused because she was unmarried. The permission to enter would be always *medical*; the patient would be admitted because she was ill and pregnant, or because she was pregnant, and had in previous pregnancies developed morbid states in herself or in her unborn infant which it was supposed might by prophylactic measures be prevented.

It was in July, 1901, that my hopes regarding the establishment of a pre-maternity hospital, which had been drooping somewhat, were revived by the receipt of a letter from a friend who had all along thought well of the proposal. This letter contained the welcome intelligence that the writer had given a sum of money (£1,000) to the Edinburgh Royal Maternity and Simpson Memorial Hospital for the endowment of a bed to be used for the treatment of patients suffering from the diseases of pregnancy. The bed was named the Hamilton Bed, in memory of Professor Hamilton, who had so much to do, one hundred and ten years before, with the founding of the Edinburgh Maternity Hospital (1791). In November, when Sir Alexander Simpson took over the hospital, he was able to open the Hamilton Bed by putting into it a patient suffering from hydramnios; and, as I acted as assistant physician at this time, I had an opportunity of superintending the four or five cases treated in it during the next three months. The case of hydramnios, which was also one of vomiting, had a somewhat curious termination, to which I shall make reference when I come to record some of the results of treatment in the Hamilton Bed.

The establishment of this special bed in the hospital stimulated me to fresh efforts to bring the idea of a pre-maternity hospital before the profession, and on January 11th, 1902, I published in the BRITISH MEDICAL JOURNAL a lecture (given in the hospital on November 6th, 1901) on "Maternities and Pre-maternities." In this lecture I restated the case for the pre-maternity. I made known the fact that there was now in the Edinburgh Maternity Hospital a bed set apart for the study and treatment of the diseases of pregnant women; and medical men in Edinburgh and the neighbourhood were not long in sending in suitable cases. Indeed, in February, 1902, a short article on the Hamilton Bed and on the cases which had already been treated in it appeared in the *Scottish Medical and Surgical Journal*: it was from the pen of Dr. Oliphant Nicholson. There were also about this time several other encouraging occurrences. For instance, in the *Lancet* of November 2nd, 1901, there appeared a leading article entitled, Puerperal Eclampsia, from which I quote the following paragraph:

> We are inclined to think that if a correct knowledge of the causation of eclampsia is ever to be arrived at, attention must be mainly directed to the pre-eclamptic stages of the disease. Further investigations must be devoted to careful observation of all departures from the normal in the health of the pregnant woman. Then, and then only, will it be possible to practise preventive medicine—the highest art of all—in the case of the pregnant woman and of the fetus *in utero*. The opportunities of a scientific study of the various problems connected with pregnancy are at the present day almost *nil*: the length of time such patients remain in lying-in hospitals before their confinement is too short for any prolonged observations to be made, and work of this nature is impossible in private practice. It is an encouraging sign to see that, mainly owing to the strenuous advocacy of Dr. J. W. Ballantyne, and the generosity of Dr. Freeland Barbour, a bed is to be endowed and set apart for the study of the diseases of pregnancy in the Royal Maternity Hospital of Edinburgh. We can imagine no more worthy object for philanthropy than the endowment of such beds in some of our large maternity hospitals where the diseases of pregnancy and of the unborn child could be investigated with all the advantages of modern science. It is by research in this direction that we are most likely to gain a true knowledge of the problems of eclampsia, and of the best means of preventing this dangerous complication of pregnancy.

It was about this time also that the BRITISH MEDICAL JOURNAL, in a leading article (October 19th, 1901) upon Diet in Pregnancy, more especially in connexion with Prochownick's method of influencing the size of the fetus and the character of the confinement by altering the diet of the mother, affirmed that

> the truth of Prochownick's statements could only be adequately ascertained in such an institution as the pre-maternity (or, more correctly, pre-maternity) hospital may yet turn out to be.

Several American medical journals, in reviewing the first volume of my work on *Antenatal Pathology*, took occasion to touch upon the advisability of establishing pre-maternity hospitals for the observation of pregnant women in whom gestation was not running a normal course; the *Medical Review*, for instance, "heartily supported the suggestion," while the *Boston Medical and Surgical Journal* (April, 1903) spoke of "the idea of a pre-maternity hospital which is fast coming into favour, and is undoubtedly bound to have a place in connexion with lying-in hospitals in the near future."

It was, therefore, with great interest that I heard in December, 1903, of the proposal that the new maternity in connexion with one of the London colleges should be provided with a ward for the diseases of pregnancy. The information came to me in a letter from the obstetric physician, and in reply I gave him all the information I possessed on the subject, including, of course, a reference to the kind of cases which were being dealt with in the Hamilton Bed. During the past three or four years I have written almost nothing on the subject of pre-maternities, for I felt—and, I think, rightly—that the profession had accepted the statement that such institutions were desirable and almost necessary for the further development of the practice of obstetrics and for the safeguarding of fetal life. I was convinced also that in time funds would be forthcoming for the building, furnishing, and staffing of pre-maternity wards, pavilions, or linked hospitals in connexion with existing maternities. I broke silence once more, however, at the National Conference on Infantile Mortality, held in London on June 13th and 14th of last year, and what I said then I may be permitted here to repeat.

> When a pregnant woman is attacked by a disease, and more particularly by a disease which is due to her pregnancy, it is often extremely difficult to obtain hospital treatment for her; it is even difficult to get her into a hospital at all, for many maternity hospitals do not receive patients until they are in the first stage of labour, and most general hospitals are chary of admitting to their wards women who are near confinement. And yet, as is well known, the diseases of pregnancy are most deserving of treatment in many instances, while in some cases a mother's and a child's life may be saved thereby. It was with reasons such as these in my mind that I proposed the establishment of pre-maternity hospitals in close association with our maternities, but not, if possible, within the same four walls, and not under the same nursing and administration. To these buildings pregnant women would be admitted, not because they were married, not because they were unmarried, but simply because they were the subjects of pathological pregnancies. In such pre-maternity hospitals the diseases of pregnancy would be made the subject of special study, and the best treatment, keeping in mind both mother and unborn infant, would be carried out. Failing the immediate construction of such institutions, I recommended the setting apart of one or two wards, or one or two beds, in the maternity hospital for the reception and treatment of pregnant women suffering from the maladies of pregnancy. My reason for pushing the larger scheme is that there is evidence that the residence of pregnant women in a maternity hospital for weeks or months before confinement has been shown to be not entirely free from risk. Apparently the association of the two classes of case, the pregnant and the puerperal, is not for the best interests of the former; the want of exercise and interest is not good; and in a word there is a lack of the special conditions of environment and diet and treatment which a pregnant woman needs, and which are not the same as those required by a puerperal one. At the same time, even the single bed that we have in the Edinburgh Maternity Hospital has been a benefit. It has, for instance, been a comfort for medical practitioners in the neighbourhood to know that they could send suitable cases into the hospital with the assurance that they would be taken in, not out of courtesy as it were, but by right; and I know from experience that the treatment such patients have received has been of value in averting abortion and miscarriage and in producing a more nearly normal state of health before the supervention of labour with all its risks. But it is, I think, unnecessary to elaborate arguments in favour of pre-maternity hospitals; they are self-evident, and further, the principle of them has been admitted in America and in this country since I published my plea for them in the BRITISH MEDICAL JOURNAL in 1901, and in several other places and at several other times since then. It seems to me that without some such institutions the study of the causes and the recognition and treatment of the diseases of pregnancy must continue to be greatly hampered and hindered. To mention only one advantage before passing from this subject to another, I may name that of being able to check the diet and the drink in cases of albuminuria and the diseases due to alcoholism.[1]

If further proof were needed that the question of the desirability of pre-maternity hospitals had passed out of

the personal into the general phase it is to be found in two circumstances which have recently come under my notice. One is the fact that Dr. T. Arthur Helme, in his address on The Unborn Child, delivered in Manchester on June 20th, 1907,[2] thought it sufficient to affirm that one of the duties now resting upon the medical profession and the State was the provision of hospitals for the reception of women during pregnancy. Dr. Helme used no arguments, gave no details, and evidently anticipated no objections. Another incident whose significance cannot, I think, be missed is recorded in the following paragraph, which appeared in the BRITISH MEDICAL JOURNAL for January 20th, 1906.

In honour of the German Emperor and Empress's approaching silver wedding, and to carry out one of the favourite ideas of the Empress, Charlottenburg has decided to erect a small model lying-in and infants' institute. There are to be 30 beds for women expecting confinement, who are to be allowed to stay on until their child is 3 months old, and 30 beds for infants to be fed artificially.

I presume that some of the beds, at any rate, will be set aside for pregnant women who are ill. When Germany has got its pre-maternities there will doubtless be hope of their early institution in this country.

CASES TREATED IN THE HAMILTON BED.

It generally happens that theories, when tested by experience, work out somewhat differently from what was expected, and it was so in the case of the Hamilton Bed. I anticipated that as soon as the bed became available for the treatment of cases of morbid pregnancy we should have a patient under our care in it for a period of, say, a fortnight or a month; that during this period we should have time for exact researches on the functions of the body, including analyses of the urine, examinations of the blood, and investigations of faeces, etc.; that then there would be time to institute some rational method of treatment and judge at one's leisure the results. But I was calculating without taking into account the proverbial uncertainty of the supervention of labour. This was borne out in the case of the very first patient who occupied the Hamilton Bed.

Hydramnios with Vomiting.

The patient, a multipara, 37 years of age, believed herself to be in the seventh month of her eleventh pregnancy. She had had a somewhat disastrous reproductive history. Her first pregnancy ended in the birth of twin girls, both of whom died about a fortnight after birth; her second pregnancy terminated prematurely at the eighth month, the child being dead-born; the next four labours seem to have been normal, but all the infants, males, died shortly after birth; and the next four gestations resulted in the birth of boys, all alive still. She had suffered from vomiting, more especially during the past three months, and was emaciated. Her pulse on admission was 109, and her temperature was 99°, rising to 101° the next day. After she had got a good action of the bowels her temperature fell below normal, but her pulse remained rapid and was seldom below 100. The circumference of the abdomen at the level of the umbilicus was 34½ in.; the fundus uteri was felt about 2 in. below the ensiform cartilage; the uterus was greatly distended with fluid; ballottement was easily got, the fetal head was felt at the fundus, and the fetal small parts could be palpated and seemed to be numerous. No fetal heart sounds could be heard, but the uterine bruit was audible. Keeping in mind the frequent association of hydramnios and fetal deformities, I expressed the opinion that the infant in this case might be found to be monstrous.

The first matter, however, which engaged my attention was the relief of the sickness; and for this purpose the patient was put on a diet of milk, was kept resting in bed, and had the bowels regulated. In a day or two she was able to take and to retain some porridge. Then I made up my mind to try whether I could not reduce the amount of liquor amnii by the administration to the mother of frequent small doses of magnesium sulphate; I thought I might in this way get a hint as to whether there was free circulation of the liquor amnii from the mother's circulation into the amniotic cavity and back again. This treatment was commenced on November 11th; but on the same night labour pains came on, and when I arrived at the hospital the next morning the resident physician introduced me to twin girls who had been born at an early hour. The labour had been rather slow, and it had been found necessary to rupture the membranes, when a quantity of liquor amnii, estimated at about two pints, had escaped. Soon afterwards the first child was born, the head presenting; a minute later the second child was born by the breech; and the single placenta was expelled two minutes and a half later. The twins had a close resemblance to each other, the first weighing 3 lb. 15 oz., and the second 3 lb. 11 oz. After labour, the pulse and temperature became normal, and the puerperium was uninterrupted. Such was the almost ludicrous termination of our first attempt to forecast the future of antenatal affairs.

This case was the first that was treated in the Hamilton Bed; but I find in the official record of the hospital that another and an earlier case of vomiting in pregnancy was credited to it. When Professor Simpson and I took over the hospital on November 1st, 1901, there was then in the wards a patient believed to be suffering from

Hyperemesis Gravidarum.

It was calculated that she was two and a half months pregnant, and it was said that she had been rejecting her food for five weeks. She had been treated medically outside the hospital, and had during the last week of October been sent in for further treatment—viz., the induction of abortion. Her temperature was subnormal; her pulse was 88, small, thready, but of high tension; and there was a trace of blood in the urine. She was a nullipara, 30 years of age. She was put upon rectal feeding; no food at all was given by the mouth. The nutrient enemata consisted of milk, brandy, and meat juice, with 15 grains of bromida of potassium in every second eneme. Under this treatment her condition had improved somewhat; but soon after November 1st she became worse, her temperature remaining subnormal, while her pulse rose to 100. I found her seriously ill; she was much emaciated; the abdomen was flat, almost scaphoid; the mammary changes were not characteristic of pregnancy, and the uterus was found lying retroflexed and enlarged. Under an anaesthetic I tried first to replace the uterus, and I partially succeeded, but a part of it seemed to be fixed in the pelvis by adhesions; then I attempted to dilate the cervix digitally, in the hope that the stretching might reflexly influence the vomiting. The firmness and resistance of the cervical tissues were well marked, and it was at this stage of the proceedings that I began to doubt the existence of pregnancy. Having once got this idea into my mind, I made another abdominal examination, and thought that I detected something like a tumour in the epigastric region, and that the cause of the vomiting was gastric.

The patient was sent into the Royal Infirmary, whence in a day or two came the news that a small fetus and decidual membranes had been expelled from her uterus. The patient recovered; but it was long before my confidence in my powers of antenatal diagnosis was restored.

Epilepsy (?) in Pregnancy.

Another case of morbid pregnancy was treated in the Hamilton Bed during the winter quarter of 1901-2. The patient was 26 years of age. She was a dwarf, her height being only 4 ft. 4½ in. Her first pregnancy had terminated three years previously in an embryulcia, and it was calculated that the child had been dead for a week before birth. Her second gestation ended spontaneously at the sixth month; she had no medical attendance in this confinement. During both the first and second pregnancy she had suffered from fits. She had not had any previous to her first pregnancy, and they did not happen during the labours. They were less severe in the second gestation. She was now (November, 1901) pregnant for the third time, and it was calculated that she had arrived at five and a half months. The fits had been troubling her during the whole course of this gestation; she described them as fainting fits; and she stated that she could generally tell when they were coming on. She had been surrounded by people suffering from epilepsy; her husband took bad epileptic seizures, and so did her stepfather and a stepbrother. There was not, however, any history of epilepsy in any of her blood relations. About the third month of the present pregnancy the patient began to experience difficulty in locomotion, and lately this difficulty had become so aggravated that she was only able to stand for a few minutes and walk for a few yards. Of course the urine was at once examined; it contained no albumen or sugar; urea was present in sufficient amount (7 gr. to 1 oz.), considering the patient's size and the diet she was put on. Daily estimations were made of the urine during the whole time the patient was in the Hamilton Bed, a period of eight weeks. Physical examination revealed the existence of a pregnancy of about the age indicated by the menstrual history; the fetal heart was heard in the upper part of the uterus, where also the head of the fetus was felt. The pelvis was found to be small and irregular; the external conjugate was estimated at 6½ in., and the diagonal conjugate at nearly 4 in., but this was afterwards found to be an over-estimate.

For a few days the patient was put upon a milk diet, but this was discontinued when it was discovered that the kidneys were acting normally. It was then decided to try the effect of the Prochownick proteid diet in this case in order to keep the size of the child small and so facilitate labour, which it was thought might be induced about the seventh month and a half. Neither the milk diet nor the Prochownick produced any effect upon the fits: bromides were administered for a time, and they were followed by valerianates, but neither of these drugs had any appreciable influence. Dr. Edwin Bramwell saw the patient on several occasions—once while she was in a convulsion. He inclined to the belief that the case was one of a group recently (1901) described by Sir Wm. Gowers, in which the symptoms were those of a functional or so-called hysteroid attack, dependent, however, upon 'a

transient and almost unnoticed attack of *petit mal*, or true epilepsy, which was, therefore, the underlying and fundamental condition. Sphygmographic tracings were taken on several occasions by Dr. Oliphant Nicholson, and were found to show no increased arterial tension. There was no sign of heart disease; the heart was not hypertrophied. The fits were very erratic in their incidence and irregular in their duration; the longest one observed lasted for half an hour. After complaining of dizziness the patient shut her eyes and became unconscious; the fists were clenched, and the lower limbs became slightly rigid, sometimes only on one side; the tendon reflexes were very active during the fits; slight squinting was observed. The tongue was never bitten, there was no foaming at the mouth, and there was no cry. Some twitching was now and again noticed. A profuse quantity of pale urine was never passed after any fit, neither was there any globus hystericus, or blepharospasm, or contraction of the field of vision. The incidence of the fits was not affected by the presence or absence of other persons in the ward, nor by the making of vaginal examinations; there was no diurnal nor nocturnal prevalence of the seizures. Babinski's sign was never detected, and the pupils reacted, but somewhst sluggishly, to light and accommodation. The mental state was quite satisfactory. Although the patient's pulse-rate remained normal and the temperature was not raised, the general state was not good, for there was great weakness and almost complete inability to stand or walk. No doubt the unsatisfactory general condition of the patient had much to do with the unfortunate termination of the case. It was decided to induce labour about the middle of January—namely, at the close of the seventh month; but when the time came the child proved to be larger than had been expected and the conjugata vera smaller, and, as the patient and her husband were anxious for a living child, Caesarean section was performed by Professor Simpson with myself as assistant. The child lived two days; the mother died on the fourth day, for, although there had been no rise of temperature, the pulse had remained fast and weak, and signs of septic infection of the abdominal incision had appeared.

This was a sad ending to a case which had been so long in the Hamilton Bed; and, although the patient did not succumb during her pregnancy but after delivery by Caesarean section, yet I cannot help thinking that her prolonged stay in bed in hospital in a ward in which puerperal cases were being nursed was in some measure prejudicial. Further, the carrying out of special methods of regimen and diet, such as were adopted in this case, is a matter of some difficulty in a maternity hospital, and I doubt whether it was perfectly performed here I was led by this experience to hope for a separate building for the management of pregnancy cases, or at least for a separate ward, and I have since been able to keep these prematernity patients more strictly to themselves. I have also aimed at benefiting them in the hospital and sending them out again to be for some time at home before the supervention of labour. I think that it is in this way that a bed or some beds in a maternity hospital will prove of most service for the treatment of the diseases of pregnancy. Another case of epilepsy in pregnancy has been recently treated in the Hamilton Bed during my quarter, and I pursued the above-named plan with it. The patient came in with a history of frequently recurring fits, and it was thought at first that they had been eclamptic in their nature. There was, however, no albumen in the urine, nor were there any other signs of renal disease. It was discovered that ever since her first pregnancy, ten years previously, this woman had suffered from convulsive seizures, almost certainly of an epileptic nature. It could not, however, be traced that they were consistently worse during the gestations. She was kept under observation and treatment in the hospital for three weeks, and then sent home as she was not yet at term.

It is with a feeling of relief that I now pass from these early and disappointing cases to some more recent and more encouraging experiences. I shall here refer to three cases of eclampsia which all occurred during my quarter in 1905, for, after all, if the usefulness of treatment during during pregnancy is to be tested and established, it must be in connexion with the most serious complications of gestation.

Cases of Eclampsia.

Case 1.

Mrs. R, aged 33, was sent into the Royal Maternity Hospital by Dr. George Dickson on August 24th, 1905. She was pregnant for the fifth time. Her first three pregnancies terminated in normal full-time labours in 1897, 1899, and 1901 respectively; the first child was a boy, and the second and third were girls. The fourth confinement took place in September, 1903; the child was a girl; the labour was easy, but there was some inflammatory trouble in the puerperium. All the infants survived. She nursed her last child till she was fourteen months old. She did not menstruate whilst nursing, and she has not menstruated since, so that the date of commencement of the present pregnancy cannot be estimated. She felt stirrage, however, in the beginning of April, 1905, and expected to be confined about the end of August. During the whole course of the present pregnancy the patient has been in very poor health. She has had headache, constipation, faintness, giddiness, great frequency of micturition, dyspnoea, and cough with frothy expectoration. All these symptoms became worse as pregnancy proceeded. During the early months she noticed some oedema of the face in the morning and of the legs at night; and lately the oedema became more marked and generalized over the body.

During the week before her admission to the hospital the patient did not get a single motion of the bowels. She took a pill on the evening of August 23rd, and a seidlitz powder the next morning, but with no result. She felt very tired on the 23rd, had severe frontal headache, took no food, vomited several times, was dizzy, and could not see well. She spent the night walking about restlessly. On the morning of the 24th the same symptoms continued, and at 12 noon she threw herself on the bed thoroughly tired out. At 1.15 she took a fit, described as "like epilepsy." Her tongue was badly bitten. The fit lasted ten minutes, and before she regained consciousness she was attacked by a second fit of the same nature, but of greater severity. Drowsiness continued for an hour or two, and thereafter she became conscious of her surroundings. It may be added that her previous health had been good; she had had no fits, no dropsy, and had never suspected that she might have kidney disease.

At 5 p.m. she was admitted to the hospital. There had been no further fits since the second one, and no more vomiting. She was a big strong woman, and somewhat plethoric. Her lips were cyanosed, and her breathing was heavy. The pulse was 120, regular, full, and of moderately high tension. The temperature was 99.6°, and the respiration-rate 25. Her face was of a dusky colour, and was swollen; her pupils were contracted and equal, and there was slight oedema of the legs. There were the usual signs of a full-time pregnancy. It was now that I first saw the patient. She was dull or semicomatose, muttering when spoken to, but not apparently realizing her surroundings. At 5.30 p.m. (half an hour after admission) she had an eclamptic seizure. Chloroform was given, and a half-grain of morphine hypodermically. A large water enema was also given, but with no results. Three pints of saline were run in under the breasts, and hot bottles were placed round her. At 7.30 she was very restless, shouting, and almost maniacal. A third of a grain of morphine was given hypodermically. Another fit occurred at 9.30, during which chloroform was administered. Two minims of croton oil were given by the mouth. At 11 p.m. she was excessively violent and could not be held in bed; 6 grains of chloral hydrate in water were given hypodermically. At 1 a.m. (August 25th) she was quieter; 5 grains of chloral were given. At 3 a.m. she had another fit, and she got 5 grains of chloral hypodermically. An hour later (4 a.m.) an enema consisting of 2 oz. of castor oil, 2 oz of Henry's solution, and 2 oz. of water was given with a small result. When I saw her at the morning visit she was much better; the bowels had moved well; there had been no more fits since 3 o'clock, and she was more rational. The urine became solid on boiling. Chloral and bromide of potassium were now given by the mouth. Steady improvement commenced under a strictly milk diet and jalap for the regulation of the bowels. Two days later (August 27th) the urine had a specific gravity of 1014, and was acid in reaction; it contained granular casts but no blood; the urea was 7 grains and the albumen 0.86 grain per ounce. There was marked optic neuritis and some small haemorrhages were seen in the left retina. On August 29th the pulse was soft and the oedema had gone. The patient was on strictly milk diet. The albumen was now 0.65 grain per ounce.

On September 1st labour pains came on at 3 p.m. The position was L.O.A., and the fetal heart was clearly heard. At 10 p.m. the os was as large as a five-shilling piece, and the membranes were protruding. At 11 p.m. the membranes ruptured and five minutes later the child was born. The afterbirth was delivered without difficulty and there was no haemorrhage. The infant, a female, was poorly nourished, and weighed only 3 lb. 11 oz.; she was put in the incubator. Milk diet for the mother was continued. On September 7th there was marked improvement in both mother and infant, but there was still a good deal of albumen in the urine, and on September 19th, when the patient left the hospital, there was still a trace. The child was thriving. In January, 1906, Dr. Dickson was able to report that the patient had made an uninterrupted recovery, that she was then quite well, and was doing her work as usual. The infant also had done well and was strong and healthy.

Case 2.

Mrs. S., aged 22, was admitted to the Royal Maternity Hospital on September 2nd, 1905. She was sent in by Dr. Sullivan, and it was stated that she had had two eclamptic seizures the preceding evening She was a primipara. She last menstruated on Christmas Day, 1904. She was living then in Hong Kong. Her health then became poor; she suffered from headaches; her face was puffy in the mornings. Her urine was scanty, dark brown in colour, and was passed with so much pain that she dreaded the act of micturition. These symptoms have persisted till the present time. She

left Hong Kong in April, 1905, and reached London in June, after a very rough passage, during which she suffered from both morning sickness and sea-sickness. She made no attempt to diet herself either in Hong Kong or on the voyage. She had lately come to Edinburgh. Quickening had occurred at the sixth month. The headaches, always occipital in position, had been very troublesome, and the swelling of the face had become more marked.

A week before admission all her symptoms became more severe; the headaches were so bad that the patient could not sit down; the oedema spread to the whole body, and she was passing very little urine, not more than a breakfastcupful in the twenty-four hours. She was seen by Dr. Sullivan on September 1st. He put her on milk diet. The same evening, when she was talking to her mother, she suddenly began to twitch all over; the movements lasted for a few minutes, and were followed by unconsciousness. Her tongue was bitten. A few minutes later she had another fit. Dr. Sullivan gave her half a grain of morphine hypodermically.

She was admitted to the hospital the following morning, having had no further fits during the night. There was oedema of the face, with slight exophthalmos. There was also a considerable amount of hard oedema of the skin of the limbs. The pulse was small, hard, and beating at the rate of 80 per minute. The urine became quite solid on boiling; there were 7 grains of urea to the ounce. The patient was conscious, and complained much of occipital headache. Her abdomen showed signs indicating pregnancy at the seventh or eighth month. No fetal heart could be heard, but the patient thought that she could detect fetal movements. The fetal head was felt lying at the brim, and the back was to the front and left.

I took occasion to examine the patient soon after her admission, and I called the resident's attention to the fact that the part regarded as the fetal head was too soft for the head and too large for the breech. This observation is of special interest in view of the condition of the infant's head discovered at birth twelve days later.

The patient was put to bed between blankets, and was surrounded with hot bottles. She was given nothing but milk. The bowels were opened freely with compound jalap powder. Improvement began and continued for a week, the quantity of urine steadily increasing, and the headaches becoming less severe; then, however, the headache again got worse and was practically constant, and the eyesight became dim—at first a white cloud came over everything, and later everything seemed black. The ophthalmoscopic examination showed no distinct optic neuritis, but there was slight swelling of the right disc at the apparent lower and nasal quadrant, and the vessels were somewhat dilated; the pulse tension was high; there were slight labour pains; the amount of albumen in the urine increased to 1 grain per ounce, and the urea was estimated at 7 grains per ounce. The skin and bowels were kept acting freely, and the grave symptoms passed off. From the 9th to September 13th the patient remained in a fairly satisfactory state. Then labour pains came on, and at 4 a.m. on September 14th the os was found to be about three-quarters dilated, and through it a large soft presenting part could be felt; further examination disclosed bones with large membranous intervals in the part palpated at the os; the diagnosis of hydrocephalus was thus made, and the obscurity of the previous examination of the fetal presentation was cleared up. Labour went on satisfactorily, and the vault of the hydrocephalic head was born as a long sausage-shaped mass. The skin of the scalp was seen to be peeling off in various places, for the infant was dead. As there threatened to be some delay in the birth of the base of the cranium, Dr. H. J. Dunbar (one of the residents) applied the forceps, and with no great difficulty brought the head down. The infant, a female, weighed only 4 lb. 1 oz. From the degree of maceration it exhibited it may be concluded that it died either at the time when the eclampsia occurred (September 1st), or when the aggravation of symptoms took place (September 9th). The head was typically hydrocephalic, but there was no spina bifida or other malformation. The placenta showed one extensive haemorrhage, situated centrally.

The patient recovered well from the delivery. No fits occurred at labour or in the puerperium, and the symptoms which had been so troublesome before delivery disappeared. Immediately before labour the albumen in the urine had been 1 grain per ounce and the urea 7 grains per ounce, and hyaline casts had been present. On September 15th (the day after delivery) the urine had a specific gravity of 1030, the urea was the same (7 grains per ounce), and the albumen was 0.86 grain per ounce. On September 20th the albumen had fallen to 0.12 grain per ounce, and the urea had risen to 8 grains per ounce. On September 25th the analysis was practically the same, and the specific gravity was 1015. On the 28th there was no longer any albumen, the urine was clear and without deposit, and the specific gravity was 1015. The patient left the hospital two days later, stating that she felt perfectly well. There was no oedema.

Case 3.

Mrs. Y., aged 35, was sent into the Royal Maternity Hospital on September 24th, 1905. She was pregnant for the third time. The history of her previous pregnancies was as follows: She gave birth to an eighth month child in December, 1903; it was dead-born. For three weeks before the confinement the patient was troubled with swelling of the face and feet, so that she was unable to go about. She took her ordinary diet; her urine was not examined. Her second confinement occurred in October, 1904; it was at the sixth month, and the fetus was not viable. She never felt quickening in this pregnancy, and there was no swelling of any part of her body. She was now living in Portobello, and Dr. Titterton was called to attend her at the time of the immature labour; he examined the urine after the expulsion of the fetus.

The present pregnancy (the third) has the following history: The last menstruation was on April 7th, 1905. In June the patient began to suffer from severe headaches; her sight was dim at times, and she had some giddiness. She consulted Dr. Titterton, who examined her urine, and told her that her kidneys were affected. She was put on a diet consisting almost entirely of milk. About six weeks later Dr. Titterton told her that her water was all right again, and she began to take ordinary food, and continued to do so till September 18th, the day of the Royal Volunteer Review in Edinburgh. On that day she noticed that her legs and face were swollen, that her sight was dim at times, that the urine was very thick, and that she felt "as if she could not be bothered to do anything." The headaches had come back again. The doctor saw her. She was put to bed, and kept again on a restricted diet. During the following week the same symptoms continued, and the patient remained in bed. She noted the fetal movements which had occurred first at mid-term (she was now six and a half months).

She awoke on the morning of Sunday, September 24th, having slept soundly all night, and remembers seeing her husband making ready the breakfast. After that all was a blank to her till she regained consciousness in the hospital. Her husband said that without warning his wife took a fit; she did not cry out, but her face and limbs twitched violently. This occurred at 10 a.m.; a second fit followed at 11.30; a third took place at 4 p.m. when the patient was coming up in the ambulance to the Maternity Hospital; and a fourth supervened immediately after her arrival at 4.30. During the fit which occurred in the hospital chloroform was administered. The convulsions were of the usual eclamptic character, and were very violent. The tongue had been bitten in the preceding fit; and the patient's clothes were soaked in urine. Five grains of chloral hydrate were injected into the gluteus maximus muscle, and the patient was put to bed between blankets, with hot bottles around her, and near a large fire. She was quite unconscious, and was very restless, muttering constantly and incoherently. She was a strong, muscular woman, and she tossed about so violently that it was necessary to tie her down in bed, else she would have fallen over the edge.

There was slight oedema of the legs and face. The rings of the trachea were easily felt, showing that the normal hypertrophy of the thyroid gland was not well marked. She had an appearance slightly suggestive of myxoedema. The pupils were somewhat contracted and equal, and the lips were slightly cyanosed. The pulse was 100, and the artery was markedly contracted; the temperature was 98.2° F. An enema was administered, and a scanty, constipated motion resulted; she was then given 2 minims of croton oil in butter. The skin was quite dry, so after she had been an hour or two in the hospital she was put in a hot pack, but even this did not cause the slightest perspiration. About four hours after admission she became more restless and was given 10 grains of chloral hydrate by the mouth; this she swallowed fairly well, but as it seemed to have very little effect the dose was repeated in two hours. She then became quieter and had a fairly good night. It should be added that a pint of saline was infused subcutaneously during the evening.

On September 25th she was still semi-conscious. She could not be made to speak at all; she was restless, and kept tossing about and muttering occasionally. The skin was dry and the temperature 99°; the pulse was 100 and of high tension. Two small watery motions were the result of the croton oil. As it seemed to me that the case was one of the thyroid type, I ordered the administration of thyroid extract (10 grains) at 2.30 p.m. Two hours later the patient was fully conscious; she was perspiring freely; she could answer questions rationally, and realized where she was; and her pulse was distinctly softer in character. Five-grain thyroid tabloids were now ordered to be given every four hours. The urine had a specific gravity of 1036; it showed a copious deposit of urates, and it went quite solid on boiling.

She was much better on the following day (September 26th). She had had two loose motions in the twenty-four hours, and had passed about 30 oz. of urine. She talked quite sensibly, and seemed happy. She was kept on a strict milk diet. She was still improving on September 27th. The tension of the pulse was not so high. Fifty oz. of urine were passed in the twenty-four hours; it still went nearly solid on boiling, and showed a copious deposit of urates. On September 28th, 70 oz. of urine were passed. On September 29th the improvement was maintained; the bowels were kept open with medicine. The urine had a specific gravity of 1030, and the albumen amounted to 1.2 grains per oz. She was feeling the movements of the fetus quite distinctly; and the fundus uteri was about the level of the umbilicus, for the pregnancy was nearing the end of the sixth month.

During the following fortnight (October 1st to 14th) the

patient continued to improve in every way. The specific gravity of the urine fell to 1020, and then to 1015, and the albumen diminished to 0.77 grain per oz., and then to a trace. She felt very well, and rebelled greatly against the strict milk diet. On October 10th it was thought to be safe to allow her a little porridge, toast, and milk pudding. She was passing 50 oz. of urine in twenty-four hours, and the bowels were being moved with the help of sulphate of magnesia. The thyroid tabloids were still being taken. On October 17th the patient went home to be under the care of her own doctor. Her condition was satisfactory, although there was a slight trace of albumen. The oedema had entirely disappeared from her face, causing a somewhat striking change in her appearance.

In January, 1906, I obtained from Dr. Titterton the following further notes of the case. The thyroid treatment was continued, and the patient did well until October 24th, when Dr. Titterton was sent for, and found the os uteri dilating, the fetal head presenting, and labour going on. The fetus, placenta, and membranes all came away easily, and the patient recovered well. The fetus had evidently been dead for a few days. A trace of albumen continued in the urine for a week after the lochial discharge had stopped; but it then disappeared, and the patient was quite well.

These three cases illustrate the kind of treatment it is possible to give to pregnant patients attacked by eclampsia. In each instance we were able to save the life of the mother and to allow the pregnancy to go on—surely the ideal treatment of gestational eclampsia. In two out of the three cases the patient was kept in the hospital until the labour came on, and in the third she was allowed to go home to be under the care of her own medical attendant. In the last-named instance I was influenced, no doubt, by the dislike I have to keeping pregnant women for a long period of weeks in ordinary maternity wards filled with puerperal patients. On the other hand, if she had stayed in, it would have been possible to have kept a more strict supervision of her diet, of the state of the urine, etc., than could be done in private practice. The death of the infant in the third case was disappointing, but, on the other hand, its survival in the first case was most satisfactory, almost surprising if its size and condition be taken into account. The infant in the second case was, as has been stated, hydrocephalic. In all the three patients recovery was complete, as is proved by reports received some months later. It is also to be remembered that these were cases of eclampsia in pregnancy, not simply of albuminuria the precursor of eclampsia.

Albuminuria in Pregnancy.

Cases of albuminuria in pregnancy ought to be most successfully dealt with in a pre-maternity hospital, and no doubt in the future they will constitute the majority of the patients treated therein. As a matter of fact, there have not been many cases of this morbid form of gestation occupying the Hamilton Bed. The reason is not far to seek; it is difficult to persuade patients suffering from albuminuria to submit themselves to hospital treatment; they do not feel sufficiently ill, and their friends and relatives see no cause for their removal from home. As soon, however, as eclampsia declares itself, the friends are ready enough, nay urgent, to have the patient transported to the hospital. This is to be regretted, for there can be no doubt that it is much easier to prevent albuminuria leading on to convulsions by proper and simple treatment than to save the mother and the infant in a pregnancy complicated with eclampsia by any means of treatment. I may here refer briefly to a case of albuminuria which was treated in the Hamilton Bed while I was acting as assistant physician in Professor Simpson's quarter in 1902.

The patient, a dairymaid, 20 years of age, was admitted to the hospital on November 9th, 1902. She had arrived at five and a half months in her first pregnancy. For three weeks she had noticed swelling of her hands, and about five days before admission her friends had observed that her face was swollen. There had been no headache, no sensory phenomena, and no noticeable diminution in the amount of urine passed. She had been in the habit of drinking much milk. On examination there was found to be marked oedema of the lower limbs and a swollen distended and tender state of the labia, especially the right labium majus. The back also was dropsical, and so was the right hand. The face was puffy and pale. There were the usual signs of pregnancy, and the fundus uteri was felt lying two finger-breadths above the umbilicus. There was marked oedema of the abdominal walls, and the exact lie of the fetus could not be made out, but the fetal heart was heard (rate, 160) on the right side, below the level of the umbilicus. The examination of the urine showed the presence of albumen, 14 grams per litre; the urea measured 2 grains per ounce.

On admission, the patient was put on a rigid milk diet; the bowels were moved by means of castor oil, and a Southey's tube was put in the right labium. On November 10th the urea had increased to 3 grains per ounce, the albumen measured 1¼ grams per litre. Five grains of thyroid extract were given night and morning; this was continued for a fortnight. The bowels were kept acting freely by means of Henry's solution. On November 16th the albumen had fallen to ¼ gram per litre, and ten days later there was only a trace. The oedema rapidly diminished. The temperature was normal, and the pulse-rate slow (60 to 70). On December 1st the red blood corpuscles numbered 4,512,000, and the white 9,266; there was 30 per cent. of haemoglobin. She left the hospital on December 5th; the oedema had almost disappeared. She was now more than six months pregnant. She felt quite well. The fetus was alive.

Other Maladies of Pregnancy.

About 40 cases, in addition to these I have reported, have been treated in the Hamilton Bed since its establishment. I may refer to some of those dealt with under my own care. There was, for instance, a case of pseudo-angina with extremely curious and enigmatical symptoms and signs; the nervous symptoms improved markedly after labour. This patient was in the hospital for nearly a month during October, 1905. Her child was born with a supernumerary auricle on the left side of the neck just above the clavicle. Another interesting case was one of old-standing hemiplegia with contractures; she was under observation for some time. Her infant also had a malformation—two congenital teeth in the lower jaw. This association of malformations in the infant and maternal nervous maladies has been noticed by me before. Then, again, there was a case of prolapse of the pregnant uterus at the sixth month. The displaced organ was replaced with some difficulty and a pessary inserted. The support, however, was insufficient, and so the patient had to be kept in bed and the vagina had to be packed daily; at a later date the pessary sufficed; and at a still later the patient was allowed to go home, the displacement not having recurred. Yet again there have been several anxious cases of heart disease complicating pregnancy, and calling in one instance for the induction of premature labour; the infant in this last-named case only lived for one month.

Other maladies have been treated, such as myxoma of the chorion, threatened abortion, accidental haemorrhage, grave anaemia, hyperemesis, and hydramnios; but, as these were dealt with during the terms of office of my colleagues, I shall not refer to them. I regret that some degree of confusion seems to have been present in the minds of some of our resident physicians as to the nature of the cases that might find admittance to the Hamilton Bed. The very fact that a patient was in labour at the time of admission to the hospital ought, of course, to have debarred her from treatment in a bed set apart for the diseases of pregnancy; and yet in the official case-book I find details of several cases of eclampsia which seem to have been in labour either at the time they were received into the hospital or within a few hours afterwards, and I notice one case of ruptured uterus which came in after labour had been going on for hours. Obviously it is impossible to form correct notions regarding the effect of preventive treatment in pregnancy in such cases. Again, I hardly think that it is wise to include cases which have been waiting in hospital for a few days before the induction of premature labour by such methods as the bougie or the hydrostatic bag. These considerations and others which have forced themselves upon me during the past few years have led me to make the following suggestions: First, in respect to pre-maternity beds in maternity hospitals, and, secondly, in regard to pre-maternity wards or pavilions or hospitals. I may add that apparently no patient has died in the Hamilton Bed during the progress of her pregnancy; but there have been a number of deaths within longer or shorter times of delivery. There was, for instance, the case of Caesarean section, to which I have already referred; there were two of death after delivery in advanced cases of heart and kidney disease; there was one death after the performance of craniotomy in a patient with kidney disease; and there were several deaths from eclampsia, some of which should in no way be associated with the Hamilton Bed, for they were in labour when they were brought into the hospital, or they were in convulsions, which in a few hours induced labour pains. On the other hand, some of the most ane-

cessful cases of preventive treatment, such as the three patients suffering from eclampsia whose histories I have recorded above, were not entered in the case-book at all. The only reason which I have been able to discover for these irregularities was a notion in my resident physicians' minds that all Hamilton Bed patients required to be seriously ill, and that the Hamilton Bed case-book was mostly for the recording of disastrous eclampsias.

From the experience I have had of the treatment of patients in the Hamilton Bed I would make the following suggestions:

SUGGESTIONS FOR PRE-MATERNITY BEDS IN MATERNITY HOSPITALS.

1. The pre-maternity bed or beds should be strictly reserved for the reception of cases of morbid pregnancy.

2. If a patient suffering from one of the maladies of pregnancy pass into labour within forty-eight hours of her reception into the pre-maternity bed she shall not be regarded as a pre-maternity case, for, obviously, such a brief stay does not permit of any satisfactory attempt towards the effective treatment of her malady.

3. The pre-maternity beds should be placed in a ward by themselves, and should not be located in the ordinary ward used for the puerperal patients.

4. A sister should be in charge of these beds who has had a surgical and medical as well as an obstetric experience, for the nursing required will in most instances be more strictly medical or surgical than obstetrical.

5. No attempt should be made to adapt the diet of puerperal patients for the use of the pre-maternity patients, for, as a general rule, the latter require quite different food.

6. Special case-taking forms should be used for the pre-maternity cases; it is unsatisfactory to attempt to utilize the back leaf or the margins of the ordinary forms or charts for the noting of the many clinical details which are of value and which ought to be recorded in such cases.

7. A special case book should be kept in which every patient who has been in the pre-maternity bed for a period of more than forty-eight hours should be entered. If this is not done patients may enter and pass through the hospital and leave no record behind them at all. If, for instance, a patient suffering from hyperemesis gravidarum or from retroversion of the pregnant uterus be treated successfully in the pre-maternity bed, she will probably not remain in the hospital for her delivery, but will leave at once for her home. This has happened on several occasions in my quarter in the hospital, and some interesting material has thus been lost.

8. In pre-maternity cases special attention should be paid to urine analysis, to examination of the blood and nervous system, to ophthalmoscopic investigations, and to a detailed and thorough examination of the signs and symptoms of pregnancy, including estimations and descriptions of the fetal heart and of the fetal movements. (During the past three years one of my resident physicians has made a special study of the blood in pregnancy and labour, while another has investigated the tendon reflexes, and yet another has made a series of urinalyses.)

9. Suitable cases for treatment in pre-maternity beds are pregnant patients suffering from albuminuria, heart disease, intractable vomiting, pulmonary disease, hepatic disease, anaemia and other blood disorders, and various nervous maladies, especially epilepsy, hystero-epilepsy, hysteria, chorea gravidarum, and paralysis. Diseases of the reproductive organs themselves, such as retroversion of the gravid uterus, threatened abortion, pruritus and oedema vulvae, uterine prolapse, cystocele, vulvar inflammation and abscess, uterine myomata as complications of pregnancy, and suspected ectopic gestation might all very properly be treated in pre-maternity beds. Hydramnios and other conditions (such as twins) leading to over-distension of the uterus might likewise derive benefit; and cases of suspected hydatid mole, of placental haemorrhage, missed abortion, or antenatal death or deformity might with advantage be kept under observation. Further, patients who have suffered in past pregnancies from "habitual" abortion, "habitual" fetal death or disease, "habitual" prematurity or postmaturity, or from eclampsia, might be dieted, kept at rest, or treated with medicinal means, etc., in future pregnancies, in order, if possible, to prevent the recurrence of these reproductive disasters. Patients who are pregnant and have already suffered from eclamptic seizures are not so suitable for pre-maternity treatment unless it is clear that labour pains have not begun and show no tendency to begin; but even in these cases good results may sometimes be obtained, although conservative treatment after the occurrence of eclampsia is much less hopeful than it is during the pre-eclamptic stage when albuminuria alone is present.

10. Cases which are unsuitable for treatment in a pre-maternity bed would seem to be infectious fevers (scarlet fever, measles, typhoid, erysipelas, etc.) occurring as complications of pregnancy (these should go to the fever hospital), and cases of insanity (mania or melancholia) in pregnancy (these should receive asylum treatment).

11. It is doubtful whether cases of syphilis should be dealt with, but I think that patients suffering from gonorrhoeal vaginitis and vulvitis might be taken in and treated during their pregnancies. Alcoholism and dipsomania in pregnant women might perhaps be regarded as suitable for treatment, but actual delirium tremens should find a home elsewhere until the acute symptoms have passed.

SUGGESTIONS FOR PRE-MATERNITY WARDS OR HOSPITALS.

1. The pre-maternity hospital or ward should be connected with the maternity hospital, but should not be included in it; there should, where practicable, be two buildings connected by a covered passage or gallery.

2. The pre-maternity portion should resemble closely an ordinary general hospital in its construction and arrangement rather than a maternity hospital.

3. The management of the pre-maternity should be kept as far as possible distinct from that of the maternity. The nursing, the diet, the regimen, and to some extent the medical treatment required all differ from those in use in a maternity hospital.

4. The special details of diagnosis and treatment which have been referred to under the pre-maternity bed could all be carried out, and ought to be carried out, in the pre-maternity hospital or ward.

5. The same cases which were enumerated as suitable for treatment in a pre-maternity bed will, of course, be fit and proper cases for a pre-maternity hospital; but, in addition, pregnant patients suffering from syphilis might be received in a special ward, and more attention might, perhaps, be paid to the alcoholic cases.

6. There should be a resident physician whose business it would be to take charge of the pre-maternity hospital. The physician of the maternity hospital would make a visit each day, and there might profitably be a consulting physician and surgeon for the pre-maternity. It would be of immense advantage if young graduates, such as Carnegie Fellows or Scholars, would take up the investigation of problems of metabolism, of excretion, of circulation, etc., in pregnancy; the work could be done in connexion with pre-maternity hospitals, but actual residence of the workers would not be necessary.

7. The supervention of labour would always be the signal for the transference of a patient from the pre-maternity to the maternity hospital; the patient's record would go with her, and would serve as a guide for treatment and diagnosis in the other part of the building. It may be found to be an advantage to give beds to patients awaiting the induction of premature labour for contracted pelvis; during their stay in the pre-maternity hospital they could be under close medical observation, and unsuspected morbid states of kidneys or of lungs, etc., might be detected; the exact age of the pregnancy might also be calculated, and possibly the early stages of the induction might even be carried out in the pre-maternity. At the same time, the pre-maternity hospital is essentially for the reception of morbid pregnancies.

REFERENCES.
[1] *Rep. Proc. Nat. Conf. Infantile Mortality.* London, 1906, p. 156.
[2] BRITISH MEDICAL JOURNAL, vol. ii., 1907, p. 421.

CIGARETTE LEGISLATION.—According to the New York *Medical Record* the Supreme Court has declared the anti-cigarette law passed by the last Illinois Legislature unconstitutional on technical grounds. The law as passed contained provisions not enumerated in its title and did not prohibit the sale of cigarettes containing "pure tobacco."

THE BACTERIOLOGICAL ASPECTS OF THE PROBLEM OF NEUROPATHIC KERATITIS.

BY

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I.

THE intimate relationship of neuropathic keratitis to disturbance of the fifth nerve and Gasserian ganglion has resulted in the pathology of this lesion being regarded in a very different light from that of other corneal affections, the eye changes in all cases being considered as secondary to the morbid condition or disturbance of the Gasserian ganglion. That the cause of the disease is difficult to elucidate is seen by the many hypotheses which have from time to time been propounded as the solution to the question, from the number of opponents who have taken the field on one or the other of the sides, and also from the manner in which these have at various times altered or modified their views. Before, then, we can bring forward the result of our investigations it is necessary that the several hypotheses should be mentioned. But as Wilbrand and Saenger[1] have set out the details of the work and controversies on this subject so fully we need only briefly enunciate these hypotheses and give in outline the arguments for and against.

1. THE PURELY TROPHIC HYPOTHESIS.

Magendie[2] showed that neuropathic keratitis occurred in animals after section of the Gasserian ganglion, and asserted that trophic fibres for the cornea travelling in the fifth reached their destination by the ciliary nerves. Further, by experiments conducted by Magendie and Claude Bernard,[3] and later still by Gaule,[4 5] it was shown that when the Gasserian ganglion was cut across, especially in its anterior part, neuropathic keratitis developed rapidly, but that when the fifth root was divided, although corneal anaesthesia was produced, keratitis either did not supervene, or else was late in onset and mild in character. This fact is supported by the clinical observations of Bernhardt[6] and Erb,[7] also by v. Graefe,[8] who regards the lessened secretion of tears, a necessary result in his opinion of extirpation of the Gasserian ganglion, as only accelerating the condition. These trophic fibres were thought by Gaule to be connected with the numerous cells which he found in the intracranial portion of the ramus ophthalmicus in rabbits.

2. THE TROPHIC TRAUMATIC HYPOTHESIS.

(*a*) *Trophic with Central Irritation.*

Wilbrand and Saenger[1] consider that trophic nerves play a considerable rôle in the preservation of the eye, but do not believe that the preservation or destruction of these fibres alone determines the presence or absence of keratitis. They support the view that whilst the loss of trophic fibres is the predisposing cause, the exciting cause depends on central irritation of the roots of the nerves or of the ganglion cells. In those cases of trigeminal neurectomy of Krause's[9] which developed neuropathic keratitis the extreme severity of the operation entailing rupture or irritation of the trigeminal branches and the loss of the trophic fibres were in their opinion the etiological factors, else, had it depended only on the severance of the cornea from its trophic nerves, all the cases would have developed keratitis. By this means also they explain those cases of trophic corneitis, as they term the affection, associated with impaired or increased sensitiveness of the cornea.

Parsons,[10] referring to the work carried out by Head in conjunction with Sherren,[11] Rivers,[12] and Thompson,[13] dealing with the paths of efferent impulses in the peripheral nerves and cord, and to the work of Bayliss,[14] in relation to antidromic impulses in afferent nerves, shows that the absence of protopathic sensation favours bed sores; that on the recovery of these fibres decubitus tends to heal rapidly; and also that antidromic fibres can be experimentally excited in a nerve of a cat after that nerve has been divided and reunited. "Hence," he continues, "it may be considered proved that the power of producing changes in the skin of the periphery is a function of fibres which run in the protopathic system." These fibres may conduct impulses antidromal in character the stimulation of which by some central irritation produces "a deleterious effect upon the nutrition of the peripheral organs." That the neuropathic condition of the eye is due to similar factors appears to Parsons as probable, and for these reasons he considers that the trophic-and-central-traumatic hypothesis "explains better than any other all the diverse clinical facts which have accumulated."

Flemming,[15] another supporter of this hypothesis, states in favour of the trophic element that other trophic changes may be observed in fifth nerve lesions, and in support of the necessity of the added factor—central irritation—gives cases to show that when neuropathic keratitis develops the fifth nerve has been only partially divided. In conclusion he says "that the nutrition of the eyeball is directly dependent on the integrity and nutrition of certain nerve fibres contained in the Gasserian ganglion and ophthalmic nerve, and that irritation of these fibres leads to these changes in the nutrition of the cornea which are regarded as neuropathic keratitis."

(*b*) *Trophic with Peripheral Irritation (other than Organisms).*

Samuel,[16] from observations on other parts of the body, imagines a system of centripetal and centrifugal trophic nerve fibres, whose centre he places in the Gasserian ganglion, the disturbance of which renders the eye less capable of resistance, so that slight irritations of the cornea which a normal eye would withstand without injury are capable of setting up this condition. Büttner[17] found that a glass shield or a wire net strapped in front of the eye was a preservative measure against traumata which a normal eye could withstand without injury. He considers the loss of sensation an unimportant factor.

3. THE VASOMOTOR HYPOTHESIS.

Spalitta[18] is the chief supporter of this hypothesis. He bases his conclusions on certain experiments in which, after removing the Gasserian ganglion, he noticed very marked vaso-constriction of the vessels of the eye, especially in the pericorneal area, and also necrosis of the cornea. This necrosis he attributed to the vaso-constriction. When, however, he removed the cervical sympathetic ganglion and subsequently the Gasserian ganglion, the vaso-constriction of the uncomplicated Gasserian ganglion paralysis could not be effected and keratitis did not develop.

4. THE VASOMOTOR TRAUMATIC HYPOTHESIS.

Schiff[19] holds that, following the excision of the Gasserian ganglion, there is a hyperaemia which lasts for about twelve days. After this time it begins to subside, appearing only at increasingly long intervals till it finally disappears. Occasionally, however, the hyperaemia persists, and only when this occurs can external injurious mechanisms come into operation. Seydel,[20] another upholder of the hypothesis, reports his observations in 6 cases. In 3 of these there was an uncomplicated trigeminal paralysis, and no evidence of neuropathic keratitis was found. In the other 3, in addition to the trigeminal paralysis, there was disease of the sympathetic, as was evidenced by the enophthalmos, narrowing of the palpebral fissure, and myosis. All these cases developed keratitis. Seydel's view is that vasomotor disturbance, anaesthesia, and sympathetic paralysis are all necessary as predisposing causes, and that slight traumata of the cornea in the centre where the nutrition is least good are the exciting cause, a necrosis associated with inflammatory symptoms being the first change produced.

5. THE PURELY TRAUMATIC HYPOTHESIS.

Snellen, Senftleben,[21] and Gudden[22] attempted, by experimental investigation, to prove that when the eye was kept carefully protected, as by a shield or by sewing the lids together, neuropathic keratitis never occurred. They held that animals, owing to the anaesthesia of the part, were not so careful in avoiding obstacles; and that foreign bodies gaining admittance were not so promptly expelled as their presence was not recognized. Cases of lagophthalmos associated with paralysis of the fifth are given, and cases also cited of paralysis of the fifth and ptosis without neuropathic changes.

6. THE DESICCATION HYPOTHESIS.

This is supported by Feuer,[23] Hippel,[24 25] and Ollendorf,[26] who consider that after trigeminal neurectomy there is a marked diminution in the secretion of tears, and that there is also a great lessening in the frequency of blinking on the affected side—a diminution more evident in animals than in man. As a result of these the part of the cornea exposed in the palpebral fissure becomes dried, and necrosis results. The necrosed part then acts as an irritant, inflammation sets in, and the slough is expelled. Protection of the eye by a shield or by stitching the lids together necessarily diminishes the evaporation and prevents the onset of neuropathic keratitis.

CRITICISM OF THE ABOVE HYPOTHESES.

Before proceeding to the last hypothesis—the mycotic—some of the chief arguments against the views above mentioned must be brought forward.

It is a recognized fact that, especially in human beings, after trigeminal neurectomy only a certain proportion of the patients develop neuropathic changes of the cornea. Wilbrand and Saenger give the proportion as a third, and our own statistics, as will be seen later, are almost the same. Now if the loss of the trophic fibres were the cause of the neuropathic condition, the eye should always be affected after removal of the ganglion. Wilbrand and Saenger attempt to overcome this argument by assuming either a greater power of resistance of these fibres or that those passing to the eye have escaped injury. In practically all our cases, however, the Gasserian ganglion was completely removed, together with the intracranial branches of the avulsed sensory root. Ranvier denies the existence of trophic fibres in that as a result of a series of experiments in which the nerves to the cornea were cut he has never noticed any alteration in the nutrition of the part. Certainly aseptic wounds heal as readily in an anæsthetic as in a normal cornea. Again, if the keratitis is dependent on the loss of trophic nerves, how is it that when properly treated the condition clears up?

The existence of trophic changes other than in the eye as a result of lesions of the fifth nerve is frequently brought forward. In 50 cases in which the Gasserian ganglion had been removed we have only once noted any change other than the corneal. This was in a woman who four years previously had had an extremely severe attack of herpes on the right side, after which in the area of distribution of the right ophthalmic division there was intense pain, anæsthesia bounded by a zone of hyperæsthesia, loss of hair, loss of the eyebrow and eyelashes, and patches of leucoderma over the upper part of the forehead.

The part played by trauma in the production of this pathological condition of the cornea is only supported by one out of 50 cases of trigeminal neurectomy which we have observed. This patient (A. H.), a man aged 26, remained free from all eye trouble for twenty months after his operation. During this interval he worked in brick fields. At the end of twenty months his eye showed a mild degree of keratitis, but after a few weeks of treatment cleared up. Six months later he again attended for keratitis. On both occasions he thought that the trouble had originated from some brick dust which had irritated his eye. The second attack cleared up after seven weeks, and for the last two and a half years, although he has continued his work without other precaution than occasionally bathing the eye, the cornea is quite healthy and shows only some old opacities.

We have observed that in nearly every case where neuropathic keratitis is going to appear it will be seen first during the stage of convalescence. If the patient remains free during this period only very exceptionally does the condition manifest itself at a later time. Further, in some of the cases we have seen, during the first few days, islands of loss of epithelium on the cornea without any indication of neuropathic keratitis developing either then or later.

The following case affords arguments against both the trophic-and-peripheral-traumatic and the trophic and-central-irritation hypotheses:

The patient had an endothelioma of the left Gasserian ganglion; the tumour and ganglion were removed. The resulting anæsthesia of the area supplied by the ophthalmic division was not complete. The outer and lower portion of the cornea was anæsthetic, but over the upper and inner surface there still remained slight sensibility for touch. Within a very short time the patient had a recurrence of the growth, which eventually involved not only the cavum and the cut ends of the peripheral branches of the fifth but also the sensory root, causing great pain in the trigeminal area. Infected glands appeared at the angle of the jaw and over the parotid on the same side, and there was complete peripheral paralysis of the left facial nerve. Despite the lagophthalmos, and on two occasions a superficial loss of epithelium of the cornea; despite the irritation round the peripheral branches (and the sensory root) of the divided fifth, there was never at any time any indication of neuropathic keratitis.

We have already referred to the suggestion made by Parsons that neuropathic keratitis develops because the "afferent tract is still open, but an irritative lesion has set up abnormal antidromic impulses in the protopathic system." In the case just mentioned there was evidence of a partial division only of the sensory fibres of the cornea and of an irritative lesion in the form of a malignant tumour surrounding the afferent tract. Here all the factors necessary on such a hypothesis for the production of neuropathic keratitis were present, yet neither in this nor in the following somewhat similar case did the cornea show any pathological change.

W. P. suffered from neuralgia of the first and second divisions of the right trigeminal for five years. His Gasserian ganglion was removed, but, owing to the strength of the adhesions, the anterior and inner part of the ganglion had to be left attached to the ophthalmic branch. The patient made an uneventful recovery. Two years later he was readmitted suffering from a recurrence of pain in the first division. A note made at that time says that his eye was perfectly normal, and the cornea quite clear. There was no absolute loss of sensation of the cornea or conjunctiva, but the corneal reflex was sluggish. At the second operation the cavum Meckelii was found to be empty, but "a little blunt dissection further on through some tissue which appeared to be of inflammatory origin revealed a nerve trunk distinctly larger than the normal sixth nerve, and running outwards over the edge of the petrous just in front of the apparent anterior limit of the cavum." This was removed. No weakness of the external rectus resulted, and the patient was free from his pain. The cornea also became completely anæsthetic. At no period before or subsequent to the second operation, which was nearly five years ago, has there been the slightest trace of keratitis.

After section of a nerve, degeneration begins to appear in the peripheral part within the first twenty-four hours, and is complete in twenty days. Since the publication of Halliburton's Oliver-Sharpey lectures[27] we may now take it as certain that regeneration of a cut nerve originates from the central end, and that towards ultimate reunion and complete regeneration the peripheral segment contributes practically no help. If, then, after excision of the Gasserian ganglion, keratitis is due to an irritative stimulus producing antidromic impulses, when not seen within the first twenty days it should not appear at all. How, then, did it occur in the case of A. H., already mentioned, in whom there was no indication of keratitis till twenty months after the removal of the ganglion?

Certain authorities maintain that the anæsthetic condition of the eye prevents it from reacting to the stimulus of foreign bodies, which are thus allowed to remain and to cause trauma. But it must be remembered that in over 60 per cent. of the patients who for years are exposed to this risk no such deleterious consequences appear. On the other hand, cases have been reported of keratitis in eyes which are sensitive or even hypersensitive, and which should therefore have been able to recognize immediately the presence of foreign particles.*

Angelucci[28] was unable to corroborate Spalitta's experiments in connexion with the vaso constriction hypothesis. On the contrary, by ligaturing the common carotid and at the same time excising the cervical sympathetic ganglion he produced a most marked degree of vaso-constriction without neuropathic keratitis supervening. The occurrence of vasomotor fibres in the fifth nerve has not indeed been proved. Krause states that the eye after excision of the Gasserian ganglion shows no deviation from the normal; nor have we been able to find any dilatation or constriction of the vessels either directly after or at periods extending up to eight years after the neurectomy. Turning now to the desiccation or xerotic hypothesis, one of us,[29] as the result of repeated observations of 30 cases of trigeminal neurectomy, has found that

* Wilbrand and Saenger have collected four cases of neuropathic keratitis in patients who had some lesion of the trigeminus but whose cornea was sensitive, and three such in which the cornea was hypersensitive.

there is no difference in the secretion of tears or in the rate of blinking of the eyelids on the affected side. Krause,[9] however, states that the secretions of the lacrymal gland are delayed. In the case of endothelioma of the Gasserian ganglion with associated homolateral paralysis of the facial nerve mentioned above, the rate of onset of the flow of tears was distinctly delayed, and in addition only very slight and infrequent winking movements occurred on that side. Yet, despite this, keratitis did not develop.

Senitleben found that if an animal in which a trigeminal neurectomy had been performed was tied down on its side with the anaesthetic eye uppermost so as not to hinder evaporation, the cornea remained perfectly healthy, and keratitis did not develop until the animal was allowed to run about. Further, keratitis has been seen in patients who have had the eye protected from evaporation both by ptosis* and by careful bandaging.

7. THE MYCOTIC HYPOTHESIS.

Turner,[30] in conjunction with Ferrier, performed a series of experiments on animals. Two out of the eighteen cases showed destruction of the cornea and panophthalmitis from septic infection; two also exhibited progressive corneal opacities. As a result of experimental irritation of the cornea, a transitory inflammation followed by healing was produced. From this Turner considered that irritation of the first branch of the fifth exercised no neuropathic effect upon the cornea, and attributed the disturbances of this part to an inflammatory irritant, the result of a septic infection. This view Krause, from his clinical observations, tends to support, and he believes that after removal of the Gasserian ganglion there exists a reduced power of resistance to inflammatory influences. Baylock, in his experiments, produced traumatic loss of the epithelium of the anaesthetic eye, thus rendering it possible for micro-organisms to enter and to form the exciting cause of the keratitis. Whilst Hippel, who at first did not regard micro-organisms as an etiological factor, later thought it very probable that bacteria play an important rôle in the establishment of the disease.† Parsons believes that organisms are important only in the more advanced stages.

As the arguments against all these hypotheses other than the mycotic appeared to us to outweigh those in their favour, and recognizing, moreover, the great part played by micro-organisms in most progressive and relapsing inflammations, we decided to attempt a further investigation of neuropathic keratitis from the bacteriological aspect in the hopes of finding some organism which was constantly present only in those eyes which developed keratitis after trigeminal neurectomy, and which by experimental inoculation into monkeys would produce the condition.

The results of our researches we shall now record. From the clinico-pathological aspect they appeared to us to be very encouraging, but our experimental work carried out with the desire to corroborate the former, whilst in some respects it supports our earlier investigations cannot be regarded as conclusive.

The whole of the experimental work has been performed for us by Sir Victor Horsley, and we cannot sufficiently express our gratitude to him for his kindness in doing it and for the time he has devoted to this piece of work.

II.

BACTERIOLOGICAL INVESTIGATIONS.

Our investigations have been based on the examinations of 21 clinical cases. All these cases had the Hartley-Krause operation performed for trigeminal neuralgia; 11 of them developed neuropathic keratitis, whilst the other 9 up to the time when they were last seen, showed no affection of the cornea. These patients have been under observation for periods ranging between five days and five years.

In one case the keratitis, which had been neglected by the patient, had progressed to a condition of hypopyon and phthisis bulbi and the eye was excised. Mr. Parsons, who performed the operation, most generously gave us the pathological specimen, our findings on which and on four eyes taken from monkeys who had developed neuropathic keratitis will be recorded in due course. In addition we have made a bacteriological examination of twenty-two normal eyes.

Finally, Sir Victor Horsley undertook by a series of operations on animals—8 monkeys, 1 cat, and 2 guinea-pigs—the investigation of the pathogenic properties of that organism which we found to be constantly present only in the eyes of patients affected with keratitis.

We wish to express our thanks to the following gentlemen, who have very kindly allowed us to examine the cases under their care: Sir Victor Horsley, Mr. Flemming and Mr. Parsons, Sir William Gowers, Dr. Ormerod, Dr. Risien Russell, and Mr. Armour. Also to Dr. Thiele for inoculating and making *post-mortem* examinations on two guinea-pigs.

Bacteriological Examination of Twenty-one Clinical Cases.

In the earlier cases we were able to obtain cultures from the eyes only after removal of the Gasserian ganglion, but in most of the others we made bacteriological examinations both before and after the operation.

The cultures were taken from the conjunctival sac of the eye on the side of the trigeminal neuralgia or neurectomy, from the interior of the nostril on the same side, and in most cases from the conjunctival sac of the opposite eye. They were grown on agar-agar. After twenty-four to thirty-six hours' incubation, the colonies were examined

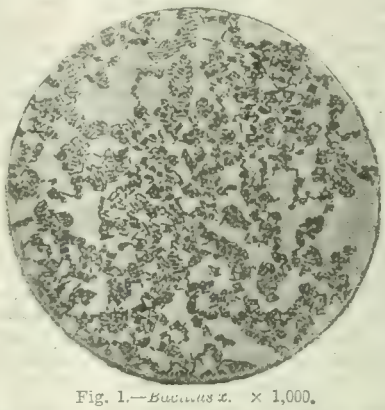


Fig. 1.—*Bacillus x.* × 1,000.

macroscopically and microscopically. When a colony was not pure it was plated out and separated into its various constituents, each of which was again subcultured on to agar agar.

In a few cases blood serum was used. The pure cultures were then individually investigated. In practically all the cases *Staphylococcus aureus* was found; less frequently *Staphylococcus albus*, streptococcus, pneumococcus, xerosis and proteus. But there was also one other bacillus which we found only in those eyes which showed neuropathic keratitis. This organism, of which the following is an account, we shall refer to as *Bacillus x.*

Description of the Organism.

The organism is a short thick bacillus (about 2.0 μ long by 0.6 μ thick) with rounded ends, frequently arranged in pairs, short chains and parallel groups (Fig. 1). In structure it is homogeneous and shows no evidence of spore formation. It is non-motile and has no flagella. It stains with all the ordinary dyes and gives a positive reaction with the Gram method. It grows readily on all the ordinary media.

On *agar-agar* it forms a thick yellowish-white succulent growth with irregular rounded margins.

On *serum* the growth is similar but not so profuse.

Gelatine-stab cultures show liquefaction only after some weeks without gas formation.

On *potato* the organism forms a profuse opaque growth of a dirty cream colour.

In ordinary *peptone broth* a uniform turbidity is produced, but no indol reaction can be obtained.

In *litmus milk* a fine coagulum appears, and in the early days an acid reaction which subsequently becomes strongly alkaline.

In *neutral litmus broth* (*glucose*) there is no gas formation.

We have repeated the examination of the cultural properties of this bacillus many times, and our results,

* In fifty-four cases of ptosis associated with paralysis of the fifth nerve collected by Wilbrand and Saenger, twenty-two had neuropathic keratitis.

† Hippel describing, however, the results of the pathological examination of an eye affected by neuropathic keratitis, says: "Mikroorganismen irgend welcher Art konnten in der Cornea bei eingehendster Untersuchungn icht nachgewiesen werden."[25]

which have been constant, have also been corroborated by independent investigations. On this account, although further investigation is undoubtedly necessary, we feel justified in looking on these characteristics as fairly definite.

It would appear, then, that this organism belongs to the group of pseudo-diphtheria bacilli, and its characteristics agree very closely with those of that form known as the pseudo-diphtheria bacillus of Loeffler.

The *x* bacillus is very difficult to distinguish from the pseudo-diphtheria organism, but the following three factors help in the differentiation: The *x* bacillus shows occasional granule formation, gives no naked-eye growth on potato, and does not render bouillon turbid.

Clinical Cases.

Of the 21 cases under observation, in all of which the Gasserian ganglion had been removed by the Hartley-Krause method, 11 were suffering or had suffered at some previous time from neuropathic keratitis.* In 9 of these patients we were able to take cultures from the eye and nose on various occasions when the eye trouble was in an active condition. The growths all showed, in addition to staphylococci and occasionally streptococci, pneumococci, *xerosis*, and *proteus*, *Bacillus x*. From 6 of the patients cultures were obtained at various periods after the cornea had healed (J. G., 2 years; A. H., 7 months; M. H., 3 months; C. W., 2 months; V. E., 2 months; E. G., 5 weeks). None of the colonies except those grown from the nose of A. H. and from the eye of M. H. showed the presence of *Bacillus x*. The latter patient, from whose conjunctival sac the bacillus could still be recovered, had another outbreak of neuropathic keratitis nine months later.† The absence of *Bacillus x* after the complete subsidence of keratitis was moreover shown by our observations on the patient J. J. This woman had the Gasserian ganglion removed in December, 1902. A very severe attack of keratitis followed in January, 1903; her eyelids were then sewn together, and kept united until April, 1904. Three days after they were undone there was a fresh outburst of keratitis. The lids were reunited until March, 1905, but the separation of them then was again immediately followed by a recurrence. This was less severe than the previous ones, was treated without closure of the lids, and cleared up within two months. In March, 1905, cultures showed staphylococci and *Bacillus x*. In November of that year, although the eye was still clear, the same organism was found. During June, 1906, there was a fresh though very slight outburst of keratitis, which soon subsided. Cultures still gave the same results. In January, 1907, however, only staphylococci and *proteus* were obtained. There has been no return of keratitis since this time.

Ten patients on whom bacteriological examinations were made (in seven both before and after the operation) have never suffered from any corneal affection consequent on the excision of the ganglion. The cultures from these cases contained staphylococci, streptococci, pneumococci, and *xerosis*, but no evidence of *Bacillus x* was found except in those growths taken from the eye and nose of S. F. before the removal of the ganglion. This patient, however, died of meningitis five days after the operation; his lids had been stitched together all the time, and no keratitis had developed. These facts may be put in tabular form thus:

	No. of Cases Examined	Presence of Staphylococcus.	Presence of *Bacillus x*.
Cases with neuropathic keratitis: Acute stage	9	9	9
Quiescent stage	6	6	1*
Cases without neuropathic keratitis	9	9	0

* This case developed another attack of keratitis later.
† The case of the patient who showed the presence of the *x* bacillus before the operation, but who died five days after (before the stitches were taken out of the eyelids) without developing keratitis, is purposely omitted.



Fig. 2.—Showing triangular ulcer and punctiform keratitis of left eye.

We have had the opportunity of making a pathological examination of one human eye which was excised by Mr. Parsons owing to the advanced state of the neuropathic keratitis and associated phthisis bulbi. There was an extensive ulcer occupying a large part of the surface of the cornea. As soon as the eye was excised a culture was made from the surface of the ulcer, but no growth was obtained.‡ Cultures were also taken from the anterior and posterior chambers, the vitreous and the cut end of the optic nerve, but in every case the result was negative. A strip of the coats of the eye, including part of the cornea and the ulcer, was hardened, embedded in paraffin, and sections were cut and stained by several of the most common methods. Among the epithelial cells at the edge of the ulcer numerous masses of staphylococci can be seen. The largest clumps are to be seen along the edge itself, and they diminish rapidly in size as the healthier parts of the cornea are approached. Scattered among the staphylococci, and lying in between the epithelial cells, a few *x* bacilli can be detected. We have not, however, been able to corroborate the presence of the *x* bacillus among the cells of the cornea in the eyes of the four monkeys which developed keratitis.

It would seem, then, that whatever part the *Bacillus x* plays in the initial stages of neuropathic ulceration, once the process is established the staphylococci carry on the work of destruction. Nor is there any evidence to show that at this stage the tissues of the neuropathic eye react to the destructive processes of sepsis in any way different from that in which reacts an eye the nerve supply of which is intact.

Wilbrand and Saenger consider that a third of the patients who have had a lesion of the trigeminus or extirpation of the Gasserian ganglion suffer from neuro-

* This must not be regarded as in any way representing the true proportion of cases which develop keratitis after trigeminal neurectomy. We have the notes on 50 patients on whom this operation was performed. Of these, 18 (that is, 36 per cent.) showed keratitis at one time or another after the neurectomy.
† This patient was then unfortunately too ill to come and see us.

‡ A culture taken from the conjunctival sac on the previous day showed the *Bacillus x*. After this the eye had been thoroughly irrigated to ensure the asepsis of the operation.

pathic keratitis. Our own statistics, based on the notes on 50 patients, work out at a proportion of 36 per cent. It seemed to us that if the keratitis was produced by an organism which had a special pathogenic power on eyes the sensibility of which had been in some way impaired, and that 36 per cent. of such people developed the corneal lesion, we might succeed in discovering the organism in about the same proportion of normal eyes. For this reason, therefore, we made an examination of the cultures obtained from twenty-two normal eyes. All the cultures showed staphylococci, and in seven out of the twenty-two the *Bacillus x.* was also found. A curious point was noticed: 15 of the cases chosen were hospital patients; the remaining 7 were resident officers in the same institution. The seven cultures which showed the presence of the *Bacillus x* were all obtained from the hospital patients.

EXPERIMENTAL INVESTIGATION.

The *Bacillus x.* obtained from a patient who was suffering from neuropathic keratitis was placed in the right conjunctival sac of three monkeys, a cat, and two guinea-pigs, to see if any pathological changes could be produced on the normal eye. At the end of a month all the eyes were perfectly healthy. The subsequent experiments on these monkeys will now be given in fuller detail:

Rhesus 1.—A culture taken from the right eye on April 3rd, 1906, showed staphylococcus and the presence of the xerosis bacillus. On the same day the right conjunctival sac was inoculated with the *Bacillus x*, obtained pure by sub-culturing from colonies grown from the eye of J. J. The next day this organism, together with staphylococci, was found in the conjunctival sac. The right eye remained healthy during the rest of the animal's existence. On April 6th the left eye was closed by suturing the eyelids, and Sir Victor Horsley extirpated the left Gasserian ganglion. Three days later the stitches cutting out, the eye opened, and the cornea was seen to be quite healthy, but the next morning keratitis was already present and making rapid progress. A culture taken on this day showed staphylococci and an abundance of the *x* bacillus. By the 15th an anterior staphyloma had formed with prolapse of the iris; and on the 30th, when the animal was killed, there was only the shrunken collapsed eyeball to be seen between the closing lids. Cultures were taken on April 10th, 17th, and 30th. On each occasion numerous growths of the *Bacillus x* and of *Staphylococcus aureus* and *albus* were obtained.

Rhesus 2.—The right conjunctival sac was inoculated on April 3rd from the same tube as that used for Rhesus 1. Cultures taken from the eye on this day (before inoculation) and on the 4th showed only staphylococci. Sir Victor Horsley removed the left Gasserian ganglion on April 7th, having previously stitched together the lids of the left eye. Two days later the stitches had cut out of the lids, and the cornea was seen to be healthy. There was no conjunctival reflex. On the 18th the left conjunctival sac was inoculated from the same tube as previously. No change had taken place by the 28th, and the conjunctival sac was therefore inoculated from the discharge from the left eye of Rhesus 1. This was again repeated in two days' time. On May 2nd there was some dried discharge round the inner canthus which had increased by the 5th, but the cornea remained clear. Cultures taken from the conjunctiva grew only staphylococcus.

Rhesus 3.—The right conjunctival sac, which contained only staphylococci, was inoculated on April 3rd, 1906, with the *Bacillus x.* On April 7th, the left eye was closed by stitching together the lids and the left Gasserian ganglion removed by Sir Victor Horsley. Four days later the eyelids were undone, and the cornea appeared dry but otherwise healthy. From a culture then taken staphylococcus and the xerosis bacillus were obtained. The following day there was a slight loss of epithelium in the centre of the cornea. This condition was only transient. On the 18th slight pin-point ulceration was observed. The conjunctival sac was inoculated on that day from an old growth of the *Bacillus x* The next day the ulceration showed some progression, but by the 23rd the eye had recovered. On the 28th the conjunctival sac was inoculated with the discharge from the eye of Rhesus 1. Two days later distinct cloudiness of the cornea was evident; the cloudiness increased, punctiform keratitis and a triangular ulcer appeared. On May 5th the monkey was killed, and the condition of the eye at that time is shown in the accompanying photograph (Fig. 2). Cultures taken before death produced a copious growth of the *Bacillus x.*

Rhesus 4 and 5, and Bonnet 3.—In Rhesus 4 the *Bacillus x* was found on the conjunctival sac before the operation. In Rhesus 5, growths of *Staphylococcus albus* only could be obtained; whilst in Bonnet 3, *Staphylococcus aureus* existed. After the operation for the extirpation of the ganglion in these three cases the cornea was found to be still sensitive. No keratitis appeared either immediately after the operation or after inoculation with pure cultures of the *x* bacillus.

Bonnet. 1.—No culture was made before the neurectomy. On May 19th the left Gasserian ganglion was removed, but the eye was not closed. Keratitis was already present on the following day, and cultures taken on the 22nd and 28th, by which time the eye was almost destroyed, showed the presence of staphylococci and of the *x* bacillus.

Bonnet 2.—The monkey had the *x* bacillus in its eye before the operation on May 28th. Keratitis appeared four days after the excision of the left Gasserian ganglion on the day after the stitches cut out of the eye. By June 6th the keratitis was far advanced, and cultures showed staphylococci and the *x* bacillus. These were separated by plating. A pure culture of staphylococci was obtained and injected into the thigh of one guinea-pig and into the peritoneal cavity of another. Local tenderness was produced in the thigh, but this had passed off in four days. Dr. Thiele, who injected these animals for us, made, twenty-one days after inoculating the peritoneal cavity, a *post-mortem* examination of the guinea-pig. The peritoneum was slightly pinker than normal, but was otherwise perfectly healthy. There was no effusion, no lymph, and no adhesions.

CONCLUSIONS.

1. The *Bacillus x* we have found to be present in about 30 per cent. of normal people.

2. The *Bacillus x* was present in the conjunctival sac of all those patients who had neuropathic keratitis, and the organism could be demonstrated, together with staphylococci, among the epithelial cells at the margin of the ulcer of the excised eye.

3. In those cases which did not develop keratitis after excision of the Gasserian ganglion no *x* bacillus was found.

4. We therefore conclude that we are justified in suspecting that the presence of the bacillus in the sac is necessary for the production of neuropathic keratitis.

5. The presence of the *x* bacillus, however, without an associated lesion of the Gasserian ganglion, does not lead to keratitis.

6. Mere presence of the organism in a patient whose Gasserian ganglion has been removed is not sufficient to produce neuropathic keratitis, because, if the eyelids are sewn together, the disease does not develop, or, if the condition is already present, it will tend to heal rapidly after suture of the lids. We are, therefore, driven to conclude that there is a third necessary factor, and that this factor is in some way prevented from acting by closure of the lids. This result of closing of the lids may be due either to the effect on the organism or to the effect on the eye. The organism continues, however, to live in the conjunctival sac, in spite of the closure of the lids.* It is, of course, possible that the closure of the lids may act by diminishing the virulence of the organism and separating the lids by increasing it again to its normal level, but the facts that the effect on the keratitis of closing the eye is so prompt, and that keratitis may follow so immediately on again separating the lids (see case of M. H.), seem to be contrary to such an explanation.

Now, closure of the lids must act on the eye in one of two ways: Either by affording protection to the cornea or by abolishing the recurrent friction of the lids. We are not in a position to indicate which of these modes of action is the efficient one, but it is at least suggestive to note that in one case in which the Gasserian ganglion had been removed the patient had also facial paralysis, and, although he repeatedly had slight abrasions of the cornea, he never developed neuropathic keratitis. It is, however, important to add that no bacteriological examination was made, so that the case provides not more than a hint which inclines us to suspect that closure of the eyelids may act through cessation of the friction. It would be interesting to try experimentally whether mere suspension of movement of the eyelids would prevent the lesion or hasten the cure.†

Our investigations, then, lead us to suspect that for the production of neuropathic keratitis three factors must be present: (1) Removal of the Gasserian ganglion; (2) the presence of the bacillus; (3) a factor of undefined nature dependent on the eyelids and removed by closing them. (1) and (2) are not adequate alone, as suture of the lids prevents or cures neuropathic keratitis; (1) and (3) are not adequate alone, because, as we have shown, keratitis only occurs after destructive lesions of the Gasserian ganglion

* The bacillus was found to be still present in one case after the lids had been united for three months.

† Wilbrand and Saenger have collected 70 cases of lagophthalmos in conjunction with anaesthesia of the cornea from paralysis of the fifth nerve: 14 of these had neuropathic keratitis.

when the organism is present and in the same proportion of patients as that in which the organism occurs in normal persons.

The mode of action of the first factor is, of course, in no way elucidated by our investigations.

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A PLEA FOR THE IMPROVEMENT IN THE TEACHING AND AN ENCOURAGEMENT IN THE STUDY OF LEGAL MEDICINE.*

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IT seems almost superfluous in these days, when so much is said of the necessity of improved technical education, and when such rapid strides and developments are being made in the various branches of medical science, to have to call attention to the backward condition of one very important medical science.

I venture, therefore, to point out some of the defects of our present knowledge of the subject of forensic medicine, together with the causes of the present lack of interest in the subject, and the possible remedies for this state of things.

It is commonly said—nay, it is almost an accepted dictum—that medical men make bad witnesses. So far as the public may think this it does not really concern us for a moment, as they are dissatisfied and critical because the medical witness is often not able to give a definite but only a speculative answer to the questions put. These, the unthinking majority, will never appreciate the difficult points that have to be considered in order to arrive at an accurate solution of the various problems presented. In fact, it is often rather creditable to the medical witness that he is guarded in his replies than that he should endeavour to give precise answers at the expense of truth and justice. Of course the criticism of medical evidence has become more acute of late, since the amount of litigation produced by recent enactments has brought such a mass of conflicting evidence into the civil courts. But I wish to speak more particularly of the medical witness in relation to criminal cases. In this direction I think we shall have to concede that, after making due allowance for the criticism of the unthinking and uneducated, the value and status of the medical witness will bear a deal of improvement. Whilst making this admission, I think that I can show, in pointing out the causes of the backward condition of the study of the subject of forensic medicine, that no reflection is implied upon the skill or ability of the various members of the profession who testify in the courts. In fact, in some cases our most eminent surgeons and physicians make the weakest witnesses. But rather the medical witness suffers from a lack of opportunity being afforded him in our system of education, and in the failure of the State to do its part in making provision for a number of skilled medico-legal experts.

What, now, are the causes of the condition to which I have just referred? I think they can be divided into two main classes, namely, defective teaching and a lack of material, together with a want of support on the part of the State.

Defective Teaching.

In the first place, our teaching is defective because we have not in our medical schools lecturers who are specially qualified to teach the subject. There are, I admit, several brilliant exceptions, but in most cases the gentleman who is appointed to teach the subject has usually distinguished himself in surgery or medicine, or he is the next one who is entitled to a post on the teaching staff. This calls to my mind the remarks of Mr. Lynn Thomas when delivering his presidential address two years ago. He called attention to the fact that up till quite recently the gentleman who was a surgeon on the staff of the Cardiff Infirmary suddenly blossomed forth into the dignified position of a physician, by reason of seniority, on the resignation, retirement, or death of a colleague who had been a physician. I remember how the allusion drew forth the smiles of the members. Now I maintain that the idea of a surgeon or physician being appointed a lecturer on forensic medicine at a medical school simply because it is his turn to get the next post, is equally a matter of amusement. Would we appoint as lecturer on medicine or surgery, even at the smallest provincial school nowadays, one who is a general practitioner? Would we appoint as lecturer on gynaecology one who has not devoted some considerable time to special study and practice of diseases of women? Yet we find that in a number of schools gentlemen are appointed as lecturers on forensic medicine—eminent physicians or surgeons no doubt—who have little or no experience of a practical character in the subject which they are expected to teach. It may be said that the number of gentlemen so qualified and experienced is very limited. That I readily admit, and will deal with this dearth of specially qualified medical jurists when I come to the second cause, lack of material together with a want of support on the part of the State.

Secondly, the lectures are, generally speaking, not made interesting and attractive, and little inducement is held out to the students to pay more than a cursory attention to the subject. The consequence is that the student attends just sufficiently often to get signed up for his examination, and learns just enough to scrape through.

Thirdly, the course of lectures is defective in not providing for some instruction on legal procedure, and some explanation of certain legal definitions, as well as an elementary course in the law of evidence and criminal law. There are many, I have no doubt, who would join issue with me on this point, but I consider that this is of the greatest importance if the medical witness is to command a greater respect in our courts. In my experience, one of the greatest reasons that the medical witness fails to do himself justice is not that he is unintelligent or unskilful, but that he fails to thoroughly appreciate his

*Introductory Address delivered before the Cardiff Medical Society at the opening of the session, Tuesday, October 8th, 1907.

position and the exact issues at stake. The constant attendance in the courts gives one quite a different idea of the functions of the medical witness, and affords an opportunity of learning a great deal about legal procedure and the law of evidence, etc. As this opportunity does not fall to the lot of all, I consider that the course of lectures on forensic medicine should include some instruction on the points which I have just referred to.

Fourthly, there is no practical teaching of the subject. It is true there is some microscopic work as well as some instruction in the tests for poisons, but the former is already taught in the physiological and the latter in the chemical laboratory. But by practical teaching I mean something very different. A student should be required to attend a certain number of cases in the courts, where he can learn procedure and he should be taught how to take notes on cases, with a view to giving evidence. No student, until he has attended at least twenty cases of midwifery, is allowed to go in for his examination in that subject, then why should he be permitted to enter for forensic medicine without some evidence of his possessing practical training in the subject? Whilst it would be, to say the least of it, foolish to allow a man who had never attended a midwifery case, but had passed in honours in a paper in obstetrics, to undertake the management of a difficult case of labour, it is equally absurd to allow the life or liberty of the subject to depend upon the evidence of one who, whilst skilled in his profession to the highest degree, may never have had an opportunity of putting that skill to a practical test in solving one of the many problems presented in the course of a criminal trial. I cannot speak too strongly of the necessity of being taught how to take notes. In the hospitals we are all impressed with the utility of making notes of the cases in the wards, and we all know how the taking such notes assists us in after-life in the midst of a busy practice. For even where we do not take notes we require a systematic method of inquiring into any case brought to our notice. But in the case of the medical jurist systematic note-taking is infinitely more important. In the first place we are permitted to use notes in the witness box, provided they are taken at the time at which we make our examination. Secondly, we may be called upon to give evidence several months after we make our examination. Besides, it often occurs that at this later period a line of defence is set up which is not indicated at the earlier stages. If our notes are not carefully and skilfully made we may find that questions will be put to us which we are not able to answer, or perhaps we are induced to give an answer which we would not otherwise have given if we had used our powers of observation and anticipation to a greater extent.

Fifthly, we do not possess as extensive a literature on this subject as its importance demands. Far be it from me that I should belittle the excellent works of those who have written on the subject in this country. But it is amusing to hear legal luminaries talking of Taylor with the same awe and veneration which the Christian shows for the Bible or the Mohammedan for the Koran. Why, only at the last assizes a quotation from this work was thrown at me in the course of cross-examination, and great wonderment was expressed at my daring to think that there were other authorities besides Taylor. The fact that this work is looked upon with so much awe by the legal profession is evidence that our literature on the subject is by no means prolific. When, however, we come to compare our work with those of Continental authors we must see at once that we are behind the times. If we take the works of one alone, Professsor Paul Brouardel, the contrast with our own is very marked. He has written numerous works on the subject. Taking those alone which I possess—*La Pendaison. La Suffocation. La Strangulation, et la Submersion; La Responsabilité Médicale: Le Mariage; Les Empoisonnements; l'Exercice de la Médecine: Les Asphyxies; Les Explosifs: l'Avortement; La Mort et la Mort subite;* and *Infanticide*—we find a very voluminous account of the various branches of legal medicine with which none of our works can compare. Each of these works is not only exhaustive, but contains numerous illustrations of the various problems presented in medico-legal inquiries. Here, again, the superiority of the works of Brouardel is due no doubt to the fact that the French Government is more alive to the duties of the State in the matter than our own. Again, I find that another French author, Tardieu, has written a volume of an extensive nature on wounds from a medico legal standpoint.

Sixthly, and probably as a result of all the previous causes, the examining bodies do not give sufficient prominence to the subject. The tendency of the present day is to afford those who are qualified an opportunity of taking the higher degrees in special subjects. Thus, in the London University the M.D. can be taken in medicine, obstetrics, pathology, mental diseases, State medicine, or tropical diseases. One of the subjects under State medicine is forensic medicine, but it is made quite subsidiary to public health. I should like to know what there is in common between public health and forensic medicine, except that they may both be classed as State medicine. Why should one be made subsidiary to the other? Why should not special degrees be granted to those who have made special efforts to qualify as medical jurists as well as to those who aspire to become medical officers of health? The State should protect the health of the community, it is true, but it should also take steps to safeguard the life and liberty of the subject—it should do everything to prevent crime as well as disease.

Lack of Material and Want of Support by the State.

If in the first place we consider the lack of material, we will find that the State is mainly responsible for this dearth of the necessary material. In the other medical sciences the material is largely in the hands of the profession, because in all the large hospitals and medical schools abundant cases are provided, which give students and teachers ample opportunity for research and observation in medicine, surgery, pathology, ophthalmology, etc., but in these same institutions we have little or no material for the practical teaching of forensic medicine. The question hence arises, In whose hands is the material which could be utilized for the adequate practical study of forensic medicine? The answer is obviously the State. All cases which are the subject of criminal investigation are in the hands of the police. Those who have the opportunity of examining such cases have the material presented to them which could be of the greatest value in studying this subject. Let me say at once, in answer to those who might possibly think the material very limited, that I can state from my own personal experience that the material is ample for accumulating useful information and making valuable investigations. It may be asked, then, Why do those of us who are in the position of police surgeons in divisions where a large criminal experience is obtained not collect such information? The answer is very simple. We are engaged in general practice, and the necessity of attending to other duties does not permit us to give the time that would be necessary to turn to full account the material at our command. I have myself kept a record in some detail of every case I have attended, but when I assure you that in return for extra work in such cases you are met by niggardliness on the part of the authorities it can be well understood why medical men are not inclined to devote any time to this subject, and why the busy practitioner would do all in his power to avoid being called as a witness in a criminal trial. I would like to say here that in my various remarks in regard to remuneration I do not refer to the payments made by local authorities, but to those made to witnesses and those allowed by the Treasury in special cases which are under the control of the Imperial authorities. The difficulty made in obtaining proper remuneration for special examinations is, I consider, an insult to the profession.

Next we come to the lack of support on the part of the State to this science. To put the matter shortly, it may be at once stated that the fees paid for medical evidence are not sufficient adequately to remunerate witnesses for their time and skill, let alone to stimulate medical men to devote their special attention to the study of the subject. It is true there has been a slight improvement during recent years, but it is of such a trifling nature, and has been made in such a grudging manner, that it is not really worth considering. To show how the medical witness has been treated I would quote from the memorandum published by the Home Secretary and dated November 12th, 1903, "Except in one point the fees under this head follow the recommendations of the committee, with a few alterations in the wording, which seemed to be necessary to avoid ambiguities. The one exception

is that the fee recommended by the committee for making a preliminary examination in cases of suspected sexual offences has been omitted. Were this fee inserted in a table of fees to witnesses it would be payable only where the examination leads to a prosecution in which the medical man who made the examination is called as a witness. It appears to the Secretary of State to be wrong in principle that a medical man should be placed in the position of earning a fee if he recommends a prosecution and of receiving nothing if his report negatives the institution of proceedings. In such cases the medical man makes the examination as the adviser to the police or to the prosecutor, and he is entitled to receive an appropriate fee whether the examination is or is not followed by criminal proceedings." This refers to a recommendation made by the departmental committee advising a fee of one guinea. But what an admission of incapacity on the part of the State! What an insult to the profession which in all ages has done such an amount of voluntary work in the interest of humanity! Surely if the fee be merited, let it be paid, and let the Secretary use his powers to see that where there are no proceedings the payment be made. Reference is also made to the cases where the medical man recommends a prosecution. Does he so recommend? He merely gives his opinion on the conditions which he is requested to investigate. Other matters have to be considered. I have frequently examined such cases where my evidence would have supported a conviction, but in which no proceedings were taken on account of the difficulty of identifying the prisoner, or where the evidence of the complainant, especially when a child, was of such a flimsy nature as not to justify the police in proceeding. On the other hand, I have examined cases in which my evidence was by no means strong enough in itself to justify proceedings, but where the other evidence was sufficient to enable the police to prosecute.

If, then, the State does not give financial encouragement to medical men to act as witnesses, it is little wonder that, speaking generally, the profession gives so little attention to the subject. There is certainly no inducement held out to medical men to specialize on the subject and to devote their efforts to any investigation or research in this direction.

Suggestions for Improvement.

Criticism is easy I know, and the best of our systems or institutions is open to attack by the veriest tiro. I would now, therefore, offer a few suggestions of a constructive character. These are the natural outcome of the criticism just offered.

In the first place, the State should recognize what is its duty in the matter, and see that it does its share in educating and encouraging medico-legal experts. If the State will only do this, I believe that the other defects in our system will be readily adjusted almost automatically. The State, as I have already said, has in its possession the material for the investigation and collection of records. Let the Home Office, then, divide the country into areas, and let it appoint experts or medical officials to devote their whole time to medico-legal work in their areas. Let these gentlemen be called into all cases except trifling ones. Say that a murder has been committed at A—— the local practitioner will at once examine the body on the instructions of the police. Now, if such an official as I suggest were appointed, he should be communicated with at once, and he should conduct the whole of the inquiries *in conjunction with the local practitioner*, be present at the necropsy, attend the inquest, police-court, and assizes, and he should report to the Home Office on the case, and advise counsel on the medical aspect at the trial. In addition he should keep a record of all criminal cases in his district, and make such inquiries as he thought fit from the local practitioners, and his records should be preserved and tabulated. The Home Office should also appoint a board of experts, who should advise them at head quarters. If such appointments were made by Government, there would at once be a stimulus for medical men to specialize and to pay greater attention to the study of the subject. Such experts, if appointed, would provide the material necessary for improving the teaching of the subject. And in some cases I have no doubt these same experts would make admirable lecturers. Once this was done the literature of the subject would increase and improve, and the examining bodies would recognize the necessity of granting diplomas in legal medicine.

Thus the medico-legal expert would take his place with the specialists in the other branches of medicine, and the medical witness would earn greater respect and a higher status.

I have now placed before you in a cursory and perhaps disjointed manner some criticism upon the position which legal medicine occupies in this country, together with certain suggestions as to its possible improvement. I feel that I have hardly done justice to the subject, but I shall feel content if it may induce some one to take up the subject in a more thorough and able manner.

There is a great fascination in the study of the many problems presented in the course of medico-legal inquiries. The opportunities are not, it is true, offered equally to all, but as every member of the profession is liable to be called in as a witness in a criminal trial, it is of the greatest importance to all of us that everything should be done to encourage the study of legal medicine, and that the medical witness should be treated with a greater amount of respect.

CANCER, ITS ETIOLOGY AND TREATMENT BY TRYPSIN.

BY JOHN ALCINDOR, M.B.EDIN.

THIS thesis, based upon clinical observations on two cases of cancer treated by injections of Fairchild's trypsin, as recommended by Beard, is an attempt to show that cancer is primarily a local disease caused by chronic irritation of tissues in a state of lowered vitality, it is also intended to indicate the value of trypsin in disease.

CASE I.

A. Y., aged 67, multipara, for several years suffered from asthenia and pain in the left iliac fossa, which was on June 4th, 1907, the seat of a hard, nodular tumour, measuring 9½ in. vertically, and reaching from the ilium to within 2 in. of the umbilicus. In the abdominal wall near the navel was an oval mass about the size of a duck's egg; the right breast was affected, with the axillary and both supraclavicular triangles infiltrated; the left triangle was occupied by a mass the size of an orange. The eighth, tenth, and twelfth ribs on the left side were attacked near their vertebral articulations, and the left infrascapular region was the seat of a round, flattened, freely movable mass, 2 in. in diameter. On the middle finger was a deposit of urates the size of a large pea. The family history was free from malignancy; her father suffered from "rheumatic gout," and for upwards of thirty years she suffered from gastro-intestinal disorders, obstinate constipation being a marked feature, also from rheumatism. The treatment was instituted on June 10th, discontinued on September 14th, and the patient died on October 10th. The condition just before death was as follows: Complete disappearance of the growths in the abdominal wall and in the infrascapular region, a considerable diminution in size of the iliac mass, which then measured 6 in. vertically, and whose inner border was 5½ in. distant from the middle line; the other growths showed no improvement. Progressive weakness, abscesses, bedsores supervened, and two growths made their appearance in the right gluteal region, where trypsin had been injected, the uratic deposit disappeared.

CASE II.

A. M., aged 37, multipara, had no family history of cancer. Her previous history was extremely bad; from childhood she suffered from gastro-intestinal troubles, constipation, and rheumatism; was admitted into University College Hospital, but was discharged as her case was considered inoperable. Her condition on June 17th, when the treatment was begun, was as follows: Carcinoma mammae, originating in the left, infiltrating the axillary and supraclavicular glands; the middle of the sternum was attacked, and the right mamma was the seat of a similar but smaller growth; the right axillary and supraclavicular glands were free. The right hip exhibited features of considerable interest; the skin was red, shiny, tense, and tender; the joint was held in a semi flexed position, and the slightest attempt at movement caused intense pain; the lumbar spines were tender on pressure, and two finger-joints were red, swollen, and painful. I had on a previous occasion seen the patient suffering from a similar condition of the right temporo-maxillary joint; the general aspect of the patient was one of extreme debility, emaciation, and pain, though the disease had started only twelve months ago. The treatment lasted from June 17th to July 16th; three days later the patient died from symptoms indicating toxaemia. Her condition just before death: Complete disappearance of right mammary tumour, considerable diminution in size and well-marked softening of the others; the physical signs connected with the right hip disappeared,

leaving it movable but the leg 2 in. shorter than the left; the upper fourth of the femur felt thickened; this condition was obviously one of the forms of rheumatoid arthritis.

The salient features common to both cases were: (1) Neither had a family history of cancer; (2) both had a previous history with evidence of faulty metabolism and malnutrition; (3) both were multiparae, were subjected to the usual irritations incidental to parturition, and they suckled all their children; (4) both suffered from cancer of the breast. In the first case the injection of trypsin into the right gluteal region caused the appearance of two growths which were hard, nodular, tender, movable, free from fluctuation, and the skin was normal. Were these tumours the result of transplanted cancer cells, metastatic, or caused by the irritation of the slowly absorbed trypsin? I never at any time injected trypsin into a tumour, thus closely following Beard's directions. I sterilized in 1 in 20 carbolic the syringe and needles used before and after each injection; the gluteal region is a very unusual site for secondary growths. I am therefore forced to the conclusion that they were caused by the irritation of the debilitated tissues by the trypsin. It must be borne in mind that this phenomenon took place towards the close, when abscesses, bedsores and progressive weakness supervened. I must also state that I took elaborate antiseptic precautions against microbic infection. Dr. Eric Meinert has shown that the alcoholic habit is a cause of the high mortality from cancer, diabetes and suicide in the German army and navy.[1] Dr. William Ogle in the Registrar-General's report for 1889 stated that one out of every twenty-one men and one out of twelve women reaching the age of 35 eventually died of cancer. Some authorities believe that the disease is more common among the poor than the well-to-do. The fact is, the poor live in unhealthy surroundings, eat improper and insufficient food, which results, as every body knows, in lowered vitality, the women beget large families, suckle their children, often for too long a period, they contract genito-urinary diseases with accompanying chronic discharges; such conditions enhance the incidence of cancer among women, as seen in the Registrar-General's report for 1901-1905, where the mortality for cancer is given as follows: Uterus, 19,645; breast, 14,308; stomach, 12,048; liver and gall bladder, 11,601; intestines, 5,870; rectum, 5,086; ovary, 1,626; abdomen, 1,526; peritoneum, 1,401. In gastric cancer there is always a previous history of dyspepsia or ulcer; the result of either condition is faulty metabolism which leads to malnutrition and lowered vitality, the ingestion of food gives rise to irritation of the debilitated organ, the pyloric orifice suffers more frequently because it has more work to do than the fundus; biliary concretions are the chief determining causes of malignant disease of the biliary passages (Mayo Robson), because gastro-intestinal and especially hepatic faulty metabolism are the *fons et origo* of gall stones. Dr. Bashford, in his July report on cancer research, stated that (*a*) melanotic sarcoma in the native races of Africa had frequently been reported and always as arising on the soles of the feet; (*b*) for India the returns referred mainly to the surface of the body and in the case of Kashmir epithelioma of the abdominal wall occurred with a constancy met with nowhere else. The native African walks barefooted on rough ground often baked by the burning rays of a tropical sun. Dr. Bashford has informed me that the natives of Kashmir are in the habit of wearing a "kangri"—that is, a small charcoal oven—next to the abdominal wall. In both cases the tissues in contact with the irritant alone suffer at first. I believe it is generally accepted that an excessive stimulation of tissues gives rise to increased growth at the expense of the vitality of those tissues, the irritant acting upon the debilitated tissues produces destruction of those tissues or induces retrogression to a lower type of cell. Mr. Lenthal Cheatle has pointed out the connexion between skin cancer and disease of the eleventh dorsal posterior root ganglion.[2] It is probable that disease of the ganglion occurred in the first place with resulting lowered vitality of the area of skin supplied by it; in such a state the chafing of the underclothing or a belt might have proved sufficient as a determining factor. Lugaro has proved that peripheral irritation causes degenerative changes in the posterior root ganglion of the spinal nerves, and Dr. Purves Stewart has corroborated these observations in some of Mr. Cheatle's cases.[3] This theory may account for the melanotic sarcoma in Africans, and abdominal epithelioma in Kashmir natives. Mr. Jonathan Hutchinson[4] says: "We have of late years appreciated more and more clearly the fact that cancer often, or indeed, usually, is during its early stage a modification of tissue growth which is confined to the part in which it begins." Legrand says the neoplastic process is undoubtedly one of deranged cellular proliferation.[5] I hold that the conditions necessary for the "modification of tissue growth" or "deranged cellular proliferation" are those of lowered vitality and chronic irritation. How do lowered vitality and chronic irritation give rise to cancer? Probably the tissues, deprived of their proper food supply or nerve impulses, or again, exhausted from over-stimulation, do not respond normally to stimulation; they are thus either destroyed or they assume new characteristics.

TRYPSIN AS A THERAPEUTIC AGENT.

Trypsin does not seem to have any evil effect on healthy living tissues, but in the presence of an alkali it splits proteids into proteoses, peptones, and polypeptides; these are further split up into leucine, tyrosine, aspartic acid, hexone bases, and other ammonium compounds. It attacks all proteids alike, and exercises no selective action on cancer tissue. These facts would explain the reason why the two cases showed marked improvement up to a certain point; also why the first patient grew progressively weaker, while the second died rather unexpectedly from toxaemia. The trypsin not only digested the growths but attacked the elaborated proteids, which were circulating in the blood for the nourishment of the organism, and converted them into toxic products; hence trypsin cannot be injected into the body for an indefinite period without producing deleterious effects, so giving rise to the very condition suitable for the growth of cancer. I am, however, convinced of the power of trypsin to digest cancer, but it must be applied directly to the disease and not in its neighbourhood. Cancer of the internal organs cannot be successfully treated by this method, whereas rodent ulcer, epithelioma, and cancer of the cervix are eminently suitable for the treatment provided the cases are in the early stage. In view of the conflicting opinions of gynaecologists regarding operation, I think trypsin ought to be given a fair trial in cervical cancer. It should also be used in inoperable cases where the outlook is hopeless and palliative treatment the only course to adopt. Finally, it is in nutritional disorders in which there are circulating in the blood imperfectly metabolized substances like uric acid that injections of trypsin are of the utmost benefit. In the course of three weeks Case I got rid of a uratic deposit and rheumatic pains in the hands and knees. In the same time Case II was greatly relieved of a condition which could only be diagnosed as rheumatoid arthritis.

CONCLUSIONS.

Lowered vitality, whether due to faulty metabolism, alcoholism, over-stimulation, diseases of trophic nerves, the debilities, general or local, is, in my opinion, the predisposing factor in malignant disease. Chronic irritation, of no matter what character, is the determining factor; the cells of the tissue irritated, unable to respond normally to the irritant, assume characteristics suitable for their environment, thus conforming to a natural law.

Trypsin is of considerable value in cancer. Uteri carcinoma cervicis, rodent ulcer, and epithelioma are eminently suitable for the treatment. Gout, rheumatoid arthritis, and chronic rheumatism ought to be treated by injections of trypsin when other better-known methods have failed. Regarding amylopsin, I may state that after injecting it singly and in combination with trypsin I have found it of no value in the treatment of cancer.

REFERENCES.

[1] Drink-Proof, BRITISH MEDICAL JOURNAL, June 22nd, 1907. [2] Inflammatory Changes in Posterior Spinal Root Ganglia in Cases of Cutaneous Cancer, ibid., July 20th, 1907. [3] Note upon a Possible Relationship between Carcinoma and Nerve and Trophic Areas, ibid., April 18th, 1903. [4] Hutchinson's *Archives of Surgery*, p. 122. [5] *Sem. Méd.*, No. 8, February 20th, 1907, and BRITISH MEDICAL JOURNAL, November 23rd, 1907.

THE twenty-fifth meeting of the German Congress of Internal Medicine will be held at Vienna from April 6th to the 9th, under the presidency of Professor Fr. von Müller of Munich. The programme of discussions includes the following questions: The relations of diseases of the female genital organs to internal diseases; recent methods of clinical examination of the functions of the intestine and their results.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

THE USE OF THE SETON IN CERTAIN INTRACTABLE NERVOUS CONDITIONS.

I AM glad to see that Dr. Eldon Pratt, in the BRITISH MEDICAL JOURNAL for December 7th, 1907, confirms my experience of the value of the seton in alleviating symptoms in certain obscure nervous affections. Mr. Walter Whitehead of Manchester was the first, as far as I am aware, to publish a case[1] of migraine which, having defied all ordinary treatment, was cured by a seton. Mr. Colin Campbell[2] of Southport and I[3] have both published cases of distressing Ménière's symptoms cured by this method, and I have also published a case[4] of true Ménière's disease that was much relieved in the same way. Added to these, Dr. Pratt now refers us to a remarkable recovery for nearly two years, brought about by a seton, in a child suffering from symptoms of cerebellar tumour. Such reports as these cannot be disregarded, and it is my firm belief that the seton, in an aseptic condition and management, is now going to play an important rôle in the treatment of certain obstinate conditions of nervous origin, and especially in those that have often hitherto been regarded as incurable.



It is cases of this kind that, "having suffered much at the hands of many physicians," eventually find their way into the consulting room of the quack or the tabernacle of the Christian Scientist. It remains, therefore, with the general practitioner (for such cases chiefly fall to his lot) to decide whether they shall still frequent those undesirable by-paths or whether their persistent symptoms shall receive at the hands of the medical man timely relief in a rational and practical manner.

In reference to technique and Dr. Pratt's observations thereon I may say that since the date[5] of my original communication in July I have had a special seton knife-needle made for me by Messrs. Arnold and Sons, an illustration of which will be found accompanying this article. It differs from the old seton knife in having a narrow shaft, while the tape-bearing handle is also narrower than the double-edged cutting blade; hence, once the head of the instrument has pierced the folds of skin the passage of the remainder, carrying the tape with it, is effected without any further increased friction.

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[1] BRITISH MEDICAL JOURNAL, February 9th, 1901, p. 326.
[2] Ibid., March 29th, 1902, p. 806.
[3] Ibid., May 11th, 1907, p. 1107.
[4] *The Lancet*, March 5th, 1904, pp. 649–651.
[5] BRITISH MEDICAL JOURNAL, July 13th, 1907, page 93.

THE PATHOLOGY OF DIABETES.

WHEN sugar is absorbed into the blood, from whatever source, all the cells of the body fix as much of it as they require in the form of glycogen, the liver perhaps having power to store whatever is in excess of immediate requirements. In order to make use of this glycogen it must be reconverted into sugar, and this, in the case of the liver, is done by means of a ferment. Now, this ferment may be the normal sugar-forming ferment of the pancreas, which, after performing its function in the intestine, is absorbed and made use of again in the tissues, perhaps undergoing some change till such times as it is wanted. When this ferment is not present, the glycogen in the cells cannot be made use of. But sugar may be an essential requirement of these cells, and, with the power of using the fixed glycogen gone, the small normal quantity floating in the blood may be of little use to supply this requirement. Hence a demand on all sides for sugar, resulting in increased appetite, and the conversion of proteid and anything that can be so transformed into sugar, so that the sugar percentage of the blood is raised above normal. But as soon as this occurs two things happen: (1) There is a demand for water, producing thirst, on account of the increased density of the blood, and (2) the kidneys begin to filter off sugar; so that, with abundance of glycogen and sugar, the tissues are starving for it, the cells striving to establish a higher sugar percentage in the blood, the kidneys always frustrating them. This theory would explain the good of pancreatic extracts in diabetes; the value of morphine may be simply that it diminishes metabolism.

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THE SOURCE OF OVA.

IN a paper entitled The Determinants of Abortion[1] the statement is made (p. 1567) that "it has been satisfactorily demonstrated that the ova are corpuscles derived from the superficial germ epithelium." This is a mistake. The early presence of these "corpuscles" ("primary germ cells") in the superficial germinal epithelium of the ovary has long been known and satisfactorily demonstrated; but Professor Waldeyer went a step further, and regarded the demonstrated fact of their presence in the germinal epithelium as evidence or proof that these germ cells were derived from it. Waldeyer's[2] view was accepted by many zoologists, and is still taught in most of the medical text-books and in Professor Haeckel's books, notwithstanding the fact that Professor Waldeyer has abandoned his old view. Dr. Beard has demonstrated that a fertilized ovum gives rise, by segmentation, to a larval (asexual) structure and a definite number of germ cells, one of which germ cells develops into an embryo, into which embryo the other germ cells migrate by passing from the yolk sac, along the yolk stalk, into the embryo, and ultimately reaching the germinal epithelium.[3] At this stage of development the germ cells are seen "embedded" in the superficial germinal epithelium, though not "derived" from it. Mr. Bennet M. Allen, of the University of Wisconsin, has lately reinvestigated this matter, and he writes:[4] "The sex cells lie among the peritoneal cells, but are not derived from them." Thus it has been demonstrated that the germ cells are formed prior to the embryo, that there is a continuity of germ cells from generation to generation, and that the body (or soma) serves merely as their host. Professor Waldeyer accepts this new view, and, writing about it in 1903, said that the consequences of this doctrine of the continuity of germ cells are almost unbounded for every branch of biology.[5]

LOUISE APPEL, B.Sc., M.B., B.S.Lond.

London, N.E., Nov. 30th.

[1] BRITISH MEDICAL JOURNAL, November 30th, 1907.
[2] Waldeyer's *Eierstock und Ei*, 1870, p. 43.
[3] *Review of Neurology and Psychiatry*, January, 1904.
[4] *Anatomischer Anzeiger*, September 6th, 1906, p. 232.
[5] Article in Oscar Hertwig's *Handbuch der vergleichenden und experimentellen Entwickelungsgeschichte der Wirbelthiere*, vol. i, p. 405.

CANCER OF PYLORUS AND LIVER: FATAL HAEMORRHAGE.

THE following notes on a case of fatal intra-abdominal haemorrhage in a case of malignant disease of pylorus and liver may prove of interest. I publish them because in Rolleston's wonderful work I find no mention of a similar case.

A Chinese steerage passenger, aged about 50, was found dead in his bunk on the morning of the second day of a voyage to China. The previous night had been rough, and from the statements of his fellow passengers it would seem that the deceased had vomited considerably during the first part. Later he became more composed and appeared to be asleep, so that it was only on the steward attempting to arouse him some hours afterwards that he was discovered to be dead.

Post mortem the body showed no external marks of violence but was extremely pale, and fluid could be detected in the abdomen, on opening which a quantity of fluid blood escaped. The liver was found to be riddled with secondary deposits of malignant disease, the primary seat of which was in the pylorus. The deposits in the liver showed degenerative changes in many instances, in some of the nodules haemorrhages more or less recent had occurred. In spite of careful search the exact point of origin of the haemorrhage could not be discovered, but it appeared to come from a nodule which occupied the portal fissure. Owing to hot weather and insufficiency

of alcohol, the specimens unfortunately decomposed before sections could be made. Macroscopically, however, the growths appeared to be carcinomatous.

There seems to be little doubt that the strain of vomiting caused the haemorrhage from one of the degenerated nodules. When the deceased came on board he did not present any symptoms of impending dissolution; in fact he was extraordinarily well nourished for a man with such extensive malignant disease.

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DEPRESSIONS OF THE SKULL DURING DELIVERY.

THE memoranda in recent issues of cases of depression of skull bones during difficult delivery recalled notes of a similar case that occurred in the maternity ward of the Melbourne Women's Hospital, whilst I was a house-surgeon there:

A multipara, aged 43, fifth labour; previous labours had resulted in deaths of children inter-partum; admitted in labour, with head at pelvic brim; pelvis contracted antero-posteriorly; labour pains strong. After some hours, as there was no progress, forceps were applied, and with some difficulty a large male child was delivered. There was a depressed fracture of the right frontal bone, the whole bone having been dented in. Ossification was advanced, and at the lowest point of depression a spicule of bone had penetrated through the scalp. The non-ossified part at the fontanelle edge was tilted up. I tried to elevate the bone by drawing the scalp at the bottom of the depression up with a catch forceps, but this seemed to lock the broken bits still more firmly in their malposition. The child's heart was beating strongly, but there was no attempt at respiration. Stimulating had no effect. The cord was tied and artificial respiration given, and the larynx was intubated with a No. 6 catheter, and I "breathed for" the child for some minutes, but these measures were all useless. The heart was failing, and it was plain that the brain compression would quickly kill the child, and that it had to be relieved. The only surgical instrument in the ward that appeared of any use was a long, thin-bladed scissors. I took this apart, and entered the thinner blade through the scalp where the bone was tilted at the fontanelle edge, pushed it along the under surface of this fragment, and when the point of the scissors came to the centre of the depression the whole area of depression was easily levered into position. The child at once cried loudly. Though the fracture could be detected for a day or two, at the end of a week there was apparently no difference between right and left sides, and the small puncture at the fontanelle edge healed at once. The child was bandaged with its left side to a pillow, so that no pressure came to the injured part. A pad of sterilized gauze was placed over the puncture and the whole injured area. There was no need for after-treatment, and three months later no trace remained of fracture or puncture.

In this case there was no time for any set surgical operation, but the good result, both immediately and remotely, was so striking that I determined to use a similar method in any such case, even when time might allow a set operation. In country midwifery work one is sometimes miles from help, and saws and trephines do not form part of a midwifery outfit though scissors do. The small puncture made by a scissors' blade is negligible, and if care be taken to keep the blade point always close to the bone no harm can be done to brain, membranes, or sinus.

Boonah, Queensland, Australia. HAROLD SOUTH, M.B.

BIRTH IN A CAUL.

I RECENTLY attended a woman in her third confinement. I saw her first at 10 15 a.m., when labour was just beginning. I diagnosed a "head presentation" and left. Later in the same day, at about 2 20 p.m., I was summoned to the case with a message that the baby was born dead. On arrival, I found that the child, with the placenta and membranes intact, had come away as a whole, *en masse*. I ripped up the membranes with my finger, but the child, a female of 8 months, was dead, evidently drowned in the liquor amnii.

Sidcup. C. R. A. SUTTON, M.D.Camb.

THE Order of Merit of the Japanese Society of the Red Cross has been conferred on Dr. Nicholas Senn of Chicago, with the sanction of the Emperor of Japan.

AT a recent meeting of the Metropolitan Asylums Board, the Hospital Committee recommended that four ambulance tramway cars be obtained for use at the small-pox hospitals at an estimated cost of £850. It was agreed to purchase two cars only.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

YORK COUNTY HOSPITAL.

A CASE OF DOUBLE POPLITEAL ANEURYSM.

(Reported by W. H. JALLAND, F.R.C.S., Senior Surgeon.)

WALTER M., aged 34, a labourer, was admitted on March 9 h, 1907, under my care, complaining of a large swelling round the right knee-joint.

Previous History.

Towards the end of August, 1906 when walking in the street, he felt a sharp pain in the back of his right knee; the knee began to swell just behind the tendon of the biceps; the swelling gradually increased and appeared also on the left side in the region of the left condyle. The patient continued working up to a few days before admission.

He first saw a doctor when he came to the out-patients' department just before Christmas; he was then advised to come into the hospital, but would not stay then; he appeared again on March 9th and was ordered inside. He gave no history of tubercle, syphilis, or injury, or of any previous affection of the leg. He had had gonorrhoea some years earlier.



Condition on Admission.

The swelling was fusiform in shape, spreading out on either side in the region of the condyles of the femur. It was not so marked behind in the popliteal space as laterally. There was no swelling in front, and no effusion into the joint. The tibia and fibula were not affected, and there was no eggshell crackling. On the outer side and behind in the popliteal space the tumour was soft and fluctuating, and there was distinct expansile pulsation. There was a distinct bruit to be heard over the tumour with the stethoscope. The swelling on the inside was firmer, but there was also fluctuation there. Pulsation in the dorsalis pedis artery was demonstrated. He complained of deep pain, aching in character and worse at night. The knee was semiflexed, but he could not bend it any more. A skiagram showed the outline of the femur apparently normal; the tumour did not cast a shadow.

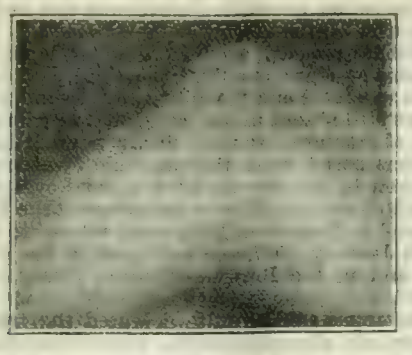
The diagnosis apparently lay between aneurysm of the popliteal artery and pulsating sarcoma, with the majority of facts in favour of aneurysm.

On March 11th the patient asked me to look at his left knee, as he felt some pain in the popliteal space, and a sensation of beating there. On examining the knee a swelling was found in the middle of the popliteal space in the line of the popliteal artery, about the size of a small pear, swelling just under the skin and superficial tissues, and giving expansile pulsation. A loud bruit could be heard with the stethoscope; this was evidently an aneurysm of the left popliteal artery.

Operation.

On March 12th, under chloroform, I ligatured the right superficial femoral artery at the apex of Scarpa's

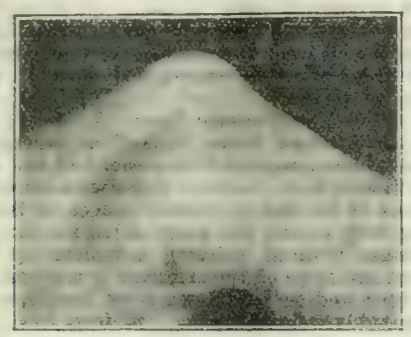
triangle; the wound was closed with silkworm gut. The leg was swathed in sterilized wool from the toes upwards, and the patient put back to bed with the foot raised.



After-History.

The stitches were removed on March 21st, when the wound was found to be quite healed.

On March 24th the foot was found to be much discoloured, and gangrene set in; a line of demarcation having formed, the leg was amputated below the knee on April 23rd. The stitches were taken out on May 2nd, when the wound was found to be healed.



As for the aneurysm in the left leg, on March 21st digital pressure was applied to it by the house-surgeon and six nurses, and continued from 5.30 p.m. until 9 p.m., when all pulsation was found to have ceased in the tumour; the leg was wrapped in cotton-wool. The aneurysm gradually diminished in size, and the patient was allowed to be up on a couch on May 11th, and he left the hospital well on June 3rd.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

E. H. TWEEDY, M.D., President, in the Chair.

Friday, December 13th, 1907.

THE TEACHING OF PRACTICAL OBSTETRICS.

SIR WILLIAM SMYLY, in introducing a discussion on the changes which have been suggested by the General Medical Council in the method of teaching practical obstetrics, said that the General Medical Council, in its efforts to improve both education and examination in obstetrics, had been hampered by the necessity of trying to reconcile what was desirable with what was possible. In England the opportunities for the teaching of practical midwifery were of the most meagre description, so that they were forced to make very moderate demands upon students with regard to the practical study of midwifery, and even those demands would appear to be impossible to carry out in practice. But in Ireland, with its great lying-in hospitals, the position of the case was different. It would be a retrogression to adopt any of the recommendations of the General Medical Council, for a six months' attendance on the practice of any one of the lying-in hospitals was more likely to produce an efficient obstetrician. How, then, was it that, as pointed out by Dr. Boxall, the results in general practice in Ireland were worse than in England? So far as the fault could be brought home to Irish practitioners, it could only be due to their having failed to profit by the advantages placed at their disposal. In order to remedy this, students must be either compelled to attend a certain number of confinements or demonstrations, or, what would be much better, a desire to study practical obstetrics must be aroused in them by adopting the recommendations of the General Medical Council with regard to practical clinical examination. As to the value of such an examination there could be no second opinion, but as to the possibility of carrying it out in practice, there was ample room for discussion. Every student ought to be made to feel that a practical knowledge of obstetrics and gynaecology would be as useful in passing his examination as would be a similar knowledge of other departments. Would it not be possible to select a certain number of students by ballot who would be required to examine an obstetric or gynaecological case instead of one surgical, medical, or ophthalmic one?

Dr. HORNE did not see why men could not be brought for examination to a lying-in hospital just as they were brought to a clinical hospital for examination of the chest. It was a grave defect in the teaching at present that the students had only to satisfy the registrars of the various licensing bodies that they had taken out their midwifery attendances. Midwives in Dublin were in a far better position. They were under the full control of the hospital, and were obliged to attend regularly day after day; they attended to the lectures, to the clinics, and they saw cases from day to day. The students did not do so. The question of the actual number of labours was more difficult. Annually in Dublin something like 200 students had to take out their course of midwifery. If they simply attended for three months, it would be utterly impossible to supply them with material for each man to take out his twenty conductions. The period was too short. How it would be accomplished in England he did not know, but if in Ireland they were unanimous, and kept to their rules, they would be still far in advance of the recommendations of the General Medical Council, and would have nothing to fear from them.

Dr. KIDD thought that the practical aspect of examinations might be improved if it were made compulsory on students to have attended not only a number of cases in the house under the supervision of the medical officer, but also at the end of their period to give clinical notes of the whole course of the puerperium for at least five cases. As regards the period of six months, he felt that a man who lived in the precincts of a hospital for one month would, in all probability, lay up a greater store of knowledge than one who attended a lying-in hospital two days in the week for three months.

Dr. PUREFOY said they agreed that the clinical character in the examinations should be present in a greater degree than it had been, and an endeavour should be made now to bring it about. He suggested that some arrangement might be made with the masters of the hospitals by which the obstetrical examiners of the colleges might make a monthly visit, and have opportunity given to examine certain students. This would obviate the difficulty of carrying out the practical examination of a large number of students at one time. The additional advantages thus secured by the students was an important consideration. An effort should be made to develop the plan of encouraging students to reside, even for one month, in some of the maternity hospitals. He did not think they should be in a hurry to adopt the General Medical Council's recommendation as to three months' attendance, except, perhaps, to the extent of allowing a certain number of students to take out their number of cases in that period.

Dr. HENRY JELLETT said they were all probably agreed that the recommendations of the General Medical Council were extremely good, with the exception of the alteration in the course of attendance at maternity hospitals from six to three months. In Ireland such an alteration would shorten the present course. A three months' course presented the great practical difficulty that students could not be given their twenty cases in so short a time. Students had a habit of going to maternity hospitals at certain months which were free from examinations and lectures, and, if limited to a three months' course, a student would frequently be unable to complete his necessary number of attendances or conductions, and the onus would then be thrown on the hospitals to provide

cases and to provide extra time. If the colleges adhered to their six months' course, and made some attempt to define regular attendance, they would not only maintain, but enhance, the reputation of the Dublin school, and would make the obstetrical training of the greatest value to the student.

Dr. Rowlette said the reason why the student took the minimum quantity of instruction in midwifery and gynaecology was that he was worn down by the earlier studies, which were made so great and difficult that his clinical work was often crowded into the last eighteen months. If teachers of anatomy and physiology were capable of doing their duty, botany and zoology were unnecessary. There were certain faults in the final examinations in midwifery and gynaecology which, if taken away, would leave the subjects more attractive to students; one was the excessive amount of surgery required by the gynaecological examiner; it was no part of the duty of an ordinary medical practitioner to be able to perform highly technical operations. If the student was going to be a specialist he must make up his work after his qualifying examination, not before it. As to the high mortality in private practice, he thought it might be explained by the fact that more cases of childbirth were left unattended by medical men in Ireland than in England.

Dr. Trevor Smith said that much of the fault for the existing state of things lay in the fact that many of the nurses turned out were of a very inferior class. He was not referring to the handy-woman, but to so called nurses who held diplomas.

The President said it was pleasant to see with what unanimity the members of the Obstetrical Section opposed the suggested curtailment of the period at present deemed necessary for attendance at maternity hospitals. Outside this Section he regretted to say that many teachers were of opinion that a six months' course of study of midwifery and gynaecology was quite unnecessary, and unless energetic action was taken he much feared that the Royal Colleges would cut down the course to three months.

It was then proposed by Sir William Smyly, seconded by Dr. Jellett, and passed unanimously:

> That the Obstetrical Section of the Academy of Medicine regards the recommendations of the General Medical Council regarding obstetrical teaching as in many cases a very great advance on the present conditions. The Section, however, considers that the suggested alteration of the period of attendance on a maternity hospital from six months would not be advisable or practicable. The Section considers that instead of reducing the attendance the licensing bodies should adopt such regulations as will ensure regular attendance of students at the clinical teaching of the hospitals. With regard to the adoption of a practical examination in midwifery and gynaecology, the Section considers that such a step is most desirable, and urges its members to aid it by all means in their power.

Dr. Purefoy then proposed, Dr. Kidd seconded, and it was passed unanimously:

> That a committee, consisting of the masters, assistants (past and present) of the Dublin maternity hospitals, be appointed for the purpose of urging upon the licensing bodies the inadvisability of changing the course of practical obstetrics from six months to three months.

LIVERPOOL MEDICAL INSTITUTION.

Mr. Frank T. Paul, F.R.C.S., President, in the Chair.

Thursday, December 19th, 1907.

The Tagliacotian Operation.

Mr. G. P. Newbolt showed lantern slides of a case in which the patient's forearm had been severely injured in a railway accident, both bones being broken, the skin much lacerated and the muscles and tendons partially torn away. A long flap of skin was raised from the abdomen below the left breast and the arm passed under it so that it lay as if in a sling. As a result of this operation, which was completed in two further stages, the arm had been saved, sensation was good and there was some movement in the fingers. The patient was still under treatment.

Ununited Fracture and Bone Grafts.

Mr. Rushton Parker related two cases of ununited fracture treated by clearing out unossified tissue from between the fragments and planting in the interval small pieces of bone clipped from the seat of fracture. One case was that of a carter, aged 35, whose left humerus had been broken six months previously and imperfectly united by incomplete callus, permitting movement and unfitting the limb for use. Union resulted in six weeks. The other case was that of a lady, aged 48, with total non union of the left ulna of eight months' standing. There was pain as well as weakness and flexibility at the seat of fracture. Union was still absent in six weeks, but after hammering the seat of fracture, resulted firmly a week later. The practice was based upon the principle laid down by Sir W. Macewen in his case reported to the Royal Society in 1881, repeated and amplified in his lecture at the University of Liverpool in December, 1906, again related to the Royal Society in January, 1907, and published in the *Proceedings* of June, and in the British Medical Journal of June 22nd, 1907.

The President said he quite accepted the truth of Sir W. Macewen's observations on which Mr. Parker had based his treatment of these interesting cases, but he did not consider that these observations contained the whole truth in reference to the development of bone. If so, how were they to explain the formation of bone in various tissues, such as arteries, where no bone cells had ever existed? The constant precursor in such cases was a calcareous degeneration. If this excited any inflammatory change, the young connective tissue formed bone. Calcified arteries, cysts, tumours, etc., in this way frequently originated bone in the neighbourhood of the calcareous deposit, and he would suggest that Mr. Parker should try the effect of the presence of phosphate of lime alone, as this could be introduced without a regular operation.

Tabetic Foot.

Mr. T. C. Littler Jones showed a patient, both of whose feet he had amputated on account of the condition known as tabetic foot. Lantern slides were shown of *x*-ray photographs of the feet at various stages of the disease, exhibiting very clearly the progressive melting away of the phalanges without primary inflammatory changes. The patient had none of the ordinary symptoms of tabes dorsalis, appeared to be in excellent health, and could walk remarkably well on his artificial feet.

Physique and Health in the Schools.

Dr. A. S. Arkle, in a paper dealing with his examination of children from schools of three classes under the control of the Liverpool County Borough Education Committee and the boys of a public school, claimed that the statistics showed clearly that there was a close relation between status in life and feeding and the growth and development of the children. The influence of feeding was shown by comparing the children of industrial schools with those of the lower class of Council schools. In regard to health, attention was drawn particularly to heart lesions, abnormality of the eye, ear, nose, throat, and teeth.

Dr. T. R. Glynn said that some of the facts demonstrated by Dr. Arkle's figures might have been anticipated, but others—as the small number of congenitally syphilitic children—were contrary to what might have been looked for; the explanation was in some degree the early death of the infected children.

Dr. E. W. Hope mentioned that the excellent work which had been done by Dr. Arkle during the last few years gave some indication of the magnitude of the task of the medical inspection of school children. It was absolutely necessary, as the excellent memorandum of the Board of Education pointed out, to follow up the examination by an extension of the amelioration of the sanitary condition which had already proved so powerful a factor in improving the health of children. The methods of carrying out the Act had not been decided upon, and if the views of the medical profession were focussed and brought to the notice of the education authority they would receive every consideration at the hands of that body. The medical inspection of school children was an extremely important accessory in public health administration.

Mr. J. Bark agreed that the Education Department's object was to prevent the occurrence in children of certain diseases, which was detrimental to their physical and intellectual future. In the case of adenoids, the earlier the removal was undertaken the better. The best results were obtained in children operated on between the ages

of 2 and 7 years; 90 per cent. of young children with enlarged faucial tonsils had adenoids. If the new Act was carried out efficiently the future generations would be freer from deafness and chest troubles than the present. Dental examination and treatment were most important, oral sepsis was responsible for much of the physical deterioration of our race.

Dr. A. C. Wilson, Medical Officer to the Truant Schools at Hightown, agreed that under-feeding was the great cause of bad physique in the poorer classes of children. He rarely met with congenital syphilis, and this he attributed to the infected children dying out or getting into special institutions for the deaf and dumb, blind or imbecile, etc. The most pressing reform needed was the better care of the teeth. He was glad to say that the Liverpool Education Committee had recently appointed a dentist for all Liverpool schools. He believed that defective vision in children was to some extent due to the eye not being trained to distances.

Several other members having spoken, Dr. T. R. Glyn proposed and Dr. G. Stopford Taylor seconded the appointment of a Subcommittee of the Institution to consider and report on the memorandum of the Board of Education. This proposal was adopted and a Subcommittee elected.

ROYAL SOCIETY OF MEDICINE.

Obstetrical and Gynaecological Section.

At a meeting on December 12th, 1907, Dr. Herbert Spencer, President, in the chair, Dr. W. E. Fothergill (Manchester) read a paper on the *Supports of the pelvic viscera*. He considered that the current teaching of gynaecological anatomy, while correct in a general sense, lacked that accuracy which was essential if the student was to have a real grip of his clinical work. It was generally assumed that the female pelvic organs were partly suspended by the so-called ligaments of the uterus and partly supported from below by the pelvic floor. But the perineum and the pelvic diaphragm were often seriously impaired by injury or loss of tone without any consequent change in the position of the pelvic viscera, which showed that support from below was not essential. Again, during abdominal operations the ligaments of the uterus were seen to lie loose and slack upon the subjacent structures and to have no supporting action whatever. The operation of vaginal hysterectomy afforded confirmation of these observations, and revealed to the clinician the fact that the uterus was really supported by the sheaths of its blood vessels, which attached it firmly to the sides of the pelvic diaphragm. In the same way the vagina and the bladder were held in position by the sheaths of their blood vessels, the rectum having an independent attachment to the back of the pelvis. Thus lengthening and laxity of the sheaths of the blood vessels was the one constant and essential factor in the causation of prolapse of the pelvic viscera. The utero-sacral ligament was a mere peritoneal fold; the broad ligament was simply a mesosalpinx and mesovarium. The round ligament was a vestigial structure, the homologue of the gubernaculum testis, which pulled down the ovary and uterus in early fetal life, and by no means supported them during post-natal life. The superficial perineal muscles derived from the primitive sphincter cloacae had a sphincteric and not a supporting action. The muscles of the pelvic diaphragm were vestigial structures, being the degenerated representatives of the powerful tail-moving muscles of lower vertebrates. The muscular action was largely lost; but, by virtue of their position, they, with their fascial coverings, formed the funnel shaped musculo-membranous structure known as the pelvic diaphragm. This could not support the plastic pelvic viscera, either by its shape or its muscularity, if the pelvic viscera were not firmly attached to its sides. The President thought it difficult to accept the view that it was the sheath of the vessels which kept the uterus in place, and asked how the bladder could be kept up by the sheath of its vessels, which were small in number and size. Dr. Amand Routh thought the author had succeeded in proving his contention that the uterus was mainly supported by the perivascular connective tissue bundles above the pelvic floor. No one who was in the habit of opening the abdomen and of seeing the flaccid broad ligaments and the redundant circuitous round ligaments could hold the view that these structures supported the uterus, whatever might be thought of the functions of the utero-sacral ligaments. The normal anteversion of the uterus was doubtless maintained by the perivascular sheaths suspending the supravaginal cervix from a direction upwards and backwards (in the erect position) much in the same way as the utero sacral folds had been hitherto supposed to act. He hoped Dr. Fothergill's views would receive general attention and acceptance. Dr. Paramore disagreed with what had been said by the author of the paper. In determining the position of the uterus and the maintenance of this position in the pelvis there should be considered not only the structures which united the uterus to the pelvic wall and the pelvic floor itself but also the intra-abdominal pressure, which had a definite influence on the position of the pelvic viscera. The intra-abdominal pressure depended upon the capacity of the abdomen, the volume of the abdominal contents, and upon the condition of the contraction of the muscles which enclosed and formed its boundaries. In women with an undamaged pelvic floor, and in whom the intra abdominal pressure was much increased by a deposit of fat in the omentum or mesentery, the uterus was often found high up, owing to the activity of the levator ani muscle. If in such cases the pelvic floor was damaged by childbirth, an inevitable prolapse resulted. Dr. Briggs believed that too much was attributed to ligaments. Sir Arthur Macan said that the importance of the pelvic connective tissue was pointed out years ago by W. A. Freund and more recently a firm band in the lower part of the broad ligament at each side of the cervix had been differentiated by Kocks under the name "Pars cardinalis lig. lati." The effect of taking away the support from below could often be observed clinically in cases where prolapse of the anterior vaginal wall followed rupture of the perineum. As the vaginal wall prolapsed it drew the cervix downwards and forwards, which produced backward displacement of the fundus and finally prolapse. Prolapse of the uterus was also met with in old women, due to senile atrophy of the pelvic connective tissue removing the natural support of the pelvic organs. The strength of the support from below was, he thought, well shown by the resistance the pelvic floor offered to the expulsion of the child's head during labour.

Dermatological Section.

At a meeting on December 19th, 1907, Dr. T. Colcott Fox in the chair. The following were among the cases shown: Mr. G. W. Dawson: A case for diagnosis. The patient was a woman, aged 33, and had had for the past six years an affection of the skin which had slowly spread from the palms and soles to occupy the forearms and legs. These parts were reddened, slightly thickened and scaly, presenting a finely rugose surface. The diagnosis was not clear. Dr. Colcott Fox: a woman with *Verrucose granulomatous swellings* on the upper lip, the nose, the chin, and naso-labial furrow. These had persisted for three months. There was no history of syphilis or tubercle, and she had not been taking any drug that could be held responsible for the appearances. A yeast-like fungus had been found in scrapings, and the possibility of its being a case of blastomycosis was suggested. Others contended that it was a verrucose syphilide. Dr. E. Graham Little: (1) A case of *Favus* of the scalp and nail in a woman, aged 40, who had never left England and was a native of Essex. Very numerous and typical scutula were seen on the scalp, and the fungus was readily found in the hair. A nephew, aged 8, living in the house, had apparently contracted the disease from the previous patient, and when shown had very numerous pityriasic and alopecic patches, the result of the disease on his scalp. (2) A case of *Bazin's disease* of unusually rapid development in a young woman, the legs having numerous deep seated ulcers and nodose swellings which dated from only two months previously. There was no history of phthisis, and the tuberculo-opsonic index was 0.96 on the single occasion on which it had been examined. Dr. J. M. H. MacLeod and Mr. Treacher Collins: (1) Three cases of *Keratosis follicularis* associated with baldness, the patients being brothers, aged 19, 13, and 10 respectively. All three cases showed plugging of the hair follicles in various parts of the body, a general but mild

ichthyosis, absence of inflammation around the spiny plugs, and no atrophy. (2) A case of *Bazin's disease* in a woman aged 21, in whom a positive reaction had been obtained with an injection of Calmette's tuberculin solution into the conjunctiva. Dr. J. H. STOWERS brought forward again the patient with a granulomatous tumour of the cheek shown at a previous meeting. The tumour had greatly diminished in size, as a result of application of mercurial plasters.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a clinical meeting on December 20th, 1907, Dr. J. ALLAN in the chair, the following were the exhibits: Mr. B. G. A. MOYNIHAN: A case of complete *Gastrectomy* in a man aged 43. A condition of "leather bottle" stomach was disclosed, and the whole stomach was removed, the jejunum being joined to the oesophagus. The patient when shown seven months after operation could eat well, worked as before, and had gained 3st. in weight. Dr. CHURTON: (1) A man aged 57, with heart disease and *Anuria*. Theocine sodium acetate, grain j, given every six hours with strophanthin, grain $\frac{1}{20}$, had caused a great increase in the quantity of urine. In two former cases 5-grain doses had been used, the patients both getting worse. (2) A girl aged 7, with partial anuria and old mitral disease. Under theocine, grain $\frac{1}{2}$, every eight hours with digitalis the urine doubled in quantity. Mr. LAWFORD KNAGGS: A case of *Actinomycosis* of the jaw after two scraping operations. The patient had been accustomed to cart grain, and whilst doing so to chew some of it. At Christmas he pulled out one of his teeth, and afterwards grains would lodge in the wound, and the latter did not heal. Soon after the disease made its appearance. Dr. GORDON SHARP: A case of *Vasomotor neurosis* and dermographism in an undersized boy aged 14. He had always a diffused blush over his face, accentuated by excitement, and by stimulation of the skin. When any part of the skin of the body was written upon by a blunt instrument, there followed, in a few seconds, a deep blush, and in a few seconds later the writing appeared as a white wheal, and remained for some time. The pulse now varied from 100 beats a minute. A thrill was felt in the mitral area, and in the same region presystolic and systolic murmurs were heard, but conducted to other areas. Dr. BARRS and Mr. H. LITTLEWOOD: A patient who for six months had had pain in the back at the level of the tenth dorsal spine, together with stiffness and numbness of the right leg. There was rapid increase in the severity of the symptoms, and on admission there was complete paraplegia with anaesthesia up to 2 in. above the umbilicus, and above this a narrow zone of hyperaesthesia. Laminectomy was performed, and a sarcomatous tumour removed from the spinal meninges. The patient had regained the power of walking. Dr. TELLING: (1) A case of *Amyoplasia* in an infant aged 1 year and 9 months. Since birth the hands and feet had been noticed to be very soft; these especially, and the limbs and skeletal muscles generally, were markedly flaccid and toneless, allowing considerable bending at the joints. It had been under continuous observation for fifteen months, but no notable change in the muscular condition occurred. (2) A case of subacute *Tylosis* of the nail matrix. The condition had commenced about three and a half months ago in one finger, and rapidly spread to all the other fingers. There was dry warty overgrowth at the distal margin of the nail bed, which was lifting up the nail and spreading to the root in a V-shaped manner.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting at Manchester on December 20th, 1907, Dr. E. O. CROFT (Leeds), President, in the chair, Dr. WALTER (Manchester) mentioned a case of *Haematoma* of both broad ligaments occurring a few hours after a supravaginal hysterectomy on a patient, aged 37, who was exhausted by prolonged metrorrhagia. The tumour grew from the posterior wall of the uterus, and extended laterally to the side of the pelvis. Incising the uterus deeply, the myoma was enucleated from its attachment, but general oozing from the broad ligaments gave trouble. The pulse was 84 at the end of the operation; four hours later it was 96, at 6 p.m. it was 116, and a small amount of blood was coming from the vagina. At 8 p.m. the patient became collapsed, and complained of abdominal pain. Saline injection was given, ether administered, and the abdomen opened. Not more than 8 oz. of blood was found in the abdomen, but both broad ligaments were distended with blood and clot. There was no bleeding apparent from the main vessels, nor had their ligatures slipped. The collapse, simulating extensive haemorrhage, was the chief interest in the case; it might have been due to intense pain from over-distension of the ligaments in a patient already debilitated by previous haemorrhage. Particulars were also given of a case of *Abdominal distension*, arising the day after supravaginal hysterectomy had been performed on a single woman aged 40, who sought relief on account of excessive menorrhagia and retention of urine produced by a myoma. The operation took place on October 29th, 1907. The Trendelenburg position was used. Three hours after operation the pulse was 88, and the patient fairly comfortable. The day following the abdomen was slightly distended, and flatus could not be passed voluntarily. The pulse gradually rose to 130, and vomiting and pain were troublesome. On the third day the symptoms became more pronounced, the pulse being 152. It was decided to open the abdomen unless improvement occurred, but in the evening an enema took slight effect, and the pulse fell to 140, and next day became 128. Hot fomentations and gentle massage aided the ordinary treatment by enemata and calomel. The obstruction was possibly due to a kinking of the intestine when being replaced after the Trendelenburg position. Both patients made good recoveries. Sir WILLIAM SINCLAIR (Manchester) mentioned a case of gonorrhoea and *Sepsis of the uterus* occurring in a patient aged 28, seven years married, who had had one abortion. Curettage and removal of the uterine appendages had been carried out with little benefit before the patient sought his advice for constant abdominal pain. On November 16th, 1907, he extirpated the uterus per vaginam, and steady improvement followed. He advocated conservative treatment in such cases. Dr. LLOYD ROBERTS (Manchester) mentioned two cases in which he had performed Caesarean section for *Pelvic deformity*. In one the patient had had eight pregnancies. Craniotomy had been necessary five times, and premature labour induced twice, the child being stillborn on both occasions. Four years ago Caesarean section was successfully performed, and now for the second time. There was no union between the uterus and parietes following the first operation. In the second case craniotomy had been performed at the first confinement. Both patients made uneventful recoveries. A case of ectopic gestation at full term was also communicated by the same speaker, and the specimen shown. Dr. ARNOLD W. W. LEA (Manchester) narrated two cases of diffuse *Adenoma* occurring in fibroid uteri, and drew attention to the features of pathological interest in this condition. Multiple polypoid projections of the endometrium, microscopically of a benign character, were present. The uterine wall was uniformly thickened to the extent of 2 in. in some places. The specimens and microscopical sections were also shown. Dr. E. EMRYS-ROBERTS (Liverpool) gave a pathological report, illustrated by lantern slides, on a case of primary unilateral superficial *Papilloma of the ovary*, and expressed the opinion that the ascites present in such cases was the result of secretion by the epithelial covering of the papillae. The tumour was removed by Professor Briggs in the Hospital for Women, Liverpool. Dr. JOHN CAMERON (Manchester) exhibited a number of dissections demonstrating the *Supports of the pelvic viscera*. After pointing out that the muscles forming the pelvic floor in man were now regarded as vestigial structures, he directed attention to the fact that we must regard the fascia surrounding the visceral branches of the internal iliac vessels (the perivascular fascia) as forming the most important support of the pelvic viscera. He then suggested that operative treatment should be directed in prolapsus uteri not to the pelvic outlet, but to this fascia.

MEDICO-LEGAL SOCIETY OF LONDON.—At a meeting on December 17th, 1907, Mr. Justice WALTON, President, in the chair, Mr. D. COTES-PREEDY drew attention to a manslaughter case tried at the last Stafford summer assizes, where the deceased man's death had followed a fracture of the thyroid cartilage.—Dr. CLAYE SHAW, in a paper on the radical cure, advocated for habitual drunkards a system analogous to the present mode of certification and treatment of lunatics.

REVIEWS.

AN INDEX OF TREATMENT.

IN their new *Index of Treatment*[1] Dr. ROBERT HUTCHISON and Mr. STANSFIELD COLLIER have brought together under a single cover a really comprehensive account of the treatment of medical, surgical, and special diseases. They have enlisted the services of no fewer than seventy coadjutors from the various schools of medicine, every one of whom has had wide experience of the subject allotted to him, or has made it his especial study. Modern thought and energy are well represented and the most recent work has been fully utilized. It is sometimes thought that while pathological knowledge is ever advancing, the science of therapeutics is apt to lag behind. Perusal of this work will show that in almost every department of the healing art great strides forward have been made of recent years. In some respects, and more especially in relation to surgical treatment, many of the methods advocated to day are far in advance of the practice of even a few years ago. The older generation of practitioners may be almost staggered by the boldness of some of the present day ideas, to which they might be apt to apply the old epithet of "kill or cure." The subjects in the *Index* are arranged in strictly alphabetical order. A supplementary index and abundant cross-references make it easy to find at once the subject sought for. Testing the work in various ways, it is found to be a really useful guide and for the most part thoroughly modern in its teaching. In a work combining the contributions of so many writers there must of necessity be inequality. Some of the articles, as, for instance, one dealing with diseases and injuries of the peripheral nerves, are somewhat encyclopaedic in style, while others, such as that on the subject of neuralgia, are compressed into two pages containing a catalogue of remedies. It is doubtless the function of an index to indicate rather than to elaborate. In many of the articles the writers have kept this in view, and have left a good deal to the judgement of the reader as to the application of the therapeutic methods which they advocate. From amongst so many that are good it is difficult to select any for special mention, but particular note may be taken of the important section on bacterio-therapeutics contributed by Dr. Bulloch. With admirable clearness the currents of scientific thought that have led up to the therapeutic use of antibacterial substances are traced out. The methods of their production and the conditions under which they may be employed are detailed in simple but comprehensive terms, and the whole article is worthy of the closest attention. Every article is signed by its author, and a list of authors is given for reference. The book is excellently printed on good paper. The type used, although of necessity somewhat small, is beautifully clear, and the headings and subheadings are well indicated. The editors and the publishers may be congratulated on the production of a work of reference which we can cordially commend to the notice of all busy practitioners who wish to ascertain the most recent information on the treatment of any morbid condition that may come before them.

ALLBUTT AND ROLLESTON'S "SYSTEM."

THE third volume of the new edition of ALLBUTT and ROLLESTON'S *System of Medicine*[2] has undergone considerable rearrangement, and has been in great part rewritten. It contains articles on "general diseases," including rheumatoid arthritis and osteo-arthritis, rickets, gout, and diabetes, the diseases of the alimentary canal, and of the peritoneum. Those on rheumatoid arthritis and allied diseases have been written by Dr. Archibald Garrod, and are entirely new. Dr. Garrod divides his subject into rheumatoid arthritis, osteo-arthritis, spondylitis deformans, articular lesions of infective diseases, and intermittent hydrarthrosis; if by this division the subject gains in clearness, we doubt if it would always be possible to classify cases clinically in this way. A new article on pulmonary osteo-arthropathy has been provided by Dr. Batty Shaw; and Professor Rose Bradford has revised the late Sir William Roberts's article on gout and the late Dr. Ralfe's account of diabetes insipidus.

Professor Saundby has brought the articles on diabetes mellitus generally up to date, and has made additions to his description of the dietetic part of treatment.

Mr. Walter Spencer has entirely rewritten the article on diseases of the mouth, and there is a new article on congenital hypertrophy of the pylorus by Professor Still. The articles on visceroptosis by Dr. Arthur Keith, and on shock by Dr. T. G. Brodie, are new, and strike us as being excellent from a physiological side, but the clinical description of shock, especially in its remoter effects, seems to be somewhat narrow.

The volume in every way maintains the high standard which has characterized this publication throughout.

CANCER.

PROFESSOR RIBBERT is an excellent morbid histologist, and as he has been devoting more than fifteen years to the microscopic study of the earliest phases of the cancerous process, his views on the origin of carcinoma[3] deserve consideration. Most people who are interested in cancer controversies are already familiar with Professor Ribbert's theory, for, in addition to his skill as a pathologist, he is a most prolific writer, and, with a reiteration which he never finds wearisome, he is always publishing afresh his opinions and arguments about the importance of changes in the subcutaneous connective tissue as a preparatory stage in the development of cancer. In the present volume, which contains the latest exposition of this doctrine, fresh examples of the earliest phases of carcinoma are described and illustrated; they are all regarded as confirmatory of Professor Ribbert's favourite theory. The actual cancerous process, he tells us, is preceded by a preliminary stage in which there is an increase of epithelium on the one hand and a cellular transformation of the connective tissue on the other. This preliminary stage probably arises in most cases from a circumscribed developmental lesion and in other cases from a circumscribed inflammatory focus. "But these conditions only form the foundations of cancerous development when, by a process which in its initial stages is of a chronic character, they give rise to a granulation tissue which *forms a new layer beneath the epithelium*, and thus separates it from its normal basis, and consequently more or less alienates it from its connexion with the body." In this loss of physiological interrelationship and interdependence between the epithelium and its subjacent connective tissue is to be found the key to the cancerous process. In carcinoma "the epithelium does not acquire its typical union with the connective tissue; consequently it continues to proliferate, it emancipates itself more and more from the rest of the body, and grows in complete independence and self-subsistence like a parasite." For those who desire to pursue the detailed elaboration of this theme a perusal of Dr. Ribbert's book is to be recommended. The author's histological data are most interesting, and he does useful service by insisting upon the importance of searching for, and studying under the microscope, the earliest phases of cancer in the human subject. As to the value of this theory, all that can be said, in the present imperfect state of our knowledge, is that it is still *sub judice*, and we consider that an equally tolerant attitude should be adopted towards many of the observers who have approached the subject from different standpoints. We are not, for example, prepared to accept Professor Ribbert's denial that the primary change in cancer can be attributed either to a biological modification of the epithelial cells or to a chemical influence acting upon these cells.

The reputation acquired by the author as one of the most successful abdominal surgeons gives Mr. MAYO ROBSON'S book on *Cancer of the Stomach*[4] a right to be received

[1] *An Index of Treatment by Various Writers.* Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, and H. Stansfield Collier, F.R.C.S., Surgeon to St. Mary's Hospital, Bristol: John Wright and Co.: London: Simpkin, Marshall and Co.; and New York: William Wood and Co. 1907. (Demy 8vo, pp. 891. 21s.)

[2] *A System of Medicine.* By Many Writers. Edited by Thomas Clifford Allbutt and Humphry Davy Rolleston. Second edition, vol. iii. London: Macmillan and Co., Limited. 1907. (Demy 8vo, pp. 1054. 25s.)

[3] *Beiträge zur Entstehung der Geschwülste* Von Dr. Hugo Ribbert. *Die Entstehung des Karzinomes* Bonn: Friedrich Cohen. 1907. (Cr. 4to, pp. 103, 40 illustrations. 4 Mk. 80 pf.)

[4] *Cancer of the Stomach.* By A. W. Mayo Robson, D.Sc., F.R.C.S. London: James Nisbet and Co., Limited, 1907. (Crown 8vo, pp. 218. 4s. 6d.)

with respect, but its chief interest lies in the conclusions based on the author's experience as an operating surgeon, and his descriptions of the operative technique which he has found most successful. Yet all this has been previously published in his work (with Mr. Moynihan) on *Diseases of the Stomach and their Surgical Treatment*. While we thoroughly agree with the author in desiring to see surgery afforded a better chance in the treatment of cancer of the stomach by earlier operations, we are unable to shut our eyes to the fact that its early diagnosis is attended by what are at present insuperable difficulties, and that unless we are to permit a great abuse of the practice of exploratory incisions, with the inevitable result that many persons with simple inflammatory or nervous affections of the stomach will be subjected to unnecessary operations, cancer of the stomach must meanwhile remain a disease only certainly to be diagnosed in its later stages, except where it is localized at the pylorus. In so far as pyloric cancer is concerned we believe that if it were generally agreed that pyloric obstruction should be in itself a sufficient indication for surgical intervention, many early cases of cancer would be recognized and cured. But this doctrine, sound as we believe it to be, is far from being universally accepted as a rule in practice, and we read with regret in the most recent edition of a work of the highest standing the following remark in deprecation of surgical intervention in such cases: "When the obstruction is benign in nature and not very complete the stomach, when once its arrears have been wiped off and it can start fair in the restored body, often recovers to a remarkable degree." Even Mr. Mayo Robson might be more clear in laying down the conditions under which it is desirable that surgical assistance should be called in; he could very well have formulated a rule which would tend to mitigate the evil results of that "fatal delay" of which he complains.

The little book on the *Reduction of Cancer*[5] which has been published by the Hon. ROLLO RUSSELL, may be regarded with approval in so far as it is a plea for a simple mode of life, and advocates moderation in the use of flesh diet, tea, coffee, alcohol, and tobacco, all of them articles in which modern civilized man seems prone to indulge to excess. As a contribution to the problem of the cause of cancer, however, it is scarcely worth notice, as there is really no serious attempt to show that the use of these articles has any relation to cancer except the broad facts that civilized man uses them, and suffers from cancer; it would be quite as logical to attribute cancer to the use of clothes.

The booklet on *Cancer* by Mr. G. SHERMAN BIGG[6] is presumably intended for the public, as it does not contain information which the profession would value. So far as we are able to understand him, Mr. Bigg appears to wish to show that cancer is not such a hopeless disease as it is generally supposed to be, some patients having recovered who had been condemned to death by the faculty. Assuming this to be true, he described in some detail what may be called the minor treatment of cancer—the means by which the patient's condition may be alleviated; and the effect of his writing is rather to deprecate operation. Perhaps it is fairest to allow Mr. Bigg to state his conclusion in his own language. He says: "The curability of cancer is possible or impossible according to what is understood by cancer. If it be an expression synonymous with malignancy and indicative of a fatal termination, it must be admitted that the disease is incurable; but if it be considered as the name of a disease in the same acceptance as the name of any other disease, it is certainly not necessarily incurable." We are not sure that we grasp the meaning of this somewhat cryptic statement, but it is possible that, like the pronouncements of the oracles, its effect would be less if its meaning were plainer.

RECTAL DISEASE.

MR. HARRISON CRIPPS has revised his well-known textbook *On Diseases of the Rectum and Anus*,[7] and it is issued in a third edition. The book includes the essay on *Cancer of the Rectum*[8] which was awarded the Jacksonian Prize in 1876, and this essay is also published separately in a fifth revised edition. The clinical records included in these volumes, and the views the author expresses on the basis of his exceptional experience, have long been recognized as a contribution of high value to the subject of rectal disease. More particularly are the new tables of cancer cases of interest, and many surgeons will envy Mr. Harrison Cripps his record of 4·6 per cent. mortality in cases of excision. The subsequent history was successfully followed up in 81 cases which recovered from the operation, and 32 of these were well without recurrence after periods of not less than three years. In this part of the book the description of operative treatment has been rewritten, but the account of the sacral operation is rather meagre. It would have been of interest if the numbers treated by perineal and by sacral excision had been given separately; the tables do not distinguish between them. Considering the thoroughness of the revision in the clinical portion of this part of the book, it is the more regrettable that the author has not dealt more radically with the remainder, but the book contains records of extreme interest to those whose chief concern is with the clinical aspects of rectal disease.

RENAL SURGERY.

A NEW textbook of renal surgery by Professor GARRÉ, of Breslau, and Dr. EHRHARDT, of Königsberg,[9] is written particularly for practitioners and surgeons, and on the whole adequately represents the modern theory and practice of this important branch of surgical work. The strong point of the book is its full discussion of diagnosis and diagnostic methods, and the manner in which the prospects of operative measures are presented also appeals favourably to the reader. The first chapter is anatomical and the second on methods of examination. In the latter the information which can be gained by properly applied palpation is described and illustrated in considerable detail. The value of *x*-ray examination is also discussed, but particular attention is naturally devoted to the cystoscope and the urine separator and to the means provided by these instruments for estimating the condition of the kidney. Among the chapters on special injuries and morbid affections, that on purulent affections is written in a particularly lucid manner. Owing to variations in nomenclature there has been a tendency to a certain want of clearness in some of the recent publications treating of these affections, but here there is no such fault. Haematuria and colic occurring in cases in which the kidneys are apparently sound is a subject that has been much discussed during the last few years, but the chapter on the subject in this book leaves the reader without clear ideas as to what has so far been ascertained as to the causes of these symptoms. Operative treatment is described in each chapter devoted to a special affection, and there is in addition a special and well-illustrated chapter on the various established operations—nephrectomy, nephrotomy, etc. Rightly, the longest chapters are those on the three important conditions—stone, tubercle, and new growth. The latter is distinguished by several excellent illustrations. The illustrations are, in fact, good and well reproduced throughout the book, and most of them are taken from original specimens. The last two chapters are on injuries and diseases of the ureter. The book is of moderate dimensions, but the authors have contrived to make it a treatise from which practically nothing of importance is absent; no doubt it will become a favourite work of reference.

The monograph on renal diagnosis and renal surgery[10] by Dr. G. KAPSAMMER must be taken to represent the latest expression of the methods and teaching of the Vienna school. The work is dedicated to Professor Ritter

[5] *The Reduction of Cancer.* By the Hon. Rollo Russell. London: Longmans, Green and Co. 1907. (Cr 8vo, pp. 62. 1s 6d.)

[6] *Cancer.* By G. Sherman Bigg. London: Baillière, Tindall, and Cox. 1907. (Cr. 8vo, pp. 95. 3s. 6d.)

[7] *On Diseases of the Rectum and Anus.* By Harrison Cripps. Third edition. London: J. and A. Churchill. 1907. (Roy. 8vo, pp. 600; figures 34; Plates XIII. 10s. 6d.)

[8] *Cancer of the Rectum: its Surgical Treatment.* By Harrison Cripps. Fifth edition. London: J. and A. Churchill. 1907. (Roy. 8vo, pp. 268; figures 11; Plates XIII. 5s.)

[9] *Nierenchirurgie. Ein Handbuch für Praktiker.* [Renal Surgery. A Handbook for Practitioners.] By Professor Dr. C. Garré and Dr. O. Ehrhardt. Berlin: S. Karger; and London: Williams and Norgate. 1907. (Imp. 8vo, pp. 352. M. 12.)

[10] *Nierendiagnostik und Nierenchirurgie.* [Renal Diagnosis and Renal Surgery.] Von Dr. G. Kapsammer. Teileu I u. II. Wien und Leipzig: Wilhelm Braumueller. 1907. (Royal 8vo, I Teil, pp. 444, II Teil, pp. 579 mit 63 Abbildungen in Texte. Mks. 20.)

von Frisch, under whom Dr. Kapsammer acquired his experience. The first part is devoted entirely to diagnosis. In the author's opinion, the old methods are insufficient; and, while x rays have given valuable aid in the diagnosis of renal stone, he thinks exploratory incisions are unsatisfactory, as superficial inspection of the kidney or even the histological examination of a small portion gives quite inconclusive information. He is of opinion that an accurate diagnosis can only be made by testing the function of each kidney separately, and in order to do this the secretion of each kidney must be obtained by catheterizing the ureters, which he does by one or other kind of ureterocystoscope. He does not approve of separators, as he thinks the results cannot be depended upon, and that the instruments are liable to cause injury to the bladder. In order to test the function of the kidneys it is not sufficient to obtain the urine of each organ separately and examine it in the old fashion for pus, albumen, and the like, but the functional capacity of each kidney should be determined by testing its secreting power, for which purpose he recommends the hypodermic injection of indigo-carmine or phloridzin. He discusses many other methods at great length—such as cryoscopy, the refractive index, and electric conductivity—all of which, he considers, give no more information than may be obtained by the far easier method of determining the specific gravity. The indigo-carmine test is performed by the injection into the muscles of 20 c.cm. of a 0.4 per cent. solution of the dye; this quantity contains 0.08 gram; he says that the time of appearance of the indigo-carmine in the urine is a perfectly trustworthy indication of the functional capacity of the kidneys; it should appear in ten or twelve minutes, and the longer the delay the greater the damage. At the end of a very long chapter he concludes that the function of the two kidneys is in health practically equal. The text is overloaded with references, and the bibliography extends to 100 pages. In the second part, which deals with the surgery of the kidney, the principles of diagnosis discussed in the first are applied, but hardly seem to have such an extended sphere of usefulness as the amount of space devoted to them would suggest. We note the absence of any reference to operative interference for nephritis or for movable kidney or for hydronephrosis.

The monograph on *Diseases of the Genito-urinary Organs and the Kidney*, by Dr. ROBERT HOLMES GREENE and Dr. HARLOW BROOKS,[11] is, we presume, an attempt to treat the subject from the point of view of the genito-urinary specialist who "comprises in himself" a universality of knowledge both medical and surgical, and aspires to treat all diseases of these organs, however caused and whether or not related to general constitutional conditions. No doubt nine-tenths of the book deal with surgical conditions and local treatment, but it includes, although very inadequately in the short compass of 37 pages, Bright's disease, its complications and their treatment. This would be excusable if the authors were followers of Edebohls and advocated operative treatment, but they say (p. 185), "decortication is discussed under the surgery of the kidney; we do not advise it." Regarded as a guide to the modern surgical treatment of the urinary organs, the book may be said to give a good description of instruments, illustrated by the clichés readily borrowed from the publishers of instrument catalogues, and to contain an accurate account of generally recognized procedures. When tested on more debatable questions we have found it disappointing. Prostatectomy, which is the most remarkable recent advance in this department of surgery, is spoken of without confidence in the results, and the authors prefer the perineal operation. They seem to have had small success with separators, and express the opinion that no really satisfactory instrument exists; their preference is for catheterization of the ureters in order to ascertain the functional activity of each kidney, and they test the permeability of the kidney by phloridzin, which they regard as superior to methylene blue, but say nothing about indigo carmine, which Kapsammer believes to be best of all. We note as blemishes "monolateral," "potassi bicarb.," "argent. nitrat.," followed by the other ingredients in English; Traube is spoken of as if he were alive, and Dr. Kelynack's name is decorated with an acute accent. Chloral by the rectum in "large doses" is recommended for uraemia, but 30 to 40 grains do not constitute a large dose by the bowel, while the useful hot air bath is not mentioned.

[11] *Diseases of the Genito-urinary Organs and the Kidney.* By Robert Holmes Greene, A.M., M.D., and Harlow Brooks, M.D. Philadelphia and London: W. B. Saunders and Co. 1907. (Roy. 8vo, pp. 533, 292 illustrations. 21s.)

VENTILATION.

IN the lectures delivered by Dr. W. N. SHAW before the University of Cambridge in 1903, and now published under the title, *Air Currents and the Laws of Ventilation*,[12] he endeavoured to simplify the problems of ventilation by making use of the methods adopted to illustrate the distribution of electrical currents. He defined ventilation as "the passage of air into the space to be ventilated and out of it again, and the distribution of the air through the ventilated space." He deplores that in the attempt to procure the satisfactory ventilation of rooms too little attention has been paid to the laws of physics, and insists especially upon the inexorable character of the law of convection. The distribution of the air supply between the occupants of a room is a matter of scrambling between them with the aid of the convection current which each individual causes, and in the course of the scramble there is much scope for the exercise of various physical laws that are not much regarded in deciding the general practice of ventilation. Dr. Shaw describes and illustrates apparatus designed to identify the flow of air in the ventilated space, and thus to illustrate how dominant is the law of convection. The apparatus consists of some very sensitive weather vanes balanced on needle points supported by small glass caps, and wheels consisting of inclined plates of mica, mounted in cork round glass caps, also balanced on a needle point, which show the motion of the air by the rotation of the wheel. The vanes and wheels, together with thermometers, etc., are attached to a movable telescopic stand, so that observations can be made at any part of the room and at any height. When discussing the application of physical laws to practical ventilation the author deals with the amount of air to be supplied to each individual, the temperature at which the air should be admitted, and the position and size of the inlets and outlets. To those who have to deal with questions of ventilation, whether in connexion with the ordinary rooms of a dwelling house or with buildings such as schools and hospitals, this treatise will be of incalculable assistance. The value of the work is increased by a large number of diagrams and illustrations of apparatus, including a general view of that made by the Cowl Committee of the Royal Sanitary Institute for experiments upon the upcast flow of air caused by wind. We cordially agree with the author that the experimental study of the problems of ventilation should be regarded as a part of the course of study in schools of technical science.

A great deal of useful and accurate information is given by Mr. W. D. MAXWELL in his book upon *Ventilation, Heating, and Lighting*.[13] Most of the statements it contains are culled from standard textbooks, and there are very few instances in which the authority quoted is not given, although the references are occasionally somewhat vague. The section upon lighting occupies only twelve pages, and less than half a page is given to the consideration of electric lighting. No mention is made of acetylene gas or of the more recently-introduced Litz light produced from petrol vapour. In spite of these omissions, Mr. Maxwell's book cannot fail to be of service to those who are specially concerned with the subjects of which he treats.

[12] *Air Currents and the Laws of Ventilation.* Lectures delivered in the University of Cambridge by W. N. Shaw, Sc.D., F.R.S., Director of the Meteorological Office. Edited by F. H. Neville, M.A., F.R.S., and W. C. D. Whetham, M.A., F.R.S. Cambridge: University Press. (Demy 8vo, pp. 106. 3s.)

[13] *Ventilation, Heating, and Lighting.* By William H. Maxwell, Assoc.M.Inst.C.E. Second edition. London: The Sanitary Publishing Co., Limited. 1907. (Cr. 8vo, pp. 157. 3s.)

AN Italian Society for the Study of Tropical Diseases has been founded on the initiative of Professor Angelo Celli, Director of the Rome Institute of Hygiene. Surgeon-Lieutenant-Colonel L. T. Cipollone, of the Italian Navy, and Surgeon-Captain G. Memmo, of the Italian Army.

NOTES ON BOOKS.

EVEN those who take only a passing interest in geology will find a mine of information in *Stanford's Geological Atlas*,[1] and to those with an intimate knowledge of the science the volume is indispensable. The first edition was edited by Mr. H. B. WOODWARD, F.R.S., in 1904 and the powers of graphic description he then displayed are again apparent in the present volume. In the earlier edition only Great Britain was dealt with, but Ireland has now been included. The preliminary pages deal with the geological structure of the country as a whole. The geology of separate counties is then described in detail, regard being paid to the more interesting geological facts, irrespective of the size or industrial importance of the county. In the case of the county having a sea-coast, notes are given upon seaside resorts. Not the least interesting portion of the book is that in which Mr. Woodward describes the leading geological features observable along the principal lines of railway in Great Britain and Ireland. Some fifteen different routes are thus described. The 36 coloured maps showing the geological formations of the British Isles as a whole and of individual counties add very materially to the value of the work. The maps are followed by plates upon which are engraved drawings of between 600 and 700 fossils.

Surgical Suggestions, by Dr. W. M. BRICKNER and Dr. MOSCHOCWITZ, has altered its title to *500 Surgical Suggestions*[2] in the second series, which has recently appeared. It is an interesting little book, and its new "dicta" appear to be quite sound. They also give the impression of being derived from experience. Many of them will come as new to practitioners; they are as entertaining as the newspapers, and much more profitable reading.

MEDICAL AND SURGICAL APPLIANCES.

Aids for the Deaf.

A BRIGHTON firm trading at 86, Queen's Road, in that town as The Unique Vibratory Conversation Tube Company, has submitted for examination two of the appliances from which it takes its name—the one a hearing tube to carry in the pocket, the other a conversation tube. The principle of construction is in either case the same, and differs from that of ordinary tubes in the following points: (1) The inside wire is less closely twisted than is usual and it does not touch the external india-rubber covering. (2) At the receptor end a disc of metal is attached to the main wire by another spiral. The wire of this spiral is so fine that it is difficult to hold the appliance so steadily that the disc does not quiver. The claims made for the appliance are (1) that the presence of the disc and wire greatly aids the conduction of sound and frees the voice from buzzing, so that sounds are heard more clearly; and (2) that air vibrations are conducted to the tympanum of the hearer with sufficient strength to exercise a massage effect upon the ossicles. In considering these claims it should be noted that the only thing which is quite certain about instruments intended to aid the deaf is that it is impossible to predict with certainty from the construction of any one of them what instrument is likely to be found really useful by any given patient. Any two patients with, as far as can be ascertained, precisely the same lesion, and with their hearing power diminished practically to the same extent, are almost certain to give very different reports as to the benefit they derive from using any particular instrument. The one will find it useless, the other beneficial, and vice versa. Hence it would not be justifiable to put the appliances forward as likely to be found generally useful by all patients, but it may safely be assumed that they will be of value to those who receive advantage from the use of ordinary conversation tubes. Whether they would be found to have superior advantages is another matter. As to this, it is easy to believe that the presence of the vibrating disc may so modify air vibrations as to lessen the harshness and buzzing of which some patients complain when using conversation tubes; but we do not believe that the actual volume of sound can be increased, because the main wire used is far too stiff to be influenced by any vibrations set up in the fine spiral attached to it, and for the same reason any unusual massage action is not easily credited. Similarly, it may be objected that the manufacturers, in referring the readers of their booklet to the sketch explanatory of the construction of the apparatus, are likely to mislead them, for from the sketch—described as an *x*-ray one—it might be concluded that the disc was continuous with the main wire; but this is not absolutely true, nor is the cost of the instrument, as compared with others, as cheap as is suggested. On the other hand, the manufacturers express their readiness to forward the instrument to any would-be purchaser for a week's free trial; so for this reason it is justifiable to draw attention to the appliance in order that those who will may try it for themselves and determine how far it is useful to them quietly in their own homes. It may be added that a medical man, who is himself deaf, confirms our supposition that the disc reduces buzzing, and finds that the voice as heard through the instrument is natural in tone.

[1] *Stanford's Geological Atlas of Great Britain and Ireland.* By Horace B. Woodward, F.R.S., F.G.S. Second Edition. London: Edward Stanford. (Cr. 8vo, pp. 200, 36 coloured maps, 50 plates. 12s. 6d.)

[2] *500 Surgical Suggestions. Practical Brevities in Diagnosis and Treatment.* By Walter M. Brickner, B.S., M.D., and Eli Moschocwitz, A.B., M.D. Second Series. New York: Surgery Publishing Co. 1907. Sup. Roy. 16mo, pp. 111. $1.00.)

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(*Continued from p. 84.*)

ANTIVIVISECTIONIST TESTIMONY.

Evidence of the Hon. Stephen Coleridge (continued).

PROCEEDING with his evidence, Mr. Coleridge said that the next point he would take up was in relation to the following question, asked by Mr. Weir of the Home Secretary:

I beg to ask the Secretary of State for the Home Department if he will state the number of persons in England, Scotland, Ireland, and Wales respectively, licensed to practise vivisection, and how many of them hold certificates to dispense with anaesthetics.

Sir Matthew White Ridley replied:

The number of persons licensed at the present time in England is 145; in Scotland, 52; in Wales, 1. The number holding the certificate dispensing with anaesthetics is in England 86; in Scotland, 30: in Wales, none. The only figures in my possession as regards Ireland are those for 1895. In that year the number of licensees was 6, of whom one held a certificate dispensing with anaesthetics.

Now came the point; this was a voluntary statement on the top of the answer:

In giving the honourable member these figures, I may remind him that the certificate in question is never given for operations involving serious pain, but only for such operations as inoculations or hypodermic injections.

That answer might be intended for the public to believe, and undoubtedly had the effect of persuading the public that in all cases of certificates exempting the licensee from the use of anaesthetics such certificates were only issued for such operations as inoculations or hypodermic injections, when all the while there was Certificate B being issued. That statement of Sir Matthew White Ridley's was quite unfair. It really only referred to Certificate A and Certificate A plus E, and omitted all reference to experiments under Certificate B. But the question was:

How many of them hold certificates to dispense with anaesthetics?

The witness said Certificate B dispensed with anaesthetics immediately after the initial operation was over; and under Certificate B the moment the initial operation was over (the opening of the animal and fixing the electrodes to the ends of the nerves and tubes down the veins) there was nothing in the law and nothing in the certificate to prevent the animal remaining disembowelled on the table for hours while observations were made upon its blood pressure and various things, while stimulations of electricity were passing through it. That was what horrified the public; and that was carefully hidden in that answer. In reply to the Chairman, who pointed out that a person who asked a question in the House of Commons was generally supposed to know with reference to what he was asking it, and could understand the answer, the witness said perhaps he had made a mistake. The question, in his opinion, involved Certificate B, which was a certificate dispensing with anaesthetics. Sir Mackenzie Chalmers pointed out that the Certificate B authorized a person—

To perform on living animals certain experiments described below, such animals being, during the whole of the initial operation of such experiments under the influence of some anaesthetic of sufficient power to prevent their feeling pain.

Mr. Coleridge replied, Yes, during the whole of the initial operation of such experiment, the experiment consisting of first opening the dog, and then chronicling what might happen to the blood pressure and other things, during hours perhaps of subsequent experiments. In reply to Dr. Gaskell, who said that was all the initial experiment, the witness said, No. The Chairman said he did not think that came to much, as a charge against the Home Office; because it was admitted that the answer to the question was one which, technically to a person who understood it, was correct, but one which might lead a person who was not familiar with the Act to misapprehension. It was putting too much upon the Home Secretary to suppose that he was to make his answer with reference to a person who did not study the Act. The witness replied that the question asked by Mr. Weir was how many of those gentlemen held certificates to dispense with anaesthetics, and the Home Secretary gave only those who had Certificate A. His answer was rather disingenuous. The Chairman said it seemed rather a forced construction to put upon it. It really seemed to him a small point. Mr. Coleridge said he next came to the case of the *Chemist and Druggist* of December 14th, 1901, in which there was an account of an address delivered by Professor Sherrington to a number of chemists and druggists, when the professor was reported to have called upon Dr. Grünbaum to demonstrate the action of the snake antitoxin upon some rabbits. The report stated that the first was inoculated with cobra venom, the second with antivenom, and the third with the cobra venom and antivenom. The first died in about thirty minutes, completely paralysed by the venom of the snake. The second, although it had also been subsequently inoculated with cobra venom, lived, and was full of life. The third, which had subsequently been inoculated with the antivenom, also lived, and exhibited a considerable amount of liveliness. He thought that was in Liverpool. The points he raised on this were, first, that Dr. Grünbaum here broke the law, first, according to that account, by demonstrating at a lecture without Certificate C. Secondly, he appeared to have broken the law by performing an experiment merely to demonstrate what was already known with this Certificate A; he had Certificate A, but it was to demonstrate something that was already known. Certificate A did not permit one to get outside the Act. Section 3, Subsection (1) of the Act provided that the experiments must be performed—

With a view to the advancement by new discovery of physiological knowledge or knowledge which will be useful for saving or prolonging life or alleviating suffering.

The Chairman said the new discovery was "the advancement of physiological knowledge, or of knowledge." Supposing that a description of what was proposed to be done was sent in, and a licence was asked for, it would not be necessary in that case, if he was licensed generally; he could do the experiment under the general licence if he had it under Section 1. The witness said, No, not without anaesthetics. There was not any anaesthetic in this case; there was no suggestion of it. The Chairman said that Subsection (1) was the subsection which dealt with the performance of an experiment which must be done under anaesthetics, to which Mr. Coleridge replied, No. On the Chairman saying that then the other subsections created an exception, the witness said:

No, you begin at Section 3, Subsection (1); you have not got to the question of anaesthetics at all then. It is the beginning of the Act; it begins at the very beginning; it says that you must not do these things, except for the purpose of new discovery, that is, by Subsection (1)—nothing else. You must not go on doing the same thing over and over again. That is what it is for. It has nothing to do with anaesthetics at all.

Asked by Sir William Collins if his point was that, apart from certificates altogether, this was a case in which either a licence could not have been granted for such a purpose, or if a licence had been granted he was transgressing it, the witness said: Yes; if a licence was ever held at the time, he was prepared to show that Dr. Grünbaum broke the law in what he did. He had not got Certificate D either, therefore he was absolutely outside the law, and had no business to do it. He first broke the law, he said, by demonstrating at a lecture without Certificate C. Further, he contended that it was highly probable that by performing an experiment before the general public he violated Section 6, because he saw no reason why a collection of chemists should be regarded as anything else than the general public. Section 6 said:

Any exhibition to the general public, whether admitted on payment of money or gratuitously, of experiments on living animals calculated to give pain shall be illegal.

He drew the attention of the Home Office to these various performances of Dr. Grünbaum on December 17th, 1901, and they replied that it would have attention the first thing. He waited till February 20th, 1902, and had no reply. He asked them then if they would kindly give the matter their attention, and then they wrote back to say:

I am directed by the Secretary of State to inform you that he has caused careful inquiry to be made into the matter. The experiments were performed under Certificate A, the authorities who granted the certificate being, no doubt, of opinion that such experiments tended to the advancement, by new discovery, of physiological knowledge, or of knowledge which would be useful for saving or prolonging life, or alleviating suffering.

That was Subsection 4 of the proviso. That was practically indicating that the authorities who granted the certificate granted him Certificate D, but he had not got that. On the Chairman saying that was the same Subsection (1), he said: No, he was on Subsection (4), which would take him out of Subsection (1). The Chairman said they were the exact words he had in his hand of Subsection (1); Mr. Coleridge admitted that he was quite right. The letter proceeded:

Dr. Grünbaum states that the report of the proceedings is somewhat misleading, in that the experiments were not performed until after Professor Sherrington had finished his address, and that they were not in illustration of a lecture. He has, however, conveyed an assurance to the Secretary of State that such experiments in similar circumstances will not be repeated.

In his opinion it was quite clear that the Home Office asked Dr. Grünbaum what his account of that was, and Dr. Grünbaum said that the newspaper was all wrong. In reply to Dr. Gaskell, he said that no doubt the experiments were done in a registered place; he did not suggest that they were not. Asked if Dr. Grünbaum was working at snake poison at the time, he said he did not know; he supposed he was. Professor Sherrington's address was headed "A Physiological Experiment in Relation to Pharmacology." The reporter described what he saw. The witness maintained that he was one of the public, and Dr. Grünbaum broke Section 6 of the Act. Asked by Sir Mackenzie Chalmers if he said that if one single member of the public was present at an experiment that broke the Act, he said, Yes, one genuine member of the public. He had been invited to go into laboratories, but he did not propose to assist physiologists to break Section 6. In reply to the Chairman, he said that nothing more happened. He thought Dr. Grünbaum got his licence again. The next case he wanted to draw attention to was that of Messrs. Dixon and Brodie, in the *Journal of Physiology*, vol. xxix, No. 2, p. 144. There these two vivisectors made the following statement:

In studying these reflexes we have found it of the utmost importance to avoid the use of chloroform or ether as the anaesthetic. The experiments must, therefore, either be performed upon unanaesthetized animals, upon animals anaesthetized with morphine, or upon decerebrate animals. Our experiments were usually conducted under one of the two latter conditions, but in a few instances were repeated upon animals lightly anaesthetized with chloroform.

The witness said this kind of light anaesthetization awoke in them the profoundest distrust. He made complaint of it to the Home Office. This was defended by the Home Office, so far as he could make out, on the bare assurance of the authors of the paper. It was a long time before he got an answer to that complaint either. He wrote on March 30th, 1903, to the Home Office, and he did not get a reply till July 9th; they then answered:

Adverting to your previous letter, I am to point out that on page 102 of the volume referred to it is explicitly stated that, except in the case of animals killed by pithing, all were anaesthetized. On page 144 it is said that in a few instances the animals were lightly anaesthetized with chloroform. The authors of the paper explain what is denoted by the term "light anaesthesia"—namely, that the animals were anaesthetic (that was the word)—that is, they could not feel pain, but that the anaesthesia was not carried so far as to abolish all reflexes. The inquiry which has been made confirms that none of the experiments described in this paper were performed on unanaesthetized animals. (He did not say that they were.) Under these circumstances there is no reason for

thinking that the provision of the Act—namely, that the animal must, during the whole of the experiment, be under the influence of some anaesthetic of sufficient power to prevent the animal feeling pain—was not complied with.

Thus the Home Office defended an experiment upon an animal of which the authors said that those particular experiments must be performed either upon unanaesthetized animals, or upon animals anaesthetized with morphine, or upon decerebrate animals, and they alluded to experiments not under the last two conditions, the experimenters themselves saying that they must be unanaesthetized to be of value. On its being put to him that, supposing the Home Secretary, who was not himself a skilled physiologist, was informed that "lightly anaesthetized" was an expression consistent with the animal not feeling pain, would not the Act then have been complied with? he said it depended upon where the Home Secretary went for his information. If he went to the Association for the Advancement of Medicine by Research, he would say that the information was not sufficient. Asked if the Home Secretary must go to somebody who held antivivisection opinions, he said, Certainly not. Let him go to Mr. Sewell; let him go to some well-known thoroughly-skilled dog doctor. Asked if he excluded the whole medical profession from that, he said that so far as he knew the ordinary M.D.'s they were not vivisectors, therefore their opinion as to what was proper anaesthetizing for a dog would not have the same weight with him, and ought not to have the same weight with the Home Secretary, as the expression of such a man as Mr. Sewell. In reply to further questions, he said his complaint against the Home Office was that they went to the vivisectors themselves for advice as to what was painful, and that they had done so always. He next came to another case. In Volume xxvi of the *Journal of Physiology*, on page xxxviii of the Proceedings of the Physiological Society of March 16th, 1901, Mr. J. Herbert Parsons, in a report of his experiments on dilatation of the pupil from cerebral stimulation, made the following statement:

> The following are some of the results obtained: (1) Dilatation of the pupil, like other effects of cortical stimulation, is best obtained with slight anaesthesia.

He complained to the Home Office that they allowed this slight anaesthesia, and the Home Secretary referred him to page 368 of that volume, where he would find it stated that—

> the animals in question were completely anaesthetized and insensible to pain throughout the experiments.

That was a general statement with which vivisectors very frequently now began a statement of all their experiments, and then when one came to detail one found these words "slightly anaesthetized." They could not both be true. The word "*ἀναίσθητος*" meant "without feeling, insensible." One must either be sensible or insensible. He declined to accept "slightly anaesthetized." On the Chairman pointing out that the term "light anaesthesia" seemed to be used by physiologists as being an expression which did cover absence of pain, the witness said he regarded such expressions in the mouths of physiologists as expressions for the purpose of putting them inside the Act of Parliament. He agreed that the Act was complied with whether one put the word "slight" in or anything else if there was sufficient anaesthetic to prevent pain. His point was that when experimenters said that "slight anaesthesia" covered absence of pain, they said it to cover themselves from the Act of Parliament. They believed that if a properly authorized inspector were present he would see that the anaesthesia was complete. To the Chairman, who said it would no doubt facilitate their inquiry if they were to adopt his view that they should believe nothing that was said by physiologists, and that those who spoke on the other side were to be believed, the witness said: "I do not take that line." On the Chairman saying that that was rather what he suggested, he said, No; he said that when a person's own conduct with regard to the Act of Parliament was impugned, it did seem to him somewhat inadequate to take, without question, his explanation of what he did. In reply to further questions, he said the definition of "anaesthesia" in Gould's *Medical Dictionary* as "a condition of total or partial insensibility, particularly to touch," was brought up to date to fit the Act. The Chairman said he merely quoted the dictionary, but it did not govern it at all; it was not very material, but it was apropos of what the witness said about the true translation of the Greek word. Proceeding, Mr. Coleridge charged the Home Office officials with having appointed Inspectors who had displayed such bias that they had thought it their duty not to make detective efforts to protect animals from illegal treatment. In proof he referred to Sir James Russell's statement that when he took office Dr. Poore wrote to him that he was to visit registered places about three times a year, but expressly said that he was not expected to act as a detective: that was to say, he was to have more consideration for the vivisectors than for the animals. Dr. Busk, who was Inspector from 1876 to 1886, alluded to the agitation conducted by his society as "a senseless and mischievous agitation." That was not a wholly impartial description of them. Dr. Poore ceased to be Inspector in 1899, and in the Harveian oration, delivered at the Royal College of Physicians in London, and reported in the British Medical Journal of October 21st, 1899, he pointed out that no conviction for cruelty or breach of law had ever been obtained. This, said the witness, was for the very excellent reason that the Home Office themselves, who were responsible for Dr. Poore being Inspector, would have to advise the Home Secretary to give assent in writing to a prosecution. It was not very likely that with Dr. Poore there they would have got assent in writing. The Royal Commission on Vivisection in 1876, said:

> The Inspectors must be persons of such character and position as to command the confidence of the public no less than that of men of science.

Dr. Poore, who made such a speech as that, could not command the respect of the public. That attitude of mind could not have arisen in a day, and it was probable that he indulged in that sort of expletives when he was Inspector. The Home Office ought not to have retained him, and he was quite an improper person to deal fairly between the poor animals and the vivisectors. Mr. Coleridge went on to speak of the extreme difficulty of finding out how these certificates were signed, and how long they were effective. He found from information from the Home Office that, so far as he could make out, Dr. Poore himself signed certificates exempting their holders from using anaesthetics, and was supposed to inspect the same persons whose certificates he had signed. Asked in what capacity Dr. Poore signed them, he said he signed certificates before he was made Inspector, but those very certificates remained in force for some years after he was Inspector, and were effective. Asked if they had not to be signed every year, he said that was a question which he had found it impossible to ascertain. The Home Secretary said on July 24th, 1899, in the House of Commons:

> All certificates expire on the 31st of December of the year in which they are granted.

Under that one would imagine that in the year when Dr. Poore was appointed Inspector, at any rate, at the conclusion of that year, any certificate signed by him would have expired, but he found that some years after that certificates were still being used by persons who still held certificates signed by Dr. Poore. He therefore wrote to the Home Office and asked them about it. He stated that in the Yearly Report Dr. Thomas Stevenson was stated to have received a certificate signed by "the Professor of Medical Jurisprudence, University College, London." Both the *Medical Directory* and *Whitaker's Almanack* for the current year gave the name of Dr. G. V. Poore as the holder of that professorship. After some correspondence he received the following reply:

> I am directed by the Secretary of State to point out that his answer was that the Inspector, whilst holding the office of Inspector under the Act, had not signed certificates. The certificate to which you refer was signed by Dr. Poore before he held the office of Inspector. I am to explain that it is necessary for Dr. Stevenson to hold this certificate in order that he may carry out his professional and official duties in connexion with the investigation of poisoning, and it is not limited in time, but is kept in force from year to year by the annual renewal of Dr. Stevenson's licence.

So that, apparently, although they were told that these certificates expired every year, they were told, on the other hand, that they were kept alive every year. Asked if Dr. Stevenson was the Home Office analyst in poison cases, he said he did not know who he was. In reply to

Colonel Lockwood, who said, "He is the man who gives evidence on trials." Mr. Coleridge replied, "Very likely." The Chairman said that what he understood the Home Secretary to say was that there was an exception made in that case, and possibly in some others, where a person was holding a particular official position, and was only doing official work. He should not gather from his answer that there was no rule at all that an ordinary certificate expired on December 31st. Mr. Coleridge replied:

You must make what deduction you like. I do not make any deduction except that it is a very confused statement. The two statements, one on the floor of the House of Commons, and the other from the office at Whitehall, seem to be contradictory.

He went on with the letter as follows:

It is the practice of this department to make licence annual, terminating on December the 31st in each year; and all certificates, whether exhausted or not, cease to operate on that day, because no person can perform a prohibited experiment without a licence. But on the renewal of his licence the holder of a certificate which is not exhausted nor disallowed may proceed with his investigation, as he is not required by the Act to obtain a fresh certificate every year.

That, the witness maintained, was a flat contradiction:

He is not required by the Act to obtain a fresh certificate every year,

and in the House of Commons:

All certificates expire on the 31st of December of the year in which they were granted.

The two statements were wholly contradictory and irreconcilable. Mr. Coleridge said he next charged the Home Office officials with having made entirely disingenuous statements in their official utterances, and with having constituted themselves the mere spokesmen of the vivisectors. On page 4 of the Parliamentary Report for the year 1904 the Inspector, speaking of one class of experiments, says:

All performed under licence alone, and under Certificate C, 1,102 in number, are unattended by pain.

He thought that was a most improper statement for a parliamentary paper, which went broadcast all over the world, and was taken to be an assertion of fact on the authority of a great officer of the State. As he could not pretend that he or his assistant was present at the vast majority of these experiments, that statement could be of no more weight than the uncorroborated assertion of the vivisectors themselves, upon which alone it must be founded, and he therefore asserted that it would be more becoming for the Inspector to say that these 1,102 experiments were stated by those who performed them to be unattended by pain. It was a remarkable commentary on the sweeping declaration of the entire painlessness of experiments done under licence alone, that on page 77 of the very same report four vivisectors in Ireland appear to have admitted that pain accompanied their experiments so conducted. On Sir Mackenzie Chalmers pointing out that Ireland was not under the Home Office, the witness said, No, but were the animals in Ireland more sensitive to pain, or was the Inspector more truthful? Further down, on page 4, the Inspector committed himself to the following assertion in respect to experiments done under Certificate B, allowing the animals to survive their operations:

Experiments involving the removal of important organs, and even parts of the brain, are performed without causing pain to the animals.

If this referred to the operative procedures under Certificate B, it was disingenuous, because they admitted, at any rate, that if the law was followed under the operative procedures the anaesthesia ought to be complete. That report was for the year 1904. He did not know whether that statement was deliberately framed so as to relate in fact only to the period of unconsciousness, while it was intended to convey to the reader the idea that the whole experiment was without pain.

Chairman: These are all cases of recovery afterwards?—Yes; this is Certificate B.

Chairman: Would you mind reading the Inspector's statement again?

"Experiments involving the removal of important organs, and even parts of the brain, are performed without causing pain to the animals."

Chairman: "And"—would you go on?—I have not got it.

Sir Mackenzie Chalmers: "And after the section of a part of the nervous system these degenerative changes are painless"?—That may be so.

Chairman: That completes the sentence?—Yes. He does not even commit himself to saying that that is always done.

Proceeding, Mr. Coleridge said that on page 5 the Inspector wrote a paragraph on inoculation experiments done under Certificate A, the plain object of which was to suggest to the public that no acute suffering occurred in such experiments. This was what he said:

The substance administered may give rise to poisoning or set up a condition of disease, either of which may lead to a fatal termination. To administer to an animal such a poison as diphtheria toxin, for example, or to induce such a disease as tuberculosis, although it may not be accompanied by acute suffering, is held to be a proceeding "calculated to give pain," and therefore experiments of the kind referred to come within the scope of the Act 39 and 40 Vict., c. 77.

He called that a disingenuous statement. The Inspector could not be unaware of the fact that terrible suffering accompanied death by tetanus, induced by inoculation under Certificate A, that very many of the 8,292 inoculations done on behalf of the Cancer Research Fund entailed considerable and prolonged suffering. On page 6 the Inspector said that he and his colleagues found the vivisectors "desirous of acting in every way in accordance with the letter and spirit of the Act." What in the world did the man expect? He need not assure the public that the vivisectors did not break the law when he made one of his rare visits to the laboratory. At the head of Table IV and repeated on several pages the department made the following statement:

N.B.—In experiments performed under licence alone, or under Certificate C, the animal suffers no pain, because it is kept under the influence of an anaesthetic from before the beginning of the experiment until it is killed.

The Home Office officials themselves simply assumed and asserted publicly in this statement, on no authority but that of the vivisectors themselves, that they never infringed the provisions of the Act, and they thereby set themselves in open antagonism to a law which, by providing inspection, informed the Home Secretary that he was not to be satisfied by the uncorroborated assertions of the vivisectors. The proper heading would have been not to assert that when those experiments were performed the animal suffered no pain, but that the vivisectors informed them that in those experiments the animals suffered no pain. Then the public could take that assertion for what it was worth. In reply to further questions, the witness said what the Inspectors saw was absolutely a vanishing point. He did not blame for that; they could not be there unless the law made it necessary. Mr. Coleridge proceeded to refer to a case put to Mr. Byrne:

To give an example, the other day an experimenter wished to have an experiment without anaesthetics in this case. He wished to feed kittens on cow's milk instead of cat's, and a certificate was granted that the experiment might be performed without anaesthetics.

The answer was:

Such an application would be granted by the Home Office.

The witness's comment upon that was, was feeding a cat with ordinary cow's milk an experiment calculated to give pain? That question and answer seemed to him to be a sort of ebullition of a spirit of raillery. It was an attempt to pour ridicule upon the whole of those who with him wished to stop grievous pain to animals. It was explained to him that on that point the experimenter would have been liable to prosecution if he had not a licence, because it was an experiment which might cause disease in the animal; it was considered and the licence was granted. In reply to the Chairman, who said that supposing the kitten had died from the change of diet, a complaint might have been made, the witness said those whom he represented were not that sort of people. He protested against that being given as serious evidence. Proceeding, he said Mr. Byrne was asked if any application to be allowed to prosecute a licensed person had ever been made and refused, and replied in the negative. Mr. Byrne added that an offer to give the Secretary of State's consent was once made; Mr. Coleridge said they all saw what that was meant to convey, that they had no case, and could not go to the Court. His answer was, that they could not make an application. How was he, or any one of the public, to obtain evidence of breaches of the law in cases which were not public? They could get no evidence of what went on in the labora-

tories except from the printed and published admissions of those who did the acts, and a man who had done an illegal thing was not likely to publish it. They sometimes did, but it was generally six months afterwards, so that he thought this innuendo a very improper one on the part of the Home Office. Referring to Mr. Byrne's statement that of the sixty contraventions quite a substantial number were contraventions indicating a keen desire on the part of the operator to provide greater security for the animal not suffering than the Act allowed him to take, Mr. Coleridge said the suggestion there of Mr. Bryne was that the Act of Parliament forced a sort of cruelty apparently upon the vivisectors; that if they were to follow the Act they would have to be cruel.

If he has a certificate, for instance, authorizing him to carry out a certain investigation (this was the instance he gave) without anaesthetics, and he, in an individual case, thinking the anaesthetic will do no harm, applies it to save the animal pain, then he has committed a breach of the Act. The Secretary of State cannot help that at present under the existing law.

The witness submitted that this was not so. He could do the experiment under licence alone, which did not compel him to kill the animal unless it was in pain after the anaesthetic had passed off, or it had been seriously injured. Therefore the whole of that answer was most unhappy and unfortunate. In reply to further questions, the witness said that what Mr. Byrne here said was that if he had Certificate A he was precluded from using anaesthetics while he injected whatever it was that he injected. The witness said that was not so; he could inject whatever it was he injected under his licence alone, because it said that the animal must, during the whole of the experiment, be under the influence of some anaesthetic sufficiently powerful to prevent its feeling pain; and then it said that the animal must, if the pain was likely to continue after the effect of the anaesthetic had ceased, or if any serious injury had been inflicted upon the animal, be killed before it recovered. But in an inoculation of this kind neither had any serious injury been inflicted upon it nor was pain likely to continue after the effect of the anaesthetic had passed off. Therefore, there was nothing whatever in the Act to prevent a man using his licence for an inoculation experiment. On the Chairman pointing out that this was hardly a charge against the Home Office, and that there seemed to be a point which he (the witness) did not agree with as to the meaning of the Act, Mr. Coleridge said that what he objected to was that Mr. Byrne would have the public believe that the Act of Parliament forced upon him a necessity for inflicting pain. On the Chairman saying he did not see that, Mr. Coleridge repeated the passage above quoted about the sixty contraventions. Mr. Byrne spoke of giving anaesthetics when the Act said that he must not. On the Chairman saying that he did not see how he could found a charge against the Home Office for taking a particular view of the Act which, after all, was not an inhuman view, the witness said his objection to it was that Mr. Byrne's evidence was rather conceived in a spirit of raillery against them. To this the Chairman said, No. The witness then quoted from Hansard of May 30th, 1902, an important statement by Mr. Ritchie:

As to the argument that animals suffered intense pain after recovering from the anaesthetic, he could assure the House that that was very easily overstated, because life was destroyed before return of consciousness in all cases, except those where special certificates authorizing the keeping alive of the animal were granted. It might become necessary to appoint additional Inspectors, but it would be absolutely impossible to ensure that an Inspector should be present at all operations, for that would require an army of Inspectors. No certificate was given except under the greatest precautions, and even where such certificates were granted, the animals had to be killed immediately the object of the experiment was attained.

He wished the Commissioners fully to appreciate those words: "Immediately the object of the experiment was attained."

Before the certificate was issued the Home Secretary had to be convinced that every precaution would be taken that the operation would be conducted by a properly-trained person for an adequate scientific object. All possible means were taken to avoid causing animals unnecessary pain; the Inspectors were most humane men, and so, generally, were the operators. He did not know that there had been any convictions under the Act.

Mr. Coleridge said he must take those words, "And so generally were the operators," to be an admission by the Home Secretary that not in all cases were the operators humane men. The Chairman said he thought that was rather a forced construction of a Minister speaking in the House. He dared say he put in the word "generally," thinking, "I am not going to commit myself to the statement that there is no such thing as a hard hearted operator." Proceeding, the witness said that as regards the words "The animals had to be killed immediately the object of the experiment was obtained," he had had considerable correspondence with the Home Office about the proceedings of Professor Starling with the Brown Dog, over which he had to pay damages in the law courts. The action was brought by Mr. Bayliss solely, and everything that happened before the dog reached Mr. Bayliss's hands was outside the purview of that action. But the witness had asked the Home Office repeatedly to tell him under what licence and certificate the first two operations by Professor Starling upon the Brown Dog were done. He had been unable to get an answer. His point was this: Professor Starling, if he had Certificate B, performed two operations upon that dog, one in December, and then another operation in February, to ascertain whether inflammation had been set up in the internal parts of that dog by the first operation. If he did that second operation under his Certificate B, it was his duty according to the Home Secretary's own words and according to the Act of Parliament, to kill that animal "immediately the object of the experiment was attained." When he had opened that dog a second time, he had by that opening fulfilled the object of his experiment. Instead of immediately killing the dog, he handed it over to Mr. Bayliss, who performed a further major operation upon the dog, which took an hour. His contention was (and he had placed it before the Home Office) that in that case it was Professor Starling's duty to kill that dog the moment he had performed his second operation upon it, and that this handing of the dog round from one vivisector to another was illegal, and ought certainly to have been stopped by the Home Office if they knew of it. If they did not know of it, the evidence in the action brought against him apprised them of it. His contention was that there never was a case more clear of a breach of the Act. And if they said that the second operation performed by Professor Starling was not done under Certificate B, but under his licence alone, then it was also his duty immediately to kill it on recovery from the anaesthesia. He had no business to leave it to anybody else. So that whatever view they had of it, Professor Starling must have broken the law. The Chairman said he understood Professor Starling's explanation (whatever the worth of it might be) to be that the animal was under anaesthetics; and instead of that dog being killed under anaesthetics, and a new dog being obtained and put under anaesthetics and operated upon by Mr. Bayliss, he allowed this dog to be operated upon. It had to be destroyed, and he thought that, as it had to be destroyed without coming out of the anaesthesia, it was saving, as it were, another dog for Mr. Bayliss to make his experiment on that same dog. Mr. Coleridge said his point was that the animal under Certificate B had a right to be killed the moment Professor Starling had performed that second operation. This might happen constantly. The Inspectors had told him they knew nothing about the case until the action was brought. He had been told by the Home Office that they knew nothing about it.

(To be continued.)

THE tenth French Congress of Medicine will be held at Geneva from September 3rd to 5th, 1908, under the presidency of Professor A. d'Espine of Geneva. The questions proposed for discussion are: (1) The Clinical Forms of Arterio-sclerosis, to be introduced by Dr. Huchard of Paris, and Professor Jaquet of Bale. (2) The Pathology of Neurasthenic States, to be introduced by Professor Dubois of Berne, and Dr. Jean Lépine, *Professeur-Agrégé* in the Medical Faculty of Lyons. (3) The Treatment of Biliary Calculus, to be introduced by Professor A. Gilbert of Paris, Dr. Carnot, *Professeur-Agrégé* in the Medical Faculty of Paris, and Dr. Mongour, *Professeur-Agrégé* in that of Bordeaux. The General Secretary is Professor A. Mayor of Geneva; the Assistant General-Secretary, to whom all communications relative to the Congress should be addressed, is Dr. M. Roch, 1, rue de la Prairie, Geneva.

Nova et Vetera.

STATISTICS FROM THE PARISH REGISTER.

OUR old parish registers, though often referred to for curious and entertaining scraps or occasional facts concerning local history, have hitherto been neglected as a source of knowledge of the historico-medical and statistical variety. An analysis of register entries is tedious, and requires close application and some antiquarian zeal, and therefore appeals only to those who are both interested and can find leisure and opportunity; consequently, workers in this direction are very few, and the writer hopes that the few results detailed below will be considered to justify a recommendation that the old parish registers be studied systematically.

The information contained in a register entry is seldom very full, and often very meagre; nevertheless, the sex is, with rare omissions, stated, also a date. Even these two facts allow of something; from them the population may be inferred, the proportion of male and female births calculated, the same as to deaths, and the numbers entered each year show the variations in the annual mortality and the local incidence of any known epidemic; it is possible by these means to obtain much statistical information.

At the British Association Meeting in 1900 Mr. Marcus Rubin read a paper in which certain methods of investigation and calculation were recommended. He stated that the population could be estimated by multiplying the average annual number of births by 30; the result would be within 10 per cent. of excess or defect. The writer has used this method in cases where the population was known and found it to work satisfactorily. For example, in Wavendon, Bucks, in 1676 the population ascertained by the archbishop's census was about 400; according to the register the decennial average of baptisms was 12—multiply by 30, equals 360: in 1740 there were 107 families—allowing 4 to a family, the proportion known to exist in 1712, the population was 428. The decennial average of baptisms was 13—multiply by 30, equals 390.

Mr. Rubin states that a century and more ago 8 per cent. of births were stillborn; occasionally a stillbirth is entered in a register, but not sufficiently often for us to suppose that all were entered. In Bletchley register, from 1577 to 1631, there are 38 burials of stillborn children entered—an average of 3 per cent. on the baptisms recorded for the same years. The writer in 68 cases attended in connexion with a hospital had 3 stillborn, and in 206 births in a purely agricultural district from 1887 to 1892 had 22 stillborn—11 per cent.! The average may vary with the district.

In Bletchley from 1577 to 1812 are recorded 5,149 entries of baptism, namely, 2,640 boys and 2,509 girls, a proportion of 105.2 to 100.

In Wavendon from 1567 to 1812 are recorded 3,267 baptisms, namely, 1,737 boys and 1,530 girls, a proportion of 113.5 to 100.

In Inkberrow, Worcestershire, 1675 to 1778, are recorded 2,849 baptisms, namely, 1,488 boys and 1,361 girls, a proportion of 109 to 100.

In the Stratford-on-Avon book from 1588 to 1652 are 6,865 baptisms, namely, 3,506 boys and 3,359 girls, or 104.3 to 100.

In Cropthorne, Worcester, 1557 to 1717, are 1,555 baptisms, namely, 842 boys and 713 girls, a proportion of 118 to 100.

In Moulton, Northants, from 1565 to 1812 are 3,673 baptisms, namely, 1,893 boys and 1,780 girls, a proportion of 106.3 to 100.

The foregoing instances all show a larger proportion of male to female births than now obtains; the writer has two instances of a reverse proportion, both of which occur in very small parishes and therefore may be exceptional, at any rate the numbers were too small to draw a positive inference from.

Twins occurred once in 70 in Bletchley, once in 73 in Wavendon, once in 88 in Inkberrow, once in 88 in Stratford-on-Avon, once in 86 in Cropthorne, once in 79 in Moulton. This shows a greater frequency of twins than is now experienced. In the two parishes showing the highest average a case of triplets is recorded, in 1660 at Bletchley and in 1710 at Wavendon; each lot consisted of two girls and a boy, and all were baptized; in the Bletchley instance the burial of the three children and the mother in one coffin is also recorded. Entries of triplets are not very rare; they occur in Lydlinch, Bitton, Kirk Ella, etc.

The mortality among twins was very high; in one series of 34 cases, 28 of the children died within a few days; in another series of 13 cases, 13 of the infants died; probably three-fourths died within the year.

Occasionally entries like the following are found:

1585. February. A woman child of one Joan Allin, borne and buried on ye XXII daye of Febr. Born wtout eyes, eares, nose or mouth, in very strange maner to the beeholders. It dyed unbaptized. (S. Sepulchre's, Northampton.)

1600. Feb. 10. A child still borne by the judgment of the women that broughte yt to be buried of fifteene weeks continuance in the mother's wombe was buried. (Stoke Prior.)

In Bletchley, 1766, is recorded the birth of a bastard daughter to a widow aged 50: the age is probably entered as an example of prolonged fecundity.

A popular belief seems justified by the following: In Stratford-on-Avon register are 134 entries of bastard infants; of these 77 were girls and 57 boys; in Simpson register are 27 bastards, 15 girls and 12 boys; at Moulton are found 42 bastard girls to 47 boys.

The cause of death is seldom entered in an ancient register unless it be accident, homicide, suicide, or some form of violence. But some causes may be surmised; it is justifiable to suppose, when a woman is buried either at the time of or near to the baptism of her child, that she died in childbirth; calculated by this means, in addition to those entries which state childbirth as the cause of death, the following are the figures for those registers already quoted:

For Bletchley, 1 maternal death to every 83 births.

For Wavendon, 1 maternal death to every 100 births or less.

For Inkberrow, 1 maternal death to every 93 births.

For Misterton, co. Leicester, 1 maternal death to every 91 births.

For Cropthorne, co. Worcester, 1 maternal death to every 85 births.

For Himbleton, co. Worcester (1715-1812), 1 maternal death to every 88 births.

It must be remembered that the above figures are all for before 1812, and carefully picked out from the registers by a patient analysis. In those cases of a woman dying undelivered or delivered of a dead child, there would be no indication to enable a searcher to recognize death in childbirth; therefore the results tabulated above represent the minimum deaths from this cause, the real mortality was undoubtedly higher, certainly 1.5 per cent., perhaps even 2 per cent.

The infant mortality is more difficult to calculate exactly, owing to the custom of entering only the name of a person buried, with no indication of the age; sometimes the entry will be fuller, and give the name of the parent of a child; then the estimation is easier, and if the register be thus carefully kept for a few years some definite result can be arrived at. In the average register, about one-fifth of the baptismal entries can be found referred to in the burial entries within the year. The infant mortality during the first year of life is easily proved to have been over 20 per cent. How much higher is uncertain; the rate probably varied from 25 to 50 per cent.

Age at death is rarely given, except in very old folk or reputed centenarians. Examples of the latter are comparatively common. The writer has examined the truth of a good many entries of death at 100 years or over; in none has proof been found, but in several definite evidence of exaggeration was discovered; therefore, all examples of age 100 may be regarded as doubtful.

Nearly all registers show certain years when the burial entries are much above the average number—for example, circa 1593-5, 1602-3, 1625, 1631, 1637-43, 1657-8, 1665, 1683-5, 1714-6, 1727-30. Nearly all these periods correspond with known epidemics which affected the whole kingdom. The "plague" was the cause of the extra mortality in most of the above-named periods; this disease was probably never absent from the kingdom before 1666, and was responsible for many localized

epidemics apart from the general prevalence indicated above. References to "plague" are very common; it is almost an exception to find an old register book without some mention of it—for example:

St. Sepulchre's, Northampton, January, 1638. Att which time, the Lord bee praised, the sickness ceased.

St. Sepulchre's, Northampton, 29 March, 1638. Att which time the sickness began.

St. Alban's, Worcester, has many entries of deaths from plague in 1637 and 1644.

Monk Fryston has many entries from September, 1604, to April, 1605, when the note is made, "And heare the the plagu ceased."

In Morden register is the entry, "Mirsse Burdetts nurse keeper was buried September ye two and twentith, 1652." "Nurse-keeper" was the old form used for "nurse" in time of plague; Defoe uses it in this sense.

The great epidemic of 1665 is more often mentioned in the registers than any other visitation, and even at that time many places escaped it, though others close by were desolated. Fenny Stratford lost about half its inhabitants, 130 being buried in a few weeks. While Wavendon, three miles from Fenny, only had one suspicious case: "1665, Oct. 25. Thomas Pancurst servant to Mr. Doggett was buried by his fellow servant R. W. being supposed to dye of the plague."

During the years 1657-9 malaria was widespread and very fatal to life; Oliver Cromwell died of it in 1658. Most registers show an increase in the deaths at this period, in some parishes a very large increase, but the writer knows of no register which gives the cause of the extra mortality. From 1685 onwards nearly all extra mortality was caused by small-pox, which has always been more or less of a scourge in England, though the ravages of the plague rather overshadowed it during the Middle Ages; in fact, very possibly both diseases may at times have prevailed simultaneously and been confounded with each other, but after 1665 the plague disappeared from these islands, and small-pox reigned indisputably supreme as the deadliest foe to life.

The horror and terror with which variola was regarded is attested by many an entry:

Misterton, 1659. A wanderinge youth who died of the small-pox in Mr. Freeman's cow yeard, bur. 1 Nov.

Shenley, 1748, Nov. 28. A stranger was buried, who in the affidavit before Mr. Thomson is called Thomas Davis, a drover. He was reported to have been sent with the small-pox out in his face, etc., in a cruel and fraudulent manner, and to have been placed in Widow Kent's barn at the Sd Cow Alehouse in the night 25-26. Being not admitted into her house. He died thro' inhumanity on the 27th. Attested by M. Knapp. Rector.

Bletchley, 1766, Mar. 19. Farmer Turner died of small-pox and was put in the grave that evening and I would read the burial service to-morrow, as hardly any of the parish had had the distemper and few of the clergy could be got to bury him, as even those who had had it were afraid of carrying infection to their families. (Cole Uss.)

At Fladbury there was an epitaph setting forth that the parson refused to bury a child who died of small-pox.

The desertion and neglect shown by the above extracts was not exceptional, similar entries are not uncommon in other registers, and all tend to prove the universal dread of a disease which the modern "antivacks" see no reason for fearing.

During the period 1727-30 there was a great increase in the death-rate, perhaps caused by small-pox; the whole kingdom was affected. The register of Great Hampton calls 1728 "lethifer annus," and the Flyford Flavel register writes of the time as "remarkable for a mortality in this parish more yn ordinary, which may be in some sense term'd an area noted to Posterity." Local epidemics are fairly frequently noticed—for example, Burnham, 1768, in this year 78 deaths, whereof 30 of small-pox.

About 1710-16 a fever epidemic prevailed, which, though of a mild nature (? influenza), would increase the death-rate by killing through its complications and sequelae. The registers give evidence of extra deaths all over England during this time. Thos. Hearne refers to it in his diary: ". . . I call it a feaverett, it being a small fever, that at this time goes all over England. It seizes suddenly, and holds generally but three days. . . ."

Mention of the "king's evil" occasionally appears in a parish register, not as a cause of death, but as the reason for granting certificates to afflicted candidates for the "king's touch." There are instances in Wavendon (1684-7), Great Brickhill (1686-7), Merstham (1673 80), etc.

Every parish register upon examination will be found to yield evidence of most, if not all, the epidemics detailed above, as well as other information of medical interest.

Isolated curiosities are:

Thornton, 11 July, 1686. Elizabeth Peter was buried, after having byen about seven weeks without any evacuation downwards and most of ye time not upwards neither.

Kirk Ella. William Swindale who stabbed himself in two places in his left side and after yt drowned himselfe in ye dale weil ye 4 day of November was buried in ye field ye 5th day of November 1664, etc. etc.

In some registers the cause of death is given, chiefly in the years towards the end of the eighteenth century. Among the various causes are—total decay, teething, typhus, fits, decline, visitation of God, inward bruise, mercurial application, stoppage, a cold, complaint in the head, nervous atrophy, etc.

W. B.

THE "CONQUEST" OF CANCER.

LITTLE more than a year ago, the "approaching conquest of cancer" was announced with a great flourish of trumpets in an evening paper, and for some days afterwards the paper in question was full of reports of cases cured by the conquering agent, with scare headlines and large posters, and the usual devices by which newspapers strive to excite the attention of the public.

The announcement was based, it appeared, on certain cases reported by Dr. Morton, of New York, who was said to have treated 29 cases with trypsin, of which 3 were reported as "cured to date." The writer, who told his story in the most sensational way, intimated that he had little doubt that he would be warranted in speaking of the "conquest of cancer." We felt it our duty to point out at the time that the tone in which the writer delivered his testimony did not inspire us with confidence in his capacity to see things steadily and see them whole. As, however, we feel strongly that in the field of therapeutics, especially in the case of a disease so refractory to treatment as cancer, it is the duty of the practitioner to give every method which offers any hope of usefulness a fair trial, we gave in the EPITOME of January 19th, 1907, a very full abstract of Dr. Morton's cases, together with his comments. In the same issue of the JOURNAL we analysed his results and showed that the sensational statement which had appeared in the newspapers rested on a very slender basis of fact. We pointed out that of the 29 cases treated by trypsin, there were 3 of sarcoma and 2 of lupus, diseases which do not come within the definition of cancer. We pointed out, further, that there seemed to be reason to believe that among the remaining cases there were at least some of rodent ulcer, which, as every one knows, is relatively benign. It was added that except in 1 case nothing was said about microscopic examination of the growth. Taking the results in the 24 cases of "cancer" recorded by Dr. Morton, it appeared that 3 patients died, in 14 great improvement took place, in 3 little or no effect was produced; in one case described by Dr. Morton as "uninstructive as regards trypsin" the patient was advised to undergo a surgical operation. The number said to be "cured" was 3. Of the "cures" we pointed out that one must be rejected, for the patient had finally to submit to the knife. Dr. Morton, however, claimed this as a "cure," because the trypsin seemed, on the evidence of the microscope, to have destroyed the growth. In regard to this it was pointed out that destruction of a single tumour by no means implied cure of the disease. In the other two cases the "cure," at the date of the report, had been maintained for less than four and two months respectively. We went on to say that Dr. Morton had made out a case for a trial of trypsin on a larger scale, and to endorse the editorial opinion expressed in the *Medical Record*—the journal in which his results were published—that the results obtained so far were not sufficient to carry conviction.

In the JOURNAL of March 2nd, 1907, a paper by Dr. W. S. Bainbridge of New York was published giving the result of one of Dr. Morton's cases on which he was called upon to operate three times after the trypsin treatment had failed, and as regards which the findings of

several pathologists were given. These showed in Dr. Bainbridge's words that there was "need for 'suspended judgement' and for 'the cultivation of that enthusiasm for truth, that fanaticism of veracity' which should be brought to bear on all questions involving human life." The importance of this pronouncement is that Dr. Bainbridge was quoted by the herald of trypsin as one of the pioneers of the treatment, who had come to London to see him, and had been by him sent on to Edinburgh that he might drink the living waters of the new truth at their source. In commenting on Dr. Bainbridge's paper, after giving the evidence, we said:

What is the inference to be drawn from these statements? Are we to reject trypsin without further trials? That would scarcely be scientific, for, though its curative properties are "not proven," there is some evidence that, in certain cases at least, it alleviates some of the worst features of the disease. It would be heartless as well as foolish to deny a sufferer doomed to death the slightest mitigation of his lot, were it only the effect of suggestion. Let the treatment be fairly and fully tried. Only, as John Goodsir said, let us have God's own truth in the reports, and let us not allow ourselves to be carried away by the eagerness of a wish which is the father of an ill-considered thought.

Later, in the JOURNAL of June 15th, we published the results of a trial of the trypsin treatment made by Messrs. Walter Ball and E. Fairfield Thomas, and published in the *Archives of the Middlesex Hospital*.[1] It is stated there that:

The instructions given by Dr. Beard, of Edinburgh University, were rigidly carried out. These instructions have varied from time to time, but the lines followed were those laid down by Dr. Beard in a printed form kindly forwarded by him to the Middlesex Hospital on December 18th, 1906.

The conclusion drawn by the authors from their observations was that "the course of cancer, considered both as a disease and as a morbid process, is unaltered by the administration of trypsin and amylopsin." It was added that Mr. Pearce Gould, who was surgically in charge of the patients, and Dr. Lazarus-Barlow, Director of the Cancer Research Laboratory, were in entire agreement with the conclusions thus expressed. Since then a few cases of apparent amelioration of symptoms have been published in the JOURNAL and elsewhere, but in none of them has it seemed to us that the evidence that the disease was cancer was conclusive.

We have thought it well to give a brief history of the position we have taken up in regard to the trypsin treatment of cancer, because it has been grossly misrepresented. Dr. C. W. Saleeby, the writer of the sensational articles to which we have referred, has written a stout volume[2] to prove that Dr. Beard has solved the problem of cancer, and that he, the author of the volume in question, is the prophet of a new discovery of incalculable benefit to mankind. From the title of the book an unwary reader might gather that the "conquest of cancer," which was declared a year ago to be "approaching," had already come to pass. He will, however, be disillusioned if he reads the first page of the preface in which the author repudiates the "wish to maintain any such monstrously untenable thesis as that the disease has been actually conquered." We cannot congratulate Dr. Saleeby either on the matter, the style, or the temper of his book. It is inordinately wordy and egotistical, and full of repetitions and self-contradictions that make the reading of it a weariness to the flesh and to the spirit. Thus, while we are told (page x) that "as regards practice, surgery as a whole has a record of the most signal and lamentable failure," it is admitted (page 124) that "when the surgeon has a fair chance he may undoubtedly succeed in effecting true cure of cancer." On the same page the author says:

I believe the time will come when the knife may be discarded for cancerotoxic ferments, but it has not yet come. I desire nothing less than to dissuade patients at this stage from availing themselves of all the real help that the surgeon can give them. It may be clearly recognized that in early and suitable cases modern surgery may remove the whole disease finally without any appreciable risk, and with a rapidity which no other mode of treatment can emulate. Furthermore, there are other cases of advanced internal cancer in which surgery can perform what are called plastic operations, that go some way towards compensating for damage which has already been done by the disease, and which no conceivable treatment can make good. In the present state of things, then, the surgeon's help is by no means to be dispensed with.

To the surgeon these are the merest truisms, but they must be taken as significant admissions from Dr. Saleeby, who elsewhere treats the surgeon as if he were the natural enemy of mankind, or at least of such portion of it as has the misfortune to suffer from cancer.

We should not have thought it worth while to notice the book at all had it not been for the charge brought against this JOURNAL in it and elsewhere, with "damnable iteration," of suppressing evidence in favour of trypsin. This is simply untrue. We have not suppressed evidence, because, not to put too fine a point on it, as Mr. Snagsby would say, there is virtually no evidence to suppress. From Dr. Saleeby himself we have received no communication whatever, and as he taxes us with ignoring some communications of his made to the *Daily Mail*, the *Observer*, and other periodicals, we may tell him plainly that we do not go to halfpenny newspapers for information on medical science, nor have we any reason to regard him as an authority on cancer. The head and front of our offending is that we returned to their authors short reports of four cases treated by trypsin, all on the same ground—namely, that the reports themselves were incomplete, and the evidence as to the nature of the disease inconclusive. Two of them were from an acknowledged propagandist of Dr. Beard's method; the others from a source which is to him anathema. We may therefore claim to have dealt impartially with the rival pioneers.

In regard to this charge of "suppressing evidence," we may be allowed to point out that the responsibility of a medical journal in such a matter as the treatment of cancer is extremely serious. Its attitude, therefore, must always be one of caution till the value of a method has been absolutely proved. That this is not the case in regard to trypsin is shown by the single fact that, assuming for the sake of argument that all that is urged on its behalf is true, it has not yet been tried in a sufficient number of cases, nor has a sufficient time elapsed to allow any definitive judgement of its value to be formed. We are, as we have frequently said, ready to welcome reports of cases that can be taken as showing a prima facie case in favour of any method of treatment, and even to stretch a point by publishing contributions which do not show even so much as this. But it is to the last degree misleading, both to the profession and to the public, to publish cases which prove nothing whatever. The premature publication of supposed cures has been one of the greatest hindrances to progress in medicine. Enthusiastic persons rush into print with a description of a "successful operation" before the blood on the knife is dry. Others tell us of the marvellous virtues of a new drug which is often an old drug under a new name, and which in a short time loses its effect. It was this that made a cynical French physician say, *Hâtez vous de prendre ce remède pendant qu'il guérit!*

As to the whole matter, we cannot put the case better than in the words of Mr. Carless in the *General Practitioner* of December 21st, 1907, which is a "Cancer Special Number," with reference to a case there reported. Mr. Carless says (page 804):

It is most important to recognize and remember in this case that it is not proved to be one of cancer, and must not be included in the category of cures of this malign disease. That it looked and felt like a cancerous growth is, to my mind, no criterion for accepting it as such. I have been mistaken in a similar way before, and have several times known of growths which I looked on as irremovable malignant tumours disappear after an exploratory laparotomy. . . . I do not for one moment wish to minimize the beneficial effects which in this case followed the injections of trypsin, and which began to be experienced almost immediately, but at the same time I do desire that the record of this case should not raise false hopes in the minds of the public or that it should be considered a cure of a cancer. My own feeling is that I made a mistake in declaring the growth to be a cancer, but at the same time it was a perfectly reasonable mistake to make. That the trypsin injections did good I have also no doubt.

He adds, however:

It may be advisable to state here that this is not the only case that I have treated or seen treated with trypsin injections. I have utilized it for recurrent cancer of the breast and for some sarcomatous growths, but in none of them have the

[1] *Archives of the Middlesex Hospital.* Vol. IX: Sixth Report from the Cancer Research Laboratories. London: Macmillan and Co. P. 18 et seq.

[2] *The Conquest of Cancer: A Plan of Campaign.* Being an account of the principles and practice hitherto of the treatment of malignant growths by specific or cancerotoxic ferments. By C. W. Saleeby, M.D., F.R.S.Edin. Author of *Biology and Progress*, etc. London: Chapman and Hall, Limited. 1907.

results been at all satisfactory. . . . All hospital surgeons of any experience have constantly had cases sent to them with a diagnosis of cancer, which on operation or without it were proved to be nothing of the sort; and if records of cases of the cure of cancer are to be believed by the profession generally, and if the trypsin treatment is to become part of our armamentarium, then the diagnosis of such reports must be guaranteed either by microscopic examination of the growth or by the opinion given in consultation with men of established position in the profession.

This is exactly what we ask for, but we do not find it in Dr. Saleeby's book.

Dr. Saleeby charges us with having suppressed one sentence in Dr. Beard's letters and inserted another. We did suppress some of the correspondence with which Dr. Beard has favoured us, because it seemed to us to be libellous, and we therefore thought it would be dangerous for him, as well as for us, to publish these effusions. The charge of inserting a sentence we simply deny, and we have no idea what Dr. Saleeby means. Had we done anything of the kind, our attention would assuredly have been called to the fact by Dr. Beard himself. We have, indeed, been cited by him to the bar of Aeacus, Minos, and Rhadamanthus; but that, as far as we understand, is for our iniquity in not swallowing his formulas, and we think these mythical personages form a specially appropriate tribunal to try such a case.

Further, we are entitled to ask Dr. Saleeby what has become of the cases "cured" by Dr. Morton a year ago. He knows, or could easily find out; but we have seen no report of them. The history of cancer "cures" recalls Byron's lines:

> Romances paint at full length people's wooings,
> But only give a bust of marriages.

It is the "marriages" and how long the patient lived happily after the "cure" that one would like to know. But this is just what we are seldom told.

Again, Dr. Saleeby makes great play with the illustrious name of Professor von Leyden, whom he over and over again claims as a supporter of the treatment which he advocates. He omits to state, however, that although von Leyden said that pancreatin often had a destructive effect on the tumour, he added that the practical results were of no importance. It is implied throughout that the method is accepted everywhere but in England, and Professor Blumenthal of Berlin, in particular, is claimed as a true believer. Yet, as we write, there has come into our hands the *Revue Générale des Sciences* of December 30th, 1907, in which, in discussing the general question of our knowledge of cancer, Professor Blumenthal, after describing the hopeful effects of treatment of cancer with a special serum and by inoculation of extracts of cancerous growths—all the experiments, be it noted, having been performed in conjunction with Professor von Leyden—goes on to state that some years ago he announced that the pancreatic extracts had the property of readily dissolving cancerous tumours. He adds:

> In England the question has been more closely studied, and the conclusion has been arrived at that it is the trypsin contained in the pancreas which digests the tumour. Thus there has been developed in England a treatment of cancer by trypsin.

But, although he thinks the treatment by a ferment which destroys the cancer cell, such as is found in the liver and the pancreas, has a great future before it, he concludes that

> all these methods are in the embryonic stage, whereas the surgical method alone will give us, in the majority of cases, a sure result.

We have quoted this paper to show that the authorities appealed to by Dr. Saleeby, so far from bearing out his statement that the method which he advocates has been ignored in England, actually give the credit of the invention, such as it is, to our country. We have other reasons for stating that Dr. Saleeby has mispresented the German evidence, and we have a suspicion that he is imperfectly acquainted with the language in which it is recorded.

The two or three Italian cases which have been cited do not, to speak frankly, inspire us with much confidence; one of them, which is quoted by Dr. Saleeby, is reported by a gentleman who, from a number of leaflets in various languages in our possession, appears to be the inventor of a specific, "Whoopene," which "ensures complete recovery" from whooping-cough in eight to fifteen days! Of any evidence from France or any other foreign country we have seen nothing. Yet Dr. Saleeby and his friends suggest that, except in England and America, the Beard treatment has met with enthusiastic support! We therefore think ourselves justified in saying that all the evidence which has so far been forthcoming is scanty in amount; we may add that it leaves much to be desired in point of quality. In the words of Falstaff's tailor, we respectfully beg Drs. Beard and Saleeby to "procure us better assurance than Bardolph; we like not the security."

Dr. Saleeby shows what in another—it might be invidious to say a greater—conqueror has been called a peculiar talent for misrepresentation. He implies that the JOURNAL is in this matter the vehicle for the conveyance of the views of a prominent cancer researcher. It may be some comfort to him to learn that the writer of the articles which have so stirred his wrath is no more prominent in cancer research than himself. That poor but honest person is, however, one who strongly holds that a medical journal should be, as Sir Thomas Barlow said of the Clinical Section of the Royal Society of Medicine, "absolutely intolerant of speculative nonsense and the non-scientific use of the imagination."

Throughout we have kept an open mind on this subject. We have not passed any definitive judgement on the treatment; on the contrary, we have urged that it should be fully and fairly tried. It is against the methods of those who boom it that we have protested. We think it our duty to warn the profession and public against premature announcements of supposed discoveries, and that duty we shall continue to discharge. If Dr. Beard has discovered a genuine cure for cancer, it would not be possible for us or any one else to hide his light under a bushel. He has himself done his best to place it on a hilltop. He has chosen to appeal to the people; let the people judge him. We are told of "numberless cases" in which it is suggested that his "prompt and priceless and unfailing advice," has snatched sufferers from the doom of cancer. Wherefore, as Sir Toby Belch says, are these things hid? "Is it a world to hide virtues in?" Let him produce but a dozen, or even a half-dozen, cases of complete cure, each of them properly attested by competent witnesses, and he will be welcomed by none more readily than by us as the deliverer of the human race from a terrible scourge. The cure must of course have lasted a sufficient time to afford some warrant for the hope that it will be permanent. A "cure" of a case of a doubtful nature which has lasted three weeks, or even three months, can scarcely be accepted as a proof of the value of any method of treatment.

Dr. Saleeby is kind enough to imply that we rejoice in recording any case of failure of the method of which he has constituted himself the apostle. He is a writer who evidently does not weigh the import of his words, and we therefore take this as only mere sound and fury. He confuses the issue, which is a perfectly plain one: Has the treatment which he asks the public to believe will conquer cancer as yet really cured a single case? We do not underestimate the value of temporary relief; but even accepting all the statements of its advocates as absolutely trustworthy, it is still conspicuously inferior in this respect to surgery. Let conclusive evidence that the "enzyme treatment" will do what is claimed for it be forthcoming, and the medical profession—in its own interest, if from no higher motive—will receive it with eagerness.

Dr. Saleeby speaks of the possibility of his life ending "upon the gallows amid universal execration." Although we feel it our duty to say that he has written a book which is an appeal to ignorance and despair, yet the facts that, as Holofernes puts it, he draweth out the thread of his verbosity finer than the staple of his argument, and that he uses all the arts of the disingenuous controversialist, do not form what the tormentors of M. de Pourceaugnac call *un cas pendable*. But may we hint that he wearies us with his perpetual complaints of the injustice that has been done to Dr. Beard? His attitude towards that meek and modest discoverer reminds us of that of Montague Tigg towards Chevy Slyme; like the admiring friend of that unappreciated genius, he evidently feels that "there is a screw of such magnitude loose somewhere that the whole framework of society is shaken and the very first principles of things can no longer be trusted" in a world that refuses to take Dr. Beard at together at his own valuation.

We would say, in conclusion, that we hold no brief for any of the official organizations for cancer research. We may point out, however, that they have been studiously cautious in their statements and have been careful not to mislead the public. In this we commend their example to Drs. Beard and Saleeby. We wish these gentlemen to understand, once for all, that it is not themselves or their remedy, but the method of booming it they have chosen to adopt, that we condemn. The wild and whirling words of Dr. Saleeby are only to be explained by enthusiasm—or ignorance—but neither of these things is an excuse for raising false hopes. Whatever may or may not have been conquered so far, unfortunately it is not cancer.

LITERARY NOTES.

We learn that Mr. Young J. Pentland, of Edinburgh, has relinquished his publishing business in favour of Mr. Henry Frowde, Oxford University Press, and Messrs. Hodder and Stoughton. The copyright volumes transferred include the well-known *Textbook and Manual of Anatomy*, by Professor D. J. Cunningham; the *Textbook of Physiology*, by Professor Schäfer; the *Manual of Bacteriology*, by Professors Muir and Ritchie; the *Manual of Surgery*, by Messrs. Thomson and Miles; the *Outlines of Zoology*, by Professor J. Arthur Thomsen, etc. These important works will for the future be published by Mr. Frowde and Messrs. Hodder and Stoughton.

Shakespeare differs greatly from Montaigne—an author whom he seems to have read with special attention—in his treatment of the medical profession. Whereas not even Molière shows a more bitter hatred of doctors than Michel de Montaigne, Shakespeare exhibits something of an opposite feeling. It should be remembered that Shakespeare's daughter married a physician, Dr. John Hall, of Stratford. Hence doctors have always taken a special interest in him. They have not, indeed, like the lawyers, claimed him as one of their own; but, setting aside the treatises that have been written by experts on the question of Hamlet's madness, his knowledge of medicine has been discussed by the late Dr. John Moyes (in a thesis on medicine and the kindred arts presented to the University of Glasgow for the M.D. degree and afterwards expanded into a book which was published in 1896), Dr. John Knott of Dublin, and others. Quite recently Dr. F. von Winckel of Munich devoted a whole number of the *Sammlung klinischer Vorträge* to the "gynaecology" of Shakespeare—a thing which, we imagine, would have startled the author of *Venus and Adonis*. About a year ago Dr. Albert C. Getchell contributed an article on the medical knowledge of Shakespeare to the *Boston Medical and Surgical Journal*, in which he seems to suggest that the one doctor whom he holds up to ridicule is a compound of Dr. John Caius, founder of the Cambridge college which bears his name, and Sir Theodore de Mayerne, a French physician very famous in his day. Mayerne, however, did not come to England till some years after the *Merry Wives of Windsor*, in which the Frenchman, Caius, figures, was written. In the *Bulletin of the Johns Hopkins Hospital*, Baltimore, for January, 1907, Dr. Arthur Meyer treated of medicine in Shakespeare, and in the November number he deals with the physicians and surgeons in Shakespeare. He points out that among Shakespeare's characters there are seven physicians. Two—the doctor in *Macbeth* and the physician in *Lear*—have no name. Those named are Cerimon in *Pericles*, Cornelius in *Cymbeline*, Caius in the *Merry Wives of Windsor*, and Butts in *Henry VIII*. The English doctor in *Macbeth* speaks but four and a half lines, in which he owns to a belief in witchcraft, universal at that time, and accepts the cure, by the royal touch, of the king's evil, which he describes as "the mere despair of surgery." His colleague, the Scottish doctor of the same play, scarcely has a more important rôle. He is shrewd, but in Dr. Meyer's opinion shows a mercenary spirit. He shows his caution in the sleep walking scene, where he says: "I will set down what comes from her (Lady Macbeth) to satisfy my remembrance the more strongly." Upon recognizing that "the great perturbation in nature," which afflicts Macbeth, is due to "unnatural deeds" which "breed unnatural troubles," he concludes that such a disease is beyond his practice. He makes what Dr. Mayer calls the "damaging admission":

> Were I from Dunsinane away and clear,
> Profit again should hardly draw me here.

Dr. Meyer contrasts him, to his disadvantage, with the physician in *Lear*. Of the latter he says:

> The fact that this physician has music to sound during Lear's awakening is usually given as one of the evidences that Shakespeare was several centuries in advance of the physicians of his own time in his treatment of insanity. I do not wish to stop for a full discussion of this entire subject, but it must be admitted that undue emphasis has been laid upon this fact. In the sixteenth century, music—such as it was—was very popular. Barbers had citterns and virginals in their shops for the amusement of their patrons. Ben Jonson refers to this custom in *Every Man in His Humour*, when he says: "I can compare him to nothing more happily than the barber's virginal; for every man may play upon him."

Furnival and Lanier think that Cerimon, in *Pericles*, represents Shakespeare's son-in-law, Dr. Hall. If *Pericles* was written in 1609, as Knight, Meres, and others hold, this is possible. Regarding Cerimon, Lanier writes:

> It is very delightful to think that this superb portraiture of the ideal doctor which Shakespeare has given us in the figure of Cerimon—a portraiture which ought to be in gold letters and framed and hung up in every medical college in the land—was possibly drawn from an actual personage. We know historically that in the year 1607 Dr. John Hall married Shakespeare's youngest daughter Susannah. Now, Shakespeare's part of the play of *Pericles* was probably written just about this time, and it seems very likely that this son-in-law, Dr. John Hall, furnished him with at least some of the features which go to make up the noble Dr. Cerimon.

Cerimon, it will be remembered, is the only physician of noble rank in the plays of Shakespeare. He is addressed by Pericles himself as "reverend appearer" and "Lord Cerimon." Butts, who appears in *Henry VIII*, was knighted by Bluff King Hal, to whom he is said to have administered his gout powder, consisting of the raspings of an unburied skull. Of Dr. Caius, Dr. Meyer says it is easy to separate him from the Caius of history. The historical Caius, a pupil and friend of Vesalius, started dissections of the human body in England, wrote *A Boke or Counseill against the Disease commonly called the Sweate or Sweatyng Sickness*, and succeeded Linacre as second President of the Royal College of Physicians. To this office he was re-elected nine times. He died about twenty-eight years before the *Merry Wives of Windsor* was written. That Mayerne could not have been meant seems to Dr. Meyer equally certain. He had been persecuted by his fellow-countrymen, partly because he was a Protestant, but mainly because he favoured some drugs condemned by the Paris College of Physicians. That College in 1603 forbade any of its members to consult with Dr. Mayerne because he espoused the doctrines of Paracelsus. Consequently he left France, came to England in 1607, where he speedily gained a great reputation. Brandes gives the following explanation of the introduction of Dr. Caius into the *Merry Wives of Windsor*:

> Shakespeare had just been trying his hand in *Henry V* at writing broken English spoken by a Welshman and by a Frenchman. He knew that at court where people prided themselves on the purest pronunciation of their mother tongue, he could find an audience exceedingly alive to the comic effects thus obtained, and he therefore, while he was in the vein, introduced into this hasty and occasional production two not unkindly caricatures—the Welsh priest, Sir Hugh Evans, in whom he probably immortalized one of his Stratford schoolmasters, and the French Dr. Caius, a thoroughly farcical eccentric who pronounces everything awry.

Dr. Meyer calls attention to the fact that in the plays of Shakespeare we find no surgeon, though surgeons and surgery are often alluded to. The medical profession in the sixteenth century was, he says, composed of a motley company. As a class, physicians were ignorant, superstitious adherents to the past who did not believe their own eyes. Yet there was no dearth of men renowned, for all time, for their professional ability, for their achievements, and for their character. It is these physicians and surgeons who must be our guides in critically judging the delineations of the doctors in the plays of Shakespeare. The physicians in Shakespeare are minor characters who have little opportunity to display professional knowledge, and often form but a small though indispensable part of the dramatic machinery. Their speech, which is not at all charac-

teristic of their profession, is usually determined by the course of events beyond their control. Their character, in several instances, is not above reproach, but we must bear in mind that their sins of omission and commission are frequently the inevitable results of circumstances.

In the second volume of the *Memoirs of the Comtesse de Boigne* (Heinemann) some interesting details are given respecting the death of Princess Charlotte of Wales, daughter of the Prince Regent, heir to the throne, and wife of Prince Leopold of Saxe-Coburg, who became King of the Belgians in 1830. After explaining that the Princess entertained such a dislike to her father, grandmother (Queen Charlotte) and aunts as to have purposely deceived them respecting the date of her probable confinement, so that they should not be present, Madame de Boigne writes: "The only person with the Princess was her husband, and the physician Croft had persuaded him that there was nothing to fear from a labour that had lasted sixty hours. The doctors who were waiting in the neighbouring rooms desired to be admitted to the chamber of the Princess. She refused absolutely, and the Prince, who was inexperienced, did not venture to insist. Eventually she brought a child into the world which was perfectly healthy and had died merely from exhaustion; the exhaustion of the mother also was extreme. Croft insisted that she only needed rest and ordered every one out of the room. An hour afterwards her nurse heard her calling weakly—'Fetch my husband,' she said, and expired. The Prince, who was lying on a sofa in the next room, could not believe that he had received her last breath. Her death spread consternation throughout England, and when I came back in December the entire population to the postboys and crossing-sweepers were in mourning and continued to wear it for six months. Dr. Croft became the subject of public execration, was eventually driven out of his mind, and blew out his brains." "Dr." Croft is of course Sir Richard Croft, Bart., and the facts respecting his alleged negligence are given as they were generally believed at the time.

THE PLAGUE.

INDIA.

DURING the weeks ended November 23rd and 30th, 1907, the deaths from plague in India numbered 4,000 and 4,476 respectively. The principal figures are: Bombay Presidency, 2,480 and 2,569; Bengal, 78 and 105; United Provinces, 123 and 426; Punjab, 328 and 391; Rajputana, 120 and 128; Central India, 112 and 61; Central Provinces, 114 and 107; Hyderabad, 210 and 200; Madras Presidency, 101 and 114; Mysore State, 401 and 447; Burmah, 47 and 73. It is encouraging to us that at Malkawal, where the tetanus incident during plague inoculation in 1902 occurred, Captain V. R. Roberts, I.M.S., has succeeded in inducing a number of persons to be inoculated against plague.

AUSTRALIA.

No plague cases reported since July 26th, 1907. At Brisbane plague-infected rats continue to be found. Latest report available November 9th, 1907.

SOUTH AFRICA.

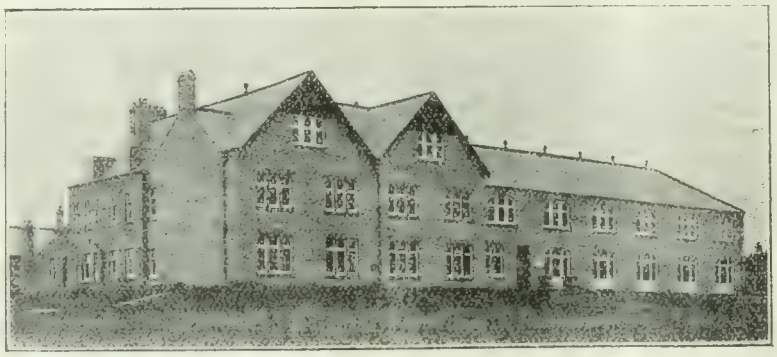
No plague cases reported since October 21st, 1907. At King Williamstown rats and mice continued to be found to be plague-infected up to the week ended December 7th, 1907.

MAURITIUS.

During the weeks ended December 5th, 12th, 19th, and 26th, 1907, the fresh cases of plague numbered 6, 2, 5, and 1, and the deaths from the disease 3, 2, 5, and 1 respectively.

A SANATORIUM FOR CONSUMPTIVE CHILDREN.

THIS sanatorium, situated at Stannington, Northumberland, was opened on October 5th, 1907, by the Duke of Northumberland, Lord Ridley being in the chair. The Bishop of Newcastle, Lord Allendale, Mrs. Roland Philipson, Dr. Allison—the initiator of the movement—and many others were present. The scheme includes a farm of 170 acres for "street arabs," who are trained as agriculturalists, and who are doing well on the farm, which is paying satisfactorily. There is also a convalescent home for boys, together with the sanatorium itself. This is isolated, and beautifully situated facing south. The building is of hollow brick walls in front, with stone for stability at the rear. The administrative block is sufficient for 100 patients, and at present there is accommodation for 60 inmates in the wing and central portions of the building. The building has cost about £80 per patient's bed. All lime, brick, and stone have been led on to the site, which is some three miles from a station. At the east end of the buildings are two acres of pine wood, and shelter belts have been planted to the north and west. Wood sheds among the pines are intended to shelter the patients when outdoors, except in sunny weather. There are no balconies, as they might be dangerous for children. The wing is divided into two wards of four beds each (on either side of a nurses' room), so that the wing contains five rooms (opening into each other) on each of the two floors. Hence the children are under observation and easily reached. All washing is done in the sanitary blocks immediately behind the wards. Lighting is effected by the Dargue acetylene gas, Newcastle. The installation has cost under £100. By the advice of Dr. Allison the light has been kept outside the wards and away from the children by inserting windows in the corridor walls. The penetrating power of the acetylene is found quite sufficient for dressing and other purposes. By his advice also the wards have been ventilated by tubes over the corridor—that is to say, from fresh air into fresh air; special w.c.'s have been installed, and the soil pipes lead to a steam sterilizer, where the faecal matter from the patients (who, being children, may swallow a proportion of their sputum) is boiled before passing it into the drains. The sewage, after passing through a septic tank and clinker beds, is utilized on the land, and from the farm will come the milk and butter from "tested" cows. The water supply is from a borehole, and is pumped up above the buildings, an irrigation reservoir for dry summers having also been constructed. The cost of the scheme was as follows:



Farm (173 acres), buildings, stock, and crops ...	£6,620
Convalescent home for 80 boys	1,774
Sanatorium (building contract)	3,359
*Furnishings, roads, sanitation, water, laundries	2,547
	£14,300

* If the *whole* of these extras were debited to the sanatorium the cost per patient's bed would be the very low one of £100.

The project is under the auspices of the Newcastle Poor Children's Holiday Association, started some years ago by Mr. J. T. Lunn (Chairman), and Mr. John Watson (Honorary Secretary). It was rendered possible by the generosity of the late Mr. Roland Philipson, who (on his holidays at the time) telegraphed the sum of £5,000 to the late Bishop of Newcastle. A memorial window to Mr. Philipson has been placed facing the staircase of the Sanatorium. The wood work and colouring give the central portion the shape of a cross, and the chief inscription reads: "In reverence to Him who loves little children, and in memory of Roland Philipson who founded this Sanatorium for Consumptive Children."

MEDICAL NEWS.

DR. WILLIAM HUNTER has been appointed Physician to Charing Cross Hospital in succession to the late Dr. Montague Murray.

THE annual distribution of prizes to the Royal Army Medical Corps (Vols.) London Companies by Lady Keogh will take place at the head quarters, Calthorpe Street, W.C., on Saturday, February 1st, at 8 p.m. The distribution will be followed by a dance.

AT the next meeting of the Surgical Section of the Royal Society of Medicine, on Tuesday next, at 5.30 p.m., a discussion on some aspects of subphrenic abscess will be introduced by Mr H. Barnard in a paper based on 76 consecutive cases. It is hoped that members of the Medical Section will join in the discussion.

IT is announced that the governing body of Rugby School has transferred Dr. Clement Dukes to a new post, specially created for him, of consulting physician to the school, with a salary, in consideration of the long series of years that he has acted as medical officer. The change will take effect after July next.

THE eighth Lees and Raper memorial lecture will be delivered in the Town Hall, Oxford, by Mr. W. McAdam Eccles, M.S., F.R.C.S., Assistant Surgeon, St. Bartholomew's Hospital, on Tuesday, February 4th, at 8 p.m.: the chair will be taken by Professor Osler. The subject of the lecture will be the relation of alcohol to physical deterioration and national efficiency.

WE are requested to state that the Odontological Section of the Royal Society of Medicine is prepared to receive applications for grants in aid of scientific research in connexion with dentistry. Forms of application may be obtained from the Honorary Secretary of the Scientific Research Committee, Odontological Section, Royal Society of Medicine, 20, Hanover Square, W.

AT a meeting of the General Council of King Edward's Hospital Fund for London on January 3rd, the resolutions providing for the work of the Fund during the year 1908, set forth in the JOURNAL of December 21st, 1907, p. 1791, were formally adopted. A communication signed by the Prince of Wales was also received, appointing to the various committees of the Fund the persons named in the JOURNAL for December 28th, p. 1841.

PROFESSOR NEISSER has, it is announced, returned from Batavia, where he has been studying syphilis in apes. From a large number of experiments, he has come to the conclusion that it is impossible to obtain a serum that will produce immunity. He has successfully inoculated apes which had been infected twice before and twice cured. A radical cure of the disease is possible by treatment with mercury and iodide and also atoxyl. During his mission, which extended over three years, he was able to convince himself that the serum diagnosis is useful and affords a reliable test of complete cure. A banquet is to be given in Professor Neisser's honour on February 1st.

THE Scottish Medical and Dental Financial Association, Limited, has been formed with the principal object of recording and keeping regular business books and accounts for and on behalf of practitioners in Scotland, and rendering accounts to patients. The practitioner will retain control of his accounts, and by the use of a cypher his affairs will be kept private between himself and the secretary. In addition, collectors will be available for the collection of overdue accounts if desired, and the Association will act as medical agents for the sale of practices and the supply of locumtenants and assistants. Further particulars can be obtained from the Secretary, Mr. John M. Lyon, 170, Hope Street, Glasgow. We are informed that it is proposed to establish similar associations in England and Ireland.

BY the time this paragraph appears a new society of some interest will probably have come into existence, its creation having been projected and arranged at a provisional meeting held last month. It was determined to hold a formal meeting at the Whitehall Rooms on Friday, this week, to confirm the constitution of the society and listen to an address from Sir James Crichton-Browne on the general objects of the meeting. These are to bring about a general crusade against rats wherever found, on the ground that these animals are dangerous to the public health, and also injurious to many agricultural and commercial interests. The proposed name of the new body is the Society for the Destruction of Vermin, and it will co-operate with one or two foreign bodies having the same general purpose in view. Its acting secretary is Mr. A. E. Moore, of Paignton, but it has apparently not yet arranged where its head quarters are to be.

THE retirement of Dr. George Turner, Medical Officer of Health for the Transvaal, is due under the Civil Service age clause early this year. He has been responsible for the public health organization of the Transvaal since 1900, when his services were borrowed from the Cape Government not long after the military occupation of Bloemfontein. In the year following he was formally transferred from the post of Medical Officer to the Cape Government to that which he is now about to vacate, and altogether has served in South Africa for some twelve years. Before going out to the Cape he had had long experience of public health work in England, being at one time an Examiner in Public Health to the Conjoint Board in England, and Medical Officer of a large combined district in the Home Counties. Since affairs in the Transvaal have settled down he has devoted a great deal of time to the study of leprosy, and has done so much useful work in this direction that it seems rather a pity that some arrangement cannot be made to provide for his residing, as heretofore, close to the Transvaal Leper Asylum, and continuing his clinical studies undisturbed by ordinary duties in connexion with public health.

INTERNATIONAL TUBERCULOSIS CONGRESS.—Active preparations for the International Congress on Tuberculosis to be held in Washington in September of the present year are being made in South America and in Europe as well as in the United States. The National Committees for France, Germany, Sweden, Austria, Holland, Greece, Bulgaria, Cuba, Venezuela, Brazil, and Costa Rica have organized and have forwarded their membership lists to the Secretary-General.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society, was held at 6, Catherine Street, Strand, London, W.C., on December 20th, 1907, Dr. de Havilland Hall in the chair. It was reported that the records of the business for the latter part of the year 1907 were very satisfactory. The somewhat heavy sickness claim account experienced in the early months of the year had been balanced by an at least equal falling off in the claims during the summer and autumn. The year 1907 showed a greater net increase in the number of members than has been attained in any previous twelve months of the Society's working. As this increase has not been produced by any extra expenditure, it is gratifying evidence that the benefits obtained by membership in the Society are becoming more widely known to the profession. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

JUBILEE OF THE NATIONAL HOSPITAL.—As has already been stated in these columns, next year will see the jubilee of the Hospital for the Paralysed and Epileptic, which, founded in 1859, was shortly afterwards enlarged as a memorial to His Royal Highness the late Duke of Albany. By way of celebrating the completion of fifty years' work it is proposed to collect a sum sufficient to strengthen somewhat the financial position of the hospital and to complete certain alterations and improvements long since seen to be required, and most of which, indeed, were definitely recommended by the Committee of Inquiry appointed in 1901. The latter part of the scheme is calculated to cost £10,000, out of which sum will be provided larger consulting rooms, with an inquiry office attached, improvements in the dispensary, a new ophthalmic room, material addition to the accommodation for the nursing staff physical exercise and isolation rooms, and a small class room for the massage and electricity pupils, whose fees now add to the income of the institution. Medical men as a body will certainly wish good luck to the undertaking, and hope that it will be successfully carried through, for there is probably no single institution which is better entitled to the designation "National," or which has done more to add to the repute of British medicine in foreign countries. The sum required is, after all, not a large one, and the probability of its being obtained is increased by the ingenuity shown in the circular which is being issued in connexion with the proposed collection. On one page this shows the modest single-fronted house in which work was commenced, on the next page is seen the handsome block of buildings occupying a considerable part of the eastern side of Queen Square, Bloomsbury, in which the work is carried on to-day; while on the third page is a map showing the precise number of in-patients who have been sent to the hospital from each county of Great Britain, and from foreign countries, and each of the several quarters of the globe.

British Medical Journal.

SATURDAY, JANUARY 11TH, 1908.

GOUT AND GOUTINESS.

"IT may," says Sydenham, "be some consolation to "those sufferers from this disease who, like myself and "others, are only moderately endowed with fortune and "intellectual gifts, that great kings, princes, generals, "admirals, philosophers, and many more of like "eminence, have suffered from the same complaint "and ultimately died of it. In a word, gout, unlike "any other disease, kills more rich men than poor, "more wise than simple. Indeed, Nature, the mother "and ruler of all, shows in this that she is impartial "and no respecter of persons; those who are deficient "in one respect being more richly endowed than in "another; her munificent provision for some men "being tempered by an equitable proportion of evil. "Hence that law, universally recognized, that no man "is *ex omni parte beatus*, nor yet, on the other hand, in "all respects miserable." On account of its preference for the great ones of this world, gout has been called *Dominus morborum et morbus Dominorum*. As to its special tendency to attack philosophers, it is enough to mention that in the early part of the eighteenth century Jean Bouhier, President of the Parlement of Dijon, who to his learning in the law added much lore in classics, archaeology, theology, and who preceded Voltaire in the occupancy of a seat among the Immortals of the Académie Française, thought it worth while to compose a treatise entitled, *Histoire des savants qui ont été sujets à la goutte*. At the end of his book Sydenham apologizes for the scantiness of his list of remedies for the disease, and makes up for the deficiency by a long catalogue collected by Lucian in his Τραγῳδοποδάγρα or "Gout Tragedy," in which Podagra figures as one of the chief characters, ridiculing the pretensions of those who profess to have found a remedy for her torments. Two doctors who have made this boast are brought in and tortured by gout till they roar for mercy. The list of remedies which Podagra recounts as having been directed against her in vain extends to fifty or thereabouts. The Chorus consists of sufferers from gout, and they renounce all the remedies in which they had been led to believe. Sydenham seems to agree with them, the moral of his teaching being that the less there is to exorcise the fiend of gout the better. Sydenham seems, as Dr. Payne says,[1] to have been a little proud of his liability to the complaint, as being the special appanage of distinguished men. To this day it has continued to be a disease which diplomatists and other high personages find as convenient as it is painful.

Of course the treatment of gout has advanced greatly since Sydenham's day, and modern physicians would not share his despairing agreement with Lucian's Chorus who throw themselves on the mercy of Podagra. Nevertheless, it is still—if not exactly an *opprobrium medicinae*—one of the most troublesome affections with which the doctor has to deal. This is shown by the enormous space it holds even now in medical literature; and it must be sorrowfully confessed that for all this writing there are very few facts in its etiology which can be said to be settled; we may, therefore, call attention to some very elaborate researches recently reported by Brugsch and Schittenhelm.[2] They have determined the purin contents of the blood of gouty individuals upon purin-free food, estimated the uricolytic ferment in the blood, observed the endogeneus and exogenous uric acid and purin base outputs in chronic gout, examined the various tissues for uric acid, and carried out feeding experiments with glycocoll and alanin. They find that the endogenous uric acid content of the blood is raised in gout; that the uric acid excretion is subnormal, and that the metabolism of exogenous purins is disturbed, the uric acid output being diminished, and the purin bases relatively increased.

The etiology of gout, they claim, is to be found in a disturbance of the whole purin metabolism, there being a decreased exogenous and endogenous uric acid formation combined with a decreased uric acid decomposition. The kidney plays no part in the matter. These conditions are present in the gouty individual during the intervals between the attacks, and may be considered apart from the acute manifestations. Without uricaemia, they say, there is no gout; but, they ask, Do circumstances arise in which uricaemia is present without gout? They answer that, apart from the increase of uric acid in the blood after the ingestion of large amounts of meat, and leukaemia, there is a uricaemia during nephritis. During the stage of failing compensation as a result of renal inadequacy there is certainly a retention uricaemia, and uratic deposits occur in the joints, tissues, and organs. In renal disease, however, the primary lesion is in the kidney; the uratic deposits are secondary. In gout the arthritic lesions are primary, while the pathological changes in the heart and kidney correspond to the age and habits of the patient. But there are certain intermediary forms between renal gout and metabolism gout. For instance, a gouty patient has his first attack in the third decade of life. The attacks recur annually up to the commencement of the fourth decade. Then, some years later, signs of cardiac and renal changes make their appearance, and the condition merges into one of chronic interstitial nephritis. We are thus led to the conclusion that metabolism gout may be manifested in regular, or irregular, forms, that renal gout also may be regular or irregular in type, and that a combination of the two may exist.

Gout (arthritisuria), then, is recognized by the joint attacks which follow disturbances in the intermediary metabolism, and by the presence of uric acid in the blood when the patient is on a purin free diet.

Metabolism gout is associated with uricaemia, subnormal or constant endogenous uric acid, delayed and decreased exogenous uric acid output, and relatively increased purin base output. Renal gout is characterized by cardio-renal symptoms, which form the most prominent feature. The uric acid content of the blood is raised, but inconstant, and the endogenous uric acid also varies with the eliminated powers of the kidney tissue. Exogenous uric acid is inadequately dealt with. It is urged that "uratic diathesis" is an indefinite term which should not be used. Urolithiasis may be associated with gout, but it is not in itself gout. The term might be fairly replaced by urate calculous diathesis.

It is interesting to observe that these further studies emphasize the oft-written rule that the only therapy in gout is a due regard to the intermediary metabolism.

[1] *Thomas Sydenham.* Masters of Medicine Series. London: T. Fisher Unwin. 1900.

[2] *Zeitschrift f. Exp. Path.* 1907.

The deficient purin metabolism in gout must be as carefully determined, spared, and controlled as is the defective carbohydrate metabolism in diabetes.

PROFESSOR FREUD AND HYSTERIA.

FOR some time past a particularly interesting and lively controversy has been in progress concerning the teaching of Professor Sigmund Freud of Vienna on the etiology of hysteria, and more particularly as to the value of his method of psycho-analysis. Rejected by Kraepelin,[1] stigmatized by Bumke[2] as "simply a hor-"rible old wives' psychiatry," his method of psycho-analysis was described more temperately but no less firmly by Aschaffenburg in 1906[3] as "in most cases "incorrect, in many hazardous, and in all dispensable." Nevertheless his theories, though perhaps not in their entirety, have found warm adherents in Janet, Jung Hellpach and many others. Recently Sadger[4] and Muthmann,[5] both followers of Freud's, have entered the lists, and Professor Aschaffenburg[6] has recently subjected the whole question to stringent adverse criticism.

In these circumstances a brief outline of Professor Freud's views may not be out of place. In the first place, Breuer and Freud fourteen years ago[7] endeavoured to show that in every case of hysteria the illness was traceable to an actual but forgotten occurrence, in most cases to a painful emotional shock or mental trauma, the circumstances of the forgotten occurrence being in most cases discoverable in hypnosis. That is, as Freud said, "the hysterical suffer from reminiscences," or in Boris Sidis's words, from "resurrected moments." They further stated that when this buried reminiscence was translated into the awakened consciousness of the subject, and the subject had given to this recollection its adequate (motor) expression, the hysterical symptoms disappeared. This statement contains an implication which has since undergone considerable development at Freud's hands and forms one of the main props of his argument; he maintains that at the time of the original psychic trauma an adequate and fitting individual reaction was denied the subject, either through force of circumstances or by its voluntary suppression on the subject's part, and that as the consequence of this denied relief, and the voluntary suppression or displacement (*Verdrängung*) from the field of conscious mentality of the painful impression with its persistent affective colouring, these latter take on an independent, "split-off," subconscious existence, making their own hidden associations and resulting in a more or less fixed psychic dissociation. According to Freud and others, this split-off complex is inaccessible to the waking consciousness, though it may be revived in hypnotic or hypnoidal states and may give the framework to dreams. Yet it has its outlets, nevertheless, in bodily form by means of what Freud calls "conversion of the sum of "excitation." "The sum of excitation," he says in his *Studien über Hysterie*,[8] "which may not enter into "psychical association, takes the wrong road, to bodily "innervation all the more readily. The repression of "the idea could only be due to an unpleasant feeling, "to incompatibility between the idea to be repressed "and the dominant ideational mass of the self. But "the repressed idea avenges itself by becoming "pathogenic." In this transformation, then, of psychical excitement into persistent bodily symptoms, or, perhaps, better in a bodily compliance or undue facility of somatic outlet of repressed psychic processes, Freud finds the essential characteristic of hysteria as contrasted with other neuroses and psychoneuroses.

But for these two processes of repression and conversion to come about, there must be a native individual predisposition. In his earlier publications he disallowed the necessity for any hereditary or constitutional factor, and declined to recognize Janet's "*affaiblissement de la faculté de synthèse psychologique*" in hysteria, but in his later works he has attached greater importance to the hereditary factor. According to Freud—and this is the most important point of his whole later teaching—this hereditary or constitutional factor takes the form in hysteria of the "sexual constitution." Not only in hysteria but in neurasthenia and the obsessional and phobic psychoneuroses the disorder is rooted, he maintains, in disturbances of the sexual life. "With a normal *vita sexualis* a neurosis is im-"possible." Further, in hysteria, with which only we are concerned, the exciting moments are referred back to the childhood of the subjects. "Without re-"pressed sexual events of early childhood, no hysteria." Here, then, is a frank return, though in sublimated form, to the fond conceptions of a thousand years ago, whose revival in cruder form than those of Freud's led, not so many years ago, to the frequent performance of öophorectomy for the relief of purely hysterical symptoms.

The above brief account of Professor Freud's theoretical teaching presages the form which his method of diagnosis, or *Deutekünste*, published in 1905, must naturally take. This consists of an exhaustive interrogation of the patients as to the recollected events of their whole past life of the most intimate kind: of the search for subconscious thought-complexes by the study of reaction times to questions, lengthy reaction times being accepted as indices of strongly emotionally tinged complexes; of the detailed recital of their dreams by the subjects, dreams being for Professor Freud a direct route to the subconscious; and also, by some of his followers, though this has lately been abandoned by Professor Freud himself, the revival of forgotten scenes under hypnosis. So exhaustive an investigation must needs take time, in fact Professor Freud states that a complete psycho-analysis of any case will take from six months to three years. We do not believe, however, that physicians will be deterred from adopting Professor Freud's method on account of the time involved, but for other, more obvious and certainly graver, reasons. Although the patients are directed by Professor Freud to relate the incidents which come into their mind "without selection," the whole trend of the interrogation is, as Professor Aschaffenburg pointed out in the article already mentioned, in one direction, and that a very undesirable one. Further, it is to be remembered that the whole therapeutic aim is the revival of repressed and long-forgotten sexual incidents and their assimilation by the waking consciousness in the hope of bringing about their adequate motor expression. How far this process of revival is likely to benefit the subjects we leave to others to imagine. It is evident from the foregoing that in these inquiries Professor Freud usurps the confessional, and that the therapeutic result, when obtained, is only the medical equivalent for absolution; and, though we earnestly wish to avoid any disparagement of the views of one whose psycho-pathological researches place him in the ranks of the most eminent, we cannot but agree with

[1] *Psychiatrie.* 1904 edition.
[2] *Schmidt's Jahrbücher.* 1906. Hft. 2.
[3] *Münch. med. Woch.* 1906. No. 37.
[4] *Zentralblatt f. Nervenheilkunde.* 1907. P. 45.
[5] *Zur Psychologie und Therapie neurotischer Symptome.* 1907. Carl Marhold. Halle a. S.
[6] *Deutsche med. Woch.* 1907. No. 44.
[7] *Neurol. Zentralbl.* of 1894 and 1895, and the *Monatsschr. f. Psych. u. Neur.* of 1899, 1901, and 1905.
[8] *Studien über Hysterie.* 1895.

Professor Aschaffenburg that this method of psychoanalysis is "in most cases incorrect, in many hazardous, "and in all dispensable."

CAN A WORKMAN BE COMPELLED TO UNDERGO AN OPERATION?

The case of Hughes *v.* Darbishires, a note of which may be found elsewhere in this issue, suggests an interesting question under the Workmen's Compensation Act. Assuming that an operation will enable a man receiving compensation to return to work, can he be compelled to undergo it? It is clear, of course, that the Act of 1906 gives no power to the Court to *order* a workman to submit himself to operative treatment; but a judge might resort to the expedient of reducing the weekly compensation to a nominal figure until the operation is performed. There have been several cases on the point. It was decided in the English Court of Appeal in 1903 that a workman cannot be compelled, as a condition to the continuance of payments, to submit himself to a surgical operation which will probably be successful, but which is attended with a certain amount of risk. There is apparently no English case in which an operation of any kind has been ordered. A well-known writer on workmen's compensation says that "Experience shows that it is only in the rarest "cases, if at all, that an order will be made conditional "on an operation being undergone." In Scotland, however, the compensation to a workman was reduced to a nominal sum on his refusing to undergo an operation which would "in all probability" enable him to "earn "wages as before, or at least to earn more than he is "able to do now," and which was alleged to be "not "attended with serious risk or pain." In another Scottish case, however, the sheriff found that the operation was a minor one, not experimental, but successful in other similar cases without appreciable risk, and if successful would enable the workman to do his work. He therefore suspended compensation. On appeal, it seems that the Court of Session held that the workman was not bound, it being admitted that after the hearing before the sheriff an eminent surgeon had expressed the view that he ought not to undergo it. Having regard to these decisions, the law would seem to be that if there is any element of risk, the hand of the workman must not be forced. At the same time, the workman must be prepared to do what is reasonable; for it has been decided that a man whose incapacity is due to his not complying with certain simple medical directions ought to be deprived of compensation.

A POINT FOR PUBLIC VACCINATORS.

Some months ago, when the new Vaccination Order was under discussion, an alleged illegitimate practice in connexion with vaccination came under notice, but attention was not drawn to it in our columns because at the time it was not possible to be sure of its existence. Evidence on the matter has since been obtained, and the circumstances may now be briefly stated. It is very common for the post of vaccination officer to be held by a person who is also registrar of births. It is a combination of offices which facilitates the work to be done, and is so far desirable; but, unfortunately, it opens the door to certain irregularities. In the case of such an officer, it is his duty as registrar of births to hand the parent an ordinary official notification that it is necessary that the child should be vaccinated before it has reached the age of 6 months, in default of good cause shown to the contrary. But it is not his duty to advocate vaccination at all, and still less is there anything in the law which justifies his urging upon the parent the desirability of the child being vaccinated by the public vaccinator rather than by any other person. Nor should he as registrar of births communicate with the public vaccinator to inform him of the occurrence of a birth. Even in his capacity as vaccination officer no such actions would be justifiable, for as vaccination officer it is merely his duty after the lapse of four months to furnish the public vaccinator with a list of children in respect of whom no vaccination certificate has been received, and to require him to call and offer to vaccinate them. There are districts, however, in which the vaccination officer goes far beyond his duty in two ways. In the first place he warns the public vaccinator of the occurrence of a birth soon after he himself as registrar of births becomes aware of it, and likewise in the same capacity addresses to the parents pointed inquiries as to what they propose to do about vaccination, and whom they intend to employ for the purpose. It is even stated that sometimes he goes further than this and suggests that vaccination at the hands of the public vaccinator is a cheaper and more effectual operation than at the hands of a private practitioner. In this way two distinct evils are brought about. More persons have their children vaccinated at the expense of the ratepayers, public outcry on the subject of expense being thus rendered more probable, and the legitimate work of general practitioners in the neighbourhood is interfered with. The practice, in short, is a species of touting, and unfair both to ratepayers and medical men. We do not believe that the practice is at all general, but there is clear evidence that it exists in at least one neighbourhood, and obviously it may easily arise in any locality in which the vaccination officer and registrar of births are one and the same person. It behoves, therefore, all public vaccinators to be on the look-out for it, and set their faces strongly against it if they find it to exist. Otherwise, apart from any other consideration, they must inevitably find themselves sooner or later on undesirable terms with other medical men in the same district.

THE POSTMAN'S ROUND.

In all houses but those of the most busy the letter-announcing knock is commonly a welcome sound, and to the postman himself is perhaps accorded a greater measure of goodwill than that enjoyed by the average public official. Something of the same feeling possibly prevails in Government circles, and may, in a measure, account for the somewhat exceptional treatment post-office officials receive at the hands of their immediate employers. The conditions of their work and hours of labour and their pay have of late years occupied a good deal of public attention, and have been the subject of several inquiries; while recently one complaint made by the actual letter-carriers has been investigated on quite original lines. It was represented to the authorities that modern practices in regard to flat-dwelling had materially altered the work of the average town postman, enormously increasing his labour and injuring his health by the amount of stair climbing imposed upon him. The Postmaster-General consented to an investigation being made by two medical men, of whom one represented the Post Office and the other the employees themselves. The net outcome is a report which shows that the stair climbing of to-day is by no means so new a duty as it might seem to be. It has been general in the cities of London and Glasgow for many years, and has been a prominent feature of postal work in the Paddington district ever since 1898. So far as its effect on health is concerned, reasons are given for concluding that the physical strain thus thrown upon the postmen is not of an abnormal character, and has not been productive of ill-health or early death, or of retirement as unfit for further service. The

proportion of such work done by individual postmen in different towns and districts varies greatly, but such variations have no apparent effect on the average health of the men employed—possibly because great care is exercised by those in authority to keep each man's work from becoming unduly arduous by frequent revision of the precise labour entailed in each walk. All this sounds very like an ordinary official reply on such an occasion, but of course this is not the case, as the investigation was of an entirely medical character, and the conclusions indicated are even more clearly brought out in the report of the private medical man—who is a well-known surgeon—to his employers, the letter-carriers themselves. It appears that he personally examined the sick lists for the last ten years, and obtained returns to show the number of years which each man had been on delivery duty, and his age, and the number of times that he had reported sick. He also obtained from the postmen themselves a detailed account of the work which each man performed on a given day in each week. In the sick reports he found no cases of heart and lung disease, and no mention of such troubles of the arterial and venous systems as might be expected to result from excessive stair climbing. Hence he concluded that there was no reason to believe that the men really suffered in their health from this cause. That this should be the case is, of course, satisfactory; but the fact will not deprive the postmen of a certain amount of sympathy from those who remember what a wearisome task it must be to mount an endless series of staircases day after day, and many times each day. At one time the average postman practically led an open-air life, leaving his letters at one street-door after another; but nowadays there are districts in which the letter-carrier employed must spend most of his time inside dwellings and offices. Of the latter there are many blocks in the City in which it must take at least an hour to visit every set of rooms, as against a few moments occupied in passing from one block of offices to another; and the same consideration, if with minor force, holds true of many flat-dwellings in and near London. The change of work environment is, in short, so complete that to many it will seem curious that there should be no indication of its effect in the mortality and sickness rates.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.[1]

THIS quarter's instalment of the *New English Dictionary on Historical Principles* is again a treble section; and this means that Dr. James A. H. Murray and his assistants are getting on more quickly with their great work than at one time seemed possible. This part is also rich in medical terms, although it must be observed that very many of them are included in the three great groups of the *poly's*, the *post's*, and the *pre's*. The first medical word to catch the eye is *polygony*, now an obsolete term, but once signifying an astringent root used in medicine. Here is an illustrative quotation from Spenser's *Faerie Queene*: "There, whether yt "divine Tobacco were, or Panachaea, or Pologony, Shee "fownd, and brought it to her patient deare." *Polyhaemia* is included among the non-naturalized words, and defined as plethora; the first illustrative quotation is dated 1858. Recent developments in haematology are adding new words to the *Dictionary*, and we discover *polymorph* defined as "a polymorpho-nuclear leucocyte"; the quotations would seem to show that this is a twentieth century word in its medical meaning. Without leaving the *poly's*, we note *polyopia* (multiple vision), *polyphagia* (excessive eating as a morbid symptom), *polysarcia* (corpulence or obesity), *polyspermy* (the impregnation of an ovum by more than one spermatozoon), *polytocous* (multiparous), and *polypharmacy*. Then there is *polypus*, with its interesting derivation ("many-footed"), and its little family of associated terms, such as *polyp*, *polypous*, *polypose*, and *polypotome*; an illustrative quotation of 1398 defines a polypus as "a superfluite of flessch growing of the nostrelles." An unfamiliar term is *poma*, which is defined as "the occipital operculum of "the brain of a monkey." Two *pons's* are referred to and defined—the *pons asinorum* and the *pons Varolii*. About half way between *pons* and *post* we come to *porencephaly*, defined as "a defect in the cerebral hemi-"sphere consisting in the formation (congenital or "caused by disease) of a depression or hollow, "sometimes communicating with the lateral ven-"tricle." *Poroplastic* comes next with this illustrative quotation, suggesting unlimited profits to the ingenious instrument maker: "an elastic kneecap costs half a "crown, a mo'eskin one five shillings, a leather one five "to twenty, and a poroplastic any sum." *Porrigo* is defined somewhat vaguely, as indeed it ought to be. *Porridge* is not, truly, a medical term, but the eye catches an alarming illustrative quotation beginning "some persons have been rendered delirious by eating "porridge," only the sentence ends "wherein it (fool's "parsley) had been used instead of parsley." Did the Editor put in this danger signal to warn southern readers away from this whilom Scottish preserve? There is no danger, however, for the *porridge* referred to is not the oatmeal kind, but an obsolete soup of the same name. *Porta*, *portal*, and *port-vein* are interesting words interestingly treated by Dr. Murray; and *posology* is a troublesome business to the young practitioner, as may indeed be guessed from its derivation from the Greek πόσος, how much! *Posset* follows: it is of unascertained origin, and we fancy is often of unascertained composition, but a quotation tells us that "a plain "posset, drunk alone, reasonable warm, will do well." Of the many medical terms beginning with *post* some are interesting, but most are new introductions into the language. *Potash* is an old word with a history curiously involved in that of chemistry itself; no word better repays the historical method of treatment. *Potion* is another old and interesting word: Dr. Murray gives his medical readers three quotations to ponder over; the first is, "he hadde diede anoon, but that "he receyvede a pocion of his phisicion"; the second is a warning, "if a man may be cured with "dyet and pocion, let there not be ministered "any Chirurgerie"; and the third is as pessimistic as the first was optimistic, "neither potions "nor physicians can do more than postpone the evil "hour." The word *pox*, as was to be expected, has for its different meanings quite a number of illustrative quotations, from which we cull that famous one of Byron's, "The Doctor paid off an old pox, By borrowing "a new one from an ox." Turning over the pages of the *Dictionary* we come next to *praecordia* and then to *praeputium*, and finally to a veritable army of *pre's*, as numerous as or more numerous than the *post's*. Numerous as they are, however, Dr. Murray could, if he had wished, have added to them even from the pages of this JOURNAL; he might, for instance, have told the world who the mysterious *precibiculturists* were, and what the visionary *pre-maternity* is to be.

[1] *A New English Dictionary on Historical Principles.* Edited by Dr. James A. H. Murray. Polygenous—Premious (Vol. VII). Oxford: At the Clarendon Press: London, Edinburgh, Glasgow, New York, and Toronto: Henry Frowde. 1903. (Treble section. 7s. 6d.)

CHILDREN AND WELLS

IN a recent number of *Folk Lore*, Dr. Dan McKenzie discusses the superstitions that have gathered about so many wells in connexion with the cure of children's diseases. Mr. R. C. Hope, in his *Legendary Lore of Old England*, enumerates 139 wells which are or were credited with therapeutic virtues in infantile ailments.

The disease cured by the well is not mentioned in 34 cases, ailments in general were treated at 24, eye diseases at 29, skin complaints at 16, insanity at 2, while children were associated with 34 in various ways. Thus at 7 their diseases were treated, they were made to drink the water of 8, they were baptized at 10, while in 8 ceremonies were performed in which children took part, or tales were told of which young folk were the heroes. A number of Cornish wells are mentioned by Mr. and Mrs. Quiller-Couch, 30 of them as curative of sick children. Many children's wells are to be found in Scotland. In some foreign countries—as in Slavonia, Servia, and Syria—diseased children are often taken to wells for treatment. Dr. McKenzie points out that the treatment of children's diseases at wells stands upon a different basis from the treatment of sore eyes, skin diseases, and insanity, where the pure water may be supposed to wash away the film or discharge from the eyes, and the scab or tetter from the skin. Insanity used to be treated at wells by plunging the unfortunate lunatic into the water, when the shock produced by the sudden immersion would probably sober, for a moment at least, the raging maniac. Hydrophobia was also treated in this way. But in the case of children there is no impurity to be cleansed, no shouting demon to be exorcised. Dr. McKenzie therefore looks elsewhere for the explanation. The ceremonial washing of children is as old and almost as widespread as the marriage rite. At first it was only the hallowing of the necessary first bath of the newborn child. He gives examples of the primitive ritual bathing of children from the ancient Romans, Goths, Scythians, Germans, and Mexicans, the old inhabitants of Yucatan in Central America, as well as from numerous savage tribes and semi-civilized tribes at the present day. Well-worship was practised in this country before the advent of Christianity, and the wells were presided over by gods, of whom some at least were later converted into Christian saints. The child was not merely sprinkled, but stripped and laid in the well; moreover, he was made to drink of the water as copiously as possible. Dr. McKenzie says that it was the water itself which was believed to have a mystic and vital property believed to be necessary to the well-being of the child. This was the principle of life. Of this belief, again, he gives numerous examples from many nations. He sums up the legendary links that bind children and water in a close and mystic union as follows: (1) Little children are taken to wells and springs for the cure of disease, and in order to prevent disease; (2) according to the folk-beliefs of Germany and elsewhere, babies come from wells; (3) the deities of rain and water in many parts of the world were also the deities of fertility and birth; (4) sterility among women is often treated by bathing; (5) the water-spirit assumes at times the form of a child or a small person; (6) water-spirits show their fondness for children by stealing them; (7) there is a certain amount of evidence to show that in some parts of the world children used to be sacrificed to water and wells. The origin of the connexion between children and water which was in early times believed to be actual and physical, and in later days mystical only, was, he says, based on two natural facts: that children in the prenatal period do actually live in water, and that there is a natural association between water and fertility, seen plainly in the vegetable world. He concludes that in order to account for the sanctity attaching to wells as creators and begetters of children, we may suppose that if a man whose mind was already tinged with the natural association of water with babies lost one of his children by drowning in a well, it would be natural for him to suppose that in that well there abode a Being who gave and took children as he saw fit, and who, therefore, must be propitiated by gifts of that which he loved the best. Finally, it would be easy for the savage to suppose, that as the spirit of life of the well was also the spirit of life of children, immersion in a well would renew the life of ailing and weakly children. Whether we agree with the author or not, it cannot be questioned that the essay is most interesting and ingenious, and full of curious learning.

MEDICAL WOMEN AND PUBLIC EMPLOYERS.

At its meeting last Tuesday the Association of Registered Medical Women passed two resolutions of considerable specific and general interest. The first of these crystallized the view that women who have adopted the profession of medicine are entitled to expect the same payment as their male *confrères*, and that ethically, as well as in their own interest, they should refuse to accept salaries lower than those offered to men doing the same kind of work. It was pointed out at the meeting that there is a belief current amongst the public that medical women are prepared to offer their services at cheaper rates than those accepted by medical men. There is certainly no reason why they should do so, and it is well that this representative body of medical women should have taken steps to break the bubble. Medical women undergo precisely the same training as do medical men, and the cost to them is no less, so that there is no ground whatever for expecting them to receive smaller fees or salaries than their fellows, or, indeed, for regarding them in any way as a separate body of practitioners. Moreover, as the resolution contains a reference to ethics, and as the profession of medicine was one of the earliest affected by the modern movement among women, it may be added, for the benefit of those who fear its further development, that women practitioners as a whole have shown themselves singularly capable of identifying their own with the general interest, and that women doctors on more than one notable occasion have shown a readiness to sacrifice themselves in the general cause, and in order to conform to the views of right conduct current among the profession as a whole. The specific interest of the resolution lies in the immediate reason for its being brought forward at the present moment. This is the circumstance that in the early future a good many appointments may be expected to be made in connexion with the administration of the new Education Act, and that there are already indications that certain educational committees will try to run this Act cheaper than would otherwise be possible by endeavouring to engage medical women at salaries which medical men would refuse to accept. One such body, indeed, has already gone so far as to offer for the whole-time work of a woman a salary of £150, rising to £200 a year. This is very little more than is paid to an average assistant teacher in an elementary school, and not nearly as much as is allotted for the salaries of teachers of various domestic and other minor arts. The view was expressed at the meeting in question, and confirmed by the resolution passed, that women should not accept positions under this Act for less than whatever sum is finally agreed upon by the general body of practitioners, as represented by the British Medical Association, as the least which should be accepted. The second resolution to which reference has been made brought into existence a Vigilance Committee, whose special duty it will be to watch advertisements of vacancies offered to women candidates, and warn medical women not to apply for posts for which an inadequate salary is offered. One remark made at the meeting was to the effect that the amount of pay accepted is usually taken as representing the quality of the work done, and that women should

make it clear that they mean to do the highest work. This is a sentiment not without its application to male practitioners, and might be more generally adopted by them as a working principle than is at present sometimes the case.

RELICS OF EDWARD JENNER.

AT a time when small-pox seems to have temporarily disappeared below the sanitary horizon in this country, and when the Legislature is thought by many to have struck another blow at infant vaccination, by passing the Act which still further facilitates the recognition of "conscientious objectors," it may be interesting to learn that the Jenner Society has lately received two interesting presentations, one of which, at least, throws a new light upon the versatility of the Father of Vaccination. This letter consists of a half-sheet of notepaper, appropriately framed, on which are drawn in ink a series of heads somewhat in the style of Hogarth. The donor of this interesting memento of Jenner, Mr. H. Mainwaring Holt, of Malton, states that it came into his hands from Mr. Etherington Cooke, to whom it was presented by his aunts, for whose delectation Jenner threw it off one day as a pastime. That Jenner was no mean naturalist, and that he had a rather happy facility for versifying, is known to all who have read his *Life* by Baron. But even so intimate a friend as the Gloucester physician was appears to have had no suspicion that Jenner could draw as deftly as he could rhyme. The other memorial is in the form of two original letters written in 1802 to Mr. Kelson, a surgeon in good practice at the time at Sevenoaks. They refer to evidence which Kelson had offered to give of his experience of the value of vaccination, and they were presented to the Jenner Society by the widow of Dr. Frederick Kelson, who was the grandson of the recipient of the letters, neither of which is contained in Baron's *Life*. The Committee of the Society will be glad to receive any other mementos of Jenner which may be available.

PROPRIETARY ARTICLES IN SCOTLAND.

MR. RUFUS FLEMING, the United States Consul at Edinburgh, has, we learn from the *British and Colonial Druggist*, forwarded to his Government a report concerning the trade in proprietary articles in Scotland, in which he says there is in the Edinburgh district a large trade in a variety of American proprietary articles, such as medicinal preparations and appliances, toilet articles, household articles, and food specialities. As to some of these classes of goods, he says the trade there has been important for many years. They have become staple goods, with a sure market, and, as a rule, there is no great variation in the sales from year to year, excepting in the instances of articles now and then widely advertised. Consul Fleming goes on to say: "Broadly speaking, the present tendency of this "trade is distinctly upward, due to some extent, I "am informed by the principal dealers, to the greater "care exercised by American manufacturers in placing "the goods. In every country the personal element "counts for much in business, and perhaps in no country "does personal and direct dealing with representative "houses bring better results than in Scotland. For all "of the various proprietary articles of real merit, "adapted to the climate of the country and the customs "of the people, the market here is an expanding one, "especially if the goods are judiciously advertised, "although it has been demonstrated to be a mistake in "Scotland to make extravagant claims for any article. "Many American pharmaceutical products are "extensively sold in this part of the United Kingdom. "In regard to these preparations in general, it has been "noticed by the local wholesale firms that an article "which commends itself to the medical profession or "prominent members of that profession in Edinburgh "is soon in demand, and the local sales increase con-"stantly up to a certain point, determined by the "purpose of the article, etc. About six months after the "trade has become active in this city and vicinity the "demand from other cities and towns in Scotland attains "a considerable volume. A leading wholesale chemist "says that this wave-like movement of trade is the "common thing in his line of business, and that its "origin and direction are invariable. In the matter of "a new pharmaceutical preparation Edinburgh may "follow London opinion, but Scotland follows only "Edinburgh." We had fondly believed that the Scot was more intelligent than the average man who makes the fortune of the vendors of proprietary remedies. But like other people he likes physic, and so he buys American pharmaceutical products; showing his superior intelligence, however, in not being misled by "extravagant claims." To us, the most interesting part of the Consul's report is that in which he shows that the medical profession itself appears to be largely responsible for the success of the proprietary remedy in Scotland as elsewhere.

THE BROWN DOG.

THE Brown Dog question has entered on a new phase The Commissioner of Police has written to know whether the Battersea Borough Council is prepared to defray the cost of the special police protection which the "Brown Dog" fountain involves. This he estimated at £700 per annum, and the Commissioner asks whether the Council will remove the fountain or pay the bill. The matter was brought before the Council on January 8th. The Town Clerk read the Commissioner's letter, and also a telegram from the National Canine Defence League, suggesting that the Commissioner should be requested to reply to the question whether, "if Battersea "organized a gang similar to the medical hooligans "to raid laboratories in order to destroy instruments "for animal torture, would these laboratories be re-"quired to pay for protection from police? To accede to "the Commissioner's demand would set up a disastrous "precedent that the people must pay twice over to "ensure police protection. Battersea should resist "this in the interests of all England." The removal of the inscription was proposed by Mr. A. E. Runeckles in the interests of law and order and common sense. According to the *Times* report, members of the Progressive party subjected him to much interruption. The Council's Standing Orders provide for the closing of the meeting at 10.30. It was 10.15 when Mr. Runeckles rose. The Progressives refused to allow the Standing Orders to be suspended, and therefore, after the motion had been seconded by Mr. Ransom, the proceedings stood adjourned for a fortnight. Had time allowed, Mr. W. Willis would have moved as follows from the Progressive side: "(1) The inscription "on the memorial, being founded on ascertained facts, "the Council declines to sanction the proposal to re-"move it. (2) That the Commissioner of Police be "informed in reply to his letter that the care and "protection of public monuments is a matter "for the police, and any expense occasioned there-"by should be defrayed out of the public rate, "to which this borough contributes so largely; also "that the Council considers more strenuous efforts "should be made to suppress any renewal of the "organized ruffianism which has recently taken place "in the metropolis in connexion with the memorial." Another Progressive, Mr. Lane, intended to move—

"That the attention of the Home Secretary be drawn "to the action of the Commissioner of Police, and that "copies of the letter from that officer, together with "the reply of the Council, be submitted to the Home "Secretary."

THE WAR AGAINST QUACKERY IN NEW YORK.

At a meeting of the Medical Society of the County of New York held on November 25th, 1907, a report of which appears in the *Medical Record* of December 14th, Mr. Champe S. Andrews, counsel to the Society, stated that the prosecutions that had been conducted up to May 13th, 1907, were instituted for violation of Chapter 398 of the Laws of 1905. The prosecutions since instituted had been under Chapter 344 of the Laws of 1907. The routine work of the Society had been conducted as heretofore, but with more effect because of the strength of the new medical law and the increased co-operation from the public authorities. This law defined the practice of medicine; it conferred upon the Regents the right to revoke the licence of any physician who was guilty of crime or fraud or deceit in his practice: the penal provisions of the Act were changed to make the following violations under the statute a misdemeanour: (*a*) The practice of medicine by a person other than a regular physician: (*b*) the practice of medicine under cover of any licence or diploma illegally obtained: (*c*) the use by a person other than a registered physician of a title or designation tending to imply or designate him as a practitioner of medicine; (*d*) the practice of medicine by a licensed practitioner of medicine under any name other than the name under which he was registered; (*e*) the advertisement to practise medicine by a person other than a registered physician. Mr. Andrews said that formerly, before an abortionist could be convicted it was necessary to prove beyond reasonable doubt that an abortion had been produced and that the person charged committed it; but now circumstantial evidence, including an advertisement in a newspaper, could be brought to show that there was reasonable ground to believe the person to be engaged in the abortion business. Under this ruling it was possible for the public authorities to rid the country and the State of physicians and midwives engaged in the abortion business. The unlicensed midwife had always been a menace to the community, and the Legislature at its last session had passed a law defining the practice of midwifery, and placing the regulations of midwives under the control and supervision of the department of health of the city. Since the passage of that law the Board of Health had prepared a set of rules and regulations, which, if adopted, would restrict the practice of midwifery to those capable of being midwives, and placing them under the supervision of the Board of Health. The total number of persons prosecuted since the last annual report was 80 under the old law, and 700 under the new law; the total number convicted under the old law was 47, under the new law 439; cases disposed of otherwise than by conviction, 9 under the old law and 180 under the new law. There were 20 cases still pending. There were 4 persons imprisoned. The aggregate fines imposed under the old law amounted to 4,675 dollars; under the new law, 35,062.95 dollars. In a paper on the legal work of the Society, read by Dr. Floyd M. Crandall, the author said it was the first of a group of societies to which had been entrusted the duty of enforcing certain provisions of the criminal law. The enforcement of medical practice laws had been an almost unworked field until within the past six years, and there were but few precedents, principles, or guiding landmarks. Prosecutions were conducted along well-established lines, and the worst offenders had learned to operate outside of those lines. In a decision of the Appellate Division there was a clause which stated that to limit the practice of medicine simply to the administration of drugs or the use of surgical instruments would be to eliminate the very corner-stone of successful medical practice—namely, the diagnosis. The next important work of the Society was the campaign against abortionists. There was substantial ground for the belief that 100,000 abortions were committed annually in New York, and, while the crime could not be stopped, it could be limited. In referring to the charlatans who played upon the credulity of young men, he said that they were mostly registered physicians, and were very hard to reach. The work of the Society, however, had been very successful, and they had reached these offenders on such charges as grand larceny and extortion. The high character of the legal work was shown by the fact that among more than nine hundred prosecutions but one case of false arrest had been brought against the Society, and in that case the Society easily won. The Medical Unity Bill was in reality a general medical law, one of the most important and comprehensive that had been enacted since the great law of 1806. A very important provision was the one relative to the revocation of the licence to practise medicine. Lawyers had long been able to disbar their disreputable brethren, but the medical profession had stood with tied hands when a physician had turned quack and resorted to a life of personal or professional dishonour. The licence could now be revoked for many misdemeanours, including fraud in practice.

PRACTICAL ASPECTS OF DISINFECTION.

The doctrine of disinfection has undergone marked changes within recent times, and at present stands on a surer footing than in the past. According to Professor W. Kolle,[1] who has recently dealt with the subject, the bases on which our knowledge is built up are the experimental methods of Koch for testing the action of fluid disinfectants, and the newer doctrine of Paul and Krönig as to the individual processes and the intimate connexion of one process with another in connexion with disinfection. The latter workers found that the disinfectant action of a solution (for example, mercury perchloride) depends on the presence of free an-ions (for example Hg ions). The greater the dissociation the stronger was the disinfecting power. The chemical substances used for the purpose should be as pure as possible, the directions for making up solutions and for using the solutions should be followed closely, and certain combinations yielded better results than simple solutions. Next, advances had been made with regard to disinfection by the introduction of vapour methods. The disinfection of tainted articles was now only a matter of cost, but as many of the apparatus devised for the use of compressed or conducted steam were both costly and cumbersome, difficulty might sometimes be experienced. Lastly, the author mentions the work done within recent times in experimentally killing infective material by means of chemical substances which can combine with the micro-organisms, and thus destroy them even in the animal body. Such substances include, *inter alia*, trypanroth and atoxyl for trypanosomes. So far, however, all attempts to kill bacteria within the living body without damaging the organism have failed. Kolle describes the practical methods of disinfecting dwellings under two heads. The first is the disinfection during the course of an infectious illness of all articles used in the sick room; if this is done with intelligence, accord-

[1] *Deut. med. Woch.*, September 26th, 1907.

ing to the requirements of each case, the danger of further infection may be nullified. The second is the disinfection of the room at the end of the illness. In addition to mechanical washing and cleaning of every object and disinfection of small movable objects in steam, chemical disinfectants are employed. A considerable number of these has been tried, and Kolle considers that formalin is the only one which can be used with advantage. Sulphur dioxide can no longer be relied on, since it has been shown that the concentration necessary is destructive to all furniture. All forms of apparatus that have been recommended for formalin aim at evaporating both formaldehyde and steam. They all, however, have great disadvantages, the chief being their high price and the cost of repairs. A marked gain was attained when a method was introduced which allowed of the use of formalin vapour without a special apparatus. That known as the autan method consists in mixing a metallic peroxide with paraform in the presence of water. Heat is liberated, and both formaldehyde, which is split off by the action of the katalyser, and water are evaporated. In spite of adverse criticism from some quarters, this method has proved itself to be one of the best hitherto introduced, although it cannot be claimed to be perfect. Kolle finds that, in order to obtain serviceable results, large quantities of the powders must be used, and gives details in support of his contention that the method can be applied with advantage in practice. As to the disinfection of hands, we are told that in Germany the method introduced by Fürbringer of disinfecting with soap, alcohol, and mercury perchloride, Ahlfeld's hot water, soap and alcohol method, simple disinfection with carbolic acid, lysol or mercury perchloride, and the use of soap spirit have all gained adherents. Within recent times Schumberg has introduced a new method which he says gives excellent results. This depends on the use of a mixture of two parts of alcohol and one part of ether, to which 0.5 per cent. of nitric acid is added. The mixture is rubbed vigorously by means of a plug of cotton-wool into the skin. The acid does not disinfect, but by contracting the surface of the skin fixes the bacteria present below the surface. The results are satisfactory. No method, however, has yet been devised which renders the skin absolutely aseptic. The surgeon must therefore avoid contaminating his hands with infective material, and when they are liable to become soiled he should protect them by some covering, such as rubber gloves or certain painting solutions. Gloves should be worn during an examination of an infected area, while rubber gloves, possibly with thin cotton gloves over them, should be employed for surgical operations. Of the paints, chirosoter, a wax-like mass, is the best, but is still susceptible of improvement. The paint should be antiseptic, should be elastic, should keep the hands pliable, and should be applied in a wet condition and allowed to dry so as to form a thin skin on the hands.

MEDICAL EDUCATION IN AMERICA.

THE Faculty of the Cornell University Medical College, New York, has concluded that the usual "high school" education commonly accepted as sufficient preparation for the study of medicine is inadequate. The great advances of recent years in all the natural sciences have led to corresponding advances in the practice of medicine and surgery, and this has overburdened the medical curriculum for the average student to such an extent that the present four-year course in medicine is impossible. Too large a proportion of the time is given up to chemistry, physics, biology, and other kindred subjects, and too small a proportion to the specialized information which is imperative in the education of a properly-equipped physician. The period of four years is deemed sufficient at present if devoted entirely to strictly medical subjects; otherwise it is not. The President and Trustees of Cornell University have therefore decided to adopt the requirements advised by the Faculty of the Medical College for admission to the course leading to the degree of M.D. Accordingly in and after 1908 candidates for admission to the Cornell University Medical College must be: (1) Graduates of approved colleges or scientific schools; or (2) seniors in good standing in Cornell University or in any other approved college or scientific school whose faculty will permit them to substitute the first year of a professional course for the fourth year in arts and science, and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in the Cornell University Medical College; or (3) persons who, while not possessing a bachelor's degree, give evidence by examination that they have acquired an equivalent education and a training sufficient to enable them to profit by the instruction offered in the Medical College. In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by laboratory work; and in and after 1910 all candidates for admission must possess a similar knowledge of biology.

AN AMERICAN NATIONAL TUBERCULOSIS COMMISSION.

WE learn from the *New York Medical Journal* that a Bill has been introduced into the United States Congress which provides for the appointment of a national tuberculosis commission, to consist of seven members as follows: The Surgeon-General of the Army, the Surgeon-General of the Navy, the Surgeon-General of the Public Health and Marine Hospital Service, and four tuberculosis experts to be chosen from citizen surgeons by the President of the United States. The members of the Commission will be required to investigate the best methods for the prevention and control of tuberculosis, and to recommend to Congress, State Legislatures, and Boards of Health uniform methods for the prevention and control of the disease.

THE Royal College of Surgeons in Ireland has decided to offer £120 this year for the best paper on the present state of the medical profession, the condition of hospitals and schools of medicine, and the modes of examination. The prize represents the proceeds of a fund left by the late Mr. Richard Carmichael for the foundation of prizes to be awarded for essays on such subjects. Competitors are invited to make suggestions as to the improvement of the profession, and to consider the preliminary and moral education of medical and surgical students.

THE King has been pleased to approve the appointment of the undermentioned gentlemen to the Consulting Staff of the Convalescent Home for Officers of His Majesty's Navy and Army, Osborne, Isle of Wight, as from December 8th, 1907: Professor Sir T. Clifford Allbutt, K.C.B., M.D., F.R.S., F.R.C.P., LL.D.; Sir William H. Bennett, K.C.V.O., F.R.C.S.; Lieutenant-Colonel Sir R. Havelock Charles, K.C.V.O., M.D.; W. Watson Cheyne, C.B., F.R.C.S., LL.D.; David Ferrier, M.D., F.R.S., F.R.C.P., LL.D.; James F. Goodhart, M.D., F.R.C.P., LL.D.; and A. Pearce Gould, M.S., F.R.C.S.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

INFANT MORTALITY IN MANCHESTER.

An interesting and important report on infant mortality has just been issued by the medical officer of health for Manchester. It appears that the conference on infant mortality had asked the City Council to appoint a special committee to consider the whole question and to suggest remedies, and the report has been prepared for the guidance of the Council. Some statistical evidence is first given showing that the fertility of the white races is everywhere declining. This has been very evident in France for a good many years, and is now very marked in England. The Manchester figures show that the birth-rate is highest in the artisan classes, and diminishes not only as we ascend but as we descend in the social scale. It is also shown that infant mortality in Manchester has not appreciably diminished since the registration of births and deaths came into force. The mortality is highest in the township itself. Of the suburbs, South Manchester has the next highest rate, while there is also a very high rate in West Gorton, Openshaw, Clayton, and Newton Heath, which are all on the outer fringe of Manchester. Moss Side, with its extremely high population density per acre, has a comparatively low rate of mortality, much lower in fact than Moston, Crumpsall, and Blackley, with their low population density. It thus appears that there is no close correspondence between density of population and infant mortality. Certain conditions characterize the districts with the highest rates of mortality which are far more important than population density. The township itself, which has the highest rate of all, forms the oldest portion of the city and has a large proportion of dwellings which are insanitary from want of light, bad ventilation, disrepair, and narrow back passages which are rendered offensive by pail-closets and ashboxes. The inhabitants largely belong to the class of common labourers, and there is much poverty of the deepest kind. The milk supply of these central districts is by no means of the best. On the other hand, in the more outlying districts of Gorton, Openshaw, and Newton Heath, which have a high infant mortality, there is less crowding and the houses are of a more recent construction and in many respects more sanitary, while the milk supply is on the average much better. Thus some of the factors which seem to be so deleterious in the centre of the town are absent, and other causes for the persistent high rate must be sought. Dr. Niven looks on the large proportion of industrial married labour as the chief cause of the high infant death-rate in these districts. At the annual meeting of the Lancashire and Cheshire Branch, Dr. Helme, in his presidential address on the Care of the Unborn Child, very forcibly pointed out the evil effects of working in mills by pregnant women, and in this and numerous other respects Dr. Niven might almost seem to be substantiating by figures from Manchester statistics the teachings of Dr. Helme's address. On this head Dr. Niven says that

> while certain selected industrial towns with a high proportion of married labour have a low birth-rate, the infants do not sustain an excess of mortality so great as might be expected. Nevertheless, in general, a high rate of female employment between the ages of 16 and 35 is associated with a high rate of infant mortality. Whenever possible, an expectant mother should not be permitted to work for at least a month before her confinement, and after the child is born she should be obliged, whenever practicable, to devote herself to nursing it. It is no doubt the fact that the most important question for the child is whether the mother gives it the breast or not. . . . There is one outstanding fact in the history of diarrhoea of cardinal importance—namely, that infants suckled at the breast are protected from fatal diarrhoea. Dr. Hope calculates that under 3 months of age for every one breast-fed infant that dies there are fifteen deaths out of the same number taking artificial food. . . . As regards the foods which are so fatal, cow's milk is least injurious, and owes its injurious properties often to dirty utensils. Condensed milk is more injurious than fresh cow's milk.

In his account of diarrhoea, Dr. Niven says that the summer uprush of diarrhoea is probably due to the conveyance of infection by flies.

In dealing with suggestions for reducing this mortality, Dr. Niven would make it compulsory on all girls in large towns to have such a course of training in domestic management and in the care of infants as will aid them to discharge their duties as wife and mother. Mothers, too, should be educated in the care of infants and the maintenance of cleanliness, not only of the infant, but of the home generally and of the food used. In order that this education may be as efficient as possible, the lady advisers should be specially trained in the various requirements and illnesses of children, and should be preferably either trained lady nurses or graduates in medicine. It has been suggested that a crèche school should be provided in which such training may be obtained. In addition to improved sanitary conditions, Dr. Niven advocates the provision of a municipal supply of modified milk and thinks that the Corporation should support legislation having for its object the improvement of the milk supply and the legalizing of the establishment of municipal milk dépôts. Powers should be given to urban authorities to inspect farms from which their milk is obtained and county councils should be empowered and required to enforce model regulations under the Milkshops, Dairies, and Cowsheds Orders. The registration of all births within four days and notification to the Health Office within ten days should be enforced, and also the registration of stillbirths within forty-eight hours, their notification forthwith to the Health Office and prohibition of the burial of a stillborn child without a medical certificate. Referring to the proposal favoured by Mr. John Burns to forbid mothers from working within three months before and six months after their confinement, Dr. Niven sees some danger lest the effect of such a law might be to retard marriages and still further lower the birth-rate. He recognizes the fact

> That we are in the presence of a movement of suppression of reproduction, and every step taken requires to be considered as to its probable effects on this movement. Changes beneficial in themselves may accelerate the evil and convert a partially beneficial prudence into a general refusal to undertake the duties of marriage.

It is pointed out that the Jews in Manchester are able to maintain the principle of no married labour, and their ability to carry this out depends largely on the fact that they do not drink alcoholic liquors to excess. It is finally recommended that mothers should be prohibited from engaging in work outside the home within three months of the birth, unless evidence be produced satisfactory to the local authority that the infant will not suffer thereby, and that the circumstances of the mother require that she should seek work. An inevitable corollary to such a law would be a claim for State support during the whole time that work was forbidden.

The report suggests that a small committee of experts on the various branches of the subject should be formed to formulate schemes to be submitted to the Sanitary Committee and the Council.

WEST YORKSHIRE.

INFANTILE MORTALITY IN BRADFORD.

A RETURN recently made by the medical officer of health for this city shows a very satisfactory reduction in the deaths of infants in Bradford during the past year. The lowest infantile death-rate from 1871 onwards was 139 per 1,000 in 1902. In 1906 however, the rate was 152, but for 1907 it was only 124. This large reduction is interesting in view of the Huddersfield scheme, which was described in this JOURNAL for December 7th last. In Bradford there has been no general notification of births under the Notification of Births Act, 1907. That Act, although adopted, has not yet been put into force. Towards the latter part of the year the medical officer of health asked the midwives practising in the city to notify voluntarily the births that came within their knowledge, but this did not affect the general reduction in mortality which was evident. There is an increased interest taken in young infants, and an evident desire on the part of mothers to do everything possible. This, it is thought, may be partly attributable to the very low birth-rate, which in 1907 was only 19.7—the lowest on record—it being argued that mothers who have fewer children are most anxious to rear them. But may not the Huddersfield statistics, as

exemplifying the virtues of early notification, be somewhat misleading? The Bradford City Council is endeavouring to force on an unwilling profession the early notification of births. If a reduction in infantile mortality can be brought about in one year from 152 to 124 per 1,000 without the assistance of the 1907 Act, why should it not be possible to continue this good work without alienating the sympathy of the profession and attempting to make them give away the confidence of their patients by force?

MEDICAL INSPECTION OF SCHOOL CHILDREN.

At the Northern Education Conference held at Sheffield on January 3rd, Dr. Crowley of Bradford read a most interesting paper on this subject. He expressed the opinion that it will take the entire time of two medical men or women, or seven men or women in general practice giving three half days a week, to carry out the necessary inspection in Bradford. To feed hungry children, clean dirty ones, and clothe improperly clad ones were, he said, necessary corollaries of compulsory education. Either special facilities would have to be afforded by existing institutions, or school polyclinics, that is, institutions corresponding with out-patient departments, would have to be arranged as hinted in the memorandum. One of the succeeding speakers spoke of Dr. Crowley's views as rank Socialism.

SOUTH WALES.

GLAMORGAN WATER BOARD.

WITH the rapid increase in the population of Glamorgan, the question of the water supplies of the county has become one of pressing importance. The problem of securing an adequate supply of water is complicated by the risk of some of the existing sources of supply being depleted through colliery workings. The Glamorgan County Council is fully alive to the imperative need of properly utilizing and preserving as far as possible the present sources of supply within the county, and of acquiring legal rights over any available gathering areas outside to provide for future wants. The Council has under consideration a scheme for the constitution of a central authority for the supply of water to the whole of the administrative county, and it is also suggested that the city of Cardiff and the county borough of Swansea should be included. A well known firm of civil engineers in London has, by the instruction of the Council, now presented a report on the proposed scheme, reviewing the present position as regards the supply of water, and making a number of important recommendations which, if adopted, would render it necessary for the Council to apply to Parliament for powers to establish a Water Board for the whole of the county, including Swansea and Cardiff, and purchasing the existing sources of supply at an estimated cost of about two and a half million pounds, apart from the expenditure on new waterworks which the proposed Board might be empowered to undertake. The population of the administrative county in 1906 was estimated to be 364,153, and that of Cardiff and Swansea 235 500, making together 949,153 The experts estimate that 20 gallons a head a day should be provided, and believe that the supplies of water drawn from the coal measures will be gradually reduced in quantity, and will be of less than half their present volume at the end of forty-four years. On the 20 gallon a day basis there is already a water deficiency within the administrative county in the water actually delivered of at least 2,761,000 gallons. Without an efficient means of treating the supply of water to the administrative county, and without a combination of interests such as the proposed Water Board would effect, it is believed that the deficiency must go on increasing. The districts which are at present supplied with more than 20 gallons of water a head are Cardiff, Merthyr, Swansea, Barry, Bridgend, Briton Ferry, Margam, Penarth, and part of the Llandaff and Dinas Powis Rural District. Parts of other districts are moderately supplied, while others have little, if any, public supply, among them being Cowbridge borough and lower rural districts. Most of the streams of the county are polluted from their sources, and both springs and streams, most of which are situated on the coal measures, are liable to be absorbed into coal workings, rendering the bounteous rainfall of the district for the most part useless for the purposes of water supply. Owing to the geological formation of the county, there are few sites available for reservoirs, and the report states that on permeable strata large reservoirs can, as a rule, be constructed at much less cost per million gallons than a number of small reservoirs of equal aggregate capacity. The view that Cardiff and Swansea have nothing to gain by combination is combated.

Cardiff is proceeding to construct a new reservoir in the Taff Fawr Valley at considerable cost, and we estimate that, should the city stand aloof, it will be necessary in about ten years' time for Cardiff to build another and much larger reservoir, which would complete the works requisite for impounding the whole of the available water of the Taff Fawr, and would, when finished, provide for the requirements of Cardiff and district until 1952 or later. If Cardiff joined the proposed combination, the city would be recouped the greater part of the expense already incurred in constructing reservoirs and in laying trunk mains. The cost of constructing the third reservoir would be undertaken by the Water Board, and the fourth reservoir need not be put into hand for many years to come. Water could be supplied by the Water Board in bulk at an even rate per 1,000 gallons consumed. The receipts therefrom should be sufficient to meet the expenses of the Water Board for interest, sinking fund, maintenance, and management without the imposition of a rate in aid.

The report then points out that the position of Swansea is the reverse of that of Cardiff, as Swansea has in the Cray Reservoir much more water than can be used in the district, and has to bear the burden of a large undertaking, only a small portion of the water from which can be sold. If the works were purchased by a Water Board, it is contended that the whole, or nearly the whole, of the water could be rendered remunerative at an early date, and the burden would be proportionately reduced.

Were Swansea to join the combination, the Cray Reservoir and the trunk mains connected with it would be purchased by the Water Board, and both the borough and the adjoining district would be supplied in bulk at a less cost than they can supply themselves.

In conclusion, the report makes the following among other recommendations:

That a Water Board for the whole of the county, including Cardiff and Swansea, be established by Act of Parliament, the Board to be constituted of members to be appointed by the local authorities.

That the sources of supply belonging to the existing local authorities be purchased by the Water Board, the basis of the purchase to be the prime cost of the works, less depreciation and any money that may be necessary to put the works in proper repair.

That the whole of the water undertakings of the various water companies be taken over by the Board, and that the distributing machinery be sold to the respective Councils within whose area it lies, or for whom it is available. That no water authority should be injured by the system of redistribution or have its supply of water reduced thereby to less than 25 gallons a head of population actually supplied.

That, should any water authority fail to provide adequately for the requirements of the population within its area of supply, the Water Board should be empowered after due inquiry to undertake the supply and collect the rents.

That the Water Board should have the power to promote Bills in Parliament to acquire land and construct waterworks.

That the sale of water in bulk at 4½d. per 1,000 gallons should provide an income sufficient to cover ordinary expenditure, but insufficient to provide for interest on new works during construction or until fully utilized. While admitting that equitably it might appear that the charge for water should increase with the distance from the source, it is thought not improbable that a universal charge would be found preferable.

MEDICAL OFFICERS.

Sir Edward Strachey, M.P., of the Board of Agriculture, speaking at a meeting of the Somerset County Council, said that they must look forward to very stringent legislation as regards the sending of impure milk into the towns. The council would have a very serious and heavy obligation put upon them, and the only way in which they could meet this was by having a county medical officer of health to satisfy the authorities that everything necessary had been done to secure proper sanitary arrangements. The position of Somerset is similar to that of all the counties of Wales, with the exception of Glamorgan, the latter being the only county council in Wales that has appointed a county medical officer.

Scotland.

[From our Special Correspondents.]

Edinburgh Royal Infirmary.

The annual meeting of the General Court of Contributors to the funds of the Royal Infirmary of Edinburgh was held on January 6th, when Mr. W. S. Caw, Clerk and Treasurer, submitted the annual report of the managers. The Chairman, after a reference to the death of Sir Patrick Heron Watson and of Professor Annandale, reviewed the figures given in the report as to the funds and number of patients dealt with in the institution. The expenditure on ordinary working had been £53,479, an increase of £1,362, bringing up the total cost per head to £64 5s. 6½d. That was a larger sum per head than last year by £2 3s. 2½d. A portion of the increase was to be accounted for by the increased cost of everything used in the infirmary. He feared there was little chance of any cheapening during the coming year. The ordinary income had gone up by £2,012 and the total was £35,707, the highest recorded in the history of the institution. Satisfactory and encouraging were the subscriptions from the industrial classes, which had given £1,300. That was the result of the appointment of an organizing secretary, whose business it had been to endeavour to promote systematic giving of so much per week. The extraordinary income had also been satisfactory. From capital they had been obliged to take £17,772 to make up the deficiency in ordinary income in order to meet the expenses of the infirmary, but yet he was glad to say the institution was richer at the end of the year than it was last year by the sum of £3,562. Next year they hoped to undertake the reconstruction of the medical outpatients' department. The Chairman proceeded to refer to the question of providing wards for the treatment of mental disease. The managers had a scheme prepared ready to go on with as soon as the funds permitted. The addition of such a department represented a cost of between £60 and £70 per patient and an increased cost of £1,500 per annum. In order to enter upon such a scheme the managers would require to see their way more clearly as to where the money was to come in. Mr. G. M. Wood moved and Mr. W. A. Tait seconded that the report be remitted to a committee of the subscribers for consideration and report. Mr. James Mackenzie said he thought the managers had done wonderfully well. Some of those who took advantage of the institution could not be described as sick poor. They had come to a stage when the expenditure was so large that he thought the managers ought to look into the matter, and if possible put the onus upon the parties who went into the infirmary of showing that they were really sick poor. He suggested that the managers should consider whether a small and reasonable charge might not be made to people who were able to pay it in return for the assistance and advice they received. The chairman said he had no doubt the Committee would consider what Mr. Mackenzie had said. A committee representative of the contributors was then elected, and the meeting adjourned until Monday, January 20th.

Epidemic of Measles in Glasgow.

Owing to the prevalence of measles the Glasgow and Govan School Boards have extended the customary Christmas vacation for schools under their charge from ten to twenty-one days. This step has been taken at the instigation of the medical officers of health.

Glasgow Royal Infirmary.

The New Year's Day gathering was this year of special interest, as it was the fortieth anniversary of the original meeting. The Lord Provost (Sir Wm. Bilsland), who presided, drew attention to the fact that some of those who attended the original meeting were present, notably Dr. John Burns, who had now reached the great age of 93. As was natural on such an occasion, the Lord Provost drew some interesting comparisons between the position of the hospital forty years ago and now. When these New Year gatherings were first instituted Lord Lister was working out his great discoveries. At that time the nursing staff numbered only 42, as against 155 to-day; while the total number of cases treated was about 4,400 (including 790 fever cases), while during the past year the cases numbered almost 8,500. On the other hand, the average period of treatment had been reduced by almost a half, due to the improvements in treatment, in nursing, and to the beneficial effect of convalescent homes, which enabled the patients to leave the hospital at an earlier stage of convalescence.

Later in his speech he alluded to the reconstruction of the infirmary, and indicated that, while satisfactory progress was being made with the building, the collection of funds was not progressing so favourably, but the directors were going on with the building scheme in faith and hope. At the close of his remarks he referred to the difficulty about the future of medical teaching at the hospital. He hinted that possibly a solution would be found along the lines which had been adopted in Liverpool under somewhat similar conditions.

Subsequently the Chairman of the Board gave a more detailed account of the present state of the new buildings. He stated that the directors hoped to instal the surgeons in the new north or surgical block before the year was up. The new laundry and power-house and the extension of the nurses' home were also expected to be in use within the next twelve months. They had also contracted for the superstructure to complete the new admission or gate block. After that the next work would be the completion of the third wing of the surgical block and the pathology new building. Then, if some good fairy should come along with £80 000 or £100,000, they would like to undertake the east or special diseases block, which will contain the new executive department. Failing this money, they intended to utilize the money collected to commemorate the Diamond Jubilee of Queen Victoria in building the front or medical block.

Finlayson Lectures at Glasgow.

The first of the lectures founded in memory of the late Dr. James Finlayson, of Glasgow, will be delivered on Wednesday, February 26th, at 4 p.m., in the Hall of the Faculty of Physicians and Surgeons, St. Vincent Street, by Dr. Norman Moore, who has taken for his subject, the Schola Salernitana. The chair will be taken by Professor Sir Hector C. Cameron.

Ireland.

[From our Special Correspondents.]

Fighting the White Plague in Ireland.

At the opening of the winter session at St. Vincent's Hospital in Dublin, Mr. Tobin, one of the surgeons to the hospital, delivered a most impressive and well-reasoned address upon the ravages of tuberculosis in Ireland. He called attention to the results of putting sanitation in the forefront in the Japanese army during the recent war, and the self-restraint practised by the rank and file of that army in the endeavour to preserve their health, so that they might lay down their lives for their country in the face of the enemy if needful, and he called upon his fellow countrymen to do likewise in the fight against tuberculosis. But we fear his admonitions, like those of many others, have fallen on deaf ears. Life is very cheap in Ireland, and at present the question whether we shall all speak English or Irish seems of far more importance than whether one thousand or ten thousand a year shall die of tuberculosis.

Lady Aberdeen has inaugurated, as has been reported in these columns, a Tuberculosis Exhibition. It was first opened as a side show to the recent Dublin Exhibition, and was then transferred to Limerick and Belfast. Though lectures were delivered at it in these cities, we fear they have never reached the class who need them most, for in Ireland the bulk of the population is rural, and the peasants would take no interest in, and would never dream of visiting, such a show.

Lately there appeared in the columns of the *Freeman's Journal* a letter on the subject. The writer, who does not sign his name, states that in dealing with tuberculosis in rural Ireland there are three factors to be considered: The local sanitary authority, which is the district council, who would not be very keen about adopting schemes involving additional expense; the ultimate peasant on the hillside, who cannot be reached by pamphlet litera-

ture, because his education is so defective that he reads little, and understands less what he reads; and, lastly, the medical officer of health, otherwise the dispensary doctor. These men have, as was shown in our recent comments on the report of the Irish Local Government Board, brought down the incidence of infective fevers in half a century from 26 000 to 1,200 a year, thereby depriving themselves of their most lucrative source of living. Their average salary is about 1s. 1½d. a day as sanitary officers, and experience has taught them that for their exertions in checking infective fevers their only reward has been no thanks and less pay; and yet they are the only men who can effectively deal with the white plague.

The writer then goes on to relate how in an unnamed rural union the medical officers determined some years ago to try to stamp out phthisis. How they proceeded to fight it by using the local fever hospital as a sanatorium, preaching the gospel of fresh air far and wide, hunting up consumptive cases and persuading them to go to the local sanatorium and disinfecting all infected houses; he furnishes satisfactory proofs of the complete success of their efforts, and goes on to say that these medical officers were perhaps young and foolish, for they have got neither thanks or other reward for their exertions, and he suggests that others would do well to wait till their value to the community is properly recognized before they attack the enemy. No class in Ireland is or has been more shamefully treated by the Government and the local councils than the dispensary doctors, as has been so often shown in these columns; and even the recent concessions of small increases to their salaries, grudgingly given by a few Boards of Guardians, do not represent a tithe of the debt the community owe them. They are already doing treble the work they are paid for, even at English club rates; and if they voluntarily undertake more without proper recognition it will be their own fault. Many new duties have lately been imposed upon them without pay, but unpaid work, as every one knows, cannot be counted on; when the dispensary doctor is paid to stamp out tuberculosis, we have no doubt he will do it just as conscientiously and effectually as in the case of infectious fevers.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

A SANITARY SERVICE FOR INDIA.

AN important letter has been addressed to local governments by the Government of India on the improvement in the sanitary services, and the development of the present establishment on lines which will bring it abreast of modern requirements. It is an outcome of the revival three years ago of the post of Sanitary Commissioner with the Government of India. It is pointed out that the administrative machinery of the sanitary department is fairly complete, although additional deputy sanitary commissioners are required in some provinces. At present such posts are all held by Indian Medical Service officers. The Government of India thinks that the time has come when they should be thrown open to others, but at the same time it lays down the rule that seven years' service in India and an English diploma of public health are necessary qualifications for the posts, whether the applicant belongs to the Indian Medical Service or not. This will preclude the recruitment of sanitary experts from England; but, on the other hand, it will provide scope for the permanent employment in the sanitary department of those medical men who have already spent a number of years in temporary employment in the plague work, and who would make excellent sanitary officers.

The next question dealt with is the deficiency of medical officers of health in the large towns; with the exception of the Presidency towns very few are thus equipped. The report of the Indian Plague Commission of 1900 recommended that a special European medical officer of health should be attached to every town with a population of 100,000 inhabitants, and that one European assistant health officer should be provided for each additional 100,000. The Government of India considers this a reasonable and moderate suggestion, except that they do not consider it necessary for all these health officers to be Europeans. On the contrary, they are of the opinion that "a sanitary service offers a suitable and congenial career for educated natives of the country, and by fully utilizing this source of supply the Government will avoid the expense of materially enlarging the Indian Medical Service." For the present it will be necessary to insist on a training in Europe, which, combined with "an intimate acquaintance with the customs and prejudices of the people, would make them singularly well equipped for the difficult and delicate duties connected with sanitation in India." The Governor-General in Council therefore proposes that the new appointments should be open to both classes alike, but on the grounds of economy preference would naturally be given to Indian candidates when men with the necessary qualifications are forthcoming. For towns with between 100,000 and 200,000 inhabitants, medical officers of health will have to be recruited from the assistant-surgeon class, educated at the medical colleges in India, and subsequently given a special course in hygiene. Private practice will in no case be allowed to sanitary medical officers, allowance being made for this in fixing their salaries.

A subordinate supervising class is also urgently needed for the sanitary department. In Madras much has been done in this direction through the efforts of Colonel King, I.M.S., but in other provinces arrangements have still to be made for training these very necessary men. The questions of recruitment and regulations to ensure fixity of tenure during good behaviour are also dealt with, permission of the local government in the case of fully-qualified medical officers, and of the Sanitary Board in the case of subordinates, being required for their removal from office.

All these questions are now being referred to the local governments for their opinions, but it is clear from the above that a serious attempt is being made to obtain an efficient sanitary branch of the Administration. The decision to throw it open to any qualified medical men, whether belonging to the Indian Medical Service or not, is probably wise, although the qualification of seven years' work in India will limit the field of selection. A further argument in favour of throwing the department open is that the Sanitary Department has never been a popular part of the Indian Medical Service, so that it is doubtful if the large number of officers who will be required could in any case be recruited through that service without compulsory appointments being made to the sanitary branch, which would not enhance the waning popularity of the service. The result of the decision to employ natives of India largely will be watched with interest, although one cannot help feeling a doubt whether a short European training will suffice to counteract lifelong familiarity with insanitary surroundings.

Cape Colony.

[FROM OUR SPECIAL CORRESPONDENT]

GRAHAMSTOWN ASYLUM.

ON January 1st, 1906, there were 368 patients in the asylum, of whom 251 were Europeans and 117 coloured people. On the last day of the year the total number had increased to 394, composed of 275 Europeans and 119 coloured, practically the whole of the increase for the year occurring in the Europeans. The total number of cases under care during the year was 437, and the average number daily resident 377, an increase of 18 on that of the previous year. During the year 119 in all were admitted, of whom 15 were readmissions and 10 transfers from other asylums. Of the total admissions, 91 were Europeans and 28 coloured. The Medical Superintendent of the asylum, Dr. T. Duncan Greenlees, states in his report that the type of insanity in the admissions is becoming more hopeless, "even among our acute and recent cases there is a gradual increase of melancholics as compared with cases of mania, the former being the less hopeful form of disorder, and the steady increase in the number of general paralytics admitted is a striking and suggestive fact." In support of this he states that to this asylum during the

previous five years 238 Europeans had been admitted, of whom 33, or 13·8 per cent., were general paralytics. From the table showing the forms of mental disorder in the admissions we see that there were 36 admissions classified as cases of mania, fairly equally divided as to race; 9 cases of melancholia, only 1 of whom was a coloured patient; 4 of dementia, equally divided as to race; 8 of volitional insanity, all European; 5 cases of alternating insanity, 5 of delusional insanity, 8 of confusional insanity, 3 of stupor, 2 of acute delirious mania, 3 of insanity with gross brain lesions, and 10 of general paralysis, all of these latter 36 being Europeans. There were also 4 cases of epileptic insanity, 1 of whom was coloured, and 21 of congenital or infantile defects (16 European, 5 coloured). This list shows that the bulk of the coloured patients were cases of mania, recent or recurrent, a further noteworthy feature being the entire absence of general paralysis among the coloured admissions. This is further borne out by the table showing the forms of mental disorder in the total number remaining in the asylum on December 31st, 1906, from which we see that out of 119 coloured patients so remaining there was not one case of general paralysis.

As to the probable causes of the insanities in the admissions, alcoholic intemperance was assigned in 21, or 23 per cent., of the European, and in 8 or just under 29 per cent., of the coloured admissions. Venereal disease was assigned in 9 of the Europeans and in none of the coloured admissions. Also, of the 20 in whom moral causes were assigned, none were coloured patients. Hereditary influences were ascertained in 39, or 42 per cent., of the European, and in 3, or 10 per cent., of the coloured admissions; and congenital defect existed in 9 of the European and 2 of the coloured admissions. The figures covered by this report are too small to permit of any broad deductions, but the absence of mental or emotional stress and also of venereal disease as causal factors in the coloured admissions is interesting. As to the duration of the disorder on admission, in 43 the attacks were first attacks within three and in 14 more within twelve months of admission; in 32 not-first attacks within twelve months of admission, and the remainder were either of more than twelve months' duration (18) or of congenital origin (12) on admission. During the year 29 European and 15 coloured patients were discharged as recovered, giving a total recovery-rate on the admissions of 31·32 per cent —or, exclusive of transfers, of 40 per cent.—or of 31·8 per cent. for the European and 53·5 per cent. for the coloured patients. There were also 11 discharged as relieved and 6 as not improved. During the year also there were 22 deaths among the European and 10 among the coloured patients, giving a total death-rate on the average numbers resident of 8·47 per cent., the death-rates for European and native patients being practically the same. The deaths were due in 13 cases to cerebro-spinal diseases, with 9 deaths from general paralysis; in 9 to chest diseases, including 6 deaths from pulmonary consumption; in 7 to abdominal diseases, including 3 from general tuberculosis and 1 from tuberculous peritonitis, and in 3 to general diseases. Of the total deaths 10, or over 31 per cent., were thus due to some form of tuberculous disease. The table of deaths does not distinguish between European and native deaths, so it is impossible to state whether or not tuberculous diseases bore more heavily on the coloured patients. The general health throughout the year appears to have been fair, but Dr. Greenlees reports the presence of considerable overcrowding and the urgent necessity for increasing the accommodation of the asylum.

INSTITUTE FOR IMBECILE CHILDREN.

The above statistical information does not include the figures of the Institute for Imbecile Children. On January 1st, 1906, there were 17 children in residence, and on December 31st, 1906, there were 20. During the year 6 were admitted, 1 was discharged to the asylum, 1 to the care of parents, and 1 died. The general health was good throughout the year, and under the care of the Matron of the asylum the Institution continues to work smoothly.

THE Lord Chancellor, on the recommendation of His Grace the Duke of Fife, has appointed J. Macdonald Brown, Esq., M.D., F.R.C.S., a Justice of the Peace for the County of London.

CORRESPONDENCE.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

SIR,—The letter of "L. H." in the BRITISH MEDICAL JOURNAL of January 4th, p. 54, regarding the published lectures of Dr. Peter Horrocks on the Instruction of Midwives,[1] is of much interest. Briefly, "L. H." asks two questions: (1) Is the routine use of a germicide necessary? (2) Is the installation of a 2 per cent. solution of silver nitrate a certain preventive of the disease?

Any unqualified answer to these two questions must be No. In support of my answers I may quote figures published in my recent book, *Preventable Blindness*. There I give statistics of 12,680 live births obtained by personal inquiry amongst doctors in "mixed" practice in a London suburb within the four-mile radius.

1. The routine use of a germicide assumes the liability of all infants to suffer from the disease, an obviously unjustifiable assumption. Of these 12,680 births, 9,680 were delivered by seven doctors who did not use a routine germicide; the eyes were carefully washed with boiled water or boracic lotion as soon after birth as possible. In only 70, or 0.72 per cent., was there any purulent discharge; and in 4 cases eyes were injured or blinded, an injury-rate of 0.04 per cent. of the births.

2. That the routine use of silver nitrate of 2 per cent. is not an absolute security against ophthalmia neonatorum is shown by the remaining 3 000 births delivered by one doctor who used this germicide as a routine prophylactic. In 37 cases, or 1·2 per cent., there was slight purulent discharge, and in 3 cases, or 0.1 per cent., there was severe gonorrhoeal ophthalmia, and in 2 of these eyes were injured or lost, an injury rate of 0·06 per cent.

The difference between these two groups of cases is in favour of prophylaxis by washing, but the difference is too small to be pressed.

Credé's method has done wonders in reducing the incidence of ophthalmia neonatorum in lying-in institutions; but it has not extinguished the ophthalmia, though the method is applied by experts, and the infants are under complete control. Further, special routine methods may be necessary in hospitals where there is a cumulation of sources of infection, but not in private practice where this added risk is absent. I find private practitioners who have carefully tried both methods prefer strict cleanliness to a routine use of a germicide, reserving the germicide for suspicious cases; and in this they are following the dictate of rational medicine, and also the lines of prophylaxis first suggested by Gibson of Manchester in 1807.

A reasonable course of procedure is the following:

1. Directly the head of the infant is born, wipe the eyes dry with clean cotton-wool.

2. As soon as the mother is settled, wash the eyelids of the infant freely with a simple lotion, then part the lids and run plenty of the clean fluid between them. For midwives Condy's fluid is best, for the colour is impressive. The water used in the first bath of the child must not get into the child's eyes.

3. If there be a suspicion of a purulent discharge from the vagina of the mother, cleanse the eyes in the same way and wash thoroughly, then instil a drop of silver nitrate, 2 per cent., between the lids. The eyes must be re-examined and washed at the end of eight hours, and if there be any suspicion of discharge instil silver nitrate of 1 per cent., and no stronger, once in twelve hours; and wash with Condy every three hours.

I lay as much stress on the thorough washing as on the use of the germicide.

Recently an experienced lady doctor, a supervisor of midwives, asked me how I defined a "suspicious discharge" in infants, seeing that in most pledgets of mucus appear at the inner canthus by the end of the first twenty-four hours. My answer was to quote the words of the memorial of our Ophthalmological Society to the President of the Local Government Board in 1884—"If the child's eyelids become red and swollen or begin to run with matter. . . ."

My experience of the blind in London County Council schools, and of the disease in hospital practice, indicates

[1] BRITISH MEDICAL JOURNAL, September 28th, 1907.

that the disease is diminishing in London; but it also makes me think that the crass ignorance or laziness of some sort of mothers can only be overcome by the stimulus of a direct penalty, such as would be provided in any scheme for the compulsory notification of the disease.—I am, etc.,

London, W., Jan. 3rd. N. BISHOP HARMAN.

THE NOTIFICATION OF BIRTHS ACT.

A SOLUTION AND AN EIRENICON.

SIR,—I submit a scheme for the practical working of this Act, which I have some reason for believing will remove all its hardships as far as our profession is concerned.

1. The sanitary authority shall issue two forms of notification absolutely distinguished by colour, etc. One shall be for the use of medical men alone, and one for midwives and others.

2. In every case of confinement attended by a medical man he shall hand one of his notification forms to the father "if he is actually residing in the house," or to any other "person in attendance" (vide Clause I, Sec. 1) with instructions to fill it in and post it within thirty-six hours to the medical officer of health.

Under Section 5 of Clause I the medical man shall then be exempted from any penalty under the Act.

3. That the form of notification shall contain a line "Notifier . . ."

(*a*) If such line be filled in Mr. B. this shall be accepted by the sanitary office as an intimation that the doctor in attendance upon the case wishes it to be left in his hands.

(*b*) If the line "Notifier" be filled in Dr. X. this shall signify to the medical officer of health that Dr. X. desires the attendance of the sanitary department.

Before I go further let me anticipate my critic who says, "All very well! But you are simply evading the Act."

My answer is: "Nothing of the sort. I am doing more than the Act requires me to do." And for practical proof of this, I state that my scheme *is approved of and adopted by my own sanitary authority!* So all troubles under the Act are removed in one sanitary area at least. I therefore make this practical suggestion. Let such a scheme—amended to suit any local requirements—be submitted as a test case by medical men to sanitary authorities.

If sanitary authorities will not meet medical men on such lines as these, then there would be at their door the suspicion of wishing to worry the doctor rather than to carry out the purpose of the Act. On the contrary, should "Barkis be willin'" but medical men be indisposed to take a small trouble upon themselves in the interests of the infant death-rate, I should say: "I am sorry—*speravi ameliora.*" But if, as in Stockport, both parties to the bargain be satisfied—"*Quare illae lacrymae?*"

I pass over the advantages of the scheme to the sanitary department.

I also clearly differentiate in the scheme between midwives and ourselves; reasons all too obvious.

I claim for the scheme that—

1. No medical man is called upon to betray any professional secrecy whatever.

2. No medical man is required to act *in loco parentis*, or to perform a "civic duty" rightly belonging to the parent.

3. No case attended by a medical man, *unless he desire it*, will have any interference from the sanitary department by an "official in uniform" or otherwise.

4. No medical man will suffer "indignity or hardship" under such a working of the Act.

5. No medical man will be compelled to inform the Sanitary Office, its officials, inquisitive members of the Sanitary Committee, or even the medical officer of health, how many cases of midwifery he attends per year.

6. Medical men at a small personal inconvenience will co-operate with sanitary authorities in carrying out an Act admitted by the whole of our profession to be beneficial, not to the cases attended by us, but to the far greater number of cases attended by midwives. On page 1844 of the BRITISH MEDICAL JOURNAL of December 28th, 1907, "Sir Dyce Duckworth accepts the estimate that 70 per cent. of all cases of labour are attended by midwives."

7. Medical men under this scheme are voluntary notifiers, as in the case of phthisis, where assistance from the sanitary authority is desired. And if sanitary authorities will but follow the line of the Health Committee of Stockport and say in effect, "We want to work with you; in fact, we cannot do without you. Notify to us all the *bad* cases you come across, and we will do our best. Get the parent or other person to notify to us your *good* cases, and we will not interfere in any way"—I am hopeful that this Act may be instrumental in bringing about a better mutual understanding and friendly working between general practitioners and Sanitary Committees—a thing much to be desired, as any active general practioner who "knows the ropes" can testify.—I am, etc.,

Stockport, Dec. 24th, 1907. J. M. BRENNAN.

SIR,—Some health authorities, after due consideration, have decided not to adopt this Act in its present form. This amounts to a demand for amendment. Others have adopted it with modifications intended to safeguard the principles which the Act violates. This is an admission that the Act is not satisfactory, but discounts to some extent the demand for amendment, and tends to postpone amendment and the benefit to the nation which would result from a satisfactory Act. In urging authorities not to adopt the Act we hope to hasten amendment, in what we believe to be the true interests of the nation as well as of our profession. An Act is wanted which all authorities might adopt with clear consciences and without making any special arrangements for safeguarding principles. Exemption of every one except the father (or in his absence the householder) from penalty would leave this Act just what is wanted, and doctors and midwives could assist the authorities in securing notification without any misgivings about principles. The great majority of them would willingly do this, and public and professional opinion would probably bring the others into line; if not, there are means of applying pressure which could hardly fail.

Drs. Smeeth, Neech, and Fremantle seem to overlook the fact that other health authorities and medical officers of health, and even their own successors, may put quite a different construction on the wording of the Act, and decide to interpret it in the most obvious way and try to carry it out literally. Under the sanction of this Act they may prosecute doctors and midwives along with fathers for default of notification, insist on the notification of illegitimate births by doctors, and insist on sending the health visitor to all births—legitimate or illegitimate. Indeed, some men might honestly feel it their duty to do all this in accordance with the Act, and there is room for wide difference of opinion as to what constitutes reasonable grounds for believing that a birth has been notified.

Anything doctors and midwives may do towards securing notification under this Act must of necessity be done under compulsion, even though they may be perfectly ready to do the same thing of their own free will. No really voluntary arrangement can be made, though the iron hand may be covered by the velvet glove.

The injustice of the Act applies quite as forcibly to midwives as to doctors, and if we are to be restored to equality with our fellow citizens in the eye of the law, they should not be left behind. Apart from the principle involved, it would be a clumsy arrangement if the father were to be held to be responsible when a doctor attended, and the midwife when she attended. One of them said the other day, "It is the father's duty, and we don't mind telling him he's got to do it, but we can't bear this compulsion." If they attend 80 per cent. of the cases that is no reason why they should be badly treated by the law.

Acts of Parliament should not disregard principles. As citizens we are justified in objecting to this Act, however much we may sympathize with its object as doctors.—I am, etc.,

Manchester, Jan. 5th. J. PRICE WILLIAMS.

THE MEDICAL PROFESSION IN SOUTH AFRICA.

SIR,—Is the profession in the Transvaal overcrowded? One may look at the question with feelings akin to the Yellow Peril, and the following true story will give a good idea of the state of things existing:

Not long ago a medical friend of mine was hunting in the Northern Transvaal near the Limpopo. Their route

brought the party close to a Kaffir kraal, and on one of the huts my friend was surprised to see an oval brass name plate bearing the name of a doctor whom he had known before. It set forth his name and qualifications, and added, "Medical Adviser to Chief So-and-So." He had been crowded out!

That, of course, is an extreme instance, and so is the other, in which a man who holds the medical degree of a British University now serves drinks behind a popular Johannesburg bar, and occasionally prescribes for special friends. Setting aside such cases, there remains plenty of evidence that the medical profession in Johannesburg, in the Transvaal, and, indeed, in all South Africa, is overcrowded. In spite of the fact that the Rand lives and dies more rapidly than any other part of the country—its white death-rate last year was 18·01 per 1,000 as against 10·97 per 1,000 for the outside districts—the doctors find that there are too many of them. Their proportion to the population is relatively too great. Johannesburg has about as much sickness for its size as any other civilized town in the Empire, but it has more doctors. Further, while the general population is going down the number of doctors remains about stationary. There has been a big influx, and in addition to this there is the fact that an unusually large proportion of the African-born population takes to medicine and law. The reason is obviously that in a non-industrial country like this there have been no other careers open to the sons of the middle class. Engineering, for instance, with its limitless possibilities, has been up till lately a career beyond the reach of the home-born and home-living Afrikander. Trade has not amounted to much more than could be done by the middleman sitting on the shore, and hence the young Afrikander who wished for something more stimulating than farming had little choice beyond law, medicine, and the Church.

The roll of registered medical practitioners in the Transvaal contains about 790. All of these men practised here since the war; 50 or 60 are known to have left—some for Europe, some for the neighbouring colonies—but it may be taken as reasonably correct that there are practising in the Transvaal at the present time 320 or 330 doctors. The white population, according to estimate for last year, is 314 819, so that we have rather more than one doctor for every thousand persons, roughly speaking. Allowing for natural differences—such as the fact that the country doctor in South Africa has to deal with great distances and a sparse population—that ratio is greater than in any other country. The result is overcrowding—the cake is not big enough to go round.

So unpleasant did the outlook seem, that a few months ago the Transvaal Medical Society discussed what steps could be taken to prevent things becoming worse. It is always an unpleasant thing for a man who is reasonably secure in his profession to cry "Hands off" to the incomer. It smacks of the dog-in-the-manger policy, and a sensitive man does not like to incur even the appearance of taking such an attitude. The difficulty was felt, but the Society came to the conclusion that it was unfair to allow the stream of emigration to continue unchecked, so advertisements were inserted in the medical journals, asking doctors who contemplated coming to South Africa to communicate with the official representatives of the profession. The mere appearance of such a notice has luckily had the effect of a danger signal.

In an attempt to estimate the position of the medical profession with regard to overcrowding, one or two facts must be remembered. It is peculiarly difficult to judge by appearances. You never see the doctor in a shabby coat; frequently you see him in his motor car, and he knows all the roads from Rosebank to Rosettenville. If you are in his confidence you may know that he makes ten, fifteen, or twenty visits a day, and each visit means half a guinea. He has also his consulting-room practice, and the occasional fifty-guinea operation. This is the prosperous doctor, and he is reasonably well off, even after allowances are made for expenses of living and bad debts. He is not over-rich, but, from the professional standpoint, he is comfortably off. The professional man, be it remembered, earns his living by his skill, and in that lies the difference between a profession and a trade. The money gains of skill must be less than those of merchandise, because the man of science earns only what his personal labours can accomplish. A man like Lord Lister removes the incubus of fatality from surgery and benefits all men who come after him, but he has no greater recompense than he can gain by his personal exertions. The doctor will seldom make a fortune, but society owes him a livelihood commensurate with his position. That is, at present, unfortunately impossible for all the doctors in the Transvaal.—I am, etc.,

Birmingham, Dec. 20th. W. H. WHITEHOUSE, M.D.

NEPHROPEXY.

SIR,—I have read with interest Messrs. Billington's and Pollard's papers on nephropexy, and, as far as I can judge, there is no introduction of any new principle but of detail in technique in the methods adopted by them.

Every normal kidney is movable; when we are called upon to "fix" a kidney, we should try to restore it to a normal bed of movement.

In our attempts to do so we must, in the first place, take them bodily out of their bed; that means we must free the capsule from every surrounding attachment right up to the blood supply and ureter. This is the first and, I believe, the most important principle to observe. Partial exposure of the kidney, I believe, accounts for a number of failures in fixing the kidney, and is based on misconceived ideas as to the method of cure. When the kidney is put back in its new bed, we attempt to exaggerate the normal process of fixation by various means, such as (1) packing the exposed kidney from the loin and letting the wound granulate up from the bottom, so that the capsule of the kidney and the consequent scar form one continuous band of connective tissue; or (2) by suturing the capsule (Henry Morris); or (3) by making flaps of various shapes from the capsule itself, such as those used by Billington and Pollard, or the band of capsule (used by myself), like the handle of a satchel, and fixed to the loins (Vulliet's method).[1]

Separation of the capsule of the kidney is an important additional factor in the operation, not simply because it becomes involved and fixed in its new bed, but also on account of the exposed raw surface of the organ becoming likewise attached. I believe that it is immaterial how or by what means the detached capsule is fixed to the surrounding parts, as I have successfully used silk, catgut, strips of the tendon of the erector spinae, and of the capsule itself, for fixation to suitable tissue.

The kidneys should not be fixed to anything that will not allow their normal movements to take place with the excursions of the diaphragm, and with this object in view a new principle has lately been introduced—namely, the obliteration of the old bed from below upwards by means of suitable suturing of its fascial boundaries. Mr. Alexis Thomson has drawn attention to the work of Harris of Chicago and others in this direction,[2] and I have tried it on a few occasions since my visit to the United States in 1906, with a feeling that it is an important adjunct to an operation which has been adversely criticized by some.

The principles which underlie successful results in nephropexy are apparently:

1. Complete removal of a floating kidney from its old bed, and taking away all the fat from the new bed when present (Henry Morris).

2. Make the new bed of suitable size in its normal position by obliterating it from below upwards by suturing.

Whether partial decapsulation is necessary when these principles are observed is a debatable point.—I am, etc.,

Cardiff, Dec. 31st, 1907. J. LYNN THOMAS.

DIABETES MELLITUS AMONG THE CHINESE.

SIR,—I am interested in the memorandum of Dr. A. C. Lambert, in which he argues that diabetes is not so rare in China as had been supposed. He accounts for the impression previously entertained by the fact that the wealthier Chinese have only recently come under the observation of European physicians, and that life insurance examinations amongst them are comparatively modern. Twenty years ago I took some trouble to ascertain the geographical and ethnographical distribution of the disease, and had to thank many correspondents for the trouble they took for me; but no one sent me such

[1] See BRITISH MEDICAL JOURNAL, November 8th, 1902.
[2] *Edinburgh Medical Journal*, October, 1907

full details as Dr. Burge, then of Shanghai, now of Bournemouth. He not only gave me his own experience, but brought the matter before the local Medical Society and elicited the fact that not one of the members had ever met with a case in a Chinaman; but a statement was forwarded to me from Singapore, made by a Chinese doctor, who said that while the disease was very rare in China, he had met with seven or eight cases in Singapore among the Chinese during fifteen years' practice. A disease that has such well-marked symptoms as diabetes could not remain unrecognized, and I think its rarity must be admitted. Dr. Lambert's first two cases were certainly diabetes, but the others were doubtful; that is to say, they were cases of glycosuria, not associated with polyuria, thirst, or wasting. But every case in which sugar is found in the urine should not be straightway diagnosed as diabetes.

Considering the extraordinary increase in the proportion of cases of diabetes observed in civilized countries during the last twenty or thirty years, it seems to me that diabetes may be getting a common disease among the Chinese, especially among the wealthier classes, who have adopted many of the luxurious habits of Europeans, and this view is supported by the appearance of the disease among the Chinese at Singapore, where the wealthy Chinese are Europeanized. A few years ago American physicians used to congratulate themselves upon the low mortality from diabetes in the United States, but it is admitted to be no longer true. The present rate of mortality from diabetes per 100 000 living in the City of New York is, according to Dr. Herman M. Biggs, as high as in Paris, which stands highest of the great cities of Europe, and where it has increased 50 per cent. during the last twenty years. I hope others who, like Dr. Lambert, are practising in China at the present time will give us their experience on the point.—I am, etc.,

Birmingham, Jan. 6th. ROBERT SAUNDBY.

A PURIN-FREE DIETARY.

SIR,—After reading only the condensed abstract of Dr. Chalmers Watson's post graduate lecture on this subject in your issue of December 21st, it is a little difficult to be sure whether his final conclusion is that this is a useful form of treatment or not. It is possible that even if uric acid and other purin bodies are not in themselves injurious, they may be associated in foodstuffs with other substances, not yet isolated, which are harmful. It is quite true that in some cases the virtue attributed to this diet has another source. Greater moderation, more efficient mastication, and more attention to hygiene generally are all factors which tell, and should receive due recognition. It is equally true that in some instances prolonged trial of this diet has only resulted in failure and disappointment. All the same, in all such cases that I have seen some important principle was being ignored, for there are many pitfalls; quality only was considered and not quantity, or the meals were too frequent, or mastication neglected or impossible, owing to dental deficiencies. The fact, however, remains that in numerous instances a change to a purin-free diet, other conditions being unchanged, has produced remarkable results; that these are due to the nature of the diet has been confirmed by the simple experiment of reverting to the old diet, when the old troubles have gradually returned. In extreme cases good results may ultimately be obtained, even when, after such a long period as ten months, no obvious benefit has accrued. Usually, under appropriate treatment, functional disturbances, such as headache, tend soon to be less frequent and less pronounced; in exceptional cases no change whatever is observed for a long time, but in the end a sudden and unexpected cure is effected.

It is not likely that this form of treatment will benefit every one, and discretion must be exercised in recommending it. If, as some observers appear to think, it benefits, when properly carried out, a considerable percentage, it should rank as an important therapeutic agent. Certainly it is easier to be moderate on this diet than on a mixed one. The man, however, who starts to experiment with the firmly-rooted idea that the only resources of the purin-free feeder are cabbage and potato is not likely to be able to give an unbiassed or useful opinion. No very extraordinary skill on the part of the cook is required to make the meals appetizing. If a change is gradually and carefully effected, little self-denial is called for.

As a rule, so far this diet has been adopted chiefly by the weak and debilitated; already there are indications that, when carried out from an early age in those of sound constitution, a much higher standard of health is obtained.—I am, etc.,

Birmingham, Dec 30th, 1907. W. A. POTTS.

THE MENTAL ORIGIN OF NEURASTHENIA AND ITS BEARING ON TREATMENT.

SIR,—In reading Dr. Drummond's interesting lecture on the above subject I was surprised that no mention was made of Dubois's book entitled, *The Psychic Treatment of Nervous Diseases*, published in 1905 by Funk and Wagnall's Co. Déjerine, whom Dr. Drummond quotes, has written a preface to this book, in which he says:

> Dubois has had the merit of showing in a series of publications the fundamental, if not unique, rôle which is played in the treatment of psychoneuroses by what I should like to call psychic pedagogy—that is to say, the re-education of the reason. He has been the first resolutely to conduct all his therapy in accordance with this guiding idea.

The book gives a description of the methods used by the author in his practice of psychotherapy, along with the most interesting psychological considerations. There are many who are sick to the death of the ordinary methods of treating neurasthenia, and who are continually reproaching themselves for their lack of courage to be honest with such patients. For such as wish to treat this disease rationally—by psychic methods—and so to change the mentality of the patient from a morbid to a healthy condition, I know of no better book.—I am, etc.,

West Kirby, Jan. 5th. ADAM MOSS.

ST. MARY RONCEVALL.

SIR,—All who take delight in the antiquities of London will be pleased with the interesting article in the BRITISH MEDICAL JOURNAL of January 4th, and it may interest some to know that it is possible to trace in certain old maps of London the various buildings that have occupied the site of that Priory down to the present time. Wyngaerde's map shows the Priory Chapel, and we know that in 1544 the Priory was dissolved, and that shortly afterwards probably the conventual buildings were destroyed. Stow, writing in 1593, speaks of this destruction, for he says, "but now the same (that is, the Priory of St. Mary Roncevall) is suppressed, and turned into tenements." Aggas's map, supposed to have been made shortly after Wyngaerde's, shows these tenements, and Newcourt's map, about half a century later, delineates clearly Suffolk House. The presence of this chapel, in addition to the fact that he portrays old St Paul's, with the steeple on the tower, which was destroyed by a storm in 1561, and never replaced, is a further proof, if any were wanted, that Wyngaerde made his map some time before Aggas. Wyngaerde's map, however, is in some respects very inaccurate. The position of St. Martin's Church must be wrong, for it is placed on the river side of the Strand. Both Aggas and Newcourt show that the relative position of this church with regard to Charing Cross was altogether different, and mark it as occupying practically the same position as now.

It is to be noted that Barham in his sketch, "The Lady Rohesia," in the *Ingoldsby Legends*, introduces a "Franciscan" from the Priory of St. Mary Roncevall, who hears the request of the supposed dying lady to his Priory, and it is from the neighbouring Durham House that the long-enduring husband departs with Sir Walter Raleigh on his adventures.—I am, etc.,

London, N.E., Jan. 4th. MAJOR GREENWOOD.

TUBERCULOUS CHLOROSIS.

SIR,—In an article entitled Tuberculous Chlorosis in the BRITISH MEDICAL JOURNAL of December 28th, 1907, Dr. James refers to three cases in support of his contention that there is a "tuberculous chlorosis."

In the first case—that of a girl of 16—the blood examination does not indicate chlorosis; on the contrary, the increase in the red blood corpuscles suggests, primâ facie, poverty of plasma. In chlorosis the amount of haemoglobin is always, I believe, lessened; but in this case it was, at least, not low for a girl of 16.

	Total Volume of Blood.	Corpuscles.	Haemoglobin.	Specific Gravity of Whole Blood.	Specific Gravity of Plasma.
In simple chlorosis ...	Increased	Diminished	Diminished	Much reduced	Normal or increased.
In tubercle... ...	Diminished	Diminished, unless drawn from a cyanosed part	Diminished, unless drawn from a cyanosed part	Reduced, unless blood drawn from a cyanosed part	Diminished.

The blood in the second case was even less like that of chlorosis. The amount of haemoglobin—95 per cent.—is, again, very suggestive of a want of plasma.

The third case occurred in a boy. I do not think that a boy whose red corpuscles and haemoglobin are below normal necessarily has "chlorosis." A few years ago I went so far as to write that chlorosis does not occur in boys, but I am now inclined to admit the very occasional occurrence in boys of a similar change in the blood, though in a lesser degree, such as we find in chlorotic girls. These boys, like the subjects of Graves's disease (and haemophilia), come of actually or potentially large families, and they have usually a blood inclining to the feminine type. Anaemia of a chlorotic kind occurs about as rarely in adolescent males as exophthalmic goitre.

On the occurrence of chlorosis in boys, however, I must not dwell, but will content myself with emphasizing the fact that the first two cases do not appear to have been cases of chlorosis at all; and boys are rarely, if ever, chlorotic; and all three, including the boy, showed the secondary anaemia which a tuberculous subject might be expected to show.

Chlorosis is so common a disease that it would be truly remarkable if tuberculosis and chlorosis did not sometimes coexist in the same individual. I have known simple chlorosis and tubercle to coexist, but I think the combination rare. At the moment of writing I only recall four cases.

The characters of the blood in tuberculous disease and in *simple* chlorosis may be contrasted as in the accompanying table.

I think Trousseau wrote of cases of the second class referred to above, tuberculous secondary anaemia, and he was, as usual, very right in his statement that iron does not suit them. Iron does not increase the plasma, and a girl with 70 per cent. haemoglobin—to say the least, a normal amount for most girls at 16—or a youth with 95 per cent. haemoglobin, needs no ferruginous treatment, and thereby grows rather worse.

These cases of tuberculous secondary anaemia, while they differ from simple chlorosis do resemble what I once described as "chloro-oligaemia." In chloro-oligaemia the volume of blood is diminished, the red corpuscles and haemoglobin are diminished, the specific gravity of the plasma is reduced, thus resembling the tuberculous secondary anaemia, but this condition, unlike chlorosis, is as common in boys as in girls with tuberculous disease, and is therefore to be attributed to the tuberculous disease, not to the chlorotic tendency.

Simple chlorosis is, I take it, an intoxication produced by an internal secretion, which I now believe may be afforded by the sexual organs in both sexes. My present view—merely a working hypothesis—is that in some males a "feminine substance" is produced in unusual amount, and I think these persons show some secondary sexual female characters, for example, in the shape of the pelvis; and the blood approaches the feminine kind in characters. These youths afford the rare cases of exophthalmic goitre in adolescent males; and I regard exophthalmic goitre as due to a similar overproduction of a substance produced also in the sexual organs of both sexes but more abundantly in the female. My own view—which I mention with much hesitancy, because I am not certain that I am right—is that these organs in males and females produce two substances, both produced in each sex, in females one normally predominates and in males the other. If my views should prove correct, exophthalmic goitre and chlorosis are very nearly related and both occur in women who have not borne children, or have not borne as many as their blood quantity could afford them to bear; each occurs occasionally in adolescent men.

I trust that sufficient reason has been given for maintaining that it is best not to use the term "tuberculous chlorosis" to denote a disease in which the condition of the blood is quite different from that found in simple chlorosis, and due to entirely different causes. If there is a "tuberculous chlorosis" we ought to write of "tuberculous Graves's disease"!—I am, etc.,

Cambridge, Jan. 1st. E. Lloyd Jones.

EMPIRICISM AND INSTINCT IN VETERINARY DIAGNOSIS.

Sir,—In the British Medical Journal of December 14th, 1907, p. 1725, Professor Clifford Allbutt is reported to have expressed himself as follows at a recent meeting of the Cambridge Medical Society:

As an example of what he meant he instanced the fact that even trained anatomists and pathologists who were perfectly familiar with horses were at times forced to call in a "vet.," who, in his clear empirical way, put his finger instantly on the defect which the skilled anatomist had been unable to detect. That sort of instinct or empirical knowledge in regard to children was what teachers ought to have, and they could acquire it if quick-witted without being taught much medical science.

I shall be glad if you will allow me to enter a protest against this gratuitous reflection on veterinary education. There is no more truth or point in the passage quoted than there would be if it were altered by substituting the word "children" for "horses" and "doctor" for "vet."

Professor Clifford Allbutt may be quite right in his contention that it is possible to impart to school teachers a sufficient knowledge of school hygiene without teaching them much medical science, but in seeking to enforce that view he had the misfortune to use an argument which proves exactly the opposite of what he intended. He might have been happier if he had selected his illustration from some subject with which he is better acquainted than he appears to be with veterinary science and education.—I am, etc.,

J. McFadyean.

Royal Veterinary College, N.W., Dec. 21st, 1907.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE APPOINTMENT OF MEDICAL OFFICERS TO WORKHOUSE INFIRMARIES.

A.—We are informed that the number of beds in a workhouse infirmary has no bearing upon the question whether a Board of Guardians may appoint a medical officer to act under the supervision of the visiting medical officer. The Local Government Board insists upon the appointment of a resident medical officer in cases where the infirmary is separately administered from the workhouse. If the sick wards are in the workhouse and *ipso facto* under the control of the master, the Board of Guardians may appoint a resident medical officer to act as full-time officer under the supervision of the visiting medical officer, but the appointment is always subject to the approval of the Local Government Board.

NURSING IN WORKHOUSES AND POOR-LAW INFIRMARIES

J. A. writes as follows: In a workhouse where there is also an infirmary with a superintendent nurse, a question has arisen with regard to the night nursing, whether it should be done continuously by the same nurses, or whether it should be done alternately by the various nurses on the staff. Who is the final authority to decide—the medical officer, the matron, or the Board?

*** We apprehend that the Board of Guardians must be regarded as the supreme authority in reference to any system of nursing in workhouses and infirmaries, subject, of course, to the approval of the Local Government Board. The guardians, however, before adopting any special system or making any material change in that hitherto in operation would do well to refer to both medical officer and matron, and to give all reasonable attention to their views and opinions on this very important matter.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

INTERFERENCE WITH ANOTHER DOCTOR'S PATIENT.

E. E. P. writes: I was called to see a patient who was the child of a coachman to a family I do not attend. The child had scarlet fever, and the coachman told his master what the child was suffering from: the master wrote to his family doctor to come up and see the child, which he did, and sent the child to hospital. This doctor blamed the coachman very much for not sending for him, and the man told him he always had me and intended to have me. Should the doctor have consulted me before seeing the child, as he was not requested to do so by the child's father?

*** Neither the master nor the doctor had power to send the child to the infectious hospital without the consent of the parents, but if the coachman lived on his master's premises the latter was justified in asking that the child should be sent away as quickly as possible. The urgency of the circumstances may excuse the second doctor for seeing the case and advising its removal, but he would have acted courteously had he written a note of explanation.

CORRUPT PRACTICES.

OPEN writes: A medical man gives free medical attendance to the employés of an hotel on the understanding that in cases of illness amongst guests he should be called in. Is this tantamount to taking secret commissions, and therefore illegal? It is a common practice amongst certain members of the profession, and appears to me to be on the same level as a tradesman's tipping to cooks. I have hitherto refused all club practice, etc., but under the following circumstances what am I to do? A new hotel manager, who is a patient of mine, informs me that a medical *confrère* of old standing and good position asks him to continue the old arrangement he had with the former manager and staff. I am naturally expected to continue the method of touting, to which I demur. If I do not consent in this case, I probably create offence and lose good patients.

*** No arrangement with the keeper of an hotel, boarding-house, or lodging, by which in return for some consideration a medical practitioner is to be recommended to visitors can be approved. If this is not an actual breach of the Prevention of Corruption Act, it violates its spirit, and is discreditable to the medical profession. We are informed that the practice exists at many watering places and health resorts; it can only be suppressed by the united action of professional opinion in those places.

Medico-Legal.

DEATHS UNDER ANAESTHETICS IN GENERAL HOSPITALS.

AN inquest was held on January 7th in connexion with another anaesthetic death which occurred at Guy's Hospital, by Dr. Frederick J. Waldo, with reference to the death of Thomas John Allison, aged 14 years, who died under an anaesthetic during an operation in Guy's Hospital. We take the following report, in which we have made certain modifications, from the *Daily Telegraph*:

This makes the thirty-ninth death under an anaesthetic which has occurred in Guy's Hospital within six and a half years, and at the last inquest it was stated that a committee of inquiry had been formed at Guy's thoroughly to investigate the whole matter. Considerable interest was taken in the proceedings, the court being crowded.

In opening the inquiry the Coroner said the child died after the administration of an anaesthetic called the "A.C.E." mixture, which consisted of alcohol, chloroform, and ether. Both chloroform ether and alcohol were poisons, and as that was necessarily causing an unnatural death, if such occurred, an inquiry was necessary as much for the sake of the governors and controllers of Guy's Hospital as for the operators, anaesthetists, and the general public, including the relatives. It was for the jury to say if there had been any gross neglect, by which he meant criminal neglect, in which case it amounted to manslaughter, or short of neglect if deaths were due to misadventure. It was also necessary to find if it was given with reasonable care and skill, and whether an operation was necessary. He (the Coroner) had ordered a *post-mortem* examination to be made by an independent outside expert pathologist in the interest of the hospital and its officials as much as in the public interest. The hospital officials interested had been given an opportunity of being present at the autopsy.

The mother stated that the child was taken to Guy's Hospital for an operation on December 22nd, 1907, which was performed successfully. Permission was given for a second operation, which took place on the 3rd inst., but the patient died.

The Coroner: Do you consider he was treated properly?—I should certainly say so. I am certain Dr. Fagge would have been only too glad to save my child's life.

Dr. Clifford Antony Myer, ophthalmic house-surgeon at Guy's Hospital, stated that he was registered as a doctor in 1906, and had acted as ophthalmic surgeon and anaesthetist in eye, throat, and ear cases for five months. In special cases in either of these complaints he was empowered to ask for a special anaesthetist.

The Coroner: Are you not a professional anaesthetist?—I do not devote the whole of my time to it, but I have only once called in a specialist.

And why then? Because if anything happened you would be liable?—No, I did not think of any liability, but of the remarks you have made at inquests suggesting that special anaesthetists should act, and I thought, if the patient had to die, it would be best to die under the care of a special anaesthetist.

The Coroner: I may point out that there is a liability, you know.

Continuing, witness said he chose the "A.C.E." mixture as necessary for the operation, which was to scrape the bone behind the ear, although he knew that under ether alone very few people indeed died, as against the mixture which contained chloroform. The anaesthetic was given for about an hour and a half.

Then it must have been a pretty bad case?—It was a safe case, I thought.

Witness added that a spasm was noticed in the patient, and oxygen was administered. After, strychnine and ether were tried, followed by massage of the heart, performed by opening up the abdomen, but all to no avail. Death, in his opinion, was due to respiratory failure.

Do you say that you are responsible, with the operator?—We have to help each other, so I suppose we are liable together, though I am willing to accept the full responsibility for the anaesthetic.

The Coroner: That may be all right from your point of view, but it does not hold good in law. The law seems to hold the operator solely liable, but if such is really the case the sooner it is altered the better.

Mr. Charles Herbert Fagge, Surgeon-in-Charge of the Aural Department, said he performed the operation, which had to be stopped just before completion. At St. Thomas's Hospital they took two hours for a similar operation.

The Coroner: Do you accept responsibility?—Oh, certainly not as regards the anaesthetic. I cannot look after two things at once, and I have the operation to do.

Then if I tell you, as a lawyer, that you are liable, I suppose you say that the sooner the law is altered the better?—I do indeed.

The Coroner: Dr. Hewitt, the King's anaesthetist, agrees with me that the operator is solely liable.

Witness said he did not consider it necessary to call in specialists in every case, but he agreed that in serious cases it was best for it to be done.

The Coroner then referred to the rider of a jury at a previous inquest, in which they said they were of opinion that if an anaesthetic had to be given in a serious case it should be given by a specialist or by a house-surgeon in the presence of and under the supervision of a visiting anaesthetist, and asked if anything had been done.

Witness: Yes, it has been seriously considered by the surgeons, and I have here the agenda of a meeting to be held this afternoon, when it will be still further considered.

Dr. Theodore Fisher, a specialist in pathology, who was called by the coroner, said that death was due to the anaesthetic primarily, and respiratory failure, followed by sudden heart failure, and that was possibly caused by the child being predisposed to a sudden death owing to the state of the thymus gland.

Dr. Myer, recalled, said he quite agreed with this view. He was present at the autopsy, and quite agreed with the evidence as given by Dr. Fisher.

In summing up, the Coroner said that it was for the jury to find whether this anaesthetic had been administered with care and that no neglect had occurred. They had been assured that an inquiry was proceeding into the whole matter at Guy's Hospital, which was comforting, in view of the fact that this was the thirty-ninth death from the same cause.

The jury returned a verdict of "Death from misadventure, and added that in their opinion the anaesthetic was properly administered and was necessary.

*** We understand that as a result of the rider referred to by the Coroner, a Committee of the Medical Staff has been considering the jury's recommendation "that in all serious operation cases anaesthetics should be administered either by a staff anaesthetist or by a resident under his immediate supervision," and that this Committee is expected to report during the present month.

DEATH AFTER LOCAL ANAESTHESIA.

A RECENT issue of the *Advertiser* contains an account of a coroner's inquiry at Rotherham on December 12th, 1907, into the circumstances attending the death of a man, aged 64, on the termination of an operation for the extraction of teeth under local anaesthesia. When nine teeth had been drawn the patient rose from the chair with the intention of washing his face, but as soon as he had left it, sat down again with his head bent forward. He then began to shake violently and in a few moments died. The operator, who described himself as a maker of artificial teeth and an extractor of teeth, said that before commencing the extractions he injected into the gums 30 minims of a solution known as alvatander. He had had five years' experience of its use, had sometimes used four times the quantity employed in the present case, and had treated with it without any mishap between one and two thousand persons. Evidence was given that the solution contained a number of drugs, the only one of a poisonous character being cocaine. In 30 minims of the solution there would be slightly over ¼ grain of this drug. A *post-mortem* examination performed showed that the heart was in a condition of advanced fatty degeneration, but that all the other organs were healthy. Some medical evidence was given, but it did not include any clear expression of opinion as to whether the death should be attributed to the use of the anaesthetic or to the operation itself. The jury returned a verdict to the effect that the deceased had died from heart failure accelerated by shock, being invited by the coroner in his summing-up to attach no importance to the circumstance that any drug had been employed In an earlier part of the case, when it was suggested that the deceased's daughter had been warned by a medical man not to take her father to the operator as he was not a regular dentist, the coroner also remarked that it did not matter whether the dentist was a qualified man or not.

WORKMEN'S COMPENSATION CASES.

AN application was made at Bangor County Court on November 14th, 1907, on behalf of Darbishires, Ltd., to reduce the amount of compensation awarded to Edward Hughes, who, in April, 1907, had to submit to amputation of the foot in consequence of an accident. He had been awarded 10s. a week. It was now stated, on behalf of the employers, that by a course of treatment, which hardly deserved the name of an operation, the man's condition might be so improved that he could earn much more than 10s. a week at the quarry. It appeared that Hughes had refused to use a kneeling-pin supplied by the employers, as a result of which adhesions had formed. The application was made in the man's own interest, as it was thought that if he did not try to work he might become a cripple. On behalf of the workman it was stated that he had tried to use the kneeling-pin and had found it impossible. There was nothing in the Act to compel a man to undergo an operation.

His Honour, in giving his decision, said that there was hardly a suggestion of an operation. If he found a man with a stiff arm who refused to have it bent he should stop his money if a referee declared there was no danger in the act. In the event, as he thought this was a case for a medical referee, he reduced the award to 2s. a week, but suspended the order for three months in order to give the workman an opportunity of consulting a specialist.

GENERAL HOSPITALS AND CONSUMPTION.

AT an inquest held by the Southwark Coroner on a bootmaker named John Holland, aged 56, who was found in a state of collapse in a Southwark street, and taken by the police to Guy's Hospital, it was stated that he had been refused admission on the ground that the hospital was full. He was then removed to St. George's Workhouse, where he died

According to a report in the *Daily Telegraph*, Dr. Massie, Medical Officer of the Workhouse, said that Holland died two days after admission, from consumption and want of food, accelerated by cold and exposure.

Coroner Waldo: Do you think the fact that the man was turned away from the hospital accelerated his death?—You see there was not a vacant bed.

But could they not have made up a bed for such a desperate case? Don't you think they ought to have done something, and not refused a dying man?—I would rather not say, as I do not know their rules

The Coroner: Perhaps they do not admit consumptives as they are infectious cases?

Dr. Sefton Jones (of Guy's Hospital) said they had only a few beds for consumption at Guy's, and these were always full.

The Coroner: I quite admit that consumptive cases may be undesirable in a hospital. It is a dreadful scourge, and seems to be spread in churches and chapels as much as in workhouses.

The jury returned a verdict of death from natural causes accelerated by exposure and want of sufficient food.

We understand that the authorities at Guy's object to overcrowd their hospital, and hold that beds should be provided for emergency cases at the Southwark Workhouse, in addition to the infirmary at East Dulwich Grove.

THE ENGAGEMENT OF A LOCUMTENENT.

WAYFARER asks at what time a locumtenent enters the service of his principal, and at what time his service expires?

*** It commences when he enters into his principal's house, and ceases when he leaves it at the end of the agreed time, unless otherwise specially provided.

THE VALUE OF PRACTICES.

M. asks whether the market value of medical practices, speaking generally, is higher, on a par with, or lower than it was nine years ago.

*** It is impossible to answer a general question of this kind with any confidence, but there is no reason to think that medical practices have a lower market value now than nine years ago: it even seems probable that the value of good practices has risen since then.

AGREEMENTS NOT TO PRACTISE WITHIN AN AREA.

POST HOC writes that he bought a practice in the West End of London, the vendor being bound down not to practise within a three-mile limit. Four years later the vendor says that he has been legally advised that the limit is not a just one.

*** A three-mile limit is fair and reasonable, and under the circumstances it would appear that the vendor has been wrongly advised.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

LONDON HOSPITAL MEDICAL COLLEGE.

Lectures on Inheritance.

THE following is the syllabus of the course of lectures on inheritance in its physiological and pathological aspects which, as already announced, are to be delivered in the Physiological Laboratory of the London Hospital at 4 30 p m.:

Lectures 1 and 2 (January 15th and 22nd), by W. Bulloch, M.D.—(1) The heredity problem in human pathology. Data derived from the study of the transmission of congenital malformations. Polydactyly, etc. Inheritance of diseases. Family diseases in general. Special data derived from hereditary diseases of central nervous system. Diseases of special organs of sensation. Family diseases affecting the skin and its appendages. (2) Angio-neurotic oedema. Haemophilia. Family disorders of viscera. Pentosuria, alkaptonuria, and other anomalies of metabolism. Mercyism. Myxoedema. Family temperaments and diatheses. Disposition and its anatomical basis. Heredity problem with reference to infections and immunity. Modes of transmission in hereditary diseases. Application of laws of morphological heredity to diseases.

Lectures 3 and 4 (January 29th and February 5th), by M. Greenwood, jun., M.R.C.S., L.R.C.P.—(3) The statistical side of inheritance. Methods of collecting data. Principles of statistical analysis. Precautions to be observed. Researches of Pearson and Rivers, relating to the inheritance of the tuberculous "diathesis." Comparison of these results with those obtained in the case of physical and mental characters. Peculiar distribution of cases among offspring. (4) Heron and Urquhart on the insane "diathesis" The question of correlated inheritance. Analysis of asylum data. Comparison with results from tuberculous material. General summary.

Lectures 5 and 6 (February 12th and 19th), by A. Bacot, F.E.S.—(5) Inheritance in moths. Special features of the Insecta that have an influence on their heredity and the segregation of characters within the germ. Non-applicability of use-inheritance to certain of their characters and instincts. General outline of the characteristics of the lepidoptera in larva', pupal, and imaginal stages. The complete independence of the larva and adult insect in regard to inheritance. Necessity of caution in referring abrupt and discontinuous variations to mutational sources. Effects of food and climatic influences, such as heat and cold, drought and moisture, in originating variation. The possibility of climate producing cumulative variation by acting alike on the determinants in the embryonic pupal wing and in the germinal material from which future individuals will be produced. Hybridization as producing altered habits (rapid development, segregation of the sexes in this respect, and alteration of the normal sexual proportions). (6) Breeding experiments. Inheritance in the larvae of *Lasiocampa quercus* and its various races. Great constancy of the moths reared from a single pair belonging to a species that has a wide range of variability: this not an invariable result. Diversity of variation in the specimens reared from a single batch of eggs may occur. Results of experiments in rearing different species of moths. Their Mendelian bearings. Further experiments specially to test the Mendelian proportions. Result. Possible influence of selection in the splitting or blending as the resort of cross pairing. Proportion of pure dominants to dominant-recessives among wild moths.

Lectures 7, 8 and 9 (February 26th, March 4th and 11th), by G. P. Mudge, A.R.C.S., F.Z.S.—(7) The phenomena of heredity

previous to the rediscovery of Mendel's laws. Accuracy of prediction the criterion of the truth of a scientific generalization. Mendelism as a means of prediction. Blended, mosaic and alternative inheritance. The nature of Mendel's principles. Fluctuating variations and mutations. Mendelian inheritance in animals and plants. (8) Mendelian inheritance in animals and plants, continued. (9) The inheritance of sex. Mendelian inheritance in man. The Mendelian interpretation of cytological phenomena.

OBITUARY.

THE LATE SIR ALFRED B. GARROD.

DR. TALFOURD JONES (Tunbridge Wells) writes: Until I opened the JOURNAL on Saturday I was unaware of the death of my old teacher, Sir Alfred Garrod. His portrait arrested my first attention; it was a very good likeness of him as he appeared many years ago. We see in it his fine and broad forehead, his abundant and curly hair, his habitual spectacles, and his genial look—the man himself. Perhaps I may be allowed, as a member of University College, London, and a friend and former clinical clerk and house-physician of Dr. Garrod, to supplement your most excellent obituary notice and the remarks of Dr. Tirard, of King's College, with some personal reminiscences. I venture to say a few words all the more because I felt that Sir Alfred Garrod's Alma Mater ought on the occasion to be represented by some one.

Dr. Garrod's connexion with University College began with his studentship there, and while there he graduated at the University of London. In 1847 he became Assistant Physician to University College Hospital, and then full Physician, Professor, etc., as so well described by you, so that when he resigned all his appointments in 1862, and went to King's College, he had been fifteen years on the hospital or college staff of University College.

His resignation took us by surprise, and we felt his loss very much; and all the more, as our great teacher Dr. Walshe had but recently (end of April or first week in May, 1862) resigned in consequence of ill-health. The Council appointed Dr. Jenner to Dr. Walshe's office, and Dr. Garrod left us for King's College. These facts are all that need be mentioned.

Dr. Garrod's first treatise on gout and rheumatism was published as far back as forty-nine years ago, and it is now sixty years since he first described his discovery of uric acid in the blood of gouty patients. We who were associated with him became very familiar with his simple and elegant method of showing the crystals. His lectures on materia medica were perhaps, like those of other lecturers of his day, rather too much devoted to the chemical and botanical and other qualities of drugs, but what his college lectures lacked in therapeutics and pharmacology were well supplemented by his apt clinical and therapeutical remarks in his hospital wards.

Garrod was always willing, when needful, to use any useful remedy to its full physiological effect. In 1861 Dr. Jones of Jersey had been using large doses of tincture of digitalis in delirium tremens with good results. It so happened that a man, aged 44, suffering from delirium tremens, was admitted into one of Garrod's wards. His heart and kidneys were apparently sound, and I thought it would be a good case to try digitalis. With Dr. Garrod's permission I gave him digitalis *à la* Jones of Jersey.

Just at this time Dr. Jenner had expressed a wish that candidates for the Fellowes Gold Medal would ascertain the influence of changes in the posture of the patient on the pulse in three cases of acute and in three cases of chronic disease. I determined as a candidate myself to utilize my digitalis patient as one of my acute cases.

I will not trouble you with any but a few really necessary remarks on this digitalis case. My report has *never* been published, and since the adjudication it has been seen *only* by the late Sir William Broadbent, who was glad to read it when at work on his book on the pulse.

The patient's attack of delirium tremens began on Sunday, November 24th, 1861. He was admitted into University College Hospital on Tuesday evening, November 26th, at 8 p.m. His pulse was taken lying, sitting, and standing. Immediately afterwards he was given half a fluid ounce of tincture of digitalis.

Between 8 p.m. and midnight the pulse was again taken in all three postures; then ½ oz. more of the tincture was given. At 1 a.m. (Wednesday, 27th) his pulse was reduced from 90 to 70 beats. At 9.50 a.m. it was noted that he had not slept at all during the night and was uneasy and restless. Pulse lying, 70. Another ½ oz. of the tincture was now given. Six further observations (in all three postures) were made up to 6.35 p.m.; but he was still restless and had not slept. Another ½-oz. dose of the tincture was given, and at 8 p.m. his pulse lying down was 64. Patient went to sleep at 5 a.m., Thursday, November 28th, and awoke 9.30 a.m., 28th, and slept well till noon.

At 12 noon his pulse, asleep and lying down, was 54. November 29th it was recorded "that patient slept the greater part of yesterday and the whole of to-day." Is now calm and rational. He rapidly improved, and all traces of delirium and want of sleep disappeared. The man took, altogether, 1¾ fl. oz. of the tincture. The observations founded on this case were, of course, not limited to the frequency only of the pulse, and are much too lengthy and numerous to be given here in detail. I will simply add that the effect of digitalis in such full doses on the heart when the patient was made to change from a sitting to a standing posture was such as to show the necessity of great caution in permitting patients with cardiac disease to get out of bed while under the full influence of digitalis.

On November 22nd, 1860, I read a paper before the Medical Society of University College on tea and coffee, their physiological action, their general and dietetic use and abuse. I had been discussing the question with Dr. Garrod, and was glad to give his opinion in support of my view that the immoderate use of these beverages was harmful.

I will now quote from my paper:

> I was talking a few days ago to Dr. Garrod about the action of these beverages upon the heart, and he gave me the following very interesting particulars about himself.
>
> About five years ago Dr. Garrod had occasion to visit, several times, a patient residing some distance in the country. Before he started on his journey he took an early breakfast of tea or coffee; again he took some before he arrived at his journey's end; he also usually drank a cup or so at his patient's residence, and on his return home at night he always indulged in his cup of coffee. I may state that before this Dr. Garrod had suffered more or less from palpitation and an irregularity of the heart's action, but after each of these journeys the symptoms were greatly increased. At last it struck him that the large quantity of tea and coffee which he had drunk on these occasions must have had something to do with it, so he resolved to try and do without them. He had no sooner done so than the palpitation and other symptoms which he had before suffered from entirely disappeared. Dr. Garrod therefore renounced altogether the use of tea and coffee, and continued to do so for four years. About a year ago, while on the Continent, he happened one day, whilst at Vichy, to indulge rather freely in some of the coffee for which Vichy is so celebrated, but that night he suffered from his old symptoms of palpitation, intermittency, etc. Since that time he has not drunk a drop of tea or coffee, but confines himself exclusively to cocoa; and he has not since had a relapse. We have since then (1860) had no further talk on this subject, and therefore I am unable to say whether Sir Alfred Garrod ever again took to tea and coffee.

One day in the autumn of 1861 Garrod said to a group of his pupils standing near him, "I think I ought to raise my fee from one to two guineas for every first interview, because a first examination of a patient always occupies so very much of one's time." A few days afterwards it so happened that I, who was then his House-Physician, had occasion to go to his house to see him. In his waiting room there was a gentleman who wished to see the Doctor, and he asked me if I happened to know Dr. Garrod's fee. I answered, "Yes, it is *two* guineas." The patient was called in, and after he left I had *my* interview, and before leaving said to Dr. Garrod, "I hope you have just had a satisfactory patient." Looking very pleased he said that the patient had much surprised him, for he had actually given him *two* guineas. Thereupon an explanation followed and he was much amused, and thanked me. We have since then had two or three talks over this episode. It would be interesting to learn whether this *two* guineas was adopted by any one *before* 1861. Garrod was then living in the same street—Harley Street—but at No 84, whence he migrated to No. 10—nearer to Cavendish Square.

We ought to remember that our deceased friend was the first to advocate the use of lithia in gout; that he introduced the well-known sulphur and acid potassium tartrate

lozenge: and that he was so highly valued by the authorities of Aix les-Bains that they named a street "rue Sir Alfred Garrod." He once told me he had sent to Aix in one year 200 patients. I told him that many of these would have done as well and perhaps better at Llandrindod hills, Buxton or Bath, or some other *British* watering place.

Sir Alfred Garrod has lived a good and useful life and outlived his great contemporaries of the last century—Walshe, Jenner, Gull, and Russell Reynolds.

DAVID BROWNE, L.R.C.P.I., M.R.C.S.Eng.,

FORMERLY PRESIDENT OF THE SOUTHERN BRANCH.

Dr. David Browne of Winchester died at the age of 66, as the old year was dying and the new year receiving its birth. He was educated at Queen's College, Belfast, and Trinity College, Dublin, and before settling down to practice further extended his education by visiting foreign lands, where he had some adventurous experience, becoming a captain in the Mexican army, serving under Maximilian. He was taken prisoner, but, escaping to the coast, he gradually worked his way back to England, where he went to Kingsheaswell, Devon, practising there ten years before he came to an anchorage in Winchester.

He was born at Boyle, co. Roscommon, Ireland, in 1841, following his father in the profession. He was always active, kind, warm in nature, and never wavered in his devotion to the strenuous duties of his profession, for he rarely took a holiday. In practice his firm and cheery manner won for him the complete regard and affection of all his patients. He was medical officer to the Winchester Post Office, and held the union appointment. He was an active worker of the Winchester Division of the British Medical Association. At one time he was the Representative, and at another time the President of the Branch, entertaining the members during his year of office (1904) at his well-earned estate outside the city. As a successful practitioner he became a power for good, doing signal service in the ancient city of Winchester.

It only seems a short time back that he relinquished the active duties of practice, handing over the greater responsibilities to his son, Dr. Spencer Browne, and his partner, Dr. Child. He had one other son, and leaves a widow and one daughter.

He was buried at Headbourneworthy, Winchester, on January 4th, followed to his last resting place by a large concourse of people. Among those present at the funeral, representing the Winchester Division, were the senior members, Drs. Harman and Fuller England (Winchester) and J. F. Briscoe (Alton).

PROFESSOR DR. ALBERT HOFFA,

UNIVERSITY OF BERLIN.

We regret to announce that Professor Albert Hoffa, the well-known orthopaedic surgeon of Berlin, died during a journey to Cologne on New Year's Day, at the age of 48. He was born in 1859 at Richmond, in South Africa, and took the degree of Doctor of Medicine at Freiburg in Baden in 1883. He afterwards acted as assistant to Maas and also to Schoenborn at Würzburg, where in 1886 he qualified as a Privatdocent in Surgery and established a special clinic. He also worked for a time at massage under Mezger and von Mosengeil. He was appointed Extraordinary Professor at Würzburg in 1896. In 1902 he was called to succeed Julius Wolff as Director of the Orthopaedic Policlinic at Berlin; he was also appointed Extraordinary Professor and had conferred upon him the title of Medical Privy Councillor. He contributed largely to surgical literature, his writings on orthopaedic subjects, on fractures and dislocations, and on massage being of special value. His principal works are his *Technik von Massage*, which won great popularity; a volume entitled *Die Orthopädie im Dienste der Nervenheilkunde* (1900); a textbook on fractures and dislocations, a fourth edition of which appeared in 1900; an *Atlas und Grundriss der Verbandlehre*, a third edition of which was issued in 1904; a work on orthopaedic literature produced in collaboration with Blencke in 1905; and an Atlas of Orthopaedic Surgery illustrated with *x*-ray figures, produced in collaboration with Rauenbusch which appeared in 1906.

Lieutenant-Colonel JOHN MAITLAND, I.M.S. Retired,

LATE PRINCIPAL, MADRAS MEDICAL COLLEGE.

The death took place at Bournemouth, on December 20th, 1907, of Lieutenant-Colonel John Maitland, of the Indian Medical Service, and news of it will be received by many Anglo-Indians and others with a regret only lessened by the fact that the disease from which he was suffering was of an incurable character, and of late attended by great suffering. Colonel Maitland received his medical education at the University of Edinburgh, where he graduated M.B., C.M. in 1874, taking the M.D. with honours some years later. In 1876 he entered the Indian Medical Service, thus adopting the same career as had his father before him. He took to India a good record as a student, and soon began to make his mark as a young medical officer of more than usual ability and promise. Though hampered from the first by a somewhat delicate constitution and often handicapped by illness, there have been few officers who could claim to have done more honest and useful work in the thirty years he served his country. An accurate and patient observer with well-developed artistic tastes and in his professional work a special bent for surgery, he soon developed into a sound, practical, and successful surgeon, and early in his service was called upon to fill responsible posts in the Presidency town of Madras and the Madras Medical College, until in 1896 he became Senior Surgeon of the Madras General Hospital, with the attached professorial Chair of Surgery in the Medical College. This appointment he occupied with considerable distinction until the year 1903, when he regretfully gave it up to become the Principal of the Medical College and Senior Administrative Officer of the hospital. For some years he took particular interest in the problems connected with filariasis, and published some valuable original work throwing light on that disease, and leading up to the knowledge we now have of those conditions. He also wrote some useful practical articles on the methods of operation for elephantiasis of the scrotum and other allied diseases, including that of ulcerating granuloma of the external generative organs. As a Fellow of the Madras University, he took a deep interest in medical education, and also for a time served on the Madras Municipal Commission, where skilled medical advice was much needed. In the South Indian Branch of the British Medical Association he took an ever active part from the early years of its initiation to the time he left India, and contributed many articles on various subjects, both clinical and pathological. In his private life Lieutenant-Colonel Maitland had a retiring and undemonstrative manner, which perhaps sometimes appeared to show a want of self confidence, but this was only apparent, for all those who came to know him found in him a wise adviser and a sincere friend, a warm-hearted and careful physician, and a man in whom there was no guile.

The various positions which he occupied—including at one time an appointment on the personal staff of Lord Connemara, the Governor—had led to his being a very well-known man in Madras, and much regret was felt when the time came for him to retire after thirty years' service in 1906. He then set up a new home at Bournemouth, and, when attacked by the illness which eventually proved so serious and ended his life at the comparatively early age of 55, he had already attracted new friends, and been made an Honorary Member of the Bournemouth Medical Society. Colonel Maitland was married, and leaves a widow and three daughters.

The life of Dr. George John Sealy, one of the best-known medical men in the Thames Valley, and a distinct personality in the neighbourhood of Walton, Chertsey, and Weybridge, ended on the day before Christmas under peculiarly sad and dramatic circumstances. He was a very fine horseman, who habitually went his rounds on horseback, accompanied by his groom, and at the time of his death, although well past middle age, was as keen a rider as ever, and a regular follower of the Berks and Bucks Hounds. On December 24th, 1907, he, with his groom a short distance behind him, was riding at a smart gallop along the tow-path on the bank of the Thames, between Shepperton and Chertsey. The going suddenly became bad, and both horsemen were about to draw rein,

but it was too late. The river was high, the bank had been flooded, and seems to have been undermined, for all of a sudden it gave way, and in a moment both Dr. Sealy and his horse were thrown into the river. They reached the water separately, but Dr. Sealy, who was wearing heavy riding boots, and who may possibly have been hit by his horse, never reappeared above the surface, and his body was not recovered for a long time. Dr. Sealy, who had been resident in Weybridge for some forty years, was a student of King's College Hospital, and became M.R.C.S., L.S.A., in 1861, taking the M.D. St. Andrews in the following year. On leaving King's College he became House-Surgeon at the West Kent General Hospital, and a few years later settled down at Weybridge, starting in the position of Medical Officer to the Guardians of the Parish. He soon acquired a very large and widely extended practice and gave up the post mentioned, but held to the end the appointments of Physician to the Princess Mary's Village Homes, and to the Addlestone and St. Nicholas Home for Cripple Children at Byfleet. His interests in life were not confined to his work, his family, and horses, but extended to general politics, and thus he will be much missed not only by a wide circle of friends and patients, but also by the Conservative organization in the locality, which he did much to establish and support. He often appeared on the platform, and was a clear and attractive, if somewhat too deliberate, a speaker. He was the author of a work dealing with the use and abuse of stimulants and on the selection and preparation of food, and last year contributed a short article to the BRITISH MEDICAL JOURNAL entitled, "The Food Factor in the 20th Century." Dr. Sealy was married, and is survived by his second wife and three daughters.

DR. ALFRED ERNEST JEAFFRESON, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., was born on September 5th, 1872. His birthplace was historical, the old hospital of Bridewell in New Bridge Street, now the residence of the Treasurer and the Clerk of Bethlem Hospital. Dr. Jeaffreson received his education at St. Paul's School, and left there for Cambridge in 1892 with the following character from the late High Master, Mr. F. W. Walker, in a farewell letter to old Mr. Jeaffreson: "Scholar of his College, Exhibitioner of his School, and Captain of the XI, he has a very complete career." This refers to an open Scholarship in Natural Science which he had just won at Christ's College, Cambridge, and an Exhibition on leaving of £45 a year for four years from the Mercers' Company. At Cambridge he had several attacks of influenza and was forbidden to row; otherwise his lungs appeared healthy, and he went into residence at St. Bartholomew's in January, 1896, after taking his Honours Arts degree in Natural Science, Second Class. He helped the cricket team to bring back the Shield in 1897, and took the Diplomas of the Conjoint Board during the same summer, just in time to jump in one evening from the position of Dresser to that of House-Surgeon in the eye wards. In the autumn of 1897, while working for the Final of the Cambridge Third M.B., a persistent cough led him to the examination of his sputum and the discovery of tubercle bacilli. On the advice of Sir W. Church and the late Dr. Symes Thompson, he went straight off to the Orange River Colony, South Africa, where he improved; after the war he went to the Transvaal, and there in 1905 got very ill. He returned to the Orange River Colony, April, 1906, but got slowly and steadily worse until September, 1907, when he was obliged to keep to his bed and remained there until the end came peacefully on the morning of December 1st, 1907. He was an example to many in the patient and uncomplaining way he bore all his sufferings. He was liked and respected by all who knew him, and his loss will be felt by many.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Chapot-Prévost, Professor of Histology at Rio de Janeiro; Dr. Peter Ilinski, of St. Petersburg, formerly editor of the Russian medical journal *Wratschebnija Wjedomosti*, and well known as a writer on medical subjects, aged 71; Dr. Alexander Kunitz, Physician to the German Legation at Tangier, aged 64; and Dr. Nello Biagi, Professor of Surgical Pathology at Florence.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.: those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER.
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

ACHTUNG writes: Would some member kindly recommend me a good *pension* in Berlin where English is not spoken?

MALE SERVANTS.

A. P. writes: I have a boy of 16 who does odd jobs in garden and stable, and sleeps in the surgery building (detached), getting his meals at his own home. Should I pay 15s. tax for him as a male servant?

*** Our correspondent is liable to pay licence duty for the boy.

INCOME TAX.

NOVICE holds a paid hospital appointment, and has recently commenced to practise as well. He asks a number of questions as to his income-tax liability.

*** The fees from the hospital appointment are assessable separately at the place where they are earned (that is, the hospital), and should not be included in the statement of profits given in the general return. Necessary expenses may be claimed, but our correspondent will find it more convenient to pay the tax on the fees from the appointment without deduction, and to claim the whole of the expenses to which he is entitled as a deduction from his general professional earnings. It would certainly not do to "ignore or refuse to recognize" a separate claim for the tax on the appointment; indeed, the day for ignoring income-tax papers has gone by, and our correspondent should attend without delay to any form or demand he may receive. With regard to the private earnings, if the original return was based on an estimate, he can apply immediately after April 5th, 1908, for an adjustment of the assessment to the amount of profit made during the previous twelve months—that is, the gross bookings less the actual expenses incurred for professional purposes. Particulars of the principal expenses that may be claimed were given in an article on Income-tax Deductions in the BRITISH MEDICAL JOURNAL for August 24th last. If our correspondent's total income, after deducting professional expenses, does not exceed £400, he may claim a deduction or abatement of £160. To obtain this he must furnish a statement of his income from all sources, taxed and untaxed. In making his return in future he will be correct in deducting legitimate expenses and showing the balance as his net profits. A call on the local surveyor of taxes, however, will probably simplify matters for him, and clear up any difficulties he may experience.

ANSWERS.

FILIBUSTER.—Various formulae have been published for so-called bust-developers, and the many advertised articles are probably of similar composition; they consist of lubricants to be used in massaging the mammae: the base is sometimes fatty and sometimes a tragacanth paste, with more or less of emulsified fat. Any effect that may be produced must be due to the massage.

Cracking Knees.

DR. R. FOSTER OWEN (Streatham) writes: In reply to "Medicus," I have found benzoic acid work wonders in several cases similar to the case he reports upon; I have given it in grains v three times a day with the results named. I am not prepared to say how it acts, but the results I have had have been very good. I shall be glad to hear if "Medicus" obtains the same results.

Nail Biting.

J. S. J. writes in answer to "P. X.'s" inquiry in the BRITISH MEDICAL JOURNAL, December 14th, 1907: Go carefully over each nail every morning, and evening if found necessary, and cut with scissors or file carefully all irregularities. If the child is observed biting his nails in the daytime, let them be carefully smoothed again. I forget who it was that suggested this plan to me many years ago, but I have known of cases cured of the habit.

Avian Proteosoma and Malaria.

SEARCHER.—Proteosoma infection of birds may be taken as the exact equivalent of malarial infection in man. Both varieties of parasite belong to the haemosporidia, a sub-order of the sporozoa. Both are pigmented, and pass through their intracorporeal cycle by sporulating in the red blood cells, which they destroy. Both pass through their extracorporeal cycle in the stomachs of mosquitos in an exactly similar manner, the only difference being that a different genus of mosquito is chosen for each. A closer analogy cannot be found. Ross, by his work on bird malaria (proteosoma), demonstrated the part the mosquito plays in the transmission of human malaria.

Homoeopathy and Vegetarianism.

DR. MAMLOCK (Paris).—(1) Homoeopathy is dealt with "in a critical spirit" by Sir Benjamin Brodie in his well-known papers entitled "Quacks and Quackery," first published in the *Quarterly Review*, December, 1842, and "Homoeopathy," published in *Fraser's Magazine*, September, 1861. Both these essays may be found in the first volume of *The Works of Sir Benjamin Collins Brodie* (London: Longmans, Green, Longmans, Roberts and Green. 1865). In Oliver Wendell Holmes's *Medical Essays, 1842-1882* (Houghton, Mifflin and Co., New York, 1891), there is one entitled "Homoeopathy and its Kindred Delusions," which is well worth reading. (2) With regard to vegetarianism, its "defects" may be gathered from any standard medical work on diet. That of Thomas King Chambers is eminently readable. Among the most recent works may be mentioned Dr. Robert Hutchison's *Food and Dietetics*, of which a second edition appeared in 1905. Sir J. Crichton-Browne vigorously condemned vegetarianism at the Annual Conference of the Sanitary Inspectors' Association held at Llandudno in September, 1907.

Climate: Polypharmacy.

J. T.—(1) It is not very easy to find a dry and equable climate in England, these qualities not being characteristic of the climate in any part of the British Isles. We may suggest the neighbourhoods of Leith Hill; the hills near Redhill, Reigate, Dorking, Guildford, Godalming, Haslemere; the elevated ground extending from Redhill to Westerham and Sevenoaks; Crowborough; Clifton in Gloucestershire; Dartmoor in Devonshire; Llanberis, near Snowdon, and Llangollen in Wales; Braemar, Ballater, Forres, and Aviemore in Scotland. The coast of Suffolk and Norfolk has a dry and sunny, but not equable, climate. (2) Diascordium appears to be as good an example of polypharmacy as can easily be found; it contains, Mr. Martindale informs us, in addition to water, germander herb, 60 grams or parts; red rose petals, 20; bistort root, 20; gentian root, 20; tormentilla root, 20; barberry seeds, 20; ginger, 10; long pepper, 10; canella, 40; herb origanum, 20; benzoin 20; galbanum, 20; gum arabic, 20; Armenian bol, 80; opium extract, 10; mel rosatum, 1,300; grenache wine, 200. 1 gram (15 grains) of diascordium contains 6 mg. (about 1/10th grain) of opium extract.

Religious Instruction in Asylums.

M. C.—The only "authoritative statement" with reference to the religious instruction of lunatics in asylums is that contained in the Lunacy Act, which provides that a chaplain of the Established Church shall be attached to institutions as a member of the staff. There is no necessary provision for religious teachers of other denominations. But the difficulties, especially with reference to Jewish and Roman Catholic patients, have been overcome by allowing the attendance of the priest and the rabbi when required, though a salary for the ministrations of these ministers is not of necessity accorded. Of late years, however, the advisability of providing religious ministrations for patients of all denominations has been recognized by visiting committees of asylums; and in the London asylums the ministers of different religious sects and denominations are not only invited to come, but are, moreover, paid for their services. This is as it should be, and there is no doubt that in the next Lunacy Act the question will receive statutory recognition. As to the beneficial or baneful effect of religious instruction on lunatics, it may confidently be asserted that in the majority of cases it is of the greatest value, and is highly appreciated. Cases occur in which the influence of the Roman Catholic priest or the rabbi is of very considerable service to the medical superintendent in the treatment of tiresome and refractory patients, whilst for the epileptics the attendance at religious functions is eagerly sought. The Lunacy Commissioners evidently attach importance to this question, and one of their most constant inquiries is as to the number of patients attending the religious services. While the influence for good of judicious ministers of religion is great among the insane, there are some cases in which the moment for its employment is not in the earliest stage, and it is in such cases that the advantage of the temperate and judicious minister is seen, for intemperate zeal may do harm. Where harmony exists between the medical and the clerical elements great mutual assistance may result, and though the medical authority may have occasion to interpose and suspend the religious officer temporarily, he will be only too glad to welcome the appearance of conditions which enable him to enlist the spiritual aid which often assists him in his combat with the physical disease.

LETTERS, NOTES, Etc.

The Public and the Profession.

C. J. W. writes: The Director of the Army Medical Department is busy explaining to the members of the profession the demands to be made upon them by the territorial army scheme, and the sacrifices which that scheme will entail upon them. At the same time, many practitioners are lifting up their voices in protest against the new Notification of Births Act. If we are to sacrifice ourselves and meet the demands which our fellow countrymen make upon us, we in our turn may reasonably demand that our fellow countrymen shall treat us with due consideration, and promptly amend the Births Notification Act.

Improved Stethoscope.

MESSRS. MAYER AND MELIZER (London) write: With reference to the improved stethoscope devised by Dr. Langley, a description of which appeared in your JOURNAL of December 14th, 1907, p. 1720, we should like to point out that we made for Dr. F. C Barker, of Bombay, an instrument on exactly the same lines. This was described in the medical journals early in 1890—in January or February, we think—and appeared in our catalogue published in that year. Dr. Barker thus described his instrument:—"The modification consists of a metal bifurcated connector, uniting two short pieces of rubber tubing from the ear tube with a single longer rubber tube leading down to an unbranched chest piece. This stethoscope is of special value in bedside cases, as, having only one tube, it is not so easily kinked as the two tubes of an ordinary stethoscope."

The Royal Society and the Test for Colour Blindness.

DR. A. A. BRADBURNE (Southport) writes: Your correspondent, N. Newman, under the above heading in your issue for December 28th, 1907, says "the travelling public has a right to demand" . . . that the Board of Trade investigate the placing in responsible positions on board ship of colour-blind persons. This possibility gave him a terrible shock, and I am afraid he will get another when he hears that I came across the case of a sailor—who had frequently and commonly been on the look-out—of a good many years' standing, and yet who was possessed of so much long-sighted defect as to make him almost blind. He was a hospital patient, and therefore I cannot at the moment lay my hands on the exact measurements; but they were so great that I told him if he attempted to try the sea again as a profession I would notify the Board of Trade. What risks ships and crews have run whilst this hypermetrope watched, goodness only knows!

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

Note
ON
THE PREPARATION OF CATGUT FOR SURGICAL PURPOSES.

BY LORD LISTER, F.R.S.

CATGUT used for ligatures or sutures in surgery should fulfil various conditions. It should, after soaking in water or blood serum, be strong enough to bear any strain to which it may be subjected, and should hold perfectly when tied in a reef knot. It must not be so rigid as it lies among the tissues as to have any chance of working its way out by mechanical irritation. Nor should it be too quickly absorbed, but should be consumed so slowly by the cells of the new tissue that grows at its expense that, in case of the ligature of an arterial trunk in its continuity, it may serve sufficiently long as a support for the substitute living thread in its embryonic condition. At the same time, it is essential that the catgut be securely aseptic when applied.

Of the various substances which I have tried for the preparation of catgut, that which has, with one exception, most nearly approached the ideal is sulphate of chromium. The one exception is secure asepsis of the gut substance, this salt being utterly untrustworthy as a germicide; this defect is easily remedied by the addition of a little corrosive sublimate, the powerful germicidal action of which is not prevented by the chromium sulphate.

I was at one time discouraged from using chromium sulphate by finding that it varied extremely in quality according to the manufacturer who supplied it. Thus one sample got from a well known firm proved quite insoluble in water.* But a perfectly satisfactory result was obtained by adding solution of sulphurous acid (*P.B.*) to solution of chromic acid until the rich orange-brown of the latter has passed through grass-green to the pure blue of chromium sulphate. When this has occurred no more should be added, since free sulphurous acid produces a precipitate with bichloride of mercury, and would thus, in proportion to its amount, withdraw the germicide from solution when the two liquids are mixed. In order to make quite sure that no free sulphurous acid is present, it is well to keep a few drops of the chromic acid liquid in reserve, and add them when the blue colour has appeared, so as to restore the green tint.

Another point that requires attention arises from the fact that the *P.B.* solution of sulphurous acid, as obtained from the chemist, is generally somewhat deficient in the amount of SO_2, in consequence of loss by volatilization. Hence it is necessary to use a smaller quantity of water for dissolving the chromic acid than would otherwise be used; and when the proper tint has been got, add enough distilled water to bring the liquid to the requisite measure.

The following directions for preparing what is known as chromic (or sometimes sulphc-chromic) catgut in accordance with the above conditions were given to manufacturing chemists in 1894, but have never yet been published:

"The preparing liquid must be twenty times the weight of the catgut. So for 40 grains of catgut 800 grains of preparing liquid are required. It is made by mixing two liquids—namely, the chromium sulphate liquid and the sublimate liquid.

"The sublimate liquid is:

Corrosive sublimate	... ...	2 grains
Distilled water	... ...	320 ,,

"The sublimate may be dissolved by heat, but the solution must be used cold.

"The chromium sulphate liquid is prepared thus:

Chromic acid	... ...	4 grains
Distilled water	... ...	240 ,,

"Add to this as much sulphurous acid (*P.B.* solution) as gives a green colour. If more is added the colour becomes blue, which shows that rather too much sulphurous acid has been used. It is well to reserve a few drops of the chromic acid solution, to be added after the blue colour has just appeared and restore it to green. Then enough distilled water is added to bring the green liquid up to 480 grains. Then add the sublimate liquid."

The catgut is kept twenty-four hours in the preparing liquid, and is then dried on the stretch.

N.B.—It is essential that the CrO_3 and SO_2 solutions be mixed before the $HgCl_2$ solution is added.

Catgut prepared in this way remains actively antiseptic in its substance for an indefinite period, as was shown by the following experiment:

Some slender hanks prepared three years previously, weighing 207 grains, chopped into short segments, were placed in a small mortar and treated with enough distilled water to cover them, 2 000 grains being required for the purpose. The gut was then pressed firmly with a pestle, and the same was afterwards done three times at intervals of about three hours. The gut and water were then transferred to a stoppered bottle for seventeen hours, when the liquid was poured off and filtered, being clear and almost colourless.

The germicidal property of the infusion was carefully tested by the late Dr. Allan Macfadyen. In spite of the large amount of water used in preparing it, he found that it destroyed the *Streptococcus pyogenes* in a quarter of an hour. When diminished to half its bulk by evaporation *in vacuo* it killed *Staphylococcus pyogenes aureus* in half an hour; and when further reduced by one-half it deprived the resisting spores of anthrax of vitality in two hours, although the amount of the liquid was still about twice that of the catgut to which it was applied.

The following is Dr. Macfadyen's account of these experiments:

Liquid Tested.

Infusion of chromic catgut = 100 c.cm.

Organisms Used.

Bacillus anthracis, sporing potato culture.
Staphyloccus pyogenes aureus, laboratory stock culture.
Streptococcus pyogenes, virulent culture.

Methods.

Threads were soaked in emulsions of the above organisms and exposed to the action of the above liquids for varying periods of time—fifteen minutes to two hours. The threads were then washed in (1) sulphide of ammonium, (2) distilled water (sterile), and placed on sloping agar and glycerine agar at blood heat for seventy-two hours.

RESULTS.

Liquid Unconcentrated.

Time.	¼ Hour.	½ Hour.	1 Hour.	2 Hours.
Anthrax spores	+	+	+	+
Staphylococcus pyogenes aureus ...	+	+	+ poor	+ slight
Streptococcus pyogenes	0	0	0	
Controls...	+	+	+	+

Liquid Reduced to Half its Bulk

Time.	¼ Hour.	½ Hour.	1 Hour.	2 Hours.
Anthrax spores	+	+	+	0
Staphylococcus pyogenes aureus ...	?	0	0	
Streptococcus pyogenes	0	0	0	0
Controls...	+	+	+	+

Liquid Reduced to Quarter Bulk.

Time.	¼ Hour.	½ Hour.	1 Hour.	2 Hours.
Anthrax spores	+	+	0	0
Staphylococcus pyogenes aureus ...	0	0	0	0
Streptococcus pyogenes	0	0	0	0

* I learn from Messrs. Morson (of Elm Street, Gray's Inn Road), who have devoted a great deal of attention to this salt, that its most suitable form requires very great care in its preparation in order to avoid variation in its composition, and also that it is extremely hygroscopic, so that, unless it is very carefully preserved, water in variable amount becomes associated with it, another cause of uncertainty in its composition.

But while the substance of the catgut is thus not only aseptic but powerfully antiseptic, its dry surface is liable to contamination by contact with septic material, and it is essential that, before being used, it be washed with some trustworthy germicidal liquid.

My practice has been to put the catgut, like the instruments, in 1 to 20 solution of carbolic acid about a quarter of an hour before the operation is begun. Any of the catgut that remains unused upon the reel may be afterwards kept in a similar solution for any length of time without disadvantage.

The essential precaution of purifying the surface of the catgut is, I fear, sometimes overlooked, the result being occasional suppuration attributed to defect in the ligature, while it is really the fault of the surgeon.

Remarks
ON
THE RESULTS OF THE OPERATIVE TREATMENT OF CHRONIC CONSTIPATION.

By W. ARBUTHNOT LANE, M.S.,

SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

While the term "chronic constipation" is in the large majority of cases quite correct, yet in a certain number a very advanced condition of autointoxication may be associated with a daily evacuation of the bowel, and also in some of the complications of chronic constipation, such as mucous, membranous, or ulcerative colitis, the motions are usually fluid and frequent.

Again, in a certain proportion of cases of autointoxication the patient may have several fluid motions during the day. I indicate these facts as some apology for the term "chronic constipation" which I have employed, not because it is completely comprehensive, but for the reason that it gives the most general idea of what I wish to call attention to.

In the earliest cases in which I removed the greater part of the large bowel the symptom demanding it was pain, usually in the caecum, splenic flexure, or sigmoid. Though I was aware of the associated symptoms of autointoxication I did not operate for their removal, nor was I aware that the excision of the large bowel would result in their complete disappearance. I only became conscious of this result after the removal of the large bowel. And the comparatively abrupt change which ensued during the few days following the operation was almost startling.

The recognition of the immense advantages which these miserable people obtained from the removal of the large bowel then induced me to operate also in cases where pain was not necessarily such a marked feature, but where life was becoming a burden through the misery and distress induced by the autointoxication and its results. As time went on I found that the condition of chronic intestinal stasis had a very extensive and far-reaching pathology, part of which was due merely to mechanical causes and part to the influence exerted by the poison absorbed. A greater experience of these cases served to increase the range of the knowledge of these effects and to associate with this condition in a causal relationship changes which at first sight would appear to have no connexion whatever with it. Metchnikoff's work has naturally been of the greatest interest and help in the study of these changes. The most important factors in determining the fatality were that one felt justified in exposing to what appeared to be such a severe operation only such patients as were practically dying, and in consequence were not in a condition to bear a surgical operation of even very moderate severity, and that the time spent in performing the earlier operations was naturally longer than that required after some experience. This class of case is about the worst possible from the point of view of the surgeon; while the operation is one of moderate severity the resisting power of the patient is at the lowest ebb. The sufferer has not only one trouble, but many others, some of which are too advanced to be relieved by one operation alone. I might allude to the dilatation of the stomach, the presence of ulceration of that organ, the acquired adhesions about the gall bladder, the mobility of the kidneys, the degenerative changes in the breasts, the fixation and probable degenerative changes in the left ovary, etc.

The removal of the large bowel alone cannot cure all these conditions; many of them may demand subsequent surgical interference. For this reason, though in a large number complete relief is obtained by operation, in a smaller proportion of very advanced cases the patient has still much left to complain of. It is quite obvious, therefore, that the earlier the patient is deprived of the cause of all these troubles the better is the result.

At first I was satisfied in most cases to remove the large bowel as far as the splenic flexure, as I believed that the risk of the operation was reduced by leaving the descending colon and sigmoid, for these structures being vertically placed I did not expect that material would accumulate in them above the junction of the ileum and rectum. I found, however, that many of those in whom this portion of the large bowel was left complained, after a lapse of time, of symptoms which I was able to attribute to distension of the descending colon and sigmoid with gas. Therefore I excised the residual bowel in many such cases of incomplete resection and took away the entire large bowel with the exception of the rectum in all primary operations.

Constant and prolonged vomiting frequently was a very distressing feature after these operations, and in some cases it was so serious as to imperil the life of the patient. We found by putting the patient on constant and abundant subcutaneous saline injection all vomiting was done away with, the beneficial result to the patient of the subcutaneous injection being most striking. Instead of these patients vomiting for days, the large majority do not vomit once after the operation. I am under the impression that abundant subcutaneous infusion also obviates what I have found to be an occasional objectionable complication in very advanced cases, namely, the fixation of the dilated small intestine by adhesions. These occasionally produce obstruction of the anchored bowel and may call for surgical interference for their liberation. In this way the risks of the operation have been greatly reduced. One might say that if the patient is in a condition to bear any surgical operation of moderate severity the removal of the large bowel may be undertaken with the same sense of security.

I do not propose to attempt to prove anything by statistics, as personally I have very little confidence in them, but I will relate briefly the notes of several cases.

Case I.

F. M. M., aged 36, a nurse, was admitted into Guy's Hospital, under my care, on March 25th, 1907, suffering from an extreme condition of autointoxication which rendered her quite unfit to continue her occupation. On April 25th the large bowel was removed up to the splenic flexure and the ileum was united to the sigmoid.

The improvement which ensued was very rapid. She left the hospital on May 28th, having lost all her symptoms and putting on flesh rapidly. She was delighted with her condition.

Case II.

S. K., male, aged 19. Operated on in Guy's Hospital in November, 1906. He had been troubled with his bowels from infancy. The reason he was admitted under my care was that for the last six months the pain from which he suffered in the late afternoon in his abdomen had become so severe that he was unable to follow his occupation. The pain was referred to the sigmoid, which was telescoped, hard, and tender, and fixed in the iliac fossa. His skin had a most offensive smell, and, although his underclothes were changed frequently, it was distinctly perceptible to others. He was very thin and wasted, and his skin was of a dirty-brown colour. His lips were opaque, and he had no reddish tint whatever. Within three days of the operation, which consisted in the removal of the large bowel to the splenic flexure, the offensive smell had disappeared completely, and much of the general pigmentation had gone also. He had also lost his pain.

In November, 1907, his health was excellent, his appetite was good, his dirty colour had quite gone, and his face

was rosy and looked perfectly healthy; he has had no return of his pain, and enjoys life thoroughly.

CASE III.

K. B., aged 23. She had suffered for years from constipation, and since 1905 this had been complicated by the presence of large quantities of mucus. She complained of great abdominal pain. Her appetite, health, weight, and colour had failed, and recently she had become much worse. In April, 1907, the small intestine was divided and united to the rectum.

In July, 1907, she was enjoying good health, and was free from pain. She was very pleased indeed with the result of the operation.

CASE IV.

L. B., aged 51. She had been constipated for years, and had got much worse recently. Purgatives caused great pain and vomiting. Persistent headache and incapacity; great dislike of food; wasting rapidly; yellowish-brown complexion; very feeble. Her abdomen was opened on June 24th, 1907. The pylorus was hung up to the liver and gall bladder. Then adhesions were divided freely. The stomach was dilated and the small intestines were very thin. Owing to her feeble condition the large bowel was not removed, but the ileum was divided and put into the junction of the sigmoid and rectum.

A month after the operation her colour was good, and she had lost her headache. She does not vomit. Her tongue is clean, and she enjoys and looks forward to her meals. She says she feels quite a new woman.

CASE V.

E. B., female, aged 34. Admitted into Guy's Hospital suffering from chronic constipation, abdominal pain at frequent intervals, and marked symptoms of autointoxication. Colectomy performed in December, 1905.

In July, 1907, her condition is very satisfactory, she has gained considerably in weight, she has lost almost all her brown colour, and is quite free from abdominal pain.

CASE VI.

M. C., female. Appendix removed in 1900. She suffered severely from chronic intestinal stasis and its effects. In 1904 the ileum was divided and connected to the sigmoid. She improved very greatly after the operation. Owing to a feeling of occasional discomfort in the caecum her large bowel was removed up to the splenic flexure in 1906. She improved still more, putting on 2 st. in weight.

In March, 1907, she had a sharp attack of abdominal pain followed by vomiting; gastric ulcer and general peritonitis were diagnosed. The abdomen was opened and about an ounce of fluid was found. No gastric ulcer was seen. She made an uninterrupted recovery. In November she was admitted under my care with an abscess in the abdominal wall in the scar of the last operation. She is still under treatment.

CASE VII.

P. S., aged 20, female. Extreme constipation and autointoxication. She was never without a headache. She suffered from severe abdominal pains. She used to be sick every other day. In spite of purges and enema her bowels would remain confined for ten days. She has been unable to work for two years, being practically an invalid. Ileum divided and connected with rectum in September, 1906. Large bowel removed to splenic flexure in February, 1907. She was going rapidly downhill before the first operation, having lost 2 st. in the eighteen months preceding it. For twelve months before the operation she was treated with massage and drugs.

May, 1907. She is now much stronger, and is fatter. She has no pain in the abdomen, has not been sick since the colectomy was performed; her bowels are kept regular with some cascara, and she is able to do housework. On July, 1907, she developed some pain above the umbilicus, and there is a fullness suggesting some anchoring and distension of a loop of small bowel. On opening the abdomen a loop of small intestine was found to be pinned down at one point in such a way as to produce partial obstruction. This operation gave her relief from this pain.

CASE VIII.

B. N., aged 43 in 1904, nurse. In 1900 both ovaries were removed in the Cancer Hospital for cystic degeneration.

She was operated on in St. Mary's, 1901, for adhesions, and in the Cancer Hospital, December, 1901, for adhesions. In May, 1902, her appendix was removed. In June, 1903, she was operated on for adhesions, and in January, 1904, a piece of omentum was removed.

She was admitted to Guy's, July, 1904, suffering from chronic intestinal stasis. The ileum was divided and connected with the rectum or sigmoid. She improved considerably, but returned complaining of pain and tenderness in the caecum, where a hard nodule of faecal matter could be felt. In November, 1904, the colon was removed up to the splenic flexure. In February, 1905, as she still suffered discomfort from a very mobile right kidney, it was fixed by operation.

On August 8th, 1907, a friend of hers wrote as follows: "Miss N. has derived very great benefit from your most successful operation. I have known her for some considerable time before your operation, and I must say I never saw her looking so well for years as she is now. She certainly is a living wonder." She was seen on August 12th, 1907. Is now a big heavy woman. She used to weigh 9 st. 9 lb.; she now weighs 11 st. 2 lb.

CASE IX.

A. W., female, aged 53. Chronic intestinal stasis of almost a lifetime's duration. She was exceedingly feeble and wasted. Her skin was deeply stained, and she was unfit to do anything but lie about. She also suffered greatly from abdominal pain. She felt her life unendurable. She was quite aware of the great risk that must necessarily be associated with any operation in her condition, but she was most anxious to obtain some relief if possible. In April, 1907, the ileum was divided and connected with the upper limit of the rectum. Her behaviour under the anaesthetic caused the greatest anxiety, so that a colectomy could not be considered.

Unfortunately the abdominal wound suppurated, and a portion of the intestine exposed by its gaping perforated, and she died three weeks after the operation. Except for the infection of the wound she would have done excellently.

CASE X.

A. W., aged 32. She suffered from gastric ulcer eight years ago. Extreme constipation for years. Had all sorts of abdominal treatment without effect. She suffered much pain, chiefly in the right iliac region. Made worse by eating, so that she had to limit her food. She was admitted May 25th, 1907, and was sent home after a time for further treatment. She was readmitted in August, 1907, as her condition was worse. She complained of pain and vomiting, and was sick of purgatives and enemata, which caused her great distress. She was quite unable to do any work, and felt her life a burden to her. On August 15th the pyloric adhesions were divided and the large bowel removed as far as the rectum, to which the ileum was united by a lateral anastomosis.

She recovered with great rapidity after the operation, and her condition continues to improve steadily, much to her satisfaction.

CASE XI.

A. B., aged 39, spinster. Suffered from extreme constipation and its results. Her right kidney was sewn up in 1902 and her left in 1904. Later in 1904 her ileum was divided and connected with the upper part of the rectum. In 1905 her large bowel was removed as far as the splenic flexure; she improved in health and weight, and felt perfectly well and was able to do her work.

Except for some pain and tenderness in the fixed right kidney, she is quite free from pain and has very little trouble with her bowels.

CASE XII.

E. A., female, aged 29 in 1905. Severe constipation and its consequences. Had her right kidney sewn up in 1904. In October, 1904, had her ileum divided. In September, 1905, had her large bowel removed up to the splenic flexure.

When seen in June, 1907, her condition was most satisfactory.

CASE XIII.

L. R., female, aged 39. Completely broken down in health by the results of chronic constipation. In 1905 an opera-

tion was considered and finally advised, the patient being fully informed as to the risk her condition exposed her to in the circumstances. She was most anxious to be operated on as her misery was great.

Though the operation of dividing the ileum and uniting it to the sigmoid was performed as rapidly as possible, she suffered severely from shock. Vomiting commenced when she came round from the anaesthetic, and continued till her death three days after. At the *post-mortem* examination nothing was found to account for her death, which appeared to be due to the constant vomiting.

CASE XIV.

E. F., 20 years old. Her appendix was removed early in 1900 for pain in and about the caecum. Severe constipation; generally ill in consequence. Remained constantly under treatment. Readmitted for constant pain in right iliac fossa in 1902. Had adhesions in the intestines broken down. Admitted under my care in 1903 with extreme constipation, progressive evidences of auto-intoxication, and great pain and tenderness in and about the caecum. An extensive operation was performed, and the caecum and hepatic flexure freed from adhesions as far as possible. Attempts were made by immediate purgation to prevent their re-formation. She improved for a short time, but her condition soon became serious. The right kidney was fixed in 1904. In 1905 the large bowel was removed at the splenic flexure, and the small intestine was connected with it at the point of section.

In May, 1907, she was very much fatter and stronger than she was. Her colour is very good, and all her deep coppery tint has disappeared. Her capacity to do work is fair, and she has had to earn her living ever since the operation. She has now worked continuously without a rest for twenty months, whereas she was unable to do any work for any time previous to her last operation. She was very pleased with her condition. Her bowels acted with a mild laxative. Owing to the development of some pain to the left of the umbilicus the abdomen was opened in November, 1907, and an adhesion which had bound down the large bowel was divided. She has a nice healthy colour, and has put on a good deal of flesh.

CASE XV.

A. E. H. M. suffered from dysentery at intervals from March, 1899, for which he was treated, but without other than temporary benefit. For instance, he went to Plombières for a three weeks' course in August, 1906, but soon after his return home he was seized with haemorrhage and pain, and was again laid up. In January, 1907, after consultation with an Indian medical officer of great experience in dysentery, I divided the ileum and put it into the rectum. This was very difficult, because of the contracted and anchored condition of the rectum. Unfortunately the fixation of the left half of the large bowel deterred me from attempting its removal. Its continued presence is responsible for the incomplete nature of his recovery.

He writes on August 23rd, 1907: "I have since gradually regained strength, and now weigh 10 st. 7 lb., rather in excess of my normal weight. I am fully able to work, and my general health is fair, though I suffer a good deal from indigestion and giddiness, and am unable to take more than very moderate exercise."

CASE XVI.

F. N., nurse, aged 50. In 1894 she had an appendical abscess, which was opened. In 1899 the appendix was removed. In July, 1906, she came under my care absolutely unfit to continue her work because of pain and autointoxication. She was treated for some time in the hopes of improving her condition, but without much benefit. She was urged not to incur the risk of the operation, which in her toxic condition was a very serious one. She said that if it were not done she would terminate her existence. In these circumstances the abdomen was opened, and arrangements were made to remove the large bowel. She behaved so badly under the anaesthetic that it became necessary to close the wound. She was treated for a long time by purgatives, massage, position, etc., and was sent away to the seaside. She returned and insisted on the operation being done. It was done in November, 1906, the large bowel being removed to the splenic flexure.

At first she did very well, but on the third day her circulation gave serious trouble, and she died four days after the operation.

CASE XVII.

M. S., female, aged 41. Admitted in 1905. Had suffered pain, constipation, and its results for twenty years. She had evidence of dilatation of the stomach and all the other changes associated with intestinal stasis. She was very feeble, wasted, and deeply stained. The colon was removed up to the splenic flexure and the ileum joined to the rectum. The stomach was dilated and attached posteriorly. Her condition became so critical during the operation that it had to be completed hurriedly.

Two days after the operation she developed symptoms of general peritonitis, but she was too feeble to permit of any operative interference. She died on the fourth day. At the *post-mortem* examination a small ulcer in the posterior wall had perforated by a small hole, apparently in consequence of the manipulation. Except for this unforeseen accident, the results of operative interference were found perfect in every particular.

CASE XVIII.

M. B., female, aged 39. Acute appendicitis, April, 1892. Between 1892 and 1900 had repeated attacks of severe abdominal pain, sickness, and constipation. November, 1900, appendix was removed. 1901-5. Repeated attacks of abdominal pain, sickness, and obstinate constipation. Attacks of membranous colitis. 1905. Right kidney stitched up. 1906 Abdominal pain increased after food or exercise. October, 1906, to May, 1907. Attacks of abdominal pain more frequent and severe. Great tenderness, sickness, and constipation. Rapid wasting and loss of strength. Became so ill that it was feared impossible to remove her to the hospital. May, 1907. Ileum cut through and connected with rectum. Large bowel excised to splenic flexure.

General health greatly improved. Mild aperient quite sufficient. Appetite good. Has now a good colour. Very pleased with result of operation.

CASE XIX.

E. F. She was in hospital for gastric ulcer for periods of four, seven, and nine weeks during 1902 3. In May, 1903, gastro-jejunostomy was performed. She was relieved of many of her symptoms for six months. She then suffered from abdominal pain and constipation. During 1904 and 1905 she underwent courses of massage. Her feebleness and exhaustion became extreme, and her life thoroughly miserable. In May, 1905, the ileum was divided and joined to the sigmoid. This relieved her for a time, but as the caecal pain returned the large bowel was removed up to the sigmoid flexure in December, 1905.

This afforded her much benefit, as she lost her pain and sickness for a good time. She then gradually slipped back into her old condition of anorexia, dyspepsia, vomiting, haematemesis, and obstinate constipation, and died from exhaustion in December, 1906, aged 25½ years.

CASE XX.

A. C., nurse. Suffered for many years from extreme constipation, with the mechanical and toxic disabilities associated with it. In 1901 her appendix was removed, as she had symptoms of trouble in that organ. This afforded her some relief of that pain for a short time. On February 12th, 1906, the adhesions about the pylorus and large bowel were divided as freely as possible with only very temporary benefit. Her pain rapidly recurred. On March 23rd, 1906, her colon was removed as far as the splenic flexure.

She did very well for a time, but later she developed what was considered to be bronchitis. This became more troublesome in spite of treatment, and she finally succumbed on April 10th. At the *post-mortem* examination the small tubes were blocked with very tough diphtheritic membrane, which extended up to the larynx. No membrane had been coughed up during lifetime, and the presence of diphtheria was not suspected by the physician who had attended her for the supposed bronchitis. The condition of the intestines was perfect.

CASE XXI.

E. B., male. Suffered for years from constipation and excruciating abdominal pains, with frequent attacks of vomiting. December, 1904. Ileum divided, and put into the rectum

with the best possible result. The distension of the large bowel became a feature in August, 1906, so in November it was removed. The stomach was found dilated, and the pylorus was fixed to the liver and gall bladder in the manner described. These adhesions were divided very thoroughly.

He went on exceedingly well till April, 1907, when the dilatation of the stomach caused him some distress. In May, 1907, a gastro-enterostomy was performed, with complete relief of the gastric symptoms. He is now in excellent health.

CASE XXII.

H. C., aged 22, male. In December, 1904, he was suffering very severely from acute ulcerative colitis following on chronic constipation from which he had suffered all his life. The ileum was exposed at its junction with the caecum and drained. The very acute symptoms subsided. When he came under my care the condition was chronic. All the contents of the small intestine escaped through the opening made in the right groin, while frequent discharges of bloody stinking mucus ran involuntarily from the anus.

In January, 1905, I opened the abdomen in the middle line, and divided the ileum proximally to the fistulous opening. I then introduced it into the rectum. This was done with the greatest difficulty, cleft-palate needles having to be employed. The reason was that while the whole large intestine was reduced to the size of the little finger, the only place in which the rectum was sufficiently dilated to allow of a junction being effected was the middle of the rectum. I found it impossible to get the large bowel away except at a risk which I did not feel justified in taking. This difficulty was due to its very inflamed condition.

The patient is now perfectly strong and well.

CASE XXIII.

Mrs. J., 35 years old. Suffered miserably for years from chronic constipation and its results. In February, 1906, large bowel removed to splenic flexure.

She is now in excellent health. Her bowels act regularly and comfortably, the appetite is good, and her dirty colour has gone except about the eyelids, where it is still perceptible.

CASE XXIV.

L. W., aged 20. Chronic constipation and its results have rendered her an invalid and quite unable to perform her duties as a nurse. In June, 1904, the right kidney was sewn up, with relief to the renal symptoms. In October, 1904, she was relieved of all her toxic symptoms by the division of the ileum and its connexion with the rectum. Her behaviour under the anaesthetic was such that the large bowel was not excised.

In August, 1907, when last seen, her bowels were regular, the presence of the large bowel caused her no discomfort, and her general condition was excellent. She is following her occupation.

CASE XXV.

Mrs. P., widow, aged 44. Saw her with a distinguished obstetric physician, who agreed with me as to the advisability of the removal of the large bowel because of the distress and depreciation consequent on chronic constipation. In December, 1905, the large bowel was removed to the splenic flexure, with relief of all her symptoms.

She is now enjoying her life thoroughly, has got back her good looks, and can walk two miles without feeling tired. She is very well nourished. She occasionally requires an aperient.

CASE XXVI.

A. T., 36 years old; worn, aged woman of a mahogany colour. Suffered for many years from obstinate constipation, nausea, vomiting, pain, and the disability of loss of flesh and happiness consequent on toxaemia. Was unable to do any work, and found life unendurable. In June, 1907, large bowel removed to splenic flexure.

She is delighted with the result, and now enjoys her life thoroughly. Her colour is good, her weight is rapidly increasing, and her appetite is excellent.

CASE XXVII.

Miss M., aged 28. Had suffered for many years from very severe constipation and its results. She steadily got worse, and obtained no relief from medical treatment, although she was most favourably placed in that respect. In October, 1904, the ileum was divided and joined to the sigmoid. Her health improved. After a time the distension of the large bowel became an annoying factor. In September, 1905, the large bowel was removed as far as the splenic flexure.

She is steadily but slowly improving, whereas originally she was going rapidly downwards.

CASE XXVIII.

W. M., born 1867. Suffered all her life from constipation, vomiting, etc. In November, 1902, appendix removed without advantage. In November, 1903, had several attacks of acute obstruction. On one occasion the adhesions obstructing the large bowel were divided with temporary benefit. In July, 1904, ileum divided and put into rectum, with relief of toxic symptoms. In November, 1905, large bowel removed.

At present her condition is enormously improved. She has put on flesh, her bowels are regular and she only wants medicine very occasionally, and she is able to earn her living. Her only trouble is due to some dilatation of the stomach.

CASE XXIX.

G. R., born 1871. Extreme constipation and its consequences. Right kidney fixed in January, 1905. January, 1905: Small intestine divided and put into rectum. Conditions did not justify the removal of the large bowel. Toxic symptoms removed. Subsequently the distension of the large bowel with gas caused much annoyance. December, 1907: Colon removed.

Several days after this operation acute peritonitis set in, and she died. This had resulted from the rupture of a small, deep stitch abscess into the general peritoneal cavity.

CASE XXX.

Miss D., aged 29. Had always suffered from chronic constipation, and for several years from a very troublesome mucous colitis, with pain, loss of flesh and vitality. This had rendered her thoroughly unfit to enjoy life. In February, 1905, the ileum was divided and fixed into the lower part of the sigmoid. The difficulties of this operation were so great, on account of the extreme thinness of the large bowel, that I did not delay to remove it as I had intended.

Her improvement was slow but steady, and when she was last seen, in the summer of last year, she was able to enjoy her life, and her general condition was good. Her somewhat slow recovery was due to the occasional discharge of mucus from the bowel, which depressed her. If the large bowel had been removed this delay would not have occurred. She is most pleased with the result of this operation.

CASE XXXI.

Miss A., aged 49. Had become a perfect wreck in consequence of a most obstinate constipation. She was unable to get about because of the pain in her abdomen.

In November, 1906, the large bowel was removed.

She was last seen in August, 1907, when she looked years younger, her colour was very good, and she had become stouter.

CASE XXXII.

Miss K., born 1853. Constipation a cause of trouble since she was 12. She had been continually under treatment for it and for its results. Her condition was very distressing, and was becoming rapidly worse. In November, 1904, her large bowel was removed.

In July, 1907, in spite of the existence of phthisis, which became apparent in 1906, her condition had improved decidedly since the operation. She had much less discomfort. Her condition at the time of the operation was so advanced that she could only expect a moderate improvement from it.

CASE XXXIII.

Miss G., 30 years old. Since 1894 she had suffered from very obstinate constipation, the results of which became so marked that she was totally unable to lead an active life. In March, 1905, the ileum was divided and joined to the sigmoid flexure.

Since the operation the patient has improved uninterruptedly, she has a good colour, has not much difficulty with her bowels, and she has been able to resume her work, which had been given up in 1903. On one occasion scybala were formed in the caecum. She was conscious of their presence, but in two days they had disappeared.

Case xxxiv.

F. H., aged 55. He had suffered from constipation for many years, and recently the pain and debility consequent on it had become distressing. In July, 1904, the ileum was divided and united to the sigmoid.

He improved greatly after the operation. Unfortunately he had acute obstruction, and died in January, 1905. No *post-mortem* examination was made.

Case xxxv.

A. G., aged 40. For many years she suffered much misery from chronic constipation, pains in the abdomen and vomiting. Had been continually under medical treatment.

In July, 1907, the large bowel was removed as far as the rectum, with which an end-to-end anastomosis was effected. The pylorus, which was also fixed to the liver and gall bladder in the usual manner, was liberated. Her recovery was uninterrupted, and the result was excellent in every way.

Case xxxvi.

M. L., aged 24. Had suffered all her life from severe constipation, producing violent attacks of abdominal pain and loss of flesh. She was perhaps the worst case that ever came under my observation from the point of view of pain. Between November, 1901, when she had her appendix removed, and October, 1903, she had had several operations for the liberation of adhesions, each giving only temporary relief. In October, 1903, the large bowel was removed to the splenic flexure, and the pylorus was freed from the liver and gall bladder. In October, 1905, the stomach having again become dilated, these adhesions having re-formed, they were divided, the pylorus was dropped, and gold leaf inserted to prevent the parts adhering again to one another. In July, 1907, the distension of the descending colon and sigmoid causing distress, these portions of the bowel were removed.

The patient improved greatly after this. Her general condition is now fairly satisfactory. She is able to get about, and only suffers from discomfort at intervals of three or four weeks.

Case xxxvii.

Miss B. had for some time been under the care of a very experienced physician for chronic constipation. He felt that unless her condition was benefited in some way her unhappy life could not be prolonged materially by further medical treatment. In September, 1905, the large bowel was removed to the splenic flexure. She gained in weight, being 8 st. before the operation and reaching 9 st. 4 lb. some months after it. After a time the dilatation of the stomach, which had not previously been apparent, gave trouble, and in December, 1906, the pylorus was freed from the under surface of the liver. She improved for a time, but the dilatation of the stomach was soon as bad as ever. In March, 1907, gastro-enterostomy was performed, with complete relief of the stomach symptoms. After a time the descending colon and sigmoid gave trouble, and were removed in October, 1907.

She is now progressing very comfortably.

Case xxxviii.

E. C., aged 21. She was admitted on October 18th, 1907, in an extreme degree of exhaustion consequent on chronic constipation. Her condition was so critical that I hesitated to adopt operative measures. She was treated actively with drugs for nearly three weeks in the hope of improving her condition, but with little benefit. It was apparent that if anything was to be done it could not be delayed. The big bowel was removed to the lower limit of the sigmoid, where very great difficulties were experienced in effecting an end-to-end junction between the ileum and rectum, due in part to the degree of fixation of the large bowel and in part to the extreme thinness of the wall of the ileum.

Some days later the symptoms of obstruction developed, and the patient died six days after the operation. A *post-mortem* examination was not permitted, so I am unable to define the seat of obstruction. I may say it is the only case of this sort on which I have operated which proved fatal in this way. In the same difficult circumstances I would not again perform an end-to-end junction, but would try to obtain a larger aperture by means of a lateral anastomosis, an arrangement which is usually preferable.

Case xxxix.

Miss C., aged 28. Health deteriorating for eleven years. February, 1905: Extreme constipation with mechanical and toxic results of a very serious nature. Early in 1906 gastro enterostomy was performed to relieve the frequent vomiting, without benefit. Her condition became progressively worse and her emaciation very great. In May, 1907, I removed the large bowel as far as the splenic flexure, and put the ileum into the rectum.

Since the operation she has gained weight steadily, and her complexion is clear and healthy instead of dirty brown as before. She eats heartily of ordinary food and has no indigestion. The result of the operation has been most satisfactory in this case. Her doctor, writing on November 15th, 1907, says she is marvellously improved, and reports that the patient declares she has not felt so well for ten years as she does now.

Lectures

ON

THE PASSAGE OF FOOD THROUGH THE HUMAN ALIMENTARY CANAL.

Delivered at Guy's Hospital for London University Advanced Students during October, 1907.

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Until recently almost all our ideas on the subject of the passage of food along the human alimentary canal were derived from experiments performed under more or less abnormal conditions in animals. But the discovery of the *x* rays in 1895 was soon followed by their employment in the study of the physiology of digestion. In the next ten years our knowledge of the movements of the stomach and intestines was greatly extended, mainly as a result of the work done on cats by Cannon and subsequently on man by Rieder and Holzknecht.

In 1905 Cannon made some observations on himself which suggested that auscultation, which had previously been used in the investigation of swallowing, might give some assistance in the study of the movements of the stomach and intestines.

The original investigations,* to which I shall refer in these lectures, were carried out by means of skiagraphy, auscultation, percussion, and palpation in normal individuals. They were done in the Guy's Hospital Physiological Laboratory, with the co-operation of Messrs. F. Cook, A. N. Cox, H. Gardiner, E. G. Schlesinger, and A. N. Todd, students of Guy's Hospital, with the exception of those in which skiagraphy was employed, these having been carried out in the Skiagraphic Department of Guy's Hospital, with the additional help of a number of other gentlemen. But the actual management of the *x* rays was entirely in the hands of Dr. C. J. Morton, Radiographer to Guy's Hospital, and on a few occasions of Mr. C. E. Iredell and Mr. E. W. H. Shenton, without whose aid the work could never have been accomplished.†

I.—Swallowing.

The reflex process of swallowing begins when a bolus of food has been brought by a voluntary effort on to the back of the tongue. Before it can be propelled into the upper end of the oesophagus it is necessary for all the other passages which open into the pharynx to be closed. The mouth is closed by the approximation of the dorsum of the tongue to the palate by the palato-glossal muscles. In order to shut off the naso-pharynx the soft palate is raised by the levator palati and the palato-pharyngeal muscles, which also render the posterior pillars of the fauces more prominent, and the uvula is lifted by the azygos uvulae so as to touch the posterior pharyngeal wall, which bulges forward owing to the contraction of the constrictors of the pharynx. The importance of the contraction of these muscles is well seen when they are paralysed in diphtheritic neuritis; if an attempt is made

* Towards the expenses of this research a grant was made by the British Medical Association on the recommendation of the Science Committee of the Association.

† For fuller details of the original investigations see a paper in the *Guy's Hospital Reports* for 1907.

to swallow, a large part of the food returns through the nose.

The larynx is protected by the elevation of the hyoid bone by the mylo-hyoids, and of the larynx behind the hyoid by the thyro-hyoids. At the same time the posterior wall of the larynx is pulled forward from its resting position in contact with the posterior wall of the pharynx towards the base of the tongue by the external thyro-arytenoid and aryteno-epiglottidean muscles. Hence the food passes over the posterior surface of the epiglottis, the anterior surface of which rests—as it does when swallowing is not occurring—against the root of the tongue. This mechanism, which was discovered by Anderson Stuart, explains why extirpation or destruction by disease of the epiglottis has no effect on deglutition, a fact which was inexplicable on the old theory that the epiglottis folded over the glottis like the lid of a box, so that the bolus should pass over its anterior surface. As a final though rarely necessary protection the vocal cords are brought together by contraction of their adductors.

The upper end of the oesophagus, the walls of which are in contact with each other while at rest, becomes patent when the posterior of the larynx is pulled forward in the manner described above. It thus becomes for a moment the point of least pressure in the pharynx, so the bolus, when thrown backwards by the sudden elevation of the base of the tongue, enters it.

There has been much discussion as to the method in which the bolus, now arrived at the top of the oesophagus, passes down into the stomach. Until recently the view proposed by Kronecker and Meltzer[1] in 1880 was generally accepted. They had placed an indiarubber balloon in the pharynx and another in different parts of the oesophagus; the balloons were connected with a recording apparatus, so that the changes in pressure in the pharynx and in the oesophagus could be observed. It was found that within a second of the beginning of deglutition a rise in pressure was recorded by both tambours, that occurring in the oesophagus being only a fraction of a second later than that in the pharynx. The first short rise was followed by a more prolonged one, which occurred almost immediately afterwards in the pharynx, but from one to five seconds later in the oesophagus, the interval depending upon how far down the balloon was situated. Near the cardia the duration of the second rise in pressure was longer than near the pharynx. Kronecker and Meltzer believed that the first rise in pressure was due to the passage of the bolus over the balloons, so that less than a second was occupied by its journey through the oesophagus. The second rise they believed to be due to a wave of peristalsis passing down the oesophagus, which swept any adherent traces of food into the stomach. They thought that the actual passage of the food through the oesophagus was due to the rise in pressure produced in the pharynx by the rapid contraction of the muscles already mentioned, the food being shot down the oesophagus, and even through the cardia, owing to the pressure at the bottom of the oesophagus being lower than in the pharynx.

Doubt was first thrown on Kronecker and Meltzer's explanation of their experiments by observations made by Cannon and Moser[2] in 1898 on unanaesthetized animals. Bismuth subnitrate was mixed with their food; this salt is opaque to the *x* rays, and so the passage of the bolus during deglutition could be watched. They found that food passed much less rapidly down than was formerly believed, the descent taking four or five seconds in the dog. The rate in the upper part of the oesophagus was much greater than in the lower part; they were, however, unable to give any sufficient explanation of this. All their experiments were performed on animals, with the exception of a few inconclusive observations made on a girl.

Using Cannon's method, we have made repeated observations on swallowing in fourteen normal young men, and have found that no individual differences of importance occur.

I. *Fluids.*

Milk, with which bismuth carbonate had been thoroughly mixed in the proportion of about 2 oz. to half a pint, was swallowed. When the rays passed through the individual somewhat obliquely from side to side, the fluid was seen on the fluorescent screen as a dark shadow passing through the thorax in the clear space between the shadows thrown by the spinal column and the heart. In the vertical position the fluid passes with great rapidity to the back of the pharynx and thence equally quickly down the upper part of the oesophagus. A mouthful of ordinary size occupies at any given moment between 1 and 2 in. of the length of the oesophagus.

When the fluid reaches the cardia, its rapid progress is arrested owing to the sudden diminution in the lumen of the oesophagus. The lower end of the column of fluid tapers to a point which must represent the cardiac orifice of the stomach, the upper limit becoming horizontal. At a comparatively slow rate the upper horizontal limit of the shadow descends, the lower part remaining unaltered in shape and position until the last trace of the shadow has disappeared. This means that the fluid runs through the cardia into the stomach at a comparatively slow rate, after travelling rapidly down the greater part of the oesophagus. Hence the cardiac orifice, even during the passage of fluid into the stomach, remains very small in diameter, and so offers a distinct obstacle to the onward passage of the food.

The average time which elapses between the commencement of the deglutition act and the disappearance of the last trace of fluid from the oesophagus is 5⅝ sec. It varies from 4⅝ to 8⅝ sec. in different individuals, and the interval may vary in one individual by as much as 3 sec. About one half of the total period is required for the fluid to reach the lower end of the oesophagus, the other half being required for its passage through the cardia.

Fig. 1 represents diagrammatically the position and size of the shadow at intervals of a second during the swallowing of milk containing bismuth carbonate.

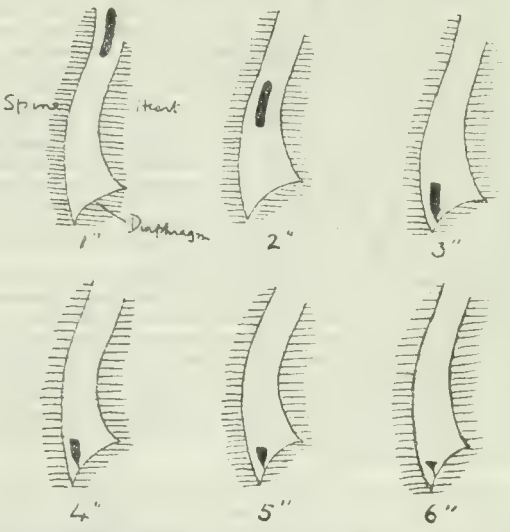


Fig. 1.—Diagram to show position of shadow at intervals of one second during the swallowing of a mouthful of milk containing bismuth carbonate.

The slow passage of fluids through the last part of the oesophagus is of practical importance in connexion with poisoning by caustics. When strong acids or alkalies are swallowed the upper part of the oesophagus frequently escapes severe injury, but the lowest 2 or 3 in. are badly damaged, owing to the irritant being longer in contact with them.

In the horizontal position fluid passes along the oesophagus slightly less rapidly than in the vertical position, and a rather more prolonged delay takes place while the fluid passes through the cardiac orifice of the stomach. Sometimes a small quantity of the fluid follows more slowly, being seen on the fluorescent screen as a thin streak instead of the comparatively broad band present when the oesophagus is filled.

In the inverted position, with the head directed downwards, the influence of gravity becomes more obvious, as the fluid steadily ascends the oesophagus approximately at only one-third the rate it descends in the ordinary vertical position. Owing to its slower passage, the final delay at the cardia, though present, is less obvious. Sometimes a little fluid runs back from the stomach into the cardiac end of the oesophagus, whence it once again passes into the stomach.

II. *Solids.*

When solids are eaten, they are normally masticated and mixed with saliva until they become semifluid in consistency. Hence it is to be expected that their passage down the oesophagus would not differ greatly from that of fluids. A loaf of bread was baked, the flour of which had been thoroughly mixed with bismuth carbonate. When spread with butter and jam its taste could hardly be distinguished from that of ordinary bread. If properly chewed, the movement of the shadow during swallowing, whether the individual was standing or lying down, was identical in character with what has been already described in the case of fluids. There was, however, a somewhat greater tendency for small quantities to

be temporarily left behind, when they were seen on the screen as a faint streak which slowly disappeared.

The passage of a solid bolus down the oesophagus is quite different. This was observed by swallowing cachets filled with bismuth carbonate. If swallowed in as dry a condition as possible, the cachet passed down the oesophagus with extreme slowness. On one occasion the cachet took fifteen minutes to reach the cardia, although the individual who had swallowed it had no sensation of its passage, and believed that it had entered the stomach when it was still high up in the oesophagus.

If a cachet was well covered with saliva in the mouth before being swallowed, or if some water was drunk immediately before so as to moisten the oesophagus, it passed down much more rapidly, the time required varying between eight and eighteen seconds. If swallowed with a mouthful of water, or if, when slowly moving down the oesophagus, some water was drunk, the solid bolus reached the stomach as rapidly as fluids.

When two or three cachets were swallowed at intervals of a second, each could be seen slowly travelling down the oesophagus. On several occasions the steady progress of one or more of the upper cachets was suddenly interrupted, and they moved a short distance upwards as if reversed peristalsis was occurring. The cause of this was probably the production of a strong contraction of the circular muscle fibres between the lowest two cachets, so that the bottom one was pushed onwards, whilst the upper ones were pushed a short distance upwards.

If the movements of deglutition were performed with the mouth empty whilst a cachet was on its way down the oesophagus, its progress was generally hastened. On a few occasions, however, the cachet was seen to ascend a short distance, as if the act had pulled the oesophagus bodily upwards.

When swallowed in the inverted position a cachet passed along the oesophagus at about the same rate as in the upright position. But when it had once reached the cardia it appeared to have considerable difficulty in entering the stomach. Instead of continuing its forward progress, it was observed to move frequently backwards and forwards, sometimes actually disappearing, apparently into the stomach, only to reappear in the oesophagus a second or so later. On one occasion, for example, the cachet reached the cardia in twenty-three seconds, but it was not until four minutes had elapsed that it entered the stomach to reappear no more.

There is no doubt that the rapid passage along the oesophagus observed in the case of the bread corresponds much more closely to what occurs when ordinary solid food is swallowed than the slow passage of the cachets. But the latter is of interest as indicating what probably happens when solid food is swallowed without being properly masticated. It suggests that the feeling of pressure in the chest experienced after a hurried meal may be due to the distension of the oesophagus caused by the presence of solid lumps of food, which only pass very slowly downwards.

In the light of these new observations it is not difficult to explain the results of the experiments of Kronecker and Meltzer. The first rise in pressure observed by them in the pharynx and oesophagus during swallowing must have been due to the lifting of the larynx and the contraction of the muscles of the tongue and pharynx, as this would compress the air present in the pharynx and at the same time pull on the oesophagus. The second rise in pressure would be due to the passage of the food down the oesophagus over the indiarubber balloons. The time relations agree with this explanation, and the more prolonged rise in the lower than in the upper part of the oesophagus would be caused by the slow entry of the food into the stomach after it reaches the cardia.

There can be little doubt that the passage of the food through the oesophagus is due to a peristaltic contraction of the oesophageal muscles, and not, as Kronecker and Meltzer believed, merely to the greater pressure in the pharynx than in the bottom of the oesophagus. It is only the top of the oesophagus which is opened by the forward movement of the larynx, the greater part having its walls in contact with each other, so that the rise in pharyngeal pressure would only be able to shoot a bolus through the first one or two inches of the oesophagus. When the peristaltic wave passing down the oesophagus reaches the cardiac sphincter, the latter relaxes, but the relaxation is only sufficient to allow the food to pass comparatively slowly into the stomach.

Kronecker and Meltzer maintained that the two sounds heard on auscultation of the oesophagus during swallowing corresponded to the changes in pressure recorded by the balloons in their experiments. As very few accurate observations have been made on these sounds, and the accounts given of them by different writers are contradictory, we have thoroughly investigated their character and their relations under various conditions in four healthy young men. The new facts we have discovered have received confirmation by a less detailed examination of a number of other individuals.

1. *Fluids.*—When a mouthful of water is swallowed two sounds are produced. The *first sound* is sharp and short, and is heard most loudly when the stethoscope is placed under the chin; it is less loud in the front of the neck, and can also be heard with less intensity over the spine and sometimes over the chest. The sound, wherever heard, occurs simultaneously with the contraction of the mylo-hyoid muscles and the lifting of the larynx. Hamburger,[3] who first described this sound, listened to it over the dorsal spine, and believed that it was due to the passage of the fluid past the level auscultated. But the situation in which it can be heard and the points where it is heard loudest, as well as its time relations and the skiagraphic observations, which will be described later, render this view untenable. The same may be said of Kronecker and Meltzer's belief, that the sound is produced by the actual entry of the food into the stomach. It is much more probable that the sound is caused by the impact of the fluid against the posterior pharyngeal wall when it is thrown across the pharynx by the sudden elevation of the back of the tongue. This explanation is borne out by the character of the sound, especially when it is heard with the stethoscope placed under the chin; it is exactly what would be produced by a volume of water coming suddenly into sharp contact with a resistant wall. Moreover, when the swallowing act is performed with the mouth empty, no sound is heard except under the chin and in the neck; there it is quite faint and entirely different in character to that heard when fluids are swallowed, and is no more than the sudden contraction of the muscles could themselves produce. The sound gains in loudness with increase in the volume of fluid swallowed, until it reaches its greatest intensity with the amount which corresponds to an ordinary mouthful. If the individual is sitting or standing the sound is louder when the head is inclined forward than backward—no doubt because in the former case a stronger contraction of the muscles concerned is required to propel the fluid in a direction against gravity, and consequently the impact of the fluid against the posterior pharyngeal wall will be more violent. Corresponding with this, the first sound is louder when the individual is in the prone than in the supine position; in the latter it is frequently inaudible, except at the neck and under the chin.

The second sound varies considerably in character and time relations according to the position of the individual examined. When he is standing or sitting it is best heard in the epigastrium and along the left costal margin near the epigastric angle. It is also audible, though rather less clearly, over the spine, the point of greatest intensity being generally over the tenth dorsal vertebra. When a number of observers listened over different parts of the spine and in the epigastrium simultaneously, it was found that this second sound occurred at exactly the same moment wherever it was heard, so that it would seem to be produced at one point only, from which it is transmitted in various directions.

In character, it can best be described as a trickling sound. Its average duration, which is between two and three seconds, does not depend on the amount of fluid swallowed. Moreover, when instead of a single mouthful a considerable quantity of fluid—half a pint for example—is drunk at once, no second sound is heard at all. The second sound begins from four to ten seconds after the first sound, which marks the initiation of the act of deglutition. Thus the normal time for the occurrence of the second sound is not the same in all individuals, so that the statement sometimes made that, if the sound be heard later than six or seven seconds after the beginning of deglutition, a stricture is probably present, is quite incorrect. In no one individual was the interval found to vary more than two seconds in repeated observations. The interval is to some extent proportional to the height of the individual, and it appears to increase slightly with an increase in the amount of water drunk.

When the stomach is empty no second sound is heard until about half a pint has been drunk. The sound also disappears when the stomach is distended. In some individuals three-quarters of a pint suffice to make the second sound disappear, but if no solids have been eaten it reappears already within a quarter of an hour, probably

owing to the rapidity with which fluids leave the stomach.

In the horizontal position the second sound differs remarkably according to whether the individual lies prone or supine. In the prone position its character is identical with that of the sound heard in the vertical position. The interval between the first and second sounds is, however, almost constantly one second longer than it is in the vertical position, owing, no doubt, to the removal of the influence of gravity.

In the supine position the single trickle is replaced by a series of sounds, which are loud and best described as squirts. They are generally felt and sometimes heard by the swallower himself. The number of squirts is generally from two to five, but occasionally only one can be heard. They do not vary with the size of the mouthful. Each lasts about one second; the first of the series generally occurs three or four seconds after the first deglutition sound, and the last may begin as much as eight seconds later. The squirts can be heard when the stomach is quite empty and when it is distended, although at these times the trickle of the vertical and prone positions is inaudible. It was found, by lying with the shoulders and legs supported but the trunk free, that both the trickle observed in the prone position and the squirts in the supine position can be heard whether the stethoscope is placed in the epigastrium or over the tenth dorsal spine.

When an individual lies on his left side, the second sound of deglutition is similar to that of the prone position; when on his right side, it is the same as in the supine position. In the position between prone and left lateral, the sound is the same as prone and left lateral; between supine and right lateral it is the same as supine and right lateral. Between left lateral and supine it is generally mixed in character; between right lateral and prone it is generally mixed, but more like left lateral and prone than supine.

As the position is gradually changed from the vertical to the supine, a squirt sound is found to precede the trickle when an angle of about 36 degrees with the horizontal is reached. At an angle of about 22 degrees the trickle disappears, the normal vertical sound being now completely replaced by the supine sound. In the inverted position, with the head downwards, as a rule no second sound was heard at all. On two occasions, however, sounds somewhat similar to those characteristic of the supine position were heard.

With the body in the vertical position, the oesophagus as it enters the stomach points downwards, forwards, and towards the left. Hence in the vertical, prone, and left lateral positions the end of the oesophagus points downwards; in the inverted, supine, and right lateral positions it points upwards. Whatever the cause of the different sounds may be, these anatomical relations may perhaps explain why the same sounds should be produced in the vertical, prone, and left lateral positions on the one hand, and in the supine, right lateral, and occasionally in the inverted positions, on the other.

I believe that the two different types of second sounds—the "trickles" and the "squirts"—have not previously been distinguished. They are of some practical importance, as an observer, who is only familiar with the trickling sound heard in the vertical position, would be very likely to regard as pathological the squirts heard in a patient who had to be examined lying on his back in bed.*

2. *Solids.*—The first sound of deglutition in the case of solids is identical with that already described as occurring when a swallowing movement is performed with the mouth empty. It is inaudible in the epigastrium and over the spine below the second dorsal vertebra; even in the neck and under the chin it is faint. It therefore appears to be due merely to the contractions of the muscles concerned in the first stage of deglutition.

The second sound is frequently absent in all positions, but occasionally an ordinary fluid sound is heard, which is presumably due to the solid being so well mixed with saliva that it practically becomes fluid in consistency.

From the character of the second sound we thought at first that it must be due to the trickling of the fluid from the oesophagus through the cardia into the stomach. But the time relations recorded above threw great doubt upon this idea. The shadow disappears from the oesophagus from 4⅜ to 8⅜ seconds after the commencement of swallowing; as half of this time is occupied by the passage of the fluid into the stomach, the second sound should begin from 2.3 to 3.3 seconds after the first sound, if the suggested explanation were correct. But it actually begins from 4 to 10 seconds after the first sound, so that its commencement appears to correspond in time with the final disappearance of the fluid from the oesophagus. This was proved, in fact, to be the case on a number of occasions on which I listened to the deglutition sounds at the same time as observations were being made by means of the *x* rays; it was constantly found that the sound only began *after* every trace of fluid had entered the stomach.

It is thus not easy to find an explanation for the production of the second sound. At present I can only suggest that it may be associated with the fall in pressure in the bottom part of the oesophagus and the rise in pressure in the stomach when the fluid passes through the cardia. These may force gas from the stomach into the oesophagus and so produce the sound.

The swallowing reflex is initiated by the contact of food with the mucous membrane at the back of the tongue. The impulse travels up the superior laryngeal nerve, the electrical stimulation of which gives rise in animals to the complete act of deglutition. The swallowing centre is in connexion with the vagus nucleus. The efferent impulses pass down the recurrent laryngeal nerves to the upper third of the oesophagus, and in the trunks of the vagi to the lower two-thirds and the cardiac sphincter. Mosso[4] found that complete transverse division of the oesophagus in various situations does not interfere with the regular transmission of the wave of contraction from the pharyngeal to the gastric end, so that the normal activity must depend on impulses reaching successive parts of the oesophagus.

It is possible, however, for swallowing to occur to some extent independently of the central nervous system. The muscular coat of the upper third, which is supplied by the recurrent laryngeal nerve, is composed of striated fibres in man and certain animals; that of the lower two-thirds is composed of unstriped fibres. If the vagi are cut below the origin of the recurrent laryngeal nerves, swallowing may be only temporarily impaired, because the unstriped muscle fibres, as in all other situations, are capable of a considerable amount of automatic activity. If, however, the nerve supply to the upper third of the oesophagus is simultaneously destroyed swallowing becomes permanently impossible, as striped muscle loses its tone and all power of contraction when separated from its nerve supply. If only one recurrent laryngeal nerve is left it is sufficient to enable swallowing to continue. These facts, the knowledge of which we owe to observations made by Reid of Edinburgh in 1839, and to a series of investigations with the aid of the *x* rays, carried out on cats by Cannon[5] and published in 1907, are of some practical importance. They explain the fact that loss of the swallowing reflex is clinically always a sign of a bilateral lesion, as either both superior laryngeal or both recurrent laryngeal nerves must be paralysed in order to prevent the occurrence of deglutition. Moreover, when such paralysis does occur it is often possible to introduce food into the stomach if a tube be passed into the upper thoracic region of the oesophagus, as the paralysed striated muscle is there replaced by the still active unstriated fibres.

Stimulation of the vagi with certain precautions causes the cardiac sphincter to relax. Hence in the "fusillade discharge" of the swallowing centre the contraction of successive parts of the oesophagus is followed by relaxation of the cardia. The destruction of this mechanism is probably one factor in the production of the temporary dysphagia which occurs after section of the vagi below the origin of the recurrent laryngeal nerves. The subsequent recovery seems to be due to a diminution in the tone of

*Meltzer, who speaks of a "squeezing murmur" heard near the xiphoid cartilage six to seven seconds after the commencement of the act of swallowing, as the normal deglutition sound, describes a "squirting murmur" occurring immediately after the beginning of the act of swallowing as "a trustworthy symptom of insufficiency of the cardiac orifice." It seems probable that this is nothing else than the normal sound heard in the supine position, so that Meltzer must have diagnosed insufficiency of the cardia in all patients whom he examined when lying on their backs. For he adds that "either one or the other murmur can be heard in all but very few cases."—*Centralbl. f. d. med. Wissensch.*, 1883, No. 1. Quoted without comment by Sahli (*Diagnostic Methods*, English Trans., 1906, p. 680).

the cardia, peristaltic waves passing along the oesophagus being then sufficient to force a bolus into the stomach without any further relaxation of the sphincter.

II.—THE MOVEMENTS OF THE STOMACH.

The foundation of our knowledge of the movements of the stomach was laid in 1679 by Wepfer,[6] who vivisected wolves, dogs, and cats, and observed peristaltic movements passing over the organ. Except for some similar observations by Schwartz and Haller in the eighteenth century, no further advance was made until the publication in 1833 of the epoch-making work of William Beaumont,[7] a surgeon in the United States army. Whoever desires to investigate any of the problems connected with the physiology or pathology of gastric digestion should first read this remarkable book, in which the author describes his researches on the stomach of Alexis St. Martin. Otherwise he is likely to find, as many recent observers have done, that his "discoveries" had already been made by Beaumont three-quarters of a century ago.

It was on June 6th, 1822, that Alexis St. Martin, a healthy French Canadian, 18 years old, was accidentally wounded in the chest and abdomen by the discharge of a musket at Fort Mackinac. He was immediately seen by Beaumont, who treated him with such skill and perseverance for over a year that finally the thoracic wound healed soundly, and the patient was restored to his former good health, although a gastric fistula, the mouth of which was protected by a valve of mucous membrane, was still present. Through this fistula gastric juice could be obtained, and the appearance of the mucous membrane and the movements of the stomach could be studied. Beaumont engaged St. Martin as a domestic servant, and in May, 1825, began his experiments on gastric digestion, which he continued with intervals for eight years.

The more recent researches into the gastric movements fall into two groups. First, Hofmeister and Schütz[8] examined the movements of the excised stomach of dogs placed in a moist chamber kept at the body temperature. The organ continued to be active for rather more than an hour. Soon afterwards Rossbach,[9] working along the same lines as Wepfer two centuries before, watched the exposed stomachs of curarized dogs. Finally, Pawlow and his pupils,[10] with the aid of oesophageal, gastric, and duodenal fistulae, made a number of important observations on the movements of the stomach in the course of their investigations on the "work of the digestive glands."

The second group of modern investigations was inaugurated by Cannon[11] in 1896. He watched the changes in shape of the shadows cast by x rays of the stomach of cats which had been given food mixed with bismuth subnitrate. These experiments were the first performed under strictly physiological conditions, and they led to the first great advance since Beaumont's time in our knowledge of the gastric movements. The method introduced by Cannon was later employed on man by Rieder[12] and Holzknecht,[13] who showed that most of the results obtained by his experiments on cats could be applied to human physiology.

In the empty condition, the pear-shaped fundus, which forms the upper third of the stomach in man, contains gas, the rest of the organ passing obliquely to the pylorus in the form of a collapsed tube, which corresponds in position to the lesser curvature of the filled stomach. Its muscular coat is in slight tonic contraction, so that the mucous membrane is thrown into folds.

When food reaches the cardia of an individual who is sitting or standing, it runs down the mucous membrane of the inner aspect of the pear shaped fundus to the point where the gastric walls are in contact with each other. Succeeding mouthfuls collect here until sufficient is present to overcome by its weight the resistance produced at the entrance to the body of the stomach by the cohesion of the mucous membrane, after which it gradually passes down to reach the pylorus without the aid of peristalsis (Holzknecht). If food is taken in any other position it reaches the pylorus more slowly. Thus, if only a small quantity is given to a patient lying on his left side or on his back, it causes the fundus to bulge, but it does not even touch the entrance to the collapsed part of the stomach (Holzknecht).

An ordinary meal will, of course, soon work its way to the pylorus, whatever position is assumed; but it is interesting to note that the very small feeds often given to bedridden patients will, unless the erect or semi-recumbent position is assumed, remain in the fundus, where, as will be shown later, they can undergo no gastric digestion. Only when two or three such feeds have been taken will sufficient material be present to reach the entry into the body of the stomach. Hence it would appear that if a patient is unable to sit up it might be better to give meals of moderate size at intervals of some hours instead of frequent very small feeds.

Over a century ago Sir Everard Home noticed that the normal stomach is divided during digestion into two parts by a "transverse band." This division is due mainly to the active contraction of circular muscle fibres, as it is rarely visible *post mortem*. But occasionally there is in the same situation a narrowing which is independent of muscular contraction; this is well seen in three specimens in the Guy's Museum, in which not a trace of a scar is present to account for the production of the hour glass shape. The depth of the constriction varies considerably, and my observations after bismuth meals have shown that it is sometimes remarkably well developed in individuals with healthy stomachs. Thus, in one case of mine it was so deep that the x-ray examination led to a diagnosis of hour-glass stomach due to a gastric ulcer being made, though at the subsequent operation Mr. Rowlands found that the symptoms must have been due to a duodenal ulcer which he discovered, the stomach being quite healthy (Fig. 2). The hour glass shape was evidently due to muscular contraction, as it was seen to come and go during the operation.[14]

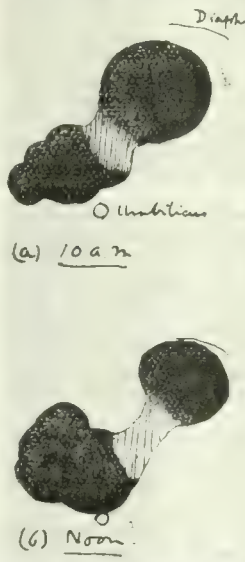


Fig. 2.—Case of duodenal ulcer simulating hour-glass stomach. Bismuth breakfast at 9.45 a.m.

Modern research has demonstrated that the transverse band is not merely of anatomical interest, but that it divides the stomach into two parts, which are functionally quite different from each other. By introducing a tube connected with a manometer into different regions of the stomach of normal individuals, Moritz[15] and more recently Sick[16] have shown that the tone of the gastric muscles is so regulated, whether the organ is full or almost empty, that the minimum intragastric pressure remains steadily between 6 and 8 cm. of water. In the antrum pylori the pressure rises three or four times a minute to between 20 and 60 cm. of water; but no corresponding changes occur in the fundus, the pressure showing only irregular variations of 2 to 5 cm. This corresponds with the fact demonstrated by the x rays that the peristaltic waves, which occur in the pyloric division of the stomach, are never seen in the cardiac division, the latter acting as a storehouse for the food, which it steadily doles out to the active antrum pylori in such a way that the contents of the latter remain almost constant in volume, whilst the contents of the former steadily diminish after the conclusion of a meal.

No mixing of the contents of the two parts of the stomach occurs. Thus on a number of occasions I have observed that if food mixed with bismuth carbonate is eaten shortly after a meal containing none of the salt, a rounded shadow just under the left half of the diaphragm is seen, whilst the pyloric part of the stomach remains invisible. After some time the first part of the meal passes into the duodenum, and the food containing the bismuth gradually replaces it in the pyloric part of the stomach, which therefore becomes visible.

By examining sections of the frozen stomach of animals after they had been given foods of different kinds, Grützner[17] discovered that when new food enters the partially-filled stomach it passes into the centre of the mass present in the fundus and displaces what is already there outwards. He also tested the reaction of the layers of the food and found that, at a time when the contents of the pyloric half were uniformly acid, only the outer layer

of the fundus was acid and so probably the seat of gastric digestion, the central part being alkaline and therefore still undergoing salivary digestion. The important fact that salivary digestion can continue for a considerable time in the stomach was also proved by Cannon and Day,[18] who found that after a meal of starch had been given to a cat, an equal percentage of sugar was present in the cardiac and pyloric divisions of the stomach in half an hour, but 80 per cent. more was present in unit volume in the cardiac half than in the pyloric half at the end of an hour, thus showing that the food in the middle of the fundus remained unmixed with the acid gastric juice, which had stopped the action of the ptyalin of the saliva in the pyloric end.

These observations show that the order in which the chief courses of a dinner are arranged is physiologically suitable, as the part containing most carbohydrate comes last, and so remains for a time in the fundus where salivary digestion can continue, whilst the part rich in proteids passes quickly to the pyloric end of the stomach, where peptic digestion begins early and salivary digestion soon becomes impossible. The great importance of thorough mastication and the consequent efficient impregnation of the food with saliva is at once explained by these facts. When a farinaceous meal is bolted, only a very superficial layer of the masses of food can be digested by the saliva. The carbohydrate is then very liable to undergo bacterial fermentation with the production of flatulence and all its unpleasant results. This is prevented when salivary digestion can occur, as dextrin, the first product of the digestion of starch, is less easily decomposed by bacteria than starch, and maltose and dextrose, the final products of salivary digestion, are soluble and readily diffuse into the pyloric end of the stomach, where the presence of hydrochloric acid prevents the occurrence of bacterial decomposition.

The pyloric part of the stomach has a much thicker muscular coat than the cardiac part. The significance of this was first realized when it was found by Beaumont to be the seat of peculiar movements, which are never observed on the proximal side of the transverse band. On attempting to pass a long glass thermometer through the fistula into the pyloric portion of St. Martin's stomach during the later stages of digestion, the bulb was grasped at the transverse band by the stomach walls and drawn towards the pylorus so strongly that it required "a pretty forcible grasp to prevent it from slipping from the hand, and being drawn suddenly down to the pyloric extremity." In half a minute relaxation occurred, and the tube could be easily withdrawn.

In 1890 these observations received confirmation by Rossbach, who watched regular peristaltic waves passing from the centre to the pylorus in the exposed stomach of a dog. But Cannon was the first to study the exact nature of the movements of the pyloric part of the stomach under strictly physiological conditions. A few minutes after a cat has finished a meal of bread a constriction appears near the middle of the stomach, which deepens as it slowly progresses towards the pylorus. The waves recur at such intervals that three or four are always present simultaneously.

Holzknecht has described the movements as they occur in man in great detail, and his description accurately corresponds with what I have myself observed on a few occasions. About two inches from the pylorus the constriction which, steadily increasing as it progresses reaches such a depth that the antrum pylori may be completely separated from the rest of the stomach. The part of the antrum cut off then begins to diminish in size in every direction, owing, perhaps, to the contraction of longitudinal muscle fibres in addition to the further progress of the peristaltic wave.

In man the peristaltic waves occur at regular intervals of fifteen to twenty seconds. The rhythm can occasionally be distinguished by auscultation as well as by means of the *x* rays. Cannon,[19] listening over his own pylorus, heard loud, rattling, explosive sounds which occurred regularly every twenty seconds. They were most obvious after food of a spongy nature had been taken, and when he lay down on his back or left side. Though we have repeatedly tried to confirm this observation, we have only rarely succeeded. On one occasion I heard sounds answering to Cannon's description which recurred five times at intervals of twenty seconds; in another individual I once heard similar sounds recur four times at intervals of eighteen seconds. I have also twice listened to the abdomen of individuals who had taken a special frothy meal, as recommended for the purpose by Cannon. In the case of one of them I heard a series of sharp pops repeated with perfect regularity every seventeen seconds for about five minutes; in the other I could distinguish no rhythmical sounds.

The peristaltic contractions of the pyloric division of the stomach serve a double purpose. Many of them, especially in the early stages of digestion, when they reach the pylorus, find it closed, so that a central reflux occurs, and the food is caused to circulate, with the result that it is broken up and thoroughly mixed with the gastric juice. The second function is to pass the contents into the duodenum whenever the pylorus opens. The strength of the peristalsis increases slightly as digestion progresses.

It does not vary appreciably according to the nature of the food so long as the quantity and consistency are unaltered. But the consistency of the food is probably of considerable importance. Thus the observations of Beaumont on introducing a large thermometer through a gastric fistula showed that mechanical stimulation can by itself excite peristalsis. Insufficiently masticated food must in the same way increase peristalsis, with the result that the muscles of the pyloric half of the stomach do the work which should have been performed by those of the jaws. The mechanical irritation of the mucous membrane thus produced is in all probability an important factor in the pathogenesis of the dyspepsia so often associated with insufficient mastication, whether from habit or from deficient teeth. The production of simple ulcers and of cancer of the stomach, both of which occur with far greater frequency in the region of the stomach where peristalsis is active than in the comparatively quiescent cardiac portion, is probably often in part due to the same cause.

Rieder and Holzknecht have both observed with the *x* rays that abdominal massage considerably increases the strength of the peristalsis in man. These experimental results afford a rational basis for the treatment of atonic dilatation of the stomach by means of massage. Exercise immediately after meals has, on the other hand, been definitely shown to delay the discharge of food from the stomach in both animals and man.

The pylorus is surrounded by a very strong ring of muscles, the sphincter pylori. This is normally in a condition of tonic contraction, variations in which regulate the passage of the gastric contents into the duodenum. The channel which connects the stomach with the duodenum is about ¾ in. long, and so narrow, even when it is relaxed, that either no shadow is cast by the *x* rays of bismuth passing through it (Holzknecht), or, as I have once observed, a very fine line joins the antral and duodenal shadows, when the latter is seen to be growing at the expense of the former. If the relaxed pylorus were less narrow, gravity and siphon action would be sufficient to empty the stomach, as the pylorus is normally almost if not quite its lowest point. But with a narrow pylorus peristalsis is required not only for mixing the food with the gastric juice, but also for pressing even finely-divided particles through it; in the case of larger particles and articles such as coins, which sometimes pass through, very strong peristalsis is required to overcome the resistance.

Cannon[20] found that if equal quantities of suet, lean beef, and rice, each prepared so as to have a similar consistency, be eaten by cats, the carbohydrate meal begins to leave the stomach within a quarter of an hour, whereas the proteid and fat meals do not begin to leave it for half an hour or even an hour. Carbohydrates, moreover, leave the stomach rapidly no trace of a meal of rice or potatoes being left in a cat's stomach after three hours. Both proteids and fats leave more slowly, some being still present six hours after the meal, though egg albumen behaves like carbohydrates, and not like other proteid foods in this connexion.

A mixture of proteid and carbohydrates leaves the stomach in a manner intermediate between that of either taken separately. Fat, when added to proteid or carbohydrate, causes delay in the emptying of the stomach. This may be one cause of the indigestibility of pork and veal compared with mutton and beef. Proteid, taken after carbohydrate, leaves the stomach at the normal

rate, but carbohydrate taken after proteid leaves more slowly than when taken alone.

Beaumont suggested that the "compound fluid of gastric juice and aliment, or chyme, by its acquired acid properties," effects its discharge into the intestine. It is still generally said that the pylorus opens as soon as free hydrochloric acid appears in the stomach. But there is very little evidence for this statement, and there is no doubt that when water is drunk on an empty stomach it runs out before an appreciable amount of gastric juice has been secreted. Moreover, in patients with achylia gastrica there is often no undue delay in the emptying of the stomach. It is more probable that a neuromuscular mechanism exists, similar to that occurring at the cardia in swallowing, which causes the pylorus to relax each time a peristaltic wave reaches it, unless it is closed by a special reflex.

The reflexes, which cause the pylorus to close instead of to relax on the arrival of a peristaltic wave, depend for the most part on stimuli to the duodenal mucous membrane, as Hirsch[21] and von Mering[22] discovered independently by means of artificial duodenal fistulae, through which they were able to watch the entry of the gastric contents into the intestine. They believed that the stimulus was mechanical, being produced by the entry of food into the duodenum. But Pawlow and his fellow-workers showed that the stimulus is mainly chemical. Injection of gastric juice or 0.1 per cent. of hydrochloric acid through a fistula into the duodenum caused the flow of gastric contents through the pylorus to cease, but water and neutral or alkaline saline solutions had no such effect.

The result of this chemical reflex is that no more of the acid contents of the stomach enter the duodenum until the part which arrived last is neutralized by the pancreatic juice and bile, the secretion of which is called forth by the presence of acid in the duodenum. This mechanism is of great importance, as it keeps the reaction of the small intestine below the opening of the common bile duct alkaline, and so allows digestion by the pancreatic ferments to proceed, and at the same time it protects the mucous membrane from the liability to ulceration, which is associated with the acid reaction of the contents of the stomach and the first part of the duodenum.

Pawlow found that the stomach empties itself abnormally slowly if the neutralization of the gastric contents is prevented by the escape of the pancreatic juice through a fistula; this may be one cause of the digestive disturbances which follow obstruction to the common bile duct in man. On the other hand, Tobler found that if the acid contents of the stomach were allowed to leave the duodenum by a fistula as soon as they had passed through the pylorus so as to prevent its reflex closure, the gastric digestion of meat continued for a shorter period and was consequently much less complete than under normal conditions.

Von Mering discovered that injection of milk into the duodenum caused the passage of the gastric contents through the pylorus to cease until it had disappeared from the upper part of the intestine. He looked upon this as a mechanical reflex, but Pawlow has proved that it depended on the presence in the milk of fat, which he showed produces the same reflex as hydrochloric acid when it comes into contact with the duodenal mucous membrane. But the presence of fat in the duodenum does not produce such a tight closure of the pylorus as that caused by hydrochloric acid. Thus, although injection of oil into the duodenum causes the regular jets of gastric contents, which would otherwise occur each time a peristaltic wave reaches the pylorus, to cease, single drops still issue without intermission from the pylorus. The closure of the pylorus is also not sufficiently tight to prevent the regular production of a reflux of oil mixed with bile and pancreatic juice into the stomach.[23] The result of this is that food containing sufficient fat to inhibit the flow of gastric juice remains a long time in the stomach, where it may be partly digested by bile and pancreatic juice.

Advantage has recently been taken of this remarkable occurrence by giving a small quantity of oil by mouth when the stomach is empty in order to obtain a specimen of the pancreatic juice and bile, when it is desired to find whether they are normal. For the oil inhibits the secretion of gastric juice, and as soon as a little reaches the duodenum it excites the flow of bile and pancreatic juice, with which some of it regurgitates into the stomach. This also explains the success which has attended the treatment of gastric and duodenal ulcers by the administration of cream and oil, as recommended by Senator and others in Germany and recently tried by me with excellent results. In patients who are able to take sufficient quantities, much more nourishment can be supplied than by means of nutrient enemata, and at the same time the contents of the stomach and duodenum are kept alkaline, so that an ulcer has a better chance of healing than when nutrient enemata are alone given, as the latter have recently been shown to excite a flow of gastric juice.

The passage of food through the pylorus is not, however, regulated by reflexes from the duodenum alone. Similar reflexes are produced when the mucous membrane of the stomach comes into contact with substances which, owing to their physical or chemical properties, might injure the duodenal mucous membrane. Thus, Cannon with the x rays observed that the presence of a solid pellet in the food delayed the emptying of the stomach, as the pylorus closed for a time after a peristaltic wave carried the pellet against it. The result is that indigestible masses remain in the stomach until all the fluid and semi-fluid contents have left, so that more time is given to the gastric juice to soften and the gastric peristalsis to break up the insufficiently chewed food.

By a similar protective mechanism fluids at higher or lower temperatures leave the stomach less rapidly than fluids at the body temperature, so that there is time for them to reach the body temperature before they enter the duodenum (Joh. Müller[24]). Moreover, Otto[25] has shown that pure water and anisotonic saline solutions remain longer in the stomach than isotonic solutions, so that the former can become isotonic by osmosis, diffusion and admixture with the gastric juice before passing through the pylorus. Lastly, Moritz[26] found that beer leaves the stomach much more slowly than water.

These facts show that the stomach has a function which is generally not recognized; it protects the duodenum from abnormal stimuli by retaining food until it is changed so as to be less injurious to the delicate intestinal mucous membrane. Proper chewing will spare the stomach most of its work; it will divide the food into fine particles, dilute it, and bring it to the body temperature.

When an ulcer is situated in the pylorus, or just on the gastric or duodenal side of it, the stomach frequently dilates and stasis of food occurs, even before any cicatricial contraction has taken place. This is generally said to be due to reflex spasm of the pylorus. More probably it is due to reflex inhibition of the relaxation which normally occurs on the arrival of a peristaltic wave, and is therefore no more a condition of spasm that the condition produced by the presence of acid or fat in the duodenum. It is, indeed, doubtful whether spasm of the pylorus ever occurs.

Note on the Administration of Bismuth Salts for the Skiagraphic Examination of the Stomach and Intestines.

Until recently it was believed that bismuth salts could not be taken safely in doses larger than half a drachm, or at most a drachm. This idea seems to have been handed down from the period when bismuth compounds were generally contaminated with arsenic, the poisonous action of which was erroneously ascribed to the bismuth. Rieder was the first to show that large doses of pure bismuth salts can be taken without danger. We have given bismuth carbonate in amounts varying between 1 and 2 oz. on about fifty occasions, without ever observing the smallest ill effect, with one unimportant exception, when an individual experienced slight nausea, which only lasted a short time, after taking 2 oz. of the salt in milk. On no single occasion was constipation or any other disturbance in the normal activity of the alimentary canal produced, so that the time relations obtained by means of the x rays, which are described later, can be looked upon as normal and uninfluenced by the bismuth meals. The bismuth is best taken well stirred up in a bowl of bread and milk, when it is not at all unpalatable. It may also be taken in the form of bread made from flour which has been mixed with bismuth carbonate.

Worder, Sailer, and Pancoast[27] report six cases in which alarming symptoms of poisoning were observed after two to four ounces of perfectly pure bismuth subnitrate had been given for diagnostic purposes. But the symptoms, which came on from one to four hours after the bismuth had been

given, whether by mouth or rectum, were probably produced by the acid, and not by the base of the salt, as no similar accidents have occurred when the carbonate has been given, and the symptoms were quite unlike those generally produced by acute poisoning with heavy metals. The reporters of these cases suggest that some nitrite was formed by intestinal fermentation from the subnitrate, as the symptoms (nausea, cyanosis, prostration, full bounding and rapid pulse, fast respiration) were similar to those of nitrite poisoning.

Mr. Finnemore, Pharmacist to Guy's Hospital, has kindly investigated the question for me from the chemical standpoint. He writes: "Two grams of bismuth subnitrate were added to 50 c.cm. of 0.25 per cent. HCl (to represent the gastric juice) at a temperature of 38° C. In eight minutes a portion was filtered off, and only a trace of HCl was found in the filtrate; in fifteen minutes no HCl was present. On testing the filtrate, however, it was found that HNO_3 was present, and on titration it was proved to be nearly of the same strength as the HCl originally employed. The reaction which occurs is

$$Bi ONO_3 + HCl = Bi OCl + HNO_3."$$

If insufficient HCl is present in the stomach to act on all of the very large doses of bismuth nitrate given, the residue of the salt would be converted by the alkaline juices in the intestines into the oxycarbonate with simultaneous formation of sodium nitrate. The nitric acid would be rapidly absorbed and would circulate as sodium nitrate, and all the sodium nitrate formed in the intestines would also be absorbed. From four ounces of the subnitrate of bismuth one ounce of sodium nitrate would be formed. It has been proved that when large doses of nitrates are taken, a small proportion is excreted as nitrite. Hence it is quite conceivable that when half an ounce, or an ounce, of sodium nitrate is absorbed into the circulation, sufficient nitrite would be formed from it to give rise to serious symptoms of poisoning.

In view of the fact that two ounces of bismuth carbonate produce no constipation in normal individuals, it becomes a matter worthy of further investigation how the ten grains (one ninety-sixth part of the dose!), so often given with apparent success in cases of diarrhoea, can act.

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(*To be continued.*)

ON A SPECIAL FORM OF DILATATION AND DISPLACEMENT OF THE STOMACH.*

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[DR. SHORT commenced his paper with some preliminary remarks on the monotonous, if not unsatisfactory, treatment of flatulent dyspepsia, and then drew attention to a particular form of the disorder which occurs in young or youngish people, which seemed to him to be a distinct condition amenable to treatment. He then proceeded as follows:]

The condition to which I wish to draw attention is associated especially with periodic attacks of severe pain—pain of a very acute type—relieved if the patient can vomit, but usually accompanied by an inability to vomit. In the intervals between the painful attacks discomfort, and especially flatulence, occurs, the latter making its presence known, not only by distension, but also by audible rumblings. There is also a want of proper assimilation of the food taken, as evidenced by loss of flesh, debility, and great depression of spirits, verging at times on melancholia. In investigating a large number of such cases I have found that the condition present is dilatation, with displacement downwards of the stomach, and in this paper I propose to deal with the causes, diagnosis, and treatment of this particular form of dyspepsia.

It will probably conduce to simplicity if I describe a typical case and then take the main points in detail.

Miss B., aged 28, came to see me, complaining of severe palpitation with a feeling of distension occurring periodically, and associated with acute pain in the pit of the stomach. She was a clever, well-educated woman, and was manageress in the warehouse of a wholesale printing and stationery business. The nature of her work entailed long hours of standing and hurried meals. She was very depressed mentally, and was becoming almost melancholic. The attacks of palpitation were not always accompanied by pain, but on some occasions great difficulty of breathing was experienced, with cough and wheezing in the chest. The painful attacks were so severe that at times she had been known to roll about on the floor of the warehouse. No vomiting had occurred at any time. The attacks were always worse after her periods. Between the attacks she was fairly well, but was gradually losing flesh. The proprietor of the business—herself a woman—thought the case might be one of hysteria and sent her to a gynaecologist, who reported that nothing abnormal could be found in the uterus and appendages. When I saw her the stomach was much distended, and examination showed the lower border to be an inch below the umbilicus. It was dilated, but not excessively. After a course of treatment presently to be described she entirely recovered.

This is a fairly typical case of the kind I am taking as my subject to-day. I have notes of 28 more or less similar cases, all of which have been benefited if not cured by treatment.

CAUSES.

Dilatation due to pyloric obstruction or to the atonic gastrectasis of old people is not dealt with in this paper.

Sex and Age.—The condition I refer to occurs in both men and women, usually below 40 years of age, and frequently between 20 and 30. In one of my cases, a young man aged 22, the lower edge of the stomach was found to be 2 in. below the umbilicus.

Carious Teeth.—The most common cause I have found to be absence or inefficiency of the molar teeth. From this cause the stomach gets overloaded with improperly-masticated food. If the want of molar teeth is associated—as it often is—with rapid eating and large meals at infrequent intervals, the condition is even more likely to occur.

Erect Posture.—Add to these, long hours of standing commencing directly after meals, and the conditions suitable for the production of the complaint are all present. It is in young men and women who serve in shops, young wives who are on their feet nearly all day, clerks and salesmen and others following similar avocations, that these special conditions are fulfilled.

Ill-health and general debility are also conducive, but usually are the results and not the actual cause. When present, however, they help to form the vicious circle.

Neurasthenia.—It has been stated that neurasthenia and allied states are the cause of dilated stomach. Without denying that such may occur in rare instances I can certainly state that I have not met with a case in which the first symptoms have not pointed to insufficient assimilation of food preceding the nervous symptoms. I believe that in by far the greater number of cases the neurasthenia is the result and not the cause of the dilatation. Quite recently I have examined the stomach of a gentleman who was placed in a private asylum on account of severe melancholia, and found that the lower border of the stomach was 4 in. below the umbilicus. The greater part of it was in the left iliac fossa. In several of the cases that are included in my paper the extreme depression of spirits was the cause of their seeking advice and the stomach symptoms were put by the patients into a secondary position.

SIGNS AND SYMPTOMS.

In addition to the continual flatulence and occasional pain the patient feels miserable. There is a dragging-down feeling as if something has given way, and several patients have volunteered the statement that after food their stomach felt to them to be too low, and to be "dragging their insides downwards."

If they should be fortunate enough to be able to vomit, the distressing symptoms are greatly relieved,

* Abstract of a paper read before the Birmingham Branch.

and perhaps altogether removed for several days, and then recur. No blood is seen in the vomit, and the pain does not occur directly after food. The temperature of the food makes no difference. The actual kind of food, fluid or solid, has no remedial effect, and careful dieting leads only to disappointment. Most patients, however, find by experience that a diet quite liberal in variety suits them better than a restricted, and that on the whole the less fluid of any kind they take the better they are.

The distension with wind may be enormous, and large quantities may be belched up time after time, fresh supplies being continually formed. The prolonged attacks of belching have caused the diagnosis of hysteria to be made in several of my cases. In one case I really believe that as the process of eructation gave relief, the habit of swallowing air in order to produce the event was contracted. If relief actually did result it could scarcely be rightly labelled hysterical.

The shape of the abdomen may be altered in a conspicuous manner. If the stomach happens to be full, it presents a rounded swelling, which is either beneath or even beneath and below the umbilicus. The smaller curve of the stomach can sometimes be seen as a curved line, situated from 1 to 2 in. below the xiphoid cartilage.

If peristaltic movement of the wall of the stomach is plainly visible, pyloric obstruction is almost certainly present, and the case belongs to a different category. These waves occur from left to right, and can thus be distinguished from a similar wave in the transverse colon, caused by obstruction in the descending colon or at the sigmoid flexure. After the belching up of wind the tumour may actually be seen to diminish in size.

In many cases it is quite possible to feel the lower margin of the stomach as a rounded, smooth border, especially when, as so often happens, there is a considerable amount of fluid in the viscus. This is a very important guide to the position of the lower border.

Succussion is often misleading, because it can frequently be detected in a healthy person after a fluid meal; but if elicited over a large area to the left and below the umbilicus, it is a very suggestive sign, because it is practically always due to the stomach. The bell note produced by striking a coin over the abdominal wall is often a valuable sign. It may be met with over a dilated colon, but if the coins be struck over the stomach area in the epigastrium and the resonant note be heard with the stethoscope well below the umbilicus either to the right or left, the cases in which it is not produced by a dilated stomach must be of very rare occurrence.

The pain complained of is usually extremely acute. Several of my cases have stated that rolling backwards and forwards on the floor more than anything else gave them relief. The pain is neuralgic, and is probably due to sudden distension with inability to force the food past the pylorus owing to the sagging downwards of the bag of the stomach. The recumbent posture nearly always relieves, if it does not remove, the pain. It is also relieved by vomiting, but the inability to vomit effectually is one of the features of the condition; should it occur the pain is removed, but great distress and faintness usually follow. So great is the feeling of prostation that the pain which can be relieved by lying down is often preferred to the collapse following emesis. When vomiting is brought about the ejecta are large in amount and frequently contain masses of undigested food which may have been taken some hours, at times as many as twenty-four, before the vomiting rejects them. They frequently smell foul.

The attacks of pain may be replaced by sudden attacks of faintness and heart palpitation. Three cases were sent to me as possible cases of cardiac disease. The explanation seems to be that the distension through the diaphragm interferes with the proper action and rhythm of the heart, and produces what the patient feels as palpitation.

This palpitation with disturbance of the breathing gives rise in some cases to attacks of dyspnoea which are put down to asthma. Not infrequently the loud, barking, stomach cough is also present, and draws attention to the real cause, or obstinate hiccough may be observed.

The chemical analysis of the vomit does not give much information in these cases. I may say that this method of examination in any form of stomach derangement has in my hands proved very disappointing. I have carried it out in all kinds of cases, malignant and otherwise, and have been forced to the conclusion that it is usually indefinite, and if free from this defect it is likely to be misleading. In the particular class of case with which I am dealing, an analysis of the stomach contents points merely to the facts that the food is badly chewed, and has been in the stomach for some considerable time.

It will be found that in nearly all stomach disorders, so long as the food can be forced through the pylorus, the patient goes on without requiring much assistance. It is the collection of food within the viscus that commences the trouble. If the patient can vomit, the stomach is relieved from time to time, and the evil day is put off. The absence of vomiting precipitates the decision to seek advice. In cases of pyloric obstruction the constant vomiting is the symptom which attracts attention, associated as it is with loss of flesh and consequently weight; but in the absence of pyloric obstruction vomiting, unless it happens daily, is often a very salutary occurrence. An exception, however, must be made in the case of cancer commencing near the oesophageal end of the stomach spreading along the small curve. Here the pain and emaciation are independent of the presence or absence of vomiting.

I have been particularly struck with the fact that in nearly all my cases of dilated and proptosed stomach the ability to vomit easily has been absent; the patients have frequently stated that they have felt as if a good vomit would have given them relief.

Obstinate constipation is nearly always present in these cases. It seems to be due to the collection of fluid in the stomach instead of its propulsion onwards into the intestinal canal. It is often a very troublesome feature of the case. When relieved by enemata the ejecta are often enormous in amount, very hard and lumpy, and extremely offensive.

Size and Position of the Stomach.

The actual size and position of the stomach can best be determined by measurement. To do this I myself much prefer to pass a tube, empty the organ, see exactly what is in it, and then inflate with an ordinary enema syringe fixed by its nozzle into the free end of the tube. My own experience with effervescing powders has not been satisfactory. They may give the patient great pain, and if the gas evolved is eructated rapidly there is not time to mark the position of the organ on the external abdominal wall. The plan I usually adopt is to inflate very gently, telling the patient to raise one hand if the distension becomes unpleasant, and both hands if any pain is felt. Directly the stomach begins to rise one hand usually goes up. I then stop and sometimes let the air out by removing the nozzle of the syringe. The patient now feels convinced that nothing dreadful will happen, and raises no objection to the inflation being carried to the full. The outline of the distended organ is now marked with a soft blue pencil on the surface of the abdomen. Up to the present no patient has ever objected to this process—praise I cannot bestow on the powder method, which in one case at least was productive of some of the most caustic invective I have ever enjoyed. Should positive objection be taken to the passing of a tube, inflation by powder may be resorted to, but then the great advantage of being able to wash the stomach out is missed.

The lower border of the organ can usually be plainly seen, but not so the upper. When proptosis is also present the line of the small curve may be looked for below the junction of the ribs with the sternum. The position of the lower border is, however, the most useful guide. I have thought that in some cases what appears to be the lesser curve is the edge of the left lobe of the liver outlined against the distended stomach. If the greater curvature is seen to be not lower than the umbilicus there is probably neither dilatation nor proptosis. In my series of 28 cases this curvature was found to be from 1 to 4 in. below the scar. [Diagrams were shown to illustrate the size and position of the stomach met with.]

Assistance is also given by the amount the stomach will hold. Roughly speaking, 2½ pints may be taken as the average amount of water that can be siphoned into the stomach of average normal size. Ewald gives 1,600 c.cm., which is rather more than 2½ pints. With a distensible organ like the stomach in patients of varying size there cannot be any fixed limit. For practical purposes it may be assumed that a stomach which holds more than from

2½ to 3 pints is dilated above the normal. Several of my cases have retained 4 pints quite easily.

If any proptosis also exists, its amount is not necessarily proportionate to the degree of dilatation. Thus in one case in which the lower margin of the stomach was seen to be 4 inches below the level of the umbilicus in the middle line and 5 inches towards the left iliac fossa, the smaller curve was seen just above the umbilicus and the stomach held only four pints. It is usually not difficult to tell when the stomach is fully distended. These cases have not the thin attenuated walls of the atonic gastrectases of older people, and their stomachs bear overdistension badly. The fluid is returned by the side of the tube. This gives a double current and is useful to clean out the organ, but is also apt to cause sudden rejection of the tube. Directly it occurs the funnel should be at once depressed and the pressure relieved, or the tube will be thrown out.

DIAGNOSIS.

The principal condition that is likely to cause difficulty in diagnosis is ulcer, either of the stomach or duodenum. In ulcer of the stomach the pain is much more continuous, and although it may not be present all day, it is nearly always present several times in each day. The pain follows food, and usually soon after its admission into the stomach. Vomiting relieves the pain for a short time only, and not for several days, as may be the case in dilatation. The pain of ulcer is also not so acute as a rule. In ulcer any tenderness present is generally localized; in dilatation it is spread all over the stomach area. The recumbent posture relieves the pain of dilatation much more readily than that of ulcer. If the ulcer be on the posterior surface, the supine posture may even make the pain worse. Haematemesis or malaena of course points to ulcer; but the difficulty in diagnosis generally arises in those cases in which no bleeding has occurred.

In ulcer of the duodenum the pain generally comes on some time after food, and is more persistent. The position of pain over the duodenum and the occurrence of melaena, if bleeding occur, materially assist the diagnosis; but in the absence of these, the diagnosis between duodenal ulcer and dilatation may prove very difficult.

Perhaps the most difficult condition in diagnosis is where an ulcer of long standing has been followed by fibrous growth in the scar and puckering with alteration in shape of the stomach. Should this occur near the pylorus some obstruction may result and dilatation follow, or a shape more or less resembling hour-glass contraction may be present. Exploration seems to be the only method of diagnosing with certainty such a condition. I do not think that this condition is so rare as was thought a few years ago. It has probably been mistaken many times in former years for cancer.

In a doubtful case the passing of a tube may be resorted to if the proceeding is carried out with care. In such cases I think the inflation with a syringe much safer than sudden violent distension with an effervescing powder, because the amount of distension is always under control, and can be stopped at any moment.

Even if an ulcer is present I am not sure that washing out the stomach need necessarily do any harm. In a doubtful case that I recently saw with Dr. Taylor of Coventry Road, the stomach was washed out, and the last washings were very visibly tinged with blood. The ulcer, however, healed rapidly, and the patient made a good recovery. As is well known, the presence of an ulcer may be first indicated by sudden perforation, but, if any suspicion exists as to its presence, I should not pass a tube, but wait and treat for ulcer first. If, however, the question of exploration arises, I should prefer to perform lavage first.

When forming a diagnosis it is important to bear in mind that cases of dilated and proptosed stomachs may come to us under the guise of heart affections, melancholia, chronic chest affections, and asthma.

[Special reference was here made to points attracting attention in the different cases.]

TREATMENT.

The treatment that I have found of most value is based on keeping the stomach as empty as possible for three weeks, while at the same time the organ is encouraged to assume its normal position by keeping the body of the patient supine and raising the hips. A flat bed is used and if the bed or mattress sags in the middle fracture boards are made use of to produce a level. Only a small pillow is allowed, just sufficient to support the head, and on no account must the shoulders be raised from the bed on the pillow. The lower legs of the bed are raised on blocks or bricks, and if necessary a pillow is also placed under the hips.

The washing out of the stomach commences the treatment, and is of much benefit in itself. Frequently large quantities of tough viscid mucus are removed. When this is seen in the washings the process is facilitated by adding an alkali, such as sodium bicarbonate, to the water. After the stomach has been thoroughly cleaned out as little as possible should be given by the mouth for three days. In the cases I have seen there has not been any great degree of thirst, provided a large saline enema is given once in each twenty-four hours, iced water or weak tea in teaspoonful doses amounting to a few ounces in the twenty-four hours being all that is called for. On no account should the patient be given ice to suck; although grateful at the time it is followed by increased thirst. Three nutrient enemata are given in addition in each twenty-four hours, at 8.0 a.m. and 3.0 and 10.0 p.m. In this way the patient is not interfered with during the night. On the fourth day a little diluted milk is given, still in teaspoonful doses up to half a pint in the twenty-four hours until the end of the first week.

During the *second* week two nutrient enemata are given instead of three, and a little solid food is added, usually milk-bread, custard, breakfast crisps with milk or cream, cornflour mould, or milk pudding.

During the *third* week only one nutrient enema is given, and small quantities of fish, chicken, or mutton, usually minced or pounded, are allowed.

During the *fourth* week the patient is allowed up each day for an hour, gradually increased to two. Before rising a soft pad about as large as the whole hand is placed across the lower part of the abdomen, just above the pubic bone. This is best kept in place by a spica bandage, and is pinned to keep it from slipping upwards. When up the patient may assume any posture at pleasure, but for the rest of the twenty-four hours the inclined recumbent position may be assumed.

From this time the patient is allowed up a little longer each day, until at the end of a period varying from four to six weeks the usual habit of life may be resumed; but for at least six months it is necessary that all food be taken in small quantities at a time, very well chewed, and taken as dry as possible. Fluid to relieve thirst should be taken about an hour before a meal.

Whether the pad should be continued or not depends very much upon the case and patient. If the dilatation is not excessive it can frequently be dispensed with in a few weeks, but several of my patients have voluntarily resumed it, saying that they felt more comfortable with it, and have worn it for several months. If it can possibly be arranged, the recommended position should be assumed for half an hour after each meal for at least six months. An ordinary sofa answers very well for this purpose, with the knees over the head of the sofa and the body on the flat of the seat.

For the treatment of the constipation the greatest success in my hands has attended the use of equal parts of the liquid extracts of cascara and liquorice. Two teaspoonfuls of the mixture should be given every night. The usual purgative doses of salts or pills frequently give great pain in these cases, and even if any action is produced constipation usually follows. I have tried faradism to the stomach in several cases, and thought that it did good. Both poles may be placed over the stomach as far apart as possible, and the skin very thoroughly wetted with salt and water, or one pole may be placed in the front and the other on the back.

It is a good plan to have any teeth that require extracting removed before the treatment commences. This gives the gums a chance to harden, and fresh teeth may be put in as soon as possible after the patient is up and about again. In nearly every case in which new teeth are necessary, the plea is urged that the patient does not feel strong enough, and wants to get well first. Nothing could be more absurd, as the presence of foul teeth have in themselves a deleterious effect upon the secretions of the alimentary canal, as is well known by

recent investigations on cases of pernicious anaemia, in addition to the defect they present as efficient grinders of food. I may say, however, that I have had more difficulty with regard to this part of the treatment than with any other.

Whether the cure becomes permanent depends very much upon the future life of the patient. If the conditions which produce this state of the stomach are resumed, the dilatation and proptosis may occur again. In one of my cases, that of a man whose employment necessitated his standing all day, a recurrence after two years brought him back to me, and he has been greatly benefited by undergoing the treatment again after this lapse of time. In most of the cases, however, so very decided an improvement has resulted that I have been encouraged to bring the details before the profession.

SOME PHYSIOLOGICAL ASPECTS OF GASTRO-ENTEROSTOMY.

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SINCE the work of Pawlow[1] and his fellow-workers in St. Petersburg, and of Bayliss[2] and Starling in London, has become widely known, the question—Is gastro-enterostomy a harmless operation?—has been asked with increasing frequency. These workers have given to us a new conception—the *continuity* of the process of digestion. So long as the process was looked upon as a series of isolated actions and reactions, each independent and separate, so long as pancreatic digestion was regarded merely as following gastric digestion, and in no sense occasioned by it or modified by it, so long might surgeons have little hesitation in performing such short-circuiting operations as gastro-enterostomy, pylorectomy, or partial gastrectomy. But when we learn that the adequate secretion of pancreatic juice is dependent upon the changes which the food has already suffered in the process of digestion—that is to say, upon gastric activity—then we may very well wonder to what extent the mutilation entailed by the "short-circuiting" of the duodenum impairs the stability of the whole process. By the operation a link in the chain has been broken. The resulting modification in the patient's powers of digestion and absorption is at any rate of considerable *theoretical* interest.

The first recorded experiments which show the digestive capacity of patients after gastro-enterostomy are those of Joslin.[3] From results obtained in Ewald's laboratory Joslin stated that in two cancerous patients upon whom gastro-enterostomy had been performed, the digestion both of proteids and fats was greatly impaired. Quoting these results, Paterson,[4] in his Hunterian Lectures on gastro-enterostomy, remarks, "Joslin's experiments have been used as an argument against the performance of gastro-jejunostomy, except as a last resource, and have had a considerable effect in retarding a more general use of the operation in gastric ulcer and other non-malignant affections of the stomach." That a knowledge of Joslin's results has delayed or vetoed the performance of the operation of gastro-enterostomy in a single instance I take leave to doubt. Surgeons are rightly in the habit of estimating the success or failure of their work by the measure of their own experience. The knowledge that an infant upon whom gastro-enterostomy has been performed for congenital pyloric stenosis may attain to a healthy and vigorous manhood, the evidence of the increasing weight of patients upon whom they themselves have operated, will far outweigh the results of such experiments as Joslin's, however indubitable and however consistent their results may be.

Therefore, I say that the result of such experiments is of only *theoretical* interest. It is foolish to tell a surgeon that gastro-enterostomy can no longer be considered a harmless operation. Tracheotomy is not a harmless operation, and yet it has its usefulness. The question cannot be decided in the abstract, but it must be answered for each individual case. A man with a gastro-enterostomy may not be as good a man as his neighbour, and yet he may be in far better case than before the operation. There are, indeed, surgeons whom it may be salutary to remind that the operation does entail some alteration of function—surgeons who seem to regard the new relation of stomach and bowel as though it were an alternative scheme of Nature to be substituted as quickly as possible whenever the old arrangement shows signs of disorder—but the majority stand in need of no such advice.

The progress of surgery is, in a sense, retarded because of the priceless value of the material with which it deals. Advance must be made by the method of observation alone, for the method of experiment is to a great extent denied to it, and rival theories—the true and the false, the wheat and the tares—must grow together until the harvest. In other branches of science theory must precede experiment. In surgery, theory must come later—framed to accord with observation. It is true that experiments upon animals, in surgery as elsewhere, have increased our knowledge. In the study of gastro-enterostomy, the work of Cannon and Blake, and more recently of Legett and Maury, has been of great value and utility. Yet surgeons are rightly chary of transferring the results obtained from animals to the precious metal of humanity.

The theoretical considerations which follow have been brought forward not so much to suggest possible alterations in surgical procedure, as to ascertain to what extent theory and practice coincide, and to attempt, in the great variety of conditions relieved by gastro-enterostomy, to find the explanation of the benefits conferred in each. For instance, the experiments quoted below show that patients after gastro-enterostomy have complete power of digesting a mixed diet rich in fat, while their capacity for digesting a purely milk diet is considerably diminished. Apparently the experience of surgeons has led them to appreciate this difference, for it is their usual practice to abandon a purely milk diet as quickly as possible after the operation, usually after two or three days at the most.

Again, it will be maintained that the benefit of gastro-enterostomy in acute ulceration of the stomach is due to this—that the operation permits the regurgitation of alkaline duodenal juices into the stomach, and thus diminishes the gastric acidity; and it will be argued on theoretical grounds that most regurgitation will occur and the maximum benefit be conferred where the simple no-loop method is adopted, and entero-enterostomy, or the Y-shaped junction, avoided. In practice, guided by observation of the results obtained, since January, 1905, the Mayos have entirely given up the more complicated methods in these cases, and always perform the simple *no-loop* method.

The following points may be discussed in order:

1. The abnormal course followed by the food.
2. The removal of the valvular action of the pylorus in regulating the passage of the gastric contents into the duodenum.
3. The regurgitation of alkaline duodenal juices through the artificial opening.
4. The changes in digestion and absorption brought about by the operation.

1. *The Abnormal Course followed by the Food.*

In cases of obstruction to the pyloric outlet there can be no doubt that the food leaves the stomach by the artificial opening. The same is, of course, true where the gastro-enterostomy follows a pylorectomy or partial gastrectomy, unless an end-to-end anastomosis has been made. Where there is no obstruction to the outlet at the pylorus, it is in the highest degree improbable that the food deviates from the normal course. Cannon,[5] in cats upon which gastro-jejunostomy had been performed, proved by the bismuth and *x*-ray method that in these animals the food took its normal course. In attempting to confirm these observations upon patients in Guy's Hospital I met with the difficulty that, although very large quantities of bismuth subcarbonate (℥ij) were given, I was never able, in any position of the patient, to photograph the duodenum, nor even to identify it on the screen with enough precision and certainty. Clinical observation, however, strongly confirms Cannon's conclusions. Thus, a man suffered from a

duodenal fistula, which refused to close. A posterior gastro-jejunostomy was performed, but the fistula refused to heal, and the intestinal contents still escaped. A second laparotomy was performed; the pylorus was ligatured, and the fistula healed almost immediately. It may be concluded almost with certainty that no opening, however large or however placed, will divert any considerable amount of the gastric contents so long as the pylorus remains unobstructed. In cases where the pylorus was obstructed, Cannon and Blake occasionally observed that the food leaving the stomach passed for a short distance into the proximal loop, only to be swept back again into the stomach by a peristaltic wave. This movement, which at times was seen to be repeated again and again, could, however, at the most only result in a very transitory and insufficient contact of the acid chyme with duodenal mucous membrane, and must be regarded rather as an accident than as the normal condition.

More recently Legett and Maury[6] have further investigated the course of food after gastro-enterostomy. To determine this point they have devised an ingenious plan. A dog was induced to swallow a bullet, which had been wrapped up in a piece of meat, and tied to a piece of string. In an instant the bullet, meat, and one end of the string were in the dog's stomach. The other end of the string was secured around the pterygo-maxillary ligament. The dog was killed some hours later, and the diagram (Fig. 1), copied from their paper, shows the course adopted in one case: That is to say, the body A had passed out at the stoma, round the duodenum in the reverse direction, and through the pylorus, twice over.

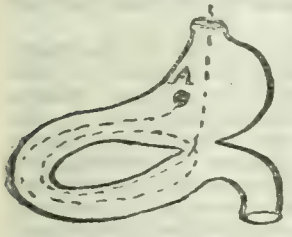


Fig. 1.

This experiment, though of great interest, certainly does not disprove Cannon's statement that with a patent pylorus the food does not pass out by the stoma. It has been known since Dr. Beaumont's observations on Alexis St. Martin that contact with a hard solid body causes spasm of the pylorus. The body A would, therefore, be forced, if it left the stomach at all, to leave by the stoma.

2. *The Removal of the Pyloric Valve.*

In cases with pyloric obstruction where the stomach is drained by the anastomotic opening, it is evident that the carefully adjusted and regular mechanism of the pyloric valvular apparatus is removed. Serdjukow has shown that while free acid in the stomach opens the valve, free acid in the duodenum closes it. So soon as free acid begins to accumulate in the stomach the pylorus relaxes and a "squirt" of acid chyme passes into the duodenum. The duodenum in consequence temporarily shows an acid reaction and the pylorus responds by becoming tightly closed. The acid in the duodenum then produces secretin in quantity just sufficient to summon to the duodenum just enough alkaline bile and pancreatic juice to neutralize the chyme which has escaped. Referring to this action of the sphincter of the pylorus Pawlow[7] remarks:

> This regulating action prevents disorder in the process of digestion and at the same time ensures regularity in the transition from the acid gastric to the alkaline intestinal digestion. If it were otherwise, and the acid contents of the stomach passed without control into the duodenum, the bile on mixing with it might arrest or greatly weaken the action of the pepsin, while the insufficient reduction of the acidity would interfere with the pancreatic ferment.

And yet it is just such an uncontrolled escape of the acid gastric contents which must take place in cases of gastro-enterostomy. It has, indeed, been stated more than once that in time something in the nature of a sphincter is developed around the artificial opening, but we can hardly believe that such a sphincter can be controlled by an elaborate local nervous reflex like that of the pylorus. Case 3 in the series described below is in this connexion interesting. Here no gastro-enterostomy, properly so-called, was performed, but the pylorus, and the pylorus only, was excised and an end-to-end anastomosis made. The patient, who suffered from a simple fibrous stricture of the pylorus, after the operation passed 26 to 28 per cent. of the fat of her milk diet undigested. The only change here introduced was the removal of the pyloric valvular apparatus, and the resulting defect may, I think, be explained in the words of Pawlow.

With the gastric contents escaping in this irregular way it appears, then, likely that the pancreatic secretion will be affected injuriously. With the pylorus working efficiently the stimulation of the pancreas is co-ordinated, long-continued, and at no time excessive; with the artificial opening draining the stomach and the pylorus obstructed it would seem that it could hardly help being inco-ordinated, explosive, and short-lived, with the result that the activity of the pancreatic juice which is actually secreted in response to the abrupt stimulus is inhibited by the excess of acid present. It is probable, however, as a result of the regurgitation of alkaline duodenal juices through the anastomotic opening, to be discussed immediately, that the removal of this controlling apparatus becomes of only minor importance; for with this regurgitation the acidity of the gastric contents is considerably diminished, and the mechanism of pancreatic secretion in consequence profoundly changed.

3. *The Regurgitation of Alkaline Duodenal Juices through the Artificial Opening.*

To determine the presence or absence of this regurgitation through the artificial opening, Katzenstein[8] has made an elaborate research upon dogs. In dogs, with gastro-jejunostomy performed, bile and pancreatic juice always find their way into the stomach, at first continuously and later on after the ingestion of food. Their appearance in the stomach is hastened by the presence of fat in the food. In consequence of this admixture of alkaline intestinal juice the stomach acidity is reduced by a chemical reaction and also by reflex inhibition. That the introduction of alkalies into the stomach inhibits gastric juice reflexly—a fact first shown by Pawlow[9] experimentally—is further proved by the observation that after gastro-enterostomy the total chlorides in the stomach are diminished.[10] The hydrochloric acid-pepsin digestion is thus impaired by a gastro-enterostomy, and with a diminished or abolished acidity of the gastric contents there must be diminished manufacture of secretin in the duodenal mucous membrane. Clinical evidence also bears out the findings of Katzenstein. In a patient upon whom gastro-jejunostomy had been performed four months before, Katzenstein himself found bile and pancreatic juice in the stomach after an ordinary test meal. Kaiser[11] quotes numerous observers who found that after gastro-jejunostomy in human beings bile was almost invariably present in the stomach. Moreover, while it is true that peptic jejunal ulceration after a gastro-jejunostomy is from time to time recorded, the extreme rarity of these cases is in itself evidence that the gastric acidity is diminished. For if the acidity was normal, we should expect ulceration to be comparatively common as a result of the uncontrolled escape of the gastric contents through the artificial opening, and of the insufficient neutralization which would result. The practical importance is that in this regurgitation of alkaline duodenal contents, which has been proved experimentally by Katzenstein and others, lies the explanation of the utility of gastro-enterostomy in cases of peptic ulcer.



Fig. 2.—At A the bowel is divided and the ends closed.

Ulceration of the alimentary tract, as is well known, is confined to those regions where the reaction is acid, namely, the stomach, the first part of the duodenum, and with extreme rarity, as a sequel of gastro-jejunostomy, the jejunum just below the artificial opening. If the reaction of the stomach could be made entirely and permanently alkaline, the cure of gastric ulcer would be facilitated and relapse rendered in the highest degree unlikely. An operation upon the lines indicated by Fig. 2 would have the effect of depriving the stomach and the upper part of the duodenum of their individual acid reaction, and of

reducing them for good and all to the alkaline level of the rest of the alimentary canal.

After the performance of a gastro-jejunostomy in the usual way, the proximal loop has been cut across and the divided ends closed. In this way the bile and pancreatic juice are found to pass backwards through the pylorus in the reverse direction to reach the stomach, with the result that the stomach acidity is abolished. The operation is not a new one in surgery. Moynihan[12] has reported a case where he was forced to adopt this device because of the accidental rupture of the duodeno-jejeunal flexure. The patient made a good recovery without vomiting or wasting. Tavel of Berne has reported a similar instance, quoted by Moynihan,[13] where persistent vomiting after gastro-jejunostomy, unrelieved by several secondary operations and anastomoses, was finally cured by adopting this method. That the operation would be well borne by dogs is suggested by the work of Legett and Maury quoted above. It has, indeed, been performed many times and for many reasons, and the animals have lived and thrived after it. Stendel, Chlumski, and Kelling, in investigations undertaken to explain the so-called "vicious circle," have all performed it. Kelling's dog was the only one to die directly from the result of the operation. He states that the food passed into the blind loop of the duodenum through the pylorus and extended it to such an extent that gastric contractions ceased, and the animal died of starvation. In Stendel's case the dog died on the eighteenth day of perforative peritonitis. Chlumski's dog made a good recovery, and lived in apparently perfect health. For four weeks after the operation the animal was noticed to have excessive thirst, but this ultimately disappeared. All these operations were performed a considerable time ago—before the year 1899—and all are quoted in the *Annals of Surgery*, vol. xxxvi, p. 698.

Quite recently Maury has more than once performed the operation, and the dogs have lived. I would refer the reader to his interesting paper on death in high intestinal obstruction.[14] When thorough and scientific medical treatment has failed to stop the process of gastric ulceration, and when, in addition, gastro-enterostomy has failed to relieve, an operation upon these lines is possibly indicated.

In the majority of cases, however, a simple gastro-enterostomy, devised so as to permit as much regurgitation of alkaline duodenal juices as possible, will bring relief or effect a cure. The testimony of surgeons upon this point is almost unanimous. It would, appear, however, that a distinction should be enforced between gastro-enterostomy done for drainage in pyloric obstruction and gastro-enterostomy done for acute ulceration. In the latter case the Y-shaped junction and secondary entero-enterostomies should be avoided, and the stoma should be placed as near the cardiac end as possible, when the pressure is low, in order to facilitate regurgitation as much as possible. When the operation is intended to provide drainage, on the other hand, as Cannon was the first to insist, the stoma should be near the pylorus. As mentioned above, it is interesting to note that since January 1st, 1905, the brothers Mayo have been led to abandon all the more complicated methods, and adopt only the simple no-loop operation, where this regurgitation is at a maximum.

That the vomiting which has occasionally followed gastro jejunostomy is to be accounted for by the presence of bile and pancreatic juice in the stomach is rendered in the highest degree unlikely by the observations quoted above of Moynihan, Tavel, Kaiser, and Katzenstein. Equally striking is the statement of Cannon and Blake, that in their researches upon cats upon which gastro-jejunostomy had been performed:

> Retention of food in the stomach, with subsequent repeated vomiting, such as attends the so-called "vicious circle," have been associated usually in our experiments with kinks and demonstrable obstacles to the easy passage of the food . . . this circulation of the food—that is, the passage from the stomach through the pylorus and duodenum back to the stomach, which they frequently observed—has never resulted in the clinical symptoms of a vicious circle.

4. The Changes in Digestion and Absorption brought about by the Operation.

Experiments on metabolism after gastro-enterostomy have been carried out by at least two observers. Joslin[15] of Boston, working in Ewald's laboratory, published the results of observations upon two patients with gastro-jejunostomy, performed for malignant disease, with pyloric occlusion.

The first case was that of a woman, aged 45, from whom two-thirds of the stomach had been removed for carcinoma. The ends of the duodenum and stomach were closed and gastro-jejunostomy performed. Her metabolism on a mixed diet was investigated. Analysis showed the following result:

	Absorbed.	Unabsorbed.
	Per Cent.	Per Cent.
Fat	81.3	18.7
Nitrogen	87.4	12.6

The subject of the second experiment was a man upon whom gastro-jejunostomy had been performed for carcinoma of the pylorus:

	Absorbed.	Unabsorbed.
	Per Cent.	Per Cent.
Fat	68.79	31.21
Nitrogen	80.05	19.95

In the second experiment a control observation was made before the operation, but its value is much diminished by the accident that the patient was vomiting frequently, and the estimate of the intake must necessarily have been extremely difficult.

In his Hunterian lectures on gastro-jejunostomy, delivered at the Royal College of Surgeons in 1906, Paterson[16] criticizes these observations, and states that, in his opinion, their value is seriously diminished by the circumstance that the patients were suffering from cancer. He maintains that diminished power of absorption and digestion is only to be expected in cases of carcinoma, and that such observations cannot be accepted as evidence concerning the effect of the operation on the digestion and absorption of patients who are not suffering from malignant disease. Paterson himself repeated the experiments in four non-malignant cases. Few details as to the methods adopted are given. The patients were fed on a mixed diet. Tabulated, his cases show the following results:

	Period Since Operation.	Fat Absorbed.	Fat Unabsorbed.	Nitrogen Absorbed.	Nitrogen Unabsorbed.
		Per Cent.	Per Cent.	Per Cent.	Per Cent.
Case 1 ...	5 months	92.3	7.7	91.0	9.0
Case 2 ...	7 months	92.5	7.5	90.5	9.5
Case 3 ...	24 months	92.7	7.3	92.1	7.9
Case 4 ...	2 months	94.7	5.3	92.7	7.3

These figures show that in non-malignant cases the digestion and absorption of nitrogen and fat is impaired only to a very slight extent. Case 3 was one of almost complete stenosis of the pylorus. Cases 1, 2, and 4 were operated upon for gastric ulcer, for perforated gastric ulcer, and haematemesis respectively, and in none is any mention made of the existence of pyloric obstruction. Paterson himself answers the criticism that in Cases 1, 2, and 4 there is no evidence to show that the pylorus is not patent, and that the food does not take its old course, by the claim that in any case, whether the food leaves by the pylorus, by the anastomotic opening, or by both routes, his experiments show that digestion is not seriously impaired, while clinical evidence proves that the short-circuiting has a very beneficial effect upon the ulcer. Although the strength of this contention for practical purposes is obvious, it can hardly be maintained that it is a satisfactory answer to a question of such importance. It appeared certain, in view of the radical nature of the operation of gastro-enterostomy, that there must be some modification of the processes of digestion, and it was in search of evidence of such modification that the present series of experiments was undertaken. It was felt that merely to prove that the powers of absorption in these patients is unimpaired does not imply that there is no modification of the process of digestion. The results of digestion, in short, may be complete and yet the nature of the digestive process may be profoundly changed.

In all, seven cases have been under observation. Cases 1 and 4 had well-marked pyloric obstruction, not malignant, and in both cases there was a largely dilated stomach. Cases 2 and 5 had no obstruction at the pylorus, but haematemesis and indigestion. Case 3 had a simple fibrous stenosis of the pylorus; no gastro-jejunostomy was performed, but the pylorus was removed and the ends united by direct suture. Case 6 had a gastro-jejunostomy for simple fibrous pyloric stenosis eight years before. In Case 7 the pyloric half of the stomach was removed for malignant disease, the ends were closed, and a posterior gastro jejunostomy was performed. In Cases 1, 2, and 3 the patients were fed entirely on milk; in Cases 4, 5, 6, and 7 a rich mixed diet was given—milk, cream, butter, eggs, bread, vegetables, fish, and lean meat, with tea or coffee—and the amount of fat in this diet was estimated in the following way: The quantity of fat in the milk, cream, and butter was calculated by extracting samples of known bulk or weight with ether in a Soxhlet apparatus. The amount of fat in the eggs was calculated from tables. Only fish with a very low percentage of fat was given (cod and haddock), and care was taken to remove all visible fat from the meat. With these precautions the amount of fat taken in food other than milk, cream, butter, and eggs was neglected. In Cases 1 and 2 both the nitrogenous and the fat metabolism was investigated; in the remaining cases only the fat. Attention was especially directed to the digestion and absorption of fat, because such a study provides the best means of estimating the activity of the pancreatic juice. It is true that on a milk diet, where the fat is presented in the form of an emulsion, the gastric lipase is able to split up almost the whole of it, but on a diet in which the fat consists of butter the lipase is ineffective, and the digestion must be the work of the steapsin of the pancreatic juice. By a study of the nitrogenous digestion and absorption, the activity of the pancreas cannot be estimated, because it is impossible to separate the effect of peptic digestion from that of the trypsin. In all cases a period of at least three days was allowed to pass after the special diet had been begun. The urine and faeces were collected from the fourth day onwards. The estimation was carried on for a period of at least five days. In Cases 1, 2, and 3 the nitrogen and fat in samples of the milk supplied were estimated twice—on the first day of the experiment, and again on the sixth day; the milk for the twenty-four hours was kept in a large flask, which was shaken before any feed was drawn off, to ensure that the sample was a true representative of the whole. The nitrogen in the urine and faeces in Cases 1 and 2 was estimated every day by Kjeldahl's method. In Case 3 the patient had some incontinence of urine, so that the estimation had to be abandoned. The total fat in the faeces for five days was estimated in all cases by extracting with ether in a Soxhlet apparatus weighed samples of the dried and powdered faeces, which had been collected for five days and mixed.

Table I (given for comparison) shows the results of similar experiments conducted by various observers upon normal persons; the last column represents the average of all cases. The diet in all was milk.

Table II, taken from Harley and Goodbody's *The Chemical Investigation of Gastric and Intestinal Diseases*, p. 133, gives similar information with regard to nitrogen absorption in normal individuals.

TABLE I.—*The Normal Absorption of Fat on a Milk Diet.*

Amount of Food.	Grams of Fat in Food.	Grams of Fat in Faeces.	Percentage of Fat in Faeces.	Percentage of Fat Absorbed.	Age and Sex.	Experimenter.
1,790 c.cm. milk ...	53.7	1.60	2.8	97.2	F. 12	Camerer
2,039 c.cm. milk ...	57.4	1.60	2.8	97.2	F. 10	Camerer
2,050 c.cm. milk ...	79.7	5.70	7.1	92.9	M. adult	Rubner
2,200 c.cm. milk ...	69.1	4.93	7.2	92.8	,,	Müller
2,438 c.cm. milk ...	95.1	4.66	3.3	96.7	,,	Rubner
3,075 c.cm. milk ...	119.9	6.70	5.6	94.4	,,	Rubner
4,100 c.cm. milk ...	160.0	7.40	4.6	95.4	,,	Rubner
3,000 c.cm. milk ...	94.2	6.57	6.9	93.1	,,	Rubner
3,000 c.cm. milk ...	111.8	5.65	5.1	94.9	,,	Prausnitz
2,632.4 c.cm. milk ...	93.4	4.97	5.04	94.96		

TABLE II.—*The Normal Absorption of Nitrogen on a Milk Diet.*

Number of Cases Examined.	Milk. Pints.	Average Number of Grams of Nitrogen in Faeces.	Percentage of Nitrogen Absorbed.
6	4	0.84	93.82
4	4½	0.76	95.03
2	5	1.03	93.76

Cases 1, 2, and 3 in the present series gave the result shown in Table III, which may be compared with the previous tables.

Table III shows that the percentage of fat absorbed in cases examined shortly after the operation and kept upon a milk diet is distinctly less than normal (see note); and that this diminution is shown whether there is obstruction at the pylorus (Case 1) or whether there is no obstruction at the pylorus (Case 2). The percentage of unabsorbed nitrogen, on the other hand, is within normal limits. Case 3, which was examined as a control in which no gastro-enterostomy properly so-called was performed, and which has been referred to above, is interesting because the unabsorbed fat is the largest found—26.28 per cent. of the whole.

The digestion of milk, therefore, was faulty both in Case 1 where the pylorus was obstructed, and in Case 2 where the pylorus was not obstructed. In the latter case both experiments upon animals and clinical observation agree that there is no considerable escape of gastric contents through the artificial opening. In Case 1 it is certain that the stomach contents passed out by the artificial opening; in Case 2 we must conclude that they passed as

TABLE III.—*Nitrogen and Fat Absorption in Cases 1, 2, and 3.*

	Amount and Kind of Food per diem.	Grams of Fat in Food per diem.	Grams of Fat in Faeces per diem.	Percentage of Fat Absorbed.	Grams of Nitrogen in Food per diem.	Percentage of Nitrogen Absorbed.	Grams of Nitrogen in Urine per diem.	Weight of Dried Faeces per diem in Grams.	Age, Sex and Period since Operation to First Day of Experiment.	Clinical Notes.
1	1,700 c.cm. milk.	69.0	8.6	87.5	7.2	97.1	7.5	25.79	F. 40 years 20 days	Mr. Golding-Bird's case. Haematemesis at 23 years of age; since then constant pain in stomach; posterior gastro-jejunostomy; pylorus obstructed; stomach dilated.
2	2,835 c.cm. milk.	117.8	15.9	86.6	14.75	95.9	11.5	35.17	M. 53 years 11 days	Mr. Rowland's case. 2½ years' history of indigestion; haematemesis 16 months before posterior gastro-jejunostomy; pylorus not obstructed; stomach not dilated.
3	1,700 c.cm. milk.	67.0	17.7	73.72	—	—	—	7.74	F 52 years 36 days	Mr. Lane's case. History of gastric pain for years; cicatricial contraction of pylorus found; pylorus excised and ends sutured together; no gastro-[illegible]; microscopic report, "no malignant disease."

Table III shows that the percentage of fat absorbed in cases examined shortly after the operation and kept upon a milk diet is distinctly less than normal (see note); and that this diminution is shown whether there is obstruction at the pylorus (Case 1) or whether there is no obstruction at the pylorus (Case 2). The percentage of unabsorbed nitrogen, on the other hand, is within normal limits. Case 3, which was examined as a control in which no gastro-enterostomy properly so-called was performed, and which has been referred to above, is interesting because the unabsorbed fat is the largest found—26.28 per cent. of the whole.

The digestion of milk, therefore, was faulty both in Case 1 where the pylorus was obstructed, and in Case 2 where the pylorus was not obstructed. In the latter case both experiments upon animals and clinical observation agree that there is no considerable escape of gastric contents through the artificial opening. In Case 1 it is certain that the stomach contents passed out by the artificial opening; in Case 2 we must conclude that they passed as

TABLE IV.—*Absorption of Fat in Cases 4 and 5 on a Mixed Diet Rich in Fat.*

The diet consisted of butter in large amount—about 3 oz. daily—milk, cream, eggs, cod or haddock, lean meat, bread, vegetables, and weak tea.

	Amount and Kind of Food.	Grams of Fat in Food per diem.	Grams of Fat in Faeces per diem.	Percentage of Fat Absorbed.	Weight in Grams of Dried Faeces.	Age and Sex. Period between Operation and First Day of Experiment	Clinical Notes.
4	Various	122.49	5.25	95.71	23.20	F. 43 years old. 18 days	Dr. French's case. Operation by Mr. Rowlands. Indigestion many years. Three ulcers, one on either side of pylorus. Posterior gastro-jejunostomy. Obstructed pylorus. Dilated stomach.
5	Various	201.3	7.00	96.57	41.31	M. 41 years old. 14 days	Mr. Lane's case. Old duodenal ulcer. Posterior gastro-jejunostomy. Pylorus not obstructed. Stomach not dilated.

TABLE V.—*Absorption of Fat in Cases 6 and 7 on a Similar Mixed Diet.*

	Amount and Kind of Food.	Grams of Fat in Food per diem.	Grams of Fat in Faeces per diem.	Percentage of Fat in Faeces.	Weight in Grams of Dried Faeces per diem.	Age, Sex, and Time between Operation and First Day of Experiment.	Clinical Notes.
6	Various	126.54	8.07	6.4	35.2	M. 68 years old. 8 years	Mr. Symonds's case. Had been operated upon for simple fibrous stricture of pylorus eight years before.
7	Various	158.40	5.00	3.16	12.6	F. 59 years old. 20 days.	Mr. Swan's case at Cancer Hospital. Partial gastrectomy for cancer, and posterior gastro-jejunostomy.

before along the duodenum. It follows that the explanation of the deficient digestion of fat is not to be found in the "short-circuiting" of the duodenum and in the consequent want of contact between acid chyme and duodenal mucous membrane. The cause must be common to both, and is probably to be found in the regurgitation of alkaline intestinal juices through the artificial opening, with the consequent diminution of the acidity of the stomach both by chemical reaction and reflexly by inhibiting the secretion of acid gastric juice.

Cases 4 and 5 were fed upon a mixed diet containing a large amount of fat (v. s. p). The analysis gave the results shown in Table IV, which may again be compared with Table I.

Case 4 had well marked pyloric obstruction. Case 5 had no obstruction at all, and again there is no marked difference in the result of analysis. Yet in one case the food passed over the duodenum, in the other it did not.

Comparing Cases 4 and 5, which were given a mixed diet rich in fat, with Cases 1 and 2, which were given milk only, it will be seen that while Cases 1 and 2 show a distinct deficiency in the power of dealing with fat, Cases 4 and 5 digested and absorbed larger quantities of fat with complete success. That the difference caused by the diet is not to be accounted for simply by the unappetizing character of a milk diet and the consequent diminution of the psychic appetite flow is, I think, proved by a reference to Table II, where the digestion of normal persons upon an equally unappetizing milk diet is shown. Moreover, it is to be noted that in Cases 1 and 2 the digestion of proteids is even more complete than usual.

The difference may probably be attributed to the diminution in the curdling ferment rennin, the secretion of which would be impaired in an equal degree to that of the pepsin. The effect of the presence of rennin in the stomach under normal conditions, by its coagulating powers, is to hold back the casein and fat of the milk while the whey is allowed to escape. With a diminution in the amount of rennin the milk would tend to remain in fluid form, with the result that it would escape with undue rapidity from the stomach. The digestion of butter and non-emulsified fats, on the other hand, would be unaffected by such a diminution in the amount of rennin. However this may be, surgeons have apparently recognized this distinction in practice, for they take a pride in increasing the amount and variety of the diet as rapidly as possible after the operation. At Guy's Hospital a pure milk diet is often abandoned on the second or third day after the operation, or even sooner.

Case 6, upon whom gastro-jejunostomy had been performed eight years previously at the Cancer Hospital for *simple* stricture, was examined with a very similar result; while Case 7, where the digestion of fat was also found to be normal, is interesting, because this result is directly opposed to the findings of Joslin in the two cancerous cases mentioned above. Case 7 was the only case of malignant disease examined.

Except in the cases in which the diet consisted of milk alone these results agree with findings of Paterson, and are in opposition to the earlier work of Joslin. In view of the teaching of Bayliss and Starling that the stimulus to the pancreatic juice is dependent upon the contact of the acid chyme with the duodenal mucous membrane, these results are surprising. It is true that prosecretin is found in all but the lowest part of the ileum, in amounts gradually diminishing as the distance from the pylorus increases, but only the prosecretin in the first part of the duodenum can be of the first importance, for there only is acid found to bring about its conversion into secretin. The complete digestion and absorption of fat in Cases 1, 4, and 7, where the duodenum is 'short-circuited," forces the conclusion that the mechanism of pancreatic secretion, demonstrated by Bayliss and Starling, and dependent on the contact of duodenal mucous membrane and HCl, can if necessary be replaced by other means equally efficacious. These cases tend to support the view that fats have themselves a specific effect upon the pancreas. Indeed, it would be strange if it were otherwise. Fat, as is well known, restrains the secretion of gastric juice, and, if fat had not also a directly stimulating effect upon the pancreatic juice, that statement would also imply that fat acted as a restrainer of pancreatic activity as well. Damaskin[17] has described a very perfect experiment upon a dog which showed undeniably that not only does a definite secretion of pancreatic juice take place after the introduction of oil into the stomach, but that this secretion takes place when every trace of acid contents is absent from the stomach. The investigations of Walther[18] go further and show that fat not only excites a free secretion of pancreatic juice, but also leads to an increase of the pancreatic ferment. Finally, Fleig,[19] by rubbing up the mucous membrane with soap, has obtained a hormone, which he has named "saprocrinin." This reaction is independent of the existence of free acid, and except that the duodenum would take no part, would be uninfluenced by the changes introduced by the operation of gastro-enterostomy. Saprocrinin, more than sufficient, is furnished by the rest of the alimentary canal, in which, as a result of the fatty diet, there will be present a more than usually large quantity of the necessary soaps.

CONCLUSIONS

1. On a purely milk diet, in non-malignant cases, after gastro-jejunostomy there is a slight but definite diminution in the power of digesting and absorbing fat.

2. On a mixed diet, rich in fat, for the most part in the form of butter, this diminution in power disappears.

3. On a milk diet and on a mixed diet, rich in fat, the results are the same, whether there is obstruction at the pylorus or not. It is therefore improbable that the diminution in power of digesting milk depends upon

whether the duodenum is or is not short-circuited out of the alimentary canal. The cause must be common to both obstructed and non-obstructed cases, and is probably to be found in the regurgitation of alkaline bile and pancreatic juice into the stomach and in the consequent reduction of gastric acidity, together with the inhibition of the rennin.

4. That in cases of recurrent intractable duodenal or gastric ulceration, an operation is indicated which will ensure the complete loss of the acid reaction of the stomach, while the benefit at present conferred in ulceration by gastro-enterostomy is due to the partial loss of that reaction. That such an operation would consist in closing the proximal end of the bowel and implanting the distal directly into the stomach. That where gastro-enterostomy is performed the opening should be near the cardiac end of the stomach, and that the anastomosis should be simple, not Y-shaped, nor with entero-enterostomy.

5. That the complete digestion of fats on a mixed diet is due to the specific stimulating effect on the pancreas of a hormone produced by the fats themselves.

6. A case of malignant pyloric obstruction, after partial gastrectomy and posterior gastro-jejunostomy, showed complete power of dealing with fats.

Finally, I take the opportunity of pleading the laborious nature of the experiments carried out as an excuse for their small number, and of thanking the physicians and surgeons under whose care the patients were at Guy's Hospital, and Mr. Swan at the Cancer Hospital, for their kindness in so readily granting facilities for work which can have no claim to be considered of the highest practical importance.

NOTE.

In an address delivered at the annual meeting of the American Medical Association, at Atlantic City, U.S.A., and published in the *Lancet* for September 21st, 1907, Mr. H. J. Paterson states that he has found little diminution in the power of digesting fat in 4 patients upon whom he had performed gastro-jejunostomy, and who were placed upon a milk diet. Details as to the method adopted and the amount of milk given are wanting. The fat absorption, taking the average of 4 cases, is stated to have been only 1.17 below the normal. The present analyses were completed before the publication of this paper.

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ETHER ANAESTHESIA BY THE OPEN METHOD.

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SINCE the year 1876, when Mr. J. L. Clover invented his portable gas and ether apparatus, it has until recently been the custom in England to administer the vapour of ether as a general anaesthetic by means of a closed india rubber bag. This method produces a very rapid insensibility; the total amount of ether evaporated averages only 6 fl. oz. an hour, and little vapour escapes into the surrounding atmosphere. Its disadvantages are that the partial deprivation of air and rebreathing of expired products from the bag tend to produce:

1. Duskiness of the countenance and oozing of venous blood from the cut surfaces of the operation wound.
2. Considerable secretion of mucus from the membranes of the air passages.
3. Laboured breathing, with strong movement of the abdominal walls.
4. After-sickness in 75 per cent. of the cases.

These factors render the smooth conduct of ether anaesthesia with a bag inhaler more difficult than that of chloroform, with the result that many practitioners do not attempt its use in private practice, and that chloroform is also frequently resorted to by specialists when complete tranquillity is desired.

The open method of administering ether has been used in America for several years, and the procedure which I now adopt, after a series of careful trials and experiments with various materials, consists in pouring ether upon a wire-framed mask covered with ten layers of white absorbent gauze such as is used for surgical dressings. The mask, which may be of the Schimmelbusch pattern, or constructed according to the author's special design shown in Fig. 1, is allowed to rest lightly upon a freshly-made gauze face-pad consisting of several layers of the same gauze made into a roll 14 in. long and 1 in. thick. The free ends of the roll are crossed and tied together with a short piece of gauze or tape, as shown in Fig. 2, before the mask is applied. An 8-oz. medicine bottle, fitted with the double-tubed stopper illustrated in Fig. 3, is well adapted for the supply of ether, which can be poured from the end of either tube at a rate controlled by the finger held upon the other. To diminish the supply still farther the bottle may be held somewhat upon its side, when a small stream of separate drops falls from the tube orifice. A larger stock of ether must also be at hand, as in some cases from 12 to 16 oz. may be required for a long operation.

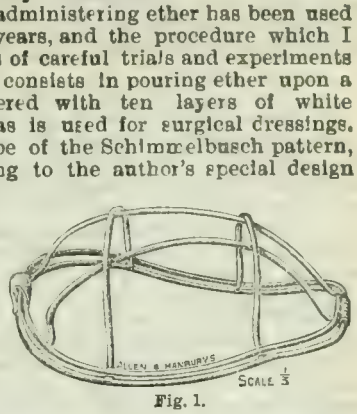


Fig. 1.

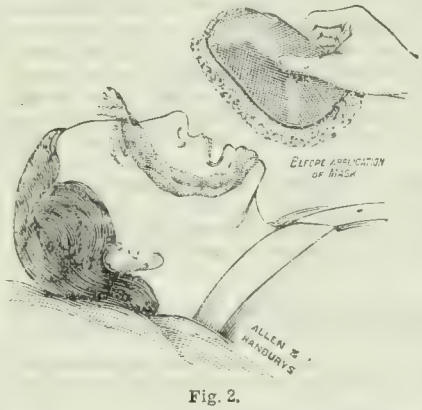


Fig. 2.

THE ADMINISTRATION.

The patient being in the supine position is first told to close the eyes, and the gauze face-pad is then loosely laid upon the face forming an oval, which covers the closed eyelids and encircles the mouth and nose. The dry ether mask is then superimposed, and the patient is told to breathe regularly and slowly in and out through the mouth. A few drops of ether are then allowed to fall upon the lower portion of the mask opposite to the mouth; and whilst verbally encouraging the patient to continue this form of breathing, the drops of ether are steadily continued so as to keep the lower half of the gauze moist to the touch but not wet enough to overflow. It is a good plan to keep talking steadily to the patient, instructing him how to breathe and describing the sensations he will experience until he drops off to sleep, so that the sound of the voice may guide and control him while he remains conscious.

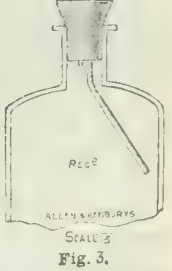


Fig. 3.

The taste of ether when presented in this manner is not objected to by the majority of patients, because it is too weak to be pungent. There is hardly any excitement or struggling except in alcoholic subjects, for whom it should not be used. The only movement which may usually be anticipated is a tendency to slowly raise the head and sit up, which is often witnessed also during the induction with C_1E_2 mixture in adults. This need not be restrained, as it only lasts for a minute or so and if the ether be steadily continued the patient will slowly sink back upon the pillows in the third stage of anaesthesia. The time taken to induce this condition is, on the average, between six and seven minutes. As a rule, when slight stertor

begins to arise the anaesthetist's troubles are over, but movement of the patient by commencing to wheel the couch along or to prepare the abdomen for operation at this moment is apt to induce vomiting, so that the ether should be continued a little longer before doing either.

TYPE OF ANAESTHESIA.

The remarkable difference in the type of anaesthesia when compared with that of the enclosed bag method is now apparent. The amount of mucus secreted in the mouth and fauces, trachea, and bronchi, is generally much less. There seems to be no tendency to coughing, retching, or laboured breathing; the depth of respiration is decidedly less in degree, and sudden changes in its type are rare. The colour of the face is pink, unless surgical shock or haemorrhage take place. The pulse-rate is, as a rule, about 80 to the minute, and its volume full, whilst the blood pressure is well maintained.

There is no oozing of venous blood from the operation wound nor congestion of the capillary vessels. The musculature becomes completely relaxed, and reflex laryngeal spasm and disturbances of respiration caused by surgical stimuli are less marked than under any other anaesthetic. Abdominal movement is not heaving in character.

AFTER EFFECTS.

My experience is that after-sickness and other bad effects, such as headache and taste of ether, are remarkably reduced, the patient being frequently quite undisturbed by any such sensations. This is corroborated by Drs. Weland and Osgood of Boston, Mass., who, writing on gauze ether,[1] state that the occurrence of post-anaesthetic vomiting is reduced to 32½ per cent., and transient acetonuria to 26 per cent. of the cases. Profuse perspiration occurs in many patients both during and after operation, and therefore, besides blanket clothing, the temperature of the operating room and bedroom should be maintained above 60° F. I have found by experiment that the temperature of the air within the mask does not sink below 70° F.

A few details may now be given from the experience of Miss Alice Magaw, anaesthetist to Dr. W. J. Mayo at St. Mary's Hospital, Rochester, Minn., which are recounted by her in "A Review of over 14,000 Surgical Anaesthesias":[2]

A much deeper narcosis is required to start an operation or to make the incision than later on when the operation is in progress.

Never bid a patient to "breathe deep," for in so doing a feeling of suffocation is sure to follow and the patient is also apt to struggle.

During the operation, as soon as the patient begins to get control of the jaw, more complete narcosis is required.

Formerly operations for exophthalmic goitre were looked upon with a great deal of dread on account of the anaesthetic. We have found these cases, when properly managed and the ether given by the drop method, were as good subjects as any other class of cases of the same gravity.

One-sixth of a grain of morphine and $\frac{1}{150}$ grain of atropine are administered to avoid tracheal mucus thirty minutes before operation.

The mask and gauze can be boiled, and the latter used again for further cases if desired. Instead of a gauze face-pad I experimented with a rubber rim to the open mask, but discovered that its perfect fitting, after the lapse of some minutes, produced the laboured breathing which is seen with the bag inhaler. This does not occur with a loose gauze pad, though it forms sufficient protection from the undue escape of ether vapour, which is 2½ times heavier than air, and otherwise sinks away and is lost.

No open flame nor cautery must be brought within 3 ft. of the evaporating ether, which is inflammable.

One drawback to the use of the open method is the quantity of ether which passes into the atmosphere; but the amount used is much reduced after a little experience when with more faith less ether is found to be necessary. The difference of the method does not reduce the danger of the occurrence of acute bronchitis and pneumonia in patients with catarrh, chronic bronchitis, or emphysema, for whom ether is unsuitable, nor should it be continued if mucous râles become audible during operations which, by reason of after-pain, will prevent the patient from coughing to clear out the bronchi, such as those upon the stomach and gall bladder.

Alcoholics, malarial subjects, and those with a family history of insanity take chloroform better than ether, and will prove unsuitable patients for this method.

The open mask may be used after anaesthesia has been induced with nitrous oxide and ether or the C_1E_2 mixture if preferred, but the simplicity, asepsis, and perfection of the method *ab initio* leave little to be desired.

Messrs. Allen and Hanburys, of Wigmore Street, W., have rendered me assistance in preparing models for the open mask and bottle-stopper, for which I am greatly indebted to them.

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THE CONVEYANCE OF WHOOPING-COUGH FROM MAN TO ANIMALS BY DIRECT EXPERIMENT.

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THE etiology of whooping-cough has been the object of much research, and many and various have been the theories advanced on the subject. Of late years, however, the belief has been gaining ground that it is bacterial in origin.

Kopolic, by making cultures from the sputum on solidified hydrocele fluid, obtained pure growths of a small bacillus with rounded ends which he claimed to be the specific organism. Jochmann and Krause discovered a small bacillus with rounded ends, very similar to the organism described by Eppendorf as the *Bacillus pertussis*. Vincenzi also claims to have isolated a bacillus which much resembles or is identical with that of Eppendorf. Mayennis, on the other hand, believes that the disease is due to a bacillus which finds a nidus on the Schneiderian membrane of the nose. None of these observers have, however, been able to prove that the organisms isolated by them are the true cause of the disease, and thus its precise etiology still remains obscure.

With the object of trying to throw light on certain aspects of this question, feeding experiments on animals were instituted, and it is for the purpose of calling attention to one of these experiments, performed in Belvidere Hospital, Glasgow, that the present article is written.

A full-grown and in every way healthy cat was placed in confinement in a building far removed from the wards in which whooping-cough patients were isolated. Sputum and vomited material were then collected from selected cases of typical whooping-cough without broncho-pneumonia or other complications. These substances were mixed with milk and administered to the cat, which took to the new diet with a fair degree of relish. For seven days this emulsion of sputum, vomited material, and milk formed the animal's sole source of nutriment. At the end of that time it was put upon ordinary milk once more.

After about fourteen to seventeen days, it was noted that the cat was getting into a languid condition; it lay at the back of its cage, and took little note of what went on around it. It had little appetite; when milk was placed before it, it would lap a little without any of the zest which characterized its attitude towards food at the commencement of its confinement.

About a month after the beginning of the experiment it was noted that the animal had a choky cough, which was always followed by vomiting. Some time later it developed a spasmodic cough, accompanied by a well-marked whoop, which even persons unacquainted with the nature of the experiment at once pronounced to be whooping-cough. When these spasms came on, the animal, rising and clinging to the bottom of the cage with its claws, coughed and whooped in a manner which left no doubt as to the nature of its complaint.

The conclusions to be drawn from the above experiment would seem to be:

1. That whooping-cough is beyond doubt an infectious disease.

2. That the specific virus is contained in the sputum or vomited material or both.

3. That infection may take place either during the process of swallowing or by ingestion of the infective agent.

4. That cats are susceptible to whooping-cough, and may therefore occasionally be the means of disseminating the disease.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

HYPERSENSITIVENESS TO ANTIDIPHTHERITIC SERUM.

In view of the increasing use of diphtheria antitoxin as a prophylactic I think that the following notes may be of interest to other practitioners.

I suffered from a mild attack of diphtheria in 1889, followed by a troublesome paralysis, and hence I have since on three different occasions injected myself with a prophylactic dose of the serum (1,000 units) when attending cases of diphtheria in which I have been more than usually exposed to a virulent infection. My first injection was in December, 1902, after which I suffered from a slight urticarial rash round the seat of injection. My second was in September, 1904. This was followed by a more general rash and some malaise. My last injection was in November, 1907. Two days after the injection I felt very unwell; three days later I could hardly do my work as I felt so ill, and my suboccipital lymphatic glands were enlarged and tender. On the night of the seventh day I went to bed with the intention of stopping there next day, as I felt unfit for work, and was suffering from a more or less generalized urticaria. At 12.30 a.m. I awoke feeling sick, and vomited almost continuously for half an hour, till I was quite exhausted. The rash by this time had become general, and on the abdomen was in places quite the size of a five-shilling piece, and raised nearly half an inch. I was completely covered from head to foot with the exception of the palms and soles. The irritation was almost unbearable. At 3 p.m. I was again seized with vomiting, which lasted quite half an hour. By this time my tongue had swollen, due to the urticaria, and I found some difficulty in breathing. At 4 p.m. the joints below the hip and shoulder were attacked, and became so swollen that I could not bend my fingers. By 8 a.m. the rash had almost gone, and I felt better, but on getting out of bed I found that I could not stand, and fainted. By the evening I felt well, but very shaken and weak. My temperature was normal during the week preceding the attack. I know that I had eaten nothing which could have upset me, and I believe that the vomiting was due to urticaria of the stomach. I also experienced some thoracic and abdominal pain during the height of the attack.

The serum used was prepared in February, 1907, by a well-known firm. I injected the patient (a man of 29) with 5,000 units, and his wife and baby (aged 1 year), who had been exposed to infection, with 500 units each of the same batch and series; none of them experienced the slightest inconvenience. I have since heard from the director of the laboratory where the serum was prepared that it was some of a large batch of 3,000 phials issued in February last, and that mine is the first complaint received. He suggests that my case is an instance of hypersensitiveness to horse serum, in connexion with which an article by Dr. Goodall in the *Journal of Hygiene* for July, 1907, is of much interest. He also tells me that mine is the first recorded case of progressive increase of reaction to serum with more than two injections at long intervals. He suggests that I should publish my experience for the benefit of other practitioners using the serum, as it seems that such results are by no means of rare occurrence.

Woking. R. THORNE THORNE, M.D.

A CASE OF VAGITUS UTERINUS.

In view of the discussion which followed the publication of a note in the BRITISH MEDICAL JOURNAL of July 6th, 1907, I think the following case will be interesting.

On Sunday morning, December 22nd, 1907, shortly after midnight, I was called to attend a confinement. The os was almost, but not quite, fully dilated, the membranes were still intact, and I at once ruptured them with my fingers during a pain. Almost immediately after the crying of the infant *in utero* surprised me so much that it caused me to stay my examination and listen, my fingers being still in the vagina. At the same time, *before I had spoken*, the nurse exclaimed, "Why, the baby is sobbing before it is born. I never heard that in my life before." There were two distinct cries, which the mother also states she certainly heard.

I hastily put on forceps and easily delivered the patient of a full-time baby, weighing about 6 lb. There was very little cyanosis, and the infant cried quite lustily in about twenty seconds.

This case firmly convinces me that the phenomenon of vagitus uterinus is possible. I agree with Dr. S. Marx when he describes the cries as "The weirdest call for help that can be imagined"; as "weird" is certainly the only adjective to describe it. On the other hand, this case bears out Peiser's conclusion, as opposed to Marx's, that the prognosis is by no means unfavourable to the infant when the cries are heard. There is not the slightest possibility of mistaking this case for one of "vagitus vaginalis," as the cries were heard before the end of the second stage.

STEWART MCNAUGHTON, M.B.

New Clecthorpes, Great Grimsby.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF GUMMA OF THE THYROID.

(Reported by R. M. R. THURSFIELD.)

THOMAS B., a waiter, aged 53, was seen by Mr. D'Arcy Power in the casualty department at St. Bartholomew's Hospital, on November 4th, 1907, complaining of a lump in his neck. He had first noticed the swelling one month previously. The patient contracted syphilis about thirty years ago and was treated for six months at the Lock Hospital. He has since had various tertiary manifestations, which have been cured by potassium iodide, a drug to which he is peculiarly susceptible, as he quickly shows signs of iodism when it is administered. He has had repeated attacks of gonorrhoea. Last September he suffered from influenza, and since then his voice has been hoarse. His father died of asthma; his mother committed suicide.

The patient was a sickly-looking man. There was an oval swelling situated on the right side of the neck. It measured 2 in. by 1 in., and the long axis pointed obliquely outwards and upwards. The lower and inner end of the tumour lay in the suprasternal notch, whilst the outer and upper extremity lay about an inch above the clavicle but behind the posterior border of the sterno-mastoid muscle. The carotid artery lay behind it and to the outer side. The skin over the tumour was natural. There was no difference in temperature on the two sides of the neck. The tumour was hard and solid with a smooth surface and rounded margin. It was painless and did not pulsate. It was neither adherent to the skin nor to the sterno-mastoid, but moved freely on swallowing, and was clearly a part of the right lobe of the thyroid gland. The outer end of the swelling felt so stonily hard that it was thought to be calcified. A radiograph was taken of the neck and the negative showed a distinct shadow in the position of the swelling.

The patient was ordered a mixture containing potassium iodide and ammonium carbonate. In a fortnight the swelling was reduced to nearly half its size, and in a month it could no longer be felt; but in spite of this the patient was put upon a course of mercury, as it was pointed out that he was still suffering from syphilis.

REMARKS BY MR. D'ARCY POWER.

Syphilis affects the thyroid gland more often in the earlier than in the later stages. It is not unusual for a slight general enlargement to take place during the early stages of syphilis, the swelling being

soft and painless. Gummata are more rare, though they have been observed in inherited as well as in acquired syphilis. The swelling in the case of Mr. Thursfield's patient was so densely hard that I thought at first it might be a cyst with a calcified wall. The evidence of syphilis was so distinct that the patient was ordered to take potassium iodide in the hope that some improvement might occur, but it was not until the swelling disappeared completely under its influence that its true nature was apparent.

REPORTS OF SOCIETIES

MEDICAL SOCIETY OF LONDON.

JAMES KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, January 13th, 1908.

GRADUATED LABOUR IN PULMONARY TUBERCULOSIS.

DR. M. S. PATERSON, in a paper dealing with graduated labour in pulmonary tuberculosis, said his remarks applied to patients under his care at the Frimley Sanatorium of the Brompton Hospital. He had noticed that it was not unusual for certain tuberculous patients who continued at work to remain in fair health, and it occurred to him that good effects might be achieved by submitting tuberculous patients to work, carefully graduated according to their physical powers, and his experience was that manual work was of use in the treatment of patients undergoing treatment in sanatoriums. Patients did not acquire lazy habits incapacitating them from returning to work immediately after their discharge. Actual experience had shown that carefully graduated work did not cause the tuberculous mischief to light up again under the strain, nor did haemoptysis occur. In those cases where patients disobeyed orders and did too much, pleurisy generally resulted from the excessive work, and the necessity of absolute obedience to the doctor's orders became paramount. Every patient on arrival at Frimley was carefully instructed in regard to the graduated system of treatment by exercise, and was taught to consider himself under treatment all the time he was at the sanatorium. The treatment by graduated labour consisted in first walking slowly certain measured distances. The next step was carrying small loads of earth in light baskets, the distance which the load was carried and the amount of the load gradually undergoing increase. The patient next commenced to use a small shovel and passed on to handling a large one. Then followed, in suitable cases, work with a pick-axe, and finally the patient, if all went well, was set to work for six hours a day with a heavy pickaxe. All these classes of work were carefully graduated so as to suit the different kinds of patients; in the earlier grades the hours of labour lasted only four hours a day. The hardest work was with the pickaxe, which included concrete work. Each man in that grade moved about ten tons a day, and had to keep going, for otherwise he kept back the whole gang. In that point it differed from the other work, where each patient took his own time in fulfilling his task. The effect of work on the patients was to render them cheerful and contented, and the difficulty was to keep them from working too hard. Patients who had successfully gone through the graduated work were set to labour at their own particular trades three weeks before their discharge, so that their muscles should be accustomed to their particular form of work before leaving, thus enabling the patients to immediately resume their means of livelihood on returning home. One of the first indications of a patient taking too much exercise was that he lost his appetite and suffered from slight headache. If he continued at work the temperature would rise to 99°, and the patient would be ordered to bed. After a short rest the treatment would be continued and no harm would seem to result. A temperature of 99° was looked on as a danger signal, and if work was persisted in the patient would complain of pains in the joints and limbs, and would lapse into a condition resembling influenza. It was important to regulate the hours of recreation as carefully as the hours of work. The diet was approximately as near that of an ordinary working man as could be arranged. The result of treatment by graduated labour was that the patients on discharge returned to their previous work. The theory that the graduated labour caused improvement by means of the autoinoculation of the patient by his own tuberculin was supported by the fact that after a rise of temperature, and, therefore, theoretically an autoinoculation, patients were often better than before. Further, patients who did not improve on a certain grade of work did improve when put to harder work causing the desired autoinoculation.

OPSONIC INDEX AND PHYSICAL EXERCISE.

DR. A. C. INMAN, in a paper on the opsonic index in tuberculous patients engaged in physical exercise, said that autoinoculation produced variations in the opsonic index. That took place in bacterial infection as in microbic disease. At the Frimley Sanatorium the patients were treated with graduated exercises and those exercises produced artificially-induced autoinoculation. Dr. Paterson's paper showed the effect of these exercises to be a marked rise in the opsonic index, and that rise was an immediate one. When the focus of pulmonary infection became arrested, the blood of the patient as regards the opsonic index returned to the normal, thus confirming the clinical diagnosis of arrest of the disease.

THE PRESIDENT said that the two papers marked an epoch in the treatment of pulmonary tuberculosis. The papers further showed what he had constantly observed, that no tuberculous patient recovered by means of treatment with sports or games, because there was no control of the amount of exercise. They had now a scientific explanation of why such patients suffered from pleurisy after undue fatigue.

Sir A. E. WRIGHT said that the autoinoculation treatment might possibly be useful, but considered that the tuberculin treatment was better, because it could be begun with minimum doses and increased as desired.

DR. THEODORE WILLIAMS said that when he visited the sanatorium the cheerful demeanour of the patients was most noticeable.

DR. R. MAGUIRE said that he would be sorry if the argument about autoinoculation was misunderstood, for if by any chance autoinoculation was practised on cases which had not been severely and carefully selected, like the Frimley patients, and as carefully watched, then it would be found that autoinoculation would fail, as compared with artificial inoculation.

DR. POYNTON thought that if the patients under Dr. Paterson's care at Frimley could be restored to their former condition and then treated with tuberculin the result would not be so good. There was much more in the sanatorium treatment with graduated labour than the mere autoinoculation.

DR. PATERSON, in the course of his reply, urged that tuberculin treatment would not restore the patient and fit him to resume his work on being discharged from the hospital.

DR. INMAN, in his reply, did not consider that injections of tuberculin would replace treatment at sanatoriums with artificially-induced inoculation by graduated labour.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

AT a meeting on January 10th, Sir T. BARLOW, Bart., President, in the chair, the following were among the exhibits: Mr R. G. HANN (Leeds): A girl aged 18, with *Polycythaemia* showing enlarged spleen, but no cyanosis. She was not robust, but had no symptoms apart from attacks of abdominal pain. Had two menstrual periods in her 15th year; none since. External genitals infantile in character; no pubic hair; practically no mammary development. She was growing and her weight increasing. Spleen enlarged, never tender or painful. Liver, heart, urine, normal. Blood: Red cells 6,200,000, slightly different in size; white cells 11,580 (polynuclears 64, lymphocytes 28, large mononuclears 6.2, mast cells 0.2, eosinophiles 0.8 per cent.); haemoglobin 115 per cent., colour index 0.915; specific gravity 1036, viscosity (water being 1) 5.3. Dr. R. HUTCHISON said that in some cases enlargement of the spleen had lasted since infancy. The case was not, he considered, in the absence of cyanosis, an ordinary one of polycythaemia. Dr. PARKES WEBER thought that polycythaemia could be accounted for by the fact that the girl

had grown in height too much without development in other directions. Her abdominal pains were not confined to the spleen only. Were the symptoms due to congenital syphilis, tubercle of spleen, or Hodgkin's disease? Mr. P. LOCKHART MUMMERY: A boy, aged 4½ years, with *Hemihypertrophy*. All measurements of the left side of the body were larger than those on the right, and the differences were yearly becoming more pronounced. The left side of the tongue, left eye, left tonsil, and all bones on the left side were larger than those of the opposite side; right testicle undescended and smaller than left. Boy quite intelligent; and no cause for his abnormal growth could be discovered. Dr. SIDNEY PHILLIPS: A woman, married, aged 56, with *Multiple telangiectases*, and subject to free bleeding from both nostrils since childhood, to bleeding from vascular patches on the tongue since 1897, and lately to bleeding from small naevus-looking spots on the lower lip. Her father had had violent epistaxis, and her sister had died of haemorrhage from the gums. She had stigmata on the cheeks and scattered about the trunk. Dr. COLCOTT FOX showed a drawing of a patient who had stigmata of the skin over the thorax, and haemorrhage from the rectum, but no naevi. Dr. F. PARKES WEBER: A woman, aged 60, who had *Telangiectases with recurring epistaxis*. Small red angiomata were distributed over the face, ears, lips, tongue, mucous membrane of mouth, conjunctival surfaces of eyelids, inside nostrils, on pharynx, and anterior surface of glottis. There were also peculiar ophthalmoscopic changes. During the last six years epistaxis had been frequent. Her mother and several of the patient's children had been similarly affected. Dr. Weber hoped that in future cases the ophthalmoscopic conditions might be fully noted. The CHAIRMAN and Dr. HAWTHORNE discussed the case, and Mr. STEPHEN MAYOU mentioned a case of telangiectasis of the bladder, with haematuria, in which there was double optic neuritis. Mr. W. SAMPSON HANDLEY: A woman, aged 44, whose *Larynx and lower half of pharynx had been excised*. Ten weeks ago, when admitted to hospital, she had a retrolaryngeal malignant growth filling the pharynx at its junction with the oesophagus. Bougies could not be passed, nor could she swallow even fluids. She was greatly emaciated. Ten days after a preliminary gastrostomy the growth had been excised. A low tracheotomy was done, and the whole larynx, lower half of pharynx, upper part of oesophagus, and left lobe of thyroid, and an enlarged gland were removed. The upper ends of the trachea and oesophagus were closed by sutures. Convalescence was uninterrupted, and now—seven weeks after operation—she had gained weight and improved in colour and had obtained much relief. Saliva passed to the stomach through a rubber funnel lying behind the tongue, its narrow end emerging by a median fistula in the neck, to be connected below with a rubber tube which passed into the stomach through the gastrostomy opening. Although no air passed through the mouth from the lungs, the patient was able to speak in an intelligible whisper. She was fed by the gastrostomy opening, but was able to swallow liquids in very small quantities. Dr. H. TILLEY said that if the general health was good—no metastatic developments existed, nor disease of kidney or liver—the operation was justifiable and should be undertaken. Septic pneumonia had formerly been fatal, but by rendering the mouth as aseptic as possible and removing bad teeth beforehand this fatality had been greatly lessened. If the oesophagus could be fixed to the skin wound it was desirable. Mr. R. J. SWAN had removed the larynx and part of the pharynx in a similar case, but the patient died of septic bronchopneumonia on the sixth day. Mr. HANDLEY said the growth involved the oesophagus so low down that its removal left too little of that tube for it to be attached to the skin wound. In another case death occurred on the table, and was probably due to exposure of the vagus during removal of glands around the bifurcation of the carotid. Had he taken the precaution to freeze the two vagi below the level of the operation beforehand death would probably not have taken place, as the inhibitory function of the vagus on the heart would have been prevented. Dr. J. GRAHAM FORBES: A boy, aged 15, with *Congenital absence of the left pectoral muscles*, and poor muscular development of left arm and shoulder muscles but no paresis. He had chronic bronchitis and emphysema. There were 75 cases recorded, mostly in males. Dr. G. A. SUTHERLAND referred to the cause of the deformity, and thought the theory of intrauterine pressure by means of the hand and wrist upon the chest wall would account for the condition in some cases. Mr. RAYMOND JOHNSON had exhibited a case in which the defect had been associated with webbed fingers and webbed arm, and thought the pressure theory inadequate to account for such a complication. Dr. SIDNEY PHILLIPS described a case of *Fatal dyspnœa* in a boy, aged 5½ years, who, whilst in apparent good health, was seized with severe dyspnœa, worst in the recumbent position. After 48 hours he came into hospital; nothing abnormal was detectable in larynx, lungs, heart, or urine, and no signs of mediastinal pressure; there was no pyrexia. The dyspnœa became progressively worse, and the heart action feebler until he died after an illness of 3½ days. *Post mortem* all the organs were normal, but there was considerable enlargement of the thymus gland, of the mesenteric glands, and of the spleen, the Malpighian corpuscles of which were easily seen enlarged by the naked eye. The case appeared to be one of those cases known as thymic asthma. Numerous cases were on record in which fatal dyspnœa occurred, in which the only *post-mortem* abnormality was an enlarged spleen, and this case appeared to be an example. Death was not due, however, to pressure of the thymus gland, but probably, as Paltauf suggested, to toxæmia from thymus gland secretion, or, as Baumler thought, to lymphotoxæmia. Dr. POYNTON had seen two cases; one had dullness over the sternum, due to an enlarged thymus; the other had respiratory spasm, sufficient to simulate whooping-cough. Dr. BERNSTEIN thought the term "status lymphaticus," often applied to these cases, was frequently a cloak for ignorance respecting their true nature. Dr. SUTHERLAND said that in certain cases, if the thymus were pulled up and removed at the suprasternal notch, the pressure was relieved. He had seen it done. Dr. Phillips's patient died, he believed, from obstructed breathing. Dr. A. RUSSELL said the weight of the thymus in health usually ranged from 5 to 10 drachms; amongst those who died in this manner its weight was generally 25 drachms. Dr. PHILLIPS, in reply, said the child died from heart failure, not respiratory failure. The case resembled death from uræmia, and he believed the enlargement of the thymus had something to do with the death.

LARYNGOLOGICAL SECTION.

AT a meeting on January 3rd, Dr. J. B. BALL, President, in the chair, the following were among the exhibits:—Mr. W. R. KELSON: A case of *Bleeding polypus* of the nose in a woman aged 20, who had suffered from epistaxis for four months; the polypus was attached to the floor of the nose just below the anterior end of the inferior turbinal. Mr. HERBERT TILLEY: (1) A case of *Constriction of the trachea*, probably syphilitic in origin; (2) a case showing the result of an incomplete Killian operation for *Frontal sinusitis* with immediate suture of the wound. Dr. JOBSON HORNE: (1) A man, aged 43, with thickening and *Injection of the epiglottis*, the right half being the part affected; the disease had progressed recently and was now considered to be malignant; (2) a specimen showing a pedunculated papilloma in the trachea, a microscopical section of a sessile papilloma of the trachea, a specimen of a trachea showing *Pachydermia syphilitica* extending from the larynx, and a section of a diphtheritic membranous cast from the trachea; (3) a man, aged 37, presenting a *Cervical tumour* of twenty years' duration. Dr. J. DONELAN: A case of tumour of the right lobe of the thyroid gland with paralysis of the right cord. Mr. CRESSWELL BABER: A specimen of carcinoma from the inferior turbinal of a woman, aged 80.

EDINBURGH OBSTETRICAL SOCIETY.

Professor STEPHENSON, President, in the Chair.

Wednesday, January 8th, 1908.

UNCONTROLLABLE VOMITING.

SIR HALLIDAY CROOM exhibited a specimen of a six months gravid uterus with a complete placenta prævia from a case which had recently died at the Edinburgh Maternity Hospital from hyperemesis gravidarum. He classified the causes of this disease as either reflex, neurotic, or toxæmic. The latter type might arise from toxines in the bowel, liver, kidneys, or from the uterine contents. The presence in the urine of substances

indicative of toxaemia, or of seriously inadequate metabolism, was the most important indication for the induction of abortion in this type.

Dr. SLOAN (Glasgow) said that as such cases were known to terminate favourably without interference with the pregnancy, there was a temptation to allow them to remain undelivered. Much valuable time was thus lost, and treatment was attempted only when the patient's condition was almost hopeless. In one case which he had met with a perimetritic adhesion had given rise to severe symptoms.

Dr. HAULTAIN believed that hyperemesis gravidarum was either nervous or toxic in origin. Rapid distension of the uterus from hydramnios or myxomatous degeneration of the chorion could produce the disease, which generally manifested itself in the early months of pregnancy. In the later months toxic causes were likely to be the source. The difficulty lay in deciding on the proper time to empty the uterus. He did so when the temperature of the patient began to rise. Clinically there were three stages: (1) Vomiting, with a normal temperature; (2) vomiting, with a rising temperature; (3) vomiting, with a falling temperature. In the latter the condition of the patient was hopeless.

Dr. R. P. RANKEN LYLE (Newcastle) considered that the more severe the vomiting the better from the patient's point of view, as less dubiety existed as to the necessity of interference. He narrated a case in which abortion had to be induced on twenty-three occasions. This patient, when two months pregnant, began to vomit incessantly large quantities of jelly-like material. As a proof of the neurotic origin of the disease, he had seen several cases cured by fear of the suggested operation. In his hands drugs had proved useless.

Dr. HAIG FERGUSON laid stress on the condition of the pulse in determining whether pregnancy should be terminated or not. If coma or delirium had supervened no treatment would avail. If the pulse-rate steadily rose, or if it was becoming feeble or irregular, no time should be lost in emptying the uterus.

Dr. JAMES RITCHIE had found benefit in neurotic cases by the exhibition of nux vomica or strychnine. In toxic cases he doubted if the liver was at fault, as the disease might occur during one pregnancy and be absent from all others. He considered that attention to the pulse was more important than consideration of the temperature.

Dr. FORDYCE did not believe in the neurotic type, regarding all as reflex or toxic. Distension of the uterus might alone suffice to cause emesis. In a severe case of hyperemesis he had seen great benefit conferred by the administration of small doses of morphine. He did not believe in the rapid evacuation of the uterine contents. He had seen two persons die from shock following rapid delivery by the aid of Bossi's dilator.

Sir HALLIDAY CROOM, in reply, said that in dealing with such cases consideration of pulse and temperature was very important, but not so much so as the state of the urine. He believed in rapid evacuation of the uterus. The slow method took a long time, even as much as two or three days. He did not approve of Bossi's instrument for rapid dilatation.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 20th, 1907, Dr. WALKER DOWNIE (President) in the chair, the following were among the exhibits:—Dr. J. G. CONNAL: (1) Nine cases of abnormal *Pulsation in the pharynx*, with notes of 3 other cases (12 in all)—namely 6 women, 3 men, and 3 boys. In 3 the abnormal vessel was bilateral. The pulsating vessel was situated below and behind the posterior pillar of the fauces, and in most of the cases ascended to the naso-pharynx. In 4 cases it was small; in the other 8 it gave one the impression of a large vessel. He thought in the slighter cases the vessel might be the ascending pharyngeal artery, but that in the other cases with more marked pulsation it was probably an abnormally tortuous internal carotid artery. An interesting point was that 3 of the cases were boys, whose ages ranged from 6 to 11 years. All had nasal obstruction from tonsils and adenoids, and in one of them the pulsation was bilateral. (2) A girl, aged 15 years, on whom he had operated for chronic *Purulent otitis media* with involvement of the sigmoid sinus. Purulent discharge (from the right ear) had persisted since childhood, and two days before she came under his observation she had had severe rigors, which continued after admission; the temperature was 105.6° F., pulse 140, and the auditory canal occupied by granulations and foul-smelling discharge. There was marked tenderness over the mastoid. The latter was freely opened up and pus liberated from between the sigmoid sinus and the bone. The sinus was freely opened up and the internal jugular vein ligatured in the neck. A septic abscess developed in the lung. Pus appeared at the lower part of the sinus, as if from the petrous portion of the bone. This healed up, and she was now quite well. The middle ear was practically dry. Dr. A. YOUNG a case of *Multiple exostoses* of the thorax and long bones in a man with well-marked rachitic deformities. The tumours corresponded in situation with the usual rachitic deformities—for example, a tumour over the tibial spine, and another larger one over the junction of one of the lower ribs with its costal cartilage. The former appeared when he was 19; the latter when 22 years of age. A large nodule on the clavicle appeared three years ago when in his 30th year. Dr. LOGAN TAYLOR demonstrated microscopic and museum specimens of *Double tumours*. These comprised tumours which during their life-history passed into a perfectly distinct and different type of tumour. Thus, in the case of adeno-sarcoma, cultivated for forty generations in mice, the carcinomatous element largely predominated. In one series, up till the twelfth generation the carcinomatous elements were in excess; about the sixteenth they were equal, and at the fortieth the tumours were almost entirely sarcomatous. Primary carcinoma in a man with secondary deposits was followed by adeno-sarcomatous growths in the lymphatic glands. In a case of melano-sarcoma of the eyeball with deposits in nearly every organ, primary carcinoma of the liver had taken place. Some of the microscopic sections showed the two kinds of tumour in different parts of the same section. Dr. IVY MACKENZIE made a short communication on the *Spirochaeta pallida* and its etiological relationship to syphilis. The organism was demonstrated in abundance in the lesions of congenital syphilis. The evidence of this organism being the cause of syphilis was steadily growing stronger, but it could not yet be cultivated outside the living body, and inoculation into animals only gave rise to an indefinite disease with little resemblance to syphilis.

HUNTERIAN SOCIETY.—At a meeting on January 8th, Mr. ROWLAND HUMPHRIES, President, in the chair, Dr. DUNDAS GRANT delivered the second Hunterian Lecture on Some Important Aspects of Suppuration of the Middle Ear. The lecturer referred to the extreme seriousness of the various complications of suppuration in the middle ear; of these the aurist probably saw more than his fair share and the general practitioner of medicine less, but whoever had experience of them realized the extreme danger and anxiety connected with them. In some acute and fatal cases he had seen, incision of the tympanic membrane had been postponed, or the opening of the mastoid cells had been relegated until infection of the blood or of the cranial contents had taken place. The reasons for delay were in many instances quite insufficient. In other cases early intervention appeared to have been the means of averting dangerous complications. With antiseptic precautions even those who did not profess to be operative experts might put their patients in safety by making an opening in the mastoid cells when more skilled aid was not available. Early and quick operation was advisable in diabetics in view of the rapidity with which the mastoid bony tissue broke down in these subjects, though no doubt a positive result with the aceto-acetic test would be a contraindication. Among interesting errors in diagnosis he quoted a case of lateral sinus phlebitis which had been previously diagnosed as enteric fever, and one of enteric fever which he himself had diagnosed as otitic septicaemia. In another case he had found lobar pneumonia to be the cause of constitutional disturbances which had by others been attributed to purulent otitis. In another exceptional case certain cerebral disturbances were, in view of a history of former otorrhoea, attributed by the physician in charge to a probable intracranial complication of middle-ear disease, but in reality the lecturer had attended the patient for condylomata of the meatus, and the cerebral disturbances disappeared rapidly under treatment by means of mercury and iodide of potassium. Recognition of cholesteatoma of the middle ear was of

vital importance in chronic suppuration of the middle ear. There was danger in the use of watery solutions for instillation or syringing when this condition was present. Alcoholic solutions were, on the other hand, of the greatest value.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a clinical evening on January 3rd, Mr. RICHARD LAKE, President, in the chair, the following were among the exhibits:—By Dr. SEYMOUR TAYLOR: A man, aged 59, with *Dysphagia* caused by an aneurysm on the third part of the aortic arch. None of the cardinal signs of aneurysm were present, but a bougie was obstructed 12 in. from the incisor teeth, and a skiagram showed the tumour. There was also extensive calcareous degeneration of the arteries. By Mr. PERCY PATON: A man, aged 47, with *Epithelioma* of the floor of the mouth, attached to the jaw, and also involving the tongue and lymphatic glands. By Dr. PHINEAS ABRAHAM: Four bald-headed children, the condition having been caused by *x* rays applied three months ago for the cure of ringworm. Mr. ASLETT BALDWIN: (1) A man, aged 30, after removal of breast for *Carcinoma*. The patient was shown at the last clinical evening two months ago. There was then a deeply ulcerated growth in the situation of the right breast with secondary growths in the skin and enlarged axillary glands. The breast, sternal part of the pectoralis major, the deep fascia from close to the clavicle, in front of the sternum, 2 to 3 in. below the xiphoid cartilage, to posterior boundary of the axilla, together with the axillary lymphatic glands, had been removed. The patient is now doing his full work as a butcher, and can raise his hand and arm vertically above his head without difficulty. (2) A girl, aged 1 year 8 months, with what was probably a *Sarcoma* starting in the left maxillary antrum. There is great prominence of the left eye and depression of the palate on the same side, also a large swelling in the right temporal region. Mercury has caused no alteration in the growths, which are steadily increasing in size. They were first noticed on December 17th, 1907.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 8th, Dr. L. W. MARSHALL (President) in the chair, Dr. M. L. FARMER showed a man, aged 47, who had been the subject of *Alcoholic neuritis*, affecting all four extremities. In the case of the feet symmetrical blebs and vasomotor disturbances had occurred, reaching as far as the ankles. He had made a very good recovery. Mr. A. R. TWEEDIE read a paper on *Otosclerosis*. He pointed out that, although it had only recently been regarded as a pathological process distinct from other diseases, a very large amount of research work had been done in this direction. The chief result of this, however, was only to determine that the disease was essentially a localized osteitis. It commenced probably about the second or third decade in the immediate neighbourhood of the foramen ovale, and led with varying degrees of rapidity to ankylosis of the stapedio-vestibular articulation, and the chief clinical characteristic was a progressive deafness, which was unaffected by local treatment. Mention was also made of the other adjacent areas in which the disease occurred, and of its association with other local and general conditions. The author urged its early diagnosis with the hope that in its incipient stages routine, tonic, alterative, and hygienic treatment might arrest its further progress. Dr. J. WATSON showed specimens of ovarian tumours removed by operation, two of which were dermoids, and a third was a cyst where torsion and consequent pain and haemorrhage had occurred. A fourth was a broad ligament cyst containing 21 pints of fluid. The capsule was so lax that it might have caused some confusion with general ascites or hydatid.

AT the annual meeting of the Liverpool Medical Institution on January 9th, the following officers were elected for the ensuing year: President, T. H. Bickerton; Vice-Presidents, F. C. Larkin, R. W. Murray, H. E. Jones, C. Thurstan Holland; Treasurer, R. A. Bickersteth; General Secretary, J. E. McDougall; Secretary of Ordinary Meetings, R. J. M. Buchanan; Secretary of Pathological Meetings, D. Douglas-Crawford; Librarian, W. B. Warrington; Editor of the Journal, J. Hay. A Council of twelve members was also elected.

REVIEWS.

DISEASES OF CHILDREN.[1]

THE editors of the Oxford Medical Publications were exceedingly happy in their choice of Dr. LEONARD GUTHRIE to write on *Functional Nervous Disorders in Childhood*. We have read his book with the greatest interest and pleasure. It deals with many subjects, such as "The effects of emotion in health," "The hypersensitiveness of special senses," "The fears of neurotic children," "Fretting and home-sickness," "Moral failings," "Mental and educational overstrain," and others of importance to the mental and bodily welfare of the child, which receive little, if any, attention in the ordinary textbooks. It would be well if Dr. Guthrie's remarks on the feeding and general treatment of children could be impressed on nurses, schoolmasters, and others entrusted with the care of the young. We are disposed to agree with the author's protest against intemperate overstatements of the case against the use of tobacco and alcohol. Ordinarily intelligent schoolboys will not accept such exaggerations for the truth; and fortunately so, for otherwise many of them would be profoundly distressed in mind, and their healths would suffer in consequence, from the conviction that their male parents were well on the road to perdition. Dr. Guthrie takes a wide view of what may be considered a functional nervous disease; nevertheless, it is a surprise to find congenital pyloric stenosis classified as a functional nervous disease, let spasm play as large a part in that complaint as it may. In writing of the irritation arising from ill-fitting or frayed clothing, he says: "It may be that a considerable number of cases of habit spasm and even *rheumatic* chorea are partly due to constant irritation of the kind." That cases of tics should thus arise is conceivable and probable, but that chorea or any other phase of rheumatism should so originate is difficult to accept. The chapter on chorea is, perhaps, the least satisfactory in the book, and the author's arguments in favour of the complaint being in every case a rheumatic manifestation are far from convincing; but chorea is a fertile field for medical contention. At the end of the work are some excellent chapters on defects in speech in children. On almost every page Dr. Guthrie's text is pointed by the happiest of quotations from ancient and modern writers or by incidents in the lives of eminent personages. It is saying much to state that his sense of humour is commensurate with his erudition, and the combination of the two make many of his chapters delightful reading. We have nothing but commendation for his work, which well deserves the success it will assuredly attain.

Dr. SUTHERLAND has added to the value of his book on *The Treatment of Disease in Children* by prefacing the account of the treatment of each complaint with a brief description of its more usual symptoms, in which few points of importance seem to have been missed. His advice on infant feeding is short but adequate, and most of those with the requisite experience will agree with him that its difficulties have been exaggerated, and that the main essentials for its satisfactory performance are "pure fresh milk, clean hands on the part of the nurse, regular feeding, and no overfeeding." The elaborate methods of so-called "percentage" feeding, for which the advantage of being "scientific" was so loudly claimed, have been tried and found wanting, and have now been largely abandoned in favour of simpler methods, in which there is a recognition of the fact that no possible modification of cow's milk can make it identical in composition with the maternal product. In the rest of Dr. Sutherland's book we find much to commend and but little to criticize. As it is mainly to him we owe the knowledge of the occasional occurrence of cerebral and meningeal haemorrhage in infantile scurvy, it is odd that he omits

[1] Oxford Medical Publications. *Functional Disorders in Childhood.* By Leonard G. Guthrie, M.A., M.D., F.R.C.P., Senior Physician to Paddington Green Children's Hospital, Physician to the Hospital for Epilepsy and Paralysis, Maida Vale. 1907. (Demy 8vo. pp. 310. 7s. 6d.) *The Treatment of Disease in Children.* By G. A. Sutherland, M.D., F.R.C.P., Physician to Paddington Green Children's Hospital, to the North-West London Hospital, and to the City Orthopaedic Hospital. 1907. (Cr. 8vo, pp. 319. 5s.) *The Skin Affections of Childhood, with Special Reference to those of more Common Occurrence and their Diagnosis and Treatment.* By H. G. Adamson, M.D.Lond., M.R.C.P., Physician for Diseases of the Skin, Paddington Green Children's Hospital. 1907. (Cr. 8vo, pp. 303, 12 plates. 5s.) London: Henry Frowde, Oxford University Press, and Hodder and Stoughton.

reference to these sites in dealing with that complaint. His statement that "simple pleurisy, with or without effusion, is not a common affection in childhood" is directly opposed to that of most writers. One well-known authority, indeed, writes that pleurisy is one of the commonest diseases of infants and children. Primary serous pleurisy, of tuberculous origin, we should not have considered a rarity in children. In the treatment of empyema Dr. Sutherland is opposed to simple incision, and says "in many cases it will prove most inefficient and will delay recovery." This may be so; nevertheless, there is a growing disposition to prefer simple incision to rib resection in properly selected cases. Increasing experience shows that with simple incision ample and adequate drainage is obtainable, and that rib resection is certainly not always necessary for the removal of masses of lymph or for the breaking down of adhesions. The operation of simple incision is less severe than that of rib resection, and with the former the drainage tube can be earlier removed, there is less tendency to necrosis of rib and sinus formation, and the duration of treatment is often materially shortened. Dr. Sutherland makes out a strong case in favour of a temporary proteid diet in tuberculous peritonitis, as opposed to the "sloppy" one usually ordered in that complaint. His arguments should certainly lead to a trial of the methods he suggests. We are surprised to learn that in his opinion "the prognosis in uncomplicated tuberculous peritonitis is good, and even when tuberculous pleurisy is present, as often happens, it is still favourable." Now, observation continued over several years has shown that the ultimate results of tuberculous pleurisy alone are grave in the extreme, and we hardly think such results are likely to be improved by the pleurisy being complicated by a tuberculosis of the peritoneum. The points we have raised are mainly debatable ones, and in no way diminish the favourable impression produced of Dr. Sutherland's book. This work is a valuable exposition of the wide experience of a careful and trustworthy observer.

As skin diseases often present special features in infancy and childhood, there is justification for Dr. ADAMSON'S small manual entitled the *Skin Affections of Childhood*. On the whole it may be said that the work is satisfactory, and that the author's description of the different diseases and their treatment is both accurate and adequate. But the book in places gives the impression of having been rapidly written and carelessly revised, and many sentences are faulty in construction, and in some the meaning is so obscure as to be unintelligible. In dealing with congenital syphilis, Dr. Adamson advises that if the infant has sores about the mouth, and the mother is free from symptoms of the complaint, she should refrain from suckling her child. From this we infer that he is a believer in exceptions to Colles's law. Now there are many who share with him the belief that there are occasionally genuine exceptions to the so-called "law," but who, nevertheless, would disagree with his advice, the positive gain of many infants from maternal feeding far outweighing the small risk encountered by an individual mother of contracting the complaint. The dose of mercury, too, he advises—¼ to ½ grain of grey powder three times a day—is too small for ordinary cases of inherited syphilis. On the other hand, the doses of turpentine, ℥iij with ℥iij of castor oil, three times a day, advised in the treatment of purpura, seem to us very large. Dr. Adamson has evidently an intimate knowledge of his subject, and the merits of his little work outweigh the defects we have pointed out.

In spite of its bulk of nearly a thousand large pages, many important complaints receive but scant attention in Dr. FISCHER'S *Diseases of Infancy and Childhood*.[2] Thus, pseudo-hypertrophic paralysis, Friedreich's disease, splenic anaemia, Raynaud's disease, are each dismissed in the space of half a page, and numerous other examples of similar brief treatment could be furnished. The author, indeed, would seem to be lacking in a sense of proportion in the disposal of the space at his service. Infant feeding occupies 160 pages, and in this section are included analyses of the composition of most of the well-known patent infants' foods, and of others that are new to us. Much space is occupied by material that is to be found in the ordinary textbooks on chemistry and bacteriology, and still more by the inclusion in the text of numerous illustrative cases of the various complaints. Most of these cases seem to us pointless, and in too many instances the space they occupy might have been more advantageously filled by a fuller description of the symptoms. The author, however, would not seem to have made the best use of the space he has left himself, for exception could be taken to statements in almost every page of his work. In the section on pseudo-hypertrophic paralysis, although he states he has seen marked enlargement of the calf muscles, he says: "The muscles most frequently affected are the deltoids, biceps, triceps, latissimus dorsi, and sterno-mastoids." There is a fairly long description of epidemic cerebro-spinal meningitis, at the beginning of which it is mentioned that sporadic cases occur, but no one would gather from this that a form resembling the epidemic one is a common disease in infants under the age of two. In dealing with syphilis, Dr. Fischer writes, "The gastro-intestinal tract is the one that will frequently show the manifestations of syphilis." And again, "When a persistent diarrhoea will not respond to the ordinary treatment of careful diet and medication, then suspect syphilis. When diarrhoea, such as a mucous colitis, persists without fever after careful dieting, then syphilis may be suspected." This last is a theory that will be new to most. For the internal treatment of syphilis he advises that "calomel and bichloride or the tannate of mercury can be given in suitable doses," but no indications are given as to what these "suitable" doses are. In the section on pericarditis is the statement, "Large effusions occur more readily in children than in adults." This is contrary to the experience of most authorities and needs confirmation. He rightly ascribes to rheumatism the foremost place in the causation of pericarditis, but goes on further: "Tuberculosis, scarlet fever, diphtheria, measles, typhoid, and influenza, frequently precede a pericarditis." That cases of tuberculous pericarditis occasionally occur is true undoubtedly, but they are far from common, and there must be many observers of wide experience who have never seen pericarditis associated with any one of the other diseases named. If pericarditis were a frequent complication of these complaints, *post-mortem* evidence of the fact should be readily forthcoming if Dr. Fischer's estimate of the mortality of pericarditis even approximates to the truth, for he writes: "The prognosis should always be looked upon as very grave. Steffen states that out of 35 cases only 6 recovered." The author on very numerous occasions gives statements and statistics from the writings of others, and when he allows them to pass uncommented on, as in the quotation given from Steffen, we take it that he accepts them as confirmatory of his own opinion and experience. From the extracts given it will be readily gathered that Dr. Fischer's work cannot be considered a satisfactory guide to the diseases of children until numerous corrections and alterations have been made in the text.

The Practice of Pediatrics, edited by Dr. WALTER LESTER CARR, is a compilation by fourteen authors, of whom two are English and the rest American.[3] As with most books compiled on this plan, the contributions vary widely in merit, but on the whole it may be said that most of the articles give an adequate description of the subjects on which they treat. The section on diseases of the newborn, by Dr. Edward P. Davis, and that on development, growth, and hygiene, by Dr. Leroy Milton Hale, are well written, and contain all that is of practical importance on these subjects. Infant feeding is well dealt with by Dr. Thomas Southworth in the space of eighty pages, and it is interesting to note the absence of most of the elaborate and complicated systems that once found such favour on the other side of the Atlantic. Dr. Tuttle has written a good article on rickets, and there is internal evidence

[2] *Diseases of Infancy and Childhood, Their Dietetic, Hygienic and Medical Treatment.* A textbook designed for practitioners and students in medicine. By Louis Fischer, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals of New York City etc. Philadelphia: F. A. Davis Company. 1907. (Roy. 8vo, pp. 979, with 303 illustrations, several in colours, and 27 full-page half-tone and colour plates. 23 50.)

[3] *The Practice of Pediatrics*, in Original Contributions by American and English Authors. Edited by Walter Lester Carr, A.M., M.D., Consulting Physician to the French Hospital, New York; Visiting Physician to the New York City Children's Hospitals and Schools. The Practitioner's Library. London: Henry Kimpton. 1906. (Demy 8vo, pp. 1014, illustrated with 199 engravings and 32 full-page plates. 21s. 6d.)

that he has widely consulted the writings of others in its compilation. The like criticism could be passed on the article on congenital syphilis by the same author, who quotes with approbation O'Dwyer's opinion as to the reality of possible exceptions to Colles's law. Rheumatism is classed amongst the infectious diseases, and is dealt with by Dr. Ruhräh. In more than one place the writer rightly emphasizes the differences between the disease as it occurs in children and in adults, but in other respects the description is unsatisfactory. Where an arthritis in a child, too, is so acute and persistent as to render the use of a Paquelin cautery advisable, however carefully the implement may be applied, we would consider the diagnosis of rheumatism open to question. Perhaps the best section in the book is that on diseases of the respiratory tract by Dr. Clive Riviere. Writing of lobar or croupous pneumonia, the common pneumonia of adult life, he states that it is "still more common in infancy." It is only a few years ago since he wrote to the directly contrary effect. That further investigation has led him to alter his opinion is a strong confirmation of the correctness of those who have always held the view that Dr. Riviere now expresses. There is a very interesting and suggestive chapter on fibrosis of the lung in children. That this disorder is more frequent in children than is commonly supposed may be admitted, but we cannot but think that Dr. Riviere somewhat over-estimates this frequency; nor have we found that the periods of pyrexia and exacerbations necessarily follow in the regular order that he suggests. The book is well got up, the paper, printing, and most of the illustrations being excellent.

The title of Dr. KERR'S book, *Diagnostics of the Diseases of Children*, may sound strangely on this side of the Atlantic, but it sufficiently indicates the purport of his work.[4] It is a gratifying proof of the increased interest taken in children's diseases that the publication of books dealing with only a limited portion of the subject is becoming not uncommon. Part of the work is written on unconventional lines. Thus, the symptom, vomiting, is considered under the headings of "vomiting accompanied by little or no rise of temperature," "vomiting accompanied by decided rise of temperature," "vomiting from toxaemia," "vomiting associated with obstinate constipation," "diseases of the stomach with vomiting as a prominent symptom." Many other single symptoms are dealt with in a similar manner, besides being treated of in the description of the diseases in which they arise. Such classifications would seem to have some advantages, if the importance of the subdivision is not too much insisted upon. For the symptoms of disease vary more in children than in adults, and in two children with the same complaint attended with vomiting, in the one the temperature may run abnormally high, and in the other rise little if at all above the normal. Many other examples will readily suggest themselves where the value of Dr. Kerr's methods may be discounted. In dealing with the differential diagnoses of the different disorders Dr. Kerr would seem prone to bring in many complaints which could only by the wildest imagination be confounded with that he is describing. His book, too, might have proved more useful if he had in the first instance credited his readers with a general knowledge of disease as seen in adults, and the space occupied by points of elementary medicine, to be found in every textbook, might have been better devoted to the special features of the disorders when occurring in children. On page 450, in distinguishing between the two forms of syphilis seen in children, he states that the presence of Hutchinson's teeth is strong evidence in favour of the acquired one. This is contrary to all experience, and indeed the statement is apparently contradicted later on in the same chapter. Other examples of careless writing or revision could be given. Many parts of his work, however, are well written and interesting. The illustrations, like the text, are unequal, some being good and others commonplace and pointless.

Dr. KERLEY'S book on the *Treatment of the Diseases of Children* is one of the best on that subject that have come under our notice.[5] All through it shows evidence of ripe experience and sound judgement, and many important points are dealt with that are scarcely noticed in most of the ordinary textbooks. Every aspect of treatment would seem to have received consideration at his hands, and his remarks as to prevention and the management of cases between attacks of recurrent disease are as valuable as those dealing with the actual attacks. If his methods of management of infants during hot weather could be impressed upon mothers and nurses little would be seen of the annual scourge of summer diarrhoea, with its lamentable mortality. In a work of this size on treatment it would be natural to find numerous statements to which exception might be taken, but there are very few instances in which we are not in accord with Dr. Kerley. It may be questioned whether the bichloride is the best form of mercury for internal administration in infantile syphilis, and, moreover, the maximum daily dose of that salt advised by the author is less than a third of that commonly given in this country. Many, too, will disagree with the advice to circumcise every male infant as a routine practice. The statement, again, that "not a few cases of persistent eczema in infants are associated with gout and rheumatism" is surprising, and will hardly be accepted without stronger evidence in its favour. The few controversial points we have raised are minor ones, and in no way diminish the high opinion we have formed of Dr. Kerley's work.

The *Atlas and Epitome of Diseases of Children*, by Drs. HECKER and TRUMPP,[6] is much more conspicuous for its wealth of illustrations than for the amount of letterpress. In a book dealing with both the medical and surgical complaints in the compass of 436 small pages with 147 illustrations, many of them of full-page size, it will be readily conceived that the space allotted to each disorder is somewhat meagre. Many important diseases are dismissed in a few lines, and the description given hardly amounts to an adequate definition. In no single instance, perhaps, could the description of a complaint be deemed satisfactory, even for a work professing to be merely an epitome. But with all its obvious drawbacks the book may prove highly useful. The illustrations, both coloured and plain, are so numerous and excellent that, used in conjunction with a larger textbook, the work might be of the greatest assistance, especially to those who have lacked the opportunity of gaining clinical experience at a children's hospital. In the preface it is claimed for the plates that they are "very lifelike," and we think the claim can be fairly conceded.

We have not usually been impressed with the merits of small books purporting to serve as introductions to the larger treatises on special diseases. As a rule, such works are more noteworthy for the importance of the information omitted than for that contained. An exception to this rule may fairly be claimed for Dr. MCCAW'S *Aids to the Diagnosis and Treatment of Diseases of Children*.[7] It contains a large amount of accurate information, which is clearly and tersely expressed. In the new edition the work has been revised and much new matter included. We might point out, as a minor omission, that there is no reference in the index or the text to the subject of night terrors. The work deserves the success it has achieved, and we doubt not the third edition will receive as favourable a reception as the earlier.

In reviews of former editions we have pointed out what we considered the merits and faults of Dr. ROTCH'S *Pediatrics*.[8]

[4] *Diagnostics of the Diseases of Children*. By Le Grand Kerr, M.D., Professor of the Diseases of Children in the Brooklyn Post-Graduate Medical School, Pediatrist to the Swedish Hospital in Brooklyn. Philadelphia and London: W. B. Saunders Company. 1907. (Roy. 8vo, pp. 542; fully illustrated 21s.)

[5] *Treatment of the Diseases of Children*. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital; Attending Physician to the New York Infant Asylum, etc. Philadelphia and London: W. B. Saunders Company. (Roy. 8vo, pp. 596. Illustrations 71. 21s.)

[6] *Atlas and Epitome of Diseases of Children*. By Dr. R. Hecker and Dr. J. Trumpp of the University of Munich. Authorized Translation from the German. Edited by Isaac A. Abt, M.A., Assistant Professor of the Diseases of Children in Rush Medical College. Philadelphia and London: W. B. Saunders Co. 1907. (Cr. 8vo, pp. 453. With 48 coloured plates and 147 black and white illustrations. 21s.)

[7] *Aids to the Diagnosis and Treatment of Diseases of Children*. By John McCaw, M.D., Physician to the Belfast Hospital for Sick Children. Third edition. London: Baillière, Tindall and Cox. 1907. (Foolscap 8vo, pp. 383. 4s. 6d.)

[8] *Pediatrics: The Hygienic and Medical Treatment of Children*. By Thomas Rotch, M.D., Professor of Pediatrics, Harvard University. Fifth edition, rearranged and rewritten. Philadelphia and London: J. B. Lippincott Company. 1907. (Demy 8vo, pp. 1030. 25s.)

That its merits have been generally deemed to more than compensate for any shortcomings is proved by the work having so soon reached a fifth edition. In this it is claimed that the book has been revised and rewritten. We may, however, point out the curious fact that on page 749, in the section dealing with the treatment of functional heart disorder, notes of a case of primary malignant endocarditis are inserted, without any introduction or explanation. Other instances could be given where the revision has apparently been hasty and unsatisfactory. Needless to say the section on infant feeding retains its original complete and elaborate form.

The third edition of Dr. HOLT'S well-known *Diseases of Infancy and Childhood*[9] was only published in October, 1906, and that a new edition has so soon been called for is sufficient testimony as to the way in which its merits have been appreciated. In this new edition the matter has been revised and added to, and we note with pleasure the fact that the chapters on infant feeding have been simplified. This welcome improvement will in no way diminish the practical value of the work for either practitioners or students. We are sorry to see, however, that the statement that "sucking" leads to deformity of the spine, masturbation, and other disorders is retained unchanged. Coming from an authority like Dr. Holt the statement is amazing, and we regard it as a serious blot on his excellent book.

POPULAR MEDICINE.

WE have received a copy of the *Standard Family Physician*,[10] edited by Sir JAMES CRICHTON-BROWNE, the late Sir WILLIAM BROADBENT, Dr. ALFRED T. SCHOFIELD, Professor KARL REISSIG, and Dr. SMITH ELY JELLIFFE, with the assistance of "many European and American specialists in the treatment of diseases and experts in medicine and surgery." The "editing" of the English editors, whose names are put first, would seem to have been limited to the contribution by each of a single short paper which is printed in the forepart of the first volume; in one instance the paper is avowedly a reprint of one published elsewhere. The spelling of such words as "fiber," "goiter," "center," the use of the formulae of the *United States Pharmacopoeia*, the description of such household appliances as cellar furnaces, and the reference to the frequency of malaria in the suburbs of large towns, show that it is an American and not an English publication. The information it contains has been compiled from standard medical works, and includes so much anatomy that a cardboard mannikin showing dissections is supplied, but it is hardly to be supposed that the average lay person, the father or mother of a family, who might wish to possess a medical book of reference, would devote sufficient time to the study and comprehension of so much anatomy and pathology. Most of those who buy books of this class wish for assistance in cases of urgent sickness, and we think they would be disappointed with this book. Even when drugs are recommended, the dose is not mentioned, and the information about treatment is merely general—for example, advice as to hygiene, clothing, exercise, diet, and sometimes simple local applications. This is perhaps as it should be. Considering the small part that the three English editors have had in the production of this encyclopaedia, we are surprised that they should have allowed their portraits to be published as frontispieces to the several volumes, but they have been made parties to an even more serious violation of professional propriety in the way in which the work has been advertised in the lay press. It is especially to be regretted that the honoured name of Sir William Broadbent should have been made to figure in such advertisements, as they are entirely at variance with the expressed opinions of the Royal College of Physicians and with the customs of the medical profession in this country.

[9] *The Diseases of Infancy and Childhood.* By L. Emmett Holt, M.D., Sc.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York. Fourth edition. Revised and enlarged. London: Sidney Appleton. 1907. (Octavo, pp. 1171, with 241 illustrations.)

[10] *The Standard Family Physician.* Three volumes. Edited by Sir James Crichton-Browne, M.D., LL.D., F.R.S., Sir William Broadbent, Bart., K.C.V.O., M.D., F.R.S., Alfred T. Schofield, M.D., M.R.C.S.E., Professor Karl Reissig, M.D., and Smith Ely Jelliffe, A.M., M.D., Ph.D. London and New York: Funk and Wagnalls Co. 1907. (Roy. 8vo, pp. 1100; 500 illustrations; 24 coloured plates; 3 volumes; 4 guineas.)

NOTES ON BOOKS.

THE sixth edition of *A Short Manual for Monthly Nurses*,[11] a book by one of the most honoured and trusted obstetric physicians of his time, does not call for detailed notice. Monthly nurses cannot find a better adviser than Dr. CULLINGWORTH, and it gives us much pleasure to say so.

Dr. W. HILDEBRANDT, of Freiburg i. B., has issued a diagram of the trunk,[12] which may be best described as on Mercator's projection. The advantage is that notes of the condition of the sides of the chest and abdomen can be entered in their proper place on the diagram. On the cover are printed a number of conventional signs for representing various morbid conditions.

The Sanitary Record Year Book and Diary for 1908[13] is the twenty-sixth annual issue. The various improvements recently introduced have been continued. The diary proper shows a week on an opening, and contains notes as to dates for receiving and preparing reports and returns. The prefatory matter includes a short article containing a summary of the sanitary legislation of 1907, and tables of memoranda likely to be particularly useful to medical officers of health and others engaged in sanitary administration.

We have received the forty-fourth edition, that for 1908, of *Herbert Fry's Royal Guide to the London Charities*,[14] edited by Mr. JOHN LANE, who in a preface gives a summary of the principal benefactions made during the year, together with other particulars bearing on the progress of charitable efforts in the metropolis. The bulk of the book consists of a tabulated statement of the aims, resources, and chief officials of the charities, arranged in alphabetical order.

Mr. W. F. HOWE is to be congratulated on having edited every one of the thirty-three annual editions of *The Classified Directory to the Metropolitan Charities*.[15] We referred last week to some of his statistics. This volume is classified according to the objects of the charities, but has an alphabetical index. In the appendix there is a list of the principal charities in England and Wales outside the metropolis.

[11] *A Short Manual for Monthly Nurses.* By Charles J. Cullingworth, M.D., F.R.C.P., Consulting Obstetric Physician to St. Thomas's Hospital. Sixth edition. London: J. and A. Churchill. 1907. (Fcap. 8vo, pp. 128. 1s. 6d.)

[12] *Schema des Rumpfes.* Von Privatdozent Dr. W. Hildebrandt. München: J. F. Lehmann. (Dbl. fcap. 32mo, pp. 20. M. 1.20.)

[13] *The Sanitary Record Year Book and Diary, 1908.* Twenty-sixth annual issue. London: The Sanitary Publishing Company, Limited. (Sup. roy. 8vo, pp. 124. 2s. 6d.)

[14] *Herbert Fry's Royal Guide to the London Charities.* Edited by John Lane. Forty-fourth edition. London: Chatto and Windus. 1908. (Cr. 8vo, pp. 382. 1s. 6d.)

[15] *The Classified Directory to the Metropolitan Charities for 1908.* Thirty-third annual edition, edited by W. F. Howe. London: Longmans, Green and Co. (Crown 8vo, pp. 210. 1s.)

MEDICAL AND SURGICAL APPLIANCES.

A Commode Bed.

A SPECIAL mattress for the use of the bed-ridden obtained a certain vogue a good many years ago, and may still be in use in certain places. It had a hole in the middle through which excreta could be passed, but was an uncleanly kind of contrivance which modern skilled nursing has rendered less than ever desirable. The same idea has been taken up by Mr. Heatley, a member of the Royal College of Veterinary Surgeons, of Dean Park Street, Edinburgh, who, without being aware that anything of analogous kind had ever existed, has brought out what he terms "the commode bed." The idea is the same, but it is so well realized that the disadvantages of its predecessor are removed. A very simple kind of ratchet apparatus supports a cushion, filling a rubber-lined hole in the centre of the mattress, and over this a draw sheet can be placed. When required, a special kind of bed-pan is substituted for the cushion with great ease, and thanks to the mechanism mentioned, is brought into actual contact with the patient's body, and can be as readily removed. It is a bed likely to prove of great value in many circumstances, saving labour on the part of skilled nurses, and making things easier for many patients. It would also facilitate douching in gynaecological, obstetric, and other cases, and enable those who are merely bed-ridden and not otherwise ill, to have their needs met in less unpleasant fashion than is at present possible. The bed is made by the Heatley Commode Bed Company (sole manufacturers), 37, Castle Street, Edinburgh.

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(*Continued from p. 94.*)

ANTIVIVISECTIONIST TESTIMONY.

Evidence of the Hon. Stephen Coleridge (continued).

COMING to the latter part of the charge that the Home Office had constituted themselves the mere spokesmen of the vivisectors, Mr. Coleridge said this had never been so openly exposed as in their own reports, in which they incorporated exactly what the vivisectors told them. Referring to a paper by Dr. Cecil Shaw published in the BRITISH MEDICAL JOURNAL of June 18th, 1898, the witness said that on inquiry he found that the alleged author of the experiments there described had never held a licence under the Act, much less the necessary certificate. It looked, therefore, very much as if there had been a breach of the law. Special inquiries were made on the subject, and the society's solicitor went to Belfast to continue those inquiries on the spot. It was found impossible, however, to fix the exact date of the experiments, which was necessary as a preliminary to bringing the matter before any court. That showed the difficulty they had about bringing law actions. As a last resource it was determined to lay the facts before the Irish Government. The correspondence which followed showed what happened. He got a letter from the Chief Secretary's Office, Dublin, in which the correspondence was enclosed. It was a letter from Dr. Shaw to his very good friend Dr. Lorrain Smith, who had a licence, and a letter from Dr. Lorrain Smith to his very good friend Dr. Shaw, who had not. The letter from Dr. Lorrain Smith, who had a licence, to his friend Dr. Shaw, who had not, was as follows—both of them were dated the same day; they must have met in the street and exchanged them:

Sir,—On receiving your note of yesterday's date I referred the matter to Dr. Shaw, and I beg to enclose his reply. I regret that his paper is so worded as to be possibly misleading in regard to the vivisection experiments on inflammation of the eye which I allowed him to use. These experiments are performed by me (that was the man with the licence) in investigating the process of inflammation, and for them I held the necessary certificate. I may further state that I reported the experiments in question to the Chief Secretary at the end of 1897 amongst other similar experiments on the process of inflammation. The experiments in which I as director of the laboratory aided Dr. Shaw were not on living animals.

Then Dr. Shaw wrote to his friend, Dr. Lorrain Smith:

Dear Dr. Lorrain Smith,—I regret that any ambiguity in expression in my paper on sympathetic inflammation in the eye should have given rise to a misunderstanding. Your aid and advice were given in the whole course of the research, which included many bacteriological and other experiments, besides those involving vivisection. These latter, very few in number, were, I understand, part of the series of your own experiments on inflammation, of which you allowed me to make use. I had no responsibility beyond taking notes and undertaking subsequent histological examination of the tissues.—Very sincerely yours, Cecil E. Shaw.

So that Mr. Cecil Shaw, who in the papers said "My own work consisted of this, that, and the other," and "In the experimental research my aim was to discover," and "This rabbit I have kept alive to observe," and so forth, when asked by the authority to explain how he did this, said: "Oh, it was not I; it was my friend Mr. Lorrain Smith. I am sorry if there is any ambiguity of expression in my papers." He could see no ambiguity of expression. It was, "This rabbit I have kept alive," not "My friend Mr. Lorrain Smith." Asked if it was now his suggestion that those two gentlemen were saying what was not true, Mr. Coleridge replied that that was his suggestion. The Chairman said that when he heard the explanation it was quite capable, to his mind, of being an ambiguous expression. If there had not been any other evidence he should have thought Dr. Shaw was speaking of his own work. But he could quite understand, if there was another operator, how Dr. Shaw should have written that; and that being so, it seemed to him that they required rather more evidence, if they were asked to say that these two gentlemen had concocted a lie, than a mere suggestion that those words were a distinct and express admission by Dr. Cecil Shaw that it was his hand that operated, and not Dr. Lorrain Smith's. In reply, Mr. Coleridge said new light was thrown upon the proceedings in the BRITISH MEDICAL JOURNAL of July 22nd 1899, on page 220, where, in the report of the Scientific Grants Committee for the past year, was the following:

Shaw, C. E., M.A., M.D., 14, College Square East, Belfast.—For a research on sympathetic ophthalmia necessitating the purchase of monkeys and dogs and apparatus, £12.

He called that corroborative evidence that Dr. Cecil Shaw was the person who did those experiments, because he was given money to do them, and to purchase monkeys, dogs, and apparatus for the purpose. Further down, the Editor of the BRITISH MEDICAL JOURNAL said on page 224:

Dr. Cecil Shaw has, owing to circumstances, had to abandon for the present the research for which he received the grant.

Putting all that evidence together, he maintained that that was sufficient evidence that Dr. Cecil Shaw did those experiments himself. The Chairman said that, supposing that Dr. Shaw had undertaken a research of this kind, and thought it was one that would yield useful results, supposing he had not got a licence, and got his friend, who had a licence and a laboratory, to do the manual work that was necessary, would not everything then be consistent? The witness replied he thought not. Dr. Shaw said himself, "My own work." The Chairman said they had gone through all that, and he had said what the effect was upon his mind. Mr. Coleridge, in reply, said the effect on his mind was very different. Proceeding, the witness said his complaint was that what he called the absurd explanation of those two vivisectors was immediately accepted by the authorities. In reply to Sir John McFadyean, he said they ought to have prosecuted Dr. Shaw for performing a very cruel experiment upon those rabbits without any licence. They could have got evidence and got to the bottom of it, instead of which they accepted immediately these ridiculous letters of those two gentlemen. In reply to Dr. Gaskell, who asked was not the case of Ferrier and Yeo a very parallel case, the witness said, Yes. Asked if the law courts did not say that the evidence was distinctly that, although Ferrier used the word "I" and spoke of them as his experiments and got the money for the very purpose, the experiment was really done by Yeo, Mr. Coleridge replied, I dare say. His next charge against the Home Office was that they accepted the suggestion made to them by some nameless adviser, that to starve animals for days was not cruel, when they must have known that if any one of them starved their own horses (if they had any), the nearest policeman could successfully prosecute them for cruelty to animals under Martin's Act. The charge was based upon this evidence. The *Journal of Physiology*, vol. xix, p. 193, contained an account of great cruelty inflicted on animals by Dr. Noel Paton. On page 193 he stated that he starved a kitten for fifty-six hours and a half; on page 194 he said he starved two pigeons for ninety-six hours; on page 199 one read:

Experiment 38. Three young rabbits of a brood, procured on June 7th, and starved to June 9th.

He asked the Home Office whether the certificate under which these cruelties were perpetrated was Certificate A, and what were the names of the professors who signed that certificate; and further, whether, in the opinion of the Home Secretary, starving animals for days together was correctly described as a "trivial operation," because Certificate A, they had been told, was only issued for trivial operations. The answer was that they had communicated with Dr. Noel Paton, and that they had ascertained from him that the experiments were not performed under any certificate specified in the Act. Asked if Dr. Noel Paton did not say what the object of the experiment was, he said he did not know. He got the information from the *Journal of Physiology*. Asked if it did not state any object, he said he dared say it did. He took no interest in the object. The examination proceeded:

Colonel Lockwood: "On the Relationship of the Liver to Fat," by Noel Paton?—Yes; I am not a doctor; I take no interest in the relation of liver to fat; I do take an interest in pain inflicted on animals. It is perfectly indifferent to me what his object was.

Chairman: You are aware that we are also discussing the question of breaches of the Act?—Yes, but the Act does not say what the intention was.

But it says "With a view"?—Yes, that I do not know.

The reply he received from the Home Office Secretary was as follows:

Sir,—With reference to your letter of the 9th ultimo, I am

directed by the Secretary of State to acquaint you that he has made inquiry as to the experiments to which you refer as having been performed by Dr. Noel Paton, an account of which is contained in the *Journal of Physiology* of 1895 6. He has ascertained from that gentleman that they were not performed under any certificate specified in the Act 39 and 40 Vict., cap. 77.

They would not tell him whether they considered it a painful operation or not. Proceeding, the witness said the point was, here was a licensee who did a peculiarly painful experiment. If he did it under his licence alone, he was bound to see that the animal during the whole of the experiment was under the influence of an anaesthetic sufficiently powerful to prevent its feeling pain. One could not keep an animal for fifty-six hours, he presumed, under chloroform. On its being put to him that Dr. Paton did not purport to do it under his licence at all, Mr. Coleridge replied that, until he informed them that he considered the experiment outside his licence, the natural assumption was that it was inside his licence. It was an experiment that came under the Act. In reply to further communications he was informed by the Home Office that Dr. Noel Paton, after careful consideration, did not deem the experiment to be within the scope of the Act, and the letter went on to say that the Secretary of State was clearly of opinion that experiments involving starvation to an extent calculated to cause pain would be within the Act; but the inquiries he had made pointed to the conclusion that the extent and degree of pain which animals suffered from deprivation of food was a matter of considerable doubt. It was added that in any case Sir Matthew Ridley did not propose to institute proceedings in respect of experiments which were conducted so long ago as 1895–6, and not brought to his notice at the time. On Mr. Ram pointing out that the passage—

> The Secretary of State is clearly of opining that experiments involving starvation to an extent calculated to cause pain would be within the Act

was a distinct answer, Mr. Coleridge said, Yes; but he did not tell him whether those were such experiments. In reply to the Chairman, who said, if it was in 1895 it would be too late for the Home Secretary to prosecute five years afterwards, Mr. Coleridge said the *Journal of Physiology* ought to have reached him as soon as it was published. Proceeding, he said it was almost the invariable rule that vivisectors never published an account of their doings until six months after they had been completed, so as to escape any possible prosecution under the Act. One could only find out what happened in laboratories at second-hand, either from the publications of the vivisectionists or from the annual report of the Home Office, which itself was generally only published three or four weeks before the expiration of the six months. In reply to further questions, he said the point was that Dr. Noel Paton's assurance that he did it outside the Act was immediately accepted by the Home Office. Proceeding, he said that, broadly, his contention there was that the Act was so administered as to put the considerations of science above those of humanity; whereas the intention of the Act was to put humanity first. Before adjournment the Chairman suggested that he might look over his remaining charges, and see whether he could not shorten them, because some of five he had brought forward were matters too small to have much effect upon one's mind.

At the next meeting Mr. Coleridge said he had brought the letters from the eminent surgeons whom he quoted, and he found on looking at them that he quoted in full all the short ones, and that he did not quote altogether in full the longer ones; but he would read them if the Commission liked to hear them all. He had refreshed his memory by reading a report of the trial of Professor Ferrier from the British Medical Journal, November 19th, 1881, pp. 836 to 842, and he found that that and the Cecil Shaw case rested on by no means the same footing. The Chairman said it did not seem material. It was only a suggestion. Proceeding, Mr. Coleridge said there was another point that he could not find at the moment—namely, the question and answer in the House on June 26th, 1903, which dealt with the number of experiments actually witnessed by the Inspectors during the whole year. Dr. Shipman (Northampton) asked how many experiments on animals under licence alone and under Certificate B respectively had been witnessed by an Inspector at any time during the experiment and during the whole duration of the experiment. Mr. Akers-Douglas replied:

> During 1902 eleven experiments under licence alone were witnessed by the Inspector, and one under Certificate B. In the case of one (under licence) the whole experiment was witnessed; and with regard to the others the Inspector usually remained a considerable time, and on some occasions made more than one visit during the progress of the experiment. In the case of the one under Certificate B the Inspector also visited the animal next day. Inasmuch as the Inspector habitually visits without notice, he cannot be sure of arriving at the beginning of an experiment, so as to be able to see the whole of it, nor even of finding any experiment in progress. It may be added that the Inspector in his visits always sees any animal on which experiments may have been made, and carefully notes their condition.

Continuing, the witness said as regards this Certificate B, that down from November, 1892, to October, 1899, the words of the certificate as issued by the Home Office were:

> Such animals being, during the whole of the experiments, under the influence of some anaesthetic of sufficient power to prevent their feeling pain.

In October, 1899, the words were changed to these:

> Such animals being, during the whole of the initial operation of such experiments, under the influence of some anaesthetic of sufficient power to prevent their feeling pain.

He became aware of this very vital change in the wording of the certificate, which seemed to him to admit of a great deal more pain being inflicted upon animals than the certificate in its former form; and he therefore wrote and asked the Home Secretary whether conditions were invariably added to Certificate B enforcing the employment of anaesthetics ensuring insensibility to pain from the commencement of the first operation until the conclusion of all manipulations of the animal, and until the last wound was closed aseptically. There were experiments in which the animal was opened and various operations of an initial kind were done, after which it might be kept for two hours in a condition of disembowelment during the period when observation of its condition took place. What he wanted to know was whether, during that period of observation, the animal was lying disembowelled without any anaesthetic under that certificate. The answer was most illuminating:

> Whenever the experiment would involve a series of cutting operations (which is very infrequent), conditions are added to the licence enforcing the employment of anaesthetics ensuring insensibility to pain during all operative procedures.

That answer left him under the conviction that that certificate admitted of a very large amount of extreme pain and awful suffering. Asked by the Chairman if he proposed to show them any case in which that had happened, he said he was dealing with the law; he was not on laboratories. The examination continued:

> You are a little too combative, I think?—I do not wish to be so.
>
> I merely asked the question in order to ascertain exactly how you apply that proposition, because you spoke of keeping the animal under anaesthetics first, while it continued lying on the table with its bowels open, and then in another place you added the words, "until the wound has been aseptically closed," which is a long time afterwards, and possibly includes a time in which the suffering would be comparatively small. Those are two very different propositions. I wanted to know whether you were going to illustrate it by any particular case, because I quite see the force of it if it is not too widely applied?—I have not got the volume here now, I am afraid; I thought I brought it.
>
> I dare say you will come to some other point when you can give an illustration?—Then I pass away from that for the moment.

Mr. Coleridge then went on to speak again of the feeding of kittens with cow's milk. His objection to that question was that in his opinion it was conceived in a spirit of raillery against those whom he represented. He perfectly unexpectedly found himself face to face with the suggestion that the object of that experiment was to create disease in the animal by giving it diseased milk. Sir Mackenzie Chalmers said, No; the point was that the man who wanted to perform the experiment wrote up to know whether it was necessary to take out a licence or not, because the object of his experiment was to try the effect of substituting the milk of another animal for mother's milk. He did not know what the effect would be—whether the mere substitution of different milk for the mother's milk would produce disease or not.

Mr. Coleridge: Whether weaning a kitten would do so! All

kittens are weaned, surely, from their mother's and given cow's milk.

Sir Mackenzie Chalmers: I think they are generally suckled by their mother?—But there comes a time when they are weaned, like children are given the bottle.

Sir Mackenzie Chalmers proceeded to say that this was at an early stage to see what the effect of substituting other milk for cat's milk would be after the very earliest stage, and the inquirer was advised that it might produce deleterious effects on the kitten, and it would be safer for him to have a licence, just as a licence was required in cases where fish were kept in a pool where there was effluent sewage, where if the water became contaminated the fish got ill and died. The Chairman said he did not consider that the question was asked in a spirit of raillery. The case had really come before the Home Office, and they had to advise on it. Mr. Coleridge said his point only was that as no suggestion of disease was made on both the former occasions when that cat was alluded to, he naturally was unaware that that was the object of the experiment. If the object of the experiment very likely included suffering to the kittens, it was, of course, a very proper case for having a certificate. Sir Mackenzie Chalmers pointed out that the witnesses for the antivivisection societies had taken up two lines. One line was that they objected to experiments causing pain. Another had been that men had no right to exploit an animal, whether it caused pain or not, for the purpose of advancing human knowledge. Both those lines had been taken up before the Commission. Mr. Coleridge said he could not be responsible for other antivivisection societies. Mr. Coleridge next charged the Home Office officials with having suppressed in the annual Parliamentary Return the names of those who took upon themselves the very grave responsibility of signing the certificates exempting licensees wholly or in part from the obligation to employ anaesthesia in their vivisections, although in the report of the former Royal Commission there was this clear direction:

> We recommend that his (the Home Secretary's) advisers should be from time to time elected and nominated by himself; their names should be made known to the profession and the public.

If the Parliamentary reports were drawn up in a straightforward manner, they should give the names of these persons, so that any one could ascertain who was responsible for exempting each individual vivisector from the obligation to use anaesthetics in his experiments, but it was quite impossible to discover this from the report. Asked if there was anything about the reporting in the statute, or was that only in the Order, he said, No; it was all "may," he thought, all the way through, not "must." In reply to the Chairman, he said he was complaining that they did not give the names of the persons who signed the certificates. Asked if that was based upon what they ought to do for the convenience of the public, or upon what they ought to do if they were to obey the words of the Order, he replied it was what they ought to do if there was no desire on the part of the Home Office to be partial or to screen the vivisectors from criticism. To the Chairman, who suggested that he did not put it upon any express words, but upon the general duty which arose from the Order, he said that all through his evidence he wished to rely very largely upon the recommendations made by the last Royal Commission. Its report clearly contemplated the publication of the names of those who took upon themselves this grave responsibility. He pointed out this strange concealment of their names to several of those who might be assumed to be the persons concerned, and asked them whether it was their desire that their names should thus be hidden under the cloak of an official title. Some of them told him they had no objection to the publication of their names; others that they considered it an insult to suggest that they wished to hide their names, which might or might not indicate that they would not object to their names being published. But whether any of them objected or not, he protested against the suppression of their names by the Home Office officials who signed those dreadful certificates. By the system of concealing their names under the description of their official positions, the Home Office officials themselves seemed unable to know who the individuals really were who signed those certificates. In the Parliamentary report dated June 8th, 1899, he found Professor Schäfer's certificate was stated to have been signed by the "Professor of Physiology, University College, London." According to the *Medical Directory* for 1899, in that same year the Professor of Physiology of University College was Professor Schäfer himself. He therefore wrote both to the Home Office and to Professor Schäfer himself to elucidate the truth, inquiring who the person was who was described in the Parliamentary report as "the Professor of Physiology, University College, London." The Home Office said that this signatory was Sir John Burdon-Sanderson, who had resigned the professorship of physiology at University College many years before. Professor Schäfer said he had not signed any certificates on his own behalf; those he held were signed by Lord Lister and Professor Halliburton only. Asked if the answer of the Home Office was about certificates or a licence, Mr. Coleridge said it was about certificates. Asked what the Home Office said was signed by Sir John Burdon-Sanderson, he said they would get the letter. Sir Mackenzie Chalmers read the letter:

> With reference to your communication of the 15th ultimo, enclosing a copy of Mr. Coleridge's letter of December 14th last (which the Secretary of State regrets had not received a reply), I am instructed to say that in no case is an applicant for a licence under the Act 39 and 40 Vict., cap. 77, allowed to sign his own certificates, and Professor Schäfer has not done so. His licence was originally given on the recommendation of Dr. John Burdon-Sanderson, by whom the certificate was signed, and who was at the time Professor of Physiology at University College, London, which post Professor Schäfer now holds. I am to add that the laboratories of the Mason University College, Birmingham, are not registered for the performance of experiments under the Act.

Mr. Coleridge said there was no inaccuracy in his statement. The Home Office said that Sir John Burdon-Sanderson signed the certificate. The examination proceeded:

Chairman: Signed the licence?—Signed the licence and the certificate. I am not on the licence.

I quite understand that; that is the reason I asked the question——

Dr. Gaskell: But not that certificate?—Yes.

He signed the certificate at the time he signed the licence—that is, years before?—But we have been already told that certificates expire every twelve months.

Sir Mackenzie Chalmers: Perhaps it would be convenient once for all to state the practice. The practice is this: The licence has to be renewed every year, as you know. At the end of the year it comes up for consideration. It is originally signed by the people mentioned in the Act.—Is that so? They only recommend for a licence.

Yes, they recommend for a licence. It does not go back to them. Every year the licence has to be renewed before February 28th. If the licence is not renewed the certificates fall with it. If the licence is renewed the certificates are also considered, and if they are not exhausted—that is to say, if the number of animals and experiments authorized by the certificate have not been exhausted—then it comes up for consideration whether that certificate should or should not be continued; it does not go back to the original people who gave the certificate, but comes up before the Home Office Inspector at the Home Office for continuation. A licence, of course, may be renewed and the certificates not continued, or fresh certificates may be obtained?——

The certificate necessarily falls if the licence falls; but they may or may not be continued if they are not exhausted?—But all that does not explain how it comes about that Professor Schäfer thinks the certificate was signed by one person, and the Home Office thinks that it was signed by another.

The Chairman said it was confusing, but what he gathered was that Sir John Burdon-Sanderson at the beginning recommended the licence, and also recommended the certificate, and also signed the certificate. That, being started, was referred to in that letter as being his signing the certificate, but that subsequently the persons responsible for Professor Schäfer's certificate at the time in question were Lord Lister and Professor Halliburton. In reply to Dr. Gaskell, who asked what the date was when Sir John Burdon-Sanderson signed that licence and certificate, the witness said he had not got it. He must ask the Home Office. That was his point—that nobody could tell. Dr. Gaskell pointed out that what he meant was that if Sir John Burdon-Sanderson signed a certificate for a certain experiment, it was very unlikely indeed that Professor Schäfer could be doing that same experiment many years after. He would probably have to get a new certificate. Mr. Coleridge replied that the point he was making was his desire, and the desire of the humane public, to know who signed certificates authorizing vivisectors to do without anaesthetics, and when they came

down to any particular case they found it almost impossible to find who that person was, and the confusion was accentuated by the Home Office saying that it was one person and the vivisector himself saying that it was another. The task of reconciling those statements was quite beyond him. The impossibility of tracing the identity of the persons responsible for signing certificates had been rendered absolute by the statement of the Home Secretary in the House, that all certificates expired on December 31st. He understood now that they did not. He protested again against the names of signatories being thus concealed. In reply to the Chairman, who said he attacked those gentlemen very strongly, he said he was not attacking them, but the Home Office. He next charged the Home Office officials with shielding the names of such licensees as they know to have broken the law, although the former report contained these words: "Abuse of the power conferred by the licence must, of course, render the holder liable to its withdrawal, but this will involve great disgrace"—a phrase, in his opinion, which clearly indicated that the framers of that report contemplated the publication of offenders' names, for no great disgrace could possibly appertain to a secret remonstrance or a secret withdrawal of a licence. Under Section II of the Act, 39 and 40 Vict., c. 77, a person who performed experiments calculated to give pain without a licence in contravention to the Act was "guilty of an offence against this Act," and would be liable to a penalty not exceeding £50 for a first offence, and for a second to a penalty not exceeding £100, or to imprisonment not exceeding three months. Anybody who committed an offence against any other Act of Parliament which created a criminal offence, and who confessed himself guilty of the offence, would in the ordinary course be brought before the courts and subjected to sentence. The Home Office officials, however, had never instituted proceedings against any vivisector for committing admitted offences against the Act, not even in a case described by themselves as a "case of deliberate violation of the Act after warning." In reply to Colonel Lockwood, he said he did not know to this day what the case was; it had never been revealed to them, not even before the Commissioners. Mr. Byrne said: "This power has been exercised on four occasions," and at the end of that answer it was stated that

He [the licensee in question] had been previously warned as to the necessity for certificates B and EE in such cases. It was considered by the Secretary of State to be a case of deliberate violation of the Act after warning, and his licence was revoked.

That was all it amounted to. Sir Mackenzie Chalmers asked if the case was not that of a licensee who did not hold certificates B and EE, and who performed the operation of gastric fistula on a cat under anaesthetics, the animal being allowed to recover. The witness replied, "Yes; a breach of the Act." In reply to a further question, he said the licence was revoked. But that fact and the licensee's name were never mentioned, even in the annual report. Further, instead of prosecuting and punishing him, he was quickly reinstated as before, though they still did not know his name. Proceeding, he said, in the House of Commons (*Hansard* of June 26th, 1903, page 629) the Secretary of State said:

Whenever the conditions of the licence were violated the severest notice was taken of it, and, if necessary, the licence was revoked.

The witness wrote and asked what were the instances of violation of the conditions of the licence alluded to in that speech. The reply was:

The Secretary of State does not think that any useful purpose would be served by the publication of the names of these experimenters.

Mr. Coleridge said he wrote that letter to test it, to see whether they would continue to shelter the names of the peccant vivisectors, and they did. In reply to Sir Mackenzie Chalmers, who said if he wrote to the Home Office it was only a matter of courtesy that they answered him, the witness said, Yes, he did not complain of any lack of courtesy on any occasion from the Home Office. He next charged the Home Office officials with preparing for the Home Secretary evasive and insufficient replies in the House of Commons to plain questions on the administration of the Act, and with making evasive and insufficient replies themselves in official correspondence with his Society, and with leaving perfectly proper questions unanswered altogether. He accepted Sir Mackenzie Chalmers's dictum that they were not obliged to answer any question at all, but at the same time he thought that on a question of the administration of the Act they would naturally answer reasonable questions, and he thought they generally did. On Sir Mackenzie Chalmers saying he could take it for granted that they would always make inquiry, but they would not necessarily tell him the result of that inquiry, the witness said that was rather his complaint. Mr. Paulton, on July 24th, 1899, asked:

Whether Dr. Poore, while holding the office of Inspector, had signed certificates in his capacity of Professor of Medical Jurisprudence, University College, London. The answer of Sir Matthew White Ridley was, "The answer is in the negative." Colonel Lockwood asked: "Does Professor Poore sign the certificates?" to which Sir Matthew White Ridley replied: "I am informed that it is not the case that he does so." Then Mr. Paulton asked: "Then how is it that the statement appears in the report of the Inspector? Will the right honourable gentleman further inquire as to its accuracy?" and Sir Matthew White Ridley replied: "Yes. I was only aware five minutes ago that the report seemed to indicate this, and, of course, I have not had time to inquire." Now, the certificates signed by Dr. Poore were still in force while he was Inspector, and the official who prepared Sir Matthew White Ridley's answer must have known it; they must have known that these certificates signed by Dr. Poore were in force at the time the question was asked.

Asked by the Chairman what the Home Office had to conceal in that case, which seemed to have been perfectly regular, the witness said they did not tell the public the truth. Asked again what it was they were trying to evade, because if they had said all that the witness said they should have said, nothing could have been said against them, Mr. Coleridge said he thought the public would have been very much surprised and indignant at discovering that a vivisector held a certificate exempting him from the use of anaesthetics, signed by the very man who was to inspect him to see what was done. The examination proceeded:

No, signed by a man before he was inspector at all?—But still responsible. The certificate was alive.

The certificate being there, it was alive by virtue of the Act of Parliament?—Yes, quite so, and in my opinion a very improper thing.

You may amend the Act, but I cannot see what the Home Office have got to evade?—The Home Office have themselves said that the person who is Inspector ought not, under the Act, to sign certificates.

And Dr. Poore did not do that?—But the certificate was kept in force after he was Inspector.

That is a totally different thing?—No, I do not see it. I think he was a most improper signatory.

When you say that you do not see that it is a different thing you startle me?—I do not. If it is kept alive every year, it is the same thing as his signing it every year again. That is my opinion, and I think it ought to be the opinion of everybody.

Sir John McFadyean: The Government have not admitted your view of the question, have they?—What view?

The view you have just been putting forward, that it is improper to allow a certificate to continue because it was signed by the Inspector before he took office?—The Government have said that it is not proper for a man to sign his own certificate.

That is not the question. They have not admitted your view?—Oh, dear, no.

Therefore it hardly seems fair to charge them with evasion; because the charge of evasion seems to imply that your view was necessarily the right one?—I say my view is the view that the general public would take; I am quite convinced of that. That is my charge, and I am quite convinced that the general public would take the view that it is very improper for the Inspector to sign the certificates of the very vivisectors he had to inspect. I am quite convinced of that, and I should have thought the Commission would have been so, too.

Chairman: Your conviction does not necessarily govern ours?—No, my lord. I invite you to share it; I can do no more.

Asked by Sir William Collins if his point was that Dr. Poore, as a matter of fact, was inspecting work that was being done as the result of certificates given under his own hand, he said that was his point, and he thought it was very improper.

(To be continued.)

Criminal Anthropology.—The seventh meeting of the International Congress of Criminal Anthropology will open at Turin on April 28th, under the presidency of Professor Lombroso. Communications relating to the Congress should be addressed to the Secretariate of the Congress, Istituto di Medicina Legale, Via Michelangelo, 26, Torino, Italy.

LITERARY NOTES.

THE intention previously announced to embody the physiological part of the existing *Journal of Anatomy and Physiology* in a separate journal has, with the concurrence of the editors of that journal, been relinquished, and it has been determined instead to bring out an entirely new periodical under the title, *Quarterly Journal of Physiology*. The purpose of the new journal is to further the publication and illustration of original communications in all branches of physiology. The first number will appear this month. The Editors are Professor Schäfer (Edinburgh), Professor F. Gotch (Oxford), Professor W. D. Halliburton (London), Professor C. S. Sherrington (Liverpool), and Professor E. H. Starling (London). The publishers are Messrs. Charles Griffin and Co., Exeter Street, London, W.

Messrs. W. B. Saunders Company, of London and Philadelphia, have in the press for early publication a *Manual of the Practical Application of Bier's Hyperaemic Treatment in Surgery, Medicine, and the Specialities*, by Willy Meyer, Professor of Surgery in New York Post-Graduate School, and Professor Dr. Victor Schmeider, of the Surgical Clinic, University of Berlin.

Messrs. Macmillan will publish early in February an anonymous volume of essays entitled *Confessio Medici*. The same firm will also issue a work entitled *Charity and Social Life*, by C. S. Loch, LL.D., Secretary to the Charity Organization Society.

It is announced that Mr. Murray has in the press a work on *The Law of Hospitals* by Mr. Arthur Turnour Murray, who has collected into one volume all the scattered laws relating both to voluntary and self-supporting hospitals.

The Walter Scott Publishing Company will shortly issue a work by Dr. R. R. Rentoul, of Liverpool, entitled *Enthetic Diseases (or the Young Man's Peril)*.

Sir John Byers writes with reference to a paragraph which appeared under the head of "Literary Notes" last week: "It may interest you to know that Dr. John Hall, whom Furnival and Lanier regard as the ideal of Shakespeare's Cerimon in *Pericles*, as pointed out in your most interesting 'Literary Notes' of Saturday last, provided Sir James Simpson with the idea of the sponge tent, formerly used in gynaecology. Hall wrote a book or a sort of medical treatise in the Latin language, in which he forecasted the modern sponge tent. After his decease, Susannah (Shakespeare's youngest daughter) whom he had married, sold Hall's work to a Mr. Cook of Warwick, and the latter in the year 1637 published a translation. Sir James Simpson, who was a great antiquarian, acquired this English version, and from it he got the knowledge of the sponge tent, which in 1844 he brought before the profession."

Hustled History, by the authors of *Wisdom While You Wait*, is an amusing skit on the methods of "yellow" journalism and the modern advertiser. The style of many writers who would doubtless prefer to blush unseen and waste their sweetness on the desert air, but whose sense of duty to their fellow men leads them daily to sacrifice their native modesty on the altar of publicity, is very happily parodied. Among them are the Hon. Stephen Coleridge and Dr. C. W. Saleeby. The humanitarian sentiments of the former, aroused by "overcrowding in the Ark," find vent in a letter in which he says:

> If the reports of the intentions of Noah as to the preservation of the human and animal race are accurate, it is time that steps were taken to prevent him from further action. For, as I understand it, he is proposing to confine for an unlimited number of days not only himself and his family (for whose welfare, however, I am unconcerned), but two of each of the whole fauna of Mesopotamia in a kind of enlarged houseboat, which has, as I understand, *only one window*, and that a very small one. Unless an assurance of better sanitation reaches us shortly, I have no hesitation in stating that my Society will interfere.

The indifference expressed as to the welfare of the human occupants of the ark is delightfully characteristic. There is a postscript to the following effect:

> A further grievance of ours is that Noah is taking only one brown dog instead of two according to contract.

Dr. Saleeby deals in his usual fashion with diseases of the heel. We quote a paragraph or two:

> The tragic end of the great Greek general, news of which only reached me five minutes ago, has more than a political or a military significance. I shall treat of those aspects of the case in thirteen other daily and weekly newspapers, and for the moment must restrict my survey to its psycho-physiological side.

The article is true to the great original in the multitude of its "I's," recalling Samuel Taylor Coleridge's jibe at German metaphysics—"I, I, I, all my I," etc. It ends with the sentence:

> As it is, I believe both my heels would have given way but for the constant use of M. Metchnikoff's talarian antitoxin, the existence of which unfortunately seems to have been unknown to the gifted Greek commander.

We cannot say that either Mr. Stephen Coleridge or Dr. Saleeby adds much to the enlightenment of the human mind; but the gaiety of nations—or, at any rate, of one nation—would be eclipsed if they were to subside into the part of mute inglorious Miltons.

To the series of "Famous Undergraduates" now appearing in *The Student*, of Edinburgh, Sir James Crichton-Browne contributes an interesting sketch of Carlyle. There is no part of Carlyle's life, he says, of which we know less than his undergraduate career in Edinburgh, which extended from his thirteenth to his eighteenth year (1809-14). There are in existence, he believes, a number of letters from several of his eleven chosen friends at Edinburgh, and he expresses a hope that these will be published some day; but for the present, at least, they are not accessible. Even if they were, however, Sir James does not think they would be likely to throw much light on Carlyle's student days; from specimens that have been given they are not so much biographical and anecdotal as critical and didactic. They discuss Scott's last novel, Byron's poems, the fall of Napoleon, mathematical problems, and sermons, but afford no insight into university doings or college customs; they do not even contain any poking of fun at professors. They show unmistakably, however, that the life led by Carlyle and his college friends was pure, simple, and high-minded, free from any of that ribald taint that sometimes infects adolescent intercourse; they prove, too, that even then Carlyle was a leader amongst men. His friends looked to him to direct their judgement, to advise them in their difficulties, and even to help them, when need was, out of his small savings, and they one and all recognized that he was superior to other young men of his age in character and intellect, and was destined to greatness of one kind or another. Had he been a member of any University literary or debating society, which he was not, he would undoubtedly have been president and dictator. Readers of *Sartor Resartus* and of the *Reminiscences* will remember that Carlyle does not speak kindly of his Alma Mater. He went through the whole Arts course, but did not take a degree, as it was not then the custom to do so. Sir James Crichton-Browne points out that in connexion with Carlyle's undergraduate career there is not one allusion to any sport, pastime, or recreation, beyond his meetings with his friends and a pipe of tobacco. Beyond snowball bickerings, there were apparently no games or pastimes in the University. Puritanical notions still prevailed as to the sinfulness of frivolous amusements, and the boys were desperately in earnest to make a living. It was a grievous deficiency, and Sir James rather thinks that Carlyle, though he does not mention it, had a more serious grudge against the University for its neglect of his physical than of his mental training. Then began that dyspepsia which troubled him for the rest of his life. He ultimately took to horse exercise when it was too late, but he never felt an interest in any mere game. The thing wanting to him, says Sir James Crichton-Browne, was golf. A couple of rounds a day would have saved him much misery, and the spoon, the niblick, and the cleek would have afforded vent for all the minor irritabilities.

Jean Jacques Rousseau, as readers of his *Confessions* know, was the reverse of a healthy man, either in body or in mind. He complains specifically of hernia and difficult micturition. His mental condition has been almost as much discussed as that of Hamlet. The most recent contribution to the subject is a paper by Dr. Antonin Poncet and M. René Leriche, which was read at a meeting of the Paris Académie de Médecine on December 31st, 1907. In a previous communication these gentlemen expressed the view that tuberculous infection was often the starting point of most of the pathological phenomena grouped together under the vague term "arthritism."

Since then they say they have frequently met with clinical confirmation of that opinion, and in reading the pathological histories of celebrated men, so many of which have appeared in recent years, they have several times been led to a "retrospective diagnosis" of inflammatory tuberculosis. They point out that Jean Jacques Rousseau's condition has even, in the most recent deliverances on the subject, been described as "arthritism" or "neuro arthritism." Quite lately, however, a last will and testament of the author of *Emile* has been discovered at Neuchatel, by M. Theophile Dufour. In this document Jean Jacques Rousseau gives a full description of his physical ailments from the age of 15 till his death, and MM. Poncet and Lériche find in it materials on which they base a "new and exact diagnosis." Their conclusion is that Rousseau suffered from congenital urethral stricture. They hold that Rousseau, instead of being a "psychasthenic," carrying, as some one has said, his bladder in his head, was the victim of urinary troubles which explain his eccentricities and his "madness." As age came on his prostate became enlarged, and finally he died of cerebral haemorrhage on July 2nd, 1778, at the age of 66. The authors discuss the result of his urinary troubles with much critical insight. We cannot follow them throughout the details of their ingenious argumentation, nor, to speak frankly, does it seem worth while to do so. We may point out, however, that in some remarks made on their paper by Professor Landouzy, he recalled the fact that another famous hypochondriac, Michel de Montaigne, suffered much from renal calculus, for which he sought relief at French, German, and Italian medicinal springs, but without much success. His contempt for the healing art was doubtless inspired and confirmed by the failure of the medicine of his day to give him relief.

THE PLAGUE.

India.

During the weeks ended December 7th and 14th, 1907, the total number of deaths from plague in India amounted to 3,340 and 3,133. The principle figures were: Bombay Presidency, 1 986 and 1401; Bengal, 113 and 203; United Provinces, 211 and 334; Punjab, 291 and 366; North-West Frontier Province, 4 and 20; Central Provinces, 125 and 108; Central India, 31 and 26; Madras Presidency, 112 and 117; Mysore State, 474 and 350; Hyderabad, 95 and 90; Burmah, 57 and 61.

South Africa.

No cases of plague reported between October 21st and December 14th, 1907. Rats continue to be found plague-infected at King Williamstown.

Mauritius.

During the weeks ended January 1st and 8th, the fresh cases of plague numbered 3 and 3, and the deaths from the disease 3 and 3 respectively.

Gold Coast, West Africa.

A telegram from Accra, received at the Colonial Office on January 11th, states that ten natives died in Accra recently of (suspected) plague. On January 12th a second telegram stated that two more deaths from the disease had occurred. No Europeans attacked. The port of Accra has been declared infected.

MEDICAL NEWS.

The name of Dr. J. E. Harburn (Buxton) has been added to the Commission of the Peace for the County of Derby.

The annual dinner of the West London Medico-Chirurgical Society will take place at Wharncliffe Rooms, Hotel Great Central, Marylebone Road, W., on Thursday, February 13th, at 7 30 p.m.

The innovation at the Great Northern Central Hospital, in the early part of the winter, of the weekly delivery of a post-graduate lecture is deemed to have been so successful that a new series is to be commenced forthwith. The hour has been changed to 3.30, and it is proposed to give them more the character of clinical demonstrations than heretofore. The first lecture of the new course will be given next Friday.

Royal Sanitary Institute.—The Earl of Plymouth, Lord Lieutenant of Glamorganshire, has consented to act as President of the twenty-fourth Annual Congress and Exhibition of the Royal Sanitary Institute to be held at Cardiff from July 13th to 22nd, 1908. The public meeting to consider the arrangements of the Congress will be held at the City Hall, Cardiff, on Thursday, February 6th, when the Lord Mayor will take the chair.

At the annual dinner of the Bristol University College Colston Society, Mr. O. A. Wills, the President, announced that his father, Mr. H. O. Wills, had promised £100,000 towards the endowment of the University for Bristol and the West of England, provided that a charter be granted within two years. It was further stated that, of the £250,000 required before the charter can be applied for, £197,000 had been given or promised.

International First Aid Congress.—The first International First Aid and Life-Saving Congress will be held at Frankfort-on-the Main this year soon after Whitsuntide. The work of the Congress will be divided among ten sections as follows: (1) Medical first aid in cases of accident; (2) instruction of lay persons in first aid; (3) ambulance work in towns; (4) amublance work in the country and in industrial and small communal centres; (5) ambulance work in land traffic (railways, automobiles, etc.); (6) ambulance work at sea, on coasts and on inland waters; (7) ambulance work in mines, etc.; (8) ambulance work by fire brigades; (9) ambulance work on mountains; (10) ambulance work and sport. All communications relative to the Congress should be addressed to the Secretary of the Organizing Committee, Dr. Düms, Nikolaikirchhof, 2, Leipzig.

New Sanatoriums in America.—A tract of 1,000 acres of land near Colorado Springs recently purchased by the Executive Council of the Modern Woodmen of America is (we learn from the *St. Louis Medical Review*) to be used as the site for a sanatorium for the treatment of members of the order afflicted with tuberculosis. It will be called the Ambley Ranch. At the Pennsylvania State Legislature last session 1,000,000 dollars were appropriated for the use of the Department of Health in its endeavour to suppress tuberculosis. Out of this sum 60,000 dollars are to be used for the purchase of more land to enlarge the State Sanatorium at Mount Alto, and for the erection of numerous small cottages. The remainder will be applied towards the establishment of a tuberculosis dispensary, where treatment will be given, in every county of the State, and from which information regarding the cure and prevention of tuberculosis will be sent out through the surrounding country.

Mr. Chamberlain and Tropical Medicine.—In recognition of the great work that Mr. Chamberlain inaugurated by the establishment of Schools of Tropical Medicine, the Incorporated Liverpool School of Tropical Medicine decided to present Mr. Chamberlain with the Mary Kingsley Memorial Medal. A letter was sent with the medal, in which it was stated that in selecting the right honourable gentleman as a recipient of the medal, the School desired to recognize the fact that his services to the great cause of the advancement of our knowledge of Tropical Medicine had assisted that cause as effectively as the labours of the most devoted scientists. In acknowledging the medal, Mr. Chamberlain said he felt, and had always felt, that the Liverpool School had largely contributed to the altered sanitary conditions of the tropics, and he regarded with pleasure any efforts he might have been able to render to the cause though he felt that they had been small compared with those of such institutions as the Liverpool School of Tropical Medicine.

Society for Relief of Widows and Orphans of Medical Men.—A quarterly Court of the above Society was held on Wednesday, January 8th, at 5.30 p.m., at 11, Chandos Street, Cavendish Square, Dr. Blandford, President, in the chair; twelve members of the Court were present. Applications for membership were received from five medical men, and they were duly elected members of the Society. Since the last Court, one of the annuitants of the Society, aged 91, had died; she had been in receipt of grants since 1866, and had received £2 324 from the Society; her husband had paid in subscriptions £27 6s. Some letters that had been received from widows of medical men, asking for relief; but this had to be refused, as their husbands had not been members of the Society. £534 was distributed as a special Christmas present amongst the annuitants of the charity in December, each widow receiving £10, each orphan £3, and those in receipt of grants under the Copeland Fund £5 each. The sum of £1,257 10s. was voted for the payment of the half-yearly grants to the 48 widows and 16 orphans at present on the books of the Society. Relief is only given to the widows or orphans of deceased members. Membership is open to any registered medical practitioner who, at the time of his election, is residing within a twenty-mile radius of Charing Cross. Full particulars and application forms may be obtained from the Secretary, at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

British Medical Journal.

SATURDAY, JANUARY 18TH, 1908.

THE SURGICAL TREATMENT OF INTRACTABLE CONSTIPATION.

WE have referred on a previous occasion[1] to Metchnikoff's view that it is only in despite of the machinations of the micro-organisms which infest his colon that man is enabled to complete his allotted span of years, or rather that the tale of years would be far longer could we but get rid of all the enemies lurking in that hiding place that are a standing menace to his life. We referred, moreover, to the way in which Mr. Arbuthnot Lane had taken Metchnikoff's hint as to the future possibilities of surgery, and brought the removal of the large intestine within the immediate field of actual and practical surgery. Within the same year we had occasion to publish the Huxley Lecture by Sir William Macewen[2] on the functions of the appendix and caecum, in which that distinguished surgeon expressed the opinion that, notwithstanding Strassburger's hundred and twenty thousand million bacteria, the large intestine was a structure the ordinary man could ill afford to do without. Not only is it pretty certain that the processes of digestion do not stop abruptly at the ileo-caecal junction, but there is also reason to believe that some at least of the bacteria, besides possible digestive functions of positive value, exert a beneficent function in preserving the organism from the deleterious action of such by-products of intestinal digestion as cholin.

In the present issue we publish a paper by Mr. Arbuthnot Lane, which embodies the results of a number of cases in which he removed the colon as a remedy for obstinate constipation. No one is more unlikely than Mr. Lane to undertake with a light heart the removal of an organ for the importance of which to the bodily economy there was both presumption and proof. Nor had he any such intention. It was not the functioning organ, but the gut, utterly incapable of performing any of its duties with efficiency and become by default a source, not of profit, but of positive danger, against which he directed his surgical battery.

It is, perhaps, a little unfortunate for the favourable reception of his proposal by the profession at large that Mr. Lane did not employ a stronger adjective than "chronic" to qualify the constipation for which a serious operation could properly be advised. Had he said "intractable" or "inveterate," he would have appealed to an experience of cases very different from the very numerous persons one ordinarily thinks of as suffering from chronic constipation.

Even those who have expressed themselves as most strongly against the operation will be interested in the results of the thirty-nine cases now published by Mr. Lane. An operative mortality of roughly 18 per cent. is not so serious as at first sight appears, since many of the patients were reduced to extremities before the operation was considered, and one had actually threatened suicide, so burdensome had life become. It is true of this, as of so many operations attended by considerable fatality, that the untoward results are not so much the result of the procedure as of the late stage at which it is undertaken; therefore the apparently high figure is not in itself any bar to the performance of the operation at a stage when it can be regarded as preventive of those severe symptoms which Mr. Lane describes as the outcome of autointoxication. One very serious condition which improved technique does not seem to have banished from the late effects of the operation is intestinal obstruction due to adhesions or bands constricting the small intestine; and it is not to be expected that every patient finding himself in such a predicament will have the good fortune that seems to attend those who come under Mr. Lane's skilful hands.

Turning to the other side of the picture, it is satisfactory to find so many of the patients professing themselves as "cured." The class of persons who suffer from aggravated forms of constipation, and especially those who, as many of these patients seem to have done, have suffered many things at the hands of surgeons, is generally not too prone to admit even the degree of benefit really received, and the testimony is therefore all the more valuable.

It is noteworthy that no mention is made of any tendency to diarrhoea, such as the experience of other surgeons who have had occasion to perform ileo-sigmoidostomy, and experimental observations, had led one to expect; on the other hand, specific mention is made of the need for mild purgation in several cases.

The majority of the patients, naturally, were women; only five males are included in the list. The average age, of those for whom it is stated, is approximately 35 the youngest being 19 and the oldest 55.

The operative difficulties involved may undoubtedly be very great, although Mr. Lane terms it an operation of "moderate severity"; but the greatest difficulty likely to be encountered will surely be the selection of suitable cases. Whereas at first pain was the symptom regarded as demanding operation, the results of the measure undertaken for this reason had far-reaching significance, and led to its adoption for the rather vague, but to the patient very real, condition connoted by the term "autointoxication." Not many of those who dwell in cities will be strangers to the malaise associated with constipation, at some time or other, and it is not difficult to believe that it is due to the absorption of toxic or injurious material from residua unduly retained. From this it is, however, a far cry to the recognition of a clinical entity resulting from intestinal autointoxication, and the profession will look for some more detailed and definite description of the criteria by which the condition is recognized and the indications for the radical measure adopted by Mr. Lane.

The time is not ripe to test the truth of Metchnikoff's prophecy as to longevity; but as his idea involved the deliverance of man from bacteria which haunt his large intestine, it would be interesting meanwhile to ascertain what changes have been wrought in the flora of the small gut by its insertion directly into the pelvic colon or rectum.

PATENT MEDICINES IN JAPAN.

MOST people probably regard America as the chosen land of the patent medicine vendor, but Japan would seem to be able to "give points" to the great Republic in this respect. That wonderful country, which has assimilated with such marvellous rapidity the Western arts of peace and war, had evidently nothing to learn from other nations about this particular subject. The system of manufacture and distribution is so highly developed that an account of it may be interesting to

[1] BRITISH MEDICAL JOURNAL, June 25th, 1904, p. 1503, vol. i.
[2] BRITISH MEDICAL JOURNAL, October 8th, 1904, p. 873, vol. ii.

our readers. According to a paper on the subject by Mr. W. M. Royds, of H.B.M. Consular Service in Japan,[1] the industry had its origin, about two and a half centuries ago, in the town of Toyama, in the province now called Etchu, on the west coast, which ever since has been the great centre of the patent medicine trade in Japan. Prince Seiho Maeda, who was born in 1649, and succeeded his father in 1674 as Daymio of the province, was a reformer in several directions, but he seems to be chiefly honoured now as the patron of that form of commercial enterprise. In May, 1906, the two hundredth anniversary of his death was celebrated by a grand festival, lasting two days, which was organized by the patent medicine dealers of Toyama.

From the time he took in his hands the reins of government, Prince Seiho Maeda showed great interest in the manufacture of medicines. When epidemics of dysentery and other diseases occurred within his dominions, he did not disdain to make up medicines with his own hand and dispense them to the poor. In 1682 Bandai-Jokan, a physician of Katakami in Bizen province, hearing of Prince Maeda's interest in medicines, travelled to Toyama, and presented to the Daymio some medicine of his own manufacture which he called Han-Gon-Tan—which, being interpreted, means "medicine which "calls back the dead to life"—a name which is now a household word throughout Japan. This the physician prepared from a secret prescription handed down in his family from generation to generation. The Prince was greatly struck with the excellence of the medicine, and caused his retainers to be taught how to prepare it. Further, he ordered that medicines should be distributed from door to door without immediate payment, and the collection of the money to be postponed until a convenient time.

This convenient system has remained in vogue in Japan ever since. The Toyama industry increased so largely that it attracted the attention of the tax-gatherers, who in Japan, as elsewhere, are ever on the outlook for new sources of revenue. From 1764 to 1771 the trade was supervised by special officers; then the control of the patent medicine industry was again vested in the City Office and Financial Bureau of Toyama. Till about 1803 an annual tax was levied on each peddler engaged in the distribution of the drugs at the rate of about 1s., which in 1860 was increased to about 2s. 9d. per head. The total amount collected in 1850 from this tax was over £350. From that time until the daimyates were abolished and prefectures established in 1868, there was not much variation in the total amount collected annually. Meanwhile, the patent medicine dealers had drawn up regulations among themselves, and had organized the peddlers into twenty-one bands, each with its own allotted district. At first, when these bands were started, there were over 2,600 peddlers in all employed. The numbers gradually increased, and in 1875 there were about 5,000 patent medicine peddlers in all. After the restoration of 1868, when daimyates were abolished and prefectures established, many Samurai took up the patent medicine business, the numbers engaged in it gradually rising to over 8,000.

In January, 1877, the Government issued the first regulations for the State control and taxation of patent medicines. The first effect of this change was favourable to the growth of the industry, and its development proceeded rapidly throughout the years 1880 and 1881. In October, 1882, however, owing to the publication of new patent medicine stamp tax laws, the business began to decline, and it seemed likely that it would be ruined. In 1886 the Finance Department lightened the burden to some extent by issuing regulations for the exchange of patent medicine tax stamps affixed to medicines which remained unsold. In 1905 a patent medicine tax Bill was introduced into the Diet, and a 10 per cent. *ad valorem* tax, with exemptions for medicines exported, was passed. As a result of this law the export of patent medicines to foreign countries has steadily increased. When the peddlers come round, each customer takes what he considers sufficient to last his household for a year, and in the following year the peddlers, in making their round, collect the money due for the medicines that have been consumed during the course of the year. What is left over they take back and exchange free of charge for new medicines of the same sort, at the same time supplying another year's stock on credit. The influence of European methods is seen in the now prevalent fashion of advertising in newspapers and magazines and on large boards set up in the neighbourhood of the railways and by the roadside.

In 1904 there were 3,102 licensed patent medicine manufacturers in Japan, who made altogether 9,735 different kinds of medicines for which licences were taken out. The total value of patent medicines manufactured during 1904 was £1,189,400, whereas in 1886 it amounted only to £438,600. Toyama produces about one-quarter of the total, its production annually being about 73,000,000 packets of medicines, worth approximately £300,000. The export of Japanese patent medicines began in 1889, when a Toyama dealer crossed over to Corea and opened up business there. After the Chino-Japanese war of 1894–5 the business was gradually extended in those countries, and also spread to Hawaii. Since then most of the ports of the Pacific where Japanese are settled have taken their share, and in other directions also an export trade has grown up. At the end of the Russo-Japanese war in 1905 the special exemption from taxation in the case of exported patent medicines came into force, and gave a great impetus to the export trade. The total value of medicines exported from Toyama alone during the year from July 1st, 1905, to June 30th, 1906, amounted to about £15,000.

The names used are generally chosen with reference to the alleged curative properties of the medicine, such as "brain-healing pills," "poison-expelling pills," "spirit-"cheering pills," "heal-everything powders," "one-"dose-healing powders," "life-supporting powders," "touch-the-spot pastilles," "second-to-none plasters," "boil-breaking ointment," "immediate-healer plaster." No Japanese patent medicines are sold in a liquid form; pills, powders, pastilles, and pastes are the usual way in which medicines are made up. There is also a large sale of dried roots, leaves, herbs, etc., prepared by steeping in hot water, which is then poured off and drunk. To safeguard the interests of the industry and of individual manufacturers, numerous patent medicine industry guilds have been formed. There is also in Toyama a special guild which makes it its business to lend money to patent medicine dealers when they are in need of capital to develop their business, and which offers them special facilities for depositing money; the membership of this guild is increasing year by year. In addition to these, there is in Toyama a patent medicine dealers' club with 3,000 members, which was started in 1901; a school for instruction in medical matters connected with patent medicines with nearly 200 pupils, founded by influential dealers in

[1] Reprinted from the *Transactions of the Asiatic Society of Japan*, vol. xxxv, Part I.

1893, and taken over by the municipality in 1888; and a *Toyama Patent Medicine Magazine*, which was started in 1904.

The story is a curious one. Mr. Royds in his report is concerned mainly with the fiscal aspect of the matter. It would be interesting to know something of the nature, properties, and effects of the "heal-everything" powders," and especially of Bandai-Jokan's medicine "which calls back the dead to life." Not even American inventiveness has devised anything to rival that. Japan may boast of having found for itself a new application of the satirical reference contained in the words of the Roman poet, *Quidquid Graecia mendax audet in historia.*

OPOTHERAPY.

SINCE the doctrine of internal secretion was founded by Claude Bernard, and opotherapy suggested by Brown-Séquard, an enormous amount of experimental work has been done by physiologists, resulting in the establishment of two valuable therapeutic agents, thyroid extract and adrenalin, while a host of ill-founded and inexact lines of treatment have been formulated by the makers of pharmaceutical preparations of animal tissues. Many of these do not possess the active principle they claim to contain; others possess it, but lose it when submitted to the digestive juices, and most owe any curative effect to suggestion.

Dr. J. Parisot of Nancy has recently published a long series of investigations he has made on the therapeutic effects of extracts of liver, kidney, suprarenal gland, and hypophysis.[1] Having served an apprenticeship in a physiological laboratory, he is able to resort to exact methods of research and to confirm and extend his clinical studies by experiments on animals. These experiments are, however, far too few in number, and we should have felt far more convinced of the accuracy of the conclusions drawn from his clinical records if Dr. Parisot had confirmed his clinical impressions by exact experimental observations on animals, whereby the therapeutic effects of suggestion, of warmth, diet, and rest in bed might have been separated definitely from those actually produced by the glandular extracts. Nevertheless, he is highly to be commended for seeking to give us definite information upon the effect of injecting extracts of liver in pathological states of that organ, of feeding with kidney substance in renal disease, of injecting suprarenal extract in Addison's disease, and in cases in which the blood pressure is low and asthenia marked, and of injecting extracts of hypophysis cerebri in heart disease, exophthalmic goître, etc.

He has recorded in each case before, during, and after the treatment, the arterial pressure, pulse, temperature, and the volume of urine, and noted the amelioration or otherwise of the general symptoms of the disease. In each of the four sections of his essay he gives a summary of the experimental work done on the internal secretion of the particular gland with which he is about to deal. Extending the observation of Schäfer, that the suprarenal of Addison's disease has lost its active principle, he finds by experiments on animals that the hypotensive effects of liver extracts are diminished or lost if extracts of diseased livers are used, and that the suprarenal is less active if obtained from cases of tuberculosis even when the capsules themselves are unaffected by the disease.

Dr. Parisot found that the fall of blood pressure, infrequent pulse and respiration which occur in cases of obstructed bile duct could be experimentally induced in rabbits, either by tying the bile duct or by injecting up it a few centimetres of 1 per cent. acetic acid. He succeeded in keeping one or two of these rabbits alive for two to three weeks, and found evidence of bile acids in the blood and urine accompanying the circulatory symptoms. The liver of the animals showed areas of necrosis and commencing cirrhosis. By injections of extracts of liver in various pathological conditions of that organ Dr. Parisot has in several cases modified the circulatory and other symptoms. In particular the blood pressure and pulse readings varied according as the liver extracts were given or withheld. He dissents from the view, stated on the authority of Broadbent, that all cases of renal disease are accompanied by high arterial tension, and asserts that in acute cases of nephritis, when in a state of functional equilibrium—whatever that may mean—the arterial tension is low. In discussing the high tension found in chronic cases of nephritis he cites evidence collected from two or three writers to show that the suprarenal glands have undergone hyperplasia. This hyperplasia is, he thinks, secondary to the renal disease, and is possibly a cause of the high tension. All the facts gathered together in this part of his work lead him to think that a special function of the kidneys is to remove or destroy products of metabolism which raise the blood pressure; he regards sodium chloride as one of the most important of these products. Dr. Parisot records some interesting observations on the effects of renal extract in cases of chronic nephritis, stating that the blood pressure was markedly lowered and the symptoms ameliorated.

Dr. Parisot's researches are well worthy of study by practical men, for they are full of interesting observations and new lines of treatment conducted on scientific lines. How much constitutes a real addition to scientific truth, and how much consists of impressions derived from suggestive lines of treatment, it is difficult to say.

[1] *Pression artérielle et glandes à sécrétion interne.* By Dr. J. Parisot. Paris: J. B. Baillière et Fils. 1908. (Roy. 8vo, pp. 572. Fr. 8.)

LORD LISTER ON THE PREPARATION OF CATGUT LIGATURES.

THE communication from Lord Lister which we have the honour to publish this week, will, we feel sure, be received by our readers with pleasure commensurate not only with the rarity of such contributions from the pen of the acknowledged head of the surgical profession, but also with the high value they have learnt to put upon everything he has to say on the subject with which his name is so pre-eminently associated. If any indication be needed of the favour in which catgut is held by surgeons as a ligature and suture material, it is to be found in the numerous methods devised, one after another, to ensure sterility, and in the price they are willing to pay to enterprising German and American firms for fancy methods of preparation and storage. Nevertheless, in many respects an ideal ligature material, catgut has never freed itself from the reproach of occasional connexion with sepsis, and unfortunately those methods which have most nearly approached perfection as regards freedom from bacteria and spores have generally deprived the material of certain other important properties, such as suppleness and pliability. The methods of Clark and Miller, of von Bergmann, of Claudius, have all their advocates; iodine, xylol, cumol, alcohol are but a few of the substances employed; the sulpho-chromic method, however, holds its own, and there is little doubt that the publication of Lord Lister's note will do much to bring catgut into even greater favour. In the matter of drugs and of medicated dressings most surgeons are entirely in the hands of the manufacturing chemists, and although perfectly well aware of the instability of

some substances constantly in use, of the uncertainty attending the physical properties of certain drugs produced to all intents and purposes by precisely similar chemical processes, they have no means, save equivocal clinical results, of applying readily efficient tests. It is therefore of the highest moment that not only the formulae of methods (for the soundness of which so excellent a testimony as that of Lord Lister can be adduced), but also the pitfalls besetting them, should be published as widely as possible. It is perhaps not out of place here to mention the point recently revived by Borszeky[1]—it is, of course, widely known—that suture materials with a rough surface such as catgut, cannot be handled even by "sterile" hands without the occasional transference from the skin of organisms; hence the use of gloves is advisable, even despite the antiseptic action of the sulpho-chromic gut, demonstrated by the experiments of the late Dr. Allan Macfadyen. It will doubtless be remembered that Sir William Macewen devoted a considerable part of his Address in Surgery[2] at the Annual Meeting at Oxford, in 1904, to the question of catgut as ligature and suture material. The method of preparation he suggested differs from that now given in detail, but there was a great deal of information as to the ultimate fate of the sutures, and the mode and rapidity of absorption, that makes the address well worth a second reading.

INFANT LIFE PROTECTION.

The opposition of certain benevolent persons and philanthropic institutions to the proposal to amend the Infant Life Protection Act, 1897, so that infants in single care may enjoy the advantages of its protection, is a little difficult to understand. The arguments used by the deputation received by Mr. Herbert Samuel, M.P., Parliamentary Secretary to the Home Office, were not very convincing. In the main they rested on the assumption that the extension of the principle of inspection to cases in which a foster mother took a single infant would interfere with the benevolent instincts of the poor, and would prevent women from accepting, partly out of friendliness and at a very low weekly payment, the infant of a widower or an unmarried girl. It was alleged that the effect of inspection of baby farms had been to increase the minimum weekly rate at which infants were received in such places from 5s. to 6s., and that inspection would have the like effect on single cases, with the result that the cost of maintaining the infant, and probably in many cases also the mother, would be thrown upon the rates. This, it was urged, would diminish the sense of parental responsibility, and even tend to the increase of illegitimacy, since the mother would be relieved of all responsibility for the maintenance of her child. Mr. Herbert Samuel, in his reply, said that the Children's Bill which has been prepared for next session consisted of seven separate parts, of which only one would deal with infant life protection, the others being concerned with various matters touching not only infant life but the interests of children generally, including offences by children as well as against children. He pointed out that there was a strong body of opinion in favour of extending inspection to single children, and that those who were in favour of this course urged that there was no logical reason why the operations of the Act should be limited to homes where two or more children were received, and that under the present law a baby-farmer might take in a succession of infants, one at a time, each of which might die, or be subfarmed to some other person; further, they were able to produce a long list of cases of cruelty and neglect of children in one-child homes, discovered in spite of the absence of a statutory right to inspect such homes. Probably, taking all the circumstances into consideration, Mr. Samuel has taken the wisest course in deciding to move for a Select Committee of the House of Commons to investigate this one point—whether or not one-child homes should be subject to inspection. The Commons Committee of 1881 and the Lords Committee of 1896 reported against it, but a good deal of further information has been accumulated during the last ten years. The new Committee would do well not to limit its inquiry to the experience of this country, for other countries have gone further, and legislation in France, Spain, Italy, and some of the States of the Commonwealth of America, is in advance of our own. The Royal Commission of 1904 in New South Wales recommended that the provisions of the Children's Protection Act in force there should be extended so as "to bring under control all persons "undertaking for gain or reward to take charge or care "of one or more children under the age of three "years," and that infantile diarrhoea should be made a notifiable disease in the case of all infants taken in for payment. The principle of the inspection of houses in which single children are received has been affirmed by succeeding international congresses on the protection of children held in Hungary, Switzerland, Italy, Belgium, Scotland, and London, and there can be little doubt that the time is ripe for giving local authorities the right to inspect, at least in those cases in which there are grounds for believing that it may be beneficial.

[1] *Magyar Orvosi Archivum*, Bd 7, and *Zent. f. Chirur.*, 1907, p. 334.
[2] British Medical Journal, 1904, vol. ii, p. 231.

THE MANCHESTER DEBATE ON VACCINATION.

We have received a letter from the Rev. W. L. Schroeder who presided at this debate. "In the interest of truth "and fair play," he enters a protest against the tone of the report which appeared in these columns on December 21st, 1907. His criticism deals with three points. First, he complains of our reference to Mr. Swan's logic, and states that "Mr. Swan presented in "good set terms a position which so far as mere logic "was concerned was impregnable. Indeed, Dr. Drury "admitted the force of Mr. Swan's 'academic' argu- "ment, and straightway declined the challenge; for "I can bear witness to the fact that Dr. Drury in his "rejoinder evaded the whole point of the debate, which "was not concerned with vaccination as such, but with "the Vaccination Acts." In the interest of truth and fair play, we have made further inquiry on this point, and have ascertained that Dr. Drury did not admit the force of Mr. Swan's argument, but that the sentence from which Mr. Schroeder picks a single word was to the effect that if Mr. Swan had had his (Dr. Drury's) experience of thousands of vaccinations, and the benefit of the observations he had been able to make during two or three epidemics of small-pox, he would "cross "out one half at least of his academic armchair essay." "The good set terms" of impregnable logic to which Mr. Schroeder evidently refers consisted of a series of propositions which Dr. Drury in his rejoinder pointed out were not consistent with the mass of evidence which he produced. Even in "mere logic" we were under the impression that the truth or falsehood of a conclusion is in question in so far as it follows the truth or falsehood of the premisses. In order to show that the Vaccination Acts should not be entirely repealed, it was surely not necessary to answer arguments against compulsion, seeing that the Vaccination Acts no longer entail compulsion except on those who are determined to pose as martyrs, and on this occasion it was evidently thought better to occupy the limited time in showing that vaccination was a boon and blessing to mankind, and in answering Mr. Swan's fallacious arguments against "vaccination as such," which after all were the main points of the debate. From

this it is evident that Mr. Schroeder's suggestion of evasion on the part of Dr. Drury, and his inaccurate statement that Dr. Drury had admitted the force of Mr. Swan's argument, somewhat disqualify Mr. Schroeder from acting as censor and critic in this matter. Mr. Schroeder's second complaint is as follows:—"Your "report suggests that I did not favour the taking of a "vote on account of the 'packed' nature of the meeting. "That is simply a misstatement, no vote being taken "because that procedure was settled before the meeting "began." We made no such suggestion or statement. We are informed that no reference was made by the chairman to the question of taking a vote until a late stage of the debate, and further, that the chairman did not inform the audience that the procedure had been previously settled. Mr. Schroeder's third complaint refers to our suggestion that the audience was "packed" by the Antivaccination League. This he contends "is not "merely illogical and unfair, but untrue." We see no reason for withdrawing the suggestion merely because the hall was not crowded, since it is a fact that officials and members of the Antivaccination League were whipped up from such places as Birmingham, Leicester, Burnley, Oldham, etc. A more careful reading of our report and a more intimate knowledge of the composition of the meeting would, we feel convinced, have modified the tone of Mr. Schroeder's objection to the statements in our report.

CRIPPLED CHILDREN.

A LITTLE before Christmas a new star in the firmament of bonesetters made what, as far as we know, was its first twinkling bow to London. The meteor on this occasion had an address in Piccadilly, and apparently some capital behind it; and naturally its appearance was duly proclaimed by the *Morning Leader* in one of those picturesque descriptive articles which bear so disconcerting, but of course deceptive, a resemblance to an advertisement. This contained the usual farrago of references to marvellous cures; but went further than usual by including an artistic allusion to the possibility of the new genius rendering further progress with the home for crippled children at Alton superfluous, by taking these unfortunate children in hand himself. Fired by the example of such philanthropy, another member of the same constellation has since made an offer of his gratuitous services to Sir William Treloar, with the small sum of a thousand guineas conditionally thrown in like a china vase with the advertising grocer's pound of tea. So far the offer does not seem to have been definitely accepted, but, since altruistic enterprise of this sort should never go unrewarded, it may be well to record the fact that it has not been overlooked by the press. Indeed, quite respectable papers have mentioned the fact that the offer has been made, and have given its maker, our old acquaintance, Mr. H. A. Barker, the title of "Dr.," with an address in Park Lane, and thus a splendid and doubtless quite unlooked-for advertisement. So far the matter is really only a satire on the credulity of the public, almost worthy of the authors of *Hustled History*. It will be less easy, however, to regard it in this light if it should really prove true, as has been indicated, that Sir William Treloar has taken the offer in question seriously, and has promised that when the Board of his Home is formed it shall be submitted to it for acceptance. We confess that we should not be absolutely surprised if it were so, for this warm hearted philanthropist, in his zeal for the success of his scheme, showed last year a certain lack of balance in his treatment of its medical features, and amongst other things admitted into a publication sold for the benefit of the Fund, gratuitously compiled and published by various well known and kindly-hearted writers, several advertisements of doubtful taste, including one of a liniment sold in the name of a "music "hall artist," who has gained a notoriety, not entirely free from connexion with the police-courts, by his employment of cripple children. Sir William Treloar was quite an exceptional Lord Mayor, in whom the public, recognizing the invariable excellence of his motives, overlooked what in others it might perhaps have been disposed to regard as unseemly antics, and even though he has now retired into private life, much doubtless should and will still be forgiven him. Possibly, therefore, even if he adopted the scheme in question, the public, upon whose support his scheme is still in some degree dependent, might not be inclined to say him nay; and in this case he would surpass his own record. Upon the whole, however, we are not disposed to advise him to attempt the feat, for, after all, it is not with the general public alone that he would have to deal, and he might find that he had ruined his scheme just as some years ago did a certain royal princess by allying with her undertaking an earlier star of the same character as Mr. H. A. Barker and the Piccadilly rival whose name escapes our memory.

THE BROWN DOG.

THREE meetings have been held in Battersea Town Hall "in defence of the Brown Dog Memorial." At the first, the most remarkable utterance, perhaps, was that of Dr. Wall, who is reported as having declared that "a miserable minority of vivisectors dominated the "whole medical profession." At the second meeting, which was held on January 13th, the Mayor of Battersea was in the chair, and was supported, among others, by Miss Lind-af-Hageby, Dr. Snow, and Mrs. Despard, one of the leaders of the "Suffragettes." The Rev. R. J. Campbell sent a telegram expressing the opinion that "vivisection is morally offensive and has "not justified itself by results." Antivivisectionists mustered in force, some three or four hundred "stewards" having been collected to keep order. Mr. Archer, a Progressive member of the Battersea Borough Council, moved a resolution to the effect that the inscription on the Brown Dog Memorial was, in the opinion of the meeting, "a veracious reference to ascer- "tained facts," which understated rather than overstated the fate of the dog, and that neither it nor the statue should be removed from their present position; further, that vivisection in all forms was a "cruel and demoralizing practice and a stain "upon the civilization of the world, more especially "in the encouragement and support of vivisectional "demonstration before students." Mr. W. Willis, who seconded the resolution, called upon the men, women, and children of Battersea to rally to the protection of the brown dog. He added that they were going to see that the Commissioner of Police did his duty, or the Home Secretary would have an opportunity of expressing an opinion. Miss Lind-af-Hageby said that if the inscription was a lie, it would be intolerable to antivivisectors. Objection was taken to the words "done to "death," but that was because the objectors had but a narrow and inhuman conception of the rights of animals. She maintained that the evidence in Bayliss *v.* Coleridge proved the truth of that part of the inscription, which read, "after having endured vivi- "section over more than two months," and that the accuracy of the inscription as a whole was proved by the statements of the vivisectors themselves. Miss Woodward, Secretary of the International Antivivisection Council, which presented the memorial to Battersea, supported the resolution. Mrs. Despard said that, in fighting for antivivisection, they were fighting for humanity. The Rev. Dr. Warschauer said that if the drunkard

were demoralized by drink, the medical student was demoralized by the practice of vivisection. He referred to medical students as "young Molochs" who would shortly be let loose to practise on the public. An amendment was moved by Mr. Stephen Paget, who described the inscription as a lie. Practically all that had been done to the brown dog had twice been done to himself. The Hon. A. Capell, in seconding, said the inscription should be removed because it was insulting and offensive. The original resolution was carried by a very large majority. We need not comment on the matter further than to call attention to the curious "humanity" which leads a clergyman to describe young men who as a class are, in a practical sense, the most humane of the community as "young Molochs," and another philanthropist, described (by the *Morning Leader*) as a "cheerful interrupter, who shouted, when Mr. Paget "spoke of an operation on himself, 'That was when "'you were vaccinated." The intelligent reporter adds that "the audience rocked with laughter" at this humane jest. Mr. R. J. Campbell's dogmatic statement that vivisection has not justified itself by results will doubtless receive the attention it deserves from those who attach importance to the utterances of that versatile divine. The third meeting took place on January 15th, and was mainly remarkable for the fact that, in reply to a question by Dr. Morgan Jones, who moved an amendment, whether those present would sacrifice the life of their child rather than cause inconvenience to some unknown guinea-pig, several voices replied "Yes." The resolution was carried as before. We hope these meetings will go on, and we appeal to all medical students to let the Battersea fanatics worship their idol undisturbed. If anything can increase the disgust which this silly agitation has already excited among the great body of reasonable people, it is such exhibitions of the true temper of antivivisectionism.

THE HOUR OF DEATH.

A few weeks ago, in the course of an article dealing with the daily rise and fall in the activity of the vital processes of human beings, we had occasion to refer to some statistics compiled by Dr. H. D. Marsh, of New York. These indicated that the wave of diurnal efficiency, or the range of mental and physical activity, varied absolutely with the habits of the individual as regards work and sleep, and that in the case of individuals conforming to the habits of the majority of inhabitants of civilized communities, the hour of greatest efficiency was likely to be 5 p.m. This conclusion was the outcome of a special investigation conducted by Dr. Marsh, and curiously enough an examination of the records of death in New York City, likewise made by him, showed that during the period under examination 5 p.m. was also the hour at which the majority of 23,439 deaths from disease occurred. It is certainly notable that the period of the twenty-four hours at which the average man is most alive should be the same as that at which his death is most likely to occur, and the apparent inconsistency has led to turning over our own columns in search of previous observations on the question of what may be called the hour of death. The general result is to indicate that before any final statement can be made as to the hour of the twenty-four at which *caeteris paribus* death is most likely to occur in any given individual, much more extended and thorough investigations of the point will have to be carried out than has yet been undertaken. At present the evidence is somewhat conflicting. Thus it is found that Finlayson, writing in the *Glasgow Medical Journal*, and using some statistics compiled by the City Chamberlain, found that of 13,000 deaths recorded in 1865, the greatest number occurred between the hours of 5 and 6 a.m., while Schneider, writing in *Virchow's Archiv* on deaths in Berlin, concluded that the most fatal hour was between 4 a.m. and 7 a.m. The number of deaths upon which he based his conclusions was 57,000; while Berens, arguing from the limited number of 1,000 deaths in Philadelphia, and writing in the *Philadelphia Medical Times*, concluded in favour of the hour between 6 a.m. and 7 a.m. In 1896 Dr. C. F. Beadles published the result of an examination of the statistics of Colney Hatch Asylum. These showed a difference between the two sexes as regards the hour of greatest mortality. Thus, amongst 1,000 women the most fatal hour was between 6 and 7 in the evening while amongst 3,424 men it was between 5 and 6 in the morning. It will be seen that the statistics here quoted tend, so far as they go, to favour a belief in the fatality of the earlier hours of the day, as against the conclusion reached by Dr. Marsh. None of them, however, give countenance to the popular belief that the hour at which any given invalid is most likely to succumb is the same as that at which, according to the Duke of Wellington, the heroic attitude is most difficult to assume, namely, 2 a.m. On the surface of things, it seems unlikely that any particular hour should be more fatal than another, and in any case it is clear that those who have investigated the matter have not always been dealing with truly comparable units. Precision in recording the exact hour of death is not easy to obtain, and, besides this, data such as the nature of the illness, its duration, and the age and sex of the patient have also to be considered. The observers, as a rule, seem to be alive to this point, Beadles, as also Marsh, noting the difficulty thus created.

FRUIT AS DIET.

The reference in a recent leading article to the use of fruit as a diet has brought us a letter from Mr. Josiah Oldfield, D.C.L., M.R.C.S., the apostle of "Fruitarianism" in this country. His main point, to use his own words, is that "when the patient is put upon a rightly-balanced "fruit diet there is a rapid diminution in the excretion "of foul-smelling products of decomposition by the "bowels, the bladder, the skin, and the respiratory "organs." We are not prepared to admit that healthy persons on mixed diet excrete foul-smelling products by the last three channels, nor is the odour of faeces dependent upon flesh food, as it may be exceedingly strong in the case of horses, whose diet is wholly vegetarian, and slight or absent in the faeces of a flesh-eating dog. The value of fruit as a diet for workers in temperate climates has yet to be determined. According to Jaffé, the Californian fruit-eaters do not look robust, but seem active and well; but they live an out-door life in a comparatively warm climate. According to Dr. Langworthy, whose essay on the use of fruit as food was published by the United States Government last year, there is sufficient evidence to show that fruit and nuts are almost completely digested, and have a higher nutritive value than is popularly attributed to them; but, while cheaper than meat, they are more expensive than cereals and potatoes. During the last few years our town populations have taken freely to the use of fruit, the sale of bananas in particular being very large. In days when the art of domestic cookery seems to be at the lowest level the addition of ripe, wholesome fruit is a welcome change and a useful variation to the monotony of the working man's dietary.

THE COMMON HOUSE-FLY AS A SPREADER OF DISEASE.

A report entitled "Pollution of New York Harbour as "a menace to health by the dissemination of intestinal "diseases through the agency of the common house-"fly," by Dr. Daniel D. Jackson, presented to the

Committee on pollution of the Merchants' Association of New York, brings forward most forcibly the part that flies play in the spread of disease and also shows a very insanitary condition pertaining to the harbour of New York. A thorough inspection of all sources of contamination throughout the entire water front was carried out, and it was found that at many points sewer outfalls had not been carried below the low water mark, in consequence of which the solid matters from the sewers had been exposed on the shore; it was also found that during the summer months on and near the majority of the docks in the city a large amount of human excreta was deposited, such accumulations through the agency of flies becoming a source of typhoid fever or other intestinal diseases. The figures brought forward show very clearly how intestinal diseases increase with the prevalence of flies, and no one can wonder that this should be the case. The example of the fly, bacteriologically examined, carrying 100,000 faecal bacteria on its legs and mouth parts is sufficient to show the danger. The flies, first settling on faeces and other filth, carry the bacilli to milk and other food; the temperature being high, rapid multiplication takes place, and the unfortunate eater of the food gets poisoned. More importance might be given to this easy method of transmission of disease germs in other parts of the world as well as in New York. It is to be hoped that the letter of the Chairman of the Committee to the Governor of New York will be productive of some amelioration of the very insanitary conditions at present prevailing around the harbour of New York.

THE WAR ON RATS.

IN these days of risk-free crusades for the promotion of this or the suppression of that, one more or less makes little difference; one need not, therefore, grumble at the addition to existing bodies of the society to which brief reference was made in the JOURNAL of January 11th. It was successfully established at a meeting on December 10th, 1907, under the name of the National Society for the Destruction of Vermin, and rejoices in a highly distinguished, even ornamental, directorate and executive council. With any society which promises to facilitate the repression of disease we are naturally in sympathy, but we confess that our sympathy in this case would be of a somewhat warmer nature if we knew precisely what it is that has brought the Society into existence at the present moment, and if we were quite sure that the motives of those who are responsible for its conception, not for its actual birth, were of an entirely altruistic nature. Its professed object is the destruction of rats, and we should have greater faith in its future success in this direction if those who spoke at the meeting had been somewhat less optimistic in their expressions, and had shown a more practical realization of the immense difficulties of the task which the Society had undertaken. The problem of the destruction of rats is no new one, and it is somewhat curious that none of those who spoke with such ready eloquence on the subject seem to be aware that in practice it is one which has vanquished the many authorities in India, Japan, Australia, and elsewhere who have undertaken it with the assistance of exceedingly able medical men. Ashburton Thompson, Haffkine, and other practical workers admit, we believe, that anything approaching the stamping out of rats is impossible; while the former not long ago expressed an opinion, founded upon his prolonged experience in Australia, to the effect that all that is necessary in connexion with rats is to secure their exclusion from dwelling houses. To the truth of this observation there is independent testimony in a fact to which attention has since been drawn—namely, that in some plague-stricken districts of India the railway employees who live in stone-built houses are practically exempt from plague. Moreover, there is strong reason to believe that the mere existence of rats counts for little; they must not only be plague-stricken, but have such free access to habitations as practically to be their normal inmates, and their presence must be so little resented that there is time for the fleas which they carry to pass to the commensal human beings. It might also be objected that from a medical point of view, and as far as these islands are concerned, the case against rats was depicted at this meeting in very crude and unduly lurid colours. It is possible, of course, that some of the outbreaks of plague which have occurred in this country may have been initially due to rats, but these outbreaks have been overcome with comparative ease, and their arrest has certainly not been due to any conspicuous success in stamping out rats. In short, the view that chiefly commends itself is that, while to agriculturists and others rats are undoubtedly formidable enemies, so far as human disease is concerned all that is necessary is to ensure that they do not obtain access to inhabited dwellings or stores of food. This, except in isolated country dwellings and when very extensive house-breaking in condemned areas is in progress, as recently in the neighbourhood of the Strand, is a comparatively simple task, and one which that much-maligned person, the sanitary engineer, commonly performs with considerable success. With the best will in the world, therefore, we cannot look upon the Society as a very notable addition to the provisions against disease in this country; and if it has any prolonged existence, we venture to think that this will be due to other reasons than to any service it is likely to render to sanitary science.

THE EDUCATION OF FEEBLE-MINDED CHILDREN.

DR. ROYER, a former clinical assistant at the Bicêtre, has written an essay[1] to enforce the doctrine that it is absolutely necessary, from the social standpoint, to provide proper care and training for abnormal children, citing in support of his contention the results obtained by his old master, Dr. Bourneville. He limits himself to mentally abnormal children (to the exclusion of blind, deaf, and cripples), and first gives a brief history of the efforts made in the early portion of the nineteenth century for the amelioration of their condition by such men as Itard, Ferrus, Falret, and notably (in connexion with the Bicêtre) by Séguin, whose labours in this direction gained him deservedly a world-wide reputation, though at the time he was calumniated in his own country. He then describes the result of the efforts of Bourneville during his term of office, from 1878 to 1905, to organize an effective training school in the Children's Section of the Bicêtre. The descriptions, illustrated by drawings of the special apparatus employed, of the ingenious methods used by Bourneville for training the limbs, the fingers, the senses, and the intelligence of his young patients, will be valuable to all those who are interested in the medico-pedagogic care of abnormal children. Various industries have been developed in the Children's Section, and we are told that the workshop accounts show for the twenty-two years of their operation children's work amounting in aggregate value to over £9,000. A long list is also given of ex-patients, who, after suitable treatment and training, have been able to gain a living in the outside world, though it would appear that for such cases Dr. Bourneville considers a system of after-care indispensable. Royer, indeed, lays

[1] Bibliothèque d'Education Spéciale (XIV). *De l'absolue nécessité de l'assistance des enfants anormaux et de ses résultats au point de vue social.* Par Maurice Royer, M.D. Préface du M. le Docteur Bourneville. Paris: aux Bureaux du *Progrès Médical*, et G. Jacques. 1907. (Royal 8vo, pp. 150. Avec 41 figures, et un plan hors texte. Fr. 8.)

stress upon the social danger arising from the ready "suggestibility" of higher-grade imbeciles rendering them liable to become instruments for evil in the hands of designing persons. He maintains that "a large "proportion of criminals, of habitual drunkards, and of "prostitutes is in reality composed of congenital "imbeciles, for whose amelioration nothing has been "done," and demands more extensive provision of asylum-schools and of special day schools throughout France. In this country we have the advantage of a fairly extensive (though not universal) system of special schools for defective children, but experience tends to show that not merely early detection and appropriate training of such weaklings is necessary, but that, to ensure the best results to society, these must be supplemented by some form of permanent care.

MEDICAL WITNESSES IN INDIA.

A CORRESPONDENT has recently drawn our attention to a very real hardship to which members of the profession in India are subject. We are informed that there is no provision in the Criminal Procedure Code for the payment of expert witnesses. In a recent case (Government *v.* Stokes), which was heard at the Mysore Chief Court, the defendant, Dr. Stokes, was careful to answer all questions as to matters of fact at the time, but declined to express his expert opinion as to how certain injuries had been caused unless he was paid a fee. He was apparently committed (or fined) for contempt of court because he refused to give evidence as an expert. It appears that the Government Inspector of Mines asked for one of a mining company's medical men to go to court to give evidence in a criminal case. He was told he could have the witness, and that the fee would be Rs.16. Upon communicating with Government it was found that there were no funds for medical witnesses, and it was suggested that the Court should be asked to summon the doctor. It was in pursuance of this that Dr. Stokes was brought before the Court as a witness. It is extraordinary that no provision is made for the payment of medical witnesses in India. In England fees are paid to medical witnesses in every criminal court, while in a civil court the practitioner can refuse to give evidence unless his fee is paid or tendered. Some persons appear to have the notion that a medical man is a kind of public benefactor, who, in consideration of his being allowed to practise medicine, must appear in court and sacrifice valuable time for the public benefit whenever called upon. This seems to be the view held by the Indian Government. We recall a recent speech by Lord Curzon in which he stated that, while military occupation and settled government had done much, it was the administration of justice according to English ideas that had done most for the welfare of the peoples of India. If it is the fact that a member of the medical profession can be compelled to give evidence without fee, even where he is called as an expert to assist the Court, we trust that this injustice may be remedied in the code which, we are informed, is now undergoing revision.

AMERICAN PUBLIC HEALTH LEAGUE

At the annual meeting of the Public Health Defence League, which, as we learn from the *Boston Medical and Surgical Journal*, was held at the New York Academy of Medicine on November 18th, 1907, a plan of consolidation with the Committee of One Hundred on National Health, organized under the auspices of the American Association for the Advancement of Science, was submitted to the members. The plan had previously been approved by the Board of Directors of the League and the Executive Committee of the Committee of One Hundred. On December 14th an agreement was signed in New York formally completing the consolidation, and by the terms of this all former members of the Public Health Defence League who are in good standing become members of a body to be known as the American Health League of the Committee of One Hundred on National Health. On January 2nd a meeting was held in Chicago, under the auspices of the new American Health League and of Section I of the American Association for the Advancement of Science, to consider questions of federal regulation of public health and to hear a report upon the work and plans of the Committee of One Hundred.

CEREBRO-SPINAL MENINGITIS.

THE *Boston Medical and Surgical Journal* states that the serum against cerebro-spinal meningitis (prepared by inoculating horses with the cerebro-spinal fluid taken from patients afflicted with the disease), upon which Dr. Simon Flexner, of the Rockefeller Institute, has been at work for the past two years, has now proved successful in over 60 cases, and that in no instance in which it was employed did it prove ineffectual. There would seem to be no doubt (adds our contemporary) of the pre-eminent value of this new remedy, for while the cases in which it was tried may not as a rule have been as virulent as those occurring at the height of the epidemic which began in New York in 1905, the disease has remained sufficiently virulent to destroy an average of eight lives each week in the city during the past three months.

SLEEPING SICKNESS.

THE second International Sleeping Sickness Conference, which was to have met at the Foreign Office on January 9th, has been further postponed, and it is uncertain when it will take place. This time the difficulty has arisen on the part of the French Government which, we understand, has shown a desire that the Conference should be held in Paris. It has, we believe, been suggested that another commission should be dispatched from England to Uganda to follow up the work of the Royal Society Commission, and to study the latest theories brought forward by Professor Koch, as well as other phases of sleeping sickness. Uganda, in 1906, lost nearly 50,000 people from this cause, and the Congo region over 400,000. The disease is spreading, and has taken hold for several hundred miles along the valley of the Upper Nile. So far south as Rhodesia traces of it have been found. It has spread in less than a century from the extreme west to the east of Africa.

AT a meeting of the Royal Statistical Society to be held on Tuesday, January 21st, at 5 p.m., at the Society's Rooms, 9, Adelphi Terrace, Strand, W.C., London, a paper entitled, Some Unconsidered Factors Affecting the Birth-rate, will be read by Dr. Reginald Dudfield.

WE are informed that the Sanitary Committee of the Leicester Corporation at a meeting held last week negatived the proposal to adopt the Notification of Births Act for the Borough of Leicester. A deputation of the Leicester Division had waited on the Committee at a previous meeting pointing out the desirability of the Act being amended.

THE hearing of the case Tucker *v.* Wakley was commenced on Wednesday, January 15th, before Mr. Justice Ridley and a special jury. The action was brought by Augustus Quackenbush Tucker, the English agent for "Dr. Tucker's Asthma Specific Inhaler," against the proprietors of the *Lancet* for a libel which was alleged to have been contained in that journal on March 9th, 1907. The defendants pleaded that the article in question was fair comment on a matter of public interest. A report of the proceedings will be published later.

England and Wales.

[From our Special Correspondents.]

MANCHESTER AND SALFORD.

A Central Receiving Hospital.

The impending removal of the Manchester Royal Infirmary from the centre of the city to a distance of a mile and a half has again brought up the question of a central receiving hospital for cases of accident and sudden illness. On January 7th the Board of Management of the Infirmary received a report of the Committee appointed to deal with the subject. It was stated that the Committee had received the option of several sites for building on, but none of them were within the area defined in the resolution of the trustees passed in December, 1904, and there would be great difficulty in finding a suitable site. The Committee was of opinion that until the actual public requirements in that respect were ascertained it was unwise to incur a large outlay for the permanent establishment of a central branch. It had, therefore, approached the Infirmary Site Committee of the Manchester Corporation, and had entered into an arrangement with it, subject to the consent of the Board, for the occupation of the existing out-patient department for twelve months after the new infirmary was occupied, and thereafter, subject to six months' notice, at a nominal rent of one guinea per year. The Secretary estimated that the upkeep of the central branch would cost about £2 100 per year. It was definitely stated that there would not be any beds provided and there would be no need for a mortuary. The out-patient department buildings are quite separate from the main Infirmary, and it was said that the process of demolishing the main buildings would not be interfered with, while the arrangement would enable the Committee to properly test the system of receiving hospitals. The suggestions of the Committee were unanimously adopted by the Board of Management.

There is very grave doubt whether this experiment will be a success. It would seem to be only a compromise forced on the Board of the Infirmary, which has not got the money properly to equip and maintain a central hospital in addition to the enormous liabilities of the new infirmary in Oxford Road. The whole subject was fully discussed in the Press three years ago, and at that time three schemes were before the public. The Committee appointed by the Board after full consideration remained divided into two parties. Five of its members signed a "majority report" in favour of simply a receiving house, with no beds, where emergency cases might receive first aid and then be either dismissed or sent up to the new infirmary. The serious objection to this was of course the double removal of the patients from the ambulance to the receiving house and then, after perhaps a painful dressing, back to the ambulance for the second journey to the infirmary. The "minority report," signed by three members of the Committee, advocated a small central hospital, properly furnished with from 12 to 24 beds. This would involve a complete staff and all the offices of a separate hospital. Besides that, it is certain that every case which happens to be nearer to the central hospital than the Infirmary would be taken to the former, and would not be sent on to the infirmary without an examination, so that the same objection as before of a double journey would occur, for 24 beds would soon be all taken up in a large city like Manchester. Moreover, patients remaining there would miss all the advantages of the new infirmary. The third scheme suggested, which received the support of the greater part of the medical profession, was to do away altogether with the idea of a central receiving-house, and to organize an efficient ambulance service for the city. In this respect Manchester's condition is simply lamentable. It is, in fact, a disgrace to the Corporation that Manchester should be so far behind many third-rate German towns in its provisions for the treatment of cases of accident occurring in the public streets. Without advocating for one moment that public hospitals should be supported by the municipality, it is surely not asking too much of the City Council to demand that it should make more efficient arrangements than at present exist. All praise is due to the police ambulance, which works well, within the limits of its equipment; but far more is needed, even if a central receiving-house be established. But if a really efficient first aid and ambulance system were established there would be no need whatever for any central receiving-house, which will never be a success, and which it is altogether unjust to saddle on the infirmary, however willing it may be to do the best its means allow. What is wanted, and what was put before the public three years ago by the medical profession, may be summed up under two heads: First, an efficient system of rendering first aid on the spot as far as possible before removal by ambulance; and, secondly, a properly-equipped municipal ambulance system. Both these ought to be quite public, and not managed by or confined to any one hospital. Many patients would often much prefer to be taken at once to their own homes for treatment by their own family doctor, and the custom of rushing off every case in hysterical haste to a hospital cannot be too strongly condemned. It is far more rational to make the first aid as efficient as possible, and, after that has been given, a few more minutes in transit will be of far less consequence. Two points about first aid should be regarded as essential: first, it should be given by a properly qualified medical man; and, secondly, it should be available as quickly as possible. To appoint special emergency medical officers would hardly meet the exigencies of the situation, for either they would have to be very numerous, or there would be often great delay in their arrival, as several accidents may occur about the same time. A far more sensible plan would be to instruct the police to summon the nearest available medical practitioner. There are scores in every district with surgeries ready fitted up for dealing with emergencies. Help would be far more quickly obtained in this way, and the cost would be less than that of the establishment of one or several emergency dépôts with the payment of special whole-time officers who would often be engaged elsewhere just when wanted.

For the ambulance system, essential points are that there should be several horse or motor ambulances kept always ready waiting at central positions, and in proper telephonic communication with all parts of the district. With such a system first aid would often have been efficiently rendered by the time the ambulance arrived, and if the accident happened at any great distance from any available medical man's residence, which would be extremely rare, that fact could easily be stated in the telephonic message, and the ambulance could then call for some practitioner on its journey to the scene of accident. Such a system, taking full advantage of all the medical and surgical skill and appliances scattered all over the district, and the splendid means of communication and conveyance at its disposal, would be far more scientific and far more humane than the establishment of a receiving house which is practically doomed to be a costly failure.

BLACKBURN.

The Question of a Sanatorium.

The Blackburn branch of the Charity Organization Society, which is anxious to see a sanatorium on very inexpensive lines erected near Blackburn, laid a number of proposals to this end before Dr. Greenwood, the Medical Officer of Health, and the Health Committee some little time ago. The incident has ended for the time being in Dr. Greenwood stating that he still hesitates to advise the Health Committee to erect a sanatorium in Blackburn, owing to difficulties regarding a proper site and lack of knowledge of the number of cases in the town in a really early stage of the disease, when it is suitable for open-air treatment. Instead, he prefers to recommend that arrangements be made with some existing sanatorium for the reception of 4 cases, each to remain for six months under treatment, thus giving 8 selected cases annually a chance of recovery. He estimates the total expense of this plan at £400 a year.

LIVERPOOL.

Farewell Dinner to Dr. William Carter.

Dr. William Carter, who has for so many years held a prominent position as a consulting physician in Liverpool, and whose retirement from his professorial

chair and from the Royal Southern Hospital was recently noticed in the Journal is also retiring from practice, and is going to live in the country. His colleagues on the staff and the committee of his hospital and other friends feel that the occasion ought not to be allowed to pass without due recognition, and accordingly it has been arranged to hold a dinner in his honour at the Adelphi Hotel on Saturday, July 25th, at 7.15 p.m. The Lord Mayor (Dr. Richard Caton, Emeritus Professor of Physiology) will preside. It is also intended to present Dr. Carter with his portrait by Mr. Copnell, of Liverpool. The Secretary, Dr. J. Lloyd Roberts, would be glad to know of any members of the profession who have not received notice of the dinner but would like to be present, and so far as room will permit he will reserve places for them. The price of the dinner ticket is 7s. 6d., and the subscriptions to the portrait are not to exceed 1 guinea.

WEST YORKSHIRE.

Halifax Mayor and the Care of Infants.

The increased interest in attempting to lessen infantile mortality is shown in the recent offer of the Mayor of Halifax. Following in the footsteps of a former mayor of Huddersfield his Worship has decided to present £1 to the parents of each of the first hundred children born in the borough during the present year, in all cases where the children reach 1 year of age. The birth of the child is to be reported to the medical officer of health within forty-eight hours of its birth; the medical officer of health will keep a register and the 100 children first reported to him will be those whose parents will be eligible to receive the £1. As soon as practicable after the birth is reported the parents will be given a promissory note for £1 payable when and in those cases only in which the child attains the age of 1 year.

Bradford Infirmary Samaritan Society.

This excellent charity held its twenty-fourth annual meeting on January 3rd in the Town Hall, Bradford, the Lord Mayor presiding. The society exists to help infirmary patients after their discharge from the institution, or home patients requiring clothing or surgical requisites. During the past year, 216 patients were helped, and clothing was given to 89 families and food to 121 families; 78 surgical instruments required by patients were partly paid for by the society; 113 patients were sent to convalescent homes; 18 patients were helped from the Charles Priestley Fund for Consumptives, and 735 garments were given away during the year.

Bradford Small-pox Hospital as a Sanatorium.

Attention has recently been drawn to a proposal of the Bradford Guardians to use this hospital for female consumptives. The Health Committee of the Bradford City Council determined to recommend this arrangement to the Council, the patients to be paid for on reasonable terms. Some further provision for the accommodation of a number of small-pox cases in the event of an outbreak in Bradford will have to be made, and it is now proposed to provide an observation block on a suitable site in the Bierley Hall grounds. This, with the necessary alterations to the existing wards, is estimated to cost £400.

DURHAM.

The Crusade against Tuberculosis.

Ten Years' Work in Durham.

The Society for the Prevention and Cure of Consumption in the county of Durham, which now has nearly ten years' active work behind it, has decided to open a second sanatorium at an estimated expenditure of £6,000. Its present building has accommodation for 45 patients, and full justification for a second venture of the same character is contained in the report adopted at the last annual meeting. The same document includes an interesting summary of the results achieved since the present sanatorium was opened seven years ago, signed by its medical officer, Dr. John Gray. The greater number of the patients are artisans and the like, and an endeavour is made to limit admission to cases in quite an early stage, but that this is not always possible is clear from the fact that of the 153 patients admitted during the last completed year, 52 already had cavities. At this institution all cases are classified for admission as either (1) early or consolidation cases, or (2) advanced or cavity cases. The former are persons in whom no physical signs of loss of lung tissue can be discovered, while advanced cases are those in whom there is evidence of definite loss of tissue in one or both lungs. The results as regards the former are shown in the following table, which covers rather less than two-thirds of the total admissions at any stage.

Early or Consolidation Cases.

Year.	Cases Discharged.		Condition on April 30th, 1907.			
	Total.	Returned to Work.	At Work.	At Home	Dead.	Lost Sight of.
1900-1901 ...	16	14	6	—	4	6
1901-1902 ..	30	23	11	1	9	9
1902-1903 ..	41	30	10	3	20	8
1903-1904 ..	59	48	29	4	11	15
1904-1905 ..	75	57	31	4	21	19
1905-1906 ..	84	63	44	8	19	13
1906-1907 ..	101	70	66	27	8	—
Totals ...	406	303	197	47	92	70

It may be objected that the classification is somewhat rough, and from the particulars given as regards last year's admissions it is evident that early cases at this institution include many which elsewhere would be regarded as advanced. Thus of 101, 47 had diseases of both lungs, and 4 infection of four lobes. As, however, the classification has been adopted, it may be better to adhere to it, so that as the years go on progress or the reverse at this sanatorium may be easier to follow, while, even if rough, the difference in the results as seen upon the foregoing and the following table are compared, shows that the classification is of a practical character.

Advanced or Cavity Cases.

Year.	Cases Discharged.		Condition on April 30th, 1907.			
	Total.	Returned to Work.	At Work.	At Home.	Dead.	Lost Sight of.
1900-1901 ...	29	9	0	1	17	2
1901-1902 ..	25	12	1	—	19	5
1902-1903 ...	38	23	5	—	24	9
1903-1904 ..	39	16	1	5	24	9
1904-1905 ..	37	14	3	5	20	9
1905-1906 ..	57	23	15	4	23	15
1906-1907 ...	52	17	16	19	17	—
Totals ...	268	114	41	34	144	49

As regards the term "lost sight of," Dr. Gray explains that it is applied to those from whom no communication has been received for twelve months. There is a tendency for patients on discharge to leave the districts in which they previously resided to seek work in more salubrious surroundings. He also notes that those to whom the term has been applied are chiefly persons who when they left the sanatorium were in very good physical condition, so that there is a strong presumption that many of them are still working. The cost of maintenance is low, the average expenditure a week for each patient being 17s. 10d.; the average stay is 13.2 weeks. The objects of the society, of course, are not limited to the maintenance of a sanatorium, and there is evidence in the report that in many directions it is being successful in its work of disseminating useful knowledge on the subject of tuberculosis in the North of England. The present sanatorium is situated near Stanhope, a village which from its healthiness and the beauty of its surroundings is in some favour as a summer resort, and since the annual meeting was held there has been opposition to the opening of a second

sanatorium in the neighbourhood. For this there seems no good reason, for in the first place the village is a considerable distance from the sanatorium and out of bounds for its patients; and in the second visitors, if the question of phthisis enters into their considerations at all, are likely to remember that Stanhope probably has its own cases of phthisis, and that these, if uninstructed in the management of their complaint, are a real not an imaginary source of danger, like the patients at the sanatorium. The proximity of the latter, indeed, should, as in the case of like institutions elsewhere, be regarded as a testimonial to the healthiness of the neighbourhood, and will ensure the prosperity of the village if steps are taken by the inhabitants to provide proper accommodation for visitors.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

ROYAL COLLEGE OF SURGEONS IN IRELAND.

WE are asked to state that the annual college dinner of the Royal College of Surgeons in Ireland will take place on Saturday, February 1st.

HEALTH OF BELFAST.

At the weekly meeting of the Public Health Committee it was stated that the death-rate from all causes was 28.0 per 1,000; 3 new cases of cerebro-spinal fever were reported, and 8 cases are in hospital. An increase of 10,000 was made last week by the Registrar-General in the population of Belfast. Dr. Baille, M.O.H., submitted a report on the adoption of the Notification of Births Act, whereby prompt information of a birth may be given to the M.O.H., and, if necessary, advice and assistance offered. He recommended the appointment of two well-qualified lady visitors as an initial measure; subsequently more might be required. It was stated that the report of the Health Commission was now completed, and was being put in type.

TUBERCULOSIS EXHIBITION IN CORK.

On January 11th the Tuberculosis Exhibition, which has been on view at the City Hall, Cork, for the past fortnight, closed its doors, having fulfilled its object by stirring up the masses of the people to a sense of the danger they were incurring by not attending to the ordinary hygienic conditions of life. The Irish poor are hard to move out of their easy-going way of being content with such things as they have, no matter how uncomfortable and unhealthy their surroundings may be. Thousands of people passed through the exhibition, and organized bands of visitors came from country districts, and the exhibits were shown and explained to them by competent demonstrators, either qualified medical practitioners or medical students. In the evenings the large City Hall was packed at 8.30 p.m. to hear lectures on the various aspects of the subject. Distinguished lecturers came from far and near to lay before the people a vast amount of information that must have sunk deep in the hearts of many. Dr. Chalmers, M.O.H. (Glasgow) Dr. McWeeney (Dublin), the Registrar-General, Professor Mettam (Royal Veterinary College, Dublin), Dr. Frank Dunne, Dr. Leopold Hare, while nearer home Dr. Moore (Lecturer in Pathology, Queen's College, Cork), Dr. D. J. O'Connor, Dr. P. T. O'Sullivan, Professor Barry, and Mr. Hoare, gave the audiences the benefit of their views in a very able manner. Her Excellency the Countess of Aberdeen, who was accompanied by the Lord Lieutenant, travelled down to Cork specially on December 30th, 1907, to open the exhibition. The Lord Mayor and Executive Committee of the Tuberculosis Exhibition, with Dr. J. J. Fitzgerald, met their Excellencies at the train and escorted them to the City Hall, where they were received by the General Committee of the Tuberculosis Exhibition with Dr. Cremen as chairman.

The Tuberculosis Exhibition is the direct outcome of the Women's National Health Association in Ireland, of which the Countess of Aberdeen is President. Accordingly on December 31st, 1907, at a large public meeting held in the City Hall, a branch of the above Association was inaugurated. Her Excellency presided, and explained the aims and objects of the Association, and a large general council was formed to carry on the work of the Association. Resolutions were proposed, seconded, and supported by the Countess of Bandon, Rev. Dr. Meade, Bishop of Cork; Right Rev. Dr. Kelly, Bishop of Ross; Dr. Cremen, Lady Carbery, Right Rev. Dr. Brown, Bishop of Cloyne, Mr. Augustine Roche, M.P., the City High Sheriff, Dr. Ashley Cummins, Sir Stanley Harrington, and Rev. Dr. Murphy. Dr. Lucy E. Smith and Dr. Alice Barry are Honorary Secretaries of the new Association, and Dr. Lucia Fitzgerald, Honorary Treasurer.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CLINICAL SURGERY IN EDINBURGH.

THE lamented death of Professor Annandale has rendered vacant two important posts in the surgical world of Edinburgh—the professorial chair of clinical surgery and the charge of three surgical wards in the Royal Infirmary. The former is a Crown appointment, the latter is an appointment in the gift of the managers of the Royal Infirmary. Already the names of many aspirants to the positions are mentioned and doubtless others will be forthcoming. Vacancies such as these necessarily raise many important questions, not only as regards the methods of teaching surgery, but also as regards the relation of university and infirmary appointments, the age limit for retirement, and the holding of multiple hospital appointments. Clinical surgery, whether taught professorially or by a hospital surgeon, obviously can be taught nowhere else than in the wards of a hospital, and consequently the educational value of the professorial chair is entirely dependent upon the tenure of a hospital appointment. The question is one which necessitates most careful deliberation, and no surprise will be occasioned by delay in its solution.

RESIGNATION OF DR. CLOUSTON.

Dr. T. S. Clouston has intimated to the managers of the Royal Edinburgh Asylum his resignation of his office of physician-superintendent. Dr. Clouston has given close on fifty years' service to the study and treatment of mental disease, and he is among the foremost men in Scotland in his own sphere. From 1860 to 1863 he was assistant-physician at the Royal Edinburgh Asylum under the late Dr. Skae. In 1863 he became medical superintendent of the Cumberland and Westmorland Asylum at Carlisle. In 1873 he succeeded his former chief, Dr. Skae, at the Edinburgh Asylum. The work he has done there during these thirty-five years is amply known to the medical profession. The Craig House for the higher class of private patients is a splendid monument to the energy and prescience and skill of Dr. Clouston. In 1873 the annual income from better-class patients was £8 600, now it is £35,000 a year. Dr. Clouston's teaching was of the first order.

EDINBURGH ROYAL INFIRMARY.

Mr. Alexander Miles, F.R.C.S.E., has been reappointed an assistant surgeon for five years as from February 28th; and Mr. William Guy, F.R.C.S., L.D.S., etc., and Mr. J. H. Gibbs, F.R.C.S.E., L.D.S., were reappointed dental surgeons for one year as from March 4th and 22nd respectively.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

The Registrar-General for Scotland reports that during the month of December, 1907, 20 deaths were due to cerebro-spinal meningitis, of which 10 were in Glasgow, 4 in Leith, 3 in Edinburgh, 2 in Paisley, and 1 in Aberdeen.

ENTERIC FEVER IN GLASGOW.

An outbreak of enteric fever is reported from Glasgow. Two deaths have occurred, and other patients are reported to be in a dangerous condition. The first two cases occurred in Kelvinside district, and soon afterwards notification was received that two cases had been discovered in the residential part of Partick. Strict inquiries resulted in the discovery that the dwellings in which the four cases took place were supplied with milk from the same source. Further investigation (says the *Glasgow Herald* of January 10th) revealed the fact that the cart from which the milk was procured received occasional supplies from a farm in the neighbourhood of Glasgow. The medical and sanitary authorities of the city and county thereupon visited the farm, where they found a young woman lying

ill in the kitchen bed. She had been ailing since the first week in December, and was once visited by a doctor. Her removal to hospital was at once ordered by the county authorities. Afterwards the farmhouse was thoroughly disinfected, and the supply of milk from it prohibited. A strict supervision of the affected area is being kept up by Dr. A. K. Chalmers, the medical officer of health for Glasgow, and his staff. Up to the 14th the cases that occurred in the affected areas of Glasgow—Hillhead, Kelvinside, and Dowanhill—have, with the addition of suspected cases, increased the number under sanitary supervision in hospital or at home to fifty.

New Zealand.

[From our Special Correspondent.]

Exclusion of Indigent Consumptives.

The High Commissioner for New Zealand desires to direct special attention to the fact that persons suffering from consumption and unable to provide for their maintenance inside a sanatorium cannot be allowed to land in New Zealand. Indigent sufferers are required to return by the next boat leaving after their arrival, and it is therefore specially important that consumptive patients of that class should be warned not to go to New Zealand.

New South Wales.

[From our Special Correspondent.]

Sydney.

The Birth rate.

The birth-rate for the metropolis for the month of November, 1907, was the highest on record for ten years, and 9 per cent. above the average of the previous five years. According to the report issued by the Bureau of Statistics during the month, there were 1,231 children born (618 males and 613 females), and 513 persons died, the excess of births over deaths being thus 718. The illegitimate births numbered about 10 per cent. of the total births, this being about the average. The birth record is 150 above the average for November during the last five years. The number of births has only once been exceeded in the month of November; that was in 1892. The resultant birth-rate is 228 per 1,000, corresponding to an annual rate of 27.36 per 1,000 of population. The mortality rate is also favourable, being lower than in last year, and below the mean for November during the preceding five years. The number of deaths of infants under 1 year of age was 126, equal to 102 per 1,000 births, which is higher than in the two years immediately preceding, but more than 20 per cent. below the average of the five years beginning with 1902.

Patent Medicines.

The patent medicine question still occupies a large place in public attention at the present time. At a recent meeting of the Sydney Chamber of Manufactures a resolution as follows was submitted, and, after an animated discussion, was finally carried:

> That all proprietary medicines should have all the ingredients and quantities of each plainly printed in English terms on all labels and wrappers.

A further resolution to the following effect was unanimously carried:

> That the publication of any extravagant or palpably fraudulent claims as to the therapeutic value of drugs or of curative properties not in accordance with fact be a punishable offence. That the legal responsibility referred to in the preceding paragraph shall rest in the vendor (whether wholesale or retail), the manufacturer (if he makes such claims), and the publisher of advertisements of the nature mentioned.

A Bill to amend the Commerce Act so that the contents of patent medicines will be stated on the bottles has been introduced into the Federal Parliament. The principal clause in this new Bills reads as follows:

> 16.—(1) In respect of any goods being medicines or medicinal preparations for internal or external use, or articles intended for food for infants or invalids, if the Governor-General is satisfied—(*a*) That any trade description or part of a trade description required by the regulations under Sections 7 or 11 of this Act would involve the disclosure of trade secrets of manufacture or preparation; and (*b*) that such disclosure is not necessary for the protection of the health or welfare of the public, he may by order allow the trade description with respect to those goods to be modified in such manner as he directs. (2) With respect to goods other than those mentioned in the preceding Subsection, the regulations under Sections 7 and 11 of this Act shall not prescribe a trade description which discloses trade secrets of manufacture or preparation, unless in the opinion of the Governor-General the disclosure is necessary for the protection of the health or welfare of the public. (3) In respect of any goods being medicines or medicinal preparations, the regulations may prescribe a trade description stating the ailments and diseases which they are intended to alleviate or cure.

This clause takes the place of the following section in the original Act:

> The regulations under Sections 7 and 11 of this Act shall not prescribe a trade description which discloses trade secrets of manufacture or preparation, unless in the opinion of the Governor-General disclosure is necessary for the protection of the health or welfare of the public.

Pure Food.

An important measure has been introduced into the State Parliament of New South Wales by the Premier "to secure the wholesomeness and purity of food and drugs, and fixing standards for the same; for preventing the sale or other disposition or the use of articles dangerous or injurious to health, and for the prevention of deception and fraud." This Bill is an adjunct to the Public Health Act of 1902. The Bill provides for the formation of an Advisory Board composed of the President of the Board of Health, the Professor of Chemistry in the Sydney University, the Professor of Pharmacology (if any) or the Lecturer in Materia Medica in the University, the medical officer of health of the metropolitan combined districts, the senior analyst in the Department of Public Health, a representative of the Pharmaceutical Society, and three persons conversant with trade requirements. Several sections deal with the sale of adulterated articles of food, and are intended to prevent the sale of food mixed with any material which would render it dangerous or injurious to health. The clauses also prevent the admixture of colouring matter or anything with drugs which would affect their potency. Where mixtures of food or drugs are sold the ingredients must be pure, sound, and undeteriorated, and the seller must deliver with the package a statement or label stating that it is a mixture, the names of the ingredients, and, in some cases, the proportions in which they are present in the mixture. This clause is evidently intended to deal with patent medicines and foods, and will probably be vigorously opposed by persons who do not wish to disclose trade secrets. Some important clauses deal with medicinal drugs and appliances, and the Board has power to examine such things when put forward by advertisements as curative. The result of the examination, with comments of the Board, may be published in the *Government Gazette* or any other newspaper, and the latter are protected from actions for publishing such matter. The use of such proprietary medicines or appliances may be forbidden by the Board, and advertisements about prohibited matter may not be published. Milk from infected cows must not be sold, and the onus is placed on the owner of a herd in which an infected animal is found of proving that milk from that beast has not been sold for human food. Under another section standards of strength, purity, or quality of any food or drug may be prescribed by regulation, on the recommendation of the advisory committee. If this drastic measure is put on the statute book of the State in anything like its present shape, a great advance will have been made towards the supply of pure food, and the prevention of deception and fraud by the patent medicine and food manufacturer.

A New Australian Medicinal Oil.

Mr. R. T. Baker, the Curator of the Sydney Technological Museum, with his assistant Mr. H. G. Smith, F.C.S., has been engaged for some years in the investigation of the various oils obtained from the eucalypts. They have extended their researches recently, and have been investigating the Australian melaleucas (tea trees) and their essential oils, and have now communicated their results to the Royal Society of New South Wales. Oil of cajeput is one of the commercially valuable oils, its principal

source being the island of Java. These two botanists have now discovered a new cajeput oil of substantial medicinal importance in one of the Australian tea trees which fulfils the requirements of the *British Pharmacopœia* for oil of cajeput. The only difference between this oil and the ordinary cajeput oil is that the steareoptene or solid alcohol of the Australian variety is new. This steareoptene does not agree with any known substance previously obtained from plants. The authors are to continue their investigations, and are hoping to be able to show eventually some connexion between the structure of the leaf and the oil constituents of these plants, because the oils from the tea plants vary greatly in characteristics and value.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Dr. Hallopeau on Localized Injections of Atoxyl and their Attenuating or Abortive Action in Syphilis.—Introduction of Female Nurses in the Val-de-Grâce Military Hospital.—Laïcization of Nurses in the Hôtel-Dieu and St. Louis Hospitals.—Dr. Pierre Marie appointed Professor of Pathological Anatomy.—Professor Bouchard elected Vice-President of Académie des Sciences.

AT a meeting of the Académie de Médecine, Dr. Hallopeau made a communication on the use of repeated and systematically localized injections of atoxyl at the beginning of syphilis, and their attenuating, retarding, and possibly abortive action on the disease. He was led to try this treatment by the following facts: (1) The treponema shows a hyperactivity in the chancre, shown by its dimensions, hardness, and constant ulceration; (2) the treponemata spread locally by two different routes (*a*) constantly they are transported by the lymphatics to the nearest lymphatic ganglion where they first keep their hyperactivity, becoming attenuated later before entering the general circulation; (*b*) at the same time they very frequently spread with this same hyperactivity into the intercellular tissue near the chancre and give rise to eruptions remarkable in their intensity and far greater than on other parts of the skin. Dr. Hallopeau treats the cases of syphilis with chancre on the penis by daily injections of atoxyl given under the foreskin or at the root of the penis between the chancre and the nearest gland; in cases with vulvar chancre the injections are made in the labia majora; in a man with chancre of the chin, instead of local injections, he ordered repeated rubbing of the chancre itself with an ointment containing 50 per cent. atoxyl. The five patients treated by this method were given at the same time mercury either in protoiodide pills or by inunction. In spite of the small number of cases, Dr. Hallopeau thinks he is justified in communicating the results in order that others may try the treatment. Of the five patients treated, two men were given daily injections of atoxyl under the foreskin or at the root of the penis, the first receiving doses of 5 cg., the second doses of 10 cg., the third man had three times daily inunction of atoxyl ointment on the chancre on the chin; two female patients were given injections in the labium majus: one was given twenty injections, the other is still under treatment. In four of the patients no secondary manifestation appeared till after a period varying from seventy-five to eighty-five days; in the fifth patient the evolution was a little delayed; the secondary eruption appeared fifty-six days after the beginning of the hard chancre; the important point is the exceptional mildness of the eruption, this remaining limited to the two palmar surfaces and then taking the form of spots not raised above the surface; the eruption was of very short duration, and there was no roseola on the body. This fact shows, however, that the dose of 5 cg. is insufficient; it can easily be doubled, and thus 3 grams of atoxyl is given by the mouth. This quantity would be too great if given in a few days, but the first doses are eliminated by the end of the month. Is there any chance of a definite arrest of the disease? The patients must be followed for years to be sure of the result, but if at the end of eight or ten months no secondary symptoms have occurred, the definite arrest of the disease seems highly probable. The attenuation of the secondary symptoms in the only patient out of the five treated so far seems to indicate at least a modifying action on the intensity of the infection. One certainly never sees four patients out of five treated by mercury alone, even in massive doses, show such a marked and simultaneous arrest of the disease. Dr. Hallopeau will communicate further results of this treatment to the Académie in due course.

An important change is about to be made in the nursing in the Military Hospital of Val-de-Grâce, where for the first time an examination is to be held for female nurses to attend on the sick soldiers instead of male nurses as heretofore. The candidates must be preferably between the ages of 21 and 25 years, and possess a nursing diploma granted either by the Assistance Publique or other teaching body agreed to by the Minister of War. The probationers will receive £32 (800 francs) per annum. After one year as probationer the nurse is, if efficient, promoted to be third-class nurse. The salary of a third-class nurse will be 1,042 francs per annum, of a second-class nurse 1,146 francs, and of a first-class nurse 1,250 francs per annum. Third-class nurses will be promoted to the second class after three years' service by selection, or by right after five years' service; and in the same way from second to first class. All probationers and nurses will be given board and lodging, or in lieu of the latter £14 (350 francs) per annum.

The President of the Republic has recently signed a decree authorizing the Augustinian nursing sisters to transfer their mother-house and novitiate to 66, Rue des Plantes, in Paris. This measure brings about the laïcization of the nursing in the St. Louis Hospital and the Hôtel-Dieu, the two last hospitals under the Assistance Publique which still had Catholic nursing sisters. The mother-house of the Augustinian nursing sisters has been at the Hôtel-Dieu for nearly 100 years, the decree recognizing the congregation dating from December 26th, 1810. The connexion of the sisters with the famous old hospital dates much further back than that decree, which was merely a formal recognition of them under the Napoleonic régime. They have nursed in the Hôtel-Dieu for many centuries, and had braved the storms of the Revolution.

Dr. Pierre Marie has been appointed to succeed Professor Cornil as Professor of Pathological Anatomy in the University of Paris. Professor Marie was born in Paris in 1853, and became "interne" in 1881. In 1883 he was appointed "chef de clinique" in Charcot's service at the Salpêtrière, and became his collaborator, describing with him the type of progressive muscular atrophy which bears their two names. Professor Marie became *Professeur-agrégé* in 1886. His clinical work has for many years been carried out at Bicêtre, where he has his laboratory and a well-known collection of photographs, observations, and pathological specimens. After ten years of study of cases of aphasia, Professor Marie has recently attacked the classical views of Broca, and maintains that the third left frontal convolution does not play any special rôle in the function of speech.

Professor Bouchard, member of the Institute, has been unanimously elected Vice-President of the Académie des Sciences for 1908, and will, in 1909, succeed M. Becquerel as President.

CORRESPONDENCE.

THE LOCAL MEDICAL PROFESSION AND THE HAMPSTEAD GENERAL HOSPITAL.

SIR,—I am directed by the Committee appointed to represent the local medical profession to ask you to insert a brief account of the steps which my Committee has recently taken in regard to the Hampstead Hospital question.

As you are aware, the Council of the hospital has decided, on the strength of a very narrow majority of subscribers, to accept the terms offered by the King Edward's Hospital Fund for London, which include the amalgamation of the North-West London and Hampstead General Hospitals and the appointment of a staff of consultants, to the exclusion of the local practitioners.

In response to this decision of the Hospital Council, my Committee issued a circular on December 12th, 1907, to the individual members of the local medical profession,

asking for their approval of the following resolution, which had been adopted at a meeting on July 3rd, 1907, namely:

> That this meeting considers that the Hampstead Hospital should always have a visiting staff of local practitioners, and in consideration of this opinion calls upon the members of the medical profession to refuse to accept any office on the staff on terms which are not considered satisfactory by the local profession.*

Of 191 *local* practitioners receiving the circular, no fewer than 132 (that is, 68 per cent.) appended their signatures to the resolution; of these 132, 75 are members and 57 are not members of the British Medical Association.

This result was so striking, that my Committee thereupon felt justified in inserting a Warning Notice in the BRITISH MEDICAL JOURNAL (since accepted by the *Lancet*).

Finally, on learning the opinion of such a large majority of their colleagues, the members of the acting medical staff and the anaesthetists have tendered their resignations to the Council of the hospital.—I am, etc.,

REGINALD A. YELD, M.D.,
Honorary Secretary of the Hampstead Division of the British Medical Association and of the Joint Committee appointed to represent the local medical profession.

January 8th.

ELECTION OF STANDING COMMITTEES.

SIR,—Leaving for the present the question whether the Central Council is justified in amending any resolution of the Representative Meeting or in postponing or even rejecting it altogether, I beg to ask your attention to a subject of no less importance—namely, the election by the Council of its Committees.

The present method is remarkable, to say the least. I propose that the method of Proportional Representation be employed. This is now very well known—see SUPPLEMENT for June 22nd, 1907—so that we may proceed to inquire what effects it would have.

There are—*Year Book, 1906*—ten Standing Committees. It is not clear from the Regulations whether they are independent organizations; but it will be safe to assume that they are Committees of the Central Council, conducting in detail the work of the Council and preparing and arranging matters for its decisions. If we put on one side the Scottish, the Irish, the Colonial, and the Naval and Military, there are thus six ordinary permanent Committees of Council. The number of members elected by Home Branches to the Central Council is 48—with President and Treasurer 50. On the Journal and Finance Committee are 11 non-official members. The quota would be 5; that is, instead of the 11 being elected by the majority—26 or so—or by an irresponsible caucus or committee self-elected, each member of that committee would be chosen and elected by 5 or 4 members of the Council, each elector voting, of course, for only 1. The 7 members for Scotland, for example, would elect 1, and the 5 for Ireland 1. Of the other Committees the number elected varies from 5 to 7. In every case Scotland would be in a position to appoint at least 1 member upon every Standing Committee. A good deal has been said about "topographical" or "geographical" distribution. The method solves that problem.

It should also be considered that new men are every year elected to the Council. These cannot be known to the majority, but each man is well known to five or six, who would be sufficiently acquainted to be pretty sure on which committee he would be of most value. The man most useful in committee is not always the most prominent or most valuable in general meetings. Every new member should be put on some committee or other. Only thus will he learn the affairs of the Association of which he is called to the management.

Looking at the committees elected for the year referred to, we find that no more than 23 of 48 home members sat on any of those six essential Standing Committees—of 7 Scottish 3, of 5 Irish 1, of 5 metropolitan 2; 3 were members of 3 committees, and 9 others of 2 committees. I do not analyse later returns, wishing to avoid any intrusion of what might be thought the personal element. These conditions under which the Association's work is carried on cannot, I submit, be regarded as quite satisfactory. The only possible method (other than by casting lots) is electing by proportional representation.

A Round Table Conference has been proposed. If all the last year's Representatives, who still adorn themselves with the name, were to elect five of their number and the Central Council do the like, using always the method I have advocated, we should have a group of gentlemen in whom every member of the Association would feel absolute confidence. They would not do much, perhaps, but would clear the issues, which I confess are at present rather obscure.

I had somewhat further to say, but must instead apologize for the length of this communication.—I am, etc.,

Kensington, Jan. 6th. G. C. CRICHTON.

* This resolution is not intended to preclude the appointment of consultants.

SAINT MARY RONCEVALL.

SIR,—Permit me to number myself among those who thank you for your very full and kindly review of the *Story of St. Mary Roncevall*, appearing in the BRITISH MEDICAL JOURNAL of January 4th. The notice taken of the history of this ancient religious house is evidence of what you have frequently remarked—namely, the interest taken in our profession in historical subjects; the necessity for the writing of the "Story" must be taken as proof of the comparatively small opportunities at our disposal to place on record the results of our investigations.

Will you also allow me through your columns to thank not only Dr. Major Greenwood for his letter in last week's issue but also many correspondents who have written me privately on the subject as the result of reading your review? Will these gentlemen kindly bear in mind that this is the busiest part of the winter session, and that some of their requests require reference to documents not readily deciphered, before accusing me of discourtesy in not replying promptly? I wish it were in my power to send my correspondents copies of the "Story," but I grieve to say that the privately printed edition is exhausted. To those who wish to obtain the references to the documents in the Record Office I may mention that copies of the book are in several of the medical and public libraries, and, failing facilities of reference in this way, I feel sure, if appeal is made to a medical neighbour who happens to be an old Charing Cross student for his copy of the July, 1907, issue of the *Hospital Gazette*, that the request will not be denied; in that number is the original paper, with full references, so far as they are known to me.

I feel sorely tempted to "enlarge" on Dr. Greenwood's interesting communication, but I must not demand too much of your indulgence on the present occasion, but I would beg of him to deal gently with Antonie van den Wyngaerde's *sketch* of London. It was not intended as a map in the sense of the well-known map drawn by Aggas some years later, and perhaps was sketched with the intention of impressing Philip of Spain in the most favourable sense with the picturesque appearance of his English capital. Also I would beg the author's licence for Barham. It is true that in *The Lady Rohesia* Dr. Butts is wroth with the "miserable Franciscan," but while under the rule of the Church the brethren of Roncevall conformed to the Augustinian canon, when the house was transformed into "a Fraternity or perpetual Gild," in the time of Edward IV, it was governed by a master and wardens. There is no evidence that the "Friars Minim" had any concern with the House.

But I am sure that you desire me to finish this note, and I can do so in no more appropriate form than in the closing sentiments of the discussion as given by Barham:

"*Benedicite!*" said the Friar,

"*Ars longa!*" returned the Leech.—I am, etc.,

London, W., Jan. 14th. JAMES GALLOWAY.

A POINT FOR PUBLIC VACCINATORS.

SIR,—The evil to which you referred in your article, "A Point for Public Vaccinators," in the last issue of the JOURNAL, is a great deal more widespread than you would seem to think.

In our town it is not at all unusual for the parent to receive a notice from the vaccination officer before the child is 1 month old, and two or three notices before the four months have expired. This practice gives rise

to a great deal of annoyance and even friction, not only to the parents, but also to the family medical attendant.

As the practice of sending the notices before the child is 4 months old is illegal, I think it would be well if an example were made of some one vaccination officer, and thus put an end to the practice. I know numbers of cases where parents have applied for an exemption order with a view to put an end to what they felt was a species of persecution.

Parents who have made arrangements with their own family medical attendant strongly object to the calling at their doors of a strange doctor, whom they do not know till he informs them that he is Dr. So-and-so, the public vaccinator.

It would be interesting to know who pays for the printing and postage of these notices to the parents—if it is done at the expense of the ratepayers, as the practice is not in accordance with the Act of Parliament, the expenditure is illegal and dishonest; and even if the expense is allowed by the Act, it is a great waste of public money.—I am, etc.,

January 14th. L.R.C.P.EDIN.

HOSPITALS AND THE WORKMEN'S COMPENSATION ACT.

SIR,—The following incident is instructive in connexion with the article in your issue of January 4th concerning hospitals and insurance companies.

I have a patient in our local cottage hospital seriously injured, and I duly received the form of certificate from the agent of an insurance company, with a request that I should fill it in and return it as soon as possible. At the bottom of it was the sentence, "The fee, if any, is to be paid by the injured person."

I returned the form with the remark that it was absurd to expect me to obtain any fee from the patient, and, until the company guaranteed reasonable remuneration, I should refuse to certify. A few days later the agent called, and most cheerfully and apologetically produced the fee. When I told him there was no obligation whatever on my part to give such certificates gratuitously or at the expense of the patient, he said he was quite aware of the fact.

The medical staff of our hospital has now passed a resolution to the effect that no accident insurance certificates for patients in the wards should be given until the fee is paid by the company requiring the same, and I would suggest that the staffs of other cottage hospitals should proceed at once to protect themselves and their patients in the same way.—I am, etc.,

Enfield, Jan. 13th. HOWARD DISTIN, M.B.

THE INHERITANCE OF PULMONARY TUBERCULOSIS.

SIR,—We entirely agree with Professor Pearson as to the vital importance of settling what are and what are not legitimate ways of constructing random samples of population. We feel that in the future all discussions on the inheritance of disease and morbid or pathological conditions must be dealt with by the statistical methods elaborated and devised by Professor Pearson, and that it is therefore absolutely essential to progress that agreement should be reached as to the correctness or not of the procedures adopted in the memoir under discussion.

As his last letter again makes clear, Professor Pearson has taken—

1. The histories of the parents and brothers and sisters of tuberculous persons.

2. The proportion of deaths due to tuberculosis in the general population in England.

He has, then, made a correction to *part* of his data, assuming that 50 of the 207 non-tuberculous will pass into the tuberculous class, making it 157. We have asked why a similar addition was not made to the 503 class? Professor Pearson has entirely ignored *this* question. He complains that it "seems impossible to make [us] understand," and then goes on to explain why he has not transferred some *from* the 503 to the 107 class. We perfectly understand *this*, and have never raised any question about it.

Our whole contention has been that the data (1) and (2) alone are insufficient, and that a knowledge of the amount of tuberculosis in the parentage of non-tuberculous persons is absolutely essential (vide Professor Pearson's article in your issue of May 27th, 1905).

As throwing some light on this last question, we referred to several series which showed that the proportion of tuberculosis amongst parents of non-tuberculous persons was about one-half that amongst the parents of tuberculous persons. We gave all the published data which we have been able to find. The following table, using percentages as Professor Pearson has done, makes this clear:

Authority.	Number of Tuberculous Parents per 100 Tuberculous Offspring.	Number of Tuberculous Parents per 100 Non-tuberculous Offspring.
Dock and Chadbourne	27	12
Kuthri	25	20
Fischer	36	15
Schwarzkopf	36	20
Burckhardt	37	18
Incomplete 1 ..	97	50
,, 2 ..	90	47

Our only object in quoting these figures was to point out the difference in the amount of tuberculosis in the parentages of tuberculous and non-tuberculous persons, and to show that the results of Professor Pearson, 47 per cent. and 5 per cent., were not consistent with these data.

Professor Pearson frankly states that he does not "believe any of the above authorities have got reliable statistics of the non-tuberculous element in the population," and that these statistics "have no real bearing on the points under discussion." We think that the figures are entirely relevant, and that the authors quoted are not to be dismissed as unreliable just because their carefully-collected facts do not suit Professor Pearson.

We are much obliged for the first explanation we have had of the differences between the tables on pages 9 and 10 of the memoir. That explanation had occurred to us but did not seem to fit the male pedigrees. We apologize for our gratuitous corrections, and withdraw them.

The two incomplete series we included in our last letter are not drawn from the United States. All the inferences and deductions made by Professor Pearson on this assumption are therefore irrelevant and require no notice. Professor Pearson's quotation from the U.S. Census while interesting is misleading. We maintained that whereas one person in ten *of all ages* died of tuberculosis the proportion of one in twenty for the parents was too small. It is merely an evasion—and a very transparent one—to quote the proportion between the single over fifteen years and the married and widowed over fifteen years.

Professor Pearson says we "assert that one quarter of the parents of sound children in the U.S. are tuberculous." We have never asserted anything of the kind. This is one example of the assertions which Professor Pearson puts into our mouth without any warrant in fact.

We feel that we can add nothing more to the facts and reasons given in our various letters, and indeed it would appear useless to do so as Professor Pearson each time evades the original points at issue and attaches no weight to the only data available as basis for arguments.

As to the second of our original contentions, Professor Pearson first admitted it was right in principle but said it was wrong in fact. He afterwards admits that we were right in fact, but withdraws his original admission that the principle was wrong. We cannot see any profit in prolonging a discussion carried on in such a manner.

We shall, therefore, not trespass further upon your space by continuing this discussion, and we thank you for the courtesy extended to us.—We are, etc.,

E. G. POPE,
LAWRASON BROWN.

Saranac Lake, N.Y., Jan. 4th.

THE TEACHING OF LEGAL MEDICINE.

SIR,—I sympathize entirely with what Dr. Buist has to say in his address on a plea for the improvement in the teaching and encouragement in the study of legal medicine, and as a remedy for the state of affairs which he

describes, in a pamphlet which I published some years ago, on *State Obligations in Matters of Public Health*, I expressed the opinion that a State Board of Health, with a Minister at its head, should be formed, a special department created, one of the duties of which should be to act in conjunction with the local practitioner in all cases of medico-legal interest. I further stated that to organize such a Board the country ought to be divided into areas, and, by way of assistance, that every county should be *compelled* to have its medical officer of health, himself a member of the State Board, whose position as such should be evidence that he had given full satisfaction as to his capacity for medico-legal work. I do not, however, agree with Dr. Buist that "there is work here for medical officials to devote their whole time to the medico-legal work in their areas," unless these are to be made very large. Dr. Buist admits that the only thing in common between public health and forensic medicine is that they both may be classed as State Medicine. This is exactly my contention, and the very reason why I wish to see them combined. A Minister of Public Health presiding over a State Board of Health regulating admission by strict examination, the country mapped out into fairly large areas with four or six inspectors supervising the work of the county medical officers who have rendered them such local assistance as may be necessary—this, roughly, is the scheme which, if put into operation and wisely administered, will do much not only to raise the status of the profession, but will give such an impetus to State Medicine as will lift it out of the Slough of Despond into which it has at present fallen, and will concentrate upon public health questions all the energies of a trained and special department. And this is much needed at the present time.—I am, etc.,

Workington, Jan. 11th. JOHN HIGHET, M.D., M.O.H.

THE EDUCATION ACT, 1907.

SIR,—The tardy issue of the Report of the Medico-Political Committee, and of your editorial on Medical Inspection, throws some light on the possible attitude of the profession, in their financial relationship to this Act. When Sir Robert Morant's memorable Memorandum on Section 13 came thundering on us over a month ago, it seemed as if each Government department in turn feared the onus of responsibility, and coolly rolled the ball on. Parliament, in the first place, having hatched its huge scheme, unburdened itself on to the Board of Education. The Board of Education, after having maturely considered and elaborated its task, transferred the burden of it on to the local education authorities. These authorities, or county and borough councils, were next required to throw it on to the shoulders of the Local Government Board. The Local Government Board finally had to requisition its army of medical officers of health for support, attack, and execution: no one in the meantime daring to formulate a scale of pay and allowances! Such a burden was more than the patient and submissive medical officer of health could really bear unaided, and unrewarded; and it is well that at the eleventh hour you have come to his rescue with recommendations that may be listened to, and which certainly appear reasonable.

The State at all times fully recognizes the helpfulness, and the helplessness, of the medical officer of health; and when legislation for the public benefit is introduced his good services are invariably sought, and as invariably unrequited. For instance, to begin with, he has no security of tenure; and as new Public Health Acts are being continually passed, they are as surely piled on to him, with never a hint for an increase in his salary! Again, when the Home Office added the Factory Acts to his list of duties not long since, there was no question of pay, and he had none. The Births Notification Act is a recent case in point, affecting the whole profession—no fees, fines instead! Death certification is another compulsory gratuitous service resented by all, and consequently too often unreliable in the cause of, and the age at, death. These illustrations are not beside the mark, for they indicate the tendency of legislation, and help to strengthen the need for deliberative and collective action, such as has been initiated in your columns, in order to receive "early consideration from the Divisions."

Medical officers who hold appointments directly under the Board of Education feel that this Board duly apprises their services, and fixes a liberal fee for the medical examination of and report on elementary school teachers; but this same Board, in its memorandum, has unfortunately omitted even to suggest fee or reward for the far more onerous services of medically examining, inspecting, measuring, treating, visiting, and reporting on elementary school children! As to local education and other authorities, medical officers of health have already learnt to expect no mercy from this quarter; so unless the Local Government Board, or the Board of Education, forces the hands of these bodies, and compels them to place adequate funds at the discretion of their advisory and supervisory medical officers of health, "to suitable medical colleagues, or assistants (men or women), who either will be specially appointed for the purpose under him, or will be local medical officers of health," sorry indeed will be the prospect for the school medical officer. The recommendation of the Medico-Political Committee as to remuneration, "which each Division should seek to obtain for those members of the profession who may be appointed," is the crux of the entire situation; and if the profession is sufficiently united to stand by this recommendation, the lot of the school medical officer may be satisfactorily settled, but not otherwise.

The remaining portions of the Committee's report on the Board's Memorandum sink into insignificance by the side of the above crucial question. Its variants on paragraphs 11 and 13 are comparatively unimportant; and, depend on it, whenever the school medical officer is appointed, he will have to see that treatment is carried out, and where necessary that homes are visited, by some one. If the child has no private or club or parish doctor, he must go to hospital; if there be none, and if hospitals object, a national Public Medical Service may become an early necessity.—I am, etc.,

January 5th. M.O.H.

EXCESSIVE PATELLAR REFLEX OF NERVOUS ORIGIN.

SIR,—I read with interest Dr. Parkes Weber's remarks on excessive patellar reflexes, with most of which I should certainly agree—as, for example, that no amount of excess in them necessarily indicates organic disease.

I must confess, however, that I was astonished by his statement with regard to the Babinski phenomenon that it is held to be a sign of organic *change* in the descending motor tract. It is with the word "change" that I quarrel, not with the statement that there are exceptions to the general rule as to its significance. One might suppose that Dr. Weber had used the word "change" rather loosely, but for the fact that he gives two instances—one where it was present in hystero-epilepsy, and one where it was present after cerebral embolism. With regard to the first, I would point out that in Dr. Collier's article in *Brain*, 1899, on the plantar reflex, the extensor response was said to be present and last some time after every fit of severe convulsions, 40 cases having been examined. With regard to the second, I think an extensor response was to be expected, if any part of the pyramidal tract was affected.

There are numerous cases in which such a response is present within a period which renders any question of "organic change" impossible. I have before me at this moment the notes of a case of cerebral compression due to traumatic haemorrhage, in which the extensor response was present in a very short time (as in Dr. Weber's case of embolism), though the only injury to the tract was by compression. Again, one finds it in cases of tuberculous meningitis coming on with the coma which indicates increased pressure in the ventricles, and sometimes disappearing when that is relieved by lumbar puncture.

I suppose every man forms his own opinion of the value of a sign which he has very frequently looked for; with regard to the extensor response, my own, whatever it may be worth, is that though it is very uncertain and very apt to fail on repeated stimulation, it *may* occur whenever the functions of the pyramidal fibres or the cells with which they are connected are interfered with by any organic disturbance, whether temporary or permanent. No doubt in its most typical form it is best seen where there is permanent secondary degeneration, but it may occur where there is a temporary disturbance from presence of fluid, as in meningitis, from intra-cerebral or extra-cerebral

haemorrhage, or from the hyperaemia which is the result of an epileptic fit.

It is precisely in some of these cases that its recognition is of the utmost importance, because the question of operation is often present, and the extensor response may be almost the only guide.

It is for that reason that I have ventured to write these few lines, though I hope that what Dr. Parkes Weber seems to think is a prevalent idea as to the significance of the sign is not so in reality. If the belief that the extensor response only occurs when there is "organic change" is held by many, it is really time that it was combated by some better authority than myself.—I am, etc.,

Hove, Jan. 13th. EDMUND HOBHOUSE.

NEPHROPEXY AND KANGAROO TENDON.

SIR,—My experience has been that there are few operations in surgery so certain of obtaining the result aimed at as that for fixing a floating kidney, provided two conditions are observed: first that the capsule is left intact, and secondly that tendon sutures are used in a series taking firm hold of capsule and adjacent cortex. The use of a strand of human tendon from the erector spinae (Vulliet's method) is ingenious and no doubt is often successful, but it can only hold the kidney in a single vertical plane and it is difficult to secure the free end of the band or sling. Kangaroo tendon (*not* chromicised) is the ideal form of suture, as so far from irritating it becomes organized into natural human fibrous tissue, and persists as such an indefinite time. This statement is not made without evidence to support it, as I have had the opportunity of proving it two, three and four years after inserting buried tendon sutures in operations on various parts of the abdominal wall. Some years ago I operated on a case of floating kidney and four years later had to remove a small calculus from the ureter.

In another case nephropexy failed to relieve the symptoms accompanying floating kidney (as it fails sometimes in every surgeon's experience), and both the patient and her doctor were positive that the kidney had got loose again. To convince them, an exploratory incision was made. In both these cases the organ was found to be firmly fixed in place, and in both I took the opportunity of excising a portion of one of the tendon sutures together with the kidney tissue around it. Microscopical examination of these two specimens proved that the tendon was normal vascularised fibrous tissue, and that the cortical structures close to it were also normal. It might be suggested that in the first case referred to the formation of the calculus was in some way due to the fixation, but I am sure this would be incorrect. The occasional coincidence of a calculus in a floating kidney is well known, and from the history of the case it was at least possible that the stone had been overlooked at the time of the first operation, which occurred before the introduction of the Roentgen rays.

When a floating kidney has been thoroughly exposed and cleared from fat on its posterior surface from top to bottom, four strong tendon sutures are inserted so as to take a broad hold (about 2 in. wide) of capsule and cortex. With due care there should be no risk whatever of passing them near the calices. The sutures lie transversely to the axis of the kidney, the highest near the top of the organ, the lowest close to the other end; they take a firm hold of the quadratus lumborum, etc., at the exact level desired. It is essential to avoid the last dorsal nerve and other branches of the lumbar plexus, and not to tie the buried tendon sutures with such force as to cut through the renal capsule. With this method an excellent hold is obtained, whereas the multiplicity of methods advocated for dealing with the reflected capsule suggests that it then becomes a difficult matter to fix it. One surgeon cuts a flap from the capsule, another two flaps, a third makes rolls of it, a fourth many ribands, a fifth a band, and so on.

As to the importance of baring the cortex in order to get adhesions, I know the evidence is conflicting. Experiments on animals have in different hands given exactly opposed results, and I venture to suggest that experimental work on the feline kidney may be made to give whatever evidence the operator wishes to obtain, and that in any case it has small analogy with nephropexy on the human subject. Those surgical writers who urge the necessity of stripping off the capsule (and in the present discussion nearly all have done so) cannot believe that the glandular renal cortex forms granulation tissue with ease, nor that the subjacent muscular wall is likely to do so. Is it the extravasated blood?

In any case my contention is that the best hold for sutures is obtained by the unstripped capsule, and any operator who will try the use of kangaroo tendon in the manner described will be satisfied on the point.

I have been able to follow up most of my cases thus operated on during the last ten years. In one, and one only, there was evidence of the kidney again breaking loose. In this case the patient fell heavily from a height of several feet, the fall especially injuring the abdomen; from that time the old symptoms returned.

As regards the relief afforded by proper fixation of a floating kidney, in the great majority of cases the result is most satisfactory. But M. Tuffier is certainly right in saying that in 10 per cent. or rather more the symptoms will not be done away with, however thorough the operation.

No method which involves fixing only one end or pole of the kidney is likely to prove efficient. More than one of those recently advocated have this drawback.

It is much to be desired that evidence in favour, or the reverse, of Dr. Suckling's contention that insanity in women may be produced by a floating kidney and cured by nephropexy should be obtained. I urged some years ago that the "neurotic condition" met with in most of the subjects of floating kidney is largely dependent upon the physical cause, and is to be relieved or cured by removal of that cause before it has lasted too long. The step between a severe neurosis and insanity is perhaps not a great one. The medical officers in charge of our asylums will do science and the profession a real service if they will bring forward their evidence on the questions:

1. In what proportion of insane women is a well-marked condition of floating kidney present?

2. Are the delusions of the insane ever such as are likely to have their cause in the physical condition of floating kidney?

3. Is nephropexy ever a cure for insanity?—I am, etc.,

London, W., Jan. 12th. J. HUTCHINSON, Jun.

A PURIN-FREE DIETARY.

SIR,—Perhaps you will allow me, in reply to Dr. Potts's interesting letter on the above subject published in your issue of January 11th, to make my position perfectly clear on the question of the value of a purin-free dietary.

I certainly believe that a purin-free diet is a useful form of treatment, but am of opinion that the virtue attributed to it has another source. Most of its value rests, I believe, on the fact that it is easier to exercise moderation on it than on a mixed diet. While many patients are undoubtedly benefited by a diet in which the purins in the food are restricted, many are not; the latter are, as a rule, cases in which satisfactory results are obtained by restricting the carbohydrates, and especially the sugars, in the food. Dr. Potts himself points out that in some instances a prolonged trial of a purin-free diet has only resulted in failure and disappointment. These facts seem to me clearly to indicate that the purin content of the food is not the all-important factor in treatment which some writers would have us believe.

I think Chittenden sums up the position correctly when he states that in gout it is not so much a disturbance of purin metabolism as a perverted function of one or more organs or tissues which is of pathogenic moment.—I am, etc.,

Edinburgh, Jan. 12th. CHALMERS WATSON.

"OPHTHALMIA" NEONATORUM.

SIR,—It seems to me that the first thing to be done in the agitation for legislative interference in respect to the "ophthalmia" of infants, is to give to the disease its proper signification. To describe *conjunctivitis* neonatorum as "ophthalmia" neonatorum is just as incorrect as it would be to describe a localized appendicitis as inflammation of the abdomen. We have seen at last the official end of such terms as "scrofula," "scrofulous," "strumous"; they do not appear in the last issue of the *Nomenclature of Diseases* published by the Royal College of Physicians

and so it may be trusted that in the next edition of that authoritative publication the obsolete term "ophthalmia," as applied to diseases of the eye, will also be similarly expurgated.—I am, etc.,

London, W., Jan. 10th. PERCY DUNN.

NOTIFICATION OF BIRTHS ACT.

SIR,—As it is not compulsory for municipal authorities to remunerate medical practitioners for their notifications under the above Act, I am afraid that they will not do so. This is so manifestly unfair that I propose that our Association should consider that:

If no payment is to be made to the practitioner for these notifications by any particular municipal authority, that all the members of the British Medical Association within the jurisdiction of that authority refuse to notify.

—I am, etc.,

Liverpool, Jan. 11th. A. STANLEY PARKINSON.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

PRELIMINARY—*Mechanics and Physics.*—C. F. Beeson, non-coll.; C. M. Berlein, New; B. Blackman, Queen's; C. M. Burrell, University; A. F. Coventry, Magdalen; C. L. Cumming, Trinity; J. C. Ellis, Jesus; E. A. Fisher, Balliol; J. G. Fry, Exeter; R. A. Gillis, St. John's; W. R. Grose, Keble; E. Hancock, Lincoln; R. St. A. Heathcote, New; S. Holliday, non-coll.; Lal C. Khosla, non-coll.; H. S. Knowlton, Keble; A. M. Munro, St John's; A. L. Parson, Christ Church; J. R. L. Pastfield, Worcester; R. Ross, non-coll.; E. G. Swann, St. Edmund Hall; J. R. Thomas, Jesus; W. W. Waller, New; J. W Woodrow, Queen's.

Animal Physiology.—D. H. Jones, Jesus.

Botany.—R. C. Briscoe, St. John's; A. A. M. Davies, University; W. K. Flemner, Trinity; F. A. Hampton, New; G. T. Hebert, Christ Church; A. Jackson, Queen's; M. M. Machaya, St. John's; F. M. Oliphant, St. John's; W. J. Pearson, University; E. D. Rose, St John's; J. Sainsbury, Oriel.

Chemistry.—H. D. Barnes, Magdalen; C. F. Beeson, non-coll.; C. M. Berlein, New; R. C. Briscoe, St. John's; J. Bromfield-Williams, Exeter; C. M. Burrell, University; E. W. Carrington, Keble; A. F. Coventry, Magdalen; C. L. Cumming, Trinity; J. C. Davies, New; C. Dean, Trinity; H. C. Doyne, Trinity; J. C. B. Ellis, Jesus; F. H. Gee, non-coll.; R. A. D. Gillis, St. John's; A. C. Godson, St John's; O. H. Gotch, New; W. R. Grose, Keble; J. M. Guilfoyle, B.N.C.; E. Hancock, Lincoln; H. L. Harvey, Oriel; O. J. Hobbs, Merton; E. W. N. Hobhouse, New; O. Jackson, Queen's; D. H. Jones, Jesus; H. S. Knowlton, Keble; F. C. Lacaita, Balliol; W. Lawton, St. John's; T. Lindsay, Balliol; F. S. MacNalty, Worcester; G. A. Maling, Exeter; A. M. Munro, St. John's; A. L. Parson, Christ Church; J. L. Pastfield, Keble; A. L. Pearce-Gould, Christ Church; G. B. R. Pease, University; C. G. Roach, Exeter; G. S. Robinson, Exeter; H. A. C. Sim, Exeter; E. R. Speyer, New; J. W. G. Steell, Trinity; E. G. Swann, St. Edmund Hall; B Tunstall Behrens, Pembroke; B. H. Walker, Queen's; B. E. Wall, Lincoln; W. D'Arcy Ward, Trinity.

FIRST M.B.—*Organic Chemistry.*—W. A. Cooke, Worcester; G. Cranstoun, Oriel; A. A. M. Davies, University; A. W. Dennis, Keble; R. C. Fairbairn, Exeter; G. T. Hebert, Christ Church; A. Ivett, B.N.C.; E. G. Martin, New; E. E. Mather, Exeter; E. O'Connor, Lincoln; E. L. Pearce-Gould, Christ Church; W. J. Pearson, University; H. M. Pope, Lincoln; M. O. Raven, Trinity; J. Sainsbury, Oriel; G. Stanger, Lincoln; T. O. Thompson, St. John's; J. F. Venables, Magdalen; S. White, Keble.

Materia Medica and Pharmacy.—A. Booth, Keble; W. F. Harvey, Balliol.

Human Anatomy and Human Physiology.—S. F. Mutch, B.N.C.; E. P. Poulton, Balliol; A. F. Sladden, Jesus; A. E. Taylor, Trinity.

FINAL M.B.—*Pathology.*—M. Bates, St. John's; C. N. Binney, Corpus Christi; N. Flower, Exeter; H. M. C. Green, Wadham; W. D. Kennedy, University; B. A. W. Stone, B.N.C.

Forensic Medicine and Public Health.—M. Bates, St. John's; G. D. Carpenter, non-coll.; E. P. Cumberbatch, Keble; N. Flower, Exeter; D. B. Todd, Lincoln; S. E. Whitnall, Magdalen; A. P. Yonge, Exeter.

Medicine, Midwifery, Surgery.—C. G. Douglas, Magdalen; S. Hartill, Exeter; G. M. Johnson, Magdalen; B. G. Klein, Corpus Christi; S. E. Whitnall, Magdalen.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have satisfied the Examiners for the Diploma in Tropical Medicine and Hygiene:

H. L. Deck, W. R. Gibson, A. L. A. Webb, F. A. Wille.

T. Manners-Smith, M.B., Downing, has been reappointed Demonstrator of Anatomy for five years.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

ON Wednesday, January 22nd, at 5 p.m., Dr. C. Spearman, Reader in Experimental Psychology, will deliver an inaugural lecture on experimental psychology and its relation to education. Professor Adams will be in the chair.

UNIVERSITY OF EDINBURGH.

ANNUAL REPORT.

THE annual report for the year 1907 contains some interesting figures. The General Council of the University now numbers 10,358 members; while the number of students who have matriculated now reaches 3,278, the highest total for fourteen years. Of those belonging to the Medical Faculty—1,478—a number which includes 55 women, 47 per cent hail from Scotland, 21 per cent. from England and Wales, nearly 18 per cent. from India and British Colonies, and the balance, with the exception of 24 foreign students, from Ireland. The graduations in Medicine and Surgery, or both, numbered 271, these including 19 women. The diploma in tropical medicine and hygiene was conferred on 5 candidates. The total annual value of the University Fellowships, bursaries and prizes, now amounts to about £18,520, of which £3 630 is allotted to the Faculty of Medicine. In addition there are a number of bursaries in the gift of private individuals, and a sum of £600 a year derived from the Earl of Moray Endowment Fund which is annually available for the encouragement of original research. The chief change in the ordinances of the University is one affecting the medical curriculum and the periods of examination for graduations in medicine and surgery. It gives increased opportunity for taking the examinations in sections, and allows examinations for medical degrees to be held in December as well as in Spring and Summer. There has only been one change in the professoriate, that brought about by the death of Professor Annandale.

EXAMINING BOARD IN ENGLAND.

THE following candidates have been approved at the examinations undernoted:

CHEMISTRY AND PHYSICS.—*A. Abdel-Al, G. Bailey, B. F. Beatson, W. H. Broughton, F. W. Campbell, R. B Campion, N. Cheune, H. D. S. Close, †A. S. Coalbank, *F. C Cowtan, E. P. Drabble, *A. R. Esler, *M. S. Esler, *H. D. Field, †W. T. Flocks, *M. Foulkes, C. A. R. Gatley, *F. H. Guppy, †O. Gwatkin, *F. M. Hughes, J. L. D. Lewis, V. A. Luna, *G. N. Martin, †W. F. Mason, †E. A. J. Murphy, L. R. Pickett, H. C. Rigg, †E. U. Russell, †C. P. C Sargent, *D. Scott, W. A. Thompson, C. de B. Thompson, C. W. Treherne, A. Viney, *I. L. Waddell, S. A. Wilkinson, *W. N. P Williams, †H. S. Young.*

* Part I only. † Part II only.

ELEMENTARY BIOLOGY.—*R. B. Agaskar, G. Aspinall-Stivala, G. Bailey, W. S. Birch, H. Chorley, A. G. B. Fenwick, G. Garland, C. A. R. Gatley, W E Hallinan, L. P. Harris, J. R. Hayman, G. B. H. Jones, E. T. H. Lea, D. Lewis, V. A. Luna, A. Macrae, R. V. Martin, A. G. Morris. E. A. J. Murphy, F. A. M. Nelson, J. B. Patel, M. Pern, G. B. Pritchard, W. A. Reynolds, H. C. Rigg, C. P. C. Sargent, J. M. Shah, C. Shaw-Crisp, W. A. Thompson, C. B. Vakil, W. C. Whitworth, W. N. P. Williams, W. Wörger.*

ANATOMY AND PHYSIOLOGY.—*P. R. Bhaya, G. N. Brandon, J. M. Brito-Salazar, I. G. Cobb, W. L. Cowardin, M. R. Dalal, W. J. Dearden, H W. Doll, S. Falkner, I. S. Gabe, R. L. Glass, W. M. Glenister, H. J. Hacker, W. P. Harrison, A. J. Hickey, W. H. S. Hodge, W. H. Hooton, R. L. Jones, J. B. Jordan, C. H. Kantawala, R. D. Kapadia, W. S. Lacey, W. E. Latham, D. C. Lloyd, W. G. Masefield, A. E. Moore, M. M. Munden, B. R. Naidu, N. K. Naik, A. P. Nicolle, G. N. Palmaer, A. C. Paterson, E. A. Penny, J. Powell, T. B. B. Price, J. Pryce-Davies, I. Rihan, H. E. Scargill, S. H Smith, H. Stobie, A. H. Todd, R. H. Vercoe, L. R. Warburton, E. P. W. Wedd, A. White, R. F. Wilkinson, E. T. Willans, J. W. Williams, R. J. Wooster.*

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

PRIMARY, PART I.—*Biology:* S. B. Webster. *Chemistry:* A. J. Cardell, E. Carter.

PRIMARY, PART II.—*Anatomy:* E. G. Carroll, J. B. Holmes, W. H. Hooton, C. W. Jenner, L. M. Potter, H. Wetherbee. *Physiology:* C. B. Hawthorne, W. H. Hooton, G. F. Malden, L. M. Potter, H. Wetherbee.

APOTHECARIES HALL OF IRELAND.

AT a special examination on January 3rd, E. Magennis, M.D., D.P.H., was admitted a Licentiate of the Apothecaries Hall.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE HEALTH OF THE NAVY.

THE *Statistical Report of the Health of the Navy for the Year 1906* has just been issued.*

Summary of Returns for Total Force.

The returns for the total force for the year 1906 show a continuous improvement in the general health of the Fleet as compared with that of previous years. Not only are invaliding and death-ratios for the year under review lower than the average ratios for the last nine years,

* London: Printed for His Majesty's Stationery Office by Eyre and Spottiswoode, Printers to the King's Most Excellent Majesty. And to be purchased, either directly or through any bookseller, from Wyman and Sons, Limited, 109, Fetter Lane, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Tweeddale Court, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin.

but the average loss of service for each person has dropped from 12 79 to 10 60 days, and this year's ratios are, under each heading, the lowest recorded since 1856. The total force, corrected for time, in the year 1906, was 103 190, and the total number of cases of disease and injury entered on the sick list was 77 842, which is in the ratio of 719.49 per 1,000, being a decrease of 119.3 per 1,000, as compared with the average ratio of the last nine years. The number of entries per man for disease and injuries was—on the Home Station, 0.69; Channel, 0 59; Atlantic, 0 76; Mediterranean, 0 67; North America and West Indies with Particular Service Squadron, 0.91; China, 0 95; East Indies, 1 05; Australia, 0 86; Cape of Good Hope, 0.74; and the Irregular List, 0 92. In the total force the average is 0.71, a fractional decrease in comparison with 1905. The average number of men sick daily was 3,144 77, giving a ratio of 29 06 per 1,000, and showing a decrease of 6.00 in comparison with the last nine years' average. The total number of days' sickness on board and in hospital was 1 147 843, which represents an average loss of service of 10 6 days for each person—a decrease of 2.19 in comparison with the average for the last nine years. The ratio per 1,000 of men sick daily on the various stations was—on the Home Station, 32.09; Channel, 21 51; Atlantic, 23 92; Mediterranean, 24.68; North America and West Indies with Particular Service Squadron, 31.04; China, 34 83; East Indies, 29 22; Australia, 28 16; Cape of Good Hope, 24.46; and Irregular List, 55 19. The Channel Fleet shows the lowest sick rate, and the Irregular List the highest, as was also the case during 1905.

Invalidings.

The total number of persons invalided was 2,436, which is in the ratio of 22 51 per 1,000, and shows a decrease of 2.73 per 1,000 in comparison with the average of the last nine years. Of the above total, 1,721 persons were finally invalided from the service (78 of these refused surgical operations), giving a ratio of 15 9 per 1,000 for the whole force, or 70.65 per cent. of the number invalided, thus showing an increase of 0 42 per 1,000 when contrasted with 1905. Including Marines invalided from head quarters, the total number invalided out of the service was 1 901 (as shown in the table at pages 12 and 13). Of the 2,436 invalided, 2,268, giving a ratio of 20 96 per 1 000, were invalided for disease, and 168, giving a ratio of 1 55, for injury. In comparison with 1905, the Home Station, Atlantic, North America, China, and the Irregular List show increased invaliding ratios; while Channel, Mediterranean, East Indies, Australia, and Cape of Good Hope show decreases.

Deaths.

The total number of deaths was 399, giving a ratio of 3 68 per 1,000, which shows a decrease of 1 46 per 1,000, in comparison with the average ratio for the last nine years. Of this number, 269, a ratio of 2 48 per 1,000, were from disease, and 130, a ratio of 1.2 per 1,000, from injury. The ratios of deaths from disease and injuries on the several stations will be found in the Medical Statistical Returns of the Total Force (Table No. 3). Compared with the death ratios for last year, Atlantic, North America, Australia, and Cape of Good Hope show an increase, the remaining stations a decreased ratio.

General Diseases.

The following is a summary of the returns under the head of General Diseases:

Small pox.—6 cases; 3 from Home, 2 from Atlantic and 1 from China.

Cow-pox.—256 cases; all discharged cured.

Chicken-pox.—25 cases; 12 from the Home Station.

Measles.—50 cases; 40 of these were from the Home Station, with 1 fatal case.

Rubella.—24 cases, of which 15 were from the Channel Fleet.

Scarlet Fever.—41 cases. The Channel Fleet contributed 18 cases, Home Station 16, Atlantic and Mediterranean 2 each, China, Australia, and Cape of Good Hope Stations 1 each; 1 fatal case was reported from China.

Dengue.—13 cases; of these China contributed 6 and the Irregular List 5 cases.

The decline in the case, invaliding, and death ratios for *Eruptive Fevers*, as compared with the last nine years' ratios, is again very marked.

Influenza.—2,950 cases. This gives an increased ratio of 5 26 per 1,000, in comparison with the last nine years' ratios, and is one of the few diseases which shows any increase The Home Station returns 1,087 cases, with 2 invalidings and 2 deaths; Channel, 682 cases; Mediterranean, 262 cases, with 1 invaliding; China and Australia, 227 each; North America and West Indies with Particular Service Squadron, 173 cases, with 1 invaliding; Atlantic, 136 cases, with 1 death; East Indies, 86; Irregular List, 67; and Cape of Good Hope, 3 cases.

Mumps.—163 cases. The Home Station contributed 110 of this total.

Diphtheria.—57 cases, with 3 deaths. The Home Station returned 52 cases, with 2 deaths; Atlantic, 3 cases; Channel, 1 fatal case; and North America and West Indies with Particular Service Squadron, 1 case.

Cerebro-spinal Fever.—3 cases. Home, Channel, and China contributed 1 each. The cases from the Home Station and from China proved fatal.

Fever, Simple Continued.—436 cases, with 5 invalidings. The cases were distributed as under: Mediterranean, 99; East Indies, 84; Atlantic, 72; Irregular List, 61; China, 47; Cape of Good Hope, 37; Home, 17; North America and Particular Service Squadron, 13; Channel and Australia, 3 cases each.

Enteric Fever.—184 cases, with 24 invalidings and 32 deaths. The case ratio per 1,000 of strength shows a decrease of 0.73, the invaliding of 0.17, and the death of 0.17, as compared with the last nine years' ratios. These figures, on the whole, must be considered to be satisfactory. The cases were returned by: Home Station, 59 cases; Mediterranean, 29; North America, with Particular Service Squadron, 26; Atlantic, 25; Channel, 15; China, 13; Irregular List, 10; Cape of Good Hope, 5; and East Indies, 2 cases. Not a single case was returned from Australia.

Mediterranean Fever.—216 cases, with 134 invalidings and 5 deaths. The case ratio shows a decline of 2.04, the invaliding of 0.69, and the death of 0 02 per 1,000, in comparison with the average ratios for the last nine years. The Mediterranean gave 145 cases; Home, 53; Channel, 5; China, 4; North America, with Particular Service Squadron and Irregular List, 3 each; Atlantic, East Indies, and Australia, 1 case each; but it is almost certain that all of the cases owed their primary origin to the Mediterranean.

Dysentery.—54 cases, giving 8 invalidings and 2 deaths. China, as usual, furnished by far the greatest number of cases—28 out of the total.

Malarial Fevers.—436 cases, with 10 invalidings and 3 deaths. The case, invaliding, and death ratios all show a satisfactory decrease in comparison with the last nine years' ratios. The cases were distributed as under: East Indies, 172 cases; China, 70; Home, 69; Irregular List, 40; Cape of Good Hope, 26; Atlantic, 20; Mediterranean, 11; Channel and North America with Particular Service Squadron, 10 each; and Australia, 8 cases.

Septic Diseases.—35 cases, with 8 deaths.

Tubercle.—Two hundred and ninety cases with 216 invalidings and 39 deaths. Both as compared with last year and with the last nine years, the case and invaliding ratios show a satisfactory decrease, while the death ratio is identical with that of last year, but shows a decrease on the nine years' ratio. It is pointed out that for the first time in these reports the cases of tuberculous disease have been classified, with the following results: Of the total number of cases, pulmonary tubercle contributed 256 cases, with 35 deaths; tubercle of glands, 8 cases; tubercle of testis, 7 cases; tuberculous disease of joints and bones, 6 each; tuberculous meningitis, 3, all fatal; acute miliary tubercle, 1 fatal case; tubercle of larynx, tuberculous ulceration of rectum, and tuberculous lupus, 1 case each. Officers furnished 13 cases—namely, executive officers, 4 cases; engineer officers, 3; paymasters, 3; and warrant officers, 3 cases. The Home Station reported 122 cases; Mediterranean, 43; Channel, 40; Atlantic, 36; China, 13; Australia and Irregular List, 11 each; North America with Particular Service Squadron, 10; East Indies, 3; and Cape of Good Hope, 1 case.

Venereal Diseases.—The total number of cases is 13,193—namely, chancroid, 1,672; syphilis, primary, 1,888; syphilis, secondary, 3,153; and gonorrhoea and its sequelae, 6 480 cases. Chancroid gave 13 invalidings; syphilis, primary, 10 invalidings; syphilis, secondary, 163 invalidings and 4 deaths; gonorrhoea and its sequelae, 93 invalidings and 2 deaths—a total of 279 invalidings and 6 deaths. The total number of days' loss of service was 316,631, while the average daily number ineffective from these diseases was 867.46.

Attention is called to the fact that the enormous amount of sickness from these diseases shows very little sign of any diminution as years go on. A slight fluctuation is noticed year by year, but the case ratio for the year under notice is practically identical with the average ratio of the last nine years. Nearly all other diseases show a pretty steady yearly decrease: these remain *in statu quo*. Australia shows the highest case ratio.

Chancroid.—1,672 cases—a considerable increase as compared with 1905.

Syphilis, Primary.—The case ratio under this heading, allowing for the fact that in certain of the previous years cases now classed as chancroid were entered under this heading, shows a decrease of 3 97 per 1,000, as compared with the average ratio for the last nine years.

Syphilis, Secondary.—3 153, with 163 invalidings and 4 deaths. Both the case and invaliding ratios show an increase

in comparison with the last nine years' ratios, but the death ratio shows a fractional decrease.

Parasitic Diseases.—There were 4,075 entries under this heading, of which number 3,954 were for scabies. The Home Station was responsible for 2,421 cases.

Poisons.—149 cases. "Poisoning by lead" gave 47 cases with 3 invaliding, the remaining 102 cases were due to various poisons, and caused 1 invaliding and 2 deaths.

Alcoholism.—108 cases, giving 3 invalidings and 3 deaths.

Rheumatism.—2,112 cases, with 110 invalidings and 1 death. The case ratio shows a decrease of 8.7 per 1,000, and the invaliding of 0.18, in comparison with the average ratios for the last nine years. The average duration of each case was 18.73 days, and the average number of men daily ineffective from this disease was 108.42. North America, with Particular Service Squadron, gives the highest case ratio under this heading.

Gout.—171 cases, with 2 invalidings.

New Growths.—162 cases of "non-malignant" and 10 of "malignant." Of the former 1 was invalided, and of the latter 6 died.

Diabetes.—10 cases, of which 5 were invalided.

Beri-beri.—20 cases, with 4 deaths. All these cases were reported from ships on the East Indian Station.

Other General Diseases.—70 cases, giving 11 invalidings and 1 death. Included under this heading are 3 cases of purpura (1 each from Home Station, Mediterranean, and Australia), 2 cases of rheumatoid arthritis (1 from Mediterranean, invalided, and 1 from North America); 1 case of Hodgkin's disease (Home Station, invalided); 1 case of osteo-arthritis (Home Station, invalided); and 1 case of pernicious anaemia (Australia, a fatal case).

Local Diseases.

The following is a summary of the returns under the head of "Local Diseases":

Diseases of the Nervous System.—904 cases, with 319 invalidings and 13 deaths. The case ratio shows a decrease of 1.91 per 1,000, the invaliding of 0.29, and the death-ratio of 0.1 in comparison with the average ratios for the last nine years. Of the above, 838 cases, with 250 invalidings and 13 deaths, are classified as "nervous diseases," while 66, all invalided, are returned as "mental diseases."

Diseases of the Eye.—885 cases, with 148 invalidings.

Other Organs of Special Sense.—669 cases, with 109 invalidings and 5 deaths. Diseases of the ear account for 106 of the invaliding and for the fatal cases, which were all due to middle-ear disease. It might, says the report, be thought that many of the cases of ear disease are due to heavy gun firing. This is not so; a case is very rarely met with in which the symptoms can be attributed to the effects of gun fire, either recent or remote. The vast majority of cases of ear disease recorded are due, in the first place, to inflammatory affections of the external meatus, and the commonest primary cause is coal dust. Naturally, under these circumstances, stokers furnish the majority of the cases. Middle-ear disease is usually met with as a sequel to neglected disease of the external meatus, but a minority of these cases are relapses of old ear trouble, which existed prior to entry, and which was concealed and undetected on examination of the recruit.

Diseases of the Circulatory System.—675 cases, giving 243 invalidings and 44 deaths. The case and death ratios show a fractional increase, the invaliding a fractional decrease, as compared with the last nine years' ratios. Of the invalided cases, 162 were due to organic and 34 to functional heart disease. The Irregular List shows the highest case ratio, followed by China and Home Stations in the order named.

Diseases of the Respiratory Systems.—8,165 cases, with 134 invalidings and 51 deaths. The case ratio shows a decrease of 21.79 per 1,000, the invaliding of 1.01, and the death of 0.29, in comparison with the ratios for the last nine years. Catarrh furnished 6,445 cases, or 78.93 per cent. of the total number; bronchitis 622, 7.61 per cent.; and pneumonia 491 cases, 6.01 per cent. Phthisis gave the largest number of invalidings—namely, 51. Pneumonia was responsible for 38 deaths. North America, Home Station, and Irregular List, in the order given, give the highest case ratios, while the highest invaliding ratios were from the Mediterranean, Atlantic, and Cape of Good Hope Stations.

Diseases of the Digestive System.—11 556 cases, giving 287 invalidings and 19 deaths. The case ratio shows a decrease of 19.55, the invaliding of 0.48, and the death of 0.07 per 1,000, in comparison with the last nine years' ratios. The stations furnishing the highest case ratios were North America, East Indian, and Irregular List, in the order given. Sore throat and tonsillitis account for 5 283 cases, diseases of the stomach and intestines for 4 571. Thirty-nine cases of hernia were invalided owing to refusal to undergo operative treatment, a reduction in the number returned in recent years.

Diseases of Intestines account for 10 deaths, 6 of which were due to appendicitis.

Diseases of the Lymphatic and Glandular System.—600 cases, with 14 invalidings and 2 deaths; of this number, 454 cases, 12 invalidings, and both the fatal cases were due to bubo (non-venereal).

Diseases of the Urinary and Generative Systems.—767 cases, with 81 invalidings and 12 deaths. The case ratio shows a decrease of 2.02 per 1,000, the invaliding and death ratios a fractional decrease in comparison with the last nine years' ratios.

Diseases of Kidneys account for 44 invalidings and 8 deaths; *Diseases of the Bladder* for 4 deaths.

Diseases of the Organs of Locomotion.—671 cases, with 67 invalidings. Diseases of the joints account for 288 cases, with 12 invalidings; diseases of the bursae for 161 cases.

Diseases of the Connective Tissue and Skin.—10,950 cases, with 39 invalidings and 1 death. The case ratio shows the satisfactory decrease of 26.75 per 1,000 in comparison with the average case ratio for the last nine years. China furnishes the highest case ratio.

Wounds and Injuries.

The following is a summary of the returns under this heading:

A. *General.*—250 cases, with 11 invalidings and 98 deaths. The case and death ratios show a fractional decrease, the invaliding a fractional increase, as compared with the last nine years' ratios. The deaths under this heading were: Suffocation from submersion, 76 cases; multiple injuries, 12; burns and scalds, 7; heat stroke, 2; and caisson disease, 1 case.

B. *Local.*—16,422 cases, with 157 invalidings and 23 deaths. The case ratio shows a decrease of 8.6 per 1,000, the invaliding a fractional decrease, but the death ratio a fractional increase, in comparison with the last nine years' ratios.

Suicide.

Nine persons committed suicide during the year.

Appendix.

The appendix contains notes of a case of traumatic aneurysm of the right common femoral in which one external iliac artery was ligatured and the patient recovered, by Fleet Surgeon J. L. Barrington, R.N.; and a paper on caisson disease by Staff Surgeon Oswald Rees, R.N.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PRACTITIONERS AND PATIENTS.

J. H. B. writes: A. and B. are medical men practising in the same district. X. is a patient of A.'s, has been under his care for a month, and, whilst having appointed to see A. again in a few days, goes in the meantime to consult B. without A.'s knowledge. B. is aware that X. is A.'s patient and still under his treatment. What course should B. adopt towards (1) X., (2) A.?

*** B. should request permission to consult with A verbally or by letter, and should refuse to undertake the treatment of the case.

OBLIGATIONS OF A SUBSTITUTE.

Kappa writes: A. and B. are neighbouring practitioners. A. asks B. to act as locumtenent for him for a few days. C. is a patient of A.'s; sends for him to attend D., a lodger in his house, who also has hitherto been A.'s patient. B. attends for A. D. is in a fit, and, when he recovers consciousness, wishes B. to continue the case, saying that C. had made a mistake in sending for A. in the first instance, for he had wished to change his doctor, although he had said nothing about this to C. beforehand. What should B. do?

*** As B. was in a position of trust he can only accept the case as A.'s substitute.

MEDICAL OFFICERS OF HEALTH AND PRACTITIONERS.

Cui Bono writes: A., who is a general practitioner in the town, acts also as M.O.H. for the township and medical officer to the infectious diseases hospital, at a yearly salary. B. reports a case of scarlet fever, that of a female aged 30. She is taken to the hospital, and while there finds that she is pregnant. A. confirms her diagnosis: she asks him to attend her at the confinement, and he agrees to do so. B., who was the usual medical attendant, was not informed by either party, and only casually came to know that the patient was really confined.

*** We have frequently expressed the opinion that a medical officer of health should not take advantage of his public appointment to detach patients from other practitioners.

THE ADVERTISING OF MEDICAL AND SURGICAL HOMES.

RIVIERA writes that he has taken a house on the Cornish Riviera to accommodate resident patients of the type of Anglo-Indian and other persons returning from the tropics, and he thinks the only way in which he can obtain such patients is by advertising the home in Indian and Colonial papers, and by issuing a prospectus to be sent to the surgeons on the Eastern-going liners. He would not insert his name in either of these advertisements. He asks for an expression of opinion as to the propriety of such advertising.

*** It has been held that advertising lunatic asylums, inebriate homes, and sanatoriums for phthisis conducted by medical men is only permissible in the medical papers or by circulars sent to members of the medical profession. If we accept this precedent, it would follow that while a circular may be sent to the surgeons of the chief steamship companies and advertisements be inserted in the medical papers, advertising in the Indian and Colonial lay press is not admissible.

ADVERTISING.

A CORRESPONDENT sends us a copy of the *Guernsey Gossip and Visitors' List*, which seems to us to be a paper of about the same literary value as the average parish magazine, and, like that class of periodical, it publishes portraits of local celebrities. In the particular number sent to us there is a portrait of a local medical practitioner on the front page, which is repeated on page 11, together with a short notice. We have several times expressed an opinion adverse to the publication of portraits of medical men in this way, but it is so common that we do not think it would be fair to suggest that there is any special iniquity in an individual case. Such occurrences invariably lead to a charge of advertising: but although we are of opinion that medical practitioners would be well advised to refuse to give their portraits for reproduction in this way, we do not think it would be possible to sustain a charge of advertising without evidence of continuous, or at least repeated, acts of the kind complained of.

OBLIGATIONS OF HOSPITAL OFFICERS TO THEIR COLLEAGUES.

F. B. writes: A. has a patient B. who meets with an accident. On account of B.'s poverty, A. sends the case to the hospital five miles away, where B. is attended by the hospital visiting doctor (C.) for a week, and then afterwards C. attends B. at his own home without A.'s cognizance or consent. Is C.'s action politic or usual? Will not A. be justified in sending his patients when they require hospital treatment to D., which is too far for the doctors to poach on impecunious patients? Ought not hospitals to have some rule forbidding such behaviour?

*** We should think it both impolitic and unusual for a hospital officer to attend a patient at his own home after his discharge, but as in this case the patient was very poor, it was probably done out of charity, and it is also possible that nothing was known of A.'s connexion with the case, as he may have omitted to send a letter or card with the the patient. If A. thinks C. ought to have known that B. was his patient, he should ask for an explanation. In future, when A. desires to send a patient to the hospital, he should send a letter with him addressed to one of the staff of the hospital requesting that he will look after the patient while in hospital, and send him back to A.'s care when the treatment at the hospital is finished. It would obviously be impossible to enforce a rule which should forbid members of the staff of a hospital to attend outside any patient who had been under their care in hospital, while, on the other hand, the rule regulating interference with patients belonging to other practitioners is quite well known, and is as binding upon the staffs of hospitals as upon other members of the medical profession.

SUPERSESSION.

L. writes: I notice in your reply to "Twenty Years a G.P." you state "The only rule that has been insisted upon in these columns is that the superseding practitioner should make it his business to ascertain that his predecessor has been duly notified of the change." This, I believe, is *not* the custom in London or any other large town; why should it be applied to country practitioners? Surely a patient has the right to call in any medical man he desires, and to make a change if he wishes to do so, and I suggest that the doctor is equally within his rights to attend when called in without any notification to the displaced practitioner; why one law of etiquette for large towns and another for country villages?

*** Our correspondent when he asks why there should be one law of etiquette for large towns and another for country villages seems to read into our answer a distinction which we did not make between country practitioners and those living in large centres; nor do we see any reason why it should be made, although in the latter even medical practitioners living in the same district are brought less into contact and there is less friction, less need for carefully regulated conduct in order to prevent disputes and less unpleasant consequences from disputes. We cannot admit that our rule is not followed or needed in large centres; we cannot imagine any one with good feeling omitting to make such an inquiry when asked to take charge of a case of acute or chronic illness, which was evidently under medical treatment. Interference with a patient under the care of a colleague is and has always been expressly forbidden by professional etiquette, and the onus is clearly thrown upon the superseding practitioner to make sure that he is not transgressing this rule. There is nothing in what we have said which is inconsistent with the general principles that a patient is at liberty to consult any practitioner he pleases, and that practitioners are similarly at liberty to give their services to any patient who asks for them; but such general rules must be subject to certain limitations if good professional relations are to be observed between practitioners, and the rule to which we have drawn attention is not the least important of these.

Medico-Legal.

ANAESTHETICS IN GENERAL HOSPITALS.

IN the report of an inquest on a case of death under anaesthesia which appeared in the BRITISH MEDICAL JOURNAL of January 11th, p. 119, it was stated that the coroner, speaking as to where the responsibility lay in such cases, said that Dr. Hewitt agreed with him that the operator was solely liable. We are asked to state that what really happened was that, whilst examining Mr. Fagge on the subject of liability, the coroner, Dr. Waldo, asked him if he considered Dr. Hewitt's work on anaesthetics a standard one, to which Mr. Fagge assented. The coroner then read to Mr. Fagge, and to the others in court, the following lines from pp. v and vi of Dr. Hewitt's preface: "It is a matter for congratulation that the examining bodies have at last made a course of instruction in anaesthetics a necessary part of the medical curriculum; and it is to be hoped that this reform may foreshadow others which are still urgently needed in this branch of practice. In the first place, legislation is required restricting the administration of anaesthetics, save in the most exceptional circumstances, to duly-registered medical practitioners, and separating the responsibilities of the anaesthetist from those of the operator. As the law now stands, anaesthetics may be administered by wholly unqualified persons, and, in the event of any accident occurring from the anaesthetic, the legal responsibility would seem to be with the operator rather than with the anaesthetist. Surely the law should protect individuals who innocently submit themselves to the influence of the most powerful drugs in the *British Pharmacopoeia* at the hands of those who are utterly ignorant of the risks involved; and surely the responsibility in administering an anaesthetic should rest with the administrator, and not, as has been held, with the operator. Half a century ago, when operations were of short duration and anaesthetics were administered under the direction of the operator, there was perhaps some reason for the acceptance by the latter of the entire responsibility of the case. But matters have completely changed, and it not infrequently happens in the surgery of to-day that the rôle played by the anaesthetist is of even greater importance than that played by the operator. The time has come, indeed, for a clear recognition of these two distinct responsibilities." After reading this quotation, the Coroner said for himself he agreed with the views expressed by Dr. Hewitt, and asked Mr. Fagge what he thought about the matter. Mr. Fagge replied that he did not altogether agree with Dr. Hewitt's views.

A CASE OF SUFFOCATION.

AT an inquest held in Southwark on January 10th, on the body of a child which was found dead about ten minutes after birth, the evidence seems to have shown that death was due to suffocation, brought about by the child being laid on the floor with its face in a quantity of blood. No medical man was present at the birth, and apparently no midwife either. When the child's condition was discovered assistance was sought from Guy's Hospital. This led to the presence at the inquest of a representative of that institution, and from him the coroner elicited a statement that the institution annually attended some 3,000 cases of delivery free of charge. This, he said, raised no objection on the part of medical men in the neighbourhood, for the patients thus attended were usually too poor to pay a fee of any kind.

SUBCUTANEOUS INJURY.

THE Secretary-Superintendent of Northampton General Hospital has called our attention to a case which was investigated recently in the town, and ended in the coroner's jury severely censuring the resident medical officers of the hospital. The case, as reported in a local newspaper, was one in which a wagoner fell while walking beside his horses and the wagon, weighing little less than three tons, was declared by two witnesses to have passed over the lower part of his chest and the left side of his face. He was taken to the General Hospital, but was not made an in-patient, because it was concluded after he had been kept under observation for one hour and three quarters that his condition did not warrant further detention. He was then sent home on his own wagon and died about two hours later. The resident medical officers seem to have examined him with much care, and from his behaviour concluded he was intoxicated. Beyond the fact that his nose had been bleeding, apparently from a blow, and that there was a little bruising in the groin, they found nothing to support the history given, and though he said that his right leg hurt him he made no complaint of pain in the abdomen or elsewhere. He was talkative and his face was flushed, and there was no sign whatever of collapse. After death the body was examined by an independent medical man, nothing being found externally beyond a few slight bruises. There were no broken bones but the intestines appear to have suffered some kind of injury, the exact nature of which does not seem to have been stated by the medical man who made the autopsy. In the opinion of the latter death was due to shock. The case ended as stated, but in view of the censure the matter was further investigated on behalf of the Board of Management, which eventually adopted the following resolution unanimously:

> The Board having received this report from its Chairman connected with the death of Joseph Marks, is of opinion that the charge of inhumanity brought against the Resident Medical Officers is without foundation; that they appear to have made a very careful examination of the injured man, and to have found no serious injury of any kind, and this fact was fully borne out by the *post-mortem* examination.

CHRISTIAN SCIENCE.

AT a coroner's inquiry in Richmond, on January 8th, into the circumstances attending the death of a woman aged 58, and as reported in the *Standard* and other papers, the jury brought in a verdict which the coroner stated was equivalent to a charge of manslaughter against a Christian Science healer and a Christian Science nurse implicated in the case. This he thought too severe, and on his suggestion the verdict was changed to one of death from acute bronchitis, a severe censure of the two persons mentioned, for neglecting to obtain medical aid, being appended. The deceased had had a cold since Christmas, and became seriously ill on New Year's Day, dying on January 5th. The medical evidence was to the effect that she had suffered from bronchitis, and would have recovered had she received ordinary treatment during the week preceding her death. The Christian Science healer deposed that she had treated the deceased at her request, and that on a previous occasion when the deceased had had a slight cold she had improved wonderfully in consequence of her prayers. On cross-examination she said she did not think that on this occasion the deceased wanted to get well, but possibly her ministrations lacked a sufficient degree of faith. She was still only a student. She did not herself believe in drugs, but at present did believe in food, because her understanding was not sufficient. The nurse said she had received ordinary training, and had had nine years' experience, but two years ago became a Christian Scientist. She thought the patient was suffering from bronchitis, but did not examine her or feel her pulse. As a nurse all she did was to make patients comfortable. She would not apply a mustard poultice, but would provide a hot-water bottle. She believed in spiritual more than in material aid, and did not believe in a judicious combination of both. Even if a patient's brain were clouded she should be left to decide for herself about calling a doctor. The coroner having summed up, the jury returned the verdict stated.

WORKMEN'S COMPENSATION CASES.

IS HEAT STROKE AN ACCIDENT?

A CASE which was heard by the Recorder of Belfast on January 4th raised a novel question under the Act. A claim was made against the owners of the White Star liner *Majestic* by the widow of a stoker who died on a voyage from New York to Southampton. It appeared that the deceased had been employed as a coal trimmer to work his passage home from New York. On July 11th, 1907, he was brought from below to the deck suffering from heat stroke, with a temperature of 104°. He died two hours afterwards.

Dr. Henry O'Neill, who was called as a witness for the applicant, expressed the opinion that the heat stroke was an accident. It was something external to the man's body. The ship's doctor, who was called by the respondents, said that the deceased was a small, emaciated man. All stokers suffered more or less from heat, but in the present case death was due to some predisposing cause in the patient's general condition.

His Honour said there was a good deal of complication in the case, and pointed out that, according to the certificate, death was due to a heat stroke and exhaustion. Medical evidence was given that the heat was not in the system, but was external, and therefore introduced into the system. The heat must have come from the boilers, as there was nothing else to create it. It appeared to him to have been an accident, and he held that the applicant was entitled to recover. He entered judgement accordingly, and awarded £162 compensation, with costs on the higher scale.

"A DETAILED ACCOUNT."

W. X. asks what is required when a patient wishes for a "detailed account."

*** It is only necessary to give the dates and the nature of the services rendered.

PRACTITIONER AND LOCUMTENENT.

A CORRESPONDENT says that he wrote to a London agent on the Wednesday to engage for him a locumtenent for the following Monday. On the Sunday he found that he did not require the locumtenent. He therefore wrote off then to countermand the engagement, also wiring early on the Monday morning. Although he considers there was sufficient time for the agent to stop the locumtenent from coming, the latter duly arrived, and he would like to know who is liable for the expense thus entailed.

*** The notice given was very short. Under the circumstances it does not seem that the agent ought to be held responsible, as it might have been quite impossible for him to stop the locumtenent from going.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A DEPUTATION consisting of Dr. D. B. Balding, J.P., Chairman of Council; Dr. Major Greenwood, Honorary Secretary; and Dr. Carey Barlow, attended the meeting of the Public Health Committee of the Hackney Borough Council on January 2nd to oppose the adoption of the Early Notification of Births Act.

The deputation pointed out the uselessness of the Act, as it affected those coming under the Poor Law. Poor-law medical officers might justly complain of further burdens being placed upon them, especially when the community was not likely to derive benefits therefrom. Poor-law patients were under the care of the guardians, and their officers were quite competent to deal with all the requirements of the lying-in, both of the mothers and of the infants; that district medical officers, and workhouse and infirmary medical officers should be compelled under a penalty to notify all births to the medical officer of health of the district was a grievance they were justified in protesting against.

In answer to questions, Dr. Balding stated that his experience as coroner for more than thirty years did not lead him to believe that much public good would be derived from the Act, and in his opinion the form of notification proposed, if enforced, would have a tendency to raise the percentage of cases of abortion and infanticide, so frequently associated with the births of illegitimate children.

Dr. Major Greenwood said that, with regard to the feeling of the medical men practising in the Hackney district, there was an overwhelming majority opposed to the adoption of the Act. At a meeting of the City Division of the British Medical Association quite recently, a strong protest against such adoption had been passed, and in the adjoining Tottenham Division the same resolutions had been unanimously carried. He had himself sent out reply postcards to all practitioners in the Hackney area, and had received 104 answers condemning the adoption of the Act, as against 38 approvals.

The Chairman of the Public Health Committee thanked the deputation for attending, and assured them that their views should receive careful consideration.

TUBERCULOUS MEAT.

AT the Daventry Petty Sessions on January 1st a butcher was fined £5 and £2 16s. costs for having on his premises beef unfit for human food. According to the evidence of Dr. Hope (Byfield) and Dr. Darley, M.O.H., the body of the animal, a heifer, was very obviously affected with tuberculosis; the lungs and liver had been buried, but there were signs of the disease in the stomach and other parts. The animal was not emaciated. Evidence was given for the defence to the effect that the animal was in good condition.

VACCINATION FEES.

DR. S. N. SCOTT, M.R.C.S., L.R.C.P., D.P.H. (Plymstock, S. Devon), writes: I am pleased to inform you that at a

recent meeting of the guardians of the Plympton St. Mary Rural District the following resolution was unanimously agreed to:

That having regard to the fact that the scale of fees in this union was fixed by the Local Government Board in 1899, and that the existing arrangements are working satisfactorily and the fees are considered reasonable, the guardians desire to make no variation at present except when two or more persons are vaccinated or revaccinated at one and the same time in the same house or premises, the fees for each case after the first should be the minimum of 2s. 6d. only.

The existing fees are:

For cases under one mile from the doctor's house—		
Registration fee	1	0
Vaccination fee	5	0
Total	6	0
For cases beyond one mile from the doctor's house—		
Registration fee	2	6
Vaccination fee	7	6
Total	10	0

This desirable result has been brought about after an amicable discussion between a representative of the doctors and a committee of the guardians.

OBITUARY.

WE regret to have to record the death of Dr. VERNON JOHN GREENHOUGH, which took place at Chapel-en-le-Frith, near Stockport, on December 11th, 1907, at the age of 55, after an illness of some duration. Dr. Greenhough, who was a Derbyshire man, and born at Whatstandwell, near Matlock Baths, received his education at Cambridge University, where he graduated B.A. in 1875. For some time afterwards he occupied himself in the teaching of science at King William's College, Isle of Man, and elsewhere, and then decided to adopt the profession of medicine. To this end he entered the Medical Faculty of the University of Edinburgh, where in 1883 he became M.B., C.M. On leaving Edinburgh he began practice near Bakewell, but after a few years moved to Chapel-en-le-Frith, where he acquired the practice of the late Dr. Jones. This was in 1894, so at the time of his death he had been in this locality for some thirteen years, and had long since acquired in marked degree the respect, esteem, and friendship of all classes. He was connected with several friendly societies, and took an unusual interest in the well-being of their members, while volunteering and rifle shooting also attracted him. For several years he had held the rank of Surgeon-Captain in the B Company of the Volunteer Battalion of the Notts and Derbyshire Regiment, and made a point, as often as his work would permit, of attending the annual camp, where his presence was greatly appreciated. He did not a little to support the shooting club, and was also a keen Freemason and a Past Master of two lodges. On the foundation of the High Peak Hospital, some five years ago, Dr. Greenhough was appointed its Medical Superintendent, and he retained that post up to the date of his death. He was a member of the Pathological Society of Manchester and of the Derby Division of the Midland Branch of the British Medical Association. His funeral, on December 14th, was of a military character and attended by widespread manifestations of regret at the loss of one whose influence in the locality had always been beneficent, and of whose kindheartedness and skill many had had experience. Dr. Greenhough was married, and leaves a widow and a son and daughter.

DEPUTY INSPECTOR GENERAL JOHN THOMSON COMERFORD, M.D., R.N. (retired), who died recently at Ventnor, Isle of Wight, aged 64, was appointed Surgeon, September 7th, 1863; Staff Surgeon, April 14th, 1877; Fleet Surgeon, December 19th, 1883; and Deputy Inspector-General on retirement from the service, September 15th, 1888. He served with the Naval Brigade at the attack on the batteries in the Straits of Simonoseki in 1864, and was mentioned in dispatches for his attention to the wounded under fire. He was wrecked in the *Griffon*, near Little Popo, on the West Coast of Africa, in October, 1866.

UNDER the will of the late Mr. James Burdick, of Putney Hill, whose will has now been proved, the Royal Hospital for Incurables, Putney, receives a legacy of £1,000.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

PETIT MAL would be glad to know in what doses, and for what period, nitrate of silver can be administered without the risk of argyria.

ORIENT writes: A lady, who admits to 42 to 43 years of age, has just been married. She has not menstruated for over a year, but appears to be in good health; she has had no particular symptoms of the climacteric. She is anxious to know the probability or possibility of her bearing offspring. Can you give me information or refer me to any book where this matter is discussed?

*** We have referred this question to a high authority, who writes that pregnancy is possible, but improbable.

ANSWERS.

E. S. H.—We have made inquiries as to the tubercle remedy mentioned, but have failed to discover anything about it.

G. D.—We know of no illustrated book showing the eruptions of the acute exanthematous and continued fevers. The following references may be of use to our correspondent: *A Theoretical and Practical Treatise on the Diseases of the Skin*, by Rayer of Paris (London), contains coloured drawings: rubeola, scarlatina, varicella, variola (with interesting illustrations of variola lesions at various stages), varioloid; also vaccinia (with lesions at various stages); *A Treatise on the Continued Fevers of Great Britain*, by Charles Murchison, 1862 (with coloured plates of eruption of typhus, early and advanced stage; lenticular rose spots of enteric, (1) unusually numerous, and (2) with *taches bleuâtres*). For variola the following may also be consulted: *Corlett's Variola* (for many illustrations), *Stelwagon's Diseases of the Skin*, *Sydenham Society Atlas* (new and old), *Kaposi's Atlas*, and, above all, the coloured drawings by Kirtland which were published in the Jenner Number of the BRITISH MEDICAL JOURNAL, May 23rd, 1896. We need hardly say that however useful coloured drawings of rashes may be, diagnosis must be based on all the facts and circumstances.

HOLDING THE KING'S HEAD DURING SEA-SICKNESS.

A CORRESPONDENT writes in reply to a query by "S. D. C." which appeared in the JOURNAL of November 23rd, 1907, p. 1564: King John gave lands at Kepperton and Atterton in Kent to one Solomon Attefeld on condition "that as often as the King should be pleased to cross the sea, the said Solomon or his heirs should be obliged to go with him to hold His Majesty's head if he should be sea sick." By the record in the Tower it appears this office of head-holding was last performed in the reign of Edward I.

BARIUM SULPHIDE AS A DEPILATORY.

J. M. C.—The formula for a depilatory to which our correspondent refers is probably the following, which appeared in the BRITISH MEDICAL JOURNAL of November 2nd, 1901, p. 1388: (1) ℞ Bariī sulphidi, ℥ij; zinci oxidi, ℥vj. M. Make into a paste with cold water, and apply to the part for ten to fifteen minutes, then wash off. (2) The time varies according to strength and growth of the hair. (3) There is no objection except that it must be repeated at intervals. Barium sulphide has no permanent effect as a depilatory. Electrolysis gives good results in some cases, not in all.

AVIAN PROTEOSOMA AND MALARIA.

SEARCHER.—The symptoms of avian malaria resemble those seen in the human subject. The bird after an incubation period, in which the parasites are multiplying, gets fever, it is ill, feathers ruffled, and mopish. If the infection is severe it may die, or if less so recovery may take place. Relapses are common, but eventually the infection dies out of its own accord. This is similar to human malaria. Pathologically the liver and spleen are enlarged, congested, and black pigment (melanin) is found in them. Those facts, together with the classification of the parasites and their life-history, described in the JOURNAL of January 11th, are sufficient to show that proteosoma is a disease the equivalent of malaria in man.

MEDICAL PRACTICE IN ONTARIO.

G. R. H.—(1) The General Medical Council of the Province of Ontario is the College of Physicians and Surgeons of Ontario. Inquiries respecting registration should be addressed to the Registrar, College of Physicians and Surgeons of Ontario, Toronto. (2) By the terms of the Ontario Medical Act, no person whose name is not upon the Register of the Province can practise medicine, surgery, or midwifery for hire, gain, or in hope of reward. Any person who does so practise, or who advertises himself as ready to give advice in medicine, surgery, or midwifery, may, upon summary conviction thereof before a justice of the peace, be condemned to pay a penalty of not more than £20 or less than £2. (3) There is no indication that the examination imposed is designed to keep out duly qualified men. (4) As far as we know, there is no immediate probability of a system being introduced whereby a medical practitioner with British qualifications will *ipso facto* be entitled to registration. We should advise our correspondent to place himself in communication with the registrar. When doing so he should state what his qualifications are, when they were obtained, and what his experience has since been.

TRACHEOSCOPY AND BRONCHOSCOPY.

P. Q. R.—For an account of the procedure in tracheoscopy and bronchoscopy we may refer our correspondent to the BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 569, where he will find a paper, Direct Endoscopy of the Upper Air Passages and Oesophagus, by Professor Killian, introductory to a discussion at the meeting of the British Medical Association held at Manchester in that year. Although the paper may not give all the details of procedure desired, appended to it is the author's bibliography, which probably contains the more important, if not all, of the author's previous communications on the subject. A work on the allied subject of oesophagoscopy, by Professor Hugo Starck, of Heidelberg, was reviewed in the BRITISH MEDICAL JOURNAL in 1906 (vol. ii, p. 1496). Recently a book has been published in the English language on these special subjects—*Tracheo-Bronchoscopy, Esophagoscopy, and Gastroscopy*, by Dr. Chevalier Jackson, of Pittsburg. Large 8vo, 200 pages, 83 illustrations, 5 full-page coloured plates, bound in cloth, price $4 00 net (17s.). The book is sold only by subscription direct to the publishers, The Laryngoscope Company, 3858, Westminster Place, St. Louis, Mo. 1907.

LETTERS, NOTES, Etc.

THE PROSPECTS OF THE MEDICAL PROFESSION.

AFTER TWENTY YEARS writes: The letters of your correspondents "Bristolian" and "X. Y. Z" in the issue of December 28th, 1907, p. 1860, will be read with sad interest by many whom the subjects treated of concern. The contiguity of the two letters is fortunate. They may be taken in relation one to the other:

As to openings for practice. The correspondence to which one of the leading dailies, the *Daily Telegraph*, lent its columns last year—I noticed that, either by accident or design, it was not until after the medical schools had counted their new entries—showed pretty clearly how few openings for practice are to be found, either with capital or without.

One would have thought that such a correspondence would have been a sufficient warning.

In the face of this, any spirit of "friendly reception" such as referred to by your correspondent "X. Y. Z." must surely be grim mockery, or a worse than meaningless phrase. Indeed, will not the questions, How many opponents? What is the opposition? be familiar rather than strange to "Only a Beginner"? How do they agree with a spirit of friendly reception?

Let us face the situation boldly, as it actually exists in medical practice at the present time. Is it not, Each man for himself, and the devil take the hindmost?

The result, as your correspondent "Bristolian" remarks, is known to the Income Tax Commissioners, and to the administrators of the miserable "Medical Benevolent Funds" to destitute widows and orphans.

I read in one of the daily papers this week: "Medical officers of 'out-patient departments' are now being overworked by the huge crowds of patients applying for relief, as is always the case after any time of national holiday-making." I think of the poor doctors in neighbouring surgeries who have had no holiday, and whose consulting rooms are empty; to whom, surely, a proportion of those huge crowds could afford a modest fee! It is difficult to compete, even to live, when what one has to sell is being given away close by. In business it means *ruin*. Why not in a profession also?

THE LATE SIR WILLIAM GAIRDNER AND MESSRS. OPPENHEIMER

WITH reference to the letter from Dr. Eric D. Gairdner which appeared in the JOURNAL of December 21st, 1907, p. 1809, we have received from Messrs. Oppenheimer a letter in which they express regret that, having a new manager in their advertising department, he should have taken a communication from the late Sir William T. Gairdner, although it was not marked "private," and published it as a testimonial. The objection raised by Sir William T. Gairdner was to the preparation known as "Triple Syrup of the Edinburgh Infirmary Pharmacopoeia." Messrs. Oppenheimer add that they at once stopped the circulation of the letter referred to, and expressed their regret to Dr. Gairdner that it should have been issued.

THE DOCTOR IN THE NEWSPAPERS.

DR. ALBERT WILSON (Langham Street) writes: My attention has been called to an article in a recent number of your JOURNAL, criticizing the appearing of my photo in a weekly paper. This is apparently the result of a communication by me at a meeting of the Medico-Psychological Association, on the psychology of crime, illustrated by about 30 cases of criminals of the worst and most dangerous types—a subject of public interest and, indeed, of national importance. The meeting was the largest the Association ever held, and was attended not only by the profession, but also by lay individuals, including a distinguished judge. In that paper I did not put forward a single claim for any discovery of my own, but gave due credit to all who have advanced our knowledge of the subject.

*** The article in *Black and White*, to which we called attention, purported to be an interview with Dr. Albert Wilson by a gentleman who makes that department of journalism a speciality. Dr. Wilson's letter supplies an explanation of the appearance of the article and photograph, but can scarcely be considered an excuse.

"PITFALLS OF LATIN QUOTATION."

LIEUTENANT-COLONEL F. P. NICHOLS, R.A.M.C. (Secunderabad, India), writes: With reference to the paragraph "Pitfalls of Latin Quotation" in the JOURNAL of December 7th, 1907, the following rather interesting mistake occurred in *Punch* about four weeks ago. Referring to the present Minister of Education, it was suggested that he was a sort of "Deus ex McKenna," forgetting that the word "machina" scans as a dactyle, as shown, for instance, in Horace's well-known Ode, I, 4:

> "Solvitur acris hyems gratâ vice veris et Favoni,
> Trahuntque siccas *machinae* carinas."

Perhaps of all our periodicals *Punch* is the freest from errors of this description, as we should expect under the able editorship of a scholar like Owen Seaman, an "Old Salopian" of the time when Shrewsbury School was still at the height of its classical reputation.

A CORRECTION.

IN the note by Dr. J. A. Calantarients on an alternative plan for treating wounds of skin without sutures, published on December 21st, 1907, p. 1784, the word "rims" in line 13 should have been "strips."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address
ON
SOME MISLEADING ABDOMINAL CASES,

DELIVERED AT THE INAUGURAL MEETING OF THE HARROW SECTION OF THE WATFORD AND HARROW DIVISION OF THE BRITISH MEDICAL ASSOCIATION ON JANUARY 23RD, 1908.

BY D'ARCY POWER, F.R.C.S.ENG.,

SURGEON TO AND LECTURER ON SURGERY AT ST. BARTHOLOMEW'S HOSPITAL; EXAMINER IN SURGERY AT THE UNIVERSITY OF OXFORD; PRESIDENT OF THE HARVEIAN SOCIETY OF LONDON.

WHEN the great Duke of Wellington was asked to what gift he mainly attributed his successful generalship, he replied to his power of rapidly correcting his mistakes. I often think that the same faculty is true of ourselves whether we are in general practice or whether we are surgeons. We all make mistakes, and the most successful practitioner is he who acts promptly when he perceives his error and is prepared instantly to recast all his plans and to throw to the winds all his preconceived ideas. A great soldier and a great doctor have this in common, and they are raised by it above the ordinary man who merely takes the lesson to heart and profits by it on a future occasion.

The human abdomen is a constant menace to its owner, and is a standing pitfall to the medical attendant. It is the seat of many and varied pathological conditions, some serious, others trivial, but often with such a general resemblance as to make it extremely difficult to distinguish one from another. We fall into error in two different ways. You err by overlooking conditions which need operation; we sometimes act precipitately and open the abdomen when we might advantageously have waited. We all try to act in the best interest of the patient, but our experience is wholly different, and we do not approach a given case of acute abdominal disease from the same point. You see numbers of trivial cases, and you are consequently not alarmed if the signs and symptoms are rather more severe than usual, for you have cured worse; we see more acute than chronic cases, and are apt to make too much of trivial conditions which have commenced acutely. We blame you for giving castor oil in cases of intestinal obstruction which have begun insidiously with simple constipation; you blame us because we have opened an abdomen for what proves to be nothing worse than an attack of colic.

I have chosen this evening to tell you about some misleading abdominal cases. They reflect pretty equally on most of us and they carry their own moral, so we need not feel aggrieved at having made mistakes.

Duodenal ulceration is a constant source of mistake. The condition is not very common, and it has only recently come within the limits of practical surgery. It occurs in two forms: acute perforation in otherwise healthy people, and in a chronic non-perforating form which leads to narrowing of the duodenum and dilatation of the stomach. Here are instances in point:

CASE I.—*Acute Perforation of a Duodenal Ulcer.*

A compositor, aged 24 years, living at Stoke Newington, had suffered occasionally from indigestion during three or four months and had vomited once or twice without cause in the same period. He gave no history of severe abdominal pain, melaena, or haematemesis. His appetite had always been good, and he had never suffered any pain associated with the taking of food. On January 20th, 1906, he ate a large meal at 3 p.m., and started for a bicycle ride at 3.30, going to Epsom and back, a distance of nearly fifty miles. At 8 p.m., whilst drinking a glass of beer at Balham, he was seized with such a sudden and severe attack of abdominal pain that he was carried to the house of the nearest medical man. Here he became so collapsed that he was thought to be dying. He rallied after the administration of strychnine subcutaneously, and was then put into a cab and sent to the Bolingbroke Hospital; on the way he vomited.

The patient reached the hospital at 10.15 p.m. He was then cold and collapsed. The temperature was 97.6° F.; the pulse was 96, of fair volume and force. His face appeared drawn as if with pain, and he complained of severe pain in his stomach, saying that he had felt some "windy pains" in the upper part of the abdomen in the morning and on the previous day. Examination showed that there was practically no movement of the abdomen during respiration. The abdominal wall was rigid all over, and it was tender in the right iliac fossa.

The patient looked better at 10.30; he was in less pain, and the abdomen was less rigid on the right side. The liver dullness was present. At 11.30 I examined him, and discovered tenderness in the right epigastric region as well as in the right iliac region. The right rectus abdominis was more tense than the left, and I made a diagnosis of "a small perforation near the pylorus, most probably on the duodenal side."

Ether was administered at 11.45 p.m., the abdomen was opened, and the pyloric end of the stomach was brought into view. A small circular perforation with sharp edges and about one-sixteenth of an inch in diameter was found in the duodenum half an inch away from the pylorus. There was no lymph exudate and there were no adhesions. No gas escaped from the peritoneal cavity when it was opened, but a small quantity of dark brown fluid was trickling from the perforation. The hole was closed by two sets of Lembert's sutures and a large drainage tube was left in the wound. A second opening was made into the peritoneal cavity over the region of the appendix, and a tube was inserted there also. The patient made an excellent recovery, and was discharged from the hospital on St. Valentine's Day. He has reported himself on several occasions, and has remained in good health.

The misleading points in this case were (1) the previous good health of the patient; (2) his rapid improvement from the initial shock—he was thought to be dying at 8 p.m., he had a good pulse and was able to give an account of his previous health at 10; (3) the diminution and localization of the physical signs in his abdomen. Fortunately, my house-surgeon (Dr. McCrae Aitken) was on the alert, and was not contented to let him go through the night without further advice. The characteristic history of profound collapse in a healthy person with rapid recovery up to a certain point roused my suspicions of a perforated duodenal ulcer. The discovery of two points of maximum tenderness, one in the iliac fossa, the other, which had been overlooked, in the right epigastric region, justified immediate exploration of the abdomen. General suppurative peritonitis would have occurred if the patient had been left till the following day, and in all probability he would have died.

Having plumed ourselves sufficiently upon the acumen we had shown in connexion with this case, we were presently confronted with the following:

CASE II.—*Appendicitis mistaken for Acute Perforation of a Duodenal Ulcer.*

I was called to a man, aged 37, on November 2nd, 1907, who was suffering from an attack of acute abdominal pain with collapse.

The patient had been a soldier serving in India, where he had enteric fever. He was now working as a labourer, and had suffered for some time past from indigestion and a feeling of fullness coming on after meals.

He stated that he had been suddenly seized with pain three days ago whilst walking in the street. The pain was severe for a time, but it passed off, and he was able to continue his work. He was working as usual on the morning of his admission to the hospital, when he was suddenly seized with such intense pain in the region of the umbilicus that he was brought at once to the hospital. Examination showed that he was suffering greatly. His abdomen moved during respiration. It was fairly soft on the left side, but the right rectus was tense, and there was a diffuse tenderness 1 in. above and to the right of the umbilicus and in the right iliac fossa. The temperature was 100.4° F., and the pulse 80.

I made a diagnosis of acute duodenal ulcer with perforation, and proceeded to operate at once. When the abdomen was opened there was no escape of gas or intestinal contents. The intestines were not inflamed, and there was no peritonitis. The appendix region appeared normal to the touch, so I did not explore it by a separate incision. The abdomen was closed under the impression that the patient was suffering from colic. The wound healed by first intention.

The pain continued after the operation, but in a more bearable form, and on November 13th, eleven days after admission, the patient vomited; on November 18th any increase in the amount of food caused diarrhoea; on November 20th he passed some mucus whilst at stool, and on November 23rd a definite lump could be felt in the right iliac fossa above the inguinal canal. This lump was tender, movable, and painful. The patient was prepared for operation, but between the time he was prepared and the time I was ready to operate he began to pass pus per rectum, and the swelling became smaller. Pus continued to be passed by the bowel from November 25th to December 3rd, when it ceased, the lump in the abdomen having in the meantime become imperceptible, and the patient was discharged on December 9th. The former symptoms of pain and swelling in the abdomen returned at Christmas, and I operated upon him on January 15th. A long appendix lay beneath the caecum and ascending colon. The tip was suppurating and was firmly adherent to the under surface of the colon. The appendix was removed and the patient is now convalescent.

My reading of this case is that the patient had a minute perforation of the tip of the appendix at the time of his pain and collapse. The perforation allowed of the escape of a small quantity of the intestinal contents,

which either passed into one of the appendices epiploicae or became shut off by local inflammation without causing any general peritonitis. In due course a circumscribed abscess was formed which remained connected with the bowel at the seat of perforation because it was movable. The abscess burst into the bowel and was discharged per rectum. The case, therefore, was one of the kind described by the older physicians as "abdominal phlegmon," and by ourselves as a localized suppurating appendicitis. I ought not to have made the mistake of thinking it was a case of duodenal perforation, because the signs of collapse were not sufficiently severe; the abdominal walls moved too freely, and the points of maximum pain were too low to be associated with the duodenum and too high for an appendix normally situated. The painful area also was diffuse and not definite, as it is when duodenal perforation is seen early. It is interesting to compare these two cases in which I operated with a third, which presented somewhat similar symptoms though the signs differed.

Case III.—*Acute Dyspepsia Simulating Perforation.*

A carman, aged 22, was admitted into one of my wards at St. Bartholomew's Hospital late one evening in summer. He said that he had been suddenly seized with such severe pain in his stomach whilst he was driving that "it fair doubled him up and threw him backwards into his cart," where he remained until his van-boy took the reins and brought him to the hospital. He vomited on the way. On admission, he was found to be complaining of great pain and some tenderness over the upper part of the abdomen. The abdominal walls moved freely during respiration, but they were held rigid as soon as they were touched, more especially on the right side and at the upper part. There was no pain or rigidity in the region of the appendix, nor was there anything to be felt by rectal examination. The area of liver dullness was markedly diminished. The temperature was 99.6° F. and the pulse was 104. He had a leucocytosis of 20,000. The patient said that he had suffered severely from indigestion for the last two or three years, though he had never had such an acute attack of pain as that from which he was now suffering. He also said that he had been "off his feed" for the last two or three days, though he confessed to having had a good breakfast of bacon and eggs and a hearty dinner of beefsteak; he had also been drinking, though he was not drunk. As he was not collapsed, in spite of his symptoms and physical signs we agreed that he was suffering from an acute attack of dyspepsia, and we waited for further developments. Two hours later the patient vomited twice, and each time brought up masses of badly-chewed meat. He then quickly recovered; his pain left him, his pulse fell to 88, he had a good night's sleep, and I discharged him the next day with a caution not to bolt his food and not to drink till he was drunk.

The indications against operation in this case were tolerably clear. The patient was in pain, but neither his face, his pulse, nor his temperature showed him to be in a state of collapse. He had recently eaten a hearty meal; his abdominal walls moved freely during respiration, though the muscles became rigid as soon as they were touched. They were thus in a very different state from that of the man with a perforation of the duodenum, who held his muscles rigid against every movement.

The next case brings us again into the region of the appendix, an organ upon which we are rather too apt to concentrate our attention at the present time to the exclusion of other sources of abdominal inflammation.

Case IV.—*Chronic Pyloric Obstruction Simulating Chronic Appendicitis.*

A young woman, aged 24, was lately admitted to the Bolingbroke Hospital under my care for symptoms said to be due to chronic inflammation of the appendix. I am indebted for the notes of the case to Dr. McCrae Aitken. About four years ago she began to have attacks of "chills" associated with abdominal pain and indigestion. She had suffered from repeated attacks of pain in the epigastrium during the past year. She had eaten less and less, and her weight had diminished in consequence from 8 st. to 4 st. 11 lb. Her condition was thought to be chiefly nervous, and she was treated by Weir Mitchell's method and by courses of electricity. Her bowels were habitually constipated; she had suffered for a long time from amenorrhoea, and of late had vomited repeatedly.

Examination showed that she was a very intelligent girl, miserably thin, and with a waxy complexion. Her skin was singularly harsh, and was in a state of chronic "goose-skin." The abdomen was hollow. There was gurgling and tympanites over the caecum and in other parts of the colon. There was a point of maximum tenderness 1 in. above and 1 in. to the right of the umbilicus, and a less tender spot in the right iliac region, but no lump could be felt in either place. The stomach was dilated to such an extent that it reached as low as the umbilicus, and it was pouched outwards to the right in the region of the pyloric antrum. Splashing sounds were heard over the dilated stomach, and the patient complained of flatulent eructations when it was percussed. The pulse on admission was 80, the respirations were 24, and during her stay in the hospital the temperature remained at 97° F.

I performed a posterior gastro-enterostomy on November 16th, and as there had been some doubt as to whether or not she had been suffering from chronic appendicitis I removed the appendix through a separate incision. The patient made an uninterruptedly good recovery, and left the hospital on December 3rd.

This girl had a mechanical obstruction to the outflow of the gastric contents, which was leading to slow starvation and causing dilatation of the stomach. The mere act of feeling her pulse was sufficient to give a clue to her condition. The peculiar harshness of her skin I have often felt in patients suffering from a dilated stomach due to pyloric obstruction, but never in any other abdominal condition. This harshness of the skin led one to look for a dilated stomach, further clues being the progressive emaciation, the pain and the repeated vomiting.

The true story in this case was as follows: Ulceration of the stomach at the pylorus or in the duodenum; cicatrization without perforation of the ulcer; narrowing of the pylorus or of some point in the first part of the duodenum. Slow dilatation of the stomach, with progressive emaciation of the patient owing to starvation. The patient would have been spared a long and tedious illness if any one had taken the trouble to examine the abdomen with especial reference to the gastric region.

The next case was as much a surprise to myself as to any one else, for I thought that I was operating upon an ordinary case of acute appendicitis.

Case V.—*Chronic Inflammation of the Caecum Requiring Excision and Simulating Appendicitis.*

A boy, aged 23, was admitted into St. Bartholomew's Hospital complaining of pain in his abdomen. He said he was a plumber by trade, and that for the last three weeks he had noticed a certain amount of pain in the right side of his abdomen, which was brought on by walking. The pain was of a sharp and stabbing character, but was relieved by pressure with the hand. The pain became constant a week before he applied for relief. On the evening of his admission the patient had a sudden attack of sharper pain, which he referred to the middle line of his abdomen. He came up to the surgery, and was found on examination to have a lump in the right iliac fossa. He had vomited and had some diarrhoea. Examination showed a firm and rather nodular mass in the region of the appendix. Nothing unusual could be felt through the rectum; his pulse was 86, and his temperature was 100° F.

I performed an emergency operation upon the boy at 9 p.m., thinking that he was suffering from an attack of appendicitis. A great mass of adhesions was found as soon as the peritoneal cavity was opened. The adhesions had formed round the caecum, which was hard and lumpy. A short search showed that the appendix was not present and that the caecum had given way posteriorly. I therefore resected the caecum, cutting through the ileum and the ascending colon about 3 in. from the ileo-caecal valve. The cut end of the ileum was sutured to the ascending colon, the overlapping portion of colon being sutured in such a way as to close the excess of lumen. The bowel was then replaced in the abdominal cavity and the wound was closed. The patient made a good recovery and was discharged from the hospital cured on November 26th.

The pathological report states that the part removed consisted of the caecum with 3 in. of the ileum. The peritoneal surface of the whole of this piece of bowel, except a small area on the caecum, is rough and reddened, whilst the posterior aspect shows marks of adhesions.

The mesentery is much thickened and on its front surface are two rounded bodies which appear to be enlarged lymphatic glands. On the posterior aspect is an area of thickened fibrous tissue or adhesions occupying the position of the appendix. At one end of these adhesions is a mass of greenish-grey tissue in a state of gangrene. The appendix as a separate structure cannot be distinguished. The mucous membrane of the gut is extremely oedematous and so swollen that no lumen is visible, but there is no obstruction to the passage of a finger in either direction.

Histological examination (*a*) of the lymphatic glands showed that the lymphoid tissue was inflamed and that there was no evidence of tubercle or new growth; (*b*) that the gut wall was greatly thickened by chronic inflammation. The conclusion arrived at was that the condition was due to acute inflammation supervening upon chronic inflammation. There was no evidence of tubercle, new growth or intussusception.

I cannot yet explain the true nature of this interesting case unless by assuming that the patient had an attack of suppurative inflammation in an appendix which had been almost destroyed by previous attacks. The acuteness of the signs was manifest, but, as so often happens, the symptoms were trivial because the inflamed area had rapidly become gangrenous and had thus lost its sensibility.

There is no need here to do more than recall those miserable cases of appendicitis, often marked by diarrhœa rather than by the usual constipation, in which gangrene has occurred early in the disease. We are all familiar with them, and we know how misleading they usually prove themselves unless attention is concentrated upon the pulse whilst the fallacious improvement due to the absence of pain is steadily discounted. I have known parents who have watched their children die under such conditions, and I have been called to patients where the medical man has throughout given a hopeful prognosis until the evidence of general peritonitis proved to him how hopelessly he had misjudged the case. Temperature counts for nothing. The apparent condition of the patient is deceptive to the last degree. There is no abdominal resistance, the respiratory movements are hardly affected, the patient may eat with an appetite, and his bowels may continue to be relieved until commencing distension warns of impending disaster. The pulse alone gives a clue if the pre-existing signs and symptoms be taken into account, and even the pulse fails us on some occasions. Here are two cases, for the notes of which I am indebted to my former house-surgeon, Mr. J. G. Gibb:

CASE VI.—*Acute Gangrenous Appendicitis: Death.*

J. B., aged 45, a rubber cutter, was admitted into St. Bartholomew's Hospital, under my care, on November 17th, 1906. He said that he had suffered for some time from indigestion—that is, pain after food—and that he had experienced several attacks of severe abdominal pain, but none which had been so severe as that of which he was now complaining. These attacks were generally relieved by opening medicine, as he was of a constipated habit. He was tired and complained of lassitude during the week preceding the present attack.

He woke up on November 15th with a general abdominal pain which had increased gradually until he was so ill that he sought admission to the hospital. His bowels had been open daily, but he took some pills on the day before admission, and he had since suffered from diarrhœa. He had also vomited twice, but he had been taking his food well and regularly, and had continued at work.

He complained of general and severe abdominal pain when he was first seen at 9 o'clock in the morning, and after he had been in bed for a short time he was found to be lying on his back with his legs drawn up and his alæ nasi in use. The pulse was 80, regular, full, and soft. Respirations, 24. Temperature, 98·6° F. The abdominal wall moved slightly during respiration, but there was no distension and it was not held rigid. Nothing abnormal could be felt per rectum. The abdomen was tender everywhere. Six hours later, at 3 p.m., the pain and tenderness continued, and the abdomen appeared to be fuller. Its walls, however, were now relaxed, whereas they had been rigid, and the tenderness was greatest over the right side and lower part of the abdomen. The pulse was hard and of markedly increased tension.

The localized tenderness and the alteration in the pulse seemed to indicate the necessity for an immediate operation, in spite of the relaxed abdomen and the absence of any rise of temperature. The appendix was found lying behind the cæcum with the terminal third gangrenous, the middle third closed by inflammatory products, and the proximal third open. There was a slight localized peritonitis.

The operation led to no marked improvement in the condition of the patient. He lay apathetic and wandering. His face became shrunken and his conjunctivæ callous. The abdomen was distended and tympanitic. He took food badly, but his bowels were open regularly, and on four days he had diarrhœa. His pulse increased to 120 and the respirations to 30. The temperature gave evidence of septic absorption.

The patient died a fortnight after the operation, and the *post-mortem* examination showed that he had suffered from a general peritonitis, the surface of the peritoneum being sticky in every part, with loss of lustre. There were no adhesions except where the diaphragmatic surface of the liver was inflamed and had become attached to the under surface of the diaphragm. There was no pus. The bases of the lungs were airless and maroon-coloured. There were some adhesions, but it was impossible to say whether or not they had been formed recently.

CASE VII.—*Acute Gangrenous Appendicitis: Recovery.*

The next case of gangrene of the appendix was as acute as the last, but it occurred in a healthy girl and had a more fortunate ending, for the patient recovered, and exactly a year later she was admitted again to the hospital with acute intestinal obstruction due to a fibrous band. The band was divided by Mr. G. E. Gask, my assistant surgeon, with an equally satisfactory recovery.

L. N., aged 14, was admitted into St. Bartholomew's Hospital on December 23rd, 1906, with severe abdominal pain and vomiting. The patient said that she had gone to bed in good health, and had waked up during the night with such severe pain that she vomited. She also had diarrhœa. On her admission to the hospital early the next morning the abdomen was found to be uniformly distended and tender. The walls moved badly during respiration and the anal sphincter was completely relaxed, the rectum being ballooned. Douglas's pouch was full, and the tissues felt beyond it were soft and tender. There was no rigidity of the abdominal wall, but pressure in the right iliac region caused pain, although there was no fullness to be felt.

I had very little doubt that the patient was suffering from an acute attack of appendicitis, and from the absence of fever and abdominal rigidity, coupled with the increased pulse-rate, it seemed that the appendix was already dead or that it had contained a concretion which had ulcerated through its walls. I opened the abdomen, therefore, and found a gangrenous appendix, 5 in. in length, the whole of the pelvic peritoneal cavity being full of pus. The peritoneum was drained by a vertical incision above the umbilicus in the middle line, by a similar incision below the umbilicus, by an incision in the left inguinal region, and by a tube passed through Douglas's pouch into the vagina. I gave a bad prognosis, based chiefly on the extreme rectal atony, but the patient made a gradual and uneventful recovery, being discharged from the hospital on February 13th, about two months after the onset of the attack.

The next case was one of the most disconcerting that I have had for a long time, because I have paid especial attention to the subject of intussusception, and have seen and operated upon a very large number of children suffering from this condition. But I entirely overlooked it in this boy, partly because he was older than the majority of patients who suffer from intussusception; partly, no doubt, because he was too ill from another complaint to permit of any thorough examination or to allow him to make any great complaint of his symptoms. The following are the details:

CASE VIII.—*Intussusception: Enterectomy: Death.*

A young man, aged 25 years, was admitted into St. Bartholomew's Hospital on October 15th, 1906, with a history that he had been confined to his bed for the past sixteen weeks with gonorrhœal arthritis. He stated that on October 7th and 8th he had felt some abdominal pain, which continued after his bowels had been opened by an aperient. He was easier for a time, but the pain returned with increased severity on October 13th—five days later. His bowels were well open on this day, and the motion was said to be natural. The pain continued in an aggravated form during the whole of Sunday, October 14th, and on the following day he was brought to the hospital.

On admission the patient was found to be an anæmic man, looking wretchedly ill. His tongue was dry, smooth, and glazed; his pulse small, frequent, and feeble; respirations 28. The abdomen was neither distended nor retracted. It moved throughout during respiration, though the muscles were held somewhat rigid. The patient complained of tenderness over the whole abdomen, and there was a sensation of doughiness from the umbilicus downwards. The percussion note above the umbilicus was natural; below that point it was slightly impaired. Nothing abnormal was felt by rectal examination. A very slight motion of small faecal flakes coloured a dark reddish-brown was obtained by an enema. The patient vomited once whilst he was under observation, the vomit consisting of milk and some watery fluid.

The patient complained of constant and general abdominal pain, which increased in paroxysms. The pain was not relieved by hot applications to the abdomen, nor by the administration of enemata, though the patient felt that he would be easier if his bowels were opened. The urine was 1020, acid, and contained a trace of albumen.

The pain continued throughout the day, October 15th. The abdomen remained in the condition described above, except that the doughy feeling and impairment of resonance were limited to the left iliac region. There was an indefinite resistance, as of a mass which yielded slightly to pressure, in the left iliac fossa and along the line of the descending colon.

The patient was so ill from the gonorrhœal arthritis which had led to his prolonged confinement to bed that I did not feel justified in submitting him to an exploratory operation until he presented more definite signs. I left orders, therefore, that he should be watched, and that I should be summoned if there was any noticeable change in his condition. My house-surgeon, Mr. Loughborough, telephoned to me at 4 a.m. on October 16th that the pulse had risen to 132, the respirations were 36, and the abdomen was becoming uniformly distended, with a tympanitic note, although the patient was sleeping.

I decided, therefore, to open the abdomen at once, and as soon as the peritoneum was incised a small quantity of blood-stained serous fluid escaped. A mass of dull prune coloured small intestine was soon found lying in the left iliac region. The mass was adherent by recent exudation, and as soon as the coil was freed an enteric intussusception was discovered. The greater part of the intussusception was reduced, but the last 18 in. had to be excised, the anastomosis being completed as quickly as possible by means of a Murphy's button. The incision in the abdomen was closed, the operation lasting twenty minutes. The patient failed to rally, and died at half-past twelve o'clock next day.

The *post-mortem* examination showed that a portion of the

small intestine had been resected, and the gut united by a Murphy's button at a point 2 ft. above the ileo-caecal valve. Below the button the peritoneal surface of the small intestine was coated with a thick layer of plastic lymph. The intestinal walls were injected, and the mucous membrane above the button showed patches of erosion, ulceration, and injection up to the jejano-duodenal junction. The intestinal mucous membrane below the button was deeply stained with blood pigment. No cause was found for the intussusception. The mucosa of the urethra was injected, but there was neither stricture, pus, nor ulceration. The joints of the extremities were free from swelling or oedema, and there was no impairment of their mobility. The prostate was natural. The vesiculae seminales were distended with mucoid fluid of a greenish hue; there was no pus. A white fluid could be expressed from the prostate, and a yellowish excretion from the ejaculatory ducts. The testes looked healthy.

We learn several lessons from these cases. The first and most important is never to be so sure of the accuracy of a diagnosis as to be unable to revise it, and act in a wholly different manner when this has been done. Both in diseases of the joints and in the surgical affections of the abdomen we are too apt to act upon preconceived ideas, and when once a name has been given to a patient's condition we are very likely to rest content, and to treat the name rather than the disease. In the case of joint disease no harm is done in most cases, because they are chronic; but in abdominal cases the mischief may end fatally before the error is discovered.

The second great lesson to be learnt is the need to examine the affected part carefully and frequently. Too great stress is laid upon the symptoms, and too little upon the signs of disease. The symptoms are more often misleading than the signs, but the signs themselves need careful interpretation in a difficult case. Examination of the abdomen will prevent a strangulated hernia being treated by purgatives, as was done by John Ranby in the case of Caroline, Queen of George II; it will show the existence of appendicitis when only the slightest indications are given by the pulse, temperature, aspect and condition of the bowels; it will even prevent a case of cancer of the large intestine or a leaking gastric ulcer being dealt with as colic. The worst mistakes I have seen are those caused by want of examination. I would therefore emphasize the necessity for a methodical examination in every case of abdominal inflammation.

It is clear, too, from a consideration of the cases here detailed, that an endeavour should always be made to find some physical cause for the symptoms of which the patient complains. Neuralgia and hysteria are still used too commonly in a purely abstract sense, when a more thorough knowledge would prove that there exists an underlying cause which being left is exaggerated, but being removed leads to cure.

There are other lessons to which I could draw your attention did time permit, but one of the objects of our meeting this evening is to inaugurate the formation of the Harrow Section of the Watford and Harrow Division of the British Medical Association. I am instructed, therefore, to point out to you the advantages which are to be derived from membership of so large and flourishing an organization. It has many advantages and some disadvantages; I will briefly draw your attention to both. The advantages come first because, in my opinion, they far outweigh the disadvantages. By joining the Association you become members of a body which is numerically strong and financially rich, two important factors in the formation of the *esprit de corps* in which our profession is often said to be lacking. You meet each other as members of the Division, and good fellowship is thus promoted, for it is impossible to hate a man whom you meet constantly, though you may often disagree with his principles or opinions. Indeed, I have often thought that the decay of hatred resulting from increased facility of locomotion would form an admirable subject for a study in modern history. These are the material advantages, but there exist also professional, or rather scientific, benefits which always seem to me to be of the greatest value. You have meetings, of which the present is an example, where you are able to compare your own results in practice with those of your colleagues, and even with those at a distance, whilst from time to time you will have the opportunity of learning from those who speak *ex cathedrâ* as having a wide and yet very minute knowledge of the subject they bring before you. The more informal these meetings the better are the results attained. The time has long gone by for the delivery of set orations, but by question and answer much knowledge can be given and received. Last, but not least amongst the advantages of belonging to the British Medical Association is the possession of a journal from which the current advances in every branch of the profession can be accurately gauged. I need not labour the disadvantages of the Association, as I am here to speak in its favour. Every institution dealing with large numbers of men has attendant disadvantages, and the British Medical Association is no exception to the general rule. If I had to specify the chief disadvantage I should condemn first the tendency which it has to encroach upon the time of men who might be more profitably engaged by leading them to serve on endless committees whose object is to reduce to rule conditions which must always be governed by circumstance. It is even open to argument whether government by committees is the best form of government. It has at least the advantage that the conclusions arrived at are not the sum of individual opinions.

Gentlemen, I have detained you too long. I end with the wish that the Harrow Section inaugurated to-night may have a long and prosperous career, that it may never be lacking in energetic officers, and that the roll of its members may be continuously increased.

AN ANALYSIS OF A RECENT SERIES OF 100 CONSECUTIVE OPERATIONS FOR ACUTE APPENDICITIS.

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IN a paper published in the BRITISH MEDICAL JOURNAL, July 13th, 1907, I briefly summarized the results of forty-seven operations for acute appendicitis performed during the year 1906. I have added to these fifty-three performed between January 1st, 1907, and November 18th, 1907, so that I am now able to present a detailed analysis of 100 consecutive operations performed in the acute stage of appendicitis between January 1st, 1906, and November 18th, 1907.

Sex.—The series comprised 66 males and 34 females.

Age.—The average age was 25·6 years; of the males 25·58, of the females 25·8. The oldest patient was 73, the youngest 3, and curiously enough these two were consecutive cases on the same evening.

Age Periods.	Males.	Females.	Total.
1 to 5 years ..	1	1	2
5 to 10 ,, ..	5	2	7
10 to 20 ,, ..	24	9	33
20 to 30 ,, ..	15	11	26
30 to 40 ,, ..	7	6	13
40 to 50 ,, ..	8	2	10
50 to 60 ,, ..	5	2	7
60 to 70 ,, ..	0	1	1
70 to 80 ,, ..	1	0	1
Total	66	34	100

Previous Attacks.—Twenty-three had had one or more recognized previous attacks, and 1 case had had 6 such attacks.

Duration of Symptoms Prior to Operation, with Results.

	Cases.	Deaths.	Mortality.
1. Under 24 hours ..	7	0	
2. 24 to 48 hours .	9	0	
3. Third day	14	0	
4. Fourth day	15	0	
5. Fifth day	10	2	20 per cent.
6. Sixth day	6	2	33·3 per cent.
7. Seventh day	5	1	20 per cent.
8. Second week	21	3	14·2 per cent.
9. Third week	13	1	7·9 per cent.
Total	100	9	

1. *Operations within Twenty-four Hours.*—The earliest performed was ten hours from the first symptom, the others being twelve, fifteen, eighteen, twenty-three, and twenty-four (3 cases) respectively. In all the appendix was found reddened, thickened, and obviously inflamed, and in 2 cases (those at ten and eighteen hours) it was already distended with pus; in none was any peritoneal infection present. The appendix was removed in every instance, and the abdominal wall sutured in layers without any drainage. Primary healing occurred in all, the recovery being in every way similar to that usually observed after an "interval" operation.

2. *Operations from Twenty-four to Forty-eight Hours.*—The duration of symptoms in these 9 cases was thirty, thirty-six (2), thirty-eight, forty-four, forty-four and a half, and forty-eight (3) hours. In 3 cases—forty-four and a half and forty-eight (2) hours—the appendix was already gangrenous and perforated, with diffuse spreading peritonitis around; in the others the appendix was inflamed without peritoneal infection. In all the appendix was removed, and in the three with peritoneal infection drainage was provided for.

3. *Operations during the Third Day (14 Cases).*—In one a small abscess was found at the root of the appendix, without any surrounding peritonitis; in all the others the appendix was either perforated or gangrenous, often both, with diffuse spreading peritonitis. The appendix was removed in every instance, and in all but the first the pelvis and lower abdomen were flushed with saline and drainage provided.

4. *Operations during the Fourth Day (15 Cases).*—In one case the appendix was inflamed and very much thinned at one spot near its distal end, but was not perforated and there was no peritonitis; in 9 cases gangrene or perforation had occurred, with diffuse peritonitis; and in 5 cases a definitely circumscribed abscess was present.

5. *Operations during the Fifth Day (10 Cases).*—In one instance only was a circumscribed abscess found. In the remaining 9 the appendix was perforated or gangrenous, and of these 4 were associated with diffuse spreading peritonitis and 5 with general peritonitis; two of the latter died.

6. *Operations during the Sixth Day (6 Cases).*—In 4 a circumscribed abscess was present; 1 had perforation of the appendix with general peritonitis, and 1, admitted in a state of profound toxaemia, had gangrene of the whole of the appendix, a portion of the caecum and a large mass of omentum, with diffuse peritonitis. These 2 last cases proved fatal.

7. *Operations during the Seventh Day (5 Cases).*—In 2 a circumscribed abscess existed; in 1 there was a gangrenous appendix with diffuse peritonitis; and in the remaining 2 the appendix was perforated and there was general peritonitis. One of these last patients recovered, but only after a convalescence of several months, and even at the present time a small faecal fistula occasionally discharges.

8. *Operations during the Second Week (21 Cases).*—In 17 a circumscribed abscess was present, one patient dying four days after the operation (which was performed on the tenth day) from continued toxaemia. Two cases had perforation of the appendix, with diffuse peritonitis, and in one of these (operated upon on the twelfth day) it was obvious that a localized abscess had existed for several days, and that a secondary rupture had then occurred into the peritoneal cavity. One case of perforation, with general peritonitis, operated upon on the eighth day, proved fatal; and in another case, also fatal, operated upon on the twelfth day, an enormous faecal abscess existed, from which the appendix and the whole of the caecum were removed as a large slough, the termination of the ileum opening directly into the abscess cavity.

9. *Operations during the Third Week (13 Cases).*—In all a well-circumscribed abscess was present. One case, a youth of 12, with a large abscess extending upwards behind the ascending colon to the subphrenic region, died three days after operation, in spite of free drainage.

The pathological conditions disclosed at these operations may be tabulated under four heads:

A. Infection limited to the appendix.
B. Circumscribed abscess.
C. Diffuse spreading peritonitis.
D. General peritonitis.

The distinction between diffuse and general peritonitis is a more or less arbitrary one, and I have again adopted that mentioned in my previous paper in the BRITISH MEDICAL JOURNAL of July 13th, 1907—that is, to include under "general" peritonitis only those cases where at the operation, through multiple incisions, it was actually seen that the infection extended from pelvis to diaphragm. The mortality from true "general" peritonitis is, and always must be, extremely high; and there can be no doubt that many of the recoveries alleged after general peritonitis have reference to the "diffuse spreading," or, as Mr. Carwardine of Bristol[1] so aptly terms it, the "acute generalizing" form.

The treatment in each of these pathological conditions was briefly as follows:

In Group A the appendix was removed, and the abdominal incision sutured in layers without any drainage (in 2 cases, being in doubt as to the advisability of drainage, I inserted a small tube down to the stump of the appendix, removing it in forty eight hours; as no discharge escaped I consider this might safely have been omitted). Primary union of the wound occurred in every instance.

In Group B the abscess was opened, flushed out with sterile saline, and drained with rubber tubes; if the abscess was comparatively small, the appendix was deliberately searched for, otherwise it was left unless obviously presenting in the cavity; it was removed in 14 only of the 44 cases.

In Group C the appendix was removed as the first step, the lower portion of the peritoneal cavity flushed out with sterile saline solution, and a large rubber drain inserted to the bottom of Douglas's pouch; in the females this was usually brought out through the vagina, thus establishing vaginal drainage. Most of the later cases of this group were operated upon in the semi recumbent position, and transferred to bed without this position being even momentarily changed during the first three days. Saline infusion into the rectum, either at frequent intervals, or better still continuously, was utilized in every instance.

In Group D the treatment was as in C, except that four or more incisions were made in the abdominal wall and counter incisions in the loins.

The results, classified according to the pathological findings, were:

	Cases.	Deaths.	Mortality.
Group A. Infection limited to the appendix	14	0	
Group B. Circumscribed abscess ...	44	3	6.8 per cent.
Group C. Diffuse spreading peritonitis	33	1	3.03 ,,
Group D. General peritonitis ...	9	5	55.5 ,,
Total	100	9	9 per cent.

These results are of great interest in connexion with the question of early operation in appendicitis and its alleged risks. The cases, 45 in number, operated upon within four days, yielded no mortality, as contrasted with a mortality of 20 per cent. for the fifth day, 33 3 per cent. for the sixth, 20 per cent. for the seventh, 14 2 per cent. for the second week, and 7 9 per cent. for the third. These 45 cases included examples of each of the groups of pathological findings, so that the technique and severity of the operation *per se* was the same as in the later series. The mortality of the latter, therefore, cannot be ascribed to the operation itself, but is unquestionably due to the inferior condition of the patient at the time the operation was undertaken. The deaths occurred after the operation and in spite of it, but certainly not on account of it. In other words, the mortality which is so often urged against operations in the acute stage really represents the mortality of *delay*, with the consequent increased toxaemic state of the patient. The lesson to be drawn is not, on account of this mortality, to advise against such operations, but rather to encourage their performance before a stage of serious toxaemia is reached. This present series would indicate that, provided operation be undertaken within four days of the onset, the chances of recovery are exceedingly good, and in a previously tabulated series of 47 cases, which I operated upon during the years 1904 and 1905, no death occurred after an operation within four

days. These results scarcely endorse the view so frequently advanced as to the great danger of operating between the second and fifth days. But even though all these cases recovered, yet the earlier the operation the better the recovery. In all the operations within twenty-four and in the majority of those within forty-eight hours, the recovery was exactly similar to that after an "interval" operation, without any risk of a weak scar. In most of those on the third and fourth days drainage was necessary, convalescence was more prolonged, and the chances of a weak scar greater.

Of the nine deaths in the series five had general peritonitis, two had diffuse peritonitis with gangrene of the caecum as well as of the appendix, one a local abscess, and one a large abscess extending to the subphrenic region. Surely these fatalities may be justly ascribed to delay rather than to operation; the operation certainly failed to save, but it cannot be said to have materially hastened the inevitable end.

The great reduction in the mortality after operations for acute appendicitis that has followed the policy of "interfering" at an earlier period points irresistibly to the conclusion that were all cases submitted to operation in the early stages of the attack appendicitis would cease to be a fatal disease.

REFERENCE

1 BRITISH MEDICAL JOURNAL, November 30th, 1907.

INTUSSUSCEPTION DUE TO POLYPUS.

By J. LIONEL STRETTON,

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THE following two cases are interesting examples of intussusception due to polypus. Both of them occurred in adults, and in both of them treatment by excision was successfully carried out.

A. T., a woman aged 25, was suddenly seized with excruciating pain in the abdomen without any apparent cause; the pain was not localized. There was some vomiting but no increase of temperature; the pulse was 90. Her bowels had been constipated. She was kept in bed and treated with small doses of belladonna and hot stupes, with small sips of hot water to drink. As the vomiting continued and the bowels did not act, enemata were administered. These were continued twice daily; faecal matter always returned, but there was never a good result. After forty-eight hours a mass of an indefinite nature was discovered in the right inguinal region. Operation was suggested and refused.

On each succeeding day her general aspect was worse, and each day the question of operation was forcibly put forward, without avail. On the eighth day she was vomiting the contents of her intestine, and although the enemata still brought away faecal matter, her general aspect was very bad. The temperature remained normal and the pulse 96.

She was placed under ether, and the abdomen was opened by a vertical incision on the outer side of the right rectus. The mass which had been felt was found to be an intussusception of the ileo-colic variety. As it was impossible to reduce it, the whole of the intussusception was excised. The divided ends were united by two layers of silk sutures. She was much collapsed in spite of saline transfusion direct into her veins and hypodermic injections of liquor strychninae. She, however, gradually improved and made an uninterrupted recovery. Her temperature only once reached 100°. The skin stitches were removed on the ninth day, and she was up in three weeks. She has since married, and remains in perfect health—nearly five years after operation.

The portion of bowel excised consisted of 8 in. of the ileum. There was a considerable amount of gangrenous degeneration and at the apex of the intussuscipiens a sessile polypus. The specimen was submitted to the Clinical Research Association for examination, and they reported it to be of an innocent nature.

T. S., a male, aged 50, was sent by Dr. Dickinson, of Tenbury. He had suffered from total obstruction of the bowels for a week; no flatus had passed. He had been vomiting constantly for three days, and during the last twenty-four hours the vomit had been faecal. He had had a similar attack six months previously which lasted a week, when, he states, "the doctor syringed me and it came away."

When admitted, on October 8th, 1907, although he had come by train and walked from the station (a mile and a half), he did not appear much distressed. He was a well nourished man, and his organs were healthy. He vomited at frequent intervals, and the vomit consisted of intestinal contents. The abdomen was swollen and tympanitic, but there was no tenderness. By the rectum a prominent mass could be felt with an orifice, but the finger could not reach the sulcus. No polypus was felt, but as Dr. Dickinson had felt it, it is probable that it had slipped back. There had not been any discharge of mucus or blood per anum.

He was placed under ether and the anus was dilated. The left hand was easily introduced, and was passed upwards, carrying the intussusciplens in front of it and completely reducing it. The fingers were easily palpable just to the left of the umbilicus. Nothing further was discovered by bimanual examination. The bowel was thoroughly washed out, and he was returned to bed. On the following day he was quite comfortable, he passed flatus, and his bowels acted naturally. He continued to progress satisfactorily, and was discharged at the end of a week. He was warned that the condition might recur, and was advised to return immediately if it did.

A week later he returned. The intussusception had occurred again; there was a considerable amount of tenesmus, with passage of blood and mucus. By the rectum the intussusciplens could be easily felt, and at its apex there was a hard flattened mass, which felt ulcerated on its surface. During the night it protruded from the anus, and was seen by the nurse.

He was placed under ether, and an incision was made in the left iliac region from an inch inside the anterior superior spine of the ilium vertically upwards for 3 in. The intussusceptum was found to reach to just above the brim of the pelvis, the intussuscipiens was with difficulty reduced, and was found to consist of more than a foot of the colon. At a point corresponding to the level of the umbilicus there was a puckered and hardened condition of its wall, interfering considerably with its calibre. Twelve inches of the bowel was removed, commencing 2 in. above the puckered portion, and the ends were joined by two rows of silk sutures. Several enlarged glands were also removed. The abdominal wound was closed in layers. There was very little shock. The following day he had some distension and vomiting, which was relieved by the stomach tube. Otherwise he made an uninterrupted recovery. He passed flatus after forty-eight hours and the bowels were well moved on the fifth day. He was discharged at the end of a month.

On opening the portion of excised bowel a sessile polypus about ½ in. in diameter was discovered with its surface ulcerated. A portion of this, together with one of the glands, was sent to the Clinical Research Association, and they reported: "This growth of the sigmoid is a columnar-celled carcinoma, showing the usual branching tubules lined by proliferating columnar epithelium. The enlarged gland contains a similar growth, but has almost completely undergone colloid degeneration. It is probably a secondary growth, not necessarily in a gland, as no gland structure can be seen."

The first case is remarkable for two reasons: (1) The slight symptoms attending such an acute condition. There was nothing beyond the sudden onset to suggest the nature of her trouble. There was no tenesmus, no blood or mucus in the stools; her pulse did not increase, and her temperature did not rise. (2) The daily passage of flatus and faecal matter. At the operation the large bowel was found empty, and there can be no doubt that flatus and fluid faeces were able to pass through the intussusciplens, although it was sufficiently constricted to produce gangrenous degeneration. It emphasizes the necessity of exploratory operation in cases where the general aspect of a patient remains unsatisfactory.

The second case, although of a chronic type, was, in the last attack, accompanied by far more acute symptoms. There was constant tenesmus, with passage of blood and mucus, frequent vomiting, and an increasing pulse. No attempt at reduction was made on this occasion, as it was evident that some more radical treatment was necessary. I therefore decided to shorten the bowel by excision.

In the course of the after-treatment we have yet another instance of the value of the stomach tube. With it a large quantity of gas and filthy material was removed, and in a few hours his alarming condition had disappeared. After such operations the use of enemata or aperients is contraindicated, and it is especially in such cases that the stomach tube is indispensable.

It is interesting to note that on the first occasion the hand and arm were easily introduced into the bowel, and in spite of this the polypus was not discovered. The portion of bowel containing it was evidently carried in front of the approaching hand. The kidney was felt and the fingers were seen and palpated to the left of the umbilicus. Although I remember a paper, by a bygone surgeon, on palpation of the kidney per rectum, I have not previously been able to do so, and it is probable that few surgeons have had such an experience. The size of the hand, in the present instance 7¼, is no doubt an important factor in rendering such manipulations possible.

The presence of a polypus is not only likely to produce intussusception, but when once this has happened it is

likely to recur. It is not always possible even to suspect its presence, but whenever it is found the best treatment is excision.

Lectures

ON

THE PASSAGE OF FOOD THROUGH THE HUMAN ALIMENTARY CANAL.

DELIVERED AT GUY'S HOSPITAL FOR LONDON UNIVERSITY ADVANCED STUDENTS DURING OCTOBER, 1907.

BY ARTHUR F. HERTZ, M.A., M.D.OXON., M.R.C.P.,
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(Continued from p. 187.)

III.—THE MOVEMENTS OF THE SMALL INTESTINES.

THE old experimental methods, in which the viscera of an animal were exposed to view, demonstrated the occurrence of peristaltic waves, which propelled the contents of the small intestines slowly towards the caecum. Cannon,[28] by means of *x*-ray examinations in cats and dogs, discovered that another and equally important type of movement occurred, which he termed "segmentation." This probably is the normal form of the "swaying pendular movements," first described by Ludwig, which are seen in the exposed gut of animals whose splanchnic nerves have been cut.

The function of segmentation is to mix the food thoroughly with the bile, pancreatic juice, and intestinal juice, and at the same time to bring every portion into frequent contact with the absorbing mucous membrane. Mall[29] has also pointed out that it assists in the pumping of blood from the submucous venous plexuses into the radicles of the superior mesenteric vein and in the discharge of chyle from the lacteals of the villi into the larger lymph vessels of the mesentery.

Pfaff and Nelson,[30] on the strength of 60 negative experiments, have recently denied the existence of segmentation, even in cats; this is difficult to understand, as on the only occasion on which we watched the intestinal movements in a cat, segmentation—exactly as described by Cannon—was perfectly obvious.

The shadow of the small intestines cannot, as a rule, be very definitely seen in man, owing to the rapid passage of the bismuth through them, and the diminished concentration of the salt due to the large quantities of digestive juices present. This probably accounts for the fact that when we began our investigations segmentation had never been observed in man. But in three healthy individuals and in three patients who had been given bismuth meals for diagnostic purposes, we have seen the shadow of a short length of small intestine and have watched its movements at intervals over a period of half an hour. Apparently a small quantity of food, containing more bismuth than the rest, kept together as it passed along the gut on these occasions. We were, in the first place, able to trace the onward movement of the shadow as a whole, due, no doubt, to ordinary peristalsis. It was obviously impossible to ascertain the rate of progress, as the movement occurs in such varying directions and in more than one plane. We also saw well-marked segmentation. The shadow of the short length of small intestine, at first of uniform thickness, became constricted in its centre; the constriction increased until the single shadow was more or less completely divided into two. Then each half underwent a similar division, but the two central segments of the four thus produced joined together. The new central segment then divided again, the segmentation continuing in one case at the rate of ten divisions in a minute and a half. The process, as seen with the *x* rays, is shown somewhat diagramatically in Fig. 3.

On eight occasions we made skiagraphic observations at short intervals on normal individuals who had taken an ordinary meal, to which one or two ounces of bismuth carbonate had been added, in order to determine how soon the first traces of the stomach contents reached the caecum. We found that the shadow of the caecum began to appear between three and a half and five hours, with an average of four and three-eighths hours, after the food had been taken, and numerous other observations, less accurately carried out, were all in accord with these times. Thus the shadow of the caecum is always obvious before that of the stomach has disappeared. Presuming, as we are probably justified in doing, that some of its contents begin to leave the stomach within half an hour of the beginning of a meal, it is clear that the average rate at which the contents of the small intestines travel is 22½ ft. in four hours, or 5 ft. and 7 in. per hour, which is equivalent to about one inch per minute.

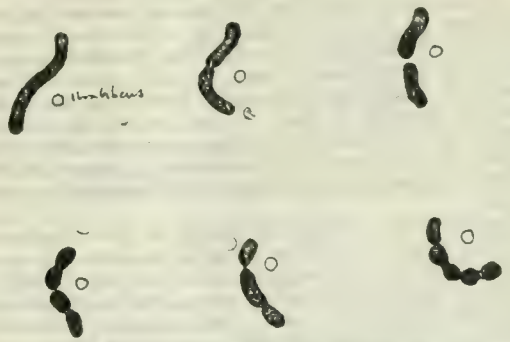


Fig. 3.—Diagram of segmentation in human small intestine occurring simultaneously with peristalsis.

Cannon hoped to obtain evidence of the occurrence of antiperistalsis in the colon by auscultation, but he came to the conclusion that the sounds often heard in the ascending colon were due to the oscillating contractions of the walls of the sacculi described by Elliott and Barclay-Smith. It occurred to me that the sounds heard over the caecum would more probably be due to the entry of the fluid contents of the ileum through the ileo-caecal valve. In order to test this view we listened on a number of occasions, at short intervals throughout the day, to the sounds heard when the stethoscope was placed over the caecum of normal individuals. Before deciding that any series of sounds originated in the caecum we listened to other parts of the abdomen, in order to determine whether anything similar in character and rhythm could be heard elsewhere.

In the morning before breakfast, about twelve hours after the last meal had been eaten, no sounds could ever be heard over the caecum. The silence continued until between four and four and a half hours after breakfast, when a few sounds could be heard, which were quite distinct from anything present in other parts of the abdomen. The sounds gradually became louder and more frequent, until they reached a maximum in one hour to two and a half hours after their commencement. After this it is not of much use to listen again to the caecum, as the relation of the sounds to the time at which breakfast was taken is confused by the taking of other meals.

An ounce and a half of bismuth carbonate were taken with the breakfast on one occasion by four of the five individuals investigated. It was found that the appearance of a shadow in the caecum, when examined by the *x* rays, coincided in point of time with the occurrence of the earliest sounds in the right iliac fossa. In those investigations in which auscultation was practised without skiagraphy, the first caecal sounds were always heard at about the time that *x* ray observations had previously shown that the first traces of the food would reach the caecum. Hence it seems clear that in auscultation we have a means by which we can time the rate at which the contents of the small intestine pass from the stomach to the caecum. Auscultation may thus take the place of skiagraphy, when the latter cannot for some reason be used, in the diagnosis of the rare cases in which constipation is due in part to the slow passage of food through the small intestines.

The sounds heard over the caecum are in all probability due to the actual entry of the fluid contents of the ileum into the gas-containing caecum. Their loudness varies considerably in different individuals. When at a later period the gas is largely replaced by faecal material, the sounds diminish in intensity and become less continuous. At all times they are louder in the upright than in the horizontal position, but for the first quarter or half minute after lying down the sounds are generally loud and

almost continuous, owing probably to the movements of the fluid contents produced by the action of gravity.

It is said that in typhoid fever "gurgling in the right iliac fossa exists in a large proportion of cases." This is, however, not a distinctive sign, as it occurs in all individuals who have small feeds repeated frequently, as in them fluid contents will be entering the caecum continuously instead of only for a limited period, beginning about four hours after each meal.

IV.—THE MOVEMENTS OF THE COLON.

In normal individuals the caecum and ascending colon are almost empty in the morning. This can be demonstrated by the resonant note found on percussion and by the feeling of emptiness found on palpation. Between one and two hours after the sounds indicating the earliest arrival of material in the caecum are heard, we have observed that, if the individual is examined in the vertical position, the resonant note previously present over the caecum is replaced by a dull note which gradually extends upwards.

When sufficient material is present in the caecum and ascending colon to produce slight distension, movements in the previously inactive large intestine begin. Ordinary peristaltic waves, which occur much less frequently than in the small intestine, carry the contents towards the rectum. But for a considerable period very little escapes beyond the centre of the transverse colon, owing to the periodical occurrence of a series of antiperistaltic waves. The existence of these was accidentally discovered by Jacobi [31] in the course of some experiments on colchicum poisoning. Antiperistalsis was subsequently investigated by Cannon [32] by *x* ray observations on cats and by Elliott and Barclay-Smith [33] in the exposed intestines of various animals. A comparison between the anatomy of the colon in these animals and in man renders it probable that the antiperistaltic waves begin in man somewhere near the centre of the transverse colon, whence they travel slowly to the caecum. Several waves are often present simultaneously, and they force the contents of the colon towards the caecum. The ileo-caecal sphincter, which will be described later, prevents the regurgitation of the contents of the colon into the small intestine. Hence antiperistalsis has the same effect on the large intestine that peristalsis has on the gastric contents when the pylorus is closed; a central reflux occurs when a wave reaches the caecum, so that the contents of the ascending colon and part of the transverse colon are caused to circulate and come into frequent intimate contact with the mucous membrane, with the result that absorption of fluid and nutrient material occurs rapidly.

The change in consistency of the contents of the caecum as absorption occurs can be traced by means of percussion. When first present the dull note over the caecum disappears entirely if the supine position is assumed, as the contents are fluid, and therefore spread along the posterior wall of the ascending colon when the individual lies down. But two or three hours later the upper border of dullness alters only slightly or not at all on lying down.* By means of palpation, also, it is possible to determine the changes taking place in the caecum. Five or six hours after a meal a sensation of splashing or gurgling can be detected on palpation, where previously only the empty gut could be felt. Some hours later the splashing is no longer present, and the caecum can be felt to be filled with semi-solid material.

As the contents of the caecum and ascending colon become more solid, antiperistalsis becomes less active and finally ceases, and forward peristalsis drives increasing quantities into the more distal part of the colon. Here no antiperistalsis occurs, the faeces being slowly propelled towards the rectum. They finally remain in the descending and pelvic colon until defaecation occurs.

Owing to the absorption of fluid in the proximal part of the colon it is found that the intestinal contents distal to the middle of the transverse colon are always moderately firm. In order to determine the rate in which the faeces pass along the colon we have made *x*-ray examinations in sixteen normal individuals at various intervals after a bismuth meal, in some cases as often as four times on the first day, as well as once or more on subsequent days if necessary. It has already been stated that the shadow of the caecum appears on an average in four and three-eighths hours after the meal has been eaten.

Between five and eight hours after the meal the hepatic flexure is reached; in from seven to ten hours the splenic flexure is reached, so that about two hours are required for the passage of both the ascending colon and the transverse colon. The average times taken are four and three-eighths hours to the caecum, six and a half hours to the hepatic flexure, eight hours to the middle of the transverse colon, and nine hours to the splenic flexure.

After a bismuth breakfast the shadow rarely reaches beyond the splenic flexure by four or five o'clock in the afternoon. On one occasion, however, the iliac crest was reached in eight hours, and on another the end of the iliac colon in nine hours.

If the bowels are not opened before the skiagraphic examination at 10 a.m., the remains of a bismuth breakfast of the previous day are found to have reached some point between the iliac crest and the rectum.

Fig. 4 shows the average time at which various points of the colon are reached if a bismuth breakfast is taken at 8 a.m. It does not, however, give much information as to the rate at which the last part of the colon is traversed, as after arriving at a certain point, which depends on the amount of faeces already present in the colon, the contents make no further progress until the bowels are opened. But on the somewhat unusual occasions on which part of the colon below the splenic flexure still contains bismuth after defaecation, the rate of progress through the pelvic colon can be measured. Thus on two occasions the bismuth was found to pass from the junction of the iliac colon with the pelvic colon to the junction of the latter with the rectum in six hours.

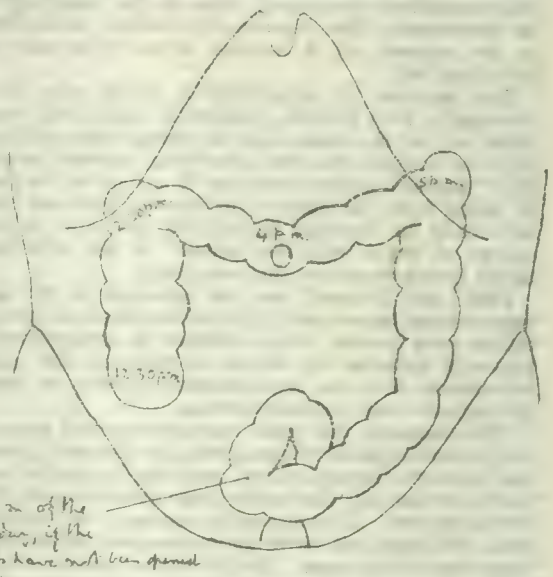


Fig. 4.—Average time at which various points of the colon are reached after a bismuth breakfast taken at 8 a.m.

The movements of the colon appear to be considerably more sluggish during the night than the day. Thus in the same individual, in whom only eight hours were required for bismuth taken at breakfast to reach the end of the descending colon, bismuth taken at 10.30 p.m. had only reached the hepatic flexure by 10.30 the following morning.

When the shadow of the caecum first becomes visible, four and a half hours after a meal, that of the stomach can almost always be still seen. The remnant of food in the stomach at this period will probably also take about four and a half hours to reach the caecum, so that it will be at least nine hours after a meal has been taken before the last traces of the products of its digestion pass through the ileo-caecal valve. In nine hours the splenic flexure is generally reached by the material which first arrived in the colon, so that it is not surprising that the shadows of the caecum, ascending colon, and transverse colon are normally still visible when that of the splenic flexure is first seen. By the time the descending colon is filled, the caecum and ascending colon, and occasionally half of the transverse colon, though generally unaltered,

* For further details on this subject see my paper in *Guy's Hospital Reports*, 1907.

may be seen only as a comparatively faint shadow. But when the iliac colon is reached, the ascending colon, and half or all the transverse colon, are, as a rule, no longer seen, though frequently a faint shadow still marks the caecum, which finally disappears when the end of the pelvic colon has been passed.

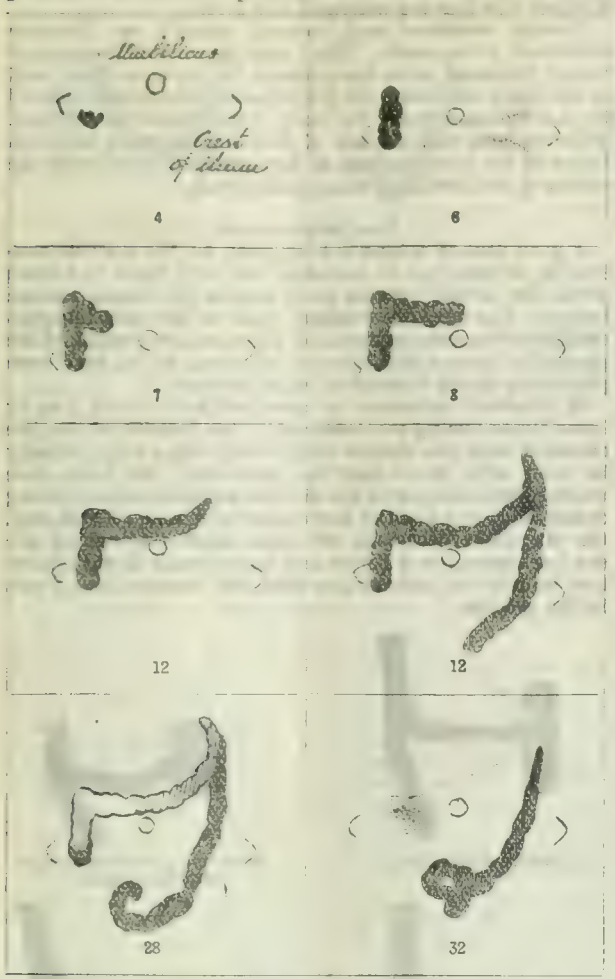


Fig. 5.—Series of colon skiagrams in a normal individual. The numbers represent the hours after bismuth breakfast was taken.

Fig. 5 is reproduced from actual tracings made on the fluorescent screen at various periods after a bismuth breakfast had been eaten by a normal individual.

Antiperistalsis is of practical importance in connexion with the local treatment of diseases of the colon by rectal injections and with the administration of nutrient enemata. I have myself observed with the *x* rays fluid containing bismuth reach the proximal part of the transverse colon when injected per rectum without producing any discomfort. It is probable that if very large quantities are injected they can be forced to the caecum. But even comparatively small amounts can be carried to the caecum by antiperistalsis if part once reaches the region in which this type of movement occurs. Hence it is quite reasonable to treat disease of the caecum and ascending colon by rectal injections, and the absorption of large nutrient enemata probably occurs from all parts of the colon, and not only, as formerly believed, from the sigmoid flexure and rectum.

It is doubtful whether segmentation, as it occurs in the small intestine, ever takes place in the colon. But both Elliott and Cannon have noticed oscillating movements of single sacculi in the exposed colon of animals, which give rise to a thorough churning of their contents. These movements have the same function as segmentation in the small intestine, and are probably the normal form of the "pendular movements" which had previously been observed in the large intestines by Starling and others.

The Ileo-caecal Valve and Sphincter.

No mixing takes place under normal conditions between the contents of the small and the large intestines, so that material which has once reached the caecum can never return into the ileum in spite of the occurrence of antiperistalsis in the colon. This has been believed to be due to the mechanical action of the ileo caecal valve ever since Caspar Bauhin, who discovered it in 1579, found that after death it can resist a moderate pressure from the side of the colon but very little from the side of the small intestine. Though this explanation might be sufficient in man, it cannot be applied to the many animals in which, though the valve is absent, the relative consistency of the contents of the small and large intestines shows that no mixing between them occurs. In 1903 Keith suggested from anatomical considerations that a strong ileo caecal sphincter exists in man and most animals, as the transverse layer of the muscular coat of the ileum is greatly thickened where it enters the colon. In the following year Elliott[34] proved experimentally that such a sphincter exists. He found that it was kept in a condition of moderate tonic contraction by impulses carried by the splanchnic nerves; when these were cut it became permanently relaxed and the contents of the small and large intestines mixed freely with each other. Stimulation of the splanchnic nerves caused the sphincter to contract tightly, although the movements of the rest of the intestines were simultaneously inhibited. Stimulation of the vagus and pelvic nerves had no influence on it.

It is still uncertain whether the peristalsis of the small intestine is sufficient to cause its contents to pass into the colon without relaxation of the sphincter, or whether it is necessary for active relaxation to occur each time a peristaltic wave reaches it. The sphincter probably contracts whenever an antiperistaltic wave of the colon arrives at the caecum, so that regurgitation of the contents of the colon into the small intestine is prevented.

As the ileo-caecal sphincter prevents the regurgitation of the colon contents into the small intestines, it is possible that the anatomical arrangement of the mucous membrane, known as the ileo-caecal valve, is not concerned in this, but has some other function. The contents of the small intestine have been seen through a caecal fistula to enter the colon in spirts which occur at regular intervals. Mr. Ralph Thomson[35] has shown that the ileo-caecal valve in man is so formed that these spirts are directed downwards towards the centre of the external haustrum of the caecum. As the orifice of the appendix is situated in the internal haustrum, the arrangement of the ileo-caecal valve diminishes the likelihood of food passing into the lumen of the appendix. Were it not for this, it seems possible that appendicitis would be even more common than it is.

NERVOUS CONTROL OF GASTRO-INTESTINAL MOVEMENTS.

The muscles of the stomach and intestines receive through the splanchnic nerves sympathetic fibres, which originate in the lower dorsal and upper lumbar region of the spinal cord. The stomach and small intestines are also supplied with fibres from the vagi; the large intestines are supplied by the nervi erigentes with fibres from the sacral cord, which are unconnected with the sympathetic system and are physiologically equivalent to the vagi. The nerves end in connexion with ganglion cells situated between the circular and longitudinal muscular layers, where they constitute Auerbach's plexus.

Stimulation of the splanchnic nerves diminishes the tone of the gastric and intestinal muscles, and inhibits their normal movements. On the other hand, stimulation of the vagus, or, in the case of the colon, the nervi erigentes, increases the muscular tone and the strength of the movements after producing a temporary inhibition.

In spite of the fact that they possess this double nerve supply, the stomach and intestines can perform their functions to a great extent independently of the central nervous system. Thus, peristalsis has been frequently observed in excised stomachs and intestines which have been kept moist and warm. Aldehoff and v. Mering[36] have shown, moreover, that the tone and movements of the stomach and intestines, as well as the reflex regulation of the pylorus, remained normal for months after both vagi had been cut just above the diaphragm, and also after destruction of the coeliac plexus.

These results have been confirmed by Cannon[37] by means of *x* ray observations on cats. He found that the movements of the stomach and the regulation of the pylorus are quite unaffected by cutting the splanchnic nerves of both sides. If both vagi are cut, gastric peri-

stalsis is impaired for a short time only, but the passage of food through the pylorus remains permanently slower than before. If both the splanchnic nerves and the vagi are divided, there is no initial depression of gastric peristalsis, as when the vagi are alone cut, but the passage of food from the stomach into the duodenum is delayed. Thus gastric peristalsis is less upset after section of the vagi if the inhibitory action of the splanchnics is simultaneously thrown out of action.

From these experiments it is clear that the tone of the cardiac part of the stomach, the control of the pylorus, and the peristalsis of the stomach and intestines are to a great extent independent of the central nervous system. Magnus has shown that separated strips of intestinal muscle contract rhythmically only if the local nerve plexus is removed with them. It is therefore probable that the motor functions of the stomach and intestines depend on reflexes which have their centre in the nerve cells of Auerbach's plexus.

There is, however, no doubt that under certain conditions the central nervous system can influence the movements of the stomach and intestines. Thus Pawlow discovered that intestinal peristalsis was excited in dogs by the smell or taste of food, and Cannon found that the movements in his cats ceased when they were excited or angry, an observation which explains the indigestion so frequently caused by unpleasant emotions. This effect of anger still occurred when both vagi were cut, so it must be due to impulses which pass along the splanchnic nerves. Pawlow, moreover, showed that reflex inhibition of the gastro-intestinal movements was produced by stimulation of many sensory nerves, the efferent impulse being carried by sympathetic nerve fibres. This is no doubt one of the principal factors in the causation of the deficient digestion which often accompanies pain in any situation.

The most important reflex inhibition is protective in character. It occurs when the peritoneum is stimulated by the presence of abnormal material in the peritoneal cavity, as after the perforation of a gastric or intestinal ulcer or after perforation of the appendix. The immediate result is that the spread of irritating material in the peritoneal cavity is delayed by the inhibition of the movements of the stomach and intestines. The reflex from the peritoneum is very easily aroused, mere exposure to the air being sufficient to give rise to temporary inhibition of most of the movements. This accounts for the fact that the stomach and intestines are nearly always at rest when an abdominal operation is in progress, and that in animals the movements can only be observed after the splanchnic nerves have been divided, so that the efferent branch of the reflex is broken. Cannon has, however, shown that the effect of exposure only lasts so long as the exposure continues. As neither cooling of the intestines nor anaesthesia have any effect on the subsequent activity of the intestines, the paralysis of the bowels which may occur after abdominal operations is due, as the important observations of Cannon and Murphy[34] show, to the effects of handling the viscera.

Various stimuli give rise to the local reflexes which result in the production of peristalsis and segmentation. Bayliss and Starling discovered that mechanical irritation of any part of the intestines causes contraction to occur in the 3 in. above and relaxation in the 12 in. below. This combination of a proximal contraction with a distal relaxation causing the irritating contents to move onward, with the result that a wave of contraction preceded by a wave of relaxation passes down the intestines; such a compound wave constitutes typical peristalsis. X-ray observations show that the contractions which give rise to segmentation depend mainly on mechanical stimuli, as they occur when distension is greatest.

Cellulose is the chief constituent of the food which gives rise to mechanical stimulation of the motor activity of the gut. Being indigestible, it also adds bulk to the intestinal contents, and may therefore stimulate by producing tension as well as by mere mechanical irritation. On the other hand, meat, fish, and eggs leave less than 5 per cent. indigestible residue. This explains the greater activity of peristalsis in herbivorous than in carnivorous animals, and in vegetarians than in people who take a mixed diet.

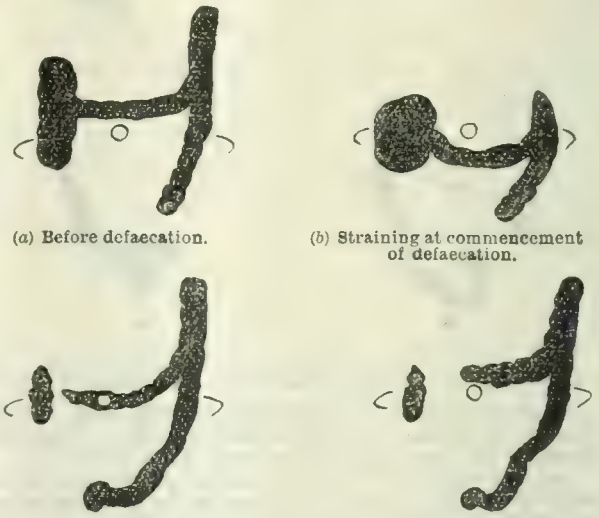
Most of the normal activity of the intestines depends probably on the chemical stimulus of certain constituents of the food and of the products of their digestion and bacterial decomposition. Thus sugars, organic acids produced by fermentation or present naturally in fruit, fats and fatty acids, salt in excess, carbon dioxide, and sulphuretted hydrogen, are among the numerous chemical substances which stimulate peristalsis. It is still uncertain whether bile has any action of this sort.

Finally, electrical and thermal stimuli can increase intestinal movements. The latter are only of importance before breakfast when the stomach is empty, as then cold or hot water can enter the intestine without being retained in the stomach until the body temperature is reached. This explains why a glass of cold or hot water taken on rising in the morning acts so favourably in promoting the action of the bowels in many individuals.

V.—Defaecation.

A good deal of work has been done on the nervous control of defaecation in animals, but very little is known about the actual process as it occurs in normal human beings. The only observation made under physiological conditions appears to be one of Cannon's, who watched the process by means of the *x* rays in a cat, which had been previously given food mixed with bismuth.[39]

If bismuth carbonate is given with the food two or three times during the course of a day instead of on one occasion only, the shadow of the whole colon can generally be seen with the *x* rays the next day. We have once watched the changes in the shadow which occurred during defaecation in a healthy individual prepared in this way. On six other occasions we have made tracings of the shadow immediately before and immediately after defaecation in order to find out how much of the colon takes part in the process.

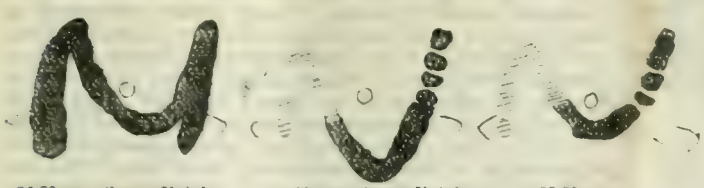


(*a*) Before defaecation. (*b*) Straining at commencement of defaecation. (*c*) Immediately after defaecation. (*d*) Half an hour after defaecation.

Fig. 6.—Normal defaecation.

Defaecation is normally started by the voluntary contraction of the abdominal muscles and the diaphragm. Owing to the simultaneous closure of the glottis, this leads to the production of greatly increased abdominal pressure. It is remarkable that in most physiological textbooks no mention is made of the contraction of the diaphragm, which appears to be of much greater importance than that of the abdominal muscles in producing the rise of intra-abdominal pressure. By means of the *x* rays we were able to see the diaphragm move down to the lowest position it could possibly attain, where it remained with slight variations during the straining which resulted in defaecation. The lower border of the caecum descended about ½ in., but the hepatic flexure was depressed to exactly the same extent as the diaphragm, and almost reached the level of the umbilicus, so that the ascending colon was compressed to an almost globular form. The transverse colon descended from 1 in. above to 1 in. below the umbilicus. The splenic flexure was depressed to the same extent as the hepatic flexure, but owing to the junction of the descending colon with the iliac colon being more mobile than the caecum, it could be more depressed, so that the descending colon did not assume such a broad shape as the ascending colon. Fig. 6 (*a*) is a reproduction

of a tracing taken of the colon immediately before defaecation, and (*b*) is reproduced from a tracing made during the act. After the straining ceases the ascending and descending colon rapidly return to their normal position, but the transverse colon rises very slowly, and may not return



10.30 a.m. (immediately before defaecation). 10.35 a.m. (immediately after defaecation). 12.20 p.m.

Fig. 7.—Normal defaecation.

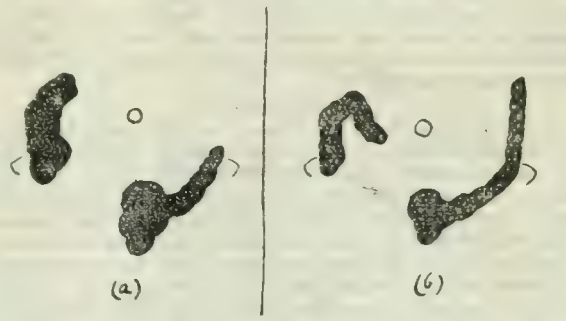
to its former height for over an hour. This is seen in (*c*) and (*d*) of Fig. 6, and also in Fig. 7.

It is often stated that "in healthy individuals, except just before defaecation, the rectum is empty, and the pressure of faeces in this part of the bowel at once gives rise to discomfort, and to a desire to defaecate." This is not strictly accurate as when a rectal examination is made on a normal individual, whatever interval may have elapsed since the last defaecation occurred, the rectum is found to contain more or less faeces. It is quite exceptional to find the rectum empty. It is probable that the desire to defaecate is felt only when the rectum is to some extent distended.

The increased intra abdominal pressure produced by the contraction of the diaphragm and abdominal muscles causes faeces in the pelvic colon to move towards the anus, which is the direction of least resistance. Thus the rectum becomes more distended, and faeces are forced into the anal canal, which is normally quite empty. Both the distension of the rectum and the irritation of the mucous membrane of the anal canal by faeces give rise to afferent nervous impulses, which pass to a centre in the lumbar spinal cord, where they set in action the efferent impulses upon which depends the reflex act required to complete the process of defaecation. This is generally described as consisting of "strong peristaltic contractions, which take place along the whole of the descending colon, sigmoid flexure, and rectum, while both sphincters are relaxed." But our observations lead to the conclusion that the caecum, ascending colon, and transverse colon are also active in defaecation. Thus on the occasion on which we watched the actual process of defaecation, active peristaltic contractions appeared to occur in the caecum and ascending colon. But even more conclusive evidence was obtained by comparing the tracings obtained immediately before and immediately after defaecation. The shadow of the caecum, ascending colon, and a small part of the transverse colon generally become thinner and much fainter; this must be due to the peristaltic contraction of their walls, causing their contents to pass further along the colon. This is seen in the tracings of the two cases reproduced in Figs. 6 and 7.

In another case the activity of the ascending colon was shown in a different way. At 9 a.m. the individual concerned felt, as usual, the desire to defaecate, but as he had on the previous day taken a bismuth supper, he wished to give us the opportunity in the evening of examining his colon before and after defaecation. He therefore restrained the desire. The desire to defaecate, at one time almost irresistible, soon disappeared, but on examination at 10 a.m. no shadow was seen in any of the colon, except in the iliac and pelvic parts, the latter being much distended. This suggested that the violent desire to defaecate at 9 a.m. had resulted in the whole of the first part of the colon emptying itself into the distal part. Another ½ oz. of bismuth was taken at noon. At 8 p.m. this had reached the hepatic flexure, so that the caecum and ascending colon could be seen, as well as the iliac colon and pelvic colon (Fig. 8 *a*). After defaecation, some minutes later, the distended pelvic colon was found to have rid itself of the excess of faeces it contained. The caecum and ascending colon had partly emptied their contents into the transverse colon, the first part of which was now visible (Fig. 8, *b*). The descending colon, previously containing no bismuth, could now be clearly seen. The source of its new contents was not obvious, as the greater part of the transverse colon was still invisible. Most probably it came from the transverse colon, where it may previously have been too diffused to throw a definite shadow.

In most cases the shadow of the whole of the large intestines below the splenic flexure disappears during defaecation (as in Fig. 7), showing that this part empties itself completely. In Fig. 6 the descending colon, iliac colon and part of the pelvic colon are still seen, as only a few small scybala were passed in spite of the active peristalsis which almost emptied the caecum and ascending colon. This was no doubt due to the fact that the individual concerned put off defaecation for twelve hours after the desire was first felt, in order that we might be able to observe the act. Consequently water must have been absorbed from the faeces in the rectum, and the reflex brought about by voluntary contraction of the abdominal muscles and the diaphragm, at a time when the desire to defaecate was no longer felt, was insufficiently active to enable the rectum to rid itself of the hard faeces it contained. The same explanation holds for the case shown in Fig. 8.



(*a*) (*b*)

Fig. 8.—Normal defaecation. June 4th.—11 p.m., bism. carb., ʒjss. June 5th.—9 a.m., violent desire to defaecate. Noon, bism. carb., ʒss. 8 p.m., tracing (*a*) made; then defaecation, after which tracing (*b*) made.

If a bismuth breakfast be eaten one morning and the bowels are opened well the next morning, some of the bismuth is often found in the faeces. In a number of cases, however, it only appears in the faeces for the first time on the second morning after the bismuth breakfast. In one individual, whose stools passed at 8.30 a.m. were not abnormally soft or copious, all the bismuth taken on the previous morning was excreted, as no trace of a shadow could be seen when a skiagraphic examination was made at 10 a.m. Generally, however, the bismuth is not completely excreted for forty-eight hours, or sometimes for seventy-two hours. In one individual, who was not in the least constipated but whose splenic flexure formed a very acute angle, a shadow was still present in the proximal part of the splenic flexure on three consecutive mornings following the day on which a bismuth breakfast had been taken. Already twenty-four hours after the meal the shadow was not very dark; the next morning it was fainter still, and on the third morning it could only be seen with difficulty.

If the lumbar spinal cord is destroyed in animals or injured or diseased in man, all voluntary control of defaecation is lost. The tone of the anal sphincters disappears, though, in animals at any rate, it may return after some time. The consequence is that with normal faeces constipation occurs, but the independent peristalsis of the colon, together with the voluntary contraction of the diaphragm and the abdominal muscles are sufficient to push the rectal contents through the slack sphincters and so prevent the production of faecal impaction. If, however, the contents of the rectum happen to be abnormally fluid incontinence with diarrhoea results, as the tone of the anal sphincters is lost and cannot be increased by a voluntary effort.

The influence of the central nervous system is thus as important in defaecation as in deglutition, although the intermediate part of the alimentary canal works to a great extent automatically. Hence both the taking of food and the excretion of faeces can be timed to suit the convenience of an animal, whereas the rest of the alimentary canal is always active without

requiring attention and without giving rise to any sensation.

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STATUS LYMPHATICUS IN RELATION TO GENERAL ANAESTHESIA.*

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How often, in looking for the particular, is the general overlooked! Much as we know of the mechanism of death under anaesthesia and the action of narcotics on special organs, the influence of the general condition of the patient on the course of anaesthesia is still obscure. We need to take a broad view of our patient's constitution. On this occasion I wish to bring to your notice a definite pathological entity, known as the "status lymphaticus," or "status thymicus."

HISTORY.

According to Griffiths, Plater, in 1614, called attention to the fact that the thymus was enlarged in certain cases of sudden death. Later, in 1723, Bichat made the same observation, and Kopp, in 1829, associated enlarged thymus with laryngo spasm. Friedleben denied the then common assumption that an enlarged thymus could cause death by compression of the air passages. The merit of having directed into the right path the investigation of many hitherto inexplicable cases of sudden death is undoubtedly due to Paltauf. Grawitz of Greifswald had previously noted the occurrence of the enlargement of the thymus gland in two sudden deaths, and had emphasized the possibility of a connexion between such enlargement and sudden death.

Paltauf, in 1889 and 1890, was the first to collect a large number of cases of sudden death in adults, which, on *post-mortem* examination, gave, in an extreme degree, characteristically similar proofs of the correctness of his theory. There was found an enlargement of the tonsils, of the lymphatic gland system, of the follicles at the base of the tongue, of the spleen, and, lastly, an enlarged thymus gland, which varied in size in different subjects; in most cases also there was narrowing of the aorta. This combination of conditions the investigator called the "lymphatico-chlorotic constitution," and referred the sudden deaths of certain patients of this type to cardiac paralysis and acute heart dilatation, putting aside a theory advanced as to the possibility of mechanical interference by pressure of the enlarged thymus on the circulatory and respiratory organs. Paltauf's first case was that of a girl, aged 9, who sat up in bed and died suddenly. He speaks of sudden death during bathing, etc. Nordmann and Recklinghausen recorded similar cases of young people who died suddenly during or after a cold bath, and in whom, *post mortem*, status lymphaticus was found. According to Laqueur, Pott saw death occur in eight children who suffered from spasm of the glottis after introduction of a tongue spatula, and was convinced that they did not die from suffocation but from cardiac paralysis, for artificial respiration after the attack was useless. In other cases where autopsy took place a markedly enlarged thymus was observed. Kundrat next published in 1895 ten cases of death under or immediately after anaesthesia by chloroform, or a mixture containing it, collected from *post-mortem* records in Vienna, all on section presenting markedly the characteristics of the lymphatic diathesis; and also one case in which ether was the anaesthetic. He pointed out that in some of his cases danger symptoms began with the heart, respiration lasting some time after cessation of the pulse. Kundrat noted, too, the association of status lymphaticus with Basedow's disease in one of his cases, and he laid stress on the remarkable flaccidity and recent dilatation of the ventricles of heart found *post mortem*. He instanced other cases of death during anaesthesia in which many of the characteristics of status lymphaticus were found *post mortem*, but in which there was no mention of enlargement of the thymus gland.

To the writings of Paltauf and Kundrat little of importance can be added to day. Ewing, Blake, and others in America have written on the subject, but there has been small mention of it in British medical literature. Since these observations of Paltauf and Kundrat many sudden deaths of children have been recorded apart from anaesthesia, in whom *post mortem* has been found the condition of status lymphaticus, and so constantly has the hypertrophy of the thymus gland been noted that the diathesis is often called the status thymicus. Lymphatism is a more modern name for the condition.

The subjects of the status are unusually subject to infectious diseases, to death from shock and fright, and to death during anaesthesia. Even comparatively slight lesions may in them end fatally. Perhaps some of those subjects who have been said to show idiosyncrasy to the action of chloroform have been lymphatic. (Hereafter in this paper status lymphaticus will be abbreviated to "S. L.")

Condition Found after Death.—According to Kundrat the results of autopsies in the subjects of S. L. are tolerably uniform and very remarkable. They are characterized by the presence of a thymus of greater or less size, by an enlarged spleen with varying degrees of prominence of its follicles, by tumescence and hypertrophy of lymphatic glands in various regions (especially of the mesenteric, retroperitoneal, and cervical), by noticeable prominence and multiplication of follicles at the base of the tongue and in the pharynx, by enlargement of the tonsils and swelling of solitary follicles and Peyer's patches in the intestine, by a dilated heart (especially is the right ventricle dilated) and extremely flaccid cardiac muscle. In addition, there is sometimes found a small heart, contraction of the aorta, and dark fluid blood in the heart cavities. To Kundrat's pathological complex may be added less constant features—namely, great pallor of the skin, enlargement of the tongue, enlargement of the thyroid gland, infantilism, oedema of the lungs and brain, fatty changes in the liver, and alterations in the bone marrow. As Kundrat remarks, similar more or less definitely characterized cases making the hypothesis of a lymphatic constitution probable are found scattered through the statistics of chloroform deaths.

Frequency.—According to Halstead, Kolisko, in a personal communication to Brickner, states that for many years he performed about six autopsies annually on persons dying from cardiac syncope under chloroform, in whom no previous lesion of the heart, lungs, or kidneys was known to exist, and always found the signs of S. L. In the children's clinic at Gratz the records are said to show that during the last twenty years in every chloroform fatality there was present the lymphatic hyperplasia which is the principal feature of S. L. Hedinger states that the chloroform deaths in his clinic occur in patients of S. L. Blake recorded 3 anaesthetic and 2 non-anaesthetic cases of sudden death in hospital showing *post mortem* signs of S. L. in only a little longer than one year. Besides the number of deaths that have taken place, there must have been many cases of recovery from danger in patients of S. L. in whom the condition had not been recognized.

EFFECTS OF DIFFERENT ANAESTHETICS.

So frequently is death during chloroform anaesthesia associated with S. L. that the question has been asked, Does death under chloroform ever occur apart from the condition? It has been stated by Elser that when S. L. exists the administration of chloroform is nearly always fatal.

The first fatal case, so far as I know, in this country was recorded by Wolff in 1905, and was that of an infant, aged 11 months, whose eye had just been needled for cataract, when cyanosis appeared, and respiration and circulation quickly failed. The thymus weighed 1 oz., and the lymphatic glands were everywhere enlarged, but the spleen was quite normal.

The second case was that very typical one recorded by Mr. Harvey Hilliard at the last meeting of this society.

My fatal case occurred in 1903, but I have not hitherto published it.

In 30 cases of S. L. deaths during or after anaesthesia whose records I have examined, the anaesthetic used was

* Read before the Society of Anaesthetists, December 6th, 1907.

in 17 chloroform, in 6 ether, in 5 a mixture of chloroform and ether: 2 were doubtful cases, and the anaesthetic was nitrous oxide. In the first nitrous oxide case the patient was an anaemic girl, aged 18, who died at the end of a dental operation after five teeth had been extracted. She was supposed to suffer from S. L., having adenoids, etc. The second patient was a female cretin, aged 18, who appeared to be coming round from a dental operation and died suddenly. *Post mortem* a very large thymus was found but no trace of thyroid. She suffered from heart disease, which apparently was compensated, and she had taken gas well before.

MacTaggart has recorded the death of an infant, aged 1 year, who died after an injection of $\frac{1}{12}$ grain of morphine, and in whom *post mortem* was found the signs of S. L.

Under local anaesthesia two deaths have been recorded, the first by Horoszkiewicz. The patient was a woman, aged 30, who was operated upon for a small cyst in the neck. She was fearful, and convinced that she would not survive operation. Altogether 0.075 gram of tropacocaine was injected locally. At first the patient laughed at her fears, then suddenly became pallid and convulsed. The operation was stopped till the patient was better; then the neck was extended, and the operation begun again. Respiration then stopped, her pulse became small, and death quickly followed. *Post mortem* were found typical signs of S. L. The quantity of tropacocaine was not enough to produce poisoning in an ordinary patient, and it was thought that death was due to psychic insult or to lessened resistance to tropacocaine.

The second case was recorded by Nettel. His patient, a woman, aged 31, who suffered from Graves's disease, died fifteen minutes after the end of an operation for extirpation of the thyroid under Schleich's infiltration anaesthesia. Her breathing had previously stopped during operation. *Post mortem* was found a large and very thick thymus, associated with enormous hyperplasia of the whole lymphatic apparatus.

Age and Sex.—The average age in 35 cases which I have collected was 16; the youngest patients were respectively 6 months, 8 months, and 11 months; 7 of them were under 10 years of age, 14 were between the ages of 10 and 20, 8 from 20 to 30 2 were 31 and 32 respectively, and the oldest was 55. Thus 24 of them were under the age of 20.* They were evenly distributed between the sexes.

I have notes of 22 cases of death during anaesthesia in the last ten years, excluding cases of death from vomiting in intestinal obstruction and also deaths during anaesthesia for tracheotomy. Of these, 19 occurred in hospital practice and 3 in my own. In 5 of these 22 cases there was found *post mortem* the symptom complex of S. L. I have had three fatalities in ten years' practice, one occurring in a man who had practically no left lung and a very bad heart, another in a child typical of S. L., and a third in a child of 5, who died during operation under chloroform administered after A.C.E. mixture for removal of adenoids and tonsils. Unfortunately no special examination was made for signs of S. L. in this last case.

Besides the above mentioned 5 cases I have brief notes of two interesting cases of death after operation under anaesthesia.

In 1899 I recorded a case of respiratory and cardiac failure during administration of chloroform to a patient probably of so-called lymphatic diathesis,† and gave some account of the condition.

CASE I.

The patient, a girl aged 8, suffered from double suppurative otitis media, and radical mastoid operation was performed by Mr. Frank Marsh, F.R.C.S., on March 21st, 1903.

History.—When 5 years the old patient had attacks of what was called "laryngismus stridulus," but as she never had fits or rickets or other illness than scarlet fever, which occurred two years ago, the laryngismus may have been of thymic origin. She had a sister who died three days after an attack of scarlet fever; both children had it very severely. No nephritis known of. There is a distinct family history of adenoids, and her father's mother had some affection of the throat, for which she wore a tracheotomy tube.

Anaesthetic about 9.45 a.m. The patient was pale and pasty-looking, fairly well nourished, and breathed stuffily and with open mouth, because of enlarged tonsils and adenoid growths. The heart sounds were rather "flappy" and soft, but nothing noteworthy was found in the chest. Chloroform was administered from a drop bottle. The child went under very quietly, and a light anaesthesia was used throughout—(that is, the lid reflex was retained, except that it was abolished once for about half a minute). Respiration was very audible, lips were a good colour, pulse regular and of good quality, and the pupils contracted. No trouble occurred; indeed, I congratulated myself that I had been able to give chloroform throughout and not a mixture of chloroform and ether, to which I had intended to change early in the administration. Just before the wound was packed the pulse was good and regular, and everything as before. Mr. Marsh had told me that the child would need little more anaesthetic, and I had put away my drop bottle and was still holding on the mask, which had a little chloroform on it, when I noticed breathing to stop and the lips to become a little pale. The pupils began to enlarge, but never became widely dilated. I took away the mask and pulled the jaw forward, but there was no breathing; the lid reflex was very slightly present, and quickly disappeared altogether. The tongue was pulled out, the head lowered, and then the body inverted as soon as possible, and artificial respiration was started. No pulse was felt at the wrist, and the colour of the face became rather bluish, but improved a little with artificial respiration, soon becoming normal in the face, ears, and lips.

By the way, it is interesting to note that in this, as in several other cases of which I have record, artificial respiration brought about and kept up a deceptively normal colour of the face, ears, and lips after death. When the body was inverted during artificial respiration the colour was good, but when the body and head were raised the normal colour disappeared.

During artificial respiration air entered freely into the chest, the eyes became fixed and glassy, and no corneal reflex could be elicited. After about five minutes there were four or five spontaneous respirations (anoxaemic), but these quickly died away. The heart was vigorously compressed by one hand between the ribs and the other hand outside. I suggested laparotomy and direct compression of the heart, but Mr. Marsh said that he could do this quite as well from the outside. After about half an hour we gave up all attempts at resuscitation. The anaesthesia had lasted about an hour and the operation about fifty-five minutes; 10½ drachms of chloroform were used.

Autopsy.—The body was examined forty-eight hours after death. It was well-nourished, hair coarse, bridge of nose depressed, pupils moderately contracted, enlarged glands below the right mastoid process. *Adenoid* tissue considerably developed in the naso-pharynx; the *tonsils* much enlarged and excavated. *Lungs:* No pleural adhesions; lower lobes of lungs collapsed but have many patches of emphysema, which is also seen along lower part of upper lobes (probably the emphysema due to vigorous artificial respiration). No subpleural ecchymoses; lungs otherwise healthy. *Heart:* Muscle healthy, five and a half ounces; little fluid blood in right ventricle; left ventricle contained no blood, and cavity contracted; all blood fluid and of usual colour; no narrowing of aorta noticed. *Larynx* and *bronchi* contained nothing but a very little mucus. *Tongue:* Organ markedly enlarged; follicles at base were somewhat enlarged. *Thyroid Gland*: This was not enlarged. *Thymus:* This gland was persistent and much enlarged; *in situ* and when laid flat on table it was bilobed, both lobes being 12.3 cm. long, the right lobe being broader than the left, weight 22.5 grams; the greatest thickness was 1.1 cm. and the average thickness was from 0.9 to 1 cm.; the greatest width across both lobes was near the lower end and = 5.5 cm. There was no evidence of compression of any of the parts by the gland. *Lymph Glands:* The glands in posterior mediastinum and all about root of lung were not enlarged, but the mesenteric glands were generally and variably enlarged, some being very big and juicy on section. The axillary and inguinal glands were about the normal size. There were some slightly enlarged glands in front of the base of the epiglottis. *Spleen:* Weight 3¼ oz.; much larger than usual. Slight adhesions around. On section the Malpighian corpuscles were very prominent, and the organ appeared congested, soft, and lymphatic. *Liver*, including gall bladder, weighed 2 lb. 3 oz.; rather large. *Intestine:* Peyer's patches and the solitary follicles were well marked. *Kidneys:* Appeared healthy, but a little congested. *Suprarenals:* Appeared healthy. *Brain:* Congested on vertex, healthy on section. Pituitary body not examined. Left middle-ear disease completely removed; the right mastoid cells and middle ear contained pus.

Microscope Results (examination made by Dr. Wynn, Pathologist to the General Hospital)—*Thymus:* Sections show moderate congestion. Blood vessels very prominent, standing out around lobules and also in their interior; some lobules are quite surrounded by a ring of congested vessels. The septa are composed of loose areolar tissue containing much fat, and are rather wider than normal, and in places show proliferation. The young connective tissue invades the follicles in places, making their outline less definite. In many of the lobules there are patches of cells undergoing colloid degeneration. These patches usually surround the concentric corpuscles of Hassall. The distinction between medulla and cortex is preserved. *Thyroid:* Shows marked hyperplasia of the epithelium, the alveoli are very irregular in size and shape,

*All of Blake's 7 cases (anaesthetic and non anaesthetic) were adults; this is interesting as the diathesis is usually one of early life.

† *Trans. Soc. Anaes.*, vol. iii, 1900.

a few being rather well formed, and consist of a single layer of cubical epithelium, and contained colloid substance; but by far the majority show proliferation of epithelium, which tends to grow inwards in irregular columns, filling up more or less the alveoli in places. The usual alveolar arrangement is almost lost; the tissue consists of irregular groups of cells surrounded by colloid material and young connective tissue. The blood vessels are well marked and somewhat congested; there is no infiltration of the connective tissue. *Spleen:* Shows nothing abnormal. *Lymphatic glands:* One taken from behind sternum is enlarged and congested, but its structure is of normal appearance. *Tongue:* Section through posterior part shows slight increase of lymphoid tissue.

CASE II.

Death under $CHCl_3$. Girl, aged 13. Operation for cleft palate. Child was known to have enlarged tonsils, adenoid growths, and an enlarged thyroid, otherwise nothing special was found on examination. There was no trouble in anaesthetizing patient, chloroform being given on an open mask. Operation started after there had been some difficulty in fixing the gag. On incision there was a good deal of bleeding, and the patient became rather blue and breathing difficult, but she had a brisk lid reflex and dilated pupil. Anaesthetic stopped, throat cleared out, head lowered, and patient went on breathing, and operation was about to be resumed, and a slight amount of chloroform had been given, when respiration stopped, the patient became pallid, and pupils dilated. Artificial respiration was started, head lowered, and in a very few minutes tracheotomy was performed. No cardiac impulse or pulse felt, but colour remained good, the alae nasi worked regularly, the vascular reflex was fairly active, and the pupils of moderate size for the whole one hour and a half that artificial respiration was continued. Encouraged by these signs, injection of adrenalin into the heart and direct subdiaphragmatic cardiac massage were delayed for about an hour, but all efforts failed.

Autopsy.—Tonsils: Moderately enlarged. *Adenoids* present in moderate amount. *Heart:* 5½ oz. Muscle somewhat pale and bloodless. Right side distended. *Lungs:* Some old pleuritic adhesions at right base. *Trachea:* Contains a little blood and mucus. *Liver:* Dark, enlarged, and contains some excess of fibrous tissue. *Kidneys:* Both show marked pallor and swelling cortex in contrast to red medulla; some parenchymatous nephritis. *Spleen:* Firm, somewhat fibrosed, markedly enlarged Malpighian bodies. *Brain: Nil. Thyroid:* Markedly enlarged, weight 3¾ oz. *Thymus:* Persistent and large, 25·25 gram; extreme width 3½ in., length 2⅝ in., thicker than normal. *Glands:* Marked hypertrophy of lymphatic tissue in all places where usually found, the inguinal and mesenteric glands especially being much enlarged.

CASE III.

Girl aged 17. $CHCl_3$, April 24th, 1903. Large double-sided goitre. No dyspnoea except on exertion. Morphine ¼ gr. before $CHCl_3$. Died suddenly just after vomiting a little fluid. Severe operation. Lid reflexes not abolished throughout.

Autopsy.—Heart: Small. *Thymus:* 28 grams, 4 in. long by 2¼ in. wide. *Thyroid:* 11 oz. *Trachea:* Very narrow. *Tongue:* Follicles markedly enlarged. *Tonsils:* Enlarged. Adenoid growths present in naso-pharynx. *Glands:* Between bronchi much enlarged, as also at root of lung many cervical and mesenteric glands enlarged. Solitary follicles in places very large. Peyer's patches enlarged. *Spleen:* 3¼ oz., pale with considerably hypertrophied lymph tissue. *Brain:* Small. *Liver:* Large.

CASE IV.

Man aged 20. $CHCl_3$, October 12th, 1905. Malignant tumour of jaw. Sister died suddenly. Heart going well until first incision and reflexion of tissues, when pulse and respiration stopped suddenly.

Autopsy.—Tongue: Larger than usual, follicles also larger. *Tonsils:* Very much enlarged and lymphatic glands about pharynx also. *Thyroid:* Rather enlarged. *Thymus:* About normal size. *Glands:* Bronchial and mesenteric generally enlarged. *Spleen:* Enlarged, much enlarged lymphatic tissue. *Heart:* Not hypoplastic. *Liver:* Normal.

CASE V.

Girl, aged 6, chloroform, April 24th, 1903. Examination of abdomen and chest; about ½ pint of fluid in each pleura. No struggling. Suddenly died when turned over to right side after anaesthetic stopped, and had moved an arm.

Autopsy.—Tonsils: Slightly enlarged; moderate adenoid growth; enlarged lymphoid tissue at base of tongue. *Thymus:* Persistent and much enlarged, weight 17 grams, extends half way down over front of pericardium. *Spleen:* Soft, with increase of lymphoid tissue. *Glands:* The posterior mediastinal, cervical, and glands in fork of trachea are enlarged but not caseous; solitary follicles of intestine prominent and rather swollen. Some free fluid both in pleurae and peritoneal cavity. *Liver:* Large and firm. *Kidneys:* Large, swollen; Malpighian bodies plainly seen (nephritis). *Thyroid:* Not enlarged, but microscopically shows degeneration.

In the first case recorded—my own—death was, I think, alone due to the administration of chloroform, for there were no evidences of shock. In the remaining cases, besides the chloroform, other factors were present—for example, shock, haemorrhage, etc.—which, added to the influence of the chloroform, brought about death.

I have also notes of two deaths which occurred after anaesthesia.

CASE A.

Death five minutes after anaesthesia and operation. Boy, aged 8 months. Children's Hospital, Birmingham, April 18th, 1907. C_2E_2 administered for operation for phimosis. Some spasmodic cough toward end of administration. Five minutes after administration stopped became cyanosed, was coughing, and respiration stopped. Artificial respiration. Was thought to have recovered. Respiration stopped again. Artificial respiration for one hour, during which slight spasmodic attempts at respiration.

Autopsy—Well-nourished child. Signs of rickets present. *Thyroid, Adenoids, and Tonsils:* Not specially examined, but not noticed to be enlarged. *Thymus:* Almost completely filled upper third of thorax and practically as large as a child's lung, weight 2½ oz. *Glands:* Neither abdominal nor bronchial enlarged; others not noted. *Spleen:* Rather enlarged and congested. *Heart:* Healthy. *Liver:* Not fatty.

CASE B.

Death three days after anaesthesia and operation. Boy, aged 6 months. February 21st, 1905. E_2C_1. Adenoids only; used to have "fits," becoming blue and "crowing." Had a fit, became very blue, recovered temporarily, made crowing noise, went black in the face, and died. Had had similar fits before.

Autopsy.—Rachitis present. *Thymus:* Markedly enlarged, about 2 in. long to 1 in. broad. *Thyroid:* Normal. *Tonsils:* Small. *Glands:* Mediastinal swollen, also axillary, cervical and inguinal. Mesenteric glands greatly swollen (ulceration of ileum). *Liver:* Fattily degenerated and enlarged.

In these two cases, owing to the small age of the patients, the full symptom complex of S. L. perhaps had not fully developed, the hypertrophy of the thymus being the prominent feature *post mortem*.

In the last case death apparently had nothing to do with the anaesthetic.

Many cases, particularly children, in practice, which I suspect to be of lymphatic diathesis, have, during anaesthesia, given trouble, especially during the administration of chloroform or mixtures containing chloroform; and so often have these troubles occurred that I am sure that some other factor than the chloroform *per se* has come into action—namely, S. L. All have been young, or fairly young, people or children. Most of them have been of the flabby type, generally having adenoids and enlarged tonsils, occasionally enlarged thyroid, very often an enlarged tongue and suspected enlarged thymus; sometimes their pupils have been larger than is usual, their pulses soft and comparatively slow, and their heart sounds have been weak and what I call "flappy" or "thin," giving the idea of thin-walled and rather dilated ventricles. Many of the cases have had the typical adenoid facies and the characteristic narrow high-arched palate, small mouth and throat. They seem to suffer more acutely than ordinary patients from shock, and the distance between ordinary deep anaesthesia and danger appears to be shorter in them than in the case of normal patients.

Under chloroform there is often a tendency to greyness of complexion, weak heart action, and shallow breathing, so that E_2C_1 or ether not uncommonly has to be substituted for it, and in most cases the dose of the drug needed to keep up anaesthesia is unusually small.

S. L. is not infrequently found in several members of one family. Hedinger states that Plater in 1614 recorded thymus hyperplasia in three children of one family who died suddenly. Hedinger himself reported the sudden death of five children in one family before they reached the age of 6, autopsy on one of them showing S. L. including an enlarged thymus. Hedinger also mentions another family in which all the 9 sons died between the ages of 3 and 9 after a few hours of slight depression with accession of sudden coma and death in less than an hour.

In most of the cases recorded there is little or no previous history noted, in fact in many of them it has been said that the patient was well and strong. Perhaps any infantile symptoms, for example, stridor or dyspnoea, may have been observed at the time and forgotten afterwards.

In small children, and especially in infants whose thymus is enlarged, there is very frequently stridor causing noisy and difficult respiration which is often called "thymic asthma." According to Hochsinger this stridor

is congenital or seen in the early months of life, and he calls the symptom "stridor congenitus infantum." It may appear suddenly and disappear suddenly, the infants are never cyanotic and never in the true sense dyspnoeic but remain well. Some cough is frequently present and is of the same noisy character as the stridor. (Warthin, however, says the cough is of a slight clear barking character.)

The stridor occurs during inspiration and is of a peculiar ringing, clanging, and hoarse character, audible afar off, and is most intense at the end of inspiration. The infants, later develop rattlings and wheeziness. These symptoms are generally mistaken for catarrhal bronchitis, but bronchitis causes wheeziness on expiration, and cyanosis. All these symptoms point to a narrowing of the upper air passages which is due to the tracheal and bronchial stenosis, caused by the enlarged thymus and bronchial glands. According to Warthin there is no modification of the voice and there are no laryngeal phenomena.

Hochsinger found in 26 young children, by percussion and by radiograph, enlargement of the thymus, and 20 of these gave the symptom picture of congenital stridor. Seven other children who had a moderately enlarged thymus, which was found radiographically, developed no symptoms. Hochsinger asserts, from his observations, that in children under 12 years of age stridor congenitus, of the type he describes, is always associated with an enlarged thymus gland demonstrable by radiograph; while children whose thymus was normal clinically or by radiograph never had the symptom of congenital stridor. This condition is a chronic one and differs from laryngismus stridulus, which is usually paroxysmal and associated with rickets.

If there be acute pressure by an enlarged thick thymus or by congestion of organs causing narrowing of the space between the vertebrae and manubrium, and especially if there be at the same time hyperflexion or hyperextension of the head on the neck, the child may have fits of dyspnoea or cyanosis. The dyspnoea, however, is supposed to be in many cases not obstructive but toxic in character. In older children there may be a history of epilepsy, infantile eclampsia, tetany, and spasm of the glottis, which neuroses, according to Ohlmacher, are associated with S. L. Fainting fits, due to sudden lowering of the already low blood pressure by the failure of a weak heart, are not uncommon in older children and young people.

DIAGNOSIS.

The most important thing to us as anaesthetists is the diagnosis of this condition. So far as I have read, not one of the cases of death under anaesthesia has been beforehand diagnosed as lymphatic.

Blumer quotes Escherich and other Vienna clinicians, who say they can recognize the status by the following: Pale thin skin, pasty complexion, a good deal of subcutaneous fat, frequently signs of rickets or scrofula, enlargement of the superficial glands, especially in the neck and axilla, enlarged tonsils, adenoid growths, and a palpable spleen. In addition to the above I would add that we may often observe enlargement of the thyroid, which is said to exist in more than 50 per cent. of the cases, and may get still more help from careful examination of the parts inside the upper air passages.

We know that the tongue is very richly supplied with lymphatics; so also is the soft palate and uvula. In the pharynx the mucous membrane is very rich in lymphoid tissue; especially is that lining the posterior surface of the larynx and the pharyngeal and laryngeal pouches. In some of the cases of S. L. recorded it has been noted that the lymphatic follicles in the pharynx, sinus pyriformis, and on the anterior surface of the epiglottis, as well as on the pharyngeal walls, have been much enlarged. In one case the follicles in the vault of the pharynx formed lobular soft rolls sprinkled with white dots formed by the numerous follicles. In many cases, probably, these enlarged follicles have been overlooked. In most cases also the tongue follicles have been enlarged. I regard enlargement of the tongue, which I believe has not hitherto been mentioned in the literature on the subject, as an important aid to diagnosis. Enlargement of the organ was noted by me *post mortem* in 2 of the 5 fatal cases I have recorded.

With regard to the presence of enlarged tonsils and adenoid growths, one or both of these conditions have been noticed in practically every case of death during anaesthesia in patients of this diathesis. I do not look upon enlarged tonsils and adenoid growths as merely local manifestations, but as indicating a marked tendency to general lymphatic enlargement; and, more than this, I believe that if patients in whom these lesions were present could be examined *post mortem* there would be a very large proportion of them in whom much more evidence of lymphatism would be found. Adenoids and tonsils do not stand by themselves, but are associated with a lymphatic condition elsewhere. Hochsinger examined three children with adenoids radiographically and found in all of them an enlarged thymus.

Thus, in the inside of the throat alone we have many conditions which are often associated with generalized lymphatic hyperplasia.

With regard to the enlargement of the glands, these are not always palpable, because they are often buried in a bed of fatty connective tissue. Examination for enlarged mesenteric glands might occasionally be successful, as these seem to be most frequently hypertrophied.

Enlargement of the thyroid is a marked feature of a large proportion of cases. Wynn found the organ enlarged in all his cases.

Late development and congenital defects may be observable.

Other signs of low blood pressure may be associated. The pupils are comparatively large, the pulse being of low tension, the heart sounds "thin and flappy," and giving the idea of thin-walled and dilated cavities and of small muscular power. Many patients who suffer from goitre show the same signs.

Blood.—Paltauf observed a lessening of the amount of haemoglobin in the blood. Ewing in one of his cases from lymphocytosis, the blood of a child who died under anaesthesia containing 76 per cent. of lymphocytes. Wynn states that "the blood *a priori* should show an increased lymphocytosis .... The blood taken *post mortem* in several of my cases showed marked lymphocytosis, and in 4 cases with every sign of the condition examined during life the blood showed respectively 52 per cent., 48 per cent, 43 per cent., and 34 per cent. of lymphocytes, in children of 5 to 10 years.... The blood in this condition needs further investigation, for if such lymphocytosis be constant, it will be an important diagnostic sign."

Rickets.—The presence of rickets may help in the diagnosis, since it is so often associated with S. L.

Thymus.—Occasionally it is said that the upper pole of the thymus, when much enlarged, may be seen above the sternum during expiration as a pulsating tumour, and it has been palpated also as a soft elastic swelling above the episternum. Percussion, which must be light, and is best done by direct finger percussion over the chest (Hochsinger), will sometimes show extension of thymus dullness beyond the manubrium. The apex of the thymus corresponds normally with the upper end of the manubrium, and its base lies behind the second intercostal space. The organ covers when enlarged a greater or smaller part of the heart. An enlarged organ shows dullness extending sideways beyond the edges of the sternum down to the level of the second rib. If this enlargement extends to either side, and especially to the left side, for about one or more centimetres, the thymus gland is distinctly enlarged. In children the dullness is continuous with the cardiac dullness.

Hochsinger examined 58 children in the first two years of life by radiograph, and in 26 by percussion found an enlarged thymus. In all of these the enlargement was to be seen radiographically.

Spleen.—The spleen has often been found so large *post mortem* that it could obviously have been palpated in many of the fatal cases.

Glands.—The mesenteric, popliteal, axillary, and inguinal glands have in some cases been felt to be enlarged.

Finally, both outside and inside the throat and neck may be found most of the evidences of lymphatic hyperplasia, the only important organs affected in other regions being the lymphatic glands and spleen.

Altogether the history and signs so numerous should enable us usually to diagnose the condition, the diagnosis of an enlarged thymus being the most difficult point.

ASSOCIATED CONDITIONS.

Several pathological conditions are often associated with S. L. Of these, perhaps the most important is exophthalmic goitre. It is well known that in Graves's disease enlargement of the thymus is common. Gierke found enlargement of the thymus in records of 42 cases of Graves's disease. He believed that most deaths after operations for this condition occurred in patients in whom the thymus was persistent, and noted the organ was persistent

in 18 out of 35 cases of Graves's disease ending fatally after operation.

Dernine observes that the heart in Graves's disease is peculiarly sensitive to the influence of fatigue, that its reserve energy is soon exhausted, and that it enlarges. If exophthalmic goître be associated with S. L., there is a double reason for heart failure in operations on the thyroid. It is probable that, in a number of cases of exophthalmic goître examined *post mortem*, though enlargement of the thymus was noted, S. L. was overlooked, and very likely the diathesis is accountable for more than it is credited with of sudden deaths in Graves's disease. Thus, both in cases of enlarged thymus and enlarged thyroid the essential factor in a fatal issue may be not the enlargement of thymus or thyroid, but the lymphatic hyperplasia.

Epilepsy.—Ohlmacher, who has had a large experience of epilepsy, has been much impressed by the frequent coincidence of idiopathic epilepsy and S. L. He believes that "idiopathic major epilepsy is a neurosis of the lymphatic constitution in the same relationship that lymphatic sudden death, infantile eclampsia, tetany, and spasm of the glottis are so considered."

According to Ewing nervous symptoms are frequently associated with the lymphatic constitution. The neuroses of Graves's disease and enlarged thyroid are also perhaps connected with it.

Rickets.—This is very frequently an associated condition, especially in the case of young children. In 37 children who showed signs of rickets Hochsinger found that 25 of them showed an enlarged thymus radioscopically.

Infantilism.—There are sometimes congenital defects, such as cleft palate, cleft kidneys. I have noted cleft palate and cleft kidneys in one of my cases. It is not uncommonly found that the heart is small and that the aorta is hypoplastic. The pelvis is occasionally ill developed, and menstruation may appear late.

Delayed Chloroform Poisoning.

Two of the fatalities after operation under chloroform where S. L. has been noted as the cause of death have been due, I think, to delayed chloroform poisoning accelerated by the diathesis. In 15 cases of S. L., dying during anaesthesia, in which the state of the liver was mentioned, the organ was found to be fatty in 4, enlarged in 2, and abnormal in 3 other cases—that is, it was abnormal in 9 out of 15 cases. In 4 out of my 5 cases, where the condition of the liver was noted, it was found to be enlarged. In one or two of the recorded cases nephritis was associated with the S. L. Blake's second case and that of Gwyer seem to me to be rather due to delayed chloroform poisoning than to S. L., so as far one can judge from the symptoms.

Blake's case was that of a child, aged 2½, to whom chloroform was administered for operation for phimosis. Afterwards restlessness, weak pulse, drowsiness, and coma gradually developed. The highest temperature was 101.4° F. Death occurred twenty-three hours after operation. *Post mortem*, the thymus was very much enlarged; the glands and follicles were generally enlarged; the spleen was excessively swollen, but the condition of the liver was not mentioned.

Gwyer's case was that of a boy, about 6 years old, to whom chloroform was administered for removal of a few axillary glands. He gradually developed a temperature of 105° F., rapid pulse, great restlessness, some delirum and coma, dying twenty-four hours after operation. No autopsy is reported, but Gwyer judged the case to be one of S. L.

Though in these two cases there is no mention of acetone or vomiting, the progressive symptoms ending in coma resemble those of delayed $CHCl_3$ poisoning. The gradual mode of death so long after anaesthesia may be contrasted with the sudden failure of circulation and respiration which characterize death in persons of S. L. If my supposition that these two fatalities were due to chloroform poisoning is correct, it would seem that having just possibly escaped sudden death during or immediately after anaesthesia by chloroform, they succumbed later with symptoms of delayed chloroform poisoning. I suggest that there is some association between S. L. and large liver, and that it would be interesting to have in future reports of deaths ascribed to delayed $CHCl_3$ poisoning or to S. L. a full microscopical examination of all the organs, and more particular notice of the state of the liver. Probably the S. L. weakens the resistance of the body to the remote as well as to the immediate toxic action of $CHCl_3$.*

In each of these 3 cases the death occurred just about twenty-four hours after anaesthesia. Now the average period before death in 8 cases of delayed chloroform poisoning mentioned by Stiles and M'Donald is two and a half days, hence it would appear that the interval between anaesthesia and death in the lymphatic cases was greatly shortened, that is to say, the course of delayed $CHCl_3$ poisoning in lymphatic cases is much more acute than in ordinary cases, the resisting power to toxic influences being greatly weakened.

Many of the patients of lymphatic type are very fearsome and perhaps some of the cases in which sudden death occurred in these patients in days gone by have been due to fear which would have much more effect on them than on ordinary patients, for example, Mr. Harvey Hilliard's recent case and Horoszkiewicz's case under local anaesthesia.

Fatalities in subjects of S. L. have occurred during anaesthesia at the hands of skilled anaesthetists and at a period of anaesthesia which ordinarily would not be dangerous, so apparently some at least of the fatalities cannot be ascribed to want of skill.

Mode of Death.

Death in the case of anaesthesia (as in many non-anaesthetic cases) is always sudden. In certain of them facial pallor and dilated pupils were first noticed and then it was found that cardiac action had stopped. In others respiration was observed to become superficial and intermittent and at the same time the pulse was impalpable; in yet others cyanosis first appeared together with dyspnoea, the circulation quickly failing afterwards. In another type of case there was sudden failure of circulation and respiration, apparently simultaneously.

The heart and especally the right ventricle is usually found to be dilated and very flaccid, in one case the flaccidity being so extreme that "the anterior wall of the right ventricle seemed to have sunk in." According to Kundrat the remarkable flaccidity and recent dilatation of the ventricles proved that along with the peculiar physical constitution the effect on the heart must generally be taken into account. Paltauf believed that the cause of death was the acute dilatation of the heart. Syncope is sometimes referred (Haig, Max Mader) to a sudden raising of the blood pressure which causes overburdening of the heart. Violent stimulation of sensory nerves especially during narcosis is supposed to lead to a sudden increase in the blood pressure. Therefore any transient awakening from narcosis during a painful operation is in the highest degree dangerous. It would appear well, then, to maintain an even level of anaesthesia.

It may be that, as in some of the non-anaesthetic cases, stenosis caused by the enlarged thymus may be a factor in the cause of death. The space in children between the vertebrae behind and the manubrium sterni in front has been found to be about 2 cm., and through that space pass the pneumogastric and recurrent laryngeal nerves, which are closely in relation to the thymus gland, while near the outer wall of the capsule run the phrenic nerves. Besides these, the trachea and most important vessels traverse the space. A large proportion of lymphatic patients suffer from rickets, and it has been pointed out by Benecke that this condition causes lordosis of the cervical vertebrae and narrows the small anterior mediastinal space, so that in a rickety lymphatic child the space between manubrium and vertebrae must be additionally narrowed by the lordosis. It has been noted that the pressure of enlarged thymus on these important structures may be the cause of sudden death. One would think, however, that if pressure alone were the cause death would generally be more gradual. The enlarged thymus only interferes with inspiration, the gland being said to act as a kind of valve, which is sucked in during inspiration. It is noteworthy that the stridor which it causes occurs chiefly during inspiration. Pressure may also be the cause of the constant dry cough which is a feature in certain cases. Pott of Halle says that the enlarged thymus causes reflex laryngo-spasm by pressing

*Since writing the above I have read that Stiles and M'Donald quote a case of Dorner's, namely, that of a child who died of delayed chloroform poisoning, and *post mortem* there was found an enlarged thymus, along with hyperplasia of the lymphatic system. Stiles and M'Donald believed that the S. L. weakened the resistance of the organism to the toxic action of chloroform in this case.

on the recurrent laryngeal nerve. Any acute flexion of the head backwards would lessen the space between the vertebrae and manubrium, and might cause sudden symptoms.

In most of the cases of thymus enlargement the gland is broad and flat, but in some of them it is thick. Seydell quoted a fatality in which its thickness was 2 cm., and in Nettel's case, in which death occurred during local anaesthesia, the gland was from 1½ to 2 fingerbreadths in thickness: and it is obvious that in such cases any acute congestion or throwing back of the neck would cause serious pressure on the neighbouring structures, and embarrass respiration and circulation. An extensive thin gland would cause no pressure symptoms, and most of the glands in fatal anaesthetic cases appear to have been thin. It has been denied that pressure has anything to do with the cause of death, but in not a few cases the trachea has been found to be compressed by an enlarged thymus.

Pathology.

Gallatti, according to Ohlmacher, calls attention to a peculiarity of S. L. which is a factor of some importance in explaining some of the clinical phenomena—namely, the peculiar predisposition to oedema. This is shown by a pasty condition of the skin, by the tendency to eczema, and by oedema of the brain. Ohlmacher also believes that oedema of the lungs may occur. In several of the records of anaesthetic deaths I have found that oedema of lungs has been noted. Oedema of the lungs and brain has also been found in several of the non-anaesthetic cases.

Ohlmacher is "strongly disposed to the belief that a periodic increase of intracranial pressure on the exterior or interior of the brain or on both portions simultaneously, manifesting itself as a result of this tendency to oedema characteristic of S. L., is a direct provocative factor of such neuroses as spasm of the glottis, tetany, infantile eclampsia, epilepsy, and other various forms of sudden death incidental to the lymphatic state." This oedema, perhaps, is due to the anaemia.

There are two theories to account for sudden death. First, the pressure theory, and secondly, that which assumes death to be due to toxaemia. The first theory undoubtedly accounts for some of the deaths, and especially perhaps for some of the non-anaesthetic fatalities. Bronchoscopy has proved the existence of tracheal stenosis (Jackson). In the second theory lymphatism is regarded as the result of the action of lymphotoxins. Wynn points out that one of the most striking and constant changes he found in these cases occurred in connexion with the thyroid gland, and thyroid secretion is supposed to be competent to produce changes in lymphoid tissue. Wynn says that in all of his 20 cases:

> The thyroid gland was found to be abnormal; in 10 it was markedly enlarged; in the remainder the gland was normal or only slightly enlarged, but in all microscopic examinations shewed marked changes—namely, reduction or absence of the colloid substance with hyperplasia of the cells which grow into alveoli. On the contrary, microscopic examination of the thymus gland simply shows hyperplasia.

Occasionally the thymus gland is found to be fatty. Wiesel believes none of the theories advanced, but asserts that "the hypoplasia of the chromaffin system (that is, adrenal tissue) associated with status thymicus will explain, for chromaffin cells perform an important physiological function by a secretion which supports blood pressure and influences the tonicity of the vessel walls and cardiac muscles. When, therefore, a substance which influences the function of the heart and regulates blood pressure is absent or diminished in quantity, excessive fluctuations in the blood pressure mechanism may cause death from atony and dilatation of the heart and vessels, intestinal hyperaemia and cerebral anaemia, which have all been noted in all the cases of sudden death from S. L. in literature."

Choice of Anaesthetic.

In view of the large proportion of cases in which death has occurred during or after the administration of chloroform, it is evident that, instead of chloroform, whenever possible ether should be chosen, even for the youngest patients, and especially for minor operations. If ether be inadvisable, a mixture of chloroform and ether should be administered. Because of the possibility of pressure caused by congestion of the thymus and neighbouring parts if ether be administered by the closed method, it is better that the inhalation should be by the open method.

In exophthalmic goître, if the operation be for removal of a goître in Graves's disease, local anaesthesia is perhaps best, aided by a previous injection of $\frac{1}{3}$ grain of morphine combined with $\frac{1}{100}$ grain of hyoscine or atropine. If an inhalation anaesthetic be necessary, it should also be preceded by a similar injection half an hour beforehand, and ether should be given by the open method.

In any case in which chloroform is to be administered and I believe that S. L. is present I give an injection—if possible half an hour beforehand—of 5 minims of strychnine added to 1 minim of atropine, and repeat the dose if necessary during the operation.

Type of Anaesthesia.

Little anaesthetic is usually needed to produce anaesthesia, and when once tolerance is established an ordinary dose comparatively quickly brings about deep anaesthesia. The pupils often are larger than usual, and tend to dilate quickly during shock or deep anaesthesia.

These patients do not seem to react to stimulation by ether as do normal patients, their respiration being comparatively slow; and if it be not much obstructed by the presence of adenoids and tonsils, it is, as a rule, much shallower than usual. The pulse is often comparatively slow (for example, the pulse of a child aged 5 was 70 per minute) and its tension is low, while the colour is paler than that of normal patients.

Prophylactic Treatment.

It is interesting to note that, according to Jackson, seven cases of thymic asthma have been cured by thymectomy.

Friedländer reports one case of S. L. with enlargement of the thymus gland that had yielded to treatment with the Roentgen ray after failure of other measures. Such curative treatment of the patient is obviously impossible for us, but it is to be hoped that surgeons will in future be on the look-out for evidence of S. L. in their patients, and as far as possible try to improve their general condition before operation. If operation be not urgent and enlarged tonsils and adenoid growths be found in the naso-pharynx these should be removed, in order that the obstruction to respiration and to the aëration of the blood be removed and that the heart be given a chance of gaining strength.

Drugs which tone up the heart should be administered for a week beforehand. The dominant feature in these cases being lack of tone in the circulatory system, cardiac and vascular tonics are strongly indicated.

If chloroform or a mixture must be administered, the inclined posture with the head low should be used.

It is important to avoid all struggling, because the heart is probably already dilated, and sudden changes of posture during the administration should be carefully refrained from. It is also advisable not to over-extend the patient's head in view of the possibility of compression of the vessels and nerves in the neck by an enlarged thymus gland.

Since several deaths have occurred during the sudden transition from light to deep anaesthesia, it is very important that the transition should be very gradual, especially if the anaesthetic be chloroform or a mixture containing it.

Treatment.

We have few or no records of cases of recovery from heart failure during anaesthesia in cases of S. L., because the condition has hitherto not been recognized beforehand so far as I know, save in the case of recovery in the patient whom I believed to be the subject of this condition.

Since death is due to cardiac failure, treatment must be most energetic and attention at once be given to the heart. Perhaps an injection of adrenalin into the organ should be made very early if the usual efforts fail. In children manual compression of the heart by one hand under the ribs and the other over it should at once be tried, and might possibly prove effective.

If the operation be an abdominal one and the abdomen be already opened when syncope occurs, direct massage of the heart by the subdiaphragmatic route, which is by far the most successful method, should at once be undertaken. If the abdomen be not opened, Sencert's advice, when speaking of cardiac massage, may be taken. He says "If

there is that terrible "white syncope" at the onset, from which recovery rarely occurs, there should be no hesitation in performing direct cardiac massage. He goes on to say that if we have to deal with "blue syncope" artificial respiration and all the usual means of resuscitation should be tried, but if, after five or six minutes of useless efforts, not a single pulsating or respiratory movement occurs, subdiaphragmatic massage should be done without delay.

In patients of the type we are dealing with, however, it is advisable greatly to shorten the period of five or six minutes devoted to useless effort. In dealing with a case I regarded as typical, I should feel inclined to advise cardiac massage within one or two minutes of the onset of syncope.

For notes of one of the cases of death after anaesthesia I am indebted to Dr. Tangye, House-Physician to the Children's Hospital, Birmingham.

I wish to acknowledge the use of several abstracts which have appeared in the *Journal of the American Medical Association* during the last two years.

Appended is the bibliography I have used, which is by no means complete and is not altogether confined to the anaesthetic aspect of the subject.

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A FATAL CASE OF STATUS LYMPHATICUS.*

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THE condition known as status lymphaticus being of great rarity, and one in which the administration of anaesthetics, or the performance of even trivial operations without them, is attended with grave risk to life, I venture to record a case which ended fatally during the administration of an anaesthetic by myself, and which at the time of its occurrence created more than usual interest in the lay press.

History.—The patient, L. H., was a young man, aged 21, 5 ft. 2 in. in height, obviously overgrown, and very thin, of a highly neurotic temperament. He suffered from a condition necessitating circumcision, and the fact of this had been on his mind for some time. He had suffered from diphtheria two years previously, and had just returned from a prolonged stay in Egypt. He was a great smoker of cigarettes. I learned afterwards that he was rather subject to faintness. His dentist, after the occurrence, wrote expressing regret that he had not known the patient was to have an anaesthetic, as he would have told us that frequently he had to place the patient on the floor, and resort to restorative measures, to recover him from faintness which supervened whenever any painful manipulation had to be done upon his teeth.

Operation.—The operation was fixed for 12 o'clock, and the patient had taken an ordinary breakfast at 8 a.m. He had remained in bed, but had been smoking and inhaling the smoke from cigarettes all the morning. On examination before the administration of the anaesthetic I found a small, rapid pulse, poor chest expansion, and considerable enlargement of the thyroid gland. There was very marked diffuse epigastric pulsation of the heart, but I could detect no adventitious sounds. The patient's condition made me decide not to give nitrous oxide and ether, and I selected CE_2 mixture, as being in my view the best anaesthetic in the circumstances. When I began the administration the patient became very agitated, asked for brandy, said he felt faint, and that he "could not stand it." I calmed and reassured him, and he then passed quietly and without a struggle under the influence of the anaesthetic. I noticed, however, that throughout the whole induction period the heart was beating very violently against the chest wall.

Result.—While the patient was still lightly under the anaesthetic the operation was begun. When the prepuce was stretched with forceps, he developed slight crowing inspiration and there was a tendency to draw up the legs. I therefore increased the percentage of the anaesthetic in the inspired air. At this moment the prepuce was severed, and simultaneously the patient turned an ashen colour, stopped breathing, and his pupils dilated. I immediately stopped the administration, asked the operator to compress the lower ribs and restore the respiration, and I performed rhythmic tongue traction and gave nitrate of amyl vapour meanwhile. This treatment quickly restored the patient, and I asked the surgeon to hurry through with the operation, saying that I did not wish to give any more of the anaesthetic, and I accordingly laid aside the inhaler. The parts were rapidly swabbed and a stitch was passed, when again the same symptoms of heart failure returned. All the usual restorative methods were resorted to, but unfortunately they all proved unavailing, and the patient was obviously dead. Artificial respiration was kept up for forty-five minutes, with skin frictions, mustard over the heart, acupuncture, hot-water bottles, amyl nitrate, and ammonia to the nostrils. I may add that when the patient "fainted" on the second occasion I adopted the advice of Dr. Leonard Hill, and for a moment sat the patient up and exerted pressure upwards in the epigastrium, with a view to relieving any engorgement of the right heart that might be present, by encouraging the patient to bleed into his splanchnic area.

Autopsy.—On *post-mortem* examination, made the next day, the following condition was discovered: The patient was tall, thin, and of sallow complexion, and dark hair. The head was doliche-cephalic in form, the palate high-arched. The tonsils not much enlarged. The air passages were clear, the lungs normal, and giving on section no odour of anaesthetic. The thyroid gland was enlarged, and showed degenerative changes. The thymus gland was persistent, and weighed 24 grams; it extended downwards towards the pericardium. The heart was dilated, with thin, flabby walls, showing on microscopic examination considerable fatty degeneration of the muscle fibres. The spleen was greatly enlarged, and there was a supernumerary spleen; both showed on section very great overgrowth of the follicles and connective tissue. In the intestines the Peyer's patches and solitary follicles were excessively developed. The mesenteric glands were all enlarged.

REMARKS.

In reviewing this case I am unable to find any detail of the administration I should alter if I could have the opportunity of giving the patient an anaesthetic again; unhappily this is not possible, and I only hope to learn from the collective experience of the Society how in future I might improve on the methods I adopted. To err is human, and it is only by being told of our mistakes that we can expect to mend them, for we all do what we believe to be best at the time. I trust, therefore, the discussion will bring out points for treatment of these dangerous and unsuspected cases.

One or two points impress themselves upon me. First, with regard to the previous preparation of the patient, I think it is very important not to rush this type of patient into an operation; I believe it would be better to send him into a nursing home for two or three days beforehand so that he might benefit by the moral stimulus of the environment and settle down to the necessary discipline.

In my opinion it is dangerous to allow patients to smoke before taking anaesthetics; there is no doubt that tobacco

* A paper read before the Society of Anaesthetists on November 1st, 1907.

depresses the heart, and would inhibit its capacity to recover from shock.

I think the hypodermic injection of morphine and atropine before the administration of the anaesthetic would be of great value, and I regret now that I did not adopt it in this case.

I believe the patient would probably have died even if the operation had been performed under local anaesthesia, whether hypodermically or intraspinally applied.

It is on record that these cases have died under ether, and, although ether by the open method suggests itself as an alternative to the CE_2 mixture I administered, I decided against it, owing to the length of time required to induce anaesthesia, and owing to the patient's very nervous and unamenable condition; I feel certain he would have been intolerant of ether.

It has been suggested to me that a dose of brandy given before the anaesthetic would have calmed the patient and strengthened his heart, and would have rendered his nervous system less susceptible to shock. I am inclined to endorse this view, and would value the opinion of the members of the Society upon the point. In my own opinion the heart, by its extreme agitation and excessive action, referred to above, tired itself out, and thus became incapable of withstanding shock, poisoned as it already was, in a measure, by nicotine.

In conclusion, I must thank Dr. Frankish for his kind permission to publish this case, Dr. B. H. Spilsbury for the *post-mortem* notes, and you, gentlemen, for your attention.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF DOUBLE DISLOCATION OF THE INNOMINATE BONES WITH FRACTURES OF THE LEGS.

THE following case is of interest as showing what grave injuries can be caused by a severe crush:

On the evening of Saturday, January 4th, a collision occurred near the mouth of the Thames between a steamer and a small sailing vessel. At the time of the collision the steamer was proceeding at the rate of nine knots per hour, and struck the sailing vessel end on. The master of the latter, seeing that a collision was imminent, summoned all hands on deck. The ship's cook, aged 17, was in the forecastle, was coming up the hatch, and partly out, when the collision occurred. He was caught by the legs and middle of body, and pinned down between the coaming of the hatch and the windlass, the latter being driven on to him by the force of the blow. He was dragged clear before the vessel sank, but died a few minutes later.

I saw the body about 10 p.m. that evening. Both legs were fractured below the knees. There were some abrasions on the face, and considerable bruising all over the abdomen, hips, loins, and scrotum, and blood had issued from the external urinary meatus. On moving the legs, by grasping the thighs separately, the corresponding innominate bones moved with them.

The *post-mortem* examination showed that both innominate bones had been torn away from the sacrum, leaving a gap over an inch broad, and extending deeply on each side. The two sides of the symphysis pubis were separated by half an inch. In the pelvic cavity there was some effused blood, the bladder empty, and the urethra ruptured. The small intestines and liver were contused, but the other organs were uninjured.

What had happened was this: The man was partly out of the narrow companion when he was caught—his legs between the back coaming of the companion hatch and the ladder, his pelvis between the heavy windlass and the front coaming. The force of the crush, acting from behind forwards, would squeeze and flatten the pelvis, drive the innominate bones apart, and thus cause the sacro-iliac synchondroses and the pubic symphysis to give way, these parts being in a young person obviously the points of least resistance.

J. S. WARRACK, M.A., M.D.Aberd., D.P.H.Camb.
Gravesend.

A RARE CASE OF SCURVY.[1]

A case of scurvy not having occurred in the navy for many years, except perhaps in polar expeditions, the following case, which came under my observation and treatment on board H.M.S. *King Alfred* on the China station, is of some interest at a time when much attention is being paid to the subject of dietetics, while the differences of opinion which exist as to the proper amount of carbohydrates, proteids, etc., which ought to be ingested, may be illuminated by description of the peculiar idiosyncrasy which undoubtedly gave rise to the symptoms from which the patient in this case suffered.

History.—The patient, a private marine, aged 23, presented himself complaining of much soreness of the mouth with a tendency to bleeding from the gums, and also of lumbar pain and weakness. He had always been healthy till quite recently. He had lived in the country till 16 years of age, when he entered the Royal Marines. As a boy in the country he lived entirely on milk, cheese, and bread. He had an extreme distaste for meat in any form, and a rooted objection to vegetables and fruit. Whilst serving on this station, where he has been for about eighteen months, his principal food consisted of bread and butter and cocoa; he very rarely touched meat and never used the ration of potatoes supplied. He occasionally supplemented his diet by cheese and sardines procured from the canteen.

State on Examination.—He was sallow and cachectic-looking in appearance, and his gums were purple in colour, especially at the edges; they rose up between and around the teeth, and showed a tendency to bleed. The breath was offensive. Both legs were covered with petechial spots, and the left knee was somewhat swollen and bruised-looking, although there was no history of injury.

Progress.—In a few days an ecchymosis made its appearance over the left knee, and later on the neighbourhood of the right knee was affected in a similar way, and subsequently the left instep was affected. He also had some slight epistaxis. His temperature for fifteen days, during which time he was confined to bed, ranged between 99° and 102°.

Treatment and Result.—A microscopic examination of his blood revealed nothing abnormal, and a blood count was also practically normal. He was confined to bed at first, and a liberal diet of fresh vegetables, fruit, and lime-juice insisted upon. Fresh meat was also employed in small quantities. At first he had some difficulty in taking this diet, more especially the vegetables and fruit, but he gradually came to tolerate them, and now, convinced of its efficacy, he consumes regularly a fair amount of vegetable food. Under this dieting his condition rapidly improved, the condition of the mouth became normal, the petechial spots and patches of ecchymosis disappeared, and he became less sallow and cachectic-like in appearance. He was discharged to duty after twenty-one days' treatment.

REMARKS.—I am convinced that this was a case of true scurvy, and not a case of purpura, from the condition of the mouth, from the history of the patient's mode of dieting, and from the marked beneficial results of a liberal vegetable diet.

JOSEPH CHAMBERS, B.A., M.B., B.Ch.Dubl.,
Fleet Surgeon, R.N.

FORMALDEHYDE IN ALOPECIA AREATA.

I WAS consulted, a little while back, by a young girl who had a circular bald patch of about 3 in. in diameter on the scalp at the side of the occiput. The patch was perfectly hairless, smooth, and shining.

The treatment consisted in painting it with a 20 per cent. solution of formaldehyde. This was done every day for the first week or two, until signs of inflammatory reaction appeared. The treatment was then suspended, and a sedative ointment applied. When the inflammation subsided the formaldehyde was again continued, stopping the application as soon as inflammatory trouble appeared. This routine of treatment was persevered in for about six or nine months. About this time a growth of hair made its appearance, continued to grow, and in every way corresponded with the surrounding hair.

I have seen the patient recently—twelve months after treatment—and the growth of hair is perfect.

I have looked up the medical books and literature on the subject of alopecia areata, and find no mention of formaldehyde in the treatment of this—very often—intractable and difficult disease. The treatment by formaldehyde has proved successful in my hands.

Abertillery. J. J. MCINERNEY, L.R.C.P. and S.I.

[1] Forwarded by the Director-General of the Medical Department of the Royal Navy.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROCHDALE INFIRMARY.

THREE CASES OF RUPTURED APPENDIX ABSCESS.

(Reported by D. Richmond, M.D. and C.M., Honorary Surgeon.)

The patient in the first of these cases was a boy aged 17, who for some months had had repeated brief attacks of pain in the right iliac fossa. One such attack occurring a fortnight before he came under medical observation lasted several days. The attack which brought him under notice began while he was at work, but Dr. Joss, who first saw him, was not called in for twenty-four hours. He found his temperature 103° F., pulse rapid, and the region of the appendix markedly painful. Operative treatment being refused, palliative measures were adopted for two days, during which all went apparently well. On the third day the abdomen was found tense, the pulse quick, the temperature low, and the pain almost gone. The tongue was dry, and there was the usual anxious look of general peritonitis. The parents then agreed to his removal to the infirmary for operation, the opinion having been formed at a consultation with Dr. Joss that the appendix had ruptured.

Operation.—With Dr. Joss assisting, I made the usual incision for removal of the appendix. The whole parts were tense and inflamed, so that the transversalis muscle had to be sacrificed. On getting through, a large quantity of foul-smelling pus was evacuated, bowels, omentum, and pus all appearing at the same time. I felt carefully in the neighbourhood of the incision for limiting adhesions, but could find none. The appendix was found bound down by adhesions in the bottom of the wound. It was removed, and with dry sponges as much pus as possible cleared out. It seemed to come welling up from all directions, especially from the region of the right kidney and from the pelvis. Not being satisfied that I had got anything like all the pus away, a counter-opening was made in the left side, and here again was found large quantities of thin pus, welling up from all sides. This was again mopped out with dry sponges and a 1 in. diameter drainage tube inserted in the left side down to the bottom of the pelvis, meeting another passed from the original wound in the right side. A smaller tube was passed towards the right kidney region from the right side. The whole was surrounded with gauze, and covered with sterilized wood-wool, allowing all wounds to drain freely. There was a good deal of shock following the operation, but it was overcome by the use of normal saline injections, heat, etc. After the shock was over, the head of the bed was raised, and the patient supported on bed rests and pillows, to favour the gravitation of the pus, etc., down towards the pelvis.

Progress.—For forty-eight hours the drainage was left to itself, changing the dressings as soon as oozing showed through. After then the tubes were syringed through with normal saline solution from right to left and vice versa until the fluid ran clear. At the end of a week the left tube was removed and had not to be replaced, but it was nearly a month before the right pelvic tube could be dispensed with; the upper right tube was replaced by gauze on the fourth day.

Result.—The pulse and temperature varied for the first week, but after then there was no cause for anxiety. The diet was kept liquid for a fortnight, when he was put on ordinary light diet. The lad was altogether thirty-seven days in hospital, and made an excellent recovery.

The second case was also a lad aged 17, who had been ill for three days before he came under observation. I was then called in because the pain, which had almost subsided the night previously, had again become acute, and vomiting had set in.

State on Examination.—The liver dullness was gone. The abdomen generally painful to the touch and tense, but more so in the right iliac region. The temperature was 97.6° F., the pulse 130, and respirations 28 and shallow in character. A ruptured appendix having been diagnosed, he was removed to the infirmary, one and a half miles distant.

Operation.—The condition was very similar to that found in the previous case, only the pus was thinner and more foul smelling, in fact very faecal. On searching for the appendix I found it bound down about the middle line over the sacrum. It was dislodged and removed, and the pus mopped out as far as possible. Following the practice adopted in the previous case, ten days before, I opened the left side and drained with large rubber tubes.

Progress.—The rubber tubes were changed for glass tubes at the end of forty-eight hours, and the latter passed to the bottom of the pelvic cavity. These were washed through with normal saline, as in the other case.

Result.—It was nearly three weeks before the left tube could be dispensed with in this case, but in the end the patient made an excellent recovery, and was able to leave hospital at the end of six weeks.

The third patient was a mechanic, aged 29. He had been ill five days, and for the last three had had faecal vomiting. A diagnosis of general peritonitis due to ruptured appendix abscess was made.

Operation.—The procedure adopted was similar to that in the other two, but in addition to the large quantity of pus it was found that almost ¾ lb. weight of omentum had become involved in the wound and was gangrenous; this was removed as well as the appendix. The general treatment was similar to that of the other two cases, but the patient only lived about eighteen hours after the operation.

Remarks.—From these cases one would conclude:—(1) That if there is a sudden cessation of the pain in a case of appendicitis operation is imperative. (2) Though a large quantity of pus may have got into the general abdominal cavity thorough drainage will remove it. (3) It is not necessary to wash the cavity, dry mopping serving a more useful purpose.

I desire to acknowledge the valuable assistance I received in the treatment of these cases from the house-surgeons, Messrs. M. M. Goldfoot and I. Cuthbertson Walker.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Dr. James Ritchie, President, in the Chair.

Wednesday, January 15th, 1908.

Operations for Appendicitis.

Mr. J. W. Dowden, in a paper containing deductions from one hundred consecutive operations for appendicitis, expressed an opinion that the disease arose from unclean conditions of the mouth or tonsils. During acute attacks it was not possible to be certain of the precise condition of the appendix or estimate the exact risk of complications. Of his 100 operations, 82 were on acute cases, 52 being males and 30 females. Of 18 "interval operations," 14 were males and 4 females. Sixteen deaths followed operation in the acute cases, but no death occurred in the "interval" cases. A further analysis of the acute cases showed that 50 patients were between the ages of 16 and 30. Of those 9 died. Sixteen were over 30, of whom 1 died. Sixteen were under 16 years of age, and of those 6 died. Of the total, suppuration was present in 58, with a mortality of 14. At present the only logical treatment of the disease was removal of the appendix at the earliest possible moment. If this were done, the death-rate would be very much reduced. In cases where surgical aid could not be at once obtained the patient should be put on starvation treatment with saline enemeta for the first twenty-four hours. Locally, hot or cold applications might be used. Morphine should not be given. When operation was undertaken within twenty-four hours of the onset of symptoms, the death-rate was probably only ½ per cent.

Mr. Cotterill did not advocate immediate operation in all cases; but the appendix should be removed before a second attack could develop. If a case was seen within twenty-four hours of the onset of symptoms immediate operation gave the best result. If not, then it was best to wait for the "interval period"; but if after two or three days no improvement showed, an operation was necessary.

Mr. McGillivray held that if after three weeks from the subsidence of an acute attack the patient felt quite well, an operation was unnecessary in the case of persons living within reach of surgical aid.

Dr. Affleck thought that every case must be treated on its merits. Nature cured many cases; the disease was not entirely a surgical one.

Mr. Caird said that in seven years he had operated on 117 acute cases, that is, cases in which pus was found free in the peritoneal cavity. Of these, only 17 died, a result probably due to the fact that he secured free drainage. In 174 operations on "interval cases" within the same period the mortality was *nil*.

Mr. Stiles would operate at once if the case was seen

early. The difficult cases were those seen about the third or fourth day. When in doubt he operated. Within two years he had operated on 152 cases, of whom 52 were acute, and of those 6 died. The improved results in the treatment of fulminating appendicitis he attributed to the substitution of ether for chloroform as an anaesthetic, to drainage of the peritoneal cavity instead of washing or swabbing it out, to placing the patient in the sitting posture, and to the introduction of large quantities of saline solution into the rectum. In cases which had gone on to abscess formation he had recently noted a physical sign, namely, the presence of fine crepitations on palpating the right iliac fossa.

Mr. ALEXIS THOMSON believed in operation if the case was seen within twenty-four hours of the onset of symptoms. The goal to be aimed at was the further reduction of the present death-rate in acute types.

Dr. MCCALLUM held that chloroform should not be given to children or young adults while being operated on for acute appendicitis, or for any true acute infective condition.

Dr. GULLAND did not believe in the necessity for operation in all cases. Recurrence could often be avoided by proper attention to habits, diet, etc. If a second attack occurred, then he approved of removal of the appendix. In his opinion surgeons did not pay sufficient attention to examinations of the blood.

The PRESIDENT thought the divergence of views between surgeons and physicians might be accounted for in part by the fact that the latter saw the mild cases, and the former the severer ones.

THE OPTIC NERVE AND INTRACRANIAL TUMOUR.

Dr. R. A. FLEMING gave a lantern demonstration illustrating changes in the optic nerve in cases of intracranial tumours. The neuroglia cells underwent marked hypertrophy and proliferation. This was best seen in the orbital part of the optic nerves; it was the neuroglia cells next to the pia mater sheath which presented the greatest degree of hypertrophy. A similar condition was found in the brain in the neighbourhood of the tumour, but the changes were slight or absent in the optic tracts. A toxin was the causal factor in their development.

EXHIBITION OF CASES.

The following were among the cases shown:

Dr. R. A. FLEMING: Spastic diplegia of infantile origin. The patient's movements were athetoid in character, most marked in the left arm and right leg. The muscles were hypertrophied, especially those of the neck. The cause of the condition was either meningitis or meningomyelitis.

Mr. CAIRD: (1) A patient after removal of half the tongue for an epithelioma. The operation was performed under cocaine. The patient could speak well a few hours after operation. The cervical glands were subsequently dissected out, and showed no malignant changes. There had developed recently an enlargement of the submaxillary gland. (2) A patient with recurrence four years after enterectomy for malignant stricture of the colon. The recurrence had not taken place at the original site, but in other abdominal organs.

Mr. ALEXIS THOMSON: A case, after osteoplastic amputation through the middle of the leg, in which a portion of the tibia was retained in the anterior flap and brought into control with the sawn section.

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

Subphrenic Abscess.

At a meeting on January 14th, Mr. WARRINGTON HAWARD (President) in the chair, Mr. H. L. BARNARD, in a paper on some surgical aspects of subphrenic abscess, analysed 76 cases from the records of the London Hospital. These included all collections of pus in contact with the under surface of the diaphragm, whether originally intrahepatic or not. Twenty-one of the patients were under his own care. For correct diagnosis and proper treatment it was essential to have clear ideas of the anatomical varieties of subphrenic abscesses; the subdiaphragmatic space might be divided into six areas, of which four were intraperitoneal. The falciform and coronary ligaments formed the chief elements of the subdivision; thus there were anterior and posterior right and an anterior left intraperitoneal subphrenic spaces; the left posterior intraperitoneal was the lesser sac. Of the extraperitoneal, one was between the layers of the coronary ligament and the other lay in the retrosplenic region. In association with the right anterior intraperitoneal space, the subhepatic fossa or space was often the seat of collections of pus, and the appendix was responsible for most of the abscesses in this situation, just as was the perforation of gastric ulcer for the infection of the left anterior space. With regard to etiology in general, gastric ulcer was responsible for one-third of the whole number of cases, the appendix for one-sixth, hepatic abscess for one-sixth, and all the remaining numerous causes for the other third. As to age periods, the highest number fell in the third decade, but the fourth was not far behind; 43 were males and 33 females. Spontaneous rupture occurred in 23 of the 76 cases; 4 into a bronchus, 2 into the right pleura, 3 into the left, 1 into the general peritoneal cavity, 8 into the stomach, 1 into the intestine, 2 into the colon, and 2 upon the surface, near the umbilicus and in the right hypochondrium respectively. In 12 cases only were the bacterial contents noted; the *B. coli* was found in 3; *Staphylococcus aureus* in 2; streptococcus, pneumococcus, *B. pyocyaneus*, and *B. typhosus* in 1 each; 3 were sterile. Of the 76 cases, 36, or 47 per cent., died; of 12 not operated upon, all died, and if these were eliminated the figures worked out at 37 per cent. The author, after very careful consideration, considered that all but 12 might have been saved in "ideal" circumstances, and deduced an unavoidable mortality of 16 per cent. To illustrate the operative measures desirable for the various forms of abscess, patients were exhibited and the incisions demonstrated. In acute cases it was highly desirable to wait two or three days, even after diagnosis, in order that the inferior pleural angle might be obliterated; it was extremely dangerous to operate in the "diffuse" stage. The mortality of posterior operations was less than that of anterior, but the former was not always applicable. One point of importance in diagnosis was mentioned—namely, that, with pus in the right anterior intraperitoneal space, the liver was not pushed down so as to be recognizable below the rib margin, but was held up by adhesions.

Dr. DE HAVILLAND HALL hoped that he would have heard more as to differential diagnosis, and recalled the discussion on the subject at the Medical Society of London, when statistics were contributed from St. Thomas's and St. Mary's Hospitals and betrayed anomalous discrepancies; he wanted to know what Mr. Barnard had to say as to the diagnosis between subphrenic abscesses containing gas and pneumothorax; he thought the position of the heart important. After several others, including the PRESIDENT, had spoken, Mr. BARNARD, in reply, pointed out that time only had prevented his going into the questions of symptoms and diagnosis. With regard to the frequency of empyema, it was noted in 56 of the 76 cases; the temperature was as a rule low, but generally showed rises to 99° to 100° at intervals; leucocytosis was found in every case in which it was looked for, but varied from 11,000 to 50,000; in the hydatid cases, 2 (of 3) showed eosinophilia. The onset was of great importance in diagnosis. Subphrenic abscesses at the outset showed an "acute abdomen" complex; the heart was pushed or tilted up, but not displaced laterally, as in pleural distension; the occurrence of simple pleural effusion in association with subphrenic abscess was on a par with the simple hydrarthrosis seen with an infective focus in the end of a long bone, and might be regarded in the same light as oedema in general—namely, as a defensive bathing of the tissues threatened with invasion, by an antibacterial serum.

A CONSULAR report on the Argentine Republic puts the population of the country at about 5,000,000, but it appears to be increasing at an extremely rapid rate, owing chiefly to the remarkable influx of immigrants from Europe. Last year the number entering the country was the largest on record. It exceeded a quarter of a million persons, most of whom were Italians, though a number also came from Spain and France. The British immigrants numbered 1,600, most of them being skilled workmen or having a certain amount of capital. Buenos Aires has over a million inhabitants, and it is stated that the number of British subjects in the city probably does not fall far short of 20,000. The capital may be regarded as one of the healthiest in the world, according to the report, for its death-rate is only 11 per mille.

REVIEWS.

THE PATHOLOGY AND ETIOLOGY OF ACUTE POLIOMYELITIS.

THESE admirable anatomic-pathological researches on acute poliomyelitis and related nervous diseases in the Norwegian epidemics, 1903–1906,[1] have the merit of being very extensive, thorough, and reliable, so that the volume in which they are published is an addition to our knowledge of the pathology of acute poliomyelitis and related diseases. The authors, in the introductory chapter, refer to the fact that Scandinavian countries, and "perhaps also North America," are especially the home of certain diseases of the central nervous system—namely, acute poliomyelitis and cerebro-spinal meningitis. In these countries both diseases not infrequently occur in widespread epidemics. A very short account is given of previous epidemics of acute poliomyelitis, and this is followed by a description of the material and the methods employed for displaying the pathological changes. The importance of this research lies in the fact that the authors have in all their cases examined the whole nervous system. They justly remark that Wickman's great work, which appeared in 1905, so thoroughly dealt with a detailed segmental examination of the spinal cord that they found it unnecessary to do more than examine it at six to eight different levels.

Chapters II, III, and IV describe in full respectively the separate cases, the pathological anatomy and the etiology and pathogenesis of acute poliomyelitis. Chapter V gives a summary of the results of their researches, and to the more important of these we will now refer.

In Norway there occurred in the years 1903–6 a scattered series of local epidemics of acute poliomyelitis, which in the years 1905 and 1906 alone affected 1,053 persons. Herewith are reckoned also isolated cases of related nervous diseases, with localization in the central nervous system other than the anterior horns of the spinal cord.

The authors have had the opportunity of examining the material from 18 fatal cases of this epidemic and 1 other. These comprised 13 cases in the acute stage, including certain with acute bulbar paralysis, 4 cases of acute poliomyelitis (death occurring in the reparation stage), and 2 cases of encephalitis.

The *post-mortem* findings in other organs and structures than the central nervous system in the acute cases were negative. In the nervous system the same anatomical changes were found throughout, namely, a diffuse inflammatory infiltration around the vessels of the pia mater and throughout the spinal cord, both in the grey and white matter, but most marked in small areas of the spinal cord, and especially in the anterior grey horns. A similar inflammation, though usually not so intense, was found in the medulla and pons, particularly in the substantia reticularis and in the cranial nerve nuclei, and always in association with a similar acute inflammation in the pia mater, in fact, wherever the pia mater extends—for example, between the laminae of the cerebellum, into the fossae Sylvii and its numerous sulci and all the structures about the base of the brain, and up the sheaths of the vessels proceeding to the basal ganglia. In a series of cases the pial cell infiltration affected the convexities of the hemispheres, extending along the sheaths of the vessels into the cortical substance, most frequently in the gyri frontales and centrales.

In the cases which clinically corresponded to an acute bulbar paralysis the same findings were obtained, but the most intense inflammation occurred in the pons and bulb. The inflammatory cell infiltration consisted of "migrated lymphocytes, larger mononucleats, cell forms, and leucocytes." We venture to think that the lymphocytes are proliferated nuclei of the pial connective tissue, and the large mononuclears (plasma cells) are of endothelial origin; this infiltration around the vessels especially was associated with early and extensive degeneration of the ganglion cells and phagocytic action in the same by leucocytes.

In one of the two cases of encephalitis the inflammation was most intense in the cortex in the form of circumscribed encephalitic foci; there was also a diffused generalized inflammatory process of the whole cerebro-spinal axis, although in the cord below the cervical region it was for the most part limited to the soft membranes.

The authors consider it probable that many of the so-called cases of Landry's paralysis are none other than severe cases of the same nature as acute poliomyelitis, as are also some cases of transverse myelitis of infective origin. Again, their results show that the inflammatory change may be most pronounced in the brain and cause a polio-encephalitis, superior or inferior, according to the location of the most intense inflammation. The acute bulbar paralysis has already been referred to, but some cases of acute encephalitis must also be related to acute poliomyelitis

We have, in fact, in this epidemic various forms of an acute perivascular meningo-encephalo-myelitis starting in the pia mater, and spreading inwards to the cerebro-spinal axis along the course of the vessels; the effects manifested during life of this inflammatory process depend upon several conditions—namely, first, the seat of the most intense inflammation; secondly, the vascular distribution; and, thirdly, the obtrusiveness of the loss of function occasioned by the disease.

The onset of the disease and its epidemic character, as observed in Norway, point to an infectious cause. It is probably not, however, the same cause as in cerebro-spinal meningitis. Dr. Geirswold in 12 cases has demonstrated a diplococcus in the cerebro-spinal fluid withdrawn by lumbar puncture, and the authors similarly obtained a diplococcus in 3 cases. They were unable, however, after careful examination to find any organisms in sections of the cord. The distribution shows that probably the cerebro-spinal fluid contains the poisonous agent; although it is possible that it gains access to the central nervous system and spreads by way of the perivascular lymphatics. There may be a general blood infection. The fact that in the majority of cases the spinal cord, especially in its lower part, is most affected points to the alimentary canal as the source of the poison; in some cases it is the neck.

The cerebro-spinal fluid was neither turbid nor purriform. There was an intense hyperaemia of the vessels, but no signs of a meningitis with a macroscopic exudation. No microbes were found in the fatty tissue or connective tissue of the dura mater, as Farquhar Buzzard showed in a case of Landry's paralysis. In the nerve roots only an inconsiderable cell infiltration was found, which was dependent upon the infiltration of the pia arachnoid. The spinal ganglia were not affected, consequently the trophic centres for the sensory afferent system being unaffected the inflammatory change in the cord was insufficient to interfere with sensory conduction. The motor symptoms which are so obtrusive are explained by the fact that the vasa nuclearia of the bulb and the anterior horns are especially the seat of the inflammatory change, often so intense as to be haemorrhagic in character. The work is of great interest to the neurologist, and is well illustrated by coloured plates depicting especially the diffuse perivascular infiltration throughout the whole cerebro-spinal axis.

[1] *Pathologisch-Anatomische Untersuchungen über akute Poliomyelitis und verwandte Krankheiten von den Epidemien in Norwegen, 1903–1906.* Von Francis Horbitz and Olaf Scheel. Udgivet for Fridtjof Nansen's Fond. Christiania: J. Dybwad. (Imp. 8vo, pp. 220, mit 17 Tafeln und 11 Figuren in Text.)

THE HOUSING OF THE PEOPLE.

THE problem of how to house the workers in town and country has been pressing for solution for many years. In his manual, *Housing up to Date*,[2] Alderman THOMPSON brings the latest facts and figures of housing schemes and proposals into a handy form for reference. The book will be found very valuable to local authorities, to members of Parliament, and to all persons interested in this particular branch of social reform. Public opinion has been slowly—very slowly—forming on this subject, for, as far back as 1884, a Royal Commission, on which the King sat, was appointed to consider the housing of the working classes, and, under the presidency of Sir Charles Dilke, published an admirable report, which revealed shocking conditions of living both in town and country. Since then, as Alderman Thompson shows in an appendix, many Acts of Parliament and numberless schemes, societies, and

[2] *Housing up to Date* (companion volume to the *Housing Handbook*). By Alderman W. Thompson, Richmond, Surrey. Westminster: P. S. King and Son. 1907. (Demy 8vo, pp. 335. 3s. 6d.)

inquiries have been intermittently engaged in trying to remedy the evils of bad dwellings, but it is hardly too much to say that even now the reformers' efforts have not overtaken the social disease, and stronger legislation is hoped for in the approaching session of Parliament. The time for sentimental proposals has gone by long ago, and to-day the crying need is for some thorough and practical legislation to lessen overcrowding in towns and to provide, as a public duty, decent homes for the labourers in the country. In the early chapters of this book there is an account of the work hitherto accomplished under the Housing Act of 1890. Many slums have been cleared out and great town improvements have been made, but the people cleared out have not always been improved in the same degree as the area cleared. The reform of one slum has too often crowded the dwellers into another insanitary area. This is now partly remedied, but much still remains to be done. A very full account of many schemes in London and the provinces, their cost and results, makes the book interesting to the student of these matters. Rural housing is discussed in the sixth chapter, and here evidence is given to show how urgent is the need in the country for decent homes. The case, indeed, might have been made much stronger if all the available evidence had been fully collected as regards country overcrowding. Near Sheringham, a fashionable Norfolk seaside resort, a case is quoted of thirteen people sleeping in two small attics—parents and children from 25 years downwards. At Northrepps, the pretty village near Cromer, again, nine people slept in two small rooms! All over rural England similar scandalous cases can be found, and in the interests of morality and health there is urgent need for drastic legislation. The example of Ireland, where the sanitary authority can build houses for agricultural labourers, is cited as an instance of the line of action which might be followed in England. Then there are chapters on housing by private enterprise and co-operative societies, cheap cottages, town development, garden cities and garden villages—all full of interesting materials for study. There is also a useful summary of the methods and legislation adopted in other countries to meet the difficulty of giving the poor healthy homes, and to show how up to date the book is we may mention that the author has even given a summary of the Small Holdings Act, 1907. It is rather surprising that no mention is made of the provision in this Act giving powers to parish councils to erect houses on allotments of one acre and upwards. Wisely used this provision may go far to solve the housing problem in many villages. In conclusion, we may say that Alderman Thompson has shown a due appreciation of the relation of the housing question to the public health service, and by his references to infantile mortality, general death-rates, infectious diseases, and water supply, has indicated how closely this social reform is connected with sanitation. His book is too crowded with facts, figures, and details to be easy reading, but it will be found most valuable for reference.

THE ROENTGEN RAYS.

DR. KASSABIAN has been at great pains to say all that can at present authoritatively be said on the subject of which he treats. *Roentgen Rays and Electro-therapeutics*[3] is an elaborate work, which appears to leave no part of the ground untouched. On the one hand it deals with the elementary principles of electricity and magnetism, and on the other, in a particularly useful chapter, with the legal status of the *x* ray. The author concerns himself not so much with his own methods and results as with those of other workers, and special value attaches to the synopses of the methods employed by the leading exponents of Roentgen-therapy in America and Europe. The work, however, is written or edited mainly from the American point of view, the author being the director of the Roentgen-ray laboratory of the Philadelphia Hospital. To some extent its value for British workers is discounted by the fact that the methods and the apparatus differ considerably in the two countries. The American worker, for instance, is in the habit of using very large currents for which his coils are specially constructed, and he is able to obtain excellent skiagraphic results with very short exposures. It is doubtful, however, whether very short exposures are often of particular advantage, save, of course, in the region of the chest. Dr. Kassabian states that he obtained fair skiagraphs of the chest of one patient in exposures of from two to four seconds without the use of an intensifying screen, and when such a screen was used he was able further to reduce the exposures, and even obtained a fair result in half a second. In both series of cases a Wehnelt break was used, the voltage of the current to the primary coil during exposure was 25 to 40, and the ampèrage 15 to 20, the anode was 60 cm. from the plate, and the self-regulating tube was of high vacuum. Dr. Kassabian also claims to have skiagraphed successfully a blood-clot in the brain. In one case he found what he thought was a "shadow" of the thrombotic area in the left lenticulo-striate region, and this was confirmed in the *post-mortem* examination. His habit in cerebral cases is to take two skiagraphs of suspected conditions and apply to the negatives obtained the principles of stereo-skiagraphy. He says that the superimposition of the two views thus derived results in a clear-cut picture of the part under investigation, which is not easily obtainable otherwise on account of the lightness of the shadow in skiagraphs of brain tissue. The sections dealing with radium and phototherapy, and with the therapeutic value of the *x* rays in cutaneous affections and malignant growths, add to the value of a most interesting as well as encyclopaedic book.

The first issue of a little annual, which its editor, Dr. ERNST SOMMER of Zurich, describes as a traveller knocking at every medical man's door, comes to hand in the shape of the *Röntgen Kalender* for 1908.[4] It contains a series of articles from the pens of German experts covering such subjects as the *x*-ray tube, the theory and method of orthodiagraphy, and the application of the rays in skin diseases and in dentistry. In the pardonably enthusiastic chapter in which the editor discusses Roentgenology in prospect and in retrospect, he points out that the therapeutical application of the *x* rays is leaving the stage of empiricism and becoming an exact science. He goes on to suggest that a triumph of the future will lie in the production of rays of greater penetrative power, which may be of value in deep-seated diseases. Of the other chapters, that by Holzknecht, whose name is associated with the chromoradiometer, the earliest apparatus for measuring the output of *x* rays from the tube, is most valuable. He gives particulars of the treatment he has found most serviceable in various diseases. In inoperable carcinoma he says that there exists no instance of cure, but the *x* rays afford a means for the prompt alleviation of pain. His dosage in cases of leukaemia is 4 Holzknecht units, in lupus vulgaris he makes an application of 3 H. when preparatory to Finsen treatment; otherwise 4 H. Although the diary pages give the book an appearance of impermanence, this is not borne out by the text, and we cordially wish the *Röntgen-Kalender* many happy returns.

NEPHROPTOSIS AND INSANITY.

WE have received a pamphlet by Dr. C. W. SUCKLING of Birmingham with the somewhat high-sounding title, *Insanity Cured by a New Treatment*.[5] It contains brief and very incomplete accounts of twenty-one cases which presented various mental symptoms and also displacement of one or both kidneys. All of the cases underwent operation, and in every case, with one exception, the mental symptoms, we are told, entirely disappeared, in most cases within a few weeks, after fixation of the kidney (nephropexy) had been performed. Dr. Suckling gives the following symptoms as very common: Loss of memory, mental confusion, mental depression, melancholia, suicidal tendencies, homicidal impulses, morbid fears, and emotional disturbances, but it is evident that the term "insanity" is used by the author in a very elastic fashion; that is, if the fragmentary clinical descriptions given embody the main facts in each case. The existence of "mental depression," for example—obviously a term of

[3] *Roentgen Rays and Electro-therapeutics*. With chapters on Radium and Phototherapy. By Mihran Krikor Kassabian, M.D. Lippincott's New Medical Series. Philadelphia and London: J. B. Lippincott Company. (Med. 8vo, pp. 515, illustrations 245. 15s.)

[4] *Röntgen-Kalender*. Edited by Professor Dr med. Ernst Sommer. Leipzig: Otto Nemnich. 1908. (Dbl. fcap. 16mo, pp. 226, with 44 illustrations in text, and 23 drawings on 5 plates. M. 5.)

[5] *Insanity Cured by a New Treatment*. Details of Twenty-one Cases. By C. W. Suckling, M.D. Lond. Birmingham: Cornish Brothers, Limited. 1907. (2s.)

considerable latitude—is hardly sufficient to warrant the inclusion of cases in which this was the chief and almost the sole mental symptom in a *Casuistik* intended to support the impressive claims of the author. Nevertheless a certain though small proportion of the twenty-one patients appear to have been indubitably insane and to have recovered after fixation of the kidney. It seems, therefore, not improbable that in a certain number of cases dropped kidney does act in predisposed individuals as an *exciting* cause of insanity, either through the persistent effects of mechanical traction on blood vessels, nerves, and ureters, and pressure on viscera, or, as Dr. Suckling believes, through autointoxication from retained urine in the renal pond. This is only reasonable, and dropped kidney will thus fall into line with the many other bodily diseases or disorders assignable as contributory causes of insanity. This modest statement of the importance of nephroptosis in the etiology of insanity, however, is hardly that assigned to it by Dr. Suckling in his pamphlet. In this he states that he visited a large public asylum and there examined fifty of the inmates on the female side for dropped kidney. Of 50 women of all ages, examined standing up, 29 had one or both kidneys badly down, 17 right only down, 3 left only, and 9 both kidneys down, so that 50 per cent. were in this physically crippled condition. Dr. Suckling does not go so far as to assert that in his opinion the 29 patients of the 50 he examined were insane as the result of the kidney condition, nor does he explicitly suggest that a considerable percentage of the insane have become so as the result of prolapsed kidney, though this is certainly implied; but he affirms that "the insanity due to Bright's disease is of course well recognized. The insanity due to dropped kidney is curable, and will in the future also be well recognized." It is to be remembered that movable or dropped kidney is very much more common among women than among men. Thus, of the 667 cases collected by Kuttner, 524 were in women and only 83 in men, and similarly, of Dr. Suckling's cases, only 5 were men. If, then, dropped kidney were such a common cause of insanity as the application of Dr. Suckling's figures to statistics generally would imply, one would reasonably expect to find the proportion of occurring cases of female insanity to the general female population considerably greater than that of male-occurring insanity to the male population. This is, however, not the case, the ratio of first admissions to population for 1905 being, males 5.38 and females 5.05 per 10,000. As we have already said, it is quite possible that dropped kidney may be a contributory factor in the causation of insanity, but whether and how far this is so Dr. Suckling's pamphlet does not make clear. Certainly there is nothing in what we have read to justify the following: "The evidence which I have since collected on the matter from many sources enables me to predict that *my theory of toxaemia*, which I advance as the factor of insanity, headaches, neurasthenia, etc., will certainly be proved and accepted in the future, just as the connexion between nephroptosis or dropped kidney and insanity is now *undoubtedly proved by my cases*."

This hyperbolic utterance is a quotation from another pamphlet of Dr. Suckling's,[6] containing brief and more or less pertinent excerpts from the published works of various writers, some of whom may not be quite prepared to accept Dr. Suckling's prophecy. In any case, it appears to us that the case for dislocated kidney cannot be proved by means of dislocated quotations.

PREPARATION FOR OPERATION.

MR. EDWARD HARRISON, in his *Modern Methods for securing Surgical Asepsis*,[7] gives a very good description of the details of a strict aseptic technique. He first describes the arrangements in the theatre and its anterooms, and the various fixtures and apparatus for the provision of sterilized water, dressings, and utensils. In the second chapter, on sterilization, the author speaks well of the air-pump as an addition to the steam sterilizer, as it provides for rapid penetration of steam to the dressings and rapid drying after sterilization. The position is taken up that it is impossible to ensure sterility of the hands, and that rubber gloves should be worn for all cases; this opinion is held with practical unanimity by surgeons to day. Mr. Harrison also holds that "it is imperative that the operator and assistant should wear masks," and he is able to produce an illustration of a nurse so equipped, which he describes as picturesque. There is, perhaps, room for difference of opinion as to the picturesqueness of the mask; but at any rate it is advisable to wear it unless the operator is equal to imposing on himself the rule of silence during the operation, and it is certainly necessary if he is suffering from catarrh. Chapter III gives a good account of the preparation of the patient, particularly for operations on the stomach and intestines, but it is marred by many errors; for example, "squeesed," "lodoform," "umbelious," on one page (55). From this the author passes to the theatre and the wards, and describes the apparatus in use in each, and particularly in the case of the latter makes many useful suggestions for the practice of a more rigid asepsis than is at present usual. Quite the most useful chapter is the last, on aseptic operations in private. It is a subject on which little has been written for the guidance of nurses, and yet one of very great importance. The training of nurses in this respect varies enormously. The methods laid down by Mr. Harrison are thorough, and have the support of the best authorities; his convictions are strong and his teaching uncompromising. One paragraph in Chapter I will appeal to the irreverent. Speaking of the theatre, it is said that "flies are of course a great source of danger, and should one gain access means should be at once taken to expel it." The sentence gives an opportunity to the caricaturist too good to be lost; he might entitle his picture, "Straining at a Gnat."

DR. FOWLER'S book on *The Operating Room and the Patient*[8] contains in its present form much more than its title implies. The second edition, which follows the original issue after a brief interval, includes several new chapters, which deal with after-treatment and the complications and disturbances of wounds. These have been carefully prepared, and seem likely to prove useful, as the author hopes, to the general practitioner to whom is entrusted, after operation, the charge of a surgical case.

It is difficult to point out any decided merit in Mr. UPCOTT'S small book on *Antiseptic Methods*.[9] It is a review of a subject the principles and practice of which are now fully dealt with in every book on elementary surgery. There seems to be no necessity to adapt any special book, as the author endeavours in this case, to the needs of private surgical nursing homes. The instructions on the technical details to be observed in the dressing of wounds and in assisting at operations are practical, though not very full; but, as the author acknowledges, such details may be modified according to the usages or requirements of different institutions.

CLINICAL SURGERY.

IN Mr. LOCKWOOD'S *Clinical Lectures and Addresses*,[10] here presented in a handy volume, a welcome opportunity is afforded of studying the dicta of a teacher who is well fitted, both by his wide experience and his correct methods of research, to throw much light on new and more or less obscure points in surgical work. This collection of papers, gathered from the columns of the BRITISH MEDICAL JOURNAL and the *Clinical Journal*, is arranged in thirteen chapters, of which three deal with the general principles of clinical investigation, and the rest with special subjects of modern surgery. The questions here discussed are mostly of practical interest, and as all that Mr. Lockwood writes on surgical matters is pleasant as well as profitable to read, this volume will, we are convinced, find many readers beyond the circle of those for

[6] *Movable or Dropped Kidney.* Extracts from published records, with notes by C. W Suckling, M.D.Lond. Birmingham: Cornish Brothers, Limited. 1907. (2s.)

[7] *Modern Methods for securing Surgical Asepsis.* By Edward Harrison, M.A., M.D., F.R.C.S. London: A. Brown and Sons. 1907. (Cr.8vo, pp. 142 illustrations 18+xiv. 3s. 6d.)

[8] *The Operating Room and the Patient.* By Russell S. Fowler, M.D., Professor of Surgery, Brooklyn Post-Graduate Medical School, etc. Second edition. Philadelphia and London: W. B. Saunders and Co. 1907. (Med. 8vo. pp. 284, 33 illustrations. 10s.)

[9] *Antiseptic Methods for Surgical Nurses and Dressers.* By Harold Upcott, F.R.C.S. London: Baillière, Tindall, and Cox. 1907. (Crown 8vo, pp. 59, 10 illustrations. 2s. 6d.)

[10] Oxford Medical Publications: *Clinical Lectures and Addresses on Surgery.* By C. B. Lockwood, F.R.C.S., Surgeon to St. Bartholomew's Hospital. London: Henry Frowde, and Hodder and Stoughton. 1907. (Cr. 8vo., pp. 284, 4 plates. 6s.)

whom its contents were first intended. Some of Mr. Lockwood's instructive and suggestive lectures bear either directly or indirectly on the absorbing question of cure of cancer. In two interesting chapters—one on cancer of the tongue, the other on mammary cancer—the reader is forced to consider the great importance, and indeed the absolute necessity, of a thorough practical knowledge on the part of the modern surgeon of the lymphatic system, the study of which, especially of the peripheral distribution of its glands and vessels, has hitherto been so much neglected in anatomical teaching. A radical or so-called complete operation for the removal of cancer would, as is shown in the case of the tongue, hardly fail to prove futile unless performed by one well acquainted with the anatomical rules for the distribution of the structural elements of this complicated system. The modern view as to the urgent necessity for very early as well as very extensive surgical action in the treatment of cancer is supported by Mr. Lockwood's well-founded belief that in organs such as the tongue and the mammary gland, which have no capsule, the interval of time between the onset of the primary growth and its spread into the neighbouring lymphatics is very short. Mr. Lockwood, who gives good reasons for his practice, deals very thoroughly with operable cancer, and in cases in which the disease has spread from the breast to the cervical glands would not, as a rule, hesitate to carry the dissection to the posterior triangle of the neck, such extension being regarded as not a very formidable undertaking for either patient or surgeon. In addition to these lectures on the all-important subject of cancer and its treatment, and to three others on interesting points of abdominal surgery, this series includes other papers on subjects of varied practical interest, such, for instance, as varicose veins, the differential diagnosis of scrotal swellings, and the immediate microscopical examination of new growths, which will be found most instructive records of earnest clinical work.

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(Continued from page 158.)

ANTIVIVISECTIONIST TESTIMONY.

Evidence of the Hon. Stephen Coleridge (continued).

MR. COLERIDGE, continuing his evidence, said he called the attention of the Home Office to Clause 9 of the Act, which provided the machinery whereby results might be collected and subsequently incorporated in the yearly report, and he said that his Committee hoped

that the public may, in the next report, be told what results in the way of benefit to mankind and the healing art have been achieved by all the torture that is continually being inflicted upon animals in the ever-increasing laboratories of this country.

That he wrote on December 8th, 1898. The answer was that it would have attention; but nothing further ever happened; the results had never been published in any report. It was not a very important matter, but in passing he just pointed it out. In July 15th, 1904, in Hansard he found that Dr. Shipman asked the Secretary of State for the Home Department:

Whether he can state in how many cases the licensed vivisector himself has been the only authority present at the operation whose duty it is to see that anaesthetics of sufficient power to prevent the animal feeling pain are administered?

Mr. Akers-Douglas replied that he had no information enabling him to answer this question. Surely, said the witness, the Home Office knew at how many experiments the Inspector had been present, and, consequently, at how many the vivisector himself was the only authority alluded to in that question; and, therefore, he thought that was an inadequate answer. On July 22nd, 1904, Dr. Shipman again asked the Secretary of State for the Home Department how many dogs were vivisected in University College during the year 1903? The answer was that the Home Secretary had no material from which he could answer this question. Therefore, said Mr. Coleridge, if he did not know how many dogs were vivisected in a particular laboratory, he must know nothing at all about what went on there. It was no doubt a perfectly true reply, but it seemed to the witness that he was in a position to get and ought to have got the information before replying. Sir Mackenzie Chalmers pointed out that there would be no return under the licence. As long as the animal was put under anaesthesia and killed before it recovered from the anaesthesia it would come in under the licence. There was nothing in the licence to limit the number of animals that could be experimented on in that way. The witness replied that he did not know. He had no idea what powers were given to the vivisectors. Asked further whether that was the Act itself, he said "I do not know." On July 15th, 1904, Dr. Shipman asked the Secretary of State for the Home Department, How many experiments had been performed at each place on the register during 1903, and whether he could ascertain how many separate experiments were performed on the same animal during the same period? Here, again, the answer was that there was no material upon which he could give any information. Of course, if he had answered this question he would have known about the brown dog having several wounds on it; but he did not. They knew that he did not know anything about that brown dog. The witness maintained that he ought to have known. The Home Office ought to know what happened to every dog that was vivisected. On October 6th, 1904, he wrote:

I desire very respectfully to inquire whether you yourself, or whether your predecessors in the office of Secretary of State have required from the licensees under the Act any guarantees of their humanity, and if so, what is and has been the nature of these guarantees?

The reply was:

I am directed by the Secretary of State to say that he has no doubt that you are acquainted with the duties imposed upon him (that is, the Home Secretary) by the Vivisection Act, and that he has every reason to believe that these duties are duly and faithfully performed by the Home Office.

There they had a statement of the duties imposed upon the Home Secretary by the Vivisection Act, and that they were duly and faithfully performed, not by him, but by the Home Office. So that in that letter the Home Office duly took upon itself the responsibility of fulfilling the duties put upon the Home Secretary by that Act. Asked by Sir Mackenzie Chalmers if he expected the Home Secretary to perform the functions of Inspector, he said of course not. That was his contention: that the Home Office officials were the real persons against whom he brought his indictment. In reply to further letters on the same subject, he said he received evasive answers. Mr. Coleridge suggested that if the Home Secretary did require guarantees of the humanity of vivisectors he would have said so. He therefore must come to the conclusion that such guarantees were not required; but though he did not require them he did not like to admit it in a letter that might be published. He would not go into the story of the brown dog and Certificate B, except to say that, in his opinion, as the two operations performed by Dr. Starling upon that dog were admittedly done under Certificate B, and as the words of the certificate told him that he was to destroy the dog immediately the object of the experiment had been obtained—and it was obtained by the second operation—he thought he did an illegal act in handing it over to Mr. Bayliss. It was his business to see it killed, and in his opinion the Act gave the animal a vested right to be destroyed painlessly as soon as the object had been attained of the experiment under Certificate B. He next charged the Home Office officials with putting forward annually a Parliamentary Return in which it was asserted, on the official authority of the Government Department, that not a single experiment in thousands inflicted on animals in Great Britain with its permission could be specified as entailing any pain at all, when all the while this plausible assertion was based upon no better evidence than the bare assertion of the vivisectors themselves, who were not expected to report themselves as cruel men. Down to a certain date the form of the return was:

Return showing number of experiments performed on living animals during the year 1903 under licences granted under the Act 39 and 40 Vict., cap. 77, distinguishing painless from painful experiments.

If that paper was supposed to distinguish between painful

and painless experiments, and one could find inside it no single experiment specified as painful, that was a statement to the public that there were none painful. Mr. Coleridge next charged the Home Office officials with placing Sir Victor Horsley year after year beyond the reach of the safeguard erected by the Act to protect animals from illegal treatment by licensees, by giving him permission to vivisect in private places, thereby placing him beyond the possibility of legal inspection, because Clause 10 of the Act of 1876 gives the inspector no right of entry into or inspection of any unregistered place. He wrote to the Home Secretary on July 25th, 1905, protesting against this; but, in spite of that protest, Sir Victor Horsley's permission to vivisect where he liked remained. Asked if it was a specific permission given to him in writing, or a licence or certificate of any kind, he said he did not know. It was simply a note at the foot at the return. On its being suggested that it was probably endorsed on his licence, he said he really did not know. In reply to Sir Mackenzie Chalmers, he said he did not know, as a fact, whether Sir Victor Horsley made use of it or not, or whether he asked for it for a special purpose. He was not attacking Sir Victor Horsley. He was attacking the Home Office for giving him permission. Whether he used it or not was a matter of indifference to him on this charge. In reply to Sir John MacFadyean, who asked if it was his charge that under no circumstances should it be permitted to be done, he said no vivisector should be placed beyond the reach of inspection, because the whole Act of 1876 definitely in its provisions implied that every vivisector was to be inspected, otherwise it would not have provided inspectors. Asked if the vivisector might not signify his entire readiness to be inspected in an unregistered place, if that would make any difference to his position, he replied that it certainly would. In reply to the Chairman, who asked if there was any special power in the Act given to the Home Office to permit this, he said yes, no doubt it was legal; it was all "may" in the Act. He did not think there was anything compulsory. He was not suggesting that it was outside the Act at all, but what was illuminating was that though this leave was given to Sir Victor Horsley for many years, and was maintained in spite of the witness's protest of July, 1905; he found that it was withdrawn on February 13th, 1906, just a month before the announcement of the Royal Commission in the newspapers; and it was very remarkable that, contemporaneously with the knowledge in the Home Office that there would be a Royal Commission, this leave was withdrawn from Sir Victor Horsley to vivisect where he liked and beyond the reach of inspection. Asked by Sir John McFadyean if they had withdrawn all similar leave to other vivisectors, he said he should think probably not. There were some, he thought, who had to do with inspecting grouse on a moor. He should have no objection to that. On its being put to him that if the Government had been in such a fright they would have withdrawn the whole of those permissions, he said he should think not. If they had not withdrawn the others, the assumption was that the one to Sir Victor Horsley was less defensible than the others in the public eye. Proceeding to another charge, he said that, although the officials of the Home Office must be aware that the report of the Royal Commission in 1876 contained this pregnant warning on page 17:

> It is not to be doubted that inhumanity may be found in persons of very high position as physiologists,

they apparently had made no inquiries, public or private, into the vital question of the character for humanity of the licensees to whom they had delivered over the animals to be vivisected, although the Act of 1876 placed upon the Home Secretary the tremendous responsibility of personally protecting animals from inhumanity. He had already cited correspondence showing the evasive replies given by the Home Office to proper questions. He now cited it to show that they must conclude that as a fact no guarantees of humanity were required by the Home Office. After referring to Mr. Thane's statement that he did not inquire about humanity, and quoting some evidence given before the former Royal Commission by Dr. Klein, who still held a certificate, he endeavoured to read a letter from Professor Huxley, who was a member of that Commission, but this was ruled out by the Chairman. Mr. Coleridge proceeded to cite a short passage out of an article by C. S. Myers, whom he described as a man of great distinction at Gonville and Caius College, Cambridge, a first-class man in both parts of the Natural Science Tripos, and the author of various articles in scientific journals, that the opinion of Dr. Klein, in which he said that he had no regard for the feelings of animals, did not expire in the year 1876, but was held by persons of distinction to this day. The Chairman said he could not see how that was relevant. Coming to his last charge, Mr. Coleridge accused the Home Office officials with having placed themselves in improper private confidential relations with a private society composed of supporters of vivisection entitled to no more consideration than the National Society composed of opponents of vivisection. Mr. Akers-Douglas had stated in 1903 that:

> No licence or certificate was granted except on the recommendation of an eminent medical man, such as the President of the College of Physicians or the President of the College of Surgeons, or without reference to the Society for the Propagation of Scientific Research.

Desiring to find out, when he saw this evidence, what this association really was, he could not find its address anywhere. He wrote in the air, and posted his letter "To the Secretary of the Association for the Advancement of Medicine by Research, London." The Post Office always found anybody, and he supposed they found him. The letter he wrote was as follows:

> Dear Sir,—In view of the inquiry now being made by the Royal Commission, I shall be much obliged if you will let me have a list of the members of your Association and the last yearly report, if you have one.

He wrote on December 24th, 1906. He got a reply from the Association for the Advancement of Medicine by Research from 135, Harley Street, W., December 29th, 1906, in this form:

> In reply to the Hon. Stephen Coleridge's letter of December 24th, the Honorary Secretary of the Association for the Advancement of Medicine by Research writes to say that he is unable to comply with the request contained in the letter.

The gentleman did not even sign his name. The witness looked up the address in the *Directory*, and found it was the house of Mr. Charles Edward Beevor, who, he deduced, was the Honorary Secretary of the Association for the Advancement of Medicine by Research. But he gave no information; he would not give him the yearly report, or tell him who anybody was. In reply to the Chairman, he said he supposed he was a doctor. The witness, therefore, prosecuted his researches to find out what that Association was. He looked up old files of the BRITISH MEDICAL JOURNAL, and he found in the number for April 1st, 1882, on page 476, that Sir William Jenner, at a meeting, concluded by proposing the following resolution:

> That, with the view of bringing the legitimate influence of the medical profession more effectively to bear on the promotion of those exact researches in physiology, pathology, and therapeutics, which are essential to sound progress in the healing art, an association be formed, to be called, "The Association for the Advancement of Medicine by Research."

Mr. Spottiswoode, then President of the Royal Society, moved also, at that same meeting apparently:

> That the Association consist of representative members of the medical profession and of other persons desirous of promoting the above objects.

That was how it was formed. In the BRITISH MEDICAL JOURNAL of April 22nd, on page 599, he found a letter from the Treasurer, who happened to be a Mr. Samuel Wilks. It was pointed out to the witness that all this history had very little to do with what the Society was now. Asked if it was the same Society that advised the Home Office, he replied in the affirmative. Mr. Coleridge went on to quote a letter from a member of the provisional committee of it when it was first started, which contained these words:

> The working physiologists [that, of course, he said, meant the vivisectors] of the three kingdoms have expressly stated that they do not desire (at least for the present) to attempt to abolish the Act, of which we are all ashamed, but to secure its being harmlessly administered. To speak with authority to public opinion and to bring effectual pressure upon officials needs other means than those which are suited to the arena of controversy.

Then the first report of the Council, dated April 29th, 1882, said that the first duty of the Association was "to promote those exact researches in physiology, pathology,

and therapeutics which are essential to sound progress in the art of healing, and to remove any hindrances which obstruct these researches." Subcommittees were appointed to report (1) on the present hindrances to research due to the working of the Vivisection Act; (2) to report on the best ways in which exact researches in medical science (that is, vivisection) could be encouraged: and on May 15th a £500 prize was offered for an essay on "The usefulness of vivisection as a method of scientific research, the conditions to be approved by the Association." The Chairman asked if all this was not rather beating the air, and said he thought it was taking up time unnecessarily to try to convince them that these gentlemen were all strongly in favour of vivisection—quite as strongly as the witness was against it. In reply to a remark by Sir Mackenzie Chalmers Mr. Coleridge said he wished to point out that it was a fact proved before the Commission that the application for licence were laid before that Association for the promotion of vivisection before they came to the Inspectors. Therefore the Inspectors received those applications under prejudice, as they had already been before the Association of Vivisectors before they reached the Inspector, who had to report upon them, and therefore it was put upon the Inspector. He called that most distinctly pressure brought to bear upon the Inspector. Having finished his charges, he wished to say in conclusion that he hoped he had shown the Commission that the Home Office officials had for thirty years betrayed the solemn trust placed upon them by Parliament. In reply to the Chairman he said he thought they had a right to kill animals, and that the duty was laid upon them in killing them to do so with as little accompanying pain as possible. In reply to further questions he put the alterations in the law proposed in his Bill under eleven headings.

The first alteration would be: (1) The animal during the experiment to be under an anaesthetic of the nature of a respirable drug or gas. After explaining that it was an amending Act, he said the second heading was: (2) The animal to be killed before recovering from the anaesthetic. That was really reinstating the Act without Certificate B. The third, and that was really the important thing, was: (3) The Inspector to be present throughout each physiological experiment. He did not mean experiments in the nature of inoculation. Provided that in the case of an "experiment not calculated to give pain from the act or operation by means of which the experiment is initiated." By that he meant an inoculation experiment. These three provisions should not apply, but in lieu thereof: (1) Directly the animal felt pain it must be placed and kept under an anaesthetic, as above mentioned, or killed. (2) The Inspector should frequently make surprise visits to all places where such experiments were taking place. The idea there was that the Inspector should be present at all serious physiological operation experiments, but he was not necessarily present at inoculation experiments, which might of course last for weeks or months; but his duty would be to go at frequent intervals and inspect the condition of the animals which had been inoculated, and if they were in serious pain it would be his duty to order them to be killed. [In reply to the Chairman, who said he understood that none of the three heads given were to apply to inoculation experiments, the witness said that was so, but in lieu of them there was this further direction, that the inspector was often to make visits and have them killed if they were in severe suffering.] The next condition was (4) the total abolition of the use of curare; the next one was (5) no application of matter to the eye of an animal for the purpose of observation through the conjunctival membrane; (6) abolition of certificates, and experiments depending thereon, of course. The rest of the Act stood. (7) Licences to be granted only for one experiment, or for one series of not more than six connected and consecutive experiments, and must specify the time and place at which such experiments are to be performed, and the nature of such experiments; (8) the licensee must make within seven days of completion of experiment a detailed chronological report in writing to the Secretary of State of the description, course, and result of the experiment, and is liable to penalties of £20 and £50 for first and subsequent failures to comply with these requirements within seven days; (9) that three copies of every licence granted by, and three copies of every report made to, the Secretary of State shall be deposited respectively in the Library of the House of Lords, the Library of the House of Commons, and such other places accessible to the public as the Secretary of State may determine. (10) In the appointment of inspectors and licensees special regard is to be paid to the applicant's reputation for humanity; and (11) prosecutions may be instituted at any time within two years of the offence without the assent of the Secretary of State, the prosecutor, however, being bound to deposit the sum of £50 as security for costs.

That was the Bill which he drafted, which his Society supported, and which had been before Parliament with some small alterations for several sessions. In reply to Colonel Lockwood, who asked if he held the opinion that if it was proved that certain operations led to discoveries to alleviate human suffering he would not object to them; or whether he objected to them altogether because he believed them to be immoral, the witness replied: Not at all. His objection to vivisection began and was centred in the question of pain. If an animal were placed under complete anaesthesia and destroyed before it recovered consciousness, personally he had no objection to that vivisection at all; and anything that might be discovered thereby would be to the benefit of humanity and welcomed by himself. He was not against the total abolition of vivisection, because in his opinion that would be the most certain way of preventing any possible torture to animals and saving them from all possible pain; but as it was the pain that he objected to, if the pain were really and truly eliminated from vivisection, he personally had no objection to it. In further evidence, Mr. Coleridge read the following letter from Sir Henry Ponsonby on behalf of the late Queen Victoria:

Windsor Castle, May 8th, 1889. Sir,—I duly laid all the documents forwarded by you before the Queen, who was much interested in the report of 1888. The object of your Society is to effect the total abolition of vivisection, by which, of course, is meant the removal of laws which sanction it. It would be impossible for the Queen to take any part in petitioning Parliament or herself to pass new laws, and therefore, while heartily sympathizing with your efforts, Her Majesty is compelled to decline the office of patron.—I am, Sir, your obedient servant, HENRY PONSONBY. The Secretary, the London Anti-vivisection Society, 32, Sackville Street, Piccadilly, W.

Asked by Colonel Lockwood how he could possibly arrive at getting a humane character for anybody excepting from an interested party, he said inquiries might be instituted about a man's character for humanity. He specified in his Bill that

a certificate recommending that the application be granted on account of the applicant's reputation for humanity, which must be signed by two or more of the following persons: That is to say, a Justice of the Peace, a minister of any religious denomination in the United Kingdom.

He thought that would be sufficient safeguard and would ease the public mind as to the humanity of the person who got a licence always provided that the Inspector was present at every vivisection.

(To be continued.)

Reports
ON
PLAGUE INVESTIGATIONS IN INDIA.

THE Advisory Committee appointed by the Secretary of State for India, the Royal Society, and the Lister Institute, acting in conjunction, to inquire into some of the problems concerning plague, has now presented a further report, which, like the first and second, is published in the *Journal of Hygiene*.[1] Analyses of the first and second reports were published in the BRITISH MEDICAL JOURNAL of October 20th, 1906, p. 1045 et seq., and July 20th, 1907, p. 155 et seq.

The present report is devoted to an account of the epidemiological observations of the Commission which were made in Bombay City, in four villages in Bombay Island, and in two villages in the Amritsar District of the Punjab. In all places the primary object of inquiry was the relationship of rat plague to human plague. Owing to the necessarily complex nature of the data, many of the important facts brought forward cannot be condensed into a short summary.

XXI.—DIGEST OF RECENT OBSERVATIONS ON THE EPIDEMIOLOGY OF PLAGUE.

This paper contains an abstract of the observations and opinions which have been published during the last ten or twelve years on the connexion between rat and human plague, the mode of infection, manner of spread, etc.

[1] Cambridge: The University Press: London: Cambridge University Press Warehouse; and H. K. Lewis, Gower Street; New York: G. P. Putnam's Sons; Leipzig: Brockhaus; Bombay and Calcutta: Macmillan and Co. Price 6s. net.

XXII.—EPIDEMIOLOGICAL OBSERVATIONS MADE IN BOMBAY CITY.

The Commission made an exhaustive inquiry into plague in rats and men in Bombay City over a period of sixteen months. The period dealt with in this report is the last twelve months of the whole investigation (October, 1905, to September, 1906). With the co-operation of Dr. J. A. Turner and his sanitary staff, more than 117,000 rats were collected and examined for plague infection in the laboratory at Parel; nearly 18,000 were found infected. At the same time, nearly all the cases of human plague (more than 10,000) in the city were inquired into with the view of ascertaining the probable mode and place of infection, etc. The density of both rat and human plague in Bombay was, however, so great that the Commission found themselves unable to draw any very definite conclusions with regard to these points, which were more satisfactorily investigated in the smaller village communities. The large numbers in Bombay, on the other hand, show the broad temporal and geographical relations between plague in rats and in man better than the smaller epidemics in limited communities.

By far the most abundant and important rodents in Bombay City are *Mus rattus* and *M. decumanus*. The habits and distribution of the two species differ, for while *M. decumanus* lives for the most part outside houses, in sewers, stables, etc., *M. rattus* is essentially a house rat and abounds in the most intimate relationship with the people. Both are subject to plague; but the percentage of *M. decumanus* (18.8 per cent.) found infected was twice as great as of *M. rattus* (9.5 per cent.) The authors point out, in this connexion, that the former species usually harbours twice as many fleas as the latter (for example, in April, 1907, an average of 13.9 fleas per live rat was found in 306 *M. decumanus* examined, as against 5.2 per rat on 1,911 *M. rattus*) while their susceptibility to plague experimentally transmitted by fleas is the same. The breeding season of both species was examined by recording the number of pregnant females and the number of young rats caught week by week; no correlation between the breeding season and epizootic plague was obtained.

Acute plague in both species of rat as well as in man occurs in Bombay City throughout the year; the rat epizootic appeared to begin simultaneously in many parts of the city, and no particular focus of origin could be ascertained for the epizootic or the epidemic. It is shown that the general intensity of rat plague corresponds to the intensity of human plague in the different sections of the city. Eight sections showed from 1.0 to 3.1 plague rats per building actually obtained, and a plague death-rate from 10.7 to 17.0 per mille; while in the other six sections the plague rats per building were 0.6 or less, and the mortality 3.6 to 13.1 per mille. The minute details of the spatial relations between rat and human plague were, for reasons already alluded to, difficult to make out; the general coincidence is illustrated by a series of monthly maps of one district.

The close correspondence in time and relative intensity at different times of the epizootics and epidemic is well shown in a series of curves. That for the whole of Bombay City shows that the beginning of the epizootic in *M. decumanus* precedes the epizootic in *M. rattus* by about sixteen days, and that the epizootic in *M. rattus* comes on some twenty-five days before the rise of the human epizootic. This is confirmed by a series of similar curves for twelve districts of Bombay taken separately. The authors point out that these intervals are not inconsistent with the hypothesis that the flea is the transmitting agent from rat to rat, and from rat to man, and they conclude that the epidemic is directly attributable to the *rattus* epizootic, which in its turn takes origin in the *decumanus* epizootic.

In a statistical analysis of these data, printed as an Appendix, Mr. Greenwood shows that the correlation between human plague and plague in *M. rattus* is of a very high order (0.8801 ± 0.0184); he also reaches the important conclusion that the correlation between plague in man and in *M. decumanus* (which reaches the large figure of 0.7481 ± 0.036) is probably spurious, depending on the correlation between plague in *decumanus* and in *rattus* (which is still higher: 0.945 ± 0.00875).

The paper concludes with a review of the sanitary circumstances of Bombay City in their relation to the prevalence of plague. The authors show that conditions of housing, ventilation, conservancy, and the like can only be considered factors of importance in so far as they encourage the rat population and bring it into more intimate relationship with the people. Even when the people live in well-constructed buildings free from sanitary defects (as in the Municipal Tenement Buildings) they suffer severely from plague, owing to their being perfectly agreeable to allow rats to live and breed in their rooms.

XXIII.—OBSERVATIONS MADE IN FOUR VILLAGES IN THE NEIGHBOURHOOD OF BOMBAY.

The villages of Sion, Wadhala, Parel, and Worli, in Bombay Island, were kept under continuous close observations, and were systematically trapped for rats. In Parel there is a sewerage system, and *M. decumanus* occurs occasionally; *M. rattus*, however, greatly predominates and is the only species found in the other three villages. No cases of human plague occurred outside the epidemic season. In Sion, Parel, and Worli no plague rats were found during the same period. In Wadhala (where some of the attendants at the Parel laboratory were living) a single rat suffering from acute plague was caught in August. The inhabitants of all four villages are in more or less constant communication with Bombay City.

1. *Sion Village.* Population, 950. The origin of plague in this village in January, 1906, could not be definitely ascertained; the available evidence points to the infection having been imported in or about the person of a woman who came from an infected quarter of Bombay. Human plague began soon after, and in the same block of houses as, the occurrence of a dead rat. The inhabitants then evacuated that part of the village, and were replaced by guinea-pigs in cages in each house, which were kept under careful observation. Plague gradually spread from the original focus through the village, the guinea-pigs dying of plague, plague-infected fleas being caught in the houses, and plague rats being found from time to time. In all, 45 per cent. of the houses of that section of the village were shown to be plague-infected; by the nature of the experiment contact between the guinea-pigs in the different houses was excluded. Among the rats the infection persisted for two months, and took six weeks to travel 300 ft. The authors conclude that the infecting agent was slowly disseminated among the guinea-pigs by plague-infected rats.

2. *Wadhala Village.* Population, 1,500. The observations made here were incomplete. In the early part of the epidemic season two cases of plague were imported from Bombay, and died in the village without giving origin to any other human cases or any epizootic. Subsequently a number of human cases occurred, some of which were in close association with dead rats which could not be obtained for examination, or with rats proved to be plague-infected.

3. *Parel Village.* Population, 3,525. During the period of observation, 28 cases of human plague occurred in this village. Five of these were definitely associated in time and place with a limited epizootic among *M. rattus* confined to one corner of the village. Ten cases were brought to Parel already infected; in six the probable source of infection could not be determined, the diagnosis being doubtful in one case, while seven were probably infected outside the village, as they had recently visited places where rat plague was known to be present. An interesting observation is detailed as follows:

"Cases 14, 15, 16, 18, 19, 24, and 25 were all employed at a cotton spinning mill in the Sewri section of Bombay. Dead rats had been found in several parts of this mill, but especially in the mixing department, where cases Nos. 14, 18, and 19 worked. Two of these men had thrown out the rats. Cases 16 and 24 were employed in other parts of the same mill. Case 24 lived with her son (25), who occasionally visited the mill with his mother. The woman had noticed dead rats in the go down where she worked. All these cases, and three others investigated by us who lived in other parts of Bombay but worked in this mill, were attacked between April 30th and May 10th. An interesting experiment was done in the mixing room in the mill. On May 12th two guinea pigs were placed in it; they were examined for fleas on May 14th. On one guinea-pig 108 and on the other 150 rat fleas were captured. After the fleas had been removed the guinea-pigs were taken to the laboratory and isolated. They remained

healthy. The fleas were transferred to a fresh guinea-pig confined in a flea proof cage in the laboratory. This guinea-pig died of plague on May 20th. The mixing room was thus proved to be infective. It is important to note that these cases lived in different parts of Parel village, and that we could obtain no evidence of a rat epizootic at their homes which did not prove infective to guinea-pigs. The infection, therefore, may reasonably be attributed to the mill in which they worked."

The infectivity of the houses in which plague cases occurred was investigated experimentally by means of guinea-pig flea traps. Though one of the imported cases infected the house in which she died, as shown by the capture of plague-infected fleas therein, none of them gave origin to any further human cases or to any epizootic among the rats.

A number of interesting data are given relative to the prevalence of rats in this village, which was very thoroughly trapped for nearly twelve months. This systematic trapping appeared to materially reduce the rat population.

4. *Worli Village.* Population, 2,503. Systematic trapping for a year appeared to reduce the rat population to approximately one quarter of the original number. No epizootic occurred among the rats, and only three cases of human plague. It is probable that all these contracted the infection outside the village. In two of the cases evidence was obtained which pointed to infection so introduced having spread in one instance to a guinea-pig and in the other to a rat.

XXIV.—General Considerations regarding the Spread of Infection, Infectivity of Houses, etc., in Bombay City and Island.

With regard to the spread of infection within houses, the authors point out the universal experience in plague hospitals has been that infection is not, except in pneumonic cases, communicated from the sick to the healthy attendants, etc. Their own observations show that guinea-pigs running free in the plague wards do not collect rat fleas nor do they contract plague; that guinea-pigs do not contract plague when kept in a flea-proof hut in close contact with the bedding of plague cases renewed daily for several weeks; and that the urine and faeces of acute plague cases are not infective to guinea-pigs by cutaneous inoculation.

Their observations in the Bombay villages tend to show that infection efficient to start an epidemic is not brought to a place in the persons of those sick of plague unless it is first effective in starting an epizootic. They also point out that in Bombay City comparatively few houses yield more than one or two cases. Recalling the experiments already published,[2] showing that plague is by no means easily transmitted from rat to rat by means of the human flea, and that the degree of septicaemia found in the human cases is much less than in infected rats, they conclude that the transmission of infection from man to man by *Pulex irritans* is probably a very infrequent occurrence. The observations made in the village of Sion show that a widespread dissemination of infection in houses may result from an epizootic in the rats when direct contact with sick occupants of the houses is rigidly excluded. In general, therefore, they reach the conclusion that contact with plague cases plays no part in the spread of the epidemic.

Plague is admittedly a place infection—that is, a house or a room in a house may be definitely infective. Seeing that persons suffering from plague and their excreta are not infective, and that, as was previously shown, the air and soil of plague-infected houses do not *per se* convey plague, much support is rendered to the view of the Commission that infection is contracted by man from the rat by means of rat fleas, and that the infectivity of houses is due to the presence within them of infected rat fleas. They are also of opinion that plague may easily be transmitted to a distance by the same means.

During the whole of the work in Bombay no evidence was obtained suggesting that plague among the common or domestic animals (other than rats) was of any practical importance. Natural plague was observed only in guinea-pigs, rabbits, and monkeys (a limited epizootic in the Victoria Gardens), with one doubtful case in a cat.

[2] BRITISH MEDICAL JOURNAL, October 20th, 1906, p. 1048, and July 20th, 1907, p. 156; *Journal of Hygiene*, vol. iv, p. 521, and vol. vii, p. 413.

XXV.—Observations in the Punjab Villages of Dhand and Kasel.

The villages of Dhand (population 1,920) and Kasel (population 3,938) were kept under close observation for a year from December, 1905. The general methods of inquiry were the same as those used in Bombay, and these villages were selected as representing isolated communities which had experienced an epidemic of plague in each year since its introduction into the district in 1902. An analysis of the data showed that plague did not tend to recur in the same houses year after year.

The rats were practically all *M. rattus*, with a few *Nesokia bengalensis*; no *M. decumanus* were found. In these villages *M. rattus* is both a house and a burrowing rat. No relation was found between the breeding season of the rats and the prevalence of epizootic plague. As in the Bombay villages, extensive systematic trapping appeared to materially reduce the rat population. Of the fleas caught on the rats, 98 per cent. were *Pulex cheopis*; the average number taken on each rat varied from 12·6 in April during the onset of the plague epizootic to 2·2 in August and September, in the off-plague season. During the period November to April about 2 per cent. of the fleas were *Ceratophyllus fasciatus* (the common rat flea of Europe); none were found during the rest of the year.

Dhand Village. No definite origin could be ascertained. Acute rat plague (28 cases) slightly preceded human plague (32 cases), and the two show a close association in time during their prevalence from February to May. Eleven rats suffering from chronic plague were taken between December and June. Of the human cases, 22 inhabited 18 houses, in which, or in the vicinity of which, plague rats had been found before or at the time of the occurrence of the cases. The other 10 cases inhabited 8 houses, and no definite association with plague rats was demonstrated; 3 of these 8 houses (4 cases) were, however, shown by guinea pig experiments to contain infected rat fleas, and two more of the cases lived close to these houses. Two of the remaining cases were clearly imported (late in the epidemic). The authors consider their failure to trace a more intimate association between rat and human plague to be largely due to the limitations of the available methods of finding plague rats.

Kasel Village. Here again the epizootic appeared to arise spontaneously, though several of the neighbouring villages, including Dhand, were already infected. Acute rat plague was first discovered three days before the first indigenous human case, and the close correspondence in time between the epizootic (238 acute plague rats) and the epidemic (75 cases) from April to July is well shown in a curve. Twenty-three rats suffering from chronic plague were caught between April and December. The 75 human cases occurred in 67 houses (total houses in village, 806); in the houses which furnished single cases there were 273 contacts, of whom only 18 had been inoculated; none of these 255 susceptible persons contracted plague. Fifty-three of the cases were definitely ascertained not to have been in contact with other plague cases. Of the 75 human cases, 4 were imported, 25 occurred in houses in which plague rats had been found, 36 in houses in the immediate vicinity of which plague rats had been found, and of the remaining 10 cases, 6 had visited at houses in which plague rats had been found, 3 lived in houses in the vicinity of which plague rats were found some days after they fell ill, and 1 was a doubtful case of plague.

Experiments in Plague Houses in Dhand and Kasel.

A number of experiments were carried out in these villages similar to those done in Bombay,[3] showing that the infective agent in the houses was infected rat fleas. In 49 plague-infected houses guinea-pigs were allowed to run free for about eighteen hours; in 9 instances they afterwards died of plague. Three times as many fleas were caught on the guinea-pigs in plague-infected as in not-plague-infected houses, and five times as many in houses which proved infective to guinea-pigs as in those not infective. Fleas found on guinea-pigs or rats in plague houses were transferred to guinea-pigs in flea-proof cages in the laboratory; in 10 out of 31 experiments the fresh guinea-pig died of plague. In 51 experiments guinea-pigs, unprotected and protected with fine wire gauze or with "tangle toes," were

[3] BRITISH MEDICAL JOURNAL, October 20th, 1906, p. 1048, and July 20th, 1907, p. 156, and *Journal of Hygiene*, vol. vi, p. 467, and vol. vii, p. 436.

placed in plague houses; a single flea was found on 4 of the protected animals, none of which died of plague; from 1 to 75 fleas were found on 34 of the 51 unprotected animals, 6 of which died of plague. Nearly 90 per cent. of the fleas caught on the "tangle toes" were rat fleas (the rest being cat fleas), and of 55 dissected the stomach contained plague bacilli in 3.

MEDICAL ADMINISTRATIVE PROBLEMS.

THE WEST AFRICAN MEDICAL STAFF.

DURING the past two or three years we have published, from time to time, letters dealing with the medical service of the British colonies and dependencies on the West Coast of Africa, which now for some four years has been amalgamated under the title of the West African Medical Staff. We now propose to consider the contents of an accumulation of other letters dealing with the same subject which are too numerous for separate publication.

A review of this correspondence would seem in some degree to involve a full and detailed description of the West African Medical Staff and of its work, and a consideration of the lines on which the medical work of the West African colonies would be best conducted from the point of view both of execution and of administration. Such treatment of the question would possibly make it of more interest to the general body of our readers, but it is doubtful if it is a task which could be undertaken with advantage at the present moment. It is proposed, therefore, in the following lines merely to detail certain general and specific conclusions which seem to result from the correspondence when studied in the light of a knowledge of the work and administration of other services both at home and abroad.

The first point that evolves is that there is at the present time, and has been for some years past, considerable discontent in the West African Medical Staff, and that the evidence of its existence emanates chiefly, if not entirely, from Southern and Northern Nigeria. That this should be the case is not peculiar, as these are the newer and less settled Colonies, in which the life led by the members of the service is possibly less attractive than elsewhere. The fact is one to be emphasized, lest it should be concluded forthwith that the whole service finds ground of complaint, but, on the other hand, it should not be assumed that elsewhere than in these areas the service is contented, and should be contented. As for the causes of discontent, these, for want of a better term, may be classed as abstract or administrative, and concrete or financial, and the latter may be taken first.

FINANCIAL CAUSES.

The concrete causes of discontent, so far as they appear in the letters, are mainly of a financial character. As regards the service as a whole, there does not seem to be any tendency to cry it down as materially underpaid, but it is clear that the way in which men are transferred from the lower paid to the higher paid grades does not work smoothly, and that there is room for improvement in the way in which stations or areas of work are assigned. These are matters which may be discussed more conveniently later on. Another point worth noting is that, though one or two correspondents seem to think it might be better if the relative position of various officers serving at the same stations were authoritatively determined, there is a happy absence, for the most part, of any evidence of friction between lay and professional officers in the service, such as at one time almost ruined the Royal Army Medical Corps.

It is in connexion with allowances, which in many Colonies and in most services are a fruitful source of contention, that discontent is most obvious and clearly most general. A detailed review of these is not easy, because in many cases our correspondents have failed to supply us with a copy showing the exact wording of the regulations to which they raise objection, and others credit ourselves and the cartographers with a more extensive knowledge of the topography of the West Coast of Africa than we or they can claim, and place at the head of their letters addresses insufficient to identify their stations with the area of the West Coast to which they belong. This is of importance, because in the matter of allowances the regulations of all the Colonies are not identical. Indeed, the essentially local character of some regulations is a circumstance with which several correspondents do not seem to be acquainted, while others write in such fashion as to raise a doubt as to whether the interpretation they put upon the rules to which they refer is accurate. Furthermore, it may be stated with satisfaction that there is reason to believe that some at least of the grievances mentioned by our correspondents and alluded to in this article may have ceased to exist or have been minimized by the time it appears in print.

With this preface, we may proceed to detail those grievances which appear most frequently in the correspondence, and may take first the *Local Field Allowance* which was formerly paid in Northern Nigeria, and which is still paid, though at a rate which began to diminish two years ago. Those who discuss the annual reduction of this allowance do not seem to have seen the pamphlets which have been issued to candidates for the West African Medical Staff, and for applicants for information respecting it, since the Protectorate was established. In these attention is plainly directed towards the fact that this allowance is a vanishing quantity, so it cannot be said that men who enter the service are deceived. Moreover, the reduction and approaching abolition of this allowance does not affect the medical staff only, but all officers equally; so the grievance, if any, is general, not special. Whether there is a grievance at all in connexion with the matter is quite another question. It is argued, and with considerable force, that the expenses of life in Northern Nigeria have by no means decreased, but, on the contrary, have increased during the last few years, so that if there was ever any justification for the allowance at all, there would seem to be little justification for its reduction at the present time.

Another grievance, however, which is in some degree special to the medical staff, is connected with what is known as *Duty Pay*. This is an allowance drawn by a certain proportion of lay officers when actually employed on the coast, and it appears to amount to a considerable sum every year, but of the medical staff, only two or three senior officers, when employed upon special duties or temporarily doing the work of their seniors, are entitled to it. The belief is current that when this allowance was introduced the medical staff as a body was excluded from its benefit on the ground that its members were allowed to take private practice. If this really be the reason, it is a bad one, because the number of medical officers who have opportunity of obtaining fees from private practice is certainly limited. It seems more probable, however, that the real reason why the medical staff was excluded from the rule was that at the time duty pay was established the conditions of appointment and the amount of the emoluments of the medical staff had been comparatively recently rearranged, and were considered fully to meet the needs of the case. In the case of ordinary officers no such arrangements of pay had taken place, and it was not desired to raise their pay all round but merely to increase the value of a proportion of offices to the men filling them and on actual duty on the coast. It is somewhat unfortunate, perhaps, that this allowance should have been founded, since it makes an apparently invidious distinction between these officers and medical men who are doing equally responsible work, but if the reasons which led to it are as surmised, they would appear to be fairly sound. Indeed, the lay officers might argue that the West African Medical Staff were well paid whether on the coast or on furlough in England, while they themselves are only fairly paid while actually on duty.

About the time this local allowance was introduced, however, a further change was made in the regulations in Southern Nigeria, and this was of such a nature as to give rise to what appears to be a thoroughly well-founded grievance in that Colony. Formerly officers whose duty called them away from their head quarters were given a *Travelling Allowance* of 15s. a day, but about the time indicated this sum was cut down to one of 5s. This regulation affected the medical staff not less than the lay officers, and established for them a distinct grievance. A certain proportion of the lay officers had, as indicated, compensation in duty pay, but there was no compensation for the general body of the medical staff, whose salary remained as before, while their travelling allowance was two-thirds less. Apart from this, a local

reading of the regulations with regard to travelling allowance payable to medical officers accentuates the grievance already mentioned, and, in addition, constituted one which stands entirely on its own legs. The local authorities choose to interpret the published regulations with regard to travelling allowances as meaning that the sum of 5s. allowed to medical officers on duty away from their stations shall include the payment of hammock-carriers and the like. These men take the place of the horses, carriages, etc., used when travelling elsewhere, and they are each paid, as a rule, 9d. a day, ordinary officers being allowed to employ fourteen such carriers at Government expense. We do not believe that the published regulations can fairly be read, as a whole, in the sense indicated; and if they can, they should be altered. We are aware that there are colonies where the amount of transport which a responsible officer requires while travelling in his district is supposed to vary with the precise amount of salary which he draws, but we know of no colony in which lay officers are granted entirely free transport, while medical officers are obliged to cater for themselves out of such a paltry allowance as 5s. a day. It is a sum which, if entirely devoted to carriers, would only allow the medical officer to employ ten carriers, instead of fourteen, which may be legitimately employed at Government expense by an ordinary officer. We regard the reading of the regulations by the local authorities as entirely erroneous, and possibly the outcome of excessive zeal for economy on the part of some unduly energetic auditor. In ordinary colonies the rule is for officers employed on duty away from their stations to receive a personal allowance to cover the extra cost of living away from home and like petty losses which are entailed by such duty, and, in addition, a sum sufficient to cover the exact amount expended on transport. The intention of the published regulations regarding the West African Medical Staff seems to be the same.

All the foregoing grievances are of an exceedingly simple nature, and, even if every one of the wishes indirectly implied by them were granted forthwith, the total cost would not be great; while the last-mentioned grievance—that concerning travelling allowances—might be, and should be, without consideration of the expense involved, abolished by a mere stroke of the pen on the part of the Secretary of State, or of the Under Secretary responsible for the well-being of the West African Medical Staff.

Administrative Causes.

It is far otherwise with the administrative causes of discontent, which we have termed abstract. Their roots lie deep and are far less easily removable, for they are directly connected with the factors which condition all work done on the West Coast of Africa, and necessitate a somewhat unique form of Government machinery. The critical factor of the whole situation is, perhaps, the circumstance that no white official on the coast holds uninterrupted office for any long period. No ordinary tour of service on the coast lasts more than a year, and at the end of that time the officer disappears, certainly for five months, and often for more; and his post, whatever it has been, is taken over by some other person who does the work connected with it sometimes on lines in conformity with an established tradition, sometimes according to his own lights. This is a condition which affects the whole Government Service on the West Coast of Africa, and the net result is that, while in the administration as a whole, there is more or less continuity of policy, there is often an entire and profound lack of correspondence in detail, and the creation of a real Civil Service with sound, well-established traditions, and in which each portion of the machinery knows exactly what other parts of the machinery are likely to do on any given occasion, as well as its own duty, is singularly difficult.

Indeed, if there is anything like a coherent service on the West Coast of Africa at all, it is the West African Medical Staff which may be held best to represent it. It is a body of 180 officers, all of whom are subject to the same regulations, and form a definite regiment specially trained to fight disease on the West Coast of Africa. In reality, however, it is merely a paper regiment. Its members are scattered up and down the coast, many of them occupying exceedingly isolated positions, and the occasions upon which they meet one another in any number are rare. Moreover, like other officers, their work on the coast is intermittent. They serve for twelve months and then go home on full-pay leave for a period which, including the voyage home and back again, is not less than five months, and commonly, in case of extension of leave on the ground of ill-health, a great deal more. On their return to work they do not always, or even usually, return to the posts which they previously held, and even if they do so their work in the interval has been done by someone else, who may or may not have exhibited totally different ideas as to what is required to be done and how it should be done. In none of the letters which we have received is the net outcome of this fact expressed in so many words; but reading between the lines, and coupling these with the results of inquiries which we have made from various officers whom we have met when on leave, the facts are quite clear. The men are suffering from the effects of isolated uncoordinated work under conditions which are in themselves depressing, and which make them inclined to say, "What is the good of it all?"

The correspondence which is here being considered emanates, as we have clearly stated, practically entirely from Nigeria; but we have reason to believe that all medical men on the Coast more or less recognize the comparative futility of effort so far as permanent results are concerned, and the lack of opportunity for an interchange of ideas with men doing the same work.

Contingent Disadvantages.

The matter is not of importance merely because the West African Medical Staff is not as contented with its lot as it might be, though this in itself would be worth serious consideration. What gives the subject its primary importance is the fact that the underlying causes are such as must necessarily affect the success of the administration of the Crown Colonies on the West Coast of Africa and retard real progress.

We could give, with some trouble, definite instances in which the present condition of affairs has led to loss of life and waste of large sums of money, but it will suffice to indicate the drawbacks in general terms. The science of medicine is everywhere now being accorded a fuller share of recognition in Government both local and central, and in speaking of the Crown Colonies in tropical areas there is no need whatever to dilate upon its value. Their future largely, if not entirely, depends on the extent to which advantage is taken of new medical knowledge. As to this the Colonial Office itself was one of the first to appreciate the importance of tropical medicine, and has materially assisted to bring about that recognition of its value now shown even by those who undertake commercial enterprise in the tropics. Hence it is quite certain that it will gladly avoid if possible those errors in medical administration which in the past have assisted to preserve for the West Coast of Africa its title of the White Man's Grave. For though the West African Medical Staff is only a few years old, medical work on the coast is as old as the colonies themselves; for generations past there have been there medical men in plenty, and many of them excellent representatives of their profession, able and energetic individuals, without whose aid attempts to keep these colonies going must absolutely have failed. That the results were not better than they have been was simply due in the main to the action of the same causes which threaten to nullify the work of their successors—the absence of machinery calculated to produce steady, combined, well-considered, and continued effort. What may reasonably be expected from work thus conducted is indicated by results already obtained.

Until a few years ago life on the coast was deemed so hazardous that, with the exception of Gambia, it was not expected that men should work there for nine months at a time. Twelve months is now deemed permissible, and as time goes on, and if the improvements which are possible are brought about, there seems no essential reason why these West African Colonies, though they will never be suitable for a large white population, should not be comparatively healthy, and allow of a selected class of white men working in them for an ordinary lifetime. This, however, cannot, as indicated, be fairly expected, unless some change of administration be brought about.

The Remedies.

The formation of the West African Medical Staff was a step in the right direction. It is full of men with ample

Practical experience, and of others of short service but exceedingly well trained for their work; and its seniors are men of ability. Continually strengthened as it now annually is by the admission of men trained in a school of tropical medicine, it should prove a most efficient machine; but it does not at present achieve the results that it might, owing to the circumstances already indicated, the lack of administrative machinery; moreover, in continued default of this, men will get disheartened and things get worse, not better.

What seems to be wanted primarily is the formation of a definite medical policy to meet the needs of each area of West Africa, and of a system which will insure that each undertaking begun is carried on as a matter of course by each officer as he steps into the post vacated by his predecessor. As elsewhere, the work which the members of the West African Medical Staff have to do falls into two main classes—the treatment of individual cases of disease, and dealing with the causes which render those diseases prevalent. The former is of material importance, not less on the general grounds of humanity than because medical work of that character is particularly appreciated by natives, and renders their control easier than otherwise would be the case. But the conduct of sanitary reform is—from the point of view of the statesman, at any rate—even more important. It would be possible, of course, to keep these two classes of work apart, and place the latter under special officers, each dealing with a group of stations. This would minimize several of the existing drawbacks, but it is not a necessary step, because all members of the staff have the training necessary to carry out sanitary work. Nor would such a system counterbalance the defects arising from the short tours of service at present possible.

What is required is a body which will define the sanitary reforms required in West Africa at the present time, and see to their being carried out as time goes on and new strips of country are opened up, this body being one which would not unduly interfere either with the authority of Governors or the responsibility of principal medical officers. It should act merely as a co-ordinating body ensuring continuity of work as executive officers come and go, and as the final authority in connexion with questions of promotion and other details of the management of the West African Medical Staff. It may be thought that the existence of responsible Governors and chief medical officers renders any such body superfluous; but in the case of the West Coast Colonies this is certainly not true, and the medical work done there would certainly benefit by being subject to more or less control by an expert and independent body at a distance.

A chief medical officer might certainly without any alteration of system be charged with the duty of seeing that a definite programme of reforms is undertaken at each station, and with that of handing to each officer immediately responsible for the work instructions as to what he is to do in respect of it, the last act of such officer when proceeding on furlough being to hand in a statement of what has been effected during his tour of duty. In such way some continuity of work would be ensured, but the whole needs of the situation would not be met, for the hands of the chief medical officer in each Colony require strengthening. One of his principal duties is to keep in close and real touch with the Governor and his Council, but this task is not always easy. There are two sides to every medical question, the scientific desirability of any particular line of action, and its practicableness from the point of view of the Government, and even in the former respect Governors are not always easy to convince.

Many of the men appointed to rule West Coast Colonies have passed the greater part of their lives in places where the conditions of life are totally different, and they are sometimes disposed to believe that practices which they have known work well elsewhere must necessarily work well on the West Coast of Africa also. In any case they do, and must inevitably influence greatly the fortunes of the medical employees of the Colony and the work which they are doing, and the extent to which they are able to do so is at present only limited by the strength of will and character of the individual who for the time being happens to be filling the post of chief medical officer. Hence if between a Governor and a medical officer there arises any essential difference of opinion on any material point of medical policy, the question should be referable for settlement elsewhere, and this not as a quarrel, but as a mere matter of routine practice.

Reference may also be made here to a question already mentioned—that of the promotion of officers of the medical staff and the distribution of stations, both of which lie at present primarily in the hands of the Chief Medical Officer, secondarily in that of the Governor. This plan requires modification. There should be some definite system, independent of individuals, for dealing with the promotion of officers and distribution of stations, and its final control should be placed in the hands of an outside body. Many excellent officers lack those social qualities which are especially esteemed in a small community, and in medical matters differences of opinion may readily arise. A subordinate medical officer, however, should not permanently suffer because he expresses, with more zeal than discretion, a view which may or may not be a right one, and find himself continually relegated to unpopular stations or passed over when a better paid post than that which he holds falls vacant. On the West Coast of Africa the status and probable emoluments of every medical officer should, in default of good cause shown to the contrary and approved by an outside body, depend almost entirely on length of service. It would not be difficult to assign a value to every station to which a medical officer is at present posted, and every officer should have a definite place on a promotion list, and be given an opportunity of accepting a change of station or refusing it as a vacancy in the next best paid billet occurs.

Conclusions.

To those acquainted with colonial governments elsewhere, or with responsible governments of any kind, the arrangements at which we have hinted may seem extraordinary, but that is not really the case. The government of the West Coast is in practice, if not in principle, a series of interregnums, and though the analogy is not very flattering, the idea underlying the suggestion here made finds its counterpart no further off than in the relations of sanitary bodies in England with the Local Government Board. The West African Colonies are already largely governed from London, and what is required so far as medical matters are concerned, is that this home government should be put on a clear footing. A general consideration of the whole subject by itself leads to this conclusion, but it is also to be noted that in nearly every letter that we have received there is a kind of indefinite cry for an outside authority. What form that authority should take is a question with which the Colonial Office, if it takes the matter in hand, is likely to deal satisfactorily itself. The appointment of a chief in London, such as the Indian Medical Service possesses in the President of the Medical Department of the India Office, or of a Director-General and an Advisory Board, as in the case of the Royal Army Medical Corps, would not quite meet the situation. A President by himself would not carry sufficient authority, and a Board on the lines of that attached to the R.A.M.C. would not be sufficiently practical. What seems to be required is a small Council formed of officials of the Colonial Office and one or two medical men with West African experience; but the latter should not hold office for more than a year or two at a time. Of such a Council every Chief Medical Officer should *ex officio* be a member when on leave, and it should take steps to ensure direct acquaintance with the subordinate *personnel* of the West African Medical Staff of the work which each man has done. In this way any possibility of individual officers considering that their progress and prosperity is impeded by prejudice on the part of those by whom they are habitually controlled will be eliminated, and all will feel that if they do good work it is not likely to be overlooked. Furthermore, the Council itself would enjoy the advantage of having its knowledge of the work going on constantly kept green and vivid by personal contact with those engaged in its performance. With its administration rearranged in the fashion here indicated, there is every reason to believe that the West African Medical Staff will prove a thoroughly contented body, and that the conditions of life on the coast will become as satisfactory as medical science, limited as it must be by economic considerations, can make them.

CAIRO WATER SUPPLY.

IN the BRITISH MEDICAL JOURNAL of January 4th it was mentioned that an International Committee of three experts, consisting of Dr. A. C. Houston, Director of Water Examination to the Metropolitan Water Board, Professor Gaertner, and Dr. Dienert, had been appointed by the Egyptian Government to investigate the sources of the supply, the methods of collection and distribution, and the suitability of the water for drinking and domestic purposes. This Commission was at work from November 21st to December 7th, 1907, and its report has recently been published. We are in a position to give a summary of the document, which is dated December 7th.

TERMS OF REFERENCE.

The members of the Commission were requested:

(1) To examine fully the existing water supply of Cairo. (2) To record their opinion as to (*a*) the sources of the supply, and (*b*) the methods of collection; (*c*) the methods of filtration or other treatment; (*d*) the distribution, with special reference to the requirements of a public water supply of the first order. (3) To record their opinion on the chemical and bacteriological character of the water supply, and its potability. (4) To state whether in their opinion the supply is liable to any contamination which may be prejudicial to the public health. (5) In the event of their opinion being unfavourable in any respect, to make such recommendation as they may regard as desirable (*a*) for the correction of any defects which they may consider to exist; and (*b*) for effecting such modifications or improvements as may be necessary to ensure the requisite standard of purity and potability.

The Commissioners report that they carefully inspected the Ghizeh, Abbassia, and Rod-el-Farag Waterworks, and personally conducted or superintended a number of field observations and laboratory experiments. They heard the evidence of a considerable number of witnesses and studied a great many reports, documents, charts, and plans. They met daily, and discussed together every aspect of the problem of the Cairo water supply.

SOURCES OF THE SUPPLY.

The Ghizeh and Abbassia supplies derive their water directly from the Nile. As regards the Rod-el-Farag supply, it seems from the experiments of the Commissioners that the water-bearing strata afford a very good filter. If the future bacteriological examinations show that the wells at all seasons of the year give good results, the question of the source of the water is unimportant hygienically. But if future experiments should show that the bacteriological results were less favourable, it would, they say, be desirable to determine in a certain manner the origin of the Rod-el-Farag water. The experiments should embrace prolonged observations at the time of both high and low Nile. The Commissioners state that the time at their disposal was far too short to make these experiments, and, from the information furnished them, they could not decide with absolute certainty whether the water at Rod-el-Farag is stagnant or slowly moving. The Rod-el-Farag is undoubtedly Nile water, like almost all water in Egypt, but it is impossible to say exactly the course it takes before reaching the wells, or how far it has to travel.

METHODS OF COLLECTION.

The Commissioners have nothing of importance to say under this heading beyond the points covered in other sections of their report.

METHODS OF FILTRATION OR OTHER TREATMENT.

Ghizeh Supply.—The method of adding aluminium sulphate to the water entering the settling tanks is governed by naked-eye observations and the result of practical experience, and is not controlled by the result of accurate scientific experiments. The method of running the water after settlement on to the filters is also open to some criticism. The depth of the sand in the filters is sufficient for all practical purposes, but the particles of sand are of very unequal size. The head of water on the filters is kept at the same level during the life of the filter, and the rate of filtration is governed apparently only by the number of turns the outlet-valve is opened, at the discretion of the waterworks manager. The length of time during which the water from a freshly-cleaned filter is allowed to run to waste is very short, and is based on naked-eye observations, not on the results of scientific experiments. The filtered water is stored in a small reservoir underneath some of the filter beds, and this method of storing is open, in our opinion, to the objection that infiltration of unfiltered or imperfectly filtered water might occur without being noticed.

At certain seasons of the year the life of the filters is very short, and they have to be cleaned at intervals of a few days only. The capacity of the filtered water reservoirs is not great, and the circumstance might possibly on occasion lead to the water being filtered too rapidly. One side of the reservoir holding unfiltered Nile water is only separated from some of the filter beds by a wall, which may possibly be not absolutely watertight. The average rate of filtration is stated to be between 600 and 1,200 cubic metres per twenty-four hours.

The Commissioners state that they were informed that during "green Nile," both the unfiltered water and the "blanket" or film on the sand in the filter beds has an objectionable fishy smell. As regards the filtered water, divergent opinions have been expressed. They did not see in the works any notice prohibiting nuisance.

Rod-el-Farag Supply.—The Commissioners state that these wells (of which there are fourteen in working order) run parallel with the east bank of the Nile, and are situated about 80 metres apart, being on an average 200 metres from the river. To the east of the wells is a canal, and adjoining this there is cultivated and irrigated land. Close to one of the wells are two cesspools. There is a badly-kept road in the neighbourhood of the waterworks. The strip of land 12 metres wide surrounding the wells, and owned by the water company, is too small.

With regard to the construction of the wells, the Commissioners state that the average depth is 60 metres, the lower 30 metres of which are composed of filter-tubes of about 30 cm. diameter. The brick chambers at the top of the wells are not all watertight, and the bottom of them is not as clean as is desirable, while some of the inspection tubes were under water at the time of their visit. The covers are iron plates, and are not protected from outside interference.

The siphons are lying at certain seasons of the year in waterlogged soil. The water in them is under negative pressure, and the joints connecting them contain a thin, compressed layer of caoutchouc coated with white lead on either side. The Commissioners were informed that these joints were absolutely watertight.

It was not possible for them to tell personally whether the collecting tank was watertight or not, as this would have entailed a temporary stoppage of the supply to the town. They understand that by means of pumps it is possible to clean out this collecting tank.

Abbassia Supply.—In regard to the Abbassia supply, the Commissioners state that the works are in a state of transition, as the increasing use of Rod-el-Farag well water renders it unnecessary to utilize much filtered Nile water. At that time they were informed that the procedure is to filter only such an amount of Nile water as is necessary to keep the filters in an "active" condition. They state that:

The method of settling the Nile water is very imperfect. The flow in the tanks is continuous, not intermittent, and the length of time allowed for settlement is very short. A proportion of the water probably passes almost directly from the "inlet" to the "outlet." In one of the tanks an effort has been made to improve the circulation of water by means of a wooden barrier running at right angles to the normal flow of the water. The depth of sand on the filters is not sufficient, but the sand appears to be of good quality for filtration purposes. Under existing conditions, they say, the rate of filtration is too rapid (3.4 instead of 2.4 cubic metres per square metre per twenty-four hours), but great care is said to be exercised in allowing the water from a freshly-cleaned filter to run to waste for as long a time as is possible. But in the event of its being necessary at any time to augment the supply of filtered water, the time during which the water is to run to waste is materially shortened. The filtered-water reservoir is not of large capacity, and receives Rod-el-Farag well water as well as Nile filtered water. This admixture in varying proportions of two waters of entirely different composition is not to be recommended. It is admitted that at "green" Nile the unfiltered water has a putrid odour, and that even after filtration the water supplied to the districts near the Abbassia Works (Mousky and Daher) has sometimes an unpleasant taste and smell. They did not see on the works any notices prohibiting nuisance.

The Commissioners think it necessary to call attention to the fact that both at the Abbassia and the Ghizeh Water Works the filtration and other purification processes are not kept under proper scientific control.

DISTRIBUTION.

The Commissioners state that the distribution of water in Cairo is very complicated, and many of the pipes are of small diameter, especially in view of the increased consumption of water. There are two large mains (of 80 mm.) carrying Rod-el-Farag water to a "tambour" near the Central Railway Station, and from this tambour the water is delivered to consumers by means of six smaller mains;

but there is no large principal main encircling the area of supply in which the water can freely circulate and from which the smaller mains can radiate. Mains are frequently joined together of different diameter.

A 500 mm. main is connected with the Abbassia Works, and all the water pumped from the Rod-el-Farag wells in excess of the town's immediate requirements is mixed with the Nile filtered water to form a reserve supply.

The junction of the lead pipes with the iron mains is not in all cases sufficiently protected from the corroding effects of the salts and moisture in the contaminated soil, and the main pipes are laid too near the surface, especially in small streets and yards in the native quarters. Many of the new connexions are specially protected with pitch, as this has been found necessary owing to the pollution of the soil and the absence of any sewage drains.

In all modern houses the water is supplied by meter, but the pressure is often insufficient, and tanks (sometimes covered and sometimes not) have to be provided on the roofs. Into these tanks water is pumped by hand. About 300 houses have these tanks, the Commissioners were informed, and the chief reasons for this unsatisfactory state of affairs are: (1) The existence of pipes of too small a diameter, and (2) insufficient pressure of water.

The uncovered (or not properly closed) tanks are exposed to many objectionable impurities, and are undoubted sources of danger. The open tanks allow mosquitos to breed luxuriantly, and they think this is a most undesirable feature of the water supply. Certain species of mosquitos are the means of conveying diseases to man, which are always dangerous, and sometimes fatal.

As regards the distribution of water, in the native quarter many of the houses have no taps, and to meet the requirements of the inhabitants bornes-fontaines are provided from which water is sold, and carried to the houses in goat-skins, tins, barrels, and other receptacles. The possibilities of spreading infection by this crude system of distribution is obvious.

The water in the houses provided with taps is not paid for by meter, but by rates levied periodically, and many of the inhabitants dislike the taps because they leak sooner or later, involving expense which falls on the water consumer, and there are no drains to carry away the waste water. The manner of distributing the water in the poorer quarters of Cairo is, in the opinion of the Commissioners, open to the most severe condemnation on hygienic grounds. There are many dead ends in the system of supply, and no proper means exist for flushing these out periodically. These remarks refer chiefly to the distribution of water on the east bank of the Nile.

The Ghizeh supply is delivered to about 470 houses which are situated in a better class part of the town, and the Commissioners were told that the circulation of water is good, that there are very few dead-ends, and that these are periodically flushed.

In conclusion, the Commissioners state they were satisfied from what they saw that the system calls for drastic improvements in the immediate future.

CHEMICAL CHARACTER OF THE WATER SUPPLY AND ITS POTABILITY.

Ghizeh and Abbassia Supplies.—The Commissioners state they received reliable evidence that at certain seasons of the year the Nile filtered water is apt to acquire an objectionable taste and smell, due to the presence of organic matter, and the development and subsequent decomposition of certain species of algae. Otherwise, there is nothing in the chemical composition or physical qualities of this supply to which exception can reasonably be taken. But the water is sometimes faintly opalescent, and its temperature in summer is rather high.

Rod-el-Farag Supply.—The Rod-el-Farag water contains a small amount of iron and manganese, and it is necessary to remedy this defect. An efficient remedy would also remove the crenothrix or any other undesirable fungoid growth, and would likewise remove the slight smell of sulphuretted hydrogen and the faint metallic taste complained of. The chemical composition and physical qualities of this supply are otherwise free from objection, and the temperature of the water remains fairly uniform throughout the year. The hardness of the water is in no way excessive, and is quite usual in water supplies drawn from underground sources all over Europe.

THE WATER IN RELATION TO THE PUBLIC HEALTH.

With regard to this question, the Commissioners state that they have been obliged, by reason of the limited time at their disposal, to base their epidemiological conclusions largely on Dr. Dreyer's experience of the health of Cairo; they are satisfied, however, that his conclusions are based on a wide practical experience of the subject. The chief diseases which they regard to be waterborne are cholera, typhoid, and possibly diarrhoeal diseases and dysentery.

Dr. Dreyer (Chief Medical Officer of Health of Cairo) is of opinion that during his time of office (seven and a half years) there has been no very special incidence of any waterborne disease in Cairo which could be attributed to the public water supply. The last epidemic of cholera in Cairo was in 1902, and was practically confined to a small part of the Boulac quarter. All the available evidence appears to be against the public water supply having been at fault. As regards typhoid fever, Dr. Dreyer considers that the disease is frequently brought to Cairo by persons in apparent health, but who are "typhoid bacilli carriers," and that most of the cases occurring in Cairo arise from secondary infections. The mortality from infantile diarrhoea is severe in Cairo, but Dr. Dreyer is of opinion that this is due to meteorological conditions, errors of diet, imperfect nourishment, unhealthy surroundings, and to the ignorance of parents, and is not to be attributed to any impurities in the public water supply. Last year the death-rate among children under 1 year of age was very high, but from the curves made by Dr. Dreyer at the request of the Commissioners, it is apparent that this heavy incidence of diarrhoeal disease was general throughout Egypt, not peculiar to Cairo. The dysentery in Cairo is usually of a chronic kind, and is believed to be amoeboid in character, and to be caused, generally speaking, by microbes of the Shiga-Kruse or Flexner types.

Nevertheless, the Commissioners say the vital statistics of eastern towns are apt to be so imperfect, that the conclusions to be drawn from them are only of a relative value. Moreover, the apparent comparative freedom of the population of Cairo from diseases due to the public water supply should not be accepted as conclusive evidence of future safety in this respect.

The liability of Nile water to become specifically infected with the excreta of persons suffering with typhoid fever and cholera is a constant source of danger, and no pains should be spared to ensure that no water, whether derived from wells or river, is supplied to the inhabitants of Cairo which has not been brought, by processes natural or artificial, into a state of undoubted purity.

Despite the relatively reassuring statistics as regards waterborne diseases, the Commissioners were not satisfied that the water supply is entirely satisfactory. The Nile filtered water is not sufficiently purified, in their opinion, especially in view of the fact that the raw Nile water is taken directly from the river to the settling tanks, without preliminary retention in storage reservoirs sufficiently large to ensure the destruction of most (if not all) of the bacteria of undesirable sorts. Moreover, no permanent River Protection Board exists for guarding the river banks from pollution or for controlling the contaminations likely to arise from traffic on the river. The reason they do not advocate the provision of large storage reservoirs in the particular case of the Cairo water supply is that they fear that the development of algae might sometimes be so excessive as to interfere seriously with subsequent filtration and impart to the water an unpleasant taste and smell.

As regards the Rod-el-Farag supply, the Commissioners carefully considered the chemical and bacteriological analyses given to them by the experts who had examined the qualities of these waters, but they thought it desirable to supplement these analyses by experiments of their own. Full details of these are given. Their conclusion is that this water is a very much safer source of supply from the epidemiological point of view than the artificially-filtered Nile water. They point out, moreover, that the purification of the water is carried out naturally, and is independent of the success of any artificial treatment. They state that they do not know of any example of water distributed in any part of the world in which the hardness, ammonia, organic matter,

iron, manganese, and crenothrix *in the amounts present in the Cairo water* have proved in any way injurious to health. Apart from the possible presence of undesirable bacteria, there is nothing in the composition of the water which is capable of giving rise to sickness or disease.

They add, however, that it is true that the Rod-el-Farag water acts very feebly on lead, owing probably to the presence of a slight excess of carbonic acid in the water. The degree of action, although very slight, cannot be ignored entirely; but it is without permanent significance, because it will be necessary to treat the Rod-el-Farag water to remove the iron, and the treatment must be of such a kind as to ensure that the water exerts no appreciable action on lead.

DISTRIBUTION.

With regard to distribution the Commissioners remark that the improvement of the unsatisfactory method of distribution of the Cairo water supply is largely an engineering matter, and they can only point out the chief things which need modification to meet the requirements of a public water supply of the first order. It is necessary that all pipes badly affected with crenothrix growth, and iron and manganese deposits, should be gradually replaced by new pipes, unless some chemical method which is both safe and practicable, can be found to free the pipes from the deposit.

Great care should be exercised when laying any new mains or carrying out any structural alterations to avoid any possibility of impurities entering the water service. The soil of Cairo is so generally polluted that this is a matter of vital importance. New mains should be laid at a greater depth than is the rule at present.

It is necessary to have as few dead ends as possible, and to flush these out periodically. At present the flushing out of dead ends is difficult, owing to absence of any drainage system. They trust, however, that the proposed drainage of Cairo will become a reality in the near future, and obviate this difficulty.

It is necessary to increase the pressure of water in the mains and to enlarge the diameters of the house pipes, so as to render it no longer necessary to provide tanks on the roofs of the houses, which, as already pointed out, are a real source of danger.

It is also desirable to alter completely the method of distribution in the native quarters of the town. House taps should be provided, and the practice of conveying water from the bornes-fontaines by means of barrels, tins, skins, etc., should be discouraged in every way practicable.

The lead service pipes should be as short as possible.

The Commissioners proceed to deal with the several sources of supply in detail.

Abbassia Supply.—With regard to the Abbassia supply they say that the present intake is in an undoubtedly unsatisfactory position, and, apart from economic considerations, they consider that both intakes should be some distance above the town and future suburbs of Cairo, preferably on the west bank, and as remote as possible from all sources of excremental pollution, such as sewage pipes and places where river craft are commonly moored. This, it is pointed out, is the more necessary since no large reservoirs exist for the storage of the water before it reaches the waterworks.

With regard to settling tanks they say that aluminium sulphate should be used as a precipitant, and the settling tanks worked either intermittently or the circulation of water so improved as to ensure that every particle of water entering the tanks remains in them an equal length of time, so as to allow the precipitate to work to the best advantage. The size of the tanks, however, is, in their opinion, inadequate. The practice of mixing the Rod-el-Farag well water with the filtered Nile water at Abbassia should be discontinued, and the two waters should always be delivered to separate and clearly defined districts.

Ghizeh Supply.—With regard to the Ghizeh supply, speaking of settling tanks and precipitation processes, they say that it is of importance that the quantity of sulphate of aluminium should be judged, not by naked eye observations only, but by the use of apparatus and tests which accurately measure the turbidity of the water, both previous to and after settling.

The time necessary for sedimentation should be checked by experiments, and the process should be carried out in such a way that every molecule of water entering the tanks remains in them an equal length of time. The sludge should be removed from the bottom of the tanks as frequently as is practically possible, especially in warm weather, and during the time of "green" Nile.

It is desirable that the water flowing out of the tanks on to the filters should be taken from near the surface by means of floating arms or by some other similar device.

In regard to filter beds, the Commissioners say they understand that whenever sand is used it is washed (*in situ*) on the filter beds. They think it is desirable that the sand should be carefully screened to a uniform size and washed with filtered water before being placed on the filters. A freshly-cleaned filter bed should be started, working with only a small head of water, which may be increased slowly after the filter has been at work for some time, but should not exceed one metre as a maximum. The rate of filtration should never exceed 2.4 cubic metres per square metre per twenty-four hours. It is desirable by a series of carefully carried out bacteriological experiments to lay down some rules to enable the waterworks manager to know when it is safe to turn water from a new filter into supply.

In this connexion it is also desirable that experiments should be carried out during "green" Nile for the purpose of devising some means of keeping back from the filters as many of the algae as possible. This is very important, as during the time of "green" Nile the life of the filters is very short, and any method which preserves the life of a filter confers additional security.

The filtered water reservoirs should be of such a capacity as to hold a day's supply of water; they should be covered, in a position easily accessible to inspection, and absolutely cut off from all possibility of contamination with unfiltered raw Nile water, or any other source of pollution, and also so constructed as to keep the water as cool as possible.

Printed notices should be placed about the works prohibiting nuisance, and giving such instructions to the workmen as will best ensure that the utmost cleanliness is observed in dealing with the sand on the filters. The nature of these notices should be fully explained to all the men employed on the works.

Analysis of Water.—Dealing with the analysis of water, the Commissioners say that samples should be collected for bacteriological examination of:

(*a*) The raw Nile water, before the addition of the sulphate of aluminium.
(*b*) The water after precipitation, as it reaches the filters.
(*c*) The filtered water, from each separate filter well.
(*d*) Of the combined filtered water from the rising main.

Also occasional samples should be examined of:

(*e*) The water from filters which have been recently cleaned, so as to ensure that the precautions taken to run sufficient water to waste at the beginning of the life of a filter are sufficiently rigorous.

Samples of water should be also taken for chemical examination from (*a*), (*b*), and (*d*), and the analyses should include a study of the amount and kind of suspended matter in the water.

A full chemical analysis should be made at periodic intervals.

The Commissioners go on to say that in the event of any emergency arising, such as poilution of the Nile with the discharge of cholera or typhoid patients above the intakes for waterworks purposes, they should think it would be possible to sterilize temporarily the raw water in the settling tanks. They think that experiments should be carried out on a sufficiently large scale with sodium hydrochlorite or other active oxidizing agent, in order to determine whether what has been found practicable elsewhere is possible also under the conditions pertaining to Egypt.

They add that they were informed that at Alexandria very good results have been obtained with preliminary precipitation with sulphate of aluminium, followed by rapid filtration through special filters. If it should be found necessary or desirable to extend or change the filtration plant at Ghizeh or at Abbassia, this process deserves attention, as it seems to work very satisfactorily with Nile water.

Rod-el-Farag Supply.—In regard to the Rod-el-Farag supply they made the following recommendations:

The brick chambers of the wells should be kept clean, water-tight, and should be protected by a properly-locked cover from any outside interference. The sloping sides should be protected by stone walls. Arrangements should also be made so as to allow of all the wells being examined separately. The cesspits must be permanently closed, and all faeces, urine, slops, and other impurities must be removed altogether clear of the works. The siphons should be absolutely protected from any danger of impurities entering the supply, as sometimes the underground water rises to such a height that they are completely immersed in water. The collecting tank should be available for inspection purposes, and arrangements made so as to allow the water in the two siphon tubes to be sampled separately.

The ground adjoining the walls should be levelled. The waterworks authorities should acquire a sufficient zone of protection, which should be guarded from all sources of contamination. The zone of protection should be at least 15 metres wide on each side, and should extend along the

whole length of the wells and siphons and be accessible to the general public. A secondary zone of protection (perhaps 50 metres wide) should be acquired, if possible, on which no manufacturing processes should be carried out, and no cesspools allowed, nor pollution permitted of any kind. No large outfall sewer should be allowed to discharge into the Nile above Rod-el-Farag.

As regards the best and cheapest method of removing the iron and manganese from the water, the Commissioners say it is difficult to speak with certainty.

In their opinion, systematic experiments should be carried out to settle this point; and it is impossible for them to state exactly what method or combination of methods should be employed in the particular case of Rod-el-Farag water. It is sufficient to say that there are a number of effective methods for removing iron and manganese from water, and preventing the development of crenothrix, and removing any objectionable taste or smell from the water. For example, "softening" the water with lime, the addition of active oxidizing agents, aëration, and subsequent rapid filtration.

At Rod-el-Farag, as at Ghizeh and Abbassia, it is highly necessary that the work of water purification should be kept under continuous scientific control. If experience shows that one or other of the wells contains too many bacteria, or bacteria of undesirable sort, it will be necessary to discover the cause and to remedy it.

Several appendices are added to the report, giving figures, tables, and other details.

In conclusion, say the Commissioners, we desire to thank all those who have so kindly given us so much valuable information and help, which has been of the utmost assistance to us in arriving at a unanimous decision. Every possible facility has been given us in carrying out our investigations and experiments, and we have experienced no difficulty in obtaining full information on all subjects connected with the inquiry.

LITERARY NOTES.

THE foundation stone of an institute for the teaching of the history of medicine in connexion with the University of Vienna will, it is announced, shortly be laid. The State has promised a subvention, and the medical profession has contributed with a generous hand. In the institute there will be a museum containing collections of all sorts of things relating to medical history—portraits, books, instruments, apparatus, etc. One section of this will be devoted to a collection showing the development of the healing art in Austria. The establishment of the institute is due to the untiring efforts of Professors Neuburger and von Töply, both of whom have won deserved fame as medical antiquarians.

Professor Hirschberg has bequeathed his collection of ophthalmological literature to the Royal Library, Berlin, together with a sum of 16 000 marks for its conservation. It is provided that the collection shall be known by the name of the donor.

We mentioned some time ago that Mr. E. H. Hankin had suggested that the legend of the Pied Piper of Hamelin had its foundation in a real epidemic of plague caused by rats. Writing in the *Times* of January 17th, Mr. A. E. Shipley of Cambridge gives some further details which may be interesting to our readers. After mentioning that Mr. Hankin had traced the march of the Pied Piper back to the year 1284, he adds that the Piper is said according to the Brothers Grimm:

> To have been an indigent person who had witnessed a disappearance of rats in the dominion of the Cham of Cathay, whence he had come. After his arrival at the town of Hamelin, in Brunswick, there was a disappearance first of the rats, and then of the children, the number of the latter being 130.

In that same year there was a severe outbreak of plague in Egypt, and in the following year so great a mortality from plague in Italy that even bishops remained unburied. The date of the children's disappearance so impressed itself on the inhabitants of Hamelin that for some centuries its archives were dated from the year 1284. Later the plague was often referred to as the *Pestis puerorum*. Mr. Shipley adds that rats are, however, not essential to the dissemination of plague, and Hankin draws attention to one of the few cases where virulent plague has been effectively controlled. The outbreak was that of Kolobouvka, in Astrakhan. Here 3,000 rodents of various species were bacteriologically examined, and in no single case was the plague microbe found. The officials attributed their success in controlling the epidemic to the fact that it did not extend to rats. Mr. Shipley goes on to say, as has been said in the JOURNAL, that it may be possible in Great Britain to exterminate rats, though the task will certainly be difficult. It may even be a good thing to do, but until it is done we cannot be sure. "Experience teaches us that any profound disturbances of the 'balance of power' amongst the fauna of a country is almost invariably followed by results no one has foreseen. In India the task will be even more difficult, where taking of life is repugnant to a very large proportion of the inhabitants." Mr. Shipley acknowledges his indebtedness to his friend Professor J. G. Frazer for drawing his attention to Crooke's *Popular Religion and Folk-lore of Northern India*, from which he gathered that there the rat is sacred to Ganesa, the elephant-headed god, and that to kill a rat is considered a great crime. When rats are troublesome in a house, the women of the family vow to give them sweet balls on a certain day if they will cease from troubling. Before the bodies of these people can be saved by their own exertions from plague, it will be necessary to give their understanding some centuries of education.

Dr. Erich Ebstein of Munich contributes to a recent issue of the *Deutsche medizinische Wochenschrift* a note on the pandemic of influenza which occurred from 1781 to 1782. It broke out first in the autumn of 1781 in China and India; then in December it showed itself in Siberia and Russia, and in February, 1782, in Finland; then it reached to Germany, Denmark, Sweden, England, Scotland, and the Netherlands, finally extending to France, Italy, and Spain. Dr. Johann Daniel Metzger, Professor in the University of Königsberg, wrote a pamphlet on the subject, which has a special interest, because it contains a curious note by the famous philosopher Immanuel Kant. It is headed *Announcement to Medical Practitioners*, and runs as follows:

> The noteworthy and remarkable epidemic which has just passed over us is, considering its symptoms and their remedies, properly only a subject for physicians; but its wide spread over so many countries aroused the attention of those who might otherwise have regarded this strange phenomenon merely from the point of view of the student of physical geography. In this respect one will not be interfering in other people's affairs if one invites doctors to be broad-minded and to search as far as possible into the progress of this sickness, which seems to spread not only by respiratory inhalation but by infection, and to be independent of climate. The universal trade of Europe with every part of the world, through ships as well as caravans, spreads many diseases throughout the whole world, so that we may believe, with much appearance of truth, that through Russia's inland trade with China two kinds of noxious insects have been brought over from the furthest parts of the East, which will in the course of time greatly extend their ravages. Our epidemic, according to public accounts, began in St. Petersburg, and then step by step, spread to the shores of the Baltic, without sparing any of the intervening places, till it reached us, and then went further westwards through West Prussia and Dantzig, resembling greatly the plague of Aleppo according to Russel's description, though the contagion of this dreadful sickness, and its danger, is not to be compared with it. Letters from St. Petersburg make it known to us under the name of influenza, and it appears that the same disease broke out in London in 1775, and from letters of the period we see it was known there under the same name. That both these epidemics may be compared by experts, I give here the translation of a report by the celebrated (lately deceased) Dr. Fothergill, as it was told to me by a friend.
>
> (Signed) I. KANT.

Fothergill's account of the epidemic appeared in the *Gentleman's Magazine* for February, 1776.

To the *Bulletin of the Johns Hopkins Hospital* for December Dr. John W. Churchman contributes an interesting article on the doctor as he is represented in the paintings of Jan Steen. That artist, as is well known, was particularly fond of medical subjects. He painted, in all, about 315 pictures, in some 32 of which he showed the doctor in one or another of his activities. Even Teniers, who was also partial to these themes, came nowhere near this proportion—painting, out of a total of 685, only about 30 medical pictures. Dr. Churchman expresses surprise that there are no blood-letting scenes among Steen's paintings. He showed, on the other hand, an inordinate interest in a certain form of neurasthenia; and no fewer than ten love-sick maidens figure in his paintings. He seems, indeed, to have been partial to sick ladies in general. One grows quite used, says Dr. Churchman, to the pathetic seated figures, dressed in ermine-bordered sacks—often brilliantly

coloured and models of taste beside the hideous things that go by that name to-day; to the silk skirts, again often brilliant; to the lovely heads, the sickest of eyes, and an appealing look that none but a boor could resist; to the stately physician taking the pulse as though he were dancing a minuet; to the rich Turkey rug, and the Cupid and the dog, and the patient's fond mother, and the other accessories. The Dutch painters laid a strong emphasis on the doctor as urologist. One gathers, indeed, from these pictures that the urine and the diseases of its organs were the chief practical concerns of the medicine of the day, and that diagnosis consisted in courtly feeling of the pulse and a wise look at a urinal. Steen and his brother painters did not overlook the quack. He is represented by Steen in some of his most characteristic but not his most finished paintings, exhibiting his wares or his skill in the open air. He often has a heavily-sealed diploma—preferably written in Hebrew—prominently displayed; and the crowd which has gathered to hear and to see him gives the artist a splendid chance to exhibit his skill in painting the odd Dutch types which appear in these pictures in such profusion. The same subject attracted Gerard Dou, who, without missing any of Steen's detail, attained a finish which the latter apparently deemed the theme unworthy of. To see, however, says Dr. Churchman, how the quack may be treated adequately and yet with exquisite elegance, one must turn to Hogarth's well-known picture in the "Marriage" series of the London National Gallery. There is a splendid portrait of a quack by Franz Hals the Younger in the museum at Rotterdam, in which the operator is represented as removing a small tumour from a patient's forehead; and this removal of glands, or sebaceous cysts, from various portions of the head and neck is a subject not overlooked by Steen. These pictures reflect a popular belief of the time; for there was a common saying in Holland in the sixteenth and seventeenth centuries which ran: "He has a stone in his head," and the meaning of which was, "The patient is crack-brained." "Cutting the stones from one's head" was therefore supposed to be curative for mental deficiency. The saying, which originated from the romance of King Arthur, was of common occurrence in the farces of the time; and it is little wonder that this reflection of it is to be found in the canvases of Steen. The dentist is the subject of one of Steen's rather good groups: of a curious outdoor scene by Victors; of a typical but uncanny interior by van Ostade, and of one of Dou's wonderful candle-light scenes; but these pictures throw no particular light on the medicine of the time. Dr. Churchman gathers from the pictures of Steen and his school that in his day the doctor had become a gentleman, and his profession was, whether respected or not, at least respectable. He may indeed be, as we have seen, a wise-looking crier in the markets, with his Hebrew diplomas and all the vulgarity of the pedlar, or he may even be a coarse reprobate, leading his vulgar life within the pale of legitimate practice. But he is neither always nor characteristically these. He is, on the contrary, a courtly, mild-mannered, well-dressed gentleman. He moves about the sick room with grace. He has none too many scientific resources; but though he has little to depend upon beyond the finger on the pulse and a glance at the urine, he has made himself a place among his patients of honour, of dependence, and of affection. Medicine is, in a word, finding in him for its service a good type of man. If we go to Gerard Dou we find the same testimony. Titian, with his magnificent Parma physician, and Holbein, with his equally splendid portrait of Chambre, had indeed already shown us what type of man medicine could appeal to. According to Dr. Churchman, the message of the Dutch painters on this point is that as a matter of fact, and on the average, medicine in the seventeenth century did appeal to men whose intellects, manners, and bearing are worth study.

AN official reception was given on January 15th at the Metropolitan Asylums Board by Mr. J. T. Helby, its Chairman, and Mrs. Helby, the feature of the evening being an interesting display of furniture, brushes, clothes, and other goods, manufactured by the imbeciles in the Darenth Industrial Colony and the feeble-minded girls at High Wood School.

MEDICAL NEWS.

DR. ARTHUR NEWSHOLME, Medical Officer of Brighton, has been appointed Chief Medical Officer to the Local Government Board, in succession to Mr. W. H. Power, C.B., F.R.C.S., F.R.S., who is retiring under the age clause.

WE regret to announce the death of Mr. Charles James Wright, M.Sc., late Professor of Obstetrics in the University of Leeds, at the age of 65. We hope to publish an obituary notice in a later issue.

A BLOCK recently reconstructed at the London Fever Hospital, comprising four wards and four private rooms for female patients, will be opened by Lady Balfour of Burleigh on Monday next at 3 p.m.

A DISCUSSION on rivers pollution, with special reference to the Board proposed by the Royal Commission, will be opened at the Royal Sanitary Institute, Margaret Street, W., by Sir William Ramsay, K.C.B., F.R.S., at 8 p.m., on Wednesday, February 12th.

A MEETING of the Medical Officers of Schools Association will be held at 11, Chandos Street, W., on Thursday, January 30th, at 3.45 p.m., when Mr. Frederick Rose, Ph.D., will read a paper on The Physical and Educational Aspects of the Open-air School.

THE Brazilian Government has voted funds for the establishment of an experimental pathological institute at Manguinhos. The institute is intended for the study of the parasitic and infectious diseases of man, animals, and plants, and for the preparation of serums. A section of veterinary medicine will form an annexe to the institute.

A PUBLIC meeting of the newly-formed Income Tax Reduction League will be held at the Cannon Street Hotel on Monday next at 4 p.m., when the chair will be taken by Lord Avebury. The object of the League is to organize income-tax payers for purposes of self-defence, to obtain in time of peace a substantial reduction of the income tax and its restrictions to profits actually received by shareholders or individual traders, and to exempt depreciation funds from the operation of the tax. The League is not a party organization.

THE Secretary of State for the Colonies has appointed Dr. W. J. Simpson, Professor of Hygiene at King's College, London, and Lecturer in Tropical Hygiene at the London School of Tropical Medicine, to proceed to the Gold Coast to assist in combating the present outbreak of bubonic plague at Accra. Professor Simpson left for the Gold Coast on January 13th, accompanied by Dr J. A. Haran, of the Medical Service of the East Africa Protectorate, who has been selected on account of his experience in dealing with plague in that dependency. Professor Simpson will probably also visit other towns in West Africa, with a view to advising in regard to questions of sanitation.

MR. W. W. WAGSTAFFE, who, since his retirement from his position on the surgical staff of St. Thomas's Hospital, has devoted much attention to collecting meteorological data in the neighbourhood of Sevenoaks, has supplied us again this year with a summary of his observations. These show that in Kent the special feature of 1907 was scarcity of sunshine except in the months of March and September, and variations in weather of unusual rapidity. The general temperature was low throughout the year, with the exception of March, which was somewhat above the average. On the other hand, wind movements were less marked than usual, the air moving at a rate equivalent to a gale only on twenty-seven days, as compared with forty-one in the previous year. In spite of the weather throughout the year being of a character which is commonly regarded as bad, there was a shortage in the rainfall of 4.68 in.; while every bank holiday brought a very fine day.

THE BROWN DOG.—A correspondent of the *Times* writes that a petition to the Battersea Town Council is being prepared for signature by the undergraduates of the University of London with reference to the Brown Dog Memorial. Medical students, he says, will not be asked to sign this petition, which embodies a request that the name of University College be omitted from the inscription on the memorial, on the grounds that every university in England carries on the practice of vivisection, and that therefore London University should not be singled out from among the others. The Battersea Town Council, at a meeting on January 22nd, decided to retain the inscription. The petition above referred to has, however, yet to be considered by the Council.

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SATURDAY, JANUARY 25th, 1908.

PARLIAMENTARY PROSPECTS.

The session of Parliament which is to open on Wednesday, January 29th, instead of on the usual Tuesday, will probably prove unusual in its course as in its opening day. Whatever the outcome, the session will be a critical one in the history of the Government, and an arduous one in respect to its work. It is generally considered enough to have one, or at most two, first-class contentious measures for a session, but this year will see a whole crop of Bills that will be fought with all the energy and strength of the Opposition.

It is expected that the first Bill to be proceeded with will be the Licensing Bill, for it was mentioned in last year's Speech from the Throne, and after a year's preparation ought to be well-considered and ripe for introduction. We are inclined to think it will prove a more moderate measure than many expect; but the Trade interests involved are so far-reaching that the Bill must prove acutely contentious. Another Bill, promised last year, is the Eight Hours Bill for Miners. It was introduced late last session, and need not occupy a great amount of time this year. There must also be an Education Bill, which we are told will be short and definite; but these two qualities do not always lessen antagonism in the House of Commons. The attempt to secure full public control of all the State-supported schools and the abolition of all religious tests for teachers, which form the minimum demand of the Government supporters, must excite deep and earnest opposition. The perennial religious difficulty, even more acute than in the Seventies, has caused an increasing body of members to seek a settlement of this difficulty in the plan of leaving the Churches to do the religious teaching, while the State makes itself responsible only for secular instruction.

Then the Prime Minister has announced that he means to send up to the Lords as quickly as possible the two Scottish Bills dealing with small holdings and land values, which the Peers rejected last year. This action, whatever be its result, will certainly not tend to lessen strife in and between the two Chambers.

Mr. Asquith, who is happily to be in charge of the Licensing Bill, and on whom the labours and responsibilities of the session will mainly rest, has also, in addition to his ordinary Budget legislation, to produce and carry a scheme for old-age pensions, a most difficult and delicate task—difficult on account of the enormous expenditure involved, estimates varying from 8 to 30 millions a year; and delicate on account of the attitude of the Labour representatives in the House, who are clamouring for the most costly scheme.

Then there are important Bills connected with other Departments. The Local Government Board must bring in and carry, if time permits, a Housing Bill more or less on the lines of the report of the Select Committee, and behind this the Department is understood to have a Town Planning Bill ready. Rivers pollution and water supply, purity of milk supply, and valuation, are all subjects engaging the attention of the Board with a view to legislation, to say nothing of small Bills connected with building by-laws in rural districts and other subjects.

Ireland, too, will require attention, and Mr. Birrell will have to tackle the thorny question of a new Irish university. He has to avoid interference with Trinity College, Dublin, and create an institution which must be democratic and non-sectarian, to which Roman Catholic colleges will be willing to send their students to be examined for degrees. It will probably consist of self-contained and self-governing colleges providing full training, and uniting together to form a university controlling and examining authority open to all on equal terms. In any case, with that task and the graziers' question Ireland must occupy a good deal of time in 1908.

The Home Office, too, has several Bills, such as the State Reformatories Bill of last year and others dealing with factory work, to be considered; while the Board of Agriculture and the Scotch Office, to say nothing of the Lord Chancellor and the Law Officers, will have subjects for legislation. There is urgent need for an amendment of the administration and the laws of lunacy, and there is some hope that the Lord Chancellor may be able to undertake the task this year.

The enumeration of these questions of difficulty and importance is in itself sufficient to indicate that even with all the time-saving appliances of Grand Committees and the free use of time limits and closure the session must be unusual in its responsibilities and labours. We must confess that it offers a poor prospect for private members. Still they will do their best in the time allotted to them, and as the unexpected has a peculiar way of coming to pass in the Commons, private members need never lose hope till the session is wellnigh over. We should have been glad to have seen proposals for reform in the law of death certification announced by the Government, and in default of their action, the Bill for the Prevention of Premature Burial may afford by its introduction an opportunity for raising this pressing question. If the Housing Bill follows, as is expected, the recommendations of the Select Committee, medical officers of health and sanitary inspectors will be given security of tenure, and the whole public health work of each county placed on a more satisfactory basis. In any case Sir Walter Foster will introduce his Public Health Officers Bill early in the session.

As regards public medical service generally, the time is getting ripe for large changes, and it is an open secret that a section, if not a majority, of the Poor-law Commission will in their report suggest a plan for creating a great civil medical service in the country, which will embrace all the medical functions performed under the Poor Law, the sanitary service, and in connexion with school inspection, and possibly the Factory Acts. This, however, is not likely to come under discussion in Parliament for a session or more.

The Bill to prohibit medical practice by companies which passed the House of Lords last year, will again be in charge of Sir John Tuke, while the Scottish Parochial Officers Bill will be introduced by a northern member. The groups of members who ballot together to get a good place for some Bill are already active, and there will, as usual, be great competition for the first dozen places. The Irish and Labour representatives will win places for their measures, including the Miners' Bills, while those interested in votes for women, in putting down ecclesiastical disorders, in home work, in vivisection, in the metric system, and many other

subjects, are all organizing for the ballot. Whatever fortune may await private members' Bills, we may, at all events, gather from the Government programme, so far as it is known, that in the coming session we shall have a strenuous time, and that many social questions, in which the medical profession is indirectly interested, will occupy the attention of Parliament.

FAIR COMMENT.

THE result of the case of Tucker *v.* Wakley, in which the English agent for "Dr. Tucker's asthma specific" sought to recover damages against the proprietors of the *Lancet* for an alleged libel, is a matter of considerable importance to the profession and the public. We regret to say that our contemporary has been mulcted in damages to the tune of £1,000. Seeing that a stay of execution has been granted with a view to an appeal, it would not be right to comment freely upon the case at present.

A short recapitulation of the facts, which are fully set forth at page 236, may, however, be of interest to our readers. Early last year Dr. Waldo held an inquest on the body of a man who had died of consumption. The coroner stated in open court that "Dr. Tucker's specific," which was said to have been used by the deceased, was a quack remedy and a fraud. Our contemporary, in commenting upon this, wrote (on March 9th, 1907) that, "In the course of an inquest held at the beginning of "the year it was stated that a labourer who had died "from consumption had been using Dr. Tucker's "asthma specific inhaler, for which he had given, "according to a newspaper report which has reached "us, three guineas, while the material with which he "had sprayed himself cost him 8s. an ounce. Dr. F. J. "Waldo, the coroner, rightly stigmatized this kind of "dealing as a fraud."

The paragraph complained of went on to comment upon the use of proprietary medicines generally, and spoke of the way in which the public were "robbed and "poisoned" by the proprietors of such articles. Mr. Augustus Quackenbush Tucker, the English agent for Dr. Tucker, brought an action for libel. The defence was a plea that the article in question amounted to fair comment on a matter of public interest. The jury, after a protracted hearing, found that the defendants intended to attack the plaintiff's character; that the article was not fair comment on a matter of public interest, and they awarded Mr. Tucker £1,000. They came to these conclusions after repeated direction from the Bench that the defence of fair comment is no answer to an action when the libel complained of is an attack upon a man's character. It was ably argued by the defendants' counsel—and the words of the libel would appear to support the contention—that this was an attack upon the plaintiff's business, not upon his character. Mr. Justice Ridley, however, took occasion in the course of his summing-up to deal with this point, and to show that, in effect, the attack was made against the plaintiff personally. To use the words of Mr. Duke, the plaintiff's counsel, the jury appear to have come to the conclusion that the object of the proprietors of the *Lancet* and all the eminent members of the profession who gave evidence on their behalf was to destroy the plaintiff and ruin his business.

There are certain facts connected with this case which are to be noted. In the first place, the plaintiff was not "Dr. Tucker" himself, but only his English agent. In the second place, it was admitted on all hands that the plaintiff had suffered no pecuniary loss as a result of the libel, though it must be remembered that it was not necessary for the plaintiff to prove special damage. Lastly, the finding that the words used by the *Lancet* were not "fair comment on a matter of public interest" is difficult to reconcile with decided cases.

In a well-known case tried in 1887 Lord Esher said: "What is the meaning of "fair comment"? I think "the meaning is this: Is the article in the opinion of "the jury beyond that which any fair man, however "prejudiced or however strong his opinion may be, "would say of the work in question? Every latitude "must be given to opinion and to prejudice, and "then an ordinary set of men with ordinary judge-"ment must say whether any fair man would have "made such a comment on the work. It is very easy "to say what would be clearly beyond the limit; if, for "instance, the writer attacked the private character of "the author. But it is much more difficult to say "what is within the limit. That must depend "upon the circumstances of the particular case." The illustration as to the attacking of the author's character raises another question of importance arising out of Tucker *v.* Wakley. The fraud alleged against the plaintiff, which has now been disproved by the jury, amounted to this—that he sold a fraudulent remedy, or assisted the sale of that remedy, by the publication of fraudulent advertisements. Short of this, we cannot see that his private honour was in any way attacked. But does the English law provide that any one who denounces a system necessarily stamps as fraudulent the author of the system? Instance the most recent pronouncement on the subject—namely, the case of Dakhyl *v.* Labouchere, where Lord Atkinson said: "A personal attack may "form part of a fair comment upon given facts truly "stated if it be warranted by those facts; in other "words, in my view, if it be a reasonable inference "from those facts. Whether the personal attack in "any given case can be reasonably inferred from the "truly stated facts upon which it purports to be a "comment is a matter of law for the determination of "the judge before whom the case is tried, but if he "should rule that this inference is capable of being "reasonably drawn, it is for the jury to determine "whether in that particular case it ought to be "drawn."

While we have no right and no desire to question the verdict of the jury, we cannot refrain from tendering our sympathy to the proprietors of the *Lancet*.

STATUS LYMPHATICUS AND SUDDEN DEATH.

THE two articles which we publish this week on the status lymphaticus or lymphatism will remind readers of one of those obscure causes of sudden death which, though fortunately rare, are brought into prominence from time to time by the occurrence of an unexpected fatality. Last summer the death of a gentleman under anaesthesia was attributed to this condition, and as recently as last week, according to the *Sheffield Independent* of January 18th, the sudden death of a child 2 years old occurred at Sheffield from no apparent reason, but was found, on *post-mortem* examination, to be attributable to a condition of lymphatism.

Sudden death in the status lymphaticus sometimes occurs during the administration of an anaesthetic, in spite of the utmost skill and vigilance, and sometimes from various other causes which are apparently trifling and inadequate. The death, some time ago, of the son

of Professor Langhans, of Berlin, immediately after a preventive inoculation with diphtheria antitoxin, is a particularly sad instance of death due to this morbid condition. The immediate cause appears to be cardiac failure, but the association of the cardiac weakness with the general anatomical condition is still far from being understood. As the name of the disease implies, the prominent feature is a hyperplasia of the lymphoid tissues. The pharyngeal, thoracic, and abdominal lymphatic glands are most frequently affected, and it is a curious fact that the enlargement of the mesenteric glands is often particularly great. Persistence and enlargement of the thymus is also a very prominent feature, which has given rise to the term "thymus death" as descriptive of sudden fatalities in the status lymphaticus. Enlargement of the spleen is also frequent but variable in amount, and the bone marrow has been found in a state of hyperplasia. In a large proportion of the cases the thyroid gland has been found enlarged, and, according to Wynn, one of the most striking and constant features of the disease is the alteration in the minute structure of this gland. He finds that there is always a reduction or absence of the normal colloid substance of this organ, together with hyperplasia of the cells which grow into alveoli. To this profound change he attaches high importance, and contrasts it with the relatively less significant changes present in the thymus, which, on microscopic examination, simply shows a condition of hyperplasia. Other important conditions found in association with lymphatism are flaccidity of the cardiac muscle and, sometimes, subnormal development of the heart, aorta, and peripheral arteries.

As aids to diagnosis it is important to look for enlargement of the superficial glands, particularly in the neck and axilla, enlarged tonsils, adenoid growths, and, according to Dr. McCardie's observations, enlargement of the tongue. Evidence of enlarged thymus and hypertrophy of the thyroid gland must also be carefully searched for. Sometimes the spleen is palpable, and the enlargement of the mesenteric glands may be detected.

From the standpoint of the anaesthetist, Dr. McCardie urges the extreme importance of endeavouring to diagnose this condition beforehand when it is proposed to submit the patient to an operation. If the condition is suspected, special attention should be paid to the heart, and, as the dominant feature in these cases is lack of tone in the circulatory system, cardiac and vascular tonics are strongly indicated and should be administered during the week preceding the date fixed for operation. Unfortunately it is only too easy to be wise after the event, as we observe from the lesson taught by Mr. Hilliard's unfortunate case, where there was no indication of the necessity for this preliminary care of the heart prior to the performance of a trivial operation, and it appears that the patient passed his time in inhaling the smoke of cigarettes during the whole of the interval between breakfast and the administration of the anaesthetic. Much importance attaches to the choice of anaesthetic, and, as in a large proportion of the fatal cases chloroform was employed, Dr. McCardie recommends that ether should be used instead whenever possible, even for very young patients, and especially for minor operations. Owing to the possibility of pressure caused by the congestion of the thymus and neighbouring parts if ether be administered by the closed method, he advises that the open method of inhalation should be adopted. When it is absolutely necessary to give chloroform in a case of suspected status lymphaticus, a preliminary hypodermic injection of strychnine and atropine, repeated if necessary during the operation, may help to ward off ill-effects.

GLASGOW AND LORD LISTER.

On January 21st Lord Lister was enrolled as an Honorary Burgess of the City of Glasgow. The Lord Provost, Sir William Bilsland, who presided at the ceremony, recalled Lord Lister's connexion with the city while Professor of Surgery at the University and Visiting Surgeon at the Royal Infirmary. It was at Glasgow that he achieved world-wide distinction as a scientist and a surgeon by his discovery which had saved thousands of lives and greatly lessened human suffering. It had been well said that Lord Lister's work marked a new epoch in modern surgery, and his name would have an imperishable place alongside the greatest in his profession and among the noblest benefactors of humanity. Professor Sir Hector Cameron accepted on behalf of Lord Lister who was unable to be present, the casket containing the burgess ticket, and read from him a letter recalling his connexion with the University and the city, in the course of which he said: "Having in due time been elected "by the managers of the Royal Infirmary as surgeon to "that institution, I experienced uniform consideration "at their hands when applying to the treatment of "wounds the great truth which had been recently "revealed by the illustrious Pasteur regarding the "nature of fermentative changes in organic substances. "That truth, though it seemed to me to shine "clear as daylight from Pasteur's writings, was for "many years not generally recognized, and thus "it was my privilege to witness in my own prac-"tice, as the application of the principle became "gradually improved, the revelation of pathological "truths of fundamental importance and a revolution in "practical surgery, and I look upon the years spent in "your city as the happiest period in my life. The old "infirmary is now giving place to more commodious "buildings; and, great as must necessarily be the "expense in this undertaking, I do not doubt that the "proverbial liberality of Glasgow will prove fully equal "to the occasion." We congratulate the illustrious surgeon on this recognition of his work in the city which witnessed its inception.

ADMISSION OF WOMEN TO THE LONDON COLLEGES.

In May, 1907, a memorial signed by the medical staff and lecturers of the Royal Free Hospital and London School of Medicine for Women, and by a number of other leading members of the profession, as well as by certain representative members of the governing body of the School of Medicine for Women, was presented to the President of the Royal College of Physicians of London asking the College that women might be admitted to the examinations of the College. The memorial pointed out that for students in England the opportunity of obtaining a qualification of the English colleges would be especially valuable, since those who at present desired to obtain a diploma of the royal colleges were compelled to enter for the examination of one of the Scottish or Irish colleges it was also observed that, in view of the fact that diplomas of the royal colleges held so high a place in the estimation of the public, and were the qualifications taken by the great majority of medical men in England, the exclusion of women

from their examinations placed them in a disadvantageous position. The memorial was considered at two prolonged meetings of the College. A motion to grant the prayer of the petition was met by an amendment which would have had the effect of admitting women to the examination for the licence only. This was carried, but at the adjourned meeting an amendment to omit the word "only" was carried by a large majority; and finally another amendment, to the effect that it was desirable that the by-laws should be altered so as to allow the admission of women to examinations of the College, was carried by a large majority, and as a substantive motion *nem. con.*, so that the prayer of the petition has been granted. But it was resolved not to take any action inconsistent with the agreement between the two colleges under which the licence of the one and membership of the other are only granted conjointly. It would appear, therefore, that the decision of the question now rests with the Royal College of Surgeons, and since the Council of that College has resolved to take a poll of the Fellows and Members on the question, the final decision appears really to lie with that very large section of the profession in England who hold a diploma granted by the Royal College of Surgeons.

THE CAIRO WATER SUPPLY.

So many of our countrymen visit the land of the Pharaohs in search of health, rest, or recreation, that, apart from the general welfare of Egypt, which we have taken to some extent into our keeping, the hygienic condition of its chief city is a matter of personal concern to large numbers of our wandering race. For some time past the water supply of Cairo has been under suspicion and has given rise to many complaints. These at last aroused the Egyptian Government to take some action. It was announced in the BRITISH MEDICAL JOURNAL of January 4th that an international Commission of experts, consisting of Dr. A. C. Houston, Director of Water Examination to the Metropolitan Water Board, Professor Gaertner and Dr. Dienert, was appointed to inquire into the sources of the supply, the methods of collection and distribution, and the suitability of the water for drinking and domestic purposes. The Commission worked from November 21st till December 7th, making as full an investigation as the limited time at their disposal allowed. The substance of their report, which is dated December 7th, 1907, is published elsewhere. It was laid before the Council of Ministers at a meeting on December 24th, and a Committee, consisting of Mr. A. L. Webb (chairman), Lord Edward Cecil, Mr. W. P. G. Graham, Mohamed Anis Pacha, Dr. Ibrahim Hassan Pacha, and Boghos Nubar Pacha, was appointed to consider the report and advise as to the best measures to be taken. The report will, we are sure, command the confidence of all who know the special competence of the Commissioners. It speaks for itself, and therefore calls for little comment. Attention may, however, be called to the results of their examination of the Rod-el-Farag. The more moderate critics of that source of supply will doubtless be gratified by the fact that the Commission of experts has confirmed all their contentions. It has practically condemned this supply in its present state, on the grounds of insufficient pressure, the unpleasant taste and smell of the water, the presence of iron, manganese, crenothrix, and other impurities. They recommend that the water shall be so treated as to remove these and other objectionable features, the existence of which, although not directly dangerous to health, prevents the supply from being classed as one of first-rate quality. They further call for a zone of protection in the neighbourhood of the wells and the removal of the cesspools. The existence of cesspools in close proximity to the wells is a very serious matter, and it would be interesting to know who is responsible for their presence in so dangerous a situation. Other, protective measures are advocated by the experts which it is unnecessary to consider in detail, but it is impossible to read the report without coming to the conclusion that, as regards the Rod-el-Farag supply, the critics are to be congratulated on having called attention to a most unsatisfactory condition of affairs, and one which would not appear to be altogether creditable to the advisers of the Egyptian Government. For our own part we congratulate the Commission on its work and hope that steps will be taken without delay to give effect to its recommendations.

NURSING IN WORKHOUSES AND POOR-LAW INFIRMARIES.

WE have lately had our attention directed to this subject, as indicated by an answer given to a correspondent which appears at p. 118 of the BRITISH MEDICAL JOURNAL of January 11th. From this and other correspondence we gather that in many rural districts the system of nursing in Poor-law institutions is still lamentably defective. We are the more surprised to find this to be the case as the Local Government Board some few years ago supplied the various Boards of Guardians of England and Wales with a series of rules and regulations on this subject. These were intended to have the effect of putting an end to the system of nursing by paupers in all Poor-law institutions, a highly desirable change for the better which it is much to be regretted has not been more generally carried out. The authority given to the local Boards appeared at the time to be quite sufficient to enable them all to better their nursing system without delay. To what extent the Local Government Board possesses powers to enforce its own views on guardians and to insist on the carrying out of their own rules and regulations we do not profess to know, but we should be greatly pleased to see a nursing system of greater uniformity brought into operation, and in many districts a much larger and in some even a more efficient staff of nurses engaged than those now employed. We have good reason to believe that the night nursing staff is sometimes far from ideal, the work being practically left in the hands of some of the inmates of the different institutions with little or no supervision by any of the engaged staff, there being no official of the latter class within easy reach at such times. We have received a copy of a report made to a provincial Board of Guardians, from which it would appear that the nursing staff (taken as a whole for both night and day duty) is deficient in strength to the extent of nearly 50 per cent.; and, if this is really correct, these nurses must be frequently most seriously overtaxed in their attempts to do their duty to the patients who are under their care; especially must this be so when their quarters provided as bedrooms are far short of being suitable, and no provision whatever is made to enable them to take meals in comfort, or to obtain any form of day repose when temporarily released from duties in their respective wards or elsewhere. Notwithstanding these disparaging comments, it is a great satisfaction to us to record the fact that in many of the larger workhouses and infirmaries, as well as in not a few of the smaller, the system of nursing therein has been so much altered for the better, and the ordinary work of the department is now so well supervised as to render it little short of perfection, and in such cases well worthy of being copied by others less advanced in the right direction. We are ready to acknowledge that good and efficient nursing in illness must for almost all classes be regarded as a most expensive matter; but, even if found to be so, it is but justice to the poverty-stricken sick and infirm that they should have it

procured for them whenever it is urgently needed, and when it can be provided at any reasonable cost.

ANTIVACCINATION LITERATURE.

COPIES of circulars and leaflets couched in the usual antivaccination language have been sent to us relating to the new Vaccination Act. These are evidently intended for circulation amongst parents, and in some instances it appears that magistrates have expressed their willingness to attend at places arranged by the Antivaccination League for the purpose of signing statutory declarations. In one instance it is stated that the magistrate "will sign any forms that may be presented." Under these circumstances it is possible that many forms may be signed which do not comply with the regulations, and it would be well for clerks to magistrates and vaccination officers to know of these declared wholesale intentions. The January number of *The Vaccination Inquirer* attempts to disguise its disappointment at the little progress made in the direction of accomplishing the object for which the Antivaccination League exists. Its lamentations, however, are pitiful. Referring to the Act which provides for medical inspection of school children the readers are informed: "We do not conceal our uneasy feeling that "by the establishment of the new Medical Department "in the Board of Education, by the new arrangements "giving medical 'authority' a footing in the schools, "and by the medical arrangements for the New "Territorial Army, these opponents of ours are hoping "and even scheming to get back more than they have "lost by the relaxation of the vaccination law." Readers are exhorted "to utilize" the *Inquirer* more and more and not to give their copy away or cast it aside. By purchasing extra copies some of the "uneasy "feeling" may be removed, for it is a well known fact that error and misrepresentation travel faster than the truth and sometimes further. The *Inquirer* challenges "an examination of this and "every issue" in support of its claim to be a "work of "reference and an armoury of controversial weapons." We have shown the kind of weapons in the armoury of previous numbers, and the present issue is no exception, as the following examples will show. A whole heap of abuse is hurled at the Canadian pamphlet mentioned in this JOURNAL on October 5th, 1907, and it is cast aside as useless, because of a mere typographical error. The word "year" occurs in the text instead of "decade" in association with certain average figures dealing with the close of the eighteenth century. Immediately opposite the paragraph containing this error the whole of the figures are quoted in a manner that would leave no doubt in the mind of any fair-minded person as to the accidental and wholly unintentional nature of the error. On the slender pretext of this typographical error the *Inquirer* further deludes its readers with the following: "But "now we can understand how it was that so soon "after recommending this Canadian pamphlet to its "readers the BRITISH MEDICAL JOURNAL announces "that in reply to inquiries, we think telegraphic, "it has been found that copies of the pamphlet "were no longer for the present available." Such is the version which the *Inquirer* publishes of a statement, including the following, made in these columns on October 26th, 1907: ". . . copies of the pamphlet "have been dispatched to this country. . . ."—an announcement based on a cablegram from the writer of the pamphlet. That such copies could not be available until they arrived is a fact which required only ordinary intelligence to comprehend. This example from the "armoury" of the *Inquirer* combines the controversial weapons of *suggestio falsi* and *expressio falsi*. When it is noted that the *Inquirer* in its own columns inaccurately quotes the very sentence in question from the Canadian pamphlet, the absurd criticism assumes even a more amusing aspect. Other demonstrations of the kind of controversial weapons which the *Inquirer* "utilizes" appear in the same issue. Adverting to the recent debate on vaccination in Manchester, special prominence is given to a report in a local paper described as an "impartial "authority." The paper mentioned published a statement so misrepresenting and misleading that, according to our information, the secretary of the society under whose auspices the debate was held forwarded a letter on the following day to that paper for publication, to correct the erroneous impression conveyed to the public in the report of this "impartial authority." The *Inquirer* carefully avoids quoting the sentence to which the Secretary of the Physical Health Culture Society took exception. If reproduced, it would have destroyed all claim to impartiality. These are samples of the controversial weapons in the antivaccination armoury, an examination of which we have undertaken in response to the confident challenge. The use of such weapons clumsily handled must of necessity defeat the *Inquirer's* own ends. It is not necessary to refer to further examples in the January number.

THE SURGICAL TREATMENT OF EMPHYSEMA.

PROFESSOR F. LEJARS has directed attention to the possibility of relieving certain otherwise incurable cases of emphysema by surgical intervention on the lines proposed as long ago as 1858-9 by W. A. Freund.[1] Freund is of opinion that a certain number of cases of emphysema originate in alterations in the cartilages of the ribs, and are not primarily due to pulmonary disease. The lesion starts in the costal cartilages, which become thickened, deformed, on section are of a yellow colour, and are riddled with cavities, their elasticity being completely lost. In consequence of this the sternum and ribs project, and the thorax is maintained in a position of full inspiration so that it becomes barrel-shaped, the movements of respiration being more and more restricted. These changes in the cartilages supervene at any time after the age of 16, and involve chiefly the second and third cartilages on the right side, but may extend to all on both sides. Division of the affected cartilages, Freund argued, would allow the ribs to subside during expiration, and the mobility of the thorax would be restored. Many years elapsed before these suggestions were put into practice, the first operative result having been published by Freund himself in 1906. The patient was extremely ill with dilated heart, ascites, oedema of the legs, and albuminuria; section of the second, third, and fourth costal cartilages on the left side afforded a certain amount of relief and increased the vital capacity of the thorax from 800 to 1,400 c.cm. A second case was published by Mohr; the patient was a man of 46, and Professor Haasler excised the second and third right costal cartilages to the extent of 1½ cm.; after the operation the crises of dyspnoea ceased, and the bronchitic condition improved, but six weeks later the symptoms recurred so severely that the operation was, at the patient's earnest request, repeated on the other side by Professor Bramann who excised portions of the second, third, fourth, and fifth left costal cartilages, with results which were satisfactory up to the publication of the case, four of five weeks later. The third case was recorded by Paessler and Seidel, and is striking, as the patient, a foreman, aged 50, was faced with the necessity of giving up his work, but thanks to the operation was able to resume his post. As Professor Lejars rightly says it is too soon to speak positively of the permanent results of the operation, but it was in all cases harmless, and it opens up a prospect of relieving cases which are otherwise hopeless. It would be a

[1] *La Semaine Médicale*, No. 45, 1907.

mistake to suppose that the operation is applicable to all cases of emphysema. It is appropriate only to those which present a fixed, dilated, and barrel-shaped thorax with no other definite expiratory obstacle, and where radioscopy shows irregular thickening and deformity of the cartilages. In order to give the operation a fair chance, it should be undertaken at a comparatively early date, before either heart or lungs have undergone grave organic alteration, and it is indicated in cases where serious shortness of breath follows attempts to walk, or the slightest muscular exertion.

ALCOHOL IN THE TREATMENT OF TYPHOID FEVER AND PNEUMONIA.

AT Stockholm, in August last year, there came into existence the International Union of Medical Abstainers, and, as part of its programme of work, this body has undertaken an inquiry as to the value of alcohol in lobar pneumonia and typhoid fever. In all its connexions the utility of alcohol is a matter of controversy, but in none are differences of opinion more acute than with regard to the propriety and desirability of its use then in these two diseases, which are of such common occurrence that any young medical man may have to deal with them on his own responsibility at a period of his career when he has as yet had insufficient experience to form a sound working rule of practice for himself. Many physicians regard alcohol as most desirable in these diseases, and as often indispensable to the saving of life; on the other hand there are others who use it rarely, and on entirely special occasions, and others again who go so far as to decline to use alcohol at all under any circumstances, and who urge all those who come under their influence to adopt the same course. The idea of the International Union is to endeavour to furnish the basis for an authoritative opinion on the subject, by an inquiry in all countries as to the broad effect of these differences of practice both on the general course of the diseases and on their mortality. Obviously in such a connexion mere opinions are of comparatively little value, but definite statements of results if accumulated in sufficient number and converted into statistics, may furnish information of value provided comparable data can be obtained. The plan, if properly carried out, ought to eliminate personal prejudice and those fallacies which are inevitable when opinions are formed from an experience of a comparatively limited number of cases. The International Union has invited the staffs of the hospitals and infirmaries of all the countries in which it is at present represented to co-operate on one of two plans. One of these merely entails the furnishing of a return as regards the results of treatment of individual cases of these two diseases, whether by alcohol or otherwise; while those who prefer the second plan will definitely agree to treat all cases which come into their hands, either of the one disease or the other, with and without alcohol alternately. This second plan would be, from a scientific standpoint, the more satisfactory, but those who adopt it will have their hands tied in the treatment of their patients. The forms in question, together with other information on the subject, can be obtained from the English representative of the Union, Dr. J. J. Ridge, of Carlton House, Enfield.

THE MAN AT THE WHEEL.

A RECENT issue of the *Daily Telegraph* contains an account of an investigation in the North of England into the circumstances attending the death of an electric tram driver, which occurred quite suddenly while the man was at his work. The medical evidence given was to the effect that the deceased had been found, on examination after death, to be the subject of marked heart disease, and an opinion was expressed that its fatal issue was accelerated by exposure to the cold. Curiously enough it was this latter fact which attracted the interest of the jury, and their anxieties seem to have been assuaged by a statement made by a representative of the Tramway Company that steps would be taken to see if drivers could not be protected from cold by the erection of a glass screen. This man a few minutes before his death was talking cheerily to his companion, the conductor, and the fact that he had suddenly died was only discovered when to repeated sounding of the bell as a signal for restarting he paid no attention. But for the fact that he happened to die at a moment when the tramcar was momentarily arrested, his death might have been the cause of great risk, if not serious accident, to the passengers, but to this circumstance neither the coroner nor the jury seem to have attached any particular importance. It is really a fact of material interest, for it is one more instance in which men have suddenly died while actively engaged in occupations such as those of railway signalling, engine driving, motor car work, and the like. Entire efficiency in the performance of such duties is absolutely essential to the public safety, and severe illness or sudden death on the part of men thus employed might result in an appalling accident. In these days of fast travelling steps should be taken to ensure that all men doing work of the character indicated are physically efficient, and the authorities, neither of electric tramway systems, automobile car companies, or railways, are justified in sending on duty men whose physical fitness has not been ascertained at the time of their first engagement, and who are not subjected to re-examination at frequent intervals at the hands of experienced medical men. Some endeavour to bring about a reform of this character was recently made by one or more of the bodies connected with the London Tramway System, but difficulties were raised by the men employed, and the question will never be put upon a proper footing until the general public, in its own interest, cries loudly for reform. In the same connexion, a regret may be expressed that the motor-omnibus drivers did not persist in their recent strike and gain a victory over their employers in the matter of payment by journey. That system is one which in the public interest should strongly be condemned. It can only lead to motor omnibuses careering along the streets more heedlessly and at greater risk to the public than ever, and to conductors practically insisting upon passengers mounting and dismounting when the vehicles are still in motion. Few (probably) other than medical men are aware of the large number of accidents due to this cause.

INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.

THE Sixth International Congress of Ophthalmology will be held at Naples, April 2nd and 7th, 1909. The Honorary President is Professor Marc Dufour; the Honorary Vice-President, Dr. E. Landolt; the President of the Organization Committee, Professor Arnaldo Angelucci. The corresponding members for Great Britain are Mr. Walter Jessop, 73, Harley Street; Professor George Mackay, 20, Drumsheugh Gardens, Edinburgh; and Sir Henry R. Swanzy, 23, Merrion Square, Dublin. The subjects proposed for discussion are: (1) The determination, in respect to indemnity, of the value of a lost or damaged eye. (2) The unification of the measure of visual acuity and the unification of the notation of the meridians of astigmatism. In connexion with the Congress there will be an exhibition of all kinds of objects, ancient and modern, relating to ophthalmology. The official languages of the Congress are Italian, English, French, German, and Spanish. Communications relative to the Congress should be addressed directly to Professor Arnaldo Angelucci, R. Clinica Oculistica in S. Andrea Delle Dame, Naples, or to the corresponding members of the relative countries.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

TENEMENT DWELLINGS.

THE proposal of the Manchester Sanitary Committee to seek powers to erect two blocks of tenement dwellings was discussed last week in the City Council. The housing question in the city is rapidly becoming very serious, and the Council seemed to think that the building of tenement dwellings in a district that was already much congested and where the death-rate was very high would only result in a still worse condition. To show how real was the overcrowding it was stated that in the district where it was proposed to erect the tenements in one house there were fourteen persons, in another thirteen, and in another twenty-eight, while the death-rate close by was as much as 31 per 1,000. Some of the opponents of the scheme advocated the building of cottages either on the site or, better, on the outskirts of the town, which would not only be much cheaper, but would prevent the congestion. It was said that in the tenements in Oldham Road there were 278 persons on one acre of land, and the death-rate was 29 per 1,000 taken over seven and a half years. At least 75 per cent. of the rooms of the proposed tenements would be sunless, and there could not be the amount of open space around that the Corporation by-laws required. On behalf of the Sanitary Committee it was stated that tenements would only be built where it was impracticable, on account of the cost, to build cottages. The committee was under an obligation to provide house-room for people who had been deprived of their houses by public improvements and by the provision of sites for schools, and many of these people were poorly-paid workers who must live near their work, and could not afford to live in cottages built on the outskirts of the town. After a long discussion, the scheme of the Sanitary Committee was rejected by a large majority.

INFANT LIFE PROTECTION.

The annual report of Miss Zanetti, the Board's Inspector under the Infant Life Protection Act, was received at the meeting of the Chorlton Board of Guardians last week. She stated that under the Act there had been during the year 21 cases, comprising 54 children. In addition she had visited 47 children who did not come within the purview of the Act, 38 being instances in which only one child was maintained. There had been little difficulty in visiting the "one child" cases, even where the foster parent had been aware that the inspector had no legal right of entry, and in many cases she had been invited to inspect. This established the contention of those who wished to extend the Act to include "one child" cases that good foster parents, so far from resenting inspection, welcomed it as a guarantee of their respectability. On the other hand, where the visits were resented, Miss Zanetti invariably found something suspicious. In one case, for instance, where every possible difficulty had been placed in her way, it was found that the foster parent had been seen drunk on several occasions in charge of two children. The report concluded with the expression of the hope that the Act would soon be extended to one-child cases. Dr. Rhodes said that the deputation that opposed the extension of the Act could hardly have known what it was talking about. The Chairman said that the protest against the inclusion of one-child cases was opposed to the almost unanimous opinion of doctors, coroners, and others throughout the country; if there were any danger for two children put out to nurse, there was certainly similar danger for one.

AMERICAN TINNED MEATS.

It is very evident that the Manchester Port Sanitary Authority is determined to do what it can to prevent the importation of unsatisfactory canned meats. During the last five weeks of 1907, 233 vessels were inspected, of which 92 were found to be insanitary, while the inspection of food has resulted in 1½ tons of meats and over 14 tons of wheat, corn, canned meats, and fruits being condemned. On a previous occasion it had been found that large quantities of old American canned meats had been brought to the port of Manchester by coasting vessels after having been stored for a considerable time in this country. It was now found that a large amount of this class of goods was coming direct from America. Out of a consignment direct from New York of 1,200 six-pound tins of meat, 157 tins were blown or burst or otherwise imperfect, while 158 others were doubtful. The labels showed signs of being very old, and there was some ground for believing that the samples had been returned to New York from somewhere before being reshipped to England. For security it was necessary to see that the labels bore the inscription "U.S. Inspected and passed under the Act of Congress, 1906." Most of the condemned tins bore the date 1901. The sanitary authority decided to bring the matter before the American Consul in Manchester and the Local Government Board.

LIVERPOOL.

EXTENSION OF THE STANLEY HOSPITAL.

ON January 13th the Earl of Derby formally opened some important extensions of the Stanley Hospital, comprising a new kitchen, a laundry, and a special gynaecological ward. Sir Robert Hampson, the President of the hospital, was in the chair, and there was a large gathering of friends and supporters of the institution. The Chairman said it was nearly six years since the Committee undertook what was practically a reorganization of the hospital. The most important part was the provision of a proper operating theatre, and there had been also provided a new out-patient department, which was thoroughly up to date. The number of beds in use had been increased from 80 to 100, and, though the hospital was still in debt, it was no worse off with the larger than with the smaller number of beds. The provision of the new gynaecological ward under a lady doctor was a novelty in connexion with hospital work in Liverpool. The cost of the ward had been defrayed by anonymous donors, and was dedicated to the memory of Mrs. J. H. Thom. Altogether the work had cost no less than £9,000, and they started the new wing free of debt. They were much indebted to Mr. W. P. Hartley who gave £1,000 on condition that the whole amount was subscribed. The annual deficit in the case of the Stanley Hospital was about £1,200. There was still a clinical room to be provided, and a nurses' home was also required.

Lord Derby drew attention to the extent to which the hospital had been improved and modernized. Although it was not so large as some of the other institutions in Liverpool it dealt with a large number of cases of all kinds, and this reflected the greatest credit upon the medical and nursing staffs. The whole atmosphere of the hospital had been changed, many of the old features having been swept away and supplanted by entirely new and modern appliances; they had the advantage of a very active Committee with a keen sense of what could be done on a small scale, and how best to develop their efforts to a larger scope. Day by day science was bringing about the solution of many great problems; such things as pure water, fresh air, clean surroundings and more personal liberty were making a healthier and stronger population. The hospitals were taking no mean part in this reform, and the Committee of the Stanley Hospital was to be heartily congratulated on extending its work. Mr. W. P. Hartley, in moving a vote of thanks to Lord Derby, referred to the need for more systematic support for the hospitals. Mr. Oswald Dobell, who seconded, announced the endowment of four beds, one in perpetuity and three for twenty years. Mr. Hartley remarked that the cost of a nurses' home would be about £5 000, and offered to give £1,000 if the Committee succeeded in raising the other £4,000.

THE ROYAL INFIRMARY.

At a meeting of the Election Committee held on January 8th, Mr. Robert Ernest Kelly, M.D., B.Sc., F.R.C.S., was elected assistant surgeon in the place of Mr. R. A. Bickerseth, recently elected surgeon. Mr. Kelly is a student of the Liverpool School, and, among other experiences, has held the post of surgical registrar for two years.

THE ABATTOIRS.

The presence of extensive abattoirs and the carrying on of subsidiary trades such as gut-scraping in the centre of

the city and within a few hundred yards of the Royal Infirmary and the college has for many years been regarded as an anomaly and as a menace to the health and wellbeing of the city. Some eighteen years ago strong representations were made to the municipal authorities, on the part of the medical profession and the infirmary and the college, against granting a renewal of the lease to the abattoir company. It was shown that the mortality in the district where the abattoirs stood was much higher than in other parts of the city where the dwellings and the inhabitants were of about the same class. After careful consideration the City Council declined to renew the lease, which will shortly expire. The hope is generally entertained that means will be found to establish slaughterhouses in some accessible place a little way out of the city and apart from human habitations, and the following resolution has been passed by the Committee of the Royal Infirmary and published in the local press:

> That this Committee reaffirms its opinion that the existence of the abattoirs in the vicinity of the Royal Infirmary is detrimental to the interests of the patients and prejudicial to their prospects of recovery, especially after serious operations, and trusts that the City Council will not sanction the continuance of the abattoirs after the termination of the existing leases. That a copy of this resolution be forwarded to the Lord Mayor and to the Chairman of the Health Committee, and to the medical officer of health.

FAREWELL DINNER TO DR. WILLIAM CARTER.

By a clerical error the dinner to Dr. Carter was announced in the JOURNAL as fixed to take place on July 25th. The date on which it is to take place is January 25th.

WEST YORKSHIRE.

BRADFORD AND THE NOTIFICATION OF BIRTHS ACT.

WE have already drawn attention to the fact that the Bradford City Council has adopted this Act in spite of the protests of the medical profession that some of its details should be modified. The medical officer of health for Bradford has recently sent a letter-card to all medical men in his area for the purposes of notification. This card required from the medical profession even more details of the case than the Act demanded. At a meeting of the Bradford Division some feeling was shown in connexion with this new demand on medical men. Ultimately a proposal was made by Dr. Metcalfe, Honorary Secretary to the Division, which was adopted unanimously, and which we think forms an admirable means of freeing medical practitioners from the obnoxious duty of notifying under the Act which has been forced on them against their will. It was stated by the Health Committee that if the medical practitioner notified, no inspectress or lady visitor would be sent to the case. But if he placed the duty on someone else the Corporation inspectress would immediately attend. This made it almost a necessity for medical men to notify unless they wished for some interference by the young ladies appointed by the Corporation to visit these cases. The proposition which was made was that letter cards should be sent to all medical men by the medical officer of health to the following effect:

> A child was born at at o'clock on , Dr. being in attendance.

The doctor in attendance should simply give this card to the father of the child, or any other person present, the father or attendant filling up the details. In this way the M.O.H. would have done his duty in sending the cards to the medical practitioners, who, again, would be relieved of the undesirable duty of notifying to the authorities, having reason to believe that the duty had been performed by some other person. We are glad to say that Dr. Arnold Evans (M.O.H.) fell in with the idea and promised to withdraw the card he had issued and send out a new one. This will undoubtedly be the means of retaining the sympathy of the profession with the Act as a whole, which was in considerable danger of being entirely alienated. It is hoped that in other localities where the Act has been adopted the local practitioners may be able to obtain the consent of the M.O.H. to an arrangement of the kind agreed upon in Bradford.

SWANSEA.

SWANSEA AND MERTHYR ASYLUM PROPOSAL.

ONE of the duties imposed upon the Borough of Merthyr Tydfil by the grant of county borough powers will be the maintenance of pauper lunatics. The Corporation has not yet been served with notice by the authorities of the County Asylum at Bridgend, but notice has been given to Swansea to provide other accommodation for Swansea patients. A deputation from the Swansea Town Council visited Merthyr on January 16th and discussed the situation with the Parliamentary Committee of the Merthyr Town Council, with a view of ascertaining whether joint action between the two Corporations could be arranged. It was found that the two authorities were not upon quite the same footing, and the conference was adjourned.

ABERAYRON AND NEW QUAY SANITATION.

An important conference, attended by representatives of the Aberayron Urban and Rural District Councils and the New Quay Urban Council, was held on January 15th to discuss the recommendations of Dr. Fletcher, Local Government Board inspector, relative to the sanitary administration of the three districts. The chief matter discussed was the recommendation of the appointment of one certificated sanitary inspector for the whole area. The Clerk announced the recommendation of the Rural Council that a qualified inspector be appointed at a salary of £100 per annum, the salary to be apportioned as follows: Aberayron Rural Council, £75; Aberayron Urban and New Quay Urban, £12 10s. each. The Chairman of the Aberayron Urban Council moved that a certificated inspector for the combined districts be appointed, the terms of the salary to be considered later. This resolution was seconded and carried.

COUNTY MEDICAL OFFICER FOR MONMOUTHSHIRE.

A joint meeting of the Education and Sanitary Committees of the Monmouthshire County Council was held on January 17th, at Newport, at which it was decided to recommend the County Council to appoint a county medical officer of health at a salary of £600 per annum, with expenses, half of his time to be devoted to county sanitary work, and the other half to the medical inspection of schools. It was also recommended that, should two assistants be necessary, one be a male and the other a female, and that the whole of their time be at the disposal of the Education Committee.

STUDENTS AND PRINCIPAL.

A complimentary dinner to Principal E. H. Griffiths, D.Sc., LL.D., F.R.S. (Hughes Medallist, 1907) was given by the students of the University College of South Wales and Monmouthshire in Barry's Hotel on January 14th; Mr M. E. Aubrey, B.A. (President of the Students' Representative Council), occupied the chair. The chairman, in proposing the toast of the evening, said that, in bringing the Hughes Medal to South Wales, Principal Griffiths had brought it to the home of its founder after it had previously been awarded to England, Germany, Italy, and America. Such an honour must do much to make the name of the college shine brighter. But they were there to honour Principal Griffiths not only as an eminent man of science, but as a true, faithful, worthy, and valued friend of the students. Had he brought back all the medals the Royal Society could give they would not have been there to meet him had they not felt he was their friend and helper. This sentiment was loudly applauded, and the toast was most enthusiastically received. Principal Griffiths, in response, said they were met together on just the terms he would wish. Apart from the conferment of the honour, nothing had given him greater pleasure since he came to Cardiff than that night's dinner. It also afforded singular pleasure to Mrs. Griffiths. That gathering showed the feeling between those who had to talk and those who had to listen was a little warmer in their college than in most university colleges in the kingdom. After giving some personal reminiscences, he concluded by expressing his desire to increase the social life of the college. The toast of the Staff was proposed by Messrs. Arnold and Lewis, and responded to by Professors Ure and Bruce, the latter proposing the Students. The toasts were all musically honoured, and the proceedings throughout were of a most cordial character.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SIR GEORGE T. BEATSON, K.C.B.

THE dinner in honour of Sir George Beatson on January 10th brought together about the most representative gathering of medical men and laymen which Glasgow has seen at a complimentary banquet for many years past. The Duke of Montrose was in the chair, and the speakers included Sir Hector Cameron, Colonel T. M. Corker, R.A.M.C., Colonel R. C. Mackenzie, Sir John Ure Primrose, Professor John Chiene, and Professor Sir T. McCall Anderson. In proposing the toast of the evening the Duke of Montrose, after reference to the recent promotion of Sir George Beatson to the Knight Commandership of the Bath, said that all present were acquainted with his eminence in his profession and the high motives by which he was actuated. The same was true of Glasgow generally, for all knew of his work at the Western Infirmary and at the Cancer Hospital. He was one of the founders of the St. Andrew's Ambulance Association in 1882, and had obtained for it a royal charter in 1889. It was to his zeal and ability that body owed its efficiency, one result of which was that since its inauguration over 47,000 pupils had been granted certificates. Their guest had also been Chairman of the Council which was chiefly instrumental in the equipment of the National Red Cross Hospital dispatched by Scotland to South Africa. The Red Cross movement in Scotland, indeed, was entirely due to his initiative, and its success the outcome of his judicious care. He was now a member of the Council of the British Red Cross Society, and was aiding in the promotion of its objects and organization throughout Scotland. The same story might be told with regard to the Volunteer Medical Staff Corps in Scotland; it came into existence in 1888, when Sir George Beatson, having started the movement for its foundation, organized two companies. These had since grown into five, which now formed the Glasgow Division of the Royal Army Medical Reserve Corps, under Sir George Beatson's command. At the present moment he was busy over the equipment of the Victoria Hospital for the Sons of Sailors and Soldiers, while within the past few weeks he had consented to undertake what was likely to prove the biggest job he had yet had to perform—the work in connexion with the new territorial force. Sir George Beatson, when responding to the toast, said that he regarded the honour granted him by the King as an acknowledgement less of his own personal merit than of the importance of the public work in which he had been engaged, and as an honour done to the medical profession, to the volunteers, and to the St. Andrew's Ambulance Association. Speaking of the value of the many voluntary associations, both civil and military in character, which now exist, he said they were all doing much good work for the country. They had a common aim—the national welfare—and by acting as an elevating agency would counteract the degenerating influences of modern life in great cities, and thus aid in social reform. In all such enterprises medical men were bound to take interest, and to afford what assistance they could. Speaking of himself, he said that though he was not Glasgow-born, he had lived the best part of his life in that city, and was second to no man in his regard for it.

THE EDINBURGH CHAIR OF CLINICAL SURGERY.

On the death of Professor Annandale, Mr. John W. Dowden, M.B., F.R.C.S.E., who had been associated with Mr. Annandale as Assistant Surgeon, was asked by the Managers of the Royal Infirmary to take charge of the wards formerly under the care of the Professor of Clinical Surgery till his successor was appointed. At a meeting of the Edinburgh University Court on Monday, January 20th, it was agreed to ask Mr. Dowden to carry on the work of the Chair of Clinical Surgery till the close of the winter session. The first step in the direction of the appointment of Mr. Annandale's successor will have to be a readjustment of the terms of appointment to the chair. Hitherto the appointment has been *ad vitam aut culpam*, but the managers of the Edinburgh Royal Infirmary have now determined that all physicians and surgeons shall retire at the age of 65. A professor of clinical surgery without hospital wards would be a glaring anomaly. Either by a short Act of Parliament or by an order of the King in Council the terms of appointment will have to be altered so that the new professor shall retire at the age of 65. It will then become the duty of the Secretary for Scotland to recommend to His Majesty a suitable occupant to the vacant chair. Already there are many candidates in the field. As far as Edinburgh is concerned it may be said that Mr. Dowden is the only eligible surgeon who is not a candidate for the vacant chair.

RESIGNATION OF DR. NASMYTH, M.O.H. FIFE.

The resignation of Dr. Nasmyth, the Medical Officer of Health for the counties of Fife, Kinross, and Clackmannan, is announced. A correspondence has passed between the Clerk of the County Council and the Secretary of the Local Government Board regarding the terms of any new appointment which falls to be made. Dr. Nasmyth is Medical Officer of Health of Clackmannan and the burghs in that county, as well as for Kinross and for several of the burghs in Fife.

It is understood that some members of the County Council are in favour of having a separate medical officer for each of the four districts of the county, while others favour the idea of having the county divided into two sections and having one medical officer for each. The salary paid at present by Fife is £500, but, in addition, Dr. Nasmyth has an assistant appointed under arrangements which include the provision that, on Dr. Nasmyth retiring, the assistant will also cease to hold office, and it is thought probable that the County Council would not be prepared to pay for medical officers more than the present fixed salary of £500, or perhaps £600 in all, if more than one were appointed. The Local Government Board is distinctly of opinion that it is in the best interests of the county that the present arrangement of a whole time M.O.H. for the county should be continued. The Board strongly deprecates the proposals that the county should be divided into two or more districts with a separate M.O.H. for each, and is convinced that to revert to the old system of small areas and the employment of part-time medical officers would have a disastrous effect on the public health of a leading industrial county.

ENTERIC FEVER OUTBREAK IN GLASGOW.

As stated in the last issue of the JOURNAL, an unfortunate outbreak of enteric fever in the West End of Glasgow has drawn attention to the serious risk which may arise from a contaminated milk supply. In the latter half of December, 1907, two cases of enteric fever were notified in the West End of Glasgow. Both cases used milk supplied from the same dairy. A visit to the distributing farm was made, and it was found that some of the same milk was being sold in Partick. As two cases of enteric had also been notified among the Partick customers, it seemed probable that the milk supply was the cause of the epidemic. The distributing farm obtained all its milk supply from farms in the country. On inquiry it was ascertained that at one of the supplying farms a woman was ill. It is stated that the patient had been under medical control, but at first the real nature of the illness had not been suspected. As soon as typhoid fever was diagnosed, the patient was removed to hospital and the premises were disinfected. By this time, however, the mischief had been done, and in the course of the next three weeks over seventy cases of enteric fever among customers of milk from the contaminated farm had been notified.

PSYCHOLOGY IN GLASGOW.

The University Court has founded a new lectureship in psychology. The first holder of the post is Mr. Henry J. Watt, Ph.D. of the University, Liverpool. His appointment is for five years. The duties attached to the post are to give instruction in general and experimental psychology, and to take charge of the new laboratory for experimental psychology, in the physiology department. The new lecturer is to be permitted to undertake certain teaching work under the Glasgow Provincial Committee for Training Teachers.

FRICTION AT RUCHILL FEVER HOSPITAL.

A very serious state of affairs at Ruchill Fever Hospital has culminated in the summary dismissal of three of the assistant medical officers by the Hospital Committee of

the Town Council. For some time the assistant medical officers have been dissatisfied with the nursing arrangements at Ruchill. During the recent epidemics of measles and scarlatina dissatisfaction was so great that the assistant medical officers formally complained to the Town Council, alleging that the nursing arrangements were insufficient and inefficient, and that the patients were suffering from the neglect that this entailed. This complaint was laid before the Hospital Committee, who eventually dismissed the complainant medical officers, on the ground that they had defiantly refused to observe one of the rules laid down for the government of the hospital. The dismissal carries with it no suggestion of professional unfitness, and we understand that the rule in question refers to the conduct of the assistant medical officers towards the matron. The medical officers protested against their dismissal. Meantime we are glad to say that the Local Government Board has intervened by appointing Professor Harvey Littlejohn to hold a preliminary inquiry to determine whether an official investigation is required.

PRESENTATION TO DR. PETRIE-HAY, FORRES.

A few days ago Dr. Petrie-Hay, who has just retired from practice, was the recipient of a purse containing 130 sovereigns, while Mrs. Petrie-Hay received a silver rose bowl suitably inscribed. Dr. Petrie-Hay has practised in Forres for the past thirty years, and has now retired to his estate of Edintore.

SMALL-POX IN EDINBURGH AND LEITH.

During the past week or so 6 cases of small-pox have occurred in Edinburgh and 18 in Leith. Two lady canvassers are said to be responsible for a number of the Leith cases.

THE ROYAL SOCIETY OF EDINBURGH.

At a meeting of the Royal Society of Edinburgh on Monday, January 20th, Dr. George A. Gibson read a paper on the arterial pressure in man. Professor J. Cossar Ewart, M.D., F.R.S., F.R.S.E., one of the Vice-Presidents was in the chair.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH: MORISON LECTURES.

The Morison Lectures will be delivered in the Hall of the Royal College of Physicians, 9, Queen Street, Edinburgh, on Monday, January 27th; Wednesday, January 29th; and Friday, January 31st, by Lewis C. Bruce, M.D., F.R.C.P.E., who is widely spoken of as the most likely successor to Dr. Clouston.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE TUBERCULOSIS EXHIBITION IN ULSTER.

THIS exhibition, which was opened in Belfast in November, has visited a number of towns in Ulster, and has been invited to many others during the next few months. Successful meetings have been held at Lisburn, Lurgan, Portadown, and preparations are being made for Banbridge, Newtownards, Ballymena, Ballymoney, and many other centres. Lectures have been given, and demonstrations explaining the specimens; it is felt that much enlightenment has been spread regarding the disease, and much good has undoubtedly been done. Branches of the Women's National Health League have also been founded.

SERUM TREATMENT OF CEREBRO-SPINAL FEVER.

Last winter Dr. Gardner Robb tried several serums in the epidemic of cerebro-spinal fever in the Belfast Fever Hospital, but without the slightest effect. The disease never quite disappeared from the town, and some 32 cases have been admitted to hospital during the last four months. In these Dr. Robb has tried the serum of Dr. Flexner of New York; only 9 have died and 23 have recovered; this is a death rate of less than 30 per cent. During the winter 1906-7, the death rate was about 70 per cent., so that the results are most encouraging. It is understood that this result is in agreement with experience elsewhere.

CORRESPONDENCE.

EMPIRICISM AND INSTINCT IN VETERINARY DIAGNOSIS.

SIR,—By chance, and late in the week, I have seen with some sense of shock the letter of Sir John McFadyean in your issue of January 11th, wherein he rebukes me, and with reason, for what seems to be a thoughtless impertinence towards veterinary science and education. I had no notion that any such allusion of mine as he quotes had been published, or was in the least likely to be published; indeed, it is with an effort that I recall the quasi-domestic occasion on which some such words seem to have escaped my lips. Those words I sincerely regret, and my regret is the deeper that Sir John McFadyean has felt it his duty to give them a wider vogue.

At a very small gathering of the Cambridge Medical Society the subject of medical school inspection was discussed, as I supposed, wholly among ourselves; and I have some recollection of saying, in no set speech but in a colloquial way with my friends, that a "vet.' equipped only with natural shrewdness and large experience of horses would often put his finger on the seat of a disease when a trained pathologist had failed to do so. It was my purpose to indicate that such an "instinct" of quick observation was of high value—let us say in a physician rapidly inspecting a large number of school children. I do not admit that my words are reported exactly; indeed, the reporter would probably agree that he intended only to convey the general effect of them.

It is true, nevertheless, that I used the word "vet." in the sense of a clever empiric, such an one as the more elderly of us well remember, and held in no little respect. I should never have dreamed of applying the flippant word "vet." to the trained anatomists, pathologists, and practitioners who are now educated at the Royal Veterinary College and other highly-efficient veterinary colleges of similar standing. The slip is in my case peculiarly unfortunate; first, because I have often expressed my admiration for Sir John McFadyean's work at the Royal College both in science, practice, and teaching; and secondly, because, inspired by it, I have been earnestly desirous during the last eight or ten years to obtain funds to establish a department of Comparative Medicine at Cambridge. Not a few rich men would confess that they have had to undergo some teasing from me in the vain hope of interesting them in such a school for our University. Moreover, in public addresses on several opportunities—the first occasion of importance being in my Address in Medicine on Comparative Nosology, at the Association meeting at Glasgow in 1888—I have complained of the anthropocentric view of medicine which our schools still perpetuate, and urged that medicine is conterminous with the world of living things, and cannot be comprehended from any lower point of view. Sincerely trusting that Sir John McFadyean can accept my excuses, I am, etc.,

Cambridge, Jan. 15th. CLIFFORD ALLBUTT.

THE RESULTS OF THE OPERATVE TREATMENT OF CHRONIC CONSTIPATION.

SIR,—Mr. Lane considers that the title of his paper which appears in your issue of January 18th, 1908, needs some apology. Doubtless there are many who will share this opinion.

As the subject is one of great interest and opens up a wide field for surgical enterprise of far-reaching consequences to a considerable portion of the community, one wishes that Mr. Lane had presented it in a more detailed manner.

Perusal of the paper seems to show (perhaps Mr. Lane will correct me if I am wrong) that his original procedure for the cure of chronic constipation was short-circuiting the ileum into the sigmoid, and that the excision of the colon was a secondary procedure rendered necessary by the fact that some of these patients who had been submitted to ileo-sigmoidostomy became much distended, owing to the operation having converted the colon into an enormous cesspool, in which faeces accumulated and decomposed. We would like to know if Mr. Lane now advocates removal of the colon as a primary measure and whether he has abandoned the operation of ileo-sigmoidostomy except in exceptional cases. Mr. Lane has "very little con-

fidence" in statistics, but perhaps he will not object to the use of this means of drawing attention to the startling facts contained in his records.

1. That of the 39 cases operated on 9 died, but excluding 2 (Cases XIX and XX), of which one died on the eighteenth day after the removal of the colon, of diphtheria, and the other, twelve months after colectomy, with "obstinate constipation," we have a death rate of 18 per cent.

2. That out of 17 cases which recovered from ileo-sigmoidostomy as a primary measure, in 10 it has already been found necessary to perform colectomy, so that in the remaining 7 this measure may yet be found necessary.

3 That several of the cases were not cured of constipation by removal of the colon (vide Cases VII, XI, XIV, XVIII, XIX and XXV).

4. That in 20 cases no mention whatever is made of the condition of the bowel after operation. Are we right in concluding that none of these patients suffered from diarrhœa or constipation?

5. In only 4 is it definitely stated that the condition of the bowel is satisfactory.

Mr. Lane "briefly relates the notes of several cases," and then goes on to record no fewer than 39. It is to be regretted he did not give a complete list of all the cases operated on by him which might possibly have shown a death rate less deterrent to those contemplating a surgical cure of chronic constipation. Conditions such as "dilatation of the stomach, the presence of ulceration of that organ, the acquired adhesions about the gall bladder, the mobility of the kidneys, the degenerative changes in the breasts, the fixation and probable degenerative changes in the left ovary, etc.," are all considered to be caused by chronic constipation and autointoxication, and we are told "it is quite obvious therefore that the earlier the patient is deprived of the cause of all these troubles, the better is the result.'

Are we to understand from this that Mr. Lane recommends the removal of the colon before these conditions arise? If so, at what stage should it be done?

Let us briefly consider the results from another point of view. To quote from Case I "the large bowel was removed up to the splenic flexure and the ileum united to the sigmoid" *Thirty-three days later* "she left the hospital . . . having lost all her symptoms. . . . She was delighted with her condition." What is her condition now that eight months have elapsed?

The same question may be asked with regard to Cases III and IV, in which the result is recorded *three months and one month* respectively after the operation. In the light of the other cases it would be useful to have the history of these cases at a later date. Case XXIV may be quoted as satisfactory in that ileo-sigmoidostomy was performed in October, 1904, while "in August, 1907, when last seen, her bowels were regular, the presence of the large bowel caused her no discomfort." It is to be hoped that this case is a cure, but it is even still possible that it may be necessary to remove her colon (cf. Cases XXIX and XXXVI, in which nearly three and four years respectively elapsed before colectomy was necessitated).

In many other cases the results are stated to be satisfactory up to date, but in not a few of them only a few months have elapsed.

Until the profession receives more information, considerable doubt must exist as to whether an operation of expediency, which has a death-rate of roughly 18 per cent. and which by the records before us is not proved to be curative in a considerable portion of the cases, is justifiable, even in the hands of so brilliant an operator as Mr. Lane.—I am, etc.,

London, W., Jan. 21st. DOUGLAS DREW.

SIR,—It is well that Mr. Lane has not longer withheld the publication of his successes by surgical measures in cases of such obstinate and intractable character as are frequently those of colon disorder. Other surgeons may thus be encouraged to attempt more for the relief of these cases than merely to open the abdomen and divide a few adhesions, with little permanent benefit to the sufferer.

May I be permitted to echo the hope expressed in your leading article that Mr. Lane will follow up these reports with a detailed discussion of the indications for the procedures he employs? Particularly, one would welcome information regarding the actual anatomical changes noted on opening the abdomen, their frequency, their probable relation to symptoms, and, lastly, their sometime absence. I suppose Mr. Lane will agree that the subject of chronic colitis may complain of localized symptoms suggestive of the presence of adhesions or other mechanical obstacle, and yet present nothing of such sort when the abdomen is opened.

It is not the mere fact of constipation, however chronic, which can justify such procedures, but the train of nervous and general symptoms and nutritional disturbance which accompany the morbid processes within the bowel. Some of these are apt to be discounted by the medical attendant as of neurasthenic or hypochondriacal origin; but, whatever their nature, they are very real to the sufferer and a source of much misery. Whether these constitute a definite clinical entity is a minor question; they vary much in individual cases, but their significance can scarcely be matter for doubt.

To my mind, Sir, the value of Mr. Lane's communication lies not so much in his demonstration of a successful means of relieving cases of an advanced and intractable character as in an argument for the early and energetic treatment by general and hydrotherapeutic measures of cases of colon trouble, so that they shall not drift into a condition from which they can be rescued only by an operation which, however successful, savours rather much of mutilation to come readily into favour.—I am, etc.,

Birkenhead, Jan. 20th. G. R. MILL, M.D.

WHOOPING-COUGH.

SIR,—I read with some interest the communication (BRITISH MEDICAL JOURNAL, January 18th, p. 146) by Dr. Macewen on "the conveyance of whooping-cough from man to animals by direct experiment." So far as the microscopic method of examination has been carried, it seems that "its precise etiology still remains obscure." It is now more than thirty years since I directed attention to the question of the nature of whooping-cough. I endeavoured to point out that the disease is very infectious, and that the views generally entertained regarding it in the profession were seriously incorrect; and I was glad that Sir Thomas Watson and Sir William Jenner both saw the mistakes they had made, and changed their views.

I am sorry to say that I do not see that Dr. Macewen's experiments have in any way added to our knowledge of the etiology of this malady. Whooping-cough is not transmitted to any extent by the sputum, that is, compared to its transmission by the atmosphere. One of the most important points to which I directed attention was the fact that in very young children the "whoop" is impossible, and that it is absurd to expect it in an infant.

After all, such experiments as Dr. Macewen's may be of interest; but practically they are not to be compared in value to that of careful clinical observation, which is really more reliable than any work by microscope or experiments in the study of diseases like whooping-cough.—I am, etc.,

January 22nd. ROBERT LEE.

"THE 'CONQUEST' OF CANCER"

SIR,—I am both surprised and pleased that, after editorial silence of so many months (since July 27th, 1907), you should have discussed in five columns what you call the "trypsin treatment" of cancer. (The chemists have never yet isolated any ferment whatever, and therefore the terms "pancreatic" or "ferment" or "enzyme treatment" are preferable to the alliterative phrase.) Your long article calls, of course, for a reply; and, though I can scarcely expect you to allow me five columns, especially since I have my own book to reply in, it is impossible to be brief. In the first place, those points must be disposed of on which I recognize that acknowledgement of correction is necessary. You accuse me (rudely, I think) of "showing a peculiar talent for misrepresentation," because I had come to the conclusion that your articles were written, and your attitude determined, by "a prominent cancer researcher." This you have shown to be untrue, and of course I apologize unreservedly to the worker whom I had in my mind; and will repeat the apology in my book as soon as possible. This is somewhat vague, but it would obviously make matters no better to state of whom I was thinking. You state that

your writer—evidently the writer of this latest article also—is "no more prominent in cancer research than myself." That seems a rather tactless kind of point to score, since a leading argument of yours against trypsin has been the fact that I am not a cancer researcher. Your writer, however, definitely places himself on a level with me in this respect; and therefore we know henceforth exactly what is the nature of the warrant for the terribly potent opinions of the BRITISH MEDICAL JOURNAL. It may be added that though I am not an official or salaried researcher, I have been watching cancer patients since February, 1906, and have been accumulating observations as exact as possible. I do not think any one has spent more time than I in the study of cancer during the whole of that period. In the second place, I acknowledge that my book contains no statement of the latest state of Dr. Morton's patients. This I regret simply because you draw attention to it. It never occurred to me to inquire, and I do not know, simply because I attach no importance whatever, for present action, to Professor Morton's early results. Be it remembered that he began his work not far short of two years ago. He gave doses which I now consider ridiculously small, and the preparations he employed bear the remotest resemblance to those—still lamentably imperfect—which are now in use. The utmost value attached to Dr. Morton's results a year ago, since they were at least the warrant for urging the widest possible trial of the treatment; but I shall expect to hear from him that in many cases the improvement was not maintained, simply because I suspect that the use of minute and gradually-increased doses may immunize the tumour—in parallel with the general laws of acquired immunity, or, more generally still, the biological principle of adaptation to environment. Thirdly, you have misunderstood—somewhat carelessly, I think—my statement as to your treatment of Dr. Beard's letters to you. Of course I do not assert anything so preposterous as that you composed a sentence of your own and printed it as his. My statement is that you printed some of Dr. Beard's sentences and suppressed others. This I make clear, surely, on p. 374 where I define in other words what you actually did. You have long been asking for reported cases. On June 15th, 1907 for instance, you asked, "But how on earth is the profession to study seriously cases that are not reported," and declared that your JOURNAL "has impartially published reports of all the cases that have come within its ken." Yet, when Dr. Beard, in response to one of these demands, sent you a letter in which he gave the reference to Professor J. T. Campbell's case, published in your fellow journal the *Journal of the American Medical Association*, January 19th, 1907, you did suppress the paragraph of his letter which contained the reference. So much for these three points.

Before turning in detail to your discussion of my book and your reply to the charges therein made against your dealing with this matter, I must draw your readers' attention to a matter which cannot have escaped your own. I am no longer alone in the public advocacy of the enzyme treatment. On the contrary, it has been freely and repeatedly discussed, and during some months vigorously advocated by your contemporary, a journal official like your own, the *General Practitioner*. This journal has now published at various times a large number of cases treated by the new method, beginning with the half dozen reported by Dr. Henry Meggitt (August 31st, 1907) and observed by myself. On December 21st, the *General Practitioner* published a "Cancer Special Number," *entirely devoted to the pancreatic treatment*, with several new cases, and special articles by Dr. Beard and myself. Your own conduct in this matter has been again and again criticized by the *General Practitioner* in its editorial articles and by its correspondents.

The latest of these criticisms appeared in the issue of January 18th, 1908, under the title, "The British Medical Journal and the Treatment of Cancer," and deals with the article which is now under discussion. This criticism specially refers to your rejection of Dr. Cavanegh's two cases, later printed in the *General Practitioner*, and to your publication in your EPITOME, just a week after the publication of my book, of the case of sarcoma of the testicle reported by Dr. Donati (*Rif. Med.*, March 2nd, 1907). After this interesting delay of eight months, during which you were repeatedly asking for properly reported cases, why should you give publicity to this case when you did? As you make no note or statement as to the subsequent history of the case since March, was its publication in March more valid in November than in March, or—wildest of hypotheses—did you publish it in order to support my book, which had recently been sent to your office?

Hitherto your solitary allusion to the criticisms and the cases of the *General Practitioner*—to which I would render a humble tribute for its open-mindedness and courage, so rare in official institutions anywhere at any time—is to be found in your article of January 11th, where you refer to its "Cancer Special Number," and "a case there reported," merely in order to quote the comments of Mr. Carless, who, by the way, concludes that the tumour in question was not cancerous, since it disappeared under trypsin. Merely assuming the major premiss, trypsin cannot cause the disappearance of a cancerous tumour, Mr. Carless's argument is absolutely free from fallacy and must be accepted without reserve. That by the way. My point is that your solitary reference hitherto to the *General Practitioner*, which has now published fifteen or twenty cases, including two more (one epitomized from the leading Munich journal) on the same date as that of your article now discussed, is such as to excuse your readers for imagining that this journal is in agreement with you on this question, instead of being a formidable, consistent and hitherto wholly unanswered critic. May I suggest that your readers, or at least those who have cases of cancer—or sarcoma, the distinction is only proximate—to treat, should read that issue, even though this will involve finding the book you describe as "an appeal to ignorance and despair" thus described at the end of a brief second notice: "There is no finer work on cancer in the English language; there certainly is none so valuable." Also it would be well to consult the files of this journal for some months past, including the issue of November 23rd, with its editorial opinion: "This new treatment is a grand opportunity for the general practitioner, which should no longer be delayed. At the present time thousands of persons must be dying of cancer in the kingdom who might—and we speak in all seriousness from data before us—be saved." And will you not direct yourself to meeting the criticisms and noticing the cases published by this journal?

And now I must refer, as briefly as possible, to your points in order.

As regards Professor Morton's case operated on by Dr. Bainbridge and ending fatally, I suggest that your readers study it in conjunction with Mr. Butlin's masterly address to the British Medical Association last year. The reader who does so will not need further comment from me.

As regards the Middlesex Hospital report, I refer your readers to my criticisms on p. 383 et seq. of my book, to which you make no reference and which I believe to be as unanswerable as they are obvious. I cannot here transcribe these pages.

Next comes your point that an unwary reader might gather, from the title of my book, "that the 'conquest of cancer' . . . had already come to pass." He is to be disillusioned by the preface, however. Was this point worth making, seeing that at the foot of the column in which it occurs the title of my book is correctly given thus, *The Conquest of Cancer: A Plan of Campaign?*

Your next point, apart from personalities which are even less relevant to the merits of the new treatment than your article in general, is that my book is full of self-contradictions. This assertion is more easily made than supported, since, to prove it, you say:

> Thus, while we are told (page x) that "as regards practice, surgery as a whole has a record of the most signal and lamentable failure," it is admitted (page 124) that "when the surgeon has a fair chance he may undoubtedly succeed in effecting true cure of cancer."

Could I have foreseen that these two sentences would be quoted in juxtaposition I should not have altered a word. Who will dispute either of them? If this is the extremest "self-contradiction" you can discover in four hundred pages, I thank you for the unintentional compliment.

You next quote a paragraph on the general status of surgery, which you regard as containing "significant

admissions." I have made these "significant admissions" repeatedly and consistently from the first. Then you say that elsewhere I treat the surgeon "as if he were the natural enemy of mankind, or at least of such portion of it as has the misfortune to suffer from cancer." This in the face of my repeated references to Mr. C. P. Childe's "Control of a Scourge," which I asked him to write for my *New Library of Medicine*, and a practical epitome of which has appeared from his pen in your columns! It was left to one whose attitude to the surgeons you so define to be responsible for the first and only book yet written in order to warn the public against delay due to fear and ignorance—the delay to combat which the British Medical Association appointed a committee last August, as it might have done a generation ago!

The next point is that I tax you with ignoring some communications of mine to the *Daily Mail*, the *Observer*, and other periodicals, and you tell me plainly that you do not go to halfpenny newspapers for information on medical science. You have not consulted your own files, and you misstate my charge. You did reply to the *Daily Mail* (June 15th), and to two paragraphs (not mine) in the *Daily Chronicle* paragraph column (July 27th). These are halfpenny newspapers. You did not reply to my article in the *Contemporary Review* (September), which is not a halfpenny newspaper, nor to my formal and signed indictment, which was given the utmost prominence by the *Observer* (July 28th, 1907), nor to similar criticisms made by me in the *Morning Post*. Thus it was only the halfpenny newspapers and the *Pall Mall Gazette* that you did reply to. None of this elucidates the value of the ferment treatment of cancer, but you have pitched the controversy on all these irrelevant grounds, and I am bound to follow you.

You go on to say that "the head and front of our offending is that we returned to the authors short reports," etc. This is not so; nor do you even allude to the really grave part of the charges which you profess to rebut. Apart from the excision of Dr. Beard's reference from his letter, when you were asking for references—a point which you evade by misinterpreting a sentence of mine—and apart from your not spontaneously epitomizing that case, which your fellow journal thought worthy of printing, and which I actually found, like all but one of those I now refer to, in the reading-room of the British Medical Association, you have failed—whilst asking for evidence—to notice the cases published in the *New York Medical Record* of January 5th, February 2nd, June 1st, and July 6th; *New York Medical Journal* of February 23rd and March 9th; *New Orleans Medical and Surgical Journal* of July—all 1907, and all favourable; whilst you did epitomize an adverse report from the *Boston Medical and Surgical Journal*, and considered for eight months the advisability of epitomizing the Italian case already referred to. Nor have you yet even given the reference to Professor von Leyden's paper (*Zeitschrift für klinische Medizin*, vol. lxi, pp. 360–5); nor to the long, exhaustive, and invaluable paper of Pinkuss and Pinkus (*Medizin. Klinik*, Nos. 28 and 29), published in one of the foremost clinical journals in the world, and having as principal author a Reporting Secretary to the International Cancer Committee. In my book I name other German papers which you have ignored, notably one by Professor Bergell. Lastly, you referred to a paper of Professor Morton's on the *x*-ray treatment of cancer, published since his *first* paper on trypsin (you ignored the second), and said, "This at least suggests that his faith in the pancreatic treatment is a little shaken." You did not add that the paper was read by Morton in May, 1906 (not 1907), a few days after his attention was first directed to trypsin. I will not ask you to print here Professor Morton's contemptuous description of this tactic.

What you describe as the "head and front" of your offending is, indeed, merely referred to by me in my book under the heading "Lastly," and then only partially, because the first I hear of two other cases sent you by I know not who is from you. As to Dr. Cavanagh's two cases, your readers will find them in the Cancer Special Number of the *General Practitioner*, and may judge for themselves as to your action in refusing to print them.

Next, as to Professor von Leyden, whom you quote as saying that the practical results of the treatment were of no importance. Seeing, however, that Professor von Leyden declared much benefit to have been obtained from oral administration of "pancreatin" in all cases of gastric carcinoma that were not too advanced, your statement is most misleading. Those patients presumably did not think the results of no importance. Professor von Leyden obtained no substantial results from hypodermic injections; but on this point, in addition to the criticisms of Pinkuss and Pinkus, I may direct your attention to the paper of Dr. Hald, printed by the *Lancet* on November 16th, 1907, though it cannot have been written later than May—another curious fact. Hald tested the digestive activity of all the injections (English, Scotch, American, German, and Italian) then obtainable, and found von Leyden's the weakest of all, having about one four-hundredth part of the activity of the best injections. The wonder is that von Leyden got any results at all from such injections.

I am disgusted to hear of the Italian reporter who has invented "whoopene"; and if you will be so good as to indicate his name to me, privately or otherwise, I will repudiate the attachment of any weight to his evidence in the next edition of my book.

It is unnecessary to write more until your readers have made themselves acquainted with the evidence published in many recent issues of the *General Practitioner*, and until you reply, as I presume you cannot but reply, to the criticisms passed upon you by your contemporary. It is obviously impossible for me to recite here all the evidence there published since the appearance of my book; and it should not be necessary. I will therefore content myself, at present, by merely referring to a sentence which is of great importance as bearing upon that enormous number of cases of cancer, existing at any time, which are either long past surgical intervention, having been operated upon a varying number of times, or have been inoperable from the first. Such cases, of course, constitute the overwhelming majority of all the tens of thousands of cases at any moment. Yet you say, "We do not underestimate the value of temporary relief; but even accepting all the statements of its [the treatment's] advocates as absolutely trustworthy, it is still conspicuously inferior in this respect to surgery." Perhaps it is, perhaps it is not, in the cases where surgery is applicable; perhaps imperfect surgery (shall we say 99 per cent. of all operations for cancer?) affords temporary relief and does not shorten life in the long run; but how can surgery be superior to *any* treatment—say, violet-leaves—in that appalling majority of existing cases which no surgeon will touch? I wish you had seen, as I have again and again seen, sweetness replacing fetor, sleep insomnia, ease pain, appetite anorexia, and even vigour cachexia in such cases. (Have you yet seen a single injection of trypsin made?) Of these results, the first is the most immediate and striking—assuming that the practitioner does not spoil his injections, that they are active, that he is cleanly, and so forth—and whilst suggestion may explain the others, it will not explain this. Without the smallest prejudice to surgery I ask your readers to employ the treatment—conceiving of it as merely a possible palliative—where surgery is out of the question, in the cases now left to morphine; and they will soon find cause to believe that the ultimate conquest of cancer will be obtained, as my book strives to prove, by the employment of specific enzymes—whether Beard's trypsin, von Leyden's liver ferment, Bier's blood ferment, a combination of them, or some other ferment still more efficacious.

I have endeavoured to write courteously, despite the lack of any such example on your part, and your statement—for instance—that I use "all the arts of the disingenuous controversialist." I will content myself with asking your permission to reprint your long-delayed reply to my indictment in the next edition of my book, so that the reader may judge for himself whether I have a single word of that indictment to withdraw; or whether, in evading its chief points, in ignoring all the recent communications to your contemporary, and, still more, in what we may call, as politely as possible, the selective character of your sole reference to it hitherto, you have not more than justified me. Should you at any time care to introduce into your columns a new subject, the details, difficulties, practice, place, and prospects of the enzyme treatment of cancer, I believe you will find the subject

not unworthy of your interest, and my pen will be freely at your disposal if you desire.—I am, etc.,

London, N.W., Jan. 20th. C. W. SALEEBY.

*** Although Dr. Saleeby says he scarcely expects us to give him five columns, he comes pretty close to that limit. A less convincing *apologia* we have seldom seen, and there is little in it that calls for reply. In view of the fact, however, that Dr. Saleeby attaches so little importance to Dr. Morton's cases on which he based the article now implicitly acknowledged to have been utterly misleading to the public, it would have been a sign of grace had he expressed some regret for his premature proclamation of a victory as shadowy as some of those in Napoleon's bulletins. Dr. Saleeby denies that he asserted anything so preposterous as that we composed a sentence of our own and printed it as Dr. Beard's. We give the passage as it stands in his book (p. 363):

> I have refrained from any reply to the JOURNAL until this present because I was aware of the fashion in which Dr. Beard's letters were treated by the suppression of one sentence and the insertion of another. By such methods it is possible to make your opponent assert that which he denies and conversely, and there is no remedy.

We leave our readers to judge between us as to the meaning of the passage. We repeat that we published all the letter sent us for publication by Dr. Beard on March 19th, 1907, except some remarks on a rival worker that seemed to us to be libellous. Dr. Saleeby charges us with suppressing a reference given us by Dr. Beard to a case published by Professor J. T. Campbell. This is the first we have heard of the reference; we have had no communication whatever from Dr. Beard on the subject. It is needless to follow Dr. Saleeby through the maze of sophistry and misrepresentation in which he has taken refuge. We may, however, give some instances of his accuracy. He seems to charge us with ignoring the *General Practitioner*, and he tells us that we shall find there Dr. Cavanagh's two cases, which we declined to publish as the evidence of malignancy did not seem to us conclusive. We have accordingly sought for the cases in the Special Cancer Number of that journal; but among the ten that make up the total number of cases therein reported—in response to an appeal made in the issue of November 23rd—we find only one by Dr. Cavanagh. It is true that in the issue of September 7th there were two; but that is not quite the same thing. Of the ten cases published in the number referred to two had appeared in a previous issue, while at least three others had already been published elsewhere. Next, Dr. Saleeby charges us with ignoring Bergell; we reply that Dr. Bergell collaborated with von Leyden in the article to which we referred in which it was said that the practical results of pancreatin were of no importance. This is surely a sufficiently plain statement. We only mention these points to show that Dr. Saleeby is somewhat careless in his references. He speaks of the good results he has seen; why does he not publish the cases? Once more we ask for properly authenticated cases of cure by the method he advocates reported by men whose names are known to the profession. Why does not Dr. Morton let the medical world know what has become of his cases? Till he does this we must bear his contempt with as much fortitude as may be granted unto us for the purpose. Again we "ingeminate" Facts, not froth—by whatever ferments it may be generated. Dr. Saleeby complains of want of courtesy. Yet he calls us "disingenuous," speaks of our "brazening out our opposition to trypsin," of "noisome dissection" (applied to what he is pleased to call an analysis of our criticisms), and indulges in other like amenities. Clearly a complaint of discourtesy comes from him with a peculiarly bad grace. Dr. Saleeby has cast aside the inventor of that other marvellous specific, "whoopene"; he has thrown over Bainbridge; he appears to have surrendered Blumenthal; he has even partly given up Morton. If this continues, he will soon be in the position of the unfortunate French general after the battle of Rossbach, of whom it is written:

> Soubise dit, la lanterne à la main,
> J'ai beau chercher, où diable est mon armée?
> Elle était là pourtant hier matin:
> Me l'a-t-on prise, ou l'aurais-je égarée?

WOMEN MEDICAL MISSIONARIES.

SIR,—You have from time to time been good enough to make special missionary needs known through your columns. Will you now give publicity to the urgent need for more women doctors in the foreign field? Pioneer work waits to be begun in at least two districts of India, an overworked doctor in China needs a colleague, and now the grievous news of the death on January 4th of Dr. Marie Hayes at Delhi, makes the reinforcement of the staff on that mission a matter of urgent necessity. In a letter dated four weeks ago, she said herself, "We desperately need another doctor."

In two years from now there will, as we hope, be doctors qualified who are now going through the medical schools with this end in view. But these needs are immediate. We appeal earnestly for two medical women already qualified and able to undertake responsible work who would offer at once for this Christ-like work, especially for Delhi.

For particulars, apply to the C.W.W. Candidates' Secretary, S.P.G. House, 19, Delahay Street, S.W.—I am, etc.,

H. H. MONTGOMERY,
London, S.W., Jan. 20th. Bishop.

"OPHTHALMIA" NEONATORUM.

SIR,—Under this heading a letter appears from Mr. Percy Dunn in your issue of January 18th, p. 177. Mr. Dunn considers that the above is not a proper term to use, and would prefer to call the affection "conjunctivitis neonatorum." Is it really necessary or desirable to change the name in common use?

My impression, from reading his letter, is that Mr. Dunn makes the not uncommon mistake of considering that "ophthalmia" signifies inflammation of the eye. If he will refer to Liddell and Scott's Greek lexicon he will find "ὀφθαλμία, a disease of the eyes accompanied by the discharge of humours," and references are there given to its use in this sense by Hippocrates and later authors.

In the *Nomenclature of Diseases* I consider that, with all deference to Mr. Percy Dunn, the position is correctly put. "Ophthalmia" is there given as a synonym of "conjunctivitis," while sympathetic inflammation of the eyeball is of course placed under a distinct heading and is not called an "ophthalmia." It is in the improper use of this word to express sympathetic disease that the mistake above referred to seems to have arisen. "Ophthalmia neonatorum" is certainly the name sanctified by use, and there seems to be no cogent reason for altering it as a preliminary to "the agitation for legislative interference" in this disease, as suggested.—I am, etc.,

London, W., Jan. 21st. R. MARCUS GUNN.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

SIR,—It is many years since the Society of Medical Phonographers was last mentioned in your columns, and we shall be glad if you will allow us to direct attention to the fact that it still exists, and still issues its medical periodical in lithographed phonetic shorthand. We believe that many students and members of the profession are ignorant of the Society and its efforts to promote the effective use of shorthand in medicine, both in practical work and in research.

The Honorary Secretary will be glad to furnish particulars of the Society to any members of the profession, or students, who may desire to join it.—We are, etc.,

WILLIAM R. GOWERS,
President.
CHARLES W. CATHCART,
G. SIMS WOODHEAD,
Vice-Presidents.
OSKAR C. GRUNER,
Honorary Secretary.

Pathological Department, General Infirmary,
Leeds, Jan. 20th.

PAN-AMERICAN MEDICAL CONGRESS.—The fifth Pan-American Medical Congress will be held in Guatemala, Central America, in the second week of August. The Government and the people of Guatemala are taking an active interest in the arrangements, and there is every prospect of a successful meeting. Dr. Ramon Guiteras, 75, West Fifty-fifth Street, New York, is the Secretary of the International Executive Committee.

Medico-Legal.

TUCKER *v.* WAKLEY.

THE hearing of the case Tucker *v.* Wakley, which was commenced on January 15th, was concluded on January 20th, before Mr. Justice Ridley and a special jury. The action was brought by Augustus Quackenbush Tucker, carrying on business at Herne Hill, against the proprietors of the *Lancet*, to recover damages for a libel relating to "Tucker's asthma specific," alleged to have been published in that journal on March 9th, 1907.

Mr. Duke, K.C., and Mr. F E Smith appeared for the plaintiff; Mr. Bankes, K.C, and Mr. Hugh Fraser for the defendant.

According to the plaintiff's case, it appeared that on January 1st, 1907, Dr. Waldo, the City Coroner, held an inquest on the body of a man who had died of consumption. In the course of the inquest, it was pointed out that the deceased had made use of "Dr. Tucker's asthma specific," some papers relating to which were handed in to the coroner. The coroner thereupon made certain observations with regard to the remedy, which were reported in the daily press, and a news-cutting relating thereto was forwarded to the *Lancet* on the following day.

The libel complained of was alleged to be contained in the following note which appeared in the *Lancet* on March 9th, 1907:

"QUACK ADVERTISEMENTS.

"In the course of an inquest held at the beginning of the year it was stated that a labourer who had died from consumption had been using 'Dr. Tucker's asthma specific inhaler,' for which he had given, according to a newspaper report which has reached us, three guineas, while the material with which he had sprayed himself cost him 8s. an ounce. Dr. F. J. Waldo, the coroner, rightly stigmatized this kind of dealing as a fraud; and it is a humiliating thing for journalists to remember that such frauds could not be committed with any profit to the quack save with the co-operation of the press. A correspondent has recently sent us a collection of advertisements of so-called proprietary medicines which he had cut from papers of high reputation in the country, inviting our opinion of them. Our opinion is that the misery wrought by quacks must be unknown to a good many proprietors of newspapers, or they would hardly share with the quacks the plunder extracted from the public, mainly from the sick poor. The remedy is in the hands of the public, who have only to signify their displeasure at reading in their journals invitations to be robbed and poisoned to find those invitations immediately cease. But the public are largely uninstructed and credulous, and, alas! those responsible for the conduct of many of our journals take no trouble to enlighten them. They prefer to regard all protests against quack advertisement as emanating from the narrowness of the medical profession. This is certainly a convenient faith, but how it can be truly held by educated people passes our comprehension."

The defendants, by their defence, alleged that the words complained of were comments made bona fide and without malice, and in the honest belief that they were true. The defendants alleged in their particulars that the constituents of the said specific were cocaine and atropine (which were poisons and dangerous if used without medical advice), sodium nitrite, glycerine, oil of gaultheria, and water. Quantities of these constituents sufficient to make up 1 oz. of the said specific, together with a suitable spraying instrument, could be obtained from any chemist at a cost of 8s. to 9s.

Counsel for the plaintiff, in opening the case, said that the plaintiff had for eight or nine years carried on his business in England with profit to himself and benefit to a great number of people. He acted as agent for his brother in America, his brother having invented this specific for asthma. The plaintiff, not being a medical man, was unaware of and was not concerned with the composition of the specific. He never advertised in the newspapers. He had sold the specific to some 25,000 persons, including members of the medical profession, some of whom would be called before the jury to testify as to the efficacy of the remedy.

Augustus Quackenbush Tucker, plaintiff, examined by Mr. Smith, bore out counsel's statement. He said that none of his patients had ever complained of any injury done by the use of the specific. As to the effect of the remedy, it afforded relief and arrested the paroxysm. He did not claim that it cured the liability to asthma. It rendered a patient less liable to the recurrence of the trouble. Rest and absence of suffering relieved the patient. He was of opinion that asthma was local in its action.

In cross-examination, he said that he would not supply the remedy to any person who had not a serious catarrhal trouble. A person suffering from consumption would not benefit. He formed that opinion without knowing what the stuff contained. He had never had occasion to consider the English Pharmacy Act. He did not know that if he complied with English law he could not sell this article. He did not know of his own knowledge that it contained cocaine. He did not know that some people were especially susceptible to cocaine. He knew that the cocaine habit was serious. He did not know that cocaine was easly absorbed by inhalation. He defended the sending out indiscriminately quantities of liquids containing atropine and cocaine. He did not advertise or have his name in the *London Directory* or in any commercial directory. They only sent out pamphlets in response to inquiries, the last edition of the pamphlet being 25,000. There had been four editions. The first part of the pamphlet had been written by his brother. There was a statement in the pamphlet that the treatment was harmless to persons with weak hearts. He did not know that this was wrong, having regard to the fact that the liquid contained cocaine. Although he claimed to cure asthma in the pamphlet, he did not mean an absolute cure. He had never made any experiment to ascertain the amount of vapour vaporized by each puff of the vaporizer.

Mr. Bankes: Are you not advocating the very thing likely to produce the cocaine habit?—Experience proves the contrary.

Mr. Bankes: Can you understand any honest man advising his patient to avoid morphine and opium and take cocaine?—That is a supposition which I cannot answer.

Continuing, witness said there was no one who was connected with his business who had medical knowledge. He sent out questions to ascertain if the patient had asthma. He knew that the symptoms of heart disease were similar. He thought that Bright's disease could not be confused. Emphysema was very similar to asthma

Mr. Bankes: May not a consumptive think he has asthma?—Yes. He (witness) was able to judge accurately as to the condition from the answers.

Mr. Bankes here took the witness through the various questions, of which the witness said the object was to decide whether he should send the specific or not. He did not know that the effect of cocaine was to deaden the sense of feeling in the mucous membrane. There had been many suggestions that his specific was injurious. Jealous people had made the suggestion. He knew that some few medical men criticized it. He heard from a number of medical men that it contained cocaine, but he had never had it analysed as his was only the commercial side of the business.

Mr. Bankes: Did you avoid knowing in order to avoid the Pharmacy Acts?—No.

Mr. Duke: There is nothing here to show that there was an infringement of the Acts.

In re-examination, Witness said that his brother, Dr. Tucker, was the author of the pamphlet sent out with the inhaler. It was there stated that the vapour might be thrown against a piece of paper without staining it, and that the remedy had been used for fifteen years without injuring any person. His brother began using this remedy in 1889, and had been using it constantly ever since. He (witness) was also a chronic asthmatic. He had never heard of any cocaine poisoning from any patient, or the relative of any patient. He had never pretended to medical skill. It was untrue that he tried to conceal his identity. The net profit in his business amounted to one-third of his gross receipts. That was a rough estimate made out for revenue purposes some years ago.

A large number of other witnesses were called to prove the efficacy of the remedy. Amongst them were Mr. A. D. Bateson, barrister-at-law, the Earl of Ashburnham, the Earl of Harewood, Mr. Coombs, Borough Treasurer of Kensington; Mr. T E Mansfield, barrister-at-law, Mr. Arthur Bellfield, solicitor, Dr. Thomas Clark, L.R.C.P.Edin., and Major-General Charles Stuart Lane. The last of these said he kept Dr. Tucker's specific in almost every room in his house.

In opening the defendant's case, Mr. Bankes said that the specific in question had been analysed and found to contain cocaine in considerable quantities, as well as atropine and sodium nitrite. Counsel contended that a combination of these drugs sold indiscriminately, in the way plaintiff had sold them, was a serious danger to the public. His case was that of a man, having no medical skill or knowledge of the constituents of the specific which he sent out, said that the stuff was harmless, and encouraged people to use it in unlimited quantities, and it was found to contain poison in dangerous quantities, it was fair to say that such a system was a fraud upon the public.

Dr. Willcox, Home Office analyst, and Mr. Herbert Tilley, F.R.C.S., surgeon to the throat and ear department at University College Hospital, having given evidence,

Dr. F. J. Waldo, City Coroner, in giving evidence on behalf of the defendants, said that before the inquest in question he knew of the plaintiff's specific. The death of the deceased was caused by consumption. He stated in open court in the course of the inquest that Dr. Tucker's specific, which it was said had been used by the deceased, was a quack remedy and that it was a fraud.

Cross-examined by Mr. Duke: He sent a cutting of a news, paper containing the report of his remarks to the *Lancet* because it dealt with a matter of interest to the profession. The word "fraud" which he used applied to the specific, not to the use of a Government stamp in connexion with quack remedies. It was true that he had an interview with the defendant's solicitor after action brought, at which the question of what he did say might have been discussed. He conceived it to be his duty to make statements like this, although the party affected was not before him. Taken except under medical supervision, the specific was dangerous.

Sir Douglas Powell, who had seen an analysis of the specific, said that its effect would be cumulative. Cocaine was a

dangerous drug, which should only be used for very few diseases and with great caution. It was quite possible for people to consider they were suffering from asthma when they were not, as the symptoms were like those of other diseases. To sell cocaine indiscriminately was unsafe. The frequently repeated use of this specific over a long period was likely to produce the cocaine habit.

Cross-examined by Mr. Duke: He had stopped some of his patients using the specific altogether, and had warned others against excessive use. Nevertheless, patients of his had gone on using the specific. Seeing that it contained one of the most powerful drugs known to science, it was not surprising the specific relieved the patient. In re-examination he said that persons who gained relief from such a specific were likely to make a habit of using it.

Sir Lauder Brunton, Mr. H. A. Francis, Professor Pepper, Professor A. R. Cushny, and Mr. Samuel Archibald Vasey also gave evidence for the defendants.

Counsel having addressed the jury,

Mr. Justice Ridley, in the course of his summing-up, said that it would be necessary for the jury to say whether the alleged libel was an attack on the character of the plaintiff. If the statement was not merely a defamatory one but an attack on the character of a private individual, then the allegation that it was fair comment on a matter of public interest was no defence. In a case which occurred in 1828, where the proprietors of the *Lancet* happened to be defendants, the plaintiff was an author, and it was held that he was entitled to protection in his private capacity. In the present case the vendor of a specific was entitled to have his character protected. He would ask them to consider the words of the libel, with a view to seeing if it was an attack upon the plaintiff in his private capacity or an attack upon his business. The defendants said, in effect, "it is the system, not the plaintiff which we attack. The words 'fraud,' 'rot,' etc., were not used of him, but of his business." There was no doubt that the gentleman who wrote the libel had quack advertisements in his mind. His lordship here read the words of the libel, and asked the jury to say whether it involved an attack on the plaintiff's character. Would any one reading the article exclude Dr. Tucker from the accusation? Did not the word fraud apply to Dr. Tucker? It had been argued that the robbing and poisoning had nothing to do with Dr. Tucker; that was for the jury to determine. It was true that Dr. Tucker was not the plaintiff; but, seeing that Mr. Tucker, the plaintiff, was the agent to disseminate the specific, it was for them to say whether he was attacked or not. With regard to the defendants' medical witnesses, some of their evidence was incontrovertible. It was not a necessary part of their evidence to use the word fraud at all. Dr. Tilley said he regarded the system as fraudulent because the plaintiff undertook to cure when he could not. That pointed to accusation of fraud against the plaintiff and not against his business. The various statements of the medical gentlemen did not give them much assistance. They had to judge of the article itself. Was it a case in which a man's personal character was attacked? The next question he would ask them to consider was—Was the libel a fair criticism on a matter of public interest? That was a question entirely for them. It was with reference to this question that the facts relating to the use of the specific became important. To decide the question of fair criticism it was necessary to consider a summary of the facts on one side or the other. There was not one word in the libel to suggest that any single human being had benefited by the use of the specific. Was it a fair thing to do to leave out the good side and put in the bad? While it was only suggested in court that two persons were the worse for the drug, they had also been told that many people had benefited from it. It was no answer to say that the writer did not know these facts, because he ought to have known them. A number of persons had said they got relief from this drug when everything else was ineffectual. None of them had experienced any evil effects. There were also 143 testimonials from the three kingdoms which had been printed in the plaintiff's pamphlet-book. It had also been said that the price was exorbitant. With regard to that, it was noticeable that some of the witnesses were glad to pay for the inhaler and the specific. The £3 was charged not only for the inhalers, but for some ounces of the specific, and the treatment had also to be considered in the price. As to the statement that the plaintiff wrote that his specific was a cure when it was not, they ought to remember that when the plaintiff went into the box he said the specific did not cure the liability to asthma. It merely gave relief, and in that sense it effected a cure. It was also said that the specific ought not to be used except under medical supervision. No one could deny that this was a matter of public interest. As to the damages, the plaintiff had not suffered pecuniarily; but the principle was, Could a man's character be attacked with impunity? What was due to him if he had been undeservedly accused of fraud, robbery, and murder? As to the word "quack," that was a word with various meanings. Although juries ought generally to be moderate, this was a case where, if they found for the plaintiff, they should mark their sense of the injury sustained by him. His lordship left the following questions: (1) Did the defendants attack the plaintiff's personal character? (2) Was the article a fair comment on a matter of public interest? (3) What were the damages, if any?

After an absence from court of about half of hour, the jury answered the first question in the affirmative and the second in the negative. They awarded the plaintiff £1,000 damages.

Mr. Fraser applied for a stay of execution.

Mr. Smith: I make no opposition, subject to the usual terms, but the damages need not be paid into court.

Mr. Justice Ridley: I grant a stay on the usual terms.

FEES OF MEDICAL WITNESSES.

B.M.A.—According to law it is the duty of every citizen on receiving a subpœna to hold himself in readiness to attend the Court. To enforce a witness's attendance a certain amount of conduct money must be paid at the time of serving the subpœna, and a medical man is allowed a guinea a day with certain other expenses occasionally, when he attends the Court. If our correspondent did not attend the Court it is by no means certain that he is even entitled legally to the fee already paid.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

WHAT ARE REASONABLE CHARGES?

GEEZIRAH PALACE.—(*a*) We should think £5 5s. a day and all expenses paid fair remuneration; our correspondent cannot charge in addition for his locumtenent. (*b*) We should suggest half a guinea a visit as a basis for the ordinary fees; a night visit to be double. (*c*) If our correspondent has to enforce his claim in the county court, it will probably be necessary to put in details of the account.

THE COURTESY CALL.

M. C. VIVIAN.—The courtesy call is often omitted in London, but it is for many reasons desirable that medical practitioners should know their professional neighbours, so that we should advise our correspondent to call upon those living near. The call should be made during the practitioner's consulting hours if these are known, or between three and five.

THE CERTIFICATION OF PAUPER LUNATICS.

FURUNCLE.—A person who has been referred by a practitioner to the relieving officer for removal to an asylum as a pauper patient ceases *ipso facto* to be a private patient, and the arrangements for the certification can be carried out at the discretion of the relieving officer, who may or may not choose to employ the medical practitioner who notified the case. Although it may be the general custom to ask him to certify, no just ground of complaint can arise if the relieving officer omits to do so, nor should any other practitioner who certifies at his request be open to the charge of undue interference with the patient of a colleague.

PRIVATE PROVIDENT DISPENSARIES.

A CORRESPONDENT encloses a card of a private provident dispensary, organized by a practitioner in his neighbourhood, and says that he has been asked to form another like it, but he considers it to be "playing rather low down." He wishes to know our opinion of the scheme.

*** Such dispensaries ought to be organized by all the medical practitioners in the neighbourhood, or by all willing to join in the scheme. If they are run by one practitioner without consultation with his brethren, they are sure to lead to professional unfriendliness, and are nearly certain to be abused. We would refer our correspondent to the report of the Medico-Political Committee of the British Medical Association, entitled, *An Investigation into the Economic Conditions of Contract Medical Practice*, published as a special supplement to the BRITISH MEDICAL JOURNAL of July 22nd, 1905, and afterwards reprinted, price 6d.

UNDER the will of the late Mr. Stroud Lincoln Cocks, of Diss, Norfolk, which has now been proved, Norwich Hospital receives a sum of £500.

THE firm trading under the comprehensive title of "Automobilia" has just issued a catalogue which throws a vivid light on the multiplicity of accessories required by those who use self-propelling vehicles. Special kinds of clothing, lamps of different power, syrens and bells, batteries, speed indicators, watches, brushes, tools, tyres, and road maps all figure in the list in almost confusing variety.

UNIVERSITIES AND COLLEGES.

UNIVERSITY COLLEGE, OXFORD.

RADCLIFFE TRAVELLING FELLOWSHIP, 1908.

AN examination for a Fellowship of the annual value of £200, and tenable for three years, will be held in Hilary Term, 1908, commencing on Tuesday, February 25th.

Candidates must have passed all the examinations required by the University for the degree of Bachelor of Arts, and for the degree of Bachelor of Medicine. They must not have exceeded four years from the time of passing the last examination required for the degree of Bachelor of Medicine.

The successful candidate must before election declare that he intends to devote himself during the period of his tenure of the Fellowship to the study of medical science and to travel abroad with a view to that study. The Regius Professor of Medicine and the Examiners, two months before the expiration of the second year after the election of each Fellow, present a report on the work done by him to the electors, who may, if they think the report unsatisfactory, declare the Fellowship forfeited.

The examination will occupy four days. Papers will be set in Physiology, Pathology, and Preventive Medicine, and a subject will be proposed for an essay. There will also be a practical examination in Pathology. Any candidate desiring to offer in addition a special branch of either Medicine or Surgery must send notice of this to the Regius Professor of Medicine.

All intending candidates should send their names, addresses, qualifications, etc., to "The Regius Professor of Medicine, University Museum," on or before Saturday, February 8th.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.C.—E. W. Sheaf, Downing.
M.B., B.C.—F. O. Arnold, Trin.
B.C.—J. H. Ryffel, Pet; B. P. Campbell, Cla.; E. Slack, Pemb.; D. W. A. Bull, Gonv. and Cai.; B. A. T. Peters, Jes.; H. N. Coleman, Chr.; N. W. Ferguson, Magd.; W. G. Parkinson, Emm.

The Gordon Wigan Prize for Physics and Chemistry for 1907 has been awarded to F. Buckney, B.A., of Sidney Sussex College.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on Friday, January 17th, the President, Sir R. Douglas Powell, in the chair.

The Admission of Women.

The consideration was resumed of the petition from the London School of Medicine for Women praying for the admission of women to the examinations of the College.

The following position had been reached when the College adjourned at the preceding Comitia:

It had been moved by Dr. Herringham and seconded by Dr. West:

That the petition of the London School of Medicine for Women be granted.

To this an amendment had been moved by Dr. Starling, seconded by Dr. Halliburton, and carried by 59 to 33 votes, as follows:

That it is desirable that such alterations be made in the By-laws as to allow the admission of women to the examination for the Licence only of the College.

On this being put as a substantive motion, an amendment was moved by Dr. Herringham and seconded by Dr. Phear, namely:

That the word "only" be omitted.

Before this was put from the Chair, it being past 7 o'clock, the adjournment of the meeting was moved by Sir W. H. Allchin, seconded by Dr. Norman Moore, and carried.

On the resumption of the debate, Dr. Herringham's amendment was discussed by the proposer, and Drs. Luff, Moore, Semon, Hunter, Champneys, and Bradford, and was carried by a large majority, the numbers not being taken. On being put as a substantive motion, Dr. Bradford moved an amendment, and Dr. Griffiths seconded:

That it is desirable that such alterations be made in the By-laws as to allow the admission of women to the examinations of the College.

After a short discussion this was carried by 74 to 33, and on being put as a substantive motion it was carried *nem. con.*

On the motion of the Registrar it was further resolved:

That it is not intended that any action should be taken under the resolution just adopted inconsistent with the agreement between the two Colleges, under which the Licence of the one and the Membership of the other are only granted conjointly.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting proceedings of the Council of that College on November 14th and December 12th last.

2. From the Marine Department of the Board of Trade, enclosing a letter from the Governor of St. Helena, forwarding a report by Dr. Arnold, the Colonial Surgeon, on the necessity of issuing further instructions respecting the treatment of beri-beri, and asking the views of the College. This was referred to a Committee consisting of Sir Wm. Church, Dr. Payne, Sir Patrick Manson, and Dr. Hewlett to consider and report to the College.

3. From the Royal Sanitary Institute, inviting the College to appoint delegates to the Annual Congress of the Institute, to be held at Cardiff, July 13th to 18th next. It was left to the President to nominate delegates at a future comitia.

4. From the Oxford University Press, asking permission to photograph the portrait of Linacre, in possession of the College, for reproduction in the first of a series of volumes of historical portraits to be edited by Mr. C. R. L. Fletcher, Fellow of Magdalen College. Permission was granted.

5. From the Dean of the Faculty of Medicine, University of Edinburgh, announcing the award of the Murchison Scholarship (1907) to James Sutherland Edwards, M.B.

Representative of the College on the Council of Queen Victoria's Institute for Nurses.

Sir Dyce Duckworth, who retired by rotation, was re-elected as the representative of the College.

Report.

A report was received from the Committee of Management, dated December 4th, 1907, recommending that the Municipal Technical School, Accrington, be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics, and that the Borough of Devonport Small-pox and Fever Hospitals be added to the list of fever hospitals recognized by the Examining Board in England. The report was received and the recommendations adopted.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Quarterly Council was held on January 16th, Mr. Henry Morris, President, in the chair.

Annual Meeting of Fellows and Members, held November 21st, 1907.

The following action was taken by the Council in regard to the resolutions passed on the above occasion:

1. That the President and Council of the Royal College of Surgeons be asked to use their moral influence with hospital authorities to recognize members of the College (who are also in almost all cases licentiates of the Royal College of Physicians) as having equal rights with provincial, Scottish, and Irish graduates to become candidates for hospital appointments.

The answer to this proposition is still under consideration.

2. That this twenty-third consecutive annual meeting of Fellows and Members again reaffirms the desirability of admitting Members to direct representation on the Council, which as now constituted does not represent the whole Corporation.

It was directed that the mover and seconder of this resolution should be informed that the resolution had been laid before the Council, and that the views of the Council upon the question referred to therein will be found in the last annual report of the Council.

3. That this meeting regrets that the Council has omitted from their report any reference to the opinion of His Majesty's Government on the question of the representation of Members, and requests the President to supply the omission by communicating the same forthwith.

As this resolution contained a request to the President which the President dealt with at the annual meeting, the Council consider it unnecessary to make any further reply.

4. That this meeting notes with satisfaction that the Council intends to take a poll of the Fellows and Members on the whole question of admitting women to the diplomas of the College, and this meeting further urges that a similar course be taken with regard to the proposal for direct representation of the Members upon the Council.

It was directed that the mover and seconder of this resolution should be informed that the Council saw no reason to adopt the suggestion that a poll of the Fellows and Members should be taken upon the proposal for the direct representation of Members upon the Council.

5. That this meeting requests the Council to add a hood to the gown already worn by Fellows and Members.

As the hood was generally understood to be distinctive of a degree, and in this sense it formed part of the academic costume of a University, it was considered that it would not be appropriate for a College. For this reason, and as hoods did not appear to be in general use among colleges of similar standing to the Royal College of Surgeons of England, the Council did not see its way to comply with the request contained in the resolution.

6. That this meeting of Fellows and Members of the Royal College of Surgeons wishes the Council to report as to their willingness to join the Royal College of Surgeons and its work with the University of London (so as to form an Imperial University of London), and whether they will approach the Royal College of Physicians for a similar conjoint action.

The answer of the Council with reference to this resolution is that this matter, which has been much discussed in the past, still occupies the attention of the Council.

Hunterian Oration.

The President was appointed to deliver the Hunterian Oration for 1909.

The London Ambulance Service.

The President reported that he gave evidence upon this subject on December 20th, 1907, before the Home Office Committee. The evidence concerned a variety of topics, comprising (1) ambulances available for infectious cases; (2) ambulances available for non-infectious medical, surgical, and mental cases other than accidents and sudden illnesses occurring in the streets; (3) ambulances for cases of accident or sudden illness happening in the streets. The evidence also contained information upon the systems adopted in Paris, Berlin, and Boston (U.S.A.). The thanks of the Council were given to the President for his action.

Queen Victoria's Jubilee Institute for Nurses.

Mr. Thomas Bryant was re-elected a Representative of the College upon the Council of the above institute for the ensuing three years.

The Admission of Women to the Examination of the Royal Colleges.

In anticipation of the decision of the Royal College of Physicians being favourable to the admission of women to examination for the licence of the Royal College of Physicians, the Council proceeded to appoint a Committee to prepare a circular to the Fellows and Members asking their opinion as to whether or not women should be admitted to examinations for the diplomas of the Royal College of Surgeons of England.

Tea.

It was arranged that during the next three months tea should be served for readers in the library, or in the common room for readers who are Fellows or Members of the College.

UNIVERSITY OF BIRMINGHAM.

THE following candidates have been granted the diploma in Public Health:

T. W. Beazeley, W. H. Davison.

OBITUARY.

J. ROBERTS, M.D., J.P.,

CHESTER.

THE medical profession in Chester lost on January 9th, in the person of Dr. John Roberts, one who until recently was among its most prominent members, and Chester a man whom it had long held in the highest esteem and affection. Dr. Roberts was born at Blaenau Festiniog in 1843, and was one of a large family, five of whom became medical men. His medical education he received partly at Glasgow and partly at Aberdeen, becoming M.B. of the former university in 1865 at a time when he had already acquired the diplomas of the College of Physicians of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow. Later on he proceeded to the M.D. of his own university. His official connexion with Chester commenced almost immediately after the termination of his career as an undergraduate, and at the date of his decease had been maintained uninterruptedly for over forty years. During this time he acquired a large practice, from which he only retired at the end of last year. Amongst professional offices he filled that of Surgeon to the Chester Lying-In Charity and retained it until the last, and for a considerable period was Surgeon to the Festiniog Hospital. Professionally he took much interest in dermatology, and in 1890 was instrumental in securing the establishment of the Chester and District Skin Dispensary, while within the last few years he had thrown his influence into the scale in favour of the crusade against tuberculosis started by the Chester Association for the Prevention and Cure of Consumption.

It was not, however, only as a private practitioner that Dr. Roberts assisted his fellow citizens; he served them more extensively, perhaps, and much more permanently through his association with the Public Health Committee of the city, of which body he was chairman for a great many years. During his tenure of office a great number of sanitary improvements were carried through, one result being that in the thirty years elapsing between 1874 and 1904 the death rate of Chester diminished by some 33 per cent. Dr. Roberts's connexion with public affairs commenced as early as 1886, and he served on a great many of the municipal committees, including the Housing, Town Hall, Parliamentary, Markets, and Baths Committees. The extent to which he won the approval of the citizens of Chester in his public capacity is sufficiently evidenced not only by the length of time for which he was invited to serve them, but from the fact that besides being an alderman he in turn filled the office of Sheriff and Mayor. He occupied the latter office for two consecutive years, on the second occasion as the deputy of his successor.

Dr. Roberts was a very loyal Welshman and an excellent Cymric scholar. The Chester Welsh Society, indeed, has in him lost a tower of strength. He held a Commission as Justice of Peace for the city, and was at one time President of the Chester Medical Society, remaining to the last a member of the Chester Division of the Lancashire and Cheshire Branch of the British Medical Association.

THE medical profession in Wrexham and district has lost one of its kindest and most loyal members in the death of Dr. J. LLEWELLYN WILLIAMS, of Holt Street House, which occurred somewhat suddenly on December 13th, 1907, from heart disease. Dr. Williams was the son of the late Dr. Edward Williams, who died in 1893, after many years of extensive practice in Wrexham and the surrounding neighbourhood. Many recall the handsome face and kindly manner of the "dear old doctor" when they now have to mourn the loss of his son. Dr. Llewellyn Williams, like his father, was an ideal family doctor. His gentle voice, honest, grave eyes, and kindly manner did much to cheer and help those in suffering and sorrow, always patient and ready to hear and sympathize with their minor troubles and worries, and he never left a bedside without a cheery word of help and comfort. Dr. Williams studied at Edinburgh University, where he took the degrees of Bachelor of Medicine and Master of Surgery in 1867; he also studied at St. Bartholomew's Hospital and obtained the diplomas of M.R.C.S. and L.S.A. He was a Justice of Peace for the County of Denbighshire, and took a keen interest in his magisterial work. In 1876 he was elected Honorary Surgeon to the Wrexham Infirmary, a post which he held until 1881. During this period he gave his time, experience, skill, and encouragement to the suffering poor under his care, and there the kindly acts and unostentatious aid rendered to so many in a humbler sphere, although unrecorded, will not be forgotten. When a vacancy occurred later on the staff of that institution he was urged by some of his colleagues to again apply for that post, but could not be induced to do so. He was for some years Medical Officer of Health for the Borough of Wrexham, and rendered valuable services in the advancement of sanitary science and public health. He was a former President of the North Wales Branch of the British Medical Association, and his year of office was a most successful one. He had high ideals of medical ethics, and his advice was always in consonance with the best traditions of the duties of members of the profession to the public and to one another. If he had a fault, it was his modesty and unassertiveness. To all who knew him, he was the embodiment of uprightness of conduct, and he lived and died a pattern, not only of a good physician, but of an English gentleman.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ATTENDANCE OF POOR-LAW MEDICAL OFFICERS AT BOARD MEETINGS OF GUARDIANS.

A. J. J. writes saying he has been directed by a resolution passed by his Board to attend all their meetings. He asks whether they can compel him to do this.

*** No resolution of this character passed by a Board of Guardians is binding on a medical officer. When they require the attendance, they must make a special request for such attendance. They have no power to order him to attend *all* meetings.

CLAIM ON GUARDIANS UNDER SUPERANNUATION ACT AFTER VOLUNTARY RESIGNATION.

A. B. writes that after thirty years' service as medical officer and the usual deductions from salary he, from unforeseen causes, resigned, and now lives elsewhere. If later on he becomes infirm, what claim would he have on the Board of Guardians under the Act?

*** We cannot see that after voluntary resignation any claim could be established.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

ROSACEAE would be glad to know whether any treatment is likely to be of use in a slight case of pharyngitis. The tonsils have been removed, but the condition has persisted for some years.

PERPLEXED would be glad if any member could tell him any treatment likely to be useful in a case of thrombosis of the internal saphena vein of some months' duration. Prolonged rest and potassium iodide have been tried in vain. The patient is over 60 years of age, and has no other trouble.

A PURIN-FREE DIETARY AND SEA-SICKNESS.

DR. A. STANLEY GREEN (Lincoln) writes: I am greatly interested in this correspondence, because I have been on a diet of this description ever since I was successfully operated on by Mr. Mayo Robson for duodenal ulcer in November, 1906. The point to which I wish to call attention, however, is the effect that it has had upon my power of withstanding *mal de mer*, from which I have always been a great sufferer, dreading even a smooth cross-Channel journey. I have, however, just crossed by the Folkestone-Boulogne route on two occasions when the wind was blowing hard and the sea was decidedly rough, and yet I never felt even a single qualm of sickness. Can this change be attributed to the alteration in my diet? I know of one other case where the same thing has happened, and it would be interesting to hear whether other medical men had found this to be of frequent occurrence when a purin-free dietary was adopted.

THE USE OF THE SETON.

M.B., who refers to the notes by Dr. Eldon Pratt in the BRITISH MEDICAL JOURNAL of December 7th, 1907, and Dr. T. Wilson Parry of January 11th, asks for definite information on the following points: (1) The kind of tape used, and where to procure it; (2) is any dressing necessary to prevent a mixed infection? (3) the exact site to fix it with regard to the cervical vertebrae; (3) how long to leave it *in situ*; (5) if it is not likely to set up erysipelas. He wishes to try the seton treatment in a severe and obstinate case of megrim headache.

SHIP SURGEONS AND VACCINATION FEES.

BITTEN writes: Not long ago Brazil, Uruguay, and Argentina passed laws insisting upon the vaccination of passengers before landing, and the shipping companies made their ship surgeons do the extra work without any extra pay, which in one case at least led to a difference of opinion. Can any one give information how matters stand at the present time, and whether the question of extra pay for the extra work has been settled in an equitable manner by any of the shipping companies running to South America?

ANSWERS.

THE author of some verses on the microscope has omitted to enclose his card.

F. Z. O.—A great part of the ninth volume of Solis Cohen's *System of Physiologic Therapeutics* (published by P. Blakiston's Son and Co.) is devoted to hydrotherapy, including its technique. The chapter on hydrotherapy in Allbutt and Rolleston's *System of Medicine* (Second Edition, volume i) is concerned chiefly with general principles and indications.

DR E. E MOORE.—The third edition of Radcliffe Crocker's *Diseases of the Skin*, illustrated, would probably meet our correspondent's requirements. We know of no English monograph on eczema, but eczema is dealt with in the large works on medicine and *Encyclopaedia Med ca.* The best monograph is that of Besnier in French, but we do not think it is issued apart from *La Pratique dermatologique*, a work in four volumes (Paris: Masson).

MIDWIVES.

TOTTENHAM.—A midwife who undertook to train nurses, and sent her pupils to cases and left them to send for her when help was required, would, we apprehend, render herself liable under Subsection 4 of Section 1 of the Midwives Act, 1902. This is as follows: "No woman certified under this Act shall employ an uncertified person as her substitute." In regard to advertising, the Central Midwives Board, as may be seen from the report of its proceedings published in the SUPPLEMENT for this week, considers that it has no power to prohibit advertising by midwives.

LETTERS, NOTES, ETC.

BRITISH SHIP SURGEONS' ASSOCIATION.

DR. G. METCALFE SHARPE (Honorary Secretary) writes: May we, through your valuable paper, issue a letter of welcome to all members of the medical profession interested in the formation of the above association? A meeting has been arranged to take place on Monday, January 27th, at 8 p.m., at the Medical Graduates' College and Polyclinic, 22, Chenies Street, Gower Street, London, and we hope for a large and representative gathering. The object of such an association has been given in former issues, and ship surgeons are almost unanimous as to its need. As some of us from the North are coming at great inconvenience to our practices, we do hope that ex-ship surgeons and others now practising in or near the metropolis will do their best to attend.

AN APPEAL.

MR. A. DE VALLANCEY (34, Shaftesbury Road, Ravenscourt Park, W.) writes: I am writing on behalf of a fellow practitioner, Mr. H. A. Bridgman, who through illness has fallen on evil times. He has been an in-patient at St. Thomas's Hospital, was discharged on December 26th, 1907, and is at present quite unfit for work as he still requires rest, and unless members of the profession who are charitably disposed come forward to his assistance he will be forced into a workhouse. A committee, consisting of H. Waymouth, Esq., Springfield College, Acton Hill, W.; Dr. Roberts, Craven Park Road, Harlesden; Dr. Henderson, Green Street, Bethnal Green, and myself as treasurer, has been formed to receive contributions.

TONSILLITIS AND SPONDYLITIS; RHEUMATOID ARTHRITIS.

DR. W. J. MIDELTON (Bournemouth) writes: In thinking over the etiology of spondylitis, I am strongly of opinion that chronic tonsillitis is an important factor. This is a practical point, since it leads one to believe that if the treatment of chronic tonsillitis were more energetically carried out than is usually the case there would be fewer cases of spondylitis. I would enter a plea for the more general use of the galvano-cautery. By this means not only is a great deal of tonsillar tissue mechanically destroyed, but also a powerful effect is produced on the local nervous and other systems and healing thereby promoted. I have read with interest Dr. P. W. Latham's letter in the BRITISH MEDICAL JOURNAL of January 4th, p. 64, on the treatment of rheumatoid arthritis by means of continuous counter-irritation to the spine. I may say that I have at the present time two new cases under treatment by this method, and both patients are taking tincture of opium; their pains are mitigated by it without any disadvantage that I am aware of. Dr. Latham does well to say that the treatment should be properly carried out. Although nearly all my patients have improved remarkably in general health after the first course of blistering, some have not shown very marked improvement in the joints until after a second or even a third course. The treatment has been condemned by some medical men who have tried it, but, in my opinion, on insufficient grounds. I am strongly of opinion that this is the most powerful means at present known of dealing successfully with rheumatoid arthritis.

A ST. THOMAS'S WORTHY.

DR. F. J. HARVEY BATEMAN, M.A. (Blackheath), writes: While on a recent visit to my native city Norwich, I came across the following memorial in the burial ground attached to the Ortogan Chapel, built 1756:

S M.

Thomas Baker, Esq., who was thirty years Surgeon to St. Thomas's Hospital, Southwark. He retired from business and came to this city the 25 day of Aug. 1769. He died Feb. 8 1770 aged 60 years. There the wicked cease from troubling and the weary are at rest.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
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Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address
ON
SOME OF THE MEDICAL ASPECTS OF LIFE INSURANCE.

Delivered at the Insurance Institute of Liverpool, January 8th, 1908,

BY
Sir JAMES BARR, M.D., LL.D., F.R.C.P., F.R.S.E.,
SENIOR PHYSICIAN, LIVERPOOL ROYAL INFIRMARY, ETC.

Mr. Chairman and Gentlemen,—When I accepted the honour of addressing you this evening I felt that I was undertaking a task which I might find difficult satisfactorily to accomplish. It is comparatively a simple matter to write a paper on a medical subject for a medical audience, but it is quite a different thing when you have to descend from technicalities and place your thoughts in plain language before an intelligent and highly critical audience who are wont to view the subject from a different standpoint to yourself. To you, as insurance actuaries, the mere length of human life does not matter very much, except to your individual selves, so long as there are no wide fluctuations from the average duration to upset your calculations, but to me the prolongation and efficiency of the individual life is a matter of all-importance. You stand to the insurance world like the medical officer of health to the community—all you care for is a low mortality, but the efforts of practitioners of medicine are and should be the maintenance of health and a high state of mental and physical efficiency. To-night, however, there are some common grounds on which we can meet. We are all interested, individually and collectively, in the prolongation of human life—if you will for what we can get out of it, not only for ourselves, for we can all be sufficiently altruistic to wish others to share in the advantages which we can offer them, but which many are foolish enough not to accept.

To-night I propose to ignore fire insurance, either for this world or the next, and I shall try and interest you in your own business—the selection of lives for insurance. Like the members of the medical profession, life insurance agents carry on a noble work. You interest men in their own lives and in the lives of their families, and enable them to make provision against the contingencies of life. It is, however, the great uncertainty of the life of the individual which often enables you to induce him to take a hand in the game; because man is essentially a gambler, and it is this feeling that he may score off the insurance companies, while, on the other hand, if he does exceed the average span he cannot lose much, that induces him to insure. If one knew the length of his own existence he would often become his own insurer; but nowadays you should try to show that you can do better than the individual, no matter how long he may live. Show that your offices are honestly managed—as I believe the vast majority are—and this is, perhaps, as much as or more than could be said for a minority of the ordinary limited liability companies. With you the best lives are protected against the risk of accident to life, and they can rest assured of a fair return for their money.

There is no insurance company run as a benevolent institution, and, if there were, it would be well for those who wish to make a *certain* provision for their families to avoid such. These altruistic institutions are worthy of support as matters of charity and as lotteries in the game of life. I heard recently of a benevolent institution in Yorkshire whose benefits are devoted to the necessitous families of former members, and the family of one member who was inconsiderate enough to die after one payment of a guinea drew nearly £1,000 during the succeeding twenty years. This is better than anything you can offer, and is more like a good haul at Monte Carlo. Frequently you dangle such prizes before intending insurers. You may refer to John Smith, who only paid £50 shortly before his death, and you had the pleasure of consoling his widow yesterday with £1,000. To be perfectly honest, you should also explain that you had a good haul out of the £50, that the doctor got a paltry guinea for passing such an indifferent life, and the insurance company which took all the risk only got a few pounds. You should recollect that, as a rule, men do not insure for the mere love of dying and leaving rich widows, and the insurer might reasonably wonder how your institution was run on these lines, and if he were a good life he should hope that such mistakes would not be often made for fear there might be nothing left when his policy matured. Good lives have a right to demand that you make as few bad speculations as possible; while the bad life, having satisfied himself of the stability of your office for the next twenty years, may be quite content to get in on the easiest terms he can. You know perfectly well that although the individual life is very uncertain, yet when you are dealing with large multitudes there are very few things in this world less liable to any great fluctuations than the average human mortality. In making your calculations, all you have got to do is to take a table with a fairly high mortality, such as the Northampton or even the Carlisle tables, put a fair loading on your policies, and you need not be too particular in the selection of your lives. Then, if you do a large business, you are perfectly safe. It would be much easier for an individual to break the bank at Monte Carlo than for any number of bad lives to break an insurance company. A large succession of bad lives might lessen the profit of an insurance company, but there is no epidemic disease could occur in this country which could affect the stability of any of the offices.

You may no doubt justly say that at present I am only putting forward the gambling side of insurance, and that insurance companies do exercise all possible care in the selection of the lives, and do share their profits with the insured as far as it is safe to do so. Although I am not an actuary, I am inclined to think that insurance companies might do more, and do what they do more fairly to all interests concerned. I shall soon tell you what I mean. The mortality tables of the Institute of Actuaries were a great improvement on those which preceded, but they have served their purpose since they were drawn up in 1869, and I think with the experience of all the insurance companies of this country of the lessened mortality during the last forty years we might have new tables, more in the interests of the insured. When an insurance company shows that its death-rate is far below the expectancy, this may be due not so much to careful selection as to the calculation having being based on tables which show a higher mortality than that ruling in the present day. The fluctuations in fire insurance losses are very great, and large reserves are required for stability, but there are no such risks in life insurance, and with the improved health of the community the risks will gradually lessen, and the lives of the insured will be prolonged. There are plenty of insurance companies in this country able to do more than twenty times the work which they at present carry through, and I think they should encourage life insurance and thrift among all classes of the community. They can do this by getting new mortality tables, and ceasing to build up large and unnecessary reserves.

In order to make insurance generally popular, it should be worked on economic lines, the division of profits should be fair; no one class of life should benefit at the expense of another, the good lives should not have to pay for the bad, and the range of insurance should be very much widened. At present the majority of offices only take selected lives of at least average health, but I see no reason why almost any life should be refused if the individual be prepared to pay the insurance company a fair premium for the risk. Surely in the present day there would be no superhuman difficulty in medical science assessing a fair expectancy to any life. This would require to be done tentatively at first, because insurance companies have never encouraged or paid medical men to go into work of this kind, and probably the estimates would be cautiously made at first in favour of the insurance companies and against the insured, but this could be easily adjusted when the assured exceeded his allotted expectancy. Again, the good lives should not be weighted with the bad, as is too often the case in the present day. No life, good, bad, or indifferent, should share in any profit which he has not earned. So long as any risk stands in the books of the company at a loss he should not be allotted even a prospective bonus. It should be quite enough for any one to know that he is covered for a definite amount for a

definite premium, and when he has paid a sufficient number of premiums to earn a profit he will be treated liberally. "The liberal deviseth liberal things, and by liberal things shall he stand," but no honest man has a right to be liberal at the expense of others. Insurance conducted on these lines would become more and more of an investment, less and less of a lottery, while the insured would be covered against premature death. There is a remarkable contrast between the management of life and fire insurance. If a man insures his life for £1,000 and his furniture for the same amount, in the case of the life office, at the end of, say, five years, the authorities would say to him, "My good fellow, you have paid your premiums regularly and have not died in the meantime, so by way of encouragement we will add 10 per cent. to the face value of your policy"; at the end of ten years another 10 per cent. would be added, although the risk still stood at a large discount in the books of the company. If the man then promptly died his relatives would receive not only the £1,000 to which they were morally and legally entitled, but they would also get a bonus of £200. Now, who pays the £200? Certainly not the insurance company, as they do not keep a charitable fund for the purpose, but the good lives have to pay it *nolens volens*. In the case of fire insurance, when the man had paid his premiums regularly for ten years and then has had a conflagration, the insurance company would send an inspector, who might discover that damage to the extent of at least £2,000 had been done. The insurance company would then politely tell the insurer that his property had only been half covered, and consequently they would make him an allowance of £500 in settlement of all claims, and if he was not content with that they might tell him to go to blazes, and draw the balance out of the life office.

In my opinion, every large insurance office should have at least three classes—not good, bad and indifferent, or better, worse, and worst, but good, average, and moderate or impaired lives, or first, second, and third classes. The first two might be charged the same premiums, but they should be kept in separate classes, and the profits allotted accordingly as they were earned. The third class should be loaded; whenever any client proved himself to be a better life than was expected of him, and his death would not occasion any loss to the company, he should be transferred to the class above. Some insurance companies will tell you that they do this largely in the present day; and when a man has great faith in his own longevity he can back his own life by taking out an endowment policy, but then they immediately handicap him by placing in the same class a lot of indifferent lives whom they place there in order to lessen their own risks. Now I shall tell you how, in my opinion, these selections should be made.

No one should in the first instance be allowed into the first class except unexceptionable lives, and as I am anxious that we should raise up a strong, healthy, and vigorous race, I shall tell you the individual I would put in that class. The client would have to show that he came of a long-lived stock, and he would have to go back not merely to his parents but to his grandparents, and if dead it would not be sufficient to say that they died of old age, but he must show when, where, and of what they died. This would give them some interest in their ancestors. I saw in the newspapers a few days ago that Americans have frequently much difficulty in finding out when and where they were born themselves without going any further back in the genealogical tree, and I heard recently of a successful Yankee who came over to this country to trace his ancestors, but he soon came on the record of one who had satisfied the ends of justice in the noose of a hempen rope, and he did not pursue the matter any further. There are no doubt numerous first-class lives who are not able to trace their ancestors beyond the previous generation, but there are many other factors to guide the office in such cases.

Depend upon it, heredity plays a very important part in longevity and in the evolution of the race. If you wish to improve the stock, you must look after the progenitors. As William Farr said in 1875, so it is to a great extent to-day:

> The hygienic problem is how to free the English people from hereditary disease, hereditary consumption, cancer, syphilis, gout, hereditary insanity, hereditary vagrancy, hereditary criminality, and to develop in the mass the athletic, intellectual, aesthetic, moral, and religious qualities which have already distinguished some of the breed. There is a divine image in the future to which the nation must aspire. The first step towards it is to improve the health of the present generation; and improvement, if as persistently pursued as it is in the cultivation of inferior species, will be felt by their children and their children's children. A slight development for the better in each generation implies progress in a geometrical progression; which yields results in an indefinite time, that if suddenly manifested would appear miraculous.

Professor Karl Pearson has arrived at the conclusion that half the family of a tuberculous parentage ultimately become tuberculous, and that in England one family in ten has a tainted tuberculous parentage. He also says that his

> Family records show that of the offspring of insane parents an average of four lived to reach fifty or to become insane before that age. Of such offspring 44 per cent. showed signs of insanity, this record again excluding cases noted as tumour of the brain, paralysis, and also the possibility of senile dementia after 50, the former being not sufficiently definite for classification.

Yet many of the wiseacres in the medical profession will tell you that consumption is not hereditary. No doubt the tubercle bacilli are not transmitted, but the lessened resistance to the baneful influence is transmitted, and if the tubercle bacilli were exterminated to-morrow there would be many another invisible foe ready to carry off the weaklings. It will be well for the insurance actuary to adhere to the belief that the diseases enumerated by William Farr are hereditary, and one who inherits a good constitution will fight through many a battle to which a weaker mortal would succumb. The laws of Mendel on heredity are being well studied in the present day, and successfully applied in the cultivation of plants and of the lower species of animals. When will man begin to improve his own breed? I am afraid that, as Professor Karl Pearson says:

> We are ceasing, as a nation, to breed intelligence as we did fifty to a hundred years ago. The mentally better stock in the nation is not producing itself at the same rate as it did of old; the less able and the less energetic are more fertile than the better stocks. The only remedy, if one be possible at all, is to alter the relative fertility of the good and the bad stocks of the community.

I would go much further, and say that none but the mentally and physically fit should be allowed to take part in the higher functions of reproduction and evolution.

Having dealt with the hereditary tendencies of the individual, we may next consider his environment and occupation, which play a very important part in the maintenance of health and in the evolution of disease. Herbert Spencer says:

> Perfect correspondence would be perfect life. Were there no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be eternal existence and eternal knowledge.

First Class Lives.

The candidate for insurance in the first class should "live, move, and have his being" in healthy surroundings; he should be physically fit for his work, and his occupation should not be inimical to health, as otherwise the death-rate is sure to rise. All those in whose occupation the mortality is above the average should be excluded, and I am afraid in this list would have to be included the majority of cornbrokers, cottonbrokers, stockbrokers, and other gamblers who live in a whirl of excitement, and medical practitioners, who cannot afford to be ill, or to lie up when they are ill. Among the eligible would be found those with a settled income and in comfortable circumstances who know how to take care of themselves.

Regarding habits, if not teetotal they should be nearly so, as the views of some people on temperance are rather vague. From an insurance point of view, the worst teetotalers are reformed drunkards or self-righteous pharisees who strain at a gnat and swallow a camel, and if the camel happen to be a besetting sin such as gluttony you should beware; the best of the ilk, on the other hand, are good lives—even better, in my opinion, than the moderate drinkers. Overeating is almost as bad

as overdrinking, and perhaps kills more men in the sixties, drink having polished off its votaries earlier.

Regarding the individual himself, he should be muscular and proportionately developed, but not a Hercules. He should not exceed 6 ft. in height, nor perhaps be below 5 ft. 4 in. I am now speaking of the Anglo-Saxon and Celtic races. The physics of the circulation readily explain my objections to very tall men, but objections to the other end of the scale may not be so apparent, as small men often live to great ages; this generally occurs when their progenitors have placed them in easy circumstances, and it may also happen with some little men, not so favourably situated, when they make up for deficiency in size by cheek and impudence, which often in the present day pass muster for intelligence. Whatever view we take of individual cases, I think the medium-sized man who has got to take part in the struggle for existence is the better man. At present we have a peaceful invasion of this country, so that all our large seaport towns are the dumping ground for the rubbish of Europe; but if we should have, and it is highly probable that we shall have, a hostile invasion within the next quarter of a century, then we shall require *men* to protect insurance and other interests. I think, therefore, insurance companies would become more popular and serve a useful purpose if they encouraged the *military* spirit, offered special terms to *volunteers*, and *reduced the premium to officers in the active service of the army and navy*: this could be readily done by cutting the unearned increment off bad lives.

He should be in good health and free from all disease and processes of disease. All his senses and functions should be normal, his vital capacity should exceed the average for age, height and weight by 30 to 40 cubic inches, his teeth should be good, and digestive functions healthy. Regarding previous disease, such affections as measles, whooping-cough, chicken-pox, and scarlet fever can be neglected if they have left no sequelae. Be cautious of the individual who tells you that he has never been ill a day in his life; if a truthful man, he would do very well for insurance against sickness, but he is a dangerous person to accept for life insurance, as he is probably careless of his health, perhaps too busy to consider himself ill, and not sufficiently alert to his own health's interests to protect himself from death. Coryza and common colds can be disregarded, but not so repeated attacks of influenza; a previous history of such disease as quinsy, pneumonia, pleurisy, bronchitis, rheumatism, gout, all forms of tuberculous disease, diseases of the kidneys, liver and spleen, bad teeth and intestinal disorders, developmental defects, and hernia, should at once exclude applicants from the first class. The applicant should have been vaccinated against small-pox at least twice. The lax manner in which the vaccination Act is being carried out will soon increase the risks from small-pox, but insurance companies should wisely protect their own interests.

I rather think that the restrictions which I have named would make the first class a very small one in the first instance, so small that insurance actuaries might wisely insist on every one proving himself to be a first-class life, and admit no one to this class until he stood at a profit in the books of the company. Whatever plan be adopted, I think good lives should receive preferential treatment. "As all men think all men mortal but themselves," it should be no great hardship to make every one prove the value of his life.

Second-Class Lives.

The second class of lives need not detain us very long as it would contain the vast majority of those who insure in the present day; but as I would only charge the same premiums as those for the first class, a good many of those who are accepted in the present day without any extra would require to be transferred to the third class. I would exclude all persons with a strong family history of insanity and other diseases of the nervous system, consumption, cancer, rheumatism, gout, and syphilis, and, of course, any actual manifestations of such diseases in the individual would apply with much greater force. There are several diseases which do not receive the attention from insurance companies which they merit, and among these must be mentioned syphilis, and diseases of the digestive tract.

Every individual who suffers from syphilis should be loaded. It is often very difficult to get a reliable history of this disease, so the medical examiner should be instructed to look out for any secondary or tertiary manifestations. The ravages of this disease are very far-reaching, and every year I see an increasing amount of its baneful influence in producing general paralysis of the insane, locomotor ataxia, diseases of the blood vessels and of all the viscera. I am told by those who have to deal with the primary stage that this disease in Liverpool is on the increase among all classes of the community, so insurance companies doing business in this city had better be on the look-out. There were 82 deaths from syphilis recorded in this city in 1906, and Dr. Hope, with his usual courtesy, informs me that of this number 70 were deaths of infants under 1 year of age. This does not represent a tithe of those deaths which are indirectly due to this foul disorder. Purity crusaders will tell you that people should be punished for their moral delinquencies, but what have those poor children done to merit such early deaths from a loathsome disease? Why should wives and mothers be thus afflicted? Are the innocent to suffer often much more than the guilty? This is a widespread social pest which ruins the constitutions of myriads and their progeny, yet in this socialistic government there does not seem to be a statesman able or willing to grapple with the problem. The late Lord Salisbury recognized the magnitude of the evil; he took a great interest in the Brussels conference, and I believe if he were alive and in power he would have tackled the subject before this. In my opinion the communication of the disease by either sex should be made a penal offence. Some tell me that it would be almost impossible to get a conviction, but I do not think so. Of course it would require an Act of Parliament, and perhaps some alterations in the law of libel, but a few convictions would strike terror into others.

A foul mouthed individual is liable to many troubles, and he is a greater danger to himself than to others. The nose, mouth, and bad teeth afford a large culture field for the growth of many pathogenic organisms which are ever ready to attack the individual when his resisting powers are lowered. In the mouth and throat the organisms are bred which give rise to such fatal diseases as pneumonia, pernicious and other septic anaemias, etc. If the insurance companies added to the premiums one-eighth per cent. for every bad tooth in the applicant's head they would do some good to the dentists, and lessen their own risks. The great increase in recent years of diseases of the digestive tract, such as cancer of the stomach and large bowel, appendicitis, etc., are largely due to dietetic errors and constipation. Those individuals who suffer from chronic functional disorders of this tract should be transferred to the third class.

Pneumonia is an infectious disease which is now causing more deaths than tuberculous disease of the lungs. The incidence has largely increased since the advent of influenza in 1889. In Liverpool in 1896 the death-rate per 100 000 inhabitants from the disease was 172, whereas in 1905 it had risen to 187, and in 1906 to 188. The percentage death-rate from pneumonia to death from all causes was 7.6 in 1896, and in 1905 it was 9 7, and in 1906, 9 26. I have calculated that fully 1 per cent. of the whole population of Liverpool suffers each year from pneumonia. It is very difficult for insurance companies to forecast the individuals who are likely to suffer from pneumonia, as many of the strong suffer from the disease when they get into impaired health, but insurance companies might take some precautionary measures by rating up those with foul and offensive noses and mouths; fat, plethoric, pot-bellied individuals; alcoholics, and those who live in unhealthy surroundings.

All tuberculous lesions, previous history of insanity, epilepsy, gout, rheumatism, malignant disease, old pleurisy, chronic bronchitis, asthma, emphysema, dysentery, repeated attacks of rheumatic fever, diseases of heart and blood vessels, diabetes, leucocythaemia, haemophilia, meningitis, myelitis, apoplexy, paralysis, chronic otitis media, alcoholic neuritis, gastritis, Graves's disease, etc., would have to be excluded from this class.

Third-Class Lives.

The third class would include all the derelicts, and with careful selection and fair rating it might be made a very large and profitable class. Of course every individual

should be considered on his own merits irrespective of the name of the affection with which he was troubled. If this work be worth doing, it is worth doing well; it would require a great amount of care and much responsibility on the part of the medical examiner. This would necessarily demand extra remuneration, and might raise the importance of the medical referee even up to that of the actuary. I am not going to tell you what I would consider fair rating for particular diseases or individuals, because the matter is not yet under consideration, and the value of my advice has not been assessed. However, I shall broadly tell you some diseases at which actuaries and some medical referees look askance, but in which, in my opinion, a large and profitable business might be transacted. On this list I would place heart disease at the top. Many an individual lives after a heart affection has been discovered twenty, thirty, or forty years, and dies of some other disease. Surely this should be good enough for an insurance company, but here the judgement of the medical examiner would be a matter of vital importance, and great care would require to be taken to draw a distinction between lesions following rheumatic fever and those of a degenerative character, as well as the physical effects of the particular lesion. Certain diseases of the kidneys also run a very chronic course, but here great care would have to be exercised as to the functional capacity of the kidneys, the habits, diet, and surroundings of the applicant. Frequent attacks of quinsy and rheumatic fever should be rated up, even though no heart mischief has resulted. Chronic otitis media might be accepted at a moderate rating if the middle ear and mastoid cells have been cleared out. Many cases of healed tuberculous disease of the skin, glands, and bones might be accepted at a moderate increase, but all cases of healed tuberculous lesions of the lungs require a high rating until the individual has paid sufficient premiums to get rid of the risk of the company. Syphilis would have to be individually judged by the effects, and in all cases the company should insist on a prolonged course of treatment. Glycosuria occurring in persons over 40 years of age need not be a complete bar to insurance, but the rating should be moderately high.

Old pleuritic adhesions, chronic bronchitis, emphysema, and asthma might be accepted if the vital capacity was not much reduced below the normal, but in all such cases the premiums should be high.

A previous history of diseases of the digestive system would have to be considered on the merits of the individual case. The Americans are apt to look upon a person who has had his appendix removed as an improved life, one of the danger signals removed from their risks, but I am somewhat sceptical. Although I do not attach any grave importance to the matter, I am of the opinion that the individual who has been foolish enough to get appendicitis is apt to get other affections of his colon. A small addition will suffice for hernia if an effective truss is worn. Bad teeth, a previous history of gastritis, haematemesis, peritonitis, colitis, gall stones, etc., should only be accepted with a considerable addition to the ordinary premium.

Myxoedema, being a disease very amenable to treatment, may be accepted with a moderate addition, but exophthalmic goitre should have a high rating. Diseases of the kidneys, stricture of the urethra, and renal calculus require careful consideration, and the last two should be deferred until after operation.

Uninsurable Lives.

The following conditions should exclude from insurance unless, perhaps, at something like prohibitive rates: Any acute illness with a high mortality until the danger has passed, all forms of active tuberculous mischief, malignant disease, diabetes in the young, Addison's disease, leucocythaemia, splenic anaemia and lymphadenoma, insanity and all advanced diseases of the nervous system, advanced degenerative lesions of the heart and blood vessels, all diseases of the lungs when the vital capacity is reduced below two-thirds of the normal, chronic alcoholism, etc.

In conclusion, gentlemen, I may say that I look upon life insurance as a sound and safe investment, and I should like to see its beneficent advantages more widely diffused among the community. Such investments will enable many to escape the pitfalls which are laid for the unwary by scheming company promoters and other scoundrels. Insurance, to be successful and give uniformly good results, should be conducted on sound business and scientific lines, and the gambling element should as far as possible be eliminated. You are engaged in a good work, and I wish you all success.

A Second Report

ON

CLINICAL EXPERIENCES WITH SPINAL ANALGESIA:

WITH

A SECOND SERIES OF ONE HUNDRED CASES.

By ARTHUR E. BARKER, F.R.C.S.,

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With no wish on the one hand to advocate or, on the other hand, to disparage this new procedure, I have hopes that the following study may help to settle its proper value in surgery, whether this be small or great.

A report on my first hundred cases has already appeared in this Journal on March 23rd, 1907. To this were added some reflections on the procedure based upon personal experiences and the writings of numerous other observers. Some experimental work of my own in a new direction was also noticed, which, as it had helped towards increasing uniformity of results, it was believed might be of use to others. Next to freedom from risk, *certainty* and *uniformity* of effect and diminution in the frequency of, or entire immunity from, such passing sequelae as headache and sickness are the most important problems which confront us. In the analysis of this second series it will be seen that in this direction much progress has been made as contrasted with the first hundred. As to possible risks, they have been surmounted in both series, and there are no serious untoward effects in either to be reported due to the procedure.* The greater uniformity in the anaesthesia I believe to be due, apart from improved manual skill, to a fuller appreciation of the part which *gravity* may be made to play on the drug injected into the lumbar dural sac, and the limitation of its action as far as possible to particular areas of the spinal canal. The same may be said of the occasional sequelae, vomiting and headache. There appear good grounds for the belief that they are prevented or mitigated by the exclusion of the drug as far or as long as possible from the cranial cavity. How this localization was effected is set out in my first paper, and I have nothing to add to the principles there advocated based on experimental work done early in 1906, and also there recorded. But it may be added that the more I and those gentlemen who have given me their intelligent assistance during operations have seen of the practice based upon them the more we have been convinced of their correctness. But it is only fair to say that these principles of action are diametrically opposed to those laid down by our Continental *confrères*, who are entitled by large experience and research to speak with authority. Dönitz, for instance, who may be regarded as the chief exponent of the views of the Bonn Klinik, which under the leadership of Bier has done more than any other surgical centre hitherto in the investigation of the anatomical and physiological sides of the procedure, has, in a paper which only came into my hands after my first essay was published, expressed views and come to conclusions quite at variance with those which I ventured to put forward in it, and which appear to me now more than ever correct as the result of much larger experience. From most of his anatomical and physiological facts few would dissent. But in the practical conclusions which he draws from them, and in his absolute repudiation of some of the *physical* factors which play a part in the procedure, there is, I think, much to be questioned. This is to be regretted; for in his denial of the effects of gravity, for

* The error of calling this a puncture of the cord is constantly made, and has aroused exaggerated apprehensions. It is merely a puncture of the dura at a point well below the termination of the spinal cord.

instance, he is (speaking with the authority of long study and large experience) directing the attention of operators away from a factor which, properly appreciated, may largely affect the simplification, the success, and the safety of the procedure in many ways.

His position is best stated in his own words.[1] Having referred to the possible errors of technique in the puncture of the lumbar sac, he says:

But even where the injection has been correctly done there are a number of factors which influence the extension upwards of the analgesia. These are (1) the change of position of the patient *subsequently*. (2) The condition of the blood pressure within the skull. (3) The amount of the solvent used with the anaesthetic agent. For the sake of completeness it may be stated also that larger doses of the agent produce higher anaesthesias and that the absolute volume of the *liquor cerebralis* present in the canal must also play a part. *But with these the knowledge of the determining factors is exhausted.* (The italics are my own.)

The positions in which the patient is placed *after* injection have the most important influence upon the extension upwards of the anaesthesia. A comparison of these may be made, taking only three varieties for the sake of brevity.

1. Injection with the patient lying down on the side and remaining horizontal.

2. Injection in the sitting posture, the patient subsequently lying on the back.

3. Injection in the sitting position followed by great elevation of the pelvis.

With the first of these we find the lowest, with second a higher, and with the third the highest extension upwards of the anaesthesia. The cause of the difference is very simple. If the horizontal position is changed into the sitting, the *liquor cerebralis* runs out of the cranial cavity into the spinal canal. If the patient again lies down, the fluid runs back once more into the skull. When the Trendelenburg position is produced, a still larger amount of the cerebro-spinal fluid flows towards the head. Seeing that the analgesic compound injected is carried with the spinal fluid, the extension of the analgesia upwards or downwards is determined by its movement. *It is not* a question of *the action of gravity on the analgesic compound at all*, nor is it one of hypothetic currents.



Fig. 1.—Sitting position for puncture when analgesia of the perineum is required. The line from iliac crest to crest crosses the fourth lumbar spinous process, above which the needle is entered. The patient is then gently laid on his back with the head and neck well raised, all unnecessary movement being avoided. (From a photograph by Dr. E. Worrall.)

Every one of these conclusions I am prepared to traverse on theoretical grounds and by practical demonstration on the living patient *if heavy injection compounds be used.* Again, and to this he attributes much importance:

It is not a question of diffusion. It is simply one of shifting of the balance in the liquor spinalis which takes place at the moment of the change of posture.

In these words Dönitz defines the position of his school beyond all possibility of being misunderstood. His views have had a great currency on the Continent, and may be said to be so far universally accepted in Germany. But it must be remembered that all Bier's followers worked with fluids of low specific gravity (see my first paper of March 23rd, 1907).

Now, without denying that an analgesic compound of low specific gravity injected into the lumbar sac may be carried upwards or downwards to a large extent by the movements of the whole column of cerebro-spinal fluid, we may well ask ourselves whether this is the best and, as Dönitz asserts, the only way in which the agent employed can be made to operate above the point of injection. I venture to think that *it is not the best way*, and have proved, experimentally first and then in clinical practice, that *it is not the only way.* These conclusions are based, therefore, not only on theoretical grounds supported by physical experiments alluded to in my last paper, but on the experience now of a sufficient number of cases to test their accuracy. That the best way of attaining a high anaesthesia is to wash the injected compound upwards in the spinal fluid by elevation of the pelvis with the certainty of its being diffused more or less through the latter as it passed through the nerve roots, and the uncertainty as to the height it will reach to, can hardly be claimed. Moreover, this mixing and diffusion reduces the concentration of the drug, and more of it is required than if a smaller quantity is applied to a given area. But though the compound injected may beyond doubt be shifted with the spinal fluid towards the head by the means which Dönitz advocates, and perhaps with impunity, the question remains, Is there no better way? I venture to maintain that there is, and that wherever it is employed it will lead to greater accuracy in using the method, and to more certainty and uniformity of results with smaller doses of the drugs in vogue than those measures hitherto practised. If this be so, and adequate anaesthesia can be produced *with relatively small doses*, the intrinsic risks from the action of the drug ought to be reduced. What these toxic risks are it is at present impossible to say in figures, but they appear small when the procedure has been in skilled hands. As to possible remote effects on the nervous structures, the evidence so far is negative, as those surgeons have pointed out who have seen large numbers of their cases years after operation. Bier, at all events, who began this new procedure in 1898 and who was one of the first men in Europe upon whom lumbar anaesthesia was practised, has, we are all glad to know, shown the greatest physical and mental vigour ever since, albeit the immediate specific effects of *cocaine* which he then used were unmistakably severe in the shape of sickness and very bad headache lasting for many days. But though there may be certain risks connected with the procedure, as there are with the use of many other fully recognized and widely used drugs, we must remember that spinal analgesia has probably already saved the lives of many patients whose condition at the time of operation would have almost certainly precluded the employment of general anaesthetics. This aspect of the matter seems to be often overlooked. The profession and the public are quite alive to the fact that there are dangers from general anaesthesia both immediate and remote. It may be that in spinal analgesia we have the means of avoiding some of these. But this can only be settled by serious study and experience; to speculate without these in such a matter seems idle.

The means employed in these two series of cases during the past two years to effect the ends in view are to make use of *gravity* (the very force which Dönitz repudiates) acting upon an injection compound of much greater specific weight than that of the liquor spinalis. This has already been demonstrated in my former paper, where the specific gravities of the various compounds employed are worked out in detail.

It now remains to show how our practical experience bears out the above conclusions.

As regards the limitation to the lowest intradural nerve roots, we have found throughout the whole series that when injection was done in the sitting position (Fig. 1), the patient subsequently lying quietly down with the head and shoulders well raised, the analgesia was confined

altogether to the perineum and sometimes the lower limbs. For instance, in cases of piles, while the patient was being operated on in the lithotomy position sensation was absolutely lost in the perineum, while motion remained in the legs and feet in many cases. Here the heavy analgesic compound ran down into the sacral dura and remained about the sacral plexus until absorbed. In this case there could be no question of movement of the whole column of the liquor spinalis upwards until a segmental paralysis was produced. The experiments *in vitro* (vide former paper) prove this, also Fig. 2, A, in text.

Again, we have demonstrated in many cases that if the patient is laid on his side with the head and neck well raised (Fig. 3) *before* injection in the second lumbar space, and is then turned quietly over on his back (Fig. 4), the pelvis remaining in the same relation to the neck as before, analgesia in five minutes reached to the sixth or seventh dorsal roots or higher. This all means simply that the heavy fluid containing the drug flowed from the highest point of the lumbar curve (point of puncture) to the lowest in the lateral or dorsal depression by virtue of its specific gravity (1.0230), the liquor spinalis (specific gravity 1.0070) being in a state of rest (Figs. 3 and 2, c, and Fig. 4).

But if any other proof were needed of the behaviour of our heavy analgesic fluid in the canal, it is furnished by those cases in which we have kept the patient on the side from before the injection to the end of the operation without any change of position at all. One or two cases out of many will suffice. It was necessary to amputate a young man's left leg below the knee. He was laid on the left side with the head well raised on pillows, the left shoulder resting on the table. In this position, which was not altered in the least until he left the table, the injection was done in the second lumbar interspace (Fig. 3). In the course of five or six minutes paralysis of sensation was absolute in the *dependent left* leg. In the right leg motion was never lost at all. The patient was quite comfortable throughout the amputation. In another case of operation for varicose veins of the left thigh and leg, the same was done, and with the like result. Dr. Henry Head, who was present, and was kind enough to test the phenomena of sensation and motion most minutely, stated that the right (upper) thigh and leg remained entirely unaffected both as to sensation and motion. This can only be explained by the flow of our heavy analgesic compound along the roots of the lumbar nerves of the left side without any diffusion. It certainly was not segmental by diffusion, as the functions of the other limb remained unaffected throughout. It would be incorrect, then, to call this medullary anaesthesia, as is sometimes done. But in patients thus injected on the side with the shoulder resting on the table and the head well raised, we have seen a one-sided analgesia extending up to the middle of the thorax passing into a bilateral soon after they have been quietly rolled over on the back without any alteration of the relative levels of head and pelvis (Fig. 4). This simply means, as has been demonstrated *in vitro* (Fig. 2, B and C), that the fluid "pooled" in the most dependent part of the dorsal curve has gravitated across to the roots on the opposite side as soon as the patient lay on the back. A medical man recently operated on lying in the same position on the right side without change became anaesthetized up to the second rib, and was quite comfortable while I explored his right kidney. He stated spontaneously that the effect of the stovaine was rather pleasant after the first prick of the needle, which was like that of an ordinary hypodermic injection.

It is clear, then, that we can make use of the specific gravity of our heavy injection to produce either a high or low anaesthesia, by carefully adjusting the curves of the spine beforehand to suit our purpose, and without subsequently changing its level. We can even produce a one-sided insensibility if we desire, though in those cases mentioned it was only done to test the correctness of our conclusions. But it is also clear that if the drug can be thus confined to one side of the canal by position, it can be excluded from the cranial cavity by keeping the head and neck to or above the level of the lumbar prominence as the patient lies on the back. Moreover, if the drug can thus be applied to a particular region, we ought to be able to do all we want with smaller doses. And our series of cases demonstrated with certainty that we can do so. We have found that with 5 cg. of stovaine or tropacocaine we can, if desired, with the patient on his side, produce an anaesthesia up to the second or third dorsal roots, though this is rarely necessary. Others claim that to do this it is necessary to use 8 cg. of stovaine. This I should strongly deprecate. I have done the most severe abdominal operations with only 5 cg., and only used 6 cg. in a few cases. If the position is carefully studied with a view to making most of the curves of the spine, 5 cg. will carry the analgesia, if need be, to the top of the sternum. It may be that the duration of the analgesia is somewhat longer with 6 cg. than with 5 cg., but the latter figure has been adequate in the last cases of this series.

It is plain, then, that almost every one of Dönitz's postulates given above is traversed by our experiences with an injection compound much heavier than the cerebro-spinal fluid.

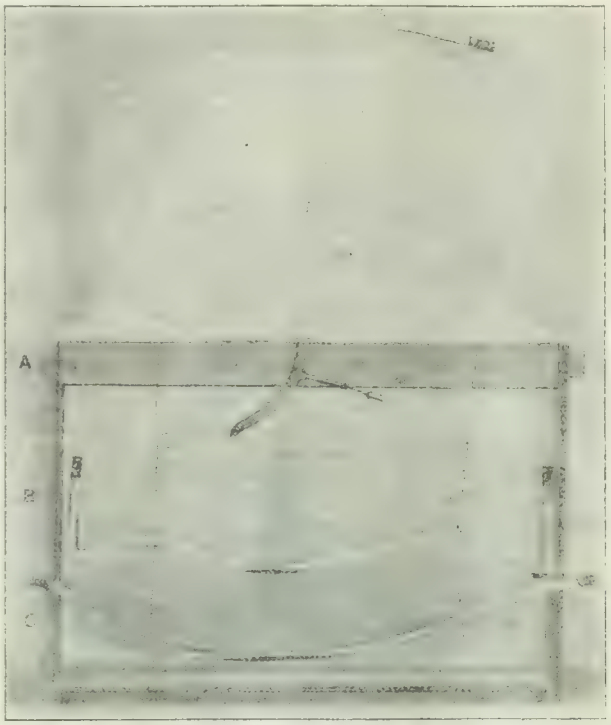


Fig. 2.—Glass tubes accurately bent to curves of spine, and filled with solution of sodium chloride of the same specific gravity (1.0070) as that of the cerebro-spinal fluid. A, Sitting position. Tube curved to the line of the dural sac from occiput to caudal termination (frozen section, Braune). This has been injected with 1 c.cm. of our heavy analgesic compound (specific gravity 1.0230) of the same temperature as the solution in the tube. The injection was previously coloured with 1 per cent methyl violet. In the photograph taken two to three minutes later it is seen to have run down to the sacral sac and to remain unmixed there. In the living subject subsequently laid on the back it would again flow a very little with the cerebro-spinal fluid towards the head. B, The same, quite horizontal. Shows the injection pooled in the dorsal curve two minutes after introduction in the second lumbar space. A little has run down into the sacral sac. Of course the patient can never be injected actually on the back for practical reasons. C, Tube bent to a tracing of the lateral curve with head and pelvis raised before injection, as in Fig 3. The injection is seen collected in a pool about the sixth and seventh dorsal vertebrae two minutes after introduction through the second lumbar interspace. This curve is greater than usual, but represents what increase may be produced in it by inclining the back a little towards the operator when the patient lies on the side as in Fig. 3. (From a photograph by Dr. E. Worral.)

1. We have obtained the *highest* analgesias with the patient lying quietly on the side *before* and after injection.

2. We have found the lowest analgesias after puncture in the sitting position with subsequent change to the lying.

3. We have not found it necessary to elevate into the Trendelenburg position with the head low at all, and believe it unnecessary if not actually dangerous. Further, this position becomes unnecessary for the convenience of operating, as the abdominal walls are so relaxed that manipulation within the peritoneum becomes easy.

4. We have found the best results as to high analgesias

and absence of after-effects where the level of the body has *not been altered after* injection, and consequently the cerebro spinal fluid has been kept in a state of rest.

The only exception to this last conclusion is found in those rare cases of which we have seen a few examples where, particularly among the labouring classes in advanced life, the spinal column is almost rigid and its curves little or not at all altered by position. Here it may be quite exceptionally necessary to elevate the pelvis more or less *after* injection if high analgesia is required. Such abnormalities must be kept in mind.

As to the volume of the injected compound, it has always in these cases been about 1 c.cm., and has never been increased by withdrawing the piston after the syringe was attached to the hollow needle, and so sucking up the cerebro-spinal fluid to mix with the drug before injection. This, too, is contrary to the practice abroad.

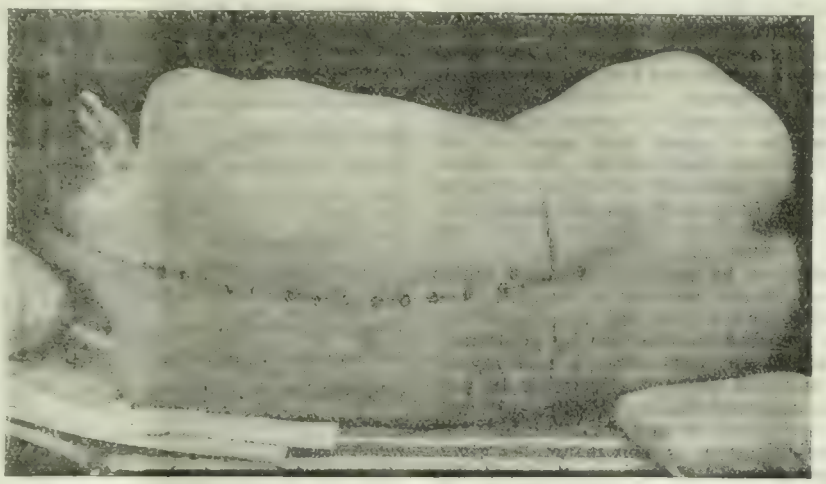


Fig. 3.—Photograph of patient in typical position on side, with head and neck raised and a 1-in. padded board under the trochanter and iliac crest. The line of the iliac crests is given crossing the fourth lumbar spine. The level of the first cervical spine is seen to be well above that at which the injection compound "pools," and will be relatively higher when patient rolls on the back as in Fig. 4. (From a photograph by Dr. E. Worrall.)

TECHNIQUE.

The details of injection have been precisely as in the first paper (q.v.). But the needles there figured have been altered in a way which has greatly affected the comfort of sterilization. The older needles, stylets, and small cannulae were made of steel nickled over. These very soon blackened from constant boiling and lost their polish, while if put by with the slightest damp they corroded and occasionally choked. Last Easter I suggested to the manufacturers to make them all in hard nickel, a suggestion which they eagerly adopted. After some delay, owing to the difficulty in obtaining the necessary seamless tubing drawn out of hard nickel, they sent me a complete set beautifully finished. These have now been in use for some months, and have proved in every way equal to the steel instruments for the purpose in view, and far more convenient, in that they can be boiled any number of times without change. They should always be as sharp as possible. A blunt needle may push the dural sac before it without entering it, and so lead to failure. Even a fairly sharp needle may fail to penetrate if the sac *is slack*. It may push the posterior wall into contact with the anterior, and even penetrate both. This is best avoided by telling the patient to hold his breath and force at the moment of actual puncture of the sac. Such straining, as is well known, renders the dura tense by forcing the cerebro-spinal fluid downwards.

Except for perineal operations, where the sitting position (Fig. 1) was adopted in all, the punctures were made with the patient lying on the affected side with the knees drawn well up on the abdomen, so as to round the back (Fig. 3). The only elevation of the pelvis at all necessary was produced *before the puncture*, in almost all our more recent cases, by laying a fourfold blanket across the table under the trochanteric region, or a 1-inch board, as in Fig. 3, covered with flannel. This slightly increases the lateral curve of the spine, and hastens the gravitation of the injection compound towards the dorsal region (Fig. 2, c). When the patient must be turned over on the back for operation this blanket is simply drawn over anteriorly as he rolls, or he rolls over on the board, which causes least disturbance, and does not alter the relative levels of head and pelvis, though deepening the dorsal depression (Fig. 4). The head and neck are kept carefully raised *at all times*, so that that part of the dural canal shall be *above the level* of the dorsal depression. In the lateral position of the spinal column the dorsal curve can be increased by inclining the transverse axis of the body a little towards the operator (Fig. 3), which is best done by an assistant, just before puncture, raising the uppermost knee from the table and pushing the uppermost shoulder back a little. This, of course, means that the direction of the needle during puncture should not be quite horizontal but inclined a little upwards, that is, at right angles exactly to the transverse axis of the body. To reach the dural sac precisely in the middle line without fail requires a little experience and skill. It is best done by placing the fingers of the left hand at either side of the spinous process above which the puncture is made and so defining the middle line exactly. There have been no failures in this respect in our last 132 cases. There can be no doubt from what we have seen that the injection compound travels along the dural sac *faster* while the patient lies on the side than when on the back. In from one to two minutes there is evidence that the analgesia has reached to its highest point.



Fig. 4.—Photograph of the same patient gently rolled over on the back with the same relations of head, neck, and pelvis. The line across the fourth lumbar spine is seen, and also that the dorsal curve is deeper than the previous lateral curve. (From a photograph by Dr. E. Worrall.)

All change of posture should be avoided after the injection, except the gentle turn over on the back; and when the patient is being removed from the operating table to his bed the lifting should be done so as not to alter the level of the spine. In bed he should lie with the head and shoulders well raised, and avoid all change of posture. These measures have appeared to all who

have seen these cases to have minimized the chances of sickness or headache, and these sequelae when present have been very trifling as a rule.

Usually from 5 to 10 c.cm. cerebro-spinal fluid were withdrawn before injection. The amount may have influenced the sequelae to some extent, but it is difficult to be certain.

The drug employed in this series of 100 cases was stovaine, as in the last. It was carefully prepared for me, as before, by M. Billon, in glass ampoules, of the strength of 5 per cent. stovaine, 5 per cent. glucose in water 80 per cent. The specific gravity of this solution is 1.0230 at 15° C. as against 1.0070 of the cerebro-spinal fluid, and it is therefore very much heavier than the latter.* The average amount usually injected was 5 cg. of stovaine, or 1 c.cm. of the solution. No adrenal derivative of any kind was used. It is impossible to avoid the suspicion, though it is at present incapable of proof, that some of the ill effects reported here and there abroad after spinal analgesia were due to the adrenal principle employed and not to the anaesthetic drug at all (see first paper).

CLINICAL.

The same plan of analysis by specially prepared tables has been followed out in this series as in the last. The various facts concerning the injection and the immediate and later effects were recorded in columns by gentlemen who specially undertook this work after I had myself done the injection, and was engaged afterwards in preparing for, and in the operation itself. These gentlemen also helped in the adjusting of and maintaining the patient's position for injection on the principles given above, which have been proved to be most important. Up to Case 103, the willing services of Mr. Hugh M. Davies had been given to this supervision throughout. His duties then took him to another hospital, and there was some difficulty in securing regular skilled assistants for the next 30 cases, though all who helped did so most cordially. At this point Captain J. H. Houghton, R.A.M.C., who had been attending my demonstrations from the first, and had seen nearly all the previous series and thoroughly grasped the principles explained to him, volunteered to help regularly, and to carry on the table of observations as before. From this time on there were only two inadequate analgesias. One was a private case of gastro-enterostomy on a patient who had begged for spinal analgesia. Here the analgesia was not quite high enough for the operation, owing to an inconvenient operating table. The loss of sensation was otherwise perfect up to the umbilicus. The other was a case of haemorrhoids. The only other inadequate analgesias—four in number—occurred among the first 20 cases after I had lost Mr. Davies's help. This is only noticed to emphasize the fact that the placing of the patient for injection and the maintenance of the proper position afterwards is most important, and that no one with an imperfect knowledge of the principles on which the procedure is based, however willing and well equipped in other respects, will secure the same uniformity of results as one who has familiarized himself with them by observation and practice. As a matter of fact, in the last 80 cases with instructed co-operation there has only been one real failure to produce analgesia. Again, in the first 50 cases my puncture failed to reach the sac twice, in the second 50 once (68th case); in the next 132 cases the sac was reached *in all*, and more easily, so that practice in puncturing tells very obviously. These considerations may ultimately result in the procedure, should it prove really useful and safe, as I believe it to be, drifting into the hands of the professional anaesthetists in large towns just as general anaesthetics have in this country. But this can only come about when they have devoted as much attention to the study of spinal analgesia in all its aspects as they have done during the last sixty years to chloroform, ether, etc. Still, the surgeon can quite well carry out the whole procedure single-handed, though in some cases he would be glad to have the time free for other matters connected with preparation for operation. At present, however, we all desire to know from actual personal observation as much as possible about the phenomena of sensation, and we devote some time to it. Later on, when these are fairly well understood, once an adequate analgesia for our operation is produced, it will be unnecessary, and even undesirable, to direct the patient's attention to his feelings at all.

Summary of Tables.

—	Series 1.	Series 2.	Series 3.	Series 4.	Total.
Strangulated herniae	4	0	1	2	7
R. cure herniae ing. fem. vent.... ...	10	7	16	11	44
Acute appendicitis	2	5	3	3	13
Appendectomy *à froid*	5	3	2	3	13
Gastro-enterostomy	0	0	2	1	3
Other laparotomies	4	5	2	2	13
Kidney operations	0	0	0	1	1
Excis. rectum (Kraske)	0	0	1	0	1
Total abdominal	25	20	27	23	95
Piles (Whitehead) and fistula	7	10	6	9	32
Pubis and genitals	7	6	1	2	16
Dislocation of hip reduction	0	0	0	1	1
Amputation of thigh, leg, foot	1	0	1	1	3
Internal S. cart. and knee	2	2	5	5	14
Wiring fractured patella	0	3	2	2	7
Other operations on lower limb ...	6	8	8	7	29
Failed to puncture dural sac	2	1	0	0	3
	25	30	23	27	105
Total abdominal	25	20	27	23	95
	50	50	50	50	200
Genl. anaesthetic required	14	0	6	0	

In only one case where the operation was begun under spinal analgesia was it necessary to give a few drops of chloroform for its completion. A man had nearly bled to death from gastric ulcer and was so very exhausted that the physician in charge asked me to employ this method in preference to general anaesthesia for the proposed gastro-enterostomy. He was perfectly comfortable during the operation but began to feel the suturing of the abdominal wound some fifty minutes from its commencement. A few drops of chloroform were given, and the stitching was finished in a few minutes. This patient recovered perfectly and had no vomiting and only a mere trace of headache. Taking the gross failures to effect adequate analgesia by this procedure, a marked improvement is noticed in the last 100 as contrasted with the first. In the first 100 there were 14 failures from all causes, in the last only 6. One of these merely came short in not reaching high enough. In the last 80 cases there have been no misses of any kind. As to dangerous or fatal sequelae of the injection, there have been none in either series. All the 100 cases of the last have left their bed for home well, except one. This patient, a woman, was admitted into hospital for intestinal obstruction of about one week's standing. She had had foul vomiting for days, and bronchopneumonia. The analgesia was good, and passed off soon after the operation. The latter consisted in opening the abdomen and dividing a tight band of fibrous tissue strangulating two coils of intestine. She recovered from the immediate effects of the operation, but failed the next morning, and died during the day. At the necropsy Dr. Thiele, the hospital pathologist, found extensive ulceration of the mucous membrane at the seat of strangulation, and the bowel much diseased for 2 ft. above it. There was extensive and very intense bronchopneumonia of several days' standing, and large infarcts from pulmonary embolism. Heart and kidneys were normal to the eye.

The number of abdominal operations among this second hundred cases was 50, in only 2 of which, including one gastro-enterostomy, was the loss of sensation not quite high enough for the operation. Among them there were no cases

* For the specific gravity of the various solutions which have been used on the Continent, see first paper of March 23rd, 1907.

of post-operative lung disease, though many of them were old and others very obese. In 3 the operation was done on pregnant women with no ill effect. One of these was in the seventh month and had a very bad attack of suppurative appendicitis. Her condition during the necessary operation, which was severe, was remarkable for its particular excellence, and her recovery was uninterrupted after the symptoms of peritonitis present at the time had subsided. She is now approaching her confinement and looking remarkably well.

In the above summary of our first 200 cases it will be seen that there were 95 abdominal operations; 25 of these belong to our first 50 cases, with 9 failures to produce adequate analgesia; 20 belong to the second 50, with no failures; 27 to the third 50, with 1 failure; and 23 to the fourth 50, with 1 failure. In other words, in the last 70 abdominal sections there have been 2 failures to produce adequate analgesia. But looked at in another way there was only 1 complete failure in 70 abdominal cases, as one of the two mentioned, the gastro enterostomy, had lost sensation absolutely up to the umbilicus and only wanted 3 in. more to have met the needs of the operation. Such a fault would hardly occur now. In any case this is a very marked improvement on our first series, where experience was lacking, especially as much higher operations were undertaken of late than were attempted in the first series.

In reference to the headaches mentioned above, it is impossible, owing to the unavoidable irregularity in keeping the tables during the first part of our third fifty, to state their exact frequency in figures. It may be said, however, that they were often present during the night following the operation, but rarely the next or following days. It is proverbially difficult to estimate the degree of subjective phenomena, but so much may be stated, that they never appear to have reached the extreme severity which has been reported by some. If present at all they were usually slight, and often would not have been mentioned if not carefully inquired after. Slight sickness was often seen, but in only two or three cases to any disagreeable extent. In spite of these undoubted blemishes on the procedure, so far noted pretty often patients who have had general anaesthesia as well as spinal unhesitatingly gave preference to the latter. I cannot but think from what has been seen that they are avoidable, and will in the future be fewer and of even less moment than they are now.

The faintness, nausea, or actual sickness sometimes seen at the commencement of the anaesthesia may possibly be explained by the rapid loss of contractile power in the abdominal muscles as the drug takes effect. The result of this would be to allow more blood than usual to accumulate in the visceral veins and to cause more or less sudden anaemia of the brain. If this be so, pressure on the abdomen with the hands or perhaps gentle compression of the veins of the neck might relieve the condition at once. This I intend to try if the opportunity arises. As a rule, however, such faintness and sickness is rapidly over without any treatment.

Since the above was written some months ago, and while waiting to round off this series with 100 cases, my attention has been drawn to a paper[2] by Professor Krönig of Freiburg (dated October, 1907). In this he claims to have introduced a new principle into lumbar analgesia by making use of *gravity* acting on a heavy injection compound. He bases his conclusions on some experiments very much like my own of a year earlier, though perhaps not so conclusive.[3] As he makes no reference to this new method of procedure in the last edition of his own work on Gynaecology, where he gives full details of the method of lumbar puncture employed by him, and as the date of this edition is September, 1906, it is fair to assume that his experiments and experience are recent. They would consequently be more than a year later than my own experiments and demonstrations at University College Hospital. No allusion is, however, made to my paper (dated March, 1907) cited above, which is the more remarkable as it was reviewed in the *Centraiblatt f. Chirurgie*, July 20th, 1907, and was in the "reprint" form in the hands of numerous colleagues of Professor Krönig in April last, besides being translated verbatim into one of the French scientific journals. Attention is pointedly called to this oversight in the *Centralblatt f. Chirurgie* in its first issue for this year (1908). Professor Krönig's paper is, however, welcome now as confirming my own work of a year and a half earlier in every respect and as laying renewed stress upon principles then established by study and proved in practical experience in operating. These principles give, as he too points out, a more certain and safer basis for carrying out lumbar analgesia than those in vogue hitherto. The deduction seems to follow naturally that the choice between stovaine, alypin, novocain and tropacocaine has less to say to success and safety than the mode in which they are employed. Nevertheless I propose in the next series to make use of tropacocaine solutions of the same strength with the same amount of glucose and under as nearly as possible the same conditions with a view to contrasting the results with those obtained with stovaine.

It is impossible to say at present what position lumbar anaesthesia will take in surgery some years hence. One thing, however, is certain—that is, that it claims a very close study, and that those who employ it casually without this incur a grave responsibility. It is not a mere question of injecting a drug at a given point and awaiting a general effect. Many factors have to be considered in the production of a satisfactory condition for operation and blameless recovery, and it is to be hoped that these will be earnestly analysed by competent observers before the procedure is either fully accepted or abandoned.

Major Spencer and Captain Houghton, who had become familiar with the procedure from constant attendance on the demonstrations of it at University College Hospital referred to, have recently introduced it into the Queen Alexandra Military Hospital at Millbank, and have had excellent results in over 50 cases.[4]

References.

[1] Die Höhenausdehnung der Spinal Analgesie, *Münch. med. Woch.*, November 27th, 1906. [2] Ibid., October 1st 1907. [3] British Medical Journal, March 23rd, 1907. [4] *Journal of Royal Army Medical Corps*, November 19th, 1907, p. 476.

Note by Dr. Henry Head, F.R.S.

Through the kindness of Mr. Barker I have been enabled to study the form and distribution assumed by the loss of sensation which follows the injection of stovaine into the spinal canal. I need scarcely say that the conditions which precede and follow a surgical operation are unfavourable for any complete examination of sensation. It is therefore impossible to make a complete statement as to the nature of this anaesthesia at present.

But certain points emerge even at the present stage. Sensibility to touch and pressure disappear later, and in incomplete cases are less widely lost than sensibility to pain, heat, and cold. The part becomes insensitive to cotton-wool before pressure ceases to be appreciated. With the loss of sensation to pressure the patient loses the power of recognizing the position into which his limbs are placed passively. This is one of the last forms of sensation to be abolished. As far as I have been able to see at present, the pain of pressure is not abolished unless the tactile sensations of pressure are diminished or lost.

One of the most interesting facts brought out by the cases of unilateral anaesthesia is the complete abolition of sensation and motion in one leg without interference with the motor or sensory function of the opposite limb. From this it is obvious that the afferent mechanism attacked by the drug is concerned with the sensory impulses before they have crossed the spinal cord. Stovaine does not attack the long afferent columns, at any rate at first. It probably acts on the motor and sensory fibres in the spinal canal or just after they have entered the spinal cord.

The upper level of the loss of sensation seems to resemble that found in affections of the roots rather than that produced by lesions of the spinal cord. The borders correspond roughly to root segments and cutaneous sensibility to pain, to heat, and to cold is usually lost to a higher level than the sensations produced by touch and by pressure.

An International University.—The King of the Belgians is said to have some idea of founding an international university at Tervueren, in Belgium, to which students of all nations would be admitted, and where scientific men of world-wide celebrity would be invited to lecture. An amalgamation of the international scientific societies and museums in Belgium might, it is thought, form the nucleus of an international university.

An Address
ON
INHERITED SYPHILIS.

DELIVERED IN OPENING A DISCUSSION BEFORE THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

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Of the three terms applied to this form of the disease—(1) Congenital, (2) Hereditary, (3) Inherited—I greatly prefer the third. *Congenital*, besides being objectionable in form and suggestion, is not universally true; *Hereditary* suggests something that may be passed on indefinitely, of which there is no proof; whilst *Inherited* implies only something derived from the parents which is detachable, like a fortune or misfortune, and this more correctly expresses the passing on of the spirochaetes to the offspring.

THE MICRO-ORGANISM.

The cause of syphilis, whether inherited or acquired, is the presence in the blood and tissues of the same organism, which can be demonstrated in the various secondary lesions, in the blood, and in the internal organs.

The *Spirochaeta pallida* is a protozoon of spiral form from 4 to 20 μ in length (about half to three times the diameter of a blood corpuscle) and $\frac{1}{4}$ μ in diameter, with a flagellum at either extremity. It is very motile, and its motility is of three kinds—a lashing, corkscrew, and a to-and-fro movement. It stains pale pink with Giemsa's fluid; whilst the coarser, highly-refracting *Spirochaeta refringens*, with which it is often associated, stains dark purple.

THE MODE OF TRANSMISSION.

The discovery of the cause of the disease necessitates the rearrangement of our former views as to its transmission. Those who remember the revolution in thought caused by the discovery of the tubercle bacillus—how that the long-taught diathesis gradually receded into the background and the danger of contagion by inter-communication in houses and families grew into importance—will be prepared for some change of idea in reference to syphilis.

To my mind inheritance from the father alone is now put entirely out of court, and it follows that infection of a mother by her syphilitic fetus can never occur. For how is it possible that a spirochaete which is highly motile and whose length averages rather more than the diameter of a blood corpuscle can penetrate an ovum $\frac{1}{25}\frac{1}{0}$th of an inch in diameter and multiply without destroying it. I lay it down as an axiom, to be demolished if you will by discussion, *that inheritance is invariably through the syphilized mother.* This is supported by Colles's law that a syphilitic infant cannot cause a chancre on the nipple of its mother when suckling.

It would seem that when virulent the spirochaetes penetrate the chorion or placenta and occasion miscarriages, macerated fetuses, or premature births; but when the virus is attenuated by time or treatment the placenta forms a complete protection to the developing fetus, and it is the separation of the placenta at birth which allows the infection to take place through the umbilical vein. Hence the regularity of the secondary exanthematous stage from a fortnight to three months after birth. *In these cases the separation of the placenta is the first stage and corresponds to the chancre of acquired syphilis.*

COLLES'S LAW.

I alluded to Colles's law (which was first stated in 1837) in support of the argument that the woman was always first syphilized before the embryo or infant. The law is that a woman giving birth to a syphilitic infant cannot be inoculated with syphilis by the infant when she is suckling it; in other words, though the mother may have shown no definite signs of syphilis, she is immune; whereas the syphilitic infant put to the breast of a healthy woman may inoculate her nipple and convey syphilis to her.

Hitherto Colles's law has been used as an argument in support of the view that the mother may get a mild form of syphilis from her syphilitic fetus, whose syphilis is supposed to be derived entirely from the father. But the law of immunity will remain equally true if it be supposed that the mother is first inoculated by the father, a large dose of the protozoon causing an obvious eruptive syphilis, and a small dose a syphilis which misses the eruptive stage.

Syphilis in a man is generally admitted to be capable of transmission to a succeeding generation for a much shorter time than syphilis in a woman, and this supports the view I have stated, namely, that for transmission, it is necessary that the woman be first infected.

TRANSMISSION BY MILK.

The question whether the milk of a syphilitic female may infect a healthy infant at the breast has been discussed for two and a half centuries, since Ambroise Paré, in the seventeenth century, quaintly observed:

> Infants suckled by syphilitic nurses are infected by them, seeing that the milk is nothing but whitened blood, which, being infected by the virus, the child fed with it imbibes the same qualities.

Hunter, founding his argument on ineffectual attempts to inoculate the blood of a syphilitic person, came to the conclusion that not only the blood, but every secretion derived from it, such as milk, saliva, perspiration, etc., could not convey the disease. But his experiments were inconclusive and his deductions incorrect. Pellizzari succeeded in inoculating the blood of a syphilitic person, and, if Voss's experiment is to be trusted, milk has been directly inoculated also.

I showed a remarkable case bearing on this subject before the Royal Medical and Chirurgical Society in 1881. A woman, aged 30, gave birth to a healthy child on December 11th, which she suckled. . . . The following Easter her husband inoculated her with syphilis, but she continued to suckle the child. She consulted me three months later when suffering from severe secondaries, squamous eruption, sore throat, condyloma and loss of hair, but the child showed no sign of infection. The mother was then treated with small doses of mercury. She and the child were shown when the latter was 10 months old. He had continued to suckle, and remained plump and in perfect health, though the mother still had patches of circinated squamous syphilide on her arms. During the two years the mother remained under my care for treatment the child showed no signs of inherited syphilis.

The importance of this case rests on the fact that the mother had suckled her child for three months after her infection before any treatment was commenced, so that it cannot be argued that the infant was taking the antidote in the mother's milk with the poison, and so escaped a source of possible inoculation; but it proves that the milk of a syphilitic woman, when received into the alimentary tract of an infant, need not convey any infection to the child.

TRANSMISSION BY SEMEN.

It is obvious, as the greater cannot be included in the less, that a spirochaete cannot be carried in a spermatozoon; but this does not exclude the possibility of the spirochaetes being conveyed by the fluid parts of the semen.

The early experiments of inoculation by Mireur failed, but if the recent results obtained by Finger on monkeys be correct the semen of syphilitic men is inoculable. It seems almost necessary that it should be so to account for the cases of inherited syphilis conveyed after the healing of the chancre. If the presence of the spirochaetes can be with certainty demonstrated in the semen of men suffering from recent syphilis much doubt would disappear; and, in the cases where no chancre could be traced in the woman, the probability of the infection being carried through the uterus, after the disintegration of its lining membrane at any menstrual period, would be apparent.

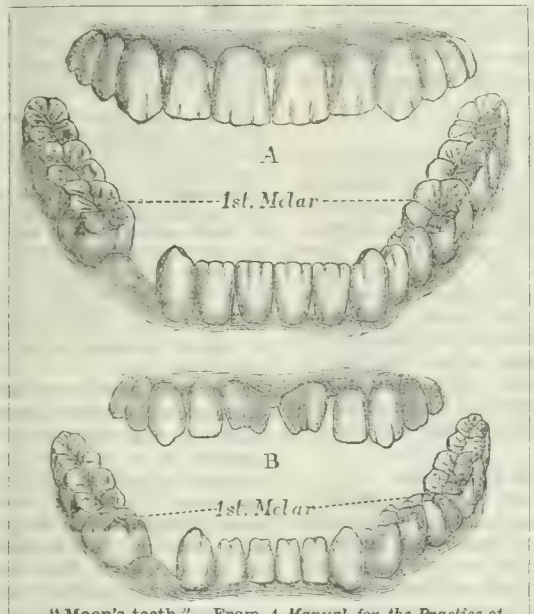
TRANSMISSION TO THE THIRD GENERATION.

Another question much open to discussion is whether syphilis inherited is capable of transmission to the third generation. If the tertiary symptoms, occurring ten or twenty years after inoculation, can be proved to be due to renewed activity of the spirochaetes in certain situations,

there seems to be a fair possibility of their being carried to a third generation. But the question is beset with difficulties, since you must prove the sexual purity of two persons up to the time of maturity, and these are generally persons in whom a tendency to vice is also hereditary, for it is known that a person the subject of inherited syphilis is not immune from reinoculation after a certain period.

Hutchinson mentions 8 cases that have come under his observation of persons who presented signs of inherited syphilis, and who married, but whose offspring showed no evidence of the disease. On the other hand, Edmond Fournier collected 116 cases, 59 of which he thought were to be relied upon as showing transmission to the third generation; and R. W. Taylor has published others. Dr. D. M. Hutton brought a case before this Society, which is published in the first volume of our Reports, and is there criticized by Dr. Ashby and others.

My own experience is limited to one case, but it is of unusual importance, as both parents showed signs of inherited syphilis which were obvious and unmistakable. A blind man attended a school for the blind, where he met a blind woman for whom he developed a feeling of affection. They were both blind from interstitial corneo-iritis, and they both presented the typical physiognomy of the inherited disease—notched teeth and scars around the mouth. They married, and at the time the man came under my care their first child was about 2 months old. The blind wife was brought up to visit her husband, and, seeing she was marked by the same disease, I sent for the infant, which presented no evidence whatever of syphilis, nor did it develop any symptom of inherited disease during the months I was able to keep it under observation. This case, in which there should have been double inheritance, showed, so long as I was able to watch it, complete immunity.



"Moon's teeth." From *A Manual for the Practice of Surgery*, by Thomas Bryant, F.R.C.S. Fourth Edition. Vol. i. (By permission of Messrs. J. and A. Churchill.)

The Infant Mortality.

There is probably no disease responsible for such an enormous destruction of human life in its earlier stages as that caused by syphilitic parentage. But my experience shows that this mortality is greatest in those families where both parents have suffered from chancre syphilis and obvious secondaries. The severity of the infection and ineffective treatment, or lack of treatment, are the two factors which determine the mortality. I give two illustrations.

Case I.

E. S. had been married eleven years, and suffered three months after marriage from rash and sore throat. The first child was stillborn twelve months after marriage, and was miscarried at the sixth month. The second child lived (the mother being at this time under treatment), but had severe snuffles and rash, is very delicate and has recurrent sores and eruptions. The third, fourth, fifth, sixth, seventh, eighth, and ninth children were all born at full time, but all died, from a few minutes to within two or three months of birth. The tenth child was brought up for treatment suffering severely from snuffles, stomatitis, and coppery shiny eruption. Thus two weak children only were living out of ten.

Case II.

R. C., three weeks after marriage, suffered from sores on vulva followed by rash and sore throat, for which she had no prolonged treatment; a pale, cachectic-looking woman. The first child, ten months after marriage, was stillborn at the seventh month. The second child was prematurely born at the eighth month, and lived a day. The third child, born at full time, came out a fortnight later in large brown spots and had snuffles, and was taken to Guy's Hospital and treated by blue ointment rubbed in over the abdomen. She still lives, and at the age of 11 shows no notching of incisors or evidence of her inheritance. The fourth child did not come out in an eruption till 5 weeks old. He died at 6 weeks. The fifth child, a boy, came out in an eruption at 5 weeks, and died at 7 weeks. The sixth child was stillborn. The seventh child, prematurely born at the eighth month with an eruption upon her, survived a day. The eighth child, a girl, had a rash soon after birth, and died on the eighth day. The ninth, also a girl, was born healthy, but an eruption came out at the third week. She was treated, but died at 11 weeks. The tenth child, a fine boy at birth, came out in an eruption three weeks after birth, and was brought up for treatment. He was suffering from symmetrical squamous syphilide of legs, feet, arms, and ears, little on body, ulceration of mouth and buttocks, and severe snuffles. Again two living out of ten.

The Secondary Stage.

The trite definition that syphilis is a "fever diluted by time," given by the late Dr. Moxon, is applicable to the inherited as well as to the acquired disease.

I argued that the primary stage is the separation of the placenta and the infection of the infant through the umbilical vein. The secondary or exanthematous stage commences from the second week to as late as the third month. It is characterized by eruptions, which may vary from slight brown macular syphilide to pompholyx, by snuffles, stomatitis, condyloma, wrinkled skin and wasting, enlargement of the spleen and liver. Then follow certain changes in the bones; in severe cases perhaps epiphysitis, giving rise to pseudo-paralysis, Parrot's nodes, causing natiform skull and square forehead, craniotabes, and bent bones.

It cannot be too strongly insisted on that the moist eruptions and ulcerations about the mouth and anus, as well as the vesicular skin affections, are charged with the spirochaetes and highly contagious.

From the second to the sixth year there is commonly a rest in the symptoms that are regarded as characteristic, but the tibiae may become thickened from periostitis, or a joint may become swollen and painful, and resolve under mercurial treatment.

But now the characteristic physiognomy has been gradually formed—the flattened nose, the square forehead, the radiating lines from the mouth, the stunted figure and pallid face; and then, during the second dentition, we look for the three signs pointed out by our great observer, Jonathan Hutchinson — the notched incisor teeth, interstitial corneitis, and syphilitic deafness. Associated with such signs, or occasionally independent of them, gummatous destruction of the soft or hard palate may occur, and ulcerations of the skin and cellular tissue. Destruction of the nasal bones, caries of the forehead and skull, of the long bones, and dactylitis may take place as the result of the inherited disease.

The teeth Mr. J. Hutchinson described as so characteristic of the disease are the notched and narrowed incisors, especially the central incisors of the upper jaw. This defect is brought about by arrest in development of the central columella, of which each incisor has three. But I wish to draw special attention to the characteristic change brought about by the disease in the first molars described by the late Mr. Henry Moon many years ago, since this change has recently been rediscovered both in America and on the Continent. The diagram which I show is taken from the fourth edition of Bryant's *Surgery*, published in 1884, wherein the article on teeth is written by Mr. Moon. He figures and describes the syphilitic first molar as "reduced in size and *dome* shaped through the dwarfing of the central tubercle of each cusp." He also contrasts these teeth with mercurial teeth and syphilitic-mercurial teeth. The change in the molar is of some clinical importance, since occasionally it is characteristic when the incisors are normal.

Eyes and Ears.

The eyes may become affected at an early stage by a choroido-retinitis, which may leave permanent changes easily recognized by ophthalmoscopic examination; and iritis, though rare, may occur during the eruptive stage. Interstitial keratitis is most frequent between the ages of 6 and 16, but may occur much later, and rarely earlier. It is highly characteristic of the inherited disease.

Like the eyes, the ears are attacked by different affections in the early and late stages. During the eruptive stage, otitis media may commence as an extension from the inflammation of the naso-pharynx, whilst during the second dentition a progressive deafness of labyrinthine origin may cause complete loss of hearing.

Inherited Syphilis attacking the Viscera.

Much work has been done in demonstrating the disease in the various viscera, not one of which appears to be exempt, and there is probably a large field still open here for further investigation. Enlarged spleen and liver associated with rickets may be proved almost invariably to be of syphilitic origin.

The disease attacks the various organs in two forms: as a small cell infiltration usually following the course of the vessels, which in its development and decline may lead to fibrosis and consequent atrophy; and as a gummatous tumour, which is less common.

When the inherited disease attacks both testicles or both ovaries at an early age, and brings about their fibrosis and atrophy, a condition known as "infantilism" is produced at a period when the sexual characteristics should be pronounced.

The Nervous System.

Much difference of opinion exists as to the frequency of nervous disease dependent on inherited syphilis. Whilst some are inclined to attribute every conceivable weakness, paralysis, or mental defect to this disease, others regard the nervous lesions dependent on it as infrequent. A certain proportion of epileptics, deaf-mutes, and idiots, but not a large percentage, show signs of inherited syphilis. On the other hand, syphilitic endarteritis of cerebral vessels, gummata on nerves, and sclerosis of brain and spinal cord have been observed by competent observers. One of the most interesting observations of late years is that some cases of hydrocephalus are dependent on inherited syphilis, and are curable by mercury.

The Need of Criticism in Diagnosis.

In conclusion, I wish to insist on the importance of weighing carefully all the evidence before determining that a particular affection is due to inherited syphilis. Every deformity, from dislocated hip to cleft palate, all defects such as hernia, infantile paralysis of various kinds, and even naevi, have been described by various writers as dependent on inherited syphilis, and as if better to cover the anomalies the term "para-syphilis" has been invented to add to the confusion.

I need scarcely waste time in combating such crude generalizations as that "all rickets takes origin in syphilis," when any puppy taken from a litter and deprived of proper food and exercise will certainly develop this disease.

Equally crude statements have been made as to other diseases. We do not deny that persons whose constitutions have been weakened by disease are liable to produce degenerates in succeeding generations; but in future the most certain test of the disease being syphilis will be the presence of the *Spirochaeta pallida* in the part affected. This organism has an extraordinary persistency, producing local symptoms after lengthened periods, but happily we have in mercury and the iodides drugs which control its development and bring about its destruction.

The Temperance Summer School, organized by the Department of Scientific Instruction and Information (United Kingdom Band of Hope Union), will be held at Ardenconnel on the Garelochs, near Helensburg, Scotland, from June 20th to July 3rd. The objects of the School are, first, to give some up-to-date and definite teaching to meet the educational needs of the day; secondly, to foster a spirit of comradeship and mutual help amongst temperance friends and workers; and, thirdly, to secure an enjoyable holiday trip. Full particulars as to terms, etc., will be sent on application to the Director, Walter N. Edwards, 60, Old Bailey, London, E.C.

THE MEDICAL INSPECTOR OF SCHOOLS AS A PSYCHIATRIST.

By T. S. CLOUSTON, M.D., LL.D.,

Lecturer on Mental Diseases, Edinburgh University.

The Medical Inspector of Schools has come on us so suddenly at the last that it is very doubtful whether his vast potentiality and the significance of his work are at all realised by the mass of our profession. It seems to me that next to the medical officer of health he may turn out to be the greatest health boon which Parliament has bestowed on the people of this country. One sees that many questions will have to be solved as to the right sort of man for the place, as to how he ought to be educated, what he ought to know, to what things he ought to direct special attention, and in what special relationship he is to stand to the School Board, the Education Department, and the profession of medicine. It will be of enormous importance that a general public interest should be taken in him and his work. That of itself would be an education to the general public. I hope his reports will always be published in the newspapers and that they will be intelligently discussed there. Of the hundreds of medical men who will be appointed inspectors, most, we trust, will be wise men, but it is certain that some will be foolish and many will be faddists. The principle laid down by the Board of Education under the head of "Character and Degree of Medical Inspection" seems sound enough. Few medical men will object to the following paragraph:

> From what has been said it will be clear that the fundamental principles of Section 13 of the new Act is the medical examination and supervision, not only of children known or suspected to be weakly or ailing, but of all children in the elementary schools, with a view to adapting and modifying the system of education to the needs and capacities of the children, securing the early detection of unsuspected defects, checking incipient maladies at their onset, and furnishing the facts which will guide the education authorities in relation to physical and mental development during school life. . . . The training of the mental faculties must not be divorced from physical culture and personal hygiene. It is these primary requirements which must first receive attention.

To some of us who have been members of the medical profession for many years, and who have witnessed the governmental ignorance and public indifference of a quarter of a century ago in regard to medical views of education, such a paragraph is both surprising and most welcome. It should be the source of the profoundest thankfulness to all doctors and to all those of the public who believe in the great mission of modern medicine. In an article in the *Times* of November 25th, 1907, the following paragraph, which may be taken as representing the views of the intelligent layman, occurs:

> The general principle underlying the memorandum is that the actual work of school inspection must be carried out in intimate conjunction with the existing public health authorities and under the thorough supervision in each locality of the medical officer of health, but subject to the control of the medical department of the Board of Education instead of to that of the corresponding department of the Local Government Board. The result aimed at is clearly the harmonious co-operation of educational with sanitary authorities, with security against injurious neglect of the essential requirements of either. In other words, school hygiene is to be treated as an integral portion of the sanitary administration of the country, but still as a branch of that administration *for which the aid of special knowledge is required.*

These references to "mental development," to the "mental faculties," and to the requirement of "special knowledge" in the school inspector brings me to the object of this paper. General cleanliness, body-nutrition, the eyes, the ears, the throat, the chest, and the teeth will all have to engage the attention of the school inspector. But the dominating organ of all—the brain—may stand some chance of being neglected, though it is the organ which is to be chiefly educated, and which should be most of all in evidence.

Referring to public health as it has hitherto been studied, we may look in vain in any of its textbooks for any reference to the mental health of the community as requiring attention or preventive measures. It may well be that if the attention of the future medical inspector of schools is not strongly directed to the brain of the child, he may be in danger of neglecting it in his investigations

into the condition of school children, as mental hygiene has been neglected in our public health practice. I would make an earnest appeal to our medical officers of health and to the medical inspectors of schools who are to be, that, although the mental functions of the human brain in health and disease are the most subtle of all the studies that he may undertake, not to neglect them. I do not claim for a moment that the data to be used by the school inspector or the medical officer of health in regard to mental facts are anything like as exact and easily applicable as the data of chemistry and bacteriology, but I do maintain that there are relevant facts and data in existence which could be used for the public benefit. I would go the length of saying that mental medicine and mental hygiene are of such infinite importance to the well-being of our community, young and old, that they should be made an essential part of the department of public health and of school inspection. Does it seem unreasonable that the medical officer of health should study the mental effects of environment on our young population? Should he not take into his consideration the social customs of the community as affecting their mental condition? When he has to do with the tramp, for instance, the clothes, the dirt, and the carrying of infection are now chiefly investigated, but these are secondary as compared with his mental condition, which is the root of the real danger to society. When the school inspector comes to know his work, after he has examined the things easy of access, such as the eyes and the chest, would it be too much to expect that he should psychologically investigate the brain action of the school children? I admit that he would have to make troublesome and often difficult excursions into the heredity, the habits, and the home life of many of the children, and especially into those of them with small or ill-shaped heads, deformed ears, too closely-set eyes, unsymmetrical features, and high palates—in short, the stigmata of nervous and mental degeneration. A study of Dr. Warner's investigations into those signs of degeneration in London school children would form a sound basis of such studies. I admit that to examine, let us say, the power of attention and the faculty of imitation in a number of children would take time, and would involve special knowledge, but I cannot imagine anything more illuminating to the inspector or more useful to the school teacher than such an examination thoroughly made.

It is difficult to lay down definite rules universally applicable for promoting mental hygiene in the education of children, and for detecting the indications which should point to its special necessity in certain of them. Such hygiene cannot be dissociated from the healthy performance of the functions of the whole body. The solidarity of body and mind must be the primary axiom for any one who undertakes such work. The existence of an obviously bad heredity, especially of a bad nervous and mental heredity, must first be taken into account. The environment of the child at home in a large sense and its effects must next be well considered. A child out of a poor home, with parents of rough manners and vicious habits, tends against mental hygiene, even if there is the best original constitution. Deficiency of food and warmth go against brain and mental development at that age. The want of moral and religious training are strong factors against that mental inhibition which is at the basis of all such hygiene. Idiosyncrasies of mental constitution, deficient power of attention, lethargy, want of the imitative and play faculties, too great impulsiveness of action by the brain, morbid fearfulness, morbid unthinking impulsiveness, exaggerated reactive tendencies, absence of the moral sense, are all matters of the very highest importance when considering the mental hygiene of the child at school. A grasp of at least the principles of modern psychology and sociology should be required of every medical school inspector.

The bodily stigmata of degeneration, to which I have alluded, may be present without much actual mental enfeeblement or mental perversity in some cases. They often indicate mental potentialities and risks rather than mental actualities. The instinctive power of reverence, and the intense desire to please are faculties in children the lack of which indicates some morbidness, and means that they will be bad to teach. A child that is a cynic or a critic is in an unhealthy condition. I was lately much impressed with the intense enthusiasm of the mass of 150 boys and 150 girls of the lowest class in Edinburgh excited by an enthusiast in music with a special method of teaching it, who seemed to hold most of them in the hollow of his hand. They did not question his methods nor doubt his theories, though he told them that they would be fine men and women, good patriots, and successful in all their games if they followed his musical methods. The *non sequitur* did not occur to any of them. When I mention that among the 150 boys there were only two who wore linen collars, the social class from which they came will be understood. Among the 300 there were perhaps from 30 to 50 who were not carried away by this enthusiast, and those I put down as the helpless, the "ne'er do weels," and the criminals of the future. A normal child's brain should react quickly to almost every influence in heaven and earth, good or bad, in some degree. At that age the impressions that are every day recorded and put by for future use may be counted by the hundred. Those impressions should be rightly made at the time, and most of them should be so arranged that they form right associations with each other. They are not like so many peas in a bag, unconnected and independent. They should be like the bricks in a scientifically constructed house, every one having a relation to every other and its ultimate object. The mental effects of outside influences and impressions on the child's brain—and by outside I mean those from the rest of the body as well as from the environment—must not only be taken account of, but the constant effect of the brain reaction from those impressions on the nutrition of the body and on the functions of every individual organ should ever be kept in mind.

The modern science of child study and our knowledge of the psychology of the child as it is related to the psychology of the fully developed man and woman are as yet almost in their infancy, but the students of this branch of science are now numerous and keen, and they are building up a mass of facts. Their conclusions, so far as they go, cannot be disregarded by any competent school inspector. Every year they widen in their scope and become more definite.

One of the most difficult problems of modern preventive medicine—the eradication and mitigation of bad hereditary qualities through the right application of antagonistic influences and environments—should be greatly helped by the new medical school inspector. Such evil hereditary influences mostly show themselves in the growth and developmental periods, and it stands to reason that it is during those periods also that they can be antagonized, if this be possible. It must never be forgotten that heredity, even of the worst kind, is at some period of the life of the child chiefly a potentiality. Two influences largely tend to bring it into actuality: the stress of the natural processes of development from a lower into a higher condition of brain and mental action, and the constant efforts of the organism to adapt itself to its environments, particularly those environments which are antagonistic to health. The highest psychological faculty is that of inhibition or control. The combined studies and efforts of the parents, the teacher, the school inspector, and the psychologist will be needed to teach us in the first place precisely the laws through which inhibition is developed in the young brain, and the principles which should guide us in educating that great faculty on right lines. The man who could teach us the way to secure only a very little improvement in the self-control of mankind would bring us nearer to a moral and social Utopia. It is quite certain that the faculty of control has an absolute relationship to its brain basis. Any attempt unduly to force it before that basis exists usually has the opposite effect to that which is aimed at. On the other hand, the absence of attempt to educate or develop control tends towards an ultimately atrophied conscience, a poor moral sense, and an unsuccessful conduct of life.

The medical school inspector of the future will need the help of most of the specialities of medicine. He will especially require psychiatric help, for the reasons I have stated. Most of us psychiatrists are already officials receiving public money and bound to do what we can for the public who pays us. We are ready to give him the help we can. We publish annually reports which I fear do not effect as much for the mental hygiene of the community as they might. It would help us to be more systematic and to be

less desultory in our observations if we knew that we were a part of a great organized system for the education and for the mental and bodily health of the community. The master mind will come in due time which will be able to generalize on our isolated facts and observations, if the facts are true and the records of the observations are intelligible and honest. We could tell the medical inspector of schools a great deal about the peculiarities and the risks of the children of the insane, the children of criminals, and the children of the degenerate and feeble in mind. We could tell him also a good deal about the children of the drunkard. We need ourselves to know much about the real origin and the preliminary symptoms of the mental diseases we have to treat, which we only see when fully developed. I believe the school inspector, if he is the right sort of man, will be able to help us in regard to this momentous point. To prevent and even to diminish mental disease would be an enormous gain to the community. To do this I believe we need to begin almost from the birth of the child who is predisposed to it. If the medical school inspector can help society in this way he will become the most effective of practical psychiatrists.

THE CRITICAL SOLUTION POINT OF URINE: A NEW PHYSICO-CHEMICAL METHOD OF EXAMINATION.

By W. R. GELSTON ATKINS.
(From the University Chemical Laboratory, Trinity College, Dublin.)

In order to determine the efficiency of a kidney as an excretory organ, the most exact method is the determination of the total solid content of the urine as shown by the depression of its freezing-point below that of pure water. This lowering of freezing-point was first fully investigated by Raoult, who showed that for moderate concentrations the depression was strictly proportional to the molecular concentration—namely, the number of gram molecules per litre—for non-electrolytes.

Its application to the examination of urine and blood has proved very useful and reliable, but the time required for carrying it out constitutes a serious drawback when only one or two specimens are to be examined. The following method is brought forward in the hope that it may prove to be of service in cases where great accuracy is not essential and saving of time an advantage. The method is capable of giving very accurate results, but this requires a tedious operation, involving the plotting of a curve from temperatures taken in a bath cooling very slowly.

Outline of Critical Solution Point Theory.

Consider two liquids not completely miscible at room temperatures, such as phenol (m.p. 40° C.) and water. If small quantities of these two substances are shaken together a white emulsion is obtained; this on standing separates into two layers, a lower one, consisting of phenol with some dissolved water, and an upper one of water with some phenol dissolved in it. If the temperature be now raised, the quantity of each dissolved in the other increases till a temperature is reached at which the two dissolve completely in one another, or, in other words, become completely miscible; on cooling even a tenth of a degree a separation again occurs, a white foggy emulsion is formed, and on standing the two layers separate out as before. The temperature at which the two layers become homogeneous depends upon the proportions of water and phenol initially present, and rises in the case of water as the amount of phenol is increased until a mixture is reached which remains in the two separate phases at a higher temperature than any other mixture of the two components.

The composition of this mixture is known as the "critical concentration," and the temperature at which the liquid becomes homogeneous is called the "critical solution temperature." The "critical solution temperature" is the temperature at which the two phases have the same composition and same properties. Accordingly it is the highest temperature at which any particular mixture of the two substances can exist as two separate phases. At the critical concentration and critical solution temperature the volumes of the two phases, water in phenol and phenol in water, are seen to be equal in the test tube.

At the critical temperature the two phases have the same surface tension, and are therefore completely miscible; at a temperature very slightly below the critical temperature the surface tensions of the two phases are almost equal, consequently the meniscus between them is flat. As the homogeneous mixture cools, at a temperature very little above the critical temperature a beautiful opalescence, blue by reflection, brown by transmission, is seen.

If now a series of mixtures of water and phenol be taken and the temperatures at which the two phases, of which each mixture consists, become one homogeneous phase, be determined, and the values thus obtained be plotted on squared paper as ordinates, while the corresponding percentage compositions of the mixtures be taken as abscissæ, a curve is obtained, the highest point of which gives the critical solution point (Fig. 1). This curve is somewhat flat at the top, which means that the composition of the mixture may be slightly altered to one side or the other of the critical concentration without altering the temperature of miscibility much—about $\frac{1}{10}$° C. The blue opalescence is still obtained, but it is not as beautiful as at the critical point itself.

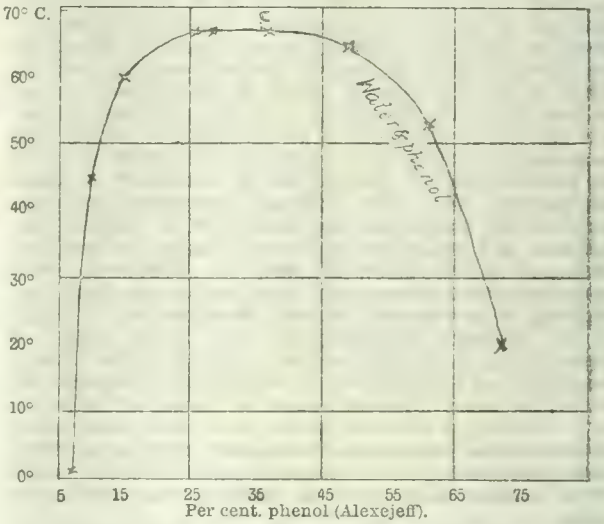


Fig. 1.—C, Critical solution point.

The addition of a very small quantity of a third substance to any mixture of water and phenol raises the temperature at which the two phases become homogeneous, provided the added substance be freely soluble in water and almost or quite insoluble in phenol, or vice versa. If the added substance be freely soluble in both, then the temperature at which a homogeneous mixture is obtained is lowered. Thus, by adding a small quantity of sodium oleate to a mixture of phenol and water, it is possible to obtain a very strong solution of phenol, homogeneous at room temperatures. Lysol, the disinfectant, is prepared in this way.

In the case of a third substance much more soluble in water than in phenol, if curves constructed as described be plotted when one of the pure liquids is replaced by a dilute solution of the third substance in that liquid, the general outline of the original curve is followed, the ordinates of temperature being everywhere longer and markedly so in the crest region. In each of these curves there is a critical point, but it is no longer the highest temperature, as in the case of pure water and phenol; accordingly it must be recognized by the beautiful opalescence and equality of volume of the layers (Fig. 2).

The rise of critical temperature for dilute solutions, say 1 per cent., is roughly proportional to the number of gram molecules of the substance added with regard to its own solvent. Thus in the curves the concentration of the third compound is constant, proportionally to the amount of its own solvent, but is necessarily quite variable to the total amount of the two liquids taken together.

This rise in the critical solution temperature is very great, an amount of solid sufficient to depress the freezing point of water 0.5° C. will raise the critical temperature of a mixture of water and phenol about 4° C. This rise, therefore, which can be readily determined to one-tenth of a degree, gives the same accuracy as the freezing point

measured to one-eighth of a degree with greater facility and simple manipulation.

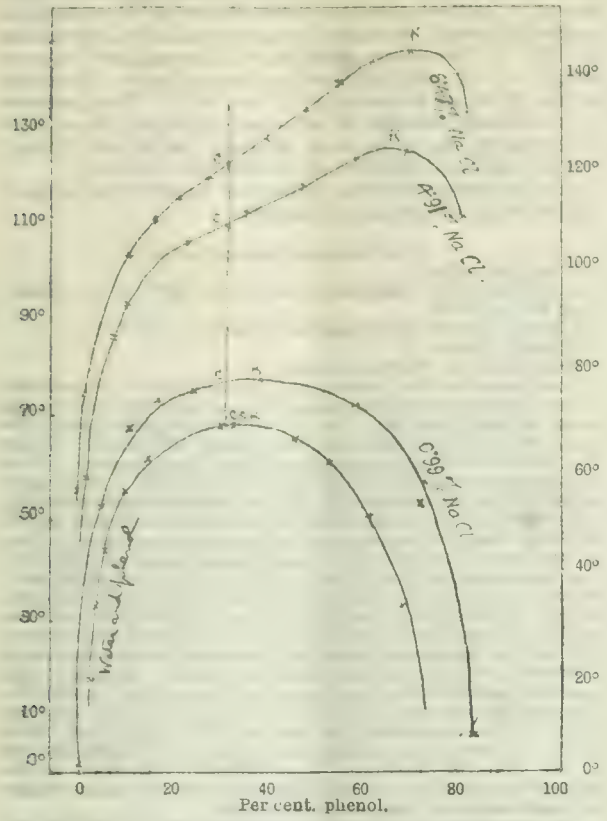


Fig. 2.—C, Critical solution point; K, maximum temperature. From Schreinemakers.

Application of the Method to Urine.

If in the preceding experiments urine, which is an aqueous solution of certain compounds, be substituted for water, a considerable rise in the critical solution temperature is found to occur. This rise varies with the concentration of the urine.

A specimen of normal urine was examined throughout the whole curve, in order completely to establish the analogy, though such a tedious operation is quite unnecessary in determining the critical temperature. This curve was found to be similar to that given by a single substance added to a water and phenol mixture (Fig. 3). The method of procedure was as follows:

Weighed quantities of phenol and urine were mixed in test tubes, and the temperatures at which they became homogeneous were noted. An ordinary thermometer graduated in degrees from 0°—100° C. was used, and tenths were estimated, the object being to devise a rapid method of examination. It is not as rough a measurement as it may appear to those accustomed to Beckmann thermometers, for the temperature differences to be measured are nearly ten times as great. The data from which Fig. 3 was constructed are given below.

Percentage Weight Phenol.	Percentage Weight Urine.	Homogeneous Temperature.	Notes.
22.42	77.58	73.4° C.	
31.31	68.69	78.0	
33.99	66.01	78.3	Opalescence.
34.28	65.72	78.7	Good opalescence.
35.93	64.07	79.7	Best opalescence.
36.48	63.52	80.0	Good opalescence.
39.78	60.22	81.2	No opalescence.
48.45	51.55	84.3	
54.22	45.78	84.7	Maximum temperature.
60.06	39.94	82.2	

Inspection of the data from which Fig. 3 was constructed shows that the critical solution point for phenol and the specimen of urine examined was 79.7°C., the critical concentration being 36 per cent. phenol and 64 per cent. urine. The critical solution point is by no means at the crest of the curve, 84.7° C., but is recognized by the beauty of the opalescence. The critical solution temperature of the phenol-water mixture determined similarly was 66.5° C. Thus the rise produced by the solids dissolved in the urine was (78.7° — 66.5°)=12.2° C.

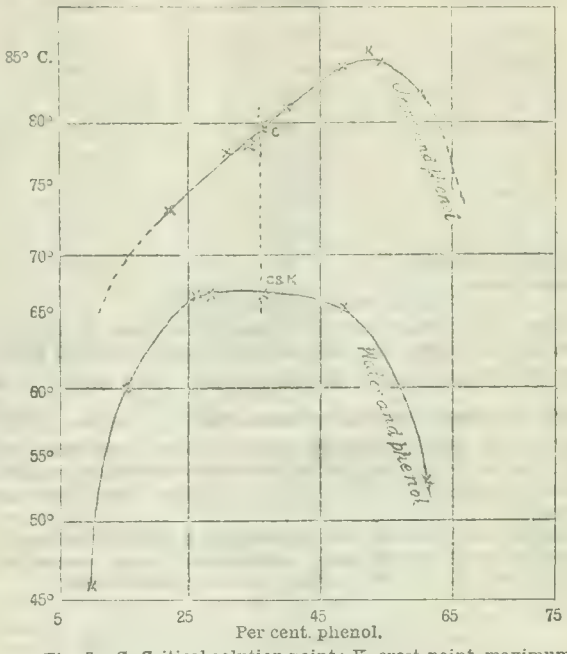


Fig. 3.—C, Critical solution point; K, crest point, maximum temperature.

The data from which the phenol-water curve (Fig. 1) was constructed are given below (Alexejeff, *Wiedemann's Annalen der Physik*, 1886).

Percentage Phenol.	Percentage Water.	Homogeneous Temperature.
7.12	92.88	1° C.
10.20	89.80	45
15.31	84.69	60
28.55	71.45	67
36.70	63.30	67
48.86	51.14	65
61.15	38.85	53
71.97	28.03	20

A number of other determinations were made as follows, the critical solution temperature only being required, no weighings were wanted.

Dry crystalline phenol (carbolic acid) was placed in a test tube to the depth of about 1 cm., and slightly more than enough urine to cover it was run in from a pipette. The mixture was warmed. If the opalescence appeared the temperature of homogeneity was noted, then a few drops more were added. If after warming and allowing to cool the opalescence was improved the temperature was again taken, the thermometer being in the test tube with its bulb just covered. In this manner we proceed from a too concentrated mixture of phenol to one of the critical concentration without the trouble of weighing quantities. By alternate warming and slow cooling the critical temperature may be accurately measured. These determinations can be very rapidly made, ten minutes sufficing for each. The rapidity depends on how nearly the critical concentration has been hit off at the first trial.

The freezing point of each sample was also found by the usual method, and against the depression Δ the rise in the critical solution temperature, Rc, has been tabulated. A third column gives the ratio $\frac{Rc}{\Delta}$.

Rc.	Δ	$\frac{Rc.}{\Delta}$
3.2° C.	0.33° C.	9.70
4.7°	0.44°	10.70
7.6°	0.87°	8.74
7.7°	0.98°	7.86
9.4°	1.07°	8.78
11.3°	1.47°	7.68
11.9°	1.63°	7.28
12.5°	1.73°	7.21
16.3°	1.85°	8.80
*15.9°	1.87°	8.71
17.4°	2.48°	7.00
Mean of the last nine...	—	8.00

* A very highly-coloured specimen.

From this comparison it is seen that there is a great similarity between the rise of the critical solution point and the depression of freezing point. The ratio $\frac{Rc.}{\Delta}$ is nearly constant, having a mean value $\frac{Rc.}{\Delta} = 8$. With very dilute urines, namely those of low depression, the ratio has a slightly higher value, while with very concentrated specimens the ratio is slightly less than the average.

Having established this similarity, a number of specimens, many of which were pathological, were examined by both methods. The results are tabulated below:

Nature of Specimen.	Rc.	Δ.	$\frac{Rc.}{\Delta}$.
Normal	9.7	1.07	9.06
,, ...	12.5	1.47	8.50
,, ...	14.0	1.71	8.19
,, ...	15.0	1.79	8.38
,, ...	15.5	1.87	8.28
,, ...	15.3	1.92	7.96
Mean	—	—	8.41
Chronic parenchymatous nephritis:			
Albumen present	9.3	1.12	8.30
Albumen precipitated by boiling	9.3	1.04	8.94
Specific gravity 1010	7.0	0.70	10.00
Alkaline, much albumen	11.0	1.27	8.66
——	16.0	1.87	8.55
From a right kidney, by catheterization...	4.5	0.47	9.58
,, left ,, ,, ,, ...	7.0	0.73	9.58
M. R., both kidneys, morning; no food since previous evening	5.5	0.63	8.73
M. R., 1 p.m., nothing but water since previous evening; from right kidney by catheterization; albumen present	2.5	0.24	10.42
Left kidney; no albumen	3.0	0.30	10.00
Glucose present 1.87 per cent.	8.0	1.17	6.84
,, ,, 5.62 ,, ,, ...	10.0	1.56	6.41
,, ,, ...	11.0	1.76	6.30
,, ,, 0.19 per cent.	15.3	1.94	7.88
,, ,, 2.34 ,, ,, ...	16.0	2.03	7.88
,, ,, 3.33 ,, ,, ...	16.5	2.27	7.56
Mean of glucose specimens ...	—	—	7.14

These results make it clear that the determination of the critical solution point rise is a reliable method for getting a measure of the functional activity of a kidney. The presence of a considerable quantity of glucose gives results which are slightly lower than would be expected from the freezing-point values, the ratio $\frac{Rc}{\Delta}$ being nearer 7 than 8. From inspection of the results the conclusion may be arrived at that a kidney which gives urine producing a critical solution point rise of 8° C. or more is functioning well, as this rise corresponds to a depression of 0.92° C., the value given by v. Koryani, and leaves a margin on the safe side for experimental error. Ordinary values of Rc are between 11° C. and 16° C. The presence of a moderate amount of albumen appears to have little effect, and in the presence of the large quantity of phenol it is not precipitated even by five minutes' boiling.

For the benefit of those who wish to try this method, the following directions are added:

Apparatus and Materials.

A few test-tubes.

A thermometer graduated from 0° to 100° C., or, better, from 50° to 100° C.

A bottle of pure dry crystalline phenol (m.p. 40° C.).

A small pipette.

Some distilled water and urine.

To determine the Critical Solution Point of Phenol and Water.—Shake out some phenol into a clean dry tube to the depth of 1 cm., roughly. Run in from a pipette enough distilled water to more than completely cover the phenol. Warm the test-tube till the contents become homogeneous. If no opalescence appears on allowing it to cool, add a little more water till an opalescence is got on cooling after warming. Note the temperature at which the white fog, followed by two layers on standing, appears in the homogeneous liquid. Keep on adding a little water till a beautiful opalescence is obtained; the appearance of fog in this mixture must be noted accurately, as this is the real and only reliable critical solution point. By alternately warming up and allowing to cool two or three times this temperature can be accurately ascertained. The further addition of water will be found to mar and finally prevent the appearance of the opalescence. Thus the temperature in which the fog appears in the mixture having the best opalescence may be taken as giving the critical solution point. This is a constant for each bottle of phenol, but, owing to the delicacy of the method, the presence of a slight amount of an impurity produces a considerable alteration in the critical temperature; accordingly it must be determined again for each sample of phenol of new origin.

To Determine the Critical Solution Point of Phenol and Urine.—Proceed exactly as in the case of water, substituting urine for distilled water. The opalescence is most readily seen by looking at the test tube against a black coat-sleeve background. It is most distinct with urines of light colour and low concentration, but can be seen even with strongly-coloured specimens. The urine should be examined without admixture of any substance whatever, phenol excepted, and, if possible, before any precipitate has formed by standing. The difference in the temperatures found, using distilled water and urine, is the rise in critical solution point required.

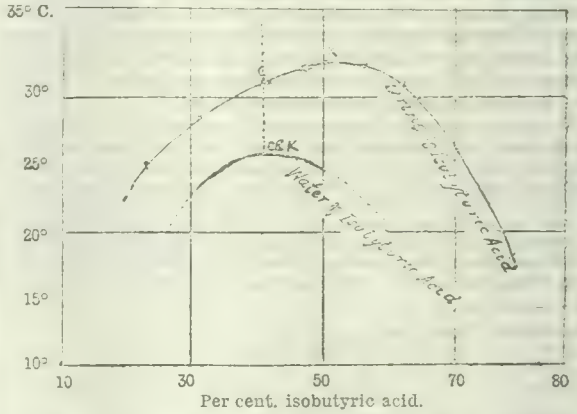


Fig. 4.—C, Critical solution point; K, crest point, maximum temperature.

Experiments were also made, using isobutyric acid instead of phenol, with water and urine. The curve obtained (Fig. 4) was quite similar to that given by urine and phenol. The freezing point of the specimen of urine employed was — 0.92° C., the critical solution temperature was found to be 31.2° C., giving a rise of 5.2° C. The critical concentration was 42 per cent. isobutyric acid.

The data from which the curve was constructed are given below, but, as the use of isobutyric acid was discontinued, they have no direct bearing on the subject, but afford a further illustration of the method, and serve to show that it is quite general, not resting upon any peculiar property of phenol. From the practical point of view phenol was found to be the most suitable substance.

Percentage by Weight Isobutyric Acid.	Percentage Urine.	Homogeneous Temperature.	Notes.
23.44	76.56	25° C.	
31.75	68.25	28.7°	
41.43	58.57	31.1°	Slight opalescence.
42.15	57.85	31.2°	Good opalescence.
47.25	52.75	32.2°	No opalescence.
48.19	51.81	32.3°	
48.50	51.50	32.3°	
50.55	49.45	32.7°	Maximum temperature.
56.36	43.64	32.5°	
61.93	38.07	31°	
69.68	30.32	27°	
78.85	21.15	18°	

Summary and Conclusions.

The examination of urine by the critical solution point method gives a reliable measure of the functional activity of the kidney producing it, and may be employed in all cases where cryoscopy can be.

The difficulty of obtaining a clear solution with blood or blood serum has so far prevented the application of this method to their examination. The rise in critical solution point should not be less than 8° C. for the urine from a healthy kidney; ordinarily the rise is from 11° to 16° C. Each determination can be made in ten minutes, without weighing and without any special or costly apparatus.

Only a small quantity of urine is required, not more than 5 c.cm. for each determination; when specimens have to be collected by catheterization of the ureters this is a saving of time and occasions less inconvenience.

I have to thank Dr. J. Timmermans (Brussels) for placing his extensive knowledge of critical solution point determinations entirely at my disposal, for much assistance in the experimental work, and for carefully revising this paper. My thanks are also due to Professor S. Young and Professor F. A. Werner for valuable advice, and to the Clinical Research Association, Dr. T. Gelston Atkins and Dr. Moorhead for supplying specimens.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

NOTE ON THE BARNSLEY DISASTER, 1908.

This sad accident, whereby some 16 children lost their lives by suffocation due to forcible compression of the chest, presents some features in common with the one at Sunderland in 1883, when nearly 200 lost their lives.

In the present instance a large number of children were endeavouring to force their way into the gallery of the Public Hall to witness a cinematographic entertainment. On the gallery being completely filled the children on the stairs were turned back by the attendant, and told to make their way to other parts of the house. A stampede then occurred on the stairs, several of the little ones fell, and others fell upon them, the whole being kept from regaining their footing by the pressure of the children behind. Before they could be extricated 14 children, of an average age of 6 years, lost their lives, and 2 more died very shortly afterwards in hospital. Those who recovered seemed to have sustained surprisingly little injury. Out of the 16 killed and 17 slightly injured attended at the Beckett Hospital, only 1 sustained a fracture (fractured humerus). This, of course, may be accounted for by the greater flexibility of children's bones, especially the ribs.

The children, seen immediately after death, presented practically the same features as described by Dr. Lambert in 1883 in his report on the disaster at Sunderland.[1] In varying degree their faces were congested and puffy, the vessels of the neck much swollen, the eyelids closed, eyeballs protruding, pupils widely dilated, and froth surrounding the mouth and nostrils. In nearly all the cases urine had been voided, and in a few cases faeces expelled.

By order of the coroner, a careful and individual examination of the whole of the bodies was made twenty-four hours after death, and in the case of two bodies *post-mortem* examinations were made by us. Rigor mortis (probably influenced by the cold) and *post-mortem* staining were well-marked in all cases. With one or two exceptions the countenance was placid as if in sleep, the eyeballs were not protruding, nor the pupils widely dilated. In 3 cases the face was markedly congested, the remainder varying from slight frontal suffusion to slight general congestion. The ears in all cases were much darker and the necks more swollen than is usually seen after death. Bruising was general but not extensive in area, being more marked on the face and lower limbs, slight abrasions being seen in a few cases. There was a total absence of fractures and wounds as disclosed by external examination. In one case in which a *post-mortem* examination was made there was a trace of blood in the left ear, but no fracture of the skull was found. In 9 cases the tongue was not protruded, in 6 but slightly, and in one case well protruded. In 12 of the cases there was well-marked oedema over the front of the chest, and in 2 of these it extended over the abdomen and thighs.

The two *post mortem* examinations presented practically the same features. Two of the most markedly congested cases were selected with a view to getting more definite results. The following are the brief particulars:

Head.—Coverings, meninges, surface, and substance of brain congested but healthy.

Chest.—No fractured ribs. Lungs congested and air passages clear. Heart: Right side contained a small quantity of dark fluid blood.

Abdomen.—Liver and kidneys, slight congestion; intestines pale; spleen not congested but pale.

It is to be noted that there were no haemorrhages in either case on the lungs or heart, as is often found in cases of death by suffocation.

V. K. Blackburn, L.R.C.P.Lond., M.R.C.S.;
R. Mercer, M.B., Ch.B.,
Barnsley. House-Surgeon, Beckett Hospital.

THE HOUR OF DEATH.

When Resident Medical Officer at Walton Workhouse, Liverpool, I tabulated the hour of death in 2,033 cases. The times were taken from the death notices sent to relatives and friends, and their totals are shown in the following table:

In the hour ending—			In the hour ending—		
1 a.m.	90		1 p.m.	94	
2 ,,	78		2 ,,	77	
3 ,,	76		3 ,,	79	
Three hours' total		242	Three hours' total		250
4 a.m.	93		4 p.m.	91	
5 ,,	76		5 ,,	78	
6 ,,	90		6 ,,	100	
Three hours' total		259	Three hours' total		269
7 a.m.	85		7 p.m.	89	
8 ,,	85		8 ,,	84	
9 ,,	98		9 ,,	79	
Three hours' total		268	Three hours' total		252
10 a.m.	79		10 p.m.	86	
11 ,,	85		11 ,,	83	
12 ,,	89		12 ,,	71	
Three hours' total		253	Three hours' total		240
Total: First 12 hours		1022	Total: Second 12 hours		1011

It will be noticed that the greatest number which occurred in any hour was between 5 and 6 p.m., or the hour following the time that Dr. H. D. Marsh found to be the hour of greatest efficiency and also that of frequency of death.

Large numbers of cases are necessary to allow of a definite conclusion being reached in this question. The

[1] British Medical Journal, vol. i, 1883.

causes of death should also be considered, and perhaps the deaths from some of them omitted. For example, a change in the direction of the wind from south or west to east will largely increase the number of deaths from phthisis pulmonalis in a very short time, so that a small number of cases might be rendered valueless by such an accident.

Chesterfield. HERBERT PECK, M.D.

TREATMENT OF BRONCHOPNEUMONIA.

In the treatment of bronchopneumonia and capillary bronchitis in infants the drugs at our disposal have hitherto appeared to me to be of but limited usefulness. In the immediate past I have treated about fifty cases with a mixture of paraldehyde and potassium iodide given with liquorice or some other pleasant expectorant, with the result that I have had no death in the series.

Widespread and severe cases have unfailingly within three or four days favourably responded to the treatment. The mixture is incompatible, a coloration from free iodine occurring immediately; the amount, however, is not in such quantities as to be harmful.

In severe cases, where there has been much secretion in the lungs and the routine expectorants and belladonna have been utterly useless, and the latter distinctly harmful, I have found the secretions dry up with the paraldehyde and potassium iodide mixture in a remarkably short time. The following prescription is suitable for a child of 1 year:

℞ Potass. iodid. ... ... gr.viij
Paraldehyde ... ... ♏xij
Ext. glycyrrh. liq. ... ... ℥j
Aquae ... ... ad ℥ij
Signa: ℥j every four hours.

WILLIAM JAS. PENFOLD, M.B., C.M.Edin.
Benwell, Newcastle-on-Tyne.

SUBCONJUNCTIVAL CYSTICERCUS.

A PERSIAN woman, aged 23, came to the dispensary complaining of swelling in the right eye, of one year's duration. On examination a cyst was seen rising from beneath the lower eyelid, and extending from one canthus to the other. It rose about one-eighth of an inch above the free border of the eyelid, and had fairly free movement under the conjunctiva. It was diagnosed as subconjunctival cysticercus, on account of (1) its thick and vascular walls, (2) its size, (3) its free mobility, (4) most important of all, a round, white, opaque spot on its anterior wall, stated by Sichel to be diagnostic of this condition. On the following day, cocaine having been administered, the cyst was excised. The wound healed by first intention.

This case is reported by kind permission of Dr. M. S. P. Aganoor, in whose practice it occurred.

ELIZABETH N. MACBEAN ROSS, M.B.,
Julfa, Ispahan, Persia. Ch.B.Glas., L.M.Rotunda.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.

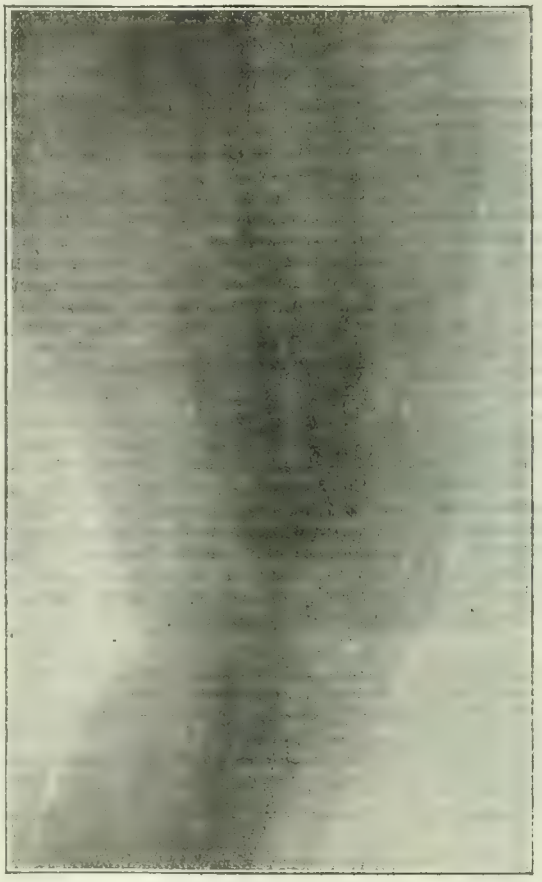
A CASE OF INFANTILE SCURVY WITH BONE FORMATION IN THE DETACHED PERIOSTEUM.

(By W. NORMAN MAY, M.D., Resident Medical Officer.)

A. B., a female child, aged 9 months, was admitted to the East London Hospital for Children on September 16th, 1907, on account of pain and loss of power in her legs. The mother stated that this was her first child. The pain in the legs was first noticed a month before admission, while two weeks later the left ankle was swollen and discoloured as if by a bruise; the discoloration gradually extended up to the knee. The child had been breast fed for three weeks, and brought up subsequently on Allenbury's food. The mother affirmed that all instructions as to preparing the food had been carefully followed, and all milk that the child had taken had been boiled. The child was rather pale and flabby, with well-marked beading of the ribs, enlargement of the lower epiphyses of the radii, and rickety-shaped head. There were two upper lateral incisor teeth present, and around these the gums were spongy and swollen, and bled easily. The lower limbs were scarcely moved at all, the left lying abducted and everted as if completely paralysed. There was some swelling over the left internal malleolus, and the left leg up to the knee was somewhat thicker than the right, and acutely tender when touched.

The day after admission the left femur was swollen and tender, and about a week later the right was similarly affected. A microscopical examination of the urine showed red blood cells in large numbers.

From the time of admission the child was put on an antiscorbutic diet, but no improvement took place for the first ten days, owing probably to some concurrent diarrhoea, and to there being some doubt about the milk supplied being unsterilized.



By October 1st both legs were much improved, being less tender, and the child's general condition was better.

By October 7th practically all pain had gone and the limbs could be freely moved, but the thickening around both femora was more definite and hard. The accompanying plate of a skiagraph taken on October 15th shows the enlargement of the left femur, the periosteum being elevated from the femur, and new bone being laid down in the detached periosteum. The right femur was similarly affected though to a less degree, and there was some new bone around the lower end of the left tibia and fibula. The child was discharged from hospital on November 1st, the measurements around the middle of the thighs on that date being—right 7½ in., left 6½ in.

For permission to publish this case I am indebted to Dr. Eustace Smith, under whose care the patient was.

THE French Government has under consideration the expediency of founding a "University of Africa." A committee, of which the chairman is M. Liard, who has taken a leading part in the organization of the French Universities, will proceed to Algeria during the Easter holidays to study the question.

REPORTS OF SOCIETIES.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

George E. Shuttleworth, M.D., in the Chair.

Friday, December 13th, 1907.

Discussion on Inherited Syphilis.

Mr. R. Clement Lucas read a paper on this subject, which is published at page 250.

Mr. Sydney Stephenson based his remarks upon an analysis of 101 cases of interstitial keratitis. Associated signs of inherited syphilis were present in 69.3 per cent., and of tubercle in 9.9 per cent. of the patients. The series included four examples of keratitis due to acquired syphilis, one of which was in a child 12 years of age, who had suffered in infancy from a chancre of the eyelid; 61 per cent. of the cases were in females. Four-fifths of the cases occurred between the ages of 5 and 15 years, so that interstitial keratitis was essentially a disease of childhood, although cases had been met with at 38 years of age. The symptoms were apt to be atypical when the disease occurred in very young subjects. In one patient an interval of seven years had elapsed before the second eye was attacked. Ulceration of the cornea had been noted in 4 of the cases. Mr. Stephenson laid stress upon the influence as a determining factor of keratitis of any condition, local or general, capable of lowering the patient's resistance. The term "interstitial keratitis" did not correspond with the pathology of the condition, which was essentially inflammation of the ciliary body. An account was given of the experimental production of keratitis caused in syphilitic cases by the lodgement and multiplication of the *Treponema pallidum* in the tissues of the cornea.

Mr. George Pernet said that all the evidence available pointed to the fact that there was no congenital syphilis of the child without syphilis of the mother. He referred to a case mentioned by Jullien of a syphilitic man with supernumerary fingers who had infected his wife; she had borne a syphilitic child with supernumerary fingers, but the man's mistress gave birth to a perfectly healthy child, also with supernumerary fingers. There could be very little doubt as to the paternity here. It was known, too, that a man with florid syphilis did not necessarily infect his wife. Again, there could be no doubt that Colles's law was a law; the exceptions to it would not hold water, various conditions, such as pemphigus neonatorum, Jacquet's *erythème érosif*, and so forth, having been taken erroneously for syphilis in the child. In conclusion, he insisted on the maternal origin of congenital syphilis and on the reliability of the observations of Abraham Colles and of Baumes.

Dr. H. G. Adamson discussed the diagnosis of the skin eruption of congenital syphilis. Streptococcic impetigo produced red raw areas with phlyctenular margins in the flexures or occupying the whole napkin area, with crusted or bullous lesions on other parts. Seborrhoeic dermatitis also attacked the flexures (or the whole napkin region), and the areas had a yellowish-red granular surface. The eruption was associated with seborrhoea capitis in the child and in the mother. Simple infantile erythema (Jacquet), on the other hand, attacked the prominent convex surfaces of the napkin region, of the calves, and of the heels in a marked manner, leaving out the flexures. There were three stages: (*a*) Erythematous, (*b*) papulo-erosive, (*c*) ulcerating. The two last were especially liable to be confused with syphilitic eruptions, but were distinguished by their affecting only prominent convex surfaces and by absence of other signs of syphilis. The syphilitic eruptions were characterized by coppery-red, disc-like patches, which might be erythematous, papular, scaly, or crusted, and which attacked flexures and prominent surfaces alike. A special point was that the palms and soles were the seat of these lesions. Other symptoms of syphilis were often present—namely, fissured lips, mucous patches at the anus, snuffles, hoarse cry, and muddy complexion.

Mr. A. H. Tubby, in discussing the bone and joint lesions in inherited syphilis, said that the cranial signs might be localized or general; local manifestations took the form of bosses, which were most marked on the frontal bone; enlargement of the parietal eminences might exist alone or in conjunction with enlargement of the frontal eminences; excessive overgrowth of the external occipital protuberance occurred occasionally, but it was a rare condition. The most striking of the lesions in the long bones was that producing syphilitic pseudo-paralysis; it occurred in infants before the fourth month, usually during the second month; the limb became useless, and then a swelling appeared in the neighbourhood of the epiphysis, associated with effusion into the joint; separation of the epiphysis might occur, and pus might form with necrosis of the entire epiphysis.

Dr. George Carpenter said that chronic snuffles was not always self-evident, and it was important to recognize a post-rhinal form with discharge by the posterior nares. Craniotabes was, he said, most usual in the second and third months of life, and whenever he detected it the probability of syphilis occurred to him. Craniotabes was not a rickety manifestation, and Parrot's nodes were evidence of syphilis, not rickets. He did not believe that syphilis produced rickets. During the first six months the majority of enlarged spleens were syphilitic. From the ninth to the thirtieth month, the rickety age of life, some cases were syphilitic, others could not be explained in that way, and although cases of splenomegaly did arise in rickety children, they occurred infrequently, and splenomegaly was a coincidence, not a symptom. Of syphilitic nephritis in infants he gave examples, and pointed out that on several occasions he had been able to diagnose this condition during life; in some cases it commenced in intrauterine life; the contracted granular kidneys of children and adults might be either syphilitic or simple, and might certainly originate in infancy.

Dr. Leonard Guthrie said that there were two kinds of nephritis attributed to inherited syphilis, acute and chronic. Both were essentially interstitial, though in both parenchymatous conditions might be present. Acute interstitial nephritis was sometimes congenital or occurred shortly after birth in undoubtedly syphilitic infants. The symptoms were usually gastro-intestinal at first, and ended in uraemia; oedema was rare in purely interstitial nephritis. The urine was scanty and albuminous, with or without the presence of casts. The kidneys *post mortem* showed little that was abnormal to the naked eye, but microscopically interstitial cellular infiltration, formation of new connective tissue, with a varying degree of catarrhal exudation in the tubules. Syphilitic infants might succumb to this within the first few weeks or months of birth. Chronic interstitial nephritis appeared to be the result of the acute form. Clinically and pathologically it was indistinguishable from the chronic interstitial nephritis of adults. Whether the two forms were essentially syphilitic was a matter for discussion. It was certain that in a small proportion of cases congenital syphilis had been recorded; but on the other hand, no personal or parental history of syphilis was forthcoming in the majority of both acute and chronic cases of interstitial nephritis in infancy and childhood. Dr. Guthrie concluded that a certain proportion of cases might be due to congenital syphilis, whilst others were of septic origin.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

Annual Meeting

Manchester, Friday, January 17th, 1908.

Election of Office bearers.

Dr. A. J. Wallace (Liverpool) was elected President. The office-bearers were elected for 1908.

The Woman of the Future.

Dr. E. O. Croft (Leeds), the retiring President, gave a short valedictory address, in which he discussed the woman of the future from a gynaecologist's point of view. He referred to the frequency with which members of the profession looked back at the work of their predecessors, and in doing so were too apt to congratulate themselves on the brilliant achievements of the present day without considering whether the progress of our knowledge was having a clear run, and whether it was being diverted into side-issues or hindered by developments which might be of immense immediate value, but which might

obscure the main issue. He suggested picturing in mind a typical healthy woman in the more or less distant future, and estimating the probability of her enjoying an immunity from many of the physical and mental disaffections as known to the present-day gynaecologist. He would require the command of a much higher knowledge of prophylaxis and of the conditions of normal health, and such knowledge would have to become an integral part of his own mental equipment, and the laws of health to be obeyed in an almost automatic manner. The indications of such a development were referred to and exemplified. Rapid advances were liable to be associated with exuberances of rapid growth and feeble vitality. These exuberances were temporary hindrances, and were more liable to form in the process of mental than physical development. They chiefly appeared in the form of eccentricities of various kinds. The general advance of bodily soundness in women was thought to be checked rather than aided by the exuberance of many quack proceedings in connexion with physical culture which existed to-day. The various classes of gynaecological disease were reviewed in the light of their ultimate avoidance. The large class of inflammatory affections which were mainly associated with microbial infection of varying degrees were to be looked upon as avoidable, as also were many of the diseases of pregnancy and abnormalities of labour. The eradication of the venereal infectious diseases was not being dealt with at all at the present day. It was to be hoped that a more common-sense view would be taken of this matter in a more enlightened future. The prevention of puerperal infection seemed to be a difficult lesson to learn in spite of its simplicity. It was suggested that the ultimate solution of the question would be in the hands of the suffering womenkind. When they themselves fully realized the position they would demand the remedy, and the demand would then be more quickly met. With regard to the possibility of dealing with the apparently hopeless conditions of maldevelopment, the suggestions of Dr. Ballantyne and the subject of eugenesis were referred to. There was no clue to the prophylaxis of the new growths of the female organs, such as cystic disease of the ovary, uterine fibroids, and cancer. Referring to fibroids, the brilliant results of a curative kind obtained by operation during recent years, while of enormous immediate value, had practically paralysed all research into the etiology and nature of these growths. More work was being done regarding cancer, but the high degree of technical skill required of the operator and the pathologist had rather tended to create a chasm between the two which was difficult to bridge. Both were liable to be lacking in the opportunity for the observation of the living habits and phenomena of the disease as it progressed in the patient. It would be interesting to revisit the earth at some future time to ascertain the extent to which the future woman had succeeded in avoiding the ills to which she was now liable.

ROYAL SOCIETY OF MEDICINE.

SECTION OF PATHOLOGY.

AT a meeting on January 21st, Mr. S. G. SHATTOCK, President, in the chair, Mr. W. G. SPENCER exhibited a man, a chimney sweep by trade, on whose thighs and abdomen there were numerous small dark patches, due, as the exhibitor had proved, to the deposition of *Soot in the epidermis*. Carcinomata had been removed from the patient. Dr. W. O. MEEK read a paper on *Tuberculous endocarditis* based on two cases of miliary tuberculosis. The first presented during life signs of an acute bacteriaemia with rigors and pyrexia. After death, in addition to well-marked miliary tuberculosis, rows of small recent vegetations were found on the mitral and aortic valves, together with recent infarcts in the spleen and liver. Microscopical examination of one of the vegetations showed it to consist of granular necrotic material, and at its junction with the valve was a zone of mononuclear celled proliferation. Tubercle bacilli were present in enormous numbers throughout the lesion. In places they formed dense masses. In the deeper parts of the vegetation were circular foci of caseation with included bacilli. An elastic tissue stain showed that the lesion was situated above the elastica. No giant-cell formation was seen. Examination of the blocked vessels in the infarcted areas of the spleen disclosed the presence of clumps of bacilli within the lumen of the vessels. Cultures from the spleen were sterile after four days, and no other micro-organisms were seen in any of the sections. This case, the author considered, was a true example of vegetative endocarditis due to the tubercle bacillus. A recent German review of the subject admitted only nine authentic cases of this condition, and it was an interesting fact that in only 1 of these 9 cases was giant-cell formation observed in the lesion. In the second case advanced miliary tuberculosis was found, with a few vegetations of recent date on the mitral valve. Histologically the vegetations were found to consist of necrotic material similar to that in the preceding case. Cellular proliferation at the base was extremely slight, and no appearance typical of tuberculosis was seen. Tubercle bacilli were scattered through the lesion, but sparingly. No other micro-organisms were seen. In this case the author considered the histological evidence that the tubercle bacilli were the cause of the vegetation not sufficiently convincing. Mr. C. W. ROWNTREE reported a case of *Malignant disease of the rectum* in a boy aged 10. Perforation and fatal peritonitis followed its growth. Mr. H. COLWELL showed some photographic plates which had been placed in contact with sections of *Vesical calculi* in the dark. After development, a more or less faithful picture of the calculus was, in the majority of cases, obtained, which, however, showed that the action upon the silver salt was confined to certain strata of the calculi. Thus, the nucleus, which consisted in each case of comparatively pure uric acid, and was compact in character, produced no photographic effect. On the other hand, layers of calculi which were of more porous structure, and which also consisted of uric acid in combination, as well as uric acid itself, gave positive results. Phosphatic portions of the calculi were without effect, except when mixed with urates. The external layers of a predynastic Egyptian calculus lent by Mr. Shattock from the collection of the Royal College of Surgeons also gave a positive result, the nucleus being without any apparent effect. Mr. W. H. BATTLE and Mr. S. G. SHATTOCK recorded a case of *Diffuse osteoma of the femur* in a child who fractured the femur in a fall. The fracture underwent repair, but a swelling appeared about the bone, nearly the whole length of which became involved. As the disease was thought to be a sarcoma, the limb was disarticulated at the hip-joint. On longitudinal section, the seat of fracture was found indicated only by a slight deviation in the axis of the shaft, around which a large tumour had grown. This consisted throughout of microscopically normal cancellous tissue, the spaces of which were everywhere filled with fat. Between the fat cells, in places, there were narrow strands of true medullary tissue, comprising finely and coarsely granular myelocytes, lymphocytes, and erythrocytes. The growth was a tumour in the proper sense, and not a mere redundant formation of callus, although it arose as a result of the fracture and probably in connexion with callus formation; it could not be regarded as an inflammatory formation, and the macroscopic and microscopic evidences of sarcoma were quite wanting. It was noteworthy that about a year after the removal of the limb, the lower limb of the child's mother was amputated for what was also thought clinically to be a malignant tumour. This proved on histological investigation to be composed of cancellous cartilage, the spaces of which were occupied with simple connective tissue. The medullary canal of the femur was not invaded, and the tumour did not present any of the histological marks of a sarcoma; it fell within Virchow's group of "osteoid chondroma"—a name neither implying nor excluding malignancy. The growth of the osteoma in connexion with the fracture of the patient's child became thus an example of the heredity of benign tumours, which, in the case of chondromata and osteomata, was so striking and well established. Another point of interest in the history of the boy was that bony tumours afterwards grew around the lower end of the opposite femur, around the middle of the right tibia, and from the radius and ulna. That around the femur spontaneously disappeared; that which formed around the tibia grew after an injury. The only comparable case in this regard, of which the authors knew,

was one recorded by Abernethy, in which osseous formations ensued after local injuries, some of which formations spontaneously disappeared. A younger brother of the boy also fractured the right femur, a larger osseous swelling subsequently forming at the site of the injury.

Obstetrical and Gynaecological Section.

Puerperal Eclampsia.

At a meeting on January 9th, Dr. Herbert Spencer, President, in the chair, Drs. N. C. Carver and J. S. Fairbairn recorded some cases which it was suggested were cases of eclampsia in which death was brought about by haemorrhage into the pons. The symptoms which should arouse suspicion of such haemorrhage during eclampsia were deep coma and cyanosis, with marked respiratory disturbance occurring in a young patient presenting the urinary and other signs of eclampsia, and they were especially suggestive when the attack was unaccompanied by the usual eclamptic convulsions. The President thought that apoplexy was a well-known cause of death in eclampsia, and was surprised that the authors had not found more cases recorded, although they did not claim that their paper was exhaustive. In view of the possibility of the occurrence of cerebral haemorrhage in eclampsia, the intravenous injection of a large quantity of saline fluid would appear to be not unattended with risk. Dr. Macnaughton-Jones recalled the fact that the "apoplectiform" was one of the old writers' divisions of eclampsia, and in which sanguineous and serous effusion occurred into the ventricles. The symptoms were such as described by the authors. In cases of threatening cerebral haemorrhage the employment of weak doses of pilocarpin was of great value. If necessary, its full physiological action might be neutralized by $\frac{1}{100}$ grain of atropin. Mr. A. Lionel Smith said he had seen three cases of cerebral haemorrhage complicating eclampsia or toxaemia of pregnancy, in all of which the diagnosis was confirmed at the necropsy. Dr. Amand Routh had not had an opportunity of seeing a *post mortem* examination of any case dying of puerperal eclampsia where cerebral haemorrhage had been found, but thought the authors had shown how often such haemorrhage might supervene and be the immediate cause of death. He thought it unwise to increase arterial tension, as must have been done in the first case reported, when 10 oz. of blood were removed, and 40 oz. of saline infusion injected. This might well have increased the tendency to haemorrhage. He presumed that saline infusion in these cases was given to dilute the toxins at each given point, and to increase the leucocytosis to combat the toxins; but it was doubtful if it should be given when it increased arterial pressure. On the other hand, he considered that the suggestion to give pilocarpin (at all events in the doses usually prescribed—namely, $\frac{1}{6}$ grain) was fraught with grave danger. He considered it should never be given in cases where apoplectic symptoms, or coma, was present, for he had seen patients under its influence suffocated by the enormous quantity of ropy mucus secreted by their salivary and bronchopharyngeal glands. After some other observations from members present, Dr. Fairbairn, in reply, said no attempt had been made to make an exhaustive collection of cases of apoplexy as the cause of death in eclampsia, and the cases collected were those of haemorrhage into the pons or base of the brain without unilateral symptoms to suggest apoplexy. Large cerebral haemorrhages were not frequent in eclampsia, as was shown by the statistics quoted in the paper. The cases recorded were undoubtedly rare, but the possibility of a deeply comatose and cyanosed eclamptic patient having also a cerebral haemorrhage ought not to be lost sight of, especially in giving a prognosis.

Section of Medicine.

At a meeting held on January 28th, with Dr. S. J. Gee (President) in the chair. Dr. Campbell Thomson gave a kinematographic display of certain diseases of the nervous system. Abnormal gaits, attitudes, tremors, and other abnormal movements of actual patients, as well as illustrations of neurological methods, were projected on the screen. Dr. C. E. Beevor remarked on the value of the method in analysing complex movements in disease of the nervous system. Dr. A. F. Hertz then read a paper on the pathology and treatment of chronic constipation, describing his investigations by means of the *x* rays and meals containing bismuth, showing what part of the intestine was at fault, and illustrating his findings with lantern slides. Cases were quoted, and the subject was treated as in his paper on The Passage of Food through the Human Alimentary Canal, published in the British Medical Journal of January 18th and 25th. Dr. Morley Fletcher asked as to the absence of shadow as the meal was passing through the small intestine, and as to the position of the patient while the radioscopic examination was being made. Dr. C. E. Beevor and Dr. de Havilland Hall also discussed the paper. Dr. Hertz, in reply, said a diffused shadow was frequently seen as the meal was passing through the small intestine; the large area of the small intestine and the dilution of the meal by the various intestinal fluids explained the inconspicuousness of the shadow from it. The supine position had been used, but probably the vertical position would be better.

Leeds and West Riding Medico-Chirurgical Society.—At a meeting on January 17th, Dr. J. Allan in the chair, the following were among the exhibits:—Mr. H. de C. Woodcock: Three cases illustrating *Calmette's ophthalmic reaction*. In 100 cases he had found a positive reaction was not necessarily present in severe tuberculous infection. He had obtained it also in some people not considered tuberculous, in people in full work and without illness. He had tried the inoculation of a blistered surface; it had answered very well, and he was satisfied with it. He had not heard of its use anywhere but at Armley Hospital. Mr. J. F. Dobson showed a short and thickened *Appendix, with a diverticulum* at its base, from a man who had had two attacks of appendicitis. A tag of omentum was adherent to the diverticulum. Dr. A. D. Sharp: A patient with a *Simple neoplasm* in the region of the left vocal process, right lateral pharyngitis, and marked hypertrophy of the lingual tonsil. As the laryngeal tumour was nearly subglottic, it passed under the right cord during phonation, and consequently did not interfere to any appreciable extent with the function of the cords. The hypertrophy of the lingual tonsil gave rise to no discomfort, although the epiglottis lay embedded in the lymphoid mass. The patient's complaint was that he felt a lump on the right side of the throat which was very painful when he swallowed the saliva. Dr. Wardrop Griffith: A heart from a patient who had been under his observation for twelve weeks prior to his death. He was admitted with signs of *Aortic disease* of rheumatic origin. With the exception of a rise of temperature lasting two and a half days, and which proved to be due to embolism of the spleen, the course of the affection was practically afebrile; but a diagnosis of infective endocarditis was come to, largely on account of the variable nature of the bruits, the presence of purpura, and the general condition. On autopsy very extensive vegetative endocarditis was found affecting the aortic segments, leading to obstruction at the orifice, to insufficiency of the valve, and to aneurysm of the sinus of Valsalva. Dr. J. Allan: (*a*) A heart much hypertrophied and dilated, showing a bulging of the wall of the left ventricle due to a growth in the wall, probably gummatous; and (*b*) the right lung of an infant, aged 8 months, showing several cavities in the apex. Dr. Gruner, in a paper on Medical Student Life at Montpellier in the Middle Ages, gave some quotations from an actual speech to illustrate the religious character of the degree ceremony in those days.

Pathological Society of Manchester.—A laboratory meeting of the Society was held in the Pathological Department of the University on Wednesday, January 15th. The following specimens were shown:—Dr. Anderton: Specimens recently added to the museum. Dr. Melland: Photomicrographs of the blood in various conditions, and illustrations of the methods of staining blood films. Dr. Loveday: Epithelial odontomata. Dr. Craven Moore: Specimens illustrating morbid conditions of the stomach. Drs. Orr and Rows: Specimens illustrating morbid lesions of the central nervous system, natural and experimental. Miss Elsie M. Royle: Specimens from

two cases of leucocythaemia. Dr. LORRAIN SMITH Haemolymph glands. Dr. LORRAIN SMITH and Dr. MAIR: Specimens illustrating the application of Weigert's myelin method of staining. Other specimens were shown by Dr. POWELL WHITE, Dr. GAVIN, Mr. WOLSTENHOLME, and Mr. ROBERTS.

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting on January 8th, Dr. A. DUMVILLE ROE, President, in the chair, Mr. C. RYALL opened a discussion on the diagnosis and treatment of *Haemorrhage* from the nose, mouth, and stomach. Dealing chiefly with haemorrhage from the stomach, he spoke of the importance of accurate diagnosis and of keeping in mind the possibility of carcinoma supervening on what appeared to be a simple chronic inflammatory condition; he referred in detail to the condition known as gastrostaxis, and to the haemorrhage in cirrhosis of the liver and from the oesophagus. Treatment of severe haemorrhage resolved itself into the use of morphine and rest; drugs were of little use except in less severe cases; ice, which should be ground, was useful, and the icebag when used should not be allowed to produce pressure on the abdomen. Gastro-enterostomy was frequently successful in removing the more prominent troubles in suitable cases. The discussion was continued by the PRESIDENT. Dr. MARK ROBINSON inquired what was the reason that the presence of blood in the stomach induced vomiting. He mentioned various other causes of haemorrhage, and the difficulty that arose at times in distinguishing between haemoptysis and haematemesis. Dr. J. GAY spoke of haematemesis in hysteria, and, referring to epistaxis, wondered if the plugging of the posterior nares was not less frequently required nowadays. He had found that in a large number of cases the haemorrhage came from a septal vessel just within the nares, where it could be easily controlled. Mr. E. F. WHITE thought that drugs were of little use in severe cases; he had administered adrenalin with little local effect, and had seen toxic symptoms arise from over-absorption. He had had experience of haemorrhage from the dilated veins of the oesophagus, and noted that in duodenal ulcer the course was commonly more rapidly downhill than in any form of gastric ulcer. Dr. M. BIGGS agreed with the view that a large number of cases of epistaxis were due to the opening of a septal artery; he had had experience of gastrostaxis, which was more alarming to the medical attendant than to the patient who was used to it. He inquired whether the view of the Leeds school—that all gastric ulcers should be excised when discovered as a precaution against subsequent carcinoma—was widely held and practised. Mr. AITKEN recorded two cases of gastrostaxis, and advocated an absolute starvation in all cases of gastric ulcer. He had found calcium chloride of little use unless it was given in teaspoonful doses of the dry salt; then it appeared to be of much use. Dr. W. G. DICKENSON mentioned two cases of sudden death from gastric haemorrhage; and Messrs. CARSWELL, MCDUDE, and E. J. PRITCHARD also joined in the discussion, which was closed by Mr. RYALL

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on January 9th, Inspector-General A. W. MAY, R.N., in the chair, Major M. P. C. HOLT, R.A.M.C., in a paper on the advisability of operation for recurrent hernia, argued that a man who suffered from recurrence of hernia after operation should not be invalided forthwith. There was abundant evidence that recurrence of hernia offered a distinct probability of cure by operation in not less than 80 per cent. of cases. The factors which tended to bring about recurrence were: 1. Sepsis, which might be due to (*a*) imperfect technique, (*b*) accidental infection of the dressings, (*c*) uncontrolled curiosity on the part of the patient leading him to insinuate his hand under the dressings. Infection of the deeper parts gave rise to a mass of non-contractile scar tissue which eventually gave way. 2. Injudicious selection of cases: (*a*) General muscular debility, (*b*) extensive fatty degeneration, (*c*) extensive cough during or for a few weeks after operation, (*d*) organic disease. 3. Errors in technique: (*a*) The attempt to confine within the abdomen large masses of omentum or extensive coils of intestine; (*b*) the obliteration of the conjoined tendon; (*c*) the transplantation of the cord without excision of veins. 4. Faulty after-treatment: (1) On the part of the surgeon—(*a*) too short a period of confinement to bed, (*b*) the prescription of a truss, which necessarily caused by its pressure some atrophy of the parts; (2) indiscretion on the part of the patient; two instances were given—in one the man within a week or two of leaving hospital attempted to lift a heavy wardrobe by the plinth; in the other the patient took it upon himself to ride and put his horse at a jump; the horse "pecked," and the rupture recurred. A percentage of 2·6 recurrences after primary operation was adopted as a standard. Statistics showed that if the cure remained good for twelve months, recurrence became very improbable. The conditions mentioned as contraindicating operation in the first instance applied still more forcibly to operation for recurrence; generally speaking, a second operation should be performed if the condition of the abdominal parietes warranted it. The operation would probably be futile when the primary operation had been effectual for a number of years and recurrence was associated with precocious senile change. Only once had the author refused to operate for recurrence, in the case of a middle-aged non-commissioned officer of unduly lax, almost flabby, habit of body, with an enormous gap in the inguinal region on both sides. Irreducibility due to adhesions should be an additional incentive to operation for the removal of an extremely dangerous condition. In operating it was necessary carefully to remove all cicatricial tissue (avoiding damage to the vas deferens) and reconstitute an inguinal region by the union of normal tissues. The author had operated on 14 cases of recurrence, and, so far as he had been able to ascertain, there had been no further recurrence. Major C. G. SPENCER, R.A.M.C., had been struck by the tendency to recurrence on either side of the scar. He regarded as very important points the removal of veins from the cord and the provision of a good posterior wall to the inguinal canal. The implantation of silver filigree in suitable cases was regarded with favour.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on January 7th, Miss THORNE, President, in the chair, Mrs. SCHARLIEB proposed the following resolution: "That, as women are equally bound with men practitioners by the ethical laws of the profession, women practitioners should, under no circumstances, accept a lower salary than that which has been agreed upon by the profession as a minimum, and that it is desirable that when men and women practitioners are doing identical work, the rate of payment should be the same." The speaker said that the resolution must commend itself to the common-sense of all medical women; they had had the same education as medical men, and it was only fair that they should be paid at the same rate, and they ought not to undersell the profession. Mrs. DICKINSON BERRY, in seconding the motion, said that in view of the fact that many new appointments were to be made throughout the country, and of the possibility of local bodies trying to get cheap labour by appointing women, it was thought that it might be useful to embody the opinion of the Association in the resolution now before the meeting. The PRESIDENT reminded those present that the British Medical Association had agreed that the minimum rate of pay was £50 per annum for a half school day a week, or £500 for whole-time work. The resolution was brought before the meeting as advertisements were already appearing for women medical inspectors of schools. The Borough of Burslem was asking for a woman at the rate of £150 rising to £200 a year for whole-time work. Miss Thorne said that she had called the attention of the Secretary of the British Medical Association to this advertisement, and had received a reply stating that the question of inserting a warning notice was to be considered, and referring to a resolution passed by the Association showing that it endorsed the view of identical payment for men and women. In conclusion, the speaker said that the amount of pay was usually taken as representing the quality of the work, and women should make it clear that they meant to do the highest work. Letters of sympathy with the resolution from county members were then read. Miss GARRETT ANDERSON suggested that a vigilance committee should be appointed to look out for advertisements and to warn women not to apply for those posts for which an inadequate salary was offered. Mrs. STANLEY BOYD considered that it was important for the standing of women in the profession that

they should make it clear that they only meant to enter into fair competition with medical men. Mrs. Hamilton Williams emphasized the importance of women making a stand and showing that they did not acquiesce in a somewhat general public opinion that they did not expect the same salaries as men. The motion was then put and carried unanimously. Miss Garrett Anderson proposed and Miss Thornett seconded a resolution that a vigilance committee should be appointed. The motion was carried, and a committee was formed consisting of Mrs. Dickinson Berry, Mrs. Hamilton Williams, and Miss Garrett Anderson, and the President as an *ex-officio* member. Miss Paine described a case in which carbuncle was followed by myelitis in a patient aged 47. The symptoms developed rapidly, death occurring on the fourth day after the patient came under observation. The *post-mortem* examination showed softening and infection of the cord. Miss Handley, in a paper dealing with teeth in relation to general diseases, showed how frequently oral sepsis was the cause of severe obscure illness, and quoted cases where symptoms resembling typhoid fever in an adult and tuberculous meningitis in a child had cleared up when the condition of the mouth had been attended to. Miss Stoney showed some radiographs of teeth and stoppings, illustrating the need of filling the whole of the pulp cavity of the tooth, and demonstrating that in certain cases where this had not been done an abscess cavity had formed in the bone at the base of the fang of the tooth.

REVIEWS.

MILITARY SURGERY.

The second volume of the textbook on wounds caused by modern firearms,[1] by Drs. Graf and Hildebrandt, deals with the wounds of special regions and organs. The first chapter is on wounds of the head. The statistics given show that in recent wars the frequency of these wounds has increased. Now that troops take greater advantage of cover the head is the least protected part of the body. In spite of improvements in treatment such wounds are attended by a very high mortality, reaching 34 per cent. in the Japanese war. In the case of skull wounds parietal are more common than frontal, and frontal than temporal. Compression from haemorrhage appears to be unusual, the meningea media being rarely torn. When infection occurs it usually results in a cortical abscess, more rarely in acute meningitis. The majority of men who sustain skull wounds die on the field. With regard to treatment, Dr. Hildebrandt summarizes it as follows: The skull should be opened (*a*) in all shrapnel and shell wounds, (*b*) in tangential wounds, and (*c*) in the deep penetrating wounds caused by bullets of small calibre if symptoms of cerebral compression or irritation of the motor cortical centres supervene, and also if local symptoms, especially paralysis or aphasia, do not clear up. Interesting references are made to the psychic phenomena which follow head wounds, and full consideration is also given to wounds of the face, eye, ear, and mouth.

Wounds of the neck appear to be only rarely complicated by haemorrhage from the large vessels. The improvement in operative technique is well illustrated by the statistics of mortality following ligature of the great vessels usually undertaken for aneurysm. Wounds of the larynx and trachea are of much practical interest owing to the necessity for tracheotomy at the dressing station.

The third section is devoted to fractures of the vertebrae. Apart from bullet wounds, these fractures may be caused by the concussion of an exploding shell. The case of a Boer is given who sustained a fracture of the third dorsal vertebra from the concussion of a lyddite shell. In most vertebral fractures by bullets the cord is implicated. This appears to be particularly the case with the modern penetrating projectile. In the days of the chassepot simple bone injuries without cord lesion were not uncommon. Even without penetration of the dura the cord may be damaged by the passing of a bullet at a high velocity. Several examples of this were recorded in the South African war.

In the chapter on thoracic wounds chief interest attaches to those of the lung and the heart. In connexion with lung wounds, questions of transport appear to have great influence on the prognosis. The experience of Makins is quoted, and his comparison of the cases of haemothorax which were treated in field hospitals or conveyed by proper ambulance wagons with those which had to submit to long journeys in ox wagons. In spite of the penetrating power of modern bullets, it appears that they not uncommonly remain in the thorax, but convalescence is not lengthened thereby, and late ill-effects are unusual. It was quite a different matter in the case of the old bullets of large calibre; if they remained, empyema, lung abscess, and gangrene were common consequences, usually ending fatally. The mortality from lung wounds treated in hospital was 14 per cent. in the South African war, in the American war (1898) 27 per cent., in the Franco-Prussian war 47 per cent., and in the Crimea more than 80 per cent. Much interest attaches to the section on heart wounds, especially to the remarks on the treatment of haemopericardium. Dr. Hildebrandt agrees with those who advise that the effusion should be left alone.

Penetrating abdominal wounds have shown a high mortality in all wars, from 92.5 per cent. in the Crimea to 30.4 per cent. in the South African war, which is the lowest on record. Dr. Hildebrandt writes a most admirable chapter on the subject in which the differential diagnosis of the lesions is carefully described. The author's South African experience furnishes him with many interesting illustrations. Is a penetrating wound of the abdomen to be treated expectantly or by operation? As Dr. Hildebrandt says, it was accepted as a dogma that all such cases should be operated on until we learnt otherwise in recent campaigns. He lays it down that laparotomy is not to be done where only the direction of the wound points to penetration of the abdomen. Cases in which the signs of visceral penetration are quite definite cannot all be treated on one principle. Shrapnel and shell wounds and point-blank small calibre wounds are mostly hopeless. In other cases, when the signs of penetration are definite but the general condition is good, laparotomy is indicated, but only if the surroundings are favourable. Intra-abdominal haemorrhage is an absolute indication. Transport has a great influence on the course of abdominal cases.

The last section of the volume is on wounds of the extremities. It is illustrated by many good radiographs. The book is a noteworthy addition to the literature of military surgery, and we hope it may find a translator in this country.

TRADE DISEASES.

In preparing his handbook on workmen's diseases,[2] Dr. Theodor Weyl, of the Technical College in Charlottenburg, has had the assistance of forty medical experts drawn from Germany and Austria-Hungary. Both editor and publisher have succeeded in presenting a readable book. There is a good list of contents, a complete index, and a list of nearly 1,000 authorities. To avoid fatiguing references to other chapters facts have been repeated under various headings—hence caisson disease is found under mining and tunnelling; similarly, ankylostomiasis is reproduced under mining and brick-making; while with lead poisoning the repetition is much more frequent. This, however, is no drawback to the book; besides, where there are many writers repetition is unavoidable. The editor has tried to bring the book up to date, and generally speaking has succeeded. There are chapters devoted to diseases of telephone operators, makers of electrical accumulators and of Roentgen tubes, workers in electrical power stations, with valuable notes on the effects of the various currents and their tension, and with a chapter devoted to first aid in electrical accidents. Thirty-four pages are devoted to the chemical industries, which is not by any means too much, remembering the part Germany at present is playing in the chemical world. The book is thoroughly German, in so far as there are very few references to French literature and fewer still to English.

The introductory chapter on industrial diseases in

[1] *Die Verwundungen durch die modernen Kriegsfeuerwaffen, ihre Prognose und Therapie im Felde* (Wounds caused by Modern Firearms, their Prognosis and Treatment on the Field). By Dr. Graf and Dr. Hildebrandt. Bd. II. Special part. Berlin: A. Hirschwald. 1907. (Demy 8vo, pp. 578. Figs. 180. M. 12.)

[2] *Handbuch der Arbeiterkrankheiten.* Von Dr. T. Weyl. Jena: Gustav Fischer. 1908. (Sup. Roy. 8vo, pp. 878. M. 22.)

general, from the pen of Dr. Weyl himself, is a good one. It deals with the statistics, preventive measures, and insurance against disease and accidents. It is a picture of what the German Government has done for the working classes.

The book is divided into two parts—(1) the diseases to which workers are subject in various trades; (2) industrial diseases affecting the organs of the body, skin, eye, kidneys, etc. Acting on the views of Professor Sommerfeld, "among industrial diseases are included those which, without having any special feature of their own, appear among certain groups of workmen in greater proportion than among the working classes in the same district in general."

Each chapter begins with a short description of the trade, and states how those who are occupied in it are exposed to disease and accident. The preventive measures and treatment are also discussed. Owing to the manner in which the medical aspects of the various industrial questions are handled, the book has considerable interest for the medical practitioner rather than for the factory inspector.

Taking a chapter or two for consideration—such, for example, as the diseases of miners and tunnel workers—it appears that the death-rate of miners is not greater than that of the people of Prussia in general. The rate of mortality sank from 917 in 1863 to 341 in 1880, and since then the conditions have still further improved. The writer of the article on miners is not of the opinion that coal dust prevents or retards phthisis. Six pages are devoted to ankylostomiasis; they are written by Dr. Lindemann of Bochum, who favours the view that the ankylostoma lives on the blood of its host, and not, as Loos of Cairo teaches, on the mucus and delicate epithelium of the intestinal mucous membrane. He thinks that infection through the skin is possible but problematical, and he is not disposed to assign such importance as some in this country to the presence of excess of eosinophile corpuscles in the blood. Miners' nystagmus is also dealt with. Nearly all the trades and the diseases that may possibly arise in connexion with them are reviewed, as also the various forms of gas poisoning—CO, H_2S, and others. The summary of the chapter which we have made gives a general idea of the character and value of the book.

TEXTBOOKS OF PATHOLOGY.

THE fifth edition of Dr. STENGEL's *Textbook of Pathology*[3] has received extensive revision, particularly in the chapters on inflammation, immunity, and animal parasites. The book covers the whole subject of pathology, including bacteriology, from the standpoint of the clinical pathologist, and is intended to provide the knowledge requisite for the medical student. The book is well planned and covers a wide area, but in some places the author has not been quite successful in the difficult task of emphasizing the main points which a student ought to grasp, without encumbering him with with controversial details which he cannot be expected to assimilate. The treatment of opsonins is a case in point. The only reference which we have found to this subject is on p. 227, where it is dismissed in eight lines. Perhaps Dr. Stengel does not think that opsonins have come to stay, but at the present time they are of much concern to the clinical pathologist, and it is also necessary for the up-to-date general practitioner to know something about them, since he has to decide in the case of many bacterial infections whether vaccine treatment, controlled by determinations of the opsonic index, is or is not to be recommended. A more serious fault we have to find is that some of Dr. Stengel's statements are expressed so carelessly, we do not wish to say inaccurately, that the student is in serious danger of forming erroneous ideas. To quote one instance, on page 271 Dr. Stengel informs the student of the difference in cultural characters between the avian and the human tubercle bacillus. If he consults any bacteriological textbook, he will find that the essential difference is that the former produces a slimy and the latter a dry growth. Dr. Stengel makes no mention of this, but says that the avian bacillus grows more luxuriantly upon glycerin-agar and blood-serum, whereas it does not grow upon potato. He will find that all bacteriologists are agreed that many human bacilli grow luxuriantly upon glycerin-agar, that blood serum, unless glycerine be added, is a much more favourable medium for the human than for the avian bacillus, and that both human and avian bacilli grow well on potato media. We do not desire to press Dr. Stengel too hard on relatively minor points, but we cite this as an example of the desirability for a little more precision in the preparation of students' textbooks.

The new edition of Professor KREHL'S *Pathological Physiology*[4] is carefully brought up to date and contains many improvements, the most important of which is the revision of the chapter on infection and immunity. In our review of the third edition we thought it our duty to call attention (BRITISH MEDICAL JOURNAL, March 4th, 1905, p. 481) to the brevity and inadequacy of this chapter; in rewriting and expanding it the author has obtained the assistance of Professor LEVY of Strassburg, and the result is that this part of the subject is now handled in a much more satisfactory manner. As we remarked in our former review, many of the chapters are very thorough and well put together, and the work as a whole is a valuable contribution to medical science. The appearance of two new editions since 1904 is a sign that the book is gaining the appreciation it deserves.

We are glad to see that Professor HEWLETT'S book on *Pathology, General and Special*,[5] has already attained its second edition. The book is frankly unambitious in its scope; it aims at no more than teaching the average medical student the necessary minimum; but, as a brief outline of a very extensive subject, it is excellent. For the more difficult medical examinations, which now demand a more thorough knowledge of pathology than they did formerly, the book is hardly sufficient, but it will serve as a useful preliminary course, to be supplemented by wider reading when the essential principles have been grasped. The new edition has been carefully brought up to date and contains many excellent illustrations.

In his *Aids to Pathology*,[6] Dr. CAMPBELL manages to compress a good deal of information into a small space. The author shows a keen desire to bring the student up to date, evinced particularly in the pages on animal parasites, immunity, and opsonins; and throughout the book there is observable the laudable habit of quoting from recent literature. The book will be found helpful to the medical student when used, in accordance with the author's intention, as a framework to be filled in by knowledge of pathology acquired from other sources. The lazy student, who fancies he can acquire all he ought to know about pathology by committing a book of this sort to memory a few weeks before his examination, will do well to remember that examiners are wily persons, and specially plan their questions with the object of defeating candidates who rely solely on this method of preparation.

In his *Manual of Pathology*[7] Dr. MCCONNELL attempts to cover the whole of the ground designated by the terms general and special pathology, bacteriology, the method of making *post-mortem* examinations, and histological and bacteriological technique. As the book is of quite small dimensions, the amount of space devoted to each of these subjects is necessarily very limited, but the purpose of the author has been not to compete with the larger textbooks, but to enable the student "to rapidly acquire the salient points of a subject." The author's phrase is, no doubt unintentionally, a delightful euphemism for what is vulgarly known as "cramming," a process not to be recommended, since the knowledge of pathology is useful to the practitioner, and ought not to be forgotten when the examination days are over. But if the student will

[3] *A Textbook of Pathology.* By Alfred Stengel, M.D. Fifth edition. Philadelphia and London: W. B. Saunders Company. 1906. (Demy 8vo, pp. 979; 399 illustrations and 7 plates; 21s.)

[4] *Pathologische Physiologie.* Von Dr. Ludolf Krehl. Mit einem Beitrag von Professor E. Levy. Fünfte Auflage. Leipzig: F. C. W. Vogel. 1907. (Med. 8vo, pp. 669. M. 15

[5] *Pathology, General and Special.* By R. Tanner Hewlett, M.D. F.R.C.P., D.P.H. Second Edition. London: J. and A. Churchill. 1907. (Post 8vo pp. 597. 10s. 6d.)

[6] *Aids to Pathology.* By H. Campbell, M.D. London: Baillière, Tindall, and Cox. 1908. (Fcap. 8vo, pp. 184; with illustrations in the text. 3s. 6d.)

[7] *A Manual of Pathology.* By Guthrie McConnell, M.D. Philadelphia and London: W. B. Saunders Co. 1906. (Cr. 8vo, pp. 523. 12s.)

steer clear of the possible danger we have indicated, he may obtain a fairly good general notion of pathology from Dr. McConnell's textbook. The "salient points" tread on each other's heels in rapid succession, but they are clearly expressed, and are often supported by excellent illustrations.

ANIMAL PARASITES OF MAN.

DR. MAX BRAUN has found it necessary to bring out a fourth edition of his well-known book, the *Animal Parasites of Man*.[8] The third edition, it will be remembered, appeared in 1903, an English translation of this appearing in 1906. The latter, though containing most of the matter of the original, also had parts added by the translators, some of those additions enhancing the value of the work, others slightly detracting from it. This is, of course, the usual fate of a translation with additions by the second author or authors, their views often differing totally from those of the producer of the work. In the present edition Dr. Braun has kept things as in the last German edition, with this exception, that he has added a new clinical therapeutical part written by Professor Otto Seifert of Würzburg. In all standard works of the nature of textbooks the parts are usually of unequal merit, some being of little use to students of any given special subject. This is so here. The part on trematodes and cestodes is probably the best in the book, that on the nematodes, especially for the filarial division, is poor in comparison and imperfect in detail. The protozoal parasites, which come first, are dealt with fairly fully, and so are the parasitic insects. The bibliography is extensive, and is so full that it must prove of the utmost value to students of the subject. In addition, many new details of discoveries made since the last edition appear, the most important being the *Schistostomum japonicum*, and a fuller description of the *Necator americanum* in the helminthological part. The spelling of ankylostoma with the "c" instead of the "k" appears somewhat peculiar, but it is certainly better than "agchylostoma" or "anchylostoma." The addition of a clinical section is good and the subject is, on the whole, well treated by Professor Seifert. A little more experience and personal knowledge of some of the specially tropical diseases, kala-azar, for example, would have been of advantage, most of the treatments being second-hand, and chiefly of German origin; though there are some points in the book which call for adverse criticism, yet we know of no better work on the helminths.

EMPLOYERS' LIABILITY.

AMONGST the many works which have been published on the law relating to employers' liability and workmen's compensation, the third edition of Mr. DAWBARN'S *Employers' Liability and Workmen's Compensation*[9] occupies a prominent place. The author has divided his subject into three parts. Part I treats of the liability of employers at common law; Part II relates to the Employers' Liability Act, 1880; while in Part III, which forms the bulk of the work, the Workmen's Compensation Act, 1906, is exhaustively dealt with. He has adopted a method of dealing with this Act which commends itself to us. The text of the measure is printed at one place, to be easily found by the edges of the pages being picked out in red, while the comments are reserved for the latter part of the book. Take, for instance, the important definition of "workman." This is defined (in the Act) at p. 135, the reader being then referred to pp. 165 to 169 for an explanation of the definition. Two other features of the work are the addition of notes on the Canadian law by Mr. Forster-Boulton, and the publication in an appendix of all the printed proceedings in a workmen's compensation case which was taken to the House of Lords. This appendix should be a mine of useful precedent to persons who may hereafter be compelled to carry a case to the highest tribunal. In so far as the Workmen's Compensation Act affects the medical profession, the book seems to contain everything that can be desired, including the rules and copies of all the forms which have to be used by certifying surgeons and medical referees. When we examine Mr. Dawbarn's excellent work with a view to solving some of the difficult questions raised by the Act of 1906, we soon become aware that he himself—an expert in the matter—is often puzzled. Thus, at p. 169 he writes: "The author has been asked again and again, 'Are we to be responsible for window cleaners in offices and elsewhere?'" In some cases Yes, in some cases No, is the correct but not very enlightening answer. If a man having his house repainted were to say to the decorator, "See the windows are cleaned," he would not be liable. On the other hand, if he were to hire a man to come and do them every Monday, he would be liable. The truth is that, until the judges have been called upon to consider this matter, the doubts now existing as to its scope and effect will not be dispelled. Works like that before us, however, give much assistance both to the lawyer and the layman.

[8] *Die Tierischen Parasiten des Menschen.* Ein Handbuch für Studierende und Ärzte. Von Dr. Max Braun, G. C. Professor der Zoologie und vergl. Anatomie, Direktor des Zoologischen Museums der Universität Königsberg I., P.R. Vierte, vermehrte und verbesserte Auflage. Mit einem klinisch-therapeutischen anhang bearbeitet von Prof. Dr. Otto Seifert in Würzburg. Würzburg: Curt Kabitzsch (A. Stuber's Verlang). 1908. (Roy. 8vo, pp. 634; mit 325 abbildungen im text. M.15).

[9] *Employers' Liability to their Servants at Common Law, and under the Employers' Liability Act, 1880, and the Workmen's Compensation Act, 1906.* By C. Y. C. Dawbarn, M.A., of the Inner Temple, Barrister-at-Law. Third Edition. With Notes on the Canadian Law, by A. C. Forster-Boulton, M.P., of the Inner Temple, Barrister-at-Law. London: Sweet and Maxwell: and Toronto: The Carswell Co., Limited. 1907. (Roy. 8vo, pp. 614. 21s.)

NOTES ON BOOKS.

AMATEUR photographers will be interested to learn that the 1908 edition of *Wellcome's Photographic Exposure Record and Diary* is now ready. The experience gained in preparing the nine previous editions have made it possible to increase the utility of the book. Bound up with the printed pages of condensed photographic information is a complete diary for 1908—one page for each week—together with ruled pages for systematically recording the details of over 300 exposures; also pages for memoranda and for recording the exposures found to be correct when printing from negatives on bromide, gaslight, platinotype, carbon, and other printing papers. The book is enclosed in a neat wallet cover, lettered in gold, and fitted with a pencil and a pocket for storing proofs, etc. A new and important feature of the 1908 edition is that it entitles purchasers to a hanging card for the dark room, giving the relative exposures required when using any one of 84 varieties of bromide paper or lantern slides. The addition of a handy table for calculating exposures in photography at night is another new and useful feature. *Wellcome's Photographic Exposure Record and Diary* is suitable for use in all quarters of the globe. For the convenience of users in different parts of the world three editions are issued: (1) The Northern Hemisphere edition (bound in light green), for all countries north of the Tropic of Cancer; (2) The Southern Hemisphere and Tropical edition (bound in dark green), for all countries south of the Tropic of Cancer; (3) the United States edition (bound in red), for use in the United States of America. When purchasing, care should be taken to specify which edition is required.

In a lecture, delivered *in aula*, and now published in separate form, Professor ANTON discusses briefly the main facts of aphasia and allied disturbances of speech as elucidating the intimate and mentally reactive relations of speech and thought.[10] The subject is treated very briefly, and from the fact that the analysis of the matter is of a very elementary kind we judge that the reprint is intended for non-medical students, or perhaps as an introduction to a more thorough study. The pamphlet is philosophic in character and exceedingly pleasantly written.

[10] *Ärztliches über Sprachen und Denken.* [The Medical Aspect of Speech and Thought.] By Professor G. Anton, Univ. Halle. Halle-a.-S.: Carl Marhold. 1907. (Med 8vo, pp. 20 M 0 60.)

MEDICINAL AND DIETETIC PREPARATIONS.

Cake Flour.

WE have recently examined a sample of the cake flour supplied by Messrs. Latham and Co., Limited, Liverpool, under the name "Cakeoma." This article is intended for the easy and rapid production of cakes of various kinds, and consists of flour, sugar, flavouring, and carbonic-acid-producing ingredients. Examination showed it to be free from objectionable constituents, and a cake produced from it showed that excellent results can be obtained by its use.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 211.*)

Antivivisectionist Testimony.

Evidence of the Hon. Stephen Coleridge (continued).

Asked if the power to prosecute was placed in the hands of practically anybody it would lead to a certain amount of carelessness on the part of the real official of the Home Office, the Home Secretary, he said he did not think that. He thought they could go by the analogy, for instance, of the Children's Society, on the Council of which he sat. In practice it was the Society that instituted proceedings; but therefore because the Society instituted prosecutions he had never observed that it made the police any more remiss in their readiness to assist or carry out the law. Asked if he disputed the fact that discoveries had been made by these experiments which had been of use to human beings, he said that was a question for experts. He would not like to express an opinion one way or the other. To elucidate his position he added that with regard to the results of vivisection, he saw no objection to human beings benefiting by the results, provided that those results were not continually produced by fresh infliction of pain, and serious pain. In reply to Sir William Collins, who said that, from a hasty perusal of his Bill, he did not see any provision in it for certificates such as those obtained under the present Act, Mr. Coleridge said they left Certificate A alone, but not Certificate B. Certificate B was practically abolished in the sense that one must not allow the animal to recover. Asked if he made any distinction as to what animals should be used under his Bill, he said, No. Asked if he had formed any opinion as to the number of inspectors who would be required if his Bill became law, he said that if the Bill became law, his hope would be that, instead of persons now vivisecting all over the country, when they had a serious object, which would be recognized by the Home Office as a serious object, it would be worth their while to come to some central place, there to perform the series of operations which they wished to do under the eye of the Inspector; and he would look to a large reduction in the number of registered places, thereby saving the time and the travelling of the Inspectors. He saw no reason for a very large increase in the number of Inspectors, provided that their whole time was occupied in inspecting, and provided that the places where they inspected were not too far distant from one another. There was nothing in the Bill which limited the number of registered places. He left the number of Inspectors to the exigencies of the case. Inspection was the whole thing in his Bill. In his view the present Act contemplated the necessity of inspection, but did not provide that it should be efficient. In reply to further questions, he said he did not think that if any valuable invention had been discovered by painful vivisection of animals they were thereby precluded from using it. Though he asserted nothing as to the usefulness of vivisection, as an ordinary layman it was open to him to criticize any statement that was brought forward asserting great benefits to mankind in the way of lowering the death-rate from any particular disease. In any case of that kind he would examine the death-rates at Somerset House, and think himself not precluded from bringing them before the public. Asked whether he desired to say anything with regard to the claims made by previous witnesses as to the beneficial effects upon the diphtheria mortality arising from discoveries due to vivisection, Mr. Coleridge said he had made a table from the death-rates per 1,000 000 persons living, and he thought the fairest and best way to do it was to group it in quinquennial periods, so as to avoid the slight inequalities of various years:

He began with 1876, and came down to 1905. In the first quinquennial period, from 1876 to 1880, the average mortality per 1,000,000 persons living from diphtheria was 121; in the next quinquennial period it was 156, in the next 170, and in the next 253. That quinquennial period reached down to the year 1895, and the *Encyclopaedia Britannica* told them that the antitoxin treatment began in the latter part of 1894, so that it fell just at the end of that quinquennial period. In the two quinquennial periods subsequent to the introduction of antitoxin, in the first the death-rate was 272, and in the second it was 204. That came down to 1905. So that both the averages, taking the last two quinquennial periods covering ten years since the introduction of the antitoxin, were considerably higher than in the period from 1876, higher than the three periods during which the antitoxin was not used.

He did not set any great store by that, except that there was the fact, when they claimed to have cured that disease by that particular remedy, that the death per 1,000,000 persons living appeared to have gone up. In reply to further questions, he said that under his Bill if an animal were inoculated with a substance that created a painful disease in it, it would be the duty of the Inspector to see that animal frequently, and if it were in a severe condition of suffering to order it to be killed painlessly. Asked if under the provisions of his Bill, and with the inspection it provided, vivisection could be carried on without inflicting suffering upon animals, he said that was his hope. In reply to Sir Mackenzie Chalmers he said he had never seen an experiment himself, and never wished to see one, and had not any intention of seeing one. Asked if he had ever seen any animal after an experiment in a physiological laboratory, he said he was wholly unacquainted with the thing from personal knowledge. His knowledge was derived from reading and from what he had been told. Asked if he had had communications with licensees, and discussed the question with them, he said he knew licensees; he had met them and talked to them. Asked if he accepted their statements, he said that was rather a large question. It depended upon the man. Asked if he knew that at present a million lives were lost every year in India from plague, he said he did not know that. Asked if he thought experiments on rats and guinea-pigs to test the mode of transmission of plague were justifiable, he said it depended entirely upon the amount of pain involved. Under his Bill it would be the duty of the Inspector to have the animal destroyed as soon as it manifested signs of severe suffering. The experiments would be permissible under the Bill. Asked if he thought the cancer research now going on was unjustifiable, he replied that it was about time that some period should be put to the numbers and the quantity of suffering inflicted for that purpose. Asked if he thought that the induction of cancer in mice was a painful experiment, he said that was a matter for experts. If it was painful, he said it should be dropped as soon as the animal showed signs of severe suffering. There were cancers, he believed, in the human family which were not painful and some that were. He presumed it was probably the same with animals, but he did not know. Asked whether he thought it was justifiable to subject calves from which vaccine was prepared to a considerable amount of inconvenience if not severe pain, he said he was an antivaccinator on the ground of the liberty of the subject quite apart from any other question. He agreed that they must have vaccine if people were to be voluntarily vaccinated, and said that that would not come under the purview of his Bill. That was a trade product. It was not experimentation for the purpose of scientific research. He presumed that the preparation of antitoxin for diphtheria also was a trade product. It would not come under the purview of his Bill. Asked about experiments for the purpose of standardizing preparations which could not be standardized by chemical means, he said that if the Home Office issued licences for the purpose merely of standardizing, that was not an experiment nor a new discovery; therefore he thought such a licence was absolutely outside the Act, and ought not to be granted.

Asked if, assuming that one was not justified in causing pain to animals for the purpose of alleviating human suffering and the advancement of knowledge, they were justified in killing and maiming animals in sport, he said he was not a sportsman; personally, he had never shot a bird. Asked whether, if the law dealt with one, it ought not to deal with the other, he said it did not seem to come within the purview of his Bill. Asked about the view of his Society on that question, he said his Society had no opinion on that matter; it was simply a Society for the Prevention of Vivisection. He would be going outside his rights and committing a breach of trust as regards its many subscribers if he devoted any of its funds for agitation against anything else. Asked for his private opinion, he said they had no right to inflict unnecessary pain on animals in killing them, and therefore if any sport inflicted unnecessary pain on animals in killing them, he objected to it personally. He did not bring any accusations against others who did, but so far

did he object to it himself, that he had done his best strenuously to support the Spurious Sports Bill now before the House of Commons. His consistency was perfect, because he did not shoot. He had never even hooked a fish. Asked if it was a consistent attitude for his Society to take up, only to deal with one form of pain to animals, leaving probably infinitely worse forms of unnecessary pain untouched, he said there was the Royal Society for the Prevention of Cruelty to Animals, whose purview was the whole cruelty performed in the world in all forms to animals of all sorts. His Society had taken up one particular form of cruelty to animals, and devoted themselves to it alone, because in their opinion the Royal Society for the Prevention of Cruelty to Animals had neglected it. Asked if his Society published detailed accounts of its income and expenditure, he replied in the affirmative. Asked if he knew whether the other societies he referred to published detailed accounts or not, he said he thought he had most of them there. (He handed them in.) In reply to Sir Mackenzie Chalmers, who asked about the object of his statement in comparing the income of his Society with that of others, he said his object was purely egotistical, to persuade the Commission, if he could, that his was the most important Society in the antivivisection world, and to claim greater attention for his evidence than for that of small obscure societies which had hardly any address and no income. Every other society except his, so far as he knew, confined its attention solely to advocating the total abolition of any vivisection whatever, and they all differed from his Society, and somewhat acrimoniously on occasion, because his Society did not confine itself to that utopian policy, but were anxious and ready to advocate anything they could for the amelioration of the condition of vivisected animals. He thought it a very valid argument in favour of their policy that the vast majority of antivivisectionists of England supported them and not the others. Continuing, he said he would prohibit all demonstration experiments. He would do so on another ground besides on the ground of the animal, though he did not particularly object to it on the ground of the animal—that was to say, the animal was under complete anaesthesia, and destroyed before recovering consciousness. He thought, on the whole, those conditions were more likely to be carried out in the presence of a lot of people than in the solitude of a laboratory. But he thought from the evidence before that Commission, and from the evidence brought before his Society, that it did not tend to edification. He did not think it was right that young people should witness these things if they could be prevented. Asked if he drew any distinction between witnessing operations of that kind on an animal and an ordinary surgical operation, he said he drew a very large and grave distinction. In his opinion, when students went into the theatre of a hospital, what they witnessed there was a beneficent operation undertaken with gravity by the surgeon for the benefit of the patient, and a totally different atmosphere of feeling must be present generally from that which obtained in a laboratory, where the simple thing was to find out whether the spleen did this and the blood pressure did that, and had no relation to the benefit of the animal of any sort. Asked in regard to the total prohibition of curare, he said his objection was that the most careful Inspector could not tell, if the animal had curare in a certain quantity injected into it, from any manifestations on the part of the animal when the real anaesthesia passed off. It was impossible to protect an animal from the extremest torture if curare was permitted to be used at all. Asked if it was possible to keep up the anaesthetic certainly and surely while the animal was under curare, he said, No, not certainly and surely. No one could tell whether an animal was suffering if it was under curare, except by manifestations it made itself of sensation. One could not know the amount of anaesthetic given from a bottle in another room. There might be a mistake, and every animal differed from every other. On its being put to him that if a person skilled in giving anaesthetics gave the anaesthetic properly there was no danger, the witness replied, What did the most skilled anaesthetist in the world do when he was administering anaesthesia to a patient? He did not merely watch a bottle and see how much he administered; he watched the patient for signs of life and sensation, and it was by those signs that he was guided. Asked if that was not because he was afraid of the patient dying, he said, Very likely, but he hoped he was also afraid of the patient suffering. In reply to further questions, he agreed that his Bill would prevent experiments which had the effect of producing any painful disease where it might be necessary for the experiment to let the disease run a certain course, if it was a painful disease. On its being further put to him that animals showed very little sign of pain in case of chronic diseases, he said he did not know that; he should have thought they did. That was for the Inspector to decide. If he said that an animal was not suffering at all, he was ready to take his word for it. Proceeding, he said, Take such a thing as tetanus—that was what his eye was upon. If one injected tetanus into an animal, it got dreadful sufferings. Such an animal should either be placed under anaesthetics when it began to manifest severe signs of suffering or be killed. In reply to further questions, he said one could not have a measure of pain. There was no such thing as a pain gauge after all. If science could be advanced contemporaneously with painless vivisection he was glad to hear it; but he did not see why science should be advanced through suffering any more than any art. Asked whether if any suffering was caused he would stop even what skilled people said was a most useful investigation, he said he was not an unreasonable man. When he said suffering he meant real severe suffering. On its being pointed out to him that his third clause, which said:

> There shall not be applied to the eye of an animal by way of experiment any matter or substance for the purpose of absorption through the conjunctival membrane,

would prevent the injection of cocaine, he said it was not meant for that, of course. The object of the clause was to protect the eye from being used as the nursing ground for bacteria. Asked if he put in any obligation that the names of the persons who were to sign the certificates should be disclosed, he said, No, but he thought that most important. Asked what was the object of having the names published, he said he thought that a man would think twice, or even perhaps three times, before he signed a certificate exempting a man from using anaesthetics if he knew that his name would be known to everybody as having done it. He did not think that anybody would have been found year after year to sign a certificate for Dr. Klein if he knew that his name would be published. On its being pointed out that Dr. Klein had done nearly the whole of his work for the Local Government Board, he said he did not know. Asked if he was aware that at the time when Dr. Klein gave evidence he said he was somewhat imperfectly acquainted with English, the witness said, Yes. He knew also that he asked to correct his evidence, and that the Royal Commission declined to have anything to do with his corrections. He agreed that they published both Dr. Klein's evidence and the corrections. Anything more condemnatory of his conduct could not be conceived. He read Dr. Klein's letter to the Secretary:

> Dear Sir,—I return you my evidence corrected. I may mention to you that when under viva voce examination, the fact of my being a foreigner made me often not able to appreciate all the purport of the questions which were asked of me, and that therefore my answers were not always such as I would have desired to give if I had quite understood the questions. In revising the evidence I have endeavoured to remove the effect of any such misapprehensions.—I am, etc., E. Klein.

Mr. Baker, the Secretary, replied:

> Sir,—I beg to acknowledge the receipt of your letter of the 16th instant, together with the proof of your evidence, and to reply that, as your corrections appear to me to have exceeded the latitude usually allowed to witnesses, I must lay it before the Commission, and take their directions as to the course I am to pursue.—I am, etc., Nath. Baker (Secretary). P.S.—I must ask you to return me the proof I originally sent you, which you damaged, for, as I told you when I sent you the duplicate, I am answerable for all the copies that are supplied to me.

Mr. Baker wrote again:

> In my letter of the 12th inst., in which I forwarded you a second proof, I told you that I must have the original proof back. On the 17th inst. I again asked you to return it to me. I regret that I must now formally request you to return it to me at once.

Dr. Klein replied:

Dear Sir,—I am very sorry to have given you so much annoyance, as it appears from your letter. As I have stated on the occasion of my asking for a second proof of my evidence, the first proof has been accidentally damaged, so much that it was quite useless. I therefore destroyed it, and am not in a position, consequently, to comply with your request. I beg again to apologize if I should have put you to any inconvenience.—Believe me, etc., E. KLEIN.

To which he got this answer:

Sir,—Your letter of the 16th November has been considered by the Commission, with the proposed alterations of your evidence. These appear to the Commission to be so much at variance with the letter and the spirit of the answers you gave at your examination that the substitution cannot be permitted. The Commissioners direct me to say that they observe with regret that, after my letter of 12th November, you should have destroyed the proof I originally sent you, and requested you to return. If you desire it, the Commissioners will include in the appendix your letter and the proposed alteration, with the correspondence which has passed with reference thereto.

And they did it. The witness once more asked to be allowed to read Professor Huxley's letter to Mr. Darwin. The Chairman said he did not think that reading what he had now read made any difference on the question of Professor Huxley's letter. He did not understand from these letters that the Commission declined to receive his corrections; they said they would publish them as his statement of what he wished his evidence to be altered to. They published both the evidence and the corrections. Asked if he knew whether Dr. Klein had done any operations except inoculations at the time he gave his evidence, Mr. Coleridge said he did not know. Asked if he knew whether since the Act Dr. Klein had done anything under his licence for the Local Government Board except inoculations, he said he had not the slightest idea what Dr. Klein had done. He had the run of the laboratory at the Brown Institute, and, as the Inspector was not there, he did not suppose that anybody knew what he had done. In reply to the Chairman, who said he was told by Sir William Church that it was a good many years, possibly twenty, since Dr. Klein ceased to have any connexion with the Brown Institute, Mr. Coleridge said he did not think that was so. There it was:

1904. E. Klein, Brown Institution, Wandsworth Road, London.

On Sir William Church pointing out that that was when he was acting under the Local Government Board, the witness replied that he could only say that Dr. Klein was licensed to perform experiments at the Brown Institution. In reply to Sir Mackenzie Chalmers, who asked if he thought it very material what experiments Dr. Klein was authorized to perform, the witness replied that he thought it was very material. Asked in regard to his statement that he abominated a statute which authorized gross inhumanity, whether he charged Lord Rayleigh, who gave evidence on behalf of the Royal Society in support of the statute, with inhumanity, he said, Of course, if Lord Rayleigh said that a great deal had been gained from the application of experiments on animals, that was Lord Rayleigh's opinion. He was not there to deny that. On its being pointed out that he was there to suggest an alteration in the existing law, which the Royal Society deprecated, he said that in any alteration of the existing law he trusted that nothing would be done to hamper the legitimate employment of the method. The legitimate employment of the method was not hampered by his Bill, but he considered that torturing animals was an illegitimate method. Asked if he said the Royal Society suggested any alteration in the existing law, he said he did not say they did. They had not had his Bill before them; they did not know what the suggestions were; they did not say anything about the law, as a matter of fact; they simply said that they trusted that nothing would be done that would hamper the legitimate employment of the method. There was no word about the law there or any alteration of the law. On its being pointed out by Sir Mackenzie Chalmers that the Royal Society said it was the bounden duty of the President and Council to urge that those safeguards should be so framed as not unnecessarily to interfere with that advancement of knowledge to promote which the Society existed, he said he entirely endorsed that. Asked with regard to the sentence in their statement:

Such restrictions would not only cripple or arrest the growth in this country of an important branch of biological science, but in so doing would reduce the efficiency of both physician and surgeon to mitigate or cure disease,

he said he endorsed every word of that. He entirely agreed with Lord Rayleigh, but he maintained—and he expected that Lord Rayleigh would agree with him—that if the sole hamperings that he suggested were to prevent animals being tortured, provided that science was left free, those hamperings should be applied at once. If he were asked whether Lord Rayleigh was humane or not, he saw nothing in that statement to suggest that he was not as humane as himself. Asked if there was any point in the evidence of Sir R. Douglas Powell he wished to criticize, he said that Sir Douglas Powell had said he had never seen any experiment in which the animal was allowed to recover from the operation without being killed since the Act. He said that any statement on the part of Sir Douglas Powell as to whether cruelty took place under that Act was wholly out of court. He could not speak of what happened when he was not there any more than he could; and the witness could, with equal emphasis, assure the Commission that cruelty was practised on equally good grounds. Asked if he was aware that Sir Douglas Powell said that he always considered carefully before granting a certificate as President of the College, Mr. Coleridge replied, "Yes, I dare say. If you say so, I accept it." Sir Douglas Powell only considered the physiological fitness and the scientific eminence of the applicant; he did not pretend that he took into consideration the humanity of the applicant. In reply to Sir Mackenzie Chalmers, who asked if he drew in his evidence a distinction between the Home Secretary and the Home Office, he said he drew the distinction which everybody with common sense would draw, that the Home Secretary himself as the head of the Office passed away with the Government, and the permanent officials always must of necessity take into their care such an Act as that, and he had no doubt that they did so. Asked if he knew that the permanent officials were nearly as fleeting as the Home Secretary, he said, Oh, no. Sir Mackenzie Chalmers explained that a man was continually transferred from one branch to another as he got promotion. The only permanent person was the Under Secretary. Many of the cases to which Mr. Coleridge referred must necessarily have gone before the Home Secretary himself. He had to answer the questions in Parliament. The draft of the answer to be given in Parliament was prepared for him; that draft he considered himself, altered himself, asked for further information as he pleased, and he ultimately was the person responsible. In reply, Mr. Coleridge said he brought his indictment against the Home Secretary and his Office; only he had always thought that it was the Home Office officials who really were the persons who framed those answers. Asked if he thought that, with all the attention that had been drawn to these matters in Parliament, each Home Secretary had not considered and laid down his own line, he said, No, he thought they were immensely influenced by the officers behind them. He thought it would be extremely difficult for the Home Secretary to take an entirely new line inside the four corners of the Vivisection Act against the settled habit of the permanent officials. He thought it almost incredible that the same settled habits should be manifested under so many different heads, unless it were that the permanent officials were almost supreme in that matter. Asked if he objected to Sir William Harcourt's proceedings in making a reference to the Society for the Advancement of Medicine by Research, he said, Most decidedly. Asked if he was aware that each licence and certificate when it came back from them was continually altered and modified, and sometimes refused, the witness replied that his point was that so far no evidence had been offered before that Commission to show that the Home Secretary had ever gone contrary to that Association till the Commission was sitting. Asked in regard to Dr. Schäfer's drowning experiments whether he was aware that his object was to verify the researches of a particular method of restoring the drowned, he said he was not aware of it. He accepted their statement. The object did not concern him. He did not say that these experiments were regarded with particular detestation; he said that the permission of the Home Office was so regarded. Asked if it made any difference in his opinion that 34 of the 36 experiments were under anaesthetics, he said it might be that Professor

Schäfer was much more humane than the Home Office. His complaint was that the Home Office permitted him to do them. He did not know whether he did them or not. The gravamen of his charge was that the Home Office gave Professor Schäfer leave to drown and redrown the same dog without anaesthetics. What he did was not known to him nor to anybody but himself. Asked if he would accept Professor Schäfer's version of what actually happened—that the two animals which were not put under anaesthetics were drowned, and not allowed to recover, he said:

You challenge me to make a charge of cruelty against Professor Schäfer. That is not my intention. I do not know Professor Schäfer.

Asked further whether for the purpose of saving innumerable human lives, that would not, in his opinion, be justifiable, he said he had not heard that one single person had been resuscitated in the country by these experiments yet. The witness went on to say that his position was a very clear one. He said that the loftiest motive professed by persons who inflicted suffering upon animals did not justify that inflicting. An act was either right or wrong, and it was quite apart from the motive of those who performed that act. Asked if he objected to drowning as a means of getting rid of superfluous dogs, he said he preferred the lethal chamber at Battersea. On its being put to him that in Edinburgh, at all events, when Professor Schäfer performed his experiments, and until recently, the mode of getting rid of superfluous dogs was by drowning, he said he did not know. It was the resuscitating the dog and then drowning it again which was the gravamen. Asked with regard to Dr. Crile if he would accept that experimenter's own explanation, the witness said, Certainly not—of course not. He had read Dr. Crile's book, and saw what he said, and he accepted that; but subsequent explanations when he was called upon to explain himself by the Home Office, if he was, he certainly did not accept. Sir Mackenzie Chalmers then read some correspondence between Dr. Poore and Dr. Crile. Dr. Crile wrote:

Dear Doctor,—Replying to your favour of June 19th [the date can be got from the previous letter], I beg to say that in the entire series of experiments no animal suffered pain. The reference to the corneal reflex was correctly made, but the animal was not conscious. In the remark to Protocol XVI, page 31, "At one time the anaesthetic was overlooked," simply meant that the animal had recovered far enough from the state of surgical anaesthesia to exhibit a corneal reflex, and begin a slight voluntary movement. By surgical anaesthesia I mean the administration of the anaesthetic to the same degree of anaesthesia as in the human subject in the performance of surgical operations. I wish to emphasize that in no instance did any animal suffer pain. In nearly every experiment I had a special anaesthetization. As I am engaged in an active surgical practice, and have been for years, I feel myself quite competent to state that the animals I have subjected to vivisection have not suffered any more than the patients upon whom I have performed operations. And the latter, I know, have not suffered at all. The experiments were all performed as nearly as possible under the same conditions as operations on patients. I shall at once send a book to the Secretary of State. The delay in my reply was due to my being abroad—just returning yesterday. Thanking you for writing me, and if there is anything more that I can do, please let me know.—Very respectfully yours,

GEORGE W. CRILE.

G. V. Poore, M.D.,
32, Wimpole Street, London.

Mr. Coleridge said it was rather strange that Dr. Crile quoted that one statement that the anaesthetic was overlooked in the letter, and then went on to say, "The animal was coming out of anaesthesia, and the corneal reflex appeared." He did not read his own experiment, because the next words in the experiment were, "The dog became profoundly under its influence," which, of course, meant that the dog had got too much, not too little, "causing a very great fall in blood pressure of 40 mm. in 85 seconds." So that in the book the overlooking was that it got too much, and in the letter the overlooking was that it got too little. The first thing Dr. Crile said in his letter defending himself showed that he was not accurate. There was no allegation against him in that experiment about anaesthesia, because it was there stated that the animal became profoundly under its influence. Asked if he was aware that Sir Victor Horsley saw a good many of these experiments, the witness said he did not know. Asked if he was aware that Sir Victor Horsley was of opinion that no pain was caused to the animal, he said, No doubt he would say that. Asked if he was aware that Dr. Goodbody also saw these experiments, he said, No. His whole position was that the Inspector should be there. If the Inspector had been there he should have been prepared to take the Inspector's word that those animals suffered nothing. The Inspector was not there, and he declined to accept the bare statement of the performer, particularly when the man himself, in his letter of excuse, clearly showed that he was not accurate. He would not accept Dr. Crile's statement at all. Asked if he would accept Sir Victor Horsley's statement as a spectator, he said, Certainly not. He did not accept a person's account of his conduct in an experiment, when his conduct was impugned, for one moment. He said there should have been an Inspector there. Parliament in its wisdom did not trust these men. If it had it would not have told them to appoint an Inspector there to watch them. Proceeding, he said he thought that all these experimenters had the greatest contempt for the Act of Parliament. They would deny a breach of the Act just as he would deny a breach of the Motor Car Act. He drove a motor car, and when he went beyond the speed limit, and a policeman asked him, he said, "No, I am not going beyond the speed limit." Nothing would keep him from going beyond the speed limit except the presence of a policeman in the car; and nothing would keep an experimenter within the four corners of the Act except an Inspector in the laboratory. The examination proceeded:

Surely, if you were asked about the speed limit, and gave your word that you had not exceeded it, you would not expect to be disbelieved?—No, I did not say so. I said last year that, of course, I did, and I exceed it every time.

Chairman: You are apparently not very ethical about motor cars. If you apply your principles as regards motoring to the physiologists, you have very little to say against them?—What I have to say is that they regard the Vivisection Act of 1876 with the same contempt that I regard the Motor Car Act as regards the speed limit. Every motorist who has a motor car, of course, breaks the Act.

What you said was that if you were going more than twenty miles an hour, and were stopped for it, you said that you were going less than twenty miles an hour?—No; on the contrary, I was asked and frankly answered that I was going beyond twenty miles an hour. I did not mean that. I always frankly admit it. When I am summoned and get to the law court, I always admit it.

Then you must not be quite so hard on a physiologist as to say that men are not to be believed on their oath?—I did not mean that; I meant that they regard the Act in the same sense as we motorists regard the Motor Car Act. We do not treat it with very great respect as regards the speed limit.

Sir William Church: Some of us?—Some of us.

Mr. Ram: You think that these people will tell a lie about this because they have a contempt for the Act?—I did not say that.

That is what I gathered. You despise the Motor Car Act, which says that you may not go more than twenty miles an hour. Therefore, on the face of your evidence, you would not mind saying what was untrue with regard to it. You say that these men have a contempt for the Act, and therefore they say what is untrue?—No; I say that they will break the Act with the same facility as I break the Motor Car Act, for the same sense of any lack of morality about it.

If one of these physiologists says, "I performed an operation, and I say the animal did not suffer," is that any reason why they should not be believed?—I do not think it is unprejudiced evidence. What do you expect them to answer? What would you expect Dr. Crile to say, "I of course torture the animals"?

Sir John McFadyean: The same as you do when you are asked about the speed limit?—The difference there is very great. Nobody regards anybody a pin the worse for exceeding the speed limit. Nobody, so far as I know or ever heard of, would hold it up against anybody as a moral fault to exceed the speed limit, but merely a technical breach of the Act; but I think that the public would certainly regard it as a moral offence if Dr. Crile were to admit that he tortured these animals.

Asked if he suggested that the Home Office could have made any further inquiries than they did from persons who were present and from Dr. Crile himself, he said he did not say that. He said that the present Act was most defective, because they could not get at present any information except from the person whose conduct was impugned. That was why he wanted the Inspector to be there always.

(To be continued.)

LITERARY NOTES.

It has more than once been suggested in the British Medical Journal that the use of Latin might be revived as the international language of science. How it may be made to convey the most advanced ideas in pathology has been shown by Mr. Shattock and his collaborators in the *Transactions of the Pathological Society*, now translated to another sphere. Cookery has a close connexion with medicine, and it may therefore not be amiss to state that at the twenty-first annual meeting of the Finnish Medical Union Dr. Sievers, Director of the Medical Department of Finland, an office akin to that of Medical Adviser to the Local Government Board, gave a dinner the *menu* of which was in Latin. Some of our readers may be interested to see how the dishes were described. The *menu* runs as follows:

Medicis Fenniae congressis coenam praebet director medicinae generalis d. XXVII m. septembris a. MCMVII.—Terna panis frusta cum butyro etc. Cerevisia bavarica. Fortissimus Trygg-Heleniae potus.—Decoctum astacorum fartorum. Vinum madeirense. Aqua apollinaris.—Salmo refrigeratus. Vinum ex castello Chablis. Succus rhenanus sine spiritu vinoso.—Caro bovina ex regione columnae vertebralis exsecta variis cum herbis. Vinum Burdigalense. Succus Florilis.—Tetrao cum acetario, cucumere etc. Idem vinum. Idemque succus.—Secunda mensa.—Vinum madeirense. Aqua apollinaris.—Casei cum particulis. Fervidum Moccae decoctum in atrio coffearlo dabitur.

"Kitchen Latin" is proverbially not of Ciceronian quality, but in this case it is at any rate intelligible.

We have received the following letter from Dr. William A. Day, of Bath:

Quite recently a discussion took place in your columns as to the spelling of "judgment." Some reader very properly protested against the absurd practice adopted by yourself of adding on an "e" and making the word "judgement." You retorted by quoting from some dictionary, and the matter ended. I was highly amused, because, if there is one thing certain in this world besides death and the last day, it is that spelling is purely a matter of custom—that is, of majority and convention. I wondered how you had the courage to attempt to settle the spelling of a word by appealing to a book instead of to custom. Now, to-day I received a shock in the matter of English used by you in a leading article. You write: ". . . has been mulcted in damages to the tune of £1,000." Surely, "to the tune of" is pure slang, unworthy of the organ representing the British Medical Association. Besides, mulcted means injured or fined, and damages means harmed or fined. Therefore, being translated, your own words amount to "has been injured in injuries or fined in fines to the stretching (for tune means a thing stretched) of £1,000." Slang in conversation is quite all right and innocent, and, indeed, most convenient and handy and justified by custom, but in written matter intended for educated readers it should be avoided, or, at all events, put between inverted commas. How easy to copy the lawyers and say, "the jury found for the plaintiff with damages £1,000."

There was a time when an iota divided the Christian world; it would almost seem as if the letter *e* in "judgement" has something of the same effect among our readers. Dr. Day would appear to be amused with the facility which Mr. Pickwick—a name inevitably suggested by Bath—envied in the friends of Mr. Peter Magnus. We leave him to debate the question of our "absurd practice" with the Editors of the *New English Dictionary*, who in their turn may possibly be amused by the dogmatic tone in which it is decided by our critic. For ourselves we have only to say that the matter is a *chose jugée*—or perhaps we should say "judgd." The French Institute some years ago found it necessary to issue an announcement that it would receive no more communications on the origin of language. We think it time, with the object of saving space that may more profitably be devoted to matters of greater importance, to make a similar intimation as to the spelling of "judgement." With regard to the second part of Dr. Day's indictment, if he will consult "some" Latin dictionary he will find that *mulctare* or *multare* means to *punish*, with a fine or otherwise. Does not Cicero say: Vitia hominum atque fraudes damnis, ignominiis, verberibus, exiliis, morte *multantur?* "Mulcted in damages" is therefore correct etymologically; it has the fur her merit of being right according to the very code of custom to which Dr. Day appeals, and the paragraph was, in fact, written by a lawyer. As for the phrase "to the tune of," we are sorry that he should have been shocked by it, and we trust that by this time his nervous system has recovered its normal equilibrium. We can only remind him that there was a time when "sham" and "mob" were slang. Swift complained that he had done his utmost for some years to stop the progress of "mob" and "banter," but, as he says, had been "plainly borne down by numbers"; in other words, by the "majority" of which Dr. Day speaks. We venture to express a hope that our sensitive correspondent may live long enough to find the phrase which afflicts him so much admitted into the select sphere of what even he can bring himself to regard as fit for educated readers.

To the *Liverpool Medico-Chirurgical Journal* for January Dr. A. Cassels Brown contributes an interesting article on medicine in the *Paston Letters*. These letters, which are well known to historians, and which Mr. James Gairdner placed at the disposal of the general reader some thirty-five years ago, lift for us (in the words of J. R. Green) "a corner of the veil that hides the social state of England in the fifteenth century." Being family letters, they contain a good deal relating to the health of the various members. In 1451 Margaret Paston, being near the time of her confinement (she signs herself "Your gronyng Wyff"), writes to remind her husband about the purchase of an *Ungwentum Album*. Dr. Cassels Brown thinks it probable that this was identical with the white ointment mentioned by Salmon in the *New London Dispensatory*, which was first published in 1676. Its composition is there given as follows; ℞ Unripe oil of roses, ℥ix; ceruse (white lead) washed in rose water and beaten, ℥iij; with a small quantity of white wax. Salmon says of it:

It is an excellent cooling, anodyne and drying Ointment, good for Scaldings and Burnings, Inflammations, Chafing, fretting or galling of the skin; it drys up Ulcers and takes away their Itching in the time of healing.

Agnes Paston describes briefly but vividly a death by cerebral haemorrhage in writing to her son:

On Tuysday Ser Jon Henyngham yede to hys churche and herd iij massys, and cam hom agayn nevyr meryer, and said to hese wyf that he wuld go sey a lytyll devocion in hese gardeyn and than he wuld dyne; and forthwyth he felt a feyntyng in hese legges and syyd don. This was at ix of the clok and he was ded or none.

In 1464 we have an opportunity of learning the small esteem in which Margaret Paston held the physicians of London. Writing to her husband she warns him against them:

Also for Goddys sake be war what medesyns ye take of any fysissyans of London; I schal never trust to hem because of your fadr and myn onkyl, whoys sowlys God assoyle.

Had the "fysissyans" expedited the passage of these worthy persons into another world? Before condemning the ignorance of these ancient brethren, however, it is well to remember that similar charges are sometimes heard from impulsive relatives even in the present day of scientific enlightenment. A letter written to Sir John Paston by a man with the suggestive name of John Pympe is an example of the coarseness of language which doubtless was common at the time:

Mary, we have herd sey, that the frowys (*fraus*) of Broggys (Bruges) with there hye cappes, have gyven sum of yow grete clappys, and that the fete of her armys doyng is such, that they smyte al at the nowthe, and at the grete ende of the thyeh; but in faith we care not for yow, for we know well that ye be gode ynowh at defence. But we here sey, that they be of such corage, that they gyve yow moo strikys than ye do to them, and that they strike sorer than ye also. But I thynk that the English ladyes and jentylwomen, and the pore also, can do as well as they, and lyst not to lerne of them no thyng; and therefor we drede lest ther hye corages should meve them to make yow warre also. But God defend, for by my trowth than have ye much to do; for hit were better and more ese for to labour iij or fowre dayes with mattokks and pykeisys to over turne yowr sande hills, as we here saye ye do ryht wurshipfully, than only one day to endure theyre fers encountrys; so as ye myht owther gete or save yowr wurshippys by; and loke that ye truste to have no rescow of us, for, so God me helpe, we have ynowh to do in these partyes with the same werrs.

Probably the gentleman to whom this letter was addressed is the one whose name occurs in the will of Margaret Paston, dated February 4th, 1482. After some bequests for the benefit of lepers at Norwich and Yarmouth, she says:

I bequeth to Custaunce, bastard daughter of John Paston, Knyght, whan she is xx yer of ages x marc.

Dr. Cassels Brown mentions that Margaret Paston died in 1484, the year in which George Broun or Brown, elder brother of his direct ancestor, Richard Brown, of Fordell, Perthshire, was consecrated Bishop of Dunkeld by Pope Sixtus IV.

PUBLIC HEALTH OF LONDON.

I.

The Report of the Public Health Committee of the London County Council for the year 1906, the publication of which was noted in our issue of January 4th last, deals with a large number of subjects which concern the County of London, including the birth and death rate, epidemic diseases, housing, and inspection of food. Embodied in this report, as an appendix, is that of the Medical Officer to the London Education Committee, with which we dealt fully some time ago, and reports on tenement houses, sanitary officers' inspection of food, and other matters, also inserted as appendices.

Deaths and Death-rates.

An elaborate series of tables show that the number of deaths in the Administrative County of London in 1906 (52 weeks) was 71,155, giving an annual death-rate of 15.1 per 1,000 persons living. It is also shown that the rate of mortality in 1906 was considerably lower than that of the period 1891 1900 at each age-period of life and for each sex, except at the period of 85 and upwards. It also appears that during the year 1906, as compared with the decennium 1891-1900, there was a saving of 18,924 lives, representing a gain to the community of 734,730 years of "life-capital."

Infant Mortality.

The deaths of children under 1 year of age in the Administrative County of London during 1906 (52 weeks) numbered 16,307, being in the proportion of 131 per 1,000 births.

Table showing the Deaths under 1 Year of Age and the Number of these Deaths per 1,000 Births in Each of the Sanitary Areas of the County of London for the Period 1901-5 and for the Year 1906.

Sanitary Area.	Deaths under 1 Year of Age, 1906. (52 Weeks.)	Deaths under 1 Year of Age per 1,000 Births.	
		1901-5.	1906.
Paddington	355	123	105
Kensington	456	145	132
Hammersmith	430	146	138
Fulham	649	143	134
Chelsea	212	135	133
Westminster, City of ...	328	118	110
St. Marylebone	317	134	117
Hampstead	113	96	77
St. Pancras	753	137	123
Islington	1,089	127	134
Stoke Newington ...	113	115	102
Hackney	676	132	119
Holborn	149	138	120
Finsbury	459	160	160
London, City of... ...	36	134	101
Shoreditch	644	173	163
Bethnal Green	697	150	155
Stepney	1,453	150	134
Poplar	821	154	152
Southwark	895	158	144
Bermondsey	623	159	153
Lambeth	1,036	138	131
Battersea	591	138	126
Wandsworth	873	120	121
Camberwell	910	133	130
Deptford	472	136	143
Greenwich	318	131	119
Lewisham...	391	112	113
Woolwich	338	120	109
London	16,307	139	131

It will be seen that both in the period 1901–5 and the year 1906 Shoreditch (173 and 163 respectively) had the highest infantile death-rate and Hampstead (95 and 77 respectively) had the lowest.

The figures of 1906 differ from those of 1905 in the following particulars: In 1905 the number of deaths decreased in each successive week of the first month of life; in 1906 the number of deaths in the third week exceeded those in the second. In 1905 the decline in successive months was interrupted by an increase in the number of deaths in the ninth month of life; in 1906 there was no interruption until a month later, and another manifested itself in the twelfth month. Explanation of the increase in the number of deaths in the third week of life in 1906 is to be found in the main in the deaths from wasting and diarrhoeal diseases; deaths from measles, whooping-cough, and tuberculous disease are largely responsible for the interruption in the decline in the tenth month, and bronchitis and pneumonia in the twelfth month. When the total of the two years is considered, it is seen that there is decline in each successive period except in the tenth month. The greatest risk of dying from diarrhoea appears to be in the third and fourth months of life, and of bronchitis in the second month of life. If this be so, increase of births some three to four months before the diarrhoea period and one to two months before the period when respiratory diseases are prevalent would affect the figures of mortality. For further consideration of this question a record of dates of birth instead of registration is needed.

Any correction necessary for this purpose would not, however, materially alter the fact that the number of deaths from diarrhoeal diseases progressively increases from the first month of life until the fourth month of life is reached, and then progressively declines in each succeeding month. This must be due more to the variation in resistance than to difference in exposure to infective agencies. It is notorious that infants fed on cow's milk are more liable to death than infants which are breast-fed, but, as Dr. Howarth, of Derby, has shown, this liability manifests itself in death from a variety of causes, and the suggestion, therefore, is that it is related to diminished power of resistance, as the result of unnatural feeding.

How far a diminished power of resistance is caused by increase of temperature must as yet be mere matter of speculation, but it is interesting to note that the London figures of the last twenty-two years show that taking the average result over the whole period, an increase or decrease of 1 per cent. in the mean temperature of the summer quarter is attended by an increase or decrease of some 6 per cent. in infant mortality. It is obviously impossible to say how much diminished resistance and how much increase of infective agency may have contributed to this result.

An interesting table on infant mortality in relation to overcrowding shows that there is a marked difference in the mortality among children under 1 year of age when the least and most crowded groups of districts are compared; the difference is least marked in the first three months of life, and increasingly marked in each of the succeeding trimesters. The term "overcrowding" is used to apply to that proportion of the population shown by the census figures of 1901 to be living more than two in a room in tenements of less than five rooms.

In numerous districts in London efforts are being made to limit infant mortality by visits to the mothers of newborn infants, and by endeavours to improve the conditions affecting infant life. In the majority of districts this work devolves upon a woman sanitary inspector, but in a few districts voluntary workers undertake this duty. In the absence of a system of notification of births, the County Council supplies to medical officers of health the addresses of women who have been attended by midwives. For this purpose a large majority of the midwives in London communicate weekly to the Council's Public Health Department a list of all the cases which have been attended by them, and in this way medical officers of health were in 1906 put in possession of addresses of 30,749 women who had been confined, the information reaching them within less than a fortnight of the confinement. Value is undoubtedly attached by the medical officers of health to the services performed by the health

visitors in visiting the homes of newly-born infants. The result of these efforts may be expected to manifest itself later in the London statistics of infant mortality, but the experience of some years will be required before sound inferences can be drawn.

In four districts—Battersea, Finsbury, Holborn, and Woolwich—these efforts are supplemented by the supply of modified milk in suitable cases. In Battersea and Woolwich the milk is supplied from dépôts owned by the Borough Councils. The Battersea dépôt has been established more than five years, while the Woolwich dépôt was opened in November, 1906. The milk dépôt in Finsbury has been established by a voluntary society, which is advised by the medical officer of health of the borough, and the milk is pasteurized and modified at the farm from which it is received. In Holborn arrangements have been made for supplying, on the order of the medical officer of health, modified milk provided by a large dairy company.

Dr. Sykes compares the position which the borough of St. Pancras occupied in respect of infant mortality in the third quarter of the year in relation to the seventy-six large towns of England and the London sanitary areas in 1904, 1905, and 1906. A system of visitation to the homes of newly-born children was instituted in 1904, extended in 1905, and accompanied by the institution of the voluntary notification of births in the third quarter of 1906. The work of visiting was undertaken by women inspectors, assisted by ladies who volunteered for this purpose, their efforts in the main being directed to the encouragement of breast-feeding during the suckling period of infancy. In the first year St. Pancras stood fortieth in the order of these towns—that is, thirty-nine had a lower infant mortality; in the second year it was thirty-fourth, and in the third year sixteenth. Compared with the other London sanitary areas, St. Pancras was twenty-fifth in 1904, eighteenth in 1905, and thirteenth in 1906. Obviously, the three years' experience does not suffice for precise inferences, but the altered position of St. Pancras is none the less of much interest. Dr. Sykes writes: "The reason for the reduction of infant mortality in St Pancras is, in my opinion, due to an increase in breast-feeding. It is extremely difficult to demonstrate this in figures, but inquiries indicate that maternal functions are being better fulfilled, and the constantly-reiterated advice to thousands of mothers to breast feed must be having this salutary effect."

The importance of breast-feeding is insisted upon by medical officers of health, and the proportions of children breast-fed and hand-fed are shown in a number of the annual reports. In an analysis of 1,127 deaths of infants in Finsbury, Dr. Newman found that the mothers lived at home in 77 per cent., and in 88 per cent. the houses were either well kept or fairly well kept; but only 30 per cent. of the children were breast-fed, and if deaths due to epidemic diseases be considered, only 14 per cent. of the children were wholly breast-fed.

A National Conference on Infantile Mortality was held in London in June, 1906, the conference having as its president the Right Honourable John Burns, M.P., President of the Local Government Board, and as its chairman Mr. Evan Spicer, Chairman of the London County Council. Several important papers bearing on the subject were read, and various resolutions were adopted. The resolutions related to the following subjects: The teaching to girls in the public schools of elementary hygiene with reference to the dietary and rearing of infants, the establishment of milk dépôts, the notification of births, the insurance of infant lives, the limitation of employment of women shortly before and after childbirth, the amendment of the Infant Life Protection Act and of the Dairies, Milkshops, and Cowsheds Orders, and the employment of specially trained women as an adjunct to public health work. The Secretary of State has since invited medical officers of health to a conference at the Home Office on the employment of women shortly before and after childbirth.

THE legal proceedings commenced by Dr. Hebert against certain newspapers for publishing inaccurate articles in connexion with the charge at Versailles against the woman Pesnel, *alias* Cesbron, have been settled by a payment to Dr. Hebert of the sum of £1,000 for damages and costs, and an undertaking on the part of the newspapers to publish an apology.

THE MECHANISM OF CHLOROFORM ANAESTHESIA.

IN three papers read recently before the Royal Society Dr. Buckmaster and Mr. Gardner recorded the results of further researches into the mechanism of chloroform anaesthesia. In their first two papers, which appeared in 1906, they dealt, it will be remembered, with the anaesthetic and lethal quantities of chloroform contained in the blood of animals. The factors of chloroform anaesthesia have since been subjected to a more rigorous logical scrutiny, and, in the authors' own words, may be stated as follows:

A. Mixture of chloroform vapour and air, constantly supplied in excess.
- B. Portion which does not reach the alveoli, but is expired.
- C. Portion which reaches the alveoli and enters the blood.
  - D. Portion which is associated by the tissues.
  - E. Portion which is eliminated at the pulmonary epithelium.

The relative amounts of B and C will, for a given percentage of chloroform, depend upon the rate and depth of the respiratory movements. This is modified as the anaesthetic state progresses to asphyxia, owing to the increasing feebleness of the respiratory centres or to the gradual effect of the drug on the muscles concerned in respiration, a factor which probably is of small importance. . . . The variation of respiratory movement would no doubt affect the relative proportions of B and C. . . . As anaesthesia progresses D will be a decreasing factor, while E will be an increasing factor, owing to the augmentation of chloroform in the blood returning to the lungs. The rate of elimination, E, may be even greater than the rate of assumption, C, though the total amount of C exceed that present in the returning blood. Although the rate at which chloroform is tending to pass out may be greater than the rate at which it tends to pass in, the actual amounts going either way will depend, other things being equal, on the mass of the chloroform on either side of the pulmonary epithelium. If, therefore, the nerve centres remained unaffected, we should expect that with a constant normal type of respiration a condition of equilibrium would be reached between factors A and B and C and E, with any given percentage of chloroform inhaled, which would effect a perfect anaesthesia and not rapidly kill.

The chloroform content of the blood of anaesthetized animals has been determined, it is true, by many observers. Nicloux has recently devoted his attention to the estimation of chloroform in the blood and organs of animals killed by prolonged chloroform anaesthesia, while numerous investigators have analysed the difference of the chloroform-laden air on expiration and on inspiration. It was by the last of these methods that it was discovered that the assumption of chloroform was considerably more rapid in the earlier than in the later stages of anaesthesia, and it is chiefly for this reason, as was clearly pointed out by the Chloroform Committee of the British Medical Association, that the drug should always be given at a low percentage—at never more than 2 per cent. These series of experiments, however, left the mechanism of chloroform anaesthesia uncertain. The originality of the present research consists in the fact that the authors have determined the chloroform content successively throughout the varying stages of anaesthesia. The method adopted was to anaesthetize with a chlorine-free drug, such as nitrous oxide or ether, and determine the chlorine content of the normal blood of each individual animal, then to administer chloroform, and take samples of the blood at varying stages in the ensuing anaesthesia. The results confirm the fact of rapid absorption in early stages. Curves having the chloroform content of the blood plotted as the ordinate, and the times after administration marked on the abscissa, show a very steep ascent, followed by a marked depression, again succeeded by a rise, only less abrupt, but somewhat higher, than the initial ascent; this gives place to a slow and gradual upward slope, terminating—sometimes even after a slight fall—in death. The 3 cases quoted are remarkably consistent, and are stated to have been selected from a large number of similar experiments. The accuracy of the curves may fairly be relied on, as they are built on a very large number of analyses made at short intervals for each individual animal during the progress of anaesthesia. They are interpreted as proving that chloroform is taken into the system at the outset with remarkable rapidity, so that within two or three

minutes the blood may be as completely saturated with the drug as it will ever be, even after prolonged administration. Shortly after the content falls, in many cases considerably, for not only does the chloroform affect the centres in the medulla, including the respiratory centre, and thereby reduce the intake of chloroform, but the tissues, robbing the red corpuscles of the chloroform they possess, leave the blood comparatively free. After a brief interval the respiratory centre appears to recover from the toxic effects of the drug, and consequently the intake of chloroform increases, the tissues take up all the chloroform that will ever be associated with them, and the blood content slowly rises to its maximal before death ensues. The authors can record no case of death from failure of the heart's action in the stage preceding the first maximal point, but death from failure of the respiratory centre proved far from uncommon. In this connexion it is interesting to correlate from the clinical standpoint the teaching of the Edinburgh Medical School, "watch the respiration, not the pulse."

The first danger point occurs just as the chloroform content of the blood approaches its original maximal value. If this stage is successfully passed, the initial fall is succeeded by a rapid rise which usually carries the chloroform percentage above the point originally attained. In this condition the animal may live for a very lengthened period, but it is equally possible it may die at any moment in the event of any disturbing element being introduced, so that the state is one of acute danger. As is shown by the following table the difference between the percentage of chloroform in the blood when the corneal reflex has once vanished and the maximal values is relatively large, amounting to about 50 per cent., but the difference between the maximal amounts and the lethal quantity is extremely minute:

Table showing the Percentage of Chloroform in the Blood.

	At the Vanishing of Corneal Reflex.	At the 1st Maximal.	At the 2nd Maximal	At Death.
Cat 1 ..	0.0193	0.03	0.0768	0.0512
Cat 2 ..	—	0.0342	0.0763	0.0511
Cat 3 ..	—	0.066	0.0604	0.0656

The author's statements are not based on these three experiments alone. A number of others similar to them were performed and the results were in every case confirmed. It is a fact of importance that in the second period, as in the first, the cats used for the experiments invariably died from asphyxia, never from heart failure. It is concluded, therefore, that in practice the onset of asphyxia is the only reliable sign of danger; failure of the respiratory centre may occur at any moment, and the constant attention of the operator during any minute of the hour or more for which the operation may last is the sole determining factor between life and death. The analysis that has been made of this branch of the mechanism of anaesthesia draws attention to and accentuates the importance of elaborating the training of those who are to be entrusted with the duty of giving anaesthetics.

The second paper deals with the function of the red corpuscles as carriers of chloroform. It is rather an account of experiments undertaken to confirm and illustrate the results arrived at in 1906 than to bring to light any absolutely new facts. As the authors and others have previously shown, chloroform present in the blood is held by the red corpuscles. It would be natural, therefore, to expect that in chloroform anaesthesia the drug would be carried from and to the surface of the lungs by the red corpuscles. The results of the experiments showed that the mechanism of anaesthesia was in no way interfered with either by haemorrhage or even by substituting the blood of one animal for that of another. It was possible for the authors to consider that the composition of the blood remained constant during anaesthesia, the time not being sufficient to allow of extravascular fluids entering the blood stream, or of new corpuscles being formed. But as there was a constant danger that the varying depth and frequency of respiration, and the irregularity of the chloroform content of the blood would mask the results at which they were aiming, it proved necessary to perform a large number of experiments in order to eliminate these factors. The experiments fall into four classes. The first of these includes those in which the asphyxial state was rapidly reached. In other words, it includes those in which the animal became asphyxiated on reaching the first danger point. The method adopted was to anaesthetize with a chlorine-free drug, and then substitute chloroform. A sample was taken on reaching asphyxia; the animal was recovered and kept under ether or nitrous oxide until the bulk of the chloroform was eliminated from its blood, and meanwhile it was bled to a large extent. Asphyxia again came on in this group at the first danger point, and analyses of the blood on asphyxia before and after haemorrhage showed almost identical percentages of chloroform. In the second series, those cases in which asphyxia occurred at the second danger point, the results were similar.

The last two were exceedingly complex experiments. In one of them the authors analysed samples taken at the asphyxial stage after haemorrhage, and again at the asphyxial stage after replacing the blood removed by the blood of another animal of the same species. In the last series there was the additional complication introduced of taking a preliminary sample from the blood at the asphyxial stage in the normal animal. In every case the authors found that asphyxia and transfusion altered nothing from the anaesthetic point of view. The percentage of chloroform remained constant; the times between inhalation of chloroform and the onset of asphyxia were contradictory except in those cases where respiration ceased at an early stage in anaesthesia, when they were approximately equal; the authors are able to declare confidently that there is no evidence of any relation between haemorrhage and anaesthesia.

The last of the three papers deals with the rate at which chloroform is eliminated from the blood stream after anaesthesia. Five experiments are quoted from a much larger number. The animals (cats) were anaesthetized to various degrees, and blood was taken from both arteries and veins (in some cases from the right auricle itself) and analysed by the method employed in all the other experiments. It was found that the rate of elimination was at first comparatively rapid, but in no way comparable to the speed with which chloroform is absorbed in the earlier stages of anaesthesia. It was impossible to generalize satisfactorily, as the rate of the elimination varied with different animals. The results obtained by Dr. Buckmaster and Mr. Gardner agree broadly with those determined by Nicloux, but the time relations are very appreciably different. The authors say that it took close upon half an hour for the arterial blood to lose 50 per cent. of its chloroform content, though by artificial ventilation the time would be very considerably reduced. The authors agree with Tissot that at the moment of stopping anaesthesia the arterial blood has a higher chloroform content than the venous, but their experiments do not allow them to accept as proved that at later stages venous blood has a higher content than arterial. Analyses of the two show so close a similarity as to lie well within the errors of experiment, and much must depend on which portions of the venous and arterial circulations are considered. It may well be that even after the administration of chloroform has been stopped certain tissues may continue to absorb the anaesthetic from the blood.

BRITISH MEDICAL BENEVOLENT FUND.

At the January meeting of the Committee twelve applications for help were received, and grants amounting to £102 made to nine of the cases.

It was decided to hold the annual general meeting of subscribers at 5.30 p.m. on Tuesday, February 18th, at 15, Wimpole Street, W.

Appended is an abstract of the cases relieved:

1. M.B., C.M.Aberd., aged 69. Earnings always small, and is now practically incapacitated. Has only a few shillings a week. Recommended by Professor J. G. McKendrick. Voted £12.

2. Daughter, aged 54, of late M.R.C.S. Has supported herself by taking private pupils, but lost them all during the past year owing to her mother's prolonged illness ending in death. No income. Recommended by Mr. William Rhodes. Voted £10.

3. Daughter, aged 60, of late M.R.C.S. Supported herself by teaching for many years, but has now lost her sight, and subsists on a few shillings a week allowed by a charitable institution. Relieved three times, £22. Recommended by Mr. F. A. Osborn, Honorary Local Secretary, and Mr. Ashby G. Osborn. Voted £10.

4. Widow, aged 56, of L.R.C.P Edin. No income; lets lodgings. Relieved five times, £50. Recommended by Dr. Robert Blair. Voted £12

5. Widow, aged 54, of L.R C.P., L.R.C.S. Ireland. No income. Right hand permanently injured. Children unable to help. Relieved three times, £29. Recommended by Dr. C. W. Buckley. Voted £12.

6. Daughter, aged 55, of late M.R.C.S., L.S.A. Has maintained herself as matron in a school for several years, but was obliged to give up the post to nurse an invalid mother, since dead. At present has obtained no other appointment. Relieved once, £12. Recommended by Dr. C. J. Gibb. Voted £12.

7. Widow, aged 50, of M.R.C.S., L.S.A. No income; a little help from a relation. One child still dependent and the rest barely self-supporting. Relieved twelve times, £138. Recommended by Dr. Charles Steele. Voted £12.

8. Daughter, aged 70, of late M.R.C.S., L.S.A. Only income £20 a year, and occasionally earns a few shillings by needlework. Relieved eight times, £83. Recommended by Dr. George Eastes. Voted £12.

9. Widow, aged 49, of L.R.C.P., L.R.C.S. Has endeavoured to support herself by letting lodgings, but is now obliged to give up on account of ill-health, and has had to sell her furniture to pay some small debts. Children unable to help. Relieved three times, £48. Recommended by Dr. William Carter. Voted £10

CONTRACT PRACTICE.

GILLINGHAM, KENT.

WE learn that a lay body is seeking to introduce contract practice, at a very low rate of remuneration, into the district of Gillingham (Kent), near Chatham. Some few months ago a society, called the Gillingham and District Medical Benefit Society, was formed. The services of a qualified practitioner were obtained. By the rules of the Society the doctor was to receive one halfpenny a week for all members (men, women, and children) on the books. He was to charge 8s. and 12s. for confinements, and half these fees if the pregnancy terminated before the end of the fifth month. The whole of the members of the profession in the district were called to a meeting at St. Bartholomew's Hospital, Rochester, early in January. Thirty-one attended out of 42 called, the others being unable to attend owing to stress of work. The opinion of those present was unanimous that the introduction of such a society into the district must be resisted to the uttermost. It was also resolved that none of those present would meet or help any medical officer of the Society. The local members of the profession earnestly hope that they will have the support of the profession generally in their endeavours to resist the carrying on of a society which, if successful, must eventually be detrimental to the interests of all at present practising in the neighbourhood. We are informed that the Gillingham Medical Benefit Society has been dissolved, but that its place is to be taken, or has been taken, by another having very similar aims.

THE READING DISPENSARY.

Dr. George May, the President of the Reading Dispensary, recently addressed to the governors a letter in which, after stating that the dispensary was formed in 1802 to supply gratuitous medical attendance to the poor of Reading, and that it was converted into a provident dispensary in 1870, he expresses the opinion that it would have been better for the poor if the dispensary had never existed, because it has prevented the extension of a medical club which would have provided medical attendance at a much cheaper rate. In the belief that the money given to the dispensary before 1870 belongs to the poor of Reading, he has given notice that he will propose at the next annual court that where the father does not wish for attendance the charge shall be 2s. 2d. instead of 3s. 3d. a quarter. Should this proposal be rejected, he intends to move that £320, the interest on £8,000 acquired before 1870, be restored to the poor by adding to the number of tickets issued to the subscribers. He states as his reason for taking this action that the dispensary charges 3s. 3d. a quarter for a family—father, mother, and children—and that no reduction is made should the father, owing to belonging to other clubs, not require attendance. He adds that the fee for families was increased from 2s. 2d. to 3s. 3d. in 1897, with the result that during the next five years the dispensary lost more than 3,000 members, and that even in spite of the great increase in the population it now has the same number of members as in 1897. He then goes on to estimate the receipts of the medical officers of the dispensary, but in the absence of further information we do not feel competent to follow him, and do not propose to comment upon the matter, as it seems to be one which must call for the early attention of the Reading Division of the British Medical Association.

MEDICAL NEWS.

PROFESSOR WILLIAM OSLER, F.R.S., and Dr. Arthur Latham have joined the Council of the National Association for the Prevention of Consumption.

THE annual dinner of the West London Medico-Chirurgical Society will be held on February 13th at the Wharncliffe Rooms, Hotel Great Central, at 7 for 7.30 p.m. The chair will be taken by the President, Mr. R. Lake, F.R.C.S.

THE Lettsomian Lectures before the Medical Society of London will be delivered by Mr. Charters J. Symonds, M.S., F.R.C.S., on Mondays, February 3rd, 17th, and March 2nd, at 9 p.m. on each evening. The first two lectures will deal with tuberculosis of the kidney, the third with malignant disease of the caecum and ascending colon.

THE annual general meeting at Davos in support of the Queen Alexandra Sanatorium was held on January 15th at Davos Platz. Dr. W. R. Huggard, the British Consul and Chairman of the Board of Management, presided. A statement made by the Chairman showed that work on the building had made good progress during the preceding summer, and that it was roofed in before the commencement of winter. If funds permitted, it was hoped that the sanatorium would be opened for the reception of patients in November of the present year. But in order to accomplish this the sum of £14,000 was still required. He appealed for help to secure this desirable result. Sir Joseph Leese, K.C., M.P., moved a resolution in support of the institution, which was also supported by other speakers.

ON Monday evening, January 27th, a meeting of past and present ship surgeons was held at the Medical Graduates' College and Polyclinic, Gower Street, London, for the purpose of discussing the unsatisfactory status and conditions of employment of ship surgeons and considering the best means of effecting reform. Dr. G. Metcalfe Sharpe, of Middlesmoor, Leeds, was in the chair, and it was unanimously decided to form a British Ship Surgeons' Association. A provisional Committee comprising Dr. Sharpe, and Dr. H. W. Bayly, of 25 New Cavendish Street, London, with Mr. J. Arthur Batley, solicitor, of East Parade, Leeds, was appointed to take the necessary preliminary steps. Communications on the subject may be addressed to any of the gentlemen named.

LONDON FEVER HOSPITAL.—Two new wards, containing twenty-seven beds, were opened at the London Fever Hospital by Lady Balfour of Burleigh on January 27th. After a tour of inspection had been made by Lord and Lady Balfour, accompanied by members of the staff, subscribers, and others, Lord Balfour said that, although one of his medical friends had remarked that the present occasion would be the only opportunity for at least fifty years for the average member of the community to come into the building with complete safety to himself, he himself believed that, with all the modern devices for disinfection and sterilizing germs, this hospital was a healthier and safer place for people to live in than walking about the streets of London, with the chance of being run over. The institution could look back on a useful career of more than one hundred years, having been founded by the citizens of London at a meeting held at the Old Thatched House Tavern in 1801. After that time what were called "Houses of Recovery" were established in various parts of London, the one of which the present London Fever Hospital was the lineal descendant being in the neighbourhood of King's Cross. In the "Forties," when that institution contained some sixty beds, the site was acquired by the Great Northern Railway. The Company subsequently bought the site of the present hospital, which was then known as the "Kettle Field," and presented it to the hospital with the sum of £26 000. After a vote of thanks to Lord Balfour (proposed by Sir Shirley Murphy) had been passed, Lady Balfour, at the request of Dr. Sidney Phillips, senior physician, consented to allow a ward to be called by her name.

British Medical Journal.

SATURDAY, FEBRUARY 1st, 1908.

THE KING'S SPEECH.

The Parliamentary prospects of which we wrote last week have not been disappointed by the gracious speech from the Throne, but what was necessarily surmise a week ago has now assumed a definite and satisfactory form. Apart from the announcement of the programme of the Government, the King's Speech was notable for its admirable and tactful references to foreign affairs, and gives us in itself another guarantee of the friendly relations of the great European Powers. A note of sadness, however, showed itself in the references to Macedonia and the Congo, and the plea for a better state of things in those regions in the interests of humanity was well expressed. The deepest and most pathetic note was reserved for long-suffering India, "where conditions of scarcity accompanied by much "sickness have arisen." The words of praise given to the stricken people of Hindostan and to those charged with their welfare have been well deserved. We augur from the King's words that more and more thought and energy will be given to stay and lessen the ravages of plague, pestilence, and famine. In that noble work the medical profession must necessarily bear the most important part. As regards coming legislation, mention was made, in connexion with the finance of the year, of "making better provision for "old age." The long-desired old age pension is to be the subject of legislation, and the Speech justified the inference that it will be attempted in the most liberal spirit which the national finances will permit. Nine other measures were mentioned, and the first place, as we anticipated, was given to the great question of the Law of Licensing in England and Wales—a social question of the most far-reaching importance to the moral and material health of the nation. Second in order came the Education Bill, then the Eight Hours (Miners) Bill, and after these, fourth on the list, the Bill for Housing and City Planning.

These four measures, with the Old Age Pension scheme, constitute together a formidable programme for the Session. We rejoice that they are all measures which bear closely, if indirectly, on public health. For Ireland a Bill to improve and extend University Education was promised and a Land Bill also, while the President of the Board of Trade is to undertake to improve the Port of London. Last of all was announced legislation to consolidate and amend the law relating to the Protection of Children and to the Treatment of Juvenile Offenders, which will be in the charge of the Home Office. The Valuation Bill for England was also mentioned and the two Scottish Bills for Land and Valuation which failed to pass last year will be again submitted to Parliament.

It will take a long and arduous Session to carry even the majority of these measures, but the Government and their followers are evidently in earnest. As a pledge of business intentions notices were given at once in the Commons by the Ministers, of the five principal Bills. We may therefore hope that the parliamentary prospects of which we spoke last week will be in a large measure realized, and that the Session of 1908 will be memorable in the annals of Parliament for substantial progress in social reform. It is not the custom to mention in the King's Speech minor and departmental Bills, and consequently we may look forward to the introduction later on of many smaller measures dealing with subjects mentioned last week. The Bill to be proceeded with first is the Licensing Bill, and the Education Bill will follow, so that with these subjects and a development of the Old Age Pension Scheme in connexion with the Budget the House of Commons will have a busy time up to Easter.

SANATORIUMS FOR CONSUMPTIVES.

Dr. Bulstrode's report to the Local Government Board on *Sanatoria for Consumption and Certain other Aspects of the Tuberculosis Question* has been long expected and will be studied with interest by every one who has to do with the treatment of tuberculosis, or with the administrative measures for its prevention. The report, an octavo volume of nearly 700 pages,[1] copiously illustrated by photographs, plans, and charts, is divided into four parts, the first dealing with general epidemiological and pathological questions, the second with existing public sanatoriums in England and Wales and the principles which should govern the establishment of such institutions, the third with notification, and the fourth with the German workmen's insurance system and its influence in controlling tuberculosis.

In a general introduction to the first part, Dr. Bulstrode reviews impartially the various changes which medical opinion has undergone with regard to the etiology of tuberculosis, and especially as to the mode of entrance of the infection into the body. He gives the evidence upon which Cornet relies for the proof of his theory that infection is usually produced directly by the inhalation of dust infected by dried sputum; that of von Behring that infection is usually to be traced to ingestion of the bacillus with milk in infancy or childhood followed by a long period of latency; and that of Calmette that infection occurs usually by way of the alimentary canal, but is derived not only or mainly from food but from droplets of infected expectoration floating in the air, carried into the mouth and swallowed, a theory which does not require the assumption of a long period of latency. Finally he quotes the views expressed in the recent report of the Royal Commission on Tuberculosis, and concludes that "it would appear not improbable . . . "that a material amount of human tuberculosis is "attributable to the introduction into the intestinal "tract of tubercle of bovine origin."

We could have wished that Dr. Bulstrode had felt himself justified by the evidence he has collected in giving some more precise estimate of the proportion of cases having their origin in this source, and that his second chapter could have discussed the morbidity of tuberculosis instead of being confined to a consideration of the death-rate from pulmonary tuberculosis in England and Wales. The Registrar-General's statistics, as is well known, show a remarkable decline in the death-rate, and that this decline has been much more rapid among females than among males. That the proportionate number of deaths from pulmonary tuberculosis should have so largely diminished during the last fifty years is exceedingly satisfactory, but except in so far as it indicates the beneficial effects of general

[1] Cd. 3657. Price 10s. 2d.

sanitary reforms and improved conditions of living, it does not help us very much to estimate the relative value of the various means which have been suggested for combating the disease in its several manifestations. We should have been glad to have had a fuller discussion of the incidence of tuberculosis in childhood; the mere existence of the theory of von Behring is in itself sufficient proof that this aspect of the subject is of great, even paramount, importance at the present time. It may readily be admitted that the materials for its discussion are at present scanty, but this is partly due to the fact that the importance of obtaining them has not hitherto been fully realized, and an appeal in this official report might have had considerable effect in causing their emergence. After quoting the conflicting opinions of various authorities, Dr. Bulstrode is not able to say more than that it is clear that there is still very much to be learnt about the prevalence amongst children of school age of tuberculosis in one or other of its forms, and to express a pious hope that the institution of medical inspection of schools may show whether the optimistic views held by many authorities are true, or whether in reality tuberculosis is not more widely spread than has been apprehended. He considers, however, that "there can be no question as "to the importance of the teaching of elementary "hygiene, especially in so far as food values are con- "cerned, as a means likely to lead to a reduction in the "prevalence of tuberculosis, both in childhood and "adult life. Such teaching might also comprise refer- "ence to the enormous importance of the early recog- "nition and treatment of pulmonary tuberculosis, as "practically the two main lessons to be learnt from "the foregoing chapters are (1) the necessity, both as "regards the prevention and arrest of this disease, of "its early recognition, and (2) the promotion by all "means in our power of improved conditions of "living."

The second part of the report occupies over 300 pages, and contains a description, very fully illustrated by photographs, and in many instances by plans also, of all the public sanatoriums in England and Wales. This section will prove very useful for reference, and Dr. Bulstrode has mercifully provided a table to serve as an index, for which the reader will feel grateful, accepting it as some mitigation of the deplorable fact that the volume has no general index. The results of sanatorium treatment are reviewed in a series of chapters, which contain a judicious and judicial discussion of the value of the statistics and of the fallacies by which their interpretation is peculiarly beset. Dr. Bulstrode, in summarizing his conclusions, states that the evidence from practically all the sanatoriums shows that, in order to attain the best results as regards working capacity, two things are necessary: One is that the case shall be suitable for treatment and that the patient shall remain at the sanatorium long enough to prove by actual experience that he is competent to work; the other is that there shall be a period of after-care, during which the patient may gradually become accustomed to full work, and may, if necessary, learn the means of gaining a livelihood in the manner best suited for the maintenance of his health.

In relation to this matter Dr. Bulstrode has a chapter on the German compulsory insurance system as a factor in the control of phthisis, founded on the results of an inquiry more fully set out in the fourth part of the volume. Under this system a workman attacked by tuberculosis has a legal claim on insurance funds for medical attention and maintenance for himself, and for the support of his family. In discussing the results of sanatorium treatment in England, Dr. Bulstrode has to point out that the want of any system providing for the support of the sick worker's family during his residence in the sanatorium has an injurious influence of a twofold nature on the results. In the first place it deters him from entering at the earliest stage while he yet feels himself capable of working and perhaps earning full wages, although it is at this stage that theory and experience alike promise the best results. In the second place, it impels him to leave the sanatorium when the necessities of his family rather than his own progress towards recovery appear to dictate a return to work. Sickness insurance came into force in Germany at the end of 1884, and Dr. Bulstrode points to the significant fact that whereas the death-rate from pulmonary tuberculosis in Germany had previously been practically stationary, a rapid and continuous decline commenced in 1887. There was a decline, as has already been observed, in this country also during the same period, but the descent of the curve has been very much more rapid in Germany (Prussia). Dr. Bulstrode's comment on this is, that "having regard to the influences which the insurance "system must exercise upon the social condition of the "people, it would seem far from improbable that the "remarkable fall in the death-rate from tuberculosis "may have been very largely promoted by this "insurance system, and that there is evidence in sup- "port of the statement made by Herr Bielefeldt at the "Paris Congress in 1905 that: 'Among all the forces "'entering into operation in the antituberculosis "'battle in Germany the German workmen's insurance "'occupies the foremost place'; and that the results "which have been achieved are 'due for the most part "'to the therapeutic and prophylactic measures of the "'German workmen's insurance.'"

The general effect left upon the mind by the perusal of Dr. Bulstrode's able and comprehensive report is that in the handling of tuberculosis among the working classes—and this is really the crux of the whole matter—we are lamentably behind Germany. This is not wholly, or, indeed, in any great degree, the fault of the medical profession or of philanthropists. A quarter of a century ago the whole question of the far-reaching social and economic effects of sickness and invalidity among workmen was firmly gripped in Germany by a great statesman. Probably Bismarck did not foresee all the beneficial results of the insurance legislation of 1884, but he had grasped a great principle, and he applied it with well grounded confidence. That the results have been better than he foresaw must only increase our admiration for his prescience.

THE RECOGNITION OF COLOUR BLINDNESS.

SOME correspondence has recently taken place in our columns concerning the question of colour blindness and its detection, but, considering its practical importance to the travelling public, it is remarkable that so little attention has been directed to the subject. Most people are aware that the eyesight of railway officials and seamen is tested by the Board of Trade, and this is sufficient to satisfy them. Were they better acquainted with the facts of the case they would not undertake railway journeys by night nor night passages in ships with a light heart.

Fortunately it happens that the large steamship and railway companies test their own servants, and do not take it for granted that, because a man has passed the Board of Trade tests in eyesight, he is therefore capable

of taking charge of one of their ships or trains with safety.

We have nothing to say regarding the ordinary form tests, designed to ascertain whether a man is capable of seeing $\frac{6}{9}$ or $\frac{6}{6}$, but whether or no he has sufficiently good colour sense to be able to recognize signal and other lights when seen under all conditions of atmosphere, including fog, rain, and snow. The atmosphere may, of course, be so thick that no eye could penetrate it, and this is one of the many risks which cannot be guarded against. Everyone, however, knows that some men can see much better in a fog than others, and the question naturally arises: What degree of inability to see what other men can, renders a man dangerous? The answer must be arbitrary, and it therefore behoves the authorities to give the subject their most careful attention.

The correspondence to which we refer certainly makes it appear that sufficient care is not taken with regard to that all-important question of colour vision, for no one will doubt for a moment that the tests used by the Board of Trade should exclude all those candidates who are dangerously colour blind, and, conversely, should not fail to pass those whose colour vision is normal, or whose colour vision is so near normal that under no circumstances could this defect prove a danger to the vessel they are handling, or to the railway train they are driving.

The test which is relied upon by the Board of Trade is that of Holmgren, which consists of taking a skein of wool out of a bundle containing many different colours, showing this test skein to the candidate, and without mentioning any colour name at all, telling him to pick out from the bundle wools of the same colour. The first test skein is pale green. If the candidate does this correctly, Holmgren's instructions lay it down that he is not colour blind, though it is added that if he fail, purple and red test skeins may be used in order to determine the variety of colour blindness from which he is suffering. It is particularly to be noticed that under this system any one who can pass the green test successfully is held not to be colour blind, as this is considered to be the most delicate test.

Is this a safe conclusion? In a letter published in our columns on January 4th, Mr. Devereux Marshall denies that the Holmgren test is satisfactory; and his opinion is based on the labours of the Committee appointed by the Ophthalmological Society to investigate the matter, of which he acted as secretary. The conclusion of this Committee was "that Holmgren's test, used with knowledge and care and in the spirit, but not necessarily according to the letter, of the instructions, is sufficient for the detection of a large number of cases of colour blindness." Some of those persons, however, who were able to pass the first (pale green) test were discovered to be defective in colour vision when tested by the second (rose colour), and consequently would have been passed as normal by the Board of Trade examiners had they followed the instructions. It was, moreover, found that no amount of skill and care on the part of the examiners could detect certain others which were at once apparent when the lantern was used.

It will be observed that the Committee stated that the test had to be used "in the spirit, but not necessarily "according to the letter, of the instructions" as published by the originator of the test. We have ascertained that the Committee found that unless colour names were used, plenty of colour-blind people would pass in matching the wools, but that they frequently disclosed their defect at once by making such a mistake as calling yellow, red, though they would not say that these two colours were a perfect match. Now one of the fundamental principles of the Holmgren test is that no names are to be used at all, therefore it is difficult to maintain that when colour names are used, the test is being applied "in the spirit . . . . of the instruc-"tions"; we should rather have said that it was being used in a way diametrically opposed to the spirit of the instructions. Still, without labouring this point, it may be said that the Committee was clearly of opinion that the test was a very bad one, and most untrustworthy.

It may be asked, How is it that a person may match all the colours correctly, and yet be colour blind? By practice a colour-blind person may get to know that wools which have a certain degree of luminosity to him are called, say green, by a normal-sighted person, and he quickly gets to know that he must not touch other wools having a different luminosity, though to him appearing the same colour, because he is told that they are drab, grey, brown, or what-not. He quickly gets these fixed temporarily in his memory, and when he has done this, he may defy all the examiners he can meet; he will match these colours correctly and yet be quite ignorant as to what colours they are, for his defect is congenital and cannot be corrected or improved. Such a person is given a certificate of normal vision, but when called upon to recognize a light at a distance he is quite unable to say what colour it is, though he may make a guess, which may perhaps be right, but may just as likely be wrong. The question the man on the bridge has to decide is this: Is that light I see red, green, or yellow? It must be obvious even to the uninitiated that if he calls a red light he sees, yellow, or a yellow light, green, disaster is not far off, and not much satisfaction would be derived from the fact that he held a certificate for proficiency in eyesight. The man is not called upon to compare coloured wools, he has no intention of being a draper's assistant, what he has to do is to say what colour a certain light is, and if he is incapable of doing this he ought never to be in a position where everything depends on his perception. Yet, as has been pointed out by the Holmgren instructions, the examiners are told not to ask him to name colours, but simply to match wools.

It seems to us inconceivable that a body like the Board of Trade, which does so much to safeguard all classes of the community, should rest satisfied with so inefficient a test for colour blindness. If the examiners were even medical men they might be better able to carry out what the Committee of the Ophthalmological Society call "the spirit" of the instructions, but which we should prefer to describe as ignoring the instructions altogether; as a matter of fact, the examiners are, as a rule, sea captains or others who cannot, of course do otherwise, when examining in a subject about which they know nothing, than follow the letter of their instructions.

In Germany and on the Continent generally the wool test has been given up and replaced by the lantern. In this they follow the teaching of Edridge-Green, whose work on colour vision is acknowledged everywhere abroad, and by those who have taken the trouble to investigate it at home, to be the best which has ever been done, for he has grasped the truth, and has utterly shattered the most unsatisfactory theories of Helmholtz and Herring, neither of which explained the facts of colour blindness. No doubt the subject is complicated, and the greatest care must be taken, not only in supplying the proper tests, but also in providing medical men as examiners who have had special instruction, and are

qualified to apply the tests in all cases of candidates seeking Board of Trade certificates for proficiency in visual acuity.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

WE would again call attention to the desirability of a common understanding among members of the profession in each locality with regard to the conditions under which the work of medical inspection of school children shall be undertaken. It will be very unfortunate if, through want of such an understanding, the profession allows itself to be exploited by local authorities more anxious to get the work done cheaply than to provide for its efficient performance. The recommendations of the Medical Inspection of Schools Subcommittee were approved by the Council of the British Medical Association at its meeting on January 29th. The report of the Subcommittee was published in the SUPPLEMENT for December 21st, 1907, and advised that the remuneration of a medical inspector should be calculated on the principle of a definite rate per working hour, and that the school medical officer should be paid at the rate of £50 a year for an attendance of one-half a school day a week, half a school day being defined as two hours. Where whole-time appointments are contemplated, this recommendation may require some modification, but it will afford a basis for calculating the salary. In response to requests for further and more definite guidance as regards the details of the work of medical inspection, the Board of Education has issued a schedule of the points to which it is considered attention should specially be given. The schedule is accompanied by a series of notes giving further explanations, and in a covering letter it is stated that the Board have thought it well to leave considerable latitude in regard to the particular forms of schedules to be used under different circumstances. The letter further points out that the chief difficulties to be considered are administrative rather than educational or scientific, inasmuch as there is little dispute as to the end in view. The schedule reached us too late to enable us to do more than announce its appearance. It has been printed by Messrs. Eyre and Spottiswoode, and copies (price 1d.) can be obtained through any bookseller, or will, we understand, be sent post free by Messrs. Eyre and Spottiswoode for 1½d.

THE WARNING NOTICE.

INQUIRIES which have from time to time been received indicate the desirability of drawing attention to the exact wording and meaning of the warning notice which appears weekly among the advertisements in the BRITISH MEDICAL JOURNAL. The notice, as will be seen by any attentive reader, is merely a request to medical practitioners to apply to certain specified persons for information about the appointments referred to in the list which follows before becoming candidates for such appointments. The object is simply to put practitioners on their guard and to assist them in obtaining information which it is considered desirable they should have before committing themselves to the acceptance of appointments which are open to some doubt. Communications received by the Central Ethical Committee in 1904 brought to its notice the hardships of the position of individual practitioners who, having accepted appointments in perfect good faith, became aware afterwards of objections on the part of the local profession, which, had they known them beforehand, would have deterred them from becoming candidates. It was considered to be a duty to take some means of assisting them in avoiding such a false position. After careful consideration it was decided that a warning notice in the advertisement columns of the JOURNAL would be the most convenient way of effecting that which was desired, and a recommendation to this effect was approved by the Council. Similar notices are published in the *Lancet*. As apparently there are many readers who do not attend closely to the wording of the notice in the JOURNAL, and therefore misconceive its intention, we are asked to point out that the appearance of a notice does not necessarily mean that a practitioner who accepts an appointment referred to therein will be deemed to have acted unprofessionally; but it does mean that, on becoming aware of the notice, it is his duty to himself and to the profession to make use of the opportunities of obtaining information placed at his disposal, and to act in the light of the information so obtained with a due regard for the honour and interests of the profession. If any question subsequently arose as to the propriety of his conduct, the fact that the warning notice had appeared would affect the issues to the extent that he would be considered to have been at fault had he neglected to apply for information, and that, had he applied for and obtained information, the propriety of his conduct must be judged in the light of the knowledge of which he was thus shown to be in possession.

THE TERRITORIAL ARMY MEDICAL CORPS.

OUR columns have already frequently borne testimony to the fact that the scheme for the Army Medical Corps of the Territorial Army, which has been laid before the profession so fully by Sir Alfred Keogh, has met with general approval both from medical officers of the auxiliary forces and from other members of the profession whose services it is hoped to enlist. It was framed largely on the lines of the recommendations of the Volunteer Medical Service Committee of the British Medical Association, which reported about eighteen months ago, and its favourable reception on all hands is a striking proof of the soundness of the policy followed by the Secretary of State for War and the Director-General in consulting the profession on a matter which so nearly concerns it. In London there will be two Divisions, and last week the principal medical officers designate of these two Divisions, Surgeon-Colonels P. B. Giles and Andrew Clark, called a meeting of the volunteer medical officers in London, when the features of the scheme as they particularly affect them were fully explained and discussed. The meeting was very successful, and, as will be seen from the report published elsewhere, the medical officers present expressed their cordial and unanimous approval of the new scheme, and assured Surgeon-Colonels P. B. Giles and Andrew Clark that they would give their assistance in every way to ensure its success.

THE ETIOLOGY OF SYPHILIS.

PROFESSOR ERICH HOFFMANN of Berlin has just issued, thanks to the generosity of the German Dermatological Society, a fitting monument to the memory of the late Fritz Schaudinn in the form of a beautiful *Atlas*.[1] In his introduction Professor Hoffmann, who worked with him at the etiology of syphilis, bears testimony to Schaudinn's genius as an investigator, and once more deplores the loss of his friend. As a frontispiece there is an excellent portrait of Schaudinn, the discoverer of the *Spirochaeta pallida*, in which discovery Hoffmann deserves a share of the credit. The *Atlas* consists of thirty-eight beautifully executed plates, mostly coloured, the first seven of which show the results of inoculation in monkeys, two of the figures reproducing experimental keratitis in a rabbit and a sheep respectively. The remainder of the plates are devoted to histology and the *Sp. pallida* mainly, but for the sake of comparison a number of figures show various kinds

[1] *Atlas der ätiologischen und experimentellen Syphilisforschung.* By Erich Hoffmann. Berlin: Springer. 1908.

of spirochaetes, such as *Sp. refringens*, *Sp. pallidula*, *Sp. balanitidis*, *Sp. gangraenae carcinomatosae*, *Sp. buccalis et dentium*, and so forth (all magnified 1,000 times). These figures are valuable, and the author has been well advised in including them. Next come sections showing *Sp. pallida* in the tissues—skin, blood vessels, liver, etc. Although some have objected that the spirillar appearances obtained by the silver method (Levaditi) were artefacts, there can really be no doubt left in the mind of the unprejudiced that it was really spirochaetes that were being dealt with. The last four plates contain photomicrographs, some of which are from preparations left behind by Schaudinn, others being original (E. Hoffmann and others). Some of these are magnified 1,500 times. Altogether, both the editors and the German Dermatological Society must be cordially congratulated on their respective share in the publication of so fine a memorial to Schaudinn.

A PIONEER IN THE REFORM OF CONTRACT PRACTICE.

Among the medical worthies of the past whose names have been allowed to lapse into undeserved oblivion is William Pryce, a Cornish physician of the eighteenth century, who was a noteworthy man in more ways than one. He was born about 1725, and died in 1790. From about 1750 he practised as a surgeon at Redruth. Later he became M.D. "by diploma," as to the source of which nothing seems to be known. He had some reputation as an antiquary, but his chief title to remembrance is the fact that he was the author of a treatise on minerals, mines and mining, which was published in London in 1778 under the title *Mineralogia Cornubiensis*. The work embodied the results of labours extending over thirty years, and according to the *Dictionary of National Biography* "is still of value both for historical pur-"poses and for practical mining." It was dedicated to the Prince of Wales of the day and seemed to have been well received. The President of the Royal Geological Society of Cornwall recently declared the *Mineralogia Cornubiensis* to have been the first contribution of genuine scientific value on the minerals of the county of Cornwall. Few at that day appreciated the importance of the mining industry to this country. The author expressed astonishment "that an industry of the first national "consequence should so long remain, even to the present "hour, a secret limited to a few illiterate people." He went on to say that it was well known that tin and lead were the first and grandest staples of Great Britain, particularly the former, which introduced a trade and navigation before unknown to the discoverers of our western coasts. He pointed out that no small advantages might be derived from reducing the vague practice of common miners to a regular science, and bringing the experience of many into a definite system. Those advantages would not be confined solely to practical miners. Every corner, he added, of the British Isles, Ireland, and many of the Colonies, abounded in a variety of minerals, wholly unknown to the possessors; and if the knowledge of the indications of metals, and the mode of working mines, was more diffused, new discoveries would daily be made, to the great profit of landed proprietors and the advantage of the public, by increasing its revenue and employing considerable numbers of the laborious poor. The prophecy of Pryce has been more than fulfilled. Millions of pounds sterling have been distributed among the owners of mines, and it is estimated that of His Majesty's subjects 1,800,000 are directly engaged in the production of minerals at home and in the Colonies, dependencies, and possessions. Many millions more are employed in the kindred industries, which could have no existence apart from the produce of the mine. Last year, according to the *Newcastle Journal*, the total value of the minerals raised from the mines of this country amounted to £105,842,992. From Dr. Pryce's book we learn the interesting fact that contract medical practice existed in the mining districts of Cornwall 200 years ago. A contribution of 2d. per month was levied by owners upon those miners who were in constant and imminent danger, and in return the local surgeon undertook to attend the injured, at all times and at all places, and to perform all operations and furnish all medicines. Soon, however, the surgeons became tired of a contract by which they were bound to give their skill and labour without adequate remuneration, to say nothing of the expense of supplying medicines. From a mine employing 300 men contributing to the fund, Dr. Pryce calculated that the yearly payment to the surgeon was only £30. As accidents of various kinds frequently required daily attendance, many miles from the doctor's residence, this remuneration was utterly insufficient. Dr. Pryce may be considered a pioneer in the reform of contract practice. He proposed the establishment of a public hospital for such cases. He said it was strange that a county so large and so wealthy as Cornwall, and one in which so many accidents requiring the greatest care and expertness in surgery were of frequent occurrence, should have been so long without a charity of this kind. This circumstance he regarded as "no proof of the wisdom and generosity of "its nobility and gentry." When, he said, an accident happened in a mine, the sufferer languished till the arrival of the surgeon, who was generally sent for in such haste and confusion that it not infrequently happened he was not provided with "every-"thing proper to administer present relief." Dr. Pryce himself had been called to a person supposed to have a compound fracture of the leg when the case proved to be a fractured skull, and the leg was only scratched. After attention by the surgeon, the patient had to be conveyed six or seven miles to his own hut, full of naked children, but destitute of all conveniences and almost all necessities. He described the scene as one of complicated wretchedness and distress. This state of things suggested the idea of a hospital furnished with every necessary to effect the cure of the injured man, and every convenience to alleviate his distress. The hospital as a solution of the problem of contract practice will not commend itself to medical reformers of the present day, but Pryce must be considered to have been in advance of his time, inasmuch as he tried to find a remedy for a state of things, alike injurious to patients and unjust to the doctor, which does not seem to have been thought worth attention by others. Pryce was the author of another work, entitled *Archaeologia Cornu-Britannica*, which appeared in 1790. A valuable feature is that it contains a Cornish vocabulary and grammar.

THE PLAGUE PORTS IN THE PERSIAN GULF.

The latest report of the Conseil Sanitaire of Persia speaks of small-pox and measles as causing a very high infant mortality in Teheran, while at Ispahan these diseases and typhoid are described as raging. On the other hand, the sanitary conditions of the ports in the Persian Gulf is stated to be satisfactory. It may be remembered that a memorandum was issued by the British Government last summer concerning proposed conjoint action to be taken with respect to ports infected, or liable to be infected, with plague or cholera in the Persian Gulf. The question again presented itself for discussion owing to further pressure on the part of the British authorities. It was pointed out that two epidemics of plague, in 1905 and last year, severely affected the Bahrein Islands, and that the ports of the Persian littoral were in constant danger. It was, therefore,

absolutely necessary in the interest of all the steamship companies, no less than the country itself, to establish a proper system of disinfection in the above ports, sundry measures being at the same time suggested. The Council were of opinion that they could not go beyond an *avis consultatif*, and that the political and financial part of the matter did not rest with them. With this reserve the proposed measures were in the main approved, and the following improvements in the sanitary service of the Gulf are placed in order of importance: A Clayton apparatus at Bushire; steam pressure stoves at Mohammera and Bunder Abbas, and also at Linga and Jask; and lastly, at Menama, in the Bahrein Islands (the starting point of the plague in 1905 and 1907), at the expense of the Indian Government, as the islands are not under Persian jurisdiction. The proposal that there should be a permanent travelling sanitary officer appointed to Bushire was not approved.

STRAWBERRY PICKERS.

THE Local Government Board has issued a report by Dr. Reginald Farrar on the accommodation provided for strawberry pickers in the Dartford rural district. On the whole, Dr. Farrar has found little that calls for reform. He deals with the accommodation provided on thirteen farms, and has consulted the farmers, the local medical officers, the Church Army, the Salvation Army large numbers of the pickers themselves, and others. In most cases the hutting accommodation was good. Except in a few instances, the huts were rainproof and had concrete floors. Plenty of clean straw was provided, ventilation and lighting arrangements were good, firing was sold at reasonable rates, and sanitary arrangements were adequate. Dr. Farrar recommends that all encampments should be provided with covered cookhouses, that a large number of the tents should be condemned, that all watertaps should be surrounded with concrete, that the camps should be provided with a responsible foreman, and that means should be taken to prevent the occupation of the huts at any time of the year except in the months of June, July, and August. At present there is a by-law which only permits of their being occupied from March 1st to November 1st, but Dr. Farrar is of opinion that effect is not given even to this by-law. The result is that farmers allow casual labourers to sleep in them at all times of the year rent free, and are thereby able to save their own pockets by reducing wages. Dr. Farrar has received complaints from men in the locality that fruit pickers and hop pickers return to the farms for casual work during the year, and actually displace local labour. Apart from the political aspect of this arrangement, it is very undesirable on hygienic grounds, as, though the huts are suitable for summer occupation, they are very ill-adapted as winter residences. The effect of the Children's Employment Act, which forbids the employment of child labour between the hours of 9 p.m. and 6 a.m., is commented on in the report. Fewer children have been brought down into the fields in consequence. This is a very doubtful benefit. The life of the picker is essentially healthy, and the children look on the work to a large extent as play. They are probably left behind in London and other towns, and prevented by the Act from reaping the benefit of the change of air. An unfortunate feature of the work is its uncertainty. Wages range from 1s. 6d. to 6s. a day, and in consequence of the lateness of last year's season several of the pickers could not earn enough to buy food. Dr. Farrar is not responsible for the fact that the report is in some respects unsatisfactory. We should have welcomed a more searching inquiry into the question of overcrowding. There is unhappily evidence that serious overcrowding occurs on certain farms, but it is evidently not prevalent in the district with which the report deals. An important omission is the absence of all reference to the question of transit. The pickers arrive in the early hours of the morning, and are forced to spend often two or three hours on the roadside waiting for it to get light. At many places the public-house provides the only form of shelter, and alcoholic drink is the only available form of refreshment; neither of these points is discussed; nor is any any mention made of the various bodies which organize charitable work among the pickers. Dr. Farrar points out that the pickers are now a better class than used to frequent the fields, and adds that the improvements already made are in great measure due to the adverse comments made at public meetings and in the press.

THE ENGAGEMENT OF LOCUMTENENTS.

FROM letters and questions recently received, it appears that divergent opinions are held upon the question: "When does the employment of a locumtenent commence?" It is urged by some that where a locumtenent is engaged to go from London to take up work in the country his employment commences at the moment of time when he starts on his journey. Others contend that in such a case the term of employment does not begin until he reaches the house of the practitioner whose place he is going to occupy. A medical agent who states that he arranges the engagement of some seven hundred to eight hundred locumtenents in the course of a year writes that: "The engagement "dates from the time he leaves London, assuming the "engagement is made from London, the expenses being "also reckoned from London." Looking at the matter from a strictly legal point of view attention would first have to be directed to the actual terms of the agreement in the particular case, and it would then have to be considered whether there was any professional and well recognized custom which must be imported into the agreement. He who relies on custom must prove that it is universally known and acted upon, like the custom of giving a month's notice to a domestic servant. It is at least doubtful whether the mere fact that a particular agent is in the habit of regarding engagements as dating from London would be deemed sufficient. With regard to the alleged custom, it is interesting to note that Mr. Glenn, in his *Manual of the Laws affecting Medical Men* (1871), at page 328, sets forth a number of customs which affect the assistant and the locumtenent, but makes no mention of that which forms the subject of this note. The importance of an authoritative decision upon the point has been emphasized by the Workmen's Compensation Act. Assuming that that measure confers a benefit upon a locumtenent, the locumtenent who takes the benefit, and the employer who runs the risk, are naturally anxious to know when the service begins. The Act gives compensation to those who sustain injuries arising "out of "and in the course of their employment," and the Courts have frequently decided that a man who is injured on the way to his work is entitled to claim. Thus it is conceived that a locumtenent who was engaged in London to go to Yorkshire and was injured in a railway accident could make a successful claim under the Act.

KISSING THE BOOK.

THE question whether a man can be compelled to kiss the book provided for the purpose of swearing witnesses was mooted in the recent case of Rabey *v.* Birch, reported in the *Times* of January 23rd. It appeared that a medical witness at the Bloomsbury County Court refused to kiss the court Testament. He produced a Testament of his own, upon which he desired to be sworn. The judge refused to allow this, suggesting that

the witness might take the Scottish oath. Upon his refusal to do this, he was not allowed to give evidence at all. On appeal to the Divisional Court, the non-acceptance of this evidence was made a ground of complaint. The only reason why the witness refused to kiss the book was that the practice was insanitary. After hearing a lengthy argument, the Divisional Court dismissed the appeal; but Mr. Justice Phillimore, in the course of the case, made some observations which are of considerable interest. He pointed out that the objection to allowing a witness to kiss his own book was that he might believe that an oath taken on a mutilated testament was not binding. Indeed, a witness could not be prosecuted for perjury in respect of such an oath. It seems that the practice on circuit is for the judge's clerk to examine any Testament which may be tendered, and if he is satisfied that it is complete the witness is allowed to use it. Commenting on the action of the judge in the case under review, Mr. Justice Phillimore said: "In the "present case it might have been that the judge would "have been wiser to look at the Testament." We trust that this dictum may be made known far and wide. It is preposterous that witnesses should be compelled to raise to their lips a volume which is never washed. Any one who has ever paid a visit to the county court may well shudder when he thinks of the persons who have kissed the Testament which he is invited, and unless he elects to take the oath in the Scottish fashion, is actually compelled, to use. And if the county courts are bad in this respect, the police-courts are even worse. We should recommend any of our readers who have a sanitary objection to using the court Testament, to ask to be sworn in the Scottish fashion, a request which according to the Act must be granted without question, or should they prefer to be sworn on the Testament, to refer the judge to the case of Rabey *v.* Birch. Having read the dictum of Mr. Justice Phillimore, those members of the County Court Bench who have hitherto refused to permit the use of any Testament other than that provided by the Office of Works, may be induced to relax an absurd and insanitary rule.

THE JAMAICA EARTHQUAKE.

The Colonial Office report on Jamaica for the fiscal year 1906-7 contains, as might be expected, a great many details of the disastrous earthquake which, at 3.33 p.m. on January 14th, 1907, laid the greater part of Kingston in ruins. It will probably never be known exactly how many persons perished; but 712 were buried or cremated, and it is probable that the 88 put down as "buried in the ruins" is an understatement. At the Kingston Hospital the whole quadrangle and the spaces between the female wards were crowded to overflowing with the wounded a short time after the occurrence. The medical officer in charge describes the patients as lying with their clothes partially torn off by falling masonry and soaked in blood, the wounds being not like ordinary wounds, clean cut, or like those after an action, but bruised and ragged by the weight of the falling materials which caused them. The number of patients ordinarily receivable is 214, but on the night in question there were 624. Many had to lie out in the open, tents not being obtainable for several days; but fortunately the weather remained remarkably fine. Many had to be operated upon where they lay, for the new operating theatre was wrecked just when it was most needed. Of the 445 cases operated on, 28 died; 7 of these died of tetanus—a small proportion considering the nature of the injuries and the conditions under which they were treated. The calamity naturally brought about the greatest difficulties in connexion with the supply of food, drugs, and surgical appliances, but they were successfully overcome. The report of the medical superintendent of the lunatic asylum contains some interesting observations concerning the effects of the earthquake on the patients: "The noisy and turbulent became quiet, and the quiet "became excited, noisy, and destructive, and one "woman who had been dumb for years was roused "from her lethargy, and, becoming noisy, resumed her "former life." The buildings suffered severely from the disaster, 9 men being killed on the spot on the male side; but, though there were 20 sick patients in the female infirmary, which collapsed, they were all rescued. Practically the whole range of buildings for male patients was totally destroyed.

DAMAGES FOR POLLUTED WATER.

The action brought by Dr. John Campbell Fergusson against the Malvern Urban District Council, the hearing of which occupied a judge and jury for eleven days, has resulted in a verdict for the plaintiff. He has been awarded damages to the amount of £7,500. It may be of interest to recapitulate the facts of the case. An outbreak of typhoid occurred at the plaintiff's hydropathic establishment at Malvern in May, 1905. There were 14 cases, several of which proved fatal. In the result Dr. Fergusson had to pay some £7,000 for compensation and the costs of actions brought against him. He now claimed damages from the District Council, alleging that the outbreak was caused owing to the pollution of his water supply by a sewer under the control of the council. The defendants denied that the outbreak was due to water pollution, and alleged that it was caused by the insanitary condition of the hydropathic establishment itself. They also alleged that the plaintiff had been guilty of contributory negligence. Amongst other allegations which the council thought proper to put forward at the trial was a charge against Dr. Fergusson to the effect that by his maltreatment he had aggravated the illness from which some of his patients had suffered. That the jury gave no weight to this is evident from their verdict. They found that the council was guilty of neglect in permitting sewage to escape from their sewer; that the escape of sewage was the only cause; and that it could not have been prevented even if the plaintiff had acted with reasonable care. The jury also found—and the point may be of importance on appeal—that the plaintiff had no licence from the owner to use the water in question. Dr. Fergusson is to be congratulated on the result of the case, although possibly, as a ratepayer in the district, he may have to pay part of the damages himself. This is not the first case in which proceedings have been instituted against a local authority for the pollution of water. Many cases can be found in the law reports in which local authorities have been restrained by injunction from polluting streams; and it is noteworthy that the Public Health Act, 1875, expressly provides that nothing contained therein shall authorize any local authority to convey sewage into any stream or watercourse. We are not cognizant, however, of any case precisely on all-fours with the present—that is to say, we do not know of a case where a local authority has been cast in damages for polluting a supply of drinking water.

HEALTH CONDITIONS IN MEXICO.

Mexico is a country making quite remarkable progress, and with the possession of the Tehuantepec Railway has a great future before it, but it leaves more than a little to be desired in the way of sanitation and hygiene. Of late more attention has been paid to the drainage of the valley and city of Mexico, and in 1900 a canal was cut for the purpose of draining the swamps and lakes surrounding the city, which greatly improved matters, while a water supply and system of sewers is gradually

being established. The poorest part of the city, however, is without drains, and here typhoid is very prevalent. In 1902, 1,663 persons perished of it, and a further outbreak occurred which up to March last, according to the last Consular report, had caused a total of 2,730 cases and 637 deaths. Compared with the death-rate of most of the great capitals, that of Mexico is disgracefully high. While London and Paris are respectively 16.6 and 17.4 per mille, the "Federal district of Mexico," which comprises the city and its suburbs, is no less than 56 per mille, and the figure appears from the records of the last few years to be rising. Diarrhœa and enteritis, pneumonia, and tuberculosis seem to be the most common of the diseases causing death, but with the exception of typhoid there have been no epidemics. These are rare in the country as a rule. No actual figures are given as to the present condition of things with regard to yellow fever, but it is stated that an energetic campaign is being waged against this disease, especially in Veru Cruz, which, with Progreso and Tehuantepec, is one of the main centres of infection. The freedom of the isthmus is of especial importance, owing to the great and increasing traffic by the railway, and the improved hygienic conditions involved in the completion of the great port works at Coatzacoalcos and Salina Cruz will no doubt help towards bringing this about.

APHASIA AND BROCA'S CONVOLUTION.

A YEAR ago[1] we gave some account of two lectures published by Professor Pierre Marie, in which he criticized the current doctrine which localizes the lesion of motor aphasia in the third left frontal convolution. About the same time his assistant, M. Souques, communicated to the Société Médicale des Hôpitaux the notes of a case of complete motor aphasia and exhibited the brain, which appeared to show an intact condition of Broca's convolution, while a patch of softening occupied Wernicke's zone in the temporo-parietal region. He has recently[2] presented to the same society a series of 1,800 microscopical sections of the left hemisphere of the brain, which conclusively prove that Broca's convolution was absolutely unaffected. At the same time he showed the brain of a right-handed patient who during life had been affected with word-blindness, word-deafness, agraphia and jargonaphasia, without anarthria (inability to articulate words), which is the complex of symptoms known as Wernicke's aphasia. There were two foci of softening in the left hemisphere; one of these involved a large part of the foot, cap, and orbital part of the third, and the posterior third of the second, left frontal convolutions. The other involved the upper half of the posterior third of the first temporal convolution, and of the middle part of the inferior parietal lobule sparing the angular gyrus. Horizontal sections showed that the frontal lesion was very deep, and that besides the injury to the third frontal convolution the destruction had involved the anterior portion of the island of Reil; the posterior two-thirds of the island of Reil were intact, as were also the external capsule, the internal capsule, the central grey ganglia, and the deep temporal. The temporo-parietal focus of softening although extensive was superficial, and did not penetrate deeply into Wernicke's zone. These lesions explain the symptoms quite satisfactorily on Professor Marie's theory, as Wernicke's aphasia is due to softening of the temporo-parietal grey matter; the integrity of the temporo-parietal isthmus and of the lenticular region explain the absence of anarthria, while, in spite of the extensive and deep lesion of the third frontal convolution, there was no motor aphasia, which is inconsistent with the generally accepted doctrine.

[1] BRITISH MEDICAL JOURNAL, December 29th, 1906, p. 1879.
[2] *Sem. Méd.*, December 20th, 1907, p. 623.

WE understand that the Royal Commission on Vivisection has finished the taking of evidence, and will now proceed to draw up its report.

WE regret to announce that Sir Thomas McCall Anderson, Regius Professor of Medicine in the University of Glasgow, and an Honorary Physician to the King in Scotland, died suddenly from heart failure on January 25th, while attending a dinner of the Glasgow Ayrshire Society in St. Enoch's Hotel. He was 72 years of age. We hope to publish a full obituary notice of the distinguished physician in a later issue.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Session of 1908 opened on Wednesday under happy climatic conditions, and the King and Queen were cheered by sunshine on their way to the House of Lords. The Royal procession was consequently a much more brilliant pageant than last year, and vastly greater crowds watched for the King and Queen to pass. In the Peers' House and in the Royal Gallery the sight was unusually bright, for there being no Court mourning the peeresses in the Chamber and the ladies in the Royal Gallery made a gorgeous display of colour. The King, who looked remarkably well, delivered the Speech in full, loud, and distinct tones, with that perfect elocution which always makes his speech so audible. As soon as it was concluded the Royalties departed and the House emptied of its distinguished crowd. In the Commons the Speech was read by the Speaker soon after 4 o'clock to a very full House, and then the business of the Session began.

The Debate on the Address was opened by Mr. Lehmann, who moved the address in answer to the gracious speech from the Throne, while Mr. Howell Davies seconded. Both speakers acquitted themselves well, and were complimented by Mr. Balfour, who opened the critical survey of the Government work and programme, after a courteous reference to the absence of the Prime Minister and its cause. The general debate went on for the rest of the sitting, without much spirit, and indeed, during the dinner hour became so listless that by general consent the adjournment was moved before half-past nine by Mr. Ramsay Macdonald, who will move his amendment on Thursday with reference to Unemployment. A large crop of amendments is foretold—no less than 22 were placed on the paper on Wednesday. Some, such as that on Irish administration, and another on the treatment of Indians in the Transvaal, are likely to produce prolonged discussion. The Government will indeed be fortunate if, in spite of the unprecedented collapse of the debate on Wednesday, they can carry the address by the end of next week.

Private Members' Bills are likely to be many this session. The ballot paper on which members put down their names for the ballot for priority for the introduction of Bills and motions was numerously signed on Wednesday afternoon, and before the House rose nearly 300 had entered their names. Groups of members, as usual, balloted for favourite measures. The Irish Party have their special Irish Bills. The Socialists and Independent Labour members combined to push their particular proposals—respecting the Unemployed, Sweated Industries, and the Feeding of Children in Elementary Schools. The advocates of votes for women, both for Parliament and for local governing bodies, will also muster well for the ballot. The miners have one or more Bills dealing with the coal mining industry, while the advocates of the Wages Board Bill, the Shops Bill, the Rating of Machinery, and the Metric System and Antivivisection will all be represented in the groups seeking to secure a good place. The result of the ballot will be known on Friday, and Bills will be introduced by private members on Monday next week after questions.

England and Wales.

[From our Special Correspondents.]

BRISTOL.

A University of Bristol.

The annual meeting of the University College Colston Society, was held on January 14th under the presidency of Mr. G. A. Wills, the guest of the evening being Sir J. Collins. The attendance was up to the average, and those present were roused to the greatest enthusiasm by the announcement of the President that a gentleman had come forward and promised such a sum of money that the hopes of the citizens of Bristol to found a university were likely to be shortly realized. This gentleman was no other than the President's father, Mr. H. O. Wills, a member of the well-known firm of W. D. and H. O. Wills. As already stated in the Journal, the amount he had promised was £100,000 on condition that the University was founded within two years. This magnificent gift assures the formation of the long-wished-for university, for taken with the amounts already promised nearly £200,000 has been obtained and little or no trouble will be found to raise the rest of the money required. The statement of the financial position was made by the Treasurer, Mr. J. W. Arrowsmith. Since the Society was founded on the suggestion of Mr. Walter Reid £4,732 had been collected. Their aim was to obtain £250,000 before they went to the Privy Council for a charter, and since the meeting that evening a donation of £10,000 had been made by a friend, this brought the total up to £195,000. Further four sums of £1,000 had been promised from Mr. Charles Thomas, Mr. Edward Robinson, Mr. Hiatt Baker, and from a gentleman who wished to remain anonymous. Mr. Wills's announcement was received with the greatest enthusiasm, the whole room standing up and cheering, followed with singing "For he's a jolly good fellow."

Territorial Army Scheme—Meetings at Bristol.

Two meetings have been held—one on the 10th, the other on the 11th—in connexion with the Medical Department of the new Territorial Army scheme, at both of which Colonel Russell, R.A.M.C., gave a clear exposition of what was expected of the medical profession in Bristol. The first meeting was for the medical men only, the other for the public. Both meetings were well attended, and the scheme has been so well taken up by the medical men of the city that all the officers required for the field ambulance have been obtained. Bristol is expected to raise one field ambulance—that is, 250 men, of which nine have to be medical men. In addition to that the staff of a general hospital has to be formed, and this important part of the scheme will be undertaken by the staff of the Royal Infirmary and the General Hospital, under a committee consisting of Mr. Paul Bush, C.M.G., Mr. Flemming, and Mr. Watters. The field ambulance will be under the command of Brigade-Surgeon-Lieutenant-Colonel Prichard, V.D.

Brentry Home for Inebriates near Bristol.

The Brentry Home for Inebriates situated near Bristol was troubled with an epidemic of enteric from September, 1906, to November, 1907, in which there were 28 cases, of which 2 proved fatal. The most searching inquiries failed to discover the cause of the long-continued succession of cases, and the authorities called in Dr. D. S. Davies, the medical officer of health of Bristol, to assist in the hunt for some source for the continued infection. On January 9th Dr. Davies reported to the Bristol Health Committee that the conditions seemed to point to the existence of a "carrier" case of chronic enteric fever. An inquiry proved that the supposition was correct, and late in December it was found that a patient in the Home had acted as a carrier. This woman had suffered from the disease as long ago as six years, and on her isolation on November 13th the epidemic ceased. Only 1 case occurred after that date, but this was within the period of incubation. A detailed account will be published later.

LIVERPOOL.

Farewell Dinner to Dr. Wm. Carter.

A farewell dinner to Dr. William Carter—who, as already announced, has retired from practice and is going to live in the country—took place at the Adelphi Hotel on Saturday evening, January 25th. Covers were laid for about 120, and the company included the Lord Mayor (Dr. Caton), who was in the chair, the Lord Bishop of the Diocese, Sir Alfred Jones, K.C.M.G., and Professor Glynn.

The usual loyal toasts having been duly honoured, Mr. William Crosfield proposed "The Royal Southern Hospital and the Tropical School," which was responded to by Mr. W. G. Killick, who urged the claims of the hospitals for increased subscriptions, and by Sir Alfred Jones, who spoke of the debt the Tropical School owed to Dr. Carter. He said that the School started at a meeting of the Royal Southern Hospital, and it had set the world studying tropical diseases and medicines. Liverpool had spent £80,000 on that investment, which had saved thousands of people, and had brought down the death-rate in Africa from 30 per cent. to 2 per cent.

The Lord Mayor, in proposing the health of Dr. Carter, said he did so with a great deal of personal feeling, since for about forty years Dr. Carter had been his dear friend. As his professional brethren learnt to know him they learnt to esteem him and his great ability. He remembered the splendid work of Dr. Carter in the old medical school. When that school was struggling for its existence, and many of them were cherishing in their minds the hope that from that little school there might spring something much greater and more important—a college and a university for Liverpool—Dr. Carter was one of the band that worked very hard. He had worked in connexion with the medical school in its various stages for nearly forty years. They owed him a great deal for that. He believed the city had never had a more devoted hospital physician, and the work he had done for a long series of years at the Southern Hospital was a record of which any man and any city might be proud. Both in the University and in the hospital he had been one of their most valued and successful teachers. Nor should his social influence in Liverpool be forgotten. His efforts on the side of social purity, his strong endeavours against the national and civic sin of drunkenness, and his earnestness as a temperance advocate would always command the respect of all who loved their city and desired to see it great, prosperous, and good. After alluding to various other activities of Dr. Carter, the speaker said that it was only natural that they should feel rather sore at heart that such a man was leaving them, and that they should wish to send him away with "God-speed," though with bitter regrets.

The Bishop, voicing the opinion of the general public, said that Dr. Carter must be looking forward with something like satisfaction to the thought of having days of rest in which to prosecute studies he had had difficulty in carrying on in the midst of a busy practice. His patients loved him as a man and honoured him as a physician. The loss of a good doctor was a great loss to a community. Liverpool was not only losing a good doctor, but, what they felt far more, they were losing a good man—one who had been a distinct moral force, and the moral force of Liverpool would be weaker on the day he left it. Mr. Edgar Browne, in a humorous letter regretting his inability to be present, had said he hoped that Dr. Carter would "keep off the drink." "I sincerely hope he won't," the Bishop said amid much laughter; "He has kept on the drink with such excellent effect the last few years that I hope he will keep on it a little longer. He leaves Liverpool a more sober city than he found it, and I venture to think it is due to his brave and persistent outspoken words that in no small degree the advance in temperance has been made."

Professor Glynn, speaking on behalf of the medical school of the University, said that it was as Professor of Materia Medica and Therapeutics that Dr. Carter's name would be associated with the school. All Dr. Carter's colleagues and students could say how well he discharged the duties, and with what facility he brought to bear his knowledge and experience upon those duties. Dr. Carter must have been a power for good in the lives of the hundreds of students who had passed through the school. He had

lived to see many of the schemes he advocated carried out. When one did not altogether agree with him, one always respected his opinions, and his own associations with Dr. Carter had been of the pleasantest possible description. They wished him happiness in his future, and let them not forget Miss Carter, his future companion.

Mr. T. H. Bickerton, President of the Medical Institution, said that to few men was such testimony given as had been given to Dr. Carter that night; by none was it more merited, and no one could value such whole-souled tribute to his life and labours better than Dr. Carter himself. It was given to few men to possess the courage to terminate suddenly in the midst of—he would not say at the zenith of—his fame, for Dr. Carter's zenith had already lasted twenty years, but to terminate suddenly a most successful career. It would be unusual if the step were dictated by considerations of health, for medical men usually elected to die in harness, as it was termed; and it was obviously not a question of age, for physically and intellectually he was a compeer of any one present. The relinquishing of a successful consulting practice when in full possession of mental and physical powers, and when ripe experience rendered him a much-sought-for colleague, was a sacrifice which few men in any rank of life would care to face. To all questions Dr. Carter brought a highly-trained and balanced mind. To elucidate the facts and obtain scientific proof, if the question permitted of it, was with him a *sine qua non*. Only when the *pros* and *cons* had been duly weighed was a decision come to. But once that decision was reached, it was unalterable until fresh facts were presented. Moreover, he had the courage of his convictions. Nobody was ever in doubt as to what he meant. Action with him followed decision. Questions of expediency did not weigh. He did not concern himself with consequences. That had been demonstrated by the unflinching stand he took in the cause of total abstinence, and had maintained in the face of all opposition. Great as was that opposition even to-day, no one but a man who had passed through it could know the full extent of the obloquy and contempt which faced a man at the time when Dr. Carter nailed his colours to the mast on that momentous question. Mr. Bickerton then referred in some detail to Dr. Carter's work as medical officer of health for West Derby, to his connexion with the Southern Hospital and the dispensaries, and as a sanitarian and as a magistrate. In private life he made staunch friends. He was a personal example of the simple life. He touched most points of civic life and identified himself with its philanthropies as few physicians had been able to do. His generosity had been great and he had not let his left hand know what his right hand did. In his long connexion with the Medical Institution he had been honoured by every position his medical brethren could bestow. He was perhaps for a quarter of a century the most regular attendant at its meetings, and the files of the journal attested to the keen interest he took in its discussions.

Dr. William Alexander supported the toast on behalf of Dr. Carter's late colleagues at the Royal Southern Hospital, and spoke of his ardent devotion to his hospital duties. The relationship between him and his patients seemed to be rather that of a brother or a father than of a patient and a physician. His opinions as to alcoholic drinks were well known, but in the treatment of disease he recognized the value of alcohol, and used it whenever it was necessary.

The toast was pledged with musical honours.

The Lord Mayor then said: Before I call upon Dr. Carter to reply, I wish to ask his acceptance of the portrait that a number of his friends have had painted, which we wish him to accept as a very small token of our sincere affection and regard and respect for him. It is a portrait that represents the strength, the strenuousness, and the sincerity of his character.

Dr. Carter replied in a speech full of interesting reminiscences of his life and work in Liverpool. He said that in November, 1866, his old friend Mr. Edgar Browne asked him to come to Liverpool, and he had never left it since. He was born on August 29th, 1836, so that last August he entered upon the seventy-second year of his youth. He had been associated with the Royal Southern Hospital for over thirty-six years. When he reached the age of 60, the usual limit of service, he sent in his resignation, but the Committee refused to accept it, and a new rule was proposed to enable his services to be retained. He came to Liverpool determined to work—at any work that was honest—without any hesitation whatever. Dr. Nevins left many years ago the lectureship on Chemistry at the Liverpool College in Shaw Street and he (Dr. Carter) succeeded, retaining the post for many years. There he made many friends. Some of his students were now white-haired; others were well-known men—Mr. Austin Taylor, Mr. Justice Pickford. Many of his pupils there had remained his fast friends ever since. The School of Science had been established not long before. Dr. Birkenhead, who was a doctor of science and occupied the chair in the Royal Infirmary School of Medicine and Chemistry, had conducted it with great ability and success for many years. In one of those terrible epidemics of typhus, which was so common in Liverpool in those days, he was swept away. He (Dr. Carter) was asked if he would undertake the duties of the position for a time. He did, and found it very congenial work. He continued, not temporarily, but for a good number of years to do the duty, and there he met working men of Liverpool, intelligent, industrious men, who devoted their evenings to scientific pursuit. One was George Gordon, a block maker, a Scotsman, distinguished for the intensity with which he pursued his studies. He earned his living by the sweat of his brow, and pursued his scientific studies far into the night. Dr. Carter then related how some years afterwards George Gordon, leaving his trade, was appointed, chiefly on his recommendation, to be curator of Fitzwilliam Museum, Cambridge, and how George Gordon subsequently assisted Lord Rayleigh in research work. The strongest expressions of gratitude were paid by Lord Rayleigh to the work of George Gordon. Some months ago poor George Gordon died, and his last wish was that he (Dr. Carter) should get his books and scientific instruments for the kindness he had received. He had remained at West Derby Union so long because of the pressure brought upon him to remain, the kindness he received, and the cordial consideration always shown him. Referring to public controversies, Dr. Carter spoke of the Contagious Diseases Act, as it was called, which degraded the manhood and womanhood of the country. He rose in indignation against it. Dr. Nevins, whose name he could never mention without reverence, came heartily in concurrence with him, nor did he relinquish the subject, travelling half over Europe, and being largely instrumental in the abrogation of that Act. Another public controversy that came on shortly afterwards was the Compulsory Notification (Diseases) Act. He never had any objection to the principle, but objected to having, under penalty of imprisonment, to notify at once, without any discretion whatever. There was one matter on which he thought he could congratulate Liverpool and himself. About this time Dr. Hope, thinking that he was losing time and that his energies might more advantageously be employed in another sphere, wanted to leave Liverpool. Dr. Hope came to him and told him about it. He used every persuasion possible, and induced Dr. Hope to stay. He knew Dr. Hope's fine qualities, and he knew Liverpool's wants, and how great a loss it would be if Dr. Hope went. The improvement that had come over Liverpool since had been due to Dr. Hope. It was with feelings of intense regret that he could hardly express that he left the city. He felt, however, that he ought to leave. He felt the most heartfelt gratitude towards all his kind friends and his loyal comrades at the Royal Southern Hospital, for never were men more loyal to each other than the men connected with the hospital; and his friends on the bench, with whom he had often had to fight in one direction when the general body of magistrates fought in another. He left all his friends with the profoundest feelings of thankfulness to Almighty God for having brought him there and kept him there.

The proceedings terminated with the singing of "Auld Lang Syne." Between the toasts an excellent musical programme was rendered by the Idlers' Quartette Party.

WEST YORKSHIRE.

NEW NORTH BIERLEY UNION INFIRMARY.

AT a cost of £10,500 the guardians of this union have now at their disposal a well-equipped and modern hospital for the treatment of the sick. The building, which was

formally opened on January 15th, is situated at Clayton, and is an addition to the workhouse already existing there. The building is a solid and almost severely plain structure with a long frontal elevation, relieved from monotony by two wings which form sanitary annexes. The infirmary is of two stories, and is planned to provide 105 beds. On each floor the nurses' room is in the centre, and commands a view of the large ward on either side. There are two separate main entrances, one side of the building having been designed for male patients and the other side for female patients. The vestibules are lined with enamelled tiles of pleasing tints, and the corridors are also tiled to a height of 4 ft. Each of the four wards is 75 ft. long by 24 ft. wide, and accommodates 23 patients. Two double-fronted stoves are used for heating purposes. The floors are of Austrian wainscot oak blocks, tongued and grooved together. Attached to each of the wards is a light, comfortable day-room for the use of the patients. These rooms—27 ft. by 13 ft.—in time of emergency could each be made to accommodate 3 beds, thus adding 12 beds to the normal number of 105. The bathrooms are tiled, and the taps can only be turned on by a key kept by the attendant. Before the attendant, even, can turn on the hot water he has to pull out a special spring—a check on thoughtless operating of the valves. All corners in the building are rounded off to prevent accumulation of dust. Along the back of the infirmary runs a balcony, to which fire-escape doors on the second floor give access, and from which the ground is gained by an iron staircase. A subway beneath the building gives access to all the gas and water pipes. In this situation there is also a calorifier chamber capable of supplying about 500 gallons of hot water an hour. Altogether the infirmary is an indication of the trend of modern feeling that the treatment of the sick poor shall be undertaken under conditions as favourable as can be obtained through increased scientific knowledge.

North Bierley Guardians and their Public Vaccinators.

The dispute between the thirteen public vaccinators of this Union and the Board of Guardians has now been settled by a compromise, and the warning notice in the Journal withdrawn. It will be recollected that the public vaccinators were formerly paid 1s. 8d. for each name forwarded to them by the vaccination officer; 5s. more for each child vaccinated, and 2s. 6d. mileage fee for all cases beyond three miles from the public vaccinator's surgery. The guardians endeavoured to obtain the consent of their public vaccinators to a 1s. fee for notification from the vaccination officer, 3s. 6d. for vaccination, and no mileage fee. The public vaccinators declined these fees, and the guardians then dismissed them and advertised for thirteen new public vaccinators. The Bradford Division intervened, and by counter advertisements and by a circular letter to all medical men in the district (over eighty), were able to persuade the doctors with one exception to refrain from applying for any of the appointments. The guardians then asked their old public vaccinators to meet them, and persuaded them to take the compromise fees. These are certainly not adequate, but they are better than were originally offered, and it has shown the authorities that the medical men have in the British Medical Association a power behind them which the guardians never dreamt of. The public vaccinators have expressed their great indebtedness to the Division and the Journal for the support afforded to them.

MANCHESTER.

Stammering Children in Elementary Schools.

The success which has attended the "Berquand method" of training stammering children in the elementary schools of Manchester has induced the Education Committee to institute a class for the training of teachers in the method. M. Berquand first commenced his classes in Vienna about thirteen years ago, and his method was adopted in Manchester two years ago, two teachers being specially instructed by him. In the two years 114 children have been dealt with, and Dr. Eichholz, His Majesty's Inspector fo Special Schools, considers the results highly satisfactory. It is now intended to train three more Manchester teachers in the method, and as several other education authorities have expressed a desire to have some of their teachers trained, a special class has just been commenced by M. Berquand at the education offices in Deansgate. The first week of the course for teachers is devoted to theoretical instruction, and after that the teachers themselves assist at lessons given to stammerers, thus combining practical with theoretical instruction. During the past year, eight classes of from ten to twelve children have undergone treatment in Manchester. At the opening of each course, every child is examined by one of the Committee's medical officers, and at the close they are re-examined and their progress noted. Each course has lasted a month, about forty lessons being given. In some very bad cases pupils have had a second course, and in the case of two boys a third course was found necessary, which resulted in complete cure. At the end of the training most of the pupils have passed a successful examination in reading, speaking, and reciting. Only in a few cases were the results unsatisfactory, and in these there were generally present some extenuating circumstances. In only one case where there were no extenuating circumstances were the teachers unable to report success. On the other hand, there were some interesting results. One pupil, a bad stammerer, was, after treatment, able to take the part of "Julius Caesar" in a school concert. Another case, a girl, whose articulation was very defective owing to deafness, so far improved that now there are few sounds which she is not able to make, and at the same time she is better able to recognize sounds made by others by watching their lips. No fewer than 313 children have been reported as needing the treatment in Manchester elementary schools, and as soon as the three extra teachers are able to commence the work it will be possible to overtake the needs of the children who require instruction. There can be no doubt that the step taken by the Education Committee is in the right direction, as hardly anything is more detrimental to the education and the future career of a child than the inability to speak properly.

The Royal Eye Hospital.

The annual meeting of the supporters of the Royal Eye Hospital was held last week in the Lord Mayor's parlour, Manchester, the Lord Mayor presiding. The report stated that the number of out-patients treated during the year at the two branches in Oxford Street and John Street was 32,643, an increase of over 2,000 as compared with the year 1906, and the largest number yet recorded. The in-patients in the same period were 1,523, the average stay in hospital being about twenty-one days. The number of accident cases was no less than 9,396, an average of 30 cases a day. The building of the extension had been going on actively during the year, and it is expected that it will be completed within another year. The cost will be at least £20 000, of which only £11 000 has been received. The report expresses a hope that the remainder will be obtained before the completion of the work, as it is most desirable that the extension should be paid for without encroaching on the investments, as the maintenance of the hospital so largely depends on the income from that source. The report also shows that various workpeople's organizations have contributed generously to the support of the hospital. Mr. J. B. McKerrow referred to the suggestion made from time to time that hospitals should be municipalized. He certainly thought that it was a desirable thing that hospitals should be exempt from rates; but to throw them on the rates entirely was quite a different thing, and altogether undesirable. The effect of such a procedure would be very considerably to repress the philanthropic instincts of the people, and to make the collection of funds almost impossible. Moreover, whenever money was required, there would have to be a public inquiry. Schemes might have to be left to the mercy of town meetings, where false economists might attend to veto all demands for money. Thus the mischief caused by throwing the hospitals on the rates would be incalculably greater than any temporary benefit that might be received in the way of a little extra money. The Lord Mayor echoed the words of Mr. McKerrow, and expressed the opinion that it would be a calamity to have the hospitals put on the rates.

SHEFFIELD.

RETFORD EDUCATION AUTHORITY.

AT the monthly meeting of the Retford Education Authority on January 27th, the Mayor (Mr. J. Thornton) occupying the chair, the Management Committee reported that they had further discussed the memorandum from the Board of Education on the medical inspection of children in elementary schools, with the medical officer, Dr. Manners Smith. He suggested that on the basis of a possible 400 short examinations during the year, the remuneration should be £50 per annum. In addition to the actual examinations there would be a large amount of clerical work to be done and statistical reports to be prepared. Dr. Manners Smith also expressed the opinion that to carry out the work properly a nurse must be present at the examinations. After a lengthy discussion it was decided to adjourn the matter for a month, and in the meantime the medical officer was asked to see how the scheme worked at Ordsall School.

SOUTH WALES.

GLAMORGAN WATER BOARD.

THE formation of the Glamorgan Water Board will be facilitated by the bargain that has been made with the Merthyr Tydfil Corporation. This is for the supply of water in quantities varying from 3 to 9 million gallons a day at 2½d. per 1,000 gallons, delivered on the boundary of the Merthyr borough at Treharris. The agreement, of course, is contingent on the formation of the Water Board. What has made the bargain possible is the ideal site at Pontsticill in the Taff Fechan Valley, upon which the Merthyr Corporation proposed to build a new reservoir to contain the enormous quantity of 2,700,000,000 gallons. If this reservoir be constructed, it will be the end of a chain of four reservoirs. Next above it will be Pentwyn, designed to hold 346 000,000 gallons; then the Lower Neuadd, holding 75,000 000 gallons; and then the Upper Neuadd, holding 345,000,000 gallons. Pentwyn has been a source of trouble since it was constructed after the passing of the Act of 1858. The only water available for the town is what a 14-in. pipe can take from the river at the top of the reservoir, and the water in the reservoir itself is distributed as compensation water to millowners down the stream, who are entitled to a daily quantity varying from 900,000 to 10,000,000 gallons a day. Every day there leaks out through the fissures and a huge hole outside the Pentwyn embankment the enormous quantity of 11,000,000 gallons of water. The longer this leakage is allowed to continue the more unsafe must the embankment become; and it is perfectly competent for the local bench of magistrates to make an order upon the Corporation to empty the reservoir should representations be made to them that it is unsafe. If that step were taken there would be a continuing liability upon the Corporation to compensate the millowners for any loss sustained by them. Should a very dry season come the Corporation would in that case also probably be at the mercy of the millowners. Mr. Deacon, reporting to the Corporation upon their water supplies, has stated: "If an exceptionally dry season were to occur next year, 91 per cent. of the whole quantity available would be taken. This leaves a margin with which no community ought for a moment to be satisfied." Then the county is most urgently in need of water. These facts, taken together, inspired some members to introduce the huge scheme for the utilization of some of the 25 million gallons of water (now running to waste down the Taff Fechan River) by constructing a reservoir at Pontsticill. This will involve, to do all the necessary works, including the main down to Treharris, a capital outlay of £350,000. For this outlay there will be a yield of nearly ten million gallons of water a day, and the cost of the scheme, having regard to the capacity of the reservoir, will work out at $\frac{1}{10}$ penny per thousand gallons. It is not surprising that the County Water Board has an option on such cheap terms as 2½d., for Merthyr will still make a profit of 100 per cent. There are, of course, serious risks, but they need frighten nobody. If the works are constructed the repayment of capital and interest will require £20,000 per annum. The sale of three million gallons a day to the County Council will produce a revenue of £11,406, and if the full nine millions are taken the revenue would be £34,218. The county cannot get water more cheaply or as cheaply anywhere else. Merthyr will benefit by having the quantity of compensation water due to the millowners fixed on a proper basis, and a large surplus for her own supplies after supplying the maximum to the county. It is a good bargain all round, and it seems plain that if the Merthyr electors are led again to upset the scheme when the opportunity comes at a poll on February 3rd, they will make a mistake they will be unable to forget.

SWANSEA MEDICAL OFFICER.

The Swansea Corporation is about to appoint a medical officer of health, at a salary of £500 a year, the officer to devote his whole time to the duties. The appointment of port medical officer will probably be added, and this will mean a further £100 a year. The six selected candidates are: D. J. Morgan, M.A., M.D., B.Ch., D.P.H., L.S.A., F.C.S., bacteriologist and pathologist to the Cancer Hospital, London; Joseph Beard, F.R.C.S., M.R.C.S., L.R.C.P., D.P.H., assistant and deputy medical officer of health, Bootle; E. W. M. Rhys Jones, M.B., Ch.B.Glasg., D.P.H., deputy medical officer of health, Lincoln; J. Mudie Morris, M.A., M.B., C.M., D.P.H., medical officer of health, Neath; Charles Grant Pugh, M.D., M.B., B.Sc., D.S.M., M.R.C.S., L.R.C.P., Woolwich; and J. T. C. Nash, M.D., M.B., C.M., D.P.H., Southend-on-Sea.

Scotland.

THE CHANCELLORSHIP OF GLASGOW UNIVERSITY.

THE vacancy left by the death of Lord Kelvin, the late Lord Chancellor, will be filled up at the next statutory meeting of the General Council of the University on April 1st, 1908. With a view to the selection of a suitable candidate a private meeting of the General Council was convened by the Business Committee at which various names were brought forward and discussed. Among others the name of Lord Lister was suggested, and it was found to be generally acceptable. It appears, therefore, probable that, if Lord Lister will accept nomination, he will be unanimously elected.

SEAFORTH SANATORIUM, ROSS-SHIRE.

Some weeks ago a description of the sanatorium lately opened at Fort Augustus was given in the BRITISH MEDICAL JOURNAL. The neighbouring county of Ross has been still more fortunate in having a fully equipped sanatorium for the treatment of consumption given to it and also endowed through the generosity of Colonel Stewart Mackenzie, of Seaforth, and Mrs. Stewart Mackenzie.

The contracts for the erection of the sanatorium amount to £8,000, and the generous donors have endowed the Institution for all time to come with the munificent sum of £100,000. This, possibly, is the first instance in the kingdom of a sanatorium being erected, equipped, and endowed by a private donor.

The site, which is an ideal one, is on the Brahan Estate, at the west side of the village of Maryburgh, not far from Dingwall and in the immediate neighbourhood of the well-known Strathpeffer Spa. The buildings are set on a ridge facing the south, and command an extensive view of the Cromarty Firth, the Black Isle, and the country to the south, while the beautiful woods of Brahan are in the immediate neighbourhood. The pleasure grounds attached are extensive; they slope to the south, and embrace charmingly wooded knolls and sheltered hollows, so that in all states of the weather the patients can procure sheltered places for rest.

The buildings consist of two large detached blocks, the one in front containing accommodation for the patients and the professional staff, while in the rear block is the administrative department. The centre of the front block is three stories high, and contains matron's and nurses' rooms, and doctor's consulting and dispensing rooms. To the east and west are the male and female patients' rooms in one story wings set at a slight angle to the centre, so as to give shelter and the best prospects. There is accommodation for twelve patients, each having a separate room, and large rooms at the end of each wing are provided for special cases.

The whole of these rooms are arranged so as to give free passage of air throughout the buildings, and on the south large sliding glazed screens open on to a broad platt, extending along the whole length of the building, where the patients can have their beds and couches in the open air when desired. Behind each of the wings annexes are built in which are placed the bathrooms, closets, dressing-rooms, and lavatories, all fitted with the most approved sanitary appliances. The buildings are lighted by electric light generated by water power procured from the Ussie Burn.

The south front extends for 184 ft., and is kept entirely for the private use of the patients, who have also private entrances to their apartments from the back. The public entrance is on the north side of the central block, giving access to a large hall communicating with the staff's apartments and the patients' wings.

The administration block contains a handsome dining-room, 30 ft. by 20 ft., with serving pantry, stores, and kitchen behind, while wings on either side contain the scullery, larders, pantries, cook's room, and laundry, etc., all fitted with every equipment of the most modern and up-to-date type. The water is taken from a well situated on the northern slope of the high ground, where a large reservoir is formed to ensure an ample supply for all purposes. Analyses from several sources were procured, and this well has been pronounced as specially suitable for domestic purposes.

The disposal of sewage and waste water has been very carefully arranged for, being received in a large tank on the north side of the grounds and there thoroughly filtered and treated. The effluent is then conducted to the burn below Maryburgh, where it flows into the sea.

The whole scheme has been most thoroughly considered and matured by Colonel and Mrs. Stewart Mackenzie, who have spared no trouble or expense in working it out and in procuring the advice of the highest medical specialists.

The sanatorium has now been completed, and was formally opened on January 16th in the presence of a very large and representative gathering. In his opening address Colonel Mackenzie said that the building is, to all intents and purposes, ready for the reception of patients; but, having in mind the open-air treatment which will be carried out, the admission of patients will be deferred until the season is rather milder and the building has become thoroughly dried. The aim and object is to receive and pass through this sanatorium as many patients as possible who are suffering in the initial stages of consumption, but those only whose cases present a reasonable prospect of effecting a cure, so that the institution may be not only of a curative but an educational nature, and that those who have been treated may instil into their fellows the principles of health which they may have learnt. The first care will be for those who are prevented by lack of means from obtaining admission into a paying institution, or those whose friends are unable to keep them. All patients will be admitted free.

The sanatorium will have a resident medical superintendent, Dr. MacLean, now at Fortross, having been appointed.

Notification of Births Act in Aberdeen.

At a meeting of the Aberdeen Town Council on January 20th, in connexion with a proposal to adopt the Notification of Births Act, a letter was read from Dr. Marnoch, secretary of the Aberdeen Medico-Chirurgical Society, asking the Town Council to receive a deputation from the Society, in order that the views of the Society against the adoption of the Act might be submitted. The deputation consisted of Dr. Williamson, President of the Society; Dr. Marnoch, Secretary; Dr. Lister, Treasurer; Dr. Edmond, Dr. John Gordon, and Dr. M'Kerron. Dr. Williamson said the deputation had been sent on behalf of the Aberdeen Medico-Chirurgical Society, and he might therefore say they represented the medical profession in Aberdeen. The Society had been absolutely unanimous in coming to the Council to ask them to consider whether they should not delay the adoption of the Notification of Births Act until an opportunity had been given for some amendment of the Act. The Society wished it to be understood that they were not taking up an attitude of hostility to the intention of the Act, but they simply objected to the duty which it placed on medical men to notify births. The medical profession was ready now, as it had always been, to support the Public Health Department in everything which they thought was for the benefit of the community, but they objected to being coerced under the threat of a penalty to do something which they believed was not only unnecessary, but of absolutely no gain to the public health, and which would certainly be contrary to the strongly expressed desire of a section of their patients. They were also of opinion that if the Act were adopted in its present form, there would be in a fairly large section of the community, not only not a diminution of infantile mortality, but the Society believed there would be increased mortality of infants. Dr. Williamson then read a memorandum from the Society on the subject setting forth the objections to the adoption of the Act in its present form from the point of view of the medical profession. Dr. Gordon, on behalf of the members of the deputation, thanked the Council for their courteous and patient hearing, and assured the Council that nothing would be wanting in their loyalty to the medical officer of health, be the decision what it might. He asked the Town Council to consider this point. The Act, as it stood, was purely a notification Act. There was no provision for the medical officer carrying the Act into effect. It could be stultified when parents or those in attendance refused admission to the medical officers of health. The medical officer of health could only receive notification, and that was all he could do. The Lord Provost said the Town Council were pleased to have heard the members of the Medico-Chirurgical Society with regard to the Notification of Births Act, and he was sure the members of the Council would give every consideration to what they had said.

Aberdeen Anatomical and Anthropological Society.

At a meeting of this Society, held on January 18th, a lecture was delivered by Dr. W. R. Macdonnell on a Biometrical Study of the Records of the Anthropometric Laboratory Aberdeen of the University. The lecture was based on statistics obtained in the University during the last twelve years, which were placed at his disposal by Professor Reid. He dealt specially with the data of cranial measurements, height standing and height sitting above chair, span of arms, colour of hair and eyes, and size of pupil. He made a comparison first between the purely Scottish and the non-Scottish groups of students. Between these groups there was practically no difference except in the colour of the hair, where the non-Scottish showed a preponderance of fair and a falling off for medium. In the second part of his lecture he confined his attention to a comparison between Aberdeen students as a whole and other classes of the community, dealing especially with Aberdeenshire rural inhabitants, and with Cambridge students; with Scottish and English criminals and Scottish insane. Compared with the other classes, the criminals and insane were distinctly smaller in stature, and the Scottish insane possessed the longest heads of all. In making a comparison of the distribution of eye colour and hair colour, Dr. Macdonnell showed that, as regards the former, Aberdeen students occupied a unique position. The number of students with light-coloured eyes was very far below the average; and as regards hair colour, though not so marked, there was a very similar difference. A comparison of data obtained from students who had passed their examination with honours and those who were merely pass-men showed that there was no appreciable difference, and an analysis of similar statistics from Cambridge led the lecturer to the same conclusion. Summing up, Dr. Macdonell tabulated the main results of his investigations as follows: The Scottish and non-Scottish groups of students are practically identical; they closely resemble Cambridge students and the rural population of Aberdeenshire; the average growth between the 19th and 23rd years of life amongst Aberdeen students is about 1¼ per cent.; there is no difference between honours and pass-men; the Aberdeen head is not larger than that of other classes of the community; low stature markedly differentiates the criminal and insane from the normal individual.

Glasgow Royal Infirmary.

At the annual meeting of the qualified subscribers, a very interesting and satisfactory report was presented,

which showed that the institution was increasing in usefulness. In almost every department the number of cases showed an increase over previous years. With the exception of the year 1870 when over 2,000 fever cases were included, the numbers treated in the past year formed a record. The admissions were 8,325, as against 7,869 in the previous year, while the mortality among the cases treated to a conclusion was 10.1 per cent., against 10.8 per cent. in the previous year. If those cases were deducted which did not survive forty-eight hours, the mortality fell to 6 4 per cent. The daily average number of cases was 593.2, against 580 in 1906. The average residence of cases treated to a conclusion was 26 days, against 26.9 in 1906. The attendances at the outdoor departments also showed marked increase in many cases. The total number of first attendances at the outdoor departments was 29,996, while a further 8,277 accident and urgent cases were treated as outdoor patients. The average cost of each fully-occupied bed was £69 5s. 6½d., against £68 10s. 8¾d. in the year 1906, but the average cost of each patient treated to a conclusion showed a slight decrease, being £4 13s. 6¾d., against £5 0s. 11d. in 1906. The financial statement showed that the total ordinary revenue was £31,690, the total ordinary expenditure £42,752, leaving a deficiency of £11,062. This deficiency was more than covered by the extraordinary revenue of £14,262, which enabled the directors to carry to the credit of the stock account the sum of £2,945. During the year the work of reconstructing the hospital was continued and good progress was made. Unless, however, a further capital sum of £100,000 was obtained immediately it would not be possible to continue the reconstitution from the point it had reached at the present time. The Joint Committee, consisting of four infirmary managers and four governors of St. Mungo's College, had held several meetings, and submitted to the two Boards at a general conference certain alternative proposals, which, however, the joint conference was unable to agree upon, so that in the meantime the matter is hung up.

Ruchill Fever Hospital, Glasgow.

The result of Professor Harvey Littlejohn's preliminary inquiry into the condition of affairs in this institution is that the Local Government Board has decided to hold an inquiry. The Board has appointed Mr. Donald Crawford, K.C., Sheriff of Aberdeenshire, a Commissioner to inquire into and report upon the complaints of overcrowding and understaffing of Ruchill Hospital and in the administration and management of the hospital. Professor Littlejohn and Mr. A. Murray, the chief clerk to the Board, will act with the Commissioner. The inquiry is to be public; it is proposed that the first meeting be held on February 3rd, and that the sittings shall thereafter be continuous till the inquiry is completed. It will be remembered that the resident medical staff made serious complaint of the overcrowding of the wards and of insufficient and inefficient nursing arrangements, which culminated in the dismissal of three of the resident medical staff. In view of the serious nature of the allegations, it is satisfactory to know that an impartial tribunal is to investigate the actual state of affairs.

Ireland.

[From our Special Correspondents.]

The Irish University Question.

The Rev. Thomas T. Gray, senior Fellow of Trinity College, Dublin, has addressed a long letter to the newspapers on the subject of Mr. Birrell's University scheme. The outlines of this were first made known by the Provost in his speech at Manchester, when he declared that "he could answer for the governing body of Trinity College, at any rate, and that they would give Mr. Birrell every assistance in their power in his proposed legislation." He (Dr. Gray) is a member of the governing body of Trinity College, but he says he is not included among those for whom the Provost undertook to answer. The main portion of the letter is devoted to a consideration of the "ban" which the "hierarchy of the Roman Catholic Church has placed upon Trinity College, Dublin, and the Queen's Colleges, forbidding the Roman Catholic youth of Ireland to frequent these Colleges, to mix with their countrymen during their university course and to take advantage of all these privileges which their co-religionists in every part of the kingdom are satisfied to accept." It is this pressure which has created the Irish University question. He mentions what has been done in England in like circumstances, and recommends this as worthy of imitation in Ireland. He quotes Mr. Dillon, Mr. W. O'Brien and Mr. Michael Davitt on the subject. The latter had been carrying on a discussion with the Roman Catholic Bishop of Limerick, Dr. O'Dwyer, and in one of his letters said:

> Is it a betrayal of religion to remind you that it was the vote of one bishop—thirteen against twelve—which, in the Forties locked the gates of the Queen's Colleges against higher education for Irish Catholic boys, because those seats of learning were not to be controlled in their secular government by the hierarchy? What has religion reaped in return for this secular sacrifice of educational opportunity? Has there been a spiritual or moral gain for God or Church or people in any way commensurate with the cost thus paid by Ireland for that one vote of one of your Episcopal predecessors? There has been no such gain; no moral or religious betterment that can weigh as an atom of Catholic compensation against the losses which have been inflicted upon the Catholic people of Ireland through this disastrous policy of ultramontane educational blindness.
>
> What has the boycott of Trinity College done for the Catholic youth of our country? Does the City of Dublin live on a higher spiritual and moral plane as a result of one set of young Irishmen entering Trinity and another set going to University College? No. These sacrifices have been absolutely barren and fruitless of religious results. They have only tended to secure to the Protestant minority of our population gains and advantages which no one begrudges to them, but which even an ordinary common-sense regard for the secular interests of a Catholic majority would have been careful to secure for them a generation ago, with the certainty that a Faith, which has not owed its existence for centuries in Ireland to the Catholic teaching of "National" schools, or to the spiritual guidance of the "National" Board of Education, would not perish in Ireland if placed inside the portals of Trinity College in the persons and presence of Catholic students.

Dr. Gray believes that Mr. Birrell's new university will be a Catholic university, and he urges that the existing "ban" should be removed by the hierarchy.

Catholic University Medical School.

The annual dinner of the past and present students of the Catholic University Medical School took place on Saturday, January 25th, Dr. Coffey, Professor of Physiology, occupying the chair. In replying to the toast of "The Medical School," proposed by Dr. M. J. Cox, Professor Coffey said that in point of numbers the school was in its rightful place—first in Ireland. Referring to Mr. Birrell's proposed University Bill, he said that Mr. Birrell must not expect any settlement of the question unless he approached it in that generous spirit which would enable him to put himself in the place of the Irish Catholic, and recognized that there were no differences between the Irish priest and the Irish layman. If history made anything clear, it was that the Irish people were steadfast to the principle of free and sympathetic recognition of their religion in all its parts. For his part, he had no doubt that Mr. Birrell's Bill would be a good and generous one, and that it would introduce into Ireland that long denied right by which the people of Ireland would be able to acquire that power in education which would make the nations of Europe recognize that the Celtic people had again taken up the work which they so long carried out in European education.

Forster Green Hospital for Consumption, Belfast.

The annual meeting of this institution was held in Belfast on January 22nd. The President (Mr. Herbert Ewart) occupied the chair, and moved the adoption of the annual report, which was seconded by the out-going Lord Mayor (Earl of Shaftesbury). The debt for working expenses had been reduced from £131 to £12. In the wards 170 patients had been treated, and in the dispensary 481 new cases. An agreement had been entered into with the City Council, and had been ratified by the Local Government Board. The City would nominate the patients for 25 beds, which it would support for the next ten years. The dispensary system would be considerably extended, and the services of a qualified medical man and one or two trained nurses engaged. For this an additional

£400 a year would be required. Cases leaving the sanatorium at Fortbreda would be followed to their home. It is generally felt that both the City Council and the hospital authorities are to be congratulated on the movement, which constitutes an undoubted advance. It is earnestly to be hoped that all the various civic and philanthropic bodies which are doing the same work will amalgamate in the same manner, so that there may be greater concentration and economy.

Jubilee of the Irish Temperance League in Belfast.

Addresses by Sir Victor Horsley.

In the afternoon of January 23rd Sir Victor Horsley gave an address to the Belfast Women's Temperance Association on the proper use of alcohol in health and disease. He pointed out that the Canadians and the Japanese had fixed the age of childhood as regards alcohol as 21, which tended to weaken the argument that alcohol might be bad for a child but not for an adult. In the evening Sir Victor gave an address on the "Temperance Movement: its Bearing on the National Life," to a large public meeting. Dr. William Calwell occupied the chair, and there was a large and appreciative audience. Sir Victor dealt with the national aspects of alcoholism and the preventive measures to be employed. He urged that it was one of the most pressing and important questions that could engage the statesmen of the day. A warm and hearty vote of thanks to the lecturer was proposed by Dr. McMurtry, seconded by Sir John Byers, and carried by acclamation.

The Castlerea Union.

In his quarterly return to the Local Government Board Dr. Donnelan, ex-President of the Irish Poor Law Association, and one of the medical officers of the Castlerea Union, complains that his position is intolerable. His district has an area of 51,628 acres and a population of 11,713. Dr. Donnelan says:

> My district is necessarily a two-horse one. Of late I have been obliged to try and work it with one, and that one is now broken up, and I have been unable to get a post-car in Castlerea to take me to the country after 10 o'clock p.m. If under these circumstances lives are lost, I claim that I shall not be held liable.

The solution of the difficulty proposed to the Board of Guardians by the Local Government Board is characteristic. They suggest that the guardians should take from Dr. Donnelan's district the easily-reached portion in and about Castlerea, transferring it to a smaller neighbouring district, and leaving to him still 41,000 acres and a population of 8,857 poor farmers to attend for a salary of £100 a year. In no union in Ireland is the inequality of Poor-law service more marked than in Castlerea. Dr. Donnelan, with an area of 52,000 acres and a population of 12,000, gets the same salary as his neighbour whose district has an area of 28,500 acres and a population of 2,625. We hope shortly to be able to show clearly how great this inequality is all over Ireland.

Killarney Union.

The medical officers of the Killarney Union pointed out to their masters that when all the Treasury grants were deducted the medical officers only received £100 a year from the rates, less one-third of a penny in the pound on the valuation. After a long wrangle it was agreed to adopt a graded scale on the condition that the medical officers would reduce their fees to private patients, guardians included, of course.

Poor-law Medical Officers.

The Guardians of the Lismore Union have decided by a majority to grant to the medical officers of that union a graded scale of salaries, commencing at £150 and increasing by triennial increments of £7 10s. to a maximum of £200. This is, we think, the most liberal scale yet adopted in any rural Irish union.

New South Wales.

[From our Special Correspondent.]

Report of Inspector of Lunacy.

We have received the annual report for 1906 of Dr. Eric Sinclair, the Inspector-General of the Insane for this Colony, from which we see that on December 31st, 1905, the number of insane under official cognizance was 5,277, and that on December 31st, 1906, the number was 5,525, giving an increase for the year 1906 of 248. With the exception of the year 1903, when the increase was 263, this increase is the greatest in the history of this Colony. At the end of 1906, the proportion of insane to general population was 1 to 277 as compared with the 1 to 282 of England and Wales for the same year.

Admissions.

During the year 1,123 cases were admitted, this being the largest number of admissions so far recorded. The proportion of admissions to general population, 1 in 1,363, is, however, less than that of 1903, when it was 1 in 1,344. Of the total admissions, 54 per cent. were natives of New South Wales, 17½ per cent. were English, 10 per cent. Irish, 9 per cent. natives of other Australian States, 4½ per cent. Scottish, and 5 per cent. natives of other countries. Of the total number 909 were first admissions, and 214 had been in the same hospital on previous occasions. The admissions were classified according to the form of mental disorder into: Mania of all kinds, 542; melancholia of all kinds, 248; dementia—primary, senile, and organic, 143; general paralysis, 56; epileptic insanity, 42; and cases of congenital or infantile defect, 92. As to the probable causes of the insanities in these cases, alcohol was assigned in 163, or 14·5 per cent.; venereal disease in 23, periodic causes in 137, previous attacks in 215, epilepsy in 59, various bodily diseases and disorders in 72, and "moral" causes in 182. Hereditary influences were ascertained in 133, or only about 11 per cent.; and congenital defect existed in 81.

Discharges, Deaths, etc.

During the year 428 were discharged as recovered, giving a recovery-rate on the admissions of 38·11 per cent., or, excluding the statistics of the Hospital for Imbeciles at Newcastle, from which recoveries could not be expected, of 39·47 per cent. This, though it compares favourably with recovery rates generally, is considerably lower than the average for the past decade of New South Wales Asylums, namely, 42·81 per cent. During the year there were also 57 discharged as relieved, 188 were transferred, and 4 escaped. During the year also there were 389 deaths, giving a death-rate on the average number resident of 7.51 per cent. as compared with the average for the past ten years of 6.97 per cent. The deaths in 148 were due to cerebro-spinal diseases, including 61 deaths from general paralysis; in 117 to chest diseases, including 61 from pulmonary consumption; in 59 from abdominal diseases, including 14 deaths from dysentery and diarrhoea and 4 from tuberculous diseases, and in 62 to general diseases. There were also 2 deaths from suicide and 1 from accident. Between 16 and 17 per cent. of the total deaths were thus due to tuberculous disease.

Cost.

The average cost per week per head, after deducting collections, in the New South Wales Asylums was 8s. 8½d.

Accommodation.

The total accommodation for the insane in New South Wales—excluding licensed houses—at Gladesville, Callan Park, Parramatta, Rydalmere, Kenmore, and Newcastle is 4,793 beds. At the end of 1906 there were actually in these asylums 5,264 patients, that is, there was an excess of 471 patients. To cope with the increasing demand for accommodation, and at the same time to provide special hospital accommodation for acute cases, additions are being built at Gladesville, Callan Park, Kenmore, and Rydalmere for 150 beds, and also for chronic case wards to accommodate from 150 to 200 at Morisset, where it is hoped to establish an industrial farm colony.

The additional accommodation when completed will be quite insufficient even for the present excess, and it is evident that it will be some time before the requirements of the colony will be met.

Harvard University has received from the trustees under the will of Miss Harriet N. Lowell the sum of £400, this being the first annual payment of a part of the income of her estate, in accordance with a provision by which the money is to be applied for purposes of surgical research. In addition to this immediate benefit, the University will receive the remainder of the estate on the expiry of a life tenancy.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Ophthalmo-tuberculin Reaction.—Proposed Chair of Experimental Surgery.

AT the last meeting of the Académie de Médecine Dr. Calmette made an interesting communication on the ophthalmo-diagnosis of tuberculosis and the part it will play in the social defence against tubercle. Since first communicating his results in June, 1907, to the Académie des Sciences a large number of practitioners had been able to show that the method permitted the recognition of the existence of tuberculous lesions in course of evolution when no clinical signs were apparent, and this with an almost absolute certainty. Dr. Calmette used tuberculin purified by three successive precipitations in alcohol at 95°, and then dried *in vacuo*. The substance thus obtained was redissolved in physiological saline solution in the proportion of 1 per 100, forming the "mother solution," and might be further diluted to 1 per 200, and when hermetically sealed in tubes it kept indefinitely. A single drop of either of these solutions instilled into the inner angle of one eye was sufficient to produce the characteristic reaction if the patient were tuberculous. In children, on account of their greater sensibility, it was preferable to use 1 in 200 solution, while in adults the 1 per 100 solution gave better results. The method was harmless, and any accidents that had occurred would have been avoided if a separate dropper had been used in each case, and if sterilized tuberculin had always been used instead of solutions, of more or less recent preparation, which altered quickly when exposed to the air. Professor de Lapersonne found that the method was without danger for healthy eyes, and its use with the usual precautions as to cleanliness was harmless except perhaps in old people or those affected with superficial or deep tuberculous lesions of the globe of the eye. The certainty of the reaction had been proved by *post-mortem* examinations, which had shown the existence of small tuberculous foci in people who reacted positively, and yet were considered clinically to be free from tubercle. The lesions were often very difficult to find, and might be limited to a mesenteric or peribronchial gland, and they were nearly always caseating. Experimentally the test never failed, in cattle at least, and all animals which reacted were certainly tuberculous. There was no reason to suppose that it was otherwise in man. The intensity of the reaction did not appear to be in ratio to the extent or gravity of the tuberculous infection; the reaction, however, seemed to be more intense and quicker in appearing in children and in adults with lesions just beginning; more advanced cases reacted less distinctly and later; in cachectic cases and those with extensive lesions (tuberculous peritonitis) the reaction was negative. The reaction was not useful in prognosis, but there seemed to be no doubt that it was of use in proving the cure of old lesions, as was shown by numerous negative results in old tuberculous cases which showed all the clinical signs of cure. Dr. Calmette then passed in review the different uses the test might serve in the crusade against tuberculosis. He first showed that infants newly born of tuberculous mothers did not react, while the mothers gave a positive reaction. Tubercle became more frequent as the infants grew older. Between the ages of 1 and 2 years 3.42 per cent. reacted positively; from 2 to 5 years the proportion was 5.26 per cent.; 13.54 per cent. from 6 to 10 years; 14.96 per cent. from 11 to 15 years. This tended to confirm, what Bang and Nocard proved in the case of cattle, that congenital tubercle was a rare exception, occurring only when the fœtus had been directly infected by the sperm or the ovule. By repeating the test at short intervals it would be possible to detect the moment when the child began to be attacked by tubercle, and thus show the part played by contagion in the family and by the digestion tube through taking food soiled by human or animal tubercle. If all the children in a family with one tuberculous patient were tested every three months the chances of cure would be largely increased, as the child could at once be removed and placed in healthy surroundings in the country or in a maritime sanatorium. This method was now carried out in the Emile Roux antituberculous dispensary at Lille. The children were placed in the country, and would be kept there till the test, which was repeated every two or three months, gave proof that the active lesion no longer existed. They would then be sent back to their families with the hope of seeing a large majority of the cases remain free, for experiments on animals, and the cases which had been followed for years after leaving maritime sanatoriums, seemed to prove that the complete cure of old tuberculous foci in glands conferred a real immunity against fresh attacks of tubercle. Dr. Calmette also suggested that the test should be applied to all candidates as teachers in Normal schools and the large State schools, and also in the army and navy, as it would reveal those who had *active* tuberculous lesions.

The Faculty of Medicine recently received a proposal from the Paris Muncipal Council to create officially a Chair of Experimental Surgery. A chair of this kind, of which Dr. Tuffier is the incumbent, has already been in existence for ten years *officieusement* in the laboratory of M. Dastre in the Faculty of Science; and important original researches and experiments have been carried out on the same lines as in the laboratory of Johns Hopkins. The Faculty of Medicine has decided that for the time being it is not necessary to make the chair official on account of the small number of students to whom it would be useful; it is still reserved for post-graduate students specializing in surgery, who carry out research and experiments on animals before operating on the human subject.

CORRESPONDENCE.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

SIR,—The recent discussion in the JOURNAL shows that there is a great uncertainty, with the consequent differences of opinion, as to the measures most successful in the prevention of this disease. It can only be under somewhat exceptional circumstances that an ophthalmic surgeon would have any experience in this matter. The case comes to him only when the disease is developed; and, again, the average obstetric physician, as I pointed out in my address at Toronto, has only the most limited opportunities for studying these cases. He has no wards with a continuous series of lying-in patients and their babies to watch, and so to gain the necessary experience in the practical application of the rules which he has to teach his students.

At Queen Charlotte's Hospital some years ago, when the Committee were considering the reorganization of the medical staff, amongst other appointments which they were wise enough to agree to, was the appointment of an ophthalmic surgeon and a pathologist, who, amongst other duties, at once proceeded to test the methods in daily use in the hospital, and in this manner: The pathologist made a bacteriological examination of the secretion, whether purulent or not, in every case in which there was the least indication of inflammation, reporting all cases of infection to the ophthalmic surgeon, Mr. Stephenson, who was thus able to take any steps he thought proper for the treatment of the case, and eventually advised us to increase the strength of the silver nitrate solution from 5 grains, which we had used for many years, to 7 grains per ounce of distilled water. The effect of this was to increase the number of cases of simple conjunctival irritation, but proved practically effectual for the prevention of disease in cases where the risk of infection was great. This form of treatment, if it could be carried out perfectly in every case, would appear to be absolutely effectual; but as both doctors and nurses, unless they have had some practical experience of this treatment, which sounds so extremely simple, but in practice is not always quite simple (owing to the small size and slipperiness of the babies' lids), sometimes fail to carry it out perfectly, the results are occasionally imperfect. In teaching students, my advice to them now is as soon as a baby's face is born to gently but thoroughly cleanse the *eyelids*, not the eyes as usually described, before the baby opens them, as well as the nose and lips, with whatever antiseptic he is using for his hands, which may be 1 in 1000 mercuric chloride or iodide, or lysol ʒj to the pint. Neither of these would prove effectual disinfectants in the presence of any active infecting agent. The

strength recommended by Dr. Horrocks, 1 in 4,000 mercuric chloride, or, as some people even recommend, 1 in 10,000, would be of little more use than plain water. This external washing of the lids, which can be done in a moment with a swab of cotton-wool wringing wet with the lotion, so that the lotion flows over the lids, is in my experience sufficient routine protection, and is that alone which I am in the habit of myself using.

In a lying-in hospital and in infirmaries, where many single women are confined, and in cases in private practice, where there is evidence of infective inflammation in the mother, I still believe that this method, carefully carried out in the way I have described at the instant of birth, proves of the highest value, and, as may very likely happen, there is no nitrate solution available at the moment, the use of the silver nitrate may be deferred without great risks until it is obtained, though it should be used with the least possible delay, a few drops being placed between the lids. Nothing, perhaps, relieves the irritation which follows more than a drop of castor oil placed between the lids in the same manner at a short interval after the silver nitrate; but, as a rule, this is not necessary.

For a great many years I have taught this method as one of the fundamental principles of antiseptic midwifery. On the occasions on which the method fails, as on all other occasions of the failure of antiseptic measures, the medical man should first critically examine the way in which he applied the treatment before blaming the method itself.—I am, etc.,

London, W., Jan. 22nd. WALTER S. A. GRIFFITH, M.D.

"OPHTHALMIA" NEONATORUM.

SIR,—Mr. Marcus Gunn's letter (January 25th, p. 235) affords me the opportunity of discussing further the point which I have raised.

Mr. Gunn quotes a definition from Liddell and Scott's lexicon to show that "ophthalmia" does not mean inflammation of the eye. I would refer him to a medical authority —*Cooper's Surgical Dictionary* (1838) where, under the heading "Ophthalmy," "Ophthalmia," "Ophthalmitis," the precise opposite is stated. The point, however, is not what meaning should be attached to the word "ophthalmia," but that "ophthalmia" does not describe, in a scientific sense, a conjunctival inflammation.

I would, therefore, suggest to the present editors of Liddell and Scott's lexicon that, under the heading ὀφθαλμία, in the next edition the definition be given as follows: "A term now obsolete, formerly used to describe a disease of the eyes accompanied by a muco-purulent discharge."

Mr. Gunn further affirms that "'ophthalmia' neonatorum is certainly the name which has been 'sanctified' by use." Personally, I should have thought that it was impossible to "sanctify" an error by anything, old-time lexicographers, "Hippocrates and later authors" notwithstanding. Not even the hoary "sanctity" of the words "struma" and "strumous" saved them from exclusion from the last edition of the *Nomenclature of Diseases*.

One further point in the letter calls for notice. Mr. Gunn refers to "sympathetic" inflammation of the eye. My views upon this subject recently appeared in a lecture published in the BRITISH MEDICAL JOURNAL for July 27th, 1907. I think I there made it plain that the use of the term "sympathetic" as applied to any inflammation of the eye was just as obsolete in these days of advanced pathology as I now maintain is the "sanctified" use of the term "ophthalmia" neonatorum. I do not claim to be a purist in this matter; I am merely contending for scientific accuracy.—I am, etc.,

London, W., Jan. 25th. PERCY DUNN.

THE INHERITANCE OF PULMONARY TUBERCULOSIS.

SIR,—The tone of Messrs. Brown and Pope's last letter, as well as certain statements appearing in it, justify me in asking you to allow me yet a portion of your valuable space to elucidate two or three matters which, after all, have a medical importance far beyond personal controversy.

I contend that a knowledge (1) of the histories of the parents and brothers and sisters of tuberculous persons and (2) a fair, approximate value of the prevalence of pulmonary tuberculosis in the general population of a tuberculous age—that is, about 15 or over—*is* sufficient to determine whether the diathesis is inherited at the same rate as we find other physical features are inherited. I do this by following up a sample of perfectly definite individuals, and asking the categories into which they will be distributed on completion of their history. Messrs. Pope and Brown ask why I do not bring in more tuberculous persons from the general population outside while this is in progress. My answer was and is perfectly simple. I am treating the history of a definite group of named individuals with tuberculous taint, and that group cannot have additions made in the process of unnamed and unrelated individuals. This is the information from (1); we are only concerned with the changes *inside* this named group—that is, whether further offspring or parents become tuberculous. When the histories of these persons are completed they form the tuberculous element of a certain sample of the general population. The problem is now, How many non-tuberculous individuals must be added to complete the general sample? This is ascertained by aid of (2). Such is the description of my process which I gave in my letter. Messrs. Pope and Brown do not enter into the logic of it, but prefer to say that I entirely ignore the question.

My critics state that I make 5 per cent. tuberculous parents to non-tuberculous offspring. For completed family history this is true. They do not add that for incomplete histories my result was 8 per cent. All the authorities cited by Messrs. Pope and Brown, as far as I can follow their methods of collecting, must have obtained their data from patients—that is, made incomplete histories. We have then the following table:

Authority.	Nature of History.	Number of Tuberculous Parents to 100 Tuberculous Persons.	Number of Tuberculous Parents to 100 Non-tuberculous Persons.
Pearson	Complete	47	5
	Incomplete	35	8
Dock and Chadbourne	Presumably incomplete	27	12
Kuthri		25	20
Fischer		36	15
Schwarzkopf		36	20
Burchhardt		37	18
Pope and Brown... ...	Incomplete	(1) 97	50
		(2) 90	47

If we take for comparison the incomplete results, my number for tuberculous parents of tuberculous offspring is absolutely in accord with those of other observers; Messrs. Pope and Brown's is simply *preposterously* divergent. If we take the parents of non-tuberculous persons, my number differs by 4 to 12 per cent. from that of other observers; Messrs. Pope and Brown's by 30 to 38 per cent.! If my results are not consistent with the above data, what can we say of theirs? But I have pointed out why mine are not consistent in the *second* column of figures—namely, because in dealing with the parents of non-tuberculous individuals, those who come from tuberculous stocks are, of course, included as well as those who come from non-tuberculous stocks, and that specialists in tuberculosis are likely to include an undue proportion of the former. Still my difference of 4 per cent. from Dock and Chadbourne may be profitably contrasted with Messrs. Pope and Brown's difference of 35 to 38 per cent.

One further instructive point follows from this table. I wrote in my letter of September 14th that Messrs. Pope and Brown's data were probably based on "incomplete" histories. On October 19th they said "the histories are practically 'complete,' and it was galling to have it suggested that we had overlooked so important a point." In my letter of December 21st I accordingly called their histories "complete." We now find Messrs. Pope and Brown in both table and text of their letter in your issue

of January 18th actually label their own data as "incomplete," thus confirming my original statement.

According to this table, 100 non-tuberculous persons have 50 tuberculous parents; unless, therefore, the tuberculous parents are enormously more fertile, 50 out of 200 parents *at least* are tuberculous, or, as I said, one-quarter of the parents of sound children are tuberculous, provided Messrs. Pope and Brown's statistics are, as they assert, a "random sample." They say that this is an "example of the assertions which Professor Pearson puts into our mouth without any warrant in fact." It is an absolutely logical deduction from their data. I showed, further, that it was inconsistent with the *United States* returns. My sin apparently consisted in assuming that gentlemen who write from the State of New York collected their data in the United States. "All the inferences," they write, "drawn on this assumption are therefore irrelevant, and require no notice." It might be pertinent to ask where the strange land may be whence statistics showing one parent in four tuberculous are collected, and what application such statistics can have to material collected in England!

Lastly, Messrs. Pope and Brown accuse me of a "transparent evasion." I formed a table professing to show on completed history the relation of parent to offspring in the character, pulmonary tuberculosis. It is, perhaps, possible that 2 per cent. of cases of this disease will be found for individuals under 15. Certainly no married nor widows will be found under 15! In this table 1 in 10 of the offspring were tuberculous, and only 1 in 21 of the married and widowed. Messrs. Pope and Brown criticized this by the statement that "amongst the married and widowed population, according to the census returns, the proportion of deaths due to tuberculosis is greater than among the total population." My answer was, that if we exclude persons under 15, as my table practically does, for it does not include the large infantile and child death-rates which are *not* from pulmonary tuberculosis, then the census returns confirm my statement that the married and widowed have a considerably smaller incidence of pulmonary tuberculosis than we find in the general population over 15. Why this result should be referred to as "merely an evasion—and a very transparent one" surpasses my comprehension. As I remarked in my first letter, my memoir is entitled a "*First* study of statistics of pulmonary tuberculosis," its results can only be approximate; when other clinical observers provide such excellent material as that of Dr. Rivers we shall know much more, but I am fairly confident that neither wider material, nor such criticisms as those of Messrs. Pope and Brown will upset the main conclusion—that is, that the tuberculous constitution is inherited at practically the same rate as other physical characteristics.—I am, etc.,

University College, W.C., Jan. 18th. KARL PEARSON.

P.S.—Since writing the above letter I have heard of the sudden death of Mr. Pope from haemoptysis at the Saranac Sanatorium. I can only express my deep sympathy with his colleague, Dr. Brown. If I differed widely from Mr. Pope's statistical conclusions, I recognized in him a keen and energetic mind, eager to consider the new statistical methods.—K. P.

THE STATUS LYMPHATICUS.

SIR,—I have read with much interest the two articles on this subject, together with your leader. They are perfect from the point of view of the anaesthetist. There is a great collection of cases, there are minute notes on the condition of the most varied organs of the body, and a general impression is conveyed that death during chloroform anaesthesia is due to some combination of circumstances over which the anaesthetist has no control—the answer to the question on page 196, "Does death under chloroform ever occur apart from (this) condition?" being as near to "No" as is possible without the necessary data. For the really remarkable feature about Dr. McCardie's and Mr. Hilliard's attitude is that, in spite of all the recent work on chloroform, they suggest that certain persons are specially susceptible to the drug without measuring the dose given. It has been shown over and over again (by Waller, Sherrington, Buckmaster, and Gardner, the reports of the Committee of the British Medical Association, and many others) that by far the most potent factor in chloroform anaesthesia is the amount of the drug that is absorbed by the patient; no doubt, additional factors are also to be reckoned with (perhaps "S. L." among the number), but, as in the case of any *other* drug in the *Pharmacopoeia*, the dose is the first point to be noted. Yet in all these cases there is not one where this has been considered, unless the little note in Case 1 was meant to refer to this point; here 10½ drachms left the bottle, a quantity sufficient, if actually inspired, to anaesthetize some twenty persons at the least.

If these authors had stated, for example, that in all these cases there was present 2 (or any other *measured*) percentage in the inspired air (even if they were unable to analyse the expired air and ascertain what amount of chloroform was actually retained), then there might have been some foundation for the hypothesis they advance; but to proceed as they have done is to act the part of men who gravely discuss the curious susceptibility of red-haired animals to strychnine which they have administered in unmeasured quantities.—I am, etc.,

N. H. ALCOCK, M.D.

Physiological Laboratory, University of London, Jan. 28th.

SIR,—I have read with interest Dr. Harvey Hilliard's paper in the BRITISH MEDICAL JOURNAL of January 25th. I should very much like to know why he did not use ether by the closed method in this case. I should have thought, with the type of patient under consideration, that it would have tended greatly to have diminished shock, and rather helped the heart than otherwise. Is it not just possible that the great shock of severing the prepuce killed the patient, especially as he was lightly under the anaesthetic?—This is rather borne out by what the dentist said afterwards about his susceptibility to painful procedures. Personally, with adults I always put them deeply under ether for the operation of circumcision; there is no crowing breathing to be noticed, and complete absence of shock. Had I to use chloroform I should proceed in the same way, using Allis's inhaler, being careful to add a good quantity of ether before the actual severing of the prepuce, and continue with ether until the end of the case.—I am, etc.,

JOHN W. RENTON, M.B., Ch.B.,

Glasgow, W., Jan. 28th. Anaesthetist, Glasgow Dental Hospital.

GRADUATED LABOUR IN PULMONARY CONSUMPTION.

SIR,—Dr. M. S. Paterson's paper on graduated labour in pulmonary consumption will be read with great interest by every one engaged in treating consumption. For the last two years, since a short visit to Sir A. E. Wright's laboratory, endeavour has been made to carry out treatment here based on the same lines; but Dr. Maguire's warning note is necessary to prevent misunderstanding, as unfortunately very few institutions devoted to treatment of consumptives are in such a favourable position as Grimley as regards the preliminary severe and careful selection which is compulsory for prospective patients. And in only a minority of the cases in most institutions can even light work be prescribed with benefit, owing to the ease with which excessive autoinoculation may be produced, unless the period of treatment is very long.—I am, etc.,

T. H. J. E. HUGHES,
M.R.C.S. Eng., L.R.C.P. Lond.,

Grange-over-Sands, Jan. 22nd. Medical Superintendent, Westmorland Sanatorium.

PLEURAL EFFUSION.

SIR,—Sir James Barr, in his letter of December 21st, 1907, in reply to mine, says I seem to "prefer the *suppressio veri et suggestio falsi* to a clear statement." I should have imagined that nothing could be more clear than that if Professor Potain introduced sterilized air into the pleural cavity after tapping in 1888, Sir James Barr could not rightly claim precedence by doing the same thing in 1904. It was nothing that the one did it where the effusion was purulent, and the other where it was serous. The novelty claimed was the introduction of sterilized air after tapping, and I said it was "old history" on the Continent.

Sir James Barr now objects that I only cited one case to prove my assertion; although several other correspondents simultaneously cited others. He says: "If the introduction of sterilized air after tapping was well known on

the Continent, why did he (Dr. Samways) not quote something more than a mere case of pyopneumothorax. In France, prior to 1904, I have only found recorded, in addition to the case of M. Potain, two cases of chronic pleurisy thus successfully treated by MM. Vaquez et Quiserne. Since then there has been another case in 1906 by M. Dufour and M. Foix. None in Mentone."

That Sir James is quibbling is evident from the following. I have lately written to Professor Vaquez on the subject, and in his reply he says:

De plus j'ai envoyé au Dr. Barr, il y a un an ou deux, le travail fait avec mon élève le Dr. Quiserne, et dont je vous envoie un exemplaire. Le Dr. Barr a donc connaissance de mes recherches; il m'a accusé reception de mon travail.

Now, the very first paragraph of this pamphlet, possessed and acknowledged by Dr. Barr, reads as follows:

Depuis que le Professor Potain a, en 1888, indiqué les bons effets que l'on pouvait retirer du traitement de (l'hydro) pneumothorax par les injections d'air stérilisé, *nombre d'auteurs se sont appliqués à perfectionner et à étendre cette méthode.*

What could be clearer than that statement of 1902, and with it in his hands, why should Sir James Barr pretend that he has not sufficient proof in one case quoted by me that his novel method is "old history" on the Continent?

I would commend further to Sir James's perusal the Paris thesis of Dr. Albert Rouet, *Traitement des pleurésies à répétition par l'injection gazeuse intrapleurale* (published by Jules Rousset, 36 Rue Serpente, Paris, 1902). He will there find several other names to add to his list of those who have anticipated him in discovery.

With regard to the injection of adrenalin solution after tapping, it seems to me merely to add another to the long list of substances which have already been tried, especially in France. There is no new principle of treatment involved in its use, and whether it will prove more useful than its predecessors remains to be seen. Colonel Meyer, Professor of Physiology, etc., in Bombay, told me lately he had tried Sir James Barr's adrenalin treatment for pleural effusion, and that he would be careful not to repeat the experiment, as his patient became pulseless and was with difficulty saved from immediate death.

It is difficult to discuss profitably Sir James Barr's writings, because of a certain butterfly flight he has in debate. As an example, take the following. In his Bradshaw Lecture he says:

I afterwards found that some others, to whose writings I shall presently refer, had been in the field before me.

Among these, he almost immediately cites Professor Potain. In his letter, a few weeks later, he writes:

As part of this history, I referred to the case of M. Potain, but it was in no way relevant to my lecture.

Potain one week is relevant and in the same "field"; and another week he is declared to have been irrelevant, and is thrust out into the cold. I can only respectfully repeat, "The convolutions of the human brain are very wonderful."

The gibe at Mentone for not occupying the van in the treatment of pleurisy with effusion is really a compliment to its climate. All the world is not Liverpool; and pleurisy with effusion is, in my experience, as rare in Mentone as dock accidents.

I have never seen a case here, nor overlooked one. Had such occurred, I should, even ten years ago, have introduced sterilized air after tapping, and thus added another to those anticipating Sir James Barr's somewhat tardy discovery.—I am, etc.,

Mentone, Jan. 16th. D. W. Samways.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

Sir,—The Memorandum issued from the Board of Education as to the medical inspection of school children states that the local authority for public health should instruct their medical officer of health to advise the Education Committee. The Board of Education, however, has no authority over the medical officer of health, and, in absence of any order from the Local Government Board making this inspection of children a part of his duties, it does not appear that the local sanitary authority can legally give the medical officer of health such instruction. Anyhow, the proposition ought to come from the Local Government Board, and not from the Board of Education, and a memorandum from the Local Government Board upon the subject would be very useful at this moment.

The first thing to be settled is the remuneration for services rendered. I think we may take it that the medical officer of health cannot and should not attempt to do the actual examinations of the children, but it is proposed at the least to make him responsible for the organization, supervision, proper working and reporting of the work—in fact, to put the real onus of the work upon him, besides giving him "increased opportunity and facilities to study all the conditions affecting the health of the community at all age periods," and much other work in connexion with the matter (see memorandum).

The local education committees are showing themselves loth to incur the expense that must be involved in the working of the Act, and will, if allowed, shift the burden of the expense, as well as that of the responsibility, on to the shoulders of the medical officers by making nominal payments. It has even been suggested in some districts that the miserably-paid M.O.H., who is already distracted by a multitude of duties, should take this new one, all in the day's work, without any further payment at all. To prevent the possibility of any such imposition, whether in the public health service or any other medical service, our profession should certainly combine in a strong organization for self-defence.

Another most interesting point in connexion with this matter is the absolute want of central control. The advocates of co-ordination of the medical services appear to be creating the body of a beast possessed of all sorts of faculties and functions, but without any guiding and restraining head. The head required, and which must be born before any good result can be expected, is a properly officered central Government Department, with control over officers acting locally. We are expecting something from Mr. John Burns in this behalf. Will the hope be vain? Shall we see him out and another novice in his office and nothing done? See what is happening in this present school business. Appointments are being made upon different lines by the various councils, and the work will be very differently done in one district and another, hurriedly and badly done in many districts at the cheapest possible rate, all without any central guidance. Presumably at some time the Board of Education will gather together and publish the "records," and from their statistical correctness much advantage to the nation is anticipated. May the result be as desired, though a present judgement must pronounce this to be far from likely owing to the want of central control, and the utter incapacity in the local ruling councils to do anything in the matter without well-paid professional assistance, the importance of which most of them will not appreciate.—I am, etc.,

January 20th. Another M.O.H.

THE DUTIES OF VACCINATION OFFICERS.

Sir,—In your issue of January 18th a letter appears from "L.R.C.P.Edin." charging the vaccination officer of his town with an excess of zeal, and certain practices in regard to sending notices to parents which he describes as "illegal." If "L.R.C.P.Edin." wishes to make an example of the vaccination officer in question, why not make out a definite case and forward his complaint to the right quarter? It would be well, however, to ascertain that his knowledge of the facts of the case is more reliable than his knowledge of the Vaccination Acts.

"L.R.C.P.Edin." states in his letter that "the practice of sending the notices before the child is 4 months old is illegal." This is an error calling for correction, as the vaccination officer is required to send out a notice (Form A) at the expiration of seven days after the child has attained the age of three calendar months according to instructions in Article VI, par. (*a*) of the General Order on Vaccination issued on May 21st, 1907.—I am, etc.,

Halifax, Jan. 21st. Arthur Drury, M.B., C.M.

The late Sir Patrick Heron Watson, Honorary Surgeon to the King in Scotland, has left personal estate valued at £139,383.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS IN ENGLAND AND WALES (1907).

We are indebted to the Registrar-General for the following rates, compiled and published for the convenience of medical officers of health. The figures are provisional and subject to revision:

England and Wales.

Annual Birth-rates and the Death-rates from the Seven Chief Epidemic Diseases.

	Annual Rate per 1,000 Living.			Deaths under One Year to 1,000 Births.
	Births.	Deaths.	Principal Epidemic Diseases.	
England and Wales ...	26·3	15.0	1.26	118
76 great towns	27·0	15.4	1.64	127
142 smaller towns ...	25.7	14·5	1.29	122
England and Wales less the 218 towns	25·6	14.7	0.91	106

The birth-rates are all lower than for 1906, as are also the death-rates, with the single exception of the death-rate in the smaller towns.

NOTIFICATION OF BIRTHS ACT.

Decision not to Adopt in Chelsea.

We learn from the *West London Press* that at a meeting of the Chelsea Borough Council, held last week, the Public Health Committee reported that they had further considered the question of the adoption of the Notification of Births Act, 1907, and in connexion therewith a circular from the Local Government Board on the provisions of the Act, and not being convinced that the Act would prove workable in practice, they recommended that it be not adopted. Councillor Mulvey stated that the carrying out of the Act would necessitate so many petty prosecutions of medical men, nurses, and others, that the Committee had come to the conclusion that the best way would be to ask the Council not to adopt it. Dr Ramsden said there was a feature in the Act which interfered with the private relationship of patient and doctor. The doctor obtained the information professionally, and was practically in the position of a priest or a lawyer. He maintained that whatever good there was in the Act was negatived by the interference with a private relationship which had obtained since the days of Hippocrates. The Council then unanimously accepted the Committee's recommendation not to adopt the Act.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighouse.—The returns of Dr. Martin, M.O.H. for Brighouse, for the year ending December 31st, 1907, show some interesting particulars. The birth-rate for 1907 was the lowest yet recorded—namely, 18.9. The death-rate was also remarkably low for a manufacturing district—13.1. Deaths from cancer were at the rate of 0.67, against 0.94 in 1906; from zymotic diseases 1.12, against 1.26; from respiratory diseases (excluding phthisis) 3.01, against 2.88; from phthisis 1.03, against 1.21; whilst the infantile mortality-rate per 1,000 births was 99 against 141 in 1906. The latter detail points the moral we expressed in these columns recently—namely, that where there was a low birth-rate there was an evident desire on the part of parents to do everything possible to rear their young. This low birth-rate is one of the main factors in the lessened rates of infantile mortality in many of the northern towns.

VACCINATION CONTRACTS.

A correspondent informs us that a Board of Guardians has given notice to terminate the contracts of all their public vaccinators who have not accepted the terms offered. The guardians propose to group the districts and to offer them to any one who will take them at the rate they propose. Our correspondent asks whether he would be justified in applying for the appointment.

*** This is emphatically a case in which the profession in the locality should act together. We advise that the matter be discussed by the local Division of the Association; should the area of the Division be too wide, or should the proceeding suggested take too long, the best course would be to call a meeting of all the members of the profession practising in the union.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

Faculty of Medicine.

Alteration of Dates of Professional Examinations.

The attention of candidates is directed to the fact that the Examinations in Medicine, Surgery, and Hygiene will in future be held in March and July, instead of April and September as hitherto. Particulars as to dates of forthcoming examinations will be found in an advertisement.

UNIVERSITY OF LIVERPOOL.

The following candidates have been awarded the diploma in Tropical Medicine:

J. B. Davey, M.B.Lond., M.R.C.S., L.R.C.P.; T. W. F. Gann, M.R.C.S., L.R.C.P.; G. J. Keane, M.D.Liverpool, D.P.H.; C. Mackey, M.B., Ch.B.Vict.; C. T. Raikes, M.B.Oxon.

CONJOINT BOARD IN ENGLAND.

The following candidates have been approved at the examination indicated:

Practical Pharmacy.—B. Barnett, C. T. V. Benson, J. W. Bowen, F. W. Campbell, A. H. H. Catt, N. Cheune, T. B. Davies, M. Dwyer, H. D. Gillies, A. O. Gray, C. A. Holburn, G. B. Horrocks, G. P. Humphry, C. Mackenzie, D. Mallam, S. Marle, G. H. Mead, B. C. N. O'Reilly, G. H. Piercy, A. H. Platt, K. Pretty, J. Startin, P. S. Tomlinson, W. Wijegoonewardena, C. E. Williams, S. Wood.

CONJOINT BOARD IN SCOTLAND.

The quarterly examinations of this Board, held in Edinburgh, were concluded on January 24th.

First Examination (*Five Years' Course*).—Of 36 candidates entered the following passed the examination:

M. J. Ahern, P. C. Mukherji, N. N. Chandra, A. N. Palit, W. J. M. White, E. E. W. Shiels, W. S. Durward, Mrs. D. Kamalakar, J. N. N. Atkinson, S. D. Bridge, S. Hoashoo, K. G. Dhairyawan, C. Trivedi, M. F. A. L'hoste, B. Nath, K. K. Jacob, C. L. W. Fleming, L. E. L. Coghlan.

Six passed in Physics, 2 in Biology, and 1 in Chemistry.

Second Examination (*Four Years' Course*).—The following candidate passed this examination:

W. A. Irwin.

Second Examination (*Five Years' Course*).—Of 27 candidates, the following 11 passed:

W. Browne (with distinction), M. C. Anderson, E. R. Jones, B. Sahni, C. J. Lacayo, Kathleen Reed, H. V. A. Gatchell, J. Blackburn, C. G. Timms, C. Trivedi (with distinction), and B. Nath.

One passed in Physiology.

Third Examination (*Five Years' Course*).—Of 35 candidates, the following 18 passed:

W. J. Cogan, R. W. Pickup, C. W. Gee, H. Millar, C. O'Herlihy, S. A. Karim, H. C. Chouler, R. Massie, P. Reid, L. E. Davies, MacW. Henry, T. B. McKendrick, J. P. Synott, H. H. Field-Martell, K. G. Dhairyawan, W. R. Griffith, and S. Sharples.

Three passed in Materia Medica.

Final Examination.—Of 76 candidates entered the following 26 were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. and S.G.:

E. D. Orok, J. H. C. Hicks, C. A. Page, M. L. Ford, M. H. Fleming, W. C. Doughty, E. C. Kinkead, Ethel A. Orchard, M. E. Grimshaw, W. F. McKenna, F. M. Vajifdar, H. W. Kerrigan, J. Macdonald, C. H. Heppenstall, M. S. Rau, W. S. Scheck, W. W. McKinley, D. Welsh, A. H. M. Maxwell, S. Das, Caroline L. Kohlhoff, Z. D. Lotter, W. H. Wijenayake, J. L. Pinto, S. R. Bhagwat, and G. L. Irwin.

Besides these 9 candidates passed in Medicine and Therapeutics, 7 in Surgery and Surgical Anatomy, 15 in Midwifery, and 13 in Medical Jurisprudence.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

First Professional.—J. Barrett, A. P. J. Canning, F. C. Fisher, R. J. Hennessy, A. F. C. Hogg, C. McCormack, A. C. McQuaide.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates passed the examinations indicated in January:

Surgery.—†T. Campbell, *†A. R. Hardy, *S. Speelman.
Medicine.—†F. H. W. Brewer, †J. Brierley, †A. R. Hardy, *†W. P. Pinder, *N. C. Wallis.
Forensic Medicine.—E. C. Banks, H. A. Parker, W. P. Pinder, A. D. Rees.
Midwifery.—M. Fisher, C. P. R. Harvey, G. F. C. Harvey, J. A. Laughton, A. D. Rees, G. W. Simpson, S. Speelman.

* Section I. † Section II.

Diploma.—The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:

A. R. Hardy and W. P. Pinder.

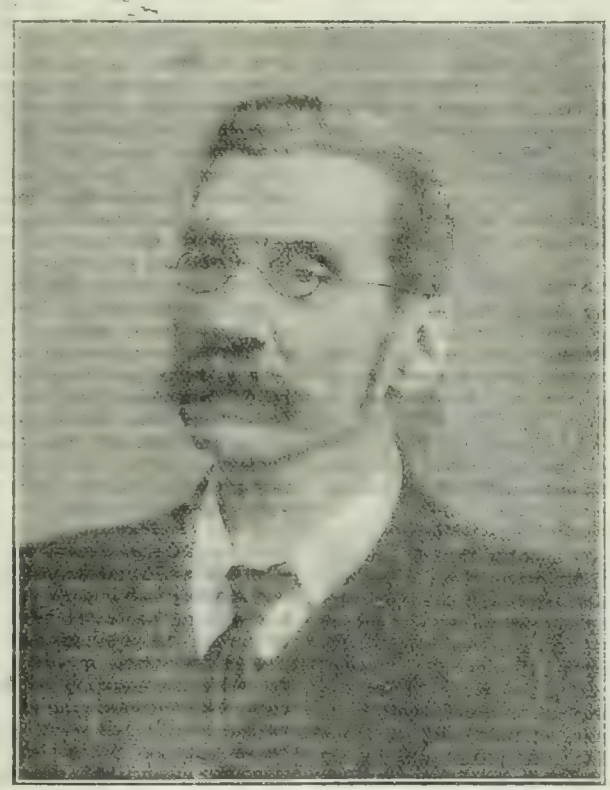
OBITUARY.

C. J. WRIGHT, M.Sc.Leeds, M.R.C.S.,

EMERITUS PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF LEEDS; HONORARY CONSULTING SURGEON TO THE LEEDS HOSPITAL FOR WOMEN AND CHILDREN.

It was with feelings of the greatest regret that we had to put on record last week the death of Emeritus Professor C. J. Wright, of Leeds. Though it was well known to many of Mr. Wright's more intimate friends that he had been failing in health for some time, the end came, if not with suddenness at least with rapidity, for only a few days before he passed away on January 17th he attended a meeting of the Medical Board of his hospital, and was apparently in his usual health and spirits.

Mr. Wright was born in Wakefield in 1842, where his father was a well-known and respected practitioner of many years' standing. He was educated at St. Peter's School, York, and went through his medical curriculum at the Leeds School of Medicine and at Guy's Hospital. It has very recently been observed in the pages of this Journal—namely, at the time of Mr. Wright's resignation of the Chair of Midwifery—that his connexion with the Leeds School of Medicine was both long and honourable, and lasted uninterruptedly from the time of his taking his first qualification until his resignation of his Professorship last year. He acted as Demonstrator of Anatomy from 1865 to 1870, and Lecturer on Physiology from 1870 to 1884. He was then appointed Lecturer on Midwifery, and when the Professorship of that subject was instituted in 1888 he was promoted to the chair. On his resignation of that position last year he had conferred upon him by the Council the title of Emeritus Professor, and the University had previously honoured him by admitting him to the degree of Master of Science. Some years ago he was elected by the Joint Faculties a Member of the Court of the University, which position he retained till the last.



C. J. Wright, M.Sc.Leeds, M.R.C.S.

Photograph by] [*Rosemont, Leeds.*

Mr. Wright took a very deep interest in the welfare of the Hospital for Women and Children, to which he was Surgeon for many years, and to which, on the recent resignation of his duties as a member of the full staff, he was appointed Honorary Consulting Surgeon.

During the earlier period of his professional life Mr. Wright was associated in private practice with the late Mr. W. Nicholson Price, but for many years he was in independent practice, and was frequently called in as a consultant in difficult cases of midwifery.

Some indication of the esteem in which Mr. Wright was held by his professional brethren may be drawn from the fact that when the British Medical Association met in Leeds in 1889 he was elected one of the Honorary Local Secretaries; that he was President of the Yorkshire Branch in 1904; and that he presided over the meetings of the Leeds and West Riding Medico-Chirurgical Society during the session of 1899-1900.

A man of singularly methodical habits Mr. Wright could always be relied upon for accurate information about any event connected with the history of the medical school. Not only did he preserve numerous documents and memoranda, but he was always able to lay his hand on any of them that might be required. He was a diligent attendant at all Committee meetings and spared himself no trouble in mastering the details of the business in hand.

He was a strenuous advocate for increasing the facilities of students for acquiring a sound knowledge of obstetrics, and it was on this important question that his address was delivered when he presided over the annual meeting of the Yorkshire Branch of the Association held in Leeds in 1904. At the time of his death he was a member of the Examining Committee of the Central Midwives Board, and the work he did in this capacity was extremely congenial to him.

Himself a man of a singularly genial disposition, he was always most appreciative of kindness in others. Perhaps this was never more conspicuously displayed than when, on the occasion of Mr. Wright's presiding at a smoking concert at the medical school during the current winter session, the students in an extremely graceful manner expressed their gratitude to him and wished him long life and happiness in his retirement, presenting him at the same time with a silver cigarette case with a suitable inscription. Probably there was nothing that could have caused the recipient more gratification than this spontaneous act on the part of the students; and his reply, given under the influence of considerable emotion, was at once cordial and manifestly sincere, and breathed of that steadfast loyalty to the interests of the school and to the welfare of the students which, during his long and uninterrupted tenure of office of forty-one years as a teacher, has been perhaps his most distinguishing characteristic.

The death of Mr. Wright will cause real sorrow to many medical men in various parts of the country, and the sympathy of all will go out in a very special measure to Mrs. Wright and the other members of his family.

At Lawnswood Cemetery, on Monday, January 20th, a large and representative gathering, which included the Vice-Chancellor of the University, many of the Professors and others of his colleagues on the teaching staff, joined with his private friends and acquaintances in paying the last tribute of respect to one whose memory will always be held in affectionate regard.

HERMAN SNELLEN, M.D.,

PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY OF UTRECHT.

It is with the deepest regret we have to announce the death of Professor Herman Snellen. He was born in the year 1834, and was the son of Dr. F. A. Snellen, a physician of repute and learning. He studied at Utrecht under Mulder, Donders, and others, and took his degree in 1857. In 1862 he was appointed Lecturer in Ophthalmology and Surgeon to the Dutch Hospital for Diseases of the Eye at Utrecht. In 1877 he was appointed Professor in the University.

Always a man of original thought and a keen investigator, he devoted much time to physiological research, and as the result of his work in the laboratory he enriched science with not a few additions to the sum of knowledge. He never forgot, however, that the true object of scientific research is to alleviate human suffering, and in all his work he kept that end steadily in view.

The work by which his name has become famous all the world over was in connexion with sight-testing, and "Snellen's types" and his method of recording visual

acuity are as well known as Graefe's cataract knife or Bowman's needle.

Snellen was the first to reduce to a really scientific basis the recording of vision. He started with the idea that a person might be considered to have normal vision if he could see and distinguish a letter which subtended an angle of one minute on the retina. This was by no means the best which most eyes could do, but he set this as the minimum standard required to justify one in regarding an eye as normal. This is the familiar $\frac{6}{6}$ vision, which simply means that a patient standing at 6 metres sees what he should see at 6 metres, whereas if he sees at 6 metres what he should see at 60 metres he is stated to have vision of $\frac{6}{60}$ or $\frac{1}{10}$th of normal, and so on. The method is simplicity itself and has obtained all but universal approval. Snellen also designed test types for reading on much the same plan. Every one has heard of his sutures for ectropion. His work on glaucoma and sympathetic ophthalmitis was most extensive, and he backed it up with a considerable amount of experimental research.

Many will remember the visit he paid to London in the summer of 1896, and his striking personality as he delivered the Bowman Lecture before the Ophthalmological Society, of which society he was an Honorary Member. He chose on that occasion as the subject of his address, "Vision and Retinal Perception." It was a masterly discourse by one who had worked almost all his life on that and cognate subjects. Brought up under Donders, Snellen formed a connecting link with a past generation of giants in the world of optics, on whose pioneer work the whole fabric of ophthalmology and optical science is based.

His reputation as an operator was almost as great among the public as his fame as a scientific investigator throughout the medical world.

He was a voluminous writer on all matters connected with ophthalmic surgery. Most of his writings appear in German in *Graefe's Archiv* and similar periodicals. He published in 1881 in the *Ophthalmic Review* a historical essay on the Development of our Present Knowledge of Glaucoma. He wrote articles in the *Graefe-Saemisch Handbuch*, and also the article on The Methods of Determining the Acuteness of Vision, in Part 3 of Norris and Oliver's *System of Diseases of the Eye*. He was also associated with Professor Landolt of Paris in certain investigations.

Professor Snellen retained the Chair of Ophthalmology at Utrecht until 1899, when, at the age of 65, he was succeeded by his son, Dr. Herman Snellen, jun. He did not, however, retire into private life. He still took the keenest interest in all branches of ophthalmology, and it is only quite recently that his years began to tell upon him, and he had to give up work. He died at the age of 73, perhaps the best known man in the whole of Europe in his own particular province, and it may safely be said that there is hardly a branch of ophthalmic science which has not benefited directly or indirectly by his work. He was a member of numerous scientific societies scattered throughout the civilized world, and there will be many who will deplore his loss as a scientific worker; while his genial disposition and kindly manner endeared him to countless numbers who have had the honour of his friendship and his example as a stimulus to work.

WILLIAM ROSS JORDAN, M.R.C.S., L.S.A.,

CONSULTING SURGEON, BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

JUST after the turn in the new year there passed away quietly in his sleep Mr. William Ross Jordan, a man of indomitable energy and in his time one of the most prominent practitioners of medicine in Birmingham. He had reached the age of 77, and in last November had an attack of pneumonia, but had apparently shaken off its effects, and his death when it occurred was quite unexpected. Though he passed practically the whole of his life in Birmingham he was born at Masham in Yorkshire, where his father was then in practice. Later on the family moved to Birmingham, and there, when his schooling was complete, William Ross Jordan was apprenticed to his father and entered the medical side of Queen's College. His medical studies were not continuous, for in a short time after their commencement he left medicine for commerce, and went to Bradford. At the end of three years, however, he returned again to Queen's College, with an experience of business life which undoubtedly stood him in good stead in his after-career. By 1858 he had completed his student career, becoming M.R.C.S Eng. in that year, and adding the L.S.A. a few years later, and at once began work on his own account in Birmingham. In the course of his career he established successively within its area no less than three distinct and successful practices. The first, in Bradford Street, he voluntarily abandoned, as the work proved too exacting; and his second, owing to ill-health, he eventually made over to the medical man whom he had taken into partnership. This was in 1880, when he had to submit to amputation of the leg, on account of disease in the knee-joint; for Mr. Jordan, in spite of the extreme activity and the length of time he lived, was never a really strong man. On his recovery he again set to work with characteristic courage, and establishing himself in Easy Row, where he remained to the end of his life, soon built up a third practice of a somewhat different kind, but quite as successful as those which he had previously conducted. About this time he became Examiner in Lunacy to the Birmingham Magisterial Court and to the Board of Guardians, and this office, as well as that of Inspector of the Birmingham Lunatic Asylum, he retained up to the time of his death, while at the same time he did a good deal of work in connexion with mental and nervous disease, especially among women. In the earlier part of his career Mr. Jordan played a considerable part in the medical developments of Birmingham, and was often regarded as the real founder of the Birmingham Hospital for Women. He was, at any rate, one of those who helped to bring it into existence in 1871, and for long was one of the most active members of its surgical staff, only retiring to the position of Consulting Surgeon within comparatively recent years. At one time Mr. Jordan, who was a member of the Central Division of the Birmingham Branch of the British Medical Association, was President of the Midland Medical Society, and he also displayed considerable interest in the general life of Birmingham. In particular, he was closely associated with those of its inhabitants who take an interest in literature and arts. Indeed, at one time he was President both of the Arts Club and of the Birmingham Literary and Dramatic Society. In the earlier part of his life he contributed a few papers to the medical journals, dealing mainly with gynaecological subjects

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DR. WILLIAM SPALDING, of Gorebridge, Edinburgh, died on January 6th, at the age of 70, some seven years after his retirement from active practice. Dr. Spalding was of American origin, but crossed the water in early life, and passed the whole of his adult life in these islands. He received his general education in Dundee, and on its completion entered the Medical Faculty of the University of Edinburgh, where he graduated M.D. in 1861. In the same year he became M.R.C.S.Eng., and shortly afterwards acquired the practice of the late Dr. Loutite, of Gorebridge. To the interests of that place he devoted the remainder of his life, being engaged in actual practice within its area for nearly forty years. Apart from his professional work he took much interest in its public affairs, especially in questions of education, and for some time served on a School Board in the neighbourhood. He was also fond of travelling, and at times was an active politician of great utility to the side which he favoured—that at present in opposition. Thanks to his broad culture and attractive personality, Dr. Spalding exercised considerable influence, and was so generally popular that the announcement of his retirement in 1900 was made the occasion of the presentation to him of a handsome testimonial. Dr. Spalding was a member of the Midlothian Division of the Edinburgh Branch of the British Medical Association, and also a Fellow of the Obstetrical Society of Edinburgh. He had been a widower for some years, but leaves two sons.

Major JAMES TRACY SIMPSON, M.D., R.A.M.C. (Militia), died at Sidmouth, suddenly, on January 16th in his 47th year. He was an Honorary Captain in the army, a rank granted to him March 1st, 1903. He served in the South African war in 1899-1901, being present in operations in Cape Colony including the actions at Ruidam, and in the Transvaal. He had received the Queen's medal with two clasps.

Medico-Legal.

WORKMEN'S COMPENSATION ACT.

PRACTITIONERS AND THE WORKMEN'S COMPENSATION ACT.

THE more that is learnt of the practical working of the Compensation Act the more is one struck by the importance of the position in which it places the medical practitioner. In many cases, as will have been seen from notes published in this column, the decision has depended entirely upon the evidence of medical witnesses. Not only does the making of an award in the first instance depend upon professional testimony, but the medical man is frequently asked to say whether, in his opinion, a workman who is already in receipt of compensation is fit to return to work.

It is, of course, obvious that it behoves every practitioner to be cautious in the expression of his views as to the effect of an injury upon a man's capacity for work. The working classes appear to be fully alive to the advantage of procuring a medical certificate. A correspondent, who is house-surgeon at an eye hospital in the South of England, recently sent us the following letter, which he received from the father of a would-be applicant:

Dear Sir,—I understand that ——— ——— is coming in to-day Friday to have his eye seen to. Would you kindly oblige me by not granting him a certificate to start work, not for at least another month as I am putting the law in motion and as his employer has agreed to pay him 15s. per week until he is able to work therefore I dont see for why he should start work before he is properly cured, or perhaps it may be the cause of his loosing his other eye, had I have known it sooner I would have been sure, but as it is I am trying for compensation, and you will greatly oblige me by not allowing him to work. I am his Father that is the reason I ask you not to allow him to work until he is properly well, and oblige yours truly,

Needless to say, no reply was vouchsafed. The best receptacle for such a letter would be the employer's post-bag, or it might, with great propriety, be forwarded to the employer's solicitor, who could use it with dramatic effect when cross-examining the applicant. We record the incident as a warning to those who may be asked to give certificates for the purposes of the Act.

WORKMEN'S COMPENSATION CASES.

Landon v. Tinsley Park Colliery.—This case was heard by His Honour Judge Benson on January 16th. It appeared that on October 3rd, 1906, the applicant, George Landon, was working at the coal face in the respondent's pit. Owing to a fall of coal he was pinned under a quantity of débris. When released, he was able to work again, but subsequently he suffered from pains and dizziness, and consulted a doctor, who said he was not fit for work. He alleged that although the company offered to provide him with light work, they actually sent him back to the coal face. Counsel for the respondents said that nothing which the claimant now suffered from was due to the accident. All the symptoms pointed to indigestion being the cause of his trouble. His Honour found for the respondents with costs.

Williams v. Tinsley Park Colliery.—This case, which was heard on the same day and in the same court as that above named, involved a claim by a miner for an accident which happened in the pit on August 20th. It appeared that while walking up an engine plane he fell in a "splitting" attitude, with the result that his groin was injured. The company paid compensation until October 15th, but refused to pay more, alleging that the injury was really caused by a tumour. Medical witnesses said that although a trained man might do a complete "split," an untrained man could not without injury. A witness for the respondent said he thought at first that the applicant had a malignant tumour, but owing to the improvement in the applicant's condition he had altered his opinion. The county court judge made an award of 19s. 7d. a week.

MORPHINE SUPPOSITORIES.

MR. G. P. WYATT held a prolonged inquiry at the coroner's court at Clapham on January 9th into the circumstances attending the death of a woman, aged 52. The case, which presents points of interest, is fully reported in the *Pharmaceutical Journal* and the *Clapham Observer*. From these reports it would appear that the deceased, according to her husband's statement, had been suffering for some five or six years from rheumatism, and for about two years from haemorrhoids, and had spent the last twelve weeks of her life in bed. During the periods indicated she had been under the treatment of more than one private medical attendant, and at one time had been an out-patient at the Soho Hospital for Women, but more recently had been attended by a medical man from Brixton Dispensary. This gentleman gave an account of the general symptoms during life, and of the findings at the *post-mortem* examination which he performed. This showed, as anticipated, that she had some very slight old scarring of the mitral valve and equally slight enlargement of the mitral orifice, but there was no dilatation of either cavity, and the heart muscle was quite healthy. In the uterus were three small polypi, as also anticipated, but about these there was no suspicion of cancer, nor was there any serious organic disease of any sort in the body. In his opinion death was due to chronic indigestion and constipation, accelerated by the large amount of drugs she had taken of late. When he found that she did not respond to treatment he urged her to go into hospital, in view of the possible connexion between fibroids in the uterus and the fact that she was continually getting thinner. Probably she would have consented to do so had she had less ready access to the drugs in question. Had she stopped taking these drugs six months before her death actually occurred he was confident that she would still have been alive. He discovered the facts concerning the drugs in the last days of her illness, and in consequence refused to give a certificate. Other evidence showed that the drugs in question were a proprietary remedy called "kaputine" and morphine suppositories, used by the deceased for the relief of her haemorrhoids. Both had been supplied by a local chemist; the suppositories he made up from a prescription of a medical man in South Africa for a relative of the deceased, who thought they might be beneficial in her own case likewise. These suppositories originally contained ¼ grain morphine each; latterly on the application of the patient the quantity of morphine had been increased to an extent which was disputed. According to a niece who resided with the deceased, as many as from two dozen to two dozen and a-half suppositories had recently been supplied to her and used by her every week. Large quantities of "kaputine" were also being taken; latterly she had been taking as many as six packets a week (each packet apparently containing eighteen powders). All persons concerned seem to have been aware that the deceased was taking a great deal more of these drugs than was good for her, the niece saying that she had often thought that it would be better if more were spent on nourishment and less on drugs. She had been told by the chemist that the doctor would probably not object to the suppositories being used, but might not like the "kaputine" powders because they made the heart of the deceased palpitate so much. The chemist, who was severely cross-examined by the coroner and the foreman of the jury, admitted that he knew at the time that he ought not to supply so many suppositories; he had not communicated with the medical attendant of the deceased whose name he knew, because he knew it would cause a commotion in the house. The jury returned a verdict in accordance with medical evidence, adding a rider that the chemist deserved censure for supplying such large quantities of drugs to one house. With this censure the coroner said he quite agreed.

BONDS NOT TO PRACTISE WITHIN AN AREA.

MEDICUS asks if an assistant, having signed a bond "not to set up in practice" against his principal, can legally act as assistant to a neighbouring practitioner after leaving the service of the former.

*** This is a nice point. The bond should have bound the assistant "not to practise either as principal or assistant," when there would have been no doubt; as it is, it is to be feared that only the decision of a competent legal tribunal could settle the question.

LOCUMTENENTS AND THE PRINCIPAL'S SERVANTS.

BETA asks what is the position of a locumtenent in regard to the domestic servants, and particularly to those concerned in the working of the principal's practice. What authority has he over them in the absence of the principal?

*** The only authority a locumtenent possesses is that delegated to him by his principal. If the latter had told his servants that they were to regard the locumtenent as their master during his absence, the locumtenent would be in a position to dismiss any of them if necessary. Under ordinary circumstances, a locumtenent has little or no real authority over his principal's servants, and has to do the best he can. If injury is done to the practice by their misbehaviour, and the locumtenent does the best under the circumstances, the responsibility rests with the principal, not with the locumtenent. In all cases where a locumtenent is left in charge and has no means of communicating with the principal during his absence, he should insist on the latter appointing some one, if not himself, with definite authority over all the servants.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

A QUESTION OF RIGHT.

R. H.—The superseded practitioner had no right to expect that the consultant called in by his successor would correspond with him about the case; he might ask his successor as a matter of courtesy to tell him the sequel of the case.

NOTICE OF REMOVAL BOARD.

R. C. N. writes that at the termination of his lease he had a disagreement with his landlord about dilapidations, and consequently left the house, which was taken by his professional opponent in the village where he lives. He placed a notice board in the field next the house in order to notify patients of his change of address, but to this his opponent takes exception as advertising. He asks for our opinion.

*** It is customary to place such a notice on or near the house quitted by a medical practitioner, and our correspondent has therefore precedent for what he has done. We think twelve months should be sufficiently long to allow the notice to remain in position.

THE OBLIGATIONS OF A CONSULTANT.

MEDICUS writes: A. and B. are neighbouring practitioners residing some fifteen miles apart. A. has seen C. two or three times in consultation with B. C. is now dissatisfied, has dismissed B., and wants A. to attend him. Is A. justified in so doing?

*** Our correspondent gives no dates, but assuming that A. has seen C. in consultation with B. recently, he should not take over the case.

EXAMINATION FOR LIFE INSURANCE.

BAYSWATER writes: A. and B. are members in practice in the some town. A. has practised in the town for many years, and is medical referee to a large number of insurance companies, and frequently examines some of B.'s patients. Recently B. secured an appointment of examiner to an insurance company. A. now wants to claim part of B.'s appointment, and to report on his own patients. B. naturally objects. What is the position of A. in the case?

*** It rests with the insurance company to determine who shall make the medical examinations. A. cannot claim that there is any customary or inherent right to examine his own patients, and many offices prefer to get an independent opinion.

THE HOSPITALITY OF GERMAN WATERING PLACES.

A CORRESPONDENT sends us a copy of a circular letter of invitation which has been tolerably widely distributed to the medical profession in this country, signed by the *Kurdirektor* of Homburg, inviting the recipient to visit Homburg as a guest of the city from June 23rd to 30th. Our correspondent says that he is a country practitioner whose patients are not of a class able to afford to go to Homburg. He does not know why he should be favoured with an invitation or whether he can accept it with propriety, and he asks for our opinion. He also wishes to know whether any expense would be incurred beyond that of ordinary travelling expenses.

*** Such invitations from *Kurdirektors* and others anxious to bring the advantages of their establishments under the notice of the medical profession have been common during the last twenty years, and permit medical practitioners without much expense to become familiar with physicians, hotels, and bathing arrangements in the places to which they may send patients. The invitation affords an opportunity for gaining useful professional information, and our correspondent would not incur any obligation by accepting it. So far as expense is concerned, we apprehend that during the time the guests are in Homburg they will be provided with board and lodging free, and will receive a certain amount of free entertainment, and be shown the attractions of the place.

THE POSITION OF SANATORIUM DOCTORS.

C. S. writes: Dr. A. owns and runs a private sanatorium for consumptives; Dr. B. is a consultant practitioner living 180 miles away, who often sends patients to A.'s sanatorium. C., a patient, is sent to A. by B. While C. is at the sanatorium, his sister D. comes to see him, and C. requests A. to to examine her lungs. (D. lives 100 miles distant from B. and 250 from A.) A. consents to examine D., after ascertaining that she is not being attended by any other doctor, but insists that she must stay one night in the sanatorium in order to be examined in the morning. After examination he tells D. that he can find nothing wrong with her, but advises her to go and see B. in a few weeks' time. When writing subsequently to B. about C., A. mentions the D. incident, and tells B. that he has recommended D. to call and consult him. B. writes A., saying that A. should not have examined D., and that he is ethically wrong in examining or prescribing for any person who is not a resident patient in his sanatorium. B. says A. is making himself a consultant in opposition to B., and cannot expect B. to send him any more patients. A. wants to know whether B. is correct, and, if so, upon what grounds? A. has a personal regard for B., and would be very sorry to quarrel with him, but wants to know what is his own standing as a sanatorium doctor. Is he entitled to examine and prescribe for patients coming to him as D. did, or would he be wise in yielding this point to B.?

*** We know of no ethical objection to A. practising his profession as a physician, but it may be politic for the owner of a sanatorium, whose success largely depends upon the support received from his professional colleagues, to abstain from competing with them, or doing anything which may suggest his willingness to compete with them, in practice.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL ARMY MEDICAL CORPS.

LONDON DIVISIONS.

A largely-attended meeting of the regimental medical officers of the combined London Divisions was held, by kind permission of Colonel Horsley, V.D., at the head quarters of the Artists, on January 22nd.

The meeting was called by Surgeon-Colonels P. Giles and Andrew Clark, the future principal medical officers of the Divisions, to ascertain the feeling of the medical officers who, in the Territorial Army Scheme, will be under their command.

Surgeon-Colonel ANDREW CLARK was in the chair, and in explaining the object of the meeting, said that he hoped all the London medical officers would at the appointed time join the R.M.C. territorial force. The scheme was most favourable, and was to a great extent the outcome of the report of a Committee of the British Medical Association in 1906. The meeting was intended for discussion and to ascertain the views and wishes of those present, and he hoped there would be a full discussion upon any and all points of doubt. Colonel Giles would explain or answer any questions; the chief of which no doubt would centre round their future positions.

Colonel GILES, before questions were asked, said that on a given day—April 1st next—all the medical officers of the auxiliary forces, yeomanry, artillery, engineers, infantry, and R.A.M.C.V. of companies and bearer companies, would have to decide what their future was to be. (1) Would they join a corps—the R.M.C territorial force; (2) if they did, would they select (*a*) to be attached to their present units; (*b*) to be appointed to a unit of the R.M.C.T.F.; (*c*) leave their appointment at the disposal of the P.M.O.'s to be used as the exigencies of the service required; (3) or would they remain as they were at present and cease to exist in five years?

Questions were asked by medical officers of all ranks and from every kind of unit, by Colonels ROBERTS, CULVER JAMES, THOMPSON, SMITH, Lieutenant-Colonel SLEMAN, Majors TABB, TURNER, SEGUNDO, BOYD, STONHAM, Captains OUST, ROCHE, MARTIN, ROE, GERVIS, and Lieutenant MOORE. The points raised related chiefly to future appointments, the expense of new corps uniforms, and remuneration for examining recruits. Several officers referred to the dislike felt for the present cherry-coloured facings of the corps.

After replying to all the questions, Colonel GILES moved a vote of sympathy with Sir Alfred Keogh, the Director-General, in his illness, and expressed hopes for his speedy return, so as to practically carry through his laborious and excellent scheme. This was seconded by Major STONHAM and carried by acclamation.

Surgeon-Colonel SMITH proposed and Surgeon-Colonel

CULVER JAMES seconded the following resolution, which was carried unanimously:

That this meeting of medical officers of the Honourable Artillery Company and auxiliary forces in the London District expresses their cordial and unanimous approval of the new scheme of the Royal Medical Corps of the territorial force, and beg to assure Surgeon-Colonel P. B. Giles and Surgeon-Colonel Andrew Clark of their assistance in every way in promoting the success of the movement. Further, that a copy of this resolution be sent to the Director-General.

A resolution thanking Colonel Horsley for the use of the room was also passed.

THE TERRITORIAL FORCE.

PRINCIPAL MEDICAL OFFICERS.

THE undermentioned officers have been selected for appointment as Principal Medical Officers of Divisions of the Territorial Force from the date that the force is established:

Highland Division.—Major J. S. RIDDELL, M.V.O., M.B., Commanding Aberdeen Companies, Scottish Command, R.A.M.C. (Volunteers).

Lowland Division.—Lieutenant-Colonel (Honorary Colonel) Sir G. T. BEATSON, K.C.B., M.D., V.D., Commanding Glasgow Companies, Scottish Command, R.A.M.C. (Volunteers).

East Lancashire Division.—Lieutenant-Colonel (Honorary Colonel) W. COATES, C.B., V.D., Commanding Manchester Companies, Western Command, R.A.M.C. (Volunteers).

Welsh Division.—Brigade-Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) P. E. HILL, V.D., 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, Senior Medical Officer South Wales Border Volunteer Infantry Brigade.

West Riding Division.—Major DE B. BIRCH, M.D., Commanding Leeds Companies, Northern Command, R.A.M.C. (Volunteers).

Northumbrian Division.—Brigade-Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) J. W. BLANDFORD, V.D., 1st Volunteer Battalion the Durham Light Infantry, Senior Medical Officer Tees Volunteer Infantry Brigade.

North Midland Division.—Brigade-Surgeon-Lieutenant-Colonel C. A. MACMUNN, M.D., V.D., 3rd Volunteer Battalion the South Staffordshire Regiment, Senior Medical Officer Staffordshire Volunteer Infantry Brigade.

South Midland Division.—Brigade-Surgeon-Lieutenant-Colonel W. P. WHITCOMBE, Commanding Worcester and Warwick Bearer Company, R.A.M.C. (Volunteers), Senior Medical Officer Worcester and Warwick Volunteer Infantry Brigade.

Wessex Division.—Brigade-Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) J. R. THOMAS, M.D., V.D., 4th Volunteer Battalion the Devonshire Regiment, Senior Medical Officer Devonshire Volunteer Infantry Brigade.

East Anglian Division.—Brigade-Surgeon Lieutenant-Colonel (Honorary Surgeon-Colonel) G. S. ELLISTON, V.D., 1st Volunteer Battalion the Suffolk Regiment, Senior Medical Officer Suffolk Volunteer Infantry Brigade.

Home Counties Division.—Brigade-Surgeon-Lieutenant-Colonel (Honorary Colonel) J. TURTON, V.D., Sussex and Kent Bearer Company, R.A.M.C. (Volunteers), Senior Medical Officer Sussex and Kent Volunteer Infantry Brigade.

1st London Division.—Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) P. B. GILES, V.D., 1st Herefordshire Volunteer Rifles.

2nd London Division.—Brigade-Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) A. CLARK, V.D., 4th Middlesex Volunteer Rifle Corps, Senior Medical Officer 2nd London Volunteer Infantry Brigade.

The appointment to the West Lancashire Division is to be made at a later date.

HOSPITAL AND DISPENSARY MANAGEMENT.

DERBYSHIRE WOMEN'S HOSPITAL.

AN extension of the Derbyshire Women's Hospital in Derby, commenced last spring, was formally declared open on December 12th, 1907. It furnishes the institution with a new out-patient department, including a waiting-room for 50 persons and various annexes, a new ward for 7 patients and an isolation ward, additional accommodation for the executive staff, and a laboratory. In the basement is a boiler-room for the heating of the whole premises by pipes. A lift has also been provided. Externally the building is of red brick with Matlock stone dressings. The hospital was founded some sixteen years ago, and during its first year's work treated 34 patients. A few years later it was slightly enlarged, and the present additions bring up the total accommodation for in-patients to 18 beds. At the opening ceremony it was stated that there was no intention to clash with the infirmary; the latter was a place for the poor, while the object of the Women's Hospital was to provide a place for the treatment of those who wished to pay a part of their maintenance.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

OPERATOR asks for advice as to the best arrangement by which to ensure an abundant supply of sterilized water in an operating theatre. A hot and cold supply of water is at present laid on.

SCOLIOSIS asks for the names of some Continental specialists in spinal surgery, and also for information as to whether any such specialist treats scoliosis in a gymnasium under personal supervision.

W. R. C. wishes to hear of small seaside village with facilities for sea-fishing, suitable for a young man with slight pulmonary tuberculosis to spend the next two or three months. A dry atmosphere and maximum of sunshine desired. Cheap lodgings and good milk supply essential. Would any of the small Cornish fishing villages be suitable?

DR. HY. BARTLETT (Hastings) writes: I have a female patient, 60 years of age, a non-meat-eater and teetotaler, suffering from cancer behind the larynx and involving that structure. For dysphagia, gastrostomy was performed on December 5th, 1907, and tracheotomy for dyspnœa on December 26th, 1907. Her sleep is disturbed by the constant flow of mucus from her mouth more than by the cough, and she is losing ground faster than I like. Will you or any of your readers kindly recommend some diet in addition to or instead of the milk (3½ pints a day) and eggs (five a day) she has been taking since December 5th, 1907. I cannot help thinking the loss of so much mucus and saliva must help to weaken her. Would an astringent mouth wash check the flow of mucus, and if so, what is best?

TREATMENT OF CORNS.

PEDESTRIAN writes: In the treatment of a corn or corns on the sole of the foot (tread) is poulticing alone sufficient to soften the epidermis and to enable the corn to be taken out? If the patient rests entirely and poultices continually, how long would this treatment take? Corn solvent has been applied in a case under treatment and poulticing has been done at night, but at present it is not successful in a patient at work during the day. Any hints as to treatment of corns, especially on the sole of the foot, will be gratefully received.

DISEASE OF THE NAILS.

O. S. asks for advice as to the diagnosis and treatment of the following case: A young lady has a peculiar affection of the nails on both hands and feet. The nail-bed near the free border becomes thickened and raises the nail until it is free on both sides. The nail seems to undergo some atrophic change and shows signs of lamination. The nail also becomes of a dirty-yellow colour, and in most cases cracks down the middle. The affection is somewhat painful, in addition to being unsightly.

RETENTION AFTER PROSTATECTOMY.

P. A. W. writes: I should be glad of any suggestion in the treatment of the following case: A gentleman, aged 68, had Freyer's operation of prostatectomy performed in March of last year, and up to the time of writing has not regained the control of his bladder, necessitating the use of the catheter whenever he desires relief. He is of an extremely neurotic disposition, and often a very tight spasmodic stricture of the urethra is induced, which on some occasions can only be overcome by the administration of chloroform. Is there any likelihood of the bladder recovering its normal tone? The patient in every other respects is healthy, and a most careful liver. He is taking helmitol internally, and tonic treatment in the way of strychnine combined with potassium bromide has often been exhibited. At present he is taking syrup of the acid glycero-phosphates with formates, and his bladder is being washed out night and morning with hot boric lotion. The urine is quite free from decomposition just now.

INCOME-TAX.

PARANOIA would be glad to know if money received by asylum medical officers in lieu of certain allowances is subject to income tax?

*** Before a definite answer can be given it is necessary to know in lieu of what the allowances are granted. If granted as, for example, the equivalent of free quarters, board, etc.,

the amount received is subject to income-tax. Communications must be verified by the writer's name, not necessarily for publication.

EAR DISEASE IN RELATION TO MEDICAL EXAMINATION FOR THE CIVIL SERVICE.

B. S. asks whether a boy, with an old perforation of the drum, would pass the medical examination for the Civil Service. The hearing is not much impaired.

*** With the data before us it is difficult to answer the question in relation to a specific case in the negative or the affirmative. The examiner would take into consideration the following, amongst other, factors: (1) The situation of the perforation; (2) whether the disease is arrested, or only quiescent; (3) the amount of the impairment of hearing and whether it could be improved by treatment; (4) the presence of any contributory factors in the nose or naso-pharynx; (5) any instructions which may be laid down by a board for the guidance of examiners. When the British Medical Association met in Edinburgh in 1898 the Sections of Laryngology and Otology and of Medicine in Relation to Life Assurance held a joint meeting to discuss "Ear Disease and Life Assurance." In the report of this discussion (BRITISH MEDICAL JOURNAL, 1898, vol. ii, p. 977), will be found expression of opinions which may be of service in the present matter.

ANSWERS.

ONE WHO DOES NOT WISH TO LOOK TOO OLD AT FORTY.—A non-injurious preparation is walnut juice: Walnut juice (green walnut shells) 10 parts, alcohol 60° 90 parts. Filter after 10 days. Apply to hair after previously washing with a solution of carbonate of potash 1 in 10. There are methods in which silver nitrate and pyrogallic acid are employed, but unless very carefully applied are apt to lead to dermatitis.

RESTLESS NIGHT.—The literature of the Pulicidae is very much scattered. Most books on entomology deal with them to some extent. Braun's *Animal Parasites of Man* and Daniel's *Laboratory Studies in Tropical Medicine* give accounts of their life-history and anatomy, but we know of no book that deals with the special points inquired about. Prevention is better than cure, and we would advise a thorough search of the house for the source of the trouble. Are there dogs and cats kept? If so, they are probably the cause. If not, then one should exclude the possibility of *Cimex lectularius*. Failing that, then a cleansing and disinfection of the floors of the different rooms ought to be tried. Abundant dusting of the bed with Keating's powder should keep the parasites off at night. Some people are much more susceptible than others, but if the irritation is constant then the cause must be constant, and this must be sought for first.

PHARYNGITIS.

DR. ARTHUR H. W. AYLING (London, S.W.) writes: Has "Rosaceae" tried painting the pharynx with tr. ferri perchlor. ℥j to glycerin. ℥vij? If applied every night and morning it ought to effect a cure. It should be used with a brush; the spray is not so efficacious. In this view I remember being supported by the opinion of the late Mr. Arthur Hensman, throat and aural surgeon to Middlesex Hospital.

DR. H. J. THORP (Ipswich) writes: I would suggest applying with a brush equal parts of guaiacol and almond oil (the application, I should say, occasions considerable smarting, but only for twenty seconds), and to take a saline aperient every other morning for a short time.

LETTERS, NOTES, Etc.

MEDICAL EXAMINATION FOR LIFE ASSURANCE.

M.B. asks if the medical profession is not now sufficiently united to fix the lowest fee for medical examination for life insurance at half a guinea. He also complains of the use made of the National Deposit Association, which pays very inadequate fees, by members of the better industrial classes.

*** The question of fixing minimum fees for medical examinations for life insurance is being investigated by the Medico-Political Committee, by direction of the Representative Meeting, and a report on the matter has been approved by the Committee for the consideration of the Divisions, and will be issued very shortly. The consideration of this report will bring about the kind of united expression of opinion suggested, though whether that will be to the effect that a minimum of half-a-guinea should be fixed cannot of course at present be said. There is no doubt that the fees allowed by the National Deposit Association are inadequate, except in the case of the poorer members of the industrial classes. Numerous complaints are made that this Association is made use of by a class quite able to pay ordinary medical fees.

POST-OFFICE APPOINTMENTS.

A. B. C. relates the following story, which he thinks may contain a lesson for other members of the profession: A. B. C.'s senior partner had held the appointment of medical officer to the local post-office for some years, and A. B. C. had been appointed his deputy. The senior partner received notice that his retirement was compulsory, owing to the fact that he had reached the age limit—70. The appointment was advertised, and A. B. C., his junior partner, and a third resident medical man applied. A representative of the G.P.O., in an interview with A. B. C., explained to him that it was unlikely that he would be appointed, as the G.P.O. did not like appointing a man who had acted as deputy in the same firm, for fear that the firm would consider the appointment belonged to them. The suggestion that the junior partner should be appointed was met with the statement that the G.P.O. would be in the same position again. The post was given to the other applicant, and A. B. C. received an official letter, explaining that this was not to be understood as expressing dissatisfaction with his services, which had always been appreciated. A. B. C. suggests that the moral of this incident is that it is to the advantage of any medical firm to obtain the appointment for the youngest member, and not for the senior partner.

CYLLIN AND CRESYLIC ACID.

DR. DAVID SOMMERVILLE (London) writes: In the article on cresylic acid the *British Pharmaceutical Codex* states at p. 15 that cresylic acid enters into the composition of a number of proprietary disinfectants such as cyllin, creolin, lysol, etc., and that a typical preparation of this class is: Liquor cresolis compositus, whose composition is described on p. 613 as consisting of—

Cresylic acid by weight	50
Linseed oil	35
Caustic potash	8
Alcohol	4
Distilled water to	100

From work that I have done on the chemical and germicidal properties of cyllin and several other proprietary disinfectants during the past five years, I have no hesitation in saying that this statement is at once misleading and dangerous. Cyllin as prepared for medical practitioners and pharmacists contains no cresylic acid. As concerns disinfection in medical or surgical practice the above substitute cannot be used without liability to disastrous results. The Rideal-Walker coefficient of cyllin medical is 20.0; the Rideal-Walker coefficient of the above substitution product is 2.5.

PATENT MEDICINES IN JAPAN.

DR. E. WEATHERHEAD (Brighton, Hove, and Preston Dispensary) writes: Your leading article in the JOURNAL of January 18th on "Patent Medicines in Japan" brought to my mind a little incident which perhaps you might think worth quoting in that connexion. When visiting Yokohama last year, I came by chance in Theatre Street on a curious little shop, behind the counter of which a man stood and lectured apparently on human anatomy, illustrating his remarks by the aid of the usual anatomical diagrams such as we ourselves use, and pointing out the several parts with a pointer. He then took up a bottle containing a pickled tapeworm, and, having hung up a diagram of its anatomical structure, proceeded to lecture on that. His audience consisted of two small children and a woman, who did not appear to be giving much attention. Judging from the inscription over the shop front, he traded in some particular nostrum which cured anything. The notice, curiously enough, was worded in English, or rather, we should say, in "English as she is Japped." I give it verbatim: "The Neikosen is a Guaranted medicine from the Government, that, it may be to recover. for the several sickness and for the deficiently blood." We suppose that this quaintly-worded advertisement was intended to catch the gullible Britisher, who, it seems, is not safe from the wiles of the quack advertiser even in Japan!

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Clinical Remarks

ON

THE SYMPTOMS, DIAGNOSIS, AND TREATMENT OF TUBAL GESTATION IN THE EARLY WEEKS.

By WALTER TATE, M.D., F.R.C.P.,

OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL; GYNAECOLOGIST TO THE NATIONAL HOSPITAL FOR EPILEPSY AND PARALYSIS.

The comparative frequency with which cases of tubal gestation are met with and the obscure nature of the symptoms in a certain number of the cases are sufficient reasons for making this interesting form of pregnancy the subject of a short criticism. In order to give some idea of the frequency of this disease, it may be mentioned that during the fourteen years—from 1892 to 1905—152 cases of tubal gestation were treated in the gynaecological ward of St. Thomas's Hospital. It would also appear that there is an increasing frequency of this form of gestation, for whereas there were only 55 cases during the first period of seven years, there were as many as 97 cases during the second period. In the large proportion of cases of tubal gestation, symptoms usually commence before the tenth week of pregnancy, the most common period being from the third to the eighth weeks. The onset of symptoms is usually an indication of some change taking place in the gestation sac. This may be due to haemorrhage occurring within the tube with the formation of a tubal mole, or the change may be the result of rupture of the tube wall, or haemorrhage—with or without escape of the ovum—through the outer end of the tube. With very few exceptions no symptoms occur until one or other of these accidents has taken place.

The group of symptoms which can be described as typical of this complaint are as follows: The patient, who has missed one or two periods, is suddenly seized with severe pain in the lower part of the abdomen, which may be accompanied by some faintness, and is followed by a haemorrhagic vaginal discharge. The patient probably goes to bed, but, as the pain soon subsides, she may get up in a day or two feeling fairly well. Soon after getting about again she has a second more severe attack of pain, with signs of faintness, and the nature of the case becomes evident.

Unfortunately, in many of the cases the symptoms are not nearly so definite, and a correct diagnosis is often difficult. Special attention must be drawn to two symptoms which are invariably present in cases of this kind. These are irregular haemorrhage and attacks of abdominal pain. Two other symptoms which are present in a large number of cases are missed or delayed menstruation, and signs of faintness and collapse accompanying the attacks of pain. In one case collapse may be a very prominent symptom; in another pain or haemorrhage may be the most marked feature of the case.

A few remarks must now be made about each of these symptoms. First, with regard to amenorrhoea, it may be said that whereas absence of menstruation is a most important and almost constant feature in cases of intra-uterine gestation, it is by no means a necessary sign of extrauterine gestation. The late Dr. Hamilton Bell, in an admirable analysis of a series of 88 cases of tubal gestation which occurred under his observation at St. Thomas's Hospital, found a distinct history of amenorrhoea in only 56 per cent. of the cases. In the remaining 44 per cent. the first symptoms occurred either in the interval between two menstrual periods or practically coincided with the onset of a period. The absence of amenorrhoea, therefore, must not be looked upon as any ground for excluding pregnancy in the tube. Attacks of pain, often recurrent, are invariably present. The pain is situated in the lower part of the abdomen, and is usually unilateral, and referred to the right or left ovarian region. It is generally severe, and often the patient will place her finger on the exact spot. Sometimes the situation of the pain is less definite, and in one case the patient referred the pain to the epigastrium. The pain in a certain number of cases is accompanied by vomiting and faintness. A rather striking feature in some cases is that, although the patient may be seized with severe pain and some faintness, and may have to take to her bed, the pain may very quickly subside, and after a day or two she may be up and doing her work again, quite unaware that there is anything seriously wrong, till another more severe attack compels her to seek medical advice. The recurrent character of the attacks must be specially emphasized. What is the significance of the pain? In one class of case the pain is due to haemorrhage within the tube, causing distension of the tube and possibly contractions of the tube wall. In other cases the pain is due to sudden or gradual escape of blood into the peritoneal cavity, where tubal abortion or rupture of the tube has taken place. Where the attacks of pain are recurrent, there seems reason to believe that the ovum is still within the tube, and that its presence exposes the patient to the danger of further attacks of haemorrhage through the open fimbriated end. The presence of a haemorrhagic discharge from the vagina is a very important and valuable symptom. It may precede by some days, or even a week or two, the onset of the pain, but often it follows the attack of pain. The discharge, as a rule, is moderate in amount and reddish-brown in colour. Sometimes, however, it is much more profuse and bright red, and exceptionally the discharge may be dark coloured and highly offensive. It is known that a decidual cast from the uterus is shed at some time in the course of a tubal gestation, but in only a very few of the cases is the expulsion of this cast actually observed. This positive evidence of tubal pregnancy is available in only about 10 to 15 per cent. of the cases.

Signs of faintness and collapse are present in a certain number of the cases, but not by any means in all. These two symptoms depend on the severity of the pain and the amount and suddenness of the internal haemorrhage. A history of faintness does not invariably signify the occurrence of internal bleeding.

Unless the medical attendant is present soon after the attack and observes the condition of the patient, it is possible to be misled. The patient may have fainted on account of the severity of the pain. In such a case the colour soon returns after the pain has subsided. When, however, the fainting and collapse are due to internal bleeding the pallor persists after the severe pain has subsided. One must, therefore, look upon persistent pallor as a strong indication of internal haemorrhage, when the other symptoms are suggestive of gestation in the tube.

Changes in the breasts are rarely present in cases of tubal gestation, seeing that the majority of these cases come under observation at some period between the third and eighth week of gestation, and during these early weeks the breast signs are rarely distinctive.

One may divide cases of tubal gestation into two classes. In the first, which may be described as the acute fulminating cases, the patient without any premonitory symptom is suddenly seized with acute abdominal pain, accompanied by faintness and collapse, together with vomiting. In this class there is a large effusion of blood into the general peritoneal cavity. In the second class, which is by far the more common variety, the patient has an attack of abdominal pain, possibly preceded by some irregular haemorrhage; there may or may not be a little faintness at the time. These symptoms, however, subside, though the haemorrhagic discharge probably persists, and within a few days, or possibly a week or two, the patient has a more severe attack in which the evidence of internal bleeding may become more marked.

The physical signs met with in cases of tubal pregnancy depend on the amount of haemorrhage and the rapidity with which the bleeding occurs. In the fulminating variety, where the haemorrhage is very sudden and excessive, if the patient is seen within a few hours of the lesion, the marked pallor is at once apparent, together with the small rapid pulse and rather shallow respirations. The abdomen is a little distended, and there is some tenderness below the level of the umbilicus. There is nothing to be felt on palpation except a little resistance over the tender area, but percussion will give evidence of dullness in the flanks and a little dullness above the pubes the bladder having been emptied by catheter to exclude this possible source of error. On vaginal examination in this variety the signs are again not very definite. The uterus will almost certainly be found

lying in front and a little enlarged. Some fullness will be felt in the pouch of Douglas, and it is possible that an ill-defined soft swelling may be made out in the right or left posterior quarter of the pelvis in the situation of the enlarged tube. One may, however, be unable to define any swelling on vaginal examination. It is needless to say that the examination of a patient under the circumstances mentioned must be carried out with extreme care and gentleness, for fear of causing further bleeding. The two important signs to notice in these cases are pallor and the presence of free fluid in the abdomen.

Next, we will suppose the initial symptoms are not so severe, there being no evidence of internal bleeding, as shown by the absence of collapse and any marked pallor. At first the nature of the case may not be apparent; but if the patient is examined within forty-eight hours or so the blood effused may have become encysted, forming a pelvic haematocele. On abdominal examination a swelling will be found rising up into the hypogastrium for a variable distance towards the umbilicus. This swelling is tender and somewhat elastic, and is dull on percussion. Per vaginam, the uterus is found somewhat enlarged, pushed forward behind the pubes, and the collection of blood forms an elastic swelling filling up the pelvis and bulging down the posterior fornix. In such a case as this the blood has probably escaped more slowly from the damaged tube, and has gravitated into the pelvis. The effusion of blood into the pelvis has become shut off by matting of the intestines above it, which form a roof to the haematocele.

In a third class of case we find a patient who may or may not have missed a period, gives a history of recurrent attacks of pain often increasing in severity with a persistent or intermittent haemorrhagic discharge. There is, however, no sign of any faintness. In such a case the recurrent attacks of pain may be associated with haemorrhage within the Fallopian tube causing distension, or small haemorrhages round the fimbriated end of the tube becoming localized, which gives rise to the condition known as peritubal haematocele. There is, however, no copious haemorrhage into the general peritoneal cavity, nor is there any large effusion into the pelvis.

In such cases some tenderness and resistance will probably be made out in the lower part of the abdomen to the right or left of the middle line. Bimanually the uterus will be found to be enlarged, pushed forwards, and not infrequently displaced to one side. A swelling of unequal consistence, partly elastic and partly firm, will be felt in the right or left posterior quarter of the pelvis. This swelling is somewhat adherent to the uterus, but is capable of a considerable amount of mobility. It may be the size of a duck's egg or larger. In these cases the posterior vaginal wall is not bulged down and the appendages of the opposite side are usually quite normal.

In discussing the clinical history of cases of gestation in the Fallopian tube no mention has been made of salpingitis as an antecedent in these cases, nor has any importance been attached to the fact that in certain cases long periods of sterility may have preceded the occurrence of a tubal pregnancy. Although sterility may have been present in a few cases, it is not of sufficient frequency to be of diagnostic value. So far as salpingitis is concerned, the knowledge gained from the operative work at St. Thomas's Hospital goes to show that, with the exception of one or two cases, salpingitis plays no part whatever in predisposing to tubal pregnancy. On *a priori* grounds this is what one would expect. For the embedding of the ovum in the uterus we know that a healthy mucous membrane is essential. There is no reason to suppose that in the case of the Fallopian tube any different condition prevails.

In few diseases is a careful and accurate history of more importance than in cases of tubal pregnancy. Errors in diagnosis will certainly occur unless special attention is paid to the history of the case and the onset of symptoms. The two most common errors are mistaking the condition for one of pelvic inflammation, or for an ordinary miscarriage.

In the majority of cases of pelvic inflammation there is a history of some past gonorrhoeal infection, or the onset of the symptoms follows soon after a miscarriage or confinement, or some other form of septic infection. There is not any history of a missed period or delayed menstruation, and usually there is no accompanying haemorrhagic discharge of dark brownish red colour which is so characteristic of tubal pregnancy. The temperature, moreover, is raised in pelvic peritonitis, and there is no evidence of pallor or faintness.

With regard to the diagnosis from ordinary miscarriage, the only cases of tubal gestation which are likely to be mistaken for this are those in which the haemorrhage is unusually severe and in which sufficient attention has not been paid to the other symptoms present. The pain in case of miscarriage usually precedes or accompanies the haemorrhage, and ceases after the expulsion of the ovum. The pain is usually felt in the sacral region or in the hypogastrium. In tubal gestation the pain is nearly always unilateral; it may occur with the haemorrhage, but the severity of the pain is greater and the attacks are recurrent. There is also the important evidence that on vaginal examination in cases of ordinary miscarriage there is only the one median uterine tumour, whereas in tubal pregnancy causing symptoms there is the uterine tumour, and also a second lateral swelling of greater or less size due to the enlarged tube with haemorrhage around it.

It is well always to remember that where irregular haemorrhage comes on suddenly in a young married woman in the child-bearing period, without any previous history of menorrhagia, in cases where carcinoma of the cervix can be excluded, pregnancy should be thought of as a possibility, whether or no there is any history of amenorrhoea. Having this possible diagnosis before one, it then becomes necessary to decide whether the pregnancy is intrauterine or extrauterine. The character and situation of the pain is of value.

The treatment of these cases must depend on the conditions present in each individual case. In the earlier part of this paper three classes of cases were referred to. We must be guided in our treatment by considering what is the least risk to the patient in each of these classes.

In the first class—the fulminating variety, where the patient is collapsed and the pelvis and lower abdomen is full of blood—it is our duty to advise immediate operation and to save the patient from the risk of further bleeding. It may be contended that operating on a patient collapsed from haemorrhage is a very serious undertaking; but as a rule at the time the patient is seen the haemorrhage has ceased, and if it has not ceased there is all the more reason for not delaying operation. The operation undertaken at this period is exceedingly simple, and takes a very short time. After opening the abdomen the hand is at once passed down to the side on which the tube has ruptured, and the appendages of that side secured with ligature. The removal of the blood from the pelvis and abdominal cavity and subsequent lavage of the abdominal cavity with warm saline solution is usually followed by marked improvement in the condition of the patient, provided too much time is not spent on this proceeding.

In the second class, where one does not see the patient till a pelvic haematocele has formed, the treatment to a certain extent depends on the time that has elapsed between the severe attack of pain and the examination of the patient. If the severe attack of pain is of recent origin, it is still one's duty to advise operation, as at this period there is a very definite risk of another attack of pain with more severe haemorrhage. Moreover, when surgical treatment is carried out within a few days of the onset, the adhesions formed are readily separated, the blood effused can be completely removed, the operative risk is extremely small, and the result in such cases is highly satisfactory. In the event of the patient not being seen or the condition diagnosed till ten days or more after the attack of pain causing the effusion of blood, provided the patient has kept free from pain during this interval, one may safely advise an expectant treatment, the patient being kept at absolute rest in bed. There is good reason to believe that in such a case as this the ovum has escaped through the open fimbriated end of the tube at the time of the haemorrhage, and that the Fallopian tube has contracted down after evacuation of its contents. Under these circumstances the risk of further internal bleeding is very slight, and there is a very fair chance of the early ovum, together with the effused blood, being gradually and completely absorbed. In a few cases sup-

puration may take place in the haematocele, and incision and drainage per vaginam may become necessary. Gradual absorption of a pelvic haematocele does not always occur, even though the patient may be kept under the most favourable conditions. It sometimes happens that further attacks of pain occur, with increase in size of the abdominal swelling. This enlargement of the haematocele means further haemorrhage into the sac, and in such cases it is usually found that the tubal mole is still retained within the tube, and remains a source of danger to the patient. Abdominal section, with removal of the affected tube and blood clot, will then become necessary.

In the third and last type of case, in which the patient has repeated attacks of pain, together with irregular haemorrhagic discharge, but without any collapse or faintness, and where a unilateral swelling is found in the situation of the tube and ovary, it is always advisable to advise abdominal section, as there is grave risk of rupture of the gestation sac, or of severe haemorrhage occurring through the fimbriated end of the tube. If the operation is performed while there is a comparatively small localized swelling in the situation of the tube there is, under present conditions of surgery, the least possible risk. If, however, the case is left and sudden severe haemorrhage into the peritoneal cavity occurs later, operative interference may become necessary when the condition of the patient is far less favourable.

To sum up, one may say that operative treatment is indicated in those cases where the haemorrhage is moderate or severe and of recent origin, and also where the symptoms and physical signs indicate that the gestation sac is still contained within the tube. It is safe, however, to wait and watch the patient in cases where a haematocele has already formed, and where, after the initial attack of pain, the patient has been free from symptoms for a week or more. Under these circumstances there is a good chance of the blood becoming completely absorbed, and no serious risk is run by following an expectant treatment.

A CASE OF RUPTURED ECTOPIC GESTATION OCCURRING IN A RUDIMENTARY HORN OF A UTERUS BICORNIS UNICOLLIS.

By H. T. HICKS, F.R.C.S.Eng.,

GYNAECOLOGICAL SURGEON TO THE DERBYSHIRE ROYAL INFIRMARY, DERBY; LATE OBSTETRIC REGISTRAR AND TUTOR, GUY'S HOSPITAL; AND ASSISTANT SURGEON TO THE SAMARITAN HOSPITAL.

History of the Case.

R. P., aged 39, had had three full-term children, the youngest being 16 years old. Nine years ago the patient had an attack of peritonitis on the right side which was thought to be due to appendicitis. Nine weeks before admission into the Samaritan Hospital she was seized with sudden abdominal pain on the left side when fourteen days overdue with a menstrual period. Haemorrhage from the vagina began a week later. The patient only remained in bed a few days after the onset of pain, and did not consult her doctor till nearly six weeks later. During this time the pain continued, and eventually became worse. She then went to see Dr. Hamilton of Ashford, who found the uterine tumour. Except at the onset of the pain the patient did not seem to be ill, and merely went to the doctor because the pain continued and prevented her doing her work. Dr. Hamilton sent the patient to see me, and she was admitted into the Samaritan Hospital under my care.

On examination I could feel the somewhat rounded firm tumour attached firmly to the left side of the uterus, and I at first thought that it was a fibroid, and that the patient might possibly have aborted nine weeks earlier.

On further consideration, however, there seemed to be too much pain present for a simple fibroid tumour, and the suddenness of the onset, followed a few days later by uterine haemorrhage, strongly suggested a ruptured ectopic gestation. With this possibility in view I advised operation, which the patient was only too ready to accept, because she said the pain was at times more than she could bear.

On opening the abdomen the uterus was found to be enlarged; the projecting left horn containing the mole was firmly attached to the intestines and omentum. The right Fallopian tube was converted into a large hydrosalpinx. I removed the uterus by supravaginal hysterectomy as well as the right tube and ovary. The left tube was quite normal and its fimbriated end patent. The left tube and ovary were not taken away. The only point of interest about the operation was the condition of the intestines, which were firmly attached to the site of rupture on the posterior aspect of the gestation sac. The walls of the gut in direct relation to the ruptured gestation sac were nearly half an inch thick. This was due to haemorrhage which had taken place into the muscular coat of the intestine. A portion of the ileum which capped the blood clot had a crater-like depression nearly half an inch deep. The lumen of the gut was not encroached upon. I had considerable difficulty in freeing the two adherent and thickened loops of small intestine and the sigmoid. The peritoneal coat of the gut had completely disappeared over the adherent area and it was quite impossible to bring the peritoneum together, but the eroded and thickened walls were united as far as possible with catgut without constricting the intestinal canal. No doubt the trophoblasts of the ovum had actually invaded the gut and their eroding action had caused the haemorrhage into the muscular coat of the intestine.

The patient made an uneventful recovery.

The Specimen.

The uterus is enlarged, measuring 3½ in. vertically and 4¾ in. and 3½ in. across at the levels of the attachments of the Fallopian tubes and round ligaments respectively. Externally it has the appearance of a uterus bicornis unicollis, the right side being well developed and the left rudimentary. The rudimentary horn joins the right side above the internal os, and is composed of a solid block of uterine muscle in the distal portion of which the mole has developed. The rudimentary horn projects upwards and to the left from its junction with the right side for a distance of 2½ in., and measures 1¾ in. across at its base. The bridge of uterine muscle which separates the mole from the uterine cavity of the right side is 1¼ in. thick, and contains no cavity. There is thus no connexion between the cavity of the uterus and that containing the mole. The mole measures 1¼ by 2½ in. in its chief diameters. It is composed of firm blood clot, and is surrounded by a rather thin capsule on its outer side. The left Fallopian tube is attached to the outer and lower angle of the horn. Behind the capsule has given way over an area about the size of a half crown, and through the rupture blood clot protrudes. The top of the blood clot is shown in the drawing of the specimen. The left



Anterior view of specimen. R. F.T., Right Fallopian tube; R. O., right ovary; C.L., corpus luteum; U.C., uterine cavity; L. R.L., left round ligament; L. F.T., cut end of left Fallopian tube M., mole; B.C., blood clot containing villi.

round ligament is attached to the front and outer aspect of the horn. The right side of the uterus is well developed, and the corresponding Fallopian tube is converted into a hydrosalpinx. The right ovary shows several haemorrhagic areas and a corpus luteum of pregnancy.

Microscopically, the mole consists of fibrin, in which chorionic villi are seen. The blood clot is in direct contact with the uterine muscle and the capsule. In a few places there seems to be an attempt at some decidual formation immediately at the periphery of the mole. The uterine cavity is lined by normal mucous membrane, but there are decidual cells in the stroma beneath the endometrium. Large quantities of lutein tissue surround the corpus luteum in the right ovary.

I think the specimen is best described as being one of a ruptured ectopic gestation, which has developed in the muscle of a rudimentary left horn of a uterus bicornis. The ovum probably passed across the pelvic peritoneum from the right ovary and entered the left Fallopian tube, and, becoming arrested in the blind uterine end of the tube, burrowed its way into the uterine muscle. It might possibly be suggested that the blood had collected in the horn as the result of a unilateral haematometra. This criticism of the specimen is, of course, negatived by the microscopical examination of the mole and the clinical history of the case.

Mr. Shattock, who has made a very careful examination of the specimen, has found chorionic villi in the blood clot which is adherent to the peritoneum around the seat of rupture. This fact clearly shows that the intestines were in direct contact with the chorionic villi.

RIGOR MORTIS IN THE STILLBORN.

By C. H. WATTS PARKINSON, M.R.C.S., L.S.A., D.P.H.,
CORONER FOR EAST DORSET.

THE annotation in the BRITISH MEDICAL JOURNAL of October 5th, 1907, on a case of rigor mortis in a stillborn infant, reported by Dr. Ulrich, of Erfurt, makes mention of the importance of this occurrence from a medico-legal point of view, and as I have reported similar cases during the past thirty years, but cannot find any reference thereto in the various works on medical jurisprudence I have consulted, I venture again to relate the facts observed by myself, in the hope that being confirmed by the experience of others, they may now be considered, verified, and embodied in the recognized manuals for the instruction of students.

CASE I.

In 1874 a young woman of respectable family living alone in a country schoolhouse was overheard by the old attendant woman (who suspected her condition) groaning in her room; after some time the young woman went out, and the attendant going into the room found in a drawer the dead body of a child, newborn, and gave information to the police. A medical man was called, and the woman was committed for trial for murder. The old woman did not hear the child cry, but the medical man found lacerated wounds of the mouth, etc. He was asked if he had made a *post-mortem* examination, and said No, because there was strong rigor mortis, and this showed that the child was born alive. The woman was ably defended; the surgeon's neglect to examine the body, and the fact that the old woman listening heard no cry, strengthened the defence that the wounds were inflicted in the agony of expulsion, that the child was born dead, or died from want of attention, and not from the injuries, and she was convicted of concealment only.

CASE II.

A short time after this case I was called to a multipara in the country, and found her in hard labour; the pains were regular and very violent; the child was alive. The pains, though severe, were not expulsive, and the membrane had been ruptured some time. After a time the pains ceased, and I went on a round. On my return I found the pains had commenced again; as progress was slow, I sent for my father to assist me, and we delivered her of a stillborn child with difficulty. We noticed that there was some stiffening of the limbs, and the child was laid aside while we attended to the mother, who was much exhausted. Before leaving we examined the child and found that the rigidity we had noticed before had increased, and that there was strong rigor mortis, and that of an unusual kind, producing an attitude unlike that caused by ordinary cadaveric rigidity. The head was drawn forward and the back somewhat rounded; the arms were flexed on the elbows and bent on the chest. The thighs were drawn up and flexed towards the belly, and the legs were flexed at the knees; in fact, the body was drawn up into the position in which it would lie in the uterus, as shown in the accompanying illustration from



Fig. 1.—Adaptation of fetus to uterus. (By permission of Messrs. J. and A. Churchill.)

Dr. Tyler Smith's *Manual of Obstetrics* (Fig. 1). I reported this case shortly in the *Medical Times*. Since then I have been on the look-out in cases of stillbirth, and the following two cases are fair examples.

CASE III.

This was an example of extreme hydrocephalus; the patient was a primipara, and delivery was effected with much difficulty after perforation. The infant when born was quite flaccid, the limbs lying extended, but rigor mortis set in, and gradually the limbs were drawn up into the intrauterine position, as described above.

CASE IV.

An unmarried girl was suspected by the police and subsequently the body of a newly-born child was found in a hole in the garden in a box. The girl was confined at her home, and the parents stated that, as the child was born dead, they thought it unnecessary to register, and of course hoped to hide the daughter's shame. I was called on to examine the body. It was a well-developed child, somewhat prematurely born. It was lying doubled up in a cardboard box; on taking it out the limbs were limp, and on placing it on its back the arms and legs were extended in the ordinary way, but there were marks of pressure at the flexure of the arms and legs, and on taking up the body the limbs fell naturally into the intrauterine position. Examination showed that the lungs had not been inflated, but were solid. As a result I was able to state that the parents' account was correct—that the child was born dead, and that it had died probably some days before it had been expelled, that rigor mortis had set in and passed off *in utero* before birth.

CONCLUSIONS.

I regret that I cannot now give details of the dates and other particulars of these cases, but they will illustrate the conclusions I wish to enforce.

1. Rigor mortis may set in under certain conditions before labour, and may pass off while the child is still *in utero*, and possibly may delay the birth in these cases until it has passed away.

2. Rigor mortis may set in when the child dies during labour, and may either be complete before or may go on to completeness after birth, and in these cases increases the difficulty of expulsion.

3. A child may die during labour and be expelled before rigor mortis can set in, but rigor mortis may supervene after birth more or less completely.

4. The attitude produced by rigor mortis in stillborn children differs from that produced by cadaveric rigidity

under ordinary circumstances, and by its character enables an opinion to be given that the child had no separate existence, for in every such case the limbs and body generally become drawn into the position in which it lies normally in the mother's womb.

Just as in the infant, when death occurs before delivery and a separate existence, rigor mortis draws up the limbs into the intrauterine position, so when a chicken dies in the shell the rigidity draws the chick into the position in which it lay in the egg. If the child or chick has had a separate existence, has breathed fully, and used and exercised its limbs for a time, and then dies, the attitude produced by the rigidity changes in character, and becomes the ordinary attitude of cadaveric rigidity, the limbs not being drawn up. Therefore, if the child or chick is watched, and the rigor mortis draws the limbs into the position in which it lay *in utero* or *in ovo*, it can be safely asserted that it was stillborn, and had no separate existence; on the other hand, if the infant or chick is laid out at length, and the limbs when they become rigid are extended or in the same position as laid when limp, this would negative stillbirth.

My first point is that rigor mortis is not a sign of live-birth: and my second, that the character of the rigor mortis enables one to decide whether or not the child was stillborn.

I am conscious that this is a very unsatisfactory report, and as I have not been in general practice for some seven years the cases are all old; but my excuse for publishing it is that the points I raise are of great value in cases of supposed infanticide. I hope better-placed observers will press the matter forward in the public interest.

ON THE USE OF CHEMICALS IN ASEPTIC SURGERY.*

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To some the title of this communication may seem paradoxical. But the end of our surgery is sterility—a logical and scientific standard of perfection. I do not hope to satisfy surgical ritualists, who look to the means and not to the end, nor to discover their standard of excellence. Clinical statistics are, to say the least, oft-times wanting in scientific precision. So much depends upon the optimism of the statistician and the credulity of the audience.

At the present time attempts are being made to conduct surgery without the use of chemicals, or, as Messrs. Dudgeon and Sargent say in their admirable communication to this Society, "without the use of chemical antiseptics for the hands, patient's skin, instruments, lotions, or dressings." But there are many surgeons, myself amongst the number, who still use chemicals, and for reasons which I am about to give.

I concede at once that chemicals may be harmful, and that the ideal would be reached if we could dispense with them altogether. Some who have gone far in this direction say that they have got better results. Probably they have, but this may not be saying much. How is it possible to tell when their previous clinical results are not set forth, and may have been indifferent; but, besides, whilst ceasing to apply excessively strong chemicals to the tissues, they used them more scientifically for the disinfection of the skin? Their ligatures, too, and sutures have been better prepared, and, perhaps, applied. Nor does it follow that because one surgeon, who operates under certain conditions and amidst a certain environment, thinks that he can dispense with chemicals, another who operates under different conditions and different environments would be wise in following his example. They may be urged to do so, perhaps, by an impression in their minds that in using dilute chemicals for their instruments and sponges, and for washing blood from the wound, they acknowledge a certain want of confidence in the accuracy of their methods of operating. They may have seen it written that "they remain condemned to the use of antiseptics"—no one likes to be condemned. Condemnation follows upon crime, and crime leads to punishment. Perhaps the fashion of the moment may have an influence upon some minds. It is possible, too, that they accept the statements which have been made as to the harmful effects of dilute chemicals upon the tissues, although these statements have not been verified and are usually based upon second-hand evidence.

Now, whatever *means* surgeons adopt, we assume that their *aim* is the same—namely, to banish bacteria from the field of operation, from everything brought in contact with the wound, and from the wound itself. Nothing short of this will ever content me. Although their wounds may not have suppurated, I do not believe patients to have passed safely through the ordeal of an operation when colon bacillus, streptococci, *Staphylococcus pyogenes aureus*, or such-like pathogenic bacteria had been found in the vicinity of their wounds. Disasters will ensue, and when suppuration does occur it will be, I believe, of a most serious type.

Let us glance at some of the sources of infection and at the means used to cope with them.

As far as possible, heat is used by everyone to kill bacteria. When heat can be properly applied its effects are asepsis. Nevertheless, to prevent carelessness in its application, constant tests are needed. Not long ago, for reasons which cannot be divined, bacteria grew on several occasions when the small suture needles were dropped into broth. After that was known the needles were always sterile. Systematic tests of everything brought in contact with the wound, of the skin, and of the wound itself, brings to light the sources of wound infection. Should by chance infection have occurred, the cultural tests would trace it to its source. If, for instance, colon bacillus had grown from the skin of the hands, and if the colon bacillus had been grown from the wound, the presumption would be strongly in favour of the hands as the source of infection.

A long series of tests performed regularly for fifteen years leads to the conclusion that bacteria very seldom reach wounds from anything to which heat can be properly applied. Wound infection comes from other sources, and has to be fought by other agencies. But even things treated with heat ought to be tested lest the heat has not been properly applied. The needle incident is a case in point. Wound infection also comes from the patient's own skin, from the hands and person of the surgeon and his assistants, and from the atmosphere. Obviously, heat cannot be applied to these. Here the use of chemicals begins; and this is the branch of aseptic surgery which I propose to discuss, and shall begin with the application of chemicals to the skin.

Now we ought to know how the chemicals which are applied to the skin act. If they act perfectly, then no bacteria can enter wounds from the hands or from the patient's skin; but if they are imperfect in their action, we ought to recognize the fact and take additional precautions until we learn how to disinfect the skin, unless we choose to assume that bacteria from these sources are harmless, which is to assume a great deal. But the hands and the patient's skin are not the only sources of wound infection. "Air infection" is a correct term, but does not imply quite enough. "Environment infection" would be better. The air which bathes a wound made in a gigantic city is not the same as that of a small town by the sea, or one in Switzerland. A private room is not the same as that to which students and visitors have free access. As Dr. Gordon and others have proved, throat bacteria are coughed long distances; and boots bring in much filth, full of equine intestinal bacteria. Clearly these are sources of wound infection which cannot be fought with heat. Are we to assume that bacteria from such sources are harmless and may be ignored?—for of course they revel in salt solution—or ought the question of environment to be taken into consideration in the treatment of wounds?

With regard to the skin of the hands and the skin of the patient, we have here two clear and distinct issues to face. First, to decide how far we can succeed in disinfecting by means of chemicals; and secondly, if we fail, what additional precautions can be taken to ensure asepsis.

Let us begin with the disinfection of the hands. It has been said over and over again that the hands cannot be disinfected. If this means that every one who tries will succeed every time, then the statement is true;

*A paper read at the meeting of the Medical Society of London on January 27th, 1908.

but if it means that the hands can never be disinfected, then it is untrue.

It is by no means easy to state the grounds for the belief that by using our present chemical methods properly the hands can be disinfected, not occasionally, but at least fifty times out of one hundred, and that disinfection is so nearly attained in the remaining fifty that extra rigorous tests are required to prove the escape of occasional bacteria. The scientific evidence is based upon a long series of tests made with culture media. The scientific results might not have impressed the mind had the improvement not been invariably accompanied by an improvement in the clinical results; by a larger proportion of wounds healing by first intention; and by a vast diminution in inflammation and suppuration when infection did unfortunately occur.

During the last fifteen years there has been a steady and continuous improvement in the results of our tests of the skin of the hands. At first bacteria grew on every occasion; then sepsis was 1 in 10; then 1 in 15; and then 1 in 37, and lately once in a series of 66. During this improvement the methods of testing remained the same. A piece of skin has been placed in broth, which is recognized to be a delicate and reliable testing fluid. Nor has the disinfectant varied. I have continued to use the 1 in 500 spirit and biniodide of mercury lotion.* Doubtless equally good results could be got with other disinfectants if properly used, but biniodide happens to suit my own hands and is a powerful germicide. As Fürbinger taught us, such good results cannot be obtained without the use of alcohol. That in itself is a potent germicide, but it has the additional advantage of removing and penetrating the cutaneous grease. Also its dehydrating properties afford a further advantage. After skin has been dehydrated by alcohol it readily absorbs water, or water with disinfectants in solution. Thus we cannot attribute the improvement in results to an alteration in the tests nor to an alteration in the chemicals applied. We have, therefore, to seek for the cause of the improvement in the way in which the chemicals have been used; there small but important alterations have been made. After the hands have been cleansed in the usual way, they are soaked for not less than two minutes in a bowl of spirit and biniodide lotion. This is what has been done hitherto; but, after the spirit and biniodide lotion, the hands are repeatedly transferred—four or five times—from the spirit lotion into a watery solution of mercury biniodide, 1 in 2,000. Presently I shall explain why the strength of the watery solution has been increased to 1 in 500. The effect of this mode of application is not only to disinfect a much larger proportion of hands, but it actually causes the biniodide to enter into a close alliance—but not into chemical combination—with the skin. This is proved by chemical tests which Dr. Hurtley very kindly performed. He found mercuric iodide in the pieces of the skin of my hands soon after their preparation. Furthermore, twenty-seven hours after I had prepared my hands with spirit and mercury biniodide, and after they had been repeatedly washed I snipped off some pieces of epidermis down to the dermis, and gave them to Dr. Hurtley, who reported that they contained an appreciable quantity of mercuric iodide. Others have, I believe, performed similar experiments, and with the same result. Obviously the presence of the mercury in the skin must have an effect upon the broth tests. Such chemical-laden skin would be as unlikely to infect broth or a wound as a piece of chemically-laden gauze, and, having tried, we know that the latter does not infect broth or a wound, provided it has no dust upon it.

Another series of tests shows that after treating with 1 in 500 spirit and biniodide, 1 in 2,000, or 1 in 4,000 watery solution, the skin of the hands has no living bacteria upon its surface. Incidentally these experiments throw light upon the asepticity of the silk which is buried in the tissues. After the hands had been disinfected the lotion was washed off by repeated ablutions with sterile water, which, I may remark, is obtained from the ordinary hot-water supply of the hospital. A small scrap of skin is then put into broth, and has been invariably sterile. Then a piece of No. 1, 2, or 3 twisted silk was pulled off a reel previously sterilized by heat, and roughly dragged again and again through the fingers and palms of the hands, and afterwards some of it was put into broth. This test is similar to that used by Haegler,[2] and is probably more rigorous than that by means of snipped off pieces of epidermis.

We found that silk could usually be drawn through the fingers and escape infection, but that it could seldom be dragged roughly through the palms of the hands. Silk for ligatures or sutures is not subjected to such rough treatment. But nevertheless the test disclosed a flaw in asepsis of the hands, and therefore a possibility of silk implantation infection.

So far, a watery solution of biniodide—1 in 2,000 or 1 in 4,000—had been used in alternation with 1 in 500 spirit and biniodide. So the strength of the watery solution was increased to 1 in 500, with the result that in about two-fifths of tests silk drawn roughly through the palms of the hands remains sterile. Of course, I am not contented with this, although it marks an improvement in methods. We hope some day to attain asepsis. It is to be noted, however, that the improvement in results is coincident with an improvement in our methods of saturating the skin with the chemical.

Clearly, the disinfection of the hands is exceedingly difficult and not likely to be carried out by the inexperienced. The object which we now have in mind is to get as much as possible of the antiseptic into the skin itself. This requires care, accuracy, and technical knowledge. Therefore, inexperienced assistants should wear rubber gloves. But rubber gloves do not afford ideal safety, and are only an additional safeguard. Some seem to think that gloves absolve them of the necessity of disinfecting their hands. But gloves may have holes in them, and are very liable to laceration or perforation. Personally I find that they interfere with delicacy of touch, and cannot therefore be used for many abdominal operations, especially those in which pelvic adhesions have to be overcome. They are, however, indispensable for septic operations or for septic dressings. But as an additional safeguard against hand infection I use mercury biniodide lotion throughout the operation for rinsing the hands and sponges, and, when necessary, to wash blood from the wound. There are, however, additional reasons for this extra precaution, for I have not yet dealt with infection from the skin of the patient or that from environment.

Difficult as the hands are to disinfect, the patient's skin is infinitely more difficult; indeed it is questionable whether the skin of parts with large and abundant sebaceous glands—such as the skin of the scalp—can be disinfected by the methods we have hitherto used.

The chances of asepsis depend upon the region from which the piece of test skin is taken. By our former methods of disinfection the skin of the limbs afforded the highest proportion of asepsis; then the skin of the abdomen (about 1 in 7 septic), then the skin of the breast (about 1 in 6 septic), and then the groin (about 1 in 3 septic). The skin of the scalp has not been disinfected yet. We are now making fresh attempts to do so. Acting on the assumption that asepsis depends upon saturating the skin itself, down to the cutis vera, with disinfectant, we have made more strenuous efforts. After washing and cleansing, the spirit and biniodide 1 in 500, and watery solution of biniodide 1 in 500, have been used alternately for not less than three minutes. Dr. Hurtley has with great kindness made a chemical analysis of skin after it had been treated in this manner, and found that he could obtain from it a distinct sublimate of mercuric iodide. Dr. Hurtley is also of opinion that the mercuric salt is not in combination with the skin; so that it is there in the form of a powerful antiseptic and disinfectant. When this process of saturation of the skin is properly carried out, it must be difficult for cocci or bacilli to live upon its surface or within its glands and hair follicles; and this antiseptic skin ought not to infect sutures or anything else. Much depends upon the way in which the process is carried out, and there is still room for improvement.

Skin which has been successfully saturated with biniodide ought not to infect buried ligatures or buried sutures. I regret that I have no evidence upon this point. For buried ligatures, the finest twisted silk (No. 000) is generally used, and is not seen again. It is quite unusual, too, for the thicker silks (Nos. 1 to 3) used for ligatures or buried sutures, as in the radical cure of hernia, or for pedicles, to appear again. Unfortunately,

*More correctly a solution of mercuric iodide in potassium iodide.

on the very rare occasions when, perhaps weeks or months after the wound had healed, a piece of silk has been extruded, we have not had the opportunity of learning the kind of infection. Out of thirty-seven skin sutures taken out on the eighth day, ten were sterile. On each of these ten occasions the piece of skin snipped off before the suture was put in was sterile. Twenty-four sutures were infected with *Staphylococcus epidermidis albus*, two with *Staphylococcus pyogenes*, and one with colon bacillus. In this instance the intestine may have been injured. In the twenty-four infected with *Staphylococcus epidermidis albus*, the bacteria may have come from either the skin of the patient or from the hands of the surgeon. In eight instances the skin of the patient had *Staphylococcus epidermidis albus* in it when the suture was put in, so that in these we need not look further for the source of infection. In the other nineteen there was only one occasion when the surgeon's hands infected broth, and this with *Staphylococcus epidermidis albus*, so that might have been the source of the silk infection. They might, as we have seen, been the source on others had the silk been roughly dragged through the palms, but it was not. But it seems to me likelier the patient's skin at the operation had living *Micrococcus epidermidis albus* in it, or micrococci which had been merely stunned by the antiseptic. But whichever explanation is right, the conclusion is the same—namely, that we have still to learn how to disinfect the skin of both the patient and of the surgeon every time: and, further, that until we learn how to do so, in my opinion, chemicals should be used as an additional protection. It is true that wounds heal by first intention although *Staphylococcus epidermidis albus* or other more virulent microbes are present. But something depends upon the quantities left in the skin. No one can doubt that the nearer we have got towards the asepsis of the skin the more certain have been the results. Short of causing suppuration, *Staphylococcus epidermidis albus* causes slight inflammation of the skin around the sutures, some inflammation along the line of incision, and also, I believe, the growth of keloid. I used to think that these were caused by the antiseptics, but they continued although the strength of the antiseptic has been diminished, and although it has been replaced by the mildest antiseptic possible—namely, saline solution. But, after all, the point in question now is not whether healing took place by first intention, but whether our methods achieve asepsis—which they do not.

But there are other sources of wound infection besides the hands and skin, which cannot be dealt with by means of heat. The air of our cities, dwellings, and hospitals has in it bacteria from the skin and from the air passages of human beings, and from the alimentary tracts of men and animals. Dr. Gordon, in his admirable reports to the Local Government Board, has given us new and striking information. *Staphylococcus epidermidis albus* was found in the air of a barber's shop, and in that of an operating theatre which was being used. So that air may have been the source of some of the *S. epidermidis albus* met with in our skin tests and of that of ligatures and sutures. But the air of cities, dwellings and hospitals may have in it bacteria much more dangerous than *S. epidermidis albus*. Even in the suburbs pathogenic bacilli and more than one kind of streptococci were found by Dr. H. Gordon in the air. Virulent *Staphylococcus pyogenes aureus* and virulent intestinal bacilli were also obtained from air.

The bacteria in the air of dwellings and hospitals are recruited from the mouths of human beings. During ordinary conversation none are exhaled or ejected. Dr. Gordon repeated and amplified Flügge's experiments and confirmed what we already knew about the showers of throat bacteria which are scattered broadcast during loud speaking, coughing, or sneezing. Loud speaking sent bacteria 40 ft. At shorter distances large numbers fell upon the floor. When any one coughs or sneezes in the audience it is quite safe to assume that the wound is bombarded with bacteria. Dung bacteria are carried about upon the boots and in spite of wipings and cleansings may be carried long distances. *Bacillus prodigiosus* was found by Dr. Gordon 576 ft. from the place wherein it had been placed, having been carried by the boots. Moist mud dries and becomes dust and is stamped into the air by the exits and entrances of an audience. The mere enumeration of the pathogenic bacteria of mud would take a long time.

Doubtless some of the dangers which depend upon the environment of a wound can be met by skilful organization. The coughing audience can be screened off, which also cuts off the dust brought in on their feet. The air of the theatre can be improved by filtration. Then those upon the floor of the theatre can be suitably clad. But this elaborate organization and installation is not always at our command. Merely to obtain it demands much time and money. And then it cannot be taken about to cases elsewhere. Besides, when it has been obtained, it has to be properly worked by erring man and erring woman. So that here we have another reason for using dilute chemicals as an additional safeguard.

It is often said—usually, as I have remarked, in second-hand evidence—that dilute antiseptics are harmful to the tissues, and may even promote suppuration. Solutions of carbolic acid and of sublimate combine with the tissues, and cause superficial necrosis, and are harmful in a certain degree; but, as many will agree, excellent results follow their use. Judging from the clinical results of my own operations, I cannot allow that ill results follow the use of dilute solutions—1 in 2,000 or 1 in 4,000 mercury biniodide. In 100 consecutive cases of radical cure of hernia the amount of suppuration was 3 per cent. One was due to an oversight on the part of the house-surgeon, who left in a silk suture which held down a transposed testicle; another followed a serious recurrent haemorrhage in a man with aortic disease, and another followed operation upon a large irreducible inguinal hernia. The cause of the suppuration was never traced, but admits of no excuse on my part. Next, in these 100 cases the dressing was hardly ever renewed until the eighth or tenth day, when the wound was healed, the stitches removed, and collodion applied.

I believe that at St. Thomas's Hospital the wounds are usually treated with salt solution, which is also used for the instruments, and plain sterilized gauze is used to cover the wound. So that I note that for a similar kind of operation, namely, the high operation for varicocele, Messrs. Corner and Nitch[3] report 4 per cent. of suppuration. Certainly a comparison of the two sets of cases does not tend to show that the use of dilute chemicals lessens the clinical results.

The effects of some chemicals upon the tissues is seen with the naked eye; 1 in 20 carbolic lotion or 1 in 1,000 sublimate speedily made the cut tissues, especially cut muscle, look as though they had been pickled in brine. It is unnecessary to use a microscope to verify the naked-eye appearances. But I have not yet come across any scientific evidence that dilute biniodide lotion injures the tissues. Besides being antiseptic, the biniodide lotion approximates normal saline solution in its physical and physiological properties. Mr. Trapnell very kindly demonstrated to me that 1 in 4,000 solution merely swells red blood cells, but does not crenate them like 0.6 per cent. saline solution. Mr. Kendrew very kindly made microscopical specimens of portions of fat and muscle which were removed at the beginning and at the end of an operation. I was unable to tell which had been washed with lotion and which had not. It is possible that damage, such as superficial necrosis, might have been seen had carbolic acid or sublimate been used.

So that until the hands can be sterilized or efficiently protected; until the patient's skin can be disinfected; until the science of architecture gives us an ideal environment, and until we learn never to cough or gesticulate, I shall continue to use chemicals.

REFERENCES.

[1] *Transactions*, Medical Society of London: also *Lancet*, November 17th, 1905, p. 1335. [2] *Handereinigung.*, Basel, 1900, p. 9 et seq. [3] British Medical Journal, January 27th, 1906, p. 196.

Medical Practitioners in Germany.—The total number of medical practitioners in Germany this year is given in Boedner's *Medicinal-Kalender* as 31,416: of this number Prussia claims 18,985. In the largest cities the proportion of practitioners to population is 2.5 per 1,000: Wiesbaden has the largest proportion of all. In Berlin and its suburbs the proportion is 1.14 per 1,000. The number of specialists in the whole of Germany is about 6,300, being about 20 per cent. of the total number of doctors. Numerically their provinces of practice are in the following order: Gynaecology, ophthalmology, oto-rhino-laryngology, urology and dermatology, surgery, neurology, and psychiatry.

ON SPLENO-MEDULLARY LEUKAEMIA AND SPLENIC ANAEMIA (BANTI'S DISEASE).

BY

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THESE two cases of enlarged spleen are, I think, worthy of record, because in neither case could a correct diagnosis have been made without an examination of the blood.

Dr. Frederick Taylor has shown in his Lumleian Lectures[1] that the following are the commonest causes of splenic enlargement: Taking spleens of over 30 oz. in weight, the largest occurred in cirrhosis of the liver, next in malaria, and then in infective endocarditis. Taking 379 spleens over 10 oz in weight, he showed that, excepting in cirrhosis, the largest occurred in infective endocarditis, tubercle, typhoid, then heart disease and cancer of the spleen. Malaria came very low in this list, but probably, taking the whole world over, it is the commonest cause of splenic enlargement. The striking thing about Dr. Taylor's list is the very high position occupied by infective diseases, and particularly by infective endocarditis and tubercle; for among the 379 cases there were 52 due to the former and 42 to the latter disease. Among less common causes it is not possible to arrange any order, as they are so infrequent. They are leukaemia, especially spleno-medullary; splenic anaemia, which in its later stages is known as splenomegalic cirrhosis, or Banti's disease; and anaemia pseudo-leukaemia infantum, in all of which the spleen is enormous. The spleen is enlarged also, though not enormously so, in lymphatic leukaemia, Hodgkin's disease, and in pernicious anaemia.

Spleno-medullary Leukaemia.

I first saw this patient on March 1st, 1905, when she complained of increasing weakness, shortness of breath and gradual swelling of the abdomen during the previous five months. Three or four times recently she had had "bruises" occurring spontaneously on her legs. She was anaemic-looking, but with a flush over the malar bones. Physical examination revealed an enormously enlarged spleen extending as far as the middle-line, and well below the umbilicus. There was no tenderness on pressure, or when lying down, but when standing or walking she complained of a dragging sensation. The other abdominal and the thoracic organs revealed nothing abnormal. The fundus of the eyes was normal. She had never had any haemorrhages except the spontaneous "bruising." She had no ascites, though this occasionally occurs in spleno-medullary leukaemia.

Splenic Anaemia.

Superficially this case is not unlike the first. I saw him first with Dr. Richard Williams in Wrexham Infirmary on November 1st, 1905, and I have to thank him for permission to report this case. The patient was 30 years old, and he complained of feeling unwell, but nothing definite, for three years or so, on and off. The onset was vague. Previously he had been a healthy man. At times he had had nose bleeding and a few attacks of haematemesis. Three weeks previously he had been tapped for ascites, not for the first time. Physical examination revealed a spleen which extended just below the umbilicus. Nothing abnormal could be detected in any other organ.

An examination of the blood showed marked differences in the two cases, and at once settled the diagnosis in the first case, in which the condition of the blood was as follows: Haemoglobin 65 per cent., red corpuscles, 4,230,000 per c.mm., white corpuscles 248,000 per c.mm.; the differential count showed 47.2 per cent. of polymorphonuclears, 4.1 per cent. of lymphocytes, 4.6 per cent. of eosinophiles, 42.1 per cent. of myelocytes, and 2 per cent. of basophiles; the enormous excess of white cells at once settling that this was a case of leukaemia, and the large percentage of myelocytes present showing that it was the spleno-medullary form. The blood condition in the second case was as follows: Haemoglobin 24 per cent., red corpuscles 2,000,000 per c.mm., white corpuscles 900 per c.mm.—that is, the blood was chlorotic in type, with marked leucopenia. From this alone it is not possible to make a diagnosis, but without it it is also impossible to say what is the cause of the splenomegaly. To this I shall return later.

The first case was treated with arsenic, and rapidly improved. In about three months the haemoglobin had risen to 70 per cent., the red corpuscles to 5,960,000 per c.mm., and the white corpuscles had fallen to 7,500 per c.mm. Very few myelocytes were present, and the spleen was much less. As the result of taking arsenic very dark pigmentation was produced, fairly universal, but most marked on the abdomen. The arsenic therefore was stopped at the end of May, 1905. Towards the end of July she was feeling much weaker, and on August 1st the white corpuscles had risen again to 30,300 per c.mm.; she now began treatment with the *x* rays applied over the spleen. Under this she said she felt better, but her blood certainly did not improve, for on October 24th the white corpuscles had risen to 55,600 per c.mm., the percentage of myelocytes being 15.5. During treatment with Roentgen rays she took no arsenic. In the volume for 1905 of Byrom Bramwell's *Clinical Studies*[2] there is described the treatment of a case of spleno-medullary leukaemia by *x* rays in which the white corpuscles fell from 590,000 per c.mm. to 12,000 during four and a half months. Byrom Bramwell says: "There cannot, I think, be the slightest doubt that in her case the *x*-ray treatment has been beneficial." In the next paragraph he says "that it is only right to say that this patient was taking arsenic at the same time the *x* rays were being applied." Professor Dock,[3] in his conclusions as to the *x*-ray treatment of leukaemia, says: "Roentgen-ray treatment of leukaemia is dangerous on account of the usual risk of dermatitis and burns, but probably also on account of toxic processes, as yet impossible to explain . . . . but it may prove more certain in its action than arsenic." This was certainly not so in this case.

By January, 1906, the white corpuscles had risen to just over 100,000 per c.mm., but as she was feeling fairly well she was very unwilling to have the *x* rays again, or to take arsenic, as the pigmentation was still bad. In September she was feeling very weak, and asked for *x* rays again; these, however, did no good, and in November they were stopped, and she was again put on arsenic. By the end of January, 1907, the white corpuscles had dropped to 26,400 per c.mm. from 200,000 per c.mm., which they were when she started the arsenic in the previous November.

The second case I take to be one of that very rare disease, splenic anaemia. Professor Osler, who has collected and published 15 cases, defines it thus:

> A chronic infection, probably an intoxication of unknown origin, characterized by a progressive enlargement of the spleen, which cannot be correlated with any known cause, as malaria, leukaemia, syphilis, cirrhosis of the liver, etc. (primary splenomegaly): anaemia of a secondary or chlorotic type, leucopenia, a marked tendency to haemorrhage, particularly from the stomach, and in many cases a terminal stage, with cirrhosis of the liver, jaundice, and ascites (Banti's disease).[4]

The patient complained two years ago of having been unwell for about three years—that is to say, there is a history now of five years. He had had epistaxis and haematemesis, and he had been tapped for ascites. Practically the only physical sign is an enlarged spleen. If we go through the chief causes of enlarged spleen it is clear that not one of them exist. The case is evidently not malaria; he has never been out of England, and there have been no shivering attacks. In alcoholic cirrhosis the history, the faeces, the more moderate enlargement of the spleen, and the whole course of the disease should make this diagnosis clear.

Infective endocarditis is another cause of an enormous spleen; here again the length of the history excludes this disease. In Hanot's cirrhosis of the liver there is an enlarged spleen, and haemorrhages also may occur; but the blood shows a leucocytosis and not a leucopenia, there is pigmentation of the skin and glycosuria, so clearly this is not a case of Hanot's disease. From leukaemia it is distinguished at once by the condition of the blood.

In addition Professor Osler gives pernicious anaemia, and Hodgkin's disease with enlarged spleen as causing difficulty in diagnosis. A few months ago I saw a case of pernicious anaemia in which the spleen was enlarged, there was marked anaemia, and in which there had been haemorrhages, with a history extending over two years. The blood, however, was typical of pernicious anaemia, for the red corpuscles were very irregular in shape, and large in size, and during the differential counts of 500 white corpuscles 13 megaloblasts were noted. This case has since improved in an extraordinary manner by taking arsenic.

As to Hodgkin's disease with an enlarged spleen, not

one of Professor Osler's cases of splenic anaemia had any enlarged glands; and the enlargement of the spleen, though not uncommon, is slight in Hodgkin's disease, while in splenic anaemia it is enormous.

As to the etiology, very little or nothing is known, every one seems to be agreed that it is commoner in males than females. Heredity has been noted in a few instances. Splenic anaemia seems to be characterized by great chronicity, for among Osler's 15 cases, 7 were of more than ten years' duration; the duration of the symptoms in this patient is five years. Probably in no disease, except spleno-medullary leukaemia is the spleen so large, in 12 cases collected by Rolleston[5] the average weight was 61 oz., and Hale White reports a case in which the spleen weighed 2 lb. 9 oz.[6]

Haematemesis is the next symptom; eight of Osler's cases vomited blood. In 26 cases collected by the Association of American Physicians, 7 had attacks of haematemesis; and this seems not to be due to cirrhosis of the liver, but either to some condition associated with the spleen, or to some blood condition, for in two cases in which the spleen was removed by operation the liver was found to be normal.[7] They may also bleed from other parts. This patient, in addition to haematemesis, also suffers from severe epistaxis. He always feels better after a haematemesis. Various suggestions as to the cause of the haematemesis have been made—namely, that it is due to:

1. A general diapedesis from the gastric mucous membrane.
2. Small erosions of the gastric mucous membrane.
3. Rupture of a varicose vein of the oesophageal plexus.
4. Rolleston[5] suggests that the large wandering spleen may pull on the gastro-splenic omentum, and give rise to torsion of the veins, or cause a kink in the splenic vein, and so induce venous engorgement of the stomach.

Probably there is no other condition except the so-called cases of gastric ulcer in young women, in which haematemesis may go on for so long a time. One sees young women who year after year suffer from haematemesis, and are treated for gastric ulcer. Personally, I do not believe that a large majority of these cases are gastric ulcer at all, but cases of chlorosis with haematemesis, due to a diapedesis from the gastric mucous membrane, possibly the result of the blood condition. *Post-mortem* evidence, evidence from operations, and the result of treatment by mild iron preparations, and feeding, whereby great improvement is noticed in many cases in about a fortnight, are all against these young womeen suffering from gastric ulcer.

To turn now to the blood, which is of a chlorotic type. The red corpuscles are now reduced to 2 300,000 per c.mm.; two years ago they were as low as 2,000 000 per c.mm. The average number in 26 cases collected by the American Association of Physicians was 3 300,000 per c.mm.; the lowest in Osler's series was 2 187 000 per c.mm. The percentage of haemoglobin is low; in fact, lower than usual in secondary anaemia—in this case 30 per cent.—while the percentage of red corpuscles is 46, so that the colour index is 0 6. A striking feature is the leucopenia. In this case, two years ago the leucocytes numbered 900 per c.mm.; in July, 1907, when last examined, they were only 1 500 per c.mm. There are no nucleated red corpuscles, and the proportions of the various kinds of leucocytes are about normal.

There is undoubtedly a large group of cases of splenomegaly with secondary anaemia, but in these there is usually an obvious cause, such as malaria, tubercle, or rickets. The anaemia and splenic enlargement yield to treatment, or the patient dies of the cause; at any rate, they do not exhibit the same chronicity as the cases of splenic anaemia. The spleen is not as a rule so large, nor the sequence of events so characteristic, as in splenic anaemia. Again, in most cases the blood shows the ordinary chlorotic changes, and in place of leucopenia there is leucocytosis. I might mention a case such as this which I saw in August, 1905.

Mrs. S. complained of weakness and abdominal swelling, which had lasted about a year. There were no physical signs of any disease except an enlarged spleen. In this case the blood showed 4 700,000 red corpuscles and 13,400 white corpuscles per c.mm., and 45 per cent. of haemoglobin. She died a few months later, and tubercle was shown *post mortem* to be the disease she was suffering from.

Here was a case of splenomegaly with secondary anaemia, but except for the splenic enlargement and the chlorosis it did not resemble splenic anaemia. It was of comparatively short duration, the spleen, though large, was not colossal; and the blood, instead of a leucopenia, showed a leucocytosis.

Pigmentation of the skin occurs in a certain number of cases of splenic anaemia. It is not present in this case. On the other hand, the case of spleno-medullary leukaemia shows marked brown pigmentation; this is definitely due to arsenic. Arsenic is so frequently given to cases with enlarged spleen that it is necessary to exclude this as a cause of pigmentation before assuming that the spleen is the cause. The pigmentation may be due to irritation of the abdominal sympathetic by the large spleen, as suggested by Rolleston, for it has been observed to disappear after splenectomy has been performed.

Coming now to the hepatic features of the disease. In the later stages, when the symptoms due to the hepatic changes occur, it is known as splenomegalic cirrhosis or Banti's disease. The symptoms are ascites and jaundice. In Osler's series of 15 cases 4 had ascites and in 2 jaundice occurred. The haematemesis occurs before the cirrhotic changes begin in the liver and is of splenic origin; in my case haematemesis has now been going on for more than three years. Haematemesis is of course one of the early symptoms of alcoholic cirrhosis of the liver, but in this disease it is quite unusual to have attacks of haematemesis going on for so many years as in splenic anaemia, and there are also other symptoms, such as morning sickness. This patient has had no jaundice, but he has been periodically tapped for ascites for more than two years. It is rather doubtful whether the ascites is really due to hepatic changes. It is, I think, more probable that the large spleen mechanically causes a chronic peritonitis, to which in turn the ascites is due, for *post mortem* on the surface of the spleen tags of fibrous tissue are sometimes found, and the capsule is thickened by changes due to perisplenitis. Also I think a case in which ascites calls for frequent tapping would not live so long as this man if cirrhotic changes in the liver were the causes of the ascites. Again, one would expect to find some physical signs of cirrhosis of the liver if it had existed for two years. In this man no physical signs of any liver change could be detected either two years ago or in July of last year.

The morbid anatomy does not throw much light on the disease. In the spleen there are two marked changes. One is a large increase in the fibrous tissue. This is composed chiefly of thickened trabeculae, though much of the normal splenic pulp is also replaced by fibrous tissue. The other change is noticed in the blood spaces, lining these are great numbers of large endothelial cells. These cells contain one or more nuclei, and occasionally completely fill up the blood spaces, so that the appearance is not unlike a new growth, so much so, indeed, that it has been described both as a carcinoma and an endothelioma of the spleen. Later in the disease fibrous changes take place in the liver. In two cases very fully reported by Dock and Warthin[3] in addition to the fibrosis of the spleen and liver there was stenosis and calcification of the portal vein. With reference to this they ask, "Is the latter the primary condition, to which the splenic fibrosis follows secondarily, or is it the result of a portal or general intoxication, to which the splenic and hepatic fibrosis are also due?" As cure of splenic anaemia may follow removal of the spleen it rather looks as if the spleen were the seat of a toxic or infective process, and that the blood conveyed from it by the portal vein to the liver carried a morbid agent causing secondary fibrosis of the liver and portal vein.

As to treatment very little is known. Byrom Bramwell[9] reports a case in which good results were obtained by giving boracic acid, and also one in which x rays were very beneficial. Armstrong[10] has collected from literature 32 cases which have been operated upon: there were nine deaths, the remaining 23 recovered, and apparently were cured; for instance, No. 5 in his list was operated on in 1898, and in July, 1906, was reported as "still living and well, having had no return of the haemorrhage since that time." At the end of Armstrong's article there is a note by Dr. Atherton, in which he reports great improvement in a case of what he takes to be splenic anaemia under treatment by arsenic and x-ray applications twice a week; and he considers that before the operation of splenectomy the x rays should be given a trial. The great danger of operation seems to be from haemorrhage, either during

the operation or within a few hours afterwards, and most of the deaths in operation cases have been from this cause.

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SOME EXPERIENCES IN THE TESTING OF TINCTURE OF DIGITALIS.

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Attention has recently been drawn to the importance of standardizing the drugs of the digitalis group, and as no chemical method of testing the strength of these drugs is at present available, attempts are being made to devise some reliable system of physiological testing. Of possible methods, two in particular have been suggested as of suitable application. By one of these the drug is injected in given amount into the circulatory system of a living animal, either frog or mammal, and the strength of the drug is shown by its capacity to cause death within a given time, death being brought about by arrest of the heart in so-called systole. Employing this method on frogs, and using "good average samples" of the drug, that is to say, samples prepared with all due precaution and known to produce certain well-recognized physiological effects, Dixon has worked out a standard unit for tincture of digitalis.[1] A tincture, before being injected into the dorsal lymph sac of the frog, is diluted with an equal amount of water, and if the tincture be of standard strength, 6 minims of this solution should kill a frog of 25 grams weight in one hour.

The other method of testing is to use in place of an intact animal an isolated heart, perfused with Ringer's or Locke's solution, the drug being in this case exhibited by introducing it diluted to known extent with the perfusing fluid. Then, as in the first method mentioned, the arrest of the heart within a given time may be taken as an indication of the potency of the drug, while during the course of the experiment observation can also be made of the effects produced before arrest takes place. In the experiments of which particulars are given below this latter method was used to test a number of samples of tincture of digitalis. It is thought that it may be of use to give an account of the results obtained, as the experiments made were sufficiently numerous to afford some basis upon which to discuss the advantages or the drawbacks of the method.

The mammalian heart was used, the animals selected being young rabbits weighing usually from 3 to 4 lb. The heart was perfused through the coronary vessels with a Ringer's solution, after the manner made familiar by Langendorff, Locke, and others, and the contractions were recorded.* The recording lever was connected with the right ventricle, and throughout the experiments by the expression "arrest of the heart-beat" is meant arrest of the contractions of the right ventricle. The procedure was in all cases the same. A steady heart-beat having been established and an even series of contractions recorded, the undrugged Ringer's solution was replaced by a supply of similar solution containing a given percentage of tincture of digitalis and this supply was maintained until the heart succumbed to the action of the drug.

The question of a suitable percentage is of some importance if manageable results are to be obtained. Low percentages, which would be suitable in a detailed study of the physiological effects of digitalis on the heart, are found to work too slowly for convenience where the object is to test the relative strengths of many different samples, the gradual dying out of the heart-beat being with low percentages often very protracted. After some preliminary trials the strength adopted in these experiments was 1 in 200. Usually three experiments were made with the sample of the drug and the average time required to arrest the heart was taken to indicate the potency of the sample. When a number of samples had been tested the question arose as to how they should be rated; within what limits might one sample legitimately differ from another. In a preliminary review of results obtained with the first eighteen samples, these were arranged in tabular form according to their potency, beginning with the strongest, that is to say the sample which arrested the heart in the shortest average time. (See Table I.)

No. 13 was a tincture prepared with special care by an expert pharmacist,† and it is considered here as a "good average sample." Nos. 7 to 16 might be considered as approximately equal in strength to the good sample, the average time of arrest with all these tinctures being over twenty-five minutes and under forty-five minutes. This group is marked II in the table.

Samples 17 and 18 made a weaker group, marked III, as in some of the experiments with these tinctures the heart was not arrested within one hour, which was the limit of time adopted.

Samples 1 to 6 appeared to fall into a "strong" group, I, their average times of arrest being all under twenty-five minutes. But the placing of these six samples apart had been decided upon with hesitation. Judged by their short average time of arrest, they were "strong"; and a study of the column of maximal values showed that their maximal times also were shorter than any maximal time recorded for a sample under group II. In the minimal column, however, the distinction between "strong" and

Table I.—*Showing the Average Time Required to Arrest the Heart in the Case of each Tincture, with Maximal and Minimal Times: also the Median Time of Arrest.*

Tentative Grouping.	Tincture No.	Average Time of Arrest in Minutes.	Maximal Time.	Minimal Time.	Median Time of Arrest in Minutes.	Final Grouping: Average.
I. Strong.	1	19	21	16	18	
	2	19	26	13	19	
	3 (x)	20	26	11	20	
	4 (x)	20	30	10	22	
	5	21	23	14	—	
	6 (x)	23	24	21	23	
II. Average	7	26	36	19	23	
	8	27	46	14	20	
	9	27	32	25	25	
	10	28	34	21	30	
	11	30	33	19	32	
	12 (x)	30	52	14	24	
	13	33	42	25	31	
	14	33	48	25	26	
	15	37	46	24	41	
	16 (x)	43	50	39	41	
III. Weak.	17	?	Over 1 hr.	25	?	Weak.
	18	?	Over 1 hr.	37	—	
	X (17 expts.)	27	52	10	23	—
	19	26	33	13	32	Average.
	20	23	28	15	25	"
	21	48	54	40	49	Weak.
	22	50	60	31	60	"
	23	19	24	15	19	Average.
	24*	27	33	22		"
	25*	29	33	25		"
	26*	23	21	24		"

* Are not included in the chart.

* For a description of the apparatus see Report of Special Chloroform Committee, British Medical Journal, July 13th, 1903, p. cxlvii; and more fully in Thompson Yates Laboratories Report, Part I. 1903. "On the Dosage of the Mammalian Heart by Chloroform," Sherrington and Sowton.

† For this tincture I am indebted to the kindness of Mr P. H. Marden, F.C.S., Lecturer in Pharmacy in the University of Liverpool.

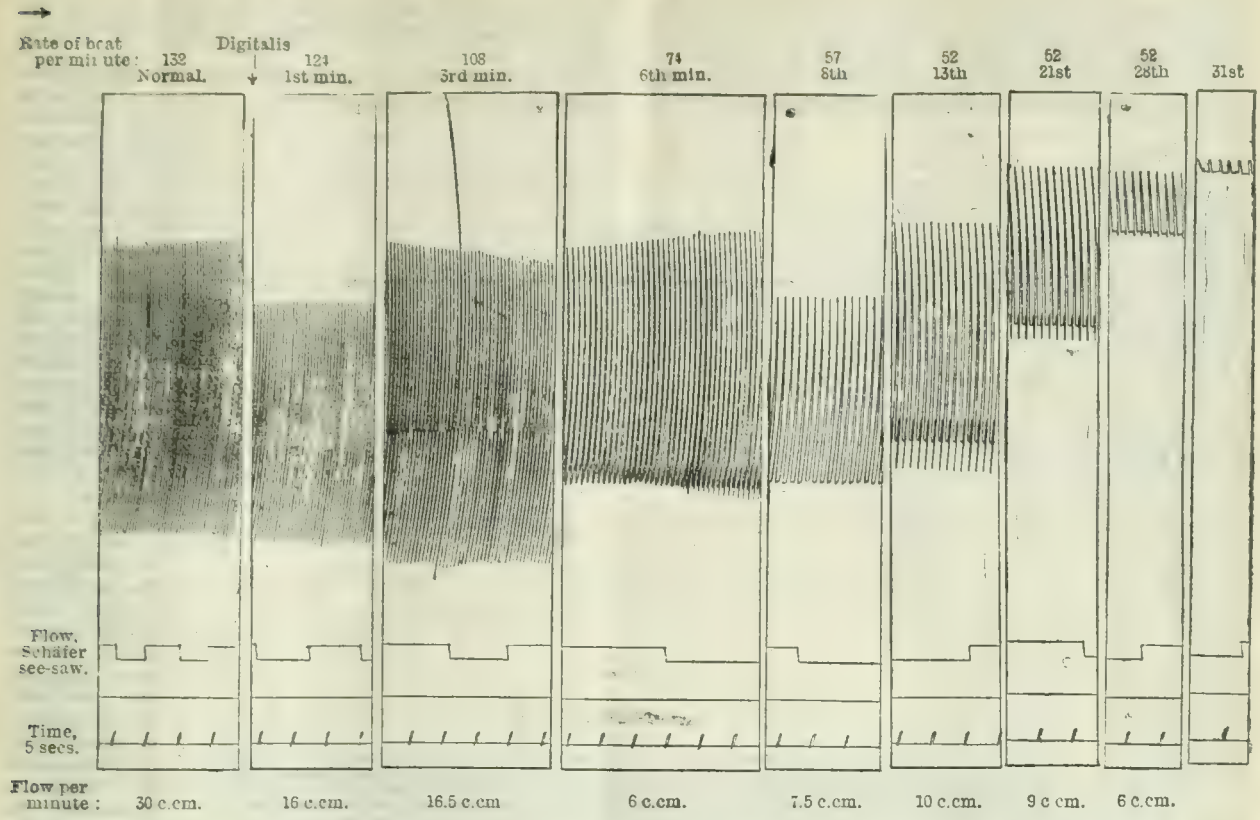


Fig. 1.—Heart of young rabbit, perfused with Ringer's solution; in the interval marked by the arrow the normal Ringer's solution was replaced by a similar solution containing 1 in 200 of tincture of digitalis No. 14. The effect is shown at the end of the 1st minute, 3rd minute, and at other intervals after the onset of the drug. The beat is slowed, and first diminished, then increased in amplitude. Tonus is very markedly increased after the first half of the experiment.

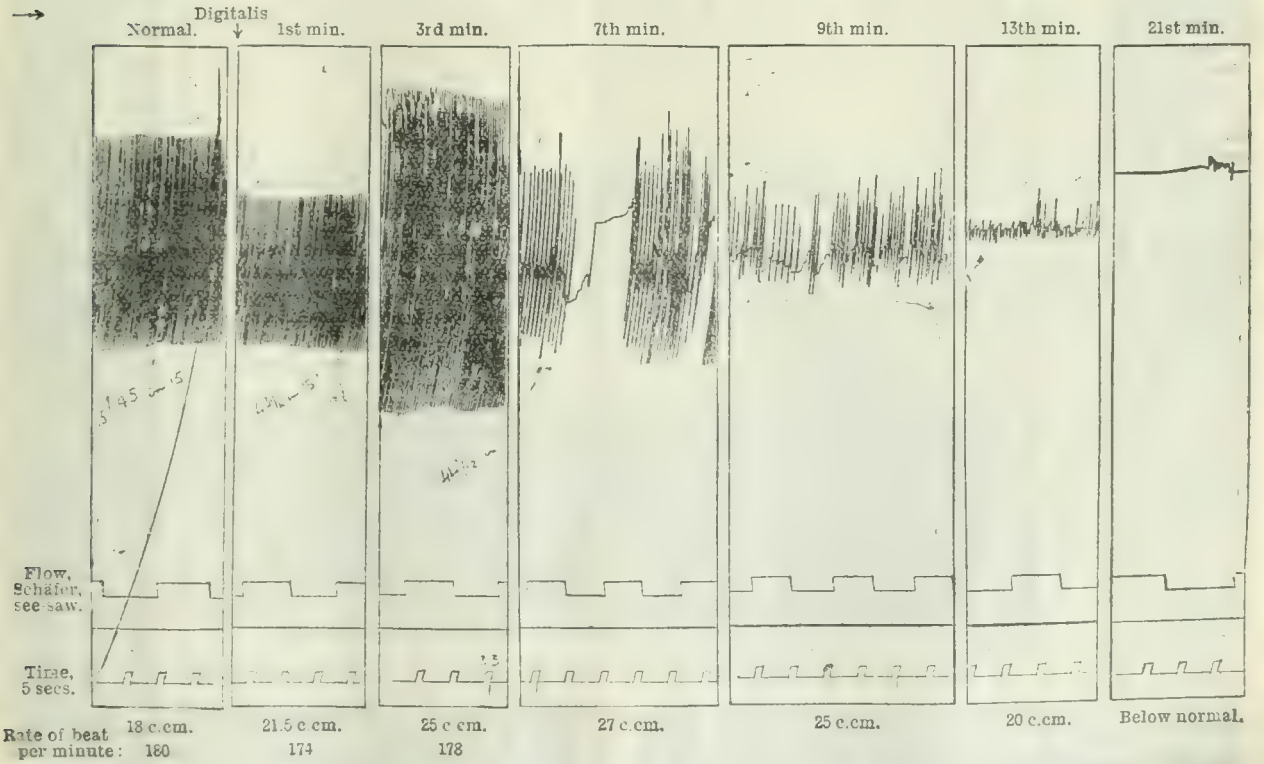


Fig. 2.—Experiment as in Fig. 1. Effect of tincture of digitalis No. 10. The flow is increased by the end of the 1st minute, although the rate of beat is rather less. At the 3rd minute the amplitude of beat has increased, but this would not account for the large increase of flow. The rate of flow remains above the normal until the latter part of the experiment, when the tonus has risen considerably.

"average" was less clearly marked. Two tinctures in group II, Nos. 8 and 12, had wide ranges of values and showed each a minimal time of fourteen minutes—a figure that would appear more appropriately in the "strong" group. A doubt was, therefore, felt as to whether these first six tinctures were really stronger, and the grouping was adopted tentatively. The sequel showed that the distinction made by this grouping was finer than the method would allow of. It appeared later that samples 3, 4, 6, 12, and 16 were all portions of the same tincture, or were in any case prepared from the same batch of leaves in precisely the same way; so that, according to the rating above adopted, portions of the same tincture had been considered to differ so much as to fall under distinct groups. Clearly, then, the separation of samples 1 to 6 from the "average" group was fallacious, and the difference observed, for instance, between the "strong" sample No. 3 and the "average" sample No. 16 was due, not to the drug, but to the condition of the test object, the heart.

Of the tinctures dealt with, therefore, if we except samples 17 and 18, all may be considered as of approximately equal strength in so far as the discriminating power of the method can show.

In regard to the sample which appeared under different numbers, and which may be designated as sample X, the experiments made with it are valuable, for the indication they give as to the limits of variation to be expected from the hearts when used in the manner here adopted. For the number of experiments made was large, no less than 17 hearts having been treated with this same tincture at the same strength, involving a lavish expenditure of time and material that might not have seemed justifiable under other circumstances.

The average time of arrest in these 17 experiments comes out at twenty-seven minutes. The variation limits are: maximal time of arrest, fifty-two minutes; minimal time, ten minutes; variation limits which agree nearly with those before noted for No. 12, where the maximal is fifty-two minutes and the minimal fourteen minutes.

In the last column of the table are given the median or central values of the times of arrest. But a clear idea of the outcome of the testings is perhaps best obtained when the results are expressed in a curve. In the chart is shown the time area within which arrest most frequently occurs when the experiments are taken as a whole, and also the degree to which each sample falls into or diverges from this area of greatest frequency. (See Chart.) Curve 1 (continuous line) expresses the results of the experiments made with all the samples. Curve 2 (broken line) shows the results of the 17 experiments made with sample X. It will be noticed that the two curves are very similar in form. From the foregoing data it is judged that a good average sample of tincture of digitalis, exhibited at the strength here used (1 in 200 of Ringer's solution) should arrest the heart in an average time of not more than forty-five minutes. Out of the whole number of tinctures in the tables, samples 18, 21, and 22 are reckoned, therefore, as

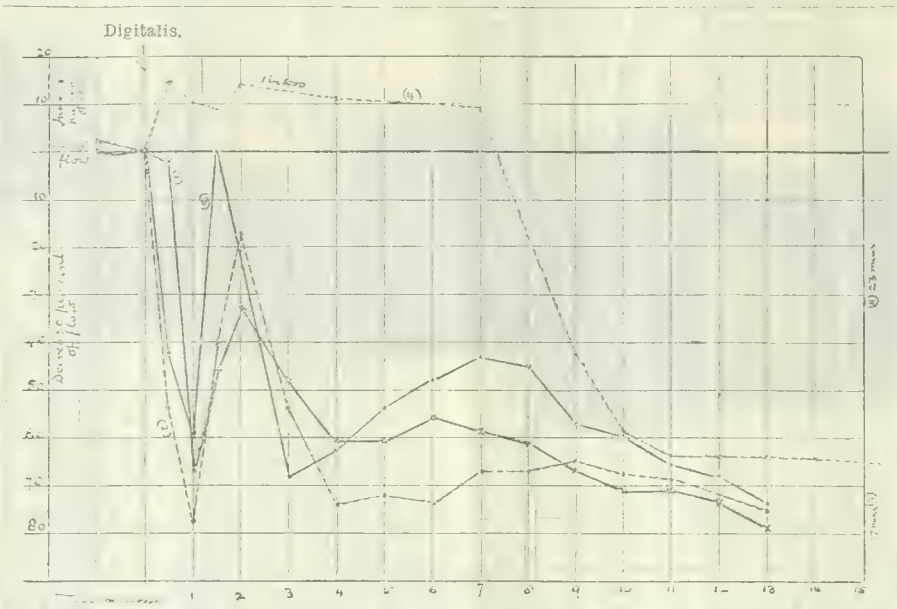


Fig. 3.—Curves showing variations of flow in four experiments made with sample 19. In (1) (2) and (3) the drug was at the usual strength of 1 in 200; the curves show rapid undulations during the first three minutes, after which the flow diminishes and remains below the normal. In (4) the drug was weaker—1 in 1,000—there is a small preliminary rise lasting seven minutes, the flow then sinks below the normal and remains subnormal, although a minor increase occurs which culminates at the twenty-third minute. Normal flow: (1) 24 c.cm. per minute; (2) 30 c.cm. per minute; (3) 34·5 c.cm. per minute; (4) 32 c.cm. per minute.

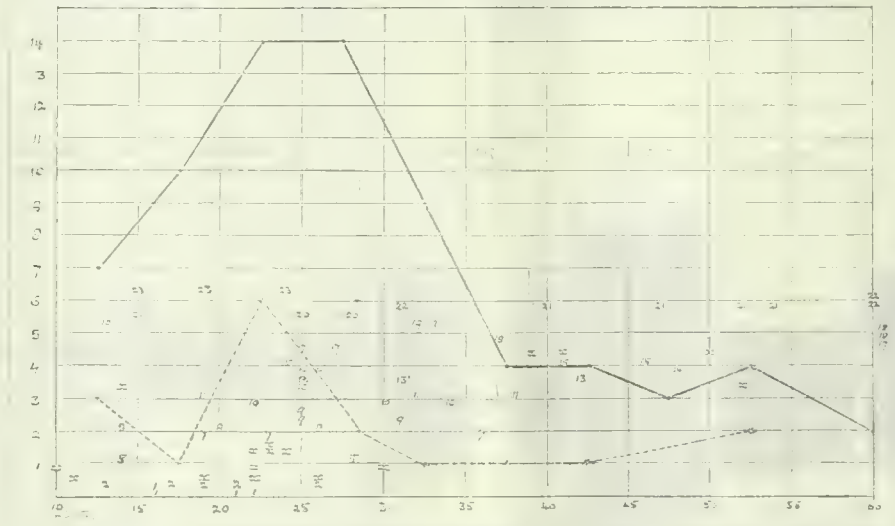


CHART.—Along the abscissa are represented periods of five minutes up to sixty minutes. The ordinates indicate the frequency with which arrest occurs within any time area. According to the time of arrest in each experiment, it finds its appropriate place in one of the time divisions. Thus, beginning from the bottom of the chart and reading across the sheet: Of the experiments made with tincture 1 (marked "1"), two of them fall into the time area 15-20 minutes; the other two into the 20-25 minute area. In a line next above, reading always across the chart, the experiments with tincture 2 will be found distributed in four time areas. The whole of the experiments made with all the tinctures having been arranged in this manner, the number falling within each time area is counted, and a mark is placed at the centre of that area opposite to the corresponding number of the ordinate. Thus into the first area seven experiments fall. The curve starts, therefore, from the dot opposite 7. The next mark is at 10, because 10 cases fall into the 15-20 minute area. In this way is formed a curve which shows the time space within which arrest most frequently occurs when the experiments are taken as a whole and the extent to which any individual tincture agrees with this kind of general average. The smaller curve, drawn with broken line, is the result of arranging the experiments of sample X in this manner.

rather below the average in strength. No. 17 is doubtful as it had one case in which arrest was not complete within the hour, while, on the other hand, two of its cases came well within the time-area of greatest frequency. All the other tinctures examined were up to the average of strength.

So far the point considered has been the "brute strength," so to speak, of the tinctures examined, but an inspection of the records of the experiments suggests the question as to whether its sheer strength is the only thing which it is important to know about a sample; other differences of action appear in the tracings which may possibly be of some importance. For instance, Figs. 1 and 2 are records of experiments made with the tinctures marked 14 and 10 in the table; samples which may be considered as of practically the same strength as judged by the time taken to cause arrest of the heart. Yet, on comparing the orderly working of the heart in 1 with the delirious irregularities of 2, some hesitation may be felt in rating these two samples as equal. It is not, of course, suggested that a tincture of digitalis which produced delirium cordis on the isolated heart of the rabbit would of necessity have the same effect on the human subject when absorbed from the alimentary canal, but, comparing these experiments with one another, it does appear that the various samples used differ in their capacity for producing disorganization of the heart's rhythm, and such differences may possibly prove to be useful means of analysis.

Two types of irregularity were noticeable in the course of the experiments. Of these, one is characterized by a dropping out of ventricular beats. It occurred with many of the tinctures, and was sometimes very marked, so that on direct inspection of the heart as many as eight or ten beats of the auricle to one beat of the ventricle might be counted, while on the tracing (a ventricular record) appeared a series of widely-spaced contractions. As it is not desirable here to discuss any theory of the causation of this well-known phenomenon, it will be referred to simply as "irregularity A."

The other form of irregularity of the heart's rhythm which was observed is that known in its fully developed state as delirium cordis "D"; hurried and uneven movements arise in different parts of the heart, interfering with each other and producing a confused activity impossible of analysis, and impotent for the work of the circulation. An example of this kind of irregularity has been given in Fig. 2. It is, we believe, a generally received opinion that the production of delirium in digitalis experiments of this kind is very much a question of strength of dose. Judging only from indications given in the experiments here considered this does not appear to be the case with all samples. Among the tinctures dealt with, about half gave no trace of delirium even at the high strength used in these experiments, namely, 1 in 200. Sample 14 (see Fig. 1) gave no irregularity of either kind. No. 13, the "good average" sample, caused no delirium. (It gave "A" irregularity in one experiment.) The other samples which gave no delirium were Nos. 5, 9, 19, 20, 23, and perhaps 18. On the other hand, most of the tinctures which gave delirium showed also occasionally the 'A" irregularity. With sample X, out of the 17 hearts on which it was tried, 16 showed absolutely no sign of delirium. The seventeenth had towards the end of the experiment a delirious interlude which lasted seventy-five seconds, after which the heart resumed its former even contractions. On one occasion this tincture was used at a strength of 1 in 100, arrest was rapid (occurring in six or seven minutes), but no delirium was observed. The "A" irregularity was, on the other hand, often very marked with this tincture, so marked in one case as to produce quite early in the experiment an effect resembling vagus arrest.

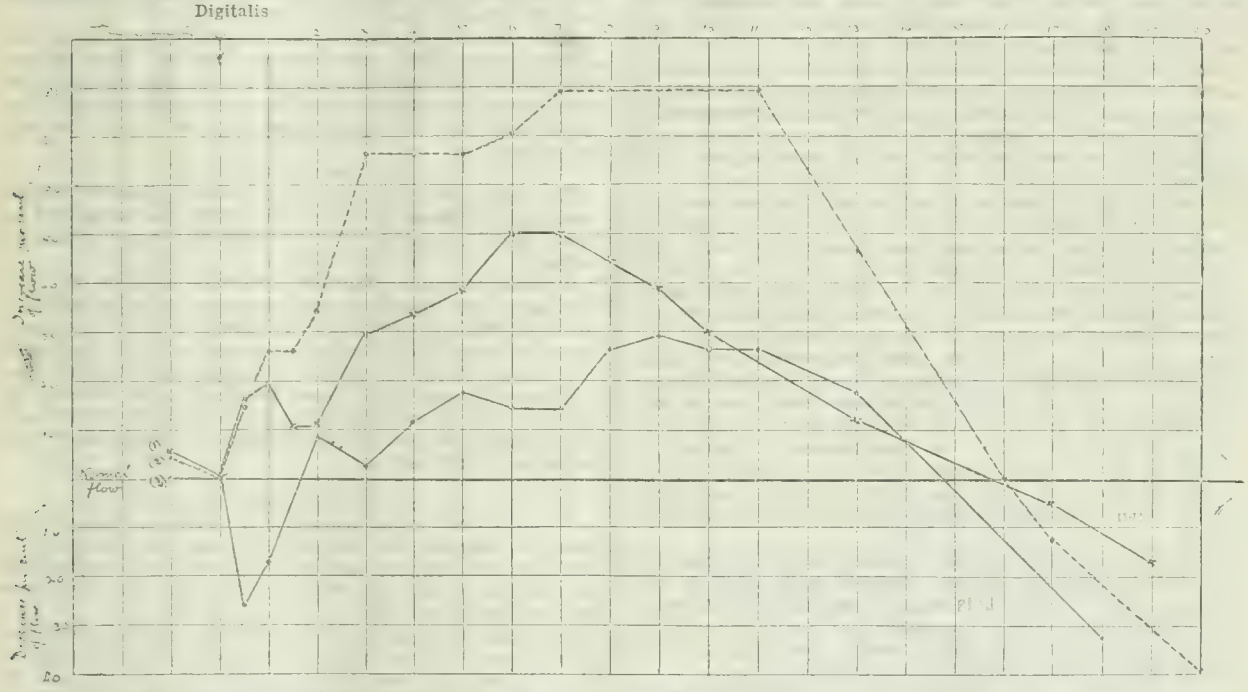


Fig 4.—Curves showing the variations of flow in the three experiments made with sample 10. In each case the flow increases in a marked way, and remains above the normal during the first half of the experiment. Later, tonus is increased and the flow diminishes. Normal flow: (1) 18 c.cm. per minute; (2) 24 c.cm. per minute; (3) 34 c.cm. per minute.

Accompanying the two types of irregularity which have been noticed were differences in the rate of flow through the coronary vessels. Throughout the experiments the coronary flow was measured by means of the little see-saw instrument devised by Schäfer. The movements of the instrument were recorded below the heart tracing by electric signal.

Sample 14, though showing no irregularity of either kind, gave the characteristics of flow associated with the "A" type, and may be contrasted, therefore, with Tincture 10, which represents the "D" type. In the three experiments made with sample 14 the flow diminished at once, and remained below the normal throughout each experiment, the always subnormal but undulating curve being curiously similar in all three cases. Tincture 19, another sample of this type, behaved in a like manner, but gave more marked undulations during the first three minutes (see Fig. 3). In the figure a fourth curve shows the variations of flow in an experiment in which the same tincture was used weaker—namely,—at a strength of 1 in 1,000. In this instance the sharp early undulations are almost obliterated; the flow rises slightly, and is maintained above the normal for some time; after the seventh minute there is a rapid fall. A minor increase, which culminates at the twenty-third minute, corresponds to the rise occurring in the other

cases at from six to nine minutes. Curve 4 has points of correspondence with the other three curves, but the variations occur in more elongated form. These constitute one type of effect.

With tincture 10, on the other hand, excepting for an immediate and short-lasting drop in one case, the flow rises with the onset of digitalis, and is maintained at a rate above the normal during the first half of the experiment, until the tonus of the heart has begun to rise in a marked degree, when the flow falls below the normal (Fig. 4). This marked increase of flow cannot be due to a rise of pressure, seeing that the pressure of the fluid entering the coronary vessels is in these experiments kept constant throughout their course. Nor can the greater flow be attributed wholly to increase in rate and strength of beat: variations of heart-beat may influence to a certain extent, but will not wholly account for the variations of flow which have been recorded. This can be shown from many experiments; to give one instance—the normal rate of beat was 200 per minute, the rate of flow 25 c.cm.; two minutes after the onset of digitalis the rate of beat was 196, the force being also diminished, but the flow was 31½ c.cm. per minute; six minutes later the rate of beat was 108 and the flow 40 c.cm. per minute. The only conclusion to be drawn is that a direct action on the coronary vessels had taken place.

In dwelling upon the differences observed between the action of tincture of digitalis from sample to sample, examples have been chosen from among the best-marked cases. With some tinctures these differences do not come out clearly; the samples cannot be said to belong to either "type."

To what the differences of action are due, and whether they are of importance from the point of view of practical testing—whether, for instance, an observed tendency in a tincture to produce delirium cordis should be held to detract from the value of that tincture—are questions at present difficult to answer. Further investigations might throw light on the causes of the variations observed. To hazard a conjecture, it seems possible that the constituent glucosides of digitalis may affect differently or in different degrees the various properties of the heart, and a preponderance of one glucoside over another in a tincture may give different results on that account. It would be useful to test reliable preparations of digitoxin and its fellows in the same way that these tinctures have been tested, with a view to tracing to its source each variety of effect.

The slowing of the heart-beat, which is so characteristic a feature of digitalis action, occurred with most of the samples tested. Fig. 1 is a good example. In some of the experiments, however, a correction has to be made for changes of temperature, and at present the amount of the necessary correction cannot be estimated.

The strength at which the drug was used (for reasons already mentioned) is less favourable to the demonstration of slowing effects than are weak solutions, such, for example, as those employed by Dixon[2] and Haynes.[3] In testing the later samples, an experiment with the tincture at 1 in 1,000 was made, in addition to two or three experiments with the 1 in 200 solution, in order to bring out more clearly these effects.

In conclusion, it may be said that by the method here adopted it is possible to ascertain with regard to a tincture (1) its "strength"; (2) its capacity for producing "therapeutic results"—for example, slowing of the heart's beat and increase of its amplitude; (3) its tendency to cause disorganization of the heart's rhythm. It may be stated here that great care was taken to keep the conditions of experiment as constant as possible, much trouble being expended in securing animals of approximately similar age and weight. The number of experiments made amounted in all to 98.

It has not at present been shown whether very small differences in alcoholic strength, such as may exist between one fresh tincture and another (the samples used were all fresh) could modify their action on the heart when the tinctures are used at a strength of 1 in 200. Such differences in the samples so far examined should be very small. It would be desirable, however, to make some experiments with a view to possible fallacies in this direction, especially since it has recently been shown by Dixon[4] that very small amounts of alcohol in Ringer's solution affect the calibre of mammalian blood vessels.

The inquiry was undertaken in the first instance at the suggestion of Messrs. Evans, Sons, Lescher, and Webb. I have to thank them for supplying a great part of the material and a number of the various samples tested.

References.

1 Dixon, *Transactions of the British Pharmaceutical Conference*, Brighton, 1905. 2 Dixon, *Manual of Pharmacology*, p. 173. 3 Haynes, *Bio-chemical Journal*, February, 1906. 4 Dixon, *Journal of Physiology*, March 27th, 1907, p. 357.

ON MIGRAINE.*

By T. H. B. DOBSON, M.D.Lond.,

Windermere.

You may remember the advice given by Gobind the One-eyed to the author of *Life's Handicap*, when asked by the latter (as to the art of telling tales) "in what manner is it best to set about the task, O chiefest of those that string pearls with their tongue?" and Gobind replies, "Do thou this: tell them first of those things that *thou* hast seen and *they* together. Thus will their knowledge piece out thy imperfections."

And thus it is that I have chosen migraine as the subject of this short paper, seeing that we have all met with numerous cases, and also as I have had an intimate, if unwilling, acquaintance with this interesting disorder. I hope that you, with your knowledge, will piece out my imperfections.

Definition.

The word, of course, is the shortened form of hemicrania, and represents a definite entity, and must not be used, as it so often is, for headaches from whatever cause.

We call migraine a functional disease (thereby meaning that as yet we have discovered no organic basis), which is characterized by paroxysmal attacks of headache, usually one-sided, and which may be associated with sickness, peculiar affections of sight, and various mental symptoms.

If each disease could have its description written by one who has himself suffered, we should have truer and more graphic accounts to read, and our textbooks would be far more interesting.

Etiology.

We must look upon migraine as hereditary to a large extent. Perhaps one should say that the tendency to suffer from a neurosis is hereditary, but that the neurosis may appear in one generation as migraine, in another as spasmodic asthma, etc.

A patient who suffers from migraine generally has one parent gouty or a sufferer from migraine. The age of onset is variable, most cases begin about puberty, and on the other hand most cases improve about the age of 60.

Women are said to suffer more than men; but in my experience there has been a preponderance of men. Goodhart speaks well of us, he says, "migrainous subjects mostly come from the ranks of the temperate livers, who often work their brains to exhaustion."

As to the primary cause of the disease, at present we can only say that there is an hereditary predisposition to a brain storm. When we come to the immediate and exciting causes, one generally finds that mental or bodily fatigue, worry, or eyestrain are responsible. Typical causes are a cinematograph exhibition, a tour round a picture gallery, and prolonged microscopical work. I have never noticed in my own case, or in those of my friends, that errors in diet have produced a migrainous attack. It is often stated to the contrary in the textbooks, but so much the worse for the textbooks. A fatiguing journey, followed by a full meal taken on a hungry stomach, may predispose to an attack, but I am inclined to blame the fatigue and not the food.

Symptoms.

May I begin by describing an attack of which I was the victim a few weeks ago? In the morning, while visiting a patient, I noticed that the lady's nose had become luminous and was trembling, and I knew that I was in for an attack. The area of disturbance was just below the central point of vision. Of course both eyes are equally

* A paper read before the North Lancashire and South Westmorland Branch.

affected and the lights keep dancing even though one shuts one's eyes. In five minutes the area had increased, so that if I looked a little to one side of the lady's face the whole of her head was blotted out of my vision. The advancing edge of the area was especially brilliant, the central part being blind. During the next fifteen minutes the disturbance increased in extent, but never involved the central point of vision. With me the central point of vision is never affected, but this is not the rule. It often begins just to one side of the central point and then extends outwards and around.

One's area of vision by this time is greatly reduced, for most of the field of vision is filled with a boiling sea of light. The lights at the advancing edge assume a zigzag form similar to that moulding called "Dog-tooth" seen in early English Gothic architecture. The luminous area is impenetrable and shuts out all vision from that quarter. One sees people with trunks but no legs, and legs without trunks. Of course, this is only relatively true, for the moment that one moves one's eyes one sees the rest of the object, whilst the part first seen disappears in a boiling sea of light. The term "fortification figures" is used for the appearance, since the form assumed corresponds to the ground plan of a fort, all angles and corners.

During the fifteen minutes or so that the fortification figures have been developing there comes on a certain amount of mental numbness. One cannot think very acutely, and one has to content oneself (during a bad attack) with talking platitudes. One loses one's powers of concentration, and I have noticed myself answering questions in a mechanical sort of way. A feeling of nausea fixes one about this time; and now, about twenty to thirty minutes after the first symptoms have appeared, the blindness on one side is complete, and one walks into people or chairs without being conscious of their existence.

Subsidence of the symptoms is rapid, and in another five minutes the blind area has shrunk or disappeared, and a headache gradually makes its presence felt on the side of the head opposite to that on which the blindness appeared. The headache lasts twenty-four to thirty-six hours. With me vomiting has never occurred.

This may be taken as a brief account of the chief symptoms of migraine; but I would point out that all cases do not present these symptoms. I would follow Liveing's classification:

1. Simple *Hemicrania*, typical in that it is unilateral and responds to every arterial beat; it recurs every few weeks.

2. *Sick Headache*, again periodical; unilateral headache culminating in nausea, followed by vomiting and prostration; hereditary.

3. *Blind Headache*, such as I have already described.

But there may be other and more alarming symptoms grafted on to any case of migraine:

(*a*) Tingling of lips or the arm.
(*b*) Numbness of arm.
(*c*) Drowsiness.
(*d*) Aphasia (motor aphasia).
(*e*) Squint (temporary paralysis of third nerve).

There is a form of the disease which I have not seen described in the textbooks, but which is occasionally met with—namely, one that might be termed the "status migrainicus" (from analogy to status epilepticus), in which one attack is immediately succeeded by another, so that the patient is for several hours troubled by the fortification figures and the blindness.

Another point worth mentioning is, that when a patient complains of waking in the morning with a typical hemicrania, and you ask, "Were you dreaming last night?" they will tell you "Yes"; and on asking the nature of the dreams they will often say that vivid lights played an important part in them. This seems to show that the fortification figures may be appreciated during sleep without actually waking the sufferer.

A friend of mine, who has suffered for thirty years from migraine, volunteered the statement that for many years before the typical attacks came on he used to dream of lights, and in the mornings to wake with headache.

Diagnosis.

The headache is quite typical in that it responds to every heart beat, is made intolerable by stooping and coughing, and is in the great majority of cases unilateral. The character of the headache, its periodicity, and usual association either with vomiting or blindness, makes the diagnosis easy.

Gowers has pointed out the numerous cases in which migraine has been mistaken for epilepsy. I shall allude to this directly.

A diagnosis of cerebral tumour might be made if the classical symptoms of both diseases were not inquired into.

Pathology.

Attempts have been made to show that the headache of migraine is the referred pain set up by disorders of the viscera. This cannot be so, for the areas of the cutaneous nerve supply associated with the visceral nerve supply should also be affected, and they are not; also the character of the pain is different. I need hardly mention that the fortification figures cannot be due to disturbance of the retina primarily, for both eyes are affected, and the homonymous hemianopia shows that the disturbance must be situated behind the optic chiasma, possibly in the optic thalamus.

During the attack there seems to be a contraction of the vessels of the part affected, causing depressed activity—for example, anaesthesia of the skin, loss of power of co-ordination, delayed digestion, mental lethargy, and partial blindness. When the attack is passing off, we have the arteries previously contracted now becoming dilated, and one experiences the headache, which responds to every heart beat, and which may be temporarily lessened by pressure on the carotid.

As to the actual nature of the attack, we can only say that it is one of a large group of nerve storms which are liable to sweep over the human organism—epilepsy, spasmodic asthma, tic douloureux and others. Certain constitutions seem to accumulate stores of nervous energy, which are liberated in one of these explosive methods. It may be we are laying up a store of poison which accumulates until the nervous system can stand it no longer. Haig, himself a sufferer from migraine, naturally puts it down to uric acid, and says that he can free himself from attacks by dieting.

Most observers seem to think that a poison is absorbed from the much-abused intestinal tract, and that eye-strain, fatigue, and hunger are only the matches which light the fuse.

Treatment.

I.—*To Lessen the Tendency to the Explosive Action in the Nervous Centres.*

Trousseau says: "In proportion as the nutritive and vegetative functions are feeble and languishing, nervous phenomena are mobile, exalted, irregular." To alter this condition belongs to the rudiments of medicine, and need not detain us. I need only point out the necessity for sufficiency of sleep, nutritious food (but not *excessive* in quantity), prevention of intestinal fermentation, and regular exercise. Haller cured himself by taking large quantities of water every day and a light dietary. Linnaeus also. (I am now quoting from Liveing.) "Marmontel," says Labarraque, "who was for seven years tormented by paroxysms of a very painful character, and who consulted the Queen's physician to no purpose, cured himself by following the prescription of a farrier, who advised him to drink water, eat little, and take exercise."

II.—*To Avoid the Immediate Exciting Causes.*

These are: (1) Gastric disturbance; (2) constipation; (3) eyestrain (by wearing + 1 cylindrical lenses for reading, I was able to reduce my attacks very considerably).

Gowers speaks highly of nitroglycerine. I have not tried it regularly. I have tried amyl nitrite inhalations when the attack was developing, hoping to overcome the arterial contraction, but, in addition to the headache of migraine, I had to put up with that caused by amyl nitrite.

The suggestive lectures by Gowers on the borderland of epilepsy opens up an interesting field for discussion. I think the chief points are these:

1. In rare cases migraine alternates with epilepsy.
2. Migraine may develop into epilepsy.
3. The tingling sensation, which may come on in the finger and gradually pass up the hand and arm during the twenty minutes in which the fortification figures are developing in migraine, may also occur as an aura of epilepsy; but in this case it is only momentary.

4. Headache follows both; that of migraine being more severe.

5. The aura of migraine seldom affects a leg or the trunk.

6. Somnolence may occur in both.

As Gowers says, "it is curious that the most frequent relation between epilepsy and migraine is as a source of error between the two." Of course, one always has to remember that they are both comparatively common complaints, and there will be a natural overlapping, apart from any affinity.

The antecedents of migraine are migraine or gout, those of epilepsy being epilepsy or insanity. In migraine there is no deterioration of mind.

THE REMOVAL OF FOREIGN BODIES FROM THE AIR AND FOOD PASSAGES.

By D. R. PATERSON, M.D., M.R.C.P.,

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AMONG the cases of foreign bodies in the air and food passages which came under my department during the last twelve months, two are of special interest, and appear to be worthy of record. While illustrating the ease with which such foreign bodies can be extracted even from deep-lying sites by means of the direct method, they show, at the same time, the importance in using it of having good illuminating power. They will also serve, I hope, again to call attention to this admirable mode of treatment, as it has hardly received in this country the attention it deserves.

Nutshell in the Left Bronchus—Extraction by Bronchoscopy.

A young sailor, 18 years old, was admitted to hospital in January, suffering from difficulty of breathing. He was eating nuts whilst playing "leap-frog," and aspirated part of a nutshell into his larynx. He had a severe suffocative attack lasting some time, during which he was partially cyanosed and in great distress. After a while the obstruction appeared to become displaced, and, while the breathing was relieved, discomfort was felt lower down in the chest. When seen, twelve hours later, he complained of a feeling of constriction of the chest and cough, and wheezing was audible. Beyond rhonchi heard over the larger air tubes there were no definite physical signs to be made out in auscultation. He was put under chloroform, which he took rather badly, there being much cough and cyanosis. After the upper part of the respiratory tract had been well cocainized, a Killian tube 9 mm. in diameter was passed through the larynx into the trachea, which was injected and intensely red and contained much frothy mucus. This was rapidly removed by means of the saliva pump and cocaine applied to the lower air passages. The tube was passed down the right bronchus, which was explored as far as the second ramification and found empty. Its mucous membrane was much injected, probably explained by the fact that the patient had been suffering from a "bronchial cold" for some days. In searching the left bronchus a mass, reddish in colour, was found blocking it just below the commencement, but its relations were difficult to make out owing to the insufficient illumination given by a worn-out lamp. The examination was accordingly suspended, and on the following day the patient was again placed under the influence of chloroform, which he this time took very well. Using a new lamp giving a greatly-improved light, I passed the tube at once down to the left bronchus, and when the mucus was removed the reddish mass was made out to be the piece of nutshell lying inside the bronchus having a small hook-like process over the bifurcation. The convexity of the shell was uppermost, and from under it a constant stream of frothy mucus poured out of the bronchus. Its red colour closely resembled that of the adjacent mucous membrane, and it was the greyish tint of the part of the shell next the bifurcation which enabled its exact relations to be recognized. A Killian long forceps was passed down, the hooked end was seized and the nutshell drawn out along with the tube. The whole procedure did not last more than a quarter of an hour. The patient left hospital two days later.

The object removed was a fragment of a Spanish nutshell measuring 2 cm. by 1·6 cm. (Fig. 1). Its outer smooth convex surface was of a uniform red colour resembling that of the bronchial mucous membrane. Towards the apex, where it terminated in a hook-like process, it had more of a greyish tint, and this was the only point which stood out in contrast to its surroundings. Foreign bodies in the bronchi usually become covered with mucus and assume a grey appearance which renders their identification from the adjacent structures easy; but in this case the polished surface of the shell afforded no hold to a mucous covering, and the entrance of the bronchus looked at first sight as if it were

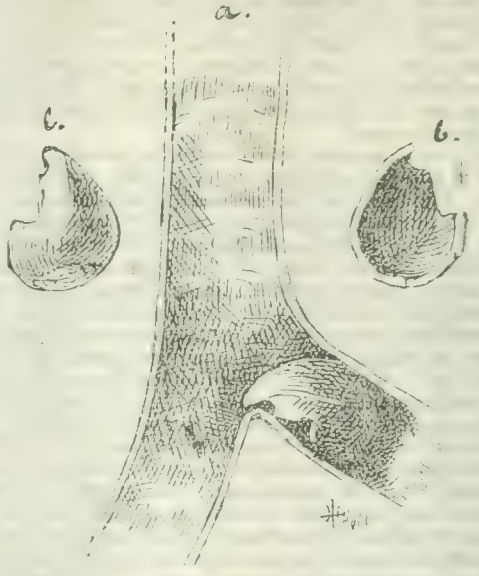


Fig. 1.—Nutshell (*a*) impacted in left bronchus; (*b*) after removal.

filled by a smooth globular swelling. The use of a good light soon revealed, however, the condition of things; and, the exact relations having been ascertained by means of a probe, the extraction presented no special difficulty.

Plum Stone in the Oesophagus: Removal by Oesophagoscopy.

A Norwegian sailor, aged 16, was admitted in June, 1907, with difficulty in swallowing so complete that nothing had been passed for forty-eight hours. There was a complete block of the gullet, and this had come on after swallowing a plum stone. Attempts to dislodge it had been made in the hospital of another town but without success. On admission the resident medical officer passed soft bougies, and found that a small size could be got as far as the cardiac end of the oesophagus, where it stopped, and a large size was arrested about the middle of the chest. He wisely refrained from employing any force or using a coin-catcher. The patient was placed under chloroform, and an oesophagoscopic tube of 13 mm. diameter passed down until it was stopped about 8 in. from the teeth by a narrowing of the gullet, which was emphasized by spasm. But even abolition of the spasm under deep anaesthesia did not permit its passage. Accordingly a tube of 9 mm. diameter was introduced, and this went through the narrow part without difficulty. It was carried as far as a short distance above the cardiac orifice 12 in. from the teeth, where the plum stone was found lying transversely across the gullet. The mucus was wiped away, and the exact relations of the body ascertained by the probe. It was readily grasped by the forceps, and was being drawn up along with the tube, into which, on account of its size, it could not enter, when it stuck at the narrow part and the forceps slipped. This happened twice. By a little manipulation the plum stone was turned lengthwise and then grasped, after which it was manœuvred through the constriction and brought out along with the tube. We subsequently learned that the patient when a child had swallowed some caustic alkali and was obliged to be very careful in eating. A few years ago he had trouble with food which remained in the oesophagus for several days.



Fig. 2.—Plum stone extracted from cardiac end of oesophagus.

The size of the fruit stone extracted (Fig. 2) was 2 cm. by 1·2 cm. It had a sharp hook-like process at one end. This was embedded in the mucous membrane of the cardia and a forcible attempt to push down the stone would certainly have led to laceration. As a rule a foreign body is easily recognized, standing out, as it generally does, in sharp contrast to the pink tint of the mucous membrane. In this instance, again, the red colour of the foreign body gave no such distinction, and accordingly a good light giving brilliant illumination was indispensable.

The general technique of the method of removing foreign bodies by bronchoscopy and oesophagoscopy I have already

dealt with elsewhere,[1] and it is unnecessary to refer to it here. It is of interest to note that since Killian published his first cases of foreign bodies removed by bronchoscopy, nine years ago, more than 200 cases have already been recorded in medical literature. They all teach the importance of undertaking extraction at an early period, and more especially is this true of soft bodies, such as beans, etc., which swell and are prone to start septic trouble in the lung. The cases published in this country are still very few in number. We have the old methods still in practice. Articles in our journals continue to advocate tracheotomy as the proper treatment, in the hope that the foreign body may be coughed up, and failing that, to grope blindly with a forceps or wire loop. It seems to me that the direct method points the way that best carries out surgical principles, and is at once safe and practicable; and it behoves the profession to bring itself into line with the real progress which has taken place in this important branch of surgery.

REFERENCE.

[1] British Medical Journal, 1906, vol. ii, p. 353.

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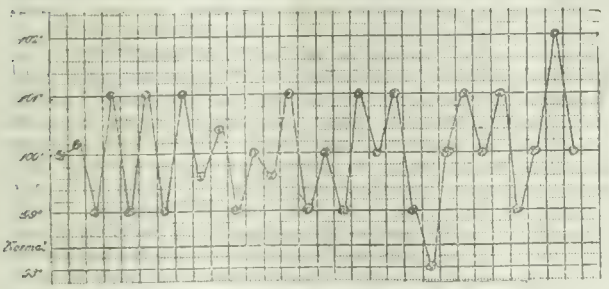
MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF PYREXIA IN MALIGNANT DISEASE SUGGESTIVE OF SUPPURATION.

Dr. J. W. Russell's instructive paper on temperature in malignant disease of the liver and bile passages[1] renders it desirable that similar cases should be placed on record. The patient in the present instance was a man of 64, who had always enjoyed good health until about two years ago, when he began to lose flesh and noticed increased frequency of micturition. In January, 1906, he had a severe attack of pain in the abdomen and right side simulating biliary colic, and a similar attack occurred in November of the same year. He had never suffered from jaundice or from any dyspeptic symptoms.

State on Examination.—When I saw him in January, 1907, he was complaining of severe abdominal pain and tenderness, the latter being specially localized opposite the tip of the tenth rib. His temperature showed remarkable variations throughout the illness, but there were no rigors and no jaundice, and vomiting, though it occurred occasionally, was never an urgent symptom. The liver showed some general enlargement, but no nodules could be distinguished, and no enlargement of the gall bladder could be made out. The urine contained a considerable quantity of sugar (26 grains per ounce). Careful examination of the abdomen failed to reveal any evidence of tumour growth, nor could any enlarged glands be discovered. The faeces were of a pale greyish-white colour, and on more than one occasion were of the pultaceous character typical of pancreatic disease.

The temperature chart which I append is strongly suggestive



of suppuration, and it required most careful and repeated examination to convince myself that none existed; the leucocyte count, which was only 5,700, confirming this conclusion.

Autopsy.—The patient died on February 20th from acute haematemesis, and I was fortunate enough to obtain a *post mortem* examination. This revealed cancer extending throughout the pancreas, involving the adjacent portions of the stomach, and with secondary growths in the liver, especially the right lobe. There were no gall stones, no cholecystitis, and no suppuration. There was a large mass of peritonitic adhesions between the diaphragm and the right lobe of the liver.

Remarks.—This case forms a good illustration of Dr. Russell's contention that rise of temperature simulating suppuration may take place in malignant disease of the liver in cases where there is neither suppuration nor cholelithiasis. The resemblance was rendered all the closer in this particular case by the frequent occurrence of early morning perspiration. That this rise of temperature is due to some form of toxaemia can scarcely be doubted. Possibly it is of intestinal origin, and due to the entrance into the circulation of toxins which the liver, rendered *hors de combat* by cancerous infiltration, is no longer able to antagonize.

W. H. Brazil,
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[1] British Medical Journal, 1907, vol. i, p. 311.

A CASE OF TWINS WITH HYDRAMNIOS OF ONE SAC.

C. L, a 3-para, was brought in from the country. She was six months pregnant, and was distended to the ensiform cartilage. She presented all the features of a large hydramnios, and on the second day after my seeing her the os began to dilate and the head of a child was felt distinctly without the intervention of a bag of membranes. As labour was very slow, when the os was well dilated I turned and delivered a dead female child; no liquor amnii came away, and the size of the uterus was not appreciably reduced. I then inserted my hand into the uterus and found an enormous bag of membranes quite intact, and with another child floating freely within it. Upon puncturing the membranes about 2 gallons of liquor amnii was evacuated, and I withdrew another dead female child. The uterus quickly contracted, and the single placenta was soon expressed.

The point of interest in the case was the absence of the fluid around the one child and its great abundance and entire limitation to the amniotic sac of the other.

Grahamstown, C.C. J. Bruce-Bays, M.D.Lond.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BRADFORD CHILDREN'S HOSPITAL.

CASE OF STRANGULATED INGUINAL HERNIA IN AN INFANT 29 DAYS OLD: OPERATION: RECOVERY.

(Reported by William H. Thompson, M.R.C.S., Honorary Surgeon.)

J. B, aged 29 days, was admitted on January 7th suffering from a swelling in the right side of the scrotum.

History.—Up to January 6th the child had been quite well, but during the night he began to vomit. The vomiting continued until the morning, and the mother noticed the swelling in the right side of the scrotum about noon. So far as she is aware there had been no swelling there before. She took the child to Dr. Kee, who diagnosed strangulated inguinal hernia, with faecal vomiting, and ordered its removal to hospital.

On Admission.—The child was quiet, but looked extremely ill. In the right side of the scrotum was a large, tense swelling, which extended up through the inguinal canal. The skin over the swelling was red. The swelling was irreducible. The abdomen was only slightly swollen and tympanitic, and rigidity was not marked.

Operation.—An hour after admission (7 p.m.) the child was operated upon. The usual incision was made over the tumour, and the sac exposed; on this being opened blood-stained serum escaped. A coil of small intestine, quite black in colour, was found tightly strangled at the neck of the sac. The constriction was divided, and the bowel pulled down for a short distance and examined. The hernia was then easily returned, the sac removed, the internal abdominal ring closed with sutures, and the operation completed as usual.

After-progress.—Recovery was uneventful, with the exception of slight retention of urine for the first day after operation. At the end of fifteen days the child was completely well and was discharged from the hospital.

Remarks.—I have thought the case worthy of record owing to the very early age of the patient and the extremely satisfactory result of the operation. I am indebted to the House-Surgeon (Dr. G. Young) for the notes of, and his careful attention to, the case.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

HONG KONG AND CHINA BRANCH.

Mr. Harston, M.B.Lond., in the Chair.

Hong Kong, Thursday, November 28th, 1907.

Cases and Specimens.—Cases were shown by Fleet Surgeon Chambers, R.N., and Dr. J. H. Sanders, and discussed. Specimens were shown by Drs. Stedman and Heanley. Dr. Heanley showed a round mass resembling a gall stone that had been passed by the rectum; on microscopical examination it proved to be carcinomatous.

The Promotion of Medical Science in China.—Dr. J. Herbert Sanders read a paper entitled, "How the Society may Aid Research and Promote the Advancement of the Science of Medicine in China." He said it had recently been his good fortune to visit the coast ports of Swatow and Amoy, also the large island of Formosa, and he had been struck by the immense quantity of clinical material that was passing through the hands of very able qualified men, many of whom were isolated and felt their isolation. If some means could be devised of bringing them in touch with them, it would help in every way. Hong Kong was the natural centre, from Pakhoi on the south to Foochow or Shanghai on the north. He wished to draw attention to a capital paper published at Shanghai, the *China Medical Journal*. The President, in his address this year, proposed that they should inaugurate a collective investigation, under the control of a small select committee, to report yearly as to the progress of their work, and tabulate the results. He raised such points as these: (1) Classification of the various forms of mosquito; (2) tabulation of the varieties of malaria and complications met with; (3) the various anaemias met with—are they cases of spleno-medullary leukaemia or other forms of leukaemia? (4) the large spleens and livers met with—are they due to the Leishman-Donovan body? Their origin—are they due to a trypanosome carried by some insect, as the trypanosome of sleeping sickness by the *Glossina palpalis*? They were still in absolute ignorance of the geographical distribution of disease in China, or nearly so. A grouping together of the medical men would enable them to find out the epidemic diseases of any locality. Was beri-beri confined to a few spots on the coast of China? The acute and continued fevers of the East were possibly caused by different germs, and until they were rightly differentiated and understood how could they apply the proper treatment? Kala-azar had been found by Aird and Thompson of Hankow; they expressed an opinion that it was distributed all over Central and Southern China. Dr. Beell of Hong Kong had searched for it in several cases here and not found any. This might be cleared up. Malta fever, he believed, had been reported at Hankow and Amoy; it would be interesting to know if the parasite had been demonstrated in the blood. Then there were the intestinal parasites; what a field for investigation they offered! What conclusions had they arrived at as to their toxicity? He thought the Research Committee of the China Medical Mission Association were working on this subject. He heard from Shanghai that there was no Branch of the British Medical Association there. Their Branch was therefore all the more important, and it behoved them to make it the centre for China. Their membership was scattered about, and in conjunction with existing organizations they could make it of some real use. There was scattered through China a large number of very able medical men, some of whom were keen on their work. In conjunction with the *China Medical Journal* they had a unique opportunity of learning the distribution, etiology, and treatment of the diseases which were carrying off in epidemics thousands every year. They had it in their power to fight these diseases by effective combination of their scientific knowledge, and by observation to learn the distribution and rational treatment. At Tainan in South Formosa he stayed with Dr. J. L. Maxwell, who was in charge of a large hospital of over 150 beds, with an out-patient department, out-patient visits, and mission work, as well as administrative work and finance. He was altogether overworked, alone, isolated, yet he succeeded in making time to do laboratory work, and to train Chinese boys to cut sections, stain slides, test specimens, etc., with much success. This was not an isolated instance by any means of the really good and useful work that was being done in all parts. Should they not, then, rise to their opportunity, and get in touch with these men? It would help them, and they would learn from their vast experience the best form of treatment for the special diseases found in their practice, for he thought that a doctor should be a student to the end of his days. Dr. Maxwell, in an able article in the *China Medical Journal*, said:

> I noticed a number of cases of anaemia usually associated with enlargement of the spleen, which I put down to chronic malarial cachexia: these were little if at all benefited by treatment. Later I began to get a more scientific grasp of these cases. To my surprise, on examining the stools, I discovered the presence of *Ankylostomum* eggs, and proved that in the more extreme cases probably over 75 per cent. are directly due to the presence of these blood-sucking worms, the enlarged spleens being but a concurrent complaint, which a proper course of treatment would have temporarily relieved or permanently cured.

Was it not a shame that no work had been done on the disease of splenomegaly and its causes, at least worth anything, when one considers that it was carrying off thousands, if not by itself directly, at least by the diseases it carried in its train, such as anaemia, ascites, cachexia, anasarca, etc., all of which were lacking a proper explanation? It was the duty of the doctor to keep himself abreast of the times by the study of books, to devote himself fully to every case of illness that was brought before him, and to apply to all doubtful cases the full extent of the microscope and bacteriological tests which were in his power. He wondered how often the microscope was applied to all cases of intractable diarrhoea that came under their notice; would it not frequently reveal to them the true cause of the trouble? How often was a liver abscess treated first as malaria? In liver abscess one would find a polymorphonuclear leucocytosis, while malaria would give leucopenia with a relative increase of lymphocytes. Scientific work was a part of their daily occupation, and if they all tried to help in the elucidation of some of these mysteries that still surrounded them by reporting the diseases they came across, especially rare ones, and the lines of treatment they had found to give good results, they would then be doing service and helping forward the cause of medicine in China. With a view to promoting discussion, he made a few suggestions: (1) Might it not be advisable to fix certain dates for their meetings, print a card with the dates for the ensuing session—say, once a month papers and discussion, once a month meet at the various hospitals for clinical cases? (2) Appoint a small committee to select a few good books to form the nucleus of a reference library. (3) Scientific periodicals might be taken up and passed round to those who applied for them, and after placed on the table. (4) It might be advisable to secure a room in a central position for their books and papers and meetings. It should prove of great use to those medical men who were daily passing through Hong Kong and to the surgeons on the ships who were waiting in port. (5) He did not think it would be advisable to start anything in the way of a medical paper, but they might get in touch with the editors of the *China Medical Journal*, Shanghai. Their idea of devoting a part of their paper to extracts from current medical literature was an excellent one for busy men. (6) To get in touch with the members of their Branch scattered throughout China and help them by collecting and distributing information about the diseases they were continually in contact with, and to aid them in any way possible.—The President, Drs. Stedman, Gilmore, Clarke, and others took part in a discussion, the meeting referring the points raised to the local Council, that, if possible, some of the suggestions might be carried out.

ULSTER BRANCH.

Dr. Warnock, President, in the Chair.

Belfast, Thursday, January 23rd, 1908.

Clinical Meeting.

Cases.—The following were shown:—Mr. J. A. Craig: A case of cerebral tumour. Dr. Darling (Lurgan): Three nerve cases for diagnosis. Mr. Kirk: (1) A patient operated upon for pressure paraplegia due to spinal

caries; (2) a tumour successfully removed from the frontal lobe. Mr. A. B. MITCHELL: A case of ataxia following acute febrile disorder in a child. Drs. MCLORINAN and CECIL SHAW: A case of supposed cerebral tumour. Dr. ST. GEORGE (Lisburn): A case of acanthosis nigricans.

Splenomegalic Polycythaemia.—Dr. W. B. MCQUITTY showed a case:

A man, aged 46 watchman by occupation and formerly a policeman, came to the Royal Victoria Hospital, Belfast, last July, complaining of numbness in the thumb, index and middle fingers of the left hand, with lividity of the affected parts; also of weakness, loss of flesh, and of a swelling in the left side of the abdomen. *Family History:* Excellent. *Personal History:* Always a healthy man prior to onset of present illness. States that he was a moderate drinker, but this is probably an understatement. *Present Illness:* Began in June, 1905, with a pain in the left side below the ribs; it was a severe pain, which was increased by a deep breath, and also made worse by walking or by lying on the left side. At the seat of pain a lump (=spleen) formed, about the size of a hen's egg, and was tender to the touch. He then came into hospital, where he remained a fortnight. Three weeks later he came to the out-patient department on July 22nd, 1905, where Dr. McQuitty saw him and made the following note: "*Enlarged spleen, plethora, albuminuria.*—Patient complains of pain in left lumbar region shifting up to the hypochondrium. Six weeks' duration. Was in this hospital fourteen days and left three weeks ago. Has lost flesh and strength. Was in the habit of drinking three or four half-glasses of whisky in the day until two months ago. Previous health good. On examination, pulse 108—above average tension—temperature 98°, face very red and covered with dilated capillaries. Apex beat fifth interspace—nipple line—no murmurs. Hard swelling (=spleen) projects 4 in. below left costal margin: it is easily seen as it pushes out the abdominal wall. Weight, 13 st. 8 lb. Urine, 1018, albumen present (distinct ring with nitric acid). No sugar." I regarded the case as splenomegalic polycythaemia, and arranged for him to come back to have a blood count made, but he did not return until July, 1907, as above stated. His further history, after his first attendance in the out-patient department, was that he remained fairly well until three weeks before the date of second attendance (namely, July 22nd, 1907). Then he noticed a numbness in the thumb, and shortly afterwards in the index and middle fingers of the left hand. In the course of a fortnight the numb feeling extended into the palm. Along with the numbness, and corresponding exactly to its distribution, the affected parts became markedly livid. He complained also a good deal of flatulence and occasional vertigo, without noises in the ears or sickness. Sometimes there is frontal headache, but not often: occasionally there is pain between the shoulders. A year ago he suffered from breathlessness on exertion, but that passed off seven or eight months ago and has not returned. Appetite is good, but notwithstanding that he is losing flesh and strength. He states he has been a high colour since the age of 25. *Present condition:* Pulse 108, high tension, arteries very thick. Temperature 98·6°. Weight 12 st. 3½ lb. The whole of the face is injected, forehead, nose, cheeks, ears, chin; also the neck. Minute venules can be seen everywhere on the face and neck. The colour is a livid red. Both hands are a bluish-red, especially the index and middle fingers of the left hand and also the palm. Marked tortuosity and thickening of left radial artery. Visible pulsation in the large arteries. The veins of the neck are not visible in the erect posture. The penis and scrotum are cyanotic. *Heart:* Apex beat fifth left interspace—nipple line—not unduly forcible. No increase of cardiac dullness in any other direction. No murmurs. Aortic second sound accentuated. *Lungs:* Nil. *Abdomen:* Liver comes down 4 in. below costal margin, smooth, not tender. Spleen projects against abdominal wall, comes down 3 in. below costal margin, is quite hard to the touch and not tender. *Urine:* Acid, specific gravity 1008; albumen, 0·3 per cent.; sugar, nil. *Nervous System:* Knee-jerks absent except on reinforcement, when they are obtained with difficulty. Pupils equal and react normally to light and accommodation. Sensation normal everywhere, except on index finger, middle finger, and palm of left hand, where tactility is diminished but not abolished; optic fundi normal.

Blood count (by Dr. Warnock, House Physician, Royal Victoria Hospital, Belfast).

Red cells	9,400,000
White cells	12,100
Haemoglobin	162 per cent.
∴ Colour index	0.91

Differential Count.

	Per cent.
Polymorphonuclears	80
Eosinophiles	6
Large lymphocytes	3
Small ,, ...	9
Transitional cells	2

Subsequent progress: January 21st, 1908.—Four months ago he had an attack of vomiting and diarrhoea, the vomit having been of a claret colour and the evacuations like "rotten liver," evidently blood. He felt weak for a few days afterwards, but the pain between the shoulders, the headache, and giddiness disappeared, and have not since returned. He states that he vomited 2 or 3 gallons of fluid, and passed another gallon through the bowels, the whole attack only lasting twenty-four hours. *On examination:* Pulse, 96, high tension; weight, 12st. 12lb. Much less cyanotic; tongue and mucous membranes very red; liver and spleen unaltered. Urine—Acid, specific gravity, 1008; albumen, 0.5 per cent. Heart—Slight systolic murmur at apex; aortic second sound accentuated. *Treatment:* Pot. citrates gr. xx four times a day was given for ten weeks, and during its administration the numbness and lividity of left hand gradually disappeared, and patient felt his symptoms easier. He has had no drugs since the attack of vomiting and diarrhoea.

Dr. MCQUITTY pointed out that this was a typical example of splenomegalic polycythaemia, inasmuch as it presented the characteristic triad of (1) increased number of red corpuscles; (2) enlargement of spleen; (3) cyanosis. Two points of special interest were that the first symptom of which the patient complained was severe pain in the region of the spleen, which on examination was hard and tender; and, secondly, that a large gastro intestinal haemorrhage four months ago gave complete relief to the headache, giddiness, and interscapular pain.

Address by Sir Victor Horsley.—After the clinical meeting an address was delivered by Sir Victor Horsley, F.R.S., on "The Early Diagnosis of Intracranial Conditions which should be Treated Surgically." He dealt chiefly with disturbances of tactile sensation of much smaller degree than those generally recognized, and pointed out the method of discovering such disturbances and their significance. He illustrated his remarks with photographs and diagrams on the lantern screen.

Vote of Thanks.—At the close of the address a cordial vote of thanks was moved by Professor SINCLAIR, seconded by Dr. ST. GEORGE (Lisburn), and passed by acclamation.

GLOUCESTERSHIRE BRANCH.

AT a general meeting held at the Infirmary, Gloucester, on January 16th, Dr. ANCRUM, President, in the chair, and eighteen members being present, Dr. CARTER showed a specimen of a congenital heart, with pulmonary stenosis and defective septum. The specimen was discussed by the PRESIDENT, Dr. O. CLARK, and Mr. HOWELL. Mr. C. L. COODE (Stroud) read a paper on a case of hydronephrosis in which the right hydronephrotic kidney was opened and drained, during which time urine escaped occasionally only through the drainage tube. An abscess afterwards developed in the left loin, and was opened, situated behind the peritoneal cavity. After death an abdominal *post-mortem* examination showed absence of left kidney, but a large amount of secreting substance in right. The paper was discussed by the PRESIDENT, Mr. ELLIS, Dr. CARTER, Mr. DAVIES, Mr. HOWELL, and Mr. BRAINE-HARTNELL. Mr. E. C. CRIPPS (Cirencester) followed with "Some Observations on the Administration of Anaesthetics," in which he remarked that a routine method of giving anaesthetics to every case should be avoided, and the choice of the anaesthetic made after careful consideration of the case. He advocated ether administration by the open method, recommending Carter Braine's inhaler, which could also be used for chloroform, ethyl-chloride, or C.E. mixture. A mixture of chloroform and ether was better in his opinion than A.C.E. In children the conjunctival reflex was no guide to the depth of anaesthesia. The important signs to watch during anaesthesia were: (1) Respiration; (2) colour of the face. The subject was discussed by the PRESIDENT and Dr. ST. JOHNSTON, Dr. COLLINS, Mr. COODE and Mr. HOWELL.

MEDICAL ORGANIZATION.—The students of the University of Pennsylvania Medical School have, we learn from the *Boston Medical and Surgical Journal*, formed an organization, the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modelled. The various student societies take the place of the State organizations, and elect members to a House of Delegates which transacts all the business of the Association. An annual meeting is held at which papers are read by chosen members for the purpose of encouraging original research and a scientific spirit. The organization, which already has over 250 members, is to be called the Undergraduate Medical Association of the University of Pennsylvania.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

JAMES KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, January 27th, 1908.

THE USE OF CHEMICALS IN ASEPTIC SURGERY.

MR. C. B. LOCKWOOD read a paper on the use of chemicals in aseptic surgery, which is printed at p. 305.

NERVOUS PHENOMENA IN PNEUMONIA.

Dr. SAMUEL WEST read a paper on nervous phenomena in pneumonia. He said that hardly any case of pneumonia ran its course without developing nervous symptoms of some kind. For the most part they arose during the acute or active stage of the disease, and passed off rapidly when the acute stage was passed. Of those that persisted, some at any rate had little more than an accidental association with pneumonia, and others stood in rather a distant relation to it. Rigor was due to the sudden upset of physiological equilibrium owing to the acute onset of the disease, and was single and severe. If the onset were less abrupt, shivering might be repeated. In children, when replaced by fits and followed by unconsciousness, it might suggest meningitis. Insomnia might be extreme, and was likely to be followed by prostration, and opiates might be necessary. Hiccough was a rare but grave symptom. Delirium, if active as in delirium tremens, might end in great exhaustion and death. It was most marked in children and in drinkers, and in apex pneumonia. If long-continued it was of bad prognosis. Wandering at night might set in after the crisis, and was then an indication for stimulants. The knee-jerk, normal for the first day or two, disappeared on the third or fourth day, remained absent till the ninth, and returned to the normal at the end of the second week. It stood in no relation to the crisis, disappeared early in bad cases, and late in mild ones. Hughlings Jackson first described the absence of knee-jerk in pneumonia in 1894. Subsultus tendinum and muscular tremors occurred only in grave asthenic cases. Acute tympanites was a neuromuscular paralysis and of fatal omen. General cutaneous hyperaesthesia was rare, but not so rare locally. Spinal irritation sometimes appeared as tremors or spasms produced by movement. Stiffness of the back and neck, retraction of the head, and arching of the back might suggest cerebro-spinal meningitis. The symptoms were only present in the early hours of the attack, and disappeared on the second day or so. Transient paralyses of limbs, face, aphasia, and eye disturbances might occur, but were very rare. Meningitis, which might start during the acute stage, might last after it. It was often found *post mortem* when not suspected during life. Epidemic cerebro-spinal meningitis was frequently complicated with pneumonia, and the spinal symptoms of pneumonia might simulate it, but the two diseases were distinct. Hemiplegia, except in the transient cases referred to, was due to thrombosis or embolism. Infective endocarditis might develop, as in other specific fevers. Mental defects, mania, melancholia, etc., might follow pneumonia. As a rule they were recovered from in time. Peripheral neuritis might follow, as in cases of diphtheria, but, like them, ended in recovery. Nervous phenomena played a more important part in pneumonia than was usually assigned to them.

Dr. KINGSTON FOWLER said that not only were there differences in the degree of virulence of the pneumococcus, but there were clinical varieties of pneumonia that had to be recognized. He related a case in which hiccough lasted five days, and was successfully treated with hypodermic injections of morphine. The more experience he had the less he ordered alcohol in pneumonia.

Dr. DE HAVILLAND HALL observed that head symptoms were commonest in cases of apical pneumonia. His teaching was that before diagnosing meningitis in children pneumonia must be excluded. He had used chloretone to relieve hiccough. Alcohol, if administered in pneumonia, should be kept for the period of the crisis.

Dr. E. CAUTLEY said his experience was that in children rigors were replaced most commonly by vomiting. Alcohol should be exhibited only in asthenic cases.

Dr. F. J. POYNTON considered it very exceptional for convulsions to replace rigors in children. He discussed two cases of pneumonia complicated with measles, in which permanent right hemiplegia resulted.

Dr. WEST, in the course of his reply, agreed that alcohol was only exceptionally required in pneumonia. He regarded the hemiplegia mentioned by Dr. Poynton to be due to infective arteritis in the vessels of the brain.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

SETON PRINGLE, M.B., F.R.C.S.I., in the Chair.

Friday, January 17th, 1908.

GRAFTING OF FIBULA TO TIBIA.

MR. R. ATKINSON STONEY read the notes of a case in which he had grafted the fibula to the tibia.

A boy, aged 7, was admitted to the Royal City of Dublin Hospital, November 25th, 1905, suffering from acute osteomyelitis of tibia. He had been ill for ten days, and a huge abscess had formed involving the whole of the leg from knee to ankle. The abscess was opened immediately, and the diaphysis of the tibia was found completely stripped of its periosteum. The necrosed tibia was removed by two operations in January and April. By April, 1906, the sinuses had closed, and an involucrum had formed in the lower and upper parts of the leg, but there was a gap of about 1½ in. between the two ends, due to destruction of the periosteum, as the result of the virulence of the original infection. An operation was performed, in which the neck of the fibula was cut across and the upper end of the lower fragment implanted into the upper end of the involucrum of the tibia. Firm union had now occurred, and the boy was able to run about without the aid of a stick, though there was considerable shortening, as the result of over a year's loss of growth while the illness lasted, and the ends of the tibia were not in contact.

The operation was a modification of one described by Hahn in 1885, and was suggested by a case reported by Professor E. E. Goldmann of Freiburg, in the *Lancet* of January 13th, 1906.

Remarks were made by the CHAIRMAN and Mr. TAYLOR; and Mr. STONEY, in reply to Dr. STOKES, said there was no tendency of the ankle to turn outwards. If anything, there might be a tendency to turn inwards, but such was hardly likely in the present case.

POST-ANAESTHETIC VOMITING.

Dr. GUNN, in a paper on this subject, first drew attention to the fact that, as the anaesthetists had not the after-treatment of operative cases, they only to a slight extent realized what a troublesome complaint post-operative vomiting might be. He believed it was the duty of the surgeons to use every means in their power to prevent this vomiting. Dr. Gunn himself had been using a method, suggested by MacArthur, of giving the patient frequent drinks of pure cold water right up to the administration of the anaesthetic, and this method had been entirely successful in 9 cases, partially successful in 19 cases, and had had no result in 12 cases out of the 40 patients who had been treated in this way.

The CHAIRMAN said he had, some years ago, carried out a series of observations on the action of the kidneys during anaesthesia. He found that the amount of nitrogenous material and water excreted during the anaesthesia was very small; but as soon as the patient came out of the anaesthetic the kidneys began to act, and there was a hyper-excretion of water and an increased excretion of nitrogenous material for some hours. It was possible that in this lay the explanation of the pain across the loin. He had noticed when administering anaesthetics that the less the patient was cyanosed during the administration the less vomiting there was afterwards, so that it was important to let the patient breathe a certain amount of fresh air.

Dr. KIRKPATRICK thought the preparation of a patient had a good deal to do with the condition of the patient afterwards, provided the preparation was satisfactory. He did not look on abstinence from food as of such importance as thorough purgation some time before the anaesthetic was administered. Various writers pointed out that the patients who usually gave most trouble with post-operative vomiting were those who suffered from more or less chronic constipation. He did not agree that the nature of the drug used had no very great effect on the post-operative condition. Occasionally after chloroform

anaesthesia vomiting became so serious sometimes as to threaten the patient's life; this was exceedingly rare after ether. He was inclined to believe that the *method* of administering the anaesthetic—the nature of the anaesthesia obtained—was of far more importance than any other factor. The Chairman had pointed out the importance of avoiding cyanosis and of giving fresh air; when patients were treated by that method they soon recovered, and vomiting was exceedingly uncommon. He would add that anaesthetists had been in the habit of maintaining a depth of anaesthesia which was quite unnecessary in most operations. He had carried out experiments, as the Chairman had, which showed a great diminution in the function of the kidneys, and he could not but think that in a patient who was profoundly anaesthetized there must result a very profound toxaemia. The activity of the renal epithelium in certain animals was not at all as much diminished as it was in the human being during anaesthesia, and it was very probable that that inactivity was associated with a fall in blood pressure.

Mr. W. I. de Courcy Wheeler had tried the open method of administering ether, and had found it very simple and the anaesthesia perfect. The patients never became cyanosed, but he had not had enough experience of the method to say whether the vomiting was less frequent. It was particularly suitable for old or fragile persons. Alcoholics, who were difficult to get under ether, vomited less than other patients; if the anaesthesia was begun with chloroform and continued with ether the vomiting was far worse. Local anaesthesia was, he thought, the ideal method. It was perfectly safe to give if the proper drug was used.

Dr. Fugin Meldon found it useful to keep patients under the anaesthetic until they were back in bed. In that way the vomiting was not started; they went off into a sleep, and got rid of a good deal of the anaesthetic.

Sir Thomas Myles thought that very little was known as to the cause of post-anaesthetic vomiting. He had known a lady, prior to the introduction of aseptic technique, to vomit incessantly for twelve days. Every drug, except one, that they could think of was administered; finally she was given ½ grain of morphine hypodermically, and the vomiting ceased. He himself had been under every anaesthetic known. He had always insisted on having a cup of tea before the operation, and he was well purged out. He had never vomited or had a fit of sickness. He was inclined to think that the sickness was due to something inherent in the patient. In the majority of cases he thought they would be found to have some kidney trouble. He thought the experience from which Mr. Gunn made his deductions was too limited. If a careful analysis of the 20,000 cases administered annually in Dublin were made, as regards the urine and the vomiting, then they might be justified in making deductions; but merely to say that in 20 per cent. of cases albumen was present was not sufficient evidence on which to base a generalization. If a patient was kept on a table in a cold room they could not help giving them a renal chill.

Mr. Taylor felt that cyanosis had something to do with the vomiting. In most cases of abdominal sections which he had done it had been his habit to give morphine either immediately before the anaesthetic or before leaving the table; less anaesthetic was then required, and there was less vomiting. He thought the vomiting was less the result of swallowing the anaesthetic than of nervousness.

Exophthalmic Goître.

Sir Thomas Myles read a paper on a case of exophthalmic goître which he believed to have been cured by a diet of milk obtained from a thyroidectomized goat. The patient was a married lady, aged 25, and the symptoms had been developing for more than a year. All the well-marked features of the disease were present, and there had been a progressive loss of strength and colour. The goats were operated on by Professor Mettam, of the Veterinary College, and when, two days later, the little wound in the neck had healed, the goats were sent to the patient, who resided in the country, and the treatment was begun and steadily persisted in. At the end of a month the improvement was very marked, and at the present moment the enlargement of the thyroid was barely perceptible and the exophthalmos had disappeared. For the last few months the milk diet had been supplemented by the use of Merck's tabloids, and in the administration of small doses of iron and arsenic.

Mr. Taylor said the method had been tried on the Continent some years ago, and a powder made from the milk of thyroidectomized goats could be bought, but the professors on the Continent had not spoken much in its favour.

Mr. W. I. de Courcy Wheeler said the main danger was that, even if the symptoms apparently abated, the patient might at any time drop dead. He had seen astonishingly good results of operative treatment abroad, but he thought the operation must be an extremely difficult and anxious one to perform.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

R. Marcus Gunn, F.R.C.S., President, in the Chair.

Thursday, January 30th, 1908.

Microphthalmia, resembling Glioma, with Lenticonus and Hypertrophy of the Ciliary Body.

Mr. S. Mayou read a paper on this subject. He said the case belonged to the class of phthisis bulbi. Some of those cases had been of inflammatory origin, but this, and possibly some of the other cases, were attributable to the imperfect development of the mesoblast, and it entering the ocular cleft to form the vitreous. The child was 8 months old, and was admitted under Mr. Hancock. The mother had noticed that the left eye was very small from birth, but the child had no other deformities. There were no signs or history pointing to congenital syphilis. The right eye was normal in size, and there was nothing abnormal in the fundus. In the other eye there was a well-marked pupillary membrane. Behind the lens, which was clear, was a yellowish-white reflex, with vessels on it, similar to that seen in glioma and pseudo-glioma. As diagnosis was doubtful enucleation was performed, and the child made a good recovery. The eye was hardened in formol, and sections cut antero-posteriorly. The optic nerve was removed and cut in transverse sections. The globe measured 15 mm. antero-posteriorly, 10 mm. vertically, and 10 mm. horizontally. The sclera showed no change. The angles of the anterior chamber were imperfectly formed, owing to incomplete separation of the iris from the back of the cornea. The ciliary body was free from signs of inflammation. Behind, and lying on the pars plana, was a large mass of pigmented and unpigmented cells derived from the ciliary body. Towards the outer part was an attempt at alveolar formation. The retina was detached; it did not stop at the ora serrata, but passed close behind the ciliary process, where it was continuous with the anterior layers of the epithelial cells and the mass mentioned. The lens was thickened and thrown into folds, and consisted principally of neuroglial tissue, but possessed no regular structure. The retinal detachment was of earlier date than the haemorrhage. The choroid presented a coloboma below, but the blood vessels were not thickened. The lens showed a condition of posterior lenticonus. The central artery was well developed, and showed no changes in its walls. Generally in such cases the distortion of the posterior part of the lens was associated with a persistent hyaloid artery, or a gap in the posterior part of the lens capsule, but neither of those conditions was present in this case. There was a hypertrophy of pigmented and non-pigmented epithelial cells, the reason of which it was difficult to understand, unless it was due to nutritional disturbance in the line of separation of the two layers in the primary optic vesicle.

Optic Neuritis in Cerebral Tumours.

Mr. L. Paton read a paper based on the records of 252 consecutive cases seen at the National Hospital, Queen Square. In 202 of these the localization of the intracranial tumour was definite, and 148 were confirmed by operation or *post mortem*. Of the 202 cases, 38, or 18.8 per cent., had no neuritis, 12 had only very slight neuritis, the edges being at no period completely blurred, 27 were in a condition of post-neurotic atrophy when first seen, and the remaining 125 had marked neuritis. Mr. Paton pointed out that the great majority of cases without neuritis occurred in subcortical and pontine tumours. The percentage of cases

with no neuritis in tumours of those two areas was respectively 38 and 43·5. He pointed out, further, that when subcortical tumours developed optic neuritis it almost invariably indicated that the growth had involved either the grey matter of the cortex or the grey matter of the base, and that when pontine tumours developed optic neuritis it practically, without exception, indicated very definite involvement of the cerebellum. He showed that in tumours of the cerebral cortex the intensity of the neuritis seemed to vary inversely with the distance of the tumour from the anterior pole of the middle fossa. He adduced evidence to show that the nature of the growth had little if any influence on the development of optic neuritis except in so far as the nature of the growth might influence its position. He stated that the figures showed that very little reliance could be placed on differences in the intensity of the neuritis as indicating the side of the tumour, and that in the cases of frontal and of cerebellar tumour, neuritis was just as frequently most marked in the optic disc of the opposite eye as it was in the eye on the side of the tumour. The neuritis commenced more frequently in the eye on the side of the tumour than in the opposite eye, but even here the preponderance—23 to 13—was not sufficiently marked to make the sign one of much value for localizing purposes. He described in detail the development of the macular changes seen in intense cases of tumour neuritis, and showed that these changes were most probably produced by an overflow of oedematous fluid from the much swollen disc into the nerve fibre layer, and that the presence of very well-marked macular fans was compatible with the retention of perfectly good vision. The causation of the temporary attacks of blindness, lasting from a few seconds to half an hour, was discussed, and it was shown that these were probably not associated with optic neuritis, as they had been observed three times in cases when no optic neuritis developed, and in other cases these fleeting amblyopias had occurred before ophthalmoscopic evidences of disc change were present. It was suggested that these attacks were due to sudden rises in intraventricular tension, causing a bulging of the thin floor of the third ventricle, and to direct pressure on the chiasma. The attacks were invariably accompanied by increased headache and giddiness. He pointed out that there was no evidence in favour of optic neuritis in these cases being due to an inflammation descending from the basal meninges, nor was there evidence in favour of its being due to pressure of fluid in the vaginal space. The clinical evidence against it being a descending inflammation in the nerve trunks was even stronger, nor was there any more evidence in favour of the neuritis being produced locally by the action of toxins, or of its being a vasomotor phenomenon. He regarded our knowledge as, as yet, insufficient to justify any definite theory as to the causation of optic neuritis, but a general review of the subject in its clinical aspects inclined him to the view that in so-called optic neuritis there was simply a manifestation locally of a general oedema of the cerebral tissues, due to the irritation set up by the tumour as an actively growing foreign body.

PAPERS.

The following two papers by Mr. SIMEON SNELL were, in his absence, taken as read:

Carcinoma of Orbit originating in a Meibomian Gland.—The case occurred in a woman aged 63. In 1904 another surgeon had removed a lump from the right upper eyelid. In July, 1905, there had been a recurrence at the site of that scar reaching back to the orbit, and about the size of a walnut. This was removed with the portion of eyelid, but in June, 1906, there was another recurrence, and then the eyeball was removed and the whole orbit cleared out, and chloride of zinc paste applied. Still further recurrence had taken place, and the orbit was filled with a large ulcerated growth, and the preauricular and cervical glands were enlarged. Dr. A. E. Barnes reported that it was a spheroidal-celled carcinoma, and was of opinion that it had probably originated in a Meibomian gland. Mr. Treacher Collins corroborated this.

The second paper was on *Coloboma of Iris* in each eye, occurring in five generations. Mr. H. was the first person seen, and he had a large coloboma in each eye, down and out. The defect was known to have existed in his grandmother, in her sister, and in his mother. Mr. H. had 6 children, 3 of whom were affected, and of these two had children—one 3 children, of which 2 were affected, and one 1 child affected. Mr. H. was the only child of his father, but his mother had, by a second husband, 5 children, of which 3 were affected. One of these had 3 children, 2 of whom were affected. The other had 1 child, which was not affected. In all, of 41 persons 12 are affected—5 males, 7 females. In the great-great-grandchildren the defect was complete aniridia.

SPECIMENS.

The following card specimens were shown:—Mr. E. E. HENDERSON: Sections from a case of sarcoma developing under calcareous plate. Mr. P. C. BARDSLEY: A new form of scotometer. Mr. S. STEPHENSON: A case of buphthalmia apparently cured by the performance of iridectomy. Dr. L. GUTHRIE and Mr. S. MAYOU: Right hemiplegia with obstruction (? thrombosis) of the left common carotid and central artery of the retina, with perception of light in the eye. Mr. G. H. GOLDSMITH: Optic neuritis. Mr. J. S. HORSFORD: Essential shrinking of the conjunctiva. Mr. C. WRAY: Sympathetic iridocyclitis.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

SYDNEY STEPHENSON, M.B., F.R.C.S.Ed., in the Chair.

Friday, January 17th, 1908.

CONGENITAL HYPERTROPHIC STENOSIS OF PYLORUS.

DR. GEORGE CARPENTER read notes of a case of congenital hypertrophic stenosis of the pylorus which he had treated in conjunction with Dr. D. J. Munro of Brixton, and which had recovered under medical treatment; dieting, lavage, and drugs being the methods employed. The infant was 2 months old. It was breast-fed and in good health for the first week, but the bottle being substituted it gradually lost ground, and, as the parents said, "in spite of being fed on a variety of foods it was sick after everything." At the time Dr. Carpenter saw it the infant vomited accumulated feeds; it was constipated and was passing scanty and concentrated urine. It was wasted and so weak and ill from starvation that it was thought that it would not live through the night. The diagnosis was confirmed by the detection of the typical pyloric tumour, as large as an almond and as hard as gristle. There was associated gastric peristalsis in the direction of the tumour. Owing to the infant's condition operative treatment was considered out of the question. It was ordered 2 oz. feeds of whey every two hours, drop doses of laudanum every four hours, and gastric lavage. This was on May 22nd, and on the following day the opium was reduced by half because of somnolence, and was finally discontinued on June 6th. During the treatment an attack of oedema associated with albuminuria, difficulty of breathing, and also swallowing came on. The child coughed at his feeds, had to be propped up with pillows, and often had to be held up by his feet as he choked and went black in the face. The infant weighed 7 lb. at birth, 5 lb. 13 oz. on May 22nd, and on June 14th 5 lb. 7 oz. On June 7th "humanoid" milk was given (2 oz. feeds), and on the 14th milk 1 part and water 2 parts (2 to 3 oz. feeds) was substituted. Lavage was discontinued on June 20th. During the first week of milk and water diet it lost 5½ oz. in weight, but after that it commenced to forge ahead, and gained on an average an ounce a day. It vomited for the last time on June 28th. Day by day it took increasing quantities of milk and water, rising from 18 oz. daily to 30 oz. on July 6th. While on whey the bowels were open once daily and the motions were green, but after it had been on milk and water for a week the stools became quite natural and numbered two to four in the twenty-four hours. At 7½ months old, the middle of October, he weighed over 16 lb. and was a jolly, normal baby, and he is still (January, 1908) doing well. Dr. Carpenter laid great stress upon the importance of discovering the pyloric tumour, as without detecting it it was impossible to be sure that the case was an example of hypertrophic stenosis. The pyloric spasm and infantile dyspepsias produced symptoms which could not be distinguished from the state in question. Vomiting of accumulated feeds, projectile vomiting, gastric peristalsis, constipation, and scanty urine could all be present and no tumour to account for them. It was necessary to detect the tumour to prevent the mistake of operating

upon cases where no tumour existed. He claimed that hypertrophic stenosis of the pylorus was a congenital affection—an abnormality of development and not a secondary muscular affection the result of spasm as claimed by Heubner and others. He said that in the cases he had examined microscopically, not only was the pylorus muscle hypertrophied but the stomach muscle also, usually about the pyloric third or fourth. Sometimes all the stomach muscle was hypertrophied, but in that case also the brunt of the enlargement fell on its pyloric end. The musculature of the pylorus was an exaggerated condition of the normal in which the circular fibres greatly preponderated. He thought that the occlusion of the pylorus might be due to reflex spasm or, as he would suggest in some cases, to oedema or congestion of the mucous membrane analogous to the congestive urethral stricture of the Saturday night tippler. But whatever might be the explanation for the obstruction of the pylorus channel, he considered that dyspepsia was at the root of the illness; cure the dyspepsia—or, better still, avoid the dyspepsia—and the pyloric tumour could be very well left alone. He thought the secret of successful treatment lay, as in all infantile dyspepsias, in the discovery of what form of cow's milk—in the absence of suitable suckling—was least obnoxious to the infant's stomach. Feeds should be small, given regularly, and above all things the milk should be clean and fresh. In addition to this, gastric lavage was a well-tried and efficient remedy. Antispasmodic drugs could be used, but they did not appear to do much good. He thought that even the most hopeless-looking cases should not be abandoned by the physician, but should be submitted to dietetic treatment and to those drug remedies which had proved beneficial in dyspepsia. As the result of medical treatment he thought that in the future there would be more medical successes and fewer surgical failures. He thought that if the surgeon were called in, it should be late and not early. What the remote future had in store for cases cured by the physician time would tell; but Seefisch had reported 3 cases that had to be operated upon before they were 12 years old, so that it was possible that the visit to the surgeon would be merely postponed. If that were so, it was, then, even better for the child, as the mortality of the operation would be greatly reduced.

PATHOLOGY OF CONGENITAL HYPERTROPHY OF PYLORUS IN RELATION TO TREATMENT.

Dr. EDMUND CAUTLEY read a paper on this subject. Accepting the view that there was such an affection as pyloric spasm, and that the action of the pylorus was that of the closed door which only opened in response to duodenal stimuli, he argued that there was no evidence that spasm could cause hypertrophy. Almost all physicians had found antispasmodic drugs of no value in treating pyloric hypertrophy, a remarkable fact if the symptoms were due to spasm grafted on or causing hypertrophy. Moreover, spasm might occur at any age, and yet these cases of hypertrophy were peculiar to the first few months of life, and there was no evidence of spasm at a later stage causing hypertrophy. Recovery from pyloric spasm under medical treatment, in cases mistaken for true hypertrophy, had led to an unduly favourable estimate of the value of medical treatment in true hypertrophy. The latter affection varied from a degree of hyperplasia which was fatal unless treated surgically, down to a slight hyperplasia which was compatible with life if no secondary effects occurred. These effects, namely, dilatation of the stomach, gastric catarrh, and occasionally acute oedema of the pyloric mucosa, were due to contraction of the muscle. In mild cases the degree of contraction might prevent sufficient nutritive food passing through the pylorus, and yet not set up the secondary symptoms. Three of his cases had been of this type, and under medical treatment had succumbed to marasmus, although food was present in the intestines after death. In was these cases in particular that made one critical of the assumed value of diet and lavage. Drugs he had found useless. A diet of whey or albumen water, carefully regulated, would suit such cases for a time, but as soon as the strength of the food was increased the secondary symptoms arose. On the assumption that the condition was induced by hyperchlorhydria, cases had been treated by undiluted cow's milk. Such a food had proved useless in his hands, and he suspected that the successful cases were due to pyloric spasm. Recent observations by Miller and Willcox supported the view that there was no excess of acid in these cases, and all clinical and pathological evidence was in favour of the weak nutritive fluid rather than undiluted milk. Lavage would be useful in hyperchlorhydria and pyloric spasm, but could hardly be expected to be of value in cases of mild hypertrophy without secondary symptoms. It seemed unnecessary if food was passing through the pylorus, if vomiting was absent, and if there was little or no dilatation. There were undoubted cases of this type. It was of great value in curing secondary dilatation and gastritis, but it cured only these secondary effects and not the hypertrophy, and might place the child in the *status ante*. Then, if the degree of hypertrophy and contraction was compatible with life, the child might recover. He regarded it as of vital importance to differentiate spasm from hypertrophy, and that the medical treatment of true hypertrophy should not be unduly prolonged. The greater the degree of marasmus previous to operation, the smaller was the chance of the child's recovery.

Dr. SUTHERLAND protested against the assumption that if pyloric stenosis were cured medically it must have been in such a mild form that it would have recovered without treatment. Operation was a very serious matter, and many infants who had stood the operation died afterwards from bowel trouble of some sort. He did not think that for a complete diagnosis one should be able to feel a pyloric tumour, as the pylorus was a very uncertain thing to feel in an infant. The diagnosis could be made if vomiting, constipation, wasting, and marked visible peristalsis were present. Where trouble arose when breast milk was given, the fault was not with the milk but with the manner of feeding. Small feeds of the most digestible material were required, and if there was a residue of food left in the stomach after washing out for a day or two, the infant was not having suitable food.

Mr. LOCKHART MUMMERY said that it was scarcely possible to have a more unsuitable subject for a severe operation. The child was very young and badly nourished, and had probably been vomiting all the nourishment given to it for some days before. Very few cases died on the table. The only cases in which the prospect of operation was good were those seen early, before there had been wasting, and in which there was a fair amount of fat.

Dr. CHARLES W. CHAPMAN said that in the condition under discussion there was a great deal of irritation causing the closure, and he was therefore surprised that no one had suggested the administration of carbonate of bismuth. It might be given freely in as much as teaspoonful doses.

Mr. HUGH LETT said that in many cases by the time that the surgeon was called in the condition was practically hopeless. The physician should be clear at the beginning of his treatment how long he would continue medical measures, lest, by unduly prolonging them, the prospects of operation were affected. He advocated the claims of gastro-enterostomy as being simpler than pyloroplasty and safer than Loretz's operation.

Dr. REGINALD MILLER suggested that the symptoms of pyloric stenosis were entirely referable to spasm. First, because of the onset of the disease. At the Clinical Society last year 40 cases were collected, and in 70 per cent. of them the onset did not occur until the third or fourth week of life. He had a case in which diarrhoea preceded the onset of the symptoms. It was true that many babies vomited from birth, but not sufficiently to cause wasting, and the well-marked constipation was frequently absent during the first two or three weeks of life. That suggested that there was not marked blocking at the pylorus as a congenital lesion. Secondly, only the circular coat was hypertrophied, and he agreed that if it were spasm the longitudinal coat would be hypertrophied. But if the longitudinal coat were hypertrophied, presumably there would be no symptoms. Thirdly, that although the baby did not live, yet as the result of lavage and careful dieting it usually died of diarrhoea, showing that the pylorus was once again patent, and that something had happened, for presumably the spasm had been relaxed. A fourth and controversial point was, that a few cases got well in which gastric peristalsis was observed week after week, and in which the tumour might be palpable for weeks. Such cases strongly

simulated the real condition which Dr. Cautley referred to, and the speaker thought they were identical. It was difficult to say what was the cause of the spasm, but he thought it was due to a congenital defect in the gastric juice, and he had tried to find what that defect was in the observations alluded to by Dr. Cautley; he believed the so-called hyperacidity was not a cause. It would be a very engaging idea if it were so. Hyperacidity was found in babies which ran a different course, generally getting well in a few weeks. The hyperacidity of pyloric spasm occurred in older and less wasted children, the tongue was clean, and there was no true peristalsis, so that the viscus stood up on palpation. There was Mr. Clinton Dent's well-known fetus in which the pylorus was found hypertrophied. He regarded spasm of the pylorus as the entire cause of the symptoms of the condition, if not of the disease itself.

CASES.

Dr. T. R. WHIPHAM showed a case of *Congenital heart disease* in a girl of 17, who showed no cyanosis or clubbing. There was a history of slight rheumatism in the feet three years previously, but none of rheumatic fever or chorea. The left ventricle was greatly hypertrophied, and over the upper part of the sternum there was a marked thrill. In this region, and to the right, a loud, rough systolic murmur was audible, which could be heard all over the precordium. There was no polycythaemia. The diagnosis was some malformation of the great vessels—possibly a patent ductus arteriosus.—Dr. PORTER PARKINSON showed a case of *Synovitis of the knee-joint* in a boy of 7. He was the subject of congenital syphilis, and the effusion followed periostitis of both tibiae. There was marked effusion, no pain or tenderness, and no alteration in the bony structures of the joint.—Dr. G. A. SUTHERLAND showed a case of *Cretinism*. The boy was 9 years old, and was seen in November, when typical signs of cretinism were present. He improved markedly under thyroid treatment. Growth in the long bones was very delayed, and pituitary extract had been given without any benefit so far. Dr. G. A. Sutherland also showed a case of *Tuberculous peritonitis* in a girl 9 years old. When first seen in September the case seemed hopeless. There had been signs of tuberculous peritonitis for five months. She was wasted and in a stuporous condition, suffered from diarrhoea, and had delirium at night and hallucinations during the day. She was now convalescent and the signs of active tuberculosis had subsided, although the abdomen was still distended.—Dr. MCMASTER (for Dr. Guthrie) showed a case of *Acute polio-encephalitis* following measles. The patient, a girl of 5 years, was well nourished and intelligent, but had spastic diplegia. There were no ocular symptoms. There was weakness of the muscles of the back so that she could not sit upright, and could not hold her head up. The condition simulated one of congenital spastic diplegia.—Mr. LOCKHART MUMMERY showed a case of *Supernumerary auricles* in an infant. On both sides of the head they were situated just in front of the external auditory meatus, in the position of the inter-maxillary cleft. That on the right side was about half the size of the normal ear, that on the left side was much smaller.

ROYAL SOCIETY OF MEDICINE.

DERMATOLOGICAL SECTION.

AT a meeting held on January 16th, Dr. H. RADCLIFFE CROCKER, President, in the chair, Dr. E. GRAHAM LITTLE showed a young girl with granulomatous swellings on the hand, wrists, ankle, and neck, which seemed to be of the same type as the cases of disease grouped under the title of *Granuloma annulare*. A specimen of a section of the skin was shown and its appearance was like that described in some cases of the disease to which this name had been applied. Several members suggested that the skin lesions were like those of acnitis, and it was decided to try the effect of a Calmette ophthalmic reaction. Dr. J. M. H. MACLEOD showed a case of *Annular lichen planus* in a man in whom the lesions were confined to the penis and the forearm. The annular lesions could be traced as being formed by the peripheral extension and central involution of papules. Dr. J. A. ORMEROD showed a case of very extensively distributed *Pityriasis rubra pilaris* in a man aged 30. In spite of the wide area of surface covered the scalp was little affected. Dr. H. RADCLIFFE CROCKER and Mr. GEORGE PERNET showed a *Case for diagnosis*, a man with a number of circumscribed patches of redness and scaliness, the skin being free both from infiltration and atrophy. This case had been seen by a dermatologist in Chicago, and had been published as an example of parakeratosis variegata. Diagnosis of mycosis fungoides and of leprosy had also been offered. The exhibitors thought the case corresponded more nearly with the type of xantho-erythrodermia perstans. The same gentlemen also showed a case of *Lichen planus verrucosus* treated with the violet rays of a mercurial vapour vacuum tube. The disease had benefited greatly by this treatment. Dr. J. H. SEQUEIRA showed a case of *Tuberculides* in a girl aged 19, in whom the lesions had been noted for seven years. These were of the type of acnitis. The opsonic index had been found to be 1.1. Calmette's ophthalmo-tuberculin reaction had been demonstrated in this case, but there was no other evidence of tuberculosis in the patient, and no family history of the disease. Dr. J. H. STOWERS showed a case of a small *Rodent ulcer* on the bald scalp of a man aged 55. This was of the size of a threepenny-piece, and had lasted for twelve months.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 22nd, Dr. W. HUNTER in the chair, Drs. C. H. CATTLE and J. R. EDWARD showed a man, aged 35, who had made a good recovery after operation and drainage of an *Abscess of the lung* in the left infra-scapular region. The exact mode of origin of the condition was uncertain, but it was most probably a sequela of pleuropneumonia. Although he at one time expectorated from 12 to 18 oz. of pus per diem, the greatest difficulty occurred in localizing the abscess, which was then treated like an empyema. Mr. R. WOOD (Ilkeston) showed a female patient the subject of *Myocarditis and dropsy*. Much improvement had followed the local application of tincture of strophanthus and belladonna over the heart. Mr. H. BELL TAWSE read a paper on *Some complications and dangers of nasal surgery*. He pointed out the mishaps which might occur in dealing with the middle turbinate, and emphasized the importance of having free access to it by preliminary removal of deviations and spurs, advocating Killian's submucous resection as the best all-round method of dealing with them. Ethmoidal curetting for nasal polypi and ethmoidal suppuration was exhaustively discussed, and cases were cited to illustrate such complications as necrosis of the frontal and superior maxillary bones, injury to the cribriform plate, and suppurative meningitis. He looked on the operation as unjustifiable in any one over 60. He considered that in many cases of frontal sinus suppuration the dangers of radical operation outweighed the advantages, but hoped some means of preventing disasters like osteo-myelitis of the skull and meningitis would soon be found. Operations on the maxillary antrum were shown to be very free from complications, and such post-operative sequelae as dry rhinitis, ozaena, infection of healthy sinuses, middle-ear trouble, and the nervous breakdown which occasionally occurred during a tedious after-treatment were briefly reviewed. The paper was discussed by Messrs. W. M. WILLIS, J. MACKIE, A. R. TWEEDIE, Dr. W. HUNTER, and others, and Mr. TAWSE replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 17th, Dr. WALKER DOWNIE, President, in the chair, Dr. G. BURNSIDE BUCHANAN reported a case of extensive *Injury to the brain*. The patient sustained a compound fracture of the skull from a block of wood falling on his head. There was a large irregular wound about the right parietal eminence. Some of the fragments were depressed under the edge of the fracture. A splinter of wood, about 1 in. by ¼ in. thick, was imbedded in the brain. There was much effusion around, and considerable haemorrhage from the wound. The man was not entirely unconscious. The left side of the body and face was paralysed. Loose fragments of bone and the piece of wood were removed. Detached brain tissue and gritty particles were removed, and the wound packed with iodoform gauze. Antitetanic serum was given. The wound healed slowly without suppuration, but a large quantity of necrotic brain matter escaped. He regained slight power over the leg. Sleeplessness and restlessness were very troublesome, and could only be controlled by morphine. The leg and facial paralysis made marked improvement, but the mental condition deteriorated. Dr. A. N. M'GREGOR described *a method of recording the efficiency of the discharge of urine per urethram*. He considered the estimation of the size of the urethra from casts, as done by Reybard, and the use of the urethrameter of Otis, Luis, etc., did not give the rate of discharge in a given case, which was the chief point of importance. His method was to get the patient to measure the urine

passed during 5 seconds without voluntary exertion and under similar circumstances from day to day. These results recorded on a chart gave a permanent record of variations in the efficiency of urination. A number of charts were shown and demonstrated the more lasting effects after moderate dilatation as compared with extreme dilatation. Charts from normal cases were also shown. Dr. W. S. Syme showed (*a*) a boy, aged 6 years, operated on for *Septic sinus thrombosis* consequent on middle-ear disease. There was a small carious opening into the mastoid antrum on admission. The whole mastoid process was carious. At the operation this was cleared out and the lateral sinus exposed. Its wall was covered with unhealthy granulations. Three days later symptoms of septic infection developed. The sinus was opened and a thrombus was found adherent to the inner surface. The internal jugular was tied. Progress was slow but steady. (*b*) Patients operated on for *Diseases of the accessory sinuses*. Intranasal treatment should be given a good trial first. Extensive operations should be performed externally, and the extent of operation depended on each individual case. The sphenoidal sinus could be opened externally (the Killian operation) by way of the maxillary antrum, by the naso-pharynx, or by the anterior nares. The latter method was generally preferable. (*c*) A case where part of the root of the first upper right molar was removed from the maxillary antrum, into which it had been driven six years before as the result of an unsuccessful attempt at extraction.

Harveian Society.—A meeting of this Society was held on January 23rd, Dr. G. A. Sutherland in the chair. The evening was devoted to the showing of clinical cases and pathological specimens. Dr. Sidney Phillips showed: (1) A case of *Splenic anaemia* in a child. The liver, spleen, and lymphatic glands were enlarged, and the blood showed the usual signs of anaemia but no leucocytosis. The case was discussed by Dr. Sutherland. (2) A case of *Landry's paralysis* in which recovery had taken place. Mr. Clayton-Greene showed: (1) A case in which *Rupture of the liver* had occurred from abdominal injury. An operation was performed within seven hours of the accident, and recovery followed. (2) A specimen of *Cirsoid aneurysm* of the arm and forearm. The arm had been amputated owing to the extensive involvement of the vessels. This was discussed by Dr. Low. Dr. Willcox showed: (1) A case of greatly-enlarged lymphatic glands on both sides of the neck, which he regarded as due to *Lymphadenoma*, with tuberculous infection superadded, the latter having been proved by investigations of the opsonic index. The case was discussed by Dr. Sutherland. (2) A case of *Enlarged liver and spleen with leucodermia*. This was regarded as cirrhosis of the liver. Dr. Langmead discussed the case. Dr. Langmead showed a case of *Third nerve paralysis*, which was discussed by Dr. Sutherland. Dr. Carmalt-Jones showed a case of *Arterio-sclerosis*, with a vascular lesion giving rise to a crossed sensory lesion. Mr. W. V. Low showed a case of *Charcot's disease of the knee-joint* with spontaneous fracture of the tibia on the same side. There were well-marked signs of tabes dorsalis. Mr. Crisp English showed: (1) A case of *Charcot's disease of the ankle-joint*, which was discussed by Mr. Kelly. (2) A specimen of *Large fibroma of the breast*. Mr. Laurence Jones described: (1) A case of *Musculo-spinal paralysis*. (2) A specimen of *Ureteric calculus*. Mr. Maynard Smith showed a case of *Injury to the brachial plexus* followed by a root paralysis, which recovered after operation. The case was discussed by Dr. Willcox. Mr. E. Morris showed a skiagraph of a *Supernumerary thumb*. Dr. C. Singer described the drawings, microscopical and pathological specimens of a case of *Exophthalmic goitre* which had recently been under his care.

At the annual general meeting, held at the Society's rooms, the following officers were elected for the ensuing year:—*President:* Mr. D'Arcy Power; *Vice-Presidents:* Dr. G. A. Sutherland, Dr. C. Buttar, Dr. H. J. Macevoy, Dr. W. H. Blenkinsop; *Treasurer:* Mr. Francis Jaffrey; *Honorary Secretaries:* Mr. T. Crisp English, Dr. W. H. Willcox; *Council:* Dr. G. A. Barton, Sir John Broadbent, Bart., M.D.; Mr. A. C. Butler Smythe, Dr. F. W. Cock, Dr. Elliott, Mr. Laming Evans, Dr. A. James, Mr. Lawrence Jones, Mr. E. L. Payne, Dr. Sidney Phillips, Dr. H. A. Sansom, Mr. Campbell Williams.

REVIEWS.

HYSTERIA AND DEMENTIA PRAECOX.

Last autumn, on the occasion of the inauguration of the Medical School of Harvard University, Professor Janet was invited to deliver a course of lectures to the students, and the fifteen lectures which this course comprised have now been published under the title of *The Major Symptoms of Hysteria*.[1] In choosing hysteria for his subject, Professor Janet was animated, he said, by a desire to discuss the results of one of the most characteristic studies of his native land, and, we may add, one the underlying nature of which he has himself done much to lay bare in his numerous published books, and consequently one with whose study his name will always be honourably associated. His little book is a masterly analysis of the multifarious phenomena of this protean disease, and it is difficult to know which most to admire—the author's felicity of expression in a foreign tongue, his analytic and synthetic skill, or his power of riveting the attention of the reader on the essential fundamental facts and their associations. From the opening of the exposition with Monoideic Somnambulism to the last chapter on General Definitions, in which the whole apparently disparate forms are tied together, it is hard to lay down the volume. Every one is aware of this distinguished writer's conception of hysteria as "a form of mental depression characterized by the retraction of the field of personal consciousness and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality," and throughout the whole series of hysterical phenomena described in this book—somnambulisms, fugues, double personalities, convulsive attacks, paralyses and contractures, tics, anaesthesias, special sense troubles, and the phenomena of suggestibility—these facts of an abasement and retraction of consciousness, and the disintegration of the normally synthetized personality resulting in the more or less independent development of certain ideal and emotional complexes which have as it were been cut off, or extended from the total personality, are beautifully brought out. This psychological conception of hysteria is everywhere gaining ground, and it is probable that, with one exception, every one of Professor Janet's conclusions will be accepted without debate. This one exception concerns the author's view of the phenomena of suggestion. For Professor Janet "suggestion is a precise and relatively rare phenomenon; it presents itself experimentally or accidentally only with hystericals, and, inversely, all hystericals, when we study them from this standpoint, present this same phenomenon in a higher or lower degree." If this be true, and only hystericals are suggestible, the numerous reputed "cures" of the subjects of disorders other than hysterical—for example, many psychoses and even epilepsy—must exist only in the imagination of their recorders or depend on erroneous diagnoses. In this connexion Professor Janet makes a very significant statement. Suggestibility, he says, disappears completely when the patient has recovered from his disorder.

> At that moment suggestions no longer take, and these subjects bear themselves in regard to suggestions like normal individuals. I have described it these twenty years, and the theoreticians who will absolutely find hypnotism and suggestion in everybody have never replied a word to this argument.

Hysteria in one form or another is so common a disorder, its manifestations are so varied—at one time simulating and at another complicating other diseases—that no medical man, in whatever sphere of work he be engaged, can afford to neglect its close study, and we cannot recommend a better guide than Professor Janet, or a more illuminating *aperçu* than is contained in this engrossing little volume.

Another most suggestive and stimulating illustration of the benefits to be obtained by the application of modern methods of psychological analysis to psycho-pathological states is furnished by a recently-published monograph on the psychology of dementia praecox by Dr. C. G. Jung of

[1] *The Major Symptoms of Hysteria*. By Pierre Janet, M.D., Professor of Psychology in the Collège de France, Director of the Psychological Laboratory in the Clinic of the Salpêtrière. London and New York: Macmillan and Co. 1907. (Post 8vo, pp. 355.)

Zürich.[2] It is the fruit of three years' experimental investigation and clinical observation; and although its author modestly disclaims anything more than a tentative value for his conclusions, it is in reality a notable exposition of psycho-analytical methods, and one which throws much light upon many of the apparently inexplicable processes manifesting themselves in the symptom-complexes united under the category of dementia praecox. We need not waste time here in discussing the felicity or infelicity of the title "dementia praecox." It is enough that cases of the clinical types—katatonic, hebephrenic, and paranoid—recognized on the Continent as dementia praecox do occur, form a considerable percentage of all cases admitted to asylums, and are nearly enough related to each other to warrant their inclusion under one category, call it what you will. The book is divided into five chapters, of which the first is an admirable critical exposition of the several theories concerning the psychology of this disorder. Many of them are incongruous in particulars, but all of them, whether that of "apperceptive enfeeblement" (Weygandt); of "dissociation, abasement of the mental level" (Janet and Masselon); of "disintegration of consciousness (Gross), or of personality" (Neisser); or of "split-off thought complexes" (Freud), clearly manifest a converging trend to the central idea of a lowered attention and enfeebled apperception as the root of the various stereotypies, automatisms, apathy, aboulia, and negativism characteristic of this disorder. This lowering of the mental level and tendency to the autonomous development of dissociated thought-complexes, however, is equally characteristic of hysteria, and to the fundamental distinction between these two disorders, whose similarity has often led to their confusion, Dr. Jung devotes the fourth and perhaps the most important chapter of the book. As a necessary preface leading up to this chapter Dr. Jung in the second and third chapters analyses the general action on the mind of a complexus accompanied by emotion and their influence on mental associations, principally as laid bare by submitting the subjects to test words and studying their reaction times and the other proved indicators of complexes having a high emotional value. In these chapters the author follows and corroborates the work of Freud and others, and shows, in the same way that they have done in hysteria and dreams, that in dementia praecox there are severed complexes—which may be discovered by the method alluded to above—which live a more or less independent existence. The difference, however—and this is the main result of the fourth chapter and the pivot of his whole argument—is that whereas in hysteria the split-off complex is still susceptible, with proper treatment, of proper co-ordination with the other complexes of mentality, in dementia praecox the complex or complexes dominate the whole individuality, are fixed and inveterate. From this dominating complex the mind of a praecocious dement never frees itself and improvement is only attained by the destruction of the complex, involving a permanent loss to the personality, or, expressed otherwise, recovery with defect. The cause of this radical distinction is yet to seek, but the author suggests that it may be found in the presence of metabolic or toxic alterations in the subjects of precocious dementia. The lack of any argument in support of this suggestion is perhaps the only weak spot in a book which from the psychological standpoint is of outstanding merit.

SURGICAL TEXTBOOKS.

THE third volume of *American Practice of Surgery*,[3] edited by Drs. BRYANT and BUCK, opens with a chapter on poisoned wounds, by Major C. F. Mason. Under this heading are discussed wounds poisoned by the bites and stings of animals and those infected by bacteria. There seems a certain unfitness in the separation of this part from Part II, vol. i, which is also on the subject of infections. With these two in sequence much space might have been saved, as in each there is a full discussion of the subjects of erysipelas and tetanus. The wound infections are clearly described, and the treatment of snakebites admirably outlined. Included in this part is an article on rabies, by Dr. G. G. Rambaud, which gives a full account of Pasteur's inoculation method. The next part (XII) treats of injuries and surgical diseases of bone, and commences with a chapter on fractures, by Dr. Duncan Eve. In its 150 pages all the important fractures are described. On the subject of general treatment something might have been said on the important questions of massage and movements. The gunstock deformity of the elbow (p. 136) usually follows a supracondyloid fracture, and the explanation most generally accepted now is that it is due to a downward displacement of the outer end of the lower fragment. Dr. Eve favours the older view of a pulling upwards of the inner end, but specimens are against this. The article is very well illustrated. Dr. T. Turner Thomas, writing on pseudarthrosis, praises the results obtained by the "Parkhill Clamp." A very excellent article follows on inflammatory affections of bone, by Mr. George A. Peters, and that portion of it which treats of acute osteomyelitis is particularly complete and well written. Surgeons will appreciate the discussion on the extent of the operative measures which should be undertaken in this affection. In Dr. Roswell Park's article on non-inflammatory affections of bone, the disorders of nutrition come first, and then acromegaly, osseous elephantiasis, rickets, osteomalacia, and other rarer affections. Achondroplasia is not considered. The remaining chapters of this part are on syphilis and tumours. Neither call for further comment than the statement that they are well up to the standard of the remainder. Part III is concerned with diseases and injuries of joints. The long chapter by Dr. Alexander Primrose of Toronto, on tuberculous disease, stands out as the most exhaustive, and on the whole the best conceived, in this volume. The subject is first taken up from the general standpoint, and then the disease is described as it occurs in the individual bones and joints. The account of the course of the pathological process and the clinical descriptions are alike excellent, and questions of treatment are also fully gone into. Preceding this chapter is one on chronic non-traumatic and non-tuberculous inflammations of joints, and following it is one on wounds of joints. This volume is quite up to the standard of its predecessors, and the excellence of the illustrations continues to be a great feature of the work.

Part III of the *Nouveau Traité de Chirurgie*,[4] which is being published under the direction of Professors LE DENTU and DELBET, consists of a section on surgical diseases of the skin, by Professor J. L. FAURE. A group of affections is considered, which concern the surgeon rather than the dermatologist. First come certain infective processes. A chapter on erysipelas includes a short discussion of the present position of serum treatment; the clinical description of its many varieties is excellent. The second chapter treats of boils and carbuncle, the latter, of course, being known as "anthrax" to French surgeons. It is unfortunate that the one term continues to be used for two different lesions, and it would be well if an agreement were arrived at on the matter. For boils the author prefers the application of iodine tincture, but discusses numerous other methods; for carbuncle his preference is given to destruction with the cautery in serious cases. The method of excision which is practised on a fairly large scale in this country is barely touched upon. The most important of the other infective processes discussed is tuberculosis in its various forms. A second section, on organic lesions, is concerned with the various forms of new growth. The third includes one lesion only—sebaceous cysts—and the fourth likewise one—painful subcutaneous nodules. The last treats of elephantiasis and the lesions produced by the guinea-worm (dracunculosis). Professor Faure's subject is encroached upon by writers in other parts of the treatise, and he has been therefore somewhat limited in its treatment. The work, however, is excellently done, the descriptions are clear, and the discussions of treatment very sound.

Professor STEWART'S *Manual of Surgery*[5] is likely to gain

[2] *Ueber die Psychologie der Dementia praecox.* Ein Versuch von Dr. C. G. Jung, Univ. Zürich. Halle a. S.: Carl Marhold. (Demy 8vo, pp. 179. M. 2.50.)

[3] *American Practice of Surgery.* Edited by Joseph D. Bryant and Albert H. Buck. Vol iii. New York: William Wood and Company. 1907. (Imp. 8vo, pp. 775, 311 illustrations.)

[4] *Nouveau Traité de Chirurgie.* Publié sous la direction de MM. A. le Dentu et P. Delbet. Fascic. III. Maladies Chirurgicales de la Peau. Par J. L. Faure. [New Treatise on Surgery. Fasc. III. Surgical Diseases of the Skin. By J. L. Faure.] Paris: J. B. Baillière et Fils. 1908. (Roy. 8vo, pp. 144, figs. 8. Fr. 4.)

[5] *A Manual of Surgery. For Students and Physicians.* By Francis T. Stewart, M.D., Professor of Surgery, Philadelphia Polyclinic, etc. London: Rebman Limited. 1907. (Post 8vo, pp. 778; 504 illustrations. 15s.)

favourable acceptance from both student and practitioner. It is, as a work of this kind must be, a compilation, but the material here presented has been carefully and judiciously gathered from the best sources, and, as the author points out in his preface, emphasis has been laid on those details which much experience has taught to be of the greatest clinical importance. The instruction here afforded embodies, with much that is acknowledged to be derived from modern manuals in this country and on the Continent, the results of the original and important work that has been done by American surgeons. The teaching, which is quite modern, is free from obscurity, and the author in his successful endeavour to be brief and practical, has not failed to be lucid and thorough. Readers seeking for information on some disputed or doubtful point in a special subject will probably be disappointed with this work, but for those seeking an exposition of the principles and practical details of advanced surgery it will be found an excellent guide. The illustrations, the best of which are original, vary in quality, but are for the most part clear and instructive. While commending the very convenient form and size of the present volume we think that in this respect the book in future editions might be improved by the omission of the inadequate chapter on amputations.

The second part of volume i of Professor Hochenegg's textbook of special surgery[6] includes the consideration of the diseases of the thorax, and the affections of the spinal column, cord, and pelvis. As in the previous part reviewed in this Journal on July 13th, 1907, p. 90, each section opens with an outline description of the anatomy and physiology of the region. The chapter which is most worthy of attention in the first section is that on lung surgery. It brings the reader up to the forefront of the advances that have taken place in this department of surgery during late years. The author, Dr. E. Page, discusses in full the physiological questions concerned, and refers widely to the literature of the subject. There is a noteworthy chapter also on heart wounds. The second section treats of the spinal cord only as it is related to injuries and diseases of the bony column, and for the rest is concerned with injuries and diseases of the latter and the pelvis. Professor Lorenz contributes a long article on scoliosis, and the other of chief importance is by Dr. M. Reiner on tuberculosis of the vertebrae.

Dr. J. F. Binnie's *Manual of Operative Surgery*[7] has reached its third edition in two years, and the revised and enlarged issue now published is a testimony to the author's determination to keep the book thoroughly up to date. One impression which the reader again and again receives is that the author writes from a wide clinical experience of the methods he describes, and that he has met with and dealt with many of the difficulties and problems continually intruding into the experience of operating surgeons. Some of the operations still call for better illustrating—perineal prostatectomy, for example. On the whole the illustrations are good and adequate. The number of new pictures in this edition is 111. We are glad to find that the author has not materially increased the size of his book, and hope that it will remain much as it is now in future editions. It is a most valuable and handy book of reference for a busy surgeon.

FOOD ADULTERATION.

The *Traité Pratique d'Analyse des Denrées Alimentaires* of MM. Gérard and Bonn[8] is a useful compilation by two experts of those analytical processes which they consider to be the best in the examination of foodstuffs. The work has been done with especial reference to the requirements of French analysts, though its usefulness will not be confined to the country of its production. For the analysis of samples of food products taken by public authorities in France official working methods are prescribed by law, and these are given in an addendum to this book; if the article in question is condemned, however, further analyses are made by experts appointed by the magistrate and by the defendant, and for these the analysts are at liberty to employ what methods they please. The authors give full working details of those methods which they regard as most satisfactory. Since the book is intended for experts, familiarity with the processes of practical chemistry is assumed, though not quite consistently; thus the familiar Kjeldahl process for nitrogen is described in detail, while the directions for the determination of arsenic in beer merely describe the preparation of a suitable liquid for testing, concluding with "this is introduced gradually into a Marsh apparatus, with the usual precautions." Among the various authorities cited, the names of English chemists are scarcely to be found at all, and the authors have diminished the value of their work by drawing on a too-restricted field, some of the methods described being undoubtedly inferior to those in vogue here for the same purpose. Each chapter concludes with a summary of extracts from laws and Government regulations referring to the purity of the articles dealt with, or the prohibition of particular preservatives, etc.; such summaries should be very useful, but they remind us with regret of the extreme paucity of such regulations in Great Britain.

NOTES ON BOOKS.

A number of useful notes on unofficial remedies are contained in Gadd's *Pocket Book for Physicians and Pharmacists*.[9] In this little book, which is of a size for the pocket, some sixty-five pages are given up to concise notes on those preparations of the *British Pharmaceutical Codex* which are not official, with their doses. Then follow diary and memoranda pages of the usual type, and a brief account of the requirements of the poison laws of Great Britain. If a more opaque paper had been used for the book, it could have been read with greater comfort; it should, however, prove useful in enabling prescribers to carry with them the principal facts about a number of useful preparations which can now be obtained of uniform composition almost anywhere, if the letters "B. P. C." are added after the name in prescribing.

Mr. E. M. Corner's *Diseases of the Male Generative Organs*[10] is one of the Oxford Medical Manuals, and gonorrhoea and syphilis, save "in relation with their influence on the generative functions," have very properly been omitted. But the diseases of the prostate have also been omitted, and, as regards other things, Mr. Corner says it was not easy to select what to include and what to omit. In these circumstances anything like a complete work was of course out of the question, and it is difficult to say exactly what place among medical books this manual can be expected to take. Hydrocele, haematocele, and affections of the testicle occupy the larger and more satisfactory portion of the text. To these matters, and particularly to the causes and treatment of the imperfectly descended testicle, Mr. Corner has given special attention; and what he has to say about them, though it might be more clearly expressed, is well worth reading and will no doubt be duly appreciated both by surgeons and general practitioners. The other subjects dealt with more or less are "the functional affections," diseases of the spermatic cord and vesiculae seminales, and some diseases of the urethra, the penis, and the scrotum.

There appears to be a growing body of opinion in favour of the careful instruction of growing boys in the facts of sexual life by parents or guardians, instead of allowing them to pick up this knowledge haphazard from usually impure schoolfellows. Those who take this view will find this difficult task done for them with much tact and delicacy by Mr. Arthur Trewby in his little book on

[6] *Lehrbuch der Speciellen Chirurgie für Studierende und Aerzte.* Herausgegeben von Professor Dr. Hochenegg. [Textbook of Special Surgery for Students and Physicians.] Vol. i, Part II. Berlin and Vienna: Urban and Schwarzenberg. 1907. (Roy. 8vo, pp. 649 to 1075; figs. 177.)

[7] *Manual of Operative Surgery.* By J. F. Binnie, A.M., C.M. Third edition. London: H. K. Lewis. 1907. (Crown 8vo, pp. 756; 678 illustrations. 12s. 6d.)

[8] *Traité Pratique d'Analyse des Denrées Alimentaires.* Par E. Gérard, Professeur de Pharmacie et de Pharmacologie à l'Université de Lille, et A. Bonn, Directeur du Laboratoire Municipal de la Ville de Lille. Paris: Vigot Frères. 1908. (Roy. 8vo, pp. 604. Fig. 42. Fr. 15.)

[9] *A Pocket Book for Physicians and Pharmacists.* Edited by H. Wippell Gadd. Bristol and Exeter: Evans, Gadd, and Co., Limited. (Royal 24mo, pp 154. 1s.)

[10] *Diseases of the Male Generative Organs.* By Edred M. Corner, M.A., F.R.C.S. 1907. (Cr. 8vo, pp. 289. 5s.) London: Henry Frowde, Oxford University Press, and Hodder and Stoughton.

Healthy Boyhood.[11] The author's introduction is an inset, which can be removed before placing the book in the hands of boys, and there is an introduction by Sir Dyce Duckworth and a "foreword" by Lord Roberts.

The Yearbook of Pharmacy for 1907[12] contains abstracts of papers relating to chemistry, materia medica, and pharmacy, which have been published from July, 1906, to June, 1907, in English and foreign journals. The abstracts are grouped under the three heads just named. Chemistry furnishes the largest section, but the other two are of greater interest to medical men. Under materia medica are included notes dealing with all the more important synthetic remedies of which additional knowledge has been gained during the year, while the pharmacy abstracts include a large number of formulae from which the prescriber may gather useful hints. The abstracting appears to have been done with care and judgement. The same volume also contains the full text of the papers read at the Pharmaceutical Conference in 1907, and reports of the discussions upon them.

Dr. H. C. PATTIN has issued in a shilling pamphlet with the title *The Ritual of Temperance and Bodily Cleanliness*,[13] four short essays on alcoholic stimulants, on caffeinic stimulants, on aqueous stimulants, and on baths, which have already appeared in a larger volume. The essays are addressed to the general public, and contain a great deal of good sense expressed in what is called a breezy style—sometimes too breezy, as, for instance, when he says of the gouty: "The stomachs of such are little better than bags of rennet; nay, their very blood is but a sort of thickened vinegar." But we are not going to quarrel with Dr. Pattin for such occasional extravagances, nor shall we do more than gently protest against his advice to the gouty to substitute for the fragrant beverage of China a cupful of hot water in which a few grains of lithium citrate and one grain of caffeine citrate have been dissolved, because as the gouty commonly possess an educated palate, his advice, which he admits is not without an element of danger, will not be taken. His remarks on the internal use of water are generally judicious; but it is what he has to say with regard to its external use that has most value. There can be no doubt that what Dr. Pattin would perhaps call the ritual of the morning cold tub is very apt to be a mere superstitious observance. As ordinarily taken, especially in winter, it can hardly cleanse even the surface of the skin; it is a stimulant, a very agreeable and healthy stimulant, but the skin as a whole is only really cleansed by perspiring, as any hero of the Serpentine can convince himself by taking a Turkish bath. A celebrated and successful, though not very learned, physician of the past, who numbered among his clients many of the most eminent politicians, lawyers, and literary men of his day, used always to give them one piece of advice: "If you want to live long, have a good sweat every day—by exercise, if possible; if not, then by some artificial means." It is to be hoped that Dr. Pattin's aspiration, that in public baths there should be provided "heated air baths and warm water swills" and that the swimming bath should be used "chiefly for the purpose of a tonic to tone up the skin before going out into the open air," is not altogether utopian.

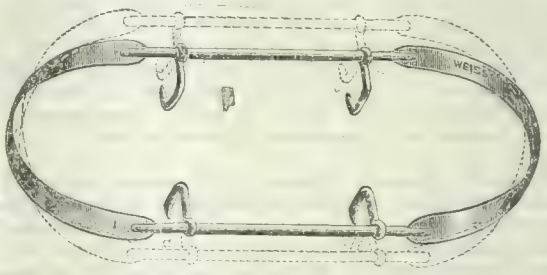
MEDICAL AND SURGICAL APPLIANCES.

Electro-Medical Apparatus.

WE have received from Messrs. Siemens Brothers and Co., Limited, of Queen Anne's Chambers, Broadway, Westminster, a copy of their latest catalogue of *x*-ray outfits and accessories. This firm is endeavouring to popularize in this country the electrolytic form of interrupter for *x*-ray work. Considerable difference of opinion exists with regard to the merits of this interrupter, and some practitioners who formerly used it have gone back to the mercurial pattern. Messrs. Siemens state that its alleged faults are due to wrong adjustments, and that when properly regulated, so far from bringing about a wastage of *x*-ray tubes, it is a means of lengthening their life, even when high discharges are passed through them, provided that their variable primary is also used. Our representative has had the opportunity of seeing these interrupters at work in Messrs. Siemens's offices, and they certainly appeared equally adaptable to hard and to soft tubes. An additional advantage is that when a multiple type is used—the triple form is now generally employed—it is unnecessary to regulate the interrupter, which can be placed outside the *x*-ray chamber. A novel feature of the apparatus manufactured by this firm is the tantalum *x*-ray tube. The tantalum anticathode is introduced in order to overcome one of the outstanding difficulties of *x*-ray work. Hitherto platinum has been used for the anticathode, and platinum, on becoming incandescent through the bombardment of the cathode rays, tends to disintegrate. The firm claims that by using the rare metal tantalum the *x*-ray tubes can run for a long time at red heat without any deterioration. This appears a large claim to make, but it has to be remembered that the melting point of platinum is 1,700° C., while that of tantalum is 2,300° C. One cannot be quite sure, of course, whether the volume of *x*-rays emitted is as great with the tantalum anticathode, but the gain in steadiness of vacuum and tube can be put against any disadvantage in that direction. Among other interesting features of the catalogue are Dr. Albers-Schönberg's compressor apparatus, which has a neat device for the making of stereoscopic radiographs; an orthodiagraph, remarkable for the easy adjustability of the arm containing the pencil which makes the tracing; and a dynamo driven by horse gear for the convenience of country doctors who reside at a distance from any source of electrical supply. The usual accessories of the radiographer are also included in the catalogue.

A New Retractor.

Dr. H. TYRRELL GRAY (Hospital for Sick Children, Great Ormond Street, W.C.) writes: The retractor illustrated in the accompanying figure has been made for me by Messrs. Weiss and Son. I have designed it more especially to ensure an adequate retraction of wounds when assistance is limited. It is particularly suitable for abdominal work, but has been found of service in operations on various



regions. The instrument consists of two light steel bars carrying retracting hooks, and connected at either extremity by a powerful flat-steel spring. It has the advantage of being simple, light, easily manipulated, and of securing an adequate exposure while lying entirely out of the field of operation. The three sizes comprising the set have been graduated to be suitable for most operations.

An Alternative Plan of Treating Wounds of Skin without Sutures.

MESSRS. ARNOLD AND SONS (London) write: In the BRITISH MEDICAL JOURNAL of December 21st, 1907, we note a description of plaster for use after abdominal operations as suggested by Dr. Calantarients (Scarborough). We feel it is due to our client, Dr. C. M. Fegen, of Croydon, that we should bring the following facts to the notice of your readers: Early in 1905 (after exhaustive experiments) we made and registered a plaster for the same purpose, but which we venture to think has many advantages over that suggested by Dr. Calantarients, as the following short description will more clearly explain: that is, strips of brown holland plaster 8 in. long by 4 in. wide with chamois leather lappets or terminations. On the upper surface are several bold hooks similar to those used in lace-up boots, so that having affixed the strips of plaster to each side of the wound, the parts are brought (or retained) in apposition, which can be maintained at any required tension by means of a lace or a piece of round elastic passing around the hooks. Please note *not* eyelet holes, hence, if necessary, the tension can be adjusted instantly.

Dr. C. H. EVERS of North Seaton has been appointed to the Commission of the Peace for the county of Northumberland.

[11] *Healthy Boyhood*. By Arthur Trewby, M.A. Privately printed. (Copies can be had from the author, Fenter House, Hampstead Heath, London. 1s. 6d., post free.)

[12] *The Yearbook of Pharmacy, 1907*. Edited by J. O. Braithwaite; with the Transactions of the British Pharmaceutical Conference in Manchester, July, 1907, edited by E. Saville Peck, M.A., and Edmund White, B.Sc., F.I.C. London: J. and A. Churchill. 1907. (Demy 8vo, pp. 550. 10s.)

[13] *The Ritual of Temperance and Bodily Cleanliness*. By Dr. H. C. Pattin, M.A., D.P.H., M.O.H. Norwich. Norwich: Goose and Son. London: Simpkin, Marshall, and Co. (Cr. 8vo, pp. 161. 1s.)

PUBLIC HEALTH OF LONDON.

II.

In a previous article attention was specially directed to the statistics with regard to infant mortality given in the report for the year 1906 of the medical officer to the Public Health Committee of the London County Council. We may now refer to the section of the report dealing with epidemic diseases.

Epidemic Diseases.

The number of deaths in the administrative county of London from the principal epidemic diseases, namely, small-pox, measles, scarlet fever, diphtheria, whooping-cough, typhus, enteric fever, pyrexia, and diarrhoea, during 1906 (fifty-two weeks) was 9 047, giving an annual death-rate of 1.93 per 1,000 persons living.

Small-pox and Vaccination.

There were no deaths from small-pox in the administrative county of London during the year 1906; 3 deaths, however, were attributed to cow-pox. So far as could be ascertained, 34 cases of small-pox occurred in London in 1906.

The following table shows the proportion of children born in each year who were not finally accounted for in respect of vaccination. It will be observed that this number has, since 1893, been gradually decreasing.

London Vaccination Returns.

Year.	Children not Finally Accounted for (including Cases Postponed) per Cent. of Total Births.	Year.	Children not Finally Accounted for (including Cases Postponed) per Cent. of Total Births.
1872	8.8	1889	11.6
1873	8.7	1890	13.9
1874	8.8	1891	16.4
1875	9.3	1892	18.4
1876	6.5	1893	18.2
1877	7.1	1894	20.6
1878	7.1	1895	24.9
1879	7.8	1896	26.4
1880	7.0	1897	29.1
1881	5.7	1898	33.0
1882	6.6	1899	27.7
1883	6.5	1900	25.8
1884	6.8	1901	24.1
1885	7.0	1902	21.3
1886	7.8	1903	20.7
1887	9.0	1904	19.1
1888	10.3		

The percentage of children born who were exempted by "conscientious objection" certificates since and including 1898 has been as follows: 1898, 1.4; 1899, 1.0; 1900, 1.0; 1901, 1.1; 1902, 0.8; 1903, 1.0; 1904, 1.1.

Measles.

The deaths from measles during 1906 (fifty-two weeks) numbered 1,909, as compared with 1,709 in 1905. With regard to the distribution of measles mortality throughout the year 1906, the highest death-rate was obtained in Finsbury (1.27), and the lowest in the City of Westminster (0.10). The death-rates from this disease in the four quarters of 1906 were as follows: First quarter, 0.58; second quarter, 0.65; third quarter, 0.22; and fourth quarter, 0.18 per 1,000 persons living.

The question of the reduction in fatality which might result from the better nursing of children suffering from measles is discussed. Dr. Davies endeavoured to secure for this purpose in Woolwich the assistance of the District Nursing Association, but their staff was insufficient for the purpose, and he writes that "many lives would doubtless be saved if all cases of measles which were seriously ill could have skilled nursing, but the Borough Council has power neither to provide such nursing nor even to contribute to the Nursing Association and help them to provide it." In this connexion, the question may be considered whether the "medical assistance" in Section 77 of the Public Health (London) Act, which a sanitary authority, with the consent of the Local Government Board, may provide for the poorer inhabitants of their district, includes the assistance of a sick nurse. Such assistance would be especially valuable in cases where lung complications arise. This is an especially frequent cause of mortality in cases of measles, amounting, as Dr. Newman shows for Finsbury, to 85 per cent. of the cases in which death occurred.

Reference has in former reports been made to the observations in Woolwich as to the value of the immediate closing of classes on the appearance of measles, for which purpose the borough was divided into two nearly equal districts, in one of which closure of classes in infant schools was resorted to immediately a case of measles was notified, and in the other only the ordinary measures of excluding children coming from infected homes were adopted. Comparing the prevalence of measles in each of these districts in the four years 1903–6 with the prevalence in an antecedent period, 1901–2, he finds that "although closure of classes appears to have had the effect of greatly limiting the increase of measles in the Eastern district compared with the Western, it must be admitted that the total result of closure has been much less than might have been hoped for," and he attributes this to the fact that "there is no satisfactory system by which a teacher becomes aware of the cause of the absence of a pupil." Commenting on the smaller mortality from measles in Woolwich in later years, he attributes this result to a more hygienic treatment of children who are attacked as the result of advice which is given to the parents by the sanitary authority. There is some indication that measles is now being regarded more than formerly by parents as a serious malady, and Dr. Dudfield states that it was found in Kensington that a larger proportion of the cases was attended by a medical man.

Dr. Kerr's report shows that 52 classrooms and 15 departments in the infants' departments of provided and non-provided schools were closed during the year on account of measles prevalence.

Scarlet Fever.

The cases of scarlet fever notified during 1906 (52 weeks) numbered 20,329, compared with 19,461 in 1905. The number of deaths registered from this cause was 533 in the year 1906, compared with 549 in 1905.

The scarlet fever death-rate in 1906 was highest in the City of London (0.33), and lowest in Stoke Newington (0.02). The scarlet fever death-rates obtaining in London in the four quarters of the year 1906 were as follows; First quarter, 0.11; second quarter, 0.12; third quarter, 0.09; fourth quarter, 0.13 per 1,000 persons living.

Examining the death-rate from scarlet fever according to age groups, it is seen that, compared with the case-rates of 1905, there was a decrease in 1906 at each age under 5 years and an increase at the ages of 5 years and upwards.

Diphtheria.

The cases of diphtheria (including membranous croup) notified in 1906 numbered 8,045, compared with 6,482 in 1905. The number of deaths registered from this cause was 691 in 1906, compared with 546 in 1905.

The diphtheria death-rate in 1906 was highest in Greenwich (0.28), and lowest in Stoke Newington (0.08). The diphtheria death-rates in each of the four quarters of the year were as follows: First quarter, 0.16; second quarter, 0.12; third quarter, 0.13; fourth quarter, 0.18 per 1,000 persons living.

With reference to the relation of school attendance to the spread of infection, mention is made of the accounts given in the annual reports of borough medical officers of the occurrence of outbreaks of diphtheria among school children; in all such instances the Klebs-Loeffler bacillus was detected in some of the children.

Dr. Jackson recorded such occurrences in three public schools and one private school in Fulham. In all either cases of clinically recognizable diphtheria or children harbouring the diphtheria bacillus were subsequently discovered. Only in the case of the last school was closure resorted to. In Chelsea, cases of diphtheria occurred among the scholars of one school, which was eventually closed on

April 5th until after the Easter recess, but on the reassembling of the children other cases occurred among them. On November 14th, 115 of 550 of the boys in the Duke of York's school were found to be harbouring the diphtheria bacillus. Sore throat in an epidemic form had been prevalent among the boys since soon after the summer vacation, and definite cases of diphtheria were discovered on November 4th, leading to bacteriological examination on 14th. The boys harbouring the bacillus were each injected with 1,000 units of antitoxic serum, and later the remaining boys, 435 in number, were injected with half this amount. Of the 115 boys, 10 subsequently developed diphtheria, and of the 435 boys 1 was subsequently attacked. Subsequent examinations were made of material from the throats of the 115 boys. On November 28th, 24 were still harbouring the bacillus, and subsequent examinations showed that the number thus affected fell to 7, 7, 5, 3, and 1. In Westminster a number of cases of sore throat occurred among the children attending a French Protestant school. Dr. Allan gives an interesting account of the outbreak, showing the number of cases which could be attributed to infection from person to person. The result of bacteriological examination was that the Kleba-Loeffler bacillus was harboured by 1 child, and the Hoffmann bacillus by another. In Lewisham the infant department of the one school was closed for a few days on account of diphtheria. In Woolwich a number of cases occurred among the children attending two schools. In the former exclusion of children on bacteriological grounds was resorted to. In the latter the same course was adopted, but eventually the whole school was closed for two weeks and the infant department for four weeks. In the reports relating to other districts similar accounts are given of the occurrence of cases of diphtheria among children attending particular schools. In Holborn the infant department of a school was affected. In Lambeth, after an attempt to deal with an outbreak in a school by exclusion of particular scholars, the school was closed; prevalence of diphtheria among the children of an infant school was dealt with by exclusion. In Wandsworth diphtheria was prevalent among the children of a school, which had eventually to be closed. There was also prevalence of diphtheria in the children of the Hambro' Orphanage and the St. Anne's Hill Home, Wandsworth, both residential institutions. Dr. Caldwell Smith gives an interesting account of the persistence of the disease in the Hambro' Orphanage. In connexion with the outbreak among the children of the school which was closed, Dr. Caldwell Smith states that

> A review of the whole of the circumstances in connexion with this outbreak only emphasizes the fact which has been previously noted, that carrier cases, or cases attending school with the diphtheria bacillus present, with very few clinical symptoms, invariably cause a serious outbreak of the disease, more especially if the carrier case or cases attend infants' departments of public schools. One feature of this outbreak, which has also been previously observed, is the association of the true bacillus and Hoffmann's bacillus. All the facts which have been observed in this outbreak appear to point to a distinct relationship between these two bacilli; either they are of the same species or the Hoffmann bacillus renders the affected individual more liable to infection by the true bacillus.

He thinks, moreover, that the children were rendered susceptible to infection by a specific germ through the flooding of the basement of the school, the result of a stoppage of the main drain.

Bacteriological examination of "contacts" is discussed in a few of the reports. Thus, Dr. Brown has continued in Bermondsey the system which he instituted some years ago. Dr. Davies states that no "contact" in Woolwich is allowed to return to school except after bacteriological examination, and Dr. Annis shows in a number of instances in Greenwich the relation of bacillus carriers to certified cases of diphtheria. In this connexion the London County Council in July adopted the following report and resolution submitted by their Education Committee:

> Our attention has been drawn to the difficulties which have arisen in districts where diphtheria has been prevalent, consequent upon children who have been excluded from school being certified as free from disease by medical practitioners. With a view, therefore, to dealing more thoroughly with the disease, the various medical officers of health were asked to adopt the temporary arrangements being carried out in Greenwich in the event of there being an outbreak of diphtheria in their respective districts. These arrangements involve that any children excluded from school on account of diphtheria or sore throat during the prevalence of the disease should not be readmitted without a certificate from the medical officer of health that they were free from infection.
>
> As a result of a conference of medical officers of health held on April 27th, 1906, the undermentioned resolutions were passed:
>
> That in the opinion of this branch (Incorporated Society of Medical Officers) it is not possible, in the absence of a bacteriological examination, to decide that a child is free from the infection of diphtheria. In the event of the prevalence of diphtheria in any district, any child excluded for sore throat should not be readmitted to school without a medical certificate of freedom from infection, based on a bacteriological examination.
>
> We are of opinion that it would greatly strengthen the hands of the various medical officers, and do much to reduce the present risks of infection, if authority were given for the refusal, during the presence of diphtheria in any district, of the readmission of children excluded from school as suffering from diphtheria or sore throat until they have obtained a medical certificate of freedom from infection, based on a bacteriological examination. We are informed that such certificate can be given either by general practitioners or by the medical officer of health, and would be free from the dangerous errors of medical certificates given merely on the inspection of the children. We recommend:
>
> That the Education Committee be authorized to refuse, during the presence of diphtheria in any district, readmission to school of children excluded on account of diphtheria or sore throat until such children shall have obtained a medical certificate of freedom from infection, based on a bacteriological examination.

Whooping-cough.

The deaths from whooping-cough in the year 1906 numbered 1,226, as compared with 1,487 in 1905. The whooping-cough death-rate in the Administrative County in 1906 was highest in Finsbury (0.56), and lowest in Hampstead (0.02). The whooping-cough death-rates in each of the four quarters of the year 1906 were as follows: First quarter, 0.39; second quarter, 0.34; third quarter, 0.16; fourth quarter, 0.15 per 1,000 persons living.

Typhus Fever.

There were no deaths from typhus registered in the Administrative County of London during 1906, and 7 persons were certified to be suffering from typhus.

Enteric Fever.

The number of cases of enteric fever notified in the Administrative County of London during 1906 (fifty-two weeks) was 1,600, and the deaths from this disease numbered 260. The enteric fever death-rate for 1906 was highest in Finsbury (0.14), and lowest in Chelsea and Stoke Newington, where no deaths were registered. The death-rates from enteric fever in London in each of the four quarters of the year were as follows: First quarter, 0.04; second quarter, 0.04; third quarter, 0.06; fourth quarter, 0.09 per 1,000 persons living.

Diarrhœa.

The deaths in the Administrative County of London attributed to epidemic diarrhœa and infective enteritis during 1906 (fifty-two weeks) numbered 2,872, while 1,635 deaths were attributed to diarrhœa and dysentery. In the year 1906 the diarrhœa death-rate was highest in Poplar (1.71), and lowest in Hampstead (0.26). The diarrhœa death-rates in London in each of the four quarters of the year 1906 were as follows: First quarter, 0.14; second quarter, 0.17; third quarter, 2.96; fourth quarter, 0.49.

THE fourth International Congress of Medical Electrology and Radiology is to be held at Amsterdam from September 1st to 5th of the present year. Among the questions on the programme for discussion are the diagnostic and therapeutic uses of the *x* rays, the study of different radiation, and medical electro-technique. An exhibition of new or modified apparatus for clinical and laboratory use will be held in connexion with the Congress.

A LABORATORY of hygiene has been founded in Paris by the Workmen's Health and Safety Association for the purpose of giving associations and syndicates information on matters relating to professional hygiene. The Director is Professor Marie, Physician in Chief to the Villejuif Asylum.

ARMY MEDICAL REPORT FOR THE YEAR 1906.*

The forty-eighth annual report, as explained in a letter of the Director-General, Army Medical Service, to the Secretary of State for War, departs from the plan of its forty-seven predecessors. As such it is a great advance, for, while avoiding redundancy, the very interesting new matter introduced lessens by judicious rearrangement the overweight of the letterpress, and avoids discussion of figures and facts recapitulated in tabulated abstracts. The insertion of some new diagrams and charts, showing at a glance various statistical ratios concerning the incidence of certain leading diseases in our own and in great foreign armies, is an excellent feature. We welcome this innovation, for in this respect our old reports were inferior to the French, and there can be no doubt that statistics so conveyed through the eye stick in the mind and memory much better than by mere letterpress and reading.

Grouping of Areas.

This is an important new departure; stations and commands are still discussed in detail, but the grouping into larger areas gives a far more comprehensive view of the incidence of foreign service on the health of our troops. The areas are five in number: (1) United Kingdom, (2) Mediterranean Basin, (3) South Africa, (4) India, (5) scattered stations.

Taking the ratios of the United Kingdom as a basis of comparison, the broad effects of foreign service on the health of our troops is seen in the following table:

Table to Show Effects of Foreign Service.

1905. Troops Serving—	Ratio per 1,000 of Strength. Admitted	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly Non-Effective from Sickness.
At Home	446.70	2.92	—	14.40	24.66
Abroad	734.48	8.30	25.00	8.90	43.00

This table shows that on foreign service, admissions and constantly sick are nearly doubled, and the deaths almost trebled; but the final invaliding is greatest at home, because there the ultimate discharge of unfits must necessarily take place. The foreign areas slumped together in this table work out very differently separately; so regarded, the South African area is the healthiest, being inferior to the Home in the ratio of deaths (4.28); second comes the Mediterranean, but with a heavy constantly sick ratio of 33.99, and although the mortality (4.07) is small, there is an enormous home invaliding of 25.65, the result of the intractable and protracted sequela of Mediterranean fever. Indeed, the Mediterranean invaliding almost rivals that of India (28.37), and in final discharges exceeds it (9.89 to 9.39); third, are the scattered stations, with heavy ratios, chiefly from malarial fevers contracted in such places as the Straits Settlements Mauritius, West Africa, etc. Lastly comes India, as usual doubling the Home admissions and constantly sick, with more than three and a half times the mortality (10.81).

Plates and Charts.

These are nine in number. Plates 1 and 2 give the curves in the ratios of admissions, constantly sick, invaliding, and deaths in our army for the past sixteen years. Since then, there has been a marked continuous though variable fall in admissions from 1,060 to 446.7 per 1,000 in 1906, accompanied also by a corresponding fall in other ratios. This gradual fall largely consists in a great decrease of venereal and general diseases, probably from greater temperance, and better conduct among the men, which again may be the result of more careful selection of recruits, better education, and the influence of various agencies working to improve the daily life of the men in camp and quarters. But beyond all these is the great advance of sanitary and medical science, together with the higher regard paid by all ranks to medical advice. It must not, however, be forgotten that during a few years past the system of treating slight cases in barracks has almost halved the hospital admissions. Plates 3 to 9 are of very great interest, and are consolidated for the purpose of this review, into the following table:

* Wyman and Co., Limited, Fetter Lane, E.C. Price 3s. 3d.

Comparative Health Statistics of Various Armies; Admissions and Death Ratios per 1,000 of Strength.

—	United Kingdom, 1906.	France, 1904.	Germany, 1903-4.	Austria-Hungary, 1904.	United States, 1903.	Russia, 1904
All diseases	446.7	660.0	605.2	636.0	1,250.28	324.2
Deaths do.	2.92	3.1	1.9	2.12	6.14	3.20
Enteric fever	0.6	14.1	0.69	1.6	3.57	8.8
Deaths do.	0.09	2.04	0.11	0.24	0.30	0.81
Tubercle of lung ..	2.4	5.3	1.5	1.0	4.72	2.7
Deaths do.	0.23	0.56	0.11	0.12	0.36	0.55
Cardiac affections ..	7.3	2.6	3.5	1.9	3.58	2.4
Deaths do.	0.37	0.07	0.03	0.03	0.09	0.06
Venereal diseases ..	81.8	63.6	19.8	66.6	172.72	44.7
Deaths do.	0.03	0.04	0.03	0.00	0.04	0.01

The enormous admission-rate for all diseases in the United States compares badly with the Russian army, but must not be assumed as representing the actual healthfulness of the two armies; so much depends upon military custom and regulations, that until these are known a contrast cannot be properly made. For instance, in our own and the French army we know that a large percentage of the total sick are treated in barracks; whereas, in the United States army, "the admissions include all soldiers who are excused from any part of their military duties," thereby immensely swelling the hospital admissions; the Americans thus stick to the old time rules in our own army, which regarded sickness in a soldier from a disciplinary point, as a dereliction of duty, to be sternly met by the axiom—"duty or hospital"; no middle course.

France has the greatest number of cases of enteric fever and pulmonary tuberculosis, but we have a bad eminence under cardiac affections. The question remains, can we fairly compare and contrast the vital statistics of voluntary and conscript armies? In many respects they differ, in pay, in individual freedom, etc. Again, are "hopeless cases" retained in military institutions as largely in conscript as in voluntary armies?

Medical Examination and Physical Training of Recruits.

The new volume presents these important matters with much greater fullness than formerly. Recruiting is now conducted more uniformly than of old; the portals of admission into the army are more carefully guarded against bad characters and those physically unsound; old recruiters, indeed, assert the inquiry into the antecedents of recruits has become somewhat injudiciously inquisitorial.

Too rigid rules in first selection are apt to defeat their end by excluding on some technical point really good recruits; they, of course, largely increase primary rejections, but no doubt decrease the numbers at the secondary weeding out within three months.

The rules for rejections on the score of defective teeth following the Boer war were unreasonably severe, and have since been modified; though the supply of dentures to soldiers has proved a costly failure, strictly conservative dentistry, in the way of stopping teeth, etc., has been successful. So, also, better rules are now followed in determining the defect of "flat feet," recognizing that it is not the relative lowness or highness of the instep that affects marching power, but the strength of the arch itself.

Some very important modifications were made in 1906 in the physical training of recruits, with the view of making the exercises and drill less trying and more progressive, and thus lessening the risk of cardiac breakdowns.

Invaliding.

The short report on invaliding is much to the point. It discusses how far the civil death-rate may be increased, or the military lowered, by the discharge of soldiers suffering from "hopeless" maladies. It recognizes that the causes of invaliding in young soldiers should in many cases be found in the recruiting rooms, but admits the extreme difficulty in detecting them there.

Enteric Fever.

The incidence of this disease, according to age and length of service, is suggestively discussed, and illustrated by charts and diagrams. The immunity undoubtedly acquired as the effect of a first attack suggests the following practical issue:—"Instead of the slow and expensive process of protection by natural infection, we should employ the more rapid and safer process of artificial protection which now seems available."

Health of Troops in the Grouped Areas.

The usual detailed account of stations within these areas are given, from which we make a few extracts:

Many of the barracks in the smaller stations at home are declared to be insanitary and entirely out-of-date, but they would cost a great deal to replace.

Under Gibraltar it is reported: "It appears probable that the rapid disappearance of Mediterranean fever from Gibraltar, which commenced in 1885, was intimately associated with the exodus of infected goats from the Rock."

Under Malta, similarly: "It is evident that to banish Malta fever from our soldiers and sailors stationed at Malta all that is required is to banish goats' milk from their dietary. This was done in June, 1906, with the result that the cases of Malta fever dropped to one-tenth of what would have been their normal number. There is therefore reasonable hope that Malta fever will now disappear from the garrison in Malta, and some 80,000 days of illness be blotted out from the yearly records of the army and navy."

This is indeed a real triumph in preventive medicine, following the discovery by the Commission—mainly of army and navy medical officers—of the *Micrococcus melitensis* in goat's milk.

The Principal Medical Officer in South Africa reports regarding the etiology of enteric fever there that, "No facts have come to light which help to elucidate in any way the causation of the disease:" but the measures adopted against its spread were "directed on the assumption that the disease is highly contagious, and measures for early isolation and disinfection were rigidly enforced."

In India, sanitary organization of the army is being steadily developed. The health of particular stations is now estimated by percentages of constant sickness, thus: 5 per cent. "good," 5 to 7.5 "fair," 7.5 to 10 "indifferent," and all above 10 per cent. "bad." Excluding venereal disease, the chief causes of sickness and mortality in India are malarial, simple continued, and enteric fevers. The Committee appointed to consider the latter fever in a preliminary report provisionally classify the means of spread of enteric fever as follows: (1) Water epidemics; (2) milk epidemics; (3) infection by shellfish from sewage beds; (4) infection by food and drink contaminated by dust, flies, etc.; (5) contact infection direct and indirect by latrine infection. A Subcommittee gives an official definition of enteric fever, shortly, as follows: "Enteric fever is a specific generally continued fever due to infection by *B. typhosus* and *B. paratyphosus*." This at present represents the attitude of medical officers in India towards the causation and spread of the disease.

The campaign against the mosquitos and their larvae, by organized "mosquito brigades," goes on incessantly as the chief means of combating malarial fevers.

The abstracts and tables at the end of the report are of the usual voluminous and exhaustive character.

THE WEST AFRICAN MEDICAL STAFF.

THE winter dinner of the West African Medical Staff took place on January 29th at the New Gaiety Restaurant, London. There was a large attendance of members, including Dr. PROUT, C.M.G., of the Liverpool School of Tropical Medicine, late P.M.O. Sierra Leone, who presided; Dr. Rutherford, S.M.O., Gold Coast; Dr. Chichester, S.M.O., N. Nigeria; Dr. Cameron Blair, S.M.O., S. Nigeria; and others. Among the guests were Sir P. Manson, K.C.M.G.; Mr. Beddoes, F.R.C.S.; Mr. J. Robinson, of the Colonial Office; and Dr. Daniels, of the London School of Tropical Medicine. Letters of apology were received from Mr. R. Antrobus, C.B., Assistant Under-Secretary of State for the Colonies; Sir Alfred Jones, K.C.M.G.; Sir Rubert Boyce, and others.

Dr. PROUT, in proposing "Success and Prosperity to the West African Medical Staff," said that he was sure that in the midst of these luxurious surroundings those present would remember their brother officers who were bearing the white man's burden in the unhealthy wilds of West Africa. He then briefly reviewed the changes which had taken place since he first went out to West Africa, and drew attention to the vast developments in tropical science of late years, the greater part of which were due to the ability, the dogged determination, and the far-sightedness of that veteran of tropical medicine, whom they were proud to have as an honoured guest that evening, Sir P. Manson. But up to the present there had been one thing lacking, the feeling of comradeship and *esprit de corps*, so essential to the welfare of any body of men, scientific or otherwise, who were bound together by a common training, common knowledge, and common interests. This was possibly due mainly to the geographical conditions of West Africa, and he believed that these dinners would do much to foster that feeling of union and cohesion which was so necessary. It was his conviction that whatever was conducive to the efficiency of the medical staff would undoubtedly be for the benefit of the general community who live under the unhealthy conditions of West Africa, and he was sure that he was speaking for all of them when he said that they would welcome any improvement of this nature, not for merely selfish and personal considerations, but because of the great gain to health and sanitation which would result.

The health of the guests, coupled with the name of Sir Patrick Manson, was briefly proposed by Dr. RUTHERFORD, S.M.O., Gold Coast.

Sir P. MANSON, in reply, expressed the great pleasure he had at being present, and considered that such meetings would be of great benefit to the West African Medical Staff, and would be conducive to a feeling of union which would strengthen their hands for good. He was aware that there was a feeling that they had not always received that support in sanitary matters to which they were entitled. This was not due to any want of sympathy on the part of the Colonial Office, which was fully alive to the value of their services, and was anxious to assist in forwarding sanitary reforms, but was perhaps to be attributed to local conditions. He realized that it was desirable that some form of organization should be devised which would enable them to bring forward their views in a more direct manner, but it was difficult to see how this could be done at once, and it was necessary to proceed slowly and cautiously. He hoped that ere long it would be found possible to find some means of surmounting these difficulties. Efficiency in the West African Medical Staff was especially desirable at the present time. They were at the beginning of new developments, of a new pathological era for West Africa which the political changes of recent years, increasing intercommunication, and, above all, the new railways, were sure to bring about. Diseases formerly limited in their area would become diffused and widespread, and diseases hitherto unknown there—for example, plague and cholera—would be introduced.

INTERNATIONAL LARYNGO-RHINOLOGICAL CONGRESS.—The first International Laryngo-Rhinological Congress (Turck-Czermak Jubilee) will be held in Vienna, April 21st to 25th, under the presidency of Professor Chiari. The following reports will be presented: Sir Felix Semon, on the general treatment of local lesions of the upper air passages; Professor B. Fraenkel (Berlin) and Dr. Lermoyez (Paris) on laryngology and rhinology from the standpoint of general medical education and examination in these subjects in different countries; Dr. Gleitsmann (New York) and Dr. Heryng (Warsaw), on the treatment of tuberculosis of the upper air passages; Dr. Burger (Amsterdam) and Professor Gradenigo (Turin), on the diagnostic and therapeutic importance of the α rays and radium in laryngology and rhinology; Professor Onodi (Buda-Pesth) and Dr. Kuhnt (Konigsberg) on the connexion between diseases of the nose and post-nasal space with morbid conditions of the eye; Dr. Jurasz (Heidelberg) on international laryngo-rhinological congresses. Among the numerous communications to be presented are the following: Dr. Heryng, on inhalation therapy; Dr. Denker (Erlangen), the operative treatment of malignant tumours of the nose; Dr. Nageli-Akerblom (Geneva), the treatment of throat diseases in Geneva in 1700; Dr. Emil Glas and Dr. Emil Kraus (Vienna), laryngeal tuberculosis and pregnancy; Professor Marquis (Chicago), enucleation of the tonsils; Dr. Kanasugi (Tokyo), laryngeal lesions in beri-beri; and Dr. Moure (Bordeaux), tracheotomy and thyrotomy. An exhibition will be held in connexion with the Congress. The Secretary is Professor M. Grossmann, IX Garnisongasse 10, Vienna.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 269.*)

Antivivisectionist Testimony.

Evidence of the Hon. Stephen Coleridge (continued).

Asked if he agreed that the Home Office had to carry out an Act of Parliament as they found it, whether they liked it or not, he said he supposed that was so. Asked if he knew that as a matter of legal construction not even expressions used in Parliament could be referred to to gather the intention of the Act, and that one could not refer to the debate in Parliament as throwing any light on the meaning of words used in an Act, Mr. Coleridge replied by asking, "Is that so?" It was further pointed out that still less could one refer to the report of a Commission, which might or might not have had anything to do with the foundation of the Act. The witness replied that he thought extraneous considerations were allowed. For instance, he had there Maxwell's *Interpretation of Statute*, the fourth edition, page 30:

The liberal construction of an Act of Parliament has, in general, but prima facie preference. To arrive at the real meaning it is always necessary to get an exact conception of the aim, scope, and object of the whole Act; to consider, according to Lord Coke (Haydon's Case, 3 rep. 7 *b*; 10 rep. 73 *a*): (1) What was the law before the Act was passed. (2) What was the mischief or defect for which the law had not provided. (3) What remedy Parliament has appointed. (4) The reason of the remedy. According to another authority (per Lord Justice Turner, in Hawkins *v.* Gathercole, 6, De G. M. G. 1), the true meaning is to be found not merely from the words of the Act, but from the cause and necessity of its being made, which are to be ascertained not only from a comparison of its several parts, but also from extraneous circumstances.

Therefore, he thought, one might call the report of a Royal Commission an extraneous circumstance which ought to be taken into consideration.

The Chairman: You may think that is good enough for us poor Commissioners, but in a court of law I think you would find some difficulty in making that assertion?—It is Lord Justice Turner.

He never said that you can interpret a statute by the report of a Commission?—No, he does not say so, and I do not say so. He says that extraneous circumstances may be taken into account.

Sir Mackenzie Chalmers: Is not that when the language of the Act is ambiguous, and not when the meaning of the Act is clear?—"We have therefore to consider not merely the words of this Act of Parliament, but the intent of the Legislature, to be collected from the cause and necessity of the Act being made, from a comparison of its several parts and from foreign (meaning extraneous) circumstances so far as they can justly be considered to throw light upon the subject." Those are Lord Justice Turner's exact words. I think that the Royal Commission does throw light upon the subject, so far as I can see. It is not very important.

On its being put to him by Sir Mackenzie Chalmers that the department was under this difficulty, it never could reply—no officer of the department who was attacked could ever reply, Mr. Coleridge said he did not attack any individual in the Office, and had never done so. He was reminded that at the time when Dr. Poore was Inspector, he and his Society had attacked him, as Inspector, and had raised various points about his inspection and his administration of the Act. He answered, "Very likely, about his reports." On its being put to him that when Dr. Poore became a free man he retaliated, the witness said he did not think that was so. He thought that his making that speech, so soon after he was relieved from the trammels of office, showed that he must have had a bias while under the trammels of office; besides, he failed to see why criticism by his Society upon the Inspector should produce any personal animosity of that kind, or why it should find expression in such violent language. Asked how many letters to surgeons he had written after Dr. Crile's experiments, he said he wrote to a great number. The vast majority did not answer. Many more did not answer than did. He really forgot how many. Asked if he got answers from seven, he said he wrote to many more than seven, certainly. Asked if there were not some subsequent correspondence from some of them—Mr. Timothy Holmes and Mr. Owen—he said, "I dare say there was." The examination proceeded:

For instance, in the *Times* of March 15th, 1902, from Mr. Owen?—Yes, there was one letter to the *Times* I remember now.

Shall I read it?—If you read his letter, I hope you will read my reply, if you have it.

Sir Mackenzie Chalmers said this was from the *Times* of March 15th, 1902:

"*Antivivisection Methods.*—To the Editor of the *Times*.—Sir,—When Mr. Stephen Coleridge asked me some time ago if it was true that at St. Mary's Hospital operations were performed on patients under incomplete anaesthesia, I at once sent him a reply in the negative. For, knowing his methods, I was afraid lest he was dressing up some horrible bogey, wherewith to shock a generous but emotional public, at the time when we were raising money to finish our much-needed Clarence wing. And, standing as it did, my reply was perfectly correct. But when I find Mr. Coleridge using it in support of his attack upon men of science, who, in a humane and lawful manner, are doing a necessary piece of distasteful work, of which Mr. Coleridge and I, and his and mine, and the whole community, may reap incalculable benefit, I must beg you to allow me to qualify it. For closing a cleft in a child's palate, and in certain grave operations on the tongue and throat, to have the patient in complete anaesthesia would be to invite disaster. But why should it be necessary to spread out these hideous things before the public gaze?—I am, yours truly, Edmund Owen." To which you reply on March 17th, 1902: "Sir,—With regard to Mr. Edmund Owen's letter in the *Times* of to-day, I asked him a plain question and he gave me a plain answer. Now he says he wants to qualify that answer, and in qualifying it he states that he made it originally in the form he did for fear I should stop subscriptions to some ward they were building at St. Mary's Hospital! Mr. Owen's qualification of his original statement is that incomplete anaesthesia is employed in certain operations on the tongue and throat. The experiment of Dr. Crile I cited, and which took place under incomplete anaesthesia in Mr. Victor Horsley's laboratory, consisted in repeatedly crushing a fox terrier's paw. Mr. Victor Horsley and his friends are not likely to succeed in this controversy if they continue to enter the arena without previously consulting each other as to what they shall say.—Your obedient servant (signed), Stephen Coleridge."

Again, this was from the *Times* of March 17th, 1902:

Antivivisection Methods.—To the Editor of the *Times*.—Sir,—I see in a letter from the Hon S. Coleridge in your paper to-day that he quotes from one which I wrote to him some years since. Mr. Coleridge is a complete stranger to me; but he has sometimes written to me about hospital matters, and the sentence which he quotes was in reply to a letter in which he seemed to be labouring under the strange delusion that hospital surgeons (for what purpose I know not, but I supposed him to fancy that it was for purposes of experiment) were in the habit of performing operations while their patients were still conscious of pain. Now, I was a hospital surgeon for more than a quarter of a century, and have performed hundreds and witnessed thousands of operations. I never heard of a case in which the patient was operated upon while conscious of pain, nor can I perceive why the surgeon should so act, and so I told Mr. Coleridge. I have, as I say, no knowledge of this gentleman, and have no right to speculate on his motives for the attitude he assumes towards our hospitals, but it seems to me a mistaken and a mischievous one. The researches carried on in our hospitals (miscalled "experiments" by persons of Mr. Coleridge's views) have resulted in an immense saving of human life and human suffering, and anything that withdraws from our hospitals the public confidence and support appears to me a crime against humanity.—I am, Sir, yours faithfully, Timothy Holmes.

At a subsequent meeting of the Commission, Mr. Coleridge said he had the whole correspondence there now; he had a list of the eminent surgeons to whom he wrote, so far as he could make out: E. Owen, T. Holmes, E. Nettleship, T. Bryant, T. W. Nunn, T. Bond, Professor Schäfer, Wm. Allingham, Jonathan Hutchinson, Lord Lister, Sir H. Thompson, Mansell Moullin, Sir Victor Horsley, T. H. Openshaw, J. A. Kingdon, Noble Smith, Herbert Snow, M. F. Rees, G. D. Pidcock, J. May, T. J. Walker, G. W. Gosling, T. Walker, T. R. Jessop, J. A. Dearden, and S. F. Barber. He wrote to those himself. Of those, Nettleship, Nunn, Allingham, Moullin, Victor Horsley, Kingdon, Noble Smith, Rees, Pidcock, Gosling, and T. Walker made no reply. T. Holmes's reply was marked "Private." He asked Lady Grove to write for him to Sir Frederick Treves, because she happened to know him; and Lord Harberton to write to Walter Tyrrell, because he knew him; and he had the replies forwarded to him from those two gentlemen. He had all the replies now. Asked if some of the people he wrote to afterwards protested, rightly or wrongly, against the use he had made of their letters, he said he did not think that was quite the way to put it. Asked if he wished to put in

any reply to Mr. Holmes's letter of March 17th, he said he wished to read his reply:

To the Editor of the *Times*.—Sir,—Mr. Timothy Holmes is entirely inaccurate in stating that my letter to him suggested that hospital surgeons operated on their patients under incomplete anaesthesia, and I ask him either to withdraw this inaccurate statement or to publish my letter, which will disprove it. Although a very august authority had informed me that hospital patients were operated upon under incomplete anaesthesia—that is, before the corneal reflexes were abolished—I did not believe it, and wrote to Mr. Timothy Holmes, hoping that he would authorize me to deny it, which he did.

On March 21st Mr. Holmes again wrote to the *Times*:

Sir,—I enclose a copy of the letter of Mr. S. Coleridge which he asks me to publish, and will leave your readers to judge whether I was inaccurate in saying that it suggests that hospital surgeons operate on their patients under incomplete anaesthesia; and then he enclosed my letter to him, which is as follows: "Dear Sir,—I have been recently informed on very high authority that surgeons now frequently perform severe operations on man under 'incomplete anaesthesia'—that is, while the eyelid still blinks when the eyeball is touched. As you may possibly be aware, I vehemently believe that animals are tortured in laboratories attached to our great hospitals, but I hesitate to accept this information charging our medical men with conveying the inhumanity of the laboratory into the hospital wards and operating theatre. I should be much obliged to you if you would tell me whether your experience leads you to endorse or deny this statement.—Very faithfully yours, Stephen Coleridge."

Mr. Coleridge said his comment on that letter was that his letter in no way suggested for a moment that he believed it; on the contrary, he said that he did not. Mr. Timothy Holmes wrote the following letter in the *Times* of March 27th, 1902:

Sir,—I judge by your leading article to-day that you think you have given sufficient space already to this topic; but I hope you will find room for these few lines (final I hope) to Mr. S. Coleridge.

Mr. Coleridge (see his letter, March 20th) charged me with being entirely inaccurate in stating that his letter—a copy of which you published on March 21st—suggested that hospital surgeons operated on their patients under incomplete anaesthesia. As a matter of fact, what I had said (see my letter of March 17th) was that he appeared to have laboured "under the strange delusion that hospital surgeons were in the habit of performing operations while their patients were still conscious of pain." And if this was not the meaning of his letter, what could it mean? It is quite true that he says he hesitates to accept the information given him on very high authority to this effect; but as he also says that he "vehemently believes" that animals are tortured in laboratories attached to our great hospitals, and talks of "our medical men conveying the inhumanity of the laboratory into the hospital wards and operating theatre," it is clear that he did believe it, else why write to me—a perfect stranger—and, as it now turns out, to many others equally strangers to him, to settle a question that any surgeon of his acquaintance could have answered at once? It is quite evident that he confounds "incomplete anaesthesia" with sensibility to pain, and that he had discovered the mare's nest which I alluded to. However, quite enough has been said about Mr. Coleridge and his opinions. I fully agree with the writer of your leader—that it is easy to attach too much importance to them; and, as far as the progress of physiology and medical science is concerned, I daresay they are negligible quantities. But at the present time our hospitals are seriously hampered for funds, and the misrepresentations of the antivivisectionists tend to frustrate our efforts to secure what is wanted. Only the other day a gentleman thus replied to the appeal from St. George's Hospital, which you, Sir, have so kindly supported: "It would be impossible for me to give to any hospital of which I know that part of its income is used, not for the relief of the poor, but for a purpose which I consider immoral and detestable—the vivisection of animals." I answered this gentleman, and so on?

Mr. Coleridge said he thought, if that letter was read and considered by the Commission, he was entitled to defend his entire conduct as regards the diversion of the hospital funds to schools licensed for vivisection. The Chairman said he did not see any object in going into it while they were talking about Mr. Timothy Holmes, unless he considered that he was attacked in any way. Sir Mackenzie Chalmers said he only read it for the purpose of showing that Mr. Timothy Holmes protested against the use made of his letters. The witness said that he did not answer that letter; it did not need any answer. It was self-evident that Mr. Holmes was wrong. The witness had never in his letters suggested anything of the kind that Mr. Holmes said he did. On the contrary, he said in his letter distinctly the opposite, and asked him to confirm his opposite view. There could be no difference as to what English meant. His letter meant one thing; Mr. Holmes said it meant another. The Chairman said he could not accept that general proposition upon a subject in which lawyers found great difference. Mr. Coleridge said he fell back on Bishop Butler, who said, "Words mean what they do mean, and not other things." He agreed that he did not solve the question what they did mean. Sir Mackenzie Chalmers said that as the foundation of his letter to those surgeons, Mr. Coleridge read part of the Home Office letter of September 2nd, 1899. He would rather have the whole letter on the notes. It was in reference to Dr. Crile:

Sir,—With reference to the sixteen experiments which were performed in this country by Dr. Crile, and to which you call the attention of the Secretary of State in your letter of May 18th last, I am instructed to say that before these experiments were sanctioned the Secretary of State was advised that they would be wholly free from pain, and that their object was to study the phenomena of shock after surgical operations in spite of anaesthesia. Their object, therefore, would have been frustrated if the animals had been allowed to suffer pain. On receiving your letter, the Secretary of State caused investigations to be made into these experiments, and the information he has received from competent persons, who either witnessed most of the experiments or have read the account of them, is to the effect that in no instance had the animals experimented upon been subject to pain. At the same time he caused inquiry to be made of Dr. Crile, from whom the strongest assurance has been received that "in the entire series of experiments no animal suffered pain." The use of the term "incomplete anaesthesia" has probably given rise to the misunderstanding. With regard to this, the Secretary of State is advised that there are various degrees of anaesthesia. In "complete anaesthesia" the narcosis is very profound, and the "reflex movements," that is, the involuntary movements in response to an external stimulus, are suppressed. One of the last of these reflex movements to disappear is the blinking of the eyelids when the surface of the eyeball is touched, thence called the "corneal" or "conjunctival reflex." But short of this is the condition termed by Dr. Crile "incomplete anaesthesia," in which the creature is quite insensible to pain, although the corneal and other reflexes can still be obtained. It is quite usual for even severe operations to be performed on man in this state of "incomplete anaesthesia." (I read every word of this so far.) Indeed, in many cases, complete anaesthesia could not be induced without great danger to life during the operation. But absolute freedom from pain exists, and the patients are wholly unconscious in this "incomplete anaesthesia." Under these circumstances the Secretary of State can find no reason to think that any offence has been committed against Section 3, Subsection (3) of the Act, which requires that the animal during the whole of the experiment shall be under the influence of some anaesthetic of sufficient power to prevent its feeling pain. I am, at the same time, to return the copy of Dr. Crile's work, and to thank you for having temporarily placed it at the disposal of the Secretary of State.—I am, Sir, your obedient servant, (Signed) HENRY CUNYNGHAME.

Mr. Coleridge said to that a reply, written by himself, was sent from his office on September 16th, 1899. Sir Mackenzie Chalmers said he had never found the last part of that letter. He thought he stopped at the word "obtained." The witness replied that he might have done so; he did not think so. After referring, he said he thought Sir Mackenzie Chalmers was right. He seemed to have left out the important item of it. Asked by Sir Mackenzie Chalmers whether, looking at it now, he did not think he would have saved correspondence with those men if he had set out rather more fully the Home Office letter, Mr. Coleridge replied that he gave them the actual words:

It is quite usual for even severe operations to be performed on man in this state of "incomplete anaesthesia,"

and he gave the definition that was given him—namely, that the corneal reflexes were abolished. In reply to a question by the Chairman as to the passage that was omitted in the letter sent to those gentlemen, he said he shortened it a little, that was all. Sir Mackenzie Chalmers said he shortened it by leaving out:

Indeed, in many cases complete anaesthesia could not be induced without great danger to life during the operation; but absolute freedom from pain exists, and the patients are wholly unconscious in this incomplete anaesthesia.

Those are the words which they would like to have seen in his letter to the surgeons. The witness said he quite admitted that. That was what he (Sir Mackenzie Chalmers) was told by his advisers. He was not in the least inclined

to place that advice before those surgeons. He wanted their independent view; he did not want their replies to be biassed by this advice from the Home Office. In reply to Sir Mackenzie Chalmers, who said he took a passage away from its context, and, perhaps unintentionally, rather altered the meaning of it, he said he did not think so. That was only the Home Office advisers. It was a complete statement:

It is quite usual for even severe operations to be performed on man in this state of incomplete anaesthesia.

That was what he wanted to know, whether it was true or false according to the advice of those great surgeons Mr. Coleridge proceeded to read a letter in reply to the one from the Home Office in which those advisers defined incomplete anaesthesia and complete anaesthesia.

Sir,—I showed your letter of the 2nd September to Mr. Coleridge yesterday at his country house, where he, unfortunately, is laid up, and he desires me to point out that the distinction you now draw between "complete" and "incomplete" anaesthesia cannot possibly be unknown to Dr. Poore, the Government Inspector. Yet the official makes the following statement in his last report: "In experiments performed under the licence alone, or under Certificate C, the animal suffers no pain, because complete anaesthesia is maintained from before the commencement of the experiment until the animal is killed." Mr. Coleridge therefore instructs me respectfully to inquire what is now the rule of the Home Office. Is complete anaesthesia permissible under licence alone, as Dr. Poore states in his report? The other matters contained in your letter will have Mr. Coleridge's attention when he is better.

The Chairman said he did not understand that Dr. Poore in that letter was drawing any contrast between complete and incomplete anaesthesia. The witness replied: Yes; he said so most distinctly. He used the words "complete anaesthesia," and defined it as follows:

The animal suffers no pain, because complete anaesthesia is maintained from before the commencement.

The Chairman said that meant that complete anaesthesia did produce it, but he was not contrasting complete with incomplete there. That was not the point he was on. Mr. Coleridge answered, No. The Chairman went on to say that, supposing he had used the words—

The animal was in a state of complete insensibility to pain,

that probably would have been expressing what he meant there. If he had been asked to define the difference between complete and incomplete anaesthesia, and whether the animals were always under complete anaesthesia in the strict sense of the word, or sometimes under complete anaesthesia without suffering pain, he might have given a different answer. The witness replied he thought he was entitled, when a Government Inspector who was their adviser, used the phrase "complete anaesthesia" as being his way of defining a condition without pain, to deduce that when he used the term "incomplete anaesthesia" he was defining a condition not without pain. The Chairman said he did not think he used it as a definition. He said that complete anaesthesia included a state of being without pain. The witness said he did not think he said that. The Chairman repeated that he did not think he was using it as a definition, adding that they seemed to be on very minute points with these verbal criticisms. Asked by Sir Mackenzie Chalmers if he was aware that Dr. Crile's experiments were most of them seen by Dr. Goodbody, Mr. Coleridge answered that he was not aware of it before. Asked if he saw a letter in the *Times* of March 13th, 1902, from Dr. Goodbody, who was present at the experiments and gave his account of them, the witness said, No; not that he could remember. Mr. Coleridge went on to say that he understood that one member of the Commission had a letter from other people, and had received evidence from other people who were present, all affirming that no pain was inflicted on the animals on the occasion. All he wished to point out to the Commission was this: There was no doubt that Dr. Crile in his own book admitted that when he applied flame to the dog's paw, as he said, "The animal struggled on the application of the flame." He admitted that it was not an English experiment, but he thought it was *ad rem* in this way, to show that Dr. Crile was a person who did not hesitate to inflict what in witness's opinion was torture upon animals. Under those circumstances, the whole book being before the Home Office when they received that letter of excuse, they ought to have taken into consideration what Dr. Crile did out of England. He placed that very experiment before the Home Office himself, and drew attention to the expression "flame was applied to the dog's paw." Asked by Sir Mackenzie Chalmers what he suggested that the Home Office could have done, Mr. Coleridge said his letter to them was before they consulted Dr. Crile as to what he had done; therefore, when they received his excuses they knew that he was a man who did torture animals, and his excuses were wholly incorrect, because he made a statement that was wholly false, showing that his evidence was not to be relied upon: first, because he was a man who did torture animals; and, secondly, because he was a man who, in his letter of excuse, was not a man incapable of making false statements. Sir Mackenzie Chalmers said that he called the witness's attention to Dr. Noel Paton's experiments on fasting, and it would only be fair if he read his own explanation in a letter written to Sir James Russell in response to a question as to how and why he performed these fasting experiments:

Dear Sir James Russell,—I suppose the experiments referred to by Mr. Thane in his letter of the 14th inst. are those published in the *Journal of Physiology*, vol. xix, p. 192 et seq. (1895-6). The experiments there described are upon the influence of fasting on the fats of the liver. I have always been most reluctant to inflict suffering upon animals, and before performing these experiments I gave them most careful consideration. I had already in 1888 studied the progress of a fast of thirty days undertaken by a Frenchman, Jacques, the results of which are published in the *Proceedings of the Royal Society of Edinburgh* in 1889. I found that Jacques throughout his fast suffered no pain or distress, except for a curious attack of gout in the middle of the period.

I had also read the accounts given by Professor Luciani of a similar feat undertaken by an Italian, Succi (Das Hungern), and the descriptions of the fasts of Dr. Tanner in America and of Cetti in Berlin. In none of these did the abstinence from food, though extending over prolonged periods, cause inconvenience or suffering. Further, it is well known that many warm-blooded animals undergo prolonged fasts voluntarily and without suffering. Among mammals the male fur seal, I am informed, remains on shore in the breeding season sometimes for one hundred days without eating. Among cold-blooded animals very prolonged fasts are undergone without suffering or impairment of function, for example, in the salmon, in fresh water. Food is simply required as a source of energy, and so long as the animal body is not depleted of its stored material there is no necessity of a supply of food from without. From these considerations it seemed evident that the experiments I proposed to perform were not in any sense painful, especially as the animals were kept warm and supplied with water throughout the period. I therefore did not think that they could be brought under the Act, and I did not apply for a certificate. Indeed I do not know what certificate would have covered them. For the purpose of my experiments more prolonged fasts were desirable, but my repugnance to inflicting even possible discomfort upon animals prevented my extending the period beyond the limit of four days. No one has a greater love of the lower animals than I have, and all through my physiological career I have never willingly inflicted pain. I am, yours very truly, (Sd.) D. Noel Paton.

Mr. Coleridge (who had complained that he had not been made acquainted with the letter previously) said he understood the case to be that Dr. Noel Paton said that he did not consider that these experiments were within the four corners of the Act at all. His answer was that if any one of the Commissioners starved his horse for four days he would be summoned by the Royal Society for the Prevention of Cruelty to Animals, and probably convicted and fined. The law of the land would call it cruel, and any magistrate in the country would call it cruel. Mr. Coleridge proceeded to refer to an experiment by G. N. Stewart recorded in volume xv of the *Journal of Physiology*.

Experiment 2. Bitch, 3,708 grams. 50 mg. curare subcutaneously. Artificial respiration. Exposed right internal jugular vein, right carotid artery and right vago-sympathetic nerve, below thyroid gland—carefully separated right vagus from sympathetic for some distance. Cannula in left external jugular vein.

There was no specific mention of anything in the way of anaesthetics, but 50 mg. of curare subcutaneously injected. This experiment was described as beginning at 2 2 in the afternoon, and it went on till 8 14, and the point he wanted to make was this: There were curious notes all along down the side. It had been going on since 2 o'clock, and at 6.51 there was a note at the side:

Curare action passing off; twitching of muscles.

It did not say anything more was done to the animal to stop those twitchings or to allay pain, which he presumed was beginning to be severe, or was severe all the time for all they knew; but at 6.53 "injected 25 mg. curare into blood," no doubt to keep the animal still. He did not know where the experiment was done. Dr. Stewart wrote several accounts of these experiments, and the difficulty was that he put at the heading of this paper, which contained a great number of them, "From Physiological Laboratories, Cambridge and Strasburg." As he did not say which were done at Cambridge, in England, and which were done at Strasburg, if he was convicted of cruelty, it was very easy to say that the pea at that time was under the Strasburg thimble, and not under the Cambridge one. Dr. Gaskell pointed out that if he looked at the end of that paper he would see a statement by Dr. Stewart on that subject. The witness in reply said, Yes.

The above paper is based upon experiments made by the author while holding the George Henry Lewes Studentship in the Physiological Institute at Strasburg. The results were embodied in a report to the Government Grant Committee of the Royal Society, dated March 22nd, 1892. The paper formed part of a thesis sent in for the Goodsir Memorial Prize in the University of Edinburgh, April 30th, 1892, of which an abstract was read before the Physiological Society, June 25th, 1892.

He said it again:

In all the experiments performed in the Physiological Laboratory at Cambridge, and in most of those done in the Physiological Institute at Strasburg, the animals were anaesthetized with choral, morphine, urethane, chloroform, or ether. When curare was given, it was generally in addition to one of these anaesthetics.

Generally, not always. "In all the experiments performed in the Physiological Laboratory at Cambridge, and in most of those done in the Physiological Institute at Strasburg, the animals were anaesthetized." What with? "Chloral, morphine, urethane, chloroform, or ether." When curare was given, "it was generally in addition to one of these anaesthetics." On the Chairman pointing out that if that statement was taken as a whole it meant that it was never administered without anaesthetics at Cambridge, Mr. Coleridge admitted that it was impossible to prove that any one of these experiments was not done at the Physiological Laboratory at Strasburg, but his point was that anybody who read the account of that experiment through would think—and he had been advised—that this was a most dreadful experiment. His chief point was that, even if this were done (as it was admittedly done somewhere) at Cambridge, this could be done under Certificate B with perfect legality. The initial operation was carefully described, and after that there was no further operation. They did not know whether the animal died or what happened. In reply to Colonel Lockwood, who asked whether curare was administered, according to the paper, alone or in conjunction with anaesthetics, the witness said that there was no mention of any other anaesthetic, but there was this general statement, which seemed to cover them all, in a sense. He admitted it was a covering statement. If it was said that an anaesthetic was used in all the experiments at Cambridge, he was not prepared to deny it. But he said that if the experimenter had Certificate B, as he presumed he had, he was only bound to use anaesthetics during the initial operation. The Chairman said that was not the point. Colonel Lockwood wanted to know whether curare was used without an anaesthetic. If curare was used at Cambridge, the statement was that an anaesthetic was used with it. The witness replied: "No; not necessarily during the period of observation." The Chairman said the witness seemed to be making too much of this, and trying to get more out of the statement than it would bear. Mr. Coleridge replied that Certificate B, as now issued by the Home Office, permitted of any amount of torture, and he cited this as an instance. The witness said his next point was this: Since he was there he had placed his Bill once more before his Committee, and he had incorporated the various little alterations that were suggested. For instance, he had incorporated in Clause 3 about inserting matters into the eye: "There shall not be applied to the eye of an animal by way of experiment any matter or substance" the words "calculated to give pain," which made it more what he meant it to mean. Then also, in deference to something that was said that in Clause 6 the names of the gentlemen who signed the certificates would not necessarily by law be published, he had inserted, after the words "Secretary of State," in the third line, "and three copies of each of the two certificates hereinafter mentioned made in support of the application for the said licence if so granted;" and also in line 31, after the word "reports," "and certificates" should be deposited. That incorporated what Sir Mackenzie Chalmers pointed out was an omission in the Bill. He laid it before his Committee with those alterations, and they passed it with their entire approval. Then there was an allusion to the picture of a dog at Khartoum. Sir Mackenzie Chalmers said he had not seen it so he had brought it (producing it). Sir John McFadyean asked whether that picture was exhibited in order to convince the Commissioners that the dog must have suffered pain. The witness replied that he would not care to have any dog that belonged to him reduced to that condition. He said it was a condition of suffering certainly. To the ordinary eye it was; it might not be so. Asked if as a layman he would admit that there were absolutely painless diseases which reduced dogs to such a state of emaciation, he said he did not know. He should himself say, as a layman, that evidence might be brought before the court that it was a perfectly painless condition by experts. That would be for the judge and jury to decide. Asked by Dr. Gaskell if emaciation without pain was not the characteristic of sleeping sickness, he said he did not know. In reply to Sir John McFadyean, who said that it did not, as it stood, prove that this animal suffered, he said he did not say it did. Sir Mackenzie Chalmers asked with reference to his statements about Sir Victor Horsley if he was aware that Sir Victor Horsley applied to the Home Office to be allowed to perform certain experiments with regard to a disease caused by *Filaria sanguinis hominis* which only arose at night time; and he asked, therefore, to be allowed to experiment outside laboratory hours, the witness replied: "You put that in the form of a question to me, but you know perfectly well that I know nothing about it." Sir Mackenzie Chalmers pointed out that he complained of the permission being given, and he was asking if he knew the reason why it was given. The witness said, Of course, he did not know. In reply to further questions, he said he was perfectly indifferent what reasons might be assigned on which Sir Victor Horsley asked to be permitted to be placed outside tha provisions of the Act. His complaint was that Sir Victor Horsley was given permission to vivisect in a place outside the region of inspection, and therefore outside the Act altogether, which contemplated that every place should be inspected. Asked if he was aware that Mr. Asquith attached a condition to that leave that Sir Victor Horsley should report to the Inspector on each occasion when he performed any experiment at any but a registered place, he said he was not aware of it; but it was immaterial to anybody whom he represented for what purpose Sir Victor Horsley was placed outside the purview of the Act. Their contention was that no vivisector should be placed outside the possibility of inspection, and that the Act of Parliament did not contemplate anything of the kind, and did not intend it to be so. Asked by the Chairman if he said it was contrary to the Act, he said there was no reason in the world why Sir Victor Horsley should be placed by the Home Office outside the possibility of inspection. In the case of persons allowed to place grouse on a moor for the convenience of experiments, that was a different thing. On its being put to him by Sir Mackenzie Chalmers that he objected to Sir William Harcourt asking the advice of the Society for the Advancement of Medicine by Research, he said he did not put it upon Sir William Harcourt. It was done in his time. Asked if he thought it would be better if, say, a committee of the Council of the Royal College of Physicians was substituted for that Society, he said that was a very large question. If he was asked to say at a moment's notice, he declined to give an opinion. Asked further whether it would give a greater sense of security to him and his Society, the witness replied that the sole reason why all those who signed certificates did so was as testimonials to the scientific fitness of the applicant. Their scientific fitness was of no interest whatever to himself or his Society.

Their interest was in the animals and their fate. In reply to further questions, he said he would have much more confidence if any body was consulted upon which there were no licensed vivisectors sitting. The society that was consulted was a society composed very largely of licensed vivisectors. If there was a Committee of the Royal College of Physicians who were not licensed vivisectors, he would certainly regard it with greater respect. He thought they would very likely take into consideration the humanity of the applicant. But even then they were not asked that. He had never had any evidence before him that the Home Office ever asked the persons to whom they referred what the humanity of the applicant might be. Anybody was fitter than the Society for the Propagation of Vivisection, which was really a better term for them. In reply to Colonel Lockwood, who asked if he had got any definite body in his mind at present, he said he was not interested in the scientific side of the matter. If he were asked who were the right persons to ask as to the humanity of the applicants, he thought that a committee of the National Antivivisection Society would be a very proper body. It was just as public a body as this private association, and just as able to give proper consideration to the humanity of the applicants as that other body was to consider their scientific fitness.

(To be continued.)

LITERARY NOTES.

We have received the January number of the *Phonographic Record of Clinical Teaching and Medical Science*, which is published quarterly under the editorship of Dr. F. H. Spooner. Among the contents are a paper on the murmurs of mitral constriction by Sir William Gowers; one on haematogenous or "functional" albuminuria by Dr. Hingston Fox, and the continuation of an essay on medical student life in the Middle Ages, dealing with Montpellier from 1100 to 1500, by Dr. O. C. Gruner. The Society of Medical Phonographers, under whose auspices the periodical is issued, deserves more support than it seems to receive.

Messrs. J. and A. Churchill are about to publish the second and concluding volume of *The Labyrinth of Animals*, by Dr. Albert A. Gray, Aural Surgeon to the Victoria Infirmary, Glasgow. The work will be illustrated by numerous stereoscopic plates. Another new book announced by the same firm is *Abdominal Tuberculosis*, by Mr. A. E. Maylard. Messrs. Churchill have nearly ready a second edition of *Lectures on Medical Jurisprudence and Toxicology*, by Dr. F. J. Smith of the London Hospital. Additional lectures on "The Examination of the Person Alive and Dead," "Anaesthetics" and "Death Certification," have been included. A sixth edition of *A Simple Method of Water Analysis*, by Dr. J. C. Thresh, is also nearly ready.

The Rev. John Williams (Vicar of Llanwddyn) writes:

You will, I think, give pleasure to many readers of the Journal if you can find space for the following witty epigram published in 1612 in a volume, entitled, *Epigrammatum Joannis Owen, Oxoniensis Cambro-Britanni Tres Libri:*

MEDICUS.

Accipit oblatum medicus, dare non solet, aurum;
Pharmaca dat medicus: non solet accipere.
Ordonner medicos, aegros *Or Donner* oportet;
Alterius sic res altera poscit opem.

We have attempted a translation which, though halting, may serve to give the sense of the epigram:

The leech takes gold but does not give;
Physic he gives that he may live.
But takes none. 'Tis his rule of art:
Ordonner is the leech's part;
Or donner with the patient lies:
Thus each the other's need supplies.

The epigrammatist would seem to have agreed with the late Dr. Moxon, who said that the motto of Guy's Hospital, *Dare quam accipere*, might be applied to the prescribing of drugs. But Owen does not appear to have known of the *aurum potabile*, and of course he could not foresee the mystic therapeutic virtues which Hahnemann was to discover in gold. We may mention that John, who flourished in the later days of the sixteenth and early part of the seventeenth century, was born in Carnarvonshire, educated at Winchester and Oxford, and was a schoolmaster first at Trelleck in Monmouthshire, afterwards becoming head master of King Henry VIII's School at Warwick. In accordance with the custom of his time, he Latinized his name into Audoenus.

We have received the first number of the *Quarterly Journal of Experimental Physiology*, to the forthcoming appearance of which attention was called in this column in our issue of January 18th. It may be noted that the word *Experimental* has been added to the original title in order to prevent confusion with the present *Journal of Physiology*. In addition to the names of Professors Schäfer, Gotch, Halliburton, Sherrington, and Starling, that of Professor A. D. Waller appears on the title page in the list of editors. The publishers are Messrs. Charles Griffin and Company, Limited, Exeter Street, Strand. The editors wish it to be understood that the publication of the new journal is to be regarded as in no sense antagonistic to the present *Journal of Physiology*, with which they have all along been connected, and which they desire to continue to support. The following list of contents will serve to show the character and scope of the new periodical: Florence Buchanan, on the time taken in transmission of reflex impulses in the spinal cord of the frog; C. S. Sherrington, some comparisons between reflex inhibition and reflex excitation; John Tait, the freezing of frog's nerve, with special reference to its fatigability; and R. A. Wilson and W. Cramer, on protagon: its chemical composition and physical constants, its behaviour towards alcohol, and its individuality.

As a pendant to the Latin *menu* cited last week, we give one of the first annual dinner of the reorganized Lancaster Chemists' Association, held on January 22nd, which we find in the *Chemist and Druggist* of February 1st:

MATERIA STOMACHICA.

Jus.
Bovis Cauda et Fructus Lycopersici Esculenti.
Pisces.
Pleuronectes Platissa,
Cum Liquamine Scillarum.
Carnes.
Lumbus Bovinus.
Gallus Indicus Assus cum Tomaculis.
Dulcia.
Globus Flcarius et Farina.
Britannorum more factus.
Artocreates Dulces.

Panis Avenaceus.
Caseus et Apii Petioli.

Vinum. Spiritus. Cerevisia. q.s.
Aquae aeratae. ad lib.

In a work entitled *A Soldier of the Legion: An Englishman's Adventures under the French Flag in Algeria and Tonquin*, by the late George Manington, which has recently been published, there is a vivid account of the sufferings of a native chief during imprisonment from the unsatisfied craving for opium. The author says:

Only those who have witnessed the powerful hold the subtle drug takes on its votaries can imagine the torture endured by this native during the hours at which he had accustomed himself to indulge in his passion. These agonies, occurring shortly after the noon and evening meals, would commence by protracted yawnings, and develop into spasmodic, nervous contractions of the body and limbs, which broke into profuse perspiration. Unable to stand the strain, the unhappy victim of the brilliant-hued but treacherous flower, or rather its seed, would entreat his guards to supply him with the smallest particle at no matter what price; then, finding that his supplications were without avail, he would break into a torrent of invective and malediction, which grew in intensity and filthiness as his increasing and impotent rage neared its climax. Then, speechless and foaming at the mouth, he would fall back on the hard, beaten-clay floor of the verandah, with mouth agape and black eyes fixed, staring at the roof above, his face, pale yellow, framed in the thick tangled mass of long black hair escaped from his fallen turban. His chest would heave and crack under the short, sharp pants which brought the air through the larynx with a whistling hiss. Thus would he continue for perhaps an hour, until, exhausted by the struggle, he would fall into a sound sleep, from which he would awake refreshed and smiling, to laugh and chat with his guards, his wife or parents, if they happened to be present. Had there been any real danger to Linh-Nghi during these attacks I believe that opium, or some anaesthetic, would have been administered to him by our surgeon, M. Joly, who, on several occasions, was present during these crises.

Some of the French officials and military officers acquire

the habit. Manington himself was persuaded by a native sergeant to try it, and one evening smoked four pipes. He was rewarded by a most violent headache, prolonged nausea, and a sleepless night crowded with waking nightmare. He did not repeat the experiment.

MEDICAL NEWS.

At the last monthly meeting of the Royal Institution Dr. Kenneth Robert Hay, M.B., was appointed medical officer in succession to the late Dr. Woodhouse Braine, who held the appointment for thirty-six years.

On January 30th the Fishmongers' Company entertained a large company, among whom were many members of the medical profession, at dinner, when the principal guests were the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England. The Prime Warden, Mr. George Lewis Denman, proposed the toast of medicine and surgery, which was responded to by Sir Richard Douglas Powell and Mr. Henry Morris.

Dr. Wilfred Harris, senior out-patient physician to St. Mary's Hospital, has been appointed also physician in charge of a newly-established out-patient department for nervous diseases which has been formed by converting the electro-therapeutic department into an out-patient department to receive new cases of nervous disease, instead of dealing only with cases referred to it from other departments. There will be a male assistant and a nurse to carry out treatment. It is stated that this is the first time that such a department has been formed in a general hospital in London. The *x*-ray department remains entirely separate.

The State Registration of Nurses. — A public meeting in support of the state registration of trained nurses will be held at the Caxton Hall, Westminster, S.W., on Friday, February 21st, at 3 p.m. The chair will be taken by Lady Helen Munro Ferguson, and the speakers will include Mr. H. Y. Tennant, M.P., Chairman of the Select Committee of the House of Commons on Registration; Dr. H. Langley Browne, member of the General Medical Council; Miss E. S. Haldane, LL D., Chairman of the Scottish Registration Committee; Dr. W. I. de Courcy Wheeler, member of the Council of the Royal College of Surgeons of Ireland; Dr. T. B. Hyslop, Resident Physician, Bethlem Royal Hospital; Dr. Bedford Fenwick, Chairman Registered Nurses Society; Miss Mollett, Matron Royal South Hants Hospital, and Miss H. L. Pearse, Superintendent London County Council School Nurses. The attention of all interested in the subject is cordially invited.

Starving Lepers.—We have received a letter from Sir J. A. Bourdillon, K.C.S.I., Sir Algernon Coote, Bart., H.M.L., Sir C. A. Elliott, K.C.S.I., LL.D., and other gentlemen representing the Mission to Lepers in India and the East, calling attention to the severity with which the present scarcity in India affects the homeless and destitute lepers, and to the drain on the resources of the Mission thus caused. They point out that the Mission is now responsible for the maintenance of 50 asylums for lepers and 20 homes for their untainted children, and in these some 4,000 sufferers, who would otherwise be a danger and an offence to the community, are being sheltered, fed, and medically relieved, while the children are being educated for lives of usefulness. Of all sections of the community, they say, the lepers are the first to feel the pinch of scarcity. Always on the very verge of actual privation, this forms the turning point, and at present there is literally famine amongst the lepers. The superintendent of the Society's largest asylum—at Purulia, Bengal, where more than 600 lepers are segregated and supported—wrote in December last that famine prices were already prevailing, and that by the present date rice would be selling at only 6 to 7 seers for the rupee, as compared with 16 to 20 in normal times. Again, from Chandkuri in the Central Provinces many more lepers will certainly flock to the asylum as food becomes scarcer. Similar conditions prevail at many other stations. An appeal is made for help, which is said to be sorely needed. Contributions should be addressed to Mr. John Jackson, F.R.G.S., Organizing Secretary, 33, Henrietta Street, Covent Garden, London, W.C., and cheques crossed Barclay and Co.

Tampon in the Fallopian Tube.—Clumsy attempts at abortion are liable to be followed by strange complications. The operation is often hurried over, and when it entails serious results the patient is not always ready to seek immediate relief. Professor Kower ("Tube mit vioform gaze tamponiert," *Zentralbl. f. Gynäk.*, No. 46, 1907, p. 1447) recently reported an instructive case of this kind. A woman suffered from peritonitis after abortion, which she admitted had been provoked. Abdominal section was performed, and sanious pus came away; no placental relics were found. The wound was packed with gauze; it proved slow to heal, as an obstinate fistulous tract developed, and when the tract closed a hernia appeared in its place. It happened that the patient was the subject of tuberculous phthisis when she came under Dr. Kower some years after the first operation, and as she suffered from much pelvic pain, tuberculous disease of the pelvis and peritoneum was diagnosed. The incisional hernia was repaired; then it was found that there was a mass simulating tuberculous disease of the appendages adherent to the bladder. The mass, the greater part of which was formed by the Fallopian tube, was excised, and was found to contain not any tubercle but a small vioform gauze tampon. The tubal walls were intact. How the gauze got into the tubal canal Dr. Kower could not explain; he admitted that it was an enigma. This case deserves to be remembered as an instance of the distant results and possibilities of criminal abortion.

Chinese Students in England. — A Committee has been formed for the furtherance of the education of Chinese students in England. Among its members are the Right Hon. Sir Cecil Clementi Smith, G.C.M.G., P.C.; Sir Walter Hillier, K.C.M.G., C.B., Professor of Chinese, King's College, London; Mr. R. S. Gundry, C.B., President, China Association; Mr. George Jamieson, C.M.G., Chairman, China Society; Mr. Byron Brenan, C.M.G., late H.B.M. Consul-General, Shanghai; Mr. J. Carey Hall, I.S.O., H.B.M. Consul-General, Yokohama; the Rev. A. C. Headlam, D.D., Principal, King's College, London; H. A. Giles, LL.D., Professor of Chinese, Cambridge; Mr. Ivan Chen, Secretary to the Imperial Chinese Legation, London; and Mr. T. L. Bullock, Professor of Chinese, Oxford. This Committee has been formed in response to a suggestion made by Sir John Jordan, K.C.M.G., His Majesty's Minister in Peking, that the growing desire evinced by the literary and commercial classes in China to send their sons abroad for education in foreign schools, universities and technical institutions should be encouraged by responsive actions in this country. It was pointed out by Sir John Jordan that in consequence of the lack of accurate knowledge on the part of the Chinese gentry as to the facilities that could be obtained for the education of Chinese youths in England, uncertainty as to the cost of such education, and the absence of definite information as to the provision of suitable schools and homes for their sons on arrival in England, the number of youths who came to this country was considerably less than that of those who were sent to countries where information on these points was ready to hand. Detailed information as to fees for education for the medical, legal, and engineering professions is given, together with estimates of the cost of living and personal expenses.

Medical Sickness and Accident Society.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 6, Catherine Street, London, W.C., on January 17th. There were present: Dr. de Havilland Hall, in the chair; Dr. J. Brindley James, Dr. Walter Smith, Dr. M. G. Biggs, Dr. H. A. Sansom, Dr. J. W. Hunt, Dr. M. Greenwood, Mr. F. S. Edwards, Dr. St. Clair B. Shadwell, Dr. F. J. Allan, Mr. Edward Bartlett, Mr. J. F. Colyer, and Dr. J. B. Ball. The accounts presented showed that in the last month of the year the amount of sickness pay disbursed by the Society was less than the average monthly sum expected and provided for in the table of contributions. This is an unusual experience, for during the winter months the number of sickness claims received by the Society is generally much greater than during the warmer season. The winter claim lists of the Medical Sickness Society are largely filled up with cases of throat and bronchial troubles. These are generally of short duration, but many of the members had reached the age at which such attacks could not be safely neglected, and it too often happened that what seemed like a mild case had developed into an illness which compelled the member to stop all work and draw the sickness pay of the Society for many weeks. Some cases were still more serious, and in a few instances members suffering from lung trouble had been compelled to abandon work permanently and join the ever-growing number of those who formed what was called the "chronic list." More than thirty of the members were known to be permanently incapacitated and would draw sick allowance—generally about 100 guineas a year—until they reached the limiting age of 65. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

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SATURDAY, FEBRUARY 8TH, 1908.

CREMATION.

It is now nearly thirty years since Lord Beaconsfield proposed *Sanitas sanitatum et omnia sanitas* as a battle cry for an impending election. It did not excite much enthusiasm, as drains and water supplies do not appeal strongly to the popular imagination. Nevertheless, the great movement of sanitary reform, which may be said to have begun with the Victorian era, is still gaining fresh force as it goes, and is steadily extending in directions undreamt of by its initiators. It is true that our lawgivers are still apt to regard sanitary reform as almost a negligible quantity in the struggle for votes, and so matters that vitally concern the public health are passed over as of little importance, or, worse still, are treated as mere playthings in the game of political battledore and shuttlecock. But on the whole, thanks mainly to the self-sacrificing efforts of the medical profession, the advance of sanitary reform has been steady nearly all along the line.

There is, however, one direction in which progress is disappointingly slow. Although from the sanitary point of view cremation is undoubtedly the best method of disposing of the bodies of the dead, it must be confessed that it does not make much headway among us. The progress of any reform which touches a traditional sentiment must always be slow, and it was not therefore to be expected that cremation should yet have entirely taken the place of earth burial. But it is now thirty-three years since cremation was brought before the people of this country by the late Sir Henry Thompson, and although the storm of opposition with which the proposal was then received has subsided, it is to be feared that it has been followed by an attitude of indifference which is yet more inimical to progress. Whereas the number of cremations carried out in Great Britain in 1906 was 732, being an increase of 138 as compared with the previous year, in 1907 the number, as shown by figures kindly supplied to us by Mr. Herbert T. Herring, Medical Referee of the Cremation Society of England, was 705. The number of crematories at work is still 13, of which 6—at Hull, Leeds, Leicester, Sheffield, Bradford, and Ilford—are municipal. The cremations were distributed as follows: Golder's Green, 290; Woking, 108; Manchester, 96; Liverpool, 34; Glasgow, 30; Hull, 17; Darlington, 8; Leicester, 12; Birmingham, 33; Leeds, 16; Ilford, 18; Bradford, 13; Sheffield, 18. The total number of cremations carried out since the establishment of the first crematorium at Woking is 6,469. It is to be noted that although the total in 1907 showed decrease, there was an increase at some places. Thus at Manchester there were 96 as against 90 the previous year; at Birmingham 33 as against 25; at Leeds 16 as against 15; the largest increase being at Sheffield, where the number rose from 6 to 18. In the number of crematories Yorkshire stands easily first among the counties of Great Britain, having no fewer than 5. At these, taken collectively, there has been practically no decrease.

Cremation in this country is almost wholly confined to persons of some intellectual distinction. The average citizen is still held in the bondage of custom, in which sentiment has taken root so deeply as to make it hard to eradicate. This is doubtless the explanation of the fact that cremation so far has failed to become general That there was a slight decrease last year is probably due to accidental causes; it must not be taken as indicating any renewal of the feeling against it which Sir Henry Thompson and the Cremation Society have done so much to remove; but the decrease is none the less to be regretted.

The religious objection has to a considerable extent died out with the decline of materialistic interpretations of Christian teaching. It may be pointed out in connexion with this aspect of the matter that cremation would solve a difficulty which must make itself increasingly felt in regard to burial in churches. Many rectors and other church authorities are already compelled to refuse a privilege which is dearly valued by not a few; the closing of the vaults of Westminster Abbey and St. Paul's to the remains of our illustrious dead is now simply a question of time. But there would be no difficulty in finding room for urns containing the ashes of cremated bodies in the vaults of churches. These would be more graceful memorials of the dead than the ordinary tombstone hiding a process of corruption revolting to think of, and would, further, be harmless to the living. Religious rites are applicable to the burning as well as to the burial of bodies, and by the Cremation Act of 1902 any clerk in Holy Orders of the Church of England may, "with the permission of "the bishop and at the request of the executor of the "deceased person or of the burial authority or other "person having charge of the cremation or interment "of the cremated remains," perform the service if the incumbent of any ecclesiastical parish refuses to do so. Cremation need not, therefore, entail the forfeiture of "Christian burial."

Many persons live in fear of being buried alive, and make provision in their wills that a doctor shall "mak' sikkar" by dividing a main artery or thrusting a knife through the heart. The carrying into effect of this precaution cannot in any case be anything but an unpleasant duty, and it is made all the more disagreeable by the fact that it is totally unnecessary. The haunting fear to which reference has been made will cease to trouble any one who knows the precautions insisted on before cremation can take place.

The most important argument that has been urged against cremation is the destruction of evidence of foul play which it is supposed necessarily to involve. Here again must be taken into account the fact that the certification of death required before a body can be cremated is of a much stricter character than that for burial. The forms of application and certification are drawn up with the special object of getting the fullest possible information and preventing the fraudulent concealment of relevant facts. The medical attendant must certify as to the fact and cause of death, and a confirmatory certificate must be given by an independent practitioner of special qualifications, which are set forth in the Act. Every cremation authority must appoint a medical referee and a deputy, to be approved by the Home Secretary. To this official the certificates are submitted, and on his authority only is cremation allowed to take place. Where the cause of death has not been definitely ascertained by the certifying doctors, the medical referee requires that a *post-mortem* examination shall be made by a medical practitioner expert in pathology, appointed by the cremation authority, or in cases of emergency by himself. The following facts will show how strictly the rules are enforced. Since the Home Office regulations under the Cremation Act came into force—that is to say, from May 1st, 1903, to

December 31st, 1907—1,739 cases were submitted for cremation to the medical referee. Of these 7 were referred to the coroner, who held an inquest in 3, and thought one unnecessary in 4. In 31 cases certificates were referred back to the doctors for further information or owing to some irregularity in filling up the form. In 20 a *post-mortem* examination was ordered by the medical referee. In 4 cases the medical referee refused to authorize cremation, and in 6, in which the deceased persons were from abroad, it was found impossible to comply with the statutory regulations. Thus of the total number of cases submitted to the medical referee, in 68, or nearly 4 per cent., further information was required or the necessary authorization was refused.* It will be seen, therefore, that under the system of certification required for cremation crime is much less likely to escape detection than under the comparatively loose certification required for burial. No system that human ingenuity can devise will absolutely prevent the possible occurrence of error; but at any rate it may be said that the Home Office regulations reduce this possibility to a minimum. And even granting that the traces of a crime may occasionally be destroyed, the advantages of cremation in every other respect are so great as to more than counterbalance this possible disadvantage.

It should be mentioned that considerable improvements have been made since the original Gorini furnace was first introduced. This is notably the case in regard to the refining of the ash residue, which makes the removal of the body from the coffin unnecessary. The arrangements for placing the coffin in the incinerating chamber have also been perfected; the process is now performed mechanically, and thus the necessity of handling or disturbing the body is obviated. The incinerating chamber is separate from the heat-generating chamber, so that the ashes do not come in contact with the fuel. These improvements tend to make the procedure not only more cleanly, but more reverent in the manner in which the remains are dealt with.

Lastly, it should be said that the belief pretty generally held that cremation is a costly process, has no foundation in fact. At Golder's Green, for instance, the average cost of cremation, together with a niche in the columbarium and a memorial tablet, is 13 guineas. An estimate of the cost of burial, with a memorial stone, based on the average cost of interment in the ordinary ground at six London cemeteries, is 18 guineas. Cremation has, therefore, the advantage of economy as well as greater decency in the disposal of the bodies of the dead than the insanitary method still generally adopted.

How is the public to be educated to a right appreciation of the advantages of cremation? As we have shown, it is a matter which interests not only the friends of the dead but the whole community. Whether we conceive of the body as a machine which has ceased to act, or as

> a worn-out fetter which the soul
> Has broken and thrown away,

it is essential that it should not be allowed to taint the air we breathe or to befoul the water we drink. The medical profession might, we think, do more than it has yet done collectively in insisting on the sanitary advantages of cremation, and we have no doubt that the help of many of the clergy might be enlisted to further the cause. A debt of public gratitude is due to the Cremation Society and to all who are endeavouring to promote this better way in the disposal of the bodies of the dead.

* These figures refer to Woking and to Golder's Green only.

MECCA AND EUROPE.

DR. CHANTEMESSE, Professor of Hygiene in the Paris Faculty of Medicine, and M. F. Borel have in a paper communicated to a recent meeting of the Académie de Médecin, uttered a warning as to the possible extension of cholera this year from the Hedjaz. The warning is founded in part upon general considerations with regard to the occurrence of cholera among the pilgrims to Mecca, and partly upon a theory as to the relation of outbreaks of cholera to the date of the pilgrimage which on the whole would appear to be well founded. The Mussulman calendar is based upon the lunar month and not upon the solar year; consequently since the festival of Bairam, when the pilgrimage is made, occurs on a fixed date in the lunar month, it never occurs in two succeeding years on the same date in the solar year. There is a difference of eleven days each year, so that during the cycle of thirty years the pilgrimage takes place in each of the seasons. The records of cholera in the Hedjaz from 1860 to 1908 show that when the pilgrimage takes place in spring or autumn outbreaks of cholera do not occur, or are of very limited extent, whereas when the pilgrimage occurs in summer or winter there is a great probability that a more or less considerable outbreak will take place. During 1905 and 1906 the pilgrimage took place in February; last year it occurred at the end of January; this year it took place a little before the middle of the month, and there has been a serious prevalence of the disease. Last year, although there was no serious outbreak in Arabia, cholera reached the southern part of Russsia, where it caused 10,000 deaths, and there therefore seems a risk that with the return of the pilgrims this year cholera, which attacked Constantinople slightly last year, may reappear and possibly extend more widely in south-eastern Europe.

Professor Chantemesse finds the explanation of the fact that cholera among the pilgrims returning from the Hedjaz is severe only when the festival falls in the winter or summer in the circumstance that the disease is most prevalent in India at these seasons. The chief incidence of cholera in India is in the cold weather and in the rains. The curve of deaths from cholera in the Madras presidency for the five years, 1902-7, shows two apices, the one in December-January, the other in August; he asserts that when cholera has broken out at the lazarette on the Island of Kamaran, where the pilgrims are detained soon after entering the Red Sea, it has always been among the pilgrims from India, while it has never appeared at the holy places until after the arrival of the Indian pilgrims. Last November, on a ship bringing pilgrims from India, 3 cases of cholera occurred during its detention at Kamaran; the boat was permitted to proceed, and disembarked its pilgrims at Jeddah, the port of Mecca, on December 8th. About December 23rd an epidemic broke out almost at the same time in Mecca, in Yambo the port of Medina, and in Medina. What, then, it is asked, are the immediate probabilities with regard to the spread of the infection from the Hedjaz? In the first place, it has on previous occasions been carried from Mecca by pilgrims returning south-east to their homes in Yemen, and it is to be expected that this will occur again this year, and even that the disease may continue throughout the summer, so that there will be a risk of the pilgrims from this district carrying the infection back to Mecca next year. Secondly, since the sanitary supervision of pilgrims returning from Jeddah to the Persian Gulf countries is most rudimentary, it is to be feared that Mesopotamia

and the south of Persia will become infected with a similar danger for next year. Thirdly—and this is the more important question for Europe—there is the probability of the infection of Egypt. The sanitary defences of Egypt are far better organized than those of the two districts previously mentioned, but the experience of 1902 showed that they might not be effectual in protecting the country from the invasion of cholera, the weak point being that pilgrims returning in apparently good health may nevertheless carry the infection in the intestine and distribute it on their return. Fourthly, a new source of danger is pointed out, which may in the future become for Europe the most serious of all. The new Hedjaz Railway, which has already made considerable progress, will shortly reach Medina and Mecca, and, when complete, will carry passengers from Mecca to Damascus in four days, thus doing away with the more or less effectual barrier created by the forty days of caravan journey from the Hedjaz.

Professor Chantemesse, while admitting that the pilgrimage so far as it is conducted by sea is subjected to sanitary measures which are more or less efficacious, maintains that it has become necessary, in order that Europe should not be at the mercy of cholera distributed from Mecca, that a new sanitary organization for the land routes which will be increasingly followed by pilgrims returning in a north-westerly direction from Mecca, should be organized. Unfortunately, the attitude of the Ottoman Government, influenced no doubt by the Shereef of Mecca, does not hold out much promise of active co-operation from the authorities at Mecca and Medina. The delegate of the Egyptian Quarantine Board was recently refused permission to leave Jeddah for Mecca, and it was only after the Khedivial Government had made strong representations to the Porte that he was permitted to proceed. He reported that down to January 24th there had been less than a hundred deaths among the Egyptian pilgrims, but that the Indians, Syrians, and Russians had suffered much more severely. The were 111 deaths from cholera at Jeddah on January 24th and 25th, but no new cases were known to have occurred in Mecca after January 20th. Professor Chantemesse urges that the necessary measures, which must for the most part be taken within the Ottoman dominions, can only be defined with authority by another international sanitary conference. Looking to Professor Chantemesse's official position (he is Inspector-General of the Council of Hygiene of France), it may be assumed that this proposal has not been made without the approval of the French Government.

MELANCHOLIA.

Certainly one of the most striking changes which has taken place in recent years in Continental conceptions of what groups of symptoms constitute the ever varying types of mental disorder concerns melancholia. This form of disorder, probably the earliest described in the whole history of psychiatry, has so long been regarded as an unassailably independent category that its gradually waning importance—at any rate among Continental writers—is extremely interesting. Its increasing disintegration by the subsumption of its cases under other categories, notably dementia praecox and manic-depressive insanity, and the increasing recognition of its limitation as a clinical entity to the psychoses of the period of involution has been very largely due to one man, Kraepelin, though he had his predecessors—Kahlbaum recognizing initial and transitory forms of melancholia, a distinction still more defined by Savage in 1887 when he maintained that melancholia might be either a complete psychosis in itself, or might usher in mania or general paralysis, or be present after an attack of mania as a phase of reaction. Up to now, however, almost every writer, including Kraepelin, has accepted the occurrence of melancholia as an independent process, but Dr. Georges Dreyfus, after an exceedingly careful clinical study of all the cases admitted to the Heidelberg Clinic, diagnosed as cases of melancholia during the years 1892-1906, has come to the conclusion[1] that melancholia, as an independent psychosis, does not exist, and that all of the cases described by Kraepelin and his school as "melancholia simplex," "melancholia "agitata," and "depressive *Wahnsinn*," are in reality cases of manic-depressive insanity. His results are founded on an examination of the patients themselves either in asylums or, in the recovered cases, in their homes, or, where a personal examination was impossible, of their records and reports from friends and others. The cases numbered 82 out of 5,518 total admissions. The strikingly low proportion, 1.4 per cent. of the total admissions of those classified as cases of melancholia, emphasizes the limited application of the term by Kraepelin and his followers. This valuable work was carried out under great difficulties, particularly amongst those cases who had recovered, and who regarded his visits with evident aversion. Nevertheless, Dr. Dreyfus succeeded in obtaining very valuable information. Out of the 82 cases of melancholia, 32 were personally examined, and in 30 of these, Dr. Dreyfus states, typical circular symptoms were present; traces of fluctuations of tone (*Stimmungsschwankungen*) with a maniacal bias, excitability, flight of ideas, euphoria, and grandiose ideas were elicited.

The all-important differential criterion, however, according to Kraepelin, is psycho-motor inhibition which, he says, is always absent in pure melancholia and invariably present in the depressive form of manic-depressive insanity. There can be no doubt, Dr. Dreyfus says, that in melancholia, the pronounced psycho-motor inhibition which gives to circular depression its typical impress is wanting, but in the majority of his cases a partial subjective inhibition was ascertainable either in the prodromal period, in the course of the psychosis, or in its final phases.

One more point is deserving of notice. Kraepelin has said that melancholia leads in the majority of cases to moderate mental deterioration, whereas, of course, manic-depressive insanity is not followed by any terminal dementia. In 49 per cent. of his (Kraepelin's) cases a more or less pronounced degree of mental enfeeblement ensued upon the disorder. Dr. Dreyfus's inquiries, on the other hand, have convinced him that in melancholia a final definite mental enfeeblement is extremely rare, and that where it does occur it is due not to the psychosis itself but to cerebral arteriosclerotic changes. This point is one to which Professor Kraepelin draws attention in his preface, and with this explanation the last barrier between Kraepelin's melancholia and manic-depressive insanity appears to be removed.

[1] *Die Melancholie. Ein Zustandbild des manisch-depressiven Irreseins.* [Melancholia as a Form of Manic-depressive Insanity.] A Clinical Study by Dr. Georges L. Dreyfus. Preface by Dr. Emile Kraepelin. Jena: Gustav Fischer. 1907. (Royal 8vo, pp. 339. M.7.)

The German Emperor has granted a patent of hereditary nobility to his chief private physician, Surgeon-General Ilberg.

THE TENURE OF POOR-LAW MEDICAL APPOINTMENTS IN SCOTLAND.

WHILST the English Poor-law medical officers enjoy fixity of tenure in connexion with their appointments, their Scottish brethren are without this, and can be dismissed at the pleasure of the parish council at any meeting duly called on ten days' notice without any reasons being assigned. A curious point in connexion with medical appointments in Scotland is, that while parochial medical officers are subject to dismissal, medical officers of health and sanitary inspectors under the Public Health Act, 1897, have fixity of tenure, and can only be removed from office with the sanction of the Local Government Board. The medical officer of the parish council of Crathie and Braemar has been dismissed on the ground that his appointment was illegal and irregular. The exact reasons why this appointment was illegal are not apparent. In connexion with this matter, the chairman of the parish council communicated with the Local Government Board, enclosing extracts from the minutes, giving the various steps which had been taken during the past year in connexion with the appointment of Dr. Brown as the Parochial Medical Officer. The Local Government Board stated that the appointment was in order and saw no good reason for doubting its legality. The Board at the same time strongly deprecated the removal of a medical officer from office unless for good and sufficient reasons. In spite of this communication the parish council by a majority resolved to dispense with Dr. Brown's services on three months' notice, to instruct the clerk to give Dr. Brown three months' notice of dismissal, and to advertise the vacancy. No reasons were given to account for the proposed dismissal of Dr. Brown. The minority handed in a protest stating that the dismissal of Dr. Brown constituted a breach of the council's contract with him, at the same time protesting against the parish assessments being employed in expenditure connected with any action which might be taken as a result of breach of contract. The action of the majority seems arbitrary in the extreme, especially as we understand that no fault is found with the medical officer as to the manner in which he performed his duties. It is another example of how the Scottish parochial medical officer can be dismissed at the pleasure of a majority of the parish council who may have some private reason for wishing to get rid of their medical officer. The Crathie Parish Council may yet find themselves in the unpleasant position in which the parish council of Durness (Sutherlandshire) found themselves some years ago when they dismissed their medical officer, Dr. Macara. He carried the case to the Court of Session, and obtained an interdict preventing the council carrying out a resolution similar to that passed by the Crathie Council dismissing him from his office. In the meantime the parish council have resolved to advertise the vacancy. We might draw the attention of any intending candidates to the facts stated, and express the hope that under the circumstances no one will think of applying for the vacancy; it might at least show that the medical profession recognize that in this instance the present holder has been dismissed through no fault of his own but what the council term an "illegal election."

THE UNWRAPPING OF PHARAOH.

IT has fallen to the lot of Professor Elliot Smith, of the Cairo School of Medicine, to unwrap the mummy of Menephtah, son and successor of Ramses II, and, according to an ancient tradition, the Pharaoh of the Exodus. The wrappings were removed from the mummy in the Cairo Museum on July 8th, 1907. Professor Elliot Smith, who has given an account of the procedure in the *Annales du Service des Antiquités de l'Egypt* (1907), has little doubt as to the correctness of the identification of the mummy as that of Menephtah. When the wrappings were taken away from the trunk, the arms were found folded crosswise in front of the chest, the right forearm being in front of the left. A broad bandage was found wrapped around the abdomen and thighs; when this was removed a mass of loose rags that filled up the widely-gaping abdominal wall was taken away. The whole body was thus exposed, covered in parts by a thin layer of very fine linen impregnated with a bright yellow resin-like material, which proved to be a balsam. Not a fragment of writing nor any ornament of any kind was found on the mummy. The body was that of an old man, 1.714 metres in height. Menephtah was almost completely bald, only a narrow fringe of white hair remaining on the temples and occiput. A few short black hairs were found on the upper lip, and scattered, closely-clipped hairs on the cheeks and chin. The general aspect of the face vividly recalls that of Ramses II, but the form of the cranium and the measurements of the face much more nearly agree with those of Menephtah's grandfather, Seti the Great. The appearance of the face was spoilt by flattening of the soft parts of the nose. The embalming wound was in the position characteristic of the eighteenth, nineteenth, and twentieth dynasties—that is, in front of the iliac crest and parallel to Poupart's ligament. All the viscera had been removed from the body cavity, but Professor Elliot Smith was able to recognize part of the heart pushed far up into the thorax, and still attached to the aorta. The aorta was affected with severe atheromatous disease, large calcified patches being distinctly visible. A very curious feature of this mummy is the complete absence of the scrotum, which was certainly removed before the process of embalming was complete; the penis was, however, left intact. The hands were placed in the position of grasping sceptres, each 15 mm. in diameter, the thumbs being in the position represented in the bas-reliefs. The mummy had suffered considerably at the hands of plunderers. The skin was shaved off the right zygomatic arch with a sharp instrument, and scraped off a small spot on the forehead. The left side of the chin was cut through to the bone. There was a deep gash on the right side of the larynx, breaking through the right ala of the completely-ossified thyroid cartilage, and there were other smaller gashes in the larynx. A deep axe-cut over the situation of the right sterno clavicular joint had broken through the chest wall, severing the inner ends of the clavicle, first rib, and part of the sternum. This separated part of the chest wall was lying free in the body cavity. The right arm was broken midway between the elbow and wrist and was held together only by the tendons and muscles. Almost the whole of the anterior abdominal wall had been chopped away, a few ribbons of skin being practically all that was left. The axe cuts passed quite through the body to the spine, large pieces being chopped away from the lower two lumbar vertebræ. The left iliac bone and the pubes were smashed by two transverse axe-blows. There were also numerous small gashes in the skin of various parts of the body, and especially on the legs. The toes of the left foot were broken, and two of them were missing. On the right side of the back there was a large vertical oval opening in the body wall. Its edges were eroded as though it had been eaten by mice, possibly attracted by the smell of the "butter" inside the body. On the back of the head there was a hole 37 by 23 mm. in size in the right parietal bone; it had been deliberately made with some sharp instrument. In the case of similar openings, which Professor Elliot Smith found in the mummies of Seti II, Ramses IV, Ramses VI (and

possibly that of Ramses V also), he was inclined to look upon them as wounds accidentally made by plunderers, who, in their haste to remove the wrappings from the head and neck, chopped through the bandages, and so damaged the cranium. He still thinks there is a good deal to be said in favour of this view; but the nature of the opening in Menephtah's skull seems to point to the possibility of it having been deliberately made—perhaps for some occult reason. That he was a man of great age is shown by his baldness, the whiteness of the little hair left, the complete ossification of the thyroid cartilage, and especially the ossification of the cartilage of the first rib, not its sheath only. The calcareous patches in the aorta also point to the same conclusion. Only one tooth was visible, the upper right median incisor. Although the body was reduced to little more than skin and bone, the redundancy of the skin of the abdomen, thighs, and cheeks indicated that Menephtah was a somewhat corpulent old man.

CHUCKS, BUTTS, AND PORK.

Dr. G. S. Buchanan's report to the Local Government Board on Certain Imported Meat Foods of Questionable Wholesomeness contains no startling revelations—nothing to recall the "jungle" scare of the year before last, but it contains none the less a good deal of matter of interest and of first-rate importance to the public, and its medical advisers in particular. It should, in fact, be rather reassuring than otherwise to be reminded that the official eye relaxes none of its vigilance when the daily press has long since ceased to trouble about these things, and the boom in alarmist novels is a thing of the past. To ensure that only sound and wholesome meat should be imported and distributed in this country is a matter of great administrative difficulty, even when live cattle or whole carcasses only are dealt with, but these difficulties are multiplied many times when the sanitary authority has to deal with boxes and barrels containing a conglomeration of parts of slaughtered animals which have been subjected to various more or less adequate processes of preservation. The latter is the problem dealt with in the present report, and Dr. Buchanan discusses his subject under the three headings of imported boneless scrap meat, imported pork in relation to tuberculosis, and imported tripe, tongues, and kidneys which are heavily dosed with boron and other preservatives. Under the first heading is included only what is, or purports to be, portions of fresh or frozen meat, and not meat imported ready prepared for consumption in the form of sausages, pâtés, etc. By far the greater portion of this "boneless "meat" consists of scraps and trimmings of beef and pork, known to the trade as "chucks" and "butts" respectively, imported in the frozen state from the United States. As these "beef chucks" are mainly derived from animals slaughtered for the purpose of canning, and therefore not of the highest quality, and as the United States regulations permit the exportation of pork from carcasses affected with tuberculosis, provided the disease has not become generalized, it is evident that both "chucks" and "butts" should be regarded with grave suspicion, the more so as it is impossible for an inspector at the port of entry or home market to form any opinion as to the condition of the animal from which these scraps have been obtained, and the meat itself has a tendency to very rapid decomposition after being thawed. Speaking of the American system of inspection, Dr. Buchanan says that since the United States Meat Inspection Act of 1906, "Although the label 'U.S. inspected' will no doubt "mean more than in the past, it would be rash at this "stage to place too great reliance upon its significance "when attached to boxes containing such a commodity "as scrap meat." In the case of pork, which is dealt with separately in the report, it will probably be a surprise to many to learn that more than half our imports of pork come from the Netherlands. This meat can be divided into two categories, as since 1902 the Netherlands Government has established a system of inspection which renders the meat certified for export beyond suspicion, but at present this inspection is optional, and there is nothing to prevent the exportation of meat which has been actually condemned by the Government inspectors, provided that the official label is not attached, and some such carcasses actually find their way into this country. Another objectionable practice is the exportation of what are known as "stripped car-"casses." Tuberculosis in the pig can generally be detected in the cervical lymphatic glands, and "stripped "carcasses" are those in which the head and neck have been removed, or the lymphatic glands themselves dissected out. Dr. Buchanan recommends that this practice should be prohibited altogether, and that all imported pork should bear a label which would be a guarantee of precautions satisfactory to the Local Government Board. The principal objection to the large consignments of foreign tripe, tongues, and kidneys which come into this country is the excess of boron compounds which they take up from the fluids used to preserve them, an amount which has been proved in many cases to be fraught with danger to the health of the consumer. Under the Public Health (Regulations as to Food) Act, 1907,[1] the Board has powers to add to and modify its regulations, and it is to be hoped that steps will at once be taken along the lines indicated in this very able report.

SEXUAL HYPOCHONDRIASIS.

There is no class of patients more troublesome to themselves or to their doctors than sexual hypochondriacs, in which term we include those who live in a constant irrational fear of venereal disease, and those who brood over what they regard as the penalty of youthful wrongdoing. Such patients are especially likely to become the prey of quacks, who levy heavy tribute on their unwholesome fancies. To the *Liverpool Medico-Chirurgical Journal* for January Mr. Frederick W. Lowndes has contributed a paper on this subject, on which his large experience gives him the right to speak with authority. With reference to a suggestion put forward that the evil habit which is the foundation of so much sexual hypochondriasis may be regarded as symptomatic of softening or other form of brain disease, he says he has known it end in this way in several cases, and he does not see why this charitable view may not be the correct one. In regard to those who are doubtful of their fitness for the married state, he quotes the well-known words of Sir James Paget as to the wrongfulness of medical practitioners prescribing illicit intercourse. Mr. Lowndes says that although he has heard of this being done, he is convinced that it is very exceptional. It is to be feared, however, that some patients consult doctors in the hope that such advice will be given. Mr. Lowndes says there is an old Lancashire word "jannock," that is to say, downright and straightforward, and he has frequently told patients it would not be "jannock" for him to recommend a course which, besides being immoral, might expose them to infection. He vigorously denounces what the author of *Tom Brown at Oxford* called the accepted British maxim as to the "sowing of wild oats." Mr. Lowndes bears testimony to the fact that in the matter of what used to be called the "social evil" there have been changes for the better in Liverpool during the last half-century. There is a better moral tone among young men of all classes, vice being no longer regarded as manly, and its tendency to

[1] To be purchased through any bookseller, price 3d.

degrade men even more than intemperance being recognized. There is also, he adds, a great reduction not only in the prevalence, but in the severity, of venereal diseases. As factors in bringing about these changes, he mentions the opportunities that young men now have of attending evening classes at the university and elsewhere, and the gymnasium and volunteer drill for those who prefer an athletic life. Much, however, remains to be done. Mr. Lowndes thinks fathers should warn their sons against what may lead to impurity. There is a growing tendency to keep boys at home in their early years, and to send them to one or other of the excellent schools which Liverpool possesses. In all homes where the ordinary decencies and proprieties of life are observed, cleanliness is the rule enforced by parents. The old jug and basin of former times is now replaced by the entire morning bath. Boys ought to be taught to wash their genital organs as well as their face and hands. Those who have a long and narrow prepuce should be circumcised. Some, he says, will urge the danger of directing boys' attention to their genitals as likely to lead to evil. But, as Mr. Lowndes tersely puts it, the danger consists not in cleanliness, but in dirt; not in knowledge, but in ignorance. There are, he says, among the profession and the laity many who know by experience the untold misery and suffering caused by such ignorance. We commend Mr. Lowndes's outspoken and wise words to the attention of all who have young children under their care.

"DIPHTHERITIC FEVER."

In a very interesting paper read before the Royal Academy of Medicine in Ireland, and since reprinted from the *Dublin Journal of Medical Science*, Sir John Moore describes a remarkable outbreak of sore throat in a girls' school in Dublin, for which he suggests the name "diphtheritic fever." Between October 2nd and November 11th, 1906, 18 out of 43 girls in the school, or 41.9 per cent., were attacked. The symptoms common to all or nearly all the cases included coryza, tonsillitis unattended by high fever or much exudation, coated and afterwards desquamating tongue with foul breath, patchy or punctate rash on the roof of the mouth and buccal mucous membrane, swelling of cervical lymphatic glands, and roseolar rash on the skin. In 3 cases there was desquamation of the skin, especially of the hands: in only 1 case was albumen found in the urine; in no case was there any formation of membrane or a temperature higher than 102·8° F. In 2 instances the disease appeared in the homes of girls when they returned for the Christmas holidays, nearly two months after the cessation of the epidemic; and a year later 3 similar but slighter cases appeared in the school, and were immediately treated with antitoxin. In every case a bacteriological examination was made, and the infecting organism was found to be a "form of the Klebs-Loeffler bacillus." This organism is described by Dr. Boxwell as somewhat smaller than the typical *Bacillus diphtheriae*, and resembling that described as Hoffmann's bacillus. These slight morphological differences which are occasionally described in the organisms responsible for disease of undoubtedly diphtheritic type, together with the frequency with which cases are met with in practice that vary in different directions from the typical membraneous diphtheria, seem to suggest the existence of a group of closely-allied organisms which further research may possibly succeed in classifying into distinct varieties with a definite relation to somewhat different clinical entities. The question certainly affords a field for further collaboration between the pathologist and the clinician, and Sir John Moore deserves the thanks of the profession for bringing his interesting case prominently before it. We doubt, however, whether the use of such terms as "diphtheritic fever" and the oft-heard "pseudo-diphtheria" make for accuracy of thought pending the question whether these atypical cases are a single pathological entity reacting differently to different environments, or are actually distinct though allied diseases.

THE RADICAL TREATMENT OF HERNIA OF THE CAECUM

The paper read by Mr. R. W. Murray[1] at the annual meeting at Exeter on the saccular theory of hernia was a valuable contribution to a question of no little moment in the matter of treatment. Without detracting in the least from the merits of that particular piece of work, it is only fair to say that Mr. Murray voiced an opinion that has for some time been growing—or perhaps it would be more correct to say recrudescent—in the minds of many surgeons. However much care may in consequence be bestowed upon the ligature of the sac in performing radical cure for ordinary cases, there must still be a difficulty in dealing with those rare instances in which the herniated viscus is wholly or partly outside what sac there is. Under the term "sliding hernia" Fiaschi of Sydney[2] refers to those cases of caecal hernia in which the portion of caecum covered with peritoneum forms a part of the circumference of the protruded tube of peritoneum, whilst the main part of the gut, uncovered, comes down behind. He states—and it is an experience not limited to him—that such herniae are apt to recur after "radical cure." He has therefore devised an operation which is really a combination of Bassini's method, with the device suggested by Jeannel for prolapsus recti. An example of this latter operation was published in the British Medical Journal by Mr. T. S. Kirk[3] in 1900. The procedure involves an extension upwards of the superficial part of the Bassini incision, so as to permit of opening the abdomen by the "gridiron" method at a site corresponding to the ordinary appendix wound. With the abdominal incision widely retracted, an area of the abdominal wall close to the iliac fossa is denuded of peritoneum, and to the raw surface of muscle and fascia thus exposed, the caecum, after it has been pulled up as far as possible, is sutured. The size of the area to be denuded will depend upon the age and size of the patient, but Fiaschi states that the area originally recommended—8 to 10 cm. by 4 or 5 cm.—is quite unnecessarily large. In the case described by Fiaschi it was not the caecum, but a portion of sigmoid, that had an extraperitoneal relation to the sac (left inguinal), and the result was very satisfactory.

DORSET DAIRIES AND COWSHEDS.

In the Dorchester rural district there are over seventy dairy farms, and although butter and cheese are exclusively made in the majority of them, some 600 gallons of milk are daily sent to London. The supervision of the cowsheds in the district is shown by Dr. R. W. Johnstone in a recently issued report to the Local Government Board to be quite inadequate. Few of them, he says, are kept as clean as they ought to be, the majority are in a filthy condition, the floors covered with refuse and manure, the walls soiled and the roofs draped with cobwebs and dust. In nearly all instances where the milkers were seen at work, their hands were observed to be unclean and stained with excrement. Serious fouling of the milk was the result and when looked for large floating particles of dung were observed in it before straining. Dr. Johnstone very properly draws attention to the fact that the Dairies, Cowsheds

[1] British Medical Journal, November 16th, 1907.
[2] [illegible], November [illegible], 1907.
[3] British Medical Journal, December 22nd, 1900.

and Milkshops Orders apply to all cowkeepers and dairymen with the exception that for registration purposes butter and cheesemakers are exempt. Although he does not state it very definitely he almost makes it appear that the regulations which may be made by sanitary authorities under the Order of 1885 also apply to butter and cheese makers. This, however, is not the case where the model regulations of the Local Government Board are in force. In them a cowkeeper is defined as "a person following the trade of a cowkeeper or "dairyman who is, or is required to be, registered under "the Dairies, Cowsheds and Milkshops Order of 1885." In a report issued in October last to the Board after an inspection of the rural district of Tregaron in Cardiganshire Dr. E. P. Manby says most explicity that those who only make butter and cheese are exempt from the regulations, and there can be no doubt that his view is correct.

THE LEES-RAPER LECTURE.

At a meeting held in the Town Hall, Oxford, on February 4th, under the chairmanship of Professor William Osler, Mr. W. McAdam Eccles, M.S., F.R.C.S., gave the eighth Lees and Raper Memorial Lecture. After alluding to the injurious effect of alcohol taken by the mother upon the child before birth, and to its deteriorating effect upon the tissues both of the child and of the adult, he discussed the measures against alcoholism and its attendant physical deterioration and inefficiency which he regarded as not only desirable but imperative. These were: Education of mothers and fathers, prohibition of the entrance of children into public-houses, feeding and teaching of the children, limitation of the opportunities for adults to obtain liquor, the provision of sound recreation, and the promotion of research, with the publication of its results. He considered that the instruction of the child in the elementary school was of the utmost importance; the elements of hygiene and temperance were vital subjects, and could be made very attractive, even to the very young, if inculcated by a teacher of experience and ability. With the view of diminishing temptation at a later age the inhabitants of a locality should have the right to prevent the continuance of a public-house at every street corner; something should be devised to take its place—a decent winter garden or concert house, within reasonable distance. Finally, he urged that, in order to alter the trend of public opinion, the universities should encourage research into the many problems involved in the question of alcohol, and publish the results with the weight of their authority.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

A letter recently appeared in our columns from the chief officers of the Society of Medical Phonographers to acquaint the profession with the fact that the Society continues to exist, and will welcome new members. The information is certainly not superfluous, for the Society is perhaps the least obtrusive of the many associations that exist in the profession. It holds no meetings, and so never comes under public notice. Some of our readers may be surprised that it has existed for fourteen years, but we learn from the report of the Secretary, published in the last number of its periodical, the *Phonographic Medical Record*, that the number of the members is only 136, one half of that ten years ago. The reason is probably correctly given by the President in the address which appears in the same number. Many men joined the Society because they had a slight knowledge of shorthand, which they hoped to extend. But adequate skill, to write without effort and read with perfect ease, can only be acquired by perseverance; the good intentions failed, and the Society ceased to be useful to them. Yet the service shorthand can render in securing records of facts makes it of extreme value in all work that depends on observation, as does medicine, and the Society strives, by its publications, to promote both medical knowledge and familiarity with shorthand. The first President, Sir William Gowers, has been again elected to the post, which, during the interval, has been occupied by, among others, Sir William Thomson of Dublin, Dr. Ferrier, Professor Sims Woodhead, and Mr. Cathcart of Edinburgh.

ARSENIC AS A PREVENTIVE OF YELLOW FEVER. Leach, in an article in the *North American Review*, advises arsenic as a prophylactic for yellow fever. The Surgeon-General of the American Army, reporting on this to the Committee on Public Health and National Quarantine, states: "There is not sufficient experimental evidence on record to justify your Committee in giving the subject any special consideration." After reading the article one agrees with this dictum. Nothing, for example, is stated as to the dose of arsenic employed, and, after all, this is a very dangerous drug to use indiscriminately amongst the general population of any given place. It might be that arsenic would act antagonistically to the growth of the yellow fever parasite, but general statements will not prove this. More experimental evidence is certainly required before any definite statement can be given, and in the meantime, as we know that the mosquito is the transmitter of the disease, all efforts in epidemics should be levelled at destroying those insects and preventing their access to the sick and healthy.

The annual Hunterian Oration will be delivered before the Hunterian Society by W. M. Ettles, M.D., F.R.C.S., at 8.30 p.m. on Wednesday, February 12th, in the Theatre of the London Institution, Finsbury Circus. The title is, The Renaissance of Ophthalmology during the Hunterian Period. All members of the medical profession are invited.

The Council of the Senate of the University of Cambridge has made a report recommending that a Darwin celebration shall be held by the university during next year. Charles Darwin was born on February 12th, 1809, and published *The Origin of Species* on November 29th, 1859. The report, which suggests that the celebration should be held in the week beginning June 20th, 1909, will be considered by the Senate on Thursday next. Darwin went up to Christ's College, Cambridge, in 1828.

The lectures to be delivered at the Royal College of Physicians of London during the present year are as follows:—Milroy Lectures: Dr. J. W. H. Eyre, on March 5th, 10th, and 12th. The subject will be "Melitensis Septicaemia" (Malta and Mediterranean Fever). Goulstonian Lectures: Dr. Herbert French, on March 17th, 19th, and 24th, on the Influence of Pregnancy on Certain Medical Diseases, and the Influence of Certain Medical Diseases on Pregnancy. Lumleian Lectures: Sir James Sawyer, M.D., March 26th, 31st, and April 2nd, on Points of Practice in Maladies of the Heart. The Oliver-Sharpey Lectures will be delivered on April 7th and 9th, by Professor Schäfer, F.R.S., who has chosen as his subject, The Present Position of our Knowledge Regarding the Suprarenal Capsules. The lectures will be delivered in the College at 5 p.m. on the dates mentioned.

The lecture arrangements at the Royal College of Surgeons of England for 1908 are as follows: The Erasmus Wilson Lectures will be given by Mr. S. G. Shattock on Ovarian Teratoma (Monday, February 10th); by Dr. J. W. H. Eyre on the Importance (Surgically) of the Pyogenetic Activities of *Diplococcus pneumoniae* (Wednesday, February 12th)

and Mr. L. S. Dudgeon, M.R.C.P., on Infection of the Urinary Tract due to *Bacillus coli* (Friday, February 14th). The Hunterian Lectures will be given by Professor Victor Bonney on a Study of the Connective Tissues in Carcinoma and in Certain Pathological Conditions preceding its Onset (Monday, February 17th, Wednesday, February 19th, and Friday, February 21st); by Professor Donald Armour, on the Surgery of the Spinal Cord and its Membranes (Monday, February 24th, Wednesday, 26th, and Friday, 28th); by Professor F. C. Shrubsall, on the Physical Anthropology of the Pigmy and Negro Races of Africa (Monday, March 2nd, Wednesday, March 4th, and Friday, March 6th); by Professor Ralph Thomson, on the Anatomy of the Long Bones relative to Certain Fractures (Monday, March 9th, and Wednesday, March 11th); and by Professor W. Sampson Handley on the Natural Cure of Cancer (Friday, March 13th). The Arris and Gale Lectures will be given by Dr. F. A. Bainbridge on the Pathology of Acid Intoxication (Monday, March 16th); and by Mr. Major Greenwood, junior, on the Physiological and Pathological Effects which Follow Exposure to Compressed Air (Wednesday, March 18th, and Friday, March 20th). The lectures will be given in every case at 5 p.m. precisely.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Debate on the Address in the Commons became more brisk and lively on the second day, when the question of the treatment of the unemployed was raised by Mr. Ramsay Macdonald's amendment. The debate lasted the whole sitting, and was finally brought to an end by closure. There was no great novelty in the matter brought forward, and the speeches showed little originality. Both Mr. Macnamara and Mr. John Burns spoke, and the former, in referring to the report of the Poor-law Commission as likely to be helpful in solving the unemployed problem, let drop the significant remark that he would be disappointed if the report was not published this year. He also indicated that the Housing Bill of the Government would secure more attention to public health and sanitation in the village areas. This would seem to refer to some more satisfactory and independent position for public health officials as recommended by the Select Committee. Mr. Burns made a characteristic speech, and quoted many statistics as regards death-rate, old age, pauperism, and infectious disease, in support of the contention that the condition of the poor in this country had greatly improved. He said Berlin was better than London only in one respect, the prevalence of measles. In London 386 children had this malady, as against only 207 in Berlin. This he attributed to the freer intercourse among London children, as compared with those in Germany. The division showed, however, that the House was by no means satisfied that enough had been done to meet the evil of unemployment, for the Government majority was reduced to 49! On Friday in last week Dr. Rutherford, fresh from a visit to India, raised by an amendment the discontent and dissatisfaction with the present system of government in the great dependency. The discussion was somewhat dull and artificial, and, strangely enough, did not raise and develop the great public health problems of India. Before the debate ended, it was brightened by an able speech from Mr. Morley. Mr. Robertson afterwards moved an amendment on Egyptian administration which occupied the rest of the sitting, which closed without any division. The Irish amendment, moved from the front Opposition bench by Mr. Long, occupied Monday and Tuesday. On Wednesday the whole day was practically occupied by the amendment which raised the consideration of the administration of the Education Department. There remained the important question of the status of the Board of Trade and of the Local Government Board, Mr. Chaplin, as an old President of the latter department, urging its inclusion in any scheme for improved status on the grounds of the care of public health and the wellbeing of local government. The intention of the Government is to bring the dispute to a close on Thursday night. In this case Friday will be a private members' day.

The Ballot for Private Members' Bills was held on Friday in last week, and no less than 397 members put their names down. The first place was drawn by Mr. McArthur, who used his good fortune to give notice of the Ecclesiastical Disorders Bill, which will be discussed on February 14th. Mr. Toulmin, who drew second place, brought in the Sweated Industries Bill, and put it down for February 21st. The Women's Enfranchisement Bill, by the good luck of Mr. Stanger, won the third place, and is to be read a second time on February 28th. The Education (Local Authorities) Bill, in charge of Mr. Walker, is set down for March 6th. The Unemployed Workmen Bill will have its second reading moved on March 13th by Mr. Whitwell Wilson. Four Irish Bills will occupy the four succeeding Fridays, and on May 1st Sir Charles Dilke will bring on his Shops Bill. May 8th is devoted to the Criminal Law (Ireland) Act of 1887 Repeal Bill, while a Scottish Housing Bill, a Local Option Bill for Scotland, an Elections and Registration Bill for London, a Rights of Way Bill, and the Coal Mines (Eight Hours) Bill occupy the remaining Fridays up to Whitsuntide. If the debate on the Address should end before Friday in this week, the Elections and Registration Bill for London will be discussed on a second reading motion. The antivivisectionists have not been successful in getting a good place for any Bill this year, and Sir John Tuke, who balloted for the Bill to prohibit medical practice by companies, was unable to draw a winning number. The Bill will, however, be introduced later, as will Sir Walter Foster's Bill for giving security of tenure to public health officials.

The Police and Sanitary Committee.—On the motion of Mr. Herbert Samuel on Tuesday last, the Committee of Selection was directed to nominate the Committee for the consideration of Private Bills promoted by local authorities by which it is proposed to create powers relating to police or sanitary regulations in deviation from the provisions of the general law.

The Milk Supply—In answer to a question put by Mr. Cavendish, Mr. Burns stated on Tuesday that the Government were desirous that there should be legislation with regard to milk supply during the present session, and he could not promise further inquiry before introducing a Bill on the subject.

Sleeping Sickness.—In reply to Mr. Rees, Mr. Winston Churchill stated on Tuesday that the spread of sleeping sickness towards Nyassaland was being investigated by a party of scientific experts sent out by the Liverpool School of Tropical Medicine with the assistance of a grant from Government funds. When their report had been received the Secretary of State would consider in consultation with the Governor of the Protectorate what measures, if any, are required. The whole matter was being closely watched. In Uganda the disease was being controlled by administrative measures. Although it was undoubtedly virulent, its spread could be prevented.

Imported Meat—Mr. Courthope asked the President of the Local Government Board on Tuesday what steps were being taken to remove the danger to the public health arising from imported meat. Mr. Burns replied that he had ordered regulations to be prepared, under the Regulations as to Food Act of last Session, with regard to the matters dealt with in Dr. Buchanan's report, and he was in communication with other departments on the subject.

Business for Next Week.—It is not expected that either the Licensing or Education Bill will be taken next week, but instead the Bill announced in the King's Speech to consolidate and amend the law relating to the protection of children and to the treatment of juvenile offenders, will probably be taken on Monday. Supplementary Estimates will follow, and later in the week two days will most likely be given to the Scottish Land and Valuation Bills in connexion with their being rapidly passed through these stages, and sent up again to the House of Lords.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE MORISON LECTURES.

The Etiology of Mania.

THE first of the Morison Lectures for 1908 was given before the Royal College of Physicians of Edinburgh on January 27th by Dr. Lewis C. Bruce, F.R.C.P.E. The subject was the symptoms and etiology of mania, and Dr. Bruce pointed out that it was a commonly-accepted belief that maniacal states were conditions of brain toxaemia or brain poisoning. It was also commonly accepted that hereditary predisposition was the chief predisposing cause of all insanities. As to the exciting causes of mania, there were evidences of bacterial toxaemias:

(*a*) In the blood serum of over 90 per cent. of patients suffering from mania the presence of an agglutinin which agglutinates the red blood corpuscles of healthy persons could be demonstrated. An apparently similar agglutinin was present in the blood serum of many sane and apparently healthy persons. By infecting rabbits with streptococci and staphylococci bacteria a similar agglutinin made its appearance in the blood serum of the infected rabbits. The presence of such an agglutinin in the blood serum would therefore apparently indicate some form of streptococcal or staphylococcal invasion. As both the sane and the insane might show this symptom of bacterial toxaemia, there must be some further factor in the production of states of mania, and this further factor was probably an inherited or acquired unstable nervous system. In other words, the sane and the insane might suffer from similar toxaemias; but whereas the brain of the sane man was stable and the toxins produced no mental symptoms, the brain of the insane was unstable and readily became disordered by toxic action.

(*b*) Although the bodily temperature showed little evidence of toxic disorder, a simultaneous observation of the white blood corpuscles of the patient demonstrated that a state of marked toxaemia existed in every case.

(*c*) The disorders of the alimentary tract were such as would be expected to be found in persons suffering from toxic diseases. Further, the bacterial flora of the whole alimentary tract was altered in at least 50 per cent. of the subjects of mania.

(*d*) Lastly, the nitrogenous excretion by the urine in the subjects of mania indicated an excess of metabolism similar to that found in known infective diseases.

In his second lecture, on January 29th, Dr. Bruce said that the blood serum in health contained protective agglutinins to certain strains of staphylococcal and streptococcal organisms. These protective agglutinins could be demonstrated in the blood serum of over 60 per cent. of maniacal patients. In addition to these agglutinins, which might be called normal agglutinins, the blood serum might contain agglutinins directly the result of bacterial disease, an example of which was the typhoid agglutinin which appeared in the blood serum as the result of an attack of typhoid fever. Such agglutinins were called specific because they acted only upon the affecting organism. In the blood serum of patients suffering from mania specific agglutinins to certain organisms of the streptococcal group could be demonstrated to exist, and similar agglutinins were rarely present in the blood serum of apparently sane and healthy persons. The streptococcal organisms with which these observations had been made were isolated from the blood, urine, and faeces of maniacal patients. The number of white blood corpuscles in the blood of maniacal patients was greatly increased, and this leucocytosis was largely due to an actual and relative increase in the polymorphonuclear leucocytes. A hyperleucocytosis of the polymorphonuclear leucocytes was generally regarded as an evidence of bacterial toxaemia. Continuous blood observations in cases of confusional mania revealed the further fact that after recovery from the maniacal attitude the patients presented this hyperleucocytosis, and it was reasonable to suppose that this evidence of toxaemia was also present before the maniacal attack. In other words, in the type of mania which was called confusional, the disease was a chronic insidious toxaemia of which the maniacal attack was only an incidental complication.

In his third lecture, given on January 31st, Dr. Bruce dealt with the results of bacterial observations on the blood of 15 patients suffering from mania. A streptococcus was isolated from one case of confusional mania. The blood serum of this patient agglutinated the organism in the dilution of 1 in 100, while the serum of few control persons gave agglutination. The blood of the remaining 14 cases of mania was sterile. It may be surmised therefore that organisms are not frequently present in the blood of maniacal patients. As the result of bacterial observations upon the urine of 20 patients suffering from mania it was noted that the urine of these cases when centrifuged and examined microscopically presented a large number of organisms, chiefly cocci, while the urine of five control males similarly treated presented very few organisms. Cultures made from the centrifuged urine of the maniacal patients afforded comparatively few colonies considering the number of organisms seen microscopically. On the other hand, the urine of the five control males, when inoculated on agar plates and incubated for twenty-four hours at 37° C., showed a large number of colonies. It was inferred from this that the organisms in the urine of the maniacal patients were largely dead, and had been probably excreted through the kidneys; while the organisms in the urines of the five control males were living, and had probably been washed out of the urethra. The excretion of organisms in the urine of maniacal patients might be explained by the fact that the small intestines of these patients, when examined *post mortem*, presented evidences of atrophic catarrh, which would favour phagocytic action by the leucocytes. Two streptococcal organisms were isolated from the urines of the maniacal patients. These streptococci were agglutinated by the blood serum of the patients yielding the organisms, while the blood serum of control persons gave no agglutination. A bacterial examination of the faeces in 27 patients suffering from mania demonstrated the fact that in 59 per cent. streptococci were very numerous, so numerous that in two instances no *Bacillus coli* were present. Houston, in examining the bacteriology of the faeces in 20 healthy persons, found an excess of streptococci in one case. Six streptococci agglutinated by the blood serum of the patients yielding the organisms, but not by the serum of control persons, were isolated from the faeces of the 27 maniacal patients examined. Attempts to produce antiserums to these organisms by inoculating two goats and a sheep failed. Attempts were made to immunize the patients by injections of vaccines made from these organisms. It was found that large doses produced an exacerbation of the mental symptoms. The opsonic index of several maniacal patients when tested with some of the streptococci above mentioned was very suggestive of a bacterial toxaemia, particularly the negative phase which followed the injection of vaccines made from these streptococcal organisms. As the result of these observations the lecturer stated that he believed that the diseases known as mania were conditions of brain poisoning, the poison or toxin in every case being bacterial. The bacteria causing these toxaemias were probably streptococci, and the point of attack was almost certainly the intestinal tract.

The following explanation of the disease process was advanced: Owing to some lowering of the bacterial defences certain strains of cocci became unduly increased in the intestinal tract. These cocci did not actually enter the blood stream, but they formed toxins in the intestine, which were absorbed by the blood vessels and lymphatics in such quantities as to escape destruction in the liver and lymphatic glands and thus passed into the general circulation. These toxins had a selective affinity for the most highly-developed nerve structures of the brain, to which they were carried by the blood stream. When the toxin molecules were present in the blood stream in sufficient quantity to produce an acute brain intoxication, then an acute attack of mania was the outward result. When the poisoning was more gradual, then there was a gradual deterioration of the brain tissues, showing itself in eccentricities and changed character, which might lead finally to a chronic delusional state. The presence of toxin molecules, however, in the blood stream inevitably led to the formation of antitoxin molecules, which, by combining with the toxin molecules, rendered them inert,

When a maniacal patient made an apparent recovery, the antitoxin molecules had, for the time being, neutralized the toxin molecules, and a cessation of the symptoms ensued. On the other hand, a lowering of the general bodily health, or a failure on the part of the cells to form a sufficient number of antitoxin molecules, immediately allowed the toxin molecules again to go free, further poisoning took place, and another attack of mania was the result. The cause of the whole process—the streptococci in the intestinal tract—remained a source of danger, as they were unaffected by the formation of antitoxins which could reach them in the intestine.

INTER-UNIVERSITIES' CONFERENCE UPON AUTONOMY.

Delegates of the General Councils of the four Scottish Universities met in the Edinburgh University Court-room on February 1st, to consider proposals recently made for superseding or modifying the present procedure for the making or altering of ordinances regulating teaching and other arrangements in the several Universities, which involve the submission of the ordinances both to the Privy Council and to Parliament, as well as to the constituent bodies of the University promoting the ordinance, and to the courts of the other Scottish Universities. Twenty-one delegates attended, and after an interchange of views on the various aspects of the question the conference was adjourned until the end of March, on a day to be afterwards fixed.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers on Monday, February 3rd, Dr. Alexander Bruce, Ordinary Physician, and Mr. F. M. Caird, Ordinary Surgeon, were reappointed to their respective offices for five years as from April 1st next, while Drs. W. T. Ritchie, Henry Wade, and W. E. Carnegie Dickson, Assistant Pathologists, were reappointed for one year as from April 2nd next.

EDINBURGH SOCIAL UNION.

The twenty-third annual report of the Edinburgh Social Union and Social and Sanitary Society (November, 1907) gives a summary of its work during the preceding year. The housing work of the Union was started in 1885, and was modelled on the work done by Miss Octavia Hill in London. In the report for last year the Committee was able to show that during the past nineteen years it had paid to the proprietors sums varying from 3½ per cent. to 6 per cent. per annum from the properties entrusted to its care. The Society was confident that this work is of great advantage to the tenants, not only in providing them with better houses, but in the personal intercourse with the rent collector, who was always ready to give friendly advice or sympathy. The objects of the Social and Sanitary Committee were: (1) To spread a knowledge of the municipal laws *re* sanitation; (2) to secure a more effective administration of the existing laws; (3) to endeavour by the diffusion of ethical and social literature to set the people on ways of self-improvement. The Committee effect this by supplying to district visitors, deaconesses, parish Sisters, and all mission workers postcards addressed to the proper authorities (Sanitary Department, Burgh Engineer's Department, Cleaning and Lighting Department), on which visitors noted any insanitary condition they may come across. The aim of the Window Gardening Committee was to encourage the children attending elementary schools to rear plants in their own homes. Arrangements are made with a gardener to supply plants and seeds at a reduced rate to the children. The plants and seeds were given out in spring, and a flower show was held at the close of the season in every school in which the head master found it possible to undertake the trouble involved in organizing a show in school hours. The desire to take part in the window gardening competition seemed to grow more popular with masters and pupils. During the year eighteen schools procured seeds and plants, and in several of the schools the number of exhibits was very largely increased. In spite of the backward season, the plants returned for exhibition were most carefully tended and well developed. The rearing of flowers from seeds was on the increase. The Industrial Law Committee reported that during last year many workers in different branches of social work had interested themselves in the conditions under which much of the industrial work of the city was done. They had received many complaints of breaches of the Factory and Workshops Acts, and these had been dealt with by H.M. Inspector of Factories. Seldom in the large, well-organized, and well managed factories were there real causes for complaint; these came oftener from the small, struggling industries carried on in very indifferent premises.

ACTION AGAINST TWO MEDICAL MEN.

An action has been raised in the Court of Session at Edinburgh by Simon Davies, a tailor there, against the Parish Council of Edinburgh, and against two of the medical officers of that Council—namely, Dr. James Bell Carruthers and Dr. Thomas Jackson Thyne—for £12 500 damages for having been, as he says, "illegally confined in Morningside Asylum through the fault or negligence of the defenders." The pursuer states that on October 21st, 1907, when working in his shop, he was apprehended by persons who stated that they were acting on a warrant of the Sheriff obtained on behalf of the parish council. He was detained in the pauper ward of the asylum for fifteen days. He complains of the treatment he received, and says he was badly fed, and avers that the sum sued for is a moderate estimate of the damage he has sustained. The defenders explain that in consequence of telephonic communications received at the offices of the parish council on October 21st, 1907, Drs. Carruthers and Thyne were instructed to call and see the pursuer. They did so separately during the day, and found that the pursuer required to be placed under immediate restraint. His averments as to the treatment received by him at the asylum are not known and not admitted. The pursuer was conveyed to the asylum in a cab, and was accompanied by his son. The case was sent to the Procedure Roll.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

The annual meeting of this Association was held at the St. Enoch Hotel, Glasgow, on January 31st, when there was a good attendance of members.

The annual report stated that contra advertising in the medical journals had been continued during the year, and had entailed a great deal of work on the secretary, since the number of applicants for information as to vacant appointments had been very large. The information, however, had been much appreciated, particularly in cases where the vacancies had occurred through more or less unjust treatment of their medical officers by the smaller parish councils. The causes of friction during the year have been much the same as formerly, namely, interference by parish councils with the private practice of medical officers; attempts to reduce the official salary for attendance on paupers; the medical officers were advised to appeal to the Local Government Board, that Board in every case, after due investigation, refused to allow the parish council to reduce the salary. In one unusual case a parish council insisted on the medical officer making regular visits to the paupers on the outdoor roll whether his professional assistance was required or not, the cost to the medical officer in making some of these visits amounting to 20s. or 30s. for horse hire. The duty of making statutory visits to paupers legally falls on the shoulders of the Inspector of Poor, and, according to the regulations of the Local Government Board, forms part of his duties, and the Committee considered that the attention of the Local Government Board ought to be called to the matter. Four cases of dismissal by parish councils came to knowledge during the past year. The secretary in each case appealed to the parish council to rescind their resolution. In two of the cases his action met with no success, in one the dismissal was not carried into effect, and one case is now pending. One parish council wrote protesting against contra advertising, as such put them to a great deal of trouble in getting the vacancy filled up, and asking for reasons why the Committee did so. The secretary replied to the effect that their duty to the profession compelled the Association to warn applicants against accepting vacancies when a parish council interfered unjustly with its medical officer, at the same time offering, in the event of the complaining parish council requiring a medical officer in the future, to do all in their power to assist them in getting a competent and reliable man, provided the Association were satisfied that the out going medical officer

had no just cause of complaint against the parish council. Acting on the advice of Mr. Cathcart Wason, M.P., the Bill to amend the Local Government (Scotland) Act was withdrawn, and introduced in a new and improved form, intituled, The Parochial Medical Officers (Scotland) Bill. This Bill consists of practically one clause, namely, a Medical Officer holding office under a Parish Council in Scotland, under the Poor Law (Scotland) Act, 1845, shall only be removable from office by or with the consent of the Local Government Board for Scotland. Mr. Wason, M.P., could not get the Bill read a second time last session, but it is his intention to reintroduce it this session. It is understood that the Secretary for Scotland has promised to give the Bill his serious consideration, in the event of the Government introducing legislation to amend the Poor Law in Scotland.

The Royal Commission on Poor Law had met in Edinburgh during the summer to hear evidence as regards Poor Law in Scotland. The secretary gave evidence as regards the position of Poor-law Medical Relief in Scotland on the following points, namely: Tenure of office, supply of medical extras and drugs, official residence when required, fees for extra professional services, supplying locumtenents by parish councils during sickness or holidays, superannuation, etc. The secretary also appeared in support of an elaborate statement, brought forward on behalf of the British Medical Association, in regard to the working of the Poor Law in Scotland as it affected the medical profession and the general public.

The minutes of the last annual meeting were read and adopted, as was also the financial statement, which showed a substantial balance in hand. Notice was given of a motion to be made at the next annual meeting to alter the constitution and rules of the Association in certain respects. The meeting terminated with the usual vote of thanks.

Correspondence from any member of the Scottish Poor-law Medical Service asking for advice in difficulties will be welcomed by the Secretary, Dr. W. L. Muir, 1, Seton Terrace, Glasgow, and all such communications will be held as private and confidential unless from members of the Executive Committee.

Ireland.

[From our Special Correspondents.]

Ballinasloe Asylum *v.* Galway Workhouse.

It will be within the recollection of our readers that early in December last we tried to give a perfectly impartial statement of a grave dispute that had arisen between the authorities of the Ballinasloe Lunatic Asylum and the Galway Board of Guardians and their hospital staff regarding the condition of a woman named Anne Laffey, who was sent to the asylum some months previously from Galway Workhouse, and that the medical superintendent of the asylum, Dr. Kirwan, took exception to our remarks.

On December 19th an inquiry on oath was held at the Galway Workhouse by Dr. Biggar, Local Government Board Inspector, as to the charges made by Dr. Kirwan against the Galway Hospital staff. It appeared that Anne Laffey was admitted into the Galway Workhouse Infirmary in the spring of 1907. She soon developed mania, and was placed upon a water-bed and carefully nursed for a couple of months. At the end of that time, as there was no improvement in her condition, she was committed to the Ballinasloe Asylum and conveyed thither by two policemen by rail from Galway Station. She died some six months later, and trouble having arisen over the failure to report her death to her relatives, Dr. Kirwan wrote the letter in which he charged the Galway authorities with allowing Anne Laffey to become "the most shameful instance of human neglect he had ever seen." At the inquiry before Dr. Biggar Dr. Adeline English, an assistant medical officer of the asylum, swore, and was corroborated by three attendant nurses and the medical superintendent, that on her admission Anne Laffey had a bedsore on her left hip the size of half a crown with sinuses exuding pus extending 5 in. down the thigh; that she had another larger bedsore over the sacrum, one on the right hip, two on the left arm, and one over each shoulder-blade. She also swore that the bedsores must have been there a fortnight before the patient's admission. She stated, further, that the patient was not put upon a water-bed because she was dirty in her habits, and was not sent to the asylum infirmary because she was noisy and violent. Dr. Kirwan swore that the term "inhuman" did not refer to the staff of the Galway Hospital, and that by "neglect" he only meant neglect to send her to the asylum sooner.

For the Galway Infirmary evidence was given by Drs. Colohan and McDonagh, the head nurse, a Sister of Mercy, three of the trained nurses on the staff, and a ward's maid. They all swore positively that when Anne Laffey left the Galway Infirmary there was not a bedsore on her body nor any sore except a small abrasion on the hip, which she had scratched with her nails. We feel that we dare not comment upon evidence so contradictory as this case discloses, and we can do no more than reproduce the following letter from the Local Government Board to the Galway Board of Guardians:

Sir,—The Local Government Board for Ireland desire to inform the Board of Guardians of Galway Union that they have received the report of their Inspector, Dr. Biggar, on the inquiry recently held by him into the case of a woman, Anne Laffey, who was transferred from the workhouse to the Ballinasloe Lunatic Asylum on April 5th last, where she died on October 13th following.

The guardians will observe from the evidence given at the inquiry that the particulars regarding the patient on admission to the asylum are somewhat vague and conflicting, whereas the details as to her condition for several days before, and on the day of her departure from the workhouse, are much more definite.

Having given a summary of the evidence given by all the witnesses the letter continues:

The Local Government Board are of opinion that the evidence given by the five responsible workhouse officials, taken in conjunction with the evidence of Dr. Kirwan and Nurse Keating, as to the stains on the patient's clothing, clearly proves that the extent of the broken skin or open sores on the patient's body was not large at the time of her removal from the workhouse. If further substantiation were necessary, it could be found in the fact that the sore or sores were *not dressed for over twenty-four hours* after the patient's admission into the asylum, during which time the sore or sores were in contact with the patient's underclothing and bedclothes.

It was stated at times that the patient was very violent, and therefore required constant care and attention, which the evidence went to show she received from the time of her admission to the hospital till she was transferred to the asylum.

It is much to be regretted that Dr. Kirwan should have written as he did in his letter of October 25th, but at the inquiry he explained that he wrote the letter in a state of great excitement, and that he exceedingly regretted the tone of that letter and the writing of it.

Dr. Kirwan having fully expressed regret for his letter, and Dr. Colohan having also expressed regret for that letter, the Board in these circumstances think it unnecessary to make any statement except that the patient in question received skilful and careful treatment for her physical ailments while in the Galway Union Infirmary.

In conclusion, the Board think that it might be desirable for the guardians to give instructions in future when a patient is being transferred to the asylum a covered vehicle should be used instead of an outside car.—I am, sir, your obedient servant,

A. R. Barlas, Secretary.

After the letter had been read the guardians adopted resolutions expressing the opinion that (1) as they had been cleared Dr. Kirwan should be made liable for the expenses; (2) congratulating the medical and nursing staff of the workhouse; and (3) sending a copy of the report to the Commissioners of Lunacy.

Sligo Lunatic Asylum.

A dispute has arisen at the Sligo District Asylum regarding the Matron and the Assistant Medical Officer, Dr. Gilcriest. These two officers some time ago married, and the Board called upon Mrs. Gilcriest to resign, but the Inspectors in Lunacy pointed out that she could not be removed from her position unless with the sanction of the Lord Lieutenant. At the last meeting it was proposed by Mr. McHugh, M.P., that Dr. Gilcriest should be called upon to resign, on the ground that it was highly undesirable in the interests of the asylum that a second family establishment should be set up. It was finally suggested that Dr. Gilcriest should be called on for an explanation, and this course was adopted.

LIMERICK UNION AND TUBERCULOSIS.

The Joint Committee in charge of the preliminary steps towards the erection of consumptive annexes at the Limerick Workhouse have adopted the following report:

That this Committee are strongly of opinion that it is imperatively necessary that an annexe should be erected for the benefit of patients suffering from any form of tuberculosis, and we respectfully suggest to the Board of Guardians that some such building on the lines of the plans shown to the Committee be adopted by the Board; and we further think that this important step in the direction of fighting this fell disease can be carried through at a very reasonable cost to the ratepayers; and we make the very strongest representation in favour of proceeding with the suggested annexe, which is a crying necessity for the poor consumptive patients, and which seems to be at the same time the readiest and cheapest way to provide the additional space which the hospital requires.

At the Cork Union the following report was sent in by the medical staff:

We beg to inform the Board that there has been a large increase in cases of consumption admitted to the hospital. In consequence the wards are greatly overcrowded, and patients have to be sent to the infirm division who should be kept in the hospital. Further, as several patients have objected to being placed next to cases of advanced consumption—and we think rightly so—we recommend as a more urgent matter that an isolation hospital for consumptive cases be erected. This should be constructed with light materials in a cheap manner, and should be placed in a sunny site.

DOCTOR AND NURSE.

A correspondent, who signs himself "Fairplay," sends the following note with regard to a recent decision of the Lurgan Guardians to dispense with the services of a lady who has for some years fulfilled the dual duties of resident medical officer and superintendent of nurses at the Lurgan Workhouse:

In 1901, in consequence of the nursing system in the Lurgan Workhouse having been amended, and to comply with the wishes of the Local Government Board, the guardians, in their wisdom, resolved to elect a lady doctor, who would be expected to act as resident medical officer, as superintendent nurse, and to assist in training of probationer nurses. Such a combination was duly advertised for at a salary of £80 per annum, with rations, etc. Two applicants presented themselves in February, 1902, one of whom was elected by thirty-five to three votes for a period of one year. Each year since she has been re-elected without any advertisement. She has discharged the duties of her difficult position well, proving herself very capable, attentive and kind, and consequently is greatly liked by the poor inmates and pay patients.

At their meeting in January, when many of the guardians had left the Board room, those remaining passed a resolution to advertise the forthcoming appointment. This proceeding has caused much surprise in the locality and is widely condemned, the feeling being that the present occupant of this post has a prior and well-earned claim to reappointment.

It is hoped that every possible candidate who may see these advertisements will evince a proper *esprit de corps* and abstain from coming forward on the day of election. Inquiries addressed to officials and others outside the workhouse would show the anomalous nature of the duties required; and would elicit the "penny-wise" ways of the guardians, who should appoint both a superintendent-nurse and a resident medical officer, and thus provide for the proper care of the patients and training of probationers, and not seek to perpetuate a peculiar mixture of both offices.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER.

NOTIFICATION OF BIRTHS.

AT the annual meeting of the Manchester Medical Guild held last week the question of the best means of obtaining all the advantages without the gross disadvantages of the Early Notification of Births Act was discussed. The letter from the Guild which appeared in the BRITISH MEDICAL JOURNAL of November 2nd, 1907, was sent to every member of the Manchester City Council and the Salford Town Council, and numbers of copies were sent also to the Lancashire and the Cheshire County Councils, and to many town and urban district councils throughout Lancashire. In many cases a request has been received from town clerks for extra copies to be distributed to members of their councils, and it is evident that the information as to the attitude of medical men on the subject has been welcomed. The Guild believes that it is only by bringing the opinions of the profession to the personal notice of individual members of town councils that there is any hope on this or any other subject of obtaining justice. It is not sufficient to write a letter to the press; only a small fraction of town councillors ever see it. Moreover, deputations to small Corporation committees are only useful as far as they go, for it not infrequently happens that the information given to the committee never goes beyond the walls of the committee room, and the general town council, knowing little of the subject, can only follow the lead given by a few influential members of the Committee. That this was not the case with the Manchester City Council was undoubtedly owing to the fact that the City Council itself had learned something of the matter and saw the justice of the objections to the Act raised by the medical profession. It has been quite surprising how many requests for further information have followed the sending out broadcast of the Medical Guild's letter. At the annual meeting of the Guild the feeling was expressed that methods of evading the responsibility which the Act imposes on the profession are not satisfactory. Arrangements by which the medical attendant undertakes to deliver notification forms to the father or friends for them to fill up and send to the medical officer of health may work fairly well for a time, but when the Act is adopted all such methods of evading legal responsibility may soon become a dead letter, and only the strict letter of the law will remain, while the thin end of the wedge will have been driven in. The Guild prefers to oppose the adoption of the Act as it stands to the uttermost, and to refuse to accept any legal responsibility for notification. If this is forced on the profession in spite of its protests, the arrangements mentioned may, perhaps, be accepted as a last resource to avoid breach of professional confidence. It is regarded as far preferable to prevent, as far as possible, the adoption of the Act, but at the same time to show perfect readiness to assist the health authorities wherever there is any possibility of good results from the visits of health visitors. In most cases of confinement attended by medical men the health visitors are not needed, while in cases where their visits are likely to be of benefit the Guild, strongly as it has opposed the adoption of the Act, would, without doubt, render every assistance in its power to reduce infant mortality. Compulsory notification by medical men is what is resented, and, with this in mind, the annual meeting passed the following resolution:

That the Medical Guild notes with great pleasure the refusal of the Manchester City Council to adopt the Early Notification of Births Act; but, recognizing the advantage to be gained in many cases by early assistance being given to nursing mothers by the health authorities, would urge its members and the medical profession generally to facilitate matters to the best of their ability by advising their patients in suitable cases to give early information of births and to make application for any required assistance to the health department.

ANTHRAX IN THE MEAT MARKET.

Last week a butcher trading in the Manchester meat market was charged with exposing meat for sale which was unfit for human food. The chief veterinary inspector said that on visiting defendant's stall in the market he saw two quarters of meat which was "rough-looking." He examined a sample under the microscope and found anthrax, and his diagnosis was confirmed by others. Defendant told him that the person from whom the carcass had come had advised him to have it inspected before exposing it for sale, and though part of it had been sold he had kept the rest back for inspection. The whole of what had been sold was quickly recovered. It would seem that the animal had been hung and not bled until an hour after, and apparently the persons concerned attributed the rough look to this fact. The inspector said that he could tell, apart from microscopical examination, when meat was affected with anthrax, but of course would not speak absolutely without such examination. He would not go so far as to say that an ordinary butcher could detect it. The defendant had rendered every assistance to the inspector, and was acquitted of any guilty knowledge, though the magistrate felt compelled to inflict a fine of £10 and costs.

Medical Women and the Inspection of School Children.

The Northern and Midland Association of Medical Women met in Manchester on January 18th, Dr. Helen Wilson of Sheffield in the chair. Dr. May Thorne of London spoke on the question of remuneration for medical inspection of school children. There was a large gathering of medical women, and the following resolution was passed unanimously:

That, as women are equally bound with men practitioners by the ethical laws of the profession, women practitioners should under no circumstances accept a lower salary than that which shall be agreed upon by the profession as a minimum.

WEST YORKSHIRE.

The Medical Inspection of School Children.

At a meeting of the Keighley Education Committee on January 28th it was decided to appoint Dr. Scatterty, medical officer of health, as the official to carry out the duties arising under the Education Act of 1907, the salary to be at the rate of £150, rising to £200 in the second year, and terminable by six months' notice. Some opposition was manifested to the appointment on account of the multiplicity of offices held by Dr. Scatterty, including those of medical officer of health at £125 per annum, and Superintendent of the Keighley and Bingley Infectious Diseases Hospital at £120 per annum. But the Committee's proposition was eventually adopted.

The question of medical inspection is at present under the consideration of a Special Committee of the Bradford Division, but it is reported that the Elementary Education Subcommittee has already taken action in the matter. It was considered that it would be necessary in carrying out the provisions of the Board of Education on medical inspection to arrange also for some treatment. It is laid down that during the first year each child must be medically inspected twice, and as there are over 47,000 scholars in the elementary schools and 3,000 in the secondary schools, it was recognized that the medical superintendent (Dr. Crowley) would require assistance to get through the inspection alone. It was decided to recommend the Education Committee to appoint two assistants to Dr. Crowley, one of whom should be a lady doctor, and it was thought that both should have special qualifications with regard to the treatment of eyes.

SOUTH WALES.

Cottage Exhibition.

Under the auspices of the National Housing Reform Council a conference of delegates from local authorities and workmen's associations was held at the Guildhall, Swansea, on February 1st, to consider the best methods to adopt for the proposed South Wales Cottage Exhibition in 1909. Lord Glantawe, who presided, said he felt indebted to the Housing Reform Council for their proposal to hold an exhibition at Swansea. No doubt there was a great cry for housing reform in Swansea, as in most other towns. Mr. Aldridge, the Secretary of the National Reform Council, explained that the objects of the Association were to give examples of the planning of suburbs and to stimulate the building of well-designed and comfortable homes, capable of being let at rents within the reach of workmen. At their Sheffield exhibition there were about 150 foreign representatives, who were delighted with what they saw. The scheme included cottages of three classes —(*a*) at £175, (*b*) at £200, and (*c*) at £225. Mr. David Harris, ex-Mayor of Swansea, submitted a motion approving of the proposal to arrange a cottage exhibition for South Wales to be held in Swansea in 1909. The motion was carried, and Lord Glantawe was thanked for presiding at the meeting.

Tuberculosis and Milk.

At the annual meeting of the Monmouthshire Chamber of Agriculture held at Pontypool on February 1st, Mr. R. H. Williams, the retiring president, read a paper on the milk question. He urged that the British farmer should pay more attention to the production of milk, as condensed milk, equalling in bulk 250 million gallons, equivalent to the yield of over half a million cows, was annually imported by this country. He urged that herds should be increased, so that better milk might be generally provided for the people. Speaking with regard to the regulations for the inspection of cowsheds and dairies, he suggested that inspection should be carried out by qualified veterinary surgeons appointed by the Board of Agriculture and not by inspectors under local government bodies. Mr. R. Stratton (Newport) deprecated the milk scare which was being raised, as he thought it was still an open question whether bovine bacilli could affect humanity. He moved that in any legislation concerning the milk supply uniform regulations should be aimed at, and that no vexatious restrictions calculated to render the production of milk more expensive should be adopted; and, further, that the working of any new Act should be entrusted to the Board of Agriculture and not to the Local Government Board. This motion was agreed to.

Brynmawr Death-rate.

In his annual report upon the health of Brynmawr, Dr. J. L. Thomas, M.O.H., stated that the birth and death rates for the year were respectively 38.5 and 14.7 per 1,000, the death-rate being the lowest of which he could find record, and exceptionally low as compared with that of the country generally. Ventilation of living and sleeping apartments was certainly more attended to than formerly. Tuberculosis only claimed 5 victims, and this spoke well for the quality of the milk supply, and also for the social prosperity of the people generally. Sixty-nine cases of zymotic diseases, 36 being of diphtheria, were notified during the year. The diphtheria cases all occurred in the early part of the year, and were in almost every instance contact cases from cases of sore throat, undoubtedly septic, which had not come under notice or treatment on account of their slight nature. The constant water supply, with the free flushing of drains, helped by the uniform rainfall, ensured the absence of the disease in the summer and autumn. Any individual effort in the checking of the disease would be fruitless unless the public water supply was ample and constant, and in this direction the proposed arrangement with the Ebbw Vale Council for a supply, in case of need, in addition to Brynmawr's own supply, would be the one thing needful to ensure the general absence of such diseases as diphtheria and typhoid fever.

Canada.

[From our Special Correspondent.]

The Weight of Bread.

Recently two of the largest manufacturers of bread in Toronto were fined $30 for light-weight bread discovered in retail shops by the inspector. In the investigation held before the magistrate evidence was given that the bread was made 3 or 4 oz. over the 20 oz. which was stamped on it as the selling weight; and it was stated that this was sufficient to allow for any shrinkage, and that the average loaf sold was over weight, one manufacturer claiming that he gave away in this way 125,000 oz. of bread a week. The magistrate held that all he could do under the law was to inflict the penalty.

Academy of Medicine, Toronto.

The inaugural meeting of the Academy of Medicine of Toronto was held on the evening of December 3rd, 1907, in the Medical Building of the University, when there was presented to the Academy by Mr. I. H. Cameron, on behalf of the British Medical Association, a portrait of Dr. R. A. Reeve, and by Dr. J. T. Duncan, on behalf of the Faculty and Graduates of the Ontario Medical College for Women, a portrait of Dr. R. B. Nevitt. The President's address was delivered by Dr. J. W. F. Ross on Ideals in Medicine.

Queen's College, Toronto.

The new medical laboratories of Queen's College, Kingston, were dedicated on January 14th, when addresses were delivered by the Hon. Dr. Pyne, the Minister of Education for Ontario; Dr. Barker, of Johns Hopkins University, Baltimore; Dean Reeve and Professor A. B. Macallum, of Toronto; and Drs. Wesley Mills and Adami, of McGill. A grant of $50,000 had been made by the Government for the building, in which is accommodated biology, physiology, histology, pathology, and bacteriology. There will also be rooms for the Department of Public Health.

CORRESPONDENCE.

THE STATUS LYMPHATICUS.

SIR,—I have read with much interest Dr. McCardie's article and your leader on this subject. They call attention to a condition which has been rather neglected in this country. It is by no means so uncommon as is usually thought, for since my interest in it was awakened by the first case recorded in Dr. McCardie's paper I have had the opportunity of investigating 21 other fatal cases, 19 of which were found in the pathological department of the General Hospital, Birmingham, in three years. Several more cases, in whom I have no doubt this condition existed, were studied during life among my out-patients at the same hospital. All the fatal cases showed the typical signs of status lymphaticus, the thymus gland varied in weight from 17 grams to 35½ grams, the average being 24·3 grams, and there was well-marked hyperplasia of the lymphoid tissue generally; 8 of the 22 cases died under anaesthesia, the anaesthetic used in each case being chloroform, 6 died after injuries, 1 during tracheotomy for diphtheria, 1 from appendicitis, 4 after operation for the removal of goitres, 1 from a perforated gastric ulcer, and 1 with nephritis. Five of the cases of injury were brought into hospital dead after dying suddenly in the street; in some of these the only sign of injury was slight bruising; in all the injury was such as, so far as one could tell, would not usually produce sudden death. In some of the other cases there was a sufficient cause of death apart from the status lymphaticus, but the mode of death was characteristic, namely, sudden and unexpected heart failure.

It is not sufficiently recognized that the prognosis of acute infectious diseases is much more serious in children with status lymphaticus, in that death may occur suddenly at any stage or during convalescence. Diphtheria is especially dangerous. True laryngismus stridulus may be fatal in these children. It is obvious that the condition has an important medico-legal interest. A number of cases are on record in which nursemaids or relatives have been charged with suffocating or fatally maltreating children, the true cause of death found at autopsy being lymphatism. Its importance in cases of death from injury, overlaying, and immersion in water will also be evident. Many theories have been advanced from time to time to account for the sudden death in these cases. They fall under two headings:

1. Those which assume death to be due to direct pressure of the enlarged thymus upon the trachea or other vital structure; and

2. Those which assume death to be due to a toxaemia which lowers the resistance to shock.

It may be taken as proved that an enlarged thymus is competent to produce, though it rarely does produce, a dangerous and even fatal dyspnoea. Cases are on record in which removal of the thymus has relieved the dyspnoea; and Jackson has placed the question beyond doubt by demonstrating with the bronchoscope the purely mechanical nature of at least some of the cases of thymic asthma. Some authorities regard these cases with chronic progressive dyspnoea as distinct from cases of true status lymphaticus, but in my opinion they are cases of status lymphaticus in which the hypertrophy of the thymus is unusually marked. Many supporters of the toxaemic theory have assumed the existence of a true internal secretion of the thymus, but of this there is no proof. The thymus is not a ductless gland, but a localized mass of lymphoid tissue with epithelial remnants. It varies in size with other collections of lymphoid tissue, and it is impossible to define cells which may be considered to act as secreting cells in the same sense as those of the thyroid or suprarenal. Swale Vincent has shown that extracts of thymus have no specific effect. The same depressor effect occurs as when extracts of other tissues—nervous, muscular, etc.—are injected.

On the other hand, in all my fatal cases the thyroid showed profound changes, resembling those found in exophthalmic goitre. In fatal cases of exophthalmic goitre an enlarged thymus is constantly found. Kocher has pointed out that there is constant swelling of the lymph glands in the neighbourhood of the thyroid, and an increase of lymphocytes in the blood even up to 60 per cent.; and Naegeli has shown that there are alterations in the bone marrow. The thyroid secretion is therefore competent to produce changes in lymphoid tissue. The internal secretion of the thyroid has a depressor action, increases the calibre of the arteries, and lowers arterial pressure. The changes in the thyroid gland in status lymphaticus therefore appear to me to offer a reasonable explanation of the tendency of these cases to sudden death. It is possible that the depressor effect of the thyroid secretion is compensated for in some cases by increase in the pressor substance of the adrenals and pituitary; and, indeed, Wiesel believes that hypoplasia of these organs in status lymphaticus is the cause of death.

Many important points await further investigation. Are the changes in the thyroid primary and the hyperplasia of the lymphoid tissue secondary, or are both common results of some unknown autointoxication? If the first, what is the cause of the thyroid changes? So far as I have been able to investigate the early history of my cases, improper feeding in infancy has seemed to play a part. Chalmers Watson has shown that the thyroid is extremely variable and sensitive to alterations in diet; many cases of status lymphaticus are associated with rickets, and there are other signs that improper feeding is one at least of the causes of this dangerous disease.—I am, etc.,

Birmingham, Feb. 3rd. W. H. WYNN.

SIR,—The subject of sudden death under an anaesthetic is one of the most anxious interest to all physicians and surgeons. Mr. Hilliard, in his paper in the JOURNAL of January 25th, p. 202, states:

> While the patient was still lightly under the anaesthetic the operation was begun. When the prepuce was stretched with forceps he developed crowing inspirations and there was a tendency to draw up the legs.

Mr. McCardie gives particulars of 5 cases:

> Regarding Case I he says: "A light anaesthesia was used throughout (that is, the lid reflex was retained)."
>
> Regarding Case II: "On incision there was a good deal of bleeding and the patient became rather blue and the breathing difficult, but she had a brisk lid reflex and dilated pupil."
>
> Regarding Case III: "Lid reflexes not abolished throughout."

With regard to Cases IV and V he does not mention the depth of the anaesthesia.

Each of the above cases ended fatally after the operation had been begun, so that the shock of the operation may have been the primary cause of death in each case. Cheyne and Burghard, in describing the process of anaesthetization, state:

> As a general rule, the fourth, or most profound degree of anaesthesia, is kept up only until the primary incisions have been made, after which the patient may be allowed to fall back to the third degree; but in cases where considerable shock is anticipated . . . it is of great importance that the anaesthesia should be maintained fairly deeply throughout.

Now a patient suffering from status lymphaticus is admittedly peculiarly susceptible to shock. In such patients the operator will anticipate considerable shock even from a trivial operation.

It seems to me that in all operations in which a general anaesthetic is used, and particularly in cases where the status lymphaticus is suspected, the commencement of the operation should be delayed until the patient is well under the influence of the anaesthetic. By well under I mean the condition of flaccidity of the limbs, abolition of conjunctival and other reflexes, and a contracted pupil—a stage just short of the fourth described by Cheyne and Burghard.

If the anaesthetist is unwilling to push his drug so far, then it is questionable whether the patient is a fit subject for a general anaesthetic. It is quite as much in the interest of the patient that he should receive enough of a general anaesthetic as that he should not receive too much. Arising from this are two interesting questions: Does the average English coroner recognize the importance of this principle? and if he does not, is he not rather a danger to the best interests of the patient than a safeguard?

In the Edinburgh Royal Infirmary, where chloroform is still almost exclusively used as a general anaesthetic, deaths under its use are very rare. There the chief maxims in its administration are: Give plenty of chloro-

form, plenty of fresh air, get the patient well under before the operation is begun, and keep him under until it is finished.—I am, etc.,

Colchester, Jan. 28th. A. N. Feil, M.D., M.R.C.P.Edin.

Sir,—I have read with interest Mr. Hilliard's account of a fatal case of status lymphaticus, death occurring during the administration of CE_2 mixture for the operation of circumcision. In remarking on the case, Mr. Hilliard says that he is unable to find any detail of the administration which he could alter with advantage to the patient. I venture to suggest that in a case where the condition was recognized, it would be infinitely safer for such a trivial operation as circumcision to employ a local anæsthetic. With, at the most, eucaine ½ grain in a 1 in 1,000 solution, the operation could have been quite painlessly performed, and I think quite safely. The initial puncture, if properly managed, need cause no pain or shock, and ½ grain of eucaine in a weak solution would probably be far short of a lethal dose even in a case of status lymphaticus. Obviously, it would be better that the patient should not have been inhaling cigarette smoke all the morning before the operation.—I am, etc.,

London, W., Jan. 27th. H. A. Clowes, M.D.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Sir,—In common with many other medical men I have puzzled long over the recent memorandum of the Board of Education regarding the medical inspection of school children. The statement that the examination, as a rule, need only occupy a few minutes is one of the first puzzles. Those of us who are accustomed to ask parents about the past ailments of their children and their own family history are aware how garrulous they often are upon these subjects, and as the doctor is expected to use "tact" he may find in some cases that the "few minutes" have gone when he has written down the answers to the first two questions. Then, supposing that the children have their boots off in the twinkling of an eye, surely weighing to the ounce and measuring to a fraction of an inch must take another minute, and unless these processes are done accurately the results are useless for statistical purposes. Assuming that the medical officer tells at a glance the state of nutrition and the presence of parasites (which he cannot with certainty do), will it not take another minute to exclude oral sepsis and estimate the number of decayed teeth? Adenoids cannot be detected forthwith, and experience in ophthalmic rooms shows that a few minutes are usually needed for taking the vision R. and L. To detect tuberculosis early, when it can be cured, is surely one of the chief aims of these examinations, and this requires a careful examination of the lungs. Gross lesions of the lungs are detected at home without the assistance of a school doctor.

The second puzzle in the memorandum is the remark that "*loosening* of the clothes is usually sufficient." How is the medical officer to recognize phthisis, hernia, and curvature of the spine, etc., unless he has a fairly complete view of the body?

The whole tendency of the memorandum is to underrate the amount of work involved in these routine examinations, and this will result in the understaffing of the schools. If the medical officer is to do the whole examination with any pretence to thoroughness it will take close upon half an hour, and, with all the assistance teacher or clerk can give, at least twenty minutes. It is important that the profession should make this clear, for obviously local authorities in their natural and laudable desire to keep down the rates will only engage the minimum amount of medical assistance, and if this is calculated on the basis that a child can be examined in five minutes the result will be that the statistics will be unreliable, many defects overlooked, and the medical officer will have no time in which to think of what he is doing.

This, Sir, is the reason I am troubling you with this letter. Some time ago in an article I think you expressed the hope that the examination would not be a farce. What else can possibly ensue if such a schedule is to be filled up in "a few minutes," and with the clothes merely "loosened"?—I am, etc.,

February 1st. H. H.

Sir,—While we are beginning by slow degrees to realize the magnitude of the task imposed upon the education authorities now that they are called upon to organize the medical inspection of school children, and while proposals as to the adequate remuneration of medical inspectors are being timorously adumbrated in Branch meetings of our Association, these same education authorities are making appointments in a manner calling for observation.

We find that Education Committees of certain county councils, who are the happy possessors of a County Medical Officer of Health, are handing the matter over to that official, and are forthwith proceeding to advertise for an Assistant Medical Officer of Health. Of this highly paid assistant (the salary offered varies from £110 to £200 per annum) we read, "his primary duty will be the medical inspection of children in the public elementary schools, but he will also be required to assist the M O H. in the performance of his general duties." In other words, the county council secures a medical inspector of schools on the cheap, and the county M O.H. an assistant into the bargain.

Some Education Committees are more lavish. The salary offered in one case reaches the sum of £300 per annum, with second-class travelling expenses and a modest perquisite for a night's lodgings should the medical inspector be away overnight on duty.

The duties attaching to this particular post are set forth with a draconian precision, as, for instance, "*children must not be unnecessarily excluded from school*"!

Dr. Clouston, in his admirable paper, entitled The Medical Inspector of Schools as a Psychiatrist, suggests some of the attributes of the ideal medical inspector. Do such attributes always repose in the person of an assistant medical officer of health at a salary of £120 per annum?—I am, etc.,

William E. Henderson, M.A., M.B., Ch.B.

Kirkcaldy, Feb. 4th.

Sir,—The proposition to make the payment of school medical officers "£50 a year for an attendance of one-half a school day a week—half a school day to be defined as two hours" is unnecessarily complicated. It would be better to say that the payment should be "10s. for each hour's sitting" if that is what is meant. The school year consists of only two hundred working days and all the inspections have to be done upon those days.—Yours, etc.,

February 3rd. G.

Sir,—I observe in to-day's Journal a statement that the Council of the Association at its meeting on January 29th approved of the recommendations of the Medical Inspection of Schools Subcommittee, which appeared in the Supplement for December 21st, 1907. I asked the Chairman of Council during the discussion on the minutes of the Medico-Political Committee whether these recommendations were before us for approval. He replied that they were not, and only appeared in the Medico-Political minutes as a report. Had they been submitted for approval I should have moved a negative. I think it is of some importance that this point should be noted in order that those of us who do not agree with these recommendations may be allowed to preserve our liberty of action without appearing to be disloyal to the Association.—I am, etc.,

J. Maxwell Ross,

Dumfries, Feb. 1st. Member of Council.

*** Dr. Maxwell Ross's version of the incident is correct; the minutes of the Subcommittee were received by the Council, but were not submitted for its approval. We regret the error.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

Sir,—The question as to whether germicidal solutions should be dropped into the eyes of every newly born child in order to prevent ophthalmia is one of great importance. At the discussion which took place at the Obstetrical Society of London on Mr. Sydney Stephenson's paper on ophthalmia neonatorum, its etiology and prevention (*Obst. Trans.*, 1903, p. 337), I was the only one who condemned this routine practice.

In my address to midwives which appeared in the British Medical Journal of September 28th, 1907, I emphasized this condemnation, and in your issue of

January 4th "L. H." has called attention to this because he thinks it may shake confidence "in the one proved effective way of preventing ophthalmia." In your issue of January 11th Mr. N. Bishop Harman answered his two chief questions—namely: (1) Is the routine use of a germicide necessary? (2) Is the instillation of a 2 per cent. solution of silver nitrate a certain preventive of the disease?—in the negative, supporting his answers from figures published in his work on *Preventable Blindness*.

In your issue of February 1st, Dr. Walter S. A. Griffith writes that he is content with the routine practice of thoroughly cleansing the *eyelids*. Midwives have been and still are taught to drop germicidal solutions into the *eyes*, opening the lids for this purpose, and it is against this routine practice that I am waging war. What I practise in private and in my lying-in ward at Guy's Hospital, and what I teach is that, as a matter of routine, nothing is to be dropped into the child's eyes, and that in washing the baby the greatest care must be taken not to contaminate the eyes. It is quite unnecessary to cleanse the lids during parturition, as advocated by Dr. Griffith; and it does not matter whether the nurse uses plain boiled water, salt and water, or a solution of mercuric chloride with which to cleanse the eyelids, so long as she does not introduce any septic material. There is nothing on the eyelids of a newly-born child as a rule which will produce ophthalmia. Since abolishing the routine practice of dropping germicidal solutions into the eyes of every newly-born child in my lying-in ward at Guy's Hospital, we have only had one case of ophthalmia, and on investigation it was found that this child had had a solution of mercuric chloride dropped into its eyes by mistake, a new Sister of the ward having been appointed who did not know my views on the subject. It was only slight inflammation and soon got well, and I feel fairly certain that it was caused by the germicidal solution.

A large number of general practitioners do not allow the nurse to drop these solutions, whether of mercuric chloride or of silver nitrate, into children's eyes as a matter of routine; but where there is gonorrhœa or a well-grounded suspicion of it, in the mother, then they use very active measures. In this they are amply justified by their results. At a meeting of midwives at the Midwives' Institute in London to discuss my address, they came to the conclusion that, in spite of my advice, they must for the present go on with this routine practice. I venture to predict that it will eventually become as obsolete as routine syringing after labour.—I am, etc.,

London, W., Feb. 2nd. PETER HORROCKS.

THE RECOGNITION OF COLOUR BLINDNESS.

SIR,—I have read with interest your leading article on this subject in to-day's issue of the BRITISH MEDICAL JOURNAL, and agree most thoroughly with the statement emphasized therein that the present state of official examination for the recognition of colour blindness as adopted by the Board of Trade is insufficient, and therefore a source of danger.

The Holmgren test is certainly inadequate in a number of cases, a fact which became known some time after it was introduced.

Eighteen years ago I demonstrated a model of a lantern for the detection of colour blindness to the tenth International Medical Congress at Berlin. Ten years later, in 1900, I exhibited an improved lantern at the annual meeting of the British Medical Association at Ipswich, of which an illustrated account is given in the JOURNAL of December 22nd, 1900. In this article I stated one of the principal reasons why the Holmgren test may fail.

The report of the Committee of the Ophthalmological Society, dated January 28th, 1904, was surprisingly meagre. Perhaps the title, "Preliminary Report," may explain this. However, no fuller report appeared afterwards. If the test was carried out by the Committee, as your leading article states, *against* the spirit of the instructions, it is still more to be regretted that a more detailed report was not issued.

The Holmgren test has its shortcomings, but that is no reason for overlooking, let alone abandoning, one of its strongest points. Holmgren, and Seebeck before him, of whose method Holmgren's is a modification, insisted on having colours matched, not named. Any deviation from this postulate is a step in the wrong direction and certain to lead to error.

Any test to be satisfactory must fulfil the following requirements:

(*a*) It must be of the nature of a signal light.
(*b*) A certain number of selected different colours must be available.
(*c*) The size of the light must be capable of variation.
(*d*) The intensity of the light must be capable of variation.
(*e*) The light must be matched, not named.

—I am, etc.,

Liverpool, Feb. 1st. KARL GROSSMANN.

THE SURGICAL TREATMENT OF EMPHYSEMA.

SIR,—May I be permitted to prognosticate in regard to Professor F. Lejars's operation for hypertrophous emphysema—referred to in an article in the BRITISH MEDICAL JOURNAL of January 25th—that it is doomed to failure, founded as it is upon an entire misconception of the pathology of the disease? The overaction of the inspiratory muscles which is constantly observed in hypertrophous emphysema is sufficient proof that the enlargement in the mean size of the chest met with in this disease is brought about by them and not by any primary change in the ribs or cartilages. The enlargement thus effected is of a compensatory nature, not only facilitating the flow of blood through the greatly narrowed pulmonary circuit, but tending to tighten up the relaxed pulmonary tissue, and thus to preserve at its normal level the suction action which the lungs exert upon the heart. Even the fixicity of the chest walls in hypertrophous emphysema has its advantages, inasmuch as it largely relieves the inspiratory muscles in their effort to secure and maintain an increment in the mean size of the chest. To attempt to reduce this latter is but to court disaster. Much the most efficacious treatment of advanced emphysema is to reduce the diet to a bare sufficiency and to provide plenty of fresh air.—I am, etc.

London, W., Jan. 25th. HARRY CAMPBELL.

MISCHIEVOUS MEDICAL MANIFESTOS.

SIR,—I had hoped the ill-considered manifesto on alcohol which appeared in a contemporary would have sunk into oblivion after the lapse of a few months. The "trade," however, has not been slow to avail itself of so plausible and valuable an advertisement. On visiting Cambridge recently on a visit to my son, a freshman there, I was surprised to see in the window of a wine merchant's close to Great St. Mary's Church, printed in prominent type and cheek by jowl with a large "show" advertisement of ——'s Special Scotch Whisky, the "Medical Manifesto" complete with full list of signatures.

Now, sir, it is impossible to estimate the baneful influence of such a manifesto on the minds of the thousands of men who go through the universities at a most critical period of their lives. It cannot be too strongly insisted upon that: (1) Young people in average health are better physically and mentally without alcohol in any form; (2) if taken at all, it should be exclusively at meal times, and moderate in amount; (3) light wine, or quite light beer, are the least objectionable forms of stimulant; (4) that spirits are emphatically bad, and should on no account be taken except on medical advice.—I am, etc.,

January 27th. PATERFAMILIAS, M.D.

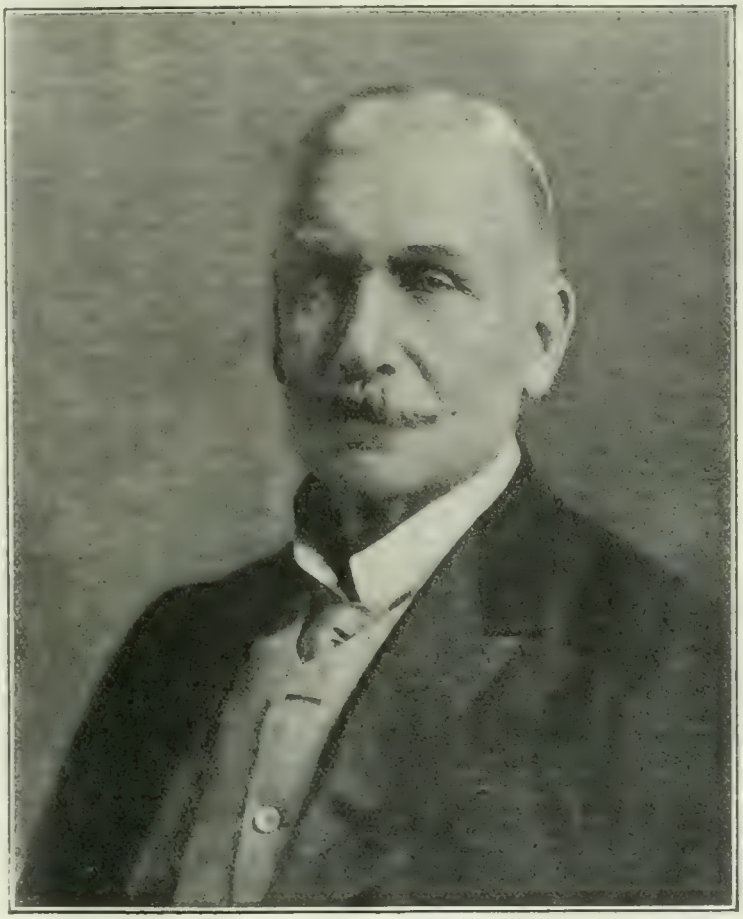
ROYAL LONDON OPHTHALMIC HOSPITAL.—The second annual dinner for past and present students of the Royal London Ophthalmic Hospital was held at the Trocadero Restaurant on January 29th, under the presidency of Sir John Tweedy. About sixty past and present students and guests were present, and the success which attended the initiation of this celebration last year under the presidency of Mr. Jonathan Hutchinson, F.R.S., was repeated. Sir John Tweedy proposed the toast of "The Moorfields Hospital and Medical School" in felicitous terms, response being made by Mr. Sturgis, Chairman of the Hospital Committee, and Mr. Holmes Spicer, Dean of the School. Mr. Spicer drew attention to the increase in the number of courses of lectures, and the flourishing conditions of the teaching department, students being attracted from all parts of the world. The health of the Chairman was proposed by Mr. Marcus Gunn, Senior Surgeon to the Hospital.

OBITUARY.

SIR THOMAS McCALL ANDERSON, M.D., F.F.P.S.G.,

REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF GLASGOW; HONORARY PHYSICIAN TO THE KING IN SCOTLAND.

Sir Thomas McCall Anderson died very suddenly at St. Enoch Station Hotel, Glasgow, on the evening of January 25th. He had been in good health during the day, and in the evening had attended the annual dinner of the Glasgow Ayrshire Society. After he had proposed, in a short speech, the last toast on the list, he left the gathering to go home, but on reaching the hall of the hotel was seized with a sudden attack of cardiac failure. Several medical men, who were present at the dinner, were immediately summoned, but, despite their efforts, Sir Thomas only rallied temporarily, and in a few minutes succumbed to a second attack of heart failure before he could be removed home. The end thus came with startling suddenness, as it was not generally suspected that there was anything seriously amiss with his health. His immediate circle of friends were, indeed, aware that last year he had an illness which caused some anxiety at the time, but it was hoped that the prolonged holiday which he took last summer had restored him to a satisfactory state of health. To make this rest as thorough as possible, he obtained leave of absence from his professorial and hospital work during the summer session of 1907. He resumed duty at the commencement of the present winter session, and had been able to carry on his work without any apparent difficulty.



Photograph by] SIR THOMAS McCALL ANDERSON. *[Lafayette Ltd.*

Thomas McCall Anderson was born on June 9th, 1836. His family was well known in Glasgow, and had for many years been prominent in local affairs. His father, Dr. Alexander Dunlop Anderson, a former President of the Faculty of Physicians and Surgeons, was one of the leading physicians, while a grand-uncle was Professor of Natural Philosophy at the University from 1757 to 1796. This Professor Anderson left money to found the Andersonian College, of which the medical department still survives. Sir Thomas received his general education in Edinburgh, but returned to Glasgow for his medical training. His career as a student was extremely brilliant, and he graduated M.D. in 1858 "with honours." After serving for two years as a resident medical officer in the Royal Infirmary, Glasgow, he went abroad for a couple of years, and during this time studied under many of the most celebrated teachers of the time in Paris, Würzburg, Berlin, and Vienna.

Soon after his return to Glasgow he was appointed to the Chair of Medicine at the Andersonian Medical College, and shortly after became one of the Physicians to the Royal Infirmary. As a clinical teacher he was successful from the very beginning, and rapidly established a great reputation as a clear expositor of medicine. He early succeeded in attracting large numbers of students to his clinic. When the University was removed to its present quarters, and the clinical tuition transferred from the Royal Infirmary to the Western Infirmary, the University collected a sum of money and founded a Chair of Clinical Medicine. To this Chair, McCall Anderson was appointed as the first occupant, and was also made a Physician to the Western Infirmary. He held the Chair for the long period of twenty-six years. When Sir William Gairdner retired in 1900, McCall Anderson was appointed by the Crown his successor as Regius Professor of Medicine. He retained this position to the end. Thus, his service as a University Professor continued for some thirty-four years, and at the time of his death he was almost the senior member of the University staff.

Many honours and distinctions came to him during his long career. In 1897 he was appointed by the War Office Examiner in Medicine for the British and Indian Medical Service. He was extremely gratified with this appointment, as he was the first physician to hold it who was not engaged in London practice. He held the Examinership from 1897 to 1901, and one of the immediate effects of this appointment was that the Imperial medical services began to attract more attention from Glasgow graduates, who entered in larger numbers. He was elected Dean of the Faculty of Medicine in Glasgow University in 1899, and represented the University at the National Conference for the Prevention of Consumption and at the International Congress of Medicine, Paris, in 1900. Three years later he was elected to represent the University of Glasgow on the General Medical Council, where he proved an assiduous representative who worthily looked after the interests of the Scottish medical schools. He had previously served as President of the Medico-Chirurgical and other medical Societies in Glasgow, while in 1888 the greater honour of the Presidency of the Medical Section of the British Medical Association had been conferred on him. In 1905 his eminent services were fittingly recognized by the King conferring on him a knighthood, and a couple of years later he was appointed one of His Majesty's Honorary Physicians in Scotland, in place of Sir William Gairdner.

Apart from his professorial and teaching duties, Sir Thomas was actively engaged in many directions. For a number of years he acted as medical adviser to the Scottish Imperial Insurance Company. For nearly fifty years he was Physician to the Hospital for Skin Diseases, and was also connected with many other institutions. For many years he was actively engaged in a large consulting practice. His contributions to medical literature were numerous. Among his most important works are the well-known *Lectures on Clinical Medicine* (1887); *Curability of Attacks of Tubercular Peritonitis and Acute Phthisis: Syphilitic Affections of the Nervous System* (1889); and *Contributions to Clinical Medicine* (1898). In addition

to his well-known *Treatise on Diseases of the Skin*, he published several books on skin diseases, and was recognized at home and abroad as one of the leading authorities on skin diseases.

But McCall Anderson's fame will rest more on his success as a clinical teacher than as a medical author. He had a great faculty for picking out the important points in a case and demonstrating them in a clear, convincing fashion to his students. An excellent organizer, everything was perfectly arranged for the proper carrying on of the large class. By avoiding hair-splitting over refinements of physical signs and confining himself to the essential features he was able to grapple with a complex case in a broad-minded fashion which rendered it intelligible to the youngest student. His power of organization and faculty of condensing his observations enabled him to demonstrate several cases within a short time. To students going up for an examination this faculty of covering the ground proved very useful. As a teacher McCall Anderson depended chiefly on demonstrations. He did not use bedside instruction to any great extent, and was not a great believer in ward visits. His very success as a teacher prevented him from using bedside teaching as his class was always so big that special arrangements required to be made if all the students were to benefit. Perhaps the only serious flaw in his teaching was the fact that the progress of the case from day to day was not sufficiently insisted on.

As a physician McCall Anderson possessed to a remarkable degree "the clinical instinct." His accurate power of observation, retentive memory, and shrewd judgement made him an accurate and successful diagnostician. In the treatment of difficult cases his great experience made his advice of value, and many a puzzled practitioner has benefited by his helpful suggestions.

As a professor McCall Anderson stood somewhat aloof from his students, but no one who knew him or sought his aid could fail to be impressed by the kindly, courteous, and considerate manner in which he was received and helped.

Dr. WILLIAM R. JACK, Assistant to the Professor of Practice of Medicine, University of Glasgow, writes: As one who from his student days has known Sir Thomas McCall Anderson, and has thereafter been associated with him in his work of teaching, I desire to add my tribute to his memory. When I became a student in his class at the Western Infirmary I was entering upon the subject of clinical medicine and looked up to my future chief as one who possessed a knowledge that I could not hope to reach. As my work under him progressed from day to day I found that he brought me nearer to his knowledge, and systematized for all of us much that had been hitherto left vague. He knew, as no other teacher of my earlier years has known, how to give to each one of us an impression of the most important features of clinical medicine. He collected for all of us, and demonstrated to us convincingly and briefly, evidences of disease that, to judge from his brilliant summary, must have cost him much preliminary preparation. He spared himself in no way, and he stimulated his class to work by that very fact.

When I came later to know him as his Assistant, the deep impression that he had left upon me as a student was further deepened. His power of organization, his arrangement of the numerous duties of his different classes, indicated a rare grasp and a rare control. His affection for his work was shown by his assiduity. Scarcely, in many years, have I known him to miss a morning at the Infirmary, and never, in many years, have I known him to leave a duty undone.

Of my personal relations with him it is impossible for me here to speak, but the strongest tribute to his character may be found in the esteem in which he was universally held by many generations of students, and by the painful shock with which his present classes heard of his sudden and tragic death.

One who was associated with Sir Thomas McCall Anderson for many years writes: The death of Sir Thomas McCall Anderson has taken from us one who has long held a foremost place in dermatology. He had a world-wide reputation as an authority on diseases of the skin. Early in his career he took a special interest in this branch of medicine, and during his two years spent on the Continent before settling in practice studied under Hebra. In 1861, Sir Thomas, along with Dr. Andrew B. Buchanan, was associated with Mr. James Grahame and others in founding the Glasgow Hospital for Diseases of the Skin. The early death of Dr. Buchanan left Sir Thomas McCall Anderson sole physician of the institution, which position he filled until the end. During the forty-seven years of its existence Sir Thomas has been the guiding spirit of the hospital, and to his constant supervision and untiring interest in the patients and students it owes in largest measure its success. The characteristics of Sir Thomas's teaching were nowhere seen to better advantage than in the Skin Hospital, and in the wards associated with it in the Western Infirmary. His ripe experience and power of concentration enabled him to demonstrate in a clear, striking, and practical manner the essential features of the numerous cases coming before his large class. He always laid great stress on the necessity of attention to the details of treatment, and to this fact was due much of his success as a therapeutist. He was closely in touch with the latest advances in medical science, and prompt in testing new methods of treatment which seemed likely to prove of value. At a time when tuberculin had fallen into disfavour with the profession Sir Thomas McCall Anderson advocated its use, in an address to the Dermatological Society of Great Britain and Ireland, entitled, A Plea for the more General Use of

Tuberculin by the Profession. In 1887 Sir Thomas McCall Anderson published his well known *Treatise on Diseases of the Skin*. This was a standard work, and has a deservedly high reputation. A second edition was published in 1894. His other dermatological works were: *On Psoriasis and Lepra: Parasitic Affections of the Skin: Treatment of Diseases of the Skin, with an Analysis of 11,000 Cases: On Eczema.*

J. BELL PETTIGREW, M.D., F.R.S.,

PROFESSOR OF MEDICINE AND ANATOMY, ST. ANDREWS.

Dr. J. Bell Pettigrew, Chandos Professor of Medicine and Anatomy in the University of St. Andrews, died on January 30th, after a long illness, in his seventy-fourth year. He was born in Lanarkshire, and studied medicine at Edinburgh, where his career as a student was very distinguished. In 1862 he was appointed Assistant Curator of the Hunterian Museum, London, where he made the beautiful dissections of the muscular fibres of the heart familiar to students of anatomy. In 1868 he returned to Edinburgh to take up the duties of Curator of the Museum of the Royal College of Surgeons. On the death of Professor Oswald Home Bell in 1875, Dr. Pettigrew was appointed to the Chandos Chair of Medicine and Anatomy at St. Andrews, and continued to discharge all the duties of the professorship until a few years ago. For more than a quarter of a century Professor Pettigrew was Dean of the Faculty of Medicine, and representative of the University on the General Medical Council.

Professor Pettigrew's earliest and perhaps most important contributions to science were embodied in his papers on the arrangements of muscular fibres in ventricles of the vertebrate heart, and on the muscular arrangements of the bladder and prostate, published in the *Philosophical Transactions* for 1864 and 1867. For the latter research he received the Godard Prize from the French Academy of Science in 1874. He contributed largely to the *Edinburgh Medical Journal*, the *Encyclopaedia Britannica*, and other publications. Professor Pettigrew took a great interest in aërial navigation and made many experiments with flying machines, most of which were fashioned by his own hands. His work on *Animal Locomotion*, published in 1873 in the International Science Series, was for many years the standard work on the subject. He was also very musical and had a fine collection of violins.

FREDERICK WILLCOCKS, M.D., F.R.C.P.,

LATE PHYSICIAN TO CHARING CROSS HOSPITAL.

We regret to record the death, at the age of 53, of Frederick Willcocks, M.D., F.R.C.P., late of 14, Mandeville Place, W., which took place at Burnham, Somerset, on January 25th, after two years' illness.

Dr. Willcocks was, at the time of his retirement from practice in 1906 owing to ill-health, a Physician and Lecturer at Charing Cross Hospital, and also a Physician at the Evelina Hospital for Sick Children. On resigning the latter appointment he was placed by the Governors on the consulting staff.

Dr. Willcocks, who was educated at Sherborne School, had a distinguished career as a student at King's College Hospital, becoming senior scholar in 1877, and filling the posts successively of House Physician and Medical Registrar. He graduated M.B. at London University in 1878, with high honours, and took the M.D. degree two years later. He became F.R.C.P. in 1893.

On leaving King's College Hospital he joined the medical staff of Charing Cross Hospital. He filled on several occasions the office of Examiner in Materia Medica for the Conjoint Board and was a member of many of the societies connected with the profession. He made several contributions to the medical journals, including papers recording the results of investigations by him on the pathology of anaemia, and (in conjunction with his friend the late Dr. Baxter of King's College) on clinical haemometry.

As a student Dr. Willcocks gained some reputation as an athlete, and was a winner in the United Hospitals' Athletic sports.

NICHOLAS SENN, M.D.,

PROFESSOR OF SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

The death of Professor Nicholas Senn, which occurred on January 2nd, is a loss not only to the medical profession of the United States but to surgery. He had been suffering from nephritis and heart disease for some months. He was of Swiss origin, having been born in the Canton of St. Gall, Switzerland, in 1844. In 1853 his family emigrated to America, and he was brought up on a farm in Wisconsin. He took the degree of Doctor of Medicine at Chicago Medical College in 1868, after which he went to Germany for a time, working chiefly at Munich. On his return he practised his profession for a time at Milwaukee. He was appointed Surgeon-General of the Wisconsin National Guard. In 1884 he was elected to the Chair of Surgery in the College of Physicians and Surgeons, Chicago. In 1890 he became professor of practical and clinical surgery in the Rush Medical College of the same city. He was also Professor of Surgery in the Chicago Polyclinic Hospital and of military surgery in the University of Chicago. He was Surgeon-General of the Illinois National Guard, and was the first President of the Association of Military Surgeons of the United States, the organization of which was due to his initiative and energy.

Dr. Senn contributed largely to surgical literature. In addition to a vast number of papers, he published several books, among which may be mentioned *Principles of Surgery*, *Practical Surgery*, and *Pathology and Surgical Treatment of Tumours*.

Of late years he had travelled extensively and recorded his impressions in books which everywhere reveal the eye of a trained observer.

Dr. Senn was a Delegate of the United States at the International Medical Congresses of Berlin, Moscow, Madrid, and Lisbon. He also represented his adopted country at the International Medical Congress held at St. Petersburg in 1901. At the time of his death he had received the Order of Merit from the Japanese Red Cross Society with the sanction of the Emperor. He had also recently been elected an honorary member of the Royal Medical Society of Budapest.

It is with great regret that we announce the death of Dr. Alfred Langston Scott, of Ealing, at the early age of 48, which occurred on January 25th. For several weeks past his friends noticed that he had looked ill and overworked, but his sudden death from perforating gastric ulcer came as a great shock to all, especially as he had been carrying on his professional work until within a few days of his death. Dr. Scott was the son of the Rev. W. L. Scott, Vicar of Dunmow, Essex. He entered at Guy's Hospital, and qualified M.R.C.S.Eng. and L.S.A.Lond. in 1884. While at Guy's Hospital he held the post of Ophthalmic Assistant, and later became House-Surgeon to the Brighton and Hove Lying-in Institution for Women. In 1888 he settled in practice in Ealing, and was elected on the staff of Ealing Cottage Hospital. He also held the appointment of Medical Referee to the Prudential Assurance Company, and was Surgeon to the Foresters, etc., and Chairman of the Ealing Division of the British Medical Association. For the past fifteen years he has taken the keenest interest in the Ealing Hospital, and, as one of the senior members of the staff, his advice at committee meetings, at which he was a very constant attendant, was much valued. At the time of his death he was engaged in the exacting duties of a large general practice. In private life he was a man whom to know was to love and respect, whilst his honesty of purpose and willingness to help his brother practitioners, often at times when he was sadly overworked, will make his untimely death a very real loss. It is perhaps by his poor patients that his loss will be most keenly felt. Invariably kind and sympathetic in manner, his presence in the sick room has been to many a sufferer a source of strength and comfort. A staunch Christian, a sidesman of his church, where he was a regular attendant, and a very willing worker in church matters, few men have shown a brighter example of a Christian life. The funeral service at St. John's Church, Ealing, was most impressive. Rich and poor alike filled the church to pay their last respects. Dr. Scott leaves a widow and six children, to whom we offer our sincere sympathy in their bereavement.

We regret to record the death of Dr. Birch, of The Litten, Newbury, which occurred on January 24th after a long illness. A son of Mr. George Birch, J.P., of Lichfield,

Staffordshire, Robert Birch was born in that city in 1850, and received his early education at Lichfield Grammar School. He studied medicine at King's College Hospital, and while there gained the Todd prize for clinical medicine. Having qualified in 1871, he came to Newbury in 1876, entered into partnership with the late Dr. Ryott, and remained in practice as long as his health allowed. He was Surgeon to the local fire brigade, and was on the medical staff of the Newbury District Hospital, to which he was one of the Consulting Physicians at the time of his death. He was also for a time Medical Officer to the Newbury Workhouse Infirmary, the Newbury Dispensary, the Oddfellows, and other clubs. Dr. Birch married in 1882 a daughter of the late Mr. F. F. Somerset, of Greenham House, by whom, as well as a family of one daughter and four sons, he is survived. Notwithstanding the claims of an extensive practice, Dr. Birch found time to take his full share in the public life of the town, was a member of the Newbury Town Council, a Commissioner of Taxes, and Librarian of the Literary and Scientific Institution. The body was cremated at Woking, in accordance with the wishes of the deceased.

By the death on December 21st, 1907, of Mr. William A. Logan, M.B., F.R.C.S., the medical profession in New Zealand has been deprived of one of its most promising members. Mr. Logan graduated in Dunedin in 1898, after a brilliant career as a student. He was appointed to the resident staff of the Dunedin Hospital, and then went to London, where he was admitted M.R.C.S., and in 1900 F.R.C.S. He then returned to New Zealand, and after a short time of service as Surgeon to the Timaru Hospital settled down in practice in Wellington. The promise of his student days was amply fulfilled in practice, and he rapidly established a reputation as a brilliant and successful surgeon. Early in 1907 failing health forced him to give up work and he came to London, where he was successfully operated on for gastric ulcer. He stayed in London to renew his acquaintance with the metropolitan hospitals, and unfortunately developed signs of mastoid trouble, which in spite of prompt surgical treatment ended fatally. At the age of 33 a brilliant career was terminated, and the profession in the Dominion will be the poorer by his loss, while those who knew him intimately will fully appreciate what a valuable life has been cut short by his death.

Staff Surgeon Harold Edgar Fryer, R.N., died at the Royal Naval Hospital, Chatham, on January 24th. He was the youngest son of Christopher Fryer, of Ryde, I.W., and entered the Royal Navy as Surgeon, May 25th, 1897, becoming Staff Surgeon, May 25th, 1905.

Surgeon-Major Edward McCarthy, Army Medical Service, retired, died at Southsea on December 26th, at the age of 72. He was appointed Assistant-Surgeon, March 20th, 1862; retired from the service, August 12th, 1873; and was granted the honorary rank of Surgeon-Major, June 30th, 1877. No war record appears in the Army Lists.

Deputy Surgeon-General Charles Vidler Cay, M.D., late Surgeon-Major Coldstream Guards, died at Leamington on December 28th, 1907, aged 84. Appointed Assistant Surgeon, June 12th, 1846, he became Surgeon, January 9th, 1863; Surgeon-Major, June 12th, 1866; and Honorary Deputy Surgeon-General on retirement, November 30th, 1878. He served in the Crimean campaign with the Coldstream Guards from November 30th, 1854, and was at the siege and fall of Sebastopol, receiving a medal with clasp and the Turkish medal.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Karl Schwing, Emeritus Professor in the Medical Faculty of the Bohemian University of Prague; Professor von Mering, of Halle, a clinician well-known by his researches on disturbances of metabolism and on diabetes mellitus; Dr. Cellier, of Laval, President of the Syndicate of Medical Practitioners of the Mayenne, formerly Vice-President of the Union of Medical Syndicates of France; and Dr. Danner, Honorary Director of the Medical School of Tours.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Degrees in Medicine and Surgery.

In a Congregation held on Thursday, January 23rd, the following degrees were conferred:

Bachelors of Medicine and Surgery.—C. G. Douglas, Fellow of St. John's College; G. M. Johnson, Magdalen College; N. Flower, Exeter College; S. Hartill, New College; B. G. Klein, Corpus Christi College.

Degree Days.

The remaining Degree days in the present term are: Saturday, February 15th, at 2.30 p.m.; Thursday, March 12th, at 10 a.m.

UNIVERSITY OF CAMBRIDGE.

The following degrees were conferred on January 30th:

M.D.—C. J. Coleman, Trin.

B.S.—C. E. M. Jones, King's; C. H. Treadgold, Cla.; O. Heath, Trin.; A. W. Drake, Pemb.; A. F. Jackson, Pet.; S. G. Luker, Pemb.

The Council of the Senate has recommended that the centenary of the birth of Charles Darwin be celebrated by the University in the week beginning June 20th, 1909.

THE VICTORIA UNIVERSITY OF MANCHESTER.

The Territorial Army Scheme.

A meeting of the Convocation of the Manchester University was held on January 29th in the Whitworth Hall. Dr. Ashton introduced the subject of the Territorial Army scheme, and moved a resolution that it is the duty of the University authorities to give every support to the scheme. As a volunteer of ten years' standing, he considered the scheme the most comprehensive, the most economical, and the most practicable ever laid before the country. The great feature of it was that every county was to be self-governing. Each county was to have what was called a county association that was to be responsible for the troops in its district. The East Lancashire association would consist of about 50 members. The University had been asked to appoint a representative, and had appointed Sir Frank F. Adams. This portion of the county was expected to provide a division of 19,600 men. In the past the University had not shown the interest in the volunteer movement that the speaker could have wished, as out of 1,100 students only 135 were volunteers, and only 3 out of a teaching staff of about 200 held commissions in the volunteer forces. He thought that if this scheme failed there would have to be conscription. Dr. F. G. Bradley thought that conscription was inevitable, and was ready to vote against the motion so that conscription might come all the sooner. The motion was carried by 19 votes to 4 against.

Evening Classes.

At the same meeting of the Convocation Dr. J. Brown moved:

That it is desirable in the interests of matriculated students who are unable for financial or other reasons to take the three years' course for the B.A. degree that a five years' course of evening classes be established.

He said that he did not propose that the standard of examination should be any different in the two courses, nor did he think that the establishment of evening classes would in any sense affect the attendance at the day classes. Mr. Scotson suggested that the B.Sc. degree should also be included, and he pointed out that many teachers in the elementary schools were anxious to obtain degrees to fit themselves for the higher branches of the teaching profession. Mr. J. H. Hudson said that he had heard it stated that if the Manchester University refused to adopt a scheme of this sort the Manchester education authority would establish classes in connexion with the London University. The Vice-Chancellor said that he could desire no better students than those who had attended his evening classes, and, without prejudice to the action of the University authorities, he could say that he himself regarded the proposal with sympathy. At the same time, he saw great practical difficulties in the way of evening classes for science which would require laboratory work. Dr. Brown said that he had thought that the cost of laboratory work in evening classes would be prohibitive. The motion was carried by 12 votes for and 9 against.

A second resolution was carried unanimously to the effect

That it is high time that a common understanding between the University of London and the Northern Universities should be arrived at as to the mutual recognition of matriculation certificates in terms of equivalence.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

An ordinary quarterly Comitia was held at the College on January 30th, the President, Sir R. Douglas Powell, in the chair.

Lectureships.

The President announced that Dr. Leonard Guthrie had been appointed FitzPatrick Lecturer; Dr. Ormerod, Harveian Orator; and Dr. Pasteur, Bradshaw Lecturer, for the year 1908, and Dr. Hewlett, Milroy Lecturer for the year 1909.

Membership.

The following gentlemen were admitted Members of the College: Jehangir Cawarsjee Balsara, L.R.C.P.; Hector Charles Cameron, M.A., M.B.Cantab., L.R.C.P.; Carey Franklin Coombs, M.D.Lond.; John Gallie Fraser, M.B.Edin.; Charles Edward Iredell, M.D.Lond., L.R.C.P.; John Owen, M.D.Lond.; Herbert Chevasse Squires, M.A., M.B.Oxon., L.R.C.P.; Henry Letheby Tidy, M.B.Oxon.; Godfrey De Bee Turtle, M.D.Durh., L.R.C.P.; Rupert Waterhouse, M.D.Lond., L.R.C.P.; John William Watson, L.R.C.P.

Licentiateship.

The Licence of the College was granted to sixty-eight gentlemen.

Diplomas in Public Health.

In conjunction with the Royal College of Surgeons, Diplomas in Public Health were granted to ten gentlemen.

Communications.

The following communications were received:

1. From Dr. Charles Coates, of Bath (to the President), presenting the College with the sum of £1,000, to be used, invested, or disposed of as the President may deem most desirable. The gift was accepted, and a vote of thanks passed by acclamation to the donor.

2. From the President of the General Medical Council, inviting the co-operation of the College in the preparation of a new edition of the *British Pharmacopœia*. The invitation was accepted, and a Committee consisting of Drs. F. Taylor, Mitchell Bruce, Nestor Tirard, Hale White, and Calvert, with Dr. H. A. Caley as Secretary, was appointed to deal with the matter.

3. From the Secretary of the College of Surgeons, reporting proceedings of the Council on January 16th, 1908.

4. From the Council of the Geological Society, conveying the thanks of the Society to the College for their assistance in the recent celebration of the centenary of the Society.

Council.

On the nomination of the Council, Drs. Herman, Finlay, Tirard, and Herringham were appointed Councillors, in the place of Drs. Buzzard, Green, Watt Black, and Hale White, who retired by rotation.

Examiner in Medicine.

On the nomination of the Council, Dr. T. D. Acland was appointed an Examiner in Medicine, in place of Dr. H. Montague Murray, deceased.

Medical Inspection of Public Elementary Schools.

Sir William Church moved, Dr. Heron seconded, and it was agreed to appoint a small standing committee under the following circumstances: In view of the fact that the institution by the Government of "medical inspection of the public elementary schools, under Section 13 of the Education (Administrative Provisions) Act, 1907," created fresh conditions under which members of the medical profession were brought into connexion with the sanitary authorities throughout the country. The committee will keep the College informed of the arrangements and methods of teaching elementary hygiene in training colleges and schools, of the working of the Act, of the position of the medical officers employed under it, and of any alterations which may be proposed by the Government or others in the education or inspection of children or in the administration of the Act.

Reports.

The following reports were received:

1. From the Representative of the College on the General Medical Council on the proceedings of the Council at their recent session.

2. A confidential report, dated December 18th last, from the Conjoint Finance Committee.

3. The Quarterly Report of the College Finance Committee, dated January 16th, 1908.

4. The Annual Return by the Examiners of the results of the Examinations for the Licence in the year 1907.

Library.

Books and other publications presented to the Library during the past quarter were received, and thanks returned to the donors.

CONJOINT BOARD IN IRELAND.

Second Professional Examination. — The following candidates passed this examination in January:

J. O'Kelly (honours), G. F. Allison, B. N. Blood, J. Boyce, F. M. J. Byrne, F. Cassidy, M. A. Callaghan, A. D. Clanchy, J. Devine, R. A. W. Ford, F. Hannigan, J. P. Johnston, W. J. P. Lillis, J. McMullan, C. Molan, T. N. Neale, T. B. Newman, J. Purcell.

Third Professional Examination. — The following candidates passed this examination in January:

P. N. Allman, H. Gray, E. A. Gregg, J. T. Heffernan, L. Hynes, T. J. Lyons, J. Marmion, T. McDonald, H. G. Miles, A. E. Moore, W. P. H. Parker, J. Patton, P. M. Power.

Special Examination for the Conjoint Diploma in Public Health. — The following candidates passed this examination:

E. E. B. Landon, M.B.C.S., L.R.C.P.

Medico-Legal.

DAMAGES FOR LIBEL.

Williams v. Lloyd, Ltd. Williams v. the Star Newspaper Co., Ltd.—These two actions were heard by Mr. Justice Darling and a special jury. In the first, Dr. Morris James Williams brought an action for libel against the *Daily Chronicle*, which was settled by a payment of £25, and £100 for costs. In the second action, the same plaintiff also sued the *Star* newspaper for libel. The defendants, amongst other things, pleaded justification.

Mr. Dickens, K.C., and Mr. F. J. Coltman appeared for the plaintiff; Mr. McCall, K.C., Mr. McCardie, and Mr. A. Profumo for the defendants.

It appeared that the plaintiff was for some years in practice at Waltham Green. In October, 1906, he was called in to see a Mrs. Blume, whom he found dead. A man named Brinkley, who was subsequently executed for murder owing to his having poisoned Mr. and Mrs. Beck, applied to the plaintiff for a death certificate. The plaintiff declining to grant it, an inquest was held, and the plaintiff made a *post-mortem* examination at the request of the coroner. He found death was due to cerebral haemorrhage, and a verdict of accidental death was returned. Suspicion being subsequently aroused by the fact that Brinkley benefited under Mrs. Blume's will, an exhumation was ordered. It was conducted by Sir Thomas Stevenson and Dr. French at Brompton Cemetery. The only organ missing was the brain, which was eventually found in a cavity in the chest. On May 20th, 1907, the defendants published the following paragraph in their paper:

Poison Drama.

The Exhumation of Mrs. Blume's Body.

It is reported that the exhumation of the body of Mrs. Blume, of Maxwell Road, Fulham, which took place at Brompton Cemetery a fortnight back, has proved abortive, so far as the discovery of any trace of poison is concerned. Sir Thos. Stevenson and his assistant were unable to make the examination of the organs in which alone traces of poison, supposing it is present in the body, could ordinarily be detected. Some parts of the organs which it is now desired to be examined are, in fact, reported to be missing. It should be explained further that this circumstance does not reflect upon any person concerned in the case ("that is Sir Thos. Stevenson," said counsel). It may be a consequence of the first *post-mortem* examination made at the time of the old lady's death.

That was obviously intended, said counsel, to reflect grossly on the conduct of Dr. Williams. Portions of the body alleged not to have been restored were also given in the report.

The plaintiff and Sir Thomas Stevenson having given evidence,

Mr. McCall said he was instructed to withdraw the plea of justification and to express regret. There could be no imputation cast on Dr. Williams. He would submit to a verdict of £500 damages and costs as between solicitor and client.

Judgement was entered accordingly.

WORKMEN'S COMPENSATION CASES.

Surgical Operations for Restitution of Power.

A Court of seven judges of the Court of Session of Scotland has given an important judgement in a stated case under the Workmen's Compensation Act. The employé had his left hand injured in the respondents' employment, Wm. Baird and Co., Iron and Coal Masters, Glasgow. Three of five medical men who examined the appellant Donelly recommended that the crooked second finger of his hand should be removed at the knuckle, or the joint next the knuckle. Donelly refused to undergo the operation.

The Court decided that the appellant by his refusal to undergo the operation was precluded from further right to receive compensation, and found him liable in expenses. They were also of opinion that the appellant, like any prudent and reasonable patient who wished to be restored to health, was bound to submit to operation which was reasonable and not attended with risk.

THE WORKMEN'S COMPENSATION ACT.

Hospitals and Certificates.

Durham asks for information as to the general rule in supplying certificates by the house-surgeon of a general hospital where accidents are received. Is it, he asks, right to expect the house-surgeon to supply a certificate, and without fee, for a case of injury or accident, when legal proceedings are likely to be taken, as in compensation cases? A clear issue on this matter is of great importance with some provincial hospitals.

PARTNERSHIP EXPENSES.

Junior Partner wishes to know whether the expenses of a motor car used only by the senior partner ought to be expenses of the partnership.

*** Yes, if the motor car is used only to do the business of the partnership. If it is used also for other purposes, then the partnership should contribute only a portion of the

expenses. It is customary in partnership agreements to settle beforehand how the driving expenses are to be shared.

THE REMOVAL OF A BODY FOR INQUEST PURPOSES.

Perpexed writes: Has a coroner the power, by warrant or otherwise, to order the removal of a body from a private house, or the premises of a public institution, to the public mortuary, for the convenience of himself and jury in viewing the body previous to the holding of an inquest? Have the friends of deceased, or the committee of a public institution, the right of objecting to such removal?

*** When the coroner has decided to hold an inquest the body is in his legal care and custody until the verdict of the jury is returned, and he can order the removal of such body from the place where it was found dead to a public mortuary, or to some other suitable place for *post-mortem* examination, or for the jury and witnesses to view, or for any other reasonable and proper purpose. Unless the action of the coroner is illegal no one has any right to object.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CANVASSING FOR SICK CLUBS.

Edinburgh.—We do not think that in the circumstances described our correspondent is called upon to do anything further unless the matter crops up again. In relation to canvassing it is a safe rule of conduct to avoid the very appearance of evil.

THE DUTY OF A SUPERSEDING PRACTITIONER.

C.C.—It is not in accordance with custom in this country that the superseding practitioner should insist upon the payment of his predecessor's fees before taking up the case. The rule exists in France and has obvious advantages, as patients have been known to change their medical advisers in order to avoid payment.

A CHRISTMAS SUPPER.

Gamma writes: Dr. A. is police-surgeon in a certain small town, and Dr. B., who has no official connexion with the police force whatever, invites the members of the police force in a body to supper at his house at Christmas. What do you think of the conduct of Dr. B.?

*** We think Dr. B. was at liberty to entertain the police constables if he chose to do so, and we see no ground upon which we are called to appreciate his conduct or to look for its motives.

PRACTITIONER AND PATIENT.

Moorland.—B. is attending a servant at a house where A. is the family doctor. A., when at the house socially, was asked to see the servant and did so, making full inquiries as to treatment, and examining the injury for which she was being attended, but neither wrote nor said anything to B. on the matter.

*** Such conduct as described amounts to interference and is better avoided. If there had been serious reason for the examination A. would doubtless have written to B., but probably he saw the patient with no other intention than to assure the family that the case was being properly treated, and attached no importance to the professional aspect of the matter.

INTERFERENCE WITH THE PATIENT OF ANOTHER PRACTITIONER

F. H. W.—In considering "C.'s" conduct it is necessary to take into consideration (1) that it is not possible to recognize proprietorship in families; or (2) to deny the general right of a patient to consult any practitioner; (3) that "C." alleges he was misled by the lady, who denied that she had recently been under the care of any other medical practitioner; (4) that as soon as he found out the true state of things he apologized: (5) that he has explained the delay in writing as due to illness. Taking all these circumstances into consideration, we see no reason why "A.," "B.," and "C." should not resume their former friendly professional and social relations.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE LONDON COMPANIES R.A.M.C.(VOLS.)

Their Position in the Territorial Corps.

The annual prize distribution of these companies was held at their head quarters, Calthorpe Street, W.C., on Saturday, February 1st. Lady Keogh was present, also Surgeon-General Fawcett, C.B., Colonel Sloggett, C.M.G., P.M.O. London District, Colonel Cantlie, M.D., V.D., Colonel E. M. Wilson, D.S.O., C.M.G., Colonel W. R. Smith, V.D., and many other distinguished guests.

Colonel Valentine Mathews, in asking Lady Keogh to present the prizes, said that the past year had shown a great improvement in the corps. A large portion of the debt had been cleared off, and had the accounts been closed on December 31st last the corps would have been practically out of debt, and have been able to hand over the ten years' lease of the premises at a nominal ground rent. The premises had recently been redecorated and repaired at a cost of about £170. During 1901 to 1904 the corps had lost nearly one-third of its members, but he was glad to say that this slump had been stopped, and although the income was reduced, more work had been done; nursing classes had been started, special certification for the men had been introduced, all set drills had been abolished, and only training for first aid and field ambulance work carried on. The companies were inspected by Mr. Haldane, the Secretary of State for War, in Hyde Park, when a section of a field ambulance complete in every detail (soup and all) was pitched in fifteen minutes. He wished to state that his retirement from the corps was due to the fact that his period of command had come to an end, and had nothing to do with the new territorial scheme, and, as all knew, he had no intention of asking for any extension of time. He wished to thank all the officers, non-commissioned officers, and men for the good services during his command and hoped that under the new style they would go on and flourish.

Lady Keogh then presented Staff-Sergeant-Instructor F. Weller, R.A.M.C., with the medal for long service and good conduct. The corps shield was won by No. 5 Company, Captain Waggett; the Cantlie shield by No. 3 Company, Captain Sharpe; and the Countess Howe cup by Private A. L. Bantree, No. 4 Company, these being a few of the very numerous and costly prizes distributed.

Colonel Cantlie proposed a vote of thanks to Lady Keogh, and then made a humorous speech on the advantages of red tape. The "triangle" of the band had been taken away by a member of the corps, and on a summons being sent to the member, he sent the matter on to the then War Minister (the late Mr. W. H. Smith), who sent it to the late Duke of Cambridge, who sent it to the Brigadier-General, and so on until it arrived at the Director-General. He sent for those concerned, and after some straight talk the triangle, valued at 3s., was returned to the band and harmony ruled again.

Major Harper seconded the proposition of Colonel Cantlie, which was received with great applause.

Surgeon-General Fawcett, C.B., thanked those present on behalf of Sir Alfred Keogh, K.C.B., D.G., who was only kept away by illness. The distribution of prizes showed that the officers and men had taken their duties seriously, and that their work was of a first-class order. Referring to the new territorial scheme, he said that the whole object of the training was for war, however horrible that might sound, and that at the present moment these highly-trained companies had no place in the army of the country on mobilization. When the new plan was under consideration, Sir Alfred Keogh took the opportunity of bringing the volunteer branch of the medical service up to what it should be and give it its proper place in the army on mobilization. Colonel Valentine Mathews had said that men before joining the new force wanted to know exactly what time would be required of them. They wanted to know under what circumstances they would be called out for the thirty days' training, and as to the conditions of time, place, and hours of attendance at the schools. It was intended that the work under the new scheme should not interfere with the civil duties of the citizen in any way. The school of instruction would be at the corps head quarters, and would be made to suit the convenience of the members. An officer of the R.A.M.C. (regulars) would be appointed, with a staff of non-commissioned officers, whose duty it would be to hold the classes of instruction at such hours and days as were most suited to the members attending, and these times would be fixed by the officer commanding the school, who would be a volunteer officer. Whether it was in the middle of the night or the early hours of the morning,

it mattered not so long as the necessary instruction was obtained. He hoped that all members of the corps would join the new territorial force, and that, if he had the pleasure of meeting them in the future, he would find them as efficient and successful as he had found them on this occasion.

The members and their friends then adjourned to the mess for light refreshments while the room was cleared, when dancing was enjoyed until the small hours of the morning, bringing the final prize distribution of the London Companies R.A.M.C. (Volunteers) to a very successful end.

INDIAN MEDICAL SERVICE.

THE result of the January examination was announced on February 1st, 1908. There were 58 candidates, of whom 51 ultimately entered for the examination; of these 48 qualified, the first 16 being admitted as Lieutenants-on-Probation, while one withdrew during the examination. The names of the successful candidates, with the marks obtained by each out of a possible maximum of 5,100 are given below, together with their degrees and medical schools:

Name.	Degrees, etc.	Medical School.	Marks.
W. E. Brierley ..	M.R.C.S., L.R.C.P., M.B., B.Ch. Manch., M.B., B.Ch. Leeds, F.R.C.S.Eng.	Leeds University; King's Coll., London; London Hospital	3,988
R. Knowles ...	M.R.C.S., L.R.C.P.	Cambridge Univ.; St. Mary's Hospital	3,962
J. B. Lapsley ..	M.B., B.Ch., B.A.O. (R.U.I.)	Queen's College, Cork	3,796
J. A. Shorten ..	M.B., B.Ch., B.A.O. (R.U.I.)	Queen's College, Cork	3,722
R. B. S. Sewell ..	M.R.C.S., L.R.C.P.	University College, London; Cambridge Univ.; St. Bartholomew's Hospital	3,680
W. L. Watson ..	L.R.C.P. and S.Ed., L.F.P. and S.Glas., L.D.S.Ed.	Royal Colleges, Edinburgh	3,652
C. H. Fielding ..	M.B., B.S.Lond., M.R.C.S., L.R.C.P.	St. Bartholomew's Hospital	3,627
W. J. Simpson ..	M.B., Ch.B.	Edinburgh Univ.; University College Hospital	3,621
F. R. Coppinger ..	M.B., B.Ch.	Trinity Coll., Dublin; Mater Misericordiae Hospital, Dublin	3,610
A. de C. S. Charles	M.R.C.S., L.R.C.P.	Cambridge Univ.; St. Thomas's Hosp.	3,575
J. W. Barnett ..	M.B., Ch.B.	Aberdeen University	3,574
F. Stevenson ..	M.B., B.Ch., B.A.O., L.M.	Trinity Coll., Dublin	3,554
S. H. West	M.B., Ch.B. Manch., M.R.C.S., L.R.C.P.	Owens College, Manchester; King's College, London	3,534
Madan Lal Puri ...	L.R.C.P. and S.Edin., L.F.P. and S.Glas., L.M. and S.Punjab	Medical Coll., Lahore; Royal Colleges, Edin.; London Hospital	3,508
Satya Charan Pal .	L.R.C.P. and S.Edin., L.F.P. and S.Glas., L.M. and S.Calcutta	Medical Coll., Bengal	3,501
R. S. Townsend ..	M.B., B.S.Lond., M.R.C.S., L.R.C.P.	St. Bartholomew's Hospital	3,483

TYPHOID FEVER IN THE FRENCH ARMY.

THE French War Office has recently taken very seriously to heart the prevalence of typhoid fever in the army, as statistics show that the cases represent 3.79 and the deaths 0.52 per 1,000 of strength. In consequence the Under-Secretary of State for War has issued a circular to the commander of army corps, in which he insists upon the need for stricter preventive measures. The circular requires not only the isolation of all recognized cases, the supervision of contacts, the disinfection of latrines, and the purity of the water supply, but urges that no milk should be supplied to the men without being boiled, and that they should be instructed in the need for precautions by lectures and conversation. In addition, patients convalescent from typhoid fever are not to be allowed to return to the regiment until the absence of the bacillus from their excreta has been ascertained, and in view of the fact that the bacillus may occasionally persist for two or three years, authority is given to discharge such cases from the army altogether. Convalescent patients, even when proved to be free from the bacillus, are not to be employed in the kitchen, messes, or canteens. The circular insists upon the importance of atypical cases in the spread of the disease, and urges that whenever epidemics occur such cases are to be searched for by serum diagnosis, blood cultures, and cultivation of stools. Recruits are not to be allowed to join regiments where typhoid fever is epidemic but are to be sent elsewhere; and even when there are only sporadic cases they are to be kept apart, using separate sleeping rooms, mess rooms, and latrines. Further, all recruits are to be carefully questioned, so that any who have recently had typhoid fever may be detected and treated as typhoid convalescents. Finally, all localities to which troops may be sent during manœuvres are to be the subject of careful sanitary inquiry, and places in which typhoid fever is epidemic are to be avoided.

The circular is a model of its kind. We hope it may receive the attention it deserves; but our French neighbours—whose talent for drawing up State papers, laws, decrees, circulars and the like is perhaps unsurpassed—show an even more extraordinary capacity for calmly permitting the best-intentioned regulations to remain a dead letter.

THE TERRITORIAL FORCE.

IN the announcement with reference to the territorial force published on page 299 of the JOURNAL of February 1st, it should have been noted that both Major J. S. Riddell, Highland Division, and Major de Burgh Birch, West Riding Division, were promoted Lieutenant-Colonel on January 10th, and should have been so described.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

NOTIFICATION OF BIRTHS.

NORWICH.

DR H. COOPER PATTIN, M.O.H. Norwich, has recently issued a circular letter to the medical practitioners of the city with regard to the administration of the Notification of Births Act, 1907. He expresses regret that the Act does not provide a fee to the doctor for each notification, but thinks it probable that it will be amended in this respect in the future; meanwhile he asks medical men to assist the health committee by directing the attention of the father, if resident upon the premises, to the duty of notifying the birth, or by notifying it directly. Upon the receipt of a notification the procedure will be as follows:

"One of the lady inspectors (who are certificated midwives) will be sent to the address given to verify the fact of birth for purposes of reference. She will have no right of entry into the dwelling, and such entrance will not be enforced in any way. She will be instructed rigidly to abstain from proffering advice whilst a doctor is in attendance. In other cases where help and advice is solicited, and is likely to be of use, it will be given. Wherever it be practicable, breast-feeding will be strongly advised, and when breast-feeding cannot be provided, a carefully thought-out leaflet of directions for other methods of feeding will be left, if a desire be expressed to possess it. Further general instructions to the health visitors will be not to cross the threshold of a dwelling from which a birth is notified, unless an invitation be given to enter, and if a doctor be in attendance, not to enter the lying-in room without his concurrence. There should thus be no danger of intrusion, or of unwelcome interference. When a doctor have ceased attendance, if visits by the health visitors be desired by the parents, they will be made at such intervals and for such periods as may be deemed desirable, and will, the M.O.H. trusts, be made largely by honorary health visitors (ladies) whom he hopes shortly to have associated with the Public Health Department. Whether the visits be made by the stipendiary or the voluntary health visitors, in all cases where satisfactory progress is not being made, the parents will be advised promptly to procure medical assistance."

The circular concludes with an offer to refund postages of notifications, or to provide stamped addressed postcards. A shorter letter has also been addressed to each midwife, who has been supplied with postcards, with the request either to get the father to fill up one of the postcards or to fill it up herself.

ROTHERHAM.

The adoption of the Act in the borough of Rotherham has not been opposed by the medical men practising there, and by a resolution of the borough council it came into force on February 5th. Dr. A. Robinson, M.O.H., calculates that probably not more than 2 per cent. of the births will have to be notified by the medical practitioner. A postcard has been issued for the purpose of making the notification.

SOUTH SHIELDS.

At the last meeting of the Health Committee of the South Shields Council, a letter was read from Dr. L. McNabb, the Honorary Secretary of the South Shields Division of the British Medical Association, with reference to the Notification of Births Act, 1907, in the course of which the following points were set out:

(1) That as the medical man in attendance can best judge the requirements of any particular case, there should be no interference on the part of the sanitary authority except at his request. (2) That such notification will, in certain cases, involve breach of the duty of secrecy towards the patient. (3) That it imposes a new duty upon

medical men without payment, and under penalty for default. (4) That, whilst they are in sympathy with the motive of the Act, medical men, whose representations have been disregarded in framing it, will withhold their ready co-operation, without which its object will not easily be attained.

The Committee adjourned the further consideration of the proposal to adopt the Act for three months.

ALLEGED NEGLECT IN AN INFIRMARY.

On January 31st Mr. Troutbeck resumed and concluded, at Wandsworth, an inquest upon a Chelsea paperhanger, aged 44, who died in Chelsea Infirmary on December 4th, five days after having been left unattended and scantily clothed in a bathroom without a fire for upwards of two hours. Nurses and doctors attending at the infirmary gave evidence, from which it appeared that the man was discovered in the bathroom by accident. He was then shivering and very cold. Dr. William Angus, assistant medical officer at the infirmary, said it was unquestionably neglect on the part of the bathroom man to have left the patient in the bathroom, because it was his duty to take him up to the ward. Dr. Freyberger, who had made the autopsy after exhumation, said the cause of death was failure of the heart while the man was suffering from acute inflammation of the lungs and acute relapse of chronic inflammation of the kidneys. He had no doubt that the treatment in the bathroom accelerated the man's death. The jury returned a verdict of natural death from inflammation of the lungs and Bright's disease, but added that the treatment received by the man in Chelsea Infirmary accelerated his death.

THE VETERINARY ASPECT OF THE TUBERCULOSIS PROBLEM.

In a lecture delivered before the Royal Institute of Public Health, the Professor of Medicine in the Royal Veterinary College (Mr. John Penberthy, F.R.C.V.S.) draws special attention to that aspect of the prevention of tuberculosis which is concerned with the possible infection of human beings from bovine sources. He gives some very significant figures at the outset, which tend to show that, although the prevalence of tuberculosis in cattle is not less in Continental countries than in the United Kingdom, the proportion of deaths from tabes mesenterica to all tuberculous deaths is far greater with us than in Berlin, Paris, New York, and other cities. As matters now stand, he says, tabes mesenterica is made to appear the ground for a terrible indictment against the British cow. The figures may also be taken as a possible indication of the difference in the degree of inspection of the milk supply in the different countries. Mr. Penberthy thinks that the percentage of cows in Great Britain suffering from tuberculosis of the udders, which is generally put at about 2 per cent., is probably not more than 1 per cent., and this, though sufficient to demand serious attention, is not so great a proportion as to make measures for the removal of the danger so costly as to be prohibitive. He maintains that the public seems to be amply safeguarded against the risk of contracting tuberculosis from consumption of animal flesh where meat inspection is carried out uniformly and systematically by officers having an intimate knowledge of animal diseases and pathological processes, and actuated by sound common sense. He, however, rightly insists that such highly-important and responsible duties as the inspection of meat should be exercised only by those who possess the requisite knowledge, and that inspection should be general and uniform. He considers that the difficulties of attempting to stamp out tuberculosis in cows are so many and serious that it would be almost impossible to do this within a short time without serious danger of diminishing the milk supply to an inconvenient extent, and of inflicting great and unjustifiable pecuniary loss on owners of stock. It is urgently necessary to provide for the compulsory notification of all udder disease, the frequent periodic inspection of all dairy cattle, the withdrawal of all cows with diseased udders and those obviously tuberculous or suspected of being so, and the slaughter of all animals found to have mammary tuberculosis or to be discharging tubercle bacilli. In the meantime the danger arising from bovine bacilli in the milk of cows might be averted by subjecting it to a temperature of 185° F. (80° to 85° C.), at which there should be no coagulation of albumen or any material alteration in the nutritive qualities of the milk. We do not think that in view of the conclusions of the recent reports published by the Royal Commission on Tuberculosis the public will long rest satisfied with Professor Penberthy's *Apologia*.

THE CARE OF THE FEEBLE-MINDED.

The Ninth Annual Report of the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded (1907) contains a record of remarkable progress and of considerable financial encouragement. A new residential home has been completed and affords accommodation for 65 additional children, and at the date of the report (November, 1907) there were actually resident on the estate 127 feeble-minded children and young people, the male sex slightly preponderating. The boys who have passed school age (that is, 16 years) sleep at the farmhouse, and it is hoped later on to put up a simple dwelling-house for those who have passed the age of 21. Of the 54 girls in residence, 3 are now over 16 years of age, and it is proposed in the near future to adapt Warford Hall—an adjacent mansion originally acquired with the view of accommodating higher payment cases but not so used—as a home of residence for all the girls over 13, experience showing that at this age it is desirable that they should not be left with the little ones. At the Hall they will have at hand facilities for laundry-work, in which many of them are at present employed. The extensive gardens and glasshouses afford useful and interesting employment for 10 of the older lads, and it would seem that, owing to very careful management and convenient markets for garden produce, this work may be considered remunerative, the paid staff consisting of one head gardener and two assistants. Eight boys work on the farm, which consists of 80 acres and carries 32 head of cattle (including 21 milking cows), besides 52 pigs; and the farm and garden balance sheet shows a profit on the year's working of £448 2s. 3d., notwithstanding unfavourable climatic conditions. The gross cost per head is set down at £27 11s. 6d., and the Government grant for last year's educational work was £247 10s. 9d.; 111 boys and girls are stated to be of school age; some of these work as half-timers, and one or two exceptional cases have been permitted by His Majesty's Inspector to be withdrawn from the school-room before the age of 16, and to be put to outdoor labour, very much to their benefit. There seems to have been but little illness in the schools during the twelve months covered by the report, 2 cases of chicken-pox and 1 of pneumonia being alone noted, though it is stated that 3 cases calling for close medical treatment have been removed to the Children's Hospital at Pendlebury on the advice of Dr. Ashby, one of the consulting physicians. Dr. Surridge, whose valuable services in the past as local medical attendant are appreciatively referred to, has been succeeded by Dr. James McIlraith.

In February, 1906, an appeal for £20,000 was made to cover the expenses of extensions of the original scheme of the colony, including an endowment fund of £8,200, and it is satisfactory to learn that towards this sum £11,209 18s. 6d. has already been contributed. This should be an encouragement to those who contemplate the establishment of similar colonies for the permanent care of the feeble-minded in other parts of the country. It is to be hoped that in the anxiously-awaited report of the Royal Commission on the Care and Control of the Feeble-minded a satisfactory plan of co-ordination of the various charitable agencies for this afflicted class will be suggested, and that facilities will be recommended for the supplementing of these by State aid, where necessary, under the control of a competent central authority.

The report is profusely illustrated, and presents a graphic account of the colony, particulars of which may be obtained from the Honorary Secretary, Miss Dendy, 13, Clarence Road, Withington, Manchester, who devotes much of her time to the superintendence of the work.

"RETURN" CASES OF SCARLET FEVER.

J. L. M.—The Metropolitan Asylums Board has published two reports on return cases by Dr. A. G. R. Cameron and Dr. F. M. Turner, dealing with the years 1901 to 1904. From these reports it appears that the proportion of *infecting* cases (that is, the cases that after discharge give rise to return cases), which caused fresh outbreaks within six weeks of discharge, was 4.0 per cent. of the discharges, according to Dr. Cameron, and 3.1 per cent according to Dr. Turner. But Dr. Cameron included cases which Dr. Turner omitted (scarlet fever cases after discharge of diphtheria patients). The percentage of *return* cases is not given in these reports, but of course it is higher than the percentage of infecting cases, any figure up to about 5.5 per cent. The investigations upon which these reports were founded were carried out in connexion with the fever hospitals of the metropolis.

MODE OF PAYMENT OF FEES TO DISTRICT MEDICAL OFFICER.

T. L. K. writes to ask if there is any recent order of the Local Government Board to the effect that district medical officers are to attend personally at the clerk's office on a fixed day in order to receive fees for extras which have hitherto been paid and transmitted by cheque.

*** We are not aware of any rule or regulation which makes this one of the duties of a district medical officer, and we regard any such requirement as most unreasonable.

RESIGNATION OF DISTRICT MEDICAL OFFICER.

R. writes: I am approaching the age of 65, and am in fairly good health. Am I compelled to resign my appointment on the ground of age at 65?

*** Only if called upon by the guardians to do so. Should they be of opinion that resignation would be expedient in the interests of the public service, it is competent for them to require retirement with superannuation allowance, in accordance with the Act, 1896.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

ANSWERS.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

H. C., F.R.C.P. writes: I would suggest to Dr. Bartlett, if he desires to lessen the flowing saliva (and mucus) in his patient, to try the tincture of belladonna, which has a specific influence on this secretion. In cases of salivation from mercurial poisoning I have found it most efficacious. In cases of salivation very large doses of the tincture of belladonna are tolerated.

DR. M. C. B. ANDERSON (Winfrith, Dorchester) writes: In answer to "W. R. C." in the BRITISH MEDICAL JOURNAL of February 1st, I can strongly recommend the village of Lulworth Cove (West), Dorsetshire, as a suitable place for his case, and can give a reference for suitable lodgings. I should be pleased to communicate further.

DR. W. SOUTHEY WRIGHT (Wool, Dorset) also writes to recommend Lulworth Cove, and offers to afford further information.

INSUSCEPTIBILITY TO VACCINATION.

C. W. S.—It would not be correct to presume immunity from small pox in the case of any infant 7 weeks old after being *once* unsuccessfully vaccinated. A child of parents who have themselves become insusceptible of successful vaccination by reason of repeated vaccinations should not be regarded as insusceptible until the test of not less than three vaccinations has been applied.

RETENTION AFTER PROSTATECTOMY.

DR. J. S. BOLTON (Nottingham) writes, in reply to "P. A. W.": The patient would probably recover under high-frequency-current treatment, as recommended in an article in the *Lancet*, April 13th, 1907.

MR. J. O'DONOVAN, F.R.C.S. (Kingstown, co. Dublin) writes: In reply to "P. A. W.," I have found the following useful in almost similar conditions to those described by him: ℞ Liq. ergotae (P. Davis) ℥jss; liq. strychninae ℥ss; acid. phosphoric. dil. ℥j; syrup. aurantii ℥vj; aq. ad ℥vj. M. Take a sixth part twice a day.

TREATMENT OF CORNS.

DR. H. J. THORP (Ipswich) writes: In reply to "Pedestrian" as to the treatment of corns on the sole of the foot, I recommend the softening of the epidermis with a piece of lint moistened with a saturated solution of bicarbonate of soda and covered with gutta percha, which will enable the corn to be taken out the following morning.

H. C., F.R.C.P., writes in reply to "Pedestrian": As regards the treatment of corns on the feet, an effectual method is to reduce the irritation caused by the pressure of the corn by filing or rasping it down to the level of the skin by means of a fish skin file, which may be procured at any chemist's; when reduced to a minimum the remainder may be solved and removed by the usual methods.

MALT EXTRACT.

TIGH NA-BRUAICH.—Malt extract is prescribed with one of two objects: (1) To increase the supply of carbohydrates in the diet. When given for this purpose it is a matter of indifference at what hour it is taken, and the choice may well be left to the individual taste of the patient. (2) To help in the conversion of starch into sugar by means of the diastase it contains. The contents of the pyloric half of the stomach become acid at a very early stage in digestion. Those of the cardiac half are alkaline for a considerable period, so that amylolytic digestion may continue in the latter after a full meal for an hour or more. The first part of a meal finds its way into the pyloric half; the second part remains in the cardiac half until the former passes into the duodenum. Hence if the latter part of a meal is largely starchy, malt extract taken with it or immediately after it helps in the conversion of starch into sugar. If taken an hour or more after the meal the malt will be useless, as the contents of all parts of the stomach are then acid.

SHIP SURGEONS AND VACCINATION FEES.

TWICE BITTEN writes: In replied to "Bitten" in the BRITISH MEDICAL JOURNAL of January 25th, p. 240, *re* the vaccinating of steerage passengers by ship surgeons, I should like to point out that surgeons of two famous lines sailing out of Liverpool have to vaccinate several hundreds of emigrants each voyage without any additional remuneration whatever. This state of things exists even to a greater extent in the Mediterranean service of these lines, where as many as 2,000 or even more emigrants are shipped nearly every voyage. Almost all have to be vaccinated, and all inspected for trachoma, this last complaint being the *bête noire* of every surgeon sailing into New York with passengers under his care. This sweating of medical men could easily be obviated if the different companies would increase the fare of the third class passengers by 1s., or even 6d., this sum to be handed to the ship surgeon at the end of every voyage. I sincerely hope that this glaringly anomalous state of things will be remedied by the recently-formed British Ship Surgeons' Association, and obtain for sea doctors that recognition and remuneration for their work which they are justly entitled to.

LETTERS, NOTES, Etc.

A WARNING.

DR. F. H. CHAMPNEYS (London W.) writes: I am informed that a young man, pretending to be a son of mine, is going about asking for pecuniary assistance. This person is an impostor, and I shall be glad to hear that he is in custody.

BACK NUMBERS.

A LADY, the widow of a medical man, has bound volumes of the BRITISH MEDICAL JOURNAL from 1868 to 1883, and a set of unbound copies from 1883 to November, 1907, which she is anxious to dispose of. She would be willing to accept any reasonable offer including carriage. The collection might be useful to a Division as the nucleus of a library.

THE H. A. BRIDGMAN APPEAL.

MR. ADE VALLANCEY (34, Shaftesbury Road, Ravenscourt Park, W.), Treasurer of this Fund, of which particulars were published in the BRITISH MEDICAL JOURNAL of January 25th, p. 240, writes to acknowledge the receipt of the following sums:

	£	s.	d.
M.R.C.S., Bournemouth	1	0	0
Dr. S. Andrews	0	10	0
Dr. G. Pernet	1	1	0
Dr. Lombe Atthill	1	1	0
T.	3	3	0
Amicus	1	1	0

DEATHS UNDER CHLOROFORM IN GENERAL HOSPITALS.

GENERAL PRACTITIONER writes: In the BRITISH MEDICAL JOURNAL of December 28th, 1907, p. 1860, I notice that Dr. McNamara strongly protests against the use of chloroform as a general anaesthetic, and classes those who continue its use as guilty of "pigheadedness and stupidity." During my twenty-four years in general practice I have administered anaesthetics on more than 2,500 occasions. In fully half—and I do not include cases of administration to the parturient woman—I have given chloroform by the open method, as taught by Lister, taking the precautions, first, to obtain the purest article available; and, secondly, to treat it with lime as suggested by an eminent scientist before the London Society of Anaesthetists some years ago. I can affirm that I have never lost a case, and, with regard to chloroform, have never even been anxious about one during this long experience. For the adult I usually employ A.C.E. (freshly made), and administer with drop bottle on mask; but for children and all alcoholic subjects I invariably use chloroform by the open method. I record this experience in no boastful spirit, but when in my hands (and I feel sure in those of many others) chloroform has been so successful it is only right that a protest should be made against its abolition as suggested by Dr. McNamara.

SUCCESSFUL TREATMENT OF A CASE OF CONSUMPTION (?).

DR. C. H FOLEY (Ardrahan) writes: Mary T., aged 25, a servant in a house in New York, U.S.A., took ill in the fall of 1906. She was sent by her doctor to a farmer's house in the country adjoining a sanatorium for open-air treatment. Having spent all her money, and being still going down hill, she returned in April to her home, a two-roomed cottage occupied by three other adults on the wet slope of a mountain valley. The cottage adjacent had been condemned by me as unfit for human habitation six years before; 3 ft. separated the two, and down this came the drainage of the hill above. I saw her in May, when she had all the clinical signs of phthisis of the second stage. Owing to history I did not think it necessary to examine the sputum. I gave her calcium chloride 10 grains three times a day after food. I ordered her to take from two to three teaspoonfuls of common salt before her food in water, and gave her also at the end of the first week 1 drachm of phosphoric acid morning and evening on an empty stomach. She got a concrete floor put in in the tiny bedroom which her mother shared with her, and outside the peep-hole window which looked into the wet and filthy yard of the next cottage, she got built a barricade of stone and mortar to protect the foundation of the gable of her room from the water ever coming down the passage. She went out on the hills every day and kept her tiny window up. But she steadily got worse; she lost her appetite; her cough increased in severity, but she kept on with the treatment. The season was wet and against her, but still she managed to crawl out for an hour or so. As she did not take food we resorted to stimulants and neat cod liver oil. By the end of July she got very bad, but just as it seemed as if all hope was gone she began to improve and has since got steadily better. She put on flesh and lost her night sweats. I saw her a few days ago. She has still a little cough going to bed and rising in the morning, but her lungs are so clear that I was surprised and cannot locate any point of mischief. Now after eight months to what am I to attribute her improvement? We see cases that become quiescent to break out again. Perhaps it was the return to her native air? It always struck me as curious that in pneumonic conditions of the lung, when a big oxygenating surface was put out of action, the chlorides should disappear from the urine; and as in the laboratory chlorine will by its affinity for hydrogen liberate oxygen from its compounds, I considered that in periods of oxygen stress, such as in pneumonia, the chlorides were conserved for the purpose of acting on the fats of the body, now being made use of, and liberating their oxygen to make up for the lung deficit. Thus chlorine seemed to me to be an oxygenating agent when the lung is diseased. I first gave sodium chloride only, and later gave it with calcium chloride, which by its action on the vessels antagonized the lymphagogue action of the sodium salt, and thus got a better effect. I gave also phosphoric acid to diminish the too great alkalinity of the blood which the above soon produce. Phosphoric also disputes with carbonic for possession of the serum, and increases the phosphates in the oxygen carriers of the blood. I found I had arrived, if my theory was right, at the best way of ensuring oxidation. The results were highly satisfactory, and now I treat tuberculosis of the lung the same way. In pneumonia I judge of the amount of phosphoric necessary by the patient's thirst.

THE PROSPECTS OF THE MEDICAL PROFESSION.

DISGUSTED writes: I suppose, along with the other members of the British Medical Association, I received the usual circular reminding me that the annual subscription to the Association was due, and enclosed therewith a circular drawing our particular attention to the Central Emergency Fund and asking for support. The latter is what I am sure every member thinks a most desirable fund; but it seems to me we require something else—namely, a means of preventing our professional brethren from making terms with the workers in mines, etc., where they are the only doctors employed. As an example, I quote a rule from among those of a sick nursing association in a mining village *two miles* from the nearest doctor, and containing about 2,000 workers:

Rule: "It has been arranged by the doctors and the workmen that where the nurse is engaged for confinements and the doctor required at the order of the nurse, 5s. to be the doctor's fee, and if he is late and the birth over no fee is charged, unless during the night time, when 5s. will be paid him."

To think that a medical man is prepared to go two miles out, do a difficult midwifery case—chloroform and instruments as it probably will be, seeing the trained nurse cannot manage it—and come two miles home, all for the princely fee of 5s., is certainly no bright prospect for any one entering the profession. The rest of the rule speaks for itself, and I would ask you, Sir, Is there no means of putting a stop to such a prostitution of an honourable profession by registered medical practitioners?

BRISTOLIAN writes: I take exception to one point of "After Twenty Years'" letter in the JOURNAL of January 18th, p. 184. I hold that we have in equity no ground of complaint that the philanthropic public supply free medical attendance to all and sundry, any more than the bookseller has against Mr. Carnegie and the municipalities for supplying free libraries. The crux of the matter is the ignorance of the middle class public (from whom our recruits are drawn) as to the onerous work and wretched remuneration of the bulk of the profession. The middle-class man pays his doctor 5s. a visit, sees him drive about in a carriage and thinks he is making a good thing of it. He has no acquaintance with the lot of the doctor who attends the small shopkeeper, the artisan, and the unemployed; who scrapes together his income carefully from clubs and Poor-law appointments; who can never afford a holiday, and but rarely can take an hour away from his place of business lest he might miss a much-needed half-crown. Even if the middle-class man knew such a practitioner personally, he would never be let into the secret of his struggle for a competency, for it is an article of faith with the profession to be "very busy just now," "getting on splendidly," and so on. A writer in the lay press has suggested that there are better times in store for medical men in the prospect of the increased work which will be provided by the medical inspection of school children! As a counterblast to this optimistic opinion, let us consider what will be the result of the gift, by Mr. Wills of Bristol, of £100,000 towards the foundation of a new university. Can any one doubt that it will result in the turning out of an excess of medical men more than sufficient in number to inspect all the school children in the kingdom? Let us be honest about our predicament, and acknowledge that squabbles about patients, hostility to each other, outcry against hospitals, underselling, and mean competition would disappear, were there enough work to provide us all with a decent living. That there is not, is evident to ourselves. Let us, and especially our teachers, acknowledge this to the public and our students, and the economic law of supply and demand may possibly in a few years make things straight; go on denying it, and no amount of ethical rules, warning notices, and trade-unions will remedy the evils they seek to combat.

PICK-ME-UPS.

A CORRESPONDENT of the *Liverpool Post and Mercury*, in a comment on a paragraph in the BRITISH MEDICAL JOURNAL, tells a story in further illustration of the real need for the suppression of the trade in alcohol in unrecognized forms. He was travelling, he says, with his uncle, and "on our way to the station—it was a hot summer afternoon—my uncle said he wanted a drink, and we went into a chemist's to get some soda water. He asked for calisaya, and as I did not know it, he explained it was a splendid tonic and pick-me-up. Having, like Cassio, a 'most unhappy head for drinking,' alcohol frequently poisoning me to the extent of giving me nettle rash, I inquired whether the preparation contained it. 'No,' replied my uncle; 'if it did I wouldn't take it, for I am on the teetotal tack myself just now.' We had our calisaya. Immediately my 'unhappy head' began to spin. We got on to the train in a few minutes, and until we reached our destination I was exceedingly uncomfortable. For the next two days I was unmercifully chaffed because I could not even drink calisaya. On Monday morning, when we returned to town, we went to the same chemist's to get another soda, and I asked what the calisaya was dissolved in. 'Why, brandy, of course,' replied the chemist. That time it was I who had to laugh." This story relates to America, but we do not doubt that stories of an analogous kind could be told of pick-me-ups as vended in England. The public does not recognize that the draughts commonly dispensed to all and sundry by chemists and others, and by way of a tonic, more often than not contain alcohol in some medicinal guise. This, however, is but a small evil compared with the extent to which alcohol is innocently imbibed in the form of patent medicines by persons who sincerely claim to be total abstainers.

SUNSHINE IN 1907.

DR. HY. DRAPER BISHOP, Medical Officer of Health (States of Guernsey), writes: May I be allowed to state that the records of the Meteorological Office for 1907 show that the Island of Guernsey enjoyed the maximum of sunshine of any place in the British Isles—namely, 1,859.7 hours? This, however, is considerably below its average for the last fourteen years, which is 1,916.2 hours.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

A Clinical Lecture

ON

CHOREA OF AGGRAVATED TYPE WITH CERTAIN UNUSUAL PHENOMENA.

BY

R. W. PHILIP, M.A., M.D., F.R.C.P., F.R.S.E.,

PHYSICIAN AND LECTURER ON CLINICAL MEDICINE, ROYAL INFIRMARY, EDINBURGH.

I had intended to address you to-day on another subject. The advent at the commencement of this week of a very aggravated case of chorea, presenting several unusual features, has determined me to direct your attention in that direction.

We are apt to think of chorea as a mild, almost trifling ailment—one of the lesser manifestations of the rheumatic diathesis, tending to occur especially in delicate, neurotic children. As matter of experience, some four-fifths of the cases do occur between the ages of 5 to 15, and the great majority of all cases are mild in character and yield readily to rest and treatment.

Contrariwise, the patient who forms the text of to-day's lecture is a well-developed lad of 18. The attack, which came on suddenly, has been of violent character. Most of the recognized symptoms are present in aggravated form, and there has appeared at least one symptom which I have not seen previously described.

History.

Let me first of all give you a short statement of the history of the case. W. I., aged 18, a joiner, was admitted to my wards in the Royal Infirmary on January 11th, 1908, suffering from intense restlessness and unceasing movement apparently of all his muscles—in a word from *chorea gravis*.

The patient seems to have been quite well till three weeks ago, when he got a severe chill, and returned home, complaining of cold and of being out of sorts. That night the movements commenced. His father, who slept with him, complained greatly of his restlessness, and the lad seems to have had a fit of emotional excitement. Next day he tried to go about as usual, but his father thought him dull and heavy-looking. He had a quiet time at New Year on account of the holiday. On January 4th he suffered from headache, and pain and stiffness in the knees and left elbow. This made him keep his bed. The doctor was called in, and said the patient was suffering from rheumatism. There was apparently no fever, and the pain disappeared in two or three days. On January 7th, while still in bed, he complained of sore throat. The same day his father noticed twitching in his hand and about the mouth, and thought there was some hesitancy in speech. Next day, January 8th, the throat was much worse, and he had great difficulty in swallowing. Since then the throat gradually improved, but the twitchings and restless movements grew steadily worse, and spread all over the body. For two or three days they have been truly violent. He was brought to the Infirmary chiefly because of the difficulty of managing him at home.

Previous Illnesses.—The patient was in the Royal Infirmary two years ago with a sharp attack of chorea, which continued for a month. There is no history of rheumatic fever, nor, up to the date of present illness, had he suffered from sore throat or pains in the joints. Indeed, apart from so-called bilious attacks every now and again, which lasted a day or so, he seems to have been healthy. There is no history or evidence of gonorrhœa.

His general surroundings seem satisfactory. His home is comfortable. He is well fed. His work is pleasant, and his habits are good. The family history shows nothing out of the way. Both his parents and two brothers and one sister are alive and well. There is no history of rheumatism in the family.

Present State.

On examination the patient presented the aspect of intense motor restlessness. The clinical picture might truly be described as one of muscular insanity (*folie musculaire*). The motor contortions were universal and most disorderly. The face showed every variety of grimace and contortion. The forehead was repeatedly wrinkled and alternately knit. The eyebrows were similarly raised and depressed, independently of the movement of the forehead and often independently of each other. The eyelids were closed and opened irregularly, unequally, and often independently of each other. The eyeballs were constantly moved in every possible direction—upwards and downwards, from side to side, obliquely, sometimes in conjugate fashion, sometimes independently. In addition to this, there was present what I do not remember to have seen described anywhere in relation to chorea, namely, the condition of *hippus*, that is to say, the pupil was alternately dilated and contracted in extraordinarily rapid fashion.

The other muscles of facial expression were thrown into irregular contortions, sometimes bilateral, sometimes unilateral, giving rise to a variety of bizarre grimaces, hardly to be reproduced by the healthy subject. Extremely contradictory manifestations were effected, from the broad grin of good nature to the ferocious look of uncontrolled anger. Interest, pleasure, excitement, vexation, distress, resentment, hate, were all rapidly reproduced from moment to moment, more quickly than the lightning sketches of the music-hall artist.

Similarly the jaws were separated and approximated with considerable force. The tongue was projected spontaneously from time to time, and as rapidly withdrawn. When the patient was asked to put out his tongue, there was usually some delay, and then suddenly it was darted out, perhaps rolled from side to side, and drawn back with a jerk. The movement of the tongue against the sharp edge of the teeth had led to considerable scratching and scoring. The lower lip also had been much injured from contact with the teeth during closure of the jaw. The lower jaw was moved from side to side violently, and the head was similarly jerked in all directions, at one time suddenly raised from the bed, and the next moment thrown back again with dangerous force. Backwards, forwards, from side to side, the heedless, delirious movement never ceased.

The upper limbs were likewise active. The fingers, thumb and hand generally, made an endless variety of jerking movements. The fingers were alternately extended to their fullest, abducted, and flexed. The hand was alternately flexed and extended, pronated, and supinated. Wrist, elbow-joint, shoulder-joint participated in the gay dance, with every possible variation and combination.

The lower extremities were also disturbed, with alternate flexion and extension, abduction and adduction, inversion and eversion of foot. Movements of flexion and extension occurred at the knee and hip, with less or more rotation, abduction, and adduction. One foot was made to cross the other, so that considerable bruises resulted on the alternate dorsa of the feet. The two internal malleoli were brought together with considerable force, causing congestion and bruises. The legs were made to cross each other. The trunk muscles were nowise spared. Irregular and unequal contractions of different groups of muscles produced extraordinary movements of the shoulders, back and sides. It was only by constant watching that the patient was saved from being jerked out of bed.

The diaphragm and abdominal and costal muscles were greatly disturbed, and the breathing correspondingly embarrassed. The rhythm of the cardiac sounds and pulse was influenced, but to a less extent than might *a priori* have been anticipated from the extraordinary disturbance in other groups of muscles.

Speech was much deranged, more particularly in respect of articulation, which was jerky, highly irregular, and halting. At times it was quite unintelligible. The patient, when spoken to, seemed to apprehend what was said perfectly, but, while attempting to answer, failed to effect accurate articulation.

The movements were so pronounced and continuous that no increase under observation was certainly determinable. They continued without intermission through the night. For two nights there was complete insomnia. On the second night the patient's mind seemed to wander from time to time, but no maniacal symptoms were manifested. At the end of forty-eight hours from admission the patient showed evidence of extreme exhaustion. The face was flushed and covered with perspiration. The

extremities were similarly clammy. The temperature had risen to 101° F., and the pulse-rate was 120 per minute, with irregularity in time and force.

A fortunate feature up to the present has been the possibility—admittedly with difficulty—of feeding the patient. With continuous watchfulness on the part of nurses, this has been effected to some extent throughout. Sufficient nourishment in these cases is of the first moment. Its achievement in the present instance has doubtless served to ward off the fatal catastrophe which the extreme exhaustion would otherwise have precipitated.

Further examination of the nervous system was rendered difficult on account of the movements. It was impossible to consider sensory disturbance. The deep reflexes were generally present, and apparently natural, perhaps slightly increased. The organic reflexes were undisturbed. I have already referred to the striking phenomenon of hippus which continued for days. There was a certain amount of uncertainty and halting in connexion with micturition.

Other systems showed little out of the way. The circulatory system was examined with care. Apart from rapidity and irregularity of pulse little of importance was determined. The heart's action was rapid and excited, but the sounds seemed pure enough. There was no definite murmur either at apex or base. The urine was natural, apart from a large excess of urates. There was no albumen. Urea amounted to 16 grains per oz.

The condition is, then, of much interest from several points of view. In the first place the age of the patient is unusual. As we have seen, the large bulk of cases of chorea occur between 5 and 15. Of the relatively small group of cases which occur later, from 16 to 30, the great majority are in female subjects. Gowers points out that the disease is rare in lads over 16.

Family history in cases of chorea often reveals a hereditary tendency in one of two directions. There may be, on the one hand, a history of rheumatism, or, on the other hand, a neuropathic leaning. Neither of those is traceable in the present instance. Indeed, apart from slight ailments, the patient's family seem to show an unusually clean bill of health.

As to his personal history, there is no factor of special significance in relation to work, or manner of life or habits. It is to be noted that he had a previous attack of chorea when he was 16. The emotional state into which he seems to have got on being reproved by his father, points to a rather sensitive, neurotic temperament, but nothing more than is common enough. Of definite facts, we must keep in view the history of sudden chill, and the subsequent malaise, which made the patient return home from work. This was immediately associated with some degree of restlessness. After battling more or less successfully against the illness which threatened, he had, in the course of a fortnight, to keep his bed because of pain and stiffness of joints, which was quickly followed by sore throat. The sore throat which supervened three or four days before admission seems to have been of aggravated nature, as judged by the history. It was while the sore throat was conspicuous that the grave nervous manifestations supervened. Such anginous symptoms are not infrequent precedents of chorea. Whether they are always rheumatic in origin or sometimes due to other toxins is a moot point.

Diagnosis.

In the present instance the diagnosis has offered little difficulty. The character of the spasmodic movements is quite distinctive. They have been much more pronounced than they commonly are in chorea, but in other respects essentially those to which the name "chorea" has been applied. Because of their severity, the condition may be properly described as *chorea gravis*, as opposed to *chorea minor*. The term *chorea major* has been retained for another condition, to which I shall refer presently.

Of conditions from which the case had to be separated, acute mania suggested itself when the movements were at their worst. As the patient threw himself about with what simulated suicidal determination, acute mania seemed possible. The absence of conspicuous delirium saved the diagnosis. Although some degree of wandering occurred towards night, the delirium was never of the constant, excited, jabbering type which one gets in acute mania. Hysteria was likewise excluded. Hysteria of this type is unlikely in a young male subject. Further, there has been an absence of the excitement of so-called higher centres, characteristic of hysteria.

With other diseases associated with irregular movements there was little risk of confusion. Thus from hereditary chorea, or Huntingdon's chorea, the present case was distinguished by the abruptness of onset, the grave character of the movements, and the absence of hereditary history. From senile chorea it was separated by the patient's youth and the severity of the spasms. From multiple myoclonus, or paramyoclonus multiplex, it was readily separated by the nature of the movements, which differed widely from the lightning-like spasms of myoclonus recurring in the same muscle or group of muscles successively. In myoclonus the trunk and proximal muscles of the limbs are commonly affected in more or less symmetrical fashion. Contrariwise, in the case before us the movements are conspicuously irregular. The same remarks apply to what is known as electrical chorea, which occurs in North Italy. In that condition, the spasmodic movements affect commonly one of the upper limbs first. Thereafter spasms occur in the muscles of the leg of the same side, and later become more generalized. As the name suggests, the contractions are commonly shock like. From disseminated sclerosis, which occurs frequently enough in young subjects, the present case is easily separated. In disseminated sclerosis there may be little disturbance save when the patient attempts a voluntary movement. Then a spasm supervenes, and the movement is executed in clumsy, jerking fashion—the so-called "intention spasm." It is hardly necessary to mention paralysis agitans, with which the present case could not be confused, first, because of the age of the patient, and secondly, because of the character of the movements. Paralysis agitans is a senile disease, associated with degenerative changes, and the movements, which develop gradually, are of fine, rhythmical character. In athetosis the movements are of quite a different character, being slower, more regular, undulating, and apparently purposive. Lastly, the movements were of too general and grave a type to lead to confusion with habit spasm and other varieties of spasmodic tic.

The case, is then, one of pronounced chorea, or *chorea gravis*. Before passing to discuss the prognosis and treatment, it may be convenient to introduce a word or two regarding the nature and relationships of chorea.

The name "chorea," or "dancing disease," was really stolen from another morbid condition, to which it is more literally applicable—a disease which seems to have been much commoner some centuries ago than now. "Chorea Sancti Viti," or St. Vitus's dance, in the early sense of the term, seems to have occurred in epidemic fashion in many parts of Europe. It was truly a choreomania, or dancing mania, especially prevalent in the fourteenth and fifteenth centuries. Patients were sent to various chapels and shrines with the view of calming their dancing ardour, and restraining the exuberance of their movements. The patients affected by the disease appeared to have lost all control over their senses and movements. They formed circles and danced in wild delirium for hours together, until at length they were overcome by exhaustion. In this state they emitted groans as if in the agony of death. By way of treatment they had the abdomen tightly bound with cloths, after which they commonly recovered, and remained sane until the next attack. During the dancing mania the patients appeared insensible to impressions through the senses but had visions. Spirits, whose names they shrieked out, were conjured up. After the attack patients maintained sometimes that they felt themselves immersed in a stream of blood, and that this had led them to leap.

The name "chorea" seems to have been applied first to the extraordinary mania in 1418, when it broke out in Strassburg, and the magistrate discovered that the best line of treatment was to dispatch the affected persons to the shrine of St. Vitus at Zabern, to intercede for the good offices of the saint. A relic of the therapeutic pilgrimage is preserved in the weird procession of so-called "jumping saints" which takes place yearly during Whitsuntide at Echternach in Luxemburg. Such dancing disease has been known variously at different times and places as "St. John's Dance," "St.

Anthony's Dance," and so on. In later times this pronounced form of hysterical or hystero-epileptic seizure has largely disappeared. Traces of the affection have emerged now and again amongst such sects as the Jumpers and the Shakers. It is well recognized that neurotic excitement of this nature is apt to be contagious by imitation, and in this sense to become epidemic.

It was to such a condition that the name "chorea" was first applied. The theft or transference of the name to the condition which we have been studying to-day was made by Sydenham, who described the more limited spasmodic condition in 1686. It is in his honour that the condition is frequently labelled "Sydenham's chorea." It was also labelled "chorea Anglorum," more especially by Continental authorities, to separate it from the glorified chorea of the Continent to which I have just referred. The distinction between the two conditions is still recognized by many observers in the division into *Chorea major*—that is, the earlier chorea of hysterical or hystero-epileptic character—and *Chorea minor*—that is, Sydenham's chorea.

Etiology.

As to the ultimate causation of chorea, there has been a good deal of speculation. It must be freely admitted that even yet the question affords room for theorizing. Its association with rheumatism, whether in the form of acute rheumatism or in some of the minor manifestations of rheumatism, has long been recognized. The frequent concomitance of chorea and heart lesions, more especially endocarditis, is one of the commonplaces of medicine. That there is a close association with these groups of diseases there can be no manner of doubt. It is more difficult to say what the exact bond of relationship is. The older view that chorea depended on the distribution of multiple emboli in the basal ganglia and corpora striata and the production of local areas of softening is not now generally admitted. The fact that chorea is not always associated with endocarditis or valvular murmur is against it. Further, there is an absence of pathological corroboration, even although it has been shown that certain irregular movements of choreiform character have been produced by introducing starch granules into the circulation. The extremely varying character of the movements, in some cases so slight, in other cases so very pronounced and widespread, is against the embolic view, as is the varying duration of symptoms in different cases. In some instances the symptoms disappear within a week or so, almost without treatment. Some cases are quickly affected by such drugs as arsenic. In other instances neither prolonged rest nor any of the usually prescribed drugs seem to have much effect—it may be for months.

What are we, then, to admit as the probable explanation? The varying character of the symptoms and their extreme violence in some cases are much in favour of the view that the disease is due to irritation. In particular, various toxins are admitted as irritants, especially that associated with rheumatism. It is to be kept in view that the disease supervenes, not only in association with rheumatism, but also after other infective conditions, especially scarlet fever, measles, small-pox, diphtheria, enteric fever, cholera, pneumonia, whooping cough, pyaemia, and gonorrhoea. Similarly, chorea has been associated with several types of sore throat. More than one observer has emphasized the probable entrance of micro-organisms through the delicate mucous membrane of the naso-pharynx. In keeping with this view is the fact that the rheumatic diplococcus has been found in relation to the smaller arterioles in the brain cortex of animals inoculated with the organism and so rendered choreic, and also in a fatal case of chorea in the human subject.

It is more difficult to determine exactly the part played by certain usually admitted causes of chorea, such as fright, shock of various sorts, and the like. Such are common enough precedents of the attack, more especially in young children. It may be, however, that, after all, these are merely predisposing influences, which determine the direction in which the effects of intoxication may show themselves.

As to anatomical changes, it must be conceded that up to the present there is no certain, constant *post mortem* appearance which can be predicated as the anatomical basis of the disease. That this is to be sought for in the brain rather than elsewhere in the cerebro-spinal axis is suggested by the following considerations—namely, the frequent association of widespread muscular movements with disturbance of more psychic nature; further, the fact that chorea minor is often one-sided (hemiplegic chorea), and the fact that choreiform movements occasionally follow on a cerebral hemiplegia (post-hemiplegic chorea).

Prognosis.

The prognosis in the simpler forms of chorea is usually favourable. Sometimes the condition may last for several months and its treatment be tedious, but a favourable termination almost always results. The tendency to recurrence must be kept in view.

The prognosis is more anxious in the severer types. It is truly grave in the case before us to-day. Several dangers present themselves. The exhaustion caused by the constant, aggravated movement is immense. The change in the appearance of the lad in the course of 36 to 48 hours has been very striking. From a condition of comparative freshness he is reduced to one of extreme enfeeblement. His pulse-rate has been almost doubled, and the temperature has risen considerably. The exhaustion caused by the movements is further emphasized by the almost complete absence of sleep for a day or two.

Besides the exhaustion caused by the movements, much local injury of skin and soft parts has been induced by the frequent movement of one limb against the other, and the tongue and lips against the teeth, which, even with careful supervision and treatment, it has been impossible wholly to prevent.

The very widespread character of the neuro-muscular disturbance in the present instance is evidenced further by the presence of the phenomenon of hippus, which, as I have said, I do not recall having seen in a previous case, or read of in connexion with chorea.

One feature which sometimes renders prognosis more anxious has been fortunately absent so far in our patient—namely, difficulty in swallowing. The patient has been able, with the help of good nurses, to take food fairly well. This has been our sheet-anchor up to the present. He has been supplied abundantly with milk, along with eggs and a little stimulant at stated intervals. It remains to be seen how long this may continue. There is also an absence of important cardiac lesion. Another element which may aggravate chorea in a female patient of his age—namely, pregnancy—does not, happily, come up for consideration.

Treatment.

Slighter cases of chorea require comparatively little in the way of treatment beyond release from disturbing influences, whether these be found at home or in school. More or less complete rest in bed and satisfactory hygienic surroundings, along with a simple tonic, such as arsenic, prove readily efficacious. In the course of six to eight weeks the patient is commonly well. Even when the cure is longer delayed, the final result is obtained along simple lines.

It is different in graver cases, such as that we are now considering. Here energetic measures require to be adopted, in order to anticipate and remedy the state of exhaustion with which the patient is threatened, and to prevent his injuring himself in the way to which I have referred.

On this account it is desirable to have the patient on a soft mattress, preferably a water-bed; all hard structures in his neighbourhood must be carefully padded; the head and corners of the bed should be cushioned; the patient's elbows and wrists, knees and ankles should be swathed in cotton wadding. It is not a bad plan to attach a pillow to the inner aspect of one of his legs. Scrupulous care must be taken in relation to feeding. The food should be of a simple, nutritious kind. I am much in favour, in such cases, of the systematic exhibition of egg-flip, say, every two or three hours. Alcohol, perhaps best of all in the form of brandy in egg-flip, say, ʒij, is of much service. Hydrotherapeutic measures may prove serviceable. Where the movements are not too violent a warm bath is of service. In other cases the wet pack may be used with benefit. In all cases great care should be taken in the matter of cleanliness, more particularly in relation to

scratches or sores of mucous membrane and skin which may be produced through the violence of movement.

Of drugs for this graver type of case, the most serviceable seems to me a combination of bromides and chloral. In the present case, bromides were at first used every three hours with insufficient effect. It was only when chloral was added that a sufficient restraining action on the movements was effected. The bromides were given in doses of 30 grains every three hours or thereby. Chloral was then added, first to the extent of 20 grains, which had little effect, and then twelve hours later in 30 grain dose. Fortunately this succeeded in giving the patient four hours' sleep. On the following night a similar dose afforded seven hours' sleep. During the deep sleep the muscular phenomena disappeared almost completely. On awaking from sleep, the patient presented some of the old violence of movement, but he seemed extremely tired. After the second night's sleep, he remained profoundly exhausted, and this has continued. The pulse remains rapid and the temperature elevated (100° F.). This is of grave omen, all the graver that now he has begun to show disinclination for food. When I saw him, a few minutes before coming to lecture, it was hopeless to think of bringing him to the clinical theatre. I must content myself by inviting you to pay a quiet visit to his bedside. The outlook is most dubious. Fatal collapse seems imminently threatened.

POSTSCRIPT.

[For two days the patient continued to get progressively weaker. Feeding became extremely difficult. At the end of forty-eight hours the temperature fell abruptly to 97° F. The pulse got very rapid (about 144) and almost indeterminable. Six hours later the collapse ended fatally. Unfortunately the patient's father resolutely refused a *post-mortem* examination.

The day after the lecture was delivered there appeared in the *Lancet* (January 18th, 1908) a Note on Certain Pupillary Signs in Chorea by Dr. F. Langmead. After dwelling on the paucity of observations regarding the pupil in chorea, he reports that he has sometimes observed the occurrence of hippus in children more than slightly affected by the sthenic type of chorea. I have pleasure in citing this, because so far as a further glance through the literature reveals, it is, apart from the observations recorded in the lecture, the only reference to the phenomenon as occurring in chorea.]

A Clinical Lecture
ON
CHRONIC BRONCHITIS.

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THE treatment of cough, and more particularly of what is termed "winter cough," constitutes a large share of out-patient and of general practice at this season of the year. Now, a condition which is so common year by year, whose features are so familiar, is apt to lose in scientific interest, or to be set aside in the more fascinating pursuit of the newer methods of treating conditions supposed to be more interesting or more important. The words of Hooker, written in the earlier part of last century, apparently remain true:

> The science of medicine in all its departments is in a very changeable state. The discoveries which are made from time to time in anatomy, physiology, and pathology, the theories which are put forth, and the new remedies and modes of treatment which are continually proposed, keep up a constant excitement in the profession.

A disease, therefore, which is not invested with the prevailing scientific halo is apt to be neglected. But no disorder, however commonplace, should be divorced from a continuous association with scientific thought. And when old facts and old views are considered in this light, the commonest conditions acquire interest, and our hitherto defective view of them gathers clearness and definition.

THE DIAGNOSIS OF A BRONCHIAL COUGH.

We are perhaps too frequently apt to conclude that a cough betokens some chest trouble, and unless care be taken, great and sometimes ridiculous mistakes may be made. The diagnosis must always be carefully and systematically carried out. To the practised ear, it is true, a cough will often betray its seat or its causes from its characters, such as tone, intensity, etc. But in all cases the physical examination should be complete. First, the entire mucous tract from the nares to the bronchi should be inspected, as the cough may arise from any point in this path. The external auditory canals should also be examined in view of the possibility of ear cough. In children, teething requires only to be mentioned. Any area of hyperaesthesia, any congestion, hypertrophy, ulceration, granulation or growth occurring at any point in the upper respiratory tract may be the cause of cough. It is unnecessary to enumerate the various lesions which are specially apt to be overlooked. I have known, for instance, a cough which had baffled several physicians quickly disappear after cauterization of hypertrophied adenoid tissue at the root of the tongue. Cough having its seat in the upper respiratory passages is usually of the hard and dry character.

When in the course of this examination the larynx is under survey the trachea should always be inspected, as the information gained is often very valuable. In some patients the trachea, or at any rate its anterior surface, can be seen right to the bifurcation in the usual sitting positions, but in some cases Killian's positions are necessary. By practice one can usually make out the bifurcation or see into the right bronchus, and note is made of the degree of hyperaemia or anaemia, venous congestion, patchy coloration, mucous deposit, and any other irregularities. But these phenomena are so intricate in their relationships that their discussion would demand a separate lecture.

The examination of the chest is next carried out, but it must be remembered that conditions provocative of cough may be present simultaneously in both upper and lower respiratory tracts. In this examination, all possibility of cough arising from diseases of the lungs or pleurae, from pericarditis, aneurysm, tumour or enlarged bronchial glands must be considered. Should the physical signs in the chest be meagre or absent, we must not neglect to consider the possibilities of nervous or reflex cough. You remember the instance given by Graves of a patient whose cough had long baffled the faculty, but which was promptly cured by an old woman who administered something which caused the expulsion of a tapeworm. The stomach and the pregnant uterus are frequent sources of reflex cough of remoter origin. It is necessary, however, to note that the class of nervous coughs may be accompanied sooner or later by congestive conditions in the larynx and trachea due solely to the mechanical irritation. This is commonly found in children, in whom such coughs are frequent. Lastly, there is the purely hysterical cough, which is generally apparent from its loud ringing or barking character, though in some instances it is merely a "teasing hem." I have known iodide of potassium and ipecacuanha given for such a cough in the expectation that it might thereby be "loosened."

If, on the other hand, our examination proves the presence of a cough due to a bronchial catarrh or bronchitis of the chronic variety, we proceed to consider the scientific conceptions on which the treatment is to be based.

THE NATURE OF CHRONIC BRONCHITIS.

It is generally assumed that catarrhal conditions of the bronchial mucous membrane are caused by irritants of various kinds which affect the mucosa as a whole, and this view is doubtless to a certain extent correct. But morbid anatomy, clinical facts and the results of treatment lead us to recognize that a more definite idea of the nature of bronchitis must be entertained if confusion is to be avoided. The indications, however, become clear when we consider the particular elements or structures in the

membrane which the *materies morbi* specially elects to attack.

In this connexion permit me, in the first place, to offer a few observations respecting the mucous glands of the bronchi. In man and in all the higher animals these glands exist in abundance. Notwithstanding this, it is a curious circumstance that we have no knowledge of the fate of their secretion. In the normal condition there is never any expectoration of mucus. It is generally believed that the mucous secretion merely serves as a surface lubricant, but I venture to submit that this view is open to question. In the first place, it may be asked, if the mucin secreted is merely required as a surface lubricant (an office which the lining epithelium, with its goblet cells, seems perfectly adequate to fulfil), why are the glands not only abundant, but why does the mucin they secrete differ in certain respects from the mucin secreted by the mucous glands in other situations? We do not know a great deal about mucin, but the researches of F. Müller and Hammarsten have supplied some valuable data. According to these investigators, the bronchial mucin contains 35 per cent. of a reducing substance obtainable both from the carbohydrate and the proteid constituents of the mucin molecule. This reducing substance is a glucosamine or non-fermentable sugar. On the other hand, the mucinoid substance secreted, for instance, by the glands of the bile ducts is a nucleo-proteid and not a mucin at all, and therefore contains no reducing substance. Again, the salivary mucin is a true mucin, but it differs in certain respects from the bronchial mucin. For example, the bronchial mucin is insoluble in dilute hydrochloric acid, while the mucin of the salivary glands is soluble. The bronchial mucin becomes flaky with acetic acid, while the salivary mucin is precipitated into tough fibrous masses. The mucin derived from other situations shows similar discrepancies. Now, if the bronchial mucin has this rather elaborate structure, is its whole function that of a lubricant? If the salivary mucin is at least intended to be swallowed with the food in order to subserve some purpose of digestion, are we justified in ascribing to the bronchial mucin a function so subsidiary in comparison?

Again, according to a number of observations in man and animals which I carried out at one time, it was found that these glands were relatively more abundant in the young, and seemed gradually to decrease as age advanced. This would seem to imply that they are specifically related to the growth and development of the lungs.

It appears, therefore, not unreasonable to consider that the mucous glands possess vital functions, not yet apprehended, by which they maintain or promote a healthy metabolism in the parts in which they are situated. It is easy to suggest that they may possess an internal secretion, or that they may separate and destroy effete products. That their secretion possesses a substance powerful enough to reduce Fehling's solution seems, at any rate, to favour the latter supposition.

The most important tissue in any organ being the secretory tissue, it is above all necessary to consider in inflammatory conditions to what extent and in what manner this tissue is affected. Now uncomplicated chronic bronchitis is chiefly an expression of abnormal activity in the epithelial or mucous tissues of the membrane. The epithelial lining of the affected tubes remains, as a rule, not only perfectly intact, but in a state of abnormal luxuriance and formative activity. The same applies to the mucous glands, which frequently partake of hyperplastic changes. From these sources altered mucus and young epithelial cells are produced, and the latter, instead of maturing, are cast off as mucous corpuscles. Outside the mucous tissues the only further change in the membrane is found in the blood vessels and lymphatics; the remaining structures—the muscle, elastic tissue, cartilage, etc.—are passive, and show no structural alterations, at least not until a very late stage of the disease, and then always in association with certain interstitial lesions of the lung itself. There are, however, the vascular changes. The capillaries are much dilated, but ordinarily there is no great diapedesis of leucocytes. In normal circumstances there is a quick-flowing, quick-ebbing tide of blood in the membrane, owing to the alternate expansion and relaxation of the tubes in the respiratory acts. In bronchitis the tubes are swollen and more or less rigid, causing tidal embarrassment and engorgement of the vessels. Hence the exudation of serum and disturbances in the local lymph circulation. The expectoration, therefore, consists of mucus, serum, mucous corpuscles, degenerate epithelium, and few or more leucocytes. It is frothy and sticky, and often exhibits colour changes, blue or green, which are due to the action of bacteria after the secretion has lain in the tubes. When freshly secreted, the mucus resembles normal mucus, but it is a vitiated or toxin-bearing mucus, and its quantity is under ordinary circumstances regulated by the amount of toxin present and the area of tubes involved.

Chronic bronchitis is therefore an affection in which, apart from the blood vessels, the epithelial tissues are chiefly engaged. We note that it occurs frequently at the extremes of life. It is found in the child, because the mucous glands are in their highest degree of functional activity; and in the aged, because they are in a state of decay. In either case they are more easily the prey of morbid agencies. In the child a mucous bronchitis is found; but in the old we often find much thin mucoserous discharge, due to degeneration in both glands and vessels—a bronchorrhoea. The special implication of the mucous glands in chronic bronchitis was not missed by the older physicians, some of whom referred to bronchitis as "follicular" disease, meaning thereby disease of the mucous glands or follicles. Ordinarily, we find chronic bronchitis confined to the larger and middle-sized tubes, and associated with more or less emphysema, more or less asthma, and attended by considerable expectoration. We also encounter a "dry" form of the affection, the *catarrh sec* of Laënnec. Some have supposed this "dry" form to be gouty in nature, but Garrod and other eminent authorities have disputed this. We find both dry and moist varieties in gouty subjects. The variety, however, which is persistently dry, is always circumscribed to certain tracts of lung, and the smaller bronchial tubes are chiefly involved; hence the paucity and viscidity of the sputum. Otherwise, we find all gradations of moistness and dryness occurring at different times in the same subject, and there seems to be no essential difference between them.

Next to the epithelial tissues on which the brunt of the disease falls, we have to consider the functional disturbance which is produced in the bronchial muscles, and this is a very important point. It is caused by the irritation of the toxins and by the mechanical conditions present. Spasm and relaxation are thereby produced. Either the toxins acting on the nerve endings, or the interference with the normal rhythmical movements caused by the swelling and tension, may goad the muscle on to a condition of spasm. To this succeeds a degree of exhaustion, and so a vicious circle is maintained. In very advanced case the relaxation is permanent, and may amount almost to a condition of paralysis.

Treatment.

The treatment of chronic bronchitis is of course many-sided, and the complications may be numerous, but for the present we may confine ourselves to the consideration of the medicinal treatment which the circumstances of its pathology suggest. Now we have all of us been accustomed to think of expectorants in connexion with the cure of bronchitis. What is implied by an expectorant? It is, of course, supposed to be a substance which induces or assists expectoration. But when we come to reflect in what way this assistance is given we may find ourselves in difficulty. Take, for instance, senega. We are advised that when the secretion is profuse, and the expulsive power feeble from weakness of the bronchial muscles, this drug is to be given. How does it act? We should expect it either to stimulate these muscles directly or else to stimulate the respiratory centre. But we have no knowledge that senega acts in either of these ways. Dr. George B. Wood says that its action is that of an alterative, and W. E. Dixon, who studies the actions of drugs from the laboratory standpoint, declares that it is not absorbed into the system at all. Squill, again, is recommended for the same purpose as senega—that is, to assist in the expulsion of the secretion after febrile symptoms have subsided. Now, what we really know about squill is that it is a powerful cardiac stimulant. Ringer asserted that it acted on the heart like digitalis, and experiments confirm this. Speaking of its action in bronchitis, Wood says that it "excites the local capillary circulation and the epithelium." Christison, on the other hand, said that squill should be given in acute bronchitis, as it never

stimulated the circulation. Many other examples might be quoted showing our ignorance of the action of the alleged expectorants on the bronchial tubes, though probably few would assent to the opinion of Dixon that any action they possessed was merely reflex, due to the excitement of the stomach.

In view of the morbid alteration in the epithelial and glandular tissues, which is such an essential feature of the disease, we turn to the search for an agent or agents having a specific action on these structures. A good many drugs act on the mucous tissues, but in the case of chronic bronchitis we may limit our consideration of them to two or three. The first is iodine, in the form of potassium iodide. Although recommended by Sir Charles Scudamore in 1847, its great efficacy in cases of chronic bronchitis, both as expectorant and alterative, has only in recent times been fully recognized. The next to be mentioned is the balsam of Peru. The volatile oils—benzyl benzoate and benzyl cinnamate—and organic acids contained in this powerful substance exert a direct, peculiar, and specific effect on the mucous cells of the bronchi. The last I may mention in this connexion is oil of turpentine. But after trying the various oleo-resins, tar, ichthyol, sulphur, and many other drugs, I have found the balsam of Peru the most efficacious and the most generally applicable. It acts quickly, altering and diminishing the mucous expectoration. Patients will return in the course of a few days saying that the expectoration has changed from yellow to white, and the cure is often very rapid. Nor is its efficacy, as is generally supposed, chiefly confined to cases with excessive secretion. On the other hand, certain cases of more or less dry bronchitis will rapidly yield to this substance even after potassium iodide has failed. As regards the oil of turpentine it is extremely efficacious in advanced cases—especially, though not necessarily, where there is abundant secretion; but it is not easy to lay down definite rules for the administration of either of these substances. When the expectoration is already free, we begin at once with the balsam in doses of 10 to 20 minims, given disguised in emulsion with mist. ammoniaci or mist. amygdalae, oil of anise and syrup. Very shortly a decided improvement will in most cases have set in and no further treatment may be necessary. If, on the other hand, the expectoration be scanty and difficult to expel, we begin with potassium iodide (gr. v–vij), and having obtained a free expectoration, follow up with the balsam. The addition of ammonium chloride or carbonate and sodium bicarbonate assists the action of the iodide. The salts may be disguised by extr. glycyrrhizae liq. Under certain circumstances the iodide may be added to the balsam, but this is not often called for.

Now, it is to be remembered that these drugs act chiefly on the mucous tissues or on the vessels, and do not directly allay irritation. If, therefore, their remedial action be not in all cases soon apparent, it must not be concluded, as many are apt to do, that they have failed. They will not readily fail providing we bring about the suitable local conditions. There may, for instance, be an excessive degree of irritation in the nerves, the cough continues very bad, and the mucous membrane cannot obtain that degree of rest which is required in order that our curative remedies may act. It is needless to enlarge on the importance of rest as an essential to healing action, and the bronchi form no exception to the rule. First, then, get the membrane rested, and there are several ways of bringing this about. We may use soothing inhalations such as Scudamore's compound inhalation of ipecacuanha, conium, and hydrocyanic acid. Morell Mackenzie recommended some very good inhalations, and mention may be made of carbolic acid when the membrane is dry and oil of turpentine when there is mucous deposit on the trachea. The vapour of tar and belladonna is often very efficacious. Medicated pastilles should not be omitted, for there appears to be a special connexion between the area just where the respiratory tract joins the oesophagus and the cough centre. At any rate, it is often remarkable how anodyne preparations applied to this part will allay even a bronchial cough. But in many cases the sedative will require to be taken internally, and of these there are many from which to choose: the bromides, hyoscyamus, conium, etc., and of course opium and its preparations. The more recently-introduced hydrochloride of acetomorphine is very efficacious and not attended with unpleasant by-effects.

There is also another and important source of irritation which may first require to be combated, and that is excessive action on the part of the bronchial muscles, due to causes which have already been mentioned. The class of sedatives employed for the cough usually relieves the asthmatic attacks, especially if the iodide be given as well. But in other cases there is sufficient expectoration and our remedies act well enough so far as that is concerned, but the irritation is caused by the retention of secretion owing to weakness and disorganization of the bronchial muscles. In these cases strychnine, digitalis, and ferruginous preparations will give assistance. Strychnine stimulates the respiratory centre and digitalis directly stimulates the bronchial muscles. On the other hand, if the secretion is excessive and becomes threatening, we should check it by opium and give a cathartic. The idea that opium is dangerous in such circumstances has been over-rated. There is a mean to be found where its influence is decidedly beneficial.

In most ordinary cases of the disease the plan of treatment herein sketched out, coupled with the free use of rubefacient applications and massage over blocked areas, so as to induce the lung reflex of dilatation, will generally be found satisfactory. The presence of emphysema does not thwart our attempts unless it be excessive, for emphysema of itself does not usually induce bronchitis. This may be seen in the case of those suffering from the congenital form of the disease, who, though dyspnoeic, may be but little troubled with cough and expectoration. The condition of the circulation and the renal functions must be carefully supervised, and when the back of the disease has been broken, so to speak, tonics are useful. Griffith's mixture, which contains iron and myrrh, is a good one, but unsightly. The combination was really first recommended by Dr. Badham, who in 1808 discovered the true nature of bronchitis. He prescribed an electuary of ferri carb. one part, myrrh four parts, and syr. zingib. three parts. Dose, a teaspoonful. Large doses of sarsaparilla with nitric acid are recommended by Graves in cachectic states. Then the diet is of great importance. Some patients require the carbohydrates cut down very much, and others the proteids. Bronchitics are also very prone to indulgence in alcohol, but their instincts in this respect are erroneous, as it undoubtedly feeds the flames of the disease, and is one of the chief causes of its persistence and recurrence.

BLINDNESS IN PORTUGAL.—A long report by Dr. Meyer on blindness in Portugal, its causes, and the extent of its prevalence, was presented to the Lisbon Medical Society on January 13th. It is based, for the most part, on records obtained in the years 1904 and 1905 (than which, apparently, there are no later available), and some of the conclusions arrived at were communicated at the meeting of the Medical Congress in 1906. Dr. Meyer's data own various origins—the general census, certain inquiries undertaken by himself, and others by Dr. Branco Rodriguez, and from these he constructs tables showing the number of blind persons to every 10,000 of the population in the various districts of the kingdom and in various years. These are rather remarkable as exhibiting very great differences. Thus, for example, in 1878 Braganza stood at the head of the list with 25·4, while in the island of Madeira the proportion was only 5·5 per 10,000. Madeira has apparently always had this low percentage of blind persons if we may judge from these statistics, though in 1904 the figures had risen to 7·6, about equal to those of Lisbon, which is the next most favoured district in this respect. The total proportion for the whole of Portugal, which in 1878 was 20·0, had sunk in 1904 to 12·5, a considerable gain, though the ratio is still high compared with other European countries. Although Bulgaria has the enormous proportion of 31·5 and Russia the very large one of 19·6, the only other country showing double figures is Finland, with 11·9. England has 8·6, France 8·8, and Norway 8·7; Italy, Switzerland, and Germany are rather better with 7·5, 7·2, and 7·1; and the best averages of all are shown by Holland with 4·7, and Denmark with 4·4. The three main causes of blindness in Portugal, whether in the case of one or both eyes, are injury, ophthalmia neonatorum or congenital blindness (these two not being statistically separable), and small-pox. Of 2,041 persons blind of both eyes, the numbers due to these causes were respectively 467, 567, and 439; and of 3,786 persons who had lost the sight of one eye only, injury accounted for it in no less than 2,485 cases, small-pox in 736, and "congenital" in 203.

An Address

ON

SURGICAL ASPECTS OF SUBPHRENIC ABSCESS.

Delivered before the Surgical Section of the Royal Society of Medicine, January 14th, 1907.

By H. L. BARNARD, M.S., F.R.C.S.,

Surgeon (with charge of out-patients) to the London Hospital.

Definition.

For the purposes of this paper any localized collection of pus which is in contact with the under surface of the diaphragm is called a subphrenic abscess.

It is not always customary to include hepatic abscesses under the heading of subphrenic, but inasmuch as they frequently thin out the hepatic substance so that their entire upper boundary is formed by the diaphragm, and they then develop along similar lines, and require like treatment, there appears to be no good reason why they should not be classed as subphrenic abscesses as they certainly are.

The Anatomical Subdivisions of Subphrenic Abscesses, with Their Special Etiology, Signs and Symptoms, and Treatment.

The chief object of this paper is to emphasize the importance of the anatomical subdivisions of subphrenic abscess.

The under surface of the diaphragm is marked out into



Fig. 1.—From a specimen in the London Hospital, Pathological Department, showing how hydatids and abscesses of the liver become "Subphrenic." H, Hydatid. L, Liver. D, Diaphragm.

four peritoneal spaces and two cellular ones (Fig. 2). The four peritoneal spaces are separated from one another by the cruciform arrangement of the ligaments of the liver—namely, the coronary, falciform, and the right and left lateral ligaments. The falciform ligament divides the subphrenic space into two parts, right and left. Each of these is again subdivided into a larger anterior and a smaller posterior part by the corresponding lateral ligament. The four peritoneal subphrenic fossae may therefore be classified and named as follows:—

A. Intraperitoneal:

I. Right. 1. Anterior.
2. Posterior.
II. Left. 3. Anterior.
4. Posterior.

The two extraperitoneal cellular spaces are also right and left, so that the classification may be completed—

B. Extraperitoneal:

5. Right.
6. Left.

A right extraperitoneal subphrenic abscess is between the layers of the coronary ligament, which it separates and opens out, whilst the left originates in the perinephric tissues around the upper end of the left kidney, and afterwards strips the peritoneum off the under surface of the left dome of the diaphragm.

These spaces, and their corresponding abscesses, will now be defined in more detail.

1. *A Right Anterior Intraperitoneal Subphrenic Abscess.*

Anatomy.—This abscess is situated between the upper surface of the right lobe of the liver below, and the dome of the diaphragm above. The falciform ligament limits it towards the middle line, whilst behind it passes back to the right lateral ligament of the liver. In front it is shut off from the peritoneal cavity by a line of adhesions which varies somewhat in position. When the appendix infects the cavity from the outside and behind, the anterior margin of the liver becomes adherent to the diaphragm in front, and forms the lower boundary of an abscess which occupies the upper and posterior part of the fossa, and incidentally it may be pointed out that these adhesions prevent the liver from descending as the abscess grows.

When, however, the fossa is infected from below and in front by a perforating gastric or duodenal ulcer, the line of adhesions is, as a rule, formed by the great omentum and transverse colon, and the whole of the fossa is filled with gas and pus, whilst the liver is separated from the diaphragm and pushed upwards and backwards.

This fossa has very important connexions at its posterior and outer part, where it communicates round the margin of the liver and round the extremity of the right lateral ligament with the subhepatic pouch which we are about to describe, whilst at the same point it is in continuity with the right lumbar fossa, which lies between the caecum and ascending colon and the loin.

These connexions are of great importance, for not only does infection usually reach both these fossae from the appendix (Fig. 3) along the right lumbar pouch, but also pus which has originated in the fossa from the liver, stomach, or duodenum, may afterwards spread to its two connexions and pass down the loin into the pelvis. This association should be recognized and anticipated, and prevented by a loin incision when it threatens. I have notes of such a case in which the right anterior subphrenic abscess was due to a perforating pyloric ulcer. It was drained from the right hypochondrium, but subsequently

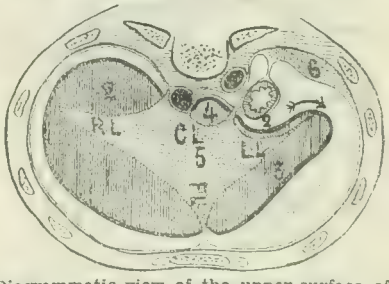


Fig. 2.—Diagrammatic view of the upper surface of the liver exposed by removing the diaphragm. C L, Coronary ligament. F L, Falciform ligament. R L, Right lateral ligament. L L, Left lateral ligament. 1, Right anterior intraperitoneal space. 2, Right posterior intraperitoneal space or subhepatic fossa (note it crosses the middle line to the left under liver margin). 3, Left anterior intraperitoneal space. 4, Left posterior intraperitoneal space or small sac of peritoneum. 5, Right extraperitoneal space. 6, Left extraperitoneal space.

spread insidiously to the subhepatic pouch and down the loin to the pelvis, and led to the death of the patient three weeks after the operation.

Incidence and Associations.—Right anterior subphrenic abscess occurred 27 times in 76 cases at the London Hospital. In 11 cases the abscess was simple, and in 15 cases one other fossa was involved: in 9 cases the right posterior intraperitoneal fossa, in 4 the right extraperitoneal subphrenic space, and in 2 the left anterior fossa. In 1 case two other fossae contained pus—namely, the small sac of the peritoneum and the right extraperitoneal cellular space. It is therefore clear that in every case where a right anterior subphrenic abscess has been opened these other fossae, but especially the subhepatic fossa, should be examined daily, lest pus should insidiously collect in them.

Etiology.—The causes of the 27 abscesses in this group were as follows:

10 Appendicitis ... One of these had pylephlebitis (q.v.)
7 Liver abscesses ... 3 suppurating hyatid.
1 tropical abscess.
1 pylephlebitis due to appendicitis.
1 suppurative cholangitis due to gall stones.
1 cause not found.
4 Perforated gastric ulcers.
2 Anterior perforating duodenal ulcers.
1 Ruptured intestine.
1 Pyosalpinx.
1 Pyaemia.
1 Gallstones; this case had suppurative cholangitis (q.v.)
1 Followed pneumonia.
1 No cause was found.

In nearly all cases due to appendicitis the appendix was external in position and occupied the right lumbar fossa, but in one case the tip of the appendix reached to the subhepatic fossa, and in another lay between the liver and the diaphragm. Other causes are stated to be ruptured liver, pancreatitis, and cancer of the pylorus and colon.

Special Signs and Symptoms of Abscess in the Right Anterior Subphrenic Space.—Clinically this abscess occurs in three forms:

1. Simple infection from behind.
2. Infection from in front.
3. Infection combined with the subhepatic pouch.

In the first of these forms (Fig. 4), in which the cause is nearly always appendicitis, the liver is firmly adherent to the diaphragm in front, and the pus is localized at the upper and back part of the recess. As the abscess grows it expands the diaphragm above, and gives rise to well-marked signs of compression and inflammation at the right base. The signs in the right hypochondrium and epigastrium are very slight, if any, because the liver cannot descend. Local signs will be present as usual in proportion to the size of the abscess.

In the second class of cases (Fig. 5) a gastric or duodenal ulcer has usually perforated, and free gas has escaped into the peritoneum. The liver becomes separated from the diaphragm and drops upwards and backwards,

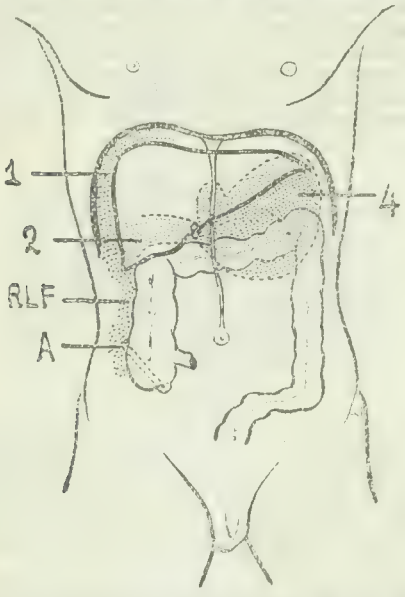


Fig. 3.—Illustrating the spread of suppuration from an external appendix, A, up the right lumbar fossa, R L F, to the liver margin, where it infects 1, the right anterior intraperitoneal space, and 2, the subhepatic fossa. From the latter suppuration is shown invading 4, the small sac of the peritoneum through the foramen of Winslow, a rare event.

The abscess in typical cases presents, in the hypochondrium and epigastrium, as a triangular area, bounded by: (1) The costal margin. (2) A line joining the ensiform cartilage to the umbilicus. This margin is due to the falciform ligament, and is convex to the left, because the ligament is pushed over by the abscess. (3) Below a band of rigidity and tenderness stretches from the umbilicus to the lower costal margin. It is 1 in. or 2 in. wide, and is placed over the limiting adhesions and peritonitis. The area of the triangle in a fully-formed case bulges forwards, fluctuates, and is not very tender. Above, in the epigastric angle, signs of a gas bubble can usually be found where liver dullness should be present. It is circular in outline, hyper-resonant, amphoric sounds are heard over it, and it passes round the side to the back as the patient is rolled over.

In the third class of cases (Fig. 6), which are usually also appendicular, both intraperitoneal fossae on the right side are simultaneously infected. The liver is adherent to the diaphragm, as in the first class, but the subhepatic abscess bulges forward from below its margin, and forms an abdominal swelling, occupying the right hypochondrium and running back into the loin as low as the iliac crest. In short, the signs of a subhepatic abscess are simply superadded to those described under Class 1.

The Treatment of Right Anterior Intraperitoneal Subphrenic Abscesses.—In appendicitis, when the infection is recent and the abscess is diffuse, the right loin incision should be employed. In recent cases due to perforated gastric and duodenal ulcers which present in the epigastrium, an anterior incision should first be made, and when the perforation has been closed a counter opening may be made in the loin. When the abscess has become well localized after ten or fourteen days it is better to drain it by the posterior transpleural or subpleural method, whether it presents in the epigastrium or not, if the exploring needle can find pus in the lower intercostal spaces behind. The liver should be pressed up by an assistant, so as to close the pleural space, whilst the pleura is incised. Where the exploring needle fails to find pus behind, and an epigastric swelling is present, the anterior epigastric incision should be employed, and the peritoneum opened as high up as possible in the subcostal angle.

2. *A Right Posterior Intraperitoneal Subphrenic Abscess.*

Anatomy.—The fossa in which this abscess forms is better known as the subhepatic pouch or the right renal fossa. It is a pyramidal space transversely disposed beneath the overhanging margin of the liver. Its base and most capacious part rests against the right lateral

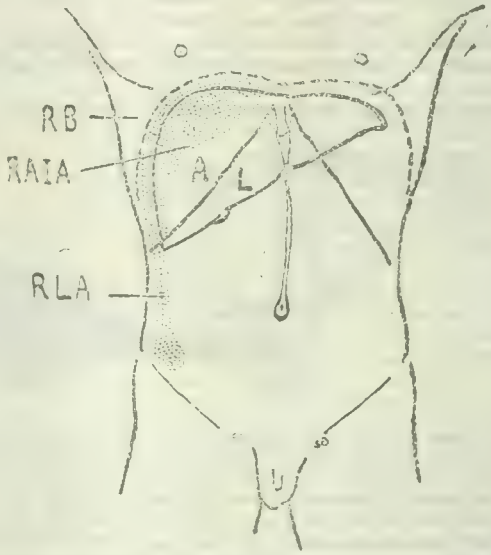


Fig. 4 shows the abdominal signs in the posterior or appendicular variety of right anterior intraperitoneal subphrenic abscesses. The liver, L, does not project nor move on respiration, because its lower and anterior part, A, is adherent to the diaphragm. If a right lumbar abscess, R L A, is present there will be tenderness and rigidity in the flank. The pus is localized in upper and back part of the fossa, R A I A, and gives signs at the right base, R B.

abdominal wall, projecting just below the last rib. The apex is formed by the upward slope of the margin of the left lobe of the liver. The liver and gall bladder are its anterior boundaries throughout. The posterior wall is divided into a right and left part by the projection forward of the lumbar vertebrae in the middle line. The right part of the fossa is capacious, and will hold about a pint of fluid before it escapes below. Its posterior wall is formed by the upper part of the right kidney, and by the lower part and crus of the diaphragm, and towards the left by the common bile duct and duodenum. It is here that the foramen of Winslow leads into the left posterior intraperitoneal fossa (see Fig. 3). To the left of the middle line the fossa is a narrow cleft between the left lobe of the liver in front, and the small omentum and upper and anterior surface of the stomach behind. Above the subhepatic fossa is bounded to the right by the right lateral ligament of the liver and to the left by the transverse fissure. Below the boundary is formed on the left by adhesions between the margin of the liver and the anterior surface of the stomach, and on the right by similar adhesions of the great omentum and transverse colon to the margin of the liver and the anterior abdominal wall. This fossa is continuous at its base with the right lumbar pouch and with the right anterior subphrenic space. At the middle of its posterior wall the foramen of

Winslow connects it with the small sac of the peritoneum, whilst its apex is but feebly shut off from the left anterior subphrenic space (see Fig. 2).

Incidence and Associations.—In 76 cases this fossa contained pus in 10, and always in association with some other pouch—in 9 cases with the right anterior subphrenic space, and in 1 case with the left anterior subphrenic space.

Etiology.—The causes of suppuration in this fossa in the 10 cases which occurred out of 76 subphrenic abscesses at the London Hospital were as follows:

6 Appendicitis
1 Gastric ulcer.
1 Duodenal ulcer.
1 Pneumonia.
1 Bronchiectasis.

Other causes are liver abscess and suppuration in connexion with the gall bladder and bile ducts, especially after operative procedures.

The signs that the subhepatic fossa is involved in suppuration are diffuse tenderness and rigidity spreading from below the right costal margin, and running downwards and backwards into the right loin, usually as low as the iliac crest (see Fig. 6). As this abscess has so great a tendency to be combined with others, the signs of a right lumbar

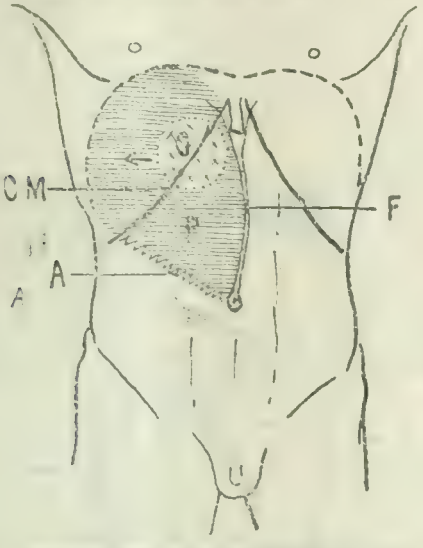


Fig. 5.—The abdominal signs in the anterior or gastric or duodenal variety of right anterior intraperitoneal subphrenic abscess. The abscess produces the "diagnostic triangle" in the right epigastrium. F, Falciform ligament bulging to the left. A, Band of adhesions from umbilicus to costal margin, broad, tender and rigid. C M, Costal margin P, Pus in contact with abdominal wall bulging, fluctuating, dull, scarcely tender. G, Gas bubble over liver dullness causing tympanitic, amphoric, and coin sounds, moves round chest as patient is rolled over.

abscess, or of a right anterior intraperitoneal subphrenic abscess, must be looked for in addition.

Treatment.—This abscess is best drained by a loin incision as far back and high up as possible below the last rib. The index finger guides the drainage tube transversely below the liver. Should the signs at the right base indicate the presence of pus under the dome of the diaphragm, the index finger should be inserted between the liver and the diaphragm, and a long tube passed up into the right anterior intraperitoneal subphrenic space.

3. *A Left Anterior Intraperitoneal Subphrenic Abscess.*

Anatomy.—This is also known as an anterior perigastric abscess, or a perisplenic abscess (Fig. 7). This fossa is bounded by the diaphragm above. The left lobe of the liver is below and to the right. The spleen is to the left, whilst adhesions of the anterior surface of the stomach and the great omentum with the abdominal wall limit it below. To the right it is sharply bounded by the falciform ligament. Behind it runs back as far as the left lateral ligament of the liver. This fossa is continuous to the right with the subhepatic pouch below the left margin of the liver, and below with the left lumbar pouch, which lies between the descending colon and the loin. Another fossa, which I believe has not been previously described, connects it with the pelvic fossa. It lies deeply in the left lumbar recess (Fig. 8). To the right it is bounded by the vertebral column. The descending colon bounds it to the left, whilst it is roofed in by the back of the mesentery. Below, over the left sacro-iliac joint, it communicates with the recto-vesical or recto-uterine pouch. Above it runs up to the duodenal-jejunal flexure, and there the pus passes forward in the splenic flexure to reach the left anterior subphrenic space. A narrow chain of pus can always be found in this situation in cases of general peritonitis when the mesentery is turned upwards and to the right, and this fossa is the line of infection when an ordinary pelvic appendix abscess is followed by an insidious subphrenic abscess on the left side, as in the case of Fitzpatrick, illustrated by Fig. 9.

CASE I.

This man was admitted under my care at the London Hospital in January, 1903, on the seventh day of the disease, suffering from a localized pelvic appendix abscess. Pus was found in an enema the same evening, but as the symptoms did not diminish, the abscess was opened by a suprapubic incision next day, and the abscess was drained by a large tube passed down into the pelvic pouch.

His progress during fourteen days was not satisfactory. His tongue was dry and cracked, he had profuse diarrhoea, he wasted rapidly, and his temperature was persistently raised to 100° to 101° F. No signs could, however, be discovered at the right base or in the lower part of the abdomen. After

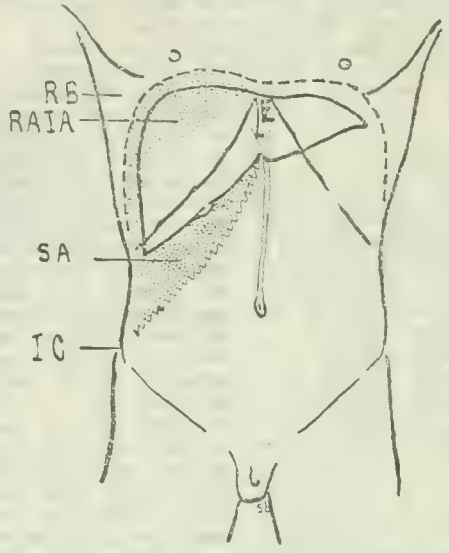


Fig. 6.—The abdominal signs when a right anterior intraperitoneal subphrenic abscess is combined with a subhepatic abscess, as often occurs in appendicular cases. The former, R A I A, produces signs of compression and inflammation at the right base, R B. The latter, S A, produces a triangular swelling below the liver margin, limited towards the abdomen by a band of tender rigid adhesions running from the ensiform, E, back into the right loin, usually as low as the iliac crest, I C. Pus or gas are sometimes found in contact with the abdominal wall within the triangle.

fourteen days a large swelling was found in his left hypochondriac region, exhibiting all the signs shown in Fig. 11. This swelling was incised high up in the left epigastrium, and much stinking gas and pus was evacuated from the left anterior intraperitoneal space. He appeared better after this operation, but two days later he suddenly coughed up, with profound collapse and fright, a large quantity of most foul pus and flatus apparently from a left empyema, but no amount of needling could find the pus in the large area of dulness at the left base. After he had evacuated similar material on several occasions, he convalesced and entirely recovered.

I believe this infection spread by the left internal lumbar fossa, for on nearly every day the loins had been examined for a spread of infection, and none could be discovered external to the descending colon.

Incidence and Associations.—The left anterior intraperitoneal subphrenic fossa was involved in 30 of 76 cases of subphrenic abscess at the London Hospital, and of these 26 were simple. In 3 cases one other fossa was involved; in 2 cases the right anterior intraperitoneal, and in 1 case the small sac of the peritoneum. In 1 case two of the other pouches contained pus, namely, the subhepatic pouch, and the right extraperitoneal cellular space.

Etiology.—The causes of suppuration in the 30 cases of left anterior subphrenic abscess were as follows:

16 Gastric ulcer.
3 Pyaemia and splenic infarct.
2 Cancer of stomach.
2 Resections of 1 stomach; 1 transverse colon.

1 Anterior perforating duodenal ulcer.
1 Appendicitis via pelvic abscess and left internal lumbar fossa.
1 Typhoid.
1 Parturition.
1 Hydatid of liver.
1 Cancer of pancreas.
1 Bronchiectasis, via a liver abscess.

Special Signs and Symptoms of a Left Anterior Intraperitoneal Subphrenic Abscess.—The previous history is very frequently one of dyspepsia, pain after food, vomiting with relief, and perhaps haematemesis. The onset is usually due to a subacute or chronic perforation of a gastric ulcer. The signs of compression, and inflammation of the base of the left lung and pleura are usually present. They are sometimes bilateral. The local signs over the abscess call for no special comment, except that gas is nearly always present.

An abdominal swelling is nearly always present in this variety, and in fully developed cases is very characteristic (Fig. 11). It occupies a triangular area in the left epigastrium and hypochondrium. Above it is limited by the costal margin on the outer side. Its inner margin stretches from the ensiform cartilage to the umbilicus, and is more or less convex to the right according to the size of the abscess. This is of course the bulging falciform ligament. The lower margin stretches from the umbilicus to the lower part of the costal margin. It is a broad, tender, and rigid band, and corresponds to the limiting peritoneal adhesions. The area of the triangle bulges forward, may fluctuate and be dull on percussion, and is not very tender. At the upper angle where the gas collects as the patient lies on his back, a tympanitic rounded area can be made out where liver dullness should be. Where much gas is present the whole of the triangle is tympanitic, and amphoric and coin sounds can be obtained. When the patient is rolled over, the swelling becomes dull on percussion, and the signs of a collection of gas pass under the left ribs, which were previously dull. Where the quantity of gas is not excessive, the lower part of the triangle is dull even in the supine position.

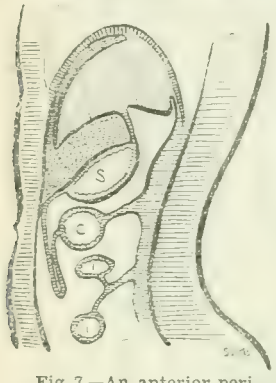


Fig. 7.—An anterior perigastric abscess occupying the left anterior intraperitoneal space and the apex of the subhepatic fossa, through which pus might readily spread across the middle line to the right.

In those cases in which the abscess has burst into the stomach and freely communicates with it through a large opening, the signs are much less obvious. The abscess is never distended. The temperature is therefore very irregular and often reaches normal. The abscess often contains at one time gas and at other times fluid, so that the signs vary frequently. In some of these cases no abdominal swelling is present, but, as a rule, a rigid, tender tumour, which does not move on respiration, projects from below the left ribs. Sometimes the abscess lies between the liver and the stomach, and the former is found, as usual, in the epigastric angle. These cases are prone to spread to the right beneath the liver margin, and may then track down the right loin. In splenic cases the abscess at first occupies the deep posterior recess of the fossa around the spleen, and the anterior part of the space is obliterated by adhesions; but in nearly all cases the pus at last reaches the epigastric angle and produces a typical swelling.

Treatment.—In the acute and diffuse stage, soon after perforation it is usual to open the abdomen in the middle line and close the perforation. Practice then differs. The abdomen is sometimes sponged out and closed altogether. In other instances a drainage tube is passed into the pelvic fossa through a puncture above the pubes, and the patient is sat up in Fowler's position. Others drain from the anterior incision. I prefer to make a counter-opening in the left loin and pass a tube up to the spleen, and then adopt the Fowler position and the pelvic drain. When the abscess has become localized and points in the epigastrium, it should be opened by a left epigastric incision as high up as possible in the costal angle. A large tube, irrigation, suction, and position are then usually enough to ensure efficient drainage. Otherwise the abscess may be counter-opened by the posterior transpleural method, guided by a finger in the cavity.

When the abscess has not extended forward to the front, it is nevertheless well to explore it from the epigastrium, and then open it by the posterior transpleural method above the adhesions, avoiding the spleen. The lateral subpleural method is suitable to some of these cases, or a posterior loin incision may be made, and a finger passed up through the adhesions to the spleen, after the general peritoneal cavity has been packed off.

4. *A Left Posterior Intraperitoneal Subphrenic Abscess.*

Anatomy.—This sac is better known as the small sac of the peritoneum (Fig. 12). At the left extremity of this cavity one surface of the spleen abuts upon it. Even anatomically this pouch extends no lower than the transverse colon, and when peritonitis is present adhesions encroach still further on the space below and drive the pus into the upper and back part of the cavity, where it lies behind the upper and back part of the stomach and small omentum and the liver. Above it is prolonged upwards into a narrow pouch which lies between the posterior surface of the Spigelian lobe and the crus of the diaphragm. The upper part of the posterior wall covers the pancreas, and the upper part of the left kidney, and suprarenal.

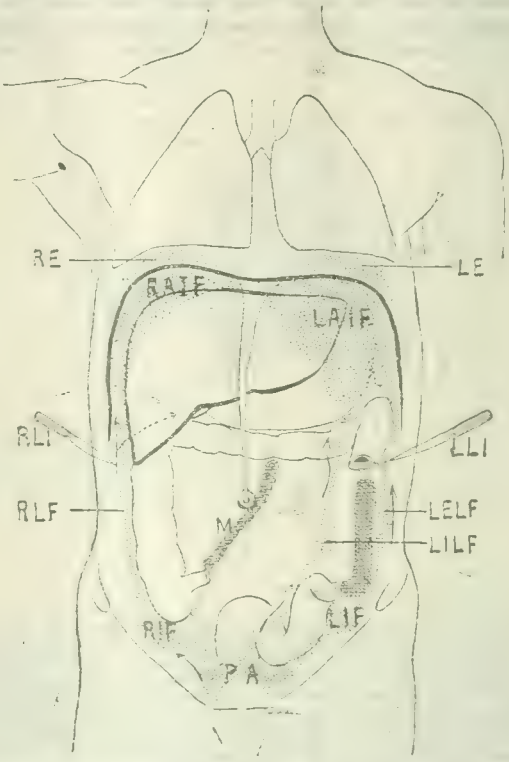


Fig. 8 shows the spread of pus from a pelvic appendicular abscess, PA, up both loins to the subphrenic spaces. The right side has already been described under Fig. 5. Up the left side the pus may either pass by the left iliac fossa, LIF, and the left external lumbar fossa, LELF, or it may follow the left internal lumbar fossa, LILF, and reach the subphrenic space at the splenic flexure. RE and LE represent empyemata; RLI, right loin incision; LLI, left loin incision; M, mesenteric attachment.

To the right this cavity communicates through the foramen of Winslow (see Fig. 3) with the subhepatic pouch, but this communication is so narrow that as a rule it is sealed at the first outbreak of inflammation, and as a consequence infection seldom enters the smaller sac from the subhepatic fossa, nor does it spread in a contrary direction.

Incidence and Associations.—Among the 76 cases of subphrenic abscess the lesser sac was involved in only three instances. In one an anterior perigastric abscess was also present, and in another a right extraperitoneal, and in addition a right anterior intraperitoneal abscess occurred as well.

Etiology.—Of the 3 cases of suppuration in the lesser sac of the peritoneum, 2 were due to *posterior perforating*

gastric ulcers. One case was due to a cholecystitis, due to gall stones, which after many years' duration produced *suppuration in the glands of the small omentum.* From the loculi of pus the small sac of the peritoneum was infected. It bulged forward between the liver and the stomach, and was opened in the epigastrium, and marsupialized, but at the same time the bile duct became infected, and suppurative cholangitis led to the formation of an abscess between the layers of the coronary ligament, and another in the right anterior intraperitoneal subphrenic space.

Injuries and Inflammation of the Pancreas.—It is said that *appendicular suppuration* may reach the lesser sac through the foramen of Winslow from the subhepatic pouch. *Tuberculous peritonitis* may become localized in this cavity (Osler). It may be infected from the *liver*, especially if the *Spigelian lobe* is diseased. Finally, infarcts and abscesses in the *spleen* may spread to the lesser sac of the peritoneum.

The Signs and Symptoms of an Abscess in the Small Sac of the Peritoneum.—When the small sac of the peritoneum is the seat of inflammation and suppuration, its cavity is more or less obliterated by adhesions. The abscess may therefore completely distend the sac, as was found in one of my cases; or, on the other hand, a small collection of pus may be shut in between the Spigelian lobe and the spine, in the extreme upper part of the pouch, a condition which occurred in another of my cases. When the whole sac is filled with pus the signs are similar to those of pseudo-pancreatic cysts. The swelling may project forward between (1) the stomach and liver, (2) between the stomach and transverse colon, (3) between the stomach and spleen, or (4) below the transverse colon. When the cavity of the sac is almost entirely obliterated by adhesions, and more especially when the abscess communicates freely with the stomach, the diagnosis is more difficult. Signs may or may not be present at the left base of the lung. The exploring needle may give definite results, but it is hard to hit a small collapsed cavity in so deep a situation. A careful consideration of the history and of the general signs of suppuration, combined with the exclusion of the presence of pus elsewhere, may justify an exploratory incision.

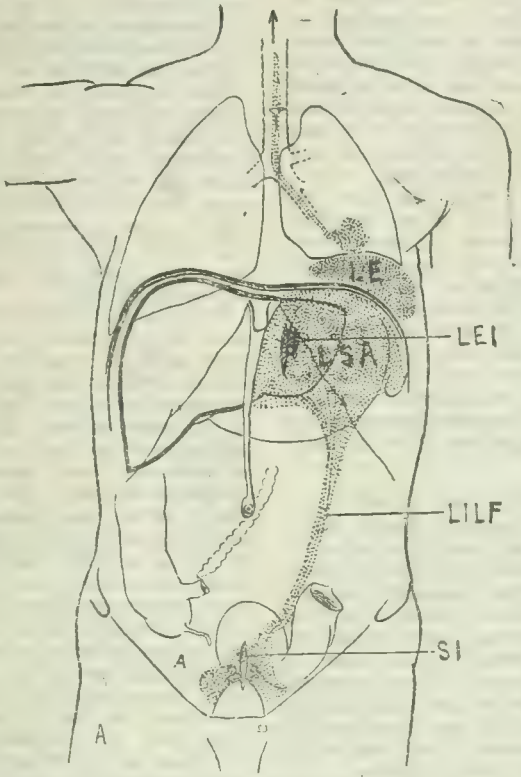


Fig. 9.—Illustrating the case of Fitzpatrick, in whom pus travelled from the rectum to the mouth with ultimate recovery. A, Appendix. PA, Pelvic abscess. SI, Suprapubic incision. LILF, Left internal lumbar fossa. LSA, Left subphrenic abscess. LE, Left empyema. T, Trachea discharging pus and flatus. LEI, Left epigastric incision.

Treatment.—When the abscess points in front it should be cut on and marsupialized and drained, a method which was followed in one of my cases. Posterior perigastric abscesses should be explored from the front, and drained from behind by a loin incision or the posterior transpleural route. The pouch between the Spigelian lobe and the spine must be nearly inaccessible.

5. *A Right Extraperitoneal Subphrenic Abscess.*

Anatomy.—This abscess forms in the cellular space between the layers of the coronary and other peritoneal ligaments of the liver. (See Fig. 2.) The largest part of this space is on the upper and back part of the liver. It is continued forward between the layers of the falciform ligament to the epigastrium, where it is connected with the deep lymphatics of the abdominal wall which accompany the superior epigastric vessels through the diaphragm to the anterior mediastinal glands. I have seen an abscess between the layers of the falciform ligament, which originated apparently by this route from an appendicular sinus burrowing in the abdominal wall. To the left the cellular tissue of the coronary ligament is continuous with that contained in the left lateral ligament as far as the oesophagus. To the right there is a similar extension between the layers of the right lateral ligament. Behind, the subphrenic cellular space is continuous with the retroperitoneal cellular tissue, and by this route infection reaches it from the right kidney, posterior surface of the duodenum, and retrocolic appendix cases. Hepatic abscesses very frequently extend up into this cellular space, thinning out the liver substance over them, until they touch the diaphragm and occupy the whole of the space. (See Fig. 1.) When an abscess forms and grows in the right extraperitoneal subphrenic space it expands its dimensions enormously, pushing the peritoneal reflexions on the liver further and further back, and the liver itself lower and lower in the abdomen. This is very different from the right anterior intraperitoneal abscess, in which the liver becomes adherent to the diaphragm early in the process, and cannot afterwards be pushed down, so that the abscess must expand the dome of the diaphragm upwards into the chest.

A right extraperitoneal subphrenic abscess may extend forward between the layers of the falciform ligament until it points in the middle line of the epigastrium, where it may be incised without opening the peritoneum. (Fig. 13.) In other cases the pus may present below the last rib; more usually, however, it perforates the diaphragm above. It is stated that this form of abscess may extend directly under the external arcuate ligament to the posterior mediastinum. Lymphatic extension may involve either pleura, and it is said that both pleurae are more often involved than in the intraperitoneal form of subphrenic abscess. The pericardium, curiously enough, is seldom involved.

Incidence and Associations.—Of 76 cases of subphrenic abscess at the London Hospital, 19 were in the right extraperitoneal cellular space. In 4 cases another abscess was present in the right anterior intraperitoneal space. In 2 cases two other abscesses were present. In one the small sac of the peritoneum was involved, and the right anterior peritoneal space. In the other the subhepatic pouch and the left anterior intraperitoneal space.

Etiology.—The causes of infection of the cellular tissue between the liver and the diaphragm may be divided into four groups. The 19 cases in this series of 76 were arranged as follows, and other possible causes are added in their appropriate places.

I. Liver:
- 7 Suppurating hydatids.
- 6 Tropical abscesses.
- 1 Liver abscess of unknown origin.
- 1 Cholangitis from suppurating hepatic glands from gall stones.
- Pylephlebitis, and pyaemia.
- Actinomycosis.
- Ruptured liver.

II. Right retroperitoneal cellular tissue:
- 1 Congenital cystic kidney.
- Other renal abscesses and perforations of the ureter.
- 1 Posterior perforating duodenal ulcer.
- Retrocolic appendicitis.
- Acute periostitis of lumbar vertebrae.
- Perforation of the common bile duct in its lower part.
- Suppuration in the head of the pancreas.
- Wounds and lymphatic infections.
- Colonic ulcers and cancer.

III. Thoracic:
1 Bronchiectasis.
Abscess of lung.
Empyema.
Actinomycosis.

IV. Lymphatics of the anterior abdominal wall:
1 due to appendix sinus.

The Signs and Symptoms of Right Extraperitoneal Subphrenic Abscess.—The previous history will be that of the cause, which in many cases is some disease of the liver. The signs of the abscess are not preceded by those of perforative peritonitis, as is usually the case in intraperitoneal forms. The onset is therefore more often insidious and indefinite, and jaundice is often an early symptom. Signs of compression and inflammation are found at the base of the right lung, and sometimes also on the left side. The liver is pushed down from below the costal margin, often as low as the umbilicus, and it moves on respiration (see Fig. 13). The tumour so formed may be tender, but there is not the same rigidity and signs of peritonitis which are found in intraperitoneal forms. This abscess may pass forward between the layers of the falciform ligament and present in the epigastrium as a fluctuating swelling. In rare instances it may reach the tissues of the right loin and present there. This abscess seldom contains gas.

Treatment.—When the abscess points in the epigastrium it should be opened there by an incision strictly in the middle line. In two of my cases I was able to reach the abscess without opening the peritoneum. With a large drainage tube, irrigation, suction and position, counter-drainage is seldom necessary. If the abscess does not point in front, it will probably be diagnosed by puncture between the ribs behind, over the area of dullness. The rule is then to follow the needle and adopt the posterior transpleural method. Should the pus point in the right loin, the abscess should be opened there and a tube be passed up into the subphrenic space.

6. *The Left Extraperitoneal Subphrenic Abscess.*

Anatomy.—The retroperitoneal cellular tissue is as abundant in the left loin as it is on the right side. It contains the left kidney and suprarenal body, the pancreas, descending colon, and the left lumbar lymphatic glands. There is, however, no large cellular space below the diaphragm upon the left side equivalent to that upon the right. For this reason, when suppuration does occur in the left retroperitoneal cellular tissue, it shows a much stronger tendency to appear in the loin as a left lumbar abscess. In a few cases, however, such an abscess strips the peritoneum from the under surface of the diaphragm on the left side, and forms a large collection there.

Incidence and Associations.—This has occurred four times in 76 cases of subphrenic abscess at the London Hospital, and in none of these cases was any other subphrenic abscess present.

Etiology.—The cause in two of these cases was acute periostitis of the transverse process of the first or second lumbar vertebra. The third case originated in a localized empyema at the left base. The fourth was probably due to a posterior perforating gastric ulcer, and Mr. Mayo Robson has described a similar case.

Other causes are similar to those narrated on the right side under the headings of Retroperitoneal Cellular Infections and Thoracic Infections.

The Signs and Symptoms of Left Extraperitoneal Subphrenic Abscess.—The signs are those of an abscess pointing in the left lumbar region, associated with compression and inflammation at the left base of the lung. In cases which have been overlooked the pus may reach the left iliac fossa.

Treatment.—A left loin incision over the swelling will efficiently drain the pus away.

PATHOLOGY.

The under surface of the diaphragm is subdivided into four peritoneal fossae and two cellular spaces. Infection of one or more of these can be produced by the passage of micro organisms from the viscera which lie in them, or by extension to them from fossae which are in continuity with them.

Abscesses which occupy the four peritoneal fossae are examples of localized peritonitis. Pathologically they originate as acute infections of the peritoneum. A profuse but diffused exudation of serum is poured into the fossae, accompanied by the symptoms of acute peritonitis. After a day or two the serum becomes turbid with leucocytes. The stomata in the peritoneum become blocked by proliferation of endothelial cells, and by leucocytes forming a layer of lymph over them and limiting absorption. The margins of the area of infection begin to be defined about the fourth day by a living lymph barrier which localizes and contains the forming abscess. At first the purulent contents are diffused in the irregular spaces and cracks between the organs, but as the lymph barrier converges and contracts upon it, gluing the organs firmly together, the pus is driven into one more or less rounded, well-defined collection. This change is not complete until about the end of fourteen days. This change from a diffuse exudation about the fourth day to a localized abscess from the eighth to the fourteenth day has important practical applications. The transpleural method of drainage, in which a hole is made through the diaphragm into the abscess from above, is most unsuitable for the treatment of the early and diffuse stage of subphrenic suppuration. An abdominal incision (usually in the loin) should be employed in such cases, and a long tube should be passed under the diaphragm from below. At a later stage, when the abscess is well shut off under the diaphragm, the abdominal route is less suitable, for in the first place the liver may be torn in separating it from the diaphragm (see Fig. 16), or some hollow viscus may be opened; or, on the other hand, pus may be admitted to the general peritoneal cavity.

When the collection of purulent fluid is first localized about the eighth or ninth day beneath the dome of the diaphragm, it may be small in quantity, and deeply placed, far from the surface, and covered by important organs and cavities. The nature of all abscesses, however, is to increase in size. The diaphragm is driven upwards and outwards so that the lower part of the pleural cavity is obliterated, and often closed by adhesions, and the lung is pushed up. The viscera which bound the abscess cavity below are pressed downwards as far as their adhesions will permit, so that the abscess can now be opened at a lower and lower spot on the thoracic wall, should the transpleural operation be adopted, or it may even appear as a fluctuating swelling in the epigastrium directly beneath the abdominal wall. For these reasons it is often advisable to await the growth of a well-localized subphrenic abscess, from, say, the eighth to the fourteenth day. This evolution of a subphrenic abscess is best illustrated by pus in the right anterior intraperitoneal space (Fig. 16). When this follows an appendicitis, it is often at first a small localized collection about the size of a tennis ball, beneath the dome of the diaphragm on the right side, and opposite the sixth or seventh intercostal spaces in the line of the angle of the scapula, and covered by the lung. It cannot well be opened from below, for the liver would probably be torn in separating it from the diaphragm. If the transpleural route be adopted, the pleura must almost of necessity be opened about the seventh space, and the lung collapsed, and even then it may not be found possible to drag the diaphragm up to the chest wall, and fix it with stitches before opening the abscess. This actually happened in one of my early cases, in which I tried to evacuate a diffuse subphrenic collection by a transpleural route, after resecting the seventh rib in the scapular line on the fourth day. It is therefore better to wait three or four days until the abscess has spread down to the level of the ninth or tenth space, and has obliterated the pleural cavity, and pushed up the lung.

When the infection is in one of the two cellular spaces, the pathological processes which produce the abscess are those of lymphangitis and cellulitis. The lymph spaces of the cellular tissue become distended, first with serum, and then with leucocytes. The centre of the area of infection is liquefied, necrosed, and converted into pus. In the meantime the reaction of the tissues around has produced the granulation tissue barrier which demarcates and contains the collection of pus.

The Reason why Pus tends to Collect beneath the Diaphragm.

It is usually stated that the causes are the suction action of the thorax, especially during inspiration, and the

normal circulation of lymph from the peritoneum through the stomata of the diaphragm to the pleural cavities. The recent investigations of surgeons in connexion with the treatment of diffuse peritonitis have shown that the main cause of subphrenic accumulations is gravitation. As a patient lies flat upon his back in bed the posterior extremity of his subphrenic spaces are only separated from the mattress by the skin, the ribs, and the diaphragm, which together do not make up much more than ½ in. of tissues. The pouch of Douglas, or the recto-vesical pouch in the male, in a similar way, are only separated from the mattress by the skin, the coccyx, and the width of the flattened rectum. Between these two dependent pouches the thick muscles and tissues of the loins, with the kidney and the perinephric fat, rise as two elevated mounds. When the general peritoneum is infected a profuse flow of serum is poured out, and this gravitates upwards into the subphrenic spaces, and downwards into the pelvic pouch. If the patient is well propped up on pillows, or is supported by an efficient bed-rest (Fowler's position, Fig. 14) this fluid will run from beneath the diaphragm over the loin mound into the pelvic pouch, from which it may be drawn off by a tube passed to the bottom of that fossa from a puncture above the pubes. This method is only effective in preventing subphrenic abscesses whilst the exudate is diffused. When it is shut in and localized special measures must be adopted to evacuate it.

The Micro-organisms found in the Pus of Twelve Subphrenic Abscesses.

The examination of the pus was carried out in the Pathological Department of the London Hospital, by Dr. William Bulloch.

Sterile	3 cases.
Bacillus coli communis	3 ,,
Staphylococcus aureus	2 ,,
Streptococcus	1 case.
Pneumococcus	1 ,,
Bacillus pyocyaneus	1 ,,
Bacillus typhosus	1 ,,

Many other micro-organisms have been recorded by other writers.

The Bursting of Subphrenic Abscesses.

Twenty-three of 76 cases ruptured spontaneously. They were distributed as follows:

Into a bronchus	4 cases.
Into the pleura (right)	2 ,,
Into the pleura (left)	3 ,,
Into the general peritoneum	1 case.
Into the stomach	8 cases.
Into the intestine	1 case.
Into the colon	2 cases.
Through the skin, one at the umbilicus and another in the right hypochondrium	2 ,,

Some of these cases demonstrate the possibility of a natural cure, but experience shows how extremely rare this is.

The Age of 75 Cases of Subphrenic Abscess.

I have arranged 75 cases of subphrenic abscess in which the age was stated in decades, and the result is as follows:

0–10	10–20	20–30	30–40	40–50	50–60	60–70
6	5	29	15	13	6	1

The curve is no doubt due to the age incidence of the chief causes—namely, gastric ulcer, appendicitis, and hepatic suppurations, which, as already stated, account for two-thirds of the cases.

The Sex of 76 Cases of Subphrenic Abscess.

Of the series of 76 cases of subphrenic abscess at the London Hospital, 1900-7, 43 were males (56.6 per cent.), and 33 were females (43.4 per cent.), so that sex does not appear to exercise any great influence.

(To be continued.)

The German Roentgen Ray Society will hold its fourth Congress at Berlin on April 26th under the presidency of Dr. Gocht of Halle. The principal subject on the programme is the value of radiography in the early diagnosis of pulmonary consumption; the discussion will be introduced by reports from Professors Rieder of Munich, and Krause of Jena. An exhibition, partly of a historical character, will be held in connexion with the Congress. The Secretary is Dr. Immelmann, 72, Lützowstrasse, Berlin, W. 35.

PRELIMINARY NOTE
ON
THE EXISTENCE OF AN ACUTE TUBERCULOUS FEVER IN INDIA WHICH HAS BEEN CONFUSED WITH CONTINUOUS AND REMITTENT FEVERS.

BY
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AND
RAO SAHIB P. R. BHANDARKAR, B.A.,
L.M. AND S.(BOMBAY),

The common opinion of medical men in this country is that a good deal more light requires to be thrown on the remittent fevers of India. We get a number of cases which, for want of a better diagnosis, we call malarial or non-malarial remittent fever, simple continued fever, atypical typhoid, etc. Of late many attempts have been made to determine how many of these are Malta fever, or forms of paratyphoid. The writers have not been able to find that the latter two designations embrace a large number of the many cases of remittent or intermittent fevers that have shown no malarial parasites and have not yielded to the administration of quinine. Moreover, the cases do not show the marked symptoms of enteric or the signs of Malta fever. The writers maintain that a large proportion of the cases, now indefinitely classified, will be cleared up by the recognition of the cause as an acute invasion of the tubercle bacillus, and that this bacillus is found during the period of fever, and for a long time subsequently, to be excreted with the urine. The diagnosis, therefore, rests upon their detection in this fluid. The clinical signs after some experience will, however, enable the practitioner to make his diagnosis, as these signs are sufficiently well marked, even should he be without a laboratory to assist him.

There is a continued period of pyrexia of a remittent or intermittent type, lasting from a week to four weeks or more; the liver is often enlarged, the spleen not so; the bowels are constipated, generally obstinately. The abdomen shows some amount of meteorism, though this never reaches the extent seen in enteric fever. Vomiting and nausea are marked though not continuous. The most distinguishing feature of this fever is pain and tenderness in the epigastrium, and it is on this that special stress must be laid in order to assist in the differential diagnosis. Some cases have acute exacerbations of pain, others only tenderness, which, if it be associated with hepatic enlargement, makes the diagnosis from liver abscess very difficult; but the detection of tubercle bacilli in the urine clears up all doubt. The mind is clear, generally remarkably so, except that when the temperature is high there may be some delirium at night. It is interesting to note that patients after recovery give a very clear account of their illness, mentioning the temperatures and symptoms, thus contrasting with the mental confusion of the typhoid state—making the memory of the illness a blank. The initial enlargement of the spleen in enteric contrasts with the want of enlargement in acute tuberculous fever. The tongue is furred, but its condition does not remind one of the "typhoid tongue" The skin is dry and hot; there are no hectic or malarial sweats. The urine is highly-coloured and contains no albumen. The writers think that this fever is completely recoverable from, and also maintain that it marks the launching of the patient on a tuberculous career. It is the beginning of a long period of ill health of an indefinite kind—dyspepsia of a flatulent type, relapses of fever, periods of general depression with a temperature below normal if frequently and carefully taken, a loss in weight, and in some cases anaemia. This general malaise is not continuous; the condition is varied by periods of good health. Practitioners have been apt to consider this as due to Indian climate and conditions, and recommend a change to Europe or the hills; in fact, just the class of case that does improve under this treatment, and improve immensely, perhaps never to recur.

Another set of cases develop obvious tuberculosis—tubercle of the lungs, kidneys, etc. The initial acute

tuberculous fever has long been forgotten, or is called malaria, or what not, and is not associated with the tuberculous manifestation. The writers have been surprised at the frequency of this acute fever in the history of cases of obvious tuberculosis, not merely among Indians but also among Europeans. We do not maintain that in all cases of tubercle a history of this fever is found; but, as there is often a history of irregular fever resembling malaria, we feel the necessity of further investigation to clear up the point in how far an invasion of tubercle bacilli without evident local manifestation can produce irregular fever long before the local disease. In our acute tuberculous fever the existence of the abdominal symptoms—namely, epigastric pain and tenderness, vomiting, constipation, and meteorism—points to the probable invasion through the alimentary canal. The writers dissociate the attack from the peritoneum, and it is not to be confounded with tuberculous peritonitis—there is little in common. Whether this invasion of the alimentary canal is due to an entry of the tubercle bacilli from outside, or into the blood from a pre-existing focus inside the body, is not a point on which we feel capable of dogmatizing at present. We suggest, however, that the infection probably takes place from the alimentary canal, and not by an irruption of tubercle bacilli from a pre-existing focus into a blood vessel, or into the thoracic duct or receptaculum chyli, as happens in acute miliary tuberculosis; and the difference in the mode of infection perhaps accounts for our disease being milder and much less fatal than the other.

One point the writers wish to state is their impression that the mortality is low, and does not drift into acute miliary tuberculosis, which is practically the only form of acute tuberculosis found in Europe, so far as they know. Professor Cornet, in his work on tuberculosis, describes the typhoidal type of acute miliary tuberculosis; but it is anything but a picture of the acute tuberculous fever we have under consideration. Acute generalized tuberculosis, as described by English and Continental writers, is a disease of such variable clinical features, with such a high mortality, that we have failed to recognize it in our cases of acute tuberculous fever, whose signs and symptoms are of a more constant and invariable nature, and whose mortality by contrast appears to be low.

A question for further investigation is the reason for this acute tuberculous fever being found in India and not in Europe. The remittent fevers of England are few, and their diagnosis and classification clear; not so in India. We have always felt there were other causes behind the scenes, besides the malarial parasites, the *Bacillus typhosus*, the paratyphoid variety, the *Micrococcus melitensis*, the *Amoeba coli*, the staphylococci and streptococci of septicaemia and suppuration, and yet we could not say what. We now maintain that the tubercle bacillus is one of these, and a very important and widespread factor. It is admitted that there is a large class of fever cases of an unknown nature, which have been labelled "non-malarial remittent fever" or "continued fever"—for example, see Dr. A. Crombie's scheme of unclassified fevers of India put before the British Medical Association in 1898[1]—and which in practice are diagnosed as malarial fevers with the qualifying term of "typho- or remittent." They do not yield to heroic doses of quinine. Some prefer to call them enteric, but neither does the clinical picture nor Widal's test justify the diagnosis. The writers have seen many such cases in which no malarial parasites or pigment in the leucocytes were found, and in which Widal's test for typhoid and paratyphoid gave negative results. The direct evidence of the presence of tuberculosis in our fever cases was supplied by the detection of the tubercle bacillus in the urine; and this is our important point.

The technique followed was that given in the textbooks, but it was found that some considerable practice and skill were necessary before we were able to attain a certain proficiency, and we feel that a casual examiner is unlikely to detect the bacillus. We would point out the importance of a good centrifuge, the washing of the deposit in distilled water once or twice to ensure fixation, and the use of egg albumen to facilitate this. The Ziehl-carbol-fuchsin is the method of staining we have used, with a final methylene-blue (lightly done) as a counter-stain. There is, moreover, the elimination of other acid-fast bacilli which take and retain the purple stain. Dr. Coles in his work on clinical bacteriology exacts certain stringent tests—namely, the exposure of the smear to sixteen hours of a 25 per cent. sulphuric acid solution, and to Pappenheim's mixture (without methylene blue) for not less than four hours, for the purpose of eliminating all the other known acid-fast bacilli. This we invariably do and our results are positive. Tests on guinea-pigs are now being carried out, but it is a method requiring some time for confirmation. We hope soon to publish our results, and moreover, to find out whether we are dealing with live or dead bacilli.

We feel convinced that there exists a tuberculous cachexia, not only as the sequela of acute tuberculous fever, but coming on gradually, and manifesting itself by indefinite malaise. Its detection depends on the examination for tubercle bacilli in the urine. This stage is probably the precursor of an evident tuberculous disease, such as affections of lungs, kidneys, bones, or abdominal organs. As far as our experience goes this cachexia exists along with a low opsonic index, and it is therefore important to raise this in order to effect a cure.

The following cases are of interest as illustrations of acute tuberculous fever.

CASE I.

An officer (European, aged 37) in the Indian Telegraph Department was transferred to the care of one of us after twenty-six days of continuous fever ranging between 101° and 102°. His mind was quite clear, his skin dry and hot. The abdomen was slightly distended, and pain existed in the epigastrium, with tenderness on pressure. It was associated with vomiting in the early part of his illness, and at the time we saw him he suffered from nausea and disinclination to take food. The bowels were constipated, and resisted doses of calomel until these were increased to 4 grains a day. The tongue was moderately furred. There was no enlargement of the liver, no cough, no headache. The condition was exactly what has often been diagnosed as simple continued fever, but tubercle bacilli were detected in the urine. On the thirty-first day the temperature dropped to normal, continuing, with slight evening rises, for some days. Convalescence was gradual. He was put under tuberculin R. with marked benefit. I may add that his blood had been tested for Widal's reaction for typhoid and paratyphoid with negative results. His history previous to his illness was good, except that five months before he had had headache on and off for three weeks or so.

CASE II.

The brother of an Indian prince, aged 23, called one of us to see him. On examination it was found that he had been suffering from continuous fever for sixteen days, accompanied by pain in the epigastrium and some vomiting in the commencement of his illness. The bowels were constipated, tongue furred, abdomen a little distended. He had had large doses of quinine and diaphoretics. His urine on examination proved to contain numbers of tubercle bacilli. The diagnosis was then obvious, and he was put under tuberculin R. On the twentieth day his temperature became normal, and his convalescence began. This has been uninterrupted.

CASE III.

Within a week his wife fell ill with high fever, ranging between 102° F. and 103° F. and touching 104° F. On the eighth day she came under our treatment. Her symptoms were exactly the same as those of her husband, excepting that the prostration was greater, and she had some catarrh of the larger bronchi. The urine contain tubercle bacilli. Her progress towards recovery was good; on the seventeenth day her temperature became normal. One injection of tuberculin R. was given on the ninth day of the disease. In this case the pain and tenderness in the epigastrium was marked, and the bowels were obstinately constipated, accompanied by meteorism, but not excessive. Vomiting was also a feature early in the attack. Her skin was fair; some roseate spots resembling those of enteric were noted in the back.

CASE IV.

An Indian civilian (Englishman, aged 40) called one of us to see him, having had fever for twenty days; it began acutely, the temperature rising to 103° on the first day, with vomiting, and 102° on the second; after that a slow subsidence took place, and for ten days he had a rise in the evening to 100° or a little under, dropping to normal in the morning. He had taken large doses of quinine without effect. The bowels were constipated, but that was his usual habit. When the illness began he had some stools which he called dysenteric. On the twentieth day his urine was examined and found to contain tubercle bacilli in numbers. His history is particularly interesting, and shows that he has probably been tuberculous for at least nine years. At that time he had an attack of so-called malarial fever, which from time to time has relapsed; but these relapses have been few and characterized by a long continuation of a "low fever," which he has shaken off with difficulty, in spite of large doses of quinine. As a rule his health has been excellent, but at times he has had attacks of

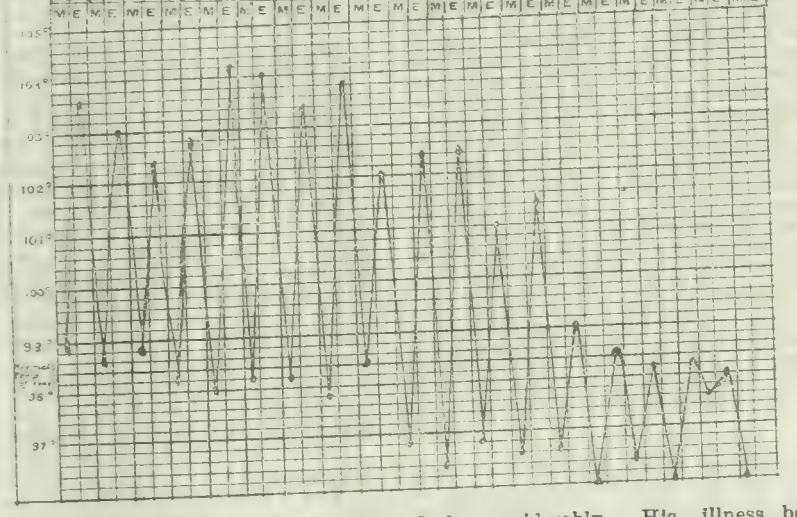
sudden and unaccountable malaise, lasting perhaps a week, and remedied by hard exercise. This is interesting as pointing to the probable rise of the opsonic index by this means. His case is one that would be called due to climate, malaria, etc. He is not anaemic generally, and is a peculiarly athletic and muscular man, well known on all fields of Indian sport. One point he tells us is that he is always more or less tender about the epigastrium, which has been put down to "liver"; although he has lost weight during his recent illness his physique is neither spare nor thin, contrasting with some of our other cases of tuberculous cachexia.

CASE V.

R., a Brahmin clerk, aged 19 years, admitted into the Charitable Hospital, Indore, on October 26th, 1907.

Previous History.—Had suffered from fever, followed by jaundice, in February, 1906. The fever lasted for about a month. The present attack of fever began on October 15th, without a rigor, temperature rising high every evening, and falling in the morning. Gets slight perspiration on the face and chest at night.

Condition on Admission into Hospital, and Progress.—Fairly nourished, tongue slightly coated, appetite fair, bowels constipated, but no marked puffiness or tenderness of abdomen; gets headache when temperature rises, pulse 88 per minute in the morning (temperature being 99°), slight cough, no pain in the chest, breath sounds in the right infraclavicular region harsh, and vocal resonance slightly increased as compared with the corresponding region of the other side. Sputum examined on October 30th, and again on November 4th, for tubercle bacilli, with negative results, opsonic index for tubercle on October 30th was 1.1. Had large doses of quinine at home before admission. In hospital sodii cacodylate ½ gr. twice a day and quinine sulphate 8 gr. every morning were administered, without producing any change in the course of the temperature. On November 3rd, $\frac{1}{500}$ m.gr. of tuberculin R was injected, the other drugs continuing: the evening temperature now began to fall, and reached normal on November 9th. Discharged on November 13th. Urine contains tubercle bacilli. The temperature chart is attached.



CASE VI.

Bombardier P., of R Battery, R.H.A., aged 25, was admitted to hospital at Mhow on October 20th, 1907, with a history of slight attacks of fever for some months previously. The blood examination on admission showed benign tertian malarial parasites; but, during the subsequent course of the case, quinine in 15-gr. doses twice a day had no effect on the fever, which was continuous and irregular in character, ranging as high as 102° and 103° for two or three days consecutively. He had enteric fever three and a half years ago, and moreover Widal's reaction for typhoid was negative. The illness began on October 13th with pain in the abdomen, but especially in the epigastric region, accompanied by vomiting; nausea was a marked feature throughout the illness. The bowels were regular, and the stools showed nothing abnormal. On admission to hospital the liver and spleen were not enlarged, abdomen not distended, but there was very distinct tenderness in the epigastrium. Subsequently the liver began to enlarge, and on October 23rd he had a slight rigor in the morning, which in conjunction with the continuance of the fever suggested exploration for liver abscess; the operation was carried out under chloroform on October 29th with a negative result. On November 6th enlargement of the left lobe of the liver was noticed, accompanied by paroxysmal pain in the epigastrium, at times extremely severe and unaffected by taking food. The enlargement of the liver subsided and convalescence was slow, very extreme anaemia being a marked feature of the case. One of us discussing the case with Captain Hudleston, R.A.M.C., suggested that it was a case of acute tuberculous fever, and his urine was examined on December 1st, when there was no difficulty in finding tubercle bacilli, in spite of the fact that he was free from fever and to all appearances convalescing.

Here, then, was a case with an acute beginning drifting into tuberculous cachexia. The above are cases of acute tuberculous fever; of equal interest are those of tuberculous cachexia that follow this acute manifestation, and whose condition it is of equal importance to diagnose.

CASE VII.

An officer, aged 48, commanding a regiment, came with a history that fifteen years ago he had an attack of "fever and liver," and that he was then on the point of being explored for liver abscess; but an improvement in his condition did not justify an operation, and he was invalided home. He remembers the pain in the epigastrium, and that his liver was found enlarged at the time by the doctors in attendance. Since then he has led an active life, and is well known in the polo field. At intervals he has been liable to fits of depression, high-coloured urine, and profound lassitude in which he has had to force himself to any exertion. One doctor years ago said he thought there was something in the left apex. I could find nothing now. He is spare and thin; the bowels are, as a rule, regular, but he is liable to flatus. On two occasions he has been to Carlsbad, and the treatment he received there on both occasions made him feel very ill. Treatment was directed to his liver when there. One interesting symptom which was noticed as he came in one of his attacks of lassitude was an intermittent pulse when lying down, but not on standing up, the third or fourth or fifth beat being dropped. He knew of this, and also that when well nothing of the sort existed. There were no physical signs whatsoever, except that the temperature remained between 97° and 98°, rarely rising to the latter point. Examination of the urine showed tubercle bacilli, otherwise the urine, though of high specific gravity (1028), was normal. His opsonic index was 0.7—that is, below normal. The pitfalls in this case are that his ill-health might be mistaken for some heart or liver derangement. He has now been one month under tuberculin R.; his index rose to 1.0, then to 1.1, and is now 0.87. The urine still contains tubercle bacilli. He has put on 5 lb. in weight, feels well, and the pulse is regular, explaining that although debarred from severe exercise his muscles have remained in excellent condition. Again in his case, when suffering from malaise a hard game of polo used to relieve him, and the interpretation is that the opsonic rise improved his condition.

CASE VIII.

A railway engineer (European) came with symptoms which had lasted for two and a half years. He had not been on the sick list at all, but had forced himself to continue at work. He had lost flesh considerably. His illness began with an acute attack of fever lasting several days, and he dated his trouble from then. He remembered having severe pain in the epigastrium during the fever. I could find nothing the matter with him after having examined his lungs and abdomen in the usual way, but noticed he was spare and thin. Suspecting at once this was a case of tuberculous cachexia, his urine was examined for tubercle bacilli, and they were found in numbers. Under one month of tuberculin R. his improvement is very noticeable.

CASE IX.

We have under treatment a Mohammedan gentleman of position and education, who has been suffering from dyspepsia for fifteen years. He dates his troubles from an attack of some rectal inflammation, fissure and ulcer, which occurred fifteen years ago. The dyspepsia is of the flatulent type, giving rise to puffiness and discomfort in the epigastrium, and his bowels are always constipated. He used to weigh 15 st., but of late years has averaged between 10 and 11 st. His health has been most indifferent, with attacks from time to time of headache, pains in the limbs, high-coloured urine, and occasional fever. He has seen innumerable doctors, went to London and Carlsbad, and was treated for liver and gout. I saw him first five years ago, and gave the same opinion. Five months ago he came with a patch of tuberculosis in the base of the right lung; tubercle bacilli were found in the sputum and also in the urine. He has improved immensely under tuberculin R. and the opsonic treatment. The bacilli are now absent from the small amount of expectoration left. Here, then, is a case of long-continued tuberculous cachexia culminating in tuberculosis of the lung. Three years ago his son died of acute phthisis. His opsonic index has been taken throughout his illness; from this we saw there never was an autointoxication

with tuberculin from the lung, and that the index always showed a tendency to fall unless pushed up with tuberculin R.

CASE X.

A young chief, aged 23, of the same family as the above gentleman, consulted us four months ago complaining of malaise, lack of energy, and occasional fever, subsiding apparently under quinine. He had lost flesh, and complained of pain in the epigastrium from time to time, not connected with his meals. Two years ago an attack of similar pain was relieved by santonin and the passage of a round worm. On this occasion it failed. His temperature was frequently taken, and was generally below normal. His urine was normal; there was no blood, pus, or albumen, but it contained tubercle bacilli. He complained at times of a slight burning when passing urine. His index has been kept high by injections of tuberculin R. during the last four months. He has regained his weight, his energy, and his appetite. Here, then, is another case of tuberculous cachexia which, judging from the numbers of cases of phthisis which have manifested themselves in his family, would, we feel, have rapidly drifted into tuberculosis of the lungs.

CASE XI.

A young Hindu hospital assistant, more or less on attendance on the above case, complained of weakness, dyspepsia, and epigastric pain. There was nothing remarkable about his previous history. His symptoms were of three months' duration. His opsonic index was 0.9. An examination of his urine showed tubercle bacilli.

CASE XII.

B., a Hindu, aged 20, was admitted into the Charitable Hospital, Indore, on October 7th, 1907, as he is a personal servant of one of us. His previous history and the history of his present condition are well known. A year ago he suffered from remittent fever lasting for three weeks, and was treated by hypodermics of quinine, but without much effect. His recovery appeared to be complete. In September, 1907, he was again attacked with fever, and though his lungs were examined carefully from time to time, nothing was found until early in October—that is, a month after the commencement of his fever—when a patch was discovered in the base of the right lung, and tubercle bacilli detected in the small amount of expectoration. He was then admitted into hospital, and his treatment by quinine hypodermics replaced by tuberculin R. injections. His opsonic index has always been high, showing autointoxication. The temperature continues very high, with morning remissions; the infection is, however, double, as pneumococci were also found in the sputum. This was injected into a guinea-pig, which developed acute pneumococcus septicaemia, and died on the fourth day. The cocci were found in the heart blood of the animal on *post-mortem* examination. No tubercle bacilli have, so far, been detected in the urine of this patient. Here, then, is a case of what we presume to have been acute tuberculous fever a year ago, developing into localized tuberculosis of the right lung in September of this year, but complicated by pneumococcus infection.

CASE XIII.

Private P., of the Carabineers, aged 24, came with a history of malarial fever at Bangalore of a month's duration, in September, 1906, when he was treated by hypodermics of quinine. He states that the highest point his temperature rose to was 103·4°. That the fever lasted for so long a time in spite of quinine makes us doubt the correctness of the diagnosis. Since then he has been in ill health. When seen by us in November, 1907, he was anaemic, and explains that he has lost weight. His appearance is certainly like that of malarial cachexia. He suffers from pain and tenderness over the liver and pit of the stomach—in fact, this was the first symptom he referred to, calling it liver. There is no marked hepatic or splenic enlargement. On examination, his urine contained numbers of tubercle bacilli, and our diagnosis is one of tuberculous cachexia.

The writers have many other cases of acute tuberculous fever and tuberculous cachexia on their books, and have been astonished at the number they have been able to lay their hands on during the last few months. They feel that some more and valuable light will be thrown on the important problem of Indian fevers by further investigations on the lines which they have indicated, and this note is written with a view to point out to other observers a line on which to proceed.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, September 24th, 1898.

AT the Franco-British Exhibition, to be opened next May at Shepherd's Bush, there will be a large section devoted to foodstuffs and beverages. The French authorities intend to make a very fine display of the natural resources of their country in this section, and it is hoped that Great and Greater Britain will also be well represented.

ON THE SPREAD AND PREVENTION OF TUBERCULOUS DISEASE IN PONDOLAND, SOUTH AFRICA.*

BY J. GRANT MILLAR, M.B., CH.B.GLASG.,

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OF the diseases to which the Pondo is subject, tuberculosis holds the first place. Not only is it much more common than any other serious disease, but, unfortunately, it is also on the increase. In his annual report, just published, Dr. Gregory, Medical Officer of Health for Cape Colony, states:

Of all the diseases attacking the native and coloured, tuberculosis is by far the most important, and it is once more my duty to call attention to the ravages of the population it is causing, and to the extreme importance of the taking of public measures to restrain its further spread.

Commenting on the fact that when he first drew attention to the subject, some fifteen years ago, the warning was received with little credence by the public, he says:

South Africa was considered by most people as the one place for the cure of the consumptive coming from abroad, and surely, it was said, if it be a place to cure the disease, it can hardly be a place where it should spread. . . . Figures, which though incomplete are irrefutable, have become available, and it is now no longer possible to doubt that this disease bids fair to decimate the native and coloured races . . . unless a check can be put on its progress.[1]

Dr. Gregory's report refers to the whole of Cape Colony, but I shall confine my remarks to tuberculosis as it affects the natives of Pondoland, a more or less mountainous country forming part of a larger district known locally as "The Native Territories" (otherwise as Kaffraria). It forms the connecting link between Cape Colony and Natal, and for administrative purposes belongs to Cape Colony, to which it was annexed in 1894. The climate is temperate; the winter or dry season lasts roughly from April until October, and the summer or wet season from October until April. During the winter season the climate is delightful, often cold at night and in the morning, but during the day ample sunshine, much like good summer weather in England. During the summer season there is a good deal of rain, especially in December. As a rule there is no excessive heat, although a temperature of 90° F. in the shade is common, whilst sometimes the temperature reaches 100° F.

The Pondos are not in any way physically degenerate. They are not, on the average, very tall; and, although not as fine a race as the Zulus, they are stoutly and sturdily built. The great majority of them are known as "Red Kaffirs," from their custom of smearing their bodies and hair with red ochre. They might equally well be called "blanket," as a blanket hung from the shoulders is the only garment they affect. There is, however, an ever-increasing number who are becoming civilized to the extent of wearing European clothes.

Pondoland is one of the chief recruiting fields for the gold mines of the Transvaal; and, after a careful consideration of the subject, I have no doubt that this is the primary cause of tuberculosis amongst the Pondos. Medical opinion here is agreed that the native races are naturally very susceptible to the disease, and that their powers of resistance to it are very low.

A young man goes up from this district to work in the mines at Johannesburg. After working there for some six months or a year—where, it must be remembered, the conditions of life are totally different to what he has been accustomed to, for example, the atmosphere of the mines, the dust, the hard work, etc.—he happens to contract phthisis, as likely as not from a fellow worker, after which he returns home to Pondoland, where the manner of living is pre-eminently calculated to favour the spread of the disease. Two main factors are the overcrowding of huts, and the filthy and disgusting habit of indiscriminate spitting.

The overcrowding is probably worse than anything that could be found in an East End slum of a great city at home. One may see some 20 people—men, women, and

* This paper has been somewhat abridged.

children—crowded into a small hut, the door of which is carefully blocked up and which contains no other opening or ventilation of any kind. This overcrowding is very much the rule, it being quite the exception to find a hut not overcrowded. Now imagine a phthisical patient one of this crowd, constantly spitting on the floor and on the walls of the hut, and can it be wondered at that the disease spreads?

No one who has lived in this country and seen nearly a whole hut of natives contract the disease one after the other could possibly have any doubt as to the infectiousness of phthisis. Nor would it be possible to get any better examples of this infectiousness than such cases, where time and again one native returned from the mines infects almost the entire occupants of a hut previously quite healthy. Nor is the spread of the disease confined only to the one hut or even the one kraal, because it is a custom amongst the natives to crowd together in the different stores, where they frequently spend half a day chatting and idling—*and* invariably spitting. Hence, taking into account how susceptible the Kaffir appears to be to the disease, it is easy to see how many different centres of infection may arise from a single imported case. Added to all which it may be remembered that it is a common practice amongst the natives to sleep with their heads covered up in their blankets, thereby sheltering which they may lend the blanket to a friend, smoking out they also freely interchange eating and drinking utensils and even pipes.

The missionary schools [illegible] of infection, as several district surgeons centres [illegible] is attending and any one suffering from tuber[illegible] disease may be is not difficult to see how th[illegible] these schools learnated. The Kaffirs attendin[illegible]ise, and there is a gen[illegible]s if they learn nothing e[illegible]essed" Kaffir is more so[illegible]ression that the "dr[illegible] the "red" or "blanket" to tuberculosis than [illegible] certain, the impression seems so far as one can a[illegible]option of European clothing all founded, the ad[illegible] softer" and more susceptible to render them "[illegible] time the question is complicated b At the same [illegible]trict surgeon sees more dressed that any dis[illegible]is, being semi-civilized, they better a proportion, p[illegible]atment. There is also the further medical tre[illegible]he male portion of the population—th regard to t[illegible]ho have been to work at the mines "boys" w[illegible] clothes either when there or on their European [illegible]t becomes somewhat difficult to know so that i[illegible]t the change of clothes plays in the quest what par[illegible]bility. Anything in the nature of even susceptible No. 15—[illegible]itted on 4th and 30 c.cm. statistic[illegible]s is, of course, in a purely native and only slightly [illegible]rovement; [illegible]ey civilized country like Pondoland, absolutely of the [illegible]sed off. Con[illegible]t, when all is said and done, one is inevitably

[illegible]eningococcus L.P. and 30. I [illegible]hink the introduction of phthisis has been to the conclusion that here, as at home, the only start[illegible]. and J. serum[illegible]ing point, but tuberculous disease is also met w[illegible]al measures in the long run depend upon the in [illegible]other forms, chiefly as acute general or miliary tube themselves. To prevent the spread of tuber- cul[illegible]till doubtfu[illegible]osis and as tuberculous gland disease. In fact, in Ca the native must be taught the evils of over- Co[illegible]proverbially [illegible]olony itself* the consensus of medical opinion is tha and he must come to learn the dangers that th[illegible] attention to [illegible]e glandular and miliary forms are more frequent than indiscriminate expectoration. Once the Pondos t[illegible] If the 2 case[illegible]he pulmonary, but I do not think this applies to Pondo alive to the infectiousness of the disease, and l[illegible] 30 cases tr[illegible]and. So far as I have seen, at least, it does not apply to uld be made to understand how few and how [illegible] mortality [illegible]he Flagstaff district, in which there is a native popula- e the precautions necessary to avert its spread, In consi[illegible]tion of some 25,000 to 30,000. However, it must be be on the high road towards attaining this the questi[illegible]admitted that only very general impressions can be le end. In regard to the overcrowding, there milder typ[illegible]gathered, as it is but a small percentage of the Pondos ious practical difficulty to be surmounted, comparati[illegible]in any district who seek the aid of a "white" doctor, a in order to lessen the overcrowding there conclusio[illegible]majority still preferring to go to their "witch-doctors" t to be a great building of huts. This is officer of [illegible]and have their ailments cured by means of charms, so that ir, not only in regard to the actual putting the city [illegible]the patients one does see can only be taken as a rough A[illegible] but still more so because it means an Decembe[illegible]guide to the prevalence of any particular disease. amnt by the native in the shape of hut tax. than 50 I[illegible]I have seen many cases of tuberculous glands, par- contribute in the way of taxes is 10s. per pital, the [illegible]ticularly of the neck, and, as might be expected, partic- trict they have, hence the more huts the this retu[illegible]larly in young people. I have not myself seen very many to owe to pay. It is a small enough con- treated a[illegible]cases of miliary tubercle, but last year accidentally came Were to work are they that they prefer in attenc[illegible]across a case when making a *post-mortem* examination of one manner described. them. C[illegible]a boy of about 14 years of age who was supposed, by in their habit of spitting, the only thing are still [illegible]erroneously, to have died from violence; every organ was missing possibly something might be done Exclud[illegible]simply riddled with miliary tubercle—lungs, liver, spleen, minds of the natives attending the have 34 [illegible]kidneys, etc. I have not seen a single case of tuberculous but to the elementary ideas of hygiene and case mo[illegible]bone disease, and on looking through the reports of mean the mor[illegible] serious evil and danger of the habit; in hosp[illegible] In con[illegible]slow and uncertain process, and seems q[illegible] proceeds apace.

other district surgeons I notice their experience is the same.

So convinced is medical opinion in this country of the infectiousness of the disease that some public bodies have approached the Cape Government with a view to the segregation of all tuberculous patients. Such a proposal is, of course, quite impracticable on the score of expense if for no other reason. As Dr. Gregory points out, it is as much as the Government can undertake to segregate the lepers in the Colony, and their numbers are small compared with those of people suffering from the various forms of tuberculosis. Still, that such a suggestion should even be made shows how much alive public opinion here is to the necessity of something being done. Some good might be done if the Government insisted that every native going to work in the mines at Johannesburg should first of all undergo a rigorous medical examination in his own district before he is allowed to proceed. This would tend to weed out the unfit, and those more likely to contract the disease. I believe all the labour boys † are medically examined at Johannesburg before being allowed to start work; but, owing to the largeness of their numbers, such examination is not probably as thorough as it would be if carried out in their own district, where the number examined by each doctor would be comparatively small, and where he might know something about the history of at least some of the boys examined. In any case, if they were first examined in their own district it would always be an additional check. As things are, a number of labour agents, for their own protection, are sending to the mines boys medically examined by the district surgeon previous to their departure; for, if a boy they send up is rejected, or breaks down in health during the first month, they are put to considerable expense, but at present such examination is not compulsory, and by no means universal. The advisability of having some such medical examination has been admitted by the Transvaal Government; but, in a recent proclamation concerning the recruiting of labour, it found itself unable to enforce such a regulation on account of difficulties which were not specified.

A great deal might be done by the Transvaal Government and the various mining companies in the way of improving the conditions of life for the boys at the mines—for example, strict isolation of the sick, providing proper buildings for them to sleep in, seeing that such buildings are properly ventilated, insisting that every boy should have a certain minimum cubic air space, etc., such being amongst the recommendations of the Conference of Principal Medical Officers of Health of British South African Colonies.

* Although Pondoland is really a portion of Cape Colony now, there is always a distinction drawn between the Colony "proper," that is, the country west of the Kei River, and the native territories, which practically form a separate country, although administered from Cape Town.

† The ter[illegible]fer to the age of a Kaffir, all natives who work[illegible] designated.

very large subject, I cannot help thoroughly and cordially agreeing with Dr. Henry Davy in his Presidential Address to the British Medical Association at Exeter in 1907, when he pleaded for more drastic treatment as regards the infectiousness of tuberculous disease, likening the sputum of a phthisical patient to the stools of one suffering from enteric fever. So long as no more radical steps are taken to disinfect the sputum of such patients, either in this country or in Britain, so long will phthisis stalk a gaunt spectre in our midst.

REFERENCE.

[1] *Report of Medical Officer of Health for the Colony of the Cape of Good Hope*, p. 30. Capetown: Cape Times, Limited. 1907.

THE PREVENTION OF TUBERCULOSIS: A SUGGESTION.

BY A. R. GUNN, M.B., CH.B.EDIN.

THE object of this communication is to suggest a method by which it is believed that the problem of the supply of tubercle-free milk can be satisfactorily solved. That infection through the alimentary tract plays a considerable part in the etiology of tuberculosis is now admitted by the majority of observers, among whom Shennan[1] and Still[2] may be cited as obtaining 28 and 29 per cent. respectively of primary intestinal lesions in the *post-mortem* examination of tuberculous children. The question of the essential similarity of bovine and human tuberculosis need not be discussed; but on account of their bearing on the possibility of milk as a not uncommon source of infection, reference may be made to the investigations of Dr. James Niven,[3] who found that 18·5 per cent. of the samples of milk intended for the city of Manchester gave evidence of tuberculosis on bacteriological examination, and that on the farms from which the milk had come 14 out of 16 herds were found to contain at least one infected individual. The necessity for the adoption of stringent and relia measures will be at once apparent.

The method of inspection, even in conjunction with use of the tuberculin test, is generally admitted to from perfect. Even when carried out according to the and spirit of the law, detection is, I believe, often by the simple precautionary measure of giving pected animal a dose of tuberculin such time be visit of the inspector is due as will give space reaction to occur and be recovered from, but n protective properties against a subsequent a injection to disappear. The method here founded on the fact, first pointed out by Arc that in every population certain members ar who possess an inborn degree of immunity t culosis which renders them less susce onslaughts than their less fortunate fellow find during an epidemic, say of scarlet f there are who escape infection owing to a trait, going to and fro in its midst as if sess disease, though not in a state of protectivity previous attack, so in tuberculosis certi this specific inborn and therefore trans disease. and even in the most unfavourable ts the escape infection from what is almost osed—a As time goes on, this selective e purely characters of the race. The suscep mmunity condition, by the way, which is th—become negative, indicating rather a lack tility has than any positive predisposition une only gradually eliminated, even alt ue struggle almost become a by word, and urvive; the are left to carry on the race ller amounts against this tuberculous men end almost less fit gradually contribute s all practical to the maintenance of the the Central wholly disappear, leaving a ial disease. purposes is as immune ne and human Africans, from a like caus at among cattle,

Now, if we assume the under ordinary tuberculosis, we should e. My proposal, also, there are certain ls and breed from circumstances, are pr then, is to take these them a strain which would remain absolutely free from any taint of disease. That this is far from being impracticable is demonstrated by the fact that something similar has already been achieved in other forms of life. Biffen[5] of Cambridge has shown that susceptibility and immunity are definite Mendelian characters, the latter being recessive; and that, by cross-breeding an inferior yet immune type of wheat—immune, that is, to the rust fungus—with a superior yet highly susceptible variety, certain of their offspring are capable of producing a strain which is possessed both of the immunity of the one parent and of the other desirable features of the other.

And the same thing is undoubtedly possible in cows. All that is required is to bring the idea before the notice of some enterprising cattle breeders who are willing to spend the little time and money that is necessary to carry it out. Very little observation and experiment would be required to indicate whether a given stock was susceptible or immune, and afterwards from the knowledge we now possess of the laws of hereditary transmission, the raising of a pure breed possessed of this quality would be merely a matter of time. That this suggestion is well worthy of the att n of practical breeders, and of the considerati of medical men, must now be apparent. As re und former, there is the commercial value which have consi ubtedly be attached to such a stock n purity a indicated. The possession of a sire be no mean it be s regards this character would of milk and stock it shou money asset, while the de the knowledge of t luable from such a source would in used. While to mediolour to doub their existence became more w practical and possible al men it has the interest source of tuberculous into the w means of eradicating at of cattle which is practicaarks to ly immune to tuberdisease, then, by attention to nd, a m he ordinary requiref byglenic science as regards cle a large anliness of housing anliness of milking, the danger fitories" om infected food, er in the shape of meat or milk, long link which we are at subjected, ought to be capable of ative purl almost complete val. nexed in r dry se nd the sr

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THE TREATMENT OF EPIDEMIC CEREBRO-SPINAL FEVER BY INTRASPINAL INJECTIONS OF FLEXNER AND JOBLING'S ANTIMENINGITIS SERUM.*

BY A. GARDNER ROBB, M.B., D.P.H.,

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IN the outbreaks of cerebro-spinal fever which have recently occurred in America, in Scotland, and in Ireland, attempts at treatment have proved most unsatisfactory and the death-rates have been remarkably uniform. In the recent extensive epidemic in New York 75 per cent. of those attacked died. Ker states[1] that the mortality in Edinburgh and Glasgow reached "over 70 per cent." Robertson[2] gives the rate in the 62 cases he reports from Leith as 74·7 per cent. In a paper which I read at the annual meeting of the British Medical Association at Exeter[3] I gave the results of 230 cases coming under my care in the fever hospitals in Belfast during the first five months of the present outbreak—namely, to the end of last May. In these 230 cases the mortality was 70·4 per cent. It thus appears that the death-rate has been practically identical in these places. In our 230 cases almost every form of treatment which has been suggested was tried, including the use of three varieties of antimeningitic serum by hypodermic injections. The varieties of antiserum used were Kolle and Wassermann's, Ruppel's, and Burroughs and Wellcome's. The results in the cases treated with these antiserums were not more satisfactory than those given by other means of treatment—79 cases were so treated, with a mortality of 74 per cent.—and their use was discontinued.

* A paper read before the Ulster Medical Society.

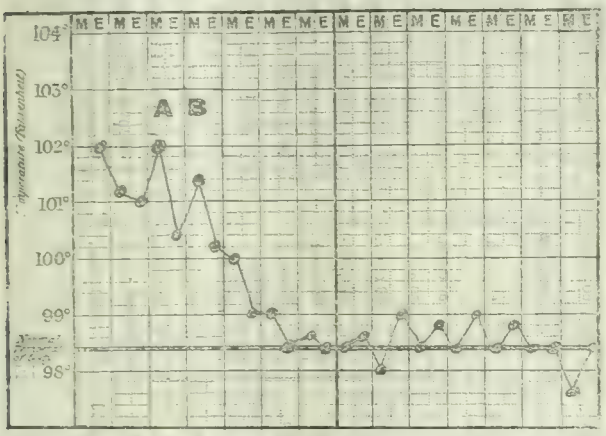
In America it had been found that there was usually a falling off in the number of cases occurring and also in the virulence of the type during the summer months, and it was hoped that with the advent of our so-called summer similar improvement would take place. A considerable fall in the number of cases attacked did take place, but there was no improvement in the type of the disease—in fact, the mortality-rate in the hospital cases rose. During the months of June, July, and August 45 cases were admitted to the fever hospitals, and of these 37 died, giving a death-rate of 82 per cent.; so that in the first eight months of the outbreak—that is, to the end of last August—275 cases were admitted to the fever hospitals, and of these 199 died, giving a case mortality of 72 per cent.

Such was the state of affairs before we began to use Flexner and Jobling's antimeningitis serum by intraspinal injections.

During the past four months every case of cerebro-spinal fever admitted to either of the fever hospitals has been treated in this way. The results obtained in these cases have been very remarkable.

In this time—September 1st to December 31st—32 cases have come under treatment. (Through the kindness of Professor Symmers and Dr. Wilson, and of Drs. Houston and Rankin, the diagnosis in all these cases has been confirmed in the bacteriological laboratory of Queen's College.) Of these 32 cases 22 have recovered, 8 have died, and 2 are still ill.

Of the 2 still ill I believe one will recover, the other is



Case No. 15.—M. H., aged 27. Type "ordinary." Usual onset. Admitted on 4th day; then marked rigidity, Kernig, headache. L.P. and 30 c.cm. on 6th day, repeated on 7th day; rapid general improvement; temperature normal on 9th day; rigidity quickly passed off. Complete recovery. (December 19th, 6th day, L.P., meningococcus isolated; 7th day, opsonic index "positive.") A, L.P. and 30 c.cm. F. and J. serum. B, L.P. and 30 c.cm. F. and J. serum.

still doubtful, but as the prognosis in these cases is proverbially uncertain it will be better to confine our attention to the cases treated to a conclusion; therefore, if the 2 cases "still ill" are excluded from the list we have 30 cases treated, with 22 recoveries and 8 deaths, a case mortality of 26.6 per cent.

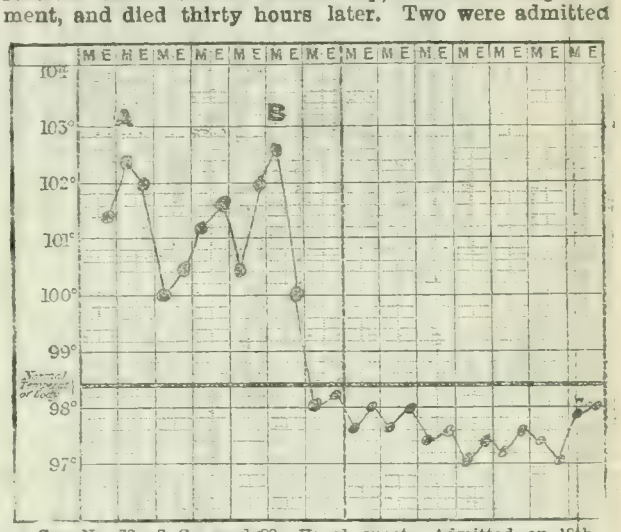
In considering this great change in the results obtained the question at once occurs to one, Are we dealing with a milder type? Are the cases occurring now in Belfast of a comparatively benign variety? In order to arrive at a conclusion on this point I obtained from the medical officer of health a list of the cases notified as occurring in the city during the same period (September 1st to December 31st) and not sent into hospital. Rather less than 50 per cent. of the cases in Belfast are sent to hospital, the others being treated in their own homes. From this return I find that 37 cases were notified and were treated at home, and through the kindness of the doctors in attendance I am able to give the results obtained in them. Of the 37 cases 5 have recovered, 29 have died, 3 are still ill.

Excluding from this list also the cases "still ill," we have 34 cases treated to a conclusion, with 29 deaths—a case mortality of 85.2 per cent.—practically the same as the mortality recorded (82 per cent.) in the 45 cases treated in hospitals in the previous three months. So that it seems quite clear that the mortality in those cases now occurring in the city and not treated with serum has not shown any improvement. Therefore, I think that the figures of (1) the cases treated in hospital up to the end of August; (2) the cases treated in their own homes without Flexner and Jobling's antiserum during the past four months, and (3) the cases treated in hospital with this antiserum during the same four months are fairly comparable. They are—

	Cases.	Deaths.	Mortality.
Cases treated in hospital up to August 31st	275	199	72.3 %
Cases treated at home without serum, September 1st to December 31st	34	29	85.2 %
Cases treated in hospital with serum, September 1st to December 31st	30	8	26.6 %

I give a table (p. 384) showing the age, type of attack, the days of disease when injections were given, the total amount of antiserum given, and the result in each case.

Of the 8 fatal cases in the list, 3 (Nos. 5, 8, and 15) were of the "fulminant" type. One of these (No. 8) received serum on the second day, showed no improvement, and died thirty hours later. Two were admitted



Case No. 30.—S. G., aged 22. Usual onset. Admitted on 12th day (continuous fever from onset) unconscious, very rigid, Kernig, herpes. L.P. and 30 c.cm. on 13th day; temperature fell 2°, but rose again; rigidity remained same, and still unconscious. On 17th day L.P. and 30 c.cm.; temperature fell to normal following morning; regained consciousness; rigidity very rapidly passed off. Convalescence was very rapid and recovery complete. A, L.P. and 30 c.cm. F. and J. serum. B, L.P. and 30 c.cm. F. and J. serum. (December 6th, meningococcus isolated.)

early on the third day of the disease, and were immediately given injections of 30 c.cm. One died five hours, and the other nine hours after injection. In all three lumbar puncture gave quite purulent fluid.

Four cases (Nos. 17, 22, 26, and 32) were of the "ordinary" type. All showed very severe symptoms on admission. No. 17 was injected on the fifth and on the sixth days with 30 c.cm. Thick ropy yellowish pus was obtained from the canal at the first puncture. This case showed no improvement, and died three hours after the second injection. No. 22 was injected on the fourth and tenth days, showed no improvement, and died on the eleventh day. No. 26 was desperate on admission, showing cyanosis of extremities, petechial rash, and pus in each anterior chamber. It received injections on the sixth, tenth, and sixteenth days; it showed slight improvement at first, but died immediately after the third injection. Case No. 32, a man of 36 years, was admitted with high fever (which had been present from the onset) and wild delirium on the tenth day of the disease. He was given 30 c.cm. on the twelfth day, but showed no improvement, and died thirty hours later.

The other fatal case (No. 2) was already "chronic" when first injected on the twenty-third day. It was a child of eight months, and had been unconscious for two weeks; only a few drops of thick pus were obtained by lumbar puncture.

CASES OF CEREBRO-SPINAL FEVER TREATED WITH FLEXNER AND JOBLING'S ANTIMENINGITIS SERUM IN THE BELFAST FEVER HOSPITALS FROM SEPTEMBER TO DECEMBER, 1907.

I.—*Purdysburn Fever Hospital.*

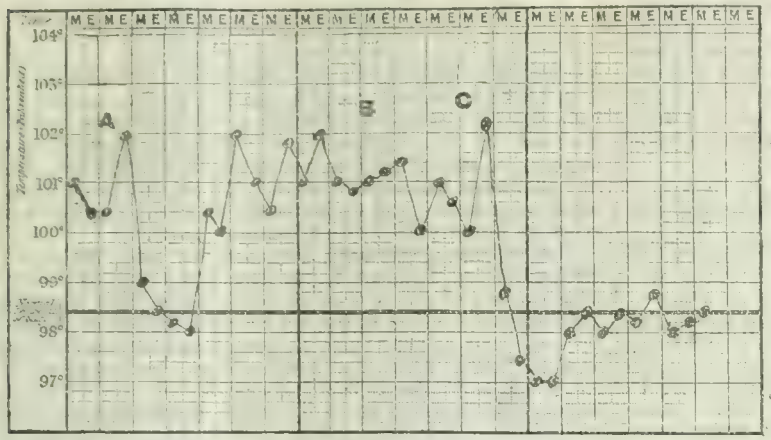
No.	Name.	Sex.	Age.	Type of Disease.	Date of First Injection of Serum.	Day of Disease when Injected.	Total Amount of Serum.	Result.	Remarks.
1	J. P.	M.	22 yrs.	Ordinary (severe)	Sept. 3rd, 1907	3rd, 6th, and 8th	90 c.cm.	Recovery	Very severe initial symptoms. Rapid recovery.
2	R. B.	M.	8 mos.	Semi-chronic	Sept. 16th, 1907	23rd and 28th	45 c.cm.	Died	Completely unconscious for ten days before injection. A few drops of thick pus only obtained by lumbar puncture on 23rd day.
3	E. S.	F.	12 yrs.	Ordinary	Sept. 18th, 1907	2nd and 4th	60 c.cm.	Recovered	Recovery complete.
4	C. W. (Mrs.)	F.	31 yrs.	Ordinary (severe)	Oct. 9th, 1907	16th, 19th, and 23rd	90 c.cm.	Recovered	Severe attack with continuous high fever until after second injection. Slow, but good recovery.
5	M. Q.	M.	19 yrs.	Fulminant	Oct. 21st, 1907	3rd	30 c.cm.	Died	Fulminant attack. Injected on admission. Died nine hours later of cardiac failure. Thin greenish-yellow pus was obtained from canal.
6	M. M. G.	M.	22 yrs.	Ordinary	Nov. 3rd, 1907	8th and 11th	60 c.cm.	Recovered	Severe initial symptoms. Complete and rapid recovery.
7	J. C.	M.	20 yrs.	Ordinary (severe)	Nov. 11th, 1907	6th, 11th, 22nd, 29th, and 52nd	(180 c.cm. (30 c.cm. hypoderm.	Still ill	Now convalescent after very severe and tedious attack. Not passed danger of relapse.
8	P. H.	M.	13 yrs.	Fulminant	Nov. 22nd, 1907	2nd	30 c.cm.	Died	No effect from serum. Died thirty hours after injection.
9	D. M. I.	M.	11 yrs.	Ordinary	Nov. 23rd, 1907	7th and 18th	(60 c.cm. (15 c.cm. hypoderm.	Recovered	High fever. Drop to normal after each intraspinal injection, no similar drop after hypodermic injection of 15 c.cm. (see chart).
10	J. B.	M.	19 yrs.	Ordinary (severe)	Nov. 25th, 1907	15th hypodermically 6th, 8th, and 13th	82 c.cm.	Recovered	Complete recovery.
11	E. M.	F.	8 yrs.	Ordinary (severe)	Nov. 29th, 1907	6th, 13th, 17th, 19th, 22nd, 34th, and 45th	210 c.cm.	Recovered	Severe attack. No loss of consciousness. Stringy pus obtained at first lumbar puncture. Long intermittent fever. Case closely resembles No. 7.
12	E. K.	F.	4 yrs.	Ordinary	Dec. 4th, 1907	14th and 17th	60 c.cm.	Recovered	Complete recovery. Two weeks ill when admitted. Semi-conscious and greatly emaciated.
13	P. S.	M.	4 yrs.	Fulminant	Dec. 8th, 1907	3rd	30 c.cm.	Died	Admitted completely collapsed and comatose. Died five hours after injection. Thin greenish-yellow pus was obtained at lumbar puncture.
14	C. S.	M.	13 yrs.	Fulminant	Dec. 18th, 1907	2nd and 3rd	65 c.cm.	Recovered	Fulminating onset. Rapid and complete recovery.
15	. H.	M.	27 yrs.	Ordinary	Dec. 19th, 1907	6th and 7th	60 c.cm.	Recovered	Complete recovery.
16	J. C.	F.	8 yrs.	Chronic	Dec. 20th, 1907	34th	180 c.cm.	Still ill	Admitted at 34th day, completely unconscious, opisthotonos, deaf, great emaciation. Slight improvement since. Still under treatment; prognosis not hopeful.
17	P. D.	F.	4 yrs.	Ordinary (very severe)	Dec. 26th, 1907	5th and 6th	60 c.cm.	Died	Thick, ropy, yellow pus from canal. No improvement shown. Died three hours after 2nd injection.

II.—*Union Fever Hospital.*

No.	Name.	Sex.	Age.	Type of Disease.	Date of First Injection of Serum.	Day of Disease when Injected.	Total Amount of Serum.	Result.	Remarks.
18	R. C.	M.	14 yrs.	"Semi-chronic"	Sept. 9th, 1907	35th	30 c.cm.	Recovered	Continuous fever with frequent very severe headache for thirty-five days. Rapid recovery after one injection.
19	F. McC.	M.	17 yrs.	"Semi-chronic"	Sept. 15th, 1907	25th and 32nd	60 c.cm.	Recovered	This case was considered quite hopeless. Semi-comatose for days, not relieved by earlier repeated lumbar puncture. Improvement commenced thirty hours after 1st injection and continued steadily. Complete recovery.
20	P. O. H.	M.	40 yrs.	"Semi-chronic"	Sept. 23rd, 1907	52nd	30 c.cm.	Recovered	Steady improvement with no further headache after serum.
21	W. H. G.	M.	29 yrs.	"Semi-chronic"	Oct. 16th, 1907	57th	30 c.cm.	Recovered	Complete recovery.
22	T. D.	M.	14 yrs.	Ordinary (severe)	Oct. 31st, 1907	4th and 10th	60 c.cm.	Died	No improvement followed injections. Died on 11th day.
23	M. K.	F.	21 yrs.	Ordinary	Nov. 3rd, 1907	7th	30 c.cm.	Recovered	Initial symptoms severe. Complete and rapid recovery.
24	S. K.	M.	20 yrs.	Ordinary (severe)	Nov. 14th, 1907	3rd and 11th	60 c.cm.	Recovered	A very severe attack. Wild delirium and high fever. Recovered with complete loss of hearing.
25	H. J.	M.	24 yrs.	Ordinary	Nov. 16th, 1907	17th and 24th	60 c.cm.	Recovered	Complete recovery.
26	M. McC.	F.	3 yrs.	Ordinary (very severe)	Nov. 17th, 1907	6th, 10th, and 16th	75 c.cm.	Died	A very severe type. Pus in each anterior chamber on admission. Died immediately after 3rd injection.
27	D. S.	M.	7 yrs.	Ordinary	Nov. 22nd, 1907	8th	30 c.cm.	Recovered	A mild case.
28	S. D.	F.	14 yrs.	Semi-chronic	Nov. 21th, 1907	29th and 4 th	60 c.cm.	Recovered	An intermittent type, with complete recovery.
29	F. B.	M.	5 yrs.	Ordinary	Dec. 5th, 1907	7th	30 c.cm.	Recovered	A comparatively mild case. Complete and rapid recovery.
30	S. G.	F.	22 yrs.	Ordinary (severe)	Dec. 6th, 1907	13th and 17th	60 c.cm.	Recovered	A severe case, with recovery by sharp crisis after 2nd injection.
31	H. W.	M.	10 yrs.	Ordinary (very severe)	Dec. 22nd, 1907	2nd, 3rd, 6th, and 10th	120 c.cm.	Recovered	A very severe case. Completely unconscious from 2nd to 7th day. Recovery by sharp crisis after 4th injection given on 10th day.
32	J. L.	M.	36 yrs.	Ordinary (very severe)	Dec. 24th, 1907	12th	30 c.cm.	Died	Admitted on 12th day with wild delirium and high temperature. No effect from injection. Died 30 hours after serum.

Thirty-two cases. Recovered 22. Died 8. Still ill 2.

Of the 22 cases which recovered, recovery was complete in all but one, in which there was complete loss of hearing. This case (No. 24) was a man of 20 years with a very severe attack of the "ordinary" type. He received injections of 30 c.cm. on the third and eleventh days. His recovery was rapid, but his deafness was still absolute at the time of his discharge from hospital on the fifty-fifth day, and will probably be permanent.



Case No. 9.—D. M. I., aged 11. Type "ordinary." Usual onset; admitted on 6th day. Then marked rigidity, Kernig, squint, mind clear. On 7th day L.P. and 30 c.cm.; temperature rose for some hours, fell to normal next day; rose again on 10th day. On 15th day *15 c.cm. hypodermically:* no effect. On 18th day L.P. and 30 c.cm., again followed by rise for a few hours, with drop to normal and general improvement on the following day. Improvement steady. Recovery complete. (It will be noted that no improvement appeared to follow the hypodermic injection of 15 c.cm.) A, L.P. and 30 c.cm. F. and J. serum. B, 15 c.cm. F. and J. serum *hypodermically.* C, L.P. and 30 c.cm. F. and J. serum. (November 24th, meningococcus isolated. December 2nd, opsonic index "positive.")

I show temperature and pulse charts of some cases which will serve to show the effects generally observed after the injections.

Method of Injection.

The antiserum is supplied in 15 c.cm. bottles. Before use it is brought approximately to the temperature shown by the patient by allowing the bottles to stand for a sufficient time in water at, or a little above, that temperature. Chloroform has been given in all cases. A rigid and comparatively large trocar is used—one of medium size from a Potain's aspirator answers very well; to the effluent pipe of this a short rubber tube is attached. The puncture is made and as much fluid as will is allowed to drain off; suction is very seldom necessary; if the amount of fluid obtained is not great, it can often be increased by raising the patient's head and shoulders. The barrel of a Roux serum syringe is then attached to the rubber tube and held upright, and the serum is slowly poured into it from the bottle. Occasionally the 30 c.cm. will flow in without pressure; more commonly about 20 c.cm. will flow in in this way, the remaining 10 c.cm. being slowly injected by means of the piston. I have not so far seen any symptoms which would indicate undue pressure follow.

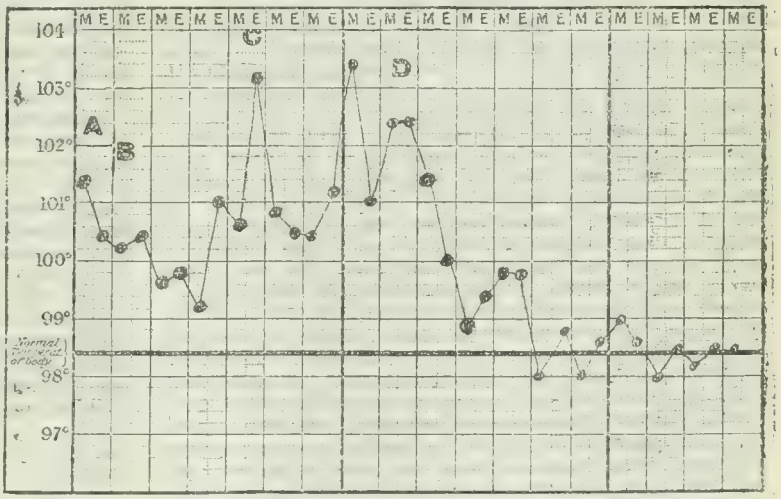
Dosage.

Much further experience will be necessary before any definite statement on this head can be made. Flexner and Jobling recommend that in severe cases 30 c.cm. should be given every twenty-four hours for three days, and then, if further injections appear necessary, that they should be given as the symptoms seem to demand. In our earlier cases we used the serum more sparingly, two or three days or more being allowed to elapse between the injections. At present I am inclined to adopt the following plan: If the case is very severe, and especially if pus is found in the fluid obtained by lumbar puncture, to give 30 c.cm. or larger doses every day for three days; (In one of our recent cases 70 c.cm. were injected within the first twenty hours after admission, with apparently good results). In cases not so urgent I think it better not to repeat the injection until after a lapse of forty-eight hours. In this way only can the effect of the smaller dose be estimated, as the full effect of a single injection is not always apparent until after forty-eight hours or longer. Some of our results have been very good after a single injection of 30 c.cm.; in other cases improvement has only been observed after repeated doses. The largest amount yet given in a single case with us has been 210 c.cm. intraspinally. I have not as yet seen any undesirable symptoms follow the use of the serum.

In several cases the serum was also injected hypodermically, but in none did any marked effect appear to follow. This is well shown in the chart of case No. 9. In this case the injection on the seventh day of 30 c.cm. into the spinal canal was followed by a definite drop in temperature to normal, and this continued for forty-eight hours; it then rose again, and having remained about 101° to 102° for several days, 15 c.cm. were injected hypodermically on the fifteenth day; this appeared to have little, if any, effect. On the eighteenth day 30 c.cm. were injected into the canal, with results on temperature exactly similar to those noticed after the same treatment on the seventh day. The temperature fell to normal on the nineteenth day, and there was no further fever (see chart).

Flexner and Jobling, of the Rockefeller Institute for Medical Research, New York, who have prepared this antiserum, have published[4] a first list of 47 cases treated in this way in widely separated districts, including the first 7 of our cases here. In that series the mortality was 27.6 per cent., practically the same as we have obtained. In their paper also some account is given of the method of preparation of the serum.

A horse was inoculated with cultures of the diplococcus, of which many strains were used; the injections were given hypodermically, in gradually increased amounts. Later, intravenous inoculation was substituted for subcutaneous; then subcutaneous and intravenous injections of an autolysate were used. The intravenous injections were discontinued, and now subcutaneous injections of the living diplococci and of the autolysate are alternately given at seven-day intervals, many different strains of the diplococcus being used in the preparation of the living cultures and the autolysate.



Case No. 31.—H. W., aged 10. Type "ordinary" very severe; usual onset; admitted when 26 hours ill; then cyanosed, unconscious, restless delirium, head retracted, marked rigidity and Kernig. L.P. on 2nd and 3rd days and 30 c.cm. doses; colour somewhat improved; still unconscious and delirious; swallowing difficult; temperature rising again; on 6th day injection was repeated; on 7th day became partially conscious and answered loud questions; temperature continued high and rigidity remained, and on 10th day injection was repeated. General and marked improvement on 11th day, which continued. Recovery was then rapid and complete. A, L.P. and 30 c.cm. F. and J. serum. B, L.P. and 30 c.cm. F. and J. serum. C, L.P. and 30 c.cm. F. and J. serum. D, L.P. and 30 c.cm. F. and J. serum. (December 22nd, meningococcus isolated.)

I am greatly indebted to Dr. Flexner for supplying me with the antiserum for use in our cases.

I fully appreciate how dangerous it would be to attempt to draw conclusions from a small number of cases, and I quite recognize that an estimate of the value of this treatment can only be made after prolonged trial and testing by many observers and under varying conditions. In first sending me the serum, Dr. Flexner stated that "he did not claim that it was of great, or even of any, value," and I think it will be well not to go beyond that position at present; but from the impressions I have formed from an examination of these figures, and from watching the course run by cases treated in this way, I considered I was justified in placing these results before you.

REFERENCES.

[1] *The Practitioner*, January, 1908. [2] BRITISH MEDICAL JOURNAL, July 27th, 1907. [3] BRITISH MEDICAL JOURNAL, October 26th, 1907. [4] *Journal of Experimental Medicine*, January, 1908.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A NOTE ON CALMETTE'S OPHTHALMO-REACTION FOR TUBERCULOSIS.

EXCEPTIONS are said to prove a rule, but the exceptions in regard to the ophthalmo-reaction seem sufficiently numerous and striking to greatly impair its value as a clinical test for tuberculosis. Since Wolff-Eisner and Calmette introduced this modification of the tuberculin test for the clinical diagnosis of tuberculosis it has been tried in many thousands of patients suffering from tuberculosis and other diseases, but comparatively seldom in apparently healthy persons engaged in their ordinary daily occupations. From the numerous published papers on the subject it is evident, in the first place, that a positive result of the test is not always obtained in cases of active tuberculous disease. Patients have failed to react in whom a subsequent *post-mortem* examination has demonstrated the presence of miliary tuberculosis of the cerebral meninges, etc., and the result has sometimes been found to be completely negative in cachectic or dying persons with undoubted advanced tuberculosis of the lungs. Moreover, by some observers, in about 10 per cent. or more of apparently non-tuberculous hospital patients a positive reaction has been recorded, and I believe this percentage would have been much higher if the test had been tried, not on non-tuberculous hospital patients suffering from various complaints, but on apparently healthy persons who have to irritate their eyes by sitting up late every night to read and write by artificial light. I know unfortunately only five medical men who have tried this test or had it tried on themselves, but in all these apparently healthy doctors a positive result was obtained; in three the reaction was violent, and in the other two it was relatively slight, and occurred only after a second instillation of Calmette's tuberculin, the result of the first test (in the other eye) having been negative. I should mention that one of these five medical men had a small tuberculous nodule (resulting from an accidental rather deep inoculation at a *post-mortem* examination on a case of advanced pulmonary tuberculosis) removed from a finger seventeen years ago, but he has had no symptoms of any form of tuberculosis since then, and Calmette's test has been proved to give a negative result in cases of old, obsolete, and "cured" tuberculous lesions. In regard to the strength of the tuberculin fluid used for the test in these cases, it was either the 1 per cent. strength recommended by Calmette or considerably weaker. In one instance another drop of the same tuberculin fluid which excited a violent ophthalmo-reaction in a medical man failed to produce any reaction whatever in the eye of a man (a patient of my own) with the characteristic clinical signs of active tuberculosis of the upper part of one lung, whose sputum, moreover, contained tubercle bacilli. I think results of this kind are worth recording, however exceptional they may turn out to be, since I believe that there has been a tendency to magnify the value of the Calmette ophthalmo-reaction as a clinical diagnostic test for tuberculosis. Much light is thrown on such anomalous results of the test by a recent communication of Waldstein to a meeting of the Wissenschaftl. Gesellschaft deutscher Aerzte in Böhmen on January 15th. He has observed violent reactions as a result of the test in some cases of follicular conjunctivitis, and even in ordinary chronic conjunctival catarrh, whereas the result of the test has been completely negative in some other affections of the eye, notably in tuberculosis of the iris.

F. PARKES WEBER, M.D., F.R.C.P.,
Physician to the German Hospital, London, and the Mount Vernon Hospital for Consumption, Hampstead.
London, W.

PHTHISIS TREATED BY BOVINE TUBERCULIN.

THE following are notes of a case of phthisis treated by hypodermic injections of bovine tuberculin as recommended by Dr. Nathan Raw and manufactured and supplied to me by the Clinical Research Association. The opsonic index has not been taken, the patient being in too weak a condition, but Calmette's ophthalmo-reaction was tried on January 21st with negative results.

The patient, a lady aged 30 years, has been under my treatment for the past eighteen months suffering from tuberculosis of the apices of both lungs with cavities. Previous to coming under my care she had been treated by some well-known physician, also in sanatoriums abroad and at home, when her sputum had been frequently examined and tubercle bacilli always found. Her weight in January, 1907, was 8 st. 12 lb., which gradually decreased to 7½ st. in September, after which it was not taken, as the disease was advancing so rapidly, extending in the left lung down by the vertebra and outwards to the angle of the scapula and forwards to the apex of the heart, with large crepitations and râles. She suffered severely from dyspepsia, almost all food being vomited. She had to take to bed and was panting for breath. On November 17th her pulse was 130, and had been so for a week previous; now it varies from 72 to 80. Her digestion has vastly improved, in fact it is almost as good as ever it has been. She can take full quantities of ordinary solid food, meat and vegetables, and at Christmas partook of the regulation pudding in good quantities without the least ill effect. She gets up daily and goes out for drives. The lungs at the apices and the one at the back have dried up, and there is not a single moist sound to be heard; the intercostal spaces after a fortnight's treatment seemed to fall in, due, I considered, to the lung contracting, as there have been considerable pleural adhesions, but now the spaces between the ribs are filling out and the chest getting nicely covered with fat. She sleeps well and has practically no cough or night sweats.

I commenced the tuberculin injections on November 16th and continued them weekly to January 20th. The evening temperature when the treatment was commenced varied from 100° to 102°. This has gradually subsided and has now been normal for the past four weeks, with the exception of three days when it went up to 99° and 100°, but this was easily accounted for by a slight attack of influenza.

Of course it is too early to call this a cure, but the effects so far have been, to say the least, marvellous, and I wish to report the case in hopes that we may hear the results of the treatment in other hands. I do not propose to give any more tuberculin until I see how the case proceeds, especially as there has been no reddening or injection of the conjunctiva by Calmette's tuberculin test.

Tadworth, Epsom. A. CUFFE, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

JOHANNESBURG HOSPITAL.

A CASE OF RESECTION OF THE RIGHT VAGUS NERVE FOR MALIGNANT DISEASE.

(Reported by H. TEMPLE MURSELL, M.B., M.C., F.R.C.S.E., Assistant Surgeon.)

THE interest of the following case lies not so much in the earlier operations carried out as in the later, where, the right vagus being involved, resection of 2 in. of the nerve was demanded if complete removal of the growth was to be attained.

History.—A man, aged 46, was referred for surgical treatment in February, 1906. In October, 1905, he felt a pricking sensation on the right side of the tongue, "as if a splinter were embedded there." No lump could be seen or felt at this time. Potassium iodide was taken without benefit. Pain gradually increased and a lump appeared. When seen by the writer there was an ulcerated, indurated swelling on the right side of the tongue extending from the middle third back to the base, the floor of the mouth being apparently free. No glands could be felt in the neck.

Operation.—He was admitted to hospital, and a few days later the anterior triangle of the neck on the right side was opened up. No enlarged glands could be detected, but a free dissection of the submaxillary triangle was made. Primary union followed, and twelve days after the first operation the right half of the tongue was removed by Whitehead's method of excision.

Recovery was uneventful.

After progress.—In August, 1906, he returned to hospital with a hard lump infiltrating the middle of the right sternomastoid muscle. The mouth appeared perfectly healthy, and showed no sign of local recurrence. The whole of the sternomastoid was now removed, and the greater portion of the internal jugular vein, the whole anterior triangle being completely dissected clean. The carotid vessels and the vagus were free from involvement in the growth. The patient recovered well and returned to his work. He remained well except for an attack of malaria till August, 1907.

Resection.—In September he returned to hospital with an indurated mass the size of a small walnut in the line of the right carotid on a level with the cricoid cartilage. This mass was fairly mobile, and it was freely dissected out. The carotid could readily be isolated, but the vagus was infiltrated by the growth. Two inches of the nerve were excised with the growth. At the moment of division of the nerve there was some increase in pallor of the face, and some sweating was noticed. There was no marked change in the pulse; none in regard to rate or rhythm, though it appeared rather feebler than before. Respiration was not altered. Dr. Bampfylde Daniell, who was anæsthetizing, was able to give particular attention to these points. The patient's recovery was rapid, and no abnormality beyond unilateral paralysis of the larynx could be detected.

Effect on Larynx.—Dr. A. R. Friel, laryngologist to the hospital, kindly examined the patient on several occasions, and the writer was able to confirm his observations in detail. The right cord appeared shorter than the left, and its margin slightly concave. The right arytenoid cartilage appeared fallen forwards and the right cord motionless and abducted, and in phonation the left cord passed beyond the middle line to meet the right. On phonation the right arytenoid was motionless, but the anterior surface of the left cartilage passed to a plane anterior to the right. There was no sign of inflammation or of excessive production of mucus. Hoarseness and diminished force of phonation, which were marked at first, improved most markedly in the course of six weeks; in fact, the hoarseness in ordinary speaking was scarcely noticeable. The laryngoscopic appearances underwent no change.

Remarks.—In the British Medical Journal Epitome, October 19th, 1907, Venot[1] records a similar case. He directs attention to a case of fibro-sarcoma involving the pneumogastric, in the removal of which he excised about ½ in. of this nerve. The patient, a man, aged 33, made a good recovery, and during the after-treatment presented no disturbance of respiration, and no change in the pulse on the affected side. Faure, in a report on this case, states that it is an additional proof of the relative innocuity of section of the cervical portion of the vagus. The alarming spasm of the glottis, so often observed in the course of deep operations on the neck, is held to be due to irritation of the nerve, and is relieved at once by its division. Of 13 recorded cases of section of the nerve 1 only was fatal, and the result in this case—according to Martini, who has made a very thorough study of the subject—was due not to functional suppression of the nerve, but to concomitant lesions produced in the attempt to remove a large malignant growth in the neck. This observer concluded from his clinical and experimental researches that unilateral vagotomy causes permanent paralysis of the corresponding vocal cord and temporary tachycardia and respiratory slackening, but no disturbance either of the lungs or of the digestive organs. In a healthy and vigorous subject section of the nerve on one side of the neck causes, it is stated, no persistent bad consequence beyond hoarseness. These favourable conclusions, which are confirmed by the reports of Venot and other surgeons, support the view held by Faure that in the removal of a cervical tumour involving the vagus, it would be better for the surgeon to make a complete resection of the involved portion of nerve than to attempt to set it free by dissection, and thus to run the risk of leaving some portion of the new growth in the wound. The additional case now recorded confirms in most details the conclusions above quoted.

[1] *Bull. et Mém. de la Soc. de Chir. de Paris*, No. 23, 1907.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

GLOUCESTERSHIRE BRANCH.

With regard to a meeting of this Branch of which a report appeared in the British Medical Journal of February 8th, p. 319, we are asked by the Honorary Secretary to correct the statement which appears there that Mr. E. C. Cripps, of Cirencester, "advocated ether administered by the open method, recommending Carter Braine's inhaler." Mr. Cripps did not advocate the open method; he said that while it well suited some cases, there were many where one might use a pint or more of ether in an open inhaler and then not get the patient under. Ormsby's inhaler as used for ether he considered essentially a closed inhaler, and he used and showed Carter Braine's modification because it had many improvements compared with the original pattern.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

Therapeutical and Pharmaceutical Section.

Tuesday, January 28th, 1908.

Dr. T. E. Burton Brown, C.I.E., President, in the Chair.

New Members.

The following gentlemen were elected to the membership of the Section: John McDonald Brown, M.D., F.R.C.S.; Frederick William Higgs, M.B., B.S., M.R.C.P.

Royal Commission on Vivisection.

Professor W. E. Dixon announced that he had given evidence before the Royal Commission on Vivisection, as the representative of the Section. Dr. Burton Brown proposed a vote of thanks to Professor Dixon for having done so, Dr. Gray Duncanson seconded, and this was carried unanimously.

Nutmeg Poisoning.

Professor Cushny gave an address on nutmeg poisoning. He referred to the scanty recognition of this in English medical literature, and noted the work of his former assistant, Dr. Wallace, in America, who found that cases of poisoning occurred exclusively from the use of the crude nutmeg or mace; in many instances it had been used as an abortifacient, although it does not appear to have this action. As far back as 1576, Lobelius relates a case in which a woman was rendered delirious by nutmeg. The symptoms were drowsiness, stupor, diplopia; delirium frequently is present, and sometimes the first symptom was burning pain in the stomach, precordial anxiety, or giddiness. One case of death in a boy occurred after eating two nutmegs. The symptoms resembled those caused by cannabis indica. Professor Cushny showed how the powerful poison was contained in the oil of nutmeg, and it was the fraction which came over at 150° C., 14 mm. Hg; from this several bodies had been isolated—for example, myristicin. From experimental work, he came to the conclusion that the symptoms were to be attributed to action on the central nervous system, which was depressed, but exhibited some indications of stimulation in the form of restlessness, slight convulsive movements, and tremor. The oil also had a marked local irritant action, whether given by the mouth or hypodermically. The stomach wall was found red and injected; the urine often contained albumen.

Dr. Power (introduced by Professor Cushny) said that he had been working on the chemistry of oil of nutmeg, which he found a very complex mixture. He had isolated large quantities of myristicin, which did not conform in its features with the substance described by Semmler under that name. He drew attention to the very small

amount of myristicin contained in the quantity of nutmeg necessary to induce poisoning, this suggesting a doubt to his mind whether the symptoms were entirely due to this body.

Dr. J. GRAY DUNCANSON mentioned the case of a woman who aborted after taking, amongst other things, a ground nutmeg in gin; she displayed the symptoms described.

Professor CUSHNY replied.

ARTERIO SCLEROSIS.

Professor W. E. DIXON dealt with arterio-sclerosis and its causation. He referred to two theories of causation—(*a*) raising of blood pressure, (*b*) toxic influences—and showed that it had been established conclusively by experiment that arterio-sclerosis could be produced in the lower animals by simply compressing the abdominal aorta for one minute once or twice a day for a comparatively short period. The changes consisted in a drawing out of the elastic fibres and degeneration of the muscular coat, plaques of calcareous material being formed. He explained how this might be brought about in man owing to violent exercise; more especially was this likely to occur as man grew older, as the rise of blood pressure was then greater after exertion than in youth. Dr. Dixon also spoke of the effect of nicotine on the blood pressure, comparing the sudden high rise in the young non-smoker after his first cigar with the slight rise in the moderate smoker and the absence of effect in the habitual smoker. He concluded by stating that man produced a ferment, probably in his liver, which counteracted the effect of nicotine.

Professor CUSHNY hoped that the study of this subject might lead to some advance in treatment. He did not think that the raising of blood pressure in man—for example, by the administration of digitalis—would give rise to these changes.

Dr. SAVILL stated that he was surprised to hear that the compression of the abdominal aorta for such short periods in small animals should give rise to so serious changes in the aortic arch as had been described by Professor Dixon.

Mr. MABEN also spoke.

SECTION OF SURGERY.

WARRINGTON HAWARD, F.R.C.S., *President*, in the Chair.

Tuesday, February 11th, 1908.

COXA VALGA.

MR. A. H. TUBBY, M.S., F.R.C.S., read a paper on coxa valga, which he defined as a deformity of the femur in which the angle of inclination of the neck upon the shaft was increased; it was altered, that was to say, in an opposite sense to that found with the better-known condition of coxa vara. The causes were classified as follows: Congenital, which were subdivided into those in conjunction with congenital dislocation of the hip and those not associated with abnormalities elsewhere. Acquired, which might be (1) due to alterations of the lower extremities, resulting in a more or less pendent limb, such as occurred in extensive infantile paralysis; (2) occurring in the stump after amputation through the thigh; (3) static or functional, as might be seen with genu valgum and with scoliosis; (4) traumatic, following injuries of the neck and shaft of the femur; (5) associated with rickets and some other processes of softening of the bone. In this last condition, however, the alteration in the neck of the femur was probably only a secondary effect of previous outward bending of the femur. For the "idiopathic" form described by some authors there was no clear evidence. With reference to the pathogenesis, it could be shown that the normal shape and position of the head and neck of the femur depended upon the nice adjustment of certain forces—namely, weight pressure, resistance of the bone, and muscular effort. If any one of these factors, or all of them, were varied in degree, altered in direction, or destroyed, changes took place conformable with Wolff's law, and the head and neck of the femur assumed different positions and directions. The cardinal symptoms were abduction of one or both lower extremities, associated with external rotation and limitation of adduction. Pain and spasm were often experienced at the beginning of the affection, and the gait in unilateral cases was limping, with the trunk inclined towards the affected side. In bilateral cases it was rolling and unsteady. The limb was frequently lengthened to as much as 2 to 3 cm., and it was abducted and rotated out, whilst movements of adduction and internal rotation were limited. Trendelenburg's sign was reversed, as the patient when standing on the affected limb inclined the body towards that side. Flattening over the great trochanter was often noticeable, and lumbar scoliosis, with its convexity towards the affected limb, was sometimes present. Very important evidence was obtained by skiagraphy, and the fallacies in connexion with this must be carefully noted, The diagnosis must be made from coxitis with abduction of the limb, from sacro-iliac disease, and from congenital dislocation not complicated with coxa valga. With reference to the treatment, various forms of operation had been performed, namely, cuneiform osteotomy of the neck removal of a wedge of bone with its base inwards from the subtrochanteric region, and linear osteotomy through the base of the neck. According to the conditions and surroundings of the patient one of the last two plans should be chosen. At the conclusion of the paper, which was illustrated by numerous diagrams and radiographs, Mr. Tubby demonstrated several cases of the deformity owning different causal factors.

Mr. GORDON WATSON thought it very difficult to understand how rickets could produce an increase in the angle of inclination, and that radiograms, taken in the ordinary position, of all cases of congenital dislocation showed as great an inclination as those which Mr. Tubby described as coxa valga.

On the latter point, Mr. TUBBY replied that he had been at great pains to measure the angles with radiograms in different positions of the limbs.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., *President*, in the Chair.

Monday, February 3rd, 1908.

TUBERCULOSIS OF THE KIDNEY.

MR. CHARTERS J. SYMONDS delivered the first of the Lettsomian Lectures for 1908, taking as his subject the early signs of renal tuberculosis, and the effects of the operations performed for the relief of the condition. Of the early symptoms the first to which attention was called was that of renal colic.

A typical instance was the case of a young lady of 20, who had the first attack two years before, the second a year after the first, and a third just before she was seen. In the interval she had been in apparently good health. Albumen was found to be present three months before she was seen, together with a little pus in the urine. The case was looked upon as one of renal calculus. Tubercle bacilli were examined for especially, after the *x* rays gave a negative result, and were found. The cystoscopic examination showed tuberculosis of the bladder round the right ureter, with swelling of the ureteric orifice, the left side being healthy. On this evidence the right kidney was removed, the ureter being left, partly because the patient had recently suffered from an attack with scanty urine, partly because she was delicate, and it was unwise to prolong the operation; and, finally, for fear that prolonged narcosis might be injurious in the presence of inadequate renal action. The kidney showed an old tuberculous centre in the lower pole, evidently of long standing, with fresh miliary tubercles in the cortex and in the pelvis. Under tuberculin treatment this patient had completely recovered.

To illustrate further this initial symptom another case was described.

The patient, a man aged 46, who had been out of health for two years, with no localizing symptom, had a sharp attack of renal colic, followed by vesical irritation. He had a second attack in every way typical of renal colic, and it was thought that a small calculus had passed into the bladder. Nothing being found on examination, the urine was examined for bacilli, and these were found in fair numbers. The cystoscope showed a healthy bladder, with prolapse and oedema of the right ureteric orifice. The kidney, being removed, showed old cicatricial tissue, with marked contraction of the lower pole. This evidently was of long standing, and probably explained the early malaise. There was recent miliary tubercle in the cortex and in the pelvis. All the bladder irritability disappeared after the operation.

Next vesical irritation as the only symptom was illustrated by the following case:

The patient was a young woman who had this trouble alone for twelve months, varying in intensity. There was no

unilateral kidney pain. The bladder was found by the cystoscope quite healthy; the lips of the right ureteric orifice were swollen and marked by small white elevations. The kidney was removed and showed extensive disease of the lower half with fresh clumps of tubercle in the cortex and the pelvis. The ureter was removed at the same time and a rapid recovery followed with immediate disappearance of all the symptoms. In a lady of 40 the only symptom complained of for at least two years, and possibly for five, was from time to time an abdominal uneasiness, hardly amounting to pain. This sensation occurred chiefly in the night, lasted about an hour, was followed by a bad night's rest, and a day of lassitude. Nothing was found on examination. Subsequently vesical irritation began and later tubercle bacilli were found. Search was specially made for these because of the large amount of albumen in the presence of little pus. In this case the bladder showed miliary tuberculosis and tuberculous ulceration near the right ureteric orifice, but the margins of the aperture were normal and the efflux of urine clear. On this evidence tuberculin treatment was carried out, but without improvement. After ten months' treatment the patient suddenly became ill with high temperature, rigors, passed a large quantity of pus, and developed a large painful renal tumour. Nephrectomy was performed, the ureter being left. The kidney showed several cavities filled with pus; obliteration of the greater part of the pelvis with one ulcerated channel leading from some of the larger cavities to the ureter. The appearance suggested long duration and a recent communication between the pus cavities and the ureter. The last case related was that of a lady of 30, who, after more than a year's vesical irritation, without any renal pain, was seized with rigors and hyperpyrexia. Coming under Mr. Symonds's care after two months' illness, she was found very emaciated, delirious, and exhibited all the signs of septicaemia. The urinary tract being suspected, an abdominal exploration was made, and the left kidney found to be somewhat enlarged. Exposed and incised through the loin, pus was evacuated, followed by subsidence of all the symptoms. After a time the kidney was removed, and proved to be tuberculous. The loin, sinus, and bladder symptoms persisting, the whole ureter was removed, and the patient made a complete recovery, being at the present time (ten years from operation) quite well.

The principal points commented upon in the lecture were the necessity of examining the urine in cases of renal colic in young people; the importance of vesical and urethral irritation as a symptom of renal disease, and especially of tuberculosis; again, that renal tuberculosis should be suspected when the amount of albumen in the urine was of greater amount than could be explained by the pus. A special tribute was paid to the value of the cystoscope, and reference was made to papers read before the Society by Mr. Harry Fenwick, and the lecturer acknowledged the help he had obtained in this regard from Mr. Pardoe. Charts showing the opsonic index in two of the cases, where the tuberculin treatment had been carried out by Dr. Eyre, were also exhibited, together with lantern slides and water-colour drawings of the kidneys removed, as well as the specimens themselves.

At a clinical meeting held on February 10th, Dr. J. Kingston Fowler (President) in the chair, Dr. de Havilland Hall showed a case of ascites treated by epiplopexy. Mr. W. H. Battle showed a case of diffuse cancellous osteoma of the femur following fracture in a boy aged 3½. The boy's older brother had developed a similar tumour as a result of fracture of the left femur, and it was treated by amputation of the thigh at the hip-joint; but later he had a tumour of the right femur, which subsequently disappeared, and then a similar tumour of the right tibia was noticed. Dr. C. E. Beevor showed a case of prolonged ataxia after diphtheria. Mr. Gordon Watson showed a patient, aged 11, on whom he had performed laparotomy for perforation in enteric fever. The operation took place within an hour of the occurrence of the perforation, and the result was successful. Dr. Essex Wynter showed a case of partial obstruction of the superior vena cava in a man, aged 43, exhibiting cyanosis and venous engorgement of the head and arms, with well-marked clubbing of the fingers and enlargement of the liver. Mr. H. J. Waring demonstrated a case of traumatic myositis ossificans; and Mr. F. C. Wallis brought forward a case of lympho-sarcoma successfully treated by *x* rays, and also showed a case of ununited fracture of the femur treated with a Hoeffteke's splint. Dr. Robert Hutchison exhibited a case of splenomegalic polycythaemia; Dr. W. H. Willcox showed a boy with symmetrical polyarthritis of the hands; Dr. Cecil Wall demonstrated a case of syphilitic infiltration of the superior mediastinum; and Mr. Morgan Dockrell showed three cases of ul erythema.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Dr. Allan in the Chair.

Friday, January 31st, 1908.

The Treatment of Gastric Ulcer.

Dr. Barrs and Mr. Moynihan opened a discussion on the treatment of gastric ulcer.

Dr. Barrs said that the rapid rise and striking success of the surgical treatment of gastric ulcer had invested the subject with a new interest and a greater importance, whilst the responsibility of the physician had proportionately increased, for with him still rested, very properly, the duty of determining, in any given case, whether medical or surgical treatment should be adopted; and it was only by maintaining him in his position of judge of first instance that unnecessary, and therefore unjustifiable, operations were to be avoided. The first, and by far the most important, question the physician had to decide in the treatment of any case of gastric ulcer was whether the case was one for medical treatment at all. That was a question to which he had up to a certain point no difficulty in making an answer which he thought would be generally accepted. The following cases, he thought, should be handed over to the surgeon without delay: (1) All perforations or suspected perforations; (2) all cases in which visible and palpable signs were present, due either to perigastritis or dilatation; (3) probably all male cases; (4) many of the older female cases, who rarely got rid of gastric ulcer without operation, and not infrequently had duodenal ulcer; (5) all cases which, though having no visible or palpable signs, resisted prolonged and efficient medical treatment, especially those with repeated haematemesis, even though the haematemesis was small in quantity. Where no definite lesion in the stomach was detected when the abdomen was opened he would suggest that no gastro-enterostomy should be done. No cases of first haematemesis should be treated by operation, and he thought in no case of repeated haematemesis should operation be done during the actual bleeding. He said this because the surgeon's present method of dealing with haematemesis was not scientific. He could not help it, but it was usually impossible for him to deal directly with the bleeding point. When all these had been disposed of, the physician is left with a large class of cases, represented most commonly by the young unmarried woman, frequently a domestic servant, but rarely a cook, whose complaint was of months, or possibly years, of great suffering (frequently with striking intermissions) from severe gastric pains, usually, but not always, aggravated by food, and relieved by vomiting, with or without occasional and profuse haematemesis along with profound anaemia and cachexia. These young women were, as a rule, poor meat eaters by nature, and many of them had had their teeth destroyed by the medicinal use of iron. Of physical signs in the abdomen in these cases there were none save superficial sensitiveness in Head's gastric area and tenderness on pressure in the epigastrium. The area of tenderness was, as a rule, quite definite, and easily covered by the end of one's thumb. That was the type of case, Dr. Barrs said, which all of them were accustomed to treat by medical means, and apparently with much success; almost all these cases were entered as "cured" when they left the hospital. But gastric ulcer was a very inveterate and long-drawn-out disorder, and many of their so-called "cures" were, he was afraid, very temporary affairs. Cases returned again and again, especially the older ones, until, as a last resort, gastro-enterostomy had to be done; so that in regard to these cases he would say medical treatment should always be tried for a reasonably long period of time; but if frequent relapses occurred, and above all if frequent haemorrhages—large or small—occurred, gastro-enterostomy should be done. But his experience of the surgical treatment of the intractable cases of this class, without definite physical signs, had not been without its disappointments, for it was obvious that the more definitely mechanical the causes of the symptoms were the more certainly were they relieved by the purely mechanical procedures of the surgeon; that was to say, surgery was most successful in cases where the ulcer had produced mechanical defects in the stomach. What, then, Dr. Barrs asked, should be regarded as efficient

medical treatment? The most essential part of medical treatment was prolonged and complete rest in bed; without that all other means were of no avail. To make a diagnosis of gastric ulcer, whether it turned out to be right or wrong, and at the same time, to allow the patient to be out of bed, was to his mind an unpardonable inconsistency. The moment a patient was even suspected of gastric ulcer she should be put to bed. He was not permitted to enter into the question of diagnosis, but he would like to say that they ought *not* to insist upon the presence of haematemesis or even of vomiting before making a working diagnosis of gastric ulcer. Having put the patient to bed what next was to be done? The general public, and possibly many of the profession, still thought diet was the most important thing in the treatment of gastric disorders. As time went on his system of dietetics became simpler and simpler, and he thought that any adult patient (except perhaps a diabetic) who could not take ordinary articles of diet—that was, solid food—had better take no food at all and lie in bed and drink water until he could. He never ordered milk for patients with gastric ulcer, he repudiated entirely the old practice of saying to a patient with gastric ulcer "A milk diet or your life." He wished they could see the same reduction in the milk bills of hospitals as recent years had seen in their alcohol bills. He could not understand how they, as a profession, could go on countenancing milk drinking in bulk by adult patients and the public at large, knowing as they did that it was probably the surest way of introducing the tubercle bacillus as well as other pathogenic organisms into their bodies. Bulk was a much more important consideration in the food of a patient suffering from gastric ulcer than *kind*, and small meals of meat and stale bread (if they could be taken *without pain and not unless*), along with water in any reasonable quantity to drink, was the food he usually suggested; but if there were vomiting, no food should be given, only plain fresh water to drink. He never used nutrient enemata or nutrient suppositories, but if vomiting prevented the taking of water by the mouth, he used normal saline injections, or injections of a solution of glucose should be employed. Enemata of any kind were not infrequently very distressing to patients, and might induce vomiting. No patient with gastric ulcer should be allowed to leave her bed until she had taken ordinary mixed solid food at the ordinary meal times for ten days at least, ten days of food not only without pain but with enjoyment. He never ordered any form of artificial or artificially digested food for anybody, or any of the so-called digestives. For medicine he had great faith in bismuth carbonate in large doses given in plain water and not in the gummy mixtures which were at one time in vogue. It should be given twenty minutes before food was taken into the stomach. If there was very much pain a little morphine—say 5 or 10 minims of the solution of morphine—could be given along with the bismuth powder. If there was constipation, and there usually was, a rhubarb pill or some other simple laxative might be given twice or three times daily after food, so as to ensure a natural action of the bowels once daily without straining and without purging. He did not give saline purges in gastric ulcer. Local applications of heat to the abdomen gave ease to the patient. He never used any severe forms of counter-irritation, such as blisters and mustard poultices. Iron was most undesirable for patients suffering from gastric ulcer, however anaemic they might be. In the treatment of haematemesis he adopted the same plan—absolute rest of body and mind, by morphine if necessary, and water drinking sufficient to allay thirst, not by teaspoonfuls but 3 or 4 oz. at a time. He had no faith in so-called haemostatic drugs in internal bleeding, but saw no objection to the use of such harmless and tasteless things as chloride of calcium, for example. Suprarenal extract might, perhaps, be used, but it was a powerful substance and should be given with care. Patients suffering from recent and severe haematemesis were never hungry and therefore did not require food. After three clear days from the cessation of the haematemesis, food, such as meat, eggs, and stale bread, might be given if the patient wished it, not unless. After haematemesis the patient should be kept in bed until anaemia had largely if not entirely disappeared.

Mr. MOYNIHAN dealt with the surgical treatment of gastric ulcer. He differentiated between acute ulcer, in which only the mucous surface of the stomach was, as a rule, involved, and chronic ulcer, in which the destructive and reparative processes had together involved all the coats of the stomach, so that the ulcer was a visible, palpable, and demonstrable lesion. In acute ulceration surgical treatment was never necessary on account of haemorrhage, and rarely on account of perforation. In his own series of 37 cases of perforating ulcer, there was only 1 in which the ulcer was acute; in the remainder it was a chronic ulcer, the symptoms of which had been present for months or years, and had been recently more acute. Gastro-enterostomy, in addition to closure of the ulcer, was called for if there were other ulcers or if the closure of the ulcer was likely to cause obstruction. Haemorrhage in chronic ulcer rarely called for urgent operation; an interval of freedom from bleeding should be chosen. Excision of the ulcer, or its infolding, the vessels supplying the ulcer being secured, and gastro-enterostomy were usually to be practised. Chronic ulcer of the stomach or of the duodenum was held to be a condition which should in all cases be treated by operation. The difficulty in some cases in arriving at a diagnosis was referred to, and the opinion expressed that in most cases an exact diagnosis was attainable, and that in many the position of the ulcer could be predicted. If, however, after the abdomen had been opened, an inspection of it revealed no lesion, there was no indication for any operation upon the stomach itself. Under no circumstances whatever, and in compliance with no persuasion however insistent, should the surgeon consent to perform gastro-enterostomy in the absence of definite demonstrable organic disease. If an ulcer were found near the pylorus, on either side, gastro-enterostomy should be performed, and if possible the ulcer should be infolded, to prevent perforation or haemorrhage, both of which had occurred after gastro-enterostomy. If the ulcer was on the lesser curvature in the cardiac half of the stomach it should be excised; gastro-enterostomy in such cases gave only slight and temporary relief. When multiple ulcers were present in the pyloric region, or when a doubt existed as to the malignancy of the condition, Rodman's operation—excision of the ulcer-bearing area—was indicated. The method of gastro-enterostomy which gave the best results was the posterior operation, the jejunum being applied almost vertically to the stomach, and the anastomosis being made as close to the flexure as possible.

The following gentlemen took part in the discussion: Dr. ALLAN, Dr. EDDISON, Mr. SOLLY, Mr. BATES, Mr. STEWART, Mr. KNAGGS, Dr. PORRITT, Dr. CHRISTIE WILSON, Dr. LEWERS, Mr. COLLINSON, Mr. H. H. GREENWOOD, and Dr. WALKER.

Dr. BARRS and Mr. MOYNIHAN replied.

CASES AND SPECIMENS.

Mr. H. LITTLEWOOD showed (1) a patient suffering from pyloric stenosis, on whom gastro-enterostomy had been performed in June, 1907. Weight before operation, 3 st. 7 lb.; present weight, 7 st. 12½ lb. (2) A specimen of thrombosis of some vessels in part of transverse colon, producing intestinal obstruction. (3) Gall bladder, with stones, removed from a girl 18 years of age. The gall bladder was contained in a complete mesentery extending from the liver to the colon. Dr. HELLIER showed a sarcomatous growth removed from an old abdominal cicatrix. Mr. J. F. DOBSON showed a specimen from a case of abscess in the great omentum, with diffuse peritonitis. Almost the whole of the omentum was removed. Specimens and cases were also shown by Mr. WALTER THOMPSON, Dr. CARLTON OLDFIELD, Mr. E. WARD, Mr. LAWFORD KNAGGS, Dr. J. ALLAN, and Mr. B. G. A. MOYNIHAN.

LIVERPOOL MEDICAL INSTITUTION.

THOMAS BICKERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Thursday, January 16th, 1908.

MITRAL REGURGITANT MURMUR.

DR. T. R. BRADSHAW read a paper on the physics of the mitral regurgitant murmur, especially with regard to its audibility at the heart's apex. He assumed the correctness of the views held by George Balfour, Chauveau, Marey, and others, that murmurs were due to the vibrations of the "fluid veins" formed in the space beyond the narrowing. The difficulty in explaining the mitral regurgitant murmur on this theory was that it was heard at a point

(the apex) in the opposite direction to the "fluid vein," which was directed towards the auricle. No explanation quite satisfactory had ever been offered; the writer's explanation was that the sonorous "fluid vein" lay between the two curtains of the mitral valve, and that its vibrations transmitted to the cone of blood, passed through the thin walls without damping, and set up vibrations in the ventricle. The vibrations were heard best at the apex because the walls of the ventricles were thinned at this spot, and this spot was most accessible to auscultation. He showed an apparatus constructed to show that sonorous vibrations could under similar conditions be conducted in a retrograde manner. The paper was discussed by the President, Sir James Barr, Professor Wilberforce, Drs. Lloyd Roberts and Buchanan, and Dr. Bradshaw replied.

British Balneological and Climatological Society.—At a meeting held on January 29th, Dr. Alfred Street (Westgate) in the chair, Dr. Fortescue Fox reintroduced the adjourned discussion on the paper of Dr. Edgecombe (Harrogate), *Blood-pressure in Spa Practice*, read on December 11th, 1907. He dwelt upon the importance of vasomotor tone as a factor in arterial blood-pressure. Abnormalities of pressure were in fact in the first instance nervous disorders, and balneological treatment, here as elsewhere, took effect to a large extent through the nerve centres. The effect of baths (*subthermal*) at a temperature between that of the blood and the skin was unquestionable in reducing excessive vaso-constriction and therefore blood pressure. He described a hereditary type of "poor circulation" in gouty families, for which hyper-thermal spa baths afforded the best treatment. In middle and later life, a judicious course of cooler baths relaxed arterial spasm and delayed for many years the development of incurable high tension. In disorders of the climacteric and other vasomotor ataxias, spa treatment was usually efficient, but subthermal baths must be employed with a sedative effect in view. Mr. Lockhart Mummery said he had done a lot of experimental work upon blood pressure, and his opinion was that it was advisable to use only the pulse-obliteration point (systolic pressure), and that the so-called diastolic pressure was quite useless and unreliable, and there was no proof that it was diastolic pressure. In fact, experimental evidence was opposed to its being diastolic pressure. He gave the figures from a series of experiments showing that the systolic pressure as estimated by the Riva-Rocci instrument was correct to within 2 mm. of Hg. He also pointed out that the Riva-Rocci instrument with a straight manometer tube was the most reliable, and that with the U-tube, as in Martin's instrument, any error of reading was doubled. Dr. Alfred Mantle (Harrogate) said disturbances of the peripheral circulation materially affected the general blood pressure. Cold subjects having a tendency to an abnormal contraction of the peripheral circulation were met with, and as a result of a diminished quantity of blood in the cutaneous reservoir there was an increased amount in the splanchnic and other areas which in time might produce gastric, hepatic, renal, or cardiac complications. In another type the periphery was dilated, and such people were always warm, and he had observed them to be more subject to cutaneous diseases, also to glycosuria. The importance of what might be called the "skin heart" in regulating the blood pressure was too little appreciated. Dr. William Ewart referred to the prevailing view that the tortuosity of arteries was the result of long-continued high pressure. In his experience tortuosity sometimes occurred in hypotensive subjects, and should not therefore be accepted as positive evidence of high tension. Dr. Street (Westgate) said that abnormalities of blood pressure were undoubtedly due to vasomotor disorder, but peripheral vasomotor abnormality did not connote serious disturbance. Dr. Buckley (Buxton) said the treatment of the early stages of high blood pressure by subthermal baths, as suggested by Dr. Fox, was most important, and at certain Continental spas had been made a speciality. The treatment of gout in Buxton for generations had followed these lines, showing that empirical methods were based on sound principles. Referring to the remarks of another speaker, he pointed out that there were many English springs of great value as diuretics, where treatment similar to that of Evian or Contrexéville could be carried out.

REVIEWS.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

At the present time, when the medical inspection of elementary school children is under consideration in nearly every part of the country, the pamphlet issued by Dr. Hackworth Stuart, entitled *The Doctor in the Schools*,[1] will be found well worthy of study. Dr. Stuart is able to write from an experience gained in working for the Hanley Education Committee, which four years ago realized that medical inspection was an important public duty. He bases his recommendations on the principle that one of the foremost objects of a sound scheme is to bring home to the parents their responsibilities where physical defects occur in their children, and adds:

> Compulsory education presupposes, first, that the child is mentally and physically fit to be educated; and, secondly, that after his State education is completed he is capable of remaining fit for the duties of civil life, and so repaying the State for his training. If a child is not educable on ordinary lines by reason of some defect, this must be removed or ameliorated; and, if that be impossible, the child must be liberated from the usual school routine. In this way most children will be rendered as far as possible educable, while some will be safeguarded from the over-pressure of unsuitable instruction, and the public funds will be insured against waste on unproductive expenditure.

With regard to the organization of the work, he writes:

> The sanitary condition of schools, and infectious diseases of children in relation to public health, might well remain under the supervision of the medical officer of health, allowing the school doctor to concentrate his attention on the more personal objects of inspection, the work of each of these officials forming a distinct section of preventive medicine.

He thinks it important to keep in view the primary objects, and not to be tempted to unduly enlarge the field of investigation, so that "any satisfactory scheme must give second place to the compilation of statistics for anthropometric survey, as compared with the practical aim of securing relief from physical defects which render children unfit for school life, and cause waste of public money." He, however, recognizes the great value of a reliable record of the physical condition of the children, and points out that it is much wiser to secure such a record at an age when the physique is plastic, than at military age.

In commenting on the policy of the Board of Education—to work the inspection through the medical officer of health's department—Dr. Stuart expresses the opinion that where circumstances are such that the medical officer of health is able to undertake the duties himself, he may become responsible to the local education authority for their discharge, but he points out that there are many questions to be considered besides the practical and economical convenience of this policy. He says:

> An officer who has devoted himself to the broad issues of public health may have sacrificed the more clinical instincts requisite for dealing with the individual child, and rarely will he have been able to take up in addition the study of defects of the special sense organs which bulk so largely in the work under consideration.

Dr. Stuart therefore suggests that where the medical officer of health needs an assistant to carry out the inspection of children, this assistant should be appointed by, and be the executive officer of, the local education authority, while at the same time responsible to and acting under the direction of the executive officer of the local sanitary authority. The course which he says appeals to some who have already had experience is to "let the local education authority appoint and retain its own independent medical officer for inspection purposes, and direct him to confer with the medical officer of health on all matters relating to sanitation and infectious diseases in schools." Dr. Stuart recognizes that in view of the large number of children to be dealt with, the work of practical individual examination can only be successfully carried through with the hearty co-operation of the teachers, and as far as possible of the parents, while the mechanical and clerical processes are reduced to a minimum. He advocates a card index, the forms affording space for recording the results of the inspection on admission, at the 7th year, the 10th year, and on

[1] London: H. K. Lewis. 1908. 1s.

leaving school. He also recommends that the medical inspector should keep a diary entered up at each visit, from which he would be able to construct his report. The medical examination should be made in a private room, and the presence of a parent should be obtained if possible. Defects found should be notified to the parents by explanatory printed forms, special forms being kept for:

Defective sight.
External eye diseases.
Squint.
Running ears.
Deafness.
Mouth-breathing due to .....
Bad teeth.
Enlarged glands.
Nits.
Want of cleanliness (neglect).
Clothing, insufficient or unclean (neglect).
Skin disease.
Requires medical treatment until well on account of.....
Unfit for school.

Each one of these physical disabilities is discussed, as is also the constitution and working of special classes for defective children. In concluding a very practical essay, Dr. Stuart expresses the opinion that a school nurse to follow up neglected cases in their homes would be helpful, and recommends that the senior girls should be instructed in the care and feeding of babies by practical lessons given in a *crèche*. We can strongly recommend the perusal of Dr. Hackworth Stuart's pamphlet to all medical men interested in the subject, and also to lay members of education authorities.

MUSEUMS.

THE chief feature in the twenty-first *Appendix to the Catalogue of the Pathological Specimens*,[2] in the museum at Lincoln's Inn, is the collection of over thirty specimens presented by Mr. Cecil Fowler Beadles, known for his writings on psychology. These additions illustrate conditions of interest relating to the pathology of the insane. Some of the finest preparations demonstrate aberrations in the distribution of the cerebral arteries, and others display various aneurysms of those important vessels. Another feature of interest is the series of five preparations presented by Dr. Bashford, the Director of the Central Laboratory of the Imperial Cancer Research Fund. The specimens are mice showing various results due to the grafting of mouse-cancer. Amongst the additions to other series in smaller instalments, we may mention Mr. Battle's five small shot which were found embedded in a large faecal concretion which filled a vermiform appendix. The patient was a woman, aged 60, who was seized with violent colicky pains not during exertion, in fact she was sitting still at the time. Four days later the appendix was removed, it bore a large gangrenous perforation. There was general suppurative peritonitis, the pus being abundant and offensive.

The *Haslemere Museum Gazette*[3] bears the honoured name of JONATHAN HUTCHINSON as its conductor, the promoter of the useful and interesting institution of which this serial is the organ. The main object of Mr. Hutchinson is the encouragement of the formation and perfection of educational museums. In the "editorial notes" to the December number are some observations which must be borne in mind by those who wish to emulate the distinguished editor. He does not think that museums in villages or small towns ought to be devoted to local objects. What are called "local museums," says Mr. Hutchinson, are difficult to make anything like complete, and the endeavour to make them so may stimulate some of the worst vices of the mere collector. Among these vices, we presume, are the prompt slaughter of every rare butterfly and bird that rashly puts in an appearance in the neighbourhood of the edifice. The aims of the editor are far wider. The death of the cuckoo who met his fate by flying against a telegraph wire is duly chronicled, but a good deal is said about sea-shells, including the giant clam and other species not to be found in the immediate vicinity of Haslemere. The proper study of mankind is man, according to the editor as well as Pope, and this *Gazette* certainly includes a great deal of anthropology. The noses of Lorenzo de Medici, a Lowland Scotch farmer, and several Hebrew ladies and gentlemen are portrayed on its pages. The Semitic question, most interesting as a generality but delicate and dangerous when personal, seems to fascinate Haslemere, for we find several paragraphs in which the probability of a Jewish ancestry in the case of Goethe, Erasmus, Descartes, and other worthies is discussed. From the above observations it will be seen that the *Gazette* is no mere catalogue of a local collection. Above all, it encourages collecting, and still more that kind of observation of Nature in which White of Selborne excelled, but its pages, as we have shown, are not limited to those matters. We find extracts from lectures, also maps and chronological statements, portraits accompanied by instructive text, and lists of questions devised to stimulate investigation. There is likewise a great deal about museum statistics; and in reference to Mr. E. Howarth's *Directory* of Museums in the United Kingdom, the editor declares that the *Gazette* not only aims at explaining how educational museums should be established and maintained, but also in convincing municipal bodies and others that such institutions are essential to educational progress, and ought to be provided in every town of any considerable size. We all must cordially agree with the editor in his efforts to stimulate the study of Nature and of man, and his *Gazette* is in itself most interesting and instructive light reading. Museums will no doubt develop in many little townships where they are as yet unknown. Unfortunately, their literary organs will seldom be able to have at their disposal so great a patron and director as Mr. Hutchinson, and so excellent a subeditor as Mr. Swanton, Curator to the Haslemere Museum.

OBSTETRICS.

A BIG third part of the third volume completes what Professor v. WINCKEL playfully calls a "handbook" of midwifery—nominally in three, but really in eight fat volumes.[4] It is not what we should call a handbook, but rather an encyclopaedia. The first forty-six pages of this part complete the set of brief biographies of men who have taught midwifery, which was begun in the earlier volumes. These pages tell us about Russian and American accoucheurs. In looking over the Russian biographies it is remarkable how few of the Russian teachers are Russians born and bred. In all intellectual progress (including obstetrics) Finland is far above every other part of the Russian empire. In the heart of the Russian empire nearly all those who can be called eminent have been educated at German universities, or are they Poles. The next part, the eighth division of the work, occupies 229 pages, and is given to the pathology and treatment of the newly-born infant. The first subject considered is stillbirth. This essay is preceded by ten pages of references. Creditable as this is to the industry of Dr. L. Seitz of Munich, who is its author, yet it is incomplete. It does not include one of the most important papers on the subject, which in England at least was a pioneer work, namely, Dr. Herbert Spencer's paper on "visceral haemorrhages in stillborn children," read before the Obstetrical Society of London in 1891. Some older works quoted by Dr. Spencer also are not included in Dr. Seitz's catalogue of the literature. These are not very important; but the omission of Dr. Spencer's paper indicates a grave deficiency in Dr. Seitz's knowledge. He discusses at great length the various theories (they are little else) of intrauterine death. The occurrence of *vagitus uterinus*, he says, cannot be doubted; but he says that it is no other than a premature movement of inspiration. We are, of course, aware that premature movements of inspiration take place, a reflex effect of cold air on the child's body, and we can conceive

[2] *Appendix XXI to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England.* By Samuel G. Shattock, Pathological Curator of the Museum. London: Printed for the College by Taylor and Francis. 1907. (Roy. 8vo, pp. 58.)

[3] *The Haslemere Museum Gazette: A Journal of Objective Education and Field Study.* Conducted by Jonathan Hutchinson, F.R.C.S., LL.D., F.R.S., assisted by E. W. Swanton, Esq., Curator of the Haslemere Museum. Vol. I. 1905 and 1907. Haslemere: The Museum; and London: John Bale, Sons, and Danielsson, Limited. (Demy 8vo, pp. 626. 7s.)

[4] *Handbuch der Geburtshülfe* (Handbook of Midwifery), in drei Bänden. Herausgegeben von F. von Winckel in München. Dritte Band, III Theil. Wiesbaden: J. F. Bergmann. 1907. (Sup. roy. 8vo, pp. 783; mit zahlreichen Abbildungen im Text und zwei Tafeln.)

that such movements might produce a little sound; but when such sounds (if ever) are produced, the head is in the vagina, not in the ut rus, and such a sound is not a cry. We cannot ourselves imagine the vocal cords vibrating in the absence of air. We therefore still doubt, indeed, think impossible, the occurrence which the words *vagitus uterinus*, in their literal sense, denote. Dr. Seitz holds that by far the most effective method of getting air into the lungs is Schultze's swings, and he has inserted Schultze's original drawings to explain the method. Thirty eight pages are given to diseases of the umbilicus, which are fully and carefully described. Then follows an account of "Buhl's disease," a condition clinically marked by cyanosis, pathologically by parenchymatous inflammation leading to fatty degeneration and haemorrhage. Dr. Seitz frankly states that we know nothing about its cause, and can do little in treating it. Next we have a sketch of "Winckel's disease," that is, acute haemoglobinaemia, an endemic disease about the cause of which we know nothing. The other articles by him are prefaced by a full bibliography; the facts are stated clearly and the author's judgement is well balanced. Dr. K. Baisch of Tübingen writes upon jaundice, and upon melaena neonatorum. The praise we have given to Dr. Seitz we can accord as heartily to Dr. Baisch. The remaining part of the book from p. 279 to the end is devoted to the legal questions concerning women upon which a doctor may be asked to express an opinion. The kinds of injury produced by rape, attempted or accomplished; the identification of seminal stains; are very fully described, according to modern methods. Florence's crystals—a test not yet mentioned in the leading English work on the subject—are figured and their development described. The possibilities of violation during sleep, natural or hypnotic, are discussed in the light of recorded cases, and the author remarks: "For the family doctor the production of hypnosis is very dangerous, especially in the hysterical." The diagnosis of pregnancy is carefully gone into. Dr. Stumpf of Munich, the author of the article, thinks that in the early months the sign commonly known as Hegar's—that is, the softening so that a distinctly soft fold or angle between the cervix and body of the uterus is produced—is a certain one. The softening of the cervix is very characteristic of pregnancy; but it can be perceived without taking the trouble to compress the uterus at the level of the os internum, which in Dr. Stumpf's opinion may possibly provoke abortion. The laws of the German Empire as to criminal abortion are summarized, and the methods by which this crime is known to be practised are enumerated. The author comes to the conclusion that conviction can be attained by circumstantial evidence only; there is no definite scientific test from which induced abortion can be distinguished from a miscarriage due to natural causes. The causes of sudden death during childbirth and childbed, and the injuries that may be produced during delivery, are described, and recorded cases are quoted in illustration. The possible modes of infection of a woman with disease germs during and after delivery are discussed. These possibilities are to the German doctor and midwife matters of urgent importance for, as many of our readers will know, the German law regards the value of antiseptics as a fact that is now beyond the experimental stage—as being a principle which must be the fundamental care of all who have to attend the sick. The causes of fetal death and stillbirth are the subject of the next chapter. The author describes as possible results of the method of swinging the child to inflate its lungs known by Schultze's name, various visceral haemorrhages, and also fracture of the clavicle leading to injury of the lungs. We may remark that visceral haemorrhages have been found commonly enough in stillborn children who have not been subjected to Schultze's swings. We cannot imagine how the swings could fracture the clavicle. We know that the clavicle may be fractured during delivery, and if fractured we can believe that Schultze's swings might do grave damage. But we think a medical man must be extraordinarily careless and unobservant who, when he took up a child with a fractured clavicle in order to swing it, did not perceive that there was something wrong with its collar-bone. The two last sections seem hardly essential to a work on midwifery. One is a minutely detailed description of how to make a *post-mortem* examination of an infant. This would be excellent in a work on pathology, but the task hardly comes into the province of the accoucheur. The final chapter deals with conditions which, when present, suppress the work of the accoucheur altogether—malformations and defects in the generative organs. The family doctor requires to know about such things, but not in his capacity as accoucheur. Last of all comes the index. There are seventy-two pages devoted to the names of the authors quoted. The owner of each name can see opposite it each volume and each page in which his name occurs, and we suppose the sight agreeably tickles his vanity. As the subject about which he is an authority is not mentioned we cannot see the utility to any one else, and for ourselves we would have gladly done without these seventy-two pages. The subject-index, the really valuable one, only occupies thirty-five pages. Looking at the work as a whole, we regard it as the greatest encyclopaedia of obstetric knowledge that has yet appeared. It is a monument of German industry and German thoroughness, and the inability of the editor to see the joke of calling these ponderous tomes a "handbook" is an indication of the serious spirit in which he has undertaken his task. Its accomplishment is in the highest degree creditable to him. This "handbook" is one which every person who has to teach obstetrics should possess and read, and any one who practises midwifery and can read German will find it instructive and interesting. We present our congratulations and respectful homage to Professor Winckel on the completion of his admirable work.

When the first edition of Dr. Whitridge Williams's excellent book on *Obstetrics*[5] appeared in 1903, we pointed out its great merits. These spring from the author's knowledge and experience of surgery, histology, and bacteriology. As a guide in the application of these methods to the pregnant, parturient, and puerperal women, this book is unsurpassed. It is an original book; the author has observed for himself, and his conclusions occasionally seem to us faulty because, spending his time in practice and research, he overlooks important facts which he might have found by wider reading. Thus, he rejects the views of those who think that with menstruation there is much destruction of the uterine mucosa. He bases his view on his examinations of uteri removed during life (for disease, of course) and of curetted fragments, and he rejects Sir J. Williams's observations on the ground that the changes he observed were probably *post mortem*. But he apparently is not acquainted with the investigations of Heape, communicated to the Obstetrical Society of London in 1894, on menstruation in monkeys, and Heape's observations are very important, for neither of the above-mentioned objections apply to them. At least Heape's paper is not in the author's bibliography. Had he read it, it is possible he might have modified his opinion. What used to be called "midwifery," that is the supervision and, if necessary, assistance of the delivery of a child by the natural passage, seems to be in danger of becoming an extinct branch of science. In cases of transverse presentation in which the child is dead there is no doubt that the best thing for the mother is to decapitate the child. This can be done easily and safely in a few seconds with the instrument that John Ramsbotham, one of the greatest practical obstetricians that ever lived, invented for the purpose. But here we have a professor of obstetrics, of first-rate ability, who has never used or heard of this instrument. He teaches two clumsy and slow ways of decapitating, and then tells the reader that he may, if he likes, cut through the neck by the movement of a piece of string passed through a speculum. He does not say how many hours this takes, so we are sure he has never tried it. He appears not to know of a good cephalotribe, for he says, "Whenever it is so constructed as to be an efficient crusher it is a poor tractor, and vice versa." We have found Braxton Hicks's cephalotribe efficient both as a crusher and a tractor. On the subject of retroversion of the gravid uterus persistent at full term he misleads his pupils, for he says:

[5] *Obstetrics: A Textbook for the Use of Students and Practitioners.* By J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-Chief to Johns Hopkins Hospital etc. Second enlarged and revised edition. London: Sydney Appleton. 1908. (Med. 8vo, pp. 978; 16 plates, and 616 illustrations in the text. 25s.)

At the time of labour the contractions tend to force the child through the most dependent portion of the uterus, while the cervix dilates only partially, so that spontaneous labour is out of the question.

So far from being out of the question, in every recorded case in which the natural process has not been interfered with the contractions of the uterus have pulled the cervix into its proper place, have opened up the os uteri, and expelled the child through the natural passage. Such cases have been unfortunately attended with a high mortality, because accoucheurs, not knowing that natural delivery would take place, have done operations with disastrous results. We are sorry that so able a writer as Dr. Whitridge Williams should use his influence to perpetuate this error. But as a whole the book is very good. The author has for this edition rewritten the sections on the development of the ovum and on the toxaemias of pregnancy. These sections contain the best short exposition of their subjects that we know of. Dr. Williams gives what to our mind is a convincing statement of the reasons for thinking that certain diseases of pregnancy must be due to a toxaemia of some kind, and an equally convincing, candid criticism of the views of each investigator who thinks that he has got hold of the particular poison of some particular disease. Dr. Williams's own observations on the ammonia coefficient of the urine in some of these diseases will be known to most teachers. The chapter on puerperal infection is also good and clear, and characterized by a sound and healthy caution before accepting novel therapeutics. We beg leave to thank Dr. Whitridge Williams for his very valuable book.

The author of a French book before us on new methods of treatment in obstetrics[6] we do not know, but we imagine to have been a diligent and successful student who has since his hospital days been in general practice, and has kept his eyes and ears open and regularly studied the medical journals. In this little book he tells his medical brethren something about the methods of treatment that to him are recent novelties. The industry of such a man is admirable; and our author is not only a reader, he is a practical man who gives clear and precise directions as to what is to be done and how it should be done. The only thing that lessens the success from a publisher's point of view is the fact that the teachers in the medical schools are as eager in the pursuit of new methods of treatment as any one else; that they have more opportunities of testing them in hospital and in private practice than any one can get in private practice alone; that their ideas are clarified and their judgement helped by the eager questioning and keen criticism of students; and they put any conclusions that they think they are sure of as quickly as they can into their textbooks. Space prevents us from doing more than mentioning the new medications. The first is the oxytocic power of sugar. If the gentlemen who itch to take out their forceps as soon as they get near a woman in labour can be induced to give the patients butterscotch instead, they will at least not do harm. The treatment of phlegmasia dolens which Dr KEIM recommends is to cut up and pound about 3 oz. of calf's liver into an emulsion with about 8 oz. of water, peptonize it, and administer it per rectum. Another novelty is the treatment of mammary abscess by refrigeration. Other therapeutic agents, not quite so new, are the uses of collargol, of hydrogen peroxide, of iodine, of sodium hypochlorite, and spinal anaesthesia. There is one other thing which we fancy is not familiar to English readers, namely, the use of dried and powdered sheep's placenta as a galactogogue. Dr. Keim possesses an open mind and practical skill. We have no doubt that whatever English doctors may do or leave undone, his little book will lead some who practise medicine in his own beautiful country and read his own attractive language, to put his new medications to the test, and if they do so, and publicly report their experience, the world will be the gainer.

[6] *Les Actualités Médicales: Les Médications nouvelles en Obstétrique.* [Medical Actualities: New Medications in Obstetrics.] Par G. Keim, Ancien interne des Hôpitaux de Paris. Paris: J. B. Baillière et Fils. 1907. (Cr. 8vo, pp. 84. Fr.1.50.)

MR. N. HAY FORBES, F.R.C.S.Edin., F.R.S.Edin., of Church Stretton, has been elected a corresponding member of the Société d'Hydrologie Médicale de Paris.

NOTES ON BOOKS.

THE LAKE OF GARDA.

The Lake of Garda, by J. GREBLE LEECH,[7] is a well-illustrated and business-like guide to the lake which possesses in a portion of its western shore a Riviera which seeks to rival the Côte d'Azur. The lake, closely surrounded by mountains at its narrower northern Tyrolese end, broadens out to the south where the mountains fall away into the lowlands. The Riviera from Gargano to Salo lies along the northern bank of the Bay of Salo, beginning where the lake begins to widen. There are here numerous hotels and boarding-houses, but there are hotels also at most of the other places at which the steamboats touch. From the north the lake is best approached by the Brenner; from the station Mori on that line a narrow-gauge railway runs to Riva at the head of the lake. The season is from September to May.

EGYPT.

The Egyptian State Railways have recently caused to be written and published a handy volume, *Egypt, and How to See It.*[8] The various places the tourist or the health-seeker will wish to visit are described with a reasonable amount of picturesqueness in writing, and the descriptions are helped by Mr. Lamplough's water-colour sketches, admirably reproduced by the Ballantyne Press. The traveller is told how to get to Egypt, how to get from one part of Egypt to another, where he can find good and where tolerable accommodation, and is helped to a decision by a list of hotels with tariffs in an appendix. He is told enough about the climate, and the statements are remarkably candid for a guide book. There are time-tables of railways and boats, and a good index. The scope of the book may best be shown by quoting the titles of the chapters: I. General Information (before starting, arrival at Port Said, and Alexandria, outline tours). II. Cairo. III. The Fayoum. IV. Upper Egypt. V. The Soudan. VI. The Delta. VII. Alexandria. VIII. The Suez Canal. The preface states that in subsequent annual editions not only will the text be revised, but the appendices will be brought up to date so as to be correct for the following season. This preface is dated Cairo, October 1st, 1907, but the cover is marked 1908, and the volume only reached us at the end of January. It is to be desired that future annual editions should be issued in October.

The reader of Dr. FRANCIS CAVANAGH'S *Care of the Body*[9] will find himself somewhat at a loss to know whether the book is addressed to the medical profession or the public. A footnote on page 14, explaining that "the cortex (or bark) is the grey, cell-containing matter of the brain," will go far to convince him that the work is intended for the lay public, but he will have to abandon this hypothesis when he arrives at a discussion of the comparative merits of the administration of bromides or lancing of the gums in delayed dentition. He will probably lay the book down without having discovered who is to benefit by its perusal. Much of the advice given is sound, and some of the suggestions are ingenious and interesting, but the book is overweighted with a mass of inconclusive verbiage, which makes it wearisome to read.

We have received the *Minutes of the General Medical Council and of its Various Committees for the year 1907, with Fifteen Appendices.*[10] The volume, which is the forty-fourth of the series, contains 422 pages, being 272 pages less than that for the preceding year. The minutes of the General Council occupy 132 pages, the Executive Committee 80 pages, the Dental Committee 8 pages, and Branch Councils 14 pages. The remainder of the volume consists of the appendices and general index.

[7] London: The Health Resorts Bureau. (Pp. 69, with map. 1s. net.)

[8] London: Ballantyne and Co. New York: Doubleday, Page, and Co. (Small 8vo, pp. 208. There are no advertisements, and this is a good feature in a guide book, which ought to be as small and portable as possible. 2s. 6d.)

[9] *The Care of the Body.* By Francis Cavanagh, M.D.Edin. "The New Library of Medicine." London: Methuen and Co. (Demy 8vo, pp. 328. 7s. 6d.)

[10] London: Spottiswoode and Co. 1908. 12s.

THE seventh congress of the German Orthopaedic Society will be held in Berlin on April 25th.

THE German Surgical Society will hold its thirty-seventh annual congress at Berlin from April 21st to 24th, under the presidency of Professor Freiherr von Eiselsberg of Vienna. An exhibition of instruments and apparatus will be held in connexion with the Congress.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 337.*)

Antivivisectionist Testimony.

Evidence of the Hon. Stephen Coleridge (continued).

Continuing his evidence, Mr. Coleridge said, in reply to a question by Sir Mackenzie Chalmers as to prosecutions under the Act, he suggested a longer period, because at present the yearly report, which was one of their sources of information, seldom came out till about three or four weeks before the six months had elapsed; so that there was no possibility that a prosecution could be based upon that report, even if it revealed any breaches of the law. Again, this short period precluded them from taking advantage, as a rule, of any publications of the vivisectors, if by a slip they let out that they had broken the law, because they did not, as a rule, publish them until six months after the experiments. Asked if this would not be applying a special law to vivisectors which was not applied to the rest of the community, he said he did not see why. He had given a definite reason, and he thought anybody ought to see it was a reasonable one. He thought the Home Secretary should prosecute in cases where the law was broken. Asked if, inasmuch as under the Act the prosecution required his leave, he thought the Act contemplated that the Home Secretary should give himself leave and then prosecute, he said he should have thought it possible for the Home Office to move in prosecutions. Asked if he was aware that the Home Office had no legal department whatever, he replied, "I dare say." Asked in how many cases his Society had asked for leave to prosecute, he said there was no possibility to get material for prosecution under the present law. In reply to Mr. Ram, he agreed that his attitude and that of his Society was one of regulating the practice of vivisection as much as they possibly could. Asked by Mr. Ram if application had ever been made under Section 13, under which a person might apply to a justice for a warrant to examine any premises not registered under the Act, the witness said, Not that he was aware of. Asked if an application had ever been made under Section 21 to the Secretary of State to allow a prosecution against a licensed person who had been doing an experiment for any reason other than that allowed by the Act, he said not since he had been honorary secretary, certainly. That was because owing to the way in which the Act was administered, it was impossible for them to find out what happened inside the laboratories. He did not think he had ever known of any instance, which he thought was a breach of the law, which was published until after six months. Asked with regard to the cases which he had cited—those of Crile, Grünbaum, Starling and Bayliss, Cecil Shaw, Noel Paton, and Dixon and Brodie—if he believed that there had been a contravention of the Act, the witness said he would like to look at each case. The gravamen of his attack was that in each case, when he had complained to the Home Office of actions done which seemed to him to be inhumane, the Home Office had accepted the *ipse dixit* of the person whose conduct was impugned. It might not necessarily have been a breach of the Act. Asked about Crile's case, in which he said there was an operation performed under incomplete anæsthesia, he said that was a breach of the Act. In Grünbaum's case an experiment was performed, as he alleged, before the public, and in Starling and Bayliss's case there was an allegation of illegality. Asked if that allegation was established largely, the witness said he ought to distinguish. His assertion was now that Professor Starling broke the Act by not killing the "brown dog" before he gave it over to Mr. Bayliss. That had never been before the court. In Dr. Cecil Shaw's case there was an alleged breach of the law. With regard to Dr. Noel Paton's fasting experiments, he said there was a little distinction. Professor Noel Paton's defence was that they were outside the Act, and the witness represented that they should be within the Act. Dixon and Brodie's case was one of light anæsthesia. Asked if those were all the cases that he reported to the Home Office as having been in his opinion contraventions of the Act, he said he could not say that. In reply to further questions, he said that in Dr. Crile's case certainly suffering was caused to the animal by the alleged breach of the Act. On Mr. Ram putting it to him that if, as Dr. Crile asserted, and as the bystanders seemed to have asserted, the animal was insensible to any feeling of pain, there would be no pain caused by a breach of the Act, the witness replied, "If they were accurate." Asked with regard to any other cases, if he alleged that suffering had been caused by an alleged breach of the Act, he said that was "most decidedly the case in Ireland." In Dr. Noel Paton's case, he asserted that to starve an animal for four days was a painful thing. Grünbaum's experiments certainly were painful. He described the rabbit after thirty minutes dying in convulsions of snake poison. Mr. Ram said what he put to the witness was whether the illegality increased the pain. Mr. Coleridge replied, "No, not the illegality." Mr. Ram then pointed out that it came to this, that except in the case of Dr. Noel Paton's starving animals, the illegality did not cause pain to the animals. The witness said that was so, if they accepted the defences. Asked if in all the years during which his Society had been investigating these matters those were really all the cases as to which he had brought before the Home Office allegations of impropriety or contravention of the Act, the witness said he was not prepared to say that. He had got instances which, to his lay mind, seemed to involve a great deal of suffering, but not illegality. He was not prepared to say that these were the only cases in which he complained of illegality. Asked if he knew of any others, he said he had a very bad memory; he could not say offhand. Sir Mackenzie Chalmers would be able to say. Sir Mackenzie Chalmers agreed that he had written about others, but these were like the strawberries—the best at the top. Asked by Mr. Ram if he thought it would be advisable, in the interests of humanity, if some such person as himself, who took an interest in humanity, witnessed some of these experiments from time to time, he said Most certainly. Asked if he had been precluded from doing that in the past by the Act, he said, Yes. Asked if he thought that it would have been a breach of the Act, he said, Yes. Mr. Ram referred the witness to the part of the Act which dealt with that matter. It was Section 6; the words were:

> Any exhibition to the general public, whether admitted on payment of money or gratuitously, of experiments on living animals calculated to give pain shall be illegal.

In reply to a further question Mr. Coleridge said that in his opinion it would be a breach of the Act if he, as one of the public, went to see an experiment; he had always thought so. He said he felt that he would be assisting the operator in a breach of the Act. On Mr. Ram putting it to him that if he had gone he might have done infinite good from the point of view of humanity, the witness replied that he did not think that any animal would be subjected to torture in his presence by any vivisector. That was why he wanted the Inspector always present. He agreed that he would have known much more about what was done in these experiments if he had been present. Mr. Ram pointed out that his evidence was something like—he might say nine-tenths of it—an indictment, and a long and acrid indictment, not of the Act but of the administration of the Act by the Home Office. The witness said, "And of the Act also." Mr. Ram pointed out that in his Bill he also proposed that licences should be granted by the Home Office, and the inspectors appointed by the Home Office, and so forth. The witness said that in his Bill the certificates would not be merely as to the scientific fitness of the applicants, but also as to their humanity. Secondly, the mass of operations would be performed in the presence of the Government Inspector. Asked if he really attached importance to two ministers of religion or two justices of the peace having signed a paper to say that they believed that the applicant was a humane person who would not torture an animal, he said he would if their names were published, so that they were publicly made responsible. In reply to further questions, he said he thought that his Society was quite as fitted to advise on humanity as that other society was to advise on scientific fitness. Asked if he knew and could name any experimenter whom he would consider humane, he said, Yes, he believed there were some vivisectors who were quite humane, and if it were his duty to find out who were humane, he would do his very best to ascertain it. He would take the statements of such men as being accurate statements when they

were asked what they meant. Asked if he regarded untrustworthiness, and, to a certain extent, unveracity and inhumanity, as being almost identical, he said he did not quite say that. He said that if a man was inhumane, and was then asked questions by the Home Office or by any authority as to what he had done, if he had been inhumane it was contrary to human nature for him to admit it. Asked by Mr. Ram how a man got a reputation for humanity, Mr. Coleridge said that was as near as he could get it. Mr. Ram, after recalling the fact that the witness had said once or twice that he took no interest in the object with which any experiment was made, pointed out that he had put it in his Bill, in Clause 2, Subsection (1) that

The experiment must be performed with a view to the advancement by new discovery of physiological knowledge or knowledge which will be useful for saving or prolonging life or alleviating suffering.

The witness replied that was in the old Act. On its being put to him that he recognized there and perpetuated that these experiments must have a humane object in view, the witness said what he meant was that when there was a question of severe pain, his Society did not recognize any justification of that pain by any lofty motive being asserted. Asked as to Clause 2, Subsection (4):

The animal must be killed while it is so under the influence of such general anaesthetic as aforesaid, and before it recovers therefrom sufficiently to feel pain,

Mr. Coleridge said their object was wholly to obliterate Certificate B and all cases under it. They were not prepared to accept absolutely the statement that all operations, however severe, left no suffering behind. Mr. Ram said no such statement, or anything like it, had been made before the Commission. The statement made was that in many of these cases, although the operation was painful, and therefore demanded anaesthetics in the performance of it, there was no subsequent suffering. The witness said he was not prepared to accept that statement. In reply to further questions, Mr. Coleridge said they were quite misunderstood if anybody thought that they wanted to stop science. Asked if he would wish, therefore, to make such provisions as, while safeguarding the animal, would secure the continuance of research, he said, Yes. On Mr. Ram pointing out that if Certificate B were obliterated altogether an enormous number of investigations would be prevented, the results of which could not be ascertained, unless the animal was allowed to live for some time, the witness assented. In reply to further questions, he said they were very suspicious of Certificate B, and it was very difficult for him, as representing his Society, to say he would only agree to its being continued provided that the animal after the operation was as much safeguarded as it would be under inoculation. Asked with regard to inspectors, if he realized that he was asking either for an army of inspectors or for a very great diminution in the number of experiments that would take place, the witness replied, Not so, necessarily. If every experiment had to be performed before an Inspector he would never waste a minute; he would go from one place to another and witness experiments, and all his time would be occupied in actually seeing experiments, instead of wandering about the country seeing nothing as now. In reply to the Chairman, he said he did not mean to include every inoculation. He meant any operations for which anaesthetics were necessary, because the presence of an anaesthetic meant suffering, and therefore whenever there was suffering, or the chance of suffering, their opinion was that the Inspector should be present. In reply to Mr. Ram, who pointed out that in his Bill he provided that the animal might be allowed to recover, although inoculated, and that he said:

Directly the animal begins to feel pain it must be placed, and thenceforth while it suffers, or is likely to suffer, must be kept under the influence of a general anaesthetic of the nature of a respirable drug or gas, such as chloroform, or ether, or alcohol, chloroform and ether combined, of sufficient power to prevent the animal feeling pain; or, if the animal is not so placed and kept under the influence of such anaesthetic as aforesaid, it must be forthwith killed,

whereas in his evidence he said "severe pain," the witness replied that where the suffering was really trifling, he did not want to interfere. He would be willing to insert "serious pain" in his Bill. Asked if he thought it was necessary to have a clause dealing with the eye expressly, he said there was a very large feeling among the humane that it was a necessary clause because the eye was so frequently used for the purpose of breeding bacteria and such things, and the eye was a very sensitive organ. Asked if it would meet his view to say that no operation of any sort should be performed on the eye save when the animal was under anaesthetics, the witness said that would be so already. If an operation was performed on the eye it was as much under the Act as if performed anywhere else. In reply to further questions he said that from inoculations the eye should be eliminated altogether. Their view was that inoculations in the eye must always be painful. Asked as to the provision in his Bill that every licence should specify the time and place at which the experiment or series of experiments was or were to be performed, whether that was with the object of letting the Inspector know, he said Yes, and the public and everybody else—to lift up the veil of secrecy from these things. The examination proceeded:

We have heard something about the veil of secrecy; but why on earth should the public know when an operation takes place?—Because this is part of the thing that is put up; this is part of the notice. It is the licensee who is to say when he is going to do it.

I ask why?—In order that the Inspector may know.

Then you eliminate the public?—Yes; I was not looking at it. "Every licence granted hereunder shall specify the time and place at which the experiment or series of experiments is or are to be performed."

Asked as to the proposal in his Bill that proceedings might be taken at any time within two years, how it could be necessary to have so long a time, he said he put that in so as to get the longest possible time. On Mr. Ram pointing out that the object of shortening the time in all these Acts was to preclude a charge being made against a person, when perhaps the circumstances were forgotten, or the evidence was lost, or some person was dead, Mr. Coleridge said he thought that would be met by the provision that the prosecutor should put down the sum of £50. Asked if that would affect his Society, with its large income, he said they would be the last persons to bring an action. Asked if it would be sufficient to say that any proceedings must be taken within six months of publication, or giving information of that which was impugned, he said he would accept that at once. In reply to a question about the *Shambles of Science*, he said he was not connected with that book in any way. In reply to further questions, he said he retained Subsection (6) of Clause 2 of the old Act:

The experiment shall not be performed for the purpose of attaining medical skill,

because, personally, he was afraid that, if it were taken out, it would immediately be taken to be a permission to students at once to set about vivisection for the purpose of getting manual skill. He believed they got licences now. Asked if his Society took any action at all, or any interest in what had been termed a farmyard operation, he said it was purely an antivivisection society. If he were to use its funds for the purpose of advocating a crusade against any other suggested form of cruelty he would be committing a breach of trust. The Royal Society for the Prevention of Cruelty to Animals was the proper society to deal with such cases. In reply to Sir John McFadyean, who asked whether by speaking of "torture" he meant simply that in vivisection operations conducted in the laboratories attached to large hospitals severe pain was occasioned to animals, the witness replied that was what he meant. Asked to define in what sense he used the word "cruelty," he said he meant the infliction of severe pain upon an animal, not for its own good. His objection to the Act was that it legalized pain. Asked if he wished to make it illegal to cause serious discomfort to the animal, even although, in the opinion of persons well qualified to judge, the experiment might extend man's knowledge of preventing or curing disease or alleviating suffering, the witness said he was not prepared to accept or admit, not being an expert, the claims put forward by the vivisectors as to those benefits. He was not prepared to admit that no such restrictions as he proposed to impose upon experiments performed on animals for the purpose of extending human knowledge were placed on man's dealings with animals for other purposes, although these involved severe pain

and suffering. On its being put to him that it was perfectly legal, and a common operation, to take a male animal, tie it to a table, or otherwise secure it for the safety of the operator, and while it was in complete consciousness cut out its testicles, and on his being asked, as a layman, if he felt able to express an opinion whether that was a painful operation or not, Mr. Coleridge said he had no doubt that it was painful. Nor had he any doubt it was quite common. Asked if he was aware that it was not regarded as an illegal operation, he said he did not know that there had ever been a test case on that. He thought it was cruelty to animals generally. Asked if he would encourage the creation of a society, such as his own, having for its main object to bring about legislation to prevent the castration of male animals, he replied that he did not say that. Asked if he would be in favour of an agitation which would compel the use of an anaesthetic pushed to complete anaesthesia on every farm animal that was castrated, he said, Yes, if it was practicable, certainly. Asked if by "practicable" he took into consideration the profit of farmers, he said he was not thinking of that; he was thinking of it purely from the point of view of the animal and cruelty. In reply to Sir John McFadyean, who asked for some clearly-defined simple principle on which the Commission could recommend Parliament to thus discriminate between painful experiments for the extension of useful knowledge, and the infliction of pain incidental to operations which were inspired by some other motives, Mr. Coleridge said if he were in Parliament he would meet the argument that this Bill ought not to be passed until some other cruelty was disposed of by urging that one would never do anything in this world if one tolerated evil in one place until one stopped evil in another. The broad principle he went upon was to put down all cruelty when he found it. Asked if he would be content to put vivisection on the same footing exactly as farmyard operations, he said, No, because castration was done in a very few seconds, and some vivisections, at any rate, were very prolonged. Asked whether he contended that under the existing law a great deal of exceedingly severe pain was caused to animals, the witness replied that it could be. On its being pointed out that that was not the question, he said, "I dare say it is." Asked if he said that it was, he replied:

I am not there. I will neither admit nor deny what goes on in laboratories. I am not there. All I know of what goes on in laboratories is what vivisectors choose of their own will to publish.

On Sir John McFadyean putting it to him that, so far as he could make out, the only objection Mr. Coleridge had expressed to allowing painless vivisectional experiments to be performed for teaching purposes was that they were unedifying, the reply was, Yes. Asked to explain in what respect they were unedifying, the witness said he was influenced very largely by the opinions of others upon the matter. The Inspector from Ireland gave that as his mature opinion after being Inspector many years. Asked if he saw any reasons to modify his Bill by legalizing operations for purposes of instruction when the Inspector was present, and was assured that the animal was throughout the whole course of the proceedings completely anaesthetized, he said he was quite prepared to admit that at present he had no reason to suppose that any torture had ever been inflicted on an animal in the presence of the Inspector. That was why he was ready to trust the Inspector to see that it did not take place in future. He was not there to give a legal opinion. Asked if he was aware that a good many materials, such as milk, were tested by animal experiment as to the presence of bacteria and so on, he said he was not aware of it. If it was not painful he had no objection to it. Asked whether the object in Clause 4 of his Bill, page 3, Subsection (1) that no licence was to be granted to perform more than one experiment, or one series of not more than six consecutive experiments; and in the next paragraph, that the licence was to specify the time and place at which the experiment or series of experiments is or are to be performed, was to make experiment difficult, he said the idea he had in framing that was to prevent a man getting leave to experiment from the beginning of the year to the end on as many animals as he liked, without any reference to the Home Office again. On its being put to him that there were medical officers of health, and veterinary officers, who daily had to deal with matters suspected of being infective and dangerous, and in their case it would be quite impossible to carry out experiments under an Act framed like his Bill, the witness said that sounded as if it was outside the Act altogether. He did not accept the statement that it was within the Act. Sir John McFadyean said that veterinary inspectors in the employ of the London County Council had to make periodical visits to cows within the metropolitan area, and when they came across a cow whose udder appeared to them to present indications of its being tuberculous, but they were not absolutely sure, they took a sample of the milk, which was taken to a bacteriological laboratory, and there and then injected into guinea-pigs. There were many similar operations where the thing was coming in daily, and had to be dealt with at the time it arrived. The provisions of Mr. Coleridge's Bill would make that sort of work practically impossible. The witness replied that he was not quite clear that it was legal as it was; under Section 3, Subsection (1) of the Act:

The experiment must be performed with a view to the advancement by new discovery of physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering.

Sir Mackenzie Chalmers said Subsection (4) was the material one. All those, he thought, came under Subsection (4). The witness said, Yes; but they never issued that certificate; they had not for years. That was just his complaint. He quite agreed that if these experiments were to be performed, they ought to be under Certificate D, which had not been issued for years. Sir John McFadyean put it to him that, when a sample of milk taken in the circumstances mentioned, came before a bacteriologist, he wanted to extend his knowledge with regard to it, and the only means of extending his knowledge was his experiment which he performed upon the guinea-pig. Mr. Coleridge replied, "You are putting that upon me; I do not admit it." Asked if he would admit that his object was to extend his knowledge, he said, Yes; but not that that was the only way to extend his knowledge. On its being put to him that it was the extension of knowledge by new discovery, he said, Yes. Sir John McFadyean said surely he must extend his knowledge by a new discovery with regard to this particular sample of milk. The witness replied that he would. The examination proceeded:

Lastly, in answer to Question 10,952, you said that all these experimenters have the greatest contempt for the Act of Parliament. You may read the rest of it if you like?—No, I do not in the least wish to do so. Yes, I see that is my one little slip, I remember.

Will you forgive me for saying that it seemed to me a very hasty generalization? Would you desire to qualify it?—Perhaps the whole answer was a slip; part of it was, I remember. It is too sweeping, I admit.

Asked if he would go so far as to say that not more than a small minority had a contempt for the Act, he said, No, he thought the majority of licensees held the Act in contempt. Asked if it occurred to him that, if anything took place at demonstrations which was cruel and negligent, amongst the students there would be some who would resent it, he said, No doubt. He did not think they would make complaint; the general feeling in the profession would be much too strong for them. He had had letters from students himself—of course, he did not give their names away. Asked if he had made complaints upon them to the Home Office, he said No. In the very last week he had received a letter signed by five or six undergraduates in College, directly opposite the laboratory at Oxford, in which they complained of hearing the most dreadful howls of agony from dogs in that laboratory. They lived opposite and heard screams of what they said were vivisected animals. He did the obvious thing that a gentleman ought to do. He wrote at once to the head of the laboratory, told him the information that he had received, and asked for his explanation; and he gave the lie to the six gentlemen at once. All he could say was that in a Court of Justice the six witnesses would go against the one. The following was the letter:

Keble College, Oxford,
June 12th, 1907.

To the Hon. Stephen Coleridge.

Sir,—I (an undergraduate member of Keble College, Oxford), knowing how keenly you feel about the practice of vivisection,

wish to draw your attention to the following facts with reference to this practice. My rooms are exactly opposite the University Museum. Every day, almost without exception, I hear the piercing yells of a dog in agony. There can be no doubt that it is a dog in agony and not simply one in confinement. I have ascertained as a fact that vivisection is carried on in the museum from an official to whom I spoke on the subject when I went over on Sunday last in the morning (June 9th), after hearing these same yells. Being a keeper of dogs myself, I am in a position to know the difference between a dog in agony and one in confinement, and that it is not the latter I am perfectly confident. It is always the same, and I am convinced that it is something more than merely the beating of some dog, because that would not happen every day, whereas students' scientific classes constantly take place. I wish something could be done to put a stop to these devilish practices condoned in the name of science. To one who is a lover of animals it is perfectly excruciating to have to listen to a dumb animal being put to the torture, as I hear it every day, by these scientists who, being apparently devoid of all feelings of humanity, don't care what pain they inflict to gain their object. I should be so glad if you can suggest anything to be done. I should have thought at least they were bound to do these things in places where every sound could not be heard outside. Putting aside the fact of the inhuman cruelty which this practice necessitates, it is, to speak mildly, a public nuisance. Please use my name or letters as much as you wish.—I am, Sir, yours faithfully, HAROLD S. SHARPE." And then: "We, the undersigned, desire to state that we have also heard these yells, and wish to corroborate all Mr. Sharpe has said.—ARTHUR H. M. PEAT, CYRIL A. BONSER, ALFRED C. C. HARNEY EVANS, GEOFFREY HEALD, BASIL W. TRUMAN."

Mr. Coleridge said he at once addressed a letter "To the licensees for the performance of experiments upon living animals, the University Museum, Oxford," dated June 14th:

Gentlemen,—I have received from a correspondent, whose credibility I have no reason to doubt, an account of cries of dogs or of a dog in agony that emanate from the buildings of the Museum at Oxford. A portion of the buildings in question being a place registered (under the Act 39 and 40 Vic., c. 77) for the performance of experiments upon living animals, and, you, gentlemen, being under the same Act licensed to perform such experiments in that portion of the buildings, I beg leave to inquire whether these cries come from your laboratories, and, if so, whether you feel disposed to offer any explanation of these most distressing sounds.—Your obedient servant, STEPHEN COLERIDGE.

Then he got this letter from Mr. Francis Gotch:

Physiological Laboratory, Oxford, June 16th, 1907.—Sir,—In answer to your letter of the 14th instant, I beg to state that no vivisection experiments on dogs have been carried out in this laboratory during the present year. Four puppies were born and kept in the adjoining yard, and the shrill yelps of these animals when at play were presumably the sounds heard by your correspondent. This might have been ascertained by making appropriate inquiry. — Yours faithfully, FRANCIS GOTCH.

Mr. Coleridge said he sent this letter with his compliments to these young gentlemen, and this was the answer that they sent back to him:

Dear Sir,—I am sorry I have been away and only just returned and found your letter. Professor Gotch is a liar. A man in Keble who is in for anatomy told Mr. Heald (one of those who signed my paper) that they did cut up rabbits, and that lately they had cut up a small dog, and this had been yelling for a week. It is perfectly absurd to say that the yells I hear are anything else than dogs, or possibly some other animal in agony. The idea of puppies is ridiculous. I have heard the puppies yelp very frequently, and I have also heard a dog scream, and I would swear to it anywhere. Mrs. Herford, writing to me to-day, says: "It is distressing to pass the museum for the yells one frequently heard." Would two people be such fools as to mistake a painful yell for a puppy's yelp? It shows that Mr. Gotch is a liar, because one dog has been cut up this term. The man who told my friend (Heald) this said they did cut up rabbits. That is sufficient. Mr. Gotch says I might have ascertained the truth by making appropriate inquiries. I asked an official, as you know, and he said vivisection was practised. I would maintain, in spite of Mr. Gotch's statements, that animals have been cut up this term. If a man is devil enough to be a vivisector he can easily reconcile his conscience to a lie or two, especially when Mr. Coleridge writes to him, for he knows matters might be made hot for him. [This is very youthful.] I am unable to get more facts than these: (1) One dog for certain has been vivisected this term; (2) also rabbits; (3) the cries I hear are *not* puppies.—Yours sincerely, HAROLD S. SHARPE.

That was the sort of thing that was constantly coming before him, and that was the result that he got. The Chairman said it seemed to him that the letter was about as reasonable as if Mr. Gotch were to answer it by saying: "No such thing has happened as you say; and as to your saying you heard it, all antivivisectors are liars, and I do not believe them." It did not carry it much further. In reply to Dr. Gaskell, he said the date that Mr. Gotch gave when he asserted that no animals had been experimented upon was June 16th, 1907. "This term" meant distinctly during the time that Mr. Gotch was there and must have known. He agreed that it was not said that the dog that was cut up was alive or dead; the context rather indicated that it was alive. Asked by Sir Mackenzie Chalmers if he sent that second letter to Mr. Gotch, and got a further reply, he said, No, he left the matter there. There was a flat contradiction. It was no use carrying it any further.

(To be continued.)

LITERARY NOTES.

THE Oxford University Press will publish forthwith the Fitz-Patrick Lectures delivered before the Royal College of Physicians of London by Dr. Norman Moore, under the title *The History of the Study of Medicine in the British Isles*. The first of the lectures treats of medical study in London during the Middle Ages; the second deals with the education of physicians in London in the seventeenth century; and in the third and fourth lectures the history of the study of clinical medicine in the British Isles is told. The volume will be abundantly illustrated.

Drs. A. Blaschko of Berlin, K. Herxheimer of Frankfort, E. Hoffmann of Berlin, v. Klingmueller of Kiel, and M. Wolters of Rostock have undertaken the editorial direction of the *Dermatologische Zeitschrift* in the room of the late Professor Lassar. The scope of the journal is to be enlarged in various directions. The principal part of the work will be in the hands of Professor Hoffmann.

In Messrs. Methuen's list of announcements of forthcoming books for the first half of 1908, are the following which may be of special interest to some of our readers:—*Early Woodcut Initials*, by Dr. Oscar Jennings of Paris; the work contains over thirteen hundred reproductions of pictorial letters of the fifteenth and sixteenth centuries; and a translation of Forel's book, *The Senses of Insects*, by Mr. Macleod Yearsley. There are also in the list three volumes of "The New Library of Medicine"—namely, *Diseases of Occupation*, by Dr. Thomas Oliver; *The Causation and Prevention of Tuberculosis (Consumption)*, by Dr. Arthur Newsholme; and *Functional Nerve Diseases*, by Dr. A. T. Schofield.

We have received the first number of *Beiträge zur Anatomie, Physiologie, Pathologie, und Therapie des Ohres, der Nase, und des Kehlkopfes*, which, as its title imports, takes the whole field of otology, rhinology, and laryngology for its province. It is edited by Drs. A. Passow and K. L. Schaeffer, and published by S. Karger of Berlin. To those interested in the special provinces of practice with which it deals it will, if it fulfils the promise of its first number, be most valuable.

We have also received the first number of the *Archives of Internal Medicine*, a new monthly journal published under the auspices of the American Medical Association. The Editorial Board consists of Drs. Joseph L. Miller, of Chicago; Richard C. Cabot, of Boston; George Dock, of Ann Arbor, Michigan; David L. Edsall, of Philadelphia; Theo. C. Janeway, of New York; and W. S. Thayer, of Baltimore. Among the contents of the number are a paper on nervous affections of the heart, by Dr. F. Mueller, of Munich; one on the haemolytic reactions of the blood in dogs affected with transplantable lymphosarcoma, by Dr. R. Weil, of New York; and one on *Trichomonas hominis intestinalis*, by Dr. Hugo A. Freund, of Detroit. The subscription price of the journal, which is to be "devoted to the publication of articles relating to internal medicine which are too technical or too elaborate for a journal of general circulation," is 18s. a year.

Dr. Seymour Stritch, the Governor of the Apothecaries' Hall, writes to call attention to the fact that the credit of the discovery of the infectious nature of puerperal fever belongs to Dr. Alexander Gordon, of Aberdeen. In proof he quotes a passage from *Zoonomia, or the Laws of Organic Life*, published in 1803. The claim of Gordon to the title of pioneer in this matter was allowed by Oliver Wendell Holmes himself, as the readers of an address by Dr. Cullingworth delivered in 1905, and published in the

British Medical Journal, will remember. The address was afterwards published as a booklet (London: Henry J. Glaisher. 1906). A biographical sketch of Gordon is given in an appendix, taken mainly from a footnote contributed by his grandson, Professor Harvey, to *Essays on Puerperal Fever*, edited for the Sydenham Society by Dr. F. Churchill (London, 1849, pp. 445–7). Some corrections and additions were supplied to Dr. Cullingworth in a private communication (dated October 6th, 1905) by Professor W. Stephenson, of Aberdeen. It may be interesting to quote some parts of it. Dr. Gordon was born in the year 1752, not in the parish of Strachan, Kincardineshire, as stated by Professor Harvey, but in Milltown of Drum, Peterculter, Aberdeenshire. After taking the degree of M.A. at Marischal College, he studied medicine at Aberdeen and at Edinburgh. In 1780 he entered the Royal Navy as surgeon's mate, and in 1782 was advanced to the rank of surgeon. Three years afterwards, being placed on half-pay, he studied in London. Returning to Aberdeen in 1785, he obtained the degree of M.D. from Marischal College, and settled in general practice in that city. He devoted himself particularly to midwifery, in which his practice became considerable, and on which, for several years, he gave an annual course of lectures to the medical students. Soon after the publication, in 1795, of his *Treatise on the Puerperal Fever*, he was recalled to active duty by the Admiralty.

What contributed, mainly, to his resolution of again entering the navy was the circumstance (which he feelingly alludes to in several of his private papers) that his connexion with the puerperal epidemic, which he wrote an account of, and the entire burden of which seems to have fallen upon him as physician to the dispensary, and the only professed accoucheur in town, raised against him such strong prejudices in the public mind as materially to damage his professional prospects in Aberdeen.

In 1779, while on duty in the navy, he caught a severe cold, which laid the foundation of pulmonary consumption. He was invalided; and, returning to Aberdeenshire, died at the age of 47 on October 19th, 1799. Dr. Gordon left behind him a large collection of manuscript papers on various professional subjects; among others are lectures on midwifery and the diseases of women and children, which occupy three volumes, folio; and a treatise, in four volumes, quarto, on the practice of physic, which last it was his intention to publish. Professor Stephenson has placed in his classroom in the University of Aberdeen an oak tablet with the inscription:

Alexander Gordon, M.D.,
First demonstrated the infectious nature of puerperal fever.
Aberdeen, 1795.

The Committee of the City of Edinburgh Charity Organization Society has decided to offer the remaining volumes of the *Report on the Physical Condition of 1,400 School Children in the City of Edinburgh, together with some Account of their Homes and Surroundings* to charitable societies and individuals interested in the welfare of children. The volume contains detailed tables of facts concerning the number of wage-earners and average earnings in each family, with information about the work of women and children, and the amount of charity received by each family when aid is given. Besides these, there are tables of heights and weights, comparing the Edinburgh children with those of other towns, and of varying social conditions. Then, after a very full medical report, follows an equally full account of the family life and budget of the 781 families to which the children belong. The following table of contents will show the nature and scope of the volume:

Foreword, by Arthur Sherwell, who supervised the investigation.
Introductory chapter, which describes in detail the methods of investigation adopted; with one "schedule" given in full.
Tabulated statement of amount of charity received by each of 449 families, along with a description of family habits.
Table of number of wage-earners in each family.
Table showing the average wage of workers in each trade for Edinburgh and district.
List of trades engaged in by women, and number in each occupation.
Account of the work, wages, and hours of labour of children at school, and children of school age.
Table giving the number of rooms inhabited by each of the 781 families.
Tables and charts comparing the heights and weights of these children with those of children of other schools, and of children examined by the Royal Commission (Scotland) in 1905.
Report of medical examination of the school children (with tables recording results in detail) which was conducted under the supervision of Dr. Leslie Mackenzie of the Local Government Board, Scotland.
Tabular summary of facts regarding the children's home-life; with information *re* housing, rent, wages, amusements, and history of each family; accompanied by the doctor's report on each child of each family that was examined.

Copies can be had on application to the general secretary, Charity Organization Society, 28, Rutland Street, Edinburgh. Price 5s. 6d., post free.

PUBLIC HEALTH OF LONDON.

III.

Phthisis.

The deaths from phthisis in the administrative County of London during 1906 (52 weeks) numbered 6,775, as compared with 6,622 in the year 1905. In the year 1906 Bethnal Green (2·45) had the highest phthisis death-rate, and Hampstead (0·66) the lowest.

The death-rates in successive periods have been as follows:

Phthisis.

Period.	Death-rate per 1,000 Persons Living.	Period.	Death-rate per 1,000 Persons Living.
1851–60	2.86	1902	1.60
1861–70	2.84	1903	1.55
1871–80	2.51	1904	1.62
1881–90	2.09	1905	1.42
1891–1900	1.84	1906	1.44
1901	1.66		

The following table shows the mortality from phthisis in groups of London sanitary districts arranged in respect to the proportion of their population living more than two in a room in tenements of less than five rooms:

London, 1901–6: Phthisis Death rates in relation to Overcrowding.

Percentage of Overcrowding in each Group of Sanitary Areas.	Crude Phthisis Death-rate per 1,000 Persons Living.	Standard Death-rate.	Factor for Correction for Age and Sex Distribution.	Corrected Death-rate per 1,000 Persons Living.	Corrected Death-rate (London, 1,000).
Under 7.5 per cent. ..	1.086	1.713	1 00391	1.097	711
7.5 to 12.5 per cent. ..	1.359	1.705	1 01761	1.383	897
12.5 to 20 per cent. ..	1.473	1.771	0 97869	1.448	939
20.0 to 27 5 per cent. ..	2.046	1.805	0 96124	1.967	1 276
Over 27.5 per cent. ..	2.047	1.651	1.05080	2.151	1,395
London	1.542	1.735	1.00000	1.542	1,000

Notification.

The annual reports of the medical officers of the metropolitan boroughs show an increase of effort to limit the prevalence of tuberculous phthisis by applying to cases of this disease the methods usually adopted for the limitation of acute infectious diseases. A system of voluntary notification of cases of phthisis has been adopted in a number of London sanitary districts, and the number of cases notified in the several areas in 1906 was as follows:

Kensington ...	252	St. Pancras ...	207	Bermondsey ...	170
Hammersmith ...	105	Islington	64	Lambeth	322
Fulham	143	Stoke Newington	25	Wandsworth ...	74
Chelsea	22	Hackney (6 months)	44	Greenwich... ...	112
Westminster ...	73	Holborn	191	Lewisham (5 m'ths)	76
St Marylebone ...	248	Finsbury	217	Woolwich	176
Hampstead ...	35	Southwark... ...	399		

Notification is followed in the large majority of cases by visits to the home, and advice as to the precautions which should be taken by the sufferer. Disinfection is usually

carried out after removal or death. Sir Shirley Murphy states that the demand for larger measures for dealing with the disease is undoubtedly growing; the compulsory notification of cases of the disease is more widely advocated on the ground that only a small proportion of the cases occurring are brought to the knowledge of the sanitary authorities, and was the subject of a resolution passed in favour of this requirement by the Metropolitan Branch of the Society of Medical Officers of Health.

Segregation.

With the desire for compulsory notification of phthisis is the further desire for opportunity for the treatment of phthisical patients in sanatoriums, and for the removal from their homes of persons who are in an advanced stage of the disease. In one instance the Medical Officer of Health writes: "Arrangements should also be made for the isolation or segregation in sanatoriums of all advanced cases, which are a source of such danger to others living in the same rooms. This isolation might, with advantage, be made compulsory by new legislation." The view here expressed is no doubt more advanced than that which is usually held, but it is the view of a responsible officer, and it is impossible not to recognize a trend of opinion in the direction of regarding the phthisical person as a public danger. The grounds upon which a demand which, if fully acted upon, would have the effect of depriving many thousands of persons in London of their liberty, is made consist in the main of observed instances of association of the sufferer with houses previously invaded or with other persons known to be suffering from the malady; whilst the number of such instances is sufficiently large to create the impression that the association of the sufferer with such houses or persons has been the cause of his illness, it has to be borne in mind that this number would necessarily be large, even if infection played no part. The question is whether the number greatly differs from the number which would obtain if chance alone determined the observed association. Upon this point Sir Shirley Murphy makes the following observations:

A table contained in one of the annual reports shows that of 232 deaths from phthisis occurring in 1906 in the district, 70, or 30.1 per cent., occurred in houses in which one or more deaths from the same disease had occurred in the preceding ten years. There is no information as to the length of time during which the persons dying in 1906 had resided in the houses in question, or whether, in fact, they had taken up their residence before or after their fatal illness first manifested itself, and the assumption must be that this point was not unconsidered, and that the 70 persons had resided in these houses sufficiently long to warrant the opinion that the disease had its origin in the houses in which they subsequently died or from which they were removed to institutions where they died. The question, therefore, which needs consideration is, in what proportion, as a matter of arithmetical probability, would the deaths of 1906 occur in houses in which previous deaths from this disease had occurred in the preceding ten years. The annual average number of deaths in those years may be taken as 22¼, and the number of houses in the district may be taken as 8,500. The result arrived at on purely arithmetical grounds is that 54 deaths out of the 232 recorded in 1906, or 23.3 per cent., is the most probable number which would have occurred in houses in which one or more deaths took place in the ten years 1896-1905. This is a near approach to the 30 per cent. actually recorded, and, indeed, the difference between the two percentages is within the range of "probable error" owing to the smallness of the figures on which the calculation is based. Further, it must be recollected that if malnutrition, overcrowding, ill-ventilation, and similar concomitants of poverty play an important part in the causation of phthisis it might be expected that quite apart from the question of the infectivity of the disease more deaths would occur in houses occupied by poor persons than in houses occupied by persons who are well-to-do, and that if it had been possible to make allowance for this the proportion of deaths occurring in houses previously invaded would have been still less conspicuous. Examination of the figures certainly suffices to negative the view that in themselves they afford any reliable evidence of the infectivity of the disease.

Another method of investigation which is frequently adopted in connexion with endeavours to throw light on the question of infectivity of phthisis is to inquire of a phthisical person in what way he has been associated with other cases of phthisis, and having found such association, before his illness was conspicuous, to assume that the disease was thus contracted. The inference is that but for this association the phthisical person in question would have remained free from his disease, and in this way a foundation is being laid for the claim to isolate persons suffering from this malady. For precise inferences a comparison of the relative incidence of disease upon persons thus exposed and others not so exposed is necessary. In this connexion Dr. G. B. Longstaff's paper published in the Collective Investigation Record of 1893 is of especial value. Dr. Longstaff calculated the probability of the accidental and fatal incidence of phthisis upon both husband and wife, and he found that during ten years 1871–80, in England and Wales, assuming marriage to have no influence upon phthisis, by selection, infection, or otherwise, it would happen 4,363 times that both husband and wife would die of that disease, and that of 4,363 husbands dying in the ten years 829 wives would die within one year of the husband's death, 742 within one year and under two years, 654 within two years and under three years, and so on in diminishing proportions. There was no evidence that this number is actually exceeded.

Reference is then made to Professor Karl Pearson's study of the subject,[1] and his final conclusion is quoted:

I feel fairly certain that for the artisan class the inheritance factor is far more important than the infection factor, because in a very large proportion of cases it does not lie in the power of the individual to maintain in the stress of urban life a wholly safe environment.

While recognizing that the acceptance of the view that under the conditions which exist in urban populations the susceptibility of the individual and not the exposure to known cases of phthisis governs the probability of attack does not itself negative the theory of the infectivity of tuberculous phthisis, Sir Shirley Murphy pointed out that it raised serious question as to the practicability of reducing the death-rate of phthisis by efforts to segregate persons suffering from this disease, even if the theory of infection from person to person is accepted as the common way in which susceptible persons are infected. He concludes, therefore, that the state of knowledge at the present time is insufficient to justify the introduction into London of a system of compulsory segregation. Upon the mode of infection he makes the following observation:

The view that pulmonary phthisis is necessarily the result of inhalation of tubercle bacilli derived from the sputum of persons suffering from this disease was a natural inference from the frequency with which the lungs appeared to be primarily infected and from the finding of the bacillus in the sputum. In children, where the abdomen was the frequent site of the disease, it was recognized that the method of infection was in all probability by ingestion, but the relative infrequency of local lesions of the intestine led to the opinion that this method was comparatively rare. There is now much reason for recasting the views which previously prevailed on these questions, and for recognizing that the lungs may be infected by ingested bacilli without the occurrence of local lesions of the intestine.

There is no doubt that the relative frequency with which the disease invades the lungs of adults has also had its influence in determining the view that pulmonary phthisis is necessarily of human origin. Indeed, in his address in London in 1901, Professor Koch said: "In far the majority of cases of tuberculosis the disease has its seat in the lungs and has also begun there. From this fact it is justly concluded that the germs must have got into the lungs by inhalation."

Sir Shirley Murphy then observes that a further reason which led to the conclusion that tuberculosis in man was almost entirely derived from human sources was a difference observed between the bacilli of man and of the lower animals, and quotes at length the conclusions of the Royal Commission on Tuberculosis in their second interim report,[2] to the effect that the facts observed by them indicate that a very large proportion of tuberculosis contracted by ingestion is due to tuberculosis of bovine source, and that a very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cow's milk containing tubercle bacilli.

Tuberculous Disease in Cows.

It had been found in several instances that cows, certified by the Council's veterinary inspector to be suffering from tuberculous disease of the udder, were sold by their owners to cowkeepers outside the county. The Council obtained power under the L.C.C. (General Powers) Act, 1904, in order to avoid the possibility of the milk from such animals being sold for human food, to remove and slaughter any cows suspected to be suffering from tuberculous disease of the udder.

The cows in the London cowsheds were periodically inspected by Mr. W. F. Shaw, the County Council's

[1] BRITISH MEDICAL JOURNAL, 1907, vol. ii, p. 274.
[2] BRITISH MEDICAL JOURNAL, 1907, vol. i, pp. 323, 697; vol. ii, pp. 1165, 1435.

Examination of Cows for Tuberculous Disease of the Udder.

Details of Examination.	1st Period, 15th Dec. (1905)—17th March (1906).	2nd Period, 18th March—12th June (1906).	3rd Period, 13th June—12th Sept. (1905).	4th Period, 13th Sept—12th Dec. (1906).
Total number of cows examined	4,026	4,333	3,773	3,908
Affected with disease or defects of the udder	239	265	253	238
Clinically affected with tuberculous disease of the udder	1	1	—	—
Suspected cases of tuberculous disease of the udder	2	1	2	2
Subjects of acute mastitis	21	31	20	19
Affected with chronic induration of the udder	6	3	9	4
Atrophy of one or more quarters	155	156	160	163
Injuries, abscesses, simple eruptions, strictures and obliterations of milk ducts	25	19	23	13
Hypertrophied udders without induration	2	7	3	—
Giving milk of poor quality, dried off cows	25	48	27	20
Presenting symptoms of tuberculosis	—	—	—	1
Suffering from chronic diarrhœa	—	—	—	—

veterinary inspector, and his assistant, with a view to the detection of cows suffering from tuberculous disease of the udder. Thus, during 1906, there were four periodical inspections of all the cows in the London cowsheds. The number of cows found by Mr. Shaw to be affected in one or another way is shown in the accompanying table.

Mr. Shaw's reports also show the action taken for the elimination of tuberculous cows from the London cowsheds, thus:

First Period.—One cow, affected with tuberculous disease of the udder, was seized under the London County Council (General Powers) Act, 1904, and slaughtered, the carcass being destroyed.

A bacteriological examination of the milk from two cows suspected of having tuberculous disease of the udder was made by Sir J. McFadyean, who, in each case, reported the milk to be free from tubercle bacilli. The number of cases of mastitis and atrophy of one or more quarters of the udder was slightly less than on the occasion of the previous inspection. Two cows affected with general tuberculosis were ordered by the owner to be slaughtered.

Second Period.—A sample of milk was taken from one cow, the udder of which presented lesions of a suspicious character, and submitted for examination, the result of which proved the milk to contain tubercle bacilli. The animal was seized under the London County Council (General Powers) Act, and slaughtered, the carcass being destroyed and the owner compensated.

Third Period.—Samples of milk were taken from two cows and submitted for examination. Tubercle bacilli were found to be present in one of them. The cow from which this sample was taken died during the period the milk was under examination, the carcass being cut up, boiled and given to pigs. Mr. Shaw, in his report, particularly directs attention to the fact that at the time the sample was taken the cow's udder appeared to be perfectly healthy, although the cow presented symptoms of tuberculosis.

Fourth Period.—Samples of milk were taken from two cows suspected to be affected with tuberculous disease of the udder, and in both cases Sir J. McFadyean reported that they contained tubercle bacilli. One of the animals in question, before the result of the examination was known, was sent by the owner to the Islington Cattle Market to be slaughtered. In the other instance the animal was seized and slaughtered under the Council's General Powers Act. Upon *post-mortem* examination, Mr. Shaw found the carcass showed evidence of the presence of tuberculous disease of the udder. The carcass, offal, and hide were destroyed. A further sample of milk was taken from a cow affected with tuberculosis of the lungs, but which presented no clinical symptoms of tuberculous disease of the udder. The inoculation test showed that tubercle bacilli were present in the sample. Prior to the result being obtained, however, the animal was sent by the owner to the knackers to be slaughtered. Upon *post mortem* examination, Mr. Shaw found that the lungs were tuberculous, but was unable to examine the udder, as it had been already disposed of.

THE MILK SUPPLY OF HOSPITALS.

THE Central Hospital Council for London, which represents twenty hospitals, last July appointed a committee consisting of Mr. A. Bingham Watson, Chairman; Mr. Willmott Evans, F.R.C.S., Mr. H. A. Harben, Mr. Arthur Lucas, and Dr. Lauriston Shaw, to consider whether the London hospitals should be advised to take joint action with a view of ensuring the purity of their milk supply. The Committee had the advantage of the views of Dr. Arthur Saunders, Assistant Physician and Physician to the department for the Medical Diseases of Children, West London Hospital; Mr. Stokes, Public Analyst to the Borough of Paddington, and analyst to several London hospitals; Mr. Hopkins, the managing director of the Great Western and Metropolitan Dairies Company, Ltd.; and Mr. Arthur Barham, managing director of the Dairy Supply Company, Ltd.

The information obtained from the constituent hospitals showed considerable divergence of practice; one hospital had no form of tender for milk; twelve merely required the supplying firm to contract to supply milk containing certain percentages of solids and fats; eight, in addition to requiring certain percentages in the constituents of the milk, made special provision to ensure the notification of the farms from which the milk was supplied, or the periodical certification of the cows and farms as being in satisfactory condition, or for dealing with milk in certain specified ways at the farms, or to have milk brought from the cows under the inspection of the hospital when so desired.

The committee advises that the council should recommend the constituent hospitals to require their respective milk contractors to agree to the following conditions, which should be embodied in the forms of tender or contract. The committee are advised that every one of the conditions is reasonable, and such as may fairly be required of contractors, in fact, each one of them has been adopted by some one or more of the hospitals.

1. That the milk shall be pure, genuine, with all its cream as yielded by the cow, absolutely free from any and every kind of adulteration (including preservatives), and shall be of such quality as will, between the months of August and January, both inclusive, produce at least 3·5 per cent. of butter fat, and for the remainder of the year 3·25 per cent. of butter fat.

2. That the milk shall be supplied from a farm or farms, whose name or names and locality are to be notified by the contractor to the hospital.

3. That it shall be permissible for an authorized representative of the hospital to visit and inspect such farm or farms and the herds there at any reasonable times.

4. That the cows supplying the milk shall be in a good state of health, and that the contractor shall give the hospital a certificate by a veterinary surgeon to the effect [in the annexed form] without cost to the hospital in the first instance, and shall give subsequent certificates whenever required by the hospital, at the hospital's expense.

5. That the milk shall be strained and cooled to the temperature of cold water—not exceeding 60°—at the farm, and there canned and sealed with a die to be supplied by the hospital, and that all cans shall be dust and rain proof.

6. That the contractors shall guarantee the cleanliness of the milking operation and of the men's hands and of all receptacles into which the milk is put, all of which receptacles shall be properly cleansed with a solution of boiling water and soda.

7. That the cans shall not be opened in transit except at the London railway station by the public sanitary inspectors, and if so opened shall be immediately re-sealed for delivery to the hospital, and shall in every case be delivered direct from the London railway station to the hospital.

8. That the milk shall not be pasteurized or treated otherwise than mentioned in Clause 5 without the written sanction of the hospital authorities.

The committee is further of opinion that the following precautions outside the contract are all reasonable, and that in the majority of cases there should be no difficulty in carrying them into effect:

(*a*) The medical officer of health of the district in which the farm from which the supply of milk comes is situate should be furnished by the hospital in question with a copy of the contract, and should be requested to further as far as possible the carrying out of its terms, so far as they relate to the condition of the cows and the dairy buildings, etc.

(*b*) The hospital should obtain a report, either from the medical officer of health or from a member of the hospital's own staff or other expert, as to the state of the sheds, milking-places, dairy, and water supply to the farm. It is, of course, most important that no hospital should be supplied with milk from a farm without a proper water supply.

(*c*) Wherever possible the hospital should endeavour to make an arrangement with the medical officer of health of the district to notify, at a fixed fee, to the hospital, any cases of contagious or infectious illness in the families of the men employed at the farm of supply. (We find this is already done in some cases at a fee of one guinea for each report. In some cases it may not be practicable, but it could, in our opinion, be achieved in the majority of cases, with the assent of the contractor, who can, of course, require his farmer to agree.)

(*d*) All milk should be inspected by some practical official on arrival at hospital.

(*e*) The milk should be chemically analysed at least once a week, but at irregular intervals, to ascertain the percentages of total solids and fats. Where it is thought inexpedient to engage the services of a skilled analyst in the first instance, a Gerber fat tester is recommended as the best apparatus to use. If the results of the test are unsatisfactory, a complete analysis should be made. The sample to be analysed should always be taken in duplicate in the presence of the contractor's representative, and one sample handed to him. We are advised that it is of little value to take the specific gravity of the milk except as part of a fuller analysis, and that the use of a creamometer is misleading. We are also advised that there is little practical utility in bacteriological tests.

(*f*) The employment of an inspector or inspectors to visit farms and test the milk either there or in transit would be an expensive undertaking for each hospital to carry out separately, but it may be worth while to consider whether the hospitals could combine for this purpose.

(*g*) In case of a yearly contract we are advised that the tender should provide two prices—one from October 1st to March 31st, and one from April 1st to September 30th. (In the event of the contract, at an average price for the year, having to be terminated prematurely in the summer months, the contractor would gain considerably, while an average price is unfair to the contractor if for any reason a larger supply is required in the winter or a smaller supply in the summer.)

The committee states that one hospital at least has secured a report upon the condition of the farm from a member of its visiting staff, who volunteered to undertake it, and it is believed that most other hospitals would encounter no difficulty in securing similar reports. The committee recommend that no condition should be inserted in the contract which it is not intended to enforce strictly, and observe in conclusion that it is possible that the strict conditions suggested may have the effect of slightly increasing the price at which contractors will tender, but in view of the serious interests involved, it is considered that this risk may justifiably be incurred.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Mr. McKenna, M.P., in reply to a deputation from the County Councils Association to urge that a grant from the Exchequer should be made to relieve the rates of the cost of medical inspection of school children, which it was alleged would press hardly upon rural districts, said he considered the claim justifiable, and would recommend it to the Chancellor of the Exchequer. He hoped, moreover, that in the Education Bill, which he would introduce in the course of a few weeks, to be able to put the grant system, at present in a state of confusion, on a different footing. The financial arrangement proposed under the new Bill would far more than meet any additional burden imposed by it.

Birkenhead.

The Birkenhead Town Council has appointed Dr. R. Sydney Marsden, M.O.H., to be supervising school medical officer, at a salary of £75 per year, and Dr. R. Owen Morris school medical officer, to devote the whole of his time to the duties of the office, at a salary of £400 a year. Dr. Morris will retain the lectureship on hygiene at the Corporation Technical School. The Town Council also intend to appoint a school nurse to assist in the work at a salary of 31s. per week and uniform.

Cheshire.

The Cheshire Education Committee has appointed Dr. Vacher, county medical officer, to be the chief medical inspector under the education authority for the county, and has resolved to appoint also two medical inspectors at a salary of £350 each a year, to give their whole time to the work of inspection under Dr. Vacher's general supervision.

Leicester.

At a meeting of the Midland Branch Council which was held in the Royal Infirmary, Derby, on Thursday, January 23rd, the President of the Branch, Dr. Lorimer of Buxton, in the chair, a letter was read from Miss H. M. Greene of Derby, asking "Would it be feasible for the Branch to pass some kind of resolution strengthening the hands of medical women on the subject of the salaries to be paid by certain county councils for the inspectorship of schools?" The following resolution was passed unanimously:

> That this meeting of the Council of the Midland Branch considers that in filling public appointments the same remuneration should be offered to female as to male medical practitioners.

MEDICAL NEWS.

Professor von Esmarch, of Kiel, celebrated his 85th birthday on January 24th. His native town, Tönning, in Schleswig-Holstein, has erected a statue to him.

At the meeting of the Royal Microscopical Society at 20, Hanover Square, W., on Wednesday next, at 8 p.m., there will be an exhibition by Mr. C. L. Curties of slides illustrating the life-history of some diptera, and Mr. E. M. Nelson will read a paper on eyepieces for the microscope.

On January 30th Professor Koch delivered a lecture, illustrated with lantern slides on sleeping sickness and the means of combating the disease, in the presence of the German Emperor and Empress. It is announced that at the end of March he intends to start on a voyage round the world which will extend over a year.

It is proposed to erect a hospital in St. Petersburg, to be called after Peter the Great. It was originally intended that it should contain 1,000 beds, but it has now been decided to increase the number to 2,000. A sum of 4,500,000 roubles has already been allocated for the purpose, but it is estimated that a million more will be required. The money will be raised by a municipal loan.

The next quarterly meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at the Warwick County Asylum, Hatton, on Thursday next, at 3 p.m., when Dr. George Turner will give a lantern demonstration on some further observations on the supposed thrombotic origin of epileptic fits, and Dr. Cunyngham Brown will read a paper, illustrated by lantern views, on boarding out of the insane in private dwellings.

Dr. J. A. W. Pereira has been presented with his portrait, bearing the following inscription: "Presented by the Chief Constable and members of the Exeter City Police Force to Dr. J. A. W. Pereira, M.D., M.R.C.S., L.R.C.P., Police Surgeon, as a mark of their appreciation of his kindness and attention to the Police Force. Feb. 6th, 1908." The presentation was made last week by the Chief Constable, and was suitably acknowledged by the recipient.

The tour of medical study (Excursions Médicales Internationales) will take place this year in Italy from April 12th to 28th. The medical and sanitary institutions of Turin, Milan, Padua, Venice, Bologna, Florence, Rome, Naples, Pisa, Genoa, and San Remo will be visited. The organization of the tour is in the hands of Professor Pini, who has secured the co-operation of Professors Baccelli, Bossi, Mangiagalli, Mya, and other leading members of the medical profession in Italy. A complete programme of the tour is published in the January number of *L'E.M.I.*, which may be got on application to the Administration de l'Oeuvre d'Enseignement Médical Complémentaire, 8, rue François Millet, Paris (16e), from which all other information required on the subject can be obtained.

British Medical Journal.

SATURDAY, FEBRUARY 15TH, 1908.

THE MODERN TREATMENT OF CONSUMPTION.

On Sunday, March 8th, in fulfilment of wishes expressed by the German Medical Congress both at Berlin and at Vienna, there will be unveiled at Breslau a monument to Dr. Hermann Brehmer, the founder of the sanatorium at Görbersdorf. He was born on August 14th, 1826, at Kurtsch, in Silesia. His first intention was to give himself to natural science, but at Berlin he came under the spell of Johannes Müller, and determined to devote himself to medicine. Himself of consumptive stock, the problem of the treatment of phthisis specially interested him as a student, and when he took his doctor's degree his inaugural thesis was entitled "Consumption is Curable." This theme he developed in a series of writings extending from 1856 over the whole of his life. He conceived the idea of a sanatorium for consumptives, but did not succeed in getting a concession for the purpose till Alexander v. Humboldt and Schoenlein, impressed by the importance of his work, exerted their influence in favour of his project. Brehmer chose for the situation of his institution Görbersdorf in Silesia, which lies in a lovely valley ringed about by wooded hills at the mouth of the Sudetes range, in the so-called immune zone, about 600 metres above sea level. Dr. Flügge, of Hanover, father of the distinguished hygienist of Breslau, and Professor von Leyden were among Brehmer's most strenuous supporters. His sanatorium soon came to be widely known in Germany; now its fame as a scientific shrine of healing has spread all over the world. Its founder deserved well of mankind, and it is right that his work should be publicly commemorated.

Without wishing, however, to steal one ray from the aureole of glory with which he has been crowned by his countrymen, it is only fair to recall that the pioneer of the open-air treatment of consumption was an Englishman. There was nothing new in the idea. Pliny the Elder speaks of the beneficial effects of sunlight and air charged with the scent of pine forests in consumption. Galen advised phthisical patients to live at high altitudes. Avicenna in the eleventh century says he cured cases of consumption by the same treatment. The doctrine of the open window was taught in 1784 by James Graham, who, though a quack of the vilest description, had received a medical education, and both preached and practised the hygienic virtues of fresh air at a time when, particularly at night, it was looked upon with the gravest suspicion as having in itself a special "miasm" to be kept out by hermetically closing bedroom windows. He recommended people to sleep with all the windows of their rooms wide open. "This," he adds,[1] "is my own invariable custom, "summer and winter, even in the wettest, coldest, and "stormiest weather, and I never, never have a cold, "low spirits or any indisposition whatever. The free, "open cold air is a constant full cold bath for the out-"side of the body, for the lungs, for the mass of blood "which passes through them, and consequently for the "whole system of the friendliest and most efficacious "kind." We ought, perhaps, to apologize to our readers for quoting from such a source, but, on the principle of giving the devil his due, we have thought it fair to show that in one point at least Graham was wiser than the medical profession of his day.

The credit of laying the foundations on which the modern treatment of consumption is built, however, belongs to George Bodington, a man of singular independence of mind, who in 1840 published a small book entitled *The Treatment and Cure of Pulmonary Consumption*, which was republished not long ago by Dr. Arthur E. Bodington,[2] and which should be read by all who are interested in the history of medical progress. The essence of Bodington's teaching is contained in the following passages. After condemning the system of "shutting the "patients up in a close room, to exclude as far as "possible the access of the atmospheric air, and thus "forcing them to breathe over and over again the same "foul air contaminated with the diseased effluvia of "their own persons," dosing them with tartarized antimony and digitalis and using demulcents, blisters, leeches, and plasters, he refers to the inhalation of gases of various kinds. He goes on: "The only "gas fit for the lungs is the pure atmosphere freely "administered, without fear; its privation is the "most constant and frequent cause of the pro-"gress of the disease. To live in and breathe "freely the open air, without being deterred by "the wind or weather, is one important and essential "remedy in arresting its progress; one about which "there appears to have generally prevailed a ground-"less alarm lest the consumptive patient should take "cold; thus, one of the essential measures necessary "for the cure of this fatal disease is neglected, from "the fear of suffering or incurring another disease "of trifling import." Bodington lays great stress on nutrition and easily-digested food and on stimulation with sedatives, when indicated. But he repeats with recurring emphasis that the most important remedial agent in the cure of consumption is the free use of a pure atmosphere. The patient, he urges, ought never to be deterred by the state of the weather from exercise in the open air. The cold, he says, is never too severe for the consumptive in this climate; "the cooler "the air which passes into the lungs, the greater "benefit will the patient derive. Sharp, frosty "days in the winter season are most favour-"able. The application of cold, pure air to the in-"terior surface of the lungs is the most powerful "sedative that can be applied, and does more to pro-"mote the healing and closing of cavities and ulcers "of the lungs than any other means that can be "employed." Bodington took patients for treatment in accordance with his system into a house at Sutton Coldfield, which is the prototype of the modern sanatorium. The building is still in existence. He held that the sanatorium afforded the only means of dealing successfully with consumption. The passage is so prophetic that we venture to quote it. Speaking of medical practitioners who have cases of consumption under their charge, he says: "If they are to succeed, they "should have country houses in proper situations, well "ventilated, and provided with all 'appliances and "'means to boot,' where their patients should be under "their own eyes, and strictly watched and regulated in "all respects as regards exercise, air, diet, medicine, "etc.; or, there should be a certain class of practi-

[1] *A Lecture on the Generation, Increase, and Improvement of the Human Species*, etc. London, 1784.

[2] London: Simpkin, Marshall, Hamilton, Kent, and Co. 1906.

"tioners who should exclusively pursue this practice "as a distinct branch, to whom those in the large "towns should confide their consumptive patients, "instead of sending them, as many now do, to take "their chance, or probably to fall into the hands of "mercenaries at some distant seaport, where they com- "monly die, far away from friends and home. With "respect to the consumptive poor patients, those who "cannot afford to pay for a proper treatment of this "sort, hospitals should be established in the vicinity "of large towns, in fit situations, and properly "appointed in all respects for their reception and "treatment. In these there should be provision made "for affording them carriage or horse exercise; and "gardening and farming occupations for the convales- "cent. The common hospital in a large town is the "most unfit place imaginable for consumptive patients, "and the treatment generally employed there very "inefficient, arising from the inadequacy of the means "at command." Bodington met with the usual fate of pioneers. Sir James Clark, then a leading authority, ridiculed what he called "the beefsteak and "porter system," and the reviewers of the day joined in pouring scorn on the general practitioner in whose "very crude ideas and unsupported assertions" (to quote one of them) lay the germ of the modern treatment of a disease which till then had defied medical art.

Similar doctrines were embodied by Benjamin Ward Richardson in a "Decalogue" drawn up by him in 1855 for the Ladies' Sanitary Association. Another pioneer of the open window was Dr. Henry MacCormac, of Belfast, father of the late Sir William MacCormac. In the words of Sir Samuel Wilks, he may be said to have spent his life in propagating the doctrine that fresh air is the only preventive and cure of consumption. When he brought his views before the Royal Medico-Chirurgical Society of London, the members of that august body present on the occasion complained that the reading of such a paper was a waste of time, and one learned physician asked that the Society should be protected against the reading of such productions. This is a sad proof of the view we have often expressed, that one of the worst hindrances to progress in medicine is the "superior person" who looks with suspicion and contempt on any departure from the beaten track.

It is the glory of men like Brehmer and Dettweiler that they fashioned knowledge that had already been accepted by progressive minds into a system of practice which has given results undreamed of by the physicians of thirty years ago.

THE MILK SUPPLY OF HOSPITALS.

Elsewhere in this issue (p. 401) will be found the recommendations made to the Central Hospital Council for London by a special committee appointed last summer to consider whether the time has not come for the London hospitals to take joint action with the view of ensuring the purity of their milk supply. The report is striking evidence of the very remarkable movement of opinion which has taken place during the last four or five years. When the facts with regard to the neglect of reasonable sanitary precautions and ordinary cleanliness were published in these columns at that time, their accuracy was denied. We were not much concerned to defend the report from these attacks because we were aware that nothing had been stated that had not been fully verified by the careful inquiries made by our Special Commissioner, and it was certain that attention having been so forcibly drawn to the matter no very long time could elapse before the truth of the allegations would be confirmed by independent inquirers.

The expected confirmation was very speedily afforded, and the apologists for milk as it is began to assert that it did not matter. Milk had always been manipulated more or less, it had always been liable to contain such extraneous objects as tubercle bacilli, staphylococci and streptococci, and dung, and it was therefore argued that, as previous generations had drunk milk of this sort, and had in part survived to be our ancestors, we might drink it with no greater risks, so that criticism of the milk industry was unnecessary and unpatriotic. This sort of argument found some support in Koch's doctrine that the bovine and human tubercle bacilli differed so much that the former was practically harmless to man. But it was not a contention that ever commended itself very strongly to the public mind; and again facts began quickly to accumulate proving that milk containing pus and the microbes derived from the cow's intestine could not be drunk with impunity even by adults, and was very injurious to infants and young children, while the scientific investigations of Koch's hypothesis by the Royal Commission on Tuberculosis and by foreign experts threw the gravest doubt on its validity. It was then said that every risk might be averted by sterilizing or even pasteurizing the milk, and when it was objected that these processes were undesirable and involved dangers of their own to the health of infants and children and that clean milk was preferable, it was asserted that such a demand showed an unpractical and impracticable spirit. This assertion being indefinite, and resting mainly on the alleged expert commercial knowledge of those who made it, was again left to the verdict of time. Once more the verdict is going against the apologists of dirty and dangerous milk.

The Central Hospital Council for London is a practical body consisting of representatives of the boards of management and medical staffs of twenty of the largest hospitals in London. It is concerned with questions of administration, and has succeeded in bringing about an understanding on many matters of general principle. The subcommittee on the milk supply consisted of three laymen and two members of the medical profession; it took evidence from, amongst others, the managing directors of two large dairy companies, and states that it is advised that every one of the conditions that it proposes is reasonable and such as may fairly be required of contractors, and that, in fact, each one of them has been adopted by some one or more of the hospitals. These particulars must be studied in the text reproduced elsewhere, but we may point out that they include the supply of a pure, genuine milk with all its cream, and without any kind of addition; a guarantee from the contractor of the cleanliness of the milking operations, of the men's hands, and of all receptacles; that it shall not be pasteurized; shipment of the milk from the farm to the hospital in sealed cans; notification of the name of the farm by the contractor to the hospital; and the right of the hospital to cause the farm to be visited and inspected. Already, therefore, we have reached the point at which the responsible representatives of the chief hospitals in London consider that milk can be delivered in good condition without pasteurizing, simply by giving adequate attention to cleanliness. The Committee also recommends the hospitals to enlist the co-operation of the medical officer of health of the district in

which the farm is situated, and that arrangements should be made with him to notify to the hospital for a suitable fee any case of contagious or infectious illness in the families of the men employed at the farm. Finally, it is stated that though the observance of the contract conditions suggested may have the effect of slightly increasing the price at which contractors would tender, this risk may justifiably be incurred in view of the serious interests involved. It has sometimes been said on behalf of the milk trade that this possible increase in price is the great stumblingblock in the way of the general enforcement of sanitary precautions, but when the considerable difference between the price received by the farmer for the milk and that at which it is retailed to the public is borne in mind, the force of this statement is considerably diminished.

The defects in the law, but more especially in the way in which it is administered, have frequently been pointed out in our columns, and we are glad to note that the President of the Local Government Board stated last week that the Government were desirous that there should be legislation with regard to the milk supply during the present session, and implied that he had a Bill ready. Lord Carrington, replying to Lord Northbrook in the House of Lords on Tuesday, confessed that the milk industry was not in a satisfactory condition, and confirmed the intention of the Government to introduce legislation this session. It is stated that, owing to the fact that no reference was made to the subject in the King's speech, some members for agricultural constituencies have put down notices of objection to certain private Bills containing clauses giving town authorities power to control the milk in the localities from which it is supplied. We hope that this action may have the effect of encouraging Mr. Burns to bring in his Bill at an early date, and that it will contain provisions for giving to the county council power either to compel the smaller rural sanitary authorities to enforce proper by-laws and regulations, or, if necessary, itself to take the place of recalcitrant authorities.

ANNUAL MEETING IN SHEFFIELD.

At a meeting of representative citizens held at the Town Hall, Sheffield, on January 31st, called to make arrangements for the civic welcome of the British Medical Association next July, the following resolution was unanimously passed, on the motion of the Lord Mayor, seconded by the Master Cutler: "That this "meeting of representative citizens of Sheffield learn "with great satisfaction that the British Medical "Association propose to hold their annual conference "in Sheffield in July next. They beg to assure the "Association of a hearty welcome to the city, and trust "that the proposed visit may not only be pleasant and "enjoyable to the members, but may be a means of "assisting and strengthening them in their profes-"sional work, and thereby of lasting benefit to the "community."

DEATHS UNDER ANAESTHETICS AT GENERAL HOSPITALS.

It appears from a paper read before the Society of Anaesthetists on February 3rd, 1905, and published in their *Transactions*, that frequent complaints had been made previous to that time, that patients anaesthetized with the hospital chloroform used at Guy's Hospital had an undue tendency to cough and hold their breath, and that the prolongation of the time of induction thus brought about might lead in inexperienced hands to the administration of an overdose. In consequence of this, the author of the paper, Dr. Wade, Lecturer on Chemistry at Guy's, was asked to investigate the cause of the apparent irregularity in action of the hospital chloroform, and to ascertain the chemical difference between chloroform made from alcohol and from acetone. The hospital chloroform had already been tested for impurities by the hospital pharmacist, with negative results, and Dr. Wade, having repeated the tests, agreed with the pharmacist's conclusion. He found, however, that in the chloroform made from acetone there was lacking a small quantity (0·25 per cent.) of ethyl chloride, which was present in that made from alcohol, and at his suggestion that amount of ethyl chloride is now added to the hospital chloroform. Inquiry from the wholesale dealers elicited the fact that the chloroform supplied to the hospital was usually that made from acetone, though occasionally that from methylated spirit was sent. Dudley Buxton has pointed out that methylated spirit is very difficult to purify, and liable to contain by-products such as chlorinated oil, etc. In Dr. Wade's paper it is stated that the difference in price to the hospital between the chloroform used and that made from rectified spirit would be over £200 a year. At an inquest held by the Southwark coroner on December 7th, 1907, on a patient who had died under chloroform, the coroner told the jury that there were two kinds of chloroform; one made from acetone, which was cheaper than that made from alcohol; that this cheaper sort was used at Guy's, and the doctors seemed to be quite satisfied with it. We have ascertained that the acetone chloroform is also used at St. Mary's, St. Thomas's, University College, and Westminster Hospitals, while at St. Bartholomew's that made from rectified spirits is used, and at St. George's and King's College that from methylated spirits. The prices vary from 4s. 7½d. per lb. at St. Bartholomew's, to 1s. 4½d. at Guy's and 1s. 3½d. at St. Thomas's. By the repeated freezing of ordinary chloroform Pictet has prepared what he considers to be pure chloroform. The mother liquid from which the chloroform has been frozen out resembles chloroform physically, but contains residues which, according to Du Bois-Reymond, differ considerably physiologically, and have a deleterious effect upon the organism. As to what these impurities or residues consist of, nothing appears to be known, but it is possible that they are composed of bodies possessing a powerfully depressant action on the heart. Chloroform may, as has been said, be derived from several sources, and many surgeons have maintained that bad results are apt to follow its use when obtained from certain makers. From experiments that have been made it appears that the residues mentioned above cause diminution of blood pressure, and that respiration stops more quickly when chloroform containing them is used than when pure chloroform is employed. Du Bois-Reymond considers that pure chloroform will kill by failure of respiration, but that impure chloroform does so rather more rapidly. The amount of impurities, he admits, is very slight, but, though minute, they act strongly when dissolved in chloroform, and their presence is enough seriously to affect the person or animal inhaling them. It seems surprising that we have no statistics to refer to as to the mortality under anaesthetics at the London hospitals, while on the Continent one observer at Geneva has been able to collect over 600 000 cases of administration with a mortality of less than 1 in 3 000, and at Dublin a large number with a similar mortality. At Guy's a reporter to the *Daily Telegraph* was told by

[1] See Luff's *Textbook of Forensic Medicine*, 1895, p. 243.

the Superintendent that "at the very lowest estimate' anaesthetics are administered in 16,000 cases every year. But as this includes the dental department in which anaesthetics were given to over 5,000 cases last year and the mortality last year amounted to 11, it would appear that the mortality at that institution was far above—double, indeed—that on the Continent or in Dublin. This is one of the points which, we understand, is now engaging the attention of the Committee of the staff at Guy's appointed some three months ago in accordance with the recommendation of the coroner's jury.

A NEW HONOUR FOR LORD LISTER.

At a special meeting of the Liverpool School of Tropical Medicine held recently, it was resolved to present Lord Lister with the Mary Kingsley Medal. In a letter dated February 7th, sent with the Medal, it was stated that it had been founded for the purpose of recognizing the work of those who had accomplished much in the cause of Tropical Medicine. No one, it was added, had accomplished more for this cause, or indeed for the whole cause of medicine, than Lord Lister. It may be mentioned that Lord Lister formally opened the Liverpool School of Tropical Medicine on April 21st, 1899. At that time the expenditure of the School was £350 per annum; in the nine years that have since elapsed, the School has, it is stated, spent on its expeditions and research work alone over £60,000.

THE TREATMENT OF INJURIES OF THE HEART.

The extraordinary advances made in surgical procedures are strikingly shown by the inclusion of the heart in the scope of surgery. It is now some eleven years since Rehn first sutured a human heart successfully. Since that date, some 120 similar operations have been performed, of which 46 per cent. recovered. Fischer and Loison have shown that only 15 63 per cent. of the cases not treated by operation recovered. Felix Franke,[1] however, considers that the mortality is still too high, and that better results may be expected from improved technique. In the first place, it is necessary that the diagnosis should be made early. The symptoms associated with injury of the heart are dyspnoea, a feeling of fear and of suffocation, and blueness of the lips, while the increase of cardiac dullness and the distant and soft heart sounds indicate the existence of a haemopericardium. The nature of the instrument which caused the wound and the wound itself may further assist the diagnosis. Franke discusses the chances of a spontaneous healing of cardiac wounds, and after dismissing the suggestion of an exploratory operation to determine how far the injury has gone, he finds that only from 10 to 12 per cent. of the operation cases have healed up without any purulent pericardial or pleural implication. The history of gunshot wounds in warfare teaches us that in certain circumstances wounds of the heart may heal spontaneously. He recalls the case of a boy with a heart wound who was admitted into hospital in a moribund condition. It was not thought worth while to operate. The blood was merely aspirated from the pericardium, and the boy recovered. Franke regards the withdrawal of blood from the pericardium as an important means of treating cardiac wounds. This may be carried out either as a palliative or as life-saving procedure. A minute examination of fatal cases has shown that in the majority of them death is due to compression of the heart rather than to loss of blood. Death may take place so rapidly that a surgeon cannot arrive in time, and the general practitioner will then have to determine the condition and let the blood out of the pericardium. The puncture may only serve as a palliative treatment, in which case the surgeon will have to decide whether suture should be undertaken or not. At times symptoms of compression of the heart do not appear until the second day or later, even up to the fifth. In these cases the puncture at times may act as a life-saving treatment; Franke gives a striking illustration of this. He claims that simple paracentesis is sufficient to save the patient. The risk of suppuration later is practically *nil*; therefore better results may be expected than when suture is carried out. In any case puncture cannot do any harm, and even when suture must be performed the patient is better able to withstand the operation after the blood has been let out than when the heart is acting at a disadvantage owing to the intrapericardial pressure. Franke uses a thin trocar for the purpose, and finds that with care there is no risk in introducing the instrument. He does not regard it wise to limit the puncture to any definite situation, but chooses the spot according to the extent of the dullness. As a rule, the fifth intercostal space close to the sternum is the safest place. It is quite easy, if the trocar is introduced skilfully, to feel when the point touches the heart, and in this way all danger of wounding the heart afresh can be avoided. The skin should not be frozen with the ethyl chloride spray, although Schleich's infiltration anaesthesia may be used for nervous patients. The patient must be carefully watched afterwards. Franke believes that a freer use of the puncture of the pericardium will be instrumental in reducing the mortality from wounds of the heart.

[1] *Deut. med. Woch.*, September 19th, 1907.

THE BRAINS OF DISTINGUISHED MEN.

The study of the brains of distinguished men has always been fascinating, for it has ever held the hope that observable structural peculiarities might give some clue which would lead to the localization of admired and envied faculties. In the past, however, the hope has been elusive, and, although the brains of some 140 more or less distinguished individuals had been studied, but little was to be gathered from the records beyond the fact that, taken as a whole, the brains of men of unusual mental calibre are more richly and more deeply convoluted than the brains of more ordinary people. In other words, it has been proved that greater mental capability is associated with greater areas of grey matter, the grey matter of an exceptionally capable brain being, as a rule, in excess of that demanded by the size of the body with which the brain is associated. Recently a step forward has been made by Professor Spitzka, of the Jefferson Medical College of Philadelphia,[1] who has deduced some very interesting conclusions from the results of his examination of the brains of six distinguished Americans. The brains he examined were those of J. Leidy, biologist and teacher; E. D. Cope, palaeontologist and morphologist; P. Leidy, surgeon and organiser; A. J. Parker, morphologist; R. Allen, surgeon and zoologist; and W. Pepper, a distinguished physician. Professor Spitzka's examination of these brains, which were associated during life with very exceptional faculties, confirms all that was previously known regarding richness and depth of convolutiens and amount of grey matter. It shows in addition that white matter, and particularly the association fibres, also preponderate in the brains of distinguished men, as contrasted with the brains of men of smaller mental calibre. This preponderance of white matter, which, as Professor Spitzka points out, is so necessary for the happy and brilliant utilization of the records deposited in the numerous cells of the abundant grey matter, is most strikingly and convincingly shown in the relatively great size which the corpus callosum

[1] *A Study of the Brains of Six Eminent Scientists and Scholars belonging to the American Anthropometric Society.* By E. W. Spitzka, M.D.

attains in the brains of unusually capable men. Professor Spitzka, however, goes still further, for he believes he is able to show that some faculties can be definitely localized, and that, taking two men, both of great but of different mental capabilities, not the same but different areas of their brains will preponderate. He supports his contention by reference to the brains of Professor Cope and Professor J. Leidy. The former was "more creative, constructive, philosophic," and he was brilliant in abstract generalizations. The latter "was a far keener observer," quick at seeing analogies, an excellent systematizer, and he had a splendid power of memorizing and recalling visual impressions. In association with these differences of mental power Professor Cope's brain shows a relatively preponderant development in the area in front of the precuneus, whilst in Professor J. Leidy's brain the precuneal and cuneal areas are relatively enormously large. Whether or not further observations will confirm Professor Spitzka's views the future alone can tell, but his observations are suggestive and should stimulate further research.

ABDOMINAL OPERATIONS AND ADHESIONS.

The technique of abdominal surgery has been brought to a high pitch of perfection in America, and the discussion on the subject at a meeting of the American Medical Association could not fail to be of interest. It followed a paper on prevention of peritoneal pelvic adhesions by adrenal salt solution by Dr. Emery Marvel,[1] who dwelt on the prevention of adhesions in the pelvis after operation. He pointed out that an active irritant on the peritoneal surface caused filling of the blood vessels and exudation, and that to avoid adhesion it was necessary to remove the irritant, separate the adherent surfaces, and provide a preventive against their reunion. To accomplish that purpose Dr. Marvel used a solution of adrenalin chloride in normal salt solution, which prevented further exudation from the relaxed vessels and closed their lumen. The solution mechanically kept the surfaces apart, and gravitation could be used to keep the solution in the desired part of the abdomen. The solution was introduced after the usual manner when the peritoneum was irrigated or flushed with saline solution. Dr. F. S. Simpson considered that, from a prophylactic point of view, operation in any case where pus was likely to be present should be delayed until the pus became sterile. Inflammatory reaction was then less likely to ensue, and the surgeon should cover all denuded surfaces with healthy peritoneum. Dr. Florus Lawrence contended that certain modern practices were the cause of adhesions, the patient being pulled and hauled about with retractors, turned upside down, and subjected to much handling of intestine. "If the "operation was clean," he added, "with no traumatism, "no raw surfaces left, no washing, no tubes left sticking "in the wound, and all such things, there would be but "few adhesions." Dr. Daniel Craig objected to chemicals which might set up irritation instead of allaying it. Adrenalin checked oozing, but, as its application in other parts of the body had proved, there was subsequent reaction, so that haemorrhage sometimes recurred at the oozing spot. Dr. C. C. Frederick stated that he once flushed the peritoneal cavity with saline solution during abdominal section, but had abandoned the practice for several years, as he considered that it was wrong in principle, and that it did not prevent the formation of adhesions. He used adrenalin for direct application to oozing surfaces after the separation of adhesions. In conclusion, Dr. Todd Gilliam expressed much distrust of adrenalin. The last word, we may add, has not been said as to the prophylaxis of adhesions.

[1] *Amer. Journ. Obstet.*, August, 1907, p 242.

The ratio between the value of a method and the skill of the operator must always be taken into account, especially by the surgeon who adopts that method at second hand. Should he discontinue it and find that operative results improve, that improvement may be due to increased manipulative skill rather than to the discarding of the method in which he once believed.

THE RESEMBLANCE OF COUSINS.

Although much work has been published bearing on the degree of resemblance between the relatives in the direct line, few data are available with respect to collaterals higher than the first degree. Miss Ethel Elderton and Professor Pearson[1] have recently investigated the intensity of resemblance between first cousins in respect of health, intelligence, success, temper, and certain measurable characters (width of hand, width of wrist, etc.). In all cases, positive significant values were obtained. Thus, in the former group, mental characters, the average degree of resemblance corresponded to a value of the coefficient of correlation ranging between about 0.25 and 0.30. These values approximate to those found to obtain for the resemblance between aunts and nieces or uncles and nephews for eye colour, and are only slightly less than the coefficients of grandparental inheritance at present determined. Positive results were also found, with one doubtful exception, for the occurence of insanity and tuberculosis in cousins. The following conclusions appear justified: "The grandparent, the uncle or aunt, "and the cousin are practically on the same footing with "regard to relationship or intensity of kinship as "measured by degree of likeness of character; and it "seems probable that any scientific marriage enactments "would equally allow or equally forbid marriage between "grandparent and grandchild, uncle and niece, aunt "and nephew, and between first cousins." It would also seem that in taking family histories for medical purposes, details regarding the first cousins are just as important as information respecting the patient's uncles and aunts. This memoir fully maintains the high standard set by its predecessors in the series, and must be studied by all interested in the statistical side of inheritance.

EUGENICS EDUCATION SOCIETY.

The annual general meeting of the Eugenics Education Society will be held at Denison House, 296, Vauxhall Bridge Road, on Wednesday, February 26th, at 3 p.m. The new prospectus of the Society, after recalling the definition of the phrase "national eugenics" by Mr. Galton as "the study of agencies under social control that "may improve or impair the racial qualities of "future generations, either physically or mentally," states that "the Society proposes to carry on its "work by holding meetings for papers and discussions, "by arranging lectures and courses of lectures, by col-"lecting a lending library, and by the issue of publica-"tions on eugenic subjects. It is not the policy of the "Society to advocate interference by the State. It is "believed that eugenic selection will take place of "itself when facts regarding it are sufficiently dissemi-"nated and understood. The appeal the Society makes "is to that feeling of responsibility which all parents "have with reference to their children, to motives of "patriotism which regards the future good of the State, "and also to the ethical interest in the betterment of "mankind. Efforts will be made to ensure a knowledge "of eugenics on the part of the young, as it is believed "that such knowledge will not only make directly "for the good of the race, but will also supply an "important element of control in the formation of

[1] *On the Measure of the Resemblance of First Cousins.* By Ethel M. Elderton, assisted by Karl Pearson, F.R.S. Eugenics Laboratory Memoirs IV. London: Dulau and Co. 1907.

"character. Membership of the Society will be of two "kinds—regular and associate. The conditions are such "that anyone with an interest in the movement can "become a member and have a voice in the pro-"ceedings." Those wishing to join should make application to the Secretary, Eugenics Education Society, 82, Vincent Street, Westminster, S.W.

INTERNATIONAL CONGRESS ON TUBERCULOSIS AT WASHINGTON.

A meeting was held at 20, Hanover Square, on February 8th to organize the general and local committees for Great Britain and Ireland in connexion with the International Congress on Tuberculosis which will take place in Washington in September next. The meeting was convened by Sir T. Clifford Allbutt, Professor Osler, and Professor Sims Woodhead, who had been asked by the General Secretary of the Congress to organize the British Committee. The chair was taken by Sir William Selby Church, President of the Royal Society of Medicine, who was supported on the platform by Professor Sims Woodhead and Dr. J. J. Perkins, Honorary Secretary of the National Association for the Prevention of Consumption. Those present at the meeting—some forty in number—and many others interested in tuberculosis and its prevention, who had written signifying their willingness to serve on the Committee, were elected a general committee. Dr. Perkins was unanimously elected Secretary of the Committee, and it was resolved to form an Executive Committee of twenty-five members representing different parts of the kingdom, to be selected as far as possible from those who proposed to attend the Congress. Of these members 6 were to be chosen from London, 9 from the Provinces, 5 from Scotland, 4 from Ireland, and 1 from Wales. The names of those who signify their willingness to serve on this Executive Committee will be submitted to a subsequent meeting for election. One of the first duties of the Executive will be to decide upon the best means of raising the necessary funds for organizing purposes. The meeting terminated with a vote of thanks to Sir William Church for presiding.

THE MURDER OF THE KING OF PORTUGAL.

Although our province lies outside the sphere of general politics, we cannot refrain from expressing our horror at the crime recently perpetrated in Lisbon and our deepest sympathy with the Queen of Portugal in the terrible bereavement which has deprived her at one fell swoop of her husband and her eldest son. Nowadays, as was said by King Umberto—who was fated to prove in his own person the truth of his words—death by the bomb or knife of the assassin is one of the risks of the trade of king. Dom Carlos took that risk, well knowing its gravity, with a courage which the ordinary citizen protected by his obscurity can scarcely conceive. *A Medicina Contemporanea* publishes portraits of the two assassins, Manuel dos Reis da Silva Buica and Alfredo Luiz da Costa, but to our eyes there is nothing about them that even Lombroso could recognize as characteristic of criminality. The same journal gives an account of the fatal wounds inflicted on the King and the Prince which may be of interest to our readers. No autopsy was made, but Professor Silva Amado made an external examination the results of which are summarized here. On the body of the King were two bullet wounds, one showing the usual apertures of entrance and exit; the other bullet buried itself in the body. In the former case the point of entrance was at a point corresponding to the interval between the seventh cervical and the first dorsal vertebrae, 2 cm. to the left of the middle line. The orifice of exit was below the edge of the inferior maxilla and a little to the left of the middle line. Both apertures presented the usual characters. Although the first wound allowed only with difficulty the introduction of a finger, it was possible to recognize a comminuted fracture of the vertebral column. The second bullet entered in the right infrascapular region, 5 cm. above the lower angle of the scapula and 2 cm. inside its internal edge. The bullet penetrated the cavity of the thorax, but it is not known what organs it reached. The body of the Prince also showed two bullet wounds, one slight, the other causing death. The former was superficial, grazing the body at the level of the fifth costal cartilages; it left a mark which was ecchymosed, as tough as parchment, elliptical in form, its long axis being downwards and to the left and measuring 12 mm. in length, while the short axis was scarcely 5 mm. The track of the second wound showed apertures of entry and exit, and the skin corresponding to the middle of its track was lacerated in such a way as to produce a third orifice, probably caused by a splinter of bone. The orifice of entry was on the left side of the face, below the malar region. It was elliptical in form, the long axis being directed outwards and upwards, and measured 28 mm. The aperture of exit was in the nuchal region, 2 cm. from the middle line and to the left. The bullet passed through the mastoid process, which was smashed into small pieces; the petrous portion of the temporal bone was also broken; in front of the concha of the ear the skin was irregularly lacerated.

MIDDLEMORE PRIZE.

At the January meeting of the Council of the British Medical Association it was decided by a unanimous vote to award the Middlemore Prize to Mr. Simeon Snell, F.R.C.S.Edin., the President-elect, for his contributions to the science of ophthalmology. The prize consists of a cheque for £50, and an illuminated scroll, which will be handed to Mr. Snell on the occasion of the forthcoming annual meeting at Sheffield. This prize was founded by the late Richard Middlemore, F.R.C.S., Ophthalmic Surgeon of Birmingham, who left a sum of money in trust to the Council of the British Medical Association to provide every third year a prize for the best essay on the scientific and practical value of improvements in ophthalmic medicine and surgery made or published during the previous three years. By a supplemental deed it was provided that the Council of the Association might make the award for the best essay or work on any subject in any department of ophthalmic medicine or surgery. The first award was made in the year 1882 to Mr. W. Adams Frost, F.R.C.S. Subsequent recipients have been Mr. George A. Berry, F.R.C.S.Edin.; Dr. W. A. Brailey; Mr. Priestley Smith, F.R.C.S.; Mr. S. Treacher Collins; Dr. Hill Griffith; Dr. Ernest E. Maddox; Mr. J. Herbert Parsons, M.B., B.S., D.Sc., F.R.C.S.; and Sydney Stephenson, M.B., C.M., F.R.C.S.Edin.

Among the distinguished persons upon whom the University of Edinburgh has decided to confer the honorary degree of LL.D. is the Right Worshipful Richard Caton, M.D., Lord Mayor of Liverpool.

Dr. J. S. Haldane, University Reader in Physiology at Oxford, has been elected Chairman of the Section of Physiology at the meeting of the British Association to be held in Dublin next September under the general presidency of Mr. Francis Darwin, F.R.S.

Professor Wilhelm Erb has given the University of Heidelberg a donation of £5 000, one half to be applied for the benefit of students and assistants and their maintenance in hospital when required, the other towards the promotion of scientific research by students.

In connexion with the *entente cordiale médicale*, Sir Dyce Duckworth is to deliver an address before the Faculty of Medicine in Paris on February 18th. The subject is "Les Diathèses: le Facteur Personnel dans les Maladies." The meeting will take place in the Amphitheatre of the Faculty at 7.15 p.m. Professor Landouzy, the Dean, will preside, and we understand that he will give an address in London in the early summer, probably on the Spas of France.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Children's Bill.—On Monday last, Mr. H. Samuel introduced the Bill to consolidate and amend the law relating to the protection of children and young persons, reformatory and industrial schools, and juvenile offenders. The present law, he said, was in a state of confusion, and spread over a large number of statutes, and required consolidation and amendment. All controversial matters had as far as possible been excluded from the Bill, such as the question of children in public-houses, the employment of children, and education. In spite of this, the Bill was a large one, consisting of 119 clauses and covering 70 pages. In it a child was defined as under 14 years of age, a young person as above 14 and under 16 years. The Infant Life Protection Bill of 1897 was embodied in the first part of the measure, and would be amended in accordance with the experience gained of its working. The Prevention of Cruelty to Children Act, 1894, would be included and strengthened, as, for example, by clauses dealing with overlying, by which some 1,600 infants were lost every year. Juvenile smoking would be dealt with in the third part of the Bill, while the fourth part of the Bill consolidated nineteen statutes dealing with reformatory and industrial schools. Vagrant children would also be provided for, and in the last part of the Bill juvenile offenders would be considered. The Bill was brought in and read a first time.

British and German Death-rates.—Mr. Haddock asked the President of the Local Government Board what was the reduction in the death-rate in Germany and the United Kingdom between the years 1870 and 1906. Mr. John Burns replied that the Registrar-General's figures for England and Wales only gave the death-rates for the German Empire from 1872 onwards. He had thought it better, therefore, to compare the quinquennia 1872-6 and 1901-5, and the single years 1872 and 1905.

Percentage Reduction in Death-rate between	United Kingdom.	German Empire.
	Per cent.	Per cent.
(1) 1872-6 and 1901-5	23	28
(2) 1872 and 1905	16	32

It should be added that, although the German death-rate had declined to a greater extent than the English death-rate, it remained (in 1905) 19.8 per 1,000 of population as against 15 5 per 1,000 in the United Kingdom. In other words, the death-rate of Germany in 1905 was 28 per cent. higher than that of the United Kingdom.

The Cost of Vaccination.—Mr. Lupton asked the President of the Local Government Board what amount of money was paid out of the rates for vaccination in the year 1906, and what amount was paid out of the rates for vaccination in the year 1907. Mr. John Burns answered that complete figures for the year ended March 1907 could not yet be given. The following statement showed the amounts for the years ended March 1905 and 1906 respectively, and for the year ended March 1907 so far as the information was at present available: For 1905 the expenditure in London unions was £33,908, provincial unions, £241,920; total, £275 828. For 1906, London, £32,713; provinces, 227,582; total, £260,295. For 1907 the provincial expenditure was not yet ascertained, for London unions it was £31,200.

Lead Poisoning.—Sir Charles Dilke asked the Home Secretary last week when the new special rules for the china and earthenware trade rendered necessary by the inclusion of lead poisoning under the Workmen's Compensation Act would be issued. Mr. Secretary Gladstone said that he proposed to appoint a Departmental Committee of Inquiry with regard to the use of lead in a number of industries, including the one mentioned, and pending the report of that committee he did not think it would be worth while to undertake the revision of the existing special rules. No serious difficulty had arisen from the temporary co-existence of Schedule B of those rules with Section 8 of the Workmen's Compensation Act, 1906, and none was anticipated.

Tuberculous Meat.—Mr. Cathcart Wason asked Mr. Burns last week what steps he proposed to take to stop diseased cattle being sold for human food. The President of the Local Government Board said that his attention had been called to the subject referred to, and in September last he caused a circular to be issued to local authorities bringing the matter under their notice, in order that they might, as far as possible, exercise supervision over the cattle in their districts with a view to anticipating and so averting possible or intended infringement of the law. He also suggested that suitable officers of the local authority should be instructed to watch closely the cattle markets, slaughterhouses, and knackers' yards in the district, with the view of satisfying themselves that no animal, the condition of which appeared to render it unfit for human consumption, was disposed of in such a manner that it was likely to be used for this purpose.

The Brown Dog appeared in the House of Commons on Friday in last week, when Sir P. Magnus asked the Home Secretary as to the expenses of police protection of a public monument at Battersea which bore a controversial inscription, and whether he would consider the advisability of introducing legislation with a view to prevent the erection in public places of monuments with inscriptions calculated to offend a large section of the public. Mr. Gladstone replied that the total amount of extra police duty which the production of this monument had necessitated in the borough of Battersea alone had been equivalent to the special services for one day of no less than 27 inspectors, 55 sergeants, and 1,083 constables. At present six constables were daily employed in this manner. In addition to this, large numbers of police had on several occasions had to be specially employed in other parts of London to cope with disturbances arising out of the same matter. This involved a considerable charge on the general body of London ratepayers, and the difficulty would grow acute if it were to become the fashion for parties or sections, for example, on the tariff question, to put up public statues or memorials with a view to defaming the actions and views of opponents. If this became common, it would be necessary to make those who erected such statues responsible for the cost of their protection, but as things stood he did not think there was ground for introducing legislation. In answer to further questions the Home Secretary said that he had no suggestion to make either as to the removal of the monument or the saving of the expense, unless the Borough of Battersea would contribute to its protection. When Mr. Smeaton suggested that exact statement on the inscription was

admitted, Mr. Gladstone said that was raising a very debateable question.

The Dogs (Protection) Bill, to prohibit altogether experiments on dogs, has been introduced by those interested in antivivisection, and has on its back the names of Sir F. Banbury, Sir F. Channing, Mr. Ellis Griffith, and Mr. Swift McNeill. The promoters are putting the Bill down from day to day in the hope of getting a second reading when an opportunity occurs.

Consumption in Ireland.—In answer to a question by Mr. A. Roche last week, Mr. Birrell said that it was intended to introduce a Bill on the subject of consumption in Ireland. The Bill, which had already been drafted, was entitled "The Tuberculosis Prevention (Ireland) Bill, 1908." He hoped it would pass into law during the present Session.

Vaccination Exemptions.—Mr. Crooks last week raised by question the point of a father being precluded by absence from England making a declaration within four months of the birth of a child, and suggested that steps should be taken to enable the mother to do so under such circumstances. Mr. John Burns said his attention had not been called to difficulties of the kind mentioned since the passing of the Act of last session. The Law Officers advised in 1893 that, under ordinary circumstances, the father was the only person who could obtain a certificate of conscientious objection, and a similar view would no doubt apply to the making of a declaration under the recent Act. He was not empowered to decide whether, in circumstances such as those mentioned, the mother would be the person competent to make the declaration; but it seemed to him that, if she did so, proceedings ought not to be taken against the father.

Anthrax.—Sir Francis Channing called the Home Secretary's attention to the death from anthrax of a man who had helped to unload a grain cargo from Kurrachee, and asked what steps had been taken to secure better precautions against infection. Mr. Secretary Gladstone replied that inquiries had been made by the factory inspector of the district and the certifying surgeon into this case. It appeared that the man had been engaged in the hold of the vessel handling bags containing Kurrachee barley; and it was suggested by the certifying surgeon that the infection was conveyed by the sacks. A danger of this kind was obviously one that was very difficult to guard against. The Home Office had circulated cautionary notices for posting in premises where infected material was likely to be handled, and had also, through the Foreign Office, circulated widely to our consuls abroad copies of a series of lectures on anthrax which were delivered some little time ago by the medical inspector of factories. It was difficult to see what further steps could be taken until the advance of scientific inquiry disclosed new methods of detecting the danger and new precautions that might be taken to meet it.

P.M.O.'s in the Territorial Army.—Mr. Crooks asked the Secretary of State for War whether it was proposed to appoint Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel) P. B. Giles, one of the medical officers of the First Herefordshire Rifle Volunteers, who did not reside in London, to the office of principal medical officer of one of the London divisions of the territorial army; and, if any question of seniority of commission was concerned in the appointment, whether such a principle of selection had been adopted in connexion with similar appointment to other divisions of the territorial army. Mr. Secretary Haldane said it was proposed to appoint this officer, as stated. He was commandant of the Volunteer Ambulance School in London, an institution which had been most successful in training a large proportion of the volunteer medical officers. He resided near London. Seniority was not the determining factor in selecting officers for the appointments mentioned in the question, but those officers best fitted to carry out the work were chosen, seniority being given its due weight.

Cultivation and Export of Indian Opium.—Sir Henry Cotton asked the Secretary of State for India what was the area of land in India under cultivation with opium, and what was the total number of provision chests of opium exported from India, during the past three years 1904–5, 1905–6, and 1906–7. Mr. Secretary Morley answered as follows:

	Acres (excluding failures).	Chests of Provision Opium Exported.
1904–5	587,140	47,855
1905–6	613,996	48,833
1906–7	553,697	53,588

The acreage given was for the Bengal and Behar Opium Agencies which alone furnished provision opium.

Milk Supply.—Last Tuesday in the Lords this subject was raised by Lord Northbrook, who asked the intentions of the Government as to legislation during this session. He pointed out that the Board of Agriculture should have a due share in the preparation of legislation in the interests of the farmers. The supply of pure and wholesome milk was a matter which should be the subject of general legislation, and not be done by piecemeal legislation and permissive orders. In many districts no rules had been made as to milk supply, and in others the regulations were carried out in a perfunctory manner. A general public Bill was desirable in the interests of the producer and the consumer. It had been announced that the Government thought it desirable that there should be early legislation, but he urged that the matter should be dealt with in a practical manner, as well as from a theoretical point of view, and that the Board of Agriculture should have a share in the work as well as the Local Government Board. He suggested that an inquiry into the milk supply of the country should be held before any legislation was introduced. Lord Carrington, in his reply, said that it was the intention of the Government to introduce legislation this session. The milk industry was not in a satisfactory condition, and in the forthcoming Bill the matter would be dealt with practically, and he would do all he could to protect the legitimate interests of farmers. He could not make any definite statement until the proposals of the Government were more developed, but he would consult with the President of the Local Government Board as to the suggested inquiry. Lord Onslow urged that as the House of Lords was not very busy just now the proposed Bill should be brought forward in the Upper Chamber, so that the farming class might have an opportunity of considering it at the earliest stage. Lord Tweedmouth was unable to state that the Government would adopt this course, but he hoped the Bill would soon be introduced either in the Lords or the Commons.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Karl von Voit, Professor of Physiology in the University of Munich; Dr. Albert Thierfelder, head of the Pathological Institute of the University of Rostock, aged 78; Dr. M. Bloch, a neurologist of some reputation, aged 41; Dr. Alexei Polotebnoff, some time Professor of Dermatology in the Medico-Chirurgical Academy of St. Petersburg, in his 70th year; Dr. Chabbert of Toulouse, founder of the *Echo Médical de Toulouse*, and author of a number of contributions to medical literature, aged 56; Dr. John Ordronaux, who since 1861 had lectured on medico-legal subjects in the Columbia University Law School, Dartmouth College, the University of Vermont, and Boston University, was for ten years a member of the New York State Commission in Lunacy, and was the author of numerous works on medical jurisprudence, aged 77; Dr. Artur Mueller, the oldest practitioner in Vienna, aged 96; Dr. Mattersdorfer of Dresden, in his 98th year; and Dr. Karl Kanka of Pressburg, an ophthalmologist of great reputation in Hungary, aged 91.

Scotland.

[From our Special Correspondents.]

Aberdeen.

The Territorial Army Medical Corps.

On February 8th the non-commissioned officers and men of the Aberdeen Companies Royal Army Medical Corps (Volunteers) to the number of over 200 were entertained at supper in the Albert Hall by Lieutenant-Colonel J. Scott Riddell, M.V.O., and the officers of the companies.

Lieutenant-Colonel Riddell gave an address in which, after stating that the corps came into existence twenty years ago as the seventh division of the Volunteer Medical Staff Corps with a total strength of one hundred medical students and five officers, he traced its development down to the present time, when, with the additions it had received by the formation of the Gordon Bearer Company, an additional lay company and transport section, it had grown to a body of 364 men with 17 officers. The companies had an excellent record, and with 29 camps in 19 years, 17 of them at Aldershot or Netley, had received a thorough field training. He then, while expressing some regret at the impending dissolution of the corps, said that it was more than counterbalanced by the extended opportunities of usefulness offered to members on their enlistment in the new Royal Territorial Medical Corps, in which the men of Aberdeen had been offered a prominent and important position. After enumerating the units of the various arms composing the Highland Division of 26,000 men, Lieutenant-Colonel Riddell stated that Aberdeen had been chosen as medical head quarters of the division and the central site of a territorial training school for the district. Of the three field ambulances for the division Aberdeen was to supply two, requiring the services of 230 men in each; in addition, 43 men would be needed as a nucleus for the personnel of a general hospital of 250 beds to be provided in the city in case of need, and 159 men specially trained in the purification of water and in other sanitary duties to act along with the different units forming the Division. Altogether some 600 men would be required to complete Aberdeen's share in the *personnel* of the Royal Territorial Medical Corps. He then referred to the conditions of service, which had been fully stated in the British Medical Journal,[1] and read a letter from Sir Alfred Keogh, K.C.B., in the course of which the Director-General wrote:

I am sure that the men of Aberdeen will give a hearty response to the call on them, and that the medical units of the new force will maintain the high reputation that the Aberdeen companies of the Royal Army Medical Corps (Volunteers) have always borne. The great advantage of the new scheme is that it concentrates and consolidates the voluntary military strength of the country. This, of course, applies not only to the medical branch but to all arms of the service. Instead of a number of isolated military units, regiments, batteries, and so on, scattered about the country without organization for war, and especially without those essential administrative departments without which an army is an inert mass of armed men, we now hope to have, and I am confident we shall have in the territorial army, an organized force in which every arm of the service and every department will be represented each in its due proportion. We are of course concerned only with our own department, and to you I need not point out how essential to the efficiency of an army is a well-organized medical department, and that the Royal Territorial Medical Corps will represent that idea is my firm belief. Enlistment in this corps presents many advantages to certain men, especially those who wish to serve their country, but do not possess the necessary aptitude or cannot afford the more stringent calls on their time that service in the combatant ranks entails. We have attempted throughout our scheme to permit of the greatest possible elasticity in the conditions of training compatible with efficiency. Thus after the first year the man who enlists in the Royal Territorial Medical Corps will be asked to attend the annual camp for eight days, or spend the same period working in a selected institution at a territorial medical training school or at the Royal Army Medical Corps Training School at Aldershot, while for those who are more zealous or have more leisure a more extended course of fourteen days will be provided at the above places. Additional liberty is allowed us from the fact that while in other units a day's training must consist of six hours, the Royal Territorial Medical Corps is allowed to count three hours as a day, it being recognized that the duties that this corps has to perform are more exacting and laborious than the comparatively mechanical work of other units. On the other hand, the work of attending on the sick being essentially the same in civil as in military life, we are enabled to allow of much greater elasticity, and to give the individual far more latitude than is possible in the more purely military units.

Lieutenant-Colonel Riddell's appeal to those present to enlist in the new corps was enthusiastically received, the majority signifying their agreement to serve.

Major-General A. J. F. Reid, K.C.B., Chairman of the Territorial Force Association of the County of the City of Aberdeen, then presented the prizes gained by the non-commissioned officers and men in various competitions held during 1907. He said that there was no more important branch of the army than the Medical Corps, for no body of troops could efficiently take the field without it. The volunteers had long asked for greater recognition, and this had now been granted. As far as the City of Aberdeen Association was concerned, he could have no more pleasant duty than that of encouraging them to realize their obligation to defend their country and to appreciate the privilege open to them to undertake that obligation of their own free will.

Subsequently Quartermaster-Sergeant Keys moved a vote of thanks to Lieutenant-Colonel Riddell for his many services to the corps, and this was enthusiastically accorded.

Among those present were Captains Lister, Fortescue, Kelyl, Ogston, Fraser, Noble, Smart, Wallace, Milne, Rorie; Lieutenants Innes, Howie, and Cruickshank; and Quartermasters and Lieutenants Cromar and Duthie. Major MacKenzie Booth, late commanding officer, who met with the most hearty reception from all ranks, was also present.

[1] British Medical Journal, 1907, vol. ii, p. 1243.

Royal Medical Society Dinner, Edinburgh.

The annual dinner of the Royal Medical Society was held in the hall of the Society in Edinburgh on the evening of February 5th; Dr. A. C. B. M'Murtrie (Senior President) was in the Chair, and the guest of the evening was Mr. Jonathan Hutchinson, F.R.C.S., LL.D. There were also present the Moderator of the General Assembly of the Church of Scotland, the Very Rev. Dr. Cameron Lees, Lord Salvesen, Sir Alexander Simpson, Colonel Corker, Principal Medical Officer Scottish Command; and Professors Chiene, Hunter Stewart, Harvey Littlejohn, and Chrystal. The Chairman gave the loyal and patriotic toasts, and Colonel Corker replied for that of the Imperial Forces. The Chairman, in proposing the toast of "The Guest of the Evening," referred to his long and distinguished career, to his valuable work in specific disease, his more recent investigation of leprosy, and his visit in that relation to the labour colonies of India. Mr. Hutchinson, in reply, urged the young members of the Society to accept life with a strong sense of responsibility and a strong feeling of self-confidence. In early life he adopted the maxim, "Keep all the dreams of life before you." He had tried to do so. Let them increase their zeal in medical pursuits, study medical biography, become acquainted with the heroes of the past, and find examples for the future. Mr. Hutchinson concluded by proposing the toast of "The Royal Medical Society," recalling the fact that it was the oldest medical society in the three kingdoms, and had done a great deal of excellent work as a students' society. He went on to discuss the present examination system. Was it the best that could be devised? Did the best men get through? Were the worst always rejected? He thought this was doubtful in the South at least. Did the examinations not hinder medical science? He thought these examination systems could be greatly reformed. He would not leave anything to the caprice or to the individual predilections of an examiner. He indicated some ways in which the examination system might be amended. Dr. Barcroft replied. Dr. Rae Gibson proposed "The Sister Professions," and the Moderator of the General Assembly replied on behalf of the Church and the Hon. Lord Salvesen on behalf of the legal profession. "The University and Associated Corporations" was proposed by Dr. J. S. Edwards, and Sir Alexander Simpson, Professor Chiene, and Professor Harvey Littlejohn replied.

The Ruchill Inquiry.

The inquiry held at the instance of the Local Government Board into the alleged overcrowding and understaffing of Ruchill Fever Hospital lasted the whole of last week. It was fully reported in the local papers, and has

aroused great public interest. On Monday the Commissioners met in Glasgow, and explained the scope of the inquiry and examined four of the resident physicians. On the following days the inquiry was held at Ruchill. On Tuesday, evidence from several nurses was obtained, and a report of an address by the matron to the sisters was read by the counsel for the complainant assistant medical officers. On Wednesday the inquiry was held at the Municipal Chambers, and the evidence was taken of some of the sisters and of the assistant matron. On the following day the chief witness was the matron. On Friday, Dr. Johnston, the medical superintendent, was examined, and was closely cross-examined by the Commissioners. After the evidence of the medical officer of health had been taken, the inquiry concluded with the examination of the convener of the Hospitals Committee. The findings of the Commission have not yet been made public, but there is little doubt that the assistant medical officers will be vindicated, as the general tenor of the evidence showed that there had been serious overcrowding.

INFANT MORTALITY.

Though the Anderston Health Association did not meet with the general approval of the local medical men, no exception was taken to that aspect of its work which tended directly to the saving of infant life. To encourage parents to be more careful of their infants, it was announced that a sum of £1 would be given to the mothers of all babies born within a certain specified area whose infants survived for twelve months. The scheme was started on January 1st, 1907, and during the twelve months of that year 137 infants were registered in this area. In the case of 22, the required period of twelve months has now elapsed, and 20 of these children are still alive.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SOME DUBLIN DAIRIES.

A VERY alarming report has just been made to the Dublin Rural District Council by Surgeon-Colonel Edgar Flinn, L.G.I., on the state of the dairies in various parts of the district. He says:

The condition of many of the cowsheds that I visited was not satisfactory. In several instances I found that pigs were being kept on dairy premises, and in one case at Blackhorse Lane pigs were actually kept in the same byre, and alongside of the milch cows. In two instances at Finglas there was clearly overcrowding, and in one case the cow byre happened to be visited at milking time, and the hands of the dairymen engaged in milking were "filthy." No provision, as a rule, is apparently made to provide towels and water for washing purposes for the milkers' hands. The cow byres in several instances—notably at Cardiff Bridge, Howth, Finglas, and Glasnevin—are kept in a very insanitary condition, and but very little regard is evidently taken to keep the cows and the byres in as wholesome and cleanly a condition as they should be kept in. The cows are not sufficiently often groomed, and as a result I found, in many instances, the hind quarters in a very dirty state. It is obvious that the keeping of milch cows under such conditions is not satisfactory, and the milk supply must always be more or less liable to contamination. Accumulations of manure in some cases are apparently allowed to remain unremoved for too long a period. The construction of the flooring, as well as the length and breadth of some of the byres, tend to keep the cows in an uncleanly condition, and very little expenditure in many cases would improve the sanitary condition of many of the cow byres. . . . This district is largely a milk-producing one, and in the immediate vicinity of the city.

Dr. John O'Donoghue, the Medical Superintendent Officer of Health for Howth, reported that he accompanied Surgeon-Colonel Flinn, and added:

Two men who were milking had their hands "covered with cow manure from the udders of the cows, which they neglected to wash before milking. In the process of milking the filth from the men's hands was gradually mixed with the milk. I certainly would not hesitate to condemn the milk from this dairy as unfit for human food."

These reports were forwarded by the Local Government Board on January 22nd, with a suggestion that the Inspector of Dairies, whose salary it was proposed to increase, should be called on to resign. The Council resolved to hear the dairy inspector's explanation. He had reported on February 5th that he had visited "dairies in the districts of Howth, Raheny, Santry, Finglas, and Castleknock. They were all in a favourable condition."

TUBERCULOSIS IN IRELAND.

The campaign against tuberculosis in the west of Ireland, which is being organized by the Gaelic League, will be commenced on February 16th. The campaign is to be conducted entirely in the Irish language by Dr. Seamus O'Beirn (James Beirne in the *Directory*), who is a fluent speaker of that language. As the people of Connemara understand very little English, it is hoped that this attempt may be productive of more fruitful results than previous efforts in the English language, and which failed owing to the fact that their instructors were not understood by the people. The following is the programme laid out by Dr. O'Beirn: The course will consist of six lectures illustrated by lantern slides, specimens, models, charts, etc., and during the day the lecturer will visit houses and urge on the people the necessity of sanitary reform. It is hoped that the Congested Districts Board and the Local Government Board will assist by a grant of funds to enable the people, who are wretchedly poor, to improve their houses.

We shall await with interest the further development of this most serious question. As it stands now it shows how gravely inefficient is the whole system of sanitation in connexion with the local government councils of Ireland, and the urgent need there is for grappling with the problem.

TUBERCULOSIS SANATORIUM FOR CONNAUGHT.

We have received from Dr. Birmingham, the able Medical Officer of Health for Westport, co. Mayo, a statement prepared by him and presented to a conference of delegates from the Province of Connaught which met last month at Athlone to consider the best means of dealing with tuberculosis. Dr. Birmingham goes fully into the means adopted in other countries. We are pleased to see that he protests against the craze for expensive brick and mortar sanatoriums, and prefers wood and iron as being so much cheaper, and in support of his view he instances the interesting fact that in Norway huge stone buildings are standing empty, erected years ago for the isolation of lepers, which disease has now practically disappeared. He advocates two small sanatoriums of forty beds each, but in our opinion one would suffice if any really energetic effort was made to check the disease at its source. We know of at least one Poor-law sanatorium in Ireland which after eight years' work has been empty for months because there are now no cases for treatment in the district it serves.

Dr. Birmingham advocates special tuberculosis dispensaries throughout the province, with special highly-paid experts to serve them. We think with his knowledge of the views of local authorities on subjects of sanitation he must himself regard this as a counsel of perfection, however desirable, and we believe he will have to rely upon the ill-paid dispensary doctor for any help that may be required in that direction. We notice two very important omissions in this otherwise admirable statement. He has made no reference to the disinfection of the tubercle-infected houses, and he has made no practical suggestions for the supervision of discharged patients. In the class of patients his scheme would have to deal with sanatorium treatment lacking attention to these two items must fail to achieve the object in view.

AN IRISH POOR-LAW ELECTION.

An election was held in the Board Room of the Cavan Workhouse, on January 21st, of a medical officer for the district of Ballinagh. There were two candidates, and the contest was fierce. The voting was 38 to 30, and the scene at the close of the poll is thus described by the *Anglo-Celt*:

Notwithstanding the appeals for a friendly contest there was a most lamentable outburst of acrimony immediately the result of the division was announced. Some of the most prominent supporters on both sides completely lost their heads; they literally flew at one another; the most offensive expressions were used, coats were half off, and blows all but struck. In fact, it took the united efforts of the calmer members who remained (several having left in disgust) to prevent a still more discreditable scene being enacted, and one which would have brought disgrace on the Board. Those guardians responsible have no reason to be proud of themselves.

Perhaps the most painful thing about it from a medical point of view was the profuse gratitude expressed by the successful candidate for the gracious permission to serve these gentlemen at a salary of £100 a year.

Belfast Hospital for Sick Children.

The financial account presented to the annual meeting of this institution on January 31st showed a balance of £381 on the right side; the improvement in the capital account was £2 746; this good result was, however, chiefly due to increased legacies. It was reported that 647 cases had been treated in the wards, against 637 in the previous year; the average daily expenditure was 2s. 4½d. a head, against 2s. 2d. of last year; the average cost of each bed per annum was £50 2s. 2d.

England and Wales.

[From our Special Correspondents.]

SHEFFIELD.

Mr. R. J. Pye Smith.

The resignation of Mr. R. J. Pye-Smith as Surgeon to the Royal Hospital is announced. The announcement of the severance of his active connexion with this hospital, which has been of such long duration, has naturally been received with no little regret by his many friends. It is, however, a satisfaction to them to know that it has not been occasioned by any diminution of activity, but will, on the other hand, give him more time to devote his energies in other directions. As already announced, Mr. Pye-Smith is to deliver the Address in Surgery at the meeting of the British Medical Association in Sheffield in July next.

The Sheffield Edinburgh Medical Graduates' Club.

The third annual dinner of this club was held on February 1st. Dr. Inkster was in the chair, and the guest of the evening was Professor J. Chiene, C.B. The company numbered 120, and included the Lord Mayor, Master Cutler, and prominent members of the profession, whether as members of the club or guests. Dr. W. S. Kay proposed the toast of "Alma Mater," and coupled with it the name of the guest of the evening. Professor Chiene received an enthusiastic welcome, and his speech in reply was admirable. He commenced with a glowing tribute to his old friend and colleague, the late Professor Annandale, who had been the guest of the club at its inaugural dinner. It would have been difficult for such a tribute to have been better conceived or better delivered, and though his speech was racy throughout with anecdotes and reminiscences, it seemed to be the general opinion that his heartfelt and sympathetic eulogy of his old colleague was the best part of a speech remarkable throughout for its sustained interest and excellence. The other toasts comprised "The University," proposed by Dr. G. Thomson, and replied to by Mr. Simeon Snell. The latter reminded the members that Professor Chiene had been Secretary of the Surgical Section when the British Medical Association met in Sheffield on the last occasion; at that time there were only four Sections, whereas at the approaching meeting there would be seventeen. The remaining toasts consisted of "The Guests" and "The Chairman."

NEWCASTLE-UPON-TYNE.

Dinner of Past and Present Students of the College of Medicine.

On February 7th the annual dinner of past and present students of the Durham University College of Medicine was held in the Turk's Head Hotel under the genial Chairmanship of Dr. R. B Robson. The guest of the evening was the Lord Mayor of Newcastle-upon-Tyne (Mr. W. J. Sanderson), and there were altogether 91 persons present. The toast of "The University" was proposed in most felicitous terms by Dr. Nathan Raw of Liverpool, and suitably responded to by Dr. T. Beattie. In the absence of Professor Page, Professor T. Oliver proposed "The Health of the Guest." After this had been given and the Lord Mayor pronounced "A Jolly Good Fellow," Professor Page smilingly entered the room. Nothing would satisfy the company until he had seconded the toast, which the Lord Mayor acknowledged in most appropriate terms. To Mr. H. B. Angus was entrusted "The Chairman." A most pleasant evening was spent, to the enjoyment of which the St. Thomas's Quartette contributed.

Dinner of North of England Glasgow University Club.

The dinner of the North of England Glasgow University Club is fixed for Wednesday evening, February 26th, at the Turk's Head. The guest of the evening will be Principal MacAlister. Sir Henry Craik, M.P., is expected to be present. As the dinner promises to be a success, members and friends who intend to be present should apply for tickets at an early date to the Honorary Secretary, Dr. Dunlop, Kingsley Terrace, Newcastle-upon-Tyne. Graduates of Aberdeen University are regarded as Associates of the Club, and can by application be admitted to the dinner, where their presence will be welcomed.

Staff of the Royal Victoria Infirmary.

The increase of work in the Royal Victoria Infirmary has called for the establishment of four assistant physicianships to the institution. Until recently only two of these posts had been filled. Vacancies having arisen through the promotion of Dr. T. Beattie to the full staff and Dr. R. A. Bolam as Physician to the Department for Diseases of the Skin, two of the posts were filled a month ago by the election of Dr. W. E. Hume and Dr. Horsley Drummond. A week ago Dr. George Hall was elected Pathologist to the Infirmary. The Committee has now decided to fill up the remaining two vacant assistant physicianships, and the vacancies are advertised in the local newspapers.

MANCHESTER.

Skin Diseases among School Children.

At the annual meeting on February 6th of the Manchester and Salford Hospital for Skin Diseases, Professor Wild made some interesting remarks on the spread of contagion in schools. He stated that in the past year there had been a great increase in the number of parasitic skin diseases the hospital had been called upon to treat, the increase being mostly among school children. There were 831 cases of scabies, 465 of ringworm, and 985 of impetigo. He thought that, beyond mere treatment, it was important to consider whether something should not be done to prevent the spread of these very contagious diseases. It often happened that several members of the same family came to the hospital suffering from the same disease. It was no use sending them home, for the disease came from the home environment, and they simply came back again as bad as ever. The question had been brought to the notice of the medical officer of health, and he agreed that it was just as necessary to disinfect the whole house as it was, say, in scarlet fever. It had been possible to get this done in some cases, but it was often difficult to persuade patients that so drastic a measure was necessary. It is difficult to be sure, as these remarks of Professor Wild might seem to imply, whether there has been an absolute increase in these diseases in Manchester. Sir T. T. Shann, the Chairman of the Manchester Education Committee, says the increase in the number attending at the Skin Hospital is undoubtedly due to the fact that the school medical staff are more and more excluding from the public elementary schools children suffering from these diseases. Dr. Ritchie, the Medical Officer of the Education Committee, says he is "unaware of any increase in the total number of children afflicted; the increasing vigilance and success of teachers and doctors in detecting and excluding these cases affect the number attending the hospital." Nevertheless, all will agree that Professor Wild did well in calling public attention to the matter. It is very doubtful whether indiscriminate disinfection of houses where these diseases exist will accomplish much. Isolation of patients would seem to be quite impossible, and it must be evident that personal cleanliness is the all-important factor. A knowledge of the means by which infection is conveyed from one person to another and the methods to adopt to prevent such conveyance may be

expected to have far more effect in lessening the number of cases. Then disinfection of houses will be of great value.

The annual report of the hospital stated that the attendances of patients of all classes during the year were 48,755, of which 8,796 were by patients taking the "light" treatment. There was a considerable falling off in the attendances of persons unsuitable for treatment, due to the fact that it is becoming well known that inquiries are made as to the position and means of applicants. This is as it ought to be, and it would be well if some of the other hospitals would make far stricter inquiries to prevent the abuse of public charities. If this were done more efficiently, and unsuitable cases weeded out, there would be far fewer complaints of lack of funds for the support of the Manchester and Salford Hospitals.

The Notification of Births Act.

Last week the Eccles Town Council decided to adopt the Early Notification of Births Act, but the advocates of the Act cannot be much complimented on the arguments they adduced in its favour. There seemed to be a vague idea that things could not be made worse than they are, but it was in vain that several councillors asked for information as to how it was expected that good results would follow. The present Ladies' Health Committee was strongly criticized as to its methods, but no one was able to suggest anything better. The Health Committee of the Council had not formulated any scheme to submit to the Local Government Board, and it is extremely doubtful whether it will be in a position to do what is required. Councillor Dr. Sidley, in supporting the adoption, referred to the disadvantages under which the Act placed medical men, and said that if a case arose where he thought he ought not to notify he would take the risk of not notifying. Councillor Dr. Orr strongly opposed the adoption, and asked if the Council was prepared to provide the machinery to carry out the objects in view, and, if so, the members ought to have some idea of what the cost would be. He pointed out that in one district, the Eccles Ward, a scheme of notification had been in operation for some time. He had gone into the figures and found that the infant death-rate in that ward was actually greater while the scheme was in operation than before, and much greater than in any other wards. In 1906, before the adoption of the scheme, there were 136 births and 14 deaths; in 1907 there were 131 births and 24 deaths, though that area had, in consequence of the notifications, been canvassed and well looked after by the lady health visitor. On the other hand, in the Winton Ward, where the scheme was not in operation, there had been a great decrease in the proportion of deaths to births, with no one specially to look after the cases. He asked the Council to wait to see how the Act worked in other towns, and he did not think there would be any great decrease in the infant mortality until the condition of the mother previous to births was dealt with. Another reason for delaying was the prospective operation of the medical inspection of schools. By combining the two the Council might get far better results. On being put to the vote, Dr. Orr's amendment to postpone the adoption for a year was lost by nine votes to five.

LIVERPOOL.

Dr. William Carter.

Dr. William Carter, whose retirement from the post of Professor of Materia Medica and Therapeutics has already been announced, has been appointed Emeritus Professor in the University.

Medal for Gallantry.

Dr. Benjamin Alfred Peters, House Physician at the Royal Southern Hospital, was recently presented with the bronze medal and certificate of the Royal Humane Society for the gallant rescue of a young lady from drowning off the coast of Anglesea. The presentation was made by the Lord Mayor (Dr. Caton) who said he was proud that Dr. Peters was a member of his own profession. On a previous occasion, under similar circumstances, Dr. Peters had saved the life of his brother off the coast of the Isle of Man. Dr. Peters is the son of the late Rev. George Peters, for sixteen years Chaplain to the Royal Southern Hospital, who died on the 5th of the present month.

SPECIAL CORRESPONDENCE.

PARIS.

Treatment of Vascular Naevi by Radium.—Association for Giving Clinical Instruction in the Hospitals.—The Chair of General Biology in the Collège de France.—The "Société de Pathologie Exotique."

At a recent meeting of the Académie de Médecine Professor Fournier made a report on an important communication by Drs. Louis Wickham and Degrais on the treatment of vascular naevi by radium. The method of treatment is exceedingly simple: A flat disc containing the radium covered by a layer of varnish of varying thickness is applied to the surface. The radiations filter through the varnish, the force varying with the activity of the salt and the thickness of the varnish, the power being determined by special electroscopes. Empirically it has been found that for the treatment of flat and superficial naevi, a slight ulcerative reaction is sufficient; for deeper naevi a stronger action is required. For naevi which are raised above the skin surface feeble doses often repeated are preferable, since they act without causing any visible reaction. Professor Fournier considers the method is now the method of choice for the two following reasons:

1. The *excellent results* obtained from every point of view, especially aesthetically. The photographs of patients before, during, and after treatment are convincing; what follows the application of radium is not a destruction, but a repair, a restoration, a sort of special modification produced without any residue or cicatrix, leaving only a regular, smooth, uniform surface without any depressions or fibrous bands or dragging on the neighbouring tissues, etc. 2. The *painlessness* of the treatment is a great advantage, as it not only allows of large areas being treated, but renders the treatment especially applicable to infants. This absence of pain is so complete that the applications have even been made during sleep and the subsequent reaction is limited usually to a slight burning sensation which is quite bearable.

As to the length of time the treatment must be continued, there are as yet no absolute rules. In the flat, superficial form of naevus, applications were made daily, either for a few hours consecutively or intermittently for half an hour or an hour; after reaction, the discoloration sought for was obtained in six to eight weeks approximately. For vascular tumours the séances are short but frequently repeated, with more or less lengthy periods of rest as soon as a slight sign of reaction is shown; the treatment, for this cause, may have to be continued for a few months.

A new association has been recently formed in Paris for giving clinical instruction in the hospitals. Professor Lucas-Championnière is the president and Drs. Babinski and Variot the vice-presidents of the new association. The inaugural meeting was attended by over 500 medical men, and included many professors from the Faculty of Medicine, as well as M. Mesureur, the Director of the Assistance Publique. Hitherto clinical teaching in the hospitals has been given by *chefs de service* who have achieved a reputation and have hospital wards at their disposal. The association will give the younger men who have no wards an opportunity of teaching. The association will not compete with the Faculty of Medicine, but will form a sort of voluntary annexe where experience in teaching will develop in those who have no chair, and thus afford the benefits which are derived from the extra-mural schools in other countries. A hospital will be able to group together instruction in all the different branches of medical and surgical science; students and foreigners will benefit from the concentration of clinical instruction, the vast amount of material which is at present scattered and lost being thus organized.

Dr. Eugène Gley has been appointed to the Chair of General Biology in the Collège de France in succession to the late Professor Charrin. The chair was formerly held by Professor Brown-Séquard.

A new medical society has just been formed under the title of Société de Pathologie Exotique, its object being the study of tropical diseases in man and animals, colonial hygiene, naval hygiene, and sanitary measures destined to prevent the extension of epidemics and diseases of animals of exotic origin. The society will meet at the Pasteur Institute. The following officers have been elected:

President, M. Laveran; Vice-Presidents, MM. Chantemesse and Kermorgant; General Secretaries, MM. Marchoux and Mesnil.

VIENNA.

Successful Resection of Six Yards of Ileum.—A Dinner Strike in a Hospital.—Orthotic Albuminuria.

In the *Wiener klinische Rundschau* Dr. Denk gives details of the case of a woman, aged 61, who had been suffering for six months from left femoral hernia. One night violent pains suddenly set in, and as the condition of the patient became rapidly worse, she was sent to the hospital. Here she vomited faeculent masses several times. In the left inguinal region there was a tumour of the size of a man's head; it was elastic and very tender. Temperature normal. Professor Brenner opened the hernial sac, and the patient, who had been anaesthetized by means of a spinal injection of 12 cg. of tropacocain, bore the operation very well. The sac contained pus and dark-brown gut. The diseased part of the intestinal canal was pulled forward until healthy gut was visible. The mesentery of the diseased gut had to be removed as well. Before the wound was closed it was discovered that a single loop of the ileum had been pressed between the mortified loops of the gut, and this, too, had to be removed. The lowest part of the ileum next to the caecum was left *in situ*: from the upper part but little was left. Anastomosis was established between the two remaining loops, but the difference in size necessitated some modification of the usual method. The removed parts measured 6 yards. The patient made a very good recovery. At first violent diarrhoea, with black-green contents, gave some cause for anxiety, and, as the ingested food came away from the opening of the upper loop, nourishment was difficult in spite of rectal feeding. This soon improved, however, and the patient slowly rallied. An interesting feature was the rapid passage of bowel contents, containing nearly unchanged particles of the food. As this is the largest known resection of intestine, it would be interesting to know the length of ileum which was left behind. Beneke estimates that each 3 ft. of the patient's height correspond to about 12 ft. 6 in. of the ileum. Thus the length of ileum left in this case would be about 12 in., as she was not quite 5 ft. high. The tests to which the faeces were submitted five weeks after operation proved normal metabolism of the food. It was shown that the remaining portion of the ileum had taken over the function of the removed part. The question is whether this substitution will be temporary or will be lasting.

A curious strike occurred quite recently in one of our State hospitals. The medical staff is provided with full board only on the days when the members have to stay indoors on account of duty. Lately the quality of the food became so bad, on account of the economy practised so often in matters medical by the authorities, that the doctors could endure it no more. One is at liberty to form his own opinion as to what the quality of the patients' food must have been in this special hospital. Anyhow, the patients and the doctors resolved to refuse the meals, and had their food brought in from the next restaurant. The "strike" did not last long, as the public soon became aware of the disgraceful conditions prevailing in this charitable institution, and a commission brought speedy relief, at least to the patients. Meanwhile negotiations are in progress with a view of regulating the whole question of board and lodging as regards the hospital staff.

At a meeting of the Medical Society, Dr. Jehle, Professor Escherich's assistant, presented a report on experiments made in the Children's Clinic, in regard to orthotic albuminuria. The pathology of this condition is not clear, some authors believing it to be an increase of physiological, others a pathological albuminuria, with or without kidney lesion. Dr. Jehle has found, in the case of six children, that they passed urine with a certain kind of albumen, which could be precipitated by acetic acid. This appeared only when the children were kept standing erect, not in a sitting posture, and was most marked when the children knelt. Jehle thinks that the passage of albumen occurs when the natural kyphosis of the lumbar portion of the vertebral column is changed into a lordosis. He made the children stand with their backs slightly bent forward, and no albumen appeared. When they stood upright, it appeared again. Then he put the children into a corset of plaster of Paris, whilst standing upright. Albumen appeared. The children were then put into bed in this corset, so that their spinal column could not change its shape. The albuminuria continued for days, and stopped when the corset was removed. Jehle thinks that this appearance of albumen is caused by a special form of lordosis, situated at the level of the first and second lumbar vertebrae, not, as usual, at the third and fourth. He believes that this lordosis causes a pull on the kidney vessels or displaces them at an angle, without any anatomical lesion of the kidneys themselves. Such children should be prohibited from standing a long time, but should be encouraged to take exercise, as in skating and climbing, where the back is bent a little forward. Milk diet should not be enforced rigidly.

CORRESPONDENCE.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Sir,—The appearance of the second Memorandum of the Education Board on the medical inspection of school children has undoubtedly modified a fear that must have been left by the first, as to the sufficiency of the consideration accorded to the predominant mental element of this great question. I was about to point out, with your permission, that the inspection appeared to be more directed towards organic defects than to functional disturbances. The inclusion of the terms "signs of strain" among the observable points now provides for what was left out, and the schedules, read with the Board's explanatory remarks, may be taken fairly to cover the ground so well laid out in Dr. Clouston's communication. But still there appears to me to be room for further consideration of very vital points. The Board truly says that the difficulties of the whole question are now more administrative than scientific; nevertheless, science must wait on administration.

A few days ago chance brought before me a case which well illustrates some of the points in question. Some friction having arisen between the capable teacher of a rural elementary school and the mother of a child, we, the managers, interviewed both parties. The leading point was whether the child is or is not fit for being promoted to a higher standard, her arithmetical powers being in question. The mistress said that the child is fit. Naturally the question was asked of her, What is the general capacity of the child? We were told that she is a bright, cheerful, rather forward girl, who joined in games eagerly, and that she is quite up to the average both mentally and physically. Later the mother told us that since she had been put up she had become dull, had headaches, and "did her sums in her sleep." Whatever may be the truth in the case, it serves to recall a series of symptoms which are frequently mentioned in connexion with developmental imbecility. Even if that point should not be reached, it is admitted that in the presence of such facts continued overpressure may lead to a hide-bound condition of intellect, which relegates the child to the defective class. It is established beyond doubt that heredity, in regard both of neurosis and alcohol, is the most potent etiological factor of early mental breakdown, and therefore the existence of such a history should be inquired into, and if found it will serve as a timely warning.

The following conclusions may, I think, be drawn from this case, which, after all, is not uncommon: All facts need to be personally looked into by the examiner himself, and the examination must be conducted with the view to exclude as well as to demonstrate the existence of abnormality. A careful inquiry into the personal and family history of the child must be made. In addition, all facts found have to be adjusted to the actual mental condition of the child at the moment, a report has to be written, and appropriate advice must be given where necessary. Unless all this is done carefully and conscientiously, the results of the examination in its leading aspect must be quite untrustworthy and open to fallacy. With every desire to support the Board in doing that which has been called for for years past, one cannot but say that, in proposing to allocate only "a few minutes," on

the average, for each child, it has seriously under-estimated necessity.

It is said that subsequent examinations will not give so much trouble as the first, the notes of which will be available. But it must not be forgotten that school age is development age, whether for good or ill. A critical examination *de novo* will certainly be required in relation to the brain. The last, or "leaving," examination is still more serious. What is its object? Is it to ascertain, simply, the total results of the application of education to the brain of the individual examinee through a series of years—to obtain material for dry enumeration by the central authority? Though this may be the end sought for, undoubtedly the examiner will regard his opinion then to be recorded as likely to be used for guidance in determining the future life, mental and physical, of the subject. He will undoubtedly feel bound to treat the occasion with the care and gravity that are due to it.

A point that comes home to me very strongly as a result of these considerations is that, while the director of inspections in each educational area must of necessity be the county medical officer of health or the officer of the Education Committee of the authority, the actual inspection work should be done, *wherever possible*, by the resident practitioner. There can be little doubt that he can from his own knowledge of the history of parents and children form an opinion more correctly and with greater dispatch than can the outside inspector, who must perforce rely on secondhand information to a great extent as the basis of his verdict. Another point is that for the purpose of detecting at the proper moment dangerous conditions, the medical supervision must be far more continuous than is contemplated by the disconnected examinations.

I have heard it said that as a rule local practitioners have not received enough training in this special work. This is absolutely fallacious. If a medical man, when he leaves his hospital, is not sufficiently trained to do what is required for the physical inspection, he should resign his profession. As to the mental side, I affirm that, with very few exceptions, no one has had any training *ad hoc*. Exceptions would be Dr. Shuttleworth and others, if any, who may have been authorized by School Boards to examine systematically all their children for the purpose of advice. There are undoubtedly many experts who can tell all about the abnormal children taken to them, but this systematic examination of all children sick or well, designed for the exclusion as well as the discovery of abnormality, is quite new business, to which the ordinary practitioner can be trained as well as any one else, as far as recognition of defect is concerned. The treatment of abnormalities may occasionally require reference to expert advice, such as can be given by the officers of asylums. There is no present virtue in the titles of M.O.H. or D.P.H., whatever may arise in future, except perhaps greater practice in extracting and tabulating facts. It seems impolitic to divorce preventive from remedial medicine, and, unless circumstances force such a thing, it does not accord with the fitness of things to take a child during school years from the care of one who, perhaps, has brought him into the world, has seen him through the risks of infancy and will probably see him through the risks of adolescence, maturity and senility.

This question, Sir, has been maturing for years. Now that action has been started it will do no harm if further time is taken to ensure that a good idea is not spoiled or crippled by want of care in thinking out every detail.

I should add, Sir, perhaps, that I am not in general practice.—I am, etc.,

February 7th. N.

SIR,—The Denbighshire Education Authority have recently held a meeting, at which the medical inspection of schools was considered; a report has been published in the *North Wales Pioneer*. They have invited the medical officers of health in the various districts to undertake for the present year the medical inspection of children in the elementary schools of their districts, the inspection for this year to be limited to children newly admitted and those leaving the school. The medical officers are to be paid on a scale based on the number of schools and the number of children in the schools of the respective districts, taking into consideration the area covered, and the total payments for the whole county is not to exceed £150 for the year.

From the local paper quoted, the sums apportioned work out at about 2d. a scholar in the rural districts, and from 1½d. to 1¾d. in the urban districts.

In view of all that you have written and published in the JOURNAL, what comments have you to make upon this? Do you think that the education authority are in earnest upon medical inspection?

Some letters appeared in the *Manchester Guardian* during January criticizing the Merionethshire Education Authority. They propose paying about 6d. a head per scholar, and this was deemed not sufficient. So Denbighshire could not have been uninformed, as the *Manchester Guardian* has a large circulation in the county.—I am, etc.

February 9th. A M.O.H. IN THE COUNTY.

P.S.—Area of county, 426,084 acres; estimated population (1906), 141,061.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

SIR,—In your issue of the 8th instant, there is a letter on the above subject written by Dr. Peter Horrocks, and in support of his condemnation of the routine practice of dropping solutions of nitrate of silver into the eyes of newborn infants I beg to supply the following particulars as to the practice adopted in the great lying-in hospitals of this city, that is, the Rotunda Hospital, the Coombe Hospital, the National Lying-in Hospital, and the Westmorland Lock (Government) Hospital.

In the Rotunda Hospital it is the routine practice to place one drop of a solution of silver nitrate in the child's eyes on the occasion of its first bath; this practice refers only to those children actually born in the hospital, and not to those delivered outside by the students. In the twenty-fifth volume of the *Transactions* of the Royal Academy of Medicine, Ireland, we find the clinical report of the Rotunda Hospital for the year ending October 31st, 1906, in which it is stated that there were 4,158 women delivered, 1,904 being confined in the wards, the remaining 2,254 belonging to the extern maternity. In quoting these figures it is only fair to state that the Master of the Rotunda (Dr. Hastings Tweedy) attaches absolutely no importance to the extern statistics, owing to the unreliability and difficulty of obtaining accurate reports. In Table No. 3 of this report there were 2 cases of ophthalmia recorded amongst the 2,254 children born outside, whereas in Table 4, 4 cases of this disease were recorded as occurring amongst the 1,904 children born intramurally, and treated by the application of the silver solution to their eyes.

When one considers these figures, the proportion of cases of ophthalmia, and the more favourable circumstances, surroundings, etc., under which the children born indoors enjoy over those of the external department, their incongruity becomes obvious. One might be excused for asking by what logical deduction it is found advisable to subject the 1,904 red and crying atoms of humanity delivered in the Rotunda Hospital to a special treatment, when 2,254 similar children born extramurally are not considered to require it! Ordinarily, one would suppose that children born in the slums of Dublin would be more likely to require such prophylactic measures than those born in the environment of the Rotunda Hospital. The fact that the percentage of ophthalmia cases is over two to one in those children in whom the treatment is used, ought to suggest that the dropping of silver nitrate solution into their eyes is at least unnecessary if not actually harmful, as by its irritating effects upon the delicate membrane it conceivably predisposes to the development of that very evil it is intended to provide against.

Neither in the Coombe nor in the National Lying-in Hospitals is such a measure of prophylaxis practised as a routine course.

In the Lock Hospital, where one expects to find active measures adopted to prevent ophthalmia neonatorum, they rely upon simply washing the eyelids by ordinary "wipes," and the silver nitrate solution is only used when special indications arise.

In 1906 I published in the *Medical Press* (vol. cxxxiii) a Clinical Report on the Delivery of Women suffering from Venereal Sores confined in the Lock Hospital, and I should here like to quote the following paragraph taken from it:

Concerning the infants, the main anxiety in their case was to prevent their eyes becoming infected. For this purpose the nurse stood ready with "wipes" for their ablution, and as they appeared at the vulva they were washed till clean. Silver nitrate solution was not used, and whilst I was in the hospital no case of ophthalmia neonatorum occurred, though subsequently to their birth some children developed a more or less severe conjunctivitis from which they made good recoveries. These may be considered perhaps as accidental occurrences caused by any one of the numerous and obvious dangers infants are exposed to in such a hospital. No sooner was a baby born than every woman in the ward and building seemed moved by a common desire to nurse it, and in spite of the vigilance of the staff they no doubt sometimes succeeded in doing so.

By which I intended to imply the infection that might ensue was not incidental to the child's actual birth, but to some accidental cause arising several days after it. I should add that there are only about twenty confinements annually in this hospital.—I am, etc.,

Seymour Stritch,
The Governor, Apothecaries' Hall, Ireland;
Formerly Resident Medical Officer,
The Westmorland Lock (Government) Hospital.

Dublin, Feb. 10th.

Sir,—I desire strongly to support the position taken up by Dr. Peter Horrocks in this matter. I have over and over again complained to nurses about the condition of infants' eyes, and find that the condition of irritation is invariably caused by the constant use of antiseptics. The worst offenders whom I have met are Queen Charlotte's Hospital nurses. The women are not to blame, but the system. No system can be sound which teaches a routine which is unsound as a rule, though perfectly sound in special cases, to an imperfectly educated class.

I cannot always agree with Dr. Horrocks, and have much pleasure in this case in finding myself agreeing with every word which he has written.—I am, etc.,

Hatfield, Feb. 7th. Lovell Drage.

SHORTHAND IN MEDICAL WORK.

Sir,—A striking illustration of the value of shorthand in medical work (a subject to which reference is made in an annotation in the Journal for last week) is presented in the remarkable treatise on *Tropical Fevers*, by Dr. Leonard Rogers, which has just been published. In a letter from Dr. Rogers which lies before me, he states that without shorthand the book could hardly have been produced. It is based on an analysis of his full shorthand notes of 2,000 cases of various fevers. His work is also a justification for the existence of our Society, if justification be needed, for he states that he only learned shorthand in consequence of the efforts of the Society and after going out to India. He persevered, and quickly became able to use it with perfect facility. As I have often urged, it is an agent that multiplies the effect of whatever force is behind it, increasing the result not only in amount but in quality. For fuller record, all observation must be more precise and in greater detail.—I am, etc.,

London, W., Feb. 10th. William R. Gowers.

PLEURAL EFFUSION.

Sir,—As Dr. Samways does not seem satisfied with the correction which I gave him before, he will now find that there is no "butterfly" touch in this letter. The history of the introduction of air into the pleural cavity can be found correctly stated in my Bradshaw lecture. I have nothing to add to or take therefrom except it be the Paris thesis of Dr. Albert Rouet, *Traitement des Pleurésies à Répétition par l'Injection Gazeuse Intrapleurale*, to which Dr. Samways draws my attention, and which I have not seen. I am not personally anxious to have much experience in *repeated* injections.

After giving a quotation from my letter in which I stated the cases known to me to have occurred in France, he says "That Sir James is quibbling is evident from the following. I have lately written to Professor Vaquez, and in his reply he says." (I am not in the habit of quibbling, and I never make any statement which I am not prepared to defend, and I must say that I do not understand how Dr. Samways could have brought himself to write a private letter to Professor Vaquez on a public matter about me or any one else, and in any case he ought to have given the text of the letter to which M. Vaquez replied.) Now what does Professor Vaquez say, in English? "Moreover, I have sent Dr. Barr a year or two ago the work done by my pupil, Dr. Quiserne, and of which I send you an example. Dr. Barr knows therefore my researches: he has acknowledged the receipt of my work." Where is the evidence of quibbling here? Unfortunately I have at present no means of accurately fixing the date when M. Vaquez sent me his paper; he says a year or two ago, but I think it must be more, but at any rate it was a long time after I published my lecture in the British Medical Journal, March 19th, 1904. As soon as I learned that MM. Vaquez and Quiserne and others had introduced sterile air into the pleura before me I took the earliest possible opportunity of bringing the facts, so far as I knew them, before the medical profession, and I did so at the Annual Meeting of the British Medical Association in 1904, and my remarks were published in the British Medical Journal of October 15th, 1904. I think it must have been some time after this that M. Vaquez sent me his paper with "Hommage de l'auteur." Any communications that have taken place between Professor Vaquez and myself have been of the most friendly description, and it is only six weeks ago that, at his request, I consented to become one of the collaborators of his new review entitled *Archives des Maladies du Cœur, des Vaisseaux, et du Sang*, and my name appears in the first number published last month. I am now put to the trouble of writing to M. Vaquez to correct any false impression which Dr. Samways may have created.

I shall not trouble your readers with any further remarks on Dr. Samways's letter as it is beneath contempt.—I am, etc.,

Liverpool, Feb. 6th. James Barr.

THE TEACHING OF LEGAL MEDICINE.

Sir,—I am glad to note that in your issue of to-day's date Dr. Highet writes expressing sympathy for my plea for the improvement in the teaching of legal medicine, etc. But I must distinctly join issue with him on his suggestions, at least so far as they affect the subject I refer to—namely, legal medicine pure and simple. I may say that I have nothing but praise for his suggestions, so long as he confines them to public health. He makes a point of my admission that public health and legal medicine may both be classed as State Medicine. Quite so; but my point was that there was nothing in common between the two subjects, except that they could be so classified. What is meant by saying that a certain medical science is included in the category of State Medicine? Nothing more than that such a science owes its existence largely, and its encouragement and material almost entirely, to State enactments and regulations. Now legal medicine is an old science, as our criminal system is old, but public health or preventive medicine is of comparatively quite recent origin. Now whereas the State has largely stimulated the study of public health, and has provided a number of lucrative posts for those who have devoted their attention to the study of this subject, it has done nothing whatever for the medical jurist.

Dr. Highet questions my statement that "there is work here for medical officials to devote their whole time to the medico-legal work in their areas," unless such areas are very large. I must adhere to my statement, and am prepared, if necessary, to give in some detail the work they could perform in the interest of public justice and the advancement of science. On the other hand, I contend that medical officers of health have got their hands full in discharging their own proper duties, without taking part in another totally distinct branch of medical science. Surely the latest enactment dealing with the inspection of school children must increase their already long list of duties, and provide for a number of good appointments for medical men working under them in a distinct subdivision of preventive medicine. May the science of public health prosper for the common good, and may those who work in that department receive every recognition and honour. But surely legal medicine, a proper knowledge of which is absolutely necessary for the successful administration of our criminal law, might get a little more consideration on the part of the State, and those who desire to make a special study of the subject could be very well encouraged and honoured.

My motive in delivering my address was to endeavour to initiate a movement in the direction of advancing the study of the subject, and pointing out the negligence of the State

in doing its duty in the matter. My suggestions may not be perfect, but I think they could very well form the basis on which the State could place the science on a higher level, and raise the status of the medical jurist.—I am, etc.,

Cardiff, Jan. 18th. J. J. BUIST.

THE HAMPSTEAD GENERAL HOSPITAL.

SIR,—The enclosed letter is being sent, *with the full approval of the Hampstead Division*, to intending applicants for vacant posts on the staff of the Hampstead General Hospital.

As the matter is an urgent one, I should be much obliged if you could find space for it in this week's issue of the JOURNAL.—I am, etc.,

REGINALD A. YELD, M.D.,
Honorary Secretary, Hampstead Division,
British Medical Association.

February 12th.

Dear Sir,

In reply to your inquiry respecting the Warning Notice in the BRITISH MEDICAL JOURNAL, I wish to inform you that the local profession is opposed to any medical man applying for an office on the staff of the Hampstead General Hospital as long as the Council adheres to its intention of excluding for the future local practitioners from the staff.

You will probably be aware that the matter has been under the consideration of the Hampstead Division of the British Medical Association for a considerable time, and that the Division, in order to strengthen its hands, applied to the whole of the local profession for co-operation and advice on several occasions. The consideration that all branches of the profession in our neighbourhood should be heard induced the Committee to co-opt members from outside for this purpose.

On May 5th, 1906, a meeting of the Division, to which the whole of the local profession was invited, instructed the Committee to take all steps deemed advisable to bring the hospital authorities into line with the views of the profession, and this has remained a continued instruction at each of the meetings of the Division held since that date.

Utilizing this power to act for the best interests of the profession in the district, and after having obtained the opinions of each individual, the Committee on December 17th, 1907, passed the following resolution:

> That the local profession has expressed an emphatic opinion that no medical man ought to accept any appointment on the staff of the Hampstead Hospital so long as it is intended for the future to exclude local practitioners therefrom.

I am instructed to point out that the hospital was originally founded by a general practitioner as a cottage hospital, and that the local profession justly resent its being entirely diverted from its original purpose.

I trust that we may receive your support in carrying to a successful issue the struggle of the medical profession against the lay authorities of a suburban hospital.

I am, dear Sir,
Yours very truly,
REGINALD A. YELD, M.D.,
Honorary Secretary Hampstead Division, B.M.A.

Medico-Legal.

WORKMEN'S COMPENSATION CASES.

A MEDICAL ASSESSOR.

AN interesting compensation case came before the Recorder of Dublin last week, when he availed himself of the advice of Sir Christopher Nixon, M.D., who sat on the bench. The Recorder had in June, 1906, ordered that the plaintiff should be awarded half his wages. The case now came on for review of that decision. Two medical men were examined to show that the *x*-ray photographs gave no indication of an injury to the femur, and acting upon the advice of Sir Christopher Nixon, whose valuable assistance he publicly acknowledged, the Recorder now ordered that the payment of half wages should cease as from January 1st, 1908. The example here set might be followed with much advantage in other cases, when medical evidence is often so contradictory that the bewildered judge and jury find it difficult to come to a satisfactory conclusion. The greatest injustice to plaintiff and defendant is too often done under present conditions.

CORONERS' INQUESTS.

IRISH MEMBER asks: Is it legal for one doctor to perform a *post-mortem* examination at a coroner's request, or must a second be requisitioned? Can a coroner who happens to be a medical man act in a dual capacity, and assist at a *post-mortem* examination in a case where he is himself holding an inquest and sitting as coroner?

*** It is quite legal for one doctor to make a *post-mortem* examination on a coroner's order. A coroner who is a medical man should act as coroner only, and not in a dual capacity.

PRACTICE OF DENTISTRY BY UNREGISTERED PERSONS.

AT a meeting recently held at Torquay of all the registered dental practitioners of Torquay and Paignton the following resolution was passed:

> That in view of the rapidly increasing number of unregistered persons practising dentistry and evading the Dentists Act of 1878, we appeal to all registered dental surgeons throughout the country to use their utmost endeavour by local combination to assist the authorities in taking steps to amend the Act, and whenever possible to bring forward cases to enable them to take action.

A memorial to the General Medical Council was also signed by registered dental surgeons in practice in Torquay and Paignton drawing the attention of the Council to the urgent need for some action to be taken to check the increasing evil of unregistered persons practising dentistry and evading the Dentists Act of 1878 and stating that during the past two years ten or more unregistered persons had started practice in these towns and the vicinity.

A CORONER ON MEDICAL FEES.

THE *Manchester Evening Chronicle* reports that on January 31st, Mr. S. Brighouse, the South-West Lancashire Coroner, took opportunity at a St. Helens inquest to say he had received a letter from the Clerk to the County Council, stating that in future medical men must receive only one guinea for attending inquests, instead of one guinea a day, as previously. Mr. Brighouse pointed out that some inquests lasted several days, and that for several days' attendance the doctor was to have the magnificant sum of one guinea. He declared that if that was the way the medical profession was to be treated, he would not think of bringing up a son of his to it, and he hoped the profession would take steps to ensure that they would be properly remunerated.

*** As the law at present stands, one guinea for each inquest is all that the medical witness is entitled to, when no autopsy is made.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

A QUESTION OF RIGHT.

R. H.—Our answer (BRITISH MEDICAL JOURNAL, February 1st, page 298) was based upon the medico-ethical aspect of the case as disclosed to us. Our correspondent now hints that there are other matters involved, but with these we can have nothing to do, although our advice still seems sound—namely, that he should apply courteously to his successor in the case for any information he may wish to have.

RECOVERY OF FEES FOR SERVICES TO THE PATIENTS OF ANOTHER PRACTITIONER.

S. writes that he saw a case in consultation with B. and also treated two of his patients for accidents, and for the fees due has sent in a bill to B., of which no notice was taken. He has since sent in another as "account rendered," and has received a note in reply: "Dear S.—I wish you would not ask me to collect your accounts—I get quite enough of my own." He wishes to know what he ought to have done, as he believes he is precluded by etiquette from applying direct to B.'s patients?

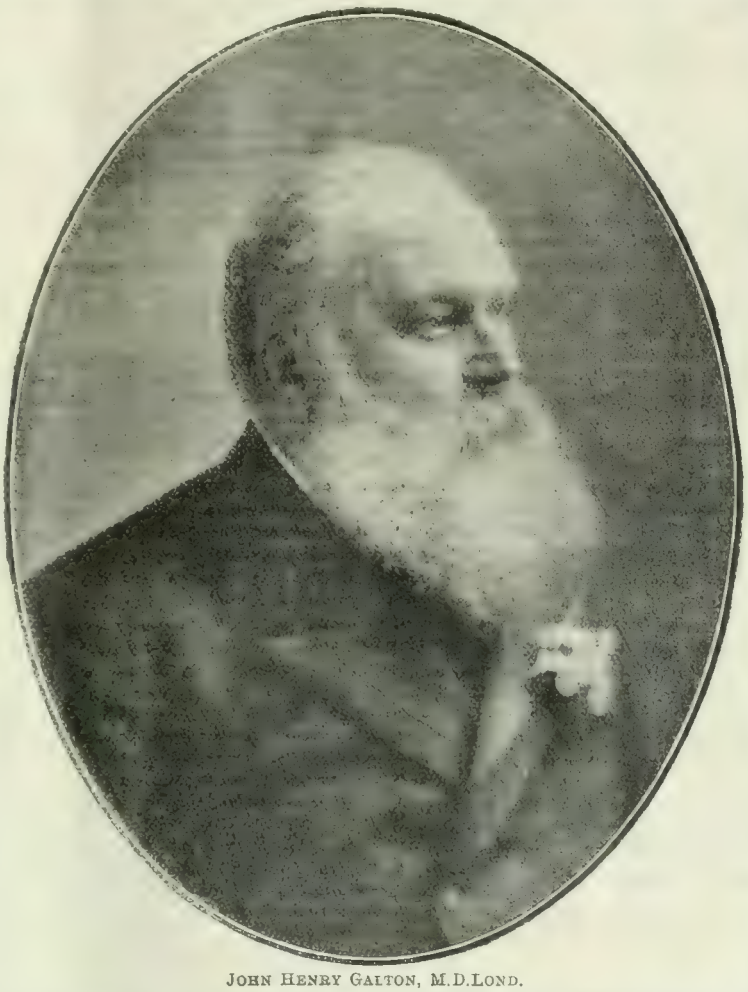
*** B. was bound to do his best to get the fee due to S. for the consultation, and if it had not previously been paid he should include it with his account and send the money when received to S. With regard to the cases in which S. considers he acted as a substitute for B., he should have sent B. a note of what he had done, and leave it to B. to recover the fees and to pay him. Many practitioners would not pay or expect to be paid under such circumstances, regarding their services as friendly help which practitioners may render to each other, but a delicate-minded man would not accept such help without payment unless he knew that he should have an opportunity of rendering its equivalent. S. should not have sent in a bill to B., as this action could not have a friendly appearance, and as in point of law he has no claim against his colleague for services rendered to his colleague's patients, he would not be justified in sending a formal account to him.

OBITUARY.

JOHN HENRY GALTON, M.D.Lond., M.R.C.S.Eng., L.S.A.,

MEMBER OF THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

THE death of Dr. Galton on February 7th at his residence, Upper Norwood, Surrey, came as a great shock to his many and devoted friends. In the autumn of last year he had been prevented by illness from attending the meetings of the Central Council of the Association, but was sufficiently recovered to be present at the meeting of the Journal and Finance Committee on January 22nd, and spoke thereat, and also drove to the Quarterly Meeting of the Council on January 29th, when the Chairman warmly welcomed him on his reappearance in the Council Chamber. Two days later, alas! acute bronchitis developed, and after a week's illness Dr. Galton passed away, in his 68th year.



JOHN HENRY GALTON, M.D.LOND.

John Henry Galton was the son of Edmund H. Galton, a much respected medical practitioner of Brixton, and the younger brother of the late Mr. Edmund Hooper Galton, F.R.C.S., who also practised in Brixton. He was born in June, 1840, and was educated at Chatham House School, Ramsgate, where he became head of the school. Thence he entered Guy's Hospital, at the age of 14½, and was soon recognized as one of the leaders of his year. He graduated as M.B.Lond. in 1861, one of the years when Guy's men obtained nearly all the honours—no fewer than 4 out of 5 mentions in physiology and comparative anatomy, all 3 in surgery, 4 out of 7 in medicine, and 4 out of 5 in midwifery, all the 3 exhibitions and 4 of the six medals falling to their share. One of the medals, that for midwifery, was gained by Galton. In that same year he also became M.R.C.S.Eng., and L.S.A.; and in 1862 he took the M.D. degree. Before leaving Guy's he held the post of House-Surgeon.

After filling the appointment of Medical Officer to the Carey Street Dispensary, London, he went as Surgeon, one voyage, in the Hudson Bay Company's steamer *Prince Arthur*, and then spent five years in practice at Foochow, China, where his aptitude for surgery was soon manifested, and he operated on several cases of elephantiasis of the scrotum. He was Surgeon to the Native Hospital, H.B.M. Consulate, the Gaol, and H.I.M. Customs. He also edited the local newspaper at Foochow. In 1870 he returned to England, married, and entered into partnership with his friend, Mr. J. Sidney Turner of Norwood, and soon built up one of the leading practices of the neighbourhood, from which he only retired on December 31st last.

He became a Fellow of the Obstetrical Society, and Surgeon to the Anerley Dispensary and Lying-in Charity, and was much interested in the starting of the Norwood Cottage Hospital, opened in 1882, of which he was one of the original staff. Upon his retirement two years ago he was appointed Consulting Surgeon.

Not content, however, with these purely professional posts, he worked for the British Medical Association, Epsom College, and the Surrey Medical Benevolent Society. He first became actively connected with the work of the Association by accepting the office of Honorary Secretary of the East Surrey District of the South-Eastern Branch; in due time he became President of that Branch, and had been one of its representatives on the Central Council since 1887. In the year when he was President of the Branch its annual meeting was held at the Crystal Palace, and many of his old friends still remember with pride and pleasure how gracefully he presided over the assembly, with the Archbishop of Canterbury for principal guest, and entertained the company with the menus which he had wittily translated into Latin. Probably the best-known piece of work Galton effected was his advocacy at the Nottingham Annual Meeting, in 1892, of the admission of women to the membership of the Association. He proposed in an eloquent speech that the words "No female shall be eligible for election as a member of the Association" should be expunged from the articles of association; the proposal was seconded by Mrs. Garrett Anderson, and carried with only about ten dissentients in a meeting of probably 300 members. One of the most efficient causes of this gratifying result was doubtless the conciliatory and convincing character of Dr. Galton's speech and his manly detestation of anything savouring of injustice. He was throughout his twenty years' service on the Council one of its most respected and popular members, and at the time of his death was a member of the Arrangement, Journal and Finance, and Premises Committees.

Dr. Galton began to work in the interests of Epsom College twenty-two years ago, and for the whole of the intervening period he has been a warm supporter of the institution, being most regular in his attendance at meetings until failing health compelled him to absent himself. As chairman of the Finance and Works Committees for a short time he rendered valuable services, and during his term of office on the latter committee he superintended the important work of the rearrangement of the drainage system at the college, upon which a sum of £8,000 was spent, taking the keenest personal interest in all details throughout a most inclement season, and in spite of physical suffering. With untiring industry and energy he collected a sufficient sum of money to erect a reading room for the students, and called it the "Holman Art and Reading Room," after his old friend, Sir Constantine Holman, then treasurer of the college. He was elected a vice-president of the college in 1902. It

is difficult, even for one intimately associated with Dr. Galton, to appreciate all that he did for Epsom College, and many connected therewith will feel that they have lost a loyal friend.

For many years, too, Dr. Galton had been Treasurer of the Surrey Medical Benevolent Society; watching over its finances and administering its funds in a manner that commanded the entire confidence of the members. His contributions to medical literature were few; a case of Caesarean section and another of ovariotomy appeared in the *Lancet*.

Dr. Galton was, in the best sense of the word, a gentleman, ever kind and courteous to all, and he was extremely happy when he could bring his medical brethren socially together, or found them supporting him in any of his public activities. His handsome head, fine presence, and rich voice formed an excellent background to his oratorical powers, which were far above the average, so that he was always able to secure the attention of his audience. He was an excellent Latin scholar, and, being blessed with a very retentive memory, had the faculty of producing an apposite quotation either from the ancient classics or from the works of the poet he best loved to study, R. B. Browning. He was truly a delightful companion and a most sincere and lovable friend.

For some years he had suffered from rheumatic arthritis of one hip-joint, for which from time to time he sought relief at Aix-les-Bains. During the past two years, too, signs of circulatory obstruction gradually developed; he broke down in June last after a course of baths at Aix. He improved to a certain extent with rest, but never quite recovered. When bronchitis developed, he had not, with his failing heart and kidneys, strength to withstand it, and, in spite of the loving care of his devoted family and friends, the end came all too soon. He has left a widow and four daughters.

The funeral took place on February 11th, at 12.30 p.m., at Shirley, near Croydon—a sweetly pretty and peaceful spot, where some years ago he expressed a wish to be buried, though other members of his family are interred at Norwood. At the ceremony, which was largely attended by old patients and friends, his former partners, and many other doctors from the neighbourhood, the Council was represented by Mr. Edmund Owen, Chairman, and among others from a distance were Mr. E. Reynolds Ray and Mr. Frederic Durham from London, Dr. John Rand from Surbiton, and Dr. H. R. Mansell from Hastings. Wreaths and flowers were beautiful and in large numbers.

SURGEON-GENERAL WILLIAM HENRY REAM, M.D., retired, Indian Army, died in London on February 6th, in his 81st year. He was appointed Assistant Surgeon, Madras Medical Department, May 14th, 1853; and became Deputy-Surgeon-General, March 28th, 1881, retiring from the service in 1886. During the Indian Mutiny in 1857 he served in Bengal and Oudh, [illegible] and during the advance on and occupation of Allahabad [illegible] relief of the rebels from the Oudh bank of the [illegible] Cawnpore, and in the defence of Cawnpore; [illegible] received the Indian Mutiny medal.

WILLIAM ALLINGHAM, F.R.C.S.,

LATE SENIOR SURGEON, ST. MARK'S HOSPITAL FOR FISTULA.

WE regret to announce the death of Mr. William Allingham, sometime Senior Surgeon to St. Mark's Hospital for Fistula, and Surgeon to the Great Northern Hospital, who has died within two months of the completion of his 78th year. He was originally intended for the profession of architecture, and was educated at University College, London, where he gained several prizes. While practising as an architect he exhibited at the Royal Academy and also submitted a design for the Great Exhibition of 1851, for which he obtained an honourable mention.

But he always felt himself strongly drawn to the medical profession, and in 1851 he determined to follow his inclination. He therefore abandoned architecture and entered as a student at St. Thomas's Hospital, where he had a brilliant career, gaining the Descriptive Anatomy Prize, the Anatomy Prize in 1854, and the Medicine Prize, the Clinical Medicine President's Prize, and the Clinical Medicine Treasurer's Prize in 1855, besides holding the posts of surgical tutor, demonstrator of anatomy and surgical registrar. He was admitted to the Membership of the Royal College of Surgeons of England in 1855, and became a Fellow of the College by examination in 1857.

Soon after becoming a qualified member of the profession, in 1855, Allingham volunteered for active service in the Crimea. He was present at the siege of Sebastopol and obtained a large surgical experience in the hospitals at Scutari. During part of his service he was attached to the French army, which was very badly provided with surgeons. On the declaration of peace he returned to England and commenced practice in Finsbury Square.

In 1863 Allingham commenced to make a special study of diseases of the rectum, and in 1873 he published his book on *Diseases of the Rectum*, which gained for him recognition as an authority on the subject. It was translated into several foreign languages and passed through six editions. In 1901 it was re-edited and brought up to date by his son, Herbert William Allingham, the brilliant young surgeon who died a few years ago in the fullness of his activity.

In 1884 Allingham was elected a Member of the Council of the Royal College of Surgeons. In addition to the appointments already mentioned, he had also been

Consulting Surgeon to the Farringdon General Dispensary and to the Surgical Aid Society, which he and a few friends [illegible]tives founded in 1862. He retired from [illegible]

Allingham [illegible]es a man of the most kindly and generous ORIGI[illegible]sition, and his charm of manner was recognized by all with whom he came in contact. He was twice married, first, in 1861, to Miss Christiana Cooke, by whom he had four sons and two daughters; one of his daughters married Mr. Chevallier Taylor, the artist; the other became the wife of Mr. Claud Woakes. In 1894 Allingham married a second time; his wife predeceased him last year. Failing health for many years prevented his wintering in London. After his retirement he lived first at St. Leonards, and lately at Worthing.

Dr. ROBERT W. TAYLOR, of New York, an acknowledged authority on venereal diseases, died suddenly of heart disease complicating nephritis, from which he had suffered for several years. He was born in London in 1842, but went to the United States at an early age. He studied medicine at the New York College of Physicians and Surgeons, taking his degree in 1868. He was at one time Professor of Dermatology at the Women's Medical College, New York, and in the University of Vermont. He was Consulting Surgeon in the department of Genito-urinary Diseases to the City and Bellevue Hospitals. He was the author of *A Practical Treatise on Sexual Diseases of the Male and Female*, a third edition of which appeared in 1905.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

DR. HUMPHRY has been co-opted a member of the Degree Committee of the Special Board for Medicine. J. S. Gardiner, M.A., of Caius College, has been reappointed Demonstrator in Animal Morphology for five years. The examinations for the Third M.B., Part II, will begin on Tuesday, April 28th.

The following have been appointed electors to professorships:—Anatomy: Dr. D. MacAlister. Medicine (Downing): Sir T. Lauder Brunton. Physiology: Dr. Gaskell. Surgery: Mr. H. H. Clutton. Pathology: Dr. Humphry.

Mr. Raymond Johnson, M.B., B.S., F.R.C.S., has been appointed an Examiner in Surgery in place of Mr. Barling, who is unable to examine.

EXAMINATIONS FOR MEDICAL AND SURGICAL DEGREES, EASTER TERM, 1908.

Third Examination.

Subject to alteration in details, of which due notice will be given, Part II—(1) Surgery, (2) Midwifery, (3) Medicine—will be held on Tuesday, April 28th; Wednesday, April 29th; and Thursday, April 30th. The oral and practical and clinical examinations will be held on Friday, May 1st; Saturday, May 2nd; Monday, May 4th; Tuesday, May 5th; Wednesday, May 6th; and Thursday, May 7th. M.C. Examination:—The written part of this examination will be held on Thursday, April 30th; the practical, clinical, and oral parts on Friday, May 1st, and Saturday, May 2nd. The names of candidates for these examinations should be sent to the Registrary on or before Tuesday, April 14th. The certificates of candidates, accompanied by their postal addresses, must be sent to the Registrary on or before Thursday, April 23rd. Information as to fees, etc., may be obtained on application to the Registrary.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on January 22nd.

Recognition of Teachers.

The following were recognized as teachers of the University in the subjects at the medical schools indicated:

St. Bartholomew's Hospital: Dr. Christopher Addison (Anatomy) Mr. Charles Ernest West (Aural Surgery), Mr. Herbert Williamson (Midwifery and Diseases of Women).

Charing Cross Hospital: Mr. Alexander Macphail (Anatomy).

St. Mary's Hospital: Dr. William Henry Willcox (Clinical Medicine)

St. George's Hospital: Dr. William Stephen Fox (Dermatology), Mr. Charles Milton Fegen (Hygiene), Mr. Thomas Seymour Tuke (Mental Diseases).

Mr. James Handcock Brinkworth was granted probationary recognition as a Teacher of Physics at St. Thomas's Hospital Medical School.

Teachers of the Preliminary and Intermediary Medical Subjects.

The Senate considered the question of the continuance of the provisional recognition hitherto accorded to teachers of the preliminary and intermediate medical subjects. In view of the abandonment of the scheme for the establishment of an Institute of Medical Sciences, it was resolved that teachers of preliminary and intermediate medical subjects hitherto provisionally recognized be accorded recognition without such condition.

Intercollegiate Courses.

It was resolved that intercollegiate courses for the session 1908-9 be arranged to fall between the dates October 8th and December 18th, January 14th and March 31st, and April 29th and June 26th, in all cases inclusive.

Amendment of Regulations.

It was resolved that the regulations for the D.Sc. degree for internal and external students be amended by the addition of the following at the end of the first complete sentence in the first complete paragraph on page 202 of the Red Book and page 275 of the Blue Book, September, 1907:

> And the candidate may be required by the examiners to submit within a given period a reasoned report on a subject prescribed by them.

The regulations for the degree of M.D. in pathology were also directed to be similarly amended.

Gilchrist Studentship for Women.

The Senate will proceed shortly to the appointment to the Gilchrist Studentship for Women of the value of £100, tenable for one year, by a graduate of the University who is prepared to take a course of study in an approved institution in preparation for some profession. Further particulars can be obtained on application to the Principal, by whom applications must be received not later than February 28th.

King's College.

In the annual report of the Council of King's College it was stated that the scheme for the incorporation of the College in the University of London had reached a further stage, and the draft of the Bill had been agreed upon. The appeal for funds had been issued, and some £21,000 had been raised, including £5,000 from the Goldsmiths', the Clothworkers', and the Drapers' Companies.

UNIVERSITY OF LIVERPOOL.

AT a meeting of the Senate held on January 29th Diplomas in Public Health were awarded to E. S. Jones, M.R.C.S., L.R.C.P., R. O Mather, M.B., L.R.C.P., L.R.C.S., and J. Orr, L.R.C.P., L.R.C.S., L.F.P.S.

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of the Senate held on Thursday, February 6th, the following, among others, were appointed Examiners:

Medicine.—James A. Lindsay, M.A., M.D.; Joseph F. O'Carroll, M.D.

Surgery.—Thomas Sinclair, M.D., M.Ch.

Pathology.—Edmond J. McWeeney, M.A., M.D.; A. E. Moore, M.B., B.Ch., B.A.O.; Wm. St. Clair Symmers, M.B.

Midwifery.—Sir John W. Byers, M.A., M.D., M.A.O.; Alfred J. Smith, M.B., M.Ch., M.A.O.

Medical Jurisprudence.—Patrick T. O'Sullivan, M.D.

Materia Medica.—Martin Dempsey, M.D.; Sir William Whitla, M.A., M.D.

Ophthalmology.—Arthur W. Sandford, M.D., M.Ch.; Louis Werner, M.B.

Physiology.—T. H. Milroy, M.D.

Diploma in Public Health.—Sir Charles Cameron, C.B., M.D.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on February 4th, Dr. Underhill, President, in the chair.

Introduction of Fellow.

Theodore Charles MacKenzie, F.R.C.P.E., was introduced, and took his seat as a Fellow of the College.

Admission to the Fellowship.

Patrick Hehir, M.D., M.R.C.P.E., Lansdowne, India, and Harold Sherman Ballantyne, M.B., C.M., M.R.C.P.E., Dalkeith, were admitted by ballot to the Fellowship of the College.

Admission to the Membership.

Lindsay Stephen Milne, M.B., Ch.B., Montrose, was admitted by ballot to the Membership of the College after examination.

Admission to the Licence.

The Registrar reported that since last quarterly meeting twenty-seven persons had obtained the Licence of the College by examination.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the monthly business meeting of the College, held on Friday, February 7th, the following candidate was duly admitted as a Licentiate in Medicine of the College: Edward Patrick Eustace, L.R.C.S.I., L.A.H.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual dinner of the Council and Fellows of the Royal College of Surgeons was held in the College, St. Stephen's Green, on Saturday, February 1st. Sir H. R. Swanzy (President) occupied the chair, and in the course of his reply to the toast of "The College," mentioned that the College had now been in existence for 124 years. He referred to the work that had been done, and to the important improvements that had been effected in the school, so as to keep its equipments and capacities equal to the demands of modern teaching.

CONJOINT BOARD IN IRELAND.

FINAL PROFESSIONAL EXAMINATION. — The following candidates passed this examination in February:

P. Blake, W. H Bomford, F P. Byrne, T. Fehily, M. J. Glancy, R. de S. B. Herrick, P. J. Holmes, J. Humphreys, P. MacCarthy, J. V. O'Hagan, W. H. O'Riordan, J. R. Talbot.

DIPLOMA IN PUBLIC HEALTH.—The following candidates passed the examination for this diploma in February:

Martha Adams, M.B.Glasg.; R. Muschamp, L.R.C.P. and S.Edin.; J. J. Scanlan, L.R.C P. and S.Edin.

APOTHECARIES' HALL OF IRELAND.

At a special meeting of the court held on Monday, February 3rd, the following candidates, having passed the necessary examinations, were admitted Licentiates in Medicine, Surgery, Midwifery, and Pharmacy of the Apothecaries' Hall of Ireland: Synott Valentine O'Connor, John Hargreaves Robinson.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

FOOT AND MOUTH DISEASE IN EDINBURGH.

A SERIOUS and somewhat alarming outbreak of foot and mouth disease was found to have occurred in the city of Edinburgh towards the end of last week. In a dairy farm consisting of 110 cows and 1 calf, fully one-fourth of the animals were suffering from this malady. Prompt and energetic measures were taken to limit and deal with the situation. The Board of Agriculture sent down their chief veterinary adviser along with a staff of assistants. The local authority, the medical officer of health, and the chief sanitary officer for Edinburgh held consultations with the representatives of the London Board, and the result was isolation of the affected herd, the proscribing of various suspected areas in the county of Midlothian and neighbouring counties, forbidding movement of animals into or out of these prescribed areas, closure of the slaughterhouses, and the decision to slaughter the whole herd of 111 animals, as well as 81 cows in a closely-contiguous dairy.

Of the animals in the dairy in which the disease appeared it was found that 30 were suffering from signs of foot and mouth disease. These were slaughtered on the spot and buried in lime pits. The rest of the herd was sent to the slaughter-house after careful inspection by the various veterinary authorities, and after inspection of the carcasses those that were fit for human food were allowed to be sold to butchers. The byres, the dung, the foodstuffs, the other domestic animals in and about the byres, such as fowls, cats, dogs, etc., will now be dealt with. The manure removed from the byres has been traced, and means taken to prevent contagion from that source; straw, hay, and foodstuffs will be destroyed. So far as any feasible theory of the outbreak has yet been formulated it would appear that hay from Rotterdam was the cause. Since the destruction of the infected and suspected animals there has been a relaxation of the drastic precautionary measures adopted by the Board of Agriculture.

The owner of the infected herd will have to be compensated to the extent of something like £4 000.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA

DURING the weeks ended December 21st and 28th, 1907, and January 4th and 11th, the deaths from plague in India numbered 2,602, 2,741, 2,618, and 2,823 respectively. The mortality during the four weeks occurred as follows: Bombay Presidency, 1 002, 832, 858 and 745; Bengal. 238, 220, 354, and 336; United Provinces, 303. 327, 511, and 530: Punjab, 283, 259, 211, and 221; Rajputana, 257, 128, 84, and 72; Central Provinces, 128, 110, 262, and 112; Madras Presidency, 98, 96. 138, and 114; Mysore State, 304, 363, 404, and 472; Burma, 115, 126, 116, and 120. Plague during the week ended January 4th caused 14 deaths in the North-West Frontier Province, and during the week ended January 11th there were 370 deaths from the disease in Hyderabad State.

SOUTH AFRICA.

No cases of plague were reported between October 21st, 1907, and January 11th, 1908. Rats and mice continued to be found plague-infected up to January 11th.

AUSTRALIA.

Queensland.

Brisbane.—No case of plague has occurred in Brisbane between July 26th and December 14th, 1907.

Cairns.—A case of plague occurred at Cairns during the week ended November 30th, and proved fatal. The patient came from Green Island, some distance from Cairns. No evidence of rats being infected with plague were found in Cairns or in Green Island at the time.

GOLD COAST, WEST AFRICA.

From January 11th to 31st the daily deaths from plaeug have been as follows:—10, 2, 1, 2, 2, 6, 4, 1, 4, 6, 2, 2, 4, 3, 1, 0, 0, 2, 0, 2, 3—equal 57 deaths since the outbreak was first reported on January 11th. On January 31st there were 14 cases of plague under treatment in the plague hospital. Thirty-two persons were at the same date isolated owing to their being in contact with plague patients.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INDIAN HOSPITAL ASSISTANTS.

ON sundry occasions during the past decade, and more particularly in May, 1905, and December, 1906, we have drawn attention to the position of hospital assistants in India, and to the feeling among them as to their position and prospects. It seemed, and still seems to us, that the discontent which we noted was well founded, and that these men, without whose assistance the general medical work of the Government of India, not less than that of the hospitals, would be absolutely paralysed, deserved and should receive greater consideration than has so far been shown by the authorities. This class of medical workers has been in existence now for over half a century; it is a service which became evolved from the necessity of having a large number of subordinates to assist in the hospitals as dressers and compounders, but little by little the duties of its members have become more numerous and responsible. There has been an corresponding improvement in the machinery provided for their education, and a good many years ago examinations were imposed and no candidate for the service admitted who had not undergone a three years' course of instruction in a medical school. Such examinations covered, and still cover, general, medical, surgical, sanitary, and medico-legal knowledge, and recently the tests imposed have been increased in severity. There is now a preliminary examination in general knowledge, and the course of the training has been extended to four years. Their general title still remains that of "hospital assistants," but this is to some extent a misnomer, since men belonging to this class are to be found wherever Government medical work of any kind is in progress, and not infrequently they occupy positions in which their work is done subject only to merely nominal supervision and control. In spite of these facts their pay and prospects remain precisely what they were fifty years ago. The former begins at 25 rupees a month, and the highest scale of pay they can hope to obtain, after obtaining promotion at least three times, is 70 rupees. Moreover, the passage from one grade to another involves further examination. Neither in the case of the junior nor in that of the senior employés of this service do the positions and prospects compare favourably with those of native officials in other departments of the Government service, and they are notably inferior to those of the police, the excise, the prison, the public works, and the veterinary departments. The tendency is for the expenses of living in India to increase in such ways as to affect those whose mode of life is still Eastern in its general character, and within recent years most Government departments have been reorganized and employés put upon a better footing as regards pay. The time has certainly come when the same step should be taken with regard to the hospital assistants. Those who work in the province of Bengal submitted last year a petition to Government on the subject, which may be regarded as on the whole free from exaggeration of statement. It contains a number of suggestions as to the ways in which the position and prospects of men belonging to the service might reasonably be improved, and the many existing anomalies and the invidious distinction made between them and other of the employés of Government minimized. It seems to us that it should meet with the sympathetic consideration of the Inspector-General of Hospitals, and that some, at least, of the contained requests should be granted, if it is desired that this subordinate but important branch of the Government service should continue to enjoy the popularity won by it in the past.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

PHENAD asks for information as to any localized poisonous possibilities from a leech-bite as distinct from an infection of the wound left by the bite.

ULTIMA THULE wishes to know the opinions, as regards reliability, etc., of users of Allday's No. 4, 12-h.p. Riley, Ford, or Clyde cars in professional work.

J. W. K. asks for suggestions for an external application for the relief of pain in occipital neuralgia. He has tried ung. belladonnae, menthol, etc., without success, and internal medication is objected to.

E. A. S. would be glad to know of some institution or home within easy reach of Brighton, where a man, about 40 years of age, could be received. He is suffering from paraplegia (not fully developed), and incontinence of urine, but not yet bedridden. He is dependent on his friends, who would be able to contribute to his support.

TREATMENT OF HEBERDEN'S NODOSITIES.

CIVIS asks what is the best treatment for this disease. The patient, a woman, aged 38, has the terminal phalanges of both hands affected. The joints are much swollen and inflamed, and the nails considerably enlarged. The patient is thin but her general health fair. The disease is of about one year's duration and the usual remedies for rheumatoid arthritis are ineffectual.

CONTRADICTORY STATEMENTS.

PERPLEXED writes: I am much perplexed at times in my reading by contradictory statements, both in medical journals and in textbooks. As regards the former, in your issue of February 1st Sir James Barr says: "The ravages of this disease (syphilis) in Liverpool are on the increase in all classes of the community." In the current issue Mr. Lowndes is reported to have said, speaking of Liverpool, "there is a great reduction—not only in the prevalence, but in the severity of venereal disease." Which statement are your readers to believe?

Now, as regards textbooks, I will take two books issued by the same publishers and written by surgeons of the same hospital. On page 149 in Sargent's *Surgical Emergencies*, in reference to cellulitis of the neck (Ludwig's angina), it says, in speaking of the operation: "It is advisable not to give a general anaesthetic, if it can possibly be avoided, because urgent dyspnoea is very apt to be induced by the administration of an anaesthetic for the purpose of making incisions." An opposite statement appears on page 49 of Corner and Pinches's *Operations of General Practice*, namely, "In cases of Ludwig's angina a general anaesthetic should *always* be given." Who is right?

ANSWERS.

RESTLESS NIGHT.—This correspondent, a reply to whom was inserted in the BRITISH MEDICAL JOURNAL of February 1st, p. 300, now writes explaining that his case is much more desperate than was at first understood. Down to two years ago, though much troubled by fleas, he was usually able to catch them with comparative ease when full of blood from biting; his present trouble is rather due to formication produced by the flea moving about; in spite of baths and changes of clothes, he is tormented in this way by, as he supposes, a single flea for several days at a time. He has gone as far as to have two bedrooms, and has several night suits in use. He admits that, were it not that he obtained complete relief when the flea is finally caught, the irritation from which he suffers might be attributed to some form of neuritis. Apparently the fleas are not in our correspondent's own house.

*** It is difficult to make any suggestion; possibly some of our readers may have helpful ideas. We should imagine that one or two drachms of chloroform soaked in wool and placed in the bedclothes would kill any flea there and then present, but it would of course be necessary to be careful not to inhale the drug. Nurses believe that during a bath fleas take refuge in the hair, and it may be added that they are not certainly killed by washing the hair with soap and water. We were once told by a practitioner in the East End of London, who was much troubled by fleas, that he made it a practice when going to bed to put his clothes into an empty shallow sponge bath, taking care to put the jersey on top; he asserted that any flea always found its way during the night into the uppermost garment.

DISEASE OF THE NAILS.

A CORRESPONDENT writes that "O. S." will probably find the article, Diseases of the Nails, by Mr. G. Pernet, in the *Encyclopaedia Medica*, vol. viii, of use to him.

TREATMENT OF CORNS.

VECTIS writes: I advise "Pedestrian"—*if* his boots and socks are *roomy enough*—to get his shoemaker to scrape out the parts of the soles of his boots corresponding to the parts of his feet complained of. To relieve present tenderness, let him pare away all hard skin and then apply a piece of Mead's inch-wide plaister (rubber) over each part of his sole.

THE ESTIMATION OF ERRORS OF REFRACTION.

"RED AND GREEN."—The equipment required for retinoscopy and the examination of patients for refraction would hardly cost as much as £17, with an additional £2 15s. for a lamp. Many unnecessary things would very likely be included in this estimate. A set of trial lenses and a retinoscopy mirror, with the ordinary Snellen's test types would be sufficient for most purposes, and if Lang's trial frame were used, accurate measurements could be taken which would enable the optician to make a satisfactory fitting frame. We are by no means in favour of a surgeon undertaking to fit and supply spectacles. That is the optician's business, and though the optician may encroach upon the oculist, that is no reason for the oculist retaliating by what virtually amounts to setting up a spectacle shop. The proper thing to do, if no optician is near, would be for the surgeon to take all measurements, and send them to a reliable optician to work out. We do not consider that the difference between the wholesale and retail price of glasses would come under the ban of secret commission. Any good lamp, whether it be oil, or gas, or electric, is sufficient for all ophthalmoscopic work, though it is a great convenience to have it arranged so that it can be raised or lowered, or put in any position required by the surgeon.

TREATMENT OF STAMMERING.

C. W. E. AND MEDICUS.—In reply to questions as to the "Berquand" method of treatment, our Manchester Correspondent informs us that Professor Berquand has not as yet published any detailed description of his method, but is at the present time engaged on a book in which he intends to show the necessity of co-operation between doctors, parents, and teachers in the treatment. He has published a small pamphlet entitled *Public School Teachers and the Pedagogic Treatment of Stammering* (Unwin Brothers, printers), in which he outlines the fundamental principles on which his method is founded, but makes no attempt to describe the method in detail. He starts with the now recognized fact that stammering is not due to any malformation of the organs of speech. This is shown not only by anatomical research, but by the fact that the infirmity totally disappears in singing and is intermittent in character. He regards it as simply due to a lack of co-ordination of the different organs, including the nerve centres, and he holds this co-ordination can be re-established only by didactic methods and by a kind of psycho-motor discipline. Such diseases as chorea, rickets, hypertrophied tonsils, adenoids, tight frenum, etc., of course ought to be treated, as they may be a hindrance to proper orthophonetic

treatment, but in no cases are these diseases to be regarded as the causes of stammering. The stammerer needs not so much the doctor as the teacher. Professor Berquand defines stammering as an intermittent functional disorder, of a spasmodic nature, of the organs of speech, principally characterized by the following symptoms: Spasmodic and convulsive repetition of certain syllables; sudden and momentary stoppage of the stream of voice before certain vowels or consonants, more especially at the beginning of sentences; disorder of respiration at the moment of phonation. Predisposing causes are heredity and nervous diseases in the ancestors or in the subject himself, while immediate causes are often violent emotions, sudden fright, falls, ill-treatment, imitation (conscious or not), and serious disorders of the respiratory passages or the brain centres. "The treatment is essentially gymnastic and pedagogic, and it includes (1) a moral treatment, the rôle of which is to modify the natural impressionability of the stammerer, to discipline his thought, and to fortify his will and self-control; and (2) a functional treatment, based on a scientific and progressive gymnastic of the organs of breath, voice-production, and articulation, whose aim is to give strength and flexibility to these organs and to restore the normal working of all the constituent parts of the vocal apparatus, the distorted and uncertain action of which destroys the balance of the phonetic manifestations."

LETTERS, NOTES, Etc.

A DISCLAIMER.

DURING the last week or two a number of papers have credited us with a suggestion that the Government should spend a million pounds "to find out a cure for influenza—or some method of prevention," and objections of various kinds have been made to the proposal. The *World* sagely says that Mr. Asquith can hardly be expected to hail it with enthusiasm. A correspondent of the *Daily Chronicle* asks why so much money should be spent "when a simple remedy exists which any one may prove to his own satisfaction." The remedy is rest in bed, without food, and with only hot water to drink. The beneficial effect of the bed cure is generally recognized, but the rest of the treatment is by no means infallible, as experience of a severe attack would have taught the correspondent. But what mainly concerns us here is that the suggestion to the Government was not made by us, but by the *Medical Press and Circular* in its issue of January 29th. We have no wish to steal our contemporary's thunder, and therefore we hope it may be duly credited with the proposal, as to which we do not think it necessary to express an opinion. It is only within the last few days that we have been aware that this undeserved greatness was being thrust upon us, or we should have rendered sooner unto the Caesar of Henrietta Street that which belonged to him.

THE BROCKLEHURST FUND.

DR. S. MONTGOMERY (Ashley Lodge, Upper Parkstone, Dorset) writes that Mr. T. H. Brocklehurst, M.R.C.S., L.S.A., for whom an appeal was published in the BRITISH MEDICAL JOURNAL of November 30th, 1907, p. 1628, died at Lytchett Minster, near Poole, on January 11th, at the age of 64.

A PIONEER OF CREMATION.

WE are indebted to Dr. S. D. Clippingdale for the following interesting note: Writing to "Notes and Queries" for January 25th, Mr. Arthur F. G. Leveson-Gower states that he copied the following inscription from a tablet in the graveyard of St. George's, Hanover Square, erected to the memory of Miss Henrietta Pratt, who died in 1769: "This worthy woman, believing that the vapours arising from the graves in the churchyards of populous citys may prove harmful to the inhabitants, and resolving to extend to future times, as far as she was able, that Charity and Benevolence which distinguished her thro' life, ordered that her body should be burnt, in the hope that others would follow her example, a thing too hastily censured by those who did not enquire her motives."

TESTIMONIALS OF DEAD MEN.

A CORRESPONDENT draws our attention to an article in the *Daily Express* of February 11th, entitled, "Bringing the dead back to life." It is practically an advertisement of certain electric belts, and was probably paid for as such, as at the bottom of the column appears [Advt.]. One paragraph of the article or advertisement is headed "Medical Testimony," and it is stated that "To merely mention the names of the many physicians who have given their professional testimony to the value of electricity as employed in the Pulvermacher treatment would be impossible here;" it is therefore curious that the six Englishmen among the list of eight names given are all dead—some of them died long ago. Of the two foreigners, one, Dr. Dubois, is described as "secretary of the Paris Academy of Medicine," but the name of neither the perpetual nor the annual secretary at the present time is Dubois; the other is Professor J. Oppolzer, described as "physician to H.I.M. the Emperor of Austria," but we cannot find any such person in any work of reference at our disposal; the famous Vienna physician of that name has has long been dead. Our contemporary has clearly been made the means of circulating information which is undoubtedly very much out of date, and may be glad to have its attention called to the fact.

TUBERCULOUS CHLOROSIS.

DR. ALBERT ABRAMS, A.M. (Paris), writes: Permit me to quote the following excerpt from a contribution by Dr. Alex. James (BRITISH MEDICAL JOURNAL, December 28th, 1907): "When we meet with a case which presents in a more or less marked degree all the ordinary appearances of chlorosis, and which yet on examination of the blood reveals the number of red corpuscles and the percentage of haemoglobin to be practically normal, we are very likely to find in it a history of past or present tuberculous disease."

This statement is deserving of universal recognition, inasmuch as it portrays not only a condition but an early symptom of tuberculosis. Several years ago (*Transactions of the Medical Society of California*, April, 1892) the writer described a condition which he specified as "pulmonary anaemia," which he then regarded, and still regards, as one of the earliest signs of pulmonary tuberculosis. The anaemia in question is always associated with pulmonary insufficiency. Pulmonary anaemia is more frequent in children than in adults. Loss in weight is quite characteristic in this form of anaemia, whereas in the essential anaemias the well-nourished condition of the patient is manifest. Another sign which distinguishes pulmonary from other forms of anaemia is—that while the ferruginous preparations benefit pure anaemics, in pulmonary anaemia they are practically valueless; at any rate, the benefit is evanescent. The pathognomonic sign, however, is the therapeutic test, provided haemanalysis shows some anomaly. The patient is directed to practise forced breathing over an interval of several minutes, and one invariably finds an immediate increase of haemoglobin percentage, if the anaemia is of pulmonary genesis. Pulmonary anaemics are cured by breathing exercises only, which fact suggests more radical measures being taken. Relapses occur, and are attributed in the main to neglect of lung gymnastics, or a return to former modes of life. It is a common observation with the writer to note the intimate association of nasal stenosis with anaemia. If haemanalysis shows no anomaly, the respiratory gymnastics improve the colour of the patients and the condition of well-being. In pulmonary anaemia I conceive a condition not unlike that which exists in polycythaemia, only cyanosis in the latter affection substitutes the pallor of pulmonary anaemia. We assume that in polycythaemia, while the peripheral blood may contain more red corpuscles and haemoglobin than normal, it is not necessarily so with the blood in the rest of the body, and that the augmentation of corpuscles occurs as a compensatory process.

A CORRECTION.

IN the paragraph referring to the Brynmawr death-rate published last week, page 351, it was stated that the rate of 14.7 per 1,000 was the lowest of which Dr. J. L. Thomas, the M.O.H., could find record. The remark referred to the infantile mortality and not to the general death-rate, which was the lowest for twenty years.

ADVICE TO INTENDING SPEAKERS AT MEDICAL MEETINGS.

When a speech you mean to make,
Boil it down!
Lengthy speeches never "take."
Boil them down!
Stick to subject and keep cool,
Empty chatter shows the fool;
"Short and sweet" should be the rule,
Boil it down!

Try and think of something new,
Boil it down!
Ancient history will not do,
Boil it down!
Complex speeches don't digest,
If you want to add a zest
Please include some wholesome jest,
Boil it down! A. D.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address

ON

SOME ABDOMINAL TUMOURS SIMULATING MALIGNANT DISEASE, AND THEIR TREATMENT.

Delivered before the Torquay Medical Society.

By A. W. MAYO ROBSON, D.Sc., F.R.C.S.

Mr. President,—In response to your kind invitation, I thought it might prove of interest if I gave you a record of my personal experience in a class of cases which are far from being uncommon, and which furnish some of the most puzzling problems with which the profession has to deal.

The cases to which I refer yield some of the most satisfactory, though at times unexpected, results, for many of the patients have had a grave, perhaps a hopeless, prognosis pronounced, and yet as the result of treatment some of them may be restored to perfect health.

Unfortunately, a single case of this kind may be the making of a fortune to the charlatan or the faith healer, or may serve to establish the reputation of a patent remedy; moreover, the unscientific and too sanguine administrator of reputed remedies, such as the various thyroid preparations and other so-called cures for cancer, is at times apt to forget that "one swallow does not make a summer," and if he happens to administer his medicine or injections in a case of this kind he forgets that "*post hoc*" is not necessarily "*propter hoc*" when he hastens to announce the fact that he has discovered a cure for cancer, though his vaunted remedy may fail to influence his next 99 cases.

From a very considerable experience of abdominal tumours that have simulated malignant growths, but which arguing from the sequel of events and the ultimate complete recovery of the patient must probably have been inflammatory, I can only conclude that such tumours are much more common than is generally supposed, and I feel, therefore, that in giving an opinion on an abdominal tumour having the appearance and feel of cancer and even having the clinical signs and symptoms, a guarded prognosis should be more frequently given; knowing well that if a hopeless prognosis is hastily pronounced, the patient and his friends will not be content to sit down and await events, but will almost inevitably drift into the hands of some cancer-curer or faith healer, who may occasionally score a point against a qualified physician or surgeon, who in his desire to be honest has been unwise in too hastily giving a gloomy prognosis.

Such tumours occur in every region of the body; for instance, I have seen mistakes made by careful observers between inflammatory swellings and malignant growths in the neck, in the breast, in the thorax and in the limbs, yet they are much more common in the abdomen than elsewhere. To-day I propose to mention only abdominal cases and to relate the salient points without entering fully into the detailed history of the cases, many of which are full of interest, but would occupy too much time to relate *in extenso*.

Attention has recently been drawn by several writers to the simulation of malignant disease by chronic inflammatory affections of the sigmoid flexure, but the same conditions may occur in any part of the large intestine, caecum, colon, sigmoid and rectum, leading more frequently to errors in diagnosis and prognosis than to mistakes in treatment.

No less than five times in the last twelve years I have had patients sent to me suffering from supposed cancer of the rectum or sigmoid flexure with obstructive symptoms necessitating a colotomy, in whom, after periods varying from one to three years, I have been called on to close the artificial anus because of the complete disappearance of the supposed growth. All of these were striking cases, but I will only briefly mention two:

One, a gentleman of just over 50, complained of increasing constipation with the occasional passage of blood by the rectum, and on examination not only could an ulcerated stricture be felt "per rectum," commencing at a point as high as the finger could reach, but a mass could be felt in the sigmoid region. His general health had failed; he had lost flesh, and he looked cachectic. No doubt entered my mind or the minds of other medical men who saw him, as to the disease being cancer, and a colotomy was advised and performed. When the abdomen was opened I felt the mass nodular, hard, and fixed; the pelvic glands were enlarged, and there was a little ascites, so that excision was out of the question. Much to my astonishment, the tumour diminished gradually and his health began to improve, and—to cut a long story short—he was quite well within a year, though I did not close the artificial anus until two years had elapsed. That is three or four years ago, and I hear the patient is still in good health.

In another case, in an elderly clergyman, a similar course of the disease led to a corresponding treatment, but the smoothness of the stricture in his case led me to say that I hoped it might prove to be simple and disappear after the bowel had been rested, though in my own mind I feared the chances were much against it. In two years he returned to see me, looking the picture of health, and I examined the rectum and sigmoid with the electric sigmoidoscope, and found it perfectly healthy, with the bowel lumen normal. The artificial anus was therefore closed, and he is now in good health.

Bearing in mind these and other cases in which I had seen resolution to occur in an inflammatory tumour of the colon, I put my experience to the test in the case of a retired military officer, about 55 years of age, who developed a tumour in the ascending colon in the course of a three months' illness, attended with abdominal pain and increasing difficulty in getting the bowels moved. When I saw him with his medical adviser he looked very ill, had lost flesh considerably, and complained of pain in the caecal region, which was associated with visible peristalsis. The tumour was somewhat diffuse and tender to pressure, but I could feel no nodules and no enlargement of glands, nor was there any sign of ascites. Moreover, my medical colleague told me that the patient had in a former illness suffered from a similar swelling on the left of the abdomen which was diagnosed as cancer, but operation was declined, and after a long and tedious illness he recovered. As removal was clearly impossible and complete obstruction was absent, we decided to wait, to give him belladonna and nux vomica, to apply antiphlogistine continuously, and to keep the bowels open by enemata. I did not see him again, but had a report six months later to say that he had recovered completely.

In August of 1906 I saw a remarkable case with a medical friend in Lincoln—an aged gentleman very seriously ill with symptoms of intestinal obstruction associated with the presence of a nodular, hard tumour opposite the umbilicus which we all thought malignant, both from the progressive character of the tumour and the great deterioration of health and loss of flesh. On opening the abdomen some ascites was found associated with a large nodular swelling involving the transverse colon, the omentum, and some coils of the small intestines, though the obstruction was manifestly in the colon; removal was impossible and a short-circuiting operation was performed, with the result that rapid recovery ensued, the tumour gradually disappeared, and a year later I was informed that the patient was in excellent health.

About twelve years ago I operated on a similar case in a patient over 70 years of age, but in this case the tumour was in the ascending colon and the obstruction was acute; a short-circuiting operation was performed by connecting the ileum to the sigmoid flexure, with the result that three years later I had a report to say the patient was still in good health.

A case perhaps even more remarkable came under my care about two years ago in a middle-aged lady, suffering from chronic intestinal obstruction with visible intestinal peristalsis following on an illness of many weeks' duration. On opening the abdomen a large tumour was found embracing the splenic flexure of the colon and involving a loop of small intestine, both of which were strictured. As the omentum was adherent and the tumour was nodular and hard, no doubt entered our minds as to the case being malignant, and as its removal was quite impracticable, a double short-circuiting was done, colon to colon and small intestine to small intestine. All who saw the case agreed in giving the patient not more than three months to live, yet she recovered without any complications, got quite well, and a year later was in good health.

What was the pathology of these cases? Probably in all of them a chronic infiltrating colitis, possibly associated with pouches lodging faecal matter, or may be simply due to infection spreading through the intestinal walls.

Two forms are commonly described, chronic adhesive colitis, in which the onset is usually acute, and chronic infiltrating colitis or proctitis, in which the onset is insidious and the progress slow; both are associated with increasing difficulties in getting the bowels moved and with great deterioration of health and loss of flesh.

The fact that cancer is often complicated with inflam-

mation makes a positive diagnosis extremely difficult and at times impossible, but fortunately the treatment of securing physiological rest by operation is curative if the disease fortunately turns out to be a primary inflammation and not secondary to growth.

Other diseases of the intestine simulating cancer may demand surgical treatment.

I operated on a middle-aged military officer last year, who was sent to me by the late Sir William Broadbent with a tumour of the caecum. The symptoms pointed to inflammation supervening on cancer, and an exploratory operation was advised. A hard mass was found, consisting of a tumour of the caecum with the omentum adherent over it, and as it appeared to be removable I thought it best to excise it, which I did widely, believing it to be cancer. The patient recovered, returned home within the month, and is in excellent health now. The disease proved to be a pouched caecum, all the pouches containing hard faecal concretions, one having perforated, and the inflammatory process having been limited by adhesions of the omentum.

Chronic tuberculous disease of the caecum may closely simulate cancer, and in the Clinical Society's *Transactions* for 1902 may be found a paper of mine reporting a series of cases, some of which I excised, and even after removal it was only on microscopic investigation that the true nature of some of the tumours could be discovered.

In two cases I have found chronic tuberculous tumours of the small intestine forming suspicious tumours; in one I excised 1½ ft. of the ileum in a patient of 51, and in the other I short-circuited the obstruction, recovery and restoration to health resulting in both cases.

Although in this condition a diagnosis is usually possible from the tuberculous history and the length of time the disease has continued, in some cases a correct diagnosis is not easy until after removal and examination of the tumour. The age of the patient is not always a guide, as some of my tuberculous cases have been over 50, and, on the other hand, I have removed a cancer of the colon in a girl of 14.

The following was a very unusual form of tumour simulating malignancy:

Early in 1907 I had a knotty question to decide in a patient who had bowel symptoms associated with disease of the uterine appendages, the left of which was adherent to the lower part of the sigmoid flexure. After removal of the diseased appendage and separation of adhesions we felt a marked thickening of the wall of the large bowel, where the tube had been attached, and, thinking it only inflammatory, we decided not to remove it, hoping it would subside. A few weeks later, as the obstructive symptoms were increasing, an examination was made with the sigmoidoscope, when at 20 cm. from the anus, at a point corresponding with the once adherent appendage, the lumen of the bowel was found to have seriously narrowed. On opening the abdomen the tumour forming the stricture was readily found, and colectomy was performed, the patient recovering. A microscopic examination showed the tumour to be an infiltration of the wall of the sigmoid flexure by the ciliated epithelium of the Fallopian tube, the small cysts in the colon resulting in the formation of a tumour leading to stricture.

It would scarcely be thought possible that a stone in the left ureter might give rise to a suspicion of cancer of the splenic flexure of the colon, yet an attack of intestinal obstruction in a gentleman of 73, with a tumour below the left costal margin and no urinary symptoms, led to such a suspicion. Fortunately, the relief of the obstruction and the subsequent development of a hydronephrosis made the diagnosis clear, and when I removed the stone from the ureter the colon was felt to be free of tumour, and, as the patient is now quite well, our former suspicion was evidently incorrect.

To pass to other organs: Early in my career I saw a patient reduced to the last extremity of weakness owing to a gradually increasing difficulty in taking food and an inability to swallow; moreover, persistent attempts to pass bougies failed. There were all the symptoms of cancer of the œsophagus without any evidence of œsophageal pouch or cicatricial stenosis of the canal. A gastrostomy was performed, and a time limit given to the relief likely to be obtained; yet I saw that patient six or seven years later still occasionally resorting to feeding through his gastrostomy opening.

A similar experience has occurred to me on two other occasions, and the question still remains, What was the cause of the obstruction? Clearly not cancer, though all the symptoms pointed to it.

My largest experience of doubtful tumours diagnosed as, or suspected to be, malignant, when the subsequent course of events has proved the disease to have been simple, has been in the stomach.

In one of my early cases, before I recognized the importance of the facts I am now bringing forward, I received a sharp lesson. I explored the abdomen of an aged man with typical symptoms of cancer of the stomach and with a tumour easily felt below the left costal margin. Finding the cardiac end of the stomach involved quite up to the œsophagus, removal was clearly impracticable, and as the pylorus was free I closed the abdomen and gave a hopeless prognosis. Much to my astonishment he came to see me a year later a well man. The disease had evidently been inflammation around an ulcer, and the care in diet and rest necessitated by operation had started a process of cure.

I have operated on quite a number of cases in which, after a long history of stomach symptoms, a tumour had developed which, on external examination, presented every appearance and the feel of cancer, and which, even when the abdomen was opened, gave the same impressions, except that the enlarged glands were discrete and there were usually adhesions which precluded any attempt at removal. The following examples serve to illustrate what I mean, and to show that in some of these cases, where merely temporary relief only was anticipated, complete and permanent cure resulted from the operation.

A professional man, aged 31 years, had had dyspepsia for seventeen years, more severe during the preceding twenty months. Sixteen months previous to my seeing him, sickness began and from the outset large quantities were vomited but never contained blood. In December, 1897, the stomach reached to the pubes and visible peristalsis was present. Relief followed dieting and lavage until March, 1898, since which time the pain had been almost constant. The pain was not materially worse after food or relieved by vomiting. A loss of weight occurred from 10 st. to 6 st. 6½ lb. There was great feebleness. Gastro-enterostomy was performed on May 6th, 1898. A large irregular tumour was found at the pylorus and along the lesser curvature with extensive adhesions, but the glands, though large, were discrete. A good recovery was followed by relief of all the symptoms. When the patient left the home on June 7th his weight was 8 st.; on August 17th, 1898, it was 9 st. 3 lb. The following is an extract from a letter received from the patient dated February 12th, 1900: "My health continues perfect. I have not lost a day's work through illness since I recovered." He was in good health in 1906.

A man, aged 45 years, gave a history of pain for two years about an hour after food, with great loss of flesh. For nine months he had vomited every day or every second day a large quantity of yeasty material, but no blood, though he was very anæmic. There were well-marked signs of dilatation of the stomach, with tenderness over the pylorus and the presence of a tumour. Posterior gastro-enterostomy was performed on June 12th, 1900. On opening the abdomen the pylorus was found to be much thickened and adherent, forming a hard nodular tumour having the appearance and feel of cancer. Through the centre of the mass a No. 10 catheter only could be passed over a roughened ulcerated surface. An uninterrupted recovery followed. Food was begun the second day and solids could be taken in the second week without pain. He rapidly gained flesh and strength and was well some years later.

A man, aged 48 years, was supposed to be suffering from cancer too advanced for treatment, the patient being extremely feeble and having lost from 2 to 3 stones in weight in six months. The presence of a tumour in the pyloric region with well-marked dilatation of the stomach and profuse coffee-ground vomiting rendered the diagnosis extremely probable, though the history of pain from one and a half to two hours after food for three years with other symptoms of pyloric ulcer led me to hope that the disease might be simple. Operation was performed on May 30th, 1902. An extensive tumour at the pylorus associated with stenosis, dilatation of the stomach, perigastritis and adhesions, together with numerous discrete, though much enlarged glands, led me to perform gastro-enterostomy. The patient rapidly put on weight, gained strength, and lost all his distressing symptoms. When he returned to report himself in three months he was robust and well, and no trace could be found of the tumour or of the dilatation of the stomach. He is to-day in perfect health.

Did time permit, I could relate a very large number of cases in which gastric tumours, apparently malignant, have disappeared after gastro-enterostomy.

These cases teach the important lesson that one ought not hastily to give a hopeless prognosis after gastro-enterostomy for tumour, for when there is any doubt whatever about the malignancy or otherwise of the growth, it is well to give the patient the benefit that is derived from the hope of cure. Another lesson to be learnt is that an exploratory operation is worth performing in nearly all cases of tumour of the stomach, for even

if the growth cannot be removed, the rest engendered by a gastro-enterostomy will almost certainly give relief, and in some, thought at first to be malignant, a cure may follow.

In two doubtful cases of this kind, where the absence of adhesions rendered it practicable, I have been able to prove the nature of these cases by excising the pylorus when dissection and microscopic examination have shown the presence of chronic ulcer with inflammatory hyperplasia, this affording a sufficient explanation of some of the cases that recovered after securing physiological rest without excision.

Duodenal ulcer, either in the form of chronic perduodenitis or as a subacute perforation, may lead to such deterioration of health and loss of weight, that when a tumour is discovered which persists and tends gradually to increase, it is apt to be mistaken for a malignant growth.

I related a well-marked case of this kind in my lecture on duodenal ulcer[1] that I saw with an eminent London physician. A distinguished surgeon had seen the case previously, and had pronounced the case malignant and hopeless. The drainage of a subphrenic abscess and the subsequent performance of a gastro-enterostomy resulted in complete and perfect recovery, and the patient is now well.

In the case of a naval officer suffering from haematemesis and melaena, with a history pointing to duodenal and pyloric ulcer of several years' standing, the tumour felt before and examined during the operation of gastro-enterostomy was most extensive, and its hard nodular feel, taken together with its adhesions to neighbouring parts—liver, pancreas, gall bladder, and colon—gave rise to a suspicion that the disease might be cancer; yet at an operation undertaken some months later for another ailment I had the opportunity of examining the site of the former tumour and found that it had entirely disappeared.

In another case of a professional man past middle age operated on for haematemesis following on symptoms of chronic duodenal ulcer I found a hard nodular tumour the size of a hen's egg, giving rise to some suspicion of cancer; yet the complete recovery after gastro-enterostomy and the perfect restoration to health, now lasting several years, absolutely proves that the disease was simple and not malignant.

The liver is not infrequently the site of simple tumours suspected to be malignant, and if they are associated with rapid loss of flesh and more or less jaundice, the conclusions as to cancer, with the inevitable hopeless prognosis, are very apt to be formed and expressed.

Only recently a tumour of the liver diagnosed as sarcoma by an eminent physician was sent to me with a view to surgical treatment. I am informed that it entirely yielded to mercury biniodide.

In another case, in an elderly statesman, seen some years ago with a leading member of the profession who had gone thoroughly into the history of the case, an incision into the suspected tumour and a microscopic examination of a portion removed proved its syphilitic origin. An illness of several months, associated with great loss of flesh and the development of a tumour in the right lobe of the liver, had given rise to the suspicion of cancer. Under specific treatment his health has been completely restored.

Some years ago a girl of 14 was transferred to my care from the medical side of the hospital with a large tumour of the liver, suspected to be sarcoma. It proved to be dependent on congenital syphilis, and yielded to general treatment.

Last year I saw a middle-aged gentleman who had returned home invalided from India with a tumour of the right lobe of the liver, suspected to be growth, as it was associated with great loss of flesh and deterioration of health. On exploration of the abdomen and of the tumour, it presented so suspicious an appearance that it was thought advisable to remove it, especially as no secondary growths could be seen, and as the tumour, being in an elongated right lobe, could be safely taken away. It was excised by a wedge-shaped incision, and afterwards found to be a chronic abscess containing inspissated pus and cheesy material too thick to flow through the exploring needle. To the satisfaction of the patient and his friends and those attending him, who had feared the disease might be cancer, the patient completely regained his health.

Did time allow, I could mention other cases in which hard, nodular tumours of the liver associated with loss of flesh, serious deterioration of health, and sometimes with ascites, had led to a grave or hopeless prognosis being given, but which proved on exploration to be gall stones, calcified hydatid cysts, irregular cirrhosis, or other conditions capable of relief or cure. One case I have never been able to explain:—

A man of under middle age was admitted to hospital with pains in the gall-bladder region associated with great loss of flesh and the presence of a tumour of the liver. On opening the abdomen a tumour was found in and under the right lobe of the liver, and dispersed over the rest of the organ were numbers of light-coloured raised tumours the size of haricot beans. Those present at the operation agreed with me in the diagnosis of primary cancer in the gall bladder and adjoining part of the liver with secondary growths distributed through both lobes, and the abdomen was closed. Much to my surprise, the patient rapidly recovered, and ultimately completely regained his health. There was no history of syphilis, and no specific treatment was adopted either before or after operation.

In the gall-bladder region, tumours simulating malignant disease so frequently prove to be inflammatory swellings in or around the gall bladder or bile ducts that I think the benefit of exploration should never be lost sight of.

A number of cases of this description have been related in my work on *Diseases of the Gall Bladder and Bile Ducts*, so that here I will only mention one or two examples:—

I was asked about four years ago to see a lady of 72 suffering from a tumour of the liver thought to be cancer. She had never had any attacks resembling gall-stone seizures, but for some weeks had been bedridden on account of pain under the right costal margin, associated with a gradually increasing hard and nodular tumour, which could be readily felt in an elongated right lobe of the liver. I suspected gall stones, though the loss of flesh, deterioration of health, and absence of characteristic symptoms made the diagnosis doubtful. At operation a gall bladder full of large gall stones was removed from under the thin tongue-shaped process of liver, and the patient is well to this day.

A similar condition, also pronounced as cancer, I saw recently in a lady over 70, but associated with jaundice and a deeply-seated tumour, easily felt because of the patient having become so thin. The presence of a characteristic pancreatic reaction in the urine made me suspect gall stones in the common duct, with pancreatitis. At operation this proved to be the case, and there being no evidence of other disease, the patient made a rapid recovery.

Some seventeen years ago I saw a case that very much puzzled me, and to this day is inexplicable:—

I explored a tumour situated in the gall-bladder region in a woman of 56. It was nodular, hard, and not fluctuating, and had apparently invaded the liver, gall bladder, stomach, colon, and omentum. I pushed an exploring syringe into it in every direction, and found no pus and no evidence of gall stones, the needle seeming to pass through tissues like cartilage. The abdomen was closed and a very bad prognosis given, yet the patient recovered and was well several years later.

Could this have been an inflammatory swelling due to an undiscovered gall stone, or was it really a growth that manipulation caused to disappear?

The appearance and feel of a tumour composed of matted omentum and the viscera adjacent to an inflamed gall bladder are often very deceptive, and in two at least of my earlier cases, after exploring such a mass with a hollow needle, I closed the abdomen and gave a gloomy prognosis, which was proved to be wrong by the patients steadily improving and completely recovering. Before seriously interfering with the adhesions and thus being committed to the following out of a dangerous and futile operation, it is desirable to raise the abdominal wall and carefully examine the liver and adjoining parts so as to be assured of the absence of secondary nodules of cancer.

If in doubt, it is better carefully to detach the omentum covering the gall bladder itself, when it may fortunately turn out that the viscus is full of gall stones and pus, as in cases described in my work already referred to, in which inoperable cancer had been diagnosed and a gloomy prognosis given, but in which cure by operation was effected. Even if, as may happen in this region, cancer be discovered and proves to be local, a radical operation may be undertaken with a fair prospect of success, as in a case where, about eight years ago, I removed from a middle-aged gentleman a wedge of liver and the gall bladder affected with carcinoma, and he remains in excellent health to-day; and in another case, where in a woman aged 56 I excised the gall bladder, the pylorus, and a portion of the liver, the patient being now—well on in the seventh year after operation—in good health. In both cases the diagnosis was confirmed by the microscope. If, however, secondary nodules be seen or felt in the liver

or omentum, the diagnosis of irremovable disease will be at once arrived at and the abdomen closed without delay.

The following brief abstract of cases condemned as hopeless but afterwards operated on demonstrates my meaning better than a multiplicity of words:

Woman, aged 50. Jaundiced nine months; great loss of weight; pain not a prominent symptom, but present. Pronounced to be cancer by an eminent Manchester physician, and operation not advised. Operation, September 29th, 1892. Gall stones found in gall bladder and common duct. Cholecystotomy and cholelithotrity performed. Good recovery. Quite well when heard of a year later.

Woman, aged 50. Jaundiced ten months; pain with ague-like attacks. Pronounced malignant by a distinguished physician in Sheffield, and operation deprecated. Operation, October 4th, 1892. Gall stones removed from gall bladder and common duct. Good recovery. Well in 1893.

Woman, aged 54. Sent to me for tumour in gall-bladder region associated with pain and jaundice. Gall stones diagnosed, but on opening the abdomen a hard nodular tumour discovered, yielding only blood to exploring syringe. Thought to be malignant, and abdomen closed. Complete and perfect recovery, and when seen some months later all trace of tumour had disappeared.

Man, aged 45. Painful epigastric attacks for twelve months, with vomiting. Deep jaundice for three months, with ague-like attacks. Loss of 2½ st. in weight. Distended gall bladder. Operation, March 29th, 1898. No gall stones. Tumour of head of pancreas discovered, with thickening of common duct, thought to be cancer. Drainage of gall bladder for ten days. Complete recovery. Quite well at present. The case was clearly one of interstitial pancreatitis.

Man, aged 39. Gall-stone seizures for five years, and discovery of concretions in motions. Operation, September 22nd, 1898. Gall bladder and liver infiltrated with what appeared to be cancer, though nodules not large enough to be felt through abdominal walls. Some gall stones felt deeply in bile passages. Thought to be useless to attempt complete operation. Patient recovered, lost his jaundice, gained weight, had no further recurrence of pain, and was reported to be quite well May 24th, 1899. This case I cannot explain, as there was every appearance of cancer of the liver.

Man, aged 51, said by eminent London physician to be suffering from cancer of the liver, and to be incurable. Jaundice intense for nine months; great loss of flesh; very little pain, and no ague-like attacks. The only suggestive symptoms were the history of intermittent pains in the upper abdomen some years previously, and a tender point at the usual spot 1 in. above and to the right of the umbilicus, which enabled me to diagnose gall stones in the common duct and to advise operation. Operation, September 21st, 1901. Six large gall stones removed from the common duct by choledochotomy. Good recovery. A letter in November stated that he had gained 1 st. 11 lb., that he had completely lost his jaundice, and was quite well.

All these cases go to support the proposition that if the diagnosis be doubtful and the patient be at all in a condition to bear operation, exploratory laparotomy should be performed; for not only may a removable cause of the jaundice be discovered, but it may fortunately happen that, even if the disease appear to be incurable on exposure, the operation *per se* may have some hitherto unexplained influence leading to recovery.

Were it desirable, I could very considerably amplify this list of operations in doubtful cases leading to a complete and perfect cure of patients pronounced by experienced and careful observers as hopeless, and in many of the cases the patients had been especially warned by their advisers on no account to consult a surgeon, lest he should be tempted to interfere.

In July, 1900, in a lecture delivered in London, I had the privilege of pointing out the frequency with which an inflammatory enlargement of the pancreas accompanies gall-stone trouble, especially common duct cholelithiasis, and which may not only persist after the original cause has passed away, but may simulate cancer of the head of the pancreas, and terminate fatally under this supposition, when by efficient surgical treatment great relief, or even possibly cure, might have been effected.

The following is a brief description of some of the cases on which I have operated:

A woman, aged 44 years, had for some time been suffering from deep jaundice with considerable pain, some irregular fever, digestive disturbance, and emaciation. At the operation on June 22nd, 1890, after separating a number of adhesions, I found a tumour of the pancreas embracing the lower end of the common duct, which at the time I thought to be malignant. The tumour was freely manipulated in order to ascertain if any gall stones were present in the common duct, but none could be felt, and as the gall bladder was contracted and there was some tendency to haemorrhage from numerous small points, I did not proceed further, and the abdomen was closed. Whether any concretion was pressed onward into the duodenum I cannot say, but the patient made a good recovery from the operation, and within a few months had regained her health. A letter received from her medical man states that she is well and in very good health.

A man, aged 37 years, had been operated on in a hospital for persistent jaundice. No gall stones were found, but a tumour of the head of the pancreas was felt, and the case was thought to be one of cancer of the pancreas. A biliary fistula had persisted, and though the patient was freed from the jaundice he remained feeble and thin. I performed cholecystenterostomy on July 13th, 1896. The patient made a good recovery, and gained flesh and strength. A year later he was well.

A man, aged 34 years, was seen in 1897. He had had painful attacks resembling cholelithiasis since June of 1896, and deep jaundice since December. The gall bladder was distended and easily palpated. The patient was extremely ill and emaciated. At the operation on February 25th, 1897, the gall bladder was found to be dilated and surrounded by numerous adhesions, but no gall stones could be felt. The head of the pancreas was enlarged and hard. Cholecystenterostomy was performed. The patient made a good recovery and rapidly lost his jaundice. He was in good health seven years later.

A man, aged 45 years, was seen in 1898, with the history that he had been well up to twelve months previously, when he began to have attacks of pain at the pit of the stomach, ending in vomiting, but not followed by jaundice until an attack on January 1st, 1898, since which time he had been deeply and continuously jaundiced. He had also from that time onward had ague-like attacks, and two days before seeing me he had had within twenty-four hours three of these seizures, each accompanied by pain. He had also lost considerably in weight. On examining him there was some swelling in the gall-bladder region, but no tenderness. The liver was a little enlarged, but the margins felt smooth. There was decided tenderness in the middle line, just above the umbilicus, and on deep pressure the pain was considerable, and an indefinite fullness could be felt. At the operation on March 30th, 1898, the gall bladder was found to be slightly distended and surrounded by adhesions to the pylorus, duodenum, colon, and omentum. No gall stones could be discovered, but there was well-marked swelling of the head and the first 2 in. of the pancreas, which though nodular and irregular was not very hard. Cholecystotomy was performed. The patient made a good recovery, and was in perfect health two years after operation.

These were all cases of chronic inflammation of the head of the pancreas and not in any sense malignant, though they would probably have ended fatally but for surgical intervention. Owing to increased experience and improved pathological methods these cases present fewer difficulties in diagnosis, so that it is generally possible to avoid giving a doubtful prognosis.

Had time permitted I could have given many more examples of tumours simulating cancer not only in the various organs I have referred to, but also in the kidneys and suprarenals, in the abdominal lymphatic glands and in the uterus, ovaries, and tubes, in which, on exploration, either simple tumours were found and removed or some curative operation was able to be performed, but I think I have given a sufficient number of examples to prove the claims I am advancing to justify me in advocating a more frequent resort to exploration, not only for diagnostic purposes in doubtful cases after every other diagnostic method has failed to elucidate the case, but also with a view to treatment at the same time.

At the present time it may be safely said that an exploratory operation *per se*, if undertaken with proper care and skill, is almost devoid of danger, so that even if, as will undoubtedly occur in some cases, no real good can be done no serious harm should follow.

I hope it will not be thought that I am advocating exploratory procedures as a cloak to careless or ignorant diagnostic efforts, for that is far from my intention. What I do say is that after every diagnostic effort has been made, and although the prognosis may seem hopeless, yet if there is any element of doubt about the case, the question of an exploratory operation ought to be seriously considered, as in some cases it will clear up all doubt as to the hopelessness of the case, in others it may show that an error in diagnosis has been made and a better prognosis may be given; in some cases what appeared to be an incurable tumour may prove to be capable of removal, and in others, again, a palliative operation may be possible that will either relieve urgent symptoms or stave off threatened obstruction of the passages in a hollow viscus, or, better still, unexpectedly result in cure.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, February 2nd, 1907.

An Address
ON
SURGICAL ASPECTS OF SUBPHRENIC ABSCESS.

DELIVERED BEFORE THE SURGICAL SECTION OF THE ROYAL SOCIETY OF MEDICINE, JANUARY 14TH, 1907.

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SURGEON (WITH CHARGE OF OUT-PATIENTS) TO THE LONDON HOSPITAL.

(Continued from page 377.)

THE GENERAL ETIOLOGY OF SUBPHRENIC ABSCESSES.

THE following organs occupy the fossae which abut upon the under surface of the diaphragm: The stomach and duodenum, liver and bile passages, pancreas and spleen, and the upper end of the kidneys. In the event of perforation or suppuration occurring in these organs the infection will spread directly to the peritoneal or cellular space in which the organ lies.

On the other hand, the infection may originate in the lower part of the abdominal cavity, such as in the small intestine, the appendix, or the pelvic viscera. The infective process then spreads along those peritoneal or cellular fossae which at their upper end communicate with the spaces which abut upon the diaphragm (see Fig. 8). I have analysed the causes of 76 consecutive cases of subphrenic abscess which have occurred at the London Hospital in eight years, and have arranged them in order of their frequency:

Gastric ulcer	21 cases.
Appendicitis	12 ,,
Suppurating hydatid	8 ,,
Tropical abscess of liver	6 ,,
Duodenal ulcer	5 ,,
Parturition	3 ,,
Pyemia	3 ,,
Splenic infarct	3 ,,
Thoracic	3 ,,
Cancer of stomach	2 ,,
Acute periostitis of transverse process of lumbar vertebrae	2 ,,
Operations, resections	2 ,,
Suppurative cholangitis	1 case.
Pylephlebitis	1 ,,
Cancer of pancreas	1 ,,
Typhoid	1 ,,
Pyosalpinx	1 ,,
Ruptured gut	1 ,,
Gall stones, cholangitis	1 ,,
Congenital cystic kidney	1 ,,
No cause found	2 ,,

NOTE.—There is a little overlapping in this table.

It will be seen that perforating gastric and duodenal ulcers are responsible for about one-third of all cases. Appendicitis is responsible for one-sixth, and hydatid and tropical abscesses of the liver for another sixth between them, whilst the remaining third of the cases is distributed among many causes, each of which is individually rare.

The Routes of Infection and Localization of Subphrenic Abscesses due to Gastric Ulcer.

Twenty-one cases of subphrenic abscess out of 76 were due to gastric ulcer, and these contain examples of the localization of pus in all the six subphrenic spaces but one.

1. In 16 cases the perforation was on the anterior wall of the stomach, and near the lesser curve. The septic matter escaped direct into *the left anterior intraperitoneal space*, and the abscess was localized there.

2. In one case the margin of the left lobe of the liver formed such firm adhesions to the anterior surface of the stomach, that the infection was directed to the right into *the subhepatic pouch.*

3. *The right anterior intraperitoneal space* was involved in 4 cases. One of these was a further extension from the subhepatic pouch of the case described under (2). In the other 3 cases perforation occurred near the pylorus, and the septic matter and gas passed direct into this fossa. The liver became separated from the diaphragm, and dropped upwards and backwards, so that the whole of the space was filled with gas and pus, which presented in the right hypochondriac region.

4. In 2 cases a posterior perforating gastric ulcer infected the *lesser sac of the peritoneum.*

5. In 1 case the cavity of the lesser sac was obliterated by adhesions. The ulcer then invaded and infected the *left extraperitoneal cellular space*, where a large abscess formed. Mr. Mayo Robson[1] has recorded a similar case.

6. Finally, a perforating gastric ulcer may produce pylephlebitis, and the branching abscesses in the liver may infect the *right extraperitoneal cellular space*, or the right anterior intraperitoneal fossa.

In cancer of the stomach the infection follows a similar course, and localizes in like situations.

The Routes of Infection and Localization of Subphrenic Abscesses due to Appendicitis.

Of the 12 cases of subphrenic abscesses due to appendicitis, in the series of 76 cases, the pus was localized as follows:

Right anterior intraperitoneal fossa	10 cases.
Right posterior intraperitoneal fossa	6 ,,
Left anterior intraperitoneal fossa	1 case.
Right extraperitoneal fossa	1 ,,

Two fossae were involved in 6 cases.

Appendicitis may infect the subphrenic fossae in four ways:

1. As a part of an acute general peritonitis, but these cases are not included here because they are clinically so different from the localized abscesses which are the subject of this paper.

2. By a more or less slow and direct extension up the lumbar peritoneal fossae, from the pelvis.

3. Through the medium of the portal vein, as a part of pylephlebitis.

4. By lymphatic extension (*a*) up the right retroperitoneal cellular tissue, or (*b*) up the lymphatics around the deep epigastric artery to the falciform ligament.

In the majority of cases the appendix lies external to the caecum and ascending colon, and reaches a variable distance up the right lumbar fossa, towards the liver margin: (1) When it becomes inflamed the infection passes into the subhepatic fossa (6 cases), and (2) in practically all these cases, and in some others in addition, the sepsis also extends between the liver and the diaphragm into the right anterior intraperitoneal space (10 cases). (3) It is stated that pus may pass from the subhepatic fossa through the foramen of Winslow, to the lesser sac of the peritoneum, but no such case has occurred at the London Hospital. (4) A localized pelvic appendix abscess may escape up either loin. When it does so on the left side it spreads up either the internal or external lumbar fossa to the left anterior intraperitoneal fossa. One such case occurred in my series, and the details of this extension are more fully described under the heading of that fossa (see Figs. 8 and 9).

5. A retrocaecal or retrocolonic appendix may infect the right retroperitoneal cellular tissues, either as a diffuse cellulitis or as a lymphangitis. In either case the infection may spread to the extraperitoneal cellular space between the layers of the coronary ligament or to the lesser omentum and its glands.

6 In one of my cases in which cellulitis of the abdominal wall followed an appendicitis, an abscess formed in the epigastrium, between the layers of the falciform ligament. Apparently extension had taken place along the lymphatics around the deep and superior epigastric arteries.

7. Pylephlebitis is not uncommon in appendicitis, and when this occurs the abscesses in the liver frequently infect the right extraperitoneal space and the right anterior intraperitoneal fossa. I have seen both these spaces infected in this manner, where the appendicitis was due to a pin in the appendix.

It will be seen that all the subphrenic spaces and fossae may be infected by appendicitis, except the left extraperitoneal cellular space.

The Routes of Infection and Localization of Subphrenic Abscesses due to Liver Disease.

Of the series of 76 cases of subphrenic abscess at the London Hospital 18 were due to liver diseases. Under this heading are grouped suppurating hydatids, tropical abscesses, pylephlebitis, cholangitis, and liver abscesses due to some other cause.

The subphrenic abscesses which resulted were localized as follows:

Right anterior intraperitoneal ...	... 7 cases.
Right posterior intraperitoneal...	... 1 case.
Left anterior intraperitoneal ...	... 1 ,,
Left posterior intraperitoneal ...	... 0 ,,
Right extraperitoneal	... 15 cases.
Left extraperitoneal	... 0 case.

As a liver abscess enlarges, it tends to thin out the liver substance over it and come to the surface. In the majority of cases this occurs between the layers of the coronary ligament, which are pushed aside until the diaphragm forms a considerable part of the upper boundary of the abscess. (See Fig. 1.)

The cellular tissue of the right extraperitoneal space may, however, be infected from quite a small abscess in the liver, especially when this is due to pylephlebitis or suppurative cholangitis, and in these cases the subphrenic abscess and the hepatic abscess are separate. A hepatic abscess may reach the surface of the liver where it is covered by peritoneum, and it may then either actually rupture or infect the corresponding peritoneal fossa by transudation of micro-organisms. In this way any of the intraperitoneal fossae may be infected, but a reference to the above list will show that this is only common in the case of the right anterior intraperitoneal space.

The Routes of Infection and Localization of Subphrenic Abscesses due to Gall Stones.

Only one such case is included in my series of 76 subphrenic abscesses. In this case suppurative cholecystitis led to abscesses in the glands of the small omentum, and from these the lesser sac was infected and suppurative cholangitis was produced. The suppurative cholangitis led to a right extraperitoneal subphrenic abscess and to a right anterior intraperitoneal subphrenic abscess. Another case has recently come under my notice, in which a stone impacted in the diverticulum of Vater led to distension and rupture of an ulcer on the right side of the neck of the gall bladder. The septic bile poured into the subhepatic pouch and was shut off below, but the infection spread round the edge of the liver into the right anterior intraperitoneal fossa, which was also occupied by an abscess. It is also said that a gall stone impacted in the lower third of the common bile duct may infect the retroperitoneal cellular tissues by actual perforation or transudation of micro-organisms, and by this route reach the right extraperitoneal space.

The Routes of Infection and Localization of Subphrenic Abscesses due to Duodenal Ulcers.

This series of 76 cases of subphrenic abscess contains 5 due to duodenal ulcer, and these were localized as follows:

Right anterior intraperitoneal ...	... 1 case.
Right posterior intraperitoneal ...	... 2 cases.
Left anterior intraperitoneal ...	... 1 case.
Left posterior intraperitoneal ...	... 0 ,,
Right extraperitoneal	... 2 cases.
Left extraperitoneal	... 0 case.

The most important distinction is into anterior and posterior perforating ulcers. An anterior perforating duodenal ulcer nearly always directly infects the subhepatic pouch in which it lies, but it is easy for the infection to reach the right anterior intraperitoneal fossa round one of the margins of the liver. A duodenal ulcer is, however, as a rule, so close to the pylorus that it is practically in the middle line, and consequently the pus may pass to the left of the falciform ligament and enter the left anterior subphrenic space.

When the ulcer is posterior it may infect the retroperitoneal cellular space. This occurred in 2 cases of my series.

The Route of Infection and Localization of Subphrenic Abscesses due to Thoracic Causes.

Only three such cases occurred in my series. It is a very remarkable fact that whilst nearly all subphrenic infections pass readily through the diaphragm to the pleurae, lungs, or pericardium, it is a very rare circumstance for the contrary to occur. The causes of this are: (1) that the intrathoracic pressure is negative, whilst the intra-abdominal is positive; and (2) because the lymphatic flow through the diaphragm is always ascending; and (3) probably the lymphatics of the diaphragm are valved upwards.

In one of the three cases referred to above, an acute lobar pneumonia of the right base was followed by a pneumonic abscess in the right anterior and posterior intraperitoneal fossae. This was presumably a lymphatic infection.

In another a localized empyema at the left base burrowed into the left extraperitoneal cellular space, passing below the external arcuate ligament. In the third case a bronchiectasis of the right base in a child perforated the diaphragm into the liver. The liver abscess so formed ruptured into the subhepatic fossa, and further infected the left anterior intraperitoneal space.

THE SYMPTOMS OF SUBPHRENIC ABSCESSES.

The diagnosis of a subphrenic abscess is not really a difficult matter when the physical examination is conducted in an orderly and complete manner. To achieve this it is well to divide the examination under several headings.

I. The history of (*a*) diseases which may produce a subphrenic abscess, and (*b*) the character of the onset.

II. The general signs and symptoms which indicate that suppuration is going on somewhere in the body.

III. Abdominal signs and symptoms.

IV. Thoracic signs.

V. Under the heading of local signs will be considered the direct evidence of the abscess itself.

I. *The History in Subphrenic Abscesses.*

Of the Cause.—Of 21 cases of subphrenic abscess due to gastric ulcer a previous history of dyspepsia was obtained in 17. The patients complained of pain after food, relieved by vomiting, and in several instances of haematemesis.

In the duodenal cases the pain had been in the right hypochondrium and had occurred some two hours after meals, and some stated that the pain was relieved by taking further food, and in several melaena was noted. Of the 12 cases due to appendicitis, a history of previous attacks was obtained in only two, no doubt because appendix abscesses nearly always occur in the first attack. The cases due to tropical abscess of the liver gave a history of foreign residence without exception, and in nearly every instance stated that they had suffered from dysentery, malaria, or enteric fever. It is interesting to note, however, that three patients who had resided in the tropics suffered from subphrenic abscess from other causes than liver abscess; namely, cancer of the pancreas, acute periostitis of the left transverse process of the second lumbar vertebra, and pyaemia after a confinement. A history of jaundice was recorded in 10 of 15 cases due to hepatic abscesses of various kinds, and this symptom did not occur in any other case. One patient who developed a left subphrenic abscess in a blood clot which formed after a resection of the transverse colon for a new growth, gave a previous history of haemophilia. Three patients dated their trouble from a septic confinement, and two from an attack of enteric fever.

The duration of the symptoms when the case came under observation was noted in 48 of 76 patients. This period varied from one day to sixteen months, and averaged eight weeks, but nearly all the cases due to perforative peritonitis were admitted ten to fourteen days after the onset.

The Nature of the Onset of Subphrenic Abscesses.

Of 76 cases of subphrenic suppuration, in 40 the onset was *sudden*, and in 36 more or less *insidious*. The chief importance of this distinction is that the great majority of intraperitoneal subphrenic abscesses begin by an acute perforation into the peritoneum, whilst, on the other hand, extraperitoneal collections of pus below the diaphragm result from a spreading cellulitis, and are therefore slower in their beginnings. Twelve cases of subphrenic abscess due to appendicitis were all acute in onset. Of 23 cases due to gastric ulcers and cancer, 15 were acute in onset, and 8 were insidious. The only two cases in the whole series due to cancer of the stomach were insidious in their onset. The other 6 cases were due to chronic gastric ulcers which formed adhesions before they perforated the wall of the stomach. Of the 5 cases of subphrenic abscesses due to duodenal ulcer, 3 were anterior in position and acute in onset; 2 cases were posterior, and insidious at the beginning, and in both these cases melaena was present. Of 8 suppurating hydatids of the liver, 6 were slow in onset; 1 was suddenly infected, and 1 ruptured into the peritoneum, so that the onset of symptoms was instantaneous. Of 7 hepatic

abscesses, 6 were subacute in onset, and in only one was the commencement described as sudden. The one subphrenic abscess due to cancer of the pancreas began acutely. When a subphrenic abscess is secondary to septicaemia or pyaemia, the origin is subacute, and the same remark appears to apply to those cases which are secondary to splenic abscesses.

Pain is nearly always the first symptom of the onset of a subphrenic abscess. It was noted in 56 of 76 cases, and was referred in every case to the situation where the abscess afterwards formed. In cases due to perforative peritonitis it was sudden, severe, and stabbing, whilst in extraperitoneal cases it was gradual in onset and aching in character. In 4 gastric cases the pain suddenly supervened after a full meal.

Vomiting is the next symptom in point of frequency and time, and occurred in 29 of 76 cases. It is almost entirely restricted to those subphrenic abscesses which originate in a perforative peritonitis, and especially to gastric and duodenal cases.

Nausea, hiccough, and *collapse* were described in a few histories of the onset of subphrenic abscesses. In 8 of 76 cases it was stated that the acute onset was followed by *a period of obstinate constipation*, no doubt due to the peritonitis, but as will be pointed out later, as the abscess becomes well localized septic diarrhoea nearly always appears.

Haematemesis and *melaena* bear a dual relation to subphrenic abscesses. In the majority of cases they are due to haemorrhage from a gastric or duodenal ulcer, which subsequently perforates, and are a part of the previous history, but in a few cases they arise from a chronic and insidious subphrenic abscess which has ruptured into the stomach and has then become acute in its progress. In the latter case they are described under the onset.

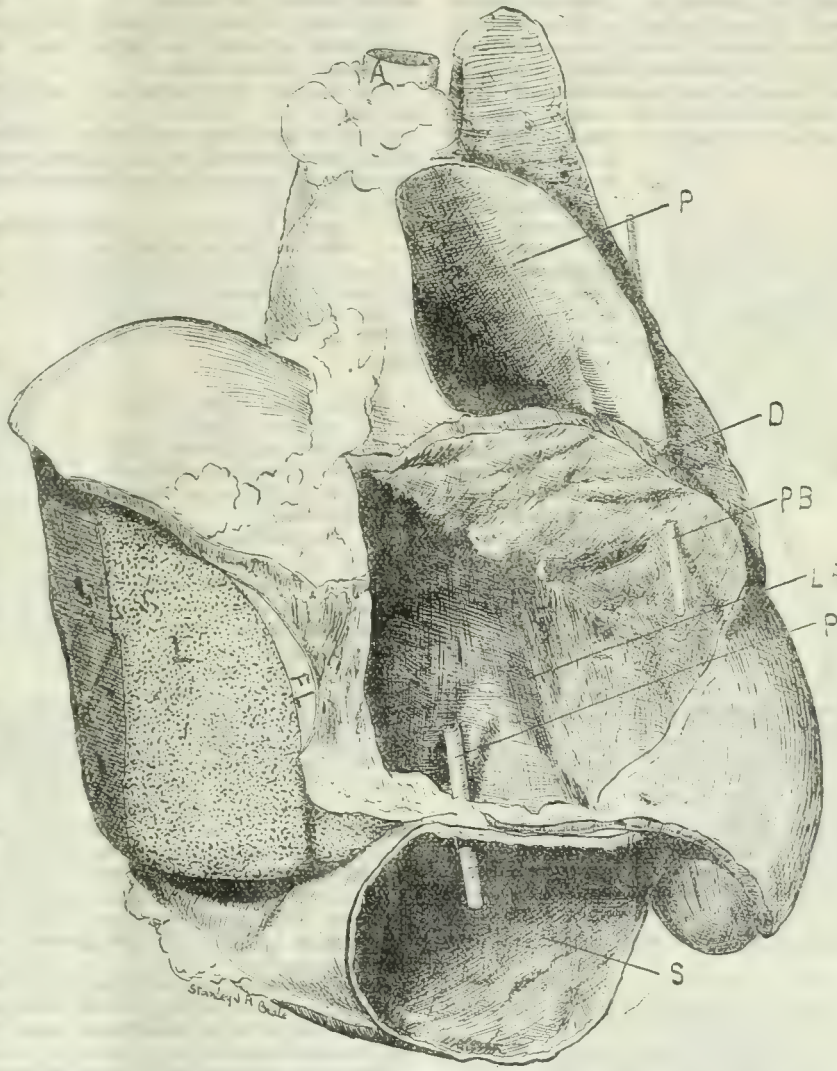


Fig. 10.—From a specimen in the London Hospital Museum, prepared by Dr. Cecil Wall. A left anterior subphrenic abscess, LAS, communicating with the stomach S through a perforation PS. The cavity of the abscess is laid open by an incision turning up a flap of the diaphragm D. It is limited to the right by the falciform ligament FL. Another perforation, PB, connects the abscess through the diaphragm with a bronchus. P, Pericardium. L, Liver. A, Aorta.

II. *The General Signs and Symptoms of Suppuration.*

In nearly all cases of subphrenic abscess an examination of the general symptoms has made it clear that a collection of pus was present in some part of the body, and when the rest of the body, including the pelvis and thorax, had been excluded, it was probable that the abscess was beneath the diaphragm. These septic symptoms were as follows: The patient's *tongue* was dirty and often dry and cracked. His face was *pale, anaemic*, and muddy, an appearance which I have elsewhere described as the *purulent complexion*. The majority of cases were covered in a *profuse sweat*, which soaked the pillow, and were *weak, listless, short of breath, and had no appetite* for their food. Some suffered from a great *thirst*. They were *thin* and *emaciated*, and had lost from 1 to 2 st. in weight since the onset of their illness. This *wasting* is a very constant sign. The majority suffered from a profuse septic *diarrhoea*, but not a few continued *constipated*.

Pyrexia was always present. As a rule it was low (100° to 101°), sustained, and rocked night and morning. In several cases, however, it frequently reached normal, and was never above 100° F. These cases were well localized, or had ruptured into the stomach or intestine. On the other hand, in the diffuse and acute stages temperatures as high as 104° to 105° F. were often recorded.

The pulse rate per minute varied according to the degree of localization of the abscess. In many cases it was no faster than 70 to 80, and as a rule was about 100, but in acute cases it often reached 130 or 140 per minute.

Rigors occurred in 10 of 76 cases, and of these 6 died, so that this is a very fatal symptom. In 5 pyaemia was present, but 2 of these were very chronic cases, and recovered. In 2 a perigastric abscess freely communicated with the stomach. One was due to suppurative cholangitis, and 1 to acute periostitis of the transverse process of the second lumbar vertebra.

Parotitis was present in 1 gastric case, which did not live.

Petechiae and other cutaneous signs of pyaemia were present in 2 cases, of which 1 succumbed, but the other recovered.

Albuminuria was present in 1 case and *delirium* and *coma* in another.

Leucocytosis was noted in all the cases examined. In 2 cases it was as low as 11,000 per c.mm. In 2 cases a differential count was made, and in one of these the polymorphonuclear cells numbered 71.5 per cent. and in the other 87 per cent.; in the others it is simply stated they were in great excess.

Leucocytosis appears to be a most valuable sign, and it is to be regretted that it was not sought for more frequently in this series.

Eosinophilia was noted in 2 of 3 cases of subphrenic abscess due to hydatids of the liver in which it was looked for.

III. *The Abdominal Signs and Symptoms of Subphrenic Abscesses.*

An abdominal swelling was described in no less than 50 of 76 cases of subphrenic abscesses. In 33 of these the

swelling was due to the abscess and the peritoneal adhesions round it. In the remaining 17 cases the swelling was the liver, but in 14 of these a hepatic abscess was present. In the remaining 3 cases, in one the edge of the liver only was felt, in another a Reidel's lobe was present, and in the third case the pus was in the right extraperitoneal cellular space. When the pus was located between the liver and diaphragm within the peritoneum, the liver was not pushed down in a single instance, because it was adherent to the diaphragm along its lower margin, as has already been explained under "Pathology."

The abdominal swelling formed by a subphrenic abscess does not descend on respiration, because it is adherent. The part of the swelling formed by peritoneal adhesions is rigid, tender, and dull on percussion. The part formed by pus in contact with the abdominal wall is scarcely tender, bulges and fluctuates, and is dull on percussion. Where gas is present in the abscess a tympanitic area is formed, as a rule, high up in the epigastrium, and over the liver dullness, amphoric and coin sounds can be obtained, and the tympanitic area travels round the chest as the patient is rolled over.

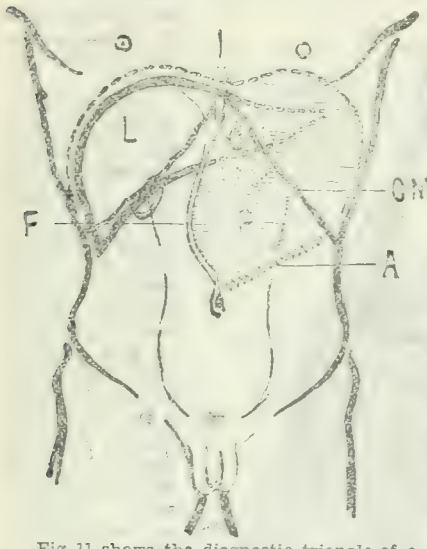


Fig. 11 shows the diagnostic triangle of a left anterior intraperitoneal subphrenic abscess. F, Falciform ligament convex to the right. A, Broad band of adhesions, tender and rigid, stretching from umbilicus to costal margin. C M, Costal margin. P, Bulging lower part of area of triangle, dull, and not very tender, occupied by pus. G, Circular area over liver dullness, tympanitic, amphoric, and coin sounds travelling to the left as the patient is rolled over. This is due to gas in the abscess, and is seldom absent in this situation. L, Liver.

In only 2 of 76 cases was the liver dullness recorded to be lost, although this is usually considered a very constant sign of perforation. The special shape and signs of abdominal swellings in the different anatomical varieties of subphrenic abscess are recorded under that heading.

The *veins* of the abdominal wall were dilated in one case, and in another a *peritoneal rub* was heard and felt over the lower margin of a subphrenic abscess. *Ascites* was also present in one case, whilst *pus* was discharged *from the rectum* in a like number.

IV. *The Thoracic Signs and Symptoms of Subphrenic Abscesses.*

Thoracic signs were present in 56 of 76 cases of subphrenic abscess, and were only stated to be absent in 3 cases. In 41 cases the signs were present at only one base, but in 15 cases they were described at both. In 2 gastric cases the abscess was on one side and the basal signs on the other. The conditions indicated by these signs were those of compression, and inflammation of the base of the lung and pleura, namely:

(*a*) Displacement of the lung upwards, and obliteration of the lower pleural angle.
(*b*) Dry pleurisy.
(*c*) Pleural effusion.
(*d*) Compression of the lung.
(*e*) Consolidation of the lung.
(*f*) More or less bronchitis at the base.

The most frequent association of signs at the base was *dullness* (30 cases), *with diminution or absence of breath sounds* (22 cases), *vocal resonance* (12 cases), and *tactile vocal fremitus* (16 cases).

Pleuritic friction sounds were only recorded in 7 cases.

Dullness on percussion was also associated with *tubular breath sounds* (9 cases), and *increased vocal resonance* (5 cases).

Râles, rhonchi, and crepitations were recorded in 3 cases.

In 9 cases *tympanitic, amphoric, and coin sounds* were discovered at the base of the thorax, usually over the liver dullness, and were proved to be due to gas below the diaphragm. In 6 of these the *resonance shifted with position.*

The *gurgling* of gas and fluid was heard in one case, and a very *sudden spread of dullness* up the thorax was noted in another, and was proved at the operation to be due to a clear pleural effusion. The thorax was recorded to have *moved less on respiration* on the affected side in 12 cases.

Pericarditis was noted in only one case.

The *position of the heart apex beat* was noted in 9 cases.

It was *displaced upwards*, but was very little if at all moved laterally in 7 cases.

In 2 cases in which pleural effusions complicated the subphrenic abscess, the apex beat was considerably *displaced to the other side.*

Pain on deep inspiration and coughing was noted in 5 cases.

A severe *cough* was recorded in 17 cases. In 8 of these *pus* was expectorated, and in 2 cases *blood*: whilst 1 patient expectorated *pus and flatus*, with collapse and profound mental anxiety.

In 5 cases it is definitely stated that *thoracic symptoms were present without expectoration.*

Dyspnoea was present in 7 cases, and varied from 32 to 48 breaths a minute. The average was 37.

The *alae nasi* were seen in active movement in several cases.



Fig. 12.—A subphrenic abscess occupying the small sac of the peritoneum. The lower part of the cavity is obliterated by adhesions. Above, the cavity extends up in a narrow pouch between the Spigelian lobe and the crus of the diaphragm. P, Pancreas in posterior wall. S, Stomach in front with lesser omentum. C, Transverse colon below with its mesocolon.

V. *The Local Signs of Subphrenic Abscess.*

These local signs were found over the abscess and encroaching upon the thorax and abdomen or both:

The abscess caused a visible *bulging of the thorax* or a definite *swelling in the abdomen* in no fewer than 46 of 76 cases. These swellings were located as follows:

Beneath the lower ribs, 11; in the right hypochondrium, 12; in the left hypochondrium, 15; in the epigastrium, 3; in the left loin, 3; in the right loin, 1; in the left abdomen, on a level with the umbilicus, 1.

In several cases the *circumference of the thorax* at the level of the ensiform cartilage was shown by the tape measure to be from 1 to 3 in. greater on the side of the abscess.

Deep tenderness was elicited in 25 cases on palpating deeply over the swelling. In 4, between the ribs; in 10, in the right hypochondrium; and in 11 in the left hypochondrium.

The x rays demonstrated the abscess as a dark shadow in the only case in which it was used.

Oedema was recorded over the abscess in 4 cases, and the *veins* were noted to be enlarged in 2.

The signs which indicated that the swelling contained gas, pus, or was formed of peritoneal adhesions have been already described under the heading of "Abdominal Signs." The most conclusive and certain sign, however, is needling; but this matter must be discussed at length.

THE EXPLORATORY NEEDLE IN SUBPHRENIC ABSCESS.

The most careful examination often fails to make it certain whether a subphrenic abscess is present or not. If pus is then found below the diaphragm with the exploring needle, the case at once becomes clear, and the abscess can at once be opened. On the other hand, many authorities (Dr. Acland) are opposed to the use of the exploring needle because it is not free from the risk of infecting the pleura, and because when the result of a puncture is negative, doubt and delay are only increased. This impeachment is confirmed by the experience of the

hollow needle at the London Hospital. Of 76 cases the aspirating needle was employed in 18, and in 11 of these the pus was not found. In 1 of these further measures were delayed for twelve days, and in another for five days, and in the others for various periods. In 1 case nothing was found on puncture with the needle at the right base, but the patient collapsed and died three hours later, and it was then found that a pint and a half of turbid offensive pus had passed through the puncture from the right subphrenic space into the pleura, and the lung was collapsed.

It is therefore clear that a promiscuous search for pus with an ineffective syringe is dangerous and deceptive.

On the other hand, the proper use of a good aspirating needle upon the operating table, and under a full anaesthetic, is the most certain means of diagnosis we possess, and it has never failed or deceived in my own experience. The only safe rule in thoracic operations is to follow the needle, and it is useless to make a large opening and admit air to the pleura where the needle can demonstrate that no pus is present.

It may seem too elementary a matter to discuss the character of an efficient aspirating needle, but no other instrument is so often badly made and out of repair. The needle should be of large calibre so that thick pus and

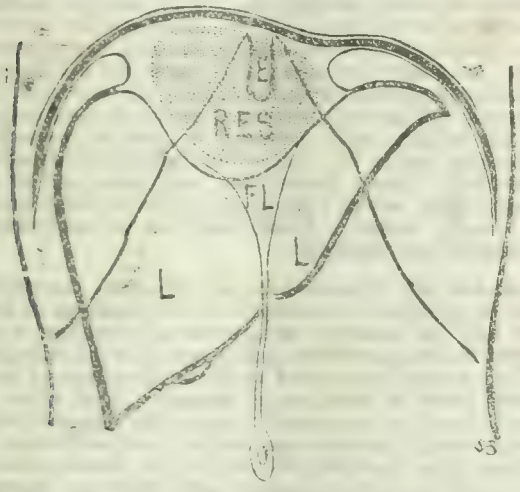


Fig. 13.—The signs of a right extraperitoneal subphrenic abscess, RES. pointing in the epigastrium below the ensiform process, E, and having separated the layers of the falciform ligament, FL, so that the abscess may be opened extraperitoneally. *Note* that the liver is well pushed down in this case, and freely movable. Compare Fig. 4.

lymph may be drawn through it. It must be at least 3 in. long, so that deep collections of pus may be reached, and well tempered, so that it may not break in the patient. I have removed two broken needles from the thoracic wall under these circumstances. The syringe must not leak either round the piston or where the needle is attached to it. The best way of testing this is to draw a little water into the syringe, and then plunge the end of the needle into a bar of soap, and draw the piston out to the full extent. It is easy then to see if the air enters at these points, and on releasing the piston it should fly back to the surface of the water, and no bubble of air should have appeared. If this precaution is not taken, and the syringe becomes filled with gas during its use, the operator cannot be certain that the gas entered from the point of the needle. Finally, the needle must be made of such material that it may be boiled for aseptic reasons. Messrs. Krohne and Sesemann have made a very good needle which meets all these requirements.

During its use the syringe should be washed free of blood between the punctures in sterile water, and carbolic and other antiseptic lotions should be avoided because they render clear serum and blood turbid, and simulate purulent fluids very closely. When air has filled the syringe whilst the thorax is being explored the needle should be withdrawn in order to expel the air, and the syringe should never be unscrewed from the hollow needle whilst it is *in situ*, otherwise air may enter the pleura and the lung collapse. In one lamentable case of empyema with which I was acquainted this accident happened to a medical man whilst he was puncturing the base of the other lung, which was also dull, and the patient did not survive.

When the signs and symptoms indicate the presence and location of pus below the diaphragm, the patient should be prepared for operation and fully anaesthetized, and only then should the needling be carried out. With the patient in the semi-prone position, I begin by passing the needle deeply into the tenth intercostal space in the scapular line, and then, if no pus is found, into the ninth, eighth, seventh, and sixth spaces in turn. I then search the spaces in the mid-axillary line, from below up. Several signs indicate that the needle has passed through the diaphragm. There is often the sensation of a second obstacle through which the needle is thrust. A deep puncture of, say 3 in., in the lower intercostal spaces is certain to pass through the diaphragm. When the end of the needle is through the diaphragm and the latter is not paralysed by the inflammation, the barrel of the syringe moves up and down with respiration (Furbringer's sign). This is practically a very constant sign, although when the diaphragm is paralysed the movement may be absent or even reversed (Devic and Challer). Finally, the character of the blood drawn into the syringe is an indication of where the point of the needle is. Blood from the liver is dark venous, and is often obtained in quantity from the hepatic sinuses. On the other hand, blood from the lung is foaming and scarlet, and is not obtained in large quantity unless a big vessel is entered, when haemoptysis follows; but this is a very rare occurrence, and is practically never a serious matter.

The needle should be passed in to its full depth of about 3 in., and then slowly withdrawn whilst suction is

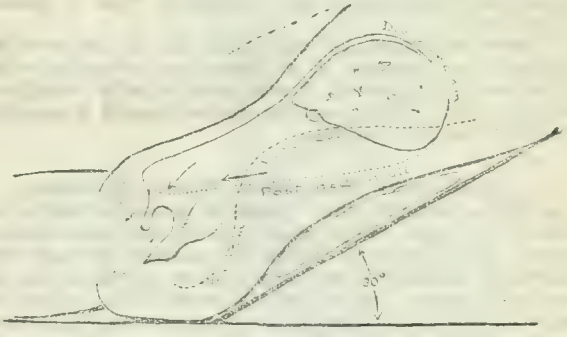


Fig. 14.—(From Kelly's *Appendicitis*.) Showing "Fowler's position" to prevent purulent serum gravitating into the subphrenic spaces in cases of diffuse peritonitis. The arrows indicate how in the sitting-up posture fluid flows into the pelvic pouch, from which it can be drawn off by a tube passed through a suprapubic puncture.

maintained. Timidity may lead the operator to only enter the pleura, from which he may obtain nothing, or only clear serum. Thus in the 11 cases at the London Hospital in which pus was present below the diaphragm, and the hollow needle failed to find it, in 5 nothing was withdrawn, and in 4 clear serum was obtained, and in 2 blood-stained serum.

When pus is found, and the needle is known to be below the diaphragm, the diagnosis of subphrenic or hepatic abscess is certain. When different fluids are withdrawn at different depths, or at separate punctures, the diagnosis is also highly probable. Thus clear serum and pus may be associated, or foul gas and clear serum, or even foul pus and sweet pus.

Needling should never be abandoned until it is certain that no pus is present; and it may be added that although the method is so free from risk when practised through the thoracic wall, as recommended above, it is never safe to puncture abdominal swellings across the peritoneum and through the abdominal wall, because they afterwards leak into the peritoneum. Thus a tuberculous pyonephrosis which was punctured in the loin, led to acute general peritonitis. When pus has been found, the rib below should be resected, and after the diaphragm has been sewn to the intercostal muscles, I usually make another puncture before incising it.

The Operations for Opening Subphrenic Abscesses.

The methods employed to drain subphrenic abscesses may be arranged as follows, and I have added the number

of cases treated by each method among the 73 operations performed on 64 cases at the London Hospital (1900–1907):

	—	Operations.	Deaths.
A.—THORACIC.			
Posterior transpleural (Scapular line)	Right	11	3
	Left	3	1
Subpleural	Right	0	0
	Left	1	0
Anterior transpleural (Nipple line)	Right	0	0
	Left	1	1
Subpleural	Right	2	1
	Left	1	0
Lateral transpleural (Axillary)	Right	1	1
	Left	0	0
Subpleural	Right	3	2
	Left	0	0
B.—ABDOMINAL.			
Median	—	5	1
Hypochondriac or epigastric	Right	17	9
	Left	17	5
Loin	Right	6	2
	Left	5	1

Speaking in a general manner, posterior methods o drainage are more favourable than anterior. In the above series 26 posterior operations were performed, with 7 deaths (27 per cent.); 43 anterior operations, with 17 deaths (39 5 per cent.); and 4 lateral, with 3 deaths (75 per cent.).

I have performed 24 operations on 21 patients for subphrenic abscesses; 15 of these were posterior, with 2 deaths—13 3 per cent.; 9 were anterior, with 2 deaths—22.2 per cent. The posterior routes should always be adopted when it is possible.

The Posterior Transpleural Thoracic Operation.

As far as possible this operation is carried out in the line of the angle of the scapula, with the patient semiprone. The exploring needle is inserted through the intercostal spaces, in turn from below up, beginning at the tenth space. When pus is found 3 in. of the rib below is resected, whilst an assistant presses up the liver on the right side to obliterate the pleural cavity, should it be open. The diaphragm is then firmly fixed to the intercostal muscles with three or four interrupted catgut sutures inserted by a sharply curved needle in a handle. Pus is then once more found with the exploring needle before the diaphragm is incised, and a finger passed into the abscess cavity. This finger should hook the diaphragm well up against the thoracic wall whilst the pus escapes, and before it is withdrawn the diaphragm and intercostal muscles should be sewn together by a continuous catgut suture. This should be done whether adhesions are present or not, for as the abscess emptied and the diaphragm descended, the adhesions gave way in 5 cases in my series, and pneumothorax resulted, in 2 cases at the operation, and in 3 cases after a day or two. Silk should not be employed for these sutures, because in one case a sinus persisted for two and a half years, but closed as soon as a stout silk suture was discharged. As large a drainage tube as is convenient should be employed, and irrigation, suction, and position may be employed to clear the cavity after a day or two.

No rib higher than the seventh should be resected, for great difficulty will then be found in bringing the diaphragm up to the thoracic wall. The exploring finger in a right anterior intraperitoneal subphrenic abscess can often feel the upper surface of the liver deeply cupped below, whilst above the diaphragm is thrown into great folds which contract in a futile manner at each inspiration.

The Posterior Subpleural Thoracic Operation.

When the tenth or eleventh ribs have been resected in the line of the angle of the scapula, it is stated by Elsberg that the reflection of the pleura may be recognized and pushed up before the diaphragm is incised. This method is, however, needless if the above precautions are taken to prevent air and pus from entering the pleura (see also Figs. 15 and 16).

The Anterior Subpleural Thoracic Operation.

Landau has pointed out that in the mammary line about 2 in. intervenes between the costal margin and the reflection of the pleura. If the costal cartilages are resected over this space an incision may be made through the diaphragm, below the pleura, and above the peritoneal adhesions shutting in the abscess. This method is especially adapted to left anterior perigastric abscesses. It may also be used at other positions on the costal margin, but the space is narrower there (Figs. 15 and 16). The series of 76 cases at the London Hospital contained 8 such operations with 5 deaths (62 5 per cent.), and in several of these the pleura was opened none the less; the operation is moreover anterior, and drains badly.

The Median Abdominal Operation.

This route is usually adopted when a strictly median swelling is pointing in the epigastrium, and when the exploring needle has shown that the pus cannot be reached from behind. When the swelling is due to a right extraperitoneal, or hepatic abscess, tracking forward between the layers of the falciform ligament, it is possible to open the abscess without wounding the peritoneum if the incision is strictly median (see Fig. 13), and the opening is deepened at the upper end immediately below the ensiform process. I have operated on two such cases successfully. An abscess occupying the small sac of the peritoneum may project forwards between the liver and the stomach. The general peritoneal cavity is then opened, and the bulging small omentum is sewn to the parietal peritoneum before it is incised, and a large drainage tube is inserted. I have drained one such case, and at the autopsy, three weeks later, the cavity was found empty and nearly closed. Death was due to suppurative cholangitis and pyaemia.

Right and Left Hypochondriac and Epigastric Operations.

These operations are adapted to the drainage of those right and left anterior intraperitoneal abscesses which present in the epigastrium, and give rise to the triangular swelling which is described under the headings of these special forms of subphrenic abscess. Even when an anterior swelling is present I prefer the posterior transpleural route if the exploring needle finds pus behind.

When it has been decided to open the abscess from in front, a vertical incision is made well within the triangle. It must not encroach at all on the band of adhesions below, lest the pus or gastric juice should be admitted to the general peritoneal cavity. The incision is therefore deepened at its upper end, and I prefer to incise the peritoneum in the angle between the costal margin and the ensiform process.

The Loin Operation for Subphrenic Abscess.

The right loin operation is adapted to the drainage of the early and diffuse infections of the subhepatic pouch and the right anterior intraperitoneal fossa when the liver is not firmly adherent to the diaphragm. At all stages it is the method to be selected for the drainage of the subhepatic pouch. On the left side it is employed alone for the diffuse stage of peritonitis. In some cases, where a very large left anterior intraperitoneal subphrenic abscess has been opened in the left epigastrium and projects sufficiently below the ribs, it may be counter-opened in the left loin.

The incision is an oblique one downwards and forwards, far back, and high up in the loin. When the peritoneum is opened, should no adhesions be present, the general peritoneal cavity is packed off with gauze below and in front. The index finger then feels for the margin of the liver on the right side, and is passed transversely below it into the subhepatic pouch, into which a drainage tube can then be introduced. Should the signs indicate the presence of pus in the right anterior intraperitoneal subphrenic space and in all doubtful cases, the finger is then insinuated between the liver margin and the diaphragm separating the adhesions. A drainage tube is then introduced up the side of the finger and pushed up under the dome of the diaphragm as far as it will go—a distance often of 6 in. or 7 in. Should a lumbar abscess be present, a tube may be passed down the loin. In one case I opened and drained a large perinephritic and retrohepatic

abscess from the posterior angle of this wound in addition to intraperitoneal abscesses in front. The procedure is very similar upon the left side, but here the exploring finger feels for the tail of the spleen, and the tube is pushed up into the left anterior intraperitoneal fossa. When the abscess is retroperitoneal and left, it usually projects in the loin, and an incision is made over its most prominent part and a tube passed up under the diaphragm as before.

The Methods of Irrigation Suction and Position in Dependent Cavities.

When it has been found necessary to open a subphrenic abscess from the front the cavity is usually dependent, so that gravity does not ensure complete drainage. The methods which should then be adopted are as follows:—The largest size of drainage tube (½ in.) should be passed to the very bottom of the cavity to act as a well for the pus. A long strip of gauze may be passed down the inside of this to soak up the fluid by capillary action into the dressings. Twice a day the cavity should be washed clean

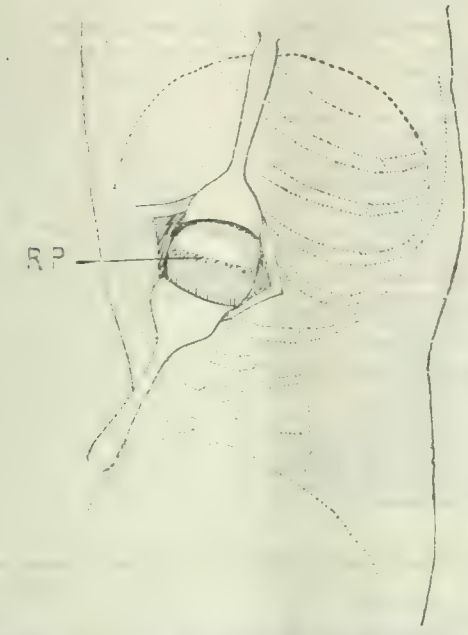


Fig. 15.—From Kelly. Shows the reflexion of the pleura, RP, in a lateral thoracic subpleural operation. The writer does not favour the lateral operation, nor in his experience is the subpleural space so liberal as is indicated here in the ninth intercostal space.

with sterile water, or very weak carbolic (1 in 100), through an elastic catheter passed down the inside of the drainage tube to the bottom of the cavity. The cavity should then be sucked dry by the same catheter applied to a syringe. At intervals during the day the patient should sit up and lie semiprone on the opposite side to the abscess cavity, so that the contents may gravitate along the tube. With these precautions the temperature will remain normal, the abscess will rapidly close, and very little tendency will be shown by the abscess to pocket and track, although a constant watch should be kept on neighbouring cavities and fossae.

The Mortality of Subphrenic Abscesses.

Of the 78 consecutive cases which make up this series, 40 lived and 36 died, a mortality of 47.4 per cent; 12 cases were not operated upon, and none of these survived, a mortality of 100 per cent; 64 cases were operated upon (by 73 operations) of the series of 76 consecutive cases, and of these 24 died, making a mortality of 37.5 per cent. These operations were divided up as follows: 26 posterior operations with 7 deaths, 27 per cent.; 43 anterior operations with 17 deaths, 39.5 per cent; and 4 lateral operations with 3 deaths, 75 per cent.

Posterior operations are therefore more favourable. Of my own series of 21 consecutive cases submitted to 24 operations, 4 died, 19 per cent.; 15 of these operations were posterior, with 2 deaths, 13.3 per cent.; and 9 were anterior, with 2 deaths, 22.2 per cent.

I have analysed the cause of death in 36 cases, and have found that it was unavoidable in 12 cases, and might have been avoided in 24 cases. The 12 unavoidable causes of death were 5 multiple abscesses of liver, 2 cancers, 2 lung complications, 2 hourglass stomachs, and 1 general peritonitis. It has been truly said that "wise men learn by others' experience," and it will therefore not be time wasted to consider in detail the 24 deaths which may be classed as avoidable. In 12 cases the condition was not diagnosed and no operation was performed. For the most part these cases died in the medical wards. In 8 cases an anterior incision was made into the abscess, which was inefficiently drained. Other loculi of pus were left undrained in several cases. By a fuller knowledge of the subphrenic spaces, and further incisions, these cases might have been saved. In 2 cases the transpleural method was adopted during the acute and diffuse stage, when the loin incision was indicated. The pus was not efficiently drained, and in one case the lung collapsed. In one case

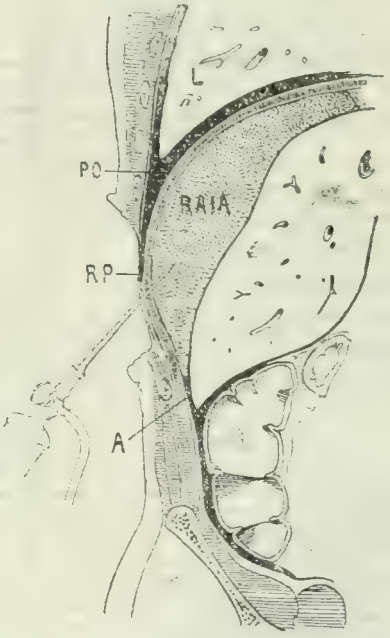


Fig. 16.—(From Kelly's *Appendicitis*.) "The lateral subpleural thoracic operation." RAIA is a right anterior intraperitoneal abscess, which, having localized below the diaphragm, has extended down as low as the tenth space. The pleura, PO, is obliterated below, and the lung, L, is pushed up. The reflexion of the pleura, RP, is seen below. The ninth or tenth rib has been resected, and the exploring needle is being inserted below the pleura. Below the adhesions, A, of the liver to the diaphragm are seen shutting off the abscess. These adhesions might in a recent case be separated by a finger passed upwards through an oblique loin incision, but after ten days the liver would probably be torn. This figure illustrates the advantages of waiting a reasonable time for a subphrenic abscess to develop.

a puncture by a needle failed to find pus, but admitted more than a pint of pus and gas to the pleura. In one case an epigastric incision was prolonged downwards beyond the line of adhesions, so that when the abscess which communicated with the stomach was opened in the upper part of the incision, it gravitated into the general peritoneal cavity in the lower angle of the wound.

In short, half the avoidable deaths may be attributed to the fact that the condition was not diagnosed at all. The other half to the absence of exact and detailed knowledge of the localization and character of subphrenic abscesses on the part of the surgeons when they were planning and executing their operations.

With a perfect opportunity, knowledge, and technique these 76 cases might have been treated with an ideal mortality of no more than 16 per cent.

The diagrams illustrating this paper were drawn by Dr. Stanley Beale, to whom my best thanks are due for their skill and lucidity. [Appendix on page 436.]

Reference.
1 *Diseases of the Stomach*, 1904, p. 320.

Appendix.

Anatomical Varieties.

	No. of Cases.	Simple.	Compound.
A.—Intraperitoneal.			
I. Right:			
(*a*) Anterior	27	11	16
(*b*) Posterior	10	0	10
II. Left:			
(*a*) Anterior	30	26	4
(*b*) Posterior	3	1	2
B.—Extraperitoneal.			
I. Right	19	13	6
II. Left	4	4	0
Not classified	2	—	—

Simple = One cavity only involved.
Compound = Two or more cavities involved.

Anatomical Varieties according to Causes.

Anatomical Variety.	Gastric Ulcer.	Appendicitis.	Hepatic Abscesses.	Duodenal Ulcer.
Intraperitoneal right anterior.	4	10	7	1
Intraperitoneal right posterior	1	6	1	2
Intraperitoneal left anterior ...	16	1	1	1
Intraperitoneal left posterior...	2	0	0	0
Extraperitoneal right.....	0	1	15	2
Extraperitoneal left	1	0	0	0

Etiology.

	Cases.
Gastric ulcer	21
Gastric cancer	2
Appendicitis...	12
Liver: Suppurating hydatid	8
,, Tropical abscess	6
,, Abscess	1
Pylephlebitis	1
Suppurative cholangitis	3
Duodenal ulcer (anterior)	3
Duodenal ulcer (posterior)	2
Splenic abscess	5
Pyaemia	3
Parturition	3
Thoracic pneumonia	1
Thoracic bronchiectasis	1
Thoracic empyema	1
Periostitis of vertebrae	2
Operations resections...	2
Pancreas cancer	1
Kidney cystic	4
Intestine ruptured	1
Typhoid	1
Gall stones	1
Pyosalpinx	1
No cause found	2

Age of 75 Cases of Subphrenic Abscess arranged in Decades.

Age	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Cases	6	5	29	15	13	6	1

Sex of 76 Cases of Subphrenic Abscess.

	Cases.	Per Cent.
Male	43	56.6
Female	33	43.4
Total	76	100

The Spontaneous Rupture of 23 Cases of 76 Subphrenic Abscesses.

Into—	Cases.
A bronchus	4
The pleura, right	2
,, left	3
The general peritoneum	1
The stomach	8
The intestine	1
The colon	2
The skin (*a*) umbilicus	1
(*b*) right hypochondrium	1
	23

Micro-organisms found in Pus of Subphrenic Abscesses.

	Cases.
Number examined	12
Sterile	3
B. coli communis	3
Staphylococcus aureus	2
Streptococcus	1
Pneumococcus	1
B. pyocyaneus	1
B. typhosus	1

Onset in 76 Cases of Subphrenic Abscesses.

Acute ... ... 40 cases = 62.6 per cent.
Subacute } ... ... 36 ,, = 47.4 ,,
Chronic }

Gastric ulcer (21 cases):	
Acute	15
Subacute }	6
Chronic }	
Gastric cancer (2 cases):	
Acute	0
Subacute }	2
Chronic }	
Appendicitis (12 cases):	
Acute	12
Subacute }	0
Chronic }	
Hydatid of liver (8 cases):	
Acute	
Subacute }	6
Chronic }	
Hepatic abscesses (7 cases):	
Acute	1
Subacute }	6
Chronic }	
Duodenal ulcer (5 cases)	
Anterior (= Acute)	
Posterior (= Subacute)	2
Splenic abscess (3 cases):	
Subacute	3

The Significance of Rigors in Subphrenic Abscesses.

	Cases.
Number recorded	10
Died	6
Pyaemias (2 chronic ones lived)	5
Communicated with stomach	2
Suppurative cholangitis	1
Acute periostitis	1

The Use of the Aspirating Needle in Eighteen Cases of Subphrenic Abscesses. Some Several Times.

	Cases.
Failed to diagnose	11
Pus	7
Foul pus	2
Anchovy pus	1
Pus and serum	1
Clear serum	4
Blood-stained serum	2
Gas	2

Mortality of 76 Cases of Subphrenic Abscess.

	Deaths.	Per cent.
76 cases	36 =	47.4
12 cases no operation	12 =	100.0
64 cases operated on	24 =	37.0
21 cases operated on by author ...	4 =	19.0

Analysis of 36 Deaths.

A, Unavoidable.—12 deaths = 16 per cent. (about).

Multiple abscesses of liver	5 cases
Cancers	2 ,,
Hourglass stomach	2 ,,
Lung complications	2 ,,
General peritonitis	1 case

B, Avoidable (probably).—24 deaths.

Not operated on	12 cases
Anterior operation: other pouches left	6 ,,
Transpleural operation in diffuse stage	2 ,,
General peritoneum opened by anterior incision ...	1 case
Inefficient needling	1 ,,

The Ideal Mortality of Subphrenic Abscess = about 16 per cent.

OBSERVATIONS ON THE INCIDENCE AND SPREAD OF CANCER.

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Incidence.

I have collected 58 cases in which cancer began in the skin of the hand. All were squamous epitheliomata except one, a rodent ulcer on the back of the hand. In all cases except two the cancer began on the backs of the hands; the two exceptions were squamous epitheliomata, both of which began on the skin of the palms opposite the centre of the metacarpo-phalangeal articulations. Hence in 54 out of the 56 cases the disease began on the backs of the hands.

The points of incidence in these 54 cases are as follows: In 28 of them the disease began either exactly over or to one or the other side of the second metacarpal bone. In 16 of these 28 cases it began on the radial side of this bone (see Fig. 1). In 22 of the 54 cases the disease began about the middle of the shafts of the third and fourth metacarpal bones (see Fig. 2). In 4 out of the 54 cases the disease began on the ulna side of the fifth metacarpal bone near the wrist

Out of the 56 cases 32 began on the right hand and 24 on the left. In 4 cases there were squamous epitheliomata of both hands (backs); in one of these patients there was in addition a rodent ulcer on the right temple. Data are not exact enough to be precise, but the majority of the cases are males.

Among these 56 cases the commonest point of incidence for cancer of the hand was on the skin covering the posterior surface of the second metacarpal bone and on its radial side. It is interesting to recall here that Dr. Henry Head[1] made himself the subject of the following experiment: Segments of his radial and two branches of his external cutaneous nerves were excised, and sensation was lost for tactile, pain and temperature impressions in the skin of the area which the nerves supplied. Eventually a trophic ulcer developed over a point on the radial side of the posterior surface of the second metacarpal bone; in fact, just upon the point which is the commonest site for the incidence of cancer on the hand. The question naturally arises, Can Dr. Head's experiment be brought into line with this site of origin in cancer of the hand? It demonstrated the point of most exposure to external irritation within the denervated area by the fact of a trophic ulcer forming upon it, and from this fact that the ulcer did not form until there had been a disturbance of the nerve supply to the part arises the problem as to whether cancer itself may be rendered possible only when there is a disturbance of nerve supply.

But it is not only in denervated areas that trophic lesions occur; Mr. James Sherren has kindly allowed me to quote the following facts from his book[2] entitled *Nerve Injuries and their Treatment*, which is still in the press. He says, in reference to cases in which the sensory nerves have been completely divided,

> Blisters may originate spontaneously; they are often noticed on waking in the morning, and occur at a time when sensibility to prick is beginning to return to the affected portion of the limb.

And in the same book Mr. Sherren says, in reference to cases of incomplete division of a sensory nerve,

> Blisters may make their appearance not only over the area of sensory loss, but also over the area in which there is hyperalgesia, but no loss of sensibility.

These important facts were not known to me, and I am very much obliged to Mr. Sherren for allowing me to use them.

The clinical connexion between external irritation and cancer is a factor too marked to be regarded only as a popular fallacy, and, while recognizing this fact, it is curious to observe that in the hand the back of it is the commonest position for cancer to begin, even when the fingers, front and back, are included. One would have imagined the knuckles and backs of the fingers would be as much exposed to external irritation as the other parts of the back of the hand. Why should it be that cancer most often starts along a line 2 in. broad drawn obliquely inwards and upwards across the back of the hand? Within that line the nerves supplying the skin become cutaneous, and, as I have pointed out before, the incidence of cancer appears to me closely associated with those points at which nerves become cutaneous. In connexion with these points it is necessary to say, first, that the "maximum points" described by Dr. Head are points at which peripheral nerves become cutaneous; and secondly, that in two cases of cancer I found inflammatory changes in the posterior spinal root ganglion on whose cutaneous distribution each cancer began and that no inflammatory changes appeared within the ganglia into whose distributions the cancers spread. It must be realized that besides affecting the epithelium of the skin locally, external irritation also affects the posterior spinal root ganglion supplying that skin and its epithelium, so that really the changes in the skin which are observed when external irritation is applied to it may be partly, chiefly, or wholly due to impulses received or not received from the posterior spinal root ganglia. That this probably is so is supported by the fact that the skin on the backs of the hands of old people is thin, shiny, and wrinkled, and although its nerve supply is present it resembles in appearance the skin of a denervated area (Dr. Head and Mr. J. Sherren). I have also observed warts and superficial blackish-yellow pigmentary patches on the backs of hands in old people, the position of which coincides with the commonest points of incidence of cancer in this region.

It is more difficult to collect cases of cancer of the fingers and the feet, and I have not yet enough of them to publish, but the regions of the big and little toes and the malleoli are apparently common points of incidence in the cancers of the feet. It is most difficult to secure records of any case of squamous epithelioma on the trunk. Mr. C. W. Rowntree has carefully examined the records of the Middlesex Hospital in the four years 1903-6; there were 935 cases of malignant tumours examined there during this time. Of these, 244 were cases of squamous epitheliomata, but not even one of them had its point of incidence on the trunk. I have seen only one case, that was one of a man who had two on his back, one over the back of the shoulder, and the other above the crest of the ilium. The two ulcers were removed, and the diagnosis confirmed by microscopic examination. Dr. Arthur Whitfield has a photograph of a case which was under his own care in which a female has the right axilla, side and front of the chest, covered with apparently discrete warts, some of which were removed for microscopical examination, and all of which were typical squamous epitheliomata.

I have collected 16 cases of squamous epithelioma which had developed on scars (no case of rodent ulcer on scar). The length of time which intervened between the injury which caused the scar and the appearance of cancer ranged between five and thirty years. There was no history of skin grafting. It does not seem essential that the scar should be large to become the seat of cancer, although in most of the cases the scar is very large. Nor is it essential that the wound should be healed, though in most cases complete healing had occurred. Curiously enough, the squamous epitheliomata of scars are limited at the edges of the scars, where the growth is apparently arrested. And lastly, the cancers seem to have begun well away from the margins of the scars which were the most extensive. I have not seen a case of cancer in a scar, therefore I cannot say that scars on which cancers develop exhibit abnormal states of nerve supply. But I have tested the tactile, pain, and temperature sensations of many scars, of many sizes and ages, and it is very striking how markedly abnormal most of them are.

The Spread of Cancer.

I wish to publish an area of occupation in cutaneous cancer. It can be seen in Figs. 3, 4, 5, 6, 7. By referring to Fig. 8 it will be seen that the anterior and inferior edges of these rodent ulcers correspond to the anterior and inferior limits of the skin supplied by the great auricular nerve, which is itself included in the supply of the second cervical posterior spinal root ganglion (see Figs. 9 and 10, and compare Fig. 7 with them). The anterior edge of the diseases in these figures also corresponds to the denervated area in Fig. 11. Mr. McAdam Eccles sent me a case of tertiary syphilis, in which the disease was extending symmetrically in the same areas.

I have a case of a cutaneous naevus which is occupying the region, and I have seen cases in which beards have become grey on the cheeks but not on the chins, and the

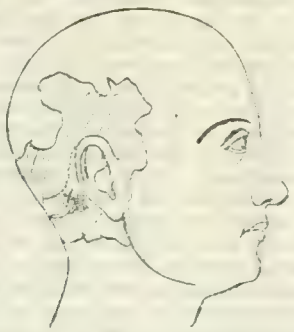
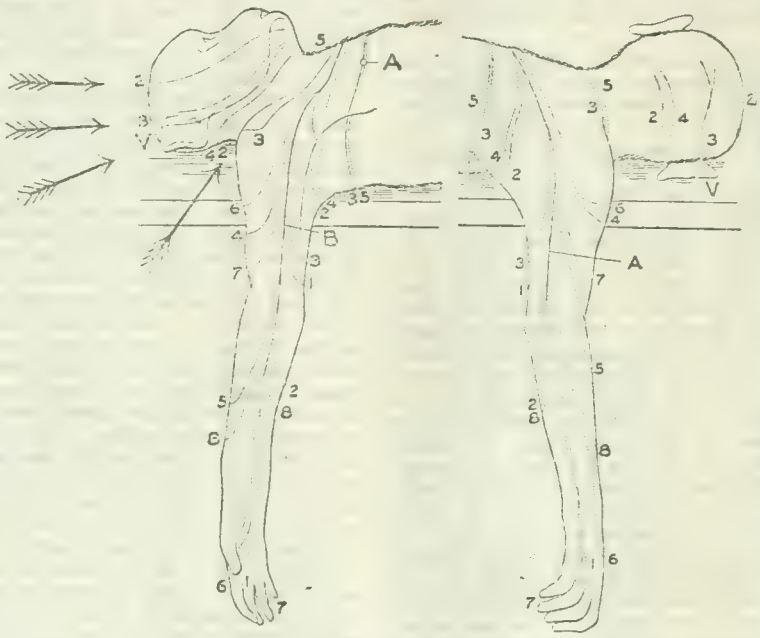


Fig. 7.—Dr. Sequeira's case of rodent ulcer; the disease began at the × behind the ear.

lines of demarcation between the two corresponded to the inferior margin of area of anaesthesia in Fig. 8.

Before leaving this subject, I want to draw fresh attention to the area occupied by the cancer in Figs. 12, 13, 14, and 15. The corresponding area is mapped out in the herpes zoster in Fig. 16, and in the denerva'ed area of the cheek in Fig. 18 Further, in Fig. 9 it will be seen that on the side of the head there is an area in which the distributions of the fifth cranial nerve and the second cervical spinal root ganglion overlap each other, and to a much smaller extent this area of overlap includes a portion of the parts supplied by the third cervical posterior spinal-root ganglion. I want to draw attention to the differences of behaviour between the different cases of rodent ulcers which affect this region of overlap, and to show how they adopt mainly two distributions, either that of the fifth cranial nerve or area, or that belonging to the second cervical posterior spinal root ganglion,



Figs. 9 and 10.—Reproduced from Dr. Charles Sherrington's paper on Experiments in Examination of the Peripheral Distribution of the Nerves of the Posterior Spinal Roots of some Spinal Nerves. *Philosophical Transactions* of the Royal Society of London, Series B, vol. 1898, pp. 45-186.

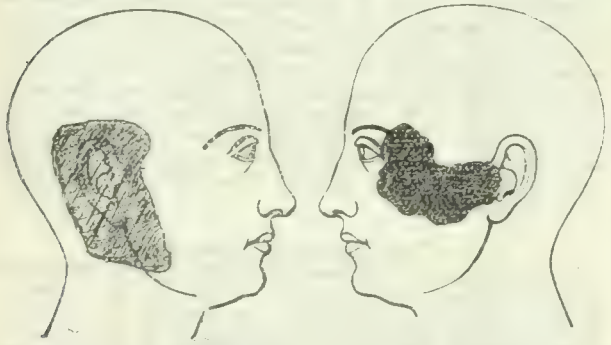


Fig. 8.—Area of anaesthesia to touch, pain and temperature upon division of great auricular nerve. (The sensations of the pinna and external auditory meatus were not accurately tested.)

Fig. 14.—Dr. Crombie's (North Berwick) case of rodent ulcer.

see Figs 3, 4, 5 6 7 for the former case, and Figs. 12. 13. 14, 15 for the latter. Therefore, although two rodent ulcers may begin on the same spot (in front of ear, for

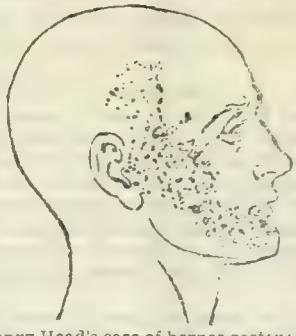
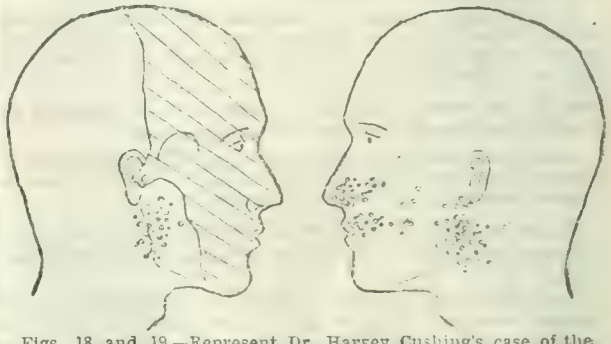


Fig. 16.—Dr. Henry Head's case of herpes zoster; the area affected corresponded to the cutaneous distribution of sensory fibres of the inframaxillary division of the 5th nerve. See *Brain*, autumn part, 1900.

indicate the assumption that these rodent ulcers are spreading in obedience to the mere anatomical arrangement of uncontrolled lymphatic and blood-vascular systems, or any other mechanical or developmental arrangement; for, if such were the case, the distribution would be the same in all cases, and would not show these particular differences of distribution. There would not be the distinct anterior and inferior limitations which are seen in Figs. 3, 4, 5, 6, 7, where there is a distinct tendency to adhere to the second cervical area, even when traversing the fifth cranial nerve overlap. This fact suggests the argument that because a rodent ulcer which is spreading in the second cervical nerve area does not alter its course directly it reaches the fifth cranial nerve area; that, therefore, there may be some factor of a nervous nature at work in the parts supplied by the second cervical posterior spinal-root ganglion which is not present in the



Figs. 18 and 19.—Represent Dr. Harvey Cushing's case of the distribution of herpes zoster on both sides of the face and neck. The right Gasserian ganglion had been previously removed by him and the oblique lines in Fig. 18 represent the area of anaesthesia.

fifth cranial nerve system. Further, it must be realized that the spread of cancer begins directly upon the first division and proliferation of the parent cell or cells of cancer, and hence if a nerve influence on the growth becomes clinically evident at a nerve limit, then



Fig. 3.—Dr Harrison's (of Bristol) case of rodent ulcer. The disease began in front of the ear.



Fig. 4.—Mr. Madden's (Cairo) case of rodent ulcer.



Fig. 1.—Squamous epithelioma on back of hand. (Guy's Hospital Museum.)



Fig. 15.—Rodent ulcer.



Fig. 2.—Squamous epithelioma on back of hand.



Fig. 5.—McMaddin's (Cairo) case of squamous epithelioma.



Fig. 6.—Rodent ulcer. Mr. J. R. Lunn's case.

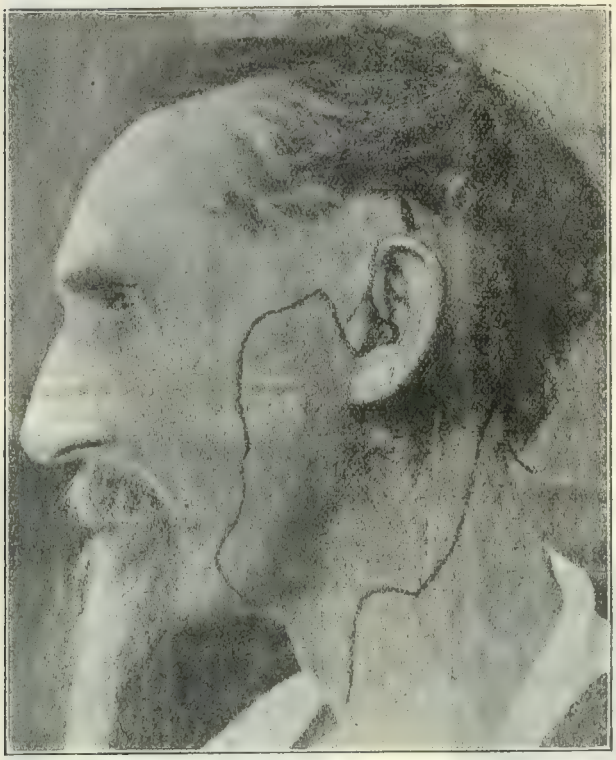


Fig. 11.—A case of Dr. Harvey Cushing's (Baltimore), which shows the segmental area of tactual anaesthesia after removal of second and third posterior spinal root ganglia.

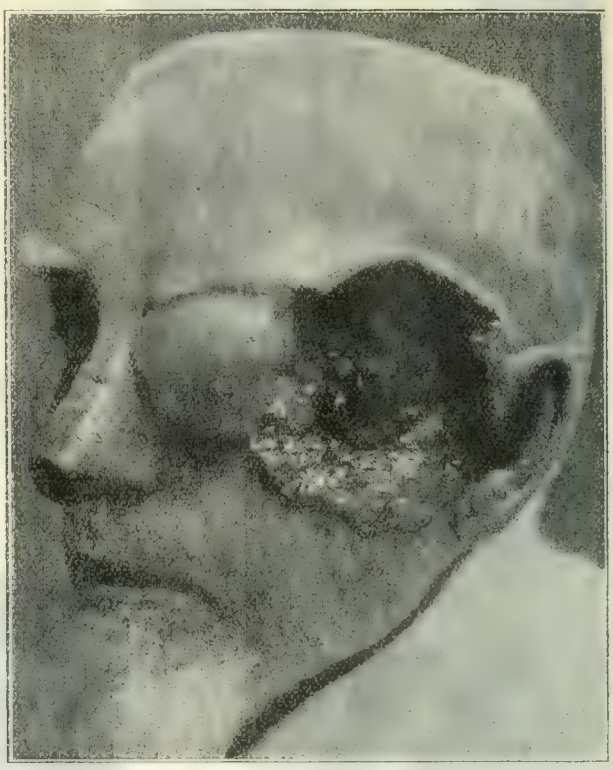


Fig. 12.—Rodent ulcer. (Cancer Hospital Museum.)

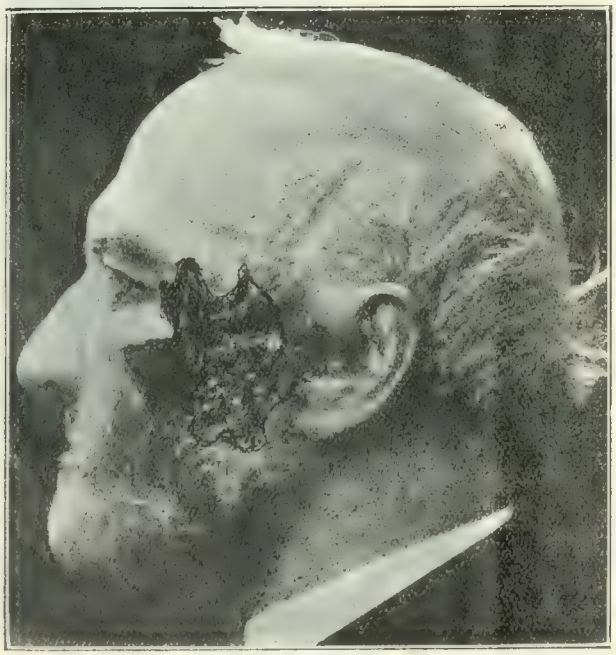


Fig. 13.—Rodent ulcer.



Fig. 17.—Dr. Sequeira's case of rodent ulcer.

it may also be exhibiting the same influence on the first division of the parent cell or cells of cancer. On the other hand, it may be said that the nervous influence (supposing it exists) which controls the spread of rodent ulcers may be called into operation only when cancer has started, and has by its presence affected such reflex nerve impulses as those of vaso-constriction or vaso-dilatation, for example. But, if such were the case, one would not expect to see the marked tendency to adhere to one of the areas where two or three overlap, and the rodent ulcer would not elect to spread in one of them in preference to another, and consequently both would be equally affected, and no definite nerve distribution would be visible.

I have another curious rodent ulcer distribution kindly sent to me by Dr. Sequeira. (See Fig. 17.) The disease began in the centre of the cheek. This might be said to be a pure spread in the lymphatic vessels of the part, but it may also be said, first, to be too transverse in direction for that to be the correct explanation; and, secondly, that its area of occupation may be one of a nerve distribution, because practically the same region is occupied by herpes zoster in Dr. Harvey Cushing's case, Fig. 19.

The case of Dr. Harvey Cushing depicted in Figs. 18 and 19 suggests that if the right Gasserian ganglion had been intact the distribution of herpes zoster on both sides would have been symmetrical. It is highly probable that the existence of a peripheral nerve is essential for the occurrence of herpes zoster as a conductor of irritant impulses from the ganglion, yet this is the only case I know which can be said to demonstrate this point. And suppose the spread of cancer be influenced by ganglionic disturbances they must be conveyed or not conveyed by peripheral nerves, and when a peripheral nerve is exposed and irritated by cancer and septic conditions, its power of conducting afferent and efferent impulses must be profoundly changed and the normal spread of cancer modified in consequence. In fact I have already shown grounds for believing that the growth of rodent ulcers are arrested, or at any rate do not spread so rapidly in denervated areas as elsewhere except when irritated by antiseptics, etc.[2] I have also pointed out inflammatory changes in posterior spinal root ganglion on whose cutaneous distribution cancer began and that I could not observe the same changes in the posterior spinal root ganglia into whose cutaneous distribution the cancer had spread.[3] Whether the changes which existed in the ganglion were primary or secondary to the appearance of the growth I will not now discuss, but it is as difficult to imagine how their presence can fail to influence the state of cancer as it is to comprehend how the influence acts or what it precisely is. In the present state of our knowledge one can only speculate upon the possibility of its being an active or irritative influence rather than one of a passive or an inhibiting nature.

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[1] Head and Sherren, Injury to Peripheral Nerves in Man. *Brain*, cx, p. 252. [2] British Medical Journal, December 12th, 1903. [3] Ibid., July 20th, 1907.

A FORM OF ORAL FILTER TO BE WORN DURING OPERATIONS BY ALL PERSONS INSIDE THE OPERATING ROOM.

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Owing to Mikulicz of Breslau and Dr. Mendes de Leon, considerable attention has been drawn of late to the question of the surgeon's breath as a source of wound infection.

The fear of infection is not from micro-organisms given forth in the ordinary act of expiration, but in the act of talking.

It has been shown by numerous observers that micro-organisms are not given off in the breath in ordinary quiet expiration; in fact, the expired air is sterile.

The buccal secretions of healthy people contain micro-organisms, and an enumeration is given of the organisms found.

Examinations of healthy buccal saliva prove that the following organisms are commonly present: *Streptococcus brevis* (Lingelsheim), *Streptococcus medius*, *Streptococcus conglomeratus*, *Streptococcus longus*. All the above cocci were found by Gordon to be present to the extent of from 10 to 100 million per c.cm. of saliva. Staphylococci in less numbers, 1 to 10 million per c.cm. No staphylococcus of the aureus variety was found. Bacilli were conspicuous by their absence. In addition to the above normally-found micro-organisms, every medical man is well aware of the accidental pathogenic cocci and bacilli that are to be found in the throats of apparently healthy individuals, such as the pneumococcus, bacillus of diphtheria, *Micrococcus tetragenus* (Koch and Gaffky). In the way of literature on the micro-organisms in the mouth there are: *The Mycology of the Mouth*, Goadby, London, 1903; *Die Micro-organismen der Mundhöhle*, Miller, second edition, Leipzig, 1892; *Microbes de la Bouche*, David, Paris, 1890.

In ordinary speaking, loud talking, orating, singing, shouting, sneezing, coughing, etc., organisms are projected from the mouths of healthy and unhealthy people in saliva droplets to various distances and in various directions. Flugge, and also others of his school, made extensive experiments in proof of the above. Papers by Flugge, Laschtschenko, Beninde, Heyman, and Koeniger are to be found in *Zeitschrift für Hygiene*, Bande 30, 34, 38. Modelled on the above experiments, we have those of more recent date by Dr. Gordon. Details of the technique are given at great length in Appendix B, No. 2. Sections 1 to 7 of the Thirty-second Annual Report of the Local Government Board, 1902-3, also an interesting paper by Dr. Rupert Collins, An Experimental Inquiry into the Infection of Operative Wounds from the Skin, the Breath, and the Air. This paper will be found in the British Medical Journal, July 15th, 1905, p. 121. Gordon found that salivary micro-organisms were capable of being projected in the salivary droplets to a distance of 40 ft. in front and 12 ft. behind the speaker. In all his experiments control tests were most rigorously carried out.

The organisms such as are projected in the salivary droplets of healthy individuals are capable of pyogenesis on a suitable soil. In the medical officer's report, Local Government Board, 1903-4, Dr. Gordon, in the "Differentiation of Streptococci," finds that two of his streptococci isolated from patients suffering from ulcerative endocarditis gave reactions identical with the two found to occur with the greatest frequency in normal saliva. The virulent streptococcus which occurred with greatest frequency in septic processes was fourth in order of frequency amongst salivary streptococci.

If there be truth in the foregoing statements, I would submit that it is in the best interests of the patient who is undergoing operation that those in the operating room should wear some form of mask or mouth filter.

The form of filter is a simple one, consisting of a square of butter muslin measuring 3 ft. 1 in. along each border. This square is folded up like an ordinary handkerchief and is sterilized with the dressings. After the surgeon, his assistants, and others in the operating room have sterilized their hands and put on their operating coats they will apply the muslin filter in this manner. Unfold the muslin from its handkerchief form until one fold remains, that is, the muslin is simply folded once, its area being halved. Grasp the folded edge with both hands and fling the muslin over the head bring the centre of the folded edge down to the centre of the forehead just above the eyebrows, pass the folded edges behind both the ears exposing the free ends down over the shoulders on to the front of the chest. (See Fig. 1.) Now strip (on both sides) the anterior free edge from the posterior free edge up to the level of the lobe of the ear. (This stripping is shown in Fig. 1 on the left shoulder, whilst the fold on the right has not yet been touched.) Now bring the posterior free edge across the face at the level of the bridge of the nose. (See Fig. 2). Likewise the remaining posterior free edge across the nose tucking the end in, about midway between the outer canthus of the eye and the external auditory canal. Now pull up



Fig. 1.

the collar of the sterilized coat round the muslin. (See Fig. 3.) With very little practice and some small amount of dexterity it is possible to bring over the nose and



Fig. 2.

mouth a doubled edge making in all four folds of muslin through which the expired air may be filtered.

During the recent visit of the Fleet to Japan I saw this filter in use in the operating theatre of the University of Osaka. The operation was an abdominal section lasting about an hour and a quarter, at no time during the operation did it seem necessary to have to readjust the



Fig. 3.

muslin. This oral filter is now in daily use at the Royal Naval Hospital, Plymouth.

A point not yet mentioned is the improbability that hairs and epithelium with their accompanying micro-organisms should fall into the wound, since the muslin covers the entire scalp, moustache, and beard.

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APPENDICITIS AT SEA.

WITH REMARKS ON THE SURGICAL EQUIPMENT OF THE MERCANTILE MARINE.

By A. E. JOHNSON, M.B., F.R.C.S.,

LATE SURGICAL REGISTRAR, MANCHESTER ROYAL INFIRMARY.

In the course of two voyages in vessels of the Royal Mail Steam Packet Company I had the somewhat unique experience of having to perform two operations for appendicitis.

The first case occurred on board the R.M.S. *Sabor*. On July 16th, 1907, the day after leaving Havana for Vera Cruz—a three days' run—I was called to see the captain's servant, aged 18, who complained of acute pain in the right iliac region and other symptoms pointing to acute appendicitis. On the two previous days he had been bathing in Havana harbour. He got up at 6 a.m. on July 16th, feeling ill and with abdominal pain, and worked until 8 a.m., when he was forced to turn in.

Though firmly believing in early operation for appendicitis, I considered that the difficulties of operating at sea warranted postponing operation as long as possible. During the afternoon of July 17th, however, the pain became more severe, the temperature rose to 101° F., and the pulse-rate to 110, with indications of perforation and impending diffuse peritonitis. Immediate operation offering the only chance of recovery, as we did not expect to arrive at Vera Cruz until the next day, I proceeded to operate with the assistance of Captain Cheret and Mr. Gibbard, the Chief Officer. After making all preparations, I anaesthetized the patient with chloroform, and Mr. Gibbard continued the anaesthetic under my direction. On opening the peritoneum a little clear fluid escaped, the appendix was found to be perforated, quite free from adhesions, and was removed. A small faecal concretion, about the size of a melon seed, was found lying loose in the right iliac fossa. A drain was inserted at one angle, and the rest of the wound closed. Fortunately all went well, and I take this opportunity of expressing my thanks to Captain Cheret for his able assistance at his first case, and to Mr. Gibbard for the admirable coolness he displayed in the administration of the anaesthetic under trying conditions. The patient had much to contend with, owing to heat, mosquitos, and flies; but his sufferings were very much alleviated by the kind way in which Captain Cheret provided him with every possible comfort. For ten days after the operation his temperature was always about 100° F. in the morning and about 101° F. in the evening, although free drainage was provided and there were no local nor general signs to account for the pyrexia. For want of any other explanation I was forced to account for it by the presence of an open wound in the tropics, and the temperature certainly fell to normal when we got out of the intense heat. Convalescence was uninterrupted, the wound being completely healed and the patient walking at the end of a month.

A point to which I would draw attention is the fact that the illness commenced after the comparatively violent exercise of swimming following a period of three weeks of the forced inactivity of life on board ship. Since the importance of inquiring for a history of trauma in cases of appendicitis was pointed out by Kelly and Hurdon[1] and attention drawn to the subject in this country by Mr. F. A. Southam,[2] a careful investigation of the histories in all cases may lead to the inclusion of many under a traumatic heading which would otherwise have been omitted. As Kelly points out patients will often attribute tumours, especially of the breast or abdomen, to an injury, but in *acute* abdominal affections their first thought is towards an indiscretion in diet or exposure to cold, and this may lead to a history of trauma being overlooked unless specially sought for. Small,[3] in 1898, collected from literature and individual reports, 15 cases of appendicitis caused by trauma, and stated his belief "that the true cause of the greater percentage of appendicitis in young men is found in the more frequent exposure to accidental injuries and strains, and to the strong contractions of the abdominal muscles necessary in their work." Six years later Kelly found 50 cases "with but little effort." In 40 out of these 50 cases the appendix deviated in some way from the normal, and in 30 concretions were found. The character of injury is of three kinds—blows, falls, and muscular exertion. Twenty of the cases collected by Kelly were due to exertion, including skipping, dancing (2), violent shaking of the body with the head downwards, long hunting, over-exertion, and fatigue lifting heavy weights (2), long bicycle ride (2), jumping (2), running, playing football, and severe strain while operating. Two of Mr. Southam's four cases might also be put down to strain. One case was that of a boy who strained himself jumping, and the other is that of a boy who was about to dive into a swimming bath and was suddenly pushed in, so that he fell flat upon his abdomen, which forcibly struck the water. In this case the immediate onset of symptoms might be put down to the blow, but to my mind a more likely explanation is the muscular strain in trying to recover himself, or the sudden translation of the viscera tearing some adhesions. I would describe my case as one of traumatic appendicitis, the onset of symptoms so soon after exertion bringing it into line with other recorded cases. There was here a faecal concretion, as in so many of the recorded cases, and one must recognize, in considering trauma as an exciting cause of acute appendicitis, that it is extremely unlikely to lead to symptoms in the case of a normal appendix. There had been no previous attack in this case, but it is common to meet with patients who have recovered from an attack, and who in the quiescent period suffer from slight pain in the right iliac region on over-exertion, and such warnings, indicating some abnormal condition, should lead to operation without delay.

The second case occurred on board the R.M.S. *Nile*. On October 22nd, 1907, one of the bedroom stewards, aged about 40, commenced with typical symptoms of appendicitis. The course was not so acute as in the first case, and after three days the temperature and pulse-rate returned to normal. The pain subsided, but tenderness on pressure and muscular rigidity in the right iliac region remained.

On the evening of October 29th—seven days after the onset of the illness—the temperature rose to 101° F. and the pulse-rate to 100, and I decided to operate. An abscess was found, and part of the appendix protruded into the abscess cavity, which was completely cut off from the general peritoneal cavity. About an ounce of pus was evacuated, and that part of the appendix which presented was removed. Owing to the absence of retractors, it was impossible to remove the whole appendix, and I could not ligate the stump left after removing the greater part, but was forced to leave a pair of Spencer Wells forceps attached for forty-eight hours. Free drainage was provided, convalescence was uninterrupted, and the wound was healed, and the patient walked off the ship within five weeks of the operation. I take this opportunity of expressing my thanks to Mr. Gale, the chief steward, who kindly kept the patient under the anaesthetic under my direction, and to Miss Alderman, stewardess, whose services in the nursing of the case were invaluable, and especially welcome, after the absence of such help in my previous case. My thanks are also due to Captain Boby for the excellent accommodation he provided for the sick man.

A point of interest in this case is the fact that the patient had suffered from a previous attack of appendicitis, and this impressed me with the grave responsibility which a medical man incurs by not advising operation after a single attack. Postponement may result in the patient being seized with a more severe attack when far from surgical aid or when an operation may have to be performed in adverse circumstances. Especially does this apply when it is known that a patient will probably be going to sea, or to some place where a surgeon is not likely to be within easy call.

Another way in which these cases prove instructive is in drawing attention to the surgical equipment of emigrant ships. The Board of Trade requirements are necessarily followed by all British shipping companies which carry emigrants, and a reference to the list of requirements will show that there is the necessary equipment for dealing with almost any emergency which might arise. The list of instruments required by the Board of Trade on first sight may seem to supply all that a surgeon can reasonably demand. There are many special instruments provided, and probably no one would ask for more. One might suggest one of the modern apparatuses for the safer administration of anaesthetics, or a larger number of artery forceps, but these can be done without.

The instruments required by the Board of Trade regulations are as follows:

In pocket case.
- 1 Artery forceps.
- 1 Dressing forceps
- 1 Finger knife.
- 1 Curved bistoury, sharp pointed.
- 1 Curved bistoury, blunt pointed.
- 2 Probes.
- 1 Silver director.
- 1 Caustic case.
- 1 Scissors.
- 1 Spatula.
- 2 Lancets.
- 1 Gum lancet.
- 12 Needles in vaseline.
- 1 Tablet of silk with four sizes.

- 1 Fergusson's small saw.
- 1 Amputating saw.
- 2 Amputating knives.
- 1 Pair large dissecting forceps
- 1 Bone forceps (bent).
- 2 Pairs Wells's pressure forceps.
- 1 Trephine (½ in. size).
- 1 Elevator.
- 1 Trephine brush.
- 1 Eye spud.
- 2 Scalpels.
- 1 Hernia knife.
- 1 Hernia director.
- 2 Trocars and cannulas.
- 1 Aneurysm needle.
- 1 Set of tooth instruments (7 forceps in leather roll).
- 1 Set tracheotomy instruments (3 double tubes and trachea dilator).
- 1 Set midwifery instruments (long forceps) in leather roll.
- 1 Esmarch's tourniquet (plain with hooks).
- 1 Oesophageal probang with bristles.
- 1 Aspirator with 2 needles in case.
- 3 Silver catheters (Nos. 4 and 8; and No. 12 with prostatic curve).
- 1 Full set of soft olive-headed catheters.
- 2 Clinical thermometers, self-registering.
- 1 Stethoscope.

There is, however, one omission from the list, one which can easily be filled. The absence of retractors made some difference to the procedure in my second case and urgent abdominal affections which require surgical treatment seem ever on the increase. It is, therefore, essential that a complete outfit of general surgical instruments be at the command of ship surgeons, who so often have to do their work under unfavourable conditions, and the inclusion of two pairs of retractors of useful sizes would complete the list. The need of retractors has been already pointed out to the Royal Mail Steam Packet Company, and they have no doubt been supplied. Other companies would probably be willing to supply the deficiency, and retractors should early be made a Board of Trade requirement.

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MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

CALMETTE'S OPHTHALMO-REACTION FOR TUBERCULOSIS.

The observations of Dr. Weber in the British Medical Journal of February 15th, p. 386, are disappointing to those who, like myself, had hoped that in Calmette's ophthalmo-reaction we had a reasonably sure diagnostic test for the presence of tubercle in an early stage. The cases I have tested by the Calmette method have given varying results. In one case it cleared up the diagnosis in a difficult case, and had the effect of making the stethoscopic signs much more apparent. Crepitation was easily heard where before it had been very slight and doubtful, and I am told by the medical officer of one of our larger sanatoriums that this is not unusual. In a second case, when the history and examination led me to regard the case as tuberculous, there was a negative result.

Since the testing for tubercle bacilli in the sputum is virtually useless in most early cases, it would be most interesting to general practitioners if you published some statistics in which numerous cases had been tested by Calmette's method; for if the results are similar to those of Dr. Weber, the reaction must be regarded as quite uncertain and unreliable, either positively or negatively. In using this test in private practice it is advisable to warn the patient that there may be considerable inflammation in the eye for some days. In one of my cases there was very acute conjunctivitis, lasting quite a week, and requiring soothing lotions and an eyeshade, though the eye tested was quite free from any trouble at the time of using the test.

Putney. A. Dumville Roe, M.B.Cantab., M.R.C.S.

In the hope that they may help to supply information of which Dr. Parkes Weber suggests the need, I venture to record these few observations. Conviction of the truth of the observation, older than the science of medicine, that no test or rule is infallible, and experience that the drawback of fallacies is much lessened by a knowledge sufficient to classify them led me to keep a record of the results of the applications of Calmette's test made here. The record of over 170 cases tends to make me believe the general accuracy of Calmette's test and confirms the law of exceptions. Of these 170, some 3 per cent., or less, of apparently non-tuberculous patients gave reactions. It is true that many were ordinary hospital patients, but some 15 consecutive cases of the type which Dr. Weber describes as suitable controls were tested. These were adults using their eyes for many hours by day and night for microscopic work, reading, and writing. All were apparently healthy. None gave a reaction. A 1 per cent. solution, less than eight hours old, was used, and the identical solution, used on patients, gave reactions.

All Dr. Weber's cases I cannot explain; two of the five I can. I have proof that a reaction obtained only after a second application of test, even though it be applied to the opposite eye, is no evidence of a tuberculous lesion.

As regards his second point, several of the patients to whom the test has been applied have had chronic conjunctivitis, and this has in no way interfered with the result, positive or negative.

It is certainly wise not to try the test in an eye that is acutely inflamed for several reasons: (1) The difficulty of observing the result; (2) the likelihood of changes in the natural course of the conjunctivitis misleading one; (3) the possibility of an additional irritant, even though not specific, causing an exacerbation.

I have tried the test in other forms of eye disease,

filamentary and interstitial keratitis, irido-cyclitis, and choroiditis, and have found the results to agree in the main with results in other cases.

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UROTROPINE IN NIGHT BLINDNESS.

Defective nutrition plays an important part in the production of night blindness, as 9 out of 12 cases I came across were found in an orphan asylum. All my patients were children, their ages varied from 8 to 12.

The dry and foam-like condition of the conjunctiva near the margin of the cornea, known as xerosis, was noticed in 2 cases only, and it is also seen occasionally in children who are not suffering from night blindness.

A peculiarly muddy-coloured pigmentation of the conjunctiva around the inner and outer margins of the cornea was however observed in 11 out of 12 cases, and which seems to me to be of some importance in the diagnosis of the disease, as I have detected night blindness in two children whose parents were not aware of the complaint, by observing this phenomena, which may be termed conjunctivitis pigmentosa. This pigmentation is due to the irritation of the conjunctiva with particles of dust, as it is found only in the exposed portion of the conjunctiva and never in the part covered by the lids. The diminished lacrymal secretion and the diminished sensitiveness of the conjunctiva are also factors essential in its production. The whole pathology of night blindness is embraced in two words—namely, torpor retinae. I believe torpor retinae, xerosis, and conjunctivitis pigmentosa are nothing but the effects of the diminished alkalinity of the blood, and the night blindness is easily cured by the internal administration of urotropine. I consider this drug as a specific in this troublesome complaint. Most of my cases got well completely within a week.

S. Mallannah, M.D.Edin., D.P.H.Cantab.
Hyderabad, Deccan.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

TWO CASES OF PERFORATED GASTRIC ULCER: OPERATION: RECOVERY.

(Reported by P. Clennell Fenwick, M.B.Lond., F.R.C.S.Edin., Honorary Surgeon.)

The first patient in the following two cases, a man aged 44 years, was admitted on June 7th, 1907. He had had symptoms of gastric trouble, accompanied by vomiting and diarrhoea, for the past four years. During the last few months he had been carefully dieted. He was seen in the out-patient department the day before admission, and then complained of pain in the stomach and attacks of vomiting. The abdomen at this time was examined, and was noted as "very hard." The following afternoon he was suddenly attacked with intense pain, and he vomited. He had had a light breakfast and very little lunch. There was no history of haematemesis or melaena. He was then admitted.

Condition on Admission.—He was very cold, pale, and collapsed. The abdomen was rigid, and pain felt on pressure over the gastric area. Temperature 96°, pulse 102. The legs were drawn up. A sixth grain of morphine was given.

Operation.—At 8 p.m. I incised in the right rectus line, and immediately exposed a clean-cut opening into the stomach the size of a threepenny-piece. The opening was on the anterior surface of the stomach and close to the pylorus. It was quickly closed by Lembert sutures, infolding the edges, and reinforced by two more superficial Lembert sutures. An india-rubber drainage tube was inserted into the right flank, and a second one into the suprapubic region.

Progress.—The temperature rose immediately, and reached 101° by 2 a.m. There was no pain, and patient looked well next day. He passed flatus thirty-six hours after operation, and forty-eight hours after operation the temperature was again normal, and never rose above this. On June 11th peptonoids were given every hour, and in ten days he was taking light diet without any trouble. Immediately after operation he had been given one pint of saline per rectum, and this was repeated every two hours for three days.

Result.—He left hospital on July 16th, but on September 27th came back on my advice to undergo gastro-jejunostomy. This was performed by my colleague Dr. Acland, owing to my disablement by a poisoned hand. The incision was in the middle line, and very few adhesions were found round the first operation scar.

At the date of writing—November 2nd—he is convalescent and looking very well.

The second patient was a woman, aged 31 years, who was admitted in a state of extreme collapse. Three years before she had a severe attack of abdominal pain, but could give no details of this attack. For the last fourteen days she had been feeling ill, and had slight pain in the gastric area. On July 13th she was working till the afternoon, and then went for a walk. While walking she was seized with acute pain in the left side. She reached home and the pain increased in severity, but she did not vomit. On the following day she came into hospital.

State on Admission.—She was a thin woman, with drawn face and sunken eyes. The nose was cold, and the abdomen greatly distended and tender all over. The percussion note was everywhere tympanitic, and the liver dullness was obliterated. A diagnosis of ruptured gastric ulcer was made.

Operation.—At 5 p.m. the abdomen was opened in the middle line, and a quantity of gas escaped. A good deal of fluid, non-offensive, was sponged out. On drawing down the stomach, a perforation the size of a sixpenny-piece was seen. This was situated to the left of the middle line, just below the lesser curvature. The walls of the opening were very thick, and more ragged than the previous case. The opening was rapidly closed with fine silk sutures. Drainage tubes were put into the right loin and suprapubic region. Saline was administered per rectum every two hours, and she rallied well.

Progress.—On July 15th the temperature was 100.4°, pulse 118. Some 53 oz. of urine had been passed during the previous twenty-four hours, and there was no pain. The temperature rose each evening and respirations became rather quick. On July 31st the respirations were 56, the temperature was 102.4, pulse 148, and patient looked very ill.

Aspiration.—After consultation the left pleura was aspirated and pus found. The patient was too ill for anaesthetic, so I incised on the left side and put in a drainage tube, releasing a very large quantity of foul-smelling pus. The ethyl chloride spray was used. At least five pints of pus was measured and some escaped.

Result.—On August 1st the temperature was normal and patient had greatly improved. Some days later I excised a rib and provided free drainage. At the present date—November 2nd—the patient is up in a chair and improving steadily. There is still discharge from the empyema, but she is gaining weight and is looking well.

Remarks.—In the first case I was fortunate in finding the perforation immediately under my incision, and in getting the case so soon after the accident, about five hours only had elapsed between the perforation and the operation. The effect of the frequent rectal injections of saline appeared most beneficial. The occurrence of the purulent pleurisy in the second case is of interest. After operation I kept her in a raised position for about ten days, she then asked to be allowed to lie down, and from this I date the beginning of the chest trouble. I believe if I had kept her in the upright position I might have avoided the possibility of any infection of the pleural cavity.

Midland Medical Union.—The seventh annual meeting of the Midland Medical Union was held at the Midland Hotel, Derby, on February 13th, Mr. A. Chawner, of Clay Cross, President, in the chair. Amongst those present were Messrs. R. Morrison, R. G. Allen, and T. Corkery; Drs. F. Cassidy, G. G. Macdonald, J.P.; J. G. Shea, J.P.; and W. B. A. Smith. Letters and messages expressing regret for inability to attend were received from Drs. Geo. Booth, J.P., A. Fulton; Messrs. J. H. Cox, J. Court, J.P., Stanford, Ashworth J. H. Booth, W. A. Warters, and others. Dr. R. G. Allen of Belper was elected President for the ensuing year, and the Council and officers of the Union were appointed. The reports of the Council and of the Branches were received and adopted. The Honorary Treasurer's accounts and the Auditors' report were received and adopted. In the evening the Midland Medical Union held its annual dinner.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Professor A. FRASER in the Chair.

Friday, January 24th, 1908.

ANATOMY OF THE ILIAC COLON IN RELATION TO HERNIA.

DR. R. A. STONEY read a paper on this subject, suggested by three cases recently seen by the speaker, where a hernia of this portion of the large intestine had occurred. Two were hospital patients who were operated on for the radical cure of left inguinal hernia, and in each case the sac, on being opened, was found to contain a piece of the large intestine invaginated through the posterior wall, the sac being incomplete. The third case was that of an old dissecting-room subject (male) with a large femoral hernia on the left side, which was found to contain, in addition to about 3 ft. of the small intestine, a loop of large intestine which proved to be about 3 in. of the iliac colon. Though the iliac colon usually had no mesentery and lay far back in the iliac fossa, there were two conditions sometimes present which might increase the liability on this part of the intestine to become extruded from the abdomen—first, the presence of a mesentery (10 per cent., according to Jonnesco); secondly, a low position in the iliac fossa, the intestine running along in close relation to Poupart's ligament. There were three ways in which a hernia of the iliac colon might occur: (1) It might be drawn down into or through the inguinal canal by an extra attachment of the gubernaculum—that was the congenital hernia; (2) it might be drawn down by a protrusion of the peritoneum covering it in the formation of the sac of an ordinary hernia; (3) there might be a giving way or lengthening of the supporting apparatus of this portion of the intestine, and a subsequent protrusion of it by the expulsive action of the abdominal muscles. The relations of the peritoneum forming the sac and covering the gut would differ according to the mode of formation of the hernia. In the congenital form the sac was probably always incomplete, as there was merely a displacement of the gut and the surrounding peritoneum into the scrotum, so that they maintained their normal relations to one another—that is, the peritoneum only partially covered the intestine. In the second form also the sac was probably always incomplete, as even if the gut had a mesentery to start with its left or lower layer would be taken up first in the formation of the sac before the gut was drawn into the hernia. Unless the hernia was of enormous size, this form was likely to occur only if the intestine had an abnormally low position. In the third form the presence or absence of a complete sac would depend on which of the two factors was at work. If it was due to a giving way of the attachments of the intestine it slid down behind the peritoneum and the sac was only partial. This might be truly described as a "hernia *en glissade*." If, however, it was due to a lengthening or stretching of the support of the intestine the latter either had a mesentery to start with or obtained one which finally became long enough to allow the gut to reach the internal abdominal ring, and be herniated like any other portion of intestine. In that case, of course, the sac would be complete; in fact, it was probably only in the hernia formed in this way that the sac was ever complete.

Professor M'LOUGHLIN said that the attachment of the gubernaculum to the peritoneum of the iliac fossa and the drawing down of the testis on that peritoneum was the general rule. It was rare to have it left behind. If the pulling of the gubernaculum on this peritoneum was to be considered as the sole cause of the congenital variety of hernia of the iliac colon one would expect to find this form of hernia a common one; but, as stated by the lecturer, it was rare. The cause, in consequence, was more likely to be *rarely* present. Now, in the fourth month, when the gubernacular bundle was beginning to push its way through the abdominal wall into the scrotum, the hind gut was provided with a mesentery. Should that mesentery be *unusually* long, especially about its centre or iliac colon portion, the free gut would swing low in the iliac fossa, and the future iliac colon would come to lie in the dangerous zone beside the internal abdominal ring. Fusion of the mesentery with the peritoneum of the iliac fossa (as was the rule) might then take place, and the fusion would be with the peritoneum close to the opening in the wall into which the testis was passing. That peritoneum would be drawn down into the opening by the action of the gubernaculum, and so the gut would pass down the canal in the wall of the hernial sac. The cause of the congenital form was thus more likely to be a twofold one: (1) The *accidental* lengthening of the mesentery of the mid gut; (2) the action of gubernaculum—the first being the determining factor.

Dr. STONEY, in reply, said Professor M'Loughlin's suggestion was extremely interesting, and quite as probable an explanation as his own.

SPECIMENS.

Mr. ADRIAN STOKES exhibited a fetus showing transposition of viscera with a tricoelian heart. The specimen was obtained by Dr. Jellett in 1896, and was shortly described by him in the *Lancet* of 1897 as a case of transposition of the viscera with a tricoelian heart. Professor FRASER exhibited: (1) The hemispheres of an encephalon, with well-marked interruption of both central sulci; (2) a duodenum of unusual form; (3) the main artery of the limb passing down on its posterior aspect. Professor M'LOUGHLIN exhibited: (1) A case of dorsal origin of the right subclavian artery, with associated vascular irregularities; (2) an example of unusual position of large intestine; (3) one of irregular disposition of the hind gut division of the colon.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., President, in the Chair.

Monday, February 17th, 1908.

TUBERCULOSIS OF THE KIDNEY.

MR. CHARTERS J. SYMONDS delivered the second of the Lettsomian Lectures for 1908. He began by referring to the large, painless, movable, tuberculous kidney as being so well known as to need but a passing reference. In the cases referred to the patients had all given a history of pain of one to three years' duration. In a case operated upon in 1902 there had been frequent micturition in the early stages, then frequent attacks of pain, and as the tumour enlarged cessation of these symptoms. The patient recovered and was alive and in excellent health in 1907. The general health of these patients was said to be good, and they were able to work. From a clinical point of view they resembled pyonephrosis or hydronephrosis in the length of the history, the character of the pain, and the nature of the tumour. The leading initial symptoms of tuberculosis of the kidney were next passed in review: First, renal colic; in many cases it exactly resembled that produced by a calculus, as in a case of a man of 46 who, without any previous symptoms, had three attacks of renal colic. Next albuminuria, as an early sign, was commented upon, one of the chief points being the proportion of albumen to the pus, it generally being more abundant than could be explained by the pus. It was pointed out that albuminuria might occur without any other symptoms and in both that form where the ureter was shut off, as in a case quoted, as well as when it was patent. Special attention was called to the fact that as miliary tuberculosis was painless and as extensive destruction might take place without symptoms, an examination for bacilli in unexplained cases of albuminuria was important. Of haematuria as an initial symptom one case was related, and though complete demonstration of renal infection was not possible, the man got perfectly well under treatment by tuberculin. Vesical and urethral irritation were shown to be present in a large number of cases without infection of the bladder, and even where vesical tuberculosis existed the irritation was, in some instances, not greater than when the bladder was healthy. The tolerance of the bladder to tuberculous pus was illustrated by several cases. In some the infective material must have entered the bladder for two years or more. This point was thought to be important in view of the danger of such an infection being unduly urged as an argument for immediate operation. The routine examination of the urine for tubercle bacilli when small quantities of albumen and pus were found without renal or vesical symptoms, but associated with ill health and anaemia, would reveal many cases of early tuberculosis of the kidney. The tubercle having

been found, the next point was to ascertain the incidence of the disease by means of the cystoscope, segregation, or other methods. The lecturer thought, however, that the ureteric orifice would not exhibit characteristic changes until the ureter itself was infected. In the absence of localizing evidence reliance must be placed on hygienic methods, and the injections of tuberculin, and by these means there was no reason why early tuberculosis of the kidney should not recover. He thought a good many of the cases of albuminuria that did recover had been of tuberculous origin. How long were they justified in waiting after tuberculosis had been localized in one kidney before operating? That there was no necessity for immediate nephrectomy was shown by the cases recorded in the first lecture. The two principal complications—infection of the bladder and dissemination—were certainly long delayed. He therefore thought that when the bacilli were few, the albumen and pus variable, and where vesical irritation was bearable, the bladder healthy, and the ureteric orifice normal, postponement was justifiable. How far complete recovery could be brought about had yet to be ascertained, but he thought that when the ureteric orifice showed positive evidence of disease operation should not be delayed. Nephrectomy should be performed when the local symptoms indicated progressive destruction of the kidney, as shown by pain, vesical irritation, a lumbar tumour, or the presence of a considerable amount of pus in the urine. These symptoms indicated probably that no recovery could take place, in the sense that some renal tissue would be left, and therefore it was better to cut short an illness by removing the kidney. In the absence of the symptoms referred to the best evidence as to the necessity of nephrectomy was in the appearance of the ureteric orifice. It was thought that the cases demonstrated that tuberculosis of the bladder was not a contraindication to nephrectomy, especially if the infection was confined to the neighbourhood of the orifice of the infected ureter, and looking to the well-known possibility of recovery in vesical tubercle, Mr. Symonds thought that nephrectomy was justified, even with multiple foci. The question whether slight infection of the other kidney, as indicated by a few bacilli from that side, should contraindicate nephrectomy when the other was obviously tuberculous, was considered, and the question turned upon the distress caused by the obviously affected organ and upon the curability of renal tuberculosis. He expressed the opinion that under such circumstances, where a kidney was causing distress and affecting the health, it should be removed, as tending to improve the general health and promote recovery of the remaining kidney. Such a proceeding compared with the removal of a suppurating knee-joint with existing phthisis. The question whether the ureter should be removed at the same time as the kidney or subsequently was next discussed. Cases were quoted to show that a tuberculous ureter might completely recover, even when associated with tuberculosis of the bladder, and that on this ground no strong reason could be given for immediate or subsequent ureterectomy. In one case, however, the ureter had to be removed for a persistent loin sinus and vesical irritation nearly a year after the nephrectomy. It was followed by complete relief. The operation was done in 1897 and the patient was in perfect health at the present time. He quoted another case to show that recovery was more rapid if the ureter was removed at the same time as the kidney. On the whole he was strongly in favour of this proceeding provided the patient was able to bear the additional strain, but looking to the fact that recovery took place when the ureter was left it was not justifiable to run any risk. With regard to the method of removal of the ureter he preferred to separate the muscles, as in the operation for appendicectomy and draw the ureter down. Done at the same time as the kidney the operation was greatly expedited by the direction given by pulling upon the loin end. He pointed out that the ureter always went up with the peritoneum and must, therefore, be sought for on the anterior surface of the wound. The advantage of preliminary nephrotomy was illustrated by a case where the general infection was completely relieved and a successful nephrectomy carried out later. The value of a preliminary incision into the kidney was that it gave an indication of the amount of renal tissue left; that the urine could be collected from the bladder, and the secreting capacity of the other kidney ascertained. In conclusion, the routine examination of the urine was urged in cases of renal pain and albuminuria; also in all cases of unexplained vesical or urethral irritation and haematuria; that nephrectomy should be performed as soon as there was evidence of destruction of the kidney or infection of the ureter; that nephrectomy was not negatived by vesical tubercle nor by slight miliary tubercle of the opposite kidney.

LIVERPOOL MEDICAL INSTITUTION.

THOMAS BICKERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Thursday, January 30th, 1908.

PRODUCTION OF PSEUDO-ARTHROSIS AT HIP-JOINT.

MR. ROBERT JONES described his operation for the production of pseudo-arthrosis at the hip-joint without disarticulation of the femoral head. The great trochanter was first separated from the shaft by a broad osteotome, and the neck of the femur either divided or removed, and the trochanter was screwed on to the head of the femur, which lay in the acetabulum. The operation might be employed in all varieties of bony ankylosis, but was eminently suited for old people with malum coxae senilis, where the shock of disarticulation was serious.

ISCHAEMIC PARALYSIS.

Mr. ROBERT JONES also described his procedure in the treatment of Volkmann's ischaemic paralysis, and his operation in paralytic calcaneo cavus. The communication was discussed by the PRESIDENT, Messrs. THOMAS and NEWBOLT; and Dr. ABRAM and Mr. JONES replied.

ECTOPIC GESTATION.

Dr. BRIGGS read a paper on the diagnosis and treatment of ectopic gestation, mainly founded upon a clinical study of 124 cases of interrupted early gestation, marked by physical signs and symptoms at or before the end of the second month; deducted from an inclusive total of 139 cases, all of them treated by operation, the 124 cases left 15 others, 9 at two to six months, 2 at six months, 3 about the full term, and 1 nine years after the full term, not included in the paper. The earliest disturbances amongst the 124 early ectopic gestation sacs occurred after intervals of six, ten, and eighteen days beyond the cessation of a previous normal and regular menstruation. For the group of clinical symptoms and signs indicative of these disturbances, Dr. Briggs fifteen years ago had instituted and since adopted the term "peritoneal crisis." He maintained that the symptoms and signs of sudden onset were often moderate or mild, and that even trivial, locally recurrent pains, together with slight, irregular menstrual and intermenstrual blood loss, were not to be construed as harmless or insignificant until the physical signs had been closely watched or waited for. A more prompt appreciation of their significance and of what might lie before the patient would lead to earlier, easier, and safer operations, and to the more frequent recognition (with the Trendelenburg position for operation) of "unruptured tubes," and a little free intraperitoneal blood, even in cases where the acute peritoneal crisis had been recent and severe. To postpone operation was to incur adhesions and haematocele sacs in their various forms. The peritubal (Sänger and Taylor) and the paratubal (Sampson Handley) haematocele sacs for their intact removal must be in a suitable physical condition; earlier and later in their course the physical conditions might defy intact removal. Intact removal was not indispensable, but the handling of organized and organizing tissues, especially of adherent blood clots, or simply draining them, did not diminish the post-operative risks. Localized haematocele sacs as intraperitoneal formations subsequent to originally free intraperitoneal haemorrhages possessed a stage at which there was both free and localized blood; the free blood outside the haematocele sac in process of absorption might be accepted as evidence of secondary rupture of the tubal or haematocele sac. Dr. Briggs believed that the older statistics of the prevalence of tubal rupture were inaccurate, in consequence of the frequency with which gestation sacs were torn or ruptured by the fingers of the operator. In the future the continued use of the

Trendelenburg posture, lending sight and light to the lower abdomen, would show, as it had shown in his more recent experience, that gestation sacs before operation were rarely ruptured. Werth and Taylor and Bland-Sutton had established their respective contributions to the process of tubal abortion. Dr. Briggs produced old gestation sacs, nine years old downwards, to demonstrate what might remain in a latent or active form in the patient after apparently successful expectant treatment. During the first ten years up to the end of 1897, 1 vaginal and 20 abdominal sections, compared with the second ten years 17 vaginal and 101 abdominal sections, denoted a change from expectant to operative methods in his practice. He showed, from nine of his cases, bilateral lesions; on one side a tubal gestation sac and on the other a pyosalpinx once, a small ovarian cyst twice, and old adherent, inflamed tubes six times, masking the diagnosis of ectopic gestation from the symptoms. A three years' old and a recent tubal pregnancy on opposite sides coexisted in one case. A second tubal pregnancy on the opposite side had been treated by a second operation in three of his patients. Dr. Briggs referred to a paper read by him in 1897, in which he had produced evidence that intraperitoneal haemorrhage and haematocele were occasionally associated with lesions other than those of ectopic pregnancy. The very rare rapid fatalities associated with tubal rupture form a very small class of their own; operative treatment, if at hand, is almost excluded by the brief space of time available. "To operate," says Dr. Champneys, "during the state of shock is, in many cases, to kill the patient." Dr. Briggs said he had invariably acted on this principle, and he showed a series of ectopic sacs successfully removed from patients after they had recovered partially or wholly from a peritoneal crisis. The severity of a peritoneal crisis was no certain measure of the amount of haemorrhage. He was of opinion that, with this exception, delay in the operative treatment of ectopic gestation increased its dangers. There were two deaths following operative treatment amongst his 124 cases, (1) after an unusually troublesome and risky operation amidst dense adhesions in a patient who had refused operation for appendage disease three months previously, and (2) after the operation for abdominal drainage of a very large haematocele in a very anaemic woman: death resulted from anaemia.

The paper was discussed by the President, Drs. Grimsdale and Gemmell; and Dr. Briggs replied.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Clinical Evening.

E. Treacher Collins, F.R.C.S., Vice-President, in the Chair.

Thursday, February 13th, 1908.

Operation for Detached Retina.

Mr. L. Paton showed a case of detachment of the retina treated by operation. The patient had been sent to the National Hospital for the Paralysed with the diagnosis of double optic neuritis, and the remark that both nasal fields were lost. The right eye had been useless thirty-six years, and for a year there was mistiness in the left. Vision was then $\frac{6}{60}$, now it was $\frac{6}{12}$. To get at the main point of detachment, he trephined above the tendon of the external rectus, and pulled the eye well forward by a tenotomy hook under the external rectus. He cauterized through the sclera until the subretinal fluid escaped, and aspirated the rest with a lacrymal syringe. He then perforated the retina above and below. In the middle of January the field was quite full.

Buphthalmia with Malformation of Iris.

Mr. Hosford showed a case of buphthalmia with malformation of the iris, and the causation of the condition was discussed.

Colour Perception.

Dr. F. W. Edridge-Green gave a lantern demonstration on some primary facts of colour perception, and an interesting discussion eventuated in a resolution being proposed by Mr. C. D. Marshall:

> That a committee of the Society be appointed to go into the question of colour-blindness and the tests for its detection and report to the Society.

Mr. Lang seconded the proposition.

Mr. Marshall asserted that the present tests failed in many instances, and that Holmgren's test could not be relied upon.

The resolution was passed.

Orbital Case for Diagnosis.

Mr. J. F. Cunningham showed an orbital case for diagnosis. It was thought to be apical periostitis, or caries of the apex of the orbit, or an optic nerve tumour.

Microphthalmia.

Mr. J. H. Fisher showed a patient with microphthalmia, and a case of fundus changes resulting from injury at birth. The second of these patients was born with great difficulty, and there was a huge haematoma of the left frontal region, and soft tissues in the right temple and orbit were much damaged and lacerated by forceps. Possibly the optic nerve was damaged, and there was haemorrhage from the lacerated vessels into the hyaloid canal, and that this formed the basis for the connective tissue organization. He did not think there was any shrinking of the globe.

Retinitis Proliferans.

Mr. Bardsley showed a case of retinitis proliferans. A large bundle of connective tissue came forward into the vitreous. He regarded it as congenital, as there was a large detachment of the retina, and only a very small field. There was no history of injury, either at birth or since, but the eye had been defective as long as the parents could remember.

Follicular Conjunctivitis.

Mr. C. Wray showed a case of follicular conjunctivitis, which he considered to be perfectly curable. It was contagious, and among 1,400 children in the Croydon schools there were 12 cases of the condition.

Metastatic Neuro-Retinitis.

Mr. Parsons showed a patient the subject of a condition which he thought was probably metastatic neuro-retinitis. A woman had a glistening mass of exudate over the left disc, with considerable swelling, and some haemorrhages on the disc. Then she suddenly lost the sight of that eye. The exudate diminished, leaving a glistening white star resembling that seen in albuminuric retinitis. She had no albuminuria.

SOCIETY OF ANAESTHETISTS.

R. J. Probyn-Williams, M.D., President, in the Chair.

Friday, February 7th, 1908.

Status Lymphaticus.

The discussion on status lymphaticus adjourned from the last meeting was resumed by Mr. R. Gill, who congratulated Dr. McCardie on his paper, and proceeded to point out that there were two features to which Dr. McCardie had drawn attention in the status lymphaticus, namely: (1) Some nasopharyngeal obstruction; (2) anaemia. These two factors were very intimately connected with the action of $CHCl_3$. Patients with nasal obstruction exhibited a long induction period, and anaemic people required very little $CHCl_3$. A combination of these conditions produced a patient to whom it was difficult and dangerous to give $CHCl_3$. And this combination occurred in people who were not subjects of status lymphaticus. It was difficult to see that there could be any relation between the enlargement of such organs as spleen, liver, glands, etc., and susceptibility to $CHCl_3$, so he concluded that there was not sufficient evidence that the status lymphaticus in itself was the cause of these $CHCl_3$ deaths.

Dr. Dudley Buxton could not agree that Dr. McCardie's conclusions followed his premisses. He could not help feeling that the status lymphaticus which had been discovered in many cases of $CHCl_3$ deaths was coincidental, not causal. Dr. McCardie had used the word "idiosyncrasy," but the speaker did not believe in idiosyncrasy to $CHCl_3$. Everybody had their dose of $CHCl_3$, and it was the duty of the anaesthetist to discover it. There were two schools as to the cause of death in these cases; one said they were cases of respiratory obstruction, the other called them cases of syncope. The pathological conditions in status lymphaticus would produce more or less respiratory obstruction, and if expiration in particular

were obstructed, the $CHCl_3$ would become locked up in the chest and absorption and poisoning would occur, especially as the myocardium in status lymphaticus was feeble to start with, and the dilatation from $CHCl_3$ might not be recovered from. As to these deaths being due to syncope, Embley and Martin had shown that a certain percentage of $CHCl_3$ in the circulation would prevent vagal inhibition, but that with a larger percentage vagal inhibition would not be prevented, and would not be recovered from. If a given percentage of $CHCl_3$ enabled a heart to escape from vagal inhibition in a normal patient, might not a patient the subject of status lymphaticus, with the same percentage of $CHCl_3$, not escape vagal inhibition and not recover from it? Patients with status lymphaticus required less $CHCl_3$. Syncopes and asphyxias might be avoided by regulating the dose, and only giving as much as was required. Some German authors referred to "thymus deaths" in adolescence, but these people did not die as suddenly as the ones under $CHCl_3$; they had glottic spasm, vomiting, etc., more like post-chloroform poisoning. The latter was probably due to lymphatic hyperplasia.

Dr. BLUMFELD disagreed with Dr. McCardie, who doubted if death ever occurred from $CHCl_3$, *per se*; many cases had been reported in which status lymphaticus was not present, and even in some of McCardie's own cases status lymphaticus was probably not present, especially some of the goitre cases. He also disagreed with Mr. Gill, who seemed to doubt the existence of the status lymphaticus as a pathological entity; and, finally, he disagreed with Dr. Buxton in considering all these deaths as due to simple overdosage, because cases had been reported in which corneal or movement reflexes were present when death occurred.

Dr. J. F. W. SILK regarded the enlargement of tonsils and adenoids in these cases as important factors in causing death. The signs and symptoms of status lymphaticus were so numerous and widely distributed that any case of death under $CHCl_3$ might be dragged into the status lymphaticus net. He pleaded for a better definition of the condition; he agreed with Dr. Buxton that we should, and usually did, avoid trouble by adjusting the dosage to the patient's requirements.

Dr. LL. POWELL asked if pathologists could tell them whether a persistent thymus was not occasionally found in people dying of some independent disease.

Dr. G. A. H. BARTON said that the status lymphaticus was a question for the pathologists. How could it be recognized? Might not a committee be formed to make blood counts on all patients anaesthetized to see if it were dangerous to give $CHCl_3$ to people with lymphocytosis. Might not some deaths be due to too little and not too much anaesthetic? Dr. Barton did believe in idiosyncrasy to $CHCl_3$; he had seen idiosyncrasy to iodide, belladonna, and morphine, then why should it not occur to $CHCl_3$? But even if the physiologists were right that 2 per cent. of $CHCl_3$ could not kill, he maintained that 2 per cent. would not always produce anaesthesia, and that death might occur from other causes than the anaesthetic.

Dr. DUDLEY BUXTON, apologizing for getting up again, said that although he held no brief for the physiologists, yet it was possible clinically to obtain and maintain anaesthesia with 2 per cent. of $CHCl_3$.

The PRESIDENT said that the question whether status lymphaticus was a clinical entity or not must be left to the pathologists to determine. Until they could point to some more definite lesions it must be considered "not proven." As to Mr. Hilliard's case, he had invited criticisms, and Dr. Probyn-Williams saw no reason why the patient should not have been given gas and ether.

Dr. W. J. MCCARDIE, in reply to Mr. Gill, said that in no case had obstructed breathing been reported. Anaemia would make the anaesthetist careful to equate $CHCl_3$ dose to patients' requirements, but he did not think these two factors sufficient to account for the sudden deaths. To Dr. Buxton he said he did believe in idiosyncrasy, and overdose was ruled out because so many cases occurred during light anaesthesia. To Dr. Blumfeld he said he did believe death from $CHCl_3$ might occur apart from status lymphaticus. To Dr. Silk he declared his belief that status lymphaticus was a clinical entity, and in one suspected case x rays showed enlargement of thymus. He agreed with Dr. Probyn-Williams that more pathological work was necessary, and referred to the two cases mentioned by Dr. Wightman, in which the status lymphaticus had been diagnosed. As to its mode of action in decreasing resistance to $CHCl_3$, he did not know, but probably it was due to a form of lympho-toxaemia. He always gave ether when he suspected status lymphaticus.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Friday, February 14th, 1908.

Sir T. BARLOW, Bart., K.C.V.O., M.D., President, in the Chair.

EXHIBITS.

Lymphangioma of Face.

Mr. J. PAUL ROUGHTON showed a boy, aged 11, with lymphangioma of the whole of the right side of the face except the region below and to the right of the mouth. The swelling was of doughy consistency and crossed the middle line on the forehead and upper lip. Many cords and knots were distributed throughout the swelling; no pulsation could be felt. The swelling began at the outer canthus 8 years ago, and had gradually spread. Mr. R. J. GODLEE considered the case one of plexiform neuroma, as also did Dr. PARKES WEBER. Mr. W. G. SPENCER advised operation, having successfully removed a similar specimen. Dr. G. A. SUTHERLAND had shown a similar case two years ago. The swelling was not produced by hypertrophy of bone, but by growth of soft tissues. He also thought the condition one of neuroma. Mr. J. P. ROUGHTON, in reply, said there was no pigmentation anywhere about the boy's body.

Tumour of Mediastinum (Hydatid).

Dr. H. L. EASON (for Dr. HERBERT FRENCH) showed a woman, aged 42, suffering from tumour of the mediastinum (hydatid?), without symptoms, except defective vision of left eye from inability to accommodate, due to complete paralysis of the left cervical sympathetic, which had existed for two years. She could not blush on the left side of the face, nor perspire there as on the right side. The left external jugular vein and veins over the upper part of the left chest in front were full; and respiratory sounds over the same area were absent. A large globular mass, nearly as big as a good-sized orange, had apparently displaced the lung, extending far enough back to compress the cervical sympathetic nerve and in front compressing the left innominate vein; and it was probably a hydatid cyst. Dr. C. T. WILLIAMS thought the growth might be a lymphoma. Dr. GARROD had seen a similar case in a child which proved to be a hydatid.

Injury and Osteo-arthritis.

Mr. R. J. GODLEE showed two men to exemplify the fact that an injury to a joint in youth might determine the onset of osteo arthritis in that joint later in life. One had fractured the lower end of the right humerus twenty-one years ago, and now had osteo-arthritis of that elbow but of no other joint; the other had had old standing dislocation of patella, and now had osteo-arthritis of that joint. Mr. T. H. OPENSHAW had arrived at the same conclusion, and instanced a marked example. Dr. SEYMOUR TAYLOR described a ganglion that developed on his left forefinger, the result of constant traumatism. Dr. F. J. POYNTON said that organisms introduced by intravenous injection might settle down in one joint only. The injury of a joint appeared to diminish its resistance to such infection. Dr. GARROD said that gout at its first appearance was apt to affect a joint injured many years before.

Rupture of Aortic Valve.

Dr. SEYMOUR TAYLOR showed a man, aged 34, with ruptured aortic valve. He had worked with lead for nearly two years, had had lead colic twice, and had a typical blue line on his gums. His chest symptoms appeared suddenly after he had lifted a heavy weight. He had a loud aortic diastolic musical murmur heard all over the chest, the musical note corresponding to about B below the staff, as had been also determined by the author in a previously-recorded example. He thought the case was one of perforation of one cusp rather than of detachment or true rupture. Sir JOHN BROADBENT said that with rupture of the aortic valve the symptoms were usually very rapid, and he had known death to occur in less than a month, the ventricle breaking down. Dr. F. J. POYNTON

had seen 2 cases followed by autopsy, in which there had been no pain and but little general disturbance at the time of the accident. Dr. C. T. Williams had seen 2 cases verified by *post-mortem* examination; in one a valve hanging at a far lower level than the other two valves had caused a loud musical murmur all over the chest. These cases did not generally live a long time. He thought a musical murmur was due rather to a free tongue depending from the cusp. Dr. Seymour Taylor, in reply, said that with a tongue hanging from a cusp, there would probably be a double murmur, and that not musical but rasping.

T.R. in Pulmonary Tuberculosis.

Dr. Arthur Latham showed a case of caseating pulmonary tuberculosis treated by tuberculin (T.R.) and horse serum, both administered by the mouth, on six or seven occasions during two months, with the result that for the last month the temperature had been normal or subnormal, the patient was up and about, his weight had increased 7 lb., and the sputum had diminished from 6 oz. to 1 oz. daily. He had now 14 other cases undergoing the treatment. Dr. Parkes Weber said the treatment suggested the feeding of phthisical patients with meat from tuberculous cattle. Dr. C. T. Williams congratulated Dr. Latham on the result of his treatment. Had he (Dr. Latham) examined the sputa for shreds of lung tissue as well as for tubercle bacilli? Dr. Latham considered exercise for these patients very deleterious, as it caused auto-infection.

Spurious (?) Acromegaly.

Dr. Parkes Weber showed a woman, aged 46, suffering from spurious (?) acromegaly. Her face might have been used as a model for an illustration of acromegaly; but it had apparently not changed for years, and the occasional headaches and shortness of breath were probably due to her excessive anaemia, caused by frequent haemorrhoidal bleeding.

Lateral Curvature of Spine.

Mr. W. G. Spencer showed a boy, aged 3, with lateral curvature rapidly developing.

Excision of Scapula.

Mr. R. P. Rowlands showed a man, aged 35, from whom the whole of the body of the left scapula was excised for enchondroma fifteen months ago. The operation was done through a posterior T-shaped incision, and three groups of large vessels were tied early in the operation, and the coracoid process with its important muscles and ligaments, the glenoid cavity with the capsular ligament of the shoulder-joint, and the acromion process with the attachments to it of the deltoid and trapezius were all saved, with the result that the functions of the arm were preserved far better than after complete excision, extreme abduction being the only movement that was now imperfect.

Gaertner Infection.

Dr. F. E. Batten and Dr. J. Graham Forbes read a note on two cases of Gaertner infection in infants. They described two cases of prolonged fever and diarrhoea in infants which, though repeatedly tested, gave a negative Widal reaction. The first was a child aged 12 months, in whom the disease lasted for 35 days. On the nineteenth day the blood was tested with the Gaertner bacillus, and gave a marked reaction. Purpura developed during the course of the disease. The child died, and at the necropsy numerous ulcers were found throughout the small intestine. A pure growth of a Gram-negative motile bacillus was obtained from the spleen and mesenteric glands. The organism gave the characteristic reactions of the *B. enteritidis* of Gaertner. The second case was very similar, but towards the termination developed symptoms suggestive of a general tuberculous infection. The child died, and at the necropsy no evidence of tuberculosis was found. The *B. enteritidis* of Gaertner was isolated from the stools. Dr. Forbes detailed the cultural distinctions between Gaertner's and allied micro-organisms.

Laryngological Section.

At a meeting on February 7th, J. Barry Ball, M.D., President, in the chair, the following cases and specimens were shown:—Dr. Parkes Weber: A case of *Multiple hereditary developmental angiomata* (telangiectases). Sir Felix Semon (for Dr. Sidney Phillips): A case of *Multiple telangiectases*. Dr. Brown Kelly: Sketches of three patients with *Multiple telangiectases*. Dr. Donelan: Specimen and microscopic sections of a *Tumour of the thyroid gland* from a case shown at the last meeting; also a case of *Intranasal hypertrophy associated with continual sweating of the nose*. Dr. StClair Thomson: A case of *Syphilitic pachydermia*, a case of *Proptosis due to distension of the frontal sinus* and radiograph to show how the orbito-ethmoidal and frontal cells can be defined before operation. Dr. Watson Williams: Microscopic sections illustrating the pathogenesis of some forms of *Nasal polypi*, and a *Universal laryngeal forceps* for use by the direct and indirect methods. Dr. Jobson Horne: A case of *Unilateral paralysis of the tongue*. Mr. Chichele Nourse: A case of *Sarcoma of the nose* after operation, and a case of *Epithelioma of tongue and fauces* after operation. Mr. Stuart Low: A case of *Complete closure of the anterior nares* with partial atresia of the pharynx, and *Cases after the radical maxillary antrum operation* exemplifying simplification of the after-treatment. Dr. Andrew Wylie: A case of *Swelling of the arytenoid* Mr. Herbert Tilley: A case of *Early epithelioma of the vocal cord*. Mr. C. Horsford: *A girl, aged 17, with a baritone voice*. Dr. Dan McKenzie: A case after removal of an *Endothelioma of the palate*. Dr. Dundas Grant and Dr. Dan McKenzie: A case after operation for *Median cervical fistula*. Dr. W. H. Kelson: A case of *Nasal ulceration*. Dr. Dundas Grant: A case of *Epithelioma of the fauces*. Dr. William Hill: A case of *Laryngeal tuberculosis*.

Otological Section.

At a meeting held on February 8th, Dr. Peter McBride, President, in the chair, Dr. Tilley showed a case of extensive development of *Keloid in the line of incision made for mastoid operation*. Various suggestions with regard to the occurrence of keloid were put forward by members of the Section, and methods of treatment were suggested. Dr. Tilley proposed to try *x* rays, and, if not successful, freely to excise the scar.—Dr. D. R. Paterson showed an unusual case of *Cerebellar abscess* in a boy aged 11, who had only been ill three weeks, without any apparent sign of middle-ear suppuration. The chief symptoms were tenderness along the posterior border of the mastoid and optic neuritis. The abscess was opened by operation, and the patient made an uneventful recovery, without impairment of hearing.—Mr. Sydney Scott showed an interesting series of histological preparations of the *Human cochlea*.—Mr. Arthur Cheatle showed a specimen of the right *Temporal bone of a man* in which, owing to the anatomical arrangement of the cells, it was possible for pus in the antrum to reach the neck without passing through the mastoid process.—Mr. Richard Lake read notes of a case of *Ménière's disease* in a girl aged fourteen. It was suggested by several members that the cause of the symptoms might by congenital syphilis.—Mr. R. Sturgeon Cocke showed a *Case for diagnosis*, namely, a girl aged 8, on whose left mastoid region was situated a hard swelling about half the size of a pigeon's egg, which had gradually increased in size since it was first noticed fifteen months ago. The members could not agree to a definite diagnosis, which was variously given as a calcified gland, a bony growth, an enchondroma, a solid dermoid, or a new growth. Mr. Cocke was asked to report the result found at operation at the next meeting of the Section.—Mr. Hunter Tod showed a case of *Vertigo* in a man in whom the co-ordination tests, as suggested by von Stein, demonstrated a definite lesion of the semicircular canals on the right side. Mr. Hunter Tod also showed an unusually interesting case of *Lateral sinus thrombosis* occurring in a boy aged 8. A few days after the operation there was facial paralysis on the opposite side, paresis of the sixth nerve on both sides, and optic neuritis on the affected side. For a considerable period the boy was very ill, and showed definite signs of basal meningitis. Convalescence was slow, and with this complete recovery of all the symptoms. Two months later optic atrophy was noticed on the left (the opposite) side, which is now well marked; otherwise the boy is restored to complete health.—Mr. A. L. Whitehead read notes of a case of *Primary epithelioma (?) of the tympanum* following chronic suppurative otitis media. The first symptom of the disease was an aural polypus which was very vascular and which recurred on removal. Eventually the mastoid operation was performed, and the growth was found to extend deeply

into the cochlea and petrous bone and forwards, involving the orifice of the Eustachian tube. The haemorrhage during the operation was almost alarming, but was arrested by pressure. Eight weeks after the operation the wound cavity was dry and covered with epithelium. There had been no recurrence since the operation, performed twelve months ago. The pathologist's report was that of a typical carcinoma. A microscopical section was referred to the Morbid Growths Committee for further examination.—Dr. BARBY BALL showed a case of *Pulsating growth in the left external auditory meatus* in a man aged 73. The patient had consulted Dr. McBride of Edinburgh ten years ago, who noticed a small growth in the meatus. Since then it had increased slowly, and occasionally there had been a sharp attack of haemorrhage. The growth filled the meatus and protruded slightly from the orifice; there was a distinct expansile pulsation in it, which was communicated to the auricle and the pre-auricular region. The growth was presumably angeiomatous in nature. The question of tying the external carotid artery was discussed, but the opinion of the Section was that owing to the age of the patient and the duration of the growth, it would be wiser to do nothing.

MANCHESTER MEDICAL SOCIETY.—At a meeting held on February 5th, Dr. A. T. WILKINSON, the President, read a paper opening a discussion on *Alcoholic cirrhosis of the liver*. He urged that due recognition should be given to tympanites as a diagnostic sign of advanced disease, and claimed that this condition was equal in significance to the classical signs of ascites, jaundice, haematemesis, and cerebral symptoms. A typical case was described in illustration of this thesis. A tympanites of three weeks' duration in a well-nourished man of 36, who felt in his usual health, was the sole prominent symptom. Alcoholic cirrhosis was diagnosed, and the patient died nine days later of coma. The diagnosis was confirmed by autopsy. Dr. Wilkinson drew attention to the neglect of this symptom of tympanites by the textbooks. In most works the matter was not mentioned; in others tympanites was referred to as a sign which might mask others, such as ascites. There was a failure to recognize tympanites as a prominent sign *per se*. The pathology of acute painless tympanites in alcoholic cirrhosis was then discussed, and the condition attributed to back-pressure from the portal system, whereby the delicate neuro-muscular apparatus of the intestine was thrown out of gear. In speaking of the treatment of advanced hepatic cirrhosis, the time-honoured pill of mercury, squill, and digitalis, āā, gr. j, was advised as the most reliable diuretic. As regards the etiology of cirrhosis, the speaker declared his belief in alcohol as the causative agent to be unshaken. It was the steady "sober" *drinkers*, not the habitually *drunken* who filled our inebriate homes, who are the victims of alcoholic cirrhosis. A brain sensitive to alcohol was actually a safeguard against alcoholic cirrhosis. Gastric catarrh did not, in the speaker's experience, bear any causative relation to cirrhosis. It was those who "stand alcohol well" who suffer from this hepatic change. Dr. REYNOLDS agreed as to the different susceptibility of the "drinker," as distinguished from the "drunkard," to alcoholic cirrhosis. He believed hepatic cirrhosis to be not uncommon in children, their livers being specially susceptible to alcohol. Splenic enlargement was inversely proportional to the amount of ascites. In ascites he believed tapping should be persevered with. Despite Hale White's advice, this manœuvre was sometimes successful if at the same time alcohol was prohibited. Dr. CHEVERS mentioned a case of "hobnail liver" in which he had reason to believe the patient had always been a teetotaler. Dr. CRAVEN MOORE laid stress on the presence of dilated abdominal veins as a diagnostic feature. He noted the change of form which *post-mortem* examination in recent years revealed in cirrhotic livers. The old "hob-nailed" liver was now rarely seen, its place being taken by livers of normal size with a granular surface. Dr. MARSDEN thought that this change of type might be due to the change of habits in present-day drinkers.

MIDLAND MEDICAL SOCIETY.—At a meeting on February 12th, Dr. JUSTIN MCCARTHY, President, in the chair, Mr. NUTHALL showed a case of *Lymphadenoma* in a boy aged 7.

Enlargement of the left cervical glands was first noticed when he was 4 years old, and he presented himself for treatment two years later with a large mass of glands underlying the left sterno-mastoid muscle and extending from the mastoid process to the clavicle, and composed of a number of distinct enlarged glands of varying size, slightly movable on each other, of a firm, elastic consistence, and not adherent to the overlying skin. There were no other enlarged external lymphatic glands. The condition of the scalp, ear, naso-pharynx, and teeth was healthy and indicated no local cause for the lymphadenitis. The boy had had pneumonia at the age of 2, but was always healthy and strong. He is the eldest of four children and there is no suggestion of syphilis or tubercle in the parents. In February, 1907, the blood showed 6¼ million red cells, 6,000 white cells, haemoglobin 100 per cent. A differential count was not made. The enlarged glands were carefully and thoroughly removed in February, 1907. A local recurrence, deeply placed in the submaxillary triangle, was excised six months later. The boy now had masses of enlarged glands in the right side of the neck, the left supraclavicular triangle, and the left axilla. There is no evidence of increased size of the spleen, liver, or abdominal glands. Further surgical treatment was impossible. On section the glands show simple hyperplasia; no tubercle bacilli could be discovered, but there were no signs of tubercle formation. After an injection of old tuberculin the temperature rose in eight hours to 99.8, returning to normal almost immediately.

The case appeared to be one of lymphadenoma, the progress of which had not been arrested by free removal of the group of glands first involved. Dr. EMANUEL showed a case of *Myasthenia gravis*.

The patient was a well-developed girl of 19, almost entirely confined to bed. She was unable to turn over unaided or to lift her feet from the bed. Her grips were very feeble; she could not raise her arms to a horizontal level, nor could she stand without assistance. There was well marked double ptosis with widely dilated pupils and diplopia on looking to the right and left. Mastication was very difficult and could only be effected with short intervals of rest. For some months the swallowing of solids had been impossible. The amount of weakness varied from day to day and was always more marked towards evening. The symptoms came on insidiously two and a half years ago, without any traceable cause, and had been gradually progressing. The deep reflexes were exaggerated. The contraction of the muscles to faradism was sluggish and of small range, and the muscles became rapidly exhausted on repeated stimulation. The knee-jerks, however, were not similarly exhausted.

Dr. JAMESON EVANS showed a woman, aged 30 years, who suffered from *Paresis of the external rectus in the right eye*, which could only be moved outwards a little beyond the middle line.

There was exophthalmos of the left eye, and lateral movements of the globe were almost entirely lost. On attempted adduction, the globe retracted slightly and turned upwards at the same time, causing a protrusion of the lower lid, which in the primary position showed a distinct fullness. Vertical movements were normal. On attempted adduction and on looking down, the upper lid in each eye retracted, and the palpebral aperture of the left eye became enlarged, whilst it became narrowed on attempted adduction of the left eye. Vision in the right eye was $\frac{6}{6}$ with correction, and in the left eye $\frac{6}{9}$ with correction. The field of vision in the left eye was contracted 20 degrees to 40 degrees. Pupils, media, and fundi were normal. As far as could be gathered, the condition was congenital.

Mr. LEEDHAM GREEN showed two cases of tuberculous disease of joints treated by Bier's method and inoculation with tuberculin. Dr. WALTER JORDAN showed the brain of a man, aged 41 years, who had had chronic phthisis and died after an acute illness of tuberculous meningitis. There were tubercles about the base of the brain in numbers with much exudation and thickening of the pia mater. The ventricles were greatly distended with fluid; on the fringes of the choroid plexus were a number of large yellow nodules. Professor Leith, who had kindly made a microscopic examination of these, reported that they showed no appearance of tuberculosis. The point was raised as to the frequency with which chronic phthisis terminated in tuberculous meningitis. Dr. DOUGLAS STANLEY showed a heart from a case of mitral disease.

THE Berlin Photographic Company, 133, New Bond Street, London, W., have issued a reproduction of the portrait of the King painted by Sir Luke Fildes, a replica of which hangs in the house of the Royal College of Physicians of London. The plate measures 20¼ in. by 15¼ in.; it is a bust nearly full-faced, and the reproduction gives an admirable idea of the portrait which has been universally admired by all who have seen it. Many members will doubtless desire to possess this portrait of the august Patron of the British Medical Association, and the publishers, we understand, are prepared to offer special facilities to medical men for acquiring it.

REVIEWS.

ARTERIAL HYPERTONUS AND SCLEROSIS.

SINCE the measurement of blood-pressure in man was made easy by the invention of armlet sphygmomanometers of Riva-Rocci and Hill and Barnard, the subject of arterial blood-pressure has occupied more and more the attention of clinicians. Dr. C. J. Martin experimenting on degenerated and atheromatous arteries reached the conclusion that pressures equal to a few millimetres of mercury are sufficient to obliterate such arteries, and that little error is introduced when the obliteration method is used to determine the systolic pressure in such. Dr. William Russell has decided opinions in the opposite sense, and has published them recently in a book on *Arterial Hypertonus, Sclerosis and Blood Pressure*.[1] Dr. RUSSELL believes that the arteries may pass into a contracted state, which he calls hypertonus, under the influence of toxic agents (errors of diet, etc.,) in the blood; that this condition at first simulates, and may finally lead to sclerosis: and that it may cause very considerable errors in blood-pressure readings taken by the obliteration method.

Speaking of his clinical assistant, Dr. J. L. Green, he says:

> If he or his friend inhales a cigarette of Virginian tobacco, the hypertonic contraction of the radial artery which ensues is very marked, and that with the hardening of the vessel the haemomanometer reading rises 15 mm. Hg. Here, as in the other instances, the fact is the constriction of vessels. What the blood pressure may be inside the constricted vessels is a problem.

He instances the well-known constricting effect of adrenalin, ergot, etc., and maintains that to obliterate an empty contracted artery considerable pressure must be required. Dr. Russell has obtained the help of Dr. Cargill Knott, Lecturer on Applied Mathematics in the University of Edinburgh, and he and Dr. Knott have constructed what is termed "a new schema of the circulation." The schema is constructed of rubber tubes of varying thickness and compressibility, and is so made that it must give the results which Dr. Russell seeks to find. The schema appears to be identical with one used by physiologists with the strongest reservations to demonstrate certain points concerning the mechanism of the circulation. To set up schemata and transfer the results obtained from them to the circulation is not safe. Dr. Russell says that "when the method of obtaining haemomanometer readings is submitted to a physicist, he will smile at the suggestion that the readings represent the pressure of the fluid within the compressed vessel." But a physicist who has never worked on the borderline of physics and physiology knows nothing or next to nothing of the conditions which exist in the living body, and physicists to whom we have submitted such problems are ready to acknowledge that they possess no adequate data on which to form a judgement. Nor can the physiologist give them all the data required. The matter can only be determined by experiment. Dr. Russell says:

> I have made some observations with vessels obtained from the *post-mortem* room, and so far as I have yet carried these, they seem quite worthless, for the simple reason that the dead vessel no longer possesses the tone or elasticity of the living vessel. In fact, the rubber tube is a better substitute for the living artery than the dead one is.

Dr. Russell is aware of the valuable experiments which Professor MacWilliam has published on the persistent contractility of excised arteries, and quotes the statement of that physiologist that he was able to constrict the artery of an amputated limb to one-third of its diameter. Dr. Russell might have used the methods of MacWilliam, and tested the obliteration pressure on such an artery. The muscular wall of the artery is composed of protoplasm—a jelly-like substance containing 75 to 80 per cent. of water. When involuntary muscle contracts, the muscle cells glide past each other and take up a new position so as to make the wall thicker, say, 12 layers in place of 4 layers thick. Having assumed the new position the cells maintain it, as far as we know, without further consumption of energy. There is no evidence that the muscle cells contain less water when in the contracted state. A jelly containing 80 per cent. of water interlaced with white connective tissue fibres and elastic fibres does not seem, at first sight, a rigid structure. Dr. Russell, however, says that the hypertonic artery feels rigid and brittle to the finger; that it is the contracted condition of the wall, and not high blood pressure, which gives the brittle feeling and high sphygmometer readings. He may be right, but the point only can be proved by experiments on contracted arteries.

In the chapter on blood pressure Dr. Russell says:

> Suppose that, as the result of *vital* influences, the vessels in a considerable area became contracted, and the circulation through them thereby impeded, the blood pressure in the vessels above the area of construction is raised as a *necessary consequence*. This takes place in an artificial scheme of rubber tubes as certainly as in the living vessels. Such a raising of pressure, if it is sufficiently great, will travel back to the aorta; if it is confined to a limited area, the increased pressure will be lost before the aorta is reached in virtue of the elasticity of the tubes. The *mean* or *average pressure* over the whole system is not affected so long as the driving power of the heart remains undisturbed; the distribution of the pressure is, however, altered. Where the vessels are constricted the pressure falls, where they are not constricted it is raised. The fall and rise balance each other, and so the mean pressure is not altered.

Here the author applies principles which pertain to such an artificial schema as that of Weber to the circulation. We cannot talk of a mean or average pressure throughout the vascular system, for no such pressure can be proved to exist when the heart is arrested. The blood pressure is not raised as a necessary consequence when a considerable area is constricted. The liver and capacious veins may receive the expelled blood with scarcely any alteration in venous pressure, while other arterial areas may dilate, and so keep the resistance and pressure in the arterial side constant. Constriction or obliteration of an artery raises the pressure in that artery if the aortic pressure rises, not otherwise. When we measure the pressure in an artery we use it as a cannula, and measure the lateral pressure in the aorta or branch of the aorta from which it arises. The pressure in all the large arteries is practically the same. It is not correct to say that pressure on constriction travels back to the aorta, and may be lost in virtue of the elasticity of the tubes. If the total peripheral resistance is increased, and the heart continues to expel the same volume of blood, the pressure must rise in the aorta.

Dr. Russell is on surer ground when he seeks to prove his theory of hypertonus and the errors of sphygmomanometers by taking readings of arterial pressure and feeling the arteries of patients before and after the administration of nitrites. He instances cases in which, in his opinion, the heart was failing and yet arterial pressure readings of 200 mm. Hg and over were obtained, and believes that at least 100 mm. Hg were due to the pressure required to deform the contracted arteries. He does not believe that pressures of 160 to 260 mm. Hg can possibly be maintained when the vagal mechanism and the mechanism of splanchnic dilatation are present to relieve the strain of the heart. This is a matter which can only be settled by observation. Certain conditions of metabolism may excite the heart to hypertrophy and the arterioles to constrict, and there is no reason why such pressures should not be borne by the vascular system. In the vertical position the arterial pressure in a man's feet is some 100 to 140 mm. Hg higher than in his head. There the arteries withstand normally twice the pressure produced by the heart. Dr. Russell also instances the divergent readings obtained from sclerosed (or hypertonic) arteries by the obliteration and maximal pulsation methods. But it is not clear that these prove the error of the obliteration method. The maximal pulsation method of the instrument employed to obtain it may here be in fault. Dr. Russell's strongest argument seems to be the clinical one: that high blood-pressure readings are obtained in cases where the arteries are thickened and the heart failing. We have been at some trouble to criticize some of Dr. Russell's methods and deductions, because it is only through free criticism that the truth on this very important subject can be reached, but we should give a wrong impression of the book if we did not add that it contains many interesting accounts of the vascular conditions in cases of angina pectoris, interstitial nephritis, and a group of phenomena which the

[1] *Arterial Hypertonus, Sclerosis and Blood Pressure.* By William Russell, M.D., F.R.C.P.Edin. Edinburgh and London: W. Green and Sons. 1907. (Demy 8vo, pp. 204; 36 illustrations and plates. 7s. 6d.)

author believes to be associated with contraction of the cerebral arteries. It is a thoughtful and honest attempt to settle vexed questions, even though it does not afford a convincing proof of the main argument.

PRACTICAL THERAPEUTICS.

IT is one of the unavoidable defects of our present system of medical education that the student does not see in hospital the kind of case, the minor ailments, which occupy the bulk of a general practitioner's time. He may be able to diagnose the seat of a lesion of the nervous system with scientific accuracy, and yet be quite at a loss when faced by a patient with a "nervous headache." In his book on *Minor Medicine*,[2] Dr. W. E. WYNTER touches a great deal of fresh ground, and provides the general practitioner with a work of the utmost value in his daily routine. Dr. Wynter has brought a thoroughly scientific spirit to bear on a number of ailments which are too often regarded in an offhand manner and treated in a merely perfunctory way. Dr. Wynter's account of those groups of symptoms known to the public as a "bilious attack" and a "chill on the liver" are quite admirable and thoroughly practical. In fact the chief recommendation of the book is its thoroughness and its practical nature. The inexperienced practitioner will not realize the amount of pain, discomfort, and anxiety caused by such ailments as chilblains or "cracked lips," nor the importance of having plenty of resources at command in dealing with them, and it is just here that Dr. Wynter's book will prove of inestimable value, while the most experienced will find much wisdom and valuable information in its pages. We notice that there is no reference to urticaria, a very common and by no means always trivial ailment which in certain cases gives a great deal of trouble to the medical attendant before relief is obtained. A future edition of the book might well include some suggestions for the treatment of this disease, beyond those given in the ordinary textbooks. The book is very well printed and bound, and makes pleasant reading throughout.

In the preface to his work on *Clinical Therapeutics*[3] Dr. CROFTAN tells us that his intention is to deal with "the homely ministrations at the bedside (that means so much to the patient), the feeding and the bathing, the technique of all mechanical and physical means of treatment, as well as the use of medicines, the choice of climate and resorts, and the indications for surgical intervention." This seems a very ambitious programme for one man in a single volume of six hundred and odd pages, but it is only fair to the author to state at once that if he has, as his countrymen say, "bitten off more than he can chew," he has nevertheless completed a work of great practical utility. A typical instance of the weaknesses of the book is the fact that the Schott treatment of heart disease is dismissed in a short footnote quoting Dr. Schott's general principles, without any details to guide the practitioner in applying them, or any references to enable him to know where to turn for further information. Again, the author says in his preface, "Wherever it was considered essential to a better understanding of therapeutic indications, I have prefaced the statement of the treatment by general remarks relating to etiology and symptomatology," and yet in dealing with "rheumatoid arthritis," while he recommends the use of guaiacol, there is no indication that this treatment is anything but empirical, no reference to the modern doctrine of microbic infection from the intestine. In spite of such defects, however, the accounts of the treatment of various morbid conditions is almost always complete and up-to-date, and the book is one which may often be consulted with advantage by the general practitioner. This is, perhaps, not the place to protest against certain "Americanisms" in the style, which jar painfully on the ear of the English reader.

It is obvious that of any class of medical students only a small percentage can become specialists or consultants, and still the training they receive is almost entirely in the hands of specialists and consultants, and in many ways more fitted to produce specialists than general practitioners. For the majority of men an "assistancy" is the only "post-graduate course" which will teach them to correlate the ideas gained in hospital to the exigencies of general practice. To such men a book with the title of Dr. HARRY CAMPBELL'S latest work, *On Treatment*,[4] will be especially welcome. If there is at first some sense of disappointment at the absence of detail in the book, no medical man will read it without a feeling of refreshment and real gain. Dr. Campbell's writing abounds in that higher power of common sense which may properly be called wisdom. He touches with no gentle finger the weaknesses of medical education, and points out quite frankly the many items in the student's load of acquired information which are merely a useless burden; but his advice is no encouragement to the "slacker"; he is told in the same breath what knowledge to acquire in double measure. The chapter on Rationalism and Empiricism is, perhaps, the most interesting in the book; and Dr. Campbell makes an important point when he reminds us that a form of treatment devised by a process of pure reasoning becomes a routine or empirical treatment in the hands of those who use it simply on the authority of the discoverer. It requires some courage nowadays to write, "Concerning treatment by drugs, I strongly advise the physician to give them on the routine principle." But Dr. Campbell makes no statement without giving his reasons, and his arguments, even if not always convincing, are always interesting.

Dr. REYNOLD WILCOX, of the New York Post-Graduate Medical School, has written a book entitled *The Treatment of Disease, a Manual of Practical Medicine*,[5] which is based, he states, on twenty-three years' experience in teaching more than 10 000 medical graduates, and is intended to meet the "anxious endeavour on the part of the physician to increase his knowledge of therapeutics, whether physical, medical, or dietetic, which goes to make up what may be termed the management of a patient suffering from disease." When it is said that the book is a good one, it is meant to be understood as a manual of the practice of medicine with the section on treatment amply dealt with. Dr. Wilcox takes the diseases seriatim as in the ordinary textbook of medicine—the infectious diseases, constitutional diseases, intoxications, diseases of the digestive system, the blood, heart, lungs, urinary system, and nervous system—and after discussing at considerable length the etiology, pathology, symptoms, diagnosis, and prognosis of each, gives approximately the same space to directions for treatment. From this it will be seen that he concentrates attention when describing treatment on differences in detail as regards individual diseases, ignoring to some extent general principles of treatment. And this represents at once the strength and weakness of the book. Its strength is well exemplified by the section in which the indications for preference of one cardiac tonic over another in various disordered conditions of the heart are set forth; and its weakness in the section on cancer of the liver, in which, after saying all treatment can be nothing but symptomatic, he devotes the whole of a large page to elaborating that symptomatic treatment. Where the book is good it is up-to-date, and otherwise very good. Where it is not in the same sense good it is extravagant of space.

Dr. SCHUIRER'S little pocket-book of treatment[6] contains an alphabetical list of diseases and symptoms and suitable remedies. There is further a fairly exhaustive account of a number of new and unofficial drugs, posological and other tables, and a list of watering-places with their principal characteristics. The book will, no doubt, be of use to German practitioners.

The publication of a tenth edition of Dr. WILLIAM MURRELL'S book on *What to do in Cases of Poisoning*[7] is

[2] *Minor Medicine: A Treatise on the Nature and Treatment of Common Ailments.* By William Essex Wynter, M.D., B.S., F.R.C.P., F.R.C.S. London: Sydney Appleton. 1907. (Demy 8vo, pp. 285. 6s.)

[3] *Clinical Therapeutics: A Handbook on the Special Treatment of Internal Disease.* By Alfred C. Croftan. Second Edition. Chicago: Cleveland Press. 1907. (Roy. 8vo, pp. 626. $5.)

[4] *On Treatment.* By Harry Campbell, M.D., B.S., F.R.C.P. London: Baillière, Tindall, and Cox. 1907. (Demy 8vo, pp. 429. 5s.)

[5] *The Treatment of Disease, a Manual of Practical Medicine.* By Reynold Webb Wilcox, M.A., M.D., LL.D. London: Rebman Limited. 1907. (Med. 8vo, pp. 939. 24s.)

[6] *Taschenbuch der Therapie.* Herausgegeben von Dr. M. T. Schuirer. Würzburg: A. Stuber. 1908. (Imp. 32mo, pp. 357. Mk. 2.)

[7] *What to do in Cases of Poisoning.* By William Murrell, M.D., F.R.C.P. Tenth Edition. London: H. K. Lewis. 1907. (Roy. 32mo, pp. 288. 3s. 6d.)

sufficient evidence of the utility and popularity of this little work. The present edition has been brought thoroughly up-to-date, and though it contains a good deal of new matter it has been reduced in size by a rearrangement of the type, so that it is now in handy form for a pocket in the doctor's emergency bag. We can confidently say that no such bag should be without it. All the directions given are thoroughly complete, concise, and practical.

The ninth edition of *The Book of Prescriptions*,[8] rewritten by Mr. E. W. LUCAS, contains all the qualities which have made its predecessors justly popular among senior students and practitioners. This edition is as completely brought up to date as it is possible for such a book to be at the present time, when new remedies are introduced almost daily. The accounts of the physical characters of drugs and of their action and uses are clear, concise, and accurate, and the plan of giving the amount of all drugs in prescriptions, both in imperial and metrical measures, will be found very useful. Such a book as this is, of course, liable to abuse by those who take their method of treatment from its pages; but that is not the fault of the author, and Dr. ARTHUR LATHAM in his introduction makes it quite clear what the functions of such a compilation are and what are its limitations.

MANUALS OF CLINICAL DIAGNOSIS.

THE sixth edition of Dr. C. E. SIMON'S excellent *Manual of Clinical Diagnosis*[9] shows evidence not only of stringent revision, but also of a successful effort to cover the new ground added to the territory in question since the appearance of the fifth edition, which was reviewed in the BRITISH MEDICAL JOURNAL of October 8th, 1904 (p. 925). Although much that is new is included, the size of the volume has been kept constant by deleting everything that was not clearly of practical value, and by condensation or rewriting of that which remained. The chapter on the blood in particular has been enlarged and brought thoroughly up-to-date. A new chapter on opsonins has been introduced, in which details are given regarding the technical portion of the subject. Two appendices have been added, one dealing with the preparation of culture media, which is a useful complement to the chapter on bacteriology, and the other representing an outline of a course in clinical laboratory methods based on the work which Dr. Simon has done as Professor of Clinical Pathology at the Baltimore Medical College during the last ten years for post-graduates. A number of illustrations, both in black and white and in colours, have been added, enhancing the utility of what has always been a most helpfully illustrated book. It remains one of the very best of its kind.

There is little material change in the sixth edition of Dr. HOBART AMORY HARE'S *Practical Diagnosis*[10] as compared with the fifth edition, a review of which was published in the BRITISH MEDICAL JOURNAL on May 23rd, 1903 (p. 1212). The object of the book—the cultivation of bedside diagnosis as against laboratory diagnosis—as was in that review suggested, has not had a very good case made out for it. The method has not been pushed by Dr. Hare to its logical and alone useful conclusion. For example, under the heading "gait" he groups for differential diagnosis locomotor ataxia, multiple neuritis due to alcohol and lead, general paralysis, and many other conditions, but to say, as he does, that the gait in cases of lead neuritis may lead to an erroneous diagnosis of tabes is itself nothing less than confusing, and to say that an ataxic gait is characteristic of general paralysis and may lead to its confusion with tabes, but that fine intention tremor of the hands may help in differentiating it, is also not only misleading but inaccurate. On the other hand, the author says not a word, as far as we have observed, of unequal pupils, tremor of the lips and tongue, or slurring articulation as differential features of general paralysis. Thus the diagnosis is left undifferentiated. Evidence of—can it be?—carelessness is also manifested in the illustrations. On page 310, in a diagram purporting to show the normal position of the spleen, in which an oval area is marked running with its long axis very much in the posterior axillary line or parallel with the long axis of the spine. On page 555 there is a picture of an adult foot showing "Babinski reflex in health (*sic*) somewhat exaggerated." Dr. Hare, in the preface, suggests that the book is a fitting companion for his *Textbook of the Practice of Medicine*; it must be admitted that the present volume is hardly fitted to be used by itself by the medical student; his textbook is much the more valuable.

Dr. RUDOLF VON JAKSCH'S very valuable textbook on bacteriological, chemical, and microscopic methods of clinical diagnosis has already been translated into several languages, and has reached its fifth English edition, which was reviewed in the BRITISH MEDICAL JOURNAL of August 18th, 1906, p. 365. The newly-issued sixth German edition, which is now before us,[11] has been revised throughout and brought up to date by the incorporation of recently published work. Schaudinn's *Spirochaeta pallida*, for example, which was not referred to in the last English edition, is now carefully described. Leishman's stain, to which we found no reference before, is now incidentally mentioned amongst other modifications of the Romanowsky method, but we think that the advantages of using this particular preparation ought to have been pointed out. Perhaps bacteriological methods might with advantage have been omitted, as there are textbooks specially devoted to this subject, and the short concluding chapter assigned to it here is not full enough to satisfy modern requirements; the work on opsonins, for example, is dismissed in a few words on the last page. But the work, as a whole, is excellent; and the sections on the blood, the faeces, and the urine, are particularly exhaustive and reliable.

PROSTATIC SURGERY.

THE fourteenth volume of the *Johns Hopkins Hospital Reports*[12] consists of three articles by Dr. HUGH H. YOUNG. The first is on hypertrophy of the prostate, the second on recto-urethral fistulae, and the third on cancer of the prostate. The first article discusses the treatment of prostatic hypertrophy by conservative perineal prostatectomy, and is accompanied by a detailed report of 145 cases. In deciding to publish an exhaustive analysis of this large series of cases, Dr. Young has been partly influenced by a desire to remove what he describes as "the absolutely unjust, not to say false, idea of perineal prostatectomy disseminated elsewhere." The term "conservative" in the title of his operation particularly refers to measures adopted to preserve the integrity of the ejaculatory ducts. A clear description is given of the various steps of the operation, and good illustrations render the understanding of it easy. The two points of technique which are particularly noteworthy are the position of the incisions into the prostatic capsule and the use of the author's well-known tractor. The incisions are made so as to preserve a bridge of tissue containing the ejaculatory ducts. With regard to the tractor, Dr. Young states that for him it has transformed an operation done somewhat haphazard, depending largely on the sense of touch and in the dark, into one performed in a shallow wound and accurately under visual control. The clinical histories of the 145 cases are analysed from many points of view and the significance and interpretation of the various symptoms are exhaustively discussed. This part of the work requires and merits careful study and no summary of its conclusions would be of value. The operation requires from fifteen to thirty minutes for its performance. Ether was the anaesthetic of choice, spinal anaesthesia did not prove satisfactory. In the great

[8] *The Book of Prescriptions (Beasley), with an Index of Diseases and Remedies.* Rewritten by E. W. Lucas, F.I.C., F.C.S., with an introduction by Arthur Latham, M.A., M.D., F.R.C.P. Ninth edition. London: J. and A. Churchill. 1907. (Fcap. 8vo, pp. 382. 6s.)

[9] *A Manual of Clinical Diagnosis.* By Charles E. Simon, B.A., M.D. Sixth edition, thoroughly revised. London: Henry Kimpton. 1907. (Med. 8vo, pp. 632. 21s.)

[10] *Practical Diagnosis.* By Hobart Amory Hare, M.D., B.Sc. Sixth edition, revised and enlarged. London: Henry Kimpton, and Glasgow: A. Stenhouse. 1907. (Med. 8vo, pp. 628. 21s.)

[11] *Klinische Diagnostik innerer Krankheiten mittels bakteriologischer, chemischer und mikroskopischer Untersuchungsmethoden.* Von Dr. Rudolf v. Jaksch. Sechste Auflage. Berlin and Vienna: Urban and Schwarzenburg. 1907. (Roy. 8vo, pp. 671, 174 illustrations. M.18.)

[12] *The Johns Hopkins Hospital Reports.* Studies on Hypertrophy and Cancer of the Prostate. Vol. xiv. Baltimore: The Johns Hopkins Press. 1906. (Imp. 8vo, pp. 640; figs. 79.)

majority of cases convalescence was remarkably simple and rapid, the rule being for the patient to be up in a chair about the third day. There were seven deaths in the 145 cases; in a note added later, however, the author brings his statistics up to date and with seven deaths in 185 cases shows a mortality of 3.7 per cent., while in the last 60 cases there was not a death or a bad result. These figures are very remarkable and speak for themselves. They afford a complete proof of the benignity of the operation as described and finally dispose of the objections most commonly heard to the perineal route.

In the article on recto-urethral fistulae consideration is given to the points to which particular attention should be paid if the rectum is to escape damage, and the treatment of fistulae is also discussed. In the article on carcinoma 40 cases are studied, and a radical operation is described; its essential points are the removal of the whole prostate along with the seminal vesicles, the prostatic urethra, and most of the trigone, and the completion of the operation by anastomosing the membranous urethra with the bladder. Dr. Young has performed this operation on four occasions, and recommends it. The study of the series of cases goes to show that cancer of the prostate is more frequent than is usually supposed, occurring in about 10 per cent. of the cases of prostatic enlargement.

The three articles form a contribution to the subject of prostatic disease of very high value, marking a distinct advance in the study and the treatment of the affections considered. It is also a contribution presented in the best possible manner, and the reader's patience is not tried by any quarrelsome discussions such as have wearied him in the case of some other recent publications on the subject.

SURGICAL DISEASES OF THE CHEST.

THERE is no doubt that, as Dr. CARL BECK says in the preface to his work on *Surgical Diseases of the Chest*,[13] the subject on which he writes has received comparatively little attention from surgical authors. It is not, however, quite the case that the treatise by Stephen Paget is the only special work in existence on the surgery of the chest. Auvray's surgery of the anterior mediastinum and Mr. Godlee's share of the joint work by Dr. Fowler and himself, at once come to mind. Dr. Beck's book opens with an excellent chapter on the anatomy of the thoracic wall and diaphragm, with illustrations for the most part from Morris's *Anatomy*. The second chapter on the surgery of the thoracic wall gives a rapid review of a large number of conditions of disease and deformity. There are some subjects introduced into this chapter which have no particular relation to the thoracic parietes. There is an account, for example, of the Roentgen-ray treatment of Hodgkin's disease; and the subject of burns is discussed and illustrated to an extent quite disproportionate to other matters. Why devote nine pages to burns if only two can be given to malignant growths of the chest wall? Ample information on the first is to be found in any text-book of general surgery, but it is to a special work such as this that the reader goes for a full discussion of tumours of the chest wall, and he is straightway disappointed. Chapter III treats of intrathoracic diseases, Chapter IV of the Roentgen method in thoracic surgery, Chapter V of subphrenic abscess, and Chapter VI of diseases of the breast. The most valuable parts of the book are those on empyema and subphrenic abscess, and to these the author has evidently devoted much attention. In other parts there is a good deal of careless writing, and there are also errors which should have been corrected in proof. The sentence commencing on line 10, p. 55, for example, obviously belongs to the next paragraph. The author has also a habit of introducing paragraphs here and there which have little direct connexion with the subject under consideration. In Chapter II, under non-penetrating injuries of the thoracic wall, the reader is worried by the interpolation of a dissertation on skin sterilization in general. The book would be much improved if the author in future editions would omit what has no special bearing on his subject, and write in greater detail on some important affections which are not given the attention they deserve. In its present state the book cannot be looked upon as a standard work.

[13] *Surgical Diseases of the Chest.* By Carl Beck, M.D. London: Rebman Limited. 1907. (Roy. 8vo, pp. 289, illustrations 178. 22s.)

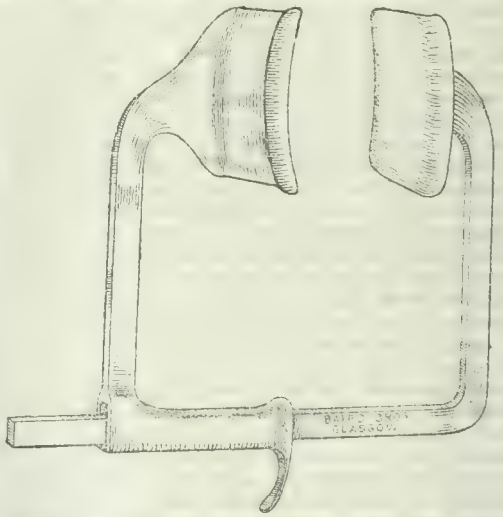
NOTES ON BOOKS.

THE seventh volume of the *Reports of the Society for the Study of Disease in Children* for the session 1906-7[14] has been issued. It has been well edited by Dr. GEORGE CARPENTER, and contains a large number of interesting clinical papers and notes, some of which are illustrated by photographs. We may mention especially those of the case of division of the clavicles into two halves—cleido-cranial dysostosis; the subjects of this deformity, owing to the unnatural mobility of the shoulder girdle, can perform most curious contortions.

[14] *Reports of the Society for the Study of Disease in Children.* Vol. vii. Session 1906-7. Edited by G. Carpenter, M.D. London: J. and A. Churchill. (Demy 8vo, pp. 368. 12s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

THE accompanying illustration has been sent by Mr. ALEXANDER MCLENNAN, of the Western Infirmary and Royal Hospital for Children, Glasgow, who adds that it represents a simple form of self-retaining abdominal retractor, which has been made for him by Messrs. Baird Bros., Glasgow, and which he has used with satisfaction during the past two years. The instrument consists of two separable parts, each forged from one piece of steel and each consisting of a vertical and horizontal arm at right angles one to the other. When the instrument is to be inserted into the wound, the horizontal bars, one of which is hollow and the other solid, are closed or driven into one another as far as they will go. When the retracting



flanges at the end of the vertical arms are in place between the edges of the wound, traction is made on the shafts, with the result that the edges or angles of the wound are thus drawn back to the desired extent, and owing to the structure of the instrument so remain as long as desired. To bring them together again and release the retracting flanges from the wound, the trigger and the end of the opposite cross-piece are pressed between finger and thumb. The instrument, when in place, lies flat on the abdomen in any direction which may be found convenient, and is little in the way. In this respect it is, he thinks, superior to a similar form of retractor accredited to Broisset, which was exhibited at the recent annual meeting at Exeter.

MEDICINAL AND DIETETIC PREPARATIONS.

Formamint Tablets.

WE have examined a specimen of formamint tablets supplied by Messrs. A. WULFING AND CO. (83, Upper Thames Street, E.C.) as a convenient means of applying formaldehyde to the mouth and throat. "Formamint" is the name given to a combination of formaldehyde and milk sugar, which is very easily broken down into its constituents when dissolved; this compound is made up into a tablet or lozenge with sugar and citric acid, together with flavouring and other ingredients to ensure the liberation of the formaldehyde. The tablets are very palatable and without any irritating effect on the throat; each one contains ⅛ grain of formaldehyde, which is gradually liberated as the tablet dissolves in the mouth, the antiseptic being thus brought into contact with the mouth and throat. Their use is recommended in various septic conditions, and as an improvement on gargles as a means of bringing an antiseptic into contact with the fauces.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 398.*)

Antivivisectionist Testimony.

Evidence of the Hon. Stephen Coleridge (concluded).

Continuing his evidence, Mr. Coleridge said, in reply to Dr. Gaskell, his point was that under Certificate B, as now worded, anaesthesia must be applied during the initial operation of opening the animal and fixing the electrodes to different nerves, or whatever it might be. Under Certificate B the animal could be kept in that condition on the board and allowed to recover consciousness, and the animal could be kept there disembowelled, or whatever it might be, as long as the operator chose, without any anaesthesia. That was his interpretation of the initial operation. Asked further if supposing, instead of being worded as it was there,

Being during the whole of the initial operation of such experiment under the influence of some anaesthetic,

and so on, it was worded,

During the whole of the operative procedures in connexion with such experiment,

that would meet his difficulty, he said, No; because his objection was that after the operative procedures were over, during the period merely of observation of the animal, it might be lying in dreadful pain without anaesthesia. On its being put to him that the whole point of Certificate B was that the animal should have recovered from the initial operation, he said, "The initial operation, yes, of such experiment." He agreed that the initial operation meant the cutting of the nerves or the removal of the organ, or what not. On its being suggested to him that it further meant till the animal was sewn up—the whole thing—he said, "Not necessarily at all." It might be for hours on the board in that condition before it was sewn up. There were such experiments. Asked to show a single experiment of that sort under Certificate B, he said that such could be done. The words of the certificate admitted of it. Asked if he was aware that in order to make the thing quite clear, in every Certificate B of late years this was always inserted:

All operative procedures in connexion with any experiments, except experiments under Certificate B, plus EE, to be carried out under an anaesthetic of sufficient power to prevent the animal from feeling pain,

he said he quite admitted that during the operative procedure—that was, using the knife. The examination proceeded:

No?—I think it is obvious.

Surely everything up to the stitching-up is an operative procedure?—No; my contention is—I may be right or wrong——

I think you are absolutely wrong.—That is on the knees of the gods.

No, it is a fact. Here are the words of the certificate—this is the old certificate I am going to read you: "Such animals being during the whole of such experiment under the influence of some anaesthesia of sufficient power to prevent their feeling pain"; then the animal is allowed to recover under that.

During the whole of what?—During the whole of such experiment; that was the wording of the certificate before October, 1899.

Asked if that did not confuse the term "experiment," which was not simply the operative experiment to begin with, but the whole thing, he said his point was that in 1899 the words were put in,

During the whole of the initial operation of such experiment.

His contention—he might be wrong—was that the whole experiment might consist of first opening the animal and fixing electrodes to its cut nerves, or putting tubes down its arteries, and then it might be left on the board in that condition, fixed tight, so that it could not move; and in that condition it might be allowed under this certificate to recover consciousness, and lie there bound at the will of the operator. He said that was part of the experiment, and it was not an operative procedure. Dr. Gaskell said, "But it is not Certificate B at all." The witness replied, "Yes, it is." Dr. Gaskell pointed out that Certificate B was always for the purpose of keeping the animal alive afterwards; and for that purpose one would certainly not begin by putting tubes in a cut-up animal in that sort of way. Mr. Coleridge said he asked the very question of the Home Office, and he got a reply which confirmed his view of it. He asked:

Whether conditions are invariably added to this certificate [that is Certificate B] enforcing the employment of anaesthetics ensuring insensibility to pain from the commencement of the first operation until the conclusion of all manipulations of the animal, and until the last wound is closed aseptically.

The answer was:

Whenever the experiments would involve a series of cutting operations (which is very infrequent), conditions are added to the licence enforcing the employment of anaesthetics ensuring insensibility to pain during all operative proceedings.

He maintained that that question and answer left his contention untouched; that the animal might be opened and operated upon and then left upon the board as long as any fresh cutting operation was performed (they absolutely said "cutting" there) without anaesthetics, under the conditions of that certificate. On Dr. Gaskell pointing out that he would have thought that any common-sense person would understand that "all operative procedures" meant the operations right up to the time that the last stitch was put in, he said that was the question that he asked. Asked if he had ever asked any one who had operated, under Certificate B, he said he asked the Home Office the plain question what the certificate meant. He gave them the opportunity of giving an answer, and they gave him an answer which satisfied him that Dr. Gaskell's contention was wrong. The examination proceeded:

But that answer is distinctly in accordance with my contention?—I think not.

Most emphatically?—I do not agree with you; "during all operative procedures"—that is all.

The operative procedure I should have thought, certainly, so far as my knowledge goes, as recognized by all persons in laboratories, does include the whole of that initial thing?—The animal may be opened, as I have said, and be prepared. What is there in the wording of this answer to prevent that animal being allowed to recover and lie on the board for hours before they begin to sew it up?

The words "operative procedure"?—There is no operative procedure. The animal is lying there, and nothing is done to it; it is not being touched; it is only being looked at. To look at an animal is not an operative procedure. I say the animal might be only looked at for an hour or two, or three hours, in that condition without any anaesthesia, under that certificate.

You cannot give me an instance, I presume?—I am not a vivisector; I do not go into laboratories. I am only on the law.

Have you examined the various Certificates B which have been issued, to see the nature of the experiments?—They are not sent round to my office to be examined.

Can you not get them?—No, I cannot. I have asked for them, and have met with a flat refusal. I have been given a courteous reply, but they will not submit them to me.

You know that it is stated on the certificate that the man must describe the nature of the operation and his object in performing the experiment?—I dare say.

Then it goes on to say, "All operations in connexion with the experiment to be carried out under anaesthesia of sufficient power to prevent the animal feeling pain." My contention is undoubtedly that that does include the whole thing. You say that in your opinion it might be used, but you can give me no evidence that it has even been used in the way you indicate?—I did not come here to give evidence of what I have seen in laboratories. I have never been in one.

You suggest that?—I say so.

To my mind it is a most extraordinary suggestion. I never heard of such a suggestion before.—I dare say not.

It is impossible for me to conceive how it can come into your head.—Here is the law.

No, the operative procedure takes in the whole of it. Then, apart from that, I presume that that is your main objection to Certificate B?—That is a very considerable one.

Dr. Gaskell put it to him that part of the objection would go if it was shown to the witness's satisfaction that such an occurrence as he indicated had never taken place. Mr. Coleridge replied:

You could not possibly inform me that such an occurrence has not taken place. You are not in the laboratories any more than I am. It may be your opinion that such things do not take place, and it may be my opinion that they do: neither of us has a right to say that it has or has not occurred.

The examination proceeded:

Do you not understand that the very kind of experiment that you are putting down is an experiment that would be conducted under licence alone?—No, I do not say that for a moment.

You do not understand it?—Yes, I do perfectly. I understand it too well.

Then I presume that you also consider that under Certificate B there is pain or considerable liability to pain afterwards?—What do you mean by afterwards?

I mean to say after the whole thing?—What is your interpretation of "the whole thing"?

After the operative procedure is finished with and after the animal is kept in the laboratory?—When it is sewn up?

Yes?—My answer to that is that I should think there may or may not be pain. In some cases there might not be pain, and in some cases there might be. I suffered considerably after I had an operation upon myself, I know.

Are you aware that it is the custom now to add to that Certificate B these words: "The animals experimented upon under Certificate B, plus EE, must be treated with strict antiseptic precautions, and if these fail, and pain results, the animal must be killed under anaesthetics?"—I hear you say so.

That is usually put on the certificate?—I accept your statement. I do not see these certificates. Sir Mackenzie Chalmers ought to answer that question, not I.

Asked if it was not the fact that in consequence of asepsis, as used in hospitals, a very large number at all events of the operations were followed by painless results, Mr. Coleridge said the suggestion was made by Mr. Starling that the surgical wards of hospitals were a kind of merry place for everybody, laughing and joking. He had asked several people, and he had not had that extreme view of the happiness of surgical wards confirmed. He dared say that under asepsis very many operations might heal without very much pain. He imagined that others would be painful. In reply to further questions, he said he was not prepared to admit that the Inspectors saw all the cases of animals which had been operated upon under Certificate B. He had brought information before the Home Office that an Inspector had been to a registered place, and had not seen a very considerable number of horses which were in great suffering in another part of the building; and he was not taken to see them. He had that evidence with him, for what it was worth. He submitted it to the Home Office at an interview. The Inspectors went where they were taken by the vivisectors. Asked if there was not much less suffering, from the evidence of these Inspectors, under Certificate B than under Certificate A, he said if that was the evidence of the Inspectors he was not prepared to combat it; but what he had pointed out was that his objection to Certificate B mainly was as to the conditions that were inflicted upon animals when there was no Inspector there. Dr. Gaskell said that, as far as the evidence went, he had no reason to suppose that such an operation as the witness suggested had ever been made under Certificate B. He wished he would produce some evidence that it had been, because it was new to him entirely. Mr. Coleridge replied that he must remember, when the evidence of the Inspectors was put up against anything he had said, that he had already asserted his opinion, and had supported it by a large amount of evidence, that the Inspectors were not unbiassed. On its being pointed out to him that he had asserted definitely there that he was willing to accept the Inspectors verdict, he said he meant the verdict of future Inspectors. He would certainly not have accepted the opinion of Dr. Poore on the question of the humanity of vivisection. In reply to Dr. Gaskell, who said he thought the witness had said that the future Inspectors were still to be appointed by the Home Office, he said, Yes, but there was that consideration about their humanity under his Bill. The Chairman pointed out that it was the humanity of the operators that he got a certificate for, not the humanity of the Inspectors. The witness replied that he provided for the Inspectors too. It was in the proviso to Clause 7:

Provided always that in the appointment or assignment of such Inspectors by the Secretary of State, special regard shall be paid to the applicant's reputation for humanity.

The Chairman said that was not a certificate, but "special regard." Dr. Gaskell put to him that what the vivisectors generally considered was that Certificate B implied exactly the same thing as occurred in every operation in a hospital. The witness said he could not agree to that. Asked by Dr. Gaskell if he could not be conscious and yet not feel pain, he said *ἀναίσθητος* meant "unconsciousness." In reply to further questions he said he believed it was well known that when one was shot one did not feel the pain at once because of the shock to the nerves all round. Asked if it was not the case in hypnotism that one could still be conscious and not feel pain, he said he had not been hypnotized; he did not know about that. Asked if he knew that in lunatic asylums patients burned themselves and the sun burnt them, but they did not feel pain, he said he really did not know what lunatics felt; he had no experience of lunacy. Reminded that he had told them distinctly that slight anaesthesia meant that the animal felt pain, he said he did not know that they had lunatic animals in laboratories. The parallel of lunacy did not seem to him to come in. On Dr. Gaskell putting it to him that in all these cases it was possible for consciousness to exist and yet pain to go, he said "That is your assertion. If you ask me to affirm it or to agree to it, I do not." Asked if he knew that the corneal reflex was only one of many reflexes, he said he was not a physiologist. He declined to discuss physiology with anybody. Reminded that he distinctly asserted that unless the corneal reflex was abolished the animal felt pain, he said he took that from the correspondence before him. Dr. Gaskell pointed out that all the correspondence said was that if the corneal reflex was abolished the animal was under deep anaesthesia. In reply to the Chairman the witness agreed that the corneal reflex was one of the last to disappear. On Dr. Gaskell asking if he would not agree that pain might disappear before the corneal reflex was abolished, he said that was another thing. In reply to further questions he said he regarded Dixon and Brodie's case of light anaesthesia with profound distrust. Asked if he did not know that at these experiments a registering apparatus was being used, he said he did not know in the least; he was not there. Asked if he did not understand that if an animal were in pain it would show signs of that pain, he said not if it had curare. He did not know whether it had in this case. There was a mention of curare (on page 144 of the *Journal of Physiology*, vol. xxix):

In no instance have we obtained any effect by exciting the central end of the sciatic in a curarised animal [he said he had not seen that before], "but the experiments are not numerous."

So that curare was used. Asked if he did not consider when a delicate registering apparatus was going on in the animal, which moved perfectly smoothly and got real good curves, even although the operator said the animal was under slight anasthesia, that did not show that the animal was not feeling pain, he said:

Not necessarily. I have an answer to that, of Sir Victor Horsley, in the case against me on that very point that an animal can be held tight when it does not move. (*Mr. Rufus Isaacs*). Would it be possible to perform the experiment or the demonstration which we knew took place, if the dog had been conscious? (*Sir Victor Horsley*) No, absolutely impossible unless the dog had been fixed up with all manner of apparatus, to absolutely fix every bone. You can fix an animal with apparatus of *that* sort. (*Pointing to the operating board.*) That is the answer to that—you can so fix an animal on that board—and he pointed to it—they had it in Court.

Asked by Dr. Gaskell if he said that morphine did not take away pain, he said he did not say so. He was ready to accept expert evidence that a poisonous dose of morphine was a complete anaesthetic near the period of death. He did not agree that large doses of morphine removed pain entirely. Asked by Sir Mackenzie Chalmers if Dr. Hadwen was connected with his Society, he said: No, they had nothing to do with him at all. In reply to Dr. Wilson, who asked if supposing he was assured, as several witnesses had assured the Commission, that no matter how prolonged and severe these experiments might be that were carried out, and no matter under what anaesthetic or narcotic they were carried out, they were absolutely without pain, he would accept that statement, he said, Certainly not. Asked if he would accept it as a statement of opinion, he said, Yes. It was not the opinion probably of the animal. Asked if, supposing that experiments were still permitted to be carried on before classes, and that all experiments were required to be carried out under anaesthesia, it would give greater satisfaction to his Society if every experimenter were required, in forwarding his reports of experiments, to fill up a form of certificate in respect to them to the effect that, to the best of his endeavour and belief, the experiments had been carried out painlessly, he said: "Oh, no." In reply to further questions, he said his desire was to separate licensed vivisectors from the medical profession. He did not

include them in any way in his mind with the medical profession. In his mind, the medical profession as a rule were not vivisectors. He agreed that the expressed opinion of the profession was in favour of experimentation on animals. What the unexpressed opinion might be he did not know. In reply to the Chairman, the witness said he wished to read a letter from the Duke of Portland, who was Chairman of the Dogs' Home at Battersea, with regard to a suggestion put to Mr. Starling by, he thought, Sir Mackenzie Chalmers, about using the Dogs' Home as a source of supply of dogs for vivisection. The letter was as follows:

Dear Mr. Stephen Coleridge,—Many thanks for your letter. I think Mr. Starling's suggestion is not only horrible but absurd, and it is one which, both as President of the Lost Dogs' Home and as a private individual, I should feel bound to resist as strongly as I possibly could. I say the suggestion is absurd because I am convinced it would never be accepted by the majority of the subscribers to the Home, and I have no doubt if persisted in it would mean the closing of the institution and the loss to the public of much useful work at present undertaken and carried out by voluntary subscription. I am sending your letter and my reply to the Secretary of the Lost Dogs' Home, and, personally, I shall be glad to know that you have opposed Mr. Starling's suggestion, and I am, yours sincerely, (Signed) PORTLAND.

Asked if that was all he wished to say, he replied that there was one thing. As regarded the courtesy with which Sir Mackenzie Chalmers had treated him, he would always feel very grateful, and personally nothing but pleasure, in having been able to bring accusations against the Home Office face to face with the chief of the department. But having said that, he wished to emphasize that he could not help feeling rather forcibly that after he had left that room Sir Mackenzie Chalmers remained in the position of judge upon the indictment which he had brought forward, and he therefore felt that the situation was a peculiar one. The witness thought it ought to be remembered as a fact that, after he had withdrawn, Sir Mackenzie Chalmers remained as the judge upon the very points which he had brought as an accusation against the Home Office of which he was the head. The Chairman pointed out that his was not an extraordinary position. Upon every Commission relating to an Act of Parliament there was some member representing the administering department. It was quite usual. It was only that this happened to be a case in which feelings were moved more than they were, perhaps, in regard to motor cars or London traffic. Mr. Coleridge said it put him somewhat at a disadvantage.

A HOSPITAL FOR MENTAL DISEASES.

At the weekly meeting of the London County Council, held on February 18th, Mr. H. P. Harris, Chairman, read the following letter:

"12, Queen Street, Mayfair, W.,
"February 14th, 1908.

"Dear Mr. Harris,—In December last you kindly allowed me to put before you a scheme for the establishment in London of a fitly-equipped hospital for mental diseases. I said then that should the London County Council be willing to carry it into effect, I should be pleased to contribute £30,000 towards the cost of it. In the hope that the Council may look favourably on the scheme, I venture to ask its acceptance of that sum for the purpose. As a physician who has been engaged in the study and treatment of mental diseases for more than half a century I have been deeply impressed with the necessity of a hospital the main object of which would be (1) the early treatment of cases of acute mental disorder, with the view, so far as possible, to prevent the necessity of sending them to the county asylums; (2) to promote exact scientific research into the causes and pathology of insanity, with the hope that much may yet be done for its prevention and successful treatment; and (3) to serve as an educational institution in which medical students might obtain good clinical instruction. (1) It is believed that many cases of acute insanity, in which recovery usually occurs within a few weeks, or under three months—notably, cases of puerperal insanity—would be cured, and the persons thus saved from much of the prejudice which is sometimes a lasting injury to them when they have been sent to an asylum; and it is hoped that, in a small institution, with several medical and other attendants, the patient and apt application of individual treatment, mental and medical, would bring about recoveries which might not take place in large asylums in which multitudes are congregated and such individual treatment is almost impracticable. (2) The London County Council has already shown its desire to promote the scientific study of mental diseases by the establishment of the important pathological laboratory at Claybury, in which its director, Dr. Mott, has done universally recognized good work, especially in connexion with general paralysis of the insane. But the distance of this laboratory from London and the difficulty of getting to it, with the loss of time involved, have made any systematic instruction impossible and detracted much from its value. (3) As an educational institution the hospital would be, I think, of almost inestimable value. If, as seems most desirable, the hospital be conducted as a recognized school of the University of London, students receiving instruction in it and serving as clinical clerks for six months would thereby fulfil the requirements of the University for branch III in the M.D. examination. Thus also a supply of trained medical officers would be available to fill the posts in the large asylums; men furnished with the requisite instruction and imbued, one may hope, with the earnest spirit of scientific observation and inquiry. The outline of the scheme suggested at our interview, as you no doubt remember, was that the hospital should be for 100 patients suffering from recent and mostly acute insanity; that some 60 or 75 of these should be of the poorer class for whom the parishes would pay, as is the case now with those sent to the county asylums; and that the remainder should be private patients who would pay a sum sufficient to prevent them from being any cost to the ratepayers. It is, of course, desirable that the hospital should be situated as centrally as possible in order that it may be of the greatest advantage to patients and students. These are, I think, the chief points to be considered in connexion with my proposal, but the memorandum which was prepared after our interview is fuller, and will give information on matters of detail omitted in this letter. I will only add, in conclusion, the expression of my belief that the establishment of such a hospital, in vital touch with the general hospitals and the University of London, would do much to break down the unfortunate isolation from general medical knowledge and research in which the study and treatment of insanity remains; and it is not perhaps too much to hope that in the end it might save to the rates some of the prolonged expense of chronic and incurable insanity.—I am, yours truly, Henry Maudsley."

The Vice-Chairman (Mr. Stuart Sankey), in moving a vote of thanks to the donor, said the scheme had been before the Asylums Committee, the Finance Committee, and the General Purposes Committee, and he believed it had the universal approbation of the medical profession and of the Royal Commission on the Feeble-minded.

Captain Hemphill seconded the motion.

The resolution was carried unanimously.

MEDICAL NEWS.

Dr. Rina Monti, a lady, has been appointed extraordinary professor of zoology and comparative anatomy in the University of Sassari.

The annual dinner of the Chelsea Clinical Society will take place at the New Gaiety Restaurant, Strand, on Thursday next, at 7.45 p.m.

Dr. David Nabarro, Assistant Professor of Pathology and Bacteriology at University College, has been elected a Corresponding Member of the Society of Tropical Pathology in Paris.

The annual court of the corporation of King's College Hospital will be held on Thursday next at 4.30 p.m., when there will be submitted for approval the Bill for transferring the school of advanced medical studies connected with the hospital, but now carried on by the college, to the corporation of the hospital.

The Medical Society of London will hold its hundred and thirty-fifth anniversary dinner at the Whitehall Rooms, Hotel Métropole, on March 11th, with Dr. J. Kingston Fowler, the President, in the chair. Tickets can be obtained from the Honorary Secretaries, Dr. F. J. Poynton and Mr. T. H. Kellock, 11, Chandos Street, Cavendish Square, W.

British Medical Journal.

SATURDAY, FEBRUARY 22ND, 1908.

THE SECOND UNITED KINGDOM HOSPITALS CONFERENCE.

As will have been seen from the circular letter reproduced in the SUPPLEMENT last week, the Committee appointed by the United Kingdom Hospitals Conference, which met in London in December, 1906, has resolved to hold a second Conference. It will probably take place in a few weeks, and it may be useful to consider the progress made in bringing about co-operation among hospitals since the last Conference took place, and the prospect of useful work for that which is about to be held. As the Conference at present has practically no funds at its disposal, the preparations for the approaching meeting have had to be carried out in the offices of the British Medical Association. The work of the Association itself has not only been very heavy during the past year, but has necessarily been hampered by the fact that it has had to be carried on in temporary premises, so that it has not been found possible to complete the report of the Committee early enough to allow the holding of the second Conference at an exact interval of twelve months after the first. The delay has had, at any rate, one compensating advantage, inasmuch as the forthcoming Conference will be held at a much more suitable time of the year.

A perusal of the preliminary letter addressed to hospitals, published in the SUPPLEMENT last week (page 60), will show that the replies of hospitals to the suggested rules of hospital management drawn up by the Committee of 1906 have, in pursuance of the resolutions of the last Conference, been submitted to analysis, with the result that a very gratifying amount of agreement as to the desirability of bringing the rules into effect has been displayed. The Committee reports that while it is practically impossible, owing to diverse conditions, to draw up a code which will cover all cases, yet it is feasible to formulate principles which will be applicable to the majority of cases. We have reason to believe that in many cases hospital Boards have already embodied some of the suggestions in their rules, and the matter has been alluded to in some annual reports. For instance, the last published report of the Leicester Infirmary states that "The system of inquiry into the means of patients "has been continued. . . . Cases of abuse . . . have at "once been debarred the privilege of . . . treatment."

With regard to the arrangements for the coming Conference, the Committee has come to the conclusion that the first Conference had not sufficient time to discuss fully all the important matters before it, and therefore proposes that the second shall extend over two days, and that the delegates shall have the opportunity of meeting one another socially at dinner on the first day. The Committee considers that as the first Conference was chiefly occupied with the question of hospital abuse, it will be unnecessary to spend much time on this subject. There are many other matters of great interest awaiting discussion, and a list of such subjects suggested by the Committee was appended to the circular recently issued to hospitals (p. 63), and further suggestions were invited. On receipt of the replies, a meeting of the Subcommittee appointed to make the final arrangements for the Conference will be held finally to determine the agenda of the Conference, and to fix its date. The question whether all hospital patients who can afford it should be compelled to pay for food and medicine supplied to them—one of the subjects placed on the provisional agenda—would undoubtedly lead to an instructive discussion; and it is, we believe, the intention of one of the most prominent believers in the advisability of these payments to bring this subject forward. Hospital accounts, pay-wards, the provision which hospitals should make for cases of accident under the new conditions created by the Workmen's Compensation Act, 1906, and the methods of co-operation between hospitals and provident dispensaries, are other subjects which the Subcommittee has suggested as ripe for discussion. It is obvious that from this list topics might be selected which alone would fully occupy the time of the Conference, while others of perhaps equal interest may be mentioned in the replies from hospitals to the letter recently issued to them. There will be a departure from the practice of last year with regard to the chairmanship of the Conference. The Committee, recognizing the advantage of having a Chairman who is thoroughly acquainted with the details of the business, has decided to invite its own Chairman, Mr. Charles Lupton, Chairman of the General Infirmary, Leeds, to occupy that position, and feels sure that the wisdom of this decision will be recognized. The appeal for funds is already meeting with ready response, and we would urge hospitals not to withhold the small but very necessary sum asked for. In conclusion we would ask all interested in hospital management to approach their respective Boards of Management and request them to make an early response to the appeal in the Joint Committee's letter for suggestions and for the appointment of delegates. An enterprise of this kind, which is nothing less than an attempt to establish the principles upon which the medical aid given by voluntary hospitals should be founded, can be successful only through the cordial co-operation of all concerned, and the interest shown, especially by the provincial hospitals, and the degree of unanimity attained at the first Conference, is of good omen for the second.

SUBPHRENIC ABSCESS.

THE most characteristic form of subphrenic abscess, namely, that containing gas, like some other diseases first recognized in England, only obtained general recognition after detailed description by foreign writers. In 1845 G. Hilario Barlow, of Guy's Hospital, recognized its existence as a logical deduction from the physical signs; and in 1874 Hilton Fagge described this and other forms of subphrenic abscess in the *Guy's Hospital Reports*. It was not, however, until 1880 that, as a result of von Leyden's classical paper on subphrenic pyopneumothorax, the subject attracted general attention. Since then numerous papers on the forms of subphrenic abscess have appeared, and our knowledge of the subject has greatly increased. The detailed paper on this subject by Mr. Barnard, concluded in our columns this week, is an extremely valuable contribution, as it is based on a series of 76 cases observed at the London Hospital in the years 1900–7, and gives the results of cases tabulated on a uniform plan. Its conclusions,

therefore, are much more convincing than those of larger series of cases collected from literature, such as Maydl's, in which the data are necessarily less definite.

The descriptions given in the standard textbooks are often somewhat uncertain and vague as to the anatomical boundaries, extent, and routes of the spread of subphrenic abscesses. A precise knowledge of these points is of the greatest practical importance in enabling proper drainage to be provided for and thus determining the success of surgical treatment. Although considerable attention has recently been paid to the anatomy of subphrenic abscess by Dr. Box and Mr. McAdam Eccles in their work on *Clinical Applied Anatomy*, and by Carnot[1] in 1906, the clearest and most exact account is that given by Mr. Barnard. His classification of six forms of subphrenic abscess is extremely simple and depends on the existence of six areas on the under surface of the diaphragm—four intraperitoneal and two extraperitoneal; the four intraperitoneal forms of abscess are the right anterior, right posterior, left anterior, and left posterior, which are separated off and defined by the cruciform arrangement of the peritoneal ligaments—the falciform, coronary, and the right and left lateral—of the liver.

Of the two forms of extraperitoneal abscess, the right, between the layers of the coronary ligament of the liver, is nearly always due to intrahepatic suppuration, and would appear to be closely allied to, if not the same as, the suprahepatic abscess described in 1899 by Mr. Cantlie[2]; the left extraperitoneal abscess is near the left kidney. The right and left anterior intraperitoneal abscesses, due in the main to appendicitis and to gastric ulcer respectively, are the forms most commonly met with; next in order of frequency comes the right extraperitoneal abscess. The right posterior intraperitoneal abscess is situated in the subhepatic or right kidney pouch and readily spreads into other pouches; thus, in 9 out of the 10 cases of this abscess it was combined with suppuration in the right anterior peritoneal pouch—that is, between the convexity of the liver and the diaphragm—and in the remaining case there was a suppuration in the left anterior subphrenic space, or a perigastric or perisplenic abscess. The left posterior intraperitoneal abscess occupies the lesser sac of the peritoneum, and occurred in 3 only out of the 76 cases. Cases of gaseous and non-gaseous subphrenic abscesses differ remarkably in the physical signs presented, and for this reason it might appear desirable to consider them separately, the gas-containing abscesses, on account of their remarkable physical signs, being easier to diagnose. Mr. Barnard, however, has not attempted any rigid distinction of this kind, probably because the anatomical relations of the two forms are identical, the differences being due solely to the nature of their contents.

From analysis of the signs and symptoms of subphrenic abscess Mr. Barnard finds, as others have found before, that thoracic signs are present in the majority of the cases—in 56 out of the 76 cases—and were stated to be absent in 3 only. While fully recognizing the dangers and the fallacies that may attach to a promiscuous search for pus with an ineffective syringe, he is very definitely of opinion that the most certain means of arriving at a diagnosis of subphrenic abscess is by exploration with a needle, which should be at least 3 in. long and sufficiently large to enable thick pus to be withdrawn. The patient is fully prepared for operation and anaesthetized; the tenth, ninth, eighth, seventh, and sixth intercostal spaces in the scapular line and the spaces in the mid-axillary line are successively explored, from below up, until pus is obtained. This thorough and systematic method of exploration is very different from the one or two somewhat timid exploratory punctures not uncommonly made; and, as it has never failed in the author's hands, it would appear that the objections raised by some authorities against exploratory punctures, though applicable to the method as commonly employed, lose their force when the directions given above are followed out.

One of the most important conclusions is that the present mortality—47.4 per cent.—of subphrenic abscess is too high; diagnosis is sometimes extremely difficult, and in the absence of diagnosis and operation the result is very prone to be fatal. Analysis of the 36 fatal cases in the series of 76 cases shows that 12, or one-third, were only recognized after death, and so were not operated upon; as no case not operated upon recovered, the mortality of cases not submitted to operation might be said to be 100 per cent., but it is only fair to point out that it is possible that some cases which are never diagnosed may yet recover after discharging their contents into the alimentary canal. Hilton Fagge,[3] indeed, recorded a clear case of gaseous subphrenic abscess which recovered completely after spontaneous rupture into the alimentary canal. In some of the other 36 fatal cases the operation was not successful owing to want of exact and detailed knowledge of the localization and character of subphrenic abscess on the part of the surgeon; this shows the importance of Mr. Barnard's careful work in settling these points. After deducting avoidable deaths—namely, those due to imperfect diagnosis and treatment—the ideal mortality works out at 16 as against nearly 50 per cent. One of the dangers usually ascribed to a subphrenic abscess is that it is prone to rupture into the general cavity of the peritoneum, and thus to set up rapidly-fatal peritonitis. It is, therefore, rather remarkable that among the 23 cases in which spontaneous rupture occurred there was only one in which the abscess opened into the peritoneal cavity.

[1] Carnot: *Sem. méd.*, Paris, 1906, xxvi, 85.
[2] Cantlie: British Medical Journal, 1899, ii, 646.

HOSPITALS FOR MENTAL DISEASE.

On several occasions the expediency of establishing in London an institution of the nature of a hospital in which patients suffering from acute mental disease could be kept under observation and treatment without incurring the stigma of certified insanity, with the manifold disadvantages, personal and social, which it entails, has been advocated in the British Medical Journal. The need of such an institution has made itself more and more acutely felt as mental disorder has become more frequent in our population. At present there is in this country nothing between unrestrained freedom, with all its attendant dangers to the patient and to the public, and the lunatic asylum, which puts upon him a brand marking him off from his fellow-men. Hence, in dealing with the victims of mental malady it has been, except to a very limited extent, impossible to differentiate between patients as to whom a reasonable hope of recovery could be entertained and those manifestly doomed to lifelong, if not progressive, insanity. The increase in the number of certified lunatics has compelled the London County Council to devote an increasing portion of the ratepayers' money to the erection of huge buildings in which unfortunate sufferers from mental disease are herded together; the result is that cases of passing functional disorder of the

[3] Hilton Fagge: *Guy's Hospital Rep.*, 1873-4, 3rd series, xix, 230.

brain, from constant association with others in whom the disorder is due to defect or organic lesion, often drift into definite and permanent insanity. It is only fair to say that attempts have from time to time been made to remedy this evil. In the Lunacy Bill promoted by the Council there was, we believe, a provision for the establishment of "Receiving Houses," and the Finance, Asylums, and General Purposes Committees of the Council have had under consideration a scheme which, in the words of Dr. Mott, in the preface to the third volume of the *Archives of Neurology*, "would "probably include the establishment of an acute hos- "pital for the investigation and treatment of curable "mental cases." This scheme has, we understand, received the approval of the Royal Commission on the Feeble-minded, and of many leading medical authorities on mental disease. In Scotland it has been proposed that lunatic wards should be attached to general hospitals. This is a revival of an old plan which, at least in Edinburgh, was adopted in the eighteenth century. In several cities of the United States, such as Boston, New York, Philadelphia, and Buffalo, emergency cases of insanity used to be admitted into general hospitals, and at the present time such cases are treated in the Bellevue Hospital, New York, and the Blockley Hospital, Philadelphia. The former has a separate pavilion for the purpose with thirty beds and a resident medical staff. This is at present the reception hospital for the insane of New York. Some thousands of cases are admitted annually. Thence they are distributed, if necessary, among the various retreats and State hospitals for the insane in the neighbourhood of New York.

What is wanted in London is a hospital staffed by men of the professional rank of the physicians and surgeons of general hospitals, and provided with an out-patient department to which patients whose condition excites the anxiety of those about them could be brought for consultation. To this should be attached a fully-equipped laboratory for the scientific study of the pathology of insanity. Such a laboratory already exists at Claybury, and has more than justified its existence by the valuable work there done by Dr. Mott and his assistants and pupils. But there can be no doubt that this laboratory would be incalculably more useful for teaching as well as for study if it were in a more accessible situation. This has been pointed out many times in the BRITISH MEDICAL JOURNAL. Money has, however, been lacking for the transference of the laboratory to London; and the same difficulty, probably, has stood in the way of the establishment of a hospital for mental disease. In addition to these solid objections we fear there has been a certain amount of obstructiveness in some quarters. The Lunacy Bill promoted by the Council has been hung up for one reason or another, and till lately the establishment of a mental hospital has seemed to be in danger of fading out of the sphere of practical politics. Now a philanthropic physician has come to the rescue with a munificent offer of £30,000 towards the erection of such a hospital. Our readers do not need to be told that Dr. Maudsley, whose letter to the County Council will be found at p. 457, has deservedly gained for himself a worldwide reputation as a specialist on mental disease. His letter speaks for itself; it deals with the whole subject in a broad and enlightened spirit characteristic of the writer. His generous offer has been accepted by the Council, and it is to be hoped that steps will at once be taken to give effect to his intention.

Such a hospital as he wishes to see established would be the means of restoring to a useful place in society many patients who now too often pass into a state worse than death, and add to the burden of the ratepayer. It is sad to think how many cases that might be cured pass beyond recovery owing to the want of timely and proper treatment. Beyond the immediate relief to the present generation, there is the larger hope of future benefit afforded by the opportunities of clinical study offered by a hospital. As Dr. Maudsley well says, the educational value of such an institution would be almost inestimable. A necessary part of the scheme is a laboratory, for in scientific research, of which we have examples in the work of Dr. Mott, his assistants and his pupils, lies the only hope of discovering the causation of mental disease. It is only by such discovery that we can look for help in the prevention of the most grievous of human afflictions.

A most important part of the scheme is the proposed connexion of the hospital with the University of London. This would be a guarantee of the scientific character of the work there to be done, and, moreover, would enable it to become the nucleus of a school of mental disease and neurology that would be a nursery for supplying the asylums with specially trained experts.

We are, it must be admitted, far behind not only Germany but the United States in our provision for the treatment of the insane. In Germany every city of more than 50,000 inhabitants has a small hospital for acute cases and a colony for chronic lunatics in the neighbouring country. Every university has a psychiatric clinic, with pathological, chemical, and psychological laboratories. Among the newest of these may be mentioned those of Giessen, Berlin, Kiel, Munich, Breslau, and Greifswald. Of the scale on which these institutions are built a notion may be formed from the fact that the one in Munich cost £120,000. In the United States Dr. Frederick Peterson, of New York, has for many years urged the adoption of what he considers the ideal system. This consists of pavilions connected with general hospitals in cities of less than 100,000 inhabitants; and special psychopathic hospitals in the larger cities, with agricultural colonies for the chronic insane in the country districts. Since the beginning of his propaganda the general hospital of the city of Albany, New York, has built a model pavilion for the exclusive care of the insane, and a mental hospital has been constructed by the State of Michigan in connexion with the State University at Ann Arbor. Two or three years ago, while Dr. Peterson was President of the New York State Lunacy Commission, he secured an appropriation of £60,000 from the State Legislature for the construction of a mental hospital in New York City on condition that the city provided the land for the purpose. This condition has recently been fulfilled. We understand that in New York the pavilion at Bellevue Hospital, as well as one at the King's County Hospital in Brooklyn, is to be continued, while provision will be made in certain other general hospitals in various districts, all in addition to the new hospital. This will provide for New York, with its 4,000,000 inhabitants, a number of places of reception for emergency cases, and one hospital for longer detention of the acute and curable cases equipped with laboratories and facilities for the instruction of students.

We in this country have not yet risen to the conception of such an organized system. But we may cherish

the hope that Dr. Maudsley's princely benefaction will serve both as an example to other "pious founders" to do likewise, and as an incitement to the powers that be to deal in a large and liberal spirit with a question closely connected with the welfare of the present generation and the future of our race.

REGISTERED ADDRESSES.

The General Medical Council has caused a circular letter to be issued to all the licensing bodies, medical teaching institutions, hospitals, infirmaries, and asylums in the United Kingdom, some 1,500 in all, again calling attention to the provision contained in Section xiv of the Medical Act, 1858. This Section enjoins the registrars to keep the *Medical Register* correct, and, in order to enable them to fulfil this duty, authorizes them to write a letter to any registered person, addressed to him according to his address in the *Register*, to inquire whether he has ceased to practise or has changed his residence; if no answer is returned to this letter within six months, it is lawful for the registrar to erase the name of such person from the *Register*. It has been found that many practitioners, especially those who have not long qualified or registered, not fully appreciating the force of this provision and its value to the profession, fail to give to the office of the General Medical Council from time to time an address at which official communications will reach them. The circular letter is accompanied by a card for display, in which the terms of the section to which we have referred are quoted, as well as certain other sections in which the privileges of registered persons are defined. It is pointed out, further, that if for any reason a permanent address cannot be given, some other should be supplied to which official communications may be directed. All notices in regard to changes of address should be sent to the registrar of the Branch at which registration was originally effected—that is to say, either to the Registrar of the General Medical Council and English Branch Council, 299, Oxford Street, London, W.; the Registrar of the Scottish Branch Council, 54, George Square, Edinburgh; or the Registrar of the Irish Branch Council, 35, Dawson Street, Dublin.

OUT-PATIENTS IN LONDON.

His Royal Highness the Prince of Wales, at the suggestion of the Executive Committee of King Edward's Hospital Fund for London, has decided to appoint a Committee to inquire into the system prevailing in the London voluntary hospitals with regard to the admission of out-patients. But, in view of the fact that some portion of the subject of inquiry by such a Committee would probably fall within the subjects to be reported upon by the Royal Commission on the Poor Laws, the Committee will not be appointed until that Commission has reported. This announcement will, we are confident, be read with general satisfaction by the members of the medical profession, but some regret will be felt that the inquiry is to be postponed until after the Royal Commission has reported. No doubt the relation of the medical relief given under the Poor Law to that afforded by the hospitals will be discussed by the Royal Commission in its report, but we believe that the results of an independent inquiry into the out-patient system in London, conducted by a committee of experts, such as the King's Fund might appoint, would have been most useful if placed before the public contemporaneously with the report of the Royal Commission, which will deal with the whole country. The out-patient system in London presents some special features, and the abuse which exists more or less everywhere is probably greater in the metropolis than in at least most other large towns. The present condition of things is good for no one, neither for the medical officers of the departments, nor for the patient, nor for general practitioners.

INSURANCE AND MEDICAL RESPONSIBILITY.

In a very brief and business-like presidential address delivered to the Life Insurance Medical Officers' Association, Dr. T. Glover Lyon touched on several points which are of no little interest to a much larger section of the profession than those directly addressed. Most medical men who have had to examine applicants for insurance will cordially endorse the remark that the chief medical officers of the companies might well reconsider the "official forms of examination in the "direction of curtailing the questions asked by the "examiner, so as to allow him to concentrate his attention on the condition of the applicant before him. The "long questions as to past ailments seem often to confuse the applicant, who not infrequently, after having "said he had never suffered from any of the diseases "named, will volunteer information to the contrary." Dr. Lyon is on much more controversial ground, however, when he suggests that his Association should "consider the position of referees," and commits himself to the statement that "in spite of the opportunities often possessed by referees of becoming acquainted "with the daily life of the applicant, the results of "their examinations are less satisfactory than those "made at the head office." It would not be surprising if the large body of general practitioners who are now engaged in insurance work as part of their daily routine should demand some confirmation or proof of this apparently dogmatic statement. As Dr. Glover Lyon himself reminds us in a later paragraph, the main consideration in all insurance work is prognosis, and it is extremely doubtful whether any special training could be devised which would beat the experience of the general practitioner in developing powers in this respect. As to Dr. Lyon's further proposal, that his Association should institute examinations and grant certificates to practitioners desiring to become referees, we can only say that it is one which we do not think likely to be received with enthusiasm by a majority of the profession. The question, "Should "the applicant's medical adviser ever be employed as "referee?" Dr. Lyon answers in the negative. Here most people will be disposed to agree with him; but he adds the cryptic remark that, "if employed at all, he "should be asked to supply a private report." In what sense does Dr. Lyon use the word "private"? Many companies make a practice of applying to the proposer's medical adviser for information, which the medical adviser is entitled to supply only if he obtains the consent of his patient; but we fail to see wherein such a report differs in privacy from that of a referee. Furthermore, the remark that "the question of prevent-"ing pressure being placed on local examiners by influ-"ential men of the locality is another point for thought" appears to contain a suggestion which may well be resented by the many honourable men at present acting as local examiners. We doubt if there are any such who require the good offices of the Life Insurance Medical Officers' Association to protect them from the pressure of "the influential men of the locality." In connexion with employers' liability Dr. Lyon expresses the belief that "the responsibility of employers in regard to "accidents will become of secondary importance to "their responsibility in regard to damage done to "employés by injurious conditions of life, and that "the assessing of damage done by employment in "offices, shops, restaurants, etc., supplied with insuffi-"cient light and air will afford unlimited work for the "medical expert, so long as sanitary authorities allow

"these conditions to continue." This belief seems to foreshadow further legislation, which, however desirable in the interests of public health, is not at present quite within the field of practical politics. The rest of Dr. Glover Lyon's address dealt with matters more closely concerning the Association he was addressing, but however we may differ from some of his opinions, we tender our thanks for this admirably alliterative aphorism—"When doctors differ, directors decide to decline."

INSUSCEPTIBILITY TO VACCINATION.

For some time there has been an increasing disposition among those whose experience of vaccination is considerable to regard with suspicion cases of alleged insusceptibility to vaccination. Among careful and persevering vaccinators such cases are extremely rare, if, indeed, they meet with any. The *Bulletin* of the Chicago School of Sanitary Instruction, a weekly pamphlet published officially by the Department of Health for the City of Chicago for the dissemination of advice and information, in a recent issue draws attention to two cases of considerable importance. They illustrate the danger of assuming insusceptibility to vaccination in patients who fail to "take," and more especially the danger of presuming that such cases are immune from small-pox. One, a medical student, had been vaccinated five times, and each time failed to take. He contracted small-pox after allowing himself to be exposed without further attempt to secure successful vaccination. The terse comment of the *Bulletin* is that "as a consequence he is now being immunized in the "old way, a way that is effective even though "expensive and frequently disastrous." The other case mentioned was a cashier in East Chicago. After five unsuccessful attempts at vaccination, he was advised by his physician that he was insusceptible to vaccinia, and therefore immune to small-pox. He died of haemorrhagic small-pox. These are doubtless very exceptional cases, but it is probably a fact that one successful vaccination can be performed on everybody. Many vaccinators of large experience have declared that they have never seen a case that they could certify as insusceptible. Natural immunity from vaccinia in the human subject is doubtless much rarer than certified insusceptibility. At the same time, it is a fact that the number of cases thus certified in this country is relatively and actually very small. According to the summary of vaccination officers' returns, published in the Local Government Board Reports for 1902, 1903, and 1904 (the latest completed returns), the percentage of certificates of insusceptibility was precisely the same for each year—namely, 0.3 per cent. of the births registered in each of those years. This is a curious and remarkable coincidence. In 1899 twice as many such certificates were received—namely, 0.6 per cent. This great variation in one year suggests an explanation which throws some doubt on the reliability of such certificates as an indication of actual insusceptibility. The year 1899 was the first year under the new regulations regarding the lymph supply, and it is well known that the glycerinated lymph issued in that year by the Local Government Board and other supplies in circulation were diluted to such an extent that an altogether abnormal number of failures to secure successful vaccination were recorded. The increased number of failures without doubt contributed to the increased number of certificates of insusceptibility. It is not reasonable to suppose that twice as many children were "insusceptible" to successful vaccination in 1899 as in 1904 or 1903. The variation in the efficiency of the lymph supply in those years contributed largely to the variation in the amount of so-called insusceptibility; indeed, to this difference possibly the whole variation may properly be attributed. Another factor in the failures is the vaccinator himself. It is well known that some vaccinators have a larger number of failures than others using the same issue of lymph. These failures undoubtedly contribute to the number of "insusceptibles." After eliminating these two circumstances it is conceivable that the number of cases of presumed natural immunity from vaccinia might be reduced almost to the vanishing point. The universal susceptibility to vaccinia on the part of the human race is strong evidence of the universal susceptibility to variola in an unvaccinated community. Opponents of vaccination have sought in vain to explain the acquired immunity of those properly protected by vaccination, and exposed directly to small-pox infection, such as nurses and attendants, by claiming these as cases of so-called natural and not acquired immunity. The facts of the case are against any such supposition.

DYSMENORRHOEA IN GIRLS.

MARIE TOBLER[1] has investigated 700 cases of dysmenorrhoea in Frankfort, following the example of Jakoby, John Williams, and Vedeler. In Tobler's series the symptom was primary in 234 patients. By primary dysmenorrhoea, painful menstruation beginning when the catamenia are first established is understood. Secondary dysmenorrhoea, beginning later, was present in 466 of Tobler's cases, 322 being girls and 144 married or parous women. He concludes: (1) The distinction between the primary and secondary form in multiparae is important; the latter is distinctly the more frequent. (2) Both forms are markedly frequent in nulliparous girls with constitutional disorders, such as chlorosis; in others where the establishment of the catamenia is retarded; in others where the patient's vocation is exhausting or unhealthy (lead poisoning, etc.); and in others with constipation, indicating impaired function of the alimentary canal. (3) Menorrhagia is the rule in girls with secondary dysmenorrhoea. (4) The dysmenorrhoea of young girls is markedly premenstrual, with its climax during the first hours of the show of blood. The pain is not of the labour type, but continual, and often associated with general malaise. (5) The genital tract does not show any lesion sufficient to explain the source of pain. (6) The fact that dysmenorrhoea in young girls is so often secondary does not support the theory of purely mechanical agencies (stenoses, flexions) as its cause. (7) Neither the circumstances of the patient's life nor her clinical history can in the great majority of cases justify the theory that the origin of dysmenorrhoea lies in the nervous system. (8) The majority of cases of dysmenorrhoea in young girls appears undoubtedly due to disturbances in the pelvic circulation. Passive hyperaemia is a common result of faulty nutrition, hygiene, and clothing; it is increased during the periods, so that very active hyperaemia results. As the elastic elements of the uterus are not rarely ill-developed in youth, these disorders of the pelvic circulation entail stretching and compression of nerves. (9) Tobler believes that the principal seat of the pain lies in the subperitoneal connective tissue, where the vessels and nerves are most exposed to pressure. (10) Clinical observation and the results of treatment favour this theory. (11) In contradistinction to the morbid conditions associated with dysmenorrhoea in young girls, painful menstruation in married and parous women is often observed in patients where distinct morbid changes in the genital tract exist. Still, Tobler is uncertain how far such changes can be looked upon as the cause of the dysmenorrhoea, and disturbances in the pelvic circulation may be, after all, the true agents in the establishment of the pain.

[1] *Monats. f. Geb. u. Gyn.*, December, 1907

THE ACTUAL STRENGTH OF NEW TUBERCULIN.

In view of the confusion which apparently exists in some quarters with regard to the way in which Koch's new tuberculin (Tuberculin T.R.) is prepared, and with special reference to a paper published in the *Lancet* of November 2nd, 1907, by Sir A. E. Wright, Professor Ruppel has given a clear account of the method of preparation of the substance in the *Deut. med. Woch.* of January 30th, 1908. Sir Almroth Wright stated in a footnote to an opsonic index chart: "Owing to the "fact that the quantum of dry tubercle powder in "Koch's T.R. (tuberculin) was, owing to an unaccount- "able error on the makers' part, declared by them as "10 mg. in 1 c.cm., when it was in reality, as they now "inform me, only 2 mg. in 1 c.cm., the dose here "inoculated would in reality be only $\frac{1}{100}$ mg. A "similar correction would, be it noted, be applic- "able to the doses of tuberculin, as stated in this "paper and in all my previous publications." Koch's new tuberculins, which were introduced in 1896, were made by grinding up thoroughly dried tubercle bacilli. The powder has to be ground up so finely that the bacilli can no longer be stained. Distilled water added to the powder in an agate mortar extracts all the soluble substances. This solution is called T.O., while the residue is called T.R. 1; T.O. is absolutely analogous to old tuberculin, both physiologically and chemically. The residue is dried quickly, then rubbed up again in the mortar, extracted in water, centrifugalized, again dried and extracted. After several repetitions, all the supernatant fluids are collected, and bear the name of T.R. On account of the risk in preparing large quantities in this way, Koch came to the conclusion that the substance would be best prepared on a large scale in a properly-constructed machine. The method adopted by the firm which has undertaken this manufacture is as follows: 1 gram of tubercle bacilli—weighed after drying—is rubbed up in the apparatus, and then extracted in 100 c.cm. of sterile water. The residue is then centrifuged. The supernatant fluid is collected and labelled T O. The residue is next dried and powdered and again extracted in water. It is then centrifuged, and the residue is again treated in the same way two or three times. The supernatant fluid of each procedure must not exceed 100 c.cm. when mixed together. This is T.R. A given quantity of the fluid is then taken, dried *in vacuo* and weighed. A small quantity of glycerine and formaldehyde, and, lastly, water, are then added, so that 1 c.cm. contains 0.002 gram dry substance. T.R., therefore, is made up to a definite strength, which may be expressed either as 1 c.cm., being the extract of 10 mg. of dry bacilli (100 c.cm. being derived from 1 gram), or that 1 c.cm. contains 2 mg. of dry substance in solution. Before being used for injection T.R. must be diluted, and this is best done, according to Koch, by diluting with physiological saline solution, but 20 per cent. glycerine may also be used. First, 2.7 c.cm. of the diluent is added to 0.3 c.cm. of T.R., so that a 10 per cent. dilution is obtained; and then to 0.1 c.cm. of this dilution is added 9.9 c.cm. of the diluent, so that the second dilution represents 1 part of T.R. to 1,000 parts; 0.2 c.cm. of this second dilution would therefore contain 0.0002 c.cm. of T.R., or $\frac{2}{10000}$ mg. dry substance in solution, or $\frac{1}{5000}$ mg. of dry tubercle bacilli. Professor Ruppel, therefore, claims that no error on the part of the makers occurred, but that confusion arose from a want of knowledge of the method in which T.R. is prepared. Its strength always remains the same.

DEATH FROM A RING PESSARY.

Retained pessaries may give rise to troublesome complications, though they rarely bring about the death of the patient, except in a very indirect manner. The pessary may cause ulceration of the vaginal walls, so that part of it may come to lie in the rectum or bladder. When there is a cribriform rubber diaphragm granulations may grow through the apertures, forming button-like outgrowths, which require to be cut away before the pessary can be extracted. Dr. Franz Cohn recently reported a series of cases of incarcerated pessaries at a meeting of a German medical society.[1] In the discussion, Dr. Bücheler related an instance where a fatal result was directly traced to a pessary. The patient was a laundress aged 68, and she had worn rubber rings for prolapse for over thirty years. Her daughter had removed and replaced the ring from time to time. Fourteen days after she had thus replaced it the patient was lifting a heavy basketful of clothes, when the prolapse for which she wore the instrument came suddenly down, yet the ring was missing. Bücheler saw that there was complete procidentia, with the usual familiar ulceration, and at first suspected that the patient must have lost the pessary. On careful examination, however, he detected a deep fissure in the vagina on the left. It led into a big cavity, and the ring lay high up between appendices epiploicae. He was obliged to separate the ring from its connexions by means of a tonsillotome. The patient had high temperature and other bad clinical symptoms. Free discharge was observed, but this disappeared after the employment of antiseptic solutions. On the day that the patient was to leave the hospital she dropped down dead. Thrombosis of the right external iliac vein and embolism of the pulmonary artery were detected. Pressure and ulceration had gradually caused inflammatory changes in the parametrium, which had yielded, but strong adhesions had cut off the bowel at first involved from the peritoneal cavity. The pessary had burst through these adhesions when the patient strained. Other obstetricians who joined in the discussion on Dr. Cohn's communication dwelt, as he had done, on sarcoma developing around a pessary-ulcer. In another instance of incarceration, the ulcerative and cicatricial changes were so extensive that when the pessary was removed the prolapse never recurred and the patient, under observation for ten years after its extraction, had not required a pessary or any other kind of support. In an extreme case of this kind, however, the patient, as we know, is rarely so fortunate, and Dr. Bücheler's experience shows how neglect may end in a fatal result.

A WHISKY COMMISSION.

A Royal Commission has been appointed, with Lord James of Hereford as Chairman, to inquire whether in the general interest of the consumer or in the interest of the public health, or otherwise, it is desirable to place restrictions upon the materials or the processes used in the manufacture in the United Kingdom of anything called whisky, to require a minimum period during which such spirits should be matured in bond, and to extend requirements of this kind to any spirit imported into the United Kingdom. The Commission is to report how the uniform observance of any restrictions or rules which the Commission may recommend to be made is to be secured. As was shown in an article published in our columns a little more than four years ago, about two-thirds of the whisky now sold in England is made in a different way from that in which the greater part of the whisky supplied when medical men began to recommend its general use as a less gouty drink than wine or beer was manufactured; further, it was there shown that much of the whisky now sold in this country, and in a still larger proportion that made and exported to tropical

[1] Report of meeting of the Mittelrheinische Gesellschaft für Geburtshülfe, *Monats. f. Geb. u. Gyn.*, October, 1907, p. 624.

colonies, is a spirit made from maize, potatoes, molasses, or anything that can be fermented. We should therefore be glad to be assured that the terms of reference are intended to include all spirit manufactured in the United Kingdom and sold under the name of "whisky," whether for export or home consumption. Among the members of the Commission are Dr. Rose Bradford, F.R.S., Professor of Medicine, University College Hospital Medical School; Dr. G. S. Buchanan, Medical Inspector and Inspector of Foods at the Local Government Board of England; and Dr. A. R. Cushny, F.R.S., Professor of Pharmacology in University College, London.

THE EPIDEMIC OF INFLUENZA.

The widespread epidemic of influenza in London, which has as usual caused many casualties among politicians, would seem to have commenced with the year. The number of deaths attributed to the disease in London jumped up from 13 in the week ending January 4th to 28 in that ending January 11th; the numbers declined to 21 in the following week, rose to 25 in the next, to 32 in the next, to 34 in the next, and to 84 in the week ending February 15th. The disease has also been extensively present in Edinburgh during the last few weeks, where the type is not so severe as in the earlier years of its reappearance, but much more severe than it has been for a good many years. Ear complications are common, but perhaps the most severe form is that affecting the digestive organs. Pneumonia, often of a rapidly fatal form, has again asserted itself. In London also the type has not, as a rule, been severe, but there would seem to have been a disproportionate number of cases of the nervous or rheumatic form.

THE UNDESERVED ASTERISK.

The *Medical Directory* is a useful publication, and its compilers are to be congratulated on its general accuracy. But there are spots on the sun, and we have it on the testimony of Sydney Smith that Francis Jeffrey not only d——d the North Pole, but went so far as to speak disrespectfully of the Equator. It may be simply owing to the propensity of the freeborn Briton to find fault with the nature of things that there are some who complain of the somewhat Draconian manner in which the compilers of the *Directory* occasionally deal with subscribers. Institutions—and is not the *Directory* an institution?—like men, are benefited by an occasional tonic in the way of a little criticism; we therefore think we are dealing faithfully by those in charge of the *Directory* in referring to certain complaints that have reached us. We are informed, for instance, that they have been known to place the asterisk by which they obelize the names of those too careless to return the entry relating to themselves against the name of a well-known member of the profession without, as far as we can learn, giving him a chance of rectifying his inadvertence. We have heard, too, that the mark has been placed against the name of another who actually had returned the entry with corrections, on the ground that it had not been received. Not only, it is said, do they send no reminder to the supposed defaulter, but they actually charge him for the volume in which his name has, like Shakespeare's, received a "brand," at the higher rate payable by non-subscribers. If such things are true, we can only say that the publishers of the *Medical Directory* are not only dictatorial in their ways, but rather shabby in their treatment of subscribers. From a firm whose liberality in its dealings is proverbial in the profession, we should have looked for a policy less calculated to cause irritation; but as men of business they doubtless know what they are about in applying the strictest rules of commercial dealing to a class which, it must be admitted, is somewhat unbusinesslike, by training as well as by tradition. We may pity the doctor who is mulcted for his own remissness, or for a failure in our admirable postal machinery. But the vendor, while sympathizing with the doctor as the walrus did with the oysters, may not inaptly say with the "sordid and wealthy" old gentleman in Horace—

> At mihi plaudo
> Ipse domi simul ac nummos contemplor in arca.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Royal Society and Malta Fever.—Mr. Mallet asked the Secretary of State for War whether he was aware of the public service rendered by a commission of the Royal Society, at the request of the War Office and the Admiralty, in discovering the cause of Malta fever, from which many hundreds annually of our soldiers and sailors on that island till recently suffered; and whether, in view of the importance of this discovery in the annals of preventive medicine, inasmuch as at the present moment the disease had been entirely stamped out, he would consider the desirability of giving the thanks of the Government to the Royal Society for this instance of the successful application of British scientific research. Mr. Haldane said he was aware of the great service rendered by the commission in question. The commission's investigations and the adoption of preventive measures as the outcome of its recommendations had been followed by the practical disappearance of Malta fever from the garrison of the island. He thought that the Royal Society was well aware how genuine was the appreciation of the Government. They owed much to the Royal Society's commission for the successful issue of this remarkable investigation, and for the excellent results which had followed. These results illustrated the enormous importance of bringing science into the business of government.

Nurses' Registration.—Mr. Claude Hay introduced on Thursday in last week his Bill to regulate the qualification and registration of trained nurses. The Bill is supported by Sir A. Bignold, and was put down for second reading on Monday last, but was blocked by Mr. Annan Bryce and Mr. Rawlinson.

Death Registration.—Mr. Holt called the attention of the President of the Local Government Board last Monday to the insufficient facilities for the registration of births and deaths at Haydon Bridge. Mr. Burns replied that he had communicated with the Registrar-General on this subject, and was informed by him that the births in the whole parish of Haydon averaged about one per week and the deaths about one per fortnight. The Allendale registrar of births and deaths, who was also relieving officer, attended at Haydon Bridge once in each week, and, in the circumstances, the Registrar-General considered that his hours of attendance there were sufficient for the requirements of the place. He might add that registration of death did not necessarily precede burial, so that registration of all deaths could take place at the weekly visits of the registrar.

The Inebriates Act and the London County Council.—Mr. Secretary Gladstone informed Mr. Charles Roberts on Monday last that he had received with much regret a letter from the London County Council stating that the Council did not see its way to renew its contracts with the national institutions for the care and reformation of inebriate persons. He would explain that, when the Inebriates Act of 1898 first came into force, absence of experience made it impossible to calculate the exact amount required by the managers of reformatories for the maintenance of inebriates. A sum of 10s. 6d. per head per week was decided upon as an experimental amount to be given to managers of reformatories by the Treasury towards the maintenance of all cases committed under

the Act, provided local authorities also contributed from local funds. This Government contribution was guaranteed for three years, but was in fact continued without change for seven years. It was then decided that the experience which had been gained warranted a reduction in the Government grant. The accounts of seven out of the eight institutions in full working order during 1906 showed a maintenance cost varying from 10s. 4d. to 14s. per inmate per week, but the eighth, Farmfield (managed by the London County Council), was not conducted at less than a weekly rate of 18s. 6d. per head. It was felt that 14s. per week should be considered the total amount required for maintenance, and that the managers of reformatories should be induced to bring down their expenses to that sum per head, and in furtherance of the view that the segregation of inebriates relieved imperial and local funds about equally, it was decided that the Government contribution should be reduced from 10s. 6d. to 7s. to correspond with the 7s. provided by local authorities. This reduction had been accepted as reasonable by the managers of reformatories, except in the case of the London County Council. At an early date after the passing of the Inebriates Act of 1898, the London County Council established a reformatory at Farmfield, near Horley, for the reception of 100 female inebriates. It soon became evident that more accommodation would be necessary, and the Council accordingly contracted with the National Institution for Inebriates for the reception of all cases they were unable to receive at Farmfield, agreeing to pay 7s. per head per week for each case. The number of London women now under detention as the result of this contract considerably exceeded 500. In May last the London County Council decided to withdraw their contract with the national institutions and restrict their work under the Inebriates Act to that carried on at Farmfield for 100 cases. The serious effect of this decision was pointed out to the Council, and eventually the Council offered to renew their contract, provided the Government grant of 10s. 6d. per head was reverted to for all cases committed under Section 2 of the Act and continued during the period of renewal of the contract. As such action by the Government would have supplied an unnecessary amount of money to the managers of institutions who did not need, and had not asked for, any increase for the proper conduct of their work, and would have entailed a large increase of unjustifiable expenditure, the offer of the Council was declined, and the contract with the national institutions had accordingly ceased. A few vacancies at Farmfield would probably be available from time to time, but these would be so few as practically to render the Act useless so far as London was concerned, and the step taken by the Council would involve reversion to the discredited system of short and repeated terms of imprisonment as the only means of dealing with female inebriates, but no power existed by which the Council could be compelled to reverse its decision or make other adequate provision for the needs of cases committed from within its administrative area.

Tuberculous Meat.—The President of the Local Government Board informed Mr. Courthope last week that he was aware that frozen beef from the Argentine had recently been seized in Hull affected with glandular tuberculosis, although accompanied by the official label of the Argentine Government certifying that the meat was sound. Regulations under the Public Health (Regulations as to Food) Act, 1907, were in preparation, and would soon be issued, to confer additional powers on port sanitary authorities, and to enable them to deal suitably with any diseased meat which might be detected on arrival in this country.

Milk Legislation—Mr. Courthope asked the President of the Local Government Board whether, in view of the intention of the Government to introduce general legislation on the subject of the milk supply, he would move instructions to the Committees on all Private Bills containing milk clauses that such clauses be struck out. Mr. John Burns replied that it did not seem to him that the course proposed could well be adopted. He thought that the best plan would be that the clauses should for the present be retained, on the understanding that they would be subject to reconsideration at a later stage in the event of a Public Bill being passed.

The Excess of Births over Deaths in Scotland—Last week the Secretary for Scotland informed Mr. Dundas White that the excess of births over deaths in Scotland for 1907 was 51,522.

Diphtheria in Pigeons.—Major Anstruther-Gray asked the honourable member for South Somerset, as representing the President of the Board of Agriculture, whether his attention had been called to the prevalence of a disease called diphtheria in wood-pigeons in several counties in England; whether he would take steps to form a Commission to investigate the matter and to ascertain whether it was a disease contagious to game, poultry, or other birds; and whether it was of a nature to be dangerous to man. Sir Edward Strachey replied that the Board were aware of the prevalence of the disease. They understood that scientific investigations were being made with respect to it, the results of which would be carefully watched. They did not think that the matter was one which could with advantage be made the subject of inquiry by a Commission. He should be glad to bring the concluding inquiry to the notice of the Local Government Board, by whom questions concerning the public health fell to be considered.

The Belfast Health Commission.—The Attorney-General for Ireland informed Mr. Devlin on Monday last that the report of the Health Commission which recently sat in Belfast had not yet been received, but might be expected early next month.

Tuberculosis among Soldiers.—Mr. Summerbell asked the Secretary of State for War on Tuesday what steps he proposed to take with regard to soldiers suffering from tuberculosis in view of the findings of the Select Committee on the subject. Mr. Secretary Haldane replied that the recommendations of the Select Committee had recently been under the consideration of the Government as a whole. The decision was that, however desirable the special provision recommended for soldiers discharged for tuberculosis, it was impossible to justify the assumption of this new obligation by the State unless it was extended to other branches of public service, and possibly more widely still. The question was one of great gravity, and could not be decided by a single department.

The Notification of Births Act—Mr. Acland Allen asked the President of the Local Government Board how many metropolitan boroughs had decided to adopt the Notification of Births Act; and whether any and, if so, which, metropolitan boroughs had decided not to adopt this Act. Mr. John Burns replied that the Act had been adopted in the City of London and in sixteen out of the twenty-eight metropolitan boroughs. He had received information to the effect that it was proposed to adopt it in another of these boroughs. The only metropolitan borough in which, so far as he was aware, the council had expressed a view adverse to the adoption of the Act was the Borough of Deptford.

The College of Surgeons and its Members.—Sir William Collins asked the Prime Minister whether he would state what action had been taken by the Lord President of the Council in regard to the memorial which was presented to the Prime Minister in the session before last, on behalf of Members of the Royal College of Surgeons of England, asking him to take such steps as might secure to Members some voice in the management of the College and its property; and what reply had been received from the Council of the College to representations made to them by the Lord President. Sir Henry Campbell-Bannerman replied that it was a matter of common knowledge that, in reply to the different deputations which he had received, the Lord President expressed the general sympathy of the Government with the objects of the memorial; but the Council of the Royal College appeared to maintain the rigour of their attitude on the subject.

PULMONARY TUBERCULOSIS AMONG SCHOOL CHILDREN.

The report of the Medical Officer to the London Education Committee for 1907 states that an inquiry was carried out during the year in schools in Fulham, Hammersmith, Kensington, and Marylebone by Dr. J. E. Squire and Dr. Annie Gowdey in order to obtain statistics and to ascertain how far children at school ages are affected with pulmonary tuberculosis and how far they may be a danger to others.

An attempt was first made to ascertain how far children attending school were popularly supposed by their parents or the school teachers to have consumption or other forms of tuberculosis. This preliminary inquiry was not expected to furnish other than a popular idea of the prevalence of disease. It was evident on dealing with the returns that they were unreliable. As a matter of fact, cases reported as having "consumption" were free from it, and in cases where it was found it had not been suspected.

The two schools selected for individual examinations were Latimer Road, the one returning the greatest number of consumption cases, and a neighbouring school where the children were of a somewhat better social type. Examination was in some cases refused, but in the case of Latimer Road boys all but 2 of the 335 were examined. The children were weighed and measured; the condition of clothing, cleanliness, and nutrition noted; the teeth, throat, neck, and ears examined, and the chest carefully examined without clothing, a card being filled up for every child seen.

Dr. Squire examined the boys, Miss Gowdey the girls, and all cases with any abnormality were seen by both.

Table I.

	Roll.	Consumption.	Spinal Disease.	Hip Disease.	Lupus.	Other Forms of Tuberculosis.	Marked Tonsils and Adenoids.
Latimer Road.—*Boys.*							
Teacher's return ...	335	4	—	—	—	1	5
Medical reports... ...	333	2	—	—	—	6	123
Girls.							
Teacher's return ...	357	2	1	2	—	—	5
Medical reports... ...	313	0	—	1	—	4	146
Infants.							
Teacher's return ...	417	—	1	—	—	80	209
Medical reports... ...	243	—	—	—	—	12	137
Addison Gardens Mixed.—							
Teacher's return ...	826	—	—	2	—	—	4
Medical reports... ...	776	6	—	—	—	61*	334
Total. Teacher's return ...	1,935	6	2	4	—	81	223
Medical reports ...	1,670	8	—	1	—	83	740

* This includes children with enlarged veins on the chest or fine downy hair down the spine.

The general results as regards glandular and lymphatic conditions in these schools and lung conditions are shown in Table II.

There were indirect results from this examination in that many children suffering from physical defects, which either interfered with school progress or were likely seriously to influence their future life, had medical treatment recommended. Many cases of heart trouble, greatly enlarged tonsils or adenoids and carious teeth were thus advised and went for treatment.

As to the actual returns in Table II, out of 1,670 children examined, signs in the lungs which would justify a diagnosis of tuberculosis were only found in 8 cases, that is, less than 0.5 per cent. In 14 other children slight signs—prolonged expiratory breath sounds, or dry fine crepitation at the margin of the lungs—which might possibly be due to tuberculous infection were found. Even if these are included as actual cases of tuberculous disease, the percentage of possible pulmonary tuberculosis only reaches 1.3 per cent. There is a further small proportion in which enlarged veins on the chest suggest the possibility of bronchial gland enlargement due to tuberculous changes, but without any evident lung infection. Nearly three-quarters of these children presented enlargement of the cervical lymphatic glands, and over 40 per cent. (43 per cent.) had enlarged tonsils. Childhood is the period of glandular activity, and the lymphatic glands of children are most sensitive reagents to irritants and indicators of the sanitary state of their environment. It is noteworthy that anæmia is present in about one-third of them, and is just as common in the better class as in the poorer school.

Table II.

School.	Number Examined.	Glands.	Tonsils and Adenoids.	Anæmia.	Lungs. Tubercle.	Lungs. Doubtful.	Lungs. Unhealthy Non-tubercular.
Addison Gardens—							
Boys	366	343	118	101	6	11	8
Girls	410	192	216	127	0	3	7
Latimer Road—							
Boys	333	261	123	114	2	0	12
Girls	318	239	146	101	0	0	12
Infants	243	196	137	54	0	0	8
Totals ...	1,670	1,231	740	497	8	14	48
Percentages ...	—	73.7	44.3	29.7	0.47	0.8	2.8
					1.3 per cent.		
					4.19 per cent.		

A rule for some years has been that where a child has been supposed to have consumption it must be excluded from school if it coughs or spits. Teachers in any way affected with pulmonary tuberculosis are excluded from school for at least twelve months. Further, the invalid schools remove many tuberculous children, with bone or joint diseases, and some doubtful cases of pulmonary disease. It is, however, stated that there are undoubtedly many cases of tuberculous children in the schools who are practically not infective, and not likely to become so.

Physically Defective Children.

Dr. Kerr gives details of children with tuberculous disease of the spine, hip, knee, and other parts under the section "Physically Defective Children." There are now 23 invalid schools with approximately 1,802 children on the roll. Each case requires a separate and careful judgement apart from the mere question of fitness or unfitness for the special school, and this work has been undertaken during the past year by Mr. R. C. Elmslie. In 1,050 cases details have been noted of the nature of the disease or defect, the presence of active disease or deformity, and the efficiency of any treatment adopted. (See Table III.)

It will thus be seen that in 80 per cent. of these cases the disease began below 7, and in 67 per cent. below 5; of the spine cases, 72 per cent. below 5; hip cases, 64 per cent. between 2 and 6; of the others, there was fairly even distribution over the first nine years of life.

1. *Tuberculous Disease of the Spine.*—In the large majority of these cases the disease began quite early in life; in 72 per cent. between the second and fifth year. It was not found possible to ascertain with accuracy the presence or absence of active disease without watching the child for several weeks, and hence no good estimate of the proportion with active disease could be made; probably it was, however, not more than 10 per cent. to 15 per cent. There was a great tendency to recrudescence in cases of caries of the spine for a long time quiet, and many of the children had other foci of tuberculous disease. In 186 children there were 8 with hip disease, 7 with lung disease, and 8 with other tuberculous disorders

TABLE III.

RESULTS OF EXAMINATION OF THE 1,050 CASES.

A.—*Number suffering from Tuberculous Diseases.*

	Boys.	Girls.	Total.
1. Tuberculous disease of the spine ...	106	80	186
2. Tuberculous disease of the hip ...	100+(5)*	95+(3)	203
3. Tuberculous disease of the knee ...	46+(2)	34+(1)	83
4. Tuberculous disease of other parts ...	8+(5)	11+(4)	28

*The numbers enclosed in parentheses refer to children who, having two or more defects, have been included in one of the previous classes.

B.—*Age of Onset where there was a Definite History.*

Age.	Tuberculous Disease of				
	Spine.	Hip.	Knee.	Other Parts.	Total.
0—1	14	9	4	2	29
1—2	27	17	5	2	51
2—3	28	35	8	3	74
3—4	26	28	10	4	68
4—5	24	25	8	4	61
5—6	8	28	10	2	48
6—7	7	11	6	2	26
7—8	6	13	6	2	27
8—9	4	8	6	4	22
9—10	1	4	2	—	7
10—11	1	1	2	—	4
11—12	—	2	2	—	4

in joints, skin, or glands. Excluding 4 cases in which there was no sign of disease, past or present, and 2 in which the diagnosis was extremely doubtful, the classification of the 180 remaining cases, as regards deformity or complications, was:

Slight angular deformity	35
Moderate angular deformity	41
Severe angular deformity	104
History of past paraplegia	19
Present or past abscess	50

The severity of the deformity depends (1) on the portion of spine affected; the upper dorsal region is far more likely to be the seat of severe deformity than are the lumbar or the cervical regions; (2) the efficacy of the early treatment. Paraplegic cases are not as a rule admitted to the schools. Of the 19 cases of paraplegia, 16 had completely recovered, and 3 had partially recovered and were still improving; the only case of complete spinal paraplegia had resulted from a fracture of the spine and not from caries. In only one case had laminectomy been done, and in this gradual recovery had resulted some months later, the result of rest rather than operation.

2. *Tuberculous Disease of the Hip-joint.*—Tuberculous hip disease was evident at a slightly later age than spinal caries, but 64 per cent. of the cases appeared between the third and sixth years. Allowing for 7 bilateral cases, a total of 210 affected hip-joints could be classified as follows:

Quiescent, with good mobile hip	14
Good functional result with ankylosis	22
Good functional result with some mobility... ...	20
Moderate functional result	34
Bad functional result (including 25 excisions) ...	71
Active disease	36
Amputations...	6

7 cases could not be fully examined owing to the mode of fixation in splints or plaster.

The separation into good, moderate, or bad functional result was made by noting the degree of fixed flexion and adduction deformity, and the amount of apparent shortening—that is, the preventable deformity, as distinct from the real shortening, due to destruction of bone and not preventable. Thus a hip which was ankylosed in a good position with 2 in. of real shortening would be classed as a good result, whereas one in which there was only 1 in. of real shortening, but 30 degrees each of fixed adduction and flexion, leading to an additional apparent shortening of 2½ in., would be classed as a bad result. In only 10 cases out of the 210 was there evidence that ostectomy had been performed. The 25 cases in which excision of the hip had apparently been carried out were all classed as bad functional results. In none of them was the disease still active. Evidences of past suppuration were present in 61 per cent. of the cases, and in 2 cases unopened abscesses were found. Associated tuberculous disease was present in 12 cases, in 8 the spine being the other site of disease.

3. *Tuberculous Disease of the Knee-joint.*—The distribution of the age of onset over the first nine years of life was much more even than in the two previous forms. Of the 83 cases, 2 were bilateral, giving a total of 85 knees, in 27 of which the disease was active, in 54 inactive, whilst 4 were fixed in plaster-of-paris and could not be fully examined. The results as regards deformity following different methods of treatment were:

TABLE IV.

	Excision Performed.	Other Operation.	No Operation.
Flexion deformity	19 (9 over 40°)	6 (2 over 40°)	—
Genu varum	8 (3 very severe)	—	—
Genu valgum	2	2	—
"Triple displacement" ...	—	—	9 (1 severe)
Shortening 1—2 in. ...	6	—	—
,, 2—3 in. ...	8	1	—
,, 3—4 in. ...	4	—	—
,, 5 in.	2	—	—
,, (not measurable owing to other deformity)	6	—	—
Little or no deformity ...	5	6	17
Disease still active	5	4	12
Total	34	14	26

Amputations—7.

The striking fact in this table is the frequency of severe deformity after excision of the knee, and remembering that all these children have still years of growth left, it will be seen that the deformity, particularly the shortening, is certain to increase. In 9 of the 34 cases re-excision has already been carried out, and will be required in many of the others. No fewer than 25 of the excisions were done before the age of nine, and some were done as early as the fourth year. Associated tuberculous disease was present in 8 cases, including 3 in the spine and 5 in the elbow.

4. *Tuberculous Disease of other Bones and Joints.*—These cases were distributed as follows:

Ankle	13 (5 cases amputated)
Tarsus and metatarsus	4
Elbow	7
Shoulder	1
Wrist and forearm	2
Head of tibia	1
Upper end of femur	1
Sternum	1

The numbers are too small to justify deductions. In 11 cases the disease was present in more than one region.

Various Diseases.—Under this head is noted phthisis 9 cases (3 girls and 6 boys), and again:

Frequency of various other defects amongst 1,050 children in physically defective schools: Phthisis 16 cases (8 boys and 8 girls, only 7 with active signs).

Backwardness of Children in Physically Defective Schools.

A large proportion of the children are several years behind their educational level. This was more marked in children with long illness from tuberculous disease than among the rest.

TABLE V.

Educational Status.	Up to Proper Standard.	Behind Proper Standard.						Total.	Abilities Exceptionally Low.	
		1 Year	2 Years	3 Years	4 Years	5 Years	6 Years		Number.	Percentage
1. Tuberculous disease of the spine	8	42	49	46	23	11	6	185	36	19.3
2. Tuberculous disease of the hip	10	19	56	58	37	15	8	203	40	19.7
3. Tuberculous disease of the knee	4	12	22	15	14	12	4	83	19	22.9
4. Tuberculous disease of other bones or joints ...	2	4	10	8	2	1	1	28	2	7.1

Of the children with tuberculous disease, a certain proportion die of the disease or other tuberculous infection, meningitis, etc. Some others become so crippled or delicate as to be useless as workers. These account for 15 to 20 per cent. Of those who will subsequently be able to work, most are cured of the actual disease during the school years. They are often transferred to the ordinary schools, and in any case should be able at 14 or 16 to commence attendance at technical schools. Such children in these classes as are to be expected to earn their own living should be capable of attending technical centres or undergoing apprenticeship in trades which are suitable to their condition.

LUNACY IN LONDON.

THE Eighteenth Annual Report of the London County Asylums Committee[1] contains its general report for the year ending March 31st, 1907, and the annual reports and statistical tables of the medical superintendents of their several asylums and that of their pathologist, Dr. Mott, for the year ending December 31st, 1907.

THE INCREASE OF LONDON'S PAUPER LUNACY.

The report necessarily contains detailed information concerning that part only of London's lunacy for which the County Council is responsible, but supplementary information is also given as to the numbers under the care of the Metropolitan Asylums Board and those in workhouses and with friends. From this we see that on January 1st, 1906, the number of lunatics for whom the Council had to provide accommodation was 18,540, that in addition 6,411 were in the Metropolitan Asylum Boards' Asylums, and 416 in workhouses and with friends, giving a total number of lunatics and imbeciles chargeable to London rates of 25,367. On January 1st, 1907, the London County cases had increased to 18,841, the Metropolitan Board's cases to 6,501, and those in workhouses or with friends to 425, giving a total number of 25,767, a total increase of 400, or of the London County cases of 301. These increases contrast favourably with the average yearly increases for the eighteen years since the County Council Asylums Committee was constituted of 553 for London's total lunacy, or of 514 for the London County asylums. In discussing this question of the increase of lunacy in London County, the Committee refer to a paper read before the Statistical Society by Mr. Noel Humphreys, which showed that the apparent increase in England and Wales was mainly due to increasing registration and accumulation in asylums. In analysing the returns for London County, the Committee point out with regard to accumulation that there has been an appreciable diminution in recoveries and deaths of late years; so much so that if the percentage of recoveries and deaths in the three years 1904-6 had been as high as those in 1890-2, the number of persons removed from the roll from these two causes would have been 2,063 greater than was actually the case—that is, the increase of the last three years would have been converted into a decrease. With regard to increasing registration and the diminution of the reserve of lunacy—a point ably brought out by Mr. Humphreys's comparison of census and lunacy returns—the Committee do not supplement Mr. Humphreys's information other than by indicating the great increase of late years in the proportion of cases admitted of upwards of 60 years of age. The Committee's analysis of their returns thus confirms the view of Mr. Humphreys. Unfortunately, the Committee have to admit that their information is not sufficiently complete to enable them to estimate what proportion of London's increase of insanity is due to an increase of occurring insanity—a point of vital importance in this relation. Whether there is or is not an actual increase in lunacy in London is therefore still open to question; but we may quote the perhaps significant words of the report, in which it is stated that "over a period of 14 years the ratio of insane persons in England and Wales registered by the Commissioners in Lunacy (including private, pauper, and criminal patients) has increased from 30.21 to 35.72 per 10,000 of population. The figures for the County of London, which represent mainly pauper lunatics (only the private patients at the Manor Asylum and patients on the 'private list' being added), show an increase in 15 years from 40.06 to 55.49 per 10,000 of the population. The figure of 1892 for London (40.06 per 10,000) was considerably above the ratio for all England, but the increase in the 15 years has been altogether out of proportion, after allowing for the fact that the population of a city is likely to include a greater percentage of lunatics than that of rural districts." As regards the ratio per 1,000 of all pauper lunatics chargeable to the several unions and parishes in the County of London, Hampstead again gives the lowest ratio of 2.5 per 1,000, and Strand the highest, 14.1 per 1,000.

ADMISSIONS.

During the year, 3,895 cases were admitted (males 1,768, females 2,127), as compared with 3,744 for the previous year. Of the admissions, 3,427 were first and 468 not-first admissions. In 1,611 cases the attacks were first attacks within three, and in 431 more within twelve, months of admission; in 857 the attacks were not-first attacks within twelve months of admission; in 704, whether first or not, the attacks were of more than twelve months' duration, and the remainder were either of congenital origin (189) or of unknown duration (103) on admission. The mean age of the admissions was 41.74, as compared with 42.44 for 1905 and 42.25 for 1904, and the numbers of cases admitted of 60 years of age fell from 587 in 1905 to 571 in 1906. Comparing, however, 1892-5 with 1903-6, the proportion of admissions of 60 years old and upwards has increased from 162 to 202 per 1,000.

As regards the forms of mental disorder on admission, the Asylums Committee have compiled no summary, the lack of uniformity in the separate tables which we have noted in former years again being present. The tables, however, do not differ radically in classification, certain of the medical superintendents entering admissions as cases of delusional insanity or of stupor which by others are included under mania or melancholia. Taking the tables as they stand and excluding the 117 admissions to the Ewell epileptic colony, there were admitted 1,020 cases of mania of all kinds, 1,116 cases of melancholia, 405 cases of dementia, 233 cases of delusional insanity, 46 of stupor, 216 of congenital or infantile defect, 178 of acquired epilepsy, and 345 cases of general paralysis. These figures show that 9.5 per cent. of the total admissions, or no less than 17.4 per cent. of the male admissions, to London County asylums were general paralytics.

As in the matter of classification, so in that of the probable causation of the mental disorders in the admissions, the lack of uniformity in the tables precludes a complete summary, but we may extract one or two of the principal assigned causes. Moral causes were assigned in 1,091, or 28.8 per cent.; alcohol in 820, or 21.7 per cent.; an insane heredity in 900, or 23.8 per cent.; syphilis in 306, or 8 per cent.; and congenital defect was found to exist in 301. It will be noted that both alcohol

[1] *The Eighteenth Annual Report of the Asylums Committee as to the London County Asylums.* Westminster, S.W.: P. S. King and Son. (Price 2s.)

and syphilis were assigned in considerably higher proportions than those given for the whole of England and Wales, that for venereal disease being just three times as great.

Discharges, Deaths, etc.

During the year 1 319 were discharged as recovered, giving a recovery-rate on the total admissions of 33 86 per cent., as compared with the average of the asylums since 1831 of 30.66. There were also discharged as relieved 671, and 268 as not improved. During the year there were also 1,519 deaths, giving a percentage death-rate on the average numbers resident of 8 9 which is 0 2 per cent. higher than that of the previous year. The causes of death are duly entered in the report for each asylum separately, and again no summary can be compiled for the reason before given. As regards the former tables, the causes of insanity are so largely conjectural, and the types of mental disorder are apprehended so differently by different observers that disparity in tabulation was to be expected, though a provisional agreement as to these points would at the least be unobjectionable, but with regard to deaths there appears to be no adequate reason why in one set of tables pulmonary consumption should be recorded under general diseases and in another under thoracic diseases, or dysentery in one under general diseases and in another under abdominal diseases, and it is to be hoped that in future reports uniformity of tabulation will replace the present chaos. As points of general interest, however, we note that there were 176 deaths from pulmonary consumption and 19 from other forms of tuberculous disease, giving the not very high proportion of tuberculous to total deaths of 12 8 per cent. There were also 316 deaths from general paralysis, and only 7 from accident or violence.

The Pathologist's Report.

As heretofore, the tuberculosis and dysentery returns from all the asylums have been collated and are appended in the form of detailed statistical reports. With regard to tuberculosis, the Director, Dr. Mott, reports that of the 17,227 patients resident on March 31st, 1907, 333, or 1.93 per cent., were reported to be tuberculous, the proportion being the same for both sexes. The great majority of these were either cases of chronic insanity (123) or the subjects of melancholia (104). The incidence of tuberculosis showed great variation, Claybury reporting four times as much tubercle in the resident patients as Banbury and ten times as many deaths with active tuberculous lesions, the difference evidently being one of diagnosis during life and detection after death. Out of the 1,415 *post-mortem* examinations made during the year active tubercle was found in 13.28 per cent. The report on dysentery and diarrhoea shows that during the twelve months March 1st, 1906, to February 28th, 1907, a considerable increase both in dysentery and diarrhoea occurred, largely due to epidemics of dysentery at Bexley, Colney Hatch, and Claybury, and of diarrhoea at all asylums except Bexley, Hanwell, and the Ewell Colony. Dr. Mott lays stress on the necessity of regarding diarrhoea as well as dysentery cases as infectious if dysentery and bowel diseases are to be eradicated from the asylums, as many patients, formerly dysenteric, are subject to recurrent attacks of diarrhoea, and on the outbreak of an epidemic these cases are found to be the first affected, that is, are the probable sources of infection of fresh cases. In addition to the above, valuable researches have been made at the laboratory by Drs. Ascherson, Waldemar, Koch, Kelley, Candler, and others, published in vol. iii of the *Archives*, and Dr. Mott (with Mr. Edgar Schuster) is at present engaged in an interesting clinical and pathological inquiry into the types of insanity in relation to types of people and convolutional patterns.

The Epileptic Colony, Ewell.

On January 1st, 1906, there were 327 patients on the colony registers. During the year 117 were admitted, 78 as direct admissions from the various parishes, 2 as statutory readmissions and 37 were transferred from asylums. The total cases under treatment numbered 444, and the average number daily resident 325. The proportion of sufficient degree of mental defect to warrant their being termed imbeciles was 19 per cent., which is a considerable reduction on the 27 per cent. of the previous year. In 41 cases, or 36 per cent., the epilepsy was of twenty years' duration or over, in 30 of between ten and twenty years' duration, in 19 between five and ten years, in 2 of unknown duration and the remaining 21 of less than five years' duration on admission. In only 8 was the duration of less than two years' standing. A family history of insanity was ascertained in 21 per cent., of parental alcoholism in 26 per cent., of an epileptic heredity in 26 per cent., and of personal alcoholic excess in 16 per cent. During the year 10 were discharged as recovered, using the term "recovery" in the technical sense of being fit for discharge from institutional care; 21 were discharged to metropolitan asylums, and 61 were transferred from the colony, either as being unsuitable for colony life or on account of bodily infirmity. During the year 12 patients in all died, 5 from syphilis, 4 from chest diseases, 1 from Bright's disease, and 2 from general diseases. No zymotic disease occurred, the general health was good and the only casualty that had to be recorded was a fractured ulna.

Accommodation.

On January 1st 1907, the excess of patients in the whole of the London County Asylums over the Commissioners' requirements as to dormitory space was 55 males and 196 females. The overcrowding was more pronounced at some asylums than others, there being at Claybury 165 patients in excess of the normal accommodation of that asylum, and at Hanwell 144.

Steps are being taken, however, to provide the required accommodation.

Cost.

For the financial year ending March 31st, 1907, the weekly cost of maintenance, including private patients, has averaged 10s. 6.66d. as compared with 10s. 11 32d. for the previous year.

LITERARY NOTES.

The *Gesundheitslehrer*, a popular fortnightly journal which has been conducted for many years by Dr. Kantor of Warnsdorf, has become the official organ of the German Antiquackery Society in place of the *Hygienische Blätter*, which has been discontinued. Dr. Neustätter, of Munich, is now joint editor with Dr. Kantor of the *Gesundheitslehrer*.

Among Messrs. Longman's spring publications will be *The Origin of Vertebrates*, by Dr. Walter H. Gaskell, an illustrated volume—the result of twenty years' work. Dr. Gaskell puts forth a theory based upon two fundamental propositions: (1) that the essential factor for the upward evolution of all animals is growth of brain power; (2) that each higher group of animals has arisen from some member of the highest group evolved up to that time, and not from a lower group.

By the will of the late Edmund Clarence Stedman, the well known American poet and critic, his cousin Dr. Thomas L. Stedman, editor of the New York *Medical Record*, has been appointed his literary executor.

The twelfth volume of the second series of the Index-Catalogue of the Surgeon-General's Library, United States Army, which has recently appeared, extends from O to Periodicals. The volume includes 5 476 authors' titles, representing 2,355 volumes and 5,195 pamphlets. It contains 10,996 subject-titles of separate books and pamphlets, and 35 324 titles of articles that have appeared in journals. The library now contains 160,412 bound volumes and 282 994 pamphlets.

The *Guy's Hospital Gazette* of February 8th reprints from the *Standard* of April 11th, 1831, an account of an operation performed by Aston Key on a Chinaman, named Hoo Loo, afflicted with an enormous scrotal tumour. The operation attracted a number of members of the profession, among them Bright, Addison, Hodgkin, and Travers, and the operator was assisted by Sir Astley Cooper, Bransby Cooper, Calloway, and others. The patient was brought into the theatre, "laughing, buoyant and spirited." The operation is described as follows:

> The patient being laid on the table reclining on pillows, the operation was commenced by making two elliptical incisions from the outer margin of the peduncle of the tumour to the spinous process of the pubes on each side. The knife was then carried forward along the upper part of the tumour, so as to raise a flap of integument, which was turned back. A similar incision was then made on each side, and two flaps of

integument detached. These incisions exposed some very large subcutaneous veins, which afforded considerable haemorrhage, and were obliged to be secured by ligatures before the operation could proceed. The neck of the tumour was next detached from above and the spermatic cords laid bare. The mass of the tumour was finally dissected by a few strokes of the knife from the perineum, and, the lower flaps of the integument being turned back, it became entirely detached from the patient's body. During the whole of the operation the patient appeared to be unusually affected by the loss of blood, which in the whole of the operation did not exceed 16 oz., and entirely venous. The only arteries besides those of the cords requiring to be secured were two small ones at the upper part of the swelling, from which not more than half an ounce of blood escaped. The patient continuing to be faint after the operation was completed, small quantities of brandy were administered, as it had been during its progress, and time was allowed him before dressing the wound to recover. In the meantime many gentlemen who were present (among whom was Sir A. Cooper) left the theatre, in the expectation that he would speedily rally from his faintness. Fresh air was allowed to blow over him, and warm applications were applied to his feet and chest; but his fainting condition beginning at length to excite apprehensions in the mind of the surgeon, brandy was freely injected into the stomach without producing any reaction of the heart; and, it appearing evident that without some further measures the heart's action would altogether cease, transfusion of blood was had recourse to, and 8 oz. (which were kindly furnished by a medical pupil, whose name we are unacquainted with) were thrown into the vein of the arm. All efforts, however, proved vain, and he sank. The tumour weighed 56 lb avoirdupois, besides 3 or 4 lb. of fluid lost during the operation. Its circumference when detached from the body was exactly 4 ft.

The case excited great interest, not only in the medical profession, but among the general public. As has been stated, the account above quoted is taken from a lay paper, which goes on to discuss the causes of the fatal issue, and the question whether all possible precautions had been taken to ensure success. The *Dispatch* of April 17th, 1831, says that such was the anxiety to possess some memento of Hoo Loo that one gentleman offered 2 guineas for the Chinese hat which he used to wear, while another "would have freely given double that sum for the dead man's 'queue,' which, like similar appendages to the heads of all the Chinese, measured nearly three-quarters of a yard." The hospital authorities, however, would not allow any relics of the patient to be sold. An oil painting of the Chinaman with his tumour hangs on one of the walls of the Curator's room in the museum at Guy's. The specimen is described in the catalogue as follows:

Spec. 162069.—A portion of an immense tumour, weighing 56 lb., removed by Mr. Key from the scrotum of Hoo Loo, a Chinaman, April 9th, 1831.

He was 32 years of age, and the tumour had been growing ten years; it commenced in prepuce and continued to grow until the whole genital organs were involved, and the tumour measured 4 ft. in circumference. It reached below the knees, but the man's health was good. He came purposely to England for removal of the tumour. The tumour consisted of hypertrophied integuments and subcutaneous cellular tissue, constituting the form of disease known as elephantiasis scroti.

The story is interesting on more than one account. That so formidable an operation should have been performed without an anaesthetic strikes us in these degenerate days with something like awe. The record makes us think with thankfulness of the better dispensation under which we have the good fortune to live. We may also congratulate ourselves on the advance in the sense of professional decency which makes it inconceivable that a detailed account of such an operation, evidently supplied by a medical writer, should appear in a newspaper.

To the New York *Medical Record* of February 1st, Dr. John W. Wainwright contributes a "psychological study of Hamlet." While Hamlet's motives seem mysterious to him, he says that sympathy is the one vital part of a comprehension of his character.

When we can conceive him as a part of our own lives, as we can of other dear friends who are with us no more, as flesh of our flesh, bone of our bone; see him as a personal entity, endeared to us by his frailties as well as his profound religious sentiment, as one of exquisitely tender conscience, deep paternal feeling, of the most exalted ideas of justice; take him into our lives, our hearts, he will in a measure be able to comprehend the motives which moved him.

All this, it must be admitted, does not bring us much nearer to a solution of the problem which has been discussed by Goethe, Samuel Taylor Coleridge, Schlegel, Bucknill, Victor Hugo, Maudsley, and many others, and which will continue to be debated as long as English literature lives, for in Hamlet, as has been said with truth, each man sees himself and each one interprets him after the fashion of his own thought and character. Dr. Wainwright says the motive force in Hamlet is his emotional nature. He holds that his madness was assumed as a part of the mask which was to shield him against his enemies. Dr. Wainwright sees everywhere in Hamlet evidences of a tremendous will power. He therefore differs from Goethe, to whom the Prince of Denmark was the embodiment of an intellect too subtle for action, and to whom the burden laid upon him of avenging his father's murder was too heavy. This we have always regarded as the true solution of the "mystery" of Hamlet, who, indeed, reveals himself in his bitter exclamation—

The time is out of joint—O cursed spite
That ever I was born to set it right!

As we have already said more than once, a characteristic of the present day is the interest taken by doctors in the diseases of celebrities of a past age. Naturally they differ more about the dead even than about the living. One instance among many that could be cited is that of Jean Jacques Rousseau. In this column of our issue of January 18th, reference was made to a communication recently presented to the Paris Académie de Médecine by MM. Poncet and Leriche on the case of that most wretched, and at the same time most contemptible, of hypochondriacs. They attributed his eccentricities not to "psychasthenia" but to urinary troubles. To any one even superficially acquainted with Rousseau's life and writings this must, we think, appear a form of absolution from moral condemnation at the expense of his character which the "Philosopher of Geneva" would have resented most strongly. The other side of the question was well put forward by Professor Régis at the Congress of Alienists and Neurologists held not long ago at Geneva. After speaking of Jean Jacques Rousseau's hereditary antecedents, M. Régis laid stress on the constitutional neurasthenic condition from which he suffered all his life, and with which was associated a considerable degree of arterio-sclerosis. That, he holds, was Rousseau's fundamental pathological state. But there was something else; he had phases of delirium, with ideas of persecution, but never hallucinations. In the last years of his life—the presenile stage—he reached a period less acute, less intense, with something of quiet and calm, such as may be seen in the life-history of an old man who evokes from a softened and distant past the events of his previous life. During this period Rousseau wrote his last work, *Rêveries d'un promeneur solitaire*. This was two years before his death, when he was 64 years of age. The slow weakening of his intelligence has not been clearly pointed out, but it is beyond dispute. The author of the *Emile* was too penetrating an analyst and too good an observer of himself to make any mistake on the subject, and he described the first signs of his intellectual decay in terms of admirable precision and accuracy. It is not possible to depict better than is done in his last letters and in his musings the commencement of intellectual decay with its true fundamental characters—namely, feebleness of transformation of sensations into ideas and narrowing of the cerebral field. Weakening of the mind, therefore, was present to a certain degree towards the end of his life. It may be presumed that if the shock of which he died had not cut short this commencing decay he would have fallen by degrees into the dementia from slow softening that is seen in persons with arterio-sclerosis. The mental disturbance is by no means incompatible with the existence of a neurasthenic arterio-sclerosis; it even confirms it. The question has been asked whether the mental affection was curable. That affection—namely, melancholia, with delirium of persecution, grafted on a neurasthenic arterio-sclerosis—might, according to M. Régis, have been modified to a certain extent under the double influence of moral treatment (mental rest, seclusion from the world, renunciation of everything, which he so judiciously imposed on himself) and of physical treatment, at once antitoxic and vascular. It is certain that such treatment might have notably improved the totality of the morbid symptoms. It is curious that M. Régis says nothing of the urinary troubles which, there can be no doubt, made Rousseau's later life one of constant suffering, even if they did not engender mental disease.

England and Wales.

[From our Special Correspondents.]

BRISTOL.

Pathology at the Royal Infirmary.

The pathologist of the Bristol Royal Infirmary, Dr. I. Walker Hall, has published his second annual report of the work done in the laboratory under his charge during the year, and the necessary conclusion come to on looking over such reports as these is that a large number of interesting and instructive cases pass through a great institution which, for want of such reports, would be lost to medical literature.

The report for 1907 is a little more comprehensive than the last, in that it contains reprints of papers published by members of the Infirmary staff and members of the pathological department, for the reason that many are directly associated with museum specimens, while others are of general pathological and medical interest. During the past year 204 autopsies were performed, of which 29 were inquest cases. Of laboratory examinations, 1,364 were made. The opsonic treatment was employed in 19 cases—6 for diagnosis, 13 for treatment—and the results for staphylococcal affections were very satisfactory. The number of tumours examined was 292, and in 137 cases the clinical diagnosis was confirmed. In one specimen the extension of tumours by venous channels was shown in a case of gastric carcinoma. Certain cases have been selected and reported more fully as being worthy of record. It is not possible in a short notice to make a detailed reference to all these interesting and in many instances peculiar cases, but the following appear to be especially noticeable: A case of lipoma of the spinal dura mater in a child of 15 months, under Dr. G. A. Nixon—a soft mass covered the posterior surface of the dura mater from the first to the eighth dorsal roots; one under Dr. Ogilvy, of tuberculous iridocyclitis; and a case of ruptured pancreas from a squeeze, admitted under Dr. Stack. The rupture was sutured, but the boy died on the ninth day of gangrenous pneumonia of mixed organisms.

Lecture by Sir Almroth Wright.

The Research Club met at dinner on February 14th, Sir Almroth Wright having consented to deliver a lecture on vaccine therapy in the Medical Library to the members and invited guests. If, unfortunately, the quality of the dinner was not up to what it might have been, all consequent ill-humour was dispelled by the admirably lucid and instructive lecture given by the guest of the evening. After maintaining that the methods used by surgeons and physicians were wrong in the treatment of bacterial diseases from the very nature of the diseases and the means employed, he proceeded to describe the latest methods of vaccine therapeutics, arguing that they were founded on a true pathological basis, and indicating the manner in which the discoveries of the past few years should be employed. The lecture is to be published in detail at a later date. For clear and convincing special pleading no better exposition could have been made, though the lecturer himself was the first to admit that he had omitted to place before his audience the objections of those who differed in opinion from him in his work.

Infant Mortality.

The Medical Officer of Health (Dr. D S. Davies) has addressed a letter to the Housing of the Working Classes Subcommittee of the Health Committee on the question of infant mortality. After expressing his hope that the appointment of special health visitor will enable him shortly to undertake some useful work, he calls attention to the care that must be employed in using statistical methods; and as an instance of how too much may be claimed, he appends comparative chart and reports for Bristol and Huddersfield. From these it appears that a practically identical improvement in the infant mortality returns has taken place in Bristol without any special methods having been adopted. The reports show that in 1907 the infant mortality-rate in Bristol was 100.9, Huddersfield 97. From the records of thirty one years the following facts are gathered: In Huddersfield the mean rate from 1897–1906 was 135; in Bristol, 135—in the former case a reduction of 28 per cent., in the latter 26 per cent. The mean for three years, 1905–7, at Huddersfield, during which time the special work has been in progress, was 117; for the same time in Bristol, 117. In Huddersfield from 1895–1904 it was 142, while in Bristol it was 138.7.

The figures are shown in charts, and that for Huddersfield and that for Bristol are almost identical. This report is most interesting, and shows clearly the care that ought to be taken in drawing deductions from statistics in this matter.

Hospital Sunday Fund.

The donations made on Sunday, January 26th, towards the Lord Mayor's Hospital Fund continue to come in and the increasing amounts must prove satisfactory to the Committee. Up to February 8th £1,012 4s. 8d., as compared with £968 14s. 10d. of last year, had been received. Not the least gratifying fact is that forty new collections have produced £88 12s. 7d., while there has been an increase of £118 18s. 1d. on 137 collections and a decrease of £55 12s. 5d. on 83. During the week following the collection the tramcars were used as a means for obtaining donations, small boxes used on a previous occasion being brought out again. By this means £9 18s. 8d. was obtained.

CARLISLE.

Dr. William Brown, medical officer of health for Carlisle, has resigned that appointment, and the office of medical superintendent of the small-pox hospital is also vacant. The town council has resolved to consolidate the medical appointments by appointing a single officer, at a salary of £400 a year, to act as medical officer of health, medical officer to the local education authority, medical superintendent of the small pox hospital, and police surgeon. While retaining the services of Dr. Brown as consulting medical officer for a period of four years at a fee of £100 a year, the council intend to terminate the appointments of two other medical men who are at present acting as police surgeon and medical officer to the local education authority respectively. It is true that Carlisle is not a large city, but it seems to us that the salary offered is inadequate for the combined posts, more especially as there is no mention of an annual increment.

Carlisle has been very well served by the retiring medical officer of health, who was appointed to that position in 1883. He at once directed attention to the evils arising from the numerous private slaughter-houses, twenty-seven in number, he pointed out the impracticability of meat inspection under such conditions, and showed that a large number of fatal cases of typhoid fever occurred in the vicinity of these slaughter-houses. In 1885 the Health Committee recommended the erection of a public abattoir, and this was opened in 1887. In the same year Dr. Brown made a report upon an extensive outbreak of typhoid fever associated with the milk supply to which the then principal medical officer of the Local Government Board, Sir Richard Thorne-Thorne, attached much importance. A year later Dr. Brown made a special report upon the dangers of the ashpit and the midden system, and these obsolete devices have since been gradually abolished. The establishment of the public abattoir made it possible to obtain details of tuberculous conditions found among the cattle, and the results were embodied in the report of the first Royal Commission on Tuberculosis in 1901. Dr. Brown's annual report for 1907 affords interesting evidence of the practical benefits which follow an enlightened policy in the sanitary administration of a town. Thirty years ago typhoid fever was a very conspicuous and serious feature of the zymotic returns. During the last seventeen years the average number of cases notified in the city dropped from 76 to 20 in the first ten years, and subsequently to an annual average of 9; as a matter of fact, only one case has been notified during the last fifteen months. This gratifying decline, which the medical officer of health attributes, in part at any rate, to the purity of the new water supply, is one result of Dr. Brown's twenty-five years' work, of which he may well be proud.

MANCHESTER.

The Royal Infirmary.

The financial position of the Manchester Royal Infirmary seems to be giving rise to some concern. It appears that the capital expenditure on the new infirmary and the central branch may be taken to be approximately £525,000. Towards this the purchase price of the old infirmary received from the Manchester Corporation was £400,000. Contributions from various sources amount to rather over £25,000, so that about £100,000 is needed to preserve the investments at the original figure. The question of maintenance is of equal importance. In the estimates for 1908 only £22,500 can be reckoned on with certainty, though it is hoped that an extra £5,000 on account of legacies and special donations may be realized. On the other hand, the minimum estimated expenditure at the new infirmary will be £30,000, to which must be added the annual deficiency of £2,500 at the Barnes Convalescent Homes, and £2,000 for the central branch, making a total of £34,500. This leaves a deficit on the year of from £7,000 to £12,000, according to the amount of legacies and special donations received. Of the reliable income of £22,500, only £8,465 is from voluntary contributions—namely, annual subscriptions and donations, £7,540; and the Saturday and Sunday Funds and other collections, £925. As is suggested in the annual report, this is entirely inadequate for a district of the population and wealth of that to which the infirmary extends its benefits.

It might well be a matter for consideration whether the annual expenditure could not be considerably lessened, at any rate in two directions, without doing the public any injury. First of all, there is a strong feeling that the establishment of a permanent central branch is unnecessary. The work which will fall to the central branch is mostly work which the Corporation ought to undertake, and the greater part of £3,000 a year would be saved to the infirmary if the Corporation could be induced to see that it is its duty to establish a proper municipal ambulance system. Now, if ever, is the time for the infirmary Board to take a strong stand on this matter. As it is, the Board is gradually drifting into a position which will most certainly end in the establishment of a separate and complete hospital in the centre of the city. Apparently this is not desired by the Board, but no one seems to be strong enough to grapple with the subject of a municipal ambulance system, which would be far preferable to the establishment of a central branch of the infirmary. The policy of drift is exactly calculated to lead to what the Board has already declared against.

Again, is it not time to do away with the home-patient department altogether? Time after time various hospital inquiry committees have declared against the retention of this department. In 1900, after a long and careful inquiry, a Committee, of which Mr. G. A. Wright, now one of the surgeons of the infirmary, was chairman, recommended that the home visiting of patients should be discontinued. The Committee of the United Kingdom Hospitals Conference has also recommended "that all cases, not suitable for hospital treatment, should be referred in general terms to a medical practitioner, to a public medical service, to an approved provident dispensary, or to the relieving officer under the Poor Law." In Manchester objection would certainly be raised if patients were referred anywhere except to a medical practitioner or to the relieving officer under the Poor Law. Considering the enormous number of patients treated at the infirmary, there is perhaps less hospital abuse than at any other hospital in the district, but many subscribers to the infirmary consider that all home treatment by hospitals is a form of abuse of public charity, inasmuch as it ought to fall to the province of the Poor-law medical service if the patients are unable to pay medical fees. Out of a total of over 50,000 patients treated by the infirmary last year, only about 1,700 were home-patients, but the cost of these must be some hundreds of pounds a year, most of which ought to be borne by the guardians. Any difficulty that might arise from the abolition of the home department on account of any special bequests, if any such exist, could doubtlessly be overcome, and the relief afforded by this, added to the saving on account of the central branch, would go a considerable way towards providing a safer income for the new infirmary itself. In any case it is most desirable that the hope of the Board should be realized that, in the event of the opening of the new infirmary being honoured by the presence of His Majesty the King, it may be declared open free from debt, with unimpaired investments, and with a sufficient voluntary income to enable it to enter upon a career of the fullest usefulness.

LIVERPOOL.

The Abattoir Question.

At the monthly meeting of the City Council held on February 12th a resolution was brought forward to confirm a minute of the Markets Committee that the Council rescind its resolution of July 18th, 1900, expressing disapproval of Trowbridge Street or the neighbourhood as the site of an abattoir. The Town Clerk intimated that letters had been received by the Lord Mayor from the medical staff of the Royal Infirmary, from the Committee of the Royal Infirmary, from the Chairman of the Lying-in Hospital, and from Mr. Bickerton (the President of the Medical Institution), disapproving of Trowbridge Street or the neighbourhood as the site of an abattoir. Mr. Bickerton forwarded a memorial signed by 378 medical practitioners, disapproving of the site, and expressing the opinion that the public slaughter of animals should be carried on far away from the centre of the city. After some discussion, it was agreed to appoint a special committee to report to the Council upon (*a*) the desirability or otherwise of the Corporation erecting, owning, and working dead-meat markets and abattoirs; (*b*) the best sites for such businesses; (*c*) the desirability of rescinding the motion passed on July 18th, 1900; and (*d*) to ascertain the terms on which the abattoir company would sell their property. The history of the abattoirs goes back to the year 1838, when the Corporation granted the abattoir company a lease of the land at present occupied for the usual period of seventy-five years. In 1883 the company applied for a renewal of the lease, which was opposed by the medical profession and some thousands of residents. In 1889–90 the application was renewed and the same agitation went on, and the Finance Committee recommended the Council not to renew the lease. The Council, however, by a majority of 4, instructed the Finance Committee to renew the lease, subject to suitable alterations and proper plans. Nothing was, however, agreed on, and the matter was left in abeyance till 1897, when it came up again, and the surveyor was asked to make a report as to the most suitable site for abattoirs. In 1900 the Council passed a resolution disapproving of the present site. As the lease runs out in four years, it is clear that some provision for carrying on the trade must be made. For many years the hope has been entertained in Liverpool that on the expiration of the lease the abattoirs and associated business would be removed to some place outside the city, and if this does not take place keen disappointment will be felt.

Bootle Borough Hospital.

Certain improvements now being carried out by the Corporation of Bootle have brought into the market a plot of leasehold land, containing about 1,200 square yards, contiguous to the Bootle Borough Hospital. The lease had about twelve years to run. The freehold of this land belongs to Lord Derby, who is the senior trustee of the hospital. Lord Derby has generously presented the hospital with the reversion of the property in fee simple, and has cancelled the ground-rent for the remainder of the term. This will allow the Committee to extend the hospital if, as seems probable, increased accommodation should be required.

SOUTH WALES.

The Royal Sanitary Institute.

A public meeting was held in the City Hall, Cardiff, on February 6th, under the presidency of the Right Hon. the Lord Mayor, to inaugurate arrangements for the twenty-fourth annual congress and exhibition of the Royal Sanitary Institute to be held there from July 13th to 18th, under the presidency of the Earl of Plymouth, Lord Lieutenant of Glamorganshire. The Lord Mayor stated the objects of the Royal Sanitary Institute, and

expressed the hope that the congress would be of great benefit not only to Cardiff but to other towns in Wales which it was hoped would lend their support to make the congress a success. Addresses having been given by officers of the Institute, a Local Committee with Subcommittee was appointed; Mr. J. Allcock was elected Treasurer, and Dr. E. Walford and Dr. W. Williams Honorary Secretaries. Dr. Walford was also appointed to preside over the conference of medical officers of health to be held as part of the congress, and Professor E. J. McWeeney was elected to deliver the popular lecture on the prevention of consumption.

Swansea Medical Officer.

At a special meeting of the Swansea Corporation on February 5th, the six candidates selected attended for the final selection of a medical officer of health for the borough with a salary of £500, to which will probably be added the position of port sanitary officer, worth £100 a year. The first voting resulted in Dr. D. J. Morgan, of Hampstead, securing 30 votes, two others obtaining 4 each, whilst one received 1 vote only. Dr. Morgan having thus secured a clear majority of the Corporation, his name was at once submitted to the Council, and a unanimous vote was given in his favour. Dr. Morgan then returned thanks for his appointment.

The new medical officer of health was born in Swansea in 1874, being a son of the late Dr. William Morgan, who was for over twenty years public analyst of the borough, and for some time Chairman of the Swansea School Board. In 1902 he was for some six months associated with Dr. Collier, the medical officer of health of Hammersmith. In addition to valuable experience gained in practice as a general medical practitioner in London, he has also made a special study of infectious diseases under the Medical Superintendent of the Western Metropolitan Fever Hospital, London. In November, 1902, he was appointed bacteriologist and pathologist to the Cancer Hospital, London, and later co-director (with Dr. Alex. Paine) of the research pathological and bacteriological laboratories of that institution.

Pontypridd Hospital.

A question which is agitating the Pontypridd ratepayers is whether the cottage hospital which it is proposed to erect should be built and maintained out of the rates. The decision of a public meeting held recently was overwhelmingly in favour of a rate-aided in preference to a voluntary institution, but when the matter was brought before the Council, several members successfully advocated the calling of ward meetings, so that the respective representatives might consult their constituents. In three wards out of the six these meetings have been held, and in each case the decision has been against the erection of a rate-aided institution. The position, therefore, is that if the councillors in these wards carry out the mandate of the ratepayers, one-half of the members of the Council is already pledged to vote against the proposal, while the Chairman of the Council represents one of the wards opposed to maintaining a hospital out of the rates. At one of the ward meetings it was announced after the voting that the Albion Company was prepared to defray the cost of building a hospital for the workmen engaged at those pits, and to contribute £60 a year towards its maintenance. This proposal will, it is stated, be put before the Albion Colliery workmen at an early date.

Ireland.

[From our Special Correspondents.]

Medical Inspection of School Children.

At a meeting of the Council of the Munster Branch of the British Medical Association held on Saturday, February 15th, Dr. J. Cotter, F.R.C.S.I., President, in the chair, a copy of the Bill relating to the medical inspection of school children was read. It was stated that the Bill applies at present to England alone. It was proposed, seconded, and carried:

> That, in the opinion of the Council of the Munster Branch of the British Medical Association, the Bill at present in force in England regarding the inspection of school children in public elementary schools should apply to Ireland.

Visitation of Queen's College, Cork.

The triennial visitation of Queen's College, Cork, was held in the Examination Hall of the College on February 15th. The visitors were the Right Hon. Mr. Justice Kenny, President; the Right Hon. Sir Rowland Blennerhassett, Bart.; Dr. Joseph Redmond, President Royal College of Physicians; Mr. John Lentaigne, F.R.C.S.I., Vice-President of the Royal College of Surgeons, and Sir John William Moore, M.D.

Dr. Windle, President of the College, made a statement as to the present condition of the College, and announced that the following matters brought up at previous visitations, regarded as desirable but unattainable, had now been satisfactorily settled: The Chair of Anatomy and Physiology had been divided; a bone room and anatomical museum had been provided, communicating with the dissecting room; a students' club had been erected and furnished, and something had been done in the direction of providing assistants to some of the members. In addition to these, the following matters have been attended to since the last visitation: A physical laboratory, a pathological laboratory, and a laboratory of practical and chemical physiology, and private laboratories for the teachers of pathology and physiology had been provided; the engineering drawing room had been provided with skylights and refitted with new desks, etc.; the ethnological museum had been entirely rearranged and relabelled; an Anglo-Indian library had been established and paid for by Lieutenant-Colonel Sexton, and a new biological laboratory was in process of erection.

The visitors adjourned in order to visit the various departments, and on their return

The Right Honourable Mr. Justice Kenny announced that the visitors found the College as a whole in a highly satisfactory condition, and that, having regard to the finances at the disposal of the College, as much had been made as was possible of the sums at the disposal of the institution. On account of the steady increase for several years past in the number of students availing themselves of the advantages provided by the College, the visitors consider it very desirable that the accommodation for teaching purposes should be increased. As regards the medical school, it was in most excellent order; the one fault they had to find was the flooring of the dissecting room, which was made of wood; they recommended that this deficiency should be brought under the notice of the Board of Works. The medical visitors noted with great pleasure the splendid physical laboratory, and suggested that a climatological station should be established for the meteorological instruction of students. The Students' Club was a great success; the buildings were erected as the result of voluntary effort, and was more than self-supporting last year.

Anticonsumption Crusade in Connemara.

On February 14th a deputation representing the Oughterard District Council, the Committee of the Gaelic League Anticonsumption Fund, and the Women's National Health Association, waited on the Local Government Board to ask a grant of money towards helping the poor people of South Connemara to improve their houses when they had been advised by the Gaelic League to effect sanitary reforms in their homes. The Gaelic League Fund, it was stated, would bear all the expenses of instruction, and the Local Government Board was only asked to help in the sanitary improvements which it is hoped to effect. The people, while willing to give their labour, are, it was said, too poor to provide material. Dr. M. F. Cox, speaking on behalf of the Gaelic League Anticonsumption Committee, referred to the deplorable condition of the dwellings of the people and to the periodic recurrence of fevers. He considered that it was the bounden duty of the Local Government Board to second the efforts of the Gaelic League. Mr. P. H. Pearse, B.L., referred to the failure of previous attempts at instruction made by the Congested Districts Board and by private philanthropists like Lady Dudley, these attempts having been made in English, a language which the people do not understand. The Chairman of the Local Government Board, while expressing sympathy, did not hold out any hope of assistance to the attempt about to be made to stamp out consumption and fevers in one of their greatest hotbeds. We are informed that the Congested Districts Board also has refused to give any help, and has even declined to

receive the deputation. The promoters of the movements must not be discouraged. Government departments are always coy when first asked to spend money. Are there not Irish members at Westminster?

MEDICAL MAGISTRATE.

Dr. Edward Mowbray, Castlederg, has been appointed by the Lord Chancellor to the Commission of the Peace for the County of Tyrone.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CANCER RESEARCH IN DUNDEE.

ON February 13th the directors of Dundee Royal Infirmary appointed Dr. Archibald Leitch, assistant in the cancer research laboratories of the Middlesex Hospital, to the post of Investigator at the Caird Cancer Pavilion. Mr. J. K. Caird, LL.D., the founder of the pavilion, offered the infirmary directors the sum of £1,000 a year for the period of five years for the purpose of prosecuting researches into the nature, cause, prevention, cure, and treatment of cancerous disease. A laboratory will be fitted up in an unoccupied portion of the pavilion. The appointment is for one year, renewable from year to year, and in fulfilment of the terms imposed by the directors, Dr. Leitch will prepare a report annually on the work accomplished, and such reports will be published at the discretion of the directors. Dr. Leitch took the degrees of M.B., Ch.B., at the University of Glasgow in 1902, and has been engaged in cancer work for the past five years. He is the author of *Adenomyoma of the Uterus* (in collaboration with Dr. Cameron); *Malignant Disease of the Uterus, Vagina, and Vulva: A Statistical Study from the Middlesex Hospital Records*, published in the *Cancer Archives* of the Middlesex Hospital (1906); the *Presence of Micrococci in Tumours*, published in the same *Archives* in 1907.

FOOT AND MOUTH DISEASE IN EDINBURGH.

The outbreak of foot and mouth disease, which was so drastically treated by the Board of Agriculture, would seem to have entirely disappeared. No cases other than those in the affected herd have been reported. A curious result of the occurrence of this disease is the abstinence of a large number of people from any form of butcher's meat, and the severe sterilization of every drop of milk. The avoidance of meat is due to the fact that some eighty animals from the infected cowhouses were allowed to be dealt with in the public slaughterhouse, and then sold by auction in the meat market. The prices obtained, we are informed, were very low.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

The Registrar-General for Scotland reports that during January, 1908 26 deaths were registered as due to cerebro-spinal meningitis in eight of the principal towns; of these, 15 were in Glasgow, 7 in Edinburgh, 2 in Dundee, and 2 in Greenock.

CORRESPONDENCE.

THE ROYAL SOCIETY AND THE TESTS FOR COLOUR BLINDNESS.

SIR,—For fear of misconception on the subject of the detection of colour blindness, and the tests as recommended by the Royal Society, on whose report the Board of Trade acted, I feel I must explain and comment upon certain points which are discussed in the letter by Dr. Grossmann in your issue of February 8th.

I quite agree with him that the "preliminary report" of the Ophthalmological Society was meagre, and when it was drawn up the Committee hoped to investigate the matter still further. On looking up the terms of reference it was found that all they were asked to do was to investigate the alleged inefficiency of the Holmgren test: and as they considered that they had thoroughly proved that it was inefficient, they came to the conclusion that they had done all that was required of them, and that it was no part of their business to investigate the whole subject of colour vision. The point, however, on which they laid stress was this, that there were many cases of dangerous colour blindness which could not be detected by the Holmgren test, no matter how carefully and skilfully applied, and many of those who could be detected by the wools were only found out when they, for instance, said a green wool was yellow, but they were at once detected when shown certain colours in the Edridge-Green lantern. Thus, one man who matched wools perfectly said that a yellow light gave him precisely the same effect as poppies growing in a field, and that he should call it light green!

Only this week I was examining a highly-trained scientific man who could, as a rule, match wools perfectly, and while engaged in doing this to my satisfaction I asked him to tell me the colour of the tie I was wearing. It happened to be a satin one of a dark amber colour. He replied, without the smallest hesitation, that it was green. I picked out a pure green and a bright yellow skein and asked him what they were; he replied that they were both green, but he would not match them, because one was lighter than the other, and he knew that normal-sighted persons did not call them the same colour. I believe that if this man went up and was examined by the tests which the Royal Society forced upon the Board of Trade he would pass, though, unless he could compare two lights, he would never know what colour any one light was.

I agree with Dr. Grossmann that the lantern will detect more colour-blind people than the wools, but why should one exclude colour names?

As was pointed out in the leading article in the JOURNAL of February 1st, a man at sea has not to match colours. Think, for example, of a ship in a fog. A look-out forward reports, "Red light on starboard bow." The officer of the watch cannot see it; the fog is too dense. He orders his helm to be put to port, in accordance with the rule of the road at sea, and thus puts his own broadside straight across the stem of the other vessel. It then turns out that the colour-blind look-out had really seen a green light and not a red one at all, and therefore "green to green" would have passed safely had the ship continued her course. The man who would do this is just the one who would describe a red or green light as a reddish green or a greenish red, though what that is no normal-sighted person knows, for the two colours have nothing in common, and could not be mistaken the one for the other, and a candidate who described a colour as such should be at once rejected without being given another chance, for he would never know the colour of a light which might be red or might be green.

I have heard it argued that a man may have perfect colour vision and yet be ignorant of the primary colour names—red, green, yellow, and blue, and may thus misname a colour. If such a state of ignorance did exist, he should be at once rejected and sent down to complete his education, for he has no more right to go up for an examination in colour vision when he knows nothing about it than he has to go up for navigation not knowing what are the names of the points of the compass; surely it cannot be held to be a hardship to reject a man who knows nothing about the subject in which he presents himself for examination. The thing to my mind is so obvious and simple that I cannot imagine any one having a doubt as to the urgent necessity for the use of colour names, and if a man calls a red light green or yellow, it is a matter of absolute indifference why he makes the mistake; the result of his mistake is more than likely to be the loss of his ship.

The advocates of the matching test will say, no doubt, that the man who could report a wrong colour will not match wools or light correctly. All I can say is, try them. I have known scores of people who could match colours perfectly, and yet are totally ignorant of the colours they are matching, and I am told that many have such a fine sense of shade that they are employed by drapers and others in matching colours in preference to many normal-sighted persons, as they can do it so perfectly. I would willingly allow comparative tests to be relied upon if a seaman were called upon to compare lights, but as a rule he is not. The man sees a single light and has to know what colour it is, and no comparison test of either lights or fabrics affords any guarantee that the man who passes it possesses sufficiently good colour vision to enable him to perform the duties of a seaman: and further, an intelligent colour-blind person who has spent a few hours practising the matching of colours with the aid of a

normal-sighted person is far more likely to pass the test than a somewhat dense normal-sighted person.

Let me quote the experience of Dr. Edridge-Green, who once had a series of 6 consecutive colour-blind persons who had all passed the test with a lantern showing two colours, like the one advocated by Dr. Grossmann; and he also had 5 red-green blind persons who were able to match the spectral colours precisely like normal-sighted individuals, and no matching test could be more delicate than this. Any one referring to the paper published by Dr. Edridge Green in the *Transactions of the Ophthalmological Society* for 1907 can acquaint himself with the details.—I am, etc.,

C. Devereux Marshall, F.R.C.S.

London, W., Feb. 8th.

Sir,—I have read the correspondence and the editorial on this subject with the greatest pleasure and gratification. It is, however, curious that no one has alluded to the main point of my letter—namely, the method by which new facts may be demonstrated and new theories considered. It has from the commencement been an astounding thing to me that I should have had the extreme difficulty which I have had in getting a fair hearing and an opportunity for demonstrating my facts. I must say that the worst offenders in this respect have been those officially connected with science and with our older universities. There are many men there who have a certain amount of book learning but very little real knowledge of the subject, and whose minds seem incapable of grasping a new idea, and yet pose as authorities in the most dogmatic manner. I have never found this either in London or on the Continent. When I have mentioned one of my crucial facts to a German professor, he may have said, "You will pardon me for saying so, but what you state is absolutely impossible; it would upset all our views"; but he has readily agreed to investigate the matter, and had no hesitation in changing his opinion when he found I was right.

The referee system adopted by the Royal Society is a very bad one. A paper may be communicated by one of the ablest of the Fellows and then be referred to one of the archaic individuals to whom I have alluded, and who, finding it unorthodox, at once condemns it. Neither the author nor the communicator of the paper will be told why the paper was refused. Let us suppose that the paper has been rightly rejected, it would be of advantage to the author to know where he was wrong, so that he might correct the error in his future work. Few know the great difficulty of pioneer work; there are pitfalls in every direction. It has cost me hundreds of pounds and several years of hard work to write a single paper. What would Newton or Bacon have said of a science which persisted in condemning facts in the strongest terms whilst absolutely refusing to look at them? This is the attitude of official science in this country. A well-known German said to me: "Your English scientific men are not so uncommonly stupid as they seem. In fact, I regard the English, individually, as the most scientific nation in the world; it is an undoubted fact that the germ of nearly every important scientific discovery has been found by an Englishman, promptly suppressed by your own countrymen, and developed by us on the Continent."

If this be true, we ought to take special means to prevent its recurrence. I will conclude with the words of Helmholtz, used by him when accused of altering his colour theory. "Actual doubt is in any case better than deluding oneself with dogmatic certainty."—I am, etc.,

Hendon, Feb. 9th. F. W. Edridge-Green.

THE HAMPSTEAD GENERAL HOSPITAL.

Sir,—I think the time has come when an attempt should be made to remove the impression that this hospital has been guilty of some crime against society in general or the medical profession of Hampstead in particular, and in order to do this I beg the hospitality of your columns.

The Hampstead Hospital was started in 1882 with a few beds for patients able to contribute a little towards their support, and was most successfully officered by certain general practitioners in its neighbourhood. It is misleading, however, to describe it as a "Cottage Hospital." The free beds, which have existed since 1894, have always been in charge of the regular medical staff; only the "contributory beds" have been available to other practitioners. In the new hospital there is no intention of taking away this privilege from the local members of the profession.

As a result of increased demands, the first portion of the new hospital was erected two years ago with 64 beds, and in these excellent quarters the hospital has continued to receive the willing and able services of the same staff of general practitioners.

At the opening ceremony it was announced that a sum of £10,000 was required to free the hospital from debt, and that a further sum of £15,000 would complete the scheme to provide a total of 110 beds. An immediate response was received, Sir Henry Harben announcing that he was authorized by an anonymous donor to say that £20,000 would be forthcoming if the remaining £5,000 required were obtained. To avoid diverting support from the general funds of the hospital by an appeal for this sum, the Council laid the conditions of this special offer before King Edward's Hospital Fund, and received a promise from them to provide the sum of £5,000. At the same time the King's Fund suggested that the growing importance of the hospital made it desirable for it to adopt a similar constitution for its medical staff to that of all other general hospitals in London.

At a later date, the King's Fund having had its attention drawn to the condition of the North-West London Hospital, the buildings of which were considered unfit for continued treatment of in-patients, and the Committee of that institution being unable to see their way to obtain an adequate sum for rebuilding, suggested that an amalgamation of that hospital with the Hampstead General Hospital might be arrived at, an out-patient department being maintained solely in Kentish Town, and all in-patients being received at the Hampstead Hospital. The King's Fund decided that as it was proposed that the Hampstead General Hospital should henceforth be reckoned, as was the North-West London Hospital, amongst the metropolitan hospitals, it should be a condition of the amalgamation that the Hampstead General Hospital should be officered by physicians and surgeons of recognized consulting rank.

In a canvass on this proposal, by means of a series of questions issued to the members of the local profession, the opinions expressed for and against the change were almost equal; but the result was distinctly unfavourable to the scheme of a mixed staff of general practitioners and physicians and surgeons in consulting practice.

It was eventually resolved by the Council of the hospital to make the change to a staff consisting of physicians and surgeons in consulting practice, with definite provision for a term of continued service in the case of members of the existing staff of general practitioners. *These terms were accepted as satisfactory by the members of the existing staff*, except as regards the decision, arrived at later under the amalgamation scheme, that the two junior members in charge of out-patients (being in general practice), who were entitled to further service of thirteen years each, should not be eligible for promotion to in-patient posts.

As regards the amalgamation proposals, I may say that on April 10th, 1907, a committee of the local medical profession and the medical staffs of the Hampstead and North-West London Hospitals reported to a meeting of the British Medical Association (Hampstead Division) that the proposed amalgamation with the North-West London Hospital was desirable from the public point of view (on certain conditions).

On the amalgamation being decided upon, the medical staff placed themselves in line with the local practitioners who were opposed to the changes. Since then, as your readers are aware, a canvass of local practitioners has been made by the Hampstead Division of the British Medical Association, resulting in a vote which in their view justified their sending a "warning notice" to your Journal, which was accepted.

I may say that the Council of the hospital appreciate most highly the valuable services of the present acting medical staff, and also their generosity in consenting to act until successors could be appointed; but the Council nevertheless much regret that when arrangements had been made for the retention of these gentlemen on the staff, on a plan but slightly modified from that which had been approved by them, they should

suddenly have changed their mind and *joined with others in a scheme for preventing their places being filled by such persons as the King's Fund suggested*, and financial reasons had compelled the Council to accept. To me as a layman it seems, to put it mildly, regrettable that the JOURNAL of your powerful Association should have allowed the name of any charitable institution to be placed on what is practically a *black list*, without due endeavours being made to see if there were justification for it. I beg respectfully to maintain that the Hampstead General Hospital has a clean record of much useful work, and that it is guilty of no offence against society or against the medical profession. It cannot get the promise of the necessary financial support in Hampstead—it will need three times as large an income as that which it has been able to count on—and it has no alternative but to accept the substantial and welcome help offered by the King's Fund, and at the same time to submit to its conditions, which, after all, in a place like London, are not unreasonable.

In conclusion, I would say that the Council of the hospital have no quarrel with the medical profession in Hampstead, nor, on the other hand, have they any fear, doubt, or hesitation in adopting the course which the successful evolution of the hospital has thrust upon them. —I am, etc.,

ERNEST COLLINS,
Chairman of the Council, Hampstead General Hospital, Haverstock Hill, N.W.

February 19th.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

SIR,—With reference to the correspondence now going on in the BRITISH MEDICAL JOURNAL on the above subject, I beg to say that a short time ago, in my capacity of medical officer to the Yorkshire School for the Blind and as honorary obstetrical officer to the York Dispensary, I gave an address, at the Blind School, on the above subject, to the nurses and midwives of York who were invited. The meeting was a very successful one, there being between seventy and eighty midwives and nurses present.

The causes, symptoms, and preventive treatment of ophthalmia neonatorum having been plainly described, it was pointed out that by far the largest number of cases of blindness caused by this disease occurred in the practices of *midwives*, and that it was quite in their power to prevent it by adopting proper antiseptic measures, etc., to the eyes of children under their care at the time of birth. Also the great responsibility which lay on them in this matter was strongly impressed upon them.

Mr. Simeon Snell of Sheffield held a successful meeting of this kind some time ago, and I feel sure that if other medical officers of institutions for the blind would follow the same example much might be done to prevent the terrible loss of sight from ophthalmia neonatorum, which is the cause of blindness in *at least one-third* of the children admitted into schools for the blind, to say nothing of the large number of cases of partial blindness not admissible into such institutions. The Dean of York (Chairman of the Blind School Committee) presided at the meeting, and the Medical Officer of Health of the city (Dr. E. M. Smith) was present, amongst others.

After the address, to which the midwives and nurses were most attentive, and in which they showed much interest, a concert was given by the blind pupils of the school, and afternoon tea was kindly provided by the Committee.

In the out-patient maternity department of the York Dispensary the eyes and eyelids of all the children are at birth thoroughly washed and cleansed with a warm boracic acid solution, the treatment being continued for several days, and I am able to state that ophthalmia neonatorum is almost unknown to us. In the very rare cases in which it does occur a weak silver nitrate solution is dropped into the eyes for a few days and the disease is at once cut short.—I am, etc.,

York, Feb. 16th. WM. DRAPER, M.R.C.S., etc.

SIR,—The sound, outspoken letter of Dr. Peter Horrocks in your issue of February 8th upon this subject will be thoroughly appreciated and approved by a large number of practitioners in private practice. As one such, I write to thoroughly endorse and entirely support his views. The importance of this senseless, illogical routine practice as affecting practitioners in their relation with midwives, quite apart from its own, is well shown by the following incident:

Recently I was engaged to attend a lady whose condition I satisfied myself as being in every way healthy and normal, surely a not uncommon condition in private practice. By the desire of friends a trained midwife's attendance was sought; this personage arrived with quite an array of credentials in the art, till one was forced to ponder whether one's position was not to some extent usurped. My instructions were that I allowed of no examination, and that I wished to be summoned early. The birth was in every way normal, no instruments were used, the child was normal and healthy. At my visit on the morning of the second day I was not a little surprised and distressed to find both eyes of the child intensely injected with considerable external chemosis of lids and in considerable discomfort. The responsibility of a careful diagnosis was now thrust upon one. One's methods, one's work, the probabilities and possibilities of an acute septic infection were all passed through the mind, with finally a close questioning of the midwife. At length it was admitted, as a trivial incident, the making of a perchloride solution from a tabloid which they invariably furnish, of about 1 in 4,000, and with it thoroughly washing the child's eyes on the previous day. The midwife now declared that such could have no connexion with the present condition of the child's eyes; such procedure was her general instruction and routine practice. She had been taught and told to do so; furthermore, she now said and believed the child's eyes were infected, that the child had "ophthalmia," that she had done the right and proper thing. The position of the medical attendant was difficult. I made my diagnosis, held my tongue; at once prepared to obtain material for a microscopic slide, and to get a culture from the child's eyes. A drop of castor oil was put in each eye. In course of a couple of days the eyes were almost normal. Both the slide and the culture were negative, and it appeared the thorough washing with perchloride had caused the "ophthalmia." The midwife's training had certainly strengthened her determination at the expense of her sense, for the next occurrence was the receipt of various nursing journals containing letters generally supporting the routine practice, and mildly hinting at the ignorance and the casualness of some medical attendants in the matter, though, adding, it was generally diplomatic to follow their instructions. Next followed copies of letters from various medical authorities in support of the routine treatment. This alone was a revelation how freely letters are given in the profession. I really now wondered what next would happen, for I had reported, quite mildly, the action of this midwife to the head of her department. Sure enough I was then threatened with an action for damages, but, with the name of one's solicitors, I heard no more.

Whether, Sir, this experience is unique, I cannot say, but it is such from a general practitioner's point of view as goes to show how very dangerous the personage of a trained midwife may be with all their knowledge—this routine, rule-of-thumb practice, instilled like unalterable dogma at their training. This routine practice with regard to child's eyes is quite illogical, and unworthy of the present state of scientific medicine. The position taken by Dr. Walter S. A. Griffiths also frankly I do not understand. What does he mean by "gently but thoroughly cleansing?" Does he refer to septic or aseptic matter in or upon the skin? If he admits it is ineffectual in the presence of septic matter, what use is it with regard to aseptic matter; his content appears to be one of sitting on the fence between past and present knowledge. As Dr. Horrocks states, I can confirm, the usual solutions recommended for this routine practice, both of perchloride and nitrate of silver, do cause quite an alarming redness and swelling in the healthy eyes of some babes; nowadays it is much easier than appears generally imagined to establish a possible diagnosis before these solutions are plunged into the eyes with blind ignorance. No responsible practitioner wishes to belittle the importance of septic infection of any sort, or the liability under certain and definite circumstances, newborn child's eyes have in particular, but I quite fail to see that we should act differently here from that in any other department of scientific medicine. I am delighted to see that Dr. Peter Horrocks

is bringing this inconsistency forward and taking a lead, I trust successfully, in waging war against a procedure of a past epoch.—I am, etc.,

Bexhill-on-Sea, Feb. 11th. JOHN O. HARVEY, M.D.Lond.

CHLOROFORM AND THE STATUS LYMPHATICUS.

SIR,—Although I do not agree with Dr. Alcock's suggestion that the two articles on the status lymphaticus (BRITISH MEDICAL JOURNAL, January 25th) are perfect from the point of view of the anaesthetist, yet his criticism is also imperfect. It is of course easy for the physiologist to refuse to regard any case of chloroform fatality as worth considering unless the percentage of the vapour being inhaled is known, but this is to ignore the significance of symptoms which surely the physiologist himself accepts as positive criteria of depth of anaesthesia and of toxic action of the anaesthetic. Several of the cases, including Mr. Hilliard's, were in fact obviously not overdosed if we accept the presence of a brisk corneal reflex and of reflex movement on incision as positive evidences of light anaesthesia. Granting this supposition, are we not justified in assuming that an anaesthesia such as this is incompatible with the inhalation of a dangerous percentage vapour? Or even if a vapour which is dangerous according to the physiologist—that is, one of over 2 per cent. is being inhaled—and yet these evidences of light anaesthesia are present, are we not justified in assuming that in the particular instance the subject is not being overdosed in spite of the high percentage inhaled? It is a pity certainly that, clinically, it is impossible at present in many cases to administer accurately known percentages, and achieve success from the surgeon's point of view. It is particularly a pity because it might be proved clinically that deaths occur in the early stage of chloroform inhalations whilst a physiologically safe percentage is being inhaled. The true explanation of some such deaths, the vagus exaltation theory notwithstanding, is still to come, and we look to the physiologist to supply it. Nor will he probably be hindered in arriving at the truth if he takes within his consideration such facts as clinical cases are able to supply.—I am, etc.,

London, W., Feb. 10th. J. BLUMFELD.

AN OPEN CONTINUOUS DROP METHOD OF ADMINISTERING ETHER.

SIR,—I have read with interest the remarks of Dr. Barton and Mr. L. Kirkby Thomas on the above subject. Dr. Barton says he has not tried the drop method; his remarks, therefore, do not call for serious comment. He states, however, that anaesthesia can be induced in about two minutes with the ethyl-chloride-ether or gas-ether sequence, with the minimum of discomfort to the patient. I cannot agree with this statement. Both from my experience as an anaesthetist and as a patient I have found the application of a close-fitting facepiece with the exclusion of air cause considerable discomfort, and in administering ether to a patient I have sometimes changed from the closed to the open method with decrease of discomfort to the patient. Dr. Barton says he would be a bold anaesthetist who, when asked to give ether, omitted to pack some form of closed apparatus in his bag. I do not claim to come under the category he mentions, but I may say that within the past thirteen months, during which time I have been using the drop method, I have frequently taken no form of closed apparatus with me, and I have had no reason to regret having adopted this proceeding.

With reference to the remarks of Mr. L. Kirkby Thomas, I consider he draws inferences for which there is no foundation. Mr. Thomas says, "Out of 257 administrations *on presumably picked cases*." I stated distinctly that I had practised this method in practically every class of case—young and old, strong and weak, alcoholics and neurotics. I am therefore at a loss to know on what ground Mr. Thomas bases his presumption that my cases were picked cases. Again, Mr. Thomas says, "Mr. Brownlee reports two deaths from ether pneumonia." Such a statement is not accurate. Of the two deaths I recorded, one, I said, was possibly due to the anaesthetic, but the other was the case of a man who had had an extensive abdominal operation performed, and who did well for four days. If Mr. Thomas has read the literature on ether pneumonia he will know that in the great majority of cases evidence of respiratory complications has ensued within twenty-four hours. It is therefore improbable that this was a case of ether pneumonia. Lastly, in comparing the death-rate of ether and chloroform, Mr. Thomas says: "Chloroform . . . would appear to be the safer drug, the difference being that in the former case (the use of ether) the anaesthetist escapes the coroner's inquiry, with its excessive publicity." Would Mr. Thomas mind telling us whether cases of acid intoxication or delayed chloroform poisoning, and cases of intractable and fatal sickness following chloroform administration, are included in the 1 in 1,300 mortality-rate of chloroform he quotes; also whether these conditions are the subject of the coroner's inquiry with its excessive publicity?—I am, etc.,

Cardiff, Jan. 20th. ALEX. BROWNLEE.

ETHER ANAESTHESIA BY THE OPEN METHOD.

SIR,—Referring to the article on anaesthesia in your issue of January 18th, p. 145, by Mr. Gardner, I think it is to be regretted that he omits reference to the extremely important practice of lifting the lower jaw forward in all cases. I have done much anaesthetic work at St. Thomas's Hospital, the Connaught Hospital, Aldershot; Gravesend Hospital, and elsewhere without accident and have found it of the utmost value. Years ago you published in your columns an illustrated description of my modification of Junker's inhaler especially adapted for difficult confinements, single handed, where this lifting of the jaw cannot easily be practiced.—I am, etc.,

London, W., Jan. 22nd. FREDERICK A. FLOYER.
B.A., M.B.Camb., M.R.C.S.Eng., L.S.A.Lond.

CALMETTE'S OPHTHALMO-REACTION FOR TUBERCULOSIS.

SIR,—Dr. Parkes Weber's experience with the tuberculin ophthalmo-reaction is of very great interest, and should be taken into consideration when determining the value of the test. It is, however, very important that conclusions be not based upon a few observations, and that the value of the test be not estimated from twenty or thirty trials.

Mr. Greenwood, the statistician at the London Hospital, has consented to collaborate with me in estimating the reliability of the test. This necessitates the collection of a very large number of cases in which the diagnosis is beyond doubt, and therefore a considerable amount of time must elapse in collecting these, unless observers will be so kind as to place their results at our disposal. We should therefore deem it a kindness to receive[1] information as to the sex of the patient, the age of the patient with initials of name, latent period of test when found to be positive, times of observation after instillation of the drop when found to be negative (with special note as to the appearance of the inner canthus and plica). The diagnosis of disease should be based either upon the finding of acid-fast bacilli, the inoculation of guinea pig, or *post mortem*.—I am, etc.

London, W., Feb. 17th. OTTO GRÜNBAUM.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

SIR,—The recent memoranda of the Board of Education, directing local authorities to make arrangements forthwith for the medical inspection of all school children in their districts, are documents of considerable interest for the profession at large. The schedule, according to which the examination is to be conducted, is arranged under twenty-four heads, and includes such items as inspection of the skin and teeth; inspection of the oro-nasal passages for tonsils, adenoids, etc.; estimation of the hearing, and examination for perforations; examination of the eyes and estimation of visual acuity; condition of the heart and lungs; examination for constitutional ailments—bone disease, spinal curvature, rickets, etc.; and estimation of the mental capacity and intelligence; in short a complete physical and mental examination of the child.

As to the person entrusted with the examination, the official circular directs that he should hold a qualification in public health, or that he should have some special knowledge, by study or other opportunity, of the com-

[1] Addressed to the Statistical Department, the London Hospital London, E.

plaints incidental to childhood. It is clear, moreover, from the official documents that this inspection is not for statistical purposes only, but that it is intended that where defects of health or of physique are noticed means shall be adopted to secure adequate treatment of the defects.

The first question that naturally arises is whether the existing medical officers of health, who are suggested as suitable officials for the discharge of the new duties, but who are—up to the present time—appointed on the strength of their presumed knowledge of sanitary matters only, whether these gentlemen are the proper persons from whom to expect the special knowledge of children's complaints which the circular directs the inspecting medical man should possess.

And the second obvious question is whether the appointment of local medical officers of health to these duties is desirable or just, having regard to their relations, as ordinary competing practitioners, to the other medical men in their districts. These relations are, in practically every instance, that the local medical officer of health is an ordinary general practitioner in daily competition with his fellow-practitioners for work and practice. Is it fair, then, to the other practitioners that the inspection of the whole of the children in the district, most of whom are patients of other medical men, should be handed over to the individual who happens for the time being to be the local medical officer of health? It is clear that such a commission confers upon the medical officer of health a position of unfair professional advantage, which, while improving his own professional status, and probably practice, will do so only at the expense of that of his fellow-practitioners. And these latter, as ratepayers—for the costs of the scheme are to be found out of the rates—have a clear right to some consideration.

More tact and consideration for the interests and the feelings of fellow-practitioners than the average medical officer of health at present possesses must be forthcoming if the proposed inspection is to produce any beneficial results to those children who are the patients of other medical men, and also if it is not to prove a constant source of friction between the medical officer of health and those medical men whose interests and reputations may be so easily compromised at the time of inspection.

These difficulties could of course be avoided by the appointment in every educational area of medical inspectors of children, under the supervision of the county medical officer of health. These inspectors would not be medical officers of health, and would be barred from practice in the area; but they would be specially qualified for the work, as the official memorandum directs, by greater proficiency in the knowledge of children's complaints than the ordinary medical officer of health possesses.

By such appointments the information obtained at the inspections would gain in statistical value, and the local friction which must inevitably arise when the inspecting duties are entrusted to local medical officers of health would be avoided.

As regards the question of expense, I believe it will be found in most instances that the appointment of a specially qualified medical inspector, who would give the whole of his time to the work of his appointment, would be found less costly than farming out the work among local medical officers of health at a fee of so much per pupil inspected.

I trust that the views of that considerable body of the profession outside the official sanitary service, whose interests are vitally affected by the proposed measure, be elicited.—I am, etc.,

Lancashire, Feb. 17th. M B., MEM. B.M.A.

SIR,—It is with astonishment that I have read the schedule of medical inspection issued by the Board of Education, together with the remarks and comments of the Board, as published in the SUPPLEMENT of February 8th.

Was it drawn up with the authority and knowledge of a medical man? I will not trouble you by going over the whole of the extraordinary document, but confine myself to the following remark and one item of the schedule:

"It is considered that the inspection of each child should not occupy on the average more than a few minutes . . ."

The schedule consists of a preliminary part, which may be filled up by the school authority; then comes the family medical history, which in all cases must be most carefully taken, and will necessarily require time and patience. Next twenty-four sections. I will take only the eye, for example. It is necessary to test the sight of both together for reading, then each separately; then the colour test must be taken; and, lastly, the refraction. Will this latter be done properly in thirty seconds, which, if the whole examination is to be done in a few minutes, is the maximum time available for any one particular part? Whatever is worth doing at all is worth doing well.

I regret that London has again fallen so short of the desired and necessary grasp of the importance of the question. The Board of Education seems to be treating the matter as a plaything given to the doctors to amuse themselves with. It is time that the medical profession put an end to this undignified nonsense.—I am, etc.,

Paignton, Feb. 10th. GRIFFITH C. WILKIN.

PROLAPSE OF ORGANS IN MENTAL CONDITIONS.

SIR,—Noticing your critical notice on p. 207, January 25th, I wondered whether or not such matters as prolapse of ovary, proptosis of stomach and of intestine, wandering spleen, dropped kidney were expressions of the same condition or of similar ones. I wondered whether all movable parts are liable to dropping, wandering, and prolapsing.

There is a case of prolapse that is interesting and may lead to mental conditions—namely, prolapse of a testicle in what I have heard called the "one down" condition, where a testicle suddenly drops to the floor of the scrotum, and lies there. The condition seems one of nervous cremasteric failure, and possibly is central in origin.

If central, it may be chimio traumatic, as in toxaemia (in all chemical action there is akinetic condition causing rearrangement, and this may cause the trauma, and hence failure of central nerve impulses), and in this way there may be set up central rearrangements that are expressed in mental conditions aberrant to the natural, as in the condition called dropped kidney. They may be all expressions of a toxic neurasthenia.

Perhaps some one of your readers will enlighten me.—I am, etc.,

Birmingham, Jan. 28th. JOHN W. DUNCAN, M.B., Ch.B.

THE RESULTS OF THE OPERATIVE TREATMENT OF CHRONIC CONSTIPATION.

SIR,—For about a quarter of a century autointoxication has been in my mind. About 1880 I treated typhoid fever cases with one drop of carbolic acid in a wineglassful of water every four hours, with a dietary of skimmed milk (I never lost a case, although in the home of the disease), I subsequently in all cases of obstinate bowels have always aimed at trying to render the intestines septic. I, therefore, with every physician who has devoted much study to this important subject, do cordially welcome Mr. Lane's grand operative skill for the relief of one of the most distressing maladies. I however would not call a number of Mr. Lane's cases "chronic constipation," but paresis of the colon. I think a great difference should be made in obstinate bowels due to the muscular coats and those due to the secretion of the bowels being deficient or nearly absent; the latter I class as "chronic constipation," and it is the latter cases that are amenable to patient continued medical treatment and careful dieting. Doubtless they are often "mixed," and it is very difficult to decide if disease is more due to paresis of the whole colon or to deficient secretion. The smaller bowels are not so liable to paresis as the colon, and the treatment after a given time will enable us to decide which is the correct diagnosis. I have now a young lady under care who often used to go seven to ten days without a motion, but under treatment for a year now has four motions a week without medicine of any kind.—I am, etc.,

London, W., Jan. 26th. THOMAS DUTTON.

CONTRACT PRACTICE.

SIR,—Frequently in the JOURNAL appear letters from correspondents complaining bitterly of the tyranny of clubs and the meagre payment doled out to their medical officers. The following instance will, I think, show that

doctors themselves are in a great measure to blame for the treatment. A friend of mind holding a large club, mostly composed of juveniles admitted without medical examination even from a month old, dared to hint that his salary was not according to the membership of the club. For his audacity the responsible officials invited the services of five or six other doctors in the district, all of whom tendered at the old price, namely, juveniles 2s. and adults 3s. per annum. In spite of this opposition, the former holder of the entire club raised his fee 1s. a member, that is, juveniles 3s. and adults 4s., with a most gratifying result, a large proportion of the Society selecting the old doctor. Surely it is time the Association took up seriously the question of "contract practice," and, by fixing a living wage, prevent men from demoralizing themselves and their profession. The public are not to blame in this matter, for they rightly reason if club practice does not pay, why are doctors so anxious to secure it, even at the cost of underselling a brother practitioner?—I am, etc.,

January 22nd. VERITAS.

THE TERRITORIAL ARMY MEDICAL CORPS NEW UNIFORM.

SIR,—A pointed question was asked in the BRITISH MEDICAL JOURNAL for December 28th, 1907, with regard to the case of regimental surgeons who will require a new kit on transferring to the R.A.M.C.T.

It is said, but I have not seen it officially noted, that an allowance of £20 may be made. Junior officers had such an allowance on becoming proficient, but senior surgeon-captains and those of higher rank have had to bear the whole expense, and it is rather much to expect them to again launch out to the tune of about £50.

An authoritative statement with regard to the new uniform question, which from the cost is of importance when the regimental officers are being urged to come over, would be much appreciated by some who, like the writer, are undecided.—I am, etc.,

February 4th. SWITHERING.

COLLEGE HOODS.

SIR,—I noticed in the report of the Quarterly Council Meeting of the Royal College of Surgeons of England, published in the BRITISH MEDICAL JOURNAL of January 25th, that the Council refused to accede to the fifth request of the meeting of Fellows and Members—namely, "that a hood should be added to the gown already worn by Fellows and Members." I consider the excuses very lame.

First, "As the hood was generally understood to be distinctive of a degree and in this sense it formed part of the academic costume of a university, it was considered that it would not be appropriate for a college." The College of Preceptors grants hoods to its Fellows and Licentiates. King's College, London, grants a hood to its Associates (A.K.C.) The College of Organists grants a hood to its Fellows, and all the Theological Colleges grant hoods to their Licentiates who are not graduates of a university. (See *Whitaker's Almanack*.)

Secondly, "As hoods did not appear to be in general use among colleges of similar standing to the Royal College of Surgeons of England."

The Council forgets that it was the *first* to grant a cap and gown to its Fellows and Members, and was followed by the Royal Colleges of Surgeons of Ireland and Edinburgh and the Society of Apothecaries. So as the Council of the Royal College of Surgeons of England was the *leader* in the gown, so it should be in the hood. I would suggest that the hoods be, for Fellows, the same shape as the Cambridge M.A., but made of crimson satin lined with black: for Members, the same shape, but made of black stuff lined with crimson satin.—I am, etc.,

February 3rd. M.R.C.S.

THE friends and patients of the late Dr. W. S. Playfair have collected a sum of £1,000, which will be presented to King's College Hospital, with which Dr. Playfair was so long associated as obstetric physician. The Removal Fund Committee has decided to devote the money to the building and equipment of an appropriate department of the new hospital shortly to be erected at Denmark Hill; the department will be named after Dr. Playfair, and will bear an inscription recording his thirty-five years' work at King's College Hospital.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Board of the Faculty of Medicine.

THE following persons have been re-elected members of the Board of the Faculty of Medicine: J. R. Magrath, D.D., Provost of Queen's College; F. A. Dixey, D.M., Fellow of Wadham College; A. L. Ormerod, D.M., New College; W. Bruce Clarke, B.M., Pembroke College; A. P. Parker, B.M., Magdalen College.

UNIVERSITY OF CAMBRIDGE.

A CHANGE in the regulations for the M.B. degree has been made and it has been decided to give students an opportunity of passing the First M.B. before the beginning of the October term. It will be an advantage to a well-prepared student who has passed the previous examination to be able to do this and to begin the subjects of the second stage the same October. Similarly a student who has just failed to pass the First M.B. in June will have an opportunity of passing the following October and entering for the courses in Anatomy and Physiology at the beginning of the term. The following degrees were conferred on February 13th:

M.D.—G. G. Ellett, Cath.
M.B., B.C.—L. G. Austin, Sid. Suss.; D. W. Roy, Sid. Suss.
M.B.—D. Holroyde, Trin.

UNIVERSITY OF LONDON.

THE following candidates have passed the Intermediate Examination in Medicine for Internal and External students:

J. W. Adams, St. Bartholomew's Hospital; F. C. Alton, St. Thomas's Hospital; Kathleen J. Armstrong, London (R. F. H.) School of Medicine for Women; E. A. Attenborough, London Hospital; ‡C. Banks, University of Sheffield; M. B. Bayly, Charing Cross Hospital; C. A. Birts, University College; K. C. Bomford, St. Bartholomew's Hospital; K. J. C. Bradshaw, University of Liverpool; F. L. Brewer, University College; ‡E. S. Calthrop, Charing Cross Hospital; S. J. Clegg, Victoria University of Manchester; G. B. Cockrem, Guy's Hospital; A. K. Contractor, University College; Grace M. Cordingley, London (R. F. H.) School of Medicine for Women; G. M. Davies, St. Thomas's Hospital; F. A. Dick, Guy's Hospital; J. A. Edmond, Guy's Hospital; R. R. Elworthy, Westminster Hospital; T. C. C. Evans, St. Mary's Hospital; A. Ferguson, St. Bartholomew's Hospital; Violet E. Fox, London (R. F. H.) School of Medicine for Women; W. E. Fox, Guy's Hospital; T. W. George, London Hospital; C. Gibson, London Hospital; Katherine A. Gill, London (R. F. H.) School of Medicine for Women; Edith C. Goodison, London (R. F. H.) School of Medicine for Women; C. D'O. Grange, University of Leeds; H. A. Grierson, University of Liverpool; H. P. Hacker, B.Sc., King's College; A. W. Havard, London Hospital and University College, Cardiff; R. M. Hiley, University College, Bristol; H. Hingston, King's College; Harrie M. Hood Barrs, London (R. F. H.) School of Medicine for Women; E. L. Horsburgh, Victoria University of Manchester; T. L. Jones, Guy's Hospital; *†N. C. Lake, Charing Cross Hospital; F. N. H. Maidment, London Hospital; K. D. Marriner, St. Thomas's Hospital; G. Matthews, King's College; J. Menzies, St. Mary's Hospital; R. Montgomery, University of Leeds; A. L. Moreton, St. Bartholomew's Hospital; G. E. E. Nicholls, Victoria University of Manchester; A. C. Palmer, London Hospital; Helen L. Peacock, London (R. F. H.) School of Medicine for Women; Cicely M. Peake, London (R. F. H.) School of Medicine for Women; E. A. Penny, Guy's Hospital; Morna L. Rawlins, London (R. F. H.) School of Medicine for Women; A. Renshaw, Victoria University of Manchester; H. F. Renton, University of Leeds; Maude M. Richards, London (R. F. H.) School of Medicine for Women; C. G. Richardson, King's College and Westminster Hospital; E. H. Roberts, University College; A. D. Rope, Middlesex Hospital; D. Scurlock, St. Mary's Hospital; E. A. Seymour, St. Thomas's Hospital; R. Stout, Guy's Hospital; ‡G. Y. Thomson, Guy's Hospital; Marjorie E. Wagstaff, London (R. F. H.) School of Medicine for Women; E. White, St. Bartholomew's Hospital; ‡W. S. Wildman, London Hospital; C. Witts, Guy's Hospital.

* Distinguished in Anatomy. † Distinguished in Physiology.
‡ Distinguished in Pharmacology.

The following candidate, having qualified in Organic Chemistry, has now completed the Intermediate Examination in Medicine:

P. C. Bharucha, University College.

UNIVERSITY OF SHEFFIELD.

THE Council of the University has appointed Mr. John L. Annan, M.B., Ch.B. Edin., to the post of Demonstrator in Anatomy. Mr. Annan is at present Demonstrator of Anatomy in the University of Edinburgh, and House-Physician in the skin wards of the Edinburgh Royal Infirmary. The Council has also appointed the following gentlemen to the newly instituted clinical tutorships: Mr. Miles H. Phillips, M.B., B.S.Lond., F.R.C.S.Eng., in Obstetrics and Gynaecology; Mr. Graham Simpson, F.R.C.S.Eng., in Surgery; Mr. A. E. Barnes, M.B.Lond., M.R.C.P., in Medicine. Mr. Phillips is the Assistant Medical Officer at the Jessop Hospital for Women, and Mr. Simpson is the Assistant Surgeon at the Sheffield Royal Hospital. Mr. Barnes holds a British Medical Association Research Scholarship, and is at present engaged in research in the Pathological Laboratory of the University.

UNIVERSITY OF WALES.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

Bequest.

At a meeting of the Council of the University College of South Wales and Monmouthshire held on February 5th, Dr. W. T. Edwards (Vice-President) in the chair, it was announced that the late Mrs Fulton, of Penarth, had left to the College a sum of about £15,000 to be spent by the College Council as it thinks fit.

Royal Sanitary Institute.

Principal Griffiths, Mr. Lynn Thomas, C.B., and Professor Hepburn, Dean of the Medical Faculty, were appointed delegates at the forthcoming Congress of the Royal Sanitary Institute to be held in Cardiff, July 13th to 18th, 1908.

Franco-British Exhibition.

It was resolved to forward certain College exhibits to the Franco-British Exhibition to be held in London next summer.

Appointments.

It was reported that Professor Hepburn had been appointed Principal's Deputy and Representative of the Senate on the Council for Session 1908-9; and that Professors Boulton and Bruce had been appointed Representatives of the Senate on the Court of Governors.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council meeting was held on February 13th, Mr. Henry Morris, President in the chair.

The late Mr. William Allingham.

A resolution was passed in appreciation of the services rendered to the college by the late Mr. William Allingham, who was a past member of the Council, and a vote of condolence was passed to his relatives.

Diplomas of Membership and Public Health.

Diplomas were issued to 66 candidates found qualified at the recent examination, and to 10 candidates found qualified for the Diploma of Public Health of the two Colleges.

Appointment of Conservator.

From amongst the applicants for the above appointment, who comprised only zoologists, Mr. Arthur Keith was chosen.

Report from the Committee on the Annual Report of the Council.

This report was adopted by the Council. It was decided, moreover, that the memorandum contained in the report be circulated to hospitals in England and Wales, together with the appendix to the report. The memorandum is as follows:

Attention having been called to a regulation in force at some hospitals, under which the ordinary pass degree of any British University is accepted as qualifying for appointments on the staff, whereas the Diplomas of M.R.C.S.Eng. and L.R.C.P.Lond. are not so accepted, the Council of the Royal College of Surgeons of England desire to point out the injustice of this regulation to Diplomates of the two Royal Colleges.

In the first place, the Council would call attention to the fact that, since the introduction of the five years' curriculum, the course of professional study required at the Universities has not been longer than that required by the Colleges. Moreover, statistics recently compiled by a Committee of the General Medical Council show that the average course of study in England is longer than that in Scotland or Ireland, and the inference is drawn by the Committee that this difference is due to the Regulation of the Royal Colleges in England which guarantees for the subjects of the Final Examination an uninterrupted period of study of two years from the date of the completion of the Intermediate Examination.

With regard to the standard of examination, the Council maintain that the examinations in professional subjects, which candidates for the Diplomas of the Royal Colleges in England are required to pass, are not less exacting than those required for the pass Degrees of most Universities. In support of this contention, the Council would point to the marked success of the Diplomates of the Royal Colleges in England at the examinations for the Royal Navy Medical Service, the Royal Army Medical Corps, and the Indian Medical Service. (See Appendix to this Report.)

The Council believe that, in many cases, the regulation in question was made at a time when there were not more than four Universities in England, and when the conditions for obtaining the degrees of those Universities were in some respects more exacting than those imposed upon candidates for the diplomas of the two Royal Colleges; but, having regard to existing conditions, they are of opinion that, in all cases in which those holding only the pass Degree of a University are accepted as eligible for staff appointments, the same privilege should be accorded to those who hold the Diplomas of M.R.C.S.Eng. and L.R.C.P.Lond.

The Council therefore trust that the authorities of hospitals in England and Wales who make this distinction between Diplomates and Graduates will see their way to modify a regulation which affects unjustly many who have studied and qualified in London, where the clinical advantages for medical and surgical education are unsurpassed, and places them at a disadvantage with those who have graduated in Scotland, Ireland, and elsewhere.

Appendix to Report.

Analysis of returns as to the examinations for the Medical Department of the Royal Navy, the Royal Army Medical Corps, and the Indian Medical Service during the five years 1903-7, compiled from tables presented to the General Medical Council:

	Passed.	Rejected.	Per-centage passed.
M.R.C.S.Eng. } L.R.C.P.Lond. }	344	20	94·5
English University Graduates	103	12	89·5
Irish University Graduates	153	25	85·9
Scottish University Graduates... ...	162	40	80·1
L.S.A.Lond.	14	5	73·6
Indian and Colonial University Graduates	16	9	64·0
Irish Conjoint Diplomates	76	46	62·2
Scottish Conjoint Diplomates	50	42	54·3

The foregoing statistics are compiled from the results of 27 examinations, and the high position in order of merit obtained by the Diplomates of the two English Royal Colleges is shown by the following table:

First place gained by	M.R.C.S.Eng. / L.R.C.P.Lond.		18	times in	27 Exams.
Second	,,	,,	20	,,	,,
Third	,,	,,	14	,,	,,
Fourth	,,	,,	15	,,	,,
Fifth	,,	,,	16	,,	,,

The Admission of Women to the Conjoint Examination.

The Council decided that the following circular be issued to all Fellows of the College whose addresses are registered at the College, and to all Members of the College whose addresses are entered upon the *Medical Register* of the United Kingdom, whether such Fellows and Members are resident in the United Kingdom or elsewhere:

POST CARD.

Royal College of Surgeons of England.

Dear Sir,—The Council, although they have decided that it is desirable to admit women to examination for the diploma of Member, and although they have power to act upon this opinion, are anxious, in accordance with a resolution passed at a meeting of the Council on May 9th, 1907, to obtain the views of the Fellows and Members on the matter.

In regard to the corporate position of women, if the diploma of the College be granted to them, the Council have taken legal opinion, and are advised that, while under the Medical Act of 1876 (39 and 40 Vict., Ch. 41) women can be admitted as Members, or as Fellows, no woman so admitted would thereby be entitled to take any part in the government, management, or proceedings of the College.

It is hoped that you will answer the questions on the accompanying Post Card, and return the Card at your early convenience. In order to give time for the arrival of replies from the Colonies and other distant localities, the Poll will be kept open until the first day of July, 1908.

Yours faithfully,

S. FORREST COWELL,
Secretary.

REPLY POST CARD.

To the MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Answer.

A. In your opinion is it desirable that women should be admitted by examination as Members of the College?

B. In your opinion is it desirable that women, after admission to the Membership, should be admitted by examination as Fellows of College?

(Please answer YES or NO.)

Signature of Member

Full Postal Address

NOTE.—On the circular sent to the Fellows the Reply Post Card will be headed "To the Fellows of the Royal College of Surgeons of England," and "Signature of Fellow" will appear at the bottom.

Central Midwives Board.

Mr. J. Ward Cousins was re-elected the Representative of the College on the above Board.

The "British Pharmacopœia."

A letter was read from the President of the General Medical Council stating that a Committee of that Council has been appointed to prepare a fresh edition of the *British Pharmacopœia*, and inviting the College to send to the Committee, before April 30th, such recommendations and suggestions relating to omissions from, additions to, or alterations in the

Pharmacopœia of 1898 as the College may think fit to offer. A Committee was appointed for the consideration of the above matter.

Bradshaw Lecturer.

Mr. W Watson Cheyne was appointed Bradshaw Lecturer for the ensuing collegiate year.

Examinership in Dental Surgery.

Mr. W. A. Maggs's period of office terminating on March 12th next, a vacancy will arise, which will be filled up at the ordinary Council of that date. Mr. Maggs is eligible for reappointment.

Medical Inspection of School Children.

A small committee was appointed with the object of keeping the Council informed as to what is being done from time to time regarding the medical inspection of school children and the arrangements for teaching elementary hygiene in training colleges and schools.

DIPLOMAS in Public Health were also conferred by the Council (in conjunction with the Royal College of Physicians) upon ten gentlemen, as follows:

R. C. T. Evans, L.S.A.; E. E. S. J. Galbraith, L.R.C.P. and S. Edin., L.F.P. and S. Glasg.; W. H. Hillyer, L.R.C.P., M.R.C.S., M.D. Durh.; W. H. Lamplough, L.R.C.P., M.R.C.S., M.D., B.S. Durh.; A. R. Litteljohn, L.R.C.P., M.R.C.S.; J. Mair, M.B., C.M. Glasg.; F. R. Ozzard (Major I.M.S.), L.R.C.P., M.R.C.S.; G. E. F. Stammers (Capt. R.A.M.C.), L.R.C.P., M.R.C.S.; J. B. Stephens, L.R.C.P., M.R.C.S., M.B., B.S. Lond.; J. Tate, L.R.C.P., M.R.C.S.

CONJOINT BOARD IN ENGLAND.

THE Comitia of the Royal College of Physicians on January 30th conferred licences to practise upon the following gentlemen who had completed the Final Examination of the Examining Board in England, in Medicine, Surgery, and Midwifery, and the Council of the Royal College of Surgeons conferred the Diploma of Member upon the same gentlemen on February 13th, namely:

A. C. Anderson, C. E. Anderson, A. G. Atkinson, T. R. H. Blake, H. Blakeway, S. L. Brimblecombe, J. P. Buckley, W. A. Burr, H. J. B. Cane, E. P. Carmody, A. J. W. Cunningham, S. T. Davies, B. Day, A. F. W. Denning, A. Dixon, J. McD. Eckstein, J. Everidge, A. L. Foster, H. Gall, E. W. Gandy, E. G. Gauntlett, W. Gilliatt, H. D. Gillies, G. R. Girdlestone, A. E. Gow, *J. L. Graham-Jones, A. Hamilton, C. T. Hawkins, C. A. Holburn, N. W. Jenkin, G. Lev, E. L. M. Lobb, D. Loughlin, A. T. McCaw, D. Macrae, C. H. Marshall, J. B. Martin, T. M. Miller, R. J. C. Parnell, E. M. Parsons-Smith, H. Pinto-Leite, H. J. D'A. G. Price, R. B. Price, J. F. E. Prideaux, E. J. J. Quirk, P. C. Raiment, R. W. Rix, H. T. Rossiter, M. R. Sawhney, F. C. Searle, L. W. Sharp, *C. H. Smith, F. H. Stephens, H. Stott, G. F. Syms, W. R. Taylor, E. W. Toulmin, N. H. Vakeel, C. F. Walker, A. G. Wells, E. G. Wheat, J. N. Wheeler, E. B. C. White, W. C. Wigan, C. O. O. Williams, B. R. Williams, J. S. Williamson, W. L. R. Wood.

* Diplomas of M.R.C.S. were conferred upon these gentlemen on January 16th.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

HOSPITAL MANAGEMENT.

UPSILON writes: If a member of the extern staff of a clinical hospital canvasses the Managing Board of the hospital to transfer some of the beds of the intern staff to him, does he act in accordance with professional etiquette?

*** In the first instance, such a question ought to be threshed out by the staff, but we are not prepared to say that there are not circumstances in which an appeal from the decision of the staff to the General Committee might not be justified.

Medico-Legal.

A BEGGING BARON.

ON February 7th "Baron Bruno von Hohnfeldt, M.D., alias Chris. J. Hughes," an elderly person, was charged before Mr. Plowden at Marylebone with attempting to obtain charitable contributions from Mr. Arthur F. G. Leveson-Gower, of Gloucester Place, Portman Square, with intent to defraud. According to a report which appeared in the *Daily Telegraph*, Mr. Arthur Leveson-Gower stated that in December last he received a letter from a "Mr. Hughes," apparently a medical man, saying that he had in a hospital he was attending a patient named Mr. Edmund Banbury, who had been with him (Mr. Leveson-Gower) at Christ Church, Oxford, and had fallen on bad times. The writer went on to suggest that witness should help him in his charitable efforts on Mr. Banbury's behalf. Mr. Leveson-Gower saw Mr. Banbury, with the result that a warrant was obtained for the prisoner's arrest. Mr. Edmund Banbury, who was called, disclaimed all knowledge of the prisoner.

Other evidence was given that accused arranged for letter, to be received on his behalf at a shop in Arlington Road, Camden Town. Six letters were received there in the name of Mr. Hughes, and were handed over to the prisoner, and subsequently he wrote from the Langham Hotel, asking that any further letters might be forwarded.

Detective-Sergeant Draper spoke to arresting Hughes in Star Street, off the Edgware Road, where he has been residing. He protested at first that he had done nothing for which he ought to be arrested, but later he made a statement containing, it was understood, certain confessions. Upon him was found a memorandum containing a number of names, including that of Mr. Banbury, and a letter in exactly the same terms as that addressed to Mr. Leveson-Gower, dated from 143, Albany Street, and signed in the name of Johnson. This letter was evidently ready to be posted. In reply to the magistrate, Sergeant Draper said the man had just completed a term of three years, and before that he had four years, and before that twelve months for burglary. Mr. Plowden granted a remand. The prisoner was again brought up on February 14th and further remanded.

VACATION OF OFFICE.

DONOVAN.—A medical officer in an institution is under agreement to give three months' notice when terminating his appointment. He gives the notice, and finds it impossible to stay more than ten weeks of the required three months, and he intends putting in a satisfactory locumtenent. Is this within his rights?

*** He should write to the governing body of the institution and offer to find a suitable locumtenent, stating the reasons of his inability to stay his full time. If he has valid reasons his offer will no doubt be accepted. Strictly speaking, he has no "right" to leave till the time of his notice has expired.

ILLNESS OF PARTNER.

A CORRESPONDENT writes that A. and B. are partners in a medical practice with a clause in the agreement that, in case of illness which is not permanently disabling, the sick partner shall pay the working partner £1 a day for the first two months, and that for a subsequent period of the continuance of the disablement the share to be paid to the disabled partner shall be settled by an umpire. He wishes to know if there is some well-known and generally-accepted rule in the profession, as the agreement gives no hint as to any basis for such decision.

*** There is no such generally-accepted rule. Such matters as these are always settled in the agreement, and that of our correspondent seems to be of a very unusual character. The clause quoted does not throw any light on the subject, and it is impossible to advise him under the circumstances.

MEDICAL WITNESSES' FEES AT ASSIZES.

OYER AND TERMINER wishes to know what are the fees payable to medical witnesses called to give evidence in criminal cases at the assizes.

*** Medical witnesses, if residing more than three miles from the assize court, may be allowed 2 guineas a day with necessary travelling expenses; if residing within three miles, 1 guinea a day with expenses. There is also a provision that if the medical witness is not detained from home four hours altogether, he is to be allowed only half his fee. A good deal of discretion is left to the clerk of the court as to what the exact fee paid shall be, and from his decision there seems to be no appeal.

NOTIFICATION OF RETIREMENT OF PARTNER.

JUNIOR PARTNER asks: When a senior partner retires from practice and sells his share to the junior, is it necessary or customary to notify by advertisement the dissolution of the partnership?

*** If notice of the dissolution is given to all those with whom the firm has been in the habit of dealing, it is usually sufficient.

PUBLIC HEALTH

THE IRISH POOR-LAW SERVICE.

C. B. A.—(*a*) There is nothing in the regulations of the Irish Local Government Board requiring dispensary doctors to give certificates to dispensary patients; but Irish dispensary doctors are compelled to act as certifying surgeons under the Factory Acts, and to give the certificates required by the Board of Trade for most inadequate fees. (*b*) Under no circumstances can a dispensary doctor or midwife accept a fee from a patient attended on a ticket; to do so would entail the risk of dismissal, the Local Government Board regarding it as a most serious offence.

OBITUARY.

SIR JOHN DENIS MACDONALD, K.C.B.,

F.R.S., M.D.St.And., M.R.C.S.Eng., R.N.,

INSPECTOR-GENERAL OF HOSPITALS AND FLEETS.

FULL of years and honours, there passed away at Southsea on February 7th Sir John Denis Macdonald, R.N. Son of James Macdonald, artist and art critic, he was born at Cork in 1826 and educated at Cork and King's College, London. He obtained the diploma of M.R.C.S.Eng. in 1849, and entered the medical branch of the Royal Navy in August, 1849. He had a strong bent towards natural history, and was in due course appointed to H.M.S. *Herald*, a surveying ship in the Pacific; here his scientific knowledge and inherited artistic capacity stood him in good stead. His brilliant work, principally with the microscope, on the deposits brought up by the sounding-lead, dredge, and towing net caused him to be elected a Fellow of the Royal Society in 1859, at the early age of 33, and in July of the same year he was promoted to the rank of Staff Surgeon. In 1862 Macdonald was presented with the Macdonagh Brisbane Medal by the Royal Society of Edinburgh; in 1866 promotion to the rank of Fleet Surgeon was awarded, and in 1867 he qualified as M.D St. Andrews.

Between 1870 and 1880 Sir John Macdonald was Professor of Naval Hygiene at the Army Medical School at Netley, the naval surgeons on entry undergoing a course of training there with the candidates for the Army and Indian medical services. Associated with the brilliant staff then serving at Netley—Parkes, de Chaumont, Macleod, Longmore, and Aitken—Macdonald soon made his mark, and it is through his teaching at Netley that he was principally known to so many generations of naval medical officers. In 1880 came the parting of the ways. It was decided to form a school for the preliminary training of medical officers at Haslar, and to the great regret of many the naval surgeons were withdrawn from the Netley course, and Macdonald's career as a teacher was over. He had already been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in 1875, and in 1880 was promoted to the rank of Inspector-General of Hospitals and Fleets. From 1883 to 1886 he was in charge of the Royal Naval Hospital at Plymouth, retiring from the service on May 24th, 1886.

Sir John Macdonald was not a very voluminous writer, but he was the author of the *Analogy of Sound and Colour*, the *Microscopical Examination of Drinking Water*, and the *Outlines of Naval Hygiene*, which ran through two editions. He also contributed the article on yellow fever to Reynolds's *System of Medicine*.

In 1902, as a Coronation honour, he was appointed a K.C.B., Military Division, an honour that, although somewhat tardily granted, was much appreciated by the members of the naval medical service.

ANTHONY ROCHE, M.R.C.P., L.R.C.S.,

PROFESSOR OF MEDICAL JURISPRUDENCE AND HYGIENE, CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN.

WE regret to announce the death of Dr. Anthony Roche, which took place at Dublin on January 29th, from pneumonia. Dr. Roche had been for many years Professor of Medical Jurisprudence and Hygiene in the Catholic University School of Medicine, and was well known as an enthusiastic worker in the cause of public health. He had ample scope in Dublin, and he lost no opportunity of impressing upon the public the importance of improved hygienic conditions. He was an excellent teacher, and was fully appreciated by his pupils. He was one of the Examiners in Sanitary Science in the Royal University, and he had been reappointed to this office on many occasions. The Medical Faculty of his college have passed a resolution of condolence, in which they say:

An old student of the school, whose career was marked by the highest distinctions in all his classes, he has filled the Chair of Hygiene and Medical Jurisprudence in a manner to merit professional and public respect, and to earn the gratitude of the pupils, in whom he inspired a thorough devotion to scientific progress. The Faculty mourn the untimely demise of an honourable colleague, a professor of exceptional ability, a warm-hearted friend, and a strenuous advocate of the educational claims of the Irish people. They tender to his bereaved family a sincere expression of condolence in their affliction.

BY the death of Mr. CHARLES A. AIKIN on February 11th, at Llandrillo, Merionethshire, the profession has lost one of its oldest and most esteemed members. He was born in 1821, and was the only son of Charles R. Aikin, M.R.C.S., who practised in London. Mr. C. A. Aikin was educated at University College School, and received his professional training at Guy's Hospital, becoming M.R.C.S. and L.S.A. in 1843, and obtaining the Fellowship of the College of Surgeons in 1858. He married early in life, started work in South Paddington, and rapidly acquired a very extensive West End practice, from which he retired about sixteen or seventeen years ago. He subsequently resided for a few years near Holland Park, W., and passed the remaining years of his life in failing health at his sons' residence, near Llandrillo. Mrs. Aikin, their three sons, and a daughter survive him.

WE have to record the death of Mr. RICHARD LUSCOMBE ELLIOT, which occurred on January 31st. He received his medical education at St. Bartholomew's Hospital and obtained the diploma of M.R.C.S. in 1862 and of L.R.C.P. in 1863. He was at one time private physician to Lord Harewood, but in 1875 experienced an attack of paralysis which permanently disabled him from practice. For over a quarter of a century he resided at Tresillian, Kingsbridge, the home of his parents, but some ten years ago removed to Paignton where his death occurred. Mr. Elliot, although unable to practise, took a great interest in local affairs to the discussion of which he frequently contributed by his pen.

HOSPITAL AND DISPENSARY MANAGEMENT.

MEDICAL SUPERINTENDENTS UNDER THE METROPOLITAN ASYLUMS BOARD.

AT the meeting of the Metropolitan Asylums Board on February 1st the Hospital Committee brought up a report on an application jointly signed by the several medical superintendents in the hospitals service for an increase in their remuneration. The salary assigned at present commences at £400 per annum rising by annual increments of £25 to a maximum of £700 per annum with unfurnished house or furnished apartments, washing, fire, and light. The medical superintendents pointed out that their responsibility and work had increased in recent years, and contrasted the salary of the medical superintendents of the fever hospitals with that of the imbecile asylums, £600 a year rising by annual increments of £50 to £800, with unfurnished house, etc. The Committee recognized that in recent years the work of the hospitals had grown both in volume and importance, and pointed out that the proportion of notified cases admitted to hospitals had increased from 65.5 per cent. in 1893 to 84 per cent. in 1906, and expressed the opinion that this was mainly due to the confidence the public had in the efficiency of the Board's arrangements for the care of the infectious sick. To maintain the Board's work at the highest point of efficiency demanded unfailing zeal and constant vigilance on the part of the chief officers. Moreover, greater calls had been made upon them by the Hospitals Committee for important reports and returns on subjects connected with hospital management and administration. The medical superintendents were constant in their endeavour to co-operate with the Board in carrying out the important duties laid upon them. Their responsibilities were heavy, and their residence in an infectious hospital involved certain social disadvantages and many educational difficulties with regard to their children. The Committee having considered the matter in all its aspects expressed its conclusions in the following terms: (*a*) That the minimum salary of a medical superintendent is too low; (*b*) that seeing that it takes twelve years, as against four years in the Board's asylum service, for a medical superintendent in the hospitals service to reach his maximum, the rate of increment should be accelerated; and (*c*) that the maximum does not adequately represent the value to the Board of a medical superintendent of experience. The Committee therefore recommended the following scale of remuneration and emoluments:—Salary: (i) Commencing at £500 per annum and rising by four annual increments of £25 to £600 per annum and thence by two further annual increments of £50 to £700 per annum; and (ii) after the expiration of ten completed years of service as a medical superintendent to rise from £700 per annum by £50 annually to a maximum of £800 per annum. (iii) The annual increments to date from March 26th of each year. Emoluments: Unfurnished house (or furnished apartments) and washing.

Under the standing orders of the Board the consideration of the report was deferred.

Recommendations (i) and (ii) were adopted at the meeting of the Board on February 15th.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

C. M. M. has recently met two cases of urticaria immediately following influenza, and would be glad to know if others have noted such a connexion between the two affections.

R. N. asks for suggestions for the treatment of a man, aged 45, in whom pustules have recurred in the nose frequently since taking a long railway journey. The patient attributes them to the dust then inhaled. They occur most often about ½ in. inside the nostril.

OTO-SCLEROSIS.

SCLEROSIS inquires whether the climate of Valparaiso or, alternatively, of Buenos Aires would be suitable for a case of oto-sclerosis (congenital), and adds, How about Capetown or Alexandria?

*** Speaking generally, whilst we know of no ground for regarding the climate of the places mentioned as not suitable, the climate, *per se*, cannot be held remedial for the form of deafness referred to.

POLICE SURGEONS' DUTIES AND REMUNERATION.

A NEWLY-APPOINTED police surgeon writes that he has under his charge a force of 103 men. He is paid a salary of £40 per annum, rising by two annual increments of £5 to a maximum of £50. His duties consist of the usual nature—examination of recruits, examination and, if requested, treatment of sick members of the force, keeping a register of sick cases, making examinations and giving certificates required under Police Acts, attending prisoners when required, and carrying out such incidental duties as may be required by the borough council or its Watch Committee. Our correspondent thinks that he is inadequately remunerated, and particularly objects to having to attend prisoners at any hour of the day or night in order to certify as to drunkenness, unsoundness of mind, to stitch up cuts, to set fractures, to examine generally and microscopically in cases of rape and indecent assault, etc.

*** With the exception of having to visit prisoners gratuitously, to which our correspondent rightly objects, the remuneration named above is probably up to the average of other towns. In the Metropolitan Police District fees of 7s. 6d. for night visits and 3s. 6d. for day visits are allowed to police surgeons. For setting fractures or examining in rape cases a special fee, usually of 1 guinea, is allowed. The Honorary Secretary of the United Kingdom Police Surgeons' Association, Dr. Whitehouse, Aston Road, Birmingham, would probably be able to supply our correspondent with further information.

ANSWERS.

MR J. GRAY CLEGG, F.R.C.S (22, St. John Street, Manchester), writes: In reply to "Operator" whose query appeared in the BRITISH MEDICAL JOURNAL of February 1st, I may say that a system of supply of sterilized water is about to be put in at the Royal Eye Hospital, Manchester, and I shall be pleased to communicate direct with him if desired about the matter.

MR. HENRY RUNDLE F.R.C.S.—The late Professor Nicholas Senn was the author of *Around the World via India* (Chicago: American Medical Association Press, 1905), which was reviewed in the BRITISH MEDICAL JOURNAL of September 8th, 1906, p. 573; and of *Around Africa via Lisbon* (Chicago, 1906). At the time of his death he was contributing a series of articles, entitled Travel Notes in South America, to the *Journal of the American Medical Association.*

MORPHINE AND SCOPOLAMINE IN LABOUR.

AMINE.—In the *Beitrage zur Geburtshilfe und Gynaekologie*, Band xii, Heft 2 (December, 1907), there is a paper by Gminder on "morphium-skopolamin narkose" in labour. He reports 100 cases, and his conclusion is that this method of producing anaesthesia is dangerous both for mother and child.

OCCIPITAL NEURALGIA.

DR. W. F. SOMERVILLE (Glasgow) writes in reply to "J. W. K." that he has had excellent results in treating cases of neuralgia of the great occipital nerve by means of high-frequency currents. While the patient lies on the condenser couch being submitted to these currents a vacuum glass electrode is applied to the exit of one or both nerves. In addition, the patient may hold an electrode connected with one terminal of the high frequency apparatus, while the doctor, holding an electrode in connexion with the other terminal, lays his finger on the nerve affected, thus completing the circuit. Relief from pain will generally result after a few daily applications.

DR. JOS. S. BOLTON (Nottingham) also writes to recommend high-frequency currents.

DR. T. M. ALLISON (Newcastle-on-Tyne) writes: I would suggest a little blistering fluid applied on cotton wool (held in artery forceps) for occipital neuralgia.

THE USE OF THE SETON.

DR. HAROLD SNAPE (Pendleton, near Manchester) writes: We are so accustomed to read only of the good results attained by certain methods of treatment that a case of failure in an obstinate case of megrim headache, where a seton was inserted, may be interesting to "M.B.," who asks for information in the BRITISH MEDICAL JOURNAL for January 25th. The patient was a sallow-complexioned married woman, 30 years of age. She had always been subject to headaches, which had become more severe during the last few years, and always most acute over the frontal region. I examined the eyes under atropine, but could find no defect of vision. The patient suffered from anaemia and constipation; a carefully regulated diet and iron and cascara caused a marked improvement in these conditions. The headache still being severe, I decided to insert a seton. The skin at the back of the neck was surgically cleansed and rendered anaesthetic by the injection of eudrenine. The site selected was at the level of the fourth or fifth cervical vertebra: at this spot a piece of skin was "pinched up" and a scalpel pushed through in a transverse direction, and while the scalpel was still in position a bodkin carrying a piece of ordinary household tape, ½ in. wide, was carried through: the scalpel was withdrawn, leaving the tape in position. The two ends of the tape were tied in a knot so as to leave a circle of about 4 in. circumference, and then the ends were cut off close; a little over 1 in. of tape was subcutaneous. Some gauze was applied and bandaged in position. The tape was pulled through the wound an inch in one direction one day, and in the opposite direction the next day. At first there was a little improvement in the headaches, but at the end of two or three weeks the wound was not painful, and was stimulated by rubbing a little ung. sabinae on the tape before pulling it through the incision. The headaches still continued, and at the end of ten weeks the seton was withdrawn, and I fully believed the patient when she said she had derived no benefit from it. I found that douches of cold water down the spine, night and morning, followed with a brisk rubbing with a rough towel, did more to relieve her than any other means. As a definite reply to questions I would answer: (1) Ordinary household tape ½ in. wide. (2) Cover with gauze and bandage. (3) Insert as described at the level of the fourth or fifth cervical vertebra. (4) Leave in two months unless the inflammatory symptoms are too severe. (5) I do not think there is much chance of erysipelas if the wound is carefully bandaged until it begins to granulate; the drainage is good, and at any time, if the inflammation is too severe, the tape could be withdrawn and fomentations applied, and, if necessary, the wound enlarged. I do not wish to imply that the seton treatment is useless, as I should certainly try it again if I got a suitable case and the patient was willing: but I have written the above to show that, although given a thorough trial, it will not relieve *every* case of megrim headache.

FLEAS.

DR. WILFRED A. ALDRED (Wroxham) writes: I would suggest that your correspondent tried powdering the bedclothes with powdered cloves. Fleas seem to have a great aversion to the smell of cloves, and I think he will find this suggestion useful.

NORTH SHIELDS writes: Let "Restless Night" make a small pad of wool soaked well in formalin straight from the bottle, wrap it up in oil silk like a large powder, and wear it with a safety pin and bandage at the small of his back next the skin. This will be efficient for two or three days' wear. At night let him put shirt, etc., into a cardboard dress box, with wool pads soaked in formalin. Just before going to bed let him sprinkle pyjamas and between sheets with as much formalin as he can stand without sneezing, etc.

DR. ALEXANDER DURE (London) writes: Your correspondent is much to be pitied, and really appears to be "addicted" to fleas (as an Irish peasant woman described her husband). I venture to suggest a trial *externally* of some strong scent such as musk, clove, or cinnamon, and if this is objected to —a mere "sentimental" objection—a weak solution of carbolic acid, or, *internally*, the exhibition of sulphur, the only drawback being liability to get into bad odour with companions by exhalation.

DR. E. T. BURTON (Birmingham) writes: Sprinkling, thinly, white pepper between the edges of the under sheet and blanket and putting two or three cubes of camphor either between the sheets, or between the upper sheet and blankets, has given me, who suffer tortures from flea bites, very great relief. Since we discarded bedroom carpets and had the rooms covered with inlaid oilcloth or linoleum, with strips of carpet at the bedside, dressing table, etc., the fleas have immensely decreased. The rooms are swept every day, and floors washed once a week with skimmed milk. If "Restless Night" will do likewise he will rest and be thankful. A careless housemaid who does not sweep under the bed daily is a splendid propagator of fleas.

PHLEBITIS writes: The best way to kill a flea moving about on the skin is to take a piece of absorbent cotton wool or lint saturated with chloroform, and press it in the hand over the inner garment under which the flea is moving. The "beastie" must be kept confined to the spot by the pressure of the hand till the confined chloroform vapour almost blisters the skin, as fleas resist the influence of chloroform much more than would be imagined. In this way fleas are got rid of as soon as their presence is felt. In bed I know of no way but catching them, unless the same method be applied by having a little cotton wool and chloroform at the bedside. Hoping this will change the restless nights of your correspondent into peaceful repose.

DR. THOS. WM. BLAKE (Hurstbourne, Bournemouth) writes: I suggest to the sufferer a trial of Jeyes' Fluid; a few tufts of cotton-wool sprinkled with a 50 per cent. solution of it in water, rolled up in the pyjamas or nightgear during the day would keep away the objectionable visitors at night. In Cairo some years ago I put it to the test in the way I describe, and while my fellow-travelling companion disturbed me in a double-bedded room by his unparliamentary language against the fleas pestering him, I myself was, owing to my precaution, left unmolested by them, and at the time I speak of they were very numerous, as they generally are in Egypt. Jeyes' Compound is also sold in powders. This I still use for dusting the floors of my dog-kennels and poultry pens, which has the desired effect of keeping off the fleas. The fluid is non-poisonous and would be safer to use in bed than chloroform.

DR. FRASER (London, S.W.) writes: Your correspondent, "Restless Night," would obtain within two or three days (at the utmost) complete immunity from the attacks of fleas if he were to use the essence of thyme sprinkled over his clothes and bed linen. An old clergyman who used to visit amongst the poor a great deal told me of this years ago, and when I moved into this house about thirteen years since we found that the room which we used as a night nursery was absolutely infested with fleas. The caretaker and his wife and children had occupied this room for over eighteen months and they were the reverse of cleanly. We used the essence of thyme and the fleas all disappeared within a couple of days, and we have never been troubled since. I have often recommended this treatment and with uniformly good results. I therefore feel constrained to write this suggestion for the benefit of your correspondent.

TREATMENT OF CORNS.

M.D. EDIN. writes: I advise "Pedestrian" to treat the corns on the soles of his feet as follows: Accurately fit a thick corn or bunion plaster over the corn, and wear it for a day or two walking, and when the thickened skin has well risen into the aperture of the plaster shave it off with a sharp knife. Then, to prevent it again forming, thoroughly wet the sole of the sock with a lotion of ℥ij of soft soap and ℥ij of methylated alcohol. Once or twice this should be done, and always when socks are changed. Whenever corns anywhere are threatened this lotion will prevent their formation if thoroughly applied on the article of clothing over the part.

QUARANTINE FOR RINGWORM.

M.B. LOND.—A boy suffering from ringworm must of course be kept away from school until it is cured. How long that will take depends on various factors—the area of scalp involved, to some extent the kind of ringworm, and the method of treatment and the manner in which it is carried out, are all of them important. By the one-exposure *x*-ray method (Sabouraud's), which gives good results, the disease may be eradicated and the hair sufficiently grown again in about four months for a lad to go back to school. Indeed when the depilation is complete—say in about two months (to take an outside limit to be on the safe side)—a careful examination may fail to show any disease, and the case would have ceased to be contagious; but the areas would be bald, and there would be objection to touch a boy returning to a school on that score. When the area affected is limited and treatment can be carried out energetically and with intelligence other methods are available, and one might get a cure in three months in favourable circumstances. The whole question is fraught with difficulties, and not to be answered *in nuce* or penny-in-the-slot-wise.

LETTERS, NOTES, Etc.

NOTIFICATION OF BIRTHS ACT.

A SCOTTISH medical officer of health, who was asked whether the Notification of Births Act was in force in his district, answered in the negative, and added, "See Exodus, chapter i, verse 19." On reference to the chapter, it was found that the passage states that "the midwives said unto Pharaoh, Because the Hebrew women are not as the Egyptian women, for they are lively, and are delivered ere the midwives come in unto them."

THE OPEN WINDOW.

DR T. CROWLY (Larchfield, Coachford, co. Cork) writes: With reference to your article of February 15th I quote the following from Dr. Smith's history, *The County Cork*, written in 1750, to show that those parties advocating open windows were not the first to do so, but that an Irish doctor in a remote part of this county did so, in a remarkable manner, a century before them. Dr. Lyne, an Irish physician, who died some years ago of the small-pox, aged 85, lived at a place called Arloom, in the half barony of Bere, in this county. It was remarkable that for fifty years together nobody died out of his house, though he always had a numerous family. His house was built in an odd manner: every window had another opposite to it, none of which he ever suffered to be shut or glazed, but were continually kept open, without any defence against the weather. The room the doctor lay in had four windows, two open on each side his bed. Upon his death his son glazed all the windows; since which time there were several buried out of the house.

*** All honour to Dr. Lyne. But *vixêre fortes ante Agamemnona*: and doubtless there were many even before Dr. Lyne who practised the policy of the open window. In the leading article to which our correspondent refers we were referring to those who *preached* the doctrine to those who might, in a sanitary sense, be called the heathen.

VAGITUS UTERINUS.

DRS. W. M. FELDMAN and M. W. COHEN (London) write: In connexion with the notes on vagitus uterinus that have appeared in recent numbers of the BRITISH MEDICAL JOURNAL, the following will be of interest. On June 16th, 1907, we were attending a confinement in which forceps was used. One of us gave chloroform, and the other applied the forceps. Whilst putting on the instruments, both of us, as well as a woman in the room, heard the child cry very lustily. The forceps was quickly applied, and the child, which was delivered about a quarter of an hour later, began to breathe immediately the head was born, and is doing well.

ECZEMA OF THE FOREHEAD.

G. H. R. D. writes: Because the life of a hat is judged by exterior gloss—ironing outside and no washing within—like all secret sins, the dirty hatband (inside) is allowed to infect the wearer's forehead. A hat during its lifetime needs quite two new inside bands.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A Clinical Lecture

ON

MULTIPLE SEROSITIS,

ILLUSTRATED BY

A CASE IN WHICH THE ABDOMEN WAS TAPPED SEVENTY TIMES.

Delivered at Guy's Hospital,

By W. HALE WHITE, M.D., F.R.C.P.,

Senior Physician to the Hospital.

Gentlemen,—The patient about whom I am going to speak to-day was in Mary Ward some time ago. Her history is as follows:

I first saw her on March 25th, 1905, with an old student of this hospital, Dr. Horace Richardson. She was then 31 years of age, and had been married six years. She was quite sure she had never had any rheumatism. Three years before we saw her she had a six months premature confinement. Shortly after she noticed that her legs were swollen, and one month after this swelling of the abdomen was observed. Five months later, namely, in September, 1902, the abdomen was first tapped. From this time to when I first saw her in March, 1905, she had been partly under Dr. Richardson and partly in various hospitals in different parts of England. Diuretics had been given, mercury had been rubbed into the abdominal wall, but treatment had not prevented the collection of the abdominal fluid and the necessity of its withdrawal. When I saw her in March, 1905, she had been tapped thirty times, and the amount drawn off at each tapping had been from 28 to 36 pints. By March, 1905, it was necessary to withdraw the fluid every two or three weeks; the interval between the first and second tapping was eight months, and the intervals between each subsequent tapping had been gradually shortening until when I saw her on March 25th, 1905, she had been tapped seven days previously, and yet a good deal of fluid had re-collected. The liver could be felt to be smooth and quite firm; she had very considerable oedema of both lower extremities. This had been previously relieved by Southey's tubes. There was no dilatation of the superficial veins, nor could we detect any disease of heart or lungs. She was admitted into Guy's Hospital three days after I saw her. Some of you may remember her; she was in No. 12 bed in Mary Ward from March 28th, 1905, to September 4th of that year. Soon after admission it became necessary to tap her again, and then 13 pints of fluid were withdrawn from the abdomen. In all, during her stay in the hospital, she was tapped ten times; the fluid always contained albumen; it was clear and pale yellow in colour, and it clotted readily. When the abdomen had been emptied we could feel the liver apparently enlarged to about three fingerbreadths below the ribs. The apparent enlargement was uniform, the organ was firm, and the edges thick and rounded. At times, if you listened over the liver you could hear a rub. She was always somewhat anaemic, but the diminution of the haemoglobin was equal to that of the red cells; the anaemia was of the secondary variety. Except for the fact that there was some fluid in the lower part of each pleural cavity, the lungs during her stay in the hospital were healthy, and so was the heart. There was no evidence of pericardial effusion or of an adherent pericardium. At no time during her stay here was the urine found to contain either albumen or sugar. We tried many diuretics, but they had no effect in checking the reaccumulation of the fluid in the abdomen. The diagnosis made was that she was probably an example of the condition called multiple serositis, or, in other words, that she had chronic peritonitis, perihepatitis, and chronic pleurisy, and we thought the vena cava was probably compressed by thickening of the peritoneum below the origin of the renal veins, because we had to explain the oedema of the feet although she had no albumen in her urine. When she left the hospital in September she again passed into the charge of Dr. Horace Richardson, and he wrote to me the other day, in answer to my letter of inquiry, saying that she died on March 5th, 1906. After she left here many more tappings of the peritoneal cavity were necessary, and it was reckoned that by the time her death took place she had been tapped in the abdomen nearly seventy times. The total fluid withdrawn was nearly two thousand pints. Dr. Richardson says that at the end the secretion of urine was very scanty.

Here we have a very remarkable case, and I think we shall be profitably employing our time this afternoon if we discuss it. It is obvious that in order to try to make out what could have been the matter with this woman we must consider what are the different causes of chronic peritoneal effusion, because she had it to such a degree that she secreted 2000 pints of fluid in her peritoneal cavity. She might have cirrhosis of the liver. Ascites occurs in about 50 per cent. of all cases of cirrhosis of the liver, and although it is a very strong argument against her having cirrhosis of the liver that she was always a very temperate woman, yet you must not take that as proof positive against cirrhosis, for we know that cirrhosis of the liver has at least two causes. A very common one is over-indulgence in alcoholic beverages, but there is some other, at present unknown, cause acting to produce the variety of cirrhosis of the liver commonly called alcoholic. The evidence of that I can give you in a minute. In the first place, there are a certain number of people who die of cirrhosis of the liver, quite indistinguishable from drunkards' cirrhosis, and yet who have never taken alcohol to excess. There are many cases on record of children who certainly have not taken any alcohol and yet who have died of cirrhosis of the liver. There are a few cases also in which the same thing has happened to adults. Last week I made a *post-mortem* examination on a patient whom I know always to have been extremely temperate, but the cause of death was typical hob-nailed cirrhosis of the liver. Then there is the fact that cirrhosis of the liver is much commoner in England than in other parts of the world, although Englishmen are not more drunken than inhabitants of some other parts of the world. For instance, I believe a city which has the unenviable reputation of having much drunkenness is Glasgow, but cirrhosis of the liver is rare there. Sir William Gairdner wrote and told me so. It is exceptional in Aberdeen, where much whisky is consumed. It is not much seen in Germany, where beer is taken to an enormous extent. So the distribution of cirrhosis of the liver is not coextensive with the distribution of drinking alcohol to excess. Again, there seems no doubt that cirrhosis of the liver is much commoner among the poorer classes than among the well-to-do people, although many people of the middle and upper classes of society drink very considerably. Also cirrhosis is very rare in asylums and homes for inebriates; it almost appears that the liver is spared if the nervous system is permanently affected by alcoholic excess. You cannot give cirrhosis of the liver to animals by giving them excessive quantities of alcohol. So in whatever way you look at it, you must admit that so-called alcoholic cirrhosis of the liver has other causes than alcohol. There is no doubt that alcohol is a very potent cause, but mere over-indulgence in it fails to completely account for the disease. I mention these points to remind you that we must not argue that it is impossible for this woman to have cirrhosis of the liver because she was not a drunken person. It is possible she may have had cirrhosis and yet not have been a drinker, because cirrhosis of the liver has apparently two causes at least, which often operate together, but may operate singly. And alcohol is one of them. When one of the causes operates singly, it probably is one which we do not at present know. But this is not a lecture on cirrhosis of the liver, so I cannot go into the question with you this afternoon, although it is very interesting as to why a person with cirrhosis of the liver should have ascites at all. But I might sum it up by saying that there are many very strong reasons for believing that cirrhosis of the liver is not the sole cause, by pressure on the portal vein, of the ascites that occurs in association with cirrhosis of the liver. It is much more probable that in cirrhosis of the liver the patient manufactures in some way, owing to the damage of the liver, a poison which circulates in his blood, and it is as harmful to him as the various poisons which circulate in the blood in granular kidney, and that one result of the circulation of this poison is that the patient gets ascites, and another result is swelling of the feet, and so forth. But I want you to remember that ascites associated with cirrhosis of the liver is not solely mechanically due to the pressure of the contracting fibrous tissue on the radicles of the portal vein in the liver.

Our patient, you will remember, was tapped many times, but unless there is associated with the cirrhosis some chronic peritonitis, you will never find a case of cirrhosis of the liver requiring anything like the number of tappings that our patient required. For example, I went through some hospital cases.[5] In 10 who had cirrhosis of the liver uncomplicated by chronic peritonitis, and who developed ascites, but the ascites was

not sufficient to need tapping from first noticing that the abdomen enlarged until the death of the patient, the average duration of the life of the patient was eight weeks. The same was true of 12 cases of uncomplicated cirrhosis of the liver which were tapped, for their average duration of life after swelling of the abdomen was first noticed was only eight weeks. In 4 out of the 12 cases death took place in less than a month after the abdomen was first noticed to be enlarged. And in only 2 of these 12 that required tapping was life prolonged beyond three months. Those figures clearly suggest to you that the onset of ascites in cirrhosis of the liver is in the majority of cases a terminal event, and means that the patient is not far off his end; so much so that it is exceptional for a patient whose ascites is due to uncomplicated cirrhosis of the liver to live long enough to require a second tapping. At the time those cases were collected they were much criticized; but some years after Dr. Campbell Thomson[1] took 13 cases from the Middlesex Hospital records, and found that they in every respect supported the conclusions derived from the cases at Guy's Hospital—that is to say, that the supervention of ascites in uncomplicated cirrhosis means the beginning of the end. And quite recently Dr. A. Ramsbottom[2] taking cases from the Manchester Royal Infirmary, begins his article by stating that he at first doubted the teaching that I have just given you, and so he collected his cases with the view of seeing whether it was right or wrong; therefore he approached the subject in an impartial spirit, and he concludes that in the great majority of cases of alcoholic cirrhosis of the liver in which the peritoneum was not thickened—that is to say, uncomplicated cases as shown *post mortem*—ascites is a terminal event. This was the teaching of our forefathers; Austin Flint, Watson, Niemeyer, Fagge, Murchison, and others taught this view. That being so, it was clear that our patient probably had not uncomplicated cirrhosis of the liver, because she survived nearly 70 tappings.

To take other causes of chronic peritoneal effusion you will suggest that she may have had renal disease, but we had her under observation six months and there was no albuminuria. You might suggest she had cardiac disease or pulmonary disease, but six months' observation failed to reveal any disease of the heart or pericardium, or to suggest any, and the only pulmonary trouble was some fluid in both pleural cavities, but not enough to cause sufficient back pressure to determine this 2,000 pints of fluid in the peritoneal cavity. When we used to discuss the case at the bedside, clerks sometimes suggested that she had malignant peritonitis; but she lived far too long for that, and hardly any case of malignant peritonitis would require seventy tappings. But there is one case we must mention here. Perhaps some of you may have heard that a few years ago one of the celebrities of Guy's was a certain Mrs. S., whose abdomen was tapped 299 times in this hospital. She used to come in for a night and be tapped and go out next day. After the 299th tapping there was a *post mortem* examination, fortunately for us, and it was found that the cause of this persistent collection of fluid in the abdomen was a papillomatous growth of both ovaries, with papillomatous nodules on the peritoneum. Dr. Pye-Smith recorded the case in the *Transactions of the Pathological Society*. But such a case as that, if not unique, is at all events so excessively rare that it hardly enters into a bedside discussion as to the probabilities of any case.

Some of you suggested at the bedside that this present patient might have tuberculous peritonitis as a cause of her repeated collections of fluid in the peritoneal cavity. But I have never seen any case of tuberculous peritonitis require 70 tappings, and after she had been tapped we could never detect at the bedside any masses of tuberculous deposits in the omentum or peritoneum, such as we should have expected to find, and she never had any evidence of tubercle in any other part of her body, nor were there any general symptoms pointing to this disease, so I think we may put that on one side. We are driven, then, to believe that she had what is called simple chronic peritonitis. It is usual in medicine to call a thing simple when we do not understand it, and nobody knows what is the cause of some cases of chronic peritonitis—often called simple or idiopathic peritonitis. I will tell you something about that condition, and try to picture to you such cases.

There are some patients who suffer from chronic peritonitis, but the peritonitis is not due to tubercle or growth, as can be shown by a most careful *post-mortem* examination. In such cases, when we look at the peritoneum in the *post-mortem* room, we find it thick and opaque. Like any chronically inflamed structure, it puckers, and therefore the great omentum is puckered up towards the colon, and lies across the abdomen like a transverse tumour, which can often be felt with the hand. In consequence of that there may be some difficulty in distinguishing it from the lower edge of the liver. In the same way the mesentery becomes puckered and shortened, so that the intestines are dragged back towards the spine, with the result that the collecting fluid flows over them and gives you a dull note at the umbilicus earlier than otherwise would be the case. Then, too, in other parts of the abdomen you may sometimes feel these thickened masses of peritoneum. And the way in which this thickened peritoneum will mat the bowels together is extraordinary. I have made more than one *post-mortem* examination in which I have been able to take out the whole of the bowels *en masse*, and they have been held together and kept open by this chronic peritonitis, and, except that the tubes were not parallel when I cut across this mass, it did not look unlike a cross-section of a tubular boiler. You will find it impossible to dissect the bowels out from such a mass. The wonder is how the intestinal contents get from one end of the bowel to the other, but they nearly always do, although, as Fagge showed, sometimes intestinal obstruction occurs. I had better now prove to you that such a condition exists. A sailor, aged 29 years, came into John Ward under my care on August 4th, 1887. He had been all over the world. Two years before admission he went to Rotherhithe Infirmary on account of what he says was rheumatic fever. During his convalescence he became dropsical. After being there seventeen months, and being frequently tapped, he went to St. Bartholomew's, where he was tapped, and where he remained two months; and shortly after leaving there he came to Guy's. Before he came into the ward he had been tapped thirty-four times. I have here a list of all the times he had been tapped. The average amount of fluid taken out at each tapping was 23 pints. He died soon after his admission to Guy's. We only tapped him once here, and six pints were taken away. The total amount of fluid withdrawn from him was 790 pints. At the *post-mortem* examination this state of affairs was found: The liver presented the usual condition of perihepatitis. It had a thick white covering, which easily peeled off; we will come back to this in a moment. There was old chronic peritonitis with matting of omentum into a thick mass; the mesentery was shortened, and there were other signs of chronic peritonitis such as I have described, but no evidence of tubercle or growth. There is a case, therefore, in which the *post-mortem* examination showed this form of chronic peritonitis, and during life the man's abdomen had to be tapped many times, although not so often as was necessary in the case of the woman the subject of this lecture.

This man I said was found at the *post-mortem* examination to have perihepatitis, and therefore this is a good opportunity to discuss that condition. Perihepatitis merely means an inflammation of the peritoneal capsule of the liver, and obviously it may be acute or chronic. The acute condition does not interest us this afternoon in connexion with our present case. It is very common; indeed one can hardly have a general peritonitis unless there is acute general perihepatitis. Sometimes there is local acute perihepatitis present over a hepatic abscess, and sometimes it is found following on a severe pleurisy of the right side, and sometimes in acute cases you can hear a rub when you listen over the liver. But usually you cannot, because the liver is so painful that every movement hurts, and the patient keeps that side still in breathing.

Next we come to the chronic perihepatitis. That is clearly either universal, in which case the whole liver is affected, or it is scattered in patches on the surface, and is then called local chronic perihepatitis. It occurs in a number of conditions which will suggest themselves to

you at once. For instance, a little here and there may be part merely of cancerous or tuberculous peritonitis. A cancerous nodule in the liver may have some local perihepatitis over it, and it is often met with round about a gall bladder which contains or has contained gall stones, so that the gall bladder becomes matted to the liver, or it may be seen when a gastric ulcer has been in contact with the liver, and patches of local perihepatitis are very commonly seen in the *post-mortem* room, when there has been much backward pressure from disease of the heart or lungs. Capsulitis of the spleen is frequently associated with this perihepatitis due to backward pressure. I do not think I need tell you more about local perihepatitis. Universal chronic perihepatitis is of much greater interest. In that condition the whole capsule of the liver becomes thick and opaque, because it is chronically inflamed. Here in this specimen from the museum is an early stage of the process; you see there is a thick layer forming all over the surface of the liver. The next specimen shows you a later stage—the whole liver has a thick white jacket, which has been compared with the ice which covers a wedding cake, and hence the condition is known in Germany as *Zuckergussleber*. This white jacket may be a ¼ in. thick. It very easily peels off the liver, and the surface of the liver underneath is smooth, and for some unexplained reason, as Fagge pointed out, the thick white jacket, by its contraction, may turn up the edge of the liver, so that its edge lies on the upper surface, bound down by the thick white jacket, and that gives to the liver a very broad rounded edge. In a case like that, when you feel the abdomen you feel this bent-up liver, and you do not feel the lower edge at all. Often you can see, on this thickened peritoneum over the liver, many little shallow pits, and I have brought this specimen to show you them. The thickened peritoneum consists of fibrous tissue which is undergoing hyaline degeneration in parts, and it is arranged in horizontal laminæ. Frequently, as you would expect, there are considerable adhesions between the liver and the diaphragm, and that may explain the fact that when there is chronic inflammation of the pleura associated with this variety of chronic perihepatitis, it is usually the right pleura which is chiefly affected. The subjacent liver has often been erroneously said to be cirrhotic. That is undoubtedly incorrect. I have seen many cases and can testify to that. The specimen I last showed you is rather a rare one, because that liver is cirrhotic; but that is exceptional, as Fagge insisted. He pointed out that the liver under the thickened capsule is usually soft and fatty. It is interesting to remember that the capsule never exercises any pressure on the transverse fissure, so these patients are not jaundiced from pressure on the bile duct, and the portal vein is not compressed. The ascites which these people have is due to peritonitis which is associated with the chronic perihepatitis. The fundamental thing which you must remember is that universal chronic perihepatitis is merely part of a chronic peritonitis from which the patient is suffering. It has been exalted into a position which it hardly deserves. I can prove that to you from some cases taken from our own reports which I analysed.[5] I took indiscriminately 40 cases of perihepatitis, 18 were examples of partial perihepatitis, 22 were examples of the complete condition. Of the 18, 6 were examples of local perihepatitis due to tubercle or cancer. In the remaining 12, only 1 is stated to have had peritonitis, 8 are distinctly stated not to have had peritonitis. No mention is made of the peritoneum in the remaining 3. In 10 out of the 12 there was lung or heart disease which caused backward pressure. My point is that of the cases in which the perihepatitis was local and scattered about in patches, the *post-mortem* report in nearly all of them distinctly stated that there was no general peritonitis at all. They were cases of growth on tubercle with a little local perihepatitis, or examples of backward pressure from heart or lung disease, but not cases of chronic general peritonitis. Now take the 22 cases of universal perihepatitis like the specimen I pass round. In only 2 of them was it stated that there was no peritonitis. In 17 it is distinctly stated there was chronic peritonitis and in the remainder the peritoneum is not mentioned. The peritonitis was always of the chronic variety. To take one description: "The peritoneum was converted into thick tough layer, matting of the intestines together and covering them with a thick fibrous apron. The omentum was matted at its upper part into a thick lump 2 in. broad below the stomach." Universal chronic perihepatitis is only part of a general chronic peritonitis not due to tubercle or growth. Partial perihepatitis has nothing to do with chronic peritonitis.

Often the form of chronic peritonitis which we are talking about is local in the peritoneum only. But there is a considerable tendency for serous membranes throughout the body to be affected together. Fagge used to teach that there was a group of cases in which the serous membranes throughout the body were liable to be inflamed at the same time. He did not know about pneumococci. But nowadays we should say most of the acute cases are pneumococcal infections of both the pleura and peritoneum, like the case of the woman now in 25 bed Miriam Ward. Some of both the chronic and acute cases are tuberculous. Some are streptococcal. Seven years ago Dr. Frederick Taylor[3] gave a clinical lecture on these acute or subacute cases. But this afternoon our interest centres on a more chronic inflammation of the various serous membranes of the body, for wherever you see chronic peritonitis of the variety we believe to have been present in the woman the subject of this lecture, you have to remember that other serous membranes may also be affected.

This chronic affection of the various serous membranes has had many names given to it—polyorrhomenitis, multiple serositis, polyserositis, progressive serositis, and Concato's disease, after the Italian who described some cases. We have to consider whether our patient with chronic perihepatitis and chronic peritonitis was an example of this disease in which the peritoneum, pleurae, and pericardium are chronically inflamed and thickened, so that any of these serous membranes may become exactly like the thickened peritoneum which I have described to you as occurring in chronic universal peritonitis. The serous membrane may become centimetres thick; it has a dense opalescent appearance, and consists of several stratified layers. It has been inaptly compared to porcelain, and can always be peeled off the subjacent organs. No case should be regarded as an example of multiple serositis unless after careful examination neither tubercle nor growth can be discovered. To illustrate the disease, let me read you one of Dr. A. G. Nicholls's cases.[4] I have one here, that of a woman aged 48. On opening the thorax everything was found matted together, so that the thoracic and abdominal organs were removed *en masse*. The upper portions of both lungs were adherent to the wall of the chest, the lower lobes were each encased in a dense white, gristly-looking deposit, varying from 0.3 to 3 cm. thick, with firm adhesions to the diaphragm. In this deposit were larger irregular cystic spaces containing fluid. The lower parts of the lungs were also firmly adherent to the chest walls by means of this dense material. The external pericardium was converted into a hyaline-looking material of cartilaginous consistency, and of a semi-translucent appearance. The two layers of the pericardium were firmly adherent everywhere. The adhesions were so firm about the vessels that they had to be separated with a knife. The abdomen, which was enormously distended, contained 6,000 c.cm. of pale, straw-coloured fluid which clotted easily. The parietal peritoneum was markedly thickened by numerous adhesions. The two largest bands of adhesions were between the great omentum and the left ovary and the body of the uterus. The mesentery was shortened and thickened, and the intestines did not float in the contained fluid, but lay bunched up along the vertebral column. The thickening of the parietal peritoneum extended round the sides and over the lower surface of the liver. The thickened membrane had a tallowy appearance. The liver was small and the edges rounded. There were adhesions everywhere about it, and there was a great hyaline thickening of the capsule, more especially in the lower aspect. In consequence of this the gall bladder was scarcely recognizable. That is a very good account of the *post-mortem* appearances of a case in which the whole of the serous membranes of the body were affected with this chronic inflammatory disease called multiple serositis, which is not due to either tubercle or new growth. In this case no tubercle bacilli could be found anywhere.

Now, to tell you something about this chronic disease of many serous membranes. It appears that it may occur at any age. It is equally common in men and

in women. There is often a history of previous acute infectious disease, which strongly suggests that the serositis is bacterial. Out of 14 cases, in 7 the peritoneum and pericardium and both pleurae were all affected. In the remaining 7 one or more of these serous membranes, but not all, were affected. Perihepatitis is always present, and perisplenitis is nearly always present. Probably in the great majority of cases this disease begins in the peritoneum and the other serous membranes are affected later, but there appears to be a small group of cases in which the pericardium is first affected and the other serous membranes are involved later. When the pericardium is first affected it is very likely that indurative mediastinitis will be present, the connective tissue around the pericardium being thickened, so that the lungs are bound in one mass to the pericardium; the patients usually waste; the disease is virtually never associated with cirrhosis of the liver; the right pleura is more often affected than the left, which may be due to the fact that perihepatitis occurs early. The kidneys are often granular. As far as I know, the prognosis is very bad, but cases may last years. The woman who forms the subject of this lecture, you will remember, survived nearly seventy tappings. There is a large amount of albumen in the ascitic fluid, which supports the suggestion I have made that the ascites is not due to pressure on the portal vein. The histology of the thickened membrane clearly shows that it is inflammatory; the exudate upon the surface of the serous membranes becomes organized. If you cut sections, you will see proliferation of the connective tissue of the capsules of the various organs and successive layers of fibrous tissue, the exudation having become organized. We know very little about the cause of this condition, but certainly a considerable number of the sufferers have chronic granular kidney, and it seems to bear some relation to specific fevers.

With regard to our case upon which I am lecturing, it was unfortunate that she died out of the hospital, and therefore that we had no *post-mortem* examination, but I brought her case forward because she certainly had chronic peritonitis with perihepatitis. We know that as the result of the tapping, and because we could feel the rounded liver. It may have been that she was an example of this disease as confined to the abdomen. But I would suggest to you that probably she was an example of genuine multiple serositis; for you will remember that she had fluid in both of her pleural cavities. You will notice that there is no boundary between cases of simple chronic peritonitis and those of multiple serositis, the difference depending merely upon the number of serous membranes affected, and it may well happen that a patient dies from simple chronic peritonitis, but if he had lived longer he would have become an example of multiple serositis.

The only thing which remains to be said is to try to find an explanation for the oedema of our patient's feet. If she had had associated pericardial trouble, it might have been easy to explain the oedema of the feet by backward pressure. But we had no evidence of that, nor had she albuminuria. So we suggested at the bedside, remembering the extreme degree of chronic peritonitis, that possibly the contraction of the thickened peritoneum compressed the vena cava and so led to oedema of the feet. But if it did so, the compression must have occurred below the renal veins, because there was no albuminuria.

With regard to the treatment of the condition, I am sorry to say we can do but little. Diuretics hardly seem to restrain the accumulation of the fluid, and as far as I know there is nothing which will do it. The only thing seems to be to remove the fluid frequently, as was done in this case. We never had to remove it from the pleural cavities; probably its withdrawal from the abdomen prevented a great accumulation in the chest.

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A PLEA FOR A NEGLECTED REMEDY.

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IN these days of progress, when "modern methods of treatment" are so much belauded, and the home of every registered practitioner is flooded with a ceaseless stream of pamphlets acclaiming the virtues of new synthetic drugs (samples enclosed), it may be useful to spare a thought to some of the old remedies which are fast slipping out of mind and are in great danger of being forgotten. Of the new drugs, if past experience is to be trusted as a guide, few are likely to prove of permanent value. In comparatively recent times how many of such remedies have been placed with more or less flourish upon the market, but only to be laid quickly aside as disappointing if not altogether useless? Few have outlived the test of adequate trial. After a short experience of such failures one is disposed to cling more and more firmly to remedies which have stood the test of time and whose value was once universally acknowledged. Of these some have been neglected owing to our change of view with regard to the management of disease and the complete disuse of the antiphlogistic method of treatment. Fevers and inflammatory or catarrhal conditions, which used to be treated indiscriminately by measures directed to the reducing of a supposed "plethora"—by which term was understood either a general hyperaemia or a local determination of blood—are now managed upon a very different plan, and bleeding, together with the free internal use of the potassio-tartrate of antimony, has been abandoned in favour of ammonia and other drugs of similar action. But because antimony in full doses produces profound discomfort and depression it does not follow that the drug, if given in more moderate and prudent quantity, is not a remedy of the utmost value. In catarrhal states of mucous membrane antimony has never been dislodged from its eminence by later substitutes.

In cases of bronchial catarrh and bronchitis its neglect is the more to be deplored because there is no other drug of approximate value which can be given in its place—at any rate with equal advantage. On this subject—the treatment of bronchitis—I find the most erroneous views (as I think them) prevailing amongst the younger generation of medical practitioners. A young house-physician will order a patient who is suffering from a severe pulmonary catarrh a mixture containing carbonate of ammonia and other stimulating expectorants as a matter of course and in total disregard of the stage of the derangement or the character of the symptoms. But in the management of a bronchial catarrh each class of remedy has its own time for serviceable action and is useless or worse than useless if given out of its due season. The whole treatment of this derangement consists in unloading the congested vessels and setting up free secretion as a first and indispensable step before any attempt to reduce the amount of expectoration can be made. To give ammonia, squill, paregoric and other stimulating and antispasmodic drugs in the early stage of the catarrh is to make the cough harder and the chest tighter, and greatly to aggravate the discomfort of the patient, if not to produce worse ill-consequences. By such means I am convinced that what should have been a mild indisposition has often been aggravated into a serious illness by driving the catarrh further and further into the minuter tubes, and that in children a moderate bronchitis has not seldom been turned into a broncho-pneumonia. The use of these remedies should be reserved strictly for the later stages of the catarrh when the cough is perfectly loose from a free secretion of mucus. The earlier remedies have then finished their work, and the time has come for stimulants and astringents to take their place, and begin their task of bracing up the relaxed mucous membrane and guiding the complaint to a satisfactory issue. Antimony is not employed with any view of depressing the patient, and therefore it is advisable to prescribe it in small doses, frequently repeated, rather than in larger doses given at longer intervals. It not only acts more efficiently when used in this way, but its effect can be more easily noted, and the dose repeated more or less often according as it

may seem desirable. It is well to combine the drug with nitrate of potash, acetate of ammonia, spirits of nitrous ether, or such other things as have a diaphoretic action upon the skin, for all these exercise a similar influence upon the bronchial mucous membrane. The most convenient form is the vinum antimonialis, of which a dose of from 2 or 3 to 10 or 15 minims, according to the age and condition of the patient, may be given, combined as above, every hour or two hours as long as the symptoms are acute. Great severity in the attack is no bar to the use of the drug; indeed, the opposite is the case, for when the distress is great, the breathing difficult, the cough hacking and incessant, and the pulse small and feeble, the beneficial effects of the remedy are the most decided, and it will be noted that the lividity and discomfort abate, and the feeble pulse gets fuller and stronger as the secretion from the lungs gets more and more abundant and free. In these severe cases the remedy should be pushed with a prudent liberality, for peddling doses are not only useless but lose valuable time, while if any signs of depression occur they can be met with suitable alcoholic stimulation.

In the early stage of broncho-pneumonia in children, antimony is a remedy of undoubted value. It is most useful at the period when the consolidation is still in patches, and before large areas of lung have become implicated, giving rise to definite bronchial respiration and all the signs of wide consolidation. It is also at this early stage that the belladonna treatment is so valuable, and the two remedies may be combined, giving 10 or 15 minims of the antimonial wine with ¼ grain of the extract of belladonna every two or three hours until the pupils begin to dilate. In bad cases the belladonna may be pushed still further so as to induce a mild delirium. In broncho-pneumonia, as in bronchitis, antimony is useful only in the earlier period of the complaint, and should be discontinued directly obvious signs of lung consolidation have become established.

Another disease which is greatly benefited by the use of antimony is stridulous laryngitis. Dr. Cheyne used to speak of the remedy as the only medicine to be trusted when the complaint had become fully developed, and declared that it had been his sheet anchor for thirty years. To produce its full effect the remedy should be administered in frequent doses of 15 or 20 drops of the wine, so as to induce a slight feeling of nausea. In very bad cases it may be advisable to excite one effort of vomiting, but afterwards smaller doses should be prescribed, and repeated every hour or so until the acute symptoms have subsided. Hot fomentations to the throat add materially to the success of this treatment. If the child be old enough, the local application of a weak solution of the potassio tartrate of antimony (gr. ½ to the ounce of water) may be resorted to; and if the patient can be induced to inhale deeply as the solution is sprayed into his throat for a minute at a time, the violence of the spasm is quickly reduced. Unfortunately this expedient is unfitted for very young children, whose co-operation can be rarely depended upon. Instead of the solution of potassio-tartrate of antimony, ipecacuanha wine may be used diluted with an equal proportion of water, but this is more unpleasant than the antimonial solution, although equally serviceable.

There is another use for the antimonial salt which must not be forgotten. It is a recognized fact that all nauseating medicines when given in minute doses lose their irritating properties and become gastric sedatives. Good examples of this law are seen in the case of ipecacuanha and zinc sulphate. Ipecacuanha wine given in doses of 1 minim in a spoonful of water is now a familiar remedy in cases of vomiting; and sulphate of zinc in doses of $\frac{1}{12}$ to $\frac{1}{6}$ grain, taken before food in a spoonful of some bitter infusion, is one of the most trustworthy and satisfactory of stomachics. In the same way, antimony prescribed in doses of 1 or 2 minims of the wine is a useful addition to the prescription in cases of gastric derangement and contributes materially to its curative value. An old-fashioned remedy for gastric pain occurring after meals contains 1½ grains of potassio-tartrate of antimony, with 1 oz. of magnesia, 6 drachms of bicarbonate of soda, and 5 drachms of tartaric acid; of this one teaspoonful is ordered to be taken in half a tumbler of water when the pain begins. In cases of flatulent dyspepsia accompanied by severe pain after all food I have found this treatment not only to afford temporary relief, but to have a decidedly curative influence upon the derangement.

Again, it must not be forgotten that antimony is not without value as a hepatic stimulant. It is to this quality that it owes its inclusion in the old pharmacopoeia preparation known as "Plummer's pill," in combination with calomel and guaiacum. Moreover, by its influence in promoting secretion from the intestinal mucous membrane, the drug is a useful addition to the aperient in cases of chronic constipation where the stools are exceptionally dry and hard. A small quantity of the potassio-tartrate ($\frac{1}{25}$ grain to $\frac{1}{20}$ grain) may be combined with podophyllin ($\frac{1}{6}$ grain), compound extract of colocynth (½ grain), extract of belladonna ($\frac{1}{6}$ grain), and extract of nux vomica (¼ grain) in a pill to be taken each evening before dinner. In its value as a gastric and general tonic antimony may be compared to another salt—the perchloride of mercury. The latter, if given perseveringly in small doses, is a remedy highly to be prized even in cases which are connected in no way with the constitutional disease for which it is generally acknowledged to be a specific. In certain derangements of the lower bowel the usefulness of perchloride of mercury is well known; but it is not equally well known that if ordered in doses of 10 or 15 minims in combination with half that quantity of the tincture of perchloride of iron, and taken well diluted with water three times a day after food, the remedy is of extreme value in chronic tuberculous disease of bone, and if persevered with for a few months will usually effect a decided change for the better. In using this method, no fear need be entertained of producing salivation or any of the untoward consequences of the overuse of the drug.

In small doses antimony is of value also for its action in inflammatory conditions of the skin. In eczema, whether acute or chronic, the drug is one of the most satisfactory of internal remedies if continued perseveringly. I have found 5 drops of the wine taken as an adult dose in a teaspoonful of water after each meal to produce speedy improvement in cases of long standing when arsenic and other remedies had been prescribed without any beneficial result. This quality of the drug is well recognized by dermatologists; indeed, so far as I can gather, in these days the remedy is practically confined to the treatment of skin diseases, at any rate amongst the newer school of practitioners.

In old times antimony was prescribed for very many other complaints, but in all of these the drug has been displaced by other and equally successful remedies. I do not advocate a return to antimony in such cases as these, where later methods of treatment give satisfactory results, but only regret that in cases for which it is especially serviceable the drug should be made use of so rarely. No doubt it is still retained in stock mixtures of the various hospital pharmacopoeias, and is therefore in common use in those institutions, but it is only because it happens to form a part of the prescription, and not on account of any wish to make use of this particular drug. Outside a hospital the remedy is practically ignored, and of late years I have rarely known it to be prescribed by practitioners of the modern school upon their own initiative. The prejudice against it which nowadays appears to exist is derived from the abuse and not the use of the drug. With our present views we do not, as formerly, prescribe the salts of antimony with any desire to produce a profound sedative effect upon the vascular and muscular systems, so that even in pushing the remedy we are careful to limit our efforts to obtaining free secretion from the mucous surfaces and the skin. For this purpose, however, antimony remains pre-eminent, but it should always be prescribed in small doses given frequently, for it is only by this means that its full effect can be obtained without any danger of lowering the patient and giving rise to unwelcome signs of depression.

A Society called the Anglo-American Society of Vienna has recently been formed, to make known in England and the United States the artistic and scientific resources of Vienna, and to facilitate visits of English and American students to Vienna. H.H. Princess M. A. Lubomirska is the President of the Society, Dr. G. de Griez, Honorary Secretary, and Mr. O. S. Phillpotts (English Vice-Consul), Treasurer. The head quarters are at the Imperial Hotel, and communications may be addressed to M. Charles Cahier, Honorary Manager, there.

An Address

ON

SUDDEN AND UNEXPECTED DEATHS.

DELIVERED BEFORE THE ST. PANCRAS AND ISLINGTON DIVISION OF THE BRITISH MEDICAL ASSOCIATION,

BY WM. WYNN WESTCOTT, M.B., D.P.H., J.P.,
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I HAVE found great difficulty in selecting a subject familiar to myself and likely to be of interest to the members of this Division of the British Medical Association. As, however, the majority of you are general medical practitioners, the sudden death of your patients must always be a matter of concern and regret, and the reason for its occurrence a fitting subject for investigation.

As a coroner, my professional duty lies in the endeavour to solve the problem of the causes of death in each reported case, by means of general evidence given by relatives and casual friends as well as by the facts observed by those present at or near the time of death. The investigation is much simplified if the evidence of a medical man conversant with the constitution of a deceased person is available, and this is rendered of still greater value if there has been attendance on the deceased for ailments of recent date. However sudden a death may appear to be in any case, it is probable that there has been, perhaps long pre-existent though not recognized, and quite unknown to any observer, some flaw in the structure and in the action of one or more vital organs. We all know we must die some day, but we take very different views of the best course to adopt in our conduct towards the coming change. Some persons are careless, others are living daily in nervous dread of death. Some believe, and no doubt wisely, that the less one allows the mind to think of illness and death the more healthy one's insight and outlook remain. On the other hand, there are many who have convinced themselves that it is only by constant attention to the mode of life—to diet, exercise, and regimen—that prolonged life can be anticipated. Some bear in silence and gloom a haunting dread of infection and ultimate "cold gradations of decay," while others run about seeking advice from medical science or from quackery, in the belief that by the ingestion of drugs alone can health be preserved.

Some people are haunted by fear of disease coming on through an hereditary taint; others put too great a trust in the knowledge of being descended from tough and long-lived ancestors. In the smallest community of the family circle even, we may observe almost every possible attitude of mind toward the approach of man's inevitable destiny.

In the endeavour to account for a sudden death, after the items of evidence already referred to, it is now commonly thought that the results of a *post-mortem* examination may be relied upon to explain the medical cause of death. In our cities and towns such an examination is now made in almost all cases; but in country districts it is frequently neglected. It must be admitted that the value of a *post-mortem* examination will very largely depend upon the skill and experience of the operator. In this country the local medical practitioner who has known the deceased, the doctor who has attended most recently, or the doctor who was called in after death, has almost invariably been chosen to make such examination for legal purposes. On the Continent, and to some extent in Scotland, this work is entrusted to a pathological expert appointed by the judicial authorities or the police. Such a doctor, having all the sudden deaths and tragedies of the district brought to his personal notice, must soon become more able to reason correctly upon *post-mortem* appearances than a private medical practitioner who is only called upon to investigate a sudden or violent death as an exceptional incident. Again, it is in no way desirable that a doctor in general and in midwifery practice should be occupied with *post-mortem* work.

Hence we may observe a growing tendency to employ specialists in morbid pathology to investigate the causes of death. It is hoped that the creation of a new public officer—a medical and forensic examiner—would lead to further study of the subject, to greater accuracy in *post-mortem* work, and so to less conflict of medical evidence in criminal trials.

It is desirable, however, that the work and opinions of such examiner should not lead to any neglect in obtaining the evidence of any medical practitioner who has been in attendance upon a deceased person, or present at his death, or called in after death, because my experience makes me yearly more and more confident that the simultaneous consideration of both these evidences can alone obviate erroneous conclusions, which may lead to most serious mistakes. Some recent attempts to supplant the medical practitioner in forensic duties by a specialist have led to unfortunate results, due to the loss by medical men not in affluent circumstances of a source of income they have so long enjoyed. It is, then, desirable, that any further delegation of *post-mortem* work to special medical officers should be authorized and regulated by new legislation, and not undertaken by any individual public official, however well-intentioned.

In the very proper desire to obtain accurate results there has been for many years what I conceive to have been an exaggerated view of the importance of legal *post-mortem* examinations in cases of sudden and violent deaths. The medical profession appears to have taught the public that by a *post-mortem* examination alone could the cause of any death be ascertained, and that if an autopsy was made the cause of death was at once apparent. Unfortunately this view is not in accordance with the facts, for in very many cases the *post-mortem* appearances will only show the presence of so much disease or injury as would render death a probable event from its existence. Or it may show so much disease or injury as would certainly lead to death in the immediate future. It is in only a minority of cases that such a lesion is found as is incompatible with continued life. In considering the diseases and injuries to which man is liable, it is almost impossible to say what circumstances must be fatal. Take, for example, what loss of blood is impossible to be sustained; no one can state the amount, or even the proportion of the total blood in the body. How much brain injury must kill, it is vain to make any estimate; large areas may be rendered useless by softening or haemorrhage without causing a sudden death; whereas a puncture in the floor of the fourth ventricle, or in a small area of the medulla oblongata may cause instant death. Some persons die suddenly from an angina pectoris, which the mere valvular lesion in the heart may alone be found to explain. A man may die of a mere pinch of a healthy testicle, while another may last for years with a cancerous tumour of the testis, which may kill only by slow exhaustion. There are hundreds of deaths from syncope or exertion, which cannot be explained by any cardiac or arterial lesion of instantaneous occurrence. Epilepsy, again, causes many sudden deaths, and leaves no gross lesion in any organ by which it can be recognized, and the occurrence of a fit cannot be proved in the absence of evidence of the events of the hours before the death occurred.

By the interdependent healthy action of the brain, the heart, and the lungs, life is maintained, said the great French physiologist Bichat, and he added that death begins at either the heart, lungs, or brain; this is no doubt true, especially when we refer to the appearances seen at the hour of death, but we are now in search of a more exact answer to the question, Why did this person die?

We desire a definite answer for several reasons. First, for personal and family satisfaction, and in regard to life insurance; secondly, for legal reasons, so as to be assured that no person is to be blamed for the death; thirdly, in order to secure accuracy in death registration; and, lastly, to guide survivors and their medical advisers in their efforts to preserve the lives of other persons in the community.

There have been several definitions of a sudden death, but it is not now my purpose to attempt any definition of the term, but rather to refer in general to such deaths as occur with little or no warning, or are preceded by no such symptoms as have led to any anticipation of a fatal issue at the time when it occurred. Deaths following external wounds and injuries are not within the present view. It is a difficult matter to offer any classification of sudden deaths, either by means of the organ affected or by symptoms preceding death, so it is proposed to refe

to several groups of cases which come prominently before the coroner's notice.

Many fewer inquests upon cases of sudden death are held in country districts than in London; first, because so many coroners will not hold inquests unless there is some suspicion of foul play, and also because country doctors are much more ready than London practitioners in poor neighbourhoods to offer a certificate of the cause of death, based upon presumption and hearsay, in the absence of observation during medical attendance. This laxity of practice robs death registration of its accuracy, and may occasionally enshroud active criminality, as well as negligence amounting to misdemeanour.

From a tabulation of inquests held by me I have found that the chief factor in sudden deaths has been cardiac 60 per cent., cerebral 30 per cent., and pulmonary 10 per cent., so far as obvious symptoms and gross organic lesions can show, but such classification is not very definite, as cases occur in which it becomes uncertain in which category to place a death; for instance, if a man die of syncope, exhaustion, haemoptysis, and phthisis, the death may be put down to cardiac or to pulmonary disease.

Syncope from Haemorrhage, etc.

Sudden deaths from syncope are marked by loss of sense and motion accompanied by pallor and sighing, fading respiration.

External bleeding is an obvious cause, and so is internal bleeding appearing externally, as is seen in the haemoptysis of phthisis, the haematemesis of ulcer and cancer of the stomach, and of alcoholic gastritis; also of acute congestion of the liver; then there is the haemoptysis of aneurysmal ruptures of the thoracic blood vessels, and of some cardiac valvular lesions, notably of mitral stenosis. The bleeding of pulmonary apoplexy may also be shown by bloody expectoration. A few persons die of syncope from epistaxis, and a few also from the rupture of varicose veins of the legs and vulva, although the pressure of a finger would save life. The bleeding of piles and of cancer of the bowel, as well as menorrhagia, *post-partum* haemorrhage, and all the forms of haemorrhage due to organic disease of the womb may give rise to syncope. More rarely bleeding from the kidneys and bladder may cause a fatal faint.

Internal and concealed haemorrhage is a somewhat frequent cause of a sudden syncope, as from placenta praevia, rupture of the womb in parturition, or of a Fallopian tube in extrauterine pregnancy. Aortic thoracic aneurysm frequently causes a fatal but only internal bleeding, and occasionally this occurs with abdominal aneurysms; of these seven out of ten are of males. Phthisical haemothorax must not be overlooked as the cause of a sudden death.

Internal bleeding from a rupture of the spleen is occasionally found, especially in the tropical countries, after the slightest of external injuries, and the same may be said of the pancreas, liver, and kidneys. Remember also the liability to sudden syncope from perforation of the bowel in about the third week of typhoid fever, and in some cases of colitis such as are now called appendicitis. Apart from internal haemorrhage of serious amount, fatal syncope may occur from the shock of rupture of the stomach, bowels, or womb, etc.

Syncope from Heart Diseases, Etc.

It has been estimated that 60 to 70 per cent. of all sudden deaths end in syncope and are due to diseases of the heart; most of these have originated in acute rheumatism, from scarlatina, or from alcoholic fatty degeneration of the heart muscle. The others from the heart strain of bodily labour, of army duties, or of athletic exercises. Of cardiac valvular diseases, those of the aortic valves are most often suddenly fatal, and next those of the mitral valve, while diseases of the pulmonary and tricuspid valves are seldom found as a cause of sudden and unexpected death. Angina pectoris apparently due to atheroma of the coronary arteries appears to kill by the shock of a sudden spasm of pain. Cardiac rupture is not a very rare event in London, and may occur without any definite extra effort being used. General atheroma of the great thoracic arteries is also often assigned as a prime factor of a sudden syncope.

Sudden death from syncope has also been attributed to the ingestion of a large quantity of cold water when greatly excited by exertion or in very hot weather, and a heavy meal of solid food in old people may lead to a fatal fainting.

Syncope may also occur from sudden changes of pressure on the blood-vessels, such as occurs from the tapping of a dropsy of the abdomen, or a pleuritic effusion, or the quick emptying by a catheter of a greatly over-filled urinary bladder.

Sudden syncope is not uncommon after severe burns; in these cases we often find peritonitis from inflammation and perforation of the duodenum.

Simple fatty degeneration of the heart muscle is the only lesion found in some cases of fatal syncope in delicate persons, whether obese or emaciated. Victims of chronic alcoholism are extremely likely to die suddenly from a syncope; and this occurs during attacks of delirium tremens and also during the periods of exhaustion with nausea which follows drinking bouts, as well as in the late and well-recognized stages of debility from liver and kidney disorganization which close the lives of many drunkards. In such cases a *post-mortem* view shows only a pale and flabby state of the cardiac muscles, with some dilatation of the cavities.

A calculation made by me in 1891 of 1,000 inquests showed 210 verdicts of death from syncope; of these there was evidence of alcoholic excess in 57 cases. Of 77 cases of fatty degeneration of the cardiac muscle there were 33 chronic inebriates.

Sudden heart failure is well known to have been due to mental impressions—such as fright, terror, and emotion—acting on a heart of feeble muscular structure, one affected by fatty degeneration or disordered innervation. The occurrence of a sudden pain of great violence, as from operations, tooth extraction, or the passage of gall stones, of renal calculi, etc., and from sudden blows on the testis, epigastrium, belly, or chest, may produce a suddenly fatal issue. Certain poisons, of course, cause a sudden fatal syncope, such as aconite and the cyanides. I must not omit to notice that simple fatal syncope may be due to muscular exhaustion, especially during or after sexual intercourse; among 1,100 inquests a year, I have about four such occurrences, always of males.

Asphyxia and Lung Disease.

Lung diseases existing alone do not afford, so far as my experience has gone, a large proportion of unexpected sudden death, except from the arterial haemorrhage of phthisis. Pure asphyxia is rare, except from pneumothorax, apart from quite recognizable attacks of pneumonia, etc., which take the cases out of the list of sudden deaths.

A diffuse pulmonary apoplexy may occur very rapidly, and cause asphyxia, and is not denoted by any profuse external bleeding.

Deaths from the complications of pleurisy may occur somewhat rapidly, and without warning.

I have myself seen and recorded sudden deaths from asphyxia from purulent fluid, due to the rupture of unsuspected abscesses in the mediastinum into the bronchi or trachea.

Thoracic aneurysms have, I believe, led to sudden fatal asphyxia from pressure on the pneumogastric nerve.

In the course of cases of chronic Bright's disease we may anticipate the occasional occurrence of a fatal result from asphyxia due to oedema of the lungs; this is especially the case after surgical operations, and if acute bronchitis intervene. Asphyxia will also be caused by oedema of the glottis, whether from disease or injury by scalding, or wasp or bee stings.

During the puerperal state, sudden death is not uncommon from thrombosis of large vessels, and from embolism of the brain or lungs; such cases may end by coma, asphyxia or syncope.

Sudden deaths from asphyxia are observed from over-dense atmosphere, as when working in caissons and mines; or from over-rarefaction of the air, as in balloons; or from the presence of poisonous or irrespirable gases, especially of carbonic oxide. Our present-day illuminating gas is much more fatal to life than that of earlier years, being largely composed of gas from water, which contains much carbonic oxide, and less from coal, which contained more hydrogen and marsh gas.

Persons may die asphyxiated from hydrophobia, tetanus, from strychnine poisoning, from the effects of such drugs

as conia or woorara, or from a respiratory palsy caused by an embolism, or a haemorrhage about the cerebral centres which stimulate the muscular breathing apparatus.

If the respiration is suddenly stopped death occurs in about three minutes, as is well seen after immersion in water, when this occurs without a fatal syncope.

COMA AND BRAIN DISEASES.

Sudden deaths accompanied by coma are mostly due to diseases of the brain or to apoplexy—that is, haemorrhage into its structure, or upon its upper or lower surface. Tumours and abscess of its substance cause prolonged illness and arise from tubercle or syphilis. All these causes are found fairly easily by *post mortem* examination.

The cases difficult of explanation are the deaths from coma (profound insensibility, loss of mind and motion, without any necessary association with loss of cardiac power, or asphyxia) which display to the pathologist no gross lesion of the brain, spinal cord, or other vital organ. I refer to such cases as the sudden death in coma after attacks of convulsions. In persons known to have had previous epileptic fits it is usual to allege epilepsy as the cause of the death, but this is not capable of any pathological proof. Some similar cases are attributed to uraemia, if a test of the urine found in the bladder shows the presence of albumen. In other cases the discovery of grape sugar in the urine is considered to be sufficient proof that death has been due to diabetes. Perhaps in the future the microscope may throw further light upon these obscure deaths from coma.

A somewhat sudden death from coma with or without convulsions arising from uraemic impurity of the blood is said to follow the pressure of a retroverted gravid uterus upon one or both ureters, but this must be very rare, as I have found no case among 15,000 inquests.

A sudden end by coma occurs in the course of long-standing disease of the middle ear with ruptured membrana tympani and a purulent discharge; there is danger if the discharge ceases. Such cases are generally due to tuberculosis.

Deaths from coma may be due to external violence of which there has been no witness, and for which there may be seen no external mark; in such cases *post-mortem* examination may disclose a fracture of the skull with depression of the bone, or with cerebral compression due to haemorrhage. This fracture may be of the vault or of the base, or through the important regions of the ear. Such an injury may happen after an apoplexy, which may cause the sufferer to have a sudden and violent fall.

KIDNEYS AND URAEMIA.

A healthy state of the kidneys is as necessary to life as the integrity of the heart, lungs, and brain—which Bichat called the "tripod of life"; but death from kidney diseases has no fourth type of death to supplement syncope, asphyxia, and coma, so affections of the kidneys end in one of the already recognized three ways.

Modern physicians of great repute allege that kidney diseases are among the commonest causes of sudden death. A fatal termination often rapidly follows the onset of coma and convulsions of a uraemic nature set up by failure of the kidneys to purify the blood; these symptoms are a recognized termination of cases of chronic Bright's disease and of acute scarlatinal nephritis, but these forms of illness are not likely to be overlooked, and so such deaths are hardly included in my subject as unexpected and sudden. Chronic kidney diseases, especially granular contracted kidney, associated with the weakness of a hypertrophied and often dilated heart, are a not infrequent cause of the sudden fatal syncope of middle-aged persons who have lived freely, and this occurs without any well-marked period of definite illness. In a similar manner gout has been classed as a cause of sudden death; chronic gout is often a companion of disorganized kidneys, which obstruct the circulation, lead to cardiac hypertrophy and dilatation, and to sudden syncope. The sudden retrocession of acute gouty inflammation from a joint has often been followed by an unexpected death.

Sufferers from kidney disease bear infectious diseases badly, very often get septicaemia after surgical operations, and are specially liable to death under anaesthetics.

Cases of Addison's disease are very likely to end fatally in a sudden manner.

Of recent years the unexpected deaths of children have been frequently attributed to an enlarged thymus gland, which is supposed by its pressure on the trachea or on the pneumogastric or recurrent laryngeal nerves to provoke anginal seizures. It has been said that a proportion of infants found dead in bed with mothers and nurses, have not been suffocated by clothing or by the adult's body, breast, or arms, but by sudden congestion affecting an overgrown thymus gland. *Post-mortem* examination of such cases would show the signs of asphyxia and an enlarged gland, but it would be difficult to exclude the factor of deprivation of air by light clothing, etc., insufficient to cause pressure marks.

I am inclined to think that in women the change of life is occasionally the reason for a sudden death which leaves no definite *post-mortem* signs. The stoppage of a recurrent drain on the system leads to a congestion of vital organs, as well as to a uterine plethora, and I have heard of several cases showing a short period of suffocative sensation ending in a quite unexpected death.

CONVULSIONS FROM VARIOUS CAUSES.

A sudden death in convulsions, apart from any definite coma, may occur in epilepsy, and is also often seen in infancy associated with the first dentition, and a form of still more rapid death is noticed from the localized spasm commonly called laryngismus. The final convulsive twitchings of asphyxia due to croup and diphtheria may fairly be called a mode of sudden death.

Of deaths from self-generated poisons, in addition to those from uraemia there are somewhat sudden deaths due to cholaemia during jaundice and due to disease of the liver or derangements of the bile ducts.

Acetone circulating in the blood in the course of cases of diabetes is also considered to be likely to cause a sudden death.

If a person be found dead with water in the air passages, drowned in only a few inches of water, a mere puddle, it is almost surely a case of epileptic convulsions and coma.

Sudden death with asphyxia and convulsions is not seldom found due to choking by a foreign body, food, teeth, jujube, lozenge, etc.

The sudden onset and fatal issue of convulsions arising from oedema glottidis must not be overlooked, whether from laryngitis, insect stings, or Ludwig's angina. This oedema has been noted in cases of diabetes and Bright's disease.

In deciding upon the cause of an unexpected or sudden death (as in making a diagnosis) it is necessary to consider whether it has been to the interest of the person who has died, or of any other person, to assist in obscuring your judgement as to his recent state of health; and this again needs to be revised by an opinion as to whether if, against his or her real interest, he or she may not be under control of some hysterical prepossession. Remember also that women will occasionally be found to hide diseases and symptoms from a bashfulness and modesty so great and perverse as to be hardly credible. I have known several cases of female deaths reported as sudden and of cause unknown, when the medical man called in during the latter hours of life has been quite unaware that his lady patient was dying of gangrene, of a strangulated femoral hernia, or was bleeding to death from the bowel, or from ruptured varices of the vulva.

In the holding of inquests upon cases of sudden death, one notable fact has often been remarked—that the deceased had been apparently specially well immediately preceding the death. There has always been a popular idea that in lingering life and gradual death from illness there often occurs a "lightening before death."

Roman Catholics have a special interest in the subject of sudden death, because that Church desires the opportunity of spiritual ministration, of baptism, conditional absolution, extreme unction, or of penance and the Eucharist. The priest desires to know, if possible, how long life may last, and how long consciousness will remain, and it is highly desirable that no one should die unshriven.

When death seems imminent the members of a Roman Catholic house send for their own or any priest. If the patient be dead on the arrival of the priest, he leaves

without doing anything. So that it is very desirable in such cases to decide the moment of death. Roman Catholic physicians have noted the recovery, sometimes only for a short time, of many cases of apparent death. Dr. A. O'Malley, of the United States, narrates thirty cases of apparent death (query, *who* said "death" had occurred?) in four of which entire recovery followed suitable skilful treatment.

I remember one case where I entered the chamber and was told the patient, an aged woman, had been dead many minutes, when, on giving brandy on a sponge in the mouth, the lady recovered and lived until the next day.

Roman Catholic authorities have said that in case of a sudden and unexpected death, such cases of resuscitation should authorize a priest in giving conditional absolution or baptism within an hour or two after apparent death, especially in cases of violent death of healthy persons. They add: "We do not know when the soul enters the body, and there is the same doubt as to the moment when the soul deserts the body, so give every possible benefit of religious observance."

Roman Catholic doctrine recites that the death without the "rites of the church" of an ailing member whose death may be anticipated by a medical attendant is a matter of grave concern. The times for death may be anticipated with much certainty in many acute diseases, and warning given to the priest, while in most chronic diseases the end can be calculated very nearly. Still, we must remember the old saying, "Death always comes unexpectedly."

Hippocrates wrote that the most difficult question asked of the doctor was, Will the patient live? His chapter "On the Progress of Disease" may still be read with advantage.

The occurrence of sudden death from a legal point of view is often a happening of the gravest importance. Apart from the serious results often resulting from intestacy, the loss of a personality in almost all businesses is a matter which upsets all arrangements and terminates many contracts. It locks up banking accounts and stops payment of cheques already drawn but not cashed. A sudden death often intervenes between the service of a summons as juror or witness and the date of the duty required, and such a death may lead to the loss of suits which would surely have been gained.

The occurrence of a sudden death of which the cause is unknown involves the holding of a coroner's inquest, with all its unpleasantness to family life, and it may give rise to serious, even if unfounded, suspicions of foul play by relatives or friends; or of neglect, which may be very difficult to disprove.

Deaths from the felonious administration of poisons are no doubt a rarity to-day, but in former times the sudden death of a notable person was often attributed, and no doubt rightly, to secret poisoning. Madame Brinvilliers in France and the Borgias in Italy certainly caused many sudden unexplained deaths.

Having now passed in review in a cursory manner the causes of sudden death and noted the unfortunate results which may arise, it may be permissible to say that it may yet be to the recipient a great blessing. Members of the Church of England are accustomed to pray every week of their lives to be delivered from sudden death*; is it wise to do so if the fervent prayer of a righteous man availeth much? Doctors and nurses see most of slow deaths from disease; how many of such long for a slow dying? Relatives and friends who have just left the deathbed of a dear one who has suffered long the terrors of pain—bleedings, vomitings, hiccoughs, purgings, and delirium—do they not always say, "May I be spared a long illness"?

The frequent suicides of those who suffered severely show that a sudden violent death is preferred to a slow natural dying.

The present discussions on an artificial euthanasia also show that death by natural illness is a disaster to be avoided.

There remains our duty as medical men; it has from the time of Hippocrates been a perfectly definite article of rightful duty to protect life as far as is possible.

The means of deferring death are identical with the means of curing disease and preserving health. Apart from correct treatment and advice, patients can only be warned in which direction their ailments and imperfections may threaten a fatal issue. So long as a patient is actually under medical attendance he will generally conform to rules, but when urgent symptoms have passed and he is left to his own devices, the full force of the old fact—*humanum est errare*—comes into play, and Death secures his victims with considerable ease.

* But theologians tell us that this word "sudden" means "unprepared for."—W.

AN UNUSUAL CASE OF SUICIDE BY SUFFOCATION.

By J. MILL RENTON, M.B., Ch.B.,
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The patient, a middle-aged man, was brought to the workhouse by the police with a history of delusions. On examination, no definite signs of insanity were found, but it was thought desirable to keep him under observation.

On the evening of the same day, quite suddenly, he became violent and excited, and, in order to ensure his safety, he was placed in a padded room. After being removed there he became much quieter, and finally lay down and went to sleep. An attendant visited him regularly, and he appears to have slept soundly for several hours. When seen at 9 p.m. he was fast asleep, but at 9.20 p.m. it was noticed that his bedclothes had been thrown off, and on further examination he was found to be dead.

When seen by me a short time afterwards, the body was lying on its back with the arms outstretched. The face was placid, and no marked cyanosis was present; there was, however, lividity of the lips, ears, finger and toe nails; there was also some dried blood on the lips. The mouth was closed but the jaws were not clenched, and were easily opened by the fingers. Inside the mouth a piece of flannel about 1 ft. long by 1 in. broad was found, and behind this were two almost similar strips. The last of these was so firmly packed down over the epiglottis that it was withdrawn with some difficulty. He had obtained these strips by tearing up his blanket, and had evidently suffocated himself by packing them down his throat.

I record this case, as suicide by this method is comparatively rare, and only a few similar cases are mentioned in medico-legal literature. Casper, in speaking of the subject, says:

> Experience teaches that suicide by stuffing the air passages with foreign bodies is a most unheard-of affair.

Taylor also considers it to be very rare, but gives details of 3 somewhat similar cases. One of these is specially interesting, as the patient had been examined and certified as dying from "apoplexy," and it was only accidentally that a plug of cotton was found in the throat.[1] Three other cases are recorded in the British Medical Journal of 1882, and one of these was resuscitated by prompt medical treatment being adopted in time. Glaister also mentions a case of a similar nature, where a man forced cloth down his throat by means of a wooden spoon, but he considers the occurrence to be very uncommon.

Cases of this nature emphasize the necessity of always examining the mouth and throat in cases of sudden death. I was interested at the time to note that apparently no effort had been made by the man to withdraw even the last strip of flannel, as I found it well back in the mouth. Considering the fact that death probably took place comparatively slowly, it is striking that, while yet in a semi-conscious state, he should not instinctively have withdrawn at least one piece. It, however, only goes to show the extraordinary perversion of the primitive instincts in a determined suicide.

I have to thank Dr. Edmunds, of Chesterfield, for permission to publish this case.

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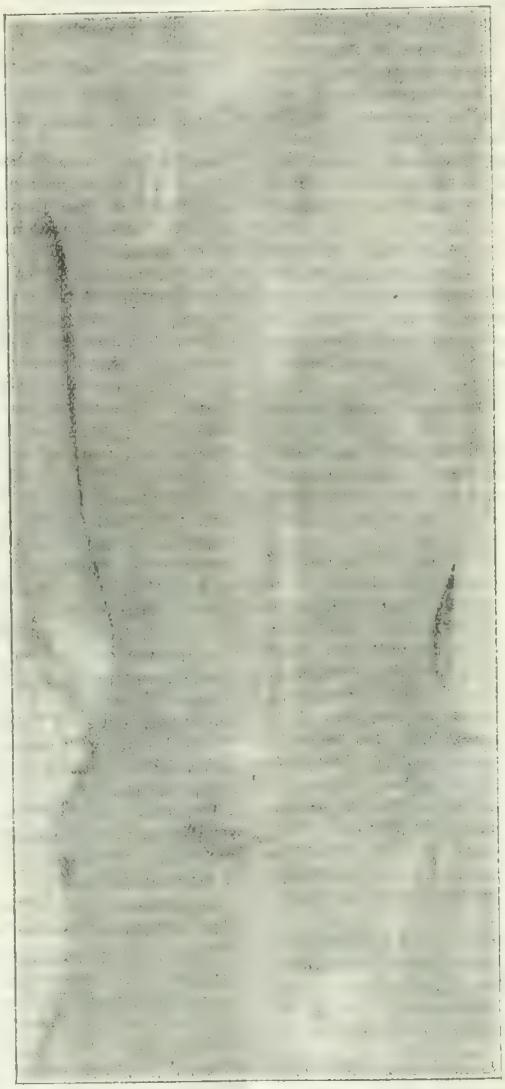
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CASE OF REMARKABLE STRIAE ATROPHICAE DUE TO CACHEXIA.

By H. D. ROLLESTON, M.D., F.R.C.P.,

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A BOY, aged 16 years, died in St. George's Hospital on December 11th, 1907, under my care, in a state of extreme emaciation from widespread malignant disease of the peritoneum and both pleurae. The growth appeared to be colloid carcinoma primary in the splenic flexure of the colon, but, like the case recorded by Kanthack and Furnivall[2] in a boy aged 16, the appearances closely simulated those of a myxosarcoma. In spite of every care in nursing and the use of a water-pillow, a bedsore formed on the left side of the sacrum (see photograph). About ten days before his death it was noticed that lineae atrophicae were appearing on the back. They continued to appear, until on December 9th the back presented a remarkable appearance, comparable to the markings of a zebra. There were numerous furrows or striae more or less at right angles to the spine, fourteen on the right and twenty-two on the left side of the spine in the dorsal, lumbar, and sacral regions. When recent the striae were depressed below the surface of the more normal skin and appeared of a livid colour; when older they were paler and almost flush with the surface of the surrounding skin. There were no similar striae on the front of the body. There was no subcutaneous oedema or ascites, but there was a bilateral pleural effusion.



Photograph showing acute striae atrophicae.

REMARKS.

The appearances shown in the accompanying figure are so remarkable that they seem to be worth putting on record. The rupture of the underlying dermis was not due to distension, as is so commonly seen in the lineae albicantes on the abdomen of women who have been pregnant or suffered from ascites, abdominal tumours, and so forth. It appears probable that there were two factors concerned in their production: (1) Malnutrition, due to cachexia which disposed the dermis to rupture on slight provocation; and (2) an immediate mechanical cause—namely, traction exerted on the dermis in the process of turning the patient in bed. It is possible that withdrawal of fluid from the skin, brought about by the pleural effusions and by the diarrhoea from which the patient suffered, may have helped to diminish the nutrition of the skin. It is also conceivable that the numerous growths on the peritoneum and some behind the peritoneum (among which was one in one suprarenal gland) may have played some part in the production of these striae by implicating the sympathetic nerve fibres.

Lineae albicantes have been divided by Osler[3] into three groups: (1) Those due to distension—the ordinary lineae gravidarum; (2) the post-febrile, especially those following enteric and scarlet fever; and (3) the idiopathic form, met with as frequently in men as in women. Abraham mentions[1] "lineae atrophicae traumaticae" following injuries from without. It would appear that there is a fifth form—cachectic striae atrophicae—as exemplified by the present case, and also by a case under my care some years ago of fatal pulmonary tuberculosis in a boy, in whom lineae albicantes appeared over the shoulders. In an interesting paper on striae patellares, Parkes Weber[4] refers to their appearance after appendicitis, and explains them as due to stretching of the skin by flexion of the knees at a time when the patient was growing rapidly and his general nutrition was greatly affected by the appendicitis. The present case appears to be one in which cachexia was the important factor, in that it altered the dermis so that slight traction led to extensive rupture.

I am much indebted to Mr. W. R. Harris for the accompanying photograph of the patient.

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ON THE

PRODUCTION OF PSEUDO-ARTHROSIS OF THE HIP WITHOUT DISARTICULATION OF THE HEAD.

By ROBERT JONES,

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SURGEONS have for nearly a hundred years endeavoured to bring about the formation of movable in the place of fixed joints. We are told, on the authority of Murphy, that Barton of Philadelphia first endeavoured to overcome flexion of the hip by means of osteotomy, and tried to avoid union of the fragments by passive movements. Similar efforts were made in the case of the temporo-maxillary joint by division or removal of bone and the interposition of foreign bodies. Gluck of Berlin, over twenty years ago, with great ingenuity introduced various ivory joints after removal of diseased ones, and some patients retained these foreign bodies for many months. Ultimately, however, they suffered extrusion.

I have in over sixty times, with varying success, endeavoured to bring about movement in ankylosed hips, mainly by removal of the head and neck and trochanter, by the interposition of foreign bodies between severed fragments, and lately by a method I am about to describe.

In 1895 and following years I interposed gold-foil between fragments, and later fortified this by the interposition of any available soft structures. I found during these years that my best results followed the free removal of bone, and that while I had most gratifying movements in many cases, in some the limb remained too flail-like to supply the necessary support during walking. By the later operations of the removal of small portions of bone

and the interposition of muscle as described by Nélaton, my results are on the whole more reliable.

There are, however, a large class of cases in which it is inexpedient to disarticulate the head even when a certain amount of disease is present there or in the acetabulum. For many years I have been in the habit of exsecting the head of the femur in the type of osteo-arthritis which we sometimes name malum coxae senilis For present purposes it will not be necessary to describe this affection beyond stating that it is characterized by considerable pain and by flexion deformity. It is a progressive trouble ultimately completely depriving its victim of any comfort. Taken early, I have noticed that by rigid confinement in bed and in a splint not only is deformity corrected and pain removed, but that many patients make a good recovery with a stiff joint. From this one learns that the disease is only progressive because of friction induced by motion and body weight. The misfortune is that many patients cannot stand the strain inseparable from the endeavour to correct flexion. In some it induces persistent vomiting if the deformity is great; in others, collapse following abdominal pain. Such are the cases in which I have several times removed the head of the femur, and have recognized the great shock that accompanies the act of disarticulation, and I finally determined in the future to bring about a movable joint, leaving the head of the femur *in situ*. I was justified in this conclusion from my clinical knowledge that if the head of the bone escaped body weight and friction it would cease to trouble.

In spite of the suggestive paper by Murphy, I also apply this procedure in many cases of bony ankylosis following tubercle or sepsis.

Description of Operation.

The operation consists in removing a slice of the great trochanter, chiselling through the neck and screwing the separated portion of the trochanter to the proximal end of the neck in order to avoid union of the fragments (Figs. 5 and 6). The neck may be chiselled close to the head or at a little distance, or the neck may be completely removed (Figs. 1 and 3), or where there has been destruction from disease, additional bone may be removed (Figs. 2 and 4).



Fig. 1.



Fig. 3.

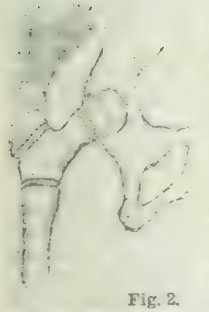


Fig. 2.

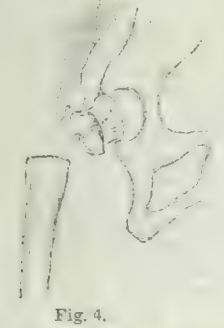


Fig. 4.

The operation, which is not admissible in the case of children, is performed as follows:

A longitudinal incision is made about 6 in. in length with the upper border of the trochanter in its centre.

An incision is made across the base of the trochanter just below the insertion of the gluteal muscles.

A slice of the trochanter from this point to its junction with the neck above is sawn or separated by a very wide osteotome and retracted upwards. The capsule is now opened and the head separated from the neck with an osteotome (Fig. 1).

Extension is next put on the femur, and the trochanter with its muscles attached is screwed on to the head of the femur, which remains in the acetabulum (Figs. 3 and 6).

Deep and superficial sutures complete the operation.



Fig. 5.



Fig. 6.

In the case of a tender joint, to avoid impinging, it may be necessary to remove a portion of the neck (Fig. 1). In the case of an ankylosed sound joint following sepsis, it may be advisable, instead of dividing the neck near the acetabulum, to divide it near the trochanter (Fig. 5).

I commend this operation as very suitable to those advancing in years. It saves the shock of disarticulation, an all-important consideration.

In bony ankylosis, where disarticulation has to be made with a chisel, the time saved is great, and the result is more reliable than where a flap of tissue intervenes, unless the piece of bone removed is considerable, while the removal of much bone involves the sacrifice of muscle and some control of movement. The femur remaining is well supplied with muscles for useful movement, and no stitching of capsule is needed for the prevention of displacement upwards.

SCARLATINA ASSOCIATED WITH PYREXIA IN APPARENTLY HEALTHY CONTACT CASES.

By BERTRAM THORNTON,

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In the British Medical Journal of June 18th, 1904, a paper of mine appeared recording some observations on an epidemic of scarlatina in a school under my charge. The outbreak occurred in 1902 in a boarding school of about 300 children, and was chiefly characterized by the mildness or absence of the usual symptoms. Out of 96 cases, only 31 showed typical symptoms of rash, sore throat, and pyrexia; 19 had no observable rash, very slight sore throat, and pyrexia of one or two degrees; 46 cases, although they had been carefully examined every day, showed no signs of any rash or indisposition, but these and all the others peeled more or less freely. The epidemic smouldered on for about seven months, and was a source of much trouble and expense.

The experience of this outbreak caused me to be doubly anxious when, on August 23rd, 1906, nine days after the children returned to school after the summer holiday, two girls were shown to me who presented typical symptoms of scarlatina, and were immediately sent to the Isle of Thanet Isolation Hospital. Judging from the time they had been at school, and the fact that they had not been exposed to any outside source of infection, it seemed probable that these two children had contracted the disease from some child in the institution who was suffering from a mild form of scarlatina, or was a simple carrier of the germs. I might here mention that, for precautionary purposes and to promote oral asepsis, the whole of the children had had their throats sprayed daily since they returned to school with a 1 in 2,000 solution of mercury perchloride.

On the discovery of these two cases the whole of the children were stripped and examined, with the result that with the exception of two or three children all appeared to be in perfect health, and these two or three children

did not then or subsequently present any scarlatinal symptoms.

To make assurance doubly sure, I thought it would be interesting to take the temperatures of the remaining 299 children. On August 23rd and on each of the two or three following days this was carefully done, and much to my surprise, although these children appeared to be in their usual health, no less than 131 had temperatures of 99° and upwards, and 29 of this number had temperatures between 100° and 101°. In all cases this slight pyrexia had disappeared within two or three days, and in no single instance was there subsequently any symptom of scarlatina or peeling, though the children were kept under special observation. It was ascertained that out of the 131 children, 23 had a history of a previous attack of scarlatina. No further cases occurred during this or the following year.

On September 19th, twenty-seven days after the first taking of temperatures, as a control experiment I had the temperatures of all the children taken again, and they were all then found to be normal with the exception of three, the probable cause of the slight pyrexia in these cases being respectively tuberculous glands, an ordinary cold, and a bilious attack. It cannot be often that opportunities present themselves for taking temperatures on such a large scale when a community is exposed to the infection of a zymotic disease; if any similar observations have been recorded they have escaped my notice. This pyrexial condition of a large group of children coincident with the possibility, if not the probability, of their inhaling the micrococci of scarlatina may be interesting enough to place on record. It may be fairly assumed that it was more than a coincidence that 131 out of 299 children should all be suffering from a slight elevation of temperature, though it is, of course, possible that in some instances the small excitement of having the temperatures taken may have sent up the thermometer to a moderate extent, although this did not occur in a single instance in the subsequent control experiment. On neither occasion was there any catarrhal or other ailment running through the school. It is difficult to resist the inference that most of these children had received a dose of the scarlatinal poison, but that their powers of resistance were sufficiently great to prevent the occurrence of any of the usual symptoms except the moderate amount of pyrexia. Whether the daily disinfection of the mouth and fauces with the perchloride solution modified or inhibited the action of the scarlatinal virus is a matter of opinion. My own experience on this and on other occasions leads me to believe that an active disinfectant such as 1 in 2,000 perchloride solution has an undoubtedly useful effect, and with ordinary care it can be safely used as a prophylactic in a disease like scarlatina where it is probable that the micrococci find their entrance to the system from the faucial mucous membrane. It is, of course, a common experience to limit an outbreak of scarlatina in a school to one or two cases without any other precaution than prompt isolation.

The experiences above related tend to suggest that in a community infected with scarlatina, in addition to those who show definite symptoms of the disease, there are others who are affected by the poison to a minor extent as shown simply by an elevation of temperature; and it may be a useful precaution to take the temperature of contacts, with the view of keeping under special observation those who though apparently quite well are suffering from a moderate degree of pyrexia.

NOTE ON THE TREATMENT OF EXPERIMENTAL TRYPANOSOMIASIS.

By ALDO CASTELLANI, M.D.,
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Mercury Perchloride.

In 1903 Low and myself while in Uganda treated four cases of sleeping sickness with intravenous injections of mercury perchloride solution, applying in this way to sleeping sickness the method of treatment devised by Baccelli for various forms of septicaemia. In our report[1] we stated that the intravenous injection of perchloride caused constantly a fall in the temperature, and this condition persisted for several days. The improvement was not lasting in any of the four patients, and the disease ran its fatal course.

The remarkable fall in the temperature after the sublimate injections has, however, always remained impressed on my mind, and at various times I have in Ceylon made experiments with the object of seeing whether mercury had any influence in experimental trypanosomiasis; as the results were not very striking I did not publish them. In Ceylon sleeping sickness does not occur, and having been unable to import animals experimentally inoculated with *Trypanosoma gambiense* I have made my experiments on monkeys, which I have inoculated with a trypanosome derived from a bullock of Indian breed. The trypanosome is probably a strain of *T. evansi*, though it is much less virulent then the typical *T. evansi*. All the inoculated monkeys develop a fever of remittent type and polyadenitis; death takes place after several months. The monkeys I have used for my experiments are of the genus *Macacus* and *Cercopithecus*. The solution of perchloride used is according to Baccelli's formula:

Mercury perchloride	...	...	0.10 gram.
Sodium chloride	...	...	0 80 ,,
Sterile water	...	...	100 c.cm.

Half c.cm. or 1 c.cm. of this solution was injected daily intravenously. It is to be noted that in the monkeys I have used the superficial veins are not clearly visible, and it is necessary in most cases to make a small cut in the skin and partly dissect the vein chosen for inoculation.

Without entering into the particulars of the investigation I may say that mercury perchloride given intravenously caused, almost constantly, the temperature to fall to normal for a certain period of time; in some cases the enlarged glands became smaller; the trypanosome, however, never disappeared completely from the general circulation and the improvement was not maintained.

Quinine Cacodylate.

In 1906 it occurred to me to try the action of quinine cacodylate in experimental trypanosomiasis. I had at that time under observation an obscure case of low intermittent fever of six months' duration; the patient, apart from the fever and a very slight enlargement of a few superficial lymphatic glands, did not show anything abnormal on physical examination; the liver and spleen were not enlarged. The case had been variously diagnosed as malaria, paratyphoid, Malta fever, syphilitic fever, beginning pseudo-leukaemia, trypanosomiasis, kala-azar, latent tuberculosis. The microscopical and bacteriological examination of the blood, urine, and faeces never gave any clue by which to form a definite diagnosis. The patient had been drenched with quinine, mercury, and liquor arsenicalis. Although I was unable to make a definite diagnosis, I tried empirically injections of quinine cacodylate. Thirty such injections (0.20 gram each injection) were sufficient to bring the temperature to normal, and the patient is at the present time enjoying perfect health. I then tried the same treatment in a typical case of kala-azar I had in the clinic; the improvement after forty injections was remarkable; the patient, however, feeling so much better, left the clinic to go to his distant village, and I cannot therefore say whether the improvement was maintained. It is worth noting that the drug gave me fairly good results also in yaws.

Experiments have been carried out on monkeys inoculated with the same strain of trypanosome as those on which the mercury treatment was tried. The drug was given by subcutaneous injections (0.10 gram per injection) once or twice daily. The monkeys stood the drug well. I may say briefly that the drug shows a well-marked trypanocide action for this particular strain of trypanosome. After 15 to 25 injections the trypanosomes are no longer present in the peripheral circulation nor in the enlarged lymphatic glands; the fever disappears. In a certain percentage of cases, however, about 30 per cent., recurrences take place; when this happens, quinine cacodylate given in large doses seems to have much weaker action than in the first attack.

Combined Treatment.

Ehrlich demonstrated that trypanosomes may become partially or totally immune to a given drug, and he

[1] Reports of the Royal Society Sleeping Sickness Commission, No. 5, p. 36.

emphasized the utility of combined treatments for trypanosomiasis, as, for instance, atoxyl and trypanroth. Soon after Moore, Nierenstein, and Todd published the results of their important investigations on the treatment of experimental trypanosomiasis by various combined treatments. They state that Thomas and Breinl's atoxyl treatment was not sufficient to prevent recurrences in a number of cases, and from their experiments on *T. brucei* they came to the conclusion that Thomas and Breinl's treatment should be followed by a mercury treatment. According to them atoxyl acts on the ordinary adult stage of the trypanosome as found in the peripheral circulation, but not on the developmental forms of the parasite, which are not seen in the general circulation.

The combined treatment I have tried is quinine cacodylate and mercury perchloride. The experiments were made on monkeys inoculated with the same strain of trypanosome as those on which the quinine cacodylate alone and the mercury treatments had been tried.

Three monkeys were treated with quinine cacodylate (0.10 gram per injection) and perchloride of mercury (0.005 gram per intravenous injection), contemporarily; that is to say, they received one injection of cacodylate in the morning and the mercury in the evening. The treatment lasted forty days. Three other monkeys received quinine cacodylate for twenty days and then perchloride of mercury for twenty more days. Three more monkeys received a daily intravenous injection of perchloride of mercury for twenty days, and for twenty days more a daily subcutaneous injection (0.10 gram) of quinine cacodylate.

The treatment, therefore, lasted in all the three groups of monkeys forty days. The trypanosome disappeared from the general circulation about the same time in the first two groups (between the fifteenth and nineteenth day); in the monkeys of the third group the trypanosome did not disappear completely during the mercury treatment; it disappeared between the twenty-second and thirtieth day.

At the present time, two months after the combined treatments were discontinued, the monkeys of the first and second groups are apparently free from the trypanosome; as regards the third group, a recurrence has taken place in one of the monkeys, though the trypanosome is present in very small numbers.

Conclusions.

1. Quinine cacodylate shows a well-marked trypanocide action in monkeys experimentally inoculated with a strain of trypanosome closely resembling *T. evansi*.

2. Mercury perchloride improves the general condition of the inoculated monkeys, and frequently causes the temperature to subside to normal. Given alone, however, its trypanocide action is not very marked. In patients affected with sleeping sickness, it would seem from the experiments made by Low and myself in 1903 that mercury perchloride given by intravenous injection induces a fall in the temperature, but the improvement is only temporary.

3. I suggest that quinine cacodylate alone, or, better, in combination with intravenous injections of perchloride of mercury, should be tried in sleeping sickness, using large doses. If it should be found that quinine cacodylate has a marked trypanocide action also on *T. gambiense*, the advantage of this drug over other preparations would be its powerful action on the malaria parasites. This would be an appreciable advantage, as in the experience of many observers, among whom Low and myself, a large number of sleeping sickness patients are suffering also from chronic malaria.

4. Quinine cacodylate besides its trypanocide properties and its action on Laveran's parasites, has apparently some action on other protozoa, as, in my experience, its use is beneficial in kala-azar and yaws.

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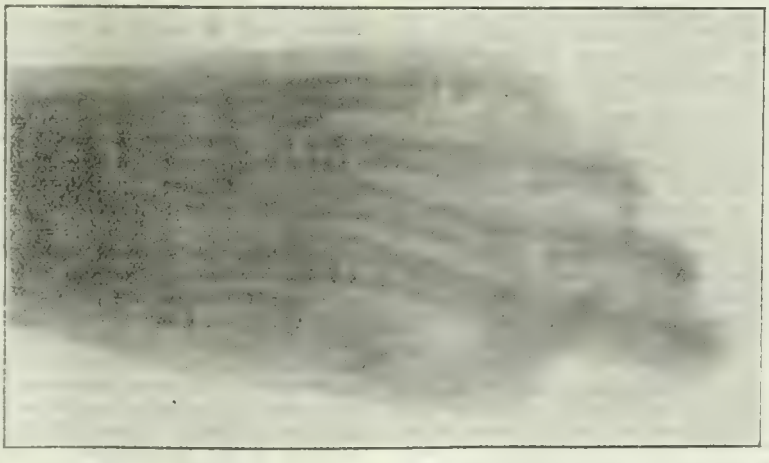
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AN UNUSUAL DEFORMITY OF THE FOOT.

By BASIL KILVINGTON, M.S., M.D.Melb.,
Victoria.

The following abnormality of both feet recently came under my notice, and its rarity and biological interest make the case worth reporting.

It occurred in a boy, aged 12 years, who consulted me for some minor ailment. There was nothing like it in the family record, as far as the parents could remember, and the family history was unimportant.



The abnormality consisted in an extremely short first metatarsal bone, the head not reaching within an inch of that of the second metatarsal.

When a young child the great toe projected slightly inwards away from the foot, but now, probably from long wearing of a boot, it lies parallel with the others.

The sklagram, taken by Mr. Fryett, shows the bones of the foot, the condition being bilateral. There is little power of abduction, but adduction of the toe is unusually powerful, though it cannot be brought in apposition with the outer members.

The absence of the usual support given by the head of the first metatarsal causes the boy to bear most of his weight on the outer side of the foot, and the parents volunteered the statement that his boots always wore out on this side. He is not so active in running and walking as his brothers.

There is a marked flexion of the first phalanx at the metatarso-phalangeal joint, so that on standing the head of the phalanx is touching the ground. This explains the apparently very short length of that phalanx in the sklagram, as it is taken almost end on. Actually the bone is of normal size. I regard this flexion at the joint as a secondary occurrence, the object being to allow part of the body-weight to be transmitted to the ground through the first phalanx.

It is obvious that the disability does not lend itself to treatment, but the interest lies in the fact that it closely resembles the condition normally present in the anthropoid apes. In them the foot is a grasping organ, and the big toe is somewhat like the thumb, being shorter than the other toes and apposable.

The great toe is still apposable in the human fetus, and is much more movable in childhood than in adult life.

The resemblance to the skeleton of the ape would be still closer if the great toe did not lie parallel with the

others, a condition probably due to wearing boots. Comparing the skiagram with that of a normal foot, there is seen to be a distinct, though slight, bowing of the metatarsal bones, the convexity being outwards, and this is very marked in the toes, especially the fourth and fifth. A still more exaggerated degree of this is seen in the skeleton of the chimpanzee and gorilla. Its object is to facilitate apposition to the great toe and the grasping of objects in climbing.

The apes, too, walk entirely on the outer side of the sole of the foot, and are not very agile in running. The deformity, which, as far as I know, is unique, is easily explained by comparative anatomy, and is a reversion towards the condition met with among the higher apes.

A NOTE ON DR. MILLIGAN'S PAPER, "THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR WITHOUT RESORT TO RADICAL MASTOID OPERATION."

By OSKAR KLOTZ,
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DR. MILLIGAN, in his paper in the BRITISH MEDICAL JOURNAL of October 12th, 1907, has brought forward many new points regarding the treatment of middle-ear disease which have their basis on the pathological findings of the exudate. The soundest treatment of medical and surgical cases has to-day its foundation on the pathological nature of the lesion, and, this being definitely determined, the physician's or surgeon's procedure is governed accordingly.

Dr. Milligan points out that the otologist must differentiate, before treatment is begun, the different stages of inflammations of the middle ear, and, further, the causative agent of the lesion must be ascertained. On the result of these findings depends the treatment of the case, and by this means unnecessary radical operations can be avoided and the prognosis can be given more accurately.

It is beyond my domain to discuss the different operative procedures, but there are some points in the conclusions that can be drawn from the examination of the inflammatory exudate which I wish to discuss.

I have had an opportunity, through the kindness of Dr. Birkett, of examining the exudates in middle-ear diseases. These cases were fairly representative of the class that is met with in hospital practice. I would point out that in our experience the cases coming to the out-door department of the Royal Victoria Hospital, Montreal, suffering from otitis media usually present a condition more chronic than those of the better classes met with in private practice; the latter class usually seek aid for middle-ear trouble earlier than the poorer classes. I have had the opportunity of examining material from cases in all stages of the disease.

Dr. Milligan points out that the inflammatory exudate varies with the stage of the disease, and that the exudates from these various stages have distinct cellular characters, which may be recognized with the microscope. In the early acute stage there is "shedding of the superficial columnar epithelial elements of the mucosa," with leucocytes and red blood cells, and, "as chronicity is established, the type of epithelium becomes changed to a more flattened and squamous variety, while leucocytes tend to be gradually replaced by lymphocytes and myelocytes." He lays great stress on the cellular character of the exudate, and adds:

> Provided the cytological examination reveals an extensive leucocytosis, with, in addition, degenerated columnar epithelial cells and but few lymphocytes, the conclusion to be come to is that the process is superficial, exudative, limited to the mucosa, and capable of arrest by means of efficient local treatment. On the other hand, the presence of a number of lymphocytes is indicative of granulomatous changes in the mucosa, changes which suggest an extension of the inflammatory process into the deeper layers of the mucosa, and changes which are unlikely to be arrested by any form of purely local medication.

Were we able to follow the course of an inflammatory process by the microscopical findings, particularly as regards the cellular contents of the exudate, the possibilities of Dr. Milligan's findings would be indeed great.

It must be extremely rare to meet with such cases in which the epithelial elements of the exudate can be recognized and differentiated. As these middle-ear diseases are infective processes, where the invading agent attacks the tissues from within the ear cavities, the superficial mucosal cells are the first to be desquamated and destroyed. Not alone do the epithelial cells become shed, but, in consequence of the infecting agent, they become swollen, granular, and frequently entirely broken up. To distinguish these cells from others, all will admit is indeed difficult, but to distinguish the various types of the epithelial elements among themselves is still more difficult.

In the exudates that I have had the opportunity of examining, and even among those in the early stage of middle-ear disease, I have not found the presence of recognizable epithelial cells in the stained preparations to be of definite significance. Where a purulent inflammatory exudate already exists, the superficial epithelial elements of the area involved in the ear must have been shed long before, and only those epithelial elements are likely to be involved which border the inflamed area. In these conditions, therefore, were it possible to distinguish the different kinds of epithelium, we would meet with both kinds of these epithelial cells, regardless of the stage or chronicity of the lesion.

Dr. Milligan also points out the variation in the leucocytes of the acute and chronic cases. In the former the polymorphonuclear leucocytes are the more numerous, while in the latter the lymphocytes are in the majority. This differentiation is probably possible where the chronic type refers to lesions advancing to healing, but in those cases in which there is a long-standing greater or less exudate, which clinically represents chronicity, the exudate contains polymorphonuclear leucocytes in greatest number. This is true whether the inflammation involves the soft tissues or even the bone. As Dr. Milligan further adds, the chronic cases are to a great extent mixed infections. This being so, these cases exhibit not infrequent recurrent exacerbations of the disease as new infection is received. Moreover, in the so-called chronic cases it is but rarely seen that the entire lesion exhibits in all parts the same stage of the disease. We must therefore recognize that while healing is going on in one area an acute or chronic inflammation may exist at another, and have associated with it the acute inflammatory leucocytes of the polymorphonuclear variety.

He diagnoses tuberculous disease of the temporal bone by the presence of lymphocytes, epithelioid cells, myelocytes, and giant cells in the exudate. Epithelioid cells, as they appear in the tubercles in the tissues, are not to be encountered in the exudate. Their form is entirely altered, and it would be difficult to distinguish them from the wandering cells or fibroblasts seen in any healing wound. The most probable giant cells found in bone destruction of whatever origin are the osteoclasts. When we recall the great number of sputum analyses that are made, and the infrequency with which giant cells are found in those exudates from tuberculous infections, the evidence contributed by the presence or absence of these elements in exudate from the middle ear has but little value.

He also lays stress on the qualitative bacterial analyses, and in this we must agree. I believe that our best evidence of the nature of middle-ear disease lies in determining the kinds of organisms producing the lesions. In our experience, the *Micrococcus catarrhalis* should not be included among the virulent infections of the ear. The commonest dangerous organism is the streptococcus, while among the infrequent severe infectious agents are the meningococci. I have not met with the gonococcus infection of the middle ear. Following this, in order of virulence and frequency, are the pneumococcus, staphylococcus, *B. influenzae*, *B. coli*, *B. typhi*, *B. pyocyaneus*, and a number of other organisms more rarely met with.

From my experience, I would conclude that much reliance cannot be placed on cytological characters of the exudate, and that we must still look to the bacteriological examinations for our evidence as to the nature of the disease and its probable consequence.

A FATAL CASE OF INFECTIOUS JAUNDICE IN THE FEDERATED MALAY STATES.

BY

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An account, however incomplete, which will tend to render the distribution of some of the rarer diseases more accurate is in itself useful, and this is my reason for publishing these few notes on a case I believe to be infectious jaundice. The identity of infectious jaundice with Weil's disease—originally described by Weil of Heidelberg in 1886—is, I believe, doubtful, the latter being at any rate a much milder complaint. Up to the present time the disease has been supposed to be limited to the Mediterranean basin, cases being reported from Egypt, Syria, Turkey, and Greece. Exactly the same statement was made, not so very long ago, as regards Malta fever, until Bruce's discovery in 1887 made it possible to demonstrate the disease in places as far apart as India, China, the West Indies, Brazil, the United States, and even in England. During eight years' practice in Port Said, Egypt, I can recall four fairly definite cases of infectious jaundice, and now, having been in this country only four months, I believe I have already seen two cases of a similar nature. Of one of these cases I will give an account, it having been rather more fully investigated than the other.

The patient, a schoolmaster, 29 years of age, had lived in the Federated Malay States since 1902. Syphilitic infection had taken place some months (exact period not known) previous to his illness. The course of the case was as follows:

March 28th, 1907. Malaise and slight fever.

March 29th. Fever, rigor, and vomiting two or three times.

March 30th. Fever; 100° F. in the morning, 102° F. in the evening. Pulse, 110. Tongue thickly furred. Bowels acted five times without purgative, the motions being liquid and normal in colour. It was noticed the patient was slightly jaundiced. Thinking the case was probably of a malarial nature, a fresh blood film was taken and carefully examined for evidence thereof. No parasites were found, however, but there was a very marked degree of leucocytosis.

April 1st. Fever; 103° F. in the morning 102° F. at night. The urine had become very scanty, contained bile pigment, but showed no albumen by boiling or by the cold nitric test. Another medical man, who also examined the urine a few hours after, found a trace of albumen by Spiegler's test, described in Hutchison and Rainey's *Clinical Methods*.

April 2nd. The temperature fell to normal this morning, but regained 102° F. in the afternoon. Pulse 82. The jaundice was much more intense. The liver could be made out to be distinctly enlarged on percussion, but could not be felt on account of rigidity. The urine was very scanty, measuring only a few ounces in the twenty-four hours, deeply bile stained, and was now loaded with albumen. Vomiting occurred several times during the day, and the patient was delirious towards the evening. A dry blood film was taken this afternoon and stained by Leishman's method. Leucocytes were present in enormous numbers, one being able to count ten or twelve under each field of the $\frac{1}{12}$ oil immersion (I regret they were not enumerated). A differential count of the leucocytes showed 90 per cent. polymorphonuclear. The bowels acted twice during the day, the motions being liquid, scanty, and very light in colour.

April 3rd. Fever, morning 101° F., evening 100° F. Pulse at 10 p.m., 80. Urine extremely scanty. Bowels acted once, motion being scybalous and chalky in colour. Jaundice intense, and the patient quite delirious in the evening. In spite of no urine being passed for several hours the bladder was quite empty, and remained so until death.

The treatment which had been adopted up to this time was a daily intramuscular injection of quinine, 10 grains, and a four-hourly effervescing mixture for the vomiting. To endeavour to make the kidneys act, hot stupes were applied to the loins, and 1½ pints of saline solution injected subcutaneously.

April 4th. Temperature, morning 100° F., evening 103° F. Patient unconscious and breathing stertorously all day; complete suppression of urine. After midnight the temperature rose to 105° F. in spite of all efforts to bring it down, sponging, etc.

The patient died at 5 a.m. April 5th.

Necropsy.

A *post-mortem* examination took place five hours after death. Rigor mortis was well marked. All the internal organs were bile-stained, as might be supposed. There were well-marked petechiae on the pleura and pericardium. Heart normal. Lungs congested at the bases, especially the right. The liver was considerably enlarged, and looked fatty. The spleen was but little larger than normal, if at all. The kidneys were enormously enlarged: both were about 7 in. long, and the cut section was pale, and looked fatty like the liver. The capsules came away easily without tearing the kidney substance. (The organs were not weighed, through a misunderstanding.)

Part of the liver and kidneys were sent to Dr. H. Fraser, Director of the Institute of Medical Research at Kuala Lumpor, Federated Malay States, who reported that the liver showed suppurative biliary hepatitis, and the kidneys glomerular and parenchymatous nephritis, he expressed it as his opinion that the liver condition was primary.

I think we can quite certainly exclude malaria and relapsing fever from the results of the blood examination. Acute yellow atrophy is negatived by the liver condition, and the only other consideration is yellow fever, and in this, if at all severe, albuminuria is marked on the first or second day, whereas in this case there was not more than the slightest trace on the morning of the fourth.

My colleagues who saw the case with me believed the case to be malaria, anyhow until I made the blood examination, and told me that such cases have been in the past called bilious remittents.

EXPERIMENTS TOWARDS THE PREVENTION OF MALARIA IN THE FEDERATED MALAY STATES.

By MALCOLM WATSON, M.D.Glasg., M.B., C.M., D.P.H.Camb.

Whether a community be civilized or not, human nature is much the same; sanitary measures should travel along the lines of least resistance, and I think the more that individuals are required to undergo during an active campaign against a disease the worse for the campaign. This has been my guiding principle in the matter.

In Selangor the population is partly gathered into towns and villages, partly scattered about the country, as permanent settlers. Others, again, find occupation as coolies in opening up new regions, in the construction of roads and railroads, and in the development of agriculture. Obviously no single method can be equally suitable for these different conditions. Yet within the past seven years, and within the district of Klang in the Federated Malay States and among communities so differently situated, malaria has presented itself epidemically in so acute a form as to threaten the existence of the entire population.

Antimalaria Measures in Towns.

In 1900 and 1901 the towns of Klang and Port Swettenham were severely attacked by malaria.

Drainage of swamps and clearing and felling of jungle in other breeding places of Anophelines led to the practical abolition of malaria from these two places. Petrolage and cinchonization of the population would have been impossible, while the measures adopted made absolutely no call on any one except the Government and other landowners, who were called upon each to deal with the swamp and jungle within his own land. It appears to me to be *the* method for towns and villages.

Antimalaria Measures Outside of Towns.

The rapid development of agriculture in this country has led to a large influx of estate coolies, who have suffered severely from malaria. A gang of coolies start in the midst of jungle and swamps to open an estate. They suffer from malaria severely; but obviously, before they can clear and drain a sufficient area to protect themselves from mosquitos, they run a considerable risk of being exterminated by malaria. Some other method has, therefore, to be adopted. The Government has not been slow to assist in measures to control the disease, and at the end of 1904 sanctioned the necessary expenditure on an experiment with mosquito-proof coolie lines on the proposed extension of the Klang water supply. For various reasons the extension was delayed, and at the end of 1906 the Government provided the sum of $2,000 (£233) as its contribution to such an experiment on a very unhealthy estate near Klang. Owing to the unhealthiness of the place there has been difficulty in

getting the necessary buildings erected, but one set of lines has recently been occupied, and two others are in different stages of construction. Two types of mosquito proofing have been adopted: one in which each room is an independent mosquito-proof cubicle, and the other in which the whole building is mosquito proofed round the outer verandah, the individual rooms opening into the mosquito-proofed verandah. It remains to be seen how such lines will answer, but if the necessary protection is not given it will be a simple matter to apply both systems to the same building, thereby doubling the protection. That Ross is right in regarding the eradication of malaria as simply a mathematical process, I am convinced, and an experiment with a mosquito-proof hospital at Jeram bears this out. For eleven months the hospital was mosquito proof, but permission was given for patients to enter or leave the building after sunset. Yet the average number attacked dropped to 0.45 a month from 2.87, the figure prior to the mosquito proofing, and rose again to 3.20 when the wire gauze was blown away in a gale.

In the experiment now being carried out, the object is not to prove or disprove the mosquito theory, but to determine the style of building most suitable for a community composed of ignorant Tamil coolies, and to compare the results obtained with those from the systematic use of quinine.

For several years I have had an opportunity of observing the effect of quinine on coolies engaged in opening up tropical estates. Of its value when given systematically there is abundant proof. Its limitation is, that it can only be given to those under the direct control of some one interested in the health of the coolies. During 1907 some 2,000 coolies in a certain portion of the district of Klang have been compelled to take from 8 to 10 grains of quinine daily when *well*, and about 20 grains when *not* at work. It is given at the afternoon muster, and the coolies do not get a "name" for their day's work until they swallow the quinine. With a few interesting exceptions, Malays, Chinese, Javanese, and Tamils, refuse to take the drug, unless under this compulsion. Much less objection has been made to its administration than I anticipated. Pills made by coolies trained on the estates to do this work, or capsules, is the form in which it is given. I hope to use soft tabloids shortly.

The terrible infant and child mortality from malaria has been completely stopped by the use of euquinine. Each child gets 5 grains daily in a little sweetened condensed milk. Instead of the struggle and splutter of the attempt to get down the ordinary quinine salts, the children with hardly an exception rush out, each with his tin, when the time of the daily dose arrives. There can be little doubt that, were the price of euquinine reduced to nearly that of ordinary quinine, its sale would be enormously increased; at present, estates can only afford it for the infants.

This is not the time to detail statistics of the value of quinine, but a few are so striking that they may be mentioned. On the estate on which the experiment with mosquito-proof coolie lines is being carried out I found from 84 to 100 per cent. of the children under 10 years infected in different sets of lines; and in 35 out of 36 cases of fever examined in one set of lines malarial parasites were demonstrated. On this estate, with a labour force of about 240 coolies, 152 had one or more attacks of fever in November. On November 6th the routine administration of quinine was rigidly enforced. In December the number had fallen to 50, and from January to June the monthly figures have been 38, 19, 14, 14, 5, 8. Allied sickness has also fallen, and the percentage of the possible working days worked by the coolies has risen from 62 to 83 (= nearly 25 per cent.)—a matter of great importance where labour is scarce. In addition to this, whereas from July to December, 1906, 12 out of 26 children died, not a single child has died during the six months of 1907, and there are now over 30 children on the estate.

The other estates where quinine has been similarly given show an equally satisfactory improvement in the turnout of their labour forces, and in their diminished sick and death rates. At some later date I hope to publish these.

I cannot conclude this paper without mentioning the keen interest taken in this question by the Government of Federated Malay States, and in particular by the British Resident (H. Conway Belfield, Esq.) and the State Surgeon of Selangor (Dr. E. A. O. Travers). Among the first in 1901 to recognize the value of Ross's work and to spend large sums on antimalaria measures, the Federated Malay States Government has since then yearly expended considerable sums on further works of a like nature throughout the country, and I think the fact that the sum asked for by the Medical Department for the experiment with the mosquito-proof coolie lines was provided without delay shows that the Government is determined to carry on the campaign against malaria to its uttermost strongholds.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF ARRESTED STRYCHNINE POISONING.

A GENTLEMAN by mistake took a dose of liquor strychninae hydrochlor., ♏xxx (1/3 gr.), in place of the intended dose, ♏v. He had not been taking any medicine previously, and it was proposed to treat him with ♏v three times a day as he was rather run down at the time. It was the first dose that was the cause of the trouble. A small bottle containing ♏xxx in water, intended to be taken in six doses and to last two days, was by accident all drunk at one draught. This was at 10.5 a.m. Nothing wrong was noticed until 10.35 a.m., when the patient began to feel a rushing as though of blood to the head, noises in the ears, giddiness and faintness, so that he was compelled to sit down to avoid falling. He felt a great desire to get out into the fresh air, but was not equal to doing so. The symptoms rapidly became worse, and in three minutes he noticed shaking of the hands and arms, legs and head, and stiffness of these parts, so that it became difficult for him to bend his joints. The extensor muscles of the thighs were painful and firmly contracted. Then the jaw muscles began to tremble. The patient had the greatest difficulty in drinking water on this account and because of stiffness of the extensors of the arm and shoulder muscles, and the tremor of the hands, which became worse on attempting to raise the glass. It was at this point that I saw the patient (10.45). He had realized that his symptoms were due to overdose of medicine. He was trembling all over. His heart was thumping; pulse 90; respirations increased in depth and frequency; temperature normal; face flushed and anxious. His limbs were stiff, and resisted flexion. The tremors were increased on voluntary effort to move the head and limbs. The knee-jerks were very active, and ankle clonus was present. The patient's mind was perfectly clear, though naturally he was anxious about his condition. He was quite unable to write on account of the tremors of the hands.

Realizing the nature of the symptoms, I immediately gave half an ounce of potassium bromide and 20 grains of chloral hydrate dissolved in cold water, followed in ten minutes by 30 grains more of bromide and 15 grains of chloral hydrate, and then 30 grains of bromide every five minutes for four doses, the last dose being mixed with 10 grains of chloral hydrate. By the end of that time his pulse was 72 and of low pressure. This was about 11.20. He was then comparatively comfortable, quite calm, only tremulous and more or less stiff and aching. The knee-jerks were much less active. On attempting to walk, he found it difficult to flex his legs, so that he was in danger of tripping, but he managed to walk slowly by holding on to objects to support himself. At 11.30 a very copious liquid stool was passed, no doubt owing to the combined action of the strychnine and the large doses of the remedies that had been administered. There was no tendency to opisthotonos at any time; the action of the muscles of the head and back tended rather to produce a bending of the body forwards; there was no risus sardonicus, no fixation of the eyes, no sweating, no changes in vision or hearing. The olfactory nerve endings were evidently over-stimulated, for the patient observed a peculiar odour like ozone which persisted until the following day.

At 1.15 he had another copious watery stool, when the act of sitting on the closet seat made his legs so much stiffer that it was with the greatest difficulty that he was able to make his way downstairs afterwards. He had

a light luncheon at 1.30, and afterwards complained of coldness all over the body, and of tingling of the hands and feet. He was now more or less nonchalant and self-satisfied.

The tremors had now completely passed away, so that he was able to write a letter in his ordinary handwriting. At 2.30 p.m. he had to keep an important appointment four miles away, which he managed without inconvenience by means of a motor bicycle. At 10 p.m. he went off into a heavy sleep, and awoke at 8 a.m. the following morning feeling pretty well again, and in the afternoon played four sets of tennis without any inconvenience.

A. T. Spanton, M.A.Cantab., L.R.C.S.Edin., L.S.A.
Birkenhead.

HYPERSENSITIVENESS TO ANTIDIPHTHERIAL SERUM.

The interesting memorandum recounting Dr. R. Thorne Thorne's experience, which appeared in the Journal of January 18th, prompts me to relate my own tale of woe.

About four years ago I gave myself a prophylactic dose of antidiphtherial serum of 1,000 units in the left forearm. Nine days afterwards an urticarial rash appeared all over the left upper extremity, but nowhere else. It disappeared within a day or two.

Eighteen months ago I again gave myself a similar dose, in the same place. On the evening of the ninth day, after dinner, I suddenly came out in an urticarial eruption over the left arm, front of chest, and abdomen. The rash appeared literally in a few minutes, and was very profuse. I walked from my drawing-room into my study, a distance of a few paces, to consult Dr. Kanthack's article in Professor Sir Clifford Allbutt's *Medicine* on the subject. Before I found the reference the rash disappeared, and I was immediately seized with such faintness that I had to lie prone on the floor. In a few minutes I had sufficiently recovered to crawl upstairs on hands and knees and climb into bed. *Pari passu* with this improvement of feeling out came the urticarial rash once more all over my body, on the abdomen and thorax the wheals being as large as a good sized plate. In a few minutes more the lips and buccal surface of the cheeks began to swell, and a most uncomfortable feeling behind the sternum and in the epigastrium became noticeable, suggesting that the œsophagus and stomach were taking part in the orgy. I passed a most unhappy night, no vomiting, like my brother sufferer, Dr. Thorne Thorne, but a continued misery of feeling that the post-sternal and epigastric pain would go if I could only bring up flatus. However, between 3 and 4 a.m. the discomfort abated, sleep came, and I awoke later in the morning feeling quite well, with the rash gone, and able to do my day's work as though nothing had occurred.

Some of the interest of these attacks lies in the questions they suggest. For instance, why should a poison, being presumably a chemical poison and not a living one (like the bacillus of enteric fever), require so long an incubation period as four to ten days before getting to work? Is it that the horse's serum undergoes some lengthy process of elaboration in some organ and that the result of this biochemical process is the peccant material?

Again, the rapid alternation of incidence of the poison is interesting, at one time appearing on the skin, at the next deserting the skin and falling upon the circulation. Sairey Gamp is fond of remarking that the child will do well because the measles rash has come out well, and all of us have doubtless noted that this, like most of her other *obiter dicta*, contains some modicum of truth. Our gouty friend, who tells us that he dreads the disappearance of the chronic squamous eczema about his shins, as he always then feels unwell, is another case in point.

Then, again, why does increasing blood coagulability with calcium chloride or lactate prevent these attacks? Do they prevent the formation of the materies morbi or do they combine with it when formed and render it inert?

No tale is complete without a moral, and the moral of the "night*mares*" of Dr. Thorne Thorne and of my own is this: Never administer an injection of horse serum to an adult without at the same time prescribing some calcium lactate, to be commenced a day or two after the injection, and continued for a week.

Caterham Valley. W. Bligh, M.D.Lond.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

Pathological Section.

Mr. S. G. Shattock, President, in the Chair.

Tuesday, February 18th, 1908.

Acidosis in Pregnancy.

Dr. J. B. Leathes brought this subject under notice, one which has come into prominence lately in papers by Zweifel,[1] Williams,[2] and Ewing and Wolf.[3] In 18 successive cases of eclampsia Zweifel found that there was a smaller proportion of the nitrogen in the urine excreted in the form of urea than is normal; the percentage of the total nitrogen excretion that was accounted for by urea varied in different cases from 27 to 70 per cent.; the ammonia nitrogen was, on the other hand, always high, and in one case amounted to 16·5 per cent. of the total nitrogen. To account for the high ammonia coefficient, Zweifel found the urine frequently contained lactic acid. Larger amounts of lactic acid were found generally in the blood, and more in the placental and fetal blood than in the maternal. On these and other grounds the lactic acid is regarded by him as the cause of the eclampsia. It has been rightly pointed out that lactic acid may be present in the blood in far larger amounts than those found by Zweifel, and cause no convulsions nor symptoms of any kind,[4] and that after epileptic seizures, though not in the intervals between them, far larger amounts are found in the urine, which are pretty clearly the result of the convulsions and not the cause.[5] The muscles, it is known, produce and contain lactic acid when the supply of oxygen is deficient.[6] But the high ammonia coefficients given by Zweifel's patients, and considerably higher ones still, have been found by others in disorders of pregnancy. Williams describes cases of toxæmic vomiting in the early months of pregnancy in which the ammonia in the urine accounted for 32, 35, and 45 per cent. of the total nitrogen excreted, and in one clinically identical case the liver showed central necrosis of the lobules similar to that found in acute yellow atrophy. These cases had no jaundice, no albuminuria, nor other signs of renal disease and in two of them the liver dullness was normal, while in the third it was somewhat diminished. Such cases as these—and besides the three described fully, three others are referred to—Williams regards as allied to yellow atrophy. The high ammonia coefficient is characteristic. It is not found in cases of neurotic or reflex hyperemesis, nor in the pre-eclamptic toxæmia accompanied by albuminuria, and therefore is an important diagnostic sign of a dangerous condition. A coefficient of 10 to 15 per cent., he says, would seem to justify the diagnosis of toxæmic vomiting and to afford an urgent indication for the prompt termination of the pregnancy. Ewing and Wolf[3] give a most valuable series of analyses of urine in more than 30 cases of pregnancy. The first 6 cases showed no symptoms of abnormality except that in the urine of one of them the ammonia coefficient was somewhat raised, in 1 case up to 11 per cent., and the urea was low and in all six the undetermined nitrogen (urea, NH_3, uric acid and kreatinine were determined as well as the total N) gave high figures, 14 to 15 per cent., even when the NH_3 was not above the normal, and 24 per cent. in one case when the NH_3 coefficient was 11 per cent. The normal undetermined N coefficient is, according to Folin's estimation, no more than about 6 per cent. The next 6 cases, characterized by very severe vomiting beginning early in pregnancy, are grouped together by the authors as toxæmic. In four of these the urine was found to contain large amounts of ammonia, forming 20 to 45 per cent. of the total nitrogen excreted in one case. In the other 2 the ammonia coefficient was normal, but in all 6 the undetermined nitrogen was at least doubled. Similarly in the other three groups of cases, of pre-eclamptic toxæmia, eclampsia, and acute yellow atrophy, low urea and high ammonia coefficients are the rule, and large amounts of undetermined nitrogen are common. The

[1] Zweifel, *Arch. f. Gynæk.*, lxxii. 1, and lxxvi. 536.
[2] Williams, *Johns Hopkins Hospital Bulletin*, 1906, p. 71.
[3] Ewing and Wolf, *Amer. Journ. Obst.*, lv, No. 3.
[4] Donath, *Berl. klin. Woch.*, 1907, p. 241.
[5] Mouye and Saiki, *Zeit. f. Physiol. Chem.*, xxxvii, p. 203.
[6] Hopkins and Fletcher, *Journ. Physiol.*, xxxv, 247.

authors are disposed to regard this alteration in the proportion of the nitrogenous constituents of the urine which is common to these conditions as a sign that they are all results of the same underlying disturbance of the metabolism of the body. The point raised for discussion before the section was whether with the data as yet available it was justifiable to conclude that the abnormal composition of the urine was causally connected with the grave conditions referred to. It was pointed out that ammonia coefficients such as those described were common in starvation, in severe vomiting and diarrhœa, with diets from which carbohydrates were excluded, in diabetes and amongst other conditions in certain diseases of the liver. In these last cases there was some evidence that the association of high ammonia coefficients with hepatic disease was incidental rather than causal, and the same sort of connexion had not yet been proved not to hold in the disorders of pregnancy. More striking than the high ammonia coefficients was the large amount of nitrogen in unknown combinations, for to account for this there were fewer possible known causes. It was particularly noteworthy that in complete starvation, so far as the available data went, there was no evidence for a similar phenomenon. But on the other hand, there was some difficulty in attributing greater significance to this sign, as all the six cases described by Ewing and Wolf as being free from symptoms of any grave disturbance excreted more than twice the normal amount of nitrogen in such unknown combinations.

OBSTETRICAL AND GYNAECOLOGICAL SECTION.

AT a meeting on Thursday, February 13th, Dr. HERBERT SPENCER, President, in the chair, a paper on *Ovarian dermoid with secondary cysts connected with the omentum* was read by Dr. MARTIN RANDALL, including a pathological report by Mr. T. W. P. Lawrence. The author described the case of a young woman who had a pelvic tumour the size of a hen's egg in the right posterior quarter of the pelvis rather high up. There were symptoms of inflammation, and the tumour was opened in the right iliac region and purulent looking fluid with some vernix-like material escaped. The cavity was drained, but subsequently the cyst was removed by operation. The omentum was found to be studded by a large number of small cysts containing cheesy material and hair, and a large piece of this structure was removed. Mr. Lawrence reported that the main tumour was a dermoid of the right ovary. As many as fifty minute cysts were found in the omentum. They were for the most part lined with cubical epithelium and contained sebaceous material. The patient made a good recovery, and died a year after with symptoms of apoplexy. The PRESIDENT (Dr. Herbert Spencer) thanked the authors for their valuable and interesting paper. He thought there was little doubt that the fluid at the first operation was sebaceous and not purulent. He had been surprised to find how frequently some operators met with "suppurating dermoids." The explanation, he thought, was that the sebaceous material, fluid at the temperature of the body, closely resembled pus to the naked eye, although at a lower temperature it solidified. In his experience, suppuration rarely occurred in dermoids. A practical deduction from the paper was the importance of removing these and other ovarian tumours entire if they were not large. This had been his practice for many years. He did not go so far as Mr Bland Sutton, who removed all tumours, however large, entire, sometimes making an incision extending from the ensiform cartilage to the pubes; such a long incision certainly to some extent increased the risk of omental and intestinal adhesions and of hernia. Dr. GALABIN said that he had met with one somewhat similar case in which there had been a further development of the metastases than in any collected by Dr. Randall. An unmarried woman, aged between 40 and 50, came with a large tumour, the history of the duration of which was quite indefinite. She said that her abdomen had been large for as long as she could remember. An ovarian tumour was diagnosed. At the operation it turned out to be a dermoid, and was removed with difficulty because of universal adhesions. Among the adhesions and over the peritoneum were scattered very numerous thin-walled cysts containing sebaceous fluid like that in the main cyst. These existed also in the cellular tissue of the abdominal wall and pelvis, so that a number of them were divided in the abdominal incision. No stem-like structure was seen in the secondary cysts. Those on the peritoneum were thin walled, but in the cellular tissue no definite cyst wall could be detected. A good deal of sebaceous matter had to be left unremoved, but the incision healed well in the first instance. After some weeks, however, it broke down again, and a discharge of oily fluid began, which later became semipurulent. The patient remained ill many months, and it was feared the condition might run a malignant course, but eventually the sinus closed, she recovered completely, and was well after several years. He agreed with the President that it was desirable to remove, if possible, a small or medium-sized tumour entire. Dr. R. H. HODGSON remarked on the fact that some of the cases had died with septic symptoms. He suggested that they might have been saved by hexamethylenetetramine. He had experimented with it in large and small doses in many and varied diseases, and had found it most valuable in septic diseases, but it needed to be used with caution. The kidneys afforded the first and most marked signs that the drug was in excess. He suggested its use to those who had much operative work on the peritoneum. Dr. AMAND ROUTH had seen several cases where dermoid cysts had ruptured before or during operation without such sequelae as the authors described. Were the authors able to discriminate between dermoids which were innocent and those whose cells were liable to be transplanted and to develop into proliferating cysts, as in the cases recorded by them? Dr. H. MACNAUGHTON-JONES said there must have been some thousands of ruptured dermoid cysts, and yet but the cases mentioned had been recorded. It did not appear, therefore, that there was any great danger of metastasis or implantation in the case of simple dermoids.

The following specimens were exhibited: Dr. HERBERT SPENCER: Caseating carcinoma of the corpus uteri. Dr. H. MACNAUGHTON-JONES: Haematosalpinx complicating a myomatous uterus. Dr. EARDLEY HOLLAND: A melanotic tumour of the vulva. Dr. AMAND ROUTH: A placenta diffusa.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, February 24th, 1908.

THE CHEMICAL EXAMINATION OF THE GASTRIC CONTENTS AFTER A TEST MEAL.

DR. W. H. WILLCOX read a paper on the importance and significance of the clinical examination of the gastric contents after a test meal. He laid great stress upon thorough and systematic examination of the gastric contents in cases presenting persistent dyspeptic symptoms. It was only by that means that a reliable diagnosis could be arrived at in many cases. The lack of information as to the nature of the gastric contents in the different forms of dyspepsia and gastric diseases was deplored, and it was pointed out how necessary it was that cases of that class should be systematically investigated, in order that more accurate knowledge, which would be of great value in directing treatment along the right lines, might be obtained. It was necessary in every case that both the clinical history and symptoms should be fully considered in conjunction with the result of the analysis of the gastric contents, for a reliable diagnosis could not be based on an analysis alone. The chemical and clinical evidence were supplementary to one another. The importance of the estimation of the total acidity was described, and it was pointed out that in pyloric carcinoma sometimes the total acidity was equal to or slightly above normal. The estimation of the active hydrochloric acid was the most important part of the gastric analysis and was much more reliable than the total acidity. It was doubtful whether the statement that the hydrochloric acid was diminished in cancer of the organs when the stomach itself was not involved was true. The only true evidence of diminished hydrochloric acid in those conditions would be given by estimations of the active hydrochloric acid, not by the free hydrochloric acid. In several cases of cancer of organs contiguous to the stomach he had found that the active hydrochloric acid was reduced, so that it could not be correct to say that extra-gastric cancer was a cause of diminished HCl in the gastric secretion. The value of the tests for lactic acid, mucin and sulphocyanides, was explained, and a new method of estimating

the ferment activity of the gastric contents, regarded as furnishing very valuable information and of being of almost equal importance to the estimation of the active HCl, described. The method of estimation was well adapted to clinical work and furnished reliable results. It depended on the addition of increasing quantities of gastric contents respectively to a series of test tubes 5 in. by $\frac{3}{8}$ in., each containing 5 c.cm. of milk. After mixture the tubes were left in a water bath at 40° C. for thirty minutes. At the end of that time the tubes were examined. Above a certain point in the series all the tubes would have undergone complete clotting, so that the contents would not flow out on inversion, while below that the contents could be poured out. The minimum quantity of gastric contents to cause complete clotting was a measure of the rennin present. Where the acidity was low the renninogen should be estimated by mixing equal quantities of 0.4 per cent. HCl and gastric contents, and carrying out the same method of estimation. In normal cases about 0 2 c.cm. of gastric contents were necessary to cause complete clotting. In gastric carcinoma the ferment activity was much reduced, 0 5 c.cm. or more of gastric contents being necessary to cause complete clotting. In congenital pyloric stenosis the rennin activity was raised. In marasmus and acid dyspepsia of children the ferment activity was lowered. Lists of recent analysis of the gastric contents in groups of several cases were given for gastric ulcer, gastric carcinoma, gastritis, mucous colitis, gastric ulcer before and after gastro-enterostomy, and in carcinoma elsewhere than the stomach; also in children in congenital pyloric stenosis, acid dyspepsia, and marasmus. Conclusions as to the nature of the gastric contents in various pathological conditions were deduced from these analyses.

The paper was discussed by Dr. F. de Havilland Hall, Dr. F. J. Poynton, and Dr. J. P. Parkinson. Dr. Willcox replied.

Experimental Production of Gastric Ulceration.

Dr. C. Bolton read a paper on the experimental production of gastric ulceration by injection of gastrotoxin. The gastrotoxic serum was prepared by injecting the mucous membrane of the stomach of one animal into another, the blood serum of the injected animal becoming poisonous for the gastric cells of animals similar to that of which the stomach had been used for injection. Three serums were described: (1) That obtained by injecting the rabbit with guinea-pig's gastric cells; (2) that obtained by injecting the rabbit with rabbit's gastric cells; and (3) that obtained by injecting the rabbit or fowl with human gastric cells. The mucous membrane of a guinea-pig or rabbit was washed free from blood, made into an emulsion with salt solution and injected fresh into the peritoneal cavity. After four or five injections the animal was bled and the serum examined *in vivo* and *in vitro*. Over 150 animals had been immunized in this way. The serum obtained by injecting the rabbit with guinea-pig's gastric cells produced no lesion in the rabbit itself nor any lesion in any other rabbit, but when injected into a guinea-pig it produced acute symptoms and death within twenty-four hours. If smaller than lethal doses were injected the acute symptoms all disappeared by the next day. The *post-mortem* lesions consisted of patches of necrosis in the mucous membrane of the stomach which developed into acute ulcers. The patches of necrosis were stained black by altered blood pigment, and were usually multiple but might be single. The necrotic process began at the ducts of the glands and extended towards the bases; it was limited to the mucous membrane. The healing of the ulcers was studied by producing them in the first instance by local injection of the serum into the wall of the stomach. In this way an ulcer could be produced without toxic symptoms. It was found that such ulcers completely healed in from fourteen to twenty-one days, leaving more or less thickening of the peritoneum and sometimes a little puckering of the mucous membrane. Adhesions might form with various organs, or the ulcer might perforate, giving rise to acute peritonitis or local abscess formation. The mode of action of the gastrotoxin was studied by neutralizing the gastric juice whilst the poison was acting. This was done by introducing sodium bicarbonate into the stomach, and it was found that when the gastric juice was thus put out of action the gastrotoxin was unable to produce ulceration of the stomach, and no microscopic change could be found in the cells as the result of the action of gastrotoxin. It was thus demonstrated that the necrosis was not due to the action of the gastrotoxin, but that the latter produced some change in the cells which allowed the gastric juice to attack them, the process being therefore one of self-digestion. That the poison injured the cells and did not remove any specific resisting power possessed by them was shown by injecting other cytotoxins. Hepatotoxin, enterotoxin, and haemolysin were shown to produce necrosis of the stomach in exactly the same way by injuring the cells. Certain protoplasmic poisons—such poisons were hydrochloric acid above 2 per cent., sulphuric acid above 0.8 per cent., lactic acid above 4 per cent, and acetic acid above 2 per cent.—introduced into the stomach were likewise found to initiate self-digestion. If the animal were poisoned with gastrotoxic serum the introduction of these solutions into the stomach in much greater dilution than was necessary to produce necrosis was found markedly to increase the lesions. Hyperacidity of the gastric juice, therefore, though unable of itself to produce ulceration might increase the tendency to ulceration by acting as a protoplasmic poison. Repeated injection of the gastrotoxic serum was not found to lead to chronic ulceration, but to immunity to the serum, the animals becoming protected against a lethal dose. Hyperacidity of the gastric juice, produced by feeding the animals in which ulcers had been induced on 2 per cent. hydrochloric acid, did not retard the healing of the ulcers. Experiments dealing with neutralization of the gastric juice and motor insufficiency of the stomach were in progress, but were not yet in such an advanced condition as to admit of conclusions being drawn therefrom. Experiments *in vitro* demonstrated the presence of a haemolytic factor in the serum, and also precipitins not only for the proteid of stomach cells, but also for the proteids of hepatic and intestinal cells and the blood serum of the guinea-pig. The gastrotoxin was proved not to be a specific poison for the stomach cells because it possessed an action upon other tissues, other serums were capable of causing necrosis of the stomach, and various tissues of the body could partially neutralize the effects of the serum if mixed with it for an hour previous to the injection. The gastrotoxin formed against human stomach cells was proved to possess the same action *in vitro* as the guinea-pig gastrotoxin. The rabbit was found to respond to the injection of rabbit's stomach cells by the formation of a poison not for rabbit's tissues but for those of the guinea-pig. The lesions produced were identical with those described in the case of the guinea-pig-rabbit gastrotoxin. Evidence was obtained that the rabbit also formed a poison against its own stomach cells, and that this poison was neutralized by a concomitantly-formed antibody. Whether any conditions existed which could prevent the formation of this antibody and thereby lead to an autointoxication was a question with regard to which no experimental data were forthcoming.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

J. M. Redmond, M.D., P.R.C.P.I., President, in the Chair.

Friday, January 31st, 1908.

Prognosis and Treatment of Nephritis.

The President of the Academy (Dr. J. M. Finny) opened a discussion on this subject. He limited his remarks entirely to the inflammations included in the varieties: (*a*) Acute nephritis due to toxic influences or exposure to cold, (*b*) subacute or chronic parenchymatous nephritis, and (*c*) chronic interstitial nephritis. He pointed out, however, that in every variety of nephritis there was more or less diffuse inflammation involving the glomeruli, the parenchyma, and the interstitial tissue. He then proceeded to discuss, with a view to forming a sure basis for prognosis and treatment, three principal features to be found in these cases—(1) albuminuria, (2) dropsy, (3) the uraemic syndrome—and laid stress on the importance of taking a wide and comprehensive view of them, and of not attaching too much significance to any one group by itself. On this point he called attention to the possible harm which might be done to a patient's prospects by rejecting him for insurance or admission to a

post in the public services on account of albuminuria, pointing out that the condition might be due to adolescence or the result of temporary weakness of the heart. He indicated some errors to be avoided, such as testing a chance sample of urine instead of the water of twenty-four hours, comparing the albumen of one specimen with that of another when the variations might be entirely due to some change of diet or diminution of the liquids ingested, and he quoted von Noorden's statement that "albumen is a conclusive index only in acute nephritis, as its reduction points to improvement, its increase to exacerbation." It was not so reliable in chronic parenchymatous nephritis, in which "it is liable to fluctuations, and an attempt to base a prognosis on or to estimate the effect of treatment by such a criterion is fallacious." On the other hand, their significance must never be underrated when they pointed in the same direction as the other changes in the general condition of the patient. As to the possibility of treating albuminuria by medicine, he considered it was as little encouraging as in using haemostatics in the haematuria of renal inflammation. The indications for treatment were to place the kidneys in physiological rest by cutting off all proteid diet, as meats, soups, beef extracts, eggs, etc., by putting the patient at first on starvation diet when the inflammation was acute, the urine bloody and very scanty, and then allowing a very restricted diet of milk and starchy foods, with cream and sugar. The amount of liquid permissible at first must not exceed two pints in twenty-four hours, as the oliguria was due to renal inefficiency, and it was as harmful as unscientific to try to produce diuresis by copious libations as by diuretic medicines. As soon, however, as the kidneys showed recovery by secreting more water, it was then most beneficial to flush them with water, or lemon and water with a small quantity of cream of tartar. This treatment by deprivation of liquids was especially necessary when the oliguria was accompanied by dropsy, local or general. The second indication for the treatment of acute nephritis was to save the kidneys by calling the bowels and the skin into activity and thereby eliminating the poisons and the water which the inefficiency of the renal epithelium caused to be retained. A daily morning dose of pulv. jalap. co., or concentrated doses of magnesium sulphate would meet the one, and poulticing, leeching, or cupping over the loins would effect the other. In some cases of acute nephritis where uraemic symptoms were early developed in a previously healthy and vigorous patient, it was right to bleed to 15-20 oz. from the arm, or, as Baccelli suggested, from the dorsal vein of the foot. One such case was reported where venesection apparently saved the patient's life. In addition to local or general depletion, the use of hot-air baths, hot pack, or hot baths was insisted on, and in most acute cases of albuminuria or of dropsy this treatment alone would be followed by diuresis. On the subject of anasarca reference was made to the opinion of Straus, von Noorden, and Senator as to the non-elimination by the secreting epithelium of the chlorides being one of its chief causes, and of the therapeusis of withholding salt from the diet, and to the statement of many German and French writers that the amount of dropsy could be gauged by the retention or the excretion of chlorides in parenchymatous nephritis, more especially when uraemic symptoms were present. That question did not arise in the chronic interstitial nephritis, as in it the chlorides were freely discharged. While the prognosis and treatment were more closely related to the state of the heart and the arteries, in these often very chronic cases, lasting for years, the diet should be more generous and contain more proteids than in the other forms of kidney inflammation; the prognosis as to cure was very bad, but much might be done to prolong life. The state of high tension of the arteries might be reduced and regulated by a systematic use of nitroglycerine, trinitrites, or sodium nitrite for weeks and months, as under their use tension was reduced and the left ventricle was enabled to recover from a state of dilatation to the normal state of hypertrophy present in cirrhosis of the kidney. Should a case be complicated by an attack of acute nephritis, the treatment for that state already detailed must be used for a comparatively short time, and, should uraemic headache or coma or convulsions set in, active treatment of the bowels and the skin should be instantly commenced and strenuously carried out, while full doses of chloral must be administered by mouth or rectum, and aided, if necessary, by inhalation of chloroform. Reference was made to the valuable effects of hypodermics of morphine in this form of disease, and when carefully administered and its effects watched they would be found invaluable in stopping the convulsions, limiting the status epilepticus, relieving the headache, and arresting the vomiting. Another drug of great value was the iodide of potassium, which should be given for weeks and months at a time, since it diminished the risks of haemorrhage into the brain or retina, while if bleeding had already taken place into the latter it caused its limitation and absorption.

PATHOLOGY OF NEPHRITIS.

Dr. EARL read a paper on this subject. He confined his attention principally to three main points: (1) The etiology of nephritis, (2) the classification of the varieties, (3) the changes in the cardio-vascular system.

Dr. TRAVERS SMITH said he had been struck on several occasions by the fact that patients died of severe uraemic symptoms without ever having been in the least oedematous, and he thought that, if oedema were a conservative process, they might have been saved if they could have been made oedematous. He had given a man, who had been for some time in uraemic convulsions and coma, sodium chloride, with the result that at the end of twenty-four hours he became markedly oedematous, and made a good recovery from all his symptoms.

Sir JOHN MOORE concurred with Dr. Travers Smith as to the beneficial influence of oedema in cases of chronic renal disease, with regard to which he had read a paper before the British Medical Association at the Oxford meeting. The general view in regard to the pathology of nephritis was that increased arterial tension was the cause of the hypertrophy of the left ventricle of the heart, but recently the view had been advanced that the high arterial tension was the result of the forcible action of the heart caused by the circulation in the blood of an increased amount of nitrogenous compounds, such as urea and its allies. He looked upon water as a valuable eliminant in cases of nephritis; it acted on the bowels and on the skin, and it was very desirable to keep the skin active in all forms of toxaemia, but the water should be soft water. They should not be too strict in dieting chronic nephritics; milk was sometimes very distasteful to them, and was not easily digested, and sometimes they died of starvation if kept off an animal diet. It was, moreover, just as necessary to treat nephritis in fresh air as tuberculosis.

Dr. FINNY, in reply, said he did not take the view that oedema should be looked upon as a conservative process, when the materials which were stored up in the fluids in the cavities of the body were a constant danger of infection. It was well known that the presence of a great deal of dropsy might be compatible with good health, but it would hardly be looked upon as a conservative process saving the patients from some other danger. High arterial tension was a compensating force, but at all times was a matter of great danger; at any moment there was the risk of rupture, and the treatment should really be to lower the tension.

LIVERPOOL MEDICAL INSTITUTION.

T. H. BICKERTON, M.R.C.S., etc., President, in the Chair.

Thursday, February 13th, 1908.

THE TREATMENT OF HAEMOPTYSIS BY NITRITE OF AMYL.

DR. CRACE-CALVERT read a note on the treatment of haemoptysis by nitrite of amyl. He stated that till recently the treatment of haemoptysis had not been satisfactory, and that nearly all drugs except morphine had been described as useless. Dr. F. W. E. Hare had called attention to the use of the nitrite in checking haemorrhage, and pointed out that it acted partly by causing a marked reduction in the arterial blood pressure, and partly by producing an intense anaemia of the lung parenchyma, and so gave time for clotting to take place. Dr. Crace-Calvert had tried it in about 25 attacks of haemoptysis, many of them profuse, and always found that it checked the bleeding almost instantly. Afterwards, if there was excitement of any kind, he gave ½ grain of morphine. He considered that nitrite of amyl was the drug *par excellence* to be used first, as it saved the patient unnecessary loss of blood and prevented large accumula-

tions of blood in the air passages. It was especially useful in sanatorium work where the patient was seen at the beginning of the attack.

Sir JAMES BARR congratulated Dr. Crace-Calvert on pointing out the value of nitrite of amyl and such other agents in cases of haemoptysis. One often heard of blood pressure in numerous diseases without the observers having any clear idea as to what was meant by blood pressure. Was it arterial pressure, capillary pressure, venous pressure, or the pressure within the arterioles? Those who talked so glibly on the subject generally meant arterial pressure, and in this case the reference must be to the systemic arterial system, because the pulmonic system was very poorly supplied with any regulative mechanism in the form of vasomotor nerves, and damming back of the blood in the pulmonic system must be due to heightened pressure within the arterial system. Blood pressure was purely a relative term, and what might be considered a very high blood pressure in phthisis would be a low pressure in renal disease. In phthisis the heart was small and weak, and a comparatively small resistance was more than it could cope with; therefore any slight rise in the arterial pressure in cases of phthisis was very apt to dam back the blood in the pulmonic system. The great advantage of the use of morphine or morphine and atropine in cases of phthisis lay in the fact that they generally stopped the cough, and thus prevented any rise in the arterial pressure. He had for many years used nitroglycerine in cases of haemoptysis, and as a rule he preferred it to nitrite of amyl because of its more lasting effect. If the blood was deficient in lime salts it was very important that lime salts should be administered.

Dr. NATHAN RAW could not agree that nitrite of amyl had any specific action in the control of haemoptysis. Whilst one occasionally met with an overpowering haemorrhage which was rapidly fatal, the fact remained that the great majority subsided spontaneously with care and rest. He could not agree that haemoptysis was due to increased blood pressure, but rather to erosion of some small blood vessel. He advocated absolute rest in the recumbent posture, a hypodermic of morphine, ice to suck, and cold turpentine applications to the chest. He had seen excellent results from adrenalin chloride in long-continued but small haemorrhages from the lungs. It was possible that nitrite of amyl was occasionally useful by lowering the blood pressure.

Dr. W. B. WARRINGTON said it had long been recognized that a hypodermic injection of morphine was the most satisfactory drug in the treatment of haemoptysis, and for some years past nitrite of amyl in addition had been the routine treatment at the Northern Hospital.

Dr. A. G. GULLAN believed that in many cases of phthisis the blood pressure was lowered. Yet every one was well acquainted with the excited and strong action of the heart and the strong and quick pulse which arose on the sudden occurrence of a serious haemoptysis. The arterial blood pressure was then undoubtedly greatly increased, and it was in this condition that the amyl nitrite was beneficial as a rapid means of lowering it. At the same time, such good results had been obtained by rest, morphine, and purgatives in the past, and, moreover, these methods were invariably used in conjunction with amyl nitrite, that he felt too much credit for the good results obtained should not be given to that drug.

Dr. R. J. M. BUCHANAN pointed out that cases of phthisis associated with good blood pressure generally did well, and that haemoptysis more often occurred in chronic and relatively favourable cases. The haemoptysis was in a large majority of cases the result of raised blood pressure in the systemic arteries, and Nature pointed out a method of treatment in that the haemoptysis itself lowered pressure and thus arrested haemorrhage. Taking the lesson from Nature, the use of nitrite of amyl acting in the same way was a rational therapeutic measure, and the results justified its administration. He advised a course of sodium nitrite afterwards to prevent recurrence at any time when, from a marked rise of pressure, haemoptysis was to be feared. He did not advocate worrying the patient at the time of the haemorrhage with purgatives. He related a case of recurrent haemoptysis without any pulmonary lesion always associated with high blood pressure, due to tobacco smoking, and always arrested by the exhibition of nitroglycerine and nitrite of soda.

The paper was also discussed by the PRESIDENT, Drs. BUSHBY, BRADSHAW, and ABRAM; and Dr. CRACE-CALVERT replied.

THE PHYSIOLOGICAL IMPORTANCE OF THE CALCIUM SALTS.

Dr. W. BLAIR BELL read a paper on this subject. The observations had been made incidentally during the work he was at present engaged upon in reference to the calcium metabolism in menstruation and pregnancy. He considered them of sufficient importance to bring forward, as he himself could not carry them any further. His method of calcium estimation, described in the BRITISH MEDICAL JOURNAL for April 20th, 1907, had been largely employed in the investigation. The diurnal variations, the value to be attached to the blood index, and the interpretation thereof, were fully described. He discussed what he described as the reparative function of calcium salts, and stated that he considered there was always a determination of these salts to an injured or a diseased region. He also thought that there was no such thing as calcareous degeneration *per se*, but rather calcification—a reparative process—in diseased structures. The effect lime salts had upon involuntary muscles was next mentioned, and reference was made to the work of Ringer and others in this direction. He went on to describe the attempts made by himself to discover the regulating factors in the calcium metabolism, and discussed his experiments and observations in regard to the thyroid, pituitary, and other ductless glands, which he considered acted in association, anabolically or katabolically, in connexion with the lime salts. The question of calcium and the coagulability of the blood was discussed, and he brought forward evidence to show that the reduction of the coagulability of the blood on the administration of an excess of lime salts was due not to an excess in the blood, but to an active resistance or immunity on the part of the subject, or increased excretion brought about probably by thyroid interference. The power the leucocytes possessed of absorbing calcium probably in solution, and conveying it for the processes of repair and for other functions, was considered and evidence adduced to show the probability of this property. Lastly, the author described some observations upon gelatine and the contained calcium. He illustrated the fact which he had discovered that if calcium was precipitated from gelatine it would no longer coagulate by passing round a control and a specimen prepared several days before.

Sir JAMES BARR said he had himself been using calcium in disease for many years, and therefore felt grateful to Dr. Blair Bell for giving a more accurate method for estimating the amount of calcium in the blood. Hitherto he had had to go by the coagulability of the blood, and in such a disease as pneumonia by the amount of the adhesiveness of the secretion. In cases of pneumonia it had a very great value, especially in those cases in which the secretion was liquid or haemorrhagic. *Caeteris paribus*, the more scanty and viscid the expectoration in pneumonia, the better the prognosis; hence in such a disease he had for many years condemned the use of expectorants. The calcium salts had a wonderful effect not only in increasing the secretion, but in toning up the vessels. The variable amount of lime salts in the blood at different periods of the day scarcely affected the diseased conditions, because in the infective process the calcium was thrown out of the blood into the tissues, and in such cases there was always a tendency to a deficiency. The important effect of the calcium salts in maintaining the heart's action had been well known since the observations of Sidney Ringer. The reparative action of the calcium salts had been shown by Dr. Blair Bell, but in many chronic diseases they were apt to accumulate in the blood where there was defective excretion and became deposited in the walls of the vessels. Now, although the salts under these circumstances were fairly insoluble, yet by maintaining a high alkalinity of the blood by the use of citrates these salts could be withdrawn from the tissues. The observation of Dr. Blair Bell on the presence of calcium in the leucocytes was exceedingly interesting. The great increase in the blood of a cat where the thyroid had been removed was interesting, because the speaker had found that in cases of exophthalmic goitre the lime salts were nearly always defective, and great amelioration of the symptoms could be produced by their administration. He hoped that Dr. Blair Bell would pursue his investigations.

Dr. R. J. M. BUCHANAN considered Dr. Blair Bell's method of calcimetry by the use of the haemocytometer sufficiently accurate for clinical purposes, and that it stood on a par with erythrocytometry and leucocytometry in abnormal blood states.

Dr. P. HICK said that, although the total calcium of the blood was not precipitated by Dr. Blair Bell's method, all the "ionized" calcium was, and it was in this state that the calcium took part in such active processes as the clotting of blood, and the method gave a measure of the available calcium. Calcium chloride and calcium lactate given by the mouth occasionally gave no rise in the calcium content of the blood, which seemed to show that in these cases inorganic calcium salts or the calcium salts of the simpler organic acids were not capable of absorption. Sir A. E. Wright having previously arrived at the same conclusion, by showing that these salts so administered in such cases produced no increase in the coagulability of the blood, Dr. Hick suggested that the disappointing results obtained with gelatine by some observers were due to using only a 2 per cent. solution, which contained only a comparatively small amount of gelatine.

Dr. GORDON LITTLE emphasized the necessity for verification of the method employed by strict chemical analysis. It was absolutely necessary that clinicians should exercise the greatest care, especially when they attempted work in the domain of physiological or physical chemistry. In the past objection had been taken, and rightly taken, by high authorities to the unreliable methods by which some eminent authors had obtained their results, and upon which far-reaching theories had been set up only to be discounted later. He pointed out that the method of Dr. Blair Bell was a comparative method, and that by it only a proportion of the calcium in the blood could be estimated, namely, the free or ionized calcium. There was, in addition, the "masked" or absorbed calcium in combination with proteins which this method did not touch, and which in a metabolic sense was the most important. He also drew attention to the artificial standard of comparison, and the impossibility of measuring by means of crystals formed in an aqueous solution even of known strength those formed in a complex colloidal solution, such as blood. The process of crystallization went on in the two media under totally different conditions. Attention was also called to Dr. Blair Bell's results in reference to menstruation and the diminished calcium content of the blood during that period as illustrating the relationship of calcium to gout. It might tend also to explain why women suffered less frequently from the disease than men. He also pointed out that, owing to the frequent variations that went on almost from hour to hour, the idea of establishing a so-called "calcium index" was next to impossible without a very prolonged series of observations. He also remarked that the subject of calcium was not so new and undiscovered as had been suggested. As an empiric remedy it was amongst the oldest and best authenticated, as in the waters of well-known springs—for example, Contrexéville, Buxton, and Bath—and mentioned the names of modern workers, more especially Ringer in this country and McCallum in America, who, with a number of others, had done much to prove the importance of this element in the human economy. In regard to calcium as an essential factor in the setting of gelatine, this was disputed. Reference was made to a paper by Mörner in the *Z. f. phys. Chemie* (28, p. 271, 1899) on the coagulation of gelatine. Mörner showed that ash-free preparations of gelatine showed very little difference in the time of coagulation when formed into an aqueous solution as compared with ordinary gelatine containing 0·4 to 3·1 per cent. of ash, and, as the result of a long series of well-conducted experiments, states:

> Solutions of gelatine rich in ash do not in the very least surpass the solutions of ash-free gelatine preparations in regard to ease with which they coagulate.

And further shows that

> the addition of neutral salts greatly increases the time required for the coagulation of gelatine solutions, although this is in no way due to a chemical change, but is a purely physical effect produced in the outward state of the medium.

This explained quite well why gelatine containing ammonium oxalate had not coagulated in the same time as the control without assuming that a calcium salt was necessary.

The PRESIDENT also discussed the paper, and Dr. BLAIR BELL replied.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 14th, Dr. ALLAN in the chair, Mr. SECKER WALKER read notes from some 40 cases in which the *Ophthalmic reaction of Calmette* had been observed. Several controls in patients with no evidence of tubercle were tested, and all were negative except one; this might have been a case of latent tubercle not diagnosed. A case of advanced tuberculous peritonitis gave no reaction, while a milder case was positive. A case of severe scleritis with no history of syphilis or rheumatism gave a positive reaction, while 2 cases of irido-cyclitis of doubtful origin were negative. A case of recent choroiditis with no history of syphilis gave a negative reaction, but improved rapidly under mercury. The possibility of infection or injury to the eye by use of the test was discussed. One eye treated with a positive result developed in a few days a phlyctenular corneal ulcer, which healed rapidly in a few days without scar. This was the only case Mr. Walker had seen, but a similar case had been observed by Drs. Webster and Kilpatrick; that was the only case he had been able to find reported. In studying the test as regards local disease, such as disease in the eye, it must be remembered that a positive result would not necessarily refer to the disease under examination, but might point to the existence of a tuberculous deposit in another part of the body. Dr. OTTO GRÜNBAUM stated that he had tried the reaction in several hundreds of cases, and that data were being collected at the London Hospital in sufficient number for the statistician attached to that institution to work out mathematically the accuracy of the test. One could well understand that only those cases which came to the *post-mortem* table, or those in which the tubercle bacillus was demonstrated, were available for the calculation, and that for this reason considerable time must elapse before the work could be completed. Mr. Walker had stated that the reaction began three to twenty-four hours after the instillation of the drop. He thought that although this was true in quite a large percentage of cases, nevertheless there were quite a number in which there was some delay, and it was his routine practice to examine twenty-four hours and forty-eight hours after introducing the tuberculin. He considered all those cases positive in which any differences had developed in the appearance of the inner canthus or plica which persisted for twenty-four hours. Not infrequently the introduction of a drop of the fluid would cause a slight hyperaemia for an hour or two, but this would not last for twenty-four hours. His impression was that the more experience one had with the reaction the greater reliance one would place in it. In only two or three of his cases was the reaction violent, and in these the discomfort could usually be allayed by minute quantities of cocaine, and frequent washing with boracic acid lotion. He inclined to the opinion that the greater the resistance of the patient, the greater the reaction in the eye. He did not venture to make a dogmatic statement to this effect, for his experience was not sufficiently large. He gave a few instances of cases in which the reaction appeared to fail, but which proved later to have been correct. In reply to Mr. Whitehead's question whether any alteration in the opsonic index was observed after the instillation of the tuberculin, he stated that experimenters had noted a distinct negative phase, and that some therefore believed the procedure possibly to possess a detrimental effect upon the patient, but in this he personally did not agree. Mr. WOODCOCK also stated his experience with the reaction. Mr. NORMAN PORRITT read a paper on the use of *Pure animal wool as a heat conserver in medical and surgical work*. He brought forward the advantages of animal wool over that of vegetable origin such as cotton-wool. The wool was not intended for use as swabs or dressings, but as a wrapping for the body where conservation of bodily heat was desired. He advised it as a substitute for the familiar Gamgee jacket and had found it of great value in minimizing post operative shock when patients came to the operating table clad in a suit of the wool. Dr. MAXWELL TELLING read a paper on *Acquired diverticula of the sigmoid flexure*, considered especially in relation to secondary pathological processes and their clinical significance. He pointed out that such diverticula were of much more frequent occurrence than was commonly

supposed and that they led not seldom to serious clinical symptoms. Of these the most important were: (1) Inflammatory troubles in the left iliac region, simulating appendicitis in many instances. (2) General perforative peritonitis. (3) Inflammatory thickening of the sigmoid, leading to stenosis, tumour formation and the mimicry of carcinoma; and (4) vesico-sigmoid fistulae. Mr. B. G. A. Moynihan agreed with Dr. Telling as to the frequency of the condition, and its clinical and especially surgical importance. He had operated on cases in which both stenosis of the bowel and vesico-sigmoid fistulae had been the direct result of such multiple false diverticula. Various specimens of the condition were shown by Dr. Telling, Mr. J. K. Jamieson, Dr. G. W. Watson, and Mr. Moynihan. Dr. Trevelyan showed: (1) A woman, aged 49, who three weeks ago woke up in the night with vomiting and headache, and next morning presented a typical reeling gait. There were no other distinct localizing signs, and the ataxia had since improved. A small *Cerebellar haemorrhage* was suggested as the cause. (2) A lad, aged 19, with a tabo-cerebellar gait, nystagmus, some tremor, and increasing defective intelligence, but with exaggerated knee-jerks and ankle clonus. There was no scoliosis or deformity of the foot, or family history. The resemblances of the case to *Friedreich's disease* were pointed out. Mr. J. F. Dobson showed a case of *Double congenital dislocation of the hip-joints*, in plaster after reduction by Lorenz's method. Dr. Warurop Griffith showed a specimen of *Aneurysm of the abdominal aorta*. Mr. A. L. Whitehead showed a case of *Lymphangioma of the orbit*. Cases and specimens were also shown by Mr. H. Collinson, Dr. Allan, and Mr. Michael Teale.

Medico-Legal Society.—At a meeting held on February 11th, Sir William Collins, M.P., ex-President, in the chair, Dr. L. Freyberger read a paper entitled, An Analysis of Seventy-four Cases of Sudden Death while under the Influence of an Anaesthetic. The clinical facts relative to many of these cases, all of which occurred in one coroner's district during the last six years, were given; in each instance Dr. Freyberger had made a *post-mortem* examination and had given evidence before an inquest jury; in his opinion it was very essential to diagnose the possibility of the presence of the status lymphaticus, as patients with that condition needed special care when being anaesthetized. Dr. F. W. Hewitt, M.V.O., considered the question under discussion a most pressing one, for many of the deaths just reported were preventable. The older view, that a small percentage of deaths was inevitable, was incorrect. Anaesthetics were not dangerous drugs unless placed in incompetent hands. The facts of the case should be stated plainly; the conditions ceased to exist as dangers when experience had been profitably gained with the use of these drugs; the fault in fatal cases did not rest with the surgeon, the operator, the patient, nor the drug. The main principle to be kept in mind was that the respiratory functions were affected; the anaesthetized patient might suffer from intercurrent asphyxia, especially in cases where the respiration was liable to be spasmodic; on the *post-mortem* table no evidence of the spasmodic condition might be visible. Much greater and more special attention should be given to the practice of anaesthetics in medical schools. He doubted if sudden cardiac and circulatory failure was ever fatal under such circumstances. "Fatty heart" was now rarely offered as the cause of death in these cases; "status lymphaticus" might also before long cease to be suggested. The real cause was auto-asphyxiation, which could be guarded against if very great care was taken by the anaesthetist. Mr. Henslowe Wellington did not think that 74 cases was relatively a large number in six years' inquest practice, especially as several had little or nothing to do with the coincidental fact of anaesthetization. Dr. Leonard Hill affirmed that the danger lay in paralysis of the heart. The vagus nerve centre was rendered very irritable by the drug, and the nerve itself was put into increased activity, the failure of respiration being due to the great fall of blood pressure owing to the gradual poisoning of the heart. After paralytic dilatation the heart could not be resuscitated, unless it was infused with unpoisoned blood. A mechanical contrivance whereby a safe dose of the anaesthetic could be given must be invented. Mr. Troutbeck explained how the cases cited had come before him as a coroner. Few deaths under anaesthetics were reported by private practitioners, possibly because it was not commonly known in the profession that all such cases must be considered by the inquest jury. The anaesthetist should be a person in authority, and not a young practitioner whose freedom was curtailed by the expressions of opinion of a senior surgeon. Very seldom did the friends of patients complain in the cases where the deaths occurred in hospitals. A pathologist should be instructed to investigate the case who was neither the anaesthetist nor the surgeon interested, although both the latter should be allowed to be present at the necropsy and to give evidence. He had not gained much benefit from the list of questions to be asked in those cases which had been published from time to time. Each coroner, after some experience, learned what questions it was most profitable to put. As the discussion had aroused great interest, on the motion of Dr. F. J. Smith, seconded by Dr. F. S. Toogood, it was decided to adjourn the meeting until Tuesday, March 24th, at which session certain medico-legal aspects of the question will be discussed. Mr. Justice Walton, the President, will be in the chair.

REVIEWS.

NORMAL AND MORBID PSYCHOLOGY.

Mr. Loveday, the translator of *Mental Pathology and Normal Psychology*,[1] at one time a student under Professor Störring, the author, states that when he himself came to teach psychology he found himself hampered by the lack of any English work on mental pathology to which he might refer his students without embogging them in a morass of clinical details, and it therefore occurred to him that it would be useful to translate Professor Störring's book. The translation is thus designed for the use of students of normal psychology, and its perusal will show that Mr. Loveday's task has been more than justified. Normal psychology and mental pathology, however, are necessary complements; neither can afford to disregard the other; and if this book is of value to students of psychology, it will be found of still greater assistance in the study of mental diseases. It is the very kind of book which is to-day so greatly required and so seldom encountered—that is, a thorough and, within the limits of present information, an exhaustive analysis of the mechanism of the phenomena of mental disorders. Its author concerns himself in no way with types of disease, with symptomatological differences, but entirely with the explanation of their fundamental origin. It is a book, therefore, for the serious student, and, whether in all particulars he agrees with the author or not, he will find it always a thoughtful and illuminating exposition of the subject. The first two lectures are concerned with general definitions, but following these, hallucination, pseudo-hallucination, and illusion are subjected in the next five chapters to a most searching dissection, with particular reference to the bearing of these perceptual anomalies on the processes of normal perception. Passing to the disorders of ideation, Professor Störring begins with aphasia and gives an admirably lucid description of the Wernicke-Lichtheim theory, according to which spontaneous speech originates from a "concept centre" and is propagated to the motor centre (Broca's). Kussmaul's view was that spontaneous speech impulses passed from conceptual centre to motor centre via the auditory speech centre, there being thus double conduction on the path between auditory and conceptual centres. Professor Störring maintains that "the process of spontaneous speech results from the co-operation of two causes, articulatory motor images being aroused first by ideas of objects (concepts) directly, and secondly by auditory images which have been themselves aroused by the said ideas of objects"—that is, there is both direct and indirect

[1] *Mental Pathology and Normal Psychology*. A Course of Lectures delivered in the University of Leipzig. By Gustav Störring, Dr. Phil. et Med., Professor of Philosophy, Univ. Zürich. Translated by Thomas Loveday, M.A., lately Professor of Philosophy, S. African College, Capetown. London: Swan Sonnenschein and Co. 1907. (Demy 8vo pp. 303. 10s. 6d.)

stimulation of the motor centre, the latter being the more common route. Paraphasia is similarly examined before the author passes to alexia and agraphia. The treatment of aphasia naturally leads to that of amnesia and the pathological states of "mental fog" (*Dämmerzustände*). Professor Störring's explanation of these clouded states—for example, in epilepsy—though brief, is worth notice. He attaches considerable importance to modifications of organic sensibility which contribute to the content of consciousness.

One of the conditions of the reproduction of an idea *b* by an associated idea *a* is similarity of the total state of consciousness. At the moment that *a* reproduces *b* it is only one constituent of the total content of consciousness, and the remainder also co-operates in determining the reproduction. An essential modification of the total state of consciousness is therefore an essential modification of the condition of reproduction, and may make the reproduction of *b* impossible.

In this light the explanation of many amnesic phenomena—for example, in some forms of epilepsy and in several psychoses—is obvious. In following amnesia into hysterical states the author justly lays great importance on the part played by affective states, and gives exceedingly clear presentments and temperate criticisms of the theories of Freud, Breuer, Janet, and others. The most interesting parts, however, at least for alienists, are the chapters in which Professor Störring discusses the origin of imperative ideas and insane delusions. His treatment of this important subject is most thorough, but too lengthy and involved to condense here. We may state, however, that Professor Störring, in opposition to Hitzig, Kraepelin, and many others, maintains that in paranoia there is no derangement of judgement—that is, of the judgement function—but merely a perceptual bias and falsification, whose form is determined by affective anomalies, these anomalies tampering with the data of judgement.

MODERN THEORIES OF MATTER.

THE little treatise, *Théories Modernes sur la Matière*, by M. Pozzi-Escot,[2] gives expression to no orthodox views. It opens with a denial of the indestructibility of matter and of energy, gives an account of the ionic theory, of Newton's corpuscular theory, of electric phenomena in rarefied gases, of radio-activity and the theories that can be deduced from it, and concludes with the triumphant assertion that the dissociation of matter is a general phenomenon, that electricity is a form of matter, and that matter is only a manifestation of energy. Ether is looked on as the fundamental constituent of the earth, from which it has been derived and to which it is destined to return, and, as the author states in his concluding sentence, the theories he professes are the extension of the Darwinian theory so as to make it universal. A book of this sort, though it hardly distinguishes between observed phenomena and the merest hypothesis, possesses a certain interest and value, since it explains fairly and clearly the views of an important section of modern physicists. It also has the merit of giving a brief synopsis of the principal theories on the modern constitution of matter. The author reminds his readers of the extraordinary antiquity of the theory of the indestructibility of matter, tracing it back as far as Anaxagoras, and his statement—"that which exists in space can neither be increased nor diminished." The danger of the book consists in the fact that the author has very rightly and naturally edited the evidence, avoiding all the complicated mathematical reasoning on which the theories he supports are based. Readers are apt to assume that the statements are necessarily correct as being based on unimpeachable mathematical data. It will be well if they remember that mathematical deductions under the best conditions are like the flour that comes from a mill. If the original corn is impure, the flour will be unwholesome; it may be more so than the corn, owing to attrition; similarly arguments built up on insufficiently-observed phenomena, when subjected to the mill of mathematical reasoning, are exceedingly apt to have any faulty observation magnified into grave and substantial error.

The inclusion of a work entitled *La Radio-activité de la matière* in the *Actualités Chimiques et Biologiques* series, edited by Professor POZZI-ESCOT, will be welcomed by those who look to this series to keep them abreast with the most noted advances made in biology and chemistry. Like the preceding volumes, the book makes no bid for the Philistine reader. The author, M. Pozzi-Escot, has not aimed at an imaginative description of the wonders of radium and the other radio-active bodies. His method has been to give a short historical account of these substances and of the facts leading up to their discovery, to describe the more important methods of quantitative research, to deal with the radiations, the *x* substances, the emanations and similar phenomena, and to conclude with a short chapter on the theory of radio-activity. The book has the merits and faults that might be expected in a work written by a man who has not been himself engaged in radio-active research. The author has succeeded in giving a short account of the more important work in admirable perspective, but his descriptions of methods and apparatus lack the vividness that can only be gained by personal experience. On page 66 there is a curious statement which translates literally as follows "Ramsay and Soddy have found that 50 mg of pure radium bromide disengage about 0·5 c.cm. of gas daily, and it seems that this gas is a mixture of oxygen and hydrogen, with a little helium." The facts, of course, are that the radium salts decompose some of the water in which they are dissolved, and at the same time give rise to the emanation, but a reader unacquainted with the work on radium might not unnaturally assume that the oxygen and hydrogen were disintegration products of the radium salt. It is disappointing to find that no reference has been made to Sir William Ramsay's more recent work on the very remarkable relations which appear to exist between radium, copper, lithium, and sodium, but the date at which the work left the author's hands (July, 1907) made all reference to this, as to the very important experiments now being carried out at Vienna, impossible. From this point of view the date that appears on the title page (1908) is misleading. In view of the probable importance of the researches now being conducted at University College, London, and Vienna, it seems unfortunate that the publishers did not keep the book back for the addition of a chapter to contain the results determined from the first researches made on a reasonably large quantity of radium salt.

VEGETABLE PHYSIOLOGY.

ANY student of animal physiology will be interested by Professor REYNOLDS GREEN'S textbook of *Vegetable Physiology*.[3] The problems dealt with therein are so curiously alike, and yet deal with a world of organisms so differently constructed that the reader cannot fail to be struck anew and with fresh force by the endless adaptations of living matter to varying conditions. Professor Green believes that the classification of living beings into animals and plants has been too strongly insisted upon in the past. Protoplasm, he says, is the same material whether we call it animal or vegetable. This being the case, its conditions of life and its immediate necessities must be practically the same, whatever its degree of differentiation in either direction. He has tried to bring out this identity, and to indicate that apparent differences of behaviour and structural arrangement are to be traced rather to differences of environment and habit of life than to those of constitution, and in doing so he has written a book excellent in style, selection, and illustration, and fascinating in interest.

The researcher in the realms of animal physiology cannot fail to find many suggestive lines of investigation, applicable to his science, by studying the observations made on the simpler but hitherto less-explored domain of the vegetable physiologist.

The transport of water in the plant forms one of the most fascinating chapters. We read of the delicate films of water which surround the particles of a well drained soil; of the root hairs which clasp the particles and absorb the water by osmosis, developing within an acid cell sap of high osmotic equivalent; of the vascular bundles which spread from root tips to the veins of the leaves, and convey water throughout even the mighty forms of forest giants. The rate of such transport may

[2] Les Actualités Chimiques et Biologiques. Publiées sous la direction de MM. le Prof Pozzi-Escot. No. 8, *Théories Modernes sur la Matière*; et No. 9, *La Radio-activité de la Matière*. Par M. Emm. Pozzi-Escot. Paris: J. Rousset. 1908. (Cr. 8vo, pp. 96 and 108 respectively. Fr. 1·50 each.)

[3] *Vegetable Physiology*. By Professor J. Reynolds Green. Second edition. London: J. and A. Churchill. 1907. (Demy 8vo, pp. 479. 10s. 6d.)

be 1 to 2 metres, but may reach 6 metres, an hour. Sachs traced it by adding a salt of lithium to the soil water, and cutting out pieces of stem for burning and spectroscopically examining the ash. Root pressure and transpiration from green parts are the two great motive powers for the transport of water, osmosis being the force in either case, and the protoplasm of the cells the *deus ex machina* which regulates the osmotic force in accordance with the effect of the ever-varying external stimuli. The protoplasm of the root hair cells by producing substances of high osmotic force causes absorption of water and turgescence. The turgescence in its turn modifies the permeability of the protoplasm, so that the hydrostatic pressure in the cell forces the water through the living substance into the vascular bundles. The root pressure, measured in a medium-sized pot fuchsia, lifted a column of water of the same diameter as the stem to a height of 25 ft. The numbering of the 160,000 stomata per square inch in the lower surface of a lilac leaf indicates the transpiration power of a tree. A birch tree with some 200,000 leaves was computed to transpire 60 to 80 gallons of water a day. The chloroplasts of the guard cells of the stomata by varying turgescence regulate the transpiration, for they develop substances of higher osmotic equivalent than those of the surrounding epidermal cells. When, therefore, the epidermal cells are charged with water, the guard cells become turgid, open the aperture, and increase transpiration. The reverse occurs when the epidermal cells become depleted by drought. The evaporation takes place in the surface films of the cells which border the intercellular air passages of the plant, and the osmotic forces of these cells help to raise the water which is driven up by root pressure. On the transport of water depends the heat regulation and food supply of the plant, for the water comes from the soil charged with traces of mineral salts. It is computed that 98 per cent. of the radiant heat of the sun may be dissipated by transpiration. The fields are truly burnt up when the soil water supply fails.

Of equal interest are the chapters on the chlorophyll function, the synthesis of formic acid, its condensation into sugar, and final storage of starch; on the digestive enzymes which render starch, fat, and proteid store materials soluble, and allow their transport through the plant by the osmotic forces of the parenchyma cells. The gland cells in the scutellum of the oat grain digest and absorb the endosperm. Such gland cells become filled with zymogen granules, as is the case with the secreting gland cells of animals. The digestive enzymes are destroyed by ultra-violet light, and their action thus confined both by time and place. Of great interest is Professor Green's account of the insectivorous plants, the bladderworts, pitcher plants, and sundews, and their special motor mechanisms and proteid-digesting glandular secretions. The sensitive spines of the dionaea leaf, which must be touched before the leaf will close, with the motor mechanism, gives us together a mechanism which, at any rate in its purpose, closely resembles the neuromuscular mechanism of the animal.

There are here engaged a receptive organ, conducting path, and an effector or motor mechanism, the movement being brought about by the altered turgescence of certain cells. In dealing with metabolism, the author says sugar and amido acids can be traced along the translocatory paths almost up to the growing point, but how they are assimilated and incorporated into the living substance is still a mystery; just as in animal physiology the mechanisms of transport and digestion can be studied, but the mystery of it all remains hidden in the living protoplasm.

Professor Green's book is illustrated with figures of several of the simple and interesting experiments which any one with a greenhouse for a laboratory can carry out. We commend his interesting book to those, and they are not few, who have interest in the growth of plants.

TEXTBOOKS OF GYNAECOLOGY.

THE third edition of a popular textbook does not call for very detailed notice. That Dr. RUNGE'S textbook of gynaecology is popular is shown by the appearance of a third edition[4] six years after the publication of the first. It is a systematic work arranged in the manner usual in textbooks. It is not remarkable for the fullness of description of operative details, nor for the number or the beauty of the illustrations. Thus the description of abdominal hysterectomy is not elucidated by a single drawing or diagram. Dr. Runge is eclectic and impartial in his methods of treatment. He tells us of drugs that we have never before heard of, and describes in detail therapeutic proceedings that we had thought were hopelessly discredited or superseded, and which Dr. Runge, though he describes, does not recommend. But although he gives us some superfluous information, yet his judgement seems often very sound. Thus he tells us, "for all bathing places the rule holds good: only take a bath cure under the supervision of a doctor, and the avoidance of all local treatment." It is a little surprising that a University Professor of Gynaecology should not be aware of the effect of dilatation of the cervix in dysmenorrhoea. The book is worth careful study by every specialist or teacher of its subject.

The textbook of WINTER and RUGE also is clearly popular in Germany. We have already had occasion to review the first and second editions of the *Lehrbuch*[5] in 1898 and 1897. We then observed that, whilst in the British Empire and the United States works on diagnosis are usually published in the form of handy manuals, Dr. Winter's work is printed on large pages, so that the diagrams and drawings, microscopic or otherwise, are of considerable size. The advantages for purposes of demonstration are self-evident; indeed, this textbook is admirably adapted for teaching purposes, and compilers of educational works may well follow the example set by Dr. Winter, even in his avoidance of an extremely elaborate type of medical illustration, which has come into existence since the days when his earlier editions were published. A few samples of this kind of high art are inserted being necessary for their purpose. Thus, at p. 79 we find a beautiful coloured engraving, covered by an explanatory outline sketch on silver-paper, representing the lymphatics of the female organs, after Döderlein and Krönig; and some fine drawings, also coloured, representing prolapse, chorion-epithelioma, etc., which are very creditable to the artist, Miss Burdach of Königsberg. The majority of the illustrations are plain and clear; they have been nearly doubled in this edition, as the total in the second issue was 190. The microscopic drawings are, perhaps, the best feature in the textbook, which is adapted particularly to the post graduate and the specialist. The unqualified student, however, cannot be reminded too soon that the study of the microscope is absolutely essential in gynaecology, especially in respect to all tissues expelled or extracted from the uterine cavity—a truth on which we may say this textbook is founded.

British teachers might read the *Manuel de Gynécologie Pratique*[6] with profit. The French are naturally endowed with qualities which fit them for elementary education, and the French language is singularly well suited for manuals, epitomes, textbooks, and all other kinds of literature designed for instruction. M. BAROZZI has prepared a very good sample of a French medical manual. In the first place, it is literally what its name implies, for it is small enough to carry in the hand, differing from more than one Teutonic "handbuch," which requires the aid of both hands when taken down or replaced on its shelf. Turning to style, we find in M. Barozzi's pages that virtue which Sir John Denham ascribed to the upper Thames—depth with clearness. The worst source of turbidity in Anglo-Saxon homologues of this manual is free reference to the writer's operative practice, a defect conspicuous by its absence in this work. Absolute clearness, again, may be impossible in definitions of conditions conveniently described as "endometritis" and "metritis," for experts differ as to their essential

[4] *Lehrbuch der Gynäkologie* [Textbook of Gynaecology]. Von Max Runge, ord. Professor der Geburtshülfe und Gynäkologie und Direktor der Universitäts-Frauenklinik zu Göttingen. Dritte Auflage. Berlin: Julius Springer. 1907. (Med. 8vo, pp. 530. M. 10.)

[5] *Lehrbuch der gynäkologischen Diagnostik.* Von Dr. Georg Winter unter Mitarbeit von Prof. Carl Ruge. Dritte auflage. [Textbook of Gynaecological Diagnosis.] Third, completely revised edition. Leipzig: S. Hirzel. 1907. (Super-royal 8vo, pp. 665; 4 plates and 334 illustrations. M. 20.)

[6] *Manuel de Gynécologie Pratique* [Manual of Practical Gynaecology]. Par J. Barozzi, Ancien interne des hôpitaux de Paris, Laureat de la faculté de Paris. Préface de M. L. G. Richelot, Professeur agrégé à la Faculté de Médecine de Paris, etc. Paris: Vigot Frères. 1907. (Cr. 8vo, pp. 813, with 154 illustrations. Fr 10.)

characters, yet M. Barozzi makes such subjects as clear to the student as can possibly be expected, and, what is equally important, he lays stress on the clinical and pathological characters of uterine inflammation, so that the student may not neglect them for other departments of gynaecology. We cannot say, on the other hand, that the author is at his best, or is even in advance of the average educational writer, in his chapter on backward displacements of the uterus. We find, as usual, too many names, too many methods, and too many statistical notes. As a rule, however, the author is very prudent about submitting a new method to the student; the paragraphs on atmocausis and zestocausis testify to this fact. Nor do we blame the teacher who mentions a method he disapproves for the one reason that others have made much of it, so that the student should at least know something about it. In conclusion, we turn to that which is usually put first in works on gynaecology—operations for big tumours and wholesale extirpation of malignant growths. The author's opinion about hysterectomy is distinctly prejudiced by his own master's—Richelot—preference for panhysterectomy over the "subtotal" method. As for uterine cancer, M. Barozzi is not enthusiastic about the Freund-Wertheim operation, and we fancy that he is wise in warning his readers to be careful what confidence they place in after-histories as reported by different operators with different views, talents, and prejudices.

There can be no doubt that Dr. CROSSEN'S *Diseases of Women*[7] is a good textbook. Its pages are adorned with illustrations largely taken from the best recent monographs, and the author has been careful about the selection of drawings illustrating, as far as pictorial art can do so, the steps in perineorrhaphy and allied plastic operations. The book is very complete, as is the case with most American works of its kind; thus, it includes directions for the staining of bacteria. Perhaps the most original feature is the long series of photographs demonstrating physical examination, specially prepared under Dr. Crossen's superintendence for this work. Thus, the position of the fingers for vaginal and vesico-vaginal examination is photographed. There are obvious objections to the inclusion of illustrations representing bimanual palpation, yet they are useful to the student and practitioner unable to attend the hospital practice of experts. Perhaps the best of the new series is a group of photographs of the female abdomen with regions of tenderness, as well as the site of organs accurately indicated by markings. The position of free and encysted or otherwise localized fluid is displayed by a very ingenious device. Black webbing is gummed on to the abdomen over the area of dullness, so that its limits show up very clearly. We may, in conclusion, consider the views of the author himself, as a representative of gynaecology in the capital of the State of Missouri. He does not give so great a prominence to operative measures as do too many contemporary writers, and he has a good deal to say about medication. He gives a fair amount of space to pathology. He is, on the whole, in favour of the radical abdominal operation for cancer of the cervix, for among other advantages it minimizes the risk of metastasis by transplantation. Again, when the abdominal cavity is laid open, the operator can, for the first time, make sure that radical extirpation of the affected structures is practicable. Not rarely in a case apparently well suited for a radical operation, intraperitoneal inspection shows that such a measure cannot be carried out, and, on the other hand, suspected malignant infiltration may prove to be inflammatory effusion, so that the radical measure is quite justifiable. Dr. Crossen insists that the only reliable curative treatment for uterine fibroids is removal by operation. He distrusts palliative procedures, and, so far, most living authorities agree with him. Lastly, Dr. Crossen, treating of displacements, does not discard the pessary in all cases and gives intelligent rules for its application, elucidated by some of the original photographs of which we have already made mention.

[7] *The Diagnosis and Treatment of Diseases of Women.* By Harry Sturgeon Crossen, M.D., Clinical Professor of Gynaecology, Washington University; Consulting Gynaecologist to Bethesda Hospital, St. Louis, etc. St. Louis: C. V. Mosby; Medical Book and Publishing Company. 1907. (Roy. 8vo, pp. 812, 700 illustrations. $6.)

OSTEOLOGY IN ANCIENT INDIA.

MR. A. M. R. HOERNLE'S *Studies in the Medicine of Ancient India*[8] is interesting from philological, historical, and anatomical points of view, and the exposition it contains of the knowledge of osteology which existed in India in the sixth century B.C. will be a source of surprise to many people. It is known that the Greeks and the Jews possessed considerable knowledge of anatomy, and it is surmised that the Greeks, at all events, practised dissection, but it has not been suspected that the ancient Indians had, in some respects, a very precise knowledge of osteology, and that they performed dissections, though by an unsatisfactory method. It appears that in the time of Buddha, six centuries B.C., there lived at Taxila, on the Jhelam River, in the west of India, a renowned physician, Atreya, who taught medicine in a famous school there, and devised a system of osteology. At a somewhat later period, but also in the sixth century B.C., Súsruta, who was a famous surgeon at Benares, compiled another osteological system, which, as he himself pointed out, differed in details from the system of Atreya. It is doubtful if Atreya practised dissection, and it would appear from the obvious incorrectness of some of his statements that he could scarcely have done so. Súsruta, on the other hand, gives directions for a crude method of dissections, in which he recommends decomposition in running water, aided by scrubbing at intervals of seven days, "with a whisk made of grass-roots, or hair, or bamboo, or bast." Such a method, though unsatisfactory as regards soft parts, would display the skeleton well, and it is not surprising, therefore, to find that his knowledge of the skeleton was fairly accurate, certainly more accurate than Atreya's. Both authors count a considerably larger number of bones than is enumerated at the present day; this, however, is partly because they looked upon cartilages as soft bones, partly because they include amongst bones, nails, teeth, and, in the case of Atreya, tooth-sockets as well. They also describe processes of bone as separate bones, the olecranon process of the ulna counting as a distinct elbow pan. The transverse processes of the vertebrae were also looked upon as separate elements; not because the observers did not know they were parts of the vertebrae, but because, according to the systems they adopted, the processes had to be counted separately, and were looked upon as belonging not so much to the vertebral as to the costal system. It is interesting to note that Súsrata counted six lumbar vertebrae, and he speaks of the sacrum and coccyx as one bone. This description suggests the possibility that the first sacral vertebra was more commonly separate from the sacrum two thousand five hundred years ago than it is to day, and, if this surmise be correct, an additional point of support is gained for the theory of the forward migration of the hind limb. From what has been already stated it is obvious that Mr. Hoernle's book is of interest to anatomists, but it will probably be still more interesting to the philologist and the historian on account of its elaborate and careful explanations, quotations, and references.

NOTES ON BOOKS.

NISBET'S MEDICAL DIRECTORY.

WE have received a copy of the *Directory of Medical Practitioners*, published by Messrs. James Nisbet and Co., which, we understand, is to be the first number of an annual issue. We are told in the preface that its aim is to meet the need of a handy, accurate, and inexpensive list of medical men, conveniently and concisely arranged in alphabetical order. There is no doubt that the volume is handy, in spite of the fact that it contains nearly 800 pages; that it is accurate we are, of course, not in a position positively to assert, but, so far as we have been able to test it, we have discovered no errors. The claim that it is inexpensive is justified by fixing the price at 7s. 6d. The bulk of the volume consists of a single alphabetical list of practitioners, which is believed to contain the name of every registered person. The information given is concise, being limited to the address, telephone number, list of diplomas and degrees with date of the earliest, the chief appointment held, and a note of some one publication. There is undoubtedly a considerable

[8] *Studies in the Medicine of Ancient India.* Part I. Osteology: on the Bones of the Human Body. By A. M. R. Hoernle, C.I.E. Oxford: The Clarendon Press. 1907. (Demy 8vo, pp. 264, 33 figs. 10s. 6d.)

convenience in having only a single list of all practitioners in alphabetical order. The second part of the book is a local directory, the names of practitioners being given under the name of the town or parish in which they reside: here we think that the principle of the single list has been carried too far, and believe the book would be more convenient for reference if these local lists were, in future issues, classified under countries.

INDIAN BAZAAR MEDICINES.

Lieutenant-Colonel C. P. LUKIS, of the Indian Medical Service, has prepared a sixth edition of the late Surgeon-Major E. J. Waring's excellent account of Indian indigenous drugs and index of Indian diseases.[1] Since the fifth edition of this modest and useful little book was published ten years ago much additional information has been obtained regarding Indian drugs, and many advances have been made respecting the nature, prevention, and treatment of Indian diseases. Without altering the purpose, scope, or arrangement of the book, Dr. Lukis has brought it up to date and added material which will enhance its value and utility. Among many salutary additions, the open-air treatment of phthisis, the destruction of rats as a prevention of plague and of mosquitos of malaria, Lauder Brunton's treatment of snakebite, potassium permanganate, and Finsen's method of preventing pitting in small-pox by the use of coloured light are fully detailed. The use of the clinical thermometer is described, and a list given of "articles required for carrying out the directions contained in this work." Altogether the revision which the book has undergone is judicious and advantageous.

PLAGUE.

Balrampur, a small town in the Province of Oudh, some fifty miles north-east of Lucknow, escaped plague until March, 1907. A severe visitation of the disease, however, during the summer of 1907 stimulated the authorities to take active measures to check its spread. In a small pamphlet, entitled *The Scourge of Plague*,[2] Mr. M. M. Bos relates the history of plague generally in India, and states how plague was believed to reach Balrampur. A short account is also given of the symptoms, the epidemiology, the treatment and prophylaxis of the disease, written in simple language for the benefit of the people, and translated into the Hindi and Urdu languages. The writer advocates preventive inoculation with Haffkine's serum as the great stand-by in the effort to check plague, and quotes statistics to show the efficacy of inoculation. Hand in hand with inoculation, evacuation of infected localities is also recommended, and several subsidiary measures are mentioned as useful adjuvants. As a supplement, the King's letter to the Viceroy and the Viceroy's letter to the heads of all local governments and administrations in India are published. The circulation of this pamphlet, which is temperate in tone and concise in its descriptions and instructions, is calculated to serve a useful purpose, and might well be imitated in India by men holding similar positions to Mr. Moni Mohan Bos.

INTERNATIONAL CLINICS.

The fourth volume of the seventeenth series of *International Clinics*[3] for 1907 contains a large number of papers of unusual interest, and several of considerable practical importance. Perhaps the most interesting and important is one by M. Emile Weil, of Paris, on the action of injections of fresh blood serum in blood states that give rise to haemorrhage. He has taken the physiological fact that certain specimens of blood which could not be coagulated experimentally might be caused to regain, *in vitro*, their power of coagulation by the addition of fresh blood serum and applied it to practical medicine by injecting fresh blood serums into patients suffering from bleeding diseases, and with apparently most beneficial results. Almost if not quite equally good results were obtained in some patients by injecting antidiphtherial serum in place of fresh serum. Other valuable papers in the volume are on the comparative value of the *x* rays and arsenic in the treatment of leukaemia, by Dr. A. S. Warthin; on five years' experience with an antityphoid serum, by Professor A. Chantemesse; on the common cardiac arrhythmias and their clinical significance, by Dr. A. W. Hewlett.; the urgency of early diagnosis of cancer of the stomach, by Dr. A. McPhedran; and a study of gastroptosis from the radiographic standpoint, by Dr. H. K. Pancoast.

[1] *Remarks on the Uses of Some of the Bazaar Medicines and Common Medical Plants of India.* By Edward John Waring, C.I.E., M.D. Edited by Charles Pardey Lukis, M.D., F.R.C.S. Sixth edition. London: J. and A. Churchill. 1907. (Fcap. 8vo, pp. 347. 6s.)

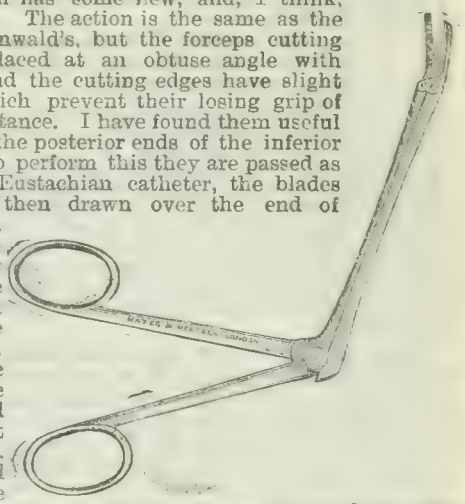
[2] *The Scourge of Plague.* By Moni Mohan Bos, Honorary Magistrate and Vice-Chairman, Municipal Board, Balrampur. Lucknow: Anglo-Oriental Press. 1907. (Demy 8vo, pp. 18 + 6. 2 annas.)

[3] *International Clinics.* A Quarterly. Edited by W. T. Longcope, M.D. Volume IV. Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907. (Med. 8vo, pp. 316.)

MEDICAL AND SURGICAL APPLIANCES.

Nasal Scissors.

MR. RUSS WOOD, F.R.C.S. (Shrewsbury), writes: For the last six months I have been using a pattern of nasal scissors which has some new, and, I think, useful points. The action is the same as the ordinary Grünwald's, but the forceps cutting blades are placed at an obtuse angle with the shank, and the cutting edges have slight saw teeth which prevent their losing grip of any hard substance. I have found them useful for removing the posterior ends of the inferior turbinates; to perform this they are passed as an ordinary Eustachian catheter, the blades opened, and then drawn over the end of the turbinate. They can be used also for removing the anterior end of the middle turbinate. They are made with the blades angled to the right or left. Messrs. Mayer and Meltzer have carried out my ideas with their usual skill and attention to detail.



MEDICINAL AND DIETETIC PREPARATIONS.

Tuberculin Preparations.

As an appendix to a recent leading article in this JOURNAL on the specific diagnosis and treatment of tuberculosis (BRITISH MEDICAL JOURNAL, December 21st, 1907, page 1794), note may be made of the contents of a pamphlet recently issued by Messrs. Meister, Lucius, and Brüning, Limited. It is a description of the method of manufacture and use of the tuberculin preparations now issued by this firm; their number and variety is striking evidence of the increased attention now being paid to the treatment in question and to the activity with which its study is being pursued. In addition to the more or less familiar products, Tuberculinum Koch (the old tuberculin), Tuberculin T.R., and the pulverized tubercle bacilli used for the agglutination test, reference is made to preparations which fall into three main classes. These are obtained respectively (1) from germ-free tubercle bouillon, (2) from bouillon containing tubercle bacilli, and (3) from free tubercle bacilli. In the first class are four varieties, the first being T.O.A., a germ-free filtrate of human bacilli grown in nutrient beef-tea. The second, P.T.O., is prepared in the same fashion, but from tubercle of bovine origin, while Nos. 3 and 4 are subvarieties of Nos. 1 and 2. Thus, No. 3, Vacuum Tuberculin, is T.O.A. evaporated at a low temperature and in partial vacuum to one-tenth of its volume; and the constitution of No. 4, Bovine Vacuum Tuberculin, is sufficiently explained by its name. All the foregoing are intended for therapeutic, not diagnostic, use, when dealing with patients in whom the older preparations produce too violent a reaction, and also for patients exhibiting a more or less constant elevation of temperature. Which of the four is the most suitable for use appears to be determinable only by actual trial. The second class contains two varieties, the first being Tuberculosis-diagnostic (Hoechst). It is a glycerine-free, desiccated tuberculin prepared from the old T.K., and is intended for use in connexion with the recently discovered tuberculo-ophthalmic reaction. To the same class belongs Bovine Tuberculin, which, except for the source of the tubercle, is analogous in all respects to Tuberculinum Koch, the old preparation. In the third class is New Bovine Tuberculin, or Tuberculin P.T.R., which corresponds in the source of the tubercle to Tuberculin T.R. The same may be said of the second variety, Bovine Tubercle Emulsion, this corresponding, except in origin, to Koch's bacilli emulsion. The pamphlet also contains a number of practical directions for the use of these and other remedies of the same class, with a statement of the indications for their use which are so far deemed to have been established.

TUBERCULOSIS IN SCHOOL CHILDREN.

DR. KERR commences that portion of his report to the London Education Committee which deals with pulmonary tuberculosis as follows:

In a paper published in *Tuberculosis* some half-dozen years ago, reasons were given for supposing pulmonary tuberculosis at school age to be quite insignificant in amount, but there have not been wanting alarmist reports as to the prevalence of this disease among children. It became a matter of serious importance not to obtain statistics but to ascertain how far children at school ages were affected, and how far they might be a danger to others.

The inquiry, the details of which we quoted last week, was carried out in two schools by Dr. Squire and Miss Gowdey, M.D., with the result that

out of 1,670 children examined, signs in the lungs which would justify a diagnosis of tuberculosis were only found in 8 cases, that is, less than 0 5 per cent. In 14 other children slight signs—prolonged expiratory breath sounds, or dry fine crepitation at the margin of the lung, which might possibly be due to tuberculous infection, were found. Even if those are included as actual cases of tuberculous disease, the percentage of possible pulmonary tuberculosis only reaches 1.3 per cent. There is a further small proportion in which enlarged veins on the chest suggest the possibility of bronchial gland enlargement due to tuberculous changes, but without any evident lung infection.

Certainly this at first sight may seem to be a very small proportion. But it is an instance in which a percentage rather fails to give a just impression. It must be remembered that in the 941 elementary day schools in London there are some 750,000 children, so that if we take the percentage of children certainly or probably suffering from tuberculosis, there must be over 7,000 phthisical children in the schools of the metropolis.

The medical officer to the Education Committee further draws our attention to the fact that there has been a rule for some years that

Where a child has been supposed to have consumption it must be excluded from school if it coughs or spits. . . . Further, the invalid schools remove many tuberculous children with bone or joint diseases, and some doubtful cases of pulmonary disease. There are, however, undoubtedly many cases of tuberculous children in the schools who are practically not infective, and not likely to become so.

In the section dealing with 1,802 children on the roll in the twenty-three invalid schools now in existence for physically defective children, under the heading, Various Diseases, we see 9 cases of phthisis noted; and again, under Delicate Children without Definite Existing Disease, 16 are noted with phthisis, 5 with tuberculous glands, and 3 with lupus. Of those suffering from tuberculous bone disease, 500 are noted in the section on Physically Defective Children; 186 have tuberculous disease of the spine; 203 of the hip; 83 of the knee, and 28 of other parts; and we are told that:

The admission of an invalid or crippled child to such a school is only permitted after a medical examination in accordance with the provisions of the Elementary Education (D. and E.) Act, 1899. In most cases the decision as to whether a child is fit for the special school or not is a comparatively easy matter. For the benefit of the child itself, however, a much more careful examination by an expert surgeon is of advantage. The future chances of the child must be estimated. Some children should be made to work; others should be treated very lightly. Each case requires a separate and careful judgement apart from the mere question of fitness or unfitness for the special school, and this work has been undertaken during the past year by Mr. R. C. Elmslie. The introduction of a card system of keeping these records has enabled him to analyse the results, and thus give a more comprehensive survey of physical defect in childhood than hitherto has ever been possible. . . . Great difficulty was experienced in getting sufficient or accurate histories, the details noted in the family history books being often extremely meagre. The medical officers at the admission sessions appear to be too fully occupied to take details of history, and there is no power to oblige parents to visit the school subsequently in order that the facts may be ascertained. The histories taken by the teachers, who are, of course, without medical knowledge, often omit most important matters.

Dr. Kerr emphasizes the importance of early treatment, and with regard to spinal cases says that if all the cases could be diagnosed early and children kept in a recumbent position for a sufficient length of time amongst good hygienic surroundings, the cases with severe deformity would practically disappear. Again, in cases with paraplegia, he states that, referring to the 19 children who had suffered in this way, 16 had completely recovered, while 3 were still improving. The large majority of cases of tuberculous disease of the spine occur in quite early life; in 72 per cent. between the second and fifth year.

Tuberculous disease of the hip-joint is evident at a slightly later age, but 64 per cent. of the 210 cases appeared between the third and sixth years; and here again bad results might have been avoided had it been possible to keep the child recumbent for a long period with an extension applied to the hip in the adducted position. In tuberculous disease of the knee-joint the distribution of the age of onset over the first nine years of life was much more even than in the two previous diseases. A table is given which brings out in a very striking way the frequency of severe deformity after excision of the knee. As all these children have still years of growth left, the deformity, particularly the shortening, is certain to increase. In 9 of the 34 cases re-excision had already been carried out, and will be required in many of the others. Upon this Dr. Kerr makes the following comment:

A German surgeon (Hofmeister) pointed out some years ago that excision of the knee was not a justifiable operation before the age of nine, owing to the great liability to subsequent deformity. English surgeons do not yet seem to have realized this. No fewer than twenty-five of the excisions were done before this age, and some were done as early as the fourth year.

In a paragraph headed "General remarks on the results of tuberculous bone disease," Dr. Kerr says:

These 500 cases emphasize the proportion left with serious deformity. Their treatment should strive to (1) cure the disease, (2) prevent deformity. Economically, failure in the second of these objects is more serious to the community than a high death-rate from the disease, tending to leave a number of cured, but crippled, individuals handicapped by deformity in their struggle for livelihood, and having to be supported by other members of the community. It might be objected that only the worst cases, surgical failures, are collected in the physically defective centres, but this is not so. Last year, it was shown that only 16 cases of tuberculous bone or joint disease had been noted in 14,098 children in the ordinary schools in Islington; disease of the spine, hip, or knee only occurring in 11 of them. Mr. Rowntree noted, too, that the disease was not active, but that the resulting deformities were very marked. Most of the children are treated as patients at the large general hospitals. There are reasons, press of work, numbers waiting for admission, necessity for showing results apparently economical in short stay of patient, which indirectly lead to the treatment of these cases being made as brief as possible, and often it is practically confined to taking them in when an abscess has to be opened, and sending them home when the wound is healed, or even earlier. At other times they are treated as out-patients, in some form of splint, or in plaster, and are seen at irregular intervals, depending to a great extent on the pecuniary circumstances of their parents. The very bad results, following excision of joints such as the hip and knee, are almost to be regarded as due to hospital exigencies. The advantages of such operations are that they effect rapid cure by clearing out the disease, and shorten the necessary stay in hospital. The corresponding disadvantages to the child are so great that it is doubtful whether these operations should be done on children of school age. The usual hospital method of treating such cases can never be efficient. A prolonged period of rest to the diseased part, procured by absolute fixation in splints, and necessitating recumbency in most cases, is required for periods of months, and even years. The best place for such children is the country recovery school, which has been often referred to before. The few special hospitals which treat hip disease in this manner show very much better ultimate results than can be found among the patients of the large general hospitals.

Considering the conditions seriatim of the children with tuberculous disease, a certain proportion die of the disease, or other tuberculous infection, meningitis, etc. Some others become so crippled or delicate as to be useless as workers. These account for 15 to 20 per cent. Of those who will subsequently be able to work, most are cured of the actual disease during the school years. They are often transferred to the ordinary schools, and in any case should be able at 14 or 16 to commence attendance at technical schools. Those incapable of getting to such schools should be provided for in homes where possibly they could contribute something by work to their own support. Such children in these classes as are to be expected to earn their own living should be capable of attending technical centres or undergoing apprenticeship in trades which are suitable to their condition.

With regard to phthisis among school children, it would be premature to draw definite conclusions on the strength of a report concerning two schools, but the inquiry serves to show that phthisis does exist, and it has also been the

means of bringing to light a mass of other disquieting facts, such as that nearly three-quarters of the children examined presented enlargement of the cervical lymphatic glands, that 43 per cent. had enlarged tonsils, and that anaemia was present in about one-third. But perhaps the most widespread good that it can do is to draw attention to the vital importance of early medical examination of the children. We have never ceased to lay stress upon this point, and we will go so far as to say that now that medical inspection of school children has come into force, if the doctors charged with this inspection will give special time and trouble to the examination of the infant classes, they will, after a few years, find comparatively little to do in the higher standards. We recommend a serious study of Dr. Kerr's report to all those interested in this question.

STATE REGISTRATION OF TRAINED NURSES.

A PUBLIC meeting in support of the State registration of trained nurses was held in the Caxton Hall, Westminster, on February 21st.

Lady HELEN MUNRO FERGUSON, who presided, said that State registration of nurses was a matter of national importance; the Bill now before Parliament would not prevent untrained women from nursing, but it would prohibit any woman from calling herself a trained nurse who was not properly qualified to fill that office.

Sir VICTOR HORSLEY sent a letter in which he declared that the object of the meeting had his entire sympathy, and a letter was also received from Dr. H. W. LANGLEY BROWNE, one of the Direct Representatives for England on the General Medical Council, in which he observed that he could not understand the opposition to State registration. It would secure efficient training for nurses, and bring reform to many hospitals. It was desired by a very large majority of the medical profession, as it would give immediate information about the nurse's training and qualifications. It was the only way by which trained nurses could distinguish themselves from those who were untrained and unfit. He hoped most sincerely that State registration would soon be established, and that through a nursing council (on which, though the medical profession and patient would be represented, the nurses would have a majority) they would be able to show how well they could manage the nursing profession.

Miss MOLLETT, Matron of the Royal South Hants Hospital, proposed the following resolution:

> This meeting desires to urge upon the Government and upon Parliament the pressing necessity which exists for an Act for the registration of trained nurses. It would further remind them: (*a*) That a Select Committee of the House of Commons has unanimously recommended such legislation. (*b*) That the medical profession in this country, through the British Medical Association, has on three occasions passed resolutions expressing its approval of the State registration of trained nurses. (*c*) That the self-governing associations of nurses unanimously desire it. (*d*) That other countries and British Colonies have passed such Acts for the efficient education and control of nurses, and for the safety and welfare of the sick. Similar legislation is, in the opinion of this meeting, a matter of urgent and national importance.

Mr. W. I. DE C. WHEELER (Dublin), in seconding, said that it was not an extravagant statement to make that the medical profession had "plumped" in favour of State registration of nurses. Speaking as a medical man, he was sure that if they could get a return of the opinions of the individual members of the profession throughout the country, there would be an overwhelming majority in favour of State registration.

Dr. T. B. HYSLOP, Resident Physician of the Bethlem Royal Hospital, said, as a measure of the claims of mental nurses to recognition in the general scheme of registration, he would refer to the fact that the Medico-Psychological Association of Great Britain and Ireland had already taken steps to promote the State registration of mental or asylum-trained nurses in a separate register, as recommended by the Select Committee of the House of Commons in 1905, and with that object a petition, with 8,500 signatures attached, was sent to the Prime Minister on June 13th, 1907. The Asylum Workers' Association, which had about 3,250 members, would probably fall into line with the Medico-Psychological Association provided certain conditions were accepted. The period of training of candidates for the Medico-Psychological Association's Nursing Certificate extended over three years, and must be passed in not more than two institutions. To be eligible for examination candidates must have attended systematic courses of lectures given by members of the medical staff of an asylum, and have received clinical and practical instruction from the staff. They were also required to study the *Handbook* published by the Association. The training and examinations had been most carefully studied and elaborated by the Educational Committee of the Medico-Psychological Association, and it was sufficient to state that each and every member of that Committee was not only a medical officer in an asylum or hospital for the insane, but also a member of the teaching staff of a general hospital, and, as such, recognized as a teacher by the various universities and bodies which granted medical degrees and diplomas. The system of registration of mental nurses had been carried out for many years, and proved itself to be advantageous in many respects. Not only did he claim for asylum nurses equality in the scheme of registration, but also protection of their special claims to recognition as being the fit and proper persons for the care of mental cases. Some institutions, such as Bethlem, had opened their doors to hospital-trained nurses who desired to supplement their general medical and surgical training by some knowledge of mental diseases, but until all registered nurses had gained such experience, the mere cover of a registration certificate should not in the interests of the public be held as a guarantee of efficiency in the care of the insane. If asylum-trained nurses were to be included in a general register, then it was fair that they should have proportionate representation on the Governing Body or Central Council of the Nurses' Registration Authorities. Under such conditions and limitations, therefore, it gave him great pleasure to support the resolution.

After Dr. J. T. BIERNACKI, the Honorary Secretary of the Fever Nurses' Association, had urged the claims of the nurses in fever hospitals, Lady LYTTELTON addressed the meeting and the resolution was then put and carried unanimously.

The following resolution was moved by Dr. BEDFORD FENWICK, seconded by Miss H. L. PEARSE, and carried unanimously:

> This meeting desires that a copy of the foregoing resolution be sent to every member of the Government, and to every member of Parliament, with an explanatory circular.

NOTES ON HEALTH RESORTS.

SALSOMAGGIORE.

SALSOMAGGIORE, a small town on the main line from Milan to Bologna, is one of those watering places which has sprung into popularity in recent years. Its discovery as a curative resort was unromantic. There is no story connecting it with the legendary history of Remus or of Romulus. The Vestal Virgins never migrated there even in prehistoric times to do honour to the goddess of fire, but a country physician discovered that its waters had valuable properties almost by accident some seventy years ago. The earliest patient of the waters, Franchina Ceriati, is still alive; at 14 years of age her foot was about to be amputated, when the village doctor decided to try the mother liquors of the local salt mine as a substitute for sea-water. The baths were taken, twenty-five in all, and at the close of the treatment Franchina's health improved, the tuberculous foot recovered, and the doctor, Berzieri, began the development of the place as a health resort. Other doctors followed, and to-day there is an annual roll of patients amounting to fifteen thousand, and Salsomaggiore claims a distinguished place among the health resorts of the world.

There has been progress since Franchina's day—*x* rays, high-frequency currents, violet rays, electrotherapy, phototherapy, hydrotherapy, mechanotherapy, and the laboratories which are necessary for an up-to-date bathing establishment, have taken the place of the rude form of bath which proved a Pool of Bethesda to the suffering Franchina. Analyses have been made of the water, and

It has been found that a litre at a density of 16° Baumé contains:

	Grams.
Sodium chloride	153 9900
Lithium chloride	0 7346
Ammonium chloride	0.6369
Calcium chloride	15 8479
Strontium chloride...	0.2556
Magnesium chloride	5 5844
Ferrum chloride	0.0326
Aluminium chloride	0 0588
Manganese chloride	0.0056
Magnesium bromide	0.3037
Magnesium iodide	0 0663
Magnesium borate	0.0116
Ferrum bicarbonate	0.0778
Strontium sulphate	0.6033
Silica	0.0230
Total	178.2301

The methods of treatment vary in the different establishments, the Old, the New, and the Terme Magnaghi; but, for the most part, they consist of baths, inhalations, irrigations, and douches of the natural waters and the *aqua madre*, or mother liquors, of the salt factory, and of the *fanghi* or mud applications. Every sort of massage and electric treatment is also supplied.

There is a long list of ailments for which the waters have been prescribed; the inhalations have proved effective for subacute and chronic diseases (other than tuberculous) of the mucous membrane. The drops of the *aqua madre* or of the natural mineral waters are mechanically atomized and inhaled. Of the various systems employed, the most interesting is the Guttaier. Compressed air is driven with the atomized water into a large hall, and the air employed is so dry that all the water vaporizes and a mist is formed out of minute solid crystals that are left suspended in the air. The peculiarity of the mist was determined by Professor Emmerich of Munich, who has also satisfied himself that the atomized mineral waters are driven into the smallest subdivisions of the lungs.

One of the greatest attractions of Salsomaggiore is its equable climate. As in all parts of Italy, but little rain falls, and the table of temperatures compiled for the season over a period of four years is as follows:

Temperature 1902–6.

Month.	Mean Maximum	Mean Minimum.
	Deg. Fahr.	Deg. Fahr.
April	59.0	43.5
May	66.9	51.0
June	68.0	55.2
July	80.7	63.2
August	77.7	62.2
September	68.4	52.1
October	58.4	46.2

There are the usual attractions, pleasant walks and drives, a theatre which is visited by the best Italian companies, and a band that plays daily.

The local authorities attribute the success of the balneotherapy to the absorption of iodine into the system, and they base the *rationale* of their treatment on the physiology of skin absorption, the *aqua madre* being specially rich in iodine, bromine, lithium, and strontium.

The baths are recommended for the treatment of scrofula, rheumatism, rheumatic arthritis, gout, anæmia, and chlorosis, certain forms of indigestion, diseases of the blood vessels and respiratory organs, affections of the nervous system, gynæcological diseases, tumours, diseases of the bones and joints, and lues.

It should be added that the whole treatment is under the control and supervision of thoroughly-qualified medical men, among whom are our own countrymen, and the conditions of the place are so pleasant that it proves very popular with patients.

The eleventh meeting of the International Congress of Ophthalmology will be held at Naples in 1909. The date of opening has been fixed for April 27th.

LITERARY NOTES.

The fifth volume of the *Cambridge Modern History* includes a posthumous paper by Sir Michael Foster, who, only a week or two before his death, completed the second section of the chapter on "European Science in the Seventeenth Century and Earlier Years of the Eighteenth Century," the first section of which is by Mr. W. Rouse Ball.

To the series of Famous Undergraduates now appearing in the *Edinburgh Student* (February 14th), Dr. Joseph Bell contributes a sketch of Syme in his youthful days. James Syme was born in 1799, and received his preliminary education at the Edinburgh High School. He did not take many university classes, nor did he spend much time within its walls. Botany and chemistry were his chief studies. Before he was 20 he made discoveries of practical value that would have brought him a fortune in business. His chief study was anatomy, which he learnt under Barclay, a famous extramural teacher. Before he was 19 he was demonstrator under Liston, but he soon gave up anatomical teaching to devote himself to surgery. He did not take the M.D. degree, but became a Fellow of the Edinburgh College of Surgeons in 1823. Failing to get an appointment on the staff of the Royal Infirmary, he started a surgical hospital of his own with twenty-four beds, two house-surgeons, a complete staff of nurses and dressers, and an out-patient department. In 1833 he was appointed to the Chair of Clinical Surgery in the university with beds in the Royal Infirmary. There he taught for thirty-six years. An attack of cerebral haemorrhage in April, 1869, led to his resignation, and he died on January 26th, 1870. Speaking of Syme as an operator, Dr. Bell says:

> His method of operating was chiefly remarkable for extreme quietness of manner and movement. He rarely moved his feet, but kept his selected position unchanged; little movement even of back and shoulders, the work was principally done from elbow and wrist. He was neither specially dexterous nor specially rapid. In some operations, such as lithotomy and larger amputations, he was not at home from want of length of fingers and of muscular power. In all, however, his hands were absolutely steady and deft, the knife went exactly where he wanted it to go, and with neither haste nor hesitation. He used few instruments; provided the knife was sharp he did not change it during an operation. He rarely spoke, expected his assistants to be as quiet as he was and to hand things unasked. I remember once being asked by an onlooker if we were in disgrace, as Mr. Syme never spoke to us. Never flurried himself, he expected his assistants to keep quiet too, and a little bleeding did not make him drop the knife and stop to tie a vessel, but he just went on, and tied them all when it was over. He had seen too much blood in the old bloodletting days, and knew that the blood lost during an ordinary operation was usually a comparatively small quantity. He used very simple dressing after an operation, warned us against tension, and encouraged wound drainage by leaving the silk ligatures out at one corner. Even in that dark age when asepticism was unknown we had many stumps healing practically by first intention.

Of Syme as a man he gives the following description:

> He was rather under the middle height, squarely and solidly built about chest and shoulders, with small hands and neat feet, active on his legs even to old age. His dress was quite peculiar—a black swallow-tail evening coat, with a light-coloured waistcoat and trousers, and a tie (generally of a black-and-white or blue-and-white check pattern); it was pretty original. His habits were exceedingly regular and simple. An early riser, he went round his garden and splendid hot-houses before breakfast, walked into town, unless the weather was very bad, and was in his chambers before ten o'clock. Punctual in his attendance at the infirmary, and back to his chambers for an hour or two. In the afternoon he was back in his garden when he could manage it, dined early, and went to bed early. Of a very shy and reserved nature, strangers sometimes found him distant and at first grim. He had no parlour tricks, was a most loyal friend and a determined foe. He always was a man of war, was a principal in several lawsuits, and once nearly fought a duel.

Dr. Bell concludes his sketch by saying that all men who came under the spell of Syme's personality will agree with the summing up of his qualities by Dr. John Brown, who inscribed his *Locke and Sydenham* to his own master in the words:

> Verax,
> Capax, Perspicax,
> Sagax, Efficax,
> Tenax.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 457.*)

Evidence of Dr. C. J. Martin, F.R.S.

Dr. Martin, Director of the Lister Institute of Preventive Medicine, said our knowledge of the causation of infectious diseases had been gained by experiments on animals. By the same method had been discovered the means whereby the causal agents exerted their injurious influence on the body, and the means whereby the animal body defended itself against attack. It was only by the employment of the experimental method that medicine, like other sciences, had been enabled to emerge from quackery. By "quackery" he meant practice not based upon knowledge. The experimental method included clinical observation. The work of Pasteur might be regarded as the foundation of the modern study of contagious diseases both in man and in animals; and their extension by Pasteur and his pupils, and by bacteriologists and pathologists all over the civilized world, had led to the discovery of the causation of most of the infectious diseases to which man was liable. It could hardly be disputed that if they were to acquire control over any disease they must have knowledge of the agent responsible for its production, and that if they were to frame measures to hinder the ravages of any disease they must study (1) the life-history of the micro-organism which was the exciting cause of the disease; (2) the conditions under which it could live and flourish; (3) the conditions detrimental to its existence; and (4) the circumstances by which they might modify its virulence. In a certain number of diseases this knowledge was already at their command, and had afforded means of stamping out these diseases from places where till recently their ravages were responsible for many deaths annually—for example, malaria, yellow fever. It was by experiment alone that Robert Koch and his pupils had during the past few years succeeded in establishing the causation of tuberculosis, cholera, typhoid fever, diphtheria, erysipelas, tetanus, and pneumonia. The witness proceeded to deal in detail with tuberculosis, puerperal fever, diphtheria, tetanus, and plague, with regard to which he said efforts towards the production of a curative serum had unfortunately, so far, been disappointing, as the means employed had not produced an antiserum of sufficient potency. Recent researches into the epidemiology of diphtheria, typhoid, and cholera had indeed proved that persons convalescent from these diseases, and in all respects perfectly healthy, might be innocent agents distributing broadcast these various infections. In many cases a bacteriological diagnosis of a disease could only be made by a direct appeal to animal experiment; but in quite a number a simpler method by which this was avoided, but which had been arrived at in the first instance by experiments upon animals, could be employed. Tuberculin and mallein in the quantities employed produced no effect when injected under the skin of healthy animals; but, if the animals were suffering from the corresponding diseases, fever, and in the case of mallein local swellings, occurred, thereby enabling a diagnosis to be made. They were extensively used to ascertain the existence of tuberculosis in dairy cattle, glanders among horses in large stables in the early stages of the disease. In regard to hydrophobia (rabies) the witness said that Pasteur discovered that it was possible to modify the virulence of the microbes of chicken cholera and anthrax by growing them outside the animal body under particular conditions. He also found that the inoculation of such attenuated cultures gave rise to merely slight malaise, from which the animal speedily recovered. On subsequently inoculating those animals which had received cultures of diminished virulence with microbes of full virulence, he discovered that they had become possessed of a marked degree of resistance to the disease. On the basis of this observation, Pasteur, by carefully controlled experiments on animals, devised a method of protective inoculation against chicken cholera and anthrax. This Pasteurian vaccine had been extensively employed in many countries, and had been the means of saving wealth to stockowners. Reasoning from the analogy afforded by his previous discoveries, Pasteur thought it might be possible to take advantage of the interval between the infection and the development of the symptoms in hydrophobia to produce in the person bitten a sufficient resistance to the disease to prevent its development altogether. He commenced this inquiry in 1881 in conjunction with Roux, Chamberland, and Thuillier (*Comptes rendus*, 1882). He discovered that the virus existed in the nervous system of rabid animals in a pure form, and that it became attenuated by slowly drying it for two or three weeks at a temperature of 20° C. He next showed that by previously inoculating his attenuated virus under the skin of dogs, these animals did not contract the disease when subsequently bitten by rabid dogs. Pasteur had shortly before shown that the inoculation into the brain of a dog of a minute portion of the nervous system of an animal which had succumbed to virulent rabies, invariably gave rise to the disease. Nevertheless, previous treatment of a dog with his attenuated virus prevented the development of the malady in this case also. Having shown that it was possible to prevent the disease by treatment, previous to the inoculation with virulent virus, he tested the influence of his method when applied during the period between the infection and the development of the disease (Pasteur, Chamberland, and Roux, *Comptes rendus*, 1885). The results were entirely successful, and in 1885 Pasteur was induced to try his method upon the human subject. Of his first 350 patients, only one died. That was a little girl horribly bitten about the head and face thirty-seven days before she arrived in Paris. Pasteur felt constrained to attempt his treatment upon this child, although the severity and situation of the bites, and the long interval before treatment began rendered the case hopeless. Since then antirabic inoculation had been employed all over the civilized world wherever the disease had existed. There were at present 51 institutes for the carrying out of the treatment, distributed over Europe, America, Asia, and Africa. Between 1886 and 1905 more than 150,000 persons had been inoculated. There was no institution of the kind in the United Kingdom. Among 150,000 persons treated in different parts of the world the mortality had been less than 1 per cent., and in most institutes less than ½ per cent. The estimated mortality among persons bitten by a rabid dog and not treated, based upon 2,264 cases, was 17·9 per cent. [The witness put in a number of figures collected from various sources to which the reader who is specially interested in the subject is referred.] The average was 17 per cent., and that was the best estimate that he could arrive at. Assuming this as correct, and taking the mortality of patients treated as high as 1 per cent., the method of Pasteur had in twenty years saved upwards of 25,245 persons from hydrophobia, as well as relieving 148,500 persons of the awful suspense for six months after having been bitten by a dog suspected of rabies. Passing next to serumtherapy, the witness said many organisms, and notably those of diphtheria and tetanus, exercised their harmful influence by the secretion of a soluble poison or toxin, which was absorbed from the seat of infection and circulated in the body of the infected animal. One of the means of defence against the invasion of such organisms possessed by the animal body was the capacity to manufacture and set free in the blood stream substances which combined with the toxins, and rendered them inert. By habituating a large animal, such as a horse, to the action of the toxin in increasing quantities, some cells or fluids of its body could thereby be stimulated to produce antitoxins, which were then thrown into the blood stream. These antitoxins, when they had reached a sufficient strength, might be employed as a remedy for the disease in man or animals. Von Behring must be regarded as the founder of serumtherapeutics; and Roux and Ehrlich first brought the subject from the experimental to the practical stage. The horses were selected by a skilled veterinary surgeon. They must be free from all signs and symptoms of disease. The witness then described the process of immunization. The animal was treated with increasing doses of the particular poison. The toxins were injected subcutaneously, intramuscularly, or intravenously. At first either very minute doses of weak toxins, or toxins which had been modified by chemical agents or in other ways, were employed. In the case of tetanus, in the early stages the toxin was usually modified by being treated with

Iodine. The first injection of the toxin might be followed by swelling at the site of inoculation, loss of appetite, general malaise, and rise of temperature. When these had passed off the animal received a second rather larger injection, and in this way the quantity of toxin was increased until, within a few months, the horse was capable of tolerating many thousand multiples of what would be a lethal dose if given as a first injection. When the serum had reached the strength suitable for clinical use, blood was withdrawn from time to time by venesection. All the processes connected with immunization were carried out under the strictest antisepsis. At the Medical Congress at Buda-Pesth in 1894 Roux communicated the results of the treatment with antitoxin of 300 cases of diphtheria in the Paris Hospital. The mortality of those treated with antitoxin was 24 per cent., as against 60 per cent. in the non-treated. In another hospital in Paris, where antitoxin was not yet used the mortality was 80 per cent. The experimental and clinical data, and the favourable statistics brought forward by Roux, led to the trial of this method of treatment for diphtheria in all civilized countries. Diphtheria antitoxin came into use in England in 1895, and immediately a fall in the case mortality in this disease was noticed in those institutions where it was administered. The witness submitted a number of statistics showing the case mortality from diphtheria before and after the employment of the antitoxic treatment He had collected the records of 132,548 cases of diphtheria treated with serum during the years 1894-9, and compared them with 183,256 collected from similar sources before the introduction of serum treatment. The results were as follow: 132,256 cases before serum treatment, mortality 38·4 per cent.; 132,548 cases treated with serum, mortality 14·6 per cent. In drawing conclusions from statistical data of this kind it was obvious that other factors might have to be taken into account as well as serum or no serum. The incidence of diphtheria was not uniform. It occurred in waves. In certain years it was more prevalent than in others, and no doubt the severity of the disease also varied somewhat in different periods. Another factor which would undoubtedly have modified the case mortality of diphtheria was the adoption of a more accurate method of diagnosing the disease by bacteriological examination. This would most certainly have led to the wider recognition of the disease in mild and atypical cases, and therefore to the inclusion in the statistical data of a number of less severe cases of the disease. The influence of this factor in diminishing the case-mortality could not be directly measured. The universal decline in case-mortality coincident with the employment of a remedy based on rational lines, and capable of being experimentally demonstrated certainly to prevent infection or cure the disease in animals, was, however, highly significant. The employment of a remedy of any value would be a factor in diminishing the death-rate of a disease per 100,000 of the population living. It would be obvious that if the prevalence in proportion to the total population were doubled and the type of the disease remained the same, the mortality per 100,000 would also be doubled. Again, supposing that a remedy adequately administered halved the case mortality and other factors remained stationary, the mortality per 100,000 would only be halved on condition that the remedy were administered in sufficient amount in every case. If both factors were varying at the same time the result due to the one might be masked by the other. For this reason it was impossible to draw conclusions regarding the value of antitoxin from general mortality figures alone. The antitoxin did not prevent the spread of the disease. From the records which he submitted it was clear that the cases in which antitoxin was administered on the first day had the lowest mortality, and that the death-rate rapidly rose as the period between the onset of the disease and administration of the serum increased. This was exactly what happened in animal experiments. If antitoxin were administered to an animal on the same day as it was injected with a fatal dose of diphtheria bacilli, 100 per cent. could be saved. If on the day after, a large percentage of treated animals recovered. If on the third day, only a small percentage; and after the third, antitoxin was unable to prevent death in animals. In other words, antitoxin was a remedy definitely known to be proportionately more effective the earlier it was administered, and the experience quoted, derived from a wide source, showed that this was the case when the serum was administered to children, just as was to be expected from animal experiments. If antitoxin were a remedy of no value, whether it were administered on the first or fifth day of the disease would be immaterial. Asked as to the effect of antitoxin upon the incidence of diphtheria paralysis, he said the incidence of paralysis in cases of diphtheria treated in the hospitals of the Metropolitan Asylums Board had risen about 6 per cent. since antitoxin was introduced. This was to be expected, from experimental knowledge of the action of diphtheria poison and of the influence of antitoxin upon an animal which had been either injected with this toxin or inoculated with the bacilli. If antitoxin were given to an animal in sufficient quantity and sufficiently early in the disease, both the acute symptoms and the paralysis, which might occur about three weeks later, were prevented. On the other hand, when the dose of antitoxin was not quite adequate the acute symptoms might still supervene. Reasoning from analogy, it would seem probable that the increased percentage of paralysis was due to a considerable number of cases, which would otherwise have died of acute poisoning, being saved by late or insufficient administration of antitoxin. This supposition was supported by figures which he cited, indicating the proportion of paralysis which occurred amongst patients treated with antitoxin upon the first, second, third, fourth, and fifth days of the disease respectively. He attributed the discovery of the serum and the efficiency of it, and the way to use it, entirely to experiments on animals. The shorter the interval between the inoculation of an animal with diphtheria bacilli or diphtheria toxin and the treatment with antitoxin the less was required to prevent a fatal issue. When the antitoxin was administered before the bacilli or toxin the amount of the former required was still further diminished, and a complete protection could be obtained. This prophylactic use of serum could be advantageously employed to prevent the spread of the disease in schools and institutions, and readily suppressed outbreaks of the disease. Hitherto, in England, diphtheria antitoxin had not been much used as a prophylactic, though in certain outbreaks, such as those at Cambridge and Chesterton, it was employed with considerable success (Cobbett, *Journ. of Hygiene*, vol. i). In France, Germany, and America, however, it was commonly employed with this object, and very valuable results had been obtained in this direction. The following experience occurred in Heubner's clinic (Lohr, *Jahrbuch f. Kinderheilkunde*, Bd. 43, Ht. 1, and Slawyk, *Die Therapie der Gegenwart*, 1899): From 1895 onwards prophylactic injections were given every three weeks to all the patients, and the outbreaks of diphtheria which had formerly regularly occurred in the wards came to an end. In October, 1897, this precautionary measure was stopped in a wing not used for infectious cases, and in November cases of house infection broke out in this department. A general prophylactic inoculation was again employed, and the occurrence of cases completely ceased. The preventive action of antitoxin was extensively taken advantage of in America. Biggs (*New York Med. Journ.*, 1900, lxxi, p. 234) stated that out of 3,109 children to whom antitoxin was administered only 9 acquired diphtheria; and Park (*Journ. Amer Med. Assoc.*, 1900, i, p. 902) recorded 6,506 cases of immunization, among which 28 developed the disease within twenty-four hours—that was, before the protection was effective—while only 274 were attacked after this limit of time. Speaking of tetanus antitoxin, he said it was possible to obtain it of extraordinary preventive power, as tested experimentally by injecting the serum previously to the toxin. The experimental results were satisfactory when the two were mixed together at the time of injection; but as a curative agent in practice its value was far less than that of the corresponding antitoxin for diphtheria, because the disease was usually discovered only after serious lesions of the nervous system had already been produced, upon which the antitoxin could exert little influence. The antitoxin treatment of a case of tetanus which had developed was not very hopeful. As a prophylactic its power was fully established. In veterinary practice, where it had been used under test conditions, it had proved infallible. The bacillus of tetanus was common in dung, and hence on

the skin of horses. A considerable mortality from tetanus occurred in veterinary surgery, owing to the entrance of the bacillus into wounds, especially in castrations, which from the situation of the wound were particularly liable to be contaminated; 2,700 cases, both operative and traumatic, were selected for preventive inoculation from those in which by experience they knew that tetanus was most likely to occur. Not one of these 2,700 animals contracted tetanus; whereas, in the practice of the same veterinary surgeons, during the same period, but not so treated, 259 cases of tetanus occurred (Nocard, *Comptes rendus du Congrès de Moscou*, 1897, t. vii, p. 244). In cases of severe wounds in man, such as compound fractures, where there had been much soiling of the wound, and especially if earth had found its way into the depths of the wound, a prophylactic injection of tetanus antitoxin was advantageously employed. Herhold (*Deut. med. Woch.*, 1901, p. 479), who was surgeon to the German contingent in the expedition to Peking, at first lost several patients by tetanus. Afterwards he used prophylactic injections in all cases of crushed wounds contaminated with dirt, and no more cases of the disease occurred. Passing on to speak of dysentery antitoxin, the witness said epidemic dysentery was an infectious disease, more particularly liable to assume serious proportions when individuals were crowded together in gaols, asylums, or camps. It was in war especially that it became formidable, both on account of the high death-rate and of the number of men thrown out of action, often for prolonged periods. Knaak (*Die Krankheiten in Kriege*, Leipzig, 1900) stated that in the American War of Secession, 1861–64, there occurred 259,071 cases of acute dysentery, with 5,576 deaths; and of chronic dysentery, 28,451 cases, with 3 855 deaths. In the Franco-Prussian war of 1870-1 there were 38 652 cases (49 per 1,000), and of these 2 380 died—62 per cent. of those affected. In addition there were 223 cases among officers, etc., with 25 deaths. The bacillus of bacterial dysentery was first isolated by Shiga in Japan (*Centralb. f. Bakt.*, 1898). Kruse found the same bacillus in an outbreak of dysentery in South Germany (*Deut. med. Woch.*, 1900–1), and Flexner in Manila (*Centralb. f. Bakt.*, 1901). The bacillus was pathogenic for the guinea-pig and rabbit. In these animals the bacillus itself, or the poison obtained by growing it in broth, produced dysenteric diarrhœa, severe nervous symptoms, paralysis, and death within a few hours or days, according to dose. In the intestines of these animals morbid changes, similar to those occurring in man, had been observed. Shiga (*Deut. med. Woch.*, 1901) first immunized horses against the dysentery bacillus, and employed the serum as a therapeutic agent in man. Kruse (*Deut. med. Woch.*, 1903, p. 49) obtained a similar serum by using the bacillus isolated by him in Germany, and Rosenthal (*Centralb. f. Bakt.*, 1904, p. 463), Todd (BRITISH MEDICAL JOURNAL, 1903), and others had added to the knowledge of the subject. Antidysentery serum possessed preventive and curative properties when employed on animals inoculated either with the living bacillus or its toxins. All the pathogenic effects referred to as occurring in experimental animals could be prevented or cured. No extensive data as to the value of antidysentery serum as a therapeutic agent in man were yet available, but so far as it had been used the results recorded had been very promising. Shiga (loc. cit.) used his serum in 298 cases, and obtained a reduction in the death-rate to one-third of the rate in cases not treated by serum, the death-rate in cases receiving only serum treatment was 10 8 per cent., and in 2,599 cases treated by other means 35.4 per cent. Kruse treated 100 cases with good results. Of 19 patients under 10 years one died, equal to a death-rate of 5 per cent., the usual mortality in cases of this age being from 13 per cent. to 20 per cent. The injection of the serum was followed by a rapid reduction in the number of stools and by improvement in the general condition. Similar results were obtained at Moscow by Rosenthal (*Centralb. f. Bakt.*, 1904) in 157 cases treated with serum. The death-rate was 4 5 per cent., compared with 10.11 per cent. in other hospitals during the same epidemic. When the serum was used in the first three days recovery took place in one or two days. Rosenthal's serum was employed in the Russo-Japanese war. Korentchewsky (*Bull. Inst. Pasteur*, 1905) treated 70 cases, and found the treatment very efficacious. The painful symptoms were controlled as by a narcotic. Barikan (quoted by Vaillard and Dopter) treated 59 cases in Manchuria, with one death. Vaillard and Dopter (*Ann. d'Inst. Pasteur*, 1906) treated 96 cases, all of a severe type, with one death. These authors found, like other observers, that after the use of the serum there occurred a diminution in the frequency of the stools. The painful symptoms, such as spasms and colic, were ameliorated. In regard to diphtheria, the witness said his own belief was that if a child could be treated with the diphtheria antitoxin in an adequate amount and sufficiently early in the disease the mortality would be nil. That opinion had also been stated by the Medical Officer of Health of Chicago from his experience of the disease in that city, where they distributed diphtheria antitoxin free to every doctor, provided that he afterwards filled up a form to say that his patient could not afford to purchase it. With regard to dysentery, he could not speak with the same confidence. From experiments on animals he regarded the dysentery antitoxin as for practical purposes coming after the diphtheria antitoxin. With regard to vaccines against plague and typhoid fever, the witness said that in 1888 Gamaleïa (*Ann. d'Inst. Pasteur*, 1888, 1889) found that guinea-pigs and pigeons could be protected against infection with an organism (*Vibrio metchnikovi*) by the previous inoculation of killed cultures of this vibrio. That was an important discovery, as it showed that to produce protection it was not essential to infect with the living microbe, but that some degree of immunity could be induced by the inoculation of the chemical products contained in the substance of the dead organisms. Subsequently the principle discovered by Gamaleïa was by experiments on animals extended to other diseases—for example, cholera, typhoid (Brieger and Wassermann, *Zeitschr. f. Hyg.*, Bd. 12, and *Deut. med. Woch.*, 1892; Pfeiffer, *Zeitschr. f. Hyg.*, Bd. 21, 1896), and plague (Yersin). In 1896 plague broke out in Bombay and spread throughout the city, and extended to neighbouring places. The general sanitary measures employed proved powerless to prevent the spread of the disease. After numerous experiments with cultures of the plague bacillus which had been killed by a variety of means, Haffkine decided upon a broth culture of the organism sterilized by heating to 65° C. Having tested the vaccine by inoculating first himself and then the personnel of his laboratory, the first extensive trial of this vaccine was made in January, 1897, upon the inmates of the Byculla Gaol, where plague had broken out (*Statistics of Inoculations with Haffkine's Antiplague Vaccine*, 1897 to 1900; Bannerman, Gov. Central Press, Bombay, 1900). The submission to inoculation was voluntary. The gaol contained 337 adults of both sexes, who were not obviously infected with plague; 154 offered themselves for inoculation. Three of these were, however, in the incubation stage of plague, for they developed plague the same evening. For the purpose of arriving at an estimate of the value of the preventive inoculation, these persons in the incubating stage of the disease must be eliminated from the calculation, as also many cases amongst the uninoculated, who also developed plague upon the day the injections were made, leaving 177 uninoculated and 151 inoculated. The result of this experiment was as follows:

	Number of Persons.	Cases of Plague.	Deaths.
Uninoculated ...	177	12	8
Inoculated ...	151	2	0

The method was tested with equally favourable results in other places, and on the strength of these it was officially adopted by the Government of India, and arrangements made for the manufacture of vaccine on a large scale. During the plague season 1902–3, 505,398 persons were inoculated in the Punjab alone (Report on Plague and Inoculation in the Punjab from October 1st, 1902, to September 30th, 1903). The official report gave details concerning the villages of twelve districts in which the proportion of inoculated persons was greatest. The number of inoculated in these twelve districts was 224,428, and the uninoculated, as estimated from the total

population, 639,600. The number of cases and deaths from plague were as follows:

	Number of Persons.	Cases.	Deaths.	Cases per Cent	Case Mortality per Cent.
Inoculated	214,422	3,393	814	1.5	23.9
Uninoculated ..	639,600	49,430	29,723	7.7	60.1

The value of inoculation against plague was undoubted.

Dealing with antityphoid vaccination he said a method of preparing a vaccine against typhoid fever was devised by Wright and Semple in 1896. They satisfied themselves of the innocuousness of their vaccine by experiments—first upon themselves, and subsequently upon their friends. The first inoculations on a large scale were made amongst British troops in India (Bangalore, Rawal Pindi, Lucknow), when the Plague Commission, of which Wright was a member, was in India, November, 1898, to March, 1899. These inoculations were voluntary, at private cost, and without official sanction; though the original proposal for them in 1897 had come from the Indian Government. The results of these early Indian inoculations were as follows:

Number under Observation.	Cases.	Deaths.	Percentage of Cases.	Percentage of Deaths.
Inoculated ... 2,835	27	6	0 95	0.2
Uninoculated 8,460	213	23	2.5	0.34

On May 25th, 1899, the Indian Government made application to the Secretary of State for India that the inoculations should be sanctioned, and should be made at the public cost. Sanction for antityphoid vaccination having been given, a number of men from several regiments were inoculated. The regiment in which the largest number of men were inoculated was the 15th Hussars, which remained in India. The incidence of typhoid in that regiment from October 22nd, 1899, to October 22nd, 1900, was as follows:

	Strength	Inoculated.	Cases.	Deaths	Not Inoculated.	Cases.	Deaths
Officers ..	22	19	0	0	3	0	0
N.C.O. & men.	482	317	2	1	164	11	6
Women ..	36	24	0	0	12	0	0

From which it appeared that the incidence of typhoid amongst the uninoculated was 5.8 per cent., and amongst the inoculated 0.55 per cent., or less than one-tenth. The witness quoted other statistics of the results of antityphoid inoculation amongst British troops during the South African war, indicating a substantial diminution both of the incidence and deaths from typhoid fever amongst the inoculated. These figures had not been officially published. The value of antityphoid inoculation could no longer be regarded as doubtful, and considerable effort was being made by the Commander-in-Chief in India to secure the inoculation of as large a proportion as possible of the British Army in India. The investigation was still going on. Vaccination was voluntary, and no inducement was given to the men. In reply to Sir William Collins, the witness said the Commander-in-Chief had issued instructions that he would like as many men vaccinated as possible. There had been no order to say that men must be vaccinated.

(*To be continued*)

THE estate of the late Sir Alfred Garrod has been proved of the value of £84,551. The late Sir Charles Frederick Hutchinson, formerly M.P. for the Rye Division of Sussex, has left £5,456. Mrs. Bell Pettigrew, widow of the late Professor Bell Pettigrew, has offered the University of St. Andrews the sum of £6,000, in commemoration of the long association with the University of her late husband. The gift is to provide a museum in connexion with the proposed extension of the present Botanic Gardens.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to the British Medical Benevolent Fund was held on February 18th, Sir WILLIAM CHURCH, Bart., being in the chair.

Sir John Tweedy, F.R.C.S., was unanimously elected President of the Fund, and the Vice-Presidents, Trustees, Committee, Treasurer, and Honorary Secretary were reappointed. The annual report, printed below, and the Treasurer's financial statement, were adopted. Hearty votes of thanks were accorded to Dr. Dawson Williams, the Editor of the BRITISH MEDICAL JOURNAL, and to Mr. Wakley, the Editor of the *Lancet*, for their sympathetic support of the Fund; to Mr. Guy Elliston, General Secretary of the British Medical Association, for his help in the collection of subscriptions; and to the Honorary Auditors, Messrs. Deloitte, Plender, Griffiths and Co., by whom the accounts have been for so many years regularly audited.

ANNUAL REPORT FOR 1907.

The most important event in the history of the past year is the lamented death of our President, Sir William Broadbent. This is a very serious loss to the Fund. As Secretary, Treasurer, and President, Sir William Broadbent had given many years of hard work to the Fund. He had not only contributed largely of his own resources and been the means of securing wide support from others, but, assisted by his daughter, had taken that personal interest in the recipients of relief which made the charity given doubly welcome. To the sense of public loss must be added that of individual bereavement, and the Committee feels his death as that of a personal friend, for his house had been for many years its home and there all its meetings were held. Altogether his great influence will be terribly missed.

In his place Sir John Tweedy, another devoted friend of the Fund, has been elected President. Under his active direction the Fund may well look with confidence to the future.

Finance.

The finances have unfortunately shared in the general depression.

Grants.

In the grant department, the amount received has been less by £143 5s. 1d. than that in 1906, but about the same as in 1905. The year 1906 showed receipts much above the average because of the special appeal, as a result of which a certain sum was placed on deposit. This had to be drawn upon to meet the demands of the current year to the extent of nearly £300; for the sum of £1,861 8s. was distributed in grants during 1907, compared with £1,567 15s. in 1906. The demands have been unusually great, and the fund has done its best to meet them, but it will not stand repeated drains of this kind, and it is imperative that every effort should be made in the coming year to increase its resources.

Annuities.

The annuity department continues to be satisfactory, for, as the result of the policy of investing all legacies, the capital continually grows, and the income available for annuities increases; £1,500 of Metropolitan Police Stock has been purchased this year, yielding £45 per annum.

The annuities number 123, and are for the most part of the value of £20 per annum. Some years ago a special fund was started with the object of raising all the annuities to £26 per annum, or 10s. a week. The special fund now amounts to £2,400. Of recent years this fund has to some extent fallen out of view, and little has been added to it. The Committee wishes to draw attention anew to its existence, and is resolved to take any opportunity that presents itself of increasing it, so that all annuities shall reach the desired value; for 10s. a week is little enough, especially to those who, like so many of our annuitants, have in earlier life been in comfortable circumstances.

To raise all the remaining annuities to this amount of 10s. a week would require over £800 per annum, or a capital sum, at 3 per cent., of more than £20,000. What a grand opportunity for the truest charity is thus open to the benevolent!

The following is the list of donors of £10 and upwards during the year:

	£	s.	d.
The Society of Apothecaries	10	10	0
British Medical Association, Exeter Meeting, Church Collection	21	8	3
Miss Flower, special gifts	15	0	0
Dr. Frank	25	0	0
Great Western Railway Medical Staff ...	10	0	0
Mrs. Hawkins	10	0	0
H. Rooke Ley, Esq., M.R.C.S.	15	0	0
Liverpool Church Collection, St. Luke's Day	25	0	0
Sir R Douglas Powell, Bart., M.D.	10	0	0
The Salters' Company	10	10	0
Dr. Satchell, J.P., F.R.C.P Edin.	21	0	0
Sir Thomas Smith, Bart., F.R.C.S.	10	0	0
Sir John Tweedy, F.R.C.S.	50	0	0
Dr. Uhthoff	10	0	0
Dr. H. H. Weir	25	0	0
F. E. Webb, Esq., M.R.C.S.	100	0	0

Administration.

Mr. John Terry, M.R.C.S., of Braunston, Rugby, and Dr. H. G. Harris, of Southampton, have been appointed new Honorary Local Secretaries.

The Committee received with regret the resignation of Dr. Wade, of Southampton, who for many years did valuable work for the Fund.

The accounts have been audited as usual by Messrs. Deloitte, Plender, Griffiths and Co., the auditors of the Fund, whose services, rendered gratuitously for so many years, the Committee desires to acknowledge with warm appreciation.

To the *Lancet* and the British Medical Journal the Committee expresses its warmest thanks. The insertion, month by month, of a short abstract of the cases relieved is the best and most touching appeal that can be made, and is one of the most effectual means of keeping the work and requirements of the Fund before the profession.

Death has laid a heavy hand upon our members, and, besides our President, has carried off Mr. J. N. Winter, Vice-President, donor of £1,290; Dr. A. E. Sansom, annual subscriber of £21; Dr. Alfred Sheen, Honorary Local Secretary for Cardiff, who collected £785 2s. 6d., as well as Dr. E. Markham Skerritt, Vice-President, Sir William Tennant Gairdner, K.C.B., Vice-President, Mr. Timothy Holmes, F.R.C.S., Vice-President, and Sir Alfred Garrod, M.D., Vice-President, all of whom were liberal subscribers. Mr. Winter was for many years an active member of the Committee and rarely missed its meetings. Besides being a constant and liberal contributor, he was always ready in various ways to give help wherever and whenever it was needed.

To make good all these serious losses, renewed and increased effort will be necessary if the Fund is not to fall behind in the good work it is doing. Every opportunity should be taken of making the objects and work of the Fund more widely known, for the better known they are the more, without doubt, they will be appreciated and supported.

At a provincial meeting of the Royal Sanitary Institute to be held at the Town Hall, Blackpool, on the evening of March 13th, a discussion on sewer ventilation and the intercepting trap will be introduced by Dr. Francis J. H. Coutts, M.O.H., and Mr. J. S. Brodie, Borough Engineer and Surveyor, Blackpool. On Saturday morning, March 14th, visits will be paid to the destructor and electricity works; in the afternoon the sea defence works and the infectious diseases hospital will be inspected.

The Russian Ministry of Railway Traffic has allocated 600,000 roubles for the establishment of a rational system of care of the eyes of railway employés. The railway Boards of management have been directed to engage the services of oculists at a salary of 1,200 roubles (about £120), whose duty it shall be, not only to do ambulance work, but to inspect the employés' eyes and, where necessary, treat them.

The Rockefeller Institute for Medical Research will award a limited number of scholarships and fellowships of from 800 dols. to 1,200 dols. each for persons judged suitable to carry on in the laboratories of the Institute in New York City investigations in experimental pathology, bacteriology, medical zoology, physiology and pharmacology, physiological and pathological chemistry, and experimental surgery.

THE EPIDEMIC OF INFLUENZA.

The following notes from our special correspondents show that the present epidemic of influenza is one of the most widespread of recent times, that it began in most of the chief centres very much about the same time, and that, though it has been on the whole mild, the cases have been of mixed type, the respiratory and rheumatic or nervous attacks being more numerous than those of the gastro-intestinal form. In Newcastle and some other districts the number of children attacked has attracted attention, but this does not appear to have happened in London. In Dublin a very distinct reduction in the number of deaths from the usual zymotic diseases has been observed, and something of the same kind is true of London, for the number of cases of death due to measles, diphtheria, whooping-cough, enteric fever, and epidemic diarrhœa were, in the week ending February 22nd, below the average for the eighth week of the year.

Birmingham.

An epidemic of influenza has been present in Birmingham and the district for the last two or three weeks, and a very large number of persons have been suffering from it, and there are still many patients under treatment for the malady. There are an abnormal number of cases of bronchitis and catarrhal conditions of the upper air passages, which are probably influenzal in origin. Although the attacks of influenza are generally mild and soon pass away, yet during last week no fewer than 11 deaths were registered as due to the disease.

Oxford.

There has been a fairly widespread epidemic of influenza here, chiefly during the last fortnight, but it is now considerably diminished. The attacks have, on the whole, been distinctly of a mild type, temperatures running up rapidly to 102° and 105° F., but becoming normal again in from twenty-four to forty-eight hours. Gastro-intestinal symptoms have not been uncommon, but have in most cases been relatively slight compared with those of the epidemic last year.

Cambridge.

During the last few weeks influenza has been prevalent in Cambridge, both in the town and in the University. The type is on the whole mild, and the epidemic not so widely spread as on many former occasions. There has also been an unusual amount of pneumonia of the pneumococcus form during the last two weeks.

Bristol.

During the past two or three weeks there has been an unusual number of cases of influenza in Bristol, though hardly sufficiently widespread and universal to be styled an epidemic. It would be correct to say that the disease, which has been endemic for some years, has become more prevalent. The type has been more like the original one seen when the disease first visited this country in 1889-90—considerable fever, aching pains in the limbs, and a tendency to bronchial troubles. In not a few cases pneumonia has followed, but hardly of the severe form seen formerly; several medical men have suffered in this way. The big institutions, such as the schools, have escaped with only a few cases.

North Staffordshire.

The prevailing epidemic of influenza has not spared even those who were already fully occupied with the question of federating the pottery towns, though this area has been behind many other provincial towns in succumbing to its influence. Probably the insular condition of this group of towns in point of railway topography accounts for the later invasion. Signs of an outbreak were first noted at Stoke-on-Trent, where the central station is situated; the disease has now become general throughout Hanley, Longton, Burslem, Tunstall, Fenton, and Newcastle; nor are the surrounding country districts escaping. Owing to the prevalence amongst country children in the north-easterly parts of the county, it has been necessary to close three schools at Cheadle, one at Kingsley, and one at Oakamoor. The disease is mostly of the pulmonary type, while a few cerebral and gastric cases are reported, the febrile symptoms being rather severe. On the whole, serious sequelæ are not numerous.

Colchester.

Influenza is prevalent to a considerable extent in Colchester, but apparently the epidemic is at present much less widespread than in London. The type is mild, with fever and pains in limbs, joints, and back, but as a rule without lung complications, and no deaths have during the present year been recorded as due to influenza.

Manchester.

Perhaps the most widespread epidemic of influenza that has visited Manchester for some years began with the beginning of the year. The onset of the epidemic was remarkably sudden. At Christmas there were practically no cases; then about a fortnight of raw foggy weather came, and by the end of the first week of January there were hundreds, and a week later thousands. In the middle of January over 200 men were absent from a single large works, suffering from the disease. The coincidence of the onset of the epidemic with the prevalence of dirty yellow fogs may be accidental, but probably there is some connexion. The fogs were simply loaded with dust and soot and other material most irritating to the respiratory organs. Even the efforts to avoid the fog must have often led to perhaps worse conditions, for everybody seemed to be trying to coop himself up in a close, stuffy room. One cannot help thinking that the disgraceful way in which the tramcars are allowed to be overcrowded every morning and evening had something to do with the rapid spread of the epidemic. It is no uncommon thing when every seat in a car is occupied for the conductors to allow ten or twelve other passengers to stand in the car, and with every ventilator closed and the doorway blocked by passengers the influenza fiend must simply revel in the material at its disposal. On the whole the type of the disease has not been so severe as in some former epidemics, though worse than for the last few years. There has been a considerable number of cases of pneumonia, though perhaps not so many in proportion as in former epidemics. Undoubtedly many cases of simple acute coryza have been classed as influenza, and some experiments have shown that severe headache and neuralgic pains in the back and limbs with high fever may arise when only the *Micrococcus catarrhalis* can be detected and not the influenza bacillus. There has also been a large number of cases of membranous pharyngitis, combined with typical symptoms of influenza, with no diphtheria bacilli but with numerous streptococci. Many of these cases are remarkable for the rapidity with which the throat symptoms recover under local treatment, contrasted with the slowness with which the general strength is regained. A fair number of cases have been seen of the afebrile type, characterized by somewhat sudden and profound prostration; but by far the commonest form has been the typical attack, ushered in with a rigor or shivering, with high temperature, quickly followed by intense headache, distressing muscular pains, especially in the back, great prostration, and slow convalescence. Within the last week there have been distinct signs that the epidemic is beginning to wane.

Liverpool.

The epidemic of influenza which has been so widely spread throughout the country appeared first in Liverpool after the great prevalence of the disease in the United States of America, especially the Eastern States, which existed towards the close of last year. The outbreak occurred suddenly in January, its maximum severity being in the third week, when there was a rise in the mortality from the normal 18 per 1,000 to 34 per 1,000. The number of cases certified as directly due to influenza during this week was only 23, but the disease, no doubt, was present as a complication in many other forms of illness, and determined a fatal result. The mortality was exceptionally severe among the poorer part of the population and the aged, especially the infirm inmates of various institutions; but it was by no means confined to them, and Liverpool has lost several distinguished and valuable citizens. After lasting three weeks, the epidemic subsided as quickly as it arose, and the mortality fell to 17 per 1,000. The type was very variable, and the epidemic resembled that of 1895 in its general behaviour.

Bradford.

The epidemic in this city is mild in character and of somewhat limited proportions. The number of cases under treatment by Bradford medical men is greater than is usual at this time of the year, but not at all to be compared with some of the previous outbreaks of the disease. Taking the cases in the average, they do not show any very unusual symptoms. There is often an attack of nausea or vomiting, followed by a rise of temperature, with pains in the head, back, and legs; all the symptoms rapidly subside as the result of treatment. There is a general feeling of lassitude after the acute symptoms have abated, and some patients have exhibited a condition of general nervous depression, with insomnia. In other cases there have been evidences of gastric disturbance, with nausea, anorexia, and a thickly furred tongue. But under treatment even these conditions quickly subside. Acute pleurisy, pneumonia, or allied conditions leading to danger to the life of the individual are not so common as formerly. There appears to be a general feeling amongst the public that when symptoms of influenza show themselves it is necessary at once to stay at home and keep warm. Large numbers of people take these precautionary measures and never call in any professional medical assistance.

Newcastle-upon-Tyne.

Newcastle-upon-Tyne and district are suffering rather severely from influenza. The malady may be said to be almost epidemic and to be affecting a greater number of young persons than hitherto. The number of children absent from school is larger than at this period of previous years, and as the returns show a marked absence of the ordinary infectious illnesses which usually keep children at home and the causes of their detention are indefinitely described as "colds," it is more than probable that much of the indisposition is due to mild influenza. Among adults influenza is extremely prevalent. The malady in grown-up people is mostly of the pulmonary type, bronchitis and pneumonia being much in evidence. Some of the cases have been extremely severe, but fortunately fatalities have so far been few.

Edinburgh.

From January 1st to mid-day of February 22nd, 1908, 33 deaths were registered as directly due to influenza. These were distributed as follows: From January 1st to 18th, 2 deaths; in the week ending January 25th, 2 deaths; in the week ending February 1st, 5 deaths; in the weeks ending February 8th, 15th, and 22nd, 8 deaths in each week. Of 110 deaths in Edinburgh in the week ending February 22nd, 46 were in persons over 60 years of age—well-nigh half—while 31 deaths were due to chest affections. During the present epidemic of influenza pneumonia, as usual, has exacted the heaviest toll, many of the cases being double. As the above figures show, those in advanced life have suffered severely: and, as Dr. Clouston points out in his valedictory annual report, more remains to be seen in premature senility. Young infants have been affected more than is usual. After pneumonia, the most common accompaniments or complications have been gastric, hepatic, and intestinal, often with profound nausea, and middle-ear catarrh accompanied by haemorrhage. Cerebral and cardiac complications would appear to have been less frequent during the present epidemic. Although the type is less malign than in 1889–90 and the two following winters, it is much more severe than for the past eight years, and the epidemic is much more widely spread. Business houses and offices have been partially paralysed, whole households have been struck down within twenty-four hours, and the public services have been handicapped.

Glasgow.

Glasgow has not escaped the prevailing epidemic, and influenza is rife. The type of disease is fairly severe, and complications are frequently noted. It seems to be the general experience that these complications chiefly affect the pulmonary system. Bronchopneumonia and lobar pneumonia are very prevalent. A more unusual feature is the fact that during the present epidemic ear complications have been frequently noted. No statistics are available to determine to what extent the mortality in the present compares with that in previous epidemics, but there seems little doubt that comparatively few deaths have resulted.

Aberdeen.

During the present winter the amount of illness prevalent was rather below the average until the second

week in January, when influenza suddenly appeared in epidemic form. Within a few days there must have been hundreds of cases in the city, and the epidemic spread with very great rapidity, until every district in the town was affected. During the first two weeks or thereabouts the cases were of a mild character, and though whole families were in many instances attacked at the same time, there were comparatively few complications of a serious nature. This is borne out by the fact that only 3 deaths were reported from influenza during the month of January. As the number of cases diminished, however, complications of serious character became prevalent, those of the chest, pneumonia, bronchitis, etc., being most frequent, while there were also many stomach and bowel complications. The number of deaths from influenza during February is likely to be over rather than under 20, which confirms the view that the epidemic in the later stages was of a more severe type. It has now almost subsided.

Dublin.

There has been an epidemic of influenza in Dublin for about the past two months. As it is not a notifiable disease it is not possible to report the actual number of cases, but these have been very numerous, if one is to judge by the absence of officials from public departments of all kinds. The death-rate shows that the disease has been for the past month distinctly severe. Thus, in the fortnight ending February 22nd, 12 deaths from influenza were reported; in the previous fortnight, 7; and in the fortnight ending January 25th, 14. For the three previous like periods only 1 death was reported in each fortnight. These returns, for which we are indebted to Sir Charles Cameron, do not include cases of pneumonia. The type of the disease is, however, mainly respiratory. In the late autumn the type was observed to be more of an abdominal character. In both classes the recovery has been slow, the depression being marked. Curiously enough, there has been a very distinct reduction in the deaths from the usual zymotic diseases. Thus, for the last four weeks the rate has been only 0.5 per 1,000 in the city, while in the same period for the previous ten years the average was 1.6.

Cork.

For the past month influenza has been rather prevalent in Cork; the cases have, however, mostly been of a mild type without complications. Many of the cases come on with great suddenness. The military authorities had to cope with an outbreak amongst the soldiers in Cork Barracks, numbers of the men being struck down at the same time.

London.

The epidemic is still very widespread in London, and is causing considerable dislocation of business, though not to anything like the extent observed in the first year of the present pandemic. The returns for the week ending February 22nd show a large increase of deaths attributed to influenza, while those due to pneumonia have been above the average during January and February. The statistics are shown in the following table, in which the averages for the eighth week of the year founded upon returns for the last five years are given in brackets; the deaths attributed to bronchitis, it will be observed, are below the average.

Week Ending.	Influenza.	Pneumonia.	Bronchitis.
1908			
January 4th	13 (37.9)	160 (213.6)	153 (245.3)
,, 11th	28 (36.8)	197 (187.1)	227 (196.1)
,, 18th	21 (33.4)	214 (160.2)	241 (192.2)
,, 25th	25 (24.8)	191 (172.5)	238 (217.2)
February 1st	32 (26.0)	182 (166.6)	217 (193.6)
,, 8th	34 (25.0)	190 (167.9)	181 (176.3)
,, 15th	84 (30.3)	128 (164.3)	231 (181.2)
,, 22nd	123 (24.2)	197 (152.5)	193 (161.9)

The annual general meeting of the Association of Certified Dispensers will be held in the Apothecaries' Hall on Thursday, March 5th, at 7.30 p.m.

MEDICAL NEWS.

The second National Congress of the Medical Practitioners of France will be held at Lille in June next.

A new Association of German School Doctors has been founded as an independent section of the German School Hygiene Association.

Sir Herbert M. Ellis, K.C.B., Director-General of the Medical Department of the Royal Navy, has been elected a Fellow of the Royal Sanitary Institute.

Dr. H. Campbell Thomson has been elected Dean of the Medical School of Middlesex Hospital, in succession to Mr. John Murray, F.R.C.S., who has resigned, after holding the office for six years.

Professor Saundby has been re-elected President of the Birmingham Library for the fifth year in succession. The library must be one of the oldest in the country, since it has been in existence for 150 years.

Dr. W. Williams, County Medical Officer for Glamorgan, has been appointed by the University of Oxford as their representative at the forthcoming congress of the Royal Sanitary Institute to be held at Cardiff during July, 1908.

Dr. William Sinclair, President of the Furness Division of the British Medical Association, has been presented by the Society of Boilermakers and Iron and Steel Builders with an emblem of the Society in recognition of his services rendered during the last thirty-seven years.

Dr. F. M. Sandwith, Gresham Professor of Physic, will give lectures on Monday, Tuesday, Thursday, and Friday next week at Gresham College, Basinghall Street, E.C., at 6 p.m. on each day. The first lecture will deal with his predecessors in the chair from 1597; the subject of the other three lectures will be tuberculosis.

West London Medico-Chirurgical Society. — The twenty-sixth anniversary dinner of the West London Medico-Chirurgical Society was held at the Wharncliffe Rooms, Hotel Great Central, Marylebone, on February 13th, with the President, Mr. Richard Lake, in the chair. Covers were laid for over 130 guests. Among those present were: Sir William Church, Mr. W. Arbuthnot Lane, Colonel Sloggett, Mr. C. Ryall, Dr. R. Burnett, Dr. Seymour Taylor, Mr. C. B. Keetley, Mr. A. Baldwin, Dr. J. H. Dauber, Dr. A. J. R. Oxley, Dr. L. Dobson, Mr. J. G. Pardoe, and Dr. F. G. Crookshank. After the usual loyal toasts had been duly honoured, Dr. Herbert Chambers proposed the toast of "The Imperial Forces," and, after referring to the Navy and the Army, observed that, in regard to the volunteers, the measure of success that would be attained in the new territorial scheme would depend on the measure of public spirit animating the nation. If the scheme failed, they were face to face with compulsory service in some form or another. There were three courses open to the medical man in civil practice: He could join the territorial medical service; he might become a consulting surgeon in connexion with a base hospital: or he could offer his services to the principal medical officer, stating his willingness to accept any position it was thought fit to offer him. In regard to the third course, more information concerning services required and the remuneration, together with other points, was required. This toast was responded to by Colonel Sloggett, R.A.M.C., who said that the sympathy and kindly feeling that had grown up between the Royal Army Medical Corps and the civilian medical men was a good thing for both. He would like to see three times as many men join from the London schools as the Royal Army Medical Corps was at present getting. The President then submitted the toast of "The West London Medico-Chirurgical Society," which was in a very flourishing condition. Its meetings were well attended, and the greatest interest was taken in its proceedings. Dr. A. J. R. Oxley then proposed the toast of "Kindred Societies and Guests," which was replied to by Sir William Church, the President of the Royal Society of Medicine. He congratulated the Society on its success, and explained that it was no part of the scheme of the Royal Society of Medicine to absorb societies like theirs. Mr. W. Arbuthnot Lane, who also responded to this toast, concluded his speech by giving the toast of "The Chairman," referring to his services in the advancement of surgery and to his ability as President. The Chairman, in responding, said the thanks of the Society were due to Dr. Crookshank for the excellent arrangement of the dinner.

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SATURDAY, FEBRUARY 29TH, 1908.

DOCTORS' DISEASES.

AN idea seems to dwell in the subliminal consciousness of the public that doctors should never be ill. When they are attacked by disease, beneath the outward expression of sympathy there is a tendency in the average man to recall in a more or less cynical spirit the text, "Physician, heal thyself!" Yet the truth is that doctors as a class are more subject to illness than their fellow-men, and their expectancy of life is less than that of most. An explanation of this is readily found in the anxieties caused by responsibilities which must weigh heavy on every man of right feeling; in the amount and trying nature of the work the doctor has to do; in irregularity in meals and broken sleep; in exposure to weather and to infection; and, last but not least, in the scanty remuneration which his labour too often brings him. The combined influence of all these causes is sufficient to undermine the strongest constitution long before a man has reached the limit of three score and ten. It is true that we can point to instances of remarkable longevity among us. A year or two ago a French doctor at Noyon completed his hundredth year, and there was another at Boulogne who was said to have carried on a general practice at the same patriarchal age. Sir Henry Pitman, who is still with us, is almost a centenarian, but we believe he has not practised his profession for many years. During the last week or two a doctor has passed away in Vienna at the age of 96, another at Dresden in his 98th year, while a distinguished Hungarian ophthalmologist has died at Pressburg at the comparatively youthful age of 91. We know of men over 80 still toiling for their daily bread.

Such length of days is, however, quite exceptional *in nostro docto corpore*. Statistics show that the average span of a doctor's life is not so long as that of the other learned professions, and is considerably below that of the farmer. A comparison of tables compiled by statisticians in different countries gives an average of 57 years at death. This fact suggests the question whether doctors as a class are especially liable to particular diseases. That this is the case is, we think, unquestionable. Setting aside affections due to exposure and infection, the practice of medicine levies a disproportionate tribute from its professors in the form of diseases of the cardio-vascular and nervous systems. Angina pectoris has been called the "doctor's disease"; neurasthenia deserves to be ranked in the same category, and severer forms of neurosis are, as might be expected, common among men whose profession compels them to live at the highest tension both of brain and nerve force. It is scarcely to be wondered at, therefore, that the narcotic habit is so common among doctors. Dr. T. D. Crothers, who in 1890 was appointed by the New York State Medical Institution to collect statistics as to the prevalence of morphinism and alcoholism among doctors, found that of 3,244 residing in the Eastern and Middle States and in some of the chief cities of the Western States, 21 per cent. were using spirits or opiates to excess. Six per cent. were known to be slaves of morphine or opium; besides these, 10 per cent. were using opium or other drugs secretly. His own experience led Dr. Crothers to believe that from 8 to 10 per cent. of medical practitioners in the United States were addicted openly or secretly to the use of morphine or other drugs. Dr. Paul Rodet[1] gives still more startling figures. In one thousand cases of morphinomania collected from various sources, the doctors stand in the bad eminence of a percentage of over 40; this proportion is more than twice as large as that found in members of any other profession or among the general public. In a debate which recently took place at the Philadelphia County Medical Society,[2] Dr. Roland G. Curtin said his experience did not confirm that of Dr. Crothers. Dr. J. M. Anders, however, said that morphine was often used in secret by doctors, and Dr. James Tyson said he had often been consulted by practitioners who were victims of morphinism and felt their helplessness; he added that the cocaine habit was in his experience very common among members of the profession. On the other hand, Dr. Albert Moulton from his own experience, was inclined to regard Dr. Crothers's figures as exaggerated. It is evident that a larger assemblage of statistical data, critically analysed, is required to decide this question

Of angina pectoris, Dr. Curtin in his own practice had seen 28 cases in doctors, all of which had proved fatal; 5 of these deaths had occurred suddenly after a hard day's work and a hearty meal. Among ourselves the cases of John Hunter, Sir Charles Bell, Sir James Simpson, and Matthews Duncan, to mention only a few of the famous names that rise to the memory, are well known. Professor Osler has said that the medical profession offered many examples of good work thoroughly and conscientiously done by men suffering from aneurysm of the aorta. Every one knows that Robert Liston died of that disease. Dr. Thomas King Chambers is a classical instance of the aneurysmal tendency, having had one in the left leg, which was amputated; then, some years later, another in the right leg. Finally, the carotid arteries were attacked.

It has often been remarked that men who have given special attention to a disease in the end fall victims to it themselves. Thus Laënnec died of consumption, Corvisart of heart disease, Trousseau and Mikulicz of cancer of the stomach, and Habershon of chronic ulcer of that viscus. It is not true, however, that either Richard Bright or Thomas Addison died of the diseases which bear their names. Bright died of heart disease. There are cases enough to afford some foundation for John Hunter's belief that constant thought about a particular part may be the cause of disease; this is probably the explanation of the bleeding stigmata which to pious minds have seemed miraculous. That such things do occur there can be no doubt; even Paul Sabatier admits that the historical evidence as to the stigmata of St. Francis is absolutely unimpeachable. In connexion with this subject we may relate a curious story which we have on first-hand authority. One day while an eminent physician, whose name we do not mention because he is still living, was talking to the late Dr. Robert Barnes in his drawing-room on this subject, Barnes said he at least, as a gynaecologist, was safe from many diseases. At that moment there passed by the window Dr. Palfrey, leaning on the arm of Mr. William Allingham, whose death we recorded in the JOURNAL of February 15th, whereupon the physician

[1] *Morphinomanie et Morphinisme*. Paris. 1887.
[2] *Medical Record*, February 1st, 1908.

said to Barnes: "You have spoken too hurriedly, for "Palfrey is suffering from disease of the os coccygis, "a woman's ailment. Having an abscess, he went to "Allingham, who told him it had its origin in that "structure."

Of other diseases the doctor has his full share, but those we have mentioned may perhaps be regarded as due more or less directly to his occupation. After all, what shortens the doctor's life is overwork, mental and bodily strain manifesting itself at the point of least resistance. The moral is obvious, but unfortunately must for most of us remain a counsel of perfection. The advice given by one of the speakers in the debate to which we have referred, to reduce work gradually after fifty, is excellent—when it can be carried out. It is related that Asclepiades, the friend of Cicero, said at the outset of his career that he would account himself disgraced if he died of anything except old age. By following a simple regimen he succeeded in becoming a centenarian, dying at last of the results of a fall downstairs. But then it is not given to all men to map out their professional life like Sir Henry Holland, who determined never to let his income exceed £5 000 a year, and to take a three months' holiday every year.

Asclepiades and Holland were the fashionable physicians of their day, and they were probably free from most of the worries that break up the average doctor's health and hurry him to an untimely grave. Doubtless the late Sir Benjamin Ward Richardson led an ideally hygienic life. It was his fixed opinion that every man and every woman should live to be a hundred, yet he died long before he had come within sight of that age.

LONDON WATER.

THE report on the results of the chemical and bacteriological examination of the London waters for the twelve months ended March 3rd, 1907, by Dr. Houston, Director of Water Examinations, Metropolitan Water Board, contains not only a summary of the monthly reports but also a review of the results for the year. During this period upwards of 12 000 samples of water were examined, and from the tabulated results valuable data are obtained for the purpose of estimating the effect on the water of various seasonal conditions.

The variation in the rainfall in the different months of the year is the first condition which renders it difficult to obtain uniform quality in the water supplied to the consumer. The rainfall in the Thames Valley varied from 0.69 in. in April to 5.13 in. in October. With the rise of the flow in the river there was a corresponding rise in the number of microbes per c.cm. Again, the rivers are full in winter not only because of the greater rainfall, but because there is less evaporation from the soil and less vegetation. During this period, when the rivers are in flood, the water is at its worst. The supply to the consumers must during such times be taken from reserves, and it is at the same time necessary, as far as possible, to avoid storing water of this quality. The time during which a water must be stored to render it safe is still a matter of controversy. There is an intrinsic biological difference between storage and mere filtration; and, while storage is of paramount importance, it is yet possible that if too prolonged it may lead to deterioration from the abnormal growth and decomposition of diatomaceae, cyanophyceae, and protozoa. It must also be noted that water taken at high flood may, after storage and filtration, yield to most available tests of purity worse results than the river water, which by this time had become clear and comparatively pure. The ideal procedure would be to keep the storage reservoir at top-water level by pumping daily into the inlet end of the reservoir as much water as is abstracted from the outlet end (active storage); but, in view of the difficulties just stated, it is necessary to make a judicious selection of river water for storage. Safety, from the epidemiological point of view, is to be achieved by the habitual use of stored water. To these considerations Dr. Houston adds another, introduced by the existence of regulations regarding the abstraction of raw water.

In spite, however, of all these difficulties, "the average "results yielded by nearly all the filtered waters under "present conditions is matter for some congratulation, "and during the best months the general results are, "relatively speaking, exceptionally satisfactory." At this point in the report the argument suggests the primary importance of further determining the biological differences in the water during the worst and best months. From February to September the average daily flow of river water steadily decreases, while the rainfall rises and falls from month to month. The average number of bacteria shows irregular variations, corresponding neither with the rainfall nor with the flow in the river. At the same time, the number of bacteria is highest when the flow in the river is highest (January).

Another point of interest which appears in the table of results for the year is the comparative observations on the total number of bacteria and the numbers of *B. coli* in raw Thames water in the best and worst months of the year. Of the former the number varies from about 500 per c.cm. to 29,000 per c.cm., while the latter vary from 50 per c.cm. to 100 per c.cm. in the corresponding months. In this also there is evidence of a variation in the seasonal rise and fall in the different classes of bacteria.

In dealing with the bacteriological results, Dr. Houston points out that the total numbers of bacteria reached the highest point in the Thames, the Lee, and the New River in January, and the lowest in April in each case. Filtration of these waters after subsidence shows a reduction of 98.6 to 99.6 per cent. in the total bacteria. The gross average was under 20 bacteria per c.cm., and if we adopt Koch's original standard of 100 bacteria per c.cm., the metropolitan water supply is above criticism. Dr. Houston, however, regards an average of less than 10 per c.cm. as the standard to be aimed at.

The test with *B. enteritidis sporogenes* gave the result that November to January is the worst period of the year. With raw Thames water the number of samples yielding negative results with the 10 c.cm. test was 9.1 per cent. in November and 100 per cent. in August. The test with *B. coli*, as may be seen from the following example, corresponded roughly to this: In November the worst results were obtained, when 99.9 per cent. of the samples of raw Thames water contained 1 or more per c.cm., whereas in September the corresponding numbers are present in only 21 per cent. Broadly, the rivers Thames and Lee contained between 1 and 10 typical *B. coli* per c.cm. on the average; between 10 and 100 in a bad month, and less than 1 in a good month. On the other hand, the filtered waters all, with one exception, contained on the average no typical *B. coli* in 100 c.cm. in more than 50 per cent. of the samples. All the London waters examined (7,649 samples) were up to this standard in 94.5 per cent. of the analyses in May and 45.5 per cent. in January, and on the average in 75.4 per cent. of the cases. In order to make the results more equal in summer and winter there must

be judicious selection of raw water for storage and constant utilization of storage water.

Another point to which attention is called is that of the *B. coli* eliminated from the water by storage and filtration; the typical forms are more reduced in number than the coli-like microbes of all sorts. "This "constitutes an intrinsic difference between the "bacterial flora of the raw and filtered waters, and as "the typical *B. coli* are considered specially significant "of undesirable excremental pollution, it is a "difference which may mean more than the actual "figures seem to indicate. The processes which effect "this modification of the original biological attributes "of the raw waters may operate far more powerfully "in the direction of eliminating the microbes of "epidemic disease." Here again Dr. Houston brings us back to the intrinsic biological character of the water. The essential elements in the biological character of a given water are the forms of life which find it possible to persist there. The permanently-established forms are balanced one against the other, but this state of things is disturbed by such abnormal circumstances as pollution and the living forms which are introduced with it. More or less rapidly the balance is restored when, for example, the abnormal food supply which pollution adds to the water has been used up. There are probably special reasons why the typical *B. coli* disappears more quickly than the atypical forms in the process of purification. In general the typical *B. coli* forms are fairly parallel to the atypical in the winter months, but there is considerable divergence in summer.

We may congratulate Dr. Houston on the result of another year of his work. These investigations are of fundamental importance, and from them we may expect ere long to obtain a clear conception of the biological economy of natural waters and the meaning of variations in the bacterial flora in relation to purification.

THE HAMPSTEAD GENERAL HOSPITAL.

IN another column will be found a letter from the Chairman of the Council of the Hampstead General Hospital which may, perhaps, afford a basis for an adjustment of the difficulty which has arisen between the general practitioners in Hampstead, as represented by the Hampstead Division of the British Medical Association, and the Hospital. We understand that the proposal that the North-West London Hospital in Kentish Town, which formerly maintained 60 beds, should be amalgamated with the Hampstead General Hospital, as suggested by King Edward's Hospital Fund, has been accepted as, if not ideally desirable, at least inevitable. As the Hampstead Hospital contains 110 beds, assuming that 60 beds would still be required for the Kentish Town service, this would leave 50 beds to serve Hampstead; of these, the Council of the Hampstead General Hospital now proposes to assign 20 or 22 for the use of general practitioners in Hampstead who may desire to treat patients in the wards of the hospital; of these beds, 14 (or 16) will be open to patients able to pay a charge of 12s. a week, while the remaining 6 will be for the use of patients in a position to pay a higher weekly rate. Further, the chairman informs us that the council of the hospital has unanimously agreed to recommend for election, at the annual meeting of subscribers each year, two medical practitioners to represent the medical profession in the district served by the hospital, in addition to the medical members representing the staff of the hospital. As the name of the Hampstead General Hospital appears in the list of Warning Notices published in the advertisement pages of the JOURNAL, we think it well to reproduce here part of an explanation of the aim and object of these notices which was published in the JOURNAL of February 1st, page 278: "The "notice, as will be seen by any attentive reader, is "merely a request to medical practitioners to apply to "certain specified persons for information about the "appointments referred to in the list which follows be-"fore becoming candidates for such appointments. The "object is simply to put practitioners on their guard and "to assist them in obtaining information which it is con-"sidered desirable they should have before committing "themselves to the acceptance of appointments which "are open to some doubt. . . . As apparently there "are many readers who do not attend closely to the "wording of the notice in the JOURNAL, and therefore "misconceive its intention, we are asked to point out "that the appearance of a notice does not necessarily "mean that a practitioner who accepts an appointment "referred to therein will be deemed to have acted un-"professionally; but it does mean that, on becoming "aware of the notice, it is his duty to himself and to "the profession to make use of the opportunities of "obtaining information placed at his disposal, and to "act in the light of the information so obtained with a "due regard for the honour and interests of the "profession. . . ."

ELECTRIC ANAESTHESIA.

ELECTRIC anaesthesia, or anaesthesia induced by a low-voltage interrupted current, is described by the discoverer, Dr. Leduc (Professor of Physics at the Nantes School of Medicine), in a pamphlet, entitled *Le Sommeil Electrique*,[1] as a "condition analogous to chloroform "anaesthesia, in which the subject remains lying down "without any voluntary movement, without any power "of defence against even the most painful stimuli; "certain reflex movements and the movements of the "heart and respiration alone persisting. The condition "which is produced by the action of a certain electric "current on the brain may be maintained during "several consecutive hours, and ceases instantaneously "when the electric current is withdrawn. . . . The "state of the reflexes depends on the position of "the anode. The kathode rests on the forehead of "the animal, and if the anode is placed on the thorax, "sternum, or belly, the current avoids the cord which "is not inhibited, at any rate in its lower portion, "and the reflexes, which are suppressed in its "face and upper limbs are exaggerated in the lower "limbs; if the anode is placed on the lower portion of "the back, the current traverses the whole length of "the spinal cord which is inhibited, and the reflexes of "the lower limbs are suppressed." The current used to produce anaesthesia has a pressure of between six and eight volts for a rabbit, the animal on which the experiments have been chiefly performed, and must be increased for larger animals. It is interrupted by a rotary interrupter a hundred times a second, in such a way that the current is on for $\frac{1}{100}$ of a second and off for $\frac{99}{100}$ of a second. The kathode is placed on the head of the animal just between and above the eyes, the anode preferably at the base of the spinal cord. The skin is shaved to secure a good contact, and the electrodes are metallic plates which are connected to the skin by a cotton pad moistened with saline. Complete apparent anaesthesia is produced by the passage of a current amounting to between 1 and 2 milliampères in the interrupted circuit. On first closing the circuit with about $\frac{1}{2}$ of a milliampère there is a look of surprise, and occasionally a little scratching of the feet. This is repeated each time the current is increased; but at last the animal lies upon its side,

[1] Paris: Messrs. Masson et Cie.

with its reflexes abolished, either completely or in part. When the current is stopped the animal awakes at once, apparently in no way injured by the experiment, taking food as soon as it is offered. One of Dr. Leduc's pupils, Miss Rabinovitch, kept a rabbit in the anaesthetic state for eight hours and twenty minutes consecutively without bad results. Repeated experiments on a single animal have not perceptibly affected its health. Respiration after a short temporary disturbance continues normal throughout the experiment; the blood pressure is slightly raised, the temperature is slightly raised, the pupils are contracted, and the intestines and bladder may be emptied. Dr. Leduc has tried the anaesthesia on himself; he finds it in no way unpleasant; but in his case his colleagues did not raise the current sufficiently high to cause complete insensibility, and there is in consequence no definite evidence that loss of sensation is produced. The condition of the reflexes, however, and the fact that in Dr. Leduc's case sensation was greatly reduced though not abolished makes it probable that complete anaesthesia is caused in the animals on which the experiment has been tried. Evidence of anaesthesia is given in the behaviour of the animals themselves after the experiment. "There are "no after-effects, no vomiting, but occasionally a little "stupor. The experiment seems quite painless, for not "only do the animals not manifest any pain, but they "remain affectionate, they show no resentment or dis-"like towards those who submit them to the experi-"ment; there is no fear, no revolt during the prepara-"tions made for a fresh application, a fact which is "especially remarkable in the case of the dog who is so "capable of discrimination." An exceedingly interesting feature in connexion with electric anaesthesia is the restoration to life of animals that have been apparently killed. The heart and the respiration may have stopped for one or even two minutes and the application of the interrupted current fifteen or twenty times a minute will restore the animal to life; 15 cases are quoted, 8 of which were successful, and the author states that for the rabbit electric narcosis it less dangerous than is that produced by chloroform or ether. The experiments are obviously of very great interest. They are vouched for by Dr. Leduc, who has an established scientific reputation. Should his discovery develop still further, this method of anaesthetization may find extensive application, not only in experimental physiology but in medical practice.

AN ACTION FOR NEGLIGENCE.

We publish elsewhere in this issue the report of an interesting case recently heard at the Manchester Assizes. The melancholy facts are capable of a very brief recital. The plaintiff, who was the wife of a weaver living at Darwen, had for some time been consulting the defendant, who carries on business in Broad Street, Pendleton, as "Dr. Hall's Hygienic "Company." She consulted him with reference to a growth in her breast. According to her evidence, he said it could be "dissolved" by his treatment, and promised a cure in time. Later he advised her to use a poultice of "slippery elm," and, although the swelling increased rapidly, he dissuaded her from having an operation done. When she saw the defendant for the last time, he told her that "cancer clings "to the body, but this is coming out." Finally, the plaintiff consulted Dr. Ballantyne, who advised an immediate operation. Owing to the delay which had previously taken place, and the consequent spread of the disease, the operation was followed by recurrence, and her condition became hopeless. Having regard to the facts, we are not surprised to learn that the defendant did not venture to enter the witness-box. The jury, after seven minutes' deliberation, awarded the plaintiff the substantial sum of £600 damages Seeing that she was a woman in humble circumstances, this is a clear indication that they took a strong view of the defendant's conduct in the matter. Not the least interesting feature of this case is the summing-up of Mr. Justice Pickford, who in the course of the hearing had pointed out that it was immaterial to consider whether the defendant was liable for fraudulent misrepresentation. In his summing-up he stated that it was also immaterial that the defendant was an unregistered practitioner. Had there been negligence? If so, What damages? Those were the questions for the jury. The learned judge drew attention to the fact that the defendant in his advertisements said that his treatment seldom failed in cases of breast tumour or cancer, and read passages from these advertisements in which members of the medical profession were held up to reproach. He also pointed out that upon the question of negligence there was really very little to be said, for the defendant's own witness was constrained to admit that to persevere in a course of palliative treatment of cancer of the breast until the disease had spread to the armpit of the patient was negligent. The result of the case cannot fail to do good, although it is almost too much to hope that it will make any lasting impression upon those members of the general public who put their faith in irregular practitioners. It is not a little depressing to think that they continue to find patients in spite of the spread of education. The case under review serves to emphasize one point in the law of negligence in so far as it concerns the practice of medicine. It was suggested in the course of the trial that as the defendant was not a qualified practitioner, he was entitled to a special indulgence when his skill was called in question. This, we are glad to say, is a wholly fallacious statement of the law. "The gist or ground of "an action for *malpraxis*," wrote Mr. Glen in his *Manual of the Laws Affecting Medical Men*, "is "the actual maltreatment, whether through ignor-"ance or negligence, and no distinction is made "between those who are regular medical practi-"tioners and those who are not so, for if the latter "profess to deal with the life and health of others they "are bound to have and employ competent skill, whilst "the former are bound to have and employ such know-"ledge and skill as are usual and reasonable among "medical men." The fact that the plaintiff in the Manchester case obtained a verdict illustrates the fact that an action may be brought for injury sustained although the negligence alleged is of a merely passive character. Total absence of necessary surgical treatment may amount to negligence, for which the person responsible may be held liable in damages.

HOSPITAL RESIDENTS AND GENERAL PRACTITIONERS.

There can be no doubt about the reality of the grievance to which our correspondent "S. H. D." draws attention (p. 535), but it is difficult to find an effective remedy, as the junior staff of a hospital is a constantly changing body; its members usually gain their posts as a reward of ability and industry, but of their tact and discretion it is practically impossible for those who appoint them to know anything beforehand. The administrators of hospitals hear too often with regret of instances in which house-physicians and house-surgeons display many of the faults of the jack-in-office, and although doubtless the vast majority behave well, an incalculable amount of harm is done to hospitals by the injudicious behaviour of a foolish and bumptious minority. When such cases are brought to the notice of authorities the offender is probably reprimanded, and possibly mends

his ways; but when it is recollected that in a large hospital there are perhaps a score of residents whose office lasts only six months, the effect of one such example can be but transient. We may hope more from the cultivation of a better tone; young men exercise a great deal of moral pressure upon one another, and if they could understand the folly of such indiscreet language to patients as that quoted by our correspondent, it would cease to be used. The matter is worth the attention of the visiting staffs of hospitals, who may do good by drawing the attention of their residents to "S. H. D.'s" letter, pointing out the harm thoughtless words may do to practitioners whose position places them without means of defence.

APPEALS TO THE LOCAL GOVERNMENT BOARD.

The question of the remuneration of public vaccinators has now reached a stage which has been awaited with considerable interest and some curiosity. It will be remembered that the Local Government Board, in the Order issued last year to guardians, constituted itself a court of appeal in those cases in which the guardians and public vaccinators had not agreed as to the fees to be paid before October 1st. The results of the appeal have recently been announced. We have already commented on the harshness of some Boards of Guardians, and on the hard bargains driven with their officers. Some public vaccinators have felt that they must accept under protest the offers submitted by the guardians, and in many districts a so-called agreement was arrived at, which was merely a submission—sometimes a weak submission—to the arbitrary dictation of Boards which had no sympathy with the work, and no conception of the nature and extent of the services required. Others elected to appeal to the Local Government Board, no doubt feeling confident their cases would receive more fair consideration at the hands of that Board. Such confidence appears to have been misplaced in a number of instances, and great disappointment and dissatisfaction has been aroused. The *Devizes Gazette* of February 13th, in reporting the last meeting of the Bradford-on-Avon Board of Guardians, announces the resignation of the two public vaccinators, and reported that they had written to explain that the fees fixed by the Local Government Board—a reduction of 33 per cent.—were inadequate considering the amount of work to be done, and they must therefore ask the guardians to accept their resignations. The *East Anglian Daily Times* of February 18th records a similar but rather worse case in the Depwade Union. There the appeal to the Local Government Board has resulted in the fixing of fees actually lower than the Board of Guardians offered to pay some months ago. The public vaccinators have addressed a letter to the guardians in which they state: "There is no course open to us "but to respectfully decline the terms now made, for "we believe that no professional man would accept "them with honour to himself and his employers" No better justification for this action of the public vaccinator could be given than the remarks made by Mr. D. Alexander, one of the guardians, who said that he "felt that, however generously they treated their other "officers, they [the guardians] endeavoured to degrade "the noble profession of the doctors. He would "scarcely like to ask a labourer to do the work for the "price they wanted the doctors to do it for. He pro-"tested against this treatment." Notwithstanding this, the guardians passed a resolution expressing approval of the the terms fixed by the Local Government Board. It is to be hoped that the medical practitioners in these two unions will support the stand made by the public vaccinators. The whole action of the Local Government Board in regard to this question of fees has been difficult to understand. It was distinctly stated in the Order that all "agreements" must be subject to the approval of that Board. It might, therefore, have been expected that this State Department would have intervened in those numerous cases where public vaccinators have been practically compelled to accept unreasonable and inadequate remuneration or sacrifice their positions. Further, no serious attempt seems to have been made to secure uniformity and equality, consequently many practitioners are doing precisely the same work in some unions for 30 to 40 per cent. less remuneration than other practitioners in other unions. All this with the approval of the Local Government Board. In some cases that Board has "fixed" fees higher than the fees which have met with its "approval" in other places; in others it has fixed them lower, even where the circumstances and conditions appear similar. Such anomalies indicate either a bad scheme of assessment or the absence of any scheme. Surely a matter of such importance has not been decided by the head or tail of a spinning coin.

TINKERING WITH TIME.

It requires more than ordinary temerity to propose to tinker with the hours of the day or the months of the year. Yet two proposals of this kind are now seriously made, at least we must suppose the proposal to alter the clock at the equinoxes to be serious, otherwise it would have to be assumed that the Mother of Parliaments had been made the subject of a practical joke. The enthusiastic promoter wants everybody to get up an hour or so earlier in summer, and with simple cunning has, with the assistance of Mr. Robert Pearce, Sir William Bull, and Mr. Horniman, devised a scheme by which we shall all be deceived into becoming early risers. Mr. Pearce has introduced a Daylight Saving Bill "to "promote the earlier use of daylight in certain months "yearly, and for other purposes relating thereto;" he would have one of the wee sma' hours ayont the twal' justify the epithet on the first four Sundays of every April by consisting of forty minutes only; in this way, on the fourth Sunday, though we might get up as we thought at eight, we should really be turning out at twenty minutes to seven. In revenge, on four Sundays in September we might take twenty minutes more in bed with an easy conscience, for one of the hours of the night would be eighty minutes long. No doubt the classes who do not live by manual labour have fallen into habits which lead to a considerable waste of daylight during two or three months of the year, but this is not so true of the workers in most manual industries, it has very little application to the numerous tribe of carters and carmen, and is not true at all of agriculture, which is still the industry employing the greatest number of persons. The Bill, therefore, would have for its chief result to alter the time at which offices and shops open. From a medical point of view, if a man or woman has to work in an office or shop for eight, nine, or ten hours, including noonday, it is difficult to see that there is any particular reason why he or she should have daylight leisure in the late afternoon rather than in the morning. The scheme to alter the months is put forward by Mr. Alexander Philip, LL.B., in a very beautifully-printed pamphlet of twenty-eight pages, entitled *Proposal for a Simplified Calendar*. After setting forth very briefly and clearly the history of the calculations by which the earth's periodic time—the essential basis of all calculations of time—was estimated and divided into months, weeks, and days, and the corrections which were rendered necessary when Julius Caesar, and afterwards Augusta Caesar, and again, sixteen centuries later, Gregory XIII, revised the calendar so as to bring it into harmony with existing

conditions, Mr. Philip proceeds to summarize the numerous inconveniences which arise from our present arbitrary and illogical division of the year into months of irregularly-different lengths, and from the fact that 365, the number of days in the year, is not divisible by 7, the number of days in the week. He argues that all these inconveniences would be at once removed by the expedient of making New Year's Day, and the extra day of Leap Year, into "dies non," placing them outside the calendar, and so reducing the number of calendar days to 364, a number which is divisible by 2, 4, and 7, so that the year could be divided into halves, quarters, and weeks without any embarrassing remainder. By a slight alteration of the number of days allotted to the months, the four quarters could be made symmetrical, the first and second months in each having thirty days, and the third thirty-one. The calendar would thus become a "perpetual" one, and all calculations of dates would be enormously facilitated. So much Mr. Philip has proved, and he is satisfied that he has disposed successfully of every objection that could be raised against his proposal. But we fear that habit and inertia will long delay its adoption. We cannot forget that when an alteration in the calendar was required for the correction of actual gross errors in the estimation of time, it took two emperors in one case and a pope in the other to bring about the necessary reform.

PROPORTIONAL REPRESENTATION.

No trade, movement, or sect is complete without its journal, and we are therefore not surprised to find a copy of the first issue of *Representation*, the official organ of the Proportional Representation Society, on our table. This young society takes its aims and objects very earnestly, and is justly proud of the progress which the cause it advocates has made within recent times. A description of the method of the "single transferable vote" system has already been published in the pages of this JOURNAL,[1] and the method has been utilized with good results in the Association at the last annual election of representatives on the Council of the Metropolitan Counties Branch. It has not yet been put to a practical test in a political election in this country, in spite of the strenuous endeavours of many of its prominent partisans. On the Continent and across the water, however, the system has gained a good foothold. The new journal contains only twelve pages, but inasmuch as its scope is necessarily limited, it would seem that a larger supply of printed material would not serve any good purpose. An able opening statement from the pen of Lord Courtney of Penwith appeals to the members and to the public alike, and with characteristic frankness terminates with the words, "Come and help!" The succeeding pages are devoted to "Notes and News," the cross-headings dividing the subject up geographically. We note, in parenthesis, that a notice of a meeting to be held at the *Tribune* Rendezvous for February 14th is announced. With the obsequies of our late contemporary fresh in our minds, we trust that this may not augur any ill luck to the progressive society. The first number of *Representation* is an interesting document belonging to an interesting cause, and we can only wish it a long and prosperous life!

THE NOTIFICATION OF BIRTHS ACT.

DR. S. A. BONTOR, the Honorary Secretary of the Watford and Harrow Division, and two other medical men practising in the town attended by invitation the meeting of the Urban District Council of Great Berkhamsted on February 19th, when the question of adopting the Notification of Births Act was under consideration. The council so fully sympathized with the views stated by the medical deputation that not only did the members who had proposed the adoption of the Act withdraw their proposition, but the council decided to postpone the consideration of the matter, and passed a resolution informing the county council that in the opinion of the urban council the person responsible for the notification should be more clearly defined. It is intended at a later date to place the views of the medical profession before the county council. As the Act does not come into force in a district until it has been adopted by the local authority, it seems clear that at the present stage, at any rate, the course taken in this instance, as in several other instances reported in recent issues, is that which is best calculated to lead to satisfactory results in other districts when the question of adopting the Act comes up for consideration. The opinion that the Act requires amendment appears to be growing, and we understand that the Medico-Political Committee of the British Medical Association now has under consideration the question of the form which such amendment should take.

[1] BRITISH MEDICAL JOURNAL, 1907, vol. i, pp. 894, 1205.

INTERNATIONAL CONGRESS ON TUBERCULOSIS, WASHINGTON.

DR. JOHN S. FULTON, Secretary-General of the International Congress on Tuberculosis to be held at Washington from September 21st to October 12th next, informs us that of the nine departments in the United States Government seven will participate in the Congress, and that every one of the forty-six States of the Union has appointed committees to make preparations. The Smithsonian Institution has determined that the Hodgkins fund prize of fifteen hundred dollars shall be offered for the best treatise submitted to the Congress on the relation of atmospheric air to tuberculosis. Messrs. Stockwell, 8, Beak Street, Regent Street, W., who arranged the voyage of many members who attended the annual meeting of the British Medical Association in Toronto in 1906, inform us that as September is one of the busiest months of the year for westward traffic across the Atlantic, it will be advisable to secure berths at an early date; in fact, it is already not too soon to do so; a deposit of one quarter the fare is sufficient, the balance being paid before sailing. Messrs. Stockwell point out to us that the boats sailing from Liverpool at this season of the year will be: Cunard line—*Mauretania*, September 5th, arriving September 11th; *Campania*, September 9th, arriving September 15th; *Lucania*, September 12th, arriving September 18th. White Star line—*Celtic*, September 10th, arriving September 18th. American line—*Westernland* (second and third class only), leaves September 9th, arriving Philadelphia, September 18th. From Southampton: White Star line—*Oceanic*, September 9th, arriving September 16th. American line—*Philadelphia*, leave September 12th, arriving September 19th. The *Columbia* of the Glasgow line leaves Glasgow on September 12th, and is due in New York on September 20th. If a return ticket is taken special berth facilities will be afforded on the homeward voyage. Further particulars as to prices will be found in Messrs. Stockwell's advertisement in another part of the JOURNAL.

THE death is announced in his eighty-sixth year of Professor von Esmarch of Kiel. We hope to publish some account of the interesting career of this distinguished surgeon in an early issue.

WE understand that the demand for Dr. Bulstrode's report to the Local Government Board on *Sanatoriums for Consumption and certain other Aspects of the Tuberculosis Question*, a notice of which was published in our columns on February 1st, p 275, has been so large that the first impression has been exhausted and that the volume is now being reprinted.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

First-aid Certificates.—Some little time back Major Anstruther-Gray called the attention of the Board of Trade to the inequality of the curricula of the St. John Ambulance Association and the St. Andrew's Association, and was informed that it was open to all those seeking the master's or mate's first-aid certificates to choose either course of instruction as they were equally recognized. Last week the Secretary to the Board of Trade stated in answer to a further question that in order to qualify for examination for the certificates of proficiency in first aid granted by the St. John Ambulance Association a candidate must attend at least four of a course of five lectures, each of two hours' duration. In the case of the St. Andrew's Ambulance Association the candidate must attend at least eight out of a course of twelve lectures of one hour and a half's duration. The syllabus of the lectures under the two associations covered practically the same ground.

Sickness at Chatham in the Navy.—In answer to Mr. Clynes, who last week inquired as to the prevalence of pneumonia amongst the men in His Majesty's Navy at Chatham, Mr. Robertson said that the only sickness at Chatham that partook of the nature of an epidemic was influenza, which was prevalent there as elsewhere, and this had been followed in a few instances by pneumonia. Four men had died within the last fortnight of this latter disease. No cause could be ascribed for the outbreak of influenza, which was apparently seasonal.

Death Certification.—Last week Mr. Holt inquired under what circumstances burial was permitted previous to the registration of death, and Mr. John Burns replied that it might be stated generally that the registration of the death was not necessary before burial took place. Section 17 of the Births and Deaths Registration Act, 1874, and Section 11 of the Burial Laws Amendment Act, 1880, contained provisions on the subject, and it would be seen from them that where there was either an order of a coroner authorizing burial or a certificate of a registrar that he had registered or received notice of the death, the order or certificate must be delivered to the person conducting the funeral service or responsible for the burial. If no such order or certificate was delivered to this person, he must give notice of the burial to the registrar.

Unsatisfactory Milk Supply.—The report of Dr. Collingridge, Medical Officer of Health for the City of London, on the dirty and infectious character of milk samples, was brought to the notice of the President of the Local Government Board by Sir Francis Channing last week. Mr. John Burns stated that he had not at present received a copy of the report referred to. He was, however, aware of its general purport, and had asked for a copy of the report itself. The Local Government Board had steadily pressed upon local authorities, and especially upon rural district councils, the importance of bringing about more cleanly and efficient methods in connexion with the supply of milk. This they had done by correspondence, by calling for special reports from medical officers of health in particular cases, and in many instances by causing inspection of rural districts to be made by their own medical staff, in which attention had been given to this matter. It did not appear to him that any immediate administrative action could with advantage be taken, but he trusted that the effect of the Bill which he hoped to introduce would be to secure more satisfactory control over the milk supply of the country.

Anthrax.—Sir Francis Channing called the Home Secretary's attention to the death of a man named Howe from anthrax who was employed as a woolcomber at Lavenham, Suffolk, and asked whether horsehair was disinfected, whether several fatal cases of anthrax had not occurred among animals in the neighbourhood since Howe's death, and what steps were being taken to secure more effective disinfection and destruction of dangerous refuse. Mr. Secretary Gladstone answered that full inquiry was made at the time into the circumstances of the case. The question of the risk of anthrax to workers in horsehair had been under his consideration, and regulations were made by him last December under Section 79 of the Factory Act—to come into force on April 1st next—which would require all horsehair from China, Siberia, and Russia to be disinfected before undergoing any manipulation other than opening and sorting, and special precautions to be observed in opening and sorting. These were the only kinds of horsehair the risk from which was so great as to call for special regulations. In the case of horsehair of British origin the risk was very slight; of 1,320 animals attacked by anthrax in this country in 1906, 36 only were horses, and under the Anthrax Order of 1899 the carcass of every animal affected or suspected to be affected by anthrax was required to be burned or buried. He was informed by the Board of Agriculture that an outbreak of anthrax occurred in the immediate neighbourhood of the factory in question very shortly after the death of William Howe, affecting three horses; in future, under the new regulations, all dust collected from the opening and sorting screens, where China, Siberian, or Russian hair had not been disinfected was opened or sorted, would be required to be burned.

Age of Recruits for India.—Mr. Mitchell-Thompson asked the Secretary of State for War whether, on medical grounds, recruits enlisting at home were not sent to India until they had attained the age of 20 years; whether boys enlisting from the Royal Hibernian School or the Duke of York's Royal Military School, Chelsea, were liable at the age of 14 or 15, if they happened to enlist in a regiment which was in India, to be sent there after three months' training at home; and whether, if so, steps could be taken at least to warn the boys or their guardians of the consequences of enlisting in a regiment which was in India. Mr. Secretary Haldane answered that the 20 years' rule for India originated in a pledge given by Mr. Cardwell, and this limit of age was fixed mainly on medical grounds. Boys were not sent to any stations abroad if under 15 years of age, and evidence showed that there was no objection to boys being sent at this age under the conditions of service applicable to boys. The consent of parents or guardians was always obtained prior to the enlistment of boys.

Forms for Conscientious Objection to Vaccination.—Sir Maurice Levy has more than once called attention to cases in which these forms had not been supplied to persons registering births since August 31st last and asked last week whether the forms had been supplied to all registrars in England and Wales. Mr. John Burns replied that the forms were supplied to the registrars in the month of September with a view to their being given to every informant of a birth registered on and after October 1st. The forms applied to births so registered if they occurred on or after September 1st. He found that the Registrar-General only knew of two cases of the kind mentioned, in addition to the one referred to in a previous question. These cases were satisfactorily settled by forms being given to the informants by direction of the Registrar-General. No other cases had come under his notice, and the matter did not seem to call for any action on his part.

Paupers Healthy and Sick.—Mr. Haddock asked the President of the Local Government Board what was the number of able-bodied paupers in health and not in health, respectively, in the Poor-law institutions in England and Wales for July, 1907, and also the number of the same aged 16 to 25, 25 to 40, 50 and upwards respectively. Mr. John Burns replied that on July 1st, 1907, the number of able-bodied adult paupers in health (including men and women) receiving indoor relief was 14,264. The number of able-bodied adults receiving indoor relief on that date who were sick or temporarily disabled was 26,581 (see page vi of the published return, No. 108, 1, of 1907). In the half yearly returns children were distinguished from the adults, but the adults were not classified in age groups. The latest return in which particulars were given of various age groups, so as to distinguish the old from the young and from those in middle life, was the special return, No. 113, of session 1904. That return, however, did not follow the grouping mentioned in the question.

Medical Officers of Health for Counties.—On Monday last Mr. John Burns informed Mr. Cooper that according to the latest information in his possession thirty-two county councils had not appointed a medical officer of health. The last Parliamentary return on the subject (1904) showed that there were then 12 cases in which a county medical officer of health was not required to devote his whole time to his duties. He would send his honourable friend a list of the county councils above referred to. The advisability of initiating legislation to require every county council to appoint a full-time medical officer of health was receiving consideration.

Industrial Accidents.—In reply to Mr. A. Henderson, the Home Secretary stated that the number of fatal accidents had increased by 5½ per cent. as compared with the year 1906, and by 56 per cent. as compared with the year 1898. For non-fatal accidents the corresponding figures were 11 per cent and 116 per cent. These increases were due partly to the increase in the number of persons employed in factories (about 100,000 a year) and to the extended use of machinery, and partly to closer inspection and to the more complete reporting of accidents. This last cause affected very largely the returns of non-fatal accidents, and also to some extent the returns of fatal accidents, the greatest increase in the latter class being in docks and buildings where, in the year 1898, the reporting even of fatal accidents was still far from complete. These increases were a matter of grave concern. He should soon be in a position to make a statement on the subject.

Cattle Condemned as unfit for Food in Glasgow.—In answer to Mr. Cathcart Wason, the Secretary for Scotland stated that he was informed that in 1906 the figures of the animals slaughtered in public slaughterhouses were as follows: Cattle, 43,895; condemned (wholly or partly) for all causes, including tuberculosis, 2,967; condemned for tuberculosis, 2 194. Sheep and lambs slaughtered, 254,635; condemned for all causes, 421; condemned for tuberculosis, 1. Pigs slaughtered, 45,456; condemned for all causes, 2,258 (including 2,034 heads); condemned for tuberculosis, 2,141 (including heads). Calves, 4,087 slaughtered; condemned for all causes, 57; condemned for tuberculosis, 19. No animals were condemned in 1906 before slaughter under Section 437 of the Public Health Act. As regards the qualifications of the inspectors and the character of the inspection, the medical inspector of the Local Government Board for Scotland reported as follows: The inspection of all animals slaughtered in the city, both home and foreign, was a searching one. He knew of no place in Scotland where the detailed examination of all carcasses was equally thorough.

Glanders.—Several questions have recently been asked in the Commons as to the prevalence of glanders, and on Monday Mr. Laurence Hardy, in calling attention to the death of a man from this disease, asked the Chancellor of the Exchequer if he would make a grant to local authorities to facilitate the stamping out of the scourge. Mr. Asquith replied that he had seen accounts of the case referred to in the public press. Under the new order, which came into operation on January 1st, the disease was now being dealt with much more effectively than in the past, and he trusted that the steps which were being taken would prove efficacious in stamping it out altogether. The statutory duty of dealing with the matter rested with the local authorities, and the efficiency of the measures taken had no direct connexion with the question of incidence of charge as between local and imperial funds. This latter question must be considered on its merits in connexion with the relations of local and national finance generally. On Tuesday Mr. Burns said, in answer to Mr. J. Ward, that his attention had been called to an inquest held on a man who was stated to have died from glanders contracted while shipping worn-out horses abroad for human consumption. He understood that to some small extent sausages made abroad from horseflesh were sent to this country. He was advised that the bacillus of glanders could not be destroyed if the cooking of the meat was imperfect, but that a heat of 55° C. for ten minutes might kill the bacillus. The importation of sausage meat was receiving his attention.

Sleeping Sickness.—In reply to Mr. Summerbell, Mr. Winston Churchill said on Tuesday that it was impossible to obtain accurate statistics regarding the mortality from sleeping sickness in Uganda, but in a recent dispatch the Governor had estimated the number of deaths at 200,000 during the past seven years. Every effort was being made by the Government to combat the disease by scientific investigation under the direction of the Royal Society, by local administrative measures, and by international co-operation with the other Powers whose possessions in Africa were similarly afflicted. The disease was at present on the decrease, but that was not due to the discovery of a remedy, but to the exhaustion and destruction of the population in the districts affected.

Death-rate on the Rand.—In answer to Sir G. Parker, Mr. Churchill stated on Monday that the average death-rate per 1,000 per annum for Chinese on the Rand gold mines for 1907 was, he believed, 16.085. The death-rate of Nyassaland natives on the Premier Mine for the twelve months ended June, 1907, the latest figures available was 106.6. He should add that a high rate of mortality had prevailed for the period among all the native labourers employed on the Premier Diamond Mine, as was shown by the fact that the rate among the British Basutos and East Coast natives on the Premier Mine was 52.8 and 42 35 respectively, compared with a rate of 20.3 and 33.1 on other mines in the Transvaal. The Secretary of State did not underrate the serious nature of these figures and reports. The subject had been engaging the attention of the Transvaal Government, and steps were being taken to carry out the recommendations of a Medical Board which investigated the causes of this high rate.

The Renfrew Road Workhouse, Lambeth.—The President of the Local Government Board informed Mr. Cooper on Monday that he had seen the report of the Workhouse Committee of the Lambeth Board of Guardians, and there was, he regretted to say, considerable overcrowding in this workhouse; but he understood that all the beds but one had now been moved from positions close to the fire-escape exits, which were no longer blocked. Account was taken of the minimum air space in the dormitories in certifying the accommodation, and the air space required varied according to the class of inmate. In general the Board required 300 cubic ft. for each healthy person, 500 to 700 cubic ft. for each infirm person, 850 cubic ft. for each ordinary sick person, 1,200 cubic ft. for each sick case of a special character. The actual accommodation for which the workhouse was certified in the present case was 1,221, but he understood that in the opinion of the medical officer the dormitory space would permit of a total of 1,264 persons. It was difficult to insist on the regulation amount of air space here at the present moment; but the guardians were using every effort to find accommodation elsewhere, and he was giving very careful attention to the matter.

Vaccination Law in England and Scotland.—In reply to a question by Mr. Henry Walker with reference to the retrospective effect of the Scottish law, Mr. Burns said that the circumstances in relation to this matter were not the same in the two countries under the Vaccination Acts in force prior to the legislation of last session. In England a parent could obtain exemption from penalties for not having his child vaccinated if he satisfied two justices or a magistrate that he conscientiously believed that vaccination would be prejudicial to the health of his child. There was no such provision in force in Scotland. Hence when exemption on the ground of conscientious objection was allowed by the Scottish Act of last year, it was necessary to provide for the case of a child born before the passing of the Act; but there was no similar need as regards England. In future in both countries a parent would only obtain exemption if he made the requisite statutory declaration within a prescribed period of the birth of the child. It did not appear to be necessary to introduce a Bill on this subject.

The Public Health Officers Bill.—Sir Walter Foster has given notice to introduce this Bill on Thursday.

Ireland.

[From our Special Correspondents.]

The Local Government Board and the Poor-law Medical Service.

As our readers are aware, the Irish Local Government Board has been urging on Boards of Guardians for some years the adoption of a graded scale of salaries for their medical officers, though hitherto with little success.

Cahirciveen is one of the poorest unions in Ireland. It is situate on the north coast of co. Kerry, where, although the beauties of Nature are glorious, the land is all mountain, bog, and heather. The area is 198,130 acres. Its population 22,435, and the rate for poor relief is 2s. 10½d. in the pound on the valuation.[1] There are five medical officers in the union, who have ten dispensaries to attend. One of them gets £80 a year, two get £90, one £104, and one £150, but that includes his salary as medical officer of the workhouse. From this it will appear that each dispensary doctor has charge of a district 40 000 acres in extent, and local inquiry shows that practically the whole population, with the exception of the inhabitants of the village of Valencia, where there is an Atlantic telegraph station, and the village of Waterville, where there is another, would be entitled, according to the views of the Irish Local Government Board, to free medical relief.

Recently the Cahirciveen guardians, moved by a spirit of justice sadly wanting in many far richer unions, decided to adopt a graded scale for their medical officers, and, when doing so, did it well. Their scale, when submitted to the Local Government Board, elicited the following extraordinary reply, which puts in unmistakable language the value the officials of that autocratic Board place upon the services of the Irish dispensary doctors.

Local Government Board, Dublin,
4th February, 1908.

Sir,—The Local Government Board for Ireland have received the minutes of proceeding of the Board of Guardians of Cahirciveen Union on the 22nd ult., containing an entry of a resolution passed after notice by the guardians relative to the salaries of their medical staff. The resolution was as follows:—"That we adopt scales of remuneration for the dispensary doctors and workhouse medical officer of the union, to apply from the 31st March, 1908, initial salary £130, with increments of £3 per annum until a maximum salary of £185 be reached, the increment in each case to be retrospective. That Dr. Sheehan's initial salary be £160 (present salary £150) on condition that the townlands of Doory, Droumalonhort, and Curraghvaha be added to his district." In reference thereto the Local Government Board desire to state that they have gone very carefully into this question, and are satisfied that the salaries of the medical officers of the union are inadequate, and ought to be increased. The Board have, however, to point out that in such a matter the guardians are bound to take into consideration the resources of the ratepayers and the pressure of existing taxation, and in view of the fact that the poor rates in the union are already 6s 6d. in the £ on houses and 3s. 9d. in the £ on lands, it seems doubtful whether the guardians paid due regard to this aspect of the subject when they agreed to a proposal which would cost the union an additional sum at once of £431 a year, thereby imposing a further rate of 4d. in the £ on their already overtaxed union. The Board, therefore, request that the matter may be reconsidered after due notice in writing to each guardian of the union.—I am, sir, your obedient servant,

A. R. Barlas, Secretary.

We presume the Cahirciveen Board of Guardians represent the wishes of their constituents, and we have never yet known an Irish Board of peasant farmers to err on the side of generosity at the expense of the rates; we must, therefore, conclude that when they fixed the scale of salaries they put it at what, in their opinion, was a minimum living wage. Yet the Local Government Board steps in and tells them they are being too generous at the expense of the poor ratepayers. Probably there are few of these poor ratepayers to whom the extra expense would amount to 1s. a year. We confess we are utterly dismayed at the action of the Local Government Board. Does that Board think it can go on sweating the Irish Poor-law doctors in the future as in the past? The Board is responsible for the miserable condition of the service.

What chance now have these men to get from their peasant masters a living wage when the all-powerful Local Government Board say it is too much? Do these gentlemen with salaries of £1,200 a year and upwards ever think of what an unfortunate dispensary doctor has to endure in the wild mountains of Kerry travelling his 40,000 acres in the furious Atlantic storms that rage on that coast? Are they afraid that the generosity of the Cahirciveen Guardians might prove as infectious as the typhus fever which is endemic in the union?

[1] Vide Local Government Board Report for 1907.

The Question of Hospital Abuse in Belfast.

Combined Meeting of the Ulster Medical Society and the Ulster Branch of the British Medical Association.

A joint meeting of these two Societies was held in the Medical Institute, Belfast, on February 20th. Dr McCaw, President of the Ulster Medical Society, occupied the chair, and Dr. Howard Stevenson, its Honorary Secretary, acted as Secretary. There was a large attendance, all medical practitioners had been invited to attend.

Dr. John Campbell introduced the discussion. He referred to the attitude of the large subscribers and philanthropists, who generously gave both time and money to the upkeep of the various charitable hospitals; many of these gentlemen were rich, and nearly all in good circumstances; they were not hostile to the representations and complaints of the medical men, and were desirous to be perfectly just in their dealings; but they were not sympathetic, they did not understand the details, and looked upon any such movement as paltry, and beneath the dignity of a profession. Another class of them, members of business firms which gave large subscriptions, took another view; they considered that their firm subscribed liberally, and their workers and those whom they recommended were entitled to hospital treatment as part of a business transaction. The general public, on the other hand, or at least a great majority of them, were in a muddle as to the relations existing between the doctors, the hospital, and the patients; they looked upon the attending staff as public officials, to whom it was a matter of no interest what patients were admitted; often unconsciously they caused hospital abuse, and even imagined they were conferring a favour; they did not understand, but would have to be taught, that although they paid a few shillings a week for their board and nursing, yet so long as they did not pay the doctor they were objects of charity. Dr. Campbell then referred to the attitude of the profession; a large number of medical men, especially in the country, were also anything but clear as to the relations between the hospital, its medical staff, and the patients; they did not know what to do to protect the interests of themselves and of the staffs. A student when attending the hospital sees certain wards labelled "private;" he does not know that the member of the staff cannot take a fee for such a case, and so he often thinks that he is doing a compliment when he says that such a case cannot pay a large fee, but that the physician or surgeon can take it into a private ward in the hospital; they were often unconsciously the worst offenders in the abuse, both as regards themselves and also as regards the staff.

Mr. Andrew Fullerton said that in all such discussions the interests of the community ought always to be impartially considered. He classified the patients seeking hospital relief into three: (1) Those obviously necessitous, whom no one wanted to limit in the slightest. (2) Those on the border line in sufficiently good circumstances to pay moderate fees, but quite unable to meet even the modified charges of an operating surgeon, massage, the Roentgen rays, the conveniences of a private nursing home, etc. He found himself strongly in favour of the self-supporting nursing homes for this class, where they could be attended by their own medical attendant, and where the services of a specialist could be obtained at a moderate charge. (3) The third class of patients comprised those who meanly and dishonestly desired to escape their pecuniary responsibilities. Sufficient care had not been exercised by the boards of management, the general practitioners, and the hospital staffs to exclude these. In the Royal Victoria Hospital the Board had recently appointed a special committee to investigate such cases, and at it the accusation was made that most of these cases were sent up by members of the medical profession. He desired that this should be brought before the profession and see what could be done to remedy it. The Board had met the staff

in a most friendly spirit, and had passed a resolution empowering the staff to communicate with the patient's doctor if any doubt existed as to the means of the patient. The general practitioner was urged to respond to these letters and second the efforts of the staff, who could not take patients into the so-called private wards and charge them fees. A special class of patient was then referred to, the penny-a-week subscribers; and it was pointed out that, although it was impossible to abolish this system, which was admitted to be a real evil, steps had been taken by the Board of the Royal Victoria Hospital to limit its disadvantages by seeing that only bona-fide members of the working classes received treatment. The Board had also ordered a printed card to be hung up in the out-patient department saying that the staff gave their services free, and that only those unable to pay for medical attendance outside were entitled to benefit. Patients not subscribers, and obviously not necessitous, were required to bring a line from their medical attendant before being treated, except, of course, in cases of emergency or urgency. A good start had been made, and it remained with the general practitioner largely to bring the project of hospital reform to a successful issue.

A very large number of medical men then joined in the discussion, and twenty-four in all spoke. As remarked by the Chairman, the debate was of a most harmonious and practical kind, and could not fail to conduce to the object in view. Every one present recognized that anything in the nature of reprisals and threats would be out of place, and that the true interests of the profession were in union between all classes of specialists, as members of the staffs of teaching hospitals were, and general practitioners. It was also pointed out that club doctors occasionally sent their better-class patients, who could afford a moderate fee to a specialist, to the hospital instead.

After the debate had lasted two and a half hours, the following resolutions were proposed by Mr. Andrew Fullerton, seconded by Mr. Walton Browne, and passed unanimously:

1. That a circular be sent to the medical practitioners in Ulster, asking them to second the efforts now being made by the medical staffs of the various charitable hospitals to reduce hospital abuse by taking every step to prevent well-to-do patients from coming to these institutions.
2. That a committee of general practitioners should be formed to discuss and report to the Ulster Medical Society the steps they deem advisable to bring about the reduction of hospital abuse and to report to a future meeting of the Society, and that the committee consist of: Dr. John McCaw, President, Ulster Medical Society; Dr. Howard Stevenson, Secretary, Ulster Medical Society, both *ex officio*: Drs. Elizabeth Bell, Kevin, Watson (Bloomfield), T. Davidson, Fraser, Trimble.

IRISH NATIONAL HOSPITAL FOR CONSUMPTION.

Mr. R. O'Brien Furlong, C.B., presided at the sixteenth annual meeting of the National Hospital for Consumption, which was held in the Royal College of Physicians, Dublin, on February 18th. The Lord Lieutenant and the Countess of Aberdeen were present.

The report stated that—

The number of beds is now 100, which was the number originally contemplated when the hospital was founded. These beds have (with few exceptions) been fully occupied during the year; the number of daily diets (including the staff) being 43,518, or slightly under the year 1906. The applications for admissions during 1907 have again considerably exceeded the accommodation available, with the result that a large number of patients, sometimes so many as 65, have been constantly on the register awaiting their turn for admission.

Having referred to the efforts of Lady Aberdeen to inform the people on the subject of tuberculosis and its causes, the report proceeded:

As regards the work of the hospital during 1907, the board beg to call attention to the medical report, which they think satisfactory. It appears from the report that 363 cases were under treatment and discharged during the year, besides 91 patients remaining in the hospital on December 31st last. Of these 82·6 per cent. (as compared with 77·0 per cent. in 1906) were improved to a greater or less degree, many of them affording a probability of permanent arrest of the disease. These statistics show a somewhat improved average as compared with 1906, while the large number of letters received from former patients (some of them admitted in 1896 and 1897) are distinctly encouraging as to the prospect of restored health, immunity from relapse, and added years of useful work. It is of interest to record here that, out of the total number of 2,101 cases treated and discharged during the ten years 1897-1906, 1,620, or 77.1 per cent., were improved to a greater or less degree. These were classified in the medical reports for these years as follows: 190 as "very much improved," 585 "much improved," and 845 "improved." These figures are full of encouragement.

The Chairman, in moving the adoption of the report, stated that the revenue was £5,470, the cost of maintenance £5,934, and the balance due to the bank £818. Mr. Justice Barton seconded the motion.

The Lord Lieutenant, in an interesting speech, referred to the advantages of the Tuberculosis Exhibition now being held in various towns in Ireland. One of its chief benefits, he said, was the course of education imparted, but that, to be effectual, would have to be followed by organizing remedial action, and it might reasonably be hoped that the discussion of the subject would result in an earnest and practical attention by all who could most successfully promote action—namely, the local and public authorities. Expert opinion was not yet fully formulated on such matters as the best means of dealing with incipient cases of the disease, some holding the view that the main effort should be the removal of the advanced cases from their surroundings, and placing them in properly-adapted places for isolation. An important suggestion had recently been made in a report to the Government advocating that disused workhouses should be devoted to that purpose, and he could not help thinking that they would admirably suit the more advanced cases. His Excellency concluded by congratulating those who had been so earnestly engaged in the work carried on at the Newcastle Hospital, and recalled the visit which he and the Countess of Aberdeen had paid to that institution last summer, as a result of which he said they could testify, from personal observation, to the excellent arrangements for the treatment of consumptive patients.

The Registrar-General mentioned that in the Dublin registration area the death-rate for tuberculous phthisis per 1,000 of the estimated population in 1907 was 2.9. In Belfast City it was 2·5, and in the twenty other principal town districts of Ireland it was 2.7. Comparing these figures with those of 1906, the rate for the Dublin registration area in 1907 was the same as in 1906. The rate for Belfast in 1907 was 2.5, while in 1906 it was 2·8, and the rate for the twenty other principal town districts was 2.7 in 1907, compared with 2.6 in 1906. Contrasting the figures for Irish cities and towns in 1907 with those for London and the eight principal town districts of Scotland, the phthisis-rate for London in 1907 was 1.4, and for the eight principal town districts of Scotland it was 1.5, so that the Irish urban rates were largely in excess.

Dr. Henry FitzGibbon, Dr. Craig, Dr. Lumsden, Sir J. W. Moore, and Major Domville also spoke, and a vote of thanks to the visiting physicians, Dr. Parsons and Dr. Coleman, was passed unanimously.

PREVENTION OF TUBERCULOSIS IN IRELAND.

In reply to Mr. Augustine Roche, M.P. (Cork), who asked the Chief Secretary to the Lord Lieutenant whether, in view of the unanimous expression of public opinion all over Ireland, any action would be taken this session to amend the law with regard to tuberculosis. Mr. Birrell said, "It is intended to introduce a Bill on the subject referred to in the question. The Bill, which has already been drafted, is entitled the Tuberculosis Prevention (Ireland) Bill, 1908. I hope it will pass into law during the present session."

Much interest is being manifested in the south of Ireland in this Bill, as it is expected that, with new legislative powers, some definite good may be achieved in the fight against the "white plague," as it is called.

TUBERCULOSIS IN IRELAND.

The Gaelic League campaign against tuberculosis in Connemara began on Sunday, February 16th, when a large public meeting, attended by the local clergy, district councillors, and the people of the parish, was held in Carraroe. All the speeches, with one exception, were delivered in the Irish language. Dr. O'Beirne has been each evening during the week delivering Irish lectures on hygiene in the school houses, and spends the days visiting the houses of the people and advising hygienic reforms. As the Local Government Board and Congested Districts

Board have refused to give financial assistance, the committee is issuing an appeal for funds to assist the poor people to improve their houses while under the influence of Dr. O'Beirne's propaganda.

Scotland.

[From our Special Correspondents.]

Royal Edinburgh Asylum: Dr. Clouston's Successor.

The directors of the Royal Edinburgh Asylum have appointed George M. Robertson M.B., C.M., F.R.C.P.E., Physician-Superintendent to succeed Dr. Clouston on June 30th next. Dr. Robertson graduated M.B., C.M. at the University of Edinburgh in 1885. For six years he acted as Assistant Physician under Dr. Clouston. After that he was Superintendent of the Perth District Asylum at Murthly, and in 1899 he was appointed Superintendent of the Stirling District Asylum at Larbert, one of the largest and best equipped asylums in Scotland, where he succeeded Dr. John Macpherson, now one of the Commissioners in Lunacy. While at Perth he had much to do with the reorganization of the asylum, including the designing of buildings, the success of which gave impetus to the introduction of the segregate system in Scotland. He was employed by the Edinburgh District Lunacy Board as medical expert to report on the plans of the village asylum at Bangour. During the past eight years he has been Lecturer on Insanity to the School of Medicine of the Royal Colleges of Edinburgh, and to the Edinburgh Medical School for Women. Dr. Robertson has written many important papers regarding insanity and allied subjects.

Foot and Mouth Disease in Edinburgh.

Despite the drastic measures adopted by the Board of Agriculture on the recent outbreak of foot and mouth disease in Edinburgh, measures which it was hoped and expected would be effective, another outbreak was discovered on February 23rd. It occurred in a cowhouse belonging to the same dairyman in whose main dairy the previous outbreak took place. There were 21 cows in the herd now affected; but unfortunately six other dairies with over 300 cows are in the immediate neighbourhood. The Board of Agriculture, on February 24th, ordered the slaughter of the whole 21 cows; this was done on February 25th.[1] Partly in consequence of the orders of the Board of Agriculture, and partly in consequence of scarcity, the price of live stock has gone up very considerably. On February 24th an ox which could have been bought a few weeks ago for £23 brought £26 7s. 6d.

Small-pox in Edinburgh.

Between January 1st and February 25th 11 cases of small-pox have occurred in Edinburgh.

Hospitals for the Conscientious.

The Vaccination (Scotland) Act only came into operation on August 28th, 1907, but already it has been extensively made use of. The Medical Officer of Health for Glasgow reports that down to December 31st, 1907, the declarations of conscientous objection to vaccination lodged with the district registrars amounted to no less than 474, of which only 87 referred to children over 1 year of age, while 304 referred to children under 6 months. As Dr. Chalmers points out, this suggests that there will soon grow up a large infant population susceptible to small-pox and that therefore the hospital accommodation provided must be increased. In the early Seventies, when the population was under 500,000, the number of beds provided was 150. The population is now over 800,000, and it is probable that each succeeding year will bring an increase to the unprotected children. The objectors seem to be most numerous in the east end of the town, but with the exception of Blytheswood and Broomielaw declarations have been made in every ward.

The town council has had under its consideration a proposal to erect a new small-pox hospital at Robroyston, but no definite decision has yet been arrived at. A Subcommittee of the Health Committee has been for some time occupied with this matter. They found that, exclusive of cost of site, a completed hospital of 372 beds would cost about £136,000, which may perhaps be taken as an indication of what will be required.

[1] The cows were valued at £21 each. They had only been bought by the dairyman the day after the first attack was discovered.

Ayr County Hospital.

At the annual meeting of subscribers it was announced that the ordinary income was not equal to the ordinary expenditure. For the past year the total ordinary expenditure was £3 678, while the income was £2 563. At the commencement of the year a special effort was made to raise funds, and, owing mainly to this, the extraordinary income for the year amounted to £2 063, of which £1,704 was obtained by the special appeal. Notwithstanding this the revenue account still showed a deficit of £433. As it was quite clear that it was impossible to raise the ordinary income to a satisfactory level the directors found that it was necessary to close a portion of the hospital. This step was only taken after consultation with the medical staff. In the meantime the directors have decided to close one large and four small wards, thereby reducing the accommodation by twenty beds. This step they took with great regret, but the only alternative was to run further into debt.

England and Wales.

[From our Special Correspondents.]

MANCHESTER.

Coroners and the Medical Profession.

It is somewhat surprising to come across two instances in one week in Lancashire where coroners have expressed sympathy with medical men.

At an adjourned inquest held on February 17th on the body of a man accidentally killed at Widnes, the foreman of the jury complained that the jury had had to pay out of their own pockets the cost of a conveyance from the hospital to the scene of the accident. The Coroner, Mr. Brighouse, said that it was grossly unfair that the jury should have to pay anything out of their own money, but if either he or the police charged for the conveyance they would be surcharged by the county auditor. As an instance of the way the county carried on its business, quite recently he had had an instruction that doctors were only to be paid 1 guinea for attending an inquest, even if his inquiry lasted three or four days. Previously they had been paid a guinea a day. This was hard lines on a man who had probably paid perhaps £1,500 for a professional training. It appears to be the fact that the county council can do as it likes in the matter, but surely no one can say that a guinea a day is excessive. The number of inquests where an adjournment is necessary is very small, and the saving to the rates would be almost infinitesimal compared with the injustice to individual medical men who may have to lose several days' work for one guinea. The subject has been already mentioned in the last meeting of the Lancashire and Cheshire Branch Council, and steps will be taken at an early date by several medical societies to make urgent representations to the County Council.

At another inquest, held in Manchester on February 21st on the body of an elderly man who had died under an anaesthetic, the coroner, Mr. Gibson, made some remarks with which all medical men will agree. He said that he was not sure whether the holding of an inquiry of that description did not do more harm than good. "We are bound," he said, "to rely on our medical officers, and it seems to me unnecessary to inquire whether the anaesthetic has been properly administered, because it may be taken for granted that they invariably use all possible skill and care in such a matter."

While agreeing with these remarks, it is, of course, most important that there should be no attempt at secrecy in these cases, but it cannot be said that an ordinary coroner's jury is at all competent to pass any opinion on the question as to whether an anaesthetic has been properly administered, and it is to be feared that the publication of these cases in the press has only the effect of terrifying patients, and producing a state of mind that in itself may be inimical to safety. A proper inquiry by competent persons would give the public what it has a right to ask—a guarantee that anaesthetics are properly administered.

The Manchester University Grants.

On several occasions reference has been made in this column to the proposed reduction by the sum of £2,000 of the Government grant to the University. Numerous protests have been sent from various Education Committees throughout Lancashire and Cheshire, and it is now announced that the Chancellor of the Exchequer has agreed to reconsider the question, and for this year at least has restored the whole grant. This is satisfactory as far as it goes, and it is hoped that the system of allotting the grants will be put on a fresh basis during the coming year.

Another attempt is now being made to reduce the grant of £4,000 a year given by the Manchester Education Committee. The reason given for this proposal is the somewhat curious one that as the University is about to benefit to the extent of £75,000 under the will of the late Mrs. Rylands the grant will not be necessary. Dr. Alfred Hopkinson, speaking in the Education Committee, said he thought it would be very unfortunate if it adopted the principle of saying that because people gave liberally to an institution the city should support the institution less liberally, always provided that it was spending the money for the advantage of the community. At the time when it was proposed to reduce the Government grant by £2,000, Manchester citizens had warmly opposed the proposal and had recognized the fact that Manchester University was pre-eminent among universities of the same type. Manchester University only received £4,000 from the Education Committee, while Liverpool University received £10,000, and other towns supported their universities in the same liberal way. He had never pressed for an increase of the grant by large amounts, but it must be remembered that the University was a great asset of the ratepayers. The Natural History Museum, which cost nearly £60,000 to build, was the property of the University, and was supported largely by private liberality, but it could not have been maintained in so efficient a state unless there had been a large charge on the rates. The museum was used by the elementary and secondary schools of the city, and the free lectures given there were attended largely by the working classes. It was sometimes said that the University made unnecessary extensions, but as an example of how necessary extensions were, it had just been decided to enlarge one of the laboratories, because the work in it was being carried on under conditions which were becoming dangerous to the students. The resolution to refer back the question of the grant for further consideration was carried by 10 votes to 9.

WEST YORKSHIRE.

Medical Inspection of School Children.

Halifax

Dr. T. H. Hunt, Medical Officer to the Halifax Education Authority, has recently made an interesting report on the result of his inspection of school children during the past year. Infectious disease had been unusually prevalent, greatly due to the parents sending children to school when they were in an infectious condition. Of 215 children examined by Dr. Hunt at the Education Office, 43 were found quite fit for school, 31 only fit for occasional attendance on account of rickets, scrofula, or delicacy of chest; 38 had verminous or sore heads, 30 had ringworm, 14 eczema, 9 were convalescing from infectious disease, 7 had inflamed eyes, 6 had itch, 4 were suffering from phthisis, 3 from spinal disease, 3 from epilepsy, 1 from enlarged tonsils, and 1 was deaf and dumb. In connexion with visits to the schools Dr. Hunt found 100 children suffering from defective vision, 37 from squint, 28 from deafness, 29 from discharging ears, 18 from disfiguring teeth, 19 from bow-legs, 8 from inflamed eyes, 7 from enlarged tonsils, and 2 from obstruction in the nose interfering with speech. The parents in these cases were all asked to secure treatment. Dr. Hunt calls attention to the weak point in medical inspection of school children, namely, that in probably more than half the cases the advice given after inspection had not been followed.

Shipley.

At a special meeting of the Shipley District Council, held on February 11th, it was directed that the Education Authority should be authorized to appoint Dr. Foster (medical officer of health) medical inspector under the new Act, at a salary not exceeding £125 per annum, in addition to his present emoluments under the Council and Education Committee.

Bradford.

At a meeting of the Bradford City Council, held on February 11th, it was resolved to adopt the following suggestion of the Elementary Education Subcommittee:

> That, in order to carry out part of the duties imposed by the Board of Education, the Committee be recommended to appoint two medical assistants (one man and one woman) to the medical superintendent, at a salary of £350 per annum each, special qualifications for eye work to be required from candidates, the successful candidates to be required to devote their whole time to the service of the Committee, and that the Board of Education be informed accordingly.

Bradford Royal Infirmary.

The annual meeting of the Bradford Royal Infirmary was held in the Town Hall on February 18th, the Lord Mayor presiding. Attention was drawn to the fact that the home patient department had been placed in the hands of five practitioners in the city, and that the new system was answering extremely well. The children's ward had been converted into a surgical ward for women, the reason being that women's surgical cases had increased enormously. The children were now in a ward of twenty-four instead of thirty, as formerly. Reference was made to the inadequacy of the infirmary for modern requirements, and to the necessity (as has been urged in these columns) for the rebuilding of the whole hospital. The difficulty in realizing this object is of course wholly financial. It is to be hoped that the public-spirited men of Bradford will soon come forward with the necessary funds to build a new infirmary on a more suitable site than the present.

BIRMINGHAM.

The Health of Birmingham in 1907.

The report of the Health Committee for the year 1907 shows that it has been the healthiest in the records of Birmingham. The death-rate was 16.1 per 1,000, while in 1906 it was 16.8, and in 1905 16.1. This low death-rate has not been of a temporary character, as is shown by the statistics for the past thirty-four years.

	Average Death-rate.
1874–5–6	25.2 per 1,000
1884–5–6	20.6 ,,
1894–5–6	19.5 ,,
1905–6–7	16.3 ,,

During this long period the Health Department had the advantages of the able services of the late Alderman Sir William Cook, who has quite recently died.

The birth-rate for 1907 was 28.3 per 1,000, while during the past three years it was 28.9 per 1,000. There has been a continuing decline in the birth-rate since 1874–6, when it was 41.4 per 1,000. The mortality from epidemic diarrhoea and enteritis was the lowest on record, being only 0.73 per 1,000, as compared with 1.94, the average for the preceding ten years. This low mortality, generally considered to have been due chiefly to the favourable climatic conditions which existed, is undoubtedly also partly the result of the good work of the health visitors during recent years. The infantile death-rate was 147 per 1,000 births, which, although the lowest on record for the city, is still far too high. During the past three years the average infantile mortality was 157 per 1,000 births, while during the years 1874–6 inclusive it was 178 per 1,000 births. The infant mortality is enormously higher among the poorer working classes than among the middle and upper classes. Ignorance and carelessness seem to account for nearly one half of these deaths, and the Health Committee welcome the passing of the Notification of Births Act, and hope by its operation to effect a further reduction in infant mortality.

The mortality from phthisis was 1.22 per 1,000, while the average rate for the past three years was 1.28 per 1,000. During the past thirty-four years the mortality has been reduced by about 42 per cent, since for the three years 1874–5–6 the rate was 2.21 per 1,000.

The seven principal zymotic diseases caused a death-rate of 1.80 per 1,000, as compared with 2.85 during the preceding ten years. No case of small-pox occurred during the whole year. There were 248 cases of typhoid fever, which was of a mild type. Typhoid fever has been less prevalent than ever previously recorded, and the Health Committee consider that this reduction has been largely due to the better cleansing of courts, etc., which is being carried out, and to the abolition of insanitary pan privies.

BRISTOL.

Royal Infirmary.

The annual meeting of the Board of the Royal Infirmary was held on February 11th under the presidency of Sir George White. In submitting the annual report the President said that a year ago the balance due for payment was £4,197 16s. to complete the £50 000, and it was now his pleasure to state that the whole sum was paid. The Committee had been during the year engaged in the consideration of schemes for the improvements and alterations contemplated when the fund was started, and had had to acquire leasehold and reversionary interests in certain properties intended to be and in extension of the premises. They had obtained the services of Mr. Edwin Hale, Vice-President of the Royal Institute of British Architects, as adviser and assessor, and invitations to architects will shortly be issued for the work. In the account for 1907 the President called attention to the increase in ordinary subscriptions resulting in about £600 more than in the previous year. Donations and workmen's subscriptions increased by £142; there was a decrease of a similar amount in church collections. As a whole, the gain in the year was only about £100. Legacies showed a falling off of £1,577. The total ordinary income was £15,190. Expenditure was less by £190 than in 1906, in spite of the fact that there had been an increase of 220 in-patients and 335 out-patients; yet, as a whole, it reached £17,414, or £2,223 in excess of income. The President stated that he had full confidence in the public to come forward and add their names to the subscription list. Among the numbers of patients, 50,092 had been treated during the year (*or 1 in 7 of the population of Bristol*), 4 249 in-patients, 45 843 out-patients. The report closed with a statement of the changes in the Committee, as to the opening of new departments in the institution, and with thanks to the whole staff for the ability with which they had carried on their work, though no formal vote of thanks was accorded them.

A special meeting was subsequently held to elect Dr. J. E. Shaw honorary consulting physician. No steps were taken to fill the two vacancies of honorary physicians.

The enormous figures representing the attendance of patients did not arouse any comment, but it is difficult to believe that this number is not hugely in excess of the needs of the poor. The Royal Infirmary is one only of the many medical charities of Bristol, and yet from their figures it appears that of the inhabitants of the city, one in every seven is receiving gratuitous advice, treatment, and medicine within one institution. Possibly a little more care in the admission of cases might result in the exclusion of many who could not be classed as "poor," and who could well afford to belong to a provident dispensary or pay for ordinary medical attendance. It might even relieve the Committee of the Infirmary of their anxiety as to how to make both ends meet.

DENBIGHSHIRE.

Inspection of School Children.

A meeting of all the medical officers of health in the county of Denbigh was convened at the Queen Hotel, Chester, on February 25th, and was attended by more than a majority. The object of the meeting was to discuss the remuneration offered to the district medical officers for the medical inspection of children under Section 13 of the Education (Administrative Provisions) Act, 1907. Those who did not attend sent letters of apology, and all expressed their determination to abide by the decision of the majority. The remuneration offered is about 1½d. a head in urban and 2d. in rural districts, and this was thought anything but adequate. Willingness was expressed by all to co-operate loyally with the county education authority in these inspections; but as to the basis of remuneration, it was determined to ask the education authority to meet the medical officers of health to discuss the point, and arrive at a satisfactory result.

SPECIAL CORRESPONDENCE.

PARIS.

"Entente Cordiale Médicale"; Lecture by Sir Dyce Duckworth in Paris.—The Disinfection of Closed Books.

The large amphitheatre in the Faculty of Medicine was far too small to accommodate the large numbers of doctors and medical students who came to hear Sir Dyce Duckworth on Tuesday last, when he came, as President of the English Branch of the "Entente Cordiale Médicale," to give his lecture on "The Diatheses: The Personal Factor in Disease." After being received by all the professors and "professeurs agrégés" in Paris in their robes in the large council chamber of the Faculty, Sir Dyce was conducted to the amphitheatre, where Professor Landouzy, the Dean of the Faculty of Medicine, made a speech of welcome, saying how true was the idea that temperament (function of our diathesic states) was continually found in us, in the manifestations of our moral as well as in the reactions of our physical being. It was that which had always been so characteristic of the English race, as La Fontaine wrote in the time of the "grand Roi":

> Les Anglais pensent profondément;
> Leur esprit, en cela, suit le tempérament;
> Creusant dans les sujets et forts d'expériences,
> Ils étendent partout l'empire des sciences.

La Fontaine wrote thus because Bacon had just laid down the laws of experimental science and Harvey had discovered the circulation, and as a contemporary of Sydenham, he being, like every poet, a prophet, felt the coming of Jenner, Darwin, Herschel, Mead, Hunter, Astley Cooper, Simpson, Huxley, James Paget, Broadbent, to speak only of a few of the illustrious scientists who were dead. Sir Dyce Duckworth, who read his lecture in French and was frequently interrupted by applause, after referring to the death of Sir William Broadbent who was to have delivered the first of this series of lectures, said that he had chosen the subject of the diatheses, as the doctrine was largely of French origin. The doctrine of diatheses, applied to practical medicine, was little in vogue in this twentieth century and was usually considered as decadent, and as the survival of methods and ideas of the Middle Ages applied to humoral pathology, ideas nowadays extinct and useless before the revelations of bacteriology. It was a dangerous error, as was the tendency at present to adopt new discoveries and to ignore or disdain old ones. If medicine no longer spoke of the different temperaments described formerly, it was yet certainly possible to recognize at least four dispositions or special types of the human body—the arthritic, the scrofulous or lymphatic, the nervous, and the bilious. The modern investigator only occupied himself with the seed which he believed capable of developing in power in every individual without distinction; he considered the soil as of no importance. An important characteristic of the arthritic diathesis was the special antagonism to the tubercle bacillus, and the attempt of the Lyons School to include arthritism in tuberculosis was incomprehensible. If tubercle developed in a rheumatic or gouty subject—an exceedingly rare occurrence—it progressed very slowly, frequently stopped, and the organism met it with a vigorous resistance. After discussing the scrofulous, nervous, and bilious diatheses, Sir Dyce, in conclusion, expressed the wish that the teachers in medical schools would try to explain more fully the methods of diagnosis and the therapeutic results obtained from the work carried on in the clinical laboratories. While much time was rightly spent in the culture of an elaborate diagnosis, the principal duty, which was to cure and relieve patients, was neglected. Knowledge of materia medica had declined out of all proportion when compared with the knowledge acquired by the progress of bacteriology, which pretended to take the place of the more ancient art of therapeutics. It would, however, never take its place, for, as Sir William

Jenner had said, there are but two problems to be solved at the patient's bedside—What is the matter with him? and What will do him good? "Are we not too much inclined," Sir Dyce said in conclusion, "to forget the second question—to experiment with synthetic novelties and neglect the old and tried remedies? What would Trousseau, the greatest of modern clinicians, say if he reappeared in that amphitheatre, the echoes of which, according to the proud motto of the Faculty, carried *urbi et orbi*?"

At the last meeting of the Académie de Médecine, Dr. Lucas-Championnière made a report on a paper by M. Berlioz (of Grenoble), describing a method for the disinfection of closed books without damaging them. M. Berlioz exposes the books for two hours to a temperature of 90° to 95° C. in a sterilizer, in which he vaporized a liquid generating formic and ethylic aldehyde. Even large volumes of over 1,000 pages which had been tested by being soiled with pus full of *Staphylococcus aureus*, and with faecal matter, were rendered sterile. There was no deterioration of the paper or the binding. If the binding was delicate, it could be protected by covering the book with foolscap or filter paper. Even old volumes were not in any way harmed. Reading rooms and circulating libraries would thus be able to disinfect their books periodically, while the process actually helped to preserve certain volumes, which deteriorate in badly-constructed libraries.

CORRESPONDENCE.

THE WORDS OF THE ORACLE.

Sir,—No oracle of old inspired greater confidence than does the dictum of "the doctor at the hospital," be he one who teaches or one who is taught—in other words, surgeon, house-surgeon, or student. It behoves an oracle, when it temporizes, to be discreet; when it dogmatizes, to be correct. Surely one who is invested with the oracular power of a hospital official should exercise a like discrimination. To give point to this preface I will state as simply as possible a case which has recently occurred in my practice. Mrs. —— came to see me one evening for advice. She had "seen nothing" since the birth of her last child, though for some time she had ceased to suckle the infant. Her menstrual history had always been irregular, probably owing to the fact that she was extremely anaemic. I examined her at home the next day, with the result that I made the following entry in my case book: "Uterus enlarged to about the size of a four to five months pregnancy; cervix not quite as soft as usual. . . . Diag., probably pregnant." I told the patient that she was probably pregnant, but that I would examine her at a subsequent date to confirm my diagnosis. The next I heard of the case was a letter from Mrs. ——, saying that it would be unnecessary for me to call as arranged. She had been to a hospital, where they told her that she was suffering from a very serious condition, and that if she did not undergo an operation she could not live two years. This letter caused me considerable surprise, and I went to see the patient for further information. She then confirmed the statements made in her letter, and told me that they had even indicated the length of incision necessary. To use her own language, "They said they would have to cut me for about four inches." I asked her if they had given any reason for the complaint (a tumour she understood) from which she was said to be suffering. She then told me that "the doctor" had said it was probably due to something "left behind at her last confinement." Two weeks later I received the following letter from her:

> Dear Dr. ——,—I am writing, as promised. I went up to —— Hospital on Thursday. . . . Was examined by the physician-accoucheur; he found that I am with some six months pregnancy, so you were not very far out; but the discharge is of a very serious nature. . . . Unless it can be stopped before confinement, will affect my eyes. It was first thought to be a tumour. I ought to have gone up some few months ago, etc.

I simply give the facts of the case as observed by or stated to me. I do not say they have not been exaggerated or misinterpreted by the patient, but I do say that, from whatever standpoint they are judged, they betray a deplorable lack of tact on the part of somebody at some hospital.

It was perfectly obvious to the patient that I had been guilty of an error in diagnosis, mistaking a "tumour" for pregnancy. My partner, who attended her at her confinement, was also on his trial for neglect. It also doubtless formed a suitable topic of conversation for her husband when shaving his customers, one of them, incidentally, being an excellent patient of mine. When consulting me, the patient laid very little stress on the vaginal discharge, which at the time of my examination was very similar to any other leucorrhoea occurring in a married woman.

This incident calls to notice a very real danger by which the practitioner is constantly menaced. It is possible for a patient's mind to be prejudiced against her medical adviser by her next-door neighbour; how much more so by an indiscreet house-surgeon or dresser who has not yet gained that control over his tongue which perhaps some day he will learn by bitter experience!

In conclusion, might I suggest the possibility—or may I say advisability?—of an occasional lecture to those about to qualify on a resident's attitude towards the hard-working and often ill-paid general practitioner?—I am, etc.,

February 2nd. S. H. D.

SUBPHRENIC ABSCESS.

Sir,—Mr. Barnard's admirable address on the surgical aspects of subphrenic abscess is a notable contribution to our knowledge of a difficult and interesting subject. As he refers to me as one of those who are opposed to the indiscriminate use of an exploring needle in the attempt to locate a collection of pus in the neighbourhood of the diaphragm, I should like to make it clear that we are not in reality at variance on this point. My objection to the needle is mainly that its use is often recommended before any operation has been decided upon, merely for the purpose of shirking the difficulties of making a correct diagnosis.

I am entirely at one with Mr. Barnard when he says that "a promiscuous search for pus with an ineffective syringe is dangerous and deceptive," but I should venture to differ from him when he says that the needle "can demonstrate that *no* pus is present." On page 433 of your issue of February 22nd he says, "The *only* safe rule in thoracic operations is to follow the needle, and it is useless to make a large opening and admit air to the pleura *where the needle can demonstrate that no pus is present*." (The italics are mine.) There is no need to emphasize the fact that a needle may be, and often is, inserted through the thoracic wall without demonstrating the presence of pus, although pus is present. A case of this kind is now under my care. An empyema was suspected, but no pus was found on aspiration, and it was not until a piece of rib was resected, and the pleural cavity opened, that a large collection of pus was evacuated.

Mr. Barnard will, I think, agree with me in saying that the safest course for the patient in any case in which subphrenic abscess is suspected is, in the first place, to try to arrive at a correct diagnosis by such physical signs and symptoms as may be present, though at the same time I doubt whether he is not too sanguine in thinking that "the diagnosis of a subphrenic abscess is not a really difficult matter when the physical examination is conducted in an orderly and complete manner." This view is certainly contrary to the experience of most observers, and I think I may also say of those who make *post-mortem* examinations.

Whatever may be our points of difference, Mr. Barnard will, I hope, join with me in raising a protest against ill-advised attempts to ascertain the nature of a lesion in the neighbourhood of the diaphragm by the use of an aspirating needle before every other means of making a correct diagnosis has been exhausted.—I am, etc.,

London, W., Feb. 24th. T. D. Acland.

Sir,—Mr. Barnard's account of subphrenic abscesses is excellent, but it is to be regretted that he has introduced a new nomenclature to indicate the positions which they may occupy. It would, I venture to think, be better to retain the anatomical terms in every-day use, since these have the merit of conveying to the mind the position of

the purulent collections in the vertical as well as in the antero-posterior plane of the abdomen. The former situation does not at all assert itself in the names proposed by Mr. Barnard.

It is true that Mr. Barnard shows all the regions occupied (or parts of all) in the same antero posterior plane (Fig. 2), but investigation of the cadaver, or failing that a reference to Fig. 580 in Spalteholz's *Atlas*, will show that the "right posterior intraperitoneal space" is out of position in the diagram, as also is the outline of the retroperitoneal space between the layers of the coronary ligament of the liver. The "right anterior peritoneal space" is the only true subphrenic space on the right side. Why not call it the right subphrenic space? The "right posterior intraperitoneal space" lies at a lower level than, and is not strictly posterior to, the "right anterior intraperitoneal space." Both its position and its level are admirably conveyed by the name given to it by Rutherford Morison—the right kidney pouch, or by an alternative due to Cantlie, and much used by Mr. Barnard himself, the subhepatic fossa.

Again, the "left anterior intraperitoneal space" is the only true left subphrenic space, and is known to most British anatomists as the dome of the stomach chamber (Birmingham). The term "left posterior intraperitoneal space" is not so self-explanatory as the older term "lesser sac"; moreover, it is not anatomically posterior to the "left anterior intraperitoneal space." The "right extraperitoneal space" is better known as the uncovered area of the liver, or the space between the layers of the coronary ligament.

For the peritoneal gutters alongside the ascending and descending portions of the colon the term "paracolic grooves," which I believe was introduced by Messrs. Jenkin and Smith (*Journal of Anatomy*, 1907), cannot be bettered. The left internal paracolic groove of these authors is the fossa in the left lumbar region redescribed by Mr. Barnard.

I write these few remarks in no captious spirit. Mr. Barnard's paper contains the most complete descriptions of these abscesses which has yet appeared. My point is that in naming these collections we should be guided by anatomical data, and ought to adopt terms which convey their own meaning both to the anatomist and the clinician.—I am, etc.,

CHARLES R. BOX,
Lecturer on Applied Anatomy, St. Thomas's Hospital.
February 24th.

CHLOROFORM AND STATUS LYMPHATICUS.

SIR,—As I understand Dr. Alcock's criticism of the views recently published in the BRITISH MEDICAL JOURNAL on Chloroform and Status Lymphaticus, it is to the effect that it is hazardous to draw conclusions concerning the effect of a poison if we do not know how much of the poison has been exhibited, and I must say that I agree with his point of view rather than with that of Dr. Blumfeld.

For many years past I have urged that as regards the action of chloroform no real knowledge of the influence of idiosyncrasy or other modifying conditions is possible until we know at what strength chloroform vapour has been exhibited. In my presidential address at Montreal to the Physiology Section of the British Association in 1897, and in the following year at the Society of Anaesthetists,[1] I asserted that for safe and effective anaesthesia by chloroform the uniform administration of chloroform and air, "*not below 1 per cent., not above 2 per cent.*," ought to be secured. Since that time many forms of apparatus have been proposed for the uniform administration of chloroform at known percentages, or, more properly speaking, at the normal percentages of instrumental scales, of which the error is liable to reach to 200 per cent. In general my limits of 1 to 2 per cent. of chloroform vapour in air have been accepted, a few authorities have, indeed, subsequently expressed the opinion that these limits might be raised to 3 per cent. and lowered to ½ per cent.; but I welcome discussion of these or other values, since any discussion of the kind involves the admission of the main point for which I have contended—namely, that chloroform should be given at known dilution. But I do not see how this point can be settled until the densimetric method of estimation and of administration, which I have elaborated during the last few years, and which is in daily use in the Physiological Laboratory of the University of London, is adopted by hospital administrators.

In its present form the apparatus has the following construction:

A closed glass bulb (of a capacity of 870 c.cm.) is suspended from one side of the beam of an ordinary balance. The balance case (capacity about 30 litres) is provided with inlet and outlet tubes, the former connected with a chloroform bottle through which a current of air (10 to 15 litres a minute) is established by a pump or bellows, the latter connected with the mask or tube by which the diluted vapour is delivered. The glass bulb rises and falls with the rising and falling density of chloroform vapour within the balance case which serves as a mixing chamber of adequate capacity. The pointer of the balance indicates on its scale the percentage of chloroform mixture.

The apparatus in its present form is not very portable, and although it may prove practicable to reduce its dimensions, I should prefer not to advise its use otherwise than as a hospital fixture in the operating room or in the preparation room. The pump or bellows and the mixing chamber should of course be at the side of the room, out of the way but not out of sight, and the pointer of the chloroform balance should indicate by bold figures 1, 2, and 3 on an open scale the percentage of vapour administered. It should be visible to the surgeon and to the administrator. At the operating table all that would be required are the delivery tube and mask, to which the anaesthetic mixture is driven on the *plenum* principle. Several very important conditions of safety would be ensured. The dilution of the chloroform or other anaesthetic vapour would be under complete control; it could be gradually, not suddenly, augmented by reason of the large capacity of the mixing chamber; the indicator of strength would be plainly visible to all persons present; the attention of the administrator would be free to be devoted to the state of his patient. As to the care and trouble involved I can only say that the apparatus is in daily use for animals, that its application to man would give less trouble than does its application to animals, and that even if more trouble should be involved, the trouble should be taken.

Upwards of thirty inquests during the last six years at one hospital on cases in which death occurred during the administration of an anaesthetic, are more than sufficient reason for making some serious attempt to apply in the hospital the knowledge of anaesthetics acquired in the physiological laboratory.—I am, etc.,

Physiological Laboratory of the University of London, Feb. 25th. A. D. WALLER.

CALMETTE'S OPHTHALMO-REACTION FOR TUBERCULOSIS.

SIR,—More statistics, as Dr. O. Grünbaum writes, are doubtless still required, especially in certain directions, but the results of very many observations in France, Germany, Austria and England, have been already published.

Of course it is quite possible that all the patients suffering from bronchitis, asthma, typhoid fever, etc., and also the apparently healthy persons, who have reacted positively to Calmette's test, may really be tuberculous. It must also be admitted as certain that some infections, such as typhoid fever, may (temporarily or otherwise) reawaken activity in old tuberculous foci, so that persons with old, almost obsolete, tuberculous lesions might, if they become infected with typhoid fever, influenza, etc., be expected (perhaps only temporarily) to react positively. "Call no man happy before he dies!" and still less dare to say that any one is free from pulmonary or glandular tuberculosis until his lungs and lymphatic glands have been examined in serial sections by the help of a microtome! Yet, the fact of Calmette's ophthalmo-reaction (1 per cent. strength of fluid) occasionally giving a negative result in consumptive patients with tubercle bacilli in the sputum (of which I have had two more examples since my memorandum appeared) requires explanation, unless it be that pyrexia and bad nutrition prevent the occurrence of a positive reaction, just as the near approach of death is said to, or that in such cases the patient's organism, as has been suggested, has acquired from familiarity a kind of indifference towards tuberculin. In

[1] BRITISH MEDICAL JOURNAL, November 20th, 1897; and April 23rd, 1898.

my three cases of advanced pulmonary tuberculosis with tubercle bacilli in the sputum, in which the ophthalmo-reaction (Calmette's 1 per cent. fluid) was negative, it is worth mentioning that the "cuti-reaction" (von Pirquet's superficial cutaneous vaccination with Koch's old tuberculin) likewise gave a completely negative result. This confirms the suggestion that in such cases the patient's organism, owing to constant auto-inoculation, may have become apparently indifferent to tuberculin. If further observations were to explain the present difficulties Calmette's ophthalmo-reaction would certainly become one of the most useful aids in the diagnosis of many doubtful and obscure cases and of incalculable value in the selection of patients for sanatoriums and in deciding on the duration of treatment.—I am, etc.,

London, W., Feb. 23rd. F. Parkes Weber.

THE PREVENTION OF TUBERCULOSIS.

Sir,—With reference to Dr. A. R. Gunn's suggestion in the British Medical Journal of February 15th (p. 382), that breeders should select the comparatively or absolutely immune cattle from which to breed, with a view to producing a stock immune to tuberculosis, may I point out that for the past five years, to my knowledge, this course has been urged by Dr. Gerald Leighton in his lectures on immunity and heredity in relation to disease, at the Royal (Dick) Veterinary College, Edinburgh? The modern veterinarian is thoroughly alive to the importance of the practical application of the principles of immunity and heredity, and it ought to be only a matter of time for him to be able to succeed in impressing and influencing breeders in this and similar directions.—I am, etc., William Brown.

Royal Veterinary College, Edinburgh, Feb. 17th.

THE HAMPSTEAD GENERAL HOSPITAL.

Sir,—It has been suggested to me that it will remove any wrong impression which may exist as to the attitude of the Council of this Hospital towards the local medical profession if I make it quite clear that there is no intention to withdraw from the medical men of Hampstead the privilege of treating patients in the pay wards of the Hospital, including the "contributory beds."

As already alluded to in my letter which you kindly inserted last week, there have been beds available to local medical practitioners from the foundation of the hospital. These have ranged from a charge of 12s. per week, the medical fees being by arrangement between the patient and the doctor in attendance. So far is it from being the wish of the Council to deprive the medical men of Hampstead and the neighbourhood of this privilege that in the extension buildings now ready the number of contributory beds is increased to 14 (or 16) and the beds at the higher rate to 6. I may say that the Council have never had any intention of discontinuing this arrangement so long as there were a demand for these beds, and they will not be unwilling to increase the number of contributory beds if necessary.

I have the pleasure to add that at their meeting last evening the Council unanimously agreed to recommend for inclusion in the Council, on its re-election at the annual meeting of subscribers each year, two medical practitioners to represent the medical profession in the district served by the hospital in addition to the medical members representing the staff of the hospital.—I am, etc.,

Ernest Collins,
February 28th. Chairman of the Council.
Hampstead General Hospital.

NOTIFICATION OF BIRTHS ACT.

Sir,—The promoters of this Act were inspired by good intentions, but its provisions will not accomplish their objects. The storm of opposition in the medical profession that has been excited renders it very unlikely that it can be efficiently administered There is, indeed, much in the Act that calls for amendment. The duplex nature of the duties imposed on the parent or guardian who is called on (1) to notify the medical officer of health, and (2) to register the birth, is likely to seriously interfere with the important work of registration. Mr. Dudman, the Registrar of Births for St. Marylebone, has pointed this out, and owing to the migratory character of large sections of our population, his apprehensions are well founded. The best solution of the problem would be to direct:

1. That registration by the parent or guardian within thirty-six hours of the birth of the child should be compulsory.
2. That on the day of registration the registrar should notify the medical officer of health for the district.
3. That medical men shall not be compelled to divulge professional secrets.

Were these amendments embodied in an Act, the medical officer of health would receive early information, whilst the sense of injustice now felt by the medical profession would disappear, and their loyal assistance in the preservation of life would be as zealous in the future as it has been in the past.—I am, etc.,

London, W., Feb. 22nd. John Fletcher Little, M.O.H.

THE PATERNAL TRANSMISSION OF SYPHILIS.

Sir,—Mr. Clement Lucas, in his interesting address on Inherited Syphilis, published in the British Medical Journal of February 1st, remarks that "to my mind inheritance from the father alone is now put entirely out of court," although he admits the possibility of contagion by the semen. I was under the impression that paternal transmission was now accepted by nearly all the leading authorities. This question was the subject of a prolonged discussion at Vienna in 1903, when the view of transmission through the father only was supported by Kassowitz, Neumann, Finger, Hochsinger, and Lang.

The chief arguments in favour of paternal transmission are: (1) The fact that, after a series of abortions or syphilitic infants, a healthy child may be born after mercurial treatment of the father only; (2) cases have been known where a woman gave birth to syphilitic children by one man and healthy children by another. Hochsinger[1] has recorded observations on 72 families in which the fathers were syphilitic, but the mothers showed no signs of syphilis during periods of four to nineteen years, although they were repeatedly examined (50 cases were under observation for more than six years); the 72 mothers gave birth to 276 children—110 stillborn, 166 syphilitic, and 31 healthy. This is difficult to explain except by paternal transmission. Mr. Clement Lucas says that "it is difficult to imagine that the *Spirochaeta pallida* can enter the ovum and multiply in it without destroying it." It is, I believe, now held by many authorities that the spirochaete condition is probably only one phase in the life-history of the syphilitic micro-organism, so that it may enter the ovum in another form.

As Fournier has pointed out, the denial of the paternal transmission of syphilis is a dangerous doctrine, as it opens the door of marriage to many syphilitic men hitherto deterred by the fear of injuring posterity.—I am, etc.,

London, W., Feb. 2nd. C. F. Marshall.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ARMY ESTIMATES FOR 1908-9.

Mr. Haldane has prefixed to the Army Estimates for 1908-9, presented to Parliament a few days ago, a memorandum in which, under the head of Military Expenditure and Policy, he reviews the history of the policy of successive Governments towards the army from the time of the Battle of Waterloo down to the present day. In concluding it, he says:

> There is no disguising the fact that every decrease in the strength of the troops available for imperial purposes, whether at home or abroad, increases *pro tanto* the burden of responsibility that rests with the territorial forces of the Empire. Any serious weakening of the first line must sooner or later postulate a far higher degree of efficiency and readiness than now obtain in the second line, and if reductions in the regular army are carried too far, demands will ultimately have to be made on the citizen forces such as hitherto have never been contemplated.
>
> In a steady development on really scientific lines of the organization of the regular army, of the special reserve, and of the territorial force, and in a rigid application, wherever possible, of the policy of concentration, lies the best hope of economy for the future.

In his comments upon the arrangements rendered necessary by the formation of the Territorial Force which comes into existence at the end of the present financial year, Mr. Haldane states that all the ninety-three County

[1] *Wien. klin. Woch.*, 1903.

Associations required in Great Britain were incorporated before the end of January, and that they are at present engaged, with the assistance of the military authorities of the several commands, in making such adjustments in the draft scheme drawn up by the General Staff as will, while not disturbing the total number of troops to be provided by each district, suit the capabilities of each county to raise the men. In the vote a special sum of £300,000 is included for initial charges for clothing and equipment, to place the County Associations in a sound financial position from the beginning. Altogether, with sums provided for the expenses of the associations and for the extinction of debts, the total provision for expenditure of a capital nature in starting the Territorial Force is about £1,250,000. The following is a brief analysis of the total sums to be voted for medical and hospital services:

TOTAL PROVISION FOR MEDICAL AND SURGICAL HOSPITAL SERVICES.

	Effective Services.	Non-effective Services.	Total.
(I) Medical establishments, including Royal Army Medical College—			
Officers	£ 417,700	£ 159,000	£ 576,700
W.O., N.C.O., and Men ...	309,900	35,000	344,900
Nurses, Civilians, etc. ...	110,900	2,200	113,100
	838,500	196,200	1,034,700
(II) Royal Army Medical Corps Militia	—	—	21,900
(III) Medical Establishment of the Territorial Force	—	—	74,000
(IV) Medical Staff at War Office, Educational Establishments, etc.	—	—	22,000
(V) Medicines, instruments, etc., except as in (I) and (II)	—	—	18,000
(VI) Barrack services (Vote 6d) for hospitals	—	—	29,000
(VII) Hospital provisions, medical comforts, etc.	—	—	115,000
(VIII) Fuel, light and water for hospitals	—	—	25,000
(IX) Hospital clothing	—	—	2,000
(X) Hospital stores and field hospital equipment	—	—	10,700
(XI) Works services, except maintenance of barracks included under (I)	—	—	81,800
Total	—	—	£1,434,700

THE TERRITORIAL FORCE.

A NUMBER of officers of the Royal Army Medical Corps have been selected to fill appointments in the Royal Territorial Medical Corps when it becomes properly organized and established. The following, among others, have been selected for the appointment of adjutants and have been ordered to join the R.A.M.C. dépôt at Aldershot to undergo a special course of instruction prior to appointment: Captain R. H. Lloyd, Captain J. M. Sloan, D.S.O., M.B., Captain W. A. Woodside, Captain E. P. Connolly, Captain H. S. Roch, Captain E. Bennett, and Captain F. A. Stephens.

INDIAN MEDICAL SERVICE.

STUDY LEAVE.

AN addition having been made to para. 5 of the regulations published in Department of Military Supply Notification No. 16 of 1907, on the subject of study leave to officers of the Indian Medical Service, the paragraph in question will now read as follows:

5. The minimum period of leave granted solely as study leave shall be six months. Time spent on the journey to and from India by an officer whose study leave is not combined with any other kind of leave will reckon as study leave, but the allowance specified in Rule 10 will be granted during the period of study only. An officer whose study leave is combined with any other kind of leave will, however, be required to take his period of study leave at such a time as to retain, at its conclusion, a balance of other previously sanctioned leave sufficient to cover his return journey to India.

Medico-Legal.

DAMAGES AGAINST AN UNREGISTERED PRACTITIONER.

AT the Manchester Assizes Mr. Justice Pickford and a special jury were occupied on February 20th and 21st in hearing the case of Johnson *v.* Hall, in which the plaintiff, a married woman, the wife of a weaver living at Darwen, claimed damages for having been improperly treated by the defendant, who carries on business in Broad Street, Pendleton, as "Dr. Hall's Hygienic Company," and has consulting rooms in Blackburn, Darwen, and other Lancashire towns. It was alleged that the plaintiff, by false and fraudulent representations made by the defendant from time to time as to his ability to effect a cure, had been prevented by him from consulting a qualified surgeon when suffering from cancer of the breast, with the result that she had to undergo a painful operation without any prospect of a permanent cure.

Mr. Sutton and Mr. Overend Evans appeared for the plaintiff, and Mr. Langdon, K.C., and Mr Sellars for the defendant.

The plaintiff, according to the report in the *Manchester Guardian*, said she was 37 years of age, and had through life enjoyed good health until her breast became infected. She had been married fourteen years. She first came in contact with the defendant about eight years ago, when he treated her for indigestion. She "bought the treatment," paying him 35s. down, for which she was entitled to consult him at any time without further fee. She got from him an india-rubber bag and some herbs and mixtures, with instructions how to use them. From that time till August, 1906, she did not see the defendant, but his pamphlets and papers were left at her house. When the first symptoms of trouble in her breast appeared she went to the defendant at his consulting-room in Blackburn. He said it could be "dissolved" by his treatment, and promised a cure in time. He ordered her to foment the breast, and prescribed certain ointments, giving her at the same time herbs and mixtures. She followed his directions carefully. Time passed and there was no improvement. On his advice she used a poultice of "slippery elm," and continued the herb medicines. The swelling increased rapidly, but the defendant assured her that it was not cancer, and dissuaded her from having an operation. When it became very bad the defendant prescribed certain baths; he told her that that would "dissolve" the tumour, but no benefit accrued to her, nor was she benefited by the subsequent use of almond oil and fomentation with poppy heads, cayenne, and vinegar. When she visited the defendant at Pendleton with her husband he still assured her that it was not cancer that she suffered from. He considered it a fibrous tumour. "Cancer," he said, "clings to the body, but this is coming out." She last saw the defendant about September 27th last year. The pain then became unendurable, and she was forced to consult Dr. Ballantyne. That gentleman advised an immediate operation. He operated next day. She suffered great pain, and even now was only relieved by morphine injections.

In cross-examination by Mr. Langdon the plaintiff denied that she had ever, after consulting the defendant, had a blow on her breast.

Dr. Ballantyne, called on behalf of the plaintiff, said that when she consulted him her only chance lay in excision of the breast, and he performed the operation next day; her condition was hopeless, and life could not have been much prolonged.

Mr. William Thorburn, Surgeon to the Manchester Royal Infirmary, said that he had examined the plaintiff on February 3rd, and, from the appearances and statements made by the patient and Dr. Ballantyne, he had come to the conclusion that she was suffering from recurrent cancer of the left breast. The disease returned in the scar, and was now widely spread, extending into the glands of the neck. No further operation was possible, and life could not be much prolonged. It was clear from Dr. Ballantyne's description that when the case came before him the cancer was already far advanced and had reached the stage of ulceration, after which operation was seldom of service. He was not able to state with precision what percentage of cases in this early stage could be safely operated on. He himself, however, had operated on many early cases, and the patients were now living. In about 40 per cent. of the cases there was no recurrence after an early operation. On the other hand, when the disease had had a year or more in which to progress, and when it had reached the stage of ulceration, the prospect of a successful operation became exceedingly bad. Questioned as to the treatment adopted by the defendant, witness said it was entirely negative—of no effect one way or the other. The advice given by the defendant against operation was an encouragement to the patient to wait until it was too late. He did not think any properly-educated medical man would have been ignorant of what the plaintiff was suffering from. In cross-examination, witness said that, in the opinion of nearly all medical men, cancer was local rather than constitutional.

In opening the case for the defendant, Mr. Langdon asked the jury not to let their sympathies for the plaintiff exceed a proper limit. They were not to saddle the defendant with responsibility for the origin of her cancer. He pointed out

that, for the first time in the history of medicine, a qualified surgeon had been found to go into the box and say that cancer in its early stage was curable by the knife. The plaintiff had consulted the defendant because she knew he would not operate, an operation having been her fear from the first. On the question of fraud, he submitted that there was no evidence.

Mr. Justice Pickford: In my view it does not make any difference. It seems to me the damages are the same. The jury may look at the defendant's published statements—statements which induced these people to go to him—in order to judge of his capacity.

Mr. Langdon: I do not dispute that.

Mr. Justice Pickford: It does not seem to me that if he treated the plaintiff negligently the fact that he made false statements affects the damages.

Dr. J. Shaw of London, called on behalf of defendant, said he did not agree that operation was a cure for cancer of the breast. The statistics of the Middlesex Hospital showed that the more extensive the operation—that is, the further you got away from the seat of the mischief—the larger was the proportion of recurrences in the scar, which tended to show that the origin of the disease was not local. He believed that essentially the disease was constitutional, and, if treated constitutionally, he believed it was curable. He thought that a patient might obtain temporary relief from defendant's treatment, and that the plaintiff's life had certainly not been shortened by it, but that something better might have been done. He himself would have used graduated compression to the lump and would have prescribed sedatives, and he would have expected a cure from that treatment within six weeks. If that failed within six weeks to effect a cure he would have advised a consultation with a surgeon, but if the patient preferred to continue with him, he would next try electricity, the constant current. If that failed, he would again advise consultation. He had known great benefit result from Chian turpentine, first introduced by Dr. Clay of Birmingham. He would not regard operation as a "chance."

Mr. Justice Pickford: Is it right to the patient to allow the disease to reach a stage in which it shows swellings under the armpits without doing something more than apply palliatives?—No, I should not think so.

The defendant did not give evidence.

Mr. Justice Pickford, in summing up, said after the evidence of Dr. Shaw it was not necessary that he should trouble the jury with very many remarks, because it stood admitted that the treatment applied was not the right treatment. But the jury must be satisfied that it was negligent treatment. There was not much dispute as to the law. A man might, if he liked, though not qualified in the medical sense, undertake to cure disease, but if he professed to be a qualified practitioner he became subject to penalties under certain Acts of Parliament. But if he undertook to cure disease he was bound to use reasonable and proper skill. It was no answer for him to say, "I am not a qualified medical man, and could not do that which a qualified person would do"—he must use ordinary and reasonable skill, otherwise he became responsible in damages. He was—using the term in the ordinary sense and not offensively—a quack doctor, who got his practice by distributing pamphlets and leaflets broadcast amongst the working people of Lancashire. In one leaflet he said: "You women are exposed by the doctors improperly, and for their own gain, to revolting and indecent examinations. You are also exposed for their own gain to unnecessary and cruel operations, and you are also exposed to being kept on as patients for the sake of gain, when you could be cured perfectly easily without them." In a further attack on the medical profession, he said: "People have found that doctors can make up bills but give little value for their money; but men with little education, yet with a clearer idea of what disease is, can do them far more good at a much less cost; and this is why there are so many unqualified practitioners in the land to-day." His treatment, the defendant said, seldom failed in cases of "breast tumour or cancer." His "methods were painless, and removed the cause of the tumour, as well as the tumour itself." Could the plaintiff, after that, claim that he was not holding himself forth as a competent person? He said, in effect, "Don't go to the doctors; come to me, and you will avoid useless operations. I can cure you when they cannot." And he added this: "We know that the success of this work has not only been the cause of our devotedness to it, but because we have been inspired and helped by God from the commencement." By much statements the defendant got his practice. What was the result? A woman, dying of cancer, went to him. He attended her some fourteen or fifteen months; she grew worse as time went on; but the defendant assured her (according to the uncontradicted testimony both of herself and her husband) that she had not got cancer at all. She had it in the most malignant form, and she could not, through want of proper treatment in the early stage, now possibly recover. There was only one of two conclusions to be drawn, the plaintiff's counsel said: Either you were so ignorant that you could not tell it was cancer—in which case your pamphlet is a fraud—or, worse than that, you knew it was cancer; you knew you could not cure it; but you kept her under your hands to make money out of her. He could not escape from one of those alternatives. The question for the jury was—had there been negligence, and, if so, what damages?

The jury retired, and in seven minutes returned into Court with the verdict for the plaintiff, damages £600.

Judgement was entered, and his Lordship certified for a special jury.

TUCKER'S ASTHMA SPECIFIC.

Mr. Augustus Q. Tucker, of Herne Hill, was, according to the report in the *Daily Telegraph*, summoned on February 24th, before Mr. Francis, for having unlawfully sold to George Waldock certain poisons—to wit, cocaine and atropine—contained in a bottle bearing the words, "Nathan Tucker, M.D., Specific for Asthma, Hay Fever, and all Catarrhal Diseases of the Respiratory Organs," which bottle, when sold, was not distinctly labelled with the word "Poison" and with the name and address of the seller. The proceedings were taken under Section 17 of the Pharmacy Act.

Mr. W. S. Glyn Jones supported the summons on behalf of the Pharmaceutical Society, on whose behalf a bottle had been bought from the defendants, contained in a case which bore nothing in the way of a label, except the Government patent medicine stamp and some embossed letters; the bottle contained no label, but embossed on the glass were the words, "Nathan Tucker, M.D., Specific for Asthma, Hay Fever, and all Catarrhal Diseases of the Respiratory Organs." Mr. Thomas Tickle, Public Analyst for Exeter, who had analysed the contents of the bottle, found it to contain 3.6 grains of cocaine and 0.91 grain of atropine. Evidence was also given by Mr. Peter Daniel, F.R.C.S., Surgeon to the Metropolitan Hospital, who stated that cocaine was rarely given internally; the maximum dose was half a grain, and the fact that it was contained in 400 parts of some harmless ingredient would not materially minimize the danger. In cross-examination by Mr. F. E. Smith, K.C., who appeared for the defendant, Mr. Daniel stated that he did not know of a case where a drug supplied for use as an inhaler had been drunk. It would take 100 squeezes of the inhaler to take up one drop of the stuff. Mr. F. E. Smith submitted that if there had been any breach of the section it was of a technical character: it was Mr. Tucker's practice to send out these bottles with minute instructions that the fluid should only be used with an inhaler. Until quite recently he had been totally unaware of the ingredients.

The magistrate thought there had been a breach of the Act, and ordered the defendant to pay a penalty of £5 and five guineas costs.

DEPUTY CORONERSHIPS.

S. M. asks for advice as to the steps he should take to obtain the office of deputy coroner.

*** Under the Coroners Acts this office is entirsly in the hands of the coroner, and he can select any fit person he prefers. There is a condition in the Coroners Act, 1892, that the appointment of the deputy must be ratified by the Mayor, or Chairman of the County Council, but ratification cannot be arbitrarily withheld. Under these circumstances a candidate for such an office can only hope to obtain it by being personally known to some coroner who may be willing to appoint him as his deputy.

MEDICAL FEES IN CASES SETTLED OUT OF COURT.

A. writes that he was consulted on two occasions by a firm of solicitors, relative to the mental condition of a late patient. The matter was connected with a disputed will, and his evidence would have been very important. The case was, however, settled out of court; he has asked the solicitors for a fee of two guineas, but they seem surprised that he should want a fee.

*** Our correspondent is morally entitled to his fee, but it is to be feared he would have great difficulty in making good his claim at law. In such cases it would be better if medical practitioners before giving information of this nature to solicitors, insisted on a written undertaking from them that a reasonable fee should be paid for such work, whether the case came into court or not.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognised by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PROFESSIONAL ETIQUETTE.

H.—If we understand our correspondent's statement correctly, his connexion with the case ended after he had recommended removal to a hospital. The relations therefore were at liberty to seek other advice, and there does not seem to have been any obligation on the surgeon who was called in to communicate with H.

GRATIS ATTENDANCE UPON THE FAMILIES OF MEDICAL MEN.

NORTHUMBRIAN.—Fees may be remitted where the patient is dependent upon a medical relative and the fees would come out of his pocket, or where the relative of a medical practitioner is not well off, although not dependent upon him, but a lady "in independent and comfortable circumstances" has no claim to exemption from payment because two of her children are members of the medical profession.

CIRCULARS TO PATIENTS.

PERRIER says that he has placed an assistant in a neighbouring township where he has always had a branch surgery, and has sent out to his patients, by which he means "those he has visited and has had on his books at one time or another," a circular introducing the new assistant, and giving his surgery hours. This has been questioned by a colleague, who has accused him of advertising, and he asks our opinion.

*** Such circulars are always dangerous, and very apt to give rise to accusations of canvassing. If they are necessary, care should be taken to send them only to actual patients; for example, they might be safely sent out with the half-year accounts, but our correspondent's plan was sufficiently elastic to allow of some reaching persons under the care of other practitioners.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

THE following candidates passed the Preliminary Scientific Examination for internal and external students, January, 1908, in the subjects indicated:

PART I: INORGANIC CHEMISTRY, EXPERIMENTAL PHYSICS, AND BIOLOGY

Inorganic Chemistry, Experimental Physics, and Biology.—W. M. Ash, London Hospital; T. P. Lewis, University College, Reading; L. Page, Epsom College and University College, Bristol; H. Webb, Guy's Hospital; A. H. White, University College, Bristol, and private tuition; N. T. Whitehead, St. Thomas's Hospital.

Inorganic Chemistry and Experimental Physics.—J. C. P. Bayley, Victoria University of Manchester; *P. C. Cole, St. Bartholomew's Hospital; *R. Creasy, Guy's Hospital; J. M. Curé, St. Bartholomew's Hospital and Royal College, Mauritius; *Gertrude Dearnley, London (R. F. H.) School of Medicine for Women; Gertrude M. Flumerfelt, London (R. F. H.) School of Medicine for Women; *A. G. Hieber, University College, Bristol, and University Tutorial College; *E. S. W. Hirsch, St. Mary's Hospital; H. N. Morgan, University College, Cardiff; *G. W. Parry, University College, Cardiff; W. Robinson, Guy's Hospital; *E. G. Saunders, St. Thomas's Hospital; W. C. Spackman, University of Birmingham; C. E. Thornton, Middlesex Hospital and private study; P. Whitehead, King's College.

Inorganic Chemistry and Biology.—†A. F. Potter, St. Thomas's Hospital; †F. C. Watson, University of Leeds; J. D. Wilkinson, St. Thomas's Hospital; †W. A. Young, Guy's Hospital.

Experimental Physics and Biology.—L. B. Baird, Victoria University of Manchester; ‡L. G. Bourdillon, St. Thomas's Hospital; ‡Dorothy C. Logan, University College, Cardiff; ‡A. R. Sharrod, London Hospital; H. Taylor, Victoria University of Manchester and private study; ‡J. A. Tsoi-A-Sue, London Hospital.

Inorganic Chemistry only.—*†E. S. Abraham, University College, Bristol; *†E. Bach, University of Birmingham; *†H. W. Batchelor, London Hospital; *†R. Brewitt-Taylor, St. Bartholomew's Hospital; *‡J. L. Davies, University College, Cardiff; *‡J. de Silva, St. Mary's Hospital; *‡A. Evans, University College, Cardiff; *†W. S. George, Guy's Hospital; *†J. Higgins, St. Mary's Hospital; *†C. E. S. Jackson, St. Mary's Hospital; *†G. B. Jameson, Victoria University of Manchester; W. E. Kingden, Trent College, Long Eaton; *†G. R. Pennant, University College, Cardiff; *‡T. H. Phillips, University College, Cardiff; *†A. J. C. Tingey, University of Liverpool; *†J. Vaughan-James, University College, Cardiff; *†Honoria J. Wallace, University Tutorial College.

Experimental Physics only.—*‡A. E. Bullock, St. Paul's School; *E. A. M. J. Goldie, University College; *A. Goodwin, University College; *‡E. A. C. Langton, St. Bartholomew's Hospital; ‡H. Mather, Guy's Hospital; N. Montgomery, King's College; *G. S. Papadopoulos, St. Bartholomew's Hospital; *‡C. J. B. Pasley, King's College and Westminster Hospital; *‡F. H. B. Percival, St. Bartholomew's Hospital; E. D. Scott, private tuition; *‡Catherine V. Turner, University Tutorial College; *‡E. W. Whiting, St. Bartholomew's Hospital; *‡C. W. Wilson, London Hospital and private study.

Biology only.—†‡F. D. Annesley, Guy's Hospital; G. C. G. Baldini, St. Bartholomew's Hospital; H. J. Barnicoat, London Hospital; †‡O. N. W. Brown, King's College and Westminster Hospital; †‡L. A. Dingley, University College; †‡I. Feldman, private study; H. H. Fisk, St. Mary's Hospital; P. D. Hamilton, Charing Cross Hospital; Helena R. Lowenfeld, Ladies' College, Cheltenham; †‡G. H. Pearson, London Hospital; †‡F. H. Rees, University College, Cardiff; †‡A. E. Roberts, London Hospital; †‡W. Simpson, St. Bartholomew's Hospital; †‡H. E. Thorn, St. Paul's School; H. C. Viehoff, University of Liverpool.

* Already passed in Biology
† Already passed in Experimental Physics.
‡ Already passed in Inorganic Chemistry.

PART II: ORGANIC CHEMISTRY.

C. Aldis, Guy's Hospital; J. Appleyard, University College; P. C. Bharucha, University College; Florence H. Bousfield, London (R. F. H.) School of Medicine for Women; N. H. M. Burke, King's College; G. C. Chubb, D.Sc., University College; H. St. Clair Colson, Hartley University College; G. Covell, Guy's Hospital; I. M. Davies, University College, Cardiff; R. J. C. Douty, Middlesex Hospital; W. H. Edmunds, University College, Cardiff; G. E. Elkington, University of Birmingham; R. R. Elworthy, Westminster Hospital; L. H. K. Finch, private study; P. W. Green, St. Mary's Hospital; G. Hadfield, St. Bartholomew's Hospital and Plymouth Technical School; T. E. Hammond, Cheltenham College and St. Bartholomew's Hospital; S. L. Heard, London Hospital; C. G. Hewett, University College; H. W. Hills, University College; E. W. Hodgson, St. Thomas's Hospital; H. J. Hutchens, private tuition; C. M. Jones, University College, Cardiff; F. H. Kelly, Middlesex Hospital; L. S. Kempthorne, University College; W. B. Laird, St. Thomas's Hospital; G. Laurence, Middlesex Hospital; A. S. Lindsay, London Hospital; J. D. Lyle, London Hospital; M. Mackenzie, London Hospital; Mary C. Martin, University College and London (R. F. H.) School of Medicine for Women; T. H. Martin, University of Liverpool; P. J. Montgomery, Middlesex Hospital; W. D. Owen, University College, Cardiff; W. H. Parry, University of Liverpool; C. L. Pattison, St. Mary's Hospital; R. E. Porter, London Hospital; T. W. W. Powell, St. Mary's Hospital; M. Radford, University College; N. R. Rawson, London Hospital; T. E. Roberts, Guy's Hospital; H. H. Robinson, London Hospital; D. Ross, London Hospital; S. P. Rowlands, University College, Cardiff; H. Rowntree, Middlesex Hospital; W. Salisbury, University College, Bristol; M. Scott, Guy's Hospital; H. K. V. Soltau, St. Bartholomew's Hospital; Mildred B. Stogdon, London (R. F. H.) School of Medicine for Women; A. W. Venables, London Tutorial College and private study; G. A. Walker, London Hospital; W. B. Wilson, University College and St. Bartholomew's Hospital.

UNIVERSITY OF ABERDEEN.

Finances of the Past Year.

AT a recent meeting of the Aberdeen University Court, Professor Matthew Hay, Convener of the Finance Committee, submitted the University accounts for the year. The general fund of the University showed a deficit of £200, which marked a distinct change from the year 1905–6, when there was a surplus of nearly £1,400, or from the year 1904–5, when the surplus was even greater. This change was not unforeseen, however; indeed, Professor Hay had pointed out in a previous year that under certain circumstances it was likely to occur. It is mainly due to three causes—first, the increased expenditure on the maintenance of the buildings, arising from the recent large extensions, which were taken into occupation about the middle of the past financial year; secondly, the annual expenditure at the beginning of the year on repairs and painting of the University buildings in general preparatory to the quatercentenary celebrations; and thirdly, the diminished receipts from class fees. With regard to the last cause, the diminution would not be continued into the current year. The fall last year was not due to a shortage in the total number of students, for there were 890 matriculated students, exclusive of 292 attending special courses, and paying a special entrance fee. This was the largest number of students in any year since 1892, when the new ordinances came into force, and partially checked the inflow of students. The continued decline during the past two years in the number of medical students was being severely felt by the fee fund, because a medical student paid in class and degree fees two or three times as much as each arts student.

During the current year an increase of £1,200 was anticipated from the raising of the arts fee from three to four guineas a subject, but from this has to be deducted an estimated loss of at least £400 from medical students. Already the new buildings were fully occupied, and there was no busier part of the University now than that opened by the King in September, 1906. It should be understood by possible benefactors that the general fund of the University was greatly in need of strengthening, preferably by contributions directly to it, leaving their particular allocation in the hands of the Court. In addition to the benefactions of the Carnegie Trust, which included the completion of the endowment by the Trust of the important lectureships in geology and French, for which £23 000 had been set aside, there had been paid to the University in the past year £9,170, a bequest by the late Colonel Alexander Milne of India. It was left for bursaries for poor and deserving students, and the Court and Senatus have devised a scheme under which the bursaries would be allotted in such sums and for such periods as might be necessary—not upon an examination open to all comers, as was usual with bursaries—but upon a patient personal inquiry into the real needs and merits of the various applicants. Another valuable gift, received through Professor Reid, was the offer of £400 a year from the Hon. A. McRobert, also of India, for a Fellowship in cancer research, to be permanently secured to the University by the gift of the requisite capital sum. The first moiety, amounting to £2,483, of the bequest of the late Mr. William Knox, for scholarships in arts and bursaries in medicine and divinity had also been received. A donation of £1,000 towards the equipment and construction of the gymnasium had also been received from a warm friend of the University who desired to remain anonymous, and £500 from Dr. J. A. Campbell, for many years the Parliamentary Representative of the Universities of Glasgow and Aberdeen, for the encouragement of athletic exercises and outdoor recreation among the students. From Mr Carnegie, through the Principal, a gift of £250 had been given for the purchase of books for the departments of modern languages, and a sum of £43 from the Primrose Trustees for prizes in the agriculture and law departments. Professor Traill, in a letter to the Secretary of the Court, intimated a gift of £1,000 as a fund

which he would administer during his own lifetime, from which grants should be made to deserving students, which would set them more free to use their time to the best advantage for their own better efficiency, but yet requiring them to pass on the benefit which they themselves have received when they are able to do so, in order that others may benefit in their time. The gift was gratefully accepted.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.

THE following candidates having passed the necessary examination have been admitted Fellows of the College:

B. P. Banaji, P. T. Carpenter, M. D. Healey, H. L'Estrange, and T. S. Reddy.

The following passed the primary part of the examination:

H. G. P. Armitage, K. K. Chatterji, W. Doolin, A. Foley, E. W. O'G. Kirwan, A. M. Lanphier, J. S. Pegum, R. H. Weir, and R. White.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates passed in the subjects indicated:

Surgery.—†H. M. Jones, †F. B. O'Dowd.
Medicine.—*†C. F. Curtis, *†M. Fisher, *O. C. H. L. Moll, *†E. H. Paterson, *†L. G. Powell, *†W. W. Stacey, †N. C. Wallis, *H. F. Wight.
Forensic Medicine.—C. F. Curtis, H. W. B. Danaher, F. S. Hawks, L. G. Powell, H. C. Simpson, S. Speelman.
Midwifery.—L. G. Powell, H. C. Simpson, W. W. Stacey, S. H. Sugden.

*Section I. *†Sections I. and II.

The diploma of the Society has been granted in Medicine, Surgery, and Midwifery to C. F. Curtis, F. B. O'Dowd, E. H. Paterson, and W. W. Stacey.

OBITUARY.

CONOLLY NORMAN, M.D., F.R.C.P.I.,

MEDICAL SUPERINTENDENT, DISTRICT ASYLUM, DUBLIN.

THAT large body of the profession which knew and admired Conolly Norman of Dublin will be shocked and pained to learn of his sudden death on Saturday last, February 22nd. His career was marked by much brilliancy, and his great labours in the study of lunacy and his devotion to the development of treatment are known everywhere. He studied at Trinity College and the Richmond Hospital, and the trend of his work lay in the direction of nerve pathology and the clinical observation of nerve diseases. He became a licentiate of the Royal Colleges of Physicians and Surgeons in 1874, a Fellow of the latter in 1878, and a Fellow of the College of Physicians in 1890.

He was appointed to be Assistant Medical Superintendent in Monaghan Asylum, and later he was promoted to the full charge of Castlebar. A vacancy occurred in the Richmond District Asylum, Dublin, and to this, the principal institution of the kind in Ireland, he was appointed by the Lord Lieutenant of the day. These appointments have since passed into the hands of the Boards of Governors, but every one recognized that in this appointment the Government had acted with the greatest wisdom. The justification of the selection and the testimony of his success remain in the thorough reorganization of the whole establishment, and the opening of the splendid Portrane Asylum as an auxiliary. When he joined there was much to reorganize at the old asylum. The newer methods had hardly touched the Dublin Asylum, but Conolly Norman, young, energetic, progressive, threw himself into the work of change with great enthusiasm. Rigid restraints were relaxed or removed, buildings were renovated or newly constructed, the assistant staff was increased to allow of the better medical treatment of the 2 000 inmates, and the asylums became a school for instruction in mental affections instead of a prison for holding the refractory subjects of brain disease. A new laboratory was built and equipped, and placed under the direction of the First Assistant, Dr. Rambaut, now of the Salop Asylum, and here excellent work was done. The Governors recognized the value of Conolly Norman's labours, which were of the most onerous character. Of course it was not to be expected that some friction should not occur between a learned scientist and a number of laymen without special knowledge, but he enjoyed the full confidence of his Board.

It was known that for some time he had been suffering from angina pectoris, and he had taken various periods of rest. But he carried the worries of his great responsibilities with him, and suffered in proportion. Quite lately he had an attack of influenza and went on another holiday. He returned only on the Monday before his death, and on Thursday his Governors congratulated him on his recovered health. On Saturday afternoon he left his home and had walked about a hundred yards when he fell to the ground. Assistance was at hand, and Dr. Finny and Sir Thornley Stoker were at once summoned; but Dr. Norman never recovered consciousness, and was dead long before his friends arrived.

Conolly Norman was held in the highest respect and affection by the profession in Dublin. He was regarded as one of the ablest of physicians in the diagnosis and treatment of mental diseases, and it is less than a year since the University of Dublin conferred upon him the degree of M.D. in recognition of his distinguished professional services. He was a member of the British Medical Association, was Secretary and Vice-President of the Section of Psychology at the Annual Meetings of the Association held in Dublin and Newcastle-on-Tyne in 1887 and 1893 respectively. He was also an ex-President of the Medico-Psychological Association of Great Britain. He had written much. He was joint-editor of the *Journal of Mental Science*, and had contributed valuable articles to Tuke's *Dictionary of Psychological Medicine* and to Allbutt's *System of Medicine*. He had also published papers on Dysentery, Hallucinations, Delusional Insanity, Beriberi in Temperate Climates, etc., the last-named being based upon his experiences of the outbreak in his own asylum.

Conolly Norman was a man of very wide literary knowledge. He had excellent artistic tastes and a very sound judgement as a collector. His opinions were carefully formed and then held with great firmness. His friendships were wide and true, and he maintained the best traditions of his profession. His death at the early age of 55 is a very distinct loss to Irish medicine, particularly to the department in which he practised, in which he was justly regarded as the leader in the Sister country.

He leaves a widow, but no children.

ROBERT SYDENHAM FANCOURT BARNES,

M.D.ABERD., C.M., M.R.C.P.LOND., F.R.S.EDIN.

WITHIN a few months Fancourt Barnes, once so well known in medical circles in London, has followed his father to the grave. The deceased was born in London in 1849, and educated at Merchant Taylors' School. He afterwards went to a school at Honfleur, where he learnt French, a language in which he remained to the last very proficient. He was for a time at Lincoln College, Oxford, but took his medical degree in Aberdeen, studying medicine in St. Thomas's Hospital.

Whilst waiting for an appointment on a hospital staff, Fancourt Barnes occupied himself in literary work, and for many years was an active member of the editorial staff of the BRITISH MEDICAL JOURNAL during the editorship of Mr. Ernest Hart. He became a member of the Board for the examination of midwives instituted by the Obstetrical Society of London, and was elected Physician to the British Lying-in Hospital and to the Great Northern Central Hospital.

Undoubtedly before the middle of the Eighties Fancourt Barnes drifted into an unfavourable position. He had an intense belief in his gifted sire, and his conflicts with several of Robert Barnes's opponents in those days were largely due to a filial loyalty which hardly deserved blame. Those who considered that he asserted himself too much were themselves far from free from that defect. Unfortunately his mainstay—his father's cause, in fact—was failing, for younger men were superseding Robert Barnes. Fancourt Barnes had not the qualities which would have enabled him to stand by himself against able and rising men led by seniors who were entirely in disagreement with his father's views. One very definite result was failure whenever he offered himself as a candidate for the appointment of physician and lecturer to any medical school. He became Physician to the Chelsea Hospital for Women, where he distinguished himself mainly by his skill in plastic operations. At length there came the famous revolution in the management of that hospital. Fancourt Barnes fought for his father, and Robert Barnes for his son, but they found themselves on the losing side, and Fancourt was not re-elected. Fancourt Barnes also did not

retain his position as medical officer to several lying-in hospitals and dispensaries. By the middle of the Nineties he had practically retired from hospital practice, and henceforward devoted himself to private work. He had already, many years earlier, transferred himself from the Obstetrical to the British Gynaecological Society—indeed, he was one of the factors in the separation of these societies. Strange to say, father and son were destined to die within a year of the reunion of the Societies as a section of the Royal Society of Medicine, both just living to witness that reunion, which was largely effected by the united labours of Drs. Champneys and Macnaughton Jones.

Fancourt Barnes was the author of many writings, but his only book was the well-known *Manual of Midwifery for Midwives*, which ran through nine editions, the last being issued as late as in 1902. His most ambitious literary effort was the joint authorship with his father of the *System of Obstetric Medicine and Surgery*, but this linking of a senior writer of long experience with a beginner proved as usual unsatisfactory. In his *German-English Dictionary of Medical Words* he was not ably seconded and the proofs were badly revised, but his edition of Martin's *Atlas of Obstetrics and Gynaecology* proved useful, as fewer doctors and students studied German thirty years ago than is the case at present. Perhaps the best original work in every sense of the word published by Fancourt Barnes was a contribution on "The Indications afforded by the Sphygmograph in the Puerperal State," preserved in the *Transactions of the Obstetrical Society of London*, and read before that Society in 1874. It would, perhaps, have been better had Fancourt Barnes undertaken more scientific clinical work of this kind. A pamphlet on *Perineorrhaphy by Flap Splitting*, the result of much experience in the Chelsea Hospital, may be remembered as distinctly above the average of works of this kind where a dexterous expert professes to teach operative manœuvres by writing and by diagrams. Barnes wrote many articles and papers for medical societies and periodicals, and his literary powers were displayed at their best in journalism; he had a facile pen, and attacked opinions which he opposed in very plain language.

At the time of his death Fancourt Barnes had retired for several years from the profession owing to ill-health. He was twice married, but had no children. In his palmy days in the Eighties he was well known for his hospitality and wit, and it will not be said, especially by those who remember genial meetings at his house in Queen Anne Street, that he died forgotten.

THE death of DR. FREDERICK MORITZ SYKES occurred after a short illness at his residence, the Manor House, Bridlington on February 7th. He was a native of Clitheroe, studied at Edinburgh, and after obtaining the diplomas of L.R.C.P.and S.Edin., made a voyage to the Amazon. In 1894 he went to Bridlington, where he entered into partnership with Dr. T. Thompson, along with whom he carried on a very extensive practice up till 1900, when his partner left the town in consequence of failing health. Thereafter Dr. Sykes undertook the entire conduct of the practice alone. He was also a member of the Honorary Medical Staff of the Lloyd Hospital. From the first he was exceedingly popular with all classes of the community, his amiable disposition and genial manner, free from all taint of affectation or artificiality, winning him friends on all sides. Among his professional brethren he was held in no less esteem, and his death at the early age of 42 came as a shock to all who knew him.

WE regret to announce the death of MR. R. W. HARLEY, L.R.C.P.and S.Ire., of Dublin, which took place with tragic suddenness on Friday, February 21st, in his 67th year. Mr. Harley was visiting a patient in a private hospital when he suddenly fell to the ground and died immediately. He was a very popular practitioner, and enjoyed a considerable practice. He qualified in Edinburgh in 1867, and in 1887 took the licence of the Irish Royal College of Physicians. He was formerly Resident Medical Officer of the Cork Street Fever Hospital. His death is deeply regretted, and a very large number of his friends attended his funeral on Monday last.

DR. HUGH HARVEY FULTON died suddenly on February 6th, at the early age of 25. He studied medicine at the Glasgow University, where he had a brilliant career, gaining honours in nearly every class, and in 1904 graduated M.B., Ch.B., with commendation. After qualifying, he acted as Casualty House-Surgeon in the Glasgow Royal Infirmary and as House-Physician in the Western Infirmary to Professor Samson Gemmell. On finishing his term of office in the Western Infirmary, he became an Assistant in the Physiological Department of the University, under Professor Paton. The funeral, which took place at his native town, Kilburnie, co. Ayrshire, on February 10th, was attended by many of his friends, to whom the news of his death came as a great shock.

DR. ROBERT RINGROSE GELSTON, a very old and distinguished practitioner, died at Limerick on February 7th. His M.D. degree was obtained at the University of Glasgow in 1837, and his licences from the Irish Colleges in 1836. He had reached the patriarchal age of 93. Dr. Gelston was surgeon to the local county infirmary, and had for many years acted as physician to the county prison. He was greatly respected by all who knew him. Failing health forced him to retire from practice some years ago, and he carried with him the respect and affection of crowds of friends.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Reigate Borough.—The population was 28,250, the birth-rate 20.3 per 1,000, the death-rate 12.0 per 1,000, and the infant mortality-rate 71 per 1,000 births. Scarlet fever and diphtheria were both prevalent in Reigate during 1907. Of the former disease there were 153 cases with 6 deaths, and of the latter 72 cases with 12 deaths. There were removed to the isolation hospital 136 and 65 patients respectively. The task of preventing the spread of the outbreak of scarlet fever was increased owing to the number of slight or unrecognized cases. As a result of the systematic following up of absentees from the public elementary schools, the medical officer of health and his staff succeeded in finding no less than 14 children in various stages of the disease, no medical advice having been sought by the parents. This is a very creditable record, and emphasizes the importance of hunting for carrier cases. The Corporation will do well to carry out the advice of their medical officer of health, and provide an additional steam disinfector in a convenient situation away from the hospital. Dr. Porter points out that the existing machine, which is available for both hospital and town purposes, was very much overworked during the year, and it may well have been that in the stress of work the process of disinfection was ineffectually carried out. The suggestion to erect in combination with a town disinfector one or more bath rooms is an admirable one. They could be put to various uses, and would be of especial value in dealing with small-pox contacts. In connexion with verminous persons, and the proper disinfection of midwives who have been in attendance upon puerperal patients, such an establishment would be invaluable.

Cheshunt Urban District.—The population was 13,280, the birth-rate 22.7 per 1,000, the death-rate 10 9 per 1,000, and the infant mortality-rate was 89 per 1,000 births. The sanitary authority has had trouble for some years with respect to the disposal of the sewage of the town, but it now appears to have overcome former difficulties, and the medical officer of health (Dr. W. F. Clark) is evidently satisfied with the results obtained by means of upward filtration and subsequent bacterial treatment. For the latter revolving sprinklers are used for the even distribution of the sewage over beds of clinker.

Maldon Rural District.—The population was 14,720, the birth-rate 22.7 per 1,000, the death-rate was 12.6 per 1,000, and the infantile mortality-rate was 72 per 1,000 births. Special attention appears to have been given to the sanitary conditions of the public elementary schools during last year. Dr. Thresh gives epitomized reports, which show that the examinations have been of a thorough character. No note seems to have been made, however, of whether any portion of the playground is covered over, and the position of the lighting with regard to the situation of the children's seats is not given. The details of the water supplies are very disquieting. "In some cases where there are wells on the school premises, the water therefrom is polluted by sewage or menurial matter. Of nine schools with private wells, two only yield a fairly good water, seven yield waters which are really unfit for drinking purposes, five being very bad."

HOSPITAL AND DISPENSARY MANAGEMENT.

LONDON FEVER HOSPITAL.

LORD BALFOUR, who presided at the annual meeting of the London Fever Hospital, stated that the year's work had been satisfactory; 781 patients had been admitted, which, with 71 in the hospital at the end of the previous year, made a total of 852 patients—250 more than the average of the last twenty years. By the completion of the work of rebuilding, the hospital was now able fully to meet the demands made upon it. The number of patients treated in virtue of the subscriptions of governors and managers of business houses was 316, the number that had paid the ordinary fee of 3 guineas was 476, and 51 had paid 3 guineas a week in private rooms. In 38 cases the fees were remitted, the patients having shown their inability to meet the charge; but of those who were charged 3 guineas 72 had supplemented the fee by sums varying from 1 guinea to 25 guineas, amounting in all to £227. The Committee had expended £60,000 in reconstructing the hospital on modern lines. The adoption of the report, which was read by Dr. Sydney Phillips, Senior Physician, was moved by Sir Shirley Murphy, and carried unanimously.

ROYAL HALIFAX INFIRMARY.

THE report presented to the annual meeting of the governors of this infirmary, held in Halifax on January 30th, stated that the total number of persons treated during the year was 9,899, against 9,423 in the previous year. The number of in-patients was 1,822, an increase of 78; and the average cost of in-patients £3 18s. 8d., compared with £3 17s. 7d. in 1906. The average cost per occupied bed per annum was £62 13s. 5d., against £58 17s. 9d. in the previous year. The Board brought to the notice of the subscribers the increased cost of administering the infirmary, owing to the advance in the price of nearly all provisions and stores.

The subcommittee appointed to consider the details of construction of a proposed isolation ward reported that an institution like the Royal Halifax Infirmary, dependent on voluntary subscriptions, ought not to burden itself with the responsibility of treating infectious cases, the municipal authorities being bound to provide for them; there was ample accommodation in the small side wards for the few cases which might occur requiring isolation. It was reported also that the opinion of the subcommittee was unanimously endorsed by the honorary medical staff of the institution. Under these circumstances the Board had determined to abandon the project.

BRADFORD CHILDREN'S HOSPITAL.

AT the twenty-fifth annual meeting of the Governors and subscribers of this hospital, held on January 31st in the Council Chamber of the Bradford Town Hall, the Lord Mayor presiding, it was reported that the number of in-patients under treatment during the year had been 557, an increase of 20 over the previous year. In the out-patient department there had been a decrease of 569 new cases, but the casualties were practically the same. The attendances on out-patients had been 12,964, compared with 16,432, a decrease accounted for by better health amongst children, better conditions of trade and a stricter method of registration of attendances. The financial position of the hospital had much improved during the year, although the income did not yet exceed or equal the expenditure. The total income amounted to £2,785, an increase of £261. The expenditure was less by £339. The average cost per occupied bed per annum had been £61 17s., a substantial decrease from last year. For the purpose of bringing the operating theatre and the sterilizing and anaesthetic rooms up to date, extensive alterations had been carried out and new appliances introduced, the greater part of the new appliances having been given by friends of the hospital.

Some discussion took place in connexion with two deaths that had occurred in children removed from the hospital on account of infectious disease. It was suggested by one of the members of the honorary medical staff that a joint isolation ward might be built by the city authorities to which all cases of infectious disease might be sent direct from the different hospitals. Another speaker, however, strongly urged that a joint isolation block would be much better if provided by private subscription.

LIVERPOOL INFIRMARY FOR CHILDREN.

AT the annual meeting of the Infirmary for Children it was announced that the west wing and also the nurses' home were nearing completion and would be ready for occupation in the spring, but about £2,000 was still required for furniture and fittings. The Lord Mayor, in responding to a vote of thanks, took occasion to emphasize the importance of the infirmary as an educational as well as a curative agency in respect of the instruction it afforded to the children and their mothers in the matter of cleanliness, order, and sanitation. The improved equipments and appliances of modern hospitals had made the work of such institutions immensely more effective than it was, say, twenty years ago. The appliances which enabled this saving of life to be effected were much more expensive, but the saving of life was so great that it was very well worth the while of the public to find the extra money required.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

J. A. ASKS for information as to the efficiency of Droitwich baths in cases of rheumatic arthritis in which there is no history of rheumatic fever.

METROPOLE desires to know of a climate which would be suitable for an English medical man, aged 40, who suffers from muscular rheumatism. It is essential that it be in an English-speaking country, where he could practise his profession, as he has a family depending on him and only small private means. He imagines a dry, somewhat warm climate would suit best. Would Australia, or South Africa, or Southern California—for example, Los Angeles—be suitable, and what are the conditions and prospects of practice for an English medical man in these places?

ANSWERS.

THE USE OF THE SETON.

DR. W. J. RUTHERFURD (Nelson, Lancs) asks whether, in cases of profound lesions of the central nervous system, the production of a bedsore might not be as efficacious as the introduction of a seton. It seems possible that even the production of superficial ulceration by a carelessly exhibited hot-water bottle might exert a similar beneficial effect.

NASAL PUSTULES.

MR. J. WISHART KERR, M.B. (Glasgow), writes, in reply to "R. N.": His patient should thoroughly cleanse the inside of his nose at night, and then apply to it the following ointment: Ung. hydrarg. ammon., liq. carb. deterg., aa ʒij; ung. zinci oxidi ʒj. With no smoking of cigars or cigarettes during treatment, three days will suffice for a cure.

MEDICAL INSPECTORS.

QUERULOUS would like to know if a county medical officer, acting on behalf of a county educational authority, is legally entitled to write to a few individuals inviting their application for two appointments as medical school inspectors under him. He understands that eight gentlemen were written to, and interviewed by the county medical officer of health, and applications and testimonials were addressed to him. These appointments were worth £300 per annum, and "Querulous" is of opinion that they should have been thrown open to the profession at large by means of advertisement in the medical journals.

*** Neither the enacting clause in the Act of last year nor the memoranda of the Board of Education contain any direction requiring advertisement of such appointments.

FLEAS.

DR. FREDERICK EDGE (Birmingham) writes: Let "Restless Night" take a sulphur tablet or two each day, and the fleas will leave him alone. To say that two sulphur tablets a day make anyone objectionable is to speak rubbish. But if there is any prejudice against taking sulphur, there can be none against washing with sulphur soap, which leaves on the skin the clean but acrid sulphurous fumes which the flea does not take to. I get numerous fleas from my out-patients, but find them tolerable with above precautions.

TREATMENT OF HEBERDEN NODES.

G. T. L. (Lieutenant-Colonel, R.A.M.C. ret., Biarritz) writes, in reply to "Clvis": My own terminal phalanges were greatly affected, and are comparatively well now by following the treatment advised by Dr. Bruce of Edinburgh. Soak boracic lint in a saturated solution of sodium chloride, apply to the fingers, and cover with oiled silk or gutta-percha tissue. Bandage on and leave on all night; ordinary lint often causes pimples. Continue every night for a considerable time. A very old lady who had been unable to write for years is now able to do so since I advised her to use this treatment. High frequency is also of great use.

LETTERS, NOTES, Etc.

TREATMENT OF INEBRIETY.

DR. CHARLES LLOYD TUCKEY (London) writes: Dr. Mary Gordon has written to me taking exception to a statement about her made by me in the fifth edition of my book, *Treatment by Hypnotism and Suggestion*, and asks me to correct it in your columns. The statement is that in a paper read by her before the Society for the Study of Inebriety, on the Drug Treatment of Inebriety (October, 1906), she ignores the use of hypnotism. Miss Gordon points out that the title is sufficient explanation for the non-consideration of hypnotism on that occasion. I have pleasure in making this correction and regret having misrepresented Miss Gordon.

AN OPEN CONTINUOUS DROP METHOD OF ADMINISTERING ETHER.

DR. G. A. H. BARTON (London, W.) writes: Dr. Brownlee in your last issue says, referring to my letter of December 24th last, "he has not tried the drop method." If Dr. Brownlee will refer to my letter again he will see that what I said was that I had not tried it for the purpose of *inducing* anaesthesia. In common, I suppose, with all anaesthetists, I have frequently given ether by an open method in suitable cases and where the patient was already anaesthetized, and I have done this in various ways. I cannot say that I have found any special virtue in one way more than another. Any one who reads my former letter impartially and as a whole will see that I am not at all an opponent of the open method where practicable, and subject to some preliminary method of induction which can be relied upon and does not last too long.

DEATHS UNDER CHLOROFORM IN GENERAL HOSPITALS.

DR. J. MCNAMARA (London, W.) writes: In my appeal against the general use of chloroform as an anaesthetic I did not deny, as your correspondent would appear to suggest, that there are some anaesthetists lucky enough to have given chloroform in a large number of cases without a death. I simply stated the fact that wherever ether is exclusively or almost exclusively used, as in Ireland and in America, death under anaesthesia is extremely rare; whereas, wherever chloroform is extensively used, as in London, death under anaesthesia is terribly frequent. Witness the statement of the coroner at a recent inquest that in one London hospital death has occurred under anaesthesia thirty-eight times in six and a half years!

SMEGMA.

DR. A. CAMPBELL STARK, M.B., B.S.Lond. (Wanstead Park), writes: I was called hurriedly to see a boy of 16 years. On arrival I found him looking very pale, shivering violently, with a small and rapid pulse and general symptoms of severe shock. He complained of pain in the glans penis. On examination the penis presented a curious appearance. The glans and corona were completely covered with a mass of white scales so arranged as to simulate closely the appearance of a papilloma. On inspection each scale consisted of a symmetrically round plaque of smegma about 3 millimetres in diameter. They were easily removed with forceps, and left a slightly inflamed and fibrous-looking surface below the corona. There was no paraphimosis, and the prepuce was freely movable. On inquiry the cause of the condition became obvious. Adhesions of long standing had existed between the prepuce and the corona, damming up the usual secretion of smegma. These adhesions had suddenly given way under the tension of the retained secretion, with forcible discharge of the smegma over the body of the glans. Considerable swelling of the penis had preceded the rupture of the adhesions, and the actual bursting was accompanied by severe shock, for which stimulants had been given before my arrival. The case seems sufficiently rare and curious to be worth recording.

EXERCISE IN PULMONARY TUBERCULOSIS.

DR. ARTHUR LATHAM (London, W.) writes: In the report in your issue of February 22nd of the "case of pulmonary tuberculosis treated by the administration of tuberculin and horse serum by the mouth" which I brought before the Clinical Section of the Royal Society of Medicine, the following sentence appears: "Dr. Latham considered exercise for these patients very deleterious, as it caused auto-infection." I shall be obliged if you will permit me to say that I expressed no such views. I did say a few words on the effect of exercise in producing *auto-inoculation*, but I am afraid did not make myself clear to your reporter.

TREATMENT OF BRONCHOPNEUMONIA

J. A. writes: In connexion with Mr. Penfold's note in the BRITISH MEDICAL JOURNAL of February 1st on the treatment of bronchopneumonia, it would be interesting to know if he gives no other medicine except that mentioned in his prescription. Personally I can testify to the value of potassium iodide in many cases of bronchopneumonia, but I have never used the combination he employs, and I do not quite understand why paraldehyde should be given. Now, while an expectorant mixture is given as a routine practice, my experience has been that a stimulant mixture is also necessary in the majority of cases. It must be remembered that bronchopneumonia is a most debilitating disease of some weeks' duration, and unless the cardiac tone is maintained the chance of recovery is lessened. The chief danger in this disease is cardiac failure, and fatal cases I have seen have been due to this cause. The stimulant may either be given in the form of an alcoholic beverage or in a mixture such as this:

℞	Tinct. strophanthi	♏viij
	Liq. strychninae	♏lv
	Spt. aetheris	♏xx
	Syr. amantii	q.s.
	Aq. chloroformi	℥j

Sig.—℥j every four hours for a child 1 year old.

Fifty cases without a death is a record to be proud of, but I cannot help thinking there were no very severe cases. Lobar pneumonia in children is very rarely fatal, in marked contrast to the heavy mortality of bronchopneumonia. The former runs a short acute course, while the latter runs a chronic course, wherein rests the danger. In bronchopneumonia it is essential to maintain the strength by careful feeding and judicious stimulation, and thus one may hope to reduce the heavy mortality.

A CASE OF BELLADONNA POISONING.

DR. G. E. PALMER (Westport, co. Mayo) writes: A man, aged about 50, well nourished and robust, went to a chemist, complaining of pain in his side, the result of a strain. The chemist prescribed the usual placebo—a belladonna plaster—and sent the man on his way, with the assurance that he would be all right as soon as the plaster had time to assert its vaunted virtues. Eight hours after the plaster had been applied he had dryness of his mouth and throat, with great thirst and giddiness, his vision became indistinct, and he was very restless. The next day there was an erythematous rash all over his body with considerable oedema of the scrotum, hesitation of speech, and a numb sensation in his left arm, extending to his fingers, the left being the side to which the plaster was applied. He had some difficulty in passing water, and three days after symptoms of poisoning set in had a severe attack of diarrhoea, which lasted for twenty-four hours. In about a week all the symptoms disappeared, except a slight giddiness and a faint erythematous rash over the site where the plaster was applied. This is the fourth case I have met under similar circumstances, and, considering the comparative frequency of such cases, I think there should be some restriction put on chemists to curtail their promiscuous prescribing for all classes of cases, as there is very little doubt that the public are pretty certain to suffer in their hands.

A CORRECTION.

IN the notice of the appointment of Dr. Mowbray of Castlederg to the Commission of the Peace for the county of Tyrone published last week, p. 474, his Christian name should have been given as Robert.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

Clinical Remarks

ON

PULMONARY TUBERCULOSIS IN INFANCY AND CHILDHOOD.

BY R. A. YOUNG, M.D., B.Sc.LOND., F.R.C.P.,

ASSISTANT PHYSICIAN (IN CHARGE OF CHILDREN'S OUT-PATIENT DEPARTMENT) TO THE MIDDLESEX HOSPITAL, AND ASSISTANT PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

INCIDENCE.

THE early diagnosis of intrathoracic tuberculosis in infants and young children is often a matter of extreme difficulty. Too often the condition is hardly suspected until general miliary infection occurs, or until widespread changes in the lung texture render it only too obvious. The reasons for this difficulty are not far to seek. The non-appearance of sputum, the number and variety of affections of the respiratory apparatus to which children, especially those brought up in the unhealthy conditions incidental to town life, are liable, and the greater proportionate size to which the lesions have to attain in order to render their presence demonstrable by physical examination are all factors. Again, the fact that the manifestations of the disease are often ushered in or accelerated by some acute infectious disorder, such as measles or whooping-cough, is one to bear in mind, since the sequence may divert attention from the grave nature of the respiratory condition and the ill-health of the child may be attributed erroneously to the debilitating after-effects of the primary disease. On the other hand, many cases are labelled as pulmonary tuberculosis on very insufficient grounds, such as the association of anaemia and malaise with a chronic cough and night sweats. Again, certain cases showing suggestive signs may clear up completely, so that it is important in doubtful cases to make more than one examination of the chest or to confirm the diagnosis by some of the newer bacteriological methods, which, however, are not always available and are not invariably desirable.

It is difficult to form an accurate estimate of the incidence of pulmonary tuberculosis in infancy and childhood, and the most widely divergent statements are current in this regard. The chief reason for this diversity of opinion is the confusion of nomenclature which exists, since by some authors the term "pulmonary tuberculosis" is taken to include tuberculosis of the tracheo-bronchial lymphatic glands, which is admittedly very common, while by others it is restricted to those cases of destructive disease of the lung similar to the types of pulmonary tuberculosis in the adult, which are by universal consent comparatively rare. For this reason statistical observations, unless carefully compiled and analysed, serve but to increase the confusion. Recently, however, the methodical examination of groups of school children in this and other countries has afforded some interesting figures. Grancher and his assistants, working among the school children of certain districts of Paris, found that 141 out of 896 examined showed evidences of glandular or pulmonary tuberculosis—that is, about 15 per cent.; and in a subsequent investigation of 4,226 children they obtained identical results, but they certainly included as cases of bronchial gland tuberculosis many which were of very doubtful nature. Dr. J. E. Squire and Dr. Annie Gowdey, after careful examination of 1,670 children in certain of the schools of the London County Council, found only 8 with signs of pulmonary tuberculosis—that is, 0.47 per cent., or if 14 other cases with doubtful signs be added, the percentage becomes 1.3 per cent. These statistics agree fairly closely with those of Leubuscher, who found about 2 cases in 1,200 to 1,400 school children in Germany. Statistics derived from *post-mortem* examinations, on the other hand, although they show the incidence of tuberculosis in children dying in certain general hospitals, fail to afford information as to the general incidence of the condition among the living, and cannot strictly be taken even as giving the general mortality, since they are often derived from hospitals for infectious diseases, or from other special sources. They serve, however, to indicate the distribution of tuberculous lesions in the body. Barthez and Rilliet some fifty years ago found such lesions in 33 per cent. of the cases examined by them in certain of the children's hospitals of Paris. J Comby has recently published statistics from the same hospitals showing 38.5 per cent. Müller in Munich found 43 per cent. among 500 *post-mortem* examinations; Baginsky in Berlin found only 18 per cent., whilst Hamburger and Sluka, in 401 *post-mortem* examinations most carefully carried out in Vienna, found tuberculous lesions in 160 cases—that is, in 40 per cent. These figures, however, are for tuberculous lesions in general; the incidence on the lungs and bronchial glands has now to be considered. Hamburger and Sluka found the lungs affected in 50 per cent., the bronchial glands in 98 per cent. These figures differ from those of Holt, who found the lungs involved in 99 per cent., the bronchial glands in 96, but both sets show that pulmonary lesions are common in fatal cases. It is probable, however, that in a considerable proportion of these the pulmonary lesions were terminal in character, and that the cases could not be regarded as tuberculosis of the lungs in the ordinary sense.

In order to form an estimate of the frequency of pulmonary tuberculosis in regard to other causes of cough I have analysed the records of 337 cases of children under the age of 15, the majority being between 7 and 14, brought to my out-patient department at the Brompton Hospital for cough, expectoration, and wasting, and found only 45 showing definite signs suggestive of tuberculous disease of the lungs, in only a small number of which was the diagnosis confirmed by examination of the sputum.

ETIOLOGY.

In regard to the etiology there are two chief points for consideration, both of which are the subject of some controversy at the present time—namely, first, the manner in which the child becomes infected with the tubercle bacillus, and secondly, the part played by various predisposing causes in determining the infection and its site.

In regard to the manner of infection there are five possibilities for discussion—namely, (1) transmission from the mother to the fetus *in utero*: congenital or hereditary tuberculosis; (2) inoculation of wounds: inoculation tuberculosis; (3) inhalation of tubercle bacilli in dust: aërogenous or inhalation tuberculosis; (4) by swallowing bacilli in food, especially milk: ingestion or enterogenous tuberculosis; (5) infection through the ear, Eustachian tube, or tonsil. The first two of these may be summarily dismissed. Congenital tuberculosis has been conclusively proved to occur by the discovery of tubercle bacilli in the organs of the fetus and in the placenta, and also by experiment in animals. Inoculation has also been proved in infants, as the oft-quoted case of the infection of the circumcision wound by a tuberculous rabbi shows; but both these means of infection are so rare as to be curiosities. Infection through the ear probably only occurs in a limited number of cases.

The problem for discussion is therefore narrowed down to the establishment of the relative frequency of aërogenous and enterogenous infection. Opinions on this question have shown remarkable changes in recent years. For a long time infection in early life was regarded as mainly enterogenous and due to milk. Subsequently there was a tendency to regard infection as chiefly aërogenous, and the preponderance of old lesions in the bronchial glands pointed out by many observers—notably by Dr. Still in this country—apparently gave very strong support to this view. The matter was focussed to burning point by Koch's startling pronouncement in 1901 as to the duality of the human and bovine diseases. Since that time this question has been studied in many countries and by many observers, but even yet there is no unanimity of opinion. One of the most valuable contributions to the subject has been the work of the Royal Commission on Tuberculosis, of which certain reports have recently been published. The Commission finds that from the lesions of tuberculous disease in man two types of bacilli can be obtained—one identical in cultural and pathogenic properties with the bovine bacillus, the other, with slightly different cultural characters and markedly different pathogenic properties for bovines and guinea-pigs, constituting the human type. The possibility of infection from bovine sources is therefore established, and once more the relative frequency of

enterogenous and aërogenous infection becomes a question for discussion. It is impossible here to do more than refer to the nature of the evidence brought forward, and in illustration the interesting feeding experiments of Calmette, Guerin, and Deléarde may be briefly alluded to. They fed young bovines on food to which bovine bacilli had been added, and confirmed the view that these bacilli can be absorbed from the intestine without producing a local lesion, and further demonstrated that they may remain in the mesenteric glands without producing tuberculous changes, but that sooner or later lesions appear in the tracheo-bronchial and retropharyngeal glands with or without pulmonary implication. These results, if they are reliable—and they have been confirmed by Vallée and other observers—show that the presence of the most advanced lesions in these glands in any particular case cannot be taken as necessarily proving an aërogenous infection. The supporters of the aërogenous manner of infection point to the statistics of the age incidence of tuberculosis in the early periods of life in support of their contention. Among the most important of these are some statistics of Comby, who found the mortality from tuberculosis to be slight in the first six months of life, increasing slightly up to the age of 1 year, then greatly increasing in the second year, and thereafter increasing more gradually till the tenth year. In other words, the mortality increases steadily through infancy after the first few months, during which the infant's environment is restricted, and increases more or less regularly with age. Comby regards these figures as supporting a direct infection from association with other sufferers rather than an infection by milk. It is further pointed out that in countries, like Japan, where cow's milk is little used as an article of diet tuberculosis in children is as common as in other countries. On the whole, the question cannot be regarded as settled, but it is wise to bear in mind both possibilities in regard to infection in infants and young children, and to take preventive measures accordingly.

Similarly, the part played by predisposing causes is difficult to appraise accurately, but is a matter of importance in regard to prophylaxis. The condition of infancy is itself undoubtedly one of high susceptibility—the resisting power is low, and therefore very short exposure to infection is sufficient to produce the disease. Wassermann has recorded a case where a fatal tuberculosis was induced in a suckling after eight days' residence in the same house with a tuberculous person, while Reich mentions the case of a maternity nurse in a village who suffered from active tuberculosis, and was in the habit of applying her mouth to that of the newborn infant to suck away mucus or blow in air, with the result that ten such infants died of tuberculous meningitis. In regard to the existence of an inherited predisposition to the disease, there is still some difference of opinion. Squire and Maxon-King have both brought forward statistics which they regard as indicating that the children of tuberculous parents show, if anything, a slightly lessened susceptibility—a conclusion which is certainly contrary to the general consensus of opinion. The part played by defective hygienic and domestic conditions in the genesis of the disease is illustrated by Mercier's observations. He found that only 3 per cent. of the children of consumptive parents who were sent to the country died, while no less than 50 per cent. of their brothers and sisters who remained at home succumbed. The importance of cleanliness of the child and of his surroundings is further shown by the work of Preisich and Schütz, who found tubercle bacilli in the dirt under the nails in 14 per cent. of 68 children between the ages of 6 months and 2 years. Measles and whooping-cough are frequent antecedents, though whether they act by rendering the swollen bronchial glands more vulnerable, or by leading to a spread of a quiescent or localized lesion, is difficult to determine. From the rapidity of advance in some cases, the latter is the more probable. The frequency of a history of injury or slight shock before the onset of general miliary infection, of local injury before joint and bone lesions, suggests that the general or local protective mechanism may be depressed by such agencies.

PATHOLOGICAL ANATOMY.

Although the histological changes induced by the tubercle bacillus in the tissues of infants and young children are in all essentials identical with those produced in adults, yet there are certain important differences in their distribution, course, and consequences which it is necessary to bear in mind, since they serve to explain the peculiar clinical features of the disease in these periods of life. The tubercles, which are of typical giant celled character, develop rapidly, and show a marked tendency to coalesce. In regard to secondary changes, caseation is the almost invariable rule, while calcification and fibrosis are extremely rare, at any rate before the age of 4 years. A second peculiarity is the special proneness of lymphatic structures to be implicated primarily or early. The third and most striking characteristic is the tendency towards generalization from blood infection, leading to miliary deposits in the organs, especially in the meninges. This occurred in 114 out of 238 tuberculous children observed by Dr. Still—that is, in 48 3 per cent. of the cases; while Hamburger and Sluka found that this was the actual cause of death in 80 out of 110 cases—that is, in 73 per cent. The most characteristic *post-mortem* lesions at these periods of life are large masses of conglomerate caseated tubercles in the oldest sites of the disease, and miliary or early caseous lesions elsewhere. There are usually but few changes in the tissues around the tubercles other than simple inflammatory non-reparative processes—for example, simple consolidation of lobular distribution around the tuberculous deposits in the lungs. The special characteristics of the disease in infancy and early childhood may be summarized briefly in the statement that the lymphatic system appears to be the most important means of protection, and that when this barrier proves ineffective through caseation and the subsequent changes, there is a great tendency to rapid unchecked growth owing to deficient local and general protective reactions.

In regard to the sites and distribution of the lesions in intrathoracic tuberculosis, it is necessary to insist once more on the great frequency with which the bronchial or tracheo-bronchial glands are affected, either primarily or as a process secondary to pulmonary infection; and, further, to point out that the lesions in the lungs do not, as a rule, follow the well known laws of spread from apex downwards. The lesions even in later childhood, when they tend to approximate more towards those in adults, are usually diffuse, and very often are most marked in the parts of the lung adjacent to the root.

For purposes of description it is best to consider the cases on the basis of an anatomico-clinical classification in four types:—(*a*) Tuberculosis of the tracheo-bronchial glands; (*b*) acute miliary tuberculosis; (*c*) acute caseous tuberculosis; (*d*) chronic or fibro-caseous tuberculosis. A type corresponding to the fibroid tuberculosis of adults can hardly be said to exist.

In tuberculosis of the tracheo-bronchial glands it is usual to find these glands markedly enlarged and more or less completely occupied by soft yellow cheesy material, presenting a very striking and characteristic appearance. Sometimes miliary tubercles may also be seen in some of the glands. The glands on the right side are most frequently involved if the affection is unilateral, but usually the whole group is implicated, and even the glands on the course of the intrapulmonary bronchi may be extensively affected, forming yellow spherical masses sometimes as large as small cherries. In Hamburger and Sluka's cases the glands on the right side were involved in 64, those on the left in 14, while in 77 both sides were affected, those on the right side being invariably the more marked. In rare cases these glands may exfoliate into the trachea, or perforation may occur into a bronchus or into the oesophagus.

Miliary tuberculosis of the lungs may be part of a general miliary affection, produced by breaking down of a caseous bronchial gland into the blood stream, or by the same process occurring in a tuberculous focus in a blood vessel—the so called "intimal tubercle" of German authors. On the other hand, the miliary outbreak may in some cases be confined to the lungs. In either case the lungs are found to be thickly studded with small grey translucent miliary tubercles, often in enormous numbers. They can be seen under the pleura, and on section they project slightly. The surrounding lung tissue may be practically normal in appearance or present a condition of partial or complete consolidation. The oldest lesion, and the one to which the miliary outbreak is

due, is usually found to be caseous and in process of softening.

Caseous tuberculosis of the lungs, as in adults, occurs in two forms—one lobular, the other lobar, or pseudo-lobar, in distribution. In the lobular form the appearances are somewhat similar to those in the acute miliary, of which indeed they represent a later stage. The lungs are riddled with small yellow conglomerations of caseated tubercles, and the pulmonary tissue around is generally in a condition of consolidation often undergoing caseation. In the oldest lesions, usually those about the root of the lung, some indications of softening may be apparent, and small cavities may appear, but these rarely attain any size. The lobar form, which Dr. Goodhart describes under the name of cheesy consolidation, is much less common. The whole of one lobe or practically the whole of one lung may be converted into a solid cheesy mass in which little or no lung tissue may be recognizable. A pseudo-lobar form may arise from coalescence of large areas of bronchopneumonic distribution like those in the first form.

Chronic fibro-caseous tuberculosis of the lung tends more towards the chronic form of adults, and does not require detailed description. It is extremely rare under the age of 4 years, but is the usual form in later childhood.

In connexion with morbid anatomy, reference may be made to certain special features. Cavities are usually stated to be rare in children; but, although they are difficult to recognize clinically, they are not infrequent. Geipel found 7 cavities in 20 cases in infants; Hamburger and Sluka found 18 cavities in their 110 cases. When they occur, they are usually small and of recent origin. They may contain a sequestrum of broken-down lung tissue. Pleurisy is common, and may lead to interlobular and parietal adhesions. Occasionally a serous or purulent effusion may occur. Pneumothorax is rare, but according to Cruchet of Bordeaux it is less uncommon under the age of 4 years than between the ages of 4 and 15. The cases in which it occurs are most often of the caseous bronchopneumonic type, and the most frequent site is at the base of the left lung. It is invariably a pyopneumothorax. In regard to the associated lesions in other organs in cases of intrathoracic tuberculosis intestinal ulceration is common, which is not surprising owing to the swallowing of the sputum. This ulceration is usually associated with some localized peritonitis and with infection of the mesenteric glands. Laryngeal tuberculosis may occur in children, and instances are on record in quite young infants. In generalized miliary tuberculosis miliary tubercles may be found very widely distributed through the various organs, and those in the choroid may have a diagnostic value if observed during life.

Symptoms and Physical Signs.

(*a*) *Tuberculosis of the Tracheo-bronchial Glands* (*Bronchial Phthisis*). — Owing to the deep situation of these glands, it is a matter of great difficulty to establish the diagnosis at a time when they are alone affected. Many, if not all, of the signs described by various authors are of very equivocal significance, and at present in many cases it is impossible to be certain of the diagnosis. An apparently causeless but progressive condition of ill health associated with a distressing paroxysmal cough, like that of whooping-cough in character, and worse at night, should excite suspicion. The children may or may not present the so-called tuberculous appearance to be subsequently described, but they become anaemic, fretful, and depressed, and night sweats are common. With regard to physical signs, on inspection it is said that puffiness of the face may occur as in pertussis, and there may be some dilatation of the veins over the upper part of the chest, and a marked growth of downy hairs on the back, but neither of these signs is in my experience of any value. On palpation in the episternal notch, some glandular enlargement may be felt in rare cases. On percussion, there may be dullness over the manubrium or to one side of it, or at the back beside the upper dorsal spine, especially on the right side. On auscultation, a permanent alteration of inspiration at one apex is regarded by Grancher as sufficient to indicate this condition. This author described three stages in this alteration, but it is probable that he attached too great importance to the auscultation of the breath sounds. The signs described are weakening of inspiration and later bronchial breathing with bronchophony. It is stated by D'Espine that in the normal child bronchophony ceases at the level of the spine of the seventh cervical vertebra, while in these cases it may be heard down to the level of the fourth or fifth dorsal spine. This I have been unable to confirm. Occasionally there may be weak breathing over the whole of one lobe, but even in these cases it is well to remember the functional irregularity of the diaphragmatic movements of children, which can be readily observed with the *x* rays, and to examine the chest on several occasions to see if the alteration is a permanent one. A further auscultatory sign is that described by Dr. Eustace Smith, namely, a systolic murmur heard over the manubrium sterni when the head is held far backwards. In my experience it is not a sign of any diagnostic value. Radiographic examination of the chest may sometimes afford confirmatory evidence of disease of these glands, but is not to be relied upon unless the enlargement is marked. The coexistence of several of these signs, especially if one of them be dullness in the interscapular region, with a positive tuberculin reaction, renders the diagnosis highly probable.

(*b*) *Miliary Tuberculosis of the Lungs.*—In considering miliary tuberculosis in the young it is important to remember that the actual symptoms as ordinarily recognized are those of the terminal stages of the process, the actual deposit of the primary focus having occurred at some period anterior in time, probably in some cases a considerable time previously. There is thus a latent period in these cases when there are few if any symptoms, or at most some indefinite condition of malaise or ill-health. The rapid progress and almost inevitably fatal character of the later manifestations render this condition one of the most tragic diseases of early life. It is perhaps not too much to hope that in the near future the means of diagnosis and treatment which the study of bacteriology promises to afford will enable treatment to be started during this period of latency, so as to increase the powers of resistance, whether by vaccines or other agencies, and thus rob of its terrors one of the most hopeless of diseases.

In regard to the clinical characteristics of this condition they differ according to whether the case is one of generalized infection or one with pulmonary dissemination only, and in the former instance they vary with the age of the child and the preponderating localization of the tubercles. It is possible to recognize at least four clinical types, although they tend to merge one into the other, and are by no means sharply defined. The first of these, which may be referred to as the *marasmic type*, occurs almost without exception in infants. The symptoms are chiefly progressive emaciation, diarrhoea, and exhaustion. Convulsion may occur towards the end. There may be little or no fever, and pulmonary symptoms may be entirely wanting. The second type tends to simulate typhoid fever, and may be called the *acute febrile type*. There is marked fever, of continuous or remittent character, with rapid prostration and emaciation. The spleen is early enlarged, and there may be diarrhoea. Cyanosis and dyspnoea out of all proportion to the pulmonary physical signs are suggestive features. An afebrile period may occur, and the condition may close with meningeal symptoms. A third and characteristic form of miliary tuberculosis is the *meningeal type*—in which the symptoms are those of tuberculous meningitis. It is outside the scope of the present paper to describe the symptoms of this condition, but it is important to remember that any case of tuberculosis may end in this manner. It is also noteworthy that in any general infection with a meningeal implication, the meningeal symptoms usually dominate the clinical picture and mask the signs due to affection of other organs or systems. The fourth type of miliary tuberculosis is the *pulmonary*, and in this form the course is, as a rule, longer than in the others except the marasmic. The symptoms are usually those of a disseminated bronchopneumonia from which, indeed, it may be difficult to distinguish it. The onset is frequently acute with anorexia, malaise, fever, and even convulsion, or, on the other hand, it may be more insidious, with progressive languor, anorexia, and wasting. In either case, symptoms referable to the respiratory system soon supervene, notably increasing dyspnoea, tending towards an expiratory type with short inspiration succeeded by audible puffing expirations, the pause in some cases

occurring after inspiration. Objective signs of dyspnoea soon become obtrusive, increasing rapidity of respiration to 60 or 80 per minute, dilating nostrils with each inspiration or shortly preceding it, and a deepening naso labial line. Cyanosis of some degree soon develops. Cough, frequent and rather dry in character, is often present, but is not invariably a marked feature, and may cease long before death, and in some cases may be almost absent throughout. Expectoration is absent or is swallowed. Death occurs from exhaustion or in a convulsion or with the occurrence of meningeal symptoms. The physical signs may simply suggest the existence of a bronchopneumonia, and, as a rule, are not characteristic. There may be intercostal recession, the abdomen becoming prominent during each inspiration. The face is usually pale, the lips and ears cyanosed, the finger tips cold and blue. As a rule, no dullness may be obtained on percussion, but sometimes patches of impaired resonance may be found. On auscultation, areas of broncho-vesicular breathing, or of actual tubular breathing, may be heard with increased voice sounds and pectoriloquy. On the other hand, areas of harsh breathing alternating with others where the breath sounds are weak may be the only changes found. The adventitious sounds are fine bubbling or fine crepitant râles, rarely crepitations. The physical signs are often in striking disproportion to the dyspnoea and to the extent of the lesions found at the necropsy. Other conditions which may be revealed on physical examination are the enlargement of the spleen and liver, and the presence of tubercles in the choroid. A tâche cérébrale may be present even before meningeal symptoms supervene.

(*c*) *Acute Caseous Tuberculosis.*—This condition represents the result of an infection where there is a slightly increased resisting power, and occurs in later infancy and early childhood. It is the form which frequently follows an attack of measles or whooping-cough, but often begins insidiously, though in other cases the onset may be acute or subacute. The children who suffer from this form often conform to one or other of the types formerly described as tuberculous or strumous, being sometimes of delicate appearance with clear-cut, regular features, long curved eyelashes, and fine-textured complexions, while others are coarser featured, with short, thick neck, the skin being thicker and blotchy. The clinical features of this form are in the main similar to those of the adult. There is rapid emaciation, hectic fever, and night sweats, the last mentioned being one of the earliest manifestations. The cough is troublesome, usually loose, and sometimes associated with vomiting. Expectoration may occur even in quite young children, and may be loaded with bacilli, but haemoptysis, especially profuse haemoptysis, is rare. Some dyspnoea develops quite early, but even until late in the disease there may be little cyanosis. The facies may be of typical hectic type, with bright eyes, flushed cheeks, and pale rings round the eyes and mouth. The hair is often lank, and soon becomes dull and lustreless. The appetite often fails early, and vomiting and diarrhoea may be troublesome, but in spite of advancing weakness the older patients in this form often present the *spes phthisicorum* up to an advanced stage. The voice is often husky or thin and piping. The physical signs are those of consolidation, and sometimes of softening and excavation, but are less characteristic than those of adults. In the lobar type the signs may be confined to one lobe or to one lung, while in the broncho-pneumonic form they are more disseminated, being especially marked about the lower part of the upper lobe in front or at the root of the lung behind. The chest is often of phthinoid type, long and narrow, with acute subcostal angle and wide intercostal spaces, the shape being more clearly recognized if the hands are raised above the head. The muscular covering shows marked wasting, and the wasting of the trapezius and of the scapular muscles is early and marked. The movements are often very poor, while flattening or local limitation of movement may indicate the side of the oldest lesion. Vocal fremitus is increased, but it is difficult to elicit unless the child says some such word as "moo" or "ma." Dullness may be localized to the upper lobe, or may occur in patches. On auscultation the breath sounds may be weak, or of broncho-vesicular, bronchial, or even tubular character; the voice sounds may be bronchophonic, and pectoriloquy may be obtained. The adventitious sounds may be scanty or even entirely absent, but sometimes crepitant or gurgling râles are to be heard. Cavities are usually difficult to be certain of, but can often be suspected. In the late stages some degree of clubbing of the fingers may be present. In young children this usually takes the form of slight bulbous enlargement of the ends of the fingers, not of the parrot-bill type, and the skin behind the nail is thin, red, and shiny in appearance. In the later stages of this type of the disease the skin of the trunk may become dark and rough, and a peculiar smell may sometimes be noticed.

(*d*) *Fibro-caseous or Chronic Pulmonary Tuberculosis.*—This form is by no means uncommon and is important to recognize owing to the relatively better prognosis if taken early and properly treated. The onset, as in adults, is very various; in some it is insidious with increasing weakness, dyspepsia, and malaise, in others with a succession of "colds," in some with a pleurisy, but in any case the child soon shows signs of ill-health. Loss of appetite, with persistent cough, and night sweats should lead to careful examination of the chest, although these conditions may be induced by many other simpler causes. A cough associated with sickness, or with expectoration, in a child under the age of 6, who has not been taught to spit out, should excite suspicion if pertussis and bronchiectasis can be excluded. The other symptoms may be similar to those of adults, but haemoptysis is not common and is very rarely fatal, at any rate under the age of 7. The physical signs are in many respects similar to those described in the caseous cases, but they are slower in their progress and are more often apical.

Cavities, when they occur, are often situated in the lower and anterior part of the upper lobe or at the apex of the lower lobe. In cases of some duration there may be signs of bronchiectasis in the lower lobe on the side of the oldest lesion.

DIAGNOSIS.

The younger the child the more difficult, as a rule, is the diagnosis of the lesion and of its situation in an early stage, and it is necessary in all cases to consider carefully the history, symptoms, and physical signs so as to exclude other conditions with similar clinical manifestations.

In regard to tracheo-bronchial gland tuberculosis, whooping-cough has to be considered, since the character of the cough may be similar and the condition may sometimes follow on that disease. Asthma is also not uncommon even in young children, and the nocturnal attacks of dyspnoea may give rise to the suspicion of bronchial gland disease, the more so since asthmatic children are liable to become anaemic, and their chests are frequently long, narrow, and ill-covered. The repeated paroxysms of whooping-cough, the tenacious mucus brought up after the cough, as a rule serve to distinguish it, while in asthma the dyspnoea is expiratory in type, and in both conditions physical signs, if present, are those of a general bronchitis with localized collapse. Lymphadenoma and malignant disease of the intrathoracic glands may give rise to similar signs to tuberculosis of those structures, but they are so rare as to be almost negligible.

The diagnosis of miliary tuberculosis may be easy in the meningeal type, or in the other forms if tubercles in the choroid are present. In the marantic type the differentiation from the emaciation produced by congenital syphilis or chronic digestive derangements, such as vomiting and diarrhoea, may be almost impossible, and the course of the case under treatment may be almost the only criterion apart from tuberculin tests. The febrile form has to be distinguished from typhoid fever, and the appearance of rose spots or the development of the Widal reaction may be of service. The pulmonary cases may be practically indistinguishable from severe broncho-pneumonia due to other causes.

The cases of caseous tuberculosis of the lungs are usually sufficiently characteristic by the time actual signs develop, though here again the diagnosis from simple bronchopneumonia may be difficult. In the lobar type of case the onset and the physical signs may suggest an ordinary pneumonia, but the absence of resolution will soon serve to distinguish it. Sometimes the condition may closely resemble empyema, but the position of the apex beat and the absence of Grocco's paravertebral triangle of dullness at the opposite base will be of value in differen-

tiation. Certain cases of recurrent pneumonia also give rise to difficulty. Children occasionally develop signs of consolidation at one apex, which clears up but frequently recurs, the lung being eventually left in a condition of fibrosis with bronchiectasis.

The chronic form or fibro caseous tuberculosis has to be differentiated from many conditions causing chronic cough which are not infrequently confused with it. Among such conditions may be mentioned bronchitis with localized collapse, whooping-cough, bronchiectasis and chronic tonsillar hypertrophy with adenoids. In bronchitis and whooping cough the signs are usually general, and breath sounds are harsh, except over areas of collapse. In bronchiectasis the ruddy complexion and well-nourished aspect of the child, the basal distribution and variable character of the physical signs, as well as the peculiar metallic character of the râles, all assist in the diagnosis. The cases of adenoids with the characteristic facies and flattened chest with winging of the scapulae are, as a rule, easy to recognize, though the defective air entry may make auscultation misleading. In any doubtful case of tuberculosis the presence of obvious tuberculous adenitis or of chronic tuberculous furuncles in the skin may render the diagnosis more certain.

To establish the tuberculous nature of any case recourse may be had to examination of the sputum, to the tuberculin reaction and its modifications, or to a determination of the opsonic index. To obtain the sputum it has been recommended to recover from the stomach the mucus swallowed during the night in pulmonary cases. By some authors the faeces are examined after carbolization and repeated centrifugalization. Holt has recently shown that in a large proportion of the cases it is possible to obtain sufficient sputum for examination by irritating the pharynx so as to excite cough and then securing the material coughed up on gauze or muslin. In this manner he was enabled to demonstrate tubercle bacilli in 54 out of 67 cases.

The original tuberculin method is employed by some authors, and Schlossmann recommends it most strongly. A dose of Koch's old tuberculin varying from 0.0001 to 0.0005 gram is injected and the effect upon the body temperature observed. The usual result in tuberculous cases is that in about four to six hours there is a slow rise followed within about two to four hours by a more rapid rise, falling to normal again within twenty-four hours. Sometimes the onset of the rise is delayed and at others the reaction is more prolonged. A local reaction about the tuberculous focus may also occur, and on this account this method is avoided by many observers. It can, moreover, only be used in afebrile cases.

During the year 1907 two modifications of this reaction have been introduced. The first of these is the cutaneous reaction of v. Pirquet, who observed a small papule upon the skin within twenty-four hours after inoculating some 25 per cent. tuberculin into some scratches upon it. This reaction appears to be of value only under the age of 2 years, since after that age increasing numbers of healthy children show a positive reaction. A modification of this method introduced by Wolff-Eisler and subsequently adapted for clinical use by Calmette is known as the ophthalmo-reaction. It is carried out by dropping into one eye a 1 per cent. solution in sterile water of the precipitate obtained by adding 95 per cent. alcohol to tuberculin to get rid of the glycerine. The reaction obtained in tuberculous subjects is an injection about the caruncle and semilunar fold developing in from six to ten hours, but sometimes delayed to twenty-four or even thirty-six hours. In a few cases the reaction has been severe, and a conjunctivitis lasting some days has followed. M. Comby of Paris has therefore reduced the strength of the solution employed to 1 in 200, and now writes very favourably of the test. Although of so recent introduction, it has been very extensively employed, and promises to be a diagnostic measure of real value. It is wise to wait until more extended trials have been made before using it as a routine reagent; moreover, it appears often to fail in advanced cases.

Determination of the opsonic index may also be used for purposes of diagnosis, and an index much below or above the normal is suggestive, especially if modified by exercise.

Prognosis.

The prognosis, which is extremely unfavourable in infancy, improves as age advances. *Post-mortem* statistics show that after the period of infancy, though a large percentage of those dying show tuberculous lesions, decreasing numbers die from that disease, and that there is an increasing tendency for reparative processes to develop. In miliary cases and in many of those of caseous type the outlook is almost, if not quite, hopeless when once the disease has become established; but it must be remembered that these are cases in which the protective processes have broken down and allowed of dissemination of the lesions, and that if they had been recognized at an earlier stage the prognosis might have been different. There is no available material for forming an opinion as to the prognosis in cases of tracheobronchial gland infection, but in view of the frequency with which old lesions are found in this situation, it is probably not unfavourable in many cases, although the presence of lesions there is a grave danger in early life from their liability to lead to general infection. In fibrocaseous cases in later childhood the outlook is distinctly favourable in a good proportion if recognized early and properly treated, although to forecast the prognosis in any individual case is a matter of extreme difficulty. In many cases, however, the process of arrest seems to be complete.

Treatment.

Owing to the great susceptibility of infants and young children, preventive measures should be most rigidly carried out. French authors insist on the importance of recognizing and dealing with what they call the "pretuberculous" conditions, that is, those in which the conditions are favourable to infection, and possibly also those in which infection has just occurred. From what has been discussed in regard to etiology, it is obvious that prophylactic measures must be mainly directed to preventing the child from coming into relation with sufferers from open tuberculous lesions, and to ensuring that the diet is beyond suspicion. If there is a tuberculous subject in the family, the most careful precautions must be taken to avoid infection, and it is especially necessary to see that the nurse or the domestic servants who come into relation with the child are free from the disease. Kissing by strangers should be prevented. The most strict cleanliness in regard to the infant is essential, and it should be brought up in the healthiest surroundings possible. If milk is given, the source should be known, or the milk should be pasteurized or sterilized. By such means it should be possible in most cases to prevent the disease in infancy.

Owing to the grave nature of miliary and caseous cases their treatment is largely palliative and symptomatic. The curative treatment of intrathoracic tuberculosis in children practically resolves itself into the care of the bronchial gland and the chronic lung cases, and on the whole the treatment of these is practically identical. Directly the condition is recognized the child should be removed from school, and if living in a town it should at once be sent away. Provided that the place chosen is warm, equable in temperature, and fairly dry, the choice between sea, inland, and mountain is not a matter of vital consideration. The question of the care of the children suffering from tuberculous disease has been taken up with great public spirit in France, where sanatoriums have been instituted in many places, especially about the coast, with excellent results. As far as possible the different types of cases are separated, and especial attention is devoted to the "pretuberculous." Novi and Gonrichon state that pulmonary cases gain in weight less in maritime colonies than in mountain or simple country districts, and this seems to be the general opinion. Early cases, however, seem to do quite well, and the value of seaside resorts, especially those about Margate, in the treatment of chronic joint cases is well known in this country. Some German authors recommend Davos. Except under exceptional circumstances it is impracticable to send children from this country; moreover, they appear to do better in warm than in cold climates. It must be urged upon the parents that a few weeks' stay at the seaside or at a health resort, the child being allowed to live almost as other children, is of little value; the life of the child must be as rigidly mapped out as that of an adult in a sanatorium and on somewhat similar lines, while the stay should be prolonged for months or even to a year

if the arrest is to be permanent. If there is fever, the child must be kept in bed until the temperature is steady. The rooms in which the child lives and sleeps must be bright, sunny, and well-ventilated. Rest, especially before meals, in cases not confined to bed is important; the amount of time devoted to play and exercise must be carefully controlled. The question of breathing exercises has been much discussed; my own opinion is that, at any rate in early cases, they are of value and should be encouraged.

In regard to diet, this should be liberal, and rich in milk, cream, and other fatty constituents. Food should be given at regular periods, and the intervals should not be long. Children, however, do not stand over-feeding very well, and it is best, by abundant open air and gentle exercise, to promote healthy appetite. A raw-meat diet is highly recommended by some authorities, and is well borne by many children. Drugs are but little needed; cod-liver oil in emulsion with malt, or some iron wine or other preparation may be given; arsenic is recommended by some authorities, and may be given in the form of one of the natural arsenical waters. The syrup of the iodide of iron is recommended, especially in the cases of tracheo-bronchial gland infection. Creosote and other antiseptic preparations I have not found it necessary to give internally. If the cough is troublesome, it may be allayed by a simple linctus or a small lozenge. If of paroxysmal character, an inhalation made of creosote and spirits of chloroform, a few drops being sprinkled on lint, is sometimes very useful. Other symptoms may be treated on much the same lines as in adults.

In regard to specific treatment, some trial has been made of the use of tuberculin in these cases. It should only be given where the disease is strictly localized, and only in very small doses, its effects being carefully followed by means of determinations of the opsonic index. A high index or a markedly fluctuating index is probably to be regarded as a contraindication, since it means that auto-inoculation with toxins is in active progress. Ganghofner of Prague reports favourably on the employment of Koch's old tuberculin in a few cases. He commenced with 0.1 mg., but subsequently reduced the initial dose to 0.01, increasing slowly by $\frac{1}{1000}$ mg. till 1 mg. or more was reached.

The tracing of opsonic curves by Wright's method shows that in the past much too large doses have been given, and Dr. Clive Riviere recommends doses of $\frac{1}{12000}$ to $\frac{1}{8000}$ mg. for infants up to the age of 1 year, $\frac{1}{4000}$ at the age of 4 years, and $\frac{1}{3000}$ at 10 years. This treatment can at present only be employed in a few cases owing to the labour and time involved in the opsonic determination, but it promises to be of real value, and may at any time become of more general application if a simpler measure of its effects than the opsonic index be found.

To sum up. The aims of the practitioner should be in the first instance to prevent infection; failing this, to establish the diagnosis as early as possible, and to employ every available means of improving the general health of the child with the object of increasing its protective powers. Under such conditions, the outlook in a considerable proportion of the cases is distinctly favourable.

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An Address

ON THE

MODERN TREATMENT OF SURGICAL TUBERCULOSIS.

DELIVERED BEFORE THE WINDSOR MEDICAL SOCIETY.

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By the term "surgical tuberculosis" I mean the infection by tubercle of such organs as the bones, the joints, the lymphatic glands, the skin, the genito-urinary system, the peritoneum, and certain abdominal and pelvic viscera, the treatment of all of which usually falls within the province of the surgeon.

During the last decade there has been a slow but steady improvement in the treatment of these conditions. In this improvement the clinicians and hygienists were, at first, our leaders; but lately the pathologist, in the person of my friend and colleague, Sir Almroth Wright, has brilliantly intervened, and has not only supplied us with scientific explanations of the success or non-success of our empirical methods, but has also made valuable additions to our therapeutic resources.

The main principle underlying the modern treatment of tuberculosis is that the ultimate cure of the disease depends upon the elaboration by the individual attacked of certain protective substances in sufficient quantities to render innocuous the invading organisms. This protective mechanism is highly complex, and it is easily influenced for evil; but, on the other hand, it may be augmented by certain measures, some of which are the outcome of pure empiricism, while others are the result of deliberate experiment and research. Of late years it has been realized that Metchnikoff's theory of phagocytosis is not the whole truth as regards the mechanism of protection against bacterial invasion. The protective mechanism is a more complex one, including the chemical action of certain antibacterial substances in the serum and tissue fluids in addition to the vital activities of the phagocytes. These protective substances exert their influence by combining with the chemical constituents of the bacteria, and are called bacteriotropic substances. According to the effect which they produce, they are called agglutinins, bactericidal substances, and bacteriolysins. To these Wright has lately added the term "opsonins," The function of the latter is to prepare the bacteria for ingestion by the phagocytes. This has been demonstrated by a simple experiment. If white corpuscles be washed with isotonic salt solution, so as to free them entirely from serum, the corpuscles will no longer ingest bacteria; but they will do so at once in the presence of normal serum. Wright and his colleague Douglas, in addition to demonstrating the presence of these bodies, have also devised a method of estimating them quantitatively.

The method employed is to incubate for fifteen minutes at 37° C. a mixture made in a capillary pipette of equal parts of

1. Washed corpuscles, freed from all traces of plasma.
2. Emulsion of micro-organisms.
3. Serum from the patient whose blood is to be tested.

The micro-organisms ingested by 100 polynuclear leucocytes are then counted and compared with a number found in 100 leucocytes in a film made from a mixture composed of

1. Washed corpuscles.
2. Bacterial emulsion.
3. Serum of a normal individual.

The ratio of these two numbers is known as the opsonic index, and represents with considerable accuracy the patient's powers of resistance to the disease in question. It also constitutes a useful means of diagnosis, and forms a most important guide to the effect of treatment. It must be clearly understood that the term "opsonin" is a convenient phrase for a property of the serum, but does not necessarily represent a body which can be isolated. Owing to the fact that the opsonic content of the serum can be accurately estimated, the antibacterial value of any serum is usually expressed in terms of its opsonic index.

Let us now consider what practical bearing this has on the question of treatment. To Robert Koch we owe the conception that the inoculation of a suspension of dead bacteria—in this case tubercle bacilli—produces in the tissue fluids of an individual an increase in the amount of antibacterial substances available for the resistance of bacterial invasion. Thus arose the use of Koch's tuberculin for the treatment of tuberculosis, from which method so much was expected nearly a generation ago. Koch's first preparation was a concentrated extract of dead tubercle bacilli. As we all know, the amount of reaction that followed the use of the ordinary doses of this substance rendered it unsafe in the majority of cases of tubercle, and the remedy which had promised so well gradually fell into disuse. It is, I believe, still used as a means of diagnosis in cattle. Koch's new tuberculin is obtained by triturating dried cultures of tubercle bacilli, and it is this preparation that is now in general use under the name of tuberculin T.R.

Wright and Douglas doubted the sterility of this product and subjected it to a temperature of 60° C., adding to it 25 per cent. of lysol. Wright's chief contribution, however, to the vaccine therapy of tubercle lies in the increased control of the effects of the remedy by the estimation of the opsonic index. He found that tuberculin was an extremely potent agent and that the dosage had hitherto been excessive.[1] Based, no doubt, on the analogy of drugs, a general impression had gained ground that gradually-increasing doses were necessary in subsequent inoculations, and that a certain amount of constitutional disturbance was required. By estimating the opsonic index Wright found that maximal responses were often obtained from the inoculation of doses of tuberculin which did not produce any constitutional disturbance. He also found that if the dose were repeated at improper intervals the immunizing response failed altogether, and the patient's resistance was lowered. The immediate result of a dose of tuberculin (the dose usually employed is $\frac{1}{1000}$ to $\frac{1}{600}$ mg) is a decline in the antibacterial power of the blood as measured by the opsonic index. To this decline Wright gives the name of the "negative phase." Its duration and extent depends upon the dose of the vaccine. It may or may not be accompanied by constitutional disturbance and rise of temperature. This "negative phase" is followed by a "positive phase," in which there is an increase in the antibacterial power of the blood. This increased power corresponds to a period of increased resistance on the part of the patient. The opsonic curve then usually sinks to normal, and in ten days or a fortnight may be at the level at which it stood before inoculation. Unfortunately, it does not seem possible, in the case of tubercle, to achieve cumulation in the direction of the positive phase, and each inoculation, therefore, has to be treated as a separate event.[2] On the other hand, cumulation in the direction of the negative phase is always a possibility, and doubtless accounted for the disappointing results which formerly so often followed the use of tuberculin, when the dosage, both as regards amount and spacing, was not controlled by an estimation of the opsonic index. But the control of the dosage of tuberculin does not exhaust the utility of the opsonic index. By its means we gain useful information as to the amount of autoinoculation which is taking place from the tuberculous focus. Tuberculous infections may be strictly localized, or they may be systemic. In the first case the opsonic index scarcely varies from day to day, being usually lower than that of normal blood. In the case of the systemic infection, the index fluctuates, being alternately above and below the normal. In cases of localized tubercle the focus of infection may be so circumscribed that it practically gives rise to little or no autoinoculation, with the consequence that there is an insufficient stimulus to the manufacture of protective substances. The lesion, therefore, tends to persist indefinitely. This is well illustrated by an ordinary case of lupus. In systemic infections the autoinoculation is in excess, with the result that there is a danger of a cumulation in the direction of the negative phase with its accompanying constitutional disturbance. These considerations are of the greatest importance in devising methods of treatment.

In the localized infections therapeutic inoculation is indicated, and it is also most important to bring the tissue-fluids, with their increased opsonic power, into contact with the infected area. In the systemic cases therapeutic inoculation becomes difficult, and is often contraindicated, so that endeavour should rather be made to limit the circulation through the diseased focus in order to decrease the amount of autoinoculation. The therapeutic value of rest is at once obvious in this class of case, and operation should be avoided during the negative phase in order to escape the risk of still further depressing the resistance by the inevitable inoculation that follows the manipulation of an operation.

Not only have we, then, to raise the opsonic value of the circulating fluids, but we have also to ensure that these fluids have ready access to the infected area. The tubercle bacilli cultivate themselves within the organism in regions where the tissue-fluids contain antibacterial substances in smaller proportion than the circulating blood. The first-arrived bacilli will rob the lymph of some of its protective substances, and will then possibly succumb to the phagocytes; but as each successive batch of bacilli arrive they will encounter lymph less and less provided with antibacterial substances, till finally an area will exist in which the fluids are inert as regards their powers of resistance to the tubercle bacillus.[3] This stagnant inert material will, by its mere mechanical presence, obstruct the access of the circulating fluids to the area described. Here we have an explanation of much that was formerly a mystery to us. Long before tuberculin and opsonins were known, it was a fact well recognized by surgeons that, if the abdomen of a person suffering from tuberculous peritonitis were opened, the fluid allowed to escape, and the abdominal wound closed, such a patient would often recover. The result was ascribed to many causes, such as the destruction of the bacilli by irrigation; drainage when it was employed; and even to the influence of daylight. In the light of our present knowledge the explanation is simplicity itself. The abdominal cavity is filled with fluid, practically devoid of antibacterial substances; in this the bacilli can thrive and work their will on the tissues. This fluid, by its mere presence, prevents the free interchange with the circulating fluids, whose opsonic index may be above normal. When the stagnant fluid is liberated, the parts are immediately douched with lymph charged with protective substances, whose value as bactericidal agents is far in excess of any chemical reagent. This fact is well illustrated in the case of a boy under my own care. This case is of special interest, inasmuch as he was one of the first, if not the first patient, on whom Wright was able to demonstrate this particular fact.

A boy aged 17 was admitted to St. Mary's Hospital on August 29th, 1904. He had been taken ill, fourteen days before admission, with abdominal pain and distension. The amount of fluid in his abdomen, and the absence of any serious symptoms of acute abdominal disease, suggested the possibility of tuberculous peritonitis, and this proved to be the case when the abdomen was opened. The peritoneal cavity contained a quantity of fluid, with flakes of lymph, and the whole peritoneal surface, both visceral and parietal, was studded with innumerable tubercles, some as large as sago grains. The fluid was allowed to escape, and the peritoneal cavity was washed out with sterile saline solution. The boy left the hospital apparently in good health, and has been so till three months ago, when, as I hear, tuberculous disease of the spinal column made itself manifest. From this he is still suffering. The patient's blood and peritoneal fluid were examined by Sir Almroth Wright, with the following results:

Patient's blood ingested	...	25.4 bacteria per cell
A. E. W.'s blood	... ...	17.0 ,,
Patient's peritoneal fluid	...	4.6 ,,

Opsonic index of patient's blood was 1.5 but that of his peritoneal fluid five times less.[4]

In this case the abdominal cavity was flushed with fluid of five times the bactericidal value of the fluid displaced.

During the same month I operated upon another boy, aged 13, who had been brought to the hospital on August 11th with abdominal pain and distension. According to the history given, the condition had only been present for four days, and he had been walking about up to the time of his admission. He was opened, and an appearance similar to that in the last case was found. The same procedure was followed, and the boy left the hospital in three weeks, apparently well. He was an inmate of an industrial home, so that I was able to keep in touch with him, and found him, eighteen months after the operation, to be a well-developed, sturdy boy, looking considerably over 15 years of age and 10 st. in weight. He has since emigrated to Australia, and is, I hear, in excellent health.

These two cases are only examples of a type of disease of which all of you have seen many examples, and I only mention them to demonstrate the fact that a very extensive invasion of tubercle can be cured merely by the liberation, under aseptic conditions, of the inert material which has accumulated in the infected area. This result was attained without the employment of any chemicals or drainage, reliance being placed only on the flushing of the infected area by the normal fluids of the body, charged with their protective substances. It follows, of course, that in such a case the opsonic index of the blood should first be estimated, and if this is found to be low, the protective powers of the blood should be raised by therapeutic inoculation.

We have now to consider by what means the circulating fluids may be brought into contact with the infected area, and it is at this point that I would speak of operative procedures. One of the main obstacles to the free access of the circulating fluids to the diseased focus is that the latter is often surrounded by tissues or fluids which have been almost entirely deprived of any antibacterial substances. We have already considered one example of this in the case of tuberculous peritonitis. The pus of a psoas abscess surrounding a tuberculous focus in the body of a lumbar vertebra is another excellent illustration. The caseous, hard, often calcareous glands removed from the neck do not readily suggest the possibility that healthy lymph could be brought to them in sufficient quantities to cause their absorption. In these cases it is obvious that the mechanical removal of this inert material is necessary before the infected part can be irrigated with healthy lymph. This should be the guiding principle for our operative measures.

The operative treatment of surgical tuberculosis during the last fifteen or twenty years has passed through several phases. At first tuberculous conditions were treated on the same lines as pyogenic infections. Abscesses were opened and drained, while in those joint cases which came to operation the kindest surgeon was he who earliest amputated the limb. Tuberculous glands were opened and scraped. We can probably all here remember such cases. Psoas abscesses which discharged profusely for months, cases of hip joint disease with four or five sinuses, knee-joints which had been opened and drained, and for whom an amputation had to be performed. Almost invariably the end came from hectic fever, exhaustion, lardaceous disease, or generalized tubercle. All these are but manifestations, as I shall mention later, of the same process—namely, sepsis, whether acute or chronic.

As the surgeon felt more confidence in his asepsis he endeavoured by earlier and more extensive operations to eradicate the diseased focus altogether. Consequently, joints and glands were excised as widely of the disease as possible without much regard to the consequent deformity. Foci of tubercle, if only partially accessible, as in spinal caries, were attacked with various chemicals, such as carbolic acid, chloride of zinc, sulphur, or iodoform, and the surgeon's prime object was, as I have said, to eradicate the local seat of the disease. The results during this period were a distinct improvement on what had gone before, but many unnecessary excisions were performed, and I need scarcely dwell on the importance of this in the case of joints.

Owing to the magnitude and importance of the operative measures involved, the surgeon's whole attention was concentrated on the local conditions, so that constitutional treatment was often neglected, though its importance was theoretically recognized. The modern surgeon realizes that it is rather on the reaction of the organism that he must depend for his good results, and that his operative procedure must be directed towards removing inert and valueless material, and thus allowing the free circulation in the diseased area of tissue fluids of high bactericidal value. Above all things he must avoid sepsis, and to emphasize this becomes the more important when we realize that asepsis is difficult of attainment in these cases. Healthy tissues are capable of dealing with a slight amount of contamination, but tissues already the seat of microbic invasion are less resistant.

The effects of a secondary pyogenic infection in a case of tuberculosis are indeed far reaching. This has long been a matter of clinical observation, and has been demonstrated by actual experiment.[5] Under the influence of sepsis the tuberculous process becomes more locally malignant, causing a wider destruction of the tissues, even leading in rare cases to erosion of a vessel and secondary haemorrhage, and, in the case of joints, producing destruction of bone, and ultimately firm osseous ankylosis. Of even more serious import is the fact that the dissemination of tubercle is markedly accelerated by secondary septic infection. This fact may have been at the root of the objection, amongst certain old practitioners, to have any operation performed on a case of surgical tuberculosis, on the plea that an operation might cause dissemination. A surgeon's chief aim, therefore, in dealing with tuberculous bone disease, is to avoid the formation of sinuses. In order to achieve this, I have for some years in these cases discarded the use of drainage tubes; and, in order that I might safely dispense with them, have avoided the use of irritating chemicals, only using sterile normal saline solution when any fluid is necessary.

In dealing with an abscess in connexion with tuberculous bone disease, such as psoas abscess, the operation is timed to correspond with a high opsonic index, whether the latter is obtained by therapeutic means or by autoinoculation. The incision is designedly made as far as possible from where the abscess may possibly be pointing. The abscess cavity, after the pus has been liberated, is carefully wiped out with sterile swabs, and any loose sequestrum is removed. The deeper parts of the incision are then sewn up, layer by layer, with catgut, and the skin separately with silkworm gut. In a few cases such an abscess may refill in the course of a few months, and the process may have to be repeated; I am then careful to avoid the site of the old scar when making the second incision. I do not use any of the powerful chemicals, as it appears to me that their presence will only interfere with the natural processes of cure.

In the operations for tuberculosis of joints surgery is becoming more and more conservative. Fewer operations are performed, and, when they are unavoidable, arthrectomies take the place of excisions, while only rarely does amputation appear necessary. Drainage is omitted if possible, and in only a few cases when, for some reason, I have not been able to wear rubber gloves, do I leave a tube in for twenty-four hours, with a loose stitch to tie when the tube is removed. In most cases of advanced tuberculous adenitis a clean excision of the infected glands is still the best treatment, but I consider it highly important that this step should be preceded by an effort to raise the opsonic index, in order to prevent both that speedy recurrence which sometimes takes place and also the worse misfortune of a diffuse local infection of the tissues with tubercle. Of this condition several illustrative cases were published in the *Clinical Society's Transactions* for 1905 by Messrs. Corner and Dudgeon. In connexion with the removal of tuberculous glands in the neck it is important to remember that possible sources of sepsis may exist in carious teeth, otorrhoea, impetigo, etc. These must be dealt with before any aseptic operation can be performed.

In a few cases of suppuration in isolated cervical glands I have, at the suggestion of Sir Almroth Wright, aspirated the pus by means of a sterile syringe. I have generally found it necessary to repeat this aspiration, and it has not always been successful, but in those cases in which it has succeeded an operation with its accompanying anaesthetic has been avoided, and there has been no scar. These two advantages are much appreciated by the patient. Such cases have, of course, been treated simultaneously by inoculation of tuberculin.

It does not always require a surgical operation to give the circulating fluids free access to a tuberculous focus. In the earlier stages, where there is no definite collection

of inert material, such means as fomentations and the use of certain mild irritants—for example, linimentum iodi and Scott's dressing—may suffice. Dr. Bulloch, with exceptional opportunities at the London Hospital of judging, considers that the Finsen light acts mainly by producing a local inflammation with great vaso-dilatation and the transudation of large quantities of plasma in the areas exposed to its action. If the serum is poor in antibacterial substances, the results of the light therapy are disappointing, and he suggests that this means of treatment should be used in conjunction with inoculation.[6]

In this connexion may be mentioned Bier's treatment by passive hyperaemia. The treatment consists of causing a passive congestion in the part by blocking the venous return without obstructing the arterial supply. This can be effected in a limb by the careful application of a Martin's bandage. Bier claims that the tissues are flooded with the constituents of the blood in the same way as a meadow through which runs a stream would be flooded if a weir were placed at the outlet of the stream, the inflow and outflow meanwhile remaining approximately the same.

The use of a Bier's bandage should be controlled by the estimation of the opsonic index, because in this, as in all other autoinoculations, the dose is not constant. I have used this method of treatment in a considerable number of cases of joint tubercle with a fair measure of success. The time and frequency of the application of the bandage is determined by the opsonic index.

I may here mention Klapp's suction apparatus, which is also employed to secure an increased lymph tension in a limited diseased area; such, for instance, as a sinus. Of this, however, I have had no personal experience. For sinuses, Wright recommends the use of a lotion containing NaCl gr. xx, citrate of soda gr. iij, to the ounce of boiling water, in order to decalcify the discharge and allow a freer lymph stream through the diseased area.

Therapeutic inoculation is not the only means at our command for increasing the patient's resistance to tubercle. The efficacy of fresh air and sunshine in the treatment of tubercle has always been realized, but it is only of late years that their full benefits have been obtained, and that the open-air treatment of tubercle has been carried out in a properly organized manner and with a full appreciation of the importance of detail. This has been thoroughly realized in respect of pulmonary tuberculosis, but in this country we are rather slow to extend the full benefits of open air and sunshine to cases of surgical tuberculosis. On the Continent and in America numerous hospitals during the last few years have been built for the treatment of surgical tuberculosis in children. In these hospitals operative measures can be carried out side by side with properly organized open-air treatment. In one hospital near Boston, U.S.A., the children live in open verandahs, or in wooden buildings termed "shacks," which are so constructed with sliding doors that half of each side of the building can be open to the air at the same time. These doors are only closed for short periods, in order that surgical dressings and other necessary details can be carried out. The children lie practically day and night in the open air. At night use is made of flannel sleeping bags with woollen gloves and hoods, but it is remarked how little the patients appear to regard the cold of even a rigorous New England winter. The results at these and other open-air hospitals have been most encouraging. Patients have improved in weight and colour, sinuses have healed, and enlarged glands have subsided. Perhaps the one fact that stands out more saliently than others is that the climate of any special locality is unimportant if only pure air and sunshine are secured. A sandy or gravelly soil, with some shelter from the prevailing winds, is all that is required in the matter of site; and in this connexion the seaside does not appear to be essential.

This is an important point to emphasize, as, in a large proportion of the patients suffering from surgical tuberculosis, the question of expense prohibits the search after what is considered a suitable climate, and, if climate is considered the important element in the cure, many invalids would easily become discouraged. The only exception which I would make is the smoke-charged atmosphere of our big cities; but even in these unpromising surroundings efforts have lately been made at some of our children's hospitals to utilize their roofs as what the Americans term "sun parlours." In the BRITISH MEDICAL JOURNAL for October 26th, 1907, I see that the success which has followed this method has induced the authorities of the Presbyterian Hospital, New York City, to build an open-air roof-ward on the top of the hospital. I do not advocate this, at any rate for metropolitan hospitals. What we require is that at a convenient distance in the country small hospitals should be built with facilities for open-air treatment. The buildings should be of the simplest description, consisting of an administrative block with shelters, which could be extended and renewed at a comparatively slight cost. I feel that it is presumptuous for a mere surgeon to criticize his medical colleagues, but I have often wondered whether the solid and stately structures in bricks and mortar which are erected under the name of sanatoriums are really the best form of building for an infectious disease like tubercle, and whether in the future our successors will not consider an occasional fire a necessary measure of hygiene.

Such hospitals as I have suggested should be considered as extensions of our city hospitals, whether metropolitan or provincial, and to them cases of surgical tuberculosis would be transferred. Each hospital should be properly equipped for the performance of surgical operations, and these should be undertaken by the staff of the mother hospital which first undertook the responsibility of the case. Resident medical officers would be responsible for the care of the patients, in the absence of the honorary staff, and on them also would devolve the routine blood examinations and therapeutic inoculations, under the guidance of the pathological department of the hospital. At the present moment very inadequate provision is made for this class of patient. The ordinary convalescent home will not take them—in fact, quite a high standard of health is required for admission into many convalescent homes. The usual history of these cases tells of constant readmissions to the same or another general hospital, and I am afraid that, in too large a proportion of cases, the patient ultimately succumbs. The mortality appears less than it really is, owing to the number of readmissions of the same patient. How often we find that the patient whom we had fondly hoped we had cured of hip-joint disease has ultimately succumbed to caries of the spine! But I expect that the medical officers of our workhouse infirmaries could tell you more of this than I can. Could such a scheme as I have outlined be adopted, it would at once free 10 to 15 per cent. of the surgical beds of our big hospitals, for the treatment of short or acute cases, and this would mean that for many years to come there would be no necessity to increase our hospital accommodation, or to build in London in order to provide more surgical beds.

In surgical tuberculosis, as in any other condition, early diagnosis is an important element in successful treatment. I have already indicated the use of the opsonic index as a means of diagnosis. There is one point, however, which I should like to emphasize in connexion with this. A normal index does not necessarily mean absence of tubercle, the curve might have been tapped as it crossed the normal line. It is only a repeatedly normal index that should lead us to negative tubercle.

Another important means of early diagnosis is the *x* rays. I need not labour this point, but will show you this photograph, which happens to be the last instance of this kind that I have had. This boy was brought to me at the Great Northern Hospital some two months ago, the complaint being that he limped. His hip-joint moved perfectly, and there was no swelling or tenderness in its vicinity. An *x*-ray photograph showed this light patch in the shadow of the neck of the affected femur. I lost sight of the boy for a few weeks, and when he came up again there was an elastic swelling to be felt on the front of the thigh. The movements of the hip-joint were still unaffected. I admitted him to the hospital and treated the abscess in the way I have indicated, and was able to verify the disease in the neck of the femur. The wound has healed, and he will be sent out on a Thomas's hip splint.

It is particularly in cases of genito-urinary tubercle that early diagnosis is important, as general treatment has a far better chance of success. By means of the cystoscope, tubercle of the bladder or kidney may be diagnosed even

before bacilli have appeared in the urine. Therapeutic inoculation and open-air treatment are the best means of dealing with these patients, except in a few cases where a nephrectomy or the removal of a tuberculous testicle may be indicated. In the former operation, the cystoscope, combined with improved methods of estimating a patient's renal efficiency, minimizes the risk of removing the less diseased of the two kidneys, an occasional surgical tragedy of the past.

Summary.

I would thus summarize the treatment of these cases of surgical tuberculosis:

1. In all cases "open-air treatment" should be organized to meet the circumstances and requirements of the particular case.

2. The patient's powers of resistance to the disease should be periodically measured by suitable blood examination.

3. Where the resistance is found to be low and there is no evidence of excessive autoinoculation, use should be made of inoculations of Koch's new tuberculin, in doses that are accurately controlled, both as regards their amount and repetitions, by examination of the blood.

4. For patients in whom there is evidence of excessive autoinoculation, absolute rest, with, in the case of a limb, absolute fixity of the diseased part, should be prescribed.

5. In the cases of circumscribed tuberculosis, efforts should be directed to increase the circulation through the infected area. I have already indicated the means we have at our disposal to effect this object.

6. Operative procedures should be directed to the removal of the inert material, whether caseous glands, carious bone, or collections of pus, and allowing the access to the infected area of healthy lymph. The necessary operations should be conducted with the most scrupulous asepsis.

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A CASE OF ACTINOMYCOSIS (STREPTOTRICHOSIS) OF THE LUNG AND LIVER SUCCESSFULLY TREATED WITH A VACCINE.

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Formerly actinomycosis was regarded as a single disease occurring in man and cattle, caused by one definite organism—the ray-fungus (*Actinomyces bovis*, Harz)—the parasitic nature of which was first fully described in cattle by Bollinger in 1877. The disease was diagnosed by the discovery of the ray fungus in the affected tissues or discharges, but the parasites were not isolated in pure culture and studied, and, in spite of variations in structure, the identity of the ray-fungi in all cases of actinomycosis, whether in man or cattle, was assumed.

Bostroem in 1890 published an account of the characteristics of some ray-fungi isolated from cases of human and bovine actinomycosis, which he regarded as belonging to the same species; but Wolff and Israel in 1891 published an account of a ray-fungus isolated from a case of human actinomycosis, which differed in a number of characteristics from that of Bostroem, and evidently belonged to a different species. Since then a considerable number of species, more or less well defined, have been described. Some confusion was caused by the description of some of these species, which differed in various respects from *Actinomyces bovis*, as pseudoactinomyces or pseudotubercle. It is now, however, admitted that there are many forms of actinomycosis, and the significance of the term has been widened so that it is used to designate a class of diseases each of which is caused by a distinct species, or at any rate variety, of parasite. Two generic names for these parasites are in use—namely, streptothrix and actinomyces; the former was recommended for adoption by a committee of the Pathological Society of London in 1899, and is generally used by British and American pathologists, but actinomyces is still in use, especially on the Continent.

The following case seems worthy of being reported, as the organism obtained from it was isolated in pure culture, and its growth on various media studied, but especially because it is the first case, so far as I am aware, that has been treated with a vaccine prepared from the infecting organism according to the methods of Sir A. E. Wright:

F. G., a schoolboy, aged 14, was admitted to the General Hospital, Birmingham, under the care of Professor Saundby, on December 19th, 1906. He then complained of a troublesome cough, with abundant sputum having an offensive odour, and also of pain and swelling on the left side of the chest.

History.

The family history was unimportant. As long as he could remember he had suffered from bronchitis during the winter. Six years ago he had been in hospital with pneumonia, and in December, 1905, was again in hospital for eight days with a severe attack of bronchitis. At that time it was noticed that his sputum was abundant and very offensive; his fingers were also slightly clubbed. There is no record of a bacteriological examination of the sputum.

He remained fairly well until May, 1906, when he suddenly began to cough and bring up much fetid sputum, and was feverish. After three weeks in bed he improved, and was able to get about again until the first week of November, 1906, when he complained of severe pain in the left side of the chest. Since then he had remained in bed, and on December 15th he had another severe attack of coughing, and is said to have brought up "nearly two pints of offensive matter." He felt bad all over, and on the day before admission a rounded tender swelling appeared on the left side of the chest, just below and outside the nipple. For some days he had been unable to lie down for fear of choking, and for three or four months he had been losing weight, and often had night sweats.

Condition on Admission.

He was a well-developed boy, showing signs of slight recent wasting. Respiration was shallow and rapid, the left side moving less than the right. There was a well-marked Harrison's sulcus, and the left side was more prominent than the right. On the left side, below and to the left of the nipple, was a rounded swelling, the most prominent part of which corresponded with the sixth intercostal space. This swelling was red, tender, and fluctuating, and was evidently a pointing abscess. The lower half of the left side of the chest anteriorly and laterally below the fourth intercostal space was absolutely dull on percussion, no breath sounds could be heard, and vocal fremitus and resonance were absent; posteriorly resonance was impaired, and moist râles were heard. Elsewhere the lungs were free from dullness or abnormal sounds.

The cardiac impulse could not be felt, and the outline of cardiac dullness was difficult to determine. The liver was just palpable below the ribs, but the spleen could not be felt. The abdomen otherwise was normal. The urine was scanty and had a specific gravity of 1028, acid reaction, many urates, but no albumen and no sugar. He passed about 30 oz a day. The fingers and toes show slight clubbing but no bony enlargement. The diagnosis of an empyema pointing through the chest wall was made.

Operation.

The patient was operated upon on the evening of the day of admission. Chloroform was given, and an incision made over the fluctuating swelling. About 8 oz. of very offensive pus at once squirted out. The seventh rib was felt beneath the incision, and about 1 in. of it was removed. A ragged cavity could then be felt with the finger running up towards the axilla and apparently in the lung itself.

Examination of Pus and Sputum.

The pus and sputum were sent to me on the following morning for examination. The pus was very thick and tenacious and had the colour of pale anchovy sauce. It contained large numbers of small yellow granules. The sputum consisted of similar pus mixed with mucus. On staining by the Gram method an enormous number of mycelial threads were revealed, in places forming dense masses. Numerous spores were seen but no clubs. Here and there the "ray-form" was present, but the organism was mostly in the form of a diffuse mycelium. No portion of the threads could be stained by the Ziehl-Neelsen method. In the pus the organism was apparently present in pure culture, but the sputum also contained various cocci and bacilli. No tubercle bacilli could be found. Both sputum and pus had a feculent odour. The staining and cultural characters of the organism will be described in detail later.

Diagnosis.

From the characters of the pus there was no doubt that we were dealing with a case of streptotrichosis of the lung and pleura.

Vaccine Treatment.

Having had experience of the manufacture and use of vaccines in other bacterial infections, and considering the close relationship between tuberculosis and streptotrichosis, the success which has attended the vaccine treatment of the former, and the almost invariably fatal result of streptotrichosis of the internal organs, even when treated with large doses of potassium iodide, I determined, with Dr. Saundby's permission, to see whether it were possible to make a vaccine from the streptothrix in this case.

Agar cultures of less than forty-eight hours old were taken, the growth was scraped off, sterilized, and dried for one hour at 60° C. It was then ground up in an agate mortar with normal saline solution containing 10 per cent. glycerine. The vaccine was standardized by weight, 1 c.cm. of the emulsion containing 1 mg. of "actinomycotin." This was diluted a thousand times, and the dose used for inoculation was 0.001 mg. of the solid substance.

After the operation on December 19th there was a considerable discharge of pus through the drainage tube: this gradually lost its fetid odour; the sputum remained abundant, frothy, and offensive; coarse râles were heard all over both lungs. The temperature for the first week was irregular, with evening rises to 99° and 99.5°; the pulse-rate was 100 to 120, and the respirations, which were 32 to 36 on December 20th, fell to 20 to 24 by the end of the week. On December 28th the patient was transferred to the Jaffray Suburban Hospital. The temperature from December 28th to January 8th, the date of the first inoculation, was pyrexial, showing evening rises to 100°, and once to 102.3°. With the rise in temperature the rate of respiration increased to 28 or 34, the pulse remaining at 100 to 120. The patient now looked and felt very ill, the cough was troublesome, and there was an abundant discharge from the drainage tuba, the sputum was also considerable in amount. The day following his removal to the Jaffray Hospital he complained of pain in the region of the liver, which was found to extend downwards to within 1 in. of the umbilicus, and to be very tender on pressure: the spleen could also be felt. It seemed probable that the removal had produced an autoinoculation with extension of the infection to the liver. The organisms in the pus and sputum were still active, and grew readily on culture media.

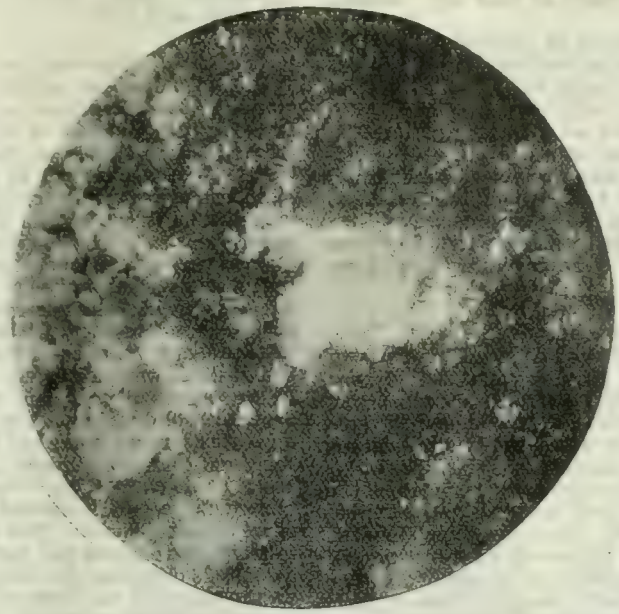


Fig. 1.—Photomicrograph of pus from empyema stained by Gram's method, showing dense mycelium of branching threads.

An attempt was made to estimate the opsonic index to the streptothrix. Obviously from the nature of the organism such an estimation could not have the same accuracy as the estimation of the opsonic index to tubercle bacilli or staphylococci. Young agar cultures were used, and the growth, after drying and sterilizing at 60° C., was ground up in an agate mortar with normal saline solution. A very fair emulsion was obtained, which on microscopic examination showed spores, bacillary forms, and here and there longer threads or portions of threads. The chief difficulty arose from the fact that the growth was stiff and tenacious, the organism being apparently surrounded by a homogeneous substance. The estimations were made in the usual way, my own serum being used as a control. At the first attempt the preparations were incubated for twenty minutes at 37.5° C., and on examination it was found that phagocytosis had been active, the leucocytes treated with my own serum being densely packed with threads and spores, while very few had been taken up by the leucocytes treated with the patient's serum. At the next attempt a more dilute emulsion was used, and the preparations incubated for only ten minutes: 100 to 150 leucocytes were counted in each preparation. On January 3rd the index was estimated at 0.3, and on January 7th at 0.5.

On January 8th the first inoculation of 0.001 mg. of "actinomycotin" was given. Twenty-four hours later the negative phase was apparently over, as the index had risen to 0.7, and by January 16th was 1.2. The patient had a good night after the inoculation, and in a few days the cough became less troublesome, and the sputum and discharge of pus diminished in a remarkable way. The temperature dropped to normal the day following the inoculation, and remained normal for the next three days. On January 12th the discharge had so diminished that the drainage tube was removed: this caused a slight irregularity of temperature for a day or two.

On January 18th a second inoculation of 0.001 mg. was given, and on January 21st the temperature fell to normal, and afterwards remained so. The respirations had decreased to 22 to 24 and the pulse-rate to 96 to 108. The patient was allowed to get up for a short time on January 19th. Inoculations of 0.001 mg. were given on February 11th and 25th, and March 11th and 27th, six inoculations altogether being given.

The opsonic index was estimated at intervals, the highest point reached being 1.7. A negative phase was never observed to last more than twenty-four hours, and the positive phase reached its maximum on the eighth to tenth day. Generally the temperature taken a few hours after an inoculation showed a slight fall, but on one occasion there was a rise to 99.2°. I do not wish to attach too much importance to the actual figures given for the opsonic index, as the difficulties in the way of making a satisfactory emulsion were great, but the difference between the films made from preparations with my own serum and those made from preparations with the patient's serum were very marked before inoculation was begun, afterwards there was no doubt that the patient's serum had a much higher opsonic power than my own, and with practice the difficulties of technique were largely overcome and a fairly accurate count could be made. The improvement in the patient's condition after inoculation was very marked. There was no sputum a week after the first inoculation, the cough had disappeared by January 22nd, and the sinus rapidly closed, the discharge by the first week in February being very little. Attempts were made on several occasions to grow the organism from the pus; after the second inoculation these attempts were unsuccessful. There was a steady increase in weight from 4 st. 8 lb. on December 29th to 5 st. 8 lb. on February 4th, and on leaving hospital on March 27th the weight was 6 st., a gain of 1 st. 6 lb. in three months. The moist sounds in the lungs disappeared, and examination on the day before leaving hospital showed some flattening of the left side of the chest in the lower axillary region, slight dullness on percussion, and a large area below the angle of the left scapula over which cavernous breathing was heard. This cavity was quite dry, and no moist sounds were heard here or elsewhere. The liver had slowly decreased in size until it could not be felt below the ribs. It was evident that the condition had left behind thickened pleura with a large cavity in the lung. There was then no sputum, and only



Fig. 2.—Photomicrograph of mycelium in sputum, showing branching and beaded threads, spores, and short rods.

occasionally a dry cough. On April 26th, 1907, the patient was shown to the members of the Pathological and Clinical Section of the Birmingham Branch of the British Medical Association. He then had not received an inoculation for a month, and looked well and robust.

No other treatment besides that described above was given except from January 11th to 18th, when 10 grains of potassium iodide were given three times a day without my knowledge; this was stopped as soon as I became aware of it.

The patient has been seen since at intervals of about a month as an out-patient. He has continued well, and has been free from pain or cough except for a slight attack of bronchitis during the first fortnight in December, 1907. He was seen for the last time on February 20th, 1908; there was then more flattening of the chest at the left base; the cavity was smaller and no moist sounds could be heard; occasionally he had a dry cough, but there was no sputum and the breath was not offensive. The liver and spleen could not be felt. His weight then was 6st. 5lb. No inoculations of "actinomycotin" have been given since March 27th, 1907.

BACTERIOLOGY.

The organism is a typical streptothrix. The pus or sputum, when stained by Gram's method, showed enormous numbers of delicate, thread-like filaments of fairly uniform thickness. Some of the filaments were straight and unbranched, others were bent at acute angles, the majority were wavy and sinuous, twisting and intertwining in all directions. Branching was common, the branches passing off laterally from the parent stem, sometimes at right angles, more often at acute angles. Occasionally an appearance of dichotomy was seen, but on tracing the branches they were seen to be unequal. The filaments were arranged in dense, irregular masses, from which threads passed out irregularly on every side, or in the form of a diffuse network of threads here and there aggregated together in denser masses. No definite clubs were found, but the ends of a few filaments were slightly swollen. The filaments were mostly stained irregularly, their contents being broken up by more or less regularly-spaced unstained intervals, so that the appearance of a chain of short, stout rods, or of a row of beads, was given. In these intervals a faintly stained sheath could be made out. Some of the filaments showed uniform staining, and there was also considerable variation in the depth of staining, as though some of the threads were degenerated.

Besides the long threads there were numerous bacillary forms resembling in size the rods contained in the threads; most of these showed irregularity of staining, so that they had a beaded appearance.

Among the filaments were large numbers of oval cocciform bodies, singly, in pairs, end to end or side by side, or in short chains of three or four, or in irregular dense masses. Many of the leucocytes had ingested threads or the cocciform bodies.

Cultural Characters.

It grows readily on ordinary media at 37° C., much less readily at room temperature. It grows under both aërobic and anaërobic conditions, but more freely under the former. The growth on media inoculated with the fresh pus was more diffuse than in subcultures, for the colonies on solid media were very adherent and difficult to break down and spread on the surface of the media, so that the resulting growth was often in the form of heaped-up masses. Growth seemed to occur more readily after several generations of artificial culture. No odour was detected in any of the cultures.

Agar.—At 37° C. growth appears after twenty-four hours as small greyish discoid colonies, later becoming confluent and raised. A separate colony has a raised centre and flat wrinkled margin. The growth as a whole is raised with a fimbriated edge. After a few days a pale yellow colour appears.

Glycerine-agar.—Growth rather more free than on plain agar, surface raised and shiny, and at bottom of the slope culture has the appearance of fresh honey, being semi-fluid, pale yellow, and translucent.

Gelatine.—Growth slower, but after four days discoid colonies form. In stab cultures, heaped-up yellow mass on surface, closely-set discs radiating from a central core along line of stab, with separate colonies in deeper part. No liquefaction or tinting of the medium.

Broth.—Greyish, semitranslucent, flocculent masses. Broth remains clear. No odour.

Glucose-broth.—Growth similar, but more abundant.

Litmus-milk.—Turned pink after four days, and milk coagulated by the seventh day, forming a dense, pink clot.

Potatoes.—Give a striking growth. Appears after twenty-four hours at 37.5° C. and abundant in forty-eight hours. Growth dry, considerably raised, and heaped up in irregular masses. Colour ochreous or brick-red.

Serum.—Growth resembles that on agar, but less vigorous. Serum not liquefied.

Diastatic Action.—None manifested after seven days' incubation at 37.5° C.

Morphology and Development.

The organism in artificial culture is highly pleomorphic. Examination of a twenty-four hours old culture shows a large number of short bacillary forms staining either homogeneously or in beaded fashion, and sometimes slightly thickened at one end. These forms were either single, in pairs, or placed end to end in short or long chains. The chains were sometimes straight, but more often wavy, and bent in graceful curves. Branching was uncommon, but here and there were short lateral branches on some threads. Often branching was simulated by an accidental arrangement of the rods. Many spores were present, but usually in dense masses, and were probably remains of the original growth with which the medium was inoculated. Longer threads were found in the broth cultures, and especially in glucose broth, than on solid media. For the next few days similar appearances were seen, but there was more variation in the length of the threads, long uniform threads being more common. After about a week's growth many branched, irregularly-stained threads were seen, and also short rods and spores. The threads now resembled those found in the original pus, being broken up into chains of short rods or spores, the latter being most frequently seen at the ends of the threads with the rods in the intervening portions. After one month's growth on glycerine agar or potato, dense masses of spores were found, with short, badly-staining rods and a few long branched threads. These threads stained very irregularly with Gram's stain, and at first sight apparently consisted of rods placed end to end with intervening spaces of varying length, but closer examination showed that they were surrounded by a homogeneous sheath which crossed the gaps between the rods. In some of the wider gaps the sheath appeared to be dilated. No clubs were seen in any of the cultures examined at various ages.

The organism from cultures of all ages, from a few days to 9 months, was stained by Ziehl Neelsen's method, but no acid-fast portions were found. After staining with hot carbol-fuchsin for five minutes some of the rods and spores retained the stain after immersion for three minutes in methylated spirit, but they were decolorized by 5 per cent. sulphuric or hydrochloric acid in one minute.

Identity of the Organism from this Case.

From its morphology and appearance in culture I have not been able to identify the streptothrix from this case with any of those of which full descriptions have been published. The most frequent organisms found in cases of pulmonary streptotrichosis belong to the "acid-fast" group, in which are included those described by Eppinger, Aoyama, MacCallum, M'Donald, Sabrazés, and Rivière, Birt and Leishman, and others. The streptothrix from this case is at once distinguished from these by the absence of "acid-fast" characters. It differs from *Streptothrix bovis communis* in its more vigorous growth, in its inability to liquefy gelatin, and in its power of coagulating milk. *Streptothrix bovis* has not been described in cases of pulmonary streptotrichosis hitherto, and is apparently a rare form in human disease.

It has most in common with the organisms described by Wolff and Israel, Norris and Larkin, Krause, and Levy. These agree in growing under anaërobic as well as aërobic conditions, in not being "acid-fast," in not liquefying casein, gelatin, or serum, but in coagulating milk. It differs from them, however, in its more rapid and vigorous growth.

SOURCE OF INFECTION.

The source of infection in this case could not be traced. The patient had always lived in the town, and had not been associated with cattle or in the habit of chewing straw or grain. We are at present ignorant of the common sources of infection, and a wider knowledge of the natural

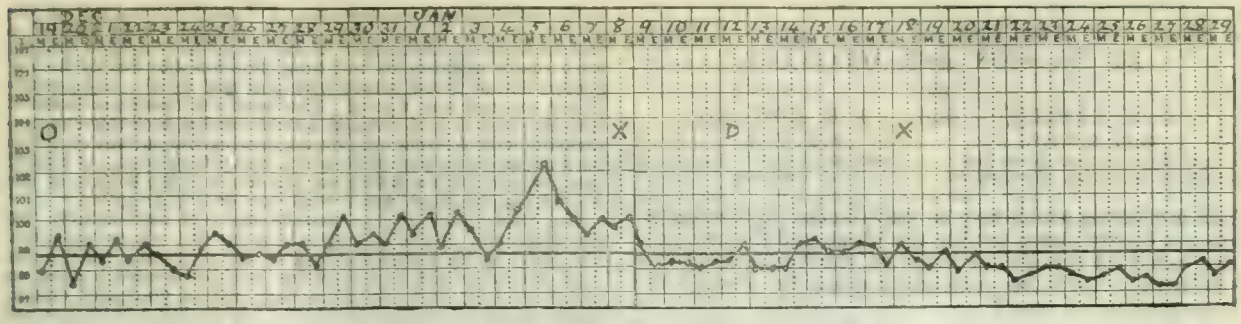


Fig. 3.—x, Injection of "actinomycotin"; o, operation; d, drainage tube removed.

distribution of streptotricheae is much needed. *Streptothrix bovis* is the only species which has been found both in man and lower animals, and since the organisms from cases of human streptotrichosis have been isolated and studied this species has been rarely found. Saprophytic species are common in the air, water, and soil, and parasitic species have been found living on grasses, attached to the roots of leguminosae, and in animals they have been found in the oyster, pig, fowl, horse, dog and rabbit. At present we have no certain evidence that these species can become pathogenic for man.

It is difficult to determine how long the patient had been infected as he had suffered from childhood from bronchitis. The earliest lesion of pulmonary streptotrichosis appears to be purulent bronchitis. In Canali's case this alone was present, and in Leith's case this condition was found *post mortem*. The disease is rarely recognized in this stage during life. In December, 1905, the patient was admitted to hospital with a severe attack of bronchitis, and it was then noticed that his sputum was abundant and had a feculent odour. This odour has been frequently recorded in cases of pulmonary streptotrichosis, and it is possible that examination of the sputum at that period would have revealed the streptothrix. It seems probable that the feverish attack with paroxysmal cough and increase in sputum occurring in May, 1906, marked the extension of the disease from the bronchi to the lung tissue, and that the severe pain in the left side complained of in November, 1906, marked the extension to the pleura with subsequent development of an empyema, which, as is usual in pulmonary and, indeed, other forms of streptotrichosis, showed a marked perforative tendency and gave rise to the external abscesses noticed on admission in December. While in hospital the disease appeared to spread to the liver, but whether by direct extension through the diaphragm or by the blood-stream it is impossible to say, most likely the former.



Fig. 4.

Potato culture three weeks old. Glycerine-agar culture three weeks old.

The case shows the importance of the systematic examination of the sputum, especially in cases resembling tuberculosis in which no tubercle bacilli can be found, and of the pus in all cases of empyema, especially those which show a perforative tendency. It is probable that some of these cases would be diagnosed earlier by a careful bacteriological examination of the sputum in cases of fetid bronchitis. At present we do not know how early the organism can be detected in the sputum of these cases. The sputum and pus should always be stained by Gram's method, as this stains all the known species except the degenerated portions. If the sputum is only stained by Ziehl-Neelsen's method the organism may easily be overlooked, especially if it belongs to an "acid-fast" species. Too much importance has been attached to the presence of clubs. These are very variable in appearance, and their absence must not be taken to exclude the possibility of actinomycosis. Branched forms even are not always present, as in old abscesses the parasite may have undergone complete segmentation, and so would be difficult to distinguish from bacilli. Careful search, however, would probably reveal short branches and a few long filaments. Another source of difficulty I have found in some cases is that the parasite is surrounded by a gritty material which stains deeply and conceals the threads contained in it.

Pulmonary streptotrichosis is one of the less common forms of the disease. Rühräh found 92 instances of pulmonary disease in 632 cases of streptotrichosis reported in the literature—a proportion of 14·5 per cent. In 18 of 34 cases collected by Hodenpyl the diagnosis was made during life—in 9 by examination of the sputum, and in 9 by examination of the pus from a lung abscess. The average duration of the cases was about ten months. In a few cases a cure has been reported, but such a result cannot be expected with any confidence, as it appears to be only a little less fatal than streptotrichosis of the brain or liver, from which no case of recovery, according to Acland, has been recorded.

The case reported in this paper is especially interesting, as it adds one more to the number of infections which have been successfully treated with a specific vaccine prepared from the infecting organism. In this case there was not much difficulty in preparing a vaccine, as the organism was isolated and grown in pure culture; but in many cases it is difficult or impossible to isolate the parasite. In these cases it will be important in the future to determine whether a vaccine prepared from one of the easily-grown species or from a stock laboratory culture will have any effect upon an infection caused by another species of streptothrix. In this connexion it is worth while recalling that temporary benefit was found in Ziegler's case of severe actinomycosis of the head and neck after injections of "bacterial protein" obtained from *Staphylococcus aureus*, and in Billroth's case after tuberculin injections.

In conclusion, I should like to express my indebtedness to Professor Saundby for enabling me to deal with the case, and to Professor Leith for the use of the excellent photomicrographic apparatus in his laboratory.

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A CASE OF ABSCESS OF THE LUNG CURED BY INCISION AND DRAINAGE.

BY

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The difficulties which may be experienced in locating an abscess deeply placed within the chest, and the comparative rarity of complete success in the treatment of this condition, seem to us sufficient reasons for placing the following case on record.

W. S., aged 36, previously strong and healthy, was taken ill in July, 1907. He was engaged on night duty in a brewery, and besides having very hard work was exposed to sudden changes of temperature. There was no evidence of excessive indulgence in alcohol. His illness commenced gradually with cough and weakness. Afterwards he had several shivering attacks, with pain in the back, shortness of breath, and cough. He was now attended by Dr. Hill of Old Basford, who informs us he detected signs of pleuro-pneumonia, followed by effusion into the left pleura. This disappeared, but, after the patient had been laid up seven weeks, he began to expectorate large quantities of pinkish tenacious sputum, which afterwards assumed the appearance of ordinary pus. Notwithstanding this, he attempted to get about, but suffered from pain, with swelling of the legs and feet, also from cough and shortness of breath.

He was admitted into the Nottingham General Hospital on September 18th, having been ill over two months. He was pale and wasted; mucous membranes of good colour. Weight 8 st., which speedily declined to 7 st. 11 lb., at which it remained with slight variations until December 14th. Pulse 124, regular, low tension. Respirations 28. The temperature was hectic, ranging from 98° to 101° or 102°. The sputum continued copious until the date of the operation (December 14th), consisting of inodorous, thin, frothy pus, the quantity varying from 4 to 18 oz. An examination for tubercle bacilli was negative. The patient always expressed himself as feeling comfortable, but was obliged to lie in a very constrained position—namely, on the right side, with the head near the edge of the bed. Doubtless this facilitated drainage of the cavity, since any attempt to lie on the back or left side caused uncontrollable cough.

Physical Signs.

Heart: The apex beat could not be seen or felt. The sounds were normal, and the organ was not displaced. *Lungs (left side):* Movement impaired; deficient resonance over the whole of the left lung, most marked at the lower part of the axilla, and near the angle of the scapula. Breath sounds everywhere weak, especially below the angle of the scapula, although vocal resonance was present in this position. At the apex; below the nipple; and near the angle of the scapula, the breath sounds were distant and bronchial. There were scattered, small crepitations all over the left side, which were of somewhat amphoric quality, though distant, at the lower anterior region. *Right Lung:* Slight dulness over the apex, and a few crepitations, these signs not being nearly so marked as at the corresponding region on the left side. [It was thought at one time that general pyogenic infection of both lungs had occurred, but the subsequent progress of the case makes it probable that the signs in the right side were caused by pus conveyed from the left side, partly in consequence of the peculiar decubitus adopted, and partly by aspiration.]

An exploring needle was inserted into the dull area near the left base, soon after the man's admission, with negative result. No further attempt to reach the pus was made for three months. In the meantime the patient was treated by tonics, sedatives, and antiseptics, both by ingestion and inhalation. From these he derived no benefit, and was obviously getting worse when, on December 10th, the exploring needle was again used, and a syringeful of pus obtained.

Operation.

On December 14th the patient was placed under the influence of chloroform, and after several fruitless attempts pus was again found by the needle, inserted deeply a little below the angle of the left scapula. After making a free skin incision in this region, a piece of the eighth rib was excised. The pleural cavity was found to be obliterated, and the finger came upon indurated lung covered by thickened pleura. Renewed difficulty now arose in finding the pus, as the needle had been removed during the resection of the rib. After searching in various directions it was suggested that the needle should be passed downwards and forwards, and this resulted in success just when we had almost decided to give up the attempt, pus being found at a depth of 2½ in. from the surface. A pair of dressing forceps was now passed along the track of the needle, and the blades separated with the utmost difficulty, owing to the toughness of the lung tissue. The track thus formed was enlarged by using the rib forceps in the same manner, it being thought unsafe to use a knife under the circumstances. Pus now welled up from the bottom of the wound. The above manipulations excited a violent fit of coughing, and, if any proof were needed that we were really working in the lung, this was afforded by the expectoration of blood, mixed with pus, and by the free passage of air through the wound. The tip of the forefinger inserted into the wound just entered a small cavity, probably communicating with a larger one, for on turning the patient on to his back about half a pint of blood-stained pus escaped. A rubber tube, of ½ in. bore and long enough to reach the bottom of the wound, was inserted, and a wood-wool dressing applied.

The after-history of the patient was very satisfactory. On the afternoon of the operation day he felt comfortable, and had coughed up traces of blood in the sputum. During the next few days the expectoration rapidly diminished to an ounce or two, and the pulmonary fistula gradually closed, although the to and fro passage of air during respiration was very free at first. The wound healed rapidly. On January 5th, 1908, gauze packing was substituted for the tube, and by the 20th healing was completed by the formation of a sound scar, parallel with the ribs, about 2½ in. long. By this date also cough and expectoration had quite ceased. Resonance was good over both lungs, except at the base of the left lung behind and in the lower part of the axilla. In the same regions the breath sounds were feeble and accompanied by fine dry pleural crepitations. Over the rest of both lungs the breath sounds were normal, and the movement good. The man's aspect and physique had greatly altered for the better. He was discharged quite well on January 25th, 1908, and sent to a convalescent home, his weight being 9 st. 5½ lb., having put on 22½ lb. since December 14th. When seen on February 19th, the patient expressed himself as feeling very well, having gained a further 10 lb.

The opinion is very generally held that uncomplicated croupous pneumonia occasionally ends in abscess of the lung. It is probable, however, that this is a rarer occurrence than is commonly supposed. This is the opinion of Dr. Pye-Smith, and also of the great Laënnec, whom he quotes as follows[1]: "Il n'a pas de lésion organique plus rare qu'une véritable collection de pus dans le tissu pulmonaire." Although this patient presented the signs of abscess of the lung when he came under our notice, it does not follow that the cavity was formed by the actual solution of hepatized lung. While this may be, not improbably, the partial explanation, there may also have been a localized empyema, which by discharging through the lung may have increased the amount of purulent discharge. The pus was not fetid, hence there is no reason to suspect gangrene of the lung or bronchiectasis. The daily amount of pus expectorated (10 ounces or more) left little doubt in our minds that it came from a cavity of considerable size. Yet signs of cavity were for the most part wanting. Instead of loud gurgling and amphoric sounds, as might have been expected, we could only find distant crepitations, and weak tubular breathing. The fibroid thickening of the tissues and the depth of the abscess doubtless accounted for the obscurity of the signs.

We would draw attention to the inability of the abscess to heal, notwithstanding free exit to the pus by expectoration, and to the rapidity of healing after drainage through a dependent opening. The sound cicatrization of the tissues and closing of the bronchial fistula are also worthy of note. A fistula in such circumstances is apt to remain permanent—especially in tuberculous and bronchiectatic cases.[2]

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[1] Allbutt's *System*, vol. v, p. 112. [2] West, *Diseases of the Organs of Respiration*, p. 645.

A CASE OF PHLEGMONOUS GASTRITIS.

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Phlegmonous gastritis is happily one of the rarer diseases affecting the stomach; its exact diagnosis is difficult and its prognosis grave. In recording this case we add one to the list of published cases in which a short history of symptoms is followed by an account of the *post mortem* findings.

There are two features of this case to which we would call attention, first, that the probable source of infection was the mouth, and that it followed the extraction of many teeth; secondly, the presence of an erythematous

rash. This rash was of the "toxic erythema" type. It was first noticed about two days before death, and was still visible an hour before death. It preceded the first enema given, so that we may eliminate that as a cause; the only drugs being taken at the time of its appearance were sodium salicylate and potassium citrate, and they had only been given the day before. So far as we have been able to refer to the hitherto published cases, we have been unable to find any mention of a similar rash having occurred in any of them. In one case there was what is termed a "dermatomyositis" affecting one leg.

We are indebted to Mr. H. H. Jamieson, of Sheffield, under whose care the patient had been before admission, for the valuable history of the case, to Mr. R. J. Pye-Smith, who performed the operation, and to Professor J. S. MacDonald, not only for much assistance to one of us (G. S.) in preparing the photomicrographs, but also for the full use of the valuable photomicrographic apparatus in the Physiological Laboratories of Sheffield University.

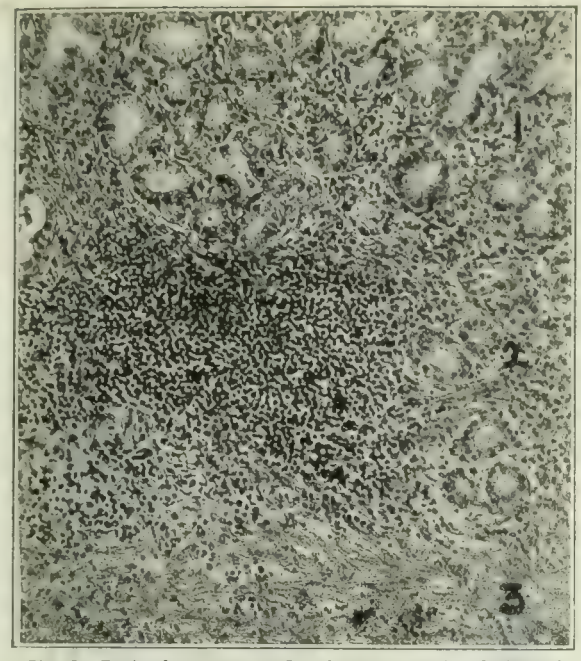


Fig. 1.—Part of mucous and submucous coats of stomach. (1) Glands separated by round-celled infiltration; (2) focus of same; (3) muscularis mucosae broken up by similar infiltration. (× 250.)

HISTORY.

The following history was kindly furnished by Mr. H. H. Jamieson, the patient's medical attendant:

A post-office clerk, aged 35, for a period of about eight years, between the ages of 22 to 30, had been very unsteady, indulging chiefly in beer. On getting married five years ago he much improved in his habits, though not foregoing an occasional drinking bout; the last occasion on which he had indulged himself was August 7th, 1905.

The first time I saw him was on July 14th, 1905, when he suffered from pain at the "pit of his stomach" and vomiting, generally a short time after food. On examination by percussion I found his stomach enlarged, and I could get a succussion splash. I advised lavage, but this frightened him away, and I did not see him again till August 28th, 1905. Between these dates he was attended by some one else for acute indigestion, but did not get any better. When I saw him on August 28th, 1905, he complained of sickness as before; the pyloric pain was not relieved by vomiting. On examining him I found the signs as before, but his pain was increased on pressure. Once more I recommended lavage. He wished me to suggest some other form of treatment first, so I examined his teeth, and found most of them in a very bad state, the gums being red and swollen, and around more than one tooth pus could be pressed out. I told him to try what effect the removal of his teeth would have.

On August 30th he had eighteen teeth extracted without an anaesthetic, and on September 2nd his wife came to me and told me her husband had had his teeth removed, and that his mouth was in "an awful state." I ordered an alkaline bismuth mixture, and tincture of myrrh, in water, for rinsing the mouth.

On September 4th he came to me himself, saying he was much better, but very constipated. On September 8th I was called to him at 8 p.m. He was in bed looking very ill, complaining of intense pain in the pyloric region, which was worse on pressure. He had vomited twice in the last hour, and felt very sick; he had brought up milk curd and yellowish fluid, but got no relief from vomiting. Headache was intense; the temperature was 100·5°, and the pulse 100. He was constipated, and the urine was loaded with urates. I thought he had caught a chill, for he had been out in the rain, and had been "doing about the house" till 7 p.m., when his acute illness commenced.

On September 9th I was called at 8 a.m. The pain in the pyloric region was very severe; he was constantly retching, but only brought up a little yellow-ochre coloured fluid; but since 4 a.m. severe watery diarrhoea, normal colour, had set in, and a great deal of straining. His body was covered with a red rash, so like scarlet fever that I examined his throat and tongue for further evidence of this disease, but there were no signs in these regions, and the arms up to the axillae and legs to the groins were quite free from rash. I ordered a common enema, and he passed a soft motion of proper colour; this arrested the diarrhoea and relieved his retching. The pain in the pyloric region still remained. The temperature in the axilla was 100·2° F., and the pulse 88. His wife tells me that he took plenty of fluid food all day, also the next day until he collapsed. He passed a very fair day, but had an increase of pain during the night. Vomiting of the same yellow fluid commenced on September 10th, at 4 a.m.; this was relieved by an enema; there was no diarrhoea. I saw him at 11 a.m.; the temperature was 100°, the pulse 88; he was in fairly good condition for a man who had not slept for three nights and had been in constant pain. The pyloric pain was still present and he was tender. The rash had partially disappeared. I gave him a hypodermic injection of morphine grain ⅓, and strychnine grain 1/30. I saw him at 3 p.m., when he seemed relieved of pain and better. The rash had disappeared. I saw him again at 11 p.m., when I learnt that the old pain had come on him more intensely than ever at 7 p.m. with severe retching. He had brought up only a little brown fluid, and complained of feeling very cold.

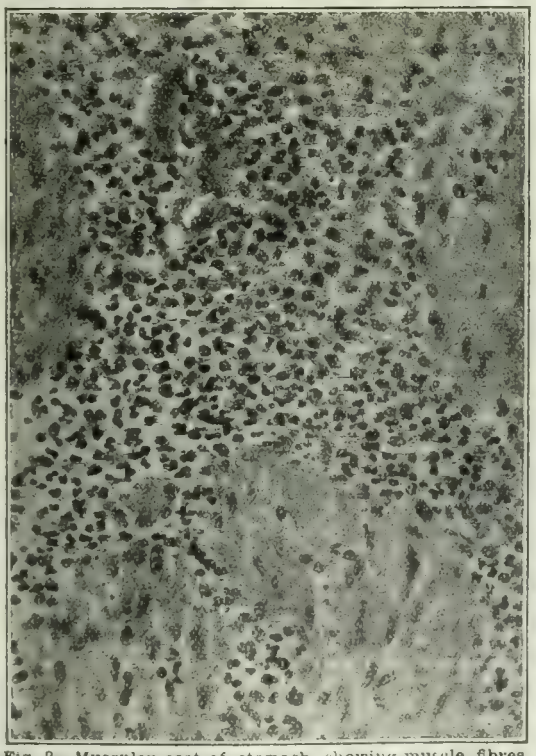


Fig. 2.—Muscular coat of stomach, showing muscle fibres broken up by round-cell infiltration. (× 750.)

The patient was seen at his home (in consultation with Mr. Jamieson) by one of us (A. J. H.) at 11.30 p.m. on September 10th. He was extremely collapsed, the face was pinched and hollowed. He was sweating profusely; the pulse was 160, and was hardly felt at the wrist. The extremities were cold. Respiration shallow and frequent. Abdominal respiration was diminished, but not absolutely lost. There was no cough. The tongue was coated, and there was some slight distension of the abdomen, with tenderness chiefly just above the umbilicus. Liver dullness was present. There was no distinct swelling; no evidence of rupture. The knees were drawn up. All over

the trunk, and very marked over the gluteal region, there was a mottled purplish erythematous rash, almost punctate on the trunk, more diffuse elsewhere. The striking character of it was its purplish colour (though not purpuric). The patient was admitted immediately into the Royal Hospital under the care of the surgeon on duty, Mr. Pye-Smith.

The condition found on admission was practically the same as above, but the following points were noted:

The abdominal wall was not rigid, nor was palpation painful, but light rubbing, as in the preparation of the skin for operation, caused some pain at, and above, the umbilicus. Firm pressure over the epigastrium made him feel sick.

A diagnosis of perforated gastric ulcer was made, though acute haemorrhagic pancreatitis was also discussed.

As it was the opinion of all who saw the patient that his one hope lay in an operation, he was at once infused, 3 pints of saline fluid being injected intravenously; his pulse now improved so that it could be felt at the wrist, and slowed down to 130; the patient said that he felt much better.

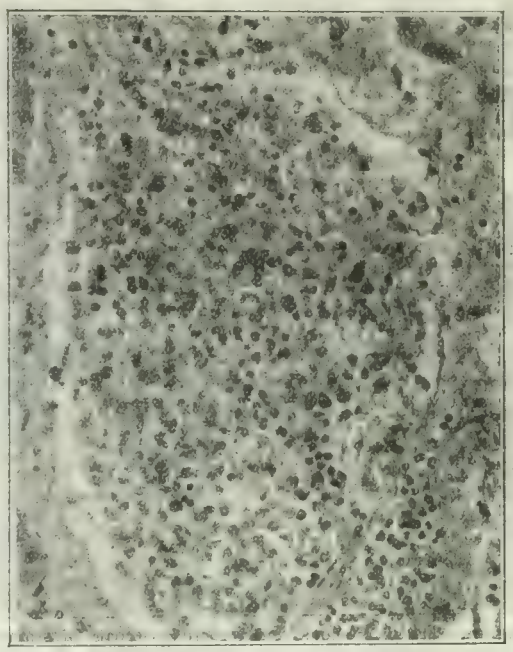


Fig. 3.—Branch of portal vein in liver substance, showing leucocytosis in vein and early infiltration of liver tissue by leucocytes. (× 250.)

OPERATION.

At 2.30 a.m., about two hours after admission, a vertical incision was made through the left rectus muscle, and the abdominal cavity was opened; neither gas nor fluid escaped, and there were no signs of peritonitis; later on, whilst handling the upper border of the pylorus, some turbid, inoffensive, reddish-brown serum escaped, and some lymph was noticed between the stomach and the liver.

The stomach was now examined; it was rather above the average size, and was paler than usual. The most striking feature about it, however, was that it both looked and felt unusually tight and distended; at first it was thought that the interior might be filled with blood; later, it was thought that a growth could be felt at the pylorus.

The question of opening and draining the organ was settled by the condition of the patient, who, in spite of infusion, strychnine, artificial respiration, and heart massage, died about half an hour after the commencement of the operation.

Before suturing the incision, the stomach was again examined, and we could now make out that the tight, distended feeling was due to a thickening of its walls; a piece of the whole thickness of the stomach was cut out, part being sent for bacteriological, and part kept for microscopical, examination. A naked-eye examination of the part excised showed that the stomach wall was greatly thickened, measuring fully 1 in. in diameter; most of this thickening consisted of a whitish infiltration of the submucous layer; the muscular coats could be recognized externally, and did not appear to be much altered; except for some injection, the mucous membrane also seemed normal. At the spot where the section was made, the infiltration was just breaking down to form pus. Owing to the thickness of the walls of the stomach, its cavity was almost obliterated, and the relative size of wall and cavity bore a striking resemblance to that of the uterus. The peritoneal coat, except over the upper surface of the pylorus, was not affected.

NECROPSY.

Necropsy was performed the same day.

The nervous system was not examined; there was some atheroma of the aorta. The abdomen showed some lymph between the stomach and the liver, but no general peritonitis.

The stomach weighed 25 oz., walls much thickened; this thickening was universal, but was most marked at the pylorus, and diminished towards the cardiac end. There was no ulceration of the mucous membrane. (The specimen has been added to the Pathological Museum of the Sheffield University.) The liver was enlarged, and weighed 74 oz. The spleen weighed 10½ oz., normal. There were some enlarged glands in the abdomen; they were not caseating.

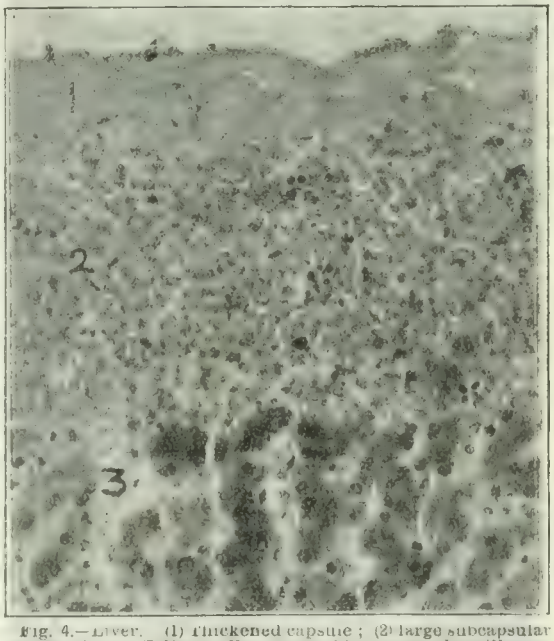


Fig. 4.—Liver. (1) Thickened capsule; (2) large subcapsular haemorrhage; (3) liver cells separated by engorged capillaries. (× 250.)

MICROSCOPICAL EXAMINATION.

Sections were cut and stained of the stomach wall, kidney, liver, pancreas, and spleen.

The Stomach Wall.—A section stained with haematoxylin and eosin showed a thin layer of fibrinous exudation on the surface of the mucous membrane. The gastric glands were separated from one another in places by a number of small round cells. Between them and amongst these cells were a number of thin-walled dilated vessels. On the whole, the glandular portion of the mucous membrane showed little change. The cells of the glands stained more deeply than usual. The muscularis mucosae could be seen; its fibres, which stained well, were much broken up by small-celled infiltration. Beneath this was a very thick layer of the same small-celled infiltration; the cells had a single relatively large nucleus, and appeared to be lymphocytes; a few looked like polymorphonuclear leucocytes; there were many red corpuscles scattered amongst this infiltration, and occasionally distinct haemorrhages. The whole of this infiltration was supported by a framework of fibrin. There were very few vessels to be seen in this submucous layer. The muscular coat of the stomach was very distinct and stained clearly; the fibres were separated and broken up by the same masses of round cells. Finally, there was a layer of small cells just under the peritoneum. A section stained by Gram's method showed enormous numbers of cocci arranged in various

ways; in some places they were obviously forming into lines: they seemed to occur everywhere where there was the inflammatory change.

The *kidney* showed dilatation of the blood vessels, with here and there haemorrhages. There were no changes in the renal epithelium.

The *liver* showed dilatation of the vessels which ran between the columns of cells forming a lobule. The portal veins were full of blood, and showed a marked leucocytosis, there being nearly as many white corpuscles as red; in places the leucocytes were seen outside the veins in the portal areas. The liver cells were pushed aside by the dilated capillaries; they showed marked vacuolation; there was an extensive subcapsular haemorrhage.

The Pancreas.—The blood vessels were dilated and full of blood, and there was some inflammatory exudation on the surface.

The *spleen* was normal except for some perisplenitis.

BACTERIOLOGICAL REPORT.

(By Dr. Charles Porter, formerly Lecturer on Bacteriology, University of Sheffield.)

A small piece of the greatly-thickened stomach wall from this case was received on September 19th, 1905.

The portion sent was found to be thickly coated on its inner aspect with a dirty-grey membrane, and from this films were made and stained by Gram's method. With the exception of a few clusters of staphylococci, the only organisms detected were streptococci.

Sections of the stomach wall, including the membrane, showed the same organisms in considerable numbers situated exclusively in the membrane.

The organisms isolated by cultivation were again streptococci and staphylococci, the colonies of the former far outnumbering the latter. The cultural characteristics of the cocci were those of *Streptococcus pyogenes* and *Staphylococcus pyogenes aureus* respectively.

The streptococcus was regarded as the organism chiefly concerned, and an attempt was made to estimate its virulence. For this purpose two small guinea-pigs weighing 120 grams each were employed. One was inoculated subcutaneously in the right groin with 1 c.cm. of a twenty-four hours broth culture of the isolated streptococcus, the other receiving 0.5 c.cm. intraperitoneally.

The animal inoculated intraperitoneally seemed to be little affected by the injection. Within twenty-four hours, in the guinea-pig inoculated in the right groin, the tissues in that region were found to be swollen and tender. Twenty-four hours later the swelling had extended along the side of the abdomen, as high as the edge of the ribs, and towards the middle line. At the end of three days the tissues over the lower part of the chest were also involved. During this time the animal was greatly out of sorts, but soon afterwards began to improve. The swelling gradually subsided, and at the end of eight days, with the exception of a small abscess in the middle line near the edge of the ribs, nothing was to be detected.

At the end of a fortnight both animals were killed. In the guinea-pig inoculated intraperitoneally nothing abnormal was found. In the other the abscess already mentioned was found to contain a small quantity of cream-coloured pus. Elsewhere there was nothing. The pus when examined was found to contain a considerable number of staphylococci, which were probably the cause of the abscess formation.

In the abscess cavity a few streptococci were found, but none elsewhere. The virulence of the *Streptococcus pyogenes* being notoriously variable, the organism found in the membrane was probably much more virulent than those tests would indicate, and it is almost certain that the conditions found in the stomach were produced by this organism.

Remarks.

The total number of recorded cases (under 100) of this disease sufficiently indicates its rarity.

Excellent tabulated lists of the cases to be found in medical literature have from time to time been published both in this country and elsewhere. During the last decade the following three have appeared. As reference to these is easy it is unnecessary to do more than mention them here. At the same time it may be a saving of time and trouble to others if we mention how the cases recorded in these three tables stand in relation to one another.

In 1896 Leith[1] was able to collect 51 undoubted cases of the diffuse form of the disease, including 1 under his own observation. These are tabulated, and a brief description of the sex, age, occupation, symptoms, and *post-mortem* findings is added in each case. This paper is well worth perusal, as the whole subject is fully dealt with, and in addition a valuable bibliography is appended.

In 1900 Jacoby[2] collected 64 cases from literature and added 2 more from Elsenberg's clinic, making a total of 66 cases up to that date. Many of these cases are not included in Leith's list, but in those that are there is little or no difference as regards the details.

In 1903 Moynihan[3] tabulated 81 cases. This is the largest complete list of the three, and contains all of those to be found in Leith's list and all but 4 in Jacoby's. Moreover, the chronological order of publication of the cases is followed more closely than in either of the others. In order to complete this list we will add here the 4 cases above referred to, and such others as we have been able to find references to in the literature published since the last case recorded in Moynihan's table, which is dated 1902.

Appendix.

Further Cases not included in Moynihan's List.

Case 82. Ohanutin. *Wratsch*, 1893 (quoted by Jacoby).
Case 83. Derbeck. *Wratsch*, 1895 (quoted by Jacoby).
*Case 84. Jacoby. Inaug. Diss. Königsberg, 1900.
*Case 85. Jacoby. Ibid.
Case 86. Schultze, H. New York Path. Society, November, 1901.
Case 87. Berka. *Centralbl. für allgem. Path. und Path. Anat.*, Bd. xiv, 1903.
*Case 88. Huguenin. *Rev. Méd. de Suisse Romande*, xxii, 1903.
*Case 89. Simmonds, *Münch. med. Woch.*, 1903, p. 1445.
*Case 90. Klieneberger. Ibid., 1903, p. 1338.
*Case 91. Hueter. Ibid., 1904, p. 85.
Case 92. Hopkins and Weir. British Medical Journal, 1904, vol. ii, p. 1406.
*Case 93. Cotterill. *Scottish Med. and Surg. Journal*, 1905, xvi.
*Case 94. Merkel. *Centralbl. f. inner. Med.*, 1905, xxvi, 257–262.
*Case 95. Schwarz. *Wien. med. Woch.*, 1905, lv, 904.
Case 96. Perrin and Blum. *Rev. Méd. de l'Est*, Nancy, 1905, xxxvii. (In this case the patient recovered.)

* References verified by us.—A. H. and G. S.

References.

[1] Leith, *Edinburgh Hospital Reports*, vol. iv. 1896. [2] Max. Jacoby, Inaugur. Dissertation, Königsberg, 1900. [3] Moynihan, *The Medical Chronicle*, November, 1903.

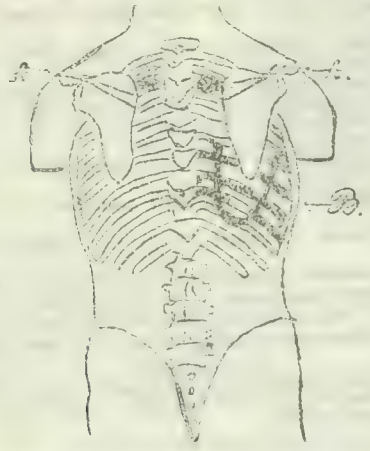
A SUCCESSFUL CASE OF THORACOPLASTY FOR THE RELIEF OF CHRONIC EMPYEMA.

By JOHN R. LUNN, F.R.C.S.Edin.
Resident Medical Superintendent, St. Marylebone Infirmary.

Having read the account of some most interesting cases of thoracoplasty in the British Medical Journal, December 10th, 1904, by Mr. Hamilton Ballance, I determined to try the operation on some of my chronic cases of empyema, in which the sinus had persisted for many months.

Edward A., aged 34, a labourer, first admitted in November, 1899, with phthisis, having been obliged to give up work on account of shortness of breath and cough. No family history could be obtained. Some weeks after admission he developed empyema on the left side; this was aspirated and about one pint of offensive pus withdrawn. The side soon refilled and the patient became very ill and hectic, with a high temperature. A piece of the ninth rib on the left side, about 1 in. long, was removed in the axillary line, and the empyema drained. The patient lived in the open air day and night; the wound healed rapidly and he gained weight. He was discharged in April, 1900. The man was readmitted in August of the same year, with signs of pus again in his chest on the left side; the old wound was reopened and several ounces of greenish offensive pus were let out. He again had outdoor treatment, his general health improved, and he was discharged February 1st, 1901, the wound in his chest having quite healed. Towards the end of March he tried to work, but the old wound reopened, and he was once again admitted in April. A tube was inserted into his chest; he took his own

discharge with the drainage tube still in. He was admitted once more in December, 1903, looking very ill and thin. His general health soon improved, but the old sinus showed no signs of closing. On June 16th, 1904, the cavity was curetted and washed out with an iodine solution. In August the wound began to heal, though still discharging freely. The patient had cavities at both apices of the lungs; he frequently coughed up sputa, which, however, contained no tubercle bacilli. The liver appeared to be enlarged (commencing amyloid disease?) His general health had not improved as on former occasions, though he gained slightly in weight; his heart was drawn to the left side of his chest. The sinus showed no signs of healing, his night sweats increased, and there was a rise of temperature every evening. He was anxious that something more should be done, and on February 1st, 1905, after explaining the danger of the operation to him, I decided to excise some ribs and give the man another chance of life. Every necessary precaution was taken before the operation. Brandy was given by the mouth and strychnine injected; he was clad in flannel and rested on hot-water pillows during the operation. Chloroform was first given, followed by A.C.E. mixture; the old discharging sinus was slit up, to allow the cavity to be well explored with the finger; the cavity was found to extend as far as the sixth rib; the pleura



The shaded portions show the ribs removed during the thoracoplasty; the non-shaded portion in the ninth rib represents the first piece of rib excised soon after admission. A, Vomicae; B, U-shaped flap corresponding to the cavity.

was much thickened. A large U-shaped flap, corresponding to the cavity to be closed, was made; the flap was then raised and turned upwards, including skin, fat, and muscles. The incision of the flap commenced from the middle of the vertebral border of the scapula on the level of the sixth rib (see diagram). This extended downwards to the upper surface of the tenth rib, below the discharging sinus, finishing at the axillary border (see diagram). The ribs with their intercostal muscles were exposed and were removed after being shelled out of their coverings, dividing them anteriorly and posteriorly. About 3 or 4 in. of the seventh, eighth, and ninth ribs were removed. The remaining soft parts, which consisted of muscles, thickened pleura, and periosteum of the ribs, were cut away with scissors. The bleeding was not excessive, but a few vessels were tied. The visceral layer of the pleura was then exposed. It was covered with prominent, unhealthy granulations; these were freely curetted, and pressure was applied by means of swabs soaked in adrenalin. The patient at this stage suddenly collapsed, and the operation was finished as speedily as possible. The U shaped flap of skin and muscles was brought down to cover the visceral pleura, the flaps were stitched together, the old sinus in the lower part of the flap was cut out, and a drainage tube inserted. The wound was hurriedly closed and the patient put quickly to bed and a saline injection given, after which he soon rallied.

The man's general health and condition rapidly improved; he gained 3 st. in weight, and was discharged July, 1906 looking fat and well.

A TYPHOID CARRIER OF TWENTY-NINE YEARS' STANDING.

By GEORGE DEAN, M.B., M.A.,
CHIEF BACTERIOLOGIST, LISTER INSTITUTE.

THE following case seems worthy of record from its almost unique character, and it serves to illustrate and elucidate a number of points in connexion with recent advances in our knowledge of the pathology and etiology of enteric fever.

History of the Case.

Twenty-nine years ago Dr. W. T., a medical practitioner had as a young man, during a residence in the United States, a severe attack of typhoid fever. During the hungry stage of his convalescence, he suffered from dyspepsia on several occasions, and within three months of the period of his illness, he had an attack of very acute pain in the region of the liver, with a feeling of distension in the neighbourhood of the gall bladder.

Attacks of this character since recognized by him as biliary colic recurred about every three months for over a year. Since that time they have become less frequent, but every year one or more attacks occur, often during holidays, and are generally associated with over exertion, long bicycle rides or walks, and irregular meals. Jaundice has sometimes been a feature of these attacks. His bowels act regularly, and his evacuations are normal. With the exception of these attacks, his health has been otherwise excellent, and he has carried on a very heavy practice during the last twenty years without being a single whole day off duty through ill-health. In view of the recent work on typhoid fever, it occurred to me that the case might be one of cholecystitis typhosa, and that W. T. was possibly a typhoid carrier. On discussing the question with him, he readily put himself at my disposal for investigation.

Bacteriological Examination.

In selecting the samples for plating, any mucus present in the faeces was included. A platinum loopful of faeces was emulsified in a broth tube containing 5 c.cm. of broth. Three loopfuls were then placed on the first of a series of Petri's plates containing MacConkey's bile-salt-lactose-neutral-red-agar. By means of a glass rod the material was distributed over the surface of the medium, and the same rod was employed for the inoculation of the second and third plates of the series.

Three samples have been examined, and in all of them the typhoid bacillus has been demonstrated. The first sample gave only non-lactose fermenting colonies, all of which proved to be *B. typhosus*. The second sample gave about equal numbers of colonies of the typhoid bacillus and of *B. coli communis*, and in this case a few colonies of the *Bacillus faecalis alkaligenes* were also present. The third sample gave seventy colonies of the typhoid bacillus and one colony of *B. coli communis*.

That we were here dealing with the typhoid bacillus was shown as follows:

The bacillus is a highly motile rod; it does not liquefy gelatine and does not produce indol. It produces acid, without gas formation, in litmus-peptone-water media containing glucose, laevulose, galactose, maltose, dextrin, and mannite, and no change in arabinose, saccharose, lactose, raffinose, inulin, erythrite, and dulcite; it produces acid in litmus milk.

The urine was examined but no typhoid bacilli were found.

The bacillus is pathogenic for the guinea-pig. Three guinea-pigs were inoculated intraperitoneally with 0·5 c.cm., 1 c.cm., and 2 c.cm. respectively of a twenty-four hours' culture in broth. The guinea-pig which received 2 c.cm. died within twenty-four hours, the other two animals survived.

The bacillus is agglutinated by an antityphoid horse serum in a dilution of 1 in 10,000.

Agglutination Tests with Patient's Serum.

With the bacillus ordinarily used in the Institute for the Widal test the patient's serum gave an agglutination in a concentration of 1 in 25 but failed to do so in 1 in 50, and 1 in 100.

With the patient's own bacillus the patient's serum failed to produce agglutination even in 1 in 25. That the absence of this reaction with the patient's own serum is not due to the lack of suitable receptors in the bacillus is proved by the fact that it was capable of being agglutinated by immune horse serum.

Within the last two years a revision of our conception of many of the factors concerned in the epidemiology and pathogenesis of typhoid fever has become necessary, and this has been almost entirely due to the work of Förster and his collaborators in the Strassburg laboratories. That work is being confirmed on all sides at the present time. Formerly we pictured the typhoid bacillus as finding its way into the alimentary canal, multiplying there, and invading the tissues, chiefly the lymphoid tissues, of the small intestine and the spleen, and only secondarily and fairly late in the disease finding its way into the blood stream.

The new conception as outlined by Förster, is briefly as follows: The bacilli have been shown by Conradi to be present in the blood during the incubation period, and even before the bacilli can be found the presence of antibodies may be demonstrated by the precipitin test, as was shown by Fornet. On the other hand, it is only during the first and second weeks of the disease that the bacilli appear in the faeces. The bacilli, therefore, do not multiply in the gut, but at a very early stage find their way through the wall of the alimentary canal, perhaps even from the fauces and tonsils into the lymphatics, and thence into the blood. While the bacillus is producing its effects on the lymphoid tissues of the gut, etc., other and not less important events, which till recently had been overlooked, are taking place.

At a very early stage the bacilli find their way into the liver and bile, and here their presence gives rise to inflammatory changes in the bile ducts and gall bladder. These changes have been observed in cases of disease in man, and also after the intravenous injection of the microbes into animals. The normal bile, according to Förster, is not a very suitable medium for the typhoid bacillus, but when albuminous material is added to it the bacillus finds in it an excellent pabulum. In the case of typhoid fever the albuminous material is supplied by the inflammatory exudate from the ducts and gall bladder, and the bacilli grow freely under these conditions in the gall bladder and pass out through the bile duct into the small intestine, thence into the large intestine, and are thrown out in the faeces. The irregular occurrence of the bacillus in the faeces is thus explained. In the later stages the bacilli from the ulcerated gut are added to those coming from the gall bladder.

In most cases recovery is accompanied by a cessation or clearing up of the inflammatory processes in the liver, bile ducts, and gall bladder; but in a certain number, about 2 per cent., of the cases this cholecystitis typhosa becomes a chronic process. Such cases are those which constitute the group of typhoid carriers. The bacillus continues to multiply in the gall bladder for periods varying from months to years, and to be thrown out into the gut and thence into the outer world. The gall bladder of such cases may be regarded as a normal habitat of the typhoid bacillus.

In certain of these cases gall stones occur, and it is still an undecided point whether these precede the typhoid fever, in which case they would play a part in the production of the typhoid carrier, or, as seems more probable, are the result of the processes indicated.

It is interesting to note that just as three-fourths of the cases of biliary calculi occur in women, so three fourths of the typhoid carriers are also women.

That such typhoid carriers are, especially under certain conditions, a public menace has been proved by the investigation of many outbreaks. When the carriers are cooks, bakers, or in any way connected with the food supply, it has been conclusively demonstrated that they may act as the distributors of infection to many individuals. The importance of this question of typhoid carriers from the point of view of preventive medicine can hardly be overestimated. Such cases probably account for the sporadic cases the origin of which has, in the absence of this knowledge, been so puzzling. It also gives a key to the understanding of outbreaks of enteric fever among soldiers in the field. It is obvious that the first step in dealing with such cases is their recognition. This might be arrived at by systematic examination of the stools of all convalescents, and the knowledge of being a source of danger to others would in the case of many lead to greater care of the personal hygiene. I do not propose to enter into the discussion of this side of the question, as it has already been dealt with in this Journal in a communication by Drs. A. and J. C. G. Ledingham.[1]

We have in this case, therefore, a typhoid carrrier, and everything in the history points to the conclusion that the condition had its origin in the attack of typhoid fever which occurred in America twenty-nine years ago.

The suspicion that this was a typhoid carrier was not aroused by the occurrence of cases associated with the carrier, as has been the case in most of the isolated carriers hitherto investigated, but was deduced from the history, because, so far as Dr. T. knows, not a single case of infection originating from him has occurred. The fact that he is a bachelor with a small household has probably some influence in this, but it is counterbalanced by the fact that he has frequently lived in households containing from six to twelve individuals. This points to the conclusion that with educated people in fairly hygienic surroundings, and where personal hygiene is carefully attended to, the risk of infecting others is not so great as might be imagined. The very definite history of the first attack of biliary colic in a young man occurring three months after typhoid fever, strongly suggests that the calculi were the result of the infective processes.

The case raises many questions of the deepest interest from the point of view of immunity and bacteriology generally. That typhoid bacilli have been passing probably almost continuously for this long period from his gall bladder through the greater part of the alimentary canal, yet without causing recrudescence of the disease, and without producing any marked deleterious influence on the health, is itself a sufficiently striking fact.

In the majority of such cases which have been examined, there is evidence that by a process of absorption of the bacilli or their products immune substances are formed, and are thrown into the blood, the serum acquiring marked agglutinating properties.

In this case, however, the serum does not possess more agglutinins than are frequently present in the blood of healthy individuals, which suggests the possibility that here the absence of bad effects may be due to a local immunity. The fact that serum possesses such low agglutinating properties that it would have been reported as a "negative Widal" by most laboratories is an important point to be noted in the investigation of such cases, for it shows that a negative reaction does not exclude the possibility of a case being a typhoid carrier.

Another point of great interest is the extraordinary change which may take place in the bacterial flora of the faeces. A comparison of the results of plating the faeces in this case with those obtained under parallel conditions from normal cases, shows that there is an enormous reduction in the total number of organisms present in the faeces, and that the normal inhabitants have been altogether, or largely, replaced by the typhoid bacillus. Of the mechanism by which this is brought about we have no knowledge. It is hoped that the further investigation of this and similar cases may yield interesting results.

REFERENCE.

[1] A. and J. C. G. Ledingham, Typhoid Carriers, British Medical Journal, January 4th, 1908.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

SUGAR HEADACHES.

I have been struck for a long time by the number of so-called "bilious attacks" which are due to taking sugar in excess. The sugar standard of Nature is the quantity in milk—that is, a baby or young animal can thrive on the amount found in the "perfect food." But the sweetness of milk is exceeded greatly in our tea and coffee, to say nothing of the starches (converted into sugar in the adult) not found in milk. Again, the quantity of sugar in an average body is said to be two and a half teaspoonfuls, that of salt being about one. Think of the pinch of salt we take to maintain the average, and the enormous amount we take of sugar and starch during the day! Many people take five to seven cups of tea and coffee, each containing two to three heaped teaspoonfuls of sugar, and sometimes condensed milk (also sugary) as well. This excess is converted into lactic acid, which irritates the terminations of the gastric vagus and sets up the well-known but badly-named "bilious attack," with its distressing symptoms of "megrim," of which the commonest is hemi-headache, generally referred to the left eyeball and relieved by pressure, together with vomiting, giddiness, and depression.

A patient has just left my house who confessed to taking five cups of tea daily with three heaped teaspoonfuls of sugar in each—that is, fifteen teaspoonfuls daily. In addition to this, there is often a large quantity of jam or marmalade daily, with sweets and chocolate at

the week end. Here is a diet chart of A. Y., a girl of 17, which is very moderate compared to many in the quantity of sugar taken:

7 a.m. One cup of tea with one teaspoonful of sugar and half of condensed milk.

10 a.m. Two cups of tea with ditto of sugar and milk.

1.30 p.m. One cup of tea after dinner with ditto. Tart with sugar.

4 p.m. Two cups of tea with ditto. Sweet cakes.

9 p.m. One cup of coffee with one and a half teaspoonfuls of sugar.

This means eleven teaspoonfuls of sugar, not including the condensed milk. There was also the sweets and chocolates at the week end (admitted), together with starches, jams, etc.

Personally I wish that sugar were 10d. instead of 2d. a pound, in the interests of the race—that is, for domestic purposes; and I feel sure that many puzzling cases of "headache," for which eye-strain, heredity, and other causes are assigned, are due to sugar in excess. The treatment is, of course, obvious.

Newcastle-on-Tyne. T. M. ALLISON, M.D.

A METHOD OF REDUCING DISPLACED INTERNAL SEMILUNAR CARTILAGE.

IN this condition, which usually occurs in consequence of a twist of the knee-joint while in a state of flexion or fixation, the cardinal symptom is an inability to extend the joint fully, any efforts in this direction being attended with pain; if unreduced, the cartilage remains nipped between the tibia and femur, the patient's walk being a limp with the knee semiflexed, while sooner or later synovitis is certain to occur. The method sometimes recommended is to extend the knee forcibly, but this without an anaesthetic is barbarous in the extreme, and even with one, is liable to be followed by very severe synovitis.

I have found the following method very successful; it is, when once understood, exceedingly simple to practise, it is absolutely painless and, if the patient has not made unavailing efforts to reduce the displacement or has not endeavoured to walk, practically unattended with synovitis.

The patient lies on a bed or couch, the surgeon standing on the outer side of the limb affected, with his face towards the patient's foot; the patient then raises his leg off the couch in the semiflexed condition, the surgeon grasps the patient's leg in both hands, and using his own thigh as a fulcrum, by means of a steady pulling movement draws the patient's leg outwards while the surgeon's thigh keeps the patient's femur in a fixed position; directly this movement is effected the patient must steadily extend the limb, and the displaced cartilage will probably go back with a slight click; if the first movement of extension is not successful the manœuvre must be repeated without any hurry or unnecessary force, and after a few attempts the cartilage can usually be felt to slip in without pain or inconvenience.

The rationale of this little manœuvre I take to be that the levering outwards of the patient's leg reduces the resistance to the backward passage of the semilunar cartilage, which then slips back into place with the aid of gravity. In view of the frequency of accidents of this description I venture to record this method, although it is quite likely that others may have already practised it. The chief points to recommend it are its extreme simplicity, the absence of pain, and freedom from after effects.

Great Malvern. HENRY W. JACOB, M.D.

RIGOR MORTIS IN A STILLBORN INFANT: RUPTURE OF THE UTERUS.

IN September last I was called to a confinement. The patient had been several hours in labour; I found her very weak, and the pains had completely ceased. The head presented at the vulva, and I immediately delivered by forceps. The infant, well formed and complete, came out perfectly straight, full length, and rigid; rigor mortis well established. In removing the placenta internal examination revealed a ruptured uterus, a large tear existing in the left posterior portion, caused undoubtedly by the feet of the infant projecting through the wall of the contracting uterus. The woman collapsed and died within an hour.

Verulam, Natal. JOHN F. ELLIOTT, L.R.C.P. and S.I.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, January 31st, 1908.

Professor J. T. J. MORRISON, M.Sc., M.D., in the Chair.

Cerebral Cyst.—Dr. STANLEY BARNES and Mr. GILBERT BARLING showed a case of cerebral cyst after operation.

The patient was a male, 20 years of age, with a good previous history. Four years ago he began to have Jacksonian fits beginning in the right hand, and continuing at average intervals of two months until a year ago. Headache began eighteen months ago, and during this time he had had many "bilious attacks." For the last twelve months there had been some progressive weakness of the right arm and leg. On examination he was found to have a chronic optic neuritis with 2½ dioptres of swelling in the left disc, and 3 dioptres in the right; there was a slight hemiplegia, most marked in the right hand, where the power was about one-half of the normal. There was complete astereognosis in the right hand below the wrist, locating of position of the fingers and recognition of the nature of objects held in the hand being absent. Writing was impossible. At the operation a subarachnoid cyst containing clear fluid was found in the centre of the parietal lobe; the cyst did not appear to contain any tumour, and after evacuation the intracranial tension was reduced to normal. The case was shown four weeks after operation, when the wound was entirely healed, the hemiplegia was gone, and the astereognosis had almost disappeared. The writing was now almost normal, whereas for several months before operation he had been totally unable to write.

Deformity of Ulna.—Mr. GAMGEE showed a boy, suffering from a deformity of the lower end of the ulna.

Uterus with Pregnancy and Cervical Fibroid.—This specimen was shown by Dr. PURSLOW.

The patient had been married nine years, and there had been one confinement eight years ago. When admitted to the Queen's Hospital she stated that menstruation had been in abeyance since the end of May; two months previous to admission she was seized with violent pain in the lower part of the abdomen, and was laid up in bed for three weeks; the pain, though less severe had persisted, and on that account she was sent to the hospital. On examination, the soft gravid uterus could be felt reaching to the umbilicus, and low down on the right side a hard tumour the size of a fetal head could be made out on bimanual palpation. This tumour appeared to almost entirely fill the upper part of the pelvis, but did not extend above the pelvic brim; it was firmly fixed, and could not be pushed up. The abdomen was opened, and an attempt made to enucleate the tumour, but in doing this the uterine cavity was extensively opened, and it was thought safe to perform hysterectomy. Patient made an easy recovery. The specimen showed a uterus containing an intact ovum of five months' development. The unruptured amnion protrudes through an opening at the level of the internal os, and, below this, in the wall of the cervix, is a hard fibroid, 4 in. in diameter.

Pregnant Uterus with Fibroid, the latter in a state of "Red Degeneration."—This specimen also was shown by Dr. PURSLOW:

The patient had been pregnant once previously. On that occasion abortion occurred at the fifth month, and Dr. Purslow was called in by the medical man in attendance, as there was retention of the placenta, with severe haemorrhage. Considerable difficulty was experienced in removing the placenta on account of the presence of a large fibroid. The patient was advised to have the tumour removed, but was not again seen until she thought that she was pregnant, when, as she was having severe abdominal pain, she consulted her medical adviser, and he sent her to the Queen's Hospital. Abdominal supravaginal hysterectomy was performed. The patient made an uninterrupted recovery, and left the hospital on the eighteenth day after operation. The specimen, which weighed 6¾ lb., shows a uterus divided sagittally, containing in its upper part a fibroid tumour, spherical in shape, and 6 in. in diameter. The surface of the tumour is deep red in colour, but at the periphery is a layer, about ½ in. in width, of normal white uterine tissue. Below the tumour is a gestation sac containing a three months fetus.

Mediastinal Sarcoma.—Dr. DOUGLAS STANLEY showed specimens from a case of round celled sarcoma.

The patient was a plumber, aged 22, who was sent to the Queen's Hospital as having phthisis and pleural effusion. On examination were found great diminution of respiratory movements on the right, absolute dullness from the middle of the scapula downwards, with diminution and—lower—suppression

of breath and voice sounds. There was no cardiac displacement. There was no evidence of intrathoracic obstruction. The abdomen was enlarged, and a nodulated mass could be felt extending from the right costal margin to 4½ in. below the umbilicus. An exploring needle was put into the dull area at the right base, and on being withdrawn was found to contain a small plug of puriform material, microscopic examination of which showed round cells. The diagnosis was sarcoma of the right lung, with secondary deposit in the liver. The patient died a week after admission. On *post-mortem* examination the lower two-thirds of the right lung were completely infiltrated with growth, but obviously a secondary extension. A large mass about the size of a hen's egg was found in the posterior mediastinum, which seemed to have originated in a lymphatic gland, and was apparently the primary growth. The liver, which weighed 195 oz., was densely infiltrated with secondary growth. There were also deposits in the pancreas and along the vertebral column.

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting was held at the General Hospital, Cheltenham, on February 20th, the PRESIDENT being in the chair, and 29 members present.

Microscopical Demonstrations.—Dr. COLLINS showed the following microscopical specimens: (1) Cammidge's reaction in pancreatic disease; (2) *Spirochaeta pallida* from a hard chancre; (3) malarial parasite; (4) meningococcus of cerebro-spinal fever. Dr. H. BRAMWELL showed two pathological specimens—primary carcinoma of kidney and chronic ulcer of stomach; these were discussed by the PRESIDENT, Mr. CARDEW, and Dr. COLLINS.

Purulent Nasal Discharges.—Dr. GLEGG read a paper on the sources, symptoms, and diagnosis in purulent discharges from the nose. The various sources of purulent intranasal discharges were referred to along with the etiology of the conditions. Empyemata of the nasal accessory cavities were specially considered, and three clinical varieties of them described—the acute, the chronic evident, and the chronic latent empyema. An account was given of the signs and symptoms, and special reference made to the occurrence of retrobulbar optic neuritis in certain cases of empyema of the posterior ethmoidal cells. A case of this nature occurring in the author's hospital practice was mentioned (*Lancet*, September 30th, 1905), where restoration of vision followed operation on the posterior part of the ethmoid labyrinth. The paper concluded with a description of the method of differential diagnosis. The paper was discussed by the PRESIDENT, Mr. E. DYKES BOWER, Dr. H. BRAMWELL, and Mr. J. A. BOWER.

Tetanus.—Mr. ARTHUR CARDEW read the notes of two very interesting cases of tetanus, which were discussed by the PRESIDENT, Dr. CONDER, and Mr. WALLER.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Acute Suffocative Catarrh.

AT a meeting on February 25th, Dr. S. J. GEE, President, in the chair, Dr. SAMUEL WEST read a paper on the acute suffocative catarrh of Laënnec, a rare disease which was still but little recognized. It was an acute catarrh of sudden onset, with suffocative dyspnoea, lasting twenty-four to forty-eight hours; if not fatal, then running the course of an acute bronchitis. A case was cited in a young man aged 23. In twenty-four hours, from a condition of perfect health, he passed into a state of urgent dyspnoea, with considerable cyanosis, and looked as if likely to die. In twenty-four hours more the urgent dyspnoea passed off. A little expectoration was then brought up, and found to contain a few pneumococci, but a large number of diphtheroid bacilli of uncertain nature. The case ran a slow and tedious course towards recovery. The following conditions were either liable to be confused with true suffocative catarrh or presented relations with it: Acute suffocative pulmonary oedema; capillary bronchitis; secondary bronchopneumonia; primary bronchopneumonia; certain cases, in the early congestive state, of acute pneumonia; acute suffocative pulmonary oedema, with antecedent morbus cordis, or in the course of hyperpyrexia, or of malignant or septic fevers. Laënnec's acute suffocative catarrh was a peculiar and characteristic affection, and might, as the case recited suggested, be due to a widespread bacterial infection.

The PRESIDENT mentioned a fatal case that had occurred in his experience which he had taken to be a case of acute bronchitis. Dr. F. J. WETHERED referred to cases resembling acute suffocative catarrh following operation, also to cases with similar symptoms associated with the inhalation of sewer gas. After Dr. W. EWART had made some remarks, Dr. WEST replied.

Acute Ulcerative Colitis.

Dr. SIDNEY PHILLIPS described the illness of a house painter, aged 39, who was seized with sudden acute pain in the abdomen, taken to be lead colic. A diagnosis of colitis had been based on the diarrhoea, melaena, leucocytosis, and hiccough. The necropsy showed the whole length of the colon to be acutely inflamed, with almost general denudation of epithelium, and with small early ulcerations; other organs were healthy. The case ran an unusually rapidly fatal course, and early cardiac failure and anuria were notable features of the attack. Dr. W. P. HERRINGHAM believed that ulcerative colitis had a definite cause, probably bacillary. Dr. HOWARD TOOTH referred to cases of dysentery he had examined in South Africa, the lesions in which were similar to those of ulcerative colitis. Dr. H. HAWKINS agreed that the cases of ulcerative colitis were hardly, if at all, to be distinguished from bacillary tropical dysentery. In two of his cases the blood had caused agglutination of Shiga's bacillus. He alluded to another case like that described in the paper associated with liver abscess, and giving only the colon bacillus on bacteriological examination. He thought that in such cases the sooner the colon was opened surgically the better. Dr. NORMAN DALTON considered the differences in type of cases of ulcerative colitis and cases of dysentery to be due to differences in virulence of the same organism. He had had, however, a case of papilloma of the intestine the blood from which agglutinated Shiga's bacillus. Dr. F. PARKES WEBER asked as to the coexistence of other diseases in cases of ulcerative colitis which might act as predisposing causes, particularly disease of the kidneys. Dr. A. ELLIOTT and Dr. S. WEST also argued for the identity of ulcerative colitis and acute dysentery. The paper was further discussed by the PRESIDENT and Mr. CHARTERS SYMONDS, the latter of whom raised the question whether cases of ulcerative colitis recovered, as those of dysentery certainly did. Dr. SIDNEY PHILLIPS, in reply, said he had had many cases of ulcerative colitis examined bacteriologically for Shiga's bacillus with a negative result. He had frequently seen recovery occur in undoubted cases of ulcerative colitis.

DERMATOLOGICAL SECTION.

At a meeting on February 20th, Dr. H. RADCLIFFE CROCKER, President, in the chair, the following were among the cases shown:—Dr. H. G. ADAMSON: A case of multiple telangiectases of the cheek in a young girl. Many members considered it an example of *Adenoma sebaceum*. Dr. WILFRED FOX: A case of *Lichen planopilaris*, following upon an eruption of ordinary lichen planus; it had been treated with injections of atoxyl and had benefited rapidly with this treatment; there had appeared some spiny papules like lichen spinulosus. This sequence had been noted before. Mr. T. J. P. HARTIGAN: Several cases of *Lupus erythematosus* which had been greatly benefited by treatment with zinc and copper ions after the method recently advocated by Dr. Lewis Jones. Dr. GRAHAM LITTLE: (1) A case of *Leuconychia* in a young man, all the nails of both hands being affected. The nails of the feet were normal. (2) A case of *Lichen annularis* in an infant, in whom two typical ringed lesions on the buttocks constituted the whole eruption. (3) A case of *Lymphangioma circumscriptum*, noted at birth, in a little girl now ten months old. Sir MALCOLM MORRIS: A case of *Elephantiasis graecorum*, complicated by the administration of iodides in large doses. Some of the eruption was undoubtedly due to iodism. Dr. J. H. SEQUEIRA: A case of ulcerating granuloma of the West Indies (*Granuloma inguinale tropicum*) in a man who had the typical ulcers on the groin, and a very unusual fungating ulcer at the angle of the mouth. Dr. PARKES WEBER: A case of telangiectatic hypertrophy of the foot, which he considered as possibly of spinal origin. Dr. WINKELRIED WILLIAMS: A case of rodent ulcer with no raised border such as is usually considered to be distinctive of the disease.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, March 2nd, 1908.

MALIGNANT DISEASE OF THE CAECUM.

MR. CHARTERS J. SYMONDS, in the third Lettsomian Lecture for 1908, said that as cancer of the intestine was a painless infection it did not become manifest until the appearance of a tumour or the signs of obstruction. It was therefore important to remember that when those signs arose the disease had been in existence some time, often for many months. In cancer of the large intestine, excluding the rectum, operative measures were very satisfactory, even when large portions required to be removed. The lymphatic infection was slow to occur, and the extension to the peritoneum and other organs was long delayed. While advocating early and even extensive removal in suitable cases, he did not wish any one to think lightly of such operations, since a disaster might cut short a life with a year or more of satisfactory existence before it. They demanded a knowledge when to proceed with and when to abandon an operation, what limits to set to the undertaking, and a patience that would not fail when further but removable infiltration was found after all had apparently been removed, and that would examine and see that no weak point in the defence had been left unprotected. The first part of the large intestine was particularly suitable for resection, on account of the length of the mesentery, the ease with which it could be handled, and the satisfactory condition in which the parts could be left, for in joining the ileum to the transverse colon the functions were practically undisturbed. In the caecum the two chief signs of malignant disease were the presence of a tumour and early intestinal colic. Typically such a tumour appeared as a movable, hard, well-defined mass, so close to the abdominal wall that it might be grasped by the hand and even lifted forwards. From a position of rest it could be moved downwards, swinging inwards as it descended towards the median line and the margin of the rectus. Upwards towards the ribs it took a more vertical course, and did not pass into the loin. It again could be moved directly inwards towards the umbilicus. During this movement a gurgle might often be heard. While the range of movement varied with the natural mobility of the caecum in any individual, and while it might be limited by fixation of the growth, the appearances described did not occur in any other tumour about the caecum. The characteristic of the colic was that at first the pain was central and later in the caecal region. It was of brief duration, attended with gurgling and often by vomiting, unaccompanied by nausea. When the disease began in the ileo-caecal valve, colic would precede the appearance of a tumour. On the other hand, when the disease began above the valve, colic might be entirely absent. The mobility of the tumour and the presence of good health might sometimes lead to error in diagnosis. A suppurating growth might also resemble appendicitis. Resection was out of question in the presence of secondary deposits and with infiltration of the posterior wall, but moderate infiltration of the anterior wall did not always negative operation; nor did adhesion and infiltration of a coil of small intestine always negative extirpation. The presence of pallor, as a rule, indicated a condition that would not endure a long operation. It was due to disseminated growth—true cachexia—to small haemorrhages, as in gastric carcinoma, and to necrotic changes in the growth. When this last was the cause, removal might be carried out if the patient was vigorous. Murphy's button for making a junction between the end of the ileum and the side of the colon was preferable to direct suture. A button not more than ¾ in. in diameter should be used, and a row of Lembert sutures placed round the junction, and the parts surrounded, whenever possible, by great omentum. Anastomosis should be postponed when the contents of the bowel were septic. When palliative treatment by anastomosis was carried out there was no necessity to divide or otherwise occlude the ileum below the junction. Such action determined the accumulation of faeces in the colon between the growth and the junction.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Pregnancies in Bicornuate Uteri.

AT a meeting on February 7th, Dr. E. H. TWEEDY, the President, exhibited an ovum from the horn of a bicornuate uterus.

The patient, who had borne three or four children, had had persistent haemorrhage since January He made a tentative diagnosis of tubal pregnancy. He operated the following day, and, to his surprise, found a small uterus, with the tumour growing out from the side of it. When he split the tumour in the direction of the tube, the ovum came out, and it then appeared that he was dealing with a two-horned uterus. In thinking the case over, he was convinced that the woman would have carried her child to full term. She had had two miscarriages and three children, and they had all, he believed, developed in that horn. The whole question of operation in a two-horned uterus was in an unsettled state. They were led to suppose that even if they diagnosed a pregnancy in a two-horned uterus, they should treat it as though it were a tubal pregnancy; but there was no doubt that there were many women who bore children in the presence of this abnormality. The size of the tumour might have led him to a correct diagnosis; it had grown enormously in the ten days between his examinations and the operation, yet it had not burst.

He had never seen a tubal pregnancy so large without rupture taking place, a fact which might have put him on the way to a correct diagnosis. Nothing had come from the uterus since; and, so far as he knew, all the other full term deliveries were normal and easy.

A Modification of Neville's Forceps.

Sir A. MACAN showed a modification of Dr. Neville's forceps, on which he had a stop put so that, by making a slight movement of the axis traction handle, he could tell at once, without looking, that the pointer was in the right direction. Dr. FITZGIBBON said that being able to utilize one's ears was an advantage, though he did not see the necessity of watching the perineum at the time the axis-traction was in use. Dr. HOLMES thought the addition of the small check was of great use in allowing the eyes to be taken off the forceps and the whole attention to be given to the perineum. Dr. SPENCER SHEILL said the forceps shown had the advantages of the Simpson forceps without its disadvantages.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 31st, Dr. WALKER DOWNIE, President, in the chair, Dr. A. A. GRAY reported a case of *Temporo-sphenoidal abscess* which had ruptured into the lateral ventricle. On opening the abscess very fetid pus mixed with cerebro-spinal fluid escaped. After operation great improvement took place. Consciousness and intelligence were quite restored, and the various paralyses, previously present, disappeared to a great extent. A few days afterwards, however, meningitis set in, and the patient died fourteen days after operation. *Post-mortem* examination revealed a long and tortuous sinus passing almost horizontally backwards from the abscess and opening into the lateral ventricle at the point where the posterior joins the middle cornu. The infection thus had reached the right lateral ventricle, and had then extended to the third ventricle, from there to the left lateral ventricle and downwards to the fourth ventricle, through the aqueduct of Sylvius. From the fourth ventricle pus had escaped into the arachnoid space, and caused a basal meningitis, and involved all the cranial nerves. The chief interest of the case lay in the comparatively long time the patient lived after the rupture of the abscess into the lateral ventricle. This was probably due to the operation being performed very soon after the rupture, and from the rupture being more a gradual leakage into the ventricle rather than a sudden burst. Dr. FREELAND FERGUS read a paper on the *Causes and treatment of lacrymation*. Hypersecretion of tears was caused by emotion, the presence of a foreign body, injury, as by chemical fumes, and also frequently accompanied inflammatory diseases of the conjunctiva. In the latter it was impossible to determine how far it was due to the action of the lacrymal gland, and how far it was merely the increased discharge from the inflamed membrane. Frequently the correction of refraction errors stopped a troublesome lacrymation. The most frequent cause was some obstruction to the elimination of tears by the usual passages. The obstruction was situated at the

punctum, in the canaliculus, or in the sac and nasal duct. Rarely the punctum and canaliculus were absent, in which case little could be done, and the gland might have to be removed. Gradual dilatation by Nettleship's dilator was sometimes possible in cases of marked stenosis of the punctum and canaliculus; probes could afterwards be passed. The treatment of displacement of the punctum varied with its cause. Pathological changes in the sac or in the nasal duct formed the most important group, and were generally caused by a septic or inflammatory state of the mucous membrane of the sac. There was then a great danger of corneal infection if the epithelium became abraded. In the acute stage sedatives should be applied, later small-calibred probes could be passed down to the nasal duct. The cavity should then be thoroughly irrigated with normal saline solution. Bowman's or the smallest sizes of Snellen's silver probes were safest. Pressure on the sac to empty its contents into the nasal passages was dangerous, as septic matter might be extruded into the tissues, and there was always the danger of corneal suppuration. In those cases where systematic probing was not sufficient, or where periodic acute attacks came on, the sac should be excised. This operation generally gave excellent results, and lacrymation was no longer troublesome. If, however, it still was troublesome the lacrymal gland could be excised. The following points were emphasized: The canaliculi should never be slit up. Probing should be little resorted to. No drug that could be used was bactericidal, so that if drainage and washing were not sufficient the sac should be destroyed by caustic or extirpation. The primary condition was a septic mucous membrane and not a stricture, hence large probes should never be used.

Aberdeen Medico-Chirurgical Society.—At a meeting held on February 6th, Dr. George Williamson, President, in the chair, Dr. J. Wallace Milne described two cases of *Resection of the bowel* for the relief of acute obstruction supervening in a chronic condition of partial obstruction. The first case was that of a girl, aged 10 years, who was admitted to the Aberdeen Royal Infirmary with an intussusception of six days' standing. As the obstruction was not complete and her symptoms were not urgent, Dr. Milne resolved to watch the case. On the seventh day after admission symptoms of acute obstruction manifested themselves. Laparotomy was performed, and an intussusception of the triple or telescopic variety was discovered. The ileum was seen disappearing into the caecum, carrying with it the appendix. As there were no adhesions the susceptum was easily expressed from the ascending colon, and a tight gangrenous intussusception of the ileum was discovered. This was resected. On the forty-fourth day after the operation the patient developed an empyema on the left side. This was treated by resection of a rib and drainage. The subsequent history of the case was good. The second case was that of a man, aged 48 years, with symptoms of acute obstruction due to a malignant stricture of the descending colon. The condition of the patient was too bad to permit of resection, and a short circuit of the transverse colon to the sigmoid flexure was therefore made by means of Murphy's button. The condition of the patient rapidly improved, and on the thirty-sixth day the tumour, with 6 in. of the descending colon, was resected. This patient made an uninterrupted recovery. He had gained nearly 3 st. in weight, and had been able to return to work. With the exception of a slight faecal fistula his general health was excellent. Professor Finlay gave particulars of a case of *Chronic pleuritic effusion* which, after two ordinary tappings, yielding respectively 66 and 47 oz. of serofibrinous fluid, was treated after Sir James Barr's plan on four subsequent occasions, a solution of adrenalin chloride varying in quantity from 1 to 5 drachms (strength 1 in 1,000) being injected. The quantities of fluid removed on these four occasions were 47, 75, 70, and 70 oz. respectively. There was a distinct lengthening of the periods between the tappings after the use of the adrenalin, but the pleura had filled up again, and there was thus no permanent improvement. Mr. Gray agreed with Professor Finlay about the adrenalin treatment. Success was doubtful in cases in which it was most needed. He considered that the injection of air into the pleural sac tended to reduce adhesions and to favour expansion of the lung. He was in favour of repeating tappings in such chronic cases, rather than resection of the ribs with the risk of empyema. Dr. Rose quoted long-standing cases of empyema in which cure resulted only after resection of ribs. Professor Finlay, in reply, described briefly two other cases which required frequent tapping. He was of opinion that in this case resection of the ribs might be tried. He would recommend a tolerably free opening which might subsequently be extended. Dr. T. C. Mackenzie read a paper on the *Recognition and treatment of incipient mental disease in general and hospital practice*. He commented on the importance of treating mental cases in their early and incipient stages. These cases were not provided for under the Lunacy Law, and were, as a rule, unprovided with hospital treatment. He gave an analysis of the earliest signs and symptoms in cases of insanity recently admitted to the Aberdeen Royal Asylum. Of these, headache, sleeplessness, loss of appetite, general feeling of unwellness, constipation, previous mental attack, and influenza were the most important. In the early recognition of cases of insanity a concurrence of these signs, with a history of hereditary predisposition to insanity, was of great importance. Dealing with the recent correspondence in the *Scotsman* concerning wards for incipient mental diseases in the Edinburgh Infirmary, Dr. Mackenzie said that personally he thought such wards very desirable. They had been worked with success in Glasgow and on the Continent, and he thought that wards of this character, under the charge of a specialist, should be provided in every teaching hospital. He described several cases which illustrated the necessity for hospital wards where acute and transitory cases of mental disorder could be treated without the patient requiring to be certified as insane, instancing such cases as delirium tremens, epileptic confusion and excitement, and some cases of puerperal fever.

Nottingham Medico-Chirurgical Society.—At a meeting held on February 5th, Dr. L. W. Marshall, President, in the chair, Mr. R. G. Hogarth showed a boy, aged 7, with *Multiple exostoses* affecting the ribs, phalanges, radius and ulna at the wrist, tibia and femur. A complete removal had been made of all present four years ago, but, in view of their painlessness and rapid recurrence, no further operation was now contemplated. Dr. F. H. Jacob showed a well-marked case of *Urticaria pigmentosa* in a breast-fed child, aged 8 months. The rash dated from birth, and previously to vaccination. Mr. W. Morley Willis and Dr. J. H. Thompson showed a girl, aged 15, in whose breast a painless, globular, vascular *Tumour probably of sarcomatous nature* had appeared a few weeks before. She had menstruated four times. A slight enlargement of an axillary gland could be made out, and a somewhat cystic feel was given by the tumour in places. The cases were discussed by the President, Messrs. W. M. Willis, R. G. Hogarth, J. A. O. Briggs, J. H. Thompson, J. Watson, and others. Dr. C. H. Cattle read a paper, entitled, *Some difficulties in the diagnosis of mediastinal tumours*. Practically these resolved themselves into the question as to aneurysm or tumour, the latter in the vast majority of cases being of a malignant nature. Referring to the case of a man of 58, who had been in hospital three months under observation, it was remarked that many of the symptoms and signs usually associated with aneurysm might at times be due to tumour. Eventually, as the *post-mortem* specimen showed, the growth surrounded the heart and thoracic aorta, so as to exert pressure upon the left recurrent laryngeal nerve, the left bronchus, and the sympathetic nerves. There was also a systolic basal murmur, an accentuated second sound, and increased pulsation to the left of the sternum, all due to the growth enveloping the aorta, and causing shrinkage and compression of the left lung. Whilst in hospital this patient gained steadily in weight. Another sign met with was compression of the left subclavian vein, and enlarged superficial veins about the thorax and shoulder. This was distinctly in favour of tumour. A new growth surrounded, compressed, and invaded the veins, while an aneurysmal sac more frequently displace them. On the other hand alterations of the arterial circulation—for example, in the radial pulse—were in favour of a diagnosis of aneurysm. A second case was related which occurred in a man of 34, whose symptoms began with breathlessness and expectoration of blood-stained phlegm. The evening temperature

varied between 102° and 104°, and often remitted as much as 3° in the morning. Friction sounds were heard near the left nipple and in the lower axillary region. When admitted he was pale and wasted, short of breath, and unable to get about. He was hoarse, and the left vocal cord was paralysed. There was dullness at the left apex in front and at the base behind. The breath sounds were weak over the left lung in general but of tubular quality at the apex. Pain was practically absent, but there were attacks of spasmodic cough. The puzzling features of the case were the rapid wasting, marked adynamia, and the hectic temperature without much expectoration. After an illness lasting about four months, the patient died suddenly of a profuse haemorrhage. The clinical symptoms were thought to have pointed to rapidly-growing sarcoma of the lung. At the *post mortem* examination the right lung was found greatly distended, the left collapsed. A small aneurysm had compressed the left bronchus, close to the bifurcation of the trachea, into which it had ruptured; the left pleural cavity contained three-quarters of a pint of fluid, and the visceral pleura was thickly coated with recent fibrin.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—At a meeting on February 13th, Dr. A. MORISON, President, in the chair, Mr. J. D. MALCOLM, in a paper on *Uterine haemorrhage* as a sign of disease, attributed various abnormal haemorrhages to: (1) Functional derangements—that is, to influences outside the uterus, for example, haemorrhages in infants, in older children associated with a precocious development of the sexual organs, haemorrhages occasionally associated with the development of ovarian tumours before, during, and after the child-bearing period, those associated with extra-uterine fetation and with inflammatory and non-inflammatory irritation in the ovaries and Fallopian tubes; (2) to changes in the uterine wall, the nature of which was very differently described by various writers, but all or nearly all of which were associated with an enlargement of the uterus, both in married women and in virgins; (3) retention of products of conception and the development of moles; (4) to neoplasms; (5) to general conditions. Prompt and thorough investigation of all cases of abnormal haemorrhage should be made, especially when the patient was beyond middle life. Apart from diseases fairly easily diagnosed, a slightly enlarged uterus with abnormal haemorrhages might be due to many conditions which could only be differentiated by curetting the uterus and examining the scrapings under the microscope, but no curetting should be undertaken if salpingitis existed. Constant care was necessary in order that no case of cancer of the uterus should be overlooked even for a time. The results of operative treatment were exceedingly good if the plan recommended by Wertheim was adopted in cases of cervical cancer. But to get the greatest benefit it was absolutely essential that operations should be performed early, and medical men should seize any reasonable opportunity of combating the popular fallacy that cancer of the womb was necessarily accompanied by pain and a foul discharge. Haemorrhage was often the first and for a long time the only symptom.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting was held at Bolingbroke Hospital on February 12th, Dr. DUMVILLE ROE, President, in the chair, when Dr. LEWIS JONES read a paper on some practical applications of electricity and *x* rays. Dealing first with its uses for diagnostic purposes, he showed how the electrical reactions of the muscles could be utilized to demonstrate the exact situation of a lesion in the peripheral nerves or in the spinal cord, giving examples of correct results obtained in cases with multiple external injuries and with no external lesion. He mentioned that by electrical testing the fact that death had occurred could be definitely determined. If no one were buried till the electrical reactions had disappeared the fears of being buried alive could be allayed. Passing to its uses in treatment, he mentioned the use of the cautery and of electrolysis in naevus, moles, warts, superfluous hair, and other conditions. Used formerly for the destruction of tissue only, electrolysis was now also applied to the introduction of drugs into the skin. The electrically-charged molecules of any given salt in solution migrated into and through the skin in accordance with fixed laws, acids moving toward the positive pole, metals and alkaloids toward the negative; and the exact quantity of each could be determined by calculation from its electro-chemical equivalent and the strength of the current employed. Thus, some 3 mg. of zinc could be administered in ten minutes under a current of 12 milliampères. Dr. Lewis Jones recorded several very interesting cases of the successful use of various drugs in different morbid conditions, such as lupus, diphtherial infection of wounds, and warts. Quinine had thus been administered in neuralgia and salicylic acid in rheumatism. Excellent skiagraphs were then shown demonstrating the presence of unusual or morbid conditions, including cases of difficult diagnosis, such as paralysis dependent upon the pressure of cervical ribs, vertebral caries, fractured scaphoid, calcification of the lateral ligaments of the spinal column, aneurysms, and tuberculous disease of the lungs. The therapeutic uses of the *x* rays were briefly referred to, with special reference to ringworm. In the discussion which followed, the PRESIDENT, Dr. J. GAY, Dr. M. ROBINSON, and Dr. SAMPSON took part.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting on February 13th was devoted to the exhibition of pathological specimens and the reading of short papers on pathological subjects. Mr. RUTHERFORD MORISON showed: (1) *Ruptured jejunal ulcer* occurring nine months after anterior gastro-enterostomy and leading to the death of the patient from peritonitis. (2) *Malignant stricture (adeno-carcinoma) of small intestine*, with great dilatation and hypertrophy of the bowel above. (3) *Sac of a ventral hernia* which contained the appendix and a small abscess. (4) *Malignant prostate* obstructing the left ureter and with enlarged glands along the iliac vessels. (5) Three very *Large calculi* from a man whose prostate, weighing 9 oz., was removed two years before. He was well for a year and then had a return of frequency of micturation and other symptoms. The stones could be distinctly felt per rectum. (6) A *Uterine myoma* showing red degeneration; it lay in the pouch of Douglas and simulated a pelvic abscess. (7) An enormous *Lipoma* of forty years' duration removed from the forearm of a woman aged 60. It appeared to spring from the interosseous membrane. Mr. OUSTON showed specimens from the same patient showing *Tuberculous disease of the mastoid, optic thalamus, apex of lung, and spleen.* Mr. W. G. RICHARDSON showed: (1) A *Cystic tumour from the intra-abdominal portion of the umbilical cord* removed from a woman of 50 in the course of an operation for the radical cure of an umbilical hernia. Microscopically it showed typical umbilical cord structure, being filled with Whartonian jelly. (2) A *Renal calculus* removed from an abscess cavity in the right iliac fossa which had simulated appendicitis, there being no urinary symptoms. (3) An example of *Chorion-epithelioma.* Mr. H. J. HUTCHENS showed a beautiful series of microscopical preparations of *Pathogenic micro-organisms.* Dr. WM. MARTIN showed a series of skiagrams illustrating the value of *X-rays in cases of slight injury:* also some *Blood pressure tracings* showing the effect which followed the intravenous injection of certain drugs, principally eucaine and cocaine. Mr. G. GREY TURNER showed the following specimens: (1) The *Pyloric end of the stomach and a portion of the duodenum removed from a man of 51* who had been ill for six months. He was very thin and anaemic, but made a good recovery, and was well four months after operation. (2) *Meckel's diverticulum, which had caused an intussusception* by becoming inverted into the bowel. The invagination was reduced and the diverticulum removed, the patient, aged 26, making a straightforward recovery. (3) *Four feet and six inches of the ileum*, showing seven tuberculous strictures, resected from a man, aged 30, whose caecum had been removed for tubercle four years previously. The patient made an uninterrupted recovery. (4) *Tuberculosis of the caecum and ascending colon* removed from a girl of 18 by a two-stage operation. A lateral anastomosis was first made, and four weeks later the affected bowel was resected. Uninterrupted recovery. (5) *Carcinoma of rectum* arising at the base of a simple polypus. The patient was a man of 34. Two years previously a large adenoma was removed from the rectum; after this he was well until two weeks before admission, when he had a recurrence of bleeding. The rectum was then removed, the patient recovering. (6) *Old hydatid*

removed from the left lobe of the liver. The patient was a man of 39, whose attention was directed to the lump after an attack of pain three weeks before operation. There were nodules all over the liver, which looked like cancer. The man made a good recovery. (7) An *Ovarian dermoid with twisted pedicle* removed from a woman of 29 who was three months pregnant. At the same time a subperitoneal myoma from the fundus and the appendix were removed. Pregnancy was uninterrupted. (8) An *Ovarian cyst and chronically-inflamed Fallopian tube*, the latter communicating with a sinus in a ventral hernia. Seven years previously an ovarian cyst was removed and the patient was very ill after the operation. This time she made an uninterrupted recovery. (9) An enormous *Kidney full of calculi and engrafted with carcinoma* removed from a man of 58. There was no history of renal calculus, but for eight months he had suffered from pain in the back and loss of flesh. The specimen weighed 2 lb. 15 oz. The patient recovered from operation. (10) A *Kidney with the whole ureter.* The latter contained several calculi and the kidney was dilated and full of pus. The structures were removed from a woman of 29, who made a good recovery. Drs. R. A. Bolam and W. E. Hume gave a lantern demonstration on some forms of *Consolidation of the lung.* Mr. H. J. Hutchens read a short paper on the *Bacteriology of meningitis*, with special reference to the meningococcus, and Mr. Rutherford Morison one on *Bone sarcomata.*

Pathological Society of Manchester.—At a meeting on February 12th, Dr. J. J. Cox (President) in the chair, Dr. W. E. Fothergill, in a paper on the *Pathology of the commonest gynaecological conditions*, said the majority of minor gynaecological conditions were due neither to displacements nor to infection but to a number of causes which still demanded careful investigation. Amongst these were: (1) Variations from the normal life-history of the uterus occurring either at puberty or at the menopause; (2) abnormalities in the process of ovulation; (3) abnormalities in the evolution of the pelvic organs during pregnancy and in their involution after parturition; (4) tissue changes secondary to anaemia, cardiac failure, arterio-sclerosis, and many other diseases. Dr. A. Donald gave an account of twelve cases of *Cancer of the body of the uterus.* In all the specimens the disease proved to be adeno-carcinoma, more or less advanced, and in many of the specimens the transition was well shown from hypertrophy of glandular structures to solid masses of epithelial cells. In every case the disease occurred after the climacteric, and the only constant symptom was haemorrhage. Professor J. Lorrain Smith showed specimens of so-called *Haemolymph glands*, with microscopic sections. The glands occurred in a case of exophthalmic goitre. Microscopically they showed the structure of ordinary lymphatic glands, the lymphatics and the lymph sinuses being full of blood. The endothelial cells showed marked phagocytic properties towards the red corpuscles. Dr. W. Mair showed two specimens, with microscopic sections of *Gas-containing cystic tumours*, one from the small intestine, the other from the omentum. Both tumours were removed during life by operation. They resembled in structure the air bladder of fishes, and were to be regarded as true neoplasms which secreted gases from the blood.

Harveian Society.—At a meeting held on February 13th, Mr. D'Arcy Power (President) in the chair, Mr. Maynard Smith read a paper on *The diagnosis and treatment of abdominal injuries.* The symptoms resulting from these injuries were described in detail, and their relative importance in diagnosis was pointed out. The difficulty in distinguishing the general shock following the injury from the collapse associated with the rupture of an important abdominal organ, such as the liver or bowel, was fully dealt with. The signs associated with free fluid or gas in the peritoneal cavity were carefully discussed. The symptoms suggestive of a grave abdominal injury, such as the general appearance of illness of the patient, the increase in pulse-rate, the presence of vomiting, and distension of the abdomen, were described, and the importance of noticing the advent of these at the earliest possible moment was insisted upon. The question of operative treatment was carefully considered. The paper was illustrated by the records of 124 consecutive cases of abdominal injury which had been under treatment at St. Mary's Hospital, and reasons for the views expressed and for the treatment advised in different abdominal injuries were in many cases supported by the results of these cases, which formed the basis for the paper. The paper was discussed by the President, Mr. Crisp English, Mr. Lawrence Jones, Dr. Aitken, Mr. Campbell Williams, and Dr. Spilsbury. Dr. Carmalt Jones read a paper on *The treatment of bronchial asthma by inoculation with a bacterial vaccine.* The methods employed in the treatment of disease by the opsonic method were briefly reviewed. The method of isolation of the organism, of its growth, the preparation of the vaccine, and the estimation of the quantity and the frequency of the dose by determination of the opsonic index of the patient after inoculation were fully described. In some cases of bronchial asthma a specific organism had been isolated from the sputum and a vaccine prepared from this was used for inoculation of the patients suffering from the disease. Twenty severe cases of bronchial asthma were treated by the special vaccine prepared. Definite improvement occurred in 16 of these cases and a marked improvement in 11. The cases chosen were severe cases which had resisted the usual methods of treatment, and the patients themselves were convinced of the marked freedom from attacks which they had experienced since undertaking the treatment by inoculation. Dr. Carmalt Jones showed several of the cases which he had been treating. The paper was discussed by the President and Dr. Willcox.

REVIEWS.

THE OPERATIONS OF SURGERY.

It is difficult to believe, when the new edition of Jacobson's *Operations of Surgery*[1] is compared with the last, that only five years separate their publication. Although the arrangement is the same, and no new departments of operative surgery have been added, it has been necessary to introduce so much new matter in the present issue that it has grown to the extent of more than five hundred pages. This is a testimony both to the growth of the art and to the determination of the authors to keep their book abreast of the times. In this edition Mr. R. P. Rowlands has collaborated with Mr. Jacobson so far as the general surgery of the abdomen is concerned, and Mr. G. Bellingham Smith has revised and largely rewritten the chapters dealing with operations on the ovary and uterus.

It is noticeable in the first volume that several pages have been added on the surgery of paralyses, chiefly founded on the work of Tubby and Jones. This is, in fact, the most important addition to the surgery of the limbs. There is a good deal of new matter also under the heading of the brain, and that part which deals with questions arising before operation on a cerebral growth is one of the best discussions on the subject in surgical literature.

In the chapter on nasal operations mention might have been made of operations for deflected septum, which have now reached a high degree of perfection. As would have been expected, the most material additions are to be found in Part IV, on abdominal operations. New sections on calculous anuria and the surgical treatment of Bright's disease are incorporated in the chapter on operations on the kidney and ureter, and to that on operations on the intestines the additions are numerous. Naturally, the whole subject of operative interference in gunshot and other injuries of the abdomen has had to be rewritten, and the experience derived from recent wars is carefully weighed, from the standpoint that this experience has shown that it is not possible to treat military wounds in the same radical way as is generally possible in civil life. Mr. Rowlands has carried out the revision of this part on abdominal operations extremely well; he has continued Mr. Jacobson's plan of introducing illustrative clinical cases into the text, which has always been a feature of the work, and one which has greatly added to its usefulness. Part VI, on operations of the vertebral column, includes an article on spinal anaesthesia, which gives but an imperfect description of the method, and does not ascribe

[1] *The Operations of Surgery.* By W. H. A. Jacobson and R. P. Rowlands. Fifth edition. 1907. London: J. and A. Churchill. (Royal 8vo, pp. 926 and 1139. Illustrations, 777. 42s. net.)

its development to those to whom it is really due. The article on laminectomy has received a much-needed revision; in cases of fracture-dislocation, a general opinion against operation is, as before, upheld. Throughout the revision the introduction of new illustrations is a feature, and those added have been wisely selected.

In previous reviews of this book the opinion has been expressed that in scope it is just what is wanted by the younger surgeon as a guide in building up his own experience. Its strong points are its wealth of clinical illustration and its plan of placing fairly and judiciously before the reader the various views and the available evidence on matters that are debateable and on which opinions differ. It is in this way much more than a treatise on technique, and in its new form will increase its already extensive popularity.

TEXTBOOKS OF PSYCHIATRY.

DR. SAVAGE'S well-known textbook, *Insanity and Allied Neuroses*, has been revised throughout by its author, who in this last edition has had the co-operation of Dr. GOODALL, the Medical Superintendent of the Cardiff City Hospital for Mental Diseases.[2] The keynote to every work on mental diseases is struck by the classification adopted, and it varies in almost every instance. In some an attempt is made to conform clinical categories to the supposed etiological factors; in others, and particularly in recent works, the various types of mental disease are regarded not in the light of their symptomatology at any given period—for this may vary from time to time—but rather with an eye to the fundamental and persistent features of mental alienation, whilst others are in the man frankly symptomatological. To this last and conservative class of book this manual belongs. Such a classification is, of course, provisional, but, owing to our present lack of information concerning the causation and underlying pathology of the insanities, it is perhaps more suitable for didactic purposes and to facilitate diagnosis than any other. In the first five chapters the nature of insanity and its so-called causes are sketched in general terms, using the term "cause" as a convenient expression of the immediate conditions connected with the disorder. Under "predisposing causes" the influences of race, sex, age, occupation, and heredity are treated, and in passing we may note that when speaking of the influence of insanity in the parents certain statements are made which, coming from one of Dr. Savage's authority, are sufficiently striking to warrant future investigation. Thus:

> The danger (of the offspring becoming insane) is greater the nearer the begetting of the child is to the insanity . . . the danger being greatest during the period of insanity and immediately before and after it.

Another is that:

> Injuries or degenerative changes in the brain of a parent may lead to insanity in the children. And here, again, the nearer the begetting is to the injury, the greater the danger.

Passing from the causes of insanity, predisposing and exciting—these latter being treated seriatim in the order of the tables of the Medico-Psychological Association—hysteria in its relation to insanity is discussed, hysteria being held to have the same origin and in many respects to be an undeveloped mania, which latter affection is then admirably described. In parallel fashion the exposition of melancholia is prefaced by an account of hypochondriasis, the separation of these two disorders being described as somewhat arbitrary, for though it may be convenient "it is not philosophical to treat of the body apart from the mind. Further consideration will show that a man who believes himself forsaken by God may, after all, have got that idea in consequence of some gastro-intestinal disturbance, and that damnation has been his method of interpreting dyspepsia." The cases of hypochondriasis are described as falling into three groups, cerebral, gastro-intestinal and sexual. These types of hypochondriasis are illustrated by clinical records of cases which show that the term "hypochondria" is used by the author in an elastic manner, all of them being the subjects of delusions woven round unpleasant organic or visceral sensations. The subsequent chapters on melancholia, primary and secondary dementia, "hallucinations"—including with this latter category paranoia—and moral insanity, contain lucid accounts of these disorders. General paralysis occupies a large part of this volume, special attention being given to its differential diagnosis and pathology. Clinical notes of many cases are given, and, as in the chapter on hypochondriasis, some of these cases—so far as appears from the notes—would certainly not be classified by many others as general paralysis of the insane. This may possibly be due to the limits of space necessitating a certain curtailment of the clinical phenomena, but is more likely due to the point of view taken, since it is explicitly denied that general paralysis is a definite and specific disease, that is, "that several distinct series of changes occur in the nervous centres, giving rise to a progressive and fatal nervous disease which has been called general paralysis." Conformably with the very extended application of the term "general paralysis" the causes of this disease mentioned are sexual excess, alcoholism, syphilis, a psychoneuropathic heredity and injury, and, on the mental side, anxiety; that is, that general paralysis arises from a combination of causes, the most common being excesses of various kinds which act more powerfully when associated with strain, worry, and anxiety. To alcohol, alone or combined with other causes, the author ascribes some 20 per cent. of the cases of general paralysis. Following this chapter, which is well illustrated by clinical records of cases more or less typical of this disease, the insanities of gross lesions, of epilepsy and idiocy and insanity due to toxic influence, are ably treated, the work being brought to a close by very valuable chapters on responsibility and legal relationships. The book contains some beautiful plates and drawings of the normal and pathological material, which have been furnished by Dr. Mott, of Claybury Asylum, and Drs. Bolton and Watson, of Rainhill Asylum.

Dr. MONGERI of Milan has added to the long list of Hoepli Manuals a small volume on the pathology of mental diseases[3] specially addressed to students, medical practitioners and jurists, as giving in a condensed form a summary of the essential facts in psychiatry, with particular bearing upon medico legal considerations. A compendium of this kind is not of much service outside the country of its origin, where no doubt it will be of value on account of the clear and succinct fashion in which the several types of disorder are delineated. The classification adopted is that which is accepted as official in Italy, laid down at the Eleventh Congress of Italian Alienists, namely:—congenital psychoses, simple acute psychoses, primitive chronic and consecutive psychoses, paralytic psychoses, nervous psychoses (epileptic, hysterical, neurasthenic, etc.), toxic psychoses and infective psychoses. The book is illustrated by some really beautiful drawings and photographs of typical cases, and the description of the various forms of insanity is thoroughly satisfactory from the point of view of pure symptomatology. Each chapter is followed by a fairly comprehensive list of published works bearing on the subject under discussion, selected apparently in somewhat haphazard fashion, no reference, however, being made to these works in the text. In this "special bibliography" there are astonishing numbers of printer's errors, hardly any author's name being spelt twice in the same way, a fault which should be corrected in future editions.

Dr. ESCHLE, the Director of the district asylum of Sinsheim, in his twenty-five years of medical experience, half of which has been spent in the observation and treatment of insanity, has been struck with the great development and change in nomenclature in psychiatry, and has written a book[4] which, amongst its other objects, aims at bringing those whose medical education was completed before the modern era into harmony with recent concepts and the *termini technici* of this branch of medicine. He has attempted to do this not by the simple substitution of the

[2] *Insanity and Allied Neuroses.* A Practical and Clinical Manual. By George H. Savage, M.D., F.R.C.P., and Edwin Goodall, M.D., B.S., F.R.C.P. New and enlarged edition. London: Cassell and Company. (Fcap. 8vo, pp. 619, 6 coloured plates, 45 illustrations. 12s. 6d.)

[3] *Patologia Speciale delle Malattie Mentale.* [Special Pathology of Mental Diseases.] By Dr. Luigi Mongeri, Medical Director of the Stabilimento Sanitario Dufour in Milan, etc. Milan: Ulrico Hoepli. 1907. (D. pott. 16mo, pp. 280, illustrated. L. 3·50.)

[4] *Grungzüge der Psychiatrie* [Outlines of Psychiatry]. By Dr. Franz C. R. Eschle. Berlin and Vienna: Urban and Schwarzenberg. 1907. (Roy. 8vo, pp. 307. M. 8.)

new for the old, but by explaining their points of fundamental agreement. The author, from his wide reading, his comprehensive knowledge of general medicine and his philosophic outlook, is eminently well qualified for this task, which he discharges in thoroughly satisfactory manner. The book is divided into three parts, the first being a general study of the nature and development of insanity, its causes and the influences of temperament, character, and particularly inherited defects, and its general pathogenesis and symptomatology, these last being discussed under the headings of "distinctive insufficiency" expressed through intellectual defect, "affective insufficiency" expressed qualitatively as depression or exaltation, and "original or appetitive insufficiency" expressed qualitatively in the phenomena of suggestibility, "induced insanity" (*folie à deux*, etc.), and quantitatively in the degenerative psychoses. In the second and major portion of the book the various categories of modern psychiatry are accurately defined and discussed, the author following in the main the classification of Kraepelin. In the sixteen chapters which comprise this second part particular attention is paid to the fundamental factors in relation to their clinical appearances, and a valuable commentary is printed in smaller type explaining in each category the relationship of the psychosis described to the classical types of former writers. Amongst these chapters those on manic depressive insanity—which he describes as an "exquisitely hereditary disease" and in his experience extremely common amongst Israelites and orientals generally—and on hysteria are of particular excellence. The third and last part is concerned with forensic questions, with particular reference to the evidence of mental experts in cases of doubtful insanity, and though necessarily somewhat condensed, is, like the rest of the book, lucid, practical, and ably treated.

THE ETIOLOGY OF UTERINE PROLAPSE.

THE book on the anatomy and etiology of prolapse of the genital tract in women,[5] by Drs. TANDLER and HALBAN, should be carefully studied by all gynaecologists. The authors have worked on the soundest principles. They have already distinguished themselves as the authors of a fine atlas monograph on the relations of the ureter in women—a work in which Professor Halban's name appeared first. Their reputation as anatomists was thereby established, and we hail with satisfaction this new publication. There is a prevalent feeling that too much is written about plastic operations for the relief of prolapses, too little about ultimate results, and next to nothing about the anatomy and pathology of these displacements. Hence some of us seem to think that pessaries may be sufficient, and others that the discomfort due to displacements is chiefly "neurotic." Much fallacy lies in and between these extreme views. Drs. Halban and Tandler treat the subject scientifically, and do not write in support of any theory or of any practice. Their work is a minute demonstration of the anatomy and causation of prolapse. The plates are of first-class quality, good as illustrations often are in contemporary medical publications. They are taken from dissections and frozen sections prepared by scientific and manually skilful anatomists. They show what they profess to show, and the explanatory text is perfectly clear. We trust that they will be duly scrutinized as a whole, and that no gynaecologist will make use of any single plate merely to support his own views, however reasonable such views may seem to be. A glance through the series of plates is in itself a lesson. We see the musculature of the pelvic floor and walls as it is in health and as it is in incipient and confirmed disease. We also may inspect the relations of parts and the condition of the musculature after the reduction of a prolapse, comparing it with the same preparation drawn before reduction. Closer study shows us how intricate are the changes wrought by displacement, and how hard it is to distinguish cause from effect, even if such distinction be possible. The effects of prolonged traction on the levator ani and coccygeus muscles and on the arcus tendineus come out very clearly in these illustrations. The authors do not rush to conclusions, fully admitting the difficulty of their theme, and preferring classification to theoretical explanations. They distinguish four distinct varieties of prolapse—namely, direct descent of the uterus, hernia of the genital gap, relaxation of the pelvic floor, and lastly, rectocele. The fourth class is held to be of a different type to the others, a theory admitted by most living authorities. The precise signification of the deepening of Douglas's pouch is often not evident, as it is frequently observed where the body of a heavy uterus has fallen into it, whilst in other subjects it is detected where no prolapse of any class exists. The authors do not by any means condemn plastic procedures; indeed, they admit that the different varieties of antefixation are all, according to their researches, quite rational operations. The only fault to be found with this excellent work is the very small space, about six pages, devoted to the therapeutics of prolapse, whether by the pessary or by the knife and suture.

THE TREATMENT OF UTERINE RETRO-DEVIATIONS.

THE author of *The Treatment of Uterine Retro-Deviations*,[6] Dr. CASALIS, has studied in Europe and practised in South Africa. The book is a very good synopsis of its subject. There are manifest objections to all kinds of fixation operations, and at the best it is never easy to define what can conscientiously be registered as a "cure." Still hysteropexy and Alexander's operation not only have their advocates, but, what is more essential, have proved beneficial to patients. Hence it is well that the gynaecologist should know how to perform them, and Dr. Casalis teaches the steps of these procedures very clearly. One principle to be found in this manual is undoubtedly sound:

> To use round ligaments palpably weak is to court disaster, the benefit reaped by the patient being only temporary, and the retro-deviation almost certainly recurring.

Many find that the stoutest and soundest round ligament is hardly reliable when it is made use of for the holding forward of a uterus but little over the normal weight. We must also agree with the author that in cases of retro-deviations, however severe, amongst women still in the child-bearing period, and free from haemorrhages, every effort should be made to delay hysterectomy even when the retroverted uterus is hyperplasic and possibly the seat of a fibro-myomatous infiltration. The opinion promulgated by the author and by many other writers, that in older women the uterus may be condemned on the score that it has played its part and is only an encumbrance, is open to question. Others may think that it still plays a part in the economy if only as a portion of the pelvic floor. Dr. Casalis certainly deserves credit for his lucidity, even when it leads us to distinguish what is clever operating from what is good surgery.

A THEORY OF LIFE.

IN a short book entitled *The Functional Inertia of Living Matter*, Dr. FRASER HARRIS, of St. Andrews, has made a picturesque effort to explain the universe in general and the functions of living things in particular.[7] We are not very sure whether the conception he introduces is really new, and the author apparently shares our uncertainty, for although in the opening pages it is given to us as something which will help us to obtain a fuller insight into the "true inwardness of living matter" the closing chapter contains a formidable array of scientific names, from Faraday and Hobbes to Sherrington and Waller, who had previously clearly perceived that living matter possesses the property which forms the theme of the intervening pages, and in some cases had even used the term "inertia" in relation to it. The idea, whether it be new or old, is briefly as follows: Living matter possesses irritability; even Glisson

[5] *Anatomie und Ätiologie der Genitalprolapse beim Weibe* [The Anatomy and Etiology of Prolapse of the Genital Tract in Women]. Von Dr. Josef Halban, Privat-Dozent für Geburtshilfe und Gynäkologie, und Professor Julius Tandler, Prosector der I Anatomischen Lehrkanzel in Wien; Aus dem I Anatomischen Institute in Wien. Wien und Leipzig: Wilhelm Braumüller. 1907. (Imp. roy. 8vo, pp. 285, with 59 plates and 44 figures in the text. M. 15.)

[6] *The Treatment of Uterine Retro-Deviations.* By G. A. Casalis, M.B. C.M. Edin., Gynaecological Surgeon to the Victoria Cottage Hospital, Wynberg, Capetown, Pretoria, and Bulawayo: T. Maskew Miller. 1906. (Demy 8vo, pp. 175. 35 illustrations.)

[7] *The Functional Inertia of Living Matter: a Contribution to the Physiological Theory of Life.* By David Fraser Harris, M.D., B.Sc., F.R.S.E., Lecturer on Physiology in the University of St. Andrews. London: J. and A. Churchill. 1908. (Med. 8vo, pp. 146. 5s.)

in 1677 knew that, and all physiologists have accepted it; irritability will explain a good many things; it may even explain why the present author prefers to call it affectability. But living matter also possesses the opposite attribute—non-affectability—or, as the author more frequently terms it, functional inertia. This attribute the misguided physiologists of the past and present have apparently either not recognized, or have failed to grasp its importance. It is, nevertheless, as important as irritability, if not more so, for it will apparently explain nearly everything which was previously obscure. In the more strictly technical sense it becomes evident in the latent period of a muscle, in the refractory period of the heart, in the periods of rest which alternate with those of action in rhythmical organs. Further than this, it will make clear the main problems which trouble the student of metabolism, psychology, lunacy, and heredity. If any of our readers have sufficient curiosity, they may also discover how it acted as the motive power (if we may employ this rather paradoxical term to inertia) which suddenly and swiftly developed D. G. Rossetti into a literary character; how it was that the inertia of inheritance caused commercial life to lose an Auber and placed him among the makers of sweet sounds, and forced Schubert the schoolmaster to become Schubert the composer. Further than this, Shakespeare apparently owed his transcendent inspiration, and Napoleon his generalship, to their want of affectability. Functional inertia is thus something to which our imperfect world owes more than it knew, and the lazy ones may find comfort in this reflection. So anxious is Dr. Harris to rope in all and sundry that in many places he quotes the experiments and deductions of Professor Bose almost side by side with the wise words of Huxley and Maudsley. The book, although crude and unconvincing, shows no evidence of hasty preparation; indeed, in many parts it is almost poetic in its dictum, and it cannot be denied that here and there are ideas which are both useful and suggestive; but to write a really effective work on the philosophical aspects of biology requires an author to be at once well grounded in knowledge, discriminative in selection, and logical in argument.

AN INDIAN MEDICAL CYCLOPEDIA.

THE aim of Dr. MUHAMMAD ABDUL HAKIM KHAN in preparing a *Medical Cyclopedia*[1] was ambitious. The title-page describes the work as:

> An extremely useful and handy volume, treating the following branches of the medical science in a short but thorough and comprehensive manner, omitting nothing what is important and practical: I, Materia Medica; II, Anatomy; III, Physiology; IV, Pathology; V, Medicine; VI, Diseases of Children; VII, Diseases of Women; VIII, General Surgery; IX, Ophthalmic Surgery; X, Minor Surgery; XI Midwifery; XII, Hygiene; XIII, Practical Chemistry; XIV, Medical Jurisprudence; XV, Toxicology. Really it is a complete medical library, reduced to a convenient and the most useful form for everyday use and ready reference.

This somewhat inflated encomium is repeated in similar terms in the preface. Dr. Khan is the Civil Surgeon of the native State of Patiala, and his book has been printed and published by native agencies in the capital town of that State. It is, considering these circumstances, a production which is very creditable to all concerned. The work is, of course, a compilation; but it exhibits a power of condensation and orderly arrangement which is very unusual in the Oriental mind. The section on materia medica includes pharmacy and therapeutics, and is founded on the *British Pharmacopœia*, but includes many indigenous and non-officinal drugs. It is well drawn up and likely to be useful. The anatomy section consists of a series of rough blotchy lithographs, apparently copied from *Gray's Anatomy*, with short explanatory notes. It is intended to be an *aide mémoire*, but for this purpose a better set of pictures is desirable. The sections on physiology and pathology are largely concerned with structural features similarly illustrated; but information is also furnished regarding chemical, dynamical, and vital processes. An intelligent summary of parasitology and bacteriology is given. As regards the more practical portions of the work dealing with diseases and injuries, and their causation, pathology, and treatment, in view of the scope and size of the volume severe criticism is disarmed. As the book is designed for Indian, or at any rate Oriental, use, one naturally turns to tropical diseases as a test of its accuracy and utility. The result is disappointing. Some subjects, such as kala-azar, trypanosomisis and sleeping sickness, yaws, and oriental sore, are omitted; others, such as blackwater fever, sprue, hill diarrhœa, and filariasis, treated very meagrely; while the articles on such important subjects as malaria, dysentery, sunstroke, and beri-beri are inadequate and confused. Malaria, for example, is said to be "an emanation from soils containing vegetable matters." Mention is made of parasites, wrongly described and classified, and of mosquitos; but the article is a bad mixture of old and new doctrines. As regards yellow fever, it is said that "it is not settled as yet whether it is due to malaria or some specific contagion," and no reference is made to the American researches which have demonstrated its causation. Strictures of this kind might be greatly extended, but an enterprise of this sort is, in the present state of medical science, probably beyond the capacity of one man, however able and well informed, and equal excellence throughout such a compilation as this cannot reasonably be expected. The author apologizes for the numerous "mistakes of spelling" which occur on every page, and leaves the correction of them to the reader! The "pressure of official duties" will, however, hardly account for the printing of "stomuc" for stomach, "dues" for dews, "choroid" for ochroid, and "testicles" for scrotum. With additional labour and pains the book might have been made very much better than it is. Even in its present state it will be found useful by native practitioners in the East. It is a safe enough guide in practice, but if thoroughly revised and brought up to date it would be considerably more serviceable.

[1] *The Medical Cyclopedia.* By Dr Muhammad Abdul Hakim Khan, M.B. Patiala: The Rajendor Press. (Demy 8vo, pp. 1300. With numerous illustrations and an index. Rs. 11 8.)

RURAL EDUCATION.

A PAMPHLET of suggestions on rural education, with specimen courses of nature study, gardening, and rural economy, has lately been issued by the Board of Education.[1] It deals with a number of subjects bearing upon rural education, with regard to elementary, higher elementary, secondary and evening schools, schools of rural industry, agricultural colleges and university departments, and the training of teachers for rural schools. There is an appendix containing a number of schedules with practical suggestions.

RURAL ELEMENTARY SCHOOLS.

Rural Bias.—Mr. Dymond points out that it is desirable that the influence of county surroundings should be distinctly felt in the curriculum, while avoiding didactic instruction in agriculture which may be waste of time for those children who afterwards migrate to towns.

Observation.—As a means of training observation, nature study is the best possible subject. Nature study should be the directed study of nature, as revealed in the surroundings of the school, by the children themselves, so that they may gain a store of information about rural things which will be real and lasting because seen and found out by themselves. This study should be adapted to the age and mental capacity of the children. Nature study should be carefully graduated: first the comparison of the external form and appearance of things, the observation on a living or moving thing; in the next stage simple observation in measurements might be begun together with more minute study of form. These observations should be succeeded by observations on the conditions of change, and this by the observation of the dependence of plants, insects, birds, etc., upon each other, or upon the character of the surroundings. Then would follow practical work, such as the cultivation of plants or the care of bees and poultry, all carried on as a study of nature. In the upper classes nature study should be developed in the direction of domestic economy and hygiene for the girls and some branch of rural economy for the boys. Drawing and description should be asked for in order to train exact observation and expression. Schoolmasters should be encouraged to grow fruits and vegetables and to keep poultry, which will provide material for nature studies and yield information. Experiments on the

[1] *Suggestions on Rural Education.* By T. S. Dymond, Adviser to the Board of Education on Rural Education. London: Eyre and Spottiswoode. 1908. Price 3d.

conditions of plant growth should be carried out with plants of industrial importance, and the study of insect metamorphosis on insects of economic interest, whether useful or injurious.

School Library.—Some reference books on natural history are essential as reference books, nature study readers being discouraged in order that children may make their own observations. Good coloured drawings of birds, wild flowers, and cattle, horses, sheep, pigs, and poultry, should hang on the schoolroom walls.

Naturalist Societies.—Teachers should form or join naturalist societies. It would be most valuable if there were established throughout the country junior naturalist societies of school children, organized as those in the State of New York. The publication of a periodical leaflet would be useful.

Manual Work.—The manual work at school should be designed to supplement home training, and the subjects should be selected with that object. The kinds of manual work most suitable for the rural elementary schools are (1) gardening, (2) handicraft, (3) the various branches of practical housewifery.

Gardening.—This is an exercise in the use of tools as well as a means of nature study. Separate plots should be a square rod in size, or two square rods if worked jointly by two boys—a senior and a junior. A schedule (3) appended to the report contains particulars of the size, shape, and arrangement of boys' gardens found by experience to be best. The fruit plot is a very valuable adjunct. Strict accounts should be kept of the cost of seeds, etc., and of the ultimate profit. The plots should be measured out and the plan of cultivating drawn to scale on paper, and the manure and some of the crops weighed. A diary should be kept by each boy, and as each crop is harvested a complete account of its cultivation compiled as an exercise in composition.

Handicraft.—Woodwork which affords an exact hand and eye training should be introduced into rural schools. The work must be done to measurement from exact scale drawings made in school and should be directed to making complete and useful things. The chief difficulty to introducing woodwork in small schools is the cost of equipment, but a very simple equipment is all that is necessary, and the training will make the boy all the more resourceful afterwards. Where woodwork cannot be carried out, baskets used for garden produce, nets to cover fruit trees, or mats to cover garden frames may be made.

Needlework.—Here utility should be kept in view if the full educational purpose is to be served, and complete garments should be made. The older girls should be encouraged to bring their own mending and darning to do.

Housewifery.—The more simple the equipment the more practical the teaching. Housewifery should include not only cooking the food but buying it, laying the table, washing up, washing the cloths and ironing them, and keeping household accounts. In counties where there is a travelling dairy, the afternoons for a fortnight may be usefully spent in dairying by the girls of twelve and upwards. Hygiene of a very practical character should be associated with the housewifery. The teaching of any subject of domestic economy will fully succeed in its object only if the teacher realizes the limitations inseparable from household management under farmhouse and cottage conditions, and adapts the work to those limitations.

Provision for Manual Work in New Schools.—It is urgently to be desired that all new rural schools should be planned with a view to providing a room, preferably opening out of the class-room, so as to be under supervision, suitable for woodwork, cooking, etc., and that ground should be secured, over and above that needed for the playground, suitable for gardening

Drawing, Geography, etc.—Freehand drawing from nature and brushwork are necessary for nature study, and scale and geometrical drawing in connexion with woodwork, besides which the ability to make a quick sketch of an implement, toolhouse, piece of furniture, etc., from memory is sure to be useful to boys. Beyond this, therefore, the drawing need not go in rural schools. Geography, history, and literature are best considered as subjects essential to general culture, but the two former have the further importance that the physiographical environment of the school and the economic and political conditions of rural life and industry in the district can only be properly appreciated by comparison with the conditions existing in other parts of the country or of the world and of other times. The foundation of geography should be nature study on its physiographical side. The predominating influence in determining the distribution of plant and animal life, fixing the character of the people and the trend of their industrial interests, is climate, and the factors upon which climate depends—namely, superficial features, rainfall, temperature, wind, vegetation, etc.—should be considered in the preparatory nature study in order to provide the basis for comparison.

Arithmetic.—It is not by working difficult examples that the rules of arithmetic are fixed in the memory—rather the reverse—but by exercises in things that involve personal observation and measurement by the children and that are concerned with their everyday experience while they are at school and are essential to their everyday occupations after they leave.

The Time-table.—The time given to some subjects at present is unnecessarily long—as, for example, too much geography in detail, too much reading aloud in the upper standards, where silent reading and study are so important. Drawing need not be carried far beyond the requirements of the freehand, geometrical or scale drawing required for nature study, arithmetic, and woodwork. Drawing should be worked in with other subjects to which it is essential. Gardening is practical nature study, and can be done in the time otherwise given to this subject. Geography in its early stages is also nature study. Writing and composition are essential to it. Even arithmetic frequently touches upon it. With such correlation of subjects, when each becomes necessary for progress in the other subjects, not alone would time be saved, but more rapid progress be made, because purpose in every subject studied becomes apparent to the pupil.

Supervision.—Supervision, to all appearances a serious difficulty where small classes are detached for practical work, is a matter of organization, and if the children are led to depend more upon their own mental resources than upon the teachers, the difficulty can in some cases be overcome.

Higher Elementary Schools and Upper Classes in Rural Districts.

The chief purpose of such schools and classes is to afford the sons and daughters of the more well-to-do persons engaged in manual employment who can afford to let their children remain at school another year or two an education which shall carry on the work of the elementary school, but develop it in the direction of the industries they are likely afterwards to follow. Nature study should give place to the study of natural science and to the application of science to agriculture, horticulture, dairying, domestic economy, and hygiene. The subjects of manual instruction should be developed in their industrial aspects; thus fruit culture would form an important subject for practical work, and needlework would be carried on to dressmaking. Arithmetic should be developed in the direction of mensuration and mechanics, and be correlated with book-keeping and commercial correspondence.

A course for the training of pupil teachers should be provided in the upper classes of the rural elementary schools whenever, through circumstances, secondary schools are inaccessible.

Rural Secondary Schools.

Manual work takes a subordinate place in the secondary school, and is introduced rather to afford a balance in educating powers of mind and body and to provide means for illustrating mathematics and the sciences. In the rural secondary school chemistry and physics should be dealt with as branches of natural science, a knowledge of experimental science being built up by a progressive practical study of air, of water, of mineral substances, of products of animal and vegetable life, those reactions and substances being used a knowledge of which is important in rural industry. A study of biology should be begun, the life-history of a few insects common in the locality (especially those of economic importance) should be studied; then the general morphology and description of some flowering plants (excluding the use

of all but necessary botanical terms), with a view to classifying wild and cultivated plants common in the neighbourhood. The physiology of plant life in relation to the soil can then be begun. The course outlined in the Board of Education Syllabuses (Stage 1 of Subject XXIV) is especially suitable for use in rural secondary schools. The work in the laboratory should be accompanied by practical experiments in the field, and the pupils should unite in cultivating a botanical garden in which plants of economic importance can be grown. A fruit plot should be provided for practical work in grafting in connexion with the study of stem structure, and field expeditions made. Mathematics should be correlated with (*a*) practical surveying in the field, (*b*) woodwork from scale drawings, (*c*) mechanics, which should be illustrated by reference to the construction of farm implements and buildings. Book-keeping and correspondence would deal with the ingoings and outgoings of the experimental field, the orders for manures, tools, seeds, and sale of produce. The boy who gives promise of a successful career in agricultural science may leave the secondary school at 16. The next two years may be profitably spent as a pupil on a farm, the pupil each winter attending an agricultural short course, after which he will enter an agricultural college or university department with the greatest profit.

With regard to rural secondary schools for girls, including preparatory classes for pupil teachers, the science work should consist of a course of general biology, leading on the one hand to hygiene and domestic economy and on the other to botany and perhaps gardening.

Rural Evening Schools.

The subjects of instruction in such of these schools as are intended to be a continuation of the elementary education of children should be similar to those given to the older children in the day schools; teachers qualified for day schools will be equally qualified for the night schools. But where the purpose of rural evening schools is technical education, the teachers will need to be specialists. These schools should therefore be centralized, one school serving several villages, in order that the school teachers from those villages may combine to form a staff of teachers of special subjects. It is important that the curriculum should be of such a kind that the pupil can enter in any year, so that there may not be a gap in his education. This can only be done by adopting the cyclic principle, so that he can begin the course any year and end it the third year with equal advantage. This applies to practical arithmetic, drawing, rural science, domestic economy, geography, history, and literature. On the other hand, in such practical subjects as gardening and woodwork, and needlework, where elementary and advanced pupils can work together under one teacher, there is no reason why the course should not be graded in difficulty. The greatest elasticity is necessary in the combination of subjects and in the time of giving the instruction.

Attention is drawn to the importance of rural economics as a subject of instruction in view of the backwardness of this country in the organization of rural industry. For any non-compulsory system of education to be successful it should be run by those who want education for themselves and for their children. Give every rural worker—man and woman, rich and poor—a stake in the district society for the promotion of rural industry, and place upon that society, with financial and other help from the the local education authority, the onus of providing for the technical education of their people.

Schools of Rural Industry.

The practical and business side of agriculture can only be learnt on the farm and market garden.

Schools of Practical Market Gardening and Fruit Culture.—The garden should be run, as far as is consistent with educational purpose, as a commercial concern, and might even prove self-supporting except for the salary of the superintendent instructor. The class work should consist of (1) horticulture, which should take the form of recording and systematizing the methods used by students in their practical work week by week; (2) book-keeping for the garden, with necessary correspondence and accounts; (3) rural science (plant and soil). After the school is well started, it would probably be desirable to add practical instruction in (1) bee-keeping; (2) rural handicraft (making boxes and baskets for produce); and (3) fruit bottling and canning; with perhaps (4) cider making.

Schools of Practical Forestry.—No special equipment would be necessary, as the whole of the practical work would have to be done by arrangement in the surrounding woods and in tree nurseries planted in suitable parts of the woodland.

Schools of Practical Farming.—The farm should be carried on as an ordinary business concern (not as an experimental farm), the students, as far as practicable, doing all the work of the farm. Dairying, poultry keeping, fruit culture, and gardening should in most cases be included. The classroom work should include instruction in tillage, crops and stock, book-keeping and correspondence, rural science (plant and soil), rural hygiene (including elementary veterinary science), and very elementary mechanics. A forge and carpenter's shop might usefully be added to the equipment. The course at a farm school should embrace the farm work of a complete year if possible.

Schools of Practical Dairying.—Such a school need not necessarily include a dairy farm, though, if one is provided, it makes it possible to study the management of dairy cattle, milking, and the proper management of milk before it reaches the dairy. The actual dairy work in hard and soft cheese-making, butter-making, and cream-potting, needs to be supplemented by class-room instruction, in which (1) methods used during practical work are systematically discussed, (2) dairy book keeping is taught, and (3) dairy hygiene is studied.

Schools of Practical Domestic Economy.

The curriculum should include cookery, laundry work, housework, needlework, hygiene, household accounts, and in many cases dairying and poultry-keeping. The school must be residential if the work is to be practical. The object will be to provide a thorough practical training for domestic service and farm service.

The Training of Teachers for Rural Schools.

Rural Pupil-teacher Centres.—One of the most important points is that what is taught the students should be on sound lines as to method. Special attention is needed in regard to the science taught in such pupil-teacher centres. It should be a direct preparation for the nature study many of the students will be called upon to conduct in schools, either rural or urban, and yet not be unsuitable as a preparation for the science course at the training college.

Training Colleges.—The special subjects required as a preparation for rural school work are (1) scientific and (2) manual. A two years' course of science should consist of (*a*) a laboratory course of chemistry and physics treated as a branch of natural science, a knowledge of principles being built up by an experimental study of air, of water, of the important products of animal and vegetable life, and of such mineral substances as come within the environment of a rural school; (*b*) an outdoor course of field botany, with subsequent examination of specimens in the class-room. In the second year the laboratory work should consist of the course of rural science (plant and soil) and the outdoor work of practical gardening, and field rambles to study the relations of plant life to environment.

According to *Science*, Professor Robert Koch proposes to visit the United States during the spring in the present year. He intends, it is stated, to rest for a year from his scientific work, and has declined all invitations to lecture in the United States.

The Congress of French-speaking Alienists and Neurologists will hold its eighteenth meeting this year at Dijon, from August 3rd to 9th, under the presidency of Dr. Culerre, Medical Director of the Asylum of La Roche sur Yonne. The subjects to be discussed are as follows:—*Psychiatry:* Mental disorders due to glands which secrete internally, to be opened by Dr. Laignel-Lavastine, of Paris. *Neurology:* Diagnosis and clinical forms of neuralgias, to be opened by Dr. Verger of Bordeaux; provision for lunatics and provision for abnormal children, to be opened by Dr. Charon of Amiens.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(*Continued from p. 518.*)

Evidence of Dr. C. J. Martin, F.R.S. (*continued*).

Asked as to the importance of animal experiments in providing a pure food and water supply, the witness said animal experiments were necessary in many of these examinations, and many others would be impossible but for knowledge previously acquired from experiments on animals. These methods were used not only to trace the origin and spread of outbreaks of disease due to contaminated food and water, but were constantly employed by municipal and other health authorities to test the purity of meat, milk, and water supplied to the public. Since the causation of outbreaks of food poisoning was understood sanitary inspectors had been alert to obviate this danger, and suspected carcasses or preserved foodstuffs were submitted to bacteriological examination, and, if necessary, condemned. In reply to further questions, the witness said the following were in his opinion very strong reasons why the variety of animals employed for scientific experiments should not be restricted, and particularly why dogs should not be excluded from use for this purpose: (1) Diseases peculiar to these animals, such as distemper and epidemic jaundice (piroplasmosis), required investigation both in the interest of possessors of these animals and of dogs themselves. (2) One case at least was known, and that a very important one, in which dog and man harboured two stages of the same parasite, echinococcus or hydatids. In some pastoral countries, notably Australia and Iceland, the proportion of the rural population which became infected with hydatid cysts was very considerable. In Iceland it had been estimated by the chief medical officer that one-seventh of the entire population were affected with echinococcus. It was also responsible for a similar cystic disease in sheep. In Australia the disease was very prevalent amongst the pastoral population, and he thought that in at least one-twentieth of the cases operated upon for tumours a hydatid cyst was discovered. The causal relationship of a minute worm in the intestine of the dog to a gelatinous cyst containing a gallon of fluid in the chest of a man could, in this case, have been ascertained only by experiments upon the dog. (3) Diseases common to man and dog had been fruitfully studied upon the latter—for example, rabies and ankylostoma. (*a*) Pasteur's discovery of a means of preventing the occurrence of rabies in persons infected by mad dogs could not have been arrived at except by experiments on dogs, for the dog was the only other available animal in which the symptoms and clinical course of the disease were at that time recognized. (*b*) Ankylostoma, or miner's worm, was a disease seriously affecting the health of miners in many parts of Europe and Great Britain. It was due to multitudes of small parasites which attached themselves to the intestinal wall and sucked the blood of their host. Until recently the way in which man became infected with these parasites was not understood. As the worms were found in the small intestine it was naturally presumed that the eggs were in some way introduced by the mouth, either in drinking water or food. All attempts to stay the extension of this disease by attention to the food and water were, however, without avail. In 1904 Loos of Cairo (British Medical Association, 1904) succeeded in demonstrating the precise channel through which these parasites effected an entrance into the human body and succeeded in establishing themselves in the alimentary canal. These experiments were made upon dogs. This demonstration of Loos of infection through the skin was subsequently confirmed upon man by Calmette (*L'Ankylostomiase (Anémie des Mineurs): Biologie, clinique, traitement*, etc., Paris, 1905) in France, and Boycott (*Journ. Hyg.*, 1905) in this country. The dog and certain species of monkey were the only animals known to be capable of occupying the position of host to the human ankylostoma. The monkeys not being available, these facts could not have been ascertained without experiments on dogs. (4) Physiology in Great Britain would be very seriously handicapped if for any reason dogs were not available for animal experiments. Pathology and medicine were founded upon experimental physiology, and any hindrance to the development of physiological knowledge must produce a corresponding diminution in the rate of advance of these medical sciences. As to experiments on animals for teaching purposes, he said he was confident that no one ever realized many of the most elementary physiological facts without witnessing experiments upon living animals. The class of physiological experiments which it was necessary to show to students involved no suffering, as the animals were all under anæsthesia. It had been suggested that the witnessing of physiological experiments would have a brutalizing effect upon the student. He had never discovered this. When professor at Melbourne he performed from thirty to forty experiments upon living animals each year during his course of lectures. This class included six or eight young ladies. What he did notice was that when confronted with experiments on animals the class became interested, earnest observers, and assumed the attitude of scientific searchers after truth.

In reply to Dr. Wilson, the witness said he imagined that the element of pain or the want of feeling of well-being was never completely eliminated. He certainly thought that in some cases there was discomfort. Asked what substances they prepared in the Lister Institute for commercial purposes, he said diphtheria antitoxin, tetanus antitoxin, dysentery antitoxin, Yersin's antiplague serum, and vaccine lymph. Antidiphtheria serum was sold to the public through their wholesale agents at the rate of 2s. 6d. for 2,000 units. That would be 25s. for the average dose administered by the Metropolitan Asylums Board officers, who had the very greatest experience in this matter. In a case of illness of average severity not more than 20,000 units should, he thought, be given during the whole course of treatment. It might be given in three or four doses within the first twenty-four hours; that was the usual practice, he believed. In reply to further questions, he said the salaries of the staff were fixed, fortunately, because the results from the sales of these products were not very remunerative, and under any circumstances it would in no way affect the salaries of the staff. As a matter of fact, they did not quite pay expenses. The horses on the Institute farm used for the production of serum did not come under the Vivisection Act at all as long as they were not trying to find out anything new. It seemed rather an anomaly that one should be able to bleed a horse for commercial purposes without supervision and not for experimental purposes. There was no Government control of establishments for the production and standardization of serums in this country; in most foreign countries there was. In reply to further questions, the witness said plague disappeared from this country for reasons they did not understand in the least. Leprosy was also at one time common. He did not know that cholera was ever very common in this country. Typhus and relapsing fever had been practically banished, with the exception of a few outbreaks in poor and dirty courts. Typhoid fever had been vastly reduced, both as regards the mortality and prevalence. He was not prepared to say how far the knowledge obtained by experiments on animals had contributed to the reduction of typhoid fever. He admitted that the prevalence had diminished before. He agreed that the mortality from phthisis had been reduced by half at least before Koch discovered his bacillus. With regard to small pox, the witness thought that Jenner took advantage of the fact that cow-pox existed in milch cows, and was associated with cow-pox in the milkers. Anyhow, he took advantage of observations of conditions that were ready-made. There were no experiments on animals in that case. He presumed that Jenner's work was familiar to Pasteur when he discovered that an old culture of chicken cholera was capable of conferring a certain amount of immunity; but he believed it was not due to Jenner's work that Pasteur discovered that fact; he believed it was purely accidental. Pasteur would probably have been influenced in drawing his conclusions by his knowledge of Jenner's discovery. In reply to further questions the witness said vaccinia, or the conditions following vaccination, whether in the cow or calf or human being, were also believed to be a modified form of small-pox. The virus of vaccinia had not been cultivated. Asked if it was not the fact that while a calf which had been successfully vaccinated was rendered completely immune against a second vaccination, the serum of successfully vaccinated

calves absolutely failed to confer any immunity at all on other calves, he said he thought that was to a certain extent true, but not absolutely true. Experiments had been made showing, first, that the serum of a vaccinated animal would destroy vaccine lymph when mixed with it; and, secondly, that in some cases it had been found difficult or impossible successfully to vaccinate an animal that had had several injections of the serum of a calf that had been vaccinated. Asked if the fact that the serum of a successfully vaccinated calf would not protect another calf against vaccination cast doubt upon the protective value of the various serums he had mentioned, he said he did not think so in the least.

In reply to further questions, he said the evidence so far of the typhoid bacillus being the cause of typhoid fever was not absolutely complete; but its association with the disease was so constant, and the fact that it could always be recovered from the organs of patients who had died of the disease (and, indeed, it was in the first instance discovered in the organs and not in the alimentary canal), left little room for doubt that it was the cause of the disease. In addition to that, there was now the evidence from agglutination and the bactericidal action of the serums of patients convalescent from typhoid fever, which was entirely specific for that organism. Asked about bacteriological examinations for diphtheria, he said mistakes were rarely made nowadays. By injections of toxins derived from so-called specific microbes into animals one got the real disease in a modified form, owing to the fact that one injected the poison all at once instead of having to wait for it gradually to be developed and be absorbed day by day. On its being put to him that if one injected vaccine lymph into the calf one got always the period of development—that was to say, a vaccine lymph vesicle was there on a particular day after—the witness pointed out that the two conditions were not analogous. In one case one was injecting a poison; in the other one was injecting a living organism which had to grow. No bacillus had been discovered yet in small-pox; no specific micro-organism had been discovered for scarlet fever. Measles was doubtful. In regard to whooping-cough, there were good bacteriologists who claimed to have discovered the organism responsible for the disease within recent years. But it was not established at present. In hydrophobia no specific microbe had been discovered. In reply to further questions, the witness said that in the first instance Pasteur used the saliva of dogs, and subsequently used the spinal cord; and he thought the train of reasoning quite clear and logical which led him to expect that he would find the virus of hydrophobia within the nervous system. The reason why they excluded all cases of death which occurred within fifteen days of the termination of the treatment was that Pasteur found that the incubation period after the direct access of virus into the central nervous system of a dog was fifteen days, and he did not imagine that his treatment would be of avail when the virus had reached the central nervous system; consequently, he never expected or claimed that it would be of any value when once that had taken place. That had nothing in common with the serum treatment in diphtheria. The principle was entirely different. In the serum treatment of diphtheria the serum contained a body which it combined chemically with the toxin of diphtheria and neutralized it. In the case of hydrophobia it was a vaccination. One was endeavouring to accustom the tissues of the animal to a resistance against the virus of hydrophobia by educating it first of all with a mitigated virus, and gradually increasing the severity of it. It was a process of education of the tissues of the individual. The other was a mere chemical reaction. With regard to Haffkine's prophylactic against plague, he thought the figures he had given showed that it had had a marked effect. It had not been attempted in the majority of instances. In reply to further questions, he said the success of Wright's antityphoid vaccine had been called in question. Karl Pearson disagreed as to the extent to which they justified the conclusions Wright had drawn from them. But he thought Karl Pearson was taking a very high standard as to what would be required of a vaccine. Asked if it was not the fact that during the Russo-Japanese war there was an entire absence of any prevalence of typhoid fever among the Japanese troops, owing to the careful sanitary and other precautions taken, without the aid of any such antityphoid inoculation, he said he had not seen any account of the amount of typhoid fever in the Russo-Japanese war amongst the Japanese troops. He did not know whether they used any prophylactic or not.

Dr. Wilson asked if Wright had not recently made rather a damaging pronouncement concerning the serum treatment. Dr. Martin said he thought that very likely. Asked if Wright did not now advocate treatment by vaccine and not serum as indicated by what he called "the opsonic index," he said he believed that was so. Asked if he thought this new departure could ever become possible in general medical practice, even if it should be proved to be successful, he said he thought it would be difficult for busy medical practitioners. But, if it were found essential, it would always be possible to find people capable of doing it. Asked if it was not the fact that the treatment of tetanus by antitetanic serum had fallen into disrepute, he said he would hardly agree as to that. It had not justified the expectations. He would put it in this way: Although he considered one was treating tetanus at a very late stage of the disease by the time there were symptoms of spasms, it would still be one's duty to administer the antitoxic serum. He would inject it intravenously, and had done so on more than one occasion. Asked if the antistreptococcus serum treatment for puerperal fever had also been more or less a failure, he said it had been unsatisfactory, owing to the fact that it was highly specific, and puerperal fever was caused by a great variety of different strains of streptococci. One was never sure that the serum would be made from an animal immunized with an homologous strain. Asked if the antipneumonic serum had become popular as a remedy, he said he thought not. In reply to further questions, the witness said there were only three cases of tetanus among the wounded during the South African War. That was due to clean surgery. Whether the serum was used in those cases or not he was unable to say. He did not think it was largely used amongst the wounded.

Asked next about antidiphtheria serum, Dr. Martin said it was not quite harmless. The most disagreeable symptoms produced were rashes which kept the child awake at night. Asked how long it generally took before the medical man received the bacteriological report, after forwarding a swab from the throat of a suspected case, he said fourteen or fifteen hours. It would take about four days to complete a test for injecting a guinea-pig. On its being put to him that, if the death-rate per 1,000 of population had gone up in spite of the antitoxin treatment during the past ten years, as it had, that could not be regarded as a statistical result in favour of the serum treatment, the witness replied it could not be regarded as a statistical result in favour or against. On Dr. Wilson putting it to him that a possible explanation of more frequent occurrence of paralytic symptoms after the use of the serum might be that, admitting that the serum might possess some action in assisting in loosening the membrane, its after-effects might increase the number of paralytic cases, Dr. Martin replied: "You may hold that opinion, sir." Referring to the statistics put in by the witness, Dr. Wilson asked his opinion about some records given by the Medical Officer of Health of the City of Toronto, in his report for 1904, based on the diphtheria cases treated in the City Hospital for ten years. It appeared that there had all along been doubts among medical men in Toronto concerning the efficacy of serum, and groups of selected cases were treated in the hospital, some with antitoxin and some without, during those ten years; and this was a summary of the results for ten years. He said:

> Since 1894, when the first dose of antitoxin was given at the hospital, the mortality results have almost always been unfavourable. In every year, save one, the percentage of deaths in antitoxin cases has even been higher than the ordinary hospital rate, which is of course influenced by the increased antitoxin mortality. In 1894 the figures were respectively 21.4 against 14.07, and this state of things continued without much improvement until 1902, when the antitoxin was about 1 per cent. under the gross hospital rate.

Then he gave the statistics for 1903:

	Cases.	Deaths.	Per Cent.
Total hospital admissions ..	565	65	11.5
Antitoxin treatment	228	37	16.2
Ordinary treatment	337	[redacted]	8.3

Then he went on to observe:

The statistics of the last decade, which can now be presented, embrace a sufficient number of cases on which to base a fair opinion of the value of antitoxin in hospital practice:

	Cases.	Deaths.	Per Cent.
Total hospital admissions ..	5,100	667	13.0
Antitoxin treatment	1,132	181	16 0
Ordinary treatment	3,968	486	12 2

Then he said:

In a report of this kind any speculations as to the cause of the pronounced failure of a remedy from which so much was expected would probably be deemed out of place. A bare statement of fact is therefore presented, and this can, if necessary, be supplemented or substantiated by a large accumulation of original and classified evidence of unquestionable reliability.

Dr. Wilson asked the witness if he accepted that report. Dr. Martin replied, Not without examination. He had not seen the report before. In reply to a question whether the antidysenteric serum had been taken up in India, the witness said it had not been used in India to any extent. In reply to Mr. Tomkinson, who asked if the horses used for the production of antitoxin suffered much, Dr. Martin said he thought not. The horses compared favourably with those in anybody's stable. They were all fat and shiny. Asked if he had seen the picture of the Khartoum dog, he said he had. That did not represent the condition of their horses. There was no evidence that the horse during the process of immunization suffered more than the man who drank too much the night before and had a headache and general unsteadiness in the morning and was off his feed. Asked about the laws regulating the practice of vivisection in the Colonies, he said they differed in different countries. In New South Wales, where he was for some years, there was no law. There was a law for the prevention of cruelty to animals, and if anybody had supposed they were cruel they might have been prosecuted under that Act. Nobody did. In Melbourne there was a clause in the Cruelty to Animals Act allowing the Governor in Council to give a licence to such persons as he thought advisable to perform experiments on animals; and that licence in the witness's case included himself and everything done in his laboratory for which he was responsible. The pathologist and the bacteriologist and others in connexion with the scientific departments of agriculture and stock also held licences. The use of anaesthetics was not imposed necessarily. The licence was a comprehensive one, and in returns one had to fill in what one did. As a general rule they did not use anaesthetics for inoculations, but they always did so for physiological experiments. He found no difficulty in keeping the animals anaesthetized all day if one wished. In reply to Dr. Gaskell, he said there was no pain connected with the production of antitoxin for tetanus. That was because one never produced tetanus when immunizing a horse. Nothing occurred more than a slight rise in temperature and general malaise following each injection. In reply to a request for information as to plague antitoxin, he said the same precautions exactly were taken as with every other form of antitoxin to render it sterile, and free from any contamination whatever. The reason why the plague serum was out of favour in India was that it was not of very great value, unfortunately. Although it was the only rational remedy they had, it was impossible at present by injecting plague bacilli into the horse to make it respond by the manufacture of a sufficient amount of immunizing bodies to be of great practical value. It was very weak compared to such serums as diphtheria and tetanus, and to that extent it was a disappointment. He was referring to Yersin's serum. In reply to Sir Mackenzie Chalmers, the witness said the preparation of the antitoxins of established value was only a very small part of the functions of the Lister Institute. Practically the whole energies of the Institute were devoted to research work. There were about twenty-five workers there. Everybody was doing something or other—not merely inoculation work dealing with infective disease. There was a chemical side to the Institute, where various chemical problems connected with biology were investigated. That might or might not be concerned with animal experiments. Often it was not. In his opinion research on the lines of the Institute could not be carried on without animal experiments. The Institute would have to go elsewhere if animal experiments were not permitted by law. It would have to go to one of the Colonies or America. In reply to a further question, he said he had been on the Plague Commission in India. There were eight doctors on the Commission, and the assistants, taking the minor assistants, must amount to one hundred. All those people were more or less continually exposed to the virus of plague. They were inoculated at regular intervals with Haffkine's prophylactic. There had been no cases of accident among the doctors. One of them suffered from pestis minor. To his knowledge there had been three cases of plague amongst the native assistants—all non-fatal. The statistics were too small to attach importance to. Asked if from his own experience he thought it right or superfluous to inoculate with Haffkine's vaccine people specially exposed to the plague, he said he could best answer that by saying that he had been always careful to inoculate himself. In his case it produced no discomfort, because he went about it in a gradual way, taking a very small dose in the first instance, and the next week a little more, and so on, which was the best way to immunize anybody, just as one would a horse; the dose was small to begin with, and gradually multiplied. He was never in the least incapacitated either in the way of appetite or his ordinary occupation. He had a slight soreness. In reply to further questions, he said experiments had shown that the common mode of transmission of the plague was by means of the rat flea. That was not the only possible mode; but the evidence adduced by the Commission was such as to lead one to regard it as the only serious mode of epidemic spread. Whether it was possible to satisfactorily interfere was another question. Still he thought it an essential step to know the means by which a disease was communicated from one person to another. That could not be obtained without the use of animals for experiment. In reply to a further question, he said the doctors were occasionally bitten. For one thing, they wore top boots. In combing out the fleas, to take them from one animal to another, the animal was chloroformed and the fleas were chloroformed. Otherwise it would have been impossible to have dealt with them; the Commission would have been exterminated. He attributed some of the immunity to the prophylactic. In reply to the Chairman, he said if they were getting fleas off the animal they would put the animal in a receptacle with chloroform vapour, and that quiescent sent the animal to sleep and the fleas to sleep, and one could then pick them off at leisure. The fleas recovered from the anaesthetic in a few minutes, and could then be dealt with as wished. It was known that the flea whilst biting commonly discharged from behind. Nearly all suctorial animals whilst sucking blood at one end discharged the contents of the intestine at the other, and in that way they could discharge infection. The discharge of the intestine got on to the puncture. That was the probable mode of entry. It itched, and one rubbed it. That seemed the probable way in which infection actually took place. The fact of the soiled proboscis was not excluded, but as infection might take place as much as fifteen days after the flea had fed upon the infected animal, during which fifteen days it had been fed upon the blood of a healthy animal every day, that practically excluded the soiling of the proboscis as the means of inoculation. Asked by Dr. Wilson if that applied also to the mode of infection conveyed by the mosquito in malaria, he said, No, it was more elaborate and more perfect in the case of the mosquito; because in the malaria parasite there were two stages, one in which it lived in the mosquito's body, and one in which it lived in the blood of man. The stage that lived in the mosquito's stomach ultimately broke up into a large number of eggs, so to speak, which got into the salivary glands of the mosquito, and were directly discharged

with the saliva when biting. In reply to Sir Mackenzie Chalmers, he said the gnat actually injected the poison; the flea merely deposited it close by. That was what they imagined was the usual case. Asked if by means of experiment on animals they had discovered at all the length of the prophylaxis conferred by Haffkine's vaccine, he said there were not very accurate data. The Commission had not concerned itself with that problem. There was certainly some immunity left in animals, and also apparently in man after twelve months, from some of the statistics which were collected by Bannerman. Asked if he could draw any general inference from the length of prophylaxis in an animal to the length of prophylaxis in man, he said only in a rough way. In reply to further questions, he said the flea did not suffer; it was a mere passive transmitter. Proceeding, he said the Commission had completed what it undertook to do in the first instance, and it was now resting during the hot weather. The Committee had suggested to the Government of India certain other matters which it considered it would be advisable to investigate, and had expressed its willingness to do so if it was wished. It had issued an interim report; a second would be ready the next day (July 11th), and there would be about three others, which would be more bulky, which dealt largely with epidemiological matters and the analysis of a very large amount of evidence, which took a long time. Asked, in regard to the Khartoum dog which was referred to, if people who died of trypanosomiasis would be attacked exactly the same as that dog and look as miserable in a photograph, he said, Yes, the people who died of sleeping sickness very closely resembled that dog. It did not cause much suffering in the later stages, but that particular trypanosomiasis which was being investigated was a disease of mules. First of all the object was to ascertain what the disease was, and then if possible how one could best prevent it by sanitary means, or cure it if possible; and dogs were used rather than mules, as being convenient and cheap in Khartoum. In reply to Sir Mackenzie Chalmers, Dr. Martin said that the fact that the ordinary bubonic form of plague, excluding the pneumonic form, was not infectious was established by the clinical experience of the plague in India. That there should be no misapprehension as to what was meant by the words "infectious" and "contagious," he said that the evidence from the experience of plague in hospitals in India and in houses in India was that it did not spread from one patient to another, provided that it was confined to the bubonic form. Their conclusions from their experiments were consonant with that experience. In reply to further questions, he said that on the whole he was content with the working of the present Act, but he took exception to the recent action of the Home Office in not extending a licence to foreign scientists wishing to work in British laboratories. On Sir Mackenzie Chalmers pointing out that there was an idea that foreigners were less careful of animal suffering than Englishmen, he said that difficulty could be got over by placing greater responsibilities upon the heads of laboratories. The form of licence that he had in Victoria granted that in principle. That licence included the head of a laboratory and such persons as he made himself responsible for, and he returned to the Government everything. In the case of his own laboratory he regarded himself as responsible for the carrying out of the Act. Asked by Sir William Collins if he agreed with the opinion of Koch in regard to the non-communicability of the tubercle of animals to man, he said, No. He thought it had been disproved by the Royal Commissions on Tuberculosis both in England and in Germany, and by other individual workers. Asked as regards syphilis, he said the contention in his statement was that the disease could be diagnosed by the recognition of the *Spirochaeta pallida*. Schaudinn himself did not claim the spirochaete as the cause. He was the discoverer of it in syphilitic material. His partner, Professor Hoffman, suggested it as the cause. It had been extensively investigated by hundreds of persons in every country during the last two or three years, and had been found to be almost invariably associated with syphilitic lesions of different kinds. The *Spirochaeta pallida* had been claimed as the cause of syphilis by hundreds. And strength had been given to that claim by the fact that material containing the *Spirochaeta pallida* could be inoculated into apes and reproduce the disease. Lustgarten claimed a bacillus as being the cause of syphilis but he was speedily shown to be mistaken. Asked if he was able to give any suggestion as to the reason why there had been hardly any fatal hydrophobia or rabies in man in this country since 1899, he said because of Mr. Long's Bill to muzzle the dogs and the quarantine restrictions. People interested in rabies in France had urged upon the Government to employ some such means, and had pointed to England as the great example. In Germany muzzling orders and the destruction of stray dogs was carefully carried out, and one way in which they had diminished the number of dogs of doubtful ownership was by doubling the dog tax. Asked if he thought that the inoculation with Haffkine's vaccine or any other vaccine in India was having a valuable influence in checking the spread of plague, he said, Very valuable. He admitted that plague had never, so far as he was aware of, been more prevalent in India in the memory of man than it had been during the past year. Sir William Church said Sir William Collins mentioned a number of diseases to which man was liable, and on which no light had been thrown by bacteriology as to their cause—mumps, typhoid, measles, chicken-pox, and various others, but he asked: Were any of those affections diseases which man shared in common with other animals? The witness replied that had been one of the difficulties in ascertaining their cause. In most of those cases it was impossible to communicate them to animals and make an experiment. It had been impossible to study them on animals. That was largely the reason why they had proceeded such a short distance. Asked by Colonel Lockwood if the diagnosis of diphtheria in country districts was not extremely loose, the witness said he imagined it was not so efficient as it was in the Metropolitan Asylums Board. Asked if the medical officers of health were not paid so much for every case of diphtheria that they detected, he said he did not know whether they had a notification fee now or not. If so, it would be such a very small amount that he did not imagine that it would tempt even the most impecunious medical man to increase the rate. (Note.—Colonel Lockwood was presumably referring to the medical practitioner, and not to the medical officer of health, and Dr. Martin answered the question in that sense.) In reply to further questions, he said he was aware of the very strong feeling existing in a large section of the public against the employment of experiments on living animals. He thought it was the natural instinct of a decent-minded man, and it had to be reasoned out of him. He thought the medical profession shared equally in the sentiment which he had just expressed; but they understood the usefulness and the necessity for inconveniencing animals and utilizing them for their own ends. He did not think the natural sentiment was deadened by continual experimentation any more than the sympathy of a medical man for children in general was any less fine because he had to cause pain to children in the ordinary course of his occupation. In reply to further questions, he did not think science had suffered materially from the restrictions imposed by the Act. A certain number of people might have wasted some of their time in correspondence, but he thought no material hindrance had been imposed. Asked if he could suggest any extra measures of protection to animals that would tend to allay the state of public opinion, he said he was unable to do so offhand, but he would think over the matter, and if he had any fertile suggestion to make he would make it when he had studied Mr. Coleridge's proposed Bill. In reply to further questions, he said he could take no exception to the form of the licence which he held in Melbourne; he thought it was only right and proper. The regulations were not in the least irksome. In reply to Sir Mackenzie Chalmers, who asked if there was any known or authenticated case in which it had been shown that the antirabic inoculation had itself created hydrophobia, he said he was not aware of any. Asked if there was a possibility, however remote, that by undergoing the Pasteur treatment, especially in its intensified form, a person might get hydrophobia who had not been infected by a dog, he said there was a possibility, but it was extremely remote. He would have no hesitation whatever in advising any one who had been bitten to undergo the treatment. In reply to Mr. Ram, he said the reintroduction of tuberculin was due to methods of ascer-

taining the action of tuberculin discovered by Wright' owing to which he found that the effect of a dose of $\frac{1}{100}$ of what used to be given in the early days was equally efficacious, and that the large doses were rather detrimental. Nearly all the hospitals in London seemed to be using it. Asked as to its results, he said his opinion on that would not be valuable, because he had not followed the cases. Asked if it was now claimed by Professor Wright that an absolute cure could be effected by this treatment after there was undoubted tubercle, he said, in the case of some forms of tubercle, he believed that Professor Wright held that opinion strongly. He had seen several cases of tuberculosis of the bladder and urinary apparatus treated by this method. Asked if he had ever known of any case which had been believed to be an absolute cure, he said, Yes, but whether it was entirely due to tuberculin he was not in a position to say. It could only be judged by large figures. In reply to Sir William Collins, he said he was unable of his own knowledge to assert that tuberculin cured consumption. Like all things in medicine, there were limitations to almost all their endeavours.

(*To be continued.*)

LITERARY NOTES.

THE first number of a new medical journal, entitled *The Archives of Diagnosis*, has appeared in New York. The editor is Dr. Heinrich Stein.

The publishers of the New York *Journal of Nervous and Mental Diseases* propose, it is announced, to issue a series of volumes under the general title of *Nervous and Mental Disease Monograph Series*. The editors of the series are Dr. Smith Ely Jelliffe, of New York, and Dr. William A. White, of Washington. The series will consist of short monographs, translations, and minor textbooks on subjects relating to neurology and psychiatry. The first of the series will be *Outlines of Psychiatry*, by Dr. William A. White; other volumes in the series will be *Studies in Paranoia*, by Drs. Glerlich and Friedman; and *Ibsen, the Apostle of the Psychopath*, by Dr. Jelliffe.

A new journal, the scope of which is described by its title, *Epilepsia*, is about to be issued as an international quarterly. The journal will be under the patronage of Dr. W. Bechterew, Dr. O. Binswanger, Dr. J. Hughlings Jackson, Professor L. Luciani, Dr. H. Obersteiner, and Professor F. Raymond. The editorial staff includes Dr. H. Claude, of Paris; Dr. A. Turner, of London; Dr. L. Bruns, of Hanover; Dr. W. P. Spratling, of Sonyea; Dr. J. Donath, of Buda-Pesth, who will be the active editor for the first year; and Dr. L. J. J. Muskens, of Amsterdam, who is the secretary. Among the collaborators are Drs. Grainger Stewart, Batten, Bruce, Ferrier; Sir William Gowers, Sir Victor Horsley, Dr. Smith Ely Jelliffe, Professor Kocher, Professor Kowalewsky, and Professor Ramon y Cajal. The official languages will be English, German, and French.

Dr. H. C. Mueller, of Utrecht, the author of many scientific works on classical philology and also on modern Greek, commenced in November last (16th), we learn from the *New York Medical Journal*, a series of articles on Medical Onomatology in the Dutch periodical *Geneeskundige Courant voor het Koningrijk der Nederlanden*. The first article deals with the psychiatrial terms found in the writings of Kraepelin and Ziehen. Dr. Mueller gives a number of words like "psychosis," the meaning of which has altered to such a degree that the Greeks must be at a loss to understand their exact signification. Dr. Mueller is a classical scholar but not a medical man, and in a letter to Dr. Achilles Rose, whose co-operation in the task he has undertaken he has secured, he acknowledges the difficulty of studying medical nomenclature without the help of a physician.

Messrs. J. and A. Churchill have in the press a third edition of *Diseases of the Rectum and Anus*, by Mr. F. Swinford Edwards. The same firm has nearly ready a new work on *Hernia*, by Mr. R. W. Murray, Surgeon to the David Lewis Northern Hospital, Liverpool. Messrs. Churchill have also in preparation new editions of *Uric Acid as a Factor in the Causation of Disease*, by Dr. Alexander Haig, and *Practical Pharmacy*, by Mr. E. W. Lucas.

An interesting essay might be written on the addition to therapeutics, whether historical or legendary, made by animals. It is said that it is to dogs we owe the knowledge of the febrifuge properties of bark; the ibis is credited with the invention of the enema, its beak being made to serve as the syringe; while to the hippopotamus, an animal from which one would scarcely have expected any device of medical treatment, is attributed the use of bleeding. The story, as told in Philemon Holland's translation of Pliny, is as follows (Book 8th, ch. xxvi):

> The riuer-Horse hath taught physitions one deuice in that part of their profession called Surgerie: for he finding himself ouer-grosse and fat by reason of his high feeding so continually, gets forth of the water to the shore, hauing spied afore where the reeds and rushes haue bin newly cut: and where he seeth the sharpest cane and best pointed, hee sets his body hard onto it, to pricke a certaine veine in one of his legs, and thus by letting himselfe bloud maketh evacuation: whereby his body, otherwise inclining to diseases and maladies, is well eased of the superfluous humor: and hauing thus done, hee stoppeth the orifice againe with mud, and so stancheth the bloud, and healeth the wound.

The last part of the procedure is scarcely up to the level of present-day surgery, but it is cleanly as compared with some of the dressings used in mediaeval surgery. Elsewhere (Book 11th, ch. xxxix) Pliny says:

> And as for the Riuer-horse, his hide is so thicke, that thereof iauelines and speares are turned: and yet so industrious is that beast, that in some case he is his owne Physician, and he hath taught vs to open a veine, and let bloud.

Health Resort, "the illustrated journal of British and Foreign Spas and Sanatoria" has recently been expanded in scope and is now entitled *The World of Travel*. The contents are interesting and the illustrations well executed.

We hail a new recruit to the ranks of the medical poets in the person of Dr. George Stoker, C.M.G. His *Songs of the Red Cross and Other Verses* (George Putman and Sons, Limited) recount some of his experiences in the Turko-Russian War and in South Africa. War, friendship, golf—such is the *farrago libelli* which Dr. Stoker has produced. It is embellished with a portrait of the author as a frontispiece.

In the *Gazette Médicale du Centre* not long ago was reported an address by Professor A. F. Le Double, delivered at the Hotel des Sociétés Savantes on the occasion of the visit of the Société des Etudes Rabelaisiennes to Touraine. Professor Le Double, who is well known as an authority on the subject, discoursed on Rabelais as the precursor of the experimental method. After dilating on the vastness and variety of the knowledge of the creator of Gargantua in languages, history, geography, botany, the art of war, education, theology, law, architecture, physiology, medicine, surgery, and anatomy, and his marvellous skill as a writer, he went on to point out that at a time when people believed blindly in the most fantastic tales of travellers, and even in assertions the truth of which it would have been easy to test, Rabelais showed the spirit of observation and experimentation. He was not intemperate in any other way, but he was a very glutton in the matter of books. He did not, however, devour them to fill himself with an empty knowledge of formulae, but to make himself more fitted to discover for himself the secrets of physical and moral nature. After having assimilated the works of theologians, grammarians, historians, poets, philosophers, the great navigators of antiquity and the Middle Ages, and especially of naturalists and physicians, which better satisfied his inclination for natural science and medicine, it is likely that at Fontenay-le-Comte during the summer he examined the trees and the plants, comparing them with the statements made in the books of the ancients. According to Le Double, Rabelais discovered the sexuality of plants, mistaking, it is true, for the male the female which bears the seed, but he expressly states that in several plants there are two sexes, male and female—*ce que voyons és lauriers, palmes, chenes, hêouses, asphodèles, mandragore, fougères, agaric, aristolochie, cypres, térébynthe, pouliot, peone, et autres.* At Montpellier, after commenting on the aphorisms of Hippocrates, and the *Ars Parva* of Galen in his lectures, which were followed by crowds of students, he frequented the dissecting room of the university, and with scalpel, scissors, and hooks worked at anatomy. He

recognized and described 300 years before the Lyons surgeon, Bonnet, the transverse flattening of the cervical portion of the trachea compressed by a goitre, and 200 years before the syphilographer Astruc the pathological lesions of venereal sarcocele. At Lyons for two years Rabelais was physician to a great hospital, where he devised an apparatus for fractures and an instrument for the treatment of hernia. Le Double says he was the first who described the symptomatology of mercurial stomatitis. Several centuries before Ricord he distinguished non-virulent from virulent urethral discharge, and seems to have discovered the parasite of scabies, a disease which in 1842 was still included among cachexias or phlegmasias.

BRITISH MEDICAL BENEVOLENT FUND.

AT the February meeting eight applications were received, and grants amounting to £94 voted in relief. The following is an abstract of the cases:

1. Daughter, aged 53, of late L.F.P.S.Glasg. Only income £10 a year from a charity, and is unable to make any effort at self-support owing to ill-health. Relieved once, £12. Voted £12 in twelve instalments.

2. Widow, aged 65, of M.D.Aber. No income. Earns a little by sewing. Children unable to help. Relieved seven times, £90. Voted £12 in twelve instalments.

3. Daughter, aged 55, of late L.S.A. No income: lets rooms, but finds difficulty in getting lodgers, and has been obliged to sell most of her furniture. Voted £10 in ten instalments.

4. Widow, aged 46, of M.B.Durh., M.R.C.S.Eng. No income. Endeavours to support herself by letting lodgings. Two children, aged 16 and 14. Voted £12 in twelve instalments.

5. Widow, aged 59, of L.R.C.P., L.R.C.S.Irel. Was provided for at husband's death, but lost everything through a failure of a bank a little more than a year ago. Slight help from a sister, who earns a living as a companion. Relieved once, £12. Voted £12 in twelve instalments.

6. Daughter, aged 62, of late M.R.C.S., L.S.A. Maintained herself for many years, but is now deaf and in indifferent health and unable to get work. No income; a friend pays the rent of a room. Relieved nine times, £108. Voted £12 in twelve instalments.

7. Widow, aged 44, of M.D., R.U.I. Quite unprovided for at husband's sudden death some years ago, and now acts as housekeeper, receiving a home for herself and only child in exchange for her services. Relieved nine times, £107. Voted £12 in twelve instalments.

8. Daughter, aged 65, of late M.D.Edin. Supported herself until nearly 60, but the last few years has had to live with an aged mother—an annuitant of this Fund. Applicant has recently been operated upon for new growth. Relieved four times, £24. Voted £12 in twelve instalments.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended January 18th, 25th, and February 1st and 8th the deaths from plague in India numbered 3,150, 3,190, 3,621, and 4,018 respectively. The principal figures during the four weeks in question are: Bombay Presidency, 719, 876, 962, and 1,112; Bengal, 298, 307, 350, and 365; United Provinces, 449, 523, 703, and 647; Punjab, 220, 491, 478, and 619; Rajputana, 97, 123, 47, and 271; Central Provinces, 178, 128, 193, and 199; Central India, 30, 25, 146, and 13: Madras Presidency, 139, 119, 121, and 126; Mysore State, 736, 311, 313, and 318; Burma, 285, 311, 299, and 304.

SOUTH AFRICA.

No plague reported in South Africa from October 21st, 1907, to February 8th, 1908.

CHOLERA AND THE HEDJAZ RAILWAY.

ATTENTION was called in our issue of February 8th to the proposal made by Professor Chantemesse, Inspector-General of the Council of Hygiene of France, that an International Sanitary Conference should be summoned to consider what new precautions should be devised to obviate the increased danger of the importation of cholera from the holy places of Arabia which the completion of the Hedjaz Railway will undoubtedly entail. Dr. Ruffer, the President of the Maritime and Quarantine Sanitary Council of Egypt, called attention to the danger about to come into existence in a paper on quarantine measures which he read at the International Congress of Hygiene last year. Until recently the desert, with its forty days' caravan route, was an automatic barrier against the dissemination of cholera by pilgrims returning from Mecca to Syria and South Russia, but the railway when completed will enable the journey from Medina to Damascus to be made in four days.

The matter is of so great importance to Europe, and indirectly to India, since India is the most ordinary source of infection of Mecca with cholera, that we have thought it well to prepare a sketch map showing the present position. The railway was opened some time ago as far as Akhdar, but our information is that it has now been constructed to within about 200 kilometres from Medina, that is to say, to a point somewhere near Hedieh; we understand that the Syrian holy carpet this year travelled to within 200 miles of Medina by this railway, and that the line has been surveyed to within a few miles of Medina, and although the engineers recently encountered in the immediate neighbourhood of Medina some opposition in carrying out the survey as far as the sacred city, there are reasons which make it pretty certain that the prejudice of the local population will shortly be overcome. In the first place, the Hedjaz railway is not being built merely for the convenience of pilgrims; it is also a strategical line. Arabia, and more particularly Yemen, is in a state of almost open revolt against Turkish rule, and it is absolutely necessary to the Sultan that he should be in a position to send troops into that district quickly; if the Sultan were to lose the Hedjaz half his authority over the Mussulman world would be lost with it. At present he is its head because the sacred cities are within his dominions; were he to lose these cities he would no longer be the caliph, and his hold on the Mohammedans outside Turkey would be gone, while even in Turkey his prestige would be diminished. Another reason why the opposition to the completion of the railway is likely to be overcome without much difficulty is that it is an enterprise in which all Mohammedans take a special interest and pride. The money to build it has been raised by voluntary subscriptions, and it is therefore looked upon as a religious undertaking. No doubt the voluntary nature of the contributions has not always been very evident to the people who have paid them, but the end has been held to sanctify the means, and the railway project is not unpopular with good Mussulmans.

There is little doubt that when once the railway is finished and in working order considerable pressure will be put on all pilgrims to induce them to make use of it. The pilgrims coming from the north are the Syrians, Turks, Persians, Russians, Bosniacs, Moghrabis, and Egyptians. Of these the Turks and Syrians, roughly speaking about 12,000 people in ordinary years, will certainly travel by this route. It is probable that the richer Egyptian pilgrims will also make use of the railway, though the poorer will continue to go by sea. The route which will be taken by the Russian and Persian pilgrims in future is uncertain; as to the Bosniac pilgrims, it is probable that the Austrian Government will not encourage them to go by the Hedjaz railway, but their number is not large; the Moghrabis, that is to say the Algerians, Tunisians, and Tripolitans, will doubtless continue to go by sea. It is, however, possible that considerable indirect pressure will be put on the Mussulmans coming from the north, from Russia for instance, to travel by the railway. If the Sultan lets it be known that he, the head of the Mohammedan religion, considers it the duty of the Mussulmans to go by the Hedjaz railway the large majority will do so at once, and it would not be impossible to make administrative arrangements at Jiddah and Yambo so onerous that the minority remaining might also find it desirable to use the railway.

The danger of infection of Syria, Asia Minor, and South-east Russia by pilgrims returning from the Hedjaz, will be very considerably greater than it has been in the past owing to the very much greater rapidity with which it will be possible to accomplish the journey from Mecca and Medina to Syria and Palestine. When once Mecca is infected the number of cases arising is very considerable. Already experience has shown that the Russian pilgrims may bring the disease back with them, and this risk will be materially increased. Hitherto the infection of Egypt has been perhaps the chief danger for Europe, and though this risk will probably not be increased to any appreciable extent by the railway, it will



remain, and will call for a continuance of the unceasing vigilance which is now exercised. In considering the possible extension of cholera in other directions the new railway from Port Sudan to Atbara and Khartoum has to be remembered.

As to the nature of the new precautions called for it is very difficult to speak with confidence. The Turkish Government is always very loth to sanction the imposition of any regulations calculated in any way to interfere with the pilgrimage; and it is more than doubtful whether the International Quarantine Board in Constantinople is so constituted as really to possess power to institute effective precautions. As at present constituted, it is practically a Turkish Board, inasmuch as Turkey can always command a majority. Even if regulations were decreed by the Board, there remains the doubt whether they would be effectually carried out; we understand that the present condition of its lazarettos in the Red Sea does not encourage any sanguine expectations. It seems probable, therefore, that pressure will have to be brought to bear upon Turkey before anything effectual will be done. The present position of international politics in the Near East, and the strained relations which other railway projects have brought about between certain of the great Powers, does not make the prospect for any immediate concerted action look very hopeful.

An international sanitary conference might, however, do much good.

KING EDWARD VII SANATORIUM.

THE first annual report of the King Edward VII Sanatorium, which has been drawn up by the Medical Superintendent, Dr. Noel Dean Bardswell, under the direction of the consulting staff, deals with the period from July, 1906, to June, 1907. When formally opened by the King, the equipment of the sanatorium was not quite complete, and it was possible at that time to admit only 30 patients; by the end of September 80 beds were available, and early in March, 1907, there were ready for use 19 more beds, making 99 in all; since that time the sanatorium has been full, and by the conversion of two sitting-rooms into bedrooms there are now in all 101 beds available for patients. The report contains statistics with regard to 161 patients; but, as in 9 instances the diagnosis of phthisis was not confirmed, the actual number of cases of pulmonary tuberculosis dealt with is 152.

CLASSIFICATION OF PATIENTS.

For the purposes of the report the patients have been classified into three groups: (I) Patients with early and limited disease, affecting one or two lobes of one or both lungs, constitutional disturbance, for example, fever, etc., being slight or absent. (II) Patients with infiltration or consolidation of two or more lobes of one or both lungs, with or without excavation, associated with the usual symptoms of active tuberculosis. (The duration of the disease of the patients in this group averages seven months.) (III) Patients with very extensive disease of considerable duration (a year or more) with considerable lung consolidation, and in many cases excavation, associated with some permanent damage to the general constitution, as evidenced by impaired digestion, weakened muscular and vascular tone, etc.

In describing the condition of patients on discharge from the sanatorium the following terms have been used:

Arrest.—General health restored in every respect. Lung disease completely arrested; there being no physical signs present, or only such as are compatible with a completely-healed lesion.

Much Improved.—General health completely restored. Physical signs in the lung, though much diminished, not entirely cleared up—for example, perhaps limited to a few moist sounds on cough only, tubercle bacilli still to be detected in the sputum.

Improved.—General health, though improved, only imperfectly restored. Physical signs, though less marked than on admission, still present.

Stationary.—No appreciable improvement in physical signs or in general health.

Worse.—Deterioration of general or local condition, or of both.

RESULTS OF TREATMENT.

Under each group a detailed description of the clinical condition of the patients are given in a table. The results are summarized as follows under the several groups:

Group I.—Forty-six patients were admitted with the disease in its earlier stages. The very large majority of these patients had no fever, but for the most part they were considerably run down, appreciably below their normal weights, and unfit for their several occupations. On discharge, 33, or 71.7 per cent., had their disease arrested, there being no physical signs present incompatible with a completely-healed lesion—in short, in a condition usually termed "apparent cure." Most of these patients are now at work, though a few are still continuing treatment at home, before returning to their ordinary work. The average length of stay of these 33 patients was 13 weeks. The remaining 13 patients all left very much improved; fully restored in general health, though with definite physical signs of disease still present. The majority of these patients are continuing the treatment at home; some, however, have returned to work—for the most part, to their ordinary occupations. The average length of stay of these 13 patients was 13.5 weeks. It may be noted that only one of these 46 early cases had tuberculous disease of the larynx.

Group II.—Of the 64 patients included in this group, only 7, or 10.9 per cent., were discharged with arrested disease. A very large proportion, 41, or 64.1 per cent., left "very much improved." These 48 patients are at the present time all doing well, either at work or at home continuing the treatment. Thirteen patients, or 20.3 per cent., appreciably improved, but the remaining 3, or 4.7 per cent., failed to make any improvement at all.

The average length of stay of the patients who left with their disease arrested was 17.3 weeks, and that of the patients who left very much improved, 18 weeks.

Group III.—The results obtained in the case of patients with advanced disease were, as one would expect, far less satisfactory. Of the 42 patients included in this group, 17 had all five lobes, and 14 four lobes definitely diseased. The existence of considerable excavation was diagnosed in 14 patients. The high proportion of patients who suffered also from some complication, amounting to no less than 35 per cent., is also notable.

Of these 42 patients treated, no one was discharged with arrested disease, and only 8, or 19.1 per cent., were recorded as "very much improved," 19, or 45 per cent., were discharged "improved," 6, or 16.6 per cent., left definitely worse, 2, or 1.3 per cent., died in the sanatorium, and 17, or 11.2 per cent., died after discharge. Six only out of the 42 returned to work on discharge.

Deaths.—Two patients died in the sanatorium. Both were classified under Group III, and in both instances death was due to haemorrhage. One patient had been in the sanatorium thirteen weeks, and the other two weeks; 17 patients died after discharge, and of these 12 belonged to Group III, and 5 to Group II.

The general results are summarized in the following table:

Group.	Number of Cases.	Arrested.	Much Improved.	Improved.	Stationary.	Worse.
I	46	33	13	—	—	—
II	64	7	41	13	—	3
III	42	—	8	19	6	7
	152	40	62	32	6	10

The report of the throat department shows that of the total number of patients 17 had undoubted tuberculous disease of the larynx, 2 suffered from chronic laryngitis, probably tuberculous, and 1 had complete paralysis of the vocal cords, due probably to the pressure of tuberculous glands on the recurrent laryngeal nerve. Most of the patients with laryngeal tuberculosis were suffering from pulmonary tuberculosis in a somewhat advanced stage, 10 belonged to Group III and 6 to Group II. In only one instance was laryngeal tuberculosis associated with early disease of the lung. The results obtained by vocal rest, as advocated by Sir Felix Semon, have been very encouraging, and experience has shown that the treatment can be carried out without making a patient's life very tedious. Patients are not isolated, but are required to carry on conversation only by the use of pencils and slates or scribbling books. It is rather surprising to hear that slates are permitted to be used.

LABORATORY.

The laboratory has been available for the examination of sputum and for investigating the opsonic index since April 15th, 1907. Down to July 24th 500 indexes had been taken in the forty patients under observation, but the results are not yet ready for publication.

DIET.

In the report, particulars are given of the daily routine and of the diet. The standard diet represents a moderate increase on that taken by the average individual in normal health. That for men, yielding 3,186 calories, is rather larger than that for women, which yields 2,814 calories. The diets, which are modified for patients confined to bed, are stated to have proved most satisfactory, patients admitted appreciably below their normal weight gaining on an average 1½ lb. to 2 lb. a week, until they reach an average of 6 lb. in excess of their average weight when in normal health. Care is taken to prevent patients putting on too much weight, and in patients well up to weight diets are often somewhat reduced. Each patient's plate is marked with the number of his room, and after a meal no plates are washed until they have been inspected by the diet Sister, and a record made of everything left.

GRADUATED LABOUR.

Much importance is attached to exercise: it is very carefully supervised. Graduated labour on the lines of that introduced by Dr. Paterson at the Frimley (Brompton Hospital) Sanatorium has been found most useful to vary the monotony of measured walks. The work

done at Midhurst consists largely of practical gardening in the grounds and flower gardens, and is roughly divided into three grades, the lightest being weeding, hoeing, gathering seeds, pruning, etc., the heaviest being digging and trenching unbroken ground, mowing and rolling, and the intermediate stage consisting of wheeling soil to the lawns and spreading it, clearing ground of stones and wheeling them away in barrows, and levelling new ground. An open-air carpenter's shop has also been established, and the care of the poultry is in the hands of some of the patients, under the direction of one of the medical officers. This graduated labour has been found to have a beneficial effect from a medical standpoint, since it promotes a good muscular tone and general well-being which are invariably associated with satisfactory progress in lung disease.

MEDICAL NEWS.

AT the last ordinary meeting of the Medical Society of London, Dr. Frederick T. Roberts was elected an Honorary Fellow.

DR. T. CLAYE SHAW will give an address on the psychology of women at the Incorporated Institute of Hygiene on Tuesday next at 3.30 p.m.

ON the occasion of his silver jubilee as a doctor, Dr. P. A. Smith was entertained to a complimentary dinner by the leading Catholics in Glasgow.

THE annual conversazione of the West London Post-graduate College will take place at the Hospital on Wednesday, March 18th, when the Duke of Abercorn, K.G., will hold a reception at 8.30 p.m. The Dean asks us to state that he will be pleased to send a card of invitation to any medical man who will apply to him at the College.

THE Executive Committee of the Society for the Destruction of Vermin has determined to concentrate its efforts in the first instance on the extermination of rats. Methods by which they may be destroyed will first be sought and examined by a special scientific committee which has been appointed. The application of those which are approved will be organized by another committee. The co-operation of all bodies and sections of the community likely to be interested in the question is invited. Application will be made to the Board of Trade for incorporation as a non-profit-making Society. The Society will for the present conduct its work at the house of the Royal Institute of Public Health, 37, Russell Square, and cheques from those desirous of assisting the work may be sent to the Secretary the Society at that address.

AT the last meeting of the Metropolitan Asylums Board the Asylums Committee presented a report upon the paucity of candidates for the appointment of assistant medical officers. We are glad to see that this matter is to be considered by the Board, and we hope that the causes of the unpopularity of the service, which have been from time to time fully set out in our columns, will be taken into serious consideration. The recommendations of the Committee appear to us altogether inadequate, but as the Finance Committee of the Board reports against even such slight modifications as the Asylums Committee proposes, and as the matter under the standing orders was adjourned for a fortnight, we at present refrain from further comment.

THE Edmonton Education Committee having written to the seventeen medical practitioners in the district inviting them to apply for two appointments of medical inspectors of schools at a salary of £75 a year each, received a communication, signed by all of them, stating that they declined to apply on the ground that the salaries offered were altogether inadequate. At a meeting of the Committee on March 3rd, the Chairman, Dr. W. B. Benjafield, expressed the opinion that the salaries were insufficient, and a motion was made to appoint a whole-time inspector at a salary of £300 a year, as well as two nurses; the voting was equal, and the Chairman declined to give a casting vote. It was then proposed to appoint two medical inspectors at a salary of £80 a year each to act under the medical officer of health, but eventually the whole matter was postponed. There are some 12,000 children in the Edmonton schools.

THE first annual general meeting of the Royal Society of Medicine was held on March 3rd at 20, Hanover Square, with Sir William Church, Bart., President, in the chair. The report of the Council, read by the Senior Honorary Secretary, stated that the financial position of the Society was stronger than had been anticipated by even the most enthusiastic advocates of amalgamation. Subscriptions from Fellows had considerably exceeded the estimate. The number of Fellows of the Society on June 14th, 1907, was 1,322, and of members of sections 386. Since then 412 members of the old societies had joined the Society as Fellows and 216 as members of sections. In addition, 317 new Fellows who had not been connected with any of the old societies had been elected during the last three months. The total number of Fellows of the Society was now 2,025, and of members of sections over 600. The average number of readers in the library had greatly increased. The number of periodicals had been increased by nearly one-third, and as a result of the amalgamation the library contained some 80,000 volumes. According to the report of the honorary treasurers, presented by Mr. Pearce Gould, the surplus of assets over liabilities stood at £39,683, and the excess of income over expenditure for the preceding six months at £778. The report of the Council, with the statement of the treasurers and the audited accounts, were unanimously adopted. A resolution of thanks to the President, Sir William Church, for his good offices in establishing the Society on its present firm basis, and for his conduct in the chair, proposed by Dr. Champneys, seconded by Dr. Pasteur, was carried by acclamation and appropriately acknowledged.

THE Council of the London and Counties Medical Protection Society, Limited, has unanimously approved the report of a Committee appointed to consider the working of the Midwives Act, especially in reference to the remuneration of medical practitioners called in by midwives. The report is founded upon several hundred replies received to a circular letter addressed to members of the Society. Many replied that they had never been summoned by midwives, and in several instances that there were no midwives in their district, but more than half of those who had been summoned received no payment. Some practitioners seem to be uniformly unpaid, a few uniformly paid; this, it was thought, might be largely accounted for by the class of people in the districts, but in a few instances the practitioner explained that he refused to go unless paid. The average payment calculated from a large number of cases was not over 9s. In a few instances fees were paid by Boards of Guardians, nursing associations, or provident dispensaries, etc., the majority of the rest by patients or their relatives. The cases to which medical men were summoned were in the great majority serious, requiring operative assistance in many instances. In about 3 per cent. the death of the child appears to have been the cause of summoning the doctor, while puerperal fever was the cause in about 2 per cent. The Committee expressed the opinion that the Poor-law guardians or other competent authority should arrange for the payment of doctors summoned by midwives, and considered that the scale should not in any case be lower than the existing Poor-law scale. The report recommended medical men to require payment to be made in advance, or guaranteed by some responsible person, so long as present conditions continue.

VINEGAR.—A report by Dr. J. M. Hamill, recently issued by the Medical Department of the Local Government Board, on the preparation and sale of vinegar in relation to the administration of the Sale of Food and Drugs Acts, contains much interesting information. The total consumption of vinegar of all kinds in England and Wales is estimated to be between ten and twenty million gallons a year, disregarding small quantities of special kinds of vinegar: this may be divided into "fermentation vinegar" and "artificial vinegar." The former is produced by the action of micro-organisms (chiefly *B. aceti*) on various forms of dilute alcohol, the product differing somewhat in nature according as malt-wort, grape-juice, sugar solution, etc., is employed in the original fermentation by which the alcohol is formed. Large quantities of what is sold as vinegar, however, are manufactured by simple dilution of the acetic acid obtained by the distillation of wood, caramel or other colouring matter being added, and very frequently a small proportion of genuine fermentation vinegar; for such a preparation Dr. Hamill employs the term "artificial vinegar." It appears that the principal falsifications to which vinegar is liable are watering, by which its strength is unduly reduced, and the sale of artificial vinegar simply as "vinegar," or even as "malt vinegar." A minimum strength of 4 per cent. of acetic acid is recommended, and this is the lower limit in force in many foreign countries and certain colonies; the use of a distinguishing name for artificial vinegar is also advocated, so that it may be sold on its own merits and not to the prejudice of a purchaser desiring genuine malt or other fermentation vinegar.

British Medical Journal.

SATURDAY, MARCH 7TH, 1908.

PERSISTENCE OF TYPHOID BACILLI IN THE GALL BLADDER.

IN an article published in another column (p. 562), Dr. Dean, of the Lister Institute, reports that he has isolated the typhoid bacillus from the stools of a man who was attacked by typhoid fever twenty-nine years ago. There is nothing in the history of the case to indicate a subsequent infection, and we are told that during the last twenty years the subject has been able to carry on his duties as a medical practitioner without losing a single day through ill-health. A feature of special interest is that an attack of biliary colic occurred three months after the onset of the fever; similar attacks followed, at first at intervals of about three months, but afterwards with less frequency; they still recur, one or more being experienced every year, and are generally associated with over-exertion and irregular meals. From these facts Dr. Dean arrives at the conclusion that the case is one of cholecystitis typhosa, and that throughout the period of twenty-nine years typhoid bacilli have been thriving in the gall bladder, and have been passing thence, "probably almost continuously," into the intestine.

If Dr. Dean's case were without parallel, this interpretation of it would naturally be received with hesitation bordering on incredulity; but the observations of many independent observers on the longevity of the typhoid bacillus in the gall bladder afford strong corroboration of Dr. Dean's view, and indeed justify us in regarding it as the most reasonable explanation which can be put forward.

The initial fact that during the febrile state typhoid bacilli are often present in the gall bladder was established long ago by *post-mortem* investigations of fatal cases, and recent investigations, conducted more systematically and on a larger scale, have shown that the percentage of instances in which the bacillus is demonstrable in this situation is extremely high. In many of the cases where death is directly attributable to typhoid fever the bacilli in the gall bladder have not set up any inflammatory change. In others, however, definite signs of inflammation have been found. Thus Forster and Kayser, quoted by Kutscher,[1] obtained pure cultures of the bacillus from the gall bladders of seven out of eight cases. In all these seven cases inflammatory changes were present in this organ, but no gall stones were found, and during life there was no clinical evidence of biliary catarrh. A further fact of significance, obtained from *post-mortem* research, is that when deaths have occurred during an advanced stage of convalescence, typhoid bacilli have been recovered from the gall bladder, though they were no longer demonstrable in the spleen.

We also know from clinical evidence that after the fever has completely cleared up, biliary colic is a not very uncommon sequela. In the mild cases there is no opportunity of obtaining a direct proof that this condition is due to the persistence of the typhoid bacillus, though, in the light of recent investigations, this inference may be regarded as based on substantial grounds. And in the more acute cases of post-typhoid biliary colic which have fallen into the hands of the surgeon definite proof has not infrequently been obtained by many competent observers that living typhoid bacilli are present in the bile and in the biliary concretions. Cholecystitis has also been found *post mortem* in subjects who had passed through an attack of typhoid fever many years previously, and in some of these cases typhoid bacilli have been isolated from the bile and may reasonably be assumed to be the direct descendants of the original infective agent. Some interesting cases, illustrating the longevity of the bacillus in the gall bladder, are quoted by Neufeld.[2] Buschke and Miller, he tells us, have both found the typhoid bacillus in the gall bladder seven years after an attack of enteric fever; von Dungern has found the organism in a case of cholecystitis fifteen years after typhoid infection, and Droba has obtained pure cultures both from the bile and from the nucleus of a gall stone in a patient who had passed through an attack of typhoid fever seventeen years previously.

Furthermore, as Dr. Dean remarks, in addition to his own highly-interesting example, many cases have been placed on record where chronic typhoid carriers have been found to be suffering from cholecystitis. Kutscher quotes Lentz, Forster and Kayser, and Frosch as authorities who have contributed largely to the proof that there is a causal relationship between post-typhoid cholecystitis and the persistence of typhoid bacilli in the stools, and makes special mention of a case where the bacilli were excreted by a person suffering from cholecystitis thirty years after the attack of typhoid fever.

The chain of evidence is thus fairly complete. In the febrile stage the typhoid bacillus is very frequently present in the gall bladder; during and after convalescence it may persist for a time in this region without giving rise to any clinical symptoms; occasionally it may remain and thrive in the gall bladder for an indefinitely long period, and in this event may set up inflammatory changes leading to biliary colic; and this condition of the gall bladder may be connected, probably causally, with the presence of typhoid bacilli in the stools for a period which is indeterminate, and may sometimes be considered interminable, since the organisms have been demonstrated in the stools at periods ranging up to thirty years after the onset of the fever.

As Kutscher points out, animal experiments have helped to confirm and elucidate this remarkable predilection of the typhoid bacillus for the gall bladder. Blackstein and Welch, in 1899, have shown, by the intravenous injection of typhoid bacilli into rabbits, that the bacteria may remain alive in the gall bladder for as long as 128 days after inoculation, although they had completely disappeared from all other organs of the body. This work was confirmed in 1905 by Forster and Kayser, who obtained pure cultures of the bacillus from the gall bladder six weeks after injection, and corroborated the fact that the bacilli survive in this region longer than in any other part of the body. Dörr, working independently of the last-mentioned authorities, published at about the same time a series of animal experiments which conclusively showed that the typhoid bacilli only arrive at the gall bladder by way of the blood stream. When the bacilli were introduced into rabbits subcutaneously, intraperitoneally, or by the stomach, the bile always

[1] *Handbuch der pathogenen Mikroorganismen.* Herausgegeben von Kolle and Wassermann. Erster Ergänzungsband.

[2] Kolle and Wassermann: Op. cit., Bd. II.

remained sterile; and a similar result was obtained when the injection was made intravenously but after ligature of the cystic duct. On the other hand, after intravenous inoculation and ligature of the common duct, typhoid bacilli were always found in large numbers in the gall bladder and often in pure culture. The shortest period after which the bacilli made their first appearance in the gall bladder was eight hours; the time during which they persisted varied in different experiments, but abundant bacilli were demonstrable for as long as one hundred and twenty days. According to this author the bacilli only made a protracted stay in the rabbit's gall bladder when, as is frequently the case, their invasion has set up inflammatory processes in the mucous membrane. In two of his cases, it is interesting to note, the infected gall bladders contained concretions in which typhoid bacilli were demonstrable.

PULMONARY TUBERCULOSIS FROM GASTRO-INTESTINAL INFECTION.

It has long been known that tubercle bacilli given to animals in their food can make their way from the uninjured alimentary tract into the lungs and bronchial glands, but the method of this transference is, as we have recently had occasion to point out, a matter still in dispute. Some writers have given it as their opinion that the microbes travel by way of the lymphatic system, and in favour of this view the experiments of certain French and Italian observers—who found that insoluble particles of carbon or mineral matter mixed with the food could, apparently, make their way directly from the stomach and intestines to the lungs—have often been quoted. Other authorities, however, have been unable to accept this explanation, and prefer to believe that the bacilli or insoluble particles in the food reach the lungs and bronchial glands from the mouth by a process of aspiration down the trachea, and that the abdominal and thoracic lymphatic systems are not concerned in the matter at all. An important contribution towards the solution of this problem has recently been made by Oberwarth and Rabinowitsch,[1] who seem to have proved that tubercle bacilli can pass directly from the alimentary canal into the blood, and so into the lungs and other viscera, in so short a space of time as twenty-two hours. They also found that the bacilli could be cultivated from some of the infected organs three weeks later, when all possible precautions had been taken throughout to prevent the entry of tubercle bacilli into the mouth, and their possible aspiration down the trachea and into the lungs.

The experiments of these two writers were made in Berlin upon sucking-pigs five weeks old, in the following manner. At a preliminary operation performed aseptically under ether anaesthesia, the stomach-wall was firmly fixed to the anterior abdominal parietes, and a gastric fistula was established by the use of a stoppered cannula. After this the pigs were fed in the usual manner; and three or four weeks later, at a second operation, the oesophagus was exposed and cut across, and a double oesophageal fistula was set up with an intervening bridge of skin. The upper fistula was kept open; the lower one was completely and permanently closed by a plug of cotton-wool and collodion, so as to prevent the exit of any of the gastric contents should regurgitation or vomiting tend to occur. After this second operation the pigs were fed by the gastric cannula; to ensure a good digestion they were allowed to eat and swallow their food (which, of course, reappeared at the upper oesophageal fistula) in the manner employed by Pawlow in his classical experiments upon digestion. The next step was to introduce tubercle bacilli into the stomachs of these pigs. The bacilli actually employed were taken from bouillon cultures of bovine tubercle bacilli from four to six weeks old, emulsified with some fluid, and introduced by way of the gastric fistula. In one experiment 3 grams of bacilli were mixed with milk, and put into the pig's stomach; but some of the mixture escaped, so that the exact dose of bacilli given remains uncertain. Twenty-two hours later this pig was killed, and was dissected with full aseptic precautions. Cultures and microscopical preparations of its various organs were made, and portions of a number of its tissues were injected into guinea-pigs, with the result that while most of the organs proved sterile, tubercle bacilli were found in the pig's blood, lungs, and mesenteric lymph glands. A second pig was dosed with 3 grams of the bacilli in a similar manner, and was killed after the lapse of four days. Inoculation into guinea-pigs showed that tubercle bacilli were present in its lungs, liver, kidneys, and hepatic lymphatic glands. A third pig received 1.2 grams of tubercle bacilli, and lived for three weeks. On dissection no macroscopical or histological evidence of tuberculosis could be found; but inoculation experiments proved that in this case, as in the other two, bacilli were present, and they were cultivated from its blood, lungs, and mesenteric glands. In each experiment elaborate precautions were taken to prevent the pigs, after they had been given the tubercle bacilli, from reinfecting themselves from their faeces, which, of course, constantly contained these bacilli, so that there is no reason for supposing that any of the three animals had opportunity for infection with tubercle bacilli by the mouth. The authors come to the general conclusions that the bacilli of bovine tuberculosis, introduced directly into the stomach of the young pig, can pass into its blood within twenty-two hours, and that the bacilli thus gaining access to the circulation can lie latent in the lungs and mesenteric glands for as much as three weeks without producing any demonstrable histological changes, yet preserving their virulence and power of growth. They also point out that there is no evidence to show whether this form of generalized tuberculosis would or would not have proved fatal to the pig had it survived for more than three weeks after its infection.

It may be objected to these experiments that the pig is very susceptible to infection by the bacillus of bovine tuberculosis, that the animals employed had undoubtedly undergone a great deal of surgical treatment that may well have lowered their general resistance to disease, and, finally, that the doses of microbes given to them were relatively enormous. But it cannot be denied that Oberwarth and Rabinowitsch are quite justified in drawing attention to the important bearing their experiments may have upon the methods whereby children may acquire tuberculosis. It must happen not infrequently that large quantities of living tubercle bacilli make their way into the digestive tracts of children, either in milk or in some other uncooked article of food. When this has occurred there seems to be nothing to prevent the microbes from making their way into the blood-stream, and so producing a generalized infection which, to argue from the pig, may last for three weeks at least. Whether such

[1] Ernst Oberwarth and Lydia Rabinowitsch, Infection by Absorption of Tubercle Bacilli from the Gastro-intestinal Tract, *Berl. Klin. Woch.*, Berlin, 1908, p. 298.

an infection would prove fatal in the long run must remain uncertain for the present until further investigations have decided the point. At any rate, these experiments prove once more the dangers that lie in the consumption of tubercle bacilli in the food, while they illustrate the unexpected form in which a tuberculosis of intestinal origin may make its initial appearance.

KING EDWARD VII SANATORIUM.

The report of the first year's working of the King Edward VII Sanatorium at Midhurst, which has just been issued, deals with the year ending June 30th, 1907, and is concerned with 152 patients suffering from pulmonary tuberculosis treated in the sanatorium. In future years the number will be larger, for it was not until March that the total number of beds the sanatorium is capable of providing could be utilized. For the purpose of analysing the results the cases have been classed into three groups—the first containing those with early limited disease, with little or no constitutional disturbance; the second, those with more extensive consolidation, with or without excavation, associated with the usual symptoms of active tuberculosis; and the third, patients with very extensive disease of considerable duration, accompanied by serious damage to the general constitution. The results, of course, vary very much in the several groups. Among patients in Group I the disease was arrested in 71.7 per cent., and the condition of the patient was much improved in the remaining 28.3 per cent.; the average stay in this group was a little over thirteen weeks. In Group II the disease was arrested in nearly 11 per cent., and the condition, general and local, much improved in 64 per cent. Only 4.7 per cent. actually grew worse during their residence in the sanatorium; 5 patients died after leaving the institution. In Group III there were no cases of arrest, but 64 per cent. were improved, about one-third being much improved; 2 patients in this group died in the sanatorium, and 12 after leaving it. These statistics may be considered very favourable, and emphasize once more the now well-established fact that really satisfactory results can be anticipated with any confidence only if the patients come under treatment in the early stage of their disease. The greatest care is being exercised in directing the daily life of the patients, and much advantage is being found from graduated labour. When the patient reaches a certain stage of improvement exercise is beneficial, and it has been found, both at the Frimley Sanatorium of the Brompton Hospital and at the King's Sanatorium, that much advantage is derived from varying the monotony of measured walks by allowing patients to do light work in the garden or in an open-air carpenter's shop. The severity of the work must, of course, be carefully adapted to the patient's condition, but the combination of walking exercise and practical work, carefully prescribed and supervised, has, it is reported, proved in every way satisfactory.

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

At a meeting of the Executive Committee of the General Medical Council held on Monday, February 24th, correspondence with regard to the application of Part II of the Medical Act, 1886, to the Province of Quebec was considered, and the Committee resolved to advise the Lord President of the Privy Council that by the enactment of amended by-laws and the repeal of a provision which unduly restricted the admission of British practitioners to the provincial *Register* the medical authorities of the Province of Quebec have provided an equitable basis for the establishment of reciprocal relations with the Mother Country in respect of medical registration. The Committee would therefore welcome the application to Quebec, as a separate British possession, of Part II of the Medical Act. The Committee also considered documents transmitted by the Scottish Universities Committee of the Privy Council with regard to an ordinance of the University of Edinburgh instituting a degree of Bachelor of Pharmacy. The Committee directed the Lord President to be informed that it was of opinion that it was highly inexpedient to institute in the Faculty of Medicine a pharmaceutical degree which conferred no qualification in any branch of medicine, especially if, following the usage of the Scottish universities in regard to the degree of B Sc., it was designated by any title suggesting its connexion with the Faculty of Medicine. Its association with degrees in medicine would almost certainly lead to misapprehension on the part of the public concerning the legal and professional status of pharmacists holding the degree, and would therefore frustrate the declared purpose of the Medical Acts, which was "to enable persons requiring medical "aid to distinguish qualified from unqualified practi-"tioners." The Committee advised the Lord President that it would be preferable that the degree should be included in the Faculty of Science, as had already been done elsewhere. The Committee resolved to accede to an application from Dr. C. W. Saleeby for the removal of his name from the *Medical Register*, on the ground that he does not "practise medicine or surgery "in any form." At the same meeting the Committee considered tables showing the accounts of receipts and expenditure of the General Medical Council, branch councils and committees, and of the dental fund for the year 1907, and also transacted some dental business of a routine character.

RESTRICTIONS ON MEDICAL FEES IN INDIA.

We publish elsewhere a note from a special correspondent in India drawing attention to the order of the Government of India issued last July, imposing further restrictions in regard to the receipt by officers of the Indian Medical Service of fees for medical attendance not only on ruling chiefs, their families or dependants, but also on Indian gentlemen of high position in a native state, or Indian gentlemen of high position in British India. The whole machinery of consulting the local government and the Director-General of the Indian Medical Service is to be brought into action in any case in which an officer of the Indian Medical Service earns in the ordinary course of his profession a single fee of over two guineas or in a month a total of over ten guineas by attendance on or visits to any gentleman of high position residing anywhere in a native state or in British territory. Commenting upon the matter last November we stated that action had already been taken by the British Medical Association, and that we hoped that the Order would be considerably modified, if not withdrawn altogether. We have reason to know that the matter has attracted the notice of the Secretary of State for India and of the India Council. However short-sighted the views of those responsible for the issue of the Order by the Government of India may be, the India Office at home no doubt fully realizes the disastrous effect which such an Order, if maintained, must have on recruitment in this country for the Indian Medical Service. It is undoubtedly surprising that the Director-General, himself a member of the Indian Medical Service, should have countenanced the issue of such an Order, and we trust that it may be possible to convince the Government of India that it has taken a false step. We have no doubt that the issue of the

Order with its irritating and unnecessary restrictions was a mistake, and that the wise course would be frankly to recognize this fact.

TOXIC EFFECTS OF PETROL FUMES.

SIR WILLIAM GOWERS has recently published, in the *Review of Neurology and Psychiatry*, the case of an officer of the British Army, suffering from nervous symptoms of unusual character, who had been exposed to possible poisoning by petrol fumes. The patient, who was 38 years of age, had never suffered from any of the ordinary causes of toxaemia, or, indeed, from any grave illness, until, six months before he was seen, he had a passing perversion of taste by which all sweet things were appreciated as saline. This was succeeded by definite and persistent dysphagia. Not only was he unable to swallow solid things, but he was unable to chew, and a change in his articulation occurred resembling that which has come to be considered characteristic of myasthenia gravis. Beginning to speak, his voice was good and his articulation fair; continuing, the one became feeble and the other imperfect, until, after three or four minutes, his speech became unintelligible, and about the same time he became unable to whistle. The orbiculares oculi and some of the smiling muscles were weak, and he became quickly tired in walking; but otherwise, except for pain referred to the front of the chest, there was nothing abnormal, either objectively or subjectively in his physical state. The symptoms resembling so closely, so far as they went, those of myasthenia gravis, coming on in mid-life and rapidly developing, suggested a toxic cause, but the only apparently possible cause in his case was a constant exposure during his working hours to the fumes of burned, and almost certainly imperfectly-burned, petrol. He was obliged by his illness to discontinue work, and after a few months he apparently completely recovered, with no further treatment of significance than the hypodermic injection of strychnine. He accordingly returned to his occupation of testing petrol engines. But shortly the old symptoms began to return, and he was advised to relinquish permanently this, to him, apparently hurtful occupation. There had been no account to Sir William Gowers of any return of the symptoms since the recovery from the relapse described, the interval covering a period of two years. A study of the case led Sir William Gowers to incriminate as the only apparently assignable cause of these characteristically toxic effects the products of the imperfect combustion of petrol. Assuming this to be the real cause, the escape of others working with him under the same conditions must be held to indicate a special susceptibility to this toxic influence, although it is possible that he was subjected to a greater concentration of the vapour than the others. As Sir William Gowers points out, the habitual inhalation of carbonic oxide gas has been known to cause polyneuritis affecting the legs, and he has been able to trace one instance—recorded by Massanek of Buda-Pesth—of nervous disorder following on the inhalation of petrol fumes. Of two boys who had been shut up in a room with a smoking petroleum lamp, one was found dead, and his blood showed CO haemoglobin. The other developed in the course of a few days a state of idiocy with a transient hemiplegia, followed by signs of peripheral neuritis in the legs and arms. Recovery occurred in six weeks. Statements by Professor F. W. Burstall, recently published on the exhaust gases from petrol motors, show that imperfect combustion of vaporized petrol is difficult to avoid when an engine is run to obtain the maximum power, and some of the petrol comes out as a spray, and much of that is imperfectly burned. Professor Burstall states that among many intermediate hydrocarbon products of petrol combustion are methane and acetylene, particularly if the petrol is present in the form of fine globules, the outer portion of which is burned and the inner core unburned. The unpleasant smells from motors he attributes to these gases, which are produced along with a considerable portion of carbon monoxide. If the inhalation of concentrated petrol fumes and their by-products can produce such serious constitutional disturbances in susceptible persons, as is so strongly suggested by Sir William Gowers, it would seem that even in dilution, as frequently met with in various motor vehicles, they cannot be other than deleterious, and the view suggests itself whether some substitute for petrol should not be preferred—a harmless combustible fluid as alcohol—if the economic difficulties associated with the use of electricity be too great.

ODIUM MEDICUM.

THE *odium theologicum* is, of course, proverbial, and scientific men, who never wrangle about quintessences and quiddities, and devote themselves to the worship of pure truth with absolute singleness of heart, naturally look with contempt on the sophistries of theological controversy, and think with pity on the imprisonment of Galileo and the burning of Michael Servetus. Like the Pharisee, they give thanks that they are not even as the "publicans" of divinity, and that they can say what they like without fear of the fiery criticism of a Holy Inquisition. Yet human nature remains essentially the same, whatever the fashion of the philosophical garments in which it clothes itself, and life under a scientific Inquisition would probably be not much more comfortable for dissenters from accepted doctrine than it was for heretics under the dispensation of Torquemada. Is it not recorded in the life of one of the supreme hierophants of science that he did his utmost to exclude from a London club one who did not share his belief in the hypothesis of evolution? It was Spurgeon, we believe, who congratulated the sect which he represented on being the only one whose annals were not stained with persecution—dashing the cup of satisfaction from the lips of his hearers, however, by adding that they never had had the chance of using the argument of the stake. This may be the reason why medical heretics have never been dealt with by the orthodox by any severer measure than the boycott. The will has not been wanting. Gui Patin, when a professional brother refused to be bled in his last illness, said "the Devil "would bleed him as an infidel and an atheist" for dying without the last consolations of medicine. In the sixteenth century the Faculty in Spain and Portugal did their best to purify by fire the opinions of some recalcitrant members of their order. The question was whether a patient with pleurisy should be bled from the arm of the affected side or the opposite one. The latter, owing to a misunderstanding of the text of Galen by the Arabians, was the orthodox teaching for many centuries till a pestilent Frenchman named Brissot taught that the right place was the arm of the affected side. In the Peninsula the dispute waxed so hot that it was referred to the University of Evora. The doctors of that seat of learning failing to agree on the point, the authority of the University of Salamanca was invoked. That famous University gave to the question the attention which its importance deserved. In the first instance, after many delays and long and violent disputes and the inevitable intrigues, it gave a decision in favour of the Arabian system. Later, however, other influences prevailed and it reconsidered the matter, finally deciding the case in favour of Galen and Brissot. But the orthodox doctors would not own defeat. They appealed to Charles the Fifth, their Sovereign, repre-

senting to him the importance of the question, the danger to his subjects likely to arise from the Brissotian heresy, and the necessity of crushing and exterminating the doctrines of "Lutheran" innovators in order to preserve the ancient established faith in all its purity. Charles was on the point of yielding to their importunities, when, by what seemed to the other side a fortunate chance, his brother Sovereign, Charles the Third, Duke of Savoy, fell sick of a pleurisy, and died of it, though he was bled by his physicians from the arm of the opposite side, according to the old orthodox system. This triumph for the "heretics" saved the Emperor from the disgrace of interfering in a medical dispute, and left the physicians to debate the question in a clear field for more than two centuries afterwards. Moreau compiled a catalogue of the doctors who took part in the controversy, and gave a short account, in chronological order, of the doctrines of the chief authors who had written on the question up to 1630; that is, little more than one hundred years after the Luther of venesection ventilated his heresy. At that time the number amounted to more than a hundred. Among them it is curious to find the name of a German theologian, Hieronymus Tragus. But it must be as difficult for a divine to keep out of a fray as for an Irishman to refrain from hitting a head that comes within reach of his shillelagh at Donnybrook. The controversy reminds one of the celebrated dispute between the Big-Endians and the Little-Endians. Will the controversies of the present day seem as absurd to those who come after us? If we judge from their style of argument some of our disputants still think that the best refutation of a fallacy is a faggot.

POOR-LAW OFFICERS' SUPERANNUATION ACT, 1896.

ATTENTION has recently been drawn to the advantages conferred on the officials engaged in the Poor-law Service of England and Wales by the Superannuation Act. The effect of its operation has no doubt during the past ten years been highly advantageous in very many cases. Moreover, many Poor-law medical officers who voluntarily contracted themselves out of its provisions when it had passed and before it became operative, have since had cause to regret ever having decided to do so. This fact is evidence that the Act itself is far from being so faulty as has sometimes been represented. There is, however, this serious drawback, that the Act seems to have an undoubted tendency to increase the difficulties of candidates for further employment in the Poor-law service of England and Wales when, though not far advanced in life, and worthy and experienced in their own departments, they find themselves compelled, from no fault of their own, to seek some fresh office or appointment. From reports and comments which appear from time to time in the lay press it would appear that all the provisions of the Act do not appear even now to be clearly understood, and that some of the opinions given in the past by clerks to Boards of Guardians have been more or less faulty, and consequently misleading to applicants when claiming superannuation allowance. We are confident that all claims for superannuation which are in accordance with the Act will, when due, be paid by the guardians. Such payments will not require the consent or sanction of the Local Government Board, which has no power to override statute law, though by regulation we believe the guardians have to report, through their clerks, all grants of superannuation allowance which come under their cognizance. The same may be said in reference to a return of contributions already paid by the retiring officials to the common fund of the union. On the other hand, it should be better known than seems to be the case that any gratuities, whether granted in addition to other claims awarded by the Act or not, if recommended by the Guardians for any special reasons authorized by the Act, can be paid only after the sanction of the Local Government Board has been obtained. These awards are regulated by the fifth clause of the Act, which enables Boards of Guardians, with the consent of the Local Government Board, to add a number of years not exceeding ten to the period of time which the officer has already served in the aggregate. Clause 8, subsection 2, enables the Guardians, if they see fit and with the sanction of the Local Government Board, to grant to their retiring officers gratuities not exceeding twice the amount of their salary and emoluments during the year immediately preceding the quarter day on which they cease to hold office. It is within our knowledge that some Boards of Guardians have been misled owing to superannuation allowance and return of contributions being erroneously spoken of as gratuities. We hope in the future to see no repetition of this error, the term being in such cases undoubtedly a misnomer.

SEVEN FARTHINGS FOR STATE MEDICAL SERVICE.

THE case from the two Castleford Districts of the Pontefract Union is perhaps the worst of the numerous instances to which we have drawn attention during recent months, revealing many astonishing facts relating to the inadequate remuneration of medical men and the unaccountable attitude of guardians towards their officers in this matter. The two District Medical Officers concerned—Drs. G. B. Hillman and W. Kemp—deserve the sympathy and support of the whole profession for refusing any longer to be parties to an arrangement which they have shown to be a scandal. They addressed a letter to the guardians, in which it was pointed out that the payment for their work as Poor-law medical officers amounted to 1¾d. for each visit or supply of medicine! Out of this fee of seven farthings they were required to provide the necessary drugs. The application for an increase on this princely remuneration was met by a resolution that the matter should stand over until twelve months' service has been completed. Drs. Hillman and Kemp replied, making a most convincing and unique offer, as reported in the *Pontefract and Castleford Express* of February 15th. So convinced were they that the work entailed actual loss, that they were willing to demonstrate this by doing the work for nothing for a month, the necessary medicines to be supplied by chemists, and the salaries for the month (£5) to go to pay the chemist, any surplus to be paid by the guardians. Possibly this condition may have alarmed the economists on the Board, for the offer was not accepted. The next, and we think the only possible, step was to resign the appointments. The resignations were accepted by 17 votes to 15, and it is only fair to draw attention to the fact that fifteen of the guardians did not approve the Board's action. The chairman then proposed that they should be dismissed from the posts of public vaccinator, though no question concerning these posts was under consideration. Advertisements have since been issued inviting applications on precisely the same terms as before. Probably anticipating that no local man, to whom the circumstances will be well known, could be enticed into this self-sacrificing sphere of labour, the guardians "as an alternative invite "applications for a medical practitioner to devote "the whole of his time" (so runs the advertisement) to the combined work of the two medical men they propose to displace. Intending applicants should note that for this "whole time" service, the only guaranteed payment is £60 per annum plus the comparatively few Poor-law extras. The rest of the *estimated average* of £220 per annum (out of which ordinary medicines must be provided) is made up entirely of the depreciated and precarious vaccination fees, with the

power of dismissal on twenty-eight days' notice, from this portion, which constitutes the bulk of the estimated average. These fees the guardians recently reduced to the absolute minimum allowed by the Local Government Board. It was not denied by the guardians—indeed, it was freely admitted—that the district medical officers were underpaid. Even the chairman is reported in the local paper mentioned, to have said, "possibly the "salaries for this work are not sufficient," also "what "the Board took into consideration (when appointing) "largely was this—that these gentlemen have one very "good appointment (vaccination) and therefore we "should average them a bit" This admission from the chairman reveals either a want of knowledge of the principles laid down by the Local Government Board, or a wilful intention to ignore those principles. These are clearly stated in a letter addressed by the Board to the Nottingham guardians on December 31st, 1907, which was published in the *Notts Evening News* (January 7th) and other papers; it contained the following passages: "The Board have always held that "the two offices of public vaccinator and district "medical officer and the duties attached to them are "distinct and separate; and they would point out to "them (the guardians) that the remuneration assigned "to them is on a different basis. In some cases in "which it has been desired that the two offices should "be held by the same medical man, there has been a "tendency for the remuneration assigned to the one "to be fixed with reference to the other, so that where "the salary paid to the district medical officer is low, "any cause of complaint by him on that account may "be avoided on the ground that he also receives the "fees payable to him as public vaccinator. This, how-"ever, is not a principle which the Board can recog-"nize as properly affecting the appointments." Unless this is a mere expression of pious opinion or meaningless verbiage, we should expect to see prompt action on the part of the Local Government Board to stop the violation of principles laid down with such force. Having regard to the remarks of the chairman quoted above, it is clear that the case of the Pontefract guardians is a concrete example of the "tendency" to which the Local Government Board refers. In these circumstances, this distasteful struggle should terminate by the insistence upon the reinstatement of Drs. Hillman and Kemp on terms which will be adequate to the demands upon their time and skill, and which will provide for proper medical attendance on the poor in these "seven-farthing" districts. Such an issue would tend to secure a readjustment of terms in other districts where similar grievances undoubtedly exist.

READING PROVIDENT DISPENSARY.

An extraordinary situation has been created in connexion with the Reading Provident Dispensary, where, as we have already had occasion to mention, the administration of the institution has been attacked, and, according to the *Berkshire Chronicle*, allegations of "robbing the patients" have been made by Mr. G. May, M.B., F.R.C.S., who is not only Chairman of the Committee of the institution, but himself a medical man. The Reading Dispensary was founded in 1802 for the purpose of providing gratuitous medical attendance for the poor of Reading. In 1870 it was proposed to convert the charity into a provident dispensary, and a scheme was drawn up by the then Committee for combining the provident system with the administration of the charitable funds. Under this scheme the charitable purposes for which funds had already been accumulated were carefully safeguarded, and experience has proved that the Committee's belief that this charitable activity would actually be extended under the new scheme was well founded. In 1897 the annual fee for provident members was increased from 8s. 8d. to 13s. for a family of six persons, the fee for individuals remaining at 4s. 4d. a year. This is the rate of pay which Mr. May has now discovered to be excessive, in view of the fact that another institution in the town, known as the "Amalgamated Club"—an institution, by the way, which has not adopted any wage limit for its members—can find medical men willing to act for a considerably lower rate. At the annual meeting of the Board of Governors, held on January 30th, Mr. May, as Chairman, made a series of propositions, of which he had already given notice in a circular letter to the members of the Board. At present the membership of the dispensary is almost 18,000, and the subscriptions of the members are just sufficient to pay the medical staff at the rate quoted above and provide the necessary drugs and other medical and surgical requisites, the expenses of management and gratuitous attendance on the necessitous being provided out of the income from the invested funds of the institution. Mr. May's contention is that the whole sum of £8,000 accumulated prior to 1870 "belongs equitably, "and probably legally, to the poor of Reading," and the interest of this sum he proposes to restore to them by the simple expedient of cutting down the remuneration of the medical staff. To this end, Mr. May proposed two alternative plans—the first, that where the father of a family did not wish for medical attendance (being otherwise provided for by his club or union), the rest of the family should be taken at a fee of 2s. 2d. instead of 3s. 3d. a quarter; the second, that the interest on £8,000 should be applied in an extension of the system of gratuitous attendance. Under the second scheme the work of the medical staff would of course be increased, and presumably the necessary saving would be effected by reducing their pay. In order to show that his proposals involve no hardship to the medical staff, Mr. May takes us through a series of astonishing calculations. He points out in his circular letter that a medical man working at the rate proposed by him would earn 6s. an hour, or, by working eight hours a day for 300 days a year, £720. In an interview granted to a representative of the *Berkshire Chronicle* he appeared to suggest that this amount of work was merely a sort of *hors d'œuvres*, and that the doctor would have all the rest of his time to grow rich in as a private practitioner. During the same interview Mr. May mentioned that the defeat of his proposals was probably due to the fear of resignation by the medical staff, and showed how, in his opinion, this difficulty could be got over by the importation of eight medical men at salaries of £150 each, and gave it as his opinion that "the best medical men would jump "at the offer." This would mean an annual payment of £1,200. At present a sum of slightly under £3,000 is divided among twenty medical officers, the average payment to each being a little under £150. Mr. May's proposals for dealing with the balance of £1,800 are so vague and so involved that we are unable to follow them. Suffice it to say that they seem to be of a piece with the bold stroke of imagination which estimates a doctor's actual income on what he would earn at so much an hour for so many hours in the year. It would be quite easy in this way to prove that the private practitioner whose average fee was five shillings was in receipt of £15 000 a year. It is much to the credit of the representatives of the Reading public that Mr. May found only one supporter in a full meeting of the Board of Governors, and that his proposals were contemptuously rejected. We are informed that Mr. May is a very old man, and that for over thirty years he has done good and useful work on the Board of this institution, but not even the respect due to age can save from the condemnation of his fellows a member of the medical profession who will publicly and gratuitously

advocate all the worst methods of that heartless "sweating" of which the profession has so long been a victim.

POLITICAL ASPECTS OF THE PULSE.

IN Lord Edmund Fitzmaurice's *Life of Lord Granville*, it is related that the Marchioness of Salisbury was once said to have observed that she believed the Whig pulse beat at least ten seconds slower to the minute than the Tory pulse. A slow pulse, says the author, is generally associated with a considerable degree of *sang-froid* and coolness in action, and there could certainly have been no doubt of Lord Granville's orthodoxy in the Whig faith, if the pulse was to be the index. "I first began to attend your Lordship professionally "in August, 1844," Dr. Meryon wrote in 1878; "your "healthy pulse was then 48, and I have never known "it otherwise." The JOURNAL, as such, has of course no politics; it is in no partisan spirit, therefore, that we venture to point out that slowness of the pulse, indicative as it is of a sluggish circulation, might *a priori* have been expected to be a physiological characteristic of what John Stuart Mill politely called the stupid party. How little the pulse, however, can be taken as an index of activity of the brain is sufficiently shown by the single example of Napoleon, whose normal pulse-rate is said not to have exceeded forty beats in the minute. It is, perhaps, not so much the pulse of the politician himself that matters as that of the people which he is supposed to study with the care of Thomas Diafoius. The *tactus eruditus* in regard to the pulse should be assiduously cultivated by every statesman who takes the throbbings of the great heart of the people as his guide. In this way he would recognize when, for instance, he imposes an income tax which weighs with undue heaviness on the class that most needs relief, that as the authority we have quoted puts it, *le pouls de Monsieur est le pouls d'un homme qui ne se porte pas bien*, and who in consequence is likely to vote against him whenever he gets the opportunity. If he introduces an Education Bill which outrages the conscience of large numbers of people, he will find that the pulse of the voter is *duriuscule, pour ne pas dire dur*, and, if he is a prudent man, he will apply appropriate remedies. Similarly, if at the dictation of what Newman might have called "an insolent and "aggressive faction" he proposes to confiscate private property, or to cripple our national defences by cutting down expenditure, the pulse will be *repoussant*, or even *un peu caprisant*. A scientific study of the pulse would save many a statesman from disaster, and, generally speaking, all who are dressed in a little brief authority, from wrong treatment of difficult situations.

ADVISORY COUNCIL FOR THE TERRITORIAL FORCE.

AN advisory council for the Territorial Force has been appointed to sit at the War Office. It is intended primarily to represent the County Associations, and to advise the Secretary of State upon all subjects affecting them; it will have to deal not only with questions of an administrative or financial character, but with the many military questions with which the associations are closely concerned affecting the men or the material of the Territorial Force. The aim has been to make the council representative of all who are in any way concerned with the raising, maintenance, or command of the force. Mr. Haldane, who has undertaken to represent for the present the Territorial Force upon the Army Council, will act as Chairman; Lieutenant-General W. H. Mackinnon, C.V.O., C.B., Director-General of the Territorial Force, will be Vice-Chairman; and among the members is Sir Frederick Treves, Bart., G.C.V.O., C.B. The Council has a great deal of work awaiting it. One of the first matters which must engage its attention will be the settling a new attestation form; that now withdrawn has, we fear, already jeopardized the prospects of the medical corps of the Territorial Army by frightening away many men who were ready to be transferred. While welcoming the presence of Sir Frederick Treves on the Council, great disappointment is felt that no medical officer actively connected with the Territorial Force has been given a seat on the Council. Having regard to the frank recognition by Mr. Haldane of the importance of the sanitary and general medical work which it will fall to the lot of the medical officers of the Territorial Army Medical Corps to discharge, we can only look upon this omission as an unfortunate oversight. Many other matters affecting the corps are arising for decision, and we believe that we are not far wrong in saying that something like consternation has been produced by some recent decisions which appear to show that the financial advisers of the War Office are disposed to favour a cheese-paring policy, which if continued must starve the corps and prevent it attaining the desired standards in number and efficiency.

McGILL COLLEGE, MONTREAL.

NO time has been lost in taking steps to make good the injury done to McGill College, Montreal, by the fire which destroyed the whole of the old medical building built in 1872, together with the addition erected in 1901. Lord Strathcona has presented a beautiful site for the new buildings on the slope of Mount Royal, near the Royal Victoria Hospital; plans have been approved, and the work of construction will begin in April. It is expected that the expenditure on the new buildings will amount to about half a million dollars. Lord Strathcona's ready and generous assistance is fresh evidence of the interest which he has always shown in the Medical Faculty of the University. Unfortunately, the part of the old building destroyed contained the pathological museum and anatomical collection, including the comparative anatomy section. There will be much difficulty in replacing these collections, but we believe that some conditional promises have already been received from museums in this country to assist by gift of duplicate specimens, and we understand that Dr. Roddick, Dean of the Faculty of Medicine, will be very glad to receive offers of specimens and to arrange for their transmission to Montreal.

IRISH SANITATION.

THE Irish Local Government Board has issued an order under the Dairy and Cowsheds Acts laying down strict rules and regulations for the keeping in good sanitary condition of the premises of all persons dealing in milk. With reference to it we have received the following observations from a correspondent well acquainted with rural Ireland: "It cannot," he writes, "be said by any "person who has had an opportunity of inspecting the "the average Irish farmer's byres that such an order "was unnecessary. The best that can be said about "them is that they are no worse than their owners "dwellings. But, like most of the sanitary orders "made in Ireland in the past, it is to be feared that this "will remain a dead letter for the simple reason that it "is the business of the local sanitary authority to carry "it out, and they have no intention of incurring the "hostility of their constituents by enforcing it. It is "to be gathered from the order that it is intended to "put upon the dispensary doctors the additional duty "of inspecting the cowsheds, subject to the order, in "their respective districts without one word being said "in the order about paying them for the extra duty.

"Of course they will have to obey, but it may be predicted "that they will carry out these inspections much as they "do those imposed upon them by the Factory Acts. "If the proposed Prevention of Tuberculosis Act im- "poses the duty of inspecting schools, notifying cases "of the disease, and disinfecting the premises, in addi- "tion to their other multifarious duties as medical "officers of health, for the existing salaries of £20 a "year, it also may be expected to be a costly failure, "for they are determined not to be imposed on. The "dispensary doctor, and he alone, can check the ravages "of the disease in Ireland: but he feels he has done "more than enough in stamping out infectious fevers, "and he is not going to sacrifice himself upon the altar "of local government economy any longer. Further- "more, unless the medical officers of health are given "the power of dealing with infected premises without "the intervention of the local *in*sanitary authority, their "best efforts to check the disease will be in vain. "Odium they are bound to incur amongst a peasantry "so averse to sanitation as the Irish, and they are not "likely to incur that odium unless it is made worth "their while."

THE PERILS OF OXYGENATED INJECTIONS.

HYDROGEN peroxide is without doubt an admirable disinfectant. Water into which free oxygen has been forced is much used in French hospitals and elsewhere: but the employment of either preparation for injections is not without disadvantages. Dr. Funck-Brentano has recently made public a case which should not be forgotten by the obstetrician and practitioner.[1] A woman, aged 29, was admitted into the maternity department of the Hôpital Tenon. Infection seems to have occurred during version and subsequent manual dilatation of the os, and the placenta was very fetid. Several rigors occurred after delivery. On the second day of the puerperium oxygenated water was injected into the uterine cavity through a Budin's intrauterine catheter, an instrument which is quite blunt at its free end. During the process the patient was seized with violent hypogastric pain, nausea, and dyspnoea, followed by great distension of the abdomen. Dr. Funck-Brentano, suspecting perforation of the abdominal wall, performed abdominal section. Directly the parietal peritoneum was opened gas rushed out and the swelling vanished. The left broad ligament was greatly swollen, appearing as though full of soap bubbles. On further inspection bullae were detected behind the mesentery and other big peritoneal folds as high as the level of the epigastrium. No free fluid was found in or outside the peritoneum and there was no sign of haemorrhage. The uterus was removed. The patient never rallied, and died six hours after the operation. It appeared that the instrument had not perforated the uterine wall, but had become engaged in a deep notch in the muscular coat in the lower segment. Dr. Funck-Brentano was of opinion that this breach of surface was produced during the obstetric procedures before delivery. The pressure of the jet of gas caused perforation, and the free oxygen escaped into the serous cavity and subserous tissues; he was not certain how far this singular accident contributed to the death of the patient, already the subject of acute septicaemia. He suspects that the great mass of bullae, "like soap- "suds in some places and like champagne in other "parts," might in itself represent a danger. It is very doubtful if any of the free gas could enter a blood vessel. The dissecting up of the peritoneum by the gas forced into the subserous tissues might, on the other hand, lead to further trouble, especially if septic germs were forced onward into those tissues by the current of gas.

[1] *Comptes Rendus de la Soc. d'Obstét. de Gynéc. et de Pédiat. de Paris*, October, 1907, p. 226.

WE are sorry to learn of the death at Mentone, on March 3rd, of Sir Alfred Cooper, F.R.C.S., in his seventieth year.

WE regret to announce the death of Dr. Edward Dillon Mapother, which took place at his house in Welbeck Street on March 3rd, at the age of 72. Dr. Mapother was formerly President of the Royal College of Surgeons in Ireland.

AT the annual court of Governors of the Middlesex Hospital, held last week, Mr. Andrew Clark was appointed a consulting surgeon to the hospital. Mr. Clark joined the staff of the Middlesex Hospital as far back as 1871, and thus has been on the active staff for upwards of thirty-seven years.

AMONG those recently elected members of the Athenaeum Club under the provision which enables the Committee to elect a certain number of persons "of distinguished eminence in science, literature, the "arts, or for public services," is Dr. John Rose Bradford, F.R.S., Physician to University College Hospital, London, and Professor of Medicine in the Medical School.

MR. CARNEGIE has given £25 000 towards the projected Koch Institute in Berlin. Reference was made in the JOURNAL of September 28th, 1907, to the movement for the foundation of such an institute. The institute, which is receiving widespread support in professional and official circles in Germany and elsewhere, is intended for the furtherance in all directions of research in connexion with the tubercle bacillus discovered by Koch a quarter of a century ago. The researches are to be directed mainly to the discovery of means of checking the spread of the disease.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Dogs Protection Bill came on unexpectedly late one night last week and Sir F. Banbury moved the second reading. He said the Bill sought to protect dogs from being used for experiments. As the faithful friend of man he urged that the dog should be exempted by the law from any possible liability to vivisection. Mr. Mooney moved the rejection of the Bill and contended that the whole question of vivisection ought to be dealt with in a comprehensive way by the Government. It was undesirable to deal separately with one class of animals. Sir F. Banbury moved the closure, but in vain, and at 11 o'clock the debate was adjourned.

Factory Inspection.—In answer to Mr. Tennant, Mr. Secretary Gladstone stated last week that during the autumn he made careful inquiry into the work of the factory department, and came to the conclusion that a strong case was made out for strengthening considerably both the organization and the inspecting staff of the department. A scheme was accordingly prepared and submitted to the Treasury, which, subject to a few modifications, had now received their assent. He could not within the limits of his answer enter into the details of the scheme, but it involved the following very substantial additions to the head quarters and general inspecting staff during the next financial year: the head quarters staff would be strengthened by the addition of a second deputy chief inspector and a second medical inspector; the general inspecting staff by a superintending inspector, sixteen inspectors, eleven inspectors' assistants, and five lady inspectors. Further provision was also made for

clerical assistance, both at head quarters and in certain districts where the clerical work was heavy. At the same time he had had under consideration the industrial work of the Home Office proper, and decided that, in view of its great growth, the branch of the office which dealt with this work should, as soon as possible, be relieved of the other important duties which were now assigned to it, and should devote itself exclusively to administration of industrial law and the study of industrial questions. The Treasury had agreed to an addition to the staff to enable this to be done.

The Board of Agriculture and Diagnosis.—Sir William Collins asked the honourable member for South Somerset, as representing the President of the Board of Agriculture, whether, in the case of each of the following diseases, the diagnosis rested upon the isolation and identification of a specific microbe or upon the naked-eye appearances of the disease: Foot-and-mouth disease, cattle plague, pleuro-pneumonia, and sheep-pox. Sir Edward Strachey answered that the diagnosis of the diseases referred to never rested on the naked-eye appearances of the disease alone, but it might rest on these appearances combined with evidence of their contagious nature. In the absence of the conditions for observing in the field whether the trouble was of a contagious nature or not, the diagnosis rested on the isolation not necessarily of a specific microbe but of a specific virus.

Births and Deaths in Ireland.—Mr. Birrell informed Mr. Dundas White that the excess of births over deaths registered in Ireland during the year 1907 was 24,153. The figures, however, had not been finally revised.

First-Aid Certificates for Seamen.—Mr. Kearley informed Major Anstruther-Gray last week that the issue by the St. John Ambulance Association of certificates of proficiency in first aid to candidates for examination in Scotland for certificates as master or mate was not contemplated. And in answer to a second question said he was not aware of the present number of recognized lecturers under the St. Andrews Ambulance Association in Scotland, but the ports at which candidates could be instructed were Glasgow, Dundee, Leith, and Aberdeen. In answer to further inquiries on Tuesday last, it was stated that the Board of Trade had not taken any steps to prevent the St. John Ambulance Association holding classes in Dundee, but that an arrangement had been arrived at with the St. Andrews Association by which such classes would cease. The St. Andrews Association had also agreed to accept attendance on four out of five lectures given by a ship's surgeon or a private physician as qualifying for a certificate for first-aid, as under the St. John system, so that Scottish candidates would have equal facilities for instruction and examination with English candidates.

The Notification of Births Act, 1907.—In answer to Sir William Collins, the President of the Local Government Board stated that 113 local authorities to whom the Notification of Births Act, 1907, was applicable had adopted that Act in England and Wales, and that the Local Government Board had not in any case taken action under Clause 3 of the Act, by putting it in force although it had not been adopted by the local authority.

The Prohibition of Medical Practice by Companies Bill has been introduced by Sir John Tuke, and is backed by Sir Philip Magnus, Mr. Charles Price, Mr. Gulland, and Sir W. Collins. The object of the Bill is to prohibit persons who are not legally qualified to practise medicine and surgery from carrying on business as medical practitioners by means of companies formed under the Joint Stock Companies Acts. This practice has grown up of late years, and the Bill declares that whatever would be an offence under the Medical Acts if committed by an individual, shall also be an offence when committed by a company. The Bill only applies to companies carrying on practice, and not to companies formed to sell medical, surgical, or dental appliances. Convalescent homes and hydropathic institutions carried on by companies are not affected by the Bill. Last year a Select Committee of the House of Lords examined and reported on the measure, and it was passed in the Upper Chamber, but time did not permit its consideration in the Commons. It is a short Bill of only three clauses, and may get a chance late some evening of discussion, and of a second reading.

The Examination for Factory Inspectors.—On Tuesday Mr. Secretary Gladstone informed Mr. Jowett that all inspectors, men and women, with one or two special exceptions, were required to pass examinations in factory law and sanitary science before being finally appointed to the staff. The examination was taken at the end of the first and second years of service, during which period an inspector was on probation. All inspectors on probation were under the direction of a senior inspector.

Vaccination Prosecutions.—In answer to an inquiry by Mr. Lupton as to the number of persons proceeded against under the Vaccination Acts, the number of convictions, and the number of orders to vaccinate, for the years 1906 and 1907, Mr. Secretary Gladstone stated last Tuesday that the figures for the year 1906 were to be found in the volume of Criminal Statistics just published, Tables XIII and XIV. They were as follows: (*a*) Number of persons proceed against, 922; (*b*) number of persons convicted, 667; (*c*) number of orders to vaccinate, 1,116. The 1907 figures could not be given, as the returns for that year were not yet complete.

Feeble-minded and Imbecile Children.—Last Tuesday Mr. Mansfield called the attention of the President of the Local Government Board to the difficulty Boards of Guardians had in dealing with feeble-minded and imbecile children, and asked whether a Board of Guardians would be allowed to appoint a Committe to provide for such children, whether paupers or not. Mr. John Burns said he had received representations from certain Boards of Guardians with regard to this matter. The subject of the imbecile and feeble-minded had been referred to a Royal Commission who, he understood, had for some time been engaged on their report. Pending the issue of that report, he could not encourage the guardians to take action of the kind suggested, nor could he undertake to propose legislation on the subject.

Beri-beri and Foreign Seamen.—In view of the debate on the employment of foreign seamen which came on last Tuesday, some thirty questions were put on Tuesday's paper dealing with deaths among foreign seamen. Many of the questions were duplicated, and dealt with suicides and deaths from chest diseases. One of the most important referred to beri-beri, and was answered by Mr. Lloyd-George, who said that the cause of beri-beri did not appear to have been very definitely ascertained, but probably bad and insufficient food predisposes to the disease. The Board of Trade were in communication with the Royal College of Physicians on the subject. The fireman referred to in the question was probably Mozaffer Alley, fireman of the *Teesta*, who died whilst a passenger on board the *Gwalior*. A return was received from the Negapatam Port officer containing a certificate of death from beri beri, signed by the medical officer. The *Teesta* was employed in the coasting trade of India under local management, and was run under the regulations of the Government of India as regards victualling and crew space. He had no reason to believe that those regulations had not been complied with.

The Medical Examination of Volunteers.—Mr. Rees asked the Secretary of State for War whether volunteers whose efficient service approached twenty years, but who, on presenting themselves for enlistment on March 31st, failed to pass the stringent medical examination required by the Territorial Army Act, would be granted any solatium, such as the long service, or some equivalent, medal, or other suitable acknowledgement of their service. Mr. Secretary Haldane answered that volunteers now serving would not be required to pass the medical examination unless they desired to enlist into a different arm of the service. Some solatium of the kind suggested would in all probability be given to those volunteers whose efficient service approached twenty years.

India.

[From our Special Correspondent.]

The Working of the Latest Rules Restricting Fees of Indian Medical Service Officers.

In the British Medical Journal of November 30th, 1907, attention was drawn to the many objectionable features of the latest rules restricting fees received for medical attendance on "ruling chiefs, their families or dependents; Indian gentlemen of high position in a native state, or Indian gentlemen of high position in British India." The absurdity was pointed out of demanding a special report and the sanction of the Government to receiving any fee of over 16 rupees (£1 1s.) for a single visit, or of 160 rupees for attendance during one month, when the ordinary consulting fee in London is £2 2s. when the patient visits the doctor, and from 5 guineas to several hundred guineas when the doctor visits his patient, according to the distance of the journey necessitated. The result in working of this rule has been to cause a large amount of unnecessary trouble both to civil surgeons and to administrative medical officers, together with an amount of irritation which will doubtless be reflected in the competition for the service, when the degrading nature of the position in which Indian Medical Service officers are now placed is fully realized in the medical schools of Great Britain and Ireland. In former years these rules only applied to native chiefs, and thus mainly affected medical officers in political employment, and their direct result has been that the appointments under the Foreign Office, which have always been among the prizes of the service, and usually only obtainable by long waiting, or through family influence in high quarters, are now very difficult to fill at all; no less than three out of the six posts in Rajputana have recently been tenantless. Yet this is the time when the objectionable rules have been extended all over India, and the very ambiguous wording "gentlemen of high position" added to ruling chiefs—a change which may be interpreted to cover practically all practice among natives, and so cause endless worrying correspondence, rather than face which many will probably abandon private practice altogether among the well-to-do Indians. Difficulties have also arisen regarding the reports of cases involving a breach of professional secrecy, one officer having returned his fee rather than report details regarding a female member of a ruling chief's household which were demanded of him. In another case a chief, on having his fee returned under the present rules as exceeding the amounts laid down, is reported to have refused to accept the money back, and caused it to be thrown into the street to be scrambled for by the poor. Such proceedings are not dignified, to say the least of it; while the chiefs themselves may well ask to be saved from their friends, whose unjustifiable interference has only irritated them and lowered their "izzat." It is confidently expected that the present rules will have to be modified, but as combination of Government medical officers is not allowed, the hands of the service are tied; nevertheless all medical officers who are adversely affected by the rules under consideration might well forward details of their cases to the Naval and Military Committee of the Association, who would soon have an overwhelming case on which to approach the Secretary of State for India.

Ireland.

[From our Special Correspondents.]

Irish Local Government and Corruption.

No stronger indictment of the Irish Local Government Act of 1898 has hitherto been framed than that contained in the following passage, which appears under the head "Bribery" in the Lenten Pastoral of the Roman Catholic Bishop of Clonfert:

> If a member of a public Board votes for a bad or dishonest candidate, or for a candidate clearly less worthy than another, he does a wrong not only to the best candidate, but also to the community, which has a right to the service of the best candidate, and he will be answerable before God for the neglect, the injustice, want of skill, or inferior service of the candidate he supports. And if, because of money or its equivalent, a representative of the people in the taking of a contract supports a wrong tender—a tender higher than others, or for worse goods—he not only acts dishonourably and sinfully by taking a bribe, but he robs the ratepayers exactly as if he had put his hand into their pockets; nor can he ever obtain pardon without restitution of what is possible for him to restore; and this obligation of restitution is also incurred by the person bribing.

Ten years have elapsed since the Act came into force, and the state of things under it gets worse year by year. Small wonder that many honourable members of the profession fight shy of appointments, so few of which could be obtained without resort to the practices the Bishop so strongly condemns.

It will need another Hercules to sweep the Augean stable of Irish Local Government, and we wonder if the framer of the promised Poor-law Act will be strong enough to tackle it, for if he does not it will be as disastrous a failure as its predecessors of 1837 and 1898.

The Crusade against Consumption.

Vigorous Efforts in Ulster.

The crusade against consumption lately started by Her Excellency the Countess of Aberdeen is bearing fruit. The utter apathy is passing away, and although we do not find public Boards rising to their duty, still there is action and debate. On February 24th the Limavady Rural District Council decided to take no action with regard to the circular of the Local Government Board suggesting precautions against the sale for human food of diseased cattle, and especially of cows suffering from tuberculosis. Later on, at the same meeting, the motion that "This Board agree to pay one proportion of the expenditure that may be incurred in providing a sanatorium for the North-West," which was proposed by a lady member, was thrown out; an amendment "To take no action as they were moving too fast," which was proposed by a man, was carried. The main point is that the subject *was* debated. At Newry, on the same date, it was mentioned that tuberculous cattle had been killed in the abattoir without detection, and the Urban Council at once appointed a Committee to investigate the matter.

The Tuberculosis Exhibition has visited Newtonards, co. Down, and was opened by Sir John Byers on February 25th. Sir John has been one of the foremost in the fight and indefatigable in ensuring the success of the movement. Most thought that he had exhausted the subject in his numerous addresses, but on this occasion he struck new ground, and explained the attitude adopted in Germany with a full account of the various insurance measures in force in that country. This is of singular value in Ireland at the present time. It is exactly what Ireland wants, and the whole address was most opportune. The exhibition is to visit Omagh, Ballymoney, and Coleraine, where Committees have been formed to organize the movement.

Health of Belfast.

The medical officer of health of Belfast at the last meeting of the Public Health Committee reported a death-rate for the week of 30.7, due chiefly to chest troubles; there is a considerable amount of influenza, mostly of the respiratory type, and there has been much pneumonia; in the present mortality lists bronchitis and broncho-pneumonia in children, especially after measles, figure highly; the weather has been most trying.

The Milk Supply.

The Local Government Board has issued a general order of much stringency in relation to dairies, cowsheds, and milkshops in Ireland. Every one carrying on the trade of cowkeeper, dairyman, and purveyor of milk must be registered. The houses must be kept clean and properly ventilated and lighted. As to shops, milk must not be exposed to impure air or kept in a kitchen or living room or in any place directly communicating with a room used as a sleeping room or in which may be any person suffering from infectious or contagious disease. Vessels must be cleaned with steam or boiling water, and milk must not be distributed by persons whose hands and clothing are not thoroughly clean and free from infection and contamination. Arrangements are also made for protection against tuberculosis in cows. Swine must not be kept in any building used for keeping cows. A register shall be kept by every purveyor, setting out the names and addresses of those from whom he obtains milk. The order comes into operation on May 1st in the present year.

Pensions for Nurses.

On Saturday, February 29th, a very largely attended meeting was held in the Royal College of Surgeons, Dublin, to listen to an address by Mr. Louis H. M. Dick, Secretary of the Royal National Fund for Nurses. The chair was occupied by Lady Pirrie, in the unavoidable absence of Her Excellency the Countess of Aberdeen. Mr. Dick explained the purposes and the working of the Fund, and Lord Justice Fitzgibbon, Mr. Jas. Talbot Power, D.L., Mr. Wm. Fry, J.P., Sir William Thomson, C.B., and Miss Shuter addressed the meeting in commendation of the objects of the Society.

Scotland.

[From our Special Correspondents.]

The Finlayson Memorial Lecture.

The first Finlayson Memorial Lecture was delivered last week in the Hall of the Faculty of Physicians and Surgeons, when Dr. Norman Moore, of St. Bartholomew's Hospital, London, lectured on the *Schola Salernitana* to a large audience. Sir Hector Cameron, who was in the chair, explained that it was the ultimate intention of the Committee to make permanent arrangements for carrying on the memorial lectures, probably by handing over the funds at their disposal, by deed of gift, to a body of trustees. He indicated that very probably the officials of the Faculty of Physicians and Surgeons of Glasgow, with which Dr. Finlayson had been so long associated, would be the body selected. Though in the meantime no permanent arrangements had been made, the Committee thought that it would be a good thing to have the initial lecture while the memory of Dr. Finlayson was still fresh.

In his lecture, Dr. Norman Moore said that in this, the first lecture, he intended to follow Dr. Finlayson's example, and therefore he chose as his subject the history, or part of the history, of a medical book rather than any particular part of medical knowledge. The *Schola Salernitana* was a collection in Latin verse of opinions or dicta upon the preservation of health, on the uses of herbs, and on the remedies for some diseases, so that it treated of what, in modern terms, are called hygiene, diet, materia medica, and therapeutics. In illustration of this, Dr. Moore quoted several of the later verses, and gave the quaint English translations of early writers. He showed how verse was often selected for medical writings as an aid to memory before the great development of printing. Of the many medical poets of Scotland the greatest was David Kinloch, who lived in the sixteenth century, and from whose work Dr. Moore quoted. After analysing the edition of the *Schola Salernitana* published in 1667 at Rotterdam, and showing how it reflected the medical opinions of the time, Dr. Moore devoted the rest of his time to an attempt to trace the origin of the book and to determine when it was written. Up to the end of the seventeenth century the *Schola* was much read in Western Europe, and there were translations into German, French, Italian, and Gaelic. From the statements in these translations it seemed likely that the *Schola* was first written in the twelfth century at Salerno, and the character of the verses was sufficiently in accord with the writings and teaching in use in Salerno at that time to make this possible. Some of the verses, however, seemed to point to some still earlier work. The *Schola* was evidently not the work of one man, but a collection or compilation of maxims applying to the practice of medicine.

Influenza in Edinburgh.

During the week ending midday, Saturday, February 29th, 8 deaths were registered in Edinburgh as due to influenza. This brings the death-roll from the disease for the year 1908 up to 41. The epidemic is now markedly diminishing, fewer new cases occurring. It has been, during the weeks it has lasted, fairly severe in its effects. So many of the nurses in the Royal Infirmary were laid up that the sick-room was more than full; several of the resident physicians and surgeons were off duty from the same cause. The Royal Edinburgh Asylum has suffered, the poorhouses, the post-office, and the Register House have all felt its malign influence. Curiously enough the gaol, of large institutions, has suffered least. Perhaps the better housing and regular and good food explains this. Pneumonia and its effects in cardiac failure, early or late, continues to claim most victims. Of the 104 deaths in Edinburgh during the week, 45 were in persons over 60 years of age, 1 was over 90, 8 were over 80.

Small-pox in Edinburgh.

Three fresh cases of small-pox were notified last week, bringing the total number for the year 1908 up to 14. Seven cases remain under treatment in the City Hospital.

Foot and Mouth Disease in Edinburgh.

On February 28th a further outbreak of foot and mouth disease was discovered in Balbirnie Place, Edinburgh, in close proximity to the second source of infection, and in consequence 31 more cows were slaughtered on the following day. These 31 were from three different cow-houses close by that first affected in this somewhat congested locality. Some of the smaller dairies in the city have had to cease supplying milk in consequence of these continued outbreaks.

England and Wales.

[From our Special Correspondents.]

LEEDS.

Appointments at the University.

At a recent meeting of the Council of the University, Dr. John B. Hellier, M.D.Lond., was appointed Professor of Obstetrics in succession to Professor Wright. Dr. Hellier has been in several capacities connected with the School of Medicine for many years. He is Honorary Obstetric Physician to the General Infirmary, and in charge of the wards for diseases of women. Dr. Hellier's promotion to a professorship naturally has met with the warmest approval of all his colleagues, and he will prove a valuable addition to the Senate. Dr. E. O. Croft, Honorary Surgeon to the Hospital for Women and Children, has been appointed to succeed Professor Hellier as Lecturer on Diseases of Women. Those who have for many years been associated with Dr. Croft, will remember that he came to Leeds as Resident Obstetric Officer at the Infirmary to take charge, under Dr. James Braithwaite, of the new Gynaecological and Obstetric Department, which was commenced in 1885.

The General Infirmary in 1907.

Though the annual meeting of this infirmary has not yet been held, the figures which will be dealt with are available for comparison with the year 1906. These figures seem to support the view which has been expressed formerly in this column that the infirmary is working well up to the limits of its power with the present accommodation. The number of new in-patients admitted was 6,745, which, with 341 remaining in at the end of 1906, gives a total of 7,086 in-patients treated during 1907, and constitutes an increase of 34 over the previous year. Of those cases, 1,348 were admitted into the medical wards. Into the general surgical wards there were admitted 4,039 patients, 729 being patients suffering from the immediate effects of accidents. The balance was made up of 684 eye cases, 293 ear cases, and 381 cases of diseases peculiar to women. The average daily number of in-patients was 368, an increase of 3 over the preceding year, and the average length of time spent in the infirmary by each patient was 18·9 days. The number of deaths was 472, a decrease of 17. Of these, 140 occurred within forty-eight hours of admission. The death-rates calculated before and after the deduction of these 140 cases work out at 6.6 and 4.6 per cent. respectively. The number of new out-patients was 40,418. In the extern maternity department there were 502 confinements. During the year the two semi-convalescent hospitals have proved of the greatest use, 1,188 patients who required skilled nursing having been sent from the infirmary to these two branches, apart from 211 patients who have gone from the infirmary to other convalescent homes. For diagnostic purposes the *x*-ray department has been called

into requisition to a greater extent than in former years, 1,499 skiagrams having been taken. The table dealing with the amount of stimulants consumed is always one of interest, and it again shows a diminution in the amount used in the infirmary. During 1906 the total amount of wine and spirits used amounted to 109¾ gallons; during 1907 it amounted only to 61¾ gallons. As this latter figure represents only 27 oz. of wine and spirits per day, and the daily average of patients was, as stated above, 368, it is clear that the overwhelming majority of patients had no stimulant of any kind.

WEST YORKSHIRE.

SCHOOL MEDICAL INSPECTORS FOR THE WEST RIDING.
AT a meeting of the West Riding Education Committee held at Wakefield on February 25th, the recommendations of the Elementary Education Subcommittee in connexion with this subject were adopted without alteration. The Chairman of the Subcommittee stated that that body had very carefully considered the subject and in order to assist the deliberations all the medical officers in the Riding had been invited to talk over the matter with the Committee. Out of 110 officers 70 attended. Of these 50 were in favour of the inspection being done by the medical officers, 10 were of a contrary opinion, and 10 did not express any opinion. The Subcommittee came to the conclusion that it would be best to appoint 10 medical inspectors to devote all their time to the work, acting under the instructions of the county medical officer; and that an additional medical assistant should be appointed in the county medical department These officers are to be paid a salary of £300 a year each, with reasonable expenses.

It seems probable that the appointment of numerous medical inspectors of schools all over the country will profoundly affect the economic conditions under which the younger members of the profession at present exist. And it is not unlikely that the medical charities in the near future will find a great difficulty in obtaining the services of resident medical officers at the small salaries paid in the past. Some improvement, too, may be looked for in the position of the general practitioner if the whole-time inspectors are restricted in the matter of treatment within the narrowest limits. Many young medical men who would find it necessary to start in general practice in places where further competition is most undesirable will probably be able to find an outlet for their energies in this class of employment.

MANCHESTER AND SALFORD.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.
AT the last monthly meeting of the Salford Education Committee it was decided that for the present the work of the medical inspection of school children shall be carried on by the present staff with an additional nurse to be appointed, and that to afford the assistant medical officer more time to devote to the duties required under the new system a qualified person be engaged for part-time services to undertake the examination of the eyesight of the children, at an estimated annual cost of £120. The assistant medical officer is to devote the whole of his time to the work, and his salary is to be £400, rising by £25 every two years to a maximum of £500. There are over 40,000 children on the rolls of the Salford schools, the average attendance being about 36,000; and one cannot help wondering what sort of medical examination one man, with the best intentions in the world, can make of 40,000 children. The resolution of the committee says the arrangement is "for the present"; meanwhile strong representations are to be made to the Board of Education to make a grant towards the cost of medical inspection and to cover the loss incurred by local authorities on account of children excluded from attending schools on medical grounds. It was further decided to appoint a subcommittee to consider whether, and to what extent, further anthropometric measurements of children in the schools should be made, and what additional staff, if any, would be required for the purpose. It is very evident that Salford does not intend to be rushed into unnecessary expense, and rightly so. Its rates are high enough already, and more than one heavily-burdened ratepayer has expressed the hope that the Education Committee will refuse to do any more than is absolutely necessary in the way of medical inspection until something towards the cost is provided from imperial funds. Many people in Salford are not convinced that it is necessary for healthy children to be medically examined at all, and not a few have openly asserted that the Act is simply one to provide berths for a few medical men and an opportunity for a little more statistic-making by medical officers of health. Of course that shows lamentable short-sightedness. Others, on the contrary, would push the Act to the utmost, even to the extent of providing free medical treatment both at school and at home for school children. The Medical Officer of Health for Eccles, in a scheme which he has laid before the Eccles Education Committee, says that in the near future the Act will be followed by school clinics and treatment of minor cases in school. Between these two extremes Salford has chosen the mean. It prefers to wait and profit by the experience of other towns.

PROVIDENT DISPENSARIES ASSOCIATION.
The annual report of the Manchester and Salford Provident Dispensaries Association states that there has been a falling off in the aggregate membership during the past year, only two of the branches showing an increase. The council attributes the decrease to the fact that many members have removed to outside districts, owing to cheap travelling facilities, and also to lapse of membership through non-payment of subscriptions. The fact remains that, in spite of increased activity in certain directions, the membership is steadily falling. Taking the receipts and expenditure of all the branches together there has been a gross surplus of £257, from which various deductions have to be made. The receipts from subscriptions, sick fees, and entrance fees amounted in all to £3 313, and the sum paid to the medical staff was £1 855. In 1906, the receipts were £3 456, and the medical staff received £1 977. The number of prescriptions dispensed during the year was 133 373, giving an average of 8.5 per paying member.

CUMBERLAND.

CUMBERLAND INFIRMARY, CARLISLE.
THE annual meeting of the Cumberland Infirmary, held at Carlisle on February 26th, was notable for the satisfactory report which the Committee was able to present. The radical change in administrative principles and practice introduced some three or four years ago has been fully justified by the results obtained, and Dr. Barnes and his committee in every way deserve the congratulations which they received on this occasion. For several years before Dr. Barnes took up office the financial position of the institution had been going from bad to worse, and no material endeavour was being made to stem the tide of increasing indebtedness. Although no special improvements in the institution were in hand it was living from hand to mouth, legacies were being treated as current income, and so far as there was any financial policy at all it was based upon the misleading conception that the greater the straits of the institution the more support it was likely to receive. The policy introduced by Dr. Barnes—the only safe one for charities other than those very exceptionally placed—consists in treating legacies as capital, in endeavouring to increase the number of annual subscribers, and in regulating expenditure by the amount of revenue fairly to be expected. Working on these lines the institution has now in the course of some four years practically emerged from debt, the subscription list has been increased to £1,300, and about 50 per cent. of the total required for the extensions and structural improvements long seen to be necessary has been accumulated. There now seems a fair prospect that the Augmentation of Income Committee, established by Dr. Barnes, will be able to bring up the annual subscription list to the desired sum of £1,800 a year, and that with the continuance of energy on the part of all concerned, the rest of the money, some £12 000, required to cover the expected cost of the new works in prospect, may be collected before the building operations are commenced, or at all events, before they are completed. When this has been achieved Carlisle will be

able at length to claim that its hospital arrangements are fully on a par with those of other towns of equivalent importance, and will have the satisfaction of knowing that while the financial reforms have been in progress and the structural improvements effected, the general work has been practically unchecked and its efficiency fully maintained.

NEWCASTLE-UPON-TYNE.

Annual Dinner of the North of England Glasgow University Club.

The annual dinner of this club was held in the Royal Turk's Head Hotel, Newcastle-upon-Tyne, on February 26th. The President, Dr. J. Johnstone Weir, was in the chair, and upwards of eighty gentlemen sat down to dinner. The Chairman was supported on the right by the guest of the evening, Principal MacAlister, of Glasgow University, and on the left by Sir Henry Craik, K.C.B., M.P. for the Universities of Glasgow and Aberdeen. Among others present were Sir George H. Philipson, Sir Isambard Owen, the Mayor of Jarrow, Dr. Farquharson, Professor Oliver, the Vicar of Newcastle-upon-Tyne (Canon Gough), Professor Duff, and Dr. Gordon Bell. After the royal toast had been given from the chair, Dr. Mearns proposed in felicitous terms the Houses of Parliament, to which Sir Henry Craik in a most able and statesmanlike speech, replied. The speech, while a call to attention and duty on the part of all graduates, was a masterly vindication of University representation in Parliament. To Professor Thomas Oliver was entrusted the toast of the evening, "Alma Mater," coupled with "Our Guest." Principal MacAlister's reply was worthy of the man and the occasion. Although a stranger to most of the graduates present, he made a good impression, and by his speech showed himself to be a most capable successor to the many distinguished Principals who have preceded him. As medical graduates form by far the larger number of members of the club, Principal MacAlister, directing his remarks accordingly, stated how constantly occupied his thoughts were with the training and equipping of young practitioners, also in safeguarding the rights and privileges, and in fostering the legitimate interests of medical men. He paid a graceful tribute to the memories of the late Sir William Tennant Gairdner, Sir Thomas McCall Anderson, and Lord Kelvin. Thrice since he went to Glasgow had the Bute Hall re-echoed the mournful tones of the "Dead March" as the last tribute offered to the memory of departed leaders. Mention was made of the opening of the splendid laboratories for physics, physiology, pharmacology, forensic medicine, and public health by H.R.H. the Prince of Wales in April of last year. These laboratories, he said, were equal to any in the country, well equipped and directed by most competent teachers. Greater facilities for clinical instruction were likely to be provided in Glasgow by utilizing, in addition to the Western and Royal Infirmaries, the Victoria Infirmary and the special hospitals of the city. The toast of "The Lord Mayor and Corporation of Newcastle-upon-Tyne," given by Dr. Farquharson, was, in the absence of the Lord Mayor, responded to by the Mayor of Jarrow. The toast of "Other Universities and Seats of Learning," submitted by Dr. Gordon Bell, was acknowledged by Sir G. H. Philipson and Sir Isambard Owen. The Rev. Canon Gough gave "The North of England Glasgow University Club," which was gracefully acknowledged by the Chairman. Altogether the banquet was most successful. The presence of several Aberdeen graduates as Associates was a pleasing feature, and contributed much to the success of the meeting.

SOUTH WALES.

Red Cross Society, Glamorgan Branch.

The Earl of Plymouth presided at a meeting at the City Hall, Cardiff, on February 22nd, when it was unanimously resolved to form a Glamorgan Branch of the Red Cross Society. Amongst those present were the Countess of Plymouth, Sir Alfred Thomas, M.P., Mr. Lynn Thomas, C.B. (Secretary), and Mrs. Thomas, Dr. C. Vachell, Dr. Tatham Thompson, Dr. Walford, Professor Hepburn, Mr. Boyd Harvey, etc. Mr. Anthony Bowlby, C.M.G., St. Bartholomew's Hospital, London, in the course of an address, traced the origin of the Red Cross Society, explained its work, and what it had accomplished in times of war. There would be scope, he said, for its operations under the Territorial Army's scheme, as large bodies of men would go into camp for training. War was not altogether an evil. It brought out some of the finest qualities in man, and in illustration Mr. Bowlby related some of his experiences in the South African war. The Welsh Hospital did excellent work in that war. Wales sent out some of her best surgeons, physicians, and nurses, some of whom sacrificed their lives. The Red Cross Society did a noble work, and he was confident Glamorgan would generously support the branch that was to be formed. Sir Alfred Thomas said it gave him great pleasure to move that a Glamorgan Branch of the Red Cross Society be formed. Professor Hepburn, in seconding, said that there could be no more practical form of mercy than that practised by the Red Cross Society. The Rev. D. Davies moved that the Provisional Committee be appointed as follows to make the preliminary arrangements: Marchioness of Bute, Countess of Dunraven, Lady Llewellyn (Penllergaer), Mrs. Godfrey Clark, Mrs. O. H. Jones, Miss Talbot (Margam), Miss Lewis (Maerdy), the Lord Mayor and Lady Mayoress of Cardiff, and the Mayors and Mayoresses of Swansea, Neath, Cowbridge, Aberavon, and Merthyr Tydfil. This motion was carried. A vote of thanks was cordially accorded to Mr. Bowlby for his address. Replying to a vote of thanks, the Earl of Plymouth said he was sure the county would not fail to extend to the Society all the support it deserved.

Cardiff Infirmary.

About twelve months ago the Board of Management of the Cardiff Infirmary decided to build a new wing with accommodation for sixty-four beds. At that time 600 patients were waiting for admission. An appeal was made for £30,000 to meet the cost of the extension. The fund was inaugurated in a magnificent manner by Mr. John Cory, J.P., D.L., who promised £5 000 on condition that the balance was subscribed within six months. On February 29th Colonel E. Bruce Vaughan, who has done excellent work for the infirmary, received a letter from Mr. Cory, in which, after expressing the gratification with which he had heard that Mr. H. Woolcott Thompson had given £3,500, he said that he now had the pleasure of enclosing his own cheque for £5,000 to complete the £30,000. He expressed the hope that the Committee would proceed with the new wing without further delay, and foreshadowed his intention of helping to increase the annual income of the infirmary. The Infirmary Board of Management, in its last annual report, attributes the success of the appeal for funds "to the zeal and infectious enthusiasm of the Chairman of the House Committee, Colonel Bruce Vaughan, to whom so much of the improved condition of the infirmary is due. Colonel Vaughan is an optimist. His faith in the cause he has so much at heart and in the generosity of the people is great. He has overcome serious opposition, even inside the Board of Management, in his efforts to make the infirmary equal to the increasing demands. In his great work he has received no little assistance from Sir William Thomas Lewis, K.C.V.O., Lady Aberdare, and others.

Health of Carmarthen.

The medical officer of health for Carmarthen borough (Dr. L. Bowen Jones) in his report for 1907 states that the death-rate for the district was 15 3 per 1,000; birth-rate 19 0 per 1 000. Thirty cases of infectious diseases were notified, with six deaths. Seventeen deaths were due to phthisis, besides ten deaths from other tuberculous diseases. Twelve of the former deaths occurred in public institutions. Dr. Bowen Jones stated that little interest was manifested by the public generally in the important social question of the prevention of phthisis. The most potent factor in preventing the ravages of this disease would be found in educating the people to live more healthy lives. The beneficial effects of the treatment in sanatoriums, and the educative influences disseminated through these institutions had already done much, and before another year had gone by there was every prospect of seeing the opening of the West Wales Sanatorium at Alltymynydd.

CORRESPONDENCE.

THE TRANSMISSION OF SYPHILIS TO THE SECOND GENERATION.

SIR,—In the address on inherited syphilis, published in the BRITISH MEDICAL JOURNAL of February 1st, my main object was to bring medical thought up to the level of the situation created by the discovery of the cause of the disease; and among other things I argued that "inheritance is invariably through the syphilized mother." My arguments were that (1) owing to the size of the *Spirochaeta pallida* it could not be carried in a spermatozoon; (2) that if it penetrated independently and multiplied it must destroy the small human ovum; (3) that Colles's law, showing how a mother escapes inoculation from her syphilitic infant supported the same view; (4) the regularity of the exanthematous stage occurring after birth showed that the first inoculation took place with the separation of the placenta, and (5) the discovery of the spirochaetes in the umbilical vein and liver indicated with certainty the mode of entry.

In your issue of February 29th Dr. C. F. Marshall has done me the honour to dispute this point, but I regret that he brings forward authorities and speculations rather than facts.

To take his last argument first, he says, "It is, I believe, now held by many authorities that the spirochaete condition is probably only one phase in the life-history of the syphilitic micro-organism, so that it may enter the ovum in another form." It is impossible to argue against phases not yet discovered, even if authorities suppose such to exist; and it will be quite time to resume the argument when the supposed phases are demonstrated. At the time of the delivery of my address no such phases had been recognized at the Pasteur Institute; but this is certain, that where syphilis is, there are the spirochaetes gathered together.

Dr. Marshall refers to a discussion that took place in Vienna in 1903, where he says many great authorities supported the view of transmission through the father alone. But we live in a progressive age, and five years is an epoch in medicine. Of what value are the sayings of great authorities two years before the discovery of the organism on which we base our arguments? One at least of those whose names he mentions has expressed a different view since.

He supports paternal transmission by the statement that healthy children may be born after syphilitic when the father alone is treated; but there is nothing more fallacious than to argue solely from the effects of treatment. Were it not so, such stupendous follies as homoeopathy and Christian Science would not grow and flourish in the twentieth century. Before accepting any such case, I should require proof that the mother had not sought treatment by some other doctor. Treatment of the father alone after the birth of a syphilitic child is, to my mind, like that of the Rosicrucian physicians who applied the salve to the weapon instead of to the wound.

He also states that "cases have been known where a woman gave birth to syphilitic children by one man and healthy by another." It would be difficult to elicit truth from such a nest of depravity as this; but the paternity, which might be various, probably played an altogether secondary part to certain judicious treatment the mother may be supposed to have received after giving birth to a syphilitic child.

Hochsinger's cases, in which many syphilitic children were born of mothers who manifested no evidence of the disease, are only in accordance with the generally received view, on which Colles's law rests—that a woman may be infected, yet show no outward sign of the disease.

In my address I asked for new facts and new observations, but I receive only the dicta of authorities in support of ancient creeds. All my life I have been striving to disentangle the results of my own observations from the deadening weight of authority. How often has progress been delayed by the ponderous dictum of some great authority! Did not the great Hunter maintain that gonorrhoea and syphilis were one and the same disease? Did not Sir Thomas Watson deny that phthisis was contagious, because a "diathesis is not communicable from person to person"? Did not Lawrence declare that ovariotomy was an unjustifiable operation? and did not the brilliant Sir William Savory maintain to the day of his death that there was nothing in antiseptic surgery, and that Lord Lister had given away his case when he gave up the carbolic spray?

Let us away with ancient shibboleths and face the new position brought about by the discovery of the *Spirochaeta pallida* as the cause of syphilis, whether acquired or inherited.—I am, etc.,

London, W., March 2nd. R. CLEMENT LUCAS.

THE ROYAL SOCIETY AND THE TESTS FOR COLOUR BLINDNESS.

SIR,—I have been much interested in the discussion on colour blindness, and should like to add my experiences. I am science master at the public school here, and some years ago started testing boys with Holmgren's wools. Shortly afterwards I became acquainted with Dr. Green's book, to which I became an immediate and enthusiastic convert.

I retested those whom I had already tested, and found that I had missed one or two. I examine them with Dr. Green's wools and then with the spectroscope. In this I am fortunate, for they have never seen a spectrum before, and so do not know how many colours they ought to see. With regard to the efficiency of wools as a test, they do well enough for my purpose, as there is no chance of the boys having been taught to match wools, but I am quite aware that all cases cannot be detected thus, as the following will show: One boy I found, accidentally, could not distinguish railway lights at a distance; he called red green, and vice versa. On being tested with wools he made no mistakes, but would have been a very dangerous man at sea. He would have been detected by the lantern test. The tests used by railways and navy are, I believe, not satisfactory. There is a boy here who passed in colour when trying for the navy. He is a dichromic.

I quite agree with Mr. Marshall's remarks on naming colours; I should never have detected the above case unless he had named colours.

I have to put up with a certain amount of colour ignorance. Dr. Green, in both of his letters, remarks on the attitude of official science, and says that he has not had fair adverse criticism. I had a similar experience last summer when I was upholding his theories in the *English Mechanic and World of Science*. My opponents pinned their faith on Helmholtz, and their attitude appeared to be, "consult the recognized authorities"; that Dr. Green's book was full of "fanciful hypotheses," etc., but they collapsed on being challenged to quote one fact or deduction that was false. I have often argued with upholders of Helmholtz, and have generally convinced them that Dr. Green and his method of testing was right.—I am, etc.,

Sedbergh, Feb. 23rd. G. F. WOODHOUSE, M.A.

HAMPSTEAD GENERAL HOSPITAL.

SIR,—The letter of Mr. Collins in your last issue induces me to ask whether a reasonable compromise cannot be arrived at with regard to the Hampstead Hospital?

I think we general practitioners ought to recognize the financial difficulties of the Council of the Hampstead Hospital, and also the claims of the North-West London Hospital, which has been doing an excellent work in a poor district.

We really do not require this big hospital for the local needs of Hampstead.

Why should not the larger part of this big building be handed over to the North-West London Hospital, as their in-patient department, and a wing of the hospital, containing say 30 or 40 beds, be reserved as a local cottage hospital, manned by local practitioners? The staffing of this wing should be managed on lines satisfactory to the practitioners of the neighbourhood, so as to ensure a comparatively short tenure and a chance for as many men as possible to have a turn of holding office, if they desire to do so. The presence of the larger institution in the background, with its staff of consultants, would, it appears to me, be of great advantage to the local wing, and consultations could be arranged in difficult cases, and patients, if necessary, transferred, where, for example, major operations were required.

I think this ought to satisfy the local practitioners of

Hampstead, as long as the out-patient department of the North-West London Hospital is kept, as at present, in Kentish Town, and no out-patient department of any kind is started in Hampstead. It should also be satisfactory to the King's Fund.

Those who are inclined to suggest that no attention should be paid to the recommendations of the King Edward's Hospital Fund should recollect that the great difficulty of the hospital at present is *lack of funds*, and that this great fund has to look at the whole matter from a public standpoint, and from the point of view of the prevention of the overlapping of charitable funds, and of the economical provision of hospital relief

The pecuniary support of the King's Fund is of enormous importance to the hospital, and its moral support of scarcely less importance, having in view its great weight with the public. It seems to me that the influence of the British Medical Association should be used to *reconcile* the views of the various bodies concerned, and not to accentuate and exaggerate their differences. I think it is of great importance that this matter should be settled in a friendly spirit and with a recognition of the claims of the public, the patients, and the subscribers, as well as of the medical men interested in the matter. I was a member of the late Joint Committee of the Division and the local practitioners, but have neither leisure nor inclination for taking any further part in this controversy. I merely suggest the above settlement in the interests of peace.—I am, etc.,

London, N.W., Feb. 25th. HENRY SHARMAN, M.D.

A SUGGESTION FOR THE PREVENTION OF HOSPITAL ABUSE

SIR,—Much has been said and written during the past few years on the prevalence of hospital abuse. Notwithstanding, the practice of using hospitals, and particularly the out-patient departments, by persons for whom their facilities were never intended cannot be said to have diminished. Certain hospitals, including some of the highest standing and influence, have indeed appointed officials whose duty it is to inquire into the circumstances and position of their patients, with authority to advise refusal of treatment to unsuitable cases. Such officials, usually called almoners, do, no doubt, good work, and their results must be measured not merely by the actual numbers of those rejected, for in addition to these many who would otherwise apply are deterred by the knowledge that inquiry will be instituted into their means. Nevertheless, hospitals employing almoners are in a distinct minority. They shrink from the additional expense, for the outlay incurred far exceeds the sum saved to the hospital by the rejection of unsuitable cases. It costs very little more to treat 1,050 cases than to treat 1,000. An almoner saves the money not of the hospital to which he is attached, but of the medical men whose patients he rescues from the largess of a non-discriminating charity.

My suggestion is that this work should be undertaken by the officials of the King's Fund. It is not outside their province, for as trustees of the largest single charitable trust in the world they owe it to those who have contributed so liberally and largely to see that the fruits of generosity are not wasted on unsuitable objects. Furthermore, there are two advantages which proceed from putting this work under the control of the fund. The first is that of economical working, for in the case of small hospitals a single official would suffice for several institutions. Secondly, there is the advantage of central administration. The reports of the almoners would be handed in, not only to the hospitals to which they would be severally attached, but also to a central office, where, after proper classification, they would be available for reference. Thus, persons rejected as financially unsuitable at one institution would find it impossible to gain gratuitous advice and treatment by transferring their affections and diseases to another hospital in the hope that the second should prove less perspicacious.—I am, etc.,

February 24th. H. D.

DEATHS UNDER ANAESTHETICS.

SIR,—I notice at the meeting of the Medico-Legal Society held on February 11th and reported in the issue of the BRITISH MEDICAL JOURNAL for February 29th a paper was read by Dr. Freyberger concerning deaths under anaesthetics, and in the discussion which followed Mr. Trontbeck stated that few deaths under anaesthetics were reported by private practitioners because it was not commonly known in the profession that all such cases must be considered by an inquest jury.

A most ridiculous assertion, I consider. During the past twenty years I have discussed the question of anaesthetics with, I may say, hundreds of practitioners, and I have never yet met the medical man who was ignorant of that very important fact. Indeed, I do not think that any member of the profession is so keenly alive to that fact as the general practitioner is.

It certainly is exceedingly rare that deaths occur under anaesthetics in private practice, the inference being that private practitioners are either the more able anaesthetists or else the administration at home is safer than in hospital.

In view of either of these aspects, Mr. Trontbeck had no logical grounds for condemning the young practitioner in favour of a "person in authority."—I am, etc.,

Barton, near Ampthill, Beds, Feb. 29th. W. SMITH, L.R.C.P.

MR. LECKY AND VIVISECTION.

SIR,—My attention has been drawn to a paragraph in your issue of December 28th, 1907, relative to my evidence before the Royal Commission on Vivisection. You quite fairly quote a passage from Lecky on the side of vivisectionists, and wonder what I was going to quote from him in support of my contention that "the temptation to a man who has hardened himself to make experiments on animals which were not for the good of the sufferer, to make experiments on human patients which are not for the good of the sufferer must be very great."

I am very grateful to you. You give me an opportunity of pointing out the gross unfairness with which I was treated as a witness before the Royal Commission. I was asked to send on beforehand a précis of my evidence to each commissioner. I complied. When I, who am a very busy man, appeared, I was practically told that the Commission did not want to hear any more evidence on the ethical side. I was never allowed to develop the positive side of my evidence, but was at once put on my defence. They made an unfair use of their reasonable request that I should send in a précis. They stole the key to the situation and then proceeded to bombard me with questions. They said in effect, "Tell us what line you are going to take," and then replied, "You shall not take it. We have stationed men to prevent it." This may be a Royal Commission, but it is not the elucidation of truth nor fair warfare. To change the metaphor, it is just as if a witness in a court of law, who had begun to make a statement, were not allowed to be examined by his own counsel, but was severely cross-examined by the opposing counsel. It is a striking illustration of the wisdom of the demand of Mr. Stephen Coleridge as the spokesman of the National Antivivisection Society, for the presence of counsel on both sides. It was not the antivivisectionists, but the vivisectionists, who were afraid of properly probed evidence.

If you will look at my answer to Question 8,780 you will see that I was allowed to utter exactly four words of the quotation from Lecky. No wonder you were puzzled as to what I was going to say. The passage runs as follows: "It is abundantly evident, both from history and from present experience, that the instinctive shock, or natural feeling of disgust, caused by the sight of the sufferings of men is not generically different from that which is caused by the sight of the sufferings of animals." This is from *The History of European Morals* (ed. of 1887), vol. i, p. 278.

I think that you will admit that this is quite à propos as the first of a series of quotations intended to establish my contention (supported in all cases by chapter and verse), and the more valuable as the admission of a man who, as you so ably show in your remarks in the issue of December 28th, was a vivisectionist. I trust to your English sense of fairness to publish the whole of my reply, and in your heart of hearts to sympathize with my complaint.—I am, etc.,

St. Mark's Vicarage, E., March 3rd. LIONEL S. LEWIS.

*** We have much pleasure in publishing Mr. Lewis's letter, as it is a characteristic example of antivivisectionist

logic. He complains that he was not allowed to read an absolutely irrelevant quotation from Lecky. He seems to have forgotten, however, that the Commission allowed him (Question 8,782) to say that:

Dr. Johnson warned us that it would lead to this sort of thing, and Lecky and some of the great thinkers of the world tell us that it is one of the great dangers of vivisection that a man who gets callous to pain and does not inflict it for the good of the sufferer will not be over-particular when he gets straight from the vivisectional laboratory to the bedside of a hospital.

We ask again where Lecky says this or anything like this. Of course now that Lecky has been revealed in his true character as a "vivisectionist," he has doubtless ceased to rank in Mr. Lewis's mind among the great thinkers of the world. But it is painfully evident that Mr. Lewis had not taken the trouble to verify his references to Lecky before giving evidence, and if the Chairman ruled out a quotation which had nothing to do with vivisection, on the other hand he allowed the reverend witness to couple the name of Lecky with evidence which, as we have shown, did not represent his opinion on the subject.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

SIR,—On the ground that it is entirely opposed to the spirit of the Association, which can, I think, be summed up as favouring equal remuneration for equal work and merit, apart from any question of sex, let me enter a protest against the insertion of the advertisement of the Glamorgan County Council as published in the JOURNAL of February 29th. As it does not specify that a woman of inferior qualification is desired or that she will be expected to do £50 worth less work than her male colleagues, one can only look on the advertisement as a flagrant attempt to induce underselling.

The matter is one in which medical men have all to gain and nothing to lose in upholding the interests of their professional sisters. It stands to reason that if county councils of frugal tendencies can get their work equally well done for £50 less per annum by qualified women, advertisements for male applicants will cease to appear.—I am, etc.,

March 2nd. H. G. C.

THE EARLIEST SYMPTOM OF SENILE CATARACT.

SIR,—One of the most popularly read textbooks on diseases of the eye states that the patient complains early of the presence of motes before the eye in this disease. This is not so in the commonest cases, the symptom of which the patient complains being simply failure of sight.—I am, etc,

ALBERT CORNER, M.R.C.S., L.R.C.P.

Sidmouth, Jan. 23rd.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

SUPERSESSION.

J. H. writes: A. and B. are two medical men practising in the same country town. Both are natives of the place and know all the local circumstances. A. has come to practise less than a year ago. B. has been in practice for more than twenty years. In B.'s absence for one day A. is called to C., a patient of B.'s. A. continues in attendance after B.'s return. Has A. acted in a professional manner to B.? What ought A. to have done, and to do, and what ought B. to do?

*** Assuming that A. had not been asked by B. to attend to his cases in his absence, and that he was called to the patient in his capacity as an independent practitioner, he was at liberty to attend and to continue in attendance so long as his services were required. B. should do nothing.

MEDICAL OFFICERS OF HEALTH AND PRACTITIONERS.

CUI BONO.—We have received a letter from a gentleman who says he is the medical officer of health referred to in the paragraph published under this heading (see JOURNAL, January 18th, 1908, p. 180). He disputes the correctness of the statement upon which our comment was based; he says that he knew nothing of the patient being pregnant when she was treated at the hospital, nor did he recognize her as having been at the hospital until a week or so after her confinement, and, as a matter of fact, she was attended not by him, but by his partner. She was in hospital in March, and was confined in November. On being acquainted with the circumstances, he immediately telegraphed to the aggrieved practitioner, offering to give up to him the fee and the patient, "as he had never influenced the woman in any shape about her choice of a medical man to attend her in confinement." As criticisms of medical officers of health have been frequent, it is only fair to them as a body to publish this explanation.

DISSOLUTION OF PARTNERSHIP.

SUCCESSOR asks: Two medical men practising in the same town go into partnership and sign an agreement whereby the senior, who has the larger practice, retires at the end of two years, when the remaining partner pays him a fixed sum. (1) Is it necessary to advertise the dissolution of the partnership, or to employ a lawyer to give it legal effect? (2) Under the agreement the retiring partner is prohibited from doing any kind of professional work in that district without the written consent of the remaining partner, who is willing that he should see patients in consultation, give anaesthetics, and attend cases in emergencies. What proportion, if any, of the fees should be paid to the remaining partner?

*** (1) In ordinary cases it is sufficient to give notice of the dissolution to all those who have been in the habit of having business transactions with the old firm. (2) This must be determined entirely by mutual arrangement between the partners; and it must further be borne in mind that any agreement to share such fees might lead to difficulties in case it was contended later that no real dissolution of partnership had taken place.

H. G. D.—The incidents, if correctly described, are such as would no doubt be inquired into by the Ethical Committee of the local Division if the case were submitted to it.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on February 27th:

M.D.—J. P. Candler, Corp. Chri.
M.B., B.C.—E. C. Sparrow, Trin.; J. H. Trench, Trin.
M.B.—G. Browse, Cla.

PROFESSORSHIP OF BIOLOGY.

An anonymous benefactor, considering that the year 1909, in which biologists have decided to celebrate in Cambridge the centenary of Darwin's birth, is a suitable occasion for founding a Chair of Biology, has offered a sum of £300 a year towards this purpose on condition that it shall be the duty of the Professor to teach or make researches in heredity. The Council of the Senate proposes to create a Professorship in Biology for a period of five years at an annual stipend of £700.

TRINITY COLLEGE, DUBLIN.

FINAL MEDICAL EXAMINATION—PART II.

THE following candidates have been approved in the subject indicated:

Medicine.—C. W. Laird (passed on high marks), I. C. Pretorius, A. H. Laird, T. P. Dowley, A. V. J. Richardson, W. E. Hopkins, W. A. Nicholson, R. de C. Wheeler, J. F. Clarke, H. V. Stanley.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting of this Association was held at 9, Copthall Avenue, E.C., on February 27th, Surgeon-General Evatt, C.B., President of the Association, was present, and Dr. Balding, Chairman of Council, presided. Among matters of interest to the Poor-law service the following were considered: A member complained that a guardian in his district was intending to move a resolution to compel the workhouse medical officer to attend without further payment the other officers of the guardians, and asked whether this was legal. The Council was of opinion that any such resolution, if carried, would be of no effect. Any action of this kind on the part of the guardians was altogether *ultra vires*, and would not be sanctioned by the Local Government Board; it would be in effect providing Poor-law relief for non-paupers.

Another member complained that a professional neighbour had certified as a lunatic a patient that he had been instructed

by his relieving officer to visit for that purpose, and who was, in fact, a pauper lunatic. After some discussion it was decided by the Council that a Poor-law medical officer could claim neither a legal nor ethical right to certify a pauper lunatic. The matter was entirely in the hands of the magistrate having jurisdiction in the case, and it was for him to decide which practitioner should be required to perform this duty.

ATTENDANCE ON CASE OF ABORTION.

ALPHA.—Attendance on cases of abortion occurring previous to the seventh month of pregnancy, which is generally regarded as the earliest period at which a child can be born to live, does not entitle a Poor-law medical officer to any special fee.

DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR.

A PROVINCIAL DISTRICT MEDICAL OFFICER writes to ask whether he can retain his vaccination work if he resigns his Poor-law medical appointment, and becomes the recipient of superannuation under the Act of 1896.

*** This depends entirely on the will of the guardians, who can give our correspondent at any time twenty-eight days' notice to determine his vaccination contract. If *no* notice to this effect is given by either party concerned, the vaccination work will be carried on by our correspondent as heretofore.

"MEDICAL RELIEF ONLY."

T. S., a district medical officer, received a medical order, crossed "Medical relief only," to attend a daughter, aged 12 of poor parents not in receipt of medical relief. He found the patient suffering from serious chest affection and malnutrition; he gave a recommendation on the usual form for a pint of milk daily for his patient. The relieving officer objected to supply this. T. S. asks what powers the guardians have to give this form of medical order.

*** This is a very exceptional form of order, and not in accordance with regulations. It is very doubtful what is meant by "medical relief only"; it may mean medical attendance only, and if so it is not in accordance with the principle on which medical attendance is provided for paupers. But whatever it was intended to mean, *it should be entirely disregarded by the medical officer*, whose duty it is to act upon the order itself and at the same time to see that all ordinary necessaries for the proper treatment of the case are provided for the patient, and to certify to this effect. If the extras certified for as necessary are not supplied in due course this fact should be reported in the ordinary weekly or fortnightly return of cases under treatment by the medical officer, and further certificates for the same extras, and if necessary for others in addition, should be regularly given even *daily* if the case is urgent. Then it would be well to send *direct to the relieving officer by registered letter post.* The persistent refusal to supply extras so recommended would throw upon him a responsibility which he would probably not be prepared to face, as, in the event of the patient's death, an inquest ought to be held, and public opinion would undoubtedly show itself opposed to the action taken both by the guardians and their relieving officer.

DUTIES OF THE MEDICAL OFFICER OF HEALTH IN INFECTIOUS CASES.

Q.—The Local Government Board has stated that it appears to it to be undesirable that the medical officer of health of a district council should in general undertake a personal diagnosis of every notified case of infectious disease. Under certain circumstances, as where, for example, the disease is one which in itself, or owing to the attendant conditions, threatens exceptional danger to the community, it may be desirable that the medical officer of health should make a personal diagnosis; but this can only be done with the consent of the patient or of those having charge of the patient, and the medical practitioner in charge should always be communicated with and his co-operation secured if possible. The attention of the medical officer of health in question might be drawn to this communication from the Local Government Board, either directly or through some member or the clerk of the district council.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Keynsham Rural District.—The population was 8,949, the birth-rate 26 9 per 1,000, the death-rate 15 6 per 1,000, and the infant mortality-rate was 71 per 1,000 births. Dr. J. C. Heaven points out once more the danger of declaring a patient free from the infection of diphtheria after only one negative culture has been made from material taken from the throat or nose. He gives details concerning a child who, being convalescent from diphtheria, returned to school at Bristol, where the doctor, hearing she had had the disease, took swabs from her as long as three months after the acute stage. Bacilli were found in the nose. Subsequently she returned to Keynsham, where Dr. Heaven found that both her nose and throat were infected.

Newark Rural District.—The population was 8,051, the birth-rate per 1,000 24.8, the death-rate per 1,000 13 1, and the infantile mortality-rate per 1,000 births 105. The district council supplies antitoxin free for use in suitable cases. There were only 12 cases of diphtheria reported during the year, and 24 of scarlet fever in seven different parishes. The spread of the latter disease, in the opinion of Dr. Broadbent, is due in some measure to the neglect of parents to take proper precautions in the way of isolating and disinfecting. This indifference he attributes to the disease being much milder than it used to be. He urges the district council to join with the town of Newark in providing a suitable isolation hospital.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE AFTER-CARE ASSOCIATION.

THE annual meeting of this Association, which is engaged in the useful work of caring for convalescents from mental disease, was held recently at 48, Wimpole Street (by kind invitation of Dr. and Mrs. Blandford). Mr. Anthony Hope Hawkins presided, and amongst the large assembly present were the Bishops of Barking and Kingston, Drs. Amsden, Blandford, H. Bond, Bower, Chambers, Craig, Higginson, Pasmore, Savage, Shuttleworth, and others interested in the care of the insane. The Chairman stated that his interest in the subject was chiefly due to the fact of his kinship with the Rev. Henry Hawkins, formerly Chaplain at Colney Hatch, who founded the Association in 1879. It performed a most necessary function—that of facilitating the re-entry into the outer world of those whose affliction had for a time cut them off from it, as would be evident from the annual report of the Council for 1907, which he called upon the Secretary, Mr. H. Thornhill Roxby, to read. The report stated that the work had progressed satisfactorily during the year; no less than 348 applications had been dealt with, and the number successfully helped (both in fitting for and obtaining suitable employment) had been in advance of any previous year. Grants had been made both in money and in kind to deserving applicants, whose cases were always thoroughly investigated by the officers before being brought before the Council. The Council were convinced that personal influence was the essential factor in dealing with cases recovered from mental illness, and some slight idea of the amount of such attention might be gathered from the fact that about 595 visits had been paid, and more than 3,700 letters written by the executive officers to or about cases in the year 1907 alone. The total amount received during the year had been £1,476 7s. 3d., but this included a legacy of £500 (which had been invested), and the current income was only slightly in advance of that of previous years. Provincial branches of the Association had been formed in six or seven centres, chiefly in connexion with large asylums, and there were nearly thirty honorary local secretaries in different parts of the country.

The adoption of the report was moved by the Bishop of Kingston, seconded by Dr. Blandford, and supported by Dr. Amsden, who said that he, in common with other asylum superintendents, thoroughly appreciated the beneficent work of the Association, to which they were indebted for indispensable aid in the kindly supervision of discharged patients. The Bishop of Barking also testified from personal knowledge to the valuable aid rendered by the Association in the care and assistance of cases discharged recovered from the large asylums in Essex.

The re-election of the Vice-Presidents, Executive Council, and officers was moved by Dr. Wolseley Lewis, and seconded by Dr. Hubert Bond.

Subsequently a short paper was read by Dr. G. H. Savage on Convalescence from Mental Disorders and its Difficulties, in which, from the medical point of view, he insisted on the necessity of a benevolent agency, such as the After-Care Association, to deal with those who had to pass from the regulated life of the asylums to the larger sphere of the workaday world. The utility of convalescent establishments to supplement the treatment of physical ailments in general hospitals was universally recognized; it was even more important in the case of those who had suffered from mental disorders that opportunity should be afforded for convalescence to be soundly confirmed and established in such homes as the Association provided for those needing them. Such a strengthening of the mental and physical powers before engaging in the ordinary duties and struggles of life was indeed the best safeguard against relapse, and the wise and kindly supervision of cases "discharged recovered" (in the technical sense) was, more often than not, quite essential to the permanence of the cure effected by asylum treatment.

A cordial vote of thanks to the Chairman, to Dr. Savage, and to Dr. Blandford was accorded, upon the motion of Dr. Pasmore, and the proceedings terminated. The offices of the Association are at Church House, Dean's Yard, Westminster.

OBITUARY.

REGINALD HARRISON, F.R.C.S.ENG.,

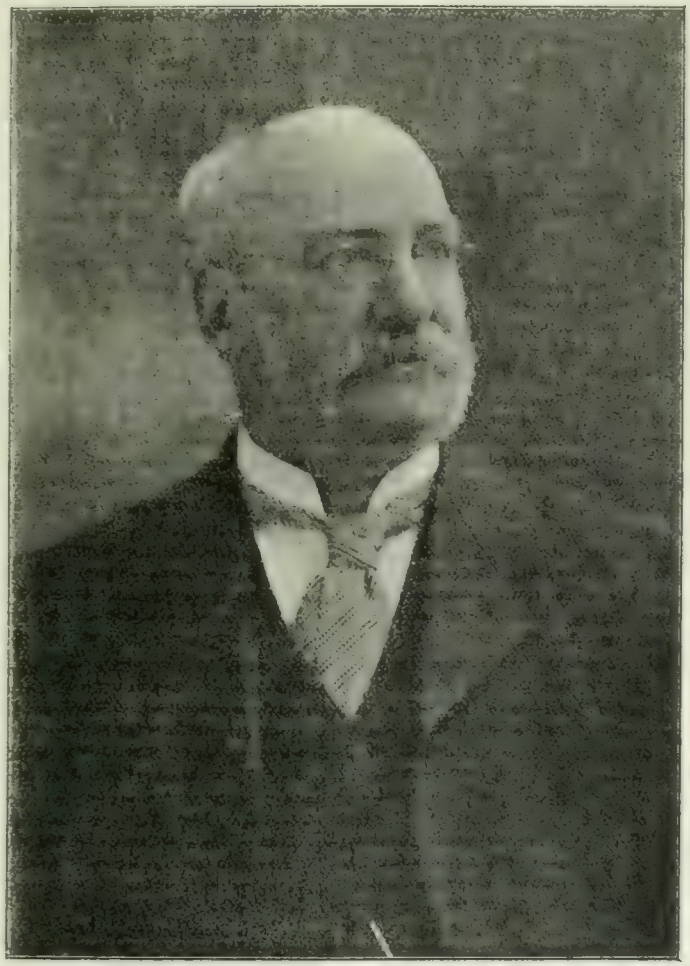
FORMERLY SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

THE death of Mr. Reginald Harrison has come as a great shock to his many friends, and not least to those who were his colleagues in Liverpool, by whom he was beloved for his amiable character and social charm, no less than he was valued and admired for his skill as a surgeon and his ability as an original worker and an inspiring teacher.

Mr. Harrison, who was in his 70th year, was attacked by influenza on February 20th; this became complicated by pneumonia, and the immediate cause of his death, which took place on February 28th, was heart failure.

Reginald Harrison was the eldest son of the Rev. Thomas Harrison, Vicar of Stafford, and was educated at Rossall School and St. Bartholomew's Hospital. He took the diplomas of M.R.C.S.Eng. and L.S.A. in 1859, and soon afterwards was appointed one of the House-Surgeons to the Northern Hospital, Liverpool. After a short time he was asked by the Committee of the Royal Infirmary to become Senior House-Surgeon to that institution. This post carried with it that of Medical Officer to the Lunatic Asylum, and he continued to hold it for two years. Even at this early period he began publishing cases in the medical journals. In 1862 he accepted the post of Surgeon to the Cyfarthfa Ironworks, Merthyr Tydfil, but he soon relinquished it, and returning to Liverpool he began private practice at 18, Maryland Street in 1864. The same year he was appointed Surgeon to the Bluecoat Hospital School, and he commenced his long connexion with the Royal Infirmary School of Medicine in the capacity of Demonstrator of Anatomy. The next year he became Registrar and Lecturer on Descriptive and Surgical Anatomy. In 1866 he obtained the Fellowship of the Royal College of Surgeons by examination; he resigned his connexion with the Bluecoat Hospital, and was appointed junior surgeon to the Northern Hospital. About this time he held the important position of private assistant to Mr. Edward Bickersteth, who then and for many years after enjoyed a unique reputation as a surgeon in Liverpool and the country around. In 1867 he became full Surgeon to the Northern Hospital, and was appointed to the then important and remunerative position of Quarantine Officer to the Port. In 1868 he removed to 51, Rodney Street, where he lived for six years. The same year he was appointed Assistant Surgeon to the Royal Infirmary, being the first to hold that office, and resigned his position at the Northern Hospital. About this time he began to lay the foundation of his great reputation as a specialist on the urinary and genital organs, as may be seen from the titles of his published contributions. In 1872 he became Lecturer on the Principles and Practice of Surgery in the school.

In the development of the School of Medicine in Liverpool, now the Medical Faculty of the University, Mr. Reginald Harrison bore an active part. Through the exertions mainly of the late Sir William Banks, Dr. Caton, and Mr. Reginald Harrison himself, the number of students, which in 1864 was only 15, had risen in 1874 to 103. Various minor extensions were made at different times, but it was in 1871 that a committee was appointed to prepare plans for the extension of the school; a fund was established, of which Dr. A. T. H. Waters was treasurer and Mr. Reginald Harrison secretary. The judicious expenditure of the money then obtained rendered it possible to double the size of the school buildings.



Reginald Harrison.

In 1874 Mr. Harrison was promoted to be full Surgeon to the Royal Infirmary, and he held the office until he removed to London in 1889. In 1880 he was made President of the Liverpool Medical Institution, and during his term of office he strongly advocated the introduction of horse ambulances into the city. In 1878 he published a volume of Clinical Lectures on stricture of the urethra, of which the second edition appeared in 1880 under the more comprehensive title of *Surgical Disorders of the Urinary Organs*—a work which placed its author in the forefront of living urinary surgeons, and which ran through four editions.

Mr. Harrison was appointed Surgeon to St. Peter's Hospital for Stone and Other Urinary Diseases in October, 1889, and settled in London, devoting himself more particularly to the practice of the speciality with which his name had become associated. In 1891 he was appointed Hunterian Professor of Surgery and Pathology at the Royal College of Surgeons of England, and delivered a course of lectures on stone in the bladder, enlarged prostate, and urethral stricture. In April, 1905, he ceased active work at St. Peter's Hospital, and was appointed Consulting Surgeon.

In 1886 Mr. Harrison was elected a member of the Council of the Royal College of Surgeons, the other candidates chosen on that occasion being Mr. Lund (Manchester), Mr. Berkeley Hill, and Mr. S. W. Sibley (London), all of whom predeceased Mr. Harrison. At the expiration of his term of office in 1894 he was re-elected, in company with Mr. Howard Marsh and Mr. James Hardie; in 1904, when his second term of office expired, Mr. Harrison did not seek re-election. In 1903 Mr. Harrison acted as the official representative of the Royal College of Surgeons of England for the inspection of the School of Medicine in Cairo; he had during earlier visits to Egypt become much interested in the school, and it was no doubt largely owing to his report and advocacy that the classes at the school were recognized by the College. Travel was one of his chief recreations, and wherever

he went he made friends—not least among surgeons in the United States, to which country he made several visits. He was an Honorary Fellow of the American Surgical Association and of the American Urological Association. Mr. Harrison was for many years and until the time of his death a member of the British Medical Association. He was Secretary of the Section of Surgery at the annual meeting in Norwich in 1874, and Vice-President of that Section at the annual meeting in Worcester in 1882. In 1883, when the Association met in Liverpool, he delivered the Address in Surgery, taking for his subject "Some Recent Advances in the Surgery of the Urinary Organs." In 1895, when the annual meeting was held in London, he was again Vice-President of the Section of Surgery, and at the meeting in Cheltenham in 1901 he was President of that Section. He was President of the Medical Society of London in 1896, and was elected a Vice-President of the Royal Medical and Chirurgical Society in 1898. Mr. Harrison was aKnight of Grace of the Order of St. John of Jerusalem, and held the decoration of the Medjidieh, first class.

Early in 1904 Mr. Reginald Harrison, who had been concerned in the establishment of the excellent street ambulance of Liverpool, and had studied the systems at work in many of the cities of the United States, became President of the Metropolitan Street Ambulance Association, formed amongst medical men for the purpose of strenuously advocating the establishment of an efficient street ambulance organization, equipped with rapid transit vehicles and all necessary appliances for dealing with street casualties in London. He took up the work of this Association in such a whole-hearted manner that within three months of its formation it numbered among its members more than a thousand of the most representative medical men in the metropolis. In May, 1904, he presided at the general meeting of the Ambulance Association and delivered a very able address. A few days later he headed an important deputation to the London County Council, and in the following month to the Police Committee of the Corporation of the City of London. As the result of these deputations, special committees were formed by each of these bodies to enquire into the ambulance question. Last year Mr. Harrison gave valuable evidence before the Departmental Committee appointed by the Government to inquire into the ambulance provision for London, and assisted that Committee in many other ways. Mr. Harrison, who remained President of the Metropolitan Street Ambulance Association up to the time of his death, never lost an opportunity of forwarding its objects. He worked for the cause up to the very last, and gave large donations to the funds of the Association.

Mr. Harrison frequently visited Liverpool after he went to reside in London, especially on occasions of interest in connexion with the Royal Infirmary or the Medical School. He was invited by the University to deliver the first Mitchell Banks Memorial Lecture, his selection for the office being suggested as a recognition of his long association in work and in friendship with the distinguished surgeon in whose honour the lectureship was founded.

Mr. Harrison married the daughter of the late Mr. J. Baron, of Liverpool, and leaves three children—one son who is at the Bar, and two daughters, one of whom is the wife of Captain Nott Bower, Commissioner of Police for the City of London.

The funeral took place on March 2nd at Highgate Cemetery, after a memorial service at St. Paul's, Portman Square, which was attended by a large number of Mr. Harrison's old friends and fellow workers.

We are indebted to Dr. CATON, so long a fellow-worker with Mr. Harrison and now Lord Mayor of Liverpool, for the following note:

The death of Mr. Reginald Harrison has caused the deepest regret, not only among the members of his own profession in Liverpool, but among the large number of his old patients and friends in the City and in the surrounding district. Mr. Harrison's brightness, cheeriness, and his great ability caused him to be highly valued in Liverpool by his large circle of friends, consequently his departure from our City some years ago was greatly regretted both by his professional and his private friends. His great energy was of especial value in Liverpool both in connexion with the several hospitals in which he did such good work, and also in regard to the organization of the School of Medicine, which he undertook at a time when the school was at a very low point, and when, indeed, many of its supporters were of opinion that it was scarcely worth while to maintain it any longer, at that time. Mr. Harrison's zeal and energy were successfully employed in choosing new recruits to fill the various lectureships, and under his direction the school rapidly rose in efficiency and in numbers. He, like others at the time, was actuated by the hope that the Liverpool School might form the nucleus from which a college and even a University might arise. Great Britain owes to Mr. Reginald Harrison the introduction of the hospital ambulance system. He had observed the advantages of the ambulance system in America, and he introduced it into Liverpool in connexion with the Northern Hospital. The system, as everyone knows, has now extended over a large part of Europe. In connexion with the Liverpool Medical Institution, of which Mr. Harrison was President, he did a very large amount of useful work. He was a most earnest and enthusiastic surgeon. In his earlier years he devoted himself to general surgery, and latterly he specialized in that department with which his name is more particularly associated. As a teacher in connexion with the Royal Infirmary and University College, his services were very highly appreciated by his students. Few men, in fact, were more warmly valued by

those whom he taught than was Mr. Reginald Harrison. His visits to Liverpool were greatly valued by his friends here, and his loss will be felt very deeply by them as well as by his friends in London.

Mr. John Pardoe, F.R.C.S., who was Mr. Harrison's Private Assistant, and later his Assistant Surgeon at St. Peter's Hospital, writes: Reginald Harrison's death at the end of a tragically short illness will be felt as a deep loss by his large circle of friends, among whom may be mentioned all his patients, for to be his patient was to be his friend. Perhaps his most outstanding characteristic was his unfailing geniality and optimism, and this endeared him to his patients in a degree which is not commonly seen. I never heard from him an unkind word or an uncharitable thought of one of his professional brethren, whilst his sanity of judgement and ability to see both sides of a case were often of inestimable value to his younger colleagues, to whom he was always ready to give his advice and help. In the department of surgery to which he restricted himself in his later years, but in which he had been interested from his earliest practice, he gained a name which is honoured throughout the world, and in his association with his Continental and American colleagues he, as usual, made numbers of firm friends who will deplore his loss. During the last two years Mr. Harrison had to some extent withdrawn from professional work, but his mental and physical activity were practically unimpaired till within a few days of the end. At the same time it was no secret from his friends that he had determined entirely to withdraw from work during the present year, and it should perhaps be some consolation to them that he has been taken from them whilst still in the enjoyment of life, for to such a character retirement would have had little to offer. He had often expressed that feeling and desire, and his last words to the writer on the day of his death, "I have had a very good time," cannot be said by every one, and may be envied by all when their turn comes to depart.

We regret to have to record the death, on January 26th, of Henry Frederick Marley, aged 76 years, at Mellingey, St. Issey, Cornwall. Dr. Marley was the last surviving son of the late Miles Marley, M.D., F.R.C.S., of Cork Street, Burlington Gardens, W., and after studying at the Middlesex Hospital and obtaining the Diplomas of M.R.C.S. and L.S.A., in 1853, settled at Padstow, Cornwall, where he continued in the active pursuit of his profession for close on half a century; in 1902 an attack of hemiplegia compelled him to retire. Dr. Marley was in his day one of the most popular, well known, and respected of the general practitioners in Cornwall, and his practice, which extended over a very wide area, was his one absorbing thought throughout his whole life. He became L.R.C.P. in 1869 and was a member of the British Medical Association. He was a skilful surgeon, well up in all branches of the profession, and held in the greatest respect by all with whom he came in contact, not only for his kind heart and genial manner but also for his ready help and keen sympathy for all who needed it. By his death the poor have lost a kind any sympathetic friend, and his name will long be remembered and revered amongst those throughout the district where he long laboured.

Brigade-Surgeon Thomas Rawlings Mould, M.D., Army Medical Service, retired, died at Boscombe on February 22nd. He was a son of the late General Mould, C.B., Royal Engineers, and entered the Army Medical Department as Assistant Surgeon, May 31st, 1857. He became Surgeon in 1871, and subsequently Surgeon-Major. He was given the rank of Honorary Brigade-Surgeon on retirement in 1880.

The Royal Mail Steam Packet Company (18, Moorgate Street, E.C.) publishes a pamphlet giving particulars of the dates of sailing and return of steamers of that line, which will enable tourists to spend the Easter holidays in Spain or Portugal. One of their boats sails on Good Friday, April 17th, another on April 21st; the return journey in either case may be completed by about May 3rd. A return ticket is issued at a reduced fare of £10 first saloon.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

FOREST asks for information as to the value of diphtheria antitoxin administered by the mouth.

APPLICATION OF THE TUBERCULIN TEST TO COWS.

S. W. writes: Will any one of your readers give me detailed instructions as to the method of applying the tuberculin test to milking cows, or inform me where such information is obtainable? I have ten or a dozen milking cows, and if the statement that one in three milch cows in this country suffers from tuberculosis in some form be true, surely it is incumbent on any owner of milking cows to ascertain whether he is using or selling tuberculous milk?

LEUCOCYTOSIS IN OTITIS.

H. W. S asks for references to literature (in English) which gives in detail the results of observations on the leucocytosis of suppurative disease of the middle ear. He can find only one paper, that by Dr. Green in the *New York Medical Record*, January, 1899.

*** Very little has appeared in detail on this subject in the English literature. In the *Zeitschrift für Ohrenheilkunde*, 1903, Bd. 45, page 161, there is a paper by Dr. Suckstorff, of Rostock, on the leucocyte count in inflammatory diseases of the ear and of the temporal bone as well as in the intracranial complications of the same. This paper was published in an abridged form in the *Archives of Otology*, vol. 35, No. 2. The paper is based upon the examination of the following cases: Seventeen cases of serous otitis media, the leucocytes were practically normal in number, in infants and 9,300 in adults. Eight cases of acute purulent otitis media, four under 10 years of age, gave an average of 20,150, The others were adults and gave an average of 12,900. In six cases of chronic suppuration of the middle ear, all occurring in adults, the leucocytes were 10,700 in number. The following is the result of Suckstorff's investigations summarized in tabular form:

Nature of the Disease.	Patients up to 10 Years of Age.	Patients over 10 Years of Age.
Otitis media serosa	13,300	9,300
Otitis media purulenta acuta	20,150	12,900
Otitis media purulenta chronica	—	10,700
Mastoiditis without intracranial complication	16,400	12,740
Mastoiditis with intracranial complication ...	17,000	16,450

Subsidized Holidays.

Salutaris asks: Are there any means (facilities) provided by the British Medical Association or other branches of medical combination for enabling a medical practitioner to get a change to the seaside or other health resort at home, when his (or her) income will not permit any lengthened stay, say a fortnight or three weeks, when a holiday is much required for a rest, say once a year at least? A fund for this purpose would be of great benefit to the profession and might insure better attention to patients afterwards, because if the body is well the mind is more likely to be clear (*mens sana*, etc.).

Income Tax.

Fibula bought a medical practice in 1907, with a partnership introduction which commenced on July 15th and terminated on November 15th. He asks what proportion of the income tax on the profits of the practice should be borne by him.

*** If our correspondent took half the profits of the period from July 15th to November 15th, 1907, and the whole of the profits from the latter date, he should pay half the tax relating to the first period, and the whole of the tax payable for the period from November 15th, 1907, to April 5th, 1908. The profits earned by him, and not merely the cash received by him, form the basis of his liability. No doubt his predecessor will be for some time receiving payment of fees earned before he retired from practice; but as income tax is assessed on gross earnings, less expenses and bad debts, he has already borne the tax on the debts which he is now collecting.

ANSWERS.

Fibrositis would recommend, from happy personal experience, "Metropole" to try a diet from which meat, alcohol, tea, and coffee are excluded before banishing himself from England.

R. W.—Our correspondent will find particulars of the working of the Riva-Rocci instrument in *Clinical Study of Blood Pressure*, by T. C. Janeway. (London and New York: Appleton and Co. 1904. 14s.)

Droitwich Baths.

T. C. S. writes, in answer to "J. A.": I can say that a few weeks ago I stayed at the Brine Baths Hotel, Droitwich, for an inspection of the baths and a trial of them. From the cases I saw there, I should say that the disorders to which he refers are just those most likely to be benefited. I spoke to the proprietor of the hotel about the necessity of arranging special diets for people taking the baths, so that, on the instruction of the medical attendant, the patient could be especially furnished (at no extra cost) with the diet best suited to his condition. There are at Droitwich very good bath attendants and masseurs, and there need be no apprehension as to taedium vitae, for the surrounding country is exceedingly picturesque and interesting, and the expenses of the treatment are moderate.

Nasal Pustules.

Mr. Alexander Francis, M.B. (London, W.), writes in reply to R. N.'s query (British Medical Journal, February 22nd): As preventive measures avoid pulling out the hairs at the orifice of the nostrils, and occasionally smear over the part with a little moistened sodii bicarb. on the tip of the finger. On any sign of a pustule forming the administration of yeast, or, better still, furonculin (dried yeast powder) or ceridin pills (yeast fat), will almost certainly put an end to the trouble at once.

The Prevention of Tuberculosis.

Dr. T. M. Allison (Newcastle-on-Tyne) writes: With regard to Dr. Gunn's suggestion and Dr. Leighton's advocacy of breeding cattle from immune parents, may I quote (from a paper read on March 6th, 1902, and reprinted in *Health in Infancy*, p. 12) this extract? "I would like to suggest that milk cows should be bred only from tested non-tuberculous parents, and should all be brought up naturally—that is, with milk warm from the cow—to ensure resistance of constitution." To this I would add an open air life and airy byres.

Fleas.

Dr. Alex. Lundie (Dalmuir) sends the following note about fleas: As a student I habitually used an extract of Keating's powder, the pollen of pyrethrum flowers or the powdered stem, in chloroform, so strong as to have a dark olive-green colour even in a thin layer against a white background. Chloroform is the pleasantest solvent, although there are many others. I sprayed the lower end of the trousers, the cuffs of the sleeves, and the collar of the coat with this, and had great immunity thereby. More recently I used to strip on coming home, and put all clothes into a trunk, sprinkle them freely with 40 per cent. formalin, and leave them over night. This is successful too. For catching fleas in bed nothing but chloroform is practicable. Carbon disulphide is probably the most quickly fatal, and I used to use it, but it requires to be constantly shaken up with pure mercury to keep its smell pleasant, or prevent it becoming unpleasant; and, moreover, it is highly inflammable. Finally, I had to give up visiting flea houses, as, apart from the worry, which was not good for the soul, I found I was never paid by the people. For the formication of a flea-bite I know absolutely nothing so prompt and permanent in effect as strong ammonia applied on a small swab for half a minute.

LETTERS, NOTES, Etc.

Gall Stones.

Dr. Hans Kehr, of Halberstadt, who has been appointed to make a report on the surgery of gall stones at the second International Congress of Surgery, to be held in Brussels in September next, asks for the assistance of surgeons in this country in collecting statistics showing the number of cases and deaths, distinguishing males and females, classified under the following three heads: (I) Pure stones; (II) complicated benign and curable cases; (III) complicated malignant and incurable cases. In Section II he would include complicated operations for appendicitis, pancreatitis, liver echinococcus, pyloric ulcer, etc., and in Section III operations for carcinoma, septic cholangitis, hepatic abscess, and cholaemia. He asks only for the statistics for the five years 1903–7. He desires to be informed of the respondent's attitude with regard to the operative method to be selected, whether cystendysis, cystotomy, or cystectomy, whether choledochotomy with suture or hepatic drainage, and also for views on the early operation recommended by Riedel on any true recurrences. Dr. Kehr has a printed form, which we understand he will forward to any surgeon interested.

Precautions in Dispensing Poisonous Liniments to Hospital Patients.

Mr. J. A. Thomas, M.P.S. (Cheltenham) writes: A distressing case of poisoning by misadventure has recently come under my observation in which a hospital patient, 76 years of age, took some aconite, belladonna, and chloroform liniment in mistake for a dose of mixture, with fatal results, in spite of the fact that the liniment was dispensed in a fluted poison bottle distinctly labelled "*Poison, etc., external use only.*" This very forcibly impresses upon me the necessity of safeguarding the public as far as possible against such mistakes by a further precaution—that is, using a metal sprinkler instead of an ordinary cork for such bottles—which method would serve two useful purposes. In the first place, it cannot be removed from the bottle without attracting the attention of children or persons who cannot read, or in the case of a person under the influence of drink or distracted with pain; and in the second place, it would ensure economy in using the liniment, which is a distinct consideration for those engaged in hospital dispensing; and although many suggestions have been made from time to time to make poison bottles more distinctive, none appears to me so practical as using a sprinkler instead of an ordinary cork. Some years ago a similar fatality occurred with an out-patient of St. Thomas's Hospital, but in that instance no precaution was taken, the belladonna liniment being dispensed in an ordinary 8-oz. mixture bottle.

Churchill's "Medical Directory."

Dr. J. J. Hemming (Margate) writes: In the autumn of last year I intended to order a copy of the *Medical Directory*, and thought I had filled up the form accordingly. At the time I made, at any rate, a note of the date by which I must make payment at the subscriber's price. The work not coming to hand, I wrote on January 3rd—nearly a month before the final time for payment—and received in reply a curt note proving I did not order it, but saying I could have a copy of the work for 14s. 6d., full price. I have subscribed for years, and this is how I am treated for a mere slip. The *Medical Directory* may be a useful publication; it is without doubt a very valuable one for the proprietors, and as usual the medical profession is exploited for this result. The proprietors bring pressure to bear to make us fill up their form by means of the asterisk, and actually make us pay the postage, and in addition we have to pay heavily for a copy. Why not buy the *Medical Register*: it is cheaper, it is an official work, and a more dignified one than the *Directory*. I advise the profession to deserve the asterisk in future or until the proprietors behave differently.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A Clinical Lecture
ON THE
TREATMENT OF PNEUMONIA.

DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL,
BY SAMUEL WEST, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I shall take for my lecture to-day a subject which is of great importance at the present moment—namely, the treatment of pneumonia—because there is a great deal of that disease about in connexion with the outbreak of influenza, and because we are approaching the time of year in which it is usually prevalent even when influenza is not here, namely, the spring months of the year.

What do I mean exactly when I say pneumonia?—an acute inflammation of the lung, of course. But we have to go further than that; and now that we study diseases from the bacteriological point of view, we have to consider what are the bacteriological causes. Many different inflammations may be produced by many different bacteria. And so it is in regard to the lung. Constantly mistakes are being made in practice by diagnosing as pneumonia a case which turns out to be tubercle. Tuberculous pneumonia may begin with very acute symptoms, just like some other acute inflammations of the lung. The same is true of typhoid fever; plague is another instance, and influenza is another. Another very good instance is anthrax, where you find the specific organism of that disease and not the pneumococcus.

We shall deal to-day with what is ordinarily called pneumonia, that is, the disease produced by the pneumococcus, known as pneumococcal pneumonia. I am not sure that we are correct in assuming that there is only one pneumococcus, because I shall have to say directly that the serum obtained from one strain of pneumococcus does not seem to have the effect we expect upon another strain of pneumococcus. So it is possible there are different kinds even of pneumonia. That is a point we need not go into in detail now. Another fact which it is well to remember is this, that a germ disease is not necessarily an infective disease, for we are rather in the habit of regarding all bacterial diseases as necessarily infective—of course we must catch these diseases somehow, and we mean by an infective disease one which is transmitted from one person to another. We have no evidence that such infection occurs in pneumonia. It hardly ever happens that a patient lying in a ward with pneumonia gives it to another patient next to him or in his immediate vicinity. There are curious cases in which pneumonia develops in so-called epidemics, and there are instances in which several cases of the disease have occurred in a particular house. But that is another point. Many of those cases were recorded before we understood the bacteriology of pneumonia, and it is possible that they were not really pneumococcal pneumonia at all. However, we pass that by. Another important point is that the pneumococcus is extremely easily destroyed. It is very difficult to cultivate and grow it properly, even when you try. It will not live for more than a few hours even in the sputum, where it is kept warm and moist, and has various conditions favourable to it. If it becomes dry it dies almost at once. That is another reason why we are justified in regarding pneumonia as not very infective, as we have distinct clinical evidence that it is not.

With regard to treatment, in all germ diseases we have several things to consider. First, what can we do to kill the germ and so prevent its spread? And if we cannot do that, what can we do to neutralize the poisons which are produced? And if we cannot do either of those things, how can we successfully treat the patient? There is no disease in which the treatment of the patient is more important than in pneumonia. We know nothing that will kill the germ inside the body, and, as I have already indicated, we do not know a serum or vaccine which is effective against the pneumococcus, and so we cannot do very much in that way. Is there anything we can do by way of preventing a patient from getting the disease? There is one marked peculiarity which it is well to bear in mind: that a patient who has had pneumonia once is more liable to it again, just as in the case of influenza. There are people one knows who have had pneumonia several times, just as many people have had influenza a number of times. A former member of this staff had several attacks of pneumonia. I saw him in one or two, and he died in his seventh attack of the disease, when he was an old man. I can give several instances of a third and fourth attack in my own experience.

Pneumonia is very often a secondary or consecutive disease, and one of the diseases which most commonly occurs with it is measles. We have no proof that the measles germ is responsible in those cases, because we do not know the measles germ yet. But we have plenty of proof that in the majority of cases of pneumonia after measles it is the pneumococcus. You must remember that the pneumococcus is very widely prevalent, and it is found frequently in the mouth, yet very many people who have this pneumococcus about them never get pneumonia; but when people are prone to pneumonia—that is the point—there is more danger. You have always to bear in mind, in dealing with germ diseases, first the germ, and secondly the soil in which it grows. Measles and some other diseases, like influenza, lower the resistance of the body to those germs very materially. So, in the case of measles, pneumonia is one of the conditions which you have to watch for.

A number of bacteria are found normally in the mouth, and the pneumococcus is frequently present among them, and therefore it is quite clear that careful toilet of the mouth and disinfection should be carried out, and this will go a long way towards diminishing the risks of pneumonia following measles. I believe that if more attention were paid to the mouth and throat and nose in all these cases of septic disease we should have very much fewer secondary complications than are met with at present. That is a little point of practice, but an important one, which you should bear in mind. It is, of course, good nursing to keep the mouth clean, but it is good doctoring, too.

The next division of treatment is what one may call the antibacterial or antitoxic. Can we do anything to kill the germ? I have already told you, No. We know nothing which will cut the disease short when it has started in a patient. Nor is there any hope in the use of antitoxins. The only serum which seems effective is that grown from the patient's own bacilli. This is the result of experiments on animals, and it takes fourteen days to develop anything in the nature of a vaccine which is required; and, as pneumonia lasts about a week, by the time anything has been grown the patient is either dead or well, and the preparation of a serum for his case does not interest him at all. That is a reason why it is very difficult to get a serum which is efficacious, and, as a matter of fact, there is no serum treatment for it.

We have, therefore, now to turn to the patient himself. That treatment is called symptomatic. Symptomatic treatment is often spoken of disparagingly; but, after all, if you cannot treat the disease you may as well treat the patient, and, if you can save your patient, it does not matter whether you have been treating the disease or not. There is no disease in which the careful treating and careful watching of the patient, the careful nursing and doctoring of him, will show better results than in pneumonia. That is a thing which you should never forget. No matter what may be the current theories of the disease, save your patient, and if you stick to the patient you will get him well. If you do not stick to the patient he is likely to die, no matter what you do, because I do not know any disease in which the changes are so rapid as in pneumonia. If I see a patient who has a devoted doctor I come away happy, but if I have a man who says, "I will call and see the patient to-morrow," I come away unhappy, because I know that very likely he will lose his patient. I have seen many cases pulled through by the doctor being on the spot ready to act when wanted. A little strychnine, for example, at the right moment will save a patient from going the wrong way; it will decide whether he will take a turn for the better or for the worse.

What is the natural history of the disease? That is often forgotten in the treatment of pneumonia. Because you want to be sure that by your treatment you have improved or modified the natural course of the disease. If the patient is going to get well anyhow, it is only a question of how far you can help him, and you will not then speak so much of treatment as if you felt you

had to do something in order to get him well. If you have a healthy young person to deal with, an ordinary robust man or woman, who has not had any great strain or illness before, but who gets pneumonia, the chances are that he will get well; and if he is properly looked after, so that he is not made worse by improper and careless treatment—because you can so easily make a patient worse in pneumonia—and if the case runs an ordinary natural course, in the majority of instances the patient will get well. If there have been no unusual symptoms, there has not been very much to treat. So what shall we do in a general sort of way for a patient who has nothing very special in his case? First of all, of course the patient must be kept in bed; and, indeed, there is no inclination or power to get up. You need not cover him up too much with clothes. His temperature is at 103° or 104°, and that is what we hope for. It is desirable that the relation which exists between the fever and the other symptoms should be something of this kind: Temperature 103°, pulse 120, respirations 36 to 40. That is what you may call normal for pneumonia in a healthy adult, and it is well that that relationship should be preserved. If the temperature be 101° it is a little unfavourable; and if the temperature be 106° of course it is serious. A pulse-rate of 140 or one of 60 are neither of them good. A respiration-rate of 20, though all right for health, is bad in pneumonia—it ought to be 40; 60 is a bad respiration-rate for pneumonia, except in children. But I need not go into those points.

If the patient has a temperature of 103° nothing need be done to reduce it. Fever used to be regarded as the cause of all the other symptoms. We know now that fever in many ailments is the way in which Nature responds to the attack of the disease, and, other things being equal, it is good that the temperature should be high, for the pneumococcus cannot live in a temperature of 104° for long. The patient should not be too warmly covered. The temperature of the room should be 60°, or something like that. If you go into a room where there is a patient with pneumonia, and the people are not instructed and not wise, you may often find the temperature of the room about 70°, the windows closed, a big fire in the grate, a kettle of water on the fire, and several blankets on the patient's bed. That is their idea of treating the fever, making the patient as hot and uncomfortable as can be to avoid the risk of a chill. As a matter of fact, nothing does the patient so much good as cool, fresh air, so long as he is not in a draught. Cover him over lightly, using one blanket, perhaps, to prevent him from getting a chill.

Next, with regard to diet, what will you give a patient who has pneumonia but no particular complications? You will not give any solid food, because the tongue is furred, but give milk and put the patient upon a definite diet. That is a point which is often forgotten in these cases. I saw a patient who had pneumonia very badly, and I asked how much milk he was having. The reply was, "Oh, at least four or five quarts, and he is doing very well indeed." And I said, "How does he take it?" And the reply was, "We give him as much as he can take whenever he asks for it." You ought to write out your diet: Let the patient take five ounces of milk or so every two hours. You can give three separate pints of milk with an egg beaten up in it, so that he will receive three pints of milk and three eggs, and that is a splendid diet for anybody; it is too much if anything for the ordinary pneumonia patient. If he is thirsty in between these feeds do not give him anything but water, or iced water if you like, or soda water, or whatever of that kind he may fancy. Do not be afraid of water. There is an old and irrational prejudice against water in fever. You can give citric acid, or lemon juice and water, or imperial drink (tartrate of potash and lemon juice). Do not give too much lemon juice, because it may coagulate milk which the patient is taking, and that will not help digestion. Such a drink, if not given in excess, will also help the kidneys a little.

Then there is the important question of stimulants. An ordinary case of pneumonia requires no stimulants at all. We will come to the class of case requiring stimulants soon.

A little purge, consisting of castor-oil, or 2 or 3 grains of calomel for an adult, would be very good to start with. This will clear the bowels and will do no harm.

Now, supposing the illness has run its acute course, and convalescence has commenced. Well, do not be in a hurry to get the patient up. Such a patient requires a good deal of care during convalescence. Even a straightforward case you should examine every other day or so, so as to ensure your not being caught napping, because you must remember that pus in the pleura or in the pericardium may develop with very little sign, and with no elevation of temperature. It is not very common for this to occur after a straightforward case, but it does sometimes, and, unless you are very careful, you may be caught. Even if everything seems right do not be in a hurry to allow the patient up, because, remember, that in pneumonia a good deal of stress falls on the heart. You may map out the outline of the heart and find that it is dilated, and that, of course, will make you more careful. The second thing to remember is that the illness has had a very serious effect on the lung—not only the part particularly attacked by the disease, which, of course, is profoundly affected, but also parts which have not been very much inflamed, so you will take great care of the patient lest he catches cold. In many cases bronchitis develops after pneumonia because the patient has not been taken sufficient care of, and this condition may degenerate into chronic attacks which may last a long time, and give a great deal of trouble afterwards. There is a general nutritive change in the lung, and I could mention cases in which emphysema dates from an attack of pneumonia. Examination was previously made and no emphysema existed, but it was found present afterwards. Remember, then, this profound nutritive change in the lung when you are dealing with the stage of convalescence.

As to medicine for such a case as I have described, a little strychnine and nux vomica will help the digestion, and will be a good tonic to use, and that is practically all you will require in the way of drugs.

Now let me mention two or three special symptoms which will call for treatment. The thing which the patients complain of most is "stitch" in the side. It is a very painful symptom and lasts a long time, perhaps for the first two or three days; it disturbs the rest and is distressing in every way. You can put on a poultice for this. But poultices are not very good things, because they are heavy, and if patients are breathing hard and with difficulty they have to lift the poultice every time a breath is taken. But poultices do good sometimes in this condition. You can, instead, put on a spongiopiline jacket and sprinkle it well with spirits of camphor or turpentine. But, as a rule, when the pain is bad these remedies do no good at all. You can give patients morphine for it, but it is undesirable for this purpose and does not often do much good. You want something else in these cases, and that is generally obtained by means of a few leeches. Three or four leeches put on to the painful spot will stop the pain and it will not come back again. That is a very curious fact, and the explanation is difficult, but we have not time to go into that now. The pain does not come back, in spite of the pleurisy being still there. Sometimes there is hyperaesthesia; tincture of aconite brushed over the spot will often stop that, and it is a very good remedy.

Then, again, with regard to temperature. When does the temperature require treatment, and what shall we do for it? If the temperature goes up to 105°, 106°, or 107°—and we may have patients with pneumonia running up to those figures—it requires treatment. The temperature which is fairly high and only drops one degree or so is a worse form of temperature than one which is a little higher but drops further. But if the temperature is as high as 105° or 106° something must be done for it. What shall we do? Of course, if it went up as high as 107° or 108°, which it seldom does in pneumonia, you would have to put the patient into a cold bath and keep him there until the temperature went down. But remember that a pneumonia patient is about as exhausted as he can be, and nothing could add to that exhaustion so much as, or more than, putting him into a cold bath. In a little child a cold bath would not do much harm, and it would be easy to lift it in and out, but with an adult it is a different matter, and of course he could not be lifted out of bed and into it again with the same facility as a child. How can you deal with the adult with high temperature in a more convenient way? I think the best way is by sponging. You can sponge one arm first and then the other, and then one leg and then the other, and in this way you can cover the whole of the

body, and the temperature will probably be brought down considerably without fatigue. Or you can pack the patient, but that is a greater undertaking. Supposing the temperature persists at 105°, we can give the patient an "air bath." It is given in this way: the patient is kept in bed, and a frame like a tent is put over the bed, and the body of the patient is only lightly covered, perhaps a sheet thrown over him. He is then surrounded by fairly cold air, and if necessary bags of ice can be hung within the frame so as to reduce the temperature of the air still further. This is an excellent way of reducing temperature. You do not so often see it employed in cases of pneumonia as in cases of typhoid fever.

Now what about the use of those drugs which are called antipyretics—that is to say, medicines whose function is to pull the temperature down? Antipyretics are almost given up nowadays, and for this reason: that when they do lower the temperature—and they do not always accomplish this—the effect is only transient. And you cannot repeat the drug, because the great point about these medicines is that they are depressant in their action, they are cardiac depressants. Antipyrin, antifebrin, phenacetin, are drugs of this kind; alcohol in large quantities has also been given for this, but it is overstimulating to the patient, and the effect is often worse than if nothing at all had been given. You will obtain your desire to lower the temperature much more effectively by cold sponging or by the air bath, and without producing any harmful results.

Now let us come to another point. There are two great dangers in pneumonia. One is the condition of the lungs, and the other, very closely associated with it, the condition of the heart. You cannot do very much for the lungs. One or two things can be done for them, in a way we shall see presently, but we do not know any means of checking the progress of pneumonic consolidation in the lung. For instance, if there is pneumonia in one lobe of a lung, we do not know how to prevent it spreading to another lobe, or all over that lung. People talk about putting blisters and other counter-irritants on the side for such a purpose, but we cannot prove that they have any effect; and remember that violent counter-irritation distresses the patient a good deal, and it may make him worse, and do harm in other ways. Some advocate ice, but it has no advantage, and some drawbacks.

Now with regard to the heart, there is hardly any case of pneumonia in which the heart has not to be considered. The great danger in these cases is cardiac failure. Why is the heart likely to fail in pneumonia? For two or three reasons: First, the patient has high temperature, and temperature alone, if it is very high, say 105°, is very likely to produce degenerative changes in the heart muscle. So temperature has to be considered as a possible cause. The next is that the toxins produced by the pneumococcus apparently have a direct effect on the heart itself. All the fever toxins do produce a parenchymatous cellular degeneration of the granular kind, and we have very distinct evidence as to how a heart is affected in that way. There is another reason, and that is the mechanical interference with the heart's action which the condition of the lung causes. Respiration has to be carried on; the inflamed part of the lung is not any good for the purpose, and the other parts have to do the work, and in order to do that work—and there are extra demands on the lungs when the temperature is raised—the heart has to work harder than otherwise it would. In some of these cases cardiac failure shows itself in failure of the right side of the heart. That side becomes in consequence greatly dilated, and you can percuss it out and prove it, and there is pulsation in the veins accompanied by a dusky colour of the face. Let us consider how you can deal with the last cause—where there is cardiac dilatation and the patient is becoming cyanosed, partly from failure of the right side of the heart and partly from the difficulty in getting the blood through the lungs. This is capable of mechanical relief, and it is the class of case in which great benefit is given by bleeding the patient. Many lives may be saved by a timely venesection. But you must always have clearly in mind what it is you are bleeding the patient for. It is of no use scratching the skin and taking away enough to stain a pocket-handkerchief; you must take away ounces—a pint or even two pints—if you are to do any good by it. If you want to relieve the dilated ventricle you must take away a large quantity of blood quickly, and therefore you will take it from a large vein, generally from the arm in the usual way. Obviously if a patient cannot afford to lose a pint of blood or a couple of pints, you must not think of bleeding him. And remember that the removal of a pint or two of blood leaves the patient weak, and that also has to be taken into consideration. You may save the patient's life for the time by the venesection, and if he has strength to spare he will get well. But if he is weak already there will be every contraindication against the venesection. But many cases have been saved by it. Nowadays patients are not bled often enough in pneumonia; there is a strong prejudice against it in the mind of the public. But in the class of case which we sometimes have here, the big, full-blooded butcher, who has beef and beer on board in any quantity, bleeding gives a good deal of benefit, and it can be done freely. Probably that is the class of case which our ancestors used to bleed regularly in the way of a regular spring cleaning, and it is the class of case which gets into trouble in the early days of an attack of pneumonia. You may save the life of such a patient by bleeding in the early stages of pneumonia. But, as I have said, there are various contraindications, and the matter requires careful consideration.

Now as regards temperature. If the failure of the heart depends on temperature, we can deal with it in the way I have been mentioning. We cannot do very much to counteract the toxins which act on the heart directly, but there are things which we may do, if the heart is very weak. How do we ascertain that? You may map out the area of the heart and conclude there is some dilatation, but the points that we look for are the character of the heart sounds and the character of the pulse. The pulse, of course, I need not describe; you know it is wanting in tone, feeble in its beats, and so on. But before the pulse shows any marked change at all you often find changes in the heart, and that is more important. You ought to investigate both, but the character of the heart sounds is the more important. If you listen to the heart, you will find the first sound is extremely weak, or you may even not be able to hear it at all. When that is found to be the state of the heart, your first indication is for stimulants; it is then that you want alcohol, or ether, or strychnine. We can use other remedies, the more directly cardiac remedies, such as digitalis, strophanthus, and caffeine. Digitalis has this unfortunate characteristic—that it is a cumulative drug. Where the heart is beating rapidly and weakly, you might give digitalis; but if you give full doses of that drug, you may find you have overshot the mark, and the pulse-rate in consequence may become very slow. For this and other reasons you have to be careful with digitalis. Strophanthus is not nearly so reliable. One of the best combinations of drugs, the one which I certainly see most benefit from, is citrate of caffeine with nux vomica. This combination is very good indeed for the asthenic form of pneumonia in which the heart sounds are very feeble.

Another way in which we might attempt to counteract or destroy the toxins is by the use of oxygen. I would say a few words about oxygen in regard to the heart.

There are two reasons why oxygen might be given. First, because patients are getting cyanosed and are not aërating their blood well. That is a very legitimate and proper employment of oxygen. There is another reason, and that is that these toxins which are produced in various conditions apparently are fairly easily oxidized. That is theory, of course; certainly the administration of oxygen is extremely useful in these toxic conditions. These toxins are not necessarily produced by fevers only. You will remember in this connexion diabetic coma and uraemic coma—or, better, diabetic and renal toxaemia; in fevers you may speak of febrile toxaemia—and oxygen does good in all these cases. But the important point is, not to wait until the condition is critical before giving it. Begin early. The great mistake which is made in this connexion is waiting until the patient is practically moribund before you use it. Oxygen has effects in various ways. It makes the patient better and, curiously enough, sends him to sleep. So there is distinct evidence of the inhalation of oxygen being an extremely useful remedy in many of these cases.

Now with regard to the use of expectorants—of course

I can only run over these matters briefly and cannot touch all the points. The patient has something the matter with his lungs, and therefore it is often thought that the first thing to do is to give expectorants. What do we mean by expectorants, and what is their action? We mean either that expectorants assist the patient to cough up the secretions in their tubes—to "loosen" it, as they say—or that the expectorant produces a secretion in the tubes. Of course we do not want to produce any secretion in the tubes in pneumonia, and there is not anything except in the pneumonic parts to bring up. So expectorants are contraindicated, and clinically they are found not to do good.

The patient has a cough. What is the use of that cough to him? It is intended to help him to get rid of the little secretion in his tubes, and therefore it is a thing to encourage and not to stop. And where the cough is not very troublesome you need not worry about it. This raises another question: Shall you give anything like that very favourite remedy, Dover's powder? That contains opium. What will be the effect of giving opium? You check the patient's sensibility and he will not get rid of the stuff out of his tubes. Remember that opium is a drug which must be employed with very great care in pneumonia.

Sleeplessness is another most important symptom to treat in pneumonia. Many patients sleep brokenly, but still they sleep. Other patients cannot close their eyes, they long for sleep but cannot get it, and they lie awake day and night. If you do not procure them sleep somehow, they will die of sheer exhaustion. Another point is, that not only are the patients sometimes sleepless, but they are actually delirious and wild, and are constantly getting out of bed, or trying to. And drinkers get delirium tremens under these circumstances, and if they are allowed, they run all about the room, seeing things. Those patients frequently die. But if there is no delirium tremens, no drink, but an ordinary case of pneumonia with nervous symptoms, in a patient who has been working the brain very actively, in such patients pneumonia takes on the nervous type; they are often found to be unable to obtain sleep, and they become actively delirious. The other day I went to see a gentleman who had had no sleep for at least forty-eight hours, and yet his temperature had fallen and apparently his pneumonia was resolving, or at any rate had come to an end. He was incessantly talking and fidgeting, and trying to get out of bed and jump about. What shall you do for such a case as that? You must get him to sleep, and at once. How shall you do it? You cannot give large doses of chloral, because of the action which that exerts on the heart. It is no good playing with sulphonal and paraldehyde and things of that sort, which may or may not affect him, but will take some hours to do so in any case. It is no good giving potassium bromide, and you cannot give chloroform in such a case, and so it comes to this, can you give a subcutaneous injection of morphine? You must. The only contraindication to giving morphine in any chest complaint is a large amount of secretion in the tubes, because it prevents the desire to cough so as to get rid of it. But in a number of these cases there is nothing obviously wrong in the other parts of the lungs—only in the part which is inflamed—and if one lung is free of disease you may give some opium. But you must be prepared for frights after you have given it. You may give an adult patient one-third of a grain of morphine, and if he does not sleep as a result of that, you may give him another. With that dose of two-thirds of a grain he may go to sleep, and then you find after a time that you cannot awaken him, and you begin to think that you have poisoned him with morphine; but this is not the case. The fact is, you have got him to sleep at last, and he is by that time so exhausted that it is almost impossible to wake him up for a time. So remember it requires careful consideration very often whether you shall give morphine or not, and in many cases the practitioner does not care to give it, and likes to share the responsibility with somebody else, whom he calls in. Yet it is the only thing to do if your patient is likely to die of exhaustion.

But in relation to sleeplessness and delirium, there is one drug which I think I ought to caution you against, because it has been used a good deal, and that is hyoscyamin. My experience of that drug has been unfavourable. You will find it advocated for delirium and it does good in mania and similar mental states, but in my opinion its use is very risky in cases of pneumonia. What you may give to a healthy lunatic with success may quite well be harmful for pneumonia.

But what shall you do for these delirious cases, short of giving morphine? And we do not use morphine as a rule for delirium. There are several things to bear in mind. What is the cause of the delirium? The high temperature is very likely to be the cause, and so we have to consider the various means of reducing temperature. Sometimes if you put cold applications on the patient's head you help him to get to sleep, or you may put the patient's head over the edge of the bed and take a watering-can and give it a shower bath. That will often send him to sleep. Now, some patients do not get markedly delirious until the temperature is practically normal, and that is the delirium of asthenia or exhaustion, and if you give the patient a little alcohol and a little sedative, the delirium will subside. Delirium in convalescence is generally an indication for stimulation of some kind.

Supposing you have your patient convalescent, I would emphasize again what I said earlier in the lecture—during the first ten days examine your patient carefully. As a warning which will be useful, I will give you a case which happened a little while ago. A patient who had had pneumonia in the hospital was perfectly well, as we thought. He sat up in bed to eat his dinner, and fell back dead. Apparently he was quite well at the time he sat up. It was, of course, a great shock to everybody. We found empyema on both sides, and the pericardium full of pus. It would have been impossible for that to have been missed if any examination had been made of the base of his lung, or heart either. I mention that to show how very insidious are some of these suppurations which occur in pneumonia. If we had examined him regularly we must have had our suspicions roused. If we had suspected pus we should have found it, let it out, and possibly saved the patient.

Lastly, let me once more impress upon your mind that when treating a case of pneumonia you are in for a big fight, and that you are most likely to win if you never lose heart, but fight on valiantly to the finish, however desperate the struggle may seem.

The Purbis Oration

ON THE

DIAGNOSIS OF ORGANIC FROM FUNCTIONAL AFFECTIONS OF THE NERVOUS SYSTEM.

Delivered before the West Kent Medico-Chirurgical Society,

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Had I not been sensible of the honour that the invitation to deliver this oration carries with it, a cursory glance at the list of past orators would have sufficed to convince me that I have been paid a high compliment. Although I needed no such reference to the list of previous orators to make me appreciate the honour, I have been unable to prevent myself from pondering over and wondering how it would be possible for me to acquit myself in a manner that would justify your associating my name with those of such distinguished members of our profession, whose orations must have contained a wealth of experience and information far beyond anything that I can possibly pretend to have at my command—fitting memorials of Dr. Purvis, in whose honour we are assembled this evening.

The subject I have chosen may be treated in many different ways, but for the purposes of this address it appears to me that cases in which the problem to be decided is as to whether we are dealing with a case of organic disease of the nervous system, as opposed to one in which the symptoms are due to functional disturbance, fall conveniently into one of four classes:

1. Cases in which the nature of the affection is such that if organic disease exists we may expect to find certain physical signs which are more or less inseparable from the affection.

2. Patients suffering from an affection in which certain physical signs may be determined, but these indicate functional disturbance of the nervous system, and not organic disease.

3. Those in which the affection is such that, although organic, no physical signs, such as those that prove so helpful in the first class, are to be expected, as they do not form a necessary part of the clinical picture of such cases.

4. Others in which the symptoms are due to functional derangements of the nervous system, but in which no special signs can be determined, from the existence of which it can be argued that a functional, as opposed to an organic, affection is to be held responsible for the symptoms.

It will readily be recognized that the cases that belong to the first class and those that belong to the second are far easier to pronounce an opinion on than those which are included in the third and fourth classes, for, instead of being able to rely on the presence or absence of certain well-defined physical signs, in both of these groups of cases the general features of the malady, the behaviour of the patient, and a variety of other factors have to be taken into consideration in making a diagnosis, all of which require special knowledge and experience to guide the medical man and assist him in forming his opinion. In short, any one can be taught that the presence of this or that physical sign means that the condition is organic, while, if certain other physical signs be present, the affection is functional. But when the case does not belong to either of these classes, then the diagnosis can only be made from a thorough knowledge of the general features of the disease which are to be expected if it is organic, as opposed to the absence of certain important details in the symptomatology if functional disturbance of the nervous system is simulating the organic malady, whose features it thus only represents in part. In addition to this, the functional affection that is a mimicry of the real disease may have certain peculiarities of its own which are foreign to the organic malady; or the general behaviour of the patient, whether it be by exaggeration of the symptoms, want of control of the emotions, or otherwise, may reveal the true nature of the condition to the experienced observer.

It thus becomes evident that it must often be very difficult for any but those who are constantly dealing with such cases to form a correct estimate of the patient's condition with sufficient confidence to warrant a grave prognosis on the one hand, or to justify the adoption of rigid measures in treatment on the other. These difficulties in diagnosis must of necessity be the greater the earlier the case comes under observation and the less pronounced are its symptoms.

1. Organic Disease with Physical Signs.

Let me illustrate what I mean when I say that cases included in the first class may be comparatively simple to diagnose, owing to the fact that any one may be taught to recognize that this or that physical sign indicates the existence of organic disease of the nervous system. The student of neurology may be shown how to use the ophthalmoscope, and thus he may learn to recognize the changes in the optic nerves which constitute neuritis or atrophy; and he may be taught that the altered conditions of the optic nerve in either case are sure indications that an organic disease exists, and that under no circumstances could uncomplicated hysteria or neurasthenia produce either condition. Similarly he may be shown how to elicit the knee-jerk, and how to employ reinforcement when it is difficult to obtain any response when the patellar tendon is struck. He can be told that if the knee-jerk is truly absent, he should not permit himself to ascribe this to functional affection of the nervous system, as he would have every justification for the belief that organic disease must be present to account for an abnormality of the kind.

One more example must suffice. The student can be shown that if in a healthy person the sole of the foot is stroked so as to evoke a reflex movement, the toes flex, and that the great toe may participate in this movement of flexion; whereas in persons suffering from certain diseases of the nervous system, when the sole is similarly stimulated, the great toe is drawn back towards the dorsum of the foot in a very characteristic manner. He can be taught that this abnormal phenomenon is the result of organic disease which has affected some part of the pyramidal system, either in the brain, the mesencephalon, or the spinal cord, and that, if he can be sure that his observation is free from fallacy—as, for instance, that a voluntary movement of the toes has not been substituted for a true reflex—he is justified in assuming that something more than hysteria or neurasthenia exists to account for such a change in the character of the plantar reflex, and that some organic change must be going on in the nervous system, no matter how strongly the clinical picture may otherwise suggest the probability of functional disturbance.

It is probable that in no class of case is the mistake more commonly made of regarding symptoms the result of organic disease of the nervous system as due to functional disturbance than where disseminate sclerosis is concerned. It frequently happens that neurasthenia or hysteria is supposed to account for a clinical picture occasioned by this disease; and in a large number of these cases the abnormal type of plantar reflex has been the chief physical sign by which it has been possible to establish the diagnosis of the organic affection, a diagnosis which subsequent developments have unfortunately proved to be fully justified.

Although a single physical sign may have to be relied on for the diagnosis of organic disease, it is impossible to deal with this part of the subject without a word of warning in regard to the possibility of misinterpreting physical signs and of establishing a diagnosis of some grave and progressive malady of the nervous system on insufficient data. The mistake of regarding as organic what is in reality only functional, in my experience more often results from the belief that exaggeration of the knee-jerks is of necessity a sign of organic disease than under any other circumstances. It repeatedly happens that patients are regarded as suffering from some form of spastic paraplegia, due to sclerosis of the lateral columns of the spinal cord, when the only justification that can be offered for the diagnosis is the fact that the knee-jerks are exaggerated. It cannot be too strongly insisted that hysteria and neurasthenia may both occasion the most pronounced exaggeration of the knee-jerks, and that accordingly, unless this condition is supported by a true ankle clonus, the extensor type of plantar reflex, or some other undoubted sign of organic disease, a diagnosis of the kind cannot be justified by exaggeration of the knee-jerks alone.

There are, however, other cases in which the diagnosis appears more justified, in view of the fact that some other abnormality exists in addition to the exaggeration of the knee-jerks. Here again an incorrect interpretation may be placed upon the abnormal phenomena that are present. Thus it has happened that a patient with pes cavus, but no other sign of any known disease of the nervous system has been regarded as probably suffering from some form, of spastic paraplegia, because in addition to the deformity of the feet the knee jerks were exaggerated. In another case in which the knee jerks were unduly active in a healthy, athletic young man, in whom there was neither rigidity of the legs, ankle clonus, nor the abnormal type of plantar reflex, but who had long been known to have a form of nystagmus, in common with several other members of his family, a similar mistake was made. This otherwise healthy young man, in whom there was no real reason to suppose the existence of any organic disease of the nervous system, was rejected on account of his health, in a competitive examination for an appointment, there can be little doubt, because disseminate sclerosis was suspected by the medical man who examined him.

Do not let it be supposed that I wish to minimize the importance of nystagmus as a sign of organic disease of the nervous system, for it may be a most important indication of serious mischief. Nystagmus is, however, capable of different interpretations. Taken in conjunction with certain other signs of organic disease of the nervous system nystagmus is all-important in diagnosis, but as an isolated phenomenon, unsupported by any other undoubted sign of organic affection, it cannot be allowed the undue weight which was evidently given to it in the case to which I have referred.

It must be remembered that organic signs may be long delayed in a case in which, nevertheless, they ultimately appear. This being the case, a diagnosis of functional affection of the nervous system to account for the symptoms cannot be made without considerable anxiety in many instances. In no class of case do I have greater

misgivings than when a patient complains of what suggests sciatica as the cause of pain in a leg, but in which no positive signs of neuritis of the sciatic nerve can be determined. Time after time cases of the kind ultimately prove to be due to malignant disease of some kind in the pelvis, although all the methods of examination at our command may long fail to detect any such source of pressure upon the nerves of the lumbo-sacral plexus.

This leads me to remind you that even when positive signs of affection of the sciatic nerve appear we are not freed from anxiety, as the physical signs which indicate interference with the functions of the nerve may equally well be produced by pressure on it as by a neuritis, as the effects are more or less similar. The state of the ankle-jerk is very important in this connexion, for when there is only functional disturbance the jerk is commonly abnormally active; whereas when the sciatic nerve is damaged it is diminished or abolished. Reliance on this sign has proved very helpful in a particularly difficult case, in which a neurotic man has persistently complained of pain in one leg for many months. His antecedents were such that involvement of the lumbo-sacral plexus in chronic inflammatory material was not only possible, but very probable. Abdominal and rectal examinations failed to determine a mass of any kind in the pelvis that could be involving the plexus, or causing pressure on the nerve, while from a neurological standpoint it was legitimate to argue that it was improbable that in a case in which any serious mischief was involving the plexus or nerve the patient could continue ill so many months without revealing any alteration of the ankle-jerk, some patchy anaesthesia, loss of motor power, or muscular atrophy. Indeed, instead of any diminution of the ankle-jerk in this case, it has been abnormally active on both sides, as have been the knee-jerks, a state of things quite compatible with functional disturbance of the nervous system.

In such a case, however, it is impossible to feel quite happy, owing to the knowledge that organic signs may be long delayed in obscure cases, and may yet ultimately appear. This makes it most important that we should observe the greatest caution before expressing too confident an opinion in all such cases.

This is well illustrated by the case of a man who was sent to University College Hospital suffering from a train of symptoms which are usually ascribed to neurasthenia. I saw and examined him on several occasions over a period of many months, during which time his symptoms did not improve, in spite of all that was done to restore his nerve tone. Indeed, he became progressively worse, and yet up to the last time that I had an opportunity of examining him he was free from any of the physical signs on which we rely for the diagnosis of an organic condition, which must have been underlying his neurasthenia, and which ultimately revealed itself. Although I have not had an opportunity of examining the man since the organic signs appeared, my colleague, Dr. Grainger Stewart, has done so, and has determined that he now has undoubted evidences of subacute combined degeneration of the spinal cord, an affection which usually proves fatal within a few years, or even months.

The following is another example of how a clinical picture that appears to be due to neurasthenia may ultimately prove to be produced by organic disease. A man met with an accident, in which he received various severe injuries, but presented no immediate symptoms to suggest a gross injury to his spinal cord. When he first came under my observation he complained of the usual train of symptoms that are ascribed to traumatic neurasthenia. A very careful physical examination of him failed to arouse the slightest suspicion that any organic condition was present. I was thus able to reassure him and encourage him in the belief that under appropriate treatment he would ultimately get well, although it might take a long time before this happy result was obtained. Some months later I had another opportunity of examining him, when I found that he was worse instead of being better; but he still presented no sign of organic affection, or evidences of structural damage to his spinal cord. His knee-jerks had been exaggerated from the first, but his lower limbs were free from spasticity, there was no ankle clonus, and his plantar reflex was of the normal flexor type on both sides. It was only on a third occasion, when I examined him about a year after the accident, that I determined the existence of ankle clonus on both sides, and found that the plantar reflex, which had hitherto been of the normal flexor type, had altered, and had become extensor. It was accordingly impossible to continue to support the hopeful prognosis on which I had ventured when I first examined him.

2. Functional Affections with Physical Signs.

Many examples could be quoted in support of what I have said with regard to the ease with which the diagnosis of functional disturbance of the nervous system may be made in the presence of certain positive signs which we ascribe to functional, as opposed to organic, affections of the nervous system, but one or two illustrations must suffice.

In a patient suffering from hysterical paralysis, one of the peculiarities may be the way in which the antagonists are brought into action and hamper the muscles which ought to be performing a given movement. This may be well seen in a case of hysterical paraplegia in which the patient is capable of performing movements of the lower limbs while lying in bed, although it may be in a very imperfect manner. When a patient is suffering from organic paraplegia in which voluntary extension of the lower limbs at the knees is at all possible, if after flexing the limb the observer prevents the extension by resisting the movement, directly the resistance is removed the limb will fall in the extended position. This may be quite otherwise in a case of functional paralysis, for when the resistance is removed, instead of the limb being extended in the way that obtains in the organic case, it commonly is kept semiflexed at the knee, owing to the fact that the hamstrings are as much in action as the quadriceps extensor muscles during the effort that it made to extend the limb.

The following case illustrates another sign which is very characteristic and suggestive of functional as opposed to organic affection. A young girl, who was frightened because atropin was put in her eyes to allow of their being tested for glasses, complained of pain in the eyes and pain in the back. On attempting to rise from her seat she was unable to walk. But for the history of fright, the onset of so acute a paralysis in so young a girl naturally would have suggested poliomyelitis as possible, and the diagnosis would have seemed the more probable owing to the fact that one leg was more affected than the other, and the sphincters had escaped paralysis. On physical examination of the patient I observed that, although the limbs were affected in their entirety, neither the knee nor ankle jerk was altered on either side; both were readily obtained, and were as nearly as could be judged normal in degree, instead of either of them being abolished in the way that might reasonably have been expected in so severe a case of paraplegia, the result of a poliomyelitis. Functional, as opposed to organic, disease of the nervous system was suspected, and the diagnosis, which subsequently proved correct, was further justified by the fact that anaesthesia, pronounced in degree, was determined in the affected limbs, contrary to what was to be expected in a case of poliomyelitis. Although the existence of anaesthesia was against the diagnosis of poliomyelitis, it was of course compatible with that of an ordinary transverse myelitis, which was, however, made improbable by the absence of sphincter affection, and of spasticity or undue flaccidity in the limbs, in addition to which there was no ankle clonus, and the plantar reflexes were not of the extensor type. That the anaesthesia was functional in origin was made clear when, on being told to say "Yes" when she felt a touch, and "No" when she did not feel it, the little girl as readily said "No" when she was touched on the anaesthetic parts as she said "Yes" when the stimulus was applied to an aesthetic region.

I must not allow what I have had to say in connexion with this case to leave the impression that the knee-jerks must of necessity be absent in a case of poliomyelitis or of any other organic lesion of the lower motor neurons, because this would not be correct. It is only when the muscles directly concerned with the jerk are affected that the knee-jerk or ankle-jerk is abolished, the thigh muscles in the one case and those of the calf in the other. I emphasize this because recently I experienced a difficulty in satisfying one of my audience that the diagnosis of a lower motor neuron paralysis was justified in a patient who was unable to perform certain movements of the foot at the ankle, and whose knee-

jerks were abnormally active. In reality the patient's paralysis was the result of trauma, which was also responsible for shock to his nervous system, which caused the instability which accounted for the increase of his knee-jerks, and, inasmuch as the quadriceps extensor muscles were intact and the atrophic paralysis was limited to the anterior tibial and peroneal groups of muscles, it will be evident that there was no reason why the knee-jerk should be absent in a case of the kind, although it would have been had the quadriceps extensor muscles participated in the paralysis and muscular atrophy which involved the muscles below the knee.

3. Organic Disease without Physical Signs.

We now come to by far the most difficult part of our subject, namely, the classes of case in which there is either an organic affection on the one hand or a functional on the other, but in which no positive sign can be determined which will definitely establish the diagnosis in favour of the one as opposed to the other. I can offer no better example of an organic disease of the kind than is supplied by paralysis agitans, for although this is a malady the clinical picture of which is so well defined and so easy to recognize from its general features, there may be no physical sign to which attention can be directed as evidence of the existence of organic disease in the way that can be done in, for instance, a case of disseminate sclerosis. This being so, it will be readily understood that, even to one who is familiar with the general picture of the established disease, the malady may be difficult of recognition in its early stages, before the general features become at all pronounced. Nevertheless, much may depend on an early diagnosis in a case of the kind. I have seen more than one patient who was in the early stage of this affection regarded as suffering from neurasthenia, in whom there was not sufficient to permit of a definite demonstration of any special features of the malady, and yet in whom there was enough to permit an experienced observer to be confident that paralysis agitans rather than neurasthenia was to be held responsible for the patient's symptoms. Let me call your attention to one or two points that may help in this class of case. When in a clinical picture of what appears to be neurasthenia the loss of power is unilateral, or, it may be, confined more or less to one limb, this should lead to the suspicion that something of a more serious nature must be present. Any stiffness of the limbs or inequality of the tendon-jerks on the two sides should also place us on our guard. I have not as yet had opportunities of observing a sufficiently large number of cases to justify any generalization from the following observation, but I have been struck by the fact that although the knee-jerk is so often more active on the side on which paralysis agitans begins, the ankle-jerk on the same side may be diminished, or even absent, at a time when the knee-jerk is increased. This may prove to be a sign of importance in the diagnosis of the disease in its early stages, but it certainly does not obtain in all cases. There are other cases in which paralysis agitans is quite evident, so definite are the tremors and other features of the malady, but in which the patient is nevertheless supposed to be suffering from a functional tremor because she is young, or perhaps it may be because the tremor has been noticed to be in abeyance when the patient has not been aware that she was being observed. In such cases it may be very difficult to convince a sceptic that an organic rather than a functional affection exists, and yet both observations are quite compatible with a diagnosis of paralysis agitans.

In such cases it may happen that a rhythmical tremor can be determined in certain of the facial muscles, in the tongue or in the jaw, which may be highly characteristic of paralysis agitans, and unlike anything that is seen in a case of functional affection which otherwise simulates this malady.

It may be equally difficult to satisfy others that a clinical picture has been produced by a functional disturbance which simulates paralysis agitans rather than that the real disease exists, although the observer is himself quite sure of his position in the matter. A good example of this is supplied by the case of a woman of advanced age who was sent to University College Hospital, supposed to be suffering from paralysis agitans. Her age was in favour of the diagnosis, the tremor of her arm simulated that which is met with in the disease, and it was quite possible that in so early a stage of the affection there had not been time for any of the other features of the malady to appear. Nevertheless, there was something in the woman's appearance and manner, and even in the character of the tremor, which made me suspect functional disturbance rather than organic disease, although it would have been impossible for me to put into words why I held the opposite opinion to that which had been expressed by the medical man who sent the patient to the hospital. That my suspicions were justified was proved by the fact that by means of a faradic current, tempered with that degree of suggestion which is always so useful in the treatment of functional affections of the nervous system, it was possible to persuade the patient that the electricity would rapidly cause arrest of the tremor, a result that was obtained in a way that placed the diagnosis beyond all question.

In another case, in which I have had opportunities of watching the unfortunate man as he has passed through successive stages of his malady, over a period of several years, the patient first came under my observation with a diagnosis of writer's cramp. He was a clerk, and complained of difficulty in writing. There was nothing sufficiently obvious in the case to justify fault being found with the diagnosis of writer's cramp, and yet there was that which made me suspect paralysis agitans. So little was there to justify the diagnosis of paralysis agitans, that it would have been impossible for me to demonstrate in the patient my reasons for suspecting so grave a malady.

Another instructive case was that of a man with slowly progressive hemiplegia, whose condition was regarded as due to an intracranial tumour. In holding a contrary opinion I felt that my position must be regarded as very weak, in that all I could say to the patient's medical attendant in justification of my diagnosis of commencing paralysis agitans was that there was that in the man's general appearance and mode of progression which gave me the impression that I was in the presence of that disease. To define more clearly what I saw and what I meant was beyond me. Nevertheless, the subsequent history of this case proved beyond all question that the ill-defined picture which I was unable to describe was really being produced by paralysis agitans, for in time this disease presented itself in all its well-known features.

The class of case with which we are now dealing may be still more difficult of diagnosis, owing to the fact that the symptoms arise under circumstances that are commonly responsible for functional disturbance of the nervous system.

Thus, a man met with an accident, in which he received a shock, on an electric railway. His symptoms were compatible with those of traumatic neurasthenia, and none of the organic signs on which reliance has to be placed for the diagnosis of structural damage to the brain or spinal cord could be determined. Nevertheless, there was that in the character of his tremor which aroused my suspicion, and which prevented me from falling into the error of diagnosing traumatic neurasthenia when paralysis agitans was really responsible for the symptoms, as was proved by the subsequent course of the case. The association of paralysis agitans with trauma is, of course, well recognized, but the point I wish to emphasize here is that in the case to which I have referred there was nothing in the man's complaints or appearance to suggest paralysis agitans, nor was the tremor characteristic of this malady. All that can be said is that the tremor was rather coarser than that which is usually seen in neurasthenia, and that although increased when he was asked to extend his hands in front of him, some tremor could be determined from time to time when his limbs were in repose. I may, perhaps, be permitted to remind you that it commonly happens that in paralysis agitans the tremor is present when the limbs are at rest, and may temporarily cease when a voluntary movement is made. This, however, is not an invariable rule, as the tremor is sometimes brought out or increased by volition.

4. Functional Affection without Physical Signs.

A like difficulty has to be contended with in the class of case in which the symptoms are due to a functional

affection of the nervous system, and in which there are no special signs, such as may obtain in some functional cases, to establish the diagnosis. The following is a good illustration of what is meant:

A woman was seen in the out-patient room at the Queen Square Hospital, with a history from her doctor that there had been two attacks of pneumonia, one of which had been complicated by pericarditis, and that subsequently to this she had developed certain choreiform movements, with inability to speak. The patient was unable to stand or walk, and was apparently so weak that she could not even sit up. Severe spasmodic movements affected all of her limbs, together with her neck and trunk. This was clearly not the kind of case in which I could look for assistance from one or other of the signs of organic disease to which I have called your attention, and physical examination did not reveal any particular signs that may exist in hysteria. My suspicion as to the real nature of the case was, however, aroused when I tried to induce the woman to speak, for, instead of the articulatory difficulty so characteristic of chorea, with the rolling about of the tongue and other unsuccessful efforts at articulation, the patient made a grimace that did not recall to my mind anything that I expected in chorea, and spoke in a whisper without any of the articulatory defects for which I was prepared. With this clue to the real nature of her condition, I was next able to persuade her to control the movements of one or other limb, so as to enable me to test her tendon jerks and plantar reflexes, and with isolation and strong faradism, combined with suggestion, she rapidly recovered in a way that would have been quite impossible had true chorea accounted for the clinical picture.

The following is another case in which the diagnosis of functional disturbance had to be made without any one positive sign which could be regarded as pathognomonic of hysteria:

A young man was sent to University College Hospital because his illness had proved obscure and had not yielded to treatment in a provincial hospital. The history of his illness did not strongly suggest any known organic affection of the nervous system, but there was just that in it which made it possible that disseminate sclerosis might be found to account for the symptoms. I accordingly examined him in detail, having clearly in mind the possibility that this organic disease might be present, and, beginning with the cranial nerves, I reviewed the whole of his nervous system, with negative results, until the knee-jerks were tested and found to be exaggerated. This did not, however, prove that there was organic disease, as you will recognize from what has already been said on the subject. I next examined him for ankle clonus, but the result was negative. I was, nevertheless, still prepared to find evidence of organic disease, for when his lower limbs were uncovered my attention was attracted by the position of his great toes, notably by the left one, which was drawn back towards the dorsum of the foot in a manner that suggested the possibility that the extensor type of plantar reflex might be present. This did not, however, prove to be the case, for on testing them both plantar reflexes were found to be flexor in type, and not even on the left side was there any suspicion of the abnormal extensor type of response. The complete absence of any sign of organic disease of the nervous system made the diagnosis of hysteria certain, although there were none of what I may perhaps be permitted to call the positive signs of hysteria. On making the patient get out of bed to attempt to walk, the awkward character of his station and locomotion was such as one has never seen in any case of organic disease of the nervous system, and was so bizarre as to baffle accurate description. Moreover, on making him attempt to stand with his feet together and his eyes closed, the way in which he swayed and recovered himself, first in one direction and then in another, without opening his eyes or taking hold of any of the objects around him, made the diagnosis still more certain, although it cannot be said that it was ever in doubt after the physical examination in bed had been completed.

In this patient, as in the woman with the general choreiform movements, the assurance that the faradic current would cure his malady enabled his treatment to be conducted with complete success in a very short time, so that he also left the hospital able not only to walk, but to run.

In conclusion, let me ask you to accept two apologies, one for the general imperfections of the lecture, of which I am painfully conscious, and the other for my failure to present the subject to you without appearing to be egotistic, a state of things that is particularly distasteful to me, but which circumstances have made it difficult to avoid.

A Clinical Lecture

ON

SOME OF THE COMMONER SYMPTOMS OF CEREBELLAR ABSCESS.

DELIVERED AT UNIVERSITY COLLEGE HOSPITAL,

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In the last few weeks I have had under my care in the hospital two cases of cerebellar abscess which illustrated some of the clinical aspects of that disease well enough, perhaps, to justify me in saying something about them now. I propose first to tell you, avoiding as well as I can tedious detail, about the more instructive of the two cases, then rapidly to remind you of some of the symptoms of the disease, and finally to give you a short summary of the second case.

CASE I.

A. W., male, aged 25, was admitted July 25th, 1907. He had had a discharge from the left ear for three months. A month before admission a polypus had been removed from the ear. For the last week he had had severe earache and headache; the discharge continued.

The left meatus was filled by a large polypoid mass; there was tenderness over the mastoid but no swelling. There was a profuse discharge of offensive pus from the ear, no facial paresis, and the optic discs were normal. No abnormal nervous physical signs. During the day the temperature rose to 104° F.

The case was manifestly one of chronic middle-ear disease complicated by acute mastoidal suppuration. There was no evidence to suggest any intracranial complication. The same evening the radical mastoid operation was done in the usual way. The tympanum, the antrum, and numerous mastoid cells were found to be full of granulation tissue bathed in foul pus. The operation afforded practically no relief. The temperature continued to range between 100° and 103° F.; the patient felt ill and weak, and from time to time suffered much from headache. On the second and third days after the operation he vomited, but not again. The pulse from the first had been rather slow in relation to the temperature, varying between 65 and 95 per minute.

It was obvious, therefore, that some infective process was still going on. There was, however, nothing to indicate, with a degree of precision great enough to justify action, where the source of the symptoms lay. Moreover, it is not uncommon for quite severe symptoms to persist for some days after the mastoid operation has been done for acute disease, and then to subside spontaneously. There was no course open to us, therefore, but to wait, and to watch with the greatest care for the development of any sign which would localize the seat of the lesion.

The condition above described persisted unchanged for nine days, and then an ominous development took place. The temperature, which had scarcely been below 100° since the operation, fell abruptly from 104° to normal, with no accompanying improvement in the headache or the feeling of illness. Still no nervous physical signs were present. After a slight irregularity for a couple of days the temperature settled down to the normal line, and remained steadily there. This disappearance of the fever was in no sense an encouraging change, for the headache was still severe at times, the patient still felt very weak and ill, complained of giddiness if he sat up, and was definitely though very slightly drowsy.

The third stage of the slow unfolding of the symptoms began on the sixth day after the temperature had reached the normal—that is, on the fifteenth day after the mastoid operation. The first evidence of the change was that early in the morning the patient vomited. About 10 a.m. he was drowsy, and complained of occipital headache; the drowsiness did not seem more marked than on the day before. A note was made that the eye movements were good. Two hours later conjugate movements of the eyes to the left were noticed to be a little impaired, and were accompanied by slight nystagmus.

At 6 p.m. lateral movements of the eyes showed distinct nystagmus, and conjugate movement to the left was distinctly weak.

The optic discs were normal. The right knee-jerk and the

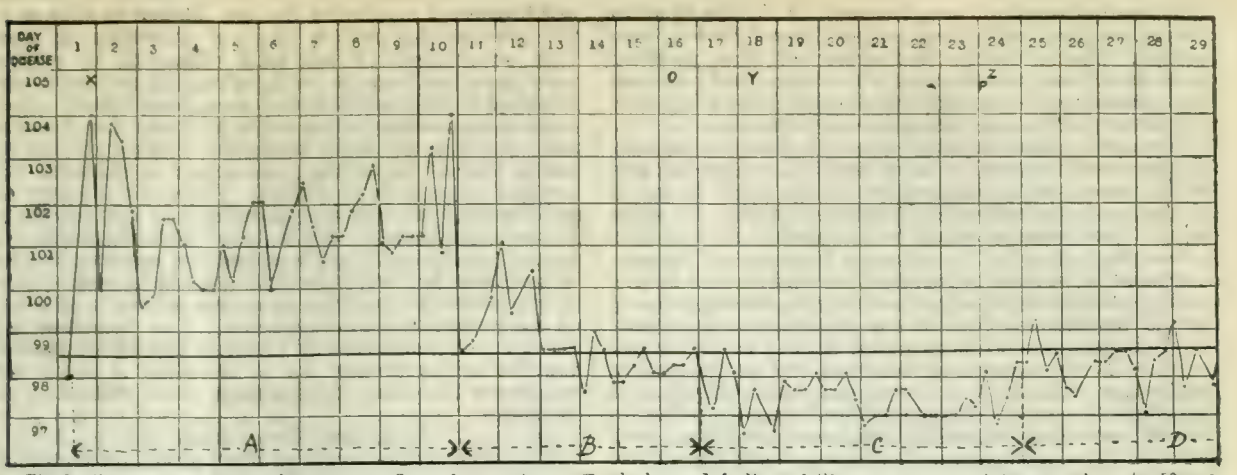


Fig. 1.—Temperature Chart of Case I.—A, Stage 1, symptoms: Headache and feeling of illness; average minimum pulse-rate, 70 per minute. B, Stage 2: Headache, feeling of illness, giddiness, drowsiness; average minimum pulse-rate, 62. C, Stage 3: Headache, feeling of illness, giddiness, drowsiness, ocular signs, vomiting: average minimum pulse-rate, 57·5. D, Stage 4: Rapid disappearance of symptoms; average minimum pulse-rate, 83.5 X, Mastoid operation. Y, Cerebellum explored; result negative. Z, Cerebellar abscess opened. O, First appearance of ocular signs and onset of vomiting. P, Appearance of cerebellar paresis.

left ankle-jerk were brisker than those of the opposite sides respectively.

The next day the temperature had fallen to 97·2°, and the patient had vomited again. For the first time the pulse-rate was below 64—namely, 56 per minute.

The weakness of leftward conjugate movement was more distinct; the leftward nystagmus was still more marked than the rightward; the reflexes were as before. There was, however, one additional sign—downward movement of the left eye was jerky and weak.

The next morning (August 11th)—that is, eight days after the temperature had come down to normal—the drowsiness and giddiness were more marked, the headache and the vomiting persisted; the temperature was 96·6°; the ocular signs were, perhaps, a little more marked, and it was noticed that when the eyes were at rest there was a tendency at times for the left to wander a little upwards and outwards, and a less distinct drift of the right down and out. The right knee-jerk was still brisk, the left distinctly diminished. The plantar reflexes were less easily obtained than before, but still flexor. There was no ataxy of the arms.

The nature of the lesion and its seat were now evident enough to justify further interference. That suppuration within the substance of the brain was present was shown by the classical and highly characteristic form of the temperature chart. A period of continued high fever had been followed by a period of normal temperature, which had passed in turn into a period of subnormal temperature; in each case the transition had been a rather sudden one, and the passage from the normal to the subnormal had been accompanied by a distinct fall in the pulse-rate and by the reappearance of vomiting. That the abscess was in the cerebellum was shown by the presence of the well-known triad of ocular cerebellar signs—namely, nystagmus, weakness of conjugate movements, and skew deviation. The first two were precise and well-marked, the last merely an elusive tendency, although definite enough to be of value in connexion with the others. That the abscess was in the left lobe of the cerebellum was shown by the nystagmus and weakness of conjugate movement being more marked when the patient looked to the left than when he looked to the right.

The most striking deficiency in the signs was the complete absence of optic neuritis, ataxy, and paresis. Of these, the absence of neuritis was by far the most serious, as ataxy and weakness seem to be relatively late cerebellar manifestations compared with the ocular signs. Negative evidence, however, is notoriously unreliable in diagnosis, as indeed might be expected from a very little consideration of general principles. The left lobe of the cerebellum was explored. No abscess was found.

Naturally enough, no relief followed, except a slight temporary diminution of the headache, due probably to a partial relief of the intracranial tension, which was very high.

For the next four days the patient's state remained much as it had been before the operation, except that there was a gradual worsening of the general condition. The temperature remained subnormal, the vomiting continued, the drowsiness, headache, and the ocular signs persisted. On the evening of August 16th, that is the fifth day after the second operation, there was a sudden increase in the severity of the headache, and the drowsiness became much more marked.

The following morning, August 17th, the patient was very drowsy, and resented any examination on account of the extremely severe headache. To the previously existing ocular signs it was clear that paresis of some individual muscles had been added, but, on account of the patient's mental state, no exact observation of them could be made. There was no optic neuritis. A very striking new feature was present in the existence of a marked paresis of the left arm and leg. These limbs could scarcely be raised from the bed, and movements of them were clumsy and disordered. There was marked flaccidity of the paretic limbs, and the left knee-jerk was, as it had been for some time, much reduced. There was no trace whatever of any weakness of the face. It was clear that some considerable extension of the lesion had taken place, and the addition to the previously existing signs in the form of a typical cerebellar paresis with flaccidity, absence of ankle clonus or plantar extension, and with immunity of the face, made it practically certain that we had to deal with an abscess in the cerebellum, which had been overlooked, on account of its smallness or deep situation, at the previous operation. The temptation to suspect a temporo-sphenoidal abscess on the right side, where the patient also had middle-ear disease, was readily resisted, in view of the character of the paresis and the known ease with which a small deeply-seated abscess in the cerebellum may escape discovery.

The left lobe of the cerebellum was therefore explored again. It was found to be bulging into the opening in the skull and was tense and fluctuating. An incision allowed about 1 oz. of offensive pus to escape from a large cavity in the left lobe.

The next day the patient was very much better, the headache and drowsiness had practically gone, and the paresis was very much less.

After about a week very few physical signs remained. The ocular signs persisted longer than the paresis, of which practically no trace was present three days after the operation. The day after the operation the temperature rose to normal and the pulse-rate, which had been 56 per minute, rose to 100.

No further complications ensued, and convalescence progressed to complete recovery.

The chart (Fig. 1) shows very well the different periods into which the progress of the case was marked by changes in the temperature—first, continued high fever, then normal temperature, then subnormal temperature; and, finally, a return to the normal after the evacuation of the pus. I have recorded on it the time of appearance of some of the principal physical signs, so as to bring out the correspondence of the temperature changes with the extension of the disease.

The case afforded one the comparatively rare opportunity of watching from stage to stage the formal and systematic development out of obscurity of one of the most characteristic clinical pictures to be met with in medicine. It does not, however, of course, show by any means all of the physical signs which may be produced by a cerebellar abscess. It is, therefore, necessary to say something in general about the commoner and more characteristic of these.

Cerebellar abscess produces or may produce (1) general evidences of an infective process, (2) evidences of a lesion in the substance of the brain spreading with variable rapidity, but as a rule subacutely, (3) evidences of a lesion of the lateral lobe of the cerebellum.

1. General Evidences of an Infective Process.

When the case is seen from the beginning there will practically always be a period of onset during which the symptoms are those of an acute infective process—a rigor, high fever, headache, loss of appetite, wasting. It is well known that during this period, which in the case I have just related lasted under observation for ten days, there may be no evidence calling attention to the brain, and the case may come to be regarded as a septicaemia. Indeed,

occasionally the patient may succumb in this stage without any suspicion of the seat of the disease having been aroused. This is, perhaps, the rarest and most puzzling of all the clinical forms under which encephalic abscess may present itself—the septicaemic type—and when it is well developed it almost always escapes diagnosis.

Like certain other infective processes, those for example in bones and in closed mucous cavities such as the gall bladder or appendix, suppuration in the brain is apt to undergo a spontaneous arrest or quiescence after the acute onset. Thus arises a second very important clinical type —the latent abscess. On account, however, of the concentration of function in the brain such an abscess is very rarely so absolutely latent as for example an empyema of the gall bladder may be; it is true the infective symptoms may to a great extent disappear, but usually some evidence or other of impairment of function will be present, or some vague implication of the general state. The clinical behaviour of cerebral abscess is thus closely similar to that of pneumonia followed by empyema, and it is a very valuable rule in any case in which an acute illness has been followed by imperfect recovery with vague residual symptoms, to suspect empyema or abscess of the brain.

This form of lateney—which we might call true latency —rarely occurs with cerebellar abscess; it must, however, be distinguished from the kind of pseudo-latency which occurred in Case I, where the fever disappeared without any other improvement whatever. This is in no sense due to quiescence of the infective process, but rather to the transformation of one of the symptoms by the progress of the disease. In Case II, presently to be related, partial latency of general symptoms was present, as will be seen, and would have given rise to difficulty had the localizing signs been at all obscure.

2. General Cerebral Signs.

Of the three familiar signs of increasing intracranial tension—headache, vomiting, and optic neuritis —very little need be said. Optic neuritis is the most significant when it is present. In spite of its great frequency in the more chronic cerebellar lesions it is often absent in cases of abscess. In neither of the cases reported here was it present; and its absence is of no value as evidence. Vomiting is a more common symptom, so that its complete absence throughout would be distinct evidence against cerebellar abscess. Of the headache we may say that it is by far most commonly occipital and practically never lateral, so that the substitution of occipital headache for the lateral headache so common in acute mastoid disease is good ground for suspecting the development of intracranial suppuration. Giddiness is a sign both of intracranial pressure and of cerebellar disease. In the former case, and sometimes in the latter, it is quite unsystematized, but when it is due to cerebellar disease it sometimes shows constant characteristics, objects during the attack seeming to the patient always to move in a definite direction. Wasting may possibly be regarded as an evidence of cerebral involvement rather than a product of the infective condition, for in some of the latent cases it is the only symptom. Apparently causeless profound wasting in an adult should always make one canvass the possibility of intracerebral suppuration.

The mental state is one of the most important of this group of symptoms. All stages of impairment of consciousness from the slightest to profound coma may be seen, the latter, however, usually only in very advanced cases or in the very acute fulminating varieties.

Perhaps the commonest early change is a very slight dullness, a disappearance of spontaneity, in which all the less important matters of life are allowed to slide as not being worth the painful effort of attending to them. This painfulness of any kind of mental or physical activity is the keynote to the situation, and as the case advances it becomes more and more accentuated. In the early stages one may often notice a certain dazed expression which is no doubt partly the product of pain and partly that of drowsiness; one comes to recognize it as a rather characteristic feature. While the lethargy and indifference gradually deepen, as long as the patient can be made to respond it will be found that the intelligence is quite normal; it is quite unusual for any true delirium or confusion to develop, as is so common in meningitis or in other conditions which produce a diffuse involvement of the surface of the hemispheres. More important probably in the production of confused mental states is the rapidity of the process, for in the stage of acute onset of abscess there may be confusion which ultimately disappears.

3. Localizing Cerebellar Signs.

This is by far the most important group, for even in the most latent cases, when the first two groups may be almost completely absent, the local signs are usually to be obtained, as was to be seen in Case II. The localizing signs of cerebellar disease may be divided into those which are due to the involvement of the structures outside the cerebellum and those which are due to the involvement of the latter itself—the former may be called extrinsic, the latter intrinsic signs.

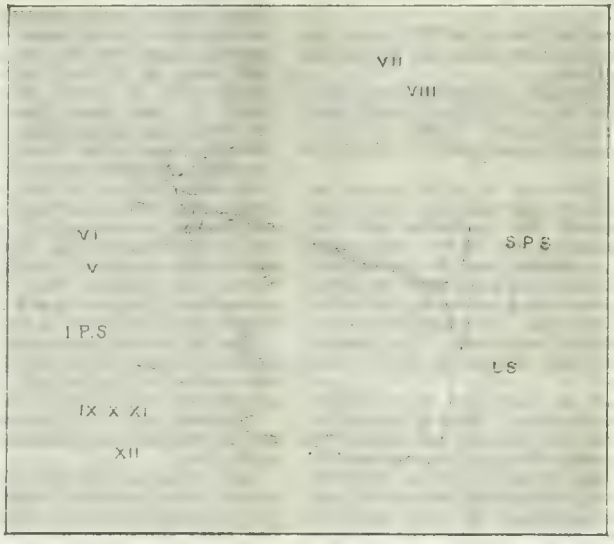


Fig. 2.—Diagram of anterior wall of posterior fossa to show grouping of cranial nerves. VI, V. Anterior group of cranial nerves. VII, VIII, Middle group of cranial nerves. IX, X, XI, XII, Posterior group of cranial nerves. L.S. Lateral sinus. S.P.S., Superior petrosal sinus. I.P.S., Inferior petrosal sinus.

Extrinsic Signs.

In the posterior cranial fossa the structures other than the cerebellum which may be involved are certain cranial nerves and the pons and bulb.

Cranial Nerves.

The last six of these are those which have a more or less considerable part of their course in the posterior fossa. It is clear that they fall naturally into three groups (Fig. 2)—an anterior or superior, including the fifth and sixth nerves; a middle group, including the seventh and eighth; and a posterior, including the ninth, tenth, eleventh, and twelfth. The posterior group is very rarely involved by abscess of the cerebellum in such a degree as to be of diagnostic value. Some degree of defect in articulation is, however, not uncommon, but naturally enough it is difficult to decide how much of this may not be due to the mental state. The second group is of practically no value in diagnosis, seeing that involvement of it is much more likely to be due to the middle-ear disease which has caused the cerebellar abscess than to the latter itself. We are left, therefore, with the anterior group.

It might have been expected that affection of the fifth cranial nerve would not be uncommon in cerebellar abscess. The sixth nerve, which is so near, is very commonly involved; the abscess is usually far forward in the lateral lobe; indeed, probably farther forward than is often thought, since we are now coming to know how frequent is infection of the cerebellum through the internal ear, yet as far as present experience goes it would appear that the fifth as a rule escapes. It is probable, however, with more exact methods of determining sensory disturbances of slight grade we may ultimately find that changes in the cutaneous area of the trigeminal are not uncommon in cerebellar abscess.*

* It has been shown by Mr. Morriston Davies and the author that very slight changes in cutaneous sensibility are demonstrable and definable in lesions of sensory nerves, so slight as to have produced no other physical signs. Such modifications can, for example, be shown in the area of the trigeminal with sufficient accuracy to be of diagnostic importance long before any insensitiveness to the usual tests for cutaneous sensibility is present. (See *Review of Neurology and Psychiatry*, October, 1907.)

The case is quite different with the sixth nerve. Paresis of the external rectus on the same side is the commonest isolated sign of cranial nerve involvement met with in cerebellar lesions. The frequent combination of it with weakness of conjugate movements to the same side makes it, however, sometimes a little difficult to detect. Unfortunately, the diagnostic value of weakness of the external rectus is but small. It occurs not uncommonly in acute mastoiditis, and even otitis media (Gradenigo's sign), and is, therefore, of much less significance than is a weakness of conjugate movements, in which are implicated the external rectus of the diseased side and the internal rectus of the other.

Pons and Bulb.

It is not possible here to deal in detail with the various signs which may result from pressure on these. It is enough to state that such pressure may cause a hemiplegia of the upper motor neuron type, usually implicating leg and arm only, and accompanied by exaggeration of deep reflexes, ankle clonus, and extensor plantar response. Such a hemiplegia is much less likely to occur in abscess than in tumour, and it implicates the limbs on the side opposite to the lesion, as the pressure is above the decussation of the pyramids.

Intrinsic Signs.

The fact of the cerebellum being an organ concerned with the regulation rather than with the origination of movement, gives to the signs of lesions of it a quality characteristically different from lesions of the direct motor path. The contrast is well brought out when we remember in cerebellar lesions the great rarity of convulsive attacks, the absence of rigidity, and the fact that paresis is a late sign of advanced disease and scarcely ever amounts to paralysis.

We must now try to get some broad general outline of the motor effects of cerebellar lesions, leaving aside all confusing detail and dealing only with the common, obvious, everyday features.

The motor effects of a cerebellar abscess may be classified as follows:

1. Ocular signs:
   - Nystagmus.
   - Weakness of conjugate movements.
   - Skew deviation.
2. Signs affecting the limbs:
   - Inco-ordination.
   - Paresis.
   - Hypotonicity.

Ocular Signs.

It is not possible to enter into the discussion of this group, and I can only allow myself to refer to two points in connexion with it. You will have noticed in the description of Case 1 that skew deviation is described as occurring upwards and outwards on the side of the lesion and downwards and outwards on the other, and that this differs from the deviation usually found in cerebellar tumours, which is upwards and inwards on the side of the lesion. The deviation, such as occurred in Case 1, I have seen in other cases of cerebellar abscess, but never as more than a slight and transitory manifestation, or in any way approaching the marked and persistent deviation sometimes produced by tumours. Unless the case, therefore, is constantly under observation the phenomenon may escape notice altogether.

The second point I wish to call your attention to in connexion with this ocular group of signs is the matter of the diagnosis of suppuration in the internal ear. This condition may produce headache, nausea, vomiting, vertigo, disturbances of equilibration, and nystagmus, and is therefore an important cause of difficulty in the diagnosis of cerebellar abscess. As you know, a great deal of work has recently been done upon the diagnosis of labyrinthine suppuration, and many details have been made out whereby cerebellar nystagmus and labyrinthine nystagmus can be differentiated.* I shall only trouble you with one—namely, that while the former is most marked when the patient looks towards the side of the lesion, the latter is in the great majority of well-marked cases in the opposite direction. The frequency with which suppuration in the labyrinth is now known to occur justifies me in reminding you how important it is when carrying out the radical mastoid operation, which is the preliminary to the treatment of intracranial complications, to inspect with great care the inner wall of the attic in order to detect, if such be present, the characteristic sinus leading to the external semicircular canal.

Signs Affecting the Limbs.

Inco-ordination.—Disturbances of the normal co-ordination of movement may be demonstrable in several ways:

(*a*) During pointing to a given object.
(*b*) In the gait.
(*c*) During rapidly reciprocating movements, such as alternating pronation and supination of the forearm.
(*d*) During complex habitual movements involving several joints.
(*e*) By the effects of the sudden removal of resistance to movement.

(*a*) When a patient with cerebellar ataxy of the arm is asked to touch the tip of his nose the movement is carried out with a characteristic uncertainty. The tremor involves the limb on the same side as the lesion; it does not increase towards the end of the movement; it is usually fairly coarse, but is rather variable in this respect; it is present only during movement and disappears when the patient is asked to hold his hand out in front of him.

(*b*) The cerebellar gait can rarely be observed in cerebellar abscess on account of the grave general condition, but when the patient is well enough to walk he shows the characteristic wide base of support, staggering towards the side of the lesion, with, perhaps, exaggerated recovery towards the opposite side, difficulty in turning, etc.

(*c*) A rapidly alternating movement of pronation and supination of the forearm was called "diadokokinesis" by Babinski, who described the disturbance of it which occurs in cerebellar lesions. This disturbance, as all the other intrinsic motor signs of cerebellar disease, occurs on the same side as the lesion. The patient should be asked to carry out the movement on the sound side first, so as to give some standard of the normal smoothness and rapidity of the rotation, and to ensure that he knows what is wanted. When he now tries to perform the same movement on the other side, the rotation is slow and extremely irregular, and he tries to compensate for this deficiency by movements of the elbow and shoulder, which on the normal side show no tendency to take part. This disturbance is called "dysdiadokokinesis"; it is a fairly common cerebellar sign, and is of considerable localizing value, as it is a delicate test for defective co-ordination.

(*d*) When a normal person lying down is asked to straighten the lower limb from a position of flexion of both knee and hip, the movement executed is single, the extension of the knee and hip occurring together. Sometimes in cerebellar lesions this synergic movement is interfered with, and the patient straightens the knee first and then the hip.

(*e*) If when a normal person is asked to flex the elbow strongly against resistance the resistance is suddenly removed, there is a sharp, short jerk of further flexion, and then the movement stops. In a limb showing cerebellar inco-ordination a similar manœuvre often shows a very striking abnormality. When the resistance is removed, flexion of the elbow is continued until the hand touches the shoulder. In some cases there is at first a rapid increase of the flexion, then a slight pause, and finally completion of the movement. The abnormality always occurs on the side of the lesion.

Hypotonicity and Paresis.—I have already mentioned the characteristics of cerebellar paresis in describing Case 1, so that I need do no more than enumerate them. Such a paresis is on the same side as the lesion, does not involve the face, is not accompanied by rigidity, tends to involve the larger movements rather than the finer, and is not associated with ankle clonus or extensor plantar response. It is, however, not enough to say that there is no rigidity; there is, in fact, very often a striking flaccidity of the paretic limbs, as can be shown by passive flexion of the hip with extended knee, or by the possibility of producing slight hyperextension of the knee (knee angle sign).

*Valuable information on this subject is to be found in the writings of Bárány and of Neumann, especially in an article of the latter in the *Archiv für Ohrenheilkunde*, Band 67, and in the recent monograph of the same author entitled *Der Otitische Kleinhirnabszess*. (Deuticke: Leipzig and Wien. 1907.)

Reflexes.

The deep reflexes are often affected by intrinsic cerebellar lesions in such a mixed way as to produce a picture almost characteristic in its irregularity, but very difficult to generalize. We may say in a broad way that any reflex may be exaggerated or reduced, and both changes may occur with different reflexes at the same time or with the same reflex at different times; and that, therefore, the localizing value of such changes is often slight as regards the side of the cerebellum involved. For example, the knee jerk on the side of the lesion is often exaggerated, but it may equally well be reduced. It is possible, however, to be more definite as to the absence as a sign of intrinsic cerebellar disease, of the Babinski toe phenomenon and its variants, the "fan sign," Schäfer's, Oppenheim's, and Remak's reflexes.

I may now shortly relate to you the symptoms and signs of a second case, as they show very well how some of the features we have been describing may be combined in an actual example.

CASE II.

E. G., a married woman of 29, was admitted September 5th, 1907. She had been ill for six weeks, but no very definite account of the illness could be obtained. She had had a discharge from the left ear since the beginning of the illness. For the last three weeks she had had much headache, and had taken to her bed. At the beginning of this period she had had much shivering. At the time of admission a large subcutaneous abscess was present behind the ear. This was immediately incised. Some hours later systematic examination gave the following results: The patient was decidedly lethargic, and spoke with a blurred articulation; she answered questions intelligently, and understood all that was said to her. The temperature was normal, and the pulse 90.

Ocular Signs.—Conjugate movements to the left were distinctly weak, those to the right normal. The left eye did not move to the left as well as to the right, so that there was probably some special weakness of the left external rectus. There was no deviation of the optic axes when the eyes were at rest, but the left eye moved upward more readily than the right, and downward less readily. Nystagmus was present during all movements except downwards, and was most marked when the patient looked to the left. There was no optic neuritis.

Reflexes.—Left knee and Achilles jerks exaggerated on the left side. Plantar reflexes very feeble, and showing slight flexion. Other reflexes normal.

Motor.—There was a very little weakness of the left arm and leg, so slight, indeed, as probably to be without significance. Movements of left arm showed distinct ataxy, movements of right normal. Marked dysdiadokokinesis was present on the left side. Flexion of elbow against resistance with sudden release showed, on the left side only, a marked continuation of the movement.

It was, of course, obvious at once that a lesion of the cerebellum was present, and operation was carried out. A large extradural abscess was found in the posterior fossa, suppuration in the lateral sinus, and a large abscess in the left lobe of the cerebellum. These were drained, and the patient did well for ten days, when she began to develop general suppurative meningitis.

The case shows well how the general and cerebral symptoms may be latent, and yet the intrinsic cerebellar signs be definite enough to establish the diagnosis with certainty. It also affords an interesting contrast with Case I in the distribution of the signs. In both the ocular signs were well marked, and in neither was there optic neuritis. But whereas in the first case the motor signs in the limbs were those of *paresis* alone, in the second case the motor signs were those of *inco-ordination* alone.

I shall make no attempt to deal with the treatment of cerebellar abscess, but confine myself to a short remark on each of two points in connexion therewith. In the first place, it seems even yet not to be fully recognized how extremely urgent is the need for prompt operation in all cases of cerebellar abscess. In fact, in any case of increasing intracranial tension in the posterior fossa, so great is the risk of sudden death from respiratory failure, that as soon as the diagnosis is made the case should be looked upon as quite as urgent as one of perforated gastric ulcer or of rupture of the spleen. This danger bears no relation whatever to the severity or mildness of the symptoms and signs.

As regards actual operative technique, the only point I wish to draw your attention to is that the chance of failing to find a small and deep seated cerebellar abscess is considerable, and that in such a case unquestionably the best course to pursue is to remove a considerable area of bone and incise the dura freely, so that if an abscess is actually present it can extend more freely towards the surface than elsewhere, and the appalling danger of sudden pressure on the medulla thus be minimized.

THE COLONY AND BROMIDE TREATMENT OF EPILEPSY.

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DURING the past three and a half years I have had charge of C.U.S.S. Colony and Epileptic School for boys at Starnthwaite, and the results obtained from what I might call the radical use of bromide are, I think, worth publishing.

The treatment is based on the assumption that *early* epilepsy is far more frequently the direct result of peripheral irritation than of Gowers's "abnormal state of chemical nutrition, whereby the molecules are more easily detached and their atoms yield with undue facility to the attraction of the adjacent oxygen," and that the liberal use of bromide prevents this peripheral reflex from disturbing the cerebral harmony and saves the brain from contracting the bad habit of epilepsy on the slightest sensory disturbances. The dose of bromide given is that amount which is necessary to control the fits. This is done in some cases by 40 grains a day; oftener 100 grains is required, and as much as 300 grains has been necessary.

During 1903 we treated four boys—two of them we have discharged as having their epilepsy arrested, though still under observation. One has been removed by his father as cured. He has had no fits and no bromide for a year. The other boy was considered at first unsuitable for treatment, but was put on bromide in March of this year, and has had his fits reduced from ten a month to one in eight months.

	Fits in 1903.	Fits in 1904.	Fits in 1905.	Fits in 1906.	
W. C. L. ..	84	11	1	0	Removed by father.
A. M. ..	267	0	2	0	Working on farm.
A. B. ...	25	0	1	1	Working on farm.
E. T. ..	32	72	99	27	

The case of E. T. shows average fits for 1903 to be 32. During 1904 he had no treatment and the fits numbered 72; in 1905 he had 99 fits without treatment, but during 1906 he was treated and his fits were reduced to 27, and of these only 4 occurred during the time he was taking bromide. The bromide was not started until March 24th.

Of the 10 cases admitted during 1904, 6 were placed on bromide with the following results:

	Fits in 1904.	Fits in 1905.	Fits in 1906.	
H. V.	197	3	4	Still in school.
F. S.	80	5	3	Still in school.
A. Y.	130	1	0	Working on farm.
R. B.	238	0	0	Working on farm.
F. W.	47	11	0	Working on farm.
F. B.	72	16	27	At school.

Two were discharged as mental cases and 2 considered unsuitable for treatment.

Mr. Colyer, our Superintendent at Starnthwaite, keeps most accurate daily, monthly and yearly records of the dose of bromide given, and the number of fits that occur in each day, month, and year. I give here a few cases from his year-book. The first is most instructive in several points. I did not consider the case a very suitable one for bromide, and although he was put on it for a few months it was stopped. Why, I am not quite clear. Bromide was resumed in March, 1906, and his case now affords us three periods—1903-4 partial bromide, 1905 no bromide, 1906 with bromide. The records of the other cases explain themselves.

CASE E. T.

Year.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total Fits for Year.
	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	
1903	—	—	—	—	—	—	—	—	—	—	—	2	—	5	—	4	—	4	—	1	—	0	—	0	16
1904	—	0	—	4	—	5	—	4	—	5	—	4	—	19	—	5	—	0	—	4	—	17	—	5	72
1905	—	2	—	13	—	3	—	5	—	10	—	9	—	6	—	5	—	10	—	10	—	10	—	16	99
1906	—	14	—	9	20	3	40	0	40	0	40	0	40	0	40	0	40	1	40	0	40	0	40	0	Since Br. started 4
1907	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	30	0	30	0	30	0	20	0	0

CASE A. M.

Year.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total Fits for Year.
	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br	Fits.	Br.	Fits.	Br	Fits	Br	Fits	Br	Fits.	
1904	Gr. *	4	Gr. —	31	Gr. —	33	Gr. —	36	Gr. —	47	Gr. —	29	Gr. —	55	Gr. 60	9	Gr. 50	21	Gr. 50	0	Gr. 60	10	Gr. 60	2	277
1905	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60	1	60	0	60	0	60	1	60	0	2
1906	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60	—	—	—	0

* Admitted January 19th, 1904.

CASE H. V.

Year.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total Fits for Year.
	Br	Fits.	Br	Fits.	Br	Fits.	Br.	Fits.	Br.	Fits	Br.	Fits.	Br	Fits.	Br.	Fits.	Br.	Fits.	Br	Fits.	Br	Fits.	Br	Fits.	
1904	—	—	—	—	—	—	—	—	—	44	—	24	Gr 40	44	Gr 20	18	Gr 20	8	Gr. 40	1	Gr 40	0	Gr 50	1	133
1905	50	0	60	1	60	0	60	1	60	0	70	1	80	0	80	0	70	0	60	0	60	0	60	0	
1906	60	0	60	1	60	0	60	0	60	0	70	2	70	0	70	0	70	0	70	0	—	—	—	—	3

CASE B. B.

Year.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total Fits for Year.
	Br	Fits	Br.	Fits.	Br	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br	Fits.	Br.	Fits.	Br.	Fits.	Br.	Fits.	Br	Fits.	Br.	Fits	
1904	—	—	—	—	—	—	—	—	—	—	—	18	—	71	20	15	40	8	50	3	60	1	60	3	119
1905	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	60	0	50	0	50	0	50		0
1906	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	—	—	—	—	0

Is the condition we recognize as epilepsy a disease or is it only symptomatic? Is there such a malady as idiopathic epilepsy? Epilepsy must be regarded as the result of a disease or the perpetuated sequel of one, a vicious habit of brain being established. The only point on which there seems to be unanimity of opinion is that one fit predisposes to another, the oftener they occur the oftener they are likely to occur, until they become in a way self-perpetuating. Much has been written as to the relative importance of predisposing and exciting causes. For practical purposes it would be well to ignore predisposing causes, and, after all, their presence is a supposition. It is supposed that convulsions would not occur during teething unless there was a predisposing cause such as heredity, rickets, or nutritional instability. Yet in my cases rickets and heredity have been conspicuously absent. I can trace 33 per cent. of my cases to their origin during teething, and one of these cut teeth so early as the third month, and in others of which I have had personal knowledge teething was by no means delayed. Moreover, one has to think of the hundreds of eminently rickety children who never have a fit. In my experience the only constant factor in infantile convulsions has been the evidence of pain and unrest, and the number of cases of infantile convulsions that have gone on to epilepsy has been large.

Pain and nerve tension seem to so disturb cerebral harmony that there is a furious outburst of energy giving rise to a display of sensory, vasomotor, and motor function constituting the fit. The fit is so obviously an outcome of cortex function that idiopathic epilepsy is regarded as a disease of that area. Epilepsy is a malady that lasts for many years, it is a malady that is very prevalent, it has afforded the fullest and best opportunity of exhibiting its pathology. Thousands of *post-mortem* examinations must have been made by the best pathologists on cases that ought to have demonstrated the lesions in its completed stage. Yet no single constant unvarying condition has been found. Pigmentations and vacuolation cells, changes in the perivascular spaces, induration of the pes hippocampi have been given up as the causes of epilepsy; degeneration of the cells in the second cortical layer has not been verified. The tendency now is to assume that an unseen and invisible lesion is present, a chemical one —one adduced by Gowers and accepted generally because Gowers has said it, and that is, "an abnormal state of chemical nutrition, whereby the molecules are more easily detached and their atoms yield with undue facility to the attraction of the adjacent oxygen." If this is the cause of epilepsy it is not surprising that pathologists have been unable to see it. Briefly, the reasoning seems to be that epilepsy is, from a study of its symptoms —aura, loss of consciousness, tonic and clonic spasm, convulsions, coma, drowsiness and sleep—so obviously a

display of the functions of the cerebral cortex, that the disease must be seated there, and this is supported by experimental investigations, especially those of Bechterew. He proved that convulsions with tonic and clonic spasm followed by coma just like epilepsy are produced on electrical stimulation of the brain cortex. But does it follow that the disease must be in the cortex because the symptoms are those of cortical function and they have been produced by stimulation of the cortex? I think not; Bechterew's experiment amounts to this, that a healthy brain gave epileptic symptoms on stimulation. This is significant; there are two factors—healthy brain and stimulation—and they give epilepsy. No need of heredity, no need of rickets, no need of abnormal chemical nutrition, with detaching molecules and yielding atoms. I am of opinion that we have in Bechterew's experiment the explanation of epilepsy as we find it in everyday practice—a healthy brain bursting out into fury owing to its over-stimulation by sensory impressions poured into it from one or more or varying sensory areas, the pain and tension of teething acting like the electrical stimulation: the brain gets teased, less tolerant, almost vicious in its habits, so that it will reply, long after teething has passed away, to other sensory disturbances with an epileptic fit, thus explaining how so many cases of infantile convulsion go on to what is called idiopathic epilepsy. Epilepsy thus becomes a reflex act in its origin and a cerebral vice in its fuller development and perpetuation.

This view of epilepsy in its origin being mainly, if not wholly, a reflex disease, brings into harmony many apparently hopelessly divergent facts regarding its etiology and treatment; for there are undoubted cases on record where correction of errors of refraction has cured the epilepsy, and of epilepsy ceasing after the nose and throat have been cleared of adenoids. I have had a case where constipation was the cause and cascara the cure. Osler mentions a case where an undescended testis was the cause of epilepsy; pressure on it produced an attack; its removal cured the disease. Gynaecologists have seen the origin of epilepsy in ovarian irritations. Oculists have found it in eye-strain. Dietetic specialists have traced it to the Sunday dinner, while the genito-urinary surgeon accounts for it all by a floating kidney. They are each and all right in their observation if they would only allow that causes might be found outside their area requiring treatment outside their routine.

Treatment.

Treatment of epilepsy is to remove the cause where this can be done, and, where it cannot, render it inoperative. The need of classification is again obvious; there are some cases that must be ruled outside the hope of much betterment by any treatment—developmental cases, cases arising in imbeciles, in the microcephalic, in inoperable tumour cases, and probably the confirmed epileptic, the individual who has had severe epilepsy for twenty or thirty years, and whose mind, brain, and body are hopelessly wrecked by repeated fits. His time for treatment is past. Peripheral, traumatic, emotional, and toxic causes give rise to about 60 or 70 per cent. of all cases in childhood and youth, and are, in my opinion, curable if treated early and long enough.

Bromide treatment is necessary and curative in peripheral, traumatic, emotional, and toxic cases. I think it was Sir T. R. Fraser who first demonstrated that the action of bromide was one of allaying reflex action. A stimulus of given strength was applied to the leg of a frog, general muscular contractions followed; under bromide the same stimulus produced less contraction, while more bromide limited the contraction to the side of the body that was stimulated. A larger dose of bromide limited the contraction to the leg only.

Epilepsy being due to severe, prolonged, or repeated sensory stimulation of brain, I use that amount of bromide that is necessary to stop the sensory stimulation. The amount required to do this varies exceedingly. Eighty grains a day is the average, but so small a dose as 60 grains has been sufficient to arrest epilepsy of an intensity that was to be estimated by the occurrence of 267 "grand mal" seizures a year. Among the boys at the colony now, 130 grains a day has been the highest dose given so far; but I have given 320 in private practice and arrested the disease. The method is to give 20 grains night and morning, and increase by 10 grains per day as often as fits recur. Epileptic boys stand bromide very well, 80 or 100 grains per day are taken without them showing any sign that they are taking a drug; 150 or 200 grains per day begins to interfere with the equilibrium—their walking becomes uncertain, and they ought to be kept in bed. With larger doses, swallowing and organic reflexes are interfered with. Adults do not stand bromide nearly so well. The boy that had 320 grains had sordes on his lips and gums, his breath was foul, swallowing was difficult, there was slight haematemesis and melaena, respiration was shallow, and râles were heard. The fits, which were numbering eight and ten a day, stopped, the bromide was gradually reduced, and the boy had no more fits for two years. I detected no toxic action on the heart; it remained regular throughout, no dilatation, little loss of clearness about the sounds. The toxic action of potassium salts on the heart to me seems a myth. I use citrate of potash in large doses—60 to 90 grains per day—for long periods for gravel, migraine, and some eczemas, and fail to find the slightest evidence or hear patients (often old) complain of any symptom of heart weakness. On the other hand, with bromide I find respiration does get embarrassed, slow, shallow, or at times halting and deep, and accompanied with râles and rhonchi. I find in Martindale's *Extra Pharmacopoeia*, 1906, Dixon is quoted as follows: "Potassium salts administered per os are non-toxic; they are excreted faster than they are absorbed."

Bromide rash may well be ignored. I use the best English-made bromide, and rashes have never given me any trouble. Of 40 cases taking bromide now, only 3 show any rash; in 2 it is very faint, a few papules on the forehead. In 1 it is severe—takes the form of boils, forming ulcers with purpuric-looking surrounding skin. This particular boy had an attack of the same thing about a year ago, and it disappeared in three weeks without the bromide being knocked off, and without anything in the way of treatment except a soothing antiseptic ointment. Other objections to bromide are that it makes them look blue and blotched, and miserable, starved, dazed, and ugly. This is a gross libel; such appearances are not due to bromide. I had an epileptic under my observation, but not under my treatment, who very well illustrated this description, but he never took bromide. He died a suicide, and the coroner's jury returned a verdict of death due to temporary insanity arising from business worries.

For those few cases that may have their origin in absorption of toxic products from over-eating, from unsuitable food, or from constipation, diet is of importance, but for the bulk of cases diet might be summed up in—three meals a day, everything fresh, everything limited, flesh never oftener than once a day and three times a week is ample. In the salt-free or purin-free diet I see no likelihood of good being done.

A few more years of Starnthwaite experience will prove whether epilepsy in the young, when taken early and treated assiduously, can be permanently arrested. The outlook at present is very hopeful, and, if we succeed, then the question becomes a very large one, and one, I think, for the State to deal with.

A CASE OF HYSTERICAL SOMNAMBULISM, SHOWING ABNORMAL ACUITY OF VISION IN THE SOMNAMBULISTIC STATE.

By JAS. W. RUSSELL, M.A., M.D.Cantab., F.R.C.P.Lond.,
Assistant Physician to the Birmingham General Hospital.

A girl, aged 21, a teacher, typewriter, and now a student of music, was sent to me on July 29th, 1907, complaining of sleep-walking of a month's duration. Having at that time temporary charge of beds in the Birmingham General Hospital, with the consent of her doctor I took her in for the sake of observation, and it was during her stay in that institution that the events recorded below took place.

Family History.

The patient's mother died aged 29, but the cause of death was not known. Her father, at the age of 26, committed suicide by shooting himself in her presence. Two brothers are living; one is in good health, the other

"suffers from abscesses." Another brother died at the age of 4 years.

Previous History.

Menstruation began at the age of 12, and has always been irregular. She has had an "abscess in the ear"—probably of the external meatus only—and suffered in childhood from "brain fever" and three attacks of measles; she has also had influenza three times. She has always been of a reserved and nervous disposition, and has latterly been exposed to some amount of worry of a family nature. Though only a child at the time of her father's death, the event—of which she has a perfect recollection—naturally made a great and lasting impression on her mind. She has always been averse from speaking of it, and I only obtained a knowledge of the fact from a friend who accompanied her on her visit to my rooms.

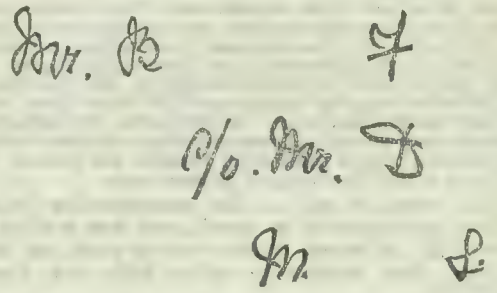
History of Present Complaint.

The first attack of sleep-walking occurred three years ago, soon after taking up her residence in a Belgian convent. It lasted for a period of three months. A year later a recurrence took place, and a third attack occurred for a short time at Christmas, 1906. She has now been troubled in the same way for about a month, and the somnambulism has occurred nearly every night throughout that period. The friend who accompanied her, and with whom she lives, made the discovery by noticing that her bedroom was in a state of disorder every morning; the drawers were "turned out," and things were displaced. She then began to come downstairs in the middle of the night; she played the piano, tuned her violin and put new strings on it. For the last week or two her friend has slept in the same room, and has locked the door on going to bed. She sleeps quietly for the first few hours, but about 1.30 or 2 a.m. she gets out of bed. She does not seem to be asleep, but it is impossible to arouse her to a sense of her surroundings, and she does not know her friend. On the first occasion on which she found the door locked, on attempting to go out of the room, she went at once to a table and wrote a letter in German, and then threw it away. Some days later—she had not tried to leave the room in the interval—on again finding the door locked, she looked up the note written on the previous occasion, read it, and then tried again to go out of the room. On the other nights she takes books down and reads them, studies harmony, and does crochet work, although the room is in darkness; and it is noticeable that, if there is a faint light from the gas, she takes her book or work away to the window and reads or crochets in the darkest part of the room. These occurrences last "for a few hours"; then she goes back to bed and often cries and knocks her head against the bedstead, or with her hand. In a short time she goes to sleep and remains quiet for the rest of the night. She awakes next morning feeling tired and always with a bad headache. She has never passed urine in bed. Occasionally in childhood she has walked in her sleep on individual nights, especially if working hard or reading for an examination at the time.

Observations in Hospital.

The patient was admitted into the Birmingham General Hospital on August 12th, 1907, and up to the time of going to bed appeared to be in a normal mental condition. About 10 p.m. the night nurse noticed that she was restless, she tossed her arms about, beat them against her head, and talked to herself. After a few minutes she sprang out of bed and began to walk round the ward. She then went back to bed of her own accord, and continued her restless movements for about half an hour. The house-physician, Dr. Hincks—to whom I am indebted for a very careful observation of the case—was sent for and made the following note: "As she was making a considerable amount of noise and there seemed no sign of her going to sleep again, I spoke to her. She took no notice, except to become rather more excited. After a time I was able to rouse her and she became very hysterical, crying and hiding her face in the bedclothes. She was then left alone and soon fell asleep." I may add here that all her attacks were preceded by a period of restless sleep, in which, to judge by her actions and moaning, she seemed to be suffering from severe headache; and she always complained of headache on being roused.

On the three succeeding nights she slept quietly, but in the early morning of August 17th, between 1 and 1.30 a.m., she sat up in bed and began to do crochet work. She did not talk. The ward was dark, except for two single and well-shaded electric lights far away from her bed, and both the house-physician and nurses were convinced that they would themselves have been quite unable to do work of any sort. The crochet, however, was well and correctly done. After a few minutes she put the work away, got out of bed, took a post-card from her locker, and wrote upon it, addressing it to a relation in Canada. The card was well and evenly written, and there were no mistakes. She then got into bed and went to sleep. The following night, that of August 17th, she again started her crochet work, but after a few minutes began to take it to pieces again. She then got out of bed, took paper and pencil from her locker, wrote a letter in German to the same relation (an Englishman), put it in an envelope, enclosing a sovereign, and addressed it. She headed the letter with the address of her own home, not that of the hospital. "She then took the letter and walked towards the door. The nurse and I (Dr. Hincks) followed her, but she took no notice of us, although we carried a lamp. As she was going out of the door I took her arm and led her back to bed. She came quite quietly, but after getting into bed she became very excited, as on the first night. After coming to herself, I showed her the letter. She did not remember having written it, but recognized the address as correct and the writing as her own." Dr. Hincks then gave her a piece of paper and pencil and asked her to repeat the address, taking the lamp away, so that the light was the same as that in which she had previously been writing; but she was quite unable to see, and wrote her lines one over another. The two following illustrations show, first the



skeleton of the address written during the attack of somnambulism, and then her attempt to write the same words in the dim light of the ward when thoroughly awake. I have suppressed all but the initial letters of the



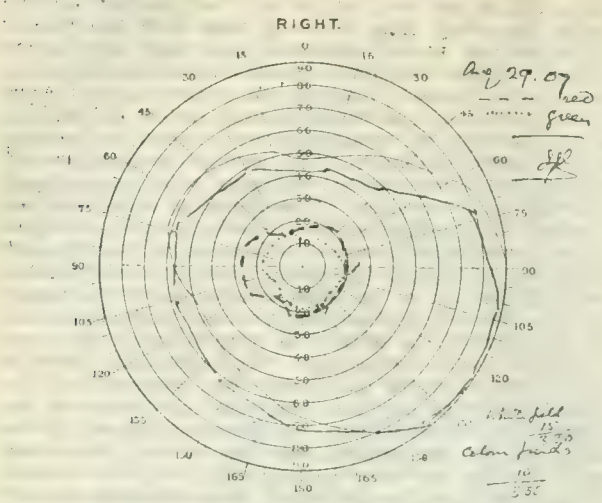
words of the address, in order to avoid possibility of identification, but the evenness of the spacing between the lines is evident, and the individual words were quite clearly written and spaced. I have also suppressed the surname in the second illustration. It therefore seems that during the hysterical condition the patient's sense of vision was abnormally acute, and this confirms the account of the events noticed by her friend before her admission to the hospital.

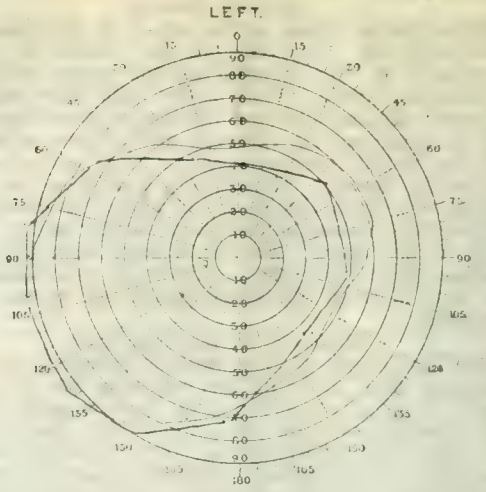
On the night of August 18th, at about midnight, she got out of bed and tore up all her old letters. She then walked down the ward, taking no notice of those about her, and tried to open the door leading on to the balcony overlooking the street. On finding it locked she pulled the blind aside and looked out. She then walked back to her bed. All this time she was moaning and seemed in great distress; and on this occasion she clearly referred to her father's death, saying, "Take it away; don't let him do it," etc.

We spoke to her and turned the lamp full on her face, but she took no notice. Her pupils were widely dilated and only slightly responded to light. After some shaking and repeated questions, she came round and said she knew where she was. Her pupils were then more contracted.

As usual, on coming to herself she complained of severe headache.

On the night of August 18th—the last night of the present series of attacks—she wrote a short letter to her





music teacher together with the following essay, putting it into an envelope and addressing it correctly, as she afterwards informed us:

SONATA FORM.

Sonata Form is divided into three forms:

1. Introduction.
2. Development.
3. Recapitulation.

(Here follow two lines crossed out.) The Introduction consists of two simple themes both written out shortly (? strictly) on the Tonic. The Development is sometimes very long and in it both themes are worked out thoroughly at great length. The Development is always written in the Dominant. Recapitulation is a brief summary of the whole piece which is written again in the Tonic. Some sonatas also contain a short Introductory Theme, and snatches of this Theme will be found are generally found running all through the Sonata. A good instance is the "Pathétique" of Beethoven.

This essay, as well as the accompanying letter, was written quite clearly in pencil, and was indited in the dim light in which, in her waking state, she had previously been unable to write with any degree of legibility.

From this time onwards there was no recurrence of the sleep-walking, and the patient was discharged a week or two later in good health. Her doctor has recently informed me that "she is much better and earning her living as a typewriter, but has occasional night wanderings."

The physical examination showed little of importance. The chest, heart, and abdomen were normal, nutrition and digestion were good, the urine was free from albumen and sugar, and there was only a slight degree of constipation. The superficial and deep reflexes were, if anything, a little exaggerated. I could myself detect no areas of altered tactile sensibility; but Mr. Jameson Evans, who kindly made the examination of the fields of vision here recorded, discovered a small patch of anaesthesia just above and to the outer side of each upper eyelid. The accompanying figures show the fields of vision in each eye and the colour field in the right eye. These were taken on August 29th, and Mr. Jameson Evans informs me that they give practically normal results, though the colour fields are perhaps a little small.

I think that there is evidence in this case of the existence of abnormal acuity of vision during the somnambulistic state. It is of course possible that, after coming to herself on the night of August 17th, the patient might have recognized the object of the test to which she was subjected, and that a desire to arouse interest might have led her to voluntarily make the unsuccessful attempt at writing shown in the second illustration. The house-physician and the nurses, however, were fully convinced that the light in the ward was quite insufficient to allow of any writing or work to be carried out by any normal individual, and I believe that the results of the test may be accepted as reliable. It is worthy of note that the events which apparently occupied her mind during the sleep-walking were not forgotten when awake. Her father's death, the circumstances of the relation to whom she wrote, and the musical interest, were all fully realized in the waking condition. In this respect the case differs from many of the instances of hysterical somnambulism recorded, especially in France, in which the ideas present during the somnambulism have been entirely forgotten in the waking state.

A CASE OF MERYCISM.

BY H. F. LECHMERE TAYLOR, M.A., M.B., D.P.H.ED.

IN view of Dr. Brockbank's paper of February 23rd, 1907, it may be of interest to record the following case of merycism in a boy seen recently as an out-patient at the Mission Hospital, Jalalpur-Jattan, Punjab.

A boy of the village farming class, said to be 14 years of age, but hardly looking so much, was brought by his mother for pains in the arms. She herself is a leper, showing a perfect clinical picture of the unmixed nervous form of the disease, from which she says she has suffered for twenty-five years. She was afraid that her son might be developing the same condition and wished to have him examined. In the course of the investigation it came to light that he was a habitual ruminant. He and his mother, though questioned and cross-questioned in various ways, both gave a perfectly consistent account of the condition.

About four years ago he began to have return of food into his mouth immediately after meals. This seems to have begun when he was attending school and was in the habit of running home and eating a meal hurriedly during school hours. What came back was slightly bitter in taste, and at first he used to spit it out, with the result that he had a great feeling of nausea and his mouth became "as bitter as poison," to use his own words. Soon he learned that by swallowing the mouthfuls as they came up he could escape the unpleasant symptoms, and the habit of doing so was speedily established. He attended school for only a few months, and then went back to work on the farm, having a good deal to do with cattle; "imitation," however, does not seem to afford a sufficient explanation of the habit.

His present condition is that his food, which he now chews well and eats at the usual rate, begins to regurgitate in mouthfuls as soon as the meal is finished; he does not rechew it as it comes up quite soft; it is still slightly bitter in taste, but not enough so to be unpleasant; on the other hand, he derives no great pleasure from the process. If, however, he spits out a mouthful, he still suffers from a very bad taste in his mouth, associated with so much nausea and giddiness that he says he is unable to stand without support. The action is quite automatic, and goes on regularly till he begins to feel hungry for his next meal, when it ceases. He has no control over it whatever, nor has he any power of producing emesis at will. He does not suffer in the least from dyspepsia, but is usually somewhat constipated, a very common complaint in the Punjab.

His food, taken twice a day according to the custom of the country, is that of the men of his class, consisting chiefly of thin unleavened cakes of wheat or barley flour

(*chapatties*) along with a little lentil pottage (*dal*) or stewed green vegetables or butter; raw vegetables, such as carrots, turnips, and radishes, are probably freely indulged in; meat is a very occasional luxury. Milk and *lassi* (sour butter milk) are the only drinks except water. Fluids "return" even more markedly than solids.

There is nothing of interest in the family history, with the exception of the mother's condition. There were three other children; two boys died in infancy of small-pox, and a sister in adult age after childbirth. The mother knows of no one else in the family connexion who was in the habit of chewing the cud, and she has never heard of any other person who exhibited the peculiarity.

There is nothing else of importance in the condition of the boy himself. The pain from which he suffers seems to be rheumatic. Careful examination failed to discover any patches of anaesthesia or nervous disorder, suggestive of incipient leprosy or other general disease.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

EXCESSIVE PATELLAR REFLEX OF NERVOUS ORIGIN.

The following cases may be of interest in connexion with different points in Dr. Parkes Weber's valuable paper and Dr. Hobhouse's letter.

1. A man, suffering apparently from acute alcoholic insanity, showed Babinski's sign, but no other symptom of organic disease. As his mental state improved the extensor response gradually gave place to one of flexion. *After* this the mental improvement stopped, and signs of general paralysis began to appear. It may be held that the Babinski sign was due to early general paralysis, but against this are the facts that it disappeared as the effects of the alcohol wore off, and was absent when the general paralysis became manifest.

2. A woman, aged about 45, suffering from melancholia, showed Babinski's sign and a very marked wrist-jerk. She was under observation for some months, during which time her mental condition improved greatly, but recovery was not complete. The wrist-jerk diminished considerably, but the extensor plantar reflex was still present when she was last seen. In this case, of course, the Babinski sign may have been an early symptom of some organic change that had not become manifest when I last saw the patient.

If the extensor response is of functional origin in infants—as presumably it is—why may it not sometimes be so in adults too?

3. A young girl with acute mania, from which she recovered in a few months, showed exaggerated knee-jerks when first seen. Some time later both knee-jerks were absent. Methods of reinforcement were not practicable. Later still, one knee-jerk was present, the other absent. On recovery both were present.

4. A woman with syphilitic disease of the brain came under observation with ankle clonus. This disappeared later without any obvious change having occurred in the organic disease.

A slight degree of ankle clonus is well known to be common in functional disease and slight patellar clonus may occur.

It is not uncommon (so far as my experience goes) for the insane to show contraction of certain individual muscles when they are lightly tapped, like that displayed only more universally, by some emaciated patients and by those in the lethargic stage of hypnotism. The muscle most frequently affected seems to be the vastus externus, sometimes of one side only; others that I have seen are the deltoid, the pectoralis major, the triceps, the biceps, and the muscles of the hypothenar eminence. The patients who exhibit this phenomenon are mostly general paralytics or chronic alcoholics, in either case having organic changes in the brain; but I have seen it in a case of acute alcoholic insanity that recovered in less than a month, and in a case of simple melancholia which became chronic. This association with cases that are probably free from organic change, and the similarity of the phenomenon to that occurring in emaciation and the hypnotic state, point to its being due to a functional disorder of the cortex, just as is the exaggerated patellar reflex, in Dr. Parkes Weber's opinion. Perhaps Dr. Weber might have added absence of the knee-jerk to the conditions that may sometimes depend on functional cortical disturbance. The theory that it is necessarily due to the cutting off of inhibitive currents that pass down the pyramidal tract is hard to reconcile with its occurrence in deep sleep, in old age, in hypochondriasis, in emaciated persons, and even in the healthy. The results of Jendrassik's method of reinforcement are also hard to reconcile with the arrest of inhibition theory. No doubt it is said that this method acts by distracting the attention, and so cutting off the inhibiting currents; but, in the first place, the method may still prove successful (in cases where the reflex is not obtainable without it), even if the patient deliberately directs his attention to the knee while pulling on his hands; and, secondly, it was shown by the late Dr. Ch. Féré that the action of one set of muscles does not diminish, but actually increases, the energy of the cerebral cortex in other directions.

Tunbridge Wells. P. C. Smith, M.D.Durh.

MIDDLE MENINGEAL HAEMORRHAGE: TREPHINING: RECOVERY.

The statistics of von Bergmann, giving 16 recoveries out of 99 cases of middle meningeal haemorrhage, are an excuse for recording the following case:

A young man, aged 22, fell off a coal cart on to his head at 5.30 p.m. on June 1st; he was unconscious for ten minutes; he was then given sixpennyworth of brandy by an onlooker, and proceeded home by train. He then had some tea and bread-and-butter. At 8.15 p.m. he began to vomit, and complained of pain in his head; a medical man saw him, and at 9.30 p.m. he became drowsy; during the night his breathing was noisy, and he began to throw his arms and legs about. There were occasional intervals when he was conscious, and he spoke several times; he became quite unconscious during the early morning. At 8.30 p.m. on June 2nd—over twenty-four hours after the accident—he was admitted into hospital completely unconscious; breathing stertorous; pulse 52; pupils markedly unequal, the right fully dilated and the left of a natural size; both were insensible to light, and there was no conjunctival reflex; both arms and legs were in a constant state of movement; a slight boggy feeling was detected over the right temporal area. About 9 p.m., after consultation with my colleague, Dr. Bell (to whom I am much indebted for his help), a trephine was applied over the site of the right middle meningeal artery and at once blood clot was exposed; on enlarging the opening a large extravasation of blood was visible, which was washed away with saline solution; as no bleeding point was seen, the opening was further enlarged with Hoffman's forceps towards the zygoma; a bleeding vessel was finally found low down and this was underrun; the flap was replaced and a drainage tube left in the wound, as the brain did not readily expand.

At 5.30 next morning, patient could answer questions, although still drowsy. He gradually made a good recovery and has been in full work for three months. There was total paralysis of the third nerve on the right side for a time, but this gradually disappeared.

In this case there was no history as to which side was injured, and both arms and legs were in a constant state of movement; the slight bogginess over the right temporal region and the marked dilatation of the right pupil determined the site for operation. With regard to this dilatation of the pupil on the affected side Jacobson says: "It is a rare but most valuable sign; taken with other evidence of middle meningeal extravasation, this condition of pupil points to a large clot reaching down into the base and pressing forwards on the sphenoidal fissure and thus compressing the third nerve." This was proved at the operation and also by the third nerve paralysis.

There was a well-marked lucid interval of four hours. Miles and Thompson say the prognosis is grave when operation is delayed beyond twelve to eighteen hours; in this case twenty-seven hours elapsed before the man came into hospital.

I am indebted to the late House-Surgeon, Dr. Mactavish, for notes of the case and for his care in the after-treatment.

Lowestoft. Wilson Tyson, M.A., M.B., M.R.C.S., Surgeon, Lowestoft Hospital.

THE CONVEYANCE OF DISEASE BY DOMESTIC PETS.

IN view of the annotation appearing on page 520 of your issue of March 2nd, 1907, the following series of cases of diphtheria, the last two of which were very possibly due to the presence of cats in the house, may be of interest.

The first of the series was a girl aged 7. She was attacked on February 16th, 1907, was first seen by a medical man on the 21st, was removed to hospital on that day, and died on March 2nd.

The other members of the household consisted of the father, mother, three girls, aged 12, 4, and 4 months respectively, and a boy aged 2. The next to be attacked was the four-year-old girl. She was first poorly on November 2nd, was seen by a doctor and removed to hospital on the 5th, and died on the 15th.

The third case was on December 20th, the boy being the victim. He was removed to hospital on the 22nd, and remained there till after the end of January, 1908. There were then left the father, mother, and the two girls of 13 and 1. Swabs from the throats of these gave negative bacteriological results.

On January 23rd, 1908, the baby fell ill, and was removed to hospital the following day with diphtheria. On the occurrence of the second and third cases I made careful inquiries as to the extent of disinfection carried out, and, so far as could be judged, nothing was overlooked. The mother was a careful woman, and probably had not concealed any articles that had been near the patients; these had been removed and disinfected by steam, and every room in the house had been sprayed on each occasion.

I had noticed that there were two cats—a tabby and a black one—both of which were said to be in excellent health throughout. They had, however, been petted by the children, and probably by the patients, and, when the fourth case was notified, it occurred to me that it might be worth while to attempt a bacteriological examination of their coats. Accordingly I rubbed a moistened swab thoroughly over the fur of each cat. The cultures on serum consisted largely of a vigorously growing bacillus resembling *B. subtilis*, and there were also a number of cocci. Smears from the culture derived from the tabby cat, however, showed a considerable number of organisms identical in appearance with the Klebs-Loeffler bacillus, both when stained by methylene-blue and by Neisser's method. A few Neisser-positive organisms were present in the culture from the black cat, but I could see no diphtheroid forms in the smear stained by methylene-blue.

I tried to isolate the suspicious bacillus from the former culture, but failed, owing to the predominance of the other organisms, so that complete proof of the presence of the specific bacillus is lacking. Nevertheless, the cats afford the most probable explanation for, at any rate, the third and fourth cases, since the house is in an isolated portion of the borough, and there had been no other cases of diphtheria in the neighbourhood since the beginning of the year. None of the last three children to be attacked attended school, and the eldest girl had left school before the second case happened. There was nothing in the general surroundings to account for the disease, and the sanitary arrangements of the house were in good condition.

The cats had been destroyed and buried before I had another opportunity of making an examination.

A. E. PORTER, M.D., D.P.H.,
Medical Officer of Health, Reigate.

Reigate.

ON THE EMPLOYMENT OF THE ARTIFICIAL MEMBRANE IN MARKED TEMPORARY DEAFNESS DURING THE SUBACUTE STAGE FOLLOWING ACUTE TYMPANIC SUPPURATION.

IT is probable that in no condition is an artificial tympanic appliance likely to prove so successful in temporarily improving the hearing as in the subacute stage of tympanic suppuration, when all pain and acute inflammation of the tympanum have subsided—that is to say usually in the second or third week following perforation. In this stage the deafness is usually still very marked, but there are often short, lucid intervals of fairly good hearing. One is frequently asked by business and professional men if nothing can be done to maintain this temporary improvement of hearing in order that they may be able to hear at a Board meeting, in a court of law, etc. They are generally cases where either both ears have been attacked, or where, with unilateral acute inflammation, the hearing powers of the other ear has been previously destroyed. In these circumstances catheterization, together with efficient aural toilet, often improves audition for some hours, but the duration of the improvement is uncertain. The employment of an artificial tympanic appliance forms no part of the routine treatment of the stage under discussion, and I fully recognize that the irritation caused by a foreign body, and the impairment of tympanic drainage through the perforation (in cases where the Eustachian tube is blocked by tumefaction of its mucosa) is generally very unsound practice; but there are occasions where it is of great, perhaps of vital, importance for a patient to attend at some special function and hear what is said, and in these circumstances I have not hesitated to try the effect of an artificial tympanic appliance, and, if successful, to allow the patient to wear one, warning him of the dangers of the practice if adopted as more than a temporary expedient. Two recent cases in my practice will illustrate the marked improvement in hearing occasionally obtainable by inserting an artificial tympanic appliance, and one of them shows the evil results of putting too implicit confidence in the discretion of the patient.

In the first instance a member of the legal profession was specially anxious to appear in court. His left ear had been rendered useless by old-standing disease. His right ear was still discharging muco-pus, the perforation of fourteen days' standing was large, the Eustachian tube blocked, bone conduction was good and ordinary speech was heard at a distance of 5 ft., the watch on contact only. With a cotton-wool appliance in position, the watch was heard at 20 in., and general conversation could be followed without difficulty. He was warned that the "drum" must be immediately removed at the end of the meeting and even before on the first indication of irritation or pain. The hearing power was temporarily restored by me by this method on three separate occasions, and the patient has since made a good recovery.

In the second case the patient was a middle-aged lady, whose left ear was useless as the result of suppuration with adhesions during infancy. The right membrane had perforated seventeen days previously, there was very slight discharge, and the tube was not so blocked as in the former case. The perforation was small, and was healing rapidly. There was great variation of the hearing power; at times it was sufficient for all ordinary purposes, but was not improved by catheterization. She was most anxious to hear well during the Christmas festivities at home. With the artificial membrane in position, the hearing for the voice was almost normal. In a weak moment I taught her to apply a cotton-wool membrane on a sliver style. I advised the cautious use of the appliance, its removal on the onset of irritation, pain, tinnitus, or increase of discharge, and gave implicit instructions that it should be worn at the most only two hours daily. She visited me a week later, hearing well, with the artificial appliance in position, but informed me that she had been obliged to wear it continuously during the daytime, otherwise she was nearly stone deaf. On making an examination I found the discharge greatly increased, the perforation double the size it was when last seen a week before, and the remains of the membrane tumefied and red.

It seems more than likely in this case that the indiscreet use of an artificial appliance at this stage will result in permanent impairment of hearing, perhaps involving the necessity of the recourse to the drum for the rest of her life.

It is not my intention to decry generally the use of the artificial membrane; on the contrary, I feel that there are probably thousands of patients in this country suffering from chronic deafness with perforation and displacement of ossicles who might be benefited by a properly adjusted appliance, but the cases here recorded show that whilst in subacute conditions the artificial membrane can be used temporarily, in exceptional circumstances, with marked improvement to audition, yet its *incautious adoption as a routine method* in acute and subacute conditions is fraught with considerable risk of bringing about a chronic discharge and of permanently reducing the hearing power.

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REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Dr. JAMES RITCHIE, President, in the Chair.

Wednesday, March 4th, 1908.

DIVERTICULA OF THE INTESTINES.

IN a paper dealing with this subject, Mr. A. THOMSON stated that diverticula might occur throughout the whole alimentary tract, with the exception of the caecum and ascending colon, and were of two types, the congenital, in which the protrusion depended on the persistence of fetal structures, and the acquired, in which the chief etiological factor was any condition that impaired the integrity of the muscular coat of the digestive tube. The former frequently possessed a mesentery, the walls contained all the coats which occurred in the normal ileum. He had seen two of the acquired type in the lower ileum, each of them solitary, and each due to a localized disease in the wall of the intestine. The first was met with in the course of a laparotomy in a woman, aged 65, who had suffered from colicky pains of a recurrent nature in the right lower abdominal region and signs of obstruction. A diverticulum was found arising about 2 ft. from the lower end of the ileum, about the diameter of the little finger, and 1 in. in length. This was removed and a subsequent examination showed a number of foci of tuberculosis scattered in the different coats of the intestinal wall, and at one point those had destroyed and replaced the circular layer of muscle. It was inferred that the localized destruction of the circular muscular coat was responsible for the formation of the diverticulum, and that the colicky pains and threatened obstruction were due to its presence and to adhesions which had formed in its neighbourhood. The second case was met with in a man aged 33, who two years previously had an attack which was believed to be appendicitis. The present attack also simulated appendicitis. The abdomen was opened thirty-four hours after the first onset of symptoms, and a small amount of clear serum escaped. The appendix did not show any sign of recent inflammation, but at about 18 in. from the ileo-caecal valve a diverticulum was found, of the "finger of a glove" type, presenting a bulbous enlargement at its extremity. Three years had elapsed since the operation, and there had been no return of the abominal symptoms. The bulbous enlargement referred to was found to consist of a cortex of fat invested with a thin serous membrane, and of a central mass made up of two separate portions of an accessory pancreas. The inner portion was confined within the longitudinal muscular coat, and replaced the circular layer of muscle at the apex of the diverticulum. The consequent weakening of the intestinal wall had allowed of the formation of the diverticulum. It resembled the normal pancreas in the greater part of its extent. The larger mass of pancreatic tissue lay outside the muscular coat, and could not be responsible for the formation of the diverticulum. It presented changes from normal pancreatic tissue which suggested that it was in process of transition into an alveolar cancer. Such changes had been observed before in the accessory pancreas, and possibly threw light on the anatomical beginnings of cancer, and afforded an illustration of the doctrine of the origin of tumour growths from embryonic residues propounded by Cohnheim. Mr. SCOT SKIRVING had met with several small diverticula directed inwards in cases of strangulated hernia.

SANATORIUMS FOR THE TUBERCULOUS POOR.

Dr. A. WALKER, in a paper dealing with the curative treatment of phthisis among the poor, said that the work most suitable for the State lay not in undertaking the curative treatment of phthisis, but its control so far as it was infectious. In the United Kingdom only about 1,000 beds were available for the treatment of phthisis amongst the classes which suffered most from this disease. In some cases their funds came from rating bodies, in others from charitable funds, paying patients, friendly societies, and individual working men. The results obtained so far justified their existence and a large increase in their number. Dr. LAWSON (Banchory) emphasized the importance of early treatment. It could only be secured either by compulsory notification or by placing both the patient and those dependent on him beyond want during treatment.

INOCULATIONS OF BACTERIAL SUSPENSIONS.

Mr. PERL RITCHIE, discussing the value of such inoculations, said that the reaction of the blood to a bacterial inoculation was enormously in excess of requirements, and the protective substances formed were therefore available for combating existing disease, or for guarding against future infection of the same nature. When the infective diseases were localized, inoculations increased the quantity of specific antibacterial substances in the blood plasma, and those might either destroy the organisms or prepare them for phagocytosis. In very chronic lesions, such as those due to the tubercle bacillus, the latter might be immured in fibrous tissue, and thus cut off from the blood and lymph. In such cases inoculations had probably little effect directly on the bacteria, but tended to prevent extension of the disease. Phagocytic index estimations had proved of the greatest value in showing how small a dose of suspension was necessary to produce a marked immunizing effect, and also in proving the fallacy of frequent inoculations. It was not necessary to prepare bacterial suspensions from organisms derived from the patient; quite as satisfactory results could be obtained from stock suspensions.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Dr. W. R. DAWSON, President, in the Chair.

Friday, February 14th, 1908.

ALCOHOL AND MENTAL DISEASE.

THE PRESIDENT, in a paper on this subject intended to provoke discussion, said that, apart from personal predilections, the uncertainty existing with reference to the effects of that drug was largely due to deficient appreciation of the influence of individual diathesis and of the varying effects of different doses. On reviewing the evidence, it appeared that with normal individuals, under appropriate circumstances, small doses, properly diluted and taken with food not too frequently, were physiologically beneficial. With larger doses it was otherwise. A drunken bout was not only a microcosm of insanity, but indicated the probable course of chronic alcoholism in the same individual. Even of the technically insane all did not enter asylums, and therefore a complete estimate of the relation of mental disease to alcohol was impossible. The regional distribution of insanity did not correspond with that of either alcoholism or drunkenness, and for various reasons it seemed probable that not more than 10 per cent. of the asylum cases were generally attributable to alcohol. The cases in which it was contributory must be numerous owing to the susceptibility to alcohol of persons with any hereditary or acquired brain weakness. THE MACDERMOT said that his observations of prisoners had shown him that the examples of the criminal type came mostly from the cities, and that their parents were of inebriate habit; while the prisoners who came from the country were not of the asymmetrical type, and were not the heirs of those transmissible qualities, including intemperance. The public had changed its point of view as regards alcohol; it no longer looked at it from the point of view of the pulpit or the philanthropist, but from the point of view, so to speak, of the College of Physicians. They all wished for health, strength, and longevity, and when the medical profession taught sound views on the use and action of alcohol he was satisfied that it would not be the elimination of the drinker which they would see, but the elimination of drink. Dr. WALTER SMITH said the chief knowledge of the scientific effects of alcohol was a quite recent growth; the turning point was reached by Schmiedeberg, who, with unanswerable arguments, demolished the view still held by many that alcohol belonged to the class of stimulants. Alcohol was an essential member of the narcotic group of substances. Most medical men were much more cautious now than in his student days about the administration of alcohol, especially in acute disease. They had learned that most diseases got on better without alcohol, and they had learned that its careless use by their profession in the past had hurried many persons to premature graves. At

the same time they had to guard against exaggerations and inexact statements appearing in recent writings on the subject, such as that alcohol was one of the most frequent causes of consumption. As for the nutritive value of alcohol, it had been shown by experiment in America that alcohol could replace equivalent quantities of carbohydrates and fats, especially when the supply of these was deficient in the diet. To a person in health, on a sufficient diet, alcohol was absolutely unnecessary, and possibly injurious to some people, but it was idle to deny its possible value as a food in some cases. The effect of alcohol on the nervous tissue was a very complicated question, but there could be no doubt as to the deleterious effects of long-continued doses on the brain. As regards treatment of alcoholics, he did not at all side with those who maintained that it was dangerous to withdraw alcohol suddenly, and he refused to undertake medical treatment unless he could at once put patients under conditions of abstinence. Dr. DONNELLY said the way to effect permanent good was to reach the coming generation by educating the present generation of fathers and mothers, especially the mothers. In the past the medical profession had used its power, in regard to alcohol, to the detriment of the community, but a great deal of good was now being done through the agency of the profession in putting before the people the physiological action of alcohol and the deleterious effects of over-indulgence. It was exceedingly unwise of physicians to permit alcohol as a beverage without marked restrictions as to its discontinuance after a time. It should never be prescribed except as a drug, and never be given to mothers who were suckling their infants. Dr. DELAHOYDE, who confessed himself a life-long total abstainer, said he did not think that statistics fully represented the amount of insanity which was directly traceable to alcohol. He occasionally prescribed alcohol, but always under strict conditions. Dr. FALKINER agreed with Dr. Delahoyde that the mortality from alcohol was not really stated in the statistics. They had very often to look to the mortality of certain diseases of the nerves and the viscera, and of pneumonia, to get a reliable idea of the number of deaths that were directly due to alcohol. Dr. STRITCH said that one of the greatest evils of alcoholism were the indiscretions which it might lead an individual into; and there was little hope for the cure of the chronic drunkard unless they could get his active co-operation. Dr. BEWLEY said that alcohol affected the mind injuriously, but of itself it did not cause insanity unless there was something else present—something which he might call a congenital predisposition to insanity. Dr. WINTER said that if the medical profession was more sparing in recommending alcohol to people of nervous type it would do a certain amount of good in battling against the evil done by the drug.

LIVERPOOL MEDICAL INSTITUTION.

T. H. BICKERTON, M.R.C.S., etc., President, in the Chair.

Thursday, February 27th, 1908.

EXHIBITION OF CASES.

MR. NIMMO WALKER showed a case of *Tuberculosis of the conjunctiva* in a boy, aged 9. The outer two-thirds of the conjunctiva of the lower lid of the right eye was occupied by a raised flat-topped growth, with bright red nodular surface, which did not extend to the palpebral margin; the eye itself was unaffected. The diagnosis was confirmed by the presence of lupus on other parts of the body, from which it was probable that the eyelid had been inoculated. The exhibitor expressed an opinion that the common phlyctenular ulcer often called strumous or scrofulous conjunctivitis was not due to the tubercle bacillus, but akin to eczema. Dr. J. H. ABRAM and Mr. F. T. PAUL showed a specimen of *Colloid cancer of the stomach* from a boy, aged 13½ years, after anterior gastrostomy, which for the time being had brought great relief. Dr. E. E. GLYNN said that he had examined some 580 specimens of cancer from the wards and *post mortem* rooms of the Royal Infirmary since January 1st, 1900, all of which, except about 80 of the *post-mortem* cases, had been verified microscopically. The total number of cancer cases in persons of 30 years and under was 22; of these, 7 were 25 years and under, while 3 were 20 years and under including Mr. Paul's case. All these were confirmed microscopically except 3, which were obviously cancer from the *post mortem* appearances. The distribution was as follows: Cancer of the breast, 6; of the stomach, 5—ages 23, 27, 28, 28, and 13—4 being the so-called variety; cancer of the rectum and sigmoid, 4, 2 being colloid; jejunum, 1; cervix uteri, 1; epithelioma of the scalp, 1; testicle, 1; penis, 1.

BIER'S METHOD IN DERMATOLOGY.

Dr. STOPFORD TAYLOR and Dr. R. W. MACKENNA showed several forms of Bier's vacuum apparatus, which they had used in the practice of dermatology. Dr. Stopford Taylor said they had used the apparatus extensively during the last few months with much advantage in cases of lupus, acne, furunculosis, various forms of oedematous eczema, and leg ulcers. They had found a negative pressure of 2½ lb. per square inch, sufficient to produce a copious discharge of serum from callous ulcers, and the treatment to be followed by the rapid formation of healthy granulations. Oedematous eczemas drained in the same way rapidly healed up, and the vacuum process applied in cases of lupus, while of great value in itself, was of special efficacy when used in conjunction with the Finsen lamp. The method flushed the tissues from within, and by bringing serum laden with opsonins to the seat of the disease aided phagocytosis.

CHOLECYSTITIS.

Mr. KEITH W. MONSARRAT, in a paper on cholecystitis, expressed the view that cholecystitis should be studied not as an incident in so-called gall-stone disease, but as a well-defined inflammatory visceral lesion, in which infection from the intestinal canal was the primary causative agent. The formation of gall stones was one of the results of the infection; once formed they exerted an important influence on the gall-bladder infection, just as an appendix concretion might be responsible for a marked modification of the result of an appendicitis. Mr. F. T. PAUL thought that the analogy drawn between cholecystitis and appendicitis was quite reasonable, the essential difference being that one structure was in the direct line of infection, whilst the other was a good deal removed from it. He deprecated cholecystectomy except when absolutely necessary, which was very rarely the case. Dr. ABRAM said he was afraid the diagnosis of cholecystitis was not so simple as the paper would suggest. He quoted a case where just such symptoms led to operation, yet the gall bladder was found perfectly healthy. He agreed as to the rôle of infection in the causation of cholecystitis and gall stones.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 20th, Dr. GEORGE WILLIAMSON, the President, in the chair, Dr. A. W. MACKINTOSH exhibited a case of *Narcolepsy* in a carter aged 41 years. Since May, 1907, he had suffered from continual desire to sleep. The attacks of sleep came on suddenly, and lasted for a few minutes. He would fall asleep even when driving or at meals. The sleep was apparently quite natural, and the patient could be roused from it quite easily by touching him, and sometimes merely by speaking to him. These attacks were sometimes preceded by a "heavy feeling" at the back of the head. He was nervous and irritable and his knee-jerks hypersensitive, but otherwise nothing further could be discovered. There was a history of syphilis twenty years previously, and of alcoholism some years back, but not recently. From the lightness of the sleep the exhibitor did not consider these attacks to be of an epileptic nature; they might be the precursor of syphilitic brain changes. A somewhat similar case had been described in a schoolboy aged 10 years, who was admitted to an asylum owing to the development of mental changes and hallucinations of hearing. For eighteen months previous to admission he had exhibited marked attacks of a narcoleptic character. Dr. GALLOWAY described 5 cases of serious *Visual deficiency* affecting responsible employés in the marine and railway services. Two of his cases were engine drivers—one suffering from compound myopic astigmatism, and the other from hypermetropia. The remaining cases were trawl fishermen, all of whom had taken an active part in the navigation of

vessels. The first of these, who showed myopic astigmatism with vision (both eyes) $\frac{6}{6}$, had acted as the mate of a trawler. The other 2 cases were completely colour blind. Dr. J. Innes read notes of a case of *Atonic dilatation of the stomach*, which was successfully treated by lavage. Dr. Kelly gave the history of a case of syphilis in a house painter who was in the habit of holding his paint brushes between his lips. He developed a circinate and depressed ulcer of the right side of the pharynx, which appeared to be the primary syphilitic lesion. This was followed by the appearance upon the face and extensor aspects of both thighs and legs of an eruption, at first papular, later molluscoid or framboesia-like. As the patient exhibited a very marked idiosyncrasy towards both mercury and iodides, the skin lesions were scraped. They healed rapidly, leaving white scars. Several months later the old scars broke out again, forming painful serpiginous ulcers covered with lichen-like crusts. These were scraped with a successful result, and the patient when exhibited was in excellent health.

Glasgow Medico-Chirurgical Society.—At a meeting on February 14th, Dr. Walker Downie, President, in the chair, Mr. Arnold Lorand, of Carlsbad, delivered an address on the causation and rational *Treatment of Diabetes*. Diabetes, he said, developed most frequently in those addicted to a diet containing large quantities of meat and starch, especially in the children of diabetics. In such he had frequently found alimentary glycosuria after puberty. A reduction in the quantity of sweets, especially if much meat were taken likewise, was advisable as a prophylactic measure in such cases. Diabetes was caused by alterations in the various ductless glands—pancreas, thyroid, and adrenals. After giving large quantities of starchy foods, Langerhans's islets had been found to be diminished or otherwise altered. Also, excessive quantities of meat were apt to cause important changes in the thyroid. It was important also to remember that in cases where, *post mortem*, no pathological changes could be made out in the pancreas, there might have been, during life, some defect in the internal secretion of the pancreas. Glycosuria or diabetes was very apt to develop in conditions associated with hyperactivity of the thyroid, in infectious diseases, after mental emotions and in toxic states. On the other hand, glycosuria was rare in myxoedema, where we had a degenerated thyroid. The injection of adrenalin had been shown to produce glycosuria when injected into animals, thus proving that the adrenals also played an important rôle in the causation of diabetes. The ovaries, testicles, and liver were also frequently altered in diabetes. The various ductless glands were closely related, and any alteration in one was followed by changes in the others. The prophylactic treatment of diabetes was the most satisfactory. Diabetes often presented no clinical symptom, and so was, in the early and most favourable time for treatment, frequently missed. It was therefore necessary that the urine be examined for sugar more frequently than was usually done. A test meal, containing large quantities of sweets and meats, should be given, and the urine examined after two hours. Frequently large quantities of sugar were found after such a meal, though none was present before. Before operations such a test should be performed. Whenever the quantity of sugar has risen above 0.1 to 0 2 per cent., antidiabetic diet should be started. Dietetic treatment should always be rational and never excessively strict. Variety was a great boon. Meat should be given only once a day. Graham bread in moderate quantities was always permissible. Green vegetables, a few eggs (unless there was considerable albuminuria), kefyr or koumiss (third day) with sour cream, and one or two oranges were permissible; also apples, peaches, apricots could be given stewed. In this way the sugar came out in the juice, which could be avoided. In severe cases, especially in young children, the diet should not be so strict. Cream and milk should be given. Diacetic acid was of more importance in these cases than the sugar. Large doses of soda bicarb.—say, 7 drachms—in the day should be given; 3 oz. of carbohydrates in the day should also be given in the form of milk, or oats, or rice, or potatoes. The serum of milk of goats, whose thyroids had been extirpated, the author had found to give excellent results in cases associated with nervous excitement or insomnia. Opium and codeia were the most useful drugs, but could generally be given for only a short time.

North of England Obstetrical and Gynaecological Society.—At a meeting held at Liverpool on February 21st, Dr. A. J. Wallace (Liverpool), President, in the chair, Dr. Miles H. Phillips (Sheffield) shewed a specimen of the uterus in which there was an unusual degree of *Cystic degeneration of the cervix*. It had been removed by vaginal hysterectomy from a patient, aged 48 years, who who had had one child twenty-seven years ago. The condition was regarded as due to a fibrosis of the supravaginal cervix leading to closure of some of the gland ducts and retention of their secretion, comparable to involution cysts of the breast. Dr. Lloyd Roberts (Manchester) gave particulars of a ruptured *Ovarian cyst* occurring in a nulliparous woman, aged 52. At the operation evacuation in the usual way by trochar was impossible, owing to the gelatinous nature of the contents. The wall of the cyst had ruptured and similar material filled the peritoneal cavity. The patient made a good recovery. Miss Francis Ivens (Liverpool) related a case of pregnancy complicated by *Bilateral ovarian dermoid cysts*, occurring in a nulliparous woman, aged 35 years. Menstruation was always regular and ceased in February, 1906, and the patient sought advice five months later, thinking herself to be pregnant. On examination a cystic swelling the size of a tangerine orange was found lying low in the pelvis beneath the pregnant uterus. On opening the abdomen the opposite ovary was found to be the seat of a similar but slightly larger tumour, also dermoid in character. It was possible to enucleate both cysts, leaving all healthy ovarian tissue behind. Recovery was uneventful and the pregnancy was uninterrupted. Dr. Grimsdale (Liverpool) communicated a case of *Carcinoma* of the cervix uteri complicating a three-months pregnancy in a patient aged 36 years. There had been loss of flesh and a sanious discharge for three months. Abdominal hysterectomy was performed, and the patient made a good recovery. Mr. George G. Hamilton showed a photograph of the specimen, taken by Lumière's colour process. Dr. E. R. Embys-Roberts (Liverpool) read a note on *Cell dehiscence* in pseudo-mucinous cysts of the ovary, illustrated by colour drawings. He described the epithelial lining of these cysts as being (1) typical and (2) atypical, the former being the more frequent, although both varieties were occasionally met with in the same cyst. He drew attention to the changes in the epithelial cell during the formation and extrusion of pseudo-mucin, and thought it highly probable that the so-called "ovarian cells," or Drysdale's corpuscles, were really aggregations of pseudo-mucin granules, and that their identification would have borne out the contention of their describer as being pathognomonic of this disease of the ovary. The process of cell dehiscence was also described as occurring especially in cysts lined by more than one layer of epithelium. In the atypical variety cell dehiscence was especially marked, and represented the last stage in the life-history of the epithelial cell. The living cell was capable not only of the production but also of the extrusion of pseudo-mucin; the dead cell was filled with the substance which it could extrude, hence it ceased to be any longer a unicellular gland, and, tightly distended, was shed into the lumen of the gland acinus.

Ulster Medical Society.—At a meeting on March 5th, Mr. Andrew Fullerton (Vice-President) in the chair, Colonel Porter, R.A.M.C., read a paper on the *Treatment of syphilis in military practice*. He favoured the intramuscular injection of an insoluble form of mercury. Mr. A. B. Mitchell in a paper on *Duodenal ulcer* described 17 cases of gastro-jejunostomy for this affection and 9 cases of perforation. The cases were consecutive, and the 26 operations were all successful. The points he emphasized were that duodenal ulcer was much commoner than was previously thought, that the diagnosis was much less difficult than was formerly thought, the age was younger, occurring not infrequently in the young adult. Duodenal was more dangerous than gastric ulcer, and owing to the greater liability to perforate, to haemorrhage, and to relapse it was even more advisable to operate than in gastric ulcer.

Clinical Society of Manchester.—At a meeting on February 18th, Dr. J. J. Cox, Vice-President, in the chair, Dr. C. Heywood in a paper on *Calmette's tuberculin ophthalmic reaction*, stated that in his experience the 0.5 per cent. solution was, for children at any rate, quite strong enough to produce the characteristic reaction, and that even with a solution of this strength the reaction was occasionally too violent. Usually the reaction came on in from six to twelve hours' time. In one it did not appear until sixty hours after instillation; it was then a perfectly normal reaction of moderate intensity passing away in a week. In another case the conjunctivitis had lasted for six weeks and was now slowly clearing; this was in a child who at the time had no evident signs of tuberculous disease, but had recently developed a chronic pleurisy. In none of the cases had there been any effect on the temperature or general health. A negative reaction in a case of well-marked tuberculosis indicated in his opinion that the case was hopeless. Up to the present he had seen no case which gave a positive reaction where tuberculous disease was not found *post mortem*. The reaction, repeated at intervals, appeared to be of value in bringing about the healing of old lesions. Dr. C. H. Melland, in a paper on the *Rôle of suggestion in treatment*, said however great a physician's other abilities might be, they were all thrown away if he lacked the quality of being able to impress his patients with his sincere wish and ability to do them good. In many cases of illness—those classed as hysteria, hypochondriasis, neurasthenia or functional neuroses—there was an extreme liability to magnify out of all proportion insignificant disturbances that in a healthy person would pass unnoticed, or to evolve wholly imaginary symptoms, and even when there were real organic disease much additional misery was caused by hypothetical troubles being grafted on to the real. These were mentally induced in the patient by some process of suggestion, in whatever way originating, and in treatment counter-suggestion should be utilized. The first essential was a careful and accurate diagnosis, especially to determine to what extent the symptoms were due to functional disease; then a hopeful prognosis as to the cure of these symptoms; and, finally, careful details as regards treatment directed to improve the patient's general sense of well-being, and to confirm his confidence that everything was being done to help him. It was the overweening self-confidence of the quack and of faith-healers and the like in their ability to cure, and the impression which they thus created in the minds of their patients, which accounted for their occasional success; and hypnotism as employed therapeutically was nothing more than a means of disposing a patient's mind so that it became unusually receptive towards suggestions.

Nottingham Medico-Chirurgical Society.—At a meeting on February 19th, Dr. L. W. Marshall, President, in the chair, Mr. Anthony A. Bowlby gave the mid-sessional address on the treatment of *Tuberculous disease of bone in children* as based upon 900 cases of hip disease. These had been treated without excision, and showed a mortality of less than 4 per cent., which compared with a mortality of 26 per cent. in cases treated before 1880. The stay of each patient in hospital was unlimited, and every child was taught to walk well with crutches for at least a year after all signs of active disease had disappeared. A large percentage of the fatal cases had had the disease more than a year previous to admission, and this meant a considerable lapse of time before treatment was seriously undertaken. It was of importance to treat the patient quite as much as the disease, in full confidence that with time and hygienic conditions he would ultimately cure himself of the disease. Antiseptic precautions were doubly necessary in operations for abscess in such subjects, for the very reason that the patient was unable to protect himself against pyogenic organisms, which found in the hip every condition favourable to their development. Very great care should also be taken to avoid infecting healthy tissues with tuberculous material. *Caeteris paribus* the chance of complete recovery depended on the duration of the disease and the child's age when first affected with it. The chief objection to the routine treatment by excision was that it was unnecessary for the cure of the disease. But, in addition, it was to be remembered that the operation often left much disease behind, and that the lameness that ensued was much worse than that ordinarily caused by the disease. There was great need for more hospitals for the treatment of children with tuberculous disease of the bones.

Society for the Study of Disease in Children.—At a meeting on February 21st, Dr. E. Cautley in the chair, the following were among the proceedings and exhibits: Mr. H. S. Clogg described a case of *Acute intestinal obstruction* produced by a band. The latter was composed of an intestinal diverticulum some ¾ in. in length, with more or less perfectly formed intestinal walls. Attached to the distal extremity was a flattened glandular body ¾ in. in diameter, which showed the structure of the pancreas on microscopical examination. Leading from the extremity of the diverticulum at its junction with the accessory pancreas was a definite, rounded cord consisting of fatty and fibrous elements. The diverticulum was regarded as a true congenital one. Dr. G. Carpenter showed two specimens of *Congenital morbus cordis* from female infants, and pointed out that, although the malformations were entirely dissimilar, the physical signs had been practically identical, while the bruits heard were the same as those audible in stenosis, and atresia of the pulmonary artery and perforate septum ventriculorum. The cases thus illustrated how deceptive were auscultatory phenomena in determining the nature of cardiac malformations. Mr. Macleod Yearsley showed: (1) A case of *Angeioma* of the right auricle and meatus in a girl aged 13. She had been under observation for three years, and during that time the angeioma had increased considerably. The right auricle measured 3 in. by 2 in., while the left was only 2⅜ in. by 1½ in. The growth extended down the meatus nearly to the membranum tympani. (2) A case of *Suppuration in the right labyrinth*, followed by recovery. At the operation a small erosion was found leading into the external semicircular canal. Instead of laying open the external canal by enlarging the erosion into it, the exhibitor opened up the lowest part of the labyrinth—namely, the vestibule. This not only promised good drainage, but avoided any accidental injury to the facial nerve. He considered that the case demonstrated that it was not always necessary to open the whole labyrinth. Dr. Porter Parkinson: A girl with *Inherited syphilis* who presented the following features: Want of development of the breasts and uterus, with absent catamenia, periostitis, chiefly of the tibiae and ulnae, synovitis of the knee and elbow joints, and nephritis, with marked *café-au-lait* complexion. Dr. Kenneth Kellie: A case of *Haemophilia*, with adhesions in the knee-joint. When 3 years old the boy cut his finger, and the resultant bleeding was difficult to stop. Since then he had suffered from bruises which appeared without any cause, and the right elbow and knee joints frequently swelled and became painful. The right knee-joint was in a condition of semiflexion, with great limitation of movement.

Association of Registered Medical Women.—A meeting was held on February 4th, Dr. Maythorne in the chair. The evening was devoted to the showing of clinical cases and pathological specimens. Miss Dobie showed: (1) A boy with *Multiple congenital dislocations* on the right side (subspinous dislocation of the shoulder, undue mobility at the acromio-clavicular joint, forward displacement of the head of the radius, and dorsal dislocation of the hip). There was weakness of the muscles of the shoulder and of the extension of the forearm. (2) A boy with *Absence of the fibula, the fifth toe and its metacarpal, and the cuboid bone.* This condition had been confirmed by a skiagram. Miss Thornett showed a case of early *Disseminated sclerosis*, the only signs being temporary double ptosis, pallor of the discs, diminished field of vision for colours and for grey, tremor of one eyebrow on looking downwards, increased knee-jerks and extensor plantar response. Mrs. Flemming showed a case of *Achondroplasia* in a girl aged 2 years and 4 months. From the fourth month of pregnancy the mother had been in very hard circumstances, with insufficient food. Miss Burgess showed a woman of 36, suffering from *Xerostomia* of twenty years' duration. The disease began shortly after the

extraction of all the teeth for advanced caries. Miss LONG referred to a case in which the affection had followed mental worry and had disappeared in a few months. Miss HAMILTON demonstrated a dissecting-room specimen of *Obturator hernia* from an old woman who had died of intrathoracic disease. The sac contained omentum, and was formed by the anterior layer of the broad ligament, causing marked anteversion of the uterus. An external direct inguinal hernia and an aberrant obturator artery were also present. Miss PLATT showed a specimen of *Endothelioma of the cervix* from a girl aged 18, which had been removed four years previously by Mrs. Boyd. The patient had recently been seen, and was in good health. The PRESIDENT read the report of the Vigilance Committee. She announced that copies of the resolutions passed at the last meeting with regard to the salaries of medical women taking posts as medical inspectors of schools had been sent to all women on the *Register*, and to the secretaries of the Education Committees throughout the country. She referred to the very satisfactory result of the action taken by the British Medical Association in inserting a warning notice in the JOURNAL. The salary offered by the Borough of Burslem to a woman medical inspector of schools had been at once raised.

REVIEWS.

OPERATIVE GYNAECOLOGY.

IN the preparation of *Gynaecology and Abdominal Surgery*[1] Professors HOWARD KELLY and NOBLE, in the opening words of their preface, tell us that they have been continually impressed with the intimate relationship which exists between those two subjects which constitute its title. The medical and pathological chapters are above the average and well suited to the advanced student. The specialist, however, will, rightly or wrongly, take more interest, we suspect, in the authors' descriptions of operative measures; and, after all, we cannot expect that he should not do so, for what is of most importance in a textbook of this kind is the verdict of accepted authorities on those grave responsibilities called operations. What they describe and practise is, we assume, that which they think should be practised by others. Dr. John G. Clark has made the best of a very grave subject, radical abdominal hysterectomy for uterine cancer. Judging from much that we have heard and read of late we must cordially agree with Dr. Clark's suggestion that the term "radical" should be still employed without designating it by any man's name, for as now performed it consists of the best suggestions made by several surgeons. Mr. Hermann Becker's illustrations are admirably clear, and Dr. Clark admits that Wertheim's most recent reports are highly encouraging. The German practice of warning all women who are nearing the climacteric about atypical haemorrhages and pains is commended as a plan which "should be instituted" in Dr. Clark's country. There is a capital chapter by Dr. Noble on the coeliotomy incision, with illustrations which really make clear what they profess to explain. One shows how the operator's left hand may be introduced through an incision to guide and protect the gall bladder whilst his right hand is employed in cutting down on that structure through a higher incision, a practice inaugurated by Kelly. Naturally, Dr. Noble, who objects to the through and through suture, advocates his method of sewing up the divided aponeurosis so that one edge slightly overlaps the other: all will not agree, but his statements are clear and his arguments reasonable. The same writer contributes the chapter on plastic operations on the perineum, vagina, and cervix; curettage of the uterus and inversion of the uterus. Like all writers on the subject, he holds his own views on that still disputed question—the etiology of prolapse. He insists that, as a matter of fact, almost all cases are caused by injuries of the perineum or sacral segment of the pelvic floor. This theory is not universally accepted. The author when preparing this chapter had not the opportunity of studying Halban and Tandler's important *Anatomie und Aetiologie der Genitalprolapse beim Weibe*, recently published, where the causation of these displacements is shown to be much more complex than is generally believed. Dr. MacMonagle contributes an article on another subject, as to which an understanding of pelvic anatomy is of paramount importance, namely, ventral suspension of the uterus. He insists strongly on the distinction between "suspension" and "fixation," as do most modern authorities. He warns the student against the possible dangers of infection, a duty which some advocates of procedures of this class have overlooked, and he claims, as usual, good results. One of his patients, he informs us, afterwards bore triplets, safely delivered by a midwife. It is, however, difficult for the operator to calculate how much discomfort has been spared the patient who has undergone a "suspension." Many women admit that they still feel perfect relief when the uterus has fallen back into its original faulty position, whilst others complain of all the original discomfort which worried them before the operation, although the uterus remains well suspended. Dr. MacMonagle very rightly insists on long rest after an operation of this kind. This work will no doubt be freely consulted by those who undertake ovariotomy and abdominal operations for the extirpation of fibromyomata and of the uterus bearing tumours of that type. Removal of ovarian cysts is held by some surgeons, we fear, to be a trivial "stock operation," an opinion strongly to be condemned. Dr. Alexander J. C. Skene, to whom the chapter on ovariotomy has been entrusted, lays great stress on preliminary and post-operative treatment. We question whether it is judicious to teach the use of the cautery in a work largely written for beginners, but Dr. Skene does very well to state emphatically that the competent operator seldom finds any necessity for touching the peritoneum after the tumour has been removed. Dr. Noble, in the chapter on abdominal hysteromyomectomy and myomectomy, writes very concisely on that now familiar subject. The text is illustrated by some of Kelly's finest drawings. Doyen's panhysterectomy is but briefly described. From this sketch of those chapters which treat of subjects in which the gynaecologist takes special interest the reader will understand that this work is an excellent treatise on its subject.

In order to make the steps of an operation intelligible by the aid of pictorial art a large number of clear drawings is always necessary. Surgical operations in the vagina are particularly difficult to explain by means of illustrations, therefore a long series of sketches of the highest quality as regards clearness is required. On that principle *Vagino-peritoneal Operations*[2] has been prepared by Drs. WERTHEIM and MICHOLITSCH. The original work is well known, and Dr. CUTHBERT LOCKYER'S translation is more than mere dictionary work, as he has had help from Professor Wertheim himself, as well as from Mr. Haltenhof, a teacher of German, so that the English description of the plates is quite as clear as the original German text. Each operation is demonstrated by drawings of each step in detail. The photographs of the field of operation were made in the cadaver after splitting the symphysis. In this way the vagina can be dilated so as to render all the parts up to the cervix, and all deeper structures exposed by surgical manœuvres, quite accessible for photography. The figures explaining the more general initial and final steps of operations—such as the opening up of the peritoneum through a vaginal incision anterior or posterior to the cervix, are of special excellence, which inclines us to agree with the translator, who in his preface expresses a belief that the volume will be of the greatest possible assistance to young gynaecologists. The drawings of the stages of vaginal hysterectomy will be valued by those who undertake such operations, for certain very delicate manipulations—especially the exposure of the ureter and its protection from damage—are not easy to follow when the surgeon wishing to learn is witnessing the performance of an expert in the operating theatre. Contrary

[1] *Gynaecology and Abdominal Surgery* Edited by Howard A. Kelly, M.D., F.R.C.S.(Hon.)Edin., Professor of Gynaecologic Surgery at the Johns Hopkins University, and Charles P. Noble, Clinical Professor of Gynaecology at the Woman's Medical College, Philadelphia. Illustrated by Hermann Becker, Max Brodel, and others. Vol. i. Philadelphia and London: W. B. Saunders Company. 1907. (Sup. roy. 8vo, pp. 859, 405 illustrations. 35s.)

[2] *The Technique of Vagino-peritoneal Operations.* By E. Wertheim and Th. Micholitsch. Translated into English by Cuthbert Lockyer, M.D., B.S., M.R.C.P.Lond., F.R.C.S.Eng., Consulting Gynaecologist, St. Mary's Hospital for Women and Children; Senior Out-patient Physician, Samaritan Free Hospital for Women, etc. London: Macmillan and Co., Limited. 1907. (Med. 8vo, pp. 335; 138 illustrations. 25s.)

to the rule, these subtleties can be better taught by the artist than by the operator, unless the latter employs the learner as his assistant. In conclusion, we find lucid demonstrations of certain procedures about which much is written in these days, such as shortening of the round ligaments through the vagina. Many of us are by no means sure of their value, and few will deny that the treatment of prolapse and displacements remains highly debatable. After-histories are as essential as dexterity, but we know more about the latter than about the former. Still, granting that plastic operations are to be largely practised, it is right that those who undertake to perform them should learn how to do so properly.

FEVERS IN THE TROPICS.

Fevers in the Tropics, one of the Oxford Medical Publications, is the title of an interesting work by LEONARD ROGERS, M.D., I.M.S., Professor of Pathology in the Medical College, Calcutta.[3] In the preface the author explains that he has attempted in this work to write an original account of fevers in the tropics, mainly based on the notes and charts of some two thousand cases in which he has personally examined the blood by modern diagnostic methods. The volume includes the Milroy Lectures on Kala-Azar, with the clinical parts greatly amplified, and a description of the early stages of the disease which have hitherto (according to the author) not been recognized. A fever which constitutes the presuppurative stage of amoebic abscess of the liver, and its rapid cure, is also described for the first time. This treatment, we are told, has in the Calcutta European Hospital led to a great reduction in the number of cases of abscess of the liver. Sections on unclassified fevers of the tropics include descriptions of "seven-day fever," first differentiated from malaria by the author, also the three-day fevers recently recognized in India. In addition to those, malaria, typhoid fever, Malta fever, plague, and the other fevers usually met with in tropical regions are described, accounts based on the recent work in sleeping sickness and yellow fever being on the suggestion of Professor Osler, included. The scope of the book is thus very large, and though very accurate accounts are contained in the standard works on tropical medicine of the present day, nevertheless the addition will prove a welcome one. Having briefly indicated the scope of the book we may next pass to the consideration of some of the matter in detail. The historical introduction is both useful and interesting. It is specially fitting that the work of early pioneers should not be allowed to pass into oblivion, when it is recalled, as in the present instance, it is clearly seen that many of the present-day ideas are based almost entirely on those of the past. John Clark's treatment of fevers in 1768 with cinchona bark is a striking example, and every one, we think, will agree with the author when he says "that if quinine be substituted for bark no better treatment of malarial fever could be written at the present time." It was exceedingly unfortunate for the inhabitants of India in those days that his valuable work should have been so completely destroyed by his successor Johnson, who, after his experiences in the East, published a book on tropical diseases which ran to six editions, this again showing that the recent boom in this subject is not new, but a revival. A chapter on the technique of the examination of the blood in fevers comes next, and, as it closely follows the ordinary teaching found in textbooks of haematology and practical tropical medicine, there is little that calls for criticism. The points made concerning the methods of working out the differential leucocyte counts have much in their favour; if time is no object, more cells can be counted than when time is precious, but the smaller figure estimations are often quite sufficient for everyday clinical work. Again, no two persons will probably be found to make exactly similar blood films whatever method they adopt: and it is perhaps doubtful whether even the author himself could produce time after time mathematically perfect films as depicted in his diagram; to do so the drop of blood would have to be exactly the same size, the shaft of the needle similar, and so on; but, until some more definitely universal method is invented, there is little more to say.

Dealing with the descriptions of the different fevers which follow the two introductory chapters, we may dismiss yellow fever and trypanosomiasis in a word, as they are not founded on the author's own work, but are compilations from different sources. Some of those, for the latter disease, are unfortunate and misleading; to quote only one, "the red corpuscles and haemoglobin have been carefully studied by Greig and Gray, who found them to be normal, in the early stages of sleeping sickness, while towards the end both might be actually increased without any signs of cyanosis." Low and Castellani, who have given a very excellent account of the clinical features of sleeping sickness, distinctly state that anaemia of varying grade is constant, the type being a secondary one with an average figure of 2,500,000 reds or thereabouts, and it is only in exceptional cases that an increase takes place. To the inexperienced, therefore, a a very false impression would be gained by the paragraph inserted by Professor Rogers.

The articles on typhoid fever, relapsing fever, the presuppurative stage of amoebic hepatitis, and dengue are probably the best in the book; that on kala-azar is too long; while that on malaria, though full enough for Calcutta, perhaps, is not sufficient for other parts of the globe. The account of typhoid fever in India is based on an analysis of over 100 cases treated in the Calcutta European Hospital during the last six years. It is not quite clear what part the author played in the treatment himself, whether he acted as the bacteriologist or the physician in charge; but however this may be, the accounts and temperature charts are excellent, and bring out some features of difference between the disease there and in Europe. Briefly, those are absence of the classical step-like rise of temperature, a more prolonged fever, pyrexia often exceeding thirty-three days, the stage of decline of the temperature unduly prolonged, and greater general severity of the disease. The symptoms are specially well analysed, and a good account of the disease in natives is given. To all who have had cases of amoebic hepatitis under their care, Chapter VI must strongly appeal. The wonderful power of ipecacuanha as a curative drug in cases of hepatitis without dysentery, and in obscure cases of pyrexia without dysentery or liver symptoms, is novel and well worth putting to the test. The author believes, and rightly, that ipecacuanha is a specific for amoebic dysentery, and, in view of the recent American work in the Philippines to the contrary, it is specially pleasing to have his testimony in favour of this drug.

Professor Rogers's name will always be best remembered in connexion with kala-azar, for his work on the flagellation of the parasite outside the human body, and the view that it is a house disease—one spread by bugs.

In the section on malaria Koch's teaching that there is only one species of malignant parasite is followed. This is in all probability incorrect, though of course it must be admitted that a double malignant tertian might produce daily paroxysms or a quotidian type. Charts 39 to 40 seem to show this. The clinical types—or, as the author calls them, "complications of malaria"—are not fully described. There is no word of the hyperpyrexial, choleraic, gastric, or dysenteric type—to quote only a few—and only about a page is given to blackwater fever. The observations on the endemic index as a test for the disease are exceedingly important, for the author clearly proves that, even though it is 0 for any given place, there may still be plenty of cases present there.

We should like to do more than mention the newly-described seven-day fever and the short three-day fever of the hot season, but limits of space forbid; it will be enough to say that they are written with care and contain important observations.

The work as a whole is of unequal merit, and a better title for it would perhaps have been "Fevers in India"; but the book contains the results of a mass of original work and personal investigations conducted with untiring energy. Its faults are due to its qualities, and it will certainly take a very important place in the annals of Indian medicine.

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[3] *Fevers in the Tropics, their Clinical and Microscopical Differentiation, Including the Milroy Lectures on Kala-Azar.* By Leonard Rogers, M.D., F.R.C.P., F.R.C.S., B.S., I.M.S., Professor of Pathology, Medical College, Calcutta. Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton. 1908. (Crown 4to, pp. 361. 30s.)

MOVABLE KIDNEY.

DR. NEWMAN, who has in the course of the last twenty years made many important additions to the literature of renal surgery, presents in his latest work [4] a systematic consideration of *Movable Kidney and other Displacements and Malformations* of the kidney. He deals in turn with the anatomy of the suspensory structures of the gland, with the pathology and etiology of different forms of abnormal mobility, and, after a description of the symptoms of each, discusses the best method of treatment. In the concluding chapter attention is directed to certain abnormalities in the form, size, and number of the renal organs, which are no longer to be regarded as merely pathological curiosities. From a distinctly clinical point of view this may be regarded as a very useful and instructive book. The author, who has had much practical experience of his subject, and taken a leading part in the work of substituting for nephrectomy a safer method of operation, discusses the symptoms and treatment of movable kidney fully and very clearly, and illustrates his sound teaching by a judicious use of typical cases. The chapter on progress and symptoms shows both the complicity of the clinical details in cases of movable kidney, and the best means of overcoming difficulties in diagnosis. From a clinical standpoint, and also for the determining of therapeutical indications, cases of movable kidney are classified under ten heads, from its simplest and most insignificant form to those advanced forms of severe pain associated with albuminuria and renal suppuration. In his remarks on the etiology of movable kidney, Dr. Newman is not so clear and convincing as he is in the more practical parts of his work. The chapter dealing with this portion of his subject consists mainly of criticism of the views of other authorities. The widely accepted theory that misplaced kidney is due to congenital causes is dismissed in a very few words, the author merely stating that he has not observed any facts to support it. The view that the disease may be the result of deviations from the normal configuration of the posterior abdominal wall is also rejected. Rapid general emaciation under conditions which do not prohibit bodily activity is regarded as one of the most important causes of movable kidney, but this view, it must be acknowledged, stands much in need of support from pathological and clinical evidence. The statement that a traumatic origin has been clearly demonstrated in many cases, coming from so experienced an observer as the author of this book, is one of much practical importance at the present time.

THE BORDERLAND OF EPILEPSY.

MOST of the substance of the six chapters which comprise this book [5] has already appeared as lectures in our columns or in those of one of our contemporaries. The importance, however, of the many unfamiliar facts which they contained, collected from their author's immense experience, and the value of the many instructive lessons educed and lucidly stated therein, more than justifies their publication in book form. For this purpose the lectures have been largely rewritten, a chapter on Some Sleep Symptoms has been added, and also, following the description of each borderland malady, suggestions as to treatment. From beginning to end there is not a page which is not engrossingly interesting, and throughout the whole work there is a steady endeavour to tie symptoms to their underlying mechanism. The origin of many of the phenomena described is obscure, and naturally the explanations given are conditioned by the limitations of present knowledge. For this reason Sir WILLIAM GOWERS's interpretation in places trenches on still debateable ground—for example, the assumption of a discontinuity of conduction at the junction of the neurons composing a conducting path and the still more problematical dendritic mobility—but whenever this occurs, the purely hypothetical nature of the ground upon which his argument rests is frankly admitted by the author. As stated in the preface, many of the facts are unfamiliar. It is not for this reason, however, that these lectures should be carefully perused, but because of the acuity of observation and the analytical thoroughness, which seize hold of inconspicuous phenomena, and, pressing them home to their deeper origin, prove them to be important differential criteria. The first chapter is on Faints and Fainting. Very frequently minor epileptic attacks have been diagnosed and treated for long as simple cardiac faints, and less frequently cardiac faints have been thought to be minor epilepsy. The point is one of great practical importance, and though Sir William Gowers enjoins that as a general rule, in the differential diagnosis of disease, symptoms must be combined and their relative weight considered, we may, perhaps, quote the final words of this lecture:

> Whenever there is evidence that loss of consciousness occurs with undue rapidity, sooner or more quickly than in the ordinary course of syncope, the epileptic aspect of the seeming faint should be noted. This is increased by sudden return to consciousness, or by its return through mental confusion rather than physical faintness.

The second chapter, on Vagal and Vaso-vagal Attacks, in addition to descriptions of "vagal" attacks (the symptoms comprehending subjective gastric, respiratory, and cardiac discomfort of fairly long duration combined at times with slight mental change) and "vaso-vagal" attacks (the above with vaso motor spasm) and their relations to epilepsy, contains a fascinating suggestion of the author's which is self-explained by the term of "extended epilepsy." Sir William Gowers suggests that "the elements of an epileptic attack may sometimes be extended, drawn out—lengthened, as it were, and thereby made less intense," so much so, in fact, that its nature may not be suspected. Foreign to our thoughts as it may be to conceive of the idiopathic epileptic attack as of anything but electric rapidity, we know that the aura, as Sir William points out, varies in duration, and certainly some of the cases described can be best explained on this hypothesis. The point is one well worth bearing in mind as one which may contain great potentialities. The two following chapters are devoted to Vertigo, and the fifth to Migraine. Some surprise, Sir William says, may be felt that migraine is included in the borderland of epilepsy. Possibly this may be true, but this attitude will not be maintained after reading this extremely valuable chapter. Definite and distinct as their differences may be, they have their relations, even though the distinguished author avers that their most frequent relation is as a source of error. He affirms that their antecedents differ, and that epilepsy and insanity rarely figure in the heredity of migrainous subjects. Epilepsy and migraine are undoubtedly two separate maladies; but the fact that they are known to occur in the members of the same family, in the same individual at different times, and to be interchangeable, replacing each other—apart from the fact of periodic migrainous headache occurring in the offspring of epileptics—is surely suggestive of their close genetic relationship. Even when epilepsy and migraine occur in the same individual, however, they are to be recognized as entirely distinct disorders requiring different treatment. Their differential diagnosis is therefore of first importance, and for this purpose the author's exposition will be found to be extremely valuable.

LIFE INSURANCE AND GENERAL PRACTICE.

THE majority of medical men have, at one time or another, to act as medical examiner for insurance purposes, and, while the training of the modern medical man should render him quite competent for the task, yet there are differences between this kind of examination and that carried out for purposes of diagnosis, which make the advice of an expert of considerable value and assistance. It is just this kind of advice which Dr. BROCKBANK offers in his work on *Life Insurance and General Practice*,[6] and, on the whole, he has achieved his object with complete success. The first two chapters on the different forms of insurance policies, different classes of lives, and the method of estimating the expectation of life will be found very useful by beginners in practice, to many of whom the subject will be quite unfamiliar. The remainder of the first section of the book is taken up with detailed instructions as to the systematic

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[4] *Movable Kidney and other Displacements and Malformations.* By David Newman, M.D., F.F.P.S.G., Surgeon to the Glasgow Royal Infirmary, etc. London: Longmans, Green, and Co. 1907. (Demy 8vo, pp. 246, 25 illustrations. 5s.)

[5] *The Borderland of Epilepsy.* By Sir William Gowers, M.D.Lond., F.R.S. London: J. and A. Churchill. 1907. (Demy 8vo, pp. 127. 4s. 6d.)

[6] *Life Insurance and General Practice.* By E. M. Brockbank, M.D. F.R.C.P. London: Henry Frowde, and Hodder and Stoughton. 1908. (Post 8vo, pp. 202. 7s. 6d.)

examination of the various organs of the body. The instructions given are quite unexceptionable, but it seems as if, in aiming at completeness, the author has covered a good deal of unnecessary ground, inasmuch as many of the directions given are such as ought to be obvious to any qualified man. The second section, which forms more than half the book, deals with "impaired lives," and this is the best part of the volume. There is no irrelevance here, and to the difficult question of the influence of various morbid states on the expectation of life Dr. Brockbank brings the result of much original and careful observation, as well as a thorough knowledge of the work of other authorities. The book can be confidently recommended as a valuable guide to all medical men engaged in insurance work.

HANDBOOKS OF BACTERIOLOGY.

IN the fourth edition of their *Manual of Bacteriology*,[7] Professor MUIR and Dr. RITCHIE have incorporated the more important results of the work which has been published since the appearance of their last edition in 1902. A good account of the bacteriology of epidemic cerebro-spinal meningitis has been added to the end of Chapter VII, and in Chapter VIII the account of Lustgarten's bacillus has been reduced to very small dimensions, and supplemented by a fairly adequate description of Schaudinn's *Spirochaeta pallida*, and the work of Metchnikoff and others upon experimental syphilis in anthropoids and monkeys. Wright's work on opsonins in relation to tuberculosis is treated fairly, and with a commendable degree of reservation and caution. With regard to the significance of the opsonic index in tuberculosis, the authors remark that "the method is still on its trial, and it is doubtful if even in the work of the most careful observers the limits of the experimental error of the opsonic method have been sufficiently defined." This criticism, as it proceeds from authors whose technical skill and practical experience in this particular work are beyond dispute, must be regarded as an expression of opinion deserving serious consideration. At the end of the volume an additional and very useful chapter has been added on trypanosomiasis and allied infections. We endorse the opinion, expressed in our reviews of earlier editions, that the book is thoroughly good, and forms one of the best student's textbooks on bacteriology which have been published.

Abel's Laboratory Handbook of Bacteriology,[8] translated from the German by Dr. GORDON, is quite up to the standard of several small textbooks on the same subject which have been written by competent English bacteriologists. We do not find that the present volume is in any important respect superior to other laboratory guides with which bacteriological students in this country are already familiar, but we can assure the intending purchaser that he will find it thoroughly reliable, clear on the whole, and concise. The special paragraphs devoted to the plague bacillus, the tetanus bacillus, and the spirochaete of syphilis are unduly short, and the concluding sentence of the last, which runs: "Be careful not to confound spirochaetes with nerve fibrils," though excellent advice, needs a little supplementary explanation. The unsophisticated student ought to be told how he is to distinguish spirochaetes from nerve fibrils, and a brief allusion ought to have been made to the important controversy which has arisen concerning the differential diagnosis of spirochaetes from nerve fibrils in sections of tissues stained by special methods. The special chapter, written by Dr. Gordon, on the methods of examining the blood in relation to immunity is good, but rather difficult for the elementary student to follow. The additions by Dr. Houston to the chapter on the bacteriological examination of food, sewage, soil, etc., are also somewhat beyond the scope of an elementary course in practical bacteriology, and those who desire to make themselves experts in these departments of bacteriological analysis will find it necessary to consult larger works.

[7] *Manual of Bacteriology.* By Robert Muir, M.A., M.D., F.R.C.P.Edin., and James Ritchie, M.A., M.D., B.Sc. Fourth edition. Edinburgh and London: Young J. Pentland. 1907. (Cr. 8vo, pp. 626, with 171 illustrations.)

[8] Oxford Medical Publications: *Abel's Laboratory Handbook of Bacteriology.* Translated from the Tenth German edition by M. H. Gordon, M.A., M.D., B.Sc.; with additions by Dr. A. C. Houston, Dr. T. J. Horder, and the translator. London: Henry Frowde, and Hodder and Stoughton. 1907. (Fcp. 8vo, pp. 236. 5s.)

In the new edition (fifth) of Professor MCFARLAND'S *Textbook upon the Pathogenic Bacteria*[9] there is evidence of a considerable amount of revision, though there is no material alteration in the essential features of the book. As we remarked in reviewing the fourth edition (BRITISH MEDICAL JOURNAL, May 7th, 1904, p. 1083), it is an interesting and useful student's textbook, fairly well up to the average but not quite equal to the best. Bacteriology is making such rapid strides that it is undoubtedly difficult to keep pace with the times in all departments of this subject, but we think, on examining his newly-revised volume, that Professor McFarland might reasonably have taken rather greater pains to incorporate the results of recent research, particularly on topics to which pathologists on this side of the Atlantic have added valuable contributions. In discussing the bacteriology of the mouth (p. 63), reference is made to work published in 1890, but the very extensive and practically important investigations conducted by Gordon during recent years are ignored. The communicability of bovine tuberculosis to man has now been established, by many independent authorities, beyond a shadow of doubt; but Professor McFarland, after reference to the sceptical attitude which Koch adopted in 1901 and endeavoured to defend in an article published in 1902, arrives at the conclusion that "the matter must, therefore, at present remain not proven." The chapter on Malta fever says nothing about the part played by the goat in disseminating the disease, but concludes with the statement that "the natural history of the micrococcus and the sources of contagion are unknown."

MINOR SURGERY.

THE size of Dr. FOOTE'S volume on *Minor Surgery*[10] and a cursory glance at its well-illustrated pages will at once convince readers in this country that it contains more than its title might lead them to expect. Much space is certainly devoted to bandaging, splints, and other details of minor surgical technique; but this forms rather a subordinate section, and is preceded by a systematic though not very comprehensive treatise on practical surgery. The author has spent much time and labour indicating the application of the most advanced principles of modern surgery to the common and every-day problems of surgical work. This book is likely to be found very useful by those for whom it is specially intended, as it serves to make the older practitioner well acquainted with the most modern methods of aseptic treatment, and to teach him that these are of equal importance in both minor and major surgery. The section on bandaging is perhaps too copious and elaborate for a work of this kind, but, on the other hand, the chapters dealing with the common events of surgical experience leave nothing to be desired. Dr. Foote has done much work, both as a teacher and as a practising surgeon, and the use he has here made of such opportunity claim for his book favourable acceptance. This volume is rendered attractive as well as very instructive by the abundant supply of photographic illustrations, all of which are original. These for the most part afford very clear and graphic pictures, and are likely to be useful in cases of doubtful diagnosis.

IT is difficult to classify Dr. BESSON'S excellent little book on the technique of daily and bedside surgery.[11] It is neither a manual of urgency surgery nor a guide to bandaging and minor operations, but it includes information on certain details of all these special branches of surgical work. This book, which has now reached a second edition, presents in a concise and very instructive manner the latest aspects of the different practical subjects with which it deals. The chapters on anaesthetics, which take up about one-third of the volume, though showing a decided preference for chloroform, gives an almost exhaustive summary of this subject. Among the many additions to the new edition will be found chapters on Bier's method, mercurial injections, and scopolamine.

[9] *A Textbook upon the Pathogenic Bacteria.* By Joseph McFarland, M.D. Fifth Edition. Philadelphia and London: W. B. Saunders Co. 1907. (Demy 8vo, pp. 647; 190 illustrations. 15s.)

[10] *A Textbook of Minor Surgery.* By Edward Mitton Foote, A.M., M.D., Instructor in Surgery, College of Physicians and Surgeons, Columbia University; Lecturer on Surgery, New York Polyclinic, etc. London: Sidney Appleton. 1908. (Royal 8vo, pp. 778, 407 illustrations. 21s.)

[11] *Technique chirurgicale journalière au lit du malade.* (Common and Bedside Surgical Technique.) By Dr. Besson of Lille. Second edition, with Introductory Preface by Professor Duret. Paris: Vigot Frères; et Lille: R. Giard. 1908. (Post 8vo, pp. 249; 28 illustrations. Fr. 3.)

NOTES ON BOOKS.

TREATMENT OF DIABETES.

IN 1906 we reviewed the translation of Professor VON NOORDEN's book on diabetes, appearing as Part VII of his Clinical Treatises on Diseases of Metabolism and Nutrition (BRITISH MEDICAL JOURNAL, July 21st, 1906, p. 144). The volume now before us is the fourth edition of the author's book on diabetes and its treatment,[1] which first appeared in 1898, and of which the third edition, long out of print, was published in 1901. The medical profession in this country is probably sufficiently familiar with the doctrines taught and the methods followed by Professor von Noorden, so that any detailed description of this book is unnecessary. He is very emphatic about all diabetics getting every day 80 to 100 grams of fat and 30 grams of alcohol. He suggests that each patient should take daily 100 grams of butter, 4 eggs, 10 grams of olive oil with salad, 30 grams of rich cheese, and three-tenths of a litre of thick cream. As we have previously pointed out, English patients will not take these large quantities of fat, so that, however desirable theoretically it may be to give them, we are seldom able to do so. It should also be remembered that 30 grams (1 oz.) of alcohol means two to three times as much spirits and ten to fifteen times as much wine, according to its strength. A more universally practicable, and, we believe, really reliable suggestion that we owe to von Noorden is that of a weekly fast-day, upon which the patient should abstain from all the little extras which may have been allowed him and take strict diabetic diet; it is also he who has forcibly pointed out that diabetic patients may easily do themselves harm by taking excessive quantities of meat, and that proper direction for diet should indicate the amount to which the patient should adhere.

SCHOOLS FOR BOYS.

The choice of a school for a boy is always an anxious problem, and in the *Public Schools Year Book*,[2] commonly known as the "P. S. Y. B.," now published for the nineteenth time, readers faced by this problem will find much assistance. It contains an adequate account of the constitution, administration, and expenses of most of the better-known public and preparatory schools, and concludes with sundry chapters giving some notes on the possibilities open to boys when their school education is complete. There are likewise lists of the entrance scholarships open at the various schools, and a record of those who have won them during the past year.

To those who desire to obtain some information as to the careers and experience of the masters by whom their boys are being, or are likely to be, taught, the *Schoolmaster's Year Book and Directory*,[3] of which the sixth annual issue has now appeared, is likely to be useful, since it contains a directory of schoolmasters much on the lines of the well-known work relating to the medical profession. Otherwise, the contents of the work will appeal chiefly to those engaged in tuition, the ground covered being entirely technical.

SCHOOL HYGIENE.

The handy volume on *School Hygiene*,[4] written by Dr. HERBERT JONES, of Hereford, differs in scope from other volumes which have come under our notice, and fills a distinct place. It is described as a handbook for teachers and school managers, but it seems to be more particularly adapted to the needs of the latter class; it is short, not overloaded with detail, thoroughly practical, and contains, more especially in its first part, which is concerned with the construction, water supply, ventilation, warming, lighting, furnishing, and cleansing of schools, just the sort of information which school managers and the members of local education authorities require. It will also be useful to teachers as an introduction to the subject; but those who desire to get an adequate grasp of their duties in this respect should, as Dr. Herbert Jones says, study some larger book, such as the manual of Mrs. Watt Smyth.

[1] *Die Zuckerkrankheit und ihre Behandlung.* Von Professor Dr. Carl von Noorden. Vierte vermehrte und veraenderte Auflage. Berlin: August Hirschwald. (Med 8vo, pp. 382. M. 9.)

[2] *The Public Schools and Preparatory Schools Year Book.* London: Swan Sonnenschein and Co. 1908. (Price, 3s. 6d. net.)

[3] *The Schoolmaster's Year Book and Directory.* London: Swan Sonnenschein and Co. 1908. (Price, 7s. 6d. net.)

[4] Dent's Mathematical and Scientific Textbooks for Schools. Edited by W. J. Greenstreet, M.A., F.R.A.S. *School Hygiene: A Handbook for Teachers of all Grades, School Managers, etc.* By Herbert Jones, D.P.H. Camb. London: J. M. Dent and Co. 1907. (Sup.-roy. 16mo, pp. 161. 2s.)

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(*Continued from p. 579.*)

EVIDENCE OF DR. DUDLEY BUXTON.

DR. BUXTON said he had had a very large experience in the study and administration of anaesthetics. It had been necessary to study the subject very carefully, and in the course of that study to make use of experiments upon animals. Asked to explain especially with reference to the stages at which sensation of pain was lost, and more particularly with regard to the symptoms which occurred during narcosis, and how far these might be ascertained to be symptomatic of pain or not, he said sensation in the first degree was *ab initio* deadened; in the second degree it was materially lessened; and in the third degree there was absolutely no sensation of pain. The degrees were roughly defined in this way. The first degree was generally from the commencement of the inhalation until the loss of conscious voluntary movement; in the second degree there was movement, but it was not controlled by the higher perceptive centres. There was some sensation to pain in the first degree and less, but still some, in the second. He was speaking of the induction period. Then the third degree was marked by the loss of all movement. The only movements at the end of the second degree (all the degrees verged into one another) and in the third degree were due to reflex excitation, and were not in any way connected with the higher perceptive centres. They were accompanied by absolutely no sensation of pain. That third degree was sometimes called surgical anaesthesia. It denoted the amount of anaesthesia which any surgeon would insist upon in performing a serious painful operation. In the third degree some of the reflex movements would persist, but not the superficial ones. A reflex movement was a movement associated with stimulation of the nerve, the nerve travelling from the periphery, from the skin or the mucous membrane, to the spinal cord. It thus communicated with the centre of the spinal cord and then along an efferent nerve it communicated with the muscle and produced contraction. In the chain of communication the higher perceptive centres were not included. It did not cause sensation to the spinal cord and the brain. There was no sensation of pain in the brain. It would produce movement although it did not produce pain. Asked if that was a common incident in operation under anaesthesia, he said, In certain operations, yes. The amount of movement did not depend upon the amount of pain caused by the operation. It depended upon the locality entirely. Asked if he was able to ascertain with any certainty when that surgical anaesthesia had been reached, he said the sign one relied upon mainly was the loss of the eye reflex, the conjunctival reflex. If he touched his eye, it blinked. In the third degree, if he lifted the lid and touched the eye there was no normal conjunctival reflex. Asked if it was true that corneal reflexes were seen, and were evidence that pain was felt, he said it was not true. He had seen that corneal reflex happen when there had been complete surgical anaesthesia In judging when the third degree was reached, one would depend not only upon that but upon various other signs. In watching the muscular system, for example, in most cases the muscular system would show rigidity at first, and having passed through that rigidity would become flaccid. One would know by that that the patient had gone through the second and passed into the third degree. A skilled anaesthetist had no difficulty whatever in assuring himself that perfect insensibility to pain had been reached. The difficulty of arriving at that stage differed slightly according to the kind of anaesthetic used. For example, in nitrous oxide one would judge by the breathing and not by the eye. In the case of chloroform and ether one judged mainly by the eye of the patient. One had to watch also very closely that respiration was not interfered with. The necessity for that differed very much according to the anaesthetic employed. The anaesthetics that most affected the respiration were chloroform and all the volatile anaesthetics. Asked if it was always safe to use chloroform as an anaesthetic, he said it depended upon the method adopted. In many cases it was not at all safe. If one adopted a regulating method, and knew the percentage

and the danger of using a high percentage of vapour—if one could keep the percentage of vapour below 2 per cent., one might give chloroform with impunity. If one gave about 2 per cent., or gave it by a method which did not enable one to regulate the percentage, one was treading upon dangerous ground. One way of getting a lower percentage was to mix chloroform with something which would diminish the danger to respiration. Asked as to the meaning of "light anaesthesia," he said it meant that the patient had been put through the third stage, had been completely anaesthetized, and then the depth of the anaesthesia had been lessened, so that he had been absolutely anaesthetized, and then it was found that, by giving a smaller quantity later on, he remained absolutely anaesthetized, and yet was actually, perhaps, in the second degree of anaesthesia for a long operation. It was extremely important in long operations to limit the amount of anaesthetic given. Light anaesthesia had to be clearly distinguished from incomplete anaesthesia, where the patient had never been completely anaesthetized. In one case the blood was at a certain degree of saturation; in the other case there was an irregular distribution of chloroform or other anaesthetic, and the patient had never been completely anaesthetized; he was always hovering between consciousness and unconsciousness. If one spoke of incomplete anaesthesia it would mean that the patient was not necessarily free from pain. The terms "complete" and "incomplete" were used with reference to pain. There was no difference in the method of operation of anaesthetics upon man and upon the lower animals. Their condition of insensibility and the degree of it was always noted in the same way with animals as with man. Animals perhaps died more frequently because they might not have been so carefully watched as regards the amount of dosage employed. That involved no pain. Asked as to the general anaesthetics used in surgical practice, he said nitrous oxide, chloroform, and ether were very common. Chloride of methyl was used occasionally, chloride of ethyl more frequently; bromide of ethyl had been used, and scopolamine; and for local anaesthesia stovaine, eucaine, cocaine, and others of that nature. Morphine was seldom used in the ordinary sense of an anaesthetic by itself. It had been used largely with chloroform and with ether, but it was not very commonly used now owing to its action upon the respiratory centres. In working with a volatile anaesthetic, one limited within a short time the effect of the drug. Having once injected the morphine one lost control of the action of the drug, and its action might go on, and the patient might succumb; there were no means of preventing it. One could remove the chloroform; one could not remove the morphine. Chloroform and ether were used together as a mixture, and the A.C.E. mixture was used, which was invented by Harley. Then alcohol and chloroform, the mixture 1 in 10, invented by Professor Schäfer, had recently been used, and a mixture of chloroform and ether, which had also been introduced, was largely used, and a very large number of mixtures containing different proportions of ether and chloroform. Petroleum ether was used in a mixture or solution with sulphuric ether and chloroform some years ago. The use of these mixtures was, he thought, largely governed by the choice of the anaesthetist. He would, of course, be guided by the necessity of the operation and the patient; he would examine his patient, and he would be familiar with the requirements of the operation, and would make his choice upon that. Besides the anaesthetics mentioned there were other drugs not generally spoken of as anaesthetics, which were soporifics, which would be anaesthetic in their operation if enough was used. As a rule there was no advantage in surgery in using a strong dose of an ordinary soporific instead of an anaesthetic. In reply to further questions, he said the use and the action of anaesthetics had been ascertained largely by means of experiments upon living animals. Asked by Colonel Lockwood if the same care was taken as to the degree of anaesthesia in the case of animals undergoing severe operations as in the case of human beings, the witness replied he would say, Certainly. They invariably waited for the same degree of insensibility. The various precautions to ensure that degree being reached which were used with reference to human beings he had always seen used for animals. Asked if where, under the licence, the animal was required to be killed before recovery from anaesthesia took place, that had always been carried out, he said, Yes, in his experience. Asked as to the anaesthetics used for animals, he said sometimes the A.C.E. mixture was used, sometimes chloroform, sometimes ether. Morphine had been used—not in his own experience. Asked if in his opinion morphine was a complete anaesthetic for severe operations, he said, Certainly. Asked if the provisions of the Act sufficiently guarded animals from suffering, he said, Yes. He thought that occasionally animals were unnecessarily killed under the provisions of the Act. He thought that animals were sometimes extinguished when they might live long and have a happy life. He meant to say that in cases where an operation had been performed, it not being one to give the animal inconvenience afterwards, it seemed a pity that it should be killed. He thought the well-being of the animals was quite safeguarded by the Act. He had never seen any cruelty in any work that he had witnessed. He had seen reflex movements, never conscious movements. In reply to Sir William Church, he said it was not his experience that dogs were particularly difficult to keep under anaesthetics. Asked if it required a very skilled anaesthetist to anaesthetize a dog, he said that would depend entirely upon the apparatus employed. The most common method was by means of a Woulfe bottle, allowing the air to pass over the surface of the chloroform. That would be a case in which the trachea was opened for a very prolonged experiment. The ordinary way of anaesthetizing a dog in a physiological laboratory was by means of tow or lint with the anaesthetic poured upon it, either by means of a mask, the animal being held under the mask, or by placing the dog in a basket with the anaesthetic. He did not think any special skill or knowledge was required for anaesthetizing a dog in order to produce anaesthesia. An inexpert person might produce an overdose by giving too much. He did not think such a person was likely to err on the other side. Asked if in the case of prolonged experiments in which it was necessary to administer an anaesthetic through a tracheotomy tube there was any difficulty in regulating the dose of the anaesthetic, he said, None whatever. In reply to a further question, the witness said he had had no personal experience of administering morphine to dogs before the administration of chloroform was commenced, or as soon as it was commenced. Asked whether or not it was true that subsequent to the injection of morphine a lighter and less amount of chloroform was required, he said he could certainly state that, because he had frequently employed morphine in the human subject before other drugs, such as chloroform or ether or scopolamine, and had always found the amount of general anaesthetic required extremely small when morphine was given beforehand. The same, of course, would obtain in the case of the lower animals. It was a very common practice in human patients to administer a small dose of morphine subsequently to the chloroform. The purpose of that was to keep the patients quiet and to prevent their having any subsequent pain, and to ensure sleep and rest. In reply to a further question, he said he would consider incomplete anaesthesia any form in which voluntary movement remained. Asked if he would consider it a condition of incomplete anaesthesia in which uncontrolled movements occurred, he said, No. "Incomplete anaesthesia" was a term often used by anaesthetists. It would not, in his mind, be equivalent to the term which had also been used of "light anaesthesia." In a way it was quite a different thing. Light anaesthesia was complete anaesthesia; light narcosis was complete anaesthesia. He would include light anaesthesia under complete anaesthesia. He did not admit that, short of the abolition of the corneal reflex, there could not be anaesthesia. Asked if that belief was held by any competent chloroformist, he said he believed not. In reply to further questions, he said there were certain parts of the body which, when stimulated, produced reflex movements in what one might call a deep state of anaesthesia, so complete that all voluntary muscular action almost was lost. Asked if so deep an anaesthesia as that was often called for in surgical operations on man, namely, absolute abolition of all movement, he said, "No, you cannot do that unless you kill your patient." Asked if it was not often done in physiological operations upon animals for the sake of abolition of all movement, he said, If artificial respira-

tion was carried on, of course. Asked further if the fact that occasionally reflex movements might be seen in animals which were being operated upon by research workers was no proof that they were not completely anaesthetic, although it was a proof that they were not in the profoundest condition of anaesthesia, he said that was so. In reply to Sir William Collins, he said the actual discovery of anaesthesia was not due to experiments on animals. Our knowledge of the precise action of anaesthesia was entirely due to such experiments. In reply to further questions, he said he had never witnessed a surgical operation of any magnitude upon a human subject under morphine as the only anaesthetic. Asked if he would advise it, he said, Certainly not. Asked for a definition of the terms "light anaesthesia," "incomplete anaesthesia," and "complete anaesthesia," he said complete anaesthesia was that degree of narcosis where no pain was felt. Incomplete anaesthesia was less complete anaesthesia. There was complete anaesthesia in profound narcosis, or there might be complete anaesthesia with light narcosis. He agreed that the appeal in each case was to pain as the differentia. Asked if he could suggest any other test, not subjective but objective, by which the three varieties could be discriminated, he said he had already mentioned various ocular phenomena that guided one as to whether there was pain or not pain, which would direct the anaesthetist's attention to the presence or absence of pain—the ocular phenomena and purposive movement. Asked if the conjunctival reflex was present in complete anaesthesia, he said the conjunctival reflex was absent. It might be very sluggish in very light anaesthesia. In incomplete anaesthesia it would be fairly brisk. He made a distinction between the conjunctival reflex and the corneal reflex. If one touched the conjunctiva there might be blinking. If one produced the condition of narcosis one got very little, hardly any movement of the eye, on touching the conjunctiva. If one touched the cornea one got movement. He was speaking of pressing upon the border of the eyelid. Asked if there was a period, in his opinion, in which the corneal and conjunctival reflexes were present, and yet there was insensibility to pain, the witness replied that the patient, having been in complete anaesthesia, the normal conjunctival reflex might during the continuance of the operation be known to pass into a condition where there was slight reaction to touching the conjunctiva, and yet be absolutely free from pain. Asked in regard to the induction period whether the same period might occur, namely, absence of pain with presence of corneal and conjunctival reflexes, Dr. Dudley Buxton said he took it that just in passing from the second to the third degree, when the conjunctival reflex was very sluggish, when the eyeball was also fixed, there followed a period of absolute freedom from pain. Asked if he had studied the influence of morphine upon different varieties of the lower animals, he said, No. He did not think it differed in its action in the frog from its action in the dog. He had never worked with curare. He could only go by what he had read. He knew there was a case reported of curare poisoning, where the patient expressed herself as not having been conscious of any pain while the surgical operation was being performed. That was the case of Mr. Joseph White, of Nottingham. Asked if he concluded from that that curare was an anaesthetic, he said that was his impression. He believed the general consensus of opinion was that it was an anaesthetic. That, he agreed, was not the opinion of Claude Bernard, but a good deal of water had flowed under London Bridge since Bernard's day. Asked if he thought the restriction in the Act whereby curare was not held to be an anaesthetic was erroneous, he said, No; if there was any doubt it was better to have the restriction. Asked if he thought there was a doubt, he said he thought there was doubt in the minds of some people. He had an open mind himself upon the question. He did not know enough about it. Proceeding, the witness said that in giving anaesthetics to the lower animals, a very similar apparatus (the Junker apparatus) to Woulfe's bottle was used. The principle was very much the same; one pumped air through. In reply to Sir Mackenzie Chalmers, he said he would not recommend morphine as an anaesthetic in the case of human beings because it had other deleterious effects, and in a sufficient dose to produce anaesthesia would be dangerous to life. He had never seen any carelessness in relation to experiments on animals which had tended to increase suffering. As far as his own personal experience went, the experiments had always been carefully carried out, and the anaesthesia had been carefully maintained. In reply to further questions, he said that in the administration of general anaesthetics like chloroform, the sense of pain was gradually dulled. The division into degrees was an artificial one. There was a progressive downward curve of loss of sensation. In incomplete anaesthesia in some animals—particular animals—there might be no sensations; in other more sensitive animals there might be considerable sensation. Asked with regard to Crile's statement as to his experiments under what he called incomplete anaesthesia, he said he thought that probably Crile used the expression "incomplete anaesthesia," somewhat loosely—in the sense in which the witness would use "light anaesthesia." Even that, he added, would depend very much upon how near complete anaesthesia Crile's incomplete anaesthesia was. He probably meant that he had not got the condition where the animal had completely lost the conjunctival reflex and the eyeball had not become fixed, and so on. Asked in reference to Miss Lind-af-Hageby's evidence of certain movements and cries which she perceived in animals that were being used for demonstration, whether he could form any opinion as to whether they were merely reflex movements which she misinterpreted, or whether the animals were actually incompletely anaesthetized, the witness said the impression left upon his mind was that she had mistaken reflex movements for movements due to sensation of pain. Asked if in the case of an unskilled person seeing demonstrations of that kind it would be easy to mistake reflex movements for purposive movements, accompanied by pain, he said, Extremely easy. He had known surgeons to mistake reflex movements for movements of pain. Asked if in any considerable proportion of cases in which he had given anaesthetics there were either movements or cries from a patient who he was satisfied was insensible to pain, he replied that according to the area of the operation one certainly got reflex movements not infrequently. Cries occurred quite infrequently, but they did occur. One could recognize them by the character of the sound—the absolute difference from articulate speech. It would only be a skilled person who would recognize the distinction between such cries and cries of pain. It was a rush of air through the glottis. Such cries would occur in similar cases to those in which one would get strong reflex movement. It was very common in rectum surgery. There might be an ascending action of the diaphragm, the air forced out by the diaphragm, when one got what was spoken of as "rectum crowing"—the patient made a curious crowing sound. In reply to Dr. Gaskell, he said he took it that anaesthetics acted upon the whole central nervous system. In the case of the general anaesthetics—chloroform, ether, and such like things—he would think their action was one gradually extending from the higher centres downwards if pushed far enough. The anaesthetic acted on the higher centres first. The highest centres of all were the cerebral hemispheres. Asked if he would consider that the anaesthetic action of the drug affected the cells in the cerebral hemispheres distinctly earlier than those in the spinal cord, he said he had no doubt of it. Asked if he had a definite opinion at all where pain was located in the central nervous system, he said the perception of pain was in the higher centres. He did not think that an animal or person deprived of the cerebral hemispheres could feel pain. Absolutely no pain would be felt in the spinal cord. Reflex actions of the same kind as those in the spinal cord would exist above the cord; so that if the cerebral hemisphere were removed, there might still be cries by reflex action, and movements apparently of pain. Still, there would be no pain. Asked if he thought it was very difficult to distinguish between an animal which was making struggles owing to feeling pain, and an animal which was making struggles through these lower centres reflexly, he said he distinctly thought it required experience to be able to distinguish that. In his own experience of vivisection experiments, he had never felt any difficulty in distinguishing that in an animal. Asked if with respect to such a light anaesthesia as was produced by laughing

gas it was not the experience in giving it for a dentist that the patient often cried out and struggled, he said, Very commonly. He had known him hit the dentist in the eye. That, however, was not a sign of pain. The patient afterwards said he had felt nothing. Asked if he had ever seen any cases of complete consciousness under an anaesthetic without pain, he said he never had; they had been recorded, but he had never seen it. Asked with reference to the case Bayliss *v.* Coleridge whether there was any doubt whatever about the animal being completely anaesthetized, the witness said he had no doubt whatever. In reply to Sir Mackenzie Chalmers, he said he had never experimented with a local anaesthetic on a lower animal. He had employed it on man. He had no doubt that local anaesthetics did produce complete loss of pain. He had seen operations for removal of the breast, tumours of breasts, the radical cure for hernia, removal of testicle, removal of lower parts of the rectum, and amputation of fingers performed without pain by means of local anaesthetics (cocaine, eucaine, or stovaine). Asked if he had actually discussed with a patient how far there was no sensation of pain or dull sensation, he said, Yes. In most cases they had felt no pain at all. Occasionally they had experienced discomfort. Asked by Dr. Gaskell if he considered that the pulse gave any indication whatever as to whether the anaesthesia was sufficiently deep to prevent pain, he said, No. In reply to Mr. Tomkinson, he said that he believed that in the preanaesthetic days opium was largely used in operations to lessen the sensation of pain. Asked if he held that persons under the influence of morphine, or insensible, say, from alcohol, were not subject to pain if they were cut, he said he had no doubt that they were not sensible to pain. Asked if in physiological experiments on dogs they were all strapped down first of all, before the chloroform was administered, the witness said, Certainly not. The dogs were in a box. Asked if in the early stages they did not struggle or bite the box, he said that as a rule his experience was that the dog turned round once or twice and went to sleep. It was strapped down when it was unconscious, and tied on a board. The object of this was not to prevent reflex action, but to keep them in the position required for the operation. In general anaesthesia for man, the man was strapped up for operating on his anus. They wanted him in a particular position, therefore they tied him there, the same as with the dog. Asked in regard to curare whether there was danger in it as a paralysing element, and thereby to some extent depriving the animal of the power of showing consciousness in the event of sensibility returning, he said he did not think there was any danger, because it was always employed with chloroform or morphine, with some competent anaesthetic. He should not employ it himself alone, because he was not sufficiently satisfied of its action. Asked in regard to Crile's experiments, if he thought there was not danger, in such shocks being administered to an animal, of pain being felt, even through the anaesthetic, he said, None. An anaesthetic would be absolutely of no use if one could not safeguard human beings and animals from the possibility of any shock, however severe, making itself felt through the anaesthesia; it would cease to be an anaesthetic. An anaesthetic, to be an anaesthetic must be capable of preventing pain of any character or kind. In reply to questions as to experiments on frogs which he had seen, he said they were always pithed. That meant the severance of the brain from the cord, and absolutely precluded sensation. In reply to Dr. Wilson, who put it to him that even with pithed frogs it had been contended that they did exhibit purposive movements—for example, they could reproduce the species—and who asked if that would modify his opinion as to whether all possibility of pain was banished by pithing, Dr. Buxton replied, Not in the slightest. Asked if in anaesthetizing animals, no matter how severe or prolonged the operation, he thought there was no difficulty at all in maintaining absolute anaesthesia throughout, he said he had no doubt of it whatever. Asked if he ever anaesthetized animals for operations on account of disease or accident, he said he had. He observed the same rules then as were applicable to human beings. Probably it was done in a more formal manner than in a physiological laboratory. On occasions when he had had to chloroform a valuable dog, or the dog of a friend, he had not put it into a box; he had put it on a table, patted it, and given it chloroform, which it had inhaled and gone off without any sign of discomfort or fear. It was very convenient to use a Woulfe bottle, but not necessary. In reply to Sir William Church, who asked if the strapping of animals on boards for some operations was not to keep them quiet but to keep them in a special position in order that the necessary operation could be performed, the witness replied in the affirmative. He agreed that it was equivalent to the fact that even still, for a large number of operations for men, it was found advisable to strap the patient into a certain position before the operation began. Asked if from his experience he could tell them that that was a necessity which very frequently arose in the practice of human surgery, he said, Certainly.

(*To be continued*)

HAMPSTEAD GENERAL HOSPITAL.

Election of Medical Staff in Charge of In-patients.

We have received a communication from the Secretary to the Hampstead General Hospital to the effect that at a meeting of the Council of the hospital held on March 5th it was unanimously resolved that the recommendation of the Selection Committee for the appointments to posts on the in-patient staff of the hospital as contained in the following report be adopted:

London, W.,
4th March, 1908.

Sir,—In accordance with the request made to us by the Council of the Hampstead Hospital, and communicated to us through the Executive Committee of King Edward's Hospital Fund for London, we have selected from the lists of candidates submitted to us the names of the following Physicians and Surgeons, and have arranged them in the order in which we desire to recommend them.

We are informed that Mr. Edmund Owen has already accepted office as one of the Surgeons at the request of the Council.

Physicians.	*Surgeons.*
1. Dr. G. A. Sutherland.	1. Mr. J. Jackson Clarke.
2. Sir John Broadbent.	2. Mr. W. H. Clayton-Greene.

We remain, Sir,
Yours faithfully,
(Signed) R. Douglas Powell.
Henry Morris.
Edmund Owen.

To the Chairman of the Council of the Hampstead General Hospital.

THE PLAGUE.

Prevalence of the Disease.

Mauritius.

During the weeks ended February 5th, 12th, 19th, and 26th the fresh cases of plague in Mauritius numbered 2, 0, 0, and 2, and the deaths from the disease during the weeks in question amounted to 2, 0, 0, and 2.

Gold Coast, West Africa.

During the weeks ended February 8th, 14th, 22nd, and 29th the deaths from plague reported from Accra numbered 15, 10, 11, and 10.

At Nianyano 6 deaths from plague were reported during the week ended February 29th, and at Temma 8 deaths from the disease. At Brewa 1 death was reported during the week ended February 22nd. Pneumonic plague is stated to prevail at Nianyano.

Since January 11th, when plague was first observed in the Gold Coast, the deaths from the disease up to February 29th amounted to 118, namely, in January 57 and in February 61.

San Francisco.

Plague is reported from San Francisco. Up to February 14th there have been 138 cases and 74 deaths from the disease. On February 14th cases under observation numbered 20. This report appears in a daily paper, which describes the sanitary condition as unsatisfactory ever since the earthquake in the city.

VALVELESS MOTOR ENGINES.

EVERY motorist of any experience has had to encounter the troublesome, or at all events tedious, task of grinding the surfaces of the inlet, and more especially of the exhaust valves, which become pitted with use and cease to close securely. Moreover, the gearing by which the valves are actuated at the proper time not only adds a considerable amount of mechanism, but is a source of more or less noise. Attempts have been made from time to time to dispense with the whole valve apparatus, but it is only recently that cars have been placed on the market without valves, sundry difficulties having had to be overcome by protracted experiments. At the present time there are two separate makes of cars on this principle, the 20-h.p. car of the "Valveless" Company, and a much smaller car, the Simplex Stanhope, of the Simplex Company, a 10-h.p. car.

The principle is the same, up to a certain point, in both of them, namely, holes or ports in the sides of the cylinder are opened or closed by the passage over them of the piston, which, as in all motor engines, is relatively long. In order that these holes, which, from the nature of the case, can only be open for a shorter time than is possible with valves, shall take in a new charge and expel an old one, the incoming charge has been previously compressed

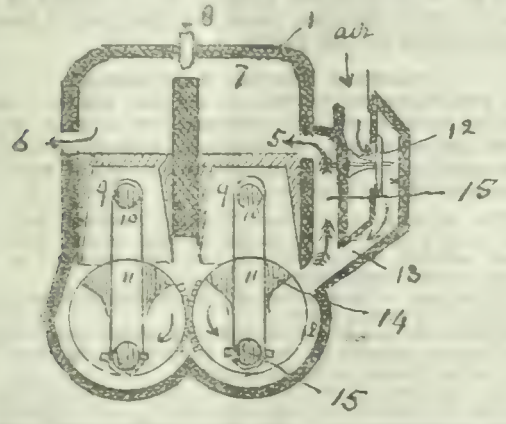


Fig. 1.—Diagram of Valveless engine. The water-cooling jacket has been omitted for the sake of clearness. 1, Top of cylinder. 2, Crank case. 5, Inlet port; the petrol jet is near to this. 6, Exhaust port. 7, Explosion chamber common to the two cylinders. 8, Sparking plug. 9, Interior of piston. 10, Gudgeon pin. 11, Connecting rod. 12, Valve allowing air to pass in during suction but not to return that way. A prolongation of the stem of this valve forms the needle which opens the petrol jet; this cannot be shown in the diagram. 13, Passage for incoming air to the crank chamber. 14, Counterpoise weights. 15, Big ends (attachment of connecting rods to cranks).

to a slight extent. In an ordinary petrol engine a new charge is sucked in; in these it rushes in by virtue of its pressure.

In the "Valveless" engine (Fig. 1) two similar cylinders (1), each with its own piston (9), connecting rod (11), and crank, are placed side by side. The space above that traversed by the piston, the explosion chamber (7), is common to the two, and the crank chamber (2) in which the cranks are enclosed is also common to the two. The pistons rise and fall together, not alternately, as in most engines, and the cranks are so arranged that they revolve in opposite directions. They are not absolutely independent of one another, but are connected by carrying geared discs which gear into one another, the teeth being shown in the diagram on a portion only of their circumference.

The crank case is made airtight; consequently, when the pistons ascend a partial vacuum is formed in the crank case, or would be formed, but that there is an air passage (12) (13) through which air is sucked in, and on its way opens a valve (12) carrying a needle, which allows petrol to spray into a chamber (15) (marked by feathered arrows). When the pistons descend, they compress the charge of air in the crank case, but just as they reach the bottom of the stroke they have uncovered the ports (5) and (6); the air compressed in the crank case rushes through the chamber (15), becoming charged with petrol as it goes, enters the inlet port (5), and drives out before it the exploded gases through the port (6). As the pistons rise they compress this new charge, and it is exploded by a spark at the top (8). The exhaust port is slightly higher than the inlet port, so that the exhaust gases begin to leave the cylinder a trifle before the new charge comes in to drive them out. There is thus an explosion at every revolution—not, as in the Otto cycle, at every other revolution.

A peculiarity of this engine is that high engine speed is not necessary for the development of fairly high horse-power; an ordinary petrol 20-h.p. engine does not develop 20-h.p. at less than 1 000 to 1 200 revolutions a minute, and when slowed down to 600 is only giving 10-h.p., whereas the valveless engine gives 17-h.p. at 600 revolutions, and has to be slowed down to 300 before its power falls to 10-h.p. This renders it a good hill climber, and enables it to go up hills with fewer changes of gear than would be ordinarily necessary.

It is claimed also that the balance of the engine is particularly good; there are balance weights (14) on the fly-wheels to balance the pistons and connecting rods, and as the fly-wheels are revolving in opposite directions, the vibration due to the momentum of heavy parts is counteracted to a large extent by there always being equal and opposite forces at work. The design has the further peculiarity that the engine is reversible; there being no idle revolution, and the same cycle of events taking place

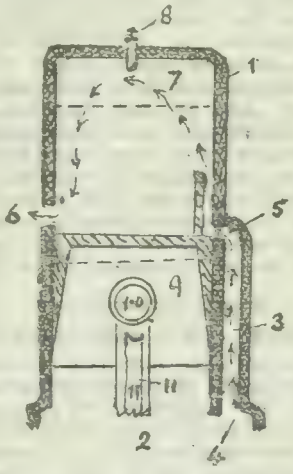


Fig. 2.—Diagram of Simplex Stanhope engine. The crank chamber which would lie below is not shown. 1, Top of cylinder. 2, Top of crank chamber. 3, Passage for admission of compressed charge. 4, Orifice of same from crank chamber. 5, Inlet port. 6, Exhaust port. 7, Explosion chamber. 8, Sparking plug. 9, Interior of piston. 10, Gudgeon pin. 11, Connecting rod. The dotted horizontal lines show the extent of the excursions of the piston, projecting from the right hand upper surface of which is seen the baffle plate.

in each revolution it does not matter which way the engine runs, its reversal being effected by alteration of the ignition timing—by, in fact, extreme advance so as to give a back fire. But another and quicker way of getting a reverse exists: by extreme depression of the clutch pedal an epicyclic gear is brought into operation; this in traffic effects a reversal much more promptly than the usual method of shifting the speed gears lever. If the engine is at the same time reversed, this epicyclic gear gives a very slow forward movement. There are many other points of interest about the car, among which are the abolition of the usually complicated carburettor with its float feed, and simplification of the ignition which is by one single sparking plug.

The price of the 20 h.p. car, the only one on the market, is £395 with side entrance body, or £475 with landaulette body.

Another valveless car, which by its low price and small size will especially appeal to medical men, is the Simplex Stanhope, a 10-h.p. two-seated car with a hood, weighing only 9 cwt., and costing £165 complete.

The system employed in the engine (Fig. 2) has many things in common with the "Valveless" already described, inlet and exhaust ports being placed on opposite sides of the cylinder, and being covered and uncovered by its traverse; a peculiarity is that the piston (9) carries a sort of shield which serves to direct the incoming charge upwards towards the explosion chamber. The incoming charge is, as in the other, compressed in the crank chamber, and so rushes in by virtue of its pressure as soon as the port is uncovered. It differs, however, in that

a carburettor is employed, and it is an already carburetted charge which is compressed, whereas in the "Valveless" it is only air which is compressed, and this air picks up its petrol on its way to the cylinder.

It is, of course, a two-cycle engine; that is to say, there is an explosion at each descent of the piston, and no idle stroke expended in drawing in and then compressing the charge. This enables it, by having twice the number of explosions, to develop 10 h.p. with a single cylinder. In the ordinary four-cycle engine this is too large a horse-power for a single cylinder engine, for the more intermittent individual explosions would need to be too powerful. For the same reason, a cylinder of dimensions which would only give 5 h.p. in a four-cycle or Otto cycle engine is enabled to develop 10 h.p.

The different speeds are given by an epicyclic (planetary) gear, which renders change of speed easy, and transmission to the driving axle is effected by means of a chain. As weight is an important element in the wear of tyres, this car should be economical in this respect, the heaviest item of expense to the motorist.

It would seem probable that valveless two cycle engines have a good future before them if no unforeseen drawbacks develop themselves. It must, however, be noted that they are a novelty, and the number of them running is as yet small, so that they have not undergone the test of time and extensive use. Individual cars have, however, been run distances which might be expected to bring out any defects, and their performance has so far been satisfactory. And the first described, the "Valveless," made a surprisingly good performance at a hill-climbing competition some years before its designer considered it fit to be placed upon the market. The Simplex Stanhope is stated to have run 6,000 miles upon the same tyres. This is a very unusual thing for a car to do, and is doubtless mainly attributable to its light weight. Both cars are stated to be economical in their petrol consumption.

SOLDIERS AND SANATORIUMS.

A PRELIMINARY report has just been issued by the War Office Committee on the treatment of soldiers invalided for tuberculosis. The following were the members of the Committee; Colonel Sir E. W. D. Ward, K.C.B., K.C.V.O., Permanent Under-Secretary of State, Chairman; Surgeon-General Sir A. Keogh, K.C.B, M.D., Director-General, Army Medical Service; The Lord Lucas; Lieutenant-Colonel J. E. B. Seely, D.S.O., M.P.; Mr. T. Summerbell, M.P.; Sir J. Batty Tuke, M.P., M.D.; Mr. H. W. Moggridge, War Office, Secretary. The terms of reference were as follows: To consider the care and treatment after discharge from the army of soldiers invalided for tuberculous disease.

The report states that the Committee, having heard the evidence of a number of expert witnesses, and having carefully considered various methods of dealing with soldiers suffering from tubercle of the lung, had come unanimously to a general conclusion. If the scheme outlined in the preliminary report and the financial liabilities which it involves is accepted in principle by the Army Council, they will proceed to elaborate it in detail. The Committee expresses the opinion that the practicable methods of treatment resolve themselves into three alternatives:

1. To continue the present method—viz., to discharge at once from the army any man who is diagnosed as suffering from tubercle of the lung, to discharge him from hospital as soon as he is fit to travel, and afterwards to disown all responsibility for him
2. To provide a special central military sanatorium for tuberculous patients, to which all soldiers suffering from the disease should be sent for treatment.
3. To make use of existing civil sanatoriums in all parts of the country by reserving in each a number of beds at the expense of army funds, and by transferring soldiers who are suspected of having the disease to the available institution nearest to their own homes.

The last method (3) is the one recommended by the Committee.

Present Treatment.

Dealing in detail with these several alternatives, the Committee says that under existing arrangements no provision whatever is made by regulation for soldiers invalided for tubercle. It is laid down that after diagnosis they shall forthwith be discharged from the Army and sent to their own home as soon as they are fit to travel. They are not awarded any pension unless they have earned it by length of service, or it can be specially proved in the particular case that the disease was due to service or climate. The adoption of this plan of removing men suffering from tuberculosis from contact with other soldiers had been followed by a great reduction in the proportion of tubercle cases in the army, and the Committee strongly upholds the necessity of isolating the patients. The stringency of the regulated treatment had been greatly mitigated in practice by the action of officers of the Army Medical Department, and by the assistance of private persons. Actually the men suffering from the disease have remained in military hospitals, under due precautions, for over four months, and, if they came from abroad, for over six months, being often retained as "free agents" in the hospitals after discharge from the army. On removal from the hospital they have frequently been sent for treatment to civil institutions at the cost of private or regimental charity. The Committee is of opinion that the State should admit responsibility for the men, and that suitable treatment on an organized basis should be provided for them by regulation. It does not think that the State is justified in discharging a man because he has an infectious disease, to return to his home, where the conditions are often specially suitable to the spread of the disease, owing to cramped space, etc., and thus to become a menace to the civilian public.

A Central Military Sanatorium.

The possibility of providing a central military sanatorium, to which all military consumptive patients should be sent for treatment, was considered and rejected. The following are some of the reasons on account of which it was considered inadvisable:

(*a*) The experiment has been tried in America, and the results have not been very successful, the benefit accruing to their patients being markedly less than received in the majority of civil institutions.

(*b*) The expert witnesses before the Committee were generally opposed to such a scheme.

(*c*) An annual cost would be involved about equal to the annual cost of proposal (3), and in addition there would be a large initial outlay on building, etc.

(*d*) The medical officers of such an institution should be specialists in sanatorium treatment, and it is not considered desirable to supplement the R.A.M.C. by a staff of specialists of this class.

(*e*) A central institution of this kind, being at a distance from the homes of the majority of the patients, would entail unnecessary difficulties in regard to transference of invalids and visits from their relations. It would, further, be much more difficult to find suitable occupation for the large number of convalescents than would be the case in connexion with a number of smaller institutions in different parts of the country.

Civil Sanatoriums.

The Committee considers that the best solution of the problem is to be found in the use of the rapidly-increasing number of civil sanatoriums. It recommends that these institutions be asked to reserve a certain number of beds for the sole use of the army. There is said to be some reason to hope that a sufficient number of beds will be obtainable to give treatment of from three to six months' duration to all soldiers who require it. If this were found to be possible, all soldiers *suspected* of having tubercle would forthwith be removed from the military hospital to the sanatorium nearest to his home at which a bed was available. They would, however, be discharged from the army at once, and would not be allowed to re-enlist, even though a comparative cure had been effected. The cases—comparatively rare in the army—in which the disease has already reached an advanced stage before discovery would have to be separately treated, as the majority of sanatoriums are open to early cases only. It is recommended that efforts should be made to get such patients into the "incurable" wards maintained at many hospitals, and, failing this, that they should be discharged. One of the principal objects of the inquiry was the safeguarding of the civil population. It was agreed that until soldiers affected with tubercle had been educated in a civil institution as to the precautions which should be taken by consumptive patients, they should not be discharged to their homes. The Committee considers that men who may be entitled to pension should not receive such pensions

until discharged from the civil institution. It is thought that the cost of maintaining a bed should average about 30s. a week. The average number of soldiers invalided annually for tubercle of the lung is about 400. The number requiring treatment, assuming that some are advanced cases, and that others refuse to remain in sanatoriums after discharge, would probably not exceed 350. Each bed should accommodate at least two patients annually, but some margin must be left in order to ensure that a bed may always be available when required. Thus, about 200 beds would have to be maintained; the cost of these at 30s. a week would be £16,600 per annum. The total cost of the scheme, therefore, would not exceed £20,000. A part of this expenditure would be counterbalanced by the fact that tuberculous patients would remain in military hospitals for a shorter time than at present. The Committee says that very probably, however, it might be found desirable to incur some initial cost with a corresponding reduction in the annual cost. A number of sanatoriums were contemplating an increase in their buildings and establishment, and it was thought that if some contribution were made from army funds toward this capital expenditure, they would often be prepared to reserve beds for soldiers on favourable terms. The Committee expressed the opinion that the army should accept responsibility for the prevention of the spread of infection by soldiers suffering from the disease. That this course would involve a large expenditure was inevitable. As the cheapest and most effective way of accomplishing it appears to them to lie in the adoption of the scheme outlined in the preliminary report, the Committee recommends that it may be authorized to proceed with the details on the understanding that an annual expenditure of not more than £20,000 is involved, and that any initial expenditure must be counterbalanced by a corresponding reduction of the annual cost.

LITERARY NOTES.

Messrs. William Hodge and Company, Edinburgh and Glasgow, announce for publication on March 19th a new volume in their series of *Notable Scottish Trials*. It deals with the trial of A. J. Monson, which was held in Edinburgh during December, 1893 and was known as the "Ardlamont Case." The editor, Mr. John W. More, Advocate, Edinburgh, has been particularly fortunate in obtaining assistance from many of those who took an active part in the trial. The Lord Justice Clerk, to whom the volume is dedicated, has personally revised the proofs of his charge to the jury, while the addresses to the jury of the Solicitor-General (Asher) and Mr. Comrie Thomson, for the prosecution and defence, have been revised respectively by Sheriff J. Campbell Lorimer, K.C., and Sheriff John Wilson, K.C., who were junior counsel in the case. In preparing his report of the medical evidence for the prosecution and the defence, the editor has received the greatest assistance from Sir Henry D. Littlejohn and Professor Matthew Hay, both of whom figured prominently as witnesses in the trial. The evidence and speeches, which are given very fully, extend to close upon 450 pages, and the whole book furnishes, as near as possible, a full and accurate account of one of the most famous trials of modern times. A number of photographs and plans add greatly to the interest of the book, which should form not the least interesting of this series of notable trials.

The W. B. Saunders Company have recently issued another revised edition of their illustrated catalogue of medical and surgical books. Since the issue of the last edition, less than a year ago, these publishers have placed on the market some thirty-five new books and new editions. The catalogue gives a good idea not only of the sound quality of the medical literature published by the W. B. Saunders Company, but of the artistic excellence of the manner in which their books are illustrated.

H.R.H. the Princess Christian has been graciously pleased to accept a copy of *The Way of the Wilderness*, a booklet of readings for the sick and suffering, by a lady well known in nursing and philanthropic circles. It has, we are informed, been found useful by ladies engaged in visiting the sick in hospitals, and in ordinary nursing work. A third edition has just been issued by J. S. Nicholas, Brecknock Road, Bristol.

At its meeting on March 3rd, M. Hamy offered to the Paris Academy of Medicine, on behalf of M. H. Omont, a volume of plates illustrating Greek surgery, drawn in the sixteenth century by Santorinos and Primaticcio. The Florentine Guido Guidi, better known under the Latinized form of his name, Vidus Vidius, was the first Professor of Medicine in the Collège de France, to which he was invited by Francis I, 1542. He taught there till 1548. There is in the Bibliothèque Nationale a fine manuscript copy of his Latin translation of a great surgical compilation made by the Byzantine doctor Nicetas, a contemporary of Constantine Porphyrogenetes. The translation was printed at the expense of the King of France, to whom it was dedicated; the drawings intended to illustrate the work have never been published. M. Omont has now repaired this, and the work presented by him to the Academy consists of the unpublished drawings intended for the compilation of Nicetas, reproduced in photogravure. The artists, J. Santorinos of Rhodes and Francesco Primaticcio, are said to have very felicitously rendered the ancient drawings which were placed in their hands by Cardinal Ridolfi. They were notably successful in reconstituting, under the supervision of Guido Guidi, the surgical apparatus of the treatise *De Laqueis* by Heracles, and those described in the *De Machinamentis* of Oribasius and Heliodorus.

We find in *La Chronique Médicale* of March 1st an interesting circular letter addressed by the Bishop of Mans to the clergy in his diocese, strongly urging them to do their best to popularize the use of vaccination. The circular is dated July 18th, 1805. The Bishop points out that a sad and long experience has proved that small-pox carries off a tenth part of the human race and besides often disfigures one-fifth. For this reason he points out that Jenner's useful and precious discovery must be regarded as one of the means provided by Providence to diminish the danger and perhaps get rid of the scourge. He urges that it is the duty of the clergy to co-operate with the civil power in diffusing the benefits of vaccination, and for that purpose he asks them to use the powers of persuasion belonging to their sacred ministry among their flock. He assures them that the supreme Pontiff himself, in his reply to members of the Central Vaccine Committee who were presented to him during his stay in Paris, expressed his approbation in the strongest terms. It would be well, we think, if the clergy more often co-operated with sanitarians in urging the acceptance of means for the prevention and alleviation of disease which science in its progress places in the hands of the medical profession, but which are too often resisted by ignorance and prejudice.

The following delicious specimen of Babu English is taken from *The Gentlest Art*, recently issued under the editorship of Mr. E. V. Lucas. It is evidently an application to some one in authority for employment.

RESPECTFULLY SHEWETH,—That your honour's servant is poor man in agricultural behaviour, and much depends on season for the staff of life, therefore he prays that you will favour upon him, and take him into your saintly service, that he may have some permanently labour for the support of his soul and his family; wherefore he falls upon his family's bended-knees, and implores to you of this merciful consideration to a damnable miserable, like your honour's unfortunate petitioner. That your lordship's honour's servant was too much poorly during the last rains and was resuscitated by much medicines which made magnificent excavations in the coffers of your honourable servant, whose means are circumcised by his large family, consisting of five female women, and three masculine, the last of which are still taking milk from mother's chest, and are damnably noiseful through pulmonary catastrophe in their interior abdomen. Besides the above-named, an additional birth is, through grace of God, very shortly occurring to my beloved wife of bosom. . . . That your honour's damnable servant was officiating in several capacities during past generations, but has become too much old for espousing hard labour in this time of his bodily life; but was not drunkard, nor fornicator, nor thief, nor swindler, nor any of these kind, but was always pious, affectionate to his numerous family consisting of the aforesaid five female women, and three males, the last of whom are still milking the parental mother. That your generous honour's lordship's servant was entreating to the Magistrate for employment in Municipality to remove filth, etc., but was not granted the petitioner. Therefore your generous lordship will give to me some easy work, in the . . . Department, or something of this sort. For which act of kindness your noble lordship's poor servant will, as in duty bound, pray for your longevity and procreativeness. I have the honor to be, sir, your most obedient servant.

Another gem is the following:

HONOURABLE SIR,—Kindly excuse this poor thy servant from attending on your Honour's office this day, as I am suffering from the well-known disease commonly called ache of the interior economy, and I shall ever pray.—Yours ever painful, Ram Chunder.

P.S.—Oh, death, where is thy sting?

MEDICAL NEWS.

The fourth International Congress of Thalassotherapy will be held at Abbazia on September 28th, 29th, and 30th.

A dinner of past and present members of the Royal Army Medical Corps Volunteers (London Companies) will be held at the Holborn Restaurant on March 31st at 7.30 p.m.

According to the *Archivos do Instituto Bacteriologico*, the number of cases of hydrophobia is on the increase in Portugal. In 1907 the number was 1,447, the numbers for the four previous years having been respectively 867, 909, 1,018, and 1,294.

Dr. Nadesda Prokosonjewna Ssuszlowa-Golubowa, the first woman doctor in Russia, recently celebrated the fortieth anniversary of her graduation. She studied privately at the Medico-Chirurgical Society of St. Petersburg, and was admitted to the necessary examinations by special grace.

We are informed that the Committee of the Royal Sanitary Institute has decided to continue the discussion on "Rivers Pollution, with special reference to the Board proposed by the Royal Commission," at a meeting to be called on Wednesday, April 8th, at 8 p m. The report of the discussion at the meeting held on February 12th will be published in the *Journal* of the Institute issued on April 1st.

The Chancellor of the University of London (the Right Honourable the Earl of Rosebery) will visit University College on the afternoon of Thursday, March 26th, and will formally open the new libraries and the new south wing which includes lecture rooms for the faculty of arts, the department of geology, hygiene, and experimental psychology, also large extensions of the departments of applied mathematics, of mechanical, electrical, and municipal engineering, and accommodation for the new hydraulic laboratory.

A congress on physio-therapeutics will be held, under the presidency of Professor Landouzy, in Paris, in Easter week. The questions to be discussed are: (1) Physical agents (electricity, massage, movement cures, gymnastics, light, *x* rays, etc.) in the diagnosis and treatment of articular and bony traumatism; (2) physical agents in the treatment of neuralgia and neuritis. The congress is being organized under the auspices of the French Society of Electrotherapy and Medical Radiology and the Kinesitherapeutic Society. Communications relative to the congress should be addressed to the General Secretary of the Organizing Committee, Dr. Laquerrière, 2, Rue de la Bienfaisance, Paris.

At a drawing room meeting on March 10th Mrs. Scharlieb, M.D., M.S.London, Senior Physician for Diseases of Women at the Royal Free Hospital and Lecturer in Midwifery at the London School of Medicine for Women, was the recipient of a portrait of herself in academic robes, painted by Mr. Hugh Riviere to the order of upwards of 300 of Mrs. Scharlieb's private and professional friends. The gift was accompanied by an address, presented on behalf of the subscribers by Mr. Holroyd Chaplin, Chairman of the Weekly Board of the Royal Free Hospital, which was beautifully illuminated and reminiscent of the work done by Mrs. Scharlieb in the promotion of the Zenana medical movement in India. The proceedings, which were of a private character, were stated to be the outcome of a desire on the part of the donors to express their personal affection for Mrs. Scharlieb, and their esteem for one who had shown herself able to combine the exercise of unusual talent of a scientific order with the graces and gifts of womanhood.

The eleventh annual dinner of the Chelsea Clinical Society was held at the Gaiety Restaurant, Strand, on February 27th, Dr. J. H. Dauber, President of the Society, being in the chair. After the usual loyal toasts, the President, in proposing "The Chelsea Clinical Society," said that the plan of allowing men to smoke at meetings had worked so well that other medical societies would do well to copy the example set, for most men after dinner wished to smoke. A suggestion had been made that societies like the Chelsea Clinical Society should join the Royal Society of Medicine at 20, Hanover Square, but in his opinion such a course would ruin a Society like theirs. Decentralization was as important as centralization, and the Chelsea Clinical Society fulfilled a public duty in helping forward the organization of the medical profession. Such organization was the more essential as the medical profession was sweated, and to meet that evil it was necessary to combine. Societies like the Chelsea Clinical Society should form an alliance with the British Medical Association to work together for the benefit of medical men. After the toast had been acknowledged, on behalf of the Society, by Dr. A. F. Penny, Dr. J. Barry Ball submitted "The Visitors and Kindred Societies," response being made by Mr. R. Lake. In the course of the evening Surgeon H. Hunt, R.N., of H.M.S. *Blake*, entertained the company by making lightning sketches, his good-humoured caricature of the Treasurer of the Society, Dr. Austin Cooper, giving an anaesthetic, being received with great applause. Dr. Dauber and Dr. Ball were also portrayed from life with astonishing accuracy and rapidity, each sketch only taking a few seconds. The evening concluded with Dr. F. McCann proposing "The President and Officers of the Society," which was suitably responded to by the President.

The Supply of Midwives.—At the fourth annual meeting of the Association for Promoting the Training and Supply of Midwives, held on March 5th, the report submitted pointed out that a strong effort was necessary to meet the need which would become acute in 1910, when a number of uncertified midwives still in practice would be about to retire. In various quarters it had been suggested that Parliament should be asked to extend this time limit, but those who wished to see this done did not realize that the women whose practice was to be stopped after 1910 were, generally speaking, precisely those whose suppression was the ultimate goal of the whole movement. Not being certificated by virtue of any training and examination either before or after the passing of the Act, or even registered on the very easy terms on which, as being in bona-fide practice, they might have enrolled themselves when the Act came into force, they were at present entirely beyond the reach of the law. They avoided the title of "midwife" and pursued their own methods quite untouched by the teaching, regulation, and inspection which were doing so much to bring the work of midwives into good instead of evil repute. In asking for an extension of the time they would simply be asking for a continuance of the very worst part of the old system. A sum of at least £5,000 was required to put the work of the Association on a desirable footing. By a subsequent resolution it was resolved to communicate with county medical officers, nursing and other associations, with a view to ascertaining the present and prospective needs of each county and the best method of grouping villages in order that no one should be beyond the reach of a midwife's services.

Medical Sickness and Accident.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 6, Catherine Street, Strand, London, W.C., on February 21st. Dr. de Havilland Hall was in the chair, and the Committee was engaged in examining an unusually long list of sickness claims. The experience of the Society shows that in the spring of each year a substantial addition to the claim list must be expected. For the most part the illnesses are of a slight nature arising from tonsillitis and other throat affections and from mild attacks of bronchitis. On this occasion the sickness claim list contained a good many cases of this kind, but a considerable number of the members were incapacitated by influenza, an epidemic which always makes its mark on the claim list of the Medical Sickness Society. The business of the Society is growing rapidly, and both in membership and financial strength the year 1907 shows a gratifying increase. In particular the number of new entrants has been exceptionally large, and the number of those members who have applied to have their benefits increased has largely grown. The number of members totally and permanently incapacitated from professional duty increases every year. The Committee have recently examined special reports on all these chronic cases, and in very few instances is there any hope that the member will ever be able to resume work. In such cases the sick pay of the Society, generally one hundred guineas a year, is a great boon, and the letters received from the sick members and their friends show how much it is appreciated. Prospectuses and all further information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

British Medical Journal.

SATURDAY, MARCH 14TH, 1908.

CHEAP FOOD.

INSUFFICIENT and bad food is a cause of physical degeneration, alcoholism, and sickness only less important than unhealthy dwellings, and we feel indebted to Dr. Cazalis who has already published a work on cheap houses, for a very useful little book on the provision of cheap food which he has compiled with the help of Dr. Lucien-Graux.[1] It is primarily concerned with France, and the authors have a good deal to say about the heavy fiscal dues imposed on food not only at the national frontiers but at the barriers of all large towns; we are told that the cost of meat, butter, and coffee is half as much again in Paris as in London, while sugar is twice and tea four times as dear. Nevertheless it has been found possible in France to supply wholesome, clean, and appetizing food at very low prices, and to make cheap restaurants pay. Various charitable agencies in Paris and the provinces distribute food gratuitously or at very low prices, but it is to the account of those restaurants which pay their way or return a limited interest that we desire to direct attention. It must, however, be noted in passing that there are many restaurants maintained by great industrial companies and employers of labour which appear to be well managed and to afford good and cheap meals; but they are conducted at some pecuniary loss, though this is considered to be compensated for by the better health of the employees, the saving of time, and the check on the consumption of alcohol. One great employer stated that when the workman is well fed he works better, with better temper, is less quickly fatigued, and is less disposed to drink. It is somewhat surprising to be told that the wife of the French working man, like her English sister, is nearly always a bad cook and unable to supply much variety in the fare, so that the husband is disposed to go to a cheap eating-house, where unfortunately he is tempted to drink with and after meals.

The founder of cheap workmen's restaurants in France on a paying basis was M. Mangini, a large employer at Lyons, who was led to organize these establishments from a benevolent desire to improve the condition of the workers. His first restaurant was opened on January 10th, 1892, and the scale upon which it was worked is shown by the receipts in the first year having reached 200,564 francs (over £8,000); the expenses were 187,573 francs, the net profit for the first year being 6½ per cent. At these restaurants a good dinner costs 5d. or 6d.; for this can be obtained, for instance, a slice of roast pork, with vegetables, bread, cheese, and a decanter of wine, all excellent. The diners wait upon themselves, but there is another room served by a waiter where serviettes are supplied, these amenities costing 1½d. Tokens for the different articles are sold at the entrance—for example, for 5d. a full meal with bread, meat, and vegetables; but separately bread is ½d., meat or fish 2d., vegetables or macaroni 1d., soup 1d., dessert 1d., coffee 1d. There is the choice of three or four dishes of meat or fish, and of as many of vegetables; the wine costs 6d. a litre, and is absolutely pure. These restaurants have stimulated competition; and, though others, established on a purely commercial basis, have taken away some clients and diminished the profits, they have provided additional accommodation to meet popular wants.

In Geneva and other Swiss towns similar restaurants exist, and at Zürich a ladies' society has founded a restaurant and hotel for the "air-cure" on the Zürichberg; this is much frequented, especially on Sundays. Everything is supplied at moderate prices, and those who stay there are charged a pension of 3½ francs daily. Many of the Swiss restaurants were started by temperance societies and sell no alcoholic drinks; but the authors, although enemies to alcoholism, prefer those where pure and light wine and beer are supplied, on the ground that they are a better means of combating alcoholism by providing the workman with comfortable social conditions. In Germany there are a number of *Volkskuechen*, or people's kitchens, founded by philanthropic societies and looked after by ladies interested in the work. At these no alcoholic drinks are sold. The prices of the food supplied are about the same as those already quoted. In Berlin there are municipal refectories due to private initiative, but receiving subventions from the municipality; their accounts are audited officially, and their president is always one of the city councillors. This system goes back as far as 1849; the buildings belong to the city; a good meal of meat and potatoes can be obtained for 2d., and the financial results are said to be satisfactory, but evidently they are not entirely self-supporting. There are also in Berlin *Warmehallen*, or large halls well warmed and open all day, where meals and hot drinks are supplied; clothes also are sold and mended. A cup of coffee and milk costs ½d., a roll or a piece of bread about ½d.; two buttered rolls or a portion of soup 4 or 5 pfg., or about ½d. Vienna seems to be supplied with numerous cheap popular refectories.

In Germany great progress has been made in organizing schools of domestic economy and cookery. Wise buying and good cooking are the two most important factors in providing cheap food, but in England, where the raw materials are cheap, there is the greatest waste in its preparation, and the meal placed on the table is too often not cheap, or palatable, or digestible. Attached to the school is a restaurant, from the profits of which the cost of the school is defrayed. Another excellent idea is embodied in the movable kitchens of the Berlin Coffee Stall and Car Company; from the earliest morning hours it sends through the city clean, and even elegant, white lacquered wagons, from which are sold hot coffee, tea, cocoa, bouillon, soup, sausages, and, in summer, cooling drinks, but no alcohol. These are of great service to workpeople and clerks, whose lodgings are often unprovided with either housekeeper or kitchen. At these coffee stalls a buttered roll, a cup of coffee or cocoa or hot milk costs ½d., two hot sausages 1d. Moreover there is an institution peculiar to Berlin called "Cookery for the Sick," by which medically prescribed diets are cooked and forwarded in thermophore boxes within a radius of 2 kilometres. There are six dépôts connected with the central kitchen by motor cars, but the separate dishes are delivered by tricycle. The prices are: 3d. for half a litre of bouillon or 6d. for a litre of soup with meat and vegetables, but the prices reach as high as 1½ marks or 2 marks for a complete meal of three or four dishes.

[1] *L'Alimentation à Bon Marché, Saine et Rationelle*, Par Jean Lahor et le Dr. Lucien-Graux. Paris: Félix Alcan. 1908. (Cr. 8vo, pp. 290. Fr. 3.50.)

nicely served. Similar establishments exist at Cassel, Aix-la-Chapelle, Bonn, and Vienna.

One of the results of a Congress of Social Economy organized by the *Journal de la Cuisine* in Brussels in 1902, was the publication of a pamphlet entitled *Budget annuel de l'employé a 1,800 francs*, written by Madame Callewaert, to show how a small income of £72 may suffice for a family composed of father, mother, and two children. The rent of 336 francs a year may be compared with that of an English workman who pays 6s. 6d. a week (336 shillings a year) for his house, and has 25s. a week to live on. That it is possible to live on such very moderate means is shown by the following bill of fare for a day, taken from this *Budget*. At breakfast the parents have coffee and sugar, bread-and-butter, the children have milk and bread-and-butter; at dinner, leek soup (enough for two days), roast pork from the day before, potatoes, endive, oranges; supper, coffee and milk, bread-and-butter, cheese, and the remains of the meat. At other times the supper would be potato salad, sardines, sauerkraut, or eggs or kippers. M. L. Banneux is quoted in support of the contention that the cost of the food of a family ought not to exceed two-fifths of its revenue. The evening meal in these budgets is light and our authors deprecate the French habit of taking two heavy meals a day; what would they say to the three heavy meals of the British middle and the four or five meals of the wealthier class? The immense economical advantages of a diet composed to a great extent of vegetable food is admitted and the case could be strengthened by reference to Chittenden's experiments. The book concludes with a number of statistical tables and receipts of value to persons interested in food questions.

The problem to which attention is drawn by the authors is one which presses as much for solution in England as in France, although our difficulties are not identical. In England we have an abundance of good and cheap food, but owing mainly to ignorance it is used wastefully. In our great towns the wives of working men seem to have given up cooking; their children are too often fed on bread and jam and their husbands on tinned meat. Food that requires preparation is viewed with disfavour, for cooking is looked upon as irksome; if girls were taught cookery, and taught that it was an art calling for the exercise of skill and good taste things might improve. Meanwhile it must be remembered that there is a large class of men who have no wives, and of girls who are supporting themselves, but have no time to cook their food; for them cheap refectories ought to be provided in all great towns, and enough has been stated here to show that when properly managed such enterprises can be made to pay their way even when food is supplied at very low prices. The schools for domestic economy with restaurants attached would perhaps be the best means of solving the problem of cheap refectories. We should like to see the kitchens for sick-room cookery established in all our large towns.

THERAPEUTIC USES OF MUSIC.

WE see it stated that in the Berlin Charité Hospital, on every Sunday, in the afternoon, from 5 to 6 30, concerts are given for the benefits of the patients. The performers are all skilled artists; the good effects of the music are said to be extraordinary, and the concerts are welcomed with enthusiasm by the patients. It will be remembered that a St. Cecilia Guild was founded in London some fifteen years ago on the initiative of the late Rev. Frederick Kill Harford, then a Minor Canon of Westminster. The movement was supported by some prominent persons, among whom was Sir Andrew Clark, and its efforts in a few hospitals and workhouse infirmaries were watched with a certain amount of languid interest by a few members of the medical profession. Experiments were made, with results that were deemed sufficiently encouraging to justify a trial of the therapeutic uses of music on a large scale. Memoirs on the subject by Dodart and others were translated under the auspices of the Guild, but, as far as we are aware, these were never published, and the enterprise came to nothing.

We have always felt that Mr. Harford's philanthropic idea deserved a better fate. The power of music on some wild beasts and on snakes is well known. It is one of the oldest remedies for mental excitement and despondency in human beings. David stilled the fury of Saul by playing before him on his harp, and Farinelli's voice soothed the melancholia of Philip V. of Spain. Esquirol and Moreau of Tours used music in the treatment of mental diseases, but without much effect. The experiment has been repeated in many asylums, French and foreign, with contradictory results. In modern asylums, we believe, music is often used as a sedative. It is systematically employed in the Hospital for the Insane at Dunning, Illinois, where two or three years ago several musical boxes and an automatic piano player were procured and distributed among the wards. Dr. V. H. Podstata, the Superintendent, is evidently a firm believer in the therapeutic virtue of music. In an address delivered some time ago[1] he spoke as follows: "The first effect of pleasing, harmonious "sounds is a relaxation of special nervous tension. "The harmonious sound wave reduces the horrible "inhibition and the mental agony of the melancholy "patient. It liberates the pent-up energy and diverts "the association of ideas. In the maniac the constant "flight of ideas and motor restlessness is moderated "and often checked. In the purely deluded the atten- "tion is diverted, so that at least temporary stay "is achieved in the abnormal mental aberration con- "stantly enclosing the poor mind in a deep network "of delusions. The demented patient is stimulated "and aroused to activity. In all cases the harmonious "impressions cause a relaxation of circulation of blood. "The congestion is relieved, also the anaemia, and, as a "result, not only the brain, but all the organs of the "body, are enabled to return to the normal activity. "The stomach can now secrete sufficient quality and "quantity of digestive ferments, and the elimination of "poisonous waste products increases. As a further "result, reconstruction may take place, and the patient "be given better chance of improvement." Dr. Podstata's enthusiasm does not, however, lead him to make impossible claims, for he asks himself the question, What is the philosophy of the effect of music upon the brain? He replies as follows: "Surely no "one can expect that the structural weakness of the brain, "due to impediments in development from hereditary "causes, will be corrected by a melodious harmony of "sound. Neither can the sweetest music remove from "the blood the alcoholic or other poisons causing a "steady deterioration of all tissue, particularly the "highly-organized and sensitive associative nervous "network in the brain."

The therapeutic effects of music has within recent years attracted a good deal of attention in America. A Society for the Culture of Musical Therapeutics was organized some time ago in New York, the moving spirit being Dr. Egbert Guernsey. Lectures on the

[1] *Medical News* (New York), May 21st, 1904.

history of music as a healing power; the musical gift, how to develop it for healing, and the choice of songs and instruments in healing, were delivered by Miss Augusta Viscelius. At the well-known Craig Epileptic Colony, orchestral and violin music, well produced by well-educated performers, is said to have had a decidedly good influence upon the patients. Dr. Spratling stated that a performance given by a celebrated violinist at the Craig Colony in place of the regular service, which usually embraced a sermon few of the patients could understand, kept them mentally alert and interested in what was going on. The result of the musical service was striking. Instead of eight or ten seizures during the hour, two only occurred, both being of a mild character; that is, the patient was neither active nor demonstrative. In a letter published in the *Medical Record* of November 12th, 1904. Dr. Spratling says that it would be difficult to go among the physicians of the State Asylums of America and find one of experience who did not recognize the beneficial effect of music on the insane. Personally, he has had ample opportunities of observing it during a five years' service in an institution for the insane, and he has seen the same thing at Sonyea. There are, he says, cases of epilepsy in which stimulation of the emotions or the imagination along certain lines (erotic, for instance) will induce epileptic attacks, and others in which the influence of musical harmony acting on an agitated and unbalanced nervous system will restore it to a more nearly normal condition. Dr. Spratling is anxious that experiments should be made in institutions, and he suggests that the Rockefeller Institute should set aside a fund of £200 for the purpose, the experiments to be carried on during several months, and to include cases carefully selected.

It is not only in brain disease, however, that good effects are claimed for music. It was announced some time ago that a hospital was being built at Kalamazoo, Michigan, for the treatment of diseases by music, but we do not know whether the proposal has been carried into effect. In Russia music is used as a means of soothing the pains of labour. Count Patrossof, Director of Public Assistance, has a small organ in the patients' rooms in the St. Petersburg Maternity, and as soon as pains are felt a nurse begins to play. To the profane mind this rather suggests the big drum which drowns the cries of the victims of the itinerant tooth-drawer. Professor Ott also uses the organ in his Gynaecological Clinic at St. Petersburg. By means of a telephone the music is "laid on" to each patient *pro re nata*. This would seem to be more appropriate in maternity wards.

Destouches dealt with some of the sensorial effects of music in a thesis presented for the doctor's degree to the University of Paris in 1898. In a thesis submitted to the same University in 1904, M. Ch. Guibier discusses the whole subject with great learning, under three heads: The physiological effects of music; its therapeutic and toxic properties; and the indications, modes of application, and dosage. He says the experiments of C. Féré, Binet and Courtier, Guibault, Patrizi, and Mentz, have defined certain points in regard to the action of isolated sounds, rhythm, and tonalities on the circulation, respiration, and muscular dynamogeny. Laborde, in a communication to the Académie de Médecine in 1901, showed the part that may be played by auditory sensations in operative anaesthesia and the treatment of certain mental disorders. Ferrand presented to the same body an *Essai Physiologique sur la Musique*, in which he attempted to explain and define its therapeutic efficacy. On November 29th, 1906, Dr. G. Norman Meachen delivered an address on the place of music in the healing art, to the Incorporated Guild of Church Musicians in London. It will thus be seen that a good deal of attention has been given to the therapeutic uses of music. We think it a pity that the St. Cecilia Guild was allowed to die, for the enthusiasm of a musician like Mr. Harford and the professional and social support which he was able to secure might, if properly directed, have led to some practical results. It might be worth while applying the experimental method to the determination of the effects of music on the circulation and on the nervous system, and thus indirectly on other functions of the body, in a more serious and systematic way than has yet been done.

INTERNATIONAL SLEEPING SICKNESS CONFERENCE.

AFTER the adjustment of some difficulties in the arrangements the second Conference on Sleeping Sickness began its sittings on March 9th. It is expected that the Conference, which was convened at the instance of the British Government, will last about a week. The following is a list of the delegates of the countries represented at the Conference. Germany: Professor Robert Koch, Herr H. de Jacobs, Dr. Steudel. Spain: The Marquis de Villalobar, Spanish Minister in London, who is attended by Dr. F. Murillo Palacios, of the Spanish Home Office. Congo Free State: Colonel Lantonnois, Dr. van Campenhout. France: M. le Myre de Vilers, President of the French Geographical Society, and of the Central Commission for the Study of Sleeping Sickness; M. Rousin, Consul-General representing the Ministries for Foreign Affairs and the Colonies; Dr. Kermorgant, of the Académie de Médecine, Inspector-General of the Medical Corps of the Colonial Army; Dr. Cureau, Lieutenant-Governor of the Middle Congo, and Dr. Giard, of the Academy of Science and Professor at the Sorbonne. Great Britain: Lord Fitzmaurice, the Right Hon. Sir Walter Foster, M.P., Mr. A. Walrond Clarke (representing the Foreign Office), Mr. H. J. Read (representing the Colonial Office), Sir Patrick Manson, K.C.M.G., Dr. Rose Bradford (representing the Royal Society), Sir Rubert Boyce, Colonel D. Bruce. Italy: Professor Rocco Santoliquido, Professor Adolfo Cotta. Portugal: Dr. Ayres Kopke. The Italian delegation was accompanied by Count Bosdari, Italian Chargé d'Affaires. The Conference was presided over by Lord Fitzmaurice, who welcomed the foreign delegates in the name of the British Government. The Conference so far has occupied itself in discussing the draft general acts drawn up by the British and German Governments.

BOTTLE-FED MOTHERS.

AN instructive discussion on the evils of the bottle was held at the January meeting of the Société d'Obstétrique, de Gynécologie et de Pédiatrie de Paris. Madame Darcanne Mouroux, M.D., ex-interne of the Paris hospitals, read a remarkable contribution on the frequency of difficult labours at Fougères and in its neighbourhood. That town is in the Department of Ile-et-Vilaine, very near what was once Normandy, and quite away from the wilder and poorer Celtic-speaking Brittany. Out of 213 labours conducted by this lady, 143 came under the heading of "dystocia." In 68 the forceps was applied for pelvic contraction due to rickets. Version by internal manipulations was practised 20 times, in 4 for shoulder presentations, in 14 for contracted pelvis after failure of the forceps, and in 2 cases of ovoid pelvis. There were 22 breech cases, 16 in primiparae with slight pelvic contraction. The patients ranged from 20 to 30 years of age, and were for the most part under the average in height. The proportion of primiparae and multiparae was even. These women were

of a mixed race, partly Breton, that is to say Celts, partly Norman, which implies a distant Scandinavian strain, and partly of Mayenne, where geography and history have probably combined to make the inhabitants Romanized-Gauls with more or less Frankish or Teutonic admixture; in other words, they are more essentially French than are their Northern and Western neighbours. But Dr. Darcanne Mouroux insists that the rickety pelves of the women of the Fougères district and the consequent frequency of dystocia are to be attributed to a very definite cause, a well-known evil prevalent among the poorer classes. The infants of workmen's and peasants' wives are invariably, this lady informs us, brought up by the bottle. There is a notion that suckling weakens the mother. The infant is entrusted from the first to a dry-nurse, the milk is rarely boiled, and yet more rarely diluted with water, and a little brandy is often added to prevent diarrhoea and convulsions. The unhappy baby is fed within a few months of its birth on pieces of bacon, and cider is also a part of its early dietary. In consequence, about 70 per cent. died early and the survivors, male and female, show all the signs of rickets. Dr. Allo, who practises in the district of Saint-Brieuc, in the Côtes-du-Nord, which is within the limits of Celtic Britanny, reported that the peasant women in his district nearly always suckled their own infants, and that dystocia was rare among them. When it occurred it was usually due to uterine inertia. On the other hand, Dr. Chancellay, who practised in the district of Lannion, a purely Celtic region almost in Finistère, stated that he frequently met with contracted pelvis, and he registered in his practice one version to ten forceps cases. In this very same district the bottle is largely employed as the sole source of nourishment for the infant. Dr. Wallich, who introduced the discussion, expressed the hope that Dr. Darcanne Mouroux would follow up her cases, and continue her researches with as great care as she had shown in analysing those she had then reported. Sources of fallacy were indicated by several speakers, but all agreed that race, a factor so prominent in the departments adjacent to Ile-et-Vilaine, did not play a very distinct part in respect to normal labour and dystocia, nor even to the development of the natives. M. Pinard, who had been surgeon-major in 1870 to a battalion of the Finistère Mobiles, in which all the men were Celtic Bretons, stated that in three companies they were very tall; in four others, from different districts, they were very short. Siredey agreed with the importance laid on the fact that the poor of Fougères were mixed Celts, Normans, and Frenchmen. There appeared to be much intemperance in the town itself. Most obstetricians will agree with Dr. Wallich that Dr. Darcanne Mouroux was right in ascribing the frequency of dystocia and the scandalous infantile mortality to artificial feeding, and not to any degeneration of the race.

EYE SURGERY IN INDIA.

IN the *Indian Medical Gazette* for December, 1907, is an article by Captain Harry Gidney, of the Indian Medical Service, in which he records a single day's work in connexion with eye surgery in the Mofussil; and although it is generally known what a large field for ophthalmic work India affords, yet a day's work of 61 eye operations of which 58 were cataracts, senile and congenital, must be something out of the common, so in fact it was, though no very great effort seems to have been made to collect the cases. All that was done was to ask the assistant surgeon in charge of the hospital at Puthia and the police subinspector to collect as many blind people as they could, and when this was done Captain Gidney was asked by telegraph to fix a day when he could go to Puthia to see them. After doing 61 operations he left off, not because he had come to the end of the patients, but because the light failed and he was unable to see to do any more. When he arrived he found about 250 blind people, of whom about 100 had been operated upon by that well-known destroyer of eyes, the "rawal," or village eye quack, who travels about the country couching cataracts, with the result that almost all of his patients have had their eyes destroyed beyond repair. About 100 cases were considered suitable for operation. Captain Gidney lays great stress on the necessity of a healthy condition of the lacrymal apparatus, and should there be a purulent condition present, he advocates the removal of the sac before the cataract is touched. There is considerable difficulty in getting the villagers to make the journey of perhaps twenty or thirty miles to the hospital, but if the surgeon will visit the villages and operate there, there is no lack of patients after once confidence is established: they are thus saved the almost certain blindness which results after operation by the rawal. Of the 52 senile cataract operations done on this one day, in 10 the lens was removed in the capsule, with loss of vitreous in one case only; the rest were treated by the usual method of lacerating the capsule. Captain Gidney states that as a rule he never performs Smith's intracapsular operation unless the patient can be at absolute rest for three or four days. Most of his cases operated upon in the Mofussil have to walk home afterwards, and if they have to do this he always makes a large subconjunctival flap, but not if he intends to do an intracapsular operation. He is by no means in favour of irrigating the anterior chamber unless the most perfect aseptic precautions can be observed such as is possible in the Presidency eye hospitals, for infection is very liable to take place. It is a great pity that the Government does not prohibit the village quack from operating for cataract, but Captain Gidney, aided by the district magistrate and the police, has been instrumental in ridding the district of a few of these men, who make quite a fortune out of the ignorant villagers, for it is they who often persuade the natives not to go to the hospitals. During a tour in the Rajshahi and Dinajpur districts, he has seen at least 500 to 600 eyes totally destroyed by these quacks, and during three and a half months in the former district alone he performed over 400 extractions. Of the 61 cases he operated upon in the one day, 60 have done quite well, and the other, an extraction, has done moderately well, while not a single case of infection took place. It is to be hoped that the civil surgeons in India and Burmah will publish their experience of the results of the operations done by couchers and itinerant eye quacks, so that the facts may be strongly brought home to the authorities, and that they may see how infinite is the harm done to the unfortunate natives by these men.

SOLIDIFICATION OF HELIUM.

THE fact that Professor Kamerlingh Ohnes of Leyden has been able to send Professor Dewar a telegram to the effect that he has converted helium into a solid is an important incident in the history of low temperature operations. The telegram, which is dated March 5th, further states that the last evaporating parts showed considerable vapour pressures, as if the liquid state had been jumped over. The interest that this communication has aroused in chemical circles depends on the fact partly that helium is the last of the isolated gases to resist condensation, but still more to the fact that its solidification unquestionably brings us nearer to the absolute zero, the *minus* 273° C. determined by Lord Kelvin. It is most unlikely that these regions of intense cold will in themselves ever prove of any practical importance, but their theoretical interest is none the less very great. Till recently it was believed that at the absolute

zero all metals would be found to be perfect conductors of electricity, for as the temperature was lowered the resistance of platinum and other metals progressively decreased. This was true even when Professor Dewar liquified hydrogen at 20.5 absolute, but on evaporating his liquid hydrogen, Dewar found that the temperature failed to fall as it should have done according to theory, unless he could believe that the conductivity of platinum had ceased to vary according to the previously recognized law. That its mode of variation had altered was ultimately found to be the case, and this discovery completely revolutionized the conceptions as to what would occur if the absolute zero were definitely reached. It has been hoped by many that the key to the constitution of matter will be found in these low temperatures. Theoretical considerations make it probable that the freezing point of helium lies between 5° and 6° absolute. Assuming that the former temperature has been reached, a degree of cold has been attained as low as that which could be reached by a comet circulating in space at an infinite distance from the sun. The stages by which the result has been achieved have been laborious and prolonged. Bacon drew attention to the need for investigation, and himself conducted experiments. Robert Boyle threw himself actively into the work, which he admitted was the most difficult on which he had ever been engaged, but it was not until 1759 that Professor Braun at Moscow made an artificial freezing mixture of snow and nitric acid, and turned mercury into the solid state. Wild speculations were forthcoming. Men so cautious as Lavoisier believed that the absolute zero was about 3,000° C. below the freezing point of water, but the process of measurement began. Experiment suggested *minus* 240°, and later, in Lambert's hands, *minus* 270°. The truth about the latent heat of liquids was fathomed by Black, and Cullen determined it for vapours. Slowly the temperatures were lowered, and in 1835 Thilorier liquefied and solidified carbon dioxide. Faraday, by evaporating it, got as low as *minus* 110°, and Kelvin, working on Joube's results in 1841, determined once and for all that the absolute zero must be placed at *minus* 273°. By this time all known gases but six had been condensed. Then came the epoch-making work on various critical constants. By pressure and by rapid expansion oxygen was liquefied in 1883, and a temperature of *minus* 200° was attained. At last hydrogen, alone of isolated gases, resisted liquefaction. In 1898 Professor Dewar found a means of preventing the entrance of heat, and reduced hydrogen to the liquid and the solid state. As a result of these researches the new gases of the atmosphere were found, and helium alone resisted all attempts. With labour and difficulty Professor Dewar collected as much as a cubic foot of the gas. The temperature was reduced, the pressure raised, and just as it was hoped that liquefaction might occur, the vacuum vessel collapsed, and in a moment the labour of years wasted. Professor Ohnes is to be congratulated on his result. He has contributed to an important advance in the investigation of low temperatures. It is probable that he has reached the lowest point that will ever be attained, unless some further elements of greater volatility than helium are discovered and identified, possibly as coronium or nebulium, and are then liquefied at an even lower temperature.

MEDICAL SECRECY IN FRANCE.

IT is well known that the ethical rule of professional secrecy imposed by the Hippocratic oath and recognized as a serious obligation by the medical profession in all civilized countries has been distorted in France into a police regulation so irksome in its operation that thoughtful men have demanded the repeal of Article 378 of the Penal Code; if this view is not generally supported by the profession in France, their hesitation is due not to approval of its meaning and application, but to the dread that the repeal would be held to signify legislative sanction for the revelation of the secrets of patients who, when deprived of the security now afforded by the law, would no longer have confidence in the discretion of their medical advisers unrestrained by the fear of legal penalties. It is a striking illustration of the disadvantages of over-much legislation to remedy evils which should be controlled by public or professional opinion. A judgement of the civil tribunal of St. Etienne has condemned a Dr. Y. to the payment of 500 francs damages and costs for violating professional secrecy under the following circumstances. Dr. Y. was employed by the sick fund of a company to attend its employés during illness, and his certificate was necessary for the receipt of sick pay, which could only be claimed for illness not due to "epidemic diseases or misconduct." Dr. Y. found a workman to be suffering from syphilis, and told him what was the matter in the presence of his wife, whom he warned of the risk of contact. He reported to the authorities of the sick fund that the man was suffering from a "contagious" disease, and would not be able to resume work for some time, but denied that he named the disease. Nevertheless, sick pay was stopped and the man was discharged, hence the action at law with the results stated above. The plaintiff in his pleas disputed the correctness of the defendant's diagnosis, and was supported by two medical witnesses; but a committee of three medical experts appointed by the Court agreed in the diagnosis, and their opinion was accepted. The committee of experts also held that no breach of professional secrecy had been committed, but with this the Court did not agree, and the interest of the case lies in the views expressed by the judges on the questions concerned. It was admitted by the defendant that he had named the patient's disease to him in the presence of his wife, and had warned her against the danger of contagion; for doing this the Court held Dr. Y. to have "failed in an essential professional obligation, and to "have committed a fault for which he must pay." According to the judges, Dr. Y. should have sent the wife out of the room, and, after having told the patient the nature of his disease, should have asked his permission to tell his wife, and, in case of refusal, he should have restricted himself to giving her such directions as were necessary to preserve her from infection. The Court did not accept the defendant's statement that in his report to the sick fund the nature of the disease was not indicated, holding that it was inconsistent with the correspondence put in and with certain remarks which it was admitted had been made by him; but the Court went further, and rejected also the alternative plea that in so far as he had done so he was only carrying out the duty imposed upon him as medical officer to the sick fund, holding that no rules or regulations of such an association could be valid if opposed to the text of the penal law; further, the Court considered that the disease had not been proved to be due to the patient's misconduct, or to be an "epidemic "disease," so that it was not a case in which sick pay should have been withheld. The Court, moreover, disallowed the plea that as the doctor was not paid by the patient he was under no obligation of secrecy, and pointed out that even gratuitous service implied in the relation of doctor and patient the right of the latter to absolute discretion regarding his ailments. The Court, however, expressed the view that a medical inspector who did not treat the workman was on a different footing, and his reports would be privileged, so that reports to insurance companies, for example, do not violate the French notion of professional secrecy. It would,

indeed, be highly illogical if they did, since the applicant voluntarily submits himself to medical examination in order that a report on his state of health may be made to the Company. This line of reasoning might be extended to embrace the circumstances of the case which is the subject of this note, since it might be argued that the medical officer of the sick fund was in an exceptional position, inasmuch as the patient who sought his services had tacitly consented to the rule by which the nature of his illness was to be disclosed by the doctor to the authorities of the fund should it be of such a nature as to render him ineligible for sick pay. The rule may have been badly worded, as both "epidemic disease" and "disease due to misconduct" are vague expressions, capable of being made the subject of prolonged dispute. It seems unreasonable to refuse to recognize that the duties of physician-inspector and physician-attendant of the workmen may and often must be performed by the same person.

FOOT AND MOUTH DISEASE.

IN view of the recent outbreak of this disease in Edinburgh, some of our readers may be glad to be reminded of the main facts of medical interest concerning the nature of the malady. Writing in Allbutt and Rolleston's *System of Medicine*, vol. ii, Part I, Sir John McFadyean defines foot and mouth disease, or epizootic stomatitis, as an acute febrile affection characterized by the formation of a vesicular eruption, the most constant seats of which are the buccal mucous membrane and the skin of the digits. It is highly contagious amongst ruminants and also amongst pigs. From these animals it is frequently transmitted to human beings, and occasionally also to horses, dogs, cats, and fowls. Although the feet and mouth are the main sites where the eruption appears, the lesions are not always confined to these situations, and it is of considerable practical interest to note that in milch cows vesicles not infrequently form on the skin of the teats and udder. The symptoms of the disease, which make their appearance in cattle from one to eight days after infection, are described by Sir John as follows: "The animal ceases to feed, and is reluctant to move; "from time to time it makes a peculiar smacking noise "with its lips, from which a more or less frothy saliva "escapes. If the mouth be opened, white blister-like "elevations will now be found on some part of the "buccal mucous membrane; these soon burst and "become converted into shallow erosions. When made "to stand, the animal is obviously lame or 'tender on "'its feet'; and while standing it frequently shifts the "weight from one leg to the other, and shakes its feet "as if to get rid of something adhering to them. This "tenderness of the feet is well marked even before the "formation of vesicles; but these soon appear on the 'interdigital skin, or on the posterior aspect of the hoof 'immediately above the horn." The same authority cites some interesting cases of the transmission of the disease to the human subject. In 1834 three German veterinary surgeons made the experiment of drinking daily about a quart of milk from cows suffering from foot and mouth disease. On the second day of the experiment one of the men manifested fever, headache, and itching of the hands and fingers; five days later a vesicular eruption formed in the mucous membrane of his tongue, cheeks, and lips, and on the skin of his hands and fingers. The other two experimenters also contracted the disease, but in their cases the eruption was confined to the mouth. Both in this country and in Germany persons have not infrequently become infected during various outbreaks of the disease, and in the majority of cases their malady was attributable to the consumption of milk from affected cows. Butter, too, has occasionally been responsible for the infection of the human subject. The virus may also be transmitted by direct inoculation—a mode of infection which has been not uncommon amongst persons such as veterinary surgeons, farm labourers, and milkmaids, who have had to handle cattle suffering from the disease. The precise nature of the virus has not yet been elucidated. Some years ago various bacteria were isolated from the lesions or the blood of diseased animals, and each was claimed by its discoverer to be the causal agent. But in 1898 Loeffler and Frosch showed that the liquid contents of a vesicle retain their virulence after large dilution with water and passage through a filter the pores of which are so minute as to prevent the transmission of the smallest known bacteria. This experiment at once swept aside the theories of former observers and makes it probable that the true causal agent is not within the range of the existing powers of microscopic vision. Numerous attempts to cultivate it on artificial media have been made, but none of them have proved successful.

UNQUALIFIED PRACTICE.

IN the medico-legal column of this issue will be found a report of a recent trial at the Central Criminal Court which presents some points of interest. The case adds one more to the rare instances in which cocaine administered for analgesic purposes has brought about the death of the patient within a few minutes of administration of the drug. Apart from this circumstance the interest of the case lies in its conduct by the presiding judge, Mr. Justice Bucknill, and the remarks which he made in summing up the facts and considerations entailed. The importance of these lies less in the actual words used than in their general tenor, which may be considered quite independently of the case in point except so far as its circumstances serve to illustrate the position. The defendant was a person who, without having any legal qualification either as a chemist or as a dentist, was shown to keep a drug store and to practise as a dentist, or at least as an extractor of teeth, and in the course of his work in the latter capacity to have used a drug which brought about the death of a person who sought his assistance. On the conclusion of the evidence Mr. Justice Bucknill said that a verdict of guilty would mean that the defendant caused the death of the deceased by wicked and culpable negligence in the reckless administration of a drug in such circumstances that he must have known that he was doing something that was dangerous and yet did it recklessly. He indicated that he himself doubted whether this was the case, and quite naturally and rightly the jury returned forthwith a verdict of not guilty. Mr. Justice Bucknill, in the course of his remarks, said that the defendant was a person of good education, but at no time in the course of the proceedings did he in the least degree indicate any disapproval of what the defendant was shown to be doing; indeed he even, so to speak, patted him on the back, by recommending him at the end of the trial not to use cocaine in future without first ascertaining the condition of his patient's heart. The importance of all this lies less in the fact that Mr. Justice Bucknill's treatment of the case may possibly affect future trials of cognate character, than that views expressed or inferred by judges in their judicial capacity tend to impress the general sentiment on such points. In this instance such a result would be much to be regretted. Unqualified practice, especially when its fatal results are the direct subject of inquiry, should not receive any kind of judicial approval, either passive or active; nor, it seems to us, should those who play with edged tools at the expense of other persons be held quite blameless, even in default of direct evidence of culpable negligence in their use. In

other relations it may be safely assumed that no such view would be taken. For instance, the public if not the law courts, would certainly condemn a person who, without any other knowledge of machinery than the fact that one lever would start an engine and another stop it, posed as an engine driver and drove an express train filled with passengers who believed themselves to be in charge of a qualified and experienced man. Much the same considerations appear to us to attach to the practice of medicine or surgery by unqualified persons, and especially to those who in the course of their work use active drugs. Such drugs should *per se* be regarded as dangerous weapons, and persons proved to have used them to the hurt of their fellows should be held guilty without other evidence of culpability.

CANCER RESEARCH.

The Harvard Medical School, like many others elsewhere, is actively carrying on research work in cancer, the task being in charge of what is called The Caroline Brewer Croft Fund Cancer Commission, which has now issued its fourth report. The work began some eight years ago, and in the main the aim hitherto has been to examine and test conclusions put forward on the subject of cancer and its causation by investigators in other laboratories. Thus the first report issued in the autumn of 1900 recorded much useful control work with regard to parasitic theories of cancer causation, the nature of Plimmer's bodies, and the like; the second report, published in 1902, covered further investigationss of the relations of blastomycetes to cancer, and studies regarding the nature of cell inclusions; while the third report, published three years later, recorded further work in the same connexion, and also an extensive series of experiments on implantation of tissue on living animals, while the therapeutic value of *x* rays also received notice. The fourth and most recent report, dated October, deals mainly with experiments on mice, and includes three papers all signed by the present director of the cancer laboratory, Dr. E. E. Tyzzer. By inoculation he has kept up the Jensen tumour for ten generations, and has found actively-growing tumours to develop in 45.6 per cent. of normal mice. Some tumours appeared soon after inoculation, but in others not until after the lapse of a considerable time: in one case a period of sixty-four days. One which began to develop on the sixtieth day attained great size. The conclusion drawn is that the vitality of tumour epithelium may be suspended for a long period, but eventually shows great activity. The second paper records careful observations of the phenomena accompanying the growth of twenty spontaneous tumours in mice, the remark being made that the comparative infrequency with which such tumours have been noticed in these animals is that those examined have not been sufficiently old. The final paper details a study of heredity in regard to tumour development in mice. It is shown that in connexion with these as with other animals, large and small, questions of heredity are hedged about with innumerable difficulties. The breeding experiments are held to have been insufficiently numerous to decide the question, but may possibly appear to favour the view that an inherited diathesis may play some part in tumour development. As regards the future work of the Commission a desire is indicated to begin research now from the clinical standpoint. Sufficient knowledge, it is considered, has been acquired now to make such work of utility, but few, if any, Commissions have sufficient funds in their hands to provide the wards required. Even a moderate proportion of the sums of money now being devoted to the crusade against tuberculosis would serve, it is argued, to enable institutions to be established which would not only be productive of valuable scientific data, but enable men to be trained in knowledge of great value in protecting the public from cancer.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

We are asked to state that hospitals in the County of London, or within nine miles of Charing Cross, desiring to participate in the grants made by this Fund for the year 1908 must make application before March 25th to the Honorary Secretaries, 7, Walbrook, E.C. Applications will also be considered from convalescent homes and sanatoriums for consumption which are situated within the boundaries above defined, or which, being situated outside, take a large proportion of patients from London. It will be seen that the scope of the operations of the Fund has been extended by the enlargement of the radius from seven to nine miles from Charing Cross, as well as by the admission to consideration of the claims of consumption sanatoriums situated in the country in those cases in which it can be shown that a large number of London patients are treated.

THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The annual meeting and dinner of this Association will be held at the Hotel Great Central on March 17th (St. Patrick's Day), Sir Charles Cuffe, K.C.B., President, in the chair. The Right Hon. Sir Edward H. Carson, P.C., K.C., and Professor B. C. Windle, M.D., LL.D., F.R.S., President, Queen's College, Cork, will be guests of the Association.

Among the fifteen candidates selected by the Council of the Royal Society to be recommended for election as Fellows are Professor David James Hamilton of Aberdeen and Dr. W. H. Rivers of Cambridge.

The Prince of Wales presided on March 5th at a meeting of the Council of His Royal Highness, held at the office of the Duchy of Cornwall, when John Cosmo Stuart Rashleigh, M.D.Camb., of Menabilly, Cornwall, was appointed Sheriff of the county.

Among the distinguished persons on whom the University of Aberdeen has decided to confer the honorary degree of LL.D., at the graduation ceremony in April, is Professor W. D. Halliburton, F.R.S., of King's College, London. The same honour will be conferred upon Colonel William Johnston, C.B., late Assistant Director-General, Army Medical Department.

The President of the Local Government Board has authorized for the current year the following researches, in addition to those already announced, under the grant voted by Parliament in aid of scientific investigations concerning the causes and processes of disease: (1) Further studies by Drs. Andrewes and Horder as to methods of inhibiting in the animal body the activities of infection by certain cocci; (2) a study of the various forms of pneumonia, especially in children, by Mr. Foulerton, F.R.C.S.; (3) a study of acid-fast bacilli in butter by Dr. Nabarro; (4) an investigation of the injurious gases evolved during artificial illumination by Dr. J. Wade, D.Sc.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Milk Supply.—When the London County Council (General Powers) Bill came on, late on Thursday night, last week, there was an interesting discussion on the milk supply raised by Mr. Courthope, who moved to omit from the Bill all clauses dealing with milk supply other than the model milk clauses. He said he was acting for the Central Chamber of Agriculture, and his proposal was supported by the whole agricultural community. It was admitted that they must have general and uniform legislation. The model clauses were incomplete, but they formed the only attempt at uniformity, and had been inserted in 100 local Acts, including those of all the London boroughs: and last year they were inserted in a slightly modified form in the London County Council (General Powers) Bill. Some boroughs had other clauses dealing with the milk supply. All the clauses, whether model clauses or not, gave power of inspection outside the local authority's area of jurisdiction, and that power had caused great inconvenience to the agricultural community. At first it was thought that the purity of the milk supply could be secured by enforcing sanitary conditions in the cowsheds and dairies. But the powers under the Dairies, Cowsheds, and Milkshops Order of 1899 had not been found to be sufficient. This Bill sought to place on the dairy farmer the whole responsibility for the state of the milk on its arrival at the place to which it was consigned. The railway companies had refused to accept any responsibility. The agricultural community had no wish to avoid inspection. On the contrary, they would accept any sound proposals for ensuring the purity of the milk supplied to the consumer. The regulation must be of a uniform nature. The agricultural community did not desire in any way to shirk their responsibility, or to hinder any steps to secure a pure supply of milk. On the other hand, they asked that they should not have liability for pollution in transit after the milk had left their hands, or else steps should be taken to render the use of sealed vessels obligatory. The dairyman was already responsible to the local authority in his area, and if this Bill were passed he would be made responsible to the London County Council. Mr. Hicks-Beach seconded the instruction to omit the clauses from the Bill, and Mr. Guinness accepted it on the ground that he preferred public legislation to piecemeal treatment of the subject if the President of the Local Government Board would undertake to bring in legislation. The state of affairs now existing was very dangerous. In Finsbury Dr. Fullerton found that 32 per cent of the samples of milk he examined contained pus and 40 per cent. contained dirt. Dr. Harris, Medical Officer of Health for Islington, last year examined the contents of 34 churns at Finsbury Park Station, and out of the 34 successive churns 33 contained excremental matter. Under present conditions the milk passed through so many different hands that it was quite impossible to discover where contaminated milk originally came from, and so the farmer got off with impunity. It was a disquieting fact that no fewer than 374 sanitary authorities had made no regulations, and in the case of a large number of others no enforcement was insisted upon. Mr. Burns said the House had before it three Bills dealing with this subject. The Bill of the Widnes Corporation proposed the establishment of a sterilized milk dépôt and also contained tuberculosis clauses. The Blackburn Corporation Bill contained two clauses which went beyond the model clauses, and dealt with tuberculosis in what the Government considered an exceptional manner. The London County Council a year or two ago got the model clauses in one of their Bills, and were now in the Bill under discussion coming to Parliament, very properly he thought, for additional powers to enable not only the borough councils, but the London County Council itself to discharge its duties in a more effective and drastic way than was now possible. As these three Bills dealt more or less with the same subject in a somewhat similar way, it was only right that he should express the views of the Government upon them. The Government took no exception to the instruction. They did not, however, identify themselves with all the objects and motives which might have influenced the hon. member and the interests on whose behalf he acted. If the hon. member sought uniformity of law and regulation, and wished the penalties to be co-ordinated so as to make the punishment fit the crime, he thought that was a very desirable object, and the Government believed it could be better attained by a general Bill and general regulation than by spasmodic and local efforts. The time had come when we ought to have a larger, better, and cleaner milk supply, especially in the interest of the children in our large towns. He accordingly intended to bring in a general Bill this session dealing with the milk supply of the country. The question had become a national one. He believed that the public could be protected without handicapping the farmer or harassing the dairyman, and that the interests of the progressive farmer and the clean and enterprising dairyman should lead them to co-operate in ensuring for their trade cleanly and scientific conditions. The Bill which he proposed to bring in would seek to secure cleanliness, purity, and reliability in the milk supply and to remove the evils of overlapping jurisdiction, and would deal with the question of compensation in certain cases, with the conditions of valuation, the price to be paid, and a number of other matters. He believed there was an increasing recognition of the value of milk as an article of diet both for young and old, but he feared that the speech of the hon. member who had just sat down was rather of a character to make people say with Eccles in *Caste*, "Milk, milk, I'd rather have a drop of cool refreshing gin!" Perhaps the hon. member would substitute stout for gin. He was convinced that the children of the poorer classes would not be as strong and vigorous as they ought to be unless milk entered more frequently into their diet. The Government would take into consideration the need of London for exceptional treatment on account of its exceptional character and size. The milk supply of London could not be satisfactorily controlled unless the central body had greater control than it now had not only over milk but over a number of other things. He assured the members for Blackburn and Widnes, and the members who represented the London County Council, that nearly all that each of them sought would be embodied in the Government Bill along with other matters which they had not mentioned. He hoped the motion of the member for Rye would be carried without a division, and that he might enter upon his task of dealing with the whole question by Government Bill with the knowledge that all parties and interests would be ready to co-operate in carrying a just and reasonable measure. Mr. Cavendish accepted Mr. Burns's offer to legislate without committing himself and his friends to the details of the Bill. Mr. Cooper thought if general legislation was to be brought in it would be better to withdraw the milk clauses. Of the 150,000 gallons of milk brought into London daily, at least 15,000 were dirty, and that fact alone ought to expedite legislation. After some remarks from Colonel Lockwood, Mr. Seddon, Mr. Harmood-Banner, Mr. Gardner, and Mr. Courtney Warner, the instruction was agreed to.

The Poisons and Pharmacy Bill.—Lord Crewe moved the second reading of this Bill last week in the House of Lords. He said the first clause dealt with some additions to the schedule of poisons. The second clause enabled certain poisonous substances used for agricultural and horticultural purposes, such as sheep dips, to be sold in case of need by dealers who were not chemists. The next clause required that when a chemist carried on business in more than one shop there should be a qualified chemist in charge. The fourth clause dealt with some amendments of the Pharmaceutical Society's examination. The fifth clause was concerned with further safeguarding some substances in common use for household and other purposes. The Bill differed from the last Bill introduced to deal with the subject. Some question arose whether the Bill should apply to Ireland. The other controversial point was what should be the powers of limited companies trading as chemists as regarded titles. Ought they to be allowed to describe themselves by such titles as chemists and druggists? These points had not been included in the Bill. There was a sharp demarcation of feeling upon them, and the Government proposed to refer the Bill to a Joint Committee of both Houses, in order that they might, if they wished, take further evidence on these two points,

and then make recommendations to Parliament. He hoped the Bill would come back in time for its valuable uncontroversial clauses and such additions as might be made to them to become law. Lord Ashbourne said there might be some difference of opinion on the so-called uncontroversial clauses, and he thought any improvement made in the law should be extended to Ireland, and certainly the new schedule of poisons. The Bill was read a second time and referred to a Joint Committee.

Volunteer Surgeons.—In answer to Sir F. Powell, Mr. Haldane said medical officers of the Volunteers would have the option of transferring to the Royal Territorial Medical Corps or of remaining regimental officers. Those who transferred would be permitted to retain the uniform of their former unit until worn out. The compound title would be abolished in the case of those who joined the Territorial Medical Corps. The appointment of Brigade Surgeon in the Territorial Force would lapse, as the Territorial Force would be organized on the same basis as the Regular Army, in which such appointment did not exist.

Imprisonment under the Vaccination Acts.—Last week Mr. Secretary Gladstone informed Mr. Lupton that it was not possible to state exactly the number of persons received into local prisons since 1873 for offences against the Vaccination Acts. From a return laid before the House in June, 1881, it appeared that from January 1st, 1868, to July 31st, 1879, 138 persons were imprisoned for offences against the Vaccination Acts. From a similar return published in 1890 the number imprisoned between July 31st, 1879, and August 8th, 1889, appeared to have been 113. For further details reference should be made to these returns. For the last eight years the figures were as follows: Year ending March 31st, 1900, 37; 1901, 44; 1902, 36; 1903, 56; 1904, 106; 1905, 80; 1906, 58; 1907, 9.

The Causes of Beri-beri.—Mr. Cooper asked the President of the Board of Trade whether any scientific inquiry was being made by the Board into the cause of beri-beri; and, if not, whether he would consider the advisability of making a grant either to the Royal Society or the School of Tropical Medicine, to be expended in experimental research to discover the specific organism or toxin causing this disease. Mr. Kearley replied that the Board of Trade had been in communication with the Royal College of Physicians on the subject of beri-beri on board merchant ships, and the matter was now before a special committee of Fellows of the College. On receipt of the Committee's report, the Board of Trade would consider whether any, and, if so, what, further steps should be taken. Mr. Kearley also promised to consider Mr. Cooper's suggestion that in all inquiries into deaths from this disease on British ships special attention should be given to deficiency of nitrogenous food, overcrowding, and defective sanitation.

Harpenden and its Drainage.—In answer to a question put by Colonel Long with reference to the sewering of Harpenden, and urging delay as the present drainage could not affect the water supply, Mr. John Burns said that the Local Government Board had caused a local inquiry to be held with regard to the complaint which had been made that the urban district council had made default in providing their district with sufficient sewers. The Board had taken into consideration all the evidence submitted at the inquiry and subsequently in regard to the matter, including that relating to any risk to the water supply of Harpenden owing to the want of sewers. They were of opinion that there should be no delay in carrying out a proper scheme of sewerage and sewage disposal.

The Ventilation of the House of Commons.—On Monday Sir Philip Magnus asked whether, considering the prevalence of influenza among the members of the House, it might not be advisable to have a daily adjournment between the hours of 7 and 9 in the evening for the purpose of ventilating the House by means of opened windows. The First Commissioner of Works replied that the opening of windows would be a distinct hindrance to efficient ventilation under the new and improved system. The absence of members might be of advantage at any period of the sitting, but even during their presence the whole air of the chamber was changed every five minutes, and it was possible though not comfortable to do this in three minutes. The more rapid change was invariably effected during the divisions, when both the members and air were in movement. Sir Philip Magnus put several supplementary questions, but they did not elicit anything in favour of his suggestion.

Rabies.—In answer to Mr. Walter Long, Mr. J. A. Pease stated last week that two dogs had been destroyed at Northampton—one on February 21st and the other on the 24th—which had attacked human beings in circumstances clearly indicative of rabies. On *post-mortem* examination, appearances were found which confirmed the suspicion. The Board had thought it desirable at once to issue an order prohibiting the movement of dogs out of the borough of Northampton and an area within a radius of about five miles. The order also provided for the muzzling of dogs in public places, and for the keeping of all dogs under control within the scheduled district.

Vaccination at Hampstead.—In answer to a question put by Mr. Bowerman on Monday as to the vaccination of the employés of the Hampstead borough at a charge of 5s. each by a member of the Council, Mr. Burns said that he was informed that the Borough Council had never made any conditions as to the vaccination of their employés, and they had no record of the number vaccinated during the last six years. He found, however, that during the last epidemic of small pox in 1901, three of the committees of the Council thought it desirable that the staffs of their respective departments should be vaccinated. This opinion was conveyed to the employés of these departments, but it was stated that the committees in no way desired to compel them to be vaccinated against their own wishes. Thirty three persons had as a result been vaccinated, eight by the Public Vaccinator and twenty-three by the Deputy Public Vaccinator. The Deputy Public Vaccinator was a member of the Borough Council, but he was not employed by the Borough Council in this matter, nor had he received from them any fee in respect of it. The employés were at liberty to go to any medical man they pleased, and they went to the Public Vaccinator and his Deputy because by doing so they were vaccinated free of charge. The usual fee in respect of the operation would be paid by the Board of Guardians of the Parish.

Poisoning by Phosphorus Matches.—Mr. T. P. O'Connor asked the Secretary of State for the Home Department on Monday if, in view of the deaths from poisoning of women and children from consuming phosphorus taken from match heads, he would state whether any record of these cases was kept; and, if so, how many deaths had occurred during the year 1907 from this cause. Mr. Secretary Gladstone replied that the deaths returned by coroner's juries as resulting from poisoning by phosphorus matches were shown in the Registrar-General's annual reports. The figures for 1907 had not yet been ascertained. The Registrar-General had informed him that in 1906 six deaths were attributed to poisoning from phosphorus matches, five of the victims being children under 5 years of age, and one a girl of 12 years.

The Pathology of Swine Fever.—On Tuesday, in answer to Sir W. Collins, who inquired as to recent investigations into the nature of swine fever, whether the pathology of swine fever showed it to be a disease against which the methods of slaughter, disinfection, etc., successfully employed against other epizootics, could be employed with similarly good results; and, if not, whether the Board considered the large expenditure involved in carrying out such methods in the case of swine fever was warranted, Sir Edward Strachey stated that full particulars of the investigations would be published as part of the annual report of the Chief Veterinary Officer. The success of stamping out a disease by slaughter and disinfection, etc., did not depend so much on its pathology as upon its epizootiology, and the epizootiology of swine fever rendered it very doubtful whether wholesale slaughter of affected and contact animals was a practicable undertaking. The Board did not consider that the large expenditure that would be involved in carrying out such an operation would be justified.

Scotland.

[From our Special Correspondents.]

Glasgow.

The Commissioners' Report on Ruchill Fever Hospital.

The report of the three special Commissioners appointed by the Local Government Board to inquire into the complaints of overcrowding and understaffing of Ruchill Hospital was issued on March 5th, with a covering letter from the Board. The Commissioners took evidence in Glasgow on February 3rd to 7th, so that a reasonable time has elapsed before the publication of their report. It will be remembered that the investigation originated with an application of the assistant medical officers for the intervention of the Board. A preliminary inquiry was held by Professor Harvey Littlejohn, who decided that there was a prima facie case for an inquiry. It had been alleged by the assistant medical officers that the hospital was overcrowded and undermanned, to the serious detriment of the patients. In addition, they complained about the nursing arrangements and ambulance system. On these latter points there was serious friction between the assistant medical officers and the matron, and eventually the medical officers were dismissed.

In general terms it may be stated that the finding of the Commissioners on the question of overcrowding and understaffing fully bears out the statements of the medical officers, and the ambulance system is also condemned. On the other hand, the Commissioners do not support the medical officers in their contention that they should be consulted by the matron before changes were made in the nursing staff.

Ruchill Fever Hospital is intended under normal circumstances to contain 440 patients, on an average allowance of 2,000 cub. ft. of space per patient. It has always been the custom of the management to exceed this number of patients considerably in times of strain. The Commissioners find that in 1907 the hospital was put to a severe strain by epidemics of measles, whooping-cough, scarlatina, and cerebro-spinal fever. Thus in December on some days the number of patients were as high as 800, while the average number for the month was 695. The necessary result was that the cubic space standard per patient was seriously reduced. This was only in part justified by the fact that the majority of the patients were children. The Commissioners point out that even for adults 2,000 cubic feet is by no means an extravagant allowance, while cubic space cannot be reduced *pari passu* with age without detriment, and that even in measles and whooping-cough the prevalence of sequelae is largely influenced by the ventilation and cubic space. Further, they very truly point out that, as far as nursing is concerned, children require as much attention as adults. The Commissioners are quite clear that there was excessive overcrowding irrespective of the number of staff; at least, in the whooping-cough, cerebro-spinal, and measles wards. In May 51 patients, adults and children, suffering from cerebro-spinal fever, and 30 of them unconscious, were put into a ward constructed for 15 beds. In December 74 children with measles, many suffering from broncho-pneumonia were in a ward of the same size. The overcrowding that resulted made nursing difficult from the proximity of the beds. Further, the staff was too small, and as a result patients were left for a long period in an unclean condition and many did not get the treatment prescribed. They consider that the friction within the hospital should have been dealt with by the superintendent. The Commissioners are apparently of opinion that the responsibility for the overcrowding was shared by the medical superintendent and the medical officer of health. The medical superintendent maintained in his evidence that he had no responsibility for the number of patients sent in. He was bound to receive all sent in by the medical officer of health. His responsibility was, in his view, limited solely to making the best distribution of the patients that he could. The medical officer of health received daily returns showing the number of patients in each ward, consequently he was in a position to form his own opinion. With this view the Commissioners do not agree. He was the head of the hospital, not a subordinate official, and was responsible for its management, even though he was subject to the orders of the medical officer of health and Hospitals Committee. The Commissioners think that he should have taken up a definite position and said that his hospital was full, and that it would be dangerous to send more patients. At the same time, the Commissioners cannot exonerate the medical officer of health altogether. From the daily returns he knew that the wards were full, and that he was pouring large numbers of patients into the hospital in excess of its ordinary accommodation. After carefully considering the matter, the Commissioners conclude that the Hospitals Committee of the Corporation of Glasgow was not responsible for the evils or to blame either for the overcrowding of the wards or insufficiency of the staff. In sanctioning the general policy of filling the hospital very full during an epidemic they were acting on the best medical advice at their command, though it was unfortunate that the prevalent overcrowding in some wards was not observed by the visiting members. In their concluding paragraph the Commissioners note with pleasure that the mistakes made were not due to wilful neglect of duty, and that no instance was quoted in which the health of a patient had suffered seriously, nor was the death-rate more than normal. In their covering note the Local Government Board concur generally with the findings of their Commissioners. The Board was satisfied that during considerable periods of the year the hospital was seriously overcrowded and understaffed. In the latter part of the year the hospital was overwhelmed with measles and whooping-cough cases, and the accommodation and staff were wholly unable to meet the requirements of such a situation. They note in regard to measles, in particular, that removal to hospital, while it does not reduce the number of cases in an epidemic, usually results in a considerable reduction in the mortality among the cases removed. They note that though in this instance too many cases were removed, yet in the opinion of the medical officer of health, who was familiar with the whole conditions, removal to hospital was justified. The overcrowding was due not to a policy of reckless indifference or neglect, but was the unfortunate result of a well-intentioned policy. The Board thinks that the responsibility for overcrowding lies mainly with the physician-superintendent, though the medical officer of health cannot be wholly exonerated from the charge of unduly crowding the hospital in the later part of the year at the height of the epidemics.

Peterhead.

The Typhoid Fever Epidemic.

The report of Professor Matthew Hay of Aberdeen on the origin and spread of the epidemic of typhoid fever in Peterhead last summer, published on January 15th, is a document of more than local interest. The history of the epidemic is clearly recorded, ample details are supplied, and the arguments in favour of the final conclusion drawn do not appear to be overstrained. The outbreak is treated as having begun at the beginning of May, is shown to have reached its height about the third week of that month, to have continued practically unabated until the end of July, and then to have begun to fall with marked rapidity, until in September cases were only occurring at the rate of two and three a week. They were still occurring in the first week of October, but further than that the history is not carried. Professor Hay's conclusion is that the epidemic was initially due to milk infection; such infection being brought about by the return of a maid from a distant village, where she had been nursing members of her family, and in particular her mother, whom Professor Hay shows undoubtedly to have had typhoid fever. The milk infection, however, Professor Hay is firmly convinced was only the starting point of the epidemic; he argues convincingly that its growth and continuance was due to contact infection, or to the propagation of the disease from person to person. The maps and tables showing the case incidence and their various dates and distribution seem, as he suggests, to be certainly incompatible with a view either of water infection or of continued milk infection, while they correspond very well on the whole with a theory of personal contact. He does not deny that conceivably some cases may have been due to the drinking of contaminated water, but suggests that if there were any such they must have been exceptional, and must have occurred in persons peculiarly susceptible to the bacillus, since there

is no evidence of many persons having been infected in the same way. The etiology of the epidemic as described by Professor Hay makes the report of special interest, for we do not remember any other report of an equally detailed character in which the persistence of an epidemic of so extensive yet localized a character has been traced to personal contact. The single exception is the outbreak at Posen, in Germany. In 1905, where, as in this case, the epidemic was ascribed initially to milk infection, and was considered to have spread and persisted owing to contact infection, and where the total number of cases recorded was practically the same as in this instance—namely, 425. The report, however, has quite another interest for Peterhead itself, for Professor Hay, although he is at great pains to convince his readers that in this instance the water supply was not to blame, makes no attempt to conceal the fact that the water supply and the general sanitary arrangements of the town are not only unsatisfactory in a town of such standing, but a constant menace to its inhabitants and more particularly to chance visitors. As regards sewage and scavenging, it is shown that ashpits, privies, and the like are still common, and the sewage is discharged into the sea far too close to the shore, while the details supplied by Professor Hay with regard to the water arrangements warrant the apprehension that Peterhead may again be visited by a fresh outbreak of a much more severe character than that from which it is now recovering. The water seems to be derived from a large number of different sources, and on merely general principles it is obvious that many of these should be regarded as permanently open to grave suspicion of liability to contamination. Further, the analyses supplied show that the water derived from them is, almost without exception, such as elsewhere would be condemned absolutely on the ground of chemical proof of gross impurity, while in a large proportion of the analyses the bacteriological evidence is equally striking, the *Bacillus coli communis* being readily detected in small quantities of water. Another point in the report which should supply the sanitary authority of Peterhead with food for reflection, is connected with Professor Hay's final conclusion, that the spread of the epidemic was due to contact infection. He describes clearly the fashion in which typhoid fever may be conveyed from person to person, but he does not point out the way in which such infection may easily be avoided, and this is a point which should not escape notice. In Peterhead, as elsewhere, risk of infection from most of the sources of danger mentioned by Professor Hay could be avoided by the attention to the ordinary rules of cleanliness, and in particular by adherence to the good old custom—more sedulously observed, perhaps, by Mohammedans than Christians—of washing the hands before meals. Doubtless the accuracy of Professor Hay's conclusion will, on one ground and another, be disputed: the water theory of its causation will be upheld, the milk infection denied, the subsidence of the epidemic differently explained, its commencement differently dated. Nothing, however, will get over the facts disclosed as to the condition of the town and its water supply, or should be allowed to obscure the consideration that, whatever view may be taken of past occurrences, the town is at present in constant danger of further epidemics of one sort or another; that in no year for several past has it been free from admitted cases of enteric fever, and that unless it is content to be regarded as a black spot on the sanitary map of Scotland, it must resolutely and promptly set itself the task of setting its house in order.

Influenza in Edinburgh.

So far as Edinburgh is concerned, the influenza epidemic would appear to be on the wane. Sir Henry Littlejohn's report for the week ending midday, Saturday, March 7th, gives a death-rate equivalent to an annual mortality of 14·0 per 1,000. The Registrar-General for Scotland gives a less rosy view—15·9 per 1,000, but probably the latter does not deduct country deaths as Sir Henry does. The annual rate of mortality per 1,000 living in eight principal towns of Scotland for the week was 19.3, the highest being in Dundee with 22·0, and the lowest in Edinburgh with 15.9, or 14·0 according to Sir Henry Littlejohn's corrected figures. For the same week in 1907 the Registrar-General's figure for Edinburgh, 20·1. For that week in 1907 Leith headed the list with 22·5, and Greenock carried the palm with 13·2. Some other figures form interesting comment on the epidemic of influenza during the present year. The Registrar-General for Scotland gives a group of deaths from "pneumonia, bronchitis, and pleurisy," a somewhat vague grouping it may be conceded. Comparing this year with last, these are the figures in eight principal towns of Scotland:

Week Ending		Corresponding Week in 1907.
January 4th, 1908 ...	128	182
,, 11th, ,, ...	203	185
,, 18th, ,, ...	199	177
,, 25th, ,, ...	176	134
February 1st, ,, ...	178	125
,, 8th, ,, ...	170	170
,, 15th, ,, ...	175	168
,, 22nd, ,, ...	183	161
,, 29th, ,, ...	135	124
March 7th, ,, ...	155	149

In these same eight towns, in the month of January, the deaths from pneumonia numbered 413, and amounted to 11·5 per cent. of the total deaths—71 more than in January, 1907.

Appointment of Fife County Medical Officer.

At a meeting of Fife County Council held on Tuesday, March 10th, Dr. Thomas F. Dewar, medical officer for the county of Forfar, was elected medical officer for the county of Fife, in room of Dr. Naismyth, resigned. The new medical officer is a medical graduate of the University of Aberdeen, and a D.Sc. of the University of Edinburgh. He has been for fifteen years medical officer for the Fife and Forfar Imperial Yeomanry, and during the South African war he had charge of one of the enteric fever wards in one of the hospitals.

Aberdeen Hospital for Sick Children.

The annual meeting of the Aberdeen Hospital for Sick Children was held on February 25th. The report of the directors states that at the beginning of the year there were 60 patients in the wards, and 710 had been admitted for treatment during the year, a total of 770. Of the 770 in-patients treated in 1907, 464 were cured, 109 were improved, 71 died, 126 were remaining in the wards at the close of the year, and the rest were removed as unfit, etc. During the last thirty-one years the hospital has attended to 14,755 in-patient cases. During the past year 1,777 cases were treated as out-patients. The total in-and-out-patients cared for by the hospital last year was 2,527, and since its establishment 33,129. The ordinary expenditure for the twelve months was £2,920 1s. 11½d., being an average annual expenditure per bed occupied of £41 7s. 10½d., or an average daily expenditure per patient of 2s. 3½d., while the ordinary income amounted to £1,853 12s. 3½d., thus leaving a deficit on the revenue account of £1 066 9s. 8d. Reference was made to the necessity for the provision of a new hospital building. The gradual growth of the hospital's work year by year intensified the inconvenience of the present building, never originally designed for a hospital. The fullest meed of praise was due to the medical and surgical staff for their honorary services. It was sad to reflect on the limited opportunity and usefulness of our hospital charities, were it not for the readiness of medical men to give their services so generously to the sick and afflicted ones.

Medical Inspection of Schools at Aberdeen.

At a monthly meeting of the Aberdeen School Board held on February 27th, the Rev. A. Murray Scott moved:

> That it be remitted to the School Administration Committee to consider and report as to the advisability of having the children in the Board Schools periodically examined by a doctor.

He said it was practically admitted on all hands that the medical inspection of school children was a necessity both in the interests of the children themselves, and in the interests of the next generation of men and women who were to do the work of the world. Last year an Act was passed in England authorizing the inspection of children in all public elementary schools, and if ever a new Scottish Education Act came into force, one of the clauses would give the same power to School Boards in Scotland. In a memorandum issued by the Board of Education for England, it was stated that the Act aimed "at the physical improvement and, as a natural result, the mental and moral improvement of the coming generation."

If rightly administered, the new law was economical in the best sense. Its justification, however, was not to be measured in terms of money, but in the decrease of sickness and incapacity among children, and in the ultimate decrease of inefficiency and poverty in after-days arising from physical disabilities. Diseases such as deafness, rickets, defects in eyesight would be noticed by a doctor, and, if noticed in time, could be effectively cured, and the children's future usefulness and happiness secured, so far as these could be attained by a sound mind in a sound body. Many of these children's troubles seemed so slight to the non-medical man that parents did not think it worth while attending to them. Only the medical men knew. It might be said that, however desirable the object, they had no power to spend money on it. They were spending money now on medical inspection in one form or other. The Edinburgh Board had already a medical man in their employment, and no objection had been taken by the Government's auditor to the expense incurred. He thought that all he would ask could be done by the spending of an amount that would not mean more than the addition of a thirtieth part of a penny to the rates and none of them would refuse to spend more than that, if each year one child was enabled to enter on life more thoroughly fit for life's battle. But when they remembered that they had 26,000 children in the Aberdeen schools, and that probably 10 per cent. of them were suffering, unnoticed, from diseases which if unattended to would unfit them for a useful life, he was sure that the Board would not refuse, at least, to consider whether they would not undertake to apply the remedy that was at their hands. Mr. Keir seconded. He did not know that there was any question of greater importance at the present time than that of medical inspection. Mr. Stewart Thomson moved as an amendment "That the Board express its entire sympathy with the proposal, but defers taking any action meanwhile, in view of the probable imminence of legislation on the subject." Little more than a year ago he had brought forward a motion pretty much in the same direction as that of Mr. Scott, but if there was a public Act in immediate prospect, it was hardly worth their while to do anything in the matter. The motion was remitted to the Administration Committee as an open committee of the Board.

Ireland.

[From our Special Correspondents.]

Richmond District Asylum, Dublin.

Dr. O'Connor Donelan has been appointed to succeed the late Dr. Conolly Norman as Medical Superintendent of the Richmond Asylum. Dr. Donelan has been in the service for about fifteen years, and has been for some time in charge of the Portrane Branch Asylum. Dr. H. M. Cullinan, the Senior Assistant at Richmond Asylum, has been appointed Superintendent at Portrane.

Milk Supply of Belfast.

Mr. McBride, inspector of cowsheds and dairies, who had been directed to inspect the dairy farms outside the city boundaries, has made his report, which amply justifies the repeated statement at the late public inquiry into the health of the city, that there was no real inspection of the milk trade in Belfast, nor safeguarding of the health of the consumer. The following are extracts from the report:

Many of the byres are only from 6 ft. to 7 ft. high, and have a hayloft above, while in some cases pigs and poultry are actually kept beside the milch cows.

In one instance I found a man milking with dirty hands.

Very few of the byres have ever been limewashed; the walls are unsightly and rough, with dust and cobwebs, and there are no windows for light.

Manure is in some cases removed only every second day, and then only to within a few feet of the door of the byre, where it lies practically from June to April.

The floors are uneven and pervious.

The animals are generally of an inferior class.

In many cases the cows are only a few feet from the wall behind them.

Grooming seems utterly neglected.

Milk received daily from the creameries represent at least three or four milkings spread over the previous two days; the milk is pasteurized before being removed to Belfast.

The water in which the can is placed for cooling purposes is not changed sufficiently, judging from its green, slimy appearance.

In the majority of the districts no inspection is made by the rural authorities.

Milk cans are left on the roadside without any one in attendance, and so are liable to contamination.

Some of the milk distributors return the cans without even rinsing them.

It would seem that the inhabitants of Limavady are to be congratulated on their meat supply, and the inhabitants of Belfast on their milk supply.

South Charitable Infirmary, Cork.

Ventilation of Operating Theatre: Use of Stimulants.

The annual meeting of the Board of Management of the South Infirmary took place in the Board room of the institution, the Right Rev. Dr. Meade, Bishop of Cork, presided. The medical report directed attention to the large number of cases—1,145—admitted during the year. These included very urgent cases, both medical and surgical, many of them demanding very prompt attention. On the surgical side, it was found necessary to perform the large number of 483 operations. The daily number of patients in hospital was 81·2. As usual, there was a large attendance at the extern departments. The staff regretted the death of Dr. Curtis, an old and valued colleague and kind and sincere friend.

Mr. S. H. Newsom, who read the annual report, said it was 134 years since a few citizens, by the founding of the South Infirmary, placed on the benevolence of succeeding generations the responsibility of continuing the good work they had originated. As years had gone by change had followed change and development succeeded development. The operation theatre was now almost as perfect as it could be made, and fully equipped. In compliance with the wishes of the staff, the honorary architect had been requested by the Board to improve the heating, lighting, and ventilation, and it has been done in a most satisfactory manner and at a reasonable cost. The air was drawn into the theatre through a tube about 4 ft. square, and distributed in the centre and both ends by means of an electrically-worked fan fitted into a recess in the wall. In its course through the tube the air was washed as it passed through fibre matting on which a continuous supply of water was playing, and then filtered through woollen screens fixed at intervals and interchangeable. This arrangement was adapted for summer use, and in cold weather the air, when washed and screened or filtered, was passed through a steel radiator consisting of twenty-four upright pipes, and the warm air was diffused, bringing the temperature to about 70° F. in cold weather. The radiator was supplied with steam from a new vertical boiler. In 1907 the question of the use of stimulants in hospitals received discussion in the English press, statistical information as to the decreased consumption showing that medical science in its advancement had reckoned with this important matter, the amount of stimulants used having decreased though the number of intern patients had increased. In 1867 the number of intern patients was 929 and the cost of stimulants £163 17s., while in 1907 the number of patients was 1,210, while stimulants cost £28 5s. The Most Rev. Dr. Brown, Bishop of Cloyne, in moving the adoption of the reports, referred to the inconvenience of having children in wards with grown-up people, and hoped a ward specially for children would soon be established.

England and Wales.

[From our Special Correspondents.]

BIRMINGHAM.

The Risks of Radiography.

Reference is made elsewhere to the sad case of Mr. Hall-Edwards, surgeon-radiographer to the General Hospital, Birmingham, who has suffered such irreparable injury to his hands from his work with the *x* rays that it has been necessary for him to have the left hand and the lower part of the forearm amputated. Extreme sympathy is felt with Mr. Hall-Edwards in his great misfortune by the members of the medical profession not only in the Midlands but throughout the country. He has suffered

for many years great pain from the condition of his hands, and is now deprived of the means of continuing his practice, at any rate for a lengthened period. It is sincerely hoped that the other hand will sufficiently recover to allow him to be free from further pain. In view of the circumstances, a meeting under the chairmanship of Sir Oliver Lodge was held at the university on March 5th, and was largely attended by members of the medical profession and by many other public men in Birmingham. At this a motion was submitted and approved recognizing the valuable services rendered to the community by Mr. Hall-Edwards in the practice of his profession in connexion with the use of *x* rays, and expressing great sympathy with him in the permanent disablement he had thereby incurred. It was then resolved to raise a fund, to be invested or otherwise used for the purpose of assisting him, the following being constituted a Committee for the purpose: Sir John Holder, Bart., Mr. E. P. Beale, Mr. Frank Marsh (Honorary Treasurer), and Dr. Simon and Mr. J. C. Vaudrey (Honorary Secretaries). Mr. Hall-Edwards was one of the pioneers in this country of the use of the *x* rays as applied to medical science. Unfortunately in the early investigations of them it was not realized as now how necessary it is to protect the operator carefully. Mr. Hall-Edwards did good service in South Africa, and was surgeon-radiographer to the Imperial Yeomanry hospitals at Deelfontein and Pretoria. It was due to his energy that the first *x*-ray field practice was organized in connexion with the 1st Volunteer Battalion the Royal Warwickshire Regiment. He was Editor of *The Archives of the Roentgen Rays*, and has written many books on his special subject, the first as long ago as 1896, entitled *Surgical Radiography*. In recognition of his valuable services he was last year elected President of the Electro-Therapeutical Association.

The Milk Supply of 1907.

During last year 815 samples sold as "milk" and 15 samples sold as "separated milk" were analysed in the City Analyst's Laboratory. This number means that 150 samples were examined for each 100,000 persons living in Birmingham. The average composition of the milk samples was 12.22 total solids per cent., 8.73 solids-not-fat per cent., and 3.49 fat per cent. The regulations of the Board of Agriculture require that any sample of milk containing less than 8 5 per cent. of solids-not-fat, or less than 3.0 per cent. of fat, shall be presumed to be adulterated. Of the 815 samples of milk, 8 were adulterated with preservatives, 4 with boric acid, and 4 with formic aldehyde. The amount of adulteration by preservatives last year was very low, being only 1.0 per cent.; in 1902 11.3 per cent. contained preservatives; in 1903, 7.9; in 1904, 4.5; in 1905, 3 6; and in 1906, 5.0. All the samples taken during the past eight years from farmers at the railway stations have been free from preservatives, and therefore the preservatives are only added locally, and not by farmers. During the past five years 5.3 per cent. of the samples taken from carts contained preservatives, and 6.3 per cent. of those taken from shops during the same period were similarly adulterated. This similarity in the proportion of milk adulterated by preservatives sold from milk-shops and from milk-carts suggests that the preservatives are added by the middlemen, and not by the shopkeepers. During the past eight years the percentage of samples containing preservatives was 7.7; in August it was 22 8, and in March 0.7. Adulteration by the addition of water or the removal of fat was found in 73 samples, or 9.0 per cent. This is slightly less than was found in the previous five years. Samples taken from milk churns at the railway stations were adulterated in this way to the extent of 7.8 per cent., those from milk carts 9.3 per cent., and those from retail shops 10.1 per cent. Thirty prosecutions for milk adulteration were made in 1907, and the fines inflicted amounted to £30 12s. 6d., which was much lower than usual.

MANCHESTER.

District Nurses as Assistants to the Medical Inspectors of Schools.

Several months ago a communication was received by the Manchester and Salford Sick Poor and Private Nursing Institution from the Queen Victoria Jubilee Institute, recommending that the education authorities should be allowed to have the services of the district nurses to carry out any treatment of school children either at home or at the schools under the direction of the medical inspectors, and it was suggested that nurses should be set apart in rotation for this purpose. It was felt by the Manchester Institution that there were serious objections to the proposal, and it was resolved not to comply with the recommendation. An attempt was then made in certain quarters to get the resolution of non-compliance rescinded, and a special meeting was called to reconsider it. The question came before the annual meeting of the Medical Guild, and the feeling was unanimous against the proposal. A similar unanimity was expressed at a meeting of the Joint Committee of the Manchester and Salford Divisions. Several collectors of subscriptions to the Nursing Institution have distinctly stated that if any such proposal is adopted they will no longer give their support to the institution. Of course it is quite understood that the Corporation would be expected to pay for the services rendered. The nurses would in fact become for the time being Corporation servants, and to a certain extent control over the nurses would be taken out of the hands of the matrons or lady superintendents. As Corporation servants, the nurses might be required to perform duties that might be objectionable in many ways. For instance, there is a strong objection in many quarters against all medical treatment of school children at the expense of the rates, and home treatment is regarded as especially objectionable, whether it be carried out by the medical inspectors themselves or by nurses under their directions. It is quite certain that if the Nursing Institution allows its nurses to be used for this purpose, it will not only very materially suffer in its subscription list, but will, to a large extent, lose the sympathy of the medical profession of Manchester and Salford.

It is being freely stated all over the country by those whose interest it is to encourage medical treatment at the expense of the rates that school clinics and home treatment of school children will certainly come, and the constant repetition of this prophecy, without the most emphatic expression of objections against it, is in danger of lending encouragement to the movement in its favour. It may be stated definitely and emphatically that any such movement will be strongly opposed by Manchester medical men. Every medical society that has considered the question is unanimous against home treatment of any sort, either by school medical inspectors or by nurses under them. There has rarely been such unanimity on any subject among general practitioners as there is on this point, and every possible means will be used to prevent such treatment, even to the extent of using influence with parents to get them to refuse their consent.

First Aid in Tramway Accidents.

It is announced that the Tramways Committee of the Manchester Corporation has agreed to pay a reasonable fee for first aid rendered by medical men in all cases of tram accidents, even when the Corporation might not be held to be legally responsible. In the past these cases have often been a source of great trouble and annoyance to medical men. Injured persons have been taken by the tram conductors to the nearest surgery at any hour of the day or night, and of course immediate attendance is always necessary. In most cases the patients are complete strangers, and in nine cases out of ten they leave without paying a fee, and afterwards very generally disputes arise as to their liability, and between the patient and the Corporation the medical man comes off badly. The Corporation has now recognized that when one of their servants takes an injured passenger to a medical man the Corporation is morally responsible for first aid, though of course any future attendance is a different matter. As the cases vary from mere cuts and bruises to fractures and dislocations and even more serious cases, it cannot be said that the request is unreasonable when an all-round fee is asked of 5s. for cases seen between 9 a.m. and 9 p.m. and 7s. 6d. for night cases. The amount of free work that Manchester medical men have to do is somewhat astonishing, and the Tramway Committee is only showing a spirit of reasonableness in its resolution.

As showing that medical men are not so utterly devoid

of public spirit as is sometimes represented, it has been resolved to give free medical attendance to all the old Crimean veterans in Manchester, and a communication to this effect is to be made to the chairman of the Veterans' Aid Society. Of course this cannot be binding on all practitioners, but there is little doubt that it will meet with general acquiescence.

UNWHOLESOME FOOD IN MANCHESTER.

The amount of unwholesome food dealt with in Manchester during the past year is somewhat alarming. It is quite a common thing for the port sanitary officer to have to order the destruction of large quantities of tinned meats and bad grain from foreign ports, and the inspectors of the Markets Committee of the Corporation must have had a busy time, for the Committee's report states that during the year there was condemned and destroyed in the city 241,157 lb. of bad meat, 247,751 lb. of fish, over 5,000 rabbits, and a great quantity of game and poultry, the latter mostly turkeys, in addition to great quantities of fruit and vegetables. The abattoirs and markets were regularly inspected, and in addition 2,233 visits were made to private slaughter-houses, where 54 carcasses and portions of 23 others were condemned and destroyed as unfit for human food. In 72 cases shopkeepers were severely cautioned for having unsound food in their possession, while six orders for the destruction of unsound food were obtained at the city police courts. There were only two prosecutions under Section 116 of the Public Health Act, and fines amounting to £15 were imposed. It is difficult to say how much of all this unsound food would have been sold for consumption; probably some would have been voluntarily destroyed, but it is satisfactory to see that the inspectors are fully alive to the importance of their work.

NEWCASTLE-UPON-TYNE.

CLINICAL SOCIETY.

UNDER the auspices of the Newcastle-upon-Tyne Clinical Society, Sir R. Douglas Powell, Bart., delivered a lecture on Angina Pectoris and its Concomitants, in the University of Durham College of Medicine on March 5th. The chair was occupied by the President, Mr. John Clay, F.R.C.S., who was supported on the platform by Sir George H. Philipson. The lecture was extremely exhaustive, and was an excellent contribution to our knowledge of the subject. It was thoroughly appreciated by the large audience of members and students. On the motion of Dr. T. Beattie, a hearty vote of thanks was given to the President of the Royal College of Physicians for his lecture.

In the evening, at the Royal Turk's Head Hotel, upwards of 120 gentlemen set down to dinner to do honour to their guest, Sir R. Douglas Powell. The chair was occupied by Mr. John Clay, who was supported by Sir George H. Philipson, the Lord Mayor of Newcastle-upon-Tyne, the Sheriff, Professor Page, Professor Oliver, Dr. A. T. Collis (Vice-President), Drs. Bolam, Beattie, Farquharson, Nathan Raw, Dunlop, Wm. Martin, Mr. A. Martin, the Honorary Secretary, Mr. J. W. Leech, and others. After the Royal toast had been disposed of, Dr. Wm. Martin submitted that of "The Colleges of Medicine and Science," to which Sir George H. Philipson and Professor Duff responded. The health of "Our Guest" was given from the Chair. On rising to reply, Sir Douglas Powell received a warm and most cordial greeting. He paid a not less graceful than well-deserved compliment to the Royal Victoria Infirmary, spoke appreciatively of its equipment and of the work done therein as well as in the College of Medicine. Sir Douglas apparently thoroughly enjoyed his visit to Newcastle. Dr. J. H. Collis, in proposing "The Lord Mayor and Corporation of Newcastle," alluded to the philanthropic work which the Lord Mayor had done in the charitable institutions of the city. The toast was acknowledged by the Chief Magistrate and the Sheriff. In the hands of Professor Page "The Clinical Society" was well rendered, and equally as fittingly responded to by the President. Dr. Burnett proposed "Our Visitors," which Dr. Nathan Raw acknowledged.

The enjoyment of the evening was much enhanced by music and song. The Honorary Secretary and officials of the Clinical Society are to be congratulated on the success of the lecture and dinner.

ROYAL VICTORIA INFIRMARY.

Dr. A. Parkin and Dr. George Hall have been appointed Assistant Physicians to the Royal Victoria Infirmary, and have entered upon their duties.

SOUTH WALES.

SWANSEA TOWN COUNCIL.

A SPECIAL meeting of the Swansea Council was held on February 28th, in order that action might be taken by the majority of the Council with a view of getting the resolution appointing Dr. Hanson medical officer for the Port Sanitary Authority rescinded before it was confirmed by the authority. Dr. David Morgan, the new borough medical officer of health, wrote that he felt convinced that the medical officer appointed would also be accepted as the medical officer for the port, on the ground that the Port Sanitary Board had previously pledged themselves to accept the same official, and also that the advertisement implied that the posts went together. He trusted that the Council would rectify what was evidently a mistake. A member said that there was no pledge given by the Swansea Port Sanitary Authority. Mr. Gwynne said the Council gave their pledge that they would do all in their power to get the Swansea medical officer appointed Port Sanitary Officer. The Council led the applicants to understand that the Council, so far as they went, were prepared to do all they could. The representatives on the Sanitary Authority knew the opinions of the Council. Mr. Gwynne further said that the honour of the Council was at stake, and he alleged faith had been broken, and that if they were going to mislead people they could not blame others for having no faith in the Council. The subsequent discussion was a heated one, and no decision was arrived at. However, there appears in the local papers an advertisement for a medical officer of health for "The Swansea Port Sanitary Authority," at a salary of £100 per annum.

ANTHRAX AT PONTARDAWE.

An outbreak of anthrax has occurred at Ynysmudw, near Pontardawe, some eight miles or so from Swansea. A cow died suddenly, and a local butcher was called in to make a *post-mortem* examination, so as to ascertain the cause of death. The butcher contracted the disease by inoculation through a cut on the hand, and the butcher, together with two farm labourers, had to be removed to the Swansea Hospital, where it was found necessary to amputate the forearm of the butcher, and on February 29th he died from anthrax; the two others affected are progressing favourably. Some fifteen animals in all have died from anthrax, and have been buried in lime. The source of infection has not been discovered.

SANITARY INSPECTORS' ASSOCIATION.

The quarterly meeting of the South Wales and Monmouthshire Branch of the Sanitary Inspectors' Association was held at Pontypridd on February 29th, under the presidency of Mr. D. J. John, Chief Sanitary Inspector, Pontypridd. Mr. Willoughby, A.M.I.C.E., engineer to the District Council, read an interesting paper in which he pointed out that during the last twenty years the average death-rate in England and Wales had been reduced by 3.4 per 1,000. In estimating the saving of life, the cash value of sanitary work, based on the fact that two million lives had been saved to the nation, was 240 million sterling, or a sum equal to the indebtedness of local authorities for all purposes in the twenty years 1885–1905. The figures appeared startling, but he did not think they overstated the case.

IT is stated that President Roosevelt is about to appoint a Pure Food Commission consisting of chemists from various universities. It will be the business of the Commission to consider cases of appeal against the rulings of the Department of Agriculture.

THE Executive Committee of the Latin-American Scientific Congress has decided that the next congress shall be styled the "Pan-American," not the "Latin-American," Congress. The congress is to be held at Santiago, Chile, in December, 1908, and the Chilian Government has invited the United States Government to take part in the proceedings.

CORRESPONDENCE.

THE TERRITORIAL ARMY MEDICAL CORPS.

Sir,—As a member of the Advisory Committee in connexion with the Territorial Army scheme, will you give me the opportunity of saying how anxious I am to further the interests of the medical department of the new force, and how glad I should be if officers of that department would oblige me with their opinions and wishes on any matter of moment?

I trust that they will consider me to be very heartily at their service.—I am, etc.,

Frederick Treves.

Thatched House Lodge, Richmond Park, Kingston-on-Thames, March 10th.

THE RISKS OF RADIOGRAPHY.

Sir,—Dr. Hall-Edwards, who is well-known as a pioneer in this country in radiographic work, has, as a result of this work, developed cancer of the skin of both hands. It has been found necessary to amputate one hand, and it is feared that he will lose the other. Dr. Hall-Edwards is, in consequence, deprived of all means of earning a livelihood, and has to face an uncertain future with the added distress of financial difficulty. It is hoped to raise a fund to put him beyond the reach of want, and for this purpose a local committee was formed at a meeting, presided over by Sir Oliver Lodge, on March 5th.

About £600 has been promised, and it is hoped that the medical profession throughout the country will show its sympathy by contributing to the needs of one who, by his pioneer work, has helped to make the road easy and safe for those who follow him.—We are, etc.,

Robert M. Simon, M.D.,
J. C. Vaudrey,
Secretaries.

41, Newhall Street, Birmingham, March 10th.

MECCA AND EUROPE.

Sir,—As, perhaps, the oldest official of the Government of India, connected with the pilgrimage to Hedjaz, I have read with great interest your article "Mecca and Europe" in your issue of February 8th.

Dr. Chantemesse has not sounded the note of warning a moment too soon. Europe will be in imminent danger of an invasion of cholera from the Hedjaz next year. The disease has been very severe lately at Mecca and Medina and their respective ports Jeddah and Yembo, whence pilgrims are now returning to their homes by land and sea in every direction, carrying with them the infection, as the present sanitary organization in the Hedjaz is unable to prevent the exportation of the disease.

Already twelve pilgrim vessels homeward bound to India have called at this port, having had on board in the short voyage of four days from Jeddah seventy-four deaths, many of which were from suspicious diarrhoea, and forty-eight cases of small-pox, one of plague, and one of cholera.

Mercifully the railway from Damascus to Mecca is not yet complete, so that, as you point out, the long camel journey by land into Syria still furnishes a barrier to the spread of infection in that direction. The sea routes are already guarded by sanitary measures, the efficiency of which, especially towards Egypt, is now being severely tested. But the pilgrims returning by land to their homes in Yemen, will almost certainly bring back the disease to the holy cities next year, whence, unless early action is taken, infection will be disseminated in a northerly direction by the Hedjaz railway, which will be complete between Medina, Damascus, and the Syrian ports in about seven months.

There is, therefore, no time to be lost in summoning an international sanitary conference to define protective measures along this line of rail, and at the same time to urge the Turkish authorities to adopt in the Hedjaz the system of examination and disinfection which has been found so efficacious in preventing the exportation of plague from India. I cannot agree with Dr. Chantemesse that India is responsible for the present, or in fact any of the recent, outbreaks of cholera in the Hedjaz. It appears to me much more likely that the disease has been introduced from the Black Sea. For many years past I have inspected every pilgrim ship from India to Jeddah (the port of disembarkation for Mecca), and every one of them has been absolutely free from cholera on arrival here, as well as during their six to ten days' voyage from India. These vessels usually remain a few days in this port discharging cargo, thus affording additional opportunity for ascertaining their sanitary condition. This year and last year they have been compelled to call for further inspection at Perim.

No case of cholera has come to notice at these inspections, which are held eight to twelve days after the vessel leaves India. In addition to the precautions taken at Indian ports—namely, medical inspection of all pilgrims immediately before embarkation, rejection of all suspicious sick, disinfection of clothing, bedding, and effects by steam, and of the vessels, when necessary, by a Clayton apparatus—Government has equipped camps both here and at Perim with full medical staffs, steam disinfectors, and Clayton machines, so that infected pilgrim vessels may be dealt with effectively in British Indian waters before reaching Camaran. There has never been any necessity to put this machinery in operation against pilgrim vessels from India, as, so far, they have all been perfectly healthy.

In view of the above facts, it may seem difficult to explain the appearance of cholera among Indian pilgrims at Camaran last November. I have been at pains to investigate the matter, and the sequence of events as exposed below, will, I think, prove that the Indian pilgrims arrived at Carmaran healthy, that they contracted the disease on shore there while undergoing the usual seven days' detention in observation camps before being allowed to go on to Jeddah, that the medical staff at Camaran eradicated the disease from amongst these pilgrims and sent them on healthy to Jeddah, and that cholera was not introduced to the Hedjaz by way of Jeddah, where it appeared later than at Yembo, Medina, and Mecca, as is proved by the telegrams in my possession from H.M.'s Ambassador in Constantinople to the Resident in Aden.

The ss. *Islami* left Bombay on November 1st, arrived here and was inspected by me on the 8th, and again at Perim on the 10th idem, and was found healthy. A few days later she disembarked her pilgrims, still healthy, at Camaran, in accordance with the rule that all Indian pilgrims, even when healthy, be detained in Camaran in observation camps for seven days before going on to Jeddah. On the sixth day of their sojourn on that island the first case of cholera occurred amongst them. Subsequently two more cases occurred, necessitating their detention for ten days after the isolation of the last case before being allowed to re-embark to continue their journey to Jeddah, where they eventually arrived on December 8th. Now it was fifteen days later, on December 23rd, that cholera appeared at Jeddah, and, as before observed, it was reported at Yembo, Medina, and Mecca much earlier.

A similar experience befell the ss. *Zaminia*, which left Bombay on October 12th, was inspected and found healthy here, and at Perim on October 19th and 21st, arrived healthy at Camaran on October 27th, when she landed her pilgrims, among whom cholera broke out four days later, so that they did not reach Jeddah till December 27th. Now, from last August cholera was prevalent in several ports of the Black Sea. Pilgrim vessels from that direction land their pilgrims at Yembo for Medina, but when infected, also go previously to Camaran to land their pilgrims for detention and observation. Pilgrim vessels from the Persian Gulf also land their pilgrims at Camaran. If Camaran was used for Indian pilgrims only there would be nothing more to be said in the matter, but in the circumstances stated above the just inference seems to be that Camaran was infected by non-Indians, and that the Indians contracted cholera there. At the present moment Camaran is being used as a quarantine station for the pilgrims *returning* to the Persian Gulf, many of whom will probably bring cholera with them. This being so, it is hard on Indian pilgrims, and unfair to the Indian Government, and to shipowners, to place Indian pilgrims on Camaran at all, when the island of Perim, within a day's sail of Camaran, is available and fully equipped to receive and deal with them.

If Indian pilgrims at Camaran are exposed to infection brought by others, the efforts of the Government of India are rendered void and a heavy tax imposed on the pilgrims

and ships that carry them, through detention on their voyage.

This is a matter well worthy the attention of the Indian Government, to whose notice it will now be brought.—I am, etc.,

CHAS. MONK,
Aden, Feb 26th Lieutenant-Colonel, I.M.S.

PLEURAL EFFUSION.

IN his last letter, published under this head in the JOURNAL for February 15th, p. 417, Sir James Barr stated that it was his intention to communicate with Dr. Vaquez with regard to a communication from that gentleman to Dr. Samways quoted in a letter from the latter published in the JOURNAL of February 1st. Sir James Barr has sent us the following reply which he has received from Dr. Vaquez:

"Très-honoré Collègue,—Je vous remercie de votre aimable communication. J'ignorais jusqu'au nom du Dr. Samway (*sic*), lorsqu'il me pria de lui donner des indications historiques sur la question qui vous occupe.

"A aucun moment je n'ai mis en doute votre parfaite bonne foi, croyez le bien, et je sais que dès que vous en avez été averti, vous avez rappelé à la date chronologique les travaux que j'ai faits.

"J'ai d'ailleurs un certain nombre d'observations nouvelles interessantes je pense, et je me propose de les rapporter prochainement. Je vous les communiqueral au moment de leur publication.

"Croyez, très-honoré collègue et collaborateur, à l'assurance de ma haute consideration,

27 Feb., 1908. "DR. H. VAQUEZ."

From this it appears that Dr. Vaquez had never doubted Sir James Barr's perfect good faith, and recognizes that as soon as Sir James Barr had received the information he set forth in chronological order the observations Dr. Vaquez had made. Sir James Barr's statement in his letter published on February 15th is therefore fully confirmed.

THE PHYSIOLOGICAL IMPORTANCE OF THE CALCIUM SALTS.

SIR,—I feel sure you will allow me space in the BRITISH MEDICAL JOURNAL to make a few comments upon the account of my paper read before the Liverpool Medical Institution and the subsequent discussion, as reported in your issue of February 29th, page 505.

At first I felt almost tempted to congratulate Dr. Gordon Little on his paper, for the brief summary of my remarks—which I deem quite sufficient—hardly does justice to his criticism. On thinking the matter over, however, I believe it was I who read the paper on experimental work done by myself, and that Dr. Gordon Little very kindly added considerable interest to the meeting by a very able and carefully-prepared speech, which was only spoilt by certain remarks which were, I think, unnecessary and unjustifiable; but those present considered, so I am told, that in my reply I satisfactorily answered all his objections, if the other speakers had not already done so, for he was the first of those reported to speak.

In the circumstances I was somewhat surprised to see in the published account of the proceedings not only an amended summary of his remarks but also a reply to my reply! This seems to me hardly "playing the game," even supposing he does wish to depreciate, for reasons best known to himself, the value of my method and work with which he is so little acquainted practically.

It is not my intention to carry on a controversy with Dr. Gordon Little or anyone else at present, as I hope that my paper will be published *in extenso* in due time, when others interested will be able to judge for themselves; but I think I can claim at least the right to reply to Dr. Gordon Little's remarks, as many men about the country who have taken the trouble to write to me, or to come long distances to learn the method and see the work, may be unduly influenced by his statements, not having heard my paper or reply.

Dr. Gordon Little has never, so far as I know, ever seen the method of calcium estimation in blood carried out, nor has he examined the accuracy of it which he so candidly criticized. If he had done me the honour to bestow the same attention upon my paper as he evidently did upon the synopsis issued beforehand, he would have gathered:

1. That I definitely stated that only the ionized calcium was precipitated by my method, but that this calcium was probably the most important as far as rapid tissue changes were concerned.

2. That I long ago gave up the comparative standard—blood with aqueous solution—mentioned in my original preliminary paper.[1] I now only speak of the blood index, and acknowledge that, strictly speaking, each different solution should be worked out independently. (Further, his objection to an "index" at all, because of the variations, is ridiculous on the face of it. It would be useless to have an "index" if it did *not* vary. Again, the standard blood-index *has* been founded on many hundred blood examinations.)

3. That the deduction he draws from my observations on menstruating women was drawn by me and mentioned. (How can *he* be so rash, in the face of his remarks, as to draw conclusions based on the method?)

4. That I did ample justice in my paper to other workers, especially Ringer. (Consequently it was particularly gratifying to receive myself the appreciation of such an eminent authority on calcium salts in disease as Sir James Barr and of the other gentlemen who spoke.)

The long discourse on Mörner's[2] paper is quite new. In his speech Dr. Gordon Little stated that "some one, as far back as 1870, had shown that after the removal of the calcium salts coagulation still occurred in gelatin." In my reply I said that I doubted if in 1870 it was known that there was calcium in gelatin, and certainly nothing could have been known of its effect upon the setting thereof. Even if its presence was known then, I said I saw no reason to suppose that all the calcium could have been removed in those days since it is impossible, so far as I know, to do this in 1908 without destroying the gelatin. I see now that Mörner's paper of 1899 is given? This paper deals mainly with the action of neutral salts upon gelatin, but as I used oxalic acid (not ammonium oxalate or any neutral salt—as might also have been gathered from my paper) I fail to see that Dr. Gordon Little has made his position any better in this matter by shifting his ground. But this is not all. A careful examination of Mörner's paper reveals the fact that he specifically states in the text and in a long footnote that he has been *unable* to get ash-free gelatin (confirming my statement). His remarks simply refer to ash-rich gelatin and gelatin from which as much of the "salt" contents as possible has been removed. My contention is thus entirely confirmed. The technique for preventing the coagulation of gelatin by precipitating the calcium will be published with the rest of the paper.

I have no wish to make such an enthusiastic metabolist as Dr. Gordon Little an adversary to my method and work, especially as I believe he has allowed himself to be influenced by others. I hope rather that he will test my statements himself, and bear in mind that I do not intend to invade the field of general metabolism by giving out these incidental observations. Being only a gynaecologist, I am endeavouring to clear up the physiology of my special branch, for so far the chemists and physiologists (on whom Dr. Gordon Little thinks the work should devolve) have been unable to find satisfactory solutions to many of the problems involved.

My paper read before the Liverpool Medical Institution was, in fact, a programme for those interested in general metabolism, and founded, as I say, on incidental observations which I could not neglect and consequently feel constrained to defend.—I am, etc.,

Liverpool, March 2nd. W. BLAIR BELL.

THE HOSPITALS CONFERENCE.

SIR,—There is probably no medical man practising in any of our large cities who seriously believes that the proposals put forward by the United Kingdom Hospitals Conference will have the slightest effect in lessening the crowds that flock to out-patient departments. These proposals have been brought forward again and again, but the result, so far as large centres of population are concerned, is practically nil.

The first of the so-called "model principles" to be considered at the conference is to the effect that "inability to pay for adequate treatment shall be the consideration for the admission of all patients to hospital treatment." The conference surely cannot believe that pious resolutions of this sort will have the slightest deterrent effect. The public

[1] BRITISH MEDICAL JOURNAL, April 20th, 1907, p. 923.
[2] *Zeit. für Physiol. Chemie*, 1899, Band 28, p. 471, 1899.

have become accustomed to free education, to free entrance to museums and parks, and especially if they have subscribed a few coppers, they regard it as a gross injustice that they should not have free entrance to hospitals. In this impression they are encouraged by the action of hospital committees, who, in sending out appeals for funds, seldom make mention of any limitations, as they well know that if they did there would be a serious falling off in subscriptions.

For the carrying out of this first model principle the Conference relies upon almoners. Can any one believe that the well-to-do will be excluded by almoners? Experienced relieving officers in crowded districts have the greatest difficulty in discovering the income of the comparatively small number who apply to them. Will a charitable public be willing to subscribe for so large a host of almoners as would be necessary to inquire into the circumstances of the two or three millions who are attended in London hospitals? And what can they know of those who come ten or a hundred miles, put up at good hotels, and monopolize the time of the hospital staff? In the name of common sense is it not time to do away with methods which are practically impossible, and which have led to so much lying and deceit? The well-to-do who prey upon charity and snatch, as it were, the bread out of the mouths of the poor and suffering, will not scruple about telling lies to almoners.

This matter has recently been taken up by the Press, and there have been many proposals for doing away with hospital abuse and providing a better system of medical attendance. These proposals have evidently not reached the ears of the members of the Hospitals Conference nor the Hospitals Committee of the British Medical Association. The general practitioner will look in vain for help from that quarter. It may come from elsewhere. The manager of a firm who have about one thousand in their employ has just told me that he has become so heartily tired of his workers going to out-patient departments for trivial complaints and afterwards parading the streets while his machinery is standing idle, that he has determined to put a stop to it. Employers and others are becoming alive to these facts, and if the medical men who are aggrieved would, instead of leaving it to a few, themselves take action, we might confidently anticipate that a system of medical attendance would be evolved which would be of vast benefit to all concerned.—I am, etc.,

Greenwich, Feb. 25th. J. H. KEAY.

THE PATHOGENY OF *B. TYPHOSUS*.

SIR,—You may allow me to make a few remarks on Dr. Dean's article, a Typhoid Carrier of Twenty-nine Years' Standing, and on other articles to the same general effect in the BRITISH MEDICAL JOURNAL and other journals.

As a statistical fact the presence of the typhoid and tubercle bacilli is determined in the human system only under a condition of probability approaching to certainty. But that measure of probability only occurs under the condition that the bacilli are increasing by the billion; to enter the minute area of surface which is the microscopic field, billions must be present in the tissue or fluid examined. Supposing only a thousand, ten thousand, or even a million existed in the body, either diffused or localized in a spot, the probability of detection by the microscope would diminish to zero.

It is, however, an unwarranted assumption to say that the rate of increase necessary for detection is a necessary state in the organism. The *B. typhosus* increases by fission, but retains its vitality in liquid air at — 150° C. for six months without multiplication. Looking at the range of circumstance outside of the animal body under which it is able to exist, its rate of increase can be taken to vary from zero to a very high figure consistent with retention of vitality. Longevity is an inexact term to apply to an organism which simply subdivides; we can assign no limit to the life of the single bacillus as long as it does not subdivide or is not destroyed.

It follows that if one human being out of 100 gets typhoid disease it is not because *B. typhosus* is present, but because it has a non-natural or pathogenic rate of increase. It may be present in great numbers and yet incapable of detection by the microscope, and we can assign no natural rate of increase to it. What we do know is that there are conditions in the body and outside of it under which exceptional rapid increase occurs. The bacillus, then, may pass from any one of 99 persons in which increase is ineffective to one in which it becomes effective; and again, from one in which it is effective to 99 in which it becomes ineffective; or, existing in one, it may vary in effectiveness according as conditions determining increase vary. Here it is these conditions as favouring increase which are really pathogenic, and not the bacillus itself, since an abnormal induced rate of increase is pathogenic for the thing itself.

My experience of typhoid is one of sporadic cases incommunicable under inevitably communicable conditions. Even so they postulated an epidemic base, and force me to conclude that *E. typhosus* occurring in normal form is non-pathogenic—that it becomes pathogenic only as an abnormal rate of increase is induced in it by an environment non-natural for it.—I am, etc.,

Newry, March 7th. W. R. MACDERMOTT, M.B.

SIR,—I have read with especial interest the communication of Dr. George Dean and your article in the current issue of the JOURNAL on the persistence of typhoid bacilli in the gall bladder, since the case referred to is in essential particulars identical with my own; and I venture to ask you to insert this letter in the hope that some suggestions as to treatment may be forthcoming.

It will be observed from the following chronological outline of my case that my sufferings have been somewhat more severe than those of Dr. "W. D.," as quoted by Dr. Dean.

History of the Case.

1896. Typhoid fever, contracted in Florence; severe attack, with two relapses.

1897. February 22nd, convalescence established; able to leave the house.

August 24th, sudden and severe attack of biliary colic; in bed four days; slightly jaundiced.

November 10th, similar attack; seven days in bed; slight pyrexia on third day, ague-like attack on fourth day; slight jaundice.

December 13th, similar attack to first upon fourth day.

1898. January 14th, similar attack to first; five days in bed.

Four years' interval with good health.

1902. April 5th, 11th, 14th, 16th, and 20th. On these dates transient colic, involving half an hour's severe suffering, occurred without the passage of a stone.

April 21st, severe attack, like the first. On this occasion careful search was made, and a mulberry-shaped calculus, weighing 4 grains, and in appearance like a dried currant, was found, and on examination it proved to consist of bile pigment.

May 4th and June 23rd, transient colic.

July 17th, severe attack, five days in bed, slightly jaundiced.

July 27th, slighter attack, incapacitating me for two days, similar calculus to the one mentioned above discovered.

1903. March 17th, attack like the first, five days in bed, calculus found.

Note: On every subsequent occasion a calculus, similar in all respects to the first, has been found, excepting in the case of transient prodromal attacks.

April 11th, attack two days, calculus.

May 12th, June 2nd, June 11th, July 3rd, August 12th, September 15th, attacks, each involving two days' illness; calculus passed.

1904. July 5th, 7th, and August 12th, attacks like those just mentioned.

October 1st, severe attack, with renewal of colic on fifth day; two calculi passed.

November 24th, attack involving three days' incapacity; calculus passed.

Three years of freedom from illness.

1907. November 23rd, 24th, 28th, 30th, December 27th and 30th, transient prodromal attacks of colic.

1908. January 2nd, severest attack yet experienced, requiring administration of anaesthetic; calculus passed as before.

I should be glad if I could be put in communication with any doctor having treated patients who have suffered similarly, and I may mention that I have preserved specimens of the calculi.—I am, etc.,

March 11th. C. R.

THE TRANSMISSION OF SYPHILIS TO THE SECOND GENERATION.

Sir,—I am quite in accord with Mr. Clement Lucas as to the evil effects of too much reverence for the dicta of authority and tradition, but it is quite another thing to cast aside the accumulated clinical experience of centuries on the strength of bacteriological research which is at present incomplete.

With regard to Mr. Lucas's first and second points—the relative sizes of spirochaete, spermatozoon, and ovum—the length of the spirochaete is given by Schaudinn and Hoffmann as varying between 4 and 14 μ; we may take an average of 10 μ, or $\frac{1}{2500}$ in. Now, the diameter of the human ovum is given as 0.2 mm. ($\frac{1}{125}$ in.) by Milnes Marshall (*Vertebrate Embryology*), and $\frac{1}{120}$ in. by Carpenter (*Human Physiology*), these measurements being practically the same. Therefore the diameter of the human ovum is twenty times the length of the spirochaete—quite large enough to allow it to multiply within it. As regards the spermatozoon, the head is much too small to contain the spirochaete ($\frac{1}{6000}$ in., Carpenter); but this is not necessary, as the latter may be conveyed in the fluid part of the semen.

As regards Colles's law of immunity of the mother, I do not think this is any argument against spermatic infection of the ovum. The mother of a syphilitic fetus may be inoculated from the fetus with an attenuated and latent form of syphilis (after which tertiary syphilis may or may not appear)—latent conceptional syphilis or "Colles's immunity," or she may show signs of syphilis during pregnancy—syphilis by conception. The latter case is of course open to the objection that the mother might have been infected by the husband in the ordinary way.

Concerning Mr. Lucas's fourth proposition that "the regularity of the exanthematous stage occurring after birth shows that the first inoculation takes place with the separation of the placenta," I do not think that this is in accordance with clinical experience, which shows that exanthematous eruptions may be present before birth, at birth, or some weeks or months after birth.

With regard to the fifth point, the discovery of spirochaetes in the umbilical vein and liver no doubt suggests transmission to the fetus by the placenta, but it does not exclude the other forms of transmission to the fetus by spermatic infection of the ovum.

In conclusion, it appears to me that the denial of syphilitic infection of the ovum by paternal transmission only would revolutionize our methods of procedure with regard to syphilis and marriage. If it is impossible for a syphilitic man to beget syphilitic children without first infecting his wife, there would be no reason for the four or five years' interval which is usually insisted upon by most authorities, for as soon as the man was free from contagious lesions he could marry with comparative impunity. However, the disastrous results which happen under such conditions we know only too well by clinical experience.—I am, etc.,

London, W., March 8th. C. F. Marshall.

PULMONARY TUBERCULOSIS IN CHILDHOOD.

Sir,—In the very interesting article on pulmonary tuberculosis in childhood in this week's issue Dr. Young has unintentionally misrepresented my views as to the influence of heredity in tuberculosis. He says, "Squire and Maxon King have both brought forward statistics which they regard as indicating that the children of tuberculous parents show, if anything, *a slightly lessened susceptibility*" (the italics are mine). I speak, of course, only of my own statistics, which show that the children of tuberculous parents are *more frequently* affected with tuberculosis than the offspring of non-tuberculous parents, though not to the extent that was formerly supposed. In my paper before the Royal Medical and Chirurgical Society[1] I showed an excess of tuberculous cases in the offspring of tuberculous parents of 9 per cent. above the incidence of the disease in the offspring of non-tuberculous parents.

I have always felt satisfaction in having been able to prove that the almost fatalistic view of the extent of hereditary influence in consumption, which was prevalent when my paper was read, was not justified. I have, however, never regarded my figures as indicating a lessened susceptibility in the offspring of tuberculous parents, though some writers—especially in America—have, I know, quoted my statistics in support of such a contention.—I am, etc.,

London, W., March 7th. J. Edward Squire.

[1] *Transactions*, vol. lxxviii, 1895.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Sir,—A large number of medical men are taking up work as directed in Circulars 576 and 582 of the Board of Education. That this work should be carried out on a uniform and systematic plan is most important. To insure these conditions, I would suggest the formation, with the help of the Education Department, of temporary schools of instruction, to which men could be attached for a *short* period, so that they might see the work done and become conversant with the most convenient equipment and its practical employment.—I am, etc.,

Ilfracombe, March 7th. Ed. Slade-King, M.D., D.P.H.

THE STUDY OF TWINS AND "DOUBLES."

Sir,—May I trouble you to insert a further letter of inquiry on a point I raised a few months ago in your columns in reference to diseases of twins?

Many of your readers were obliging enough to reply to my inquiries, and I have now a considerable quantity of evidence on this subject, though I should be very glad of additional material.

A further question I would wish to have medical experience upon is that of similarity of diseases in persons not brothers or sisters, and yet greatly resembling each other.

From time to time popular magazines have published photographic reproductions of these resemblances, and instances of odd mistakes are now and again commented on in daily newspapers and elsewhere. The popular saying that "every person has a double" records the general recognition of this fact.

The evidence which I now possess makes it probable that twins suffer similarly from disease, and that constitution is a much more important factor than has lately been assumed, the older medical men being largely justified in their insistence upon this.

Before, however, giving facts to support such a conclusion, I am anxious to obtain an independent source of study to compare with my twin researches, and the possibility of the availability of "doubles" has been brought into my mind by a case in my own experience which was as follows:

A colleague of mine and myself both mistook a new patient we had not previously seen for an old one suffering from diabetes, so alike were they in appearance, and at our request she brought up a sample of urine to be examined, and it was diabetic.

The woman herself had no suspicion at the time of this disease, nor had she any noticeable symptoms, and, but for the chance likeness to the other patient, the disorder might very possibly have been overlooked.

If any medical men have had similar experiences, I should be glad if they would kindly communicate with the writer at the address appended below.—I am, etc.,

J. Lionel Tayler.

8, Adys Lawn, St. Paul's Avenue, Willesden Green, N.W., March 9th.

HOSPITAL AND DISPENSARY MANAGEMENT.

OUT-PATIENT INQUIRY.

The Secretary of St. John's Hospital for Diseases of the Skin informs us that in his Inquiry Officer's Report for the past year, is given a list of applicants for treatment into whose cases special inquiries were made. The list, representing some hundreds of applicants, comprises: Accountants, agents, bakers, boot dealers, builders, butchers, chemical manufacturers, cigar merchants, city merchants, clerks, (Admiralty, Bank, Civil Service, L.C.C., solicitors), coachbuilders, corn chandlers, dairymen, dealers, drapers, dressmakers, electricians, engineers, fruit merchants, grocers, greengrocers, hairdressers, hotel proprietors, house decorators, jewellers, laundrymen, musical instrument dealers, nurserymen, pawnbrokers, photographers, picture dealers, publicans, schoolmasters, sculptors, stewards, stockbrokers, surveyors, tailors, tutors, travellers, undertakers, upholsterers, valuers, wine merchants, and others of no occupation. The Secretary states that careful inquiry is made into all such cases, which are either refused treatment entirely or are referred to their own medical practitioner from whom they are requested to bring letters as to their fitness for hospital treatment. This plan is invariably successful, the really genuine cases attending again with the requisite letter, the others staying away.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognised by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL CERTIFICATES AND ASSURANCE COMPANIES.

A CORRESPONDENT draws attention to a circular he has received from a sickness, accident, and guarantee corporation, informing him that it intends to appoint district medical officers whose certificates alone will be accepted by it from the holders of its policies. The company proposes to pay half a crown for each report, and, as an additional inducement to medical practitioners to accept these appointments, informs them that their names and addresses will be printed on the prospectuses, and that all the claimants will be required to consult the company's medical officers.

*** The company is not well informed as to the view taken by the medical profession of such matters. Such a plan if carried into effect would cause considerable friction, as it would lead to unnecessary interference with the patients of other practitioners. The company would be well advised to accept the certificates of any registered medical practitioner in attendance, reserving to itself the right to send a medical inspector in any or every case.

THE PHYSICAL EXAMINATION OF GIRLS AT HIGH SCHOOLS.

J. R. A.—Our correspondent sends a copy of a circular from the head mistress to parents of girls attending a high school, informing them of arrangements for the physical examination of the pupils by a medical woman in order to ascertain that each girl is fit physically for the ordinary school course, and also "to supply data for the scientific study of the growing girl." The examination is optional, parents may give or withhold consent, and a fee of five shillings is charged for each examination. If any defect is found, such as spinal curvature, which may be corrected by exercises, the necessary directions will be given to the instructor, but all other defects will be referred to the family medical adviser. Our correspondent objects to this circular "being sent to his private patients" and expresses doubt as to the ethical position of the medical woman who has agreed to make the examinations.

*** Such examinations were started ten or fifteen years ago and have been very generally introduced into high schools for girls; as they are made only with the consent of the parents we see no ground for objection. There can be no doubt that many cases of defective eyesight or deformity may be detected by such systematic examinations. It is impossible for the medical profession to maintain the position that no one should be examined except by the family doctor in the face of the fact that examinations are daily made by specially-appointed practitioners in the elementary schools, for factory employment, for admission to the public services and banks, and for life insurance.

Medico-Legal.

THE PRESCRIBING CHEMIST.

SOME very strong comments were made by the Cardiff Coroner, Mr. W. L. Yorath, during an inquest held on the body of a 5-year old child whose death was due to diphtheria. The child complained of feeling poorly on February 11th, and her mother took her to a chemist's shop. The chemist's assistant declared the child was suffering from influenza and gave her a bottle of medicine. Two days afterwards the mother again repaired to the same shop, and from her description of the child's symptoms the chemist agreed that the disease was still influenza, and supplied another bottle. The following night, as the child was no better, the woman's mother advised her to call in a doctor, which was done the next day. When Dr. Downie of Cardiff at last saw the child, he found her suffering from fully developed diphtheria. The precious hours during which antitoxin might have saved the child's life had been thrown away, and she died. We agree with the coroner that the case *ought* to be a warning to chemists of this class, and to the people who resort to them in order to save a doctor's fee. But we know the warning will be insufficient. The list of these martyrs to ignorance and ill-directed economy will have still to be lengthened before any efficient check is put on the practice of counter-prescribing.

COCAINE AND UNQUALIFIED DENTISTRY.

AT the Central Criminal Court, on March 5th, a Russian subject, who has for many years been carrying on a drug business in Soho, was indicted for manslaughter in respect of a woman who died immediately after having two teeth extracted by him. Before the extraction he made a solution of cocaine, and injected into the gums a quantity variously stated to have been equal to one-third of a grain and half a grain. The teeth were extracted successfully, but almost immediately afterwards the patient died. The result of the *post-mortem* examination was to show that her heart was diseased, and that it and the respiratory centres had failed under the influence of cocaine. The prisoner admitted that he had no legal qualification to carry on the business of a chemist or to practise dentistry, but claimed that he had studied medicine abroad, and had acted as assistant to medical men and dentists in England for many years, and that he had used cocaine with great frequency in the same way without accident. Included in the medical evidence were statements that cocaine was used extensively and often without any examination of the heart even by the most skilful dentists.

Mr. Justice Bucknill, as reported in the *Times*, said in his address to the jury that a verdict of guilty in this case would mean that the defendant caused the death of the woman by wicked and culpable negligence in the reckless administration of a drug in such circumstances that he must have known that he was doing something that was dangerous, and yet did it recklessly, and brought himself within the pale of the criminal law. If the jury could not find that, or if they had any doubt about it, they must find him not guilty. The fact that defendant left Russia for political reasons had nothing to do with the case. The jury must consider the defendant as a Russian gentleman of good education, who had come here because he preferred to live in a country where he could practise his profession in safety without regard to his political views. He had been an assistant to qualified practitioners in this country, and he had practised for many years as a dentist. It had been stated in evidence that cocaine was extensively used by dentists, and very often without an examination being made as to the state of the patient's health. There was also a difference of opinion existing among doctors as to what would be an excessive dose, the medical work quoted for the defence stating that a stronger dose than that which the defendant was alleged to have given would not be too much. It had also been stated that cocaine was a most uncertain drug, and that it was impossible to say what its effects would be on any particular person. Did not those circumstances raise a doubt in the minds of the jury? If the jury thought that it had been made out that the defendant had been guilty of culpable, criminal negligence they must return a verdict accordingly; but, if they had any reasonable doubt after hearing the medical evidence, and remembering what the defendant in his evidence had said as to what the dose was which he gave the woman, they must find him not guilty.

The jury immediately returned a verdict of not guilty. Mr. Justice Bucknill expressed his approval, and discharged the prisoner with some words of advice to the effect that it would be extremely unwise of him in the future ever to administer cocaine without first ascertaining the condition of the patient's heart.

WORKMEN'S COMPENSATION.

Coles v. Great Western Railway Company.

THIS case, which was heard at the Weymouth County Court on February 21st, involved a conflict of testimony between medical witnesses. It appeared that the applicant sustained an injury to his knee in April, 1906. At that time he was engaged in heavy work. He was for some time paid compensation as if for total incapacity, but later he was put to light work and paid a less sum. On trying to resume his heavy work the knee gave way. Finally he was discharged in November, 1907, and he now claimed 10s. 1d. per week during further incapacity. The question at issue was whether he was incapacitated.

Dr. Manning, the club doctor, said there was no fracture and no objective to indicate the injury. He did not, however, think the plaintiff was malingering.

Evidence was given as to the applicant's steady habits.

Dr. Du Boulay, called on behalf of the railway company, said that in his opinion, if the plaintiff had exercised the leg, it would soon have got all right. There was no serious injury. If the plaintiff had resolutely resumed his ordinary work, the joint would have got in working order.

His Honour, in giving judgment, said that out of the conflict of opinion amongst the medical men he thought he was able to say that the plaintiff was only able to do light work at present. He hoped there was no permanent injury. If the railway company would take the plaintiff back into their employ, and provide him with light work, he would make a nominal order for the payment of a penny a week only, to keep the liability alive. But if they wished to keep to his dismissal he held that the plaintiff, being only competent for light work, had reduced his earning power by one-half, and that he thought would be doing justice. Putting his wages at, say, 18s. per week, he made an order for the payment of 9s. per week from November 16th to January 21st, the date of the issue of the summons, and after that time he would have 5s. per week until any further application was made.

THE RECEPTION OF LUNATICS IN UNLICENSED HOUSES.

On March 7th, at the Middlesex Sessions, Edith Mary Lascelles pleaded guilty to a charge preferred against her of taking charge of a person being a lunatic within the meaning of the Lunacy Act, 1890, at a house not licensed for receiving lunatics. Dr. Lyttleton Stewart Forbes Winslow was charged with aiding and abetting. Both defendants pleaded guilty. Mrs. Lascelles was fined £10 and Dr. Winslow £50. The law upon the subject is clear. It is provided by Sec. 315 (1) of the Lunacy Act, 1890, that every person who, except under the provisions of the Act, receives or detains a lunatic or alleged lunatic in an institution for lunatics, or for payment takes charge of, or receives to board or lodge, or detains a lunatic or alleged lunatic in an unlicensed house, shall be guilty of a misdemeanour, and in the latter case shall also be liable to a penalty not exceeding £50. In *R. v.* Heygate the defendant, who pleaded guilty, was fined £50 at Winchester Quarter Sessions in July, 1889, for keeping two lunatics for profit in an unlicensed house.

PARTNERS AND APPOINTMENTS.

Justice writes that two medical men are in partnership, and that the senior is a member of the Town Council. The latter is about to appoint a medical school inspector, and the junior partner is a candidate for the post. The senior partner has stated that any emoluments derived from this appointment will go to the junior alone. Could the junior partner legally or ethically hold such an appointment?

*** In order that the junior partner may legally hold this appointment, either the senior partner must resign his seat on the Town Council, or the partnership between the two must be dissolved.

THE BANKRUPTCY COURT AND THE SALE OF A PRACTICE.

Ignorant would be obliged for information whether in the case of bankruptcy the court has any power to sell a medical practice.

*** The court has full power to deal with the premises where the practice is carried on, but cannot compel the bankrupt to give any covenants restraining him from practising in the vicinity. As a medical practice without such covenants on the part of the vendor would be practically unsaleable, it would not be incorrect to say that the court cannot sell a medical practice.

SALE OF PRACTICE.

Glaucus asks the following questions: (1) In the sale of a practice, when a fourth is sold, how much of the expenses does the incoming partner take over? (2) When a practice increases after the arrival of a partner through the efforts of both parties, and the partner wishes to increase his share, should the price of the increase be reckoned on the value of the practice at that time, or on its value when the partnership was entered into; or on a valuation, which would pay the old partner for the increase due to his own efforts? (3) What is a fair price for a partnership in a special practice in the provinces or abroad?

*** (1) He would pay one-fourth of the expenses. (2) This should have been arranged in the deed of partnership. The usual custom is to pay for any increase of share, according to the value of the practice, when the purchase is made; it may be greater or less than at the time of the partnership. (3) This would depend on so many unknown factors, that it is impossible even to give an approximate valuation.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

Meeting of Senate.

A meeting of the Senate was held on February 19th.

Francis Galton Laboratory for National Eugenics.

Mr. David Heron, M.A., and Miss E. M. Elderton were reappointed respectively Research Fellow and Research Scholar in the Francis Galton Laboratory for National Eugenics for 1908-9.

Appointment of Fellows of University College.

The following were among those appointed Fellows of University College: Dr. Archibald M. H. Gay, Mr. Philip M. Heath, M.S., and Professor George R. Murray, M.D.

Conferment of Degree.

The degree of Doctor of Science in Physiology was conferred upon Mr. David Henriques de Souza, an internal student of University College.

King's College.

Sir Edward Busk and Mr. C. A. Russell have been nominated to represent the Senate, and Sir Thomas Raleigh and Mr. W. Harrison, K.C., to represent King's College on the Commission to be appointed under the King's College (London) Transfer Act. The fifth Commissioner is to be appointed by His Majesty in Council.

The Mercers Company have made a grant of £525 towards the fund for the incorporation of King's College in the University.

Appointments.

Dr. E. C. Seaton has been appointed a delegate to the Sanitary Institute Congress to be held in Cardiff in July next.

Dr. Alexander Macphail has been added to the Board of Intermediate Medical Studies, and to the Board of Studies in Human Anatomy and Morphology.

Advanced Lectures in Physiology.

Owing to ill-health, Professor C. S. Myers, M.D., will be unable to deliver the course of lectures on "The Special Senses (hearing, taste, smell)" announced to be given by him at King's College during the third term.

UNIVERSITY OF DUBLIN.

The following degrees were conferred on March 3rd:

M.D.—G. A. Crowley, T. O. Graham, T. R. King-Edwards, T. J. T. Wilmot.

On the same occasion a licence in Medicine, Surgery and Obstetrics was granted to F. O'B. Kennedy.

UNIVERSITY COLLEGE OF WALES, ABERYSTWITH.

A meeting of the Council of the University College of Wales, Aberystwith, was held in London on March 6th, with the Vice-President, Sir John Williams, Bart., K.C.V.O., in the chair. A vote of sympathy with the family of the late Sir Lewis Morris, late Treasurer of the College, and one of its warmest supporters, was passed on the proposal of the Principal. Congratulations were accorded to Sir Samuel T. Evans, an old student of Aberystwith College, on his appointment as Solicitor-General. Communications were received from local bodies in Radnorshire and Breconshire greatly approving of the work done on behalf of the College in various centres in connexion with cookery, dairy, horticultural, and other classes. The Principal, the Registrar, and Sir John Williams were appointed to represent the College at the conference convened on the initiation of the Denbighshire Local Education Authority to consider the question of the proposed National Council of Education for Wales. Principal Roberts was appointed to represent the College on the Court of Governors of the National Museum of Wales, and Mr. D. C. Roberts, of Aberystwith, to represent the Council on the Central Welsh Board. It was announced that, owing to his official position at the Board of Education, Mr. Owen M. Edwards had sent in his resignation as a member of the Council. The resignation was received with regret. The relation of the College volunteers to the new army scheme was discussed, and a committee including the Principal was appointed to consider the matter and report to the Council. Mr. J. H. Davies announced that Mrs. Tattersall, the sister and executrix of the late Rev. H. Davies Owen, of Penmynydd, had presented to the College museum the famous punch bowl belonging to Llewellyn Ddu y Fon. The donor and her late brother were direct descendants from Ellen Morris, the sister of the well-known Morrisiaid, of whom Sir Lewis Morris was the greatest.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL FORCE.

The following appointments as Principal Medical Officers to the Territorial Force are announced: Colonel J. Turton, Senior Medical Officer, Sussex and Kent Volunteer Infantry Brigade, to the Home Counties Division; Surgeon-Colonel G. S. Elliston, Senior Medical Officer, Suffolk Volunteer Infantry Brigade, to the East Anglian Divisions; Colonel W. Coates, C.B., Manchester Companies, R.A.M.C. (Volunteers), to No. 3, East Lancashire Divisions; Surgeon-Colonel P. E. Hill, Senior Medical Officer, South Wales Border Volunteer Infantry Brigade.

Major E. C. Freeman, M.D., late R.A.M.C., has been appointed Staff Officer to the Principal Medical Officer, East Anglian Division.

Medical officers of Volunteers will have the option of transferring to the Royal Territorial Medical Corps, or of remaining regimental officers. Those who transfer will be permitted to retain the uniform of their former unit until worn out. The compound title will be abolished in the case of those who join the Territorial Medical Corps. The appointment of Brigade Surgeon in the Territorial Force will lapse, as the Force will be organized on the same basis as the regular army, in which such appointment does not exist.

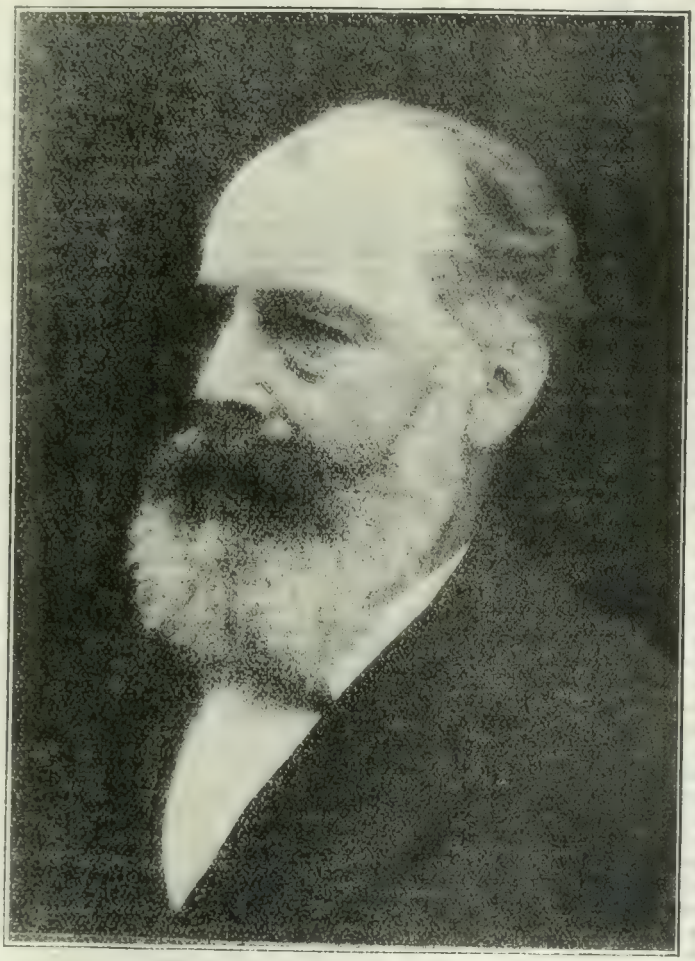
The German Emperor has conferred the following decorations on the undermentioned officers: On Surgeon-General R. H. Quill, M.B., Principal Medical Officer of Netley Hospital, the Second Class of the Order of the Red Eagle, with Star; and on Lieutenant-Colonel R. S. F. Henderson, M.B., Registrar and Secretary of the Hospital, the Second Class of the Red Eagle.

OBITUARY.

EDWARD ROBERT BICKERSTETH, F.R.C.S.,

LIVERPOOL.

THE death of Mr. Edward Robert Bickersteth, which took place at his residence, 2, Rodney Street, on Saturday, March 7th, removes one who for more than half a century has been a prominent figure in Liverpool, and was for many years one of the most eminent operating surgeons in the North of England. The family to which the deceased gentleman belonged has been connected for several generations with Lancashire, and of recent years its members have risen to more than ordinary distinction in the Church, at the Bar, and in Medicine. His grandfather, a medical practitioner of Kirby Lonsdale, had four sons. Of these one entered the Church, and his son became Bishop of Exeter; another went to the Bar, rose to be Master of the Rolls, and was created Lord Langdale; a third son also entered the Church, and was father of the late Dean of Lichfield and of the late Bishop of Ripon; while the fourth son, Robert, father of the subject of the present memoir, entered the medical profession. Settling in Liverpool, he was in the year 1811 appointed one of the Surgeons to the Infirmary, not yet entitled Royal, at that time located in Shaw's Brow. He remained on the staff of the Royal Infirmary till 1853, when he retired and was appointed Consulting Surgeon, and he died in 1857. He acquired an extensive practice and enjoyed a distinguished position as a surgeon. Early in his career he built No. 2, Rodney Street, and there the subject of the present memoir was born in 1828.



EDWARD ROBERT BICKERSTETH, F.R.C.S.

Mr. Edward Bickersteth was carefully educated for his father's profession, and began his medical studies in the Liverpool Royal Infirmary School in 1845, afterwards, as was the custom at that day, carrying them on in London, Dublin, Edinburgh, and Paris. After obtaining his diploma as Member of the Royal College of Surgeons of England in 1851, he returned to Edinburgh, and renewed his acquaintance with many of the celebrated teachers who then adorned the university of that city, and whose world-wide reputation combined to make the Scottish capital at that time the leading centre of medical and surgical instruction. He had the honour of being chosen house-surgeon by Syme, and held the office for upwards of a year, enjoying the advantage of Syme's personal friendship, and the opportunity of taking part in his private as well as his hospital practice. It was to that great master that he afterwards acknowledged himself to be indebted for the inspiration which had guided him towards the love of surgery. In 1852 he began general practice in Liverpool, according to the custom almost invariable in the provinces at that time, but his predilection for surgery was so strong that in 1857, finding no surgical appointment vacant, he established a private hospital, which attracted considerable attention from the public and the profession, and led to his appointment, the same year, at the early age of 28, as Surgeon to the Royal Infirmary. During the long period of nearly thirty-two years that he remained on the staff of that institution he took a leading part in the practice and the teaching, his Monday out-patient clinics being one of the most highly appreciated events of the week. Always on the look-out for improvement and advance in the science and art of surgery, it is not surprising that he was one of the first to appreciate and adopt the antiseptic system as it became evolved by his friend and former fellow-student, Lord Lister. In 1870 he reported 3 cases successfully operated on by the antiseptic method, in one of which the knee-joint was twice opened for the removal of loose bodies. One case was a popliteal aneurysm in which after failure to cure by compression the femoral artery was tied with carbolized catgut. He was early impressed with the value of absorbable ligatures, and in April, 1868, he successfully secured the spermatic artery with magnesium wire in a case of castration. A memorable day was April 3rd, 1869, when Lord Lister's "Observations on ligature of arteries on the antiseptic system" appeared in the *Lancet*, announcing the discovery of "an antiseptic animal ligature which, applied to an artery, virtually surrounded it with a ring of living tissue, which actually strengthened the vessel where it obstructed it." The ligature had only been tried on the calf, but Mr. Bickersteth's attention having been drawn to the article he decided to try the new ligature on two patients then in his wards, one a man with aneurysm of the femoral and the other with aneurysm of the carotid artery. Some catgut was at once obtained and prepared by Lister's method, and on April 6th, three days after the publication of the paper, Mr. Bickersteth had the honour of being the first to employ Lister's carbolised catgut ligature on the human subject, and he had the satisfaction of recording a few weeks later that both patients had left the infirmary well. The present generation of surgeons, who have had no acquaintance with the anxious process of separation of ligatures and the risk of secondary haemorrhage, can hardly realize the tremendous advance in surgery of which these two cases were the firstfruits.

He held the position of Lecturer on the Principles and Practice of Surgery in the old medical school. In 1873 he made unsuccessful application for the vacant Chair of Clinical Surgery in Edinburgh, and had the highest testimony from Lord Lister, and a most cordial tribute to his merits from the Liverpool School, the five signatories including the present Lord Mayor of Liverpool (Dr. Caton) and Mr. Reginald Harrison, whose lamented death we recorded only last week.

Mr. Bickersteth was in every sense a successful surgeon. As an operator he was admittedly *facile princeps*; his name was for many years a household word in Liverpool and the surrounding districts; he enjoyed a large and lucrative private practice, and was extremely popular with his patients. He was always deeply interested in the Royal

Infirmary, of which he was a generous supporter, and since his retirement from the active staff, besides being consulting surgeon, he had held the office of President for a year, and had for a long time been a member of the general committee.

Mr. Bickersteth married the sister of his fellow-student, the late Charles Murchison, and is survived by his wife. He leaves two sons and three daughters. The eldest son is Surgeon to the Liverpool Royal Infirmary, being the third of the name to hold that office. One of his daughters is married to Dr. George R. Murray of Newcastle-on-Tyne.

An indefatigable worker while on duty, he always took a long summer holiday, which he generally spent on his own yacht. Some twenty years ago he purchased the estate of Craig-y-don in Anglesea, where he had since resided a great part of the year. He always enjoyed excellent health until recently, but for the last five months he had been confined to the house, seriously ill for most of the time.

He was elected President of the Medical Institution in 1870, and was President of the Surgical Section of the British Medical Association when it met in Liverpool in 1883.

Dr. AUGUSTUS CONSTABLE MAYBURY, formerly of Heathcote Street, W.C., died at his residence in Chelsea on February 16th in the 65th year of his age. The eldest son of the late Dr. William Augustus Maybury, he received his general education at the City of London School, and entered St. Thomas's Hospital as the winner of a scholarship entitling him to perpetual attendance. His student career was one of industry and great distinction, especially in connexion with the sciences only indirectly connected with medicine. In 1866 he became M.R.C.S., L.S.A., but already at that time had won the degree of Bachelor of Science at London University, taking honours at the examination in several subjects. He had also been named an Associate of the Royal College of Mines. This he entered with a Royal Exhibition awarded by the Science and Art Department, South Kensington, and there he obtained many medals and other prizes. In 1873 he proceeded to what was at that time a rare degree—the D.Sc. London. In his early life he held several medical appointments, including that of Registrar of the London Fever Hospital, and the Resident Medical Officership of the Farringdon Dispensary, and of the Chelsea, Brompton, and Belgrave Dispensary, but the greater part of his life was spent in lecturing and tutorial work. For this he possessed very marked talent, and it was an occupation entirely congenial to him. At one time and another he held many posts of this character, among others the Professorship of Chemistry at the City of London College, and at the Charterhouse Science School and Polytechnic; he also lectured to the matriculation class at St. Thomas's Hospital, and devoted much time to private work in the same connexion, only giving it up a year or two ago when his health began to fail. Besides being a man of much kindness of heart, always ready to assist those who sought his counsel or other services, the versatility of his knowledge made him an exceedingly pleasant companion, especially on the pedestrian excursions to which he was devoted, and which he turned for his friends into illuminating nature studies. He was an omnivorous reader, and besides one or two textbooks for students, had published a translation of some of the works of Ovid.

SIR ALFRED COOPER, KT., F.R.C.S.ENG., F.R.C.S.EDIN.,

CONSULTING SURGEON TO THE WEST LONDON AND ST. MARK'S HOSPITALS.

THIS well-known surgeon, so popular in the fashionable world, died in the first week of this month in the Riviera, where he had been condemned to spend the winter owing to rapidly-failing health. His father was in his days a legal luminary, Mr. W. Cooper, B.A.Oxon., who became Recorder of Norwich. Alfred Cooper was educated at Merchant Taylors School, and was afterwards apprenticed to Peter Nichols, an eminent surgeon, once on the staff of the Norfolk and Norwich Hospital, at which institution Cooper was in constant attendance on Nichols during his term of apprenticeship.

In 1858 Alfred Cooper became a student at St. Bartholomew's Hospital, and qualified as a Member of the College of Surgeons in 1861. He did not fill any of the house-staff appointments at the hospital, but, determining to perfect his surgical education so far as was within his means, he went through a course of operative surgery in Paris, his companion from the great City hospital being Sir Thomas Smith. In 1868 he obtained the diploma of Fellow of the Royal College of Surgeons, Edinburgh. With the College at Lincoln's Inn he was, as will be seen, destined to be more closely associated. Soon after qualifying as Member, he was chosen as Prosector to the Court of Examiners, which shows that he had a reputation for skill in dissection.

After qualification, Cooper set up in practice in Jermyn Street and made little headway at first. One evening, however, he was called in by chance to see a rich man in the immediate vicinity of his consulting room, and the patient was so satisfied with young Cooper's appearance, manner and treatment, that he gave him the benefit of his patronage. Cooper soon afterwards began to prosper, his geniality and tact being powerful factors in his favour. He became well known in West End clubs and popular as a Freemason. Already when practising in Jermyn Street he was appointed Honorary Surgeon to the Inn's of Court Royal Volunteers, the far-famed "Devil's Own." A former comrade testifies, in a recent number of the *Pall Mall Gazette*, to the personal charm and professional reputation for which Cooper was already distinguished in those days nearly forty-five years past. Later on Cooper held the appointment of Surgeon to the Duke of York's Loyal Suffolk Hussars.

Early in his professional career Cooper gained another friend, the late Duke of Hamilton. Through this friendship he was introduced into high society, for which he

was by nature fitted, and he soon became as popular among the great as he had already been beloved by humbler associates. Dr. Clement Godson, with whom he had been intimate for over thirty-five years, can, we are informed, testify to this truth so creditable to the deceased. The late Duke of Edinburgh always expressed the greatest admiration for Cooper, and when His Royal Highness became Duke of Saxe-Coburg Gotha he appointed his friend and medical adviser his Surgeon in Ordinary. Cooper was present at the marriage of the Duke in St. Petersburg in 1874, as medical attendant to the then Prince of Wales, His present Majesty. Many years later Edward VII knighted Cooper. The title was one of His Majesty's coronation honours. A banquet, under the Presidency of the Duke of Devonshire, given to celebrate the knighting of Sir Alfred, was attended by the Presidents of the Royal College of Physicians and Surgeons, and many well-known members of the profession. Through his connexion with the Russian Court, where, as everywhere else, he made friends, Cooper received from the Czar the honour of knighthood of the Russian Order of St. Stanislas. He was also elected an honorary member of the Medical Society of St. Petersburg.

When fortune began to smile upon him, Cooper took up his final abode in Henrietta Street, where he practised until his retirement. He never professed to be highly skilful as an operator of the modern type, but all professional friends admitted that no surgeon excelled him in careful investigation of a case and in kind and skilful treatment. Much of his professional excellence, perfected in the slow course of time, was due to his experience as medical officer to several well-known institutions. For Cooper was attached to St. Mark's Hospital for Fistula for over thirty-three years. He was elected Surgeon in April, 1864, resigning at the end of 1897. On his retirement he received a gratifying presentation from members of the Committee, colleagues and friends in recognition of the invaluable professional services which he had rendered to St. Mark's Hospital for a space of time representing a whole generation. For many years he was Surgeon to the Lock Hospital, where he acquired great practical experience in the treatment of the important class of disorders for the relief of which that institution was designed.

Turning from East to West, from the City Road to Hammersmith, we are reminded that in 1867 Alfred Cooper was elected to the surgical staff of the West London Hospital, resigning in 1884, when he was made Consulting Surgeon. He took a great interest in the welfare of that useful institution and of the popular and prosperous Society so intimately associated with it. Lastly, in respect to staff appointments, Cooper was for a time Surgeon to the City Road Hospital for Diseases of the Chest. The Royal Society of Musicians also elected him their Consulting Surgeon.

In 1885 Cooper, urged by his numerous friends, offered himself for election as a member of the Council of Surgeons. He failed in his candidature, the successful candidates being Mr. Willett, Sir Frederick Treves, and Mr. Butlin; then Cooper went on as substitute until 1900 for Mr. Durham, recently deceased, and lastly Mr. Ward Cousins, substitute for Mr. Hulke. So great was Cooper's popularity, that when he once more became a candidate in 1900, when his term as a substitute member had expired, he came in at the top of the poll, ahead of eleven other candidates, the 1900 election being very warmly contested. The four winners were; Cooper 304 votes, Ward Cousins 257, Pearce Gould 253, and Tweedy 233. In 1903 he was elected Junior Vice-President, but in 1905 he resigned his seat, thus terminating his association with the College.

Cooper was not among those who make much use of learned societies, yet when he attended their meetings he listened, and on the rare occasions when he spoke his words were to the point. He joined the Medical Society as long as forty-six years ago, and a few years later, in 1865, was elected a Fellow of the Royal Medical and Chirurgical Society, together with Sir Dyce Duckworth, Drs. Pavy, J. E. Pollock, and Blandford, Mr. Alfred Willett, and Mr. John Langton, as well as others who have died before him. In the West London Medico-Chirurgical Society he took much interest, and became President in 1901. He was also a Vice-President of the Dermatological Society and of the British Medical Benevolent Fund, and a Trustee of the Cancer Research Fund.

Sir Alfred Cooper married in 1882 Lady Agnes Cecil Emmeline Duff, third daughter of the fifth Earl of Fife and sister of the present Duke; they had four children, all living, a son born in 1890 and three daughters, all of whom are married. After his resignation of his seat on the Council of the College Sir Alfred led a retired life, living for the greater part of the year in Angus Lodge, Whiting Bay, Isle of Arran, a gift of his friend the late Duke of Hamilton. Cooper was a good shot, and was well known as a sportsman in his late Grace's preserves. Latterly his health failed, and he went down to Mentone in November. He survived his 69th birthday, December 28th, and lived into the present year, but his health did not improve, and he died on March 3rd.

Mr. Swinford Edwards, who was closely associated with Sir Alfred Cooper for over twenty-five years both in his private practice and at St. Mark's and the West London Hospitals, sends us the following: Sir Alfred Cooper was a man who, by his personal charm, endeared himself to all with whom he came into contact, and the majority of his patients became his firm friends. Of a distinguished appearance and unfailing courtesy, he will long be remembered for his generosity and hospitality. Whether at a patient's bedside, at a Masonic banquet, or amongst the grouse, he was always cheerful and genial. He was a recognized authority on rectal disease, also a firm believer in Zittmann's treatment, by which means, though in another branch of the healing art, he obtained many remarkable cures. As a proof of his popularity it has only to be mentioned that on the occasion of his receiving the honour of knighthood he was entertained by 150 of his friends and colleagues at dinner, when the Duke of Devonshire, who was in the chair, was supported by several Cabinet Ministers. An old patient of Cooper's, the late Duke of Hamilton, presented him with a charming place in the Isle of Arran, where he was wont to spend his autumn holiday in shooting and fishing. Sir Alfred Cooper's demise will not only be mourned by his loving and devoted wife and by his family, but by a very large circle of friends, many of whom feel that his place can never be quite filled.

Dr. Clement Godson writes: Sir Alfred Cooper was of the most kind and generous disposition; he was always ready to help any in distress, and would take any amount of trouble if he promised to help any one. He was sympathetic in the extreme, and if he had a patient ill he spared himself in no way to contribute to the recovery. No man was ever so popular, and deservedly so, amongst his patients. Alfred Cooper was a keen sportsman at grouse and partridge shooting, and also a very good shot when deer-stalking. A few years ago he killed in the Isle of Arran a stag with fifteen points, perhaps the best of the year. He used to have some of the finest shooting with Lord Carnarvon, and was more than once selected to shoot with Lord Ashburnham and Prince Dhuleep Singh, famed as the pick of good shots. Cooper also loved sea-fishing.

EDWARD DILLON MAPOTHER, M.D.,

FORMERLY PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

The many friends in England and Ireland of Dr. Edward Dillon Mapother, and those Irishmen scattered through the world who were his former pupils at the Royal College of Surgeons, Dublin, will regret to hear of his death, which took place at his residence, 16, Welbeck Street, W., from influenza and broncho-pneumonia, on March 3rd, in his 73rd year. He had retired from practice for several years, and had latterly been in failing health.

Dr. Mapother belonged to a well known Roscommon family of English descent, but long settled in that county. He was born at Fairview, near Dublin, on October 14th, 1835. The system of apprenticeship being still in vogue when he commenced his professional studies, he was bound to Dr. Hatch Power, Professor of Surgery in the Royal College of Surgeons, Dublin. In 1857 he graduated M.D. (with First Honours and Gold Medal) in the Queen's University. For some years he was engaged in tutorial work, and prepared many successful candidates for the

medical services of the Crown as well as for graduation. In 1862 he became a Fellow of the College, and soon after, in 1867, was elected Professor of Anatomy and Physiology in succession to Professor Jacob, and was also appointed in 1864 to the Chair of Hygiene. He had been Surgeon to St. Vincent's Hospital from 1859, as well as to the Children's Hospital. For several years he discharged with conspicuous ability the onerous duties of Medical Officer of Health for Dublin, and many much-needed sanitary reforms owe their initiation to his courage and energy. He was elected President of the Royal College of Surgeons in Ireland in 1879, and it was largely due to his exertions in his year of office that the Dental diploma of the College was instituted, while later on he took a leading part in the movement which brought about the amalgamation of the Carmichael and Ledwich Schools with that of the College. He was the author of many professional works, amongst others: *A Manual of Physiology* (three editions), *Lectures on Public Health*, *The Body and its Health*, a book for primary schools (six editions). In 1868 he won the Carmichael Prize of £200 for the best essay on Medical Education. He delivered the address in Public Medicine at the Brighton meeting of the British Medical Association in 1886.

During the next few years he spent a considerable time at the centres of medical education in France and Germany in the study of skin diseases as well as of syphilis and gout.

In 1888, on removing the sphere of his consulting practice to London, he was presented with a farewell address by the leading members of the profession in Dublin. In that year he was President of the Dublin Branch of the Association.

Dr. Mapother was also a Fellow of the Royal Medical and Chirurgical Society, a member of Council of the Medical Society of London, and Chairman of the Irish Medical Graduates' Association. He was also for many years—1880–1886—Surgeon to the Lords Lieutenant of Ireland.

He married in 1870 Ellen, daughter of the Hon. John Tobin, M.P., of Halifax, Canada, who survives him, and had issue one son, Edward Mapother, M.B., B.S.Lond., who has lately entered the medical profession, and is at present House-Surgeon at University College Hospital, and six daughters, of whom five survive.

Professor ALEX. MACALISTER, of Cambridge, writes:

The death of Dr. Mapother removes the last of my colleagues of the olden time when I was officially connected with the Royal College of Surgeons of Dublin. Professionally he was seven years my senior, as he obtained the licence of that College in 1854. In those days there was no age limit, and Mapother was only 19 when he passed, and in the same year he was appointed Demonstrator. At that time Dublin supplied the largest number of candidates for the Army Medical Examination, and the Senior Demonstrator, John Morgan, had for some years carried on a successful "grinding" class, in which most of the Dublin candidates prepared for the examination. In this Mapother became his partner, and soon showed his remarkable powers as a teacher. Before settling down to this work, however, and in spite of the veto of the Catholic Bishops against the "godless" colleges, he spent a session at Queen's College, Galway, and graduated M.D. with honours and a gold medal in the Queen's University in 1857.

My first introduction to him was in the following year, 1858. I had entered for anatomy at the College of Surgeons, and wanted a part. The practice then was for the Demonstrator to call over the roll of the class each time a body was to be allotted, and each man who wanted a part answered his name and received his subject. There were 170 men and very few subjects in that year, and we had to fight for our rights. I was an insignificant member of the class, a boy of 14, and my application was drowned by the shouts of those whose names came after mine; but Mapother saw fair play, and I got my part in due course.

The acquaintance thus begun ripened as the session advanced. Mapother was almost the only one of the demonstrators who really did his work and I had frequent need of his help. In the arm I found a muscle which was not in the *Dublin Dissector*, and he showed me what it was, but I did not take his advice, which was, "cut it away, it is only an anomaly." This was, however, the spirit of the time. The chief work of the Demonstrator was to give an impromptu lecture on any dissected part he could find to a mob of students who crowded round him. In this kind of work Mapother excelled; he had a clear voice, a very rapid utterance, and a lucid method of description. I can even after the lapse of half a century remember some of his commonest phrases and turns of expression. Before presenting myself for the licence of the College in 1861 I coached with Mapother, as did all my contemporaries, and on passing I was appointed Demonstrator in that year, having served as Assistant Demonstrator in 1860. While I held this office I was closely associated with him, and learned to esteem him highly as a judicious, upright, straightforward man. In that year we four demonstrators—Mapother, Croly, Stoney and myself—united into a "grinding" co-partnership and held our classes in Mapother's stable, next door but one to the College.

Although I left the College of Surgeons in 1869 I had many opportunities of keeping up my acquaintanceship with him. We often met, and there was not one of my Dublin colleagues for whom I had a higher regard. He had become Professor of Hygiene in 1864, and delivered several courses of lectures on public health. These he subsequently published, and at the time they were highly appreciated. He was about this time also appointed Medical Officer of Health for Dublin, a post which he held for some years.

Meantime he had also been making a name in surgery. He was appointed Surgeon to St. Vincent's Hospital in 1859, and his painstaking, although not brilliant, qualities had earned for him a considerable and increasing reputation. The esteem in which he was held was shown by his having been appointed Surgeon to the successive Viceroys of Ireland from 1880 to 1886. He was made Professor of Anatomy and Physiology in the College of Surgeons in 1867 on the resignation of Arthur Jacob, who had held that chair for forty years. About the same year Mapother was elected on the Council of the College of Surgeons, of which he became Vice-President in 1878, and President in 1879-80.

Mapother was a thoughtful man, of considerable literary power. His essay on medical education, to which was awarded the Carmichael prize of £200, is a work which shows much ability and insight. He also delivered an able address as President of the Statistical Society, and wrote several other papers on various professional subjects. Research of a scientific character was not much in his line, but that was the fault of the time and place, and not of himself. I remember in 1862 that I was called up before an informal meeting of professors on the charge of having written a paper on some anatomical subject; and the Chairman, Dr. Mitchell, the Professor of Botany, sharply reprimanded me, saying that reputation for research work would injure the school as a successful teaching place.

From the time that I left Dublin in 1883 I saw little of Mapother, but I heard from and of him occasionally. He also left Dublin, and settled in London in 1888, and having been for some years interested in dermatology, he devoted himself to this line of practice. He had, some years before, written and published some lectures on diseases of the skin. We met occasionally at the Council and dinners of the Irish Medical Schools' and Graduates' Association, of which he was for some time President, and much enjoyed our reminiscences of old times, but otherwise our paths seldom crossed, much to my regret. I have always cherished the kindliest memories of our old days of association, and there is no one by whom his death is more sincerely lamented than myself. His life has been one of honourable and honest work, and his name will be remembered with affection and respect by the many generations of students to whom he was teacher, counsellor, and guide.

MURDOCH DONALD MACLEOD, M.B., L.R.C.S.EDIN.

THE death of this able and popular Asylum Superintendent took place at Beverley on March 3rd. Dr. Macleod belonged to the Morven Macleods, who have supplied so many distinguished members to the professions of divinity, medicine, and law, and to the army. He was a thorough highlander, both parents and three grand-

parents being Macleods. He was born in the island of North Uist on August 31st, 1851. His father was the Rev. Norman Macleod, Free Church Minister of North Uist, and his mother a daughter of Dr. Alexander Macleod, whose memory is still venerated in the islands on account of his ability, kindly nature, and skill. He was educated at the Edinburgh High School and University, and obtained the degree of M.B. and the licence of the College of Surgeons in 1873. After serving as a house-surgeon in the Edinburgh Infirmary, he obtained the appointment of Assistant Medical Superintendent in the Cumberland and Westmorland Asylum at Garlands, near Carlisle. He remained there until in 1882 he was selected as Medical Superintendent of the East Riding Asylum, Beverley, an appointment which he held with much credit until his health broke down in 1904. After some premonitory cerebral symptoms, he had a severe attack of right hemiplegia, with serious impairment of reason and speech, due, no doubt, in great measure to the strain of his anxious and exacting office. Recovering partially after a few months' rest, he resumed work, but recurrent attacks, causing progressive paralysis, compelled him in 1906 to retire. In acknowledgment of his valuable services he obtained a pension of £600 a year. His death was caused by influenza supervening on gradual decadence of physical and mental power.

Dr. Macleod was a man of great energy, keen devotion to his profession, and good abilities. He was an excellent administrator and accomplished physician. He was of generous, kindly disposition, and very popular among his patients and a large circle of acquaintances and friends. He contributed several interesting papers to the medical press, and was a member of the British Medical Association and Medico-Psychological Society. He served as President of the East York and North Lincoln Branch of the Association and as Vice-President of the Psychological Section at one of the annual meetings. He was an early member of the Caledonian Medical Society, and presided at the annual meeting in London in 1899. He was an enthusiastic volunteer, and rose to be a Captain of the 2nd Volunteer Battalion East Yorks Regiment. He was also a keen golfer, and a very expert angler. He leaves a widow, two daughters, and three sons. His funeral, which took place at Beverley on March 6th, was numerously attended.

ILL-HEALTH limited his activities, and served to narrow the circle of his friends, but there must be many old comrades of Dr. GEORGE GRIGSON ELLETT, of Cirencester—students of Cambridge University and of St. Bartholomew's Hospital, frequenters of the clinic of the Metropolitan Hospital, and other medical men—who will hear with deep regret of his death, which took place at the beginning of March at the Metropolitan Hospital. Though there was nothing dramatic in its circumstances, both it and the long painful illness by which it was preceded was as truly and conspicuously the outcome of duty as the death of any soldier on the battlefield. Dr. Ellett died as the result of one of those accidents, risk of which constitutes a feature of medical life, more commonly overlooked, both by the public and the profession, than might well be the case. Dr. Ellett was a Cambridge undergraduate, and took the B.A. of that University in 1899, and the professional degrees four years later. Only a few weeks ago he took the M.D. degree. Meantime he had entered the Medical School of St. Bartholomew's Hospital, and in 1902 became M.R.C.S., L.R.C.P. After receiving his first qualification he held several minor appointments, including the clinical assistantship at the London Temperance Hospital and the Royal Eye Hospital, and the assistant medical officership at the former institution. His longest connexion, however, was with the Metropolitan Hospital, which he served in turn as Assistant House-Physician, Senior House-Physician, and Senior Resident Medical Officer. It was due to what at the time seemed a passing incident in his tenure of office as House-Physician that his death was eventually due. During the treatment of a case of empyema he scratched his finger against the sharp edge of a rib; it healed at once, and for about a week nothing untoward was observed, but he then fell ill, streptococci were found in his blood, a thrombosis developed in one axillary vein, and multiple abscesses appeared in the left knee-joint, both hips, the pelvis, the psoas muscle, and elsewhere. The inevitable outcome was a very long illness, during the course of which many operations had to be performed. After about a year of continuous suffering he recovered to some extent and at length his health became sufficiently good for him to be able to do a certain amount of work and to establish himself at Cirencester with a view to practice. He was never, however, entirely free from the after-effects, and at intervals of about three months had to lie by altogether owing to recurrence of pain and discharge from a sinus connected with the right hip. His last and fatal illness commenced in much the same way, but with more acute symptoms than those to which he had recently been subject. He was, therefore, advised to enter the hospital which he had so long served; there he was kept under observation for some little time, and as no improvement was noted it was at length decided to explore the joint. Though the necessary proceedings were successfully undertaken no improvement resulted, and three days later he died with symptoms partly due to septic poisoning and partly to nephritis. Dr. Ellett's scientific predilections lay in the direction of pathology, and a useful note on the effect of bodily exertion on the opsonic index of healthy persons, embodying the result of recent work done in the pathological laboratory at Cambridge, appeared under his name in the BRITISH MEDICAL JOURNAL in 1906. He was also a valued contributor to its EPITOME.

THE medical profession has lost one of its most useful and promising members by the death, at the early age of only 39, of Mr. W. BERTRAM COOPER, which happened on March 5th at Chiswick. He was the youngest son of the late Mr. George Cooper, for fifty years a most respected merchant of Friday Street. He was in delicate health all his life. Nevertheless, he passed through his studies at St. George's Hospital with great credit, and was even at that early stage looked upon as a promising medical man. He was afterwards in succession Assistant Medical Offier to the Kennington and the Camberwell Poor-law Infirmaries, Resident Medical Officer to the East Dulwich Workhouse, House-Physician to Addenbrooke's Hospital, Cambridge, and Medical Officer of Health in succession of Bognor and of Margate. He was an M.R.C.S. and L.R.C.P., and gained considerable and varied experience as locumtenent, winning golden opinions from those with whom he was brought into contact, and ingratiating himself with patients by his medical skill, his kindness, and his unfailing geniality and cheerfulness. He was valued more particularly for his sure hand when operating and his excellent diagnosis. An offer of partnership made by a medical practitioner in Chiswick, after repeated replacement of him as locumtenent, decided Mr. Cooper to fix his abode in that suburb, where he has practised with great credit since, acquiring a considerable practice, endearing himself to his patients, and gaining the respect of his colleagues. Some weeks ago his pulmonary troubles, which had never quite deserted him, took on an acute form, developing into pneumothorax, which struck him down, in spite of devoted attention by Sir Douglas Powell, Dr. William Ewart, and other medical friends. Mr. Cooper leaves a faithful wife, married to him less than four years ago, and a child not a year old. He was buried at Willesden Old Cemetery last Monday.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

REFUSAL OF SUPERANNUATION.

DR. HANAFIN, having resigned his post of medical officer of the Castlemain District of the Tralee Union after thirty-four years' service, has been refused any superannuation by 20 votes to 12. As he was qualified in 1866, we presume advancing age has compelled him to seek relief, but it appears he gravely offended Bumbledom by seeking an increase of salary some years ago, and it is now having its revenge.

J. L. M.—A Joint Hospital Board owning and administering an isolation hospital into which are admitted scarlet fever and diphtheria patients is under no statutory obligation to find accommodation for patients during the temporary closing of the institution for purposes of cleaning and repair.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

SPARKING-PLUG writes: I should like to hear from members of some institution where a bright girl of 12 years of age, whose speech is almost unintelligible through faulty articulation, could be taken in hand for training. Parents are of limited means.

WESTMORELAND writes: I shall be glad if any correspondent can suggest anything to alleviate the pain of a woman suffering from an inoperable carcinoma cervicis. She has had pil. opii gr. j tr. opii ℥ss, liq morphine ♏40, supposit. morph. gr. ½, et cocainae gr. ½, two or three times in twenty-four hours, but can only procure an hour's sleep at night. She also has hot douches with sanitas twice in the day. Nothing appears to give ease for more than an hour.

W. H. asks for books giving information about the various climates suitable for a case of early phthisis.

*** The following books deal with this question: (1) *Climatotherapy and Balneotherapy.* By Sir H. Weber, M.D., F.R.C.P., and F. Parkes Weber, M.D., F.R.C.P. London: Smith, Elder, and Co. 1907. (Demy 8vo, pp. 833. 15s.) (2) *A Handbook of Climatic Treatment including Balneology.* By W. R. Huggard, M.A., M.D., F.R.C.P. London: Macmillan and Co. 1906. (Demy 8vo, pp. 536. 12s. 6d.) (3) *Arrotherapeutics, or the Treatment of Lung Diseases by Climate.* By Dr. C. T. Williams. London: Macmillan and Co. 1894. (Demy 8vo, pp. 200. 6s.) (4) *A Handbook of Medical Climatology.* By S. E. Solly, M.D., M.R.C.S. London: J. and A. Churchill. 1897. (Roy. 8vo, pp. 470. 16s.) (5) Allbutt and Rolleston's *System of Medicine.* Second Edition. Vol. I: Climate in the Treatment of Disease. By Sir H. Weber and M. G. Foster. London: Macmillan and Co. 1905. (Demy 8vo, pp. 1209. 25s.)

LEUCOCYTOSIS IN OTITIS MEDIA.

DR. LINDLEY SEWELL (Manchester) writes: In answer to H. W. S.'s query in your last issue *re* leucocytosis in otitis media and its complications, an excellent paper on this subject by John M. Darling appeared in the *Edinburgh Medical Journal* for February of this year, recording the results of an investigation carried out in the Ear and Throat Department, Royal Infirmary, Edinburgh. A list of references is given.

MALIGNANT DISEASE AS AN ACCIDENT.

CICONIA.—In the present state of professional opinion, and in the absence of a sufficient number of legal precedents, the question whether incapacity brought about by amputation performed for the removal of a sarcoma of the lower end of the radius appearing subsequent to a sprained wrist, should be ascribed to the accident, is one which every medical man must settle for himself, according to his lights and his conscience. Current scientific opinion inclines to the view that a local injury may be a precipitating, if not initiating, cause of even the more serious of malignant growths, and if (1) "Ciconia" holds this view strongly, (2) is sure that there was a sprain, and that the development of the sarcoma was really subsequent to its occurrence, no one can find fault with him if he gives a certificate ascribing the patient's incapacity to his accident. Nor would "Ciconia's" position be prejudiced if the Courts eventually so far controverted his opinion as to rule the patient out of the Workmen's Compensation Act.

ANSWERS.

DIPHTHERIA ANTITOXIN BY THE MOUTH.

DR. T. M. ALLISON (Newcastle) writes in reply to "Forrest": As the author of the above method may I say that I have never subcutaneously given antitoxin, and in some fifteen years I have had the fortune to only lose one patient in Newcastle—a boy with laryngeal diphtheria, where twenty-four hours had gone by. A second brother, who had 12,000 units (by the mouth) every four hours in the first twelve hours, was all right in two days' time. Given by the mouth, antitoxin acts as well, if not better, than subcutaneously, is a local wash, avoids pain and abscess, while skin eruptions are less common. My friend, Dr. Hunter, and others are equally satisfied with the treatment. In almost any microbial affection of the tonsils or larynx, and in acute pleurisy of children, antidiphtheria serum is of value. Antistreptococcic serum should be given in a similar way for suitable cases, such as infected wounds, and on a rise of temperature on the third day of the puerperium. But the chief point with both serums (especially the latter) is early administration.

LETTERS, NOTES, ETC.

MR. F. A. BAILEY (London Institution, Finsbury Circus, E.C.) will be glad to receive by March 20th the addresses of any old Exonians in London with a view to the expansion of the Old Exonians Club.

INSUSCEPTIBILITY TO VACCINATION.

DR. J. M. MACKENZIE, P.V. (Kirkoy-in-Ashfield), in the course of a letter referring to the annotations on this subject in the BRITISH MEDICAL JOURNAL of February 22nd, writes: I agree that, with your careful and *persevering* vaccinators, cases of insusceptibility are extremely rare in the young. If you include the aged in your generalization we shall have to part company. Here is a case in point. A lady, aged 60, was, during a recent outbreak of small-pox, four times unsuccessfully vaccinated—four consecutive weeks. As to the potency of the lymph, there was no room for doubt. According to her own account, she had on several previous occasions resisted vaccine; she has no vaccination scars. Like your vaccinator of large experience, I have never seen a genuine insusceptible case in an infant, but very young infants, like the aged, are more resistant to vaccine. In this they respond to the law of immunity. How often do we find the very young and aged immune against such infectious disorders as scarlet fever, diphtheria, and enteric, for example. The second factor you have overlooked is the health of the individual. E. M., aged 4 months, anaemic and poor-looking, apparently due to lack of suitable food, was three times unsuccessfully vaccinated with active and reliable Local Government Board glycerinated calf lymph, but instead of certifying the case as "insusceptible" I resolved to change the baby's diet; cow's milk replaced malted food, more fresh air and small doses of syrup. ferri phosph. co. The child improved, grew strong and robust, and, at the end of twelve months, was successfully vaccinated first time, four large vesicles. Do not forget that the age and health of the patients have more to do with success than the experience of the operator.

*** The article in question did not profess to cover the whole ground of insusceptibility and immunity. The fact is well known that vaccination fails to "take" in some very young infants, but no vaccinator of experience would certify these as insusceptible. Later attempts are invariably successful. We are not aware of any records or statistics of *primary* vaccination in adults which support the contention that such adults are insusceptible to vaccinia to any appreciable extent. The experience of careful observers, who have opportunities for recording a sufficient number of such cases as would be of real value, would be interesting. Failures due to temporary and transitory causes in delicate and unhealthy infants are also well known; but such children should not be vaccinated at all except in the presence of a small-pox epidemic. These also cannot be regarded as cases of real insusceptibility. The article was not so much concerned with the percentage of "failures" in vaccination as with the percentage of "insusceptibility," which is quite another matter. We venture to think that our correspondent has confused these two points.

ERRONEOUS PROGNOSIS.

"The patient cannot live another day,"
We heard an old physician rashly say.
We now disprove the truth of what he said—
The patient's living but the doctor's dead!

A. D.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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An Address
ON
VISIBLE SIGNS OF VISCERAL DISEASE.

Delivered to the Stratford Division of the British Medical Association.

By JAMES GALLOWAY, M.D., F.R.C.P.,
physician to charing cross hospital, and physician to the skin department.

[After some introductory remarks, Dr. Galloway proceeded:]

It must have been the experience of most of us while watching our patients during the course of an illness, especially if the illness happened to be a prolonged one, to note the occurrence of intercurrent troubles which at the time seemed to have little or no relationship to the malady from which the patient was suffering, but which on after-thought have appeared to be connected in some way with the main cause of disease. The idea would then certainly have occurred that had we been in the position to understand the relationships of the intercurrent affection, it would have served as a sign, and we should have become possessed of information as to the nature and the progress of our patient's illness, and even of suggestions for effective treatment. I wish to draw your attention this evening to some of these imperfectly recognized indications of disease.

Indications in Diseases of the Liver.

It has happened during the last few months that I have had under my observation in Charing Cross Hospital and elsewhere a number of cases of disease of the liver. It will suit our purpose this evening, therefore, if I concentrate my remarks on indications occurring in the course of liver disease, and use the cases to which I have referred as illustrations.

The Blood-purifying Function of the Liver.

There are few organs in the body to which are ascribed, rightly or wrongly, so many different functions as the liver. Two of its great duties—namely, those of dealing with the carbohydrates and the proteids absorbed from the food—have undergone prolonged and critical investigation. But there is another important service which this organ has to fulfil not so often emphasized—namely, that of acting as a protector to the organism by removing noxious substances derived from the alimentary tract, contained in the blood passing into it through the portal vein. This blood purifying function is constantly in action, and under various circumstances no doubt has to bear a serious strain. Some of these noxious materials gain access to the body in the most direct form—namely, by being taken in food. Others are produced during the normal processes of digestion; still others by defects in function of the alimentary tract, depending on the faulty action of the mucous membranes and other tissues; others as the result of the action of bacteria. The importance of the liver as a great blood-purifying agent deserves special emphasis, as does also the fact that this blood-purifying process is seriously affected in many diseases of the liver.

Influence of Obstruction of the Portal Circulation on the Function of the Liver.

It is especially in those diseases in which the portal circulation becomes seriously obstructed that we should naturally expect to find indications of failure of this function. Of the diseases which bring about serious portal obstruction, the varieties of cirrhosis of the liver occur, perhaps, most commonly in practice. In a case of cirrhosis of the gland, its chief functions are interfered with by the gradual destruction of the liver cells from various causes. But the peculiar function of blood purification is especially disturbed for another reason. The growth of fibrous tissue in the liver characteristic of cirrhosis in many cases commences round the terminal branches of the portal vein, but in all cases seriously compresses these vessels. For this reason blood has difficulty in passing through the portal circulation, and the liver does not receive its proper supply of blood from the stomach and intestines. As a consequence of the obstruction thus placed in the way, attempts are made by the blood returning from the alimentary tract to seek collateral channels in order to regain the systemic venous circulation. Some of these collateral channels are well known—for instance, the passage of the intestinal blood from the inferior mesenteric vein to the radicles of the internal pudic veins by the route of the haemorrhoidal venules is mentioned in all textbooks, and students are carefully taught to recognize as a symptom of cirrhosis of the liver, bleeding from the mucous membrane of the lower bowel and the formation of actual haemorrhoids. Another very important channel permitting of a collateral return of blood is the vein or veins which may be opened out in the round ligament of the liver, passing from its under surface to the umbilicus, and communicating with the subcutaneous veins at that point. In addition to this, however, there are many other courses which may be opened out for the return of the portal blood to the vena cava without passing through the liver. They consist mainly of communications between the portal vein and the systemic veins in the retroperitoneal regions and the under surface of the diaphragm, especially where the peritoneal coats do not intervene between visceral and parietal surfaces.

The general result of the opening out of these by-paths, and the development of this collateral circulation is that much blood, not only containing the products of digestion in the alimentary tract requiring the finishing touches given to them in the liver to render them useful to the body but many other more definitely noxious substances, is poured into the general circulation without the interposition of the liver at all. The presence of these substances in the circulating blood cannot be regarded as being otherwise than harmful.

Relation of Certain Cutaneous Eruptions to Disorders of the Alimentary Tract.

A totally different series of observations has formed the basis of the conclusion that many eruptions or diseases of the skin, some of them of the utmost gravity, are closely connected with or are directly produced by the absorption of poisonous substances from the alimentary tract. One of the most striking examples is the sudden eruption of urticaria frequently seen after the ingestion of decomposed or poisonous foods. It must have been an early experience to most of us, especially while acting as house-physicians in our hospitals, to have been brought face to face with cases of what may be called "Saturday night" eruptions of urticaria, rendering almost unrecognizable the features of individuals whose ideas of riotous living consisted in an indulgence, let us say, of winkles and beer.

But, in addition to such very obvious examples, a large number of cases of erythema, especially of the exudative variety, are traceable to disorders of the gastro-intestinal tract, and are the consequences of changes of more complicated character than those following the ingestion of harmful foods. These affections of the skin vary from the simplest varieties of urticaria and erythema to the more severe manifestations of the latter, with exudation of the contents of the blood vessels, in other cases producing atrophy or rapid destruction of the skin itself.

Bearing these two series of observations in mind, and recognizing, first, the importance of the liver as a blood-purifying organ, and, secondly, that many cases of exudative erythema have close relationship with disease of the gastro-intestinal tract, let us inquire whether cutaneous manifestations of the erythematous type occur during the course of diseases of the liver, especially in those cases in which the portal blood passes into the general, and therefore the cutaneous, circulation, without being subjected to the normal cleansing action performed by that organ.

I.—*Eruptions of the Type—Erythema Exudativum—Occurring in Case of Disease of the Liver with Portal Obstruction, for example, Cirrhosis.*

1. *Urticaria.*—Perhaps I should ask indulgence for mentioning attacks of urticaria under this heading, but, for the purposes of simplification and on account of the close relationships of urticaria to erythema exudativum, it will

be more convenient to classify such eruptions under this heading. Urticaria in its various forms seems to be an uncommon affection in liver disease. In my own experience, I can remember one case only in which urticaria occurred. This patient, who suffered from cirrhosis of the liver, manifested a troublesome eruption of urticaria with small lesions, lasting for many weeks, producing a considerable degree of pruritus and discomfort. Dr. Rolleston mentions urticaria occurring in the course of jaundice, and draws attention to the peculiar colour of the wheals in those circumstances. It is probable, however, that the allied eruptions of the erythema multiforme type are more easily produced by the action of the circulating poisons in liver disease than the definite urticarial lesion.

2. *Erythema Exudativum.*—The occurrence of eruptions of this type is not uncommon in cases of cirrhosis of the liver. The eruption usually makes its appearance as an erythema arranged in discs, or as segments of circles, occurring most profusely on the trunk, but, conforming to the type of the malady, also making its appearance on the extensor surfaces of the extremities. It varies in severity, sometimes being very superficial and evanescent, at other times producing lesions elevated above the surface of the skin, and remaining obvious for weeks. In the slighter cases little discomfort is complained of. In some cases, however, the patients complain much of the irritation and pruritus produced by this condition. An attack of the eruption usually does not last more than ten days or a fortnight, but is apt to recur. Recently I have had under my care in the hospital a patient suffering from cirrhosis of the liver who had recurrent attacks of the eruption during the whole of the time he was in the ward—between two and three months. The eruption is frequently complicated by jaundice.

3. *Erythema Exudativum Haemorrhagicum.*—Bearing in mind the evidence of serious alterations in the character of the blood shown by the indications of destruction of red blood cells and the tendency to haemorrhage in the later stages of organic liver disease, it is not at all surprising that the erythematous eruptions become purpuric. The purpuric erythema in such cases varies from lesions which show a small amount of blood-staining only, through varying degrees, to cases in which the lesions are intensely haemorrhagic, occurring as elevated spots or patches having the colour of a superficial haematoma.

As an example of the milder variety I may cite a case of a gentleman of about the age of 60 years who came recently under observation. His occupation in life was a sedentary one. He was in comfortable circumstances, had indulged freely in the pleasures of the table, and had taken considerable quantities of alcoholic beverages daily. He was, however, with one slight exception, supposed to be in good health. My friend who brought this patient to see me told me that for years there had been a slight scaly eruption of eczematous nature on various parts of the trunk and extremities, but it had caused so little trouble that no definite treatment had ever been required. On returning from an autumn holiday in Scotland, his attention was drawn to the fact that the patches of superficial scaliness had become much more pronounced. On examination it was seen that the slight scaly patches, which were declared to be of long standing, were definitely blood stained; in fact, the previous desquamating lesions were now erythematous, and the erythema had passed on to definite extravasation of blood—purpura. Noting this suspicious alteration, we examined the patient thoroughly, and found that the edge of the liver could be felt 2 in. below the costal margin, and that he showed signs of an early stage of cirrhosis of the liver.

As an example of the more severe types of this indication, I may mention a case occurring some three or four years ago. This patient, a man, aged about 45, was employed as a licensed victualler. He was a man of active habits, and had taken a considerable amount of interest in the public affairs of his district. The reason that I was summoned to see him by his medical attendant was that a severe purpuric eruption had appeared on his body suddenly. When I saw him it was clear that the patient was seriously ill. There were numerous patches of intense purpura varying in size from points to areas as large as the palm of the hand, well raised above the surrounding surfaces, of the characteristic dark-red colour, and with definite circinate outlines. The parts most severely affected were the lower parts of the trunk and the upper parts of the thighs. On further inquiry, the important evidence was forthcoming that about the same time, or shortly before the eruption had commenced to make its appearance, there had been severe loss of blood from the rectum, which was ascribed to the occurrence of internal haemorrhoids. On examining the patient the liver could be felt considerably enlarged, with a characteristic firm, slightly irregular, margin. There could be no doubt of the diagnosis—namely, that he had cirrhosis of the liver.

In such a case as this the temptation is very strong to explain the phenomena of the disease on the basis that the cirrhosis has advanced to such an extent as to be a serious impediment to the return of the portal blood. As the result of the portal obstruction the by-paths through the veins in the lower portion of the bowel and in other situations are opened out; the obstructed portal blood, containing the materials resulting from the digestive processes, which should have been rendered innocuous by passing through the liver, gains the general circulation without having been subjected to the usual purifying influence. Simultaneously with the bleeding from the bowel, and the formation of a "haemorrhoidal" condition of the mucous membrane, there is the appearance of the haemorrhagic eruption of the skin, strongly suggesting that the blood from the portal vein directly returned to the general circulation was the cause of the alarming cutaneous malady.

It may be of interest to note that in spite of the intensity of the haemorrhagic eruption, and in spite of the risks the patient ran of necrosis of the purpuric areas, he recovered, and a short time ago was reported to be in comparatively good health, able to carry on his business, and continuing to be interested in the public affairs of his district.

In both these cases the recognition of the visible sign led to the diagnosis of the underlying disease.

4. *Erythema leading to Atrophy of the Skin.*—A tendency to symmetrical congestion of the central portions of the face with rosacea has long been recognized as occurring in cirrhotic diseases of the liver, especially in those cases in which alcohol has been taken to excess. Occasionally there develops in this region a very different type of erythema, leading in severe cases to obvious atrophy of the skin. To this condition it has been the habit to apply the term "lupus erythematosus"—an unfortunate name, as it suggests a close relationship to lupus vulgaris. The latter disease has long been clearly recognized as a definite tuberculosis of the skin; lupus erythematosus, on the other hand, is entirely distinct from lupus vulgaris; there is no direct relationship, and possibly only in some cases a remote connexion with tuberculous diseases of other organs. The disease is much more correctly regarded as a member of the erythematous group, the inflammation and exudation being of a peculiar type, leading to atrophy of the connective tissues and alterations in the character of the epithelium.

The blood changes occurring in the cirrhotic diseases of the liver are of varying severity, and no doubt also of varying character. It will not be surprising, then, to find that as the more ordinary types of erythema are associated with these cases of liver disease, this more unusual type of symmetrical erythema, followed by atrophy, has been observed. The association is rare, but it does occur.

On one occasion I admitted into Charing Cross Hospital a woman of about 35 years of age suffering from an extensive eruption of this atrophying erythema—lupus erythematosus so-called. It affected the face, having the often-described "bat's wing" distribution, but in addition many patches occurred on the trunk and also appeared on the forearms, the hands and the lower extremities symmetrically. It was rapid in its onset, and was accompanied by a very severe disturbance of health, with prolonged fever, loss of flesh, failure in nutrition—well recognized symptoms in severe and widespread cases of "lupus erythematosus." Careful examination revealed no evidence of visceral disease beyond a certain amount of bronchial catarrh. There were no signs of recognizable tuberculosis either on admission or at any period of her illness. The patient remained under my close observation for about two years. For the first two months she was seriously ill, and then gradually began to improve; many of the cutaneous lesions healed without ulceration, but leaving atrophy, and she was able to get up and go home; but she remained in indifferent health, and I admitted her into hospital under my care on several occasions. About eight months after the commencement of her illness I found that symptoms of disease of the liver were manifesting themselves. The liver was enlarged, and gradually the characteristic signs of cirrhosis became manifest. On further inquiry I now found, much to my surprise, that the

patient was an inveterate alcoholic. While under care in the hospital nothing of the kind was suspected; she was a woman of better education than is usual in hospital patients; she was married, the mother of a family, and gave rise to no suspicion of alcoholism. But when at home and by herself I learned that she indulged to inordinate excess in alcohol, and indeed was rarely free from alcoholic influence except when under treatment in hospital. She developed the usual symptoms of cirrhosis of the liver, with loss of flesh, occasional attacks of jaundice, and finally ascites, and died of the disease. After the first outburst the cutaneous condition never became so acute, but recurrences took place to the end of her life, usually on other parts of the body than the face.

This case is very noteworthy. The probability is very great that the cutaneous condition was connected with her visceral disease, and we should at the commencement have suspected more strongly than we did that she suffered from serious visceral disease. (Figs. 1 and 2.)

I notice within the last year or two, with much satisfaction, that when a case of this form of erythema is brought forward at medical societies for demonstration, one of the questions asked is, What is the condition of the kidneys? We should now go further, and in all such cases inquire not only as to the presence or absence of albumen in the urine, but as to the state of the internal viscera generally, not forgetting the liver.



Fig. 1.—Symmetrical erythema of the face leading to atrophy of the skin, associated with cirrhosis of the liver.

II.—*Dilatation of Superficial Blood Vessels as an Indication of Diseases of the Liver.*

In cases of disease of the liver there occur several forms of dilatation of the superficial veins, some of which have considerable importance as indications of disease.

1. A very striking type is the enlargement of the subcutaneous veins of the abdomen forming collateral channels for the return of blood with a general course from the groin upwards to the intercostal veins and even towards the axilla. The veins which are opened up to produce these channels are the anastomosing veins between the deep and superficial epigastric system on the one hand, and the superior epigastric and intercostal veins on the other. These subcutaneous channels frequently become very large and must have been observed by all. The dilatation of these subcutaneous veins must be regarded as evidence of obstruction to the vena cava rather than the portal circulation simply. It must be remembered in many cases of disease of the liver, even of cirrhosis, that direct pressure upon the vena cava may result in various ways; and these enlarged veins may aid in the return not only of blood of the systemic circulation of the lower part of the body, but also of blood which should find its way into the portal vein.

2. A second form of dilatation of veins on a much

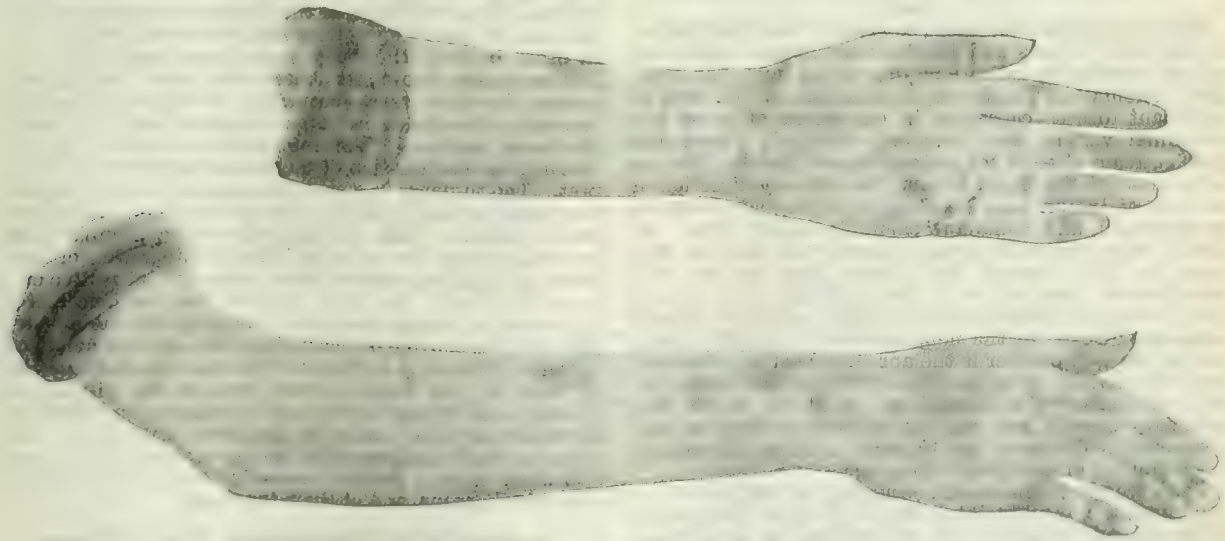


Fig. 2.—The forearms and hands from the same case as Fig. 1. (From water-colour drawings by Miss Mabel Green.)

smaller scale is sometimes noted. This type is produced by the dilatation of venules rather than of the larger veins, and is noted usually in two situations. One of these—the most significant—is the dilatation of venules radiating from the umbilicus, and permitting blood to pass backwards from the liver through its round ligament into the subcutaneous veins of the abdomen. It is especially likely to occur in cases of obstruction to the portal circulation arising in the liver itself. It permits of the passage of portal blood into the general circulation without passing through the liver, and has therefore special significance. This condition is so remarkable that it has received such picturesque names as "*caput Medusae*," or "*cirsomphalos*." The second type of enlargement of venules occurs along the lower border of the thorax, and is known by the name of the "costal fringe of venules." It occurs, however, in many conditions causing venous obstruction and is not specially significant of hepatic disease.

3. A third and very significant form of vascular disturbance gives rise to localized dilatation of the capillary vessels of the cutaneous surface. These telangiectases are of two chief varieties, one of them resembles the spider-like telangiectases so frequently observed in the skin of the face in young children. They consist of very fine straggling venules, usually radiating from a central red and slightly elevated point. This central punctum is actually a small angioma, and the straggling blood vessels may extend a quarter of an inch or more in various directions round it. These spider-like angiomata are not always permanent. They sometimes disappear in a few weeks after formation, and probably do so by coagulation of the blood in the vessels and gradual absorption of the necrosed tissue. They sometimes occur in considerable numbers in cases of cirrhosis of the liver, and their rapid appearance should be looked upon as an indication of some importance.

Another type of angioma affecting the surface in diseases of the abdominal viscera appears as localized vascular papules. They are formed by a small group of dilated cutaneous capillaries, and are very likely due to degeneration of their walls. In the haemorrhagic state occurring in the later stages of liver disease they are said occasionally to bleed. They are of importance not only as being an indication of some value of vascular degeneration produced by visceral changes, but at the present time they are worthy of special study as presenting some analogy to the cases of punctiform cutaneous telangiectases with a tendency to haemorrhage occurring in family groups, to which attention has been drawn by Professor Osler, Dr. Kelly, and other writers.

III.—*Indications Occurring in the Course of the Lymphatic Vessels.*

While much attention must be given to the distribution of the blood vessels and to alteration in their structure and their contents, indications depending upon the lymphatic circulation should not be lost sight of. In cases of malignant disease, especially in carcinoma affecting the abdominal viscera, the lymphatic channels direct the lymph stream towards the retroperitoneal glands. But, as in the case of the blood stream, the ordinary direction of the flow of lymph may be changed, retrograde currents are produced, and collateral channels forced open. Of these a very important lymph stream may find its way from the liver through the round ligament into the subcutaneous lymphatics of the abdomen, and thus it comes about not very infrequently that an early sign of malignant disease in the neighbourhood of the bile ducts and of the gall bladder is the appearance of an indurated patch involving, or in the immediate neighbourhood of, the umbilicus. Cases could be cited in which this secondary growth was the first definite indication that some obscure disease of the liver or in its neighbourhood was definitely of malignant character.

The secondary new growth occurring at the umbilicus is perhaps the most striking of the external indications of the internal tumour. It is well to bear in mind, however, that lymph containing the cancerous cells finds its way from the subperitoneal lymph vessels in the same directions as the blood stream when obstructed either in the vena cava or in the portal vein. This collateral lymph circulation takes the opposite direction to the normal current, and is probably caused by the obstruction of the retroperitoneal lymph vessels and glands as the result of secondary growth. Thus it comes about that nodules are discovered on the lateral aspects of the thorax and the abdomen which may be of the utmost significance in forming a diagnosis as to the internal trouble. These little tumours may be single or very sparsely scattered when first observed, but not infrequently occur in great numbers during the course of the disease. A search for these nodules should always be made in cases of abdominal disease, especially if any doubt as to its character is entertained.

I may give an example of the importance of observing this sign:

A man of a little over 50 years of age was recently sent into the hospital under my care by two colleagues who had seen him in consultation at his home. The patient had been a heavy drinker, and suffered from symptoms strongly suggestive of cirrhosis of the liver. The suggestion made as to diagnosis was that he had cirrhosis of the liver complicated by tuberculosis. On admission to the hospital, the symptoms of his malady were quite in keeping with the diagnosis suggested. It was noted, however, that he had a small, firm, subcutaneous nodule on the right side in the infra-axillary region 2 or 3 in above the costal margin. In a short time one or two other very minute nodules made their appearance in the neighbourhood of the original one. A week or two later he developed suddenly an extraordinary amount of local oedema of the lower and back portion of the chest. The oedema was so firm as to suggest a collection of free fluid, and an exploratory puncture was made to clear up this point in the diagnosis. In a short time the oedema began to be absorbed, and, as it disappeared, the portion of the chest wall previously swollen was found to be studded with minute hard nodules. These increased in size, and at the time of his death these subcutaneous growths could be numbered by the score. The actual cause of his disease was carcinoma, commencing in the right suprarenal body, involving the liver secondarily, and causing finally much disorganization of the structures both of the right side of the thorax and the abdomen. There was no cirrhosis of the liver nor tuberculosis.

The correct diagnosis was arrived at only when the original single firm subcutaneous nodule was noted.

IV.—*Primary New Formations in Disease of the Liver: Xanthoma.*

I have been led to mention the occurrence of metastatic nodules on the surface of the body as giving indications of the nature of internal diseases, but it must not be forgotten that in various diseases of the liver, sometimes producing organic change, at other times apparently simply functional in character, and often associated with glycosuria, there appears on the surface of the body the curious growth known as xanthoma. Everyone has known cases of the form of the disease commonly occurring at the inner angle of the lower eyelid, known as "xanthoma palpebrarum." This type of xanthoma occurs in the majority of cases without any recognizable disturbance of health. There are forms of the disease, however, probably differing in some respect from that mentioned, which occur in other parts of the body, sometimes localized in flat patches on the elbows, the knees, and other bony prominences, in other cases occurring as discrete localized tumours, sometimes in large numbers over the whole cutaneous surface. The information obtained by the histological examination of xanthoma is difficult to interpret. The tumours in some respects suggest that they are produced by degenerative changes occurring in the connective tissues, with the collection of a peculiar fatty material within the cells, and the disintegration of both white and yellow elastic fibres, strongly suggestive of a toxic influence. In other respects the evidences of a degenerative change are not so striking, and the affected tissues seem capable of recovering. The general evidence, however, is strongly in favour of the fact that the majority of cases of the widely spread form of the disease are accompanied by important morbid changes of metabolism, especially associated with the functions of the liver. The occurrence of xanthoma anywhere excepting on the eyelids must always demand a careful examination of the abdominal organs, and of their functions.

V.—*Anomalies of Pigmentation as Signs of Visceral Disease.*

The indications derived from alterations in the colour of the patient are numerous, and I can only refer briefly to the subject in this place.

Haemochromatosis.—One of the most striking discolorations observed seems to be due to the destruction of the red blood cells in diseases of the alimentary tract and

liver. The breaking down of the haemoglobin produces various forms of abnormal pigment, which become deposited throughout the body and in the skin. The condition is known as "haemochromatosis," and the alteration in the colour of the skin is sometimes of a most remarkable character. If recognized, it may serve as an important sign of the internal disorder. Most of the cases already described have been associated with disease of the liver or of the intestinal tract, not infrequently associated with glycosuria. This association, however, does not seem to be always necessary.

I have under observation now a patient suffering from the disease, whom I first was called to see by one of my colleagues in the hospital.

She was a young woman, a Board School teacher, of about 24 years of age, emaciated to an extreme degree. On further examination, the abdomen was noted to be greatly distended, and obviously contained fluid. The most striking feature, however, was the fact that she had become deeply pigmented from head to foot. The pigmentation, as usual, was most intense in the flexures of the body, where the tint could be compared to a very deep grey-blue slate colour. It was not of the usual brown or black tint characteristic of the deposit of melanin. An abdominal section was performed for the purpose of removing the collection of fluid and of exploring the abdomen. A large quantity of free, clear fluid, containing a few flakes of lymph was evacuated. The abdominal viscera, so far as could be seen, were normal with the exception that in the upper and back part of the abdominal cavity and on the under surface of the liver a small quantity of lymph lining the peritoneal surface and a few adhesions were seen. The operation was concluded, and I am glad to say that the patient made an uninterrupted recovery not only from the operation but of her general health. She soon commenced to increase in weight, to take her food properly, and was discharged from the hospital. She is still under my observation, having resumed her work as a Board School teacher eighteen months ago. She is in vigorous health, working eight or nine hours or more in the day in spite of my protests. The pigmentation gradually disappeared, and now can be made out with difficulty. The patient, however, says that the skin has never quite regained its original colour.

This case is very instructive as an illustration of the subject to which I have directed your attention. The unnatural pigmentation suggested a more accurate diagnosis than had previously been made, as the patient had been suspected of suffering from complications associated with ovarian cyst. It is possible that some cases of this abnormal pigmentation may arise from chronic inflammatory processes involving the upper regions of the abdomen, the neighbourhood of the suprarenal capsules and the liver, and are not necessarily fatal in their results.

Jaundice.—The other great anomaly of pigmentation which will, I am sure, be in your mind is jaundice, the most common and most important of the indications of liver disease. The consideration of the indications afforded by the varieties of jaundice I have purposely omitted from our discussion this evening. The subject is a complicated one, and worthy of detailed consideration, both from the point of view of accurate diagnosis and also because jaundice is associated with severe cutaneous troubles, which may be greatly alleviated by properly-advised treatment.

This sketch that I have attempted to make this evening is incomplete, and leaves many parts to be filled up, but I hope that I have been able to show the importance of attempting to interpret some of the neglected signs of visceral disease.

A RETURN recently issued by the Minister of the Interior for Egypt, and relating to births and deaths during 1907 in the principal towns of that country, shows a birth-rate for natives of 43.7 per 1,000 on an estimated population of 1,530,672, and a death-rate, calculated on the same basis, of 36.7 per 1,000. During the same period the infant mortality was 309 per 1,000 registered births. The foreigners in the same towns are calculated as numbering 104,051 persons, the death-rate given being 24.4 per 1,000. In this case, however, the population is taken as being the same as the census of 1897, so the percentage figures are without material interest.

AN ANALYSIS OF 263 CASES OF TABES.

BY

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IN this communication I have analysed 263 cases of tabes dorsalis met with in hospital and private practice. The notes of the earlier cases are necessarily in some respects incomplete, but all the later cases have been carefully studied. Further, I have followed out the cases, so far as it has been possible to do so, and brought them up to date. I have consequently been able to trace the course of the disease during a period of several years, in a considerable proportion of the 263 cases, and, in most of the fatal cases, to give the total duration and the immediate cause of death.

TYPE OF THE DISEASE.

Of the 263 cases, 192, or 73 per cent., were in the ataxic, and 71, or 22.9 per cent, in the preataxic, stage of the disease.

SEX AND AGE.

Sex.—239, or 90.8 per cent. of the 263 cases, were males, and 24, or 9.1 per cent., females.

Age at Onset.—The age at which the first symptoms of tabes were said to have developed was noted in 258 of the 263 cases, and is shown in Table I and Fig. 1. In 5 of the 263 cases the age at which the first symptoms developed is not stated in the notes.

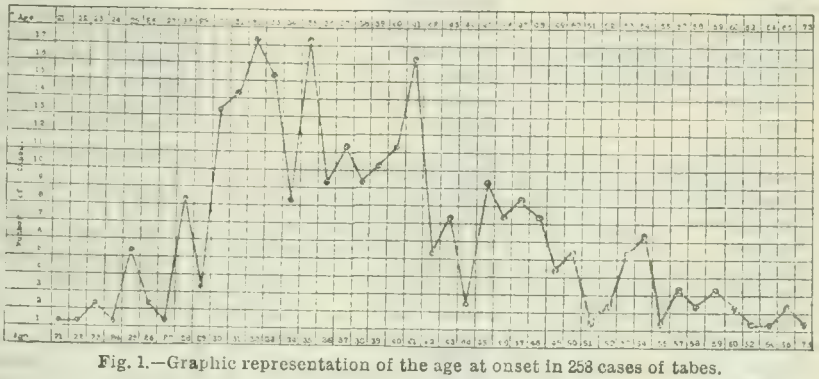


Fig. 1.—Graphic representation of the age at onset in 258 cases of tabes.

TABLE I.—*Age at Onset in 258 Cases of Tabes.*

Age.	No. of Cases.	Per Cent.
From 20 to 30 years	37	14.3
,, 31 ,, 40 ,, ...	121	46.8
,, 41 ,, 50 ,, ...	70	27.0
,, 51 ,, 60 ,, ...	25	9.6
Above 60 ,, ...	5	1.9
Total	258	99.6

In the 258 cases in which the age at onset was ascertained, the disease commenced in 191 cases, or 73.6 per cent., between the ages of 30 and 50. In one case, in which the patient not only denied syphilis and gonorrhoea, but stated that he had never been exposed to infection, in which there were no appearances indicative of syphilitic disease, and in which there was no evidence of inherited syphilis, the disease commenced at the early age of 21. In one case in which the symptoms were in every way typical, the disease commenced at the age of 66; and in another case, characterized by marked ataxia, Rombergism, loss of the knee-jerk, and the Argyll-Robertson condition of the pupils, but in which there were no lightning pains, at the remarkably advanced age of 73.

SOCIAL STATUS.

Married, Widowed, or Single.—In 159, or 60.4 per cent., of the 263 cases, the patients were married; in 18 cases, or

6.8 per cent., widowers or widows; in 52 cases, or 21.2 per cent., single; and in 30 cases, or 11.4 per cent., the condition as regards marriage is not stated in the notes.

Occupation.—The occupations of the patients were very various, and are shown in Table II.

TABLE II.—*Showing the Occupation in 263 Cases of Tabes.*

Accountant	1	Manager public company	1
Actor	1	Manufacturer	1
Architect	1	Mason	3
Auctioneer	1	Machinist	1
Author	1	Medical practitioner	3
Baker	1	Merchant	5
Bank agent	1	Merchant (corn)	1
Barman	1	Merchant (wine)	1
Blacksmith	4	Miner	7
Boatman	1	Nurse	1
Bookbinder	3	Organist	1
Brassfinisher	1	Painter (coach)	2
Bricklayer	2	Painter (house)	5
Cabinet maker	2	Painter on china	1
Cabman	1	Paper maker	1
Cab proprietor	1	Plasterer	3
Carter	1	Police officer	2
Charwoman	1	Porter	1
Checker	2	Press reader	1
Chemist	3	Quarrymaster	1
Clergyman	3	Railway agent	1
Clerk	11	Railwayman	1
Coachman	2	Railway foreman	1
Comptroller of telegraphs	1	Ranchman	1
Commercial traveller	9	Riveter	1
Confectioner	2	Rubber worker	3
Cooper	1	Saddler	1
Dairyman	1	Sailor	4
Domestic servant	1	Sailor and pawnbroker	1
Draper	1	Salesman	2
Draughtsman	2	Saw miller	1
Engineer	14	Schoolmaster	1
Engine minder	1	Shipwright	1
Farmer	2	Shoemaker	4
Fisherman	1	Soldier	4
Flax dresser	1	Soldier (old) and coal miner	1
Florist	1	Soldier (old) and cooper	1
Fruiterer	1	,, ,, labourer	1
Furnaceman	1	,, ,, mason	1
Furniture packer	1	,, ,, night watchman	1
Gardener	2	Soldier (old) and painter	1
Gentleman (private means)	7	,, ,, railway-man	1
Glass cutter	1	Spinner	1
Golf club maker	1	Stableman	1
Grocer	4	Stationmaster	1
Groom	2	Stationer	1
Hairdresser	1	Stockbroker	2
Hosier	1	Stoker	1
Hotelkeeper	3	Street singer	1
House agent	1	Tailor	1
Housewife, or living at home	19	Telegraphist	1
Inland revenue officer	1	Tinplate worker	1
Insurance agent	2	Tramwayman	1
Ironmonger	2	Warehouseman	1
Jockey	1	Whisky agent	2
Joiner	3	Wireworker	1
Labourer	9	Workman in distillery	1
Land agent	2	Not stated	10
Lawyer	6		263
Lithographer	1		
Lorryman	1		

ETIOLOGY.

In 253 of the 263 cases a definite statement as regards syphilis, and in 10 cases no statement as regards syphilis, was made in the notes.

Syphilis.

In 155, or 61.2 per cent., of the 253 cases in which there is a definite statement as regards syphilis, the patients admitted syphilis; in 12 cases, or 4.7 per cent., it is practically certain—from the family history of repeated miscarriages, stillborn children, husband syphilitic, etc.—that the patient had had syphilis; in 16 cases, or 6.3 per cent., the history as regards syphilis was doubtful; and in 70 cases, or 27.6 per cent., the patients denied syphilis.

Gonorrhœa.

In 42 cases in which the patients denied syphilis, or in which syphilis was doubtful, the patients admitted gonorrhœa.

Consequently, in 197 of the 253 cases there was a definite history of some form of venereal disease, and in 12 other cases it is practically certain that the patients had had syphilis. It is, therefore, practically certain that in 209, or 82.6 per cent. of the 253 cases the patients had had some form of venereal disease. In one case in which syphilis was denied the condition of the teeth suggested congenital syphilis.

Further, it is, of course, certain that in some (perhaps a considerable proportion) of the 70 cases in which the patients denied syphilis they had actually suffered from that disease. In several of the cases in which syphilis was ultimately admitted the patients had, at first, emphatically denied that they had suffered from the disease. In several cases the syphilis had been treated very thoroughly for long periods of time with mercury. These cases show—and this is an important practical point from an insurance point of view—that prolonged and thorough mercurial treatment does not, in all cases at all events, prevent the subsequent development of tabes.

In these statistics I have not attempted to discriminate between a true syphilitic ("hard") chancre and a "soft" sore, for, in many cases, I have found it impossible to get reliable information regarding the nature of the primary sore (whether "hard" or "soft") and as to the occurrence of slight secondary symptoms long years before. Further, "soft" sore may of course "carry" the syphilitic poison, and be followed by secondary and tertiary symptoms.

Length of Time between the Occurrence of the Venereal Sore and the First Symptoms of Tabes.

This point, which is of great importance from an insurance point of view, was definitely determined in 141 of the total 263 cases. The results are shown in Table III and Fig. 2.

TABLE III.—*Time between the Chancre and the First Symptoms in 141 Cases of Tabes.*

	No. of Cases.	Per Cent.
Under 1 year	1	0.7
1 to 5 years (inclusive)	26	18.4
6 ,, 10 ,, ,,	36	25.5
11 ,, 15 ,, ,,	30	21.2
16 ,, 20 ,, ,,	33	23.4
21 ,, 25 ,, ,,	11	7.8
26 ,, 30 ,, ,,	2	1.4
36 ,, 40 ,, ,,	1	0.7
41 ,, 45 ,, ,,	1	0.7
Total	141	99.8

From this table it will be seen that in 63 of the 141 cases, or 44.6 per cent., the tabes developed within the first ten years after infection; and in 78 cases, or 55.3 per cent., more than ten years after infection; in 63 cases, or 44.6 per cent., between ten and twenty years after infection; and in 15 cases, or 10.6 per cent., more than twenty years after infection.

Sexual Excess.—In 13 of the 263 cases marked sexual excess was admitted; but since the presence or absence of this form of excess was not particularly inquired for in all cases, it may have been present in a considerably larger proportion of cases. In 9 of the 13 patients who admitted marked sexual excess, there was a definite history of syphilis, and in 4 cases syphilis was denied.

Marriage.—In 7 of the 263 cases (in addition to the 13 cases in which sexual excess was admitted) marriage

seemed to have a decided influence either in producing or aggravating the disease. In 4 cases the symptoms developed soon or immediately after marriage; and in 3 cases the symptoms were markedly aggravated by marriage. In 5 of the 7 cases in which marriage seemed to produce or accelerate the development of the disease there was a definite history of syphilis; in 1 case syphilis was probable, and in 1 case doubtful.

Alcoholic Excess.—In 26 of the 263 cases marked excess as regards alcohol was admitted; the actual number was probably much larger. In 20 of the 26 cases in which marked alcoholic excess was present there was a definite history of syphilis; in 2 cases syphilis was probable, in 1 case doubtful, and in 3 cases definitely denied.

Injury.—In 7 cases an injury or operation was blamed by the patient as the cause of the disease, but it is very doubtful if in any of these cases the injury was the real cause. In all of these 7 cases there was a definite history of syphilis. In 1 case in which the disease commenced with optic atrophy in one eye, that eye had been habitually exposed to the glare of a bright light, and this was thought by the patient to be the cause of the condition. This patient admitted syphilis.

Exposure to Cold and Wet; Lying Out at Night.—This was blamed by the patient in 8 cases. In 4 of these 8 cases there was a definite history of syphilis, in 1 case syphilis was doubtful, and in 1 case definitely denied.

Mental Worry.—This was said to be the cause in 4 cases. In 3 of these there was a definite history of syphilis, and in 1 case syphilis was doubtful.

Infectious Diseases.—In 2 cases influenza, in 1 case scarlet fever, and in 1 case diphtheria were said to be the cause of the disease.

Lead Poisoning.—In 1 case lead poisoning was thought by the patient to be the cause of the disease.

The etiological factors detailed above are summarized in Table IV.

TABLE IV.—*Showing the Chief Etiological Factors in 253 Cases of Tabes.*

Syphilis admitted ...	the only apparent cause	105	
	+ sexual excess	9	
	+ marriage*	5	
	+ alcoholic excess	17	
	+ alcoholic excess + exposure to cold	1	
	+ alcoholic excess + injury ...	1	
	+ alcoholic excess + morphine excess	1	
	+ injury	5	
	+ injury + mental worry	1	
	+ exposure of eye to light	1	
	+ exposure to cold and wet	5	
	+ mental worry	3	
	+ influenza	1	
			155
Syphilis practically certain	the only apparent cause	8	
	+ marriage*	1	
	+ alcoholic excess	2	
	+ influenza	1	
			12
Syphilis doubtful ...	the only apparent cause	12	
	+ marriage*	1	
	+ alcoholic excess	1	
	+ exposure to cold and wet	1	
	+ mental worry	1	
			16
Syphilis denied ...	and no other apparent cause ...	58	
	but sexual excess	4	
	but alcoholic excess	3	
	but exposure to cold and wet ...	1	
	but scarlet fever	1	
	but diphtheria	1	
	but injury	1	
	but lead poisoning	1	
			70
			253
Not noted			10
Total			263

*In the cases in which marriage is suggested as a cause of the disease, the symptoms either developed soon after marriage or became greatly aggravated soon after marriage.

The Length of Time the Disease had been in Existence before the Patients came under Observation.

This was definitely ascertained in 257 of the 263 cases, and varied from a few months (less than one year) in 28 cases, to 30 years in 1 case. In the remaining 6 cases in which the exact duration of the disease when the patient first came under observation is not definitely stated, the period is stated to have been many years in 2 cases, and some years in 3 cases. The details are given in Table V.

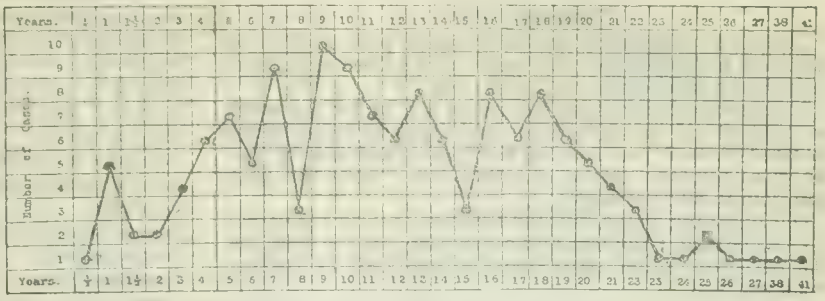


Fig. 2.—Graphic representation of the length of time which elapsed between the occurrence of the venereal sore and the first symptoms in 141 cases of tabes.

TABLE V.—*Duration of the Disease, when the Patients were First Seen, in 263 Cases of Tabes.*

Less than a year ...	28 cases	14 years	1 case
1 year	37 ,,	15 ,, ...	1 ,,
2 years	38 ,,	16 ,, ...	2 cases
3 ,, ...	30 ,,	17 ,, ...	1 case
4 ,, ...	34 ,,	19 ,, ...	1 ,,
5 ,, ...	16 ,,	20 ,, ...	5 cases
6 ,, ...	20 ,,	22 ,, ...	1 case
7 ,, ...	7 ,,	25 ,, ...	3 cases
8 ,, ...	9 ,,	30 ,, ...	1 case
9 ,, ...	5 ,,	Many years	2 cases
10 ,, ...	6 ,,	Some ,, ...	3 ,,
11 ,, ...	4 ,,	? ,, ...	1 case
12 ,, ...	7 ,,		

THE NATURE OF THE FIRST SYMPTOMS.

For the diagnosis of early tabes this is a point of considerable practical importance. In 258 of the 263 cases the nature of the first symptom, as stated by the patient, was as follows:

TABLE VI.—*Nature of the First Symptoms, as stated by the Patient, in 258 Cases of Tabes.*

Nature of Symptom.	Cases.	Per Cent. of 258 Cases.
Lightning pains (alone)	133	51.5
Diplopia	20	7.7
Dimness of vision	20	7.7
Ataxia	17	6.5
Lightning pains and ataxia	14	5.4
Derangement of urination	10	3.8
Gastric crises	6	2.3
Numbness (in feet, etc.)	5	1.9
Pains and loss of vision	3	1.1
Ataxia, pain in back, and numbness in feet	2	0.7
Vomiting (not due to gastric crisis)	2	0.7
Pains and giddiness; diplopia and giddiness; derangement of urination and debility; pain in the back; pain in the back and ataxia; coldness of feet; weakness; ataxia and loss of sexual desire and power; ataxia and bladder trouble; lightning pains and bladder trouble; joint affection; numbness in the feet and catching of the toes; pain in the back and bladder trouble; ataxia and cramps in the hands; ataxia and girdle sensation; noise in the ear (like a singing bird); loss of sexual power and desire; numbness and cough; anaesthesia of thorax; tired feeling in legs; pains, bladder trouble, and weakness in legs; inordinate sexual desire; pains, ataxia, and bladder trouble; pains and numbness; pains and girdle sensation; loss of vision and giving way of legs; 1 case each	26	10.0
	258	99.3
Not stated	5	
Total cases	263	

Analysis of Individual Symptoms.

I will now consider seriatim the different symptoms and signs of the disease, as manifested in the 263 cases under analysis.

Lightning Pains.

Lightning pains were present in some part or other of the body in 244 of the 263 cases, or 92.2 per cent., and were absent in 19 cases, or 7 2 per cent.

In my experience, lightning pains are by far the most frequent of all the symptoms and signs of tabes (they occurred in 92.2 per cent. of the cases), and are by far the most common initial symptom (they were the first symptom in 60.3 per cent).

The lightning pains affected the legs only in 113 cases, or 42.9 per cent.; the legs and other parts in 239 cases, or 90.6 per cent.; other parts than the legs only in 5 cases, or 1.6 per cent.

Table VII.—*Parts affected by the Lightning Pains in 263 Cases of Tabes.*

Parts Affected.	No. of Cases	Per Cent. of 263 Cases.
Legs alone	113	42.9
Legs and trunk	39	14 8
Legs, arms and trunk	48	18 2
Legs and arms	24	9.1
Legs, trunk, arms and head	12	4.5
Legs, trunk and head	3	1.1
Arms and trunk	2	0.7
Arms, trunk and head	1	0.3
Head alone	1	0.3
Trunk alone	1	0.3
Absent	19	7.2
Total cases	263	99.4

In 1 case the pains were worse if the patient was constipated. In 1 case riding and hunting were repeatedly observed to be the exciting cause of very severe lightning pains, requiring morphine for their relief. In 1 case the occurrence of the gastric crises was always followed by very severe pains in the legs. In 1 case sexual excitement "had a bad effect on the pains." In 1 case very severe shooting pains were referred to the left forearm and hand, which had been amputated eight years previously.

Pain in the Back.—This was present in 86 of the 263 cases, or 32.7 per cent.; absent in 94 cases, or 35 7 per cent.; and not specifically mentioned in the notes in 83 cases, or 31.5 per cent. Consequently, in the 180 cases in which pain in the back is specifically mentioned in the notes, it was present in 86, or 47.7 per cent., and absent in 94, or 52.2 per cent. In 1 case, in which there was a very severe and persistent pain under the left scapula, an aneurysm of the descending thoracic aorta was found *post mortem*.

Girdle Sensation.—This was present in 107 of the 263 cases, or 40.6 per cent.; absent in 76 cases, or 38 8 per cent.; and not specifically mentioned in the notes in 80 cases, or 30.4 per cent. Consequently, in the 183 cases in which the presence or absence of the girdle sensation is mentioned in the notes, it was present in 107 cases, or 58.4 per cent., and absent in 76 cases, or 41 5 per cent.

Paraesthesiae.—Some form of paraesthesia was present in 178 of the 263 cases, or 67.6 per cent.; absent in 36 cases, or 13.3 per cent; and was not specifically mentioned in the notes in 49 cases, or 18.6 per cent. Consequently, in the 214 cases in which the presence or absence of paraesthesiae is specifically stated in the notes, paraesthesiae of some form or another were present in 178 cases, or 83.1 per cent., and absent in 36 cases, or 16 8 per cent.

Table VIII.—*Nature of the Paraesthesiae in 178 Cases of Tabes.*

Numbness	53
Numbness and pins and needles	11
Numbness and cold feet	27
Numbness and ground felt soft	17
Numbness, pins and needles, cold feet, and ground felt soft	13
Numbness, pins and needles, and cold feet	14
Numbness, cold feet, and ground felt soft	11
Numbness, pins and needles, and ground felt soft	2
Pins and needles	4
Pins and needles and cold feet	4
Pins and needles, cold feet, and ground felt soft	1
Cold feet	12
Cold feet and ground felt soft	4
Ground felt soft	5
No paraesthesiae	36
Presence or absence of paraesthesiae not noted	49
Total	263

Consequently, in the 214 cases in which the presence or absence of paraesthesiae was noted, numbness (in feet, legs, hands, etc.) was present, either alone or in conjunction with other forms of paraesthesia, in 145 cases, or 69 1 per cent.; coldness of the feet (a feeling as if standing on snow, etc.), either alone or in combination with other forms of paraesthesia, in 85 cases, or 39.7 per cent.; "the ground felt soft," either alone or in combination with other forms of paraesthesia, in 53 cases, or 24.7 per cent.; and pins and needles, either alone or in combination with other forms of paraesthesia, in 49 cases, or 22.9 per cent. In the 178 cases in which the above forms of paraesthesiæ—numbness, pins and needles, cold feet, the ground felt soft—were present, other forms of paraesthesiae—such as hyperaesthesia, coldness in the back, a damp cold feeling about the testicles, etc.—were also present in some cases.

Anaesthesia in the Legs.—In 100, or 38 per cent., of the 263 cases there was more or less anaesthesia in the legs; in 114 cases, or 43 3 per cent., there was no anaesthesia in the legs; and in 49 cases, or 18.6 per cent., the presence or absence of anaesthesia in the legs was not specifically mentioned in the notes. Consequently, in the 214 cases in which the presence or absence of anaesthesia in the legs was specifically mentioned in the notes, it was present in 100 cases, or 46.7 per cent., and absent in 114 cases, or 53 2 per cent. In many of the 100 cases in which anaesthesia was present in the legs it was slight in degree and limited in distribution.

Anaesthesia in the Arms.—In 51 of the 263 cases, or 19.3 per cent., there was more or less anaesthesia in the arms; in 123 cases, or 46 3 per cent., there was no anaesthesia in the arms; and in 89 cases, or 33.8 per cent., the presence or absence of anaesthesia in the arms was not specifically mentioned in the notes. Consequently, in the 174 cases in which the presence or absence of anaesthesia in the arms was specifically mentioned in the notes, it was present in 51 cases, or 29.3 per cent., and absent in 123 cases, or 70.6 per cent.

Anaesthesia in the Trunk.—In 77 of the 263 cases, or 29.2 per cent., there was more or less anaesthesia in the trunk; in 98 cases, or 37.1 per cent., there was no anaesthesia in the trunk; and in 88 cases, or 33.4 per cent., the presence or absence of anaesthesia in the trunk was not specifically mentioned in the notes. Consequently, in the 175 cases in which the presence or absence of anaesthesia in the trunk was specifically mentioned in the notes, it was present in 77 cases, or 44 per cent., and absent in 98 cases, or 56 per cent.

Anaesthesia in the Face.—In 8 of the 263 cases, or 3 per cent., there was more or less anaesthesia in the face; in 151 cases, or 57.4 per cent., there was no anaesthesia in the face; and in 104 cases, or 39 5 per cent., the presence or absence of anaesthesia in the face was not specifically mentioned in the notes. Consequently, in the 159 cases in which the presence or absence of anaesthesia in the face was specifically mentioned in the notes, it was present in 8 cases or 5 per cent., and absent in 151 cases, or 94.9 per cent. In 1 case there was complete anaesthesia and analgesia of one—the left—side of the face and tongue, obviously due to a lesion of the fifth nerve or its central connexions. In 1 case there was complete

hemianaesthesia and hemianalgesia of the left side of the body (face, arm, and leg).

Analgesia in the Legs.—In 107, or 40 6 per cent., of the 263 cases, there was more or less analgesia in the legs; in 89 cases, or 33.9 per cent, there was no analgesia in the legs; and in 67 cases, or 25.4 per cent, the presence or absence of analgesia in the legs was not specifically mentioned in the notes. Consequently, in the 196 cases in which the presence or absence of analgesia in the legs was specifically mentioned in the notes, it was present in 107 cases, or 54.5 per cent., and absent in 89 cases, or 45 4 per cent.

Analgesia in the Arms.—In 96 or 36.5 per cent., of the 263 cases, there was more or less analgesia in the arms; in 80 cases, or 30.4 per cent., there was no analgesia in the arms; and in 87 cases, or 33 per cent., the presence or absence of analgesia in the arms was not specifically mentioned in the notes. Consequently, in the 176 cases in which the presence or absence of analgesia in the arms was specifically mentioned in the notes, it was present in 96 cases, or 54.5 per cent., and absent in 80 cases, or 45.4 per cent.

Ulnar Analgesia.—In 54, or 20.5 per cent., of the 263 cases, ulnar analgesia was present; absent in 49, or 18.6 per cent.; and not mentioned in the notes in 160, or 60 8 per cent. Consequently, in the 103 cases in which the presence or absence of ulnar analgesia was specifically mentioned in the notes, it was present in 54 cases, or 52.4 per cent., and absent in 49 cases, or 47.5 per cent.

Analgesia in the Trunk.—In 123 of the 263 cases, or 46 7 per cent, there was more or less analgesia in the trunk; in 60 cases, or 22.8 per cent., there was no analgesia in the trunk; and in 80 cases, or 30.4 per cent., the presence or absence of analgesia in the trunk was not specifically mentioned in the notes. Consequently, in the 183 cases in which the presence or absence of analgesia in the trunk was specifically mentioned in the notes, it was present in 123 cases, or 67.2 per cent., and absent in 60 cases, or 32.7 per cent.

Thoracic Analgesia.—In 62 of the 263 cases, or 23 5 per cent, thoracic analgesia was present; in 42 cases, or 15 9 per cent., absent; and in 159 cases, or 60.4 per cent., not specifically mentioned in the notes. Consequently, in the 104 cases in which the presence or absence of thoracic analgesia was specifically noted, it was present in 62 cases, or 59.6 per cent., and absent in 42 cases, or 40 3 per cent.

Analgesia in the Face and Head.—In 4 of the 263 cases, or 1.4 per cent., there was more or less analgesia in the face and head; in 153 cases, or 58.1 per cent., there was no analgesia in the face and head; and in 106 cases, or 40 3 per cent., the presence or absence of analgesia in the face and head was not specifically mentioned in the notes. Consequently, in the 157 cases in which the presence or absence of analgesia in the face and head was specifically mentioned in the notes, it was present in 4 cases, or 2 5 per cent., and absent in 153 cases, or 97.4 per cent.

Sensibility to Heat and Cold.—This was only carefully investigated in such a small number of the 263 cases that I am not able to make any definite and reliable statement regarding its condition in the different areas of the body.

The Stereognostic Sense.—This was examined in a limited number of cases; in 2 cases it was defective; in all the other cases in which it was examined it was unaffected.

Ataxic Gait.—In 192 of the 263 cases, or 73 per cent., an ataxic gait was present; and in 71 cases, or 28 9 per cent, absent.

Rombergism.—In 190 of the 263 cases, or 72 2 per cent., Rombergism was present; in 72 cases, or 27.3 per cent., absent; and in 1 case, or 0.3 per cent., the presence or absence of Rombergism was not specifically mentioned in the notes.

Inco-ordination in the Legs.—In 184, or 69 9 per cent., of the 263 cases, inco-ordination was present in the legs; in 75, or 28 1 per cent, inco-ordination was absent in the legs; and in 4, or 1 5 per cent., the presence or absence of inco-ordination in the legs (other than the inco-ordination shown by the ataxic gait) was not specifically mentioned in the notes. Consequently, in the 259 cases in which the presence or absence of inco-ordination in the legs was specifically mentioned in the notes, it was present in 184 cases, or 71 per cent., and absent in 75 cases, or 28.8 per cent.

Inco-ordination in the Arms.—In 58, or 22 per cent., of the 263 cases, inco-ordination was present in the arms; in 156 cases, or 59.3 per cent., there was no inco-ordination present in the arms; and in 49 cases, or 18.6 per cent, the presence or absence of inco-ordination in the arms was not specifically mentioned in the notes. Consequently, in the 214 cases in which the presence or absence of inco-ordination in the arms was definitely stated in the notes, it was present in 58 cases, or 27.1 per cent., and absent in 156 cases, or 72.8 per cent.

Muscular Sense in the Legs.—In 94 of the 263 cases, or 35.7 per cent., the sense of movement was affected; in 81 cases, or 30.8 per cent, unaffected; and in 88 cases, or 33.4 per cent., the condition of the sense of movement in the legs was not specifically mentioned in the notes. Consequently, in the 175 cases in which the sense of movement in the legs was specifically stated in the notes, it was impaired in 94, or 53.7 per cent., and was not affected in 81, or 46 2 per cent.

Muscular Sense in the Arms.—The sense of movement in the arms was affected in 26 of the 263 cases, or 9.8 per cent.; unaffected in 127, or 48.2 per cent.; and not specifically mentioned in the notes in 110 cases, or 41.8 per cent. Consequently, in the 153 cases in which the condition of the sense of movement in the upper extremities was specifically stated in the notes, it was affected in 26, or 16 9 per cent., and unaffected in 127, or 83 per cent. In the great majority of the 26 cases in which the sense of movement in the arms was affected the impairment was only slight.

Muscular Analgesia in the Legs.—This was present in 81 of the 263 cases, or 30.7 per cent.; absent in 51 cases, or 19 3 per cent.; and not specifically mentioned in the notes in 131 cases, or 49.8 per cent. Consequently, in the 132 cases in which the presence or absence of muscular analgesia in the legs was mentioned in the notes, it was present in 81 cases, or 61 3 per cent, and absent in 51 cases, or 38 6 per cent.

Muscular Hypotonia.—This was present in 70 of the 263 cases, or 26.6 per cent.; absent in 48 cases, or 18 2 per cent.; and not stated in 145 cases, or 55 1 per cent. Consequently, in the 118 cases in which the presence or absence of hypotonia was mentioned in the notes, it was present in 70 cases, or 59.3 per cent, and absent in 48 cases, or 40.6 per cent. In many of the cases in which hypotonia was present it was only slight. Hypotonia in the legs was regarded as present when, the patient lying flat on the back, the extended leg could be brought to a right angle, or less than a right angle, with the trunk.

The Condition of the Knee jerks.—In 224 of the 263 cases, or 85 1 per cent., the knee-jerks were lost (on both sides, in 212, or 80 6 per cent., and on one side in 12, or 4.5 per cent.); in 31 cases, or 11 7 per cent., the knee-jerks were present on both sides. In 8 cases, or 3 per cent., the condition of the knee-jerks was not specifically mentioned in the notes. Consequently, in the 255 cases in which the condition of the knee-jerks was specifically stated in the notes, they were lost on one or both sides in 224 cases, or 87 8 per cent, and present on both sides in 31 cases, or 12.1 per cent. The exact frequency with which the knee-jerk is absent in any series of cases of tabes will, of course, to some extend depend upon the relative proportion of the cases of preataxic and ataxic in that series. We now recognize many obscure cases as cases of preataxic tabes, which were not recognized as tabes a few years ago. This is probably the explanation of the fact that, in my series of cases, the knee-jerks were lost in a somewhat smaller percentage of cases—87.8—than in the series of cases recorded by other observers a few years ago.

Achillis-jerk.—In 138 of the 263 cases, or 52 4 per cent., the Achillis-jerk was absent on one or both sides (in 136, or 50 1 per cent., on both sides, and in 6 of these cases, or 2 2 per cent., on one side only); in 21 cases, or 7.9 per cent., the Achillis-jerk was present on both sides; and in 104 cases, or 39 5 per cent., the Achillis-jerk was not examined. Consequently, in the 159 cases in which the Achillis-jerk was examined, it was absent in 138 cases, or 86.7 per cent., on one or both sides (on both sides, 136 cases, or 83 per cent.; and in 6 cases, or 3.7 per cent., on one side); and in 21 cases, or 13.2 per cent., it was present on both sides.

The Relationship between the Achillis-jerks and the Knee-jerks.

A comparison of the relative frequency with which the knee jerks and the Achillis-jerks were absent shows that the knee-jerks were absent (on one or both sides) in 87.8 per cent., and the Achillis-jerks in 87.5 per cent. The greater frequency with which the knee-jerks were absent was without doubt, I think, due to the fact that, in 169 cases in which the Achillis-jerks were examined, there was a larger number (proportion) of cases of preataxic tabes than in the 255 cases in which the knee-jerks were examined.

In 169 of the 263 cases the condition of both the knee-jerks and Achillis-jerks was noted.

In 144, or 85.2 per cent., of the 169 cases, the knee-jerk was absent (on both sides in 135 cases, or 79.8 per cent., and on one side in 9 cases, or 5.3 per cent.); and in 25 cases, or 14.7 per cent., both knee-jerks were present. In 148, or 87.5 per cent., of the 169 cases the Achillis-jerk was absent (on both sides in 142 cases, or 84 per cent., and on one side in 6 cases, or 3.5 per cent.); and in 21 cases, or 12.4 per cent., both Achillis-jerks were present. In 130, or 76.9 per cent., of the 169 cases, both knee-jerks and both Achillis-jerks were absent; in 17 cases, or 10 per cent., both knee-jerks and both Achillis-jerks were present; and in 22 cases, or 13 per cent., the knee jerks and Achillis-jerks were unequally affected. In the 22 cases in which the knee-jerks and Achillis-jerks were not affected in the same way, the knee-jerks were both absent in 5 cases, and the Achillis-jerks both absent in 12 cases; one knee-jerk was absent in 9 cases, and 1 Achillis-jerk in 6 cases; both knee-jerks were present in 8 cases, and both Achillis-jerks in 6 cases.

TABLE IX.—*The Condition of the Achillis jerks and Knee-jerks in 22 Cases of Tabes in which the Two Jerks were not affected in the same way.*

No. of Case	Right Leg.		Left Leg.	
	Knee-jerk.	Achillis-jerk.	Knee-jerk.	Achillis-jerk.
43	Normal	Normal	Normal	Absent.
60	Absent	Normal	Absent	Absent.
89	Absent	Exaggerated	Exaggerated	Exaggerated.
145	Absent	Absent	Present on reinforcement	Absent.
157	Absent	Present and active	Absent	Present, very slight.
158	Present and active	Absent	Absent	Absent.
167	Normal	Absent	Normal	Absent.
175	Absent	Normal	Normal	Absent.
180	Absent	Absent	Normal	Absent.
191	Absent	Absent	Absent	Normal.
196	Present, very slight	Absent	Present, very slight	Absent.
197	Normal	Absent	Absent	Absent.
200	Absent	Absent	Present, very slight	Absent.
201	Absent	Normal	Absent	Present, slight.
210	Normal	Absent	Normal	Absent.
214	Present, slight	Absent	Present, slight	Absent.
220	Normal	Absent	Normal	Absent.
222	Normal	Absent	Normal	Present, slight.
40	Absent	Normal	Absent	Normal.
254	Normal	Present, slight	Absent	Absent.
255	Present, slight	Absent	Normal	Absent.
263	Normal	Absent	Normal	Absent.

Deep Reflexes in the Upper Extremities.—In 62 of the 263 cases, or 23.5 per cent., the deep reflexes in the upper extremities were absent or not obtained,* on one or both sides; in 70 cases, or 26.6 per cent., present on both sides; and in 131 cases, or 49.8 per cent., the presence or absence of the deep reflexes was not recorded in the notes. Consequently, in the 131 cases in which the condition of the deep reflexes in the upper extremities was noted, they were absent, or not obtained, on one or both sides, in 62, or 46.9 per cent., and present in 70 cases, or 53 per cent.

Jaw-jerk.—In 30, or 11.4 per cent., of the 263 cases, the jaw jerk was absent, or not obtained; in 86, or 32.6 per cent., present.; and in 147, or 55.8 per cent., not specifically mentioned in the notes. Consequently, in the 116 cases in which the condition of the jaw-jerk was specifically mentioned in the notes, it was absent, or not obtained, in 30 cases, or 25.8 per cent., and present in 86 cases, or 74.1 per cent.

Plantar Reflex.—In 26 of the 263 cases, or 9.8 per cent., the plantar reflex was absent; in 187 of the 263 cases, or 71.1 per cent., present on one or both sides; and in 50 cases, or 19 per cent., the condition of the plantar reflex was not specifically mentioned in the notes. Consequently, in the 213 cases in which the condition of the plantar reflex was noted, it was present on one or both sides in 187 cases, or 87.7 per cent., and absent in 26, or 12.2 per cent. In many of the cases the plantar reflex was exaggerated. This exaggeration of the superficial reflexes in tabes is, I think, of some diagnostic importance, more especially in the early stages of ill-developed cases.

The Toe Movement: Babinski's Sign.—In 135 of the 263 cases, the condition of the toe movement was noted. In 17 cases, or 12.8 per cent., of these 135 cases, there was no movement of the toes; in 110 cases, or 82.9 per cent., the movement of the toes was flexion; in 7 cases, or 5.2 per cent., extension on one or both sides; and in 1 case, or 0.7 per cent., there was doubtful extension. In 4 of these cases of tabes in which the toe movement was extension, the presence of the Babinski sign could be satisfactorily accounted for by the presence of some associated lesion or complication.

Cremasteric Reflex.—In 54 of the 263 cases, or 20.5 per cent., the cremasteric reflex was absent on both sides; in 12 cases, or 4.5 per cent., absent on one side; in 95, or 36.1 per cent., present on both sides; and in 102, or 48.7 per cent., the condition of the cremasteric reflex was not specifically mentioned in the notes. Consequently, in the 161 cases in which the condition of the cremasteric reflex was specifically noted, it was present in 95 cases, or 59 per cent.; absent on both sides in 54 cases, or 33.5 per cent.; and on one side in 12 cases, or 7.4 per cent.

Abdominal Reflex.—In 118, or 44.8 per cent., of the 263 cases the abdominal reflex was present; in 32 cases, or 12.1 per cent., absent; and in 113 cases, or 42.9 per cent., the condition of the abdominal reflex was not specifically mentioned in the notes. Consequently, in the 150 cases in which the condition of the abdominal reflex was specifically mentioned in the notes, it was present in 118 cases, or 78.6 per cent.; and absent in 32 cases, or 21.3 per cent.

Bladder Reflex.—In 186 of the 263 cases, or 70.7 per cent., the bladder reflex was affected in some way or another (forcing, dribbling, retention, incontinence, precipitant urination, etc.); in 65 cases, or 24.7 per cent., the bladder reflex was not affected; and in 12 cases, or 4.5 per cent., the condition of the bladder reflex was not specifically mentioned in the notes. Consequently, in the 251 cases in which the condition of the bladder reflex was specifically mentioned in the notes, urination was affected in 186 cases, or 74.1 per cent., and unaffected in 65 cases, or 25.8 per cent. The vesical crises are not included in the derangements of urination just considered; they will be dealt with subsequently.

Rectal Reflex.—In 143 of the 263 cases, or 54.3 per cent., the rectal reflex was (apparently)* affected; in 105 cases, or 39.9 per cent., not affected; and in 15 cases, or 5.7 per cent., the condition of the rectal reflex was not specifically mentioned in the notes. Consequently, in the 248 cases in which the condition of the rectal reflex was specifically stated in the notes, it was affected in 143 cases, or 57.6 per cent., and unaffected in 105 cases, or 42.3 per cent.

Sexual Reflex.—In 115 of the 263 cases, or 43.7 per cent., the sexual reflex was affected; in 63 cases, or 23.9 per cent., not affected; and in 85 cases, or 32.3 per cent., the condition of the sexual reflex was not specifically mentioned in the notes. Consequently, in the 178 cases in which the condition of the sexual reflex was specifically

* I say not obtained, for in some cases it is difficult to obtain these reflexes, especially the triceps-jerk, in health.

* I say "apparently," for constipation is such a common symptom that in many of these cases the constipation was probably accidental, and not the direct result of the tabes.

mentioned in the notes, it was affected in 115 cases, or 64.6 per cent., and unaffected in 63 cases, or 35.3 per cent.

Paralysis.—Paralysis, other than ocular paralysis, was present in 19 of the 263 cases, or 7.2 per cent.; absent in 199 cases, or 75.6 per cent.; and not specifically mentioned in the notes in 45 cases, or 17.1 per cent. Consequently, in the 218 cases in which the presence or absence of paralysis (other than ocular paralysis) was specifically mentioned in the notes, it was present in 19 cases, or 8.7 per cent., and absent in 199 cases, or 91.2 per cent.

The Condition of the Pupils.

(*a*) *Equality in Size.*—In 99 of the 263 cases, or 37.6 per cent., the pupils were unequal in size; in 100 cases, or 38 per cent., the pupils were equal; and in 64 cases, or 24.3 per cent., the equality of the pupils was not specifically mentioned in the notes. Consequently, in 199 cases in which the condition of the pupils as regards their equality was specifically mentioned in the notes, they were unequal in 99 cases, or 49.9 per cent., and equal in size in 100 cases, or 50 per cent.

(*b*) *Size.*—The pupil was measured in a moderate light. Pupils above 5 mm. in size were classed as dilated; between 5 and 3 mm. as of medium size; at or below 3 mm. as contracted. In several of the 122 cases in which the pupils were contracted, they were extremely myotic —1 to 1½ mm. In 122 of the 263 cases, or 46.3 per cent., the pupils were contracted; in 72 cases, or 27.3 per cent., of medium size; in 14 cases, or 5.3 per cent., dilated; and in 55 cases, or 20.9 per cent., the size of the pupils was not specifically mentioned in the notes. Consequently, in the 208 cases in which the size of the pupils was specifically mentioned in the notes, they were contracted in 122 cases, or 58.6 per cent.; of medium size in 72 cases, or 34.6 per cent.; and dilated in 14 cases, or 6.7 per cent.

(*c*) *Regularity of Margins.*—In 36 of the 263 cases, or in 13.6 per cent., the margins of the pupils were regular; in 32 cases, or 12.1 per cent., irregular; and in 195 cases, or 74.1 per cent., the condition of the pupil in respect to this point was not specifically mentioned in the notes. Consequently, in the 68 cases in which the condition of the pupils as regards regularity of their margins was noted, they were regular in 36 cases, or 52.9 per cent., and irregular in 32 cases, or 47 per cent.

(*d*) *Contractility to Light.*—In 222 of the 263 cases, or 84.4 per cent., the pupil reflex to light was completely lost or very sluggish in one or both eyes (in 215 cases, or 81.7 per cent., in both, and in 7 cases, or 2.6 per cent., in one eye); in 30 cases, or 11.4 per cent, the pupils reacted briskly to light; and in 11 cases, or 4.1 per cent, the condition of the light reflex was not specifically mentioned in the notes. Consequently, in 222 of the 252 cases, or 88 per cent., in which the condition was specifically mentioned in the notes, the light reflex was lost or very sluggish, and in 30 cases, or 11.9 per cent., present.

(*e*) *Contraction on Accommodation.*—In 37 cases, or 14 per cent., of the 263 cases, the contraction of the pupil on accommodation was either completely absent or very sluggish (in both eyes in 34 cases, or 12.9 per cent., and in one eye in 3 cases, or 1.1 per cent.); in 215 of the 263 cases, or 81.7 per cent., both pupils contracted briskly on accommodation; and in 11 cases, or 4.1 per cent., the activity of the pupil on accommodation was not specifically stated in the notes. Consequently, in the 252 cases in which the condition of the pupil as regards contractility on accommodation was noted, the contractility of the pupil on accommodation was absent or very sluggish in 37, or 14.6 per cent. (in both eyes in 34, or 13.4 per cent., and in one eye in 3, or 1.1 per cent.), and brisk in 215, or 85.3 per cent.

The Argyll-Robertson Condition (Reflex Iridoplegia).—In 186 cases, or 70.7 per cent, the Argyll-Robertson condition of the pupil was present on one or both sides (in 179 cases, or 68 per cent., on both, and in 7 cases, or 2.6 per cent., on one side). In 36 cases, or 13.3 per cent., both the light reflex and the contraction of the pupil on convergence were lost; in 30 cases, or 11.4 per cent., the pupils contracted actively to light; and in 11 cases, or 4.1 per cent., the contractility of the pupil to light was not mentioned in the notes. Consequently, the Argyll-Robertson pupil (loss or sluggish action to light with activity on convergence) was present in 186, or 73.2 per cent., of the 252 cases in which the condition of the pupillary reaction was specifically stated in the notes.

Optic Atrophy.

In 55 of the 263 cases, or 20.9 per cent., optic atrophy was present (in 51 cases, or 19.3 per cent., in both eyes, and in 4 cases, or 1.5 per cent., in one eye); absent in 208 cases, or 79 per cent.

Other Ocular Symptoms.

Some form or other of ocular paralysis was noted in 37, or 14 per cent., of the 263 cases. Ptosis alone without other ocular paralysis in 15 cases; in 8 of these cases the ptosis was unilateral, and in 7 bilateral. Paralysis of the external rectus in 14 cases; on one side in 8 cases, and on both sides in 6 cases. More extensive and complicated paralyses of the external muscles of the eyeball were present in 8 cases; in 2 cases complete paralysis of the third nerve on one side; in 1 case double ptosis, more marked in the right eye, with frontal overaction, paralysis of the external recti, paralysis of the right internal rectus; in 1 case paralysis of the third and sixth nerves in one eye; in 1 case ptosis and paralysis of upward and downward movements of the right eye; in 1 case ptosis and paralysis of the right external rectus; in 1 case ptosis of the left eye, slight paralysis of the right external rectus, inability to look upwards with either eye; in 1 case paralysis of both external recti and inability to converge with either eye.

Nystagmus and *watering of the eyes* were noted in a small number of cases.

Crises.

Visceral crises of some form or another were present in 35 of the 263 cases, or 13.3 per cent.; absent in 187 cases, or 71.1 per cent.; and not specifically mentioned in the notes in 41 cases, or 15.5 per cent. Consequently, in the 222 cases in which the presence or absence of visceral crises was specifically mentioned in the notes, they were present in 35 cases, or 15.7 per cent., and absent in 187 cases, or 84.2 per cent.

The nature of these crises was as follows:

(*a*) *Gastric alone* in 20 cases.
(*b*) *Rectal* in 4 cases.
(*c*) *Gastric and nasal* in 1 case.
(*d*) *Gastric, rectal, and vesical* in 1 case.
(*e*) *Gastric, intestinal, and vesical* in 1 case.
(*f*) *Gastric and intestinal* in 1 case.
(*g*) *Gastric, rectal, and laryngeal* in 1 case.
(*h*) *Laryngeal* in 3 cases.
(*i*) *Intestinal* in 2 cases.
(*j*) *Sexual* in 1 case.

Consequently, the different forms of crisis were present, either alone or in combination with other forms of crisis, as follows:—*Gastric* in 25 cases; *rectal* in 6 cases; *intestinal* in 4 cases; *laryngeal* in 4 cases; *vesical* in 2 cases; *sexual* and *nasal* in 1 case each.

Trophic Lesions of Bones and Joints (Charcot's Joint Disease).

Trophic lesions in the bones and joints were present in 17 of the 263 cases, or 6.4 per cent.; absent in 231 cases, or 87.7 per cent.; and not specifically mentioned in the notes in 15 cases, or 5.7 per cent. Consequently, in the 248 cases in which the presence or absence of trophic lesions in the bones and joints was specifically mentioned in the notes, such lesions were present in 17 cases, or 6.8 per cent., and absent in 231 cases, or 93.1 per cent.

Vasomotor and Trophic Lesions in the Skin and its Appendages.

In 19 of the 263 cases, or 7.2 per cent., vasomotor and trophic lesions in the skin and its appendages were present; and in 244 cases, or 92.7 per cent., absent.

General Paralysis of the Insane.

In 30, or 11.4 per cent., of the 263 cases of tabes, general paralysis of the insane developed in the course of the disease (tabes)*. And if we take into account the fact that in many of the 263 cases the progress of the case after the patients were under observation is not known, and that in many cases the disease is still in progress, it may be confidently assumed that in this series of 263 cases of tabes, general paralysis of the insane developed in a considerably larger percentage than 11.4.

*I have not included in this analysis the cases in which tabes dorsalis developed in the course of general paralysis of the insane (these cases are entered in my notebooks as "G.P.I.")

Mental Symptoms.

In the 30 cases in which symptoms more or less typical of general paralysis of the insane developed, there were of course mental symptoms. In addition, mental symptoms of some form or another (impairment of memory, mental depression, mental irritability, etc.) were noted in 27, or 10·2 per cent., of the 263 cases. In the remaining cases of the series, the mental condition was either quite normal or not specifically stated in the notes. Consequently, if the 30 cases in which general paralysis of the insane developed are included, mental symptoms were present in 57 cases, or 21·6 per cent. In the remaining cases of the series the mental condition was either quite normal or not specifically stated in the notes.

Special Senses.

Hearing.—In 25 of the 263 cases, or 9·5 per cent., hearing was more or less impaired on one or both sides; in 162 cases, or 61·5 per cent., hearing was normal; and in 76 cases, or 28·8 per cent., the condition of hearing was not specifically mentioned in the notes. I do not attach any great importance to these percentages, for in many of the 25 cases in which hearing was impaired the impairment was apparently not the direct result of the tabes.

Taste.—In 2 of the 263 cases, or 0·7 per cent., taste was affected; in 177 cases, or 67.3 per cent, taste was not affected; and in 84 cases, or 31.9 per cent., the condition of taste was not specifically mentioned in the notes.

Smell.—In 2 of the 263 cases, or 0.7 per cent., smell was affected; in 176 cases, or 66·9 per cent., smell was not affected; and in 85 cases, or 32·2 per cent., the condition of smell was not specifically mentioned in the notes.

Headache and Giddiness.

Headache was complained of in 31 of the 263 cases, or 11.7 per cent.; absent in 157 cases, or 59.6 per cent.; and not specifically mentioned in the notes in 75 cases, or 25.5 per cent. Consequently, in the 188 cases in which the presence or absence of headache was specifically mentioned in the notes, it was present in 31 cases, or 16·4 per cent., and absent in 157 cases, or 83.5 per cent.

Giddiness was present in 33 of the 263 cases, or 12·5 per cent.; absent in 153 cases, or 58·1 per cent.; and not specifically mentioned in the notes in 77 cases, or 29·2 per cent. Consequently, in the 186 cases in which the presence or absence of giddiness was specifically mentioned in the notes, it was present in 33 cases, or 17.7 per cent., and absent in 153 cases, or 82·2 per cent.

Sleep.

In the 263 cases sleep was affected in 50 cases, or 18.9 per cent.; unaffected in 150 cases, or 57 per cent.; and not specifically mentioned in the notes in 63 cases, or 23·9 per cent. Consequently, in the 200 cases in which the condition of sleep was specifically stated in the notes, sleep was affected in 50 cases, or 25 per cent., and unaffected in 150 cases, or 75 per cent.

Considerable Loss of Weight.

In 78 of the 263 cases, or 29.6 per cent., there was marked emaciation or considerable loss of weight; in 146 cases, or 55·5 per cent., there was no marked loss of weight; and in 39 cases, or 14·8 per cent., the presence or absence of emaciation and loss of weight was not specifically mentioned in the notes. Consequently, in the 224 cases in which the presence or absence of considerable loss of weight was specifically mentioned in the notes, this condition was present in 78 cases, or 34·8 per cent., and absent in 146 cases, or 65·1 per cent.

Condition of the Heart.

In 14 of the 263 cases, or 5·3 per cent., some form or another of cardiac lesion was present; in 220 cases, or 83.6 per cent., the heart was normal; and in 29 cases, or 11 per cent., the condition of the heart was not specifically mentioned in the notes. Consequently, in the 234 cases in which the condition of the heart was specifically mentioned in the notes, there was some form of cardiac lesion in 14 cases, or 5·9 per cent; and in 220 cases, or 94 per cent., the heart was normal.

Condition of the Urine.

In 13 of the 263 cases, or 4.9 per cent., the urine contained albumen; in 221 cases, or 84 per cent., the urine was normal; and in 29 cases, or 11 per cent., the condition of the urine was not specifically mentioned in the notes. Consequently, in 13 of the 234 cases, or 5.5 per cent., in which the condition of the urine was specifically mentioned in the notes, it contained albumen; and in 221 cases, or 94.4 per cent., it was normal.

SUMMARY.

I append a table (X) showing the percentage frequency of the leading symptoms in (1) the total 263 cases under analysis; and (2) the frequency and percentage frequency of the same (the leading symptoms of the disease) in the cases in which the presence or absence of the special symptom under investigation was specifically stated in the notes:

TABLE X.—*Frequency and Percentage of Chief Symptoms in 263 Cases of Tabes.*

Nature of Symptom.	Frequency and Percentage of Different Symptoms.			
	In total 263 Cases.		In those Cases in which the Symptom was Specifically Noted.	
	No. of Cases in which present.	Per Cent.	No. of Cases in which Symptom was Specifically Noted.	No. of such Cases in which Symptom was Present.	Per Cent.
Lightning pains	244	92·8	263	244	92·8
Pain in the back	86	32·7	180	86	47·7
Girdle sensation	107	40·6	183	107	58.4
Paraesthesiae	178	67·6	214	178	83·1
Numbness	148	56.2	214	148	69.1
Coldness of feet	85	32·3	214	85	39.7
Pins and needles	49	18·6	214	49	22·8
Ground felt soft	53	20·1	214	53	24.7
Anaesthesia in the legs	100	38·0	214	100	46.7
,, ,, arms	51	19·3	174	51	29·3
,, ,, trunk	77	29·2	175	77	44.0
,, ,, face	8	3·0	159	8	5·0
Analgesia in the legs	107	40·6	196	107	54.5
,, ,, arms	96	36·5	176	96	54.5
,, (ulnar)	54	20·5	103	54	52.4
,, in the trunk	123	46.7	183	123	67.2
,, (thoracic)	62	23·5	104	62	59·6
,, in the head	4	1.5	157	4	2·5
Ataxic gait	192	73·0	263	192	73.0
Rombergism	190	72·2	262	190	72·5
Inco-ordination in the legs	184	69.9	259	184	71·0
,, ,, arms	58	22·0	214	58	27.1
Impairment of muscular sense in the legs	94	35·7	175	94	53·7
Impairment of muscular sense in the arms	26	9·9	153	26	16·9
Muscular analgesia in legs	81	30.7	132	81	61·3
Hypotonia in the legs	70	26.6	118	70	59·3
Paralysis, other than ocular	19	7·2	218	19	8·7
Loss of both knee-jerks	212	80.6	255	212	83·1
,, one knee-jerk	12	4·5	255	12	4.7
,, both Achillis-jerks	132	50·1	159	132	83.0
,, one Achillis jerk	6	2.2	159	6	3.7
,, deep reflexes, upper extremities	62	23·5	131	62	46.9

TABLE X.—*Continued.*

Nature of Symptom.	Frequency and Percentage of Different Symptoms. In total 263 Cases. No. of Cases in which present.	Per Cent.	In those Cases in which the Symptom was Specifically Noted. No. of Cases in which Symptom was Specifically Noted.	No. of such Cases in which Symptom was Present.	Per Cent.
Loss of jaw-jerk	30	11.4	116	30	25.8
,, plantar reflex	26	9.8	213	26	12.2
Babinski's sign present	7	2.6	135	7	5.2
No toe movement	17	6.4	135	17	12.5
Loss of cremasteric reflex	66	25.0	161	66	40.9
,, abdominal reflex	32	12.1	150	32	21.3
Derangement of bladder reflex	186	70.7	251	186	70.1
,, rectal reflex	139	52.8	248	179	56.0
,, sexual reflex	115	43.7	178	115	64.6
Pupils:					
Inequality in size	99	37.6	159	99	62.2
Contracted	117	44.4	208	117	56.2
Medium	69	26.2	208	69	33.1
Dilated	14	5.3	208	14	6.5
Irregularity of margins	32	12.1	68	32	47.0
Loss of light reflex	222	84.4	252	222	88.0
Loss of contraction on accommodation	37	14.0	252	37	14.6
Argyll-Robertson pupil	186	70.7	253	186	73.2
Optic atrophy	55	20.9	263	55	20.9
Ocular paralysis	38	14.4	263	38	14.4
Crises:	35	13.3	222	35	15.7
Gastric	25	9.5	222	25	11.3
Rectal	6	2.2	222	6	2.7
Laryngeal	4	1.5	222	4	1.8
Vesical	2	0.7	222	2	0.9
Intestinal	2	0.7	222	2	.9
Sexual	1	0.3	222	1	0.4
Nasal	1	0.3	222	1	0.4
Trophic lesions in bones and joints	17	6.4	240	17	6.8
Trophic lesions in skin and its appendages	19	7.2	240	19	7.9
Mental symptoms	27	10.2	263	27	10.2
General paralysis of the insane	30	11.4	263	30	11.4
Headache	31	11.7	188	31	16.4
Giddiness	33	12.5	186	33	17.7
Derangement of sleep	50	18.9	200	50	25.0
Impairment of hearing	25	9.5	187	25	13.4
,, taste	2	0.7	179	2	1.1
,, smell	2	0.7	178	2	1.1
Considerable loss of weight	78	29.6	224	78	34.8
Cardiac disease	14	5.3	234	14	5.9
Albuminuria	13	4.9	234	13	5.5

RESULTS.

I have endeavoured to follow out and bring up to date all of the cases. The result of this inquiry is as follows: 70 of the 263 patients have died, 88 are known to be still alive, and in 105 cases the result is not known. Of the 88 cases which are known to be still alive, 4 are quite well; 21 are better; the remaining 59 cases are either worse or *in statu quo*.

CAUSES OF DEATH.

The immediate cause of death in the 70 cases which have proved fatal is shown in Table XI.

TABLE XI.—*Causes of Death in 70 Fatal Cases of Tabes.*

General paralysis of the insane	15
General paralysis of the insane and albuminuria	1
General paralysis of the insane and pyelonephritis	1
Cerebral symptoms resembling acute general paralysis of the insane	1
Apoplexy	3
Exhaustion tabes	7
Exhaustion and bedsores	2
Exhaustion and gastric crises	1
Exhaustion, prolonged vomiting	1
Cystitis	2
Kidney disease, pyelitis	1
Diarrhoea	1
Diabetes mellitus	
Asthma	1
Phthisis	2
Phthisis and Pott's disease	1
Phthisis and morphine	1
Phthisis, ascites, etc.	1
Influenza and bronchitis	
Pneumonia	2
Heart failure	
Aneurysm, thoracic (one ruptured)	3
Aneurysm (abdominal)	1
Aortic regurgitation	1
Haemorrhage (? gastric)	1
Haemorrhage from bowel	1
Cut throat	1
Not known	16
	70

DURATION OF THE FATAL CASES

The average duration of the 70 fatal cases in which the exact date of death is known was 8.2 years (shortest under 1 year, longest 22 to 23 years).

The exact duration in each of the 70 fatal cases in which the dates of onset and termination are known, is shown in Table XII.

TABLE XII.—*The Total Duration of the Disease in 70 Fatal Cases of Tabes.*

Below 1 year	1 case	11 to 12 years	1 case
1 to 2 years	2 cases	12 ,, 13 ,,	5 cases
2 ,, 3 ,,	2 ,,	13 ,, 14 ,,	1 case
3 ,, 4 ,,	6 ,,	14 ,, 15 ,,	1 ,,
4 ,, 5 ,,	9 ,,	15 ,, 16 ,,	3 cases
5 ,, 6 ,,	8 ,,	16 ,, 17 ,,	1 case
6 ,, 7 ,,	3 ,,	17 ,, 18 ,,	3 cases
7 ,, 8 ,,	4 ,,	20 ,, 21 ,,	1 case
8 ,, 9 ,,	3 ,,	21 ,, 22 ,,	1 ,,
9 ,, 10 ,,	2 ,,	22 ,, 23 ,,	1 ,,
10 ,, 11 ,,	8 ,,	Not stated	4 cases

UNDER the will of the late Miss Katharine Stewart Forbes of Ascot, which has now been proved, the Brompton Hospital for Consumption and the Cancer Hospital, Brompton, each receives a sum of £10,000; the Middlesex Hospital £5,000 for its Cancer Ward, the National Hospital for the Paralysed and Epileptic £1,000 for its convalescent branch at Finchley; and the Hospital for Sick Children, Great Ormond Street, the British Home for Incurables, Streatham, and the Surgical Aid Society each a similar sum for general purposes.

PREMATURE BURIAL.—A Bill is now before the Massachusetts Legislature which provides that in every case of apparent death of a human being no fewer than eleven specified tests for the discovery of life shall be applied to the body before preparations for burial are begun. The tests are to be made personally by two medical practitioners, one of them representing the Board of Health. The cost of the service would be borne by the town or city in which the death occurred.

REMARKS ON THE TREATMENT OF SYPHILIS BY INTRAMUSCULAR INJECTIONS.*

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The treatment of syphilis by intramuscular injections of mercury is a plan which in certain phases of the disease may be adopted with advantage, and is a useful addition to the therapeutic measures at our disposal; but it is one which hardly commends itself as a routine, and is unlikely ever to supplant the simpler and more familiar method of administration by the mouth. As a general rule, syphilis in its early stages is a disease which is most amenable to the ordinary mercurial treatment, and one in which a favourable prognosis may usually be given; but there are cases which do not respond to such treatment, and in which recourse must be had to more drastic measures. Ingestion of some mercurial preparation by the mouth is at once simple, convenient, painless, and efficacious, and will usually ensure a rapid disappearance of the symptoms; but a certain proportion of patients will be encountered who are intolerant to mercury so introduced into the system. For instance, in some it induces dyspepsia, colic, diarrhœa, loss of weight, anæmia, and cachexia, and the discomfort attending this plan of mercurial treatment is in no way counteracted or affected by the addition of opium. In the case of patients who are intolerant to mercury administered by the mouth, the usual alternative has been the introduction of the drug through the skin by means of inunction with mercurial ointment. But this plan possesses many drawbacks and disadvantages, such as its uncertainty, its uncleanliness, its inconvenience, and the fact that it is contraindicated in cases in which the skin is tender and irritable, and in the presence of a general pustular syphilide.

In addition to these cases in which the ingestion of mercury by the mouth, or its introduction by way of the skin presents these inconveniences and disadvantages, there are others in which a more rapid action of the drug is essential, and in which the future prospects, and even the life of the patient, are endangered unless more urgent measures are adopted. For instance, cases of malignant syphilis attended by severe ulcerative lesions, and possibly entailing disfigurement or mutilation; syphilitic iritis threatening destruction or impairment of vision; cerebral or spinal syphilis; tertiary syphilitic laryngitis and pharyngitis; chronic and inveterate syphilides, resisting the ordinary methods of treatment; ulcerating tuberculous and spreading serpiginous lesions; chronic glossitis and the so-called palmar and plantar psoriasis. Chronic glossitis and syphilitic leukoplakia are conditions which particularly call for strenuous measures, since, if they are allowed to continue unchecked, they are liable to proceed on to carcinoma linguae. In cases such as these it is absolutely necessary that the patient should be brought under the influence of mercury as rapidly as possible, and no more efficient plan is at present at our disposal than that of intramuscular injections.

There is no glamour of novelty about this method, for it was introduced by Scarenzio in Italy more than forty years ago, but owing to the many drawbacks and accidents by which it was attended, it was only practised sporadically, and was not held in high repute. One of the almost inevitable sequelae of the injections as at first employed was acute inflammatory reaction proceeding to suppuration, and abscess was the rule rather than the exception. The large doses at first introduced were to some extent responsible for this complication, but the ignorance of the principles of antisepsis and asepsis was another more important factor. The usual locality selected for the introduction of these injections was the buttock, but very little regard was paid to the anatomical disposition of the blood vessels and nerves of that region, with the consequence that severe and even fatal complications occasionally ensued. The needle thrust in indiscriminately might happen on the great sciatic nerve, with the result of an acute attack of sciatica, and possibly localized paralysis; or it might penetrate into one of the large tributaries of the gluteal veins, and the injection be conveyed to the lungs, giving rise to pulmonary embolism. Moreover, acute stomatitis and profuse salivation usually followed the injections, and occasionally enteritis with severe colic and diarrhœa, and more rarely ulceration and perforation of the intestine.

These many disadvantages and dangers were sufficient to damp the enthusiasm of many of the early supporters of the injection treatment, though they do not appear to have discouraged its principal advocate, Scarenzio. Still, though at first this treatment resulted practically in failure, there is no doubt that the labour of its author was not in vain, and, with certain modifications and restrictions, this method is now becoming well recognized, and in appropriate cases is adopted in all the clinics of dermatology and syphilography.

The substances at present employed for these injections are too numerous for me to mention, but they may be primarily divided into the soluble and insoluble preparations of mercury—the soluble salts being dissolved in sterilized water, and the insoluble suspended in sterilized oil, vaseline, and some similar vehicle. The soluble salts are introduced daily, or on alternate days, twenty to thirty injections constituting a course; the insoluble preparations are given once a week, or once a fortnight, the course in this instance consisting of from ten to twelve injections. Whichever preparation is made use of, every precaution must be taken to avoid any of the accidents and disasters previously alluded to. The locality almost universally selected for the injections is the buttock, and a part of that region devoid of any large vessels or nerves, and consequently above and to the outer side of the great sacro-sciatic foramen; the centre of a line drawn between the anterior superior spine of the ilium, and the summit of the intergluteal fold is one of almost perfect safety; I say almost, because here occasionally one of the tributaries of the gluteal vein may be encountered. To guard against introducing the injection directly into the arterial or venous circulation, it may be performed in two stages. In the first the needle is thrust into the buttock, and if no blood escapes the syringe is attached to the needle and the injection introduced; should there be any flow of blood through the needle, it should be removed and inserted into some spot adjacent until a point free from any blood vessels is met with. Having determined the locality, the next important step is the surgical cleansing of the skin; this can best be effected by ether soap, followed by the application of a solution of mercury biniodide in rectified spirit, 1 to 500. The syringe made use of should be one capable of being easily sterilized, the best form being known as Luer's, made entirely of glass. The needle should be made of platino-iridium, as this will withstand the chemical action of the mercurial salts and also sterilization by heat; it should be about 2 in. in length, and for the insoluble injections of somewhat larger calibre than the ordinary hypodermic needles. Both needle and syringe should be sterilized by immersion in boiling water. The patient should be placed in the prone position, and the needle, directed perpendicularly, should be sharply plunged into the buttock in the spot already indicated to its full extent; the contents of the syringe should then be introduced slowly, as thereby less pain ensues than if the injection is made rapidly; gentle massage of the buttock should then be employed, as thereby the pain is to some extent lessened and the material injected is more widely diffused; over the seat of the puncture a small piece of antiseptic gauze should be affixed by means of collodion.

The soluble salts have the advantage over the insoluble in that they are more rapidly absorbed, and consequently their effect on the syphilitic manifestation is more quickly observed; they are in addition comparatively painless. On the other hand, the necessity for their daily introduction is an almost insuperable objection, at any rate in private practice, since very few patients are able or willing to visit their attendant so frequently; further, each visit is followed by a certain amount of discomfort, and several courses of injections have to be given annually. With the insoluble salts, the absorption is hardly so rapid, but the therapeutic action of the drug is most energetic, and is usually successful in cutting short any urgent symptoms. The object of this method of treatment is to introduce a larger quantity of mercury into the system at a time; here it remains as a reservoir from which absorption may subsequently take place. The insoluble have

* Abstract of a paper read before the Derbyshire Division of the British Medical Association.

the advantage over the soluble salts in that they are given at longer intervals, and a much smaller number of injections is required to constitute an efficient course; their principal disadvantage is the pain by which they are almost always attended, which is occasionally so intense as to necessitate the abandonment of the treatment. It is also impossible to regulate or to foresee how much of the drug will be absorbed after each injection, and certainly in some cases the injection becomes encysted in the gluteal muscles, so that the material employed does not enter at once into the circulation, but possibly at the time when the effect of the drug is no longer required. Occasionally the absorption of the drug is so rapid that the injection is shortly followed by signs of mercurial poisoning, such as severe stomatitis or enteritis. The disadvantages have, I think, been somewhat exaggerated, and are quite outweighed by the beneficial effects which, as a rule, accrue from the treatment.

With a view of making myself thoroughly cognizant with this treatment, I have carried it out as a routine amongst my patients at the Female Lock Hospital for the past three years, and I must say that I consider the results in every respect satisfactory, and sufficient to justify me in continuing with this practice, at any rate when the patients are under constant supervision. The number of hospital cases treated in this manner was 375, and the number of injections given was 4,516. At the commencement I employed the soluble preparations, and was quite satisfied with them as a rule, though I found that in some of the graver lesions their action left something to be desired; later, however, I utilized the insoluble preparations almost entirely, and relied mainly upon the most powerful vehicle for the introduction of mercury into the system—namely, calomel.

The salt I first utilized was mercury sozoiodolate combined with sodium iodide, in the proportion of ½ grain of the former to 1 grain of the latter; 46 patients were treated in this manner, the number of injections being 759. I then gave a prolonged trial to mercury succinimide in doses of ½ grain, utilizing it on 91 patients, and introducing 1,940 injections. After a trial of the soluble salts extending over fifteen months I abandoned them for the insoluble preparations, using almost exclusively calomel, and continued that treatment until the end of last year, at which time I was transferred to the male department of the Lock Hospital, where I am employing similar treatment. The dosage of calomel is ⅔ grain of the sublimed powder suspended in 17 minims of sterilized olive oil; for hospital patients this preparation is kept in a glass bottle, from which the required quantity is taken, but probably a safer method, and the one always employed by me in private practice, is to have each injection prepared separately and introduced into minute flasks hermetically sealed. The deposit of calomel seen in the small flasks at once disappears on heating them over a spirit lamp, when the contents assume a milky appearance, and the powder is in a state of perfect suspension. The number of patients injected with calomel was 166 and the number of injections 1,241.

Another variety of the insoluble preparations I also employed, though not nearly to the same extent, was grey oil. Grey oil is a term applied to a large number of preparations of different strengths and compositions, but consisting essentially of metallic mercury suspended in some fatty vehicle. The formula of one variety of grey oil, which is much employed by our Army Medical Staff, is:

℞ Hydrargyri ... ... ʒj
Adipis lanae ... ... ʒiv
Paraffini liquidi (carbolisat 2 per cent.), ad ʒx.

One grain of metallic mercury is contained in 10 minims, and a suitable weekly dose for an adult male is from 10 to 15 minims. I employed this in 15 patients, the number of injections being 125.

Another insoluble preparation made use of was the basic salicylate of mercury suspended in vaseline, of which 1 grain was injected weekly. The number of patients treated by this salt was 14, and the number of injections 157.

Of the 375 patients alluded to, 311 were discharged relieved, that is to say, they were free from all active signs of disease; 64 patients were discharged at their own request, for the most part greatly improved in health, but still showing some syphilitic manifestations. As regards the pain resulting from this treatment, 8 of the patients on soluble injections complained, and 15 of those on insoluble, and 10 of the latter declined to continue the injections, and were consequently treated by the simpler methods. In 2 cases of soluble injections there is a note of enteritis and melaena, necessitating a modification in the treatment. In 2 cases of soluble injections and in 5 of the insoluble, there occurred an abscess in the buttock, or what was described as such; but in only 1 case was there any collection of pus that required evacuation, and that was quite subcutaneous, and due to some infection from the skin. In the other 6 cases the patients complained of deep-seated pain and swelling in the buttock; on aspiration of the swelling in each of these cases a chocolate coloured fluid of thick consistence was drawn off, and on injecting the swellings with some boric acid lotion they subsided without any further treatment. In a considerable number of cases, especially those treated with insoluble injections, some nodosities in the buttock were to be felt, but I have no accurate record of the exact number of patients so affected, since the pain resulting therefrom was not sufficient to induce any comment. The majority of the patients were affected with gingivitis to a greater or lesser extent, but in any vigorous form of antisyphilitic treatment this is to be expected, and almost welcomed, since it indicates that the drug is having the desired effect. The hygiene of the mouth requires the same, if not more, careful supervision during the treatment by injections, as in other methods, and one of the essential concomitants is the frequent use of an astringent mouth wash and tooth powder.

I do not advocate intramuscular injections as a routine treatment, though I do strongly recommend them in the exceptional circumstances and conditions previously mentioned, and also in the case of patients detained in hospital and under constant observation. The shorter the stay of a patient in hospital, especially in a Lock Hospital, the better it is for the patient, so any treatment that will lessen the duration of the symptoms of the disease is to be commended. The disasters which have been reported with the view of discouraging and discountenancing this treatment have been somewhat magnified, and are rather a memory of the past, and under the present more careful supervision and improved technique they do not occur. For instance, in the 4,500 injections I have alluded to, neither I nor the house-surgeon working under my directions have ever seen any of the alarming symptoms to which I have drawn attention; the worst that has occurred has been severe diarrhoea, in two cases complicated by melaena, symptoms which immediately disappeared on the cessation of the treatment.

So far, I have only alluded to my hospital practice, from which the statistics I have given have been drawn, but my experience in hospital patients led me to introduce it into private practice in appropriate cases, and with the most gratifying results. I have here only utilized it in very severe cases, or in those which had resisted the more ordinary measures, but my results have been most satisfactory and encouraging. In the latest work on the treatment of syphilis by the great French authority, Fournier, he states, apropos of intramuscular injections and alluding to calomel injections in particular, that it constitutes the best method for preventing patients continuing treatment, but neither in hospital or in private work have I found this the case. Furthermore, the pain gradually diminishes from the first injection, so that one is in a position to assure one's patients that they will ultimately suffer very little, if any, inconvenience therefrom.

As regards the particular indications for the different forms of injection, the energy of the treatment should be in proportion to the severity of the disease, and since the insoluble preparations are far more powerful than the others, they are specially called for in the severe and malignant cases where it is desirable to get the patient under the influence of mercury in the shortest possible time. Of the insoluble preparations calomel is by far the most powerful, and should in these cases be utilized in preference to any of the other insoluble salts. It is especially indicated in destructive and progressive ulcerative lesions, in syphilitic iritis, and in syphilis attacking the brain or spinal cord.

The soluble salts, though decidedly inferior to the others, are in some cases of the greatest service, and are

specially indicated in cases requiring the exhibition of small doses of mercury frequently repeated, in cases in which the patient is also tuberculous, in which the functions of the liver and kidneys are not being carried out satisfactorily, in nervous women, in the milder forms of ocular lesions, and in those whose digestion is impaired, and who are consequently intolerant of the drug when administered by the mouth.

There are certain subjects who are not amenable to injections in any form; those suffering from Bright's disease particularly, and in a lesser degree patients with any hepatic disease; the alcoholic subject is rebellious to this, as he probably is to any other form of treatment, and in those whose mouths are in a septic condition and who are suffering from carious teeth, it should not be attempted until the mouth has been restored to a state of comparative asepsis.

It must be confessed that recurrences are just as frequent after this as after any other form of treatment, and here as in the other methods the chronic intermittent form of treatment has to be pursued over a period of at least five years. But there are few patients who would be able or willing to submit to two or possibly three courses of injections annually, and consequently it is not a treatment to be pursued throughout the course of the disease unless possibly in a few quite exceptional cases. It is of the greatest use in suppressing the disease in its most active stage, and in eliminating the syphilis toxin at the period of its greatest virulence. If resorted to at the commencement of the disease, and carried on until symptoms of mild mercurialism are present, its place may be taken later by one of the milder and simpler measures, such as ingestion by the mouth. In cases which have been inadequately treated at the outset, and in which constant recrudescences of the symptoms occur, it will usually so attenuate the disease as to render it subsequently more amenable to ordinary remedies. Finally, in cases of destructive tertiary lesions, it is one of the principal mainstays of treatment, for not only does it succeed here when other remedies have failed, but it tends to alter the character of any lesions which may crop up later, and causes them to assume a more benign character.

A CASE OF SYPHILIS, PHTHISIS, AND LOCOMOTOR ATAXIA.

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The following case is of interest, not only as a clinical history of the sequence of three diseases, but also for its bearing on the much disputed clinical problem of the influence of syphilis on phthisis, and on the relation of locomotor ataxia to syphilis.

A. H., aged 46, a native of Finland, and an officer in the mercantile marine, was seen by me on January 1st, 1908, complaining of cough, headache, loss of appetite, and pains in the legs.

Family History.

His mother died of phthisis, aged 47, when he was 11 years old, and some years later his father died of heart failure. He has one younger brother, who has always enjoyed good health.

Patient's History.

When 16 years of age A. H. went to sea, and has followed this profession ever since, having risen to hold a master's certificate. At the age of 22 he contracted syphilis, and was treated by inunction, being given fifteen frictions with mercuric ointment, under which the primary lesion disappeared, and the patient believed himself to be cured. Five years later, however, at the age of 27, his skin became covered with blotches and papules, about which he consulted an English doctor in the United States, who put him on mercury pills for three months. The skin lesions disappeared, and he has not seen any manifestations of syphilis since.

At the age of 42, twenty years after contracting syphilis, he began to feel generally weak, was easily tired, and the appetite was diminishing. He continued in this state off and on for some time, and two years later, when 44 years of age, he further noticed a difficulty of walking in the dark, which he describes "as if I was putting my foot on a step which wasn't there"; and at this time he also commenced to suffer from pains in the legs, and from slight cough in the morning. Being in Finland at this time, he consulted a physician in Helsingfors, who told him that he was suffering from a nervous disease, and advised a course of mercury. Two days later, with regard to the loss of appetite, which had now increased to nausea and vomiting after breakfast, he saw another physician, who found tubercle bacilli in the sputum, and prescribed residence in a sanatorium. He was extremely surprised to find himself phthisical, and the same day consulted a professor of the University of Helsingfors, who confirmed both diagnoses. At this time the patient felt very weak, and entered Nummela Sanatorium, where he received ten injections of mercury, on the instructions of his physicians. He resided at Nummela for four months; on leaving, his weight had increased from 59 kilos to 75 kilos, the nausea, sickness, and cough having entirely disappeared. Five months later his weight rose to 84 kilos.

Six months ago the patient noticed that the cough, which at the commencement of his illness had attracted little attention, was now returning with increased frequency, and for this he saw a doctor in Germany, who prescribed the iodides of sodium and calcium, from which, however, no benefit was derived.

Present Condition.

The patient is a well-developed man of 48, weighing 76 kilos. He complains of cough, headache, loss of appetite, and pains in the legs. Temperature is normal.

The cough is most frequent in the morning, and his sleep is undisturbed by this. During the whole course of his illness he has never suffered from night sweats nor from fever. The chest is well developed, and there is no diminution of "tidal breathing" on either side. Percussion and vocal fremitus were normal throughout. On auscultation wheezing rhonchi were heard during expiration over both lungs, but in only one spot could any alteration in the breath sounds be detected, and this in the upper lobe of the left lung over an area corresponding to a dollar, situated in the middle of the anterior maxillary fold. Over this very limited area the breathing was bronchial, vocal resonance was increased, but no accompaniments could be heard. The sputum has been white and frothy for the past week, but prior to this was greyish-white. A small piece of solid substance when examined contained large quantities of tubercle bacilli!

The appetite is poor, he has nausea after food, and is constipated. The liver is not enlarged.

The heart is normal in size and function. The radial arteries appear thickened and fibrous. The pulse is regular, frequency 70, the wave is full and well sustained, but the arterial tension is high. The urine contains no abnormal constituents. The spleen is not enlarged, but the inguinal and posterior occipital glands show adenopathy.

The patient is an intelligent man, takes considerable interest in his case, and has the nervous temperament. He has now suffered from pains in the legs for two years intermittently, and describes the sensation as a dull pain, with now and then sharp twitches running from the hip to the knee, sometimes in the reverse direction. He has still the uncomfortable sensation when walking in the dark of being uncertain of feeling the ground, and his feet are often numb and cold. Both knee-jerks are absent, but neither paraesthesia, allocheiria, nor Romberg's sign is present. The gait is not ataxic, the legs are well developed, and hypotonia cannot be elicited. The left pupil is smaller than the right, and both eyes show the Argyll-Robertson pupil.

There is little doubt but that this patient has suffered from chronic phthisis for four years, and it appears that the pulmonary lesion, of which a small part is now apparent in the left upper lobe, has its centre at the root of the left lung, possibly in enlarged bronchial glands, which by irritation of the sympathetic chain have brought about the contraction of the left pupil. Recently the patient has had chronic bronchitis which, from the absence of fever, may have been a superadded non-tuberculous infection. In any case this cleared up in a few days. One may here touch for a moment on the purely theoretical possibility of the phthisis having supervened on a tertiary lesion in the lung. In a patient who has had syphilis, and who in after-years becomes phthisical, there is always the possibility of a dual infection, although diagnostic certitude is impossible. On this chance Sergent[1] advises that such patients be put on mercury, and this practice seems worthy of trial. In this case, however, it is improbable that a tertiary lesion existed, as there were no pulmonary symptoms prior to the onset of phthisis, and as the presence of locomotor ataxia apparently precludes the formation of gummata. At the same time, if there still be syphilis in the system, such treatment would be beneficial.

The patient has all his life been a great milk drinker. He states that in no other country he has visited does milk enter so largely into the general diet as in Finland, which is chiefly a pastoral country and ships seven thousand casks of butter every week to Britain. He informs me that up to a few years ago tuberculosis was rife among the cattle, but that now there is an efficient inspection of milk and butter by Government chemists

and bacteriologists. As a drinker of milk he has taken it all over the world. At the same time, as it might naturally be supposed that a life at sea would have precluded all prolonged contact with phthisis, it must be stated that six years ago, two years before the onset of phthisis, he began to carry a number of consumptives for two months in the summer on a cruise round the Mediterranean, and was thus for two summers in succession in contact with tuberculosis.

Effect of Syphilis on Phthisis.

The effect of syphilis on phthisis, particularly as regards the course and prognosis of the disease, is a question on which diverse opinions have been held. On the one hand we have the grim phrase of Landouzy,[2] "Syphilis often makes the bed of phthisis," and on the other hand the reckless advice attributed to a certain doctor to his phthisical patients, "Tâchez donc, mon garçon, d'attraper la vérole."[3] Such varied opinions are but proof of the fact that syphilis and phthisis may coexist under a variety of different conditions, and that each combination must be separately considered. The question raised by the present case is the influence of pre existing syphilis on phthisis.

It is admitted by all authorities that syphilis is a predisposing cause to tuberculosis, a cause which needs no other explanation than the profound anæmia so often the concomitant of secondary syphilis, for, as Ricord[4] has expressed it, "syphilis is a blow to the economy, a blow capable of arousing organic defects and of awaking to activity every diathesis." Not only so, but Stieffel,[5] Jacquinet,[6] Renon,[7] and Sergent[8] have proved that when phthisis does break out during secondary syphilis it runs an extremely rapid course.

The writer recently saw a case under the care of Dr. W. A. Mackay of Huelva which bears out this view.

A lad, aged 17, contracted syphilis in 1904. He was seen early and put on Hutchinson's pills. In spite of treatment, he suffered severely from secondary symptoms, and at the end of the year in 1905, although mercury was pressed, he had ulceration and destruction of the palate, a lesion which may be considered to belong to Hutchinson's "intermediate period." At this time he was in extremely low health, and developed cough, and tubercle bacilli were found in the sputum. He now rapidly went downhill, and when seen by me in 1907 had both lungs involved in every lobe. He died two months later.

The secondary period past, syphilis does not seem to exercise this malign influence on phthisis. Thus Sergent[8] records two cases which became phthisical three and four years respectively after contracting syphilis and where the pulmonary lesion assumed a chronic form, and five similar cases where the phthisis appeared from thirteen to thirty-four years after syphilis. To explain such cases Sergent[10] has promulgated the theory of the "*terrain syphilitique*," which he describes as "a state of body resulting from old and worn-out syphilis, and which can be transmitted to descendants." He considers that this state is favourable to the development of tuberculosis, but that, "if tuberculosis is very frequent in old syphilitics, it is particularly torpid and benign in such subjects." Until it be statistically proved that the incidence of phthisis in old syphilitics is greater than among normal persons of the same age, the predisposition of old syphilitics to pulmonary tubercle will remain theoretical. On the other hand, Landouzy, Stieffel, and others have also held that tubercle in the subjects of old syphilis runs a peculiarly benign course, and the cause of this beneficial tendency to fibrosis of the pulmonary lesion is a question of extreme interest.

Handford[11] considered that the fibroid tendency of tubercle occurring in subjects of arterio-sclerosis was due to the high blood pressure and not to the sclerosis. Landouzy[12] holds it due to the sclerosis, and Sergent[13] believes it is caused by sclerosis, aided by a peculiarly active reaction to inflammation, which is one attribute of the "*terrain syphilitique*."

In the case under consideration phthisis appeared twenty years after the syphilitic infection, and is running a chronic and benign course. If we look to evidences of sclerosis outside the lung, these are to be found in the condition of the arteries, although there are no signs of aortitis or nephritis; and also in the condition of the spinal cord. It is little wonder, then, in an area of the lung where the tissues not only share the general incitement to sclerosis, but are also subject to the irritation of the tubercle bacillus, that fibrosis should be active. Further, there is little doubt but that the active hyperæmia in the pulmonary lesion, present during "periods of high blood pressure," will also augment this process. Thus syphilis, one great cause of arterio-sclerosis, whereby life is shortened, affords a slight reprieve from a disease which might otherwise have been fatal. With regard to the course of phthisis following syphilis, it appears to be true that the more ancient the syphilis the more hopeful the prognosis.

Syphilis and Locomotor Ataxia.

It was Fournier[14] who first classed locomotor ataxia and general paralysis of the insane as parasyphilides, his view being that "although they have a syphilitic origin, they have nothing of syphilitic nature"; and recently, in his address on Syphilis and the Nervous System, Dr. F. W. Mott[15] has brought together a compendium of evidence which leaves no doubt as to the essential taint of syphilis in these affections. Admitting the essential syphilitic taint in locomotor ataxia, there are three views as to its causation: (1) That it is a manifestation of quaternary syphilis. (2) Bernheim and Levi[16] and others believe it to be due to an unknown toxin acting in conjunction with syphilis. (3) Mott[15] holds that the syphilitic poison along with other exciting influences will "cause the nerve cells to exercise an abnormal metabolic activity in the production of side-chain molecules necessary for immunization against the toxic effects of the virus," and that there results an over-immunization against the syphilitic poison, along with exhaustion and decay of the nerve cells.

One indication that syphilis alone is not the sole cause of locomotor ataxia is the fact that in the South of Spain, where syphilis is widespread, locomotor ataxia is relatively rare, while of other exciting causes the only one absent is alcoholism.

The most important point in Mott's view is that there exists in these diseases an over-immunization against the syphilitic virus which makes the giving of antisyphilitic remedies not only useless but injurious as lowering to the general vitality. This theory of over-immunization is based on two facts—the failure of Krafft von Ebing to infect general paralytics with syphilis, and the presence of "antisyphilitic bodies" in the serum and cerebro-spinal fluid of patients with parasyphilitic lesions, which antibodies are said to increase as the disease progresses. Admitting these facts, it seems to the writer that they may bear another interpretation.

With regard to the failure to infect general paralytics, it is known that in primary syphilis, once there is general infection, it is impossible to inoculate the patient with the discharge from his own chancre, and yet from this it is not to be deduced that a patient with primary syphilis is in a state of over-immunization. When one considers the ravages of which secondary and tertiary syphilis are capable, it is probable that the failure to produce a second chancre is due, not to over-immunization, but to absolute want of resistance in the organism, due to present infection, whereby the *Spirochæta pallida* will enter the system without the formation of a chancre, which in itself is only an evidence of tissue resistance to the virus. Further, there is the authority of Hutchinson[17] that a second attack of syphilis is possible, which means that not only has the patient recovered from the first attack, but has failed to acquire a lasting immunity. On this view, when there is no local reaction to syphilitic infection, it indicates that the patient has had syphilis and is still suffering from it.

So far as antisyphilitic bodies are concerned, Bab and Fleischmann[18] found them in patients still suffering from syphilis, and Citron[19] states that patients who show antibodies are those who have not been sufficiently treated with mercury. Again, if these antibodies are thrown off in increasing numbers by the nerve cells when decay sets in without a greater increase in the excitation of the syphilitic virus, they then form an unusual exception to the law of Weber—that to produce effects increasing in arithmetical progression it is necessary to have stimuli increasing in geometrical progression, a law which is generally true when the phenomena of immunity are concerned. Lastly, it is certain that the *Spirochæta pallida* can exist in the body years after the primary infection, and Ballet and Valensi[20] have recently

reported a case of chronic syphilitic meningitis forty-three years after infection.

Charcot, Fournier, and Hutchinson have considered that clinically mercury and iodides are of value in checking these parasyphilitic lesions, and in accordance with the practice of the last authority the patient in this case has been put on 1 grain of mercury twice daily in the form of Hutchinson's pill, and is advised to continue this treatment for twelve months, the iodides being contraindicated by the pulmonary lesion.

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ON EXTRAGENITAL SYPHILITIC INFECTION.

By H. BAYON, M.D. Univ. Genoa,

PATHOLOGIST TO THE SEAMEN'S HOSPITAL, GREENWICH, S.E.

THOUGH syphilis is acquired in nearly all cases in the course of sexual intercourse, or is present congenitally, one meets every now and then with patients in whom the usual mode of infection is doubtful, or is denied and cannot be proved.

This paper deals with cases of syphilis insontium, the syphilis of the blameless, where we can exclude venereal infection with great probability, or even certainty. In practice and hospital work I have met with several cases in which men and women, living with infected individuals, have developed in the course of sexual connexion primary sores on various parts of the body surface—for example, the abdomen (1 case at the Seamen's Hospital), shoulders (1 case mentioned by Mr. Turner), lips (2 cases—1 at Würtzburg, 1 at the Seamen's Hospital), eyelids (2 cases mentioned to me by Dr. Wilfrid Fox, and 1 seen by myself whilst a student), tongue (1 at the Seamen's Hospital), etc. These cases I exclude from consideration in this paper.

To show the importance of small abrasions or wounds in the skin in relation to infection with a syphilitic virus, I may mention a case observed by Professor Müller at Zürich a few years ago. A blacksmith went for a walk with a factory girl in the woods. On the way he was stung on the index finger of his right hand by a wasp. Shortly afterwards he had connexion with the girl, and a primary sore appeared on his finger but none on his penis. This is, however, a case of extragenital but not of extravenereal infection. I want to call attention to the fact that people leading blameless lives may be unfortunate enough to contract a perfectly avoidable disease, which, taking into consideration its long-lasting and intense effects, is one of the most important that the medical man has to deal with.

A discussion on the subject would have been almost useless a short time ago, for we knew next to nothing of the active cause. We now know for certain that the etiological organism is a spiral body, very probably of parasitic or protozoic nature. It has been repeatedly grown in pure culture in the cornea of the rabbit, after an incubation of from five to seven weeks. I may mention the names of Tomasczewski, Bertarelli, Schucht, Neisser, Greef and Clausen, Kraus and Volk, von Benedek, Mühlens, and E. Hoffmann, as among those who have succeeded in obtaining cultures. After having passed through the corneae of several rabbits, it has still been possible to infect monkeys, to produce in them hard sores at the site of inoculation, and to find again in the resultant secondary manifestations the spirochaetes in pure culture. All the necessary postulates to prove the etiological relation of an organism to a disease have been fulfilled. Also the spirochaete, or in the newer nomenclature *Treponema pallida*, has never been found in any but cases clinically showing themselves to be syphilis, if we make exception of the tropical disease yaws or frambœsia, in which a similar organism has been detected by Castellani. We have now, therefore, the opportunity of making a definite diagnosis in all doubtful cases.

I shall not take into consideration the commonest instances of syphilis insontium—namely, the infection of medical men in the course of their practice. They are very frequent indeed, and, though much to be deplored, not much can be done to eliminate them from the bounds of possibility. They are among the necessary risks of the profession. In many cases the disease was not recognized, and in others the medical man endangered himself and others by neglect of the necessary precautions. Lessar published lately 5 cases of syphilis in medical men, all acquired in the course of practice. Three did not diagnose the disease in themselves, and only remembered having had whitlows on their fingers, which took a very long time in healing. Under such circumstances we must not be astonished to find no history of syphilis in many cases of general paralysis of the insane, a disease which, from its clinical, pathological, and histological appearances, I believe to be always of syphilitic origin.

CASE I.

The first case of extravenereal syphilis that came to my notice was in Genoa. An illegitimate child had been entrusted to a foster-mother in the mountains near Genoa; this child was brought to me with a sore on its left tonsil, and hard glands on the corresponding side of the neck. Doubts as to the nature of the disease were set at rest by the appearance of a typical rash by the time that the child was brought for a second examination. The foster-mother had papules on her pharynx. Her husband had been to town to deal in cattle, and during his stay there had infected himself and then had infected his wife. The woman had the habit of tasting every spoonful of food before giving it to the infant, and probably with the contaminated spoon had wounded the left tonsil of the child, which, during the process of feeding, she held on her left arm; this, however, is mere hypothesis. Mercurial inunctions soon brought the disease to a standstill in man, woman, and child.

CASE II.

The second case I met with was in Switzerland. A lady, engaged to a young man of my acquaintance, asked my advice about a sore on her lower lip. I sent her to a specialist, who diagnosed ulcus lueticum, and prescribed mercurial treatment by the mouth. It fell to my lot to tell her fiancé the nature of the complaint, and that his marriage would have to be postponed for at least two years. He had no visible signs of specific disease, and denied that he had ever had any venereal disease except gonorrhœa, but admitted that he had been with a prostitute about four weeks before, and that within half an hour he had visited his fiancée and had kissed her. At the time I considered it probable that the syphilitic germ had been carried from the prostitute to the patient without the carrier being affected. I am now rather sceptical about this mode of infection, but am persuaded that the infection took place extravenereally, and simply refer to it as a case of this kind.

CASE III.

It has fallen to my lot to help to diagnose the third case recently in London. A tailor, a foreigner, married about eight years, had a healthy wife and two healthy children. In November, 1906, he helped to eject a drunken man from a public-house, and during the struggle the man, who appears to have had a number of red spots on his forehead (corona veneris?), bit him on the little finger of the left hand. The wound rapidly swelled, and refused to heal in spite of medical treatment. In February, 1907, the patient noticed for the first time that a number of red spots had made their appearance on his chest; the spots increased rapidly in number and size. On examination he was found to be suffering from a slight angina, and to be covered with maculo-papular specific exanthem. There was no primary sore on his genitals. On the second phalanx of the little finger of the left hand there was a red, infiltrated, indolent, hard, circular sore, well-developed cubital glands on the right side, and also glands in the axilla. On the left side no glands could be detected with any certainty. All symptoms disappeared rapidly under vigorous treatment with mercurial ointment.

To these 3 cases I can add 2 doubtful cases where direct proof of extravenereal infection is wanting:

1. A Portuguese gentleman whilst dancing with a girl rubbed his forehead several times on hers. He noticed later that her forehead had a number of curious spots on it. He developed a primary sore on his temple. No primary sore could be detected elsewhere. The patient denied cohabitation, and the sore appeared three weeks after the dance. I had occasion to treat him some time after, and saw the typical scar on his forehead.

2. A butcher was sent to the out-patient department of the Seamen's Hospital for a persistent whitlow on his thumb that

refused to heal. A diagnosis of primary chancre was made, and was afterwards borne out by the appearance of a secondary rash and by the fact that under mercurial treatment the whole thing rapidly subsided.

The treponema seems to have a special predilection for the connective tissue directly under the epithelial cells. This explains, I believe, why the inunction method is the most efficacious in the treatment of secondary eruptions. The mercury gets straight and undiluted to the noxious organisms, and must pass amongst them before getting to the lymph stream. The effect on the spirochaetes was brought forcibly to my notice lately when I fruitlessly examined 33 patients suffering from syphilis for the spirochaete after one or two weeks' treatment with inunctions, whilst in untreated papules they could be demonstrated quite easily.

I have endeavoured to point out the danger to the community at large of the syphilitic patient in its midst, for I am convinced that such cases are relatively frequent. Can no regulations be framed to minimize this danger?

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

THE LOCAL TREATMENT OF DIPHTHERIA.

A CASE of diphtheria recently under my care demonstrates the value of local treatment so well that I am tempted to publish the remedy used. I was called to see a child on January 5th, 1908, and found it was suffering from diphtheria. There were considerable patches of membrane on both tonsils. The face was pale and puffy, there was a little albumen in the urine, and the pulse was soft. I ordered the following paint to be used every two hours, telling the mother the object was to kill the germs in the throat:

℞ Liq hydrarg perchlor. ... ... ℥j.
Glycerini acidi tannici ... ... ℥j. M.

The mother, in her anxiety to get the child well and back to fulfil an engagement at a theatre, actually painted the throat every hour, and in thirty-six hours all trace of membrane had disappeared, and the child seemed well again, except that she was weak and anaemic. Indeed, the mother thought the diagnosis was wrong, as she could not imagine that a diphtheritic throat could be cleared in such a short space of time. The paint was continued for several days, at longer intervals, and then stopped, and an iron tonic prescribed.

On January 20th a bacteriological examination was made, and the bacillus of diphtheria was found. The paint had been stopped too soon. For many years I have used this paint, ordering it to be applied every two hours, unless during sleep, and have found it only fail on one occasion to clear up the throat, when I used antitoxic serum. The strength of the paint is 1 in 2,000 of the perchloride of mercury; the glycerine of tannin gives body to the application, and is a useful astringent. The practical lesson seems to me to be, paint hourly, day and night, until membrane is gone, then continue the application at suitable intervals for a week or longer, or until the swab test is negative.

Glasgow. J. T. MACLACHLAN, M.D.Glas.

INHERITED SYPHILIS.

IN his interesting and instructive paper on inherited syphilis, published in the BRITISH MEDICAL JOURNAL of February 1st, Mr. Clement Lucas states that it is the separation of the placenta at birth which allows the infection to take place through the umbilical vein.

That infection before birth can occur is, however, proved by the following case, which occurred in my practice some three years ago. I attended a young married woman at her first confinement, which was at full time. The child was well developed and showed no abnormality, except that it was covered by a profuse syphilitic rash. It lived until the seventh day, when the cord separated and free haemorrhage from the umbilicus took place. In spite of all treatment the bleeding continued, and the child died six hours after the commencement of the haemorrhage. The mother came of a healthy family and never had any signs of syphilis. On interrogating the husband he admitted having suffered from syphilis a year before marriage, but declared that for six months before his wedding he had been quite free from all signs of that disease.

South Shields. JOHN BAIN.

THE WORK OF A HOSPITAL PATHOLOGICAL DEPARTMENT.

THE following is a summary of the work of the Stephen Ralli Memorial Pathological Department of the Sussex County Hospital, Brighton, by F. G. Bushnell, M.D., D.P.H., and A. W. Anderson, M.B. From July, 1904, to January 31st, 1908, 2,447 examinations were made of specimens received from the hospital. Of these 1,965 were made previously to August 31st, 1907, and 482 from that date to January 31st, 1908.

Analysis	July, 1904, to Jan. 31, 1908.	July, 1904, to Aug 31, 1907.	Aug 31, 1907, to Jan. 31, 1908
1. Histological ...	931	764	177
2. Chemical ...	140	120	20
3. Bacteriological...	893	707	186
4. Microscopical ...	483	384	99
	2,447	1,965	482

1 *Histological Examinations.*

Sections of "scrapings," tissues, new growths ...	662
Blood examinations	180
Effusions for "cell diagnosis"	20
Miscellaneous	69
	931

2. *Chemical Examinations.*

Test meals and gastric contents	41
Urines	68
Exudates, transudates, cerebro-spinal fluid, milk, water, faeces	31
	140

3. *Bacteriological Examinations.*

a. Swabs and rubbings from the throat and nose...	65
b. Sputum	366
c. Serum reaction (Widal)	79
d. Inflammatory products	210
e. Blood	55
f. Urine	86
g. Miscellaneous	32
	893

a. In 12 of these swabs diphtheria bacilli were identified.
b. In 72 tubercle bacilli were present.
c. Twenty 'positive" serum diagnoses were made.
e Streptococcus pyogenes, *Staphylococcus albus*, *Staphylococcus aureus*, and on a few occasions the *B. typhosus* were isolated from the blood; and the malaria parasite was observed.
f. Tubercle and acid-fast bacilli were found in 11 specimens of urine; also *B coli communis*, *Staphylococcus albus*, and streptococci and diphtheroid bacilli.
g Tubercle and acid-fast bacilli were found in pleural effusions and the cerebro-spinal fluid, and typhoid bacilli were recovered from the dejecta of a typhoid patient and from the gall.

From January, 1906, to August 31, 1907, 2,291 media tubes were inoculated, and 675 from August 31st, 1907, to January 31st, 1908, or 2,966 in all.

4. *Microscopic Examinations*

These 483 examinations were of hair, urine, etc. Among the findings were the *Spirochaeta pallida*, the ova of *Bilharzia haematobia*, echinococcus cysts, and microsporon. *B. tuberculosis* was identified in the dejecta.

5. *Opsonic Indices.*

Up to August 1907, the opsonic indices of about 100 cases had been repeatedly calculated; 38 from that date to January, 1908, and 7 bacterial vaccines prepared. This treatment of staphylococcal infections, especially if subacute or chronic, is hopeful. An attempt to treat the form of anaemia, known as "pernicious," by this method is being carried out by this department.

6. *Post-mortem Department.*

During the six months this department has become a part of the Ralli Laboratories, 70 autopsies have been made, and the necessary bacteriological and histological procedures connected therewith carried out. The average yearly number of such examinations is 150.

7. In the *private pathological practice* 534 examinations were made up to January, 1908.

8. Some thirty *original contributions* have been made to medical literature by research workers in these laboratories since their foundation.

Specimens, slides, etc., are preserved for purposes of reference and research in the future; the card-index system of recording specimens and a research or reference library is being introduced.

Mr A W Anderson is proceeding shortly to Hamburg to demonstrate the technique of opsonic determination in the laboratory of Professor Unna.

REPORTS OF SOCIETIES.

EDINBURGH OBSTETRICAL SOCIETY.

Professor STEPHENSON, President, in the Chair.

Wednesday, March 11th, 1908.

PELVIC DISPLACEMENTS.

IN a paper on downward and backward displacements of the pelvic viscera, Dr. W. E. FOTHERGILL said the essential factor in determining these displacements was relaxation of the perivascular sheaths. He treated prolapse of the uterus by modified anterior colporrhaphy, uniting the parametric and paravaginal connective tissue in the middle line in front of the cervix, and repairing the perineum if torn. Cystocele and vaginal prolapse he treated on similar lines, and retroversion either by the Alexander Adams operation or by intraperitoneal shortening of the round ligaments. When the uterus was fixed separation of adhesions was necessary, and in some cases resection of the ovaries must be performed before the uterus could be freed and brought into a proper position. Sir HALLIDAY CROOM agreed that the broad ligament and round and utero-sacral ligaments played but a small part in keeping the pelvic viscera in their proper positions. He had constantly noted when he had performed laparotomy that all those ligaments were lax. As regards operative treatment, he strongly condemned vaginal fixation. In persistent retroversion with a movable uterus he approved of the Alexander Adams operation. When the uterus was fixed laparotomy was necessary, adhesions should be broken down, and the uterus should be brought forward and held in place by one or other of the many operations devised for that purpose. He did not approve of vaginal massage. Sir A. R. SIMPSON could not understand what cause could produce a relaxation of the perivascular connective tissue sufficient to bring about displacements of the pelvic viscera. He attached great importance to the pelvic floor as a support. In some cases it might receive great laceration and yet no displacements or prolapse result, but in such cases one always found an associated cellulitis which caused a thickening and fixation of the pelvic connective tissue. He had noted marked benefit follow vaginal massage in suitable cases and when performed by experts. Dr. RANKIN LYLE could not understand why prolapse did not follow parturition, since at this time all the pelvic connective tissue was relaxed. One met with two types of patients. In one there was little or no elasticity of the tissues. In such patients prolapse was frequent, and operative treatment as a rule did not give good results owing to the want of tone of the tissues. The second class were muscular and hardy, and possessed tenacious and elastic structures. Tearing of the parts was common in such subjects, but prolapse rare. In uterine prolapse he had often found Parsons's operation of use, since it caused contraction and thickening of the pelvic connective tissue such as was met with after a cellulitis. Dr. BARBOUR believed that the various ligaments associated with the broad ligament played an important part. Though the round ligament might be a vestigial remnant, the hypertrophy which it underwent during pregnancy proved that it played an important part in anchoring the uterus. Prolapse was extremely rare in nulliparous women. The perivascular connective tissue was as likely to become relaxed amongst those as in multiparae.

PLACENTAL TRANSMISSION OF PROTEIDS.

Dr. LOCHHEAD read a paper discussing the transmission of serum proteids from mother to fetus across the placenta. Experimental results, he said, showed (1) absence of altered proteids such as albumoses and peptones in the freshly obtained placenta of the sheep; (2) absence of any extracellular proteolytic ferment. Hence the placental action was not analogous to that of the intestine. Egg albumen was shown to pass from mother to fetus unchanged, while ox serum did not. Probably the normal serum proteids also did not pass across the placenta as through a sieve, but were transformed there, and elaborated into products necessary for the growth of the fetal tissues.

THE LOWER UTERINE SEGMENT.

Dr. FREELAND BARBOUR criticized the position taken up by Bumm and Blumreich as a result of their examination of frozen sections of the body of a primipara, aged 39 years, who died during the second stage of labour. Their conclusion was that the lower uterine segment was really formed by the stretched cervix, and that the retraction ring was found at the os internum. Hence they believed Barbour was wrong in the interpretation of his sections published in 1890. After describing in detail the two sections, he expressed his belief that the difference in opinion was due to the differences in the ages of the patients from whom the sections were obtained and the stage of labour. Finally, he defined the lower uterine segment as that part of the uterus which must be converted into a canal so as to allow the fetus to pass. This corresponded to rather less than a fourth part of the total cavity of the uterus.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Mr. R. MARCUS GUNN, President, in the Chair.

Thursday, March 12th.

OPTIC NEURITIS IN CEREBRAL TUMOUR.

A DISCUSSION on a paper by Mr. LESLIE PATON at the last meeting was resumed. Mr. PATON stated that since reading the paper he had been through the records of 60 additional cases, which bore out the conclusions he had formed on those already published. Mr. HERBERT PARSONS said the paper was essentially statistical, and statistics did not lend themselves well to discussion; the only part open to debate was the conclusions which the author had formed on the figures. The records of the cases were of great value, because the ophthalmoscopic appearances were observed by the President. There was a distinct apparent discrepancy between the details in this series and those previously published by others. A recent series by Uhthoft, of Breslau, more nearly coincided with those of Edmunds and Lawford than with Paton's. It was important not only to record the amount of swelling of the disc, but the stage at which it was observed. He was not in agreement with Mr. Paton's explanation of subcortical and pontine tumours in regard to vascularity. The star at the macula was not a mere result of the violence of the neuritis; there were cases equally violent in which no star was present. The latter he had seen more commonly in children than in adults. Sir VICTOR HORSLEY said the paper was really founded on records of his own cases, and yet he was diametrically opposed to one of its most important conclusions. He had taught for years, and had supported it by operative proof, that one was justified in regarding the homolaterality of the lesion as a point of clinical value. Every case must be dealt with on its merits, and he thought the difference of opinion between Mr. Paton and himself was due to the treachery of clinical statistics. It was essential to study the neuritis by the character of the changes in the disc, not the mere swelling. It was necessary to know whether it was an exudate, and, indeed, the minutest details of it. He had often seen a macular fan entirely disappear after the removal of a cerebral tumour. One point, which was learned from the Queen Square cases twenty years ago but which did not find a place in the paper, was the question of pressure. Free opening of the dura mater would cause subsidence of the neuritis. Sir WILLIAM GOWERS sent a communication supporting some of Sir Victor Horsley's criticisms. Dr. BEEVOR said that in 50 cases of cerebral tumour of all kinds which he investigated for his Lettsomian lectures last year, the optic neuritis was most severe on the same side as the tumour. Dr. FARQUHAR BUZZARD complained that Sir Victor Horsley had not brought forward figures to support his view on homolaterality, valuable though his opinion was. The number or proportion of cases in which the neuritis occurred on the same side was not great enough to make it diagnostically important. Placing too much stress on the doctrine might lead to serious error. The PRESIDENT thought the truth in the matter lay between the views of Mr. Paton and Sir Victor Horsley, in the way mentioned by Dr. Farquhar Buzzard.

SCHLEMM'S CANAL.

Dr. THOMSON HENDERSON (Nottingham) gave a lantern demonstration on the venous connexions of Schlemm's canal. He said the channels of the aqueous outflow were: Schlemm's canal, the suprachoroidal space, and the iris.

The last was an absorbing surface only because of its crypts. His object was to show the close venous connexion between those three channels. The vascular supply of the ciliary body was derived from the arteriosus iridis major, formed by the two long posterior ciliary arteries, reinforced by the eight anterior ciliary arteries, two from each rectus. The whole of the venous blood was returned via the venae vorticosae, except the small area drained by the anterior ciliary veins. A study of a large number of series of consecutive radial sections brought out the following points: In each millimetre of the scleral circumference (42 sections equal 1 mm.) there was never less than one anterior perforating scleral vessel, frequently two, and occasionally three. There was free anastomosis among the vessels. Each perforating vessel sent or received an efferent branch from Schlemm's canal. He had not been able to find a perforating scleral vessel not connected with Schlemm's canal. Therefore all those vessels were veins, and the so-called circulus arteriosus iridis major was a sinus venosus iridis. Schlemm's canal was nothing more than an offshoot of the iris veins. Before perforating the sclera, the iris veins were in free communication with the ciliary veins and radicals of the venae vorticosae. In chronic glaucoma, when adhesions of the iris root had been long enough established, serial sections showed new-formed vessels perforating the pectinate ligament, and connecting directly the iris veins with Schlemm's canal. This bore greatly on glaucoma and its treatment by iridectomy, as the success of the latter depended on the iris being an absorbing surface only by virtue of its crypts. Its effect was that of a large crypt occupying three sides of a square, for in a healthy iris the cut surfaces forming the base and pillars of the coloboma never healed. Cicatrization was a protective process following as a result of the reaction of the cells of a tissue to irritation or altered condition of life. A successful iridectomy left the tissue cells bathed in aqueous, so that no stimulus was imparted to them to cause the formation of a dense protective layer. The cut iris tissue thus remained unaltered, and so presented a large raw surface, by means of which the aqueous could readily drain away, provided (a very important point) the operation were done before atrophy and damage to the iris structure had proceeded too far.

LIVERPOOL MEDICAL INSTITUTION.

Pathological Section.

The Standardizing of Vaccines.

At a meeting on March 5th, Dr. Leith Murray described a method of standardizing vaccines. He used a Thoma-Zeiss haemocytometer, the diluting fluid being 5 per cent. Giemsa stain in 0 1 per cent. saline solution. This was filtered twice, sterilized, and 4 per cent. of formalin added. The low specific gravity allowed the organisms to sink to the bottom, the trace of salt permitting of better staining, and the formalin rapidly arresting movement even if the organism were flagellated. The cell was covered in by a thin coverslip chosen in the following way: A series of slips were cleaned, dried, and applied successively to the cleaned and dried plate glass slip provided with the apparatus after breathing on the opposing face of each. Pressure was applied to make them adhere, and the slips which showed Newton's rings well distributed over the surface were selected for use. Counting with $\frac{1}{12}$ oil immersion was begun half an hour after placing the drop. Excess of oil was laid on and the condenser slightly depressed. The lightly-stained organisms were found lying practically motionless at the bottom, but it was advisable to focus them throughout the depth of each square to detect any stragglers still floating. Three or four sets of sixteen squares could be counted easily in fifteen to twenty minutes. The totals of each set of sixteen showed a conformity which would indicate that the lack of mathematical flatness in the coverslip, and the possibility of slight cupping from surface tension were negligible quantities. Controls with both a red and a white corpuscle pipette and with two cells simultaneously had amply confirmed the method. Using a red corpuscle pipette and taking vaccine up to the second cross-marking —that is, a dilution of 1 in 500—the average per small square was only five organisms in a vaccine containing ten millions per c.mm. As it was a simple matter to count fifty organisms per square by using the full dilution of 1 in 1,000, it would be possible to bring within range a vaccine containing 200 million per c.mm.

Cases and Specimens.

Dr. Warrington showed a specimen of acute primary infective laryngitis from a tailor's assistant, aged 53. Death resulted from a secondary gangrenous bronchopneumonia. No source of infection could be traced. Mr. R. W. Murray showed a section of a *Columnar-celled carcinoma* removed from the parietal bone of a woman aged 60. The tumour had been mistaken for a sebaceous cyst. It was regarded as a secondary deposit, although careful examination failed to show evidence of a primary growth. Dr. Wills (for Dr. Nathan Raw) showed lungs infiltrated with minute metastatic growths secondary to carcinoma of the stomach from a man aged 32 years. The patient had been in good health until two months before his death, and had no subjective symptoms of a stomach lesion. Mr. Kelly showed a woman with a *Congenital cleft* involving the manubrium and first portion of the mesosternum. The cleft was V-shaped, and about 2 in. wide above. The patient's only child possessed a normal sternum.

Rapid Microscopic Diagnosis.

Dr. Ernest Glynn, in a note on rapid section cutting as an aid to diagnosis, described the method of Dr. Louis Wilson, of St. Mary's Hospital, Minn., U.S.A. Pieces of tissue without any preliminary fixation were frozen with ether, cut on a Cathcart microtome, floated out in 1 per cent. salt solution, stained in polychrome methylene blue, washed and mounted in Bruns's glucose medium. The epithelial and sarcomatous cells stain blue and connective tissue pink. An opinion could be given within five minutes of receiving the specimen. The method had been used in 10 instances. In none had the opinion formed regarding the malignancy of the tumour been misleading.

ROYAL SOCIETY OF MEDICINE.

Section of Surgery.

Lumbar Puncture in Otitic Meningitis.

At a meeting on March 10th, Mr. Warrington Haward, President, in the chair, Mr. A. E. Barker described 3 cases in which he had treated otitic meningitis by lumbar puncture. The first case, on admission, had a little pus in the ear, but no local evidence of mastoid involvement; on symptoms suggestive of meningitis arising, lumbar puncture was performed. The fluid appeared normal, but was found to contain a few diplococci thought to be a contamination. A complete mastoid operation was then performed, and the cranial cavity explored, with negative results. As the symptoms persisted, the lumbar space was again tapped, and this time thick greenish pus was obtained. From it the *Micrococcus catarrhalis* was cultivated. Subsequently, a temporo-sphenoidal abscess was evacuated, and in the course of some twelve further tappings rapid resolution of the condition occurred, as evidenced by diminished turbidity with disappearance of the bacterial and leucocytic content of the cerebro-spinal fluid. The second case, in a lad who also recovered, was similar in most respects, although the operative measures were much more severe; the pus withdrawn by puncture contained several organisms, among them a diphtheroid bacillus and a staphylococcus. The third case, a woman, ended in death—a result anticipated when it was found that the cerebro-spinal fluid contained a virulent streptococcus. In the case of this organism and of the tubercle bacillus, repeated tappings seemed to be of little or no benefit. The remarkable immunity of the nervous tissues during severe inflammation of the meninges rendered it probable that, like the peritoneum, these membranes were well able to take care of themselves, and it was in agreement with what was known of the peritoneum that the injection of antiseptic fluids, such as the collargol that had been used, did not exert any beneficial influence. Mr. Ballance said he had already published similar cases; he was accustomed to divide meningitis into two types—serosa and suppurativa. The symptoms of the former were often seen in association with acute spreading otitis, and if the suppurative stage of meningitis could be averted by combining local operative measures with lumbar tappings it was of great importance. In the suppurative form the discovery of turbid fluid in the lumbar region did not necessarily

imply a fatal termination; indeed, in association with brain abscess it did not necessarily imply meningitis. The fulminating type of meningitis did not yield to tappings. Dr. BATTEN said that to physicians the fatality of meningitis wore a different aspect. Before the introduction of lumbar puncture it was recognized that 30 to 40 per cent. of cases of cerebro-spinal meningitis recovered, and although puncture permitted proof of the presence of the organism, it was by no means certain that repeated tappings had improved the results. Flexner's injections of antimeningococcal serum were said to have produced better results, but it had not yet been verified to what extent respectively the serum or the actual tappings were responsible. It had long been known that the organism concerned was not pathogenic if injected subcutaneously. With regard to Mr. Barker's first case, he thought it obvious that the infection with *M. catarrhalis* occurred between the first and second punctures—that is, at or after the opening of the cerebral meninges. In the second case, he would like to know whether the cerebral abscess contained the same organism as the cerebro-spinal fluid recovered by puncture. It had long been known that nerve tissue remained practically unaltered by severe inflammations of the meninges due to the pneumococcus and meningococcus. In reply, Mr. BARKER stated that he believed the abscess in the second case did contain similar organisms to those in the puncture fluid.

CLINICAL SECTION.

Hermaphroditism.

AT a meeting on March 13th, Sir T. BARLOW, President, in the chair, Mr. T. H. KELLOCK described the case of a man, aged 25, with a left inguinal hernia. He had a strong voice of masculine type; penis of fair size; hypospadias, the urethra opening opposite the front border of the scrotum; no right testicle to be felt in scrotum or canal; left testicle in scrotum. Hernia partly reducible. At the operation for hernia two sacs were found on the left spermatic cord; the lower contained the testicle; the upper did not communicate with it, but opened into the peritoneum, and through this opening a mass was pulled out which was adherent to the sac, and proved to be a uterus about the size of a horse-chestnut, with a well-marked broad ligament, round ligament, and small ovary on its right side. This sac with its contained uterus was freed from its external connexions and dropped into the abdominal cavity. The operation had proved successful. The prostate could not be felt per rectum.

Angina Pectoris with Aortitis.

Dr. PARKES WEBER read notes of the case of a married woman, aged 42, admitted to hospital with great pain to the left of the sternum and coarse crepitation over the same area. No dyspnoea; urine normal; temperature 99° F.; pulse 95, regular. The pain persisted, the pulse became weaker, and the patient died suddenly eight hours after admission. She had had the thoracic pain nearly a fortnight. The necropsy revealed aortitis of the first part of the aorta; the orifices of both coronary arteries much stenosed, but the vessels practically healthy in the rest of their course. The cardiac muscle seemed healthy, and there was no valvular disease. All other organs were practically healthy. The aortitis was probably due to syphilis, though there were no syphilitic changes elsewhere in the body. The speaker discussed the case in relation to Sir Clifford Allbutt's hypothesis of the constant origin of angina in aortitis. Dr. JAMES MACKENZIE said there was no increase of blood pressure in the case, and in such cases he had found nitrite of amyl useless. When muscle was impoverished and tried to carry on its work, it caused pain. He thought the term "pseudo-angina pectoris" absurd. Dr. DE HAVILLAND HALL thought the case one of syphilitic origin, and considered that true angina pectoris was always an accompaniment of aortic disease. He was a believer in pseudo-angina. Sir DYCE DUCKWORTH also believed the case to be one of syphilis. The pain of angina pectoris he thought was due to distension of the heart, just as a distended bladder or stomach caused great pain. Dr. GARROD related the case of a man recovering from pneumonia, who died absolutely suddenly on sitting up in bed. He had pneumococcal endocarditis implicating the aortic valves, and a fragment of vegetation had become detached and was found occupying the opening of one coronary artery; the pain was doubtless due to the cutting off of the blood supply from the cardiac muscle. In reply to a question, Dr. PARKES WEBER said he had not found any spirochaetes in the sections.

Purpura Haemorrhagica and Cerebral Haemorrhage.

Dr. S. W. CARRUTHERS reported the case of a woman, aged 59, who had had fair general health, and after two months of slight malaise had small subcutaneous ecchymoses in the limbs, which were apparently not lessened by treatment with calcium lactate for a week. Two days later she had an apoplectic seizure—headache, vomiting, coma, and death after about five hours. There was no pyrexia throughout. The PRESIDENT had seen such cases, and the extravasation was usually into the arachnoid sac. One of the instances was an example of purpura in typhoid; the coma lasted forty-eight hours. The patient recovered, but died afterwards of another trouble, and at the necropsy there were found the remains of a large extravasation into the arachnoid sac. In purpura cortical haemorrhages were also known to occur. Dr. PORTER PARKINSON had seen two cases, and in 1906 contributed, with Dr. Soltau Fenwick, a paper thereon to the Royal Medical and Chirurgical Society. That paper showed that he had obtained good results from the administration per rectum of "polyvalent" antistreptococcus serum, and recommended its use in similar cases.

Cerebellar Tumour with Proptosis.

Dr. PORTER PARKINSON and Mr. J. S. HOSFORD described a case, and said that only three other examples were recorded. The patient, a girl, aged 14, tall, after having various pains and vomiting, attended hospital for failing sight. She had double proptosis, paresis of right external rectus muscle, slight but definite horizontal nystagmus, pupils equally dilated, reacting slowly and faintly to light, intense choked disc, and neuro retinitis (more marked in the right eye), temperature subnormal, urine normal, no tremors. Treatment consisted in mercury and iodides. She had short convulsive fits daily for a fortnight; weakness and wasting of right upper limb followed. The fits recurred and she became apathetic and drowsy, urine and faeces were passed involuntarily, the temperature rose to 101.2°, and she died suddenly three and a half months after coming to hospital. Autopsy revealed great dilatation of the cerebral ventricles, the cerebral cortex flattened and thinned, and an irregular, flattened growth, as large as a pigeon's egg, attached to the pia mater beneath the right lobe of the cerebellum, pressing on the restiform body and medulla oblongata, and dipping down into the foramen magnum, which proved to be a fibro-psammoma. The PRESIDENT thought the proptosis might have been due to the hydrocephalus, in the extreme cases of which condition proptosis was not very rare. Sir DYCE DUCKWORTH said the case showed that proptosis might arise from conditions other than disease of the thyroid body; notably from cerebral disease.

OTOLOGICAL SECTION.

At a meeting on March 7th, Dr. PETER MCBRIDE in the chair, Mr. H. H. B. CUNNINGHAM showed two cases of *Deafness* resulting from epidemic cerebro-spinal meningitis. In the opinion of the meeting nothing could be done for these cases, but as a prophylactic measure lumbar puncture was suggested. Dr. ADOLPH BRONNER read notes of a case of *Purulent otitis media* with deep ulceration of the external meatus occurring in secondary syphilis, and laid stress on the fact that purulent otitis media was very rare in such conditions. Under antisyphilitic and local treatment the symptoms soon cleared up. Dr. D. R. PATERSON described an interesting case of *Crossed abducens paralysis* occurring in the course of a cerebellar abscess. As a result of operation the patient made an uninterrupted recovery. No opinion was expressed with regard to the causation of the ocular paralysis. Mr. C. H. FAGGE read notes of a case of a *Branchial sinus* leading from the neck into the external auditory meatus. The sinus was excised by operation with complete success. Dr. W. MILLIGAN described a case of *Epithelioma of the middle ear*, possibly the result of a blow received nine months previously. The mastoid was opened on account of the severe pain.

The patient afterwards died, and a large intracranial abscess involving the temporo-sphenoidal lobe was discovered on autopsy. Mr. MACLEOD YEARSLEY showed a case of *Labyrinthine suppuration* in a boy aged 8, the result of measles when 1 year old. The condition was discovered whilst performing the complete mastoid operation, there being no previous symptoms pointing to labyrinthine disease. The vestibule was laid open by removal of bone below the fenestra ovalis. There was an uneventful recovery.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

At a meeting on February 25th Dr. HARRY CAMPBELL, in a paper on the Therapeutics of Diet, traced the alterations and variations in man's diet from his simian ancestors onwards, and said that from the dietetic standpoint the present age might be called "the age of pap." A due proportion of vegetable food should be eaten raw, and cooked farinaceous foods should be in a form compelling abundant mastication. Were this plan adopted, not only indigestion but diseases of the teeth, nose, and throat would greatly diminish in frequency. There had been an enormous increase in the consumption of sugar within recent years. For primitive man wild honey was the sole source of pure sugar, but now thousands of tons of cane sugar were extracted yearly from sugar cane and beetroot. In England at all events far more good could be got from curtailing starch and sugar than from cutting down the animal food, though sometimes this might be necessary.

GLASGOW MEDICO CHIRURGICAL SOCIETY.—At a meeting on February 21st, Dr. WALKER DOWNIE, President, in the chair, Dr. J. CRAWFORD RENTON demonstrated a number of excisions of the elbow and other surgical cases. The *Excisions* included one in which, although 5½ in. of bone had been ablated, satisfactory movement was obtained. Dr. ALEX MACLENNAN reported (1) a case of tumour of an *Accessory thyroid* of four years' growth in a woman aged 28. It was painless, cystic, not attached to the skin, of the size of an orange, and situated behind the sterno-mastoid in the middle of the neck. There was no inflammatory exudation about the mass, and its attachment was evidently deep in the neck. (2) The result of an investigation into the function of the thymus gland, with special reference to the results of *Thymusectomy*. These were as follows: (*a*) The recovery of the animals was rapid. The operated-upon animals showed more vigour, and had larger appetites; their weights increased more rapidly than the controls, though the latter were selected to begin with because of their larger size. (*b*) Certain changes in the epiphysial cartilages. The epiphysial lines were thickened in the thymusless; there were a greater number of cells between cartilage and bone; there was evidence of increased rate of growth. (*c*) The thyroid was reduced in size, was paler, and on section there was seen reduction in the size of the gland spaces; the connective tissue cells were more numerous in the thymusless. (*d*) After thyroidectomy the thymus was found to atrophy, in some cases completely.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 6th, Dr. ALLAN in the chair, Mr. O. C. GRUNER showed (1) microscopical preparations from cases of *Gastritis hyperplastica chronica*, in which the wall of the stomach was widely, and in some instances universally, thickened. There was absolutely no evidence of malignant disease, but histologically the tissues were densely infiltrated by inflammatory cells of all kinds, and more especially plasma cells. The causation of the condition was not known, though the clinical features resembled those of chronic dyspepsia. There was almost complete absence of the gastric glands. Six cases had been met with during five years at the Leeds General Infirmary. (2) A specimen illustrating the presence of peculiar "islands" (very similar to those of the pancreas) in the adrenal medulla. They were found with some frequency in 150 consecutive necropsies, and only after childhood. The condition seemed, so far, to have passed unnoticed. Dr. ALEXANDER SHARP showed a specimen of *Exostosis of external auditory meatus* in a patient aged 30 years. The left ear had been almost completely deaf for seven years, and during the same period there had been intense neuralgic pain involving the left side of the face and head. On examining the ear there was seen a pale pink bony growth, with smooth surface, which completely filled the meatus. It was excessively tender, and there was a history of repeated attacks of inflammation. The growth was found to be attached to the entero-superior meatal wall, and was removed with hammer and gouge by way of the meatus. Since the operation the headache had disappeared and the hearing had become quite normal. Mr. B. G. A. MOYNIHAN showed a specimen of acute phlegmonous gastritis. The condition was diagnosed at an exploratory laparotomy. Death occurred next day. The stomach was removed through the operation wound. After removal a pure culture of *Bacillus coli* was obtained from the cut surface. The submucous coat was distended from cardia to pylorus with a grey sloughy material, consisting chiefly of leucocytes; the mucosa was normal; the muscular coat was somewhat infiltrated with leucocytes. Microscopically diplococci and short wide bacilli, probably sporing organisms, were found.

MANCHESTER MEDICAL SOCIETY.—At a meeting on March 4th, Dr. WILKINSON, President, in the chair, Mr. STANMORE BISHOP said that gastro-enterostomy, which was first performed by Woelfler in 1881 as an alternative for pylorectomy, or as an adjunct to partial gastrectomy, where the amount of tissue removed rendered reunion of the stomach and duodenum specially hazardous, had lately been far more frequently employed as a remedy for gastric or duodenal ulceration. In such cases its good effects appeared to be due (1) to the drainage which it produced securing rest for the area implicated; (2) to such rest permitting coating over by mucus of the ulcerated patch, thus securing its protection from irritating materials; such protection was aided by the folds into which the gastric walls fell; (3) to the avoidance of alternate stretching and contraction of the gastric walls, and the elimination of pyloric spasm; (4) to the decreased acidity of the stomach contents. He based his belief on drainage as the primary result on radioscopic observations made by himself and Dr. Barclay on the passage of food after operation at successive periods. Later on, the opening appeared to act more as a safety-valve. The question of "vicious circle" vomiting had ceased to be a serious factor in gastro enterostomy. The mortality was small and decreasing, and the symptomatic results obtained were strikingly good. Dr. ALFRED BARCLAY, speaking of *x* ray examination of the stomach, with special reference to gastro jejunostomy, stated that he always used the upright position in his examinations, which were entirely carried out by means of tracings made on the screen from shadows cast by a meal of bismuth carbonate with porridge (4 oz. to 1 pint). The average healthy stomach in normal circumstances varied in shape. Solid foods did not mix, and he found no evidence of "churning," though fluids taken after a meal passed all round the walls of the organ right down to the pylorus in a few seconds. He agreed with Drs. Leven and Barrett that the healthy stomach maintained a level for its contents, and that increased capacity was obtained by lateral expansion, and not by filling from below upwards. If this latter was noted there was atony of the walls, but this need give rise to no symptoms unless there was inefficient peristaltic action. Motor efficiency could be tested by watching the passage of bismuth porridge out of the stomach, while the presence of free HCl could be demonstrated by observations with capsules of bismuth made with gold-beater's skin, which should be digested and the bismuth dispersed in two and a half hours. Carcinoma sometimes led to irregularities of outline that helped in the diagnosis. An examination of some cases in which Mr. Stanmore Bishop had performed gastro-jejunostomy showed that the stoma was utilized in them all, although peristaltic action was directed towards the pylorus. In only one case did food pass through this orifice. Shortly after operation foodstuffs passed through much more rapidly than later, say, three months, when their passage was more or less normal, the stomach, moreover, retaining proteids and fat longer than carbohydrates.

REVIEWS.

TALENT AND GENIUS.

THE first volume of Dr. REIBMAYR'S work on the *Developmental History of Talent and Genius*[1] differs widely from the type we are accustomed to associate with German scientific writers. In the first place, the reader misses the elaborate footnotes and quotations so dear to the average Teuton; and in the second, the author's style is throughout lucid and readable. The former peculiarity is explained by the fact that a second volume, containing a full *apparatus criticus*, will appear shortly, so that we are not justified in saying that Dr. Reibmayr has erected large superstructures of hypothesis upon slender bases of fact. Briefly, Dr. Reibmayr's position can be summarized in the following terms:—A primary necessity for the cultivation of talent and genius is fixity of habitat, as in a trading or agricultural race. When favourable varieties appear, their preservation depends upon selective mating or in-breeding. This is the origin of the high value assigned to pure descent in all primary civilizations. Although this preferential mating, with the resultant development of an aristocracy or oligarchy, is essential to progress, yet in the end it is self-destructive. Without repeated intermixtures of fresh blood, the evil results of in-breeding appear, characterized, mentally, by narrow particularism and class prejudice; bodily, by an increasing prevalence of diseases, especially of the nervous system, and a selective diminution in reproductive power, the male line becoming extinct. When this phase is well marked, repair is possible if a middle class, having behind it a numerous agricultural population, is able to act as a reservoir from which fresh blood may be introduced into the governing families. Should this not be the case, the nation will be subjugated in the inter-racial struggle for existence, and its subsequent history will depend upon the character of its conquerors. If victors and vanquished be not drawn from very dissimilar stocks, complete regeneration will follow. Even if the conquerors are distinctly beneath their victims in the scale of civilization, the apparent retrogression will be of short duration, owing to intermarriage between the males of the victorious race and the women taken as booty from the vanquished. The difference must not, however, be too great. In a sketch of Greek, German, and Italian history, the author brings forward evidence in favour of his view. Thus, in Attica and the eastern colonies of Greece, strict but not exclusive, in-breeding, combined with an admixture of blood from races upon the same level of culture, or approximately so, resulted in an extraordinary production of talent and genius. In Sparta, with almost exclusive in-breeding, true genius was rare, while extreme fixity of character and preservation of racial characteristics were universal in the governing class. In Greece, north of Thermopole and Oeta, in the settlements on the Black Sea, and all western colonies, free admixture of races far below the Greeks in civilization was the rule, and the names of few talented families or men of genius have come down to us. In similar fashion, the author shows that south and west Germany have been zones fruitful of genius, owing to favourable crossing; central Germany, on account of strict in-breeding, was predominately national and conservative: east Germany, exposed to crossing with the more barbaric and nomadic Slavs, relatively sterile of genius. In treating of the symptoms of racial degeneration, the author lays peculiar stress upon the diminution of the agricultural class. He says (page 401):

> If we find an unusually marked flight from the land associated with the second symptom—a constant fall in the population—then this testifies to an incurable sickness of the whole body politic, and under these conditions the end of such a national existence is a mere matter of time.

As will be seen, these views are not novel, but their adequate discussion would far exceed the limits of a review. The weakest parts of the book are, we think, those dealing with the more strictly medical aspects of the problem. In discussing the inheritance of predispositions to disease, the following statement is made (p. 249):

> However the latter (predispositions) are compensated by the maternal blood to some extent, in so far that by means of the latter a considerable handing on of acquired immunities (antitoxins) from definite injurious results of civilization is effected. This is peculiarly important for those diseases so justly termed diseases of higher civilization—tuberculosis and the insanities.

Our present knowlege of the facts of pathological inheritance, both experimental and statistical, certainly does not warrant so definite a conclusion. Despite this and similar shortcomings, we have no hesitation in pronouncing Dr. Reibmayr's book eminently suggestive and well written. The author is writing more for the educated layman than the professed man of science. When we compare his work with certain English publications addressed to the same class, we cannot but admit that our own writers are conspicuously inferior.

[1] *Die Entwicklungsgeschichte des Talentes und Genies.* Von Dr. Albert Reibmayr. Erster Band. Die Züchtung des individuellen Talentes und Genies in Familien und Kasten. [The Cultivation of Individual Talent and Genius in Families and Castes.] München: J. F. Lehmann. 1908. (Med. 8vo; pp. 517 and 3 maps. M. 10.)

IMMUNITY.

THE textbook on *The Technique and Method of Immunity Investigation*, edited by Professor KRAUS and Dr. LEVADITI,[2] is the joint production of many of the leading authorities on this subject, and will be completed in two volumes, each of which will be divided into two parts. The first part of vol. i commences with short introductory chapters by Ehrlich and Metchnikoff. In the former the German professor discusses the nature of the reaction between antigen and antibody, and defends his side-chain theory against recent criticisms which have been directed against it. Metchnikoff's contribution is very brief and contains nothing new; there are the usual remarks about the importance of phagocytosis and the dangers of regarding experiments performed *in vitro* as representative of what actually takes place in the living body. The really business-like part of the book begins with general chapters on the bacterial toxins, by Neisser and Madsen. These are followed by special chapters, in which each of the more important bacterial toxins is discussed in detail; both diphtheria and tetanus toxin are dealt with very fully and thoroughly, the former by Madsen and the latter by Eisler and Pribram. Amongst the articles which find a place in the concluding portion of the volume, special mention deserves to be made of the chapter on antigens of animal origin, by Sachs; the interesting account of snake venoms, by Calmette; and Pick's valuable exposition of the chemical and physical methods which are employed in the investigation of antigens. Every chapter in the book is written by an authority of high repute in the special department with which he deals, and on this account alone the publication is sure to be of service to specialists engaged in research on immunity. But the editors might have done a little more to make the book convenient for reference; there is neither a table of contents nor an index; the articles are simply strung together like a batch of contributions to a magazine. It is also questionable whether the general arrangement of the subject has been planned on judicious or attractive lines. The next instalment to appear will, we are told, be concerned with the technique and method of active immunization; after this there will be the two portions of volume ii, dealing with antitoxins and other antibodies. This project undoubtedly gives promise of great elaboration and thoroughness, and there may be theoretical advantages in separating the consideration of antigens (that is, substances which in the living body give rise to specific antibodies) from the discussion of antitoxins and other antibodies. But the majority of persons attach more weight to considerations of practical interest than to academical abstractions. The concrete reality, from the medical standpoint, is the particular infective agent, and there are excellent reasons for adhering to the rule, observed in all bacteriological textbooks, of treating each infective agent separately, and grouping together all that is known about the properties of its toxin and antitoxin, and about the degree of success which has been attained in the production of active and of passive immunity. Perhaps the reasons which have induced the editors to split up the subject in the manner proposed will become more apparent and more convincing when the remaining instalments of the work have been published. The work, when completed, promises to be a

[2] *Handbuch der Technik und Methodik der Immunitätsforschung.* Herausgegeben von Professor Dr. R. Kraus und C. Levaditi. Erster Band. Erste Lieferung. Jena: Gustav Fischer. 1907. (Sup.-roy. 8vo, pp. 373. With a lithographic plate and 38 illustrations in the text. M. 15.)

mine of valuable information; its utility will largely depend on the skill exercised by the writers and the editors in rendering this information readily accessible to the reader. The busy man cannot afford to spend unlimited time in wading through a mass of detail; he wants to know exactly where to find the particular information he seeks.

BLOOD PRESSURE.

DR. GEORGE OLIVER has brought out a second edition of his little book on *Blood Pressure*,[3] in which he gives an account of the various methods used and the results of his clinical observations. The publishers have bound it and lettered it with gold in such a way that it suggests to us a book of devotion. Dr. George Oliver, at any rate, is a devotee to his subject. In his latest form of instrument for measuring arterial pressure he adopts the armlet method, using a gauge with a fluid index—a modified form of the instruments introduced by Hill and Barnard. To measure the venous pressure he takes the patient's hand, and, raising it from the level of the heart upwards, notes the height (above this level) at which the veins on the back of the hand collapse. He says the collapse is so sharp and sudden that he can use it as an index to tell differences of pressure of as little as 1 mm.! We must confess we have been unable to obtain so sharp an index. While lifting the hand up, the arterial pressure is lowered by the hydrostatic effect as much as the venous pressure is, and vasomotor effects may occur, so it does not seem possible to determine venous pressure by this means without altering the arterial pressure. As the venous and capillary pressures vary from moment to moment with every change of posture and muscular contraction, there is not much to be gained by rendering a limb immobile, and trying to read capillary and venous pressures in that state. Any one can see on hanging his hand down how the veins and capillaries congest, and the pressure rises in them with the continuance of the dependent and immobile position, and how forcible gripping movements of the hand temporarily blanches the capillaries, forces the blood past the venous valves, and relieves the congestion. Dr. George Oliver finds the venous pressure raised 15 to 20 mm. Hg on cycling on a level road and 50 mm. Hg on a rising gradient, a result to be expected from the rise of arterial pressure and vaso-dilatation of the limbs which occurs during exercise. While the contrivance and use of ingenious methods of measurement are described, we do not find the physiological factors at work fully recognized and discussed. In treating of high arterial pressure in acute gout, Dr. George Oliver says:

> The exciting causes of such attacks are numerous. According to my observation, the following among others play a leading rôle—mental emotion and excitement; physical and mental over-exertion and fatigue; an unusually heavy meal; the increased ingestion of chloride of sodium or of alcoholic stimulants (especially in the form of beer or wines), the partaking of certain articles of food, the toxaemias, an injury (however trivial, such as sprains, etc., in some cases), warm baths, a common cold or influenza.

We would ask what the conditions are which do not bring on acute gout. He proceeds to say that all these causes

> are powerful stimulants of the peripheral circulation; they all raise the capillary pressure and increase tissue irrigation. In the non-gouty they are harmless, but in the gouty they are risky.

We are ready to admit that a common cold increases tissue irrigation in the nose, but not that influenza or a toxaemia is harmless to the non-gouty. Because of the difference of readings he obtains between the armlet method (obliteration pressure) and the maximal pulsation method when applied to sclerosed arteries, Dr. Oliver concludes that considerable pressure—for example, 75 mm. Hg—must be required to obliterate sclerosed arteries. His results may equally well be ascribed to errors in the maximal pulsation method. We have no evidence to show that, in the case of sclerosed arteries with high blood pressure and a big difference between systolic and diastolic pressure, the maximal pulsation indicates pressure correctly, while we have evidence that pressure equal to not more than a few millimetres of mercury obliterates excised sclerosed arteries. In treating of the causes of raised pressure, Dr. George Oliver says:

> Apart from exogenous causation (for example, by lead, alcohol, tobacco, syphilis, etc.), we might formulate a hypothesis according to which we have (1) an endogenous biochemical cause (whether metabolic, toxinic, suprarenal or renal) inducing hypertonia. . . .

We fail to see how the use of the words "exogenous" and "endogenous" is justified here. They were introduced by physiologists in a definite sense to express the origin of the nitrogenous substances in urine from body tissue or foodstuff. The author apparently wishes us to conceive that tertiary syphilitic effects on arteries are not to be classified with endogenous, biochemical, metabolic, toxinic causes. We cannot help thinking that he is using here scientific terms without attaching definite, clear conceptions to them. Again, in dealing with dietary for cases of high blood pressure, he says:

> The proportion must be reduced of these constituents of the foodstuffs which more particularly stimulate the cardio-vascular apparatus, such as various salts, soluble extractives, active principles and other bodies (for example, alcohol), which are directly absorbed without change, and may be regarded as exogenous hormones between the digestive tract and the circulatory apparatus.

Here the expression "exogenous hormone" seems not in accord with the clear and logical conception which accompanies the use of scientific terms. The number of remedies suggested for the treatment of high pressure are legion, including the giving up of common salt and the use of an "apressor salt" composed of ammonium hippurate 1 part, potassium nitrate 4 parts, potassium chloride 25 parts; the rendering of grapes, salads, strawberries aseptic "by dissolving one of Dr. Rideal's tablets of bisulphate (*sic*) of soda in ten ounces of water and using this as a wash water"; radiant electric light baths; Schnee's four-cell electric bath (galvanic or sinusoidal); peat, sulphur, pine, saline, and carbonic acid baths, followed by dry warm packing; intestinal antiseptics, such as benzo-naphthol, salol, salacetol, and tylmarin (acetylated ortho-coumaric acid); small daily doses of sulphur; "sedation of the gastro-cardiac reflex"; thyroid gland; "exogenous apressor remedies," such as nitrites of amyl, etc.; iodopin and iodalbin. Having considered all the proposed remedies, we agree with the author when he says:

> We are apt to forget that (high arterial) pressure is not infrequently a necessary evil, and should sometimes be regarded as a compensatory effort, or as one of the natural defences of the body.

Dr. George Oliver is the inventor of more than one ingenious instrument and useful method of examination, several of which are described in the appendix, and it is to this ingenuity of contrivance that we can give praise free from criticism.

INTESTINAL DISEASES.

WE gladly give a cordial welcome to the English translation of the volume on *Diseases of the Intestines and Peritoneum* in Professor NOTHNAGEL'S *Encyclopedia*.[4] The volume has the great distinction of having been almost entirely written by Nothnagel himself, the exceptions being two chapters on the chemical processes and the bacteriology of the intestines, the former by Dr. Fritz Obermayer, and the latter by Professor Julius Mannaberg. The work of translation has been well done, and we feel sure that it has gained greatly by the careful supervision of the English editor, Dr. Rolleston, as it contrasts most favourably with some other translations from the German which have been sent out by transatlantic publishers. In fact, the only misprints we have noted occur on page 1036 of the bibliography, where "Tobby" is printed for "Tubby," and "McSviney" for "McSwiney," on page 306 "impractical" is not English, it might be either "unpractical" or "not practical"; on page 316 to recommend "supination" seems a pedantic way of saying the patient should lie on his back. We are glad to see the unmistakable manner in which it is

[3] *Studies in Blood Pressure.* By George Oliver, M.D., F.R.C.P. London: H. K. Lewis. 1903. (Cr. 8vo, pp. 267. 4s.)

[4] *Nothnagel's Encyclopedia of Practical Medicine.* English edition. *Diseases of the Intestines and Peritoneum.* By Professor H. Nothnagel. Edited, with additions, by H. D. Rolleston, M.A., M.D., F.R.C.P. Second edition, thoroughly revised. Authorized translation from the German under the editorial supervision of Alfred Stengel, M.D. Philadelphia and London: W. B. Saunders Co. 1907. (Roy. 8vo, pp. 1059. 21s.)

laid down by Dr. Obermayer that disinfection of the intestines by drugs is impossible, and that the most efficient means is by emptying the bowel, for which purpose calomel ranks first, but the possible value of harmless bacteria (*B. lactis aërogenes*) in checking the growth of putrefactive and pathogenic bacteria is not overlooked. We agree with the Editor that it is flogging a dead horse to argue against the supposed English doctrine of the origin of chlorosis in constipation, as it is no longer supported by any authority in this country. We do not know that sufficient attention has been paid to the statement of Fischl that albumen and casts are sometimes found in the urine as a consequence of simple constipation, on the removal of which they disappear.

Dysentery is not dealt with in this volume, but in a note on page 264 the Editor makes it clear that in his opinion ulcerative colitis has no right to an independent position, and gives a brief epitome of the recent bacteriological and clinical work in support of this view. We cannot help expressing surprise at an editorial note on page 731 which speaks of oedema of the feet as occurring "often" in cases of cirrhosis of the liver without ascites. Cases of cirrhosis of the liver without ascites are not sufficiently common for any one to have a large experience of them, and the relative frequency of such an accidental complication as oedema of the feet can only be determined by a careful compilation of cases collected from some large hospital, but we should be surprised to find that it was common, for as a rule these cases come under observation for haematemesis; until this has happened, they have been usually regarded as in good health, or give an account of a certain amount of digestive disorder depending upon their alcoholic habits; further, when the portal obstruction causes dropsy, the feet do not swell until ascites has become pronounced.

Appendicitis is discussed under the heading of acute circumscribed peritonitis, and not as a disease of the intestines. There is marked opposition between the views held by German and American authorities as to the need for surgical intervention; the former contend that the number of deaths from appendicitis is very small, only 148 having occurred among 45,000 autopsies performed in twenty-seven years at the Vienna Pathological Institute, and that although the American mortality is only 2 per cent. or even 1 per cent, this is relatively high if the disease is to be regarded as one which, left to itself, is rarely fatal. We are told that no general rule can be formulated as to operation, but each case must be dealt with on its merits; on the other hand, the editorial note represents the views held in this country and in America.

HERNIA.

MR. MCADAM ECCLES has made very little alteration in his work on *Hernia*[5] since its first appearance eight years ago. The new edition contains some additions to the rich supply of excellent and instructive illustrations, but, beyond this, the last edition differs very slightly from the first, as it was found undesirable and, it might have been added, quite unnecessary to alter the size or the general scheme of the book. It is an able and useful treatise on all practical points of this important subject. It deals for the most part with the diagnosis and the treatment of the different forms of hernal protrusion, and in its teaching represents, as would be expected from the position and experience of its author, the most modern views. In one respect, however, Mr. Eccles seems to lag behind a large majority of his colleagues, and, in regard to what is called the radical cure of hernia, to hold rather conservative views. Certainly, if we consider the almost general practice at the present time, his list of indications for operative treatment is too restricted, and, moreover, far too much space, we think, has been devoted in this volume to trusses and mechanical treatment. The author, however, whose views on this subject claim respect, points out that the modern practice has led to an undue neglect of truss treatment, and consequent discomfort and danger to the patient. By those seeking instruction on the best method of operating for the radical cure of inguinal hernia, the special chapter on this subject will, from its clearness and fullness of detail, be found one of the most useful sections of the book.

Dr. DE GARMO of New York, whose work on *Abdominal Hernia*[6] is before us, has evidently acquired much personal experience of his subject. He gives a lucid and readable description of the clinical characters and the treatment of the different forms of rupture, and in his teaching is greatly assisted by a profusion of excellent illustrations, many of which, taken from photographs of living patients, are original. The monograph, however, cannot be regarded as an important addition to the abundant literature of hernia, as it really contains very little that cannot be found in articles on this subject included in the many general treatises that have in recent years been composed or translated by American surgeons. It is difficult to comprehend the statement made by Dr. Garmo in his preface—that the physician or general practitioner in his own country can derive little practical aid from such literary sources in the study of abdominal hernia. The information here given on the surgical treatment of strangulated hernia is scanty, and, indeed, quite inadequate. The important question of how to deal with gangrenous intestine is dismissed in some few lines. The chapters on operations for radical cure, and especially that dealing in this respect with femoral hernia, are good and instructive. As there are very few contraindications to such surgical intervention, too much space, we think, is given to mechanical and gymnastic methods of treatment, and to descriptions of different forms of truss.

MINOR OPERATIONS.

THE authors of this work on the *Operations of General Practice*[7] are rather obscure in explaining the precise object they have had in view. It has been written, we are told in one place, to assist the medical man to undertake with success many of the smaller operations which he will elect to perform, whilst in the preface we read that the authors have endeavoured to supply a want due to the failure of larger books to describe the steps of procedures all practitioners are called upon to perform frequently. The latter we would be disposed to regard as the actual aim of the authors, as their work seems well fitted to meet the needs of those practitioners who, though they have long lost touch with their schools, and have been thus prevented from acquiring a practical knowledge of the rapid advance in surgical technique, are compelled to meet the claims of their patients for operative as well as strictly medical treatment. Although we cannot agree with the authors that the education of the vast majority of medical men is very deficient in the practice and performance of the many small operations which lie so largely on the borderland between medicine and surgery, there is, we believe, a decided need for a book of this kind. Mr. CORNER and Mr. PINCHES have shown much ability and judgement in their selection of proper matter, and by sound teaching and a lucid exposition of the principles and technical details of modern surgery have succeeded in preparing a very useful and reliable guide for the busy practitioner. The utility of the volume is much enhanced by the liberal supply of clear illustrations.

NOTES ON BOOKS.

THE eleventh volume of the *Transactions of the Glasgow Pathological and Clinical Society*, which has just reached our hands, covers the work of all meetings from October, 1905, to April, 1907, and hence contains a very large number of papers. Among these one of the most important is that by Dr. JAMES H. NICOLL, dealing with the steps necessary for the radical removal of penile cancer. The outstanding feature of the volume is the admirable conciseness with which the members seem to have made their communications, but this may possibly be due to careful editing by the honorary editorial secretary, Dr. John Anderson. In

[5] *Hernia: Its Etiology, Symptoms, and Treatment.* By W. McAdam Eccles, M.S.Lond., F.R.C.S.Eng., Assistant Surgeon to, and Demonstrator of, Operative Surgery at St. Bartholomew's Hospital, etc. Third edition. London: Baillière, Tindall, and Cox. 1908. (Demy 8vo, pp. 234, 121 illustrations. 7s. 6d.)

[6] *Abdominal Hernia, its Diagnosis and Treatment.* By W. B. de Garmo, M.D., Professor Special Surgery (Hernia), New York Post-graduate Medical School and Hospital, etc. Philadelphia and London: J. B. Lippincott Co. (Med. 8vo, pp. 453; 226 illustrations. 21s.)

[7] Oxford Medical Publications: *Operations of General Practice.* By Edred M. Corner, M.A., M.C.Cantab., F.R.C.S.Eng., Assistant Surgeon to St. Thomas's Hospital; Senior Assistant Surgeon, Hospital for Sick Children, Great Ormond Street, etc.; and Henry Irving Pinches, M.A., M.B. London: Henry Frowde, and Hodder and Stoughton. 1907. (Demy 8vo, pp. 398. 170 illustrations. 15s.)

future editions of these *Transactions* a list of papers as well as an index of subjects and authors might perhaps be introduced with advantage.

Nearly all works dealing with the detection of adulterants in foods are written for the use of those who are specially engaged in such work, and accordingly assume a good deal of technical knowledge and skill on the part of the user; while the processes given are, as a rule, somewhat complicated, and intended to yield precise and detailed results. It is often required, however, to submit articles of food to comparatively rough tests for adulteration, without the use of special apparatus; for those desiring to perform such tests, *Detection of the Common Food Adulterants*,[1] by E. M. BRUCE, provides a very useful compendium of information. All the ordinary articles of food and beverages, including condiments and some flavouring preparations, are dealt with, short directions being given for qualitative tests for the commoner adulterants. Only tests are given which can be performed with the simplest apparatus, and by any one with moderate experience of laboratory work. The tests are collected from a great variety of authorities, and have been well chosen. In performing such tests, the necessary limitations of the information so obtainable must be borne in mind; but within these limitations, this little book is likely to be very useful and to meet a distinct want.

The first volume of the work recording the proceedings at the fourteenth International Congress of Hygiene and Demography,[2] held in Berlin at the end of last September, now published, contains a list of the official delegates, and of the medical men and others who attended the Congress, and a full record of the official speeches. Some of the scientific papers read are also included, but the greater number of them will doubtless be contained in the succeeding volumes. The papers are published in the language in which they were originally read—English, French, German, and Italian—so to appreciate these *Transactions* to the full the readers must be somewhat more polyglot than are the majority of medical men.

The *Dairy Laboratory Guide*,[3] by C. W. MELICK, is stated in the introduction to be written for farm boys attending short dairy courses at a college, and is intended to supply the deficiencies in instruction incidental to "short courses where a large amount of work is crowded haphazard into a small space of time." It is to be feared, however, that whatever might be its usefulness to American students (on which we express no opinion), farm boys in Great Britain will hardly derive much assistance from the book. The numerous illustrations, often placed on a different page from the description of the article illustrated, are of the most miscellaneous kind, from a butter-trier and pipettes to departments of model dairies, etc., in which no details of appliances or arrangement are clearly shown. The subject-matter is for the most part too condensed to be of much assistance to a beginner, and is not treated exhaustively enough for an advanced student. The extremely brief way in which departments of the subject are dismissed may be judged from the fact that "dairy bacteriology" occupies ten small pages, of which illustrations take up about two. Thirty-five "exercises" are described in the book, including such various matters as "cleaning and arranging laboratory apparatus," "pasteurization," "ice cream," "disinfectants," and even "writing to patrons."

The object of this pamphlet, *Midwives in England*,[4] originally an address delivered by Dr. F. H. CHAMPNEYS before the Abernethian Society of St. Bartholomew's Hospital, is to inform those who read it as to the number of women in this country who are attended during their confinements by midwives alone; as to the large number of deaths in childbed and illness following it which might be prevented; and as to the consequent necessity of the Central Midwives Board. The author gives a sketch of the work of the Midwives Board, and vindicates its methods. The influence which this pamphlet will exert can only be for good.

[1] *Detection of the Common Food Adulterants.* By Edwin M. Bruce, Instructor in Chemistry, Indiana State Normal School. London: Archibald Constable and Co., Limited. 1907. (Post 8vo, pp. 92 6s.)

[2] *Bericht über den XIV Internationalen Kongress für Hygiene und Demographie.* Band I. Berlin: Verlag von August Hirschwald. 1908.

[3] *Dairy Laboratory Guide.* By Charles W. Melick, B.S.A., M.S., Professor of Dairy Husbandry, Maryland Agricultural Experiment Station. London: Archibald Constable and Co., Limited. 1907. (Post 8vo, pp. 136; 52 illustrations 5s.)

[4] *Midwives in England*, especially in relation to the Medical Profession. By Francis Henry Champneys, M.A., M.D.Oxon., F.R.C.P. Reprinted from vol. xv of the *St. Bartholomew's Hospital Journal*. London: Adlard and Son. 1908. (Pp. 24. 6d.)

ROYAL COMMISSION ON VIVISECTION.

THIRD REPORT.

(*Continued from p. 634.*)

EVIDENCE OF LORD JUSTICE FLETCHER MOULTON, F.R.S.

LORD JUSTICE FLETCHER MOULTON stated that for many years he had taken a very keen interest in the progress of curative science both from the scientific side and the ethical side. He had come, many years ago, to a very deep conviction upon the subject. He had had in his long experience at the Bar, he thought, unrivalled experience in being an interpreter between those who were doing the pioneer work in science and the people who had to judge of the results of their work; and it was, perhaps, more from that standpoint than from any other that he desired to put his views before the Commission. He thought that in the controversy a great deal had been lost by looking at it in too narrow a light. It was not a question of vivisection, namely, the performing of cutting experiments on living animals; that was a mere nickname, a mere catch phrase, originally invented, he had not the slightest doubt, for purposes of prejudice. The real issue was whether curative science was to be an observational science or an experimental science, and the importance of the decision of that issue was impossible to be exaggerated. The opposition purported to be based on the principle that we were bound to regard the sufferings of animals, and that the avoidance of the suffering of animals was a motive which ought to influence every man with a conscience. It was a consequence, no doubt, of a change which had come over the views of mankind decidedly in the right direction. Of old, cruelty was thought nothing of, whether it was to men or animals. Down to the seventeenth century there was an extraordinary callousness to suffering of every kind. A great change from that time had been passing over the world. First there came the regard for the sufferings of men; now the thought of human suffering and the desire to avoid it was one of the most unquestioned and influential motives that guided the action of mankind. Presently there followed on that the extension of the feeling to the sufferings of animals, and there was no doubt that now, with the best part of humanity, sympathy for the sufferings of animals and the desire to lessen those sufferings were most influential motives of action. That appeared to him all in the right direction, and so far as his opinion went it was not only not contested by either party to this controversy, but both of them would in words accept it as a duty to lessen as far as possible the sufferings of animals as well as of men. He did not wish to be misunderstood when he talked about the sufferings of animals in the same breath, as it were, with the sufferings of men. There was a very broad distinction between the two which must be borne in mind if they were to come to right conclusions in this matter. The sufferings of animals were not solely physical. Almost as important a factor in that suffering was mental suffering, arising partly from a man's relations to society—that was to say, death or sickness would cause pain and suffering and trouble and misery to those intimately connected with the man, and partly to the individual himself. He was capable of feeling anxiety, regret, dread, and many other things which were of the most serious importance in measuring human suffering, but which were practically absent from animal suffering. Asked by the Chairman if he meant that if a man and an animal had each to be subjected to a serious operation under anaesthetics, the whole of the pain and suffering the animal experienced after it was properly anaesthetized and died under the anaesthetic, was covered by the anaesthetic, he said, Yes. On the other hand, he agreed that, in the case of a man, he had the suffering of anticipation, thinking of the future, of those who belonged to him, and if he died he had the suffering of his family. If he survived, he had suffering from that again, which might amount also to disablement and loss of some of his functions. That brought out another point. In the case of an animal, if the future was to be one of pain one unhesitatingly killed it. No matter how certainly the future must be a future of pain in a man, they must by universal acceptance keep him alive. He admitted that there was

a responsibility on every one who operated on animals to avoid unnecessary pain. He went further, and thought that one ought to admit as a fundamental principle that it was the duty of all men to work for diminishing pain. The diminution of the totality of pain in animals and in men ought to be a guiding motive and a prominent motive in the case of people who were working in curative science, and also of people in ordinary life. He went on to say that there was an almost unanimous opinion among those engaged in the practical work of the curative sciences in favour of experimental research in connexion with them. That support had been discounted by people saying, "Oh, those who are engaged in curative science get callous to pain." In his opinion, they were more sensitive to pain, because it was perpetually appealing to them, and it was the lifelong foe they were engaged in fighting. The difference between the two schools was this: Those with whom he ranged himself, who were desirous of extending and supporting experimental research in the curative sciences, considered not only the pain inflicted, but the pain that might be prevented, and they held themselves responsible for permitting pain which they could stop, just as much as for inflicting pain deliberately; they looked at the two together. The other school considered only inflicted pain. They thought it their duty to prevent pain being inflicted, even though the infliction of pain might lead to the prevention of many times that much pain in the future. He agreed that his argument, if carried out, would lead to this—that if anaesthetics had never been invented, one would still be justified in carrying out experiments on living animals, and inflicting the necessary pain upon them for the sake of the knowledge that would be acquired in the saving of pain in the future. Proceeding, the witness said he wanted the Commission to allow him to take what he might call a simile or an illustration. He was going to take a case which, in his opinion, exactly represented the attitude of the two rival schools; it was not connected with experiments on animals at all, and that was one of the reasons why he had chosen it. He would suppose that a ship which was plague-stricken and had got rats on board arrived at a port. A man with a sense of his responsibility, knowing that there was high probability that rats conveyed the plague, would unhesitatingly extirpate those rats, even though his only method of doing so was by putting them to a painful death, whether it was by poisoning them with phosphorus or by stifling them, or by even more painful methods. Now, supposing that a person were to come and say, "I could not bear to see those poor creatures running for their lives and in danger, trying to save themselves from their relentless pursuers, and so I let as many as I could escape," he had no doubt that the person who did that would think that he acted from humane motives. But what would be the consequence? It might communicate plague not only to a town, but to a whole nation. It might bring positively measureless misery. The first man would be right, because he would look at the inflicted pain which would be to the bad side of the ledger. No one would have a right to inflict that suffering merely capriciously. But he would see beyond that pain he was inflicting—that in acting thus he was preventing an amount of pain beyond all measure greater than that which he was inflicting; and if he was a man who had a heart which felt keenly suffering, whether in men or animals, he would do it all the more unhesitatingly. The other man would think only of the inflicted pain, and say, "I am too tender-hearted to inflict it." He would not consider that by not doing it he was causing preventable pain on such an enormous scale. That was typical of the struggle between the two parties. He had chosen that example because there was no veil between the act and its consequences. One could see plainly that the letting free of those infected rats might produce those consequences. Now, he would suppose that, instead of its bringing a plague, the killing of those rats would lead to the discovery of the antiseptic treatment. That antiseptic treatment put an end to an amount of human misery that they could scarcely realize. The suppuration of wounds, accidents leading to months of painful sickness and a recovery which was only partial and left the people maimed, the horrors of war doubled, the deaths in war enormously increased, were all consequences of sepsis—it was just as bad as a plague. Now if, instead of its being a question of "either you extirpate the rats or you have the plague," it had been "either you extirpate the rats or the antiseptic method will not be discovered, and the suppuration of wounds and all the horrors which follow from that must remain in the world," one saw at once that to the thoughtful man the argument in the two cases was precisely the same: "If I do not inflict this pain I permit an unmeasured amount of pain which I could prevent." In his opinion, when one saw clearly the causal connexion between the pain inflicted and the diminution of pain which followed from it, it made no difference in what way it followed. One's duty was to take that line which produced the minimum total pain, and whether the pain was inflicted pain, or whether it was preventable pain which was not prevented, was in his opinion one and the same thing. The reason why he gave that illustration was that he wanted to put before them by an example the criterion which he said every humane man ought to follow. It was that he ought to take that line which before his conscience he thought would lead to the diminution of total pain, and if he was satisfied that the infliction of a certain amount of pain was the right way to diminish the total pain, he was bound, from his very feelings of humanity, to take it. He admitted that those who claimed that they should inflict pain were bound to show that it was the wisest thing to do with the view to reduce the totality of pain. But he wanted to point out further that a man would be bound to take the same course with regard to the rats if there was not a certainty, but a reasonable ground for thinking, that plague would follow. He had said that the parallel he had taken was not unfair to either of the two parties, and he wanted to digress for a moment to show that he was justified in saying so. If they were to ask a man who had given thought to the matter who, of all living men, had been privileged to do most to reduce pain, the answer would almost without exception be "Lord Lister," who introduced the antiseptic method, which had been followed now by the various aseptic and antiseptic methods which obtained all over the world. Yet he saw the other day in a paper that at an antivivisection meeting Lord Lister's name was mentioned, and it was greeted with shouts of "Brute." They called a "brute" the man who had done most of all living men to lessen pain. That was perfectly consistent. They knew that he had voluntarily inflicted pain in his experiments, and that was all that they looked to; and they did not realize that if their real motive, the thing which was the real spring of their action, was the desire to lessen pain, Lord Lister's name should have been the most highly honoured of all. He only wanted to point out that they were acting according to the effect on their emotions of the contemplation of pain, not according to the pain itself. The prevented pain, which had made Lord Lister's name so esteemed, was not present to their minds. The inflicted pain struck their imagination, and the consequence was that they, with the best of motives, denounced him because he was willing to inflict pain, without realizing that he, who was the most capable—at any rate one of the most capable—of all men to know the ultimate result of his actions, had been doing it for the purpose of reducing suffering, and had succeeded beyond all hope. Going on to establish that experimental research was the wise mode of action if they wished to diminish pain, he started from the following fundamental facts: If one looked round the world, the only way in which they could diminish pain was by human action. Animals went on regardless of the pain they caused to one another. The universe was built on pain. Whole races of animals lived simply by killing other races, and killing them without the slightest regard to suffering. What was it that prevented their diminishing pain in the world? It was because they did not know how to do it. Take the case of doctors. Doctors were as desirous as they could possibly be of lessening suffering in the world, and yet how often they stood by the bedside, and the patient went on suffering, and they could do nothing. The absence of their power of diminishing pain was due to their not understanding two things. First, not understanding the causes which excited pain; and, secondly, not understanding the action of those causes on the organism. He called the first one (simply to distinguish it) the pathological factor—that

was to say, what were the springs of disease; the other was the physiological factor—that was to say, how those springs of disease caused pain in the organism. He cited the following as an example of the way in which lack of knowledge increased suffering. The discovery that the organism could, by means of anaesthetics, pass into unconsciousness without passing into death, and that all the living operations could go on equally vigorously while consciousness was entirely suppressed, led to the use of anaesthetics, and, as a consequence, to the diminution of suffering, both directly during operations and indirectly in increasing the possibilities of surgery. Without the knowledge obtained from that discovery men were obliged to perform operations in the brutal method of the old surgeons, because there was no alternative. Here, again, there was no difference of opinion. Not only the whole medical profession, but the whole public agreed that doctors ought to be armed with all the knowledge of the time. Every attempt was made to increase the efficiency of the education of the doctor; because they felt that by arming the doctor with the knowledge of the time they armed him as best they could with the means of diminishing pain. That was true with regard to the knowledge attained during the last forty years—the only years as to which he could speak; and that knowledge had been mainly due to experimental research. He also wanted to say that our inability to stop suffering, owing to absence of knowledge, was not only to be found in the case of obscure diseases. He should think there were very few who had not seen those near to them suffer from diseases which had baffled the doctors, and whether or not they could be eased or saved was decided by whether or not the doctors could read what was the cause of the trouble. A friend of his had just died, apparently of a painful disease, which the doctors could not touch. A *post-mortem* examination showed that it was only because they did not realize what the true cause of the disease was; it was one which might almost with certainty have been relieved. It was ignorance that hampered them. He used the term ignorance in a sense that would not, he trusted, be misunderstood. He was aware of the gigantic amount of knowledge that the present and past members of the medical profession, and those who had been engaged in research, had already accumulated, but what he meant by ignorance was the vast field of what might yet be known, but was not at present known. Passing to the question how they were to get rid of this ignorance, he said no man who knew anything of science had any doubt whatever that the right way to advance knowledge was by experiment. One could take the whole range of the sciences, and he would challenge an opponent to name one in which advance, if it had been rapid and striking, had not been through experiment. Where they were reduced to observation a science crawled. Where and in proportion as they could use experiment the science advanced rapidly. The scientific man added, of course, the testimony of observation—that was extremely valuable for the purpose of guiding and starting his experiment; but everybody knew that each observation became only the nucleus, or rather the basis, from which one started one's experiment. He was puzzling to think of some branch of science where there was only observation, and the only thing he could think of was the case of volcanoes. Now, there was not anything that had attracted human attention more, or fascinated it more, or had been on a bigger scale or more open to observation, than volcanoes, yet they were almost in the same state of ignorance of the origin and the *modus operandi* of volcanoes as Pliny was. He agreed with the Chairman that the difficulty was just as great now as then for anybody to go down a volcano when it was in eruption. In no way could one bring experiment to bear upon it. Experiment was like cross-examination. One could put the question one wanted, and Nature always answered it. She did not answer the question one meant to put; she answered the question actually put. She swore by the card in the most shocking manner. The consequence was that when one adopted experiment the great experimenter could put the question, the answer to which let the whole secret out. He proceeded to give an example that impressed him very deeply. It was just about the time when it was first discovered that guinea-pigs were susceptible to tuberculosis. He heard from a friend that a doctor of his acquaintance had been troubled as to whether consumption was a communicable disease or not; the vast preponderance of opinion at that date was that it was hereditary. That doctor took a dozen guinea-pigs, divided them into two sixes, and he let one six have the run of the wards of a consumption hospital, and the other six have the run of the wards of another hospital, just about in the same condition of temperature; he left them there for the requisite number of weeks, whatever it was, and then he killed the whole dozen, and he found that the six which had been running in the consumption hospital had tuberculosis, and that the six that had been running in the other hospital had no trace of it. In reply to Sir William Collins, the witness said he could not tell the name of the doctor, because it was not given him, but he heard it in the early days of research upon tuberculosis, and he believed it to be true. But if it was not actually performed, it would still serve as a typical example of experiment. Klein put guinea-pigs into an air shaft which led from the wards of a consumption hospital, and found that they developed tuberculosis. He was not basing anything on the fact. What he wanted to point out was, that such an experiment would settle the question more than would twenty years of observation—he might say a century of observation—for this reason, that these similar animals were placed under entirely similar circumstances, with the exception that, in the one case, but not in the other, there were present in the immediate neighbourhood persons who were sick of the disease, and it would be found as a result that in the one case they became sick and in the other they did not. The experiment showed affirmatively the disease was communicable. Lord Justice Moulton proceeded:

> Just try and see how you could get an equal degree of certainty from observation. You take a case where it has run through a family. Yes; but it might be that it was hereditary in the family. Then you find that in a particular place it is very largely prevalent. Yes; but that may be because, as compared with other places, the climate or soil of that place produces a predisposition to it. Neither group of cases points necessarily to communicability. Some people will be struck in one way with a series of these cases, others will be struck in another way, and there will be a perpetual conflict as to which is the true explanation. But when you take such an experiment, there is not a doubt; you cannot explain it, except that the disease is communicable. And the consequence is that you commence your further examination with the consciousness that it has been demonstrated that it can pass from the sick to the well.

The witness went on to say that he was very much struck, as illustrating the impossibility of arriving at these things by observation, by a piece of cross-examination by Sir William Collins of one of the witnesses before the Commission. He was dealing with the result of the serum treatment of diphtheria. An appeal was made to the statistics of diphtheria hospitals in London, and the witness said:

> Oh, the serum treatment is demonstrated as being a great success, because you have here the same hospital in the same place dealing for a consecutive number of years with the same population, and the statistics show a great diminution of the percentage of deaths after the introduction of the serum treatment.

Sir William Collins quite justifiably cross-examined on that. He asked if we were now getting the cases earlier; was it not true that we had made such advances in the diagnosis that we knew better what was diphtheria and what was not? And he went on pointing to differences in the circumstances of the earlier years and the later years, as an element that required consideration. That was perfectly fair. Statistics that were got in that way must be rightly open to that criticism. And for this reason: One dared not let the children wait in the later years so as to make the time at which they were taken up for the purpose of treatment comparable with what it was in the earlier years, because one was bound to do for every child the best thing that could be done, and the consequence was that one dared not make the experiment scientifically more perfect, because there was the paramount duty towards human life. There could not have been a case in which the observational method was working under greater advantages. There were hospitals devoted to that disease alone, dealing with the same population, in the same place, under, as far as possible, the same circumstances; but one dared not, and ought not to, make

the circumstances identical because of one's duty to the individual. Compare that with the case of the guinea-pigs. He could give another and more striking example, which was the classical experiment in connexion with anthrax, in which, after Pasteur had worked out the treatment by inoculation against anthrax, he took 50 sheep for his experiment; 25 of them were inoculated and 25 were left uninoculated. Then the whole of the 50 were inoculated with virulent anthrax, and within four or five days every one of the 25 that had not been inoculated died, while of the others 24 were alive and 1 was shown to have died from things unconnected with anthrax. These examples showed how in experimental research the circumstances could be made identical, and one experiment of that kind (properly repeated so as to eliminate error) gave a certainty that years of observation could not give. And all these years of observation had paid their toll in suffering. All that time there had been preventable pain, which had not been prevented because one had not known how. What, therefore, he wanted to point out was that they knew that the way to acquire knowledge with certainty was by experiment; it followed from its very nature, and from our universal experience in all sciences, that this was the way knowledge could best be acquired, because each experiment could be made to answer some critical question. The more complex the subject was, the more factors there were at work, the more essential the experimental method was; and the most complex of all phenomena were those that related to living beings. The more complex the subject, the more was one driven away from observation, which only gave the total result of many causes that were varyingly present in all cases, to something which would enable one to isolate several of the causes and determine separately their effects. He had a strong view that when one had once realized that experiment was the right way to acquire the necessary knowledge, it was a bad thing to work too directly and too consciously for practical results. He thought that the object and the reward and the ultimate justification of research was the benefit it conferred. But what he wished to urge was that it was unwholesome to keep that before one's mind when working, at all events, in the earlier stages. As a parallel he took the history of alchemy. For centuries men of the highest intellectual attainments worked hard at the transmutation of metals, and the result of those centuries had only been snippets of knowledge. They gave some very valuable reagents, but that was practically all. And the reason was that they did not commence by working so as to get to know the nature and properties of the things on which they were working; they worked straight for a result. If he might take a parallel in curative science, this work was like the shots at specific cures for cancer—violet-leaves, and all that sort of thing—made by people working straight for a nostrum that would cure a disease like that, the nature of which was shrouded in mystery. If he was to ask any scientific man of position in the medical profession, "Where do you look for the solution of the great problem of cancer?" he would say, "I look to a gradual acquisition of knowledge about it, and the breaking up of the obstinate silence of the disease which will tell us nothing—neither its preferences nor the things it dislikes, nor its origin, nor anything." Such men did not give much heed to the investigations aimed directly at its cure, because they did not believe they would succeed. They believed that they would have to know a great deal more about the disease itself before they knew in what direction success could come. But what they did think was that by gradually acquiring knowledge of it, knowledge acquired quite independently of whether it was a thing they could use or not, the disease would gradually cease to be a mystery, and when it had ceased to be a mystery they would find some weak point in its armour. Therefore, he was satisfied that the wisest thing to do was to realize that their ignorance of the springs of disease and the nature of the organism that suffered were the cause of their powerlessness, and that all research intended to lessen their ignorance was in the right direction, and that it was in vain for them beforehand to say which would soonest lead to a beneficial result. He felt strongly that they ought to fix their eyes on knowledge and not on immediate promise. Proceeding to deal with the justification of the use of the experimental method by what it had actually performed, he asked to be allowed to confine himself to the work of the last forty years, because that was the period which had fallen under his direct notice. Of course the first example which one must take was that of sepsis and the antiseptic method. If one looked at the books of forty years ago one found that the idea that sepsis in the case of open wounds was due to organisms derived from outside was rarely held; he doubted whether it was held by any, and it was not put into practice in any way. And the work of those who demonstrated that sepsis was in all cases due to organisms, and where access was possible it was almost always due to organisms coming from outside the animal attacked, gave rise to the antiseptic treatment, the value of which it was quite unnecessary to dwell upon. It was purely the result of experimental research, and it was a triumph the practical value of which put it at the head of all the changes in the last forty years. Dealing next with microbic diseases, he divided them into infectious diseases and diseases communicable otherwise than by what was ordinarily called infection. If one went back forty years it would be found that these diseases were complete mysteries. They were known as things which ran through a certain course, their symptoms were studied, and doctors did their best to alleviate them by nursing and treatment. A great number, no doubt, tried to do so also by drugs, which most authorities to-day would say were practically of little use. Now, experiment had shown that the bulk of these diseases were known to be the result of an invasion of the system by specific organisms which multiplied in the system, and the disease was due to the presence and action of these foreign organisms. The work of these forty years had revealed that we lived not as isolated living organisms, but that we were surrounded by and penetrated by infinitely small living things of very varied descriptions. Within us we had them permanently and probably normally; in fact, if the organisms which lived in the blood were included, certainly normally. This knowledge was absolutely due to experiments on animals. He would take one case, because he wished to show how baseless was the idea that the work done in this respect had only led to doubtful or hypothetical results. That was Pasteur's classical experiment on anthrax, to which he referred. That was a definite experiment, showing conclusively that there was a way of defeating this disease. It was a fact which was just as much demonstrated as any fact that had been demonstrated in chemistry or in any other science. The whole was based upon the discovery of the origin of the disease. It was the knowledge that it was due to microbes which led to the whole of that discovery. It instantly put the phenomenon of recovery in a new position. When an animal was healthy, and there were only a few microbes put in it, when one would say it was best calculated to repel invasion, they multiplied furiously. At the moment when it was weakest, when the microbes were strongest, most numerous, and the animal was most exhausted (if it was a case of recovery), the tide turned, and the enfeebled organism was able to fight the strengthened assailants successfully. That necessarily led to the conclusion that there must have been a change in the organism during that period, which entirely altered the relative strength of the two forces; and that was the beginning of the realization that in these diseases there came some protective change in the organism attacked which brought recovery at the time when one would least expect it. This led to the inquiry: What is that change? It must be something that survived the disease, because they knew that when a man was recovering from an infectious disease he could give it to other people. Then the question came: If it survived the disease, was it possible to produce it under circumstances so that it might be present in the organism independently of the disease? In fact, men came to realize that recovery in a case of microbic disease meant "the turn of the tide" in a process where, on the one hand, the invading microbes were multiplying, and, on the other hand, these protective forces were multiplying, and recovery or death meant whether the turn of the tide came too late or not. The moment one saw that, the whole question became: Could one antedate this turn of the tide? Could one contrive that this protective condition should be produced earlier, before the mischief was done?

(To be continued.)

Nova et Vetera.

ANCIENT SURGICAL INSTRUMENTS.

Doubt has sometimes been expressed by cynics whether medicine has made any advance since the days of Hippocrates. The progress of surgery is too evident to be called in question, but it is often taken for granted that the development of the art is entirely modern. In a certain sense this is true, for the history of surgery falls into a natural division—before and after Lister. But it is a vulgar error to suppose that the surgery of the ancients was as barbarous as it was in the twelfth century, when Leopold, the Duke of Austria who held Richard Coeur de Lion prisoner, could not find a man of art to amputate his crushed leg, and was obliged himself to lay a hatchet on his thigh which he ordered his servant to strike with a mallet. The limb was severed, but the Duke died of the gush of blood that followed. Hippocrates and his school, as their writings show, knew how to handle many kinds of surgical cases as well as the surgeons of the eighteenth century; and up to the time when the knowledge of the Greeks was lost in the darkness of the Middle Ages, surgery was practised on fairly rational principles.



Plate XLIV.—Extraction of weapon from wound in thigh by means of long forceps with crossed legs.

This is proved not only by the descriptions of old writers, but by old statues. There is on an Italo-Greek vase in the Louvre a figure of a Satyr with a wooden leg, the date of which is assigned to the second century before Christ. Ample proof of the range of ancient chirurgery is afforded by the instruments which were used, of which there are many specimens in modern museums and private collections. In Dr. P. Hamonic's work on the medicine and surgery of former days,[1] which is based on a series of old instruments collected by him, there are 487 illustrations from photographs taken by the author. These, he says, represent but a small portion of his collection. One thing which is made manifest by such collections is that the human mind moves within a circle of small circumference, for there are found in them the very forms of instruments generally accounted as of modern invention. Notwithstanding their infinite variety, the fundamental types of the weapons in the armoury of surgery have remained almost unchanged. This is well shown by the pictures and descriptions of the contents of surgical cases found in Greece, Asia Minor, Thoenicia (Syria), Roman Gaul, and Germany, given by Hamonic.

The subject is dealt with more fully in a recent work by Dr. John Stewart Milne, of Hartlepool,[2] who confines his attention to Greece and Rome. The work was presented as the thesis which forms part of the examination for the M.D. degree of the University of Aberdeen, and gained for its author the distinction of "Highest Honours." Dr. Milne spent several years in collecting his materials from books, and from examination of the contents of museums. The number of specimens available for such investigation is now very large. As Dr. Milne says in his preface, "The steady progress of archaeological discovery has gradually added find after find of surgical instruments, till now there is scarcely a museum with any considerable number of antique *petits bronzes* which does not number among its contents a few surgical instruments, and in the Naples Museum alone there are hundreds." The method pursued by Dr. Milne was to make a complete examination of the medical, surgical, anatomical, and pharmaceutical writings of the Greek and Roman authors which have been preserved. He makes the interesting remark that those ancient classics are not easily accessible; this is surprising in view of the reverence with which they were regarded by surgeons as well as by physicians up to comparatively modern times. The fact seems to be, as he points out, that our professional forefathers were content to take their knowledge of the old writers largely from mediaeval Latin translations. Dr. Milne also made a careful study of the reports of "finds" of instruments in various places. Failing actual ancient specimens, he laid mediaeval or ancient Arabian authors under contribution for purposes of illustration. The character of Dr. Milne's book could scarcely be described better than in his own words. He says:

> The volume opens with a short account of the ancient authors whose writings have any bearing on the subject in hand. At the end of the book will be found a bibliography of reports on finds and a list of the most interesting instruments to be found in various museums. The latter makes no pretence of being a complete inventory, although it might serve as a skeleton for the construction of a more comprehensive list at some future date. The bibliography, on the other hand, is believed to be fairly complete. The bulk of the book consists of an attempt to reconstruct, in the manner described above, the different instruments used in classical times.

[1] *La chirurgie et la médecine d'autrefois.* Paris: A. Maloine. 1900.

[2] *Surgical Instruments in Greek and Roman Times.* Oxford: At the Clarendon Press, 1907.

A full review of the wide field covered by Dr. Milne is impossible within the limited space at our disposal; a rapid survey is all that can be given. In an introductory chapter he gives an interesting account of the classical authors who are the "sources" of his work. As is well known, the problem of the Hippocratic writings is almost as much a subject of dispute among the learned as the authorship of the Homeric poems. Taking them all together, however, the number of instruments described is, Dr. Milne says, surprisingly large, comprising trephines, bone drills, probes, needles, tooth forceps, uvula forceps, bone elevators, uterine sounds, graduated dilators, cranioclasts, and many others. After these writers Greek medical literature ceased for a long time, or, it may be, ran in underground channels, coming to the surface again in the great schools of Alexandria, in the output of which Greek medicine was represented for several centuries. Of the Roman writers, the first was Celsus. Dr. Milne does not discuss the question whether he practised the art, the principles of which he set forth so clearly, but there is reason to believe that he was a compiler, and that his work *De Re Medica* was one of a series of treatises *de omni scibili* written or projected by him. This would partly explain the fact noted by Dr. Milne that he has only one word (*volsella*) for all the different forms of forceps which were designated by the Greeks by descriptive compounds. Much information about instruments can be gleaned from the multitudinous writings of Galen. Soranus of Ephesus, though he wrote only for midwives, has furnished Dr. Milne with many references to instruments, such as the speculum, the uterine sound, the cephalotribe, the decapitator, and the embryo hook. These are the principal writers from whom he has gathered his material. It is interesting to note, as showing the comprehensive scope of his examination of the medical literature of the ancients, that he has found references to surgical instruments in the works of some of the early Christian Fathers; in one of these, Tertullian (who, it may be mentioned in passing, was a lawyer, not a doctor), he found mention of no fewer than four instruments, one of which is not described by any other author. Of the Arabic writers, some are profusely illustrated with figures of instruments; but Dr. Milne has been careful not to fall back on any of the Arabs except to support deductions, drawing from more direct sources. Lastly, he refers to some later writers, such as Ambroise Paré, who flourished in the sixteenth century; Scultetus, who belonged to the seventeenth; and Heister, who wrote in the earlier part of the eighteenth century. All are abundantly illustrated, and some of the instruments represented agree exactly with the descriptions of the classical writers. "In other cases," say Dr. Milne, "although the names given to the instruments are those of classical times, it is, to say the least, doubtful whether they are of the same form as the ancient instruments whose name they bear. That was an age of great activity in the manufacture of new forms of surgical instruments, and we must accept with caution illustrations professing to indicate ancient forms of instruments. At the same time it is very interesting to note the large number of primitive arrangements which remained in use till nearly 1800. The enema syringe figured by Heister is exactly the same as we find described in the Hippocratic works—the bladder of an animal fixed to a tube—and many practitioners alive at the present day have seen the same simple arrangement in actual use."

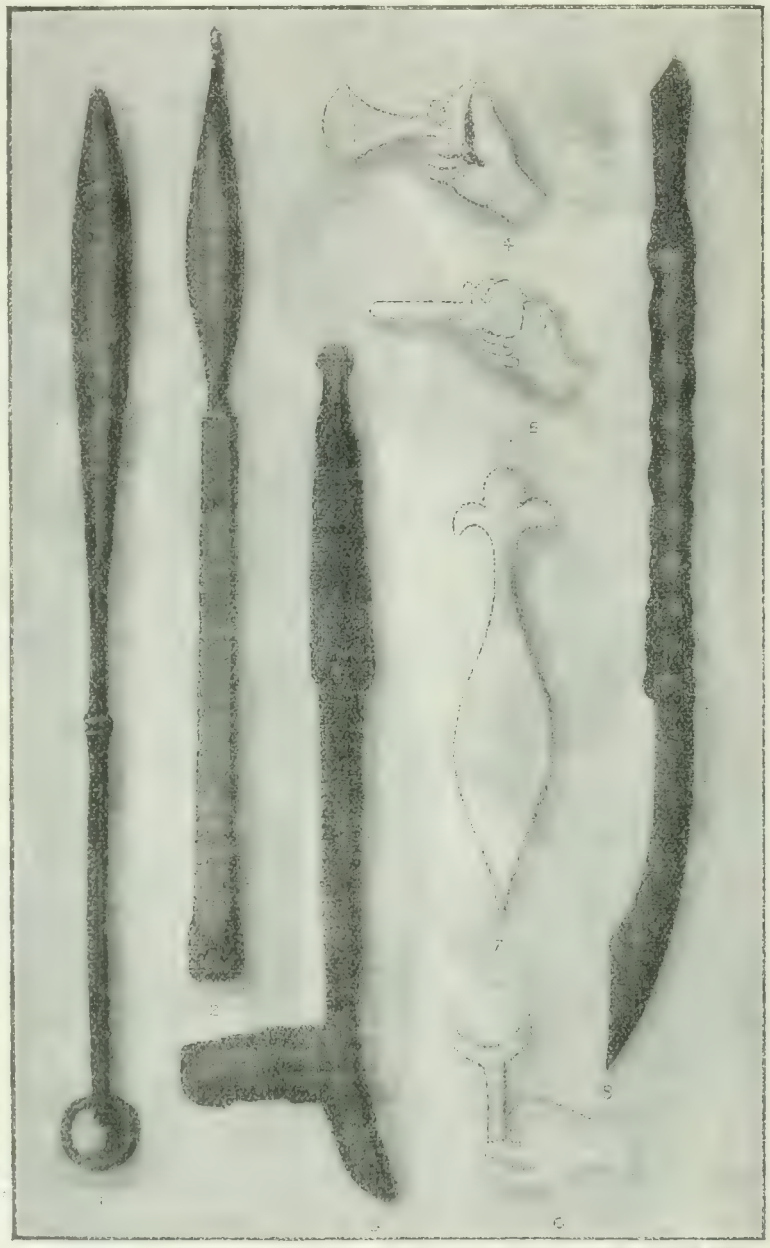


Plate VIII.—Fig. 1, Polypus knife; Fig. 2, Probe-pointed bistoury; Fig. 3, Phlebotome; Fig. 4, Lithotomy knife; Fig. 5, Lithotomy knife; Fig. 6, Lithotomy knife; Fig. 7, Perforator for fetal cranium; Fig. 8, Hemispathion (? polypus knife).

As to the material of which the instruments are made, those that have come down to us are for the most part of bronze. The Greeks and Romans used iron and steel as well for the purpose, but these have perished while the bronze has endured. The Homeric poems, says Dr. Milne, picture a civilization in a state of transition from a bronze to an iron period, and weapons and even agricultural tools are frequently described as made of iron, but this is said to be "hard to work." By the time of Hippocrates, however, iron was in common use. It is, according to Dr. Milne, a curious commentary on the relative durability of iron as compared with bronze instruments that cauteries, which are always described as made of iron, and which were so freely used that they must have existed in very large numbers, are among the rarest surgical instruments found. There was, however, plenty of good steel available, and the majority of the tools found in the earliest Greek colonies on the Nile, such as Naucratis and Daphnae, are fashioned of steel or iron, although those of the Egyptians among whom they were living (*circa* B.C. 600) were made of bronze. Pure copper was occasionally used for instru-

ments; it was got mainly from Cyprus and Spain, and to a lesser extent from Africa and Asia. Tin was got mainly from Britain; it was used for uterine sounds, and eyed probes for rectal work, but no tin instrument has come down to us. Leaden sounds and tubes for intrauterine medication are frequently used in the Hippocratic writings, and Celsus and Paulus Aegineta speak of leaden tubes for insertion into the rectum and vagina to prevent cicatricial contraction and adhesions after operations. Gold was used by Hippocrates to bind the teeth together after fracture of the jaw, and silver probes, grooved directors, and uterine syringes were sometimes made of silver. Dr. Milne says the execution of the instruments is, as a rule, all that could be desired, and the weight and thickness were no greater than was consistent with the necessary strength. The ornamentation is simple and effective. In the round instruments, such as probes, it consists usually of raised circular ornamentation, with or without a second ornamentation on the raised ringing. In others there are longitudinal or spiral grooves running along the instrument. In some cases the bronze is decorated with an inlay of silver damascening. The handles of some scalpels belonging to the third century are beautifully inlaid with silver, and Lucian speaks of some inlaid with gold. Wherever possible two instruments are combined into one. Thus, very few of the probes are simple instruments, but carry a spatula, a scoop or spoon, an eye or a hook at the opposite end. Even in volsellae a scoop, raspatory, or probe is sometimes found at the other end. The typical scalpel handle carries at the end opposite the blade a spatula for blunt dissection. Dr. Milne makes the interesting remark that where the scalpel and handle were forged in one piece they were united by something very like the modern aseptic joint. Hippocrates insists on the importance of keeping everything in the surgery absolutely clean. A few instruments bear the image of deities connected with medicine or their attributes. The figures of Aesculapius and his daughter Hygeia are found on medicine boxes the former with the serpent entwining his staff, the latter feeding a serpent from a bowl. The serpent is sometimes found on a probe, and there is one on a uterine dilator found at Pompeii.

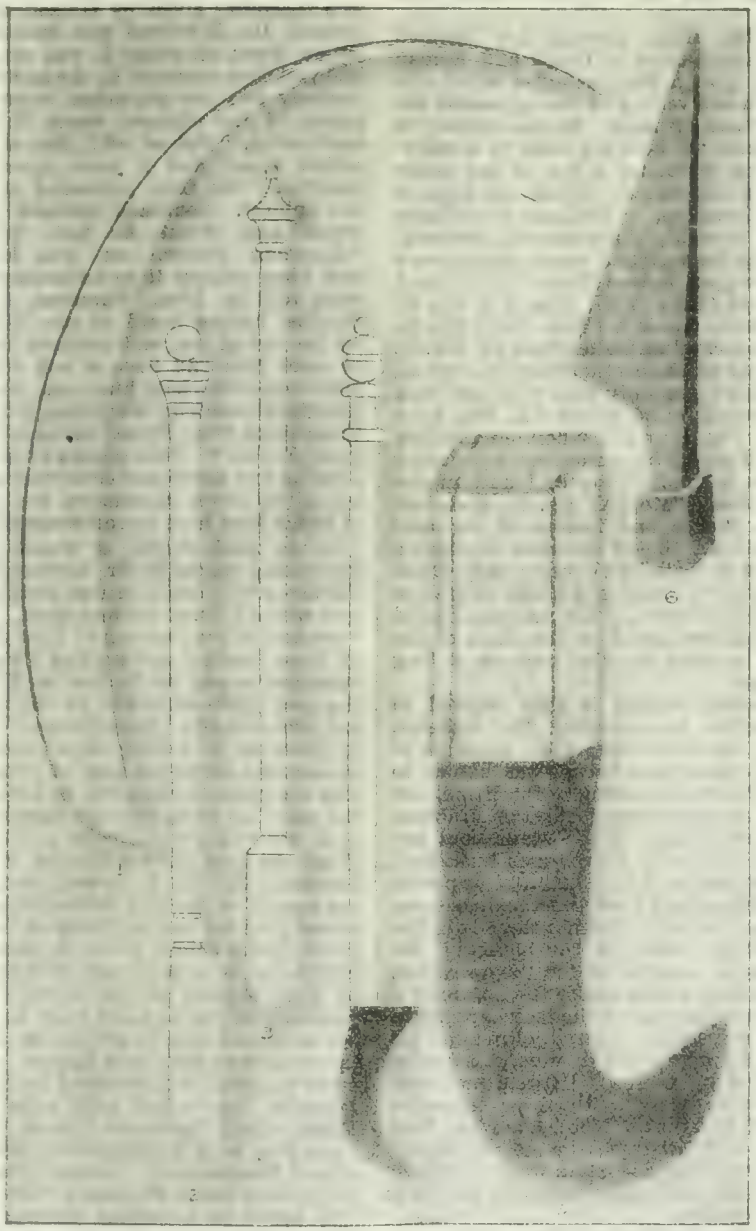


Plate IX – Fig 1, Fistula knife; Fig. 2, Pterygium knife; Fig. 3, Knife for plastic operations of the eyelid; Fig. 4, Uvula knife; Fig. 5, Curved bistoury; Fig. 6, Knife for eye work.

Dr. Milne gives an interesting account of the finding of ancient surgical instruments. The most prolific sources have naturally been Herculaneum and Pompeii; the instruments found there in the course of the excavations that have now been pursued for nearly three centuries have found a place in the National Museum at Naples. In 1818, a physician's house containing a large number of surgical instruments was discovered at Pompeii, and two chemists' shops with instruments have also been found. As Dr. Milne points out, the custom of burying the belongings of a deceased person together with his ashes, which prevailed among the Romans in the early centuries of the Christian era, has been the means of preserving a number of instruments. In 1880, M. Tolouse, a civil engineer of Paris, in carrying out some alterations in the neighbourhood of the Avenue Choisy, laid open the grave of a surgeon in which was found a bronze pot full of surgical instruments, among them being many forceps and volsellae, scalpel handles for blades of steel, probes and spatulae, ointment tubes, and a bleeding cup. Some coins found in the grave showed that the period was the end of the second or the beginning of the third century. In 1854 the remnants of a wooden chest were discovered at Rheims containing, besides jars for ointments, several scalpel handles, hooks, probes, spatulae, forceps, and a seal showing that the owner was an oculist named Gaius Firmius Severus. The coins found at the same time showed that the date of burial was about the end of the third century. One of the most important finds of recent years, Dr. Milne tells us, has been the discovery of a Roman military hospital at Baden, the ancient Station of Aquae, or Vicus Aquensis. From time to time isolated discoveries of instruments were made, among them being a catheter, a scalpel, and several probes. In 1893 a systematic excavation was made by Messrs. Kellersberger and Meyer on the site of some old Roman buildings on property belonging to them. A large chamber 10.35 metres by 12.5, with walls 60 cm. thick, was discovered, and later others were discovered varying from 3 to 27 metres in length. There were in all fourteen rooms. Along the side of the building on which a Roman road ran, there were the remains of an imposing façade, running the whole length of the building. It had consisted of a portico with colonnades, the foundations of which were found at regular intervals. It is possible that some of the larger rooms had been subdivided into others by thin

walls or partitions, for fragments of partitions of plaster with wood lathing were found. A large number of objects —tiles, lamps, vases, pots, knives, spearheads, nails, glass, fibulae, beads, weavers' weights, three amphorae a metre high—were found near the surface. Then, at a depth of 2 metres, surgical instruments began to be found. These included probes to the number of 120, unguent spoons in bone and bronze, a fragment of a catheter 13 cm. long, bronze boxes for powder, needles, earscoops, unguentaria, spatulae, a fragment of a case for instruments, and cauteries. Many coins of the reigns of Claudius, Nero, Domitian, Vespasian, and Hadrian were found, showing that the hospital had been in use between 100 and 200 A.D.

We cannot follow Dr. Milne through his detailed description of the armamentarium of Greek and Roman surgery. We can only give a few examples which will serve to show the wealth and variety of the apparatus the old surgeons had at their disposal. By the courtesy of the Clarendon Press, which we here beg leave to acknowledge, we are allowed to reproduce a few of the plates with which the work is illustrated. Under the head of "Knives," Dr. Milne describes, in addition to ordinary scalpels, razors, etc., a straight, sharp-pointed bistoury, Galen's knife for opening the vertebral canal, phlebotomes (Plate VIII, Fig. 3), polypus knives (Plate VIII, Figs. 1 and 8), lithotomy knives (Plate VIII, Figs. 4, 5, and 6), a perforator for the fetal cranium (Plate VIII, Fig. 7), reproduced on p. 698; a pterygium knife (Plate IX, Fig. 2); one for plastic operations on the eyelid (Plate IX, Fig. 3); another knife of the shape generally used with eye work (Plate IX, Fig. 6); a uvula knife (Plate IX, Fig. 4); a fistula knife (Plate IX, Fig. 1); a probe-pointed bistoury (Plate VIII, Fig. 2); and curved bistouries, one so strongly curved as to resemble a small billhook, found in the Roman Hospital at Baden (Plate IX, Fig. 5); these are reproduced on p. 697. Probes and forceps of the most varied shapes are described. One of the most interesting kinds of forceps is shown in Plate XLIV (see p. 695), which is a reproduction of a picture found in a house at Stabiae and now in the Naples Museum. The surgeon, Iapix, is engaged in extracting a weapon from the thigh of the wounded Aeneas; he is using for the purpose a long forceps with crossed legs.

An especially interesting chapter is that devoted to bladder and gynaecological instruments. The catheter, both male and female, was in common use. It seems to be doubtful whether the lithotomy forceps was known to the ancient surgeons. Celsus, according to Dr. Milne, had no knowledge of such an instrument; but the Arabians used it, for Albucasis says that "if the stone does not start out, it must be seized with a forceps or hook and, failing removal by these means, it is to be broken up with the forceps." The Arabians may have got the lithotomy forceps from Galen, who lived after Celsus; there is in the Naples Museum a forceps, found in the house of the physician, which seems to be suitable for the operation. Celsus describes a lithotrite, which was of the nature of a slender chisel. Hippocrates mentions the rectal speculum and Soranus describes a speculum specially intended for the vagina. These specula were really dilators with blades which could be separated by a screw. Various modifications of the instruments, mostly with three separable branches, are described by Franco (1586), Ambroise Paré (1592), Scultetus (1666), and Garengeot in the eighteenth century. The invention of the speculum with reflecting inner surface belongs to Récamier, who used it in the early days of the nineteenth century.

Dr. Milne thinks it improbable that the ancients had forceps for the extraction of the living child. They had, however, as we learn from Tertullian in his sermon *De Anima*, instruments for destroying the fetus *in utero*. They had also apparatus for fumigating the uterus and vagina, and pessaries of various kinds.

The surgeon of old was a pedicure and a "beauty artist" as well as a healer of wounds; hence in his equipment there were numerous instruments for epilation and other purposes not directly connected with surgery in the modern sense.

Enough, we think, has been said to give the reader an idea of the contents of Dr. Milne's most interesting work. His scholarship is as sound as his knowledge of surgery, both ancient and modern, is extensive. That a book based on such wide research should have been produced by a man busy about the many things that make up general practice is an achievement worthy of the greatest praise. It not only reflects the highest credit on Dr. Milne, but tends to raise in the public esteem the reputation for learning of the profession of which he is a member.

LITERARY NOTES.

FEW even of the greatest men are exempt from the infirmity of thinking they understand medicine. We learn from a recent number of the *Chronique Médicale* that Thiers was no exception. One evening in the year 1846, at a reception given by Guizot, then Prime Minister of France, Dr. Bouillaud was questioned by Thiers as to yellow fever, of which it was reported that some cases had just then occurred in the ancient capital of Provence. Scarcely had the physician begun to explain the symptoms of the disease, when Thiers contradicted him, exclaiming, "Not at all! Not at all! I have studied yellow fever, and I have never observed what you describe." He then proceeded to develop a theory on the subject. Bouillaud listened to him with astonishment, and, when he had finished, said quietly, "Monsieur Thiers, you, who know history so well, and have written it so admirably, must remember the story told by Livy. Hannibal, when held prisoner by Prusias, having heard of one Fabius, who gave lessons on the art of war and military tactics, expressed a wish to meet him and have a talk with him. But finding, after conversing with him some time, that he was only an intelligent amateur, the Carthaginian general left, saying to those about him, '*Multos vidi errare homines, neminem magis quam Fabium.*'" This remark of the famous warrior is applicable to a number of clever persons of our own day who talk glibly about vaccination and other medical matters of which they have no real knowledge or understanding.

In the *Daily Graphic* of March 11th there appears an interesting article by Mr. Herbert Sleveking, in which he discusses with much curious learning the question of the spot where Tyburn Gallows stood. He places it at a point "marked by the junction of lines drawn down the centres of these roads;" adding that "the permanent triangular structure known as Tyburn or Tiburn Gallows stood till the year 1759—certainly for 150 years before that date, and probably 360. From Henry IV, 1399, to 1759, is likely to prove to be a fairly accurate statement." Up to the present the wonderful map of John Rocque, 1746, which took ten years to complete, and is on a scale of 26 in. to the mile, has been, says Mr. Sieveking, the sheet anchor of all investigators. Thanks to the courtesy of Mr. John Hunt, the town clerk of the city of Westminster, and his assistant Mr. W. E. Bowen, custodian of the records of the council of the city of Westminster, Mr. Sieveking was recently, at the public library of the city of Westminster, Buckingham Palace Road, in charge of Mr Frank Pacy, introduced to a huge map, 7 ft. by 6 ft., designed in 1725 by John Mackay for the vestry of St. George, Hanover Square. He thinks he is right in saying that this map has never before been utilized in any way with regard to the fixation of the site of Tyburn. There are two of these maps in being, both designed for the vestry of St. George, Hanover Square, and both were in the vestry hall in Mount Street, Grosvenor Square, till a short time since, when they were transferred to the public library of the city of Westminster. Various views of Tyburn, including the famous one in Hogarth's "Idle 'Prentice" are given.

A writer in a German journal calls attention to the *Sacred Discourses* of Aelius Aristides, which may be described as the diary of an invalid of antiquity. The author was one of the most famous of the later Greek sophists, who lived in the second century after Christ. It was while on a journey from his home in Asia Minor to Rome that Aristides was taken ill. The first symptoms were emaciation, inflammation of the throat and bowels; nevertheless, he continued his journey in the severest winter weather, tormented by fever and asthma. Medical treatment and an operation—of what nature is not stated—on the stomach were of no use. He then sought the help of the gods, begging them for a cure in the spirit of the Emperor Marcus Aurelius, who thanked them for the remedies for blood spitting and giddiness which they suggested to him in a dream. The illness of Aristides lasted thirteen years, with many

changes, during which he faithfully followed the therapeutical instructions given to him in dreams by the gods; he made a careful record of them all. The general character of this literary production offers an interesting problem to the student of psychology. The anonymous German writer from whom we quote says that he had before him a medical dissertation from Jena of the beginning of the last century, the author of which finds in the diary of Aelius Aristides simply a typical picture of the somnambulist. This, he thinks, is certainly wrong. But it is certainly remarkable that Aelius Aristides continued through long years to have a regular dream life, from which came not only the healing of his ailments, but also inspirations of one kind or another, and a series of discourses or meditations which he believed he derived from his intercourse with the gods. As this morbid spiritual condition is displayed in minute self-description extending over 100 pages, we agree with him in thinking that there is here a fund of psychological material which awaits a scientific explanation. In particular, it is pointed out that the kind of treatment followed—the diets, fasts, the walks with bare feet in cold and rain—appear to have been especially efficacious in winter weather. The gods who advised Aelius Aristides seem in fact to have been precursors of Pfarrer Kneipp. We quote part of the patient's account of his sufferings:

A heavy cold left me no rest night or day. I suffered from palpitation, my breath was burning hot. Every minute I thought myself dying. I had not the strength to call a servant. It was only with the utmost difficulty that I could swallow some nourishment. It was impossible to remain lying in bed: I was obliged to spend the whole of the sleepless night sitting upright, my head supported on my knees, wrapped in wool and other warm clothes. The gods told me to look for relief from my sufferings by sea-bathing or foot-baths and bathing in springs, through the severe winter weather.

The result was satisfactory. "It is scarcely to be believed" says the invalid, "how well I felt afterwards. My strength was completely restored, and I passed the whole of the rest of the day and night in an equal temperature, keeping the whole body in a state of invigorating warmth." It is certainly a remarkable document.

The *Province Médicale* of March 7th publishes a decree of Henry II of France in regard to abortion and infanticide, the increasing number of these crimes having evidently excited the anxiety of the Government of the period. It may interest some of our readers to see the full text of this decree, which is entitled, "Of women who have concealed their pregnancy and caused the death of their newborn children by criminal methods":

Henry by the Grace of God, King of France. To all present and to come greeting. Like the most Christian Kings of France, our predecessors and progenitors, who by their virtues and Catholic acts each in his day showed in most praiseworthy fashion that the said title of Most Christian was given to them for good and sufficient reason, We, wishing to imitate and follow their example, and having by divers good and salutary examples testified the desire we have to keep and preserve this Heavenly and excellent title of which the principal effects are to initiate the creatures whom God sends into this world in our Kingdom and in all the territories subject to our allegiance into the sacraments ordained by Him, and when it pleases him to recall them to Himself carefully to provide for them the sacraments instituted for this purpose with the last rites of burial. And being informed of a vile and execrable crime frequent in our Kingdom which is that many women having conceived children in immoral ways or otherwise, are persuaded by evil counsel to disguise, hide, and conceal their pregnancies without disclosing or declaring anything about them. And when the time for their delivery comes about they get rid of the fruit of their womb in a hidden manner, then suffocate, beat to death, or otherwise suppress it, without giving it the benefit of the Holy sacrament of Baptism. This done they throw it away into secret and filthy places, or bury it in unconsecrated ground, thus depriving it of Christian burial. When brought before the judges and charged with this, they excuse themselves, saying they were ashamed to declare their wrong-doing, and that their children have come forth from their womb dead, and without any appearance of hope of life, so that in default of other proof the Justices of our Courts of Parliament, in dealing with such criminal actions brought against women, have been led to diverse opinions, some being in favour of the punishment of death, others of the "extraordinary question" (torture), so as to know and learn from their mouth whether in truth the child that came from their womb was dead or alive. When after such question by torture nothing has been confessed, most often they are taken back to prison, which has been and is the cause of making them again become guilty of such crimes, to our great regret and the scandal of our subjects. Against this it is our wish to provide in future.

We therefore cause it to be known that desiring to extirpate and cause the complete cessation of the said execrable and detestable crimes, vices and iniquities committed in our said Kingdom, and to remove the occasions leading to their repetition, We, with a view to the prevention of such things, have decreed and ordained, and by Perpetual Edict, General and Irrevocable Law, of our own mere motion, plenary power, and royal authority, say, declare, wish and ordain, and it is our pleasure that every woman who shall be duly convicted of having hidden and concealed either her pregnancy or her delivery without having declared the one or the other, and having obtained sufficient testimony as to the one and the other, and also as to the life or death of the child born of her womb, and it is found afterwards that the child had been deprived both of the Holy Sacrament of Baptism and of the usual public burial, that woman shall be held and reputed to have murdered her child, and by way of reparation shall be punished by death and the last penalty with such rigour as the particular nature of the case deserves so as to be an example to all. And that hereafter there may be no doubt or difficulty about the matter, by these presents we entrust the execution of this decree to our friends and faithful counsellors, the Judges of Parliament, the Provost of Paris, the Bailiffs, Seneschals, our officers and justicers. Given at Paris in the Month of February, the year one thousand and fifty-sixth, the tenth of our reign.

In 1585 Henry III added another clause to this decree to the following effect:

That no serving woman, chambermaid or other, may be able to plead ignorance of the above decree we enjoin all parish priests to publish to the people the contents of the said ordinance in their sermons at parochial masses every three months, and we order our procurators and lords high justicers to see that such publication is made.

CONTRACT MEDICAL PRACTICE.

Salary of "Works Doctor"

Yorkshire.—The terms offered by the firm in question to the proposed medical officer are very inadequate. The amount paid at the lowest club rate of 4s. per annum, when calculated on a membership of 2 250 girls would be double the proposed payments, and in nearly all clubs extra fees are paid for examination of members on admission. Accidents, too, are nearly always paid for in addition in the case of works and mines, and these are included together with the duty of administering anæsthetics and attending to ambulance classes. It is to be hoped there will be few applicants for this appointment at the terms proposed.

Medical Officers of Friendly Societies

"Wood N.W." writes that he has been asked to become the medical officer to a friendly society in his district at the rate of 4s. per annum per member, all men, and patients to be visited at their own homes within a radius of three miles. He wishes to know whether this is proper remuneration for the medical officer.

*** The terms quoted are the minimum terms now accepted by medical practitioners for club work. They are much too low, and it is to be regretted that they are still generally accepted.

The increase of work on the Panama Canal has caused a considerable exodus of labourers from Grenada, and those returning have brought back with them a far more serious type of malarial fever than has hitherto prevailed on the island. This naturally spread wherever *Anopheles* abounded, and the year (1906-7) with which the report just published deals was remarkable for the prevalence of malaria, while diarrhœa, dysentery, and enteritis were also unusually common. Two hundred and sixty cases of malaria were admitted to the Colony Hospital, mainly between August and November. The estimated population of the island is close on 70 000. The birth-rate was only 38.5, the preceding ten years' average being 41.5, and the death-rate 24.5, which was above the average. The peculiar type of small-pox (or what is regarded as such), an innocuous form of malady, prevalent in these islands during the last few years, broke out in June, and it was found necessary to open an isolation station, 52 cases occurring. The population of St. Vincent is estimated by the Registrar-General at 51 009, though it is probable that this does not make sufficient allowance for the exodus to the Panama Canal works. The births registered during the fiscal year were 1,768, of which 856 were male and 912 female, and of these 1 018, or 57.5 per cent., were illegitimate. The death-rate was 18 2 per mille, which, taking into account the high rate of infant mortality, is decidedly low. There were 11 lepers in the asylum, of whom 4 died, but as there is no compulsory segregation no clue is afforded as to the actual number existing on the island.

MEDICAL NEWS.

Mr. John Poland, F.R.C.S., late Senior Surgeon to the City Orthopaedic Hospital, has resigned the post of Surgeon to the Royal National Orthopaedic Hospital, to which he was recently elected.

A meeting of the Aesculapian Society will take place in the Metropolitan Hospital, Kingsland Road, N.E., this evening (Friday, March 20th), at 9 p.m., when Dr. Harold Pritchard will introduce a discussion on vaccines and opsonins. Mr. H. W. Armit and Mr. Girling Ball will take part in the discussion.

The King and Queen have given their patronage to the National Conference on Infantile Mortality, which is to be held this year at the Caxton Hall, Westminster, on March 24th and 25th, at 10 o'clock each day. Mr. Burns, M.P., the President, will deliver his presidential address on March 23rd, at 9 p.m. The Mayor of Westminster will preside on March 24th, and the Lord Mayor of Liverpool on March 25.

The inauguration of the Northern Counties Branch of the Incorporated Institute of Hygiene will take place in Armstrong College, Newcastle, on Monday, March 23rd, at 3 p.m. The ceremony will be performed by Professor Sims Woodhead of Cambridge, who will be supported by Sir Isambard Owen, Professor Thos. Oliver, Professor George Murray, Mr. Geo. Lunn, J.P., Mr. Johnstone Wallace, Dr. Thresh (Chairman of Council), and others. Sir George Hare Philipson, M.A., M.D., LL.D., will be in the chair.

In his lecture on March 11th at the Institute of Civil Engineers, under the auspices of the Royal Meteorological Society, Dr. Hellmann, Director of the Royal Prussian Meteorological Institution, traced the study of meteorology somewhat further back than did Sir William Thomson, of Dublin, in his interesting popular lecture at Exeter last year. Like Sir William Thomson, Dr Hellmann showed that the earliest known work on the subject in this country was done by the Rev. William Merle in the early half of the fourteenth century. In the previous century, however, the resuscitation of experimental science had already paved the way for regular meteorological observations; while general interest of a sort in the subject had always been kept alive by the Fathers of the Church, who, in their works on the Creation, had devoted much attention to the atmosphere. But the true dawn of meteorology dates, he showed, to a period long before the birth of Christ. Some modern proverbs concerning the weather can be traced back to Indo-Germanic and Babylonian sources. Tablets have been excavated at the site of old Babylon which on being deciphered have been found to contain references to the same subject. The Greeks seem to have been the first to make real meteorological observations; they even had parapegmata or weather almanacks fixed on the columns of public buildings. Rain records were first made in Palestine.

Last Tuesday was March 17th, and no one should need to be reminded that that day is sacred to the memory of the patron saint of the land habitually mentioned as the Emerald Isle by unoriginal poetasters, as Auld Ourland by the Liverpool dock labourer, and more tersely, if not less affectionately, as the Sod, by his American-Irish relative. On that occasion, as usual and most appropriately, the Irish Medical Schools' and Graduates' Association held its annual general meeting, and the first of these two yearly dinners, which, by their invariable success and the fact that they are attended by not fewer of Erin's daughters than of her sons, have acquired for the Society's festivals quite a distinct cachet of their own. The business meeting, held, like the dinner, at the Great Central Hotel, saw the installation as President of Sir Charles Cuffe, K.C.B., on the termination of the year of office of Sir J. W. Moore. The ballot, held immediately afterwards, resulted in the election of Dr. F. A. de Thierry Mouillot, of Harrogate, as President-elect, while Dr. M. J. Bulger was reappointed Honorary Treasurer; Dr. J. J. Macan, Chairman of Council; and Dr. Kenneth Fraser, Vice-Chairman. Certain vacancies in the Council were also filled, and Drs. T. Hobbs Crampton, W. Douglas, and C. W. Dawson, the Honorary Secretaries, confirmed in their office. The dinner in the evening brought together some 200 members and guests, the proportion of ladies present being even greater than usual, and some of them contributing not a little to the success of the concert which sandwiched the after-dinner speeches. The latter were as apt to the occasion as usual, their special feature being the verbal quips employed by the Right Hon. Sir Edward Carson, K.C., when acknowledging the toast to the guests proposed by Dr. Macnaughton-Jones in a gracefully-worded speech. The party, which assembled soon after 7, did not break up till long after 11 o'clock, the evening being voted by all a most successful one. Professor Windle, F.R.S., President of Queen's College, Cork, shared with Sir Edward Carson the honour of being the special guest of the evening, and the speakers included Dr. L. S. McManus, of Wandsworth, a Direct Representative on the General Medical Council.

Medical Magistrates.—Among the names of gentlemen recently placed on the Commission of the Peace for Aberdeenshire are those of the following members of the medical profession: Dr. Robert Bruce, Cults; Dr. John Findlay, Logie Crimond, Lonmay; Dr. Edward Oliphant, Bucksburn; Sir James Reid, Bart., G.C.V.O., K.C.B., M.D., Ellon; Dr. Alexander Forbes Trail, Fraserburgh; and Dr. Ellerington Reed Turner, Kintore.

Consumptive School Children.—The Cumberland Branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis has interested itself in the question of the provision of sanatorium treatment for consumptive children. During the year 1906 the number of children admitted to the Branch's sanatorium at Blencathra amounted to 12 per cent. of the total admissions for the year, and the Committee reports that it was unable to cope with the number of child applicants for admission to the institution. It has been suggested that a cheap wooden building might be erected in a field adjacent to the sanatorium for the accommodation of consumptive children, who might be taught by convalescent consumptive school teachers. The Branch has approached the Carlisle Education Committee with a view to getting the assistance, financial and otherwise, of the education authority to the proposed scheme. The Branch, in a letter on the subject which was referred for consideration to the Schools Management Committee, suggests that children discharged from the special building at the Blencathra Sanatorium might be drafted to open-air schools in Carlisle and elsewhere. The special building at the sanatorium would, if approved by the Board of Education, become a residential school for consumptive children. The Board of Education has written that there seems no reason why such a school as that proposed should not be certified under the provisions of the Elementary Education (Defective and Epileptic Children) Act, 1899, and so become entitled to receive from the local education authority a contribution towards its maintenance, provided the regulations of the Board as to such schools are complied with. The proposal of the Cumberland Branch of the National Association for the Prevention of Tuberculosis seems to be a sound and useful suggestion which is worthy of consideration by other similar bodies interested in the prevention of consumption.

Association of Certificated Dispensers.—The annual meeting of the Association of Certificated Dispensers was held at the Apothecaries Hall, Blackfriars, on March 5th. Mr. Montagu Smith (Lewisham Infirmary) presided. The meeting was largely attended, most of those present being engaged in the Poor-law infirmaries and out-door dispensaries, general and special hospitals, and general dispensaries in London. The Treasurer, Mr. A. L. Anderson (Whitechapel Infirmary) presented the balance sheet which after meeting all liabilities showed the substantial balance of £24 6s. 9d. The Honorary Secretary, Mr. A. Howell, Dalston Dispensary, presented his annual report, which stated that the Association continued to prosper, the membership having increased by 50 compared with the preceding year, making a total of 225. The Committee had kept in close touch with all matters affecting the interests of the members. A deputation had waited on the Master and Wardens of the Society of Apothecaries urging the adoption of several urgent and necessary reforms which would greatly enhance the value of the assistant's certificate. The introduction of a Bill into Parliament on behalf of the assistants would stand over until it had been seen what could be done for them through the Government Poisons and Pharmacy Bill now before Parliament. The meeting proceeded to appoint the Committee, which after some slight rearrangement of some of the offices held, were practically re-elected. The Honorary Secretary then announced that if the necessary arrangements could be made, it was proposed to institute a quarterly journal to circulate amongst the members. Mr. Howell made an appeal to those present on behalf of an assistant in distressed circumstances, the result being that £1 17s. 6d. was collected and forwarded forthwith. This pointed out the necessity for the founding of a benevolent fund.

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SATURDAY, MARCH 21ST, 1908.

THE SLEEPING SICKNESS CONFERENCE.

WE learned with much regret last Saturday that the Conference which Lord Fitzmaurice, the Under-Secretary for Foreign Affairs, called together in June, 1907, to consider international co-operation in the war against sleeping sickness, had been brought to an end without being able to come to an agreement on the draft convention. At the close of the sittings last year all seemed in a fair way for the acceptance of a scheme, framed after careful consideration, to enable all the Powers interested mutually to assist each other in stamping out the malady which has affected Africa for many generations and has recently more than decimated the native population of the Congo Free State and Uganda. The convention drawn up in accordance with the results of last summer's discussions has proved unacceptable to some of the Powers on a point which seems to us of secondary importance compared with the grave issues of life and death which are at stake.

When the Conference first met it had before it the discoveries of Colonel Bruce and the results of the more recent studies made in the affected districts by Professor Koch. There were, therefore, ample scientific data on which to base administrative proposals. The position may be stated shortly as follows: Sleeping sickness is caused by the presence of a trypanosome in the blood, which is introduced by the bite of a fly, the *Glossina palpalis*. The malady does not pass from individual to individual except through the medium of the fly. Where the fly exists sleeping sickness prevails; where the fly is absent the malady is unknown. The habitat of the fly is the lake shore or river bank, where there are forest and bush, and it is in the neighbourhood of such places that the disease is met.

Recent researches, moreover, have led Koch to conclude that this fly lives mostly on crocodile's blood, and consequently, if this source of sustenance were cut off, the fly would perish. This theory has much to support it, but it is inadequate as an explanation of the prevalence of the disease. In some of the islands in the great lakes there are no crocodiles, but plenty of flies and sleeping sickness. In these exceptional localities the fly feeds on antelopes. In any case, the probability is that, just as the killing off of big game saved other parts of Africa from the ravages of the tsetse fly, so the *Glossina palpalis* would disappear with the extermination of the crocodiles and other animals on which it feeds. Hence the proposal to destroy the eggs of crocodiles to lessen the feeders of the fly. With these facts and the results of a vast amount of research before them, the first Conference formulated a scheme of administrative action for combating the disease. It was felt that while each of the Powers gathered information in its own territories, and took with its neighbours common steps to combat the spread of the malady, the collection, analysis, and co-ordination of all information and results should be made in a central bureau for the common use. In each colony the officials would record the results of their work and study, and transmit them to the bureau of their own nation, and from each national bureau the accumulated experience would be sent to the central bureau for comparison and classification, in order that it might be published and distributed to each and all for the common purpose of fighting the pest. So far all was satisfactory, but when it came to the locality of the central bureau the difficulties began. "The French and "Italian plenipotentiaries declared themselves unable "to accept a proposal made at the last conference in "June, and then unanimously recommended, for the "establishment of a central bureau in London, and they "proposed that the work connected with sleeping sick-"ness should be taken over by the hygienic bureau, "which a Conference held in Rome in November last as "a sequel to the Paris Conference of 1903 has proposed "should be established in Paris."

Germany and a majority of the Powers represented at the Conference last week accepted London as the most suitable place for the central bureau. In doing so they recognized that time is of the essence of the problem. In any campaign against a spreading disease every week lost is an incalculable disaster. London was practically ready to take up the work of the central bureau, while the great institution, the bureau of hygiene at Paris, has yet to be established and organized. It is, in our opinion, a matter for profound regret that, on what is, after all, a thing of secondary importance, unanimity should have been lacking at this Conference. The central bureau could hereafter have been transferred to any more suitable locality, and in the meantime much co-operative work organized and accomplished. It was a great opportunity for the Powers represented at the Conference to unite in the humane enterprise of preserving health and saving life. So far as science was concerned there was harmony, and it was only when the sphere of diplomatic action was reached that the beneficent scheme broke down. Still, as Lord Fitzmaurice, the President of the Conference, said in closing the proceedings, the meetings have borne good fruit. "The assembling in London of the distinguished "scientific men whom they had welcomed, the dis-"cussions which had taken place, and the com-"munications which had been made were an impor-"tant record in themselves of scientific views, and "would help to form opinion on controverted points." In a word, the Conference has been in itself a central bureau, and brought together valuable information on which future action can be based. It is now for the Powers most seriously and most acutely affected by the pressing problem of fighting sleeping sickness to agree among themselves on common and co-operative action. If Great Britain, Germany, Portugal, the Congo Free State, and the Soudan will assent to a scheme of united effort for regulating the movements of the natives in their respective territories, segregating those affected with the disease, exterminating the *Glossina palpalis* and the animals on which it feeds in the affected districts, and, lastly, interchanging through some central organization their observations and experience, the Conference will have done much to succour and save a stricken people.

HUMAN TYPHOID CARRIERS.

THE Home Office has recently issued a report by Dr. Branthwaite, His Majesty's Inspector under the Inebriates Act, on an outbreak of enteric fever in the Inebriate Reformatory at Brentry. The first case occurred in September, 1906, and between that date

and November, 1907, 28 persons were attacked, 2 of whom died. The cases occurred at irregular intervals, and always in batches, 3, 4, or 5 sickening at about the same time. This intermittent feature of the epidemic was a definite characteristic from the beginning to the end of the outbreak. After the detection of the first case, which occurred in a woman who had been some months under detention, and had, therefore, not been recently exposed to outside sources of contamination, a vigorous search was made for the cause of infection, and, amongst other matters, special attention was paid to the source of the milk supply. But notwithstanding the care exercised over food distribution and sanitary conditions generally, fresh cases arose. The only clue to their cause was that all pointed to milk contamination rather than to general infection of food. Three officers were attacked who boarded themselves away from the reformatory, and received no food from that institution except milk. Three inmates developed the disease who, being mothers with infants, received a larger allowance of milk than was given to other patients. Officers, who were supplied with undiluted milk, were attacked in larger proportion than inmates, who were only given milk which had been mixed with boiling tea or cocoa. Owing to these and other observations, renewed attention was paid to the milk. The rule had always been to sterilize the milk furnished by the dairy before it was distributed. It was found, after careful investigation and the institution of additional precautions, that the possibility of imperfect sterilization and previous introduction of the germs could be confidently excluded. It became evident that contamination must have occurred subsequently to sterilization, and probably during the time when the milk remained standing in the dairy after sterilization and before distribution.

Other sources of dairy contamination having been excluded, Dr. Davies, medical officer of health for Bristol, initiated the search for an apparently healthy human "carrier." The result was that one of the dairymaids, who had recovered from an attack of typhoid six years previously, was found to give a semi-positive reaction to Widal's test. This suspicious circumstance led to an examination of her excreta. The first two searches proved negative, but the third time pure cultures of the typhoid bacillus were obtained. She was forthwith excluded from all dairy work, and in his report, written three months later, Dr. Branthwaite states that no further cases of typhoid have occurred. He considers that this woman was the sole cause of the outbreak. "The epidemic started after her admission "to kitchen work, where she was able to contaminate "food and milk in a modified degree, and became more "virulent after she was given dairy work only." The intermittent character of the outbreak, he points out, agrees with the fact that the occasions when her excreta contained infective bacilli were also intermittent. In concluding this highly interesting and important report, Dr. Branthwaite expresses his indebtedness to Professor Walker Hall for conducting the bacteriological work which led to the establishment of the final result.

Still more recently another instance of the human typhoid carrier has been discovered. It is recorded by Dr. Chalmers, medical officer of health, in his report on an outbreak of enteric fever in the City of Glasgow. This outbreak, which commenced early in December, 1907, and continued into the third week of January, 1908, was traced to a particular milk supply. An examination of the milkers, made with a view to the possible discovery of an apparently healthy "carrier," brought to light the fact that one of them had passed through an attack of typhoid fever sixteen years ago, and had from time to time since that date been associated more or less closely with outbreaks of the same disease. The person was taken into hospital and specimens of the dejecta and urine were submitted to Dr. R. M. Buchanan for bacteriological examination. "These tests," Dr. Buchanan reports, "have resulted in "the discovery of the bacillus of enteric fever in the "dejecta and in establishing the existence of a source "of infection which, doubtless, directly accounted for "the early cases of the outbreak and indirectly gave "rise to the epidemic wave. The bacillus did not "appear in great number in the dejecta, a rough "estimation computing it at 5,000 per cubic centimetre. "Her blood gave a positive Widal reaction with the "laboratory strain of *Bacillus typhosus*."

The relation of the earlier to the later cases in this outbreak is of particular interest, and is explained in Dr. Chalmers's report. The outbreak began with five cases distributed irregularly over eleven days, the notifications being received from December 17th to December 27th. At this point there followed a blank period of six days, but on January 3rd a series of cases commenced to crop up, and was maintained unbroken until the outbreak ceased. The cases in this latter series "present the true characters of a milk-"borne epidemic, in the rapid increase in the numbers "notified daily, and in the numbers sickening simul-"taneously." Amongst the Glasgow consumers of the incriminated milk supply 92 cases were registered as occurring in seventy-nine households, there being ten households in which multiple primary infections, 23 in number, occurred. The explanation given of these two waves of infection is that the earlier cases are directly attributable to the chronic carrier, and that amongst the persons who derived their disease from that person there was a member of a family supplying part of the milk which was responsible for the later series of cases. This last-mentioned person must be regarded as the starting-point of the secondary or epidemic wave. There is thus a very instructive difference, as regards their causation, between the sporadic and the epidemic cases which occurred during the Glasgow outbreak. The mischief directly attributable to the chronic carrier manifested itself in the production of sporadic cases; this feature seems to be typical of infection by apparently healthy carriers, and suggests a clue to the causation of many isolated cases of the disease for which no satisfactory explanation could be established. The epidemic, on the other hand, owed its immediate origin, as is usually the case, to food contamination emanating from the actual occurrence of enteric fever.

To the two instances of human typhoid carriers which we have discussed above many more may be added. Dr. Dean's discovery of a typhoid carrier of twenty-nine years' standing was reported and discussed in the British Medical Journal of March 7th, p. 562. And in our issue of January 4th, 1908, p. 15, we published a valuable article on typhoid carriers by Drs. A. and J. C. G. Ledingham. They report that a certain lunatic asylum in Scotland has been visited since 1893 by a succession of small outbreaks of typhoid fever. Thirty-one cases in all have occurred, and 24 of these have been in females. Investigations pursued along the usual lines failed to elucidate the cause of the outbreaks; so in September, 1907, the authors commenced a systematic examination of the patients' stools. From the main asylum 57 samples of faeces from female patients were examined. One patient, who

has been in the asylum since 1896, was found to be passing typhoid bacilli in enormous numbers. There is no record of her ever having had typhoid fever. The patient was isolated, but after this precaution had been taken a case of typhoid arose in another part of the institution containing 34 female patients. The examination of the faeces of these persons brought to light another carrier, a woman aged 60, who had an attack of enteric fever in 1895, and has remained continuously in the asylum since that time. Subsequently a third carrier was discovered, a woman aged 30, who had typhoid fever in 1904.

The authors supplement the account of their own observations by quoting some of the instructive instances of typhoid carriers which have been demonstrated in Germany. Special mention deserves to be made of the now famous Strassburg case, described by Kayser in 1906. It was observed that almost every new employé in a bakery, kept by a woman who had suffered from typhoid fever ten years previously, became seriously ill, with intestinal symptoms resembling those of typhoid fever. At length the faeces of the woman were examined, and were found to contain the specific bacilli in large numbers. This case attracted widespread attention; bacteriologists were stimulated to make systematic examination of the excreta of apparently healthy persons in other outbreaks the origin of which had not been explained, and the result was that in many instances apparently healthy persons were found to be chronic typhoid carriers, and were proved to be responsible for the dissemination of the disease. This class of person is a particularly serious danger in lunatic asylums, partly owing to the dirty habits of the patients; and these institutions have yielded a remarkably large number of the cases recorded. A particularly striking example, quoted by Drs. A. and J. C. G. Ledingham, was brought to light by Nieter and Liefmann, who found as many as thirteen carriers in an asylum where there had been a succession of typhoid outbreaks.

The examples to which we have called attention are sufficient to make it clear that recent bacteriological research has thrown a new light on one of the ways, hitherto little suspected, whereby typhoid fever may be disseminated. The discovery of the chronic typhoid carrier, and of the mischief which such a person may produce, is certainly disquieting, particularly when we reflect that, though the bacillus probably persists in only a very small percentage of enteric fever cases, there must be a considerable number of these dangerous individuals whose condition is unknown, unsuspected, and not likely to be discovered. It is especially disconcerting to realize that some of these unknown carriers may be engaged in occupations which involve the constant handling of food. But however unpleasant this contingency may be, we cannot afford to shut our eyes to its possibility; and it therefore seems desirable that special precautions should be taken when persons ascertained to have previously suffered from typhoid fever are employed on work of this nature.

THE COMMUNICABILITY OF PHTHISIS.

DR. BULSTRODE'S *Report on Sanatoria*, etc., the general scope of which was noted in an article published a few weeks ago (p. 275),[1] contains observations relative to the direct communicability of phthisis which may be advantageously compared with the conclusions Sir Shirley Murphy has been led to express[2] on somewhat different grounds. From an examination of the data afforded by the Catholic Nursing Orders in Prussia, Cornet[3] inferred that intimate association, such as obtains in a religious order, is responsible for an enormously enhanced mortality from tuberculosis among healthy persons. In a careful analysis of Cornet's figures, Dr. Hamer shows that the inference is not justifiable. Dr. Hamer points out that the "population at ages" in Cornet's returns, as deduced from the total deaths in his Table III and "death-rates at "ages" in Table IV, are at variance with the results obtained by following through the population at various ages, applying the appropriate decennial death-rates. Thus, the expected number of persons between 50 and 60 is 1,000, as against 311 deduced from Tables III and IV. This suggests that the inmates are not followed from entrance to death, and that, further, some "selection" of persons entering the institutions occurs. The impossibility of basing any argument upon the mean age at death is clearly seen if we examine individual tables. Thus, No. 18 "Order," Table I, gives an average number of inmates of 43, and 18 deaths are recorded in twenty-five years, so that, if the full numbers were maintained from the beginning, the majority of the inmates must have been middle-aged women. The average age at death was, nevertheless, 28·88 years. Hence, either the older women have been, for some reasons, removed from the class which provides material for the death returns, or the average age of those living is exceptionally high.

Statistically the problem is difficult, because the age distribution of inmates may have varied during the history of the institution, in which case the constitution deduced from Tables III and IV, which represents the *average* population over the whole twenty-five years, would not serve as a basis for comparison. Dr. Hamer has, at least, made it clear that Cornet's conclusions cannot be accepted without further evidence.

Apart from its public interest, the question is of importance in dealing with the problem of inheritance, the greater prevalence of tuberculosis among the offspring of tuberculous parents having often been attributed to a greater chance of infection. Baumgarten's well-known views[4] regarding germinal infection, which, in view of the admitted rarity of congenital disease, involved the postulation of a long latent period, have not been confirmed by recent workers.

As Sanchez-Toledo[5] pointed out many years ago, the undoubted cases of congenital disease testified strongly against the view that a germinal infection, when present, was likely to remain dormant. The work of Longstaff, alluded to by Sir Shirley Murphy, does not support the contention that interconjugal infection is of frequent occurrence; Pearson's analysis of the Crossley records tends in the same direction. The relative frequency of non-pulmonary tuberculous infections among the offspring of phthisical and non-phthisical parents has not yet been satisfactorily investigated; but, in view of the work to which we have alluded, it is reasonable in the present state of knowledge to believe that fitness of soil is a very important factor in the development of tuberculous disease.

[1] *On Sanatoria for Consumption and certain other Aspects of the Tuberculosis Question*, p. 84, etc.

[2] BRITISH MEDICAL JOURNAL, February 15th, 1908, p. 400.

[3] *Zeitschrift f. Hyg.*, Bd. vi, Part 1.

[4] Vide *Zeits. f. klin. Med.*, 1883, vol. vi, p. 71; ibid., 1885, vols. ix and x. Ueber latente Tuberculose (*Volkmann's Sammlung*, 1880, No. 21).

[5] *Arch. de Méd. Expérim.*, 1889, p. 503.

PROFESSOR OSLER AND THE ASSOCIATION.

AT the annual dinner of the old Medical Society of London, which was held on March 11th, Professor Osler was called on to return thanks for the official guests of the Society. After speaking of the Medical Society of London and the Royal Society of Medicine, he said: "As for the third—which you should all join "—it is the Association of the men behind the gun, "of those who work in and for the profession, the "British Medical Association. It may do things which "you do not like, or do them in ways of which you "do not approve, but that is no reason for keeping "out of it; you should join it and help to have "them altered. Those of you here who are con- "sultants and on the medical and surgical staffs "of the London hospitals, but do not belong to "this Association, do justice neither to yourselves "nor to the profession to which you belong." He further remarked that the British Medical Association was the one and only Association or Society which represented the entire profession, and that it did this very thoroughly; it was alive and active, and was doing a great work. We have great pleasure in drawing attention to Dr. Osler's expression of opinion, and we can say in return that he certainly does not shirk his responsibilities to the profession or the Association, and that we gratefully recognize the fact that from time to time he is able to leave his occupation at Oxford to come and take his share of the work of the Association as a member of the Central Council.

HOSPITALS CONFERENCE.

THE United Kingdom Hospitals Conference will take place on Wednesday and Thursday, April 1st and 2nd, in the Botanic Theatre, University College, London, kindly lent for the occasion. The proceedings will be divided into three sessions—Wednesday, 2 to 6 p.m.; Thursday, 10.30 a.m. to 1 p.m., and 2 p.m. until the completion of the business. Arrangements are being made for those taking part in the Conference to dine together at the Waldorf Hotel on the Wednesday evening. Each session will have its own definite programme, that for the Wednesday afternoon including (in addition to the reception of the report of the Committee and other formal business) consideration of motions, if any, submitted by hospitals through their representatives with respect to the proposals as to reform in hospital administration which were before the last Conference; questions of payment by hospital patients, including (*a*) whether patients should pay for food and medicine supplied to them (to be introduced by the Hon. Sydney Holland), (*b*) whether hospitals should treat gratuitously patients who are receiving payments under the Workmen's Compensation Acts, (*c*) the advisability of having pay wards in general hospitals; the prevention of hospital abuse, (*a*) the employment of almoners (to be introduced by Colonel Montefiore, of the Charity Organization Society), (*b*) the co-ordination of hospitals with provident dispensaries and similar institutions. The programme for Thursday morning will include systems of payment by patients in cottage hospitals (proposed by the Deal Cottage Hospital); the formation of county guilds for the support of hospitals (proposed by Bedfordshire County Hospital); the advisability of the adoption of the system of uniform accounts, as recommended by the King's Fund, by all provincial hospitals. In the afternoon the following matters will be discussed: The direct representation of the medical profession on boards of management of hospitals (to be introduced by Dr. Ford Anderson); whether general hospitals should make provision for the reception of cases of incipient insanity (to be opened by Dr. Barrs on behalf of the Leeds Infirmary); and the desirability of the inclusion of tuberculosis among notifiable diseases, with a view to the isolation of such patients in publicly provided hospitals (to be introduced by the Rev. W. Blissard, on behalf of the Kent County Hospital).

MISS FLORENCE NIGHTINGALE.

ON March 16th the City of London conferred its honorary freedom, the highest honour in its gift, on Miss Florence Nightingale. The only other lady ever made a "free sister" of the City of London was, we believe, the late Baroness Burdett-Coutts. The City Chamberlain, Sir Joseph Dimsdale, in presenting the casket to Mr. L. H. Shore Nightingale, who represented Miss Nightingale, said that probably on no previous occasion had the Corporation more accurately gauged the desire of the Empire than when the Council unanimously passed a resolution expressive of appreciation of the great efforts of Miss Nightingale for the improvement of hospital nursing and management which had led to the alleviation of so much human suffering. They thus proclaimed for all time their admiration of the labours and lofty aims of one of the noblest characters in our country's history, and of one whom posterity would ever be proud to claim as one of Britain's daughters. They regretted that, owing to impaired health, Miss Nightingale was unable to be present in person. They further regretted that owing to some unexplained omission on the part of a previous generation, the highest honour in the gift of the Corporation was not conferred upon her half a century ago, when she was in health and strength, and able thoroughly to appreciate and enjoy it. Lapse of time did not detract in the smallest degree, however, from their wish to pay their tribute to the life-work of that incomparable lady. Many present, like himself, could only remember the Crimean War as children, and only knew the incidents of those stirring times by hearsay or reading. Still less could they recall the memorable years of the life of Miss Nightingale anterior to 1854, during which, though unconsciously, she was preparing for her marvellous future in the cause of humanity. Early in life Miss Nightingale met that great philanthropist and authority upon nursing—Elizabeth Fry. What passed at these interviews was not known, but they seemed to have had no little influence in forming the future action of Miss Nightingale. She shortly after visited the hospitals of London, Edinburgh, and Dublin, and made a lengthened and prolonged tour of the hospitals of France, Germany, and Italy; and so deeply moved was she with the necessity for immediate change in our district visiting and nursing system that she placed herself as a deaconness in the then best-known nursing institution in Europe—the Kaiserswerth, on the Rhine, near Düsseldorf—under the severe but judicious tutelage of its founder, Dr. Fleidner. She returned to her home so fully equipped for her great future that, as an authority upon district visiting and hospital nursing, she had no compeer. Miss Nightingale was the initiator and pioneer of our nursing system. The strides made in medicine and surgery during the last thirty years would have been impossible without the co-operation of the trained, unselfish, and sympathetic nurse of to-day. Sir Joseph Dimsdale went on to describe Miss Nightingale's work in the Crimea. The greater the difficulties and anxieties, the more determined were she and her fellow-workers to surmount them. Cholera, dysentery, sickness, the wounded and dying were her companions by night and day for months. Some of the "Angel Band" fell at their posts of duty and won the martyr's crown. Miss Nightingale herself—"the Lady Chief"—was struck down with fever, and for days hovered between life and death. The magnitude of their work of mercy could never be fully appreciated but

by those whose suffering was assuaged, whose wounds received care and tender treatment, and by the dying, to whom comfort and consolation was imparted with love and true womanly sympathy by her whose very shadow seemed to consecrate the ground. We venture to add our meed of praise to the well-deserved tribute to Miss Nightingale and her fruitful and unselfish work for humanity paid by the City Chamberlain. Her name, as he truly said, is imperishable. It graces our rough island story far more than the conquests of war, and, we would add, than many of the other achievements, political and literary, on which our national glory is built.

MEDICAL MEN IN PARLIAMENT.

SPEAKING at the annual meeting of the Hoxton Liberal Association on March 15th, in support of the prospective Liberal candidate, Dr. Christopher Addison, of St. Bartholomew's Hospital, Sir William Collins, M.D., M.P., said there was plenty of room in the House of Commons and the London County Council for men belonging to the honourable profession to which he and their candidate belonged. The health of a nation was the wealth of a nation, and medical men were by no means out of place in the counsels of the Empire. He ventured to claim that medical men, even more than their fellow professional men the lawyers, who too often made Parliament their happy hunting-ground, were specially qualified to be of service to the nation, for, after all, when they talked of diagnosis, what was it but the prompt apprehension of minute differences? Again, when they spoke of prognosis, what was it but an accurate prevision of the future based upon a careful observation of the past? Treatment in its ultimate analysis, too, was it not resourcefulness in cases of emergency? He asked whether these qualities, which were specially developed in medical men, ought not to be more frequently brought to the service of the State?

THE MEDICAL SOCIETY OF LONDON.

WHEN the Medical Society of London, a year or two ago, firmly but gracefully declined to take advantage of an invitation to enter the modern Medean cauldron and emerge therefrom in rejuvenated form, but with lost identity, there were not a few ready to prophesy evil of its future. These Cassandras, however, have proved less skilful in soothsaying than the prophetess of Troy. It is true that into that same cauldron not a few of the sisters of the Medical Society of London, great and small, flung themselves boldly, and that the happy results of this experiment in social chemistry has been the creation of a body which seems to have a great future before it—the Royal Society of Medicine. But it is equally true that of those who declined few seem to have suffered, and, in the case of the Medical Society, at any rate, it is satisfactory to note that the policy of abstention which it adopted has been fully justified by the results. It had excellent quarters of its own, a large balance at the bank, an almost unique library, a membership equally representative of the soundest as of the most advanced medical and surgical thought in London, and its meetings were well attended and commonly resulted in illuminating and thoroughly interesting discussions. These are the reasons which seem to have led to its declining the invitation to merge itself in another organism, and to have influenced it in determining to remain what it was—an independent body, only second in age to the Royal Medical Society of Edinburgh, and one where the *terrain* was not split up into sections, but used as a common meeting ground for all exponents of an art which, whatever the number of specialities brought into being, must always remain in some respects one and indivisible. This was the position when the decision in question was taken, and therefore, in view of the qualms experienced by some both within the Society and without, it was satisfactory to gather from statements made at the Anniversary Dinner on March 11th that it remains unchanged. The Medical Society of London, it was indicated, continues its successful career unchecked, its financial position is as strong as ever, the few wandering sheep are again seeking admission to the fold, and its meetings are as well attended, and, as our own pages have shown, of as interesting a character as heretofore. This is as it should be, for there is much to be said in favour of a Society which has adhered so faithfully to what may be called the principle of Lettsom, who was its chief father and patron saint. It is one sufficiently simple in character, namely, that of declining to recognize the existence among medical men, whatever their separate paths in medical life may be outside the premises of the Society, of any social or other difference except natural endowments in the way of brain and capacity for the exposition of ideas. Even still more useful and desirable is the idea of not separating the various departments of medicine, but of endeavouring at all meetings to bring every subject discussed, however scientic and specialized in character it may be, into focus with the general needs of practical men daily engaged in dealing with human suffering whether medical or surgical in its character. That the other object of Lettsom and Fothergill and of those who co-operated with them in founding the Society in 1773—the promotion of pleasant social relations between medical men—is not less well remembered the annually occurring festival dinner itself sufficiently testifies. It is managed on informal lines, and on March 11th, as in previous years, the presidents of most of the medical societies in London were present as guests, as well as many others representative less of societies than of themselves, and of all that is most distinguished both in medicine and surgery. Prince Francis of Teck, and Lord Montague of Beaulieu were also present, both being obviously deeply interested listeners to the various speeches. Of the latter little need be said; they were not intended for publication, but to further the object which had brought all together, and in that they eminently succeeded. It may be noted, however, that Mr. Edmund Owen and Professor William Osler were both particularly happy on this occasion in their combination of wit and wisdom, and that the remarks of the latter, to which reference is also made elsewhere in this issue, included a suggestion to the Medical Society of London that it should bring about the publication of some of the treasures in the way of ancient manuscripts and folios which its library contains. This appeal will find an echo in the breast of all interested in such things.

THE LESSON OF AN EPIDEMIC.

IN the BRITISH MEDICAL JOURNAL of March 14th we gave an abstract of Professor Matthew Hay's report on the recent outbreak of typhoid fever in Peterhead, a town in Aberdeenshire which used to be the centre of the whale fishing but which now finds its chief source of wealth in herrings. We have received a letter on the subject from the Town Clerk, enclosing cuttings from the *Buchan Observer* of March 10th, from which it may be gathered that the sanitary authorities of the town have seriously set themselves about the task of putting their house in order. It is there stated that extensive operations are at present being carried on for the purpose of largely augmenting and improving the water supply. The works are estimated to cost £40,000. Evidently the lesson of the epidemic has been taken to heart by those responsible for the health of the town, and in this way it may prove to have been a blessing in disguise. We cannot, however, absolve the sanitary

authorities of serious negligence in the past. The following passage from the newspaper kindly sent us by the Town Clerk will serve to show the state of things which previously existed: "It is interesting to note the "defective condition of some of the old pipes. Not "only were they of small-sized bore—2 in.—but in "some cases they were almost entirely closed with a "reddish incrustation, so much so that it was surprising "that there should have been a supply flowing through "them at all. In one instance a 2-in. pipe was found "when taken out to be reduced almost to a ¾-in. bore "by incrustation." But not only was the water supply scanty and liable to interruptions which left the dwellers in certain districts destitute of water for ordinary domestic purposes: there were occasions when its appearance and quality recalled Mr. Thomas Atkins's description of that supplied to him by Gunga Din: "It was crawlin' "an' it stunk." During the summer, too, the town was pervaded by what Trinculo would have called "very ancient and fishlike smells," which some of the natives professed to find wholesome, but which to visitors were simply disgusting. Peterhead, in fact, was like an arsenal full of explosives, only awaiting a spark to bring about a disaster. We hope that the sickness with which the town has been visited may drive into the heads of the City Fathers the notion that one human life is of more value than many herrings. The victims of the epidemic will not have died in vain if from their graves there springs the germ of sanitary regeneration. Peterhead was once a health resort: it has advantages of situation which even now would make it a pleasant place for summer visitors if the "amenities" were not so completely sacrificed as they have heretofore been to what in a very literal sense may be described as "filthy lucre." Taking everything into account, we think that on the whole Peterhead got its object lesson cheaply. We hope the time will come when sanitary authorities will be held personally responsible for the loss of life caused by preventable disease. In the meantime we congratulate the Peterhead Town Council on its efforts to repair the faults and mistakes of the past.

METROPOLITAN ASYLUMS BOARD.

IT is satisfactory to note that the seed sown by the simultaneous resignation by three medical officers of their appointments under the Metropolitan Asylums Board, and carefully nurtured by ourselves in sundry articles, did not fall altogether on barren ground. It has been long in fructifying, but the harvest is now in view. The Asylums Committee of the Board having become unpleasantly conscious of an abnormal difficulty in recruiting young medical men for the service of its five asylums, appointed some time ago a subcommittee to consider the subject, and the results of its deliberations were, as stated in the JOURNAL on March 7th, laid before the General Board on February 29th. On that day the matter was not discussed, but last Saturday the subject was duly considered. The immediate practical outcome was a decision by the Board to abolish the regulation which subjects assistant medical officers to annual re-election after they have served three years. A second was a resolution to refer to the General Purposes Committee a recommendation of the Asylums Committee concerning the reception by medical officers of visits from their friends. The present regulations restrict medical officers as to the number of visits they may receive, even though no expense to the public is involved, and these are all the more irritating because authority in the matter is in some degree exercised by the steward and the clerk. The recommendation of the Asylums Committee on this point was not accepted forthwith, as it was deemed to involve certain principles of general application, but there seems little doubt that this subsidiary factor in the general question will eventually be settled in a favourable sense. More notable and much more promising as regards a happy issue to the whole situation was the tone in which the general question was discussed. It was very different from what it has been in times gone past, and we are happy to observe that now not only a few individuals, but the Board as a whole, seems to recognize both the importance of securing good men and the fact that it has not in the past taken all reasonable steps to tempt them to remain in its service. It may be said, in short, that the general tone of the Board was one of sympathy with its medical officers and appreciation of their work. Given this spirit the Board, being for the most part composed of business-like and thoroughly capable men, will, we have no doubt, emerge eventually from its difficulties and once more find that it has a wide choice in the selection of its medical officers. We are clearly of opinion, however, that the situation will not be fully met by any of the suggestions and recommendations which have as yet been officially considered; we are equally certain that now the Board has taken the matter in hand it will not rest until it has probed the position to the bottom. Of the causes of the exceeding unpopularity of the service of the Asylums Committee, many may have been born of a lack of the spirit which the Board, including its Asylums Committee, now seems to us to be showing, but there are others which may be termed intrinsic. As suggested by Dr. Elkins of Leavesden Asylum, in a memorandum to the Committee which seems to have entirely met the views of his followers, institutional work appeals to medical men mainly for three reasons: either because it gives them an opportunity of gaining medical experience, or because the posts in question are especially well paid, or because it opens up a desirable career. The service of the Asylums Committee is, however, not very attractive from any of these points of view. It is not specially well paid, it affords no marked opportunity for gaining experience likely to be generally useful in private practice, and it has few openings for the advancement of those that remain in it. Besides this, the treatment of imbeciles, such as are the occupants of all the Board's asylums, is somewhat disheartening in itself, even if not uninteresting, nor do the asylums devoted to their care afford as much scope for social intercourse and indulgence in active amusements as ordinary asylums. Asylum work, indeed, may as a whole be regarded as somewhat unattractive to the majority of men, and in the case of residence at imbecile asylums certainly tends to be depressing. In their case, therefore, superfluous vexations in the way of ill-considered regulations are specially undesirable, and in their paths should be placed as many of the various amenities of life as circumstances permit.

TRUTH AND ANTIVACCINATION LITERATURE.

THE misguided zealots who lead the propaganda of opposition to vaccination in a most unscrupulous manner have just received a severe and well-deserved admonition. The unintended assistance rendered by these enthusiasts against the cause which they advocate by adopting disingenuous tactics is once more illustrated. In an editorial comment on March 4th, *Truth* says: "Though not an antivaccinationist myself, "I have always felt a certain sympathy with the con- "scientious objector to vaccination. But some of the "proceedings of the antivaccinationist agitators, like "those of the antivivisectionists, are calculated to "alienate all sympathy. The latest method of com- "bating vaccination seems to be to follow up advertise- "ments of births in the newspapers by sending sensa- "tional antivaccinationist literature to the mother of the "infant. One of the pamphlets forwarded in this way "is made up of portraits of children alleged to have

"been killed by vaccination. The natural effect of "this is to terrify the woman who receives it, but the "propagandists evidently care nothing for any other "consequences if they can delay the vaccination of an "infant. Possibly we shall next have the disciples of "vaccination issuing portraits of mothers who have "been killed by the receipt of antivaccinationist litera-"ture." The pamphlet mentioned is one of the highly objectionable and misleading publications issued by W. J. Furnival of Stone, Staffs, whose numerous sensational documents receive the approval of the Antivaccination League. It is a folded leaflet, entitled *Cut Flowers, or School Age Vaccination Illustrated.* Seven photographs of children are reproduced. The only information given is the name of the child, age, date of vaccination (not stated in two of the cases), and date of death. It is either definitely stated or implied in each case that the child "died from the effects" of vaccination. In consequence of the vagueness of the statements, and the impossibility of identifying any of the cases without further information, application has been made to the publisher for such particulars as have been withheld, for obvious reasons, from this grotesque parody of honest propagandism. The reply, according to our information, shows that these cases are gleaned from the pages of the *Liberator*, an American journal. Further particulars were supplied with reference to six of the seven cases from which the following is obtained:

1. Died of tuberculosis nearly four years after vaccination (date of vaccination suppressed by the leaflet).
2. Died of meningitis two weeks after vaccination.
3. Died of Bright's disease and erysipelas five weeks after vaccination.
4. Died of blood poisoning two weeks after vaccination.
5. Died of spinal meningitis two months after vaccination.
6. Verdict at inquest stated to be "Death from vaccination." (No particulars of evidence at inquest given.)
7. No further information given by the publisher.

To have published such particulars as Mr. Furnival possesses, but which he has not judged it necessary to publish, would have enabled those who receive his brochure to judge for themselves what value is to be attached to his dogmatic assertion. This, however, would have defeated his purpose. These facts give additional point and force to the stern rebuke administered by *Truth*, and such unworthy tactics cannot fail to alienate sympathy still further. We hope to refer in a later issue to another example of the same publisher's method by which it is sought to delude the public in the pages of a widely-circulated pamphlet entitled *Vaccination and the Medical Profession.* On March 11th *Truth* again referred to this matter in reply to a correspondent who wrote, "Have "you never heard that the provaccinators send round "most hideous pictures revealing the dire results of "small pox in the various stages of the disease?" *Truth* replies, "But do they send them systematically "to women who have just had babies? That was what "I commented upon, not the character of the litera-"ture." Probably *Truth* would have commented on the character also if that journal had known the above facts.

PURE MILK.

THE reply of the President of the Local Government Board to the deputation which approached him on March 12th with reference to the question of pure milk supply was not altogether satisfactory. He pointed out that it was the business of the Board of Agriculture and the Local Government Board to extend as far as possible the production of good milk, and that in legislation common sense would be their guide, the public health their aim, and equity their means. This is high-sounding, but vague. Some indication of the practical steps which he proposes to take in order to combat a serious public evil would be more satisfactory. We can suggest one alteration in the law which would be of the greatest importance. According to the present practice, inspectors are very seriously hampered in the administration of their duties. The dairyman can generally shelter himself behind the warranty which is given him by the farmer; but if the dairyman and farmer live in different parts of the country, it is impossible for the inspector in the dairyman's district to keep his eye on the milk all the way from the cowhouse to the kitchen. There is nothing to prevent a dairyman making some arrangement for the addition of water or other impurities while the milk is on its way from the country to the shop in town. In a case heard in 1903 a farmer in Derbyshire was under contract to send milk to Westminster. It was to be delivered to the dairyman at St. Pancras station. A Westminster inspector, acting on the instructions of his council, purchased a sample of milk at St. Pancras, and summoned the dairyman because the milk was impure. The Divisional Court dismissed the summons, on the ground that the inspector had no power to take samples outside his own district. The following passage from the judgement of the Lord Chief Justice is instructive: "If this particular "point had been thought of it probably might have "been desirable, certainly with reference to a place like "London, to deal with the common case of milk coming "up by rail, the delivery being at the railway station, "and then going to be sold and used in some other part "of London than the particular area in which the rail-"way station is placed or happens to be." His Lordship also suggested the remedy: "Of course it is plain that, "if the inspectors do their duty, on information being "given to the inspector at St. Pancras, they would no "doubt act, and there is that practical remedy against "the consequences of our decision preventing the Act "being put in force."

INSANITY IN AMERICA.

AN article entitled Insanity and the Nation in the issue of the *North American Review* for January contains some interesting statistical information concerning the growth of insanity in the United States. The writer, Mr. Addington Bruce, who has taken his figures from a special report of the United States Census Bureau on the insane and feeble-minded in hospitals and institutions, comes to the conclusion that although the ratio of insane to population in the United States (186.2 per 100,000) is much lower than the ratios of Great Britain, Canada and Switzerland, and somewhat lower than that of Germany, the rate of increase is much more rapid than in any of these countries. In Great Britain, for example, the certified insane have undergone in the last sixty years a five-fold increase, whereas the insane of the United States have undergone a nine-fold increase; having leaped from 20,000 to 180,000. Between 1890 and 1903 the total population of the United States increased by less than 30 per cent. In the same time the insane increased by more than 100 per cent. The writer frankly admits that these figures cannot afford an exact measure of the increase, for to accumulation and increasing certification a large part of the increase must be attributed, but he holds that these factors only partly account for the enormous increase in the insane. According to Mr. Bruce, and also according to the official census investigators, the prime cause of the increase is that "the conditions of American life "are conducive to an increase of insanity." In the course of their inquiries the census investigators made some interesting discoveries. Not only was insanity more common among the foreign-born whites than among the native-born, but in many instances it was found that of the foreign-born whites, those whose home countries had a low ratio of insanity gave a high proportion of insanity in America. Scandinavia, for example, has a lower insane ratio than almost any

other European country, yet in America the Scandinavians were second only to the Irish in supplying asylums with inmates. The Hungarians, whose native ratio is the lowest of all (14.1 per 100,000) exceeded English, Canadians, and many other nationalities in the United States asylum statistics. The explanation which springs to mind—that the classes of emigrants giving a high ratio of insanity possibly contained a large proportion of weaklings who were crowded out of their native countries—is neglected by the investigators who say on the contrary that "insanity is apparently "most prevalent in the nationalities who were among "the earliest immigrants to this country, and con- "tributed the sturdiest of their people." Accepting it as proved, therefore, that there is an actual and great increase of insanity in America—though the official statistics do not warrant any such conclusion—the explanation given by Mr. Bruce, namely, that the increase of insanity is the expression of a lack of adaptation to the exigencies of civilization, appears reasonable. Health, bodily or mental, is equivalent to harmony with environment, and where changes in environment—including in that term all external relations, social or other—occur with so great rapidity that man's adaptive ability fails to keep pace with them, then ill-health, bodily or mental, must arise.

THE OXFORD EYE HOSPITAL.

The Oxford Eye Hospital has recently issued its twenty-first annual report, and although the institution contains but thirty-two beds, and was founded so lately as 1886, yet it may fairly claim to be perhaps the best known of the English provincial eye hospitals. There can hardly be an ophthalmic surgeon in the British Isles who does not know of it, while its reputation has spread to many parts of Europe, America, and Australia. Its success is due to the energy of its staff, Messrs. R. W. Doyne and F. Menteith Ogilvie, while recently Mr. P. E. H. Adams has been appointed Assistant to the Honorary Staff. It is more due to Mr. Doyne than to any one else that the elaborate post-graduate course is now held annually in July, and the attractions of this course are such that it draws together a large number of ophthalmologists, scientists and students, and although so small an institution, it does more for the advancement of ophthalmology than many of the large general and special hospitals both in London and in the provinces. Last year between eighty and ninety surgeons accepted the invitation given to see some of the more interesting cases which had been collected, and this meeting was so successful, that another gathering of the same sort will take place on July 26th and 27th of this year, under the presidency of Mr. Nettleship. The post-graduate course proper lasts from July 15th till 27th, and the syllabus, which is already published, includes pretty well the whole subject of ophthalmology, while many well-known surgeons from London and the provinces are to take part in the demonstrations. Mr. Doyne of 34, Weymouth Street, London, the Reader of Ophthalmology in the University of Oxford, will be glad to give further information regarding the course. It is hoped that an even larger number will this year avail themselves of the opportunities offered.

The annual general meeting of the Medical Graduates' College and Polyclinic will be held at 22, Chandos Street, W.C., on Friday, March 27th, at 5 p.m., Dr. C. Theodore Williams in the chair.

The Sleeping Sickness Conference came to a somewhat untimely end on Saturday, the jury of nations having failed to agree on a verdict upon the case submitted to them. But the usual social amenities were not wanting. The delegates were entertained at dinner on March 11th by Lord Strathcona and at luncheon by the Lord Mayor on March 16th. At the dinner Lord Strathcona coupled the toast of "The Delegates" with the names of Professor Koch, the Marquis de Villalobar, Dr. Cureau, Professor Santoliquido, Sir Walter Foster, Colonel Lantonnois (Congo Government), and Dr. Kopke. Each of these gentlemen, speaking in his native tongue, bore testimony to the urgent need for putting an end to the ravages of sleeping sickness.

Miss Mary Gordon, L.R.C.P., L.R.C.S.Edin., L.F.P.S. Glasg. and L.M., has been appointed by the Home Secretary an Inspector of Prisons and an Assistant Inspector of State and Certified Reformatories. Miss Gordon has for some time been a Visitor of State Inebriate Reformatories and has had a large experience in treatment of inebriety. She has also recently been on the Committee of the Female Convict Prison at Aylesbury, so that she has considerable knowledge of the work to be done. The appointment of a lady doctor as inspector of prisons cannot fail to be most useful. It is a new sphere opened to the activity of female medical practitioners, and no better holder of such a post than Miss Gordon could have been found. We congratulate the public on her appointment.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Public Health Act (1875) Amendment (Water Rights) Bill, which was introduced early in the session by Mr. Leif Jones, is intended to amend a defect which has been found to exist in regard to the taking of water by local authorities otherwise than by agreement. It was believed that the Public Health Act empowered local authorities to acquire water rights compulsorily under provisional orders. Under this belief several provisional orders were obtained, but a Committee of the House of Lords, when considering a provisional order to purchase water rights, decided that it was not legal to do so by compulsion. The law officers of the Crown, when consulted, confirmed this decision, and it followed that under the Public Health Act a provisional order can only apply to taking by agreement. The Bill proposes to remedy this defect, in accordance with the recommendations of the Committee, so as to enable sanitary authorities to obtain water supplies more easily. Blocking notices have been put down by Mr. Watt, Mr. Goulding, and Mr. Mitchell-Thomson.

The Death Certificates (Charges) Bill, introduced by Mr. Gill, and supported by Mr. Shackleton, Mr. Bell, Mr. Haslam, Mr. Wilkie, Mr. Bowerman, Mr. Steadman, Mr. Barnes, Mr. Kelley, Mr. G. H. Roberts, and Mr. W. T. Wilson, is a short measure of seven clauses. The objects of the Bill are to provide that the fees for a certificate of death required by any officer or member of any trades union shall be the sum of 1s., in place of the sum of 2s. 6d. The Bill was put down for second reading on March 18th, but it is so low on the list that it is not likely to be discussed.

Housing in Ireland.—Mr. Birrell informed Mr. Sheehan last week that the Government was not prepared to recommend the extension of the Housing and Town Planning Bill to Ireland. The provisions of the Bill, while no doubt suitable to English industrial centres of population, would not meet the difficulties which presented themselves in dealing with the housing problem in Ireland. Moreover, the codes to be amended were not the same in the two countries, and the application of the principles of the English Bill to Ireland would present very great difficulties.

Wastage in the Army. In the course of the debates on the army last week there were few if any points of medical interest made in the House of Commons. In the debate in the Lords on Thursday, however, Lord Portsmouth gave some interesting figures as regards wastage. He said the two millions a year extra expenditure incurred in recent years on the pay of the army had been wisely spent. We had developed that policy of generous treatment by laying down in November last that the 3d messing allowance was to be given to every man on enlistment, instead of his having to wait until he had completed six months' service. This general increase of emoluments during the recent years had been attended with very important results. The class of recruit showed a marked improvement, and this fact, together with the generally improved conditions of the soldier's life, had resulted in considerably lessening the wastage. The number of men invalided had fallen from 4,973 in 1903-4 to 2,894 in 1906-7. The number of recruits rejected as unlikely to become efficient soldiers had fallen from 1,373 in 1903-4 to 928 in 1906-7. And in the third category of wastage—discharges for misconduct—it had fallen from 3,656 in 1903-4 to 2,119. This gave a total decrease from 10,002 to 5,937, or practically 4,000 less. This decrease of wastage, to the extent of 40 per cent., had a very important effect on the establishment.

Rabies at Northampton.—Mr. Clement Edwards last week raised by question the point of the value of the autopsy test as evidence of rabies, and further asked if the necropsies were conducted by duly-qualified veterinary surgeons. Sir Edward Strachey replied that the Board of Agriculture had not accepted the *post-mortem* examination as conclusive evidence of the existence of rabies, and the final diagnosis awaited the result of the inoculation test. The *post-mortem* examinations were conducted by a duly qualified veterinary surgeon, and his opinion was confirmed by the chief veterinary officer of the Board.

Warranty for Milk Supply.—Sir Edward Strachey informed Mr. George Gibbs last week that he was not aware of any case in which a local authority had required that each consignment of milk sold by farmers should be accompanied by a warranty, but if any instances of such a practice were supplied to him inquiry would be made.

The Mortality in the Transvaal Mines.—Last week Mr. Fell asked the Under-Secretary of State for the Colonies how many natives employed in the Transvaal mines died in the month of December last, and how many Chinese; and what percentage these numbers bear to the numbers of each class employed. Mr. Churchill said that he had no official information; but from press telegrams it appeared that the number of Chinese employed in December was 37,728, and the number of deaths 66, giving a death-rate of 20.9 per 1,000 per annum, while the native death-rate for the whole of 1907 is stated to have been 32.42 per 1,000 per annum. He could not give the native death-rate for December separately; he could not vouch for the accuracy of the figures. Mr. Fell then asked if the English medical inspector employed to look after the health of the natives in the Transvaal mines had recently been discharged; if so, what reason was alleged for this; and was another medical man to be appointed in his place? Mr. Churchill replied that Dr. Sansom, the officer in question, was to be retired, but he knew nothing of the reason or of the arrangements which might be contemplated by the Transvaal Government.

Tuberculous Meat at Glasgow.—Mr. Cathcart Wason asked the Secretary for Scotland if his attention had been called to the fine recently imposed on a Glasgow butcher for having exposed a carcass for sale which was found to be tuberculous; and whether, in view of the fact that it was perfectly competent to a qualified authority to say whether an animal was tuberculous or not during life, that the said animal was passed as sound by the Glasgow authorities, and that the butcher acted in good faith, he would consider what steps in the interests of justice he should take. Mr. Sinclair said he had inquired into the case. The sale or exposure for sale for human food of unsound meat was an offence under the Public Health Acts, and the butcher in question appeared to have been convicted of a contravention of the statute. The facts mentioned could have been brought to the notice of the Sheriff, and it did not appear, therefore, that any action on his part was called for.

The Water Supply of Lewis.—Mr. Weir asked the Secretary for Scotland, in view of the fact that the Scottish Office had stated that the local authority in the Island of Lewis was not in the possession of sufficient funds to admit of any satisfactory improvement being effected in the supply of water in the insanitary townships, if he would state how he proposed to deal with the matter, especially bearing in mind that nearly every outbreak of fever in the island had been attributed to the defective water supply. Mr. Sinclair replied that he was glad to say that some progress was being made. The Local Government Board were informed that during the three years four new wells had been sunk, and three more were expected to be completed by May.

The Tuberculin Test in Seaborne Cattle.—In reply to Mr. Courthope, the representative of the Board of Agriculture stated on Monday that it would not be correct to say that non-tuberculous cattle suffering from indigestion or other indisposition caused by a sea voyage commonly reacted to the tuberculin test. Such cattle might, however, and frequently did, show irregularities of temperature for a few days after landing, which made it impossible to correctly interpret the effect of the test.

The Parochial Medical Officers (Scotland) Bill, to amend the law relating to the tenure of office of parochial medical officers in Scotland, was introduced by Mr. Cathcart Wason last week and backed by Mr. Ainsworth, Mr. Leicester Harmsworth, Sir John Dewar, Mr. Crombie, Mr. Gulland, Sir H. Craik, Viscount Dalrymple, Major Anstruther-Gray, Mr. Younger, Mr. Cross, and Mr. Mitchell-Thomson. The second reading was fixed for April 30th.

Tuberculosis in the Army.—In answer to an inquiry by Mr. Summerbell as to the number of soldiers discharged during 1907 suffering from tuberculosis and who were in receipt of a pension, and the number of men discharged during the same period suffering from the same disease and who were in receipt of a pension due to having contracted the disease while in the service or due to the climate where serving, Mr. Haldane stated on Wednesday that 357 soldiers were invalided for tuberculosis in 1907, of whom 216 received pensions and 50 contracted the disease during service.

Infantile Ophthalmia.—Lord Robert Cecil asked the President of the Local Government Board on Tuesday whether his attention had been called to the large number of cases of blindness caused by ophthalmia of the newborn; whether he was aware that in the great majority of cases timely treatment of this disease would prevent this result from ensuing; and whether he would take steps, by circular or otherwise, to induce the local authorities under Section 7 of the Infectious Disease (Notification) Act, 1889, to order that that Act should apply to this disease. Mr. Burns answered that he was aware that timely treatment would prevent the blindness following on ophthalmia of the newborn. This was fully recognized in the rules of the Central Midwives Board, which directed a midwife in attendance at a confinement in any case of inflammation of the eyes of the child, however slight, to explain to the husband or nearest relative or friend present that the case was one in which the attendance of a registered medical practitioner was required, and to give him a form for sending for such help. She must send a copy of this form to the local supervising authority, who were thus made aware of the case. He would point out that the primary object of the Infectious Disease (Notification) Act was to prevent the spread of infection. This danger scarcely existed in cases of ophthalmia of the newborn. He was afraid that he could not properly take the precise course suggested by the noble lord in the last part of the question, but he was giving consideration to the whole subject.

Scotland.

[From our Special Correspondents.]

Sir Henry Littlejohn.

Sir Henry D. Littlejohn has formally tendered his resignation of the appointments of Surgeon of Police and Medical Officer of Health to the City of Edinburgh. He was appointed Surgeon of Police in August, 1854, and Medical Officer of Health in September, 1862. Although he has nearly attained the age of 84 (he was born in May, 1824), he remains young, active, alert, and vigorous. Since the death of Sir Robert Christison he has been the most outstanding and noteworthy figure of the medical profession of Edinburgh in the eyes of the public, and he has well deserved this distinction, for he has played a foremost part in the medical history of the city for more than half a century. He took the degree of M.D. of the University of Edinburgh in 1847, and became a Fellow of the Royal College of Surgeons in 1854. In 1855 he became a Lecturer on Medical Jurisprudence in the Extra Academical School of Edinburgh, of which he was probably the most popular lecturer and the greatest favourite with students of medicine and law. Here he continued for forty-one years till in 1896 he was appointed by the Crown to succeed Sir Douglas Maclagan in the University Chair of Medical Jurisprudence. He occupied the Chair for ten years; in 1906 he resigned and was succeeded by his son, Henry Harvey Littlejohn. In 1895 Her late Majesty Queen Victoria conferred the honour of knighthood on him. About a year ago he was presented with his portrait by a number of his friends in the legal and medical professions; it was the work of Sir George Reid.

It would be difficult to enumerate Sir Henry's many varied and valuable services to the city of Edinburgh. In 1865 he made an elaborate report on the sanitary condition of Edinburgh which led to the disappearance or improvement of the slum districts of the city. A year or two later a report on a small-pox epidemic in Edinburgh led to the Vaccination Act being applied to Scotland. He took a leading part in the production of the Infectious Diseases Notification Act and its application to Edinburgh. The disappearance of typhus fever from Edinburgh is mainly due to his untiring energy. During his term of office the death-rate of Edinburgh has fallen from 25·88 per 1,000 of the population to something like 14.00 per 1,000. The organization and equipment of the new City Hospital at Colinton Mains was largely his work. He was Medical Adviser to the Local Government Board for Scotland, and to the Crown in connexion with criminal cases in Scotland. He figured in all the great criminal trials of Scotland for many years. His friends in the legal and medical professions, as well as among his fellow-citizens, will endorse his claim to rest after so long and so full a life, and hope that he will continue to enjoy that marvellous vigour in his retirement.

When Sir Henry's resignation was laid on the table at the Town Council meeting on Tuesday, March 17th, a generous tribute to his services to the city was made by the Lord Provost and some of the other councillors.

Scottish Women Graduates: Appeal to the House of Lords.

The Committee of Women Graduates of the Scottish Universities, who raised an action in the Court of Session in February, 1906, claiming, as members of the General Councils of the Universities, the right to exercise the Parliamentary franchise, held a meeting in Edinburgh on Saturday, March 14th. There were present representative graduates from the four Scottish Universities, and the chair was taken by Mrs. Marion Watson. The financial statement showed that the circular asking for donations, issued since the decision in November, had met with a generous response. The Committee was now in a position to proceed with the appeal to the House of Lords. It was decided that the women graduates should plead their cause in person. A petition for presentation to the House of Commons was sent from the meeting to Sir John Batty Tuke, M.D., M.P., praying for the removal of the electoral disabilities of duly qualified women in those Parliamentary constituencies in which legislation has not yet enfranchised them.

Influenza in Edinburgh.

During the week ending mid-day, Saturday, March 14th, five deaths in the city of Edinburgh were ascribed directly to influenza, as against eight in the previous week. This brings the total deaths from influenza during the present year up fifty-two. There would seem to be a slight recrudescence of the disease during the past few days.

Small-pox in Edinburgh.

Three further cases of small-pox have occurred in Edinburgh, bringing the total number during the present incidence up to eighteen cases. There have been no deaths.

Payment for Certificates of Unfitness to Attend School.

The question of payment for certificates of medical unfitness to attend school crops up now and again, and while some School Boards and Educational Committees pay for these certificates, the majority refuse, and look to the parents for the payment of the medical certificate granted by the medical attendant. The onus of producing a certificate rests with the parent, but this does not necessarily imply that such must be supported by professional evidence, which might reasonably be reserved in the event of a prosecution; it would be sufficient for the parent to intimate to the School Board officer when he calls that the defaulting child is suffering from illness, and state that if a certificate is required the medical attendant will be prepared to supply it, for which the Board would have to pay a fee. In the event of proceedings being taken, the medical attendant would attend and state the cause of the child's non-attendance; in such cases the Court has allowed the medical man a fee for which the School Board has had to pay. A School Board or Educational Committee has no right to demand a certificate from the medical attendant in cases of failure to attend school through illness; nor can it insist on the specification of the nature of the illness in any certificate which may be given in such cases; nor has it any legal right to demand that the certificate produced should be on a special form. That School Boards think that they have a legal right to do so is evidenced by the fact that the clerk to a School Board in Lanarkshire wrote to all the medical men in the district stating that in future all school certificates of unfitness granted by medical men should be on a form which had been accepted in the Sheriff Court, and is one made out in the Scotch form "on soul and conscience," the only form accepted by this Court. Printed forms of this certificate were sent to the medical men. Naturally the medical men concerned wished to know whether the School Board was to pay for these certificates; the reply they got to their query was that the Board refused to do so, referring the medical man to the parent for his fee. In 1905 the Medico-Political Committee, in the report which it presented to the Representative Meeting at Leicester, stated that it had circularized all the County Councils and Councils of County Boroughs in England and Wales inquiring what provisions, if any, had been made for the payment of medical men who gave certificates required by the educational authorities of unfitness of children to attend school on the ground of ill-health. Only twenty-two replied that they paid fees for such certificates; seventy replied that no provision had been made for this purpose. In Scotland the same thing was done, and it was found that only three School Boards paid for these certificates. The resolutions passed by the Dundee Branch of the Association, as well as by some other Scottish Branches, are worthy of being quoted, as they contain the gist of the whole question. The Branch recommended that where a medical certificate of unfitness to attend school was required by a parent the usual visiting fee should be charged, that the medical officers of charities and other public bodies should decline absolutely to give certificates of unfitness of a child to attend school through illness, but explain to the parent that in the event of a prosecution they were ready to appear in court; if a certificate were required by the School Board or other public body the medical attendant will be prepared to supply it, and for this the Board would have to pay a fee, which in no case should be less than 2s. 6d. But unanimity in the

profession is required to remedy this, and if all medical men would refuse to grant certificates unless under similar terms to that quoted above, then the question would right itself. This granting of certificates is not legally compulsory, and until it is, medical men should not save the pockets of the ratepayers by giving them gratuitous work; enough of this is done already. Possibly when medical inspectors under the Education Act are appointed, the granting of these certificates may be part of their duties; if so, it will place them in the same invidious position as the medical officer of health who visits cases of infectious disease which are notified to them.

ABERDEEN.

Colour Photography in Medicine.

Mr. G. G. Hamilton, of Liverpool, delivered a lecture and gave a demonstration on the above subject in the pathological lecture-room, Marischal College, Aberdeen, on the evening of March 6th. Professor Hamilton presided, and there was a large audience of students and practitioners, to whom the Chairman introduced his brother as having made a special study of a special process which appeared to be of great value in medical demonstration and research. Mr. Hamilton described in detail Lumière's colour process, and explained the need for the application of this to medicine in special regard to the teaching of pathology, in that museum specimens lost much of their value for teaching purposes because they lacked colour, and many of them did not look at all what they were meant to represent. Mr. Hamilton showed a large number of beautiful slides, remarkable in colour and in clear and sharp outline, of various pathological conditions, some of the most notable relating to pathological conditions of the appendix and liver. The demonstration was followed with the keenest interest, the lecturer's fluent and easy style carrying the audience entirely with him. Dr. George Williamson, in the name of the Aberdeen Medico-Chirurgical Society, thanked Mr. Hamilton for his lecture and demonstration. Mr. Hamilton's charm as a lecturer recalled to him many gestures and utterances when he was a pupil of the lecturer's distinguished brother, Professor Hamilton, whom they warmly congratulated upon the honour the Royal Society had conferred on him. Not only had Aberdeen and its University been honoured, but the subject and science of pathology had been recognized, and his old pupils shared in the distinction he had received. Mr. H. M. W. Gray and Dr. George M. Duncan also spoke in appreciation of the excellent slides that were shown.

ABERDEEN DISPENSARY.

The annual meeting of the managers of the Aberdeen Dispensary, Maternity Hospital and Vaccine Institution, was held in the Town Hall, Aberdeen, on March 5th, Lord Provost Sir Alex. Lyon presiding. The annual report, which was submitted for approval, showed a deficiency of £734 on the year's working. Regret was expressed that the institution did not receive an adequate amount of support from the citizens considering the valuable nature of the work done by it. With the deficiency of the past year and that carried forward from former years the managers had to face a total debt of £2,191 and the Committee of Management had had under consideration how this somewhat large deficit is to be reduced. The number of cases treated during the year was 13,256 and 3,166 patients were treated at their own homes, the number of visits paid to patients was 8,630 and the prescriptions during the year numbered 57,052. It is asserted, however, that a considerable number of patients attend this institution who could afford to have their own doctor, and particularly it had been shown that a considerable number of patients who belong to sick clubs such as Oddfellows' and Foresters' Lodges, and who had a medical man appointed to attend them, prefer to go to the Dispensary because they get medicine as well as advice free, whereas most lodges in Aberdeen only provide medical attendance for their members, the patient receiving a prescription which, as a rule, he could have dispensed where he chose, though in some cases the Lodge made a contract for medicines with a particular chemist on behalf of its members, and in very few cases indeed does the doctor contract for the provision of drugs. On the subject of obviating the abuse of the dispensary, the Managers propose to revert to the old custom of lines of recommendation signed by Managers of the Institution. Whether this will meet the case appears doubtful, and the question arises whether several of the medical charities should not combine and appoint an official whose duty it should be to investigate doubtful cases. It was decided to confirm the appointment of a resident medical officer at the Maternity Hospital, which office had been held by Dr. Alexander Mitchell since December. The Managers then proceeded to fill the vacancy on the staff of the dispensary caused by the completion of Dr. Pirie's term of office. Dr. A. R. Laing was appointed by a majority.

ABERDEEN ROYAL INFIRMARY.

The report of the above institution for the year ending December 31st, 1907, shows that 940 medical and 2,179 surgical cases were treated during the year. The average number of beds in daily occupation was 226, the highest being 247 on December 14th, and the lowest, 183, on September 26th. The average number of days in hospital of each patient was 26. Operations performed on in-patients numbered 1,689. Compared with last year, the number of in-patients treated showed an increase of 281, the average number of occupied beds being greater by 1, while the average period in hospital of each patient was reduced by four days. Including 1,606 patients treated in the electrical department, 15,792 out-patients received advice and treatment during the year. The ordinary income for 1907 was £11,488 2s. 9d., an increase of about £370 over last year. The ordinary expenditure was £12,871 9s. 6d., so that there was a deficit on the year's working of £1,383 6s. 9d. The average cost per occupied bed was £53 9s. 2d., and of each in-patient £3 17s. 6d., as compared with £50 3s. 7d. and £3 19s. 7d. respectively for the year 1906. This calculation is based on the total ordinary expenditure, less the cost of out-patients, reckoned at 1s. each. During the year, to meet the growing demands of the ophthalmic department, a new post—that of assistant ophthalmic surgeon—was created, and Mr. William Clark Souter, M.D., was appointed to that office. Dr. John Gordon resigned his appointment as an Assistant Physician to the Infirmary, and no new appointment has yet been made. An appeal for funds to extend the accommodation, especially for out-patients, and to give facilities for the treatment of ear, throat, and nose diseases, is made in the report, and prominence is given to a letter signed by the three Surgeons to the hospital—Mr. J. Scott-Riddell, Mr. J. Marnoch, and Mr. H. M. W. Gray—drawing attention to the inadequacy of the present operating theatres, and to the absolute necessity for the speedy erection of new theatres, if the reputation of the hospital and medical school are to remain unimpaired. In 1893—the year after the present theatres were opened—the number of operations performed, excluding eye operations, was 403. In 1906 the number (including operations on out-patients) was 1,741, and in 1907 the number rose to 1,972. A striking and most important feature was the enormous increase in major operations, for the proper performance of which, with a view to obtaining the best results, the present theatres were hopelessly inadequate in regard to position, ventilation, general arrangement, and equipment, falling very far short of modern requirement, even in regard to essentials. It is believed that to meet the most urgent necessities of the hospital a sum of at least £25,000 will be required, and no doubt a special effort will be made soon to raise that amount.

GLASGOW MEDICAL SOCIETIES.

A new medical society, originally projected in the early winter, has now come into being, under the title of the Western Medical Society. With a view to its formation a preliminary meeting of those to whom the project appealed was summoned in January by a provisional committee, and thereat all the arrangements for carrying through the matter were made. The work has now been accomplished, and the new society starts its active life in auspicious circumstances, having obtained plenty of adherents among medical men residing in the Partick, Whitewich, Scotstown, and Hyndland districts. The office-bearers appointed are: President, Dr. Arthur Meehan; vice-presidents, Drs. W. Snodgrass and J. Gibson Graham; secretary, Dr. A. W. M. Sutherland; recording secretary, Dr. J. King Patrick; and treasurer, Dr. G. A. Allan. A council of eight members has

also been formed. The new society is the outcome of a feeling that the western district of Glasgow might well have a society similar to those existing in other parts of the city. Its object, as stated in the ordinances, is to afford its members opportunities of meeting socially, and of formally discussing at regular intervals matters of ethical and educational interest. The creation of this society may be regarded as completing the possibilities of Glasgow in the direction of medical societies, for the new body makes the seventh of the same nature appealing to a total constituency of about seven hundred and fifty medical men. Of these the Medico-Chirurgical Society should be considered perhaps as the doyen, as although it only came into being under its present title in 1866, it represents an amalgamation of two anterior bodies, the Medico-Chirurgical Society and the Medical Society, both of which were founded in the year 1814. The other societies are the Glasgow Southern Medical Society, founded in the year 1844; the Glasgow Pathological and Clinical Society, founded in 1873; the Glasgow Obstetrical and Gynaecological Society, established in 1885; the Glasgow Eastern Medical Society, founded in 1893, and the Glasgow Northern Medical Society. Besides these there is, of course, another body of allied order but somewhat different purport, the West of Scotland Medical Association, which publishes the *Glasgow Medical Journal*.

Ireland.

[From our Special Correspondent.]

Orthopaedic Hospital of Ireland.

The Lord Chancellor of Ireland presided at the annual meeting of this hospital on March 16th. The report stated that the available beds had been increased from 60 to 65. There remained a debt of £2 000; 138 cases had been admitted, and 2,060 cases were treated at the dispensary. Mr. E. D. MacLaughlin moved and Lady Walker seconded the adoption of the report. Votes of thanks were passed to the various supporters of the hospital. The proceedings closed with a vote of thanks to the Chairman proposed by Mr. R. L. Swan, and seconded by Mr. Dent.

Legacies to Hospitals.

On Monday Mr. Justice Barton granted an application for an order that the amount to the credit of the estate of the late Major William M. Leslie should be paid out to the several charitable organizations named in his will. There were six hospitals, each entitled to receive one-sixth of the residue, amounting to £6,668 3s. The proposed allocation was as follows: The Governors of Sir Patrick's Dun's Hospital, £496 15s. cash and £614 12s. 2d. New Consols; the House of Recovery and Fever Hospital, Cork Street, £496 15s. cash, £614 12s. 2d. Consols; the Governors of Mercer's Hospital, Dublin, £496 15s. cash, and £614 12s. 2d. Consols; the Governors and Guardians of the Charitable Infirmary in Jervis Street, Dublin, £496 15s. cash, and £614 12s. 2d. Consols; Colonel the Hon. Charles Frederick Crichton, Hamilton Drummond, and Captain Wade Toompson, Trustees of the Adelaide Hospital, Dublin, £498 15s. cash, and £614 12s. 2d. Consols; the Hospice for the Dying, Harold's Cross, £496 15s. cash, and £614 12s 2d. New Consols.

England and Wales.

[From our Special Correspondents]

MANCHESTER AND SALFORD.

Pure Milk Supply.

All suggestions for the improvement of our milk supply are welcome at the present time, especially as the Government intends to legislate on the subject, and no one can be more competent to offer suggestions than Dr. Niven, the Medical Officer of Health for Manchester. In an article recently published in the *Manchester Guardian*, he points out that the Manchester Pure Milk Supply Company has already done much good, and in the last ten years, owing to the vigilance of the city authorities, the amount of tuberculous milk entering the city has been reduced by one-half. Much, however, remains to be done, and Dr. Niven suggests the creation of a veterinary public health service. This he admits would be a costly proceeding, though he thinks it is necessary as a first step. Next he would schedule open or clinical tuberculosis as a contagious disease, and remove from the herds all plainly tuberculous animals. But even if all such animals were slaughtered tuberculosis would not be eradicated, as many cases must exist that cannot be diagnosed by ordinary clinical methods. It is therefore further suggested that the veterinary service should begin a process, which could only be gradual, of completely eradicating tuberculosis. It might commence by picking out certain farms that were considered to be well fitted to have their stock rendered absolutely non-tuberculous, and such farms should be used for the rearing of non-tuberculous calves with which to stock other farms. At the same time the necessary reconstruction of cowsheds and other farm buildings should be proceeded with, special care being taken to have them well-built, well-lighted and ventilated, and easily disinfected. The cost of reconstruction is estimated at from 18 to 20 million pounds. This would fall on the landlords, who might be assisted by loans from the Public Exchequer at a low rate of interest. The rental of the farms would, of course, be increased, but the improved value of the stock would more than compensate for increased rental. It would also be necessary for a time to pay compensation for all tuberculous animals, and this might amount to about £5,000,000. This could be spread over, say, fifteen years within which the eradication of tuberculosis might be prescribed. It is not suggested that compensation for condemned animals should be a permanent arrangement; it would only be given during the first purgation of the stock, and the farmer whose stock had once been cleared from tuberculosis would be required to keep it clear in the future at his own expense. It is further suggested that an annual licence should be issued in rural districts by the county councils for all cowsheds, and that town authorities should require all milk dealers to obtain certificates that the farms from which they obtained their milk complied with model regulations.

Dr. Niven's scheme is almost an ideal one, but is likely to prove a very costly ideal. In the first place, it is not probable that the landlords would ever be able to recoup themselves for the cost of reconstruction by raising the rents. It is with the greatest difficulty that they obtain even the present rents. Again, even with compensation the scheme is likely to seem a very formidable one to the farmers. The mention of even the slightest rise of rent is enough to stir up opposition throughout the agricultural world. The ratepayers, too, will have a good deal to say about the cost, not only of a new set of sanitary inspectors, but the increased price of milk which would be inevitable. In spite of all this, however, Dr. Niven's scheme would be preferred in many quarters to any scheme of municipalization of the milk supply, and where the health of the whole community is at stake, the cost to the State should only be the secondary consideration.

Notification of Births.

A joint half yearly conference of societies and institutions engaged in social service was held in Manchester last week, Principal J. W. Graham in the chair. A resolution was passed expressing a hope that the Notification of Births Act would soon be adopted in Manchester, though it seemed to be agreed by the conference that some changes in administration were desirable. It was suggested that the notifications might be sent to the registrar and should constitute the official registration, as the registrar is in frequent communication with the medical officer of health. Of course that cannot be done until the Act is amended, a fact that seems to have been overlooked. The suggestion seems to be simply in the interests of parents, for in places where the Act has been adopted information of births has to be given twice over—once to the medical officer of health, and later to the registrar—it being expressly stipulated in the Act that notification is in addition to, not in substitution for, registration. Of course this is a clumsy and troublesome arrangement which could easily have been obviated. In fact, all the benefits of early notification could have been obtained by changing the words "six weeks" in the Registration Acts to "thirty-six hours." That would have

saved the parents the trouble of making two notifications where one should be enough. The only objection is that the registrar can demand a fee for every single copy of registration certificates that he supplies to the medical officer of health. At present the fee is only small, as the registrar can give the information when it is convenient; but if the benefits of early notification are to be got, it would be necessary for the registrar to send copies of all his certificates punctually every day. That would be no small task, and probably a much higher fee would be demanded, the total cost of which throughout the country would be considerable. Even that, however, would be preferable to imposing on the parents the trouble of notifying twice over. Of course, no mere change of this kind will satisfy medical men, who demand that they shall have nothing whatever to do with either notification or registration; and it may be taken for granted that, in Manchester at any rate, no Act will have the least chance of being a success that depends on imposing on medical men a task that properly belongs to parents.

The whole profession in Manchester has learned with the deepest regret of the death of Dr. W. Walter, which occurred at his home, Rusholme Hall, on Tuesday, March 17th. As a gynaecologist of the first rank and a member of the honorary medical staff of the St. Mary's Hospitals, he was as well known as any consultant in Manchester, and a wide circle of friends and colleagues will mourn his death.

THE DENTAL HOSPITAL.

At the annual meeting of the Victoria Dental Hospital it was decided to change the name to either the "Manchester Dental Hospital" or the "Dental Hospital of Manchester," a Committee being appointed to decide on the fine distinction between the two. The University, with which the hospital is connected, is now generally known as the University of Manchester, and there would seem to be no further reason for retaining the word "Victoria," while the new name would give a more local meaning to the title. It was reported that the number of patients treated during the last year was 13,787, of whom about 10,500 were adults and the rest children. The Committee expressed a hope that when the more pressing needs of the new building fund were met it might be possible to establish a permanent fund to defray the cost of providing artificial teeth to poor and deserving patients. Gifts had been received of £5,000 from the trustees of Mr. Godfrey Ermen, £250 from the Co-operative Society, and a legacy of £2,000 from the late Mrs. Rylands. The new building was expected to be ready for occupation next August. The total cost of it would be about £16,000, and of this about £3,000 was still required.

BIRMINGHAM.

THE GENERAL HOSPITAL.

THE one hundred and twenty-eighth annual report of the General Hospital has just been issued, and the Board of Management expresses its satisfaction with the general working of the institution during the past twelve months. The patients treated numbered 67,670, and of these 5,568 were in-patients and 62,102 out-patients. Of the in-patients, 1,100 were children under 12 years of age, of whom 240 were under 2 years. The total expenditure was £24,978, and the total income £21,953. The amount accruing from subscriptions and extra tickets was £7,508, the ordinary donations were £396, and the legacies £1,907. The deficit at the end of 1906 of £4,673 was increased to £7,698 exclusive of the cost of altering the theatres, not included in last year's accounts. The total cost of the alterations in the theatres will probably amount to £1,000. The large operating theatre has been divided into two separate theatres, each having its own anaesthetic and sterilizing rooms. Special tanks for the supply of sterilized water have been provided. The hand-basin fittings have been removed and large sinks substituted. A similar alteration of the fittings is now being made in the small theatre on the second floor. The important question of the great pressure of work in the out-patient department has been considered by a Special Committee. As the result of their report and the recommendation of the Medical Committee, the Board of Management has authorized and instructed the present visiting and resident medical and surgical staff to refer elsewhere trivial cases after giving first aid, and also to refer to general practitioners, clubs, dispensaries, or to the Poor-law authorities chronic cases which do not require the treatment of the hospital staff.

THE QUEEN'S HOSPITAL.

The sixty-seventh report of the Queen's Hospital shows that 37,898 patients were treated at the institution during the year, and that of these 2,485 were in-patients and 35,413 were out patients. The expenditure of the hospital was £12,786 and the income £10,979. The committee estimates that about £2,500 additional income will be required when the new block is opened. The extension to the Nurses' Home has been completed, and on September 24th all the nurses were housed in it. The new hospital block has been nearly completed. The chapel and the dispensary remain to be built, and the alterations in the out-patient department will be carried out during the present year. The amount promised towards the extension of the hospital is £23,433, and there is still about £15,000 to be raised before the new buildings can be opened free from debt.

REPORT OF THE PUBLIC ANALYST.

The report for 1907 of the Public Analyst, Mr. J. F. Liverseege, showed that 3,057 samples had been submitted for analysis. Of these, 2,024 were taken under the provisions of the Sale of Food and Drugs Acts, and 1,033 were miscellaneous samples sent by various Corporation departments. Last year over 500 samples more were taken than in the previous year. In six years the samples have increased from 247 to 365 per 100,000 persons living in Birmingham. The comparative figures for 1906 are: London, 474; England and Wales, 262. Of the samples of foods and drugs taken, in 508 cases the vendor was notified, and of these, 416 were genuine, 10 adulterated with preservatives, and 82 adulterated in other ways. There were 1,516 informal purchases, and of these 26 were adulterated with preservatives, and 71 in other ways. The proportion of adulteration by preservatives only—namely, 1.8 per cent.—was lower than the figure recorded for any previous year. This improvement would have been greater but for the presence of salicylic acid and excess of salt in an unusual number of beers. The amount of adulteration in other ways was 7.6 per cent., being lower than in the two previous years. The number of prosecutions and the amount of fines last year were decidedly lower than usual. Only 53 cases were prosecuted, as compared with 79 in the previous year, while the fines amounted to £115 2s. 6d., as compared with £244 17s. 6d.

SOUTH WALES.

CARDIFF INFIRMARY.

GENERAL LEE was unanimously re-elected Chairman of the Cardiff Infirmary Board of Management on March 11th, and in returning thanks said the completion of the £30,000 fund, so munificently opened by Mr. John Cory, had been wonderful, and great praise was due to Colonel Bruce Vaughan for his untiring and unselfish work in connexion therewith. The statement of accounts showed a balance due to the bankers of £15,380. Dr. Northranger resigned his appointment as House Physician because he had no control over the admission of patients to the medical beds. The reason assigned was thought to be important. A member of the Cardiff Trades' Council said that he had received many protests from the Carpenters' Society owing to the ordering of forty or fifty doors from America. The infirmary was supported by the 2,000 members of the building trades in Cardiff and district, and these doors could be obtained as good and far more cheaply at home. He hoped that when the new wing was started local labour would be given the preference. Colonel Vaughan said the doors needed could not be made in Cardiff. They would cost between £80 and £100. He would be sorry to take from Cardiff any work that could be done there. Mr. Lynn Thomas, C.B., moved that a subcommittee be appointed

> To take into consideration, as instructed by the annual meeting of the Governors, the desirability of reorganizing the constitution of the Board of Management, on account of the present system being extravagant and unwieldy.

The resolution was carried. A discussion took place as to

the advisability of appointing an almoner to supervise the out-patients with the view of preventing abuse. Mr. Fisher denied that there was abuse—certainly not sufficient to justify such an appointment. The General Secretary said there were abuses, and instanced the case of a man who, representing that his average weekly wage was 25s, really received about £3 Some of the representatives of the colliers warned the committee against setting up a system which could only result, they argued, in alienating the sympathies of the workers. Working men who sought the aid of the infirmary would resent the authorities investigating their home circumstances and applying to their employers for a statement of the wages they received The question will be brought up again when the delegates to the United Kingdom Hospitals Conference present their reports.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

There were twenty-nine applications received for the three posts of medical inspectors under the Glamorgan Council, and at their meeting held at the Town Hall, Pontypridd, on March 12th, the following three candidates were appointed: Mr. T. Evans, M.B.Lond., Westminster Dispensary, London; Mr. T. E. Francis, M.D. State Medicine, Lond., Tredegar; and Miss Edith Jones, M.B., B.S.Lond., of Henllan, Velindre, South Wales.

India.

[FROM OUR SPECIAL CORRESPONDENT]

THE PLAGUE COMMISSION.

UNDER the authority of the Government of India, the Sanitary Commissioner with the Government at Simla has issued a summary of the work of the Plague Commission, in a pamphlet entitled *The Etiology and Epidemiology of Plague*, compiled by Major George Lamb, I.M.S. The reports, as they have been issued, have been fully noticed in our columns, and the pamphlet generally follows the order of the reports. It has been prepared for the use of administrators in India in framing measures for the prevention of plague, and in the hope that a knowledge of the facts will help the people to understand the reasons for the measures introduced. The general conclusions are summarized as follows:

1. Pneumonic plague is highly contagious. It is, however, rare (less than 3 per cent. of all cases), and plays a very small part in the general spread of the disease.
2. Bubonic plague in man is entirely dependent on the disease in the rat.
3. The infection is conveyed from rat to rat and from rat to man solely by means of the rat-flea.
4. A case of bubonic plague in man is not in itself infectious.
5. A large majority of plague cases occur singly in houses. When more than one case occurs in a house, the attacks are generally nearly simultaneous.
6. Plague is usually conveyed from place to place by imported rat-fleas, which are carried by people on their persons or in their baggage The human agent not infrequently himself escapes infection.
7. Insanitary conditions have no relation to the occurrence of plague, except in so far as they favour infestation by rats.
8. The non-epidemic season is bridged over by acute plague in the rat, accompanied by a few cases amongst human beings.

The pamphlet is to be obtained through any bookseller in India, England, France, Germany, or Holland, price 4 annas, or 5d.

THE MEDICAL OFFICERSHIP OF CALCUTTA.

Dr. J. Neild Cook has presented a memorial to the Viceroy and Governor-General of India, praying for an inquiry into the circumstances under which his appointment as medical officer of health for Calcutta was terminated by the Corporation of that city, and suggesting the advisability of so modifying the existing law as to ensure security of tenure for medical officers so long as they perform the duties of their office efficiently. We have had occasion to refer to this matter in several previous issues, but may now briefly summarize the facts as follows: Dr. Neild Cook was appointed medical officer to the Calcutta Corporation in January, 1898, after seven years' service in a similar capacity in Madras. After five years' service his appointment was renewed for a further period of three years, and during the whole of this period he carried out his extremely difficult duties with admitted distinction and success. Nevertheless, in December, 1905, at the fag-end of a meeting of the Municipal Commissioners, when only about one-third of the Commissioners were present, a resolution was passed giving Dr. Cook six months' notice of the termination of his appointment, an excuse being found in the proposed reorganization of the Health Department and its amalgamation with the Plague Department. So much feeling was aroused by this decision that at a subsequent meeting it was decided to extend Dr. Cook's term of office to October, 1907. The new appointment was advertised early in 1907, and Dr. Cook, among others, applied for it. These applications were considered by the Estate and General Purposes Committee of the Corporation, who decided, by the casting vote of the Chairman, to submit only Dr. Cook's name to the next meeting of the Corporation. Notwithstanding this, the name of another local applicant was proposed at the meeting, and this gentleman was ultimately elected.

Dr. Neild Cook, in his memorial to the Viceroy, bases his plea for inquiry on the ground that his dismissal was due, not to any dissatisfaction with his performance of his duties, but to personal motives, and a deliberate campaign organized to oust him by certain individuals. Dr. Cook's memorial is, no doubt, a privileged document, but when some of these allegations have been made in public, they have not, so far as we are aware, been challenged except in one case when an action was entered by one of the officials concerned against the editor of *Capital*; but this suit was withdrawn after the cross-examination of a single witness, who admitted that the plaintiff had endeavoured to induce him to withhold his evidence. The fact that the resolution dismissing Dr. Cook was only passed at the end of a long agenda, when many Commissioners had left the meeting under the impression that so important a matter would not be taken at that late hour, is also, to say the least of it, suspicious. Further, Dr. Cook quotes an extract from the proceedings of a special meeting of the Commissioners, in which one member of that body actually admits having said "that he was a past-master in the art of electioneering and wire-pulling, that he had made up his mind to get rid of Dr. Cook, and by God he had done it."

Dr. Cook has only memorialized the Viceroy after appealing in vain to the Government, and we regret to add that the official reply to his memorial is couched in the following terms of hard-and-fast bureaucracy: ". . . Such an inquiry could only be made under Section XXII of the Calcutta Municipal Act of 1899, and the Government of India are of opinion that action could not properly be taken under that section in the present case."

To the unofficial mind it seems obvious that Dr. Cook has made out a prima facie case so strong that it is the duty of the Viceroy to grant his request for an inquiry. The question at issue is much more than alleged injustice of a most grievous kind to a meritorious public servant, bad as that is. The proper sanitary administration of a great seaport such as Calcutta, with its widespread commerce, its population of nearly a million, and, unfortunately, its present suitability as a breeding-place both for cholera and plague, is a matter of vital concern to the whole civilized world. How far that administration is likely to be and remain efficient while the responsible officer is removable at the whim of a town council free from even the degree of control which the Local Government Board exercises in England, we leave to the imagination of those who have followed the history of similar recent cases in this country.

THE will of the late Sir Thomas McCall Anderson, M.D., F.F.P.S., Regius Professor of Medicine in the University of Glasgow, and Honorary Physician to the King in Scotland, has been proved at £54,006.

PAYMENT for the new premises of the Royal Waterloo Hospital for Children and Women has now been completed, but one ward of 30 cots remains closed owing to the insufficiency of the annual income of the institution to maintain them. An earnest effort is now being made to increase the number of annual subscribers in order that these cots may no longer lie idle. Subscriptions may be sent to the Secretary of the Special Appeal Committee, at the Hospital, Waterloo Bridge Road, S.E.

SPECIAL CORRESPONDENCE.

PARIS.

Société de Chirurgie: Discussion on Intraspinal Injections of Stovaine to Produce Anaesthesia—The Common Cactus for Destruction of Mosquitos in Tropical Countries.—Banquet of the Association of the Medical Press.

At the last meeting of the Société de Chirurgie M. Chaput communicated the statistics of the cases in which anaesthesia had been produced by lumbar injections of stovaine during the year 1907 in his wards at the Lariboisière Hospital; 647 operations in all were performed by M. Chaput or his residents, and of these 425 were performed with lumbar injections (without one death), 181 with general and 30 under local anaesthesia. M. Chaput in his personal cases used general anaesthesia 22 times only and lumbar injections 177 times, the latter including 82 large laparotomies, 11 operations on the thorax, 16 operations on the upper extremity, and 3 operations on the head. Syncope was always avoided by the use of caffeine and intravenous injections of serum, headaches and subsequent accidents being avoided by preventive evacuation of cerebro-spinal fluid, by later evacuation of this fluid, and by rest in bed. M. Chaput considers the advantages of lumbar injection over general anaesthesia to be the following: The greater benignity in low operations; with this method he has never seen sudden death in an anal dilatation. The lumbar injection of stovaine produces less shock than general anaesthesia; there is no albuminuria, no subsequent vomiting; all patients, except laparotomy cases, can be fed immediately. Are there any contraindications? They are not absolute, but old and exhausted patients are specially liable to syncope, especially with large doses; it is better to use only 5 to 6 cg., and always have handy some caffeine and serums for intravenous injection. M. Chaput considers that lumbar injection can now in the majority of operations be regarded as a rival to general anaesthesia. In the discussion which followed, M. Hartmann spoke about being on one's guard against thinking this an absolutely innocent method. He had seen two deaths in his wards under exactly similar conditions. In the first case a transvesical prostatectomy (which is rendered an almost bloodless operation by lumbar injection of stovaine), M. Hartmann had some difficulty in introducing the finger into the rectum, and had the patient's pelvis raised to place a cushion underneath; at this instant the patient became pale, and the radial pulse could not be felt; he remained in the same state for seven hours, and then died in spite of caffeine and serum injections; 7 cg. of stovacocaine had been injected in this case. In the second case 7 cg. of pure stovaine was injected, and the patient—a woman—died rapidly after the pelvis had been raised to more easily return the intestine in a case of volvulus. M. Hartmann thinks it is more prudent not to raise the pelvis for fear of diffusion of the injected liquid towards the medulla. M. Le Dentu said that besides the deaths and grave accidents, there were others of a serious nature recorded. He had personally observed a complete paralysis of the group of shoulder muscles which had lasted two or three weeks, and a paralysed bladder, both of which could only be accounted for by the action of stovaine. M. Schwartz has used the method for the last two years, and is generally satisfied with it. He has, however, several times observed retention of urine lasting several days, and requiring the use of the catheter. M. Guinard has used this method hundreds of times, but he has now completely abandoned it since he observed the following cases: (1) A woman, aged 50 years, on whom he performed a vaginal hysterectomy for cancer of the neck of the womb. The operation went off very well. Three months later the patient began to have paresis of the lower extremities, then became childish, and died within the year with softening of the brain. (2) Some time after he operated on a lady in a nursing home for a simple tear of the perineum. Everything went off well. Three weeks later he found the patient sitting up in bed, taking some soup. He told her that she could leave the home the next day. A few minutes later he is told that the patient had died suddenly. (3) A private patient, aged 52, who recovered rapidly after having an artificial anus made. The artificial anus worked regularly, and the rectal cancer continued its evolution slowly. At the end of three months the patient began to want to stay in bed. He complained of weakness of the lower limb. In a few weeks he, too, became childish, and died with brain softening six months after the operation. Before using this method M. Guinard never saw similar cases, and he has not seen any since he stopped using it. These cases may be simple coincidences, but they have given him a bad impression, and he will only use lumbar injections in the future in cases in which general anaesthesia is contraindicated. M. Nélaton said he had seen two cases similar to those of M. Guinard. M. Tuffier since 1899 has made hundreds of lumbar injections of cocaine and stovaine. He now only uses pure stovaine, and with it he has never had any serious accidents either at the time of the operation or later, the few cases of headache, rise of temperature, etc., never being serious, and always yielding to simple therapeutic methods. He will shortly communicate his statistics.

Dr. Sauzeau de Puyberneau, chief of the medical service in the Gabon, in the *Annales d'hygiène et de médecine coloniales*, for the destruction of mosquitos, advises the use of the prickly cactus (*Opuntia vulgaris*), which is common in all tropical countries. If the fleshy leaves of the plant are cut up into pieces and mixed with water, a mucilaginous mixture is soon made, and spreads out on the surface of the water, forming, exactly like petroleum, an isolating layer which prevents the larvae of the mosquito from coming in contact with the air, blocking up their tracheae, and destroying them in fifteen to fifty hours, depending on the thickness of the layer of mucilage. The mosquito eggs which are laid on the surface cannot develop and form fresh larvae. It is not necessary to mix the cut-up leaves with water beforehand; it is sufficient to throw the pieces of the leaves on the surface, and by osmosis the plant forms the isolating layer. More leaves, however, are necessary, and the process is slower. The method is harmless and does not affect the fish. In stagnant water the cactus absorbs the gases of fermentation. This method is cheap, easy, and always applicable, but is much slower than petroleum. It lasts several weeks, whereas petroleum has to be renewed every fortnight. The larva stage of mosquitos lasts a fortnight, so if the method with cactus leaves is repeated every month the complete destruction of the larvae is certain.

On February 21st the Association of Medical Journalists, which was founded a year ago, celebrated its first anniversary with a banquet at the Restaurant Marguery. The association is very flourishing, and already consists of 133 members. M. Monprofit, from Angers, as President of the Association, occupied the chair; the Ministers of the Interior, Public Instruction and Agriculture were represented, and among others present were Professor Landouzy, Dean of the Faculty of Medicine, and Professor Pozzi. After M. Monprofit had said a few words of welcome, M. Mirman, Directeur Général d'Assistance Publique at the Ministry of the Intérieur, analysed the rôle of medical journalists, who are of two categories: Those attached to purely scientific journals, and those who in the daily press vulgarize medical questions, carrying out the hygienic education of the people, to ameliorate public and social hygiene in France. Professor Laudouzy also made a speech which was warmly applauded.

BRITISH ASSOCIATION. The Council of the British Association for the Advancement of Science has nominated Professor J. J. Thomson, F.R.S., Cavendish Professor of Experimental Physics in the University of Cambridge, to be President of the meeting of the Association which is to be held at Winnipeg next year. In 1894 Professor Thomson was awarded one of the Royal medals of the Royal Society, and to this was added in 1902 the Hughes Medal in recognition of his contributions to the advancement of electrical science, especially in connexion with the phenomena of electric discharge through rarefied gases. Two years ago he was the recipient of the Nobel Prize for Physics. It is understood that provision will be made by the Canadian Government in the estimates for the coming financial year for a grant of £5,000 by the Dominion Parliament towards the expenses of the Association's visit to Winnipeg. The city of Winnipeg itself proposes to make a grant of £1,000. The week of the meeting will probably be from August 25th to September 1st, 1909.

CORRESPONDENCE.

THE TREATMENT OF PNEUMONIA.

SIR,—The "big fight" for which Dr. Samuel West's laudable exhortation in your last issue is valour "to the finish," is best fought and won, like all other battles, at the outset. There can be but one strategy against a foe so notorious for disastrous surprises, however reassuring may seem to be the insignificance of its first appearance in the field—the strategy of our recent Indian campaign. We have tried in another latitude the plan of "meeting the symptoms as they arise," and of sending for men and ammunition and for a plan of campaign for a good fight at the finish. There is nothing dangerously dogmatic in claiming as the patient's right the full benefit of any doubt that may still exist as to the efficiency of adequate measures, safe as well as strong, against the earliest signs of pneumonia. But the responsibility of a silence which might be mistaken for consent would be less serious only than that which is inseparable from the rigid and uncompromising teaching that it is a duty to wait until the invasion is completed and the lung paralysed, and a dogma that it is futile to attempt to check or to disperse the loose croupous exudations until we shall have discovered some bactericidal remedy. Do we wait for any such in presence of the hard masses of syphilitic gumma or of the swollen glands of scrofula? My latest protest[1] is of so recent a date that this letter might have been superfluous; but neither from Dr. West's paper nor from the debate upon it at the Harveian Society does it appear that any alternative opinion, at variance with the dictum that "we do not know any means of checking the progress of pneumonic consolidation in the lung," is matter for discussion.

The only case of pneumonia happening to be under my treatment this day at the Belgrave Hospital is that of a well-nourished infant of 16 months, admitted two days ago, on the third day of an acute attack. An extensive dry consolidation had already occurred at the left posterior base. No fine crepitations or râles were audible, and my house-physician, Miss Norah Smith, M.B., had based her diagnosis (which I confirmed) from effusion upon the absence of any displacement of the heart. Whey was substituted for milk, and the following mixture administered every hour for six doses and subsequently every two hours:

℞	Pot. iod.	gr. ¾
	Pot. cit.	gr. ½
	Liq. amm. cit.	♏ 15
	Aq. anethi	ad ℥j.

The next examination was made by Miss Smith fourteen hours later, ten doses (equivalent to 6½ grains of potassium iodide) having been taken and retained. The infant was better. Loud tubular respiration persisted, but it was accompanied with large *redux* crepitations. The patient continued to improve, and when I examined again on the following day (fifth day of illness) resolution was far advanced, though some tubular breathing was still heard with the râles. The temperature was down by lysis, and the infant, practically convalescent after the administration of 16 grains of the iodide in forty hours, was restored to its milk and to four-hourly doses. Leeches had not been resorted to, though I invariably use them in older patients.

Granted that this case proves nothing, some significance attaches to it nevertheless. In the first place, the treatment mentioned was prescribed as safe, fit, and desirable in this instance—because it had been found eminently satisfactory in many previous cases. And again the same treatment will not unreasonably be adopted in the next case, because it has once more confirmed the numerous impressions made by previous cases that the disease and the consolidation are most favourably influenced. Some points of importance are, however, proved by the case as it stands: (1) A patient apparently of good promise did not deteriorate into a bad case under thoroughly active treatment, but on the contrary made excellent progress. (2) So active a drug as iodide of potassium, administered at frequent intervals, did not prove to be pernicious, but salutary. (3) Whey was substituted for milk with distinct advantage. (4) The progress was as usual so satisfactory that alcohol and even medicinal stimulants were not deemed requisite. In conclusion, the early measures which I have recommended some years ago[2] are definite, and I have continued to practise them almost without any alteration because I have found them successful. But I am anxious to adopt any definite improvement from any quarter. My criterion is clinical not statistical—the evidence of results. These impel me to urge with the practitioner the care of patients from the first hour of their sickening. He should be allowed to enjoy that freedom and zeal in looking for progressive helpfulness in the treatment of pneumonia also, as well as of all other diseases, which I myself value as a privilege. The *onus probandi* rests with the doctrine of helplessness and of systematic inactivity and delay.—I am, etc.,

London, W., March 15th. WILLIAM EWART.

[1] Cf. The Treatment of Pneumonia in Private Practice. *Folia Therapeutica*, October 1907, January, 1908.

[2] The Principles of Treatment of Pneumonia. *Lancet*, January 21st 1905.

THE TRANSMISSION OF SYPHILIS TO THE SECOND GENERATION.

SIR,—I am pleased to find that Dr. Marshall, in his reply to my letter of March 7th, no longer puts forward his hypothetical intermediate forms (so far undiscovered) as an argument, but returns to the known facts concerning the micro-organism of syphilis.

His restatement of the relative sizes of the spirochaete, spermatozoon, and ovum will be of interest to those unfamiliar with these measurements, and will make it clear to all on what a feeble basis the argument as to the entrance of the spirochaete into the ovum rests. A spirochaete $\frac{1}{25000}$ in., as I argued, and he admits, cannot be carried in the head of a spermatozoon $\frac{1}{60000}$ in.; but it must not be lost sight of that it is the penetration of the head or heads into the ovum which brings about impregnation, therefore the ordinary channel of infection with impregnation is excluded. He proceeds to state that, as the diameter of a human ovum is twenty times the length of a spirochaete, the ovum is quite large enough to allow the spirochaete to multiply within it. Possibly, if the ovum were regarded as a mere passive cyst with no future than to supply temporary pabulum for the multiplication of spirochaetes. But the cells of an impregnated ovum have rapidly to undergo the most complex of all differentiation into cartilage, nervous system, muscle, bone, skin, and viscera; and it is inconceivable that such processes could go on with these comparative giants of spirochaetes lashing out and multiplying in so confined an area. Death must come to one or the other. As well might it be argued that the trees and herbage of Cavendish Square would remain uninjured if a megatherium or diplodochus were confined within its narrow precincts.

Dr. Marshall quotes me incorrectly in suggesting that I stated Colles's law was an argument *against* spermatic infection of the ovum. The words I used were, "Hitherto Colles's law has been used as an argument in support of the view that the mother may get a mild form of syphilis from her syphilitic fetus, whose syphilis is supposed to be derived entirely from the father. But the law of immunity will remain equally true, if it is supposed that the mother is first inoculated by the father, a large dose of the protozoon causing an obvious eruptive syphilis, and a small dose a syphilis which misses the eruptive stage." The argument is that Colles's law is not inconsistent with the more modern view.

Your correspondent's experience must be strangely at variance with that of others if it teach him that, when the virulence of the disease is over, it is not the rule for the infant to be born apparently healthy and to come out in an eruption some time after birth. In these cases, I again assert, "*the separation of the placenta is the first stage and corresponds to the chancre of acquired syphilis.*" Surely Dr. Marshall would not hold that the spirochaetes had remained dormant from the date of impregnation and blossomed out like a bulb on exposure to daylight. I did not deny that infants were born either prematurely or at normal time with eruptions upon them, but in those cases syphilis of the placenta is almost always to be demonstrated. Were it not so explanation would still be easy for an irregular contraction of the uterus causing slight rupture of the placenta might let in the spirochaetes at any placental stage.

My critic's last appeal on the danger of denying

paternal infection as leading to the shortening of the five years' quarantine after infection, shows how deeply he is still imbued with ancient ideas, for this long exploded dictum I believe dates back from the days when Fournier was young.—I am, etc.,

London, W., March 16th. R. CLEMENT LUCAS.

CEREBELLAR ABSCESS.

SIR,—Having read the excellent paper on cerebellar abscess by Mr. Wilfred Trotter in the BRITISH MEDICAL JOURNAL of March 14th, I thought the following notes might be of interest by illustrating the great risk of respiratory failure from pressure on the medulla in cases of cerebellar abscess, which he mentions in his lecture.

On August 13th, 1907, I saw with Messrs. Fagge and Willan, of Melton Mowbray, a boy, aged 11 years, who since August 1st had been developing typical symptoms of a cerebral abscess. He had had discharge from the right ear for several years. He was in a semi-comatose condition, extremely emaciated, with a slow pulse (56), subnormal temperature, and retracted abdomen. No localizing signs could be detected. Immediate operation being decided on, chloroform was administered. Directly the anaesthetic was commenced respiration ceased and all efforts to make the patient breathe spontaneously were unavailing. The heart, however, continued beating strongly with artificial respiration. After a hurried consultation we decided to trephine and explore while the boy was kept alive by artificial respiration. The first attempt was negative, but after repeated explorations a stinking abscess was tapped in the right lobe of the cerebellum. The rhythmical compression of the chest, which had been kept up for nearly half an hour, was now stopped, and the boy began to breathe naturally. Recovery, though slow, was uneventful, and a radical mastoid operation was performed some few months later.

The boy's mental and physical condition seems now to be in no way impaired.

This case seems to point strongly to the advisability of immediate exploration in all cases of suspected cerebellar abscess where sudden respiratory failure occurs.—I am, etc.,

Leicester, March 17th. F. BOLTON CARTER.

THE PREVENTION OF TUBERCULOSIS.

SIR,—On having my attention drawn to the letter of Mr. W. Brown in your issue of February 29th, I immediately communicated with Dr. Gerald Leighton, and asked him kindly to furnish me with particulars of the suggestions he has been making with regard to the subject of my paper. Dr. Leighton very courteously replied at once, and informed me that he has always impressed on his students "the importance, from the point of view of breeders, of taking advantage of the comparative immunities of species and individuals with the view of producing types and strains resistant to disease," and that he has pointed out to them "the very curious differences in susceptibility to disease shown by cattle, etc., in reference especially to tuberculosis, anthrax, and glanders." I have long known that Dr. Leighton has been, like myself, a member of that unfortunately too scanty band of medical practitioners who seek inspiration in the larger field of biology for the solution of many of the problems affecting the smaller and more highly specialized branch which we know as human medicine; but, owing to the fact that the above lectures were delivered to an audience of veterinary students, and have apparently never been published, I was quite unaware that he, though in a more general way, had already somewhat anticipated my more specific and, of course, quite independent scheme.

But the question of priority—which, I suppose, I am entitled to claim in respect of date of publication and definiteness of scheme—is, after all, one of very small moment. What is of greater importance is the scheme itself, which, with the assistance of Mendelian methods of breeding, is bound in the near future to prove the solution, being absolutely ultimate in its application, of the problem of the supply of tubercle-free milk.

In conclusion, allow me to express my thanks to Mr. Brown for bringing to my notice Dr. Leighton's claim.—I am, etc.,

Spennymoor, March 4th. A. R. GUNN.

TOXIC EFFECTS OF PETROL FUMES.

SIR,—The attribution by Sir William Gowers of a case of nervous disorder to the inhalation of petrol fumes is opportune, inasmuch as much investigation of the products of combustion in motor engines is being carried on at the present time. But there are some statements in the article which appear to require some qualification, since they are not quite in accord with recent observations.

Sir William Gowers is inclined to attribute the symptoms to the continued inhalation of carbonic oxide, but admits that, if so, the particular patient probably showed special susceptibility. Now the discovery that carbonic oxide was of quite frequent occurrence in the exhaust gases is somewhat recent, and has hardly penetrated as yet to the ordinary garage. In a large country garage, where not only are cars being temporarily housed but repair work is carried on, a number of motors come in and go out every day under their own power, and the running of engines under adjustment is of very frequent occurrence in an enclosed space. There being as yet no general knowledge that a poisonous constituent may be, and in an engine in need of adjustment almost certainly is, present, no particular precautions are taken to avoid breathing it, nor even much precaution as to general ventilation; yet inquiries made at this large garage failed to show that the workmen were otherwise than exceedingly healthy, and even somewhat leading questions failed to elicit evidence that anything like obvious slight carbonic oxide poisoning had been met with there. For what it is worth, the conclusion might be drawn that the inhalation of carbonic oxide in small quantities and well diluted does not, in most people, produce any obvious effect, for from what is now known it is perfectly certain that workers upon engines out of order must have, in a vast number of cases, breathed some carbonic oxide repeatedly.

Further, it must not be supposed that the formation of carbonic oxide is a necessary accompaniment of an engine working at full power, as would seem to be implied in the article. On the contrary, the investigations of Professor Hopkinson have proved that when an engine is working at its best efficiency there is none, or practically none. If the results are plotted in curves, as the carbonic oxide curve rises the efficiency curve falls; carbonic oxide is an evidence of imperfect combustion calling for remedy, and, now that its significance is recognized, it will be remedied more and more.

That alcohol burnt under similar circumstances—that is, in an explosion engine—would yield a harmless exhaust, even when badly burnt, may be true, but there is no evidence whatever that it would. The combustion of a hydrocarbon like petrol is not quite fully understood. The old idea, to which some still lean, was that there was a preliminary decomposition of the hydrocarbon, and that the hydrogen was burnt preferentially, the carbon following later. Subsequently the theory that hydroxyl compounds were formed as an intermediate stage was advanced. If this idea, which has lately been revived, be correct, there seems no reason why a hydroxyl, like alcohol, should behave any better than a hydrocarbon when its combustion is not perfect.

However this may be, it is the fact that with proper adjustments petrol can be burnt in a motor engine without carbonic oxide (except the merest trace) occurring in the exhaust. On the other hand, with things in very bad adjustment, carbonic oxide may be present to the extent of 10 per cent. of the exhaust gases, the water vapour formed being left out of this calculation, and only the nitrogen and carbonic acid estimated.

As bearing on the feasibility of remedy, a purchaser recently specified that a new car was not to show more than a certain very small percentage of carbonic oxide in the exhaust; when delivered it showed a greater proportion, and was returned to the makers, who in a few days were able to send it back adjusted so as to satisfy the requirement.

Methane occurs in crude petroleum, and its presence in an exhaust is not proof that it was formed in the process of combustion; it may have existed dissolved in the petrol, and escaped being burnt, for—and this is very surprising—free hydrogen has been sometimes found unburnt in the exhaust gases.—I am, etc.,

Aylsham, Norfolk, March 12th. C. S. TOMES.

THE PHYSIOLOGICAL IMPORTANCE OF THE CALCIUM SALTS.

SIR,—My attention has been called to a letter from Dr. Blair Bell in your issue of last week. I really feel that I do not deserve the honourable attention he there gives to a few casual utterances of mine during a discussion on his paper on the Physiological Action of Calcium Salts. He thrusts greatness upon me when he calls it an "able and carefully-prepared speech." I had not the slightest idea what I should say, or whether I should say anything, until after the close of his own address.

But what I did say I meant, and should not hesitate to say again, about clinicians and their loose methods of research in physiological and physical subjects. Moreover, it was at Dr. Blair Bell's own request that I took some little trouble to find the exact reference to Mörner's paper. Despite what Dr. Blair Bell has said in his letter, Mörner's work, if studied carefully, conclusively confirms my original observation that calcium salts are not an essential factor in the setting of gelatin. I consider I was perfectly justified in anything I have said or done in criticizing Dr. Blair Bell's work. What influence does he refer to, I wonder? I have neither before nor since the evening of his paper had a quarter of an hour's conversation with anybody about it. What I pleaded for was simply thorough-going chemical confirmation of clinical methods. Nobody who values truth for its own sake can blame me for that, and seeing that Dr. Blair Bell has not been able to conduct a few simple experiments such as would be required to prove his point regarding gelatin coagulation, I think others will excuse me for being sceptical as to the value of his other experiments in the more complicated department of physiological chemistry.

I truly reciprocate his goodwill as expressed in his last paragraph.—I am, etc.,

Blundellsands, March 17th. W. GORDON LITTLE.

SIR,—In your issue of March 14th I notice that Dr. Blair Bell still claims that calcium is important for the setting of gelatin.[1] In view of the great amount of work already done on this subject it seems almost superfluous to reopen the matter, especially as the point readily admits of experimental proof. Let me quote the following simple experiment which I have carried out in consequence of feeling surprise at reading Dr. Blair Bell's statement:

A 5 per cent. solution of Coignet's gold label gelatin was made, and 10 c.cm. of it was added warm to 10 c.cm. of each of the following substances in 2 per cent. solutions, so that the final mixtures contained 2·5 per cent. gelatin and 1 per cent. of the reagent in each of the following cases: (1) Control in water, (2) potassium oxalate, (3) ammonium oxalate, (4) oxalic acid, (5) acetic acid, (6) tartaric acid, and (7) ammonium sulphocyanide. These were all cooled under identical conditions. The amount of oxalate was much more than sufficient to precipitate all the calcium contained in the gelatine. The control and the potassium and ammonium oxalates set equally rapidly and well. The ammonium sulphocyanide tube set somewhat more slowly, thus agreeing with Lewites, who found that sulphocyanides and many other substances inhibit the setting of gelatin.[2]

The three acid mixtures were greatly delayed in setting, but some hours later, when they did set, the oxalic acid one set fully as rapidly and firmly as the ones containing acetic and tartaric acids.

The prevention or retardation of the setting of gelatin, therefore, turns out to be due not to the precipitation of calcium, but to the presence of acid (hydrogen ion), and this not only confirms Lewites but also explains Dr. Blair Bell's error.

Concerning his method for the estimation of calcium,[3] Dr. Blair Bell's curious use of the term "index" in his expression "calcium index" seems to me—and I know others who agree with me on the point—misleading. In the first place, it gives an impression of defined accuracy which the method does not really warrant. Further, the term "index" is confusing, because he denotes by it simply an artificially chosen divisor, which leaves out of account the size of the individual crystals, etc.

I therefore feel constrained to write this brief note in order that those who are using Dr. Blair Bell's method should realize that much caution is required before accepting it as a reliable means of estimating the amount of calcium—even of the ionized, let alone the full physiological quantity—in the blood.—I am, etc.,

HERBERT E. ROAF.

Pathological Department, University of Liverpool, March 17th.

[1] BRITISH MEDICAL JOURNAL, 1903, vol. i, pp. 505 and 654.

[2] See *Zeitschrift für Chemie und Industrie der Kolloide*, vol. ii, 1907-8, pp. 161, 208, and 237 for a detailed study of the gelatinization of colloids, where he also points out (p. 239) that formol-gelatin will not set above 53° C. in the presence of acid even so dilute as $\frac{1}{5}$ normal HCl.

[3] BRITISH MEDICAL JOURNAL, 1907, vol. i, p. 920.

MR. LECKY AND VIVISECTION.

SIR,—I crave permission to reply to some of your comments on my letter in your issue of March 7th. (Before doing so may I say that by a clerical or printer's error the edition of Lecky's *History of European Morals* ascribed to the year 1887 should be 1877?)

You consider it illogical of me to think my quotation an excellent *first one of a series* to establish the point which I wish to bring out. I think it illogical of you to think so. I am perfectly contented to leave the point with the unbiassed reader.

As regards my answer (8,782) quoted by you, any one who reads all the context can see that, after my being denied the right of producing a part of my evidence, this was a summary—and, I claim, a fair one—of the evidence which I wished to bring forward. It was uttered on the spur of the moment in the hope that I might prevail on the Commission to see the importance and justice of letting me fairly develop my point. As my quotations were never allowed to be finished, it is impossible for any really critical mind to decide whether I was fully justified in my contention or not. But most people will be able to see that the quotation which I made in my last letter to you was a splendid *foundation* on which to build my thesis up with the help of other authorities, and, as such, highly relevant.

Seeing that the antivivisectionist roll contains such immortal names as Shakespeare (apparently), Johnson, Tennyson, Browning, Ruskin, Shaftesbury, Manning, Voltaire, Comte, Westcott, and Hugo, I am not surprised that you fancy that I expect to find the names of all the great thinkers in it; but I gladly make you a present of that great thinker, Lecky. We saw in my last letter the solemn warning uttered by this vivisectionist, that the sufferings of men and of animals produce the same type of psychical result on the witnesses. Now I will add a condemnation of much of the vivisection that goes on out of the mouth of this same vivisectionist:

> The horrors of vivisection, often so wantonly, so needlessly practised, the prolonged and atrocious tortures sometimes inflicted in order to procure some gastronomic delicacy, are so far removed from the public gaze that they exercise little influence on the character of men. Yet no humane man can reflect upon them without a shudder.—*History of European Morals*, 3rd edition, vol. ii, pp. 176-7.

I hope, Sir, that you will go on claiming Lecky as a vivisectionist.—I am, etc.,

LIONEL S. LEWIS.

St. Mark's Vicarage, Whitechapel, E., March 11th.

P.S. You have small respect for antivivisectionist logic. I have small respect for vivisectionist facts. As an answer to your charge of lack of verification of authorities (so typical of your side!), I am perfectly prepared to show the original paper with the carefully-verified quotations from authors which I took with me before the Commission. It is a pity to bring charges so easily disproved.

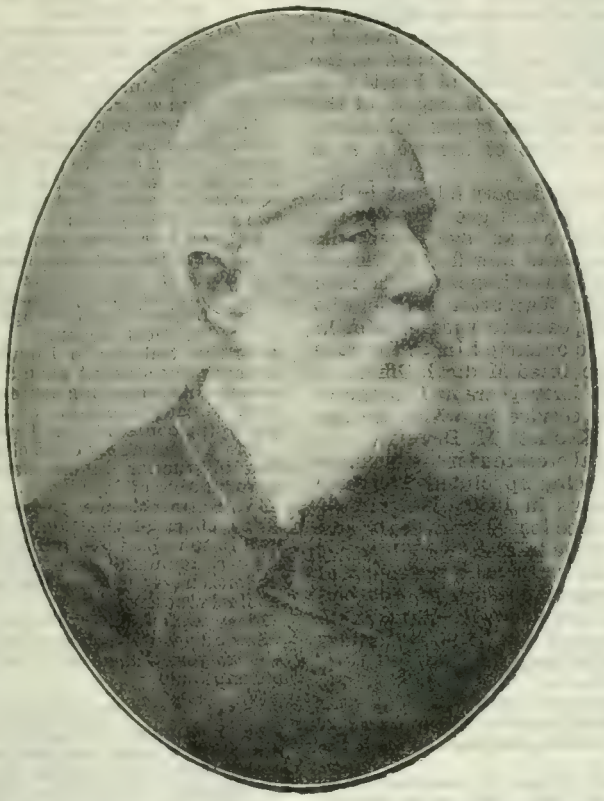
*** Our reverend correspondent reminds us of his brother cleric whose sermon elicited from Archbishop Whately the criticism that he had "aimed at nothing and hit it." He has succeeded in showing that he is very angry, but in nothing else. The "immortals" whom he quotes, even if it be granted that they held the views imputed, may, with the greatest respect, be said to have spoken with zeal not according to knowledge. On the ethical question we prefer the active benevolence of such men as Pasteur and Lister to the noble sentiments of poets, philosophers, and parsons.

OBITUARY.

HIS EXCELLENCY JOHANN FRIEDRICH AUGUST VON ESMARCH,

PROFESSOR OF SURGERY, UNIVERSITY OF KIEL.

We have already announced the death of Professor von Esmarch, which occurred on February 23rd. The distinguished surgeon was 85 years of age and fell a victim to pneumonia following on influenza. He was the son of a medical practitioner and was born on January 9th, 1823, at Toenning, in Schleswig-Holstein. He received his preliminary education in the gymnasia of Rendsburg and Flensburg, and afterwards studied medicine at the Universities of Kiel and Goettingen. He was a pupil of von Langenbeck and Stromeyer, and took his doctor's degree in 1848, having already been for two years assistant to Langenbeck. From 1848 to 1850 he served as a medical officer in the Schleswig-Holstein army. In 1849 he qualified as Privat-Dozent at Kiel. In 1851 he made a scientific tour, visiting Prague, Vienna, Paris and Brussels. On his return he was suspended by the Danish Government from his lectureship, but only for one semester. In 1854 he was appointed Director of the Surgical Clinic of Kiel and in 1857 he became Ordinary Professor in the University and Director of the Hospital, a position which he retained till his retirement in 1899. In 1887 he received a patent of nobility, and on his retirement the Emperor conferred upon him the title of "Excellenz," which corresponds with that of "Right Honourable" in this country.



Esmarch rendered great services in the war of 1864, and in 1866 he was called to Berlin to take charge of the surgical department of the Berlin Lazaretto. In 1870 he was appointed Surgeon-General and Consulting Surgeon of the Army, although severe illness prevented his going on active service. He worked at Kiel and Hamburg in the organization of volunteer aid for the wounded, and was afterwards called to Berlin as Consulting Surgeon in the large barrack lazaretto in the Tempelhof Feld. Esmarch was twice married. His first wife was the daughter of his former chief, Langenbeck; and in 1872 he married the Princess Henriette von Schleswig-Holstein-Sonderburg-Augustenburg, aunt of the Empress of Germany and of the late Prince Christian.

Esmarch's professional work lay largely in the domain of military surgery. He was an ardent supporter of the antiseptic system, and contributed much of great value to surgical literature. Among his principal productions may be mentioned *On Resection after Gunshot Wound* (Kiel, 1856); *Essays on Practical Surgery* (Kiel, 1859–60); *The Use of Cold in Surgery: Chronic Inflammations of Joints* (1867). He was also the author of a handbook of the *Technique of Military Surgery*, a fourth edition of which appeared in 1871; and a monograph on the antiseptic treatment of wounds in war surgery. His name became widely known owing to his introduction of the elastic bandage; he also invented a mask for the administration of anaesthetics.

He took a prominent part in the formation of Samaritan Societies and in the organization of their work. He also wrote a book on *First Aid to the Injured*, the first edition of which appeared in 1875. It had a large sale and had the honour of being translated into English by H.R.H. Princess Christian. A seventh edition of these ambulance lectures appeared in 1907.

Esmarch had the highest reputation in Germany as a surgeon and as a teacher. Among his pupils were Professor Bier, now of Berlin, and the late Professor Petersen. Few men of our day have rendered greater services to humanity than Friedrich von Esmarch.

ANDREW HALLIDAY DOUGLAS, M.D., F.R.C.P.E.,

EDINBURGH.

At an extraordinary meeting of the Royal College of Physicians of Edinburgh, held on Tuesday, March 10th, the Fellows learned that the oldest of their number had that morning passed away. It was a gentle passing, for Dr. Andrew Halliday Douglas, whose name had for several years stood at the top of the Roll of Fellows, was within a week of his 89th birthday when he succumbed to cerebral thrombosis. Four months previously he had a mild attack, which confined him to the house. In the end of February he suffered from influenza, and four days before the fatal issue there were evidences of a fresh thrombosis.

It was about fifteen years ago that he retired from practice, when he was the subject of a pancreatic or hepatic affection that led some of his medical friends to form a very gloomy prognosis. This induced him to spend some winters in the South of France. His remarkable vitality enabled him to throw off the threatened mischief, but he never resumed active practice, and spent the evening of his days in the enjoyment of intercourse with a circle of relatives and attached friends and interesting himself in some of the benevolent enterprises that had occupied the energies of his former years.

He was one of a very notable group of medical men in Edinburgh, whose outstanding Christian endeavour and philanthropic activities did much to elevate the general character of the profession in the estimation of the community. He was one of those who, with Dr. Abercromby, Professor Alison, Professor Miller, John Hutton Balfour, John Coldstream, Benjamin Bell, Wm. Omond, William Brown, John Moir, James Begbie, P. D. Handyside, and others, founded and developed the Edinburgh Medical Missionary Society, and he was a Vice-President of the Society. At a time when too little interest was taken in the social well-being of medical students, they organized monthly receptions for students in the Bible Society's Hall, and it fell to Dr. Douglas for many years to provide the speakers for their entertainment. These were not only ministers or missionaries, but also medical men, especially Indian or other army medical officers retired or at home on furlough, who could interest the prospective graduates with narratives of their own observations and experiences at home or abroad.

Born in 1819, Halliday Douglas had already passed his professional examinations in 1839; but was not allowed to graduate till he reached the age of 21. He was at once recognized as a man of talent. He was of good social standing in the city; and at the early age of 24 he found himself in the position of full Physician to the Royal Infirmary at an age when nowadays many are just escaping from their undergraduate career, and only a very small minority have attained the full M.D. degree. He did good clinical work in the

infirmary, and had as his pupils men who afterwards made their mark. He probably heard others of his teachers decry the value of the stethoscope besides Professor Hamilton, who held that it was of no use for the diagnosis of pregnancy. Dr. Douglas was gifted with a good musical ear, and became such an adept in stethoscopic examinations that he came to be recognized as an authority on heart affections, and throughout his career his professional brethren were glad to have his opinion in the diagnosis of obscure cardiac and pulmonary affections. He was one of the first to demonstrate clinically the value of digitalis in the treatment of diseases of the heart. He wrote memoirs on fever, heart disease, bronchitis, and chorea; and on the occasion of his candidature for the Chair of Practice of Physic in the Glasgow University, the Managers of the Edinburgh Royal Infirmary and several of his colleagues bore strong testimony to the value of his work as a clinical observer and teacher.

His early appointment to the Infirmary fell out in the end rather to his disadvantage. It held good for only ten years, necessitating retirement at an age when the aspirants for infirmary appointments now find it difficult to attain an assistant's position. Thus it happened that men like Sir William Gairdner and Dr. Warburton Begbie, who had been his residents or pupils, came to succeed him in the more important place, and to outstrip him in the race of professional life. He was appointed Medical Officer to the Post Office in 1858, and for forty years had charge of the health of the employés—a service in which he has been succeeded by his son, Dr. Kenneth M. Douglas.

The appreciation of his medical brethren for his business qualities was evidenced by his being appointed Treasurer of the Royal College of Physicians in 1856. He fulfilled the duties of that important office for several years, and was elected President of the College in 1869.

Dr. Halliday Douglas had the sorrow six years ago of losing, after an operation for appendicitis, a son who had for the short space of a year occupied with remarkable ability the Chair of Apologetics in Knox College, Toronto. He is survived by four sons and a daughter.

THE LATE SIR ALFRED COOPER.

IN the obituary notice of Sir Alfred Cooper which appeared in the JOURNAL of March 14th, the fourth paragraph on page 661 should read as follows:

"Cooper became a Fellow of the College by examination in 1870. Twenty five years later, in July, 1895, urged by his numerous friends, he offered himself for election as a member of the Council of the College. He was successful in his candidature, being elected with Mr. Willett, Sir Frederick Treves, Mr. Butlin, and Mr. Ward Cousins. Cooper on that occasion was substitute member until 1900 for Mr. Durham, recently deceased, and Mr. Ward Cousins was substitute for Mr. Hulke. So great was Cooper's popularity that when he once more offered himself as a candidate in 1900, his term as a substitute member having expired, he came in at the top of the poll, ahead of eleven candidates." The remainder of the paragraph was correct.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—H. Beckton, Clare; R. D. Smedley, Pemb.; H. Robinson, Trin.; J. E. Spicer, Trin.; A. E. Taylor, Down.
M.B., B.C.—P. J. Verrall, Trin.; P. H. Bahr, Trin.
M.B.—S. P. Chan, Gonv. and Cai.; D. W. A. Bull, Gonv. and Cai.
B.C.—G. B. Fleming, King's; G. Graham, Trin.; C. W. Hutt, Trin.; T. C. Lucas, Clare; H. H. Taylor, Pemb.

ABERDEEN UNIVERSITY.

THREE TERM SESSION IN ARTS.

SOMEWHAT late in the day the Senatus of the University has decided to recommend a new Draft Ordinance in regard to the Three-Term Session to the University Court. As the proposal, more or less falling into line with the other Scottish universities, has some bearing on medical education, the following are some of the provisions of the Draft Ordinance:

1. Preliminary examination. The present regulations are retained.

2. Attendance during three academical years on seven courses in five subjects. The academical year to be divided into three periods, but the Senatus to be empowered to accept attendance on any two of these as sufficient selection and sequence of subjects to be regulated by the Senatus.

3. A total of 525 class meetings (about three per week per subject); but the Senatus to be empowered, "having regard to the nature of the subjects selected," to accept a less total. The arrangements as to half-courses to be retained.

4. Degree examinations as at present. Candidates taking honours in any group to be required to add not more than two non-honours subjects.

Recommendations to the General Council.

Among the more important changes implied in the recommendations made by the Business Committee for approval by the General Council are the following:—

I. The preliminary examination (or its equivalent) should embrace:
- (*a*) English.
- (*b*) Another language (to admit to the graduation course in that language).
- (*c*) Higher mathematics (to admit to the group of mathematics and natural philosophy); or, alternatively, lower mathematics together with elementary biology or Nature knowledge (to admit to the group of botany and zoology).

II. Attendance during three academical years (normally of three terms but "in special cases" of two) on (*a*) seven subjects in seven courses; or (*b*) six subjects, one being repeated in an advanced course; or (*c*) five subjects, two being repeated in advanced courses, these courses to include during the first two academical years:
- (1 and 2) English and the other language taken in the preliminary examination.
- (3 and 4) Mathematics and natural philosophy, or, alternatively, botany and zoology.
- (5) Logic and psychology (one subject), or, alternatively, political economy.

After this training in linguistic, scientific, and philosophic methods, the student should be free during the third year to take for his remaining courses either advanced classes in subjects already studied, or new subjects from the other qualifying courses in the Faculty of Arts.

III. A minimum of 525 class meetings, with the provision that instruction in alternative subjects should occupy the same number of days.

IV. Examination as in draft ordinance.

The effect of the Committee's recommendations are best seen in the specimen curricula drawn up in accordance with these recommendations, and adapted for such careers as art students have in view. For example—curriculum of intending medical student:—

First year: English, French, and botany.
Second year: Logic and psychology, German, zoology.
Third year: Chemistry (and in faculty of medicine, physics, and anatomy).

UNIVERSITY OF WALES.

AT a meeting of the Cardiff Cymmrodorion Society, held on March 6th, a paper was read by Mr. Austin Jenkins, Registrar of the University College, Cardiff, on the necessity for the appointment of a principal officer for the University of Wales, regarding the question from the point of view of the necessity of absolute efficiency in the administration of the University. Mr. Jenkins pointed out reasons why the University should be maintained as a federal body, and gave a detailed account of the changing circumstances of the University as compared with its condition when it was established. He enlarged on the advantages which could be derived from the appointment of such an official, and defined the duties which should be assigned to him. At the close of the meeting, on the motion of Dr. Edwards, it was resolved to request Mr. Austin Jenkins to publish his paper.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examinations indicated:

FINAL (PART I.)—John L. Phibbs, F. A. Anderson, D. Drew, W. R. Allen.
FINAL (PART II.)—*Surgery.*—*W. S. Thacker, *J. L. Phibbs, T. P. Dowley, A. H. Smith.

* Passed on high marks.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of Council on March 12th, Mr. Henry Morris, President, in the chair, votes of condolence were passed in respect of the late Mr. Reginald Harrison and Sir Alfred Cooper, both of whom were past Vice-Presidents, and past members of the Council.

Examination in Dental Surgery.

Mr. Maggs was re-elected a member of the Board of Examiners in Dental Surgery.

Council of University College, Bristol.

Mr. R. J. Godlee was appointed to serve upon the above Council as the Representative of the Royal College of Surgeons, in place of Mr. Thomas Bryant, until November next.

Admission of Women to the College

The President stated that he had fixed July 1st as the date for closing the poll of the Fellows and Members on the above subject.

Members admitted before the Year 1850

The Secretary was authorized to remove from the list of members published in the College *Calendar* the names of all members admitted before the year 1850 whom he may be unable to trace as still living from reference to the *Medical Register* and directories.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

GRATUITOUS ATTENDANCE ON THE CLERGY AND THEIR FAMILIES.

AUDAX says he is a churchwarden, and asks whether he should charge for attendance upon his vicar, whose living is worth £650 a year and a house; or should he charge for visits paid to his wife and family only? What is the usual rule in the profession?

*** The clergy, whether beneficed or not, have no right to gratuitous medical attendance for themselves or their families. In some cases, however, a clergyman may be in such a position that payment for medical attendance upon himself or upon his family may most properly and benevolently be waived. It would not appear that that is the case in the present instance.

DOOR PLATES ON BRANCH SURGERIES.

M. H. S. asks whether there is any objection to his choosing for a branch surgery a house occupied by a monthly nurse who has her name up and where he proposes also to put up a door plate?

*** A door plate should not be placed where a practitioner has no bona-fide tenancy, and although in widely-scattered districts it may be necessary for practitioners to have places where messages can be left for them, it is undesirable that these should be either a chemist's shop or the house of a midwife or monthly nurse.

RECOVERY OF FEES FOR SERVICES TO ANOTHER PRACTITIONER'S PATIENT.

J. G. B. writes that A. and B. are practitioners in the same village, and that B. attended at A.'s surgery at his request and administered chloroform for him. B has since sent in an account to A. for the fee, of which no notice has been taken. B. asks what he ought to do; and whether this is a case in which the local Branch of the Association would take action?

*** Instead of sending in an account, it would have been much better if B. had spoken to A. or written to him about the fee. Apparently the patient is liable for the fee, and it should be recoverable from him unless he has already paid an inclusive fee to A., when A. would be in the position of withholding money which belongs to B.; as then his honour and good faith would be in question, it might be right to consider whether he should be dealt with by ordinary legal means or should be brought before the local Ethical Committee.

Medico-Legal.

RECEPTION OF LUNATICS.

WE published last week a paragraph commenting on the case in which Dr. Lyttleton Stewart Forbes Winslow was fined for aiding and abetting a person who took a lunatic into an unlicensed house. Dr. Winslow now writes to say that, inasmuch as he pleaded guilty to the charge with a view to saving expense, his defence was not put in, and, in the result, the reports of the case were one sided. He points out that the alleged lunatic was originally an out-patient at a hospital at which he attended, and that from first to last he never received a penny for his services. Further, he had no financial interest whatever in the house to which the alleged lunatic was sent. He points out, further, that this is the first case in which a medical practitioner has ever been attacked under this section of the Lunacy Act. The offence to which our correspondent pleaded guilty appears to be without parallel, as we cannot find any precedent for it in the law reports. The fact that the keeper of an unlicensed house receives no remuneration does not appear to palliate his offence, as it was decided in an old case that a person put to superintend an unlicensed house for the reception of lunatics was liable to the penalties imposed by the 14 Geo III, c. 40, although he did not receive any of the profits of the establishment.

A BEGGING BARON.

IN the BRITISH MEDICAL JOURNAL of February 22nd there appeared a brief report of the case of a man claiming to be "Baron Bruno von Hohnfeldt, doctor," who was charged at Marylebone Police Court on February 7th, before Mr. Plowden, with attempting to obtain charitable contributions from Mr. Arthur F. G. Leveson-Gower, of Gloucester Place, Portman Square, with intent to defraud. He was brought up again on February 14th and further remanded. When brought up again (according to a report which appeared in the *Evening Standard and St. James's Gazette* of February 26th), Mr. Purcell, who prosecuted, said the prisoner had certainly mastered completely the art of obtaining money by cleverly conceived begging letters and a system which would have brought credit to a business establishment. He wrote letters to university men, posing as a medical man, and representing that in the course of practice he had come across a former college chum of the addressee, who, after a period of successive misfortunes, had been reduced to the lowest poverty. He appealed in plausibly pathetic terms for pecuniary assistance for he who by the vicissitudes of life was then in the direst distress.

Detective-Sergeant Draper said the prisoner claimed to be a German baron born in Brompton, but he refused to give any information to corroborate the assertion. He had been in English gaols on and off since 1892 for various offences.

The prisoner had confessed, added the officer, that "one day he wrote 101 appeals and nearly ruined himself with the postage." He was sentenced to three years' penal servitude.

AN UNUSUAL CASE OF ANTHRAX.

A CORONER'S inquiry was held on March 11th at St. Bartholomew's Hospital into the death of a domestic servant who died within half an hour of her admission, the cause of death proving on necropsy to have been anthrax. She was a nursemaid who had been seven years in her situation, and none of the circumstances of the household in which she lived helped to explain the source of the infection. The inquest was attended by Dr. Legge, Medical Inspector of Factories, who expressed an opinion to the effect that in this case the infection was probably of food origin, the bacilli entering through an abrasion on the tongue. He gave some details of a closely corresponding case which had come within his experience last year. The jury returned a verdict of death from natural causes, adding a rider that cases of anthrax ought to be included among the diseases compulsorily notifiable.

OBJECTIONABLE ADVERTISEMENTS.

AT Bow Street Police Court on March 17th, the Cardinal Manufacturing Company was fined £10 and £5 5s. costs for sending an indecent print through the post, contrary to the Post Office Protection Act of 1884. The prosecution was brought about by the action of a medical man who informed the police that on the announcement in the ordinary way of the birth by his wife of a child, a packet of printed matter was sent to her by the defendants, which he regarded as filthy and disgusting.

CORONERS AND MEDICAL WITNESSES.

RICKET writes to complain that a coroner summoned the divisional surgeon of police to make a *post-mortem* examination in a case of sudden death to which our correspondent had been called in at the time of the deceased's death, and had, moreover, been consulted by the coroner as to the advisability of the *post-mortem* examination. He further wishes to know if it is not usual for the coroner to summon the medical man who first saw the body after death to make the *post-mortem* examination and to give evidence thereon, thus entitling him to receive the fees, which in the present case were paid to another.

*** We think it is usual for the coroner to act as our correspondent suggests, but it is quite within his province to summon such witnesses as he may think desirable, medical included; and if it is found that the evidence is not sufficient to satisfy the jury as to the cause of death, they can adjourn the inquiry and call such further evidence as they may think desirable, medical or otherwise. The fees payable at inquests are all regulated by statute law.

DEATH CERTIFICATES.

CO-OPERATION asks if it is illegal to charge a fee for a death certificate.

*** Under Section 20 of the Births and Deaths Registration Act medical practitioners are required to give a certificate of the cause of death of any person attended by them in his or her last illness. To charge a fee for this duty would be illegal.

SOME LEGAL QUESTIONS.

MONK writes that he has recently purchased a carriage for professional purposes, and he hires a horse and driver from a local livery stable for a weekly payment: (1) Is he liable to take out a licence for a man servant? (2) Would he be responsible under the Employers' Liability Act for any injury to the driver? (3) If the driver is negligent and causes injury to the property or persons of others, is he responsible?

*** (1) No, he is not really his servant at all, and if he were, only a portion of the man's time is employed. (2) There have been as yet no decisions, but as in the next case, the contractor would probably be liable. (3) No, a person employing a contractor is not generally responsible, as laid down in Quarman *v.* Burnett, 6 M. and W. 499. This was a case almost identical with the one propounded.

WORKMEN'S COMPENSATION ACT.

R.N.L.—The article to which our correspondent refers has relation to the liabilities of medical practitioners under the Workmen's Compensation Act. If a locumtenent sustained injury through an accident he might be entitled to claim compensation. It is obvious, however, that no question under the Workmen's Compensation Act could arise in the circumstances stated, inasmuch as influenza is not an accident within the meaning of the Act. As to whether the guardians are entitled to stop a week's salary, that depends upon the terms of the agreement to employ the locumtenent.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL FORCE.

COLONEL J. MAGILL, C.B., M.D., late R.A.M.C., has been selected for the appointment of Staff Medical Officer in the 2nd London Division.

Lieutenant-Colonel G. Scott, M.B., late R.A.M.C., has been appointed Staff Officer to the Principal Medical Officer of the Highland Division.

EXAMINATION OF OFFICERS FOR PROMOTION.

THE undermentioned officers of the R.A.M.C., having obtained the necessary percentage of marks in each of the subjects (*c*) to (*i*) for promotion, have been granted a "Special Certificate" in accordance with Appendix VII, King's Regulations: Captain A. C. H. Gray, M.B. (for the rank of Captain), Lieutenants G. Ormerod, M.B., J. A. Anderson, M.B., and W. R. Galwey, M.B.

DETENTION ALLOWANCES IN INDIA.

IT has been announced in India that officers of the Royal Army Medical Corps cannot be considered as regimental officers for the purpose of drawing detention allowance under Clause (*i*) of the Indian Army Order No. 405 of 1907.

MILITARY OPERATIONS IN EAST AFRICA, 1902-6.

THE *London Gazette* of March 13th contains dispatches from the several officers commanding detached expeditions in East Africa in 1902-6, the troops having been called on five times to operate in various parts of the Protectorate. The details are of comparatively minor interest to medical readers. Colonel Hasler, Acting Commandant of the Northern Nigeria Regiment, however, in his report dated May 11th, 1907, says: "The Officer Commanding is loud in his praise of the conduct of Mr. A. C. Parsons, the Medical Officer. In addition to the large number of wounded men whom he had to attend, he was also in charge of Lieutenant Burnett, Highland Light Infantry, who was in a critical condition with blackwater fever. Mr. Parsons was absolutely indefatigable in the performance of his duties."

The reports end with a recommendation that the Africa General Service Medal be granted to all officers and men who took part in the operations.

A PROVINCIAL sessional meeting of the Royal Sanitary Institute will be held in the Council Chamber, Town Hall, Hull, on Saturday, April 4th, at 11 a.m., when a discussion will take place on Diphtheria in Elementary Schools and its Prevention, which will be opened by J. Wright Mason, M.B., C.M., D.P.H., M.R.C.S. Dr. Spottiswoode Cameron, B.Sc., M.O.H., Leeds; Dr. J. M. Clements, D.P.H., Hull; Dr. R. H. Crowley, D.P.H., Medical Superintendent, Bradford Education Authority; Dr. J. R. Kaye, D.P.H., M.O.H., West Riding of Yorkshire County Council; Dr. E. M. Smith, C.M., D.P.H., M.O.H., York; and Dr. J. Mitchell Wilson, M.O.H., East Riding of Yorkshire County Council, will take part in the discussion. The chair will be taken at 11 a.m. by Colonel J. Lane Notter, M.A., M.D., R.A.M.C., Deputy-Chairman of the Council of the Institute.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

CASTLEFORD GUARDIANS AND THE MEDICAL OFFICERS.

PARTICULARS of this dispute between the Pontefract Guardians and two of their district medical officers were given in the JOURNAL of March 7th, p. 588. We understand that about half a dozen applications for the posts have been received. As these are all from men non-resident in the district, it is possible that the circumstances connected with these vacancies are not yet known to the applicants. At Oldham recently several applicants have been appointed on different occasions to the post of public vaccinator, but when fully acquainted with the facts of the case each in turn has declined the honour offered him by the guardians and refused to undertake the duties after being selected for the post. We cannot imagine that any man could or would continue for more than a brief spell to discharge the duties of medical officer under the Poor Law at Castleford with satisfaction to himself, his patients, and his employers for remuneration which works out at seven farthings for each visit or supply of medicine, and it is to be hoped that the applicants will ascertain the facts in time.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chelmsford Rural District.—The population was 24,100, the birth-rate 22.8 per 1,000, death-rate 14.2 per 1,000, and the infantile mortality-rate 82 per 1,000 births. In spite of frequent inspections, the dairies and cowsheds in the Chelmsford Rural District are still in a very unsatisfactory condition. The council would be well advised if they acted upon the advice of their medical officer of health (Dr. Thresh) and exhibited more firmness when dealing with delinquent dairymen. Too many cowsheds, he reports, are inadequately lighted and in winter are practically dark, all the air inlets being closed to keep the cows warm. In others the flooring and draining are defective, while inadequate and impure water supplies are still to be met with. Many of the cows have their flanks covered with dry faecal matter, and such filth is often found attached to the udders. Facilities for washing the udders or cleaning the milkers' hands is rarely to be found, and a really clean milking stool or a clean milkman is a great rarity.

Sutton Coldfield Borough.—The population was 20,391, the birth-rate 19.7 per 1,000, the death-rate 8.97 per 1,000, and the infantile mortality rate 65 per 1,000 births. When commenting upon the very low death-rate among young children, Dr. Bostock Hill expresses the opinion that the saving of infant life effected may be attributed to the spread of knowledge among mothers, of better conditions, and of better methods of infant rearing and feeding, chiefly through the instrumentality of the county council health visitors. The possibility of the spread of diphtheria by cats has long been recognized, but very little direct evidence is available, so that the instance recorded by Dr. Hill is specially valuable. During the illness from diphtheria of a patient, the household cat was unable to swallow its food and was so ill that it had to be destroyed. Material from its throat was examined and found to contain Klebs-Loeffler bacilli. Prior to the illness of the patient the cat was known to be ill with throat trouble and with offensive breath, and, together with other evidence, this led to the conclusion that the disease was caught from the cat. In this report, as well as in his report to the Warwickshire County Council, Dr. Bostock Hill adopts the excellent plan of numbering each paragraph consecutively. For purposes of reference this is a great convenience.

MEDICAL OFFICERS OF HEALTH AND REMOVAL OF INFECTIOUS CASES.

NUNQUAM.—A person who is suffering from a dangerous infectious disease may be removed by the order of a justice to an isolation hospital if (1) without proper lodging or accommodation; (2) lodged in a room occupied by more than one family; (3) on a ship or vessel; (4) in a common lodging house. Where the patient remains at home, any other inmates of the house who have been exposed to infection and who go about the public streets are liable to prosecution under Sec. 126 (3) of the Public Health Act, 1875, which reads:

"Any person who gives, lends, sells, transmits or exposes, without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection from any such (dangerous infectious) disorder, shall be liable to a penalty not exceeding £5."

In those districts in which Sec. 61 of the Public Health Acts Amendment Act, 1907, has been adopted, two justices can make an order for the removal from an infected house to a temporary shelter of any person in the house who is not himself sick.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 8, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Allilogy, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER.
2331, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

C. B. would be glad of information as to any home or institution where a man of weak intellect, aged 35, could be received on payment of 10s. per week.

M.D.—Can any reader suggest a remedy for the following case? An old lady a year ago had a hemiplegic attack, causing loss of taste, speech, and power of left arm. She has quite recovered, except that everything she takes tastes exceedingly bitter, so much so that she is disgusted with all food. I have tried various remedies in vain.

DR. R. W. O. WITHERS (Shrewsbury) writes: My house is supplied by gravitation with water having 5° temporary and 10° of permanent hardness. About twice a year I find the boiler and pipes connected with the hot-water cylinder choked with deposit, necessitating considerable expense to remove. Can any reader advise me as to the best way of dealing with it? Can the permanent hardness be reduced by any automatic system on the market? Can any one give me his experience of Maignen's softening apparatus? The boiler is placed behind and heated by the cooking range.

ASTHMA asks for information about Mont-Dore (Auvergne, France) in respect to the treatment of asthma there. The points as to which he specifically asks are: (1) Would the treatment be likely to benefit a case of asthma of twelve years' duration, and complicated by a great deal of emphysema and heart-weakness, in a gentleman aged 30 years? The patient has been in bed off and on more or less the whole winter, having attacks of asthma every four or five days, which keep him in bed for two or three days, and then he gets up and about the house for a day or two in comparative comfort till the next attack comes on. (2) In the event of the treatment being likely to do good, When is the best time to go? To whom should one apply for particulars? How long does the treatment take? Would the aforesaid patient be able to stand the treatment? How much would the whole course be likely to cost?

B. G. writes: I should be very grateful if any of your readers could tell me the best means to adopt to alleviate the condition I suffer from. Two years ago I had a very serious illness, which was diagnosed (but not with certainty) as typhoid fever, and which ended in a low form of pneumonia with abscess in the lung, and abscess on one of the temples. I ultimately made a good recovery, but my feet and legs were weak up to last summer. They then seemed to regain much of their old strength, so that I could do all my work on a bicycle. Then last October they began to get weak again, and they get no better. They are all right when I get up, but as soon as I walk on them a little or stand, they get sore and weak and swollen, the swelling and fullness extending up my thighs. The ankles and calves pit on pressure. My kidneys and heart are quite sound, and my general health is excellent. There seems to be a stasis in the lymph circulation. I tried Aix douches for a month daily, but, although I always felt the benefit of them for a little time, they seemed to do little permanent good. I have taken extract of bone marrow, glycero-phosphates, and strychnine. It is important that I should not lie up at the present time.

GASTRIC writes: I am just recovering from a severe attack of gastritis, with dilatation of the stomach, and am nearly convalescent. I should be much obliged if you could recommend me to a suitable spa or health resort, where I could find a hydropathic establishment in which I could get careful dieting, with massage and electric treatment, on moderate terms, at a reasonable distance from London.

*** One of the Matlock hydros would, perhaps, to some extent, suit our correspondent. The kind of institution he refers to is more common on the Continent than in England.

THE TREATMENT OF CHRONIC TYPHOID CARRIERS.

D. F. has a chronic typhoid carrier under his care, and asks for advice as to treatment.

*** So far as we are aware, no satisfactory treatment for this condition has been found. Numerous so called intestinal disinfectants have been tried, but they have not proved permanently efficacious. Attempts have been made to increase the immunity of the subject against typhoid infection, in the hope that by augmenting his powers of resistance a bactericidal effect might be produced on the bacilli; but no promising results have been obtained. Urotropin, invaluable in dealing with infection of the urinary tract, has not been found successful in causing the disappearance of typhoid bacilli from the faeces. It is generally considered that the gall-bladder is the permanent nidus of the bacilli excreted by the chronic carrier; drainage of this organ has been performed in a few cases, and, it is said, with successful results. Sufficient data to justify a general statement as to the value of this method of treatment, however, are not available, and it is doubtful whether many "carriers" would submit to it.

ANSWERS.

NATALIAN.—Many marriages have taken place in conditions such as those detailed by our correspondent, and without any ill result.

DR. H. HODGSON.—The following books may meet the wishes of our correspondent: *Diseases of Occupation*, by Dr. Thomas Oliver; *Sweated Industries*, by M. Alden; *History of Matrimonial Institutions*, by Howorth (Publisher: Fisher Unwin); *The Physiology of Bodily Exercise*, by Lagrange.

NAUTICUS.—An article describing various methods of embalming the dead was published in the BRITISH MEDICAL JOURNAL of May 28th, 1898, p. 1403. In the *Edinburgh Medical Journal* of September, 1890 (vol. xxxvi, p. 297), the late Sir John Struthers described a method of embalming for which he claimed the advantages of efficiency, simplicity, and cheapness.

BAZIN'S DISEASE.

F. McL.—The literature of Bazin's disease is fairly extensive and too long to give in this place. The malady is dealt with in all textbooks on diseases of the skin, with references. The most recent critical review with bibliography up to 1903 will be found in Pautrier's *Les tuberculoses cutanées atypiques (tuberculides)*. (Paris: C. Naud. 1903. Pp. 131–188.) The price of the book is not high, though we are unable to give the exact figure.

PAINFUL PRURITUS.

DEVONIAN.—We have referred this question to an authority on skin diseases, who writes: The case described belongs to a class very rebellious to treatment. In a general and local way "Devonian" has done what he could. Internally I would suggest small doses of calomel and saline aperients. Locally, painting with tinct. benzoin. co. or the following:

℞ Argenti nitratis ... ... gr. v
Sp. aether. nitrosi ... ...ad ℥j

(With a camel-hair brush in both instances.) The latter pigment will, when applied at night, lead, after a certain amount of local smarting, not lasting long as a rule, to a good night's sleep. This should not be indefinitely applied, say three nights running in succession. The application of a zinc oxide vaseline starch paste is sometimes of service. Failing foregoing, *x* rays should be tried, with the usual precautions, of course. High-frequency currents sometimes give relief, temporarily. In severe paroxysms, morphine injections should not be withheld, due attention being given to age, condition of heart and kidneys, etc. As far as I know lumbar puncture has never been resorted to in such cases, but it has struck me recently that such a procedure might, perhaps, afford relief. As more readily carried out, dry cupping over the lumbar enlargement might also be tried.

X RAYS IN RINGWORM.

W.S.—Everything depends on the kind of case our correspondent has in mind. In a general way the single exposure method of the *x* rays answers best. But it has drawbacks. In the case of the *x* rays there are many factors, known and unknown. Usually the results are good, but no risks should be taken by the operator, and the matter fully explained to the parents.

INOPERABLE CANCER OF CERVIX.

DR. H. A. LATIMER (Swansea) writes: In answer to your correspondent "Westmorland," I recommend him to treat his patient with Chian turpentine and resorcin. Although the idea that cancer can be cured by these drugs is exploded, I can assure him that, in many cases, the pains resulting from malignant disease are relieved in a very signal manner by their employment; for I have seen the happiest results follow their administration in cases of this nature. Should he desire it, I shall be glad to send him the formula of a mixture which I have used in the past.

MEDICAL PRACTICE IN FRANCE.

OMEGA.—The degree of M.D. must be obtained by examination before a French faculty (Paris, Montpelier, Nancy, Bordeaux, Lyons, Lille, or Toulouse). The degree, however, confers the right to practise only if it has been obtained on precisely the same conditions as those to which French students are subject; that is to say, by going through the whole curriculum and passing all the examinations required for the degree. The curriculum extends over five or six years. The prospects of an English practitioner in Paris depend on so many factors that it is impossible to give an opinion with regard to an individual case without fuller knowledge than is supplied by our correspondent.

THE ESTIMATION OF ERRORS OF REFRACTION.

OCULIST has mistaken the point of the reply to "Red and Green." The question asked was whether it was permissible for a surgeon to supply a patient with spectacles and charge the retail price for them. If the surgeon likes to take the trouble and spend the time fitting glasses he is at liberty to do so, just as he is at liberty to dispense his own prescription, and there is no obligation on his part to charge for nothing but the bare wholesale price for the drugs it contains. Of course it was not suggested that it was right for a surgeon to come to an arrangement with an optician that the latter was to return to the former so much on each pair of glasses he made to the surgeon's prescription. This is quite another matter, and did not enter into the case about which we were asked.

LETTERS, NOTES, Etc.

INCOME TAX.

A CORRESPONDENT writes: Could you kindly repeat in an early number the information you gave some time back with regard to what we might deduct in preparing our income-tax returns? I mean with regard to: (1) Portion of house used in consulting room, etc., rates and taxes; (2) stable, rates and taxes and rent; keep of horses extra for hiring; (4) repair of carriage, harness, etc.; (5) groom's wages, etc.; (6) chemist's account; (7) instrument-maker's account, and any other "professional" expenses in carrying on our work.

*** The information which our correspondent asks for was given in an article on Income-tax Deductions in the BRITISH MEDICAL JOURNAL of August 24th, 1907. With regard to the particular items named in his letter, the answers are: (1) and (2) Such a proportion (not exceeding two-thirds) of the total rent or annual value of the house and stable, and of the annual amount paid for local rates, may be deducted, as the value of the portion of the premises used for professional purposes bears to the total value. (3), (4), and (5) These expenses are allowable if incurred solely for professional purposes. If incurred partly for private purposes, the total cost must be apportioned between the professional and private uses. (6) Allowable. (7) Allowable, unless the expense is of such a character as to be considered capital expenditure.

HERPES ZOSTER

DR. J. F. HAEGERT (South Chile) writes: In Sir Malcolm Morris's book on diseases of the skin, p. 161, I noticed a reference made to Wasilewski and Pfeiffer's views that the distribution of the eruption in the above condition is better explained by the blood stream than by nerve ramification. Recently I treated a gentleman whose condition seemed to prove definitely that the nerve ramification is the more probable explanation. In this patient the left second intercostal nerve was affected, and at the same time its intercosto-humeral branch was involved, so much so that a complete picture was shown of the cutaneous distribution of this nerve and its communicating branch. The rash appeared along the course of the nerve on the thorax, and extended into the axilla, down the inner aspect of the arm as far as the elbow, and over the lower third of the back of the arm. It is probable that the nerve of Wrisberg was affected through the communication with the intercosto-humeral. The rash was very severe on the thorax and slight on the arm.

THE HUMBER COMPANY.

THE Humber Company on March 12th opened its new motor and cycle works, covering some thirteen acres and employing no less than 5,000 hands. This is believed to be the largest motor and cycle factory in the world, and is a striking testimony to the energy and success with which English manufacturers have to a great extent won over a trade of which for some time the foreigner had almost a monopoly. When the Humber Company started upon the manufacture of motor cars it had to go through an experimental period, and the earliest cars were not quite satisfactory. But it very soon remedied their defects, and the present expansion, under which it is able to turn out 150 cars a week, is a sufficient evidence of a well-deserved popularity. An idea of the magnitude of the works may be realized by the fact that 70 men are occupied in testing the engines before they are built into the cars, and no engine is passed until it has developed its full horse-power on the trial bench. The power employed is furnished by eight 100-h.p. gas engines; there are miles of shafting, and the lubricating apparatus for the machinery, on a circulating system, requires 50,000 gallons of oil. One of the features upon which the company prides itself is the interchangeability of all parts, everything being most accurately gauged before being passed. Hence the purchaser may be sure of getting any spare part required ready to go into its place with little or no fitting. In view of such success it is to be hoped that the impending increased taxation upon motors will not be of such a nature as to put a check upon the industry; England has not too many new and flourishing industries.

ELECTRIC ANAESTHESIA.

DR. R. MANSELL-JONES (Brighton) writes: I was much interested in reading an account of Dr. Leduc's experiments in "electric anaesthesia" which appeared in the JOURNAL of February 29th. Judging from somewhat similar experiments carried out by myself about two years ago, I very much doubt if any kind of electrical currents will be found capable of producing anaesthesia in the human being without seriously injuring the brain. Some cats and dogs appear readily to succumb to the influence of electric currents, but as these animals are also easily hypnotized by various means I could never be certain whether their anaesthetic condition was not due to hypnosis; at any rate, from experiments carried out on myself and friends, the human brain does not appear to be susceptible like an animal's, and this may probably be due to it being more highly organized. I have, however, found that the application of sinusoidal currents, and also rapid electric vibrations to the crown of the head and forehead, are often extremely useful as an aid in the production of the hypnotic state in those patients who do not easily succumb to the ordinary methods; but this is probably due to the patients being of the opinion that they numb the brain, as they are much too weak to have any great anaesthetic action. Hypnotic suggestion is undoubtedly an invaluable aid in the treatment of all kinds of diseases and functional derangements, and especially is this the case when it is judiciously combined with internal and external remedies, chronic and intractable cases frequently yielding to these combined treatments, although they had all signally failed when used separately. It is difficult to account for the marvellous results which are frequently obtained by the judicious and careful employment of hypnotic suggestion: it may, as many authorities claim, be due to the temporary suspension of the control of the objective consciousness permitting the subliminal consciousness, which governs the bodily functions, to be more amenable to the suggestions which are made; however, whatever the true explanation may be, it is high time, in our own interests, that these results should be universally recognized by the members of our profession and that a proper system of psychotherapy should be taught at all our leading hospitals and thus rescue this most valuable healing agent from the hands of Christian Scientists, faith-healers, and quacks, and by careful experiments and study place it on a scientific basis

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NEW IDEAS ON FRACTURES,

OF THE

UTMOST IMPORTANCE TO THE MEDICAL PROFESSION AND TO THE LAY PUBLIC IN CONNEXION WITH THEIR RESPONSIBILITIES AND POSSIBLE LEGAL LIABILITIES.*

BY DR. LUCAS-CHAMPIONNIÈRE,

CHIRURGIEN HONORAIRE DE L'HÔTEL-DIEU, PARIS; MEMBRE DE L'ACADÉMIE DE MÉDECINE.

THE treatment of fractures has been neglected ever since the whole body of modern surgeons have appeared to be concentrating their attention on visceral operations. Yet fractures are such common occurrences, and they are so familiar to the public, that it is essential that the medical profession should devote some consideration to the situation that has arisen owing to certain recent discoveries, owing to the novel methods of treatment of fractures, and owing to the conquests of therapeutic methods, which may be simple or complex, but which agree in differing from methods which have been very generally adopted and which have the sanction of antiquity, and which must induce the medical profession, and even the lay public, to call in question certain ideas which have till now appeared to them immutable.

If a medical man is not very careful he may be most unjustly criticized in connexion with these new principles, and the criticism may be based on exceedingly widespread errors which he has himself accepted in the past. The criticism may take the form of a serious accusation of lack of skill and of claims for considerable damages, which are quite unjustifiable, but which the public and the judges will willingly admit and allow so long as a clear exposition of the truth has not been made.

In all periods the public has supposed itself capable of deciding questions regarding fractures. It might appear that lesions affecting the bones, the organs of whose functions every man has a vague idea, were easy matters to decide, and that a broken bone had some analogies with any other long solid body that has been broken and is mended by juxtaposition.

Moreover, in surgical books, in which the mania of mathematical classification reigns supreme, the public can find some sort of corroboration and justification for their view.

And, lastly, is it not common knowledge that the bone-setters who place the bones back into position are in the eyes of the public as fortunate as, and even more fortunate than, the surgeons, and are consequently reckoned as possessing equal learning with those who have studied anatomy and possess the experience of surgical practice?

One can easily imagine how the discovery of x rays has increased the pretensions of the public to knowledge in respect of fractures. It is true that the x rays enable one to see and to photograph the broken extremities of the bones, and this new principle is considered as something very simple and very clear even by many doctors.

These prejudices and erroneous ideas regarding fractures, which are widely spread among the public, constitute a very real danger for the surgeon. A dispute as to their value may very easily be set on foot between him and the public.

It is essential, therefore, for the surgeon to understand thoroughly whence he may be threatened with danger. He must be steadily on his guard against an unfortunate interpretation of the facts. In the first instance he must be careful not to give expression to ideas which can be turned against him. His actions must also be carefully explained so as to allow of no doubtful interpretation, when once the treatment has been followed. He must not provide weapons against himself by any act of unjustified interference.

The following are the precepts that for more than thirty years I have incessantly repeated to my pupils:

"The accurate juxtaposition of the fractured extremities of bones, in order to reproduce the normal arrangement, is a laudable object. It is only achieved in a minimal number of cases."

"Never tell a patient that you are going to obtain and that you have obtained this exact result."

"The books teach you that this is the case, but clinically the statement is false, and it will turn against you in several ways."

"The conditions that are necessary in order that a limb should again become functionally perfect are far from demanding this exact juxtaposition. There are a large number of conditions which are more essential and which you should be more sure of satisfying."

"Do not insist upon this claim."

These views that I was in the habit of expressing in the past, relying on the evidence gained from a careful examination of a very large number of fractured limbs, have been clearly confirmed by radiography. It is with amazement that the surgeons who in times past had implicit confidence in their power to restore to the bones their perfect form, have now seen that they were mistaken, and that those limbs which they considered accurately replaced and which besides show perfect restoration of function, present the most pronounced overlapping.

Another view that I continually kept before my pupils is this: "Give no credence whatever to the statement that absolute lack of movement is the most favourable condition for the repair of bone and for the formation of callus. I have, on the contrary, demonstrated that a certain amount of movement of the fractured ends favours and accelerates the formation of bone. Do not, therefore, allow itto be repeated continually that there is no salvation to be found except in some form of apparatus in which the limb is to be placed. If you do, you will be contradicted by a crowd of facts which an irate public will hurl at your head in order to confound your ignorance."

I showed that the large majority of fractures could derive benefit from this legitimate and useful movement, and that immobility should be reserved only for those cases in which the threat of active deformation unfortunate y demands this absolute immobility, which in itself is an evil.

Now, the statement that you are continually making to the public, that fractures are not healed without some form of apparatus, will be used against you in two ways. You will be ridiculed, because you will be shown fractures that have been cured perfectly without any form of apparatus having been used. But, on the other hand, when a patient suffers from some complication due to traumatism, the public will accuse your apparatus of being defective, or will accuse you, with even greater bitterness, in a case when you have considered it advisable not to apply an apparatus.

Lastly, since the invention of radiography, I have continually repeated to doctors, "Don't go and proclaim from the housetop that from henceforth radiography has afforded you an exact picture of the fragments." That it has done so is untrue.[1] Radiography does provide us with a very precious new means of study, and one which must never be neglected. But it in no way obviates the need of studying fractures now as completely as they used to be studied in the past. If the necessity is ignored, if you do not pay serious attention to this mode by diagnosing a fracture, the public will imagine that radiography gives you no more information about the diagnosis of a fracture than they are able to deduce for themselves. They will never understand that the evidence of radiography may be neglected, or that one may act contrary to its indications. Yet one must realize that, as regards fractures, radioscopy is most unreliable, and may involve you in so profound an error, that it would have been better not to have had recourse to it.

Owing to the permanence of the image, radiography makes it easier to form a judgement, and the light it may throw is so interesting that one must wish to use it for every case of fracture; but it demands a most experienced and well-informed interpreter, otherwise it may lead you into the most serious errors. All those who imagine that they can trust entirely to a radiograph for their diagnosis are grossly deceived.

Lastly, in an individual case never try to prevent the use of radiography for a bony lesion. Whenever it is materially possible to employ it, have it employed; but never allow it to be interpreted in your absence, and make a special point of explaining to the patient or his friends in the clearest possible way the interpretation of the photograph.

* This article was written in French for the BRITISH MEDICAL JOURNAL; the translation has been revised by the author.

In practice even, I would go so far as to say, Never permit the demonstration of a negative, for this negative, which is necessarily obscure even to your practised eye, allows your patient to believe anything which a malevolent interpreter will try to make him see.

At any cost, with or without the use of radiography, the public must be shown that in the question of fractures there is nothing simple, starting from the photograph to which the patient pins his faith and continuing right through the treatment, and through the interpretation of the repair phenomena, however simple they may seem to be.

The study of fractures is exceedingly complex. It demands long hours of patient, conscientious application. It must be understood that theories and mathematical considerations only play a very subordinate part in comparison to the clinical ideas that experience alone can teach us. This is owing to the large number of physiological conditions that intervene in connexion with the vitality and the functions of the limb in question. Theoretical inductions referring to fractures are full of error and of dangers.

A revolution is necessary in the treatment of fractures. This revolution cannot occur without a complete destruction of the old principles on which to-day one would be wrong to insist. I refer to the classical ideas on the necessity of general and particular forms of apparatus. The public have got to learn that there can be no real uniformity in the treatment of fractures; in the first instance, because the cases which seem to them comparable owing to certain objective signs are not comparable to our eyes as they are to theirs. Again, different methods of practice in identical cases cannot be appreciated by the lay mind.

It may even be stated that it does not follow that certain methods which are successfully applied by certain surgeons should therefore necessarily be applied by other surgeons. It is quite possible that they will be more successful by the use of a different method.

As the profession generally pays little attention to this necessary form of teaching, a dangerous situation exists, and the practitioner has little that is reliable to guide him across the difficulties that are thereby engendered.

At the Société de Chirurgie M. Chaput, in a communication on the fracture of the two malleoli, quoted an example. A patient suffering from bimalleolar fracture, after leaving the hospital with one leg straight, subsequently returned and accused the surgeon of wrongful treatment, and laid on him the responsibility for his deformity. This attempt to throw responsibility on to the surgeon was due to the fact that it has been too often repeated that the use of good forms of apparatus definitely straightens fractures of the lower extremity of the limb.

Doubtless much can be done. Contrary to the opinion of certain of my colleagues, I believe that all difficult cases of reduction should be reduced only under chloroform anaesthesia. It must, nevertheless, be recognized that, however great the talent and care of the surgeon, there are cases in which this reduction cannot be obtained. This is plainly seen even during treatment.

But there are cases of less common occurrence which are more formidable for the surgeon. In these a limb which has been absolutely straight and in a perfect condition subsequently becomes crooked. This may be because the first steps are taken while the bone is not properly consolidated. But it must also be known that there are cases in which the seat of fracture was perfectly solid and in which the secondary deviation has occurred owing to some softening of the callus. I am of opinion that I have had cases of this under my personal observation; they have occurred in patients for whom very strict immobility had been rigidly prolonged. But probably there are cases where no explanation could be given for the fact.

Now the phenomenon is observed, as was pointed out at the Société de Chirurgie, not only in cases of fractures of the lower end of the leg, but in some degree for every sort of fracture.

I have observed instances on the wrist, the arm, the leg, and the thigh. I have observed them in the case of patients who had been treated by surgeons who had certainly not neglected them. I am convinced that in very rare cases the phenomenon may be observed.

Do not tell a patient that the occurrence is impossible, that it can only result from inefficient treatment, that *secondary* deviation is a myth, and that if once he is fully cured he is safe against all secondary deviation. If you do, and the condition does occur, it is quite possible that he will invoke against you the courts of law. You may be accused, if you have not warned him of the difficulties of treatment, and of the grave consequences from which he has not escaped. If such a suit was tried in France, although softening of the callus is a known fact, there would be plenty of witnesses to say that a fracture, when once it is consolidated, is not liable to fresh deformation, and that, if deformation does exist, it is due to a defect in the earlier steps of treatment.

It is necessary, therefore, that the existence of this sort of case should be clearly established, as it has been at the Société de Chirurgie.

In fact, in France and in all countries the help of the courts is more often invoked against the surgeon on account of fractures than on account of any other form of surgical treatment.

The great lawsuit which has been twice tried in England, and which has made so deep an impression on the whole medical world, might be tried in France or in any other country to-morrow and on the same grounds.

The action, which would seem more dangerous for a young practitioner, was brought against a doctor who cannot be characterized as young, since he graduated in 1888, Dr. Skyrme, and a surgeon of established reputation, Mr. Lynn Thomas. The motive of the action was a weakness due to a most serious lesion—fracture of the superior extremity of the right humerus, with dislocation of the shoulder.

There is no doctor who is not aware that such a lesion has always exposed the patient to consequences of the most painful description and often to the most serious disabilities. On what possible grounds, therefore, can plaintiffs sue the practitioners who attended them promptly, and why are they entitled to claim damages as a result of their services not having led to a definite cure?

The medical attendants were accused of negligence because the first doctor, Dr. Skyrme, only spoke to the patient at the outset of the dislocation of the shoulder, which he reduced by the method of the heel in the axilla. Mr. Lynn Thomas, on being called in, noticed crepitation, and consequently the fracture. Both doctors advised treatment without any apparatus of recognized type, and when asked as to the usefulness of radiography, they stated that it would be of no use for the treatment. Moreover, the ordinary immobilizing apparatus could not be worn on account of an enormous swelling.

A radiograph was subsequently taken, and Mr. Lynn Thomas considered that the nature of the deformation due to the fracture did not call for operation. Six weeks later the patient left home, and, suffering now from very marked loss of function, and from persistent pain, he sued his medical advisers for damages.

What are the issues pleaded in this case, the gravity of which every one must admit?

According to the lawyers, it is not proved that the patient suffered from dislocation. The doctor failed to see the fracture which at any rate accompanied the dislocation. He reduced the dislocation by the method of the heel in the axilla, a method that was not admissible. No radiograph was taken of the patient, and this was a mistake. Finally, he was treated without apparatus and without splints, a treatment inadmissible in a case of fracture.

Although the most eminent surgeons who were called on to give evidence all showed that in all this there was no professional fault, although they showed that the practice followed could be perfectly justified, the contention of the lawyers was to a certain extent admitted, because although the verdict was for a very much smaller sum than that claimed, yet it was a verdict against the defendant.

Judges and lawyers agreed in admitting that they, in virtue of their common sense, and in the light of what they had read for themselves, were competent to judge this case, and that the quotation of a classic book appeared to them an argument irrefutable. Sir Frederick Treves, when examined on one of his books in which he had recommended in such a case the reduction and complete

immobilization of the fracture, replied very wittily that he had not written the article, although it appeared in his book, but that even had he written it, his opinion after twelve years might easily have changed.

These are matters which are quite incomprehensible to the public, who always imagine that surgical and medical practice should obey immutable formulae.

The further we advance, and the more the public are invited to attend courses of nursing, courses of so-called popular science, and the more pictures or anatomical specimens are shown to them, the more firmly will they hold that they are good judges in the discussion of the most complex medical and surgical questions.

Since we cannot do away with this detestable practice of initiating the public into the secrets of medical science, it is necessary that all those who take upon themselves to instil into the public mind ideas that to it are useless, should not fail at the same time to instil a certain number of necessary first principles.

We must keep a close watch on the facts which strike the public, and which we scientists are insufficiently able to foresee, in order to put it on its guard against false and dangerous interpretations.

Such a lawsuit must convey its warning both in France and in England; it emphasizes the fact that there are notions which it is dangerous to allow patients to adopt, and that there are certain warnings which must be given to patients to prevent their placing an unfavourable interpretation upon one's conduct.

Thus the doctor was greatly blamed for not having told the patient that, as he reduced the dislocation of the shoulder, he had felt the crepitation, which had informed him that there was concomitant fracture. Probably he was actuated by the kindly intention of not frightening the patient by pointing out to him the gravity of his case.

It is certain that the fact of concealing from the patient some portion of the gravity of his case in no way modifies the treatment. But, in view of the mental attitude of the patient, it is of the utmost importance that the full gravity of a case should be mentioned at least to some relative who may later be called on to appear as a witness. In the event of there being no such intermediary, there is no reason for hesitation; and, except in desperate cases in which it is one's duty to deceive one's patient in some degree, this pity for the sick man must not so modify our actions as to give grounds for an accusation being brought at a later date against the surgeon.

The question of radiography is still more important. In this case the surgeon was reproached for not having at once had a radiograph taken. Yet he did not refuse to have it done. But, from honest motives, he explained that resort to radiography would involve expense, while it could in no way modify the treatment that was being followed.

This was perfectly true, but a fair interpretation is never placed on this discretion. The public are so thoroughly convinced that the radiograph is an exact picture of the lesion that every time its use is refused they are convinced that it was to one's interest to hide something. They are convinced that no rational treatment is possible without radiography.

Allowance must be made for these illusions and this ignorance, and a radiograph must be taken in all complicated and serious cases.

Not only must a radiograph be taken, but under no circumstances must the medical man neglect to interpret it to his patient, for otherwise the patient will certainly interpret it in his own way, and there will always be somebody to interpret it in a manner unfavourable to the doctor.

In the course of this case the doctor was also reproached on the ground that he had not reduced the fracture and brought the fractured ends into exact juxtaposition.

This is a grievance which you will constantly find litigants making. They rely on the opinion expressed in the books about the necessity of reducing fractures. It is to-day made the more easily because after treatment a more or less good radiograph will always show this lack of juxtaposition. All untoward after-effects, every incident, and every interference with function will be attributed to this lack of juxtaposition. The barrister, the judge, and the patient will repeat, with the weariness of a refrain in comic opera, "You have broken all the rules, you have failed to reduce the fracture."

It is essential that the public and the medical profession should realize that in the vast majority of cases the so-called "reduction" which one is taught as a routine method does not exist.

The public must be informed that it is not necessary in order to make a perfect mend. They must learn that absolute reduction no more tends to a satisfactory final result than does complete absence of movement of the fractured bones. Unfortunately, the doctors and the surgeons, by publishing these antiquated principles, have hitherto been building up difficulties for themselves.

It will be noticed that these new ideas are useful, not only for practitioners, like myself, who have a special form of treatment, quite different from that of my contemporaries, who hold that in a large number of cases violent reduction is as useless as it is dangerous, and that lack of movement does harm rather than good. But it is essential that the public should thus be warned, because every time that these complicated cases are encountered they never understand why the doctor, being bound, as it were, to practise complete reduction and to maintain it by absolute immobility, has failed to do so. Thus, he will bear the penalty for the erroneous idea that he has himself been propagating for so many years in defiance of all reasonable clinical observation.

It cannot be denied that the treatment of the doctor was in perfect conformity with the views of medical science in a case in which the diagnosis of a fractured head of the humerus with dislocation was made.

And yet I believe that the clinical teaching is faulty. In the case of grave and complex traumatism of the shoulder I always advise my pupils to have recourse to chloroform. There are a number of cases of articular traumatism in which this must be done. Anaesthesia permits of an infinitely more perfect diagnosis, and, if interference is necessary, will lessen the fresh traumatism that is inevitable.

In these circumstances it will be impossible for the patient to dispute the diagnosis at a later date and still more impossible for him to be able to state that he underwent needless violence.

When a patient has been treated for a certain time, he must be warned against following other treatment, and he must be informed that secondary treatment after a fracture may not fail to produce bad results.

I was amazed to notice that during this case no one pointed out that the patient, who was suffering from considerable traumatism of the right shoulder, had, six weeks later, gone on a long journey. In the course of this journey he underwent a new private treatment in an institute for mechano-therapy. No reference was made to the consequences of this treatment.

Any one who has a wide experience of fracture knows the bad effects that violent manipulation may cause in the definite repair of a limb. I refer to such treatment as injudicious massage, and even more to mechano-therapy, unless special precautions are employed.

I have noticed total loss of power in a case of simple fracture of the radius after an untimely course of treatment by mechano-therapy. Mechano-therapy is like all other violent and powerful forms of therapy. It may render services; but at times it may also cause the very greatest damage.

This will be the more easily understood from the fact that even if very moderate secondary treatment is carried out by another surgeon whose methods are different from those of the first, it may prove very disadvantageous to the patient. When the secondary treatment is applied by a surgeon other than the one who was responsible for the first treatment, the change may give rise to complications for which the first cannot be held to be responsible. I have seen patients who were cured of a fractured patella by the method of suture walking excellently at the end of a month, but coming back three months later with loss of power, because all movement had been prevented by doctors who had informed them that absence of movement was essential for the safety and the final repair of the limb.

I have seen doctors forcibly bend joints which were somewhat stiff, when with a little patience the stiffness

would have completely disappeared. The treatment caused considerable pain, and was followed by serious ankylosis of the joint near the fracture.

As I have often said, the surgeon who has begun the treatment must warn the patient that he cannot be responsible for the treatment of another surgeon. Now, the treatment for a serious fracture, and especially for articular fractures, includes attention for a very long time after the limb has recovered its functions.

CONCLUSIONS.

The various views I have here expressed are often ill-understood by the medical profession. They should study them, and it is their duty to communicate them to the lay public. The public must be made to understand the difficulties involved in a study of fractures. They must know that radiographs have to be interpreted. They must know that the reduction of fractures is not an absolute rule, and is often not indispensable. They must know that absolute rest is not the necessary test of every sound treatment for fractures. They must know that a fracture is not a simple lesion, but that it includes complications owing to displacement, and owing to rupture of tendons and muscles. They must know that there is no mathematical solution for the repair of fractures.

It is always difficult to put the public on its guard against the rooted belief that it knows and can understand everything relating to medicine. But in the case of fractures the doctor must be especially on his guard, because nothing will uproot the conviction of the public, that it can understand every secret in connexion with the treatment and the repair of bones.

In the course of the many lectures on medicine that it is now fashionable to deliver to the public, it would be better to enforce these ideas than to persuade one's audience that they can be of use in rendering first aid to the injured.

Had these several ideas been familiar to the judge and jury, the verdict against the English doctors would have been impossible. It was based on a series of false ideas regarding fractures and especially on two beliefs—that for every fracture there is a routine mathematical treatment, whose effects are referable to a known immutable law, and that it is right to blame a medical man for not having rendered implicit obedience to the absolute laws laid down for the treatment of fractures.

REFERENCE.

[1] Les Erreurs de la Radiographie, Congrès français de Chirurgie, 1997, Dr. Lucas-Championnière.

An Address

ON

ARTHRODESIS AND TENDON TRANSPLANTATION.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

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UNTIL comparatively recently the operative surgery of paralysis in children, both spinal and cerebral, has been limited to an occasional subcutaneous tenotomy, and the subsequent treatment has been largely guided by makers of orthopedic appliances. Too little effort has been made in the past to bring the resources of our surgical art to assist, and if possible to supplant, the mechanical methods. With the advent of the operations of arthrodesis, tenoplasty, and tendon transplantation, new avenues are open to the surgeon's enterprise and new possibilities for the relief of the hitherto hopeless amongst the paralytics. Nerve anastomosis is too recent a procedure to admit of our estimating its value. Arthrodesis and tendon transplantation, however, have been sufficiently practised to permit of our forming an estimate of their limitations and possibilities, and we can now with some authority indicate the causes of our failures and point to the essentials of success.

ARTHRODESIS.

Since I advocated the operation of arthrodesis to English surgeons I have performed it in over 500 cases. Many of my early results which seemed so promising at first proved later on to be disappointing; but it was the occasional success which encouraged me to persevere in searching for the faults which I was to avoid in order to ensure permanently successful effects.

By arthrodesis we endeavour to ankylose a joint with the least possible sacrifice of bone. The joint thus fixed is quite healthy, usually preternaturally mobile, and the muscles which should govern it are either wholly or in part paralysed. With exceptions which I shall mention, the operation of arthrodesis should be limited to those articulations wholly dependent for their usefulness upon outside appliances, and which offer no opportunity for a successful tendon operation.

The object of an arthrodesis when applied to the lower limb is to make a flail joint sufficiently firm to bear body weight without yielding. When this result is attained it is the best that can be expected, for it means that the patient is able in the future to dispense with supporting frames of every kind. A less successful result than this, however, may fully justify the operation. The ankle, for instance, may be so improved in shape and position that less costly and less complicated apparatus can be used with better effect.

The surgeon fails if, wanting a bony ankylosis, he succeeds in securing merely a yielding fibrous one; but on several occasions I have noticed that a short fibrous ankylosis has given overstretched muscles an opportunity of acting, and this to the uninitiated might look like a recovery of motor cells.

The chief cause of my early failures was that I operated on children who were much too young, and the first important principle I would emphasize is that arthrodesis is best performed in children over 10, and should never be performed in children under 8. To neglect this, which I would call a fundamental law, is to court failure. Operations on younger children result in feeble fibrous ankylosis, and later on, from the sacrifice of too much cartilage, irregularity of growth. I cannot remember one case of a child operated upon under 4 years of age where bony union has been secured. In children under 7 less than a fourth have yielded satisfactory stability, but in children over 10 the fixations are practically universally good. Indeed, the youth of 10 or 12 is as good a subject for arthrodesis as is the adult, and if proper precautions are taken at the time of operation and afterwards the immediate results permit of no relapse. The deformity at the ankle due to irregularity of growth is usually a pure varus, and armed with a knowledge of its possible occurrence the surgeon can always place successful obstacles in its way. The same kind of perverse growth is apt to follow early operations of bone removal in club-foot and in arthrodectomy at the knee for tuberculous degeneration. These awkward and compromising sequelae will be avoided if the surgeon determines not to operate on the very young, and if he watches, with a view to correction, the subsequent conduct of the joint. This is not all. If an arthrodesis is to be done at the ankle for equino-varus, then both the deformities of inversion and extension should be fully corrected by wrenching before the operation of fixation is undertaken, otherwise an increasing adduction of the foot will occur with growth.

Of all joints, the most amenable to arthrodesis are the ankle, the mid-tarsal, and next to these the knee-joint, whilst in rare instances it may be advisable to fix the shoulder-joint. The hip, wrist, and elbow are, in my opinion, not fitted for bony fixation.

For demonstration purposes I will take the ankle-joint, and refer to the procedures which I adopt in order to meet the demands of a particular deformity. One first inquires into the condition of the muscles, the age of the patient, and the length of time which has elapsed since the paralysis originated. If the patient is under 8, if there is any power in the stretched muscles, if complete paralysis of the stretched muscles has not lasted over two years, arthrodesis should not be done. I have seen several cases in which the paralysis seemed to be complete make a recovery under appropriate methods, even three years after the onset. In those cases where a mere contractile flicker in muscles is noted, and where power has not increased for many years, by applying to their

treatment certain principles to which I shall refer later complete recovery can be relied upon. It is, therefore, of the utmost importance that the ankle joint should not be fixed until we know—

(*a*) That the paralysis is complete, and depends on the destruction and not on the temporary disorganization of motor cells.

(*b*) That at least two years has elapsed in the case of muscles suspected to be completely paralysed.

(*c*) That apparently paralysed, but really overstretched, muscles have first undergone appropriate treatment.

We will suppose that the child brought to me is only 4 years old. He has been paralysed for two years, only retaining feeble tibial control, not sufficient to increase the deformity which is the result of posture, his calf muscles overact and are contracted. Before telling the parents that in four years an arthrodesis must be performed a preliminary effort should be made to place the apparently paralysed muscles in the best possible position to recover. This means the elongation by the Beyer method of the tendo Achillis and the placing of the foot in the everted position and at right angles with the leg, the object being to relax the elongated muscles. If any contraction of deep ligaments or plantar fascia exist these must be corrected by tenotome and wrench, and if adduction at the mid-tarsal joint is noted abduction must replace it. Everything in short, must be done to overcorrect, and retain in overcorrection, the deformed foot before any operation on bone is performed. For this preliminary treatment to succeed it is necessary that not for one day should the foot when placed in the corrected position be allowed to relapse into the old position of deformity. And herein lies the problem—how can we afford to the foot this necessary security? We all know that when we apply splints parents of all classes temporarily remove them on various pretexts, and amongst the poor folk children are often even allowed to take their splints off at will and walk. It is because of this real difficulty I advocate that we should not trust to splints alone, but should operate to retain the foot effectively in good position without in any way interfering with the integrity of the joint. With this end in view I have for some years excised skin areas, and by a very simple device the foot is thus held in position by shortening the skin on the convex aspect of the foot. An assistant holds the foot in the overcorrected and everted position, and I hold in each hand a pair of forceps which nip the skin at some distance from one another; these I approximate, and so learn how much skin I can remove in order to hold the foot in a correct position. An oval flap of skin between the forceps is then removed, and the wound accurately stitched. When this stitching is completed the foot will, if necessary, remain in the overcorrected position without support. Further, the peronei tendons should be exposed and shortened, and the same should be done in the case of the flexors of the ankle and extensors of the toes. By the combination of these procedures, tenoplasty, and skin exsection we can be assured that the muscles which should govern the ankle, but are overstretched, are kept in the best possible position for recovery, and in a comparatively short time one can predict either success or failure. May I venture again to emphasize the fact that the time that paralysis has existed will alone not instruct the surgeon unless the paralysed or overstrained muscles have been subjected to proper treatment? In other words, muscles which would remain apparently paralysed for years may, under suitable fixation, recover in a few months. This point I will again refer to in dealing with muscle transplantation. If it be found that power returns to some or all of the muscles, the question of arthrodesis may be dismissed, and instead, by a continuance of massage, and maybe by tendon transplantation, recovery must be sought. If the paralysis, however, remains, mechanical appliances must alone represent our surgical effort until the patient has arrived at an age when arthrodesis can be safely done. The case, say, being one of equino-varus with adduction at the mid-tarsal joint, we make an incision on the outer side along the length of the astragalus, exposing the ankle and the mid-tarsal joints. With a gouge all the cartilage is carefully removed from the astragaloid surface of the tibia and from the malleoli, and a wedge is taken from the astragalus, with its base to the outer side so large that when the bones are brought together the foot will be at right angles and slightly everted; a wedge is also taken from the mid-tarsal joint with its base outwards, and the foot is then fixed in a position of slight abduction.

In operating on the ankle it is well to be sure that if a wedge has to be removed it should be taken from the astragalus, as this does not interfere with the tibial epiphysis and growth of the shaft; it is also advantageous that accurate apposition be obtained.

Operations on the knee are less frequently performed, and the patient has to decide between a stiffened joint and a splint which will give him the choice of moving the knee or not, as he pleases. The well-to-do, who can command the best apparatus, would generally prefer mechanical help. The poor, to whom splints are unavailable, or who live out of the reach of the mechanic, often elect an ankylosed joint. I have a number of poor people who trudge about without inconvenience with both knee and ankle stiff. The surgeon knows he can make the operation successful, but must leave entirely to the patient the decision as to which condition he prefers.

I have only performed arthrodesis of the shoulder in 5 cases. In 3 the union was bony, and in 2 fibrous. As Vulpius says, the arm should be kept well abducted and rotated inwards, as this facilitates the raising of the hand to the face and head. Unless the elbow can be kept permanently flexed, the operation is not indicated in those cases where the muscles governing it are affected. The object of the operation is to fix the humerus to the scapula at an obtuse angle so that the shoulder may be governed by the trapezius, serratus, and any other available muscles, and the arm can therefore be made to move with the shoulders. If the muscles governing the shoulder blade are paralysed, then arthrodesis of the shoulder is of no avail. There is a type of case, not at all uncommon, in which the muscles of the hand are acting, but the shoulder girdle and elbow are flail. It is necessary to fix the arm in acute flexion so that the functioning hand may be of use. This can be done by what I call the excision of skin flaps, fixing the forearm to the arm, which is infinitely preferable to an arthrodesis of the elbow.

Many complaints have been made by most excellent surgeons of the difficulties in bringing about bony union in arthrodesis of the ankle, and I have often experienced the difficulty myself. Now that I operate on older children and am careful of my apposition, I no longer dread a fibrous union.

Many devices, mechanical and physiological, have been tried to facilitate and render more sure a true synostosis. My friend Mr. Stiles, of Edinburgh, having performed his arthrodesis, drove a nail through the os calcis into the tibia. Karewski fixed the joint with ivory pegs. For reasons based on the arguments of the late H. O. Thomas, in dealing with ununited fractures, I have tied a rubber band above the ankle and below, sufficiently tight to obstruct the venous circulation. This old practice, which Thomas named "damming the fracture," has lately been most erroneously associated with the name of a distinguished German surgeon, Helferich. Were it possible to be sure of hastening bone formation, a knowledge of the method would be most valuable to the surgeon. We must all have noticed, as did Ollier, of Lyons, that irritation of the epiphysis due to chronic inflammation sometimes lengthened bone. Ollier, putting this knowledge to practice, endeavoured, and with a certain degree of success, to lengthen short legs by scarification and pegs. The late Professor Hoffa, basing his practice on the experiments of Mass and Schmidt, painted his arthrodesed joints with iodine, and advocated the procedure. Mass and Schmidt found that, by painting the extremities of young rabbits from birth with iodine, the bones thus painted became larger and heavier than those of the opposite side.

To sum up, therefore, we come to the conclusion that arthrodesis, properly performed, is a very valuable means at the surgeon's disposal, and that failures which have been reported are generally due to neglect of fundamental principles.

(*a*) The operation should not be performed on children under 8.

(*b*) It should not be performed until the surgeon is satisfied that the muscles are paralysed beyond hope.

(*c*) The preliminary preparation of the foot by wrench and tenotome must correct all deformity.

(*d*) The operation should be so planned that at its

completion the bones lie in apposition to the foot, which should be placed in an overcorrected position. This is effected by the exsection of skin flaps, by the shortening of lengthened tendons, and by the removal of graduated wedges of bone.

(*e*) The wedge should never be taken from the tibia, lest the tibial epiphysis be injured.

Splints should be applied and retained until union is pronounced to be complete, and appliances should be worn until the surgeon has evidence that the ankle can bear body weight without fear of yielding.

TENDON TRANSPLANTATION.

Tendon transplantation offers us many opportunities for speculations which we have no time to indulge in to-night. The physiological and psychological problems involved are of intense interest. My purpose, however, is to endeavour to lay before you some of the reasons why failures are so often reported, and to try and help from an experience of over 260 operations to make a successful issue more likely. I shall not do this by an analysis of cases, as some of my patients have been operated upon many years ago and others only a few days since. In my early cases, groping largely in the dark, the results of operations were not encouraging. I can, however, endeavour to describe the indications for operation, and point out those factors which in my experience have made for success and those which predestine failure. To do this usefully I will enter later upon the discussion of certain practical principles relating to tendon elongation and their effect upon opponent groups, and this in order to avoid fallacious conclusions as to the results of transplantation.

The object of tendon transplantation is twofold, to correct deformity and to improve or restore function. Rarely does it happen that failure is so complete as neither to improve the utility nor the appearance of a foot. The prudent surgeon, both for his patient's sake and his own, will use every available art to ensure an improvement in the position of the foot, with a knowledge that should the transplantation fail in function, at least a more useful and normal looking foot will be secured. In my opinion, the indications for tendon transplantation are:

(*a*) To fortify a weakened group of muscles.

(*b*) To supplant a completely paralysed muscle, or group of muscles.

(*c*) To obstruct an overacting spastic group.

(*d*) To deviate tendon action when perverted—as in transference of the tendo Achillis to the outer side of the os calcis in congenital club-foot to prevent inversion of the ankle.

(*e*) As a help in partial arthrodesis.

When I began to transplant I did so into tendons, but for a considerable time I have inserted direct into periosteum or an equivalent firm tissue, and in a few cases direct into bone by tunnelling or grooving. On occasions I have transplanted the complete bony insertion of a tendon as in the case of the patellar ligament and Achilles tendon.

In my earlier cases the results, as in those of arthrodesis, were disappointing. Even now with my extended opportunities and experience I cannot be so certain of a good result as when I elect to make a flail joint stiff. My early operations, however, were made when I had not realized principles which I now hold to be essential to success, and cases which seemed to promise well at first soon began to show signs of relapse. Were it not for two or three encouraging results out of fourteen or fifteen early failures, I should long ago have ceased to operate. The two or three successes, however, meant everything to me; they meant, in the first place, that, given certain conditions to be found out by the surgeon, a transplanted tendon could be made to do the work required of it. Nearly every writer who deprecates the operation will admit the occasional success. The recognition of the possibility of success is alone sufficient to justify tendon transplantation as a surgical procedure. As a guest of the French Congress of Surgeons in Paris, last October, I listened to a very able address by Professor Kermisson, largely sceptical of the value of tendon transplantation. He referred to the case which, at first brilliant, later on relapses. I maintain it is necessary to *find out* why a case at first successful should later disappoint. There are to my mind only two answers to this question, either that the after-treatment has been faulty, or that a mistake has been made in ascribing to the transplanted tendon a result produced by other causes. A transplanted tendon which begins to act should never be allowed to relapse. When relapse does take place, it shows that the efforts of the weak muscle in the discharge of its new duties has not been sufficiently appreciated and helped forward. Instead of being carefully nursed it has been allowed to become overstretched, either by the action of opponent groups or by erroneously applied body weight. To prevent this the transplanted muscle should be energetically massaged, and the foot should be so fixed that body weight is deflected from it. For a muscle to continue to contract well it must have a certain elastic tension and a normal tonicity, and, as was pointed out a quarter of a century ago by H. O. Thomas of Liverpool, an overstretched muscle while the strain is continued loses its function. This question of lengthened tendon goes to the root of the question of relapse, for it is quite possible to render powerless strong healthy tendons if they be overstretched.

If, for instance, we follow carefully the histories of certain drunkards with drop wrist, we shall find that in some of them direct stretching of the extensors from weight and posture, and not pressure on the musculospiral nerve, is the cause of the paresis. Experimentally I have investigated and confirmed this theory, first promulgated by Thomas. In drop wrist of many years' standing due to poliomyelitis, continuous and prolonged hyperextension of the hand for many months will completely restore the muscular balance, and in conjunction with my friend Mr. Tubby I have elsewhere given instances where after seventeen and nineteen years the overstretched extensors have regained their contractility. In further illustration of this point I would relate three cases. A girl of 13 who had been afflicted for years presented a complete paralysis of the shoulder and upper arm, but had free use in the hand (the upper arm type of Erb). There was no power of extension or flexion at the elbow, and the electric reactions denoted complete paralysis of biceps and brachialis anticus. As is my custom in such cases, I removed a large diamond-shaped flap from the upper and lower arm, and attached the forearm to the arm, so that the elbow was fixed at an acute angle, and the patient was thus enabled to use her hand for many useful purposes about her neck and face. Many months afterwards my colleague Mr. Armour, on examining her, found the skin slightly stretched, but noted that the girl could flex her forearm several degrees. In fact, restoration of function had taken place in the paralysed brachialis anticus and biceps by allowing structural shortening to take place in the bodies of the muscles. A second case, three years paralysed, and similarly treated and tested, resulted after four months in complete muscular restoration. Now I would draw your attention particularly to a third case, similar in most respects to the other two, where the paralysis had lasted seven years, but during the whole of this time a flicker of contractility had been noted in the biceps, so slight as to have no effect upon the forearm, which lay limp and extended. I slung the forearm in a position of acute flexion, and sealed it in such a way that for some months its position could not be changed. Some power was soon manifested in both the biceps and brachialis anticus, and by degrees the arm was lowered to the position of right angles. It was then found that from that position the arm could voluntarily be acutely flexed with moderate power. The patient's doctor at this stage, thinking the arm was well, took the sling off. The sequel was most instructive: the weight of the forearm so stretched the recovering muscles that the arm again lay limp, extended, and powerless, and function was regained only when the flexion treatment had been continued for a sufficient length of time. The bearing of these cases on the question of tendon transplantation is obvious, and may thus be formulated:

(*a*) A muscle, if stretched for a sufficiently long period, will cease to act.

(*b*) An overstretched muscle will regain its power if relieved from strain.

If the surgeon fails to grasp these facts fully he is apt to make two serious mistakes. First, he does not discriminate the muscle paralysed because of destruction of a motor cell from a muscle not functioning because

of overstretching. Secondly, he does not realize that recovery is not due to the action of a transplanted tendon, but to the functional restoration by posture of a hyperextended muscle. My third case shows clearly how gravity may overcome even a considerable degree of muscular restoration, and is a complete answer to those surgeons who wonder how an immediately brilliant result may end in failure.

I have on many occasions observed the recovery by posture of muscles which have been pronounced hopeless after electrical examination. These observations have been confirmed by Hoffa, Koch, Lange, König, and others. Koch has shown by histological examination that in useless muscles regeneration of muscular fibres is possible. He adduces instances of muscles microscopically and macroscopically showing complete degeneration which have recovered elastic tension.

There are many ways of deflecting strain from a newly-implanted tendon. Hoffa did it by shortening the inactive or paralysed tendons. Others trust entirely to posture in splints. Personally I see that the deformity of the foot is overcorrected before any operation is performed, and as soon as the tendon is transplanted, as in arthrodesis, I remove an oval skin flap from the paralysed side so large that when the edges are sewn together the foot remains fixed in an overcorrected position. The removal of the skin flap, I venture to suggest, gives us considerable help in removing strain from the transplanted tendon. The foot by this means, as I have before said, remains in the desired position in spite of any outside influences.

The causes of my early failures may be thus summarized:

(*a*) Inadequate tension of the reinforcing muscle.
(*b*) Inadequate preliminary correction of deformity.
(*c*) Early adhesions of transplanted tendons.
(*d*) Insufficient fixing of the tendon.
(*e*) Overdeflection of the transplanted tendon.
(*f*) Overstrain upon the transplanted tendon.

Latterly I have avoided operation upon children of too early an age. I usually wait until they are 5. If we operate younger than this, the children can give no help in the after-treatment by exercise and resistance. By manipulation, by the wrench, or by tenotomy the deformity must be overcorrected, and in obstinate cases the foot should be kept for some time in an overcorrected position. How absurd it is to expect a newly-implanted tendon not only to hold its own against powerful opponents, but to be sufficiently strong, in addition, to unravel a deformity! On occasions, in order to give my newly-placed tendon a favourable chance, I have divided all its active opponents—a harmless and useful device. The sheath of the transplanted tendon should be as often as possible spared, and should accompany the tendon to its new destination. We must remember that the blood supply of the tendon is from its belly—bone insertion—and from its sheath, and if deprived of its blood supply union is very slow and feeble. The suture fixing the tendon should be tight. Silver found from experimental study that it is practically impossible to tie a suture tightly enough to cause necrosis, and that many relapses occur from the tearing of sutures which have insufficiently held the tendon. When the tendon is fixed to the periosteum it should be tightly sewn, but it should not be pulled so forcibly that it will not become slackened slightly by overcorrection of the foot. We must always remember that an overstretched tendon is in danger of rapid atrophy. Tendons which are not acting may be shortened to help the bracing up of the foot and to restore the function of those which have been overstretched. The overcorrected position of the foot should be maintained for some weeks, and when the patient is allowed to walk the body weight should be so deflected that the transplanted tendon is saved from strain. Before body weight is allowed on the foot massage and voluntary movement of the tendon will have been diligently employed.

If these principles are regarded we may estimate a large percentage of recovery, but, alas! how rarely can we secure for a foot the prolonged exercise free from body weight so essential to the bringing about of an ideal result. If the technique has been good, the after-treatment correct, and the transplanted tendon begins to act, improvement should be uninterrupted. Hubscher of Basle, referring to implantation of the biceps and sartorius into the patellar periosteum, says that, though immediate results are marvellous, sooner or later these may be partially or wholly lost. If regard be paid to after-treatment one need not fear loss of function. If success is not continued when once begun, either the surgeon or the patient must be to blame.

Bearing closely upon this comes the question of strengthening the implanted tendon, which withers quickly if it suffers undue strain. What is the test of the recovery of the tendon? The tendon has recovered when the patient is able by a voluntary effort to make it forcibly act, and when it can successfully withstand the action of gravity. If a weak tendon has been inserted to replace a strong one, the after-treatment must be anxious and prolonged. Directly bearing upon this question of the test of recovery in a muscle and the systematic strengthening of a weak tendon, I would refer surgeons to the so-called relapsing congenital club-foot. It is well known that if an extreme case of club-foot is rapidly overcorrected by hand or wrench, so completely, indeed, that the surgeon without the slightest effort can move the foot from equino-varus to calcaneo-valgus, such a foot may easily relapse. Textbooks do not inform us why this is, but the explanation I offer will appeal to you as being simple and correct. The deformity recurs because the overstretched flexors of the ankle have not had time to shorten, and they behave as if paralysed; the foot gradually, therefore, as in poliomyelitis, gravitates into equino-varus. Such deformity will never recur if the surgeon watches his little patient until, by an act of volition, he is able quite easily to overcorrect his own foot.

Again, given a certain degree of power in a transplanted tendon, by appropriate treatment this should be continually increased. Some years ago I operated on a boy with a slipping peroneus longus tendon and was surprised to find it almost the size of his tendo Achillis. I found later the reason why it was so hyperextended. At a preparatory school he delighted to exhibit its noisy movement over the malleolus at a penny a performance for the amusement of his school companions. This is suggestive as to what may be done by appropriate after-treatment in the case of a weak but acting transplanted tendon.

The tendon must be well freed by amply tunnelling the soft structures through which it is to pass. The tunnel should be made in the one plane without the exercise of force on the surgeon's part. The exercise of force means the tearing of structures and the formation of adhesions, which will spoil our efforts. There should be no angular deflection on the part of the reinforcing tendon, which would most surely be fatal to its action.

If during an operation we are in doubt as to the vitality of a muscle, we will observe that the healthy muscle is dark and red and the afflicted muscles pale pink, fatty or yellowish-white.

CONCLUSIONS.

In tendon transplantation one must insist on—

1. The overcorrection of deformity as a preliminary act.
2. The removal of skin flaps to secure the uninterrupted continuity of the overcorrection.
3. The direct and not angular deflection of the tendon.
4. The free tunnelling in the one plane through the soft tissues.
5. The firm suturing into periosteum or bony groove.
6. The careful choice, tension, and nursing, of the transplanted tendon.
7. The maintenance of a hypercorrected position until voluntary power is assured to the tendon.
8. The deflection of body weight during walking from the reinforcing tendon.

In addition to these, it may sometimes be well to shorten all the paralysed tendons and prevent the overaction of their opponents by tenotomy.

In all my cases of arthrodesis and tendon transplantation I employ the tourniquet, and of course insist upon scrupulous asepsis. The surgeon and his assistant should either be masked or absolutely silent during the operation, and india-rubber gloves should replace the surgeon's skin, which can never be accounted surgically clean. It is practically impossible to speak without spitting, and a carious tooth will readily start an infection. The knowledge of the ease with which, by talking, we can infect

gelatine 2 ft. from us should check those discussions which we foolishly carry on over the wounds we inflict.

All my hospital transplantations are treated as out-patients, and return to their homes on the day of operation, and no difficulties of any kind arise therefrom.

With the limited time at my disposal, I have thought it best not to discuss individual operations nor to dwell upon statistics. I have preferred to lay before you certain principles which I hope may prove useful. Both arthrodesis and tendon transplantation are, if properly appreciated and applied, valued surgical assets. They give us an interest and encouragement in our treatment of paralytics which we sorely needed. Failures, and we are bound to experience many, should prove our welcome counsellors, and we should be unsparing of our efforts to learn from them all we can.

THE MOST ANCIENT SPLINTS.

BY

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[WITH SPECIAL PLATE.]

IT is a well-known fact that among the ancient Egyptians excellent results were often obtained in the treatment of fractured bones, but it has never been explained what measures the archaic surgeons adopted to secure this success in the practice of their art.

I have been fortunate enough to have had the opportunity of examining two sets of splints which had been applied to fractured limbs almost at the dawn of Egyptian history—roughly, about five thousand years ago. These are certainly the oldest splints which have come to light in any part of the world, and, with the exception of flint knives used for circumcision* in Egypt in prehistoric times, they are the earliest surgical appliances ever discovered.

These interesting objects were found by the Hearst Egyptian Expedition of the University of California in charge of Dr. George A. Reisner. The enlightened generosity of Mrs. Phoebe Hearst, the great benefactor of that institution, has enabled Dr. Reisner to make scientific investigation rather than the mere collecting of museum exhibits the paramount object of the work of the expedition; and to the thoroughness with which this aim has been pursued we are indebted for the discovery of these splints, which throw a new light on the early history of surgery.

During the progress of the Hearst Expedition's work at Naga-ed-dêr (about 100 miles north of Luxor), Mr. A. C. Mace excavated a cemetery of rock-cut tombs made in the time of the fifth dynasty.† In these tombs were found the two sets of splints which form the subject of these notes.

By one of those curious coincidences which occur at times in the experience of every one who systematically examines large series of specimens, both of these sets of splints—the only known splints that had been applied to living‡ patients earlier than the Christian era§—were found at the same time and in one cemetery. These sets of splints have been in the Anatomical Museum of the Cairo School of Medicine for the last five years, and, although they have been seen by innumerable visitors, no account of them has ever been published, because it was our intention to reserve the description of them for the reports of the Hearst Expedition's work. But at the urgent recommendation of Mr. Edmund Owen I have sought and obtained permission from Dr. Reisner to publish these notes and photographs now.

Mr. Mace's photographs showing the condition of the two tombs from which these splints came will be published in the Hearst Expedition's Reports, and one of these showing the splints themselves *in situ* is reproduced here to illustrate the exact position in which they were found (Fig. 1). One of the sets of splints I replaced in the exact position in which they were found (and photographed by Mr. Mace) for the purpose of taking the photograph reproduced here as Fig. 2. In the case of the second set of splints their linen wrappings have become so stiff and brittle after five years in a museum show-case that they cannot be put into their original places without damaging the bandages. The manner in which they are shown in Fig. 3, however, is perhaps more instructive. It shows the position of the bones in relation to the splints and it is easy to imagine the exact appearance of the supporting pieces of bark when they were put together to form a tube around the damaged limb.

SPLINTS APPLIED TO A COMPOUND FRACTURE OF THE FEMUR.

This case is the fracture of the shaft of the right femur almost exactly at its mid-point; the subject was a girl about 14 years of age. A piece of bone 52 mm. long and 13 mm. wide had been detached from the back of the shaft at the seat of the fracture (Fig. 4). As this was missing and also for other reasons to be mentioned later the fracture must have been compound.

The broken limb was set with four splints passing from just above the fracture to a point well below the knee (Figs. 2 and 3). Each consisted of a rough, slender strip of wood, which had been wrapped up by means of a carefully-applied linen bandage (Fig. 5, B) before being fixed to the limb. The splints were held in position by means of two bandages, each tied in a reef knot (Figs. 2, 3, and 5, A), one above and the other below the knee. As the result of a natural process of decomposition and, even to a greater degree, of the damage done by insects, the great part of the linen bandages has disappeared, and even what is left of them is in a very much disintegrated condition and is very fragile. Sufficient remains, however, to indicate exactly what had been done by the surgeon to prepare and apply the splints. The most important and most carefully prepared splint was applied to the antero-mesial aspect of the limb (Fig. 2; in Fig. 3 it is to the right side of the bone). It consists of a rough strip of wood, which has been sawn or roughly shaped with an adze, but not planed. It is 40.3 cm. (about 1 ft. 4 in.) in length, 2.9 cm. (about 1¼ in.) in width, and 7 mm. (about ¼ in.) in thickness. Only 7.2 cm. (less than 3 in.) of this splint was above the seat of the fracture, but 16 cm. of its length was below the knee.

It was carefully wrapped in two layers of linen bandage, wound obliquely around the wood in such a manner that the direction of the obliquity of the superficial layer was at right angles to that of the deeper layer (Fig. 5, B). The bandage is 3.5 cm. (about 1⅜ in.) broad, and is composed of somewhat loosely and irregularly-woven threads, of which there are 14 per cm. in the warp and 32 in the woof.

A short distance below the site of the fracture there is a large pad of linen, 8 cm. long and 3.1 cm. thick, attached to this splint; its upper border is 9 cm. from the upper end of the splint (Figs. 2 and 3). This pad is composed for the most part of a bandage, wound in a circular manner around the splint, but on its inner aspect there is an unattached sheet of linen, folded to form an oblong mass (55 × 35 mm.).

The femoral surface of this pad is discoloured by a rust-like stain, which my own investigations, and especially the large series of exact observations made by Mr. Frederic Wood Jones, M.B., my collaborator in the anthropological work in Nubia, enable me to recognize as

* In my examination of the bodies found in the prehistoric cemetery at Naga-ed-dêr (Hearst Expedition's excavations), I found that all the men were circumcised. In a tomb of the ancient empire at Sakkara, the operation of circumcision is represented in a series of wall pictures; the surgeon is using a flint knife. Although it is not possible to say with certainty that any particular knife found in an archaic tomb has actually been used for surgical purposes, it is safe to say that some of them were intended for such a use.

† There are still great discrepancies in the estimates of the dates of these ancient Egyptian dynasties. Professor Breasted, following the Berlin school of archaeologists (which reduces the periods of time to the lowest possible figure), gives the date of the fifth dynasty as 2730-2625 B.C. Professor Flinders Petrie gives the date as 3721-3503 B.C. Even if we adopt the lowest estimate of age, these splints are more than 4,500 years old.

‡ I have described (Report on the Unrolling of the Mummies of the Kings Siptah, Seti II, Rameses IV, Rameses V, and Rameses VI, *Bulletin de l'Institut Egyptien*, 5e Série, T. 1, 1907, p. 49) a set of splints applied to the right forearm of King Siptah of the nineteenth dynasty, which had been broken by plunderers of his mummy long after his death and was set with splints by the priests of the twenty-first dynasty, who rewrapped his body, which the robbers had stripped.

§ I have described sets of splints found on the two forearms of a girl of the early Christian period (perhaps seventh century). See the first *Bulletin of the Archaeological Survey of Nubia*, 1908. Mr. Mace tells me that in an early Christian cemetery at Naga-ed-dêr, excavated by the Hearst Expedition, he found a fractured patella set with splints. This is now in one of a large series of boxes (in the Anatomical Museum of the Cairo School of Medicine) which have not yet been unpacked.

blood.* The surface of the shaft of the femur from the seat of the fracture as far down as the centre of this pad exhibits similar evidence of blood staining.

That such stains should last is very surprising, seeing that my colleague, Professor W. A. Schmidt, is unable to obtain any chemical or biological reaction of blood from these specimens or in any samples of blood staining more than 250 years old.[1] The circumstances in which Mr. Wood Jones and I have found these stains in several hundred cases prove that they are undoubtedly blood. Professor Schmidt and Mr. W. M. Colles have obtained iron from such stains, and they tell me that even after the complete disintegration of blood the iron left will persist and stain the bones and other structures.

These circumstances go to prove that the fracture was a compound one, and that the pad on the antero-mesial splint was placed on the wound.

The postero-mesial splint (Fig. 3, on the extreme right) is a rough strip of unsawn and unplaned wood, which is rendered still more irregular by several small knots. It is the same length as the splint already described, 27 mm. wide, and has a maximum thickness of 9 mm. It is wrapped in linen like the rest.

The antero-lateral splint (Figs. 2 and 3) resembles the antero mesial in shape and size. It was roughly shaped by means of an adze. In its present state this splint is broken across at the place where it rested on the external condyle of the femur (Fig. 2). This probably occurred at the time the skeleton collapsed after the decomposition of the flesh; the fragile, worm-eaten piece of wood dropped on the femur, while the weight of a mass of tomb clothes would fall on its two ends, thus snapping it. This strip of wood was wrapped like the others.

The postero-lateral splint (Fig. 3, the extreme left) is a very roughly split piece of irregularly knotted wood, 36 cm. long and 22 mm. wide. It was wrapped like the others.

Death must have occurred very soon after the damage was inflicted on the limb, for there is no evidence of any inflammatory or healing reaction on the broken bone except a very slight roughness on the anterior surface of the lower fragment.

That these splints must have been quite useless as a support to the broken bone or as a restraint on the tendency of the thigh muscles to shorten the limb, is obvious at a glance. Their only purpose could have been to fix the knee joint, and by that means to ensure some degree of rest to the damaged member.



A

Fig. 5.—A, Knot in bandage tied around the splints. B, Part of the postero-mesial splint, to show the manner of covering the wood with bandages.

The examination of a series of healed fractures of the femur obtained from ancient Egyptian tombs shows—what in fact we might have anticipated from a study of these splints—that as a rule there is considerable shortening, displacement of the fragments, and an excessive development of callus.

SPLINTS APPLIED TO A COMPOUND FRACTURE OF THE FOREARM.

In this case there is a fracture of both bones of the left forearm at about its mid-point, the ulna being broken a little below and the radius a little above the middle of their respective shafts (Fig. 6). The fracture was certainly compound, because there is a pad of blood-stained vegetable fibre (probably obtained from the date palm) still adherent to the upper fragment of the ulna (Fig. 7) and bandages; this was evidently pushed into the wound to stanch the bleeding; some of this palm fibre is still sticking to the broken surface of the bone, and extends into its medullary cavity. A complete tube of splinting invested the damaged limb from a point about an inch below the upper end of the radius as far as and partly including the wrist-joint. This tube consisted of three pieces of rough bark (probably acacia) and a bundle of straws of coarse grass (Fig. 7).

The broken arm was probably treated in the following manner: The wound was plugged with the vegetable fibre to which I have already referred. Then the forearm was invested with a bandage, 76 mm. (less than 3¼ in.) wide, composed of linen of a much finer mesh (warp 22 and woof 35 threads per centimetre) and more closely-woven than that used in the other case. Small fragments of bandage still adherent to the bark seem to show that these splints were wrapped in linen, like those applied to the thigh, but there is not sufficient left to exhibit their arrangement. The splints have a natural curve, which must have adapted itself accurately to the form of the limb. Two of the pieces of bark were of the same size—26 cm. (about 10¼ in.) long and 22 mm. broad (measured without allowing for the curve)—but the third splint was considerably shorter (19.5 cm.). When these three splints had been applied, a gap, 25 mm. wide, was left between two of them behind the ulna. This space was then filled in with a bundle of coarse grass, placed directly upon the bandage investing the arm (Fig. 7). Then a broad sheet of linen, reaching from the upper ends of the splints as far as the wrist, was wrapped around the complete tube of splinting, and then two tapes, each 18 mm. wide, composed of a folded bandage, were applied and presumably tied around the whole investment of the limb.

Death occurred soon after the infliction of the injury, because there is no sign of any healing process.

As an effective support to the broken bone, these splints present a marked contrast to those found on the thigh, and the examination of the excellent results obtained in the treatment of the large series of healed fractures of the forearm which I have studied, shows that the measures adopted by the ancient Egyptian surgeon admirably served their intended purpose. I have seen only one case of long-standing ununited fracture of the ulna; and, in spite of the fact that a certain proportion of the cases of fracture (always due to direct violence) must have been compound, only one of my series (of more than 100 examples) shows any signs of suppuration having occurred. Even in prehistoric times fracture of the ulna alone usually healed with little or no displacement or shortening, and with a remarkably small development of callus, but in such cases the undamaged radius may have fulfilled the functions of a splint. In a case of fracture (Fig. 8) of both bones of the forearm recently found in a very early prehistoric cemetery in Nubia (see Wood Jones's report in the second *Bulletin of the Archæological Survey of Nubia*) there is not only considerable displacement of both broken bones, but also evidence which seems to indicate that the fractures remained ununited for some time before eventually healing. Whether or not splints were used in prehistoric times in Egypt is a question we cannot answer with certainty; but it is safe to say that no such splints as I have described in this communication could have been used in the case to which I have just referred, for it exhibits in its displacement, delayed union, and its outgrowth of callus all the signs which Sir William Macewen has taught us to associate with free mobility combined with tearing of the periosteum.[2]

Fracture of the forearm—as a rule the left ulna, but

* Appended to the present communication there is a report by Mr. Wood Jones on the subject of blood stains on ancient bones.

often both bones, and sometimes in both arms—has always been exceedingly common in Egypt in comparison with the incidence of other fractures. This is true of every period from the earliest known prehistoric times up till the present. The Egyptians have always indulged in fencing, both as an amusement and also as a serious method of attack; for both purposes they use the *naboot*, a very thick, heavy stick about 5 ft. long, which many Egyptian peasants habitually carry. No doubt the great majority of these fractures of the forearm were inflicted while the victim, with upraised arm, was defending himself or herself; for a considerable number of women, especially in prehistoric times, have suffered from this injury. In the Anatomical Museum in the Cairo School of Medicine there is an example of such a fracture of the left forearm in a girl of the time of the twenty-sixth dynasty (about 600 B.C.), whose bodily remains bear distinct traces, not only of the manner in which the injury was inflicted, but also of a possible reason for the fatal attack which had been made upon her. She was a young woman less than 20 years of age and in the sixth month

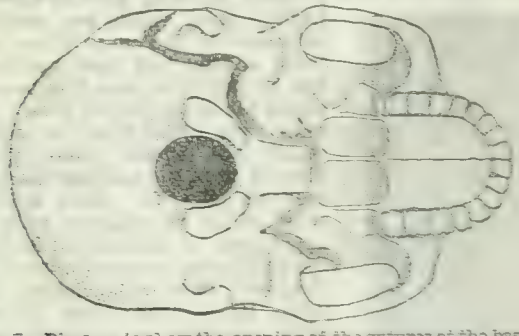


Fig. 3.—Diagram to show the opening of the sutures at the base of the skull. (Illustrating Dr. Wood Jones's paper, p. 735.)

of pregnancy; just when her condition was making itself evident she was murdered by a series of blows, one on the left forearm, another on the left shoulder breaking the acromion process, and others, the fatal blows, smashing the left side of the jaw, face, and cranium.* There is, perhaps, no such common motive for murder in Egypt at the present day as the discovery by a father or brother of delinquency on the part of a daughter or sister. This case seems to have been an ancient instance of a drama of daily occurrence in Egypt to-day.

There is one curious feature common to both sets of splints described in this communication, and that is, unlike the general usage of modern European surgeons, the old Egyptian employed more than two splints. In other words, he endeavoured to form a protective casing around the damaged limb to guard it against injury from outside rather than to hold the fragments of bone rigidly in position, and so avoid the greater danger of damage from within. It is a striking testimony to the stability of this idea, as well as of the extreme conservatism of the Egyptian, that three thousand years later he was using exactly the same form of appliance. I have recently described sets of splints found around the broken forearms of a young Christian woman, who was buried on an island near Philae in the 7th century A.D.[3] Five rough wooden splints were applied around one of these damaged limbs.

In the year 1903 an expedition was sent by the Egyptian Ministry of Public Works to Lake Tsana in Abyssinia. On its return Mr. Hayes, the Medical Officer to the Expedition, told me that when they crossed into Abyssinia patients flocked to him from all the surrounding country; among them was a man wearing splints on a broken forearm which resembled those used in Egypt five thousand years before.†

Gorgy effendi Sobhy, Demonstrator of Anatomy in my department, tells me that the use of such splints as I have described in these notes is still widely prevalent in Egypt, although the rapid increase in the number of medical men trained by European methods and in accordance with Western ideas, and also the improvement in the education of the village barber-surgeons, threaten the extinction of this form of splint, which has been in vogue here for the past five thousand years. He informs me that most of the barbers, when they do not refer cases of fracture to a medical practitioner, make use of a pair of splints after the European model; but in most villages there are old women ready to take upon themselves the treatment of fractures. They make a kind of mat of a number of pieces of palm-stick (the axis of the leaf of a date palm) laid side by side, and wrap the broken limb in this, so as to form a tube around it like that found in the second case described above. Dr. Gorgy tells me that there is a much-venerated relic of an early Christian monk in one of the churches of Old Cairo with such a splint in position on a broken arm.

The modern Egyptian bonesetter uses the same type of

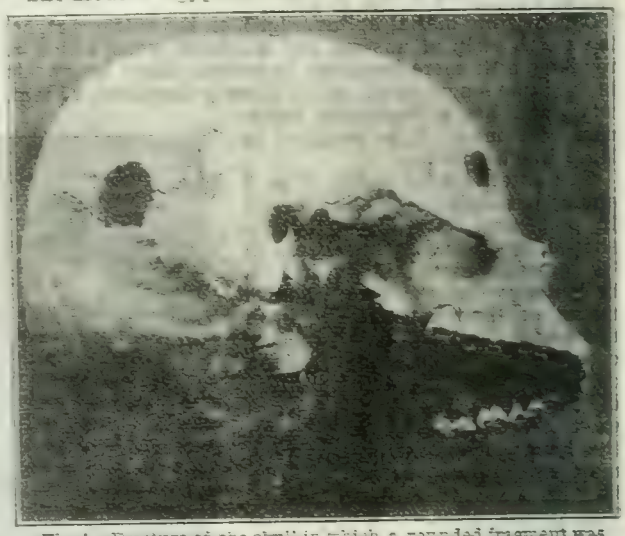


Fig. 4.—Fracture of the skull in which a rounded fragment was found inside the cranial cavity. (Illustrating Dr. Wood Jones's paper, p. 735.)

splint, but very often he uses a series of strips of rough wood instead of palm sticks.

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THE POST-MORTEM STAINING OF BONE PRODUCED BY THE ANTE-MORTEM SHEDDING OF BLOOD.*

BY FREDERIC WOOD JONES, M.B.LOND.

[WITH SPECIAL PLATE.]

IN 1905, when Dr. Elliot Smith was engaged on the work of unwrapping the royal mummies at the Cairo Museum, he discovered in the body of Rameses V an *ante-mortem* wound of the skull, and around the wound he saw and described "a wide area of discoloration."[1] Although from this discoloration Professor W. A. Schmidt was unable to obtain any blood reactions, there is practically no doubt that it was in reality due to blood. The blood that causes the staining is only to be identified by blood tests for a certain lengthy period after its shedding, and 250 years is the limit of age of blood stains from which positive reactions have been obtained. It is therefore not surprising that the blood of Rameses V failed to show the blood reactions.

In the anthropological work of the Egyptian Government Archaeological Survey of Nubia, Dr. Elliot Smith and I have come to recognize that, though the stains of ancient blood may not be amenable to laboratory treatment, still they are, none the less, signs of the utmost importance in the diagnosis of *ante-mortem* wounding, even in the most

* I unrolled this mummy two years after the presence of Sir A. W. Simpson, Emeritus Professor of Midwifery in the University of Edinburgh. Before we had any idea as to what was about to be revealed I told Professor Simpson in answer to my query that I had never seen the mummy of a pregnant woman.

† Unfortunately these splints were not brought away from Abyssinia, and I have only the verbal account of them given me by Mr. Hayes, who at that time had neither seen nor heard of the ancient splints in the museum of my department.

* A full account of the investigations which have made such an investigation as this possible will be found in the first *Archaeological Survey of Nubia*. This notice is published with the permission of the Egyptian Ministry of Finance and Captain H. G. Lyons, F.R.S., Director-General of the Survey Department, under whose direction the Archaeological Survey of the country to be flooded, when the Assouan dam is raised, is being carried out. For the determination of the age of the materials used in this investigation I am indebted to Dr. George A. Reisner, who conducted all the excavations and the archaeological work of the expedition.

ancient of bodies. Among the several thousand bodies that we have already examined in cemeteries excavated in that tract of Nubia between Shellal to the north and Dabod to the south, we have found a great number of cases of wounds that have caused the death of their recipients. Some of these wounds were doubtless the outcome of accidents, but the great majority were those that it is but natural to expect at the frontier line of two ancient kingdoms. Several were caused by sharp instruments, especially in those bodies buried in cemeteries dating from Roman times; whilst others of the same period were produced by hanging, or by blows upon the head. Amongst the bodies in the earlier cemeteries, and especially in the prehistoric* burials—the commonest *ante-mortem* wounding that caused death, is a general smash of the skull, at times so extensive that portions of the head or face of the victim are missing from the grave.

Many factors go, in these bodies, to determine the *ante-mortem* or *post-mortem* origin of the wounding, and, as a rule, in undisturbed burials there can be little doubt as to their real nature. Bodies that have met with violent deaths, so far as we have observed, are buried without ornaments, even though the cemetery of their interment may be one in which rich ornamentation is the rule.

Other circumstantial details may at times contribute to the certainty of the diagnosis: hair and brain and fragments of skull bones have been found, firmly clotted into a solid mass, within the cranial cavity; and, in the pitch-made mummies of the Ptolemaic period, we have become across a man within whose skull the fragments of bone derived from an *ante-mortem* fracture were embedded in the embalming bitumen.

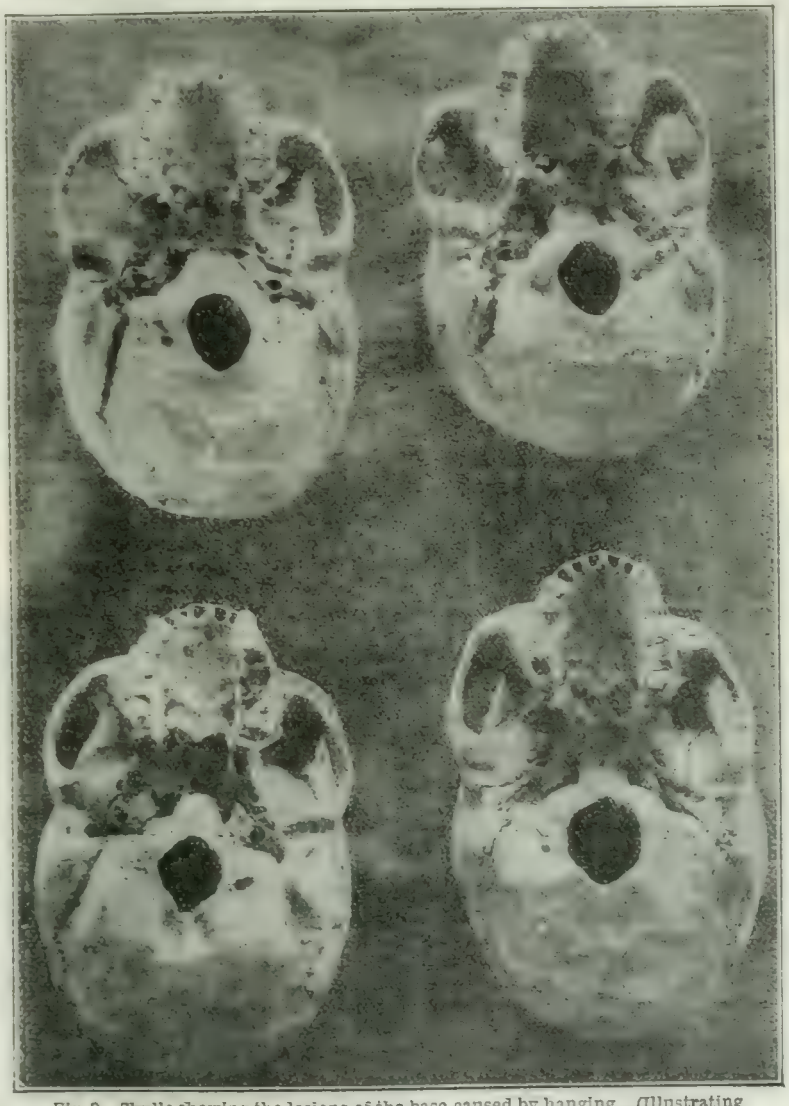


Fig. 2.—Skulls showing the lesions of the base caused by hanging. (Illustrating Dr. Wood Jones's paper, p. 736.)

The question that usually demands an answer in the archaeological investigation of broken and disturbed human remains is that of the time of the infliction of the fracture; was it produced before the death and burial of the individual, or was it caused by grave plunderers after the interment of the body? It is in such cases as this that the diagnostic value of blood staining of bone is so well demonstrated, for in disturbed burials all traces of circumstantial evidence of *ante-mortem* wounding may easily be absent. The diagnostic differences between the appearance of fractures inflicted before death and those inflicted after death may be very slight indeed; and in dealing with large quantities of disturbed and broken bones these slight differences are easily overlooked. There are many factors at work that may make the differential diagnosis uncertain or impossible; the effects of long-continued grave pressure are extremely confusing, and the erosion of surfaces that were once clean cut may produce a very perfect picture of *ante mortem* splintering. Fractures of the limb bones and of ribs are apt to present peculiar difficulty, for then one single broken bone may be the only trace of very extensive and fatal wounding. The element of doubt surrounding such cases is usually cleared up by the discovery of the dark-red stains of blood, shed presumably by the act of wounding. The stain may be limited to the fractured surfaces, and then a characteristic appearance is produced, for the rough fragments become deeply dyed, and the recesses of the cancellous tissue show darker areas by reason of their more abundant supply of the pigment; it is an appearance that cannot be easily mistaken, and its most noteworthy feature is that, even in most ancient bones, it looks strangely recent.

As a rule, the staining is by no means limited to one fractured bone, but involves wide areas around the seat of injury; this is especially well marked in fractures of the cranium, where very extensive reddish stains are, as a rule, present upon the flat surfaces of the skull bones.

Amongst the bones with which this survey has had to deal there are no other discolorations with which these stains may be easily confused; and even on the deeply-yellow bones that are found in bodies buried in goat skins, or bones turned brown by mummy wrappings, the *ante-mortem* blood stain shows vividly enough. In a Ptolemaic mummy, with an extensive smash of the head, the blood was not visible upon the pitch-stained bones, but was well marked upon the front surfaces of the incisor teeth; and in a prehistoric body the recently-broken surfaces of the teeth were deeply stained with blood.

It is a remarkable thing that the blood spilled by the killing of a prehistoric Egyptian should make a stain so lasting that to-day it is the best evidence of his violent death. By the most careful archaeological dating and the most critical interpretation of chronology, the age of some of these stains must exceed 5,000 years, and yet they still are remarkably vivid. It may be that, in other parts of the world, where the wonderful preservation of bodies that is so common in Egypt is not found, this blood-staining may be more transient, and may not be of such great importance as a diagnostic sign, but amongst the thousands of bodies with which we have had to deal, it has proved to be a point of the utmost value.

* In Egypt any grave earlier than the time of the first dynasty is called "prehistoric." It implies an age of about six thousand years.—G. E. S.

It is a point that should be carefully looked for and noted in future archaeological work, for if it may not be a sign that is of actual medico-legal importance, it may help to throw some light upon the life conditions of an ancient people.

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THE EXAMINATION OF THE BODIES OF 100 MEN EXECUTED IN NUBIA IN ROMAN TIMES.*

BY FREDERIC WOOD JONES, M.B.LOND.

IT is not often that the examination of a large number of bodies of people killed by various wounds falls to the share of the anatomist. Such cases as reach our museums are, for the most part, isolated instances of death from violence inflicted by accident, and the medico-legal interest attached to the damage of soft parts so greatly outweighs the importance of the bony injuries that the *post-mortem* evidences to be found in the skeleton may easily be overlooked or neglected. Among the vast number of bodies that Dr. Elliot Smith and I have handled during the first three months' work of the Egyptian Government Archaeological Survey of Nubia, we have been fortunate enough to find much material that possesses the advantages of being dated with historical accuracy and of being preserved in the wonderful manner that is common among bodies interred in this part of the world.

No burial site could be better suited to the study of the effects of violence inflicted upon the human frame than the region around the Pillars of Konosso that mark the frontier line of Ancient Egypt. Vast cemeteries of most historic and prehistoric periods lie in this neighbourhood, and the bodies that have been buried in these cemeteries are those of the peoples who have come from the north and from the south, as traders or as soldiers, to this boundary line of commerce and of politics. So far as any records go back, this region of the first cataract of the Nile has been an arena for all those contending peoples who have lived and fought, who have died and been slain, in the myriad frontier battles waged around Shellal by the Nubians from the south and the more highly-cultured dwellers, or conquerors, from the north.

From isolated instances a great quantity of material has been examined that has been of the utmost interest in the study of *ante-mortem* wounding, but the cases to be described are those of two interments only. The bodies from these burials date from late Roman and Byzantine times, and the trenches in which they were thrown were portions of an extensive Roman fort, built upon the eastern bank of the Nile, and facing the historic island of Philae. In one trench 62 bodies were thrown in one confused mass, and in the other were 40 more (Fig. 1).* Both burial trenches are of the same date, and in both cases all the bodies in the trench were thrown in at one act of burial. All the skeletons were those of males, and, with the exception of a youth of about 18, all were grown adults in the prime of life. Each corpse was wrapped around with coarse linen, and the cords that bound their legs together, and trussed their arms to their sides, were not even removed before burial. Even the rope with which the great majority had been hanged was found *in situ* around the neck of one of the victims, and in a great many other cases thinner cords encircled the cervical vertebrae in firmly knotted loops. The injury most commonly found, and the one of the greatest interest, was that inflicted upon the skull by the process of hanging. The lesion is a peculiar and very constant one, and although it is not the injury most naturally expected, still its origin is easily seen, and all its features are readily explained. In all cases the lesion was confined to the base of the skull; no *post-mortem* evidences of hanging were to be found in the spinal column, there being no single case of damage inflicted to a cervical vertebra in the whole series of over 100 bodies. The injury to the skull consists of a dragging open of the sutures running antero-posteriorly, and a tearing apart of the whole of the cranial base, so that the lateral halves of the skull tend to be disunited (Fig. 2).



Fig. 5.—Exit wound of a spear thrust through the loin from the front.

The final effect is an oblique opening of the sutures, so that the one portion of the skull, represented by the occipital and one temporal bone, becomes pulled aside from the other portion, represented by the facial part of the skull and the other temporal bone. The basilar suture in most cases becomes disunited, and so the median axes of the front and back portions of the base of the skull are not continuous.

* An account of the circumstances under which these bodies were found by Dr. Reisner, to whom I am indebted for the determination of their age, will be found in the first *Bulletin of the Archaeological Survey of Nubia*. This report is published with the permission of the Egyptian Ministry of Finance and Captain H. G. Lyons, F.R.S., Director-General of the Survey Department, under whose direction the survey of the country that will be submerged in the Assouan reservoir is being carried out.]

* Figs. 1, 6, and 7 will be found in the special plate.

TO ILLUSTRATE DR. G. ELLIOT SMITH'S PAPER ON ANCIENT SPLINTS.



Fig. 1.—Photograph by Mr. Mace of splints as found *in situ* in the tomb.



Fig. 7.—The upper fragment of the ulna with a mass of palm fibre adhering to it. On the right, one of the bark splints with blood-stained palm fibre adhering to its linen wrapping; on the left, one end of the bundle of grass reeds seen from behind. Note the linen both in front of and behind the reeds.



Fig. 4.—The broken femur seen from behind, showing loss of substance.



Fig. 6.—Fracture of left forearm set with bark splints. Note the blood-stained mass of vegetable fibre adhering to the ulna.

TO ILLUSTRATE DR. G. ELLIOT SMITH'S PAPER ON ANCIENT SPLINTS.

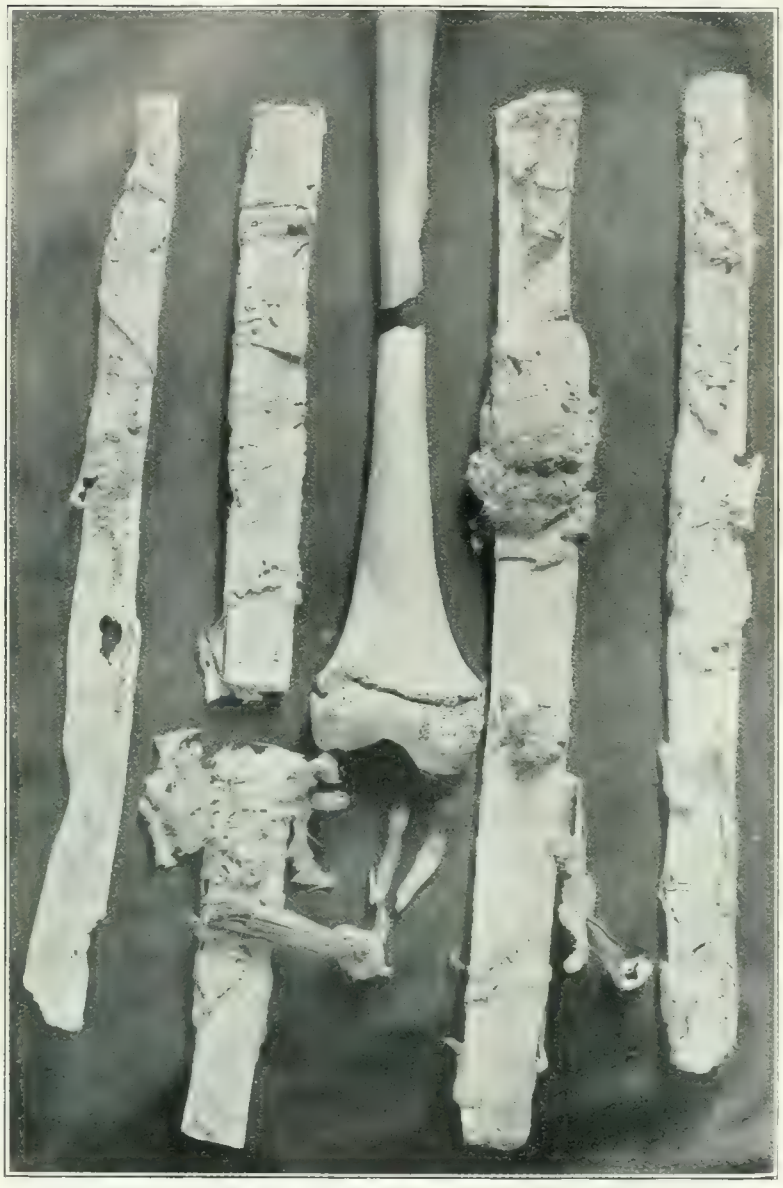


Fig. 3.—The same splints removed and placed alongside the broken femur. Note the pad on the splint to the right of the femur.



Fig. 2.—A set of ancient Egyptian (5th dynasty) splints in position around a fractured femur.



Fig. 8.—An example of vicious union after fracture of the forearm in a prehistoric Egyptian.

TO ILLUSTRATE DR. WOOD JONES'S PAPER ON THE *POST-MORTEM* STAINING OF BONE.

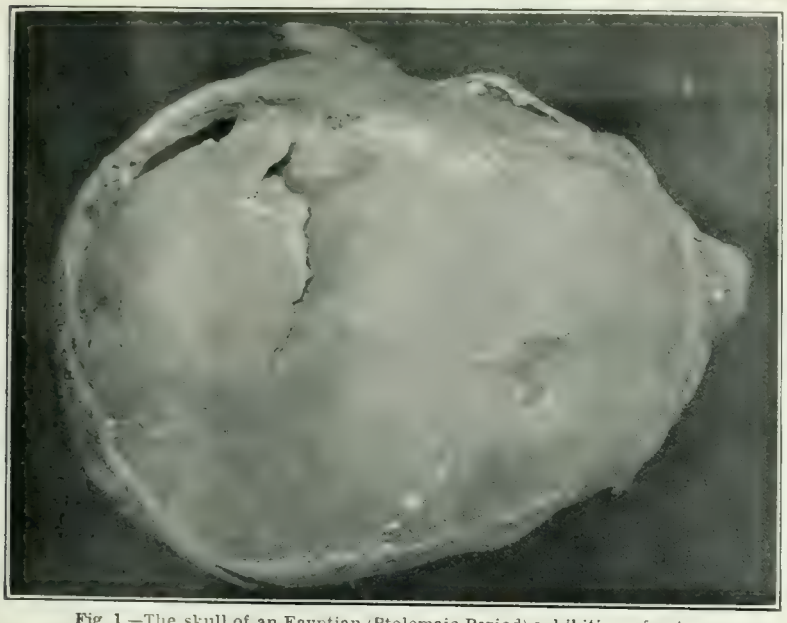


Fig. 1.—The skull of an Egyptian (Ptolemaic Period) exhibiting a fracture surrounded by blood stains.



Fig. 2.—The fractured mandible of a prehistoric Egyptian showing blood stains.

TO ILLUSTRATE DR. WOOD JONES'S PAPER ON THE EXAMINATION OF THE BODIES OF 100 MEN EXECUTED IN NUBIA.



Fig. 7.—Skull showing the passage of a sharp instrument that severed the head from the body.



Fig. 1.—View of the bodies undisturbed in the trench.



Fig. 6.—Sword cut of th

TO ILLUSTRATE MR. R. P. ROWLANDS'S PAPER ON EXCISION OF THE BODY OF THE SCAPULA.



Fig. 5.



Fig. 6.



Fig. 1.



Fig. 2.





The lesion commences behind, at the meeting of the lambdoid suture with the parieto-mastoid and occipito-mastoid sutures. The occipito-mastoid suture is torn widely open, and the whole basal portion of the occipital bone is separated unilaterally from its connexions, the jugular and basilar processes being torn across their synchondroses. The line of disruption now passes forwards to the other side of the skull, the great wing of the sphenoid being separated from the temporal bone, and the squamous suture being opened in a varying extent of its course.

In the great majority of the cases the line of opening of the sutures passed from behind forwards from right to left; but in some instances the process was exactly reversed, and in these the left occipito-mastoid suture and the right spheno-temporal suture were opened (Fig. 3).

The factor that caused the change from the right to the left-sided opening of the hinder sutures was doubtless the varying position of the knot of the hangman's rope; and whilst in the great majority of cases it was placed upon the right side, in some few instances it was reversed, and placed upon the left.

The mechanical causation of this lesion is easy of explanation. It was doubtless the sudden jerk, accompanied by an upward pull, imparted to one portion of the head, and a downward pull to the other, that caused the sutures to be strained apart. The upward jerk of the head acts upon one side only—the side upon which the knot is placed; and the pull acting from the temporal bone—for the knot doubtless caught on the mastoid process and ramus of the jaw—caused that side of the head to be violently strained upwards and downwards. The counteracting pull of the body was transmitted via the occipito-atlantal joint, and so the occipital bone, and the opposite side of the skull, were pulled violently downwards.

The temporal bone of the knot side naturally carried the facial part of the skull with it, for the stress was transmitted forwards through the jaw; whilst the body weight acted on the basi-occipital, and so carried the non-knot temporal in the opposite direction. The bases of all these skulls that give evidence of hanging also show a widespread reddish staining of the bone; the stain is doubtless due to the blood exuded in the neighbourhood at the moment of death. This *post-mortem* stain, so strangely permanent, which is imparted to the bones by the *ante-mortem* shedding of blood, we have come to regard as a sign of special importance, and it has been more fully discussed in a special note.

The exact methods employed in these ancient executions by hanging are, of course, not readily determined, and it is not impossible that in some details they may depart from those used in judicial hangings practised to-day. But if there may be some doubt as to the manner of hanging, there can be none as to its effects upon the skeleton; and, unless these cases are for some reason exceptional, then the best *post-mortem* evidences of death by hanging are those to be found in this peculiar lesion of the base of the skull. It is possible that in the *post-mortem* examination of persons killed by judicial hanging this injury to the cranial base may have been overlooked, for if a sufficient cause of death could be found in other parts of the body this lesion might easily escape detection.

Besides these people who had met their death by hanging, others were found in these executioner's trenches, and they had died from a variety of injuries. Some bodies showed extensive recent fractures of ribs. One (Fig. 4) had a typical *ante-mortem* fracture of the right parietal bone, with the fragment still inside the cranial cavity, and, as in the other cases, there was abundant evidence of the blood staining of bone. Some had met their death from blows of sharp instruments; one body showed in the right loin the skin wound of the exit aperture of a spear thrust from the front (Fig. 5); one had the manubrium sterni divided obliquely by a sharp blade; and one had a large penetrating wound of the skull, in which the sword had actually raised a portion of the right parietal bone as a partial flap (Fig 6).

One skull only gave evidences of decapitation, and it showed in a remarkable manner the clean-cut track of the blade that had divided the left mastoid and occipital condyle in the act of severing the head from the trunk (Fig. 7).

DESCRIPTION OF FIGURES IN SPECIAL PLATE.

Fig. 1.—Back view after *nearly complete* excision of the scapula.

Fig. 2.—Back view after *complete* excision of the scapula. The deformity is much greater after complete than after nearly complete excision.

Fig 5.—Excision of the body of the scapula; the glenoid cavity and the processes have been preserved. The coracoid process is held in its normal relation to the clavicle by the conoid and trapezoid ligaments, therefore there is hardly any flattening of the shoulder. There is a considerable interval between the humerus and the ribs.

Fig. 6.—Excision of the whole scapula. The head of the humerus lies close to the ribs and the outer end of the clavicle projects outwards.

Fig 7.—Excision of the body of the scapula; the glenoid cavity and the processes have been preserved. The glenoid and the coracoid, in one piece, are lying internal to the head of the humerus, suspended by the conoid and trapezoid ligaments from the outer third of the clavicle. The arm has been *passively* abducted.

Fig. 8.—Excision of the whole scapula. The head of the humerus lies close to the ribs, and the clavicle is also displaced. The arm has been *passively* abducted.

REMARKS UPON EXCISION OF THE BODY OF THE SCAPULA.

WITH AN ILLUSTRATIVE CASE.

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[WITH SPECIAL PLATE]

SOME important points have to be considered before deciding upon the most suitable operation, if any, for every individual case of growth of the scapula. The choice has to be made between three chief operations, namely: (1) Partial excision, (2) excision of the whole scapula, and (3) interscapulo-thoracic amputation.

It is necessary to estimate the relative advantages and disadvantages of these procedures for each case as it presents itself. Only the first two operations had to be compared in the case reported, for the growth was neither extensive nor malignant enough to suggest such a mutilation as amputation of the forequarter.

The most important points to discuss are: (*a*) The immediate risks, (*b*) the chances of recurrence, (*c*) the loss of function, and (*d*) the amount of deformity associated with each operation.

Statistics,* although they have their value, must not be taken too seriously, for any considerable collection of cases of such uncommon operations includes a very large proportion of those which were performed before the days of aseptic surgery, so that the chief value of the records of the past is that they clearly show absolute surgical cleanliness to be of vital importance for these severe and extensive dissections. In most other respects they are misleading, because they deal with too few cases, many of which are so dissimilar as to be hardly comparable. Percentages based on such a collection of published cases are apt to give erroneous impressions.

A. *The Comparative Risks of the Two Operations.*

In the past the operative mortality of complete excision has been a little less than that of partial excision, and considerably less than that of nearly complete excision of the scapula. The main causes of death have been sepsis and haemorrhage, both of which have been more common after incomplete removal of the bone. There is no reason why they should be so in the future, for haemorrhage can be better controlled, especially by systematic ligation of the scapular vessels at the beginning of the operation. It has been asserted that the vessels retract under the portions of bone that are left in partial resections, but surely this must be due to incomplete exposure, and neglect of the obvious precaution of tying the large vessels at the earliest possible opportunity.

Oozing from the cut sections of bone in partial excision

* There are less than 100 partial resections recorded, and only about 75 complete excisions (Dr. Buchanan, *Phil. Med. Jour.*, 1900, vol. vi, p. 78).

may be considerable, but even this can either be minimized by means of sterilized wax, or rendered harmless by efficient drainage for about two days. Septic infection can be and ought to be almost excluded by preventing the accumulation of blood in the wound, and by taking all possible aseptic precautions, including the use of airtight boiled rubber gloves by the surgeon and his assistants. The writer has not performed any operation of any kind for more than a year without gloves and but very few for several years. If the chance of septic infection be eliminated, it is probable that removal of the body of the scapula will be at least as safe as, and certainly an easier operation than, the removal of the entire bone. The removal of the coracoid process carries some risk of injury of the axillary vessels and nerves. Shock, which is mostly due to excessive haemorrhage and prolonged exposure, is avoidable to a great extent.

B. *The Chances of Recurrence.*

There is no recorded instance of the recurrence of enchondroma of the scapula after either partial or complete excision of the bone; therefore, it is only necessary to excise as much of the bone as will ensure the complete removal of this variety of growth, and the same is true of osteoma and of true myeloma, which, though very rare, does occasionally occur in the scapula.

In the writer's case it was possible to remove the entire growth by sawing through the neck of the scapula, but a less radical procedure was not practicable, although it would probably have been possible at an earlier date to eradicate the disease without sacrificing more than the spinous process. It has to be understood that it is not easy to distinguish an enchondroma and a chondrifying sarcoma during an operation, even by incising the growth, and this step is not to be recommended, because there is a good deal of evidence to prove the risk of infecting the wound in this way from malignant tumours.

As regards *malignant* growths of the scapula, the risk of recurrence is very much more serious. It is impossible to lay down any law which can have anything like a general application, but each case has to be considered on its own merits, for new growths have widely different degrees of malignancy, and patients will always present themselves at different stages of their disease. Statistical tables, disregarding these important points, are apt to be misleading. For instance, it has been concluded from them that for small malignant neoplasms both the immediate risk and the chances of recurrence are smaller after resection of only a part of the body of the scapula than after resection of the whole of that body. Surely, it is a more legitimate conclusion that small growths and those of slow growth are more easy to eradicate than large or rapidly-growing ones. It is more than probable that more extensive resections would have considerably diminished the recurrences after the operations for the small growths, although they would have increased the immediate risks of death from shock and sepsis in the early days of surgery. Local recurrence is best guarded against by extensive resections, so that complete excision of the scapula has this obvious advantage in many cases of malignant growths, but whether it is necessary to remove the whole bone in all cases is open to question.

Is the general law, that the whole of a bone affected by malignant growth must be removed, applicable to this rather peculiar bone—the scapula? Or does the great density of the body of the bone with the absence of diploë offer such an obstacle to the rapid spread of new growths as to justify us in treating it a little differently from the long bones? A study of the published cases seems to indicate this, and also to draw our attention to the unusual and early risk of recurrence of scapular growths within the chest. Leaving the processes and the glenoid does not seem to increase this risk of dissemination, for the actual infection usually precedes the operation; although it may occasionally arise from a local recurrence. The available evidence justifies the conclusion that it is not always necessary to remove the whole of the scapula for malignant growths affecting it; but that the processes and the glenoid cavity may be safely left in some cases of early and small growths of low degrees of malignancy.

Moreover, the functional advantages of leaving these structures are so great, that it may be justifiable to run a slightly increased risk of local recurrence in some cases. For extensive growths and those of rapid development complete excision of the scapula must be done.

Theoretically, excision of the body of the scapula would seem to be especially suitable for inflammatory diseases, such as caries and necrosis; but this is not true in practice, for it is extremely rare for these conditions to leave the shoulder joint healthy. Usually, the joint is affected first or quite early in the disease, and in many cases excision of the shoulder has been tried and has failed before it becomes necessary to remove the shoulder-blade for intractable sinuses.

C. *Loss of Function.*

It is certain that the loss of use of the upper limb is far less after the operation which was adopted in this case than after excision of the whole scapula. At the time of the operation the writer had no information upon this important point, for he was under the impression that the method was entirely original. Since then he has discovered that several similar operations had been previously performed (loc. cit.), but past writers do not seem to have thoroughly appreciated the advantages of the method over complete excision in selected cases. Theoretically, the saving of the processes and the glenoid cavity seemed to be worth trying, but the writer did not expect the result of the operation to be so very good as it is in his case. Some of the functional and artistic advantages of the method may be now considered.

The preservation of the coracoid process and the glenoid socket in one piece is useful in many ways. The conoid and trapezoid ligaments, suspending the coracoid process from the outer third of the clavicle, prevent both drooping and flattening of the shoulder (Figs. 5 to 8). It is true that the retraction of the deltoid muscle draws the humerus upwards and lessens the depression of the shoulder, even after the complete removal of the scapula, but it does not prevent the flattening, which is a well-marked feature after this operation. The head of the humerus is drawn inwards into contact with the chest (vide Figs. 6 and 8), and as a result the axis of the arm becomes tilted, so that the elbow is abducted and the outer end of the clavicle overhangs like a crag (vide Figs. 4 and 6).

My senior colleague, Mr. L. A. Dunn, has kindly allowed me to make use of one of his successful cases of complete excision of the scapula for extensive sarcoma. The photographs of this patient are useful for comparison. Nearly two years have elapsed since the operation, and there are no signs of recurrence.

The capsular ligament of the shoulder joint, the coracohumeral ligaments, the two heads of the biceps, the coraco-brachialis, and the long head of the triceps all help to keep the head of the humerus more nearly in its natural position after the partial excision (vide Figs. 5 and 7) Moreover, the long head of the triceps acts as an external rotator of the shoulder. The preservation of the origins of the biceps and triceps leaves the elbow less impaired in strength than after complete excision, and the full power of supination of the forearm is also maintained.

It is well to save the *acromion process*, if possible, because of the important and extensive attachments of the deltoid and trapezius to it. The power of elevating or "shrugging the shoulder" is thus preserved, and abduction to a right angle remains possible—the trapezius fixing the acromion, while the deltoid raises the humerus (Figs. 3 and 4). With the same object in view, those fibres of the trapezius and deltoid which are normally attached to the spinous process should be joined together as far as possible, and where apposition is impracticable, the gap should be bridged across with catgut sutures, so that a new tendon may develop around the threads.

Extreme abduction, with the arm touching the ear, and the forearm above the head, can never be regained after excision of the whole body of the scapula, for the rotatory power of the serratus magnus must remain for ever lost; but we rarely apply this power of extreme abduction to any useful end, so that, for practical purposes, the disability is trivial.

The following case serves to illustrate the advantages which are referred to in the paper:

J. S., painter's labourer, aged 36, was admitted into Guy's Hospital, under the writer's care, on November 12th, 1906, for swelling of the left shoulder blade.

History.

About July, 1905, his fellow workmen drew the patient's attention to a swelling on the back of his shoulder; he had not noticed it himself before then, because it had not caused any pain or inconvenience. Since that time the tumour had gradually enlarged and had become painful. The patient thought the pain was due to rheumatism; it was worse at night and when the arm was abducted. There was no history of injury, or of syphilis, and iodides had been tried without benefit.

Condition on Admission.

The patient was not wasted, but was in good general health. There was a large and obvious prominence upon the posterior aspect of the left shoulder. The swelling was very hard and firmly fixed to the scapula, but the skin was movable over it. It seemed to fill the supraspinous fossa, and it extended downwards into the upper half of the infraspinous fossa. Its long axis stretched from the vertebral almost to the axillary border obliquely along the spine of the scapula. The acromion process was not enlarged. The swelling was slightly tender and a little uneven on the surface; it gave no crepitus or egg-shelled crackling. The axillary surface was even and normally concave. There were no enlarged glands either in the axilla or in posterior triangle of the neck.



Fig. 3.—The relative amount of abduction. The glenoid cavity and the processes have been preserved.

Diagnosis.

The tumour was so hard that it was considered to be either an enchondroma or a chondrifying sarcoma, the latter being favoured because the comparatively slow growth was not fully realized at the time. The very definite outline, extreme hardness, and uneven surface of the swelling seemed to exclude the more malignant forms of sarcoma, although it was not forgotten that soft growths confined by the strong aponeurotic coverings of the posterior scapular muscles may appear to be hard. Osteoma of the scapula is very rare, and grows more slowly than this tumour had done.

Operation.

On November 14th the patient was anaesthetized, turned upon his healthy side, and rotated towards the semiprone position. This made the diseased scapula easily accessible. A T-shaped incision was made with its horizontal limb on a level with the upper border of the scapula, and its vertical limb descending over the tumour beyond the inferior angle of the bone. The descending part of the incision included an elliptical piece of skin, about 2 in. square, which covered the prominence of the tumour with which it was excised, although it was not too adherent to the diseased part. The flaps of skin and subcutaneous tissues which were thus marked out were reflected. Those fibres of the trapezius which were inserted into the spine of the scapula were divided about 2 in. above this bone, but the acromial fibres were preserved with care. The suprascapular vessels were found by deepening the outer end of the horizontal wound, and feeling for the root of the coracoid process. The artery and vein were each divided between two silk ligatures, and the suprascapular nerve was severed. The levator anguli scapulae was cut through 2 in. above the postero-superior angle of the scapula, and the posterior scapular vessels were easily found, secured, and divided between ligatures. Then the anterior flap was drawn forwards, and the deltoid fibres arising from the spinous process were severed 2 in. below their origin. The latissimus dorsi, which was not adherent to the lower angle, was pulled down, and the teres major was cut across just before it passes in front of the long head of the triceps, which was preserved. It was then quite easy to find the subscapular vessels, which were secured separately, and divided between ligatures above the origin of the dorsalis scapulae artery. Thus all the large vessels were tied before the greater and most difficult part of the dissection was undertaken. The acromion process was sawed across near its junction with the spine of the scapula, and the teres minor, infraspinatus, and supraspinatus were cut close to their insertions, great care being taken to avoid opening the shoulder-joint and injuring the circumflex vessels and nerves. The rhomboid muscles, which had been useful so far in keeping the bone in position, were now divided well away from the vertebral border. The gloved left hand seizing this border served to rotate the bone and to draw it away from the chest, thus exposing the deep surface of the serratus magnus. This broad and powerful muscle was cut across about an inch from its insertion, allowing the bone to be rotated still more, so as to expose the subscapularis, which was carefully defined without wounding the important structures in relation with it. It was obliquely divided as close to its insertion as possible without damaging the capsule of the joint. Meanwhile the axillary vessels and nerves had been held aside, and the long subscapular nerve saved. The neck of the scapula was then defined, the transverse ligament and the omo-hyoid being divided and the muscular fibres drawn aside. To protect the axillary vessels and nerves, gauze was packed in front of the neck of the bone, which was then sawn through from its posterior surface in a line with the suprascapular notch. The coracoid process, with its important ligaments and muscles, the articulating surfaces of the shoulder-joint, and the origin of the long head of the triceps were thus preserved. Moreover, the important attachments of the deltoid and trapezius to the acromion were saved by leaving that bone in the body. All bleeding points having been secured, the divided fibres of the deltoid and trapezius were joined together, as far as possible, but the posterior part of the gap could not be closed. The large deep wound was also lessened by catgut sutures which were used to approximate the divided muscles to one another and to the chest wall. The upper fibres of the serratus magnus were sewn to the remains of the muscles in front and behind the neck of the scapula. The skin wound was closed except at its lower end where it was drained for several days. Upon microscopical examination the growth proved to be an enchondroma.

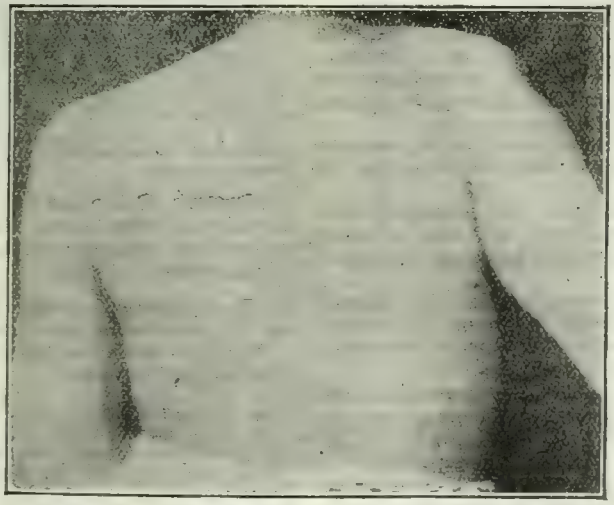


Fig. 4.—The relative amount of abduction. The whole scapula has been excised.

After-History.

A good deal of vomiting followed the operation and continued for two days, but except for this and some slight reactionary haemorrhage, the patient made a good and rapid recovery, so that he was sent to a convalescent home within three weeks of the operation. After the first week active and passive movements were practised regularly every day, and after returning from the convalescent home, the patient was treated in the Massage Department for about six weeks. Since then he has been able to follow his usual occupation as a painter's labourer at Guy's Hospital. His present condition is very satisfactory. There is very little loss of function, the only movement that is imperfect is extreme abduction. It is very interesting to find rotation of the humerus to be normal, for after complete excision external rotation is abolished. The amount of deformity is so slight that it is difficult to identify the affected shoulder when looking at the patient from the front.*

D. *The Amount of Deformity Associated with Each Operation.*

The accompanying photographs and diagrams show very clearly that the deformity is much greater after the

* This patient was shown at the Clinical Section of the Royal Society of Medicine on February 14th, 1908.

complete than after the incomplete excision (Figs. 1 to 8). Both flattening and drooping of the shoulder are more marked, and the posterior pitting is also more evident (see Figs. 1 and 2).

The outline of the upper and outer fibres of the trapezius are kept natural, and the normal level of the shoulder is maintained by these fibres, whose insertion to the acromion is saved.

The chief reasons for the absence of any appreciable flattening and drooping of the shoulder have been already given, but an additional reason may be mentioned. This is the careful preservation of the deltoid as an active muscle. Its acromial fibres are not disturbed, and those normally arising from the spine are fixed to the trapezius; whereas, after complete excision of the scapula, the posterior and external fibres, which form quite two-thirds of the muscle, are deprived of their origin, and therefore waste away from want of use.

The Incision and the Prevention of Severe Haemorrhage.

The T-shaped incision is very satisfactory. It gives a direct approach, and provides comparatively small, well-nourished flaps and efficient drainage at the lower end of the wound; it does not leave much disfigurement; and if its horizontal limb be placed high enough it enables the surgeon to expose and to tie the main vessels at the beginning of the operation. There need be no difficulty in finding the subscapular vessels from the back, so that a separate axillary incision for ligaturing these is superfluous.

For large growths either direct or indirect pressure upon the subclavian artery may be necessary. It is a distinct advantage to leave the rhomboid muscles intact until the posterior aspect of the neck of the scapula has been cleared, for the bone is thus prevented from falling forwards into an awkward position.

CONCLUSIONS.

It may be fairly concluded:

1. That for suitable cases excision of the body of the scapula, with preservation of the processes and glenoid socket, is a much better operation than excision of the whole bone, because it leaves a limb far more perfect from the functional and the artistic points of view.

2. That the operation is especially suitable for innocent growths, which fortunately and frequently leave the processes and the shoulder-joint unaffected.

3. That it may be adopted in preference to complete excision of the scapula for some small and for some slow-growing malignant growths without increasing the immediate risk of death, and probably without increasing the danger of either local or general recurrence.

4. That it may be occasionally suitable for inflammatory diseases of the scapula when the shoulder-joint is unaffected.

5. That it is wise to tie the three main vessels as early as possible in the operation, and that this can be easily done through a suitably-arranged posterior T-shaped incision.

6. That the success of the operation largely depends upon careful asepsis, the sewing of some of divided muscles together, and the early adoption of systematic active and passive movements of the shoulder.

SIR FREDERICK WILLS has contributed a further sum of £5,000 to the fund for establishing a University at Bristol. This brings his contributions up to a total of £10,000.

CERTAIN optical illusions are so well known that they are practised at times purely for the sake of amusing an audience, and there is almost an infinite variety of ways in which things may be made to appear different to what they really are. Lines, for instance, which are really parallel can readily be made to appear to be convergent or divergent by drawing other lines, and setting them at a certain angle to the originals. Working more or less on this principle, but elaborating it to a high degree, Dr. James Fraser has produced some extremely interesting plates, and has published them with a paper entitled A New Visual Illusion of Direction, in the *Journal of Psychology* for January, 1908. The most curious illusions are brought about, and any one interested in the subject should study the paper, but without the plates it is useless to do more than draw attention to it. The figures display the greatest ingenuity of design.

PUNCH FRACTURES.

BY HAROLD BURROWS, M.B., B.S.LOND., F.R.C.S.ENG.

LATE SENIOR ASSISTANT SURGEON TO THE SEAMEN'S HOSPITAL, GREENWICH, AND TO THE BOLINGBROKE HOSPITAL, WANDSWORTH COMMON.

THE object of this paper is to call attention to the frequency with which a metacarpal bone is fractured when a resisting object is struck with the clenched fist.

Little notice has been given to these fractures; and this is curious, because they are common. The fact is, they are usually overlooked—often by the patient, who refrains from seeking advice; occasionally by the doctor, who regards the injury as a "bruise" or a "sprain."

My attention was first drawn to these injuries in the Out-patient Department of the Seamen's Hospital, where I chanced to see several cases within a short time.

The following are the varieties of punch fracture which I have seen: (1) Fracture of the first metacarpal bone, not involving the articular surface; (2) Bennett's fracture;



Fig. 1.—Skiagram of Case I. showing transverse fracture of first metacarpal bone near its base, with forward displacement of the distal fragment.

(3) fracture of the head or shaft of one or more of the metacarpal bones of the fingers; (4) fracture of the base of the fifth metacarpal bone, resembling Bennett's fracture of the thumb.

I.—FRACTURE OF THE FIRST METACARPAL BONE, NOT INVOLVING THE ARTICULAR SURFACE.

In these cases the fracture is usually near the carpal extremity of the bone.

CASE I.

A. B., aged 35. The injury was received by striking another man with the fist, which was clenched in the usual manner. Crepitus and deformity were well marked. It was difficult to retain the fragments in good position. Ultimate result not known.

CASE II.

W. H., aged 35. The deformity of the right thumb was noticed casually in a patient who attended for some other complaint. There is marked deformity, but no disability, except that the patient feels some pain when using a hammer. The lower fragment has been displaced backwards and inwards, and union has occurred in this position, considerable shortening of the metacarpal bone being thus produced. The injury was received some years ago during a fight. At the time there was considerable swelling of the hand, and the patient consulted a doctor, who treated the hand with some lotion and a bandage. The doctor did not say anything about the bone being broken.

II.—BENNETT'S FRACTURE.

I do not possess a skiagram of a Bennett's fracture produced by a blow with the fist clenched, although I

have seen examples. But the skiagram of Case III shows a typical Bennett's fracture, and for illustrative purposes may be useful.

CASE III.

J. G. The patient was admitted with a scalp wound and concussion, having fallen from a cart. The injury to his hand was not observed until he had been in hospital for several days, when he happened to remark that his wrist hurt him, and that he thought it must have been damaged at the time of the accident with the cart. On examination there was found to be a slight amount of swelling about the base of the first metacarpal bone, and pressure in this region caused a sharp pain. But beyond these slight signs there was nothing to suggest the presence of a fracture.

Experience has taught one to suspect that a Bennett's fracture is present in a case where there are swelling and tenderness about the base of the first metacarpal bone following an injury. But I have on two occasions made a diagnosis of Bennett's fracture in error. In the one case the swelling and tenderness were due to arthritis and in the other (Case IV) these signs were due to a fracture of the tuberosity of the metacarpal bone.



Fig. 2.—Skiagram of Case III, showing a typical Bennett's fracture.

CASE IV.

A. G., aged 35, a coster, was thrown off his cart into the road. There was swelling about the base of the metacarpal bone, and pressure on the bone caused acute pain and crepitus. The skiagram shows a fracture of the tuberosity of the first metacarpal bone.

As patients suffering from Bennett's fracture do not, as a rule, seek special advice on this account, it is not easy to get skiagraphs of recent cases. But there is no difficulty in finding old cases. For a while I made it a habit to examine the hands of men attending among my out-patients at the Seamen's Hospital, with the result that a surprisingly large proportion of them were found to have some thickening about the base of the first metacarpal bone, which they attributed to a previous injury, often received while boxing or fighting, sometimes in another manner, such as a fall. Skiagraphs of these cases usually, I think, show the deformity resulting from a Bennett's fracture.

Fig. 3 is a good illustration of an old Bennett's fracture. The patient (Case VI), a pugilist, could not give a specific account of the injury; but in the pursuit of his profession he had often hurt his hands. There are signs of considerable arthritis in the affected carpo-metacarpal joint.

CASE V.

M. M., a middle-aged man, was attending for some trouble not connected with his hand. The deformity, to which I have referred above, was noticed in his right hand. On questioning him, he replied that he had hurt his thumb twenty years ago. For a few weeks after the injury there had been some disability of the hand. The skiagram shows a condition of the first metacarpal similar to that in Fig. 3.

III.—FRACTURES OF HEAD OR SHAFT OF METACARPAL BONES OF FINGERS.

These fractures appear to be as often overlooked as are those of the first metacarpal. As a rule the displacement of the fragments is small, and probably the periosteum at the seat of fracture is not completely torn through. Such an injury is usually regarded by the patient as a bruise, and if perchance he shows the injured hand to a doctor, the doctor also regards the injury as a mere bruise or "sprained knuckle." I have seen the deformity resulting from this injury in the hand of a doctor. On asking him how it had come about, he said he had hurt his fist some time previously when striking a blow in self-defence. He was unaware that the bone had been broken, but an *x*-ray



Fig. 3.—Right hand of Case VI; skiagram shows callus resulting from fracture of second metacarpal bone near its head; the first metacarpal shows deformity due to a Bennett's fracture which has healed, and there is consecutive arthritis in the neighbouring carpo-metacarpal joint.

examination showed angular deformity of the bone, which undoubtedly had been caused by a fracture.

CASE VI.

F. W., aged 37, a professional pugilist, came for advice because he could not clench his right fist properly, on account of an injury to the knuckle of the forefinger received in a fight six weeks previously. On examination some thickening was found about the knuckle of the right forefinger, and flexion at this joint was incomplete. There was also an old lateral dislocation of the right thumb at the metacarpo-phalangeal joint. Apparently each thumb has been the seat of a Bennett's fracture at some distant time (see Fig. 3). The dislocation of the thumb was received in a fight in which the opponents clinched. F. W. hit up at his opponent's jaw, but struck his thumb against the opponent's arm instead. He could give no account of the Bennett's fractures, but said he had often had his hands painful after a fight, but he did not take much notice of such things.

CASE VII.

G. F., aged 28, came on account of an injury to his right hand received in a fight. The skiagram shows a fracture of the head of the metacarpal bone of the forefinger.

CASE VIII.

A. F., aged 28, came to the out-patient department of the Seamen's Hospital for some illness unconnected with the old injury to his hand. The skiagram shows an old healed fracture

of the shaft of the metacarpal bone of the left forefinger. The patient, who was a soldier at the time, had hurt his hand some years ago in a fight. Immediately after the injury he showed his hand to the army surgeon, who caused it to be painted with iodine. The patient was not incapacitated by the injury, but continued his work as usual. There is a marked projection on the dorsum of the hand, but there has been little or no lateral displacement of the fragments. I think this is the typical deformity which results from a punch fracture of the shaft of a metacarpal bone. An examination with the fluorescent screen, and even an *x* ray photograph, may fail to reveal a fracture of this nature, if the examination be made in the usual way with the hand lying flat on the screen or the photographic plate.

IV.—Fracture of the Base of the Fifth Metacarpal Bone

The skiagraph of Case IX is of especial interest, for it shows a fracture which resembles, anatomically, Bennett's fracture of the thumb. It seems possible that this fracture will be found to be fairly common when particular attention has been directed to these cases of punch fracture. I have no note to say how the fracture in Case IX was caused, but believe it was the result of a fight.

Although, as a rule, these "punch" fractures cause little inconvenience of either an immediate or remote nature to the recipient, yet it is of some importance to recognize them. For, in the first place, it is not good surgery to regard a fracture as a bruise, and to dismiss the case without a suspicion of its true character; and, secondly, in those cases in which the fracture involves a joint, osteo-arthritic changes may ensue, and it is possible to maintain that these changes are increased, or even caused, by frequent movements of the joint during the period following immediately upon the injury. The skiagram of Case VI shows well-marked arthritic changes in the right carpo metacarpal joint of the thumb; and I found similar changes in two cases in the *post-mortem* room, in each of which the appearances of an old Bennett's fracture were present.

With regard to treatment, it may be urged that none is required, because permanent disability of any kind is rare even if no treatment is employed. Such a crude rule governs the practice of the present day, but chiefly because a correct diagnosis is not often made. If a recent punch fracture be correctly diagnosed, there are two points which at least should be considered. The first is the desirability of reducing deformity, and the second is the necessity for maintaining rest if the fracture involves a joint. The amount of deformity resulting from a punch fracture varies greatly. Following a Bennett's fracture there is usually some palpable thickening about the base of the first metacarpal, and the tuberosity of the bone is unduly prominent. But it is almost impossible to prevent these effects. The problem is easy of solution, however, when one of the metacarpal bones of the fingers is broken. Here there is commonly an angular projection on the dorsum of the hand marking the position of the fracture; if uncorrected this bony irregularity will form a permanent and manifest record of the combat in which it was produced. As to the means of reducing deformity or maintaining rest nothing need be said, for every surgeon will rely on his own ingenuity.

In conclusion, I should like to thank Mr. C. C. Choyce and the resident medical officers at the Seamen's Hospital, for their very kind co-operation with me in finding and examining these cases of punch fracture, and Mr. Thomas Hart for the most excellent skiagrams.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

CALMETTE'S OPHTHALMO REACTION.

The following observations were made at the Crossley Sanatorium for Consumption during the four months, November, 1907, to February, 1908

The tuberculin employed was obtained from the Pasteur Institute, Lille. The same pipette was employed for each instillation thus ensuring accurate and identical dosage. All the patients were under precisely similar conditions. All were under observation from hour to hour from the time of instillation. When no reaction was obtained in the first instance, a second instillation was administered after a fortnight's interval. When this also proved negative, a third instillation was given after a similar interval.

Of 106 cases examined, 2 only failed to give a reaction even after three such instillations.

Of the 104 cases in which a reaction was obtained tubercle bacilli were found in the sputum in 83; of these 78 reacted to the first application, 5 only reacted to the second. These 5 cases were all of an advanced type. In 2 the larynx was secondarily involved, and in 2 others there was morbus coxae in addition to extensive pulmonary lesions.

In 26 cases no tubercle bacilli could be found in the sputum even after repeated examinations; of these, 10 reacted to the first application, 6 to the second, and 5 to the third. Of the 6 cases which only gave a reaction to the second application, 3 were of a very early type and could be considered as being apparently cured, the physical signs being consistent with the existence of healed foci of tuberculosis. One had tuberculosis of the os calcis with slight involvement of the right apex; one had marked lesions in both lungs, and the last of this series was an old case which had been under observation during the past five years. Of the 5 cases which only gave a reaction to the third application all exhibited definite physical signs with lesions of limited extent in one or other apex. The 2 cases which gave no reaction to the tuberculin and in whose sputum no tubercle bacilli could be demonstrated are added.

H. M., aged 18, had all the physical signs and symptoms of bronchiectasis, probably of pneumonic origin.

S. F., aged 13, had previously had a pneumococcal empyema, and was affected with marked scoliosis.

It is doubtful whether any relation exists between the intensity of the reaction on the one hand, and the activity of the disease or the extent of the lesion on the other. We noted, however, that in some cases with physical signs of early or healed lesions the reaction was sluggish, sometimes delayed, and perhaps only positive on the second or third application. In several advanced cases with evidence of marked pleural thickening, and in some cases fluid, the reaction was also delayed until the second or third application, when it developed a severe type.

This is what one would expect, as in these early cases in which the reaction was delayed the disease must have been latent; in the advanced cases such a minute dose of tuberculin was not likely to elicit a response at the first application. It has been universally recognized that in very advanced or moribund cases no reaction is obtainable.

For the facilities afforded to carry out these observations we are indebted to the honorary staff. It is but right to add that most of this work was done by Dr. Radcliffe, late Assistant Medical Officer, and that I have simply put the facts together. For much advice and kind assistance my thanks are due to the Medical Director of the Crossley Sanatorium.

H. F. R. Stephens, M.B., B.S.Lond.
Royal Infirmary, Manchester.

I have most carefully read Professor Calmette's article in *International Clinics*, and I have tried the ophthalmic reaction in 200 cases, including both hospital and private patients.

The reaction shows best in twenty-four hours, in some few exceptional cases it appears even after a longer interval than twenty-four hours. Among my cases were many of surgical tuberculous disease (joints or glands). These cases gave a reaction quickly, and the effects were slow in passing away. Patients with coincident disease of the eye or lids reacted violently, and it is interesting to note that in one case of choroiditis said to be syphilitic, one of iritis said to be rheumatic, one of slight conjunctivitis, two of severe corneal ulcer, and one case where the patient was constantly using his eyes all day, the reaction was not only violent, but continued for a period of ten days. These patients complained, in one case bitterly, of the pain and inability to use the eye. Of these patients with eye defects or lesions, two gave no other indication of tuberculosis apart from this ophthalmic reaction.

Two of my patients with T.B.+ and with physical signs of pulmonary disease gave no reaction with one application of Calmette's fluid; in one of these cases a repetition of the test caused the reaction to appear. I was able to test five children in the workhouse through the

courtesy of Dr. Isaac Taylor of Leeds, and in these the reaction was slight, with one exception. Each case was undoubtedly tuberculous, but each case was so tearful whilst the tuberculin was being applied that possibly the tears washed out the testing fluid.

Many people react who are not tuberculous according to the ordinary acceptation of the term. Three people in the family of a friend reacted although in good health. Two of my patients showed an increase of temperature (from normal to 102° F. in one case), many suffered from headache without temperature. Of course, the reaction does not give any help in locating the disease, and the mistake might easily be made and a wrong conclusion drawn if the patient were suffering, say, from bronchitis and a hidden tuberculous focus in addition.

I have only tried the test once in the case of the dying, and in this case there was no reaction.

For some time I have been using another form of test. I put two small blisters on to the back of the chest; after the blisters have risen I give two days of water dressing to lessen the hyperaemia, and then to *one* of the blistered surfaces I apply Koch's T.R. new tuberculin in its concentrated form, the patient lying exposed until the surface has dried. This takes about half an hour. I then put a dressing of sterilized lint on to the two surfaces, and in twenty-four hours I compare them. The surface which has been treated with tuberculin is then rosy red with a blush on its circumference, and the untreated surface is comparatively pale. This method has proved satisfactory, and it has not caused the annoyance to the patients which has so often followed the application to the eye. Its disadvantage is the time required, consequently in hospital patients I am more inclined to use the blister test, in out-patients the Calmette.

The great question is, Do these reactions occur *ever* in non-tuberculous patients?

H. de Carle Woodcock, D.P.H., M.R.C.S.,
Leeds. Honorary Physician, Leeds Hospital for Consumptives.

In view of the memoranda and correspondence on Calmette's reaction published recently in the British Medical Journal, the following figures are of interest. They are taken from a short note on Calmette's reaction which I have contributed to a forthcoming issue of *Public Health*. Up to the middle of January I collected all the published statistics of this reaction. Of 491 cases of definite tuberculosis, 463 (94.3 per cent.) gave a positive reaction. Of 610 cases of people not giving any evidence at all of tuberculosis, 563 (92.3 per cent.) showed a negative result. There are two other classes where the reaction is being tried—namely, those possibly tuberculous and those probably tuberculous; but the figures under these headings are necessarily of little use at present in estimating the value of the test.

Brighton. H. C. Lecky, B.M., D.P.H.

A CASE OF VOMITING OF PREGNANCY.

On November 21st, 1907, I was called in to attend Mrs. V., aged 27. She had had two children, the youngest being 3 years of age. She complained of constant vomiting. She had menstruated last in September, the last day of her menstrual period being September 27th. Fourteen days afterwards she commenced to vomit, and this had continued until I saw her on November 21st. She appeared ill and was very thin. She had a cough, and the relatives thought that she suffered from consumption and did not think that she was pregnant. The vomiting was constant, night and day. She could not retain any food at all. Quantities of bile-stained mucus were brought up, and she had most distressing retching. She could not sleep on account of the retching. I tried all the drugs I could think of—bismuth, cerii oxalas, potassium bromide, chloral-hydrate, 1 minim doses of tincture of iodine every hour, etc. Suppositories of cocaine, morphine, and belladonna were also used, but nothing availed. She could not retain a particle of food, even a sip of water being at once ejected. For a week I directed that no food should be given by the mouth, and fed her per rectum. The vomiting, however, still continued, and she became very much emaciated and worn out from loss of sleep, and I was afraid that she would die from exhaustion if not relieved. Acting in consultation, I decided to induce labour. On December 29th I inserted a bougie and left it in for twelve hours. The next day she had some haemorrhage and pain. The vomiting ceased almost at once and she retained food. She had a slight discharge of blood and occasionally pain until January 21st, 1908, when the fetus was expelled. This appeared to be of about four months' development. I did not interfere from the time I induced labour, as her condition improved daily; she took food well and retained it, slept well, and got about the house, and had no heavy discharge. The interesting points in this case are: (1) The immediate relief to the vomiting by the passage of the bougie; (2) the long interval between induction of labour and the termination of it—namely, more than three weeks.

South Shields. J. A. Kendall, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROCHDALE INFIRMARY.

A CASE OF ANTHRAX OF THE LOWER LIP.

(Reported by S. Wilson M.A., M.B., Ch.B.Glasg., House-Surgeon.)

The patient in the following case, a man aged 24, was admitted on January 24th, having been sent in by Dr. Carse, who had promptly diagnosed his condition as due to anthrax infection.

State on Admission.—Pus was exuding from a small aperture about half an inch below the lip margin. The sinus was surrounded by slightly dark necrosed tissue and this again by faintly red skin, but the noticeable feature was the remarkably swollen condition of the lower lip, extending down to the mental protuberance and round into the upper lip. His temperature, which had been subnormal, was 100·2°, and he was anxious and seemed to be suffering to a degree out of all proportion to the size of the lesion.

Operation.—There being no Sclavo's serum to hand, the lower lip was excised one hour after admission by Dr. Richmond, assisted by Dr. Bateman, by a V-shaped incision, extending from the angles of the mouth down to the chin, and carried all the way down to the bone. Pure carbolic was swabbed over the raw surface and the wound closed by strong sutures. Carbolic in ether 1 in 10 was freely injected deeply all round the incision. Perchloride swabs were renewed over the wound from time to time, and ice was packed round to reduce the oedema which still existed.

Progress and Result.—At midnight his temperature was normal, but it soon rose again and remained up for two days, after which it kept slightly above normal for six days. The pulse and respiration fell to normal and remained so. He complained of severe pain after the operation, and this was relieved by morphine. Two days after operation Sclavo's antianthrax serum 30 c.cm. in three portions at intervals of one hour were injected into his flanks. A slight rise of temperature and a slight rash on the back seem to have been the only effect of the serum. With perchloride swabs, ice poultices, and frequent washing out of the oral cavity with boracic lotion and a fluid diet, the wound, after discharging considerable débris, was found to be healing, the oedema to be lessening, the lips to be assuming a fairly good form, so that he could speak quite plainly, and the patient as a whole so comfortable that on February 2nd he was considered entirely recovered. The stitches were taken out on the twelfth day, and in a few days the patient was allowed up.

Remarks.—The excised portion was reported on by the Clinical Research Association as follows:

This underlip shows a large inflammatory area extending roughly from skin to mucous membrane. In the centre of this there is a breaking down area and anthrax bacilli can be seen in it, as well as other organisms. The preparation is not very typical and there are not many bacilli.

The smears from the discharge before operation taken by Dr. Carse showed plenty of anthrax bacilli. The appearance possibly was not that described in textbooks, and though it seemed a critical case, being so near the entrance to the lungs and alimentary canal, yet the vascular nature of the lip was of great service, for the tremendous oedema must have choked the tissues and shut off the lesion from the surrounding tissues. Its spread was thus prevented and the prompt operation completed the natural process.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, March 9th, 1908.

DIAGNOSIS AND TREATMENT OF FRACTURES OF THE LONG BONES.

Mr. A. PEARCE GOULD opened a discussion on the diagnosis and treatment of fractures of long bones. He said that his intention was to suggest certain points on which professional opinion was not yet decided, with the hope that many surgeons would express their opinions on these points. The well-recognized and classical signs of fracture—suddenly-produced deformity, localized pain, localized tenderness, and oftentimes mobility in the length of the bone—with crepitus, were sufficient to lead to the recognition of the great majority of fractures; and the introduction of other means, particularly skiagraphy, should not lessen the thoroughness of the investigation of these older symptoms of fracture. He emphasized the great value of anaesthesia, both in arriving at a correct diagnosis and in applying proper treatment to a recent fracture. By the use of *x* rays a fracture could be demonstrated, when by other means it would only be suspected, and, in some cases, where even the surgeon had not even previously suspected it. But in such cases it was possible to take the position that the recognition of the fracture had little or no bearing upon the prognosis of the cases nor upon the treatment. He referred, for instance, to fractures of the carpal bones, to incomplete fissures in long bones, fissures in the scapula, and simple fissured fractures of the vault of the skull. He laid more stress upon the value of *x* rays in showing the exact condition of a fracture, and referred to the fact that even serious displacement in fractures of long bones might be concealed by the supervening swelling. He submitted that the importance of obtaining really accurate and complete knowledge of the details of a fracture by skiagraphy was one of the questions upon which professional opinion was not yet formed, and in this connexion he alluded to the difficulty that often arises in interpreting skiagrams. The line of a fracture might be very indistinctly indicated and very easily overlooked. The normal epiphysial junctions might be mistaken for fractures, and a little want of care in taking a skiagram might readily distort the shadow, and present an appearance of displacement which did not really exist. In reference to treatment, he pleaded for a much more frequent use of anaesthesia to aid in the reduction of displacement; urged the importance of immediate reduction, and insisted that splints should never be employed for the reduction of a fracture, but only for the maintenance of the fragments in their corrected position. The important debatable point in treatment, however, he thought, was connected with the necessity for the exact and perfect adjustment of fragments in all cases of fracture. Pointing out the peculiar construction of long bones, and the perfect adaptation of the arrangement of the bony lamellae for the transmission and distribution of pressure, and resistance to the pull of muscles, the question arose whether a perfect restoration of function after a fracture of a bone could be expected unless the replacement of the fragments was so exact as not to cause any interruption in the mechanical adaptation of the bone to its special purpose in the skeleton. It was not easy to give a definite answer to this question, for while a study of the mechanics of the skeleton suggested that the structure of the bones was most closely connected with their function, experience of fractures showed that even considerable alterations in the shape of a bone might, under some circumstances, not be very harmful. He referred, for instance, to the result obtained in fracture of the middle of the clavicle and in Colles's fracture. In the more important weight-bearing bones of the lower limb, he held that serious deformity of the bone was attended with distinct functional imperfection. Upon the answer given to the question depended the real value of the operative treatment of simple fractures. He thought it should be stated that these operations were not easy; that they were attended with rather more than the ordinary risks of modern surgical operations; that in some cases the mechanical difficulties were very great indeed; and that the use of screws, wires, staples, and plates, while undoubtedly of value, was also attended with disadvantage, for they added to the local injury, and lessened the rapidity with which the final repair of the bone was effected. He therefore suggested that when employed, the procedure should be of the simplest kind, provided that it was also efficient for its purpose. For example, a wire ligature surrounding fragments would often hold them in place, and, if so, was preferable to anything introduced into the bone. He referred to the value of massage, and, in reference to movements, insisted on the much greater usefulness of active movements than of passive movements, and spoke of the great improvement that could be obtained in fractures near and into joints by patient and gentle manipulations and use of the part, when violent movements and rough handling only perpetuated the mischief. He thought there was evidence of a power of compensation for deformity caused by fractures, for some patients who at first were lame after a time lost all lameness and disability. It was an important point to ascertain how far this compensation for deformity could go.

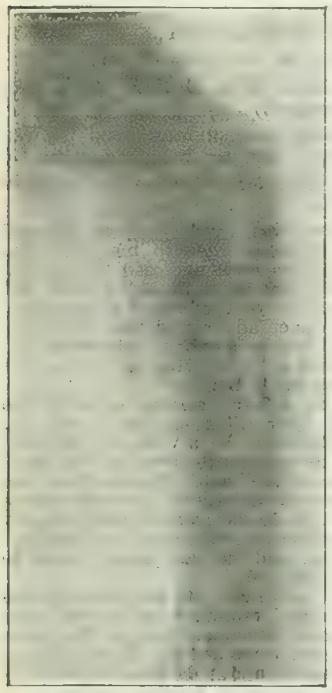


Fig. 1.—Condition after treatment by splints (Mr. Arbuthnot Lane).



Fig. 2.—Condition after operation (Mr. Arbuthnot Lane).

Mr. A. E. BARKER said that on every point which Mr. Gould had raised he was in agreement with him. He directed the attention of the younger members of the profession to the possibility of doing without operation for fractures. There seemed to be growing an idea that fractures could not be diagnosed without *x* rays, and that without the radiographer the surgeon was helpless. Some surgeons thought that perfect apposition and preservation of the contour of the bones was absolutely necessary, and that if that was not obtained one must resort to operation. There were cases in which it was very difficult to get anything like accurate apposition, and in those cases it might be justifiable to operate on the bone. He thought there

had been a tendency to trust too much to passive movement and to neglect active movement, and active movement should be commenced earlier, and it should be more vigorous.

Mr. W. Arbuthnot Lane said that he found himself as much opposed to Mr. Gould's remarks as it was possible to be. It was the surgeon's business to do his work as well and as thoroughly as possible in the treatment of fractures, and, whether they thought so or not, they would be made to do so by the law courts, by the *x* rays, and by the force of public opinion. He had brought skiagrams of a few cases of recent fractures, the large majority being in young children, for this reason, that he had previously shown so many in adults. He also showed the skiagrams of a large number of malunited fractures which had been treated by manipulation and splints, and on which he had to perform extensive operations in order to restore the malunited bones to their normal shape and function. Even a person of the meanest intelligence must allow that the more perfectly the skeleton was restored to its normal form the more perfectly was it likely to do its work. Fig. 1 showed the condition of a fractured femur after treatment by splints and massage and passive and active movements. The patient was an absolute cripple, the leg being much shortened and deformed. In spite of advice to the contrary the patient decided to follow Mr. Lane's suggestion, and was operated on, with the satisfactory result shown in Fig. 2. A skiagram of a bad case of malunited fracture of the femur (shown in Fig. 3), was exhibited by Mr. Lane, and he said it served as a barometer of the surgery of the present day, for though it was quite possible to restore the bone to its proper form and function by operation, unfortunately for the patient several leading surgeons said it was impossible to do so, with the result that nothing was done, and the patient still remained in a crippled condition. Fig. 4 represented an ununited fracture of the radius and ulna, which had been treated by splints and massage in the orthodox manner. Fig. 5 showed the condition after the operative treatment with metal plates and screws which secured for the patient a perfectly useful and normal arm.



Fig. 3.—Mr. Lane's "barometer of present day surgery."



Fig. 4.—Ununited fracture of fore arm after treatment by the orthodox method. (Mr. Arbuthnot Lane.)

Mr. W. G. Spencer said that observation by means of *x* rays of fractures that had been either wired or pegged showed that there was atrophy of the bone in connexion with the peg or wire. In the union of the long bones, where callus was largely periosteal, there was not the necessity for the exact apposition which Mr. Lane had advocated. If the union could be brought about without the insertion of a foreign body into the bones, that was surely better than putting in such objects.

Mr. Robert Jones (Liverpool) said the public needed educating to the real value of radiography, and to the fact that surgeons did not expect the perfect results which they were thought to have attained in the past. The public should also know that it was possible to get a good functional result, even though in a case of fracture the fragments were not in accurate apposition; also that bones might be got into very good position and yet there might be very bad function resulting. Fractures treated in the usual method rarely united accurately, and the degree of disability was not necessarily in accordance with the degree of deformity. If that were known to the public, it would happen less often that members of the public would come brandishing a skiagram and holding it over the heads of their medical attendants like the sword of Damocles.

Mr. C. B. Keetley referred to a paper which he read fifteen years ago on the prevention of shortening in the shafts of the long bones after fractures by making a pinhole in the skin opposite each fragment, and then driving a pin straight through the flesh and the bone; an important detail was to keep those pins a long way from the point of fracture.

Mr. Lynn Thomas (Cardiff) said that no case should be operated upon unless it was quite certain that non-operative procedure would not yield a satisfactory result. The use of *x* rays had made no difference at all to the line of treatment which he adopted in his own practice. A friend of his in the South African war fell and fractured his leg 2 in. below the knee-joint. There was displacement of the tibia and overlapping of ½ in. He was treated by a Fellow of the College of Surgeons, and came to London and went to see many surgeons to try to get something done, as the leg was extremely painful. He went, however, to the non-operative school, and nothing was done. He wanted his limb amputated. After some years the condition of the limb improved so much that his friend was able to go out hunting four days a week. That and other cases had given him (Mr. Lynn Thomas) a great deal more confidence in Nature than he had when he started his surgical career in Cardiff.



Fig. 5.—Condition after treatment by metal plates and screws. (Mr. Arbuthnot Lane.)

Mr. Gould, in the course of his reply, presumed that Mr. Lane did not judge the results of the usual treatment by the excellent series of skiagrams which he had brought forward. Naturally Mr. Arbuthnot Lane, by his eminence in the profession, had attracted a large proportion of cases of fracture which had been unsatisfactorily dealt with by others, and in the majority of the cases shown probably every one in the room would agree that they had not been treated successfully by other methods, and certainly operations in those cases were urgently called for. In the case of serious deformity from fracture of the tibia described by Mr. Lynn Thomas, in which the patient was eventually able to go hunting, it was very instructive, and the advice to take skiagrams of old fractures and compare them with the functional results should be followed.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

SETON PRINGLE, F.R.C.S.I., in the Chair.

Friday, February 28th, 1908.

EXOPHTHALMIC GOÎTRE.

MR. WILLIAM TAYLOR read the notes of a case of Graves's disease treated by removal of the right lateral lobe and isthmus of the thyroid gland. The patient was a girl, aged 24, who had been suffering from the phenomena characteristic of Graves's disease for six years. Both eyes were very prominent, the heart's action was rapid, and palpitations were very distressing on the slightest exertion; muscular tremors were well marked, and her nervousness was so great that she could scarcely speak intelligibly. The thyroid gland was enlarged, but the enlargement was much greater on the right side. Medicinal treatment had been tried for the six years she was affected, but without any beneficial effect. Her condition steadily became worse, and she was compelled to give up her work as a dressmaker. Before the operation she was kept quiet in bed for three weeks. During that time her pulse varied from 120 to 136 beats per minute. The operation was conducted under chloroform anaesthesia preceded by a hypodermic injection of morphine $\frac{1}{6}$ grain and atropine $\frac{1}{100}$ grain; the right lobe and isthmus of the thyroid gland were removed. Very little blood was lost, and the operation was well borne. She left hospital on the tenth day, when the pulse record was 78 beats to the minute. On examination twenty months after operation the patient's condition was in every respect quite satisfactory. Her nervousness had disappeared, there were no muscular tremors, she never got any attacks of palpitation, her pulse averaged 80 to the minute, and her exophthalmos, though still present, was much less marked. The speaker regarded all drug treatment of Graves's disease as at the best merely palliative; but operative treatment was radical, the relief obtained varying with the amount of hypertrophied gland tissue removed or destroyed. It was essential that the operation of partial thyroidectomy should be advocated and undertaken in an early stage of the disease. Mr. L. G. GUNN considered that in Graves's disease the parathyroids were primarily affected; the enlargement of the thyroid followed. Operation, while undoubtedly attended with risk, held out the best prospect of cure for the patient. He did not approve of cocaine as the anaesthetic to be used. Chloroform was no more dangerous for the patient, and far more comfortable for the operator. Dr. STOKES asked how it was that though in the worst cases the pathological changes were those of atrophy and the gland apparently removed itself, yet those were the cases which died. Dr. KIRKPATRICK said he did not think physicians would raise much objection to patients suffering from exophthalmic goître being taken from under their care provided the surgeon could give better results. In order to prove curative, operation would have to be undertaken before serious symptoms had arisen; and, in order to be able to recommend patients to submit to operation at an early stage, the operation must be a comparatively safe one, and one from which good results could be promised. At present, however, the mortality of the operation was considerable, and permanent cure was not by any means established. Mr. A. J. BLAYNEY said there could be no question as to the pathological change from which the symptoms arose—namely, an increased production of thyroid extract. It was only by comparing results in a large series of cases which were operated on with those in which there was no operation that any conclusion could be arrived at. In ordinary goître he preferred ether anaesthesia, because one of the results of thyroidism was to affect the cardiac muscle, and on that chloroform had a very depressing effect. Mr. KENNEDY attributed considerable importance to the position of the patient during operation. Many deaths, he thought, had occurred through interference with the recurrent laryngeal nerve. To get good results from operation practically the whole of the gland must be removed. The central lobe would be quite sufficient for the needs of the patient afterwards. If the surgeon got the case before pathological changes had occurred in other organs, the cure of the disease could be practically assured. Mr. SETON PRINGLE, though disposed to agree that local anaesthesia was the safest, preferred a general anaesthetic. Kocher's patients were bound hand and foot, and were in a much better state of surgical training than was possible in Dublin. Mr. TAYLOR, in reply, said he was not aware of the comparative mortality of surgical and medical treatment. It was the few cases that got well without apparently any treatment that prevented cases being handed over to the surgeon at an early stage. Recent experience had led him to prefer ether anaesthesia by the open method.

ROYAL SOCIETY OF MEDICINE.

PATHOLOGICAL SECTION.

Intestinal Larvae.

AT a meeting on March 17th Mr. S. G. SHATTOCK, the President, exhibited some larvae of *Eristalis tenax* passed, with several others, in the living state from the human bowel. The patient, a lady under the care of Mr. H. McQuade, had recently arrived from France, where she had eaten a good deal of watercress. The larvae were identified by Mr. E. E. Austen as those of the dipterous fly, *Eristalis tenax*. The larvae, which were as large as tadpoles, were furnished with a respiratory proboscis or "tail," and were commonly known as "rat-tailed" larvae. Oviposition took place upon material at the surface or edge of water; and the ova (about 1 mm. in length) had presumably been ingested concealed in watercress. As sewers were among the habitats of the larvae, there was nothing incongruous in their development in the intestinal contents. The oxygen for respiration during their development in the intestinal canal would be furnished by the air swallowed. A considerable number of cases of intestinal myiasis had been recorded, but the larvae passed were usually different species of Homalomyia; no example of *Eristalis* had been before observed in this country, and only two or three cases had been placed on record abroad. The fly itself closely resembled an ordinary drone; and entomologists had pointed this likeness out as an explanation of the ancient method of raising "bees" from the decomposing carcass of an ox, described by Virgil (*Georgics*, Book IV).

Secondary Sexual Characters.

Mr. C. E. WALKER described some experiments undertaken by him to ascertain whether certain groups of cells in fowls of both sexes possessed the potentiality of developing in a particular way under a suitable stimulus. This stimulus, he claimed, was shown by his experiments to be supplied by the testis throughout its functional activity. He injected two hens with a fresh extract of cock's testis, beginning on February 1st, 1907. The injections were continued every day until October 4th, with the following results: The combs and wattles of the hens grew to a very large size, and the hens stopped laying eggs about the middle of March. This growth of the combs and wattles seemed to reach its maximum at about the end of June. From March until October these hens seemed always ready to attack any cock which was placed in the greenhouse where they were kept. On October 4th the injections were discontinued, and on November 9th the combs and wattles had retrogressed to the normal size they presented before the experiment was commenced. The dimension of the combs at the maximum was about eight times that in the same hens before the experiment, and after November 9th. In two cases Shattock and Seligmann had recorded a shrinkage of the comb after castration of the adult cock.

Certain Endotheliomata.

Dr. W. S. LAZARUS-BARLOW brought forward the view that certain varieties of growth met with, chiefly in the breast and the cervix uteri, and generally described respectively as spheroidal-celled and squamous-celled carcinoma, were identical in appearance and differed from normal carcinomata of those types by the presence of lumina, by the characters of their cells and their nuclei, and by the general arrangement of the cell masses. These characters, together with a great tendency to variation in appearance in the metastases, were best to be explained on the view that they had originated from endothelium.

Lumina in certain Malignant Tumours.

Messrs. L. COURTAULD and A. LEITCH described the formation of spaces and lumina in cancers of the breast

and cervix. These arose from degeneration of the central cells of the masses, the cells of the persistent periphery of the column becoming flattened immediately around the lumen; the flattening was the result of pressure. In other cases the cells immediately around the lumen so produced acquired a radial arrangement. In further cases multiple small lumina appeared amongst groups of the cell masses of such tumours.

Prickle Cells in Carcinoma.

Mr. C. W. Rowntree pointed out that as prickle cells were of such constant occurrence in squamous epithelium, new growths arising in the latter should always contain them. This was not always so. There was a class of tumour originating in the tongue and cervix uteri which departed from this common type, and suggested the possibility of their constituting a separate class of new growth.

Laryngological Section.

At a meeting on March 6th, Dr. J. Barry Ball, President, in the chair, the exhibits included the following:—Mr. Harold Barwell: A case of *Necrosis of the arytenoid cartilage* of unknown causation. The laryngeal appearance, which showed the bared white cartilage, had remained almost unchanged over a period of sixteen months. Dr. George K. Grimmer: A case of partial occlusion of both anterior nares by a *Congenital cutaneous web*. A good result had followed treatment, on one side with the cautery, and on the other by a simple plastic operation. Mr. A. R. Tweedie: One of a pair of tonsils apparently composed of a mass of *Papillomata*. Mr. E. B. Waggett: A case of *Multiple telangiectases* in a man, aged 55, giving thirty-five years' history of epistaxis. Mr. Hunter Tod: A case of venous *Angioma* of the soft palate in a man, aged 48, which involved the uvula, anterior faucial pillars, and base of the tongue. Dr. de Havilland Hall: A case of functional aphonia in a man, aged 24, which had persisted for twelve months.

THE MEDICO-LEGAL SOCIETY.

The Legal Liability of the Anaesthetist.

At a meeting on March 24th, Sir James Walton, President, in the chair, Mr. R. Henslowe Wellington said that Dr. Frederick W. Hewitt had given them to understand that the majority of deaths from or under an anaesthetic were preventable, and that if death took place it was as a rule not the patient nor the operator that was at fault, but the anaesthetist. Now, there was nothing upon the Statute Book that prohibited any person who was not a qualified medical or dental practitioner from administering an anaesthetic or any other drug. It seemed that if a person honestly and bona fide performed an operation or used a dangerous instrument which caused a patient's death he was not guilty of manslaughter; but if he was guilty of criminal misconduct, arising from gross ignorance or criminal inattention and not from a mere error of judgement, then he was guilty of manslaughter. It must first be proved that these deaths were due to the anaesthetic itself, and, secondly, to the want of reasonable skill, care, and attention on the part of the anaesthetist and not due to any contributory cause on the part of the patient from an idiosyncrasy, or to his pathological condition at the time of the operation, or on the part of the operating surgeon. How could one differentiate between these, or say that there was not a combination of them as causes contributing to the death, and so exonerate every one concerned? It had been argued that if the anaesthetic were not required then the anaesthetist was liable at law. Surely if an operation was necessary an anaesthetic was, humanely speaking, equally so. It was, then, the operating surgeon who was to be called into question for malpraxis if any one, but who would controvert his opinion as to whether the operation was necessary or not? If the anaesthetist was an unqualified practitioner and was engaged by the qualified operator, or if an unqualified operator engaged a qualified anaesthetist then the qualified and registered man, surgeon or dentist, was guilty of "covering" under the regulations of the General Medical Council, whether the patient lived through or died under the anaesthetic. It was very doubtful as to whether the dentist who had the L.D.S., without the full qualification of the physician or surgeon, was qualified to give any anaesthetic at all; or whether he was not limited to the administration of nitrous oxide gas—and must call in a qualified surgeon to give the other anaesthetics; in respect of which he was in the same position as an unqualified man. If the anaesthetist was engaged by a surgeon to administer the anaesthetic, the surgeon was the servant of the patient and agent to find a capable anaesthetist, and if both surgeon and anaesthetist showed reasonable care, skill and attention, neither of them was liable for malpraxis whether the patient lived or died. Again, if the operating surgeon engaged an anaesthetist who gave an anaesthetic for an illegal operation, the anaesthetist if ignorant of the illegality of the operation, could not be held liable, whether the patient survived or died. But if the anaesthetist knew the nature of the operation to be illegal, he was equally liable to answer with the surgeon for felony if the patient survived, and for murder if the patient died. In ordinary cases, if the *causa causans* of the death was a pathological condition of the patient, unknown till the patient was upon the operating table, the death must of necessity be one of misadventure; or, if due to a recognized pathological condition, and the patient or his representative had been warned of any risk, and accepted that risk, the patient then accepted full responsibility and exonerated both the surgeon and the anaesthetist. Supposing that the anaesthetist saw danger from the anaesthetic after he had commenced its administration and withheld his hand, at the same time warning the operating surgeon that to proceed was dangerous, the *onus probandi* was perhaps thrown upon the surgeon if he proceeded with the operation, though it might be well nigh impossible to finish it forthwith. But naturally the two must work together and do their best for the life that was in their hands, and then no one could reasonably find fault or sustain any action at law for malpraxis. When a patient entered any hospital, and an operation under an anaesthetic was required, the patient expected, and the law implied, that a competent anaesthetist would give the necessary anaesthetic; and if a qualified practitioner administered it and used reasonable care and skill, he could not be held liable for malpraxis if unforeseen death supervened. Further, if an unqualified man, as pupil, was manipulating the anaesthetic apparatus under the supervision of a qualified anaesthetist, the former was not acting illegally, nor was the latter liable for "covering," as that was permissible under the regulations of the General Medical Council. He had not touched upon the subject of delayed poisoning from anaesthetics, but only upon the acute cases or those of emergency and sudden death in consequence. In conclusion, he said that the immediate cause of death attributable to the anaesthetic, *per se*, as a poison, must first be proved beyond any reasonable doubt; and then a further proof that the administrator of that anaesthetic or poison—and it mattered not whether he were a qualified or an unqualified practitioner—did not use reasonable care, skill and attention must be shown before he could be made answerable to the law for damages or punishment. But the administration of any anaesthetic, whether for a local or a general anaesthesia, by unqualified practitioners—which was carried on to a very large extent throughout the kingdom—was a grave public danger and should, perhaps be made a penal offence by statute. Dr. F. W. Hewitt moved the following:

> That the two following resolutions be forwarded, in the name of the Medico-Legal Society, to the Privy Council and to the General Medical Council respectively:
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> That in view of the importance of the administration of anaesthetics, this Society is of opinion that it is highly desirable, in the public interest, that every member of the medical profession, before he is registered, shall have received instruction in the administration of anaesthetics. They therefore earnestly beg the General Medical Council to consider whether they can see their way to include a course of instruction in anaesthetics amongst their "Requirements in regard to Professional Education."
>
> That as the administration of any drug or drugs with the object of producing generalized insensibility to pain or actual unconsciousness for any medical or surgical purpose cannot be safely undertaken without medical knowledge and skill, your petitioners humbly pray that legislation be granted whereby the administration of any drug or drugs with either of the aforesaid objects by any person other than a duly-registered medical practitioner or some one acting immediately under his supervision, direction, and instruction, be made a penal offence.

The real crux of the question was, he continued, the protection of the public in regard to the administration of anaesthetics. There should be resident anaesthetists at the large hospitals. He regarded statistics concerning anaesthetics as valueless. Mr. Wellington, in seconding, said that at the last session of the General Medical Council, a Committee was appointed to ascertain what legal provisions existed in the Colonies and foreign countries for the prevention of medical practice by other than legally-qualified persons, and this Committee was to report to the Council in May next. Sir A. Fripp said that the proposals of Dr. Hewitt had his heartiest support. If the law was altered as proposed, only medical men would be able to administer or superintend the administration of anaesthetics. That would affect a large section of the public, who would be forced to apply to hospitals instead of paying the small fees now customary. Dr. R. J. Probyn-Williams, President of the Society of Anaesthetists, objected to the use of the word "safe" as applied to chloroform by Dr. Hewitt, who in his book described many cases in which death was with difficulty averted. If Dr. Hewitt was correctly reported in saying that "the fault in fatal cases did not rest with the surgeon, the operator, the patient, nor the drug," then it rested with the anaesthetist. Dr. Hewitt was therefore responsible for the dangerous condition described by him in which his patients were placed. Dr. Probyn-Williams concluded by mentioning that as a result of the representation of the Society of Anaesthetists, the Royal College of Surgeons of England recognized the necessity of instruction being given to students in the administration of anaesthetics. Dr. F. J. Smith considered that Dr. Hewitt's statement that 9 out of every 10 cases of death under anaesthetics could be avoided by means of greater care or skill or attention on the part of the anaesthetist went beyond the limits of fair criticism of the whole body of skilled anaesthetists. Any medical man in the wilds of the country has to face emergency operations and had to do his best, but that man must not be held responsible for any catastrophe that might happen if he had honestly done what was possible. Professor John Glaister (Glasgow) pointed out that chloroform could not be called "safe," because of the variable factor in the case introduced by the diverse conditions of the patients. Dr. Hewitt would find himself on dangerous ground if it was true that in 9 out of 10 cases of death from anaesthetics the catastrophe might be avoided by the anaesthetist. Dr. Waldo (coroner) said that it was his practice to hold an inquest on every case of death from anaesthetics reported to him. Dr. Templeman (Dundee) and Professor Harvey Littlejohn spoke of the Scottish methods of conducting inquiries into deaths under anaesthetics. The discussion was continued by Dr. Blumfeld, Dr. Silk, Dr. Willcox, Mr. Murphy, Mr. Schroeder, Dr. Bellamy Gardner, and Mr. Sweeney. Dr. Hewitt explained that when he said 9 out of every 10 deaths from anaesthetics were preventable, he did not mean that it was possible for those who had not had considerable experience to avoid deaths in that proportion. The two resolutions were then put to the meeting, the first being carried unanimously, the second by 16 votes against 11.

Bristol Medico Chirurgical Society.—At a meeting on March 11th, Dr. Waldo, President, in the chair, Dr. Carey Coombs showed specimens from the *Myocardium in acute rheumatism*, drawing attention to the nodules occurring in the neighbourhood of arterioles composed of aggregations of large spindle-shaped, polynuclear cells; they were chiefly met with in the muscle of the left ventricle near the apex. He was inclined to regard them as the result of a fibroblastic reaction (peculiar perhaps) to the rheumatic virus. Mr. S. V. Stock read notes of a case of *Carcinoma of the breast* in which metastasis occurred after an interval of twenty-four years. The breast had been amputated twenty-four years previously; a few days after the operation the dressings were accidentally set on fire, and the patient was severely burnt; erysipelas supervened, but after a prolonged illness a good recovery was made, and the patient was free from any recurrence. In May, 1907, the patient noticed a lump in the right iliac fossa, which Sir Thomas Smith (who had performed the first operation) and Mr. Bowlby diagnosed as a growth in the right ovary, but regarded as inoperable; the growth increased rapidly, nodules appeared above the clavicle, on the sternum and ultimately in many other situations either in glands or subcutaneous tissues. Some glands were removed from the groin with a local anaesthetic, and those under the microscope showed clear evidence of being carcinoma secondary to a primary mammary growth. Ultimately the patient died (eight months after first noticing the mass in the pelvis), with symptoms of cerebral metastasis. Mr. Hey Groves pointed out the necessity of accepting with some reserve the pathological report that the carcinoma of the gland submitted to examination was indubitably secondary to that in breast, and also the diagnosis of the mass in the pelvis as being ovarian in the absence of proof obtained by operation or by necropsy. On the whole, however, he agreed that probably the explanation given was the correct one, although such an occurrence must be very rare. Mr. Roger Williams drew attention to the relative chronicity of mammary cancer, saying that from data he had collected, 1 case in 12 lasted for more than five years, while several lasted fifteen, twenty, and even thirty years with ultimate recurrence. He questioned the part played by lymphatic paths in recurrence or metastasis; might not the traumatism of the operation liberate into the circulation cells in a pre-cancerous stage, which lodge, rest, and then, owing to some change in the metabolism of the body, take on their usual malignancy in some remote situation? Mr. C. B. Goulden, in a paper on *Lacrymal obstruction*, said that in dacryocystitis the sac should invariably be excised; the use of probes and styles he utterly condemned. Mr. Cyril Walker pointed out that excision of the sac had been the universal rule until Bowman suggested and proved the efficacy of probing; probably the advocates of excision would learn the same lessons by which Bowman had profited, and might admit that of two not wholly satisfactory procedures, Sir William had adopted the more generally useful. If excision of the sac were practised, care should be taken to avoid dividing the tarsal ligament. Dr. A. Fells read notes of a case of *Urobilinuria associated with polycythaemia* occurring in a woman aged 37, who had been long resident in India, and had suffered from sunstroke and many bouts of fever. In 1901 she returned to England, and first began to complain of shivering fits and attacks of pain in the left side, which radiated down the leg. In 1906 she became liable to attacks of fainting with extreme irritability and restlessness; she had then intermittent pyuria with pyrexia. The right kidney was explored, and being found movable but otherwise healthy, was fixed by suturing. Subsequently headache, neuralgia, insomnia, constipation, and profound muscular weakness successively developed, and the urine became of a clear port-wine colour; the blood count showed an increase of erythrocytes (6,500 000), without leucocytosis. Eventually the patient died with increasing myasthenia, and paralysis extending gradually from the extremities to the respiratory centres. The urine had been examined and reported to contain "urobilin." The case was probably one of autointoxication from the alimentary tract. The patient had taken sulphonal, but not to excess. Dr. Symes considered that a case showing such persistent and long-continued urobilinuria was probably unique. He agreed with Dr. Fells's suggestion of toxaemia as the explanation. Dr. Edgeworth said he felt no doubt that the specimen of urine shown contained haematoporphyrin, and that the case was one of sulphonal poisoning, ending, as such cases frequently did, in peripheral neuritis. Dr. Nixon inquired as to the tests which had been relied on for establishing the presence of urobilin and the absence of haematoporphyrin, since he was convinced that, whatever else the urine contained, the colour was due to haematoporphyrin. Dr. Waldo detailed a case, which he had treated, of a man who had died of chronic sulphonal poisoning with haematoporphyrinuria. The similarity in the course of the disease to that of Dr. Fells's case was striking, and he could not help thinking that probably haematoporphyrin was present in this instance also.

Liverpool Medical Institution.—At a meeting on March 12th Dr. Nimmo Walker described briefly a novel system of dealing with cases of *Ophthalmia neonatorum* now in use in Liverpool. A small ward has been allotted in St. Paul's Hospital, and under the Notification of Births and Registration of Midwives Acts any infant suffering from the disease is admitted into it. Dr. W. B. Warrington, in opening a discussion on *Exophthalmic goitre*, said that it was a very serious condition, only rarely terminating in real and permanent recovery. The success obtained on the Continent and in America by operative procedures was remarkable. Dr. A. Gordon Gullan considered the disease had been proved by experiment to be due to excessive activity of the thyroid gland; that treatment by the antithyroidin of Moebius, radogen, and thyroidectin was satisfactory and that definite results had been obtained. He urged more extended use of antithyroid treatment in preference to operative measures. Dr. T. R. Glynn agreed with Dr. Gullan that there was an hereditary element in the development of the disease. He had met with an instance in which two sisters and the only daughter of one of them suffered from this affection. In the latter the typical symptoms appeared at the age of 6. The majority of cases improved under rest and treatment in hospital, and occasionally recovered perfectly. Mortality after thyroidectomy had diminished greatly of late years, but neither it nor other operative measures were more than moderately successful. Mr. C. Thurstan Holland said he had treated 20 cases during the last five years by *x* rays, though some of them only attended a few times. In most of them, immediately on the first exposure, a noticeable drop in the pulse-rate occurred, and muscular tremors and general nervous symptoms abated. Several mild cases after a course of this treatment were symptomatically cured. The *x*-ray treatment seemed to be of undoubted value, and in bad cases might be valuable as a preliminary to operative interference. In making the exposure, the skin should be protected by two or three layers of thick boiler felt. Dr. R. J. M. Buchanan considered that people in whom Graves's disease showed itself in later life were of a separate and distinctive class, and had had the affection in a certain degree from early childhood. He showed lantern slides of families in which some members had simple goitre, others in the same family the symptoms of Graves's disease. In one family the father had a large thyroid, and the condition had been transmitted to his three daughters by two separate mothers; two of the daughters had large quiescent thyroids, and the third a large thyroid with signs of Graves's disease. In one case he had watched the development of the disease in a lady over a period of eighteen years, and also in her daughter from early childhood for the same period of time. The thyroid probably functionated intermittently, as all other organs of the body must do. This would account for the exacerbations noted in Graves's disease. There was a clinical sign which he had not seen described by any one else, that, before moving the eyes from one fixed object to another the patient always blinked.

Hunterian Society.—At a meeting on March 11th, Mr. Rowland Humphreys in the chair, Dr. Porter Parkinson showed (1) a boy of 5 who had developed *Fibrosis of the lung* with bronchiectasis as a sequel of pneumonia three and a half years ago. At the left base the movement of the chest was deficient; there was dullness, cavernous breathing, and râles. The *x* rays showed nothing abnormal, the diaphragm moving well. (2) A girl, aged 9, who was admitted for fever of unknown causation of a year and a half duration. The spleen was enlarged, and below this the left kidney was felt to be considerably enlarged. The right kidney was also large and palpable. The urine was diminished in amount; it contained pus, and tubercle bacilli had been found in it. The blood showed the characters of a *Secondary anaemia* with a moderate leucocytosis. Mr. Douglas Drew showed a series of cases in which the hip had been successfully excised for *Tuberculous disease*. He said that his practice in these cases was only to operate when there was an abscess, or when the child was going down-hill. He never operated in early cases; but, on the other hand, if an abscess were present he never simply scraped the abscess out, but excised as much of the joint as was affected through a posterior incision. Dr. Taylor showed a case of *Disseminated sclerosis* in a girl of 5.

Association of Registered Medical Women.—At a meeting on March 3rd, Dr. May Thorne in the chair, Miss Ivens showed (1) a uterus with a *Subperitoneal fibroid*, growing from the right side of the body, which had simulated a solid ovarian tumour. (2) A specimen of *Haematosalpinx* resulting from torsion of a pre-existing pyosalpinx. It was removed from a married woman who, often suffering from metrorrhagia, for three months had an attack of severe abdominal pain with vomiting and pyrexia. The uterine end of the left tube was found to have undergone torsion to the extent of three-quarters of a turn, while the distal end contained half a pint of pus and blood. The tube was adherent to the bladder and to the uterus, and was raised out of the pelvis by a cystic ovary. The pus was sterile, suggesting a gonococcal origin. There were matted appendages on the right side. Dr. Christine Murrell read the notes of a case of *Movable kidney*. The patient, a woman of 26, was subject to attacks of nausea, pyrexia and abdominal pain simulating appendicitis, but recurring after the appendix was removed. A diagnosis of "Dietl's crisis" was made; the patient was fitted with a kidney belt and had no return of symptoms. A discussion on the *Treatment of constipation* was then opened by Dr. Helen Webb, who said that all treatment should be directed towards securing a regular habit of the bowel, and that the prescription of a suitable diet, exercise, massage, and, if necessary, enemata, should all be tried before drugs were resorted to. Mrs. Flemming pointed out the importance of discovering which part of the bowel was at fault, by examination with *x* rays after giving a meal impregnated with bismuth carbonate. Mrs. Cyriax and Miss Dobie recommended trunk movements in addition to deep massage of the abdomen, and several speakers referred to cases in which obstinate constipation had been cured by the inculcation of regular habits.

REVIEWS.

THE ROENTGEN RAYS.

Dr. Davidsohn's work on the subject of *Roentgen Technique*[1] is at once comprehensive and concise. The author wastes little space in recapitulating methods and cases other than those he has personally employed or observed, and those who read German will find in his pages a useful addition to the rapidly-growing literature on the subject of the *x* rays. Separate sections deal with the mode of production of the rays, the various apparatus, and the practical application of the rays in diagnosis and therapeutics. There is also an atlas of the normal appearances of the bones and joints, and the author or publisher is to be congratulated upon the success of the half-tone reproductions. In dealing with Roentgentherapy, Dr. Davidsohn lays stress upon the value of the rays in post-operative lupus, when they will search out the little masses of tubercle which the surgeon is liable to miss. He has also found excellent cosmetic results. In psoriasis the rays afford temporary relief rather than permanent cure, and he instances a curious case of a patient who had suffered from childhood from a psoriasis that refused to yield to any form of treatment. Later on the sufferer worked in a manufactory where *x*-ray apparatus was produced, and by coming undesignedly into contact with the rays the psoriasis healed. On leaving that place of business, however, there was recurrence of the malady, demanding renewed radiation. Dosage is particularly important in the treatment of psoriasis. Radiations which are too weak are ineffectual, whilst those which are too strong complicate the evil. Dr. Davidsohn uses half a dozen tubes of different degrees of hardness, and carefully graduates the exposures. He recommends comparatively short exposures of from seven to ten

[1] *Die Roentgentechnik: ein Hilfsbuch für Aerzte*. By Dr. F. Davidsohn. Berlin: S. Karger. 1908. (Sup.-roy. 8vo, pp. 78, with 13 illustrations in text and 12 plates. M.6.)

minutes for leukaemia, and he also calls attention to the use of the rays in asthma; he says that they exert a favourable influence upon the bronchial secretions. He is most elaborate in describing his radiographic methods for the various parts. His directions can only be suggested here. He has gained the best results in radiographing the skull by taking side views and exposing from two to four minutes with a hard tube. He generally favours the plate-to-back position in the radiography of the chest. The patient takes four deep inspirations, holding the breath, while the lungs are fully inflated, for as long as possible. The time that elapses between inspiration and expiration lengthens with each attempt—from possibly twenty seconds to one minute—and the exposure is made immediately after the fourth inhalation. The book, as a whole, is another illustration of the fact that in Germany, as in this country, *x*-ray work is steadily approaching the dignity of an exact science.

A further contribution to *x*-ray literature comes from Germany in the shape of the third edition of DESSAUER and WIESNER'S *Manual of Roentgen Procedure*.[2] This work was first published in 1903, which is a period of ancient history so far as the *x*-rays are concerned, and it now reappears enlarged and brought up to date. It is essentially a textbook for the physicist and the practitioner, and deals very fully with the physical, technical, and medical aspects of the question. The medical section affords a good deal of information on such matters as *x* ray diagnosis, the interpretation of the shadows in thoracic and abdominal examinations, and the localization of obscure fractures. In the chapters dealing with radiotherapy, which has made greater progress than any other branch of *x*-ray application, Dr. Holzknecht describes his methods of procedure in various superficial diseases. There are the usual chapters on orthodiagraphy, stereoscopy, and photographic manipulation. The "technical groundwork of the Roentgen method" is presented at length, one of the editors being well known in Germany commercially for the improvements he has introduced into *x*-ray apparatus. The problem of eliminating secondary radiation is attacked, and generally it is sought to "sharpen and refine the weapon" which Roentgen placed in the hands of the profession. The prefaces to the previous editions, which are here republished, help the reader to realize how much progress has been made during the last five years, and how those mistakes and that lack of cohesion which once led to a general distrust of *x*-ray practice have gradually been overcome. The refinement with which protective methods have been developed in Germany is reflected in the pages of this volume.

[2] *Leitfaden des Röntgenverfahrens.* Edited by Ing. Friedrich Dessauer and Dr. B. Wiesner. Third edition. Liepzig: Otto Nennich. 1908. (Medium 8vo, pp. 336, 113 illustrations in text and 3 plates. M. 10.)

PRESCRIBING.

THE art of prescribing is one to which too little attention has long been given in the professional training of the student of medicine. Whatever faults may have attached to the old apprenticeship system, it possessed one distinctive feature of value in the practical education of the medical man; for it taught him, though in a very rule-of-thumb way, the physical properties and dosage of drugs, and also the various methods in which they might be compatibly and attractively dispensed. He also learned something of their commercial value, and thus acquired a stock of information of no small importance as an economic factor in the future conduct of his business should his career develop, as it did in the majority of cases, into that department of work which is concerned with general practice. When the apprenticeship system fell out of favour many students of medicine, in order to familiarize themselves with the drugs on which they were to depend for results in their subsequent combat with disease, sought the education which they felt to be essential—but which was at that period of educational development in medicine practically unobtainable either at university or college—by a short term of service in the shop of a busy druggist. Subsequently the various teachers of therapeutics began to realize that it was necessary to elaborate their didactic courses of lectures by the establishment of ancillary classes for the practical study of pharmacy, in order to teach the subject on a scientific plan rather than allow it to be casually acquired after the haphazard method which of necessity pertained to knowledge gained either in a practitioner's surgery or behind a chemist's counter. This step marked a distinct advance in the method of instruction in an important department of professional education, but though such tuition is now provided for by suitable laboratories in all medical schools, it is regarded as one of the minor subjects to which the student's attention is, we believe, still inadequately directed. The growing recognition of its importance, however, is evidenced by the number of books which, within recent years, have been written on the subject. The latest to come under our notice is a volume entitled *A Manual of Prescribing*,[3] written by Professor MARSHALL of St. Andrews University. The subject is not one which lends itself to much originality in treatment, but we confess to a feeling of disappointment that this treatise, like so many others that have preceded it, lacks the element of individuality which is requisite to make any book on the prescribing of drugs useful and comprehensive enough, and at the same time attractive. Dr. Marshall's volume is full of valuable information, and the facts set forth are carefully mustered and clearly stated, but the volume, as a whole, will, we think, appeal more to dispensing chemists than to practitioners of medicine. As a work of reference it is admirable, but it would have been of greater help to the prescriber, as distinguished from the dispenser, if it had entered more fully into details bearing upon the art of writing prescriptions so as to get from drugs the maximum of their therapeutic value, while also presenting them to the patient in the most acceptable and assimilable form. There is a useful appendix containing an English-Latin vocabulary, and an excellent index makes reference to the various sections of the book easy.

Dr. L. PRON'S *Formulaire Synthétique*[4] is a pocket volume which the publisher's advertisement claims to be arranged on an entirely new and original principle. This arrangement is, however, sufficiently familiar in this country, being simply the alphabetical list of "diseases and remedies" which may be found in sundry gratuitous publications. The arrangement here is quite unscientific, as there is no attempt to distinguish between diseases and symptoms, and groups of remedies, such as "antiseptics," "révulsifs," etc., are interpolated in their alphabetical positions. Some of the suggestions for treatment are unfamiliar and might be useful, but this is a kind of book which is obviously liable to abuse.

[3] *A Manual of Prescribing: For Students and Practitioners of Medicine.* By C. R. Marshall, M.D., Professor of Materia medica and Therapeutics in the University of St. Andrews. London: J. and A. Churchill. 1908. (Fcap. 8vo, pp. 381. 6s.)

[4] *Formulaire Synthétique de Médecine.* Par le Dr. L. Pron. Paris: Jules Rousset. 1908. (Pott 8vo, pp. 602. Fr. 6.)

HYDROSOLS, OR "METALLIC FERMENTS."

WHEN an electric spark is formed between two metallic electrodes in distilled water, a metallic solution or suspension is formed, and to this has been given the name of an electrolytic metallic ferment, or hydrosol. They are called ferments because it is claimed that they possess the properties of diastatic ferments; their action seems to be identical whatever the metal employed, although palladium is said to act better and more regularly than the others. In therapeutics they are administered by hypodermic injection, and they are recommended for the treatment of pneumonia, acute rheumatism, acute meningitis, typhoid fever, diphtheria, influenza, for many inflammatory diseases, as well as for Bright's disease and diabetes. Professor ROBIN'S book[5] contains chapters in which the physiological and therapeutical properties of these hydrosols are explained and their applications to the treatment of disease discussed in detail, but its perusal has failed to convince us that these alleged remedies have any therapeutic effect at all.

[5] *Les Ferments métalliques et leur emploi en thérapeutique.* Par Albert Robin, Professeur de Clinique Thérapeutique à la Faculté; Membre de l'Académie de Médecine. Paris: J. Rueff. 1907. (Cr. 8vo, pp. 250. Fr. 4.)

COMPARATIVE ELECTRO-PHYSIOLOGY.

PROFESSOR CHUNDER BOSE of Calcutta has followed up the book on plant response which he published in 1906 by another volume on *Comparative Electro-Physiology*.[6] Perhaps the most barren subject in the whole range of physiological studies is that of electro-physiology, considering the enormous amount of work that has been done upon it in the last fifty years by eminent men, who, hoping thereby to find a clue into the mystery of the processes of life and the nature of nervous energy, have sedulously pursued the lines of study initiated by du Bois-Reymond. Professor Bose seeks to group the diverse phenomena of the electrical response of plant and animal tissue, and even of metallic wires, when excited by mechanical, thermal, or electrical means under simple generalizations. In the case of isotropic organs, he summarizes all his experimental observations under the following formulae: (1) Excitatory response takes place by contraction and galvanometric negativity; (2) increase of internal energy induces the opposite effect of expansion and galvanometric positivity. While for anisotropic organs he arrives at the following formulae: (1) On simultaneous excitation of two points, A. and B., the responsive current flows in the tissue from the more to the less excited. (2) Conversely, if under simultaneous excitation, the responsive current be from B. to A., B. is the more excitable of these two points. Professor Bose's experimental methods show great ingenuity, and many of his observations on plants are of much interest, especially those on the glandular excretions of sundews, pitcher plants and other fly-eating plants, and their comparison with gastric glands, those on root absorption and secretion and the ascent of sap, and those on the motile leaflets of biophytum which he employs, he states, to demonstrate the anodic and cathodic effect of a constant current, and the velocity of transmission of an excitatory wave, etc., in a singularly interesting and conclusive manner. He claims to have demonstrated by means of his optical lever—by which he obtains magnification of effect up to 100,000 times—that nerve is a contractile substance; that it expands and gives a positive electrical variation on very weak excitation, and contracts and gives a negative variation on stronger excitation, and he assumes that the former effects arouse in consciousness sensations pleasurable in tone, and the latter painful. The contractility of nerve has never been demonstrated by any European physiologist, and Professor Bose must excuse us in doubting whether his effects were not obtained by some experimental error. He regards the vascular bundles of plants as serving the functions of nerves, and maintains that the veins, which the bundles form in the leaves of plants, form a vast nervous mechanism for catching the stimulations of light, and for maintaining the tone and vigour of the plant by transmitting the energy so caught to all parts of the plant. Thus he explains the experimental observation that one branch of a plant, if placed in the dark, does not lose its tone, so long as the rest of the plant is illuminated. The maintenance of health in animals by the continual instreaming of adequate sense stimuli, the loss of tone which results from ennui, the failure of health which often results when a busy man is forced to retire, are matters of common observation. Professor Bose now asserts that the tone and growth of plants depends not only on their inborn power of assimilation, but on the constant inflow of energy, the vascular bundles distributing the energy received by the external parts of the plants to the deepest and most remote portions of the parenchyma. While admitting that there is much of interest and excellent device of experimental work in this book, we cannot help thinking that Professor Bose strains his facts to suit his theories. All his theoretical statements, it is true, are supported by photographic curves of electrical and mechanical response, but no information is given as to the number of observations or of the negative or contrary results which occur in every research. It is so easy to get some kind of effect out of a galvanometer or an optical lever that multiplies 100 000 times, that we hesitate to accept Professor Bose's results until they receive confirmation at the hands of other electro-physiologists. With Dr. Waller the author is constantly at variance, and we should like to hear his side of the questions involved. In all his work Professor Bose has used the galvanometer only, and has neglected the capillary electrometer, which alone can demonstrate the rapid diphasic variations of uninjured animal tissues; apparently he knows nothing of the researches on nerve and the retina made with this instrument by Professor Gotch.

[6] *Comparative Electro-Physiology*. By Professor J. C. Bose, M.A., D.Sc. London: Longmans, Green, and Co. 1907. (Demy 8vo, pp 803. 15s.)

NOTES ON BOOKS.

THE REGISTERS FOR 1908.[7]

THE *Medical Register* and *Dentists' Register* for 1908 were issued on March 21st. From the usual table in the former it appears that the number of persons whose names were registered for the first time during 1907 was 1,221; this was slightly in excess of the average for the last five years, which was 1,212, and shows an excess of 24 over the number so registered in 1906. The number of persons restored to the *Register* was 66; we may assume that the majority were practitioners whose names had been removed under Section XIV of the Medical Act, 1858, which empowers the Registrar to write a letter to any registered person, addressing him according to his address on the *Register*, to inquire whether he has ceased to practise or has changed his residence, and in the event of no answer being returned within a period of six months to erase the name from the *Register*. The number of names removed from the *Register* during 1907 was 989; of these, 667 were removed on evidence of death, and 316 under the operation of the section just referred to. The total number of names on the *Register* on December 31st, 1907, was 39,827, an increase of 298 as compared with 1906. The list of practitioners registered as in possession of a foreign qualification does not grow rapidly; in the issue for last year there were 19, and this year 23.

From the *Dentists' Register* it appears that the proportion of persons registered as in bona fide practice of dentistry before the appointed date continues slowly to decrease the percentage last year was 44.34; this year it is 42.73; the total number of persons on the *Dentists' Register* has increased from 4,772 to 4,873.

Mr. LEDIARD'S little book upon *Anatomy and Art*[8] is a reprint of a lecture delivered before the Society of Arts and Crafts of Carlisle. It deals with anatomy in relation to art as seen in the sculptures of Assyria, Egypt, Greece, and in the pictures of the best known ancient and modern artists. Prehistoric art is not touched upon and strangely little is said about the relation of anatomy to art in India; indeed Mr. Lediard appears to think that the Hindus had little or no knowledge of anatomy and he attributes their tendency to create monstrosities to want of knowledge rather than to imagination revelling in symbols, but at the same time he does not appear to be convinced that a knowledge of anatomy is absolutely essential to artists who make a speciality of the human figure. His lecture is suggestive rather than dogmatic, and is well worth the consideration of all who are interested in the relation of anatomy to art.

The *Reminiscences* of the oldest army medical officer on the retired list, now in his 85th year, with a service of sixty-three years[9] could not fail to be interesting. He relates military experiences in the Crimea, Cape, China, and Japan; but the book is largely a record of remarkable Christian missionary zeal, undertaken wherever quartered. On retirement in 1871 he laboured for ten years in a London Medical Mission, in the squalid region of St. Giles, now largely cleared for the Kingsway. We wish Dr. SAUNDERS yet many more years to crown a singularly altruistic life.

[7] London: Spottiswoode and Co. *Medical Register*, 10s. 6d.; *Dentists' Register*, 3s. 4d.

[8] *Anatomy and Art*. By Henry A. Lediard, F.R.C.S. Published by Simpkin, Marshall and Co., London. (Demy 8vo, 32 pages. Price, 6d.

[9] *Reminiscences*. By George Saunders, C.B., M.D. London: James Nesbit and Co. 1907. (Pott 8vo, pp. 93. 1s.)

CAPTAIN F. J. BRAKENRIDGE, R.A.M.C., has been granted permission to accept the Imperial Ottoman Order of the Medjidieh, Fourth Class, conferred upon him by the Khedive of Egypt in recognition of valuable services rendered by him.

THE CASE OF SOUTHERN *v.* LYNN THOMAS AND SKYRME.

The appeal headed "Lynn Thomas and Skyrme Fund," which appears below, will, we have no doubt, command a wide measure of sympathy from the profession. It is numerously and influentially signed, and when circulated will be accompanied by a "First List of Subscriptions," received in response to the limited number of private communications which it has alone been possible hitherto to make. The sum thus collected already amounts to over £700. This "First List" will appear in our next issue, with such additions as may be received in the intervening period by the Honorary Secretary, Mr. William Sheen, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff.

The delay in starting the fund has been due to various unavoidable reasons. A full report of the legal proceedings will be found in our issues of December 1st and 8th, 1906; and in the issue of December 8th, in an article headed "Putting Back the Clock," there is a short summary of the case, from which the following is quoted:

> The facts of the case are fairly simple. The plaintiff, who was riding a bicycle, came into collision with a cart, and was thrown, bruising his face, wrist, hand, knee, and ankle on the right side, and sustaining a fracture of the surgical neck of the humerus, complicated by subglenoid dislocation of the head of the bone, and much bruising of the soft parts about the shoulder. The dislocation was reduced, but the head of the bone remained rotated with the articular surface inwards, and the fractured surface outwards. The fractured end of the shaft was drawn upwards and inwards into the axilla, and the fractured surfaces could not be brought into end-to-end apposition. The best that could be done in the circumstances was done—the bones were brought into lateral apposition, and union took place; the patient recovered with an arm the movements of which were limited. Skiagrams were taken which of course showed the displacement of the head, and the fact that the bones had united not by end-to-end but by lateral apposition.

At the first trial in Cardiff the jury disagreed. At the second trial in London, after retiring three times and being absent altogether for more than two hours, a verdict was returned for the plaintiff for £100 damages, one-twentieth of the amount claimed. This verdict carried the costs of the two trials. Stay of execution was granted for a fortnight to permit defendants to give notice of appeal. Such notice was given, but subsequently withdrawn on account of Dr. Skyrme being in ill-health, while Mr. Lynn Thomas was advised not to proceed with the appeal alone as he was joined with Dr. Skyrme in the former actions. A further action was brought by the plaintiff to cover expenses of preparing his case for appeal; this he lost.

The expenses of the trials may be thus tabulated:

	£	s.	d.
Plaintiff's taxed costs and damages (bills delivered, £3,342 12s. 0d.) ...	1,696	13	10
Amount paid by defendants over and above amount allowed by the Medical Defence Union	1,250	0	0
Miscellaneous legal expenses, including notice of and preparation for appeal and transcript of first trial, etc.	250	18	5
Amounts paid by Medical Defence Union for both trials	928	3	6
	£4,125	15	9

With regard to the sum of £1,250 stated above to have been paid by the defendants, it should be explained that the Medical Defence Union pays for *defence*, including counsels' fees up to a limited amount. In the event of an action being lost it does not pay damages or the costs of the other side.

Special counsel were briefed at the second trial, and the expenditure under this head was largely increased by the protracted duration of the trial. The disagreement of the jury at the first trial, and the serious issue involved in the case for the profession at large, indicated that no expense should be spared in presenting the case to the court at the second trial, and the briefing of special counsel was in accord with the advice of leading surgeons who gave evidence for the defendants. Numerous incidental legal expenses inseparable from a protracted trial materially added to the costs.

The sympathy of the profession with the defendants was immediately shown by a dinner given to them in Cardiff within one week of the conclusion of the trial, at which about 130 medical men were present, and the expressions of sympathy and confidence were unanimous. Practical proof of this feeling may now be given by subscribing to the fund. The movement has our emphatic support, and we trust the entire sum will be collected. It is not asked that large sums should be given by individuals, and, indeed, the greater the number who subscribe the stronger will be the evidence of sympathy afforded by the list.

The feeling of the profession is not confined to this country. A "Protest," embodying the opinion of leading surgeons in the United States, Canada, and on the continent of Europe on the case, is being numerously signed, and we hope to publish it with the signatures in a later issue.

The technical aspects of the case and the treatment of fractures in general are ably and judicially dealt with in the paper by M. Lucas-Championnière, which appears elsewhere, and to those we do not refer here.

Two important questions arise from the case:

1. Are the judicial processes at present in use in this country those best calculated to obtain a right judgement in these highly technical cases?

2. Are the means of "medical defence" at present obtainable adequate?

The following is the text of the appeal, with list of signatures already received:

APPEAL.

LYNN THOMAS AND SKYRME FUND.

Dear Sir,—A fund has been started to defray the heavy legal expenses incurred by Mr. J. Lynn Thomas, C.B., F.R.C.S., Surgeon to the Cardiff Infirmary, and by Dr. H. E. Skyrme of Cardiff, in defending the actions Southern *v.* Lynn Thomas and Skyrme.

The plaintiff had sustained a fracture-dislocation of the upper end of the humerus, and, being dissatisfied with the result of the treatment adopted, claimed two thousand pounds (£2,000) damages. The case was first heard at the Cardiff Assizes in 1905, when the jury disagreed. A new trial took place in the King's Bench Division, London, in November, 1906, when the jury awarded the plaintiff one hundred pounds (£100) damages, the costs falling upon the defendants. The jury was apparently influenced by the view that the line of treatment which had been recommended could not be accepted as proper, as it could not be quoted as being set forth in the recognized surgical textbooks in use in this country, although the evidence went to show that the measures prescribed are fairly well known and valued in our profession. The amount which Mr. Lynn Thomas and Dr. Skyrme have to pay is three thousand one hundred and ninety-seven pounds, twelve shillings, and threepence (£3,197 12s. 3d.).

We feel that members of the profession all the world over will wish to show their sympathy with Mr. Lynn Thomas and Dr. Skyrme by uniting to support the fund which is now being raised to meet the above heavy legal expenses. We therefore appeal confidently to you to make a donation to the fund, and we hope that the sum needed will be speedily subscribed, so that our profession and the public alike may recognize our full sympathy with our colleagues, and our entire agreement with their conduct of one of a class of cases the treatment of which must invariably be an anxious and difficult undertaking.

We are, yours faithfully,

HENRY DAVY, President, British Medical Association.
H. M. ELLIS, K.C.B., Director-General, Royal Navy Medical Service.
ALFRED KEOGH, K.C.B., Director-General, Army Medical Service.
J. M. COTTERILL, President of the Royal College of Surgeons of Edinburgh.

HENRY R SWANZY, President, Royal College of Surgeons of Ireland.
JOHN WILLIAMS, K.C.V.O., Llanstephan, Carmarthenshire.
W. OSLER, Regius Professor of Medicine, University of Oxford.
EDMUND OWEN, Chairman of Council, British Medical Association.
ISAMBARD OWEN, Principal, Armstrong College, Newcastle-on-Tyne.
LAUDER BRUNTON, Consulting Physician, St. Bartholomew's Hospital.
ARTHUR CHANCE, Surgeon-in-Ordinary to Lord-Lieutenant of Ireland.
THORNLEY STOKER, Ex-President, Royal College of Surgeons of Ireland.
JAMES BARR, Lecturer on Clinical Medicine, University College, Liverpool.
G. LENTHAL CHEATLE, C.B., Surgeon, King's College Hospital.
A. W. MAYO ROBSON, Consulting Surgeon, Leeds General Infirmary.
J. A. MACDONALD, Physician, Taunton and Somerset Hospital.
J. MAGEE FINNY, Professor of Medicine, Trinity College, Dublin.
R. SHINGLETON SMITH, Emeritus Professor of Medicine, University College, Bristol.
A. FRANCIS DIXON, Professor of Anatomy and Medicine, Trinity College, Dublin.
W. S. HAUGHTON, Surgeon, Steevens's Hospital.

Surgeons who gave or were ready to give Evidence in the London Trial.

G. H. MAKINS, C.B., Surgeon to St. Thomas's Hospital.
C. MANSELL MOULLIN, Surgeon, London Hospital.
A. A. BOWLBY, C.M.G., Surgeon, St. Bartholomew's Hospital.
ANDREW CLARK, Consulting Surgeon, Middlesex Hospital.
H. F. WATERHOUSE, Surgeon, Charing Cross Hospital.
A. PEARCE GOULD, Surgeon, Middlesex Hospital.
W. ARBUTHNOT LANE, Surgeon, Guy's Hospital.
H. W. PAGE, Consulting Surgeon, St. Mary's Hospital.
A. H. TUBBY, Surgeon, Westminster Hospital.
ROBERT JONES, Surgeon, Royal Southern Hospital, Liverpool.

Professors of Surgery.

WILLIAM MACEWEN, Regius Professor of Surgery, University of Glasgow.
CHARLES B. BALL, Regius Professor of Surgery, Dublin University.
J. H. NICOLL, Professor of Surgery, Anderson's College, Glasgow.
HECTOR CAMERON, Professor of Clinical Surgery, University of Glasgow.
FRED. PAGE, Professor of Surgery, University of Durham.
T. SINCLAIR, Professor of Surgery, Queen's College, Belfast.
R. J. PYE-SMITH, Professor of Surgery, University of Sheffield.
H. GILBERT BARLING, Professor of Surgery, University of Birmingham.
C. A. MORTON, Professor of Surgery, University College, Bristol.
C. YELVERTON PEARSON, Professor of Surgery, Queen's College, Cork.
JAMES SWAIN, Professor of Surgery, University College, Bristol.
HY. ALEXIS THOMSON, Lecturer on Surgery, School of Medicine, Edinburgh.

Senior Surgeons of Provincial Hospitals.

SINCLAIR WHITE, Royal Infirmary, Sheffield.
W. F. BROOK, General Hospital, Swansea.
J. RUTHERFORD MORISON, Royal Victoria Infirmary, Newcastle-on-Tyne.
A. HAMILTON, General Infirmary, Chester.
J. FURNEAUX JORDAN, Queen's Hospital, Birmingham.
G. H. PERCIVAL, General Infirmary, Southampton.
E. D. BOWER, General Infirmary, Gloucester.
T. K. CLARKE, The Infirmary, Huddersfield.
W. ALEXANDER, Royal Southern Hospital, Liverpool.
J. E. GARNER, Royal Infirmary, Preston.
J. D. HARRIS, Royal Devon and Exeter Hospital, Exeter.
J. PAUL BUSH, Royal Infirmary, Bristol.
B. THORNTON, Royal Sea-Bathing Hospital, Margate.
F. C. LARKIN, Stanley Hospital, Liverpool.
W. H. JALLAND, County Hospital, York.
A. J. WILLIAMS, North Riding Infirmary, Middlesbrough.
WM. BERRY, Royal Albert Edward Infirmary, Wigan.
H. P. SYMONDS, Radcliffe Infirmary, Oxford.
CYRIL WACE, Royal Hants County Hospital, Winchester.
T. J. VERRALL, Sussex County Hospital, Brighton.
A. BOUTFLOWER, Salford Royal Hospital, Manchester.
R. H. LUCE Royal Infirmary, Derby.
G. S. HATTON, North Staffordshire Infirmary, Newcastle, Staffordshire.
P. RHYS GRIFFITHS, The Infirmary, Cardiff.
W. H. SHETTLE, Royal South Hants Hospital, Southampton.
L. S. LUCKHAM, Salisbury Infirmary, Salisbury.
O. E. B. MARSH, County Hospital, Newport, Monmouth.
A. JACKSON, Salop Infirmary, Shrewsbury.
R. STIRLING, Royal Infirmary, Perth.
J. COTTER, North Infirmary, Cork.
H. R. TOWNSEND, South Infirmary, Cork.
J. WARD COUSINS, Royal Portsmouth Hospital, Southsea.

Officials of the British Medical Association in Wales.

W. T. EDWARDS, Cardiff, Ex-President, British Medical Association.
T. D GRIFFITHS, Swansea, Ex-President, British Medical Association.
D. J. WILLIAMS, Representative on Council of South Wales Branch.
H. JONES ROBERTS, Representative on Council of North Wales Branch.
E. D. EVANS, Chairman, North Wales Branch.
W. B. CRAWFORD TREASURE, Chairman, Cardiff Division.
E. EVANS, Chairman, South-West Wales Division.
W. D. STEEL, Chairman, Monmouthshire Division.
J. ARNALLT JONES, Chairman, Swansea Division.
E. W. JONES, Chairman, North Glamorgan and Brecknock Division.
E. J. MACLEAN, Representative for Representative Meeting, Cardiff Division.
W. J. GREER, Representative for Representative Meeting, Monmouthshire Division.
W. E. THOMAS, Representative for Representative Meeting, North Glamorgan and Brecknock Division.
HUGH JONES, Representative for Representative Meeting, South Carnarvon and Merionethshire Division.
E. O. PRICE, Representative for Representative Meeting, North Carnarvon and Anglesey Division.
W. MITCHELL STEVENS, Honorary Secretary, South Wales and Monmouthshire Branch.
A. HANSON, Honorary Secretary, South Wales and Monmouthshire Branch.

Medical Societies in Wales.

A. GARROD THOMAS, President, Newport Medical Society.
J. J. BUIST, President, Cardiff Medical Society.
D. E. EVANS, President, Swansea Medical Society.
D. J. JONES, President, Eastern Valleys Medical Association.

FIRST LIST OF SUBSCRIPTIONS.

Amount received up to March 20th.

Subscribers of Ten Guineas.

Ball, Sir Charles B., Dublin.
Cheatle, Geo. Lenthal, C.B., London.
Edwards, W. Lloyd, Barry, Glam.
Edwards, W. T., Cardiff
Gould, A. Pearce, London.
Lane, W. Arbuthnot, London.
Makins, G. H., C.B., London.
Morison, J. Rutherford, Newcastle-on-Tyne
Moullin, C. W. Mansell, London.
Nicoll, J. H., Glasgow.
Parry, E. J., Pontycymmer, Glam.

Subscribers of Ten Pounds.

Jones, Robert, Liverpool.
Thomas, A. Garrod, Newport.

Subscribers of Six Guineas.

Stockport Infirmary Honorary Staff, per E. Rayner, Stockport.

Subscribers of Five Guineas.

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MEDICAL INSPECTION OF SCHOOLS.

Deputation to Mr. McKenna.

The President of the Board of Education last week received (we learn from the *Times*) a deputation from the Executive Committee of the Association of Municipal Corporations with reference to the question of medical inspection in schools. Mr. A. H. Scott, M.P., introduced the deputation.

Alderman Oulton (Chairman of the Education Committee of Liverpool) urged that there should be a contribution made by the Treasury to defray the cost of the medical inspection of school children. The Ex-Mayor of Sunderland, Mr. Laverack (Town Clerk of Hull), and the Secretary of the Bradford Education Committee also spoke.

Mr. McKenna, in reply, said he did not deny that the Act would throw an additional charge upon the cost of education. He was prepared to recommend to the Treasury that provision should be made in the coming financial year for medical inspection, and further, that the provision should be in the form of a special grant. He thought that the cost of medical inspection would come to something between 6d. and 1s. a child, and he hoped he was not overstating it. In the Bill which he had introduced this year it was proposed to increase the existing grants to local authorities by a sum of £1,400,000, and the actual increase by reason of the special provisions of the Bill would not, in his judgement, come to anything like half that amount. He believed, on the contrary, that the education authorities would not only have an additional grant, but that there would be to some extent a saving on the rates. The additional grant would come to about 5s. 6d. a child, which he thought would be about five or six times the amount which the medical inspection would actually cost. Even the local authorities who were worse treated under the Act would get at least 4s., and he thought in those circumstances it would be admitted that the proposal of the present Bill did give ground for the expectation that they would be far more than indemnified for any special burden imposed under the Administrative Provisions Act. It had been put to him that the local authorities would lose grant by the absence of the children from school owing to medical inspection, and he said that it was obvious they must not suffer, and that means must be devised if possible which would relieve them from suffering any reduction owing to their carrying out the law. He could only ask them to place their confidence in them, for the present at any rate, upon that point. Some points had been mentioned to him in a letter in connexion with that deputation with regard to the relations of the education authority to the sanitary authority, and he thought that there was a little misunderstanding. A great deal of the work which was included under the Administrative Provisions Act was work directly related to, and of the same kind as, the work which was now done by the sanitary authority. In the Board's memorandum they had endeavoured to leave to the local authorities great latitude, and they had interpreted the Act in a way which gave scope for elasticity. With regard to the subject of specific medical treatment, they did not propose to lay down any hard and fast rule, but the local authorities must, with the assistance of their own experience, find out what was best for their particular districts.

Alderman Oulton said that in the case of a girl who left school at 14 or 15 years of age, there might be some objection to medical examination of this kind.

Mr McKenna remarked that that was a very valuable point, and he could quite understand that there might be great repugnance to examination in that case being made compulsory. He would consider the point.

The Secretary of the Bradford Education Committee thought that if children could be medically examined when they became half-timers, and again when they left school, some valuable evidence would be obtained as to the effect on children of being allowed to work half-time.

Dunfermline.

In his second annual report on the medical inspection of school children in Dunfermline, 1907 Dr. J. C. Bridge, Medical Officer of the Carnegie Dunfermline Trust, states that the examination of all children attending each school has been undertaken continuously, with a view to minimizing, as far as possible, the interruption of school work.

Refusals on the part of parents to submit their children to medical examination have gradually decreased, although there still remain a certain number who prefer that they should not be examined.

The examination is carried out as privately as possible in a warm room, great care being taken to prevent any child from taking cold. The possibility of many of the children who are not submitted for examination being those who most require it must not be forgotten in considering the details in the following report.

The examination of the girls in the senior departments is carried out without the children being undressed. This limits the observations that can be made.

Should the condition of any child appear to require further investigation, a request is sent to the parent for permission to carry out the examination. This is granted in most cases.

It is difficult to ascertain the number of children who have received treatment in consequence of letters sent to the parents. From the beginning of next year a scheme will be started by which it is hoped that the children who are found physically unfit may be brought more closely to the notice of the instructors in physical training and the teachers. The exercises can thus be regulated. Children will be re-examined from time to time with a view to altering, if necessary, the course of physical exercises.

An endeavour will also be made to obtain, through the parents, the past history of each child examined as regards infectious diseases.

Measurements.

Height.—At all ages, in the cases of both boys and girls (1,074 boys and 1,202 girls) the Dunfermline children are just below the standard of the average height estimated by the Anthropometric Committee. Particularly is this so in the case of the girls, the difference becoming especially marked from 10 upwards.

Weight.—The weight of the Dunfermline boys is practically identical with that of the anthropometric standard, but the average weight of the girls is below the standard, the difference being more pronounced from the age of 10 upwards. In comparing the average weight of boys and girls, the average weight of the girls becomes greater than the boys between 13 and 14 instead of between 12 and 13, as is the case in the Committee's standard. Only at the early ages, from 5 to 8, and that in the case of the boys alone, is the Dunfermline average above the standard. These averages are probably greatly influenced by the small numbers examined, so that too much importance cannot be attached to them. On the whole, the averages for Dunfermline do not compare so favourably as last year with the Anthropometric Committee's standard.

Chest Measurements.—These consist of (1) girth of chest at rest (normal); (2) girth of chest fully expanded (maximum); and (3) girth of chest after complete expiration (minimum). The reliability of measurements depends upon the intelligence of the child in carrying out certain necessary details. In the case of the boys there is a slight increase in the chest expansion since last year, especially from the ages of 10 and upwards, when the physical training which the boys have been receiving during the past three years ought to begin to make itself apparent. The same boys, however, have not been examined as last year. In boys with the greatest chest measurements it has been generally noted that swimming is one of their forms of recreation, and the number learning is increasing year by year.

Nutrition.—Of the 1,068 boys who were examined, 37·39 per cent. were found good, 48·70 per cent. of average nutrition, while 13·91 were bad. Taken throughout, the percentages at each age bore a close relationship to one another, the poorest state of nutrition being found at the middle ages. The state of nutrition has been observed in 428 girls. The number examined from 9 to 14 has been too small to be of value. At 6 and 7 years 25 per cent. of the 200 girls examined were of good nutrition, and 18 per cent. of bad. At the same age, in the boys, 38 per cent. were good, and 11 per cent. bad. This coincides with the weight results.

Teeth.—Of 492 boys, at the ages from 7 to 10 years, only 25, or just over 5 per cent., had a sound (no decaying) set of teeth. The remaining 95 per cent. had decaying teeth in varying numbers; 20 per cent., or one-

fifth of the whole number at those ages had teeth which had been classified as bad. Much of this is due to the remains of some of the decaying primary teeth in the mouth. Not only does their presence injure the child's general health but leads to caries of the permanent teeth. The presence of carious teeth frequently sets up a condition of chronic inflammation of the glands of the neck. Should the specific organism of tuberculosis enter the child's body, glands in such a state present a very suitable starting point for the disease. Scars, the result of very necessary operations, are but a very mild sequence to the train of events. It is not too much to say that in the forefront of preventive medicine, and in particular the elimination of tuberculosis from the race, proper attention to the teeth of children must play an important part. At present in but a very minute number is any attempt made to preserve the teeth by daily cleaning, and in none of the children examined was there found any attempt to arrest decay by stopping. The question of dental treatment for children attending the schools is an urgent one. Teeth cleaning should be a part of the daily routine during school hours. The result of the examination of 1,208 girls was as follows: Out of 546 examined between the ages of 7 and 10 only 3 per cent., or 2 per cent. less than the boys, had a sound denture, 29 per cent. having bad teeth.

Eyesight.—The 729 boys examined were classified according to their ability to read Snellen's types at 6 metres distance. Both eyes were tested separately as well as together, the following results being those obtained from reading with both eyes together: 87.65 per cent. were found with normal vision ($\frac{6}{6}$), 6 58 per cent. with fair vision ($\frac{6}{9}$), while 5.77 had bad vision ($\frac{6}{12}$ or worse). The latter have been referred for treatment and the defect found to be due to errors of refraction. Many of the children with fair vision had a certain degree of hypermetropia, which, although it did not interfere with the visual acuity, in many cases caused sore eyes, headache, etc., and was thus detrimental to progress in school. Of 639 boys with normal vision, reading with both eyes together, 12 per cent. were found to have one eye more or less defective. The percentage of children with normal vision was highest at age 11. The same tests were applied to 797 girls; 80.56 per cent. were found with good vision, 12.17 per cent. with fair vision, and 7.27 per cent. had bad vision and required suitable correction, which was advised.

Vision Corrected.—During the year, 68 children were found wearing spectacles. Among 1,068 boys and 1,208 girls, or a total of 2,276 children, as far as it was possible to ascertain, 10 boys and 18 girls had been suitably corrected during the past year. There are still many requiring spectacles whose parents have been informed but had not sought advice. Expense no doubt played an important part, but there was still much ignorance regarding the ill effects of neglect.

Squint.—All the cases observed in boys were convergent, 32 being noted. The importance of correction, either by glasses or operation in early life, is pointed out. Among girls, 31 cases of squint were observed, 30 being convergent and 1 divergent. In 16 cases there was normal vision in the squinting eye, the squint being very slight. In 11 cases the vision was more or less defective, and in 4 the squinting eye had become practically visionless. The case of divergent squint was interesting. The spectacles required refitting, the condition of the eye having improved. The squint after correction was hardly noticeable. The girl stated that previous to wearing spectacles she suffered from fits, but since procuring spectacles last year she had ceased to have any fits, the probability being that the eye strain caused by the defective vision produced a cerebral irritation, and when this was remedied by spectacles the fits ceased.

Blepharitis and Styes.—In 50 boys suffering from this condition of the lids, the cases were very mild, with the exception of two; 66 cases of blepharitis and 6 of styes were observed among 1,208 girls.

Conjunctivitis.—Seven cases of the chronic variety and 4 of the acute were noted among the boys, and 4 chronic cases among the girls. Of the 2,276 children examined, 15 suffered with this complaint.

Corneal Nebulae.—This condition was noted in 19 boys and 10 girls. In 11 boys vision was little affected, but in the remaining 8 vision was more or less greatly impaired, amounting in 4 cases to almost total blindness. Of the 10 cases in girls, in 4 cases the affected eye had lost all vision.

Strumous Keratitis.—One boy and 4 girls were affected; all were referred for treatment with beneficial results.

Iritis.—One case was noted among the boys.

Disease of the Nose and Throat; Adenoids.—Although these are commonly said to disappear at the higher ages, other defects result from them such as mouth-breathing, deafness, and flat chest, to the impairment of health. Treatment should be applied early. Of 1,068 boys and 1,208 girls, 64 were found to be suffering from adenoids, 20 from purulent discharge of the ear; 102 were more or less deaf, and of those who had enlarged tonsils, in 70 they were markedly enlarged, 164 were recorded as medium and 217 as slight. Chronic enlargement of the tonsils was found in 188 boys, or 18.1 per cent. of the number examined. In 22 cases immediate attention was necessary. Among the girls enlarged tonsils were found in 263 cases, or 21.7 per cent., and in 48 the condition was well marked. Moderately enlarged tonsils were present in 104 girls.

Ears.—Of the 1,068 boys examined, 52, or 4.8 per cent., suffered from defective hearing, excluding those whose deafness was due to adenoids. In 11 cases purulent discharge from the ears was present. Of the 1,208 girls examined, 70, or 5.8 per cent., were found affected, purulent discharge being present in 9 cases.

Heart.—Valvular disease was present in 36 boys, or 3.3 per cent. of the total number examined. Irregular or weak action of the heart was found in 23 cases. Nine cases of valvular disease and 6 cases of functional disease were found in this way among 428 girls examined.

Lungs.—Among the boys 73 cases with affections of the lungs were observed; of these, the most important were weak breath sounds in certain areas in 5 boys out of the 30; in addition to this defect, they showed signs of weak condition of the lungs generally. The 40 cases of bronchial catarrh were all of a mild character. Among the girls, 1 case only showed a badly-affected condition of the lungs. The remaining cases were all of a slight nature.

Glands in the Neck.—In 585 boys, or over half the total number examined, the cervical glands were found more or less enlarged. The same condition was found in 647 girls, or 53.5 per cent., of those examined.

Diseases of Bones and Joints.—Of 23 boys found suffering from diseases of the bones and joints, in only 4 was the defect such as to be a hindrance in after-life. Among the girls, only 6 cases were observed, none of which require special mention.

Hernia.—This condition was found in 12 boys.

Deformities.—280 children suffered from deformity. Those requiring special attention were cases of curvature of the spine.

Contagious Diseases of the Skin.—There were 18 cases noted of impetigo contagiosa, scabies, and ringworm.

Miscellaneous.—146 cases suffered from more common conditions not already noted. Anaemia (116 cases) was observed chiefly at the ages of 7 and 8, especially among the boys. Whether it bears any relation to the extra strain thrown on the child as he passes from the junior to the senior department it is impossible to say, but the fact is worth bearing in mind.

A SANITARY bureau has been established in the German colonies in East Africa with the object of promoting the suppression of epidemic diseases among the natives.

THE second Congress of the American School Hygiene Association will be held in Atlantic City, New Jersey, on April 17th and 18th, 1903. The programme includes papers on legislation relative to school hygiene, medical and sanitary inspection of schools and school children, treatment following the medical inspection of school children, nursing system in public schools, and other cognate subjects.

THE report submitted at the annual Court of Governors of the Royal Sea-Bathing Hospital, Margate, showed that the year's work left a considerable balance of income over expenditure, and this it was decided to devote to paying for the two additional observation wards now being erected. The present ambition of the hospital is for the endowment of more individual beds, and a wish was expressed that more people would visit Margate and see for themselves what excellent work this seaside institution is doing for those suffering from tuberculous disease.

ROYAL COMMISSION ON VIVISECTION.

Third Report.

(Continued from p. 694.)

Evidence of Lord Justice Fletcher Moulton, F.R.S.

Continuing his evidence, Lord Justice Fletcher Moulton said that from the ideas as to the possibility of producing a protective condition in infectious diseases before the mischief was done to which he had alluded (see British Medical Journal, March 21st, p. 694) there sprang almost immediately the two main methods of treatment. The one sought to produce this protective state during the period of the disease, and it was a treatment of that type which succeeded in rabies; the other sought to produce the protective state before the disease came, and was the method that was illustrated in anthrax. Finally, they led to the third line of discovery. Was it possible to get the protective substance from somewhere else, and introduce it during the disease, in order to antedate the time when the system would become strong enough to repel the attacks of these foreign invaders? If one thought of those three lines of discovery which had respectively led up to the treatment of rabies, to the prophylactic methods used in the case of anthrax, pneumonia, and other diseases, and to the serum treatment of diphtheria, one would find that they all came from the knowledge that the cause of the disease was a foreign organism, capable of multiplication, and that Nature defeated it by a change in the organism which made it more capable of resisting. These practical applications were the direct outcome of those two facts, which were pure pieces of scientific knowledge. So long as the disease was considered merely as a disease which ran its course, which was due to an unknown cause, whose consequences were only known by its symptoms, no one of these things could possibly be discovered. Their discovery was solely due to the experimental examination of natural processes. He was much amused by some statements made by one of the lady witnesses who had given evidence. She seemed to be very much disgusted with the consequences of all this knowledge, and if he might paraphrase what she said, it was, "Nature has made such nice drugs and put them in the plants all around us. Why should we not use these, and not go to such messy things as serums?" Nature had put all kinds of useful drugs in plants, but she never dreamt of using them for curative purposes. Her method of curing was entirely by means of the messy things with which the researches of the last forty years had led them to work. They were now, thanks to the theoretical knowledge acquired of the cause of these diseases, working to help Nature along the very lines which she had from the foundation of the world herself taken in fighting these diseases; and therefore, in his opinion, if they were to be guided in their action by respect for what Nature had done for them, their course would be to pay very little attention to drugs and to pay very much attention to those lines of treatment which were based on the study of the two closely analogous phenomena of recovery and immunity. Proceeding, the witness said he had been pointing out that the whole modern conception of the nature of these diseases and the mode of their cure arose from discoveries arrived at purely by experimental methods, including necessarily experiments on living animals—namely, the discovery that they were due to foreign organisms that entered and multiplied in the system, and the discovery that the changes in the system which unquestionably produced recovery were closely allied to those which also produced immunity after recovery. So far he had only spoken of attempts to effect a cure by introducing those protective substances which Nature, when there was need, produced in some strange manner. But it looked at this present moment as if they were going to combat some microbic diseases still more successfully by stimulating other agencies by which she effected her cure. He did not know whether Sir Almroth Wright was to give evidence, but if so he would point out how he had devised a method of stimulating the action whereby the white blood corpuscles actually destroyed physically the organisms themselves, so that they were gradually utilizing both of Nature's methods of cure (and utilizing them exactly as Nature did) for the purpose of antedating what he had called the turn of the tide, that is, strengthening the resistance of the organism attacked more than Nature would do merely by her methods of reaction. He now wanted to pass from these to another class of diseases which equally they had been studying during the last forty years—the cause of the disease and its action on the organism, but where research had led to a totally different method of fighting them. He referred to the communicable diseases which could not be called infectious. Take the case of malaria, the tsetse fly disease in animals, and Malta fever. In reply to the Chairman, he said rabies belonged to the first set, because they fought it by generating in the body a protective substance. They had got a method of giving an attack of rabies which was very quick but very slight, and the consequence was that it produced very swiftly a small amount of protective substances. Then they gave another one which was also quick, but stronger, but which could be borne by reason of the presence of the protective substance, and continued doing so while the main body of the attack was moving up. They had thus gradually accumulated a body of protective material which when the main attack came, which would have been inevitably fatal, enabled the system to resist it. The Chairman said he merely thought that the gnat was serving the same purpose and function that the mad dog was; therefore he thought it was really in the same class of disease. Chief Justice Fletcher Moulton said:

> May I apologise? You are quite right. It is not infectious, but is communicable in a different way, and ought to be in the second class. The reason I already mentioned it with the first class was because we there use the method of cure of which I have spoken—that is to say, we attempt to produce a protective substance. It was I that was wrong.

He then passed to cases where they could not imitate the method of cure, but because they knew the cause of the disease and its method of communication they were able to intercept it. Take the case of malaria. He did not know that their methods of curing malaria had advanced substantially, but they now knew the cause of malaria, and they were destroying the possibility of communication. At Ismailia they had got rid almost entirely of the mosquito which communicated the disease by its bite, and had thus almost got rid of the disease. In reply to the Chairman, he would certainly say that that was discovered by experiments on animals. They had first to discover in what way this disease was communicable. As soon as they had discovered this, the destruction of the communicating animal presented itself at once as a method of preventing the disease. A similar case was that of the tsetse, which was absolutely fatal to cows in districts where the fly was found. They found that it inoculated an organism which produced death. He did not think they had made any advances in fighting the disease when the disease was once communicated; but knowing that it was communicated in that way, attention was at once turned to discovering how one could fight the tsetse fly, or how one could prevent the fly itself getting the organism into it which it passed into the animal that it bit. In certain places in England where there used to be ague, ague was now stopped. It was quite possible that that ague was communicated by the bite of an insect that derived the organism which was the cause of ague from biting some affected animal. They had drained the country; the insect probably existed, but in far smaller numbers, and there were fewer people there, if any, who were affected with ague from whom it could get the infection. The consequence was that the insect was harmless; it could not communicate the poisoning organism, because it could not get it. Similarly, they could, when they knew the cause of the disease, set to work to prevent the occurrence of those circumstances which enabled it to be communicated. This was not being done with yellow fever and many other diseases. It might be that the disease was so bad that the only method of fighting its spread was to kill the animal. Take the case of glanders. Now that they thoroughly understood what glanders was, when they thoroughly understood the method of testing whether an animal was suffering from glanders, the animal might be killed at once, and that stopped the propagation of the disease. Without that knowledge they could not ascertain so soon what animals they ought to kill, and they would be left as centres of contagion. So that it might be equally

effective from the point of practical utility whether they found out the means of communication and stopped it, or whether they attacked the disease when it was communicated. In both cases it was the knowledge of the cause of the disease and the knowledge of the way that that cause came to operate on the organism which enabled them to devise these practical methods; and all that knowledge had been derived entirely from research work conducted for the purpose of acquiring knowledge, and from the knowledge had come the power. Turning to the study of the organism on which these diseases operated, he said a vast amount of experimental work of the last forty years had been directed to discover the physiological actions going on in man. The knowledge of physiological actions must be obtained by experiment from a living creature, because, as a rule, as soon as death came they ceased. The importance of this work was just as great as the importance of the investigation of the causes of disease. Take the localization of function in the brain—the discovery from the symptoms of paralysis, or epilepsy, of the place where the interference with the nervous system was taking place. It would be quite impossible to ascertain the laws which governed this excepting by experiments on a living animal. In many cases it need not be a sentient animal. But there were similarly important experiments as to blood pressure, digestion, the function of the great organs, such as the liver, or the pancreas, or the kidney, or the suprarenal capsules, in which it might be necessary to trace out consequences which did not occur immediately. In that case one must do so on animals which were not only living at the time of the experiment, but which were allowed to live afterwards. He would define the great change between curative science as it was now and as it was years ago as being that now they tried to fight causes, and then they only tried, or mainly tried, to fight symptoms. The aim of all this investigation into physiological action, which was so varied in its character, and related to every different part of the organism, was to put the medical man of to-day in the position of a man who knew the construction and operation of the engine he was working, who knew the meaning of every symptom of irregular action; the increase of his power of alleviating suffering and staving off death was enormously increased by this increase of his knowledge and power of diagnosing which had arisen from these experimental researches. Sometimes these experiments had resulted in curative methods. One could not have a better example than the relation of the thyroid gland to myxoedema and cretinism, where it was discovered that there were glands within us which were producing protective substances for the normal life, just as Nature would, when there was an attack of a microbic disease, produce *pro hac vice*, a protective substance against the foreign invader. When the thyroid gland was taken away and the protective substance was no longer formed, then the body got out of order because that was no longer present which was necessary in order to keep down the inherent forces of dissolution. Then it was discovered that, if one supplied artificially that which this gland produced, one could keep down this form of disease just in the same way as one could stop the effects of diphtheria, if one put in from another animal that which Nature would produce in order to repel the microbic attack. This appeared to be only the commencement of a series of analogous successes. Apart from the question of direct curative methods so arrived at, the power of diminishing suffering given through increased knowledge of the organism was so great that it was difficult to over-estimate it. This necessary knowledge must be obtained by experiments on men or on animals. He unhesitatingly said that their right to experiment on men was extremely limited. In the first place, they had no right, voluntarily, to allow death to occur even though the man would be willing to permit it. Nor did he think they had any right, voluntarily, to allow serious damage to occur, unless it perhaps might be where it was directly for the purpose of saving life. Proceeding, he said he did not think they ought to lessen in any way the feeling of sanctity of human life, because the consequences were so widespread. Before attempting to experiment on man one must have done everything to prepare for it, and must know with fair scientific certainty what would happen. Continuing, he said that, in his opinion, unquestionably it was their duty to try to remove ignorance by experiments on animals, if necessary; and he wanted to give the Commission the principal reasons which made him have such a confident opinion on this point. The first was the overwhelming preponderance of the prevention of suffering by this method. The great bulk of the necessary experiments could be made without any pain to the animals at all, because the animal never need be conscious, and therefore no pain was caused at all. But taking the others, the amount of experiment, if properly done, which caused pain was incredibly small compared with the results of the knowledge obtained, even if they were measured by what had already been achieved. The number of painful experiments, as was shown by looking at the actual experiments made, was quite infinitesimal. He read the description of the experiments done under licence in England, where excellent research work was done; he read through the list of those thus done in a year, and he very much doubted whether the total amount of suffering caused by those experiments would be much greater than would be caused in a single fairly large shooting party, where there were one or two bad shots. If one considered the amount of suffering caused in the world, not only thoughtlessly, but even deliberately, by ordinary normal men, who might be able to show a reasonable defence for what they did, it dwarfed so utterly the amount requisite to produce this useful knowledge, that if the matter were not so serious it would be almost ludicrous to think that there was this organized opposition to the pain caused in scientific research in proper hands. In the case of animals there was all this vast mass of pain inflicted or permitted, and people tolerated it and said nothing about it; but there was one little bit which brought return in lessening the sufferings of the world, and people were to be found to organize themselves against it, and throw the whole of their strength into denouncing and preventing it. If one looked at the medical science of to-day and the medical science of forty years ago, and realized that the advance had been caused by physiological research, and then considered, on the one hand, how much pain that had caused and how completely it had changed our power of dealing with disease and of alleviating suffering, it was really incomprehensible that anybody who saw the totality of misery in the world should think that the small amount of pain that had produced that gigantic result was the first that ought to be stopped. Mankind not only claimed, but perpetually exercised, and properly exercised, the right to cause or permit suffering in animals when needful or desirable. Take the case, for instance, of a herd of cattle attacked by some painful disease, from which, say, 50 per cent. of those attacked survived. A man would be considered perfectly justified in allowing them all to go through the disease. The 50 per cent. that would die would die, the rest would have the pain of the disease and get better; and he would say, "Well, but I could not afford to sacrifice the 50 per cent. that would survive—it would be too big a loss to me." For the £10 apiece that they were worth he would have permitted them to be killed on the spot; but he considers that he has a just and perfect right to allow them to suffer all that pain in order to save himself from the loss of the 50 per cent. that survive. And he did not say he was wrong, because the comfort of his family and other things of importance to him might depend upon the question of how great was the loss inflicted on him pecuniarily by this attack. But if it was allowable to permit that suffering in order to avoid a pecuniary loss, the question as to whether it was right to increase by a little the suffering by well-designed scientific experiments to secure a return, not in money, but in the power of stopping suffering, seemed to him literally to permit of only one answer. No man could consider the matter without realizing that such infliction of pain was justified if he would do what he held he ought to do: add inflicted and preventable pain together. Nobody, as far as he knew, would hesitate to overdrive a horse in order to save a life or to bring assistance to a life that was in danger, and yet that would be suffering inflicted for the purpose of benefit to a single individual. The people that were engaged in scientific research were working for something which would benefit not one single individual, but the race for all time. He felt that the justification for the necessary use of even painful experiments, where they were required for the purpose of obtain-

ing knowledge, could only be questioned by putting a veil between their action and what it ultimately led to. And he could not help thinking that the people who led the movement on the other side must be aware of this, because they dealt so persistently in misrepresentation. It was very easy to misrepresent the work of those who were a long distance in advance of the ordinary man. He had known this illustrated again and again in manufacture. Processes had been stigmatized as adulteration, as falsification, and everything that was bad, whereas if people had followed out the advance of science they would have known that they were simply better methods for doing the same thing as earlier processes, and doing it with greater certainty and with greater cheapness. But they had not followed it out, and because the new processes were different, a contrast to the old ways, and people thought that therefore they were something to be stigmatized, so it is here. Turning to the practical conclusion to which he had come, he said the good basis of all these movements was the desire of saving pain in animals and men. If that were so, the whole motive ceased with the conscious life of the animal. It was as absurd to object to an experiment on an animal that had ceased to be conscious and would never again be conscious as it would be to object to the dissection of a dead animal. Hence there ought to be no interference with experiments on animals which were in anaesthesia, except that they should be permitted only to persons who could and would take care that the anaesthesia was complete and that the animal was killed before it came out. Therefore, with regard to such experiments, it was not only not necessary to interfere with their being used for educational purposes, but if the Commission might trust his experience they would indicate that in their opinion it was most important that they should be so used. There was no comparison between the living effect of an experiment one had seen and one that one merely read of. He had many and many a time read over carefully-described processes, and had imagined that he understood them; but he knew of old what that meant, and used generally, in cases of any difficulty, to insist on "having a view." He used to insist on being taken, not necessarily by an educated person—he much preferred a workman—right through the whole process, and seeing it done before his eyes. He went back with a knowledge of the case, with a power of handling it, and with a power of drawing conclusions as to the processes which were quite newborn. So it was with the man who was being educated for the serious duty of fighting disease. If he had actually seen an experiment, it lived in his memory; but, further, it remained in his memory as a living thing, and when he acquired new experience or new knowledge connected with it he would find that it would make the old experiment mean more than it did to him even at the moment when he saw it, because he saw the whole thing before his mind's eye, and not only read a description, which, after all, only stated certain results. As there was no ground, therefore, from the side of humanity to interfere with these experiments which cause no pain, he thought they should be largely used educationally. Medical education was of prime importance to the community. The greatest difficulty in the way of giving to the world the full benefit of all the accumulated knowledge of the last forty years was that they had to educate the practical men up to the level of it. Therefore the efficacy of their methods of tuition was a matter of the very gravest importance; he would put no restrictions upon the use of painless experiments in connexion with it, excepting that the experiments must be under the supervision of someone possessing a certificate granted to persons who could be trusted with regard to anaesthesia. Whether there were reports of those experiments or not, he did not think was of the slightest importance, provided it was thoroughly understood that it was the duty of those possessing the certificates to see that the anaesthesia never ceased, and they were held responsible for so doing. Turning to the question of experiments in themselves painful, he thought the certificates should be divided into two classes. Certain men of acknowledged capacity in research should have general certificates entitling them to perform such experiments, subject only to one thing, and that was that they should report fully every experiment. They were immeasurably better able to judge what was worth doing than any body of men that could be put over them. They were, as a rule, men of such high position and high character in England that there could be no ground for being afraid of trusting them with this power. The report should be made by the operator, and he would put him under no restriction as to the character of his experiments; he would not put him under any restriction as to the place in which they were done, but he would have a full report sent into the Home Office. He had never, in the years that he had followed the matter, found anything which from this point of view he called recklessness of suffering in any experiment made for research. With regard to the charges of levity, he felt very strongly that such an accusation was unfair even in the case of students. He did not find that the medical student of to-day was a man of the Bob Sawyer type. He thought they worked extremely hard. In reply to Mr. Ram, he said he would have no inspection of the first-class certificates. He did not mean the first-class certificates described in the Act, but his first class. As an example, he said, supposing it was a question of giving a general certificate to Sir Lauder Brunton. The idea of controlling what he should do with it would, in his opinion, be nothing but a blunder. But he would have to report all that he did; and if, by some accident, a mistake was made in any case, if a person developed levity, or even recklessness or cruelty, his reports would show it, and his certificate might be withdrawn by reason of it. He might then be relegated to the second class. He knew he was imposing a new duty upon the Home Office. He thought the Home Office ought to decide by the opinion of the leaders of the medical sciences, because he was satisfied that they possessed to an equal degree with any other body of men in the world, the moral qualities necessary to enable them to advise; and beyond question they possessed better than anybody else the intellectual qualities and the qualities of knowledge which would enable them to do so efficiently; and a certificate of this kind should only be given where there was a consensus among the advisory body that the person held such a position in medical science that he might have this general certificate. He thought that in the case of the younger men or men who had not yet attained the commanding position of those to whom he would give this general certificate the lines of the present Act were the right lines. He thought it reasonable to expect them to accept specific limitation of the type of experiment, of the scope of the research, and of the place where the experiment was to be performed, in order that there might be the security of the supervision of those who were over the laboratory, if there were any such persons, and also the security of inspection. As before, full and complete reports should always be made, so that a record of all these experiments and their results should be preserved. The line he would advise would be as follows: Certificates with regard to non-painful experiments—that was to say, experiments where the animal was kept under anaesthetics and not allowed to survive—should be quite general, but should only be issued to persons who would perform or supervise these experiments, and could be trusted to see that the anaesthesia was complete and permanent. For painful experiments there should be a small but select class who should have general certificates. The other class should have special certificates, specifying the nature of the research, the nature of the experiment, and the place where it was to be done, and there should be full and adequate inspection of those places while the experiments were going on. He would not have strangers present, first of all, because, in his opinion, it would not assist the experiment, and, secondly, he did not think it would be a good thing for unqualified persons to see these things. They were the serious work of research, and persons who were not trained by medical or physiological study would gain no good from witnessing them. But he would encourage students being associated with this research. It was the finest training that they could have. Proceeding to deal with the two restrictions which had recently been suggested to the Home Office, he said he thoroughly disapproved of them. The first related to foreign savants who were not naturalized Englishmen. There was no reason why they should be put at a disadvantage as compared with British subjects. The only difficulty in the way of enforcing the performance of the conditions was

that they were capable of changing their residence; but an Englishman who wanted to break the conditions was equally capable of changing his residence. The true remedy in both those cases was to have a responsible head of the laboratory, who had to see that the conditions were duly performed step by step as the work went on. With regard to the second suggestion, that a medical diploma should be required, he said, in his opinion specialization had gone so far that the distinction between people who actually worked practically at the curative sciences, and those who devoted their lives to research in those sciences, was becoming marked. A man who actively employed in practice, as a first-rate man ought to be, had not usually the time for consecutive research. On the other hand, there were many men so devoted to research that they gave up medical practice as a method of earning their livelihood, and devoted themselves entirely to research. What should guide the Home Office entirely was whether or not the applicants for certificates or licences were suitable for research. Whether or not they had taken out a medical diploma which gave them the nominal right to practise when they had no intention to do so, but meant to devote their whole time to research, was a matter which should be quite immaterial. He was quite satisfied that there were now, and there would be yet more such in the future, men in the first rank of research work who did nothing in the way of the practice of medicine because it would interfere with their scientific research by taking their time and their attention. Those people ought to be encouraged rather than discouraged. Therefore this proposed restriction would, in his opinion, be a retrograde step. Asked if he had studied the Act with a view to suggesting amendment, he said he agreed with a great deal of it, excepting that he thought there were a certain class of men who should have these unrestricted powers of experiment, and that the practice of the Home Office with regard to non-painful experiment should not have regard to the nature of the experiment, but simply to the reliability of the person on whom was placed the responsibility of the anaesthesia. With these modifications, he did not quarrel with the Act, because he did not think that the real worker, if he was not really hampered in his research, chafed against these restrictions, which were, after all, only a recognition of what was the fundamental principle of his action. He was working that pain might be lessened. He was a person whom he had always found extremely sensitive to the cry of suffering, and had no wish to protest against this Act, which did homage to that principle, provided that it did not hamper him. In reply to Sir Mackenzie Chalmers, the witness said that the Home Secretary was bound to have regard to the Act. He thought that he had no need to regard public feeling beyond the extent to which it was expressed in the Act. The safest way to maintain the Act was to administer it in a way in which it was best for research. He did not himself fear very much the popular storm. He knew perfectly well the power of a certain small number of determined people to prejudice the minds of the public; but the more that the public had experience of the good results of research the safer it was in the hands of the public. In reply to further questions, he said he would require the most exceptional testimony in the case of a man who had not done scientific study at a university and under proper training; but that it should have taken the form of medical study seemed to him unnecessary. Asked if he thought that the existing certifying authorities, which were mainly medical authorities, under the Act, would be able to deal with the case of the people without medical qualification, he said he thought so. Asked for his opinion as to Mr. Coleridge's suggestion of a certificate for humaneness, the witness said it would be an absolute insult to the people whom they would be consulting. The suggestion that the heads of the medical profession were not judges of humaneness was a piece of the most intolerable insolence. It was shocking when one considered the way in which, as a rule, medical men disregarded their own comfort, and put themselves to any amount of trouble and discomfort for the purpose of helping people who were sick, very often when it did not bring to them the slightest kudos, or the slightest pecuniary return. To suggest that such people did not know what humaneness was and were not moved by suffering was intolerable. So far as Englishmen were concerned—of whom he could alone speak from personal experience—the question whether they were likely to use power properly from the point of view of regard for suffering was, from his knowledge of the people who were likely to take out licences, practically settled before the application was made. But the certifying authorities had to advise that licences should be granted to the applicants, and if they thought that *par exception* they were people who had not got any care for suffering, and would make a recklessly painful use of their powers, they were bound to say that they were not fit persons to receive licences. Asked, with regard to the ethical side of the question, if we were justified in the present infliction of a lesser evil when there was a reasonable prospect in the future of avoiding a very much greater evil, the witness replied in the affirmative. That was the touchstone to be applied to all animal experiments. In applying that touchstone they must conscientiously use the whole of the teaching that the history of science and the history of medicine had given them. The particulars he had given were in order to show that where there was serious research there was an overwhelming probability that the answer would be in the affirmative. The suggestion conveyed no information to his mind. He felt satisfied that that was an extremely bad definition. "Conscience" was too often used where the true expression should be "emotion." Emotion might be a good motive power, but it was a bad guide, and, in his opinion, there was a very great deal of force in the phrase which somebody had used:

> If you want to do good in a particular way, and want to know how you can do it effectively, give your heart a rest and your brains a chance.

The only thing that could safely guide one was reason. The argument that the future saving of pain was absolutely problematical simply meant that the people had not studied the question. What one had to do in life was to act on probabilities. The witness was further asked as to certain points put forward in a publication by Mr. John Page Hopps. For instance:

> But when all is said on the score of results, and the "artist" in vivisection has done his best to convince us that he is the apostle of mercy, many grave considerations "give us pause." For instance, what law of God or Nature justifies this treatment of our poor relations? Who gave to this amazing enthusiast the right to say offhand that he was at liberty to exploit "the lower animals" for experiments?

The witness pointed out that what gave the whole force of that to the people he was talking to was the use of the word "experiments." They did not know what it meant; they did not know its importance. Supposing he was to put, instead of "experiments," "saving life or stopping suffering," the whole appeal would fall to the ground. "Experiment" to an uneducated person did not connote what it did to persons acquainted with the nature and results of research. Again, the question—

> What law of God or Nature justifies this treatment of our poor relations?—

was all based on this want of appreciation of the meaning and effect of scientific research. Supposing he was to put it, for instance, "What law of God or Nature justifies our killing things, or permitting them to suffer, in order to save us from pecuniary loss?" Yet they did this, and must do it, every day. A beetle was a poor relation, or a mouse was a poor relation, just the same as a guinea-pig was; yet they treated their poor relations in the shape of mice and beetles with phosphorus, and let them die in pain, because they said they must keep them down. If his argument was right, they should first kill all the birds of prey, and then kill the birds they prey on because they prey on insects; then they should kill the greater part of those insects because they lived, many of them, on still smaller things. Nobody ever dreamed of doing that. It was only when it was applied to scientific research, the advantage of which they did not know, that these qualms came in. Asked as to the sentence:

> For laboratory purposes, his spectacles would not be safe in the streets; and if he put his proposal into effect and got his babies on the dissecting table, the very costermongers would raid his laboratory, and even medical students might help them. Why? The cutting-up of one baby might save the lives of thousands of other babies, and the torture of one for an hour might save thousands from suffering for years. Why object?

the witness said he objected because one ought to get that knowledge in other ways. Everybody who had studied

the subject realized that the knowledge could be obtained in other ways. He agreed that, pressing Mr. Hopps's argument to its logical conclusion, it would come to this: If experiments on animals led to experiments on babies, the eating of animals for food would lead to eating human beings for food. In regard to the following passage, in which Mr. Hopps spoke of voluntarily incurred experiments:

There is a splendid opportunity here for the suicide. Instead of a coward in retreat, let him be an hero as an offering. "The world," he says, "is full of misery—sordid, diseased, and despairing. I will get out of it." He is full of pity for mankind and is disgusted at its lot, so he decided to give it no help, but to go. What a lame and impotent conclusion! What an opportunity for heroism lost!

the witness said it was to his mind immoral in the highest degree, and showed an absolutely crass ignorance of the nature of scientific research to think that by a few suicides one could replace the experiments on animals which, in a complicated matter like this, must be enormous, but need rarely be painful, and which, if they were painful, could, in the great majority of cases, be stopped by inflicting death. In regard to the following passage:

Or might it not be possible to connect some minor forms of vivisection with crime? Here is a criminal who had earned his fourteen years of penal servitude. Let him commute it for six months in the hands of a reliable vivisectionist, within limits. And so on throughout the whole scale of penalties,

the witness said he thought it loathsome levity. Asked by Sir Mackenzie Chalmers, in regard to scientific men experimenting on themselves, if he would justify the course of experiments of Dr. Leonard Hill and his assistant experimenting on themselves in the way of testing how many atmospheres they could subject themselves to, the witness said Yes. That was a most interesting instance. He had worked at the subject until he felt clear that he had got the rule of danger, and, having worked it out, he had the confidence to submit himself to it, and in that way he enormously assisted the acceptance of his methods. He thought he was right. But he would have been perfectly wrong to go trying one method after another upon himself before he had worked his method out to that high degree of scientific probability. He made an exception when it was necessary to save human life. If a doctor knew that if he did not go into a hospital reeking with typhus at the imminent risk of his life many lives would certainly be lost, he thought he was perfectly right to say, "Well, I will risk my life in order to save those lives." But, in the other case, he thought that he was a bad scientific man if he did not find a way of working it out, without exposing his life, up to a point when he was justified in doing so. Asked as to the witnessing of experiments by medical students, he said that that fear was entirely bred in the minds of the people who expressed it. He did not believe there was the slightest justification for it. They compelled students to be present at operations on living men and living women because they felt that they must do so, and no one would listen to the suggestion that they ought not to be present there. How in the world could it have a bad effect when they saw operations on animals if it did not when they saw them performed on man? In reply to Mr. Tomkinson, he agreed that some more stringent law in the direction of prevention of cruelty to animals would be very desirable in regard to the destruction of dangerous or destructive animals. He would be very strongly in favour of legislation for lessening pain, if such a thing were possible; but, he was happy to say, the need grew less. There was a growing of increased sensitiveness towards suffering which would help legislation of the kind, and which was even rendering such legislation unnecessary.

(*To be continued.*)

A CORRECTION.

In the abstract of Lord Justice Fletcher Moulton's evidence before the Royal Commission on Vivisection which appeared in the BRITISH MEDICAL JOURNAL of March 21st, p. 691, the passage at line 27 from the bottom of the column, where it is stated that "the sufferings of animals were not solely physical," should read as follows:

"The sufferings of animals were substantially physical only. The sufferings of men were not solely physical. Almost as important a factor in that suffering was mental suffering, etc."

UNITED KINGDOM HOSPITALS CONFERENCE.

THE following is the programme of the meeting of the United Kingdom Hospitals Conference to be held at University College, Gower Street, London, W.C., on Wednesday and Thursday next, April 1st and 2nd.

AGENDA.

Wednesday, April 1st, Afternoon Session, 2 p.m. to 6 p.m.

1. Formal business:
   - (*a*) Appoint chairman.
   - (*b*) Receive: Return of members of Conference (document marked "A").
   - (*c*) Receive: Apologies for absence.
   - (*d*) Adopt standing orders (see document marked "B").
   - (*e*) Receive: Report of proceedings of last Conference (marked "1").
   - (*f*) Receive: Report of proceedings of Committee (marked "2").
2. Consider: Motions, if any, for amendment of proposals which were before last Conference (marked "3").
3. Consider: Questions of payment by hospital patients.
   - (*a*) Cases under the Workmen's Compensation Act.

     Motion: That it is undesirable to supply gratuitous hospital treatment to those who are provided for by the Workmen's Compensation Act.

     To be introduced by a representative of the Leicester Infirmary.
   - (*b*) Pay-wards in general hospitals.
   - (*c*) Payments for food and medicine.

     Motion: That where they can afford to do so hospital patients ought to be asked to pay for the food, medicines, and bandages supplied to them.

     Proposer: Hon. Sydney Holland (Chairman of the London Hospital).
4. Consider: Questions of prevention of abuse.
   - (*a*) Employment of almoners:

     Motion: That, in the opinion of this Conference, the appointment of trained hospital almoners constitutes one of the best methods for checking the misuse of hospitals, and for rendering more effective the economic value of an out-patient department.

     Proposer: Lieut.-Colonel Montefiore (Charity Organization Society).
   - (*b*) Co-operation of provident dispensaries and analogous institutions with hospitals.

     Motion: That the use of the out-patient department of hospitals by persons able to pay for their own treatment can be most effectually prevented by a close co-operation between hospitals on the one hand, and provident dispensaries and similar institutions and local medical practitioners on the other.

     Proposer: Mr. H. A. Harben (Treasurer of St. Mary's Hospital).
5. Mode of election of honorary staffs of hospitals.

Wednesday Evening (at 7.30 p.m. for 7.45 p.m.), Conference Dinner, Waldorf Hotel, Aldwych, Strand, W.C.

Thursday, April 2nd, Morning Session, 10.30 a.m. to 1.0 p.m.

At 10.30.

1. Cottage hospitals: System of payment by patients.

   To be introduced by Colonel J. G. Curtis (Deal and Walmer Victoria Hospital).

At 11.30.

2. Question of the organization of county guilds, as in Bedfordshire, for the support of hospitals, as an alternative to the extension of the work of the "League of Mercy" in the provinces.

   To be introduced by a Representative of the Bedford County Hospital.

3. Form of hospital accounts.

Motion: That, in the opinion of this Conference, the uniform system of accounts recommended by the King Edward's Hospital Fund should, as far as possible, be adopted by all hospitals.

To be introduced by a Representative of the South Devon and East Cornwall Hospital.

Thursday, April 2nd. Afternoon Session, 2 p.m. to 6 p.m., or until end of business.

1. Cases of tuberculosis in general hospitals.

Motion: That tuberculosis should be included among notifiable diseases, with a view to the isolation of such patients in publicly-provided hospitals.

Proposer: Rev. W. Blissard (Kent and Canterbury Hospital).

2. Medical representation on General Hospital Boards.

Motion: That, with the view of securing the cordial support of hospitals by medical practitioners, it is desirable that they should nominate representatives for election to Boards of Management of hospitals in their respective localities, and that such nominations should be carried out by an organized professional body, such as a Division of the British Medical Association.

Proposer: Dr. J. Ford Anderson.

3. Reception of mental cases:

Question of provision of temporary accommodation in hospitals for certain cases of unsoundness of mind for purposes of observation.

To be introduced by a Representative of the Leeds General Infirmary.

4. Appointment of Committee, and instructions.

5. Any other business.

INFANTILE MORTALITY.

THE second National Conference on Infantile Mortality was opened on the evening of March 23rd in Caxton Hall, Westminster, under the presidency of Mr. Alderman Broadbent of Huddersfield.

Mr. John Burns, M.P., President of the Local Government Board, said that the results of the first conference had exceeded his most sanguine expectations: it had stimulated authorities all over the country, Government departments had responded and Parliament itself had not turned a deaf ear. The adoption of the Notification of Births Act by thirty-two county boroughs, fourteen other boroughs, fourteen urban district councils, and twelve metropolitan borough councils, had already been approved by the Local Government Board, many other applications were awaiting its approval, and other local authorities were seeking advice. With regard to milk for infants he said that considerable difference of opinion appeared to exist among experts, but in his judgement a mother could not and ought not to sublet her maternity, she should not subcontract the source of the infant's life to any bottle or any artificial food. With regard to infantile mortality, he said that while a comparison of the rates of this country with those in other countries gave no ground for discouragement, there was ample room for improvement. Antenatal conditions were less adverse than was formerly supposed, and 80 to 90 per cent. of the babies born were healthy; but as town life increased no efforts should be spared to make the life and lot of the mother well fitted for the children that were or were to be. He held that during the year including expectation and until the child was 6 months old, the mother should not be at work, and that her home work should be light and suitable to her strength. If the child must be reared artificially, then milk from cows suitably fed, kept clean, and free from disease was the best substitute; it should be obtained from clean dairies, milked by clean hands, put into clean vessels, stored in clean places, and conveyed to the baby's mouth in vessels which should not be the microbe traps too often now used. He sincerely trusted that the Milk Bill and the Housing Bill would be passed this session. At the conclusion, Mr. Burns stated that it would not be wise to expect too much too soon, it was necessary to awaken intelligence in the mother and the husband, and to induce them to provide better and cleaner homes, and better food and more of it.

This aspect of the matter was the chief subject of discussion on the following day, when Dr. Saleeby read a paper on the human mother, and Miss Alice Ravenhill another on the education of girls in the functions and duties of womanhood. Mr. Alderman Broadbent, who contributed a paper on the education for motherhood and instruction for mothers, described the system in force in Huddersfield, the guiding principle of which was to help the mother to nurse her infant in her own home. The work of the St. Pancras Mothers' and Infants' Society was described by Miss Dora Bunting, who said that an effort not unattended with success was being made to instruct the fathers as well as the mothers. Mr. F. W. Verney, M.P., said that the work in villages in Buckinghamshire of health visitors trained by the medical officer of health to visit the cottages was admirable. Mr. Councillor Darby, of Poplar, said that in his experience women health visitors were welcomed and listened to by poor women. Both he and Miss Pine, of the Woolwich Board of Guardians, maintained that a large proportion of infantile mortality was due to mothers being obliged to remain at work almost until the child was born. Dr. Chadwick (Lancashire County Council) said that the heavy mortality in that county was due to the fact that mill-girls had not time to learn housekeeping or how to manage the children they brought into the world.

Miss Zanetti, Inspector under the Infant Life Protection Act for the Chorlton Union, urged that the powers of Boards of Guardians in relation to children should be extended. The majority of the infants coming under the care of the Boards were illegitimate, and she maintained that homes where one child was nursed should be inspected. She recommended that unmarried mothers of children born in the workhouse should be detained for a time as a means of reducing the specially high rate of mortality among illegitimate children. The discussion which ensued disclosed a general opinion in favour of the amendment of the Infant Life Protection Act so as to include one-child homes. Finally, the following resolution was moved and adopted after an amendment declaring that the inspection of one-child homes was not necessary had been rejected by a very large majority:

That the conference welcomes most gladly the Children's Bill introduced in the House of Commons by Mr. Herbert Samuel for the amendment of the Infant Life Protection Act (1897), and recommends the Executive Committee to ask specially that it be so amended as to include the cases in which one child only is put out to nurse.

BRITISH MEDICAL BENEVOLENT FUND.

AT the March meeting of the Committee twenty-three cases were considered, and grants amounting to £216 made to twenty of the applicants, one case being passed over and two postponed for further inquiries. Mr. Parker Young was re-elected Chairman of the Committee for the ensuing year. Appended is an abstract of the cases relieved:

1. Wife, aged 45, of L.F.P.S.Glasg., who is permanently incapacitated. Applicant has tried to obtain post as housekeeper or companion, and neither she nor her husband have any means. Three children, of whom two are partially dependent. Voted £16.

2. Daughter, aged 51, of late M.R.C.S. For the last few years has been obliged to nurse her mother, an Epsom annuitant, recently deceased. Is endeavouring to obtain pupils, and meanwhile is dependent on two sisters who both earn a very precarious living. Voted £10.

3. Daughter, aged 43, of late M.R.C.S., L.R.C.P. Only income a few shillings a week, and has recently undergone a severe operation. Voted £5.

4. Widow, aged 49, of M.R.C.S.Eng., L.R.C.P.Edin. Husband's means were exhausted by an illness lasting several years, during which applicant nursed him and endeavoured to maintain the family by keeping a boarding-house, which has now had to be given up owing to her ill-health. Five children, of whom two are able to help and two are dependent. Relieved five times, £72. Voted £10.

5. Daughter, aged 58, of M.R.C.S., L.S.A. No income. Earns a few shillings a week by needlework, and occasionally receives slight help from friends. Relieved once, £18. Voted £12.

6. Daughter, aged 56, of late M.R.C.S., L.S.A. Was provided for at father's death, but lost everything through the dishonesty of a friend. Only income £10 a year from a charity. Relieved four times, £56. Voted £12.

7. Widow, aged 58, of L.S.A. Practically unprovided for at husband's death, and endeavours to support herself by letting lodgings. Five children, but only able to give very slight help. Relieved six times, £70. Voted £10.

8. Daughter, aged 59, of late M.R.C.S. Until recently had a daily teaching engagement, but was obliged to give it up to nurse an invalid sister, lately deceased. No income; slight irregular help from friends. Relieved once, £18. Voted £12.

9. Widow, aged 50, of L.R.C.P., L.R.C.S Edin. Quite unprovided for at husband's death. Six children who help as far as possible. Relieved twice, £20. Voted £10.

10. Widow, aged 59, of M.R.C.S. No income; lets lodgings. Six children, of whom two are able to give slight help, and three are dependent. Relieved twice, £24. Voted £10.

11. Daughter, aged 54, of late M.R.C.S. No income, and health so indifferent that regular employment is impossible. Tries to let lodgings, but it is only possible for a few weeks in the summer. Small earnings from needlework. Relieved four times, £48. Voted £12.

12. Widow, aged 67, of M.R.C.S., L.S.A. Was left entirely unprovided for, and for twenty years held a situation as cook in a boarding house. Health now very indifferent. No children. Relieved twice, £24. Voted £14.

13. Daughter, 52, of late L.R.C.P.Edin., L.S.A. Used to be employed as a dressmaker, but lost her situation owing to changes in the firm, and is now unable to obtain another engagement. Dependent on a friend who allows a few shillings a week. Relieved three times, £30. Voted £10.

14. Daughter, aged 52, of late M.R.C.S., L.S.A. Applicant's mental condition is such that for some years past she has been dependent on three half-sisters who all have to earn their living, and at present she is confined to an institution. Relieved four times, £44. Voted £12.

15. Daughter, aged 48, of late M.R.C.S., L.S.A. Is an epileptic, and unable to earn a living. Slight help from relations, and receives £10 a year from the Hospital for the Paralysed and Epileptic. Relieved once, £12. Voted £12.

16. Widow, aged 39, of L.R.C.P., L.R.C.S Edin. Has trained as a maternity nurse, and requires a little help to enable her to present herself for examination at the Central Midwives Board. Two children, aged 11 and 9, both at institutions. Relieved once, £5. Voted £5.

17. Widow, aged 63, of M.D., C.M.Glas. Receives £14 a year from the Ladies' Working Guild, and is given a little help by her son, who is a signalman. Practically incapacitated by chronic rheumatism. Relieved eight times, £94. Voted £10.

18. Daughter, aged 52, of late M.R.C.S., L.S.A. No income; health too bad to admit of regular employment, and is allowed a few shillings a week by a sister. Relieved ten times, £113. Voted £12.

19. Widow, aged 30, of L.R.C.P.Edin., L.S.A. No income; health indifferent. Is at present engaged as a caretaker without salary. No children. Relieved four times, £34. Voted £12.

20. Widow, aged 47, of M.R.C.S. No income; earns a little by needlework. Two children, one being dependent, and the other unable to help. Relieved six times, £39. Voted £12.

LITERARY NOTES.

The Copenhagen *Hospitalstidende*, the second oldest medical journal of Denmark, completed its fiftieth year of existence at the end of 1907.

We learn from the *France Médicale* that Professor Raphael Blanchard submitted to the Société Française d'Histoire de la Médecine, on December 11th, 1907, a scheme for the publication of a *Corpus Inscriptionum ad medicinam biologiamque spectantium*. The proposal was unanimously approved. Professor Blanchard invites the co-operation of all doctors and others, wherever they may be residing. Every curious or interesting inscription in the church or graveyard of the poorest village will be welcomed. He asks that every such inscription should be copied with the strictest respect for the spelling, punctuation, abbreviation, capitals, italics, etc., of the original; and that the arrangement of the lines be indicated. Any religious or heraldic emblems around the inscription should be faithfully copied. If the inscription is on the pedestal of a statue, a description of the latter with the name of the sculptor and the date of its erection should, if possible, be given. Whenever possible a photograph should be sent with the copy of the inscription. The documents should be sent to the Secrétariat Général, 1, Place des Vosges, Paris. They will be published in the *Bulletin* of the Society with the name of the sender.

We have received the first number of the *Royal Dental Hospital Gazette*, from which we learn that fifty years ago there was no dental hospital in London, that the profession of dentistry, if it existed at all, possessed no status, and that no special qualifying examination existed. The establishment of the Dental Hospital in 1858 was, it is stated, the immediate means which induced the Royal College of Surgeons to obtain its Royal Charter, to institute a department in dental surgery, and to proceed to examine candidates for the L.D.S. The editors say that their first aim will be to produce such articles as will reflect the progress of advancing dental science. Clinical lectures, demonstrations, teaching of special subjects or departments will be introduced. They add:

> To the ill-informed Science with a big *S* means what Carlyle delighted to call "dry-as-dust"; but science, as we propose to understand it, is knowledge still molten, as it is cast up from the volcano of the active minds of men who seek truth before all things.

As far as we are qualified to judge, the new periodical seems likely to fulfil the object of its foundation. It has as a frontispiece what is described as "a singularly life-like portrait" of the late Sir John Tomes, F.R.S.

We are asked to announce the forthcoming appearance of *Parasitology*, a supplement to the *Journal of Hygiene*. It is to be edited by Dr. George H. F. Nuttall, F.R.S., Quick Professor of Biology in the University of Cambridge, and Mr. A. E. Shipley, F.R.S., University Lecturer in the Advanced Morphology of the Invertebrates, and to be published at the Cambridge University Press. The editorial introduction states that the remarkable development of parasitology in recent years, and the increase in our knowledge of the part played by parasites in human and animal diseases, demand a means of publication, in the English language, of original papers dealing with the subject in its widest sense. The editors further say:

> The fundamental discoveries upon the modes of infection in plague, malaria, sleeping sickness, yellow fever, ankylostomiasis, elephantiasis, and other important diseases affecting man and animals, render it evident that the co-operation of specialists in different fields is required for the proper elucidation of the complex problems which surround the causation of these diseases. The successful study of such diseases as are carried through the agency of invertebrate hosts demands, therefore, not only investigations into the processes which occur in the affected vertebrate, but also observations on the structure and life-history of the pathogenic organism, and of the alternative host, or hosts, which serve to spread the disease. Thus a knowledge of the structure and biology of mosquitos, biting flies, and ticks is necessary for a comprehensive knowledge of the etiology of malaria, trypanosomiasis, spirochaetosis, and piroplasmosis, and a knowledge of fleas and their habits is essential in the study of plague. Further, recent discoveries relating to parasitic worms, especially those which produce filariasis, ankylostomiasis, and various intestinal diseases, have given a great stimulus to the study of the entozoa.

Papers on these subjects are now scattered in journals of widely different character, into some of which they are but grudgingly admitted. *Parasitology* is intended to encourage the study of the subject to which it is devoted, especially in relation to disease, by providing a means for the publication of papers relating to pathogenic and disease-transmitting parasites. A paper by Dr. K. Jordan and the Hon. N. C. Rothschild on the structure and classification of a group of fleas, some of whose members are now known to play an important part in the spread of plague, constitutes the first number of *Parasitology*. The following papers have been promised for succeeding numbers: "Further studies on the anatomy and life-history of *Anopheles maculipennis*," by A. D. Imms; "The structure and biology of the Tick (*Haemaphysalis punctata*)," by G. H. F. Nuttall, F.R.S., W. F. Cooper, B.A., and L. E. Robinson; "On two new species of Human Entozoa," by R. T. Leiper, M.B. (London School of Tropical Medicine); "On the relation of Entozoa to intestinal disease in vertebrates," by A. E. Shipley, F.R.S.; "Studies on *Spirochaeta duttoni*," by G. H. F. Nuttall, F.R.S.; "Comparative studies on the Piroplasmata," by G. H. F. Nuttall, F.R.S., and G. S. Graham-Smith. *Parasitology* will be issued in the form of a separate yearly volume of four to five hundred pages. The parts will be issued when sufficient material has accumulated.

Mr. Sidney Appleton, the senior member of the publishing firm of D. Appleton and Co., of Bedford Street, Covent Garden, died on March 16th. On the list of the firm's publications are such well-known works as Osler's *Practice of Medicine*, Williams's *Obstetrics*, Holt's *Diseases of Infancy*, Butler's *Diagnostics*, and many others. We are informed that the business will be continued by Mr. Warner Circuitt, the remaining partner, who has been associated with Mr. Sidney Appleton for some time. Mr. Warner Circuitt will have the assistance of Mr. Walter Blaber, who for many years past has acted as manager for the firm.

MEDICAL NEWS.

Colonel Valentine Matthews, late commanding London Companies R.A.M.C.(Vols.), has been appointed 1ero Jefe Honorario de la Ambulancia No. 3 (Madrid), Cruz Roja Espanola.

The Goldsmiths' Company has voted a sum of £1,000 to the removal fund of King's College Hospital, £1,000 as a fourth donation to the rebuilding fund of St. Bartholomew's, and £250 to the King Edward's Schools of the Bridewell Royal Hospital.

The Queen has given permission for the North-Eastern Hospital for Children, Hackney Road, to be in future known as "The Queen's Hospital for Children." A special meeting of the governors of the institution will be held on April 2nd, at 4 p.m., to give effect to the change of name.

At its last quarterly meeting the Board of Management of St. Mary's Hospital adopted a vote of thanks to Dr. R. H. Scanes-Spicer for his services to the hospital during the past twenty years as surgeon for diseases of the throat, and elected him Consulting Surgeon for Diseases of the Throat.

Lord Alverstone, who presided at the thirty-fifth annual meeting of the London Temperance Hospital, drew attention to the fact mentioned in the report that out of 27,226 cases, to only 80 had alcohol been administered. The discretion of the medical staff was not fettered, the Committee merely asking that a permanent record of all cases treated with alcohol should be made.

The conversazione at the Post-Graduate College, West London Hospital, on March 18th, proved fully as interesting and successful as its predecessors. The guests, who were received by the Duke of Abercorn, numbered over 200, and included many distinguished representatives of the Naval, Military, and Indian Medical Services, with which the work of this school has always been closely associated.

In the reference to Dr. Mary Gordon's appointment as Inspector of Prisons which was made in the British Medical Journal of March 21st. p. 708, it was stated that she had recently been on the Committee of the Female Convict Prison at Aylesbury. We are informed that this statement is inaccurate. Miss Gordon was on the Visiting Board of the State Inebriate Reformatory, but not on any Committee of the Convict Prison.

Messrs. Stockwell and Co., passenger agents, 8, Beak Street, Regent Street, London. W., announce that they have made arrangements under which, if a sufficient number give in their names, members travelling to the International Laryngological and Rhinological Congress in Vienna on April 21st and the following days, can obtain tickets at specially reduced rates: Three parties may be formed via Queenborough-Flushing, via Dover and Ostend, and via Harwich and Hook of Holland. Further particulars can be obtained on application.

We note with much satisfaction the announcement made in the House of Commons on March 23rd and reported elsewhere in this issue that a Civil List pension has been granted to Dr. Hall Edwards, of Birmingham, whose disablement in consequence of his *x*-ray work has already been mentioned in the Journal. Dr. Edwards has already undergone amputation of the left hand and the disease has made so much progress in the other that it is feared that an operation may shortly become necessary. The pension does not render superfluous the fund which is being raised to enable him to live in comfort, and we feel sure that many members of the profession will be glad to show in a practical way their sympathy with a man who has paid so dearly for his pioneer work in radiography.

The annual meeting of the General Council of King Edward's Hospital Fund for London was held at Marlborough House on March 20th. It was for the most part of a formal nature, the reports submitted and approved covering matters which have already been fully noticed in this Journal at earlier dates. The financial statement showed that a total of £484,069 10s. 9d. has been received during the year, of which £121,000 was placed in the hands of the Distribution Committee and dealt with, as recorded in our issue for December 21st, 1907. Of the grand total, £51,260 17s. 3d. was income from invested capital; the balance was made up by ordinary contributions or legacies which accrued or were paid during the year, including a gift of £100,000 by Mr. Andrew Carnegie, and a sum of £212,500 due from the Lewis estate. In his speech the Prince of Wales, who presided, referred to the proposed inquiry regarding the system in vogue at London hospitals for the admission of out-patients, and to the extension this year of the scope of the Fund's work. It was pointed out that in the eleven years which have passed since the Fund was founded London had so greatly grown that it was right that the area of the work should be extended from a radius of seven to one of nine miles from Charing Cross, and that consumption sanatoriums should be deemed entitled to take a place among the beneficiaries of the Fund. It was not expected that for the first year at any rate this alteration would entail any very great additional demands upon the resources of the Fund, but it was impossible to say what the position might be in a few years' time. In any case, the calls on the Fund were yearly increasing, so that the need for substantial support from the public was as great or greater than ever.

International Prize for Ophthalmology.—Professor Emile Grosz, the Secretary-General, gives notice that at the Sixteenth International Medical Congress to be held at Buda-Pesth from August 29th to September 4th, 1909, under the patronage of His Imperial and Apostolic Royal Majesty Francis Joseph I. The Hungarian Minister of the Interior will offer a prize of one thousand crowns for the best essay on the etiology of trachoma. All works, whether in manuscript or published for the first time in 1907 or 1908, will be eligible for competition, provided they are in English, Hungarian, French, or German. Essays are to be sent to the Minister of the Interior (Belügyministerium, Budapest, Hungary) before December 31st, 1908. The jury will be appointed by the Minister of the Interior, and the verdict will be announced at the inaugural meeting of the Congress. The subscription to the Congress is twenty-five crowns—about one pound sterling—the wives and daughters of members paying twelve crowns and a half. The officials of the English National Committee are a President, Dr. F. W. Pavy, F.R.S., and two Honorary Secretaries, Dr. Clive Rivière and Mr. D'Arcy Power. The address of the Honorary Secretaries is 10A, Chandos Street, Cavendish Square, W.

Motor Show at Islington.—On Saturday, March 21st, Messrs. Cordingley and Co., of the *Motor Car Journal*, opened their thirteenth annual automobile exhibition at the Agricultural Hall, and it is to remain open till Saturday, March 28th. As this exhibition has not the approval of the Society of Motor Manufacturers and Traders many of the leading British makers and agents are debarred from exhibiting. Nevertheless, many well-known types of car are on view, and the show should be particularly interesting to the profession as indicating the large number of small cheap cars now on the market. For instance, the Reo Motors, Limited, offer a 10-h.p. car, to seat four persons, for £125, and a car of 18-h p. to 22-h.p. for £199, or, if fitted as a touring car, to carry five persons, for £224. Bowen and Co. exhibit a neat 8-h.p. to 10-h.p. car, the price of which is £175, for seating two persons, or £195 for seating four persons. The Turicum Voiturette, a small French car, may be bought for £160 or £198, accommodation being for two or four persons respectively. A 10-h.p. Minerva seating two may be bought for £188, or carrying four persons for £210. The Star Cycle Company, of Wolverhampton, have placed three cars on the market, all of them costing £200 or under. These are the Royal Starling, of 10-h.p., price £175, for two persons, or £200 for four persons. The Imperial Starling, of 8-h.p., seating two, price £160: and the Starling, of 6 h.p., price £120. The New Pick Motor Company exhibit through their agents, the Earl's Court Motor and Garage Co., Limited, a 4-cylinder car of 14-h.p. to 16-h.p., the price of which is £165, with seating capacity for two persons, or £190 for four persons. These cars are British-built throughout, and the manufacturers claim them as being the cheapest 4-cylinder cars ever offered to the public. A number of more powerful and more expensive cars of well-known makers are also exhibited, among which may be mentioned the 18-h.p. 4-cylinder Italian Rapid, price £425, and the 16-h.p. to 20-h.p. Stella, with 4-cylinder engine, price with fittings complete £450. In the gallery surrounding the Hall are exhibited accessories innumerable—horns, lamps, speed recorders, and motoring garments of all sorts. The Fanphare lamp, shown by the Motor Accessories Company, of Great Marlborough Street, is worthy of mention, as by an arrangement of lens and reflector the light is carried no higher than the lamp level, and consequently glare is diminished. A useful pedal guard, by means of which a rug or an apron can be used with no fear of fouling the pedals, is exhibited by the Nonex Safety Tank Syndicate, Limited. There is also in the gallery a section devoted to balloons and airships, organized by Messrs. Spencer Brothers, Limited, of Highbury, in which figures a model of the successful Farman Aëroplane.

British Medical Journal.

SATURDAY, MARCH 28TH, 1908.

FRACTURES AND THE PUBLIC.

IN the general field of medicine and surgery there are a good many furrows which not every man need hoe, but the question of the right treatment of fractures is not among them. These are so common and are encountered at such unexpected times and places that every medical man must be prepared to deal with them. To all, therefore, the papers and discussions on this subject published in this issue are of essential interest, for the considerations they involve are of general application.

The first point which arises is whether a medical man, be he general practitioner, specialist, or pure surgeon, can safely depart in his work from lines of treatment laid down in textbooks. This is a question which it might be supposed could hardly arise in the present day, when the progress which science is making in all directions is so striking; but in spite of this circumstance the case Southern *v.* Lynn Thomas and Skyrme shows that so belated a contention may still have weight in a court of law, for judges are by their training disposed to attach great importance to written authority. The appeal signed by the large number of eminent surgeons published at page 752 is therefore timely as an affirmation of a principle of vital importance to humanity. If the outcome of the case mentioned were to establish a precedent in law that the medical profession must strictly adhere to the forms of treatment prescribed in textbooks, the results would be disastrous.

It is in the nature of things that all textbooks, however rapidly produced, by whomsoever written, should be behind the times in many respects; and if the view adopted by the court had been accepted in the past, all progress in medicine and surgery must long ago have been arrested, and treatment, both surgical and medical, must have been to-day what it was centuries ago. Every medical man recognizes that the progress of knowledge must often render it positively wrong to adhere to textbook treatment rather than adopt some other measure, the value of which has been proved since the textbook has been written and only awaits a demand for a new edition to receive due recognition in its pages; moreover, so greatly in the application of science to the relief of injury and disease do circumstances alter cases, that occasions must often arise when the responsible medical man is thoroughly justified in adopting a line of treatment which, so far as he is aware or could show, has never been tried before.

As to the justice and propriety of the protest, therefore, there can be no dispute. Indeed, the extraordinary thing is that it should have been necessary to make it; for the public itself would be the last to accept the view that the practice of medicine should be hedged and bound by precepts already canonized in textbooks. It is ever the first itself, and in all connexions, to cry out for the newest treatment and the most improved methods. The view against which protest is made is one which neither the public nor the profession would allow to assume the position of a precedent of permanent authority. Nevertheless, it is clear that such a protest is needed at the present day, and we hope that medical men recognizing this fact will lend their weight to it by sending donations to the fund on behalf of the two gentlemen who, in fighting their own case, have fought also for the general cause of the profession.

The other considerations raised by some of the papers and reports published in this issue are of a different nature, but have a distinct if indirect connexion with the foregoing. At one time nothing seemed more "standard" and immutable than views as to the right treatment of fracture. It was recognized that there were certain exceptions to the general rule, but as to what the general rule should be there was, until comparatively recent times, no doubt whatever. Given a certain fracture there were half a dozen ways in which it could be treated, but they were all of the same general kind, based on the same general principles, and the results to be expected were regarded as almost certain. The general formula for the treatment of each kind of fracture was fixed, the number of days for which the part should be immobilized laid down, and students and the public were alike led to believe that at the end of those days every ordinary fracture should be found repaired, though the patient might still be more or less incapacitated by stiffness in the neighbouring joints and other minor ills.

Of late years, however, the physiology of the repair of fractures has been more fully studied, the part played by the periosteum more clearly recognized, and the whole subject re-examined from the general standpoint of modern surgery. The net outcome is that few now are disposed to maintain that the treatment of fractures in the past was everything that it could be, or to deny that the idea of immobilization by different sorts of external appliances was overdone. No one, in short, considers it wise that in any variety of fracture a surgeon should pin his faith absolutely to any given form of splint, or deem that he has done his whole duty when he has kept such an appliance in place for a standard number of days. Apart from this, the cleavage is so wide that two distinct schools may be said to have arisen.

Of these, the one argues that in every case of fracture it is the duty of the surgeon to endeavour to secure absolute end-to-end apposition of parts, and to maintain this by the help of metallic ligatures, plates, pegs, and the like, applied direct to the bones at an open operation. The other school maintains that such a course is rarely necessary, that the operative risks are not inconsiderable, that the results obtained are not always good even in cases at first apparently successful; that end-to-end repair of fractures is not essential to absolute restoration of function, and that when the latter is not secured this is as frequently due to the accompanying injury to soft parts as to the actual fracture of the bones. This school, therefore, would treat every fracture on its merits, but usually treats such injuries on the general lines which have proved satisfactory in the past, substituting, however, treatment by massage and early passive and active movements for the old-time cast-iron rules as regards immobility.

Of the two schools, the operative hitherto has numbered comparatively few adherents, but radiography is perhaps now tending to increase them by showing that the setting of a fracture by ordinary means is a much more difficult matter than at one time was believed, and even that, so far as that term implies absolute restoration of bony parts to their original form, this result is seldom attained. But for the most part

this revelation leaves the larger school entirely undisturbed. It may be a reason, it argues, for more frequently taking advantage of anaesthesia as an aid to good setting, but not for a complete change of existing practice. On the contrary, if the theoretic imperfection of the latter is proved by radiograms, its practical efficiency is claimed to be likewise demonstrated and the lesson of the museums confirmed. In other words, dozens of persons in whom radiography shows that complete reduction of a fracture with end-to-end apposition has not been obtained have no subjective consciousness of any defect, and know that the limb is at least as strong as the other.

Which school of thought is destined eventually to reign supreme only the future can tell, but meantime no practitioner can afford to neglect to study for himself the arguments by which each is supported. As a matter of practical politics, the progress of the operative school is conditioned at present by the facts, first that the public at large has too long been accustomed to regard fractures as injuries entailing no more than a certain period of detention in bed, or the wearing of splints for a certain number of days, for it to be ready for a long time to come to submit to cutting operations for their cure; and secondly that the majority of medical men are not likely to advise them until facilities for operations in the depths of the country are much greater than is at present the case.

Upon the whole, therefore, in the question of the modern treatment of fractures, the part which radiography should play is perhaps of the most immediate interest. On this subject there are different opinions, not essentially the property of either one school or the other. Some regard radiograms as essential both to the diagnosis and treatment of every fracture, and would be entirely ruled by what they are considered to show. Others admit their utility in certain circumstances but are quite prepared to dispense with them as a rule, and are ready on occasion to disregard the indications they appear to offer.

Whoever is right in regard to this point, it is at least certain that whatever real assistance radiography may afford in the diagnosis of fractures, it would be lamentable if the younger generation of medical men learnt to regard it as anything more than an adjuvant to that prime instrument of diagnosis—the surgeon's own fingers. One very obvious reason for this is that good radiograms are not at present, and are never likely to be, obtainable at a moment's notice in every part of the country. Moreover, even if it be true, as has been asserted, that light pictures cannot lie, it is eminently true (as witness the "spook" photographs habitually published in a certain monthly magazine) that they can deceive; and if this be true of a photograph, it is a thousand times truer of a radiogram. Very slight lack of skill or care on the part of a radiographer may lead to the production of a most deceptive picture. Finally, the interpretation of radiograms, however good, is a matter demanding the highest skill and experience, in default of which the conclusions drawn, whether by a layman or by a surgeon who cannot check his observations by his own fingers, are likely to be exceedingly misleading. Stress is laid upon this point because there is reason to believe that even by medical men as a body, and certainly by the public, the facultative deceptiveness of radiograms is not fully appreciated. It is a fact to be borne in mind by every surgeon, not only when examining a radiogram taken for his own guidance, but more especially when the picture is one shown him by a person who has hitherto been the patient of some other surgeon. In such circumstances, if questions are asked, a medical man is bound to explain carefully the essential limitation of all radiographic pictures, and to bear in mind himself that though a radiogram if correctly interpreted shows what is, it does not show what was, and that without an intimate knowledge of that circumstance no one can correctly assess the amount of skill exercised in obtaining the result, whether good or bad, which the radiogram may reveal.

Finally, in view of the readiness with which patients are misled by radiograms, it seems important that some general effort should be made to disseminate an appreciation by the public of certain indisputable facts. The first is that there is no "standard" treatment for any fracture whatever; secondly, that the simplest fracture may be accompanied by grave and irreparable injury to nerves and other soft parts; thirdly, that whatever the treatment employed a certain considerable proportion of fractures must inevitably result in a greater or less degree of permanent disability; fourthly, that the persistence of some asymmetry in a bone is by no means incompatible with complete restoration of the function of a limb; and, finally, that when a fracture is shown by a radiogram not to have been set in absolutely end-to-end apposition, any disability which exists is not necessarily due to that cause, but may be attributable to accompanying injury of soft parts.

As a last word it may be added that in future all medical men called upon to treat a fracture will have to be more careful than ever as to the promises they make in respect of the final result. On this question, as on all others with which this article deals, readers will do well to study with close attention the interesting dissertation which appears in this issue from the pen of that great and distinguished authority on the subject of fractures, M. Lucas-Championnière.

THE RESULTS OF TRAUMATIC SEPARATION OF THE EPIPHYSES.

UNTIL quite recent years the descriptions of epiphysial injuries appearing in the ordinary textbooks were meagre enough to permit an inference that British surgeons paid scant attention to this important subject. Such an inference would, in fact, not have been justified, for Holmes, Hilton, Hutchinson, Humphry, and Bryant—to mention but a few of the many names that might be quoted—all contributed to our present knowledge. In 1891 Mr. Jonathan Hutchinson, jun., following his father's lead, with an essay on *Injuries to the Epiphyses of Long Bones*, was awarded the Jacksonian Prize. Valuable as this piece of work undoubtedly was, it was eclipsed in 1898, when the publication of Mr. Poland's monograph[1] raised English medical literature on this branch of surgery beyond fear of comparison with Continental writings, even over the names of Malgaigne, Ollier, Poncet, Vogt, and Bruns.

Although every student nowadays is familiar with the occurrence of traumatic separation of the epiphyses, and is impelled by well-known proclivities of latter day examiners to be on the watch for them constantly, there still exists among many practitioners a reluctance—shall we say?—to diagnose, and a tendency to regard too lightly, these particular accidents.

Diagnosis is generally not exceedingly difficult, and of course, where radiography is possible, should certainly not be in fault. The worst cases—those asso-

[1] *Traumatic Separation of the Epiphyses.* Smith, Elder, and Co. 1898.

ciated with great displacement or actually compound—cannot very well be unrecognized: but, unhappily, even the simplest form, with little or no deformity, may be followed by the most undesirable after-effects. The Roentgen rays have revealed the fact that many injuries which used to be named "severe sprains" are really fractures: it may be, merely linear and incomplete, but, more particularly in the case of the hands and feet, often of such a nature as to demand much more careful and prolonged treatment than they would have been likely to get under the comfortable designation "sprain."

Exactly the same applies to the simpler forms of epiphysial separation; indeed, the term "juxta-epiphysial sprain" still obtains and is employed with regard to a definite type of lesion at the extremity of the diaphysis.

With regard to treatment, too, an opinion has been current that less time and care are necessary than is the case with fractures. It is true, as Poland says, that these injuries generally do well, but he produced records of fifty-six instances of arrested development, and, in giving a list of causes of this untoward sequela, inserted after "mobility of the fragments," the note, "(probably common)."

No doubt arrest of growth is rare, but it occurs quite frequently enough to make it imperative for every case to be treated with the greatest care and circumspection.

It is by no means easy to foretell in any given case whether or not arrest of growth will ensue. Ollier's experiments showed that a separation through the conjugal cartilage resulted in complete cessation of growth at the epiphysis involved, and when such cessation is found clinically, it may be taken either that the cartilage itself has been damaged, or that imperfect adjustment and circumstances incidental to the process of repair have interfered with its nutrition. Fortunately in most of the cases diagnosed as separation of an epiphysis, the cartilage itself is uninjured, the juxta-epiphysial portion of the diaphysis being the actual seat of the lesion. Other things being equal, the earlier the accident happens, the nearer, that is, to the period in which the bone is most dependent upon the conjugal cartilage for its continued increase in size, the more likelihood will there be of resulting deformity. Even this criterion is unreliable, however, for of two unpublished cases of separation of the lower tibial epiphysis, one occurring at the eighth year was followed by a loss in length, as compared with the sound tibia, of 2 in. during the next eight years; the other, in an infant of 2 years, due to a fall of between 50 and 60 ft., two years later showed no appreciable difference in length of the tibias. On this point it may be remembered, moreover, that separation is uncommon in infancy, the years most liable being those between 10 or 11 and 20.

The particular epiphysis involved is obviously a factor of importance, since, for one thing, growth does not take place from the two epiphyses of a bone to the same extent, and also because the consequent disability will differ in quality and degree according as the epiphysis belongs to a bone of the upper or lower extremity, or to one of two parallel bones, or lies within a joint capsule. In the case of the humerus, for example, stunting of the bone may be very marked when the upper end suffers, but the deformity is not so serious as a similar deficiency in length of the femur would be, or as the consequences to the elbow-joint may be, when the lower epiphysis is separated.

The degree of displacement, except in so far as it precludes accurate apposition, does not affect the prognosis to any great extent. On the other hand, the occurrence of any inflammatory process, and especially of suppuration, at the injured spot, as may be inferred from what has been said as to the essential integrity of the conjugal cartilage, is of grave import. An elementary acquaintance with modern views on the etiology of acute periosteo-myelitis suffices to familiarize one with the peculiar susceptibilities of the juxta-epiphysial tissues to haemic infection, chiefly by the staphylococcus, and with the importance of trauma as a determining factor; hence it will be readily understood that severe inflammation is apt to follow separation of the epiphyses, even without external wound, and quite apart from questions of growth, very serious complications, such as ankylosis, limitation of movement, loss of muscular power, necrosis, and even pyaemia, are among the evils against which the surgeon must be on his guard and make every effort to prevent.

The deformities of the hand and foot resulting from unequal growth of the radius and ulna, tibia and fibula respectively, call for the exercise of great judgement in treatment. Endeavour should be made to prevent their occurrence by suitable apparatus, but success cannot be guaranteed to the most ingenious instrument, and, in the event of failure, it becomes a question as to the proper period for operative intervention. It is easy to arrest the growth of the sound bone, but it is not easy, in the earlier years, to estimate exactly how much must be done to ensure an ideal final result.

It is, perhaps, a matter of curiosity rather than of importance that separation of an epiphysis may be followed by excessive instead of deficient growth; and, further, that deficiency may result from a fracture of the diaphysis at a distance from the conjugal cartilage. In view of the frequency of actions for malpraxis in connexion with this class of injury in America, and of the increasing proneness of our own public to litigation we cannot do better than reiterate Poland's assertion that in these cases "it is most desirable that the "responsibility of the case should not rest with a single "surgeon."

THE CAUSE OF DEATH.

GERMANY has preceded us in the working of the laws for securing compensation to workmen for injuries or death arising in the course of employment, and by her experience we may profit. One of the results of this legislation has been to give much greater practical importance to the assigned causes of death; and, if we may judge from the admonitions and complaints expressed by Professor Johannes Orth in a recent lecture with the title, What is the Cause of Death?[1] the medical profession in Germany has proved to be to some extent unequal to the situation, and it is possible that as time goes on we may experience similar difficulties. From his position as the successor of Virchow in the Berlin Chair of Pathological Anatomy, Professor Orth is one of the leading authorities in Germany on disputes arising as to the cause of death, and many cases are referred to him. He reminds us that the cause of death is not an event, but a series of events, which vary in importance according to the standpoint from which they are regarded, and that any statement of them which may fulfil the requirements of medical science may be without interest to the statistician, and devoid of meaning or misleading to the lawyer. For legal purposes, the cause of death must be stated etiologically, the relation of the disease to certain antecedent circumstances should be always considered, and

[1] *Berlin. klin. Wochensch.*, No. 10, p. 485.

if possible must be made clear. Simple inspection of a dead body is insufficient to allow the cause of death to be affirmed. A *post-mortem* examination is better, but it is only by a careful collation of the facts ascertained before and after death that a trustworthy opinion can be formed. The importance of *post-mortem* examinations is so great that Professor Orth thinks indirect pressure should be used to induce the public to consent to them by the Courts refusing to consider theories of death which could have been proved or exploded if a proper examination of the body had been made. He thinks that all examinations of persons dying without any clinical history, or whose deaths are likely to become the subject of legal inquiry, should be made by experts, by which he means practitioners who have had experience as prosectors in the *post-mortem* theatre of a hospital. He holds that a *post-mortem* diagnosis should be purely anatomical, and complains of a certificate of "cerebral paralysis" having been given where there was fracture of the skull with bleeding into the cranial cavity. Such a diagnosis, Professor Orth says, went beyond the sphere of the deponent, who knew nothing of the case beyond the facts disclosed on dissection, and was beside the point.

In answer to the question, "What should the doctor "assign as the cause of death?" he replies that this must depend upon the object of the inquiry, whether it is medical, scientific, statistical, or legal. For example, if a child dies of diphtheria, it is simply a death from diphtheria, to be registered as such by the statistician, to whom it is of no importance to be told that the child died of heart failure, although this is of interest to the medical inquirer; and in the event of alleged neglect to perform tracheotomy it is conceivable that the fact that the child did not die of suffocation might become of legal importance.

A serious practical difficulty arises when there is a concurrence of causes. Then the facts need the most careful sifting to determine the share borne by each factor. For example, arterio-sclerosis, emphysema, and chronic nephritis may all be present. Sometimes the autopsy may dissipate such difficulties by showing the true unity of the cause, as in a case where death was attributed to arterio-sclerosis and cystitis, but at the autopsy there was only slight arterio-sclerosis and catarrh of the bladder, with cancer of the prostate and secondary deposits in the lymphatic glands and bones.

In a judicial inquiry the immediate cause of death, for example, heart failure, is of little importance, and if tendered only leads to waste of time and money and discredits the work of the medical profession. For example, a man was found unconscious and died twenty-four hours later without having been able to give any account of himself; a hospital house-physician assigned the cause of death as heart failure. In doing this he overlooked the point of the inquiry, which was whether death was spontaneous or the result of injury, and in the end Professor Orth came to the conclusion that it had been due to concussion. In another case a man fell and struck his forehead on the right side; some time after he developed cancer of the stomach and died; although there was no relation of time or place and the connexion between the two seems almost incredible, a doctor certified that death was due to the fall. In such a case, says Professor Orth, there should be no talking of certainties, but at most of probabilities and possibilities. Litigation, however, seems to have had a demoralizing effect upon the German doctor who, Professor Orth says, has ceased to be objective, but takes sides. It may be natural and even meritorious for a practitioner to sympathize with his patient, but this excuse cannot save the company's doctor who allows himself to be biassed in favour of his employers; yet Professor Orth regrets to find that in the great majority of papers relating to disputes of this sort "the attending practitioner says, Yes! and the "company's doctor says, No!"

This may be natural and perhaps pardonable, but it is unfortunate, and we may join with Professor Orth in urging that in all such cases the opinions given should be as impartial, as carefully considered, and as strictly scientific as possible.

THE DIFFICULT POSITION OF MEDICAL OFFICERS OF HEALTH.

IN the early part of 1871 the report of a Royal Commission was presented to Parliament recommending the appointment of medical officers of health. Even at that date the Commissioners recognized the difficulties which these officials would have to contend with, and suggested, in order that they might be able to discharge their duties without fear of personal loss, that they should not be removed from office by a local authority except with the sanction of the central authority. When the Public Health Act of 1875 was passed, and every local authority was required to appoint a medical officer of health, it is evident that Parliament intended to accept this very definite and prudent recommendation, and certain powers were given to the Local Government Board with respect to the tenure of office of medical officers of health. It is now well known that the Board has interpreted these powers in the very narrowest spirit, and in spite of similar precise recommendations from Royal Commissions and Departmental Committees of later dates, has persisted in maintaining a service of short-term appointments, which has had the effect of retarding sanitary progress, more especially in the small urban and rural districts, to a degree that can only be properly appreciated by those who are intimately or officially connected with those districts. It has certainly never been recognized as it should have been by the permanent officials of the Local Government Board, who must accept a very large share of responsibility for the condition of many rural districts which have recently been the subject of adverse criticism at the hands of the Board's medical inspectors. In a report to the Board dated as recently as February 3rd last, Dr. Wilfred E. Fletcher animadverts upon the inactivity of Dr. C. H. Watts Parkinson, who for a quarter of a century was medical officer of health for the Wimborne and Cranborne Rural District of Dorset. Dr. Fletcher states that after reappointing Dr. Parkinson year by year for twenty-five years the rural district council became dissatisfied with his services and advertised his office instead of simply reappointing him as heretofore, and as a fact Dr. Parkinson was not reappointed. There is in the report no word of sympathy with Dr. Parkinson upon being thus summarily deprived of a position which he had occupied, with the approval of the Local Government Board, for so long a period; and Dr. Fletcher does not appear to have made any inquiries, or if he did the result is not recorded, as to the cause of the council's dissatisfaction with the medical officer of health. Readers who remember the circumstances attending the vacation of this appointment, detailed in the BRITISH MEDICAL JOURNAL of October 12th last, p. 1003, will find that they throw a sidelight on the incident. There is, however, ample evidence in the report itself that the council had conspicuously failed to realize the responsibilities cast upon it by the Public Health Acts with respect to water supplies, drainage, new buildings,

house accommodation, and milk supplies, and was not at all the kind of body to accept advice and guidance from an official who could so readily be got rid of, and who in point of fact was got rid of when his advice became unpalatable to the majority of the members. It would appear to be almost impossible to place in the hands of defaulting local authorities a stronger weapon than that of periodical re-election; but in at least one instance which has come under our notice much more extensive powers are desired. The General Order of the Local Government Board, dated March 23rd, 1891, with respect to the appointment, tenure of office, etc., of medical officers of health, provides for the suspension from the discharge of his duties of any such officer, but the suspension may be removed by the Board. To the council of a small urban district this power of suspension apparently seems quite inadequate, and the medical officer of health, who has been reappointed annually since 1886, has been asked to sign an agreement containing a clause which is so gratuitously insulting that its exact terms must be quoted: "In the event of misconduct (and drunkenness whether "in or out of office hours shall be deemed to be mis- "conduct within the meaning of this clause) the said . . . "may be suspended from his offices under the council "by the chairman of the council for the time being and "countersigned by the clerk to the council, and if such "misconduct is proved the said . . . may be summarily "dismissed without notice." The medical officer of health very properly refused to sign this extraordinary document, the contents of which should bring home even to the Local Government Board the difficulties under which medical officers of health to small districts carry out their duties.

THE SERUM TREATMENT OF TUBERCULOSIS.

AT the meeting of the Medical Section of the Royal Society of Medicine on Tuesday last Dr. Arthur Latham read a preliminary note on an investigation he has conducted in conjunction with Drs. H. J. Spitta and A. C. Inman on the administration of tuberculin (T.R.) and other vaccines by the mouth, together with (*a*) normal saline solution and (*b*) fresh horse serum. It was pointed out that the hypodermic injection of Koch's tuberculin in pulmonary tuberculosis not only increases the percentage of arrested cases in those undergoing sanatorium treatment, but diminishes the tendency to relapse. The use of tuberculin and other vaccines on a large scale has been attended with great difficulty, owing to (1) the fact that the hypodermic method of administration has to be employed, and (2) the necessity, in most instances, of making frequent estimations of the opsonic index in order to determine the proper intervals between the doses. One of the objects of this investigation was the simplification of our present methods. On the assumption that immunity against certain diseases was often due to the absorption of the products of dead micro-organisms from the alimentary canal, it was decided to try the effect of administering various vaccines by the mouth. Further, the fact that the destruction of tissue in tuberculosis varies immensely in different cases suggested that something beside the direct effect of tuberculin had to be considered, possibly some deficiency in the patient's serum. There was evidence also of the value of various antiserums, such as antidiphtherial serum, in diseases other than the specific disease, and of horse serum in haemorrhagic conditions when administered by the skin, mouth, or rectum; fresh horse serum was given in a number of cases in order to determine whether it could supply some substance in which a patient's serum was deficient, or to stimulate the production of some such substance. Systematic observations of the opsonic index were simultaneously made. The cases treated embraced examples of advanced pulmonary tuberculosis, tuberculous peritonitis, tuberculous disease of glands and hip, and cases of streptococcic, staphylococcic, and pneumococcic infection. Evidence, clinical and bacteriological, was brought forward tending to show that satisfactory immunization could be produced by the administration of vaccines by the mouth; in tuberculosis and other diseases of bacterial origin in which fever was present, there was a definite relation between the curve of the opsonic index and the temperature, the two varying inversely. In such diseases the temperature, even when normal or subnormal, afforded some guide to the changes of phase in the opsonic index; and from a study of the temperature curve and the clinical symptoms alone, it might become possible to dispense with the systematic estimation of the opsonic index. Horse serum in certain cases increased the opsonic content of the blood. The discussion was adjourned.

MEDICAL EGYPTOLOGY.

IN the present issue are published three papers of great antiquarian interest. Professor Elliot Smith, who has already done much for Egyptology by bringing the light of science to bear on the "finds" of excavators, gives an account of the most ancient known splints. He shows that at the very dawn of Egyptian history surgeons could treat broken bones with a measure of success that must surprise those—and they are not a few—who think that the art of healing is of comparatively modern growth. That the ancient Egyptians were experts in bandaging we knew from the mummies which are familiar in our museums, but it has been left for the distinguished Professor of Anatomy in the Cairo School of Medicine to show that they could fashion and apply useful splints some five thousand years ago. Whether or not splints were used in prehistoric times in Egypt is a question which he cannot answer with certainty; in some cases he thinks it safe to say that no splints were applied, as bones exhibiting all the signs of fractures which remained ununited for a long time before healing took place are found. He makes the interesting remark that fracture of the forearm—as a rule the left ulna, but most often both bones, sometimes in both arms—has always been exceedingly common in Egypt as compared with other fractures. This is true, he says, of every period from the earliest known prehistoric times till the present day. The explanation given is that the Egyptians have always indulged in fencing, both as an amusement and as a serious method of attack. For both purposes they use the *naboot*, a very thick heavy stick about five feet long, which many Egyptians habitually carry. Professor Elliot Smith thinks there is no doubt that the great majority of these fractures of the forearm were inflicted while the victim with upraised arm was defending himself or herself—for a considerable number of women, especially in prehistoric times, have suffered from this injury. As an example he refers to a specimen, from which a terrible tragedy may be reconstructed without much difficulty. In the Anatomical Museum in the Cairo School of Medicine there is an example of such a fracture of the left forearm in a girl of the time of the 26th dynasty (about 600 B.C.), whose body bears distinct traces, not only of the manner in which the injury was inflicted, but also of a possible reason for the brutal treatment inflicted upon her. She was a young woman less than 20 years of age, and in the sixth month of pregnancy; just when her condition was becoming evident she was murdered by a series of blows, one on the left forearm, another on the left shoulder breaking the acromion process, and others, the fatal blows, smashing the left side of the jaw, face, and

cranium. There is, perhaps, no such common motive for murder in Egypt at the present day as the discovery by a father or brother of sexual delinquency on the part of a daughter or sister. A striking instance of the conservatism of the Egyptians is afforded by the fact related to Professor Elliot Smith by Mr. Hayes, Medical Officer to the expedition sent by the Egyptian Ministry of Public Works to Lake Tsama in Abyssinia in 1903. When the expedition crossed into Abyssinia patients flocked to Mr. Hayes from the surrounding country; among them was a man wearing splints on a broken forearm, which resembled those used in Egypt 5,000 years before. Mr. Wood Jones's paper on the *post-mortem* staining of bones produced by *ante-mortem* staining of blood supplies proof that the question whether a fracture in a body buried 6,000 years ago was inflicted during life, or after death by riflers of graves, can be answered with tolerable certainty. Some of these blood stains are more than 5,000 years old, and yet they are still wonderfully vivid. There can be no question here of coloured gum and resin used in embalming, which, according to Schmidt, were mistaken by previous observers for blood. Mr. Wood Jones also gives an account of the appearances in a number of bodies of Nubians, killed, chiefly by hanging, in Roman times. In no case was there any trace of damage to a cervical vertebra; the injury which was most commonly found, and which he thinks was caused by hanging, was confined to the base of the skull. The sutures running antero-posteriorly were dragged open and the whole cranial base was torn apart so that the two sides of the skull tended to be disunited. This was caused, in Mr. Wood Jones's opinion, by the sudden jerk, accompanied by an upward pull imparted to one portion of the head and a downward pull of the other. The upward jerk acted only upon the side of the head on which the knot was placed. The bases of all the skulls, more than a hundred in number, show a widespread staining of the bone, doubtless due to the blood exuded in the neighbourhood at the moment of death. These "human documents", described by Professor Elliot Smith and Mr. Wood Jones are of extraordinary interest, and we shall look with interest to the results of their further investigations in the same field.

ANTIVIVISECTION MEETINGS.

AT a meeting of the Union of the Debating Societies of the University of London held recently at Bedford College for Women the following resolution was discussed: "That the Brown Dog Statue is a libel on "University College and a noble and humane science." The debate was opened by Mr. Lister, who moved the adoption of the resolution. This was seconded by Miss Ayrton, from the general point of view. Mr. Stephen Coleridge opposed on the characteristic ground that the statue was not put up by his society but by a rival antivivisectionist body. He said he was not there to defend the inscription; nevertheless he proceeded to defend it. His audience showing signs of resenting this inconsistency, he explained that "done to death" meant nothing more than the animal was killed. Further attempts to attenuate the expression were received with derisive laughter. Can this apologetic orator, who reminds us of the candidate who said, "Gentlemen, these are my opinions, but "if you do not like them, they can be "changed," be the author of a letter published in the *Times* of December 31st, 1907, in which a substitute for the present inscription was given, ending with the rhetorical appeal to the "intellectuals" of Battersea: "Men and women of England, how long shall these "things be?" But Mr. Coleridge's adaptability to his environment carried him further, for he declared that he was not an antivivisectionist, but only wished that experiments on animals should be adequately controlled —which means made practically impossible—by his Bill. And this same gentleman, who is not an antivivisectionist, informed the Royal Commission on Vivisection[1] that his society "desires to see vivisection totally "abolished by law"! Among the other speakers were Mr. Somerville Wood, the itinerant advocate of antivivisection, who was called to order for discourtesy to one of the ladies who had spoken on the other side; and Miss Lind-af-Hageby, who, in her amiable manner, said a medical student was known by his love of cruelty and his dirty linen In regard to cruelty, we would cheerfully back medical students for practical humanity against Miss Lind-af-Hageby and the other sentimental persons who denounce them with such gracious philanthropy; and as for their linen, poor fellows, it may be pleaded in excuse that but few of them enjoy the social advantages that may be supposed to belong to the daughter of a "Chief Justice of Sweden." Some speakers, who said they were antivivisectionists, admitted that it was unjust to single out University College, and that the inscription and Mr. Coleridge's statements were misleading. The result of the debate was that, in spite of the display of antivivisectionist eloquence, the resolution was carried unanimously. Were the philozoists afraid to vote? They are not used to being met in a fair field by speakers who knew what they are talking about; they prefer an audience which will swallow their "platform facts" with the greediness of the scandalmonger, and they are as "slim" as Boers in taking cover when opposed to an enemy who shoots back. Another debate in which the antivivisectionists had a like experience took place at Oxford not long ago, when the question, "Does vivisection con-"tribute to the advancement of the art of healing?" was discussed by Dr. Reinhardt, representing the National Antivivisection Society, and Dr. Gustav Mann. Dr. Collier and others spoke, and the motion was carried by a substantial majority. At a meeting of the local branch of the National Antivivisection Society held at Worcester on March 19th an amusing dispute took place between the Rev. Dr. Warschauer, who gave an address, and a member of the audience who objected to his calling a pamphlet by Miss Beatrice Kidd, the Secretary of the British Union for the Abolition of Vivisection, "a ridiculous production of a ridiculous person." This was followed by an exchange of "amenities of debate" after the style of Mr. Coleridge with regard to the honesty of the methods employed by the rival antivivisectionist sects. It must have been like the historic debate between the pot and the kettle.

CREMATION SOCIETY OF ENGLAND.

AN extraordinary general meeting of the members of the Cremation Society of England was held on March 23rd. Sir Charles Cameron, Bart., M.D., LL.D., President, who was in the chair, said in opening the proceedings that the meeting had been called to ask for sanction of alterations of the Society's rules, such as, in view of the altered circumstances of to-day as contrasted with those existing at the date of its foundation, were in the opinion of the Council necessary to enable it to fulfil the function for which it was instituted. Though such societies were now to be found in most civilized countries, that Society was the oldest of them all, and the rules which were drawn up when it was founded in 1874, though then admirably suited for its purpose, required very extensive modification to adapt them to the altered conditions. At that time no crematorium existed in the United Kingdom, and the first work of the Society was to provide funds for the erection of their crematory at Woking. Public feeling was hostile and clerical prejudice was strong against cremation, and but for the indomitable energy and

[1] Third Report. Minutes of Evidence, p. 144.

liberality of the late Sir Henry Thompson the movement must have failed. Thanks, however, to the hearty co-operation of a few friends, among whom he specially mentioned the late Sir Spencer Wells and the ninth Duke of Bedford, the crematorium at Woking was erected and equipped for work in 1879. The Home Secretary of the day, however, at once forbade its use, declaring that if the law was found insufficient to prevent cremation he would seek legislative authority to do so. This ban was maintained under two successive administrators for more than six years, until the judgement of Mr. Justice Stephen in what was known as the Welsh Druid case declared that cremation was not in itself forbidden either by statute or common law, and a division in the House of Commons on a Bill which he (Sir Charles Cameron) introduced on the subject convinced the Government that it would not be such an easy matter as they thought to pass an Act forbidding it. The first cremation at Woking took place in March, 1885. The old prejudice had now entirely died out and the announcement of a cremation now excited no more comment than that of an ordinary funeral. Many leading clergymen of the Established and other Churches were amongst their supporters. The Government had sanctioned an Act empowering municipal authorities to erect crematories at the public expense. It had promoted legislation regulating the practice of cremation and applying to it safeguards, which Sir Henry Thompson and the Society for years endeavoured to get enacted in every case of death, for the detection of possible neglect or foul play, so that now in the case of bodies cremated, and in their case alone, the law insisted on a procedure which rendered the disclosure of anything suspicious a matter of practical certainty. The multiplication of crematories, the legal recognition and regulation of the practice, the steadily increasing number of cremations showed that the movement was now fairly started, and if the Society was to continue to fulfil its object in the promotion of cremation its rules and methods must be altered to suit the altered position of affairs. Their object was to promote and extend a reform which with every year as the population increased would be more urgently required. Their existing rules provided that a single payment of ten guineas, or twenty annual subscriptions of one guinea, should constitute the subscriber a life member of the Society, and should entitle him to be cremated at death without fee at the Woking Crematorium. That was all very well when Woking stood alone, but now that crematories were scattered all over the country it was evident that the offer of a free cremation at Woking would present no attraction to a cremationist living in Manchester, Liverpool, or even in London. Moreover, the amount of the subscription required for life membership had been unnecessarily large. They proposed, therefore, to cancel that rule and to substitute for it one providing that life membership of the Cremation Society of England should be constituted by a single payment of five guineas or six annual subscriptions of one guinea each, and that each person who had paid five or six guineas should at death be entitled to cremation at the expense of the Society at any crematory in Great Britain that might be in working order. This new departure would, they believed, tend to give increased vitality and cohesion to the movement and not only largely to augment the membership of the Society throughout Great Britain but to afford an opportunity to many persons who preferred incineration to burial to place on record their wishes as to the disposal of their bodies after death in the guise of a provision for the relief of their families from a portion at least of those, in many cases, heavy disbursements which a death entailed on the survivors. This rule as to reduced fees for membership and free cremation at any crematorium was the only material new departure to be found in the draft rules. The other draft rules differed from those which they were intended to supersede only in the omission of provisions that had become obsolete or unnecessary, and in such respects as were required by the altered condition of the law and the multiplication of crematories. Sir Charles Cameron moved the substitution of the new draft rules submitted to the meeting for the existing rules of the Society. The motion was seconded by Sir Herbert Thompson, Bart., and carried unanimously. A vote of thanks to the chairman concluded the proceedings.

DISTRICT NURSING.

A GREAT effort is being made to obtain materially increased support for Queen Victoria's Jubilee Institute for Nurses, which is now in the twentieth year of its existence. The foundation of such an institute was strongly advocated by Miss Florence Nightingale some thirty years ago, but it was not until her late Majesty Queen Victoria devoted to the purpose the sum collected by the women of Great Britain as an offering on the occasion of her Jubilee that it became possible to realize the project. The funds at the disposition of its Council were increased from much the same source later on, at the time of her late Majesty's Diamond Jubilee, and in 1901, after her death, the sum of £84,000, collected as a women's memorial, was devoted to the same purpose. From these and other fairly assured sources the institute has now a yearly income of about £10,000. This seems a fair sum, but nevertheless the authorities are able to show by practically indisputable arguments that it ought to be doubled in order to permit the institute to do all that is required of it. This is the easier to believe when it is remembered that the title of the institute is in some degree a misnomer. In other words, it is an institute in no sense established for the benefit of nurses, but to provide nurses for gratuitous work among the poor. All candidates for the title of Queen's Nurse must already have undergone a full period of three years' ordinary training at some recognized hospital, and they are then trained specially for district work by the institute itself, the period of extra training imposed being six months. It is the common practice likewise for Queen's Nurses to obtain certificates enabling them to act as midwives. When fully trained they are distributed to districts where associations affiliated to the institute have been established—now to be found in all parts of England, Scotland, Wales, and Ireland—and a high standard of work is insured by visits from nursing inspectors appointed by the institute. Altogether there are now over 1,100 Queen's Nurses to be found at work in different parts of the kingdom, but there are still upwards of fifty places demanding assistance from the institute. They have formed associations under its aegis, and have collected funds sufficient to insure the payment of the modest stipend which the institute stipulates a Queen's Nurse shall receive; but the institute cannot send the nurses required because it has not sufficient funds to train them. It is fully justified, therefore, in calling for more support, and one reason in particular why it seems to us that it should be accorded is that the work of the Jubilee Institute has created a need, and that in places where the institute has not been ready at once to meet it, more or less strictly local bodies have been formed which do work of the same character, but in a very different way. They employ nurses who are by no means of the same class as those on whom the institute confers the title of Queen's Nurse, and these are often anything but thoroughly trained. Such women are necessarily less helpful in professional respects to the medical men whose labours they should lighten, and, more important still, they are

not infrequently a cause of difficulty, owing to a lack of a sense of discipline and other desirable qualities born of long training in a large hospital. On this ground alone Queen Victoria's Jubilee Institute for Nurses deserves the good wishes and fullest support of medical men. Its head quarters are at 120, Victoria Street, London, S.W., to which address contributions may be sent.

POOR-LAW MEDICAL APPOINTMENTS.

SOME little time ago Dr. Brand, Medical Officer for the Driffield District, applied to the Board of Guardians for an increase in the salary paid to him. At the last meeting, Dr. Brand wrote stating that, judging from the reports printed in the press, not only were his services not appreciated by the guardians generally, but some of them grudged even the utterly inadequate remuneration already paid. He therefore resigned his position, and went on to explain that he had long been aware that the work had been performed at a pecuniary loss, but had not realized at what a loss until he had made certain definite calculations. From these it had resulted that the remuneration he received was at the rate of 1½d. for each visit and medicine. At present he received the weekly sum of 15s. 7d. for attending the poor of the district, which was a large one, and supplying all necessary medicines, etc. The augmentation which he suggested would increase the sum to 23s. a week, which was less, he added, than he paid his chauffeur. The matter was referred to a committee for consideration after protest had been made by one member in the usual terms, to the effect that, as Dr. Brand had resigned, the guardians should set about getting another man in his place. Other district medical officers have come to the same conclusion as Dr. Brand when they have taken the pains to calculate the average amount of remuneration received; and we apprehend that the profession in general will be in complete agreement with Dr. Brand when he declares that such remuneration as he has been receiving is not in keeping with the dignity of the medical profession; nor is it in keeping with ordinary business principles.

AN ACTION FOR MALPRAXIS.

THE case of Douglas *v.* Stanger, heard by Mr. Justice Pickford and a special jury on Monday last is an example of the kind of claim to which the practitioner may be exposed. The facts may be stated in short compass. The defendant was called in to see the plaintiff's wife, who was suffering from Bright's disease and dropsy. The defendant prescribed certain drugs and treatment which were admittedly correct. The patient having died, an action for malpraxis was commenced, the negligence alleged being that he allowed his patient to have beer and spirits, which were fatal to any one suffering from Bright's disease. The defendant frankly admitted that at the earnest solicitation of the patient he allowed her to have one glass of beer, as her condition was then already quite hopeless. He wholly denied a further charge made by the plaintiff to the effect that she was to be allowed gin and spirits. A second doctor who was called in by the plaintiff fully endorsed the defendant's treatment, but expressed the opinion that alcohol in any form was undesirable in Bright's disease. In the circumstances it is not surprising that the jury stopped the case and returned a verdict for the defendant almost before he had given his version of the story. We wonder whether the futility of bringing actions of this kind will ever be brought home to the general public. It is true, of course, that a medical practitioner who causes the death of a patient by such negligence as would have entitled the patient (if death had not ensued) to maintain an action may be liable in damages, even though the circumstances under which the death was caused amount to felony. But the facts proved must amount to negligence of a serious character. The position of the medical man who is thus attacked is by no means enviable. To have his skill and competence called in question is sufficiently odious; but to this is added the possibility of having to pay a large bill of costs, as it frequently happens that the plaintiff cannot pay the costs imposed upon him by an unsuccessful verdict. The necessity for becoming a member of some medical defence association is emphasized by a case of this kind.

CLAIMS UNDER THE COMPENSATION ACT.

WHILE the Workmen's Compensation Act, 1906, is generally of interest to the medical practitioner in so far as he may be called upon to pay claims thereunder, or give evidence as to the condition of an injured workman, cases do arise in which the practitioner himself is entitled to prefer a claim for compensation. As our readers are doubtless aware, any practitioner holding a salaried post—as, for instance, a medical officer of health, the doctor to a workhouse, or an assistant—is entitled to compensation for injuries unless "his "remuneration exceeds £250 per annum." It is not easy to say what is remuneration exceeding £250. It has been decided in cases of a similar nature that board and lodging may be taken into account. Thus, suppose a man is in receipt of a salary of £200, and has board and lodging provided for him amounting to £1 a week in value, he cannot claim compensation. Until quite lately the courts have laid down no criterion as to how the value of board and lodging is to be estimated. A recent case, however, in which the captain of a vessel made a claim, throws light on the subject. He received £216 a year, and was provided with food while on board and an allowance for washing. A county court judge held that the test was, What did the deceased save by his allowance of food? The Court of Appeal, however, held that the proper test was the actual value to the deceased of the reasonable board and allowances provided for him by the owners, and the case was remitted to the county court judge in order that he might reconsider it from that point of view. Applying the principle of this case to a locumtenent who receives £4 a week it would seem that if his keep at his employer's house is worth £1 a week to him, he would not be a workman, but if it was worth only 15s. a week he would be entitled to compensation in case of accident.

SIR MALCOLM MORRIS, K.C.V.O.

A very interesting dinner party took place on Thursday evening, March 19th, at the Imperial Restaurant to celebrate the honour recently conferred by the King on Sir Malcolm Morris. The party numbered about 35, and Dr. Radcliffe Crocker was in the chair. Among those present were Sir Patrick Manson, Dr. Colcott Fox, Dr. Galloway, Dr. Leslie Roberts, Mr. George Pernet, Dr. Sequeira, and Dr. J. M. H. MacLeod. After the King's health had been duly honoured, the Chairman proposed the toast of their guest. He spoke of the very friendly relations which had existed for so many years among those especially interested in the study of dermatology in this country. In connexion with this he referred to the good work done during the period of its existence by the Dermatological Society of London, now included in the Royal Society of Medicine. The result of the work of this small Society had been to advance the collective study of cutaneous diseases, to an extent unequalled by any other agency throughout Great Britain and Ireland, and the Society had gained the reputation of fostering the growth of most valued friendship among its members. Sir Malcolm Morris had been an original member of this Society and one of its most industrious members. The chairman then

referred to the great influence exerted on the progress of this department of medicine by Sir Malcolm Morris, and to the high position which he now occupied in medical circles generally, and through his writings, in the estimation of the community. Evidence of this was now clearly given by the recent gracious action of the King. He wished to congratulate Sir Malcolm both as a valued professional colleague and an esteemed friend on behalf of all those present upon the high honour conferred on him by His Majesty. In responding, Sir Malcolm Morris referred to the growth and recent developments in the study of cutaneous medicine. He also referred to the invaluable influence which has been exercised by the old Dermatological Society. The work of every one of its members had been laid before the others for criticism and for mutual instruction. It deserved in a special sense the epithet of a "College of Dermatology." He made mention in cordial terms of the peculiarly harmonious character of their comradeship. In concluding a very interesting speech he remarked that while he appreciated in the highest degree the personal character of the honour conferred upon him, he preferred to look upon the King's act more from the point of view of a recognition of the position gained for dermatology as a branch of scientific medical study in this country than as a purely personal royal favour. Dr. Mitchell Bruce at the close of the evening referred to the good fellowship which had been promoted by the old Dermatological Society of which he had been a member. He spoke of the very helpful influence which had been exerted by their guest throughout his career in advancing general medical studies by his publications and literary ability, and especially of the series of textbooks of medicine which he had been to such a large extent instrumental in having published. He then proposed the health of the Chairman in very cordial terms, bringing a peculiarly interesting evening to a conclusion.

THE TERRITORIAL ARMY.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. J. DE ZOUCHE MARSHALL, one of the most experienced officers of the Volunteer R.A.M.C., and now one of the military members of the Surrey Territorial Association, has recently circulated amongst technical papers a letter dealing in interesting and practical fashion with one of the most important problems connected with the new Territorial Army. This is the question of how a sufficiency of real training is to be obtained in this force which the author considers will resemble much less the volunteers than the militia of the past. It is admitted and arranged that its members should be tempted by pay to assemble for training during camp, and in modified fashion they should, Colonel de Zouche Marshall thinks, be tempted by the same means to attend for what is at least equally important—training at head quarters. To be passed as fit, they have to attend head quarters at least thirty or forty times a year, often paying railway and tramway fares to get there. This and some portion of the connected expenses should be taken off their shoulders by paying officers and men so much an hour for every hour spent on actual drill instruction, under the strictest supervision and discipline. The rate of hourly pay should be based on the day's pay fixed for officers and men respectively when called up for duty in camp. Taking such a day as one of twelve hours, the hourly pay would, in the case of ordinary regiments, work out at the following rates: Captains, 1s. 2d.; lieutenants, 9d.; sergeants, 5d.; corporals, 4d.; privates, 3d. The pay should be deferred until quarter day and the men placed under stoppages for all neglect of duty and other irregularities; while promotion from bottom upwards should go strictly on examination results. A healthy spirit of competition would result, and this with the improved discipline and better attendance at head-quarters training, would lead to the right sort of men seeking commissions. In addition, the granting of this hourly pay would prove to all ranks that they were being taken seriously by the authorities, and lead to all showing greater pride in their work. As a further step in the same direction the affinity between Regulars and Territorials should be emphasized by authorizing the latter to use the brass "furniture" worn by regulars and old-time militia instead of silver. Grounds are supplied for believing that the expense of this hourly pay system would be relatively quite small—that is to say, if a full T.A. infantry company attended drill two evenings a week for two hours each evening and for three weeks, the total expense would not exceed that of a regular company's pay for a single day. Those who desire to examine this scheme in detail could probably obtain copies of the letter from Colonel de Zouche Marshall on application to him at the head quarters of the East Surrey Volunteer Infantry Brigade of which he is S.M.O.

UNIVERSITY COLLEGE, LONDON.

THE extension to the buildings of University College, London, opened by Lord Rosebery, Chancellor of the University of London, on March 26th, have already proved of material benefit to all departments in the College. The most important change which has been made is the rearrangement of the library. The general library remains in the old position, but the lecture rooms, which used to lie between the library and the University College Schools, have been converted into small libraries devoted to special subjects for advanced students; there is also a special science library lying between the Anatomy Museum and Flaxman Gallery. The general library is intended for the use of first-year students and for general purposes. It is to house the Graves Library, the Ricardo Library, the Morris Library, the Arthur Strong Memorial Library, and editions of Latin and Greek classics. A portion of the Science Library has been reserved for medical students, who will have the advantage of being able to consult the physiological library collected by Professor Sharpey, in addition to the current medical textbooks. The inclusion of the old school buildings has provided much needed space for the departments of botany, geology, applied mathematics, and engineering. A large research room has been opened for the study of biometric measurement and work is already in progress on the 1,600 crania sent from Egypt by Professor Petrie. The Galton Eugenics Laboratory has already been moved into the main buildings, while, in addition to many other improvements adequate space has been found for a laboratory for experimental psychology, and every department of the College has benefited by increased space.

AMONG the distinguished persons upon whom the Senate of the University of Glasgow has decided to confer the honorary degree of LL.D. are Colonel David Bruce, C.B., F.R.S., R.A.M.C., and Dr. John C. McVail, County Medical Officer, Stirlingshire and Dumbartonshire. These honorary degrees will be conferred on Wednesday, April 22nd.

M. HENRI DUNANT, founder of the Red Cross Association and initiator of the Geneva Convention, will celebrate his 80th birthday on May 8th. It is proposed to strike a medal in honour of the occasion, bearing on the obverse the words "Joannes Henricus "Dunant, natus 8. v. 1828," and on the reverse, in addition to the dates, "Joannes Henricus Dunant, "Fundator Operis Crucis Rubrae, 1863. Promotor "Conventionis Genevensis, 1864."

Medical Notes in Parliament.

Housing in Ireland.—There was an interesting debate on Friday in last week on the Housing of the Working Classes (Ireland) Bill. Mr. Clancy, in supporting the second reading, said that the present state of things in Ireland amounted to a national scandal. The Registrar-General had shown that out of 60,000 families in Dublin in 1903 no fewer than 21,747 lived in one-room tenements. The percentages of one-room tenements having five or more occupants were in Manchester, 0.04; Liverpool, 0 22; London, 0 57; Edinburgh, 1.80; Glasgow, 4.28; Dublin, 8.69. These figures showed that the need of Ireland was more urgent than that of Great Britain. He admitted that the Act of 1890 had done good, but it only touched the fringe of the problem, and he supported the Bill as a means of making the financial difficulties less, and because it would induce philanthropists to follow the good example of Lord Iveagh. Mr. Lonsdale, speaking for the Ulster members, pointed out that progress in better housing had been made in the rural districts; in 1841 there were 491,278 mud cabins of a single room in Ireland, but in 1901 that number had fallen to 9,872. The census figures, however, pointed to much overcrowding. In 1901 there were 79,149 tenements of one room in Ireland, and in 5,587 of these dwellings seven or more persons were crowded together. In Dublin, which was the worst city in this respect in the British Isles, 40.6 per cent. of the population occupied overcrowded dwellings. In Belfast only 8.29 per cent. of the population dwelt in overcrowded tenements. In Belfast the death-rate had declined compared with that of Dublin. He referred to the 12,000 deaths in Ireland in 1905 due to tuberculosis, and pointed out that the death-rate from this cause was higher in Ireland than in England or Scotland. In the course of the debate, which occupied the whole sitting, Mr. Birrell made a sympathetic speech, admitting the necessity of legislation and regretting that he could not promise to give the Bill special facilities. The Bill was finally read a second time without a division.

Dr. Hall Edwards.—Sir Gilbert Parker asked on Monday whether the Government could see its way to making some provision for Dr. Hall Edwards, whose sufferings in the cause of science and for the benefit of humanity were known to all. Mr. Asquith said, in reply, that the suggestion had been anticipated by the Prime Minister, on whose advice His Majesty had been pleased to grant a Civil Service pension to Dr. Hall Edwards of £120.

Medical Referees under the Workmen's Compensation Act.—Last week Mr. Arthur Henderson asked the Secretary of State for the Home Department whether any case had been considered by the medical referees appointed under the Workmen's Compensation Act; and, if so, in what trade and with what result. Mr. Secretary Gladstone said in reply that the total number of cases considered by medical referees in the six months from July 1st, 1907, the date on which the Workmen's Compensation Act, 1906, came into force, up to December 31st, 1907, after which date figures were not available, was 117. The numbers in the respective branches of employment were as follows:

Railways, 4; factories, 27; mines, 64; engineering, 2; building, 9; agriculture, 3; not stated, 8.

He could not give the results, as the reports of the referees were not made to the Home Office, but to county court judges and other persons; such information as was furnished to the Home Office being principally required for the proper payment of the fees. He should like to add that he did not think any trustworthy inference as to the working of the provisions of the new Act could be drawn from the results of the first six months of its operation. In reply to a further question by Mr. Wedgwood, Mr. Gladstone said that steps were taken to secure that the medical referees appointed had not previously been interested in the cases as certifying surgeons or in any other manner.

Malta Fever.—The stamping out of Malta fever has excited some interest in the House of Commons, and a little time back Mr. Secretary Haldane informed Sir William Collins that the number of cases of Malta fever occurring among the troops in Malta, and the number of deaths during the years 1905, 1906, and 1907, was as follows: 1905, 643 cases, 16 deaths; 1906, 161 cases, 4 deaths; 1907, 11 cases, 1 death. The reduction in the number of cases of Malta fever among the troops in Malta was solely attributable to the prohibition of the use of goat's milk in barracks and hospitals. Protective inoculation had not been used for the troops. The disease, according to information received from the Board of Health in Malta, continued to prevail among the native population without any change or abatement.

Free Medical Attendance for Workhouse Officials.—Mr. Cooper asked the President of the Local Government Board whether his attention had been drawn to the action of the West Ham Board of Guardians in trying to compel one of their medical officers to give free medical attendance to the officials of the workhouse; whether he was aware that one of the relieving officers had given to workhouse officers the ordinary order to obtain medical attendance; whether the issue of such orders was in accordance with the rules of the Local Government Board; and whether he had any authority to deal with the matter. Mr. John Burns replied that he was aware that an allegation to the effect stated had been made, and he was causing the matter to be investigated.

The Children's Bill.—The second reading of this Bill was moved on Tuesday by the Lord Advocate, who called special attention to the clauses for the protection of infant and child life. Section 3 dealt with the proper sanitary surroundings for children, and the general care was also provided for under other sections. Referring to overlying, he said that in London alone 1,600 deaths had arisen from this cause in a single year, and he also spoke strongly in favour of the clauses for protecting children from liability to burns and scalds. With reference to juvenile smoking, he quoted the Physical Training Commission to the effect that "Tobacco smoking before maturity is reached has a most prejudicial effect on physical development, and this evil and increasing practice cannot be too strongly denounced." He therefore commended the provisions of the Bill in this direction and dwelt at some length on the treatment of juvenile offenders. Mr. Akers Douglas gave a general support to the Bill, and especially to the provisions for the protection of infant life, pointing out that while the ordinary death-rate had steadily fallen, infant mortality had remained practically the same. Mr. A. Allen made a suggestion that the parent should be made liable, if after being warned that neglect would result in mental or bodily injury to the child, he refused to provide proper medical attendance. Several other speakers criticized the provisions of the Bill, and Mr. J. E. Ellis, who had acted as Chairman of the Committee appointed to consider the extension of the Act to "one-child homes," said that the Committee had come to the conclusion unanimously that such homes should be included, provided that local authorities were given power to exempt institutions or homes of a bona-fide character. Mr. Herbert Samuel defended the Bill generally, and the debate was then adjourned.

Public Health Bill.—On Tuesday Mr. Cooper introduced a Bill to amend the Public Health Act, 1875, and the Local Government Act, 1888, and the Bill was ordered to be printed, and the second reading put down for May 6th. The Bill is backed by Sir Walter Foster, Mr. Bowerman, Mr. Crooks, and Mr. Straus.

Lead Poisoning.—Mr. Alden asked the Secretary of State for the Home Department whether he was aware that during the months of January and February of this year there were 17 cases of lead poisoning in the china and earthenware industry, as against 10 for the same two months of 1907; that 7 out of the 10 persons affected by lead poisoning during the month of February this year were females; whether he could inform the House as to the number of china and earthenware factories represented by these cases; and how many of these cases had resulted in death. Mr. Secretary Gladstone said the figures quoted were correct. The 17 cases occurred in fourteen factories, and 1 of them was fatal. As he had already announced, he was appointing a Committee to make a further inquiry as to lead poisoning in this industry.

Scotland.

[From our Special Correspondents.]

Royal Edinburgh Asylum.

The statutory annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held on Monday afternoon, February 24th, in the City Chambers, Professor Rankine presiding in the absence of the Lord Provost. The Ordinary Managers in their report for the year ending December 31st, 1907, place on record a warm tribute to Dr. Clouston for his work at the Asylum from May 20th, 1873, till now, as Physician, administrator, organizer, teacher, consultant, writer, man of business, and man of "untiring zeal, energy, and devotion to duty."

Valedictory Report.

General Statistics.—Dr. Clouston then read his last annual report. In the beginning of the year the number of patients (including 6 on probation) was 837, and on December 31st it was 743 (including 10 on probation). The admissions were 317 (154 men and 163 women), giving a total number of patients under treatment of 1,154. There were discharged 328 (106 men and 222 women), 83 died (40 men and 43 women). The average number of patients resident was 731.7 (355.2 men and 376.5 women).

Admissions.—The total number of admissions (317) was 100 fewer than the average of the past five years. The reason for this was the opening of Bangour Village Asylum, which has thus been able to receive most of the patients from the Edinburgh Parish Council. It is twenty-two years since the number of admissions was so small. The number of private patients admitted was 134, the largest number on record.

Elevated and Depressed Lunatics and Influenza.—Following the oldest and simplest classification of mental diseases, in which the elevated and excited are put in one category and the depressed or melancholic in another, a very suggestive fact appeared when the numbers of these two classes sent in to the Edinburgh Asylum before 1890, the year of the great epidemic of influenza, were compared with those sent since that time. From 1874 to 1890 the number of melancholics had never touched that of the maniacal. There were only 1,846 of the depressed in the sixteen years to 2,832 of the exalted, or 40 per cent. of the total, while in the eighteen years since 1890 inclusive there had been 2,662 melancholics to 3,123 cases of mania, or 46 per cent. For the first time in 1900 the numbers of the depressed exceeded those of the excited; while in 1905 this was also the case. In 1896–7 and this year the number of both classes was equal. The depressing effect on the whole nervous energy of that scourge of humanity was now fully recognized, and its direct effects, bad as they were, were scarcely equal to its indirect and distant consequences.

Other Nervous Effects of Influenza.—Melancholia was not the only nervous disease which influenza predisposed to: neurasthenic conditions, premature senility, various forms of paralysis, all kinds of neuralgic affections and a general incapacity for work, both bodily and mental, have all been noticed as following influenza. It seemed as if no disease of whose effects there was any correct record had had such far-reaching evil effects.

Alcoholic Insanity.—Alcoholic excess did not appear in the assigned causes of mental disease in so many cases as usual. It was put down as a general cause in 14½ per cent. of the cases admitted, and if that particular form of mental disease which was called "alcoholic insanity," which had specific alcoholic characters was taken, 9½ per cent. of the admissions were of this character; women appeared about as frequently as men in the statistics. The figures of the last ten years strengthened the idea that women of the working classes had taken more to excess in drink of recent years than before. If this represented a general social fact it was of bad import for the future of the population.

Apparent Fallacies about Alcohol.—It was often said that alcohol was not really the cause of mental disease in so many cases as would appear from the statistics of mental hospitals. It was pointed out that in many cases drinking to excess was a result rather than a cause, and that the kind of brain which yielded to and was upset by drink might have been upset in its mental working by other causes. There was undoubtedly some truth in these statements, but if certain persons in a population were specially predisposed to take drink to excess, and to be upset in their brains by that means, surely this was a special argument for special care in the use of alcohol in the case of such predisposed persons. It was one of the great principles of modern medicine that people should be taught the means of avoiding disease.

General Paralysis.—The number and proportion of cases of general paralysis remained large, 40 cases were sent in 1907, and the number of women (14) was very much larger than used to be the case. From 1874 to 1890, 5.8 per cent. of the admissions were cases of general paralysis, while in the succeeding eighteen years, 1890 to 1907, 10.3 per cent. suffered from that disease. This proportion of general paralysis was very high for Scotland, and approached that of some of the great English manufacturing and mining districts.

Discharges.—The percentage of recoveries was 28.6, low as compared with the average of 38.5. It was a rather startling fact that in all mental hospitals, both in this country and abroad, the recovery-rate had tended to become lower of recent years. That would be a depressing result if its causes were not looked into. It appeared to result from the fact that cases of a different class were now sent to mental hospitals from those sent thirty years ago. Among the poor there were far more patients of the old, weakened, and paralysed class sent than formerly. Then the average mean age of the admissions for the years 1874 to 1884 was 32.5, while for 1898 to 1907 it was 42.1. This meant that the enormous advantages of skilled nursing and hospital wards were now taken advantage of for a class of the population for which they were not used thirty years ago.

Deaths.—The number of deaths (83) was smaller in proportion to the population than usual, the percentage on the average number resident being 11.3, and on the total number under treatment 7.2. General paralysis was by far the most frequent cause. The proportion from pulmonary consumption was low.

General History of the Institution.—Dr. Clouston then referred to the history of the asylum and to the celebration of the 100th anniversary of its Royal Charter. There were now only 24 patients in the asylum who were there when Dr. Clouston assumed office in 1873. One of these had been in residence sixty years, and was now over 80 years of age. The occasion of her sixtieth year of residence was celebrated in a suitable way, and she enjoyed herself very much. The only thing she complains of and bitterly resents is being thought old. For the first time in the history of the institution the rate-paid was fewer in number than the private class of patients—306 rate-paid patients and 437 private, probably the largest number of private patients in any institution in Scotland.

Advances in the Knowledge of Insanity.—Reference was made to the work being done in increasing knowledge of the nature and pathology of the forms of mental disease during the last thirty-four years. The terror and the reproach of mental disease was visibly lessening. A small ward or two in the Royal Infirmary for the treatment of suitable mental cases would largely tend to instruct the public as to the true nature of mental disease.

Farewell.—Reference was made to changes in the staff, and then a word of farewell was said. "I find it harder," said Dr. Clouston, "to write this my last report than any of the forty-seven which I have written at Carlisle and here. To lay down one's official duty seems somehow to cut adrift from life's anchorage. . . . It would be quite impossible for me even to indicate the feelings with which I shall finally leave the patients and my work. The institution has a great future before it for humanity, and my most fervent wishes and prayers will ever be for its continued prosperity."

Medical Education of Women at Edinburgh.

The building known as Minto House, Edinburgh, which for many years has been used as a teaching institution in connexion with the Extra-Academical School, and in particular for the teaching of women students of medicine, whether proceeding to university degrees or to the triple qualification, has been sold for some business enterprise. Thus the association of Minto House with the extra-mural school which has existed since the days of Syme,

Peddie, and John Brown, will be severed at the end of next summer session. The Scottish Association for the Medical Education of Women has been casting about to find a new home. It seems it would be possible to get accommodation in Surgeons' Hall and in the New School. The Association, however, approached the University Court, after correspondence with the Carnegie Trust, and suggested that representatives of the Court should be appointed as members of a joint committee to consider the details of a scheme formulated by its President. Essentially this was that the University should now undertake the medical education of women, as they do of men, since they admit both to degrees. We understand that 500 men students sent in to the University Court a "round robin" against this proposal. At a meeting of the University Court held on March 16th, the following reply was approved:

The Court, having before them a report by the Senators on the education of women in medical subjects and also a communication from the President of the Scottish Association for the Medical Education of Women, with copy of correspondence between the Association and the Carnegie Trust, resolved that, in the present circumstances, and in particular looking to the fact, of which the University Court is informed, that the present curriculum can be maintained with a slight change of locality, the Court do not see sufficient reason for complying with the request made in the aforesaid communication that representatives of the Court should be appointed as members of a joint committee to consider the details of the scheme sketched therein.

Doubtless the University of Edinburgh, having admitted women to its medical degrees, will sooner or later have to teach those women. In the meantime there are difficulties in the way. There is the question of expense, and there is the question of mixed *versus* separate classes. It is, we believe, an undoubted fact that the number of women entering on the study of medicine in Edinburgh is diminishing rather than increasing. Already the other three universities of Scotland—Glasgow, Aberdeen, and St. Andrews—give teaching to women, and there are some who think that it is well there should be one of the four universities of Scotland restricted to men. There is another point that appears to have been overlooked in the controversy that has been going on. If the University of Edinburgh admits women to its classes, there will be no occasion for teaching women in the extra-mural school. The numbers would not warrant that, except on the basis of mixed classes, for which the time is not ripe. This would inflict a hardship on those women who were only contemplating the triple qualification as against the university degrees, because they would have to pay the heavier university matriculation and class fees. In this matter it seems scarcely diplomatic to force the pace.

ALLEGED EMBEZZLEMENT OF GLASGOW ROYAL INFIRMARY FUNDS.

For some time rumours have been circulating regarding the funds of a certain trust administered by the late secretary of the Royal Infirmary. Mr. Henry Hamond had acted as secretary for nearly fifty years, and resigned a few weeks ago. On Saturday, along with his partner, he was arrested on a charge of embezzling £10,000 while acting as law agents to the trust estate of the late Mr. Andrew Wilson. This trust directed that the surplus income, subject to the payment of certain life interests, should accumulate till the death of the beneficiaries, and then be transferred to the Royal Infirmary as residuary legatee. It is alleged that the defalcations of the secretary and his partner have extended over fifteen years, when the last of the original trustees died.

SICK CLUBS IN ABERDEEN.

The majority of "lodges" or sick clubs in Aberdeen pay their medical officer an annual fee of 2s. 6d. per financial member, and the medical man has nothing to do with the supply of drugs. If the doctor attends the member's family, he receives, in addition, 3s. per family (exclusive of any obstetric attendance, for which no fees are fixed by the lodge). If there is cause for revision of fees in contract practice in Aberdeen—and many medical men think there is—it ought to begin with the contract fees for attendance on families of lodge members. In regard to the revision of the rates for attendance on members of lodges, it is suggested that a serious attempt to raise the standard of fees in private practice in Aberdeen should first be made.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE GENEROSITY OF THE IRISH LOCAL GOVERNMENT BOARD.

SOME weeks ago we felt compelled to animadvert upon the refusal of the Local Government Board to sanction the reasonable scale of salaries which the guardians of the Cahirciveen Union proposed to grant the medical officers of that paradise of mountain bog and poverty. While the guardians proposed to give each of their doctors initial salaries starting at £130 and increasing to a maximum of £200, what the Local Government Board has approved is shown in the appended letter to the guardians of that union, a scale which the medical officers very properly refuse to accept with the added condition that the guardians should have the power to fix for them a scale of fees for private cases.

At the meeting of the Cahirciveen guardians, the following correspondence was read:

Local Government Board,
Dublin, 3rd March, 1908.

Sir,—Adverting to previous correspondence, and to the resolution of the Board of Guardians of Cahirciveen Union of the 10th ult., the Local Government Board for Ireland desire to state that they have sanctioned the scale now proposed for the medical officers of the dispensary districts of the union—namely, an initial salary of £120 a year for each medical officer, rising by increments of £5 after each triennial period of good service approved of by the Local Government Board to a maximum salary in each case of £160 a year.

The Board have also sanctioned the guardians' proposal in the case of the medical officer of the Glenbehy Dispensary District, under which he retains his present salary of £150 a year, and rises by two triennial increments of £5 each to the maximum salary of £160 a year. As regards the salary to be allowed to Dr. Mannix as medical officer of the workhouse, the Board enclose a copy of a communication which they received on the 26th ultimo, signed by the chairman and fourteen other guardians of the union, stating that they voted for £120 a year as the initial salary. In consideration of the long and efficient service of Dr. Mannix as medical officer of the workhouse, the Local Government Board are prepared, if the guardians so desire, to agree that his salary for that office should be raised at once to £120 a year on condition that the amount should be regarded as the maximum salary, and be subject to review on the recurrence of a vacancy in the office.—I am, sir, your obedient servant,

A. R. BARLAS, Secretary.

Cahirciveen Union has five medical officers, an area of 198,000 acres of bog and mountain, and a poor population of 22,400.

Clonmel, in the county of Tipperary, one of the richest counties in Ireland, has six medical officers to attend to the wants of 19,000 people inhabiting an area of 88,000 acres, about half that of Cahirciveen, and not to be compared with Cahirciveen in respect to the profits of private practice. Recently, the Local Government Board sent down its inspector to advise the Board of Guardians to amalgamate some of the districts by reason of their diminished population, and fix a graded scale of salaries for the remainder. The Clonmel Board agreed and fixed the following scale:

Ballymacarby, £140 to £200; Kilsheelan, £140 to £200; Marlfield, £140 to £200; Clonmel and St. Mary's, £180 to £230; Kiltinan, £50 to £80; the increases to be £10 every five years to the maximum, except in the case of Kiltinan, which would be £5 for every five years.

Dr. Browne said that under that scale, if made retrospective, Dr. White would be entitled to an increase to £160 next year, as he had been nine years in office. Dr. McEniry would be entitled to the maximum, as would also Dr. O'Brien.

We await with interest the reception this scale will meet with at the Local Government Board Office. It may be somewhat reduced, but we shall be much surprised if notwithstanding the wealth of that district, it is cut down to the starvation wage of Cahirciveen.

Were the Irish Poor-law service one in which promotion was given for long and good service, we should have nothing to say, but these poor men in Cahirciveen have nothing to look forward to but poverty, no matter how hard they work or how efficiently they serve the poor; and we say without hesitation that it was cruel of the Local Government Board to prevent their getting what even at its best was but a poor recompense for a life

spent under the conditions prevailing on the Atlantic seaboard, and what would have entailed so small a tax on the ratepayers of the union. But it is the galled jade that winces, and the officials of the Local Government Board have no sores to be galled in Cahirciveen; the officials of the Poor-law service of all classes seem to be in their estimation animals upon whom any amount of extra work can be imposed without any additional food.

England and Wales.

[From our Special Correspondents.]

MANCHESTER AND SALFORD.

Charity Organization.

The report presented to the seventy-fifth annual meeting of the District Provident and Charity Organization Society of Manchester and Salford stated that the applications for sick relief during the year numbered 3,477, many of them needing prolonged help at considerable cost. At the Convalescent Home at Southport there had been 752 cases. The average cost had been 8s. 0½d. a case, against 7s. 8½d. last year, the increased cost of provisions accounting for the difference to a large extent. Thanks were expressed to the Football Association for a special donation of £100. The cases investigated by the Society were 60,104, against 57,608 during the previous year. Practically, the whole of these inquiries were as to the means of people who wished to be admitted to the various hospitals and charitable institutions of the district, and it was evident that, by its co-operation with the various Boards of Guardians and the medical charities, a great deal was being done by the Society to suppress mendicity and imposture. Still more could be done in this direction if every organization giving relief in any form would co-operate. On the general account the expenditure during the year had been £1,824, which was £298 less than the income. In this respect the Society differed from the medical charities, which were bound to go on spending money for their upkeep whether they received it or not, whereas the Society was limited in its work to the amount of subscriptions and donations it received. The Chairman of the Civic League of Help and the Surgical Aid Society expressed the appreciation of these Societies at the splendid work the Provident Society did for them.

There can be no doubt that the various hospitals receive very valuable aid from the Provident Society in the investigations it makes as to the suitability of candidates for hospital attendance. Yet, in spite of this, there is undoubtedly a vast amount of most glaring imposition on the hospitals of the district, perhaps more particularly the specialist hospitals. It almost seems to be sufficient for patients to prove that they cannot afford to pay a guinea or half a guinea a time for them to be allowed to attend some of the special hospitals almost indefinitely. Of course, the inquiry officers of the Provident Society have simply to find out the circumstances of patients whose names are given to them, and it is presumably the duty of the almoners of the separate hospitals to say which cases shall be attended by the hospitals freely, which are able to pay a small sum to the hospital, and which shall be referred elsewhere. It is impossible to allot the blame for imposition in every case to its proper quarter, but there can be little doubt that where imposition occurs, in nine cases out of ten the hospitals themselves are to blame, and not the officers of the Provident Society, who can naturally only inquire into cases submitted to them.

Payment of Medical Men Summoned by Midwives.

A circular letter has just been sent round to the medical men of Salford from the Salford Board of Guardians with reference to the payment of fees to practitioners when summoned by midwives in cases of emergency. It should be mentioned that about two years ago Manchester recognized the justice of the claim for a fee on the part of medical men, and through the Midwives Supervising Committee a scale of fees was arranged which are paid by the Corporation in cases where the parents have less than a fixed wage limit. The Salford Town Council, however, absolutely refused to pay fees in any cases. To meet the injustice of such cases which are common throughout the country, the Local Government Board in July last issued a circular advising Boards of Guardians to notify medical men and midwives that the guardians would be prepared to pay fees to any medical man in emergency cases where the parents are too poor to pay. Apparently no notice was taken of that circular, and accordingly, in December, the Salford Division of the British Medical Association again drew the attention of the guardians to the matter. Again, in February, the Privy Council sent out another circular to the same effect, and now, after seven months, the guardians have felt that something must be done; hence, the present letter to medical men. It commences by alluding to the recommendation of the Local Government Board of last July, and quotes Rule 18 of the Central Midwives Board by which midwives are instructed in certain cases to advise the calling in of a medical man. It then continues:

> Persons in receipt of relief are given orders upon the district medical officers in cases of pregnancy or childbirth, and provision is also made for their attendance during confinement.
>
> The present contracts with the district medical officers include this attendance, and the guardians will not be prepared to receive applications from other medical gentlemen in respect thereof.
>
> In cases where the husband, nurse, nearest relative, or friend of the destitute woman is not in possession of an order for the district medical officer and is too poor to pay for the necessary medical assistance, the district medical officer should be called in; but if the district medical officer is not available without undue delay, then some other medical officer should be called in, and it shall be open to the husband, relative, or friend to apply to the guardians, who will, if satisfied of such inability to pay, that the case was an urgent one, and that it was impossible to obtain the services of the district medical officer, be prepared to pay the private medical officer called in a maximum fee of £1 1s., this fee to include medicine, etc., and attendance during the whole period.
>
> It should be distinctly understood that this regulation only applies to abnormal cases, and that in ordinary cases of childbearing or confinement the midwife, husband, relative, or friend should make application to the relieving officer for an order for medical attendance.
>
> Notification of having attended any such abnormal case under the circumstances named, together with full particulars of the case and of the midwife who requisitioned your services, should be sent within seven days to the relieving officer of the district where the person resides. I enclose you a list of the names and addresses of the relieving officers.

Three things are perfectly clear from this remarkable document: First, the guardians are determined that every case shall be pauperized as far as they can do it; secondly, the medical man shall be paid as badly as possible; and, thirdly, every one concerned shall be put to as much trouble as possible before the doctor is paid at all. The whole circular breathes out the sentiment, "We won't pay a farthing if we can help it." One would have thought that humanity would have rather dictated the sentiment, "We will help the poor women in their labour as far as possible." It may be asked, What will happen if a nurse thinks a case urgent and sends for the nearest medical man, who goes and decides that some delay is advisable before doing anything? Can the husband, then, prove that the case was urgent? and, if not, will the doctor miss his fee? Again, the ordinary fee in normal cases is 21s., and most medical men would refuse to attend for that fee certain classes of abnormal cases which might involve a subsequent attendance of three or four weeks. It is quite certain that the circular will not be regarded as at all satisfactory and in the interests of the mothers the objections to it ought to be forcibly pointed out to the guardians.

BIRMINGHAM.

Ambulance Work.

In the annual report of the Chief Constable of Birmingham there is a short account of the ambulance work among the police force. Classes have been held at each division, under the tuition of the divisional police surgeons. The amount of work done has proved very satisfactory, as 1,260 cases have been recorded in which first aid has been rendered, against 1,195 for 1906. A total of 896 have passed the examinations which have been held during the year. Twenty-nine members are in possession of certificates granted by the Royal Humane and other societies for saving life. In addition three matrons engaged in the lock-up are in possession of first-aid certificates. The Watch Committee has rewarded 21 members of the force, and complimented 4 others for the efficient manner in

which first aid has been rendered by them. There are 15 hand ambulances in the various police-stations, which are fully equipped with surgical dressings. There have been 340 persons conveyed to various institutions for treatment on the above ambulances. Hand ambulances have been borrowed from the railway companies, fire brigade, and St. John Ambulance Association on 103 occasions for the purpose of removing injured persons. The calls for the horse ambulance have again increased, so much that on about fifty occasions a second call has been made when the ambulance was engaged. The horse ambulance has attended to 648 cases during the year, 448 accidents or sudden illnesses, and 200 private removals.

Birmingham Medical Institute.

The Birmingham Medical Institute has now a library containing 14,268 volumes. During the past year 152 volumes have been added, which consist of 81 gifts 14 purchases, and 57 periodicals bound. There were 932 volumes issued to 111 borrowers. Seventy periodicals are supplied to the Reading Room, and of these 40 are foreign and 30 British—48 being presented and 22 purchased. There are 191 members, namely, 157 ordinary and 34 life members. A special fund has been opened for the purchase of new books. The revenue account for the year ending December 31st, 1907, shows that the expenditure amounted to £520, and the income to £480, the excess of expenditure over income being £40. The subscriptions for the year 1907 were £193, and the invested funds gave an income of £285. The Committee urgently appeals for more members, and writes in the annual report: "A large medical library such as ours is essential for supplying the needs of the practitioners in the Midlands, and of those also who are doing research or special work in the higher branches of medicine and surgery. Our aim is to supply these needs, to have so complete a library as will obviate the necessity of workers having sometimes to journey to London to carry out their researches. An increased list of members is necessary if our efforts are to be successful."

Care of Feeble-minded Girls.

The Birmingham Laundry and Homes of Industry Society, which devotes itself to the care and protection of feeble-minded women and girls, held its sixteenth annual meeting on March 19th. In the report for the year 1907 it was stated that a few unruly spirits among the girls had had to be removed after all the influences brought to bear upon them had failed to make them amenable to conditions of home life. It is a great misfortune that the Poor-law guardians or some other public authorities have not the power to detain such irresponsible and feeble-minded people for long or short periods. The Society cares for those mentally feeble girls whom they are able to protect and make happy and contented in their voluntary homes at Alvechurch and Knowle, but it finds that a large number who apply for admission to the Society's homes require firmer discipline than it is possible to give.

LEEDS.

Leeds Poor Children's Holiday Camp Association.

The fourth annual meeting of this Association, which was started in 1904, was held recently under the Chairmanship of the Lord Mayor. From the report it appears that during last summer 476 poor children had each had a fortnight's stay at the camp situated at Arnside, on Morecambe Bay. This is an increase of 21 on the previous year. It is intended to extend the dormitory accommodation, and in this way materially to increase the number of children dealt with. The average increase in weight of each child during the stay at the camp was 2¾ lb. in the case of the girls, and 2½ lb. in that of the boys. The 476 children were taken from 387 families, the total weekly earnings of which amounted only to £213, being an average of about 11s. per family per week. The promoters of this movement are to be congratulated on the excellent work already accomplished. There are other associations in Leeds which concern themselves with the sending of children into various centres in the country where they are boarded out, and the work they do is worthy of all praise. It was felt, however, that the children of the very poorest class could best be dealt with by sending them into camp, and the excellent results obtained have more than justified the institution of this new charity in Leeds. It is hoped that the sphere of its operations may be widely extended.

The Feeding of Necessitous School Children.

The Corporation of Leeds has recently decided to adopt the Provision of Meals Act of 1906, which deals with the feeding of necessitous school children, and to that end the Education Committee has voted a rate of one-eighth of a penny in the pound, which will produce a sum of £1,000 yearly. It is hoped that this amount may not be all required, and those in authority have expressed their intention of proceeding with caution, and of availing themselves of that clause in the Act which enables them to deal with people who try to take an unfair advantage of the provisions of the measure. It should be mentioned that for some years gratuitous meals have been provided to hungry school children in various districts as a result of voluntary effort. Thus, during the acute distress of the winter of 1904-5 323,414 meals were served at 66 ward centres between November, 1904, and February, 1905. The balance of the sum of £1,720 which had been collected, amounting to £100, was then handed over by the Central Committee to the Education Committee and Boards of Guardians of the city who carried on the work under the Relief (School Children) Order of 1905. From December, 1905, to the following May, 27,754 meals were in this way provided. During the winter of 1906, 46,685 dinners were given, largely through the generosity of the Lord Mayor of that year, Mr. Joseph Hepworth. During the winter now ending 38,579 meals have been given. In this connexion the work of Dr. William Hall, which has been mentioned more than once in this column, should be referred to again, for it has now extended over a period of upwards of five years, during which time some 150,000 meals have been provided to poor children and much food and clothing has been distributed. Dr. Hall's well-known researches into the feeding and development of the Jewish children of the city will be fresh in the minds of our readers, and are of interest both from the purely scientific and from the philanthropic point of view.

Tuberculosis in Milch Cows.

A prosecution of considerable interest has recently taken place at the Leeds Police Court and resulted in the conviction of a farmer, who was fined £1 and costs for omitting to give written notice to the medical officer of health that he had in his possession a dairy cow affected with tuberculosis of the udder, thereby infringing one of the provisions of the Leeds Corporation (General Powers) Act of 1901. This is the first Leeds prosecution under the Act.

New South Wales.

[From our Special Correspondent.]

Bubonic Plague.

After the lapse of seven months the plague has again made its appearance in Sydney. This has come as rather a disagreeable surprise, since it was believed that there were no plague-infected rats in the metropolis, for bacteriological examination of the rats which have been caught for some months past has not revealed the existence of plague in them. The last case of plague in a human being occurred last May, and the last plague-infected rat was caught on October 21st. The first case occurred in a girl 21 years of age, who was employed in a factory at the northern end of Darling Harbour. This part of the city has always had an unenviable reputation as a plague spot, but it happens that in this case the factory in which the girl was employed was found to be in first-class order, and, so far as is known, no rats have been dying in the neighbourhood and no diseased rats have been found there. The infection, however, has been traced to a produce store in the immediate neighbourhood of the house in which the patient resided in one of the suburbs. It has been ascertained that rats had been dying recently about this store, and, as the result of cleansing operations conducted there, the carcasses of three rats were found. These were examined in the Board of Health Laboratory, and two of them have been found to have died of plague.

Since then a very large number of infected rats have been found on the same premises. The worst feature of the case is that these infected premises have been reported upon on more than one occasion by the health officers; and the local municipal council, in spite of the warnings from the Board of Health, have failed to put into force the by-laws issued by the Board of Health in 1904 dealing with the maintenance and construction of produce stores, stables, etc., with a view of preventing the spread of plague by rats. The patient presented herself at the Royal Prince Alfred Hospital, and was admitted for treatment, as she was suffering from an abscess in the groin. This was opened under an anaesthetic, and microscopic examination of smear preparations of the pus revealed the presence of bipolar stained bacilli. The patient was subsequently removed to the Coast Hospital, and is progressing favourably. Another case of plague was reported a day or two later from another source, the patient being a dairyman, 21 years of age. He also was removed to the Coast Hospital. No plague rats have been found in the locality of his residence, but it is reported that he had been recently purchasing produce from the store in the municipality referred to above, and it is believed that the infection in his case is to be traced to the same source. It has since been ascertained that among the dead rats found in the infected store was a ship's rat, which is different in colour and appearance to the usual sewer rat, and it is supposed that this rat was conveyed in one of the bags of chaff purchased by the owners of the store from one of the wharves in the city. It has also been ascertained that the young woman had never been in the store at any time, but she was frequently standing about close to the door of the store, and it is supposed that she thus became infested with the fleas from the plague rats. It is noteworthy that none of the men employed all day long in the store have contracted the disease. The health officials point out that the municipal councils have, with three or four exceptions, failed to carry out to their fullest extent the duties imposed upon them by the by-laws of the Board of Health. It is hoped that this outbreak will arouse the attention of the councils to a sense of their responsibilities. Since this is the period of the year when the outbreaks of plague have always occurred, it is feared that in view of the laxity of the councils further cases are likely to occur before the outbreak can be subdued.

Resignation of Dr. Woodward, Railway Medical Officer.

Dr. Woodward, who has been medical officer for railways and tramways for nearly twenty-five years, has retired from the service. He was originally an imperial medical officer, ranking as surgeon-general. He was appointed to the railway service in New South Wales in 1883, and shortly afterwards, at the suggestion of the Commissioner for Railways, he initiated the ambulance movement in the department. Some twenty years ago he compiled an ambulance handbook, the value of which is proved by the fact that it has already run into five editions since its first appearance.

Vital Statistics.

During the year 1907 both the birth-rate and death-rate were considerably higher than for many years past. The births were 330 more than in 1906 and 244 more than 1892, which year previously showed the largest number. The deaths were 538 more than in 1906, and higher than any year since 1898. After making allowance for the increase in population, the births and deaths in 1907 were each over 5 per cent. higher than the average for the previous five years. The high death-rate is to be ascribed to the prevalence of epidemics of whooping-cough, the number of deaths from which was 218, as compared with 3 in 1906; of measles, deaths from which numbered 48, as compared with 6 in 1906; and of influenza, which caused 55 deaths, as compared with 23 in 1906. The mortality-rate of infants under 1 year during the month of December last was equivalent to 135 per 1,000 births, and is higher than for the two years immediately preceding, but more than 23 per cent. below the average of the previous ten years. The birth-rate for the month of December, 25.36 per 1,000 of the population, has been exceeded on two occasions only during the last ten years, and is equal to the average of the previous five years.

Hong Kong.

[From Our Special Correspondent.]

Outbreak of Small-pox.

During the last fortnight the cold weather has set in, and, as frequently happens, cases of small-pox have occurred. For the week ending January 25th there were 31 cases, 30 being Chinese and 1 British, of which number 28 proved fatal; for the week ending February 1st 25 cases occurred, 24 being Chinese and 1 Japanese (imported), 17 proving fatal. Vaccination of children born in the colony is compulsory, and notifications are issued every year stating that free vaccination can be obtained at the various hospitals in the colony. As the Chinese conceal their cases as long as possible, the mortality is high; during 1907 of 168 occurring among the Chinese 137 were fatal, a mortality of 81.5 per cent.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Déjerine on Recovery from Aphasia.—Dr. Ausset on Ophthalmo-Reaction to Tuberculin in 300 Children.—Munificent Gift by Prince Roland Bonaparte.—Professor Gilbert Ballet's Inaugural Lecture in the Chair of the History of Medicine.—Presentation to Dr. Magnan.

At a recent meeting of the Académie de Médecine Professor Déjerine read an interesting paper on the recovery from motor aphasia, which always occurs in children, nearly always in the adolescent, but rarely in the adult, especially if advanced in years. Professor Déjerine communicated four cases of recovery in adult patients, whose cases he had followed and on whom he had made a *post-mortem* examination. In each case there were found important lesions of Broca's convolution. The cure was explained on the theory that the patients still possessed a certain cerebral plasticity. Another condition which seemed to play an important part in capacity for re-education of aphasic cases was the development of bilateral manual ability. The cerebral plasticity of cultured right-handed people who were ambidextrous was greater than that of exclusively right-handed or left-handed people.

Dr. Ausset of Lille communicated at the same meeting the results of the ophthalmo-reaction to tuberculin in 300 children, and he noted the absolute agreement between the results given by this method and clinical examination if tuberculosis were considered according to the ages of the children. As tuberculosis increases in frequency with the age of the child, so with the age do the number of positive reactions increase. The 300 cases gave 126 positive reactions, 56 slight, 49 of medium intensity; there were no accidents, although 6 cases reacted very strongly. Of the 300 cases, 28 were distinctly tuberculous, and of these 24 reacted; of the 4 who did not react, 3 were cachectic. Thus 24 reacted out of 25, a proportion of 96 per cent. Of 35 who were suspected of being tuberculous, 21 gave a positive reaction, and in each case the diagnosis was ultimately confirmed. When practised on children living with tuberculous parents, the reactions were positive where the children had lived with them for some time. In children who had had measles, whooping cough, or who had adenoids, the ophthalmo-reaction gave very useful results.

Prince Roland Bonaparte has recently placed at the disposal of the Académie des Sciences, of which he is a member, the sum of £4,000, to be used not as a capital sum, but to be expended in a small number of annuities to be rapidly employed. These sums of money are not to be given as prizes for work done; their object is rather to stimulate fresh discoveries by facilitating original research by those who neither belong to the Académie, nor have sufficient resources to undertake or carry on their investigations. The holders of these annuities must give to the Académie an annual report on the way in which the sums have been employed and as to the results obtained.

Professor Gilbert Ballet recently gave his inaugural lecture after being appointed to the Chair of the History of Medicine in the Faculty of Medicine, and traced the history of the Chair and of his predecessors. When the

convention in November, 1794, organized the École de Santé in Paris, a large place was reserved for medical history, and the Director of the school was appointed to give a course of lectures on Hippocratic medicine in the treatment of acute diseases; the librarian with professorial rank had to teach medical bibliography. There was also a third Chair, bearing the double title of Chair of History of Medicine and Legal Medicine, provided with a professor, P. Lassus, and an assistant professor, M. Mahon, who was not only called upon occasionally to take the place of his chief, but was professor himself. This arrangement continued until 1819, when the Chair of the History of Medicine was separated from the Chair of Legal Medicine, the last holder of this compound chair being Royer-Collard, who was especially an alienist. The Chair was occupied by J. L. Moreau (de la Sarthe) till 1822, when it was suppressed at the temporary dissolution of the Faculty, and was not restored when those professors who had been excluded by the Government of the Restoration were recalled. The Chair was not restored till 1870, when it was endowed by Salmon de Champotzan, a member of the Conseil d'État; since then the Chair has been held by Daremberg, Lorain, Parrot, Laboulbène, Brissaud, and Déjerine.

On March 15th an interesting ceremony took place at the Asile Sainte-Anne, when his colleagues, pupils, and friends offered a medallion to Dr. Magnan, who for forty years has been engaged in teaching, and at the same time has been head of the service for admission to the asylum. A large audience was assembled in the amphitheatre, among those present being M. Clemenceau, the Prime Minister, Professors Raymond, Pozzi, Le Dentu, and Gautier. Professor Bouchard traced the career of Dr. Magnan, whose friend he had been since they both began to study medicine. Dr. Bajenof offered two addresses sent by the Society of Neurologists and Alienists of Moscow, and by the Council of Psychiatry of the Faculty of Moscow. Dr. Magnan, after thanking the numerous speakers, recalled the fact that in France twenty-five years ago a doctor who did not use a straight jacket was blamed for the risks to which he exposed the patients, neighbours, and attendants. During the last twelve years there had only been three cases of suicide among more than 20,000 males admitted, and not one among the females, who had been as numerous. The medallion, which was engraved for this Jubilee by Professor Richer, of the Institut, shows a hospital ward, which replaced the old cells, and thus marks a date in asylum history in France.

CORRESPONDENCE.

HOSPITAL ALMONERS AND INQUIRY OFFICERS.

SIR,—It may have been remarked that during the last few weeks the question of hospital abuse has received considerable attention in the columns of various newspapers, and energetic press representatives have reported the results of their interviews under the lurid headlines which are usual in the case of any topic in which the interest of a certain section of the press has been aroused.

In all cases reference has been made to the word "almoner," whose special significance is acknowledged to be open to doubt in the letter which appeared over the initials "H. D." in your issue of March 7th.

In that particular letter many admirable suggestions are made, but they are unfortunately obscured by the confusion of thought which presupposes that no difference exists between an inquiry officer and a trained almoner.

In the general interests of truth, and incidentally on behalf of hospital almoners, in whom my Council are naturally interested, I hope I may be permitted to refer briefly to the points in which the difference consists.

The work of inquiry officer, as your correspondent rightly suggests, begins and ends by endeavouring to secure that applicants for treatment in an out-patient department are without the means to pay a private doctor for the advice which they require.

This function is important and its abuse is leading to grave abuse, but though it is also a distinctive feature of the almoner's work, her duties include many other functions of equal if not greater importance. Her most important functions may be briefly summarized:

1. To provide from the funds of the Hospital Samaritan Fund, in co-operation with outside charities, all surgical instruments, convalescence, etc., recommended by the medical staff, except in such cases where the patients or their families are able to provide such treatment themselves.

2. To ensure that the home conditions of the patients should, so far as possible, be suitable; and that the directions of the physicians or surgeons as to diet, fresh air, exercise, or rest should be carried out.

Herein lies the distinctive feature of the almoner's work—she must act as a connecting link between the doctor and the outside charity, and endeavour as far as possible to secure that the treatment recommended is adequately carried out. To enable her to perform these difficult and arduous duties she has received a thorough training in the complex social conditions under which the poor live.

My Council hope that you will be able to insert this letter in order to remove any misconceptions which surround the almoner's work and to illustrate the important bearing which the appointment of a trained and capable lady may have on the social wellbeing of the numerous applicants for medical relief in any of our large hospitals.—I am, etc.,

A. S. MORSE.
Captain and Secretary, Hospital Almoners Council.
Denison House, Vauxhall Bridge Road,
London, S.W., March 24th.

HOSPITAL OUT-PATIENTS.

SIR,—With reference to the elimination of cases unsuitable as regards their means, I believe that in Germany the workman is obliged to produce his receipt for the week's rent. This alone would probably suffice for the London hospitals. A brief inspection of the rent book, and a patient would either be attended to or else sent to the Poor-law dispensary or to a surgeon in his private professional capacity. This suggestion has place (Question II, A (2), p 91 of the SUPPLEMENT) in the memoranda issued by the Metropolitan Counties Branch. It is greatly to be desired that not only the metropolitan, but all the members of every Division throughout the Association, should carefully study this document. The members of the Medical Charities Committee are most anxious to have the opinions of the rank and file of the profession.

So much hospital abuse has been allowed to grow up through our own neglect that it is in every way important under new circumstances to start with a right method, and also to insist on strict discrimination as regards accidents at all events. The memoranda refer only to accidents and occupation diseases.

There is a movement to abolish separate Boards of Guardians, and to make Poor Law as well as Education a part of municipal affairs. When this comes to pass—and it is very probable—then will be a time to utterly abolish the out-patient department (except for consultations). The present strictness of the Poor Law might be somewhat relaxed, and a scheme of provident dispensaries insisted upon with a certain amount of control by the authorities.

But as matters stand, it is undoubtedly the bounden duty of King Edward's Hospital Fund to act as almoners for *all* hospitals to which it contributes. There should be no question about that. It is, however, doubtful whether this Fund will create or develop any real reform.—I am, etc.,

London, W., March 19th. GEORGE CRICHTON.

THE WORD OF THE ORACLE.

SIR,—Although I fully agree with what your correspondent, "S. H. D.," says about the word of the oracle, yet there is another side to the question which I should like to bring forward. The following case will illustrate it:

A woman came to hospital a short time ago with a letter from a practitioner, in which he told me that he thought she was suffering from endometritis and needed curetting. On examination she was found to be five months pregnant. She was treated at the hospital for a foul vaginal discharge, and returned to her doctor very pleased with her doctor, the hospital, and herself, and all was quite satisfactory. It is easy to see what would have happened if the doctor had followed the procedure of most practitioners here. The woman would have come to me with a verbal message from her doctor to say that she must

come into hospital for an operation to remove a tumour, and four months later the doctor's mistake would be the talk of the district.

I think that many practitioners would have less to say against hospitals if they would realize that, when a case is sent to a hospital for treatment, the "oracle" at the hospital naturally expects to decide what that treatment shall be. If the patient informs him that his doctor has said that he has got to have so and so done at the hospital, it often requires the exercise of a great deal of tact to explain the reasons for a different line of treatment. Let practitioners tell their patients less about what the hospital treatment is going to be and tell the hospital "oracle" more about the patient, and things will go more smoothly.

May I add a word about a grievance of my own? It is an everyday occurrence here (in a provincial town of about 60,000 inhabitants) for a man to come to hospital and tell me that the doctor says that his wife must come into hospital, and please can I tell him if there is a bed. He knows absolutely nothing of the nature of the case, and I have not the slightest inkling as to whether it is medical or surgical, urgent or a case which can go on the waiting list and be admitted in its turn. I always send the applicant back to the doctor for further information, and he usually turns up later with a dirty piece of paper, certifying that, in the opinion of the writer, Mrs. —— is a suitable case for hospital treatment—a certificate which is of no more use to me than a sick headache. If the practitioner, when sending in a case, would either ring up the resident or else write two lines about the case on a bit of paper, instead of sending a formal certificate, he would get more attention paid to the cases he sends up, and would make things easier for the "oracle" at the hospital.—I am, etc.,

March 5th. HOUSE-SURGEON.

THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR WITHOUT RESORT TO RADICAL MASTOID OPERATION.

SIR,—The criticism of my paper on this subject in the BRITISH MEDICAL JOURNAL of February 29th, from the pen of a pathologist of such ripe experience as Dr. Oskar Klotz is doubly welcome, partly on account of the particular views expressed and partly as serving to stimulate an interest in this comparatively new domain of pathological research.

Dr. Klotz doubts whether much reliance is to be placed upon the results of a cytological examination of the exudate in cases of middle-ear suppuration. In any such investigation much depends upon the exact source from which the droplet of pus is taken, upon the method of staining adopted, and upon the practical experience of the observer. The sources of error are numerous and accurate deductions are admittedly difficult. The information gained is in many cases, I maintain, of great practical value, and goes a long way to establish a more accurate diagnosis, and to solve that difficult problem of when local treatment should cease and operative treatment begin. It is only in the very earliest stages of an acute infection of the middle ear tract that any reliance can be placed upon the differential characteristics of antral and tympanic epithelium. The opportunities of making such a cytological examination occur comparatively infrequently and almost entirely in private practice, where patients present themselves for examination at a much earlier period of the disease than do hospital patients. If a droplet of pus be secured either as a result of incision of the swollen membrana tympani or within twenty-four to thirty-six hours of its rupture, there is not much difficulty in distinguishing antral from tympanic epithelium. Both types exhibit characteristics which differentiate them from meatal epithelium.

This important fact was emphasized by Wyatt Wingrave, whom I regard as the pioneer of this form of investigation, in a paper read at a meeting of the Otological Society (February 2nd, 1903). In the later stages of the disease tympanic epithelium so closely resembles meatal that it is not possible to be sure of its exact source of origin.

With regard to the diagnosis of a tuberculous process in the middle ear and the recognition of giant cells Dr. Klotz says, "When we recall the great number of sputum analyses that are made and the infrequency with which giant cells are found in the exudate from tuberculous infections the evidence contributed by the presence or absence of these elements in exudate from the middle ear has but little value." Surely Dr. Klotz does not regard these investigations as analogous? There is a vast difference between the exudate from a tuberculous lung and that from a tuberculous temporal bone. If care be taken to secure pus from the actual area of disease by means of a sterile curette my experience is that giant cells of definite diagnostic value are to be found, although not invariably, still sufficiently often as to justify their inclusion as cytological evidence. Epithelioid cells from which "giant cells" are supposed to originate are often most striking features in tuberculous discharge from the ear.

The diagnostic value of leucocytes and lymphocytes, and especially their relative numbers in any given droplet of pus taken from the infected middle-ear tract, is indeed great. In all acute cases and in all purely exudative processes the number of leucocytes far exceeds the number of lymphocytes, whilst even in chronic cases attended by the formation of tufts of exuberant granulation tissue lymphocytes, although found in large numbers, are yet numerically fewer than leucocytes. I think that there can be but little doubt that a cytological examination affords information as to the existence of an acute exacerbation, the presence of a cholesteatoma, granulation tissue, and infection of the cancellous tissue of the temporal bone, all of which points are at times extremely difficult to establish by means of the clinical methods in everyday use.

Dr. Klotz believes that the best evidence of the nature of middle-ear disease lies in determining the kinds of organisms producing the lesions. I grant that the discovery of the particular bacterium is all-important, but, as its virulence and pathogenicity vary so much, the mere fact that such and such a bacterium is present can never afford an exact gauge of the seriousness of the underlying morbid process. The *Diplococcus catarrhalis* is the most frequent species of diplococcus found, and is potentially dangerous.—I am, etc.,

Manchester, March 9th. WILLIAM MILLIGAN.

CONJUNCTIVITIS NEONATORUM AND MIDWIVES.

SIR,—The fault of the routine use of antiseptics in conjunctivitis neonatorum lies, not in the principle, but in the practice of the method. As long as midwives are taught that any appearance of discharge from an infant's eyes means "ophthalmia," and that "ophthalmia" always means purulent conjunctivitis—in a word, so long as that antiquated term "ophthalmia" is retained—so long must we expect that resort will be made to the improper use of strong antiseptic solutions in these cases. If midwives, under their certificates, are permitted to employ drugs of such germicidal potency as silver nitrate and mercurial preparations, they should also be taught that all cases of conjunctivitis in infants are not gonococcic in origin. Despite, however, opinions to the contrary, I submit that midwives should be prohibited from using any stronger antiseptic reagent than boric acid in these cases. The question is obviously not whether the indiscriminate use of silver nitrate may or may not do harm, but one involving the principle of the assumption by unqualified persons of a responsibility which in every sense belongs to the medical practitioner.

So far as preventive measures are concerned—and valuable as Credé's method has proved to be in the past—I have for long maintained that only a weak solution of silver nitrate is requisite. If virulent cases of purulent conjunctivitis in infancy can be efficiently, readily, and successfully treated with one grain of silver nitrate to the fluid ounce—I never use anything stronger—there is no logical reason for employing such a solution as one or two per cent. To sledge-hammer the gonococcus with solutions of this strength cannot in practice be commended, inasmuch as the action of the silver nitrate is not so much germicidal as that of rendering the conjunctival sac an impossible medium of cultivation for the micro-organism. This object is most readily attained by the regulated and frequent instillation of a few drops of a weak solution such as I have indicated, by which the gonococcus is gradually starved out of existence with the least

discomfort to the patient and with the least disturbance to the conjunctiva.—I am, etc.,

London, W., March 2nd. PERCY DUNN.

THE METHOD OF REDUCING DISPLACED SEMILUNAR CARTILAGES.

SIR,—May I, with however some variations of detail, corroborate Dr. Jacob's note as to the method involved in reducing dislocated semilunar cartilages of the knee. The main point in reduction is to open out the gap between the femur and the tibia so that the cartilage can easily slip or be slipped back into place. For this purpose I have always placed the patient exactly as Dr. Jacob describes. But (and taking the right internal cartilage as an example) I have grasped the ankle with the right hand, pressed my own right knee against the outer side of the patient's knee so as to force the latter inwards and thereby open the gap, and whilst making the movement from complete flexion to extension, I have manipulated the cartilage back by the finger tips of the left hand. Any surgeon who chooses to test the opening capacity of the internal or external gaps can do so in his own person by standing on one leg, say the left, and placing his finger tips on the right knee over the gaps referred to. If he then presses his right foot on the ground so as to force the leg into the knock-knee position he will find that the internal gap between the femur and the tibia can be readily and amply opened out. And similarly, by forcing the leg into the bow-legged position, the outer gap can be made to open. It is this opening out of the gap that is the key to the easy reduction of the cartilages and it can be effected on the patient in the way I have indicated. When the cartilage has been so replaced it is very liable to slip out again, but can always be securely held in position by the proper "clamp" that was invented by my father and perfected by myself.

You will perhaps permit me, whilst on the subject, incidentally to correct a misstatement. This clamp was invented in 1865, and was figured and described in the 1869 and 1877 editions of *Orthopraxy;* for the latter edition I wrote the description myself. Further, I detailed the origin of the invention in the BRITISH MEDICAL JOURNAL of September 27th, 1890. Although the clamp after its original publication was immediately and broadly copied into the instrument makers' catalogues, still for forty years no misnomer was attached to it, but within the last year or so it has been widely advertised as "Paget's clamp," as though Sir James Paget was its actual inventor. Let me emphatically deny this. It is true that it is only since Sir James Paget's death that the misstatement has appeared, and it is also true that as Sir James Paget is no longer living no personal disclaimer is available. But it is equally true that the two editions of *Orthopraxy* in which the invention was recorded were dedicated by permission to Sir James, and that he had them for perusal and approval before publication. Consequently, it is clear that the account given in these editions is a correct one, and that Sir James was not therefore the inventor of the clamp, as certain catalogues have recently implied. This catalogued misrepresentation seems now to be so much the vogue, that I venture to offer a specific instance, as I believe that many medical inventors, who for the benefit of humanity have abstained from patenting their designs, have thereby found themselves unjustly deprived of the name-titles to their inventions.—I am, etc.,

London, W., March 9th. HEATHER BIGG.

DEATHS UNDER ANAESTHETICS.

SIR,—Your correspondent, Mr. W. Smith, in the BRITISH MEDICAL JOURNAL of March 7th, draws an inference that is so very unlikely to be correct that I do not think it ought to pass unchallenged. He says, in effect, that because deaths under anaesthetics are very rare in private practice, therefore the inference is either that "private practitioners are the more able anaesthetists or else the administration is safer at home than in hospital." The first logical inference to draw from a statement that deaths are rare in private and common in hospital practice would surely be that operations also are rare in private and common in hospital. To draw any such inference as he has done, Mr. Smith must show that deaths under anaesthetics are rarer in private practice than in hospital work *proportionally to the number of administrations.* As an argument against the greater safety of anaesthetics in the hands of people who have had special experience he must also show that the hospital deaths occur in such hands and not, as is the fact, mostly in the hands of those who are, as regards experience in anaesthetics, much in the same position as those for whom Mr. Smith claims superior safety.—I am, etc.,

London, W., March 17th. J. BLUMFELD.

THE TRANSMISSION OF SYPHILIS TO THE SECOND GENERATION.

SIR,—In his letter of March 21st Mr. Clement Lucas remarks that, the head of the spermatozoon being too small to contain the spirochaete, "the ordinary channel of infection with impregnation is excluded." There is no apparent reason why the spirochaete should not penetrate the ovum independently of the spermatozoon, in the same way as it is known to penetrate other cells. We do not know what transformations the spirochaete may undergo after penetrating the ovum any more than we know what becomes of the spirochaete during the latent period between secondary and tertiary manifestations of syphilis, but that the spirochaete is there in some form or another is shown by its occasional reappearance in tertiary lesions (Schaudinn found spirochaetes in a gumma twelve years after infection).

If Mr. Clement Lucas will refer to my book on *Syphilology* (page 321), he will find a case reported by Jesionek, which is difficult to explain except by paternal transmission and syphilis by conception.

As regards the separation of the placenta "letting in" the spirochaetes to the fetal tissues, I think it is much simpler to assume that they were already present in the fetus.

As to the five years' quarantine before marriage being an "exploded dictum," I would humbly ask, Where, when, and by whom it was exploded? On the contrary, I find, by referring to the chief authorities (if Mr. Clement Lucas will allow me) that the period of quarantine has been gradually increased in length up to the year 1907. In 1854 Diday proposed a period of "two years at least" without symptoms before marriage (this period of two years is still regarded by Mr. Hutchinson as sufficient). In 1890 Fournier (*Syphilis et Mariage*, 2me edn.) increased the period to "three or four years as a minimum." Since then the marriage of syphilitics is sanctioned after four years by Prince Morrow (1904), after five years by Ledermann (1904) and Balzer (1906). The most recent dictum from Professor Gaucher—the successor of Fournier at the Saint Louis Hospital, Paris—is five years, provided no symptoms have occurred during the last two years:

Si après la cinquième année révolue, il n'a pas présenté d'accidents depuis deux ans au moins, on peut autoriser le syphilitique à se marier dans la sixième année, mais on fera bien de lui imposer, immédiatement avant le mariage, un traitement spécifique d'un on deux mois, destiné à éviter la procréation d'un infant syphilitique (*Le Chancre et les Syphilides*, 1907).

Mr. Clement Lucas reproaches me with being too deeply imbued with ancient ideas. I can only retort that I am in excellent company.—I am, etc.,

London, W., March 23rd. C. F. MARSHALL.

THE ROYAL COLLEGE OF SURGEONS AND THE HOOD.

SIR,—Although "M.R.C.S." corroborates (from *Whitaker*) what I had already said at the annual meeting of the Royal College of Surgeons, that colleges in London granted hoods, he does not go beyond that. But there is the much more important question of the position and rights of the College of Surgeons to the hood, and which I propose to add and deal with, besides refuting the Council's *ipsissima verba* about the hoods of colleges. This was not the fifth but the first resolution; so "M.R.C.S." may refer to the imperfect gown which the Fellows and Members obtained. The Secretary confirms me in this.

The present Council of the Royal College of Surgeons rejected the resolution of the annual general meeting of Fellows and Members to grant a hood, basing their objection to it on the want of precedency.

Certainly the medical colleges in London have not yet taken up teaching. But, as of old tradition, they belong to a university standard; for colleges have often been an ante-

cedent in the history of the past formation of all universities. From that position the Newcastle College of Medicine, the old College of Physicians before the decadence, the Liverpool University College, Owens College, Firth College, and other colleges have all been on a sufficient equality and superiority to possess the right, and *ad eundem* right, to grant hoods to their diploma or degree holders.

When supporting my resolution for a hood at the annual meeting, I spoke on what I thought was the origin of the hood. I think masters or teachers were the first to wear them, from the Middle Ages, in colleges as well as in universities. Surely, then, the old surgeons were exactly in that position? They, even more than the physicians or the university men, were called upon as masters and teachers to fully instruct professionally their students. Likewise, when the physicians formed themselves into the self-same collegiate position, they all wore hoods. Indeed, Charles II's mandate of 1674, and onwards, forced from the members the university grade, and which thus constituted the collegiate position. So the pronouncement of the present Council of the Royal College of Surgeons cannot rest justly on its negative argument.

The surgeons, as separate from the ancient illegitimate practitioners, had always been at the head of the profession, above the grocers, above the apothecaries, above the barber-surgeons, and above any of the universities in their own art and craft, though for convenience they may have joined one or other of those bodies. Thus, from a business point of view, it is ill grace enough for the Council to indulge what seems a perpetual neglect discriminately against the body of the College; whilst benefits and privileges keep on accruing more and more to outside opponent bodies, and very much to the detriment of its Members. That is why I have traversed its statements; and wish them to acquiesce in the general needs of the situation. For, it must be apparent, if it accepted fresh control, by both Fellows and Members together, there would be an end to any of the antiquated subservience amongst such an educated body of Members, where they remain unable to ratify their own resolutions.

The only other medical body in London to examine for any corresponding trace of conformity would be the Society of Apothecaries. And, by Mr. C. R. B. Barrett, it is recorded, in 1698, that the Livery of the Apothecaries, when the King (William III) made a public procession, were in their allotted place, and they wore both gowns and hoods.

Again, quite outside the amply sufficient medical references, there do happen to be confirmatory precedents in London for granting a hood. Of course, the Royal College and Academy of Music are merely scholastic or training institutions, giving certificates, and, on that account, they purposely remained unmentioned in my speech. But, besides music guilds containing graduates, both the College of Preceptors and the Royal College of Organists *have* attempted, in London, to satisfy the university standards as colleges, by giving a higher grade of diploma when such colleges have existed without a practical university. These bodies were consequently specially singled out by me and mentioned as precedents. I have their regulations actually by me, where they certainly do grant hoods. So, I hold that the Council of the Royal College of Surgeons had no justification whatever to issue its inappropriate *démenti*. At the time of the meeting, as now, I wished to suggest an improvement of the present incomplete academic dress of the College. If there are to be academicals at all, they should have a hood attached, and not, as without the hood, liable to be mistaken by the public for the drap garment of a verger or even that of the undergraduate status.—I am, etc.,

Bognor, Feb. 26th. H. ELLIOT-BLAKE.

EXPERIMENTS ON LIVE ANIMALS.

SIR,—In an account of the fire at Hamstead Colliery published in the *Birmingham Gazette and Express* for Friday, March 6th, it is reported:

A continuous stream of water was poured into the main shaft, and the effect of this was shown when, at 8 o'clock yesterday morning, a linnet was let down in a cage into that shaft and allowed to remain for five or ten minutes. On being brought to the surface it was alive, and this gave some hope that the worst might be over and that the poor fellows who had been cut off from communication with the outer world might still be rescued.

In the issue of the same paper for the previous day I believe it was stated that a rat was let down in a similar way to ascertain if it could live in the atmosphere.

There is no evidence that those who performed these experiments possessed any licence, and it appears from the report that no anaesthetic was administered.

It is not definitely stated by whom the experiments were performed, but it seems probable that several prominent men witnessed it, and it is possible that one of these may have been His Majesty's Inspector of Mines, who is stated to be in attendance.

These poor animals were sent down the shaft with the full knowledge that they might have to suffer the tortures of suffocation, or perhaps be roasted alive, without any chance of protest or escape. For what reason? In order to save the life, or, more correctly, to save discomfort to a human being. The latter would be able to signal to the pit's mouth to be brought up if danger occurred, while the poor dumb creature could not.

And yet there is no word of protest, no question to the Home Secretary, and no motion for the adjournment of the House of Commons to discuss the question! One would have expected a torrent of protest from a Society which is so conspicuous in its condemnation of scientific research. One could even have imagined the arrival of a trainload of their members ready to volunteer their service rather than allow such cruelty.

It certainly appears strange that a medical man is not allowed to perform an experiment, even under an anaesthetic, without a licence, and then is condemned by the above-mentioned Society. The fact that his experiment may save much suffering and perhaps many lives is no justification. And yet, in order to save possible discomfort to one person, animals can be subjected to the possibility of being roasted alive without protest.—I am, etc.,

J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.

Kidderminster, March 8th.

NOTIFICATION OF BIRTHS ACT.

SIR,—I note with much regret that, at a meeting of the Liverpool and Birkenhead combined Divisions, the objection raised against the Compulsory Notification of Births Act seemed to rest solely on the absence of remuneration to the medical man notifying.

To my mind the lack of payment is the smallest and the least weighty of many objections; a much graver one is that a Government should treat so cavalierly a whole profession, and, against its protests, thrust upon it duties which are repugnant to its traditions and in opposition to the current law of the land. It is a nice constitutional question whether such a selection of certain citizens to perform a duty from which others are free is completely justifiable.

The State has in the past used the medical profession scurvily, neglected its just requests for recognition, and imposed upon it public duties for which it offers no reward.

Should the members of the Liverpool joint Division accept a small fee for notification as a sufficient bribe to make the Act acceptable, they will have done much to lower the position taken up by their fellows in opposing this most unjustifiable piece of legislation, and that which will make opposition to similar Bills even more difficult than it has been in the past.—I am, etc.,

March 17th. X. R. X.

OXFORD POST-GRADUATE COURSE OF OPHTHALMOLOGY.

SIR,—In the note in which you speak so generously of the work of the Oxford Eye Hospital one or two mistakes occur owing to your having received a syllabus of last year's course instead of this. Mr. Nettleship then kindly took the chair on one of the two days devoted to the Congress of Ophthalmic Surgeons at the end of the post-graduate course. I fear, however, that this year we cannot count upon his help.

The course (see your advertisement columns) this year is from July 6th to 18th, not July 15th to 27th.

Will you allow me this opportunity of saying that again this year the last three days will be devoted to addresses and demonstrations of subjects of special interest by distinguished English and foreign surgeons, which any sur-

geons interested in ophthalmology are invited to attend without fee. Board and lodging in Keble College (7s. 6d. a day) will, by the kind permission of the Warden, be granted to those who apply sufficiently early. I shall be glad to give further particulars to any who may desire them.—I am, etc.,

ROBERT W. DOYNE,
Reader in Ophthalmology in the University of Oxford.
30, Cavendish Square, W., March 24th.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

SIR,—The letter of Dr. Slade-King in the issue of March 14th, p. 656, referring to the need for uniformity in the work of medical inspection and suggesting some form of training for school medical officers, calls attention to matters which seem to be overlooked.

As the course of instruction need only extend over a few days I would suggest, seeing that the matter is one of some urgency, that a short vacation course be worked up for Easter, when the school officers of experience in centres such as London, Bradford, etc., might have the time to impart the instruction required.—I am, etc.,

Neath, March 17th. J. M. MORRIS, M.O.H.

PULMONARY TUBERCULOSIS IN INFANCY AND CHILDHOOD.

SIR,—I have only just read Dr. Young's very interesting article in the JOURNAL for March 7th on pulmonary tuberculosis in infancy and childhood.

In the early diagnosis of these cases I have always been helped by one point I do not notice that he has laid any stress upon—namely, the pulse-rate. This is extremely rapid, often almost uncountable and quite out of proportion to the physical signs in the chest or general condition of the child.

This sign is particularly useful in those early cases of bronchial phthisis where the diagnosis from pertussis is difficult.—I am, etc.,

ARTHUR J. MARTIN, M.D.
Bloxwich, near Walsall, March 18th.

MOTOR CAR TAXATION.

SIR,—I have been hoping for some weeks to read in my JOURNAL that the British Medical Association is making an organized opposition to the increase of taxation of the doctor's car, as threatened in the coming Budget. Surely we have a just cause for special terms to be granted to us; but our apathy and want of organization will probably cost us dearly. The Motor Union is looking after its members' interests; why not the British Medical Association? I would advise all medical men who use a motor for their work to write to the M.P. for their division and urge him to do battle for the already overtaxed medico.—I am, etc.,

Hornsea, E. Yorks, March 17th. H. D. JOHNS.

*** There has already been long and voluminous correspondence on this subject; there is a special committee of medical men using motors (of which the secretary is, or was, Dr. Bruce-Porter of Grosvenor Street). This Committee caused special representations to be made to a committee of the House of Commons which was sitting some time ago. As a result of the correspondence in the JOURNAL, the Shropshire and Mid-Wales Branch of the British Medical Association passed a resolution on the subject, and sent a copy of it to all members of Parliament in the neighbourhood, and the same course is to be recommended everywhere.

THE late Dr. J. H. Galton, of Norwood, left estate to the amount of £42,590.

ON the occasion of his recent retirement from active teaching Professor Hallopeau, the distinguished dermatologist, was presented at the Hôpital Saint Louis in Paris with a gold medal struck in his honour. It bears the inscription, *Primum multos cognovit morbos.*

LIEUTENANT-COLONEL JOHN MAITLAND, M.D., Indian Medical Service (retired), died at Bournemouth on December 20th, 1907. He entered the Madras Medical Department as Assistant Surgeon, March 31st, 1876, became Surgeon-Lieutenant-Colonel March 31st, 1896; and retired from the service in 1906.

UNIVERSITIES AND COLLEGES

UNIVERSITY OF OXFORD.

Radcliffe Travelling Fellowship, 1908

H. R. DEAN, B.M., B.Ch., New College, M.R.C.P., formerly Senior Demy of Magdalen College, has been elected to a Radcliffe Travelling Fellowship for three years.

Degrees.

The following degrees have been conferred:

B.M., B.Ch.—S. E. Whitnall, Magdalen College.
B.Sc.—H. Sutton (M.B. Melbourne), New College.

The degree days for next term are as follows: Thursday, April 30th, at 10 a.m.; Saturday, May 23rd, at 2.30 p.m.; Thursday, June 18th, at 10 a.m.; Thursday, June 25th, at 10 a.m.; Saturday, July 11th, at 10 a.m.

UNIVERSITY OF GLASGOW.

REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL.

To fill the vacancy on the General Medical Council left by the death of Sir Thomas McCall Anderson, the University Court has appointed Principal MacAlister as their Representative for the next five years.

UNIVERSITY OF LONDON.

THE UNION SOCIETY.

THE officials of the Union Society are to be congratulated upon the report which they have been able to publish at the end of the first year of its active existence. This dates from about the beginning of last year, and since then the Society, which is founded on the model of those at Oxford and Cambridge, has held a series of interesting debates on various topics, and ends up the year with a balance in hand sufficient to cover immediate future expenses, but not so great as to enable the Society to dispense with further assistance from those connected with the University.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on Friday, March 20th, the President (Sir R. Douglas Powell) in the chair.

Licences.

The Licence of the College was granted to Bertram Arthur Lloyd, Birmingham University, and David Ranken, Durham University.

Communications.

The following communications were received:

1. From the Secretary of the Royal College of Surgeons, reporting proceedings of the Council on February 13th last.
2. From the same, conveying a proposal that the Committees which have been separately appointed by the two Colleges on the subject of the medical inspection of school children and the teaching of hygiene should act together or form a joint committee. It was resolved that the two should form a joint committee.
3. From Dr. Cooper Pattin, medical officer of health for the City of Norwich, asking leave to have a sketch made from one of the portraits of Dr. Caius in the College, for a medallion by a London sculptor. Leave was granted.
4. From the Secretary of the International Congress on Laryngology and Rhinology with a Türck-Czermak Commemoration, to be held in Vienna, April 21st to 25th, 1908, inviting the College to send a delegate. The invitation was accepted, and, on the nomination of the President, Sir Felix Semon was appointed to represent the College.

Catalogue of the College Library.

On the motion of the Harveian Librarian, Dr. Payne, it was unanimously resolved:

That in pursuance of a resolution adopted at the meeting of the Library Committee, January 23rd last, a commencement be made of preparing a new printed catalogue of the College Library.

Reports.

The following reports were received:

1. From the Beri-beri Committee on the reply to be sent to the Board of Trade (Marine Department).
2. From the Committee of Management, dated March 3rd, 1908, recommending that University College School, Hampstead, be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics.

SOCIETY OF APOTHECARIES OF LONDON.

THE following have been approved at the examinations indicated:

Surgery.—*S. Speelman, †A. H. Turner.
Medicine.—*E. J. Crew, *H. E. Middlebrooke, †A. H. Turner.
Forensic Medicine.—G. K. Aubrey, A. H. Turner.
Midwifery.—V. P. Norman, H. T. Roberts, A. H. Turner.
* Section II. † Sections I and II.

The diploma of the Society has been granted to A. H. Turner.

Two Lectures

ON THE

PHYSIOLOGY OF THE EMOTIONS.

DELIVERED AT KING'S COLLEGE,

BY F. W. MOTT, M.D., F.R.C.P., F.R.S.,

PATHOLOGIST, LONDON COUNTY COUNCIL ASYLUMS.

LECTURE I.

WHEN my friend Professor Halliburton asked me to give two lectures on the physiology of the nervous system, I bethought myself what subject of importance to the medical student was not already fully and adequately dealt with in his lectures or in his admirable textbook.

I am not surprised that the physiology of the emotions occupies but little space in our standard textbooks of physiology, for its study in animals by experiment has been in a great measure unfruitful or open to criticism. Yet French and Italian physiologists have successfully devoted much attention to the subject, and the experiments of Professor Sherrington are of great importance in this connexion. I wish also to acknowledge my indebtedness to the philosophical works of Dr. Henry Maudsley on the physiology and pathology of mind. Then no consideration of this subject is complete, especially from the biological aspect, without a study of Darwin's great work on the *Expression of the Emotions* and the classical work of Sir Charles Bell on the *Anatomy of Expression*.

Let me preface my remarks by saying that I am not so foolish as to suppose that I can do more than expound *some* of the facts of anatomy and physiology, with a direct or indirect bearing upon the psychology of the emotions, for there is probably no subject in the physiology of mind of which we know less. Yet its study is well worthy of attention, for it will serve you in good stead in understanding the neuroses and psychoses in which emotional disturbances are usually an important and even essential feature.

The physiology of the emotions finds its expression in the language of the novelist, the poet, and the dramatist. Thus Spenser in his *Fairy Queen* says:

> And troubled blood through his pale face was seen
> To come and go with tidings from his heart.

Clarence says to his murderers:

> How deadly dost thou speak!
> Your eyes do menace me: why look you pale?

As the emotions are depicted in their writings, so the measure of their success may be gauged. The interest aroused and the emotional echo awakened in ourselves is the response by which we share the feelings and motives of the characters portrayed. Again, popular metaphor illustrates the physiology of the emotions: "The broken heart" the "light-hearted," "breathing out vengeance," "bowed down with sorrow," "the breast swells with anger," "blue funk," and the coarse expressions used to denote paralysis of the sphincters in fear, and many other examples, will occur to you.

According to Ribot[1] the emotion is in the affective order the equivalent of the perception in the intellectual order: a complex synthetic state which is composed essentially of movements produced or arrested, of organic modifications in the circulation, respiration, etc., of a state of consciousness, agreeable or painful or mixed, proper to each emotion. It is a phenomenon of sudden appearance. It is of limited duration. It certainly may not be of limited duration in the case of sorrow, which generally is contemplative, whereas grief is tumultuous and less persistent. Ribot should have stated: It is of *limited duration* in the primitive forms as manifested in animals, in the child, in the imbecile, and in the savage. It is related always to the preservation of the individual or the species directly for the primitive emotions, indirectly for the derived emotions. By primitive emotions I mean anger, fear, joy and sorrow, disgust, and the tender emotions, love, sexual instinct and reciprocal affection of mother and offspring.

An object or idea excites an emotion; thus a stranger suddenly intrudes himself into your presence, producing an emotion of anger or fear, preceded by momentary astonishment. The *objective* manifestations of the emotion you are experiencing may be slight, transitory, merely a flush or pallor; and a slight alteration of expression may be all that is obvious to the stranger; but if the emotion be not controlled, then all the outward bodily manifestations of anger and fear may occur. In both cases, however, there are internal organic disturbances.

Let us consider the emotion Fear, and I will borrow from the description by Darwin. Fear is often preceded by astonishment, and is so far akin to it that both lead to the sense of sight and hearing being instantly aroused. In both cases the eyes and mouth are widely opened and the eyebrows raised. The frightened man at first stands like a statue, motionless or breathless, or crouches down as if to escape observation. The heart beats quickly and violently, so that it palpitates and knocks against the ribs (due to *accelerator sympathetic excitation*); but it is very doubtful if it then works more efficiently than usual, so as to send a greater supply of blood to all parts of the body, for the skin instantly becomes pale, as during incipient faintness (*due to vasomotor spasm*), a cold sweat occurs (*probably excitation of sympathetic and constriction of involuntary fibres in sweat glands*) the hairs are erected (goose-skin, or *pilo-motor contraction*), and the superficial muscles shiver (*due to coolness of the skin*).

The salivary glands act imperfectly, the mouth is dry* and is often opened and shut. The pupils are dilated (*stimulation of dilator fibres*). We see that in fear there is a profound effect on the sympathetic vasomotors supplying the unstriped muscle fibres of the vessels, and in terror the effects are more pronounced. In anger there is an exactly opposite effect; dilatation of the vessels, flushing of the skin, warmth, perspiration, and increased muscular tone and action. It seems as if there were an antagonism between the action of the unstriped muscle and the striped, except that in fear there is relaxation of the unstriped muscles of the sphincters and loss of visceral tonus.

"There are two theories advanced to explain the emotions; according to the one, they are derived qualities, modes, or functions of consciousness; they only exist by it. This is the *Intellectualist theory* which has found its more complete expression in Herbart and the German School of Psychology, according to which every affective state only exists by the reciprocal relation of representations; every feeling results from the co existence in the mind of ideas which support or antagonize it; it is the immediate conscience of elevation or depression of psychic activity, of a state of free or restrained tension. Suppress every intellectual state, and feeling vanishes. The other, the *Physiological theory* of Bain, Spencer, Maudsley, Lange, James, Sergi, and Ribot, connects all affective states to biological conditions, and considers them as the direct and immediate expression of the vegetative life." According to this physiological theory, the emotions have their roots in the instincts, appetites, and desires. In contradistinction to the intellectualist theory, we have the peripheral theories of James, of Lange, and of Sergi, that emotions follow upon and are the result of organic changes; whereas the intellectualist theory is that the perception or idea produces the feeling of the emotion which is followed by the organic changes. There are three peripheral theories. Let us consider the simplest first, that of Lange. It comprises two propositions: (1) The psychic emotion does not exist, but is only the state of consciousness brought about by organic disturbances. (2) The reflex organic disturbances which are the factors of the emotions are themselves only reflexes of the circulating apparatus governed by the vasomotor centres. This is therefore termed the *Vasomotor theory*.

Sergi has opposed this theory and has asserted that it is too restricted, and he would include not only the vasomotor centres, but also all the bulbar centres, including the respiratory, and the centres of vegetative life; hence Sergi's theory is termed the *Bulbar theory*.

Physiologically considered, Sergi's arguments that the other bulbar centres should be included are strong, because we know that the *vasomotor* and cardiac inhibitory centres have phasic periods of activity and relaxation corresponding to those of the respiratory centres. The centre of deglutition reacts also very manifestly upon the respiratory and the cardio-inhibitory centres in

*The vaso-constrictors of the salivary glands are post-ganglionic from the superior cervical ganglion.

man; the pulse is quickened during deglutition; there is on swallowing a short inspiratory twitch of the diaphragm, followed by an arrest of impulses from the respiratory centres.

All the bulbar centres must be associated for the perfect performance of the vital functions of nutrition, of respiration, and of circulation.

Again, we know that the pneumogastric is the great nerve of organic life, controlling the actions and secretions of the viscera, and very possibly the metabolism of the body. We know that puncture of the fourth ventricle produces glycosuria, and therefore disturbs either the liver or the pancreas in its functions. Again, in the bulb we have the motor cells which preside over the muscles of expression, speech, and vocalization. The pons and medulla represent a complex of spinal segments; we know that in the simple spinal reflexes the same groups of muscles are brought into play to give rise to totally different purposive actions, according to the nature of the stimulus. This means an integrative or associative action of these spinal segments; the same integrative or associative action of the infinitely more complex centres in the medulla takes place under appropriate stimulus, as I shall hope to show you later. There is much, therefore, to be said in favour of the whole of the structures of the pons or bulb being primarily affected in an emotion, as Sergi asserts.

Lastly, we have the more complex theory of James that emotions follow upon the bodily expressions—the *coarser emotions*, at least. He says our natural way of thinking about these coarser emotions is that the mental perception of some fact excites the mental affection *called* the emotion, and that this latter state of mind gives rise to the bodily expression. His theory is not this—the intellectual theory—but that the bodily changes follow directly the perception of the exciting fact, and that *our feeling* of the same changes (as they occur) is the emotion. He points out in support of his theory that every one of the bodily changes, whatever it be, is felt acutely or obscurely the moment it occurs.

> If we fancy some strong emotion and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind; no mind stuff out of which the emotion can be constituted, and without the bodily states following on the perceptions, the latter would be purely cognitive in form, pale, colourless, destitute of emotion and warmth.

One objection raised to the peripheral theory is that people state they do feel the emotion—for example, *fear*—before the bodily manifestations occur. Yet, if they are questioned about this, they say it is very difficult to decide; and when you ask them when they know that the sense of, say, *fear* has departed, they tell you that it is only by the feeling of the organic changes having left them. In fact, can we summon up in the mind the feeling of an emotion and at the same time suppress all bodily manifestations? A case recently came under my notice: A highly intelligent man suffered with cerebral tumour; he suffered with curious attacks which he described as follows: Suddenly a sense of fear, associated with pallor, momentary arrest, disturbance, or weakness of the action of the heart, disturbance of respiration, trembling and weakness of the body and limbs, a feeling of anxiety, suffocation, and vague unpleasant sensations in the breast, also dryness and an unpleasant smell or flavour in the mouth. When I asked him how he knew the sense of fear had gone, he said it was only by the return of the normal *organic* sensibility, as shown by the departure of the disturbances described.

Here, then, was no doubt some source of excitation in the cerebrum which gave rise to these curious attacks; but functional conditions of a similar character have been described by James, and more recently by Sir Wm. Gowers. James says that pathological cases in which the emotion is objectless furnish the best proof that the immediate cause of emotion is a physical effect on the nerves, and he cites a case in point in which the individual suffered from attacks of inability to draw a deep breath, fluttering of the heart, precordial anxiety with an irresistible tendency to take a crouching attitude and to sit still, accompanied, perhaps, by other visceral disturbances occurring quite spontaneously. I have seen such a case. The patient's feeling of this combination is the emotion of dread, and he is the victim of what is known as *morbid fear*.

Sir William Gowers, in his recent very interesting work on the borderland of epilepsy, describes somewhat similar cases, which he terms "*vagal and vaso-vagal attacks*." They were described by Nothnagel as "*angina vaso-motoria*," and also by Sir Douglas Powell. Some of the symptoms were classed by Bonnier as "*syndrome médullaire*," but none of these writers have brought the symptoms together as features of definite attacks irrespective of their relation to the heart.

As far as I can gather from the account of the cases given by Sir William Gowers, they came on independently of any particular state of consciousness which would give rise to morbid dread or fear; yet, as in James's case noted, "there may be a sense of vague fear and dread which is recognized to have no adequate cause."

The vagal symptoms are chiefly referred to the stomach, respiratory system and the heart. We may probably ascribe to the gastric nerves a sensation referred to the epigastrium, generally described as a sense of oppression or of fullness, but often indescribable. It begins suddenly, irrespective of the state of the stomach or of its functions, and often seems to ascend to the chest, very seldom to the throat or head, as does the aura of epilepsy. There is seldom nausea and never vomiting. Even more common (especially as an early symptom) is a sense of respiratory distress, or difficulty in breathing; the cardiac symptoms are discomfort (in some cases acute pain), and often a feeling of arrest of the heart's action. It causes alarm; but, apart from any cardiac sensation, there is sometimes a vague feeling of fear and dread, which is recognized to have no adequate cause. The slowness of mental operations, the difficulty in thinking or in concentrating attention which may accompany these attacks, or may even be the first symptom, is probably owing to the same cause as pallor of the face and coldness of the extremities, and is related to vasomotor spasm and inefficiency of the heart's action.

According to James, objects excite bodily changes by a pre-organized mechanism; the changes are so indefinitely numerous and subtle that the entire organism may be called *a sounding-board*, which every change of consciousness, however slight, may make reverberate. Even if James's theory cannot be accepted in its entirety, there can be no doubt that what he says is true, that without these organic bodily disturbances—the result of a diffuse discharge of nervous energy—there would be a colourless feeling, and the emotion, if it existed, would be disembodied.

Ribot points out that Maudsley had already, in his *Physiology of Mind*, indicated this peripheral theory without insisting upon it too strongly. He quoted Burke in his treatise *On the Sublime and Beautiful*:

> I have often observed that, on mimicking the looks and gestures of angry, or placid, or frightened, or daring men, I have involuntarily found my mind turned to that passion whose appearance I strove to imitate.

Burke also writes of the physiognomist Campanella:

> When he had a mind to penetrate into the inclinations of those he had to deal with, he composed his face, his gestures, and his whole body into the exact similitude of the person he intended to examine, and then carefully observed what turn of mind he seemed to acquire by the change. Thus he was able to enter into the dispositions and thoughts of people as effectually as if he had been changed into the very men.

Darwin in his great work on *The Expression of the Emotions* supports the view that the assumption of the facial expression and attitude of an "emotion gives rise to the *feeling* of the emotion"; but Maudsley points out that there is a fallacy in making this experiment, for in order to produce the suitable movements of expression we are compelled unconsciously to imagine the emotion. The practised actor, however, does not necessarily feel any emotion. Probably Maudsley's position is the correct one when he asserts:

> In our emotional life any particular passion is rendered stronger and more distinct by the existence of those bodily states which it naturally produces, and which in turn, when otherwise produced, tend to engender it.

Darwin says: "Most of our emotions are so closely connected with their expression, that they hardly exist if the body remains passive."

It seems to me probable that the bodily feeling of the emotion intensifies and prolongs it, meeting the idea half

way. In fact, an emotion cannot be looked upon as a physical entity, and it would be better to leave out the insoluble question of which is *cause* and which *effect*, and assume that no conscious state is capable of dissociation from its physical conditions.

Dr. Claye Shaw recently wrote a paper in *Mind* in which he calls attention to the question of actors *feeling emotions*, and he was good enough to introduce me to Mr. Comyns Carr. This gentleman informed me that actors do *not* feel the emotions which they so skilfully portray; in fact, if they felt an emotion, for example fear, they would be unable to perform their parts. Thus the art of acting lies in concealing the art, and the actor, by his expressions and gestures and the modulations of his voice, feeling himself no organic internal disturbance—the essential part of an emotion—can nevertheless, by his art, arouse in the expectant audience that part of an emotion which he does not portray, namely, the quickening or slowing of the pulse and respiration, the emotional thrill or shudder of the spine, pallor and coldness, or redness and warmth of the skin, and various other manifestations of diffuse visceral-vascular disturbances.

James quotes William Archer on the anatomy of acting in support of his theory, and certainly some actors and actresses do *feel* these internal disturbances. Especially do they refer to emotional disturbances when performing the part of Othello. It evidently depends largely upon the temperament of the individual actor, for Forbes Robertson writes:

> I suffer from fatigue in proportion to the amount of *emotion* I have been called upon to go through, and not from physical exertion.

Professor Sikorsky of Kief contributed an important article on the facial expression of the insane to the *Neurologisches Centralblatt* for 1877, in which he says:

> When I contract my facial muscles in any mimetic combination I feel no emotional excitement, so that the mimicry is in the fullest sense of the word artificial.

So with "quick-change artists"—they cannot feel any emotion. But habitual acts such as these may become unconscious, and a certain amount of feeling of the emotion when the mimicry is first practised may soon become vague and lost.

Two fundamental biological principles—the preservation of the individual and the preservation of the species—are the basis of all vital actions in the animal kingdom. In all animals, consisting of a commonwealth of cells composing organs and tissues, different in structure and function, harmonious co-operation by which the animal is able to adapt itself to environment is brought about by two vital processes—namely (1) a biochemical association, by means of the circulating blood and lymph, which contains the products of the vital activities of all the cells; and (2) a biophysical association, by means of the nervous system. These two associations are similar in plan in all mammals, yet there are differences to each order, to each species of the order, and to every individual of each species. The similarity is shown by the reaction to conditions which produce pleasure or pain in the struggle for existence and survival of the fittest, and in the manifestations of the primitive emotions—anger, fear, disgust, and the tender emotions, courtship, the sexual instinct, and the reciprocal instinctive sympathy of parent and offspring.

The sense of wellbeing of the whole personality of the individual depends upon an adequate supply of blood to each and all the important tissues of the body, whereby they can function in harmonious co-operation. This in a healthy individual is the prevailing bodily condition, and a general pleasurable satisfied sense of wellbeing is the result of this harmonious co-operation. The quality of the blood, by its influence on the nervous centres, may affect the emotional reaction, for we know that toxic conditions of the blood have a profound influence on the affective state of the individual.

We have definite evidence that the respiratory centre in the medulla is sensible to the chemical condition of the blood as regards the amount of oxygen and carbon dioxide it contains, and when all afferent channels are cut off the centre is capable of automatically responding to the chemical changes. "The activity of the centre is intimately dependent on the condition of the blood, and is especially excited by increased venosity of the blood or allayed by improved arterialization" (Starling).

Again, we have evidence to show that the internal secretions of glandular organs may excite or arrest tissue activities even without the influence of the nervous system; there are other secretions—for example, adrenalin—which excite through the sympathetic the viscero-vascular motor system; again, the profound effect upon the mind of the early removal of the reproductive organs has long been known, and gave Brown-Séquard the idea of the importance of the internal secretions of organs. Nothing is more obvious than the intimate association of the emotions with the reproductive organs and their functions, and this association may be partially due to an internal secretion passing into the blood, arousing instinctively characteristic feelings in a preorganized complex nervous mechanism which in the long procession of ages has habitually acted and reacted in the same manner; there has thus been established a biochemical associated memory in the seat of consciousness of the presence in the blood of a substance indicating tumescence of the gland and the desire of detumescence. I do not mean to assert that the sexual instinct and the emotions associated therewith may not be aroused by nervous stimuli proceeding from the turgid gland and the seminal vesicles, but inasmuch as the sexual desire and instinct is more persistent when the glandular substance is left behind, although its connexions are severed, than when the glands are entirely removed or destroyed; and since we know from other experimental facts* that the internal secretions can serve as messengers to remote parts when all nervous connexions are severed, we may conclude that the complete mental revolution which takes place at puberty may be of twofold causation—biochemical by the blood, and biophysical by the nervous system. The ancient Greeks ascribed the diversity of temperament to the mixture of the elements of the body, and more to the fluids than the solids. In every succeeding age the distinctions of constitution and temperament have been attributed to the humours. Hippocrates treated of four radical humours—the sanguineous, phlegmatic, choleric, and melancholic. Recent discoveries in biochemistry indicate that the humoral theory is in a measure true, but it is inseparable from the cellular theory; for upon the quality of the blood depends the healthy condition of all the organs of the body. Now we are only conscious of the internal organs when some disturbance of their normal activity occurs—alteration of the rhythm, alteration of their phasic or periodic activity, or some disturbance of their function, temporary or permanent. This organic sensibility produces a disturbance in consciousness when the normal impulses from the vital organs are altered. Normally of low intensity, diffuse and uniform, it only produces a vague effect upon consciousness; but this coenaesthesis is the great silent background of *personality*, and as Maudsley so truly remarks:

> It may well be that the general uniformity of passions and desires among mankind is owing to the uniform operation of the bodily organs upon the brain, and just as the general uniformity of their ideas is owing to the uniform action of the organs of the senses.

Coexistent with the progressive evolution of the animal kingdom is found an increasing development and complexity in the respiratory, circulatory, and nervous systems, especially the latter, and the upward steps are marked particularly by the increasing development of the nervous system. In the developing embryo we find an abstract and brief chronicle of the phylogenesis of these systems. The muscles and glands to which the nervous system in response to stimuli discharge innervation currents require a due supply of blood according to the intensity of their activities. In order that these systems—respiratory, circulatory, and nervous—may co-operate efficiently, muscles, glands, organs, and subcutaneous tissues, etc., must automatically receive a supply of blood in proportion to the intensity of the innervation currents, the emotions excited and the energy expended. Again, the grey matter of the central nervous system when discharging more energy must receive automatically more blood if it is to maintain its potential equilibrium. The vasomotor system is therefore brought into harmonious

* Paul Bert divided all the nerves to the mammary gland of a she-goat; the mammary gland nevertheless developed during gestation.

co-operation with the central nervous system which directs and controls the expenditure of muscular and glandular energy. The principal vasomotor centre is in the floor of the fourth ventricle, but in the thoracic region of the spinal cord, where the primitive metameric segmentation persists, there are vasomotor centres which give off the fine medullated fibres passing to the ganglia of the sympathetic—vertebral and paravertebral.

Now the study of the emotions would seem to show that there is some sort of antagonism between the discharge of innervation currents into the striated muscles entering into the life of relation and the unstriped muscles of the arteries; for in emotions such as fear, disgust, grief, we find evidence of vasomotor constriction as manifested by pallor of the skin, goose-skin, cold feeling, cold sweat, dry mouth, associated with enfeeblement and loss of tone in the skeletal muscles; whereas in anger and joy there is relaxation of the unstriped vaso-constrictor fibres with a dilatation of the vessels, flushed skin, associated with glandular activity and increased muscular activity.

It is obvious that increased muscular and glandular activity requires automatically an increased supply of blood; it might be argued, indeed, that the increased activity was due to impulses from the brain affecting the vasomotor system as well as the centres which innervate the striped muscles—the two systems being associated by inhibition of the one and impulsion of the other.

It is probable that under certain conditions stimuli may travel down the posterior roots inhibiting vaso-constrictor influences. For Bayliss has shown that there are no vaso-dilator fibres to the hind limb of the dog, in the abdominal sympathetic chain, but the only fibres excitation of which will produce dilatation are contained in the posterior roots. But the facts of degeneration show that the posterior roots do not contain efferent fibres. Bayliss, therefore, comes to the conclusion that the same nerve terminations in the periphery serve both to take up sensory impressions and to convey inhibitory impulses causing dilatation of the vessels. In this way we can understand how increased innervation currents to muscle would automatically be associated with vaso-dilation and increased flow of blood to the parts actively engaged in using up energy, and therefore requiring more arterial blood.

The affective tone of the individual largely depends upon the influence of the vasomotor and vagal nerves; it is continually oscillating about a mean point of equilibrium, a mental state that is neither painful nor pleasurable. Although neither pain nor pleasure can be said to constitute an emotion, yet one or other, and sometimes both, form an essential part of every emotion. We know little of the physiology of pleasure; it is a diffuse vague state of consciousness clothed and enriched by perceptual and intellectual associated memories which we desire to experience again, and it forms an accompaniment of the healthy activity of bodily functions which does not exceed the ordinary normal powers of reparation that the organism possesses. The fundamental basis of the stimuli to this activity of bodily functions is the satisfaction of the desires, appetites, and instincts necessary for the preservation of the individual and the species. The preservation of the individual, however, depends not only on the maintenance of the nutritional equilibrium by the gratification of the appetites, but the body is protected from physical and chemical injury by pain and the unpleasant experience of disgust. These are both states of consciousness which there is no desire to experience again, and when clothed and enriched by perceptual and intellectual memories, their causes can be avoided. Thus, by constantly furnishing the desire to prevent painful and injurious bodily conditions, they form, even more than pleasure, the basis of voluntary action. In the animal scale at first, they form only psychical adjuncts to protective reflexes, but they come more and more to dominate automatic instinctive reflex activities which only arise consecutive to the injury. Besides physical pain, many painful states may be related to the organic needs of hunger, thirst, the desire for sleep, for exercise, and repose, muscular fatigue, and the non-gratification of the sexual instinct. But besides these physiological cravings we may have artificial cravings—for example, for alcohol, tobacco, morphine, etc; and any interference with the habitual routine of life may cause discomfort. In fact, the sentient being, whether animal or man, reveals a complex of desires, of appetites, and of physical and psychical tendencies, and all those conditions, whether from internal or external causes which suppress or interfere with them, give rise to painful states, physical suffering and mental pain.

Let us now consider the more simple physical pain, though even in this question there are still many points in physiology not definitely settled; for example, Is there sufficient evidence to warrant us in accepting the existence of special pain nerves, or is pain merely the result of injury by strong excitation of the nerves of general sensibility? It is known that pressure of a point of the skin just short of the breaking point causes pain. Heat of 48° C. causes a painful sensation; this is the temperature which causes changes in the nerve substance. The cornea, which is a delicate skin where the nerve fibrils are almost naked, is extremely sensitive to slight irritation. Painful sensation depends, however, not only upon the intensity of the irritant, but also upon the irritability of the chains of neurones which form the sentient system of receptor, transmittor, and perceptor. This is a matter of common experience, especially in disease. Pain is felt in the cerebrum, and without the cerebral centres there would be no pain, only irritability and reflex discharge such as occurs in a decerebrate animal. We only remember physical pain by the perceptual concomitants that caused it or were associated with it. Whilst visual, auditory, tactile, gustatory, and olfactory impressions are referred to the external objects which produce them, the pain of pricking, cutting, and burning are not exteriorized into the needle, the knife, or the flame. Cutaneous sensibility to pain is associated, therefore, with the internal organic sensibility; it is precise enough as to localization, because in its prevention it is continually associated with perception of the special senses. The prevention of pain serves thus as a constant factor in the development of the special senses. The same cannot be said of pain affecting the internal organs, but, according to a physiological law depending upon morphological conditions, the mind refers the pain to a definite area of skin, and this pain is termed a "referred pain." Thus in angina pectoris, where there is irritation of the cardiac plexus, not only is there a state of precordial anguish, of constriction, and feeling as if the vital functions are about to be suspended, but a pain which radiates from the chest down the inner side of the left arm. This referred visceral pain can be explained by the fact that the afferent fibres of the cardiac branches of the sympathetic enter the same segments of the spinal cord as the sensory cutaneous nerves of the post-axial border of the upper limb corresponding to the distribution of the ulnar nerve from the lowest cord of the brachial plexus. The visceral-vascular structures are supplied by the fibres of the white and grey rami of the sympathetic, and strong irritation of internal visceral structures produces intense impulses which are carried by afferent visceral fibres into the grey matter of the various segmental metameres of the spinal cord; these by irradiation excite the neurones which receive painful stimuli from the associated skin areas; the result is twofold, the establishment of a protective reflex by contraction of the associated groups of skeletal muscles and a painful sensation transmitted to the seat of consciousness. The mind is only cognizant by the senses of this particular painful stimulus coming from a definite skin area; it therefore refers the pain to it. Thus the establishment of the protective reflex serves to keep the parts at rest and the pain produced protects the internal organ by preventing that reflex being broken down by volition.

REFERENCE.
1 *Les Sentiments*

The First International Congress for the Repression of the Adulteration of Alimentary and Pharmaceutical Products will be held in Geneva in September, 1908. The feeling that such a congress is necessary has been growing for a quarter of a century, and at the Fourteenth Congress of Hygiene and Demography, in Berlin, 1907, the Universal Society of the Geneva White Cross conceived the idea of initiative action. The plan for the first meeting is an exhibition of unadulterated products, and the aim of the Congress will be to arrive at a definition of unadulterated food—in fact, the establishment of a "Codex alimentarius." The Committee of Organization is anxious that manufacturers, chemists, and lawyers who are interested in this question should unite in formulating these definitions.

VICIOUS CIRCLES ASSOCIATED WITH DISORDERS OF THE HEART.*

By JAMIESON B. HURRY, M.A., M.D.,
READING.

Logicians apply the expression "vicious circle" to a fallacy (*argumentum in circulo*) in which a proposition is used to establish a conclusion and is afterwards proved by that same conclusion, so that, as in a circle, there is no starting point. Many years ago the expression was transferred into medical nomenclature to indicate a morbid condition in which cause and effect act reciprocally on each other †

Vicious circles are very numerous and play a more important part in the processes of disease than has hitherto been recognized. Many of them result from a failure of Nature's efforts at compensation, and are therefore of interest both to clinician and to pathologist. Elsewhere[1] I have suggested a classification based on etiology (organic, mechanical, chemical, infective, neurotic circles, etc.), and have given examples of vicious circles affecting the various organs of the body. The study of the subject as affecting a single organ possesses even greater advantage, since the inter-relations of such circles come more clearly into view.

The organ best suited for the purpose is probably the heart, since the vital and mechanical phenomena presented by cardiac lesions are unique in their variety and interest. The heart, moreover, has maladies of local origin and maladies of peripheral origin, thus supplying an extensive field for observation. At the same time, modern methods of physical diagnosis have thrown so much light on the pathology of cardiac lesions that probably nowhere else can that interaction of forces with which we are concerned be so readily studied.

For the sake of clearness vicious circles associated with disorders of the heart may be arranged in the following groups:

Group I.—Circles associated with the myocardium.
Group II.—Circles associated with the endocardium.
Group III.—Circles associated with the pericardium.
Group IV.—Circles associated with neuroses.
Group V.—Circles associated with a fall in blood pressure.

Group I.

Circles Associated with the Myocardium.

Striking examples are met with as a result of arterial hypertonus in the pulmonary and the systemic circuits. Thus in the case of the *right* side of the heart various conditions, such as chronic bronchitis and emphysema, increase the resistance to the flow of blood through the lungs and necessitate greater driving power by the right ventricle, leading to its hypertrophy and dilatation. These changes are at first compensatory and salutary. But as time goes on and the compensation begins to fail, dilatations gains on hypertrophy, leading to congestion of the venous system and to interference with the functions of digestion, absorption, elimination and sanguification. The unfortunate myocardium, already labouring under special difficulties *a fronte*, is poisoned by the products of metabolism, which sap its nutrition and aggravate the weakness and dilatation. A vast vicious circle is established, embracing the great organs of the body.[2] The weak and dilated ventricle and the increased resistance to the pulmonary circulation also act and react injuriously on each other, setting up a second circle of evil omen.

Even commoner are the conditions which cause a high arterial tension in the systemic circulation, and throw excessive work on the *left* side of the heart. Amongst them are renal disease, gout, lead poisoning, and defective metabolism. The toxic products in the blood set up a spasm or hypertonic condition of the capillaries and arterioles, leading to increased resistance, which in turn requires a more forcible cardiac systole, so as to force the blood through the distant ramifications of the vascular system. The consequent rise in the blood pressure leads to hypertrophy of the muscular structures engaged, which hypertrophy reacts on and raises the blood pressure.[3] Thus the antagonistic forces of arterial hypertonus and muscular hypertrophy come into operation and complete the morbid circle. When, as often happens, the degenerative processes of arterio-sclerosis are superadded to the muscular hypertrophy, obliterative changes in the coronary arteries are apt to ensue, interfering with the nutrition of the myocardium and lowering its vitality; especially will this happen if the blood is impure in quality as well as deficient in quantity. The consecutive weakening of the myocardium in turn impairs the coronary circulation, a second circle being thus established. As the dilatation and enfeeblement of the left ventricle increase, the venous stasis is manifested on the right side of the heart and produces the sequelae already mentioned in connexion with failure of the right ventricle. Thus no less than three forms of vicious circles may arise at different stages of arterio-sclerosis, ending in grave cardiac disorganization.

The right and left sides of the heart have hitherto been considered separately as affected by disease of the pulmonary or systemic areas. But in point of fact the changes described usually affect both sides simultaneously, although not to the same extent. While this is partly due to the close anatomical and physiological relations, a special cause for the bilateral dilatation and weakening lies in a vicious circle, which may be established between the two sides of the heart, as has been pointed out by West.[4] When the right side of the heart fails, the whole of the coronary veins, which open into the right auricle, soon become engorged. Hence result impaired circulation through, and impaired nutrition of, the whole heart. As the left ventricle becomes implicated its driving power is diminished, giving rise to pulmonary congestion and defective aëration of the blood. Further, the circulation through the coronary arteries is weakened, another source of general cardiac weakness being added. In a similar way dilatation commencing on the left side involves the right, and so it comes about that right-sided failure involves the left side, and left-sided failure involves the right, the degree depending on the seat of the primary lesion, and unless the vicious circle can be broken, a fatal result is only too probable.

Anaemia, when associated with fatty or other kinds of degeneration of the cardiac walls, frequently sets up a vicious circle. For the insufficient *vis a tergo*, the sluggish renewal and purification of blood and the hampered digestion and absorption of food tend to increase the anaemia, while the anaemia in its turn exerts a most prejudicial effect on the myocardium by interfering with the metabolism of its cells, and accelerating the degeneration. Thus cause and effect proceed *pari passu*, acting and reacting on each other. These degenerations of the myocardium may also be prejudicial, as already mentioned in connexion with arterio-sclerosis, by obstructing the orifices of the coronary arteries. Through such obstructed vessels the supply of blood to the walls of the heart is more or less completely cut off, leading to further degeneration and increased stenosis. Thus, what with a degenerating myocardium and a defective blood supply, a complex series of interactions is set up, which medicine can do little to unravel, and which, sooner or later, ends in a complete breakdown.

In obese persons some interesting reciprocal relations may be observed. The primary effect of obesity is to induce a certain amount of cardiac hypertrophy, followed in due course by cardiac dilatation, dyspnoea on exertion, disinclination for active exercise, and eventually by increased obesity. The obesity, in fact, is both cause and effect of the heart lesion.

In general practice a condition is commonly met with where enfeebled health, due to overwork or other sources, leads to an irregular and weak action of the heart, and hence to oedema and congestion of the viscera. Dyspeptic disorders, such as flatulent distension, follow and further depress the heart, a reciprocal relationship being established between these organs.

Chronic alcoholism in its later stages leads to a vicious circle by causing dilatation of the heart and enfeebling its contractile power, effects with which are commonly associated anorexia, palpitations, and a general want of energy. These symptoms only too often drive the victim to further indulgence, and thus intensify the original mischief, until the inevitable Nemesis of shattered health ensues.

Jürgensen[5] points out how close is the connexion between a feeble, dilated ventricle and impaired nutrition

* Read before the Reading Pathological Society.
† Dr. (afterwards Sir H.) Holland, F.R.S. (*Medical Notes and Reflections*, p. 99), gives an excellent description of a vicious circle in 1839, and there are probably still earlier references.

of the myocardium, and how the resultant vicious circle may be the harbinger of death.

Je unzureichender die Herzthätigkeit, desto unzureichender seine Ernährung, und damit nimmt seine Ermüdbarkeit und Dehnbarkeit zu. Es ist also möglich, dass der Circulus vitiosus sich schliesst, d. h. eine einmal entstandene, durch Ermüdung ihrer Muskeln herbeigeführte Erweiterung der Kammer kann nicht mehr beseitigt werden, sie muss zum Herzstillstand führen.

This condition may arise through a variety of causes which diminish the cardio-motive force, such as sudden strain, influenza, beri-beri, or other toxic agencies. The progressive accumulation of residual blood, which overdistends the ventricle and leads to its further weakening, is an additional source of danger.

Acute disease, such as croupous pneumonia, may be complicated by a vicious circle, the lungs and the heart being the organs reciprocally involved. The cardiac dilatation and failure so often associated with pneumonia result partly from poisoning and exhaustion of the nerve centres, and partly from the mechanical effort to overcome the increased obstruction in the pulmonary circuit. In either case the failure of the heart reacts unfavourably on the lungs by retarding the pulmonary circulation, which retardation throws an extra burden on the ventricle, whose nutrition is impaired and whose contractile power is unequal to the demands upon it. Thus heart and lungs embarrass each other, and the vicious circle is frequently only interrupted by death. A closely allied condition, which need not be more fully described, occurs in acute bronchitis.

Group II.

Circles Associated with the Endocardium.

Chronic valvular lesions, accompanied by compensatory changes, sooner or later, when the compensation fails, set up such vicious circles as have already been described in Group I in connexion with dilatation of the heart. For the secondary changes in the great viscera, including the myocardium, are the same whether the dilatation has resulted from peripheral disease such as a chronic nephritis, or from such a cardiac lesion as aortic obstruction. Further reference to such vicious circles is therefore needless.

There are, however, other circles specifically associated with valvular lesions. In the words of Bouillaud,[8] "Diverses maladies du coeur peuvent elles-mêmes devenir causes déterminantes d'autres maladies de cet organe," and it is in connexion with these secondary disorders that reciprocal relations are met with. Such, for example, occur in cases of aortic regurgitation, where the state of repletion of the coronary arteries lasts a shorter period than normal, owing to valvular insufficiency. Hence follow impaired nutrition of the cardiac walls, lessened working capacity, increased regurgitation, and consequently a still less adequate repletion of the coronaries, culminating occasionally in sudden death.

Another illustration is seen where tricuspid regurgitation results from the dilatation of the right ventricle secondary to mitral obstruction. For a time the reflux may relieve the overloaded ventricle, but ultimately its effect is to further weaken the power of the ventricle to overcome the obstruction. Again, when mitral regurgitation is consequent on aortic regurgitation or obstruction (owing to progressive dilatation of the ventricle and auriculo-ventricular orifice), a morbid circle arises through the reciprocal effect on one another of the aortic lesion and the mitral regurgitation.

In the case of malignant or septic endocarditis an infective vicious circle is frequently started by the micro-organisms circulating in the blood. These microbes lead to vegetations and erosions in the endocardium, especially that lining the valves, and from these vegetations showers of infective emboli are detached in their turn, carrying infection far and wide.

Another circle is established when an attack of endocarditis bequeaths permanent valvular mischief. The patient does not die, but remains an invalid, the *sanatio incompleta* being shown by a disposition to relapse, by a diminished power of resistance to fresh attack. "As a taper just blown out will snatch the flame from the torch that scarcely touches it,"[7] so readily is the endocardiac mischief rekindled. Thus the valvular mischief and the lowered resistance act and react on each other, often leading in time to extensive cumulative mischief.

The morbid circle met with in congenital heart disease is most appropriately placed in this Group, since such disease often arises from imperfections either of the valves or of the septa caused by fetal endocarditis. The venous stasis associated with the cyanosis and the resultant convulsions constitute the two factors in the circle which frequently constitutes a grave menace to life.

When valvular lesions occur in such persons as navvies or coal-heavers, whose laborious daily work cannot be exchanged for a lighter occupation, disastrous consequences generally follow much earlier than they would do were the environment more favourable to compensation. Many a life has been sacrificed where poverty or adverse fortune compelled a life of toil. The labour aggravates the heart lesion, the heart lesion (owing to associated dyspnoea and palpitation) makes the daily task relatively, if not absolutely, harder than it would otherwise be.

Group III.

Circles Associated with the Pericardium.

Attention has already been directed to the vicious circle met with in persons who have recovered from endocarditis, but in whom, unfortunately, there has been no *restitutio ad integrum*. Recovery has been at the cost of some valvular lesion, and of a diminished power of resistance. A similar condition not infrequently follows pericarditis. The acute attack subsides, but leaves behind a liability to recrudescence; the damaged pericardium on trivial exposure is attacked afresh, and each time the damage increases, until the pathological changes due to the several attacks may be enormous. The primary lesion has led to the second attack; the second attack has aggravated the primary lesion.

Another vicious circle is set up when acute pericarditis leads to copious effusion. The effusion compresses the great vessels at the roots of the lungs, as well as those of the heart and pericardium, and thus hampers the circulation. The hampering of the circulation increases the effusion. A parallel condition is associated with pleuritic effusion, and the improvement that so often follows paracentesis, even when only a small quantity of fluid is removed, is probably due to the breaking of the circle by such removal.

Non-inflammatory dropsy of the pericardium or hydropericardium, due to venous stasis in the coronary veins or to some other cause, acts in a similar manner. The dropsy, often part of a general condition, in its turn aggravates the disease from which it sprang. In the words of Gibson:[9]

Hydropericardium may be said to step in as the closing link of a pathological chain, and once it has made its appearance it unites with the other morbid conditions to form a vicious circle of fatal import.

Group IV.

Circles Associated with Neuroses.

A lamentable vicious circle belonging to this Group is set up when an inexperienced practitioner erroneously diagnoses a "weak heart," and excites in his patient an ever-present dread of serious illness or immediate death. The exaggerated fears, like Damocles's sword, overshadow life, and render all enjoyment impossible. The constant direction of the mind to the one organ leads to morbid consciousness of trivial sensations, to such unwholesome régime as to induce a feeble and flabby heart, which on the slightest provocation reacts on the neurotic condition. An illustration is given by Sir Douglas Powell:[9]

The patient was a young married woman, formerly of active, energetic, useful habits, whose doctor had diagnosed a weak heart. She had been taking the utmost care of a healthy organ ever since, resting half the day, never even walking upstairs, until she became fat, breathless, anaemic, and miserable. Many months would elapse before she could be fully weaned back to her former healthy activity, if indeed recovery were at all possible.

Huchard[10] has drawn attention to a vicious circle associated with angina pectoris.

Les angineux tournent souvent dans un cercle vicieux morbide. Le repos leur est formellement prescrit: on leur défend l'exercice . . . et à la faveur de ce repos systématique, de cette immobilité prolongée, ils ont une tendance à faire du tissu adipeux, à devenir obèses; bientôt, la circulation intra-abdominale va se ralentir . . . et le coeur . . . va être bientôt insuffisant à la tâche. De la sorte, il y a des angineux qui se

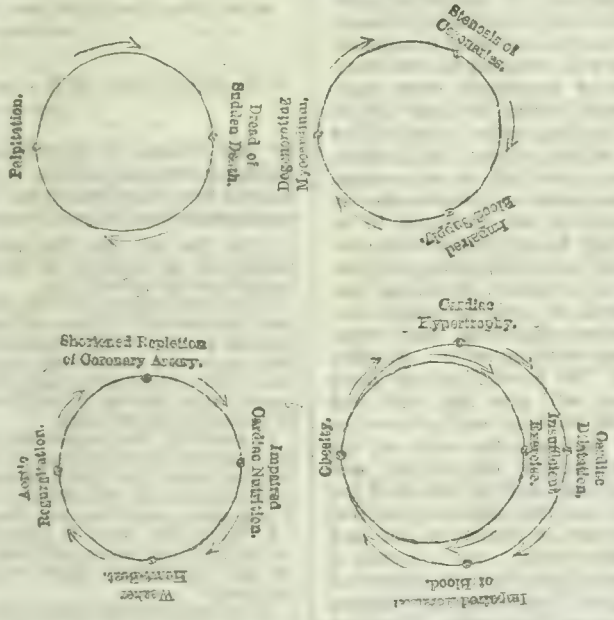
trouvent, à la longue, singulièrement aggravés par cet embarras circulatoire dû au manque d'exercice.

When an unduly neurotic temperament is associated with heart disease, another variety of circle may be established, if the true state of the heart is revealed. Equanimity is all-important for the processes of compensation and repair, and its absence may seriously militate against recovery. In the words of Fraentzel:[11]

Dies Wissen ist oft viel schlimmer as die Krankheit selbst.

In other patients of a similarly neurotic temperament such a functional disorder as palpitation may start the train of symptoms. The palpitation may be so violent as to cause an apprehension of sudden dissolution, and this apprehension in turn keeps up, and indeed intensifies, the palpitation. The result is a concatenation of symptoms causing grievous distress.

A different form of circle may be established when an unsound heart is injudiciously "coddled"—that is, treated by excessive mental and physical repose, perhaps even pinned to bed! Such a régime keeps the heart feeble, and the over-rested heart calls for more rest. What procedure is more likely to wreck all chance of recovery! Yet another circle, sometimes ending fatally, may be set up when in heart disease an attack of vomiting is brought on either through the pneumogastric nerves or as a result of mechanical congestion of the stomach. The vomiting may depress the circulation and vital powers to such an extent as to aggravate the cardiac condition or accelerate the end. Lastly, when from some temporary cause an intermittent action of the heart has set in, a vicious circle may result from a mere repetition of the intermittence. The habit of intermitting leads to an exaggerated irritability of the cardiac nerve centres, causing a continuance of the abnormal action even after the removal of the primary cause.



Diagrams showing the analysis of vicious circles into component factors. The fourth figure represents the double circle of obesity.

Group V.

Circles Associated with a Fall of Blood Pressure

Vicious circles have already been described in which the blood pressure was higher or lower than normal, more especially in connexion with diseases of the myocardium. But it will be convenient to group under a separate heading some other circles in which a rapid fall of pressure, either of central or peripheral origin, is a dominant feature. During health the bulbar centres are excited to increased or diminished activity, according as arterial pressure falls or rises, this compensatory mechanism maintaining the cerebral circulation. But when those centres are paralysed, exhausted, or inhibited, the vasomotor mechanism is thrown out of gear, and a diminished blood supply weakens instead of stimulating the centre. A good example is seen in cases of severe surgical shock causing paralysis of the bulbar centres. As a result of the paralysis the blood pressure falls, partially emptying the cardiac and cerebral vessels. Less blood is pumped up to the brain, and the bulbar centres are still further weakened. Thus cause and effect act and react on each other, leading, when the shock is severe, to disastrous consequences. A similar condition occasionally accompanies the administration of chloroform, which not only acts on the bulbar centres, but also causes dilatation of the heart, and further interferes with the compensatory mechanism. Probably syncope and church faints are due to a like interference with the vasomotor mechanism.

Cohnheim[12] has pointed out how prolonged pyrexia, while increasing the demands on the heart, steadily reduces its motive power, owing partly to changes in the cardiac muscle, partly to toxins and to nervous exhaustion. This reduction in power causes the arterial pressure to fall, and as a result the functions of the digestive, respiratory and nervous tissues suffer. Products of metabolism accumulate in the blood and further depress both cardiac activity and blood pressure. Not infrequently does the vicious circle thus established end in the collapse which is so often the forerunner of death. An allied condition is met with in extreme tachycardia, where the pulse-rate may reach 250 or even 300 per minute and the pressure fall from 15 to 5 cm. Hg. In such cases the tachycardia and the lowered pressure are often reciprocally correlated. As Huchard[13] has expressed it:

Le rapprochement des révolutions cardiaques empêche à la fois la réplétion ventriculaire qui n'a pas le temps de se produire et l'expulsion du sang dans le système artériel. C'est là un cercle vicieux d'où l'on ne peut faire sortir le malade qu'en agissant directement sur la tension artérielle trop abaissée.

An excellent illustration of an artificial circle belonging to this Group may be mentioned here, although happily its interest is chiefly historical, since it belongs to the days when venesection was regarded as a panacea for almost every ailment, acute or chronic. The evidence is only too clear that *venesectio ad mortem* was no uncommon occurrence, death being erroneously attributed to the illness instead of to loss of blood. The custom was to bleed until the patient became faint, when recovery was allowed to take place. In the case of many diseases, especially such as are accompanied by fever or pain (for example, pneumonia, peritonitis, typhoid), some remission of the symptoms followed recovery from the faintness, a remission which was hailed as evidence of the beneficence of the operation, and led to its being repeated again and again, if the original fever or pain recurred.

When, however, blood is drawn *pleno rivo*, many of the symptoms produced (for example, palpitation, vertigo, violent headache, jactitation, convulsions, coma) resemble those of inflammatory disorders, and were attributed to a recrudescence of the original mischief, although really due to anaemia. Unwary practitioners were easily led astray. In the *Lancet* of 1827[14] an illustrative case is given which may be briefly summarized:

A man fell from a scaffold and fractured several ribs. On reaching St. Bartholomew's Hospital early on a Friday morning he was bled 18 oz., and at noon 20 oz. more. The next day a further 18 oz. were taken, and on the following day 18 oz. at noon and 18 oz. in the evening. On Monday the pulse was small and jerking, but very compressible. This condition was regarded as "indicative of inflammation and not resulting from loss of blood or haemorrhagic irritation." Accordingly bleeding was again ordered to the extent of 18 oz. The dresser in charge of the case, however, alarmed by the condition following the loss of a few ounces, desisted from drawing any more. Nevertheless, when about two hours later two surgeons saw the man in consultation, they ordered 20 oz. more to be drawn. After this the pulse became a mere flutter, death taking place a few hours later.

Many such cases could be quoted in which cause and effect were inextricably mixed up, the venesection being repeated to remove the very symptoms it had produced.

Treatment.

A vicious circle can be analysed into two or more factors which act and react on each other to the progressive injury of the patient, and their recognition is essential to rational treatment. The graphic method of analysis, as shown in the annexed diagrams, will often assist in defining the factors.

As regards treatment, most of the recognized principles of cardiac therapeutics apply. Some special points, however, deserve attention.

1. The exciting cause must be sought. Sometimes this is obvious—for example, when rheumatic fever has led to the vicious circle of aortic regurgitation and cardiac ischaemia, or when pneumococcic infection has led to that of pneumonia and heart failure. At other times close investigation of detail will be required. In law "*de minimis non curat lex*" may be pardonable; but "*de minimis curat medicus*" is a safer motto for the physician dealing with obscure disease. Thus an ill-ventilated gas-lit office or over-indulgence in tobacco may so depress the heart, even when organically sound, that the pulse becomes feeble and intermittent and life miserable and useless, the heart and general health depressing each other. Removal of the exciting cause may in itself ensure recovery.

2. It is frequently desirable to actively treat *each* of the several factors concerned. In pneumonia, for example, the practitioner who merely watches the lungs, and is oblivious of the more important cardiac signs, loses the best chance of helping his patient weather the storm. The finger on the pulse is as important as the stethoscope on the chest. Again, if in the rush of the out-patient room the unsound heart of a coalheaver is stimulated with digitalis and strychnine, while no steps are taken to lessen the daily toil that is hindering Nature's efforts at compensation, the remaining span of life will probably be but brief.

3. Where there is a choice of treatment, each practitioner must attack what appears to him the *locus minoris resistentiae*. Hence results a varying *modus operandi* for the same disorder, a variety which puzzles the patient, especially if several doctors are consulted in succession. An example will illustrate the point: A stockbroker of advancing years suddenly collapses, and is found to be suffering from insomnia, failing heart, crepitation over both bases, albuminuria, general anorexia and dyspepsia. One physician orders him to Switzerland, believing that complete change of scene and air will so restore his nervous system that circulation, digestion, and renal organs will rapidly get back into working order. Another prescribes a long spell of bed. No *Stock Exchange Daily List* can worry him; recumbency will give his heart less work; the warm bed will act on the skin and relieve the kidneys; the lighter diet will facilitate the work of the stomach and liver; the improved circulation and digestion will relieve the lungs and react in favour of the heart. In brief, this treatment ensures physiological rest to brain, heart, lungs, and viscera, a change of air and scene being prescribed at a later stage. As a result of these cumulative measures, the vicious circle is converted into a healthy one, all the organs improving by degrees and helping one another in an ascending scale. Here are two methods of breaking the vicious circle, and each method would at times be most successful.

4. The close dependence of the heart on the central nervous system is shown by the existence of several vicious circles in nervous introspective patients. Oft-times there is a baseless fear of sudden dissolution, or some trivial ailment is magnified into such importance that all useful altruistic life is ruined. Here a few well-chosen words from a trusted counsellor may sever the bonds and loose the sufferer from a state of despair. Where insomnia forms part of the neurosis, a dose of morphine may render great service, acting, in the words of Pridgin Teale, "like a good coxswain, who rallies a crew who had been catching crabs, and makes the men pull together."

5. Many vicious circles associated with the myocardium arise from the failure of compensatory changes, as, for instance, when a salutary hypertrophy is followed by undue dilatation, caused either by degeneration of the myocardium or by the excessive work thrown on the heart. Here treatment may do much to increase the vigour of the myocardium or to lighten its load. By either one or both courses the failing compensation may be so restored as to render the heart once more equal to its task. Above all must an ample supply of pure blood be secured to the myocardium.

CONCLUSION.

Indulgence may fairly be claimed for this the first attempt to deal systematically with the vicious circles associated with a great organ such as the heart, the capital, so to speak, of an empire with whose remotest outposts it is, for good as well as for ill, in constant communication. The subject is one which throws some fresh light on Hippocrates's aphorism:[15] *Συμπαθέα πάντα· κατὰ μὲν ὁλομελίην πάντα, κάτα μέρος δὲ τὰ ἐν ἑκάστῳ μέρει μέρεα πρὸς τὸ ἔργον*, that is, "the whole body sympathizes with every member, and every member with the whole throughout its structure," and emphasizes the limits that are imposed on the *vis medicatrix naturae*.

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REPORT, WITH COMMENT, OF SIX CASES OF HEART-BLOCK,

WITH TRACINGS, AND ONE POST-MORTEM EXAMINATION OF THE HEART.

BY

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SAN FRANCISCO.

IN the *Journal of Experimental Medicine*, January, 1906, Erlanger summarizes the results of his admirable experimental investigations upon the function of the auriculo-ventricular bundle as follows:

1. In the dog, the impulse which normally causes the ventricles to contract is conducted through the auriculo-ventricular bundle of His.

2. By compression of this bundle all stages of heart-block may be obtained. These include (*a*) an increase of the inter-systolic pause; (*b*) an occasional ventricular silence; (*c*) regularly recurring ventricular silences—for example, one silence in ten, nine, eight, seven, six, five, four, three, and two auricular beats; (*d*) a two-to-one rhythm; (*e*) a three-to-one rhythm; (*f*) complete heart-block.

3. As a rule, the ventricles take on a constant slow rate at the moment complete heart-block is established. Occasionally, usually when the block becomes complete suddenly, there results a marked preliminary slowing of the ventricular rate. The auricular rate does not change.

4. When the block is complete, stimulation of the vagus nerve has no, or but a minimal, effect upon the rate or force of the ventricular beats, whereas the auricles still react normally.

5. When the block is complete, stimulation of the accelerator nerve increases the rate both of the auricles and ventricles.

6. When the block is complete, the rate of ventricular beats may not be materially affected by variations in the general blood pressure, nor by asphyxia, nor by interference with the coronary circulation.

In his book, *Das Reizleitung's System des Saugetier-Herzens*, Tawara records his wonderfully painstaking anatomical researches. He demonstrates that the A.V. bundle is the trunk of a tree like system (comparable to the bronchial system) which has its roots in a tangled "knot" above the fibro-cartilaginous atrio-ventricular septum, that it sends backwards a short bundle to the neighbourhood of the anterior part of the coronary sinus, where this becomes connected with the auricular muscle fibres. The trunk of the tree after breaking through the auriculo-ventricular septum splits up into two prongs, one for the left, the other for the right ventricle. These run subendocardially and divide into branches, which re-divide till the ultimate twigs come into direct connexion with the ventricular muscle fibres. Throughout its course this tree is isolated by means of connective tissue, and within it blood vessels and nerves are to be found.

Through the methods of instrumental registration of the working of the cardio-vascular apparatus, as evolved and interpreted by Mackenzie[1] and as further elaborated by him and Wenckebach, physicians are gradually attaining greater accuracy in the study of cardio-vascular cases, and it is through reading their publications that we are tempted to write these reports.

For recent reviews of the literature and publications of excellent tracings the reader is referred to two papers, one

by Ashton, Norris, and Lavenson,[1] the other by Gibson and Ritchie.[2]

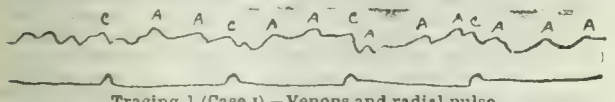
Here we propose recording in full the history of a case of acute heart-block with *post-mortem* findings, of which only a bare notice has previously appeared, reviewing from the clinical standpoint the cases which have come under our notice, and publishing some of the more interesting of the tracings taken from these patients.

Case I.

The patient was a young man of 30, of excellent family history. Six years previously he had acquired syphilis, for which he was treated by mouth for six months. Two years later he contracted gonorrhoea, from which he never entirely recovered, a morning urethral drop being regular in its appearance. Till six weeks previous to his admission into hospital his powers of endurance were good, and his field of cardiac response wide. At that time he had an acute exacerbation of his gonorrhoea. This after three weeks led to a bilateral acute epididymitis. He developed fever, felt chilly, suffered from headache, and later experienced pain in the hamstring and wrist tendons. Three days prior to admission, whilst resting in bed, he suddenly felt faint and everything became dark. He momentarily lost consciousness; when he awoke he arose and tried to sweep the floor but he became dizzy and fell upon the bed. Five seizures occurred in quick succession, all being of the same character. During the next three days he had many fainting spells, but no new symptoms arose. When admitted his temperature was 100°, pulse 80 to 90, and it remained at about that figure for two days, during which only a few seizures occurred, the pulse at these times being very slow. Then it became permanently infrequent, and continued so till his death two weeks later. The following status was taken by one of us on the third morning after his admission:

The patient is a short, thin, wiry, muscular man. He is somewhat cyanotic, but there is no oedema. There is no paralysis, and his joint movements are free. Little petechial spots are present over the body surface. The hamstring and wrist tendons are hypersensitive and somewhat rigid, but not swollen. The lungs are normal. The heart dullness is widened, the palpable apex being 1 in. outside the mid-clavicular line. A systolic bruit is present, and is most pronounced at the mitral area, and is transmitted in all directions. The ventricular rate is 22 to the minute; over the auricles faint double sounds are heard in the intervals between the successive ventricular sounds. The radial pulse is 22 to the minute, regular in rhythm, of good tension; in the pause tiny beats can be appreciated. The neck veins are not dilated, but pulsate much more rapidly than the radial pulse, apparently about 4 to 1. There is now no urethral discharge. The prostate is enlarged and of irregular consistency. On massaging it a copious amount of muco-pus is discharged. In this no gonococci could be detected. The epididymes are hot, enlarged, and tender. The liver and spleen are normal in size. The kidneys are not palpable. The nervous system and special senses are intact.

Later investigations showed that the urine contained many threads, but was otherwise normal. The leucocytes rose to 40,000 per c.mm., the polynuclears being in relative excess. Repeated blood cultures were negative. The systolic blood pressure (Stanton apparatus) was 140 to 145 mm. of Hg, and the lower point of greatest oscillation of the mercury column was from 100 to 110 mm. At this level, between the larger oscillations due to the ventricular systoles, were smaller oscillations, probably due to the contractions of the auricles. The sphygmograph of the radial pulse also showed on the down stroke the little elevations which the finger previously could detect, and to which the movements of the mercury column bore testimony.



Tracing 1 (Case I).—Venous and radial pulse.

The patient's temperature ran a marked septic course, at times intermittent, at times remittent, varying from 105° to 97°. *Pari passu* the pulse varied from 40 to 20, thus showing response to temperature changes. Chills occasionally occurred, and marked sweating was present. During two weeks many paroxysmal seizures happened. At first they were of the nature of fainting spells; later the pseudo-apoplectiform, and later still epileptiform attacks developed. The cyanosis became deeper, the patient often becoming very blue during a prolonged seizure. During the milder paroxysms the neck veins continued to pulsate, and the auricular sounds were still audible. During the severer attacks, the neck veins, after pulsating for a few seconds, became much distended; they no longer pulsated, and no sounds could be heard over the base of the heart. The patient continued to weaken, the heart gradually grew feebler, and death occurred in an attack fourteen days after his admission. A few hours before death the temperature fell from 105° to 95°, the pulse, however, remaining at 40, to which it had risen with the preceding temperature rise. The greatest length of absence of pulse-beat up to the time of his death was 40 sec.

The clinical diagnosis was: Acute gonorrhoeal epididymitis, acute gonorrhoeal sepsis which had led to an acute involvement of the bundle of His.

We regret that the temperature and pulse charts, and the list of the sphygmograms were burnt in the San Francisco fire. The curve (No. 1) appended is a traced copy of a sphygmogram taken with the Mackenzie instrument. The sphygmogram had become adherent to the wood on which it was placed to dry, and so escaped destruction. It shows that heart-block was present, but it is too poor to admit of a strict analysis.

Autopsy Report of the Heart (only part obtainable).—Mr. K., patient of Drs. Jellinek and Cooper, January 12th, 1906.

Clinical Diagnosis.—Gonorrhoeal sepsis, death from acute Adams-Stokes's disease with heart-block.

Heart of normal size. Muscle of normal appearance everywhere, except directly underneath the membranous septum near the large flap of the mitral valve. At this point on the left side of the septum the endocardium shows several ragged perforations, the largest one about 2 mm. in diameter, which lead into deep defects in the myocardium. The muscle near the lesion in the endocardium is quite opaque and soft. On the corresponding side on the right side of the septum the space between the median flap of the tricuspid valve and the upper part of the muscular septum is filled with solid mixed thrombus.

Smears from the thrombus show much granular material, few red and white corpuscles. No bacteria found, in spite of careful search. Sections of the diseased area show a complete necrosis of the heart muscle, which begins at the membranous septum and extends into the muscular septum on the right side for a distance of 10 mm., on the left for 8 mm. In the middle of the section it does not go quite so far. On the right the necrotic area is covered with an ordinary mixed thrombus. The necrotic mass contains some nuclear débris in places and also quite a little crystalline pigment (haemotoidin). Along the edge of the necrosis one finds some leucocytes (polynuclears and lymphocytes), and also some new-formed connective tissue cells. The adjoining muscle is normal. Serial sections show that a medium-sized artery entering the necrotic part from the membranous septum and two of its branches, of which one runs towards the left and one towards the right side of the muscular septum, are filled with thrombus consisting of granular material and fragments of leucocytes.

No bacteria found in the thrombus in the arteries, in the necrotic area, or in the thrombus on the outside. Specimens were stained with Weigert's modifications of Gram's method, methylene blue, eosin, dilute carbo-fuchsin. Anaemic necrosis of muscular septum in the region of the His bundle.—W. Opiuls.

Case II.—*Incomplete Heart block but no Paroxysmal Seizures.*

H. Y., a farm labourer, aged 31, was admitted into the German Hospital, July 7th, 1906, complaining of occasional shooting pains in the cardiac region. Father and mother were both dead, the former from cancer at 68, the latter at 54, cause unknown. When a child he had measles. He knew of no other illness, and denied all venereal infection. He drank but little, but smoked and chewed considerably. Till a week previous he had worked hard and felt well; since then he had experienced shooting pains in the lower left mammary region. These travelled towards the margin of the left chest, were of momentary duration, and after them he felt somewhat breathless. He had never fainted or had any kind of a seizure.

Examination showed a thin, tall individual whose face and hands were much tanned. His nails, lips, and gums were pale. Both supraclavicular and infraclavicular regions were retracted, and had been apparently the seats of old tuberculous trouble; there were, however, no indications of recent activity. A few hard small glands were palpable above both clavicles. There was no anaemia, and none of the systems gave any further indication of disease except the cardio-vascular.

The heart was of normal size; the rate was 36 to the minute with regular rhythm. The apex beat was weak but localized. The heart sounds were clear and distinct. Over the base faint sounds were at times audible during the ventricular silence, at other times not; the point of greatest intensity of these faint sounds was in the second right interspace, 1 to 1½ in. to the left of the sternum. At the root of the neck much more rapid vibrations were apparent in the neck veins, the latter not being distended. The ratio of the venous pulse to the carotid beat seemed about 3 to 1. The pulse-rate was 38 to the minute, apparently regular in rhythm; the tension was fair, both radial pulses were equal. The walls were thickened, but the arteries were not tortuous.

At times the venous pulse was not visible, and deep respiratory efforts or muscular movements were required before the vein waves could be demonstrated to observers. On standing, the pulse-rate was 42 to the minute. After exercise the pulse-rate was 24 during the first succeeding half-minute.

The patient was kept for a week in bed and suitably fed. The heart became somewhat dilated, but the pulse-rate remained the same. Then iodide of potassium was administered, 10 grains t.i.d., increasing 1 grain every day. The pulse-rate then rose to 55–60 at rest; after walking, to 72. The

patient's condition much improved, and after a month he left the hospital feeling quite well. The heart was then of normal size. The tracings showed that the patient had incomplete heart-block with a 3-1 rhythm (auricular rate 112, ventricular 36-38). The *a–c* interval was never more than ⅓ second. This, however, we regard as no absolute index of the conductivity of the bundle at the times when the ventricular systole failed to occur, and consequently do not feel justified in regarding the condition as being due to diminished excitability or contractility of the ventricular muscle. Later the auricular rate was halved, and a ventricular systole followed each auricular contraction. Under atropine (1/100 grain subcutaneously) the pulse registered 90-100. To save space these tracings are not inserted.

CASE III.

A. H., male, aged 27, a labourer by occupation, was admitted into the German Hospital in June, 1904, complaining of dizzy spells and breathlessness. His family history was irrelevant.

As a child he had developed whooping-cough, measles, and mumps. He denied all venereal infection, drank but little, and neither chewed nor smoked.

Up to four years before he felt quite well. His powers of endurance were good, and his field of cardiac response wide. Then one day, whilst ploughing, he strained to lift his plough from a rut. He suddenly felt pain in the precordium, and his heart "just jumped." He did not fall, but at once went home feeling faint. Since then his field of cardiac response has been much narrowed. A year ago he began to be afflicted with frequent attacks of dizziness, and during the last few months he has had many fainting spells, in which he frequently lost consciousness.

Status.—All the systems, with the exception of the cardio-vascular, were healthy. The heart was greatly enlarged. A soft systolic murmur was present at the apex and was transmitted into the axilla. Toward the base the murmur became rougher and louder, was more pronounced over the pulmonary region, and was not transmitted into the neck vessels. The heart-beat was twenty to the minute. The second pulmonic sound was louder than the second aortic. The peripheral arteries did not pulsate unduly. The jugular veins were not distended, and no abnormal pulsations were noted in the neck. The radial pulse was twenty to the minute, regular in rhythm, moderate in size and tension, equal on both sides. The walls were not thickened.

Whilst in hospital he had many seizures, these varying much in severity. An aura as of something "ascending from the abdomen and cutting off his wind" preceded these attacks. He would then lift his finger to warn us that an attack was coming, and the seizures uniformly followed. The patient finally died during a seizure. No necropsy.

The attacks were mostly pseudo-apoplectic or epileptiform in character and accompanied by rotation of head and eyes to the right. The longest duration of absence of pulse was one minute forty seconds. During the longer seizures involuntary movement of rectum and bladder frequently happened. On recovery from the seizures four pulse beats about four seconds apart would occur, then the pulse suddenly became very rapid, the pulse exhibiting the staircase effect, then systoles would drop out irregularly, the pulse falling to 50-60 per minute, and later to 20.

We briefly refer to this case, notwithstanding the loss of our detailed record and tracings during the fire, because of the age of the patient (27) and the peculiar behaviour of the pulse following an attack. We clinically regard it as a case of myocarditis due to causes unknown, in which dilatation of the heart had suddenly occurred whilst he was lifting a plough, the degenerative process having either before that time or later involved the bundle of His.

CASE IV.

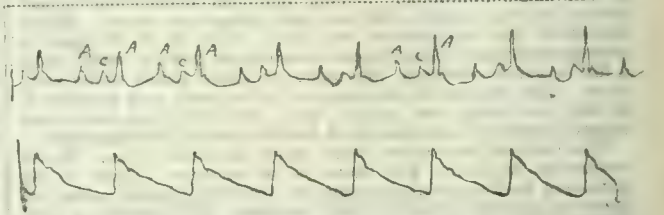
Mr. D., aged 68, a stockholder by profession, was seen by one of us in consultation because of the happening of peculiar cerebral phenomena following an operation for cataract. He became unconscious and comatose, and seemed as though he would die. Artificial respiration had been performed, greatly to the annoyance of the patient, who, having passed through many such unconscious spells, strongly objected to the disturbing artificial respiratory movements.

He had had gonorrhoea and syphilis; had used alcohol moderately; smoked but did not chew.

Nine years previously he had a slight fainting spell, and such attacks had recurred at intervals for the next five years. Four years ago they began to happen more frequently, twenty-five sometimes occurring in a week. Of late these seizures had become of a graver type, they, however, occurring at irregular intervals. His field of cardiac response had been narrow for some years.

Status.—The liver is congested and large. With that exception all the systems other than the cardio-vascular are healthy. Cardio-vascular: The heart is much enlarged, being 19 cm. from right border to apex. The precordium heaves at each ventricular systole. Between the main beats little ones are occasionally appreciable below and outside the nipple. A loud soft systolic murmur is audible at all areas and is transmitted in all directions. The second sound is loud at all areas. Following it one can sometimes hear faint tones like faint echoes, these being best heard at the apex. The ventricular rate is 28 in all postures. The jugular veins are not distended but distinctly pulsate, there being apparently two vein between successive carotid pulsations. The radial pulse is 28 to the minute, regular in rhythm, of high systolic tension, equal on both sides, the walls are fibrously thickened. In severe attacks the pulse ceases to beat, the patient breathes stertorously for ten seconds, then breathing stops, his tongue is thrust between his teeth, is bitten and bleeds, the head is jerked over to the right; the eyes open, the corneal reflex is absent, the face is quite blue. Then, fifty seconds after the breathing ceased, a peculiar "chortling" breath is taken which leads one to think that he is breathing his last, the face becomes bluer, the hands and feet tremble; after another fifty seconds of apnoea another choking breath is taken and the face becomes blue-black. Then two and a half minutes after the onset of the period of pulse absence, one loud stertorous respiration occurs, a slight wave is felt in the pulse, ordinary breathing is resumed, and the patient awakes. During the seizure involuntary movements of bladder and bowels occur. For fifteen seconds the pulse is very rapid, then it suddenly drops to 28 Many similar seizures were noted, and to those unfamiliar with the previous attacks it seemed that the one witnessed must inevitably be the last. Nevertheless he gradually improved, was able later to leave his bed, and for the last two years has been able to get about, having had no attack. The systolic blood pressure = 200 mm. J.Hg. The diastolic (?) 150 (Stanton).

A tracing (No. 2, slow speed; time interval, one-fifth second) of this case is appended. Two auricular con-



Tracing 2.—Simultaneous record of jugular and radial pulses. Note the alternation of the height of the auricular waves. This is due to the auricular systole taking place every other beat during the period of closure of the auriculo-ventricular valves. The block was a complete one. No v waves are evident, which is not uncommon when auricles and ventricles contract synchronously. Time beat ½ sec. Tracing 3, which showed three auricular systoles at one place between two successive c waves is purposely omitted.

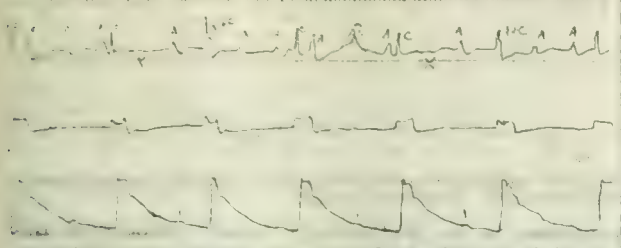
tractions are seen between two successive c waves. One occurs always during the period of closure of the auriculo-ventricular valves and therefore is always a high wave. The time interval between the beginning of this high elevation and the succeeding auricular contraction is constantly greater than the time interval following in the proportion of 4¾ to 4½, and this though we would expect the auricle to fill quicker after the big wave. The rhythm in this tracing is 2 to 1, but we are dealing with a case of complete heart-block. This was suggested clinically by the constancy of the pulse-rate in all postures, and by taking many tracings we obtained curves on which c and the following a became very close together, three auricular contractions then occurring between two successive c waves. We were not fortunate enough to obtain tracings of the rapid pulse immediately supervening on an attack.

CASE V.

H., a shoemaker, aged 61, was seen by one of us three years ago. He was a big, powerful-looking man, with an excellent family history. He himself had been exceptionally healthy, had never acquired any venereal disease, drank but moderately, and never used tobacco. His seizures had begun as "dizzy spells" a year and a half previously. During these spells he said he reeled like a drunken man. Later, "fainting fits" supervened, and whilst bending at work he would tumble over "just as though he had been shot." He was taken to hospital, and remained in bed for six months. During that time the attacks were very numerous, twenty sometimes occurring in a day. When they occurred whilst he was lying in bed they frequently were preceded by a peculiar sensation travelling up from the middle of his neck, and accompanied by ringing in the ears. He thought he could sometimes avert the threatened seizures by widely opening his mouth and taking a deep breath. The more severe attacks were pseudo-apoplectic in nature, and not infrequently he passed his discharges during the attack. After six months' rest in bed he began to improve. The attacks became less severe and less frequent. He gradually was able to get about, and for the last two years he has led a useful life, though he still has attacks of dizziness from time to time, particularly, he thinks, if he becomes excited, or if his digestion be faulty.

Status during this Period of Activity.—All his systems are healthy except the cardio-vascular. The heart is much enlarged, the whole precordium heaving at each systole. Following the apex beat is a second slighter tap, apparently synchronous with the second sound. No murmurs are present. The sounds as heard over the base are muffled and faint. The ventricular rate is 28. The systolic blood pressure equals 200–210 mm. Hg, the diastolic 160–170.

The pulse-rate is 28 to the minute, regular in rhythm; the left radial is stronger than the right, but both occur simultaneously. The walls of all the palpable arteries are thickened. The tracing (No. 4), which was taken when the patient was



Tracing 4.—Vein above, apex in the middle, radial artery below. Note the complete block and the dropping out of the auricular systoles at x, and the little waves in the radial pulse which are due to the auricular systoles.

able to get about, shows a complete block. Sometimes the A and C waves coincide, sometimes A occurs independently but during the closure of the auriculo-ventricular valves. The auricular rhythm is itself slightly irregular, and it will be seen that at two places an auricular contraction has dropped out. On the theory that the stimulus which sets the auricular pace arises in the region of the mouths of the great veins (by no means proven), such a phlebogram is extremely suggestive of a block between sinus and auricle at the so-called sino-auricular junction. It is true that the time relationships do not exactly correspond with those instances in which Wenckebach so astutely reasoned out the existence of delays of conduction, but it is probable that many departures from the typical occur. On such a hypothesis Fig. 1 is constructed.

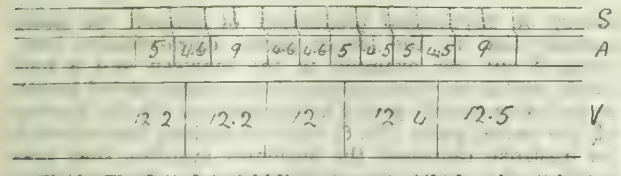


Fig. 1.—The dotted straight lines s represent the imaginary sinus waves; A the auricle waves; V the ventricular contractions. The space between A and V represents the A-V bridge, which is blocked. The space between S and A represents the imagined conduction from sinus to auricle, which fails on two occasions.

CASE VI.

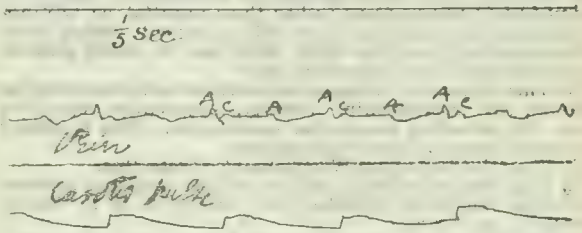
The patient, a carpenter by trade, was admitted into hospital July 4th, 1906. He was 58 years old, and came of a family whose tenure of life was exceptionally long. He himself had enjoyed excellent health. He drank little, but was an inveterate tobacco chewer. He had never contracted any venereal disease, and gave no history of any infections.

Two years previously, whilst working, he had a slight fainting spell. Since that time his field of cardiac response had been considerably narrowed. During the last few weeks he had fainted on several occasions. He would lose consciousness and often fall, and he bore on his forehead the traces of bruises so acquired. He thought these fainting seizures were of only momentary duration. He felt quite well between the attacks, and had continued to follow his occupation.

Examination showed a tall, strongly built, ruddy, healthy looking man, and the only abnormalities apart from his cardio-vascular system detected were:

1. The left pupil was somewhat sluggish in its reaction to light.
2. The tongue was unduly fissured.
3. The liver was enlarged, and the spleen was palpable ½ in. below the left thoracic margin.
4. A few râles were audible in the region of the angle of the left scapula (these, however, soon disappearing).

Cardio-vascular System.—The heart was enlarged, the right border being ½ in. to the right of the right sternal edge. The apex was sometimes in the fifth, sometimes in the sixth interspace 1 in. outside the left mid-clavicular line. The impulse was diffuse, slow, and heaving, and the most noteworthy fact concerning it was its apparent rapid shifting independent of respiration or of change in posture. A loud, long, blowing systolic bruit was audible, most pronounced at the mitral area, and carried for some distance towards the left axilla. The aortic and pulmonic second sounds were faint, muffled, and lacked sharpness. Occasionally faint sounds were audible during diastole over the base of the heart. The heart-rate was 36 to the minute and apparently regular in rhythm. The neck veins were not distended, but pulsated at a more rapid rate than the carotids; apparently about two to one. All the peripheral arteries were thickened and pulsated unduly. The radial pulses were equal; 36 to the minute, of regular rhythm. A capillary pulse was present. When standing the pulse was 42 to the minute; after exercise it registered during the first succeeding half-minute 24 beats. Three months later it was 42 in all postures, and the injection of $\frac{1}{50}$ grain of atropine had no influence upon the rhythm; the tracings still continued to show a partial heart-block with a 2-1 ratio (vagus influence at a minimum).



Tracing 5.—Vein above, carotid below. Note 2-1 rhythm, incomplete block and normal length of the A-C period. (Time beat ⅕ second.)

No. 5 is a tracing taken at this time. The auricular waves are marked A, the carotid peak C. The interval A–C is never more than one-fifth of a second, and is generally a little less. It is possible that the dropping out of the alternate systoles is due to a diminution of the ventricular excitability, but this is regarded as undetermined (see Case II). Though no history of luetic infection was obtainable, the unilateral pupillary sluggishness, the fissured tongue, and the enlarged liver and spleen suggested antisyphilitic treatment, but this had no influence on the pulse rhythm.

One year later the patient again came under our observation, complaining of dyspnoea. He had had many seizures of the nature of fainting spells. His respiration was of the Cheyne-Stokes type without actual pauses.

Examination revealed bronchitis. The heart apex at this time was double, a very distinct second tap following the first one, occurring internal to the first and suggesting to the finger a rolling movement.

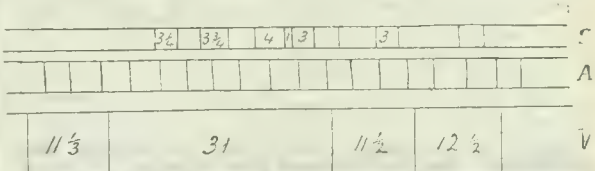
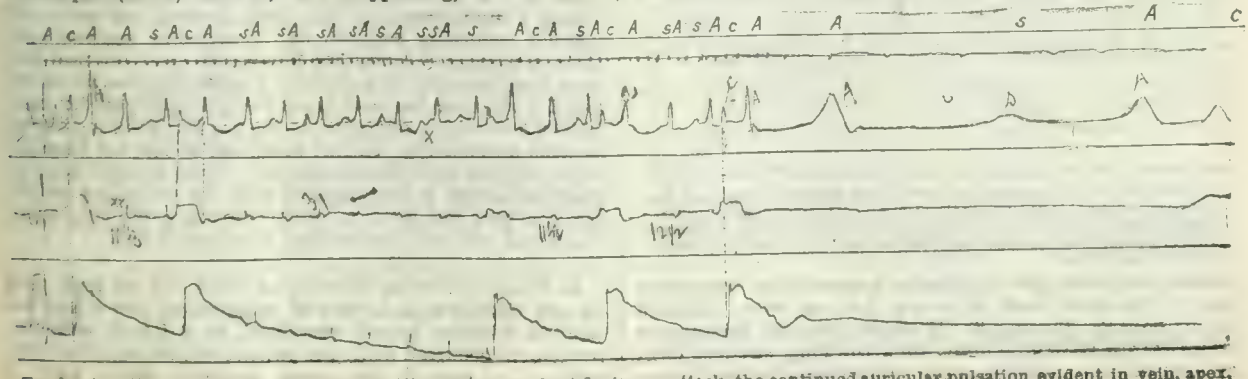
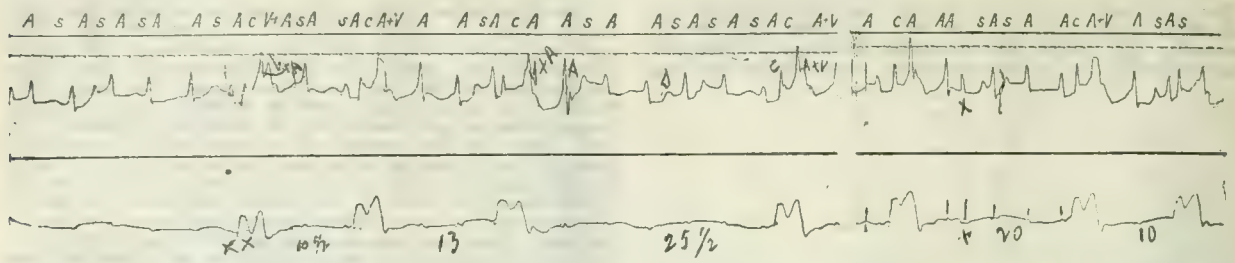


Fig. 2 is a diagrammatic representation of Tracing 6. s equals the "so-called sinus" waves, which are evidently arrhythmic; A equals the auricular systoles, V the ventricular. The clear space between represents the A-V bridge through which no waves are conducted.

Tracing No. 6 was taken at this time, and includes the period of one of his fainting spells. It presents many interesting features. Analysing first the venous pulse, we note



Tracing 6.—Note the s waves, the absence of the ventricular beat during an attack, the continued auricular pulsation evident in vein, apex, and radial curves. Time ⅕ second (Cf. Fig. 2).



Tracing 8 of vein above, apex below. Note the s waves, the cessation of the ventricular action during slight attacks, the continued auricular pulsation, and the auricular extra systole at x. Time beat ⅕ second.

that the second auricular contraction occurred during the closure of the auriculo-ventricular valves. The resultant wave is a very high one. The auricular contractions are unequally spaced, there being present a slight auricular arrhythmia. The auricles continue to contract during the attack.

Equally interesting are the little elevations which are evident between the auricular systoles (the s waves of Gibson and Ritchie). As their occurrence in auriculo-ventricular heart-block is concomitant rather than essential, we will not here discuss the cause of their origin, but will simply point out concerning them these facts, which can be readily gleaned from a perusal of the various tracings:

(*a*) They present a curious serial relationship to the auricular systoles, this relationship, however, apparently depending upon the preceding ventricular contraction. This is always the case in many tracings that we have.

(*b*) They rise well above Wenckebach's niveau line.

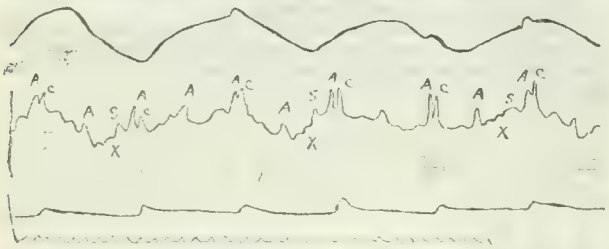
(*c*) They are arrhythmic, and sometimes multiple between successive auricular systoles (see Tracing 6 at x, Fig. 2, Tracing 7A at x x x).

(*d*) They are at places separated from the succeeding auricular wave by the comparatively big time interval of two-fifths of a second, but no auricular systole drops out.

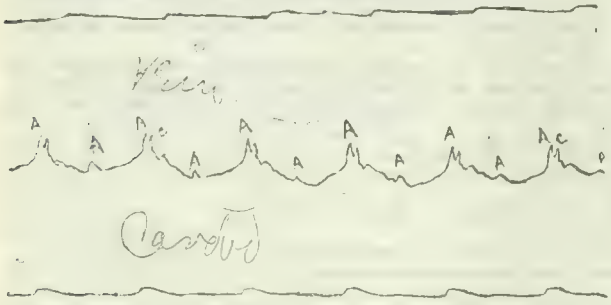
(*e*) In Tracing 7A they can be seen to bear no special relationship to any respiratory phase; in this tracing, at x x x, multiple undulations are evident. In Tracing 7B, taken with the breath held in deep expiration, they are hardly recognizable, and the same occurred with the breath held in deep inspiration.

(*f*) In Tracing 11, at x x, the c elevation is superimposed upon these little s waves.

In the cardiogram (Tracing 6) little depressions catch the eye between the ventricular systoles. Careful inspection, however, reveals at xx a small elevation preceding the depression, and it is this that corresponds to the

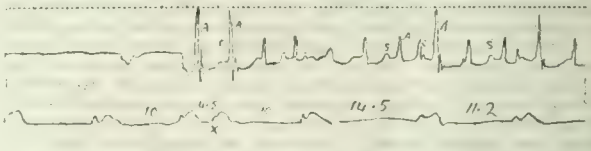


Tracing 7A.—Respiratory curve above, pneumograph over manubrium. Note the occasional little elevations due to the aorta (?) beneath. Vein in the middle, A = auricular, C the carotid waves. Note the s waves, the short A-C interval, the undulations between successive A waves, particularly at x.



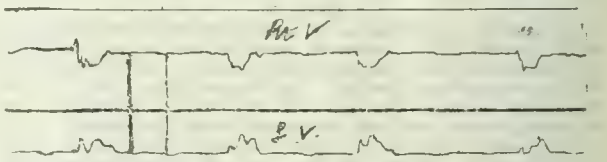
Tracing 7 B is a continuation of 7 A, the breath being held in deep expiration, consequently there is no respiratory curve in the pneumograph, but the waves spoken of in 7 A are more distinct. The so-called s waves have disappeared or become so small as to be unrecognizable.

auricular systole, the depression representing the recession of the chest wall following the real wave. This is better seen in Tracing 8. If the ventricular interspaces be measured, it will be noted that the long silences form an approximate multiple of the shorter ones in their immediate neighbourhood, thus suggesting that the stimulus continues to be rhythmically formed throughout the attacks, but owing to faulty excitability, contractility, or conductivity of the ventricular muscle, no systole results. In Tracing 9 a ventricular extra-systole is present whose period compares exactly with the preceding full ventricular period. If the single ventricular periods be measured in Tracings 6, 7, 8, 9, it will be found that they vary from ten fifths of a second to fourteen and a half. Such a difference is unusually wide, and to maintain the



Tracing No. 9.—Vein and apex beat. Note the ventricular extra-systole at x. Time beat ⅕ of a second.

theory of rhythmical production of stimuli we must assume that in the longer period extra-systoles have dropped out—for example, in the fourteen and a half fifths period an extra-systole of the same period length as the extra-systole period in the tracing. In the tracing of the radial pulse (No. 6) little elevations marked with an upstroke represent the auricular systoles, they presenting the same time relationship as the auricular venous waves. At x in Tracing 8 an auricular extra-systole is to be seen both in the vein and apex curves. In Tracing 10 cardiograms of the right and left heart are



Tracing No. 10.—Tracing from right heart above, from left below. The ventricles contract synchronously, also the auricles.

shown. In that of the left heart little auricular negative waves correspond to the positive elevations in the curve of the right heart. Evidently the receiver was not over the part of the left ventricle which the left auricular systole projected against the chest wall, but in its immediate neighbourhood, hence the depressions instead of the usual elevations. In this compound cardiogram, then, we have evidence of the working of all four chambers of the heart.

With rest in bed and simple food, the patient's condition improved. The block became incomplete with at times a 3–1, at others a 4–1 rhythm. A tracing taken during a slight attack at this time showed ten auricular systoles occurring between two ventricular contractions. Then a regular 3–1 rhythm developed (A–C interval not more than one-fifth of a second). Further improvement led to a 2–1 rhythm, the A–C time being slightly under one-fifth of a second (a reversion to the rhythm existing fifteen months previously). In this condition he left the hospital three months after his admission. Three months later he was readmitted to the surgical side, for an injury to his hip, due to a fall from a ladder during a fainting spell. The block was still incomplete, the rhythm 2–1.

In briefly reviewing these cases clinically we note that in two there was a history of syphilis, in one other the clinical findings raised suspicion, in a fourth case improvement occurred while the patient was taking potassium iodide. In one of the cases, however, which gave a syphilitic history (Case 1) this disease seems to have had

nothing to do with the onset of the condition. All six patients were males.

Three patients were comparatively young. 27, 30, 31 respectively, and two of these died, the third being in the pre-paroxysmal stage and recovering. The other three patients are still alive and are apparently as well as when they first came under our observation. One of these had his first seizure eleven years ago. All came complaining of the attacks. The dizzy spells complained of did not consist of a rotation of the patient, or of objects relative to the patient, but seemed to be of the nature of semi-faints, the patient not quite losing consciousness. One individual, however, stated that he reeled like a drunken man.

One patient frequently experienced an aura, which always, when tested, did precede the attack. A second patient sometimes felt an aura, but only when lying down, and he believed that he could sometimes prevent the attack by opening his mouth and taking a deep breath—a manœuvre which we have known patients exhibiting extra-systoles perform with a similar intent.

We would suggest that these pre-seizure sensations may be due:

1. To extra systoles which, coincidently in some cases, in others perhaps regularly, precede the seizure, the vague description given by some patients of extra-systoles being not unlike the so-called "aurae" in Adams-Stokes's disease.

2. To slight, short seizures preceding more prolonged ones.

3. To the pumping in of blood into comparatively empty blood vessels after an extra-systole has failed to open the aortic valves; this, for instance, causing an additional pulsation in some of the vessels. Unfortunately, we have no tracing of the period of the sensations.

The attacks seemed often to occur in spells, and we have come to regard such clinically as an indication of the temporary breaking down of the ventricular compensation. Such would naturally be more apt to occur in acutely-developing cases, and at periods in the chronic ones when the rhythm changed in an incomplete block, or, when the block became complete, the ventricle, with its commonly diseased musculature, needing time to adjust itself to the new condition of things, and it seems possible that the adoption of certain attitudes or breathing exercises might at certain times aid in a temporary adjustment, and so be the foundation of some patients' belief that they can avert attacks.

It is truly remarkable from what seizures—or, indeed, series of seizures—people can recover and afterwards live a useful life for years. Thus, one of our patients during an attack in which the pulse was absent two and a half minutes exhibited periods of apnœa of fifty seconds each, he being at these times to all appearances dead. Such attacks occurred repeatedly, yet he improved, and has not had a seizure for two years, he in the meantime being able to climb stairs, etc.

In the shorter attacks the veins in the neck can be seen to pulsate, as, indeed, our tracings show. In the longer paroxysms in our patients pulsation could no longer be detected on the swollen veins, nor could any auricular sounds be heard during such long attacks, not even in Case 1, in which they were commonly distinctly audible. Still it would seem that the auricles must continue to contract, otherwise what sustains life in a person so long pulseless and apnœic?

The sounds as heard over the auricles seemed to us as shortened miniature toneless imitation of the normal first and second sounds as commonly heard at the heart apex; in other instances only one sound was audible corresponding to each contraction. The seat of greatest intensity of these sounds varied, being generally in the second and third interspaces, a little out from the sternum on each side, occasionally, however, at the heart apex.

In no case was there any œdema, and, strange to say, the neck veins were never distended except during an attack. In fact, frequently no intercarotid pulsation could be detected in two or three of these patients as long as they lay quiet in bed, and it was necessary to enjoin some muscular exercise in order to demonstrate their existence to onlookers.

Three different modes of behaviour of the pulse immediately following an attack were noted in our cases.

In one patient four beats, four seconds apart, would uniformly occur, then the pulse would become rapid, and the tracing invariably showed the staircase effect; then systoles would drop out occasionally, then more frequently, and finally the pulse-rate became 20 per minute (tracings burnt in the fire). We have regarded this as an instance of a clinical reproduction, immediately following a long rest, of the experimental results obtained by Erlanger.

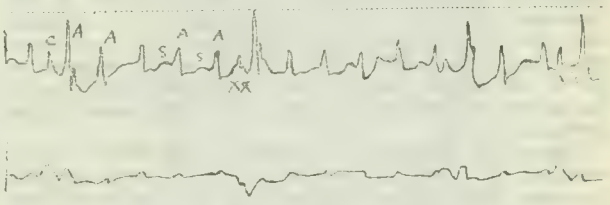
In another patient the pulse was very rapid immediately following a seizure, and then after fifteen seconds it suddenly dropped to its present infrequent rate. In view of Wenckebach's work, it seems probable that such was due to extra-systoles.

In the other cases approximately the same ventricular rate immediately followed as preceded the attacks.

In all the attacks witnessed the pulse ceased before the seizure began, and returned after it had ended.

One patient—a thick-chested man—was examined with the fluoroscope; the result was unsatisfactory, and the information in no way compares in the writers' opinion, with that given by multiple tracings.

Clinically, the hearts of all these patients, with the exception of the individual who developed the disease acutely, and the man who had, apparently for just a week, been in the pre paroxysmal stage, were greatly dilated and hypertrophied. The heart examined *post mortem* (first case) was of normal size, but during life it gave every evidence of dilatation. Quite worthy of note in patient No. 6 was the shifting of the position of the apparent apex independent of movement and respiration. Thus we had to move our receiver between the fifth, sixth, and seventh interspaces at quite short intervals. This is suggested in Tracing 11, where at one period the move-



Tracing No. 11.—Note the combination of the s and c waves at x x, and the cardiogram, in which the second ventricular wave is evidently due to the right ventricle.

ment of the right ventricle is recorded instead of the left We would suggest that this shifting was due to the varying quantity of blood driven into the ventricle by the varying number of interventricular auricular systoles. We have alluded to the palpable double apex beat. At x x in Tracing 8 the M shaped cardiogram shows the instrumental record of this. Tracing 10 demonstrates that it was not due to asynchronous contraction of the right and left ventricles. From this, and the peculiar rolling palpatory sensation, we ascribed the second tap to the rotatory movement of the heart.

In three of our patients the systolic blood pressure was high—170, 200, 210 mm. Hg; the pressure corresponding to the lower part of the greatest oscillation of the mercury column, as judged by the eye, was in each case about 50 mm. less. In these three cases the peripheral arterial walls were thickened. Notwithstanding this high pressure the second aortic sound in two of these cases was muffled, faint, and dull, though no diastolic murmur could at any time anywhere be detected. One of these patients had a distinct capillary pulse. It seemed to us that the arterial capillary area was fed so infrequently, whilst it was being constantly drained, that when the systole happened, the free passage of blood would diminish the recoil upon the semilunar valves, thus accounting for the faintness of the second sound, the same phenomenon being responsible for the capillary pulse.

In five of these patients the systems other than the cardio-vascular were but little affected, the blood in Hb. and cell-content was normal, and in all drugs, with the possible exception of potassium iodide in one case, were without apparent salutary influence. Rest in bed, however, seemed a great factor in their restoration to a useful life.

References.

[1] *The Study of the Pulse.* [2] *American Journal of Medical Sciences*, 1907.
[3] *Practitioner*, May, 1907.

A Lecture
ON
A SPECIFIC TREATMENT OF LEPROSY.

DELIVERED AT THE LONDON SCHOOL OF TROPICAL MEDICINE.

BY PROFESSOR DEYCKE, M.D.,
LATE DIRECTOR OF THE MILITARY SCHOOL OF PRACTICAL MEDICINE, CONSTANTINOPLE.

GENTLEMEN,—I am specially indebted to Sir Patrick Manson, Dr. Daniels, and Professor Sandwith for their courtesy in giving me the opportunity of addressing you regarding my researches in respect of leprosy. Notwithstanding the abundance of the available material, I shall be as concise as possible.

The researches made by me (during nine years in the course of my official work in Turkey), for the most part in collaboration with my assistant, Dr. Reschad Bey, commenced with attempts to grow the lepra bacillus in pure culture.

Despite many interesting facts then observed by us, we did not succeed in growing the lepra bacillus in the form in which it is seen in the leprous tissue; we isolated, however, from several severe cases of nodular leprosy a characteristic micro-organism which on account of its specific characters and habitat we termed *Streptothrix leproides*. The material from which the cultures were made was obtained by throwing back a flap of skin including a non-ulcerated recent leproma, and taking fragments of lepra tissue from the under surface of the leproma; every precaution against outside contamination was, of course, carefully observed. The tissue so obtained was placed in normal salt solution, and incubated at 37° C. for several weeks. The filaments of the streptothrix were now observed growing from the mass in great profusion.

I may here state that I am unable to say with certainty whether there are any, and if so, what, generic relations between this micro-organism and the genuine lepra bacillus; but I can positively assert that it is not a question of an accidental impurity. In order to ascertain whether there were any such relationship with the lepra bacillus, I ventured on one occasion to inject a small quantity of a living culture in a very severe case of leprosy. Irrespective of a slight induration at the place of injection no result was observed; the patient, however, obstinately maintained that the injection had had a beneficial effect on him, and he was not satisfied until I repeated the injections at weekly intervals. Under this extraordinary treatment the patient, whose disease was severe and accompanied by high fever, became completely free from fever, and his extensive leprous symptoms retrogressed so rapidly and in so remarkable a manner that after two months he considered himself to be thoroughly cured and left the hospital. Seeing that similar results were also obtained in other cases of leprosy, we naturally made it our task to discover the curative principle contained in the cultures. Extensive trials demonstrated that substances soluble in water and passing into the culture liquid, and also certain enzyme-like substances, could be excluded; hence it was only the culture mass which remained to be investigated.

We now proceeded by first cultivating large quantities of streptothrix, and by chemically separating them. The division of the chemical constituents of the cultures into albuminoid and lipoid substances was a matter of course. It was soon found that the active principle certainly could not belong to the albuminoid substances, but was contained in the fatty substances, that is, in the ether extract. Upon careful investigation the ether extract turned out to be a complicated mixture of greatly varying substances; and it was only after much trouble and after employing new methods that we succeeded in discovering a chemically well-defined substance which, on the strength of very numerous trials, made on man, could with certainty be regarded as the sole carrier of the active principle. Strange to say, this substance, called "nastin" by us, is a genuine neutral fat, that is, the glycerin-ester of a high-molecular fatty acid. Under the microscope it is seen to be precipitated in beautiful starlike crystals from its solutions. It is strange to say that nastin is a neutral fat, for we are accustomed to look upon genuine neutral fats as chemically very inactive substances. We have, however, proved with certainty that all the by-products of nastin, such as the fatty acids or soaps, have completely lost their specific efficacy.

Now, by giving suitable doses of pure nastin by hypodermic injection, there ensued more or less intense reactive processes in the leprous tissue. These reactions consisted in inflammatory swelling and saturation, in pulplike softening, in true suppuration and necrosis of the leprous formations, to which these processes were exclusively confined, the normal parts of the tissue remaining unaffected.

There existed very great differences regarding the capacity for reaction of individual leprous patients. Whereas some of them responded to nastin injections by very violent reactions of long duration and dangerous to life, a small number apparently proved completely refractory; between these two extremes there were greatly varying grades of "reactivity." In many cases, however, in which changes of the leprous tissue took place, one was able by means of the microscope to observe a classical bacteriolysis of the lepra bacilli; so that in a preparation there is seen at first, besides well-preserved bacilli, the occurrence of granules which, if still containing some fat appear red, if deprived of fat, blue. Later, when the bacteriolysis is at its height, heaps of small red and blue granules only are seen. Still later, when the bacteriolysis is in the decreasing stage, there are only a few isolated minute granules and fragments of bacteria, all the rest being completely dissolved and destroyed. By microscopical examination it is easy to observe that the bacteriolysis is always heralded by the bacilli being deprived of fat—that is, when Ziehl's staining method is employed, by the loss of this specific staining property.

On the basis of these facts I had first deemed the consequence of nastin injections to be the formation of fat-splitting ferments, now attacking and splitting up the nastin-like fat contained in the lepra bacillus, and thus depriving the lepra exciter of its resisting power due to this very fat. Seeing, however, that experiments *in vitro* made by means of lipolytic ferments on tubercle bacilli gave no results at all, we again resorted to trials on man. Starting from the observed fact that nastin reaction always occurred with pronounced participation of leucocytes, I tried to produce artificial leucocytosis in a few patients who otherwise did not react to nastin at all. A good result was obtained by means of intravenous injections of sodium cinnamate (the hetol of commerce), but leucocytosis by itself proved to be quite ineffective. It was only when at the height of leucocytosis a small quantity of nastin was injected that reactions ensued every time, but they were of so energetic and violent a nature that we had to dispense with further trials.

These very remarkable observations induced us to inquire more closely into the chemistry of cinnamic acid and into what happens in the human and animal organism. Cinnamic acid, as well as similar aromatic substances, are excreted in the form of hippuric acid, which, as is well known, is a substance formed synthetically from glycocoll and benzoic acid. In dogs, and probably in other animals, the synthesis does not take place until the kidneys are reached—that is, immediately prior to excretion. Hence, it follows that cinnamic acid is transformed in the tissues into benzoic acid. This, however, is a simple process of oxidation, which can easily be carried out in the laboratory.

Experiments made by me with the final product of oxidation—the benzoic acid—gave no results at all. The idea presented itself, therefore, of contemplating the possibility of there being an intermediary product of oxidation, and such a product, indeed, does exist—namely, benzaldehyde.

At this stage we resumed experiments *in vitro*: previously, for the want of genuine lepra bacilli, they were made with tubercle bacilli. It had been found that it is extremely difficult, or hardly possible, by means of the usual agents for the extraction of fat, such as ether, chloroform, benzine, etc., even after extraction extending over weeks and months, to deprive tubercle bacilli of fat so com-



Fig. (a).



Fig (b)



Fig. (c).



Fig. (d).

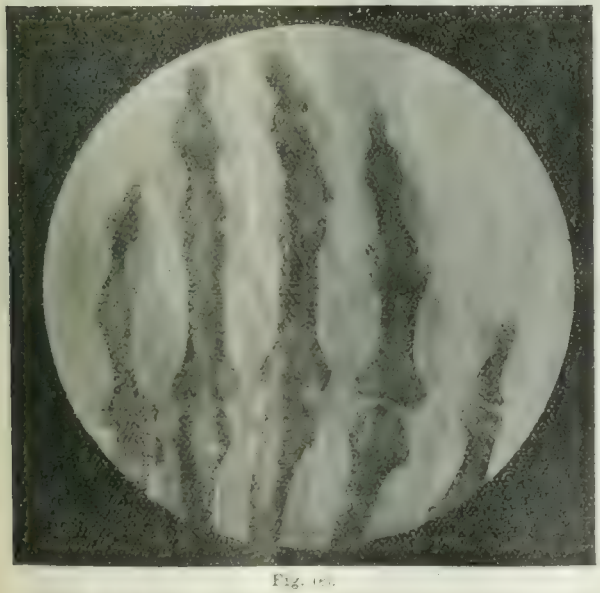


Fig. (e).

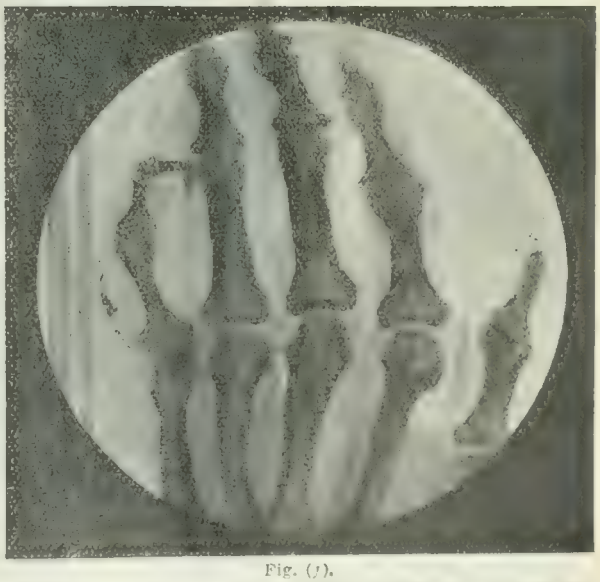


Fig. (f).

Case 1.—Figs. (a) and (b), condition before commencement of treatment. Fig. (c), condition of hands after treatment. Skiagram of hand (d) before, (e) during, and (f) after treatment. Contraction of the last phalanx of the little finger has been produced by a contracting cicatrix).



Fig. (*a*).



Fig (*c*).

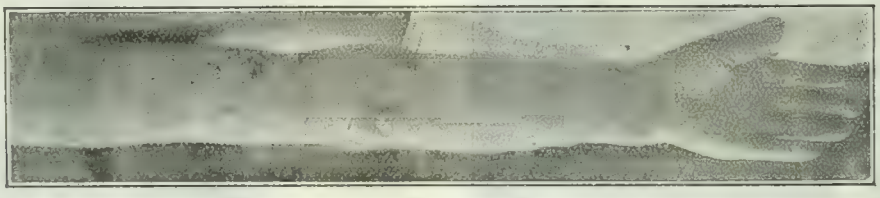


Fig (*b*).



Fig. (*d*).

Case II.—Figs. (*a*) and (*b*), condition at an early stage of treatment, showing disappearance of leproma from left arm Figs. (*c*) and condition after treatment.

pletely that they lose their specific staining property to Ziehl's method. In benzaldehyde we first came across a substance which completely frees (in our sense) the tubercle bacilli from fat. To attain this end, heating, it is true, has to be resorted to. By heating to 100° C, the tubercle bacilli are completely deprived of fat within ten to twelve hours; at a higher temperature within about half an hour. In these circumstances we hoped that, on human beings, benzaldehyde would prove to be the sought-for substance for activating nastin. But it had not this effect.

The activation through benzaldehyde was neither more nor less intense than that produced by cinnamic acid. In face of these facts there was left only one possibility—it must be a question of the benzoyl radical at the very moment of separation. The next well-known substance possessed of the benzoyl radical in a readily separable form is benzoylchloride; and, indeed, it was soon found that benzoylchloride in the cold deprives tubercle bacilli of fat in about twenty minutes, and does so instantaneously and completely after slightly heating.

On the strength of these extensive experiments *in vitro*, and after satisfying myself by trials on animals that benzoylchloride is innocuous, I deemed myself justified in making trials on sufferers from leprosy. Very soon—in fact, immediately—it was seen that by combining nastin with benzoylchloride the former was activated to quite an unexpected extent, but much work was still required in order to ascertain the proper proportion of concentration between nastin and benzoylchloride, for not only the efficacy but also the possible danger of the method greatly depend on this purely quantitative proportion. For my trials on man I employed 2 per cent. benzoyl solutions, to which nastin was added in varying proportion. It now was found that in the event of nastin exceeding a certain amount and being present in excess, very pronounced reactive processes occurred in cases of tuberculous as well as in nerve leprosy. In the case of the latter there occurred particularly curious phenomena, which I will briefly refer to as they are of general interest. The employment of undiluted nastin had already formerly been observed to be frequently followed by apparently fresh symptoms developing in distinct connexion with the injection. With a highly-concentrated benzoyl-nastin solution I was able to produce such symptoms artificially with almost experimental certainty. In most instances it was a question of suddenly-appearing eruptions which reminded one greatly of burns of the second and third degree. Seeing that highly-concentrated benzoyl-nastin solutions give rise to purulent reaction in the case of tuberculous leprosy, I think I may draw the conclusion that the described eruptions are due to an inflammatory, probably leucocytic, reaction within a leprous nerve centre. Such reaction transfers itself in the form of a change in the condition to the as yet preserved nerve filaments leading to the periphery, where it gives rise to the described purely trophic disorders.

I make mention of these observations because I think they throw some light on certain hitherto but little explained symptoms of anaesthetic leprosy. If, however, we use for injections such low-concentrated benzoyl-nastin solutions in which benzoylchloride is present in excess, the reaction phenomena remain completely absent after suitable doses; changes in the leprous tissue become manifest only after a considerable time, but the therapeutic influence is not less favourable, and, withal, absolutely innocuous. Here also special interest attached to the observations made in cases of the purely nerve form. In the case of the same patients in whom by means of the strong solutions I was able to cause the above-described intense reactions the extensive anaesthesia retrogressed with surprising rapidity.

From the photograph it will be seen how severe some of those cases were. In the photographs and radiograms of the hand and foot of a patient of this category it can be seen that severe mutilations already existed. This patient had, moreover, anaesthesia in the arms and legs so deep-reaching that he had burnt his left arm by placing it on a heated stove. After a few injections the anaesthesia had disappeared, and the patient was again able to distinguish clearly between all kinds of sensation—for instance, between pointed and blunt objects, heat and cold, etc.

Having thus succeeded in gradually ascertaining the correct proportion in which to mix nastin and benzoylchloride, and the interesting fact that there is a definite relation in the solubility of nastin in benzoylchloride, the provisional character of the simple nastin-therapy of leprosy at first essayed was at once done away with.

The difference between then and now is so remarkable, and the new combined method is so clearly superior to the former simple nastin treatment, both as regards reliability and constancy of the therapeutic results and the exclusion of the dangers arising from nastin reactions, that I no longer hesitate in highly recommending the treatment in its present form for general therapeutic use in cases of leprosy.

Numerous trials having demonstrated that pure benzoylchloride solutions are quite ineffective specifically, we can only assume that benzoyl is the really active substance which acts direct on the lepra exciter; it requires, however, in order to get at the bacilli at all and not to be wasted in other directions, the guidance, so to say, of the otherwise thoroughly passive nastin, which charges itself in oily solution with benzoylchloride; it is not, however, a chemical union, but rather a state of simple solution; in this way benzoylchloride is protected from being prematurely and uselessly used up. The nastin is carried to the lepra bacilli, to which, owing to its near chemical and physical relation, it attaches itself, and then benzoyl can fully display its antibacterial action in the fat-removing sense. When deprived of fat the lepra bacilli seem to be doomed; the human organism then effects with comparative ease the further dissolution and ultimately the complete destruction of the bacteria nuclei.

The conclusions drawn by me from my experience hitherto are summed up in the short sentence: Benzoyl-nastin is an agent which directly acts on lepra bacilli. This sentence expresses the advantages and the progress affected by our method of treatment of leprosy as compared with other therapeutic endeavours. On the other hand, it clearly points out the limitations of the method.

Let us just imagine for a moment how a chronic infectious disease, such as leprosy, arises. In the first place, there is the specific exciter, without which the disease, of course, is unimaginable; there is besides, however, the human organism, which actively reacts on the invading parasites and which admits of the originating of the real pathological formations, and supplies the anatomical substratum for what we perceive as visible symptoms of disease. It does not, however, always follow that in every case the symptoms disappear upon the destruction of the parasites. The coincidence of these two phenomena depends on many factors which have reference to characteristics and structure, size and resistance, seat and conditions of circulation of the pathological formations. The more transient and delicate these formations are, the more easily they are accessible to the blood and the lymph stream, the better are the prospects of doing away with the symptoms of the disease simultaneously with the exciters.

When entertaining such considerations, one will not wonder at the fact that even in the case of the nastin-therapy of leprosy, notwithstanding its specifically anti-leprous character, there is perceptible occasionally a divergency between the influence exerted on the exciters of the disease and the effect on the morbid products; and I must draw attention to these points in order to forestall conceptions, mistaken in principle, concerning the capabilities of the method.

There are, indeed, leprous nodules, even in comparatively fresh cases, which respond not at all or only slightly to the injections; but there are also leprous formations (besides true forms of exanthema, also more solid, even massy infiltrations, some of them of large extent) which are acted upon and done away with by nastin not less promptly than, say, syphilitic eruptions are by mercury. Between these two extremes there are many graduations. Rapid visible results should not lead to overrating the new method of treatment and its natural limitations, nor should occasional absence of expected changes and retrogressions of leprous symptoms lead to underrating the method. With patience and fairly clever individualizing one will be able—excepting, of course, in the more severe, hopeless cases—generally to effect at least arrest of the leprous process; frequently, however better results will be obtained. Such is my

opinion, formed on the strength of clinical observations and experience extending over a period of more than four years.

In order to give an idea of the therapeutic results obtainable in the case of leprous patients solely by means of the benzoyl-nastin method, a few photographs are reproduced. In Turkey I had under treatment altogether forty patients for at least several months; I was able, however, to observe some patients for a considerably longer period, up to several years.

The photographs of Case I show the conditions in a severe case of nodular leprosy, with the extensive, partly ulcerated leproma of the face, the arms, and the hands; with tumours of the lymphatic glands on both sides of the throat. The patient, who at that time already suffered from extensive leprosy of the tongue, the pharynx, and larynx, and of both the testicles, was a very unruly individual, who after a short stay escaped from the hospital at night. After a few months he returned with immensely aggravated leprosy of the mucous membrane and severe attacks of suffocation owing to leprosy of the larynx, necessitating immediate tracheotomy. In the course of treatment, continued for more than twelve months, the patient got rid of the leprosy of the mucous membrane, the tracheal tube could be removed, and he now speaks in a clear voice.

The skiagrams show multiple osteo-leproma of the hands in this case prior to, during, and after treatment. It can be seen that the parts of the bone previously affected, partly greatly distended, partly even completely destroyed, gradually consolidated and ultimately presented again a normal structure of bone.

The result obtained by the treatment regarding the lepromæ of the skin is shown by the photograph of the hands, where, instead of lepromata and ulcers there are left only flat cicatrices.

The photographs of Case II show nodular leprosy with specially large lepromata. The first photographs—(*a*) and (*b*)—were taken during the treatment, and besides the large fungiform prominent nodules, very flat pigmented cicatrices, the residue of former tubera, may be seen on the left arm. Photographs (*c*) and (*d*) illustrate the therapeutic result in such a manner that no further description is required. The last picture shows the same result obtained by the therapy on the legs of the same patient, where the pigmented cicatrices still approximately show the size of the leproma at that place.

I would add, however, a few remarks regarding tuberculosis, whose exciters are so nearly related to the lepra bacilli.

The neutral fat of tubercle bacilli, which necessitated the employment of special methods for isolating it and which was produced by me a year and a half ago, is chemically and biologically very near to, perhaps even identical with, nastin. This neutral fat, which we will call tuberculo-nastin, acts in the case of sufferers from leprosy in the same way and with the same intensity as nastin does. And vice-versa the ordinary nastin, which is quite inactive as regards healthy men and animals, proves in respect of tuberculous individuals to be an extremely active substance which acts likewise in the sense of fat removal and of the granular decay of the tubercle bacilli, as has recently been recognized as regards the animal organism by Behring, who has seen and verified my cases of leprosy in Constantinople.

But the decisive and essential difference between leprosy and tuberculosis consists in this, that in the case of leprosy one's object is attained in general with the fat-removal and with the dissolution of the bacteria into granules, that is, the organism then is able to dispose of the remaining constituents of the nuclei of the comparatively but slightly toxic lepra bacilli. In the case of tuberculosis, however, it is the very deprivation of fat and the granular decay which renders the extremely poisonous endotoxins of the tubercle bacilli amenable to absorption, and for this reason much harm may be done by incautious injection of nastin. Nevertheless I think and trust, on the strength of numerous cases of the most varying forms of tuberculosis which have come under my treatment hitherto, that nastin—in greatly different concentrations than are used for leprosy, and, it may be, combined with antitoxic treatment—is destined to play a part in the therapy of tuberculosis also.

But observations to be made for many months, perhaps for many years to come, will be needed before I can be in a position to recommend a tuberculosis-therapy which admits of being generally introduced. At the present stage of my studies in this highly controversial province I can but urgently caution against applying nastin in the concentration indicated for use in the treatment of leprosy, when dealing with patients suffering from tuberculosis. Sad experiences would be the result.

It is otherwise as regards leprosy; I am convinced that in leprosy the present benzoyl-nastin therapy is innocuous on the one hand, and hence may conscientiously be recommended for use to medical men; and that, on the other hand, it constitutes a real advance in the treatment of this terrible disease.*

ELECTROLYSIS IN TIC DOULOUREUX AND IN SPINAL SCLEROSIS.

BY DAWSON TURNER, B.A., M.D., F.R.C.P.E., F.R.S.E., M.R.C.P.LOND.,

PHYSICIAN IN CHARGE OF THE ELECTRICAL DEPARTMENT OF THE ROYAL INFIRMARY, EDINBURGH.

I SHOULD like to call the attention of the profession to the valuable results which can be obtained in tic douloureux, spinal sclerosis, and other conditions by ionic medication. The human body is an electrolyte, and electrical currents are only conveyed through it by the migration of ions (electrified particles of matter). A current through the body is a convection current analogous to the convection of heat. There is an actual transfer of material particles, each carrying one or more electrical charges on its back, from one electrode to the other in both directions. By this means drugs can be carried through the unbroken skin into the body, and exactly at the spot where the effect is desired. I will refer here only to the two conditions of tic douloureux and spinal sclerosis. Ionic treatment of tic douloureux has been recommended by Leduc and others. Leduc narrates several successful cases, but no previous reference to the ionic treatment of sclerosis is known to me.

Six cases of tic douloureux have recently been under treatment by me. In each of these great relief or a cure—whether permanent or not it is too early to state—has been obtained.

CASE I.

R. M., aged 58, recommended by Dr. Boyd, had suffered from tic douloureux for five months, the pain was stabbing and worst at night, but never entirely away. The patient was unable to sleep and in and out of bed all night, had difficulty in opening jaw, and was becoming exhausted; many remedies had been tried unavailingly. The first application relieved him for twenty-four hours; the second application three days later had a similar effect; after five applications the patient expressed himself as being greatly benefited, he was able to take food and to sleep, and the attacks had almost ceased.

CASE II.

A. B., recommended by Dr. Ronaldson: tic douloureux had followed herpes; the attacks were severe, keeping the patient awake at night. Four applications sufficed to remove the pain, but the patient suffered from nausea and giddiness afterwards; during the applications she was inclined to sleep. Each séance was followed by freedom from pain.

CASE III.

A patient of Mr. Cotterill, aged 73; she had suffered from tic douloureux for nine years. The first application gave her, in her own words, the first good night she had had without an opiate for weeks. Three or four séances greatly relieved her, but when the treatment was intermitted the pain had a tendency to recur; a renewal of the applications always led to improvement, and after a dozen applications she returned home greatly benefited.

CASE IV.

A patient, aged 34, recommended by Dr. Frost, complained of shooting pains in the side of the face and back of the neck. In this case the current was passed from the one affected area to the other by means of large electrodes placed over these areas. The result was satisfactory; when the patient returned some days afterwards, she said that she had had scarcely any pain since the treatment.

* The benzoyl-nastin solution is put up in ampoules containing each from 0.0005 to 0.002 nastin in sterilized olive oil. One such dose is injected hypodermically once a week. No reaction is observed with the smaller doses, but with the larger reaction occasionally takes place. It is not desirable to induce a marked reaction. In favourable cases, after some weeks or months the lesions gradually disappear. Kalle and Co., Biebrich am Rhein, have undertaken to prepare the material in a form ready for use.

In treating cases of tic douloureux by this method when strong currents may be passing through the brain, it is very important to avoid all abrupt changes in the current strength, or giddiness, faintness, or other serious symptoms may follow. Burns will also be produced if the current density be allowed to become too great. Beneath each electrode several layers of unmedicated lint soaked in the solution it is desired to use should be placed.

In all these cases the treatment was the same; the salicylic ion (or the quinine ion) was introduced into the cellular tissue beneath the skin by a strong constant current.

In the hitherto incurable and hopeless cases of spinal sclerosis something can now be attempted, not to directly regenerate destroyed nerve tissue, though indirectly some such effect may possibly be produced, but to loosen and remove the fibrous tissue which may be pressing upon and interfering with the function of the nerve strands and cells. Two cases of lateral sclerosis and one of disseminated sclerosis have been treated electrolytically by me.

Case V.

The patient, aged 34, had been ill for more than a year; he presented all the signs and symptoms of spastic paralysis; he was unable to walk alone, and suffered from urinary incontinence. Six applications sufficed to remove these symptoms, and, under a continuance of the treatment, he was soon able to walk quite well by himself. After reaching this stage of improvement the applications were discontinued, and the patient was advised to remain quietly at home. Unfortunately, he returned to his work, and when he was seen again some months later his condition was aggravated. A repetition of the former applications now failed to relieve him; but when much stronger currents were employed satisfactory results followed. The patient steadily improved, and was soon brought back to his former level.

Case VI.

A patient, aged 25, of Dr. G. Gibson. Improvement began at once: immediately after the application the patient could move his limbs more freely. He was given three applications a week, and manifested improvement after each one; this was sometimes more marked on the day following the treatment. He has now had twelve applications, and his legs are stronger and he can walk better.

Case VII.

Also one of Dr. Gibson's. The patient, aged 29, has been ill for five years with disseminated sclerosis, the left leg being chiefly affected; this patient has had three applications similar to those in the previous cases, but without any observable improvement; another ion will, therefore, now be introduced—the iodide ion instead of the chloride ion.*

That the chloride ion has a remarkable power of resolving fibrous adhesions has been shown by Leduc and tested by me in many surgical cases, and it was this fact which led me to try it in sclerosis. I would suggest that overgrowths of fibrous tissue in other organs—for example, the liver and kidneys—should be similarly attacked. Naturally the more superficial the organ the better hope of success. Strong currents and long séances and the individual attention of a qualified specialist are in my opinion the key to successful results. Surely we may rejoice at the addition of this new powerful but most manageable weapon to our armamentarium.

* This patient has now begun to show improvement.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

TOXIC EFFECTS OF PETROL FUMES.

In connexion with the notes which have lately appeared in your columns the following cases of "petrol poisoning" may be of interest:

A young fellow in charge of a 40-h.p. Daimler car returned with the car to a private garage accompanied by another chauffeur. Having taken the car in, they completely closed the garage by pulling down the roller shutters with which it was provided. There was no other opening to the air with the exception of a staircase to the upper story. The time was about 4 p.m. They then proceeded to manœuvre the car about the garage. For this purpose the engine was kept running, and they noticed a strong smell and black smoke from the exhaust. The younger one stated that a lot of petrol (Carless spirit) was running through the engine. At 4.30, experiencing a sense of vertigo and constriction of the head, "worse than headache," but no nausea, they went upstairs to get some tea. About this time people outside the garage heard considerable shouting and commotion from within, and remarked upon it. At 5.45, on the return of another car, the garage was unlocked, and the two young fellows were found insensible upstairs. One was in the lavatory, which had to be forced open; the other lay near the door of the kitchen. They must have lain insensible for over an hour. The windows upstairs were open. They were immediately carried down into the open and soused with water. I saw them about fifteen minutes later. Both were then in a completely dazed condition, with medium-sized, active pupils. They were unable to stand. One was pale, shivering, and drumming his feet on the floor. He did not appreciate what was said to him, resented interference, and struck out when addressed. The other was deeply flushed and slightly cyanosed. He was more sensible, but when moved he struck out at the door, injuring his knuckles. The pulse in each case was small and rather fast. There had been no vomiting, and the fact that one was found in the lavatory was due to his having taken a pill previously. They were again carried upstairs and laid on settles near the fire. The windows were widely opened. Although warmly wrapped up, they continued to shiver acutely for some time. The shivering had the appearance of clonic spasm, and was particularly marked in the case of the pale patient; the feet in his case and the hands in the other were constantly beating against the floor. The flushed and younger of the two recovered rapidly, the pale one more slowly. By the next day they were both all right, but had only an imperfect recollection of what had happened subsequently to their leaving the garage proper and going upstairs. The treatment adopted was free ventilation and the administration of hot strong tea, which was handy. The kindness of a bystander had already supplied a glass of spirits.

It was a fortunate thing that, on the first feeling of illness, they left the closed garage and went to a higher level where windows were open.

London, W. Charles R. Box, M.D., F.R.C.P.

RIGOR MORTIS IN THE STILLBORN.

Since reading the annotation in the British Medical Journal of October 5th, 1907, on a case of rigor mortis in a stillborn infant, I have been on the look-out for this condition, and a few days ago my patience was rewarded by seeing a child born in a typical state of *post mortem* rigidity. The mother was a multipara, and was in full labour when I saw her. As her pains did not seem to be doing much good, I was just thinking of applying the forceps when the patient exclaimed the head was in the birth. On raising the bedclothes, I saw the head bulging the perineum in such a way as made me think at once that the presentation was an occipito-posterior one.

The head showed no signs of undergoing the movement of extension, and it was only when I pressed it strongly forward that the vertex appeared at the vulval outlet. When it was born I was surprised to see an occipito-anterior instead of a posterior presentation, as I had anticipated. The child was dead, and *post-mortem* rigidity was very marked; indeed, its condition was exactly that described so clearly by Mr. Parkinson in the issue of the Journal for February 8th, that I cannot do better than quote his words: "The head was drawn forwards and the back somewhat rounded. The arms were flexed on the elbows and bent on the chest; the thighs were drawn up and flexed towards the belly, and the legs were flexed at the knees."

The position of the head—namely, drawn strongly forward—accounted for the lack of extension and simulation of an occipito-posterior presentation by undue bulging of the lower part of the perineum.

The woman stated that she had not felt fetal movements for a fortnight, but in this she is probably incorrect, as the child would have shown signs of maceration at birth had it been dead so long.

This is the first case of rigor mortis in the stillborn which I have observed, but now that my attention has been drawn to the subject I mean to keep a keen look-out for it in the future.

South Shields. John Bain.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

YORKSHIRE BRANCH.

Leeds, Wednesday, March 18th, 1908.

Dr. TURNER, President elect, in the Chair.

Cases.—Dr. CHURTON showed: (1) A case of (probable) superficial gumma of the pons in a man aged 42; typical drunken gait; nerve deafness in right ear; slight eye clonus on looking to right; history of tinnitus in right ear, but anaesthesia of left chin (when cut by razor no pain) and left side of tongue, with accumulation of food in left cheek during mastication. Much improvement by mercury (hyd. cum cretâ grain ij night and morning). (2) A boy, congenitally syphilitic with cerebellar symptoms. (3) A case of right subphrenic abscess in a man, aged 34, who had had dysentery in South Africa in 1901. A case of left subphrenic abscess which had recently occurred, and was due to perforation of a duodenal ulcer, was also described.

The Relationship and Interchangeability of Pancreatitis and Parotitis.—Dr. GORDON SHARP (Leeds) read a paper on this subject, basing his remarks on a long-continued, severe, and widespread epidemic affecting patients aged from 17 months to 35 years. The temperature was never higher than 101° F. or 102.5° F., and the pulse-rate was generally comparatively slow. In one family of three, of whom all were attacked, a girl aged 10 suffered from vulvitis eight weeks after the original affection of the parotid, and three days later than this the pancreatic gland became affected. The enlarged gland could be distinctly felt after the tenderness had passed away. In all cases where pancreatitis resulted the pain and swelling were always referred to the same parts—namely, the left hypochondrium and the epigastrium. The girl ultimately got well. The boy of this family, aged 12, developed orchitis six weeks after the original affection of the parotid, but did not suffer from pancreatitis. In another family a girl aged 13 began with a severe parotitis, which cleared up and showed no farther sequel. A brother ten days later began with pancreatitis and passed blood and fat in the stools. This was examined by Dr. Allan Wilson, who diagnosed the condition as acute pancreatitis. The boy never showed signs of parotitis. Was this, then, asked the writer, acute pancreatitis due to the same causal agent as ordinary mumps? A boy of 12 who was exposed to the infection had great pain in the parts of the abdomen above named, with vomiting of great quantities of blood, although after the acute symptoms had passed away no tumour could be felt. This was thought to be another case of acute pancreatitis without the usual affection of the parotid. This patient, like the former patient, recovered. Another case was interesting from the fact that the pancreatitis preceded the parotitis; a girl of 5 had great pain and some swelling in the left hypochondrium and epigastrium, so severe as to keep her awake for two nights. At the end of forty-eight hours after having been first seen she showed signs of a typical case of mumps. When the abdominal tenderness had passed away the writer was able to feel a distinctly large and somewhat tender pancreas. The child was convalescent in ten days. The writer wished specially to emphasize two points—namely: (1) That pancreatitis might precede the parotitis in one and the same patient; (2) that one patient in a household or in an infected area might show parotitis, while another patient might only have pancreatitis, but both due to one and the same causal agent. In conclusion, Dr. Sharp said that in children he treated mumps by giving 5 grains each of sodium salicylate and bicarbonate well diluted with water or aërated water every four hours while acute symptoms lasted. He gave plenty of cold water or aërated water and no food, unless the child asked for it. When pain in the abdomen developed he gave 3 minims of tincture of opium diluted to half a teaspoonful with glycerine and water every hour as long as necessary.

The Treatment of Epilepsy.—Dr. EURICH gave a synopsis of his results of treating epilepsy by the sodium bromide-substitution method. This consists in forbidding all addition of table salt to the various articles of food, and substituting for it bromide of sodium. Salt must be washed out of butter; sodium-bromide must be put into bread in place of salt, etc. No change was made in the diet table, save that meat was permitted only once a day, and tea and coffee and alcohol were forbidden. The results obtained were: Disappearance of the fits in 60 per cent. of the cases; marked improvement in 25 per cent. of the cases; failure, or only moderate improvement, in 15 per cent. Patients do not object to the method, as they do to the original dietary of Toulouse and Richet. The treatment can, of course, be easily carried out in the patient's home, and in only a few cases did the patient and his friends not care to take the necessary trouble. The patient in this way takes about 2 grams of sodium chloride in his food, and this quantity seems to suffice for all wants; no unpleasant effects were noted. The amount of sodium bromide taken in this way is about 30 grains a day; in many cases it is necessary to prescribe a little KB_2—say 5 to 10 grains t.d.s. No marked signs of bromism were noted in any of the cases (100). The mental state, in particular, was unaffected by the drug. Cheapness is another advantage. Attacks of *petit mal* are especially beneficially influenced, after they had been treated ineffectually by the ordinary potassium bromide medication. Even inveterate cases have yielded to this method. The longest period of observation was two years.

Electro-Therapeutics in Some Skin Diseases.—Dr. METCALFE (Bradford) read a paper on this subject. Attention was drawn to the value of Roentgen ray and Finsen light applications in the treatment of lupus. Exception was taken to the opinion held by some workers that the use of *x* rays was a certain cure for lupus. Some cases were only amenable to treatment by an effective arc lamp like that named the Finsen-Reyn. Cases of rodent ulcer had been almost invariably successfully treated by *x*-ray applications. Broken-down glandular affections involving the skin of the face and neck were greatly benefited by the use of prolonged Finsen applications: the discharging sinuses dried up, the indurated cicatrices were greatly reduced, and the cosmetic effects were excellent. Some long-standing enlarged glands in the neck had been cured by *x* ray applications. Special attention was directed to the value of *x*-ray applications in the treatment of eczema—especially in the most obstinate, chronic, and recurring types—a few short exposures relieving the pruritus and curing the inflamed areas. The value of Roentgen applications in psoriasis—especially in intractable types like that of psoriasis vulgaris unguium—was discussed. The value of *x* rays in cases of small port-wine naevi, some cases of hypertrichosis, in tinea tonsurans, sycosis, favus, and verrucae, was considered. It was pointed out that *x* rays have the curious power of producing a fatty degeneration and subsequent destruction of tissue cells of low resistance and simultaneous stimulation of the normal cell elements present. They are not bactericidal. The active effect of an arc lamp was, however, undoubtedly bactericidal. Attention was drawn to the assistance obtained in treating some cases of lupus by raising the opsonic index to normal. Methods of treating rodent ulcer and some other skin diseases by the ions of metals was also considered. In conclusion, Dr. Metcalfe asked that in cases which had resisted all the ordinary methods of treatment it should be remembered that it might be possible to obtain satisfactory results by the use of some of the modern electro-therapeutic remedies. The paper was discussed by the CHAIRMAN, Drs. BLACK, BRONNER, and EWING, and Dr. METCALFE replied.

OXFORD AND READING BRANCH: OXFORD DIVISION.

Friday, March 20th, 1908.

Dr. R. E. YELF in the Chair.

Urethral Calculus.—Dr. YELF (Chairman) recorded a case of calculus impacted in the urethra and removed by external urethrotomy. The calculus (phosphatic), measuring nearly 1 in. in length and ½ in. in its broadest diameter, was exhibited, together with several smaller ones which were passed subsequently per urethram.

Puerperal Tetanus.—Dr. MORTON read notes of a case of puerperal tetanus coming on in a primipara, aged 32, sixteen days after labour. The early symptoms were sore throat, trismus, with the "facies Hippocratica," and

orthotonos. The patient was kept under the influence of chloral, bromide, and belladonna, and finally morphine was injected to relieve the tetanic spasms. A feature of the case was the loosening of the upper teeth, two of which were shed. After a fortnight the rigidity diminished, and the patient recovered. The highest temperature recorded was 103·5° F.; there was no cessation of the lochia, which were somewhat offensive, necessitating the use of vaginal douches. No other septic symptoms were present. No antitetanic serum was used. In the discussion which followed, Dr. Collier referred to the failure of the serum in acute cases, while in the more chronic cases it seemed to mitigate the attacks. Dr. T. W. Eden spoke on the case, and said that tetanus was the rarest form of puerperal infection. He raised the question as to whether the infection could have been introduced by some other route than the vagina.

Removal of Necrosed Lung.—Mr. Whitelocke showed a remarkable case in a young man, where the left upper lobe of the lung had been removed, partly by a process of sphacelation and necrosis and partly by resection; he now presented a large cavity in the upper part of the thorax, lined by cicatrized pleura, at one portion of which the heart within the pericardium was plainly to be seen pulsating. This cavity practically occupied the position of the upper lobe of the left lung. The patient had suffered from empyema in October, 1905, for which portions of two ribs were resected. Further resections were performed in the spring of the following year, portions of gangrenous lung being removed at the same time. After some months of open-air treatment a further operation was necessary, at which some more rib and necrosed lung tissue were removed. This resulted in the present condition.

Removal of Internal Semilunar Cartilage.—Mr. Whitelocke also showed some specimens of internal semilunar cartilage removed from knee-joints. He demonstrated the anatomical attachments of the semilunar cartilages, showing the greater liability of the internal cartilage to displacement, and explaining the mechanism of the accident.

The Third Stage of Labour.—Dr. T. Watts Eden, of Charing Cross Hospital, was then introduced by the Chairman, and opened a discussion on the management of the third stage of labour. The placenta was detached by a process of contraction and retraction of the uterus, assisted by the formation of a retroplacental clot. The contractions were intermittent, and expulsion was carried out by voluntary muscular effort, together with some slight assistance from the hand of the attendant. The placenta sank into the cervix and vagina, still attached by the membranes, and time was required for them to separate. The process of detachment could be followed by observing the following abdominal signs—namely: (1) Immediately after birth of the child the fundus uteri rose commonly to 1 in. above the level of the umbilicus; (2) then the uterus became smaller, harder, and globular; finally it formed a doughy swelling above the pubes, this denoted that the placenta lay in the cervix. In the management of this stage of labour the main principle was to leave the separation of the placenta to Nature, and then to assist expulsion without delay. The uterus should be watched at this stage; if no contraction took place, the uterus could be gently rubbed from time to time, but the time required for detachment might vary from five minutes to one hour. When the above-mentioned abdominal signs had been noticed, the placenta could be expelled by voluntary efforts of the patient or gentle downward and backward manual pressure. Failing this, more time should be allowed, as the membranes were probably not completely detached. After expulsion of the placenta, gentle kneading of the uterus should be practised; this emptied the uterus of blood clot, prevented bleeding, lessened after-pains, and reduced the risk of sapraemia. Dr. Eden finally dealt with the treatment of haemorrhage, due to partial separation of the placenta, which admitted of no delay in its removal; and also the treatment of non-detachment of the placenta, with no haemorrhage. He referred to two methods of artificial separation: (1) The Credé method, forcible manual compression, first without and then with an anaesthetic; (2) detachment by the hand within the uterus. The risks of this method were pointed out, and statistics were quoted from Queen Charlotte's Hospital which proved that the fever-rate—that is, a temperature over 100° F.—was doubled in such cases. This was due to the liability of the fingers to deposit organisms, or to the difficulty of disinfecting the skin of the hands and vulva of the patient. In answering various questions which were put in the discussion which followed, Dr. Eden advised that portions of membrane should be left *in utero* rather than removed by hand, except in those cases where the whole chorion was detached. He further recommended the use of chloroform in all cases where the placenta had to be removed by hand. The meeting concluded with a hearty vote of thanks to Dr. Eden.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

J. Kingston Fowler, M.D., F.R.C.P., President, in the Chair.

Monday, March 23rd, 1908.

Acute Anterior Poliomyelitis.

Dr. J. S. Risien Russell, in opening a discussion on the prognosis and treatment of acute anterior poliomyelitis, said that cases of Landry's paralysis and acute toxic polyneuritis must be carefully excluded before a true estimate of the prognosis in poliomyelitis could be obtained. The former was much more fatal than poliomyelitis, while recovery from toxic polyneuritis was much more perfect than usually obtained in poliomyelitis. Occasionally, perhaps, some cases of poliomyelitis died in the acute stage and without the disease being recognized, but nevertheless it was not to be regarded as one of the fatal diseases. In any individual case, however, no opinion could safely be given until there was evidence that there had been no extension of the paralysis for at least twenty-four hours. Some return of power in the paralysed parts was to be expected even in the most severe cases that lived, but the residual defect was most disappointing in a large proportion of cases, although there were notable exceptions to this rule. The more rapidly power returned the better the eventual outlook. Muscles which still responded to faradism after three weeks might be expected to make a good recovery. It did not follow that because a muscle did not respond to the interrupted current after this period it was incapable of some recovery, but full recovery could never be expected. Cases were sometimes seen in which poliomyelitis was probably responsible for a uniform want of development of a limb in which, nevertheless, no one muscle was paralysed or specially atrophied, and by which all normal movements could be performed. Such a case, as also those of acute poliomyelitis, might be followed by a progressive muscular atrophy later in life, but this was a rare sequel. Beyond keeping the patient at rest in bed, with the skin and bowels freely acting, the less active treatment the better in the acute stage of the affection. Pain must, however, be relieved, and if local applications failed morphine might be required. In the case of a child it was much more important to keep the patient quiet than to risk the disturbance caused by the attempt to counter-irritate the spine or secure the prone position. Provided there was no fever, and provided pain did not prevent it, massage should be commenced in ten days to a fortnight, and should be combined with passive movements to which resisted movements should be added in due course, voluntary movements, however small the capacity for them, being encouraged. In spite of some statements to the contrary, treatment by a skilled masseuse was far superior to any rubbing that a child's mother or a nurse could be taught to give it. Galvanism was likewise a most useful therapeutic agent. Drugs played an altogether unimportant part in the treatment of the disease beyond any general effect on the system that might be desired, although it was the rule to give strychnine in the hope that it might have a more direct influence on the course of the malady. Medical measures should be fully tried before recourse was had to surgery. Nevertheless, physicians should not be too conservative, but should avail themselves of the assistance of the surgeon at the proper time, for in a large proportion of cases there was much that he could do to supplement the medical treatment of the case. Heavy and cumber-

'ments for the prevention of deformities 'olde', but all suitable means to prevent ...s should be adopted in order that physicians ...ld not lay themselves open to a charge that they had allowed to occur what a surgeon would have prevented. Dr. C. E. BEEVOR, having described a case of the disease in an adult, observed that the prognosis in them was bad, for the cases were severe. Mr. A. H. TUBBY, in discussing nerve-grafting, pointed out the necessity for researches which would reveal where in the large nerve trunks the fibres for the different muscles were situated. He looked forward to the future of nerve-grafting with great hope. Dr. L. GUTHRIE held that if electrical reactions were found to be absent, it did not follow that they would not return. It was also possible to discover all that was necessary for diagnosis without the use of the electrical reactions. Dr. BATTEN said that treatment by galvanism had been strongly advocated, but his experience did not agree with it. Mr. ROBERT JONES agreed with what Mr. Tubby had said, and Dr. FARQUHAR BUZZARD observed that more statistical knowledge was wanted of the incidence of the disease, and that the prophylactic measures should be studied. Dr. POYNTON remarked that in cases in which a limb was generally wasted such limb, although small, often proved extremely useful. The CHAIRMAN said that it was most important to find some means of treating the disease itself. He agreed that treatment by massage should be by a skilled person, and observed that general hospitals should have separate departments where massage could be taught.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

E. H. TWEEDY, F.R.C.P.I., President, in the Chair.

Friday, March 13th, 1908.

TUBERCULOUS SALPINGITIS.

DR. R. D. PUREFOY having read a paper on tuberculous salpingitis, Sir A. V. MACAN said there was a great difficulty as to the origin of primary tubercle of the tubes. If it did not ascend or descend they could only suppose that it filtered out from the blood. Sterility was one of its earliest effects, but he was not sure whether it would be much use to leave a small portion of the tube in such cases. He had at one time held the view that if they could not see their way to extirpate completely such affection of the tubes they had better leave them alone, but he now thought they ought to remove as much as was possible, and trust to general strength to get rid of what was left behind. Professor ALFRED SMITH said it was of little use to leave even a small portion of a Fallopian tube behind; it became so thickened that the lumen was practically useless, and seemed to serve as a fresh focus of disease. But when the tubes were removed it did not follow that the uterus should be removed also. If it was curetted it would probably be found to contain no tuberculous disease. While, however, no necessity might arise for the removal of the uterus in tuberculous salpingitis, it might be good practice to remove it in staphylococcic or streptococcic infection. He was of opinion that it was not necessary to leave in a tube or gauze drain; by leaving these they courted a tendency to hernia in the track left by the drainage tube. Dr. SPENCER SHEILL said he had under his care a case of suspected tuberculous salpingitis in which intermittent diarrhoea was a marked symptom, and without, so far as he knew, any disease of the intestines. Dr. JELLETT said that the "ascending mucous currents" pointed out by Bond of Leicester suggested one mode of origin of primary tubal tuberculosis. The infection had to pass through the uterus, the periodical sweep out of which probably prevented it from taking root there. He was strongly against the wholesale removal of the uterus and ovaries in these cases. Dr. HOLMES said he had lately seen several cases where tubercle was suspected. The Calmette reaction was tried, and three out of four reacted, and evidently the condition was very early. The PRESIDENT said it was rare for tuberculous tubes to be diagnosed until the abdomen was opened, and they were not always recognized even then. As a drain he preferred a wick of iodoform gauze passed through the abdomen rather than through the vagina. He drained more with the hope of exciting a localized peritonitis than getting septic matter away. The cause being walled off would prevent the infected area spreading, and they had an outlet for any infected matter. He did not think there was anything in the fear of a hernia forming. His experience as regards leaving the ovaries and tubes was not at all that of Professor Smith's. As Dr. Jellett had pointed out, it was very rare to see tuberculous tubes affecting the uterus; but they sometimes saw, just at the cornua, an isolated tubercle which they could cut out, and leave a healthy tube behind. If, however, the tubes were removed, he did not see the use of the uterus, if for no other reason than that women were more subject to cancer than men, and that the uterus was the organ most prone to that disease. Dr. PUREFOY, in reply, said he agreed as to the wisdom of avoiding drainage, except for some good reason, such as he thought he had in the case before them. He was also in accord with regard to the retention of the ovaries where possible. It was quite possible that diarrhoea was a sign of tuberculosis, but he had not had the condition under observation.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

AT a meeting of this Section held on March 24th, with Dr. S. J. GEE, President, in the chair, Mr. S. G. SHATTOCK and Mr. L. S. DUDGEON read a paper describing their observations on phagocytosis carried out by means of melanin, more particularly with reference to the part taken by the leucocytes in infective diseases. When melanin in salt solution was mixed with immune blood, the phagocytosis might be below normal, or normal, or considerably higher. Melanin was opsonized, for an immune serum could be largely *de*opsonized by saturation with melanin. This could only result from opsonization of the melanin. Conversely, saturation of a tuberculous serum with tubercle bacilli largely reduced the phagocytosis of melanin. This, they held, showed that the chief increase of opsonin was not of a specific kind. The phagocytosis of melanin, moreover, was diminished after heating the immune serum. In this the authors' observations accorded with those of R. Muir and W. B. M. Martin, which proved that thermolabile opsonin (in normal blood) was non-specific, since it could be removed by very different micro organisms. The leucocytes of immune blood were in some cases more active than those of normal blood. An increased phagocytosis of melanin occurred in some cases, if melanin were presented to the "washed" leucocytes of an immune blood in normal serum, as compared with washed normal leucocytes in normal serum; or, if melanin were presented to "washed" immune leucocytes in immune serum, and to "washed" normal cells in immune serum, the ingestion by the patient's cells was, in many cases, greater than that by normal cells. Hence the opsonic value of the patient's serum alone did not give a complete estimate of haemophagocytic resistance; it might be too high or too low, or as a coincidence might exactly represent it. A haemophagocytic estimate was considerably simpler and more rapid than the estimation of the opsonic value of the serum alone, which entailed washing normal cells and collecting blood in order to obtain both normal serum and the serum of the patient. It was merely necessary to draw up one volume of the patient's blood and one volume of a citrated salt suspension of the micro-organism to be used, into the capillary tube, to mix, incubate for twenty minutes, spread the film, and compare the phagocytosis with that of one volume of normal blood similarly treated—a slight modification of the technique practised by Leishman. The only thing that would vitiate the estimate obtained by taking the haemophagocytic as distinguished from the opsonic index would be evidence of an additional formation of opsonin *in vitro*, during the twenty minutes in which the capillary tube containing the immune serum, the immune cells and the melanin, or bacteria, was being incubated. This possibility the authors excluded by the following experiment: One volume of washed immune cells was thoroughly mixed with one volume of immune serum, using larger volumes than usual. The mixture was then drawn up into three capillary tubes of the usual calibre, and incubated for twenty minutes, thirty minutes, and one hour. At the end of these intervals an equal volume of citrated salt suspension of living colon bacilli was added to the contents of each capillary tube, mixed, and each tube then incubated for twenty minutes. By this means

a full supply of active immune cells was allowed to act in immune serum for different periods. The phagocytosis was then tested in each case after the same time allowance—namely, twenty minutes. The phagocytosis was the same in all. Thus it might be held that the haemophagocytic index, whether higher or lower than the opsonic, represented more accurately the blood resistance; if higher, this was not due to an additional formation of opsonin in the drawn blood, and for this reason fallacious, but to greater activity on the part of the immune cells.

Obstetrical and Gynaecological Section.

Myomectomy during Pregnancy.

At a meeting on March 12th, Dr. Herbert Spencer (President) in the chair, Drs. Walter Swayne and J. H. Dauber having described some cases in which myomectomy had been performed during pregnancy, Dr. Spencer said that, while not criticizing the three cases reported, in which the operations were done for definite and serious indications, he felt bound to express his strong opinion that operations in the case of fibroids complicating pregnancy were rarely called for, and that myomectomy, which was occasionally urgently demanded in the case of very large, or impacted, or rotated tumours, was, in relation to the frequent occurrence of this complication of pregnancy, very rarely required, and, as the cases exhibited that night showed, was attended by considerable risk. When practicable, the operation should be postponed till the child was viable. Dr. F. H. Champneys entirely endorsed the remarks made by the President. Dr. Amand Routh thought Dr. Swayne's statistics, tending to show that fibroids were so serious a complication of pregnancy that operations were frequently justifiable, were out of date. He had collected statistics (British Medical Journal, October 3rd, 1903) showing that the maternal mortality of such cases under modern methods was only slightly in excess of the normal, and that the danger to life was not so much due to risks during labour, but to sepsis afterwards, for if the endometrium became infected, a submucous or intramural fibroid almost always became infected also. Abortion did not more often occur where fibroids were present, though labour often ensued a few weeks before full time. No operation should be performed till fetal viability, unless absolutely essential, so as to save the two lives involved. He had only twice had to perform Caesarean hysterectomy at or near full term, and never at an earlier date, though he had seen many cases of fibroids blocking the pelvis in the early months. The fibroids in such cases almost invariably underwent flattening and softening (*assouplissement*), and were gradually or suddenly displaced out of the pelvis, sometimes as late as the onset of labour itself, and labour spontaneously occurred without assistance. Dr. T. W. Eden agreed with the previous speakers as to the rarity with which serious complications occurred when women with fibroids became pregnant, and deprecated the view sometimes advanced that pregnant women with fibroids necessarily went in peril of their lives. Dr. Arthur Giles said that speaking in generalities would lead to confusion and inaccuracy. To say that the complication of fibroids and pregnancy was generally unimportant was as much beside the mark as to say that it was generally dangerous. The existence of fundal fibroids might make no difference to pregnancy or labour, but cervical fibroids impacted in the pelvis were in a totally different category. He alluded to a case in which he had removed a fibroid from the left broad ligament in a woman four and a half months pregnant. He experienced great difficulty in stopping the bleeding, and, though he succeeded at the time, it recurred later, necessitating the removal of the uterus, as in Dr. Dauber's case.

Dermatological Section.

At a meeting on March 19th, Dr. H. Radcliffe Crocker in the chair, the following were among the exhibits: Dr. H. G. Adamson: A case of *Tinea circinata* in a child; its source, he believed, was probably a horse, the father of the patient being a harness repairer. Dr. Beddoes (for Dr. P. S. Abraham): A case of *Favus in a mouse*; it had been caught by a woman whose husband had trichophytic sycosis, in which large-spored mycelium had been demonstrated. Dr. Abraham regarded the association of favus with ringworm in this case as fortuitous. Dr. G. W. Dawson: A case of "ringed eruption" of the left hand and fingers, of the type of *Lichen annularis*, in a lad aged 18, who asseverated that he had had the condition for seven years. Dr. Crocker considered that it was probably an instance of lichen planus; Dr. Galloway thought it was rather like what he had called "lichen annularis." Dr. T. Colcott Fox: A case of *Bilateral telangiectases* of the trunk in a woman who gave a history of marked epistaxis in childhood and of recent rectal haemorrhage. There was no family history of similar conditions, and this differentiated the case from a group in which the same symptoms had been associated with family inheritance. A section of one of the telangiectases showed dilatation of capillaries without other changes. Dr. Wilfrid Fox: A case of *Dermatitis artefacta* in a young girl, the lesions consisting of sharply-demarcated rounded patches on the chest and left side. The agency of production was not demonstrated. Dr. James Galloway: A case of an acute *Scarlatiniform eruption*, which had apparently resulted from the administration of quinine. The eruption had commenced to show itself within two hours of taking a dose of 1 grain of quinine, and the temperature had risen suddenly to 102°, with symptoms of shivering, nervous depression, and swelling of the fauces. The rash was followed by widespread superficial desquamation. Similar symptoms had been noted twelve months previously on taking a patent preparation said to contain quinine. Dr. Graham Little: A case of granulomatous-looking tumours and nodules, the result of ingestion of *bromides*. The patient was an infant who had never had that drug, but whose mother (who suckled her child) had been daily taking large doses of bromide for two years. Dr. J. H. Sequeira: (1) A case of lupus of the face, with a lymphatic oedema of the hands resembling the condition which had been called "lupus pernio." (2) A case of *x*-ray warts which had appeared on the hands of an operator in the course of four years' work in an *x* ray department. The warts had been removed from one hand by exposure to measured doses of *x* rays administered therapeutically.

Odontological Section.

At a meeting on March 23rd, Mr. J. H. Mummery, President, in the chair, Mr. Sturridge, in a paper on *Suppurative periodontitis in displaced teeth*, contended that it could not be cured except by the replacement and retention of the teeth in their correct positions. He showed a method of retaining such teeth by means of a wire and small pins cemented to the teeth which had previously had small holes drilled in them. In the discussion which followed it was admitted that the gum did not reunite with the tooth, and that the "pockets" always remained. Mr. W. Hern, in opening the discussion on Mr. J. F. Colyer's paper on the *Treatment of children from the dental standpoint*, opposed the views expressed. Caries occurred in inverse ratio to the amount of care exercised in cleansing the teeth with brush and silk. Use of the brush was more important than thorough mastication for preserving teeth. Extraction of temporary teeth should be avoided. Mr. Robbins advocated and practised the habit of rewarding his small patients with sweetmeats. Mr. Rushton still advocated the use of a toothbrush, but did not believe caries occurred in inverse proportion to its use. He agreed with Mr. Colyer that the cause of caries of the teeth was not thoroughly known. Mr. Sims Wallace asked why, if the toothbrush was efficient, there had not been in recent years a great decrease in caries. It was quite possible to bring up children free from caries who had never used a toothbrush. Thorough mastication was most important. Pap-feeding was responsible for the craving for sweets, for the lack of proper mastication, and for a great deal of caries. Mouth-breathing was another cause. Mr. Stanley Mummery thought that the influence of civilization, with the laws of survival of the fittest, was one factor in the prevalence of caries. Mr. Colyer, in his reply, said he was satisfied to have proved by the discussion he had provoked that there was a wide difference of opinion among dentists as to the causes of caries. He still believed those causes were not known. The chemical constitution of modern foods differed from that of the diets of former days. Heredity was not the cause of the prevalence of caries. If dentists were able to discover

of the prevalence of caries and remove it would be far more common.

...field Medico Chirurgical Society.—At a meeting on March 12th, Dr. Thomson, President, in the chair, Professor Beattie, in a paper on *Acute rheumatism* and the evidence in support of its bacterial origin, gave an account of some of his own work in this connexion. With a streptococcus isolated from three typical cases of acute rheumatism, he had produced the clinical picture of acute rheumatism in a series of twenty-three rabbits. In 76 per cent. of these there was non-purulent arthritis, and in 56 per cent. endocarditis. Only three rabbits died, two of these showing very acute arthritis, and one, large mitral vegetations. In two of these the streptococcus was found in the blood, but in the other it was found only in the synovial membrane of the knee-joints. In experiments carried out by himself and by Rufus Cole with streptococci from other sources than rheumatism, the conditions produced were quite dissimilar, the arthritis being purulent, and endocarditis uncommon. Moreover, recovery was rare, the death-rate being 40 per cent. in his own cases and 30 per cent. in those of Cole. The general conclusion drawn was that in acute rheumatism in adults, the bacteria were in the majority of cases localized, and that many of the clinical manifestations and pathological effects were due to the toxins.

North of England Obstetrical and Gynaecological Society.—At a meeting in Sheffield on March 27th, Dr. A. J. Wallace (Liverpool), President, in the chair, Dr. Miles H. Phillips (Sheffield) exhibited a specimen of *Uterus bicornis unicollis*, with atresia of the external os and absence of the vagina. The patient was aged 16 years, and had enjoyed good health up to October, 1907, when she began to suffer from pain in the right iliac region, accompanied by some febrile disturbance. She had never menstruated. On examination, the vulva was normally developed, but there was no vaginal orifice, and per rectum a rounded, smooth, hard swelling, about the size of a duck's egg, could be felt in the middle of the pelvic cavity. Bimanually the tumour extended to a point just above the right Poupart's ligament. Under anaesthesia the lower pole of the tumour was reached by an easy perineal dissection, but owing to the thickness of its wall pointed to a uterine rather than a vaginal collection of fluid. The abdomen was therefore opened, and it was then seen that the tumour consisted of the right horn of a bicornuate uterus, together with a distended right Fallopian tube. The left cornu was a small, solid fibromuscular body, to which the left Fallopian tube, patent in its outer half, was attached. Removal of the entire mass was carried out, with the exception of the normal left ovary, which was saved. Recovery was uneventful. Dr. Lloyd Roberts (Manchester) showed a *Vaginal fibroma*, removed from a patient 46 years of age, who had had six pregnancies. Labour had always been difficult. She complained of pain and difficulty in micturition and an irregular sanious vaginal discharge. The tumour, which was sessile to the left fornix of the vagina, was removed by enucleation. Dr. Briggs described a case of *Acute complete inversion of the uterus*, manually reduced on the twentieth day after labour. The patient was 28 years of age, four years married, and had had two miscarriages previous to the present full-term pregnancy. The labour was slow, on account of premature rupture of the membranes, and the delivery by forceps under chloroform occupied two hours. During the third stage fundal pressure had been used on account of severe haemorrhage. For three weeks there had been febrile disturbance, temperature, 101° to 105°, with one definite rigor, the day before admission to hospital; severe abdominal pain and profuse vaginal bleeding; dribbling and incontinence of urine, for which the catheter had been repeatedly used. A vaginal douche of lysol had been given twice daily. No vaginal examination was made till the nineteenth day, when she was at once sent to hospital, under the care of Dr. Briggs. On examination, the enlarged inverted uterus lay in the vagina; its mucosa was slightly ulcerated, and the ring of cervix above was faint and sharp. Under ether the well-marked uterine cup became palpable bimanually, and reduction was effected by twenty minutes' continuous increasing pressure, gradually exerted so as to raise the body of the uterus through the thin cervical ring without damage. A douche of sterilized water at 120° was then used. For seven days intrauterine douches of sterile water were given twice daily. Convalescence was tardy, with febrile symptoms—101° to 105°—including six rigors during the first three weeks. The patient was discharged well at the end of eight weeks from the time of the reduction. Drs. Briggs and Edmiston narrated a case of *Severe concealed accidental haemorrhage* occurring in a patient aged 26 years, 5-para, with a history of previous easy labours. During her present pregnancy she had had a good deal of worry, and said she also remembered falling on one occasion, but without serious consequences. At 11.30 a.m. on March 6th, three days short of the full term, she was seized with severe abdominal pain and vomiting. At 7.30 p.m. the collapse became grave; she was pallid, cold, and restless, with a thready intermittent pulse of 152, and a subnormal temperature. The physical signs of a tense, tender, full-term uterus were present. Fetal heart-sounds were inaudible. Vaginally, the cervix admitted two fingers, there was no bleeding, and the examining finger could reach neither placenta nor blood clot. The membranes were unruptured, and labour pains were absent. In this condition she was admitted to hospital, and Dr. Briggs ordered morphine ¼ grain and atropine $\frac{1}{100}$ grain hypodermically at 9.30 p.m. This was followed by five hours' sleep, and at 8 a.m. on March 7th the pulse had fallen to 120. Three hours later the morphine and atropine was repeated on account of restlessness, and sleep supervened. During the intervals of sleep, small quantities of diluted milk were given. The os now admitted three fingers. Shortly after midnight labour pains became pronounced, and a speedy and spontaneous delivery was completed at 12.30 a.m. on March 8th. Two and a half pounds of clot and about a pint of liquid blood were expelled. The fetus, which appeared to have been dead about a week, weighed 7¾ lb. The pulse was 156 at the end of the third stage, but now gradually fell, until the eighth day, when it rose to 142 and the temperature to 102°. The involution of the uterus had been slow. On the tenth day, an intrauterine douche of sterile water at 111° was given, and the temperature fell to 97.8°, and the pulse to 112. Dr. Miles H. Phillips related a case of *Concealed haemorrhage* during the fifth month of pregnancy, treated by vaginal hysterotomy. The patient had had nine children, the last 1¾ years ago. Menstruation was regular, with the exception that the three periods before Christmas were less in amount than usual, and the two since Christmas consisted of smart floodings accompanied by hypogastric pain. The last had ceased three days before she was seen by Dr. Phillips. The abdominal tumour reached to within 1½ inches of the umbilicus. No fetal parts or movements could be felt, and no heart sounds heard. Threatened miscarriage was diagnosed, and complete rest in bed enjoined. A week later haemorrhage recurred, and the patient was admitted to hospital. She looked extremely ill, and complained of severe abdominal pain. The uterus now extended to 1 inch above the umbilicus. The pulse was 96 per minute. A laminaria tent was introduced into the cervix, and rectal salines were given. Five hours later, as the patient appeared to be getting worse, it was decided to evacuate the uterus as quickly as possible. Under anaesthesia a transverse incision was made in the anterior vaginal fornix, and the bladder separated. The rigid cervix and 1½ in. of the lower uterine segment were divided in the mid line. A large amount of old and recent clot was evacuated from the decidual cavity, and the intact ovum was reached on the left side of the fundus uteri. The 4½-5 months fetus was delivered together with its placenta. The incision was closed by catgut sutures, and the uterine cavity packed with gauze. Recovery was complete. The amount of blood clot collected filled a 2 pint measure. Dr. Gemmell (Liverpool) read a note on *Primary carcinoma of the Fallopian tube* based upon a recent case in which there was a history of profuse watery offensive vaginal discharge in a nulliparous woman, 45 years of age. The physical signs led to the diagnosis of multiple uterine fibroids with chronic inflammatory disease of the right appendage. Laparotomy revealed double chronic inflammatory appendage disease, right hydrosalpinx, left pyosalpinx. Subsequent examination of the specimen

demonstrated that the left tube, which was closed at its fimbriated end, sausage-shaped, measuring 3 in. in diameter at the abdominal end and 1 in. at the uterine end, contained pus and an enormously thickened mucous membrane forming a papillomatous growth. Microscopical sections showed this growth to be an adenocarcinoma. Both ovaries were normal; the right tube showed simple salpingitis.

Leeds and West Riding Medico Chirurgical Society.—At a meeting on March 20th, Dr. J. Allan in the chair, Mr. Grünbaum read a paper designed to show the baselessness of the custom existing in some hospitals of excluding dressers from the educational advantages of the *post-mortem* room and forbidding dissecting room students from the surgical wards. He said there was no evidence to show that the atmosphere or surroundings of the dissecting room or *post mortem* room were bacteriologically more dangerous than those of the operating theatre or surgical wards, nor that the hands of students working in these rooms were bacteriologically more dangerous or difficult to disinfect than of those not so working. In addition there was no reason for supposing the student to become suddenly susceptible to the precepts of surgical cleanliness by mere removal from the dissecting room. Surgeons should have faith in the efficacy of their methods of securing asepsis. The following were among the exhibits:—Mr. A. L White-head: Leber's apparatus for transillumination of the eyeball. The presence and extent of an intraocular sarcoma causing detachment of the retina without symptoms was demonstrated. A case of glaucoma with secondary cataract preventing an examination of the fundus was also shown. The absence of any growth within the eyeball was demonstrated, indicating that the glaucoma was of the simple primary form, and not secondary to an intraocular tumour. Dr. J. Allan: A specimen of about 1½ inches of bone excised from the middle of the left clavicle five months after fracture, to relieve pressure on the brachial plexus. The operation was successful. Mr. J. F. Dobson: (1) A patient from whom a *Popliteal aneurysm* had been excised, together with the specimen. The popliteal vein was so firmly adherent to the sac of the aneurysm that it was necessary to divide it. The patient recovered without any embarrassment of the circulation. (2) A case in which perforation of a *Tuberculous ulcer* of the ileum occurred, with diffuse peritonitis, and extensive disease of the mesenteric glands and adhesions of coils of intestine. The perforation was closed by suture, recovery ensuing. Mr. J. Stewart: A specimen containing thirteen distinct *Fibroids* massed together which was removed from a patient aged 45. She had retention of urine for ten days and obstruction of bowels, vomiting, constipation, and albuminous urine. There was a mass impacted in the pelvis dissecting up the left broad ligament and firmly attached to the rectum. The patient made an uninterrupted recovery. Mr. H. Littlewood: A kidney with malignant disease from a child 9 months old. Dr. Maxwell Telling: A specimen of dissecting aneurysm of the arch of the aorta, causing death by rupture into the pericardium. There was a tear 1 in. long due to atheroma at the junction of the transverse and ascending portions of the arch. The aneurysm extended to the commencement of the thoracic aorta and 4 or 5 in. up the neck. Mr. H. de C. Woodcock: A case of myxosarcoma apparently primary in the breast. Secondary subcutaneous nodules were widely distributed over the trunk, but the limbs were free.

Nottingham Medico-Chirurgical Society.—At a meeting held on March 4th, Mr. J. Mackie in the chair, Dr. A. B. Dunne showed a boy, aged 11, from whom he had removed a *Darning needle* over 3 in. in length which had become embedded in the gluteal muscles, and probably penetrated the great sacro-sciatic ligament. Mr. W. Morley Willis showed: (1) A girl, aged 14, from whom he had removed the breast and axillary contents a fortnight before for a tumour of doubtful nature (*? Adeno-sarcoma*), microscopic sections of which were also shown; (2) a woman, aged 41, both of whose breasts contained hard nodules, probably due to *Chronic mastitis* of four years' duration, with glandular enlargement on one side.

REVIEWS

HYGIENE OF NERVES AND MIND.

In the British Medical Journal of April 13th, 1907, an article was published on Professor Forel's *L'âme et le système nerveux*. Since then this work has been ably translated into English from the German edition.[1] A convinced monist, recognizing no ultimate distinction between mind and brain—brain activities being to his view merely mental processes from another standpoint—mental hygiene is, for the distinguished author of this book, completely synonymous with the hygiene of the nervous system. The book is intended for popular reading, and, in accordance with this aim and the author's convictions concerning the nature of mental phenomena, the four opening chapters are devoted to an admirably lucid account of what is meant by mind and brain, and to the anatomy and physiology of the central nervous system. A fifth chapter on embryology and the phylogenetic development of the nervous system, in which inheritance is discussed, concludes the first and introductory part. In the second part of the book the pathology of nervous life is considered, and a synopsis given of the separate phenomena of mental disorders and disturbances in such a way as to be easily comprehended by the non-medical reader. Here also the causes of mental and nervous disturbances are treated, prominently amongst which Professor Forel places faulty breeding or selection and alcohol. Throughout the whole book the author lays great stress on the evil influence of alcohol in inducing germ corruption (blastophthoria), adducing in support of this the experiments of Hodge, Lombemelle, and Laitenen, who showed that in the progeny of artificially-alcoholized animals there were large numbers of stillborn or stunted animals; the observations of Ziegler and Führer on sea-urchins immersed in 1 per cent. alcohol, and a considerable amount of more or less suggestive statistical information. It is, however, only the third part of the book which is concerned with hygiene proper. Though perhaps not the most interesting, this is certainly the most valuable part. Through the publication of his book, *Die Sexuelle Frage*, Professor Forel's neo-Malthusian views are well known, and in the work under review nervous and mental prophylaxis naturally begins with the selection of parents. Professor Forel does not plead for State interference, but merely seeks to attain this end by the dissemination of correct views amongst the lay public, so that they may consider the probable result in choosing a mate, or, having chosen unwisely from the eugenic standpoint, to make certain that there are no descendants. A valuable chapter is devoted to pedagogics, in which Professor Forel subjects ordinary scholastic methods to severe criticism, but describes and praises the type of school known in Germany and Switzerland as country training homes (*Landerziehungsheime*), such as those at Haubinda in Thuringia, Clarisegg in Switzerland, and Bedale and Abbotsholme in England, Dr. Reddie of the last named school being the initiator of the movement. It is to the progressive promotion of total abstinence, however, that Professor Forel looks for the greatest amount of good. On this matter, as on all other matters discussed in a very able book, Professor Forel has no doubts, and speaks his mind fearlessly and dogmatically with the conviction of one who sees his own side of each question very clearly. His wide experience as an alienist and as a teacher entitles him to speak with authority; and though some of his data are open to question, his book is one which it is impossible to read without benefit.

INFLAMMATION.

The dominant idea of the monograph on *Inflammation* by Professor Klemensiewicz[2] is to explain the phenomena of this process in the light of recently acquired knowledge concerning the chemical and physical laws which determine the activities of living tissues. After a brief

[1] *Hygiene of Nerves and Mind in Health and Disease.* By August Forel, M.D., late Professor of Psychiatry at the University of Zürich. Translated from the German by Austin Aikins, Ph.D. The Progressive Science Series. London: John Murray. 1907. (Demy 8vo, pp 333. 6s.)

[2] *Die Entzündung. Eine monographische Skizze aus dem Gebiet der pathologischen Physiologie.* Von Dr. Rudolf Klemensiewicz. Jena: Gustav Fischer. 1908. (Demy 4to, pp. 125. M. 3.)

historical sketch of classical theories on the subject of inflammation, he expounds his own ideas, commencing with a discussion of the vascular changes which are produced. Special attention is paid to the causation of inflammatory hyperaemia, the changes in the blood pressure within vessels present in the inflammatory area, and the nature of the alterations produced in the capillary endothelium. The pages devoted to these matters appear to us to be the most interesting part of the author's book. Professor Klemensiewicz attaches equally high importance to the study of the lymph as a guide to the interpretation of inflammatory changes. He reviews the "filtration," the "secretion," and other well-known theories of lymph formation, and then proceeds to discuss the character of the exudate in inflammatory foci, together with the mode of its production and the mechanism of its absorption. The description of the inflammatory process is then brought to an abrupt termination in a brief chapter on suppuration, phagocytosis, and histolysis. According to the author's theory, the most prominent changes in inflammation, commencing from the outset of the process, are the alterations found in the blood and lymph, and he is "disposed to look for the essential cause of the successive appearance of the typical manifestations of inflammation in a damage done to the vessel wall." This initial pathological change of the vessel wall he describes as an increase of permeability accompanied by vasomotor paresis or paralysis.

> This change in the vessel wall is the result of the action of a chemical agent. We are able to show that by means of materials the activity of which is undoubtedly chemical in nature there can be produced the changes in the vessels, and in their physiological function, which are characteristic of inflammation. . . . It can also be shown that the specific products of bacterial metabolism act in a similar way.

Whilst admitting that the experimental proof is not yet complete, the author suggests that in inflammation there may be a specific action of organic toxins; these toxins, he considers, may exercise a selective influence upon the capillary endothelium, and they may be, in effect, "specific endotheliotoxins." The valuable feature of Professor Klemensiewicz's work is his vigorous protest against the purely morphological and microscopical method of describing inflammatory processes. Not a few writers on the subject suffer from this fault; they describe the successive appearance of this, that, and the other type of cell and note the variations in structure which the various cells exhibit, but they make no attempt to explain the action of the tissue juices which are causative of the phenomena demonstrable under the microscope. Professor Klemensiewicz, as we think he would admit, is far from having succeeded in this latter task, owing to the simple reason that the physics and chemistry of living tissues are extremely complex and very imperfectly understood. Consequently much that he says about the importance of chemico-physical forces is not really a scientific explanation but merely a recapitulation of the still unsolved problems of inflammation translated into the phraseology of the chemist and the physicist. It may also be objected that though the permeability of the vessel wall and the exercise of a toxic influence upon the endothelial cell are undoubtedly questions of high importance, there are many other tissue changes in inflammation which demand consideration but are ignored by the author. His exposition certainly suffers from this tendency to exclusive emphasis of one factor in the process, but nevertheless it must be regarded as a valuable stimulus to further research in a direction which has not hitherto been explored with the attention it deserves.

CELLS AND PLASMA.

Professor Martin Heidenhain's work on *Plasma und Zelle*[3] will consist, when completed, of three volumes. The first of these, which has recently been published, commences with a long and very elaborate discussion on the theory that the cell is the unit of life, and then proceeds to the minute description of cell nuclei, centrosomes, and cell granules. It is becoming more and more clear, in the author's opinion, that living matter does not always or necessarily exist in a cellular form. There are many minute forms of life of a primitive kind which are invested with a living individuality without being cells, and such forms obviously stand nearer to the phylogenetic source of life than the cell itself; intercellular substance, also, must be regarded as a specialized living derivative of the cell body. "In short, we find ourselves more and more compelled to regard the common element of all living things as consisting of the matter which provides material for the structure of all cells and all other manifestations of life." And in another passage Professor Heidenhain expresses his convictions still more emphatically. "It is not the cell," he says, "which is the vehicle of life, but rather life inheres in every vital fragment down to the most minute molecular bridges, which still retain their title to vitality." Hence his work is not confined to a study of the structure of the cell but embraces the more general problems of "the structural and biological properties of living matter and the inherent laws of its formation." As a protest against the current idea that the bodily structures consist merely of groups of cells and that these cells are to be regarded as independent entities, Professor Heidenhain's insistence on the essential unity and interconnexion of living matter is a wholesome corrective which the pathologist as well as the physiologist will do well to bear in mind, since the mistake is often made of assuming that the morbid changes in a tissue are due merely to pathological processes affecting individual cells rather than to conditions which affect the tissue as a whole. The only fault we have to find with the author's argument is that it is unduly prolix, painfully redundant, and often tautological. The sections devoted to nuclei and cell centres are full of interesting details and are enriched by a large number of excellent illustrations. The discussion of cell granules is also particularly good. The work of Altmann and his followers is very fully described, and careful attention ought to be paid to Professor Heidenhain's reasons for refusing to assign a biological individuality to the so-called "bioblasts."

Mr. C. E. Walker is well known to pathologists as one of the students of cancer research who is attacking the problems of this disease from the cytological standpoint. His book on *The Essentials of Cytology*[4] is mainly concerned with the phenomena of mitotic division, a subject in which the author's special experience is both interesting and valuable. Some of the more difficult theoretical considerations, such as the probable individuality of the chromosomes, are also discussed, and his useful explanation of "Mendel's law," which has aroused a considerable amount of popular as well as scientific interest during recent years, adds to the interest of the book for the general reader. The final chapter, on cytological methods, gives a good general idea of the technique to be employed, but does not enter into details at sufficient length to be of much interest to the specialist who might wish to compare his own technique with Mr. Walker's and to profit by the latter's experience. Within the small limits of the present volume it has been impossible to include many matters concerning the structure and functions of the cell which are intrinsically important and ought to find a place in a student's textbook; consequently the author can hardly expect his work to rank with the more substantial treatises on this subject, such as that published by Wilson. If Mr. Walker had chosen some rather less comprehensive title—for example, "essentials of the cell nucleus"—he would have indicated more clearly the most valuable feature which his book presents.

In his monograph on the origin of the chromosomes,[5] Dr. Tellyesniczky advocates a theory of nuclear mitosis which is not in accordance with the views of most cytologists. It is generally believed that the chromosomes are formed by a process of contraction from the reticulum of the resting nucleus, and that after division

[3] *Plasma und Zelle.* Erste Abteilung. *Allgemeine Anatomie der lebendigen Masse.* Bearbeitet von Professor Dr. Martin Heidenhain. Erste Lieferung. *Die Grundlagen der mikroskopischen Anatomie, die Kerne, die Centren, und die Granulalehre.* Jena: Gustav Fischer. 1907. (Sup. roy. 8vo, pp. 514, with 276 illustrations in the text, partly coloured. M.20.)

[4] *The Essentials of Cytology.* By Charles Edward Walker. Preface by Professor C. S. Sherrington, F.R.S. London: Archibald Constable and Co. 1907. (Demy 8vo, pp. 142: illustrated. 7s. 6d.)

[5] *Die Entstehung der Chromosomen. Evolution oder Epigenese?* Von Dr. Kálmán v. Tellyesniczky. Berlin and Vienna: Urban and Schwarzenberg. 1907. (Sup. roy. 8vo, pp. 54, 22 figs. M. 2.50.)

the chromosomes in the daughter cells again resolve themselves into a nuclear reticulum without losing their individuality. The author does not admit the existence of a reticulum in the resting nucleus; he maintains that "the chromosomes are not preserved in the resting nucleus, but at the end of each mitosis are completely disintegrated—that is, are altogether absorbed in the juice of the daughter nucleus, so that it is impossible to speak of them as preserving their individuality. After this complete solution in the daughter nucleus, the chromosomes make their appearance in the subsequent mitosis as entirely new formations." This formation of the chromosomes *de novo* in each successive mitosis is termed "epigenesis," and is regarded as due to a process analogous to crystallization. As a protest against the tendency to assume a continuous existence for any and every structure which can be demonstrated in the nuclei of fixed and stained specimens, Dr. Tellyesniczky's arguments contain a useful element of truth. The possibility of artefacts in cytological specimens has always to be remembered when we endeavour to interpret vital processes, and it is difficult to know how far structures demonstrable under the microscope are indicative of permanent physical properties; but it is not altogether clear that the conception of epigenesis by a process of crystallization will revolutionize cytological research or throw much new light on the phenomenon of mitosis.

OPSONINS.

Mr. Allen's short compendium on *The Opsonic Method of Treatment*[6] is written from the standpoint of an enthusiastic believer in the value of Wright's work. After briefly discussing the nature of opsonins, the author proceeds to give a careful and detailed account of the technique involved in making determinations of the opsonic index, a subject in which he has evidently had a considerable amount of practical experience. As some pathologists of high repute have expressed the view, stoutly denied by Wright's adherents, that even in the most careful determinations there may be a wide margin of experimental error, the rules of procedure which, in Mr. Allen's opinion, will ensure accuracy of work will be read with some interest. Other features of the book which are especially deserving of attention are the discussion of the effect of exercise upon the tuberculo-opsonic index in cases of phthisis, the chapter on the opsonic treatment of nasal and tracheal catarrh, and, in particular, the account of the successful results obtained by this method in dealing with diseases of the eye. The main purpose of Mr. Allen's book is, as he avows, to demonstrate the valuable results achieved by opsonic work in actual practice. It is not possible, within the compass of so small a textbook, to supplement this purpose by an adequate treatment of the vexed controversial questions, both practical and scientific, to which the opsonin theory has given rise. Mr. Allen has weakened his case by failing to leave these larger problems severely alone. He cannot resist the temptation to indicate his hostility to the critics of Wright's school by cavalier expressions of personal opinion, unsupported by reasoned argument. Simon, for example, who raises objections to Wright's determination of the opsonic index and considers his own "percentage index" to be more reliable, is dismissed in the following words: "Perusal of Simon's papers induces me to believe that he failed completely to master the technique of finding the opsonic index. As to the value of his index I offer no opinion." When Mr. Allen gains more experience as a writer on scientific subjects, he will realize how seriously he shakes the reader's confidence in the author by attempting to demolish an adverse critic in this grandiose fashion. And in dealing with highly complicated bacteriological questions, such as the relationship between human and bovine "types" of the tubercle bacillus, the author comments, criticizes, and suggests with a degree of confidence which far exceeds his very meagre display of knowledge concerning the work which has been done on this subject. But in quoting these instances where Mr. Allen's zeal appears to have outrun his discretion we have no intention of prejudicing the far-reaching questions involved by the brilliant work initiated by Wright and his colleagues. These problems are still *sub judice*, and require the matured and lengthy consideration of pathologists before a verdict can be pronounced.

[6] *The Opsonic Method of Treatment.* By R. W. Allen, M.B., B.S. London: H. K. Lewis. 1907. (Demy 8vo, pp. 147. 5s.)

LARYNGOLOGY IN WÜRZBURG.

The attractive Bavarian town of Würzburg is the seat of a university with which many famous names are associated. Among these are Gerhardt, Leube, Scanzoni, Kölliker, von Troeltsch, von Bergmann, and others who in many instances were transferred to the universities of larger and more opulent towns. Professor Seifert, who has for some years had charge of the University Clinical School of Laryngology and Rhinology, presents us in his history of laryngology in Würzburg[7] with an interesting narrative of the development of the teaching of this branch of medicine in that town. Laryngoscopy was at first taught in 1859 by Professor Gerhardt, whose name is familiar to every laryngologist. It was then included by Drs. Rossbach and Riegel in the course of teaching of auscultation and percussion. Drs. Mayr, Matterstock, Herterich, Platzer, Stark, and others continued the teaching of laryngoscopy in turn. Professor Seifert himself has since 1880 given lectures and practical teaching uninterruptedly up till the present day. The classes are of two grades, for beginners and advanced students respectively. The scheme of teaching for beginners is described in some detail, and seems extremely well devised. One very interesting section in Professor Seifert's history is that devoted to the enumeration of the works issuing from the Würzburg school relating to laryngology and rhinology. Among others we observe papers by Aschenbrandt on the Importance of the Nose for Respiration, 1886; Gerhardt on Posticus-paralysis or Adductor Contracture, 1885; von Bergmann on a Case of Extirpation of the Larynx, 1882; Boenninghaus on Mucous Glands in Hyperplastic Epithelium of the Nasal Mucous Membrane, 1895; Seifert on Paralysis of Laryngeal Muscles due to Lead Poisoning, 1884; on Lymphosarcoma of the Lingual Tonsil, 1900; Amyloid of the Larynx, 1904; Rhinogenic Cerebral Abscess, 1905, etc. The amount of "material" in the clinic appears to be sufficient for the purpose of study, and yet not so overwhelming as to render original investigation so difficult as it is in some of our more active special hospitals. The countenance given by the State to such work as Professor Seifert's over and above the financial support which, though moderate, is apparently sufficient, adds greatly to the dignity and pleasure with which it is carried on. The wish arises that in this country there might be greater encouragement offered to original work such as the academical title of Professor and the honorarium attached, which smooth the way and brighten the lives of many foreign confrères.

PELVIC INFLAMMATIONS IN THE FEMALE.

We are glad that *Pelvic Inflammations in the Female*[8] has been published. The lecturer, Dr. Thomas Wilson, is one of the most scientific living gynaecologists—an authority who lays great stress on clinical research. We can, without desiring to depreciate surgical skill, turn our backs for awhile on complicated plastic "fixations," and on the triumphs of Wertheim and his bold disciples, and consider one of the commonest class of disorders to which woman is subject. Bernutz and Goupil, Virchow, and, lastly, Matthews Duncan, turned the attention of gynaecologists to the proper systematic study of inflammatory disease of the pelvic viscera, serosa, and connective tissue. The wide diffusion, anatomical and geographical, of abdominal surgery has, since the days of those authorities, thrown much light—and, what is more, very literal and very clear light—on this class of disease. Some writers, such as Cullingworth, have investigated the subject from both aspects as operators and as pathologists, though too many confine themselves to surgery alone. Dr. Wilson prefers a sound clinical review of his theme, not neglecting surgery as a therapeutic medium, and in that respect the

[7] *Geschichte der Laryngologie in Würzburg* [History of Laryngology in Würzburg]. By Professor Otto Seifert. Würzburg: C. Kabitzsch. 1908. (Sup. roy 8vo, pp. 68.)

[8] *Pelvic Inflammations in the Female.* Being the Ingleby Lectures delivered at the University, Birmingham, May 9th and 16th, 1907. By Thomas Wilson, M.D.Lond., M.Ch.Birm., F.R.C.S.Eng., Obstetric Officer to the General Hospital, Birmingham, etc. Bristol: John Wright and Co.; and London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1907. (Demy 8vo, pp. 74. 3s. 6d.)

summary of his own results in operations for suppurative pelvic inflammation deserves consideration. He very properly reminds his audience that, as his own experience has shown, abdominal section for tuberculous appendages may be followed by faecal fistula, which usually kills the patient by exhaustion, and he denounces the old incomplete operation where a pedicle of inflamed tissue was left attached to the uterus. He excises a piece of the uterine cornu; other operators prefer to amputate the uterus. Dr. Wilson is in favour of the evacuation of pus through the posterior fornix when practicable. The main part of the lectures, treating of the pathology, course, and diagnosis of pelvic inflammation is of high value. In conclusion, we feel bound to express our opinion that more should have been said about pelvic cellulitis. The author has wisely avoided the bad practice of treating his subject as purely a question of the selection of operative measures, but one great cause of this evil lies in the over-importance ascribed, relatively we mean, to inflamed appendages. Hence the young gynaecologist may begin his career as a responsible practitioner or operator profoundly ignorant of cellulitis. A good monograph on parametritis and on nothing else is urgently required, and if Dr. Wilson were the author we should all study it with respect and profit.

HOSPITALS AND CHARITIES.

THE edition for 1908 of *Burdett's Hospitals and Charities*,[9] which was published last week presents all its familiar and useful features, and in addition gives particulars as to the chief nursing institutions in Great Britain and Ireland and the principal Continental capitals. The information regarding hospitals and their expenditure and other matter seems as full and exhaustive as heretofore, while the chapters which precede it are perhaps of more general interest than usual. They explode once and for all the familiar theory that the possible volume of charity is a fairly fixed sum, and show that so far from this being the case there has been an enormous increase in the last ten years in the total sum of money which the public has shown itself ready to place at the disposition of charities of various kinds. Between the totals for the years 1895 and 1905 there is a difference of 46 per cent. in favour of the latter year, while the population has certainly not increased by as much as one-fourth of that figure. Of the increase the hospitals have perhaps had their full share, as their total receipts from all sources and for all purposes in 1905 exceeds the sum placed at their service in 1895 by 54 per cent. In much the same way another statement commonly made is also controverted. This is to the effect that the operation of the King's Fund is, on the whole, not favourable to hospitals, inasmuch as it draws away contributions which otherwise have been received direct by certain institutions. It is considered that an examination of the returns of each hospital show that there is no ground for this statement, but, on the contrary, prove that the King's Fund, by immensely increasing the general interest of the public in hospital enterprises, has benefited all hospitals alike. Attention is also directed to the extraordinary inconsistency between the amount which the public subscribes to foreign missions as compared with what it contributes towards the Bishop of London's Fund. This does for London very much what these missions do for the localities in which they work, but its total income remains almost stationary and under £35,000, while in the last ten years the money devoted to foreign missions has increased by 43 per cent., their receipts for 1905 standing at the enormous sum of £3,467,000.

A GERMAN MEDICAL DICTIONARY.

THE fourth edition of WALLER'S *German-English Medical Dictionary*[10] is a handy little book, which should prove still more useful than the third edition. The dictionary includes a number of chemical and biological terms as well as those which belong more properly to medicine, and the new German orthography has been respected. One of the characteristics of the dictionary is that a certain number of expressions are not translated in the proper sense of the term, but rather explained—for example, Lassar's zinc-paste is given as "equal quantities of zinc oxide and starch with double the amount of vaseline," and "Wegner'sche Krankheit" as "a separation of epiphyses in congenital syphilis." Naturally this descriptive translation adds to the value of the book. A few minor defects, most of which are due to somewhat un-English expressions, may be easily forgiven. A book of the size of the one before us can have no pretension to completeness, but the selection in the present case is a little surprising at times. While common words, which can be found in any dictionary, such as "hören," to hear; "länge," length—take up a great deal of space in the book, a singular want of consistency is shown by giving words like "amboceptor" and "antibody," while no place is found for "alexin," "antigen," "complement," etc. "Immunkörper" is translated as "antitoxin, amboceptor," instead of the more straightforward "immune body." The terms employed in clinical medicine and surgery, etc., are mostly well given and are nearly complete. On the whole, in spite of the growing number of such dictionaries, Waller's dictionary deserves to meet with success, and will be useful to the English practitioner who has need of a German-English dictionary when reading medical literature.

[9] *Burdett's Hospitals and Charities.* London: The Scientific Press, Limited. 1908. (Price 7s 6d. net.)

[10] *German-English Medical Dictionary.* By Joseph R. Waller, M.D. Fourth edition, improved and enlarged by M. White, M.D. Leipzig and Vienna: F. Deuticke. 1907. (Roy. 16mo, pp 449. M. 6.)

NOTES ON BOOKS.

WARWICK AND TUNSTALL'S *First Aid Manual*[11] retains its place as one of the best handbooks on this subject. This edition—the fifth—has been revised and several of the illustrations have been improved, whilst fourteen entirely new illustrations have been added in the section on transport of sick and injured. The three-belt sling by which firemen are shown carrying an injured man should, we believe, be credited to a London volunteer. This edition is in a cardboard cover with an artistic design. When revising the illustrations we should have been pleased to see Fig. 164 replaced by a drawing of the bandages for fractured clavicle in which the large arm sling was kept free from the point of the shoulder. As now shown the bandage tends, by dragging downwards on the shoulder, to counteract the lifting of the outer fragment of the fractured bone which the sling is intended to effect.

In the preparation of tissues for histological purposes, they undergo changes in specific gravity, porosity, volume, etc. The changes are especially noticeable if paraffin imbedding is employed. In a recent essay on the subject, Dr. BERG[12] has given numerous figures as to the extent of the alteration. They vary very much with the method used, and also with the tissue investigated. The numbers cannot therefore be regarded as constants, and will not on this account be of much value to subsequent workers.

In *Minor Maladies and their Treatment*,[13] Dr. LEONARD WILLIAMS has put together, amplified, and rearranged several lectures delivered to practitioners at various times on colds, coughs, sore throats, indigestion, constipation, diarrhoea, vomiting and giddiness, rheumatism, neuralgia, headache, and goutiness. Other chapters discuss change of air and the choice of locality for various diseases; general health and its maintenance by suitable clothing, adequate supply of oxygen, diet, and exercise; some drugs and their uses (pages teeming with valuable suggestions); and insanity and the exact procedure to be adopted in dealing with the insane. The treatments recommended are based on detailed and judicial consideration of the chief factors of each malady, in consonance, moreover, with the latest teachings of pathology. Practitioners generally may learn much from a perusal of Dr. Williams's book, whilst the recently qualified will find it a mine of therapeutic lore. That it has obtained a satisfactory verdict is evident from the fact that in less than eighteen months after its first issue a second edition, containing some important additions, has appeared.

[11] *First Aid to the Injured and Sick.* By F. J. Warwick and A. C. Tunstall. Fifth edition. Bristol: J. Wright and Co.; and London: Simpkin, Marshall and Co. 1908. (Fcap. 8vo, pp. 268. 1s.)

[12] *Die Fehlergrösse bei den histologischen Methoden.* [The Amount of Error in Histological Methods.] By Dr. W. Berg, Assistant in the Anatomical Institute, University of Strassburg. Berlin: A. Hirschwald. 1908. (Sup. roy. 8vo, pp. 48. M. 1.20.)

[13] *Minor Maladies and their Treatment.* By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital, London; Assistant Physician to the Metropolitan Hospital. Second edition. London: Baillière, Tindall, and Cox. 1908. (Crown 8vo, 416 pages. 5s.)

INTERNATIONAL CONGRESS OF TUBERCULOSIS AT WASHINGTON.

The Executive Committee to represent Great Britain and Ireland in the International Congress on Tuberculosis to be held at Washington from September 21st to October 12th this year has been formed, in accordance with the resolution of the general meeting on February 8th, as follows:

Sir William Selby Church, Bart, K.C.B, Chairman.

Conveners of General Meeting (3).
Sir T. Clifford Allbutt, K.C.B.
Professor Osler.
Professor G. Sims Woodhead.

Representatives.
London (6).
Dr. Theodore Williams, M.V.O.
Dr. T. D. Acland (Honorary Treasurer).
Dr. A. J. Newsholme, M.O.L.G.Bd.
Dr. Heron.
Dr. J. E. Squire, C.B.
Mr. Charles H. Garland.

Provinces (6).
Professor Sheridan Delépine, Manchester.
Dr. Walker Hall, Bristol.
Sir Isambard Owen, Newcastle.
Dr. Nathan Raw, Liverpool.
Dr. J. Robertson, Birmingham.
Dr. J. C. Thresh, Chelmsford.

Scotland (2).
Dr. Matthew Hay, Aberdeen.
Dr. R. W. Philip, Edinburgh.

Ireland (2).
Dr. A. E. Boyd, Dublin.
Sir J. W. Moore, Dublin.

Wales (1).
Dr. William Williams, Cardiff.

Honorary Secretary.
Dr. J. J. Perkins, 20, Hanover Square, W.

The Executive Committee met at 20, Hanover Square, on March 16th, Professor Osler being in the chair.

The following additional members were elected to the Executive Committee: Dr. H. J. Bulstrode, Dr. Percy Kidd, Dr. J. Kingston Fowler, Sir Felix Semon, K.C.V.O., Mr. W. Watson Cheyne, C.B, Dr. A. Latham, Dr. Samuel West, Sir John MacFadyean, Dr. James Kerr, Dr. E. W. Hope (Liverpool), Mr. Patten McDougall, C.B. (Edinburgh), Dr. Leslie Mackenzie (Edinburgh), Dr. D. J. Macintosh, M.V.O. (Glasgow).

It was decided to suggest to the general secretary of the Congress that all papers from private individuals in this country should be referred to this Committee before being accepted by the Congress. It was also decided to draw up reports of what has been done officially or otherwise towards the prophylaxis of tuberculosis in England, Scotland, and Ireland respectively. Subcommittees were appointed for this purpose, and an Architectural and a Museum Subcommittee were also appointed. A letter was read from the General Secretary stating that the Committee on Entertainments is arranging an itinerary to begin at New York on September 14th, go up the Hudson to the Adirondacks, from there to Niagara Falls, then by way of the lakes to Chicago, and over the Alleghany Mountains to Philadelphia (September 24th).

Information as to passenger rates and travelling arrangements may be obtained from Messrs. Stockwell and Co., Limited, 8-10, Beak Street, Regent Street, W., Shipping and Passenger Ticket Agents. Some details were published in the British Medical Journal of February 29th, p. 527.

Prizes Offered by the Congress.

The Central Committee of the International Congress on Tuberculosis has announced the offer of the following prizes: (1) A prize of £200 for the best evidence of effective work in the prevention or relief of tuberculosis by any voluntary Association since the last International Congress in 1905. In addition to the money prize two gold medals and three silver medals will be awarded. Evidence is to include all forms of printed matter, educational leaflets, etc.; report showing increase of membership, organization, classes reached—such as labour unions, schools, churches, etc.; lectures given; influence in stimulating local Boards of Health, schools, dispensaries, hospitals for the care of tuberculosis; newspaper clippings of meetings held; methods of raising money; method of keeping accounts. Each competitor must present a brief or report in printed form. No formal announcement of intention to compete is required. (2) A prize of £200 for the best exhibit of an existing sanatorium for the treatment of curable cases of tuberculosis among the working classes. In addition to the prize, two gold medals and three silver medals will be awarded. Each competitor must present a brief or report in printed form. (3) A prize of £200 for the best exhibit of a furnished house, for a family or group of families of the working class, designed in the interest of the crusade against tuberculosis. In addition to the prize, two gold medals and three silver medals will be awarded. This prize is designed to stimulate efforts towards securing a maximum of sunlight, ventilation, proper heating, and general sanitary arrangement for an inexpensive home. A model of house and furnishing is required. Each competitor must present a brief with drawings, specifications, estimates, etc., with an explanation of points of special excellence. Entry may be made under competitor's own name. (4) A prize of £200 for the best exhibit of a dispensary or kindred institution for the treatment of the tuberculous poor. In addition to the prize, two gold medals and three silver medals will be awarded. The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form. (5) A prize of £200 for the best exhibit of a hospital for the treatment of advanced pulmonary tuberculosis. In addition to the prize two gold medals and three silver medals will be awarded. The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form. (6) The Hodgkins Fund Prize of £300 if offered by the Smithsonian Institute for the best treatise that may be submitted on "The Relation of Atmospheric Air to Tuberculosis." Memoirs having relation to the cause, spread, prevention, or cure of tuberculosis are included within the general terms of the subject. Any memoir read before the International Congress on Tuberculosis, or sent to the Smithsonian Institution, or to the Secretary-General of the Congress before its close, namely, October 12th, 1908, will be considered in the competition. The memoirs may be written in English, French, German, Spanish, or Italian. They should be submitted either in manuscript or typewritten copy, or, if in type, printed as manuscript. The prize will be awarded by a Committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis. Such memoirs must not have been published prior to the Congress. Memoirs designed for consideration should be addressed to either "The Smithsonian Institution, Washington, District of Columbia, U.S A.," or to "Dr. John S. Fulton, Secretary-General of the International Congress on Tuberculosis, 714, Colorado Building Washington, District of Columbia, U.S.A." Further information, if desired by persons intending to become competitors, will be furnished on application to Charles D. Walcott, Secretary of the Smithsonian Institute. (7) Prizes for educational leaflets: A prize of £20 is offered for the best educational leaflet submitted in each of the seven classes defined below. In addition to the prize, a gold medal and two silver medals will be awarded in each class:

Competitors must be entered under assumed names.
A. For adults generally (not to exceed 1,000 words).
B. For teachers (not to exceed 2,000 words).
C. For mothers (not to exceed 1,000 words).
D. For indoor workers (not to exceed 1,000 words).
E. For dairy farmers (not to exceed 1,000 words).
F. For school children in grammar school grades (not to exceed 500 words).

In Classes A, B, C, D, E, and F, brevity of statement without sacrifice of clearness will be of weight in awarding. All leaflets entered must be printed in the form they are designed to take.

G. Pictorial booklet for school children in primary grades and for the nursery.

Class G is designed to produce an artistic picture-book for children, extolling the value of fresh air, sunlight, cleanliness, etc., and showing contrasting conditions. "Slovenly Peter" has been suggested as a possible type. Entry may be made in the form of original designs without printing.

(8) A gold medal and two silver medals are offered for the best exhibits sent in by any State or country (the United States excluded), illustrating effective organization for the restriction of tuberculosis. (9) A gold medal and two silver medals are offered for each of the following exhibits; wherever possible, each competitor is required to file a brief or printed report:

A. For the best contribution to the pathological exhibit.

B. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State of the United States. Brief required.

C. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State or country (the United States excluded). Brief required.

D. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any municipality in the world. Brief required.

E. For the society engaged in the crusade against tuberculosis having the largest membership in relation to population. Brief required.

F. For the plans which have been proven best for raising money for the crusade against tuberculosis. Brief required.

G. For the best exhibit of a passenger railway car in the interest of the crusade against tuberculosis. Brief required.

H. For the best plans for employment for arrested cases of tuberculosis. Brief required.

(10) Two gold medals and three silver medals will be awarded for the best exhibit of a workshop or factory in the interest of the crusade against tuberculosis. The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form. Applications for further information should be made to Dr. Fulton at the address mentioned above.

LYNN THOMAS AND SKYRME FUND.

Mr. William Sheen, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this fund, desires to acknowledge the following subscriptions:

(Subscriptions Accidentally Omitted from First List.)

Subscriptions of One Guinea.

Graham, C. R., Wigan.
Pinching, C. J. W., Gravesend
Thomas, W. E. Bridgend.
Williams, H. E., Newport (Mon.).

Second List of Subscriptions.

March 21st to March 28th,

Subscriptions of Five Guineas.

Plymouth Medical Society (per J. Eliot Square).
Woolwich, Plumstead, and Charlton Medical Union (per E. Atkins).

Subscriptions of Two Guineas.

Broadbent, Sir J., Bart., London.
Butler, T. M., Guildford
Frank, Philip, London.
Grantham Medical Society (per J. W. Hancock Steil).
Leigh, W. W. Treharris, Glam.
Renton, J. Crawford, Glasgow.
Walker, T. J., Cambridge.

Subscriptions of Two Pounds.

South Essex Division, British Medical Association (per W. Cardy Bluck).
Stone, W. Domett, London.

Subscriptions of One Guinea.

Addey, W. F., Croydon
Ballance, H. A., Norwich.
Bevan, Arthur, London.
Carroll, W. S., Pontypridd.
Collins, W. A., Bexley.
Cotton, W., Bristol.
Cullingworth, C. J., London.
Ensor, C. A., Tisbury, Wilts.
Eve, Frederic, London.
Glover, L. G., London.
Govan, George, Cockermouth.
Hall, J. A., Huddersfield.
Hichens, P. S., Northampton.
Hunt, A. H. W., Wolverhampton.
Jacob, F. H., Nottingham.
Lett, Hugh, London.
Litchfield, H. R. Campbell, Twickenham.
Little, E. Muirhead, London.
Llewellyn, T. R., Penygraig, Glam.
Manser, F., Tunbridge Wells.
Marnoch, John, Aberdeen.
McFarland, Andrew, Aylesbury.
McIntosh, L. M., Blackpool.
Porritt, Norman, Huddersfield.
Rowell, J. G., Huddersfield.
Rowlands, R. P., London.
Sharpe, S. H., Goring-on-Thames.
Sprawson, G. C., Blackpool.
Turner, Edward, London.
Wood, John H., Hereford.
Worger, R. J., and Pratt, J., Radstock, Bath.

Subscriptions of One Pound.

Brown, G. Leonard, Pau, France.
Harris, N. H., Surgeon, R.N.

Subscriptions of Half a Guinea.

Bowker, C. S., Pontnewydd, Mon.
Brown, John, Bacup.
Cathcart, C. W., Edinburgh.
Charles, J., Stanley, Durham.
Couzens, A. G., London.
May, E. Hooper, London.
Nicholls, F. J., Eltham, Kent.
Purvis, W. P., Southampton.
Scot-Skirving, A., Edinburgh.
Wood, A. C., Nuneaton.
Wood, M. A., Ledbury.

Subscriptions of Five Shillings.

Blake, B. Jex., Hereford.
Leak, H., Winsford, Cheshire.

A Correction.—Mr. J. B. Footner's name should have appeared last week in the list of subscribers of two guineas, and not among the one guinea subscriptions.

CONTRACT PRACTICE.

A Doctor's Wife writes: As one who until lately was an outsider in medical matters, and who therefore looks at them partly from an outsider's point of view, I should like to say a few words on club abuses, and to express my astonishment at doctors tolerating a state of things which in other professions would be impossible. My husband is the medical officer of various clubs, which pay him 4s. a year for each member who wishes to enjoy the benefits of medical attendance. For this sum he is expected to attend them in all illnesses, and to provide necessary medicine, so that it is hardly necessary to point out that the doctor cannot profit financially from the arrangement. In cases of long and serious illness it hardly pays him for one visit and bottle of medicine; and even when there is no real illness, the club members, intent on getting value for their money, generally manage to have some small ailments requiring a few bottles of medicine during the year. Many of the members of these clubs are by no means poor, but consist of well-to-do tradesmen, shop assistants, etc.

My attention has been specially called to the matter lately by the annoyance caused to my husband by a well-to-do member of one of the clubs objecting to pay the trifling amount charged for extraneous things, such as a small surgical operation, extraction of teeth with anaesthetic, etc., all of which, though not specified in the club rules, she evidently expected to get included for the 4s. a year. It may be asked why any doctor submits to such terms, and an answer to the question is hard to find, but unfortunately there are many within reach who are willing to do so. To begin with, the doctor perhaps imagines that if one member of a family is in the club of which he is medical officer, the other members of the family will call him in. They do occasionally, but also, occasionally, they intimate that they did not expect to have anything to pay, as father, mother, or brother, as the case may be, belongs to the club.

The point of the whole matter, in my opinion, is this. Under existing conditions the whole risk undertaken by the club in providing medical attendance for its members falls on the doctor, an officer of the society, instead of on the club itself, generally a large and wealthy institution of old standing, having many departments, and many millions of pounds in reserve (one in this neighbourhood has 13 millions). If the club likes to give its members the benefit of medical attendance, by all means allow it to do so, but let all doctors unite, and oblige it to take its own risks and pay them an adequate salary for their attendance, either by guaranteeing them so much per annum for looking after their members, as is done by many institutions, or by paying them a reasonable fee for each attendance. The clubs would of course make what arrangements they pleased with their own members as to payment, and it would be an interesting problem for them to discover whether a payment of 4s. per annum per member was sufficient to cover their expenses in connexion with the doctors' salaries, etc.

MEDICINAL AND DIETETIC PREPARATIONS.

A Liquid Preparation of Haemoglobin.

Among the articles of animal origin which are finding favour to an increasing extent is haemoglobin; this is most frequently administered in a dry form, although liquid preparations are not lacking. One of the latter class, of which we have received a sample for examination, is the Liquor Haemoglobin Compositus prepared by Messrs. Longman and Co., Hanley, Staffs. This is a deep red-brown liquid with a slightly vinous and saline taste, by no means unpleasant; when heated it becomes almost solid from coagulation of the proteid present, the amount of which was found, by determination of the nitrogen, to be 22.15 parts in 100 fluid parts. The liquid contained 7.0 per cent. (by volume) of alcohol, and left on ignition 1.9 per cent. of ash containing iron, lime, soda, and phosphate; no salicylic or boric acid was present. The liquor is recommended for the administration of iron in organic combination in all wasting diseases, and appears well suited for the purpose.

ROYAL COMMISSION ON VIVISECTION.

Fourth Report.

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has just been issued.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Mr. John Glaister, M.D.

The witness stated that he was Professor of Forensic Medicine and Public Health in the University of Glasgow and had been desired by the Faculty of Physicians and Surgeons of Glasgow to give evidence. He had a place which had now been registered in his new department. He had not previously had accommodation for animals which was registered under the Act for the purpose. He had not yet applied for a licence but proposed to do so. He was very familiar with experiments on animals. Being one of the statutory certifiers under the Act, he had had for some years to act as a signatory of the certificates of others. Before signing a certificate he had always satisfied himself of two things: First, that the applicant was a capable person to perform the experiment; secondly, that the experiments, in his opinion, ought to be performed. Asked if, as regards certifying, there was any amendment he would like to suggest in the Act, he said that, so far as he could see, the Certificate "A," which was usually confined to inoculation and feeding experiments, was not large enough for such work as his own, for example. As Medico-Legal Examiner to the Crown in Glasgow and the West of Scotland, charged with the duty of examining *post mortem* the bodies in cases of sudden and violent or suspicious death, he was required to report to the Crown as to the cause of death. In some cases the death had been due to poisoning; it might be from food or ordinary poisons, or more occult poisons, and if one, in Certificate "A," laid oneself down to ask for a certain number of experiments, on account of the uncertainty of the amount of work to be done in the year one might have some difficulty in having the number of animals named in the certificate not exceeded. He might require more animals in one year than in another, and if he put down a certain number, or if the number were laid down for him by the Home Office, he might not be able to conduct the work. He said further that he understood there was a certificate which had not, he thought, been mentioned in the evidence, called "A 2," which had been issued by the Home Office to a small number of investigators. He had only seen it scheduled in the last few days. The terms of that certificate would be quite satisfactory to him, inasmuch as the number of experiments was not named, the time of carrying out the work was not laid down, and the range of work would cover all that he personally would require. There was a range of causes of poisoning due to food, of which he had had several cases in the last few years, which were more difficult to deal with than many cases of mere mineral poisons. He would like to be able to include in his work investigations on food poisoning. The cases which came under investigation were those due to shellfish, to the typhoid fever bacillus, to the *Bacillus coli communis*, to Gaertner's bacillus, which was called the *Bacillus enteritidis*, and a third group, the sausage bacillus, the *Bacillus botulinus*. These formed groups of meat-poisoning micro-organisms, some of which formed toxins, which of themselves were poisonous apart from the existence of the organism itself. Asked by the Chairman if he considered it necessary to make experiments upon animals for the purpose of making these investigations about poisons, he said he had no doubt about it. He had mentioned in his précis the Dr. Lamson poisoning case, in which aconitin was the active poison, of which the poisonous doses were an infinitesimal part of a grain; in that case Sir Thomas Stevenson discovered the poison along with Dr. Dupré, partially by experiments upon himself and upon mice. He farther referred to the outbreak of cerebro-spinal meningitis in Scotland during the past two years. During 1907, from February to September, 1,611 cases had been reported to the Local Government Board. Of these, 1,028 occurred in the county of Lanark, in which Glasgow was situated. During 1906, up to March of 1907, in Glasgow there were 312 cases and 230 deaths, a death-rate of about 70 per cent.—73.7, to be quite accurate; and in the latter year, between March 29th and May 11th, the number of cases was 229. The question at issue was how the disease was propagated. An investigation had been started with regard to the air passages of apparently healthy persons acting as passive carriers; people who had been in contact with a case had been found to carry the organism passively in their upper air passages, and it had been found in these. That subject must be elaborated, and the nature of the organism itself had to be discovered. The disease simulated certain cases of food poisoning. Asked regarding criminal poisoning, he said that there were a certain number of alkaloids so poisonous that he did not think any chemical means could possibly detect them. Comparatively little was known about them now, and they must be investigated by experiments on animals. If the poisonous dose, for example, of a drug was half a grain (and that was an exaggerated case with regard to some of them), and that was taken into the body and caused death, the most accurate chemical processes could not enable them to isolate from the remains of that body anything like half a grain; and even if rescued, as in the case of aconitin, chemical tests would not enable one to say what it was. In reply to further questions, he said experiments had materially increased our knowledge as to the action of aconitin and alkaloids. Again, the best antidote for acute arsenical poisoning was brought into practical operation by experiments on animals. In the early Thirties of last century, in theory it was believed that the use of a certain preparation of iron would be beneficial. Between 1834 and 1840 certain experiments were made on the dog and on the horse, which showed that hydrated ferric oxide, freshly made, would be distinctly antidotal. In March, 1861, Dr. Watt published in the *Ohio Medical and Surgical Journal* certain experiments performed on dogs. He administered arsenic alone to five dogs in different doses from 3 grains upwards, and all these dogs died from the effects of the poison within eight hours after the administration. To a second series of twelve dogs he administered varying, but all lethal, doses of arsenic, and afterwards administered the antidote, in some instances not until the poisonous symptoms had appeared, and all the animals recovered. It was upon evidence of that kind that hydrated ferric oxide was now recommended as an antidote to arsenic in all their books and all their teaching. Many cases of human beings recovering from arsenic poisoning by the administration of this remedy had been recorded. The experiments on dogs determined the amount of the antidote to be used to the poison—the method of use. Proceeding, he said there was a very fatally poisonous arsenical gas called arseniuretted hydrogen. A few years ago he had two cases. A man engaged in chemical works in the manufacture of bleaching powder in a Welldon's retort suddenly became overpowered, and had to be taken out. He died within three days. The man who followed him also was overcome, but he recovered. The process of making bleaching powder by a Welldon's retort was this:

Hydrochloric acid is mixed with a certain proportion of manganese dioxide; the manganese dioxide acts upon hydrochloric acid, liberates the chlorine gas, which saturates the lime and forms the bleaching powder. The retort is made to work continuously night and day for from two to three weeks. At the end of that time a workman has to proceed in from the top, by means of a rope ladder, after the retort has been steamed out with live steam, to dig out and remove what is called by the workmen the mud, the débris, which lies at the bottom of the still.

The witness was called in to consult with other doctors regarding this man before his death. After going to the works and getting the details of the process, he came to the conclusion that the man died from this gas. The case was reported to the Home Office, a *post-mortem* examination was made, and Sir Thomas Stevenson found arsenic in the remains. The interesting thing about the case was that this arsenical gas did not exist in the retort when the men went into it. As the implements for the removal of this mud they took an iron shovel and a zinc galvanized iron pail, and they themselves manufactured the gas which caused their death. They manufactured on a large scale what was

*London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

known as the Marsh test for arsenic. Since these cases he had collected over 100 cases of deaths from this cause in a large variety of occupations. In the State Ballooning Department of France several deaths had already occurred from this gas being present in the impure hydrogen by which the balloons were inflated. All the evidence they had regarding the physiological effect of this gas was from experiments made on the Continent. He was not aware of a single experiment having been made in this country on the subject. The experiments on the Continent had been by subjecting dogs to varying percentage proportions of this gas mixed with air and studying the symptoms that followed. His attention would be directed not to the result of the gas, but to the prevention or cure of the poisoning when it happened. Nothing had been done in that way so far as he knew. The gas acted differently from arsenic itself: it broke up the corpuscles in the blood, and thus an antitode was more difficult to be arrived at. An antidote must be tested upon animals. He would not dare use anything else than an animal for that. Our knowledge of antidotes with respect to a large variety of mineral and vegetable poisons had been derived from experiments upon animals of different kinds. He had a whole list there of those of which he had data, and to which he could give references. These were some of them:

Mercuric chloride: Examined by Sir Benjamin Brodie on rabbits and cats, and the reference is *Philosophical Transactions*, vol. cii, page 222 (1812) Tartar emetic: Magendie (*Mémoire sur l'Émétique*) experimented on dogs with and without the gullet being tied. (Orfila, *Toxicologie Générale*, vol. i, p 469.) Lead poisoning: Orfila, Christison, and others examined the effects by its action on animals. (Christison on Poisons, 4th edition, 1845, p. 548 et seq.) Prussic acid: Magendie experimented on dogs and birds (*Annales de Chimie*, vol. vi, p. 347; Christison on Cats, op cit., p. 757.) Hemlock: Orfila on animals. Christison in 1835 found it a deadly poison for dog, cat, rabbit, mouse, frog, fly, and flea; and Geiger, for kitten, pigeon, swallow, glowworm and earthworm. Laburnum: Ross on Dogs; Christison on Rabbits (op. cit.). Strychnine: Marshall Hall's test with frogs. (Wormley on Poisons, p. 584.) Digitalis and Digitalin, by Tardieu, on frogs in the Pommerais case (Author's Manual, p. 435.)

Asked about the certificate which he said would be satisfactory to himself, he said he would recommend it for certain heads of departments. He would like the Commission to distinguish between the head of a department supervising the whole department, and a junior working under him as assistant or a research student. The head of the department was the responsible person. The head of the department holding a licence ought to have more liberty with regard to the range of work, always subject, of course, to the provisions for inspection and other things, than an assistant or research student should have, and a little more elasticity should be shown in this regard in the certificates by the Home Office. Asked by Sir William Collins whether hydrated peroxide of iron was not recommended as an antidote before 1861, he said he had no doubt that it was, and what made him say that all the more freely was that in Christison's work the results of the experiments were so varied that Christison set himself to find out wherein the inconsistency lay. The inconsistency was largely a question of the quantity of hydrated peroxide used. Many of the experiments on dogs to which he referred were made before 1845. Since 1861 in every book on toxicology the remedy was given. Before that it was in some books, and in some books it was not. Christison recommended it, but he would like it to be understood without any doubt that Christison's opinion came after experiments on dogs conducted by Soubeiran, Miquel, and Boulay, whose researches were published in *Annales d'Hygiène Publique*, vol. xlv, p. 134. In reply to further questions, he said he did not think it necessary to illustrate his lectures on forensic medicine by vivisection. He thought it essential that they should have facilities for legal work. He was aware that under Section 12 of the Act special provision was made for that. In reply to Sir John McFadyean, the witness said the rubric on the margin of Certificate A said that it might be given for such time or for such series as the person signing might think expedient. But the rubric further said that if the certificate was unlimited or limited by time only, the Secretary of State usually imposed a limit on the number of experiments performed; and he submitted to the Commission that in Certificate A 2 there was no limit to the number of experiments put down. Asked if he thought there should not be any such limitation, he said there were cases in which it was of the utmost importance, from a medico-legal and public-health point of view, that the number of experiments should not be limited. In reply to Sir Mackenzie Chalmers, he said he never knew until recently that there were any other certificates than A, B, C, D, E, and F; but he understood that there was a certificate called A 2. On the copy he had seen the "2" had been put in in typewriting. It was headed "For Public Institutions." The number of experiments in that certificate was blank, and the time limit was blank. Asked to whom it was granted, he preferred not to say unless the Commission desired it. He might say it was not given to Sir Thomas Stevenson. Asked by Sir John McFadyean if it was possible that the figure "2" was merely to distinguish that particular Certificate A from a previous Certificate A given to the same holder and held at the same time, he said he did not know. The range of work permitted under that certificate was as follows:

Hypodermic, intravenous, and intraperitoneal injection of living cultures of bacteria, bacterial poisons, chemical substances, animal and vegetable extracts, blood, and other medicinal poisonous and infective substances. These injections may be repeated at intervals and in various combinations. Immunization experiments with any of these substances may be performed. Inunction into the skin and administration by the mouth of bacteria, animal extracts, and vegetable substances. From time to time during the experiments, small quantities of blood, peritoneal fluid, or other exudation may be removed for examination.

That was a copy of the certificate sent from the Home Office with the stamp of the Home Office on it. That was the kind of certificate he would like to have, and would apply for, because it was the only kind of certificate that would cover the range of work he was asked officially to do. In reply to further questions, he said Gaertner's bacillus could be differentiated from the other two groups in the "coli" series by cultural tests; but there was a series of organisms in the Gaertner group that they could not differentiate culturally. He agreed that the *Bacillus botulinus* could not be recognized without animal experimentation. He added with regard to Gaertner's bacillus that it was an open question yet whether the toxins could be destroyed by boiling temperature or not. The latest investigations showed that they were not. Asked if he could suggest some way in which it might be proved that the toxin had been destroyed without animal experimentation, he said the only way to know that it was destroyed was by experimentation on animals. Asked by Sir Mackenzie Chalmers if he had ever known of cases where the investigation of cases of suspected poisoning was impeded or delayed from the want of a certificate, he said, No. He was aware that in any case of difficulty a judge of the Court of Session had power to order any necessary investigation without going to the Home Office. Asked if he was aware there had been any difficulty in the head of a department, properly certified, obtaining the necessary certificates, he said he did not think so. He thought that the Home Office was exceedingly generous. Great difficulty was, however, felt by many of them in determining what really was an experiment under the Act; there was great difficulty also in defining what was pain under the Act. According to Section 2 a person must not perform on a living animal any experiment calculated to give pain, except subject to the restrictions imposed by the Act. Referring to feeding experiments, he said it seemed to him a ridiculous thing for a man who proposed to feed a cat on cow's milk to have to go to the Home Office for a certificate. He had interpreted the Act differently, and he had acted accordingly, as he would show immediately. If that practice was to be followed, the total number of experiments at the end of a year was so increased that the public thought vivisection was enormously on the increase. He referred to Questions 205, 206, and 207, which indicated that even in Mr. Byrne's opinion certificates were asked for which, in the opinion of the Home Office, although they would not offer any opinion of that kind, seemed to be unnecessary with regard to feeding. Three years ago he was asked to deal with the following problem: A series of cows were alleged

to have been poisoned with draff—that is, distillers' spent grains—on account of minute proportions of arsenic present in the draff and found on analysis. The amount of arsenic found per pound of draff was between $\frac{1}{500}$ and $\frac{1}{600}$ grain. The people who had to deal with that action had had no opportunity of seeing the animals during the continuance of this so-called poisoning. The animals were dead; they had no opportunity of seeing their bodies at a *post-mortem* examination. He was consulted by the people as to what they should do, and he said that it was no good their going to court and simply swearing that this amount of arsenic would do cows no harm. The only evidence of any value for the guidance of the court was to give arsenic to cows over a lengthened period, because they knew that the arsenic so given would do no harm. Accordingly the principal of a veterinary college, and an examiner of that college, a colleague in the University, and himself agreed that they would feed a series of cows on arsenic doses much larger than these over a period of three weeks. They did not feel that they were under the Act. They knew that the arsenic would do the cows no harm, but would do them good. They selected a bull and two cows, each with sucking calves. They gave each adult animal ½ grain of arsenic three times a day for the first week; they gave them ½ grain of arsenic three times a day for the second week; and 1 grain of arsenic three times a day for the third week. Thus in three weeks they gave these three adult animals 36½ grains of arsenic in addition, of course, to the draff as their food, which was blamed as being the cause of the mischief. They weighed the animals at the commencement of the investigation, and their temperature was noted during the course of the investigation night and morning, and at the end of the experiment every animal had increased in weight. This evidence was given to the court, and the court gave its judgement on that ground; and he held personally that they were outside the Act making that investigation. Taking another case, he was many times consulted with regard to rivers pollution cases in Scotland, and Part III of the Rivers Pollution Act dealt with what was called noxious poisoning or polluting liquid. The County Council of Lanarkshire asked him to advise them with regard to an alleged occurrence of this kind, and he made an analysis of the river water above and below the point of effluence of this liquid, but it was impossible to convey to the mind of a court of law whether a thing was noxious or poisonous unless one got some evidence to show that it was so. He therefore made an investigation on fish in the different effluents, and published the results in the Philosophical Society's *Transactions*. Some of them died. Asked by Sir John McFadyean on what ground he concluded that that was not an experiment, he said he thought that nobody would contend that fish, being cold-blooded animals, could at all be ranked with regard to pain on the same level as warm-blooded animals. It was a question of interpreting the word "pain." Nobody would define "pain" for them. The Home Office very properly declined to do so. The individual certifier to whom application was made had to do it for himself. He mentioned these cases in order to get the protection which the Commission could give him if he had gone outside the Act. In reply to Dr. Gaskell, he said that in every university there were departments in which experimentation was usually carried on—the pathology department, for example; the forensic medicine and public health department, the pharmacology department, and the physiological department. There might be several laboratories in each of these departments. There would probably be assistants in each of them; there might be research students in some of them. His position was that the head of the department, the professor in charge, should have the fullest facilities; that the assistants should have limited facilities, such as now existed under the Home Office, and in the same way research students would have perhaps to a still more limited degree. He would make the head of a department responsible for any misconduct that went on in his laboratory by his assistants. In reply to Mr. Tomkinson, he said that, assuming that one used aconitin upon rats and mice, knowing that it was aconitin, and got the development of certain clear symptoms, then, if one got something extracted from a dead body which, when injected into a mouse or a rat, produced the same symptoms, that was strong confirmatory evidence of the fact that the same poison had been used. In reply to Dr. Wilson, he said he attached the greatest importance to animal experimentation, both in public health and in criminal cases, in certain departments. He had been engaged in researches, without experimentation on animals, for the last twenty-five years. He had not been able to carry them all out without the aid of animal experimentation. Food-poisoning cases, for example, would have been done either in the Corporation's Bacteriological Institution, which was licensed, or when he had had an investigation to be carried out, he had had to apply to somebody who had a licence, and assume it as his own experiment. Asked if it had not been proved by recent research that even sound food, during the process of healthy digestion, was broken up in part, or in whole, into ptomaines and alkaloids in the living stomach, he said before he could answer that he would require to know exactly what was meant by ptomaines, because the word "ptomaine" itself implied that it could only be formed in a dead body. On its being put to him that both ptomaines and leucomaines were formed by the decomposition of healthy food when it was attacked by micro-organisms, and on his being asked whether he would not expect on analysis to find a certain amount, at all events, of these deadly alkaloids and poisons in all food that had been kept for some time, whether flesh or fowl, he said he did not think that the present stage of science would enable him to give a definite answer to that question. Brieger and others had isolated alkaloids from dead tissues which were poisonous to animals, and there could be no doubt that there was a difficulty sometimes in determining, in the examination of a dead body, whether the poisonous principle found had been due to the substance swallowed or to the natural result of decomposition of the body. It was in order to enable science to deal with such difficulties that experiments were carried on. All those foods, such as game, which were eaten high, had their special risks, because they contained ptomaines. Asked with regard to food outbreaks, from eating sausages and so on—the poisoning called "botulism"—if it was not possible to ascertain with certainty that the outbreaks had been caused by the food, he said, No. If one took, for example, Gaertner's bacillus, one might get meat containing that organism, which, neither by smell nor appearance nor taste, would give any indication of the presence of the organism. Consequently, it might be taken or purveyed quite innocently in the belief that it was good food. It would be correct, he thought, to say that many of the toxins formed in the way they had been discussing would be destroyed by a temperature of boiling point, but that some others of them would not be so destroyed, and among these particularly that of Gaertner's bacillus. Asked if Gaertner's bacillus was not found almost anywhere where there was decaying vegetable or animal matter, he said, Not by any means always; he would not say even generally; it was exceptional; that was the reason why meat-poisoning outbreaks were so uncommon, considering the great use of meat in this country as compared with other countries. They did not eat meat raw in this country; they did largely on the Continent, and if Gaertner's bacillus were present in meat they were liable to have outbreaks on the Continent, as the evidence showed. Asked with regard to cerebro-spinal meningitis and the passive carriers of the meningococcus, if it had not been proved lately that very little reliance could be placed upon the examinations which had been hitherto made with regard to the presence of the bacillus in the excretions from the mouth, Dr. Glaister said that within the present year an examination had been made individually of 370 contacts in Glasgow with the following results:

> Of the 370 contacts 22 were to be deducted for one reason, and in all, including these, 62, leaving for consideration 308 cases, occurring in 74 families. The meningococcus was found in 81 of these, or 26·3 per cent., that was to say that in 81 people out of 308 who came in contact with cerebro-spinal meningitis, but who themselves were not affected by it, in their upper air passages the meningococcus is proved by bacteriological examination.

There was a characteristic difference between the *Micrococcus catarrhalis* and the meningococcus, which was that if one took a particular medium, that was to say, a material containing neutral red, the meningococcus produced an acid reaction, whereas the *Micrococcus*

catarrhalis did not. Asked if he did not think that the difficulties attending such researches were so enormous that errors were liable to creep in, he said it was precisely because they wanted to eliminate these errors that they hoped the Commission would not do anything to prevent their being able to do so, but would give them more facilities. Asked if he thought experimentation on animals the final court of appeal on all these points, he said, Yes; in this respect, that they could hardly use human bodies. The medical profession and scientific men had not spared themselves in investigations, but there were certain others that they could not ask them to perform upon themselves. Asked as to serumtherapy, he said he did not think that any medicinal treatment could have been devised which would ever have effected what the serum treatment had done for diphtheria. In cerebro-spinal meningitis it had not been so uniformly successful. In some cases there had been a cure, but he did not know whether it could be said it was cause and effect quite so positively as in the case of the serum antitoxin in diphtheria. In reply to Dr. Wilson, who said he gathered that anaesthetics interfered very considerably with the results which he would otherwise obtain from the administration of many drugs and poisons, the witness said "Poisons, not drugs." If he wanted to see the natural action of a poison he did not wish to administer another substance which might act poisonously at the same time and confuse the results.

(To be continued.)

LITERARY NOTES.

THE second volume of the *Transactions* of the Fourteenth Congress of Hygiene and Demography, containing official reports of Sections 1 to 5, has just been issued by August Hirschwald of Berlin. The volume, which is edited by the General Secretary of the Congress, Professor Nietner, consists of about 1,200 pages. The third and fourth volumes will be issued shortly.

In the *Graphic* of March 28th there appears an illustrated article on St. Bartholomew's Hospital, which is the first of a series entitled "London's Medical Schools." We note with satisfaction that due recognition is made of the fact that the medical student of to-day is an altogether different sort of person from Bob Sawyer and his friend Ben Allen. We would point out, however, that the change began to show itself earlier than "during the last two decades." It may, indeed, be said to be a result of the passing of the Medical Act in 1858, which made the gateways to the profession more difficult to enter than they had been to the irresponsible youths of the Forties as depicted by Albert Smith. As examinations have become more numerous and more stringent, the student has perforce had to take his work with increasing seriousness. The much larger number of men who receive their training at Oxford and Cambridge nowadays is a factor which has doubtless made for greater culture and refinement. The illustrations in the *Graphic* are good, and we hope the articles will serve to give the public a truer notion of their future doctors than that engendered by long tradition and kept up by virulent—we should have said "scurrilous," but we do not wish to borrow from Mr. Coleridge's vocabulary—antivivisectionists.

The forthcoming appearance of a new journal dealing with psychology, normal and pathological, with the physiology of nerves, experimental paedagogy, the hygiene of education, and the physiology of work, is announced. It will be entitled *La Revue Psychologique*, and the first number will be issued on April 13th. It will be published under the editorship of Mlle. I. Ioteyko, M.D., of the psychologico-physiological laboratory of the University of Brussels, Professor of Experimental Psychology, and superintendent of the laboratories of paedagogics in the provincial schools of Hainault. Among the contents of the first number will be a paper on the state of applied psychology in Belgium, by M. Schuyten; and articles on the examination of the auditory sense, the measurement of muscular force, tactile sensibility and sensitiveness to pain in the pupils of the normal schools of the province of Hainault, by Miss Ioteyko.

An illustrated article on the Royal Army Medical College, which appears in the *Sphere* of March 28th, is another sign of the increasing interest taken by the public in medical matters. It is entitled the Greatest College for Army Surgeons in the World, and gives an account of the visit recently paid to the College by the Queen, and what she saw there.

In connexion with the belated honour recently paid by the City to Miss Florence Nightingale, *Truth*, in its issue of March 25th, has aptly called attention to the fact that Longfellow's poem "Santa Filomena," in which reference is made to the Lady with the Lamp, is degraded by being made to serve the purpose of an advertisement of Mother Eddy. Everyone knows the lines, some of which we quote:

Honour to those whose words or deeds
Thus help us in our daily needs,
And by their overflow
Raise us from what is low!

Thus thought I, as by night I read
Of the great army of the dead,
The trenches cold and damp,
The starved and frozen camp.

The wounded from the battle plain,
In dreary hospitals of pain,
The cheerless corridors,
The cold and stony floors.

Lo! in that house of misery
A lady with a lamp I see
Pass through the glimmering gloom,
And flit from room to room.

And slow, as in a dream of bliss,
The speechless sufferer turns to kiss
Her shadow as it falls
Upon the darkening walls.

As if a door in heaven should be
Opened and then closed suddenly,
The vision came and went,
The light shone and was spent.

On England's annals, through the long
Hereafter of her speech and song,
That light its rays shall cast
From portals of the past.

A lady with a lamp shall stand
In the great history of the land,
A noble type of good,
Heroic womanhood.

The last stanza, says *Truth*, now adorns the cover of the *Christian Science Sentinel* ("Entered at the Post Office, Boston, Mass., as second-class mail matter. Copyright, 1907, by Mary Baker C. Eddy"). Above the lines is a figure of a classical lady with a lamp, who might be a relative of the one who adorns the cover of *Truth*. We agree with our contemporary that this is surely the strangest liberty ever taken with a writer's words to transfer what was written of Florence Nightingale to "this weird compound of crazy religion and muddled metaphysics, which is at war with all medical science and hospital work." It may be, however, that the "Lady with the Lamp" is intended to represent Mrs. Eddy herself! To what base uses may a poet's verses come!

The *Lone Hand* is the title of a magazine published at Sydney, Australia. The contents are interesting and varied, and the periodical is well illustrated. We gather that the *Lone Hand* has shown a public spirit rare indeed among magazines in waging war against quackery. The number before us contains a strong deliverance on the prohibition of proprietary medicines by Dr. Macneill Simpson, of Sydney. His conclusion is: "Since people will drug themselves if they can, remove the incentives to self-drugging—advertisements of patent medicines; remove the great means of self-drugging—the patent medicines." Dr. Simpson's sentiments are admirable, but he does not tell us how this is to be done. In this country at least the Government has already too many measures on its hands. We think, however, that it would be more for the public good if it sacrificed, say, its Licensing or its Education Bill and brought in one for the suppression of patent medicines, which might have some chance of passing.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended February 15th, 22nd, and 29th, and March 7th the deaths from plague in India numbered 4,531, 5,502, 5,045, and 6,815. The seizures during the same periods were 5,565, 6,842, 7,403, and 8,103.

The principal mortality figures were: Bombay, 955, 1,125, 711, and 1,346; Bengal, 588, 910, 862, and 1,168; United Provinces, 920, 1,239, 1,262, and 1,337; Punjab, 920, 800, 1,011, and 1,619; Rajputana, 458, 468, 454, and 510; Central Provinces, 151, 224, 227, 232; Central India, 22, 18, 114, and 56; Mysore, 297, 260, 284, and 253; Hyderabad, 15, 24, 21, and 15; Madras Presidency, 66, 75, 70, and 128; Burmah, 348, 357, 143, and 45. In Eastern Bengal and Assam, during the week ended March 7th, the deaths from plague amounted to 177.

Although plague is increasing in India at present the figures are much smaller than during the corresponding weeks of 1907, when the deaths from plague amounted to 20,706, 23,400, 24,242, and 32,709 respectively.

MAURITIUS.

From February 5th to March 11th, 4 fresh cases and 4 deaths from plague occurred in Mauritius.

GOLD COAST.

During the weeks ended February 22nd, 29th, March 7th, 14th, and 21st, the deaths from plague in the several affected parts of the Gold Coast were 11, 14, 6, 8, and 10.

MEDICAL NEWS.

THE late Mr. Reginald Harrison left estate of the value of £18,642.

A SCHOOL for epileptic children has recently been established in Buda-Pesth.

THE muzzling order issued for Northampton and district on February 29th has been revoked.

IT is stated that the Dowager Empress of Russia has almost completed a scheme for the establishment of a Russian hospital in London on the lines of the French and German Hospitals.

THE discussion on rivers pollution, with special reference to the Board appointed by the Royal Commission, will be continued at a meeting of the Royal Sanitary Institute on Wednesday next at 8 p.m.

THE first dinner of Cardiganshire men and women in Cardiff and Glamorgan was held recently under the Chairmanship of the High Sheriff of Cardiganshire, Mr. Lynn Thomas, C.B. The dinner was attended by over 100 ladies and gentlemen, and will, it is hoped, become an annual fixture.

THE celebration of the hundredth anniversary of the birth of Charles Darwin, and the fiftieth anniversary of the publication of the *Origin of Species*, will be celebrated by the University of Cambridge on Tuesday, Wednesday, and Thursday, June 22nd, 23rd, and 24th, 1909. The Honorary Secretaries hope to issue in the near future a programme of the celebration, to which representatives of universities and other learned bodies will be invited.

A PROPOSAL has recently been submitted to the Belgian Senate that diplomas should be required from nurses, male and female, of the same kind as those required from dentists and pharmacists before they are allowed to practise. At present, it appears, nothing in the nature of a certificate is required of nurses in Belgium. It is suggested that the diplomas should be granted by the medical provincial commissions.

AT the last meeting of the Council of the Hampstead General Hospital the following appointments were made for the out-patient posts at the separate department in Kentish Town, which is to be maintained by the amalgamated Hampstead General and North-West London Hospitals—namely, Physicians: Dr. C. O. Hawthorne and Dr. Frederick W. Price; Surgeons: Mr. J. W. Thomson Walker and Mr. W. Feilde Fedden.

ALTHOUGH it was publicly announced, apparently with authority, that the Royal Commission on Vivisection had finished the work of taking evidence some time ago, it is now stated that it held further meetings on March 18th and 25th, at which Colonel Lawrie and other witnesses were examined. The Commission then finally decided to hear no further evidence and to proceed at once to the consideration of its report.

THE annual provincial meeting of the British Balneological and Climatological Society will be held this year at Harrogate on May 16th, and be carried over the week-end. On Saturday, at 3.30, there will be an ordinary meeting, at which short papers will be read. This will be followed by an examination of the baths. In the evening there will be a dinner, followed by an entertainment at the Kursaal; and on Sunday an expedition to Ripon, Studeley Royal, and Fountains Abbey. The hotel charges from Sunday to Monday will be one guinea.

BY the will of the late Sir Massey Lopes, Bart., formerly M.P. for Westbury and South Devon, a sum of £5,000 is directed to be paid to the South Devon and North Devon Hospital; of £2,000 to the Royal Hospital for Incurables, Putney, and other sums of £1,000 each to the Devon Ear and Throat Hospital, Plymouth Dispensary, and the Cancer Hospital, Brompton.

BILLS providing for pensions of £300 a year for the widows of Dr. Jesse W. Lazear and Dr. James Carroll, who sacrificed their lives in seeking for the proof of the mode of transmission of yellow fever, are now before the United States Congress. They have the support of President Roosevelt, Surgeon-General Riley, and the medical profession in general. The widow of Dr. Walter Reed received a pension of like amount some time ago, besides a sum of £1,000 collected by the medical profession, in recognition of his services in the same cause.

AT the annual general meeting of the London Polyclinic on March 27th, Dr. C. Theodore Williams, who was in the chair, in moving the adoption of the balance sheet and annual report, mentioned the good work that was done in the laboratory, whereby many post-graduates received valuable instruction, especially in bacteriology. The investigations carried out by the Medical Superintendent, Captain Pinch, on the same lines as those done by clinical research associations, were a great success, both in regard to prestige and finance. During the year the attendance at the clinics and lectures amounted to 13,862.

THE AGE OF THE EARTH.—In a lecture delivered at the Royal Institution on March 27th the Hon. R. J. Strutt developed the idea of measuring the age of the earth and the relative ages of its strata by means of the ratio of the helium and radium present in rocks. After pointing out that nearly all minerals contained traces of radio-active bodies and also of helium, the lecturer said that there was only a slight variation in the helium-radium ratio, whatever minerals were studied. The peculiar nature of beryl, which is rich in helium but almost, if not quite, deficient in radio-active substances, was described, and the explanation was suggested that the helium was produced by rays moving at a pace so relatively slow that they were unable to retain their electric charge. According to this view, he said, they would resemble the rays that apparently must pass beyond the circular patches produced after long periods round radio-active patches of zircon. The difficulty in this view was that they knew of no body in beryl capable of emitting these rays. Accepting, however, the general application of the helium-radium ratio, it was only necessary to establish the time factor experimentally in order to verify a number of vitally important facts, such as the length of time that man had existed on the earth. In confirmation of his view, Mr. Strutt stated that he had found that the flints present in the chalk were not more than one-thirtieth the age of the mineral veins that are mined in Cornwall.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 6, Catherine Street, Strand, London, W.C., on March 20th; Dr. de Havilland Hall in the chair. The list of sickness claims examined by the Committee was exceptionally long. In the early months of the year the sickness claim list of the Society is always increased by a large number of bronchial and other similar attacks to which medical men are specially subject. In addition to these there has been a large number of claims caused by the epidemic of influenza. These have been, for the most part, of short duration, and, as there are signs that the epidemic is subsiding, the total disbursement of sick pay will probably have no appreciable effect on the large reserves of the Society. The number of new members who have joined since January 1st this year is so much greater than the average that there seems good reason to hope that the record of 1907 will in 1908 be broken. The Society has no agents and pays no commission for the introduction of new business. The growth in the numbers is caused by those members who, having enjoyed the benefits of the Society, bring them under the notice of their professional brethren. The report, which will be submitted to the members at the annual general meeting in May next, will show that the Society is still growing both in numbers and in financial stability. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

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THE HOUSING BILL.

The circumstances connected with the appearance of this Bill are peculiar. It was introduced in the least formal manner, being merely presented without a word of comment by the President of the Local Government Board on March 26th, and the second reading was fixed for April 1st. For a far-reaching measure of social reform, drastic in its provisions, and dealing with the relations of landlord and tenant in town and country in a stern, if withal salutary, fashion, this procedure is almost unprecedented. But the peculiarity was still more emphasized when the second reading was postponed at the last moment till Monday week. In some quarters it has given rise to the suspicion that the Bill is put forward for discussion, and not as a final expression of the ideas of the Government. We hope this is not so, for the measure contains many clauses of great value, and with some modifications can be made an efficient measure for removing the insanitary scandals that still disgrace the housing of the people in both town and country. It is about a quarter of a century since this question began to be gravely discussed; it must therefore be almost ripe for settlement according to the usual rate of progress in this country. Acts have been passed, it is true, and amending Acts, but they have all dealt too timorously with the difficulties, and now Mr. John Burns comes in with a Bill bold in its conception and almost audacious in its proposals. He has behind him the report of the Select Committee of 1906. It will be recollected that in that year Mr. Mackarness obtained a good place in the ballot for private members' Bills, and he was induced in a fortunate moment to take up Sir Walter Foster's Housing Bill. He obtained a second reading for the measure, and it was referred to a Select Committee, on whose report the present Bill is largely founded.

The problem to be solved presents itself in a threefold aspect. First of all, existing houses have to be dealt with, repaired and rendered sanitary, or demolished; next, new dwellings have to be supplied to meet the existing deficiency; and, lastly, the whole process has to be wisely supervised and controlled in the interests of public health. So far, legislation has failed. Local authorities have been unwilling or unable to do their duty in this matter. In 1904, only about one-sixth of the local authorities took any action as regards unhealthy dwellings, and out of five millions of houses of an annual value of less than £15 each, only about one-ninth of 1 per cent. were reported as unfit for human habitation, a fraction absurdly below the actual requirements of the case. Driving power is obviously wanting in order to enforce the law and improve housing. It is now proposed to obtain this by making Part III of the Housing Act of 1890 compulsory, and *not adoptive*, in every urban and rural district. This is the first clause of the Bill, and really is the keynote of the whole, for it enacts that the local authority must, willing or unwilling, undertake and perform its duties as regards the housing of the working classes. The Bill makes it easier to get information as to bad homes, and easier to compel owners to put them into a sanitary condition, and, failing their doing this, the local authority may order their demolition. If the owners will not execute repairs when required, the sanitary authority can step in and do them and charge to the owner. All the delay of repeated adjournments in a local court, whereby orders for repairs and better sanitation have been so constantly obstructed in the past, will disappear under the provisions of the Bill. But, over and above all this, the Local Government Board is endowed with power to enforce action. By Clause 11 the Board, on the representation of the county council, the parish council or parish meeting, or on the complaint of four inhabitant householders, that the local authority have failed to exercise their powers under Part II of the principal Act, can, after holding an inquiry, order and compel by mandamus the local authority to do their duty. All this is excellent, and there is more of the same quality.

As regards the provision of new cottages, the great difficulty always has been the acquisition of land for building, both in town and country. This same difficulty as regards allotments was grappled with, and, as time, we hope, will show, successfully accomplished, in the Small Holdings and Allotments Act last year. The simplified procedure therein enacted for the compulsory acquisition of land is incorporated in this Housing Bill, and so this impediment will be removed, and, land being made easy to acquire and money loaned by the State on easier terms, local authorities will have no excuse to neglect their duty to provide decent and wholesome dwellings.

In the third part of the Bill town planning is provided for, and powers conferred on local authorities to draft schemes for building on land in their area in such manner as to secure proper sanitation and the desirable amenities. The ugly blots of suburban extension which now disfigure the outskirts of towns will by these clauses be prevented, and extensions made more in harmony with the demands of public health and with reasonable security for future development. Too often under the ill-regulated system of the past the destruction of one slum has led to the growth of another. The system of town-planning which the local authority will be obliged to formulate and carry out under the supervision and control of the Local Government Board will prevent such disasters in the future, and will regulate growth on lines conducive to health and wellbeing. In the end this must prove economically and socially advantageous. Through this part of the measure there runs the same spirit of central control which animates the Bill from beginning to end.

The last clauses which form Part III of Mr. Burns's Bill deal with county medical officers. "Every county "council shall appoint a medical officer of health" are the first words of the clause, and afterwards the Local Government Board is authorized to prescribe by order the duties of such medical officers of health, whether appointed before or after the passing of this measure. As some counties are small in area and population, this clause will have to be modified to enable counties to combine in appointing a medical officer to devote his whole time to the work. In the next clause the local medical officer of health is obliged, under penalty, to supply information to the county medical officer. All this is business-like and effective, but in these last words of the Bill it is clearly seen that the pivot on which the whole work of this plan of housing reform must turn is the medical officer of health. He and his staff will be, and must always be, the guides and advisers of the council of a county, a town, or a

district, and on this expert advice the local authorities must base their action. It is therefore absolutely essential that medical officers of health and those acting under them should be placed in a position of strength and independence. The Bill does not do this, and therein lies its weakness. How can a medical officer elected from year to year report and condemn properties owned by influential citizens, possibly by the councillors who appoint him? Such action is constantly under present conditions creating difficulty and disaster. Earnestness in sanitary work is too often condemned as medical officiousness, and the energetic reformer has to make place at the next annual election for a more apathetic and less reforming successor. The public health suffers, but property is protected, and the rates saved in the present to be magnified in the future. Under this bold Bill of the Local Government Board such a condition of things must be avoided if the sanitary work is to be done. There must, therefore, in the public interest be some provision for abolishing once and for all these appointments of health officers for limited periods, and for securing to them a right of appeal to the Local Government Board when dismissed. The courage which has inspired Mr. Burns to bring in this measure—which really creates in the interests of public health almost despotic central authority—must rise to the occasion, and secure to those on whom the whole work must in the end devolve security and independence from local influence in performing delicate and difficult duties for the public good. The Bill is sure to be opposed on the ground that it interferes with local self-government, and places a central authority in a position incompatible with the free action of local authorities. We admit this objection, but the history of self-government in localities teaches the lesson in unmistakable terms that public health can only be perfectly safeguarded on large and broad principles which topical influences cannot always realize. It is in this direction that success can be won, and we welcome this Bill because it has grasped the idea of central control as the foundation of health administration.

THE IRISH UNIVERSITY BILL.

Mr. Birrell's second effort at legislation in Ireland appears to have more chance of success than his first. His proposal to establish two new universities—one in Dublin in place of the Royal, and another in Belfast, for the North of Ireland—has received the approval of the regular Opposition, and of the Irish party, so that it appears almost certain that the Bill will pass both Houses of Parliament.

The first obvious objection to its provisions is that it parcels off the university students of Ireland into three denominational enclosures—an Episcopalian Protestant Trinity College in Dublin, a Presbyterian University in Belfast, and a Roman Catholic University in Dublin. In no other part of the kingdom would such a proposal be thought of, and it is an indication of the peculiar influences which seem to operate in all legislation in Ireland. Mr. Bryce's scheme aimed at bringing all students into fellowship, but this firmly fixes the walls of separation which in future are to keep the youth of the country in different and, it is to be feared, hostile camps. For this misfortune, however, Mr. Birrell is not to be blamed. The creators of the position are to be found in Ireland, and not in Government ranks, and with them the responsibility must rest.

No special reference was made to the medical school of the new Catholic University, to its equipment, or the fees which are to be charged. The medical school will be that which now exists in connexion with the present Catholic University, with a young and accomplished staff. It will be lavishly equipped, and, starting with an already-made reputation, it will attract many pupils. Then, if the school fees should be smaller than those in force at present in Dublin, a very serious competition will be set up largely injurious to the teachers in the Trinity and Royal College of Surgeons schools. In regard to the last, the President and Council have laid their views before the Chief Secretary, but he made no allusion to the matter in his speech. It is a question of the greatest interest to the existing schools, and particularly to that of the Royal College of Surgeons. If the new school should adopt the scale in the provincial Queen's Colleges, the other schools can hardly afford to adhere to the present standard. Trinity has very large endowments, and can afford to make good to its professors any reductions in income due to this cause. But in the College of Surgeons school there are no such sources of supply, and the professors must bear large inroads upon their income. It is perhaps true that in large questions of public policy such considerations should be set on one side. But no Government ought to permit personal injury to individuals without compensation. The College school has done its work for medical education with great success, and it is hoped that Mr. Birrell will divert a few thousands yearly to it, to enable it to resist the damage which this Bill will undoubtedly inflict upon it.

Belfast has not made up its mind upon the value of the gift which is presented to it. There are very divided counsels. But that city is as much entitled to a university on general grounds as are some of the provincial English towns. It has recently had a most valuable extension of scientific laboratories, provided by private subscription, and it is proposed to give a further £60,000 for additional buildings, with a handsome increase to its endowments. The citizens of the North are shrewd, and it may be taken for granted that they will think twice before rejecting a scheme which will add to their educational facilities and enlarge their good reputation, although at the cost of adding to their rather cherished isolation.

The buildings of the new University in Dublin will, it is understood, be erected on a site on the south side of St. Stephen's Green, adjacent to the Royal University buildings. The purchase will be costly in respect of some of the present residences, and it is doubtful if the £150,000 promised for new buildings will be sufficient. Who the new President will be was not announced, but a Dublin newspaper states that the office will be offered to Dr. D. Coffey, who is Professor of Physiology in the Catholic University Medical School. No mention of salary was made by Mr. Birrell, and the statement that it will be £800 a year and a residence seems to be unauthorized. The Provost of Trinity receives somewhere about £3,000 a year, and the Catholic demand being that the new college should be nearly on a level with Trinity financially, it is clear that a more substantial salary than that suggested will be necessary. The expenses of such an office are very great, and no one could fill it adequately on such small remuneration.

The proposals on the whole have been well received in Ireland. We hope the Bill, with some modifications, will go through speedily. Its passing will close at least one of the grievances of which the Irish people have long complained.

THE PROPOSED HOSPITAL FOR MENTAL DISEASES IN LONDON.

In the British Medical Journal of February 22nd it was stated that Dr. Maudsley had offered £30,000 to the London County Council towards the expense of a hospital for mental diseases. The main objects of such an institution would be, in his own words, "the early "treatment of cases of acute mental disorder with the "view, so far as possible, to prevent the necessity of "sending them to the county asylums; to promote "exact scientific research into the causes and pathology "of insanity, with the hope that much may yet be done "for its prevention and successful treatment; and to "serve as an educational institution in which medical "students might obtain good clinical instruction." It was announced a few days ago that the Asylums Committee of the London County Council had recommended the Council to accept the offer. The approximate cost of the whole scheme, site, buildings and equipment, is estimated at nearly £60,000, the balance of which, after using the donation of £30,000, would be provided by the Council, which would maintain the institution when completed. The Committee states that the strongest argument for such an institution from the point of view of the patient is that it would provide opportunity for individual treatment and close personal attention, which are all-important in the early stages of mental disorder. Other features of a mental hospital situated in London would, it is pointed out, be the possible association with the institution of honorary visiting physicians and surgeons, and the provision of an out-patient department where persons in the incipient stages of mental disorder could be taken for advice and treatment, and might thus, by timely attention, avoid altogether the necessity of certification and restraint. This, it is hoped, would, by the prevention of insanity, afford relief to the rates. It is pointed out that from another point of view a very strong argument in favour of such a hospital is the value of such an institution in the dissemination of knowledge of mental diseases and in the provision of systematic instruction in methods of treatment. A hospital, to be conducted as a school of the University of London, in close touch with the general hospitals and their medical schools, and with a central pathological laboratory, should do a great deal to bring this about.

All this has been urged in the British Medical Journal over and over again, and we are glad to see that there is at last a hope that a hospital for the treatment and study of mental diseases on the lines of the great general hospitals will be established in London. We learn with much satisfaction that the Council has adopted the recommendations of its Asylums Committee; this may be taken as a proof of the enlightened spirit in which the Council is prepared to deal with the question. The scheme cannot fail to be beneficial, directly or indirectly, to the whole population of the County of London. The site of the hospital will, of course, be costly, for it is essential that it should be in a position easily accessible from all parts of London. But it need not cover a very large area of ground, and it need not be in a part where the cost would be prohibitive. It should be borne in mind that the hospital is intended only for acute cases, and anything in the nature of the huge barracks in which the Council houses its lunatics would be a mistake from every point of view.

Another point essential to the success of the scheme is the transference to London from Claybury of the Pathological Laboratory, which should be in organic relation with the institution. This would have the further advantage, on which we have more than once insisted, that the laboratory would be in direct touch with all the asylums under the control of the London County Council—a matter of the greatest importance for the conduct of research. Until such a hospital, properly staffed and with a fully-equipped laboratory attached thereto, is available, there is little prospect of solving the mystery that enshrouds the origin of mental diseases, and therefore little hope of preventing or curing them. Continuance of the present system of herding cases of all sorts and degrees of mental disorder in numbers that make accurate observation and fruitful study almost impossible can only result in an ever-growing addition to the burden of the ratepayer without corresponding benefit to the sufferers for whom provision has to be made.

THE HOSPITALS CONFERENCE.

The United Kingdom Hospitals Conference was opened on Wednesday afternoon last at University College, London; about eighty persons were present at the beginning of the proceedings, when Mr. Lupton, representing the Leeds General Infirmary, was called to the chair, and this number was subsequently increased. The first business on the agenda had reference to the hospital treatment of persons provided for by the Workmen's Compensation Act, and the Conference expressed the view that the general principle adopted at the previous Conference, to the effect that inability to pay for adequate treatment shall be the consideration for the admission of all persons to hospital treatment, should apply to cases benefiting under the Workmen's Compensation Act. A motion to the effect that hospital patients who can afford to do so should be asked to pay for the food, medicines, and bandages supplied to them, was brought forward by the Hon. Sydney Holland, Chairman of the London Hospital, who stated that in the out-patient department of that hospital no charge was made if the patient received advice only and not medicine or bandages, and that in-patients were required to pay for certain articles of diet when there was reason to believe that they were in a position to do so. After considerable discussion this resolution was eventually carried. The Conference then proceeded to consider the subject of hospital almoners, and on the motion of Lieutenant-Colonel Montefiore unanimously resolved that the appointment of trained hospital almoners was one of the best methods of checking the misuse of hospitals, and rendering more effective the economic value of an out-patient department. The last business done by the Conference on Wednesday was to adopt *nem. con.* a resolution moved by Mr. H. A. Harben, Treasurer of St. Mary's Hospital, to the effect that the use of out-patient departments of hospitals by persons able to pay for their own treatment would be most effectually prevented by close co-operation between hospitals on the one hand, and provident dispensaries and similar institutions and local medical practitioners on the other. On Wednesday evening a number of the members of the Conference dined together at the Waldorf Hotel under the Chairmanship of Mr. Cosmo Bonsor, Treasurer of Guy's Hospital. Dr. Davy, President of the British Medical Association, in proposing success to the Conference, expressed the hope that one of its results would be to diminish the pressure on the members of the medical profession practising in the poorer districts produced by the unfair competition of the hospitals. Mr. Lupton, Chairman of the Conference, said that the meeting that afternoon had been most successful, and encouraged the hope that a conference held every year would create a healthy

public opinion as to how hospitals should be managed. Dr. Pope, Chairman of the Hospitals Committee of the Association, gave the health of the chairman, and Mr. Cosmo Bonsor, in responding, said that it seemed to him a somewhat melancholy subject for reflection that the very hospitals in whose schools students were trained for the medical profession should become their competitors afterwards. At Guy's Hospital the address of every patient was taken, and inquiries were made by a lady almoner who found that nearly all the ordinary patients were in a distressed condition, but he was bound to admit that these inquiries showed that there was considerable abuse of the special departments. A full report of the proceedings of the Conference will be published in a subsequent issue.

A NEW TREATMENT FOR LEPROSY.

From time immemorial the search for a remedy for leprosy has been carried on. When we consider the hideousness, the chronicity, and the practically hopeless nature of the disease, this is not to be wondered at. Although almost every year brings forth a new "cure," and although in the aggregate such cures amount to legion, we have to confess that hitherto the quest has been in vain. It is true that certain drugs do appear to have some influence on the progress of the disease, and it is equally true that a small proportion of lepers recover, yet it can hardly be affirmed that we can cure leprosy even in a limited sense, or any more than it can be said that we can cure cancer. When Hansen discovered the germ cause of the disease, and more particularly when it was found that tuberculin produced in certain cases of leprosy a definite reaction, it was thought by many that in that substance we might find the long-sought-for remedy, or, at all events, an indication of the direction in which search should be made. Unfortunately, the attempts to find the remedy were baffled from the outset, for it has been found impossible to cultivate the germ from which such a remedy might be manufactured. It is true that Rost and others claim to have grown the lepra bacillus, but their statements and the cures they say they have effected have not hitherto been confirmed. We print to-day a lecture by Professor Deycke, in which he states he has cultivated, if not the lepra bacillus itself, at all events an organism closely related to it; from this organism he has extracted a fatty principle, nastin, which on being injected into lepers gives rise to a reaction similar to that produced by tuberculin in tuberculosis, and which when combined with benzoyl chloride and administered in appropriate dose brings about, if not in every case complete cure, at least the arrest of the disease in all but the most hopeless. According to Professor Deycke, the combination of nastin and benzoyl chloride acts directly on the lepra bacillus by depriving it of its fatty element, thereby killing it and leaving it an easy prey to the protective influences of the tissues. The microscopic specimens and lantern slides which he showed at his lecture at the London School of Tropical Medicine seemed to support his statements. We sincerely hope that further experience of nastin therapy will be found fully or even partially to bear out what Professor Deycke claims for it. The object of his visit to this country was to obtain permission to try his nastin treatment on a large scale in some of the numerous leper asylums in British Colonies. As the treatment involves no risk or pain to the patient, we have no doubt that the Colonial Office, which of recent years has shown itself so keen to assist medical research, will afford him every facility, and also, on behalf of the innumerable leper subjects of King Edward, carefully watch the effects of the treatment. This is the least the Colonial Office can do. Any one who reads Professor Deycke's paper can see that it is based on careful work carried through with ability and in a truly scientific spirit, and all will agree that he has earned the opportunity he asks for. It is not the leper only who has a direct interest in the result, for there appears to be a side issue in the direction of tuberculosis. The latter may prove of importance, but, even failing that, if nastin therapy is found to cure or even to mitigate the misery of the hundreds of thousands of lepers who at the present moment are slowly rotting to death, Professor Deycke will have earned a place among the great benefactors of our race.

EARLY NOTIFICATION OF BIRTHS ACT.

According to a recent return made by all the metropolitan boroughs, it now appears that 17 out of 29 have nominally adopted the above Act up to the present time, but in only 4 has it as yet come into force. The Local Government Board has expressed an intention not to sanction an adoption unless a proper expenditure is made by the local authority to carry out the Act, and hitherto there seems no great alacrity on the part of the bodies that have adopted the Act to fulfil this requirement. Of the 17, only 6 propose to appoint health visitors, and 1 an extra clerk, so that it is at least doubtful whether all the adoptions will be sanctioned. To the question, "What proportion of notifications of births are received at the present time?" two boroughs, Bethnal Green and Kensington, reply, "A portion." Chelsea alone gives reasons for not adopting the Act, namely, "The probable difficulties in enforcing its provisions, and the opposition of the medical profession." Paddington states that the Paddington Health Society has offered to co-operate with the Borough Council in visiting to supplement the work of the department; and Westminster describes the action it proposes to take:—"The line we intend to take is to hold that the duty of notification is primarily open to the parents, and we are asking local medical practitioners to remind parents of their duty in this respect. If the Act is sanctioned, we shall probably supply post-cards or letter-cards. We do not anticipate having to employ extra health visitors or clerical assistance, as we intend to work it through the Voluntary Health Society which exists in Westminster, who have a large number of trained ladies as visitors. The Council propose to make a grant of one shilling for each child visited and reported upon during the year, and are providing an office for the Society. The Society will find their own clerical assistance." Five of the borough councils propose to supply stamped letter-cards. Such, then, is the present position in the metropolis. Where any activity has been shown by the medical profession the Act has not been adopted, but in many districts no organized opposition has been attempted, although it is probable that a large majority of the practitioners in London are opposed to the "compulsory notification" by medical men, and will give little assistance in carrying out the Act. Had the compulsory clauses affecting the profession not been forced into the Act, the measure would have been far more useful, and sanitarians cannot but regret that its utility has been so impaired by inspiring a strong feeling of opposition in the minds of those who otherwise would have been the first to welcome it. It is not too late now to amend the Act by the withdrawal of these obnoxious clauses; otherwise, the feeling of opposition that has been engendered in the medical profession throughout the country does not augur well for loyal co-operation on the part of those whom it will be found impossible to coerce. There can be little doubt that, had the Act been passed as originally intended, far more assistance would

have been obtained from the medical profession in carrying it out than is likely to be derived from the compulsory powers it at present possesses.

MEDICAL "PUFFS."

In the *Berliner klinischer Wochenschrift* of March 23rd, 1908, a concrete instance of what we are unfortunately forced to realize is a not very uncommon crime against medical ethics is set forth with a singular amount of convincing evidence. From time to time medical men of all countries are caught redhanded writing professedly "scientific" articles in praise of certain medicinal preparations for gain. These "puffs" are usually difficult to prove, and in the absence of complete evidence the offender, in this country at least, escapes unpunished. The Ethical Committee of the Association has investigated cases of this nature on several occasions, when circumstantial evidence made it impossible to believe that the articles complained of were bona fide conclusions of scientific observation, but, as would naturally be expected, it is but seldom that evidence can be obtained of payment by the manufacturer for the article. In the case dealt with by our contemporary, the evidence, though circumstantial only, is of such a nature that no one can hesitate in accepting it as convincing. In the *Heilkunde* of last July, an article appeared praising the virtues of "visvit," a so-called nutrient preparation. There seemed something familiar about the article, and on looking through the literature on nutrient preparations, there was found an article published in 1899 on a substance called "hygiama," which proved to be practically the same as that on visvit. In a further article on the latter preparation were found the "clinical details of cases" also practically identical with the cases quoted in the visvit article. The two articles are reproduced side by side, and it is seen that they are almost word for word identical. Perhaps the most impudent part of the publications is the slight changes in the clinical histories of the case. In the hygiama article the carpenter is 29 years of age, while in the visvit case he was 39; in the former the count of his red blood cells was 3,500,000, while in the latter it was 3,600,000. In the former case, the man gained 1¼ kilograms in a fortnight, while in the latter he gained 1½ kilograms in two weeks. The names of the authors are not mentioned in the *Berliner klinischer Wochenschrift*, which prefers to deal with this case from the point of view of the effect of such articles on the medical public, relying on the efforts of the International Medical Press Association to purge the respectable medical journals of such contributions. We, however, cannot but think that proceedings against the authors on the ground of unethical conduct would have a salutary effect, and would materially assist the cause of medical journalism. It seems inexplicable that medical men can find it worth while to sink honour, love of truth, the interest in the public weal, and the interest in the medical profession for payment. There need be no hesitation in describing this form of advertising as the worst kind of quackery, and an exposure such as this proves how utterly valueless are the utterances of their writers.

VACCINATION AND THE MEDICAL PROFESSION.

When a layman undertakes to expound and express the views of the whole medical profession on any branch of medicine, he essays a task of great difficulty and generally of small utility. Mr. Furnival, of Stone, Staffs., has made a speciality of the art of publishing antivaccination literature by means of leaflets, pamphlets, etc., which are widely circulated. *Vaccination and the Medical Profession* is the title of one of these published in 1907. Of this sixpenny brochure, it is not possible to repeat even the limited and faint praises of one who, after hearing the reading of a feeble essay, rose and remarked that he noticed the paper on which the essay was written was of good quality, and then resumed his seat. The pamphlet, badly printed on poor paper, is a jumble of selected and clipped excerpts, mostly from antivaccination publications, said on p. 45 to be the views of medical men whose names are appended, though quite a number of them are not members of the medical profession. Quotations are given from the writings or sayings of over seventy medical men. The unwary reader is left to infer that these are for the most part men who oppose vaccination. At least half of those whose names appear are in reality strong supporters and advocates of vaccination. An impartial presentation of their views would spoil the pamphlet from the author's standpoint, so no attempt is made to provide such a view. This controversial method is much on the same lines as Satan quoting the Scriptures. The contention that the medical profession in this country is utterly at variance as to the practical value of vaccination does not receive much support from this pamphlet, for Mr. Furnival is able to marshal only a thin line of a dozen or so living British doctors on his side. It is claimed, however, that among these are the four "greatest living specialists"! From this enlightened source we learn (p. 66) that "vaccination is the "nursling of those of your profession who like "sheep have gone astray." The writer concludes with these words, "May the noble art of heal-"ing be cleansed from all its uncleanness and "put on a robe of righteousness." In that case the noble art must refrain from borrowing its mantle from Mr. Furnival. His plausible sentiment becomes somewhat pharisaical and unctuous from the pen of one whose tract shows that it requires the purifying process of cleansing fires. On page 19 there occurs a glaring instance of controversial unrighteousness. Dr. M. Friedrich (Cleveland) is there quoted to have said: "It "affords me great pleasure to state that the house-to-"house disinfection freed Cleveland from small-pox." It is further stated that "he proposed to stop vaccina-"tion entirely and instead of it to disinfect thoroughly "with formaldehyde, as a result of it Cleveland is now "(1901) free from small-pox and from the worst infected "city it has become the cleanest." No doubt Dr. Friedrich did say this, but very shortly after he purged himself of the error, as was pointed out in the columns of the British Medical Journal in October and November, 1906. Mr. Furnival cannot plead ignorance of the facts. Having published this statement in a previous pamphlet, a letter was addressed to him by the Editor of the *Cleveland Medical Journal*, of which we published a copy ("Antivaccinist Tactics," October 13th, 1906), forwarded to us by the editor, who wrote: "It seems to "us wise both on behalf of Dr. Friedrich and in the "interest of the Cleveland medical profession to make "the true facts in the matter known through your "Journal." Reference to this letter and a second one published on November 17th, 1906, shows that immediately following this supposed new discovery, by means of which Cleveland had become the cleanest of cities, and rendered free from small-pox, there came the "virulent epidemic (of 1902) with its appalling fatality." During this epidemic there were 1,298 cases with 224 deaths. Dr. Friedrich found his reliance on formaldehyde and his house-to-house disinfection powerless to cope with the scourge. He reinstituted vaccination, 195,000 individuals were vaccinated, and "within two "months an epidemic which had promised by its con-"stantly increasing number of cases to be very serious "indeed began to decline, and once on the decline "dropped off with great rapidity." Mr. Furnival had

these facts before him in 1906, and it was then pointed out to him that Dr. Friedrich very positively did not wish his previous article to be republished, as it gave but a partial view of the Cleveland epidemic. The editor, however, did not object to republication provided the facts subsequently disclosed were published "in an equally conspicuous place." In the face of this we find in the 1907 pamphlet the same attempt to dupe readers by the same means as the author adopted in his previous pamphlet. An old proverb says, "He who "stumbles twice over one stone deserves to break "his shins." We suggest that this second fall of Mr. Furnival has brought upon him more serious damage as an advocate and pamphleteer, and that his *Vaccination and the Medical Profession* stands discredited and sorely in need of cleansing.

THE DAIRIES (SCOTLAND) BILL.

A Bill for the regulation of milk supplies in Scotland has been introduced into the House of Commons, which, if it passes into law, promises to revolutionize, but in no revolutionary spirit, the milk trade in Scotland. There is undoubtedly much and well-founded discontent in the large towns in England and Scotland with the present condition of affairs, and a great disposition on the part of these towns to take a short cut towards reform by assuming the direct control of dairy farms all over the country. It is questionable, however, whether the results would be commensurate with the expectations entertained. In any case, the Scottish Bill takes the more constitutional course of laying down a complete sanitary code for dairies, and providing security that it shall be enforced. In Scotland at present the law as to dairies is scattered over seven or eight Acts of Parliament and Dairies Orders. Under the Bill the law will be consolidated and amended in one statute and regulations made under that statute. The Bill provides for the regular and systematic inspection of dairies, for a report by the medical officer of health to the sanitary authority as to the condition of all dairies in the month of May in each year, for the licensing of all dairies which are reported to be in conformity with the regulations in the month of May in each year. All existing regulations are cancelled, and the sanitary authorities are required within a stated time to submit fresh regulations to the Local Government Board, which may amend, alter, or add to such regulations before they come into operation. The Bill provides that every sanitary authority "may, and, if required by the Board, "*shall*," appoint a veterinary inspector, who shall not be engaged in private practice in the district. The dairyman is required to report forthwith to the sanitary authority of the district any cow which is suffering from any disease of the udder or from any sore upon the teats accompanied by suppuration or bleeding. The veterinary inspector is empowered to mark distinctively any cow suffering from disease of the udder and to order its slaughter, the dairyman receiving the value of the carcass and hide. The medical officer of health and veterinary inspector are authorized to take samples of milk from any cow, and are to be bound to do so when required by the medical officer of the district to which the milk is consigned. A novel provision is that the dairyman is required to call in a medical man if any person connected with the dairy is suffering from "any illness "attended by sore throat, diarrhœa, lassitude, or "weakness," and the medical man so called in is required to report to the medical officer the precise nature of such illness, for which he is to receive a fee. The medical officer is to furnish forthwith to the medical officer of the district to which the milk is consigned full information as to any case of infectious disease occurring at or in connexion with a dairy. The Bill provides that when the medical officer of a consuming district has reason to believe that any disease is being spread or is likely to be spread by the milk from a rural dairy, he or his deputy and a veterinary surgeon may accompany the medical officer and veterinary inspector of the rural district to the dairy, where the dairyman is to afford every facility for the examination of the *personnel*, cows, and premises. Two members of the sanitary authority of a consuming district may, on the certificate of the medical officer, apply in a summary manner to the Sheriff for an order to stop a milk supply. The dairyman must on the demand of the sanitary authority of the consuming district furnish a list of his customers and of the persons, if any, from whom he receives milk. Last, but not least effective, is the provision under which, if a rural sanitary authority shall neglect to perform any duty imposed upon them under the Bill, the sanitary authority of the district to which the milk is consigned may complain to the Local Government Board, which, if it see fit, may apply for the equivalent of a mandamus requiring the rural authority to do its duty. Altogether the Bill appears to be a thoroughgoing measure, and calculated to secure the ends in view.

THE PRACTICE OF THE GENERAL MEDICAL COUNCIL IN PENAL CASES.

The case in the Court of Appeal reported elsewhere in this issue involved a question of some importance in relation to the procedure of the General Medical Council in the exercise of its disciplinary powers. Although the result was unsatisfactory in that it involved no actual decision by the Court, the fact that an attack made upon the methods of the Council was abandoned in open Court is a clear indication that in this case, at any rate, those methods could not be seriously called in question. The history of the case may be briefly stated. In December last a member of the profession was summoned before the Council on a penal charge.[1] In the course of the hearing his solicitor applied to see the original letter of complaint. To this the Council's solicitor objected, stating that the documents to which parties were entitled were those which were sent to the Council in support of the charge or in answer thereto. The defendant's solicitor then applied for an adjournment, in order that he might apply for a mandamus. After that application the gentleman appearing for the prosecution consented to the letter being read, and undertook to supply a copy to the defendant. On the following day, however, application was made to the Court of King's Bench for a mandamus to compel the General Medical Council to produce all documents, including the application made in writing to the Registrar, which stated the ground on which the application was made for a penal hearing, and also for a rule *nisi* directing them to hold a new inquiry. As will be seen from our report of the case, counsel for the defendant, "after reading the shorthand note of "what occurred before the Council," said he could not resist the rule being discharged. Having regard to the fact that the material document was actually produced before the Council, it is not surprising that he took this course; at the same time, it would have been interesting to obtain judicial opinion upon the point whether the Council is bound by law to produce the document in question. An application complaining of the conduct of any registered medical practitioner must be in writing, and comes not before the whole Council, but, together with the necessary statutory declaration, before the Penal Cases Committee. The Penal Cases Committee decides

[1] British Medical Journal Supplement, December 7th, 1907, p. 323.

whether the case is one in which an inquiry shall be held or not. If it decides upon an inquiry, then the solicitor draws up the necessary notice of inquiry, which corresponds to the summons received from a court of summary jurisdiction. In other words, the Penal Cases Committee stands between the profession and frivolous complaints. When an inquiry is directed, what the defendant has to meet is the charge contained in the Notice of Inquiry, not that contained in the application to the Registrar. In practice that never comes before the Council at the hearing. An accused person may obtain full particulars of the charge which he has to meet, specifying names, dates, and places. Upon request he can also obtain the full detailed documentary evidence in support of the charge. Hitherto it has not been the practice to let the party accused have a copy of the letter to the Registrar, and the legal adviser to the Council has expressed the view that the Council is under no obligation to disclose it. He has pointed out, in a memorandum submitted to the Council, that the preliminary letter corresponds very closely to the "information" upon which a summons is issued from the police-court. An information is never produced to the accused, and we see no reason why the General Medical Council should be under any obligation to produce the original letter upon which the charge is founded. "The principle is," said Baron Huddleston, in the Queen *v.* Hughes, 1879, 4 Q.B.D., at p. 633, "that "a party should have an opportunity of knowing the "charge against him, and be fully heard, before being "condemned. If he has the opportunity, the method by "which he is brought before the justice cannot take "away the jurisdiction to hear and determine when "he is before them." Having regard to the wide terms of the Council's Standing Order 8, every indulgence appears to be shown to those who are called upon to answer charges of professional misconduct.

VISION OF RAILWAY MEN.

Railway accidents and collisions at sea are, unfortunately, only too common, and besides those which are explained, there are others which baffle the most careful observers. One such accident which occurred on January 1st of this year on the North-Eastern Railway at Guisborough has been the subject of a Board of Trade inquiry. It appears that an empty train, which had been brought to a standstill by signal, was run into by an excursion train near Middlesbrough Station, and the brake van was so badly smashed that the guard barely escaped with his life. The evidence given by Wheatley, the driver of the excursion train, a man of over thirty years' experience, was to the effect that when he sighted the Whitehouse Crossing distant signal it showed partly green and partly red, and he took it as a "right away" signal. He then ran past the Whitehouse Crossing rear home and home signals without seeing either of them. He ascribed his not seeing the former to the fact that he was attending to the injector, and to the steam and smoke from the engine obscuring the latter. Colonel von Donop, who conducted the inquiry, considered that the accident was due entirely to want of care on the part of the driver, who was certainly not suffering from the effects of drink, and "it "seems inexplicable that a driver of such experience, "and with such a good record, should have acted with "the want of care which he undoubtedly showed on "this occasion." The point which would be of the greatest interest to know is the precise condition of the driver Wheatley's eyesight. Was his sight tested by a competent expert directly after the accident? and what is even more important to know would be the condition of his colour vision. If, however, this was not examined, the inquiry must be valueless, and indeed is, for the cause of the accident is, in the words of the report, "inexplicable," and nothing more satisfactory can be said than that it was due to "want of care on Driver Wheatley's part," though why such a man should be so careless is beyond comprehension. If, however, it be assumed, for the sake of argument, that his vision, and especially his colour vision, was at fault, he acted precisely as such a man would act. He sees a light, and does not know whether it is red or green; it appears to him to be as much one colour as the other, and he elects to call it green. After the accident he made the statement that the signal was in a doubtful position. We should like to know whether there was any confirmatory evidence that the semaphore arm was only half dropped, and whether, when tried afterwards, it could be made to occupy a doubtful position. What had the signalman to say? Had he attempted to drop it? Apparently he had not, for it is admitted that he had the next two signals at danger, and the driver passed the first one without seeing it, because, he says, he was attending to his engine, and apparently he neither slowed down nor warned the stoker to keep a look-out; but, anyhow, he failed to see it. He admits he never saw the second, because it was in a fog caused by the steam from the engine; but whether the signal was visible to a normal-sighted person it is impossible to say, though an examination would at once tell whether he could see a fogged red light, which is so difficult for any one to see whose colour vision is defective, and a man suffering from, say, tobacco amblyopia would do precisely what this man did. As far as we can gather, this very fact, which might have explained the whole, was the very thing never taken into account. When the statement was made some time ago to an official of the Board of Trade that defective colour vision would account for many accidents both on land and sea, he challenged any one to produce evidence that any accident had been so caused. The obvious reply was that as the Board of Trade does not examine the eyesight of those responsible for accidents, of course no evidence is forthcoming that colour-blindness does cause them. Considering the most unsatisfactory official tests used to discover this defect, it is no wonder that gross errors do exist in men who hold certificates for good vision. Until some action is taken to remedy this really deplorable state of things we shall continue to hear of cases such as the Guisborough accident, where the inquiry elicits no cause for the conduct of an otherwise rational and experienced engine-driver.

THE WORKMEN'S COMPENSATION ACT AND COMPULSORY OPERATION.

We publish elsewhere the report of a somewhat unusual case under the Workmen's Compensation Act. The question was, Can a disabled workman, who can be completely cured by surgical treatment, be compelled to undergo an operation? In our view the question admits of but one answer; but it seems that His Honour Judge Rentoul, declining the responsibility of deciding the point, has referred it to the Court of Appeal. In the case in question the workman, who had been receiving 13s. a week for thirteen months, declined to have cartilage removed from his knee, although five doctors, including two called on his behalf, said that the operation was attended with a minimum of risk. As was very properly pointed out by the Counsel for the employers, the Scottish Courts have declared that a workman must submit to a reasonable operation.[1] It is to be hoped that the Court of Appeal in England will follow their example; for it is obvious that to support a man in his refusal to do what is reasonable will be to put a premium on

[1] See British Medical Journal, February 8th, 1908, p. 359.

laziness. It may be mentioned, however, that the English Courts are somewhat jealous of compelling any man to submit to medical intervention of any kind. Thus it has been held by the House of Lords that a bankrupt cannot be compelled to submit to medical examination for life insurance at the instance of a trustee acting on behalf of the creditors. Should the Court of Appeal come to the conclusion that an operation ought to be undergone, it has an admirable method of enforcing their decree. A slight reduction of the weekly award would soon bring a workman to his senses.

MIDWIVES AND DOCTORS.

The Central Midwives Board at its last meeting resolved to make representations to the Privy Council with regard to the payment of medical men summoned by midwives in difficult cases under the rules of the Board, and as to the provision of midwives in certain poor or sparsely inhabited districts. The first point was brought forward by Mr. Ward Cousins, and elicited from the Chairman a statement of the action heretofore taken by the Board with regard to this matter, one result being that the Privy Council had adopted the suggestion that a copy of the Local Government Board's circular should be forwarded to medical practioners in England and Wales. Dr. Champneys further stated that the omission in the Act could only be cured by fresh legislation which the Privy Council had not hitherto seen its way to undertake. The Board, after a brief discussion, resolved unanimously to formulate definite proposals to be submitted to the Privy Council and Local Government Board. With regard to the other point, the Board resolved to communicate to the Privy Council its opinion that as midwives, who are a necessity, will be unable to make a living in certain localities where their presence is most necessary owing to the poverty or the sparseness of the population, a Government grant, to be administered by a council of competent persons, has become a necessity. It may be true that in a certain, probably limited, number of localities midwives are a necessity; but it is open to question whether the Board is well advised in asking for an Imperial grant to meet the necessary expenditure and yet another central body to supervise the administration of the grants. The creation of another administrative body is to be deprecated, more especially in view of the fact that a revision of the existing Poor-law system is a matter which must, before many years are over, engage the serious attention of Parliament.

The Town Council of West Ham has passed a resolution authorizing the placing of a bronze tablet on the house in Upton Lane, Forest Gate, now St. Peter's Vicarage, where Lord Lister was born.

We are informed that Dr. Latham, when reading the paper referred to in our issue of last week under the heading "The Serum Treatment of Tuberculosis," stated that the local and internal use of normal serum in many diseases characterized by tissue destruction, was introduced by Dr. Hort, to whom he took the opportunity of expressing his indebtedness in connexion with his paper.

The annual discussion at the Hunterian Society will take place this year on Wednesday next at 8.30 p.m., and will be devoted to rheumatism and be opened by Dr. Frederick Taylor. The bacteriological aspect of the subject will be dealt with by Drs. Poynton and Horder, while Dr. Lough will discuss irregular manifestations of the disease, all members of the medical profession being invited to attend. The Society holds its meetings at the London Institution, in Finsbury Circus.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Medical Inspection of Schools.—Mr. J. Redmond asked the Chief Secretary to the Lord Lieutenant of Ireland last week whether his attention had been called to a statement recently made by the President of the Board of Education to the effect that the Education Department was prepared to recommend to the Treasury that provision should be made in the coming financial year for the medical inspection of children attending schools, and that this provision should be made in the form of a special grant; and whether he intended to take steps to have a similar procedure followed and a similar grant made in connexion with medical inspection of schools in Ireland, and more especially with regard to the medical inspection of the eyesight of children. Mr. Birrell said that his right hon. friend the President of the Board of Education informed him that the newspaper report to which the hon. gentleman evidently referred contained a very material mistake. His right hon. friend did not say that he was prepared to make the recommendation in question to the Treasury. What he said was that he was asked to make that recommendation; and the sense of his reply was shown in a subsequent passage of his speech in which he asked the deputation not to press him to go to the Chancellor of the Exchequer for the ensuing year, for in the first place he thought it would be a mistake to introduce any special grant at a moment when they were anxious to get rid of special grants, and, secondly, he feared that the Chancellor of the Exchequer would not be able to meet their demands at present, having regard to the existing claims that were made upon him. Mr. J. Redmond then asked whether the National Board had taken any steps in regard to the medical inspection of children, especially with reference to their eyesight. Mr. Birrell replied that he believed they were very anxious on this subject, but he would take care that their attention was specially called to it.

Orders under the Public Health Act, 1907.—Mr. Courthorpe asked the President of the Local Government Board whether, in the case of the sanitary authorities of popular seaside and health resorts who had applied for orders under the Public Health Act, 1907, he would issue such orders without delay, in order that the sanitary authorities in question might secure the advantages of the Act before the summer season commenced. Mr. John Burns replied that he was desirous that the several cases should be dealt with as early as practicable, and he would bear in mind the point mentioned; but the preliminary investigations necessary in each individual case, as well as the statutory requirements which had to be complied with, made it impossible to issue the orders with great rapidity.

The Provision of Meals Act.—Last week Mr. McKenna informed Mr. Tyson Wilson that except in cases where it was desired to spend money from the rates upon the purchase of food under Section 3, local authorities were not required by the Act to inform the Board of Education of their proceedings under it, and he had, therefore, no complete information as to the authorities who had in one way or another taken advantage of its provisions. Thirty-nine local authorities, including two county councils, nineteen county boroughs, seven boroughs, and eleven urban districts had been authorized by the Board of Education to spend money from the rates upon the purchase of food. He was not able to state the amount expended by each local authority to meet the cost so incurred, but under Section 3 of the Act it was limited to the amount which would be produced by a rate of one-halfpenny in the pound.

The Working of the Notification of Births Act.—Mr. Alden asked the President of the Local Government Board on Monday whether he could state the number of county boroughs, urban district councils, and other local authorities which had adopted the Notification of Births Act; and whether he could make any statement as to the measures that had already been taken by the large industrial centres of population. Mr. Burns replied that the Act had been

adopted by 132 local authorities. In most of the districts in which it had been adopted there was one or more female health visitors, whose duty it was in appropriate cases to visit and advise the mothers of newly-born infants, and in some instances the local authorities availed themselves of the co-operation of local voluntary associations. In all cases the health visitors acted under the supervision of the medical officer of health.

Diseased Bacon from Denmark. — In answer to a question put on Monday by Mr. Lawrence Hardy in regard to the dangers arising from the export of bacon from Denmark which had been derived from diseased animals, the President of the Local Government Board said that, as was stated last week, he did not think any special action was necessary at the present time. He had in preparation regulations dealing generally with the measures to be taken for the prevention of danger to health from the importation of foreign meat.

The Notification of Anthrax and Glanders.—In answer to Mr. Lawrence Hardy, who called attention to an inquest held at the City Coroner's Court on a man who had died from anthrax, the President of the Local Government Board said that he was aware of the inquest. It was competent for the sanitary authority, with the consent of the Local Government Board, to make cases of anthrax and glanders in man compulsorily notifiable in their districts. He might, however, state that glanders was a rare disease as regards human beings. Cases of anthrax in man chiefly occurred in factories and workshops, and as regards those cases arrangements were made by the Home Secretary for information of them being given to the local medical officer of health.

Training of Nurses in Ireland.—Mr. Cullinan asked the Chief Secretary to the Lord Lieutenant of Ireland if he would state what proofs of efficient teaching, of efficient examining, and of the possession of adequate *matériel* and of a capable and industrious staff, did the Local Government Board require before sanctioning any hospital for the training of nurses, whether trained or merely qualified; and whether they would take the medical profession generally into their confidence on those points. Mr. Birrell, in reply, stated that under the Local Government Board's Nursing Order, 1901, a trained nurse meant any person who had resided for not less than two years in a general, clinical, or other hospital recognized by the Board, and who, after examination, had obtained from such hospital a certificate of proficiency in nursing; and the term "qualified nurse" meant any person who, after examination, had obtained a certificate of proficiency in nursing from any (1) public general hospital, or (2) workhouse infirmary and fever hospital, or (3) nursing institution, that might be recognized by the Board as an efficient school for medical and surgical nurses. The Board required as evidence of the due training or qualification of a nurse, the production of the original certificate of proficiency from a recognized hospital. Before recognizing for the purpose in question any hospital other than a general clinical hospital, the Board made careful inquiries respecting such hospital. The Board had always received and welcomed assistance from the medical profession, both as regards the general question of recognition of the training of nurses and as regards the capacity for teaching of any particular hospital. It might be added that a general clinical hospital was one recognized by examining bodies for the instruction of medical students.

The Irish University Bill.—On Tuesday Mr. Birrell introduced this Bill in a long explanatory speech, and the proposals outlined met a very favourable reception. His scheme proposes to establish two new universities, one in Belfast and one in Dublin. The Dublin University will be founded on the Royal University, which will cease, and will include the Colleges at Cork and Galway. Belfast University will take over Queen's College in that city, and may later on incorporate Magee College. Trinity College will be left untouched, and so there will be three degree-giving bodies in Ireland instead of two. The Senates of the two new universities will be nominated for the first three years, and afterwards academically elected. There will be no religious tests for professors or students, and no public money will be given to denominational education. If theology is taught, the chairs will be sustained by private gifts. The Belfast University will be Protestant, the Senate having only one nominated Roman Catholic, while in the case of Dublin there will be seven Protestants on a nominated Senate of thirty-six. Both Universities will have limited powers of affiliation, and in this way Maynooth will probably be joined to the new Dublin University, which will in the first instance have as its central college the present University College of Dublin. The financial clauses of the Bill involve an additional yearly grant of £13,500, raising the total income of the two bodies to £30,000 a year. In addition, generous grants will be given for collegiate buildings in Dublin and Belfast. The only hostile criticism came from the Ulster members, who divided against the second reading, which was carried by 307 to 24.

Deaths from Anaesthetics.—Mr. Bramsdon asked the Secretary of State for the Home Department, if he would state how many deaths occurred during the year 1907 in the metropolitan area and in the other parts of England and Wales respectively, from the effects of the administration of anaesthetics. Mr. Secretary Gladstone replied that the figures for the year 1907 were not yet available. According to the verdicts of coroners' juries and the certificates of medical practitioners there were, in the year 1906, 64 deaths in London and 119 in the remainder of England and Wales caused by anaesthetics administered for operations. There appeared to be some reason to doubt whether the certificates on which these returns were based were in all cases complete, and there must necessarily sometimes be difficulty in determining if death under an anaesthetic was caused by the anaesthetic. He proposed, therefore, to make further inquiry into the matter.

Fever and Opium in India.—Mr. Rees asked the Secretary of State for India whether, in view of the fact that the mortality from fever in India was so greatly in excess of that occasioned by other diseases, and of the fact that opium was a recognized specific, and an absolute necessity to certain races and tribes of Indians for the treatment of this disease, he would, in arrangements that are made for reducing the cultivation of opium, safeguard the supply of sufficient quantities for use for medicinal purposes. Mr. Secretary Morley said that he had no doubt that in any further regulations which the Government might make for the restriction of the opium habit in India, the special circumstances of particular tribes or races, necessitating a supply of the drug for medicinal purposes, would receive due consideration.

Vaccination.—Mr. Jackson asked the President of the Local Government Board whether his attention had been called to the fact that Mr. A. E. Rossiter, Vaccination Officer of the Greenwich Union, omitted to serve Form Q on Mr. Frederick Daniel Eastman, of 45, Lausanne Road, Queen's Road, S.E., before Mr. Eastman's child had attained the age of 4 months, as prescribed by the Vaccination Order of May, 1907; and whether, in view of the fact that this omission contributed to Mr. Eastman's neglect to make a declaration under the Act of 1907 until six days after the four months' limit prescribed by that Act, and that Mr. Eastman had made a declaration and paid 1s. 6d. for it, although a week too late, he proposed to take any steps in the matter. Mr. John Burns said that he understood from the vaccination officer that he visited the home of the child on February 12th last, when the child was little more than 3 months old, that he was told by the mother that it was not intended to have the child vaccinated, and that he informed her that the necessary objection should be sent within the time allowed. He also understood that his note of the case after his visit showed that a notice in the Form Q was sent in the evening of the day of his inquiries. It did not appear to him that he could take any steps in the matter, but he gathered that the father had not communicated with the vaccination officer with regard to the case since the latter returned to him the statutory declaration which was made after the prescribed period, and it might be desirable for him to do so.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

IX.—REMEDIES FOR BALDNESS, TO BE TAKEN INTERNALLY.

DURING recent years the number of preparations put forward for the cure of baldness has been increased by a new class, those, namely, which are not applied locally but taken internally. The most widely advertised of these is the one known as "capsuloids"; these are manufactured by the Capsuloid Company, Limited, 47, Holborn Viaduct, London, E.C.

The price is 2s. 3d. per box containing 36 capsuloids.

On the outer package it is stated that—

Our special process used in making Capsuloids is never used and never has been used outside our laboratory. It is known only to The Capsuloid Company Ltd., and has never at any time been communicated to any other person or firm. This material is then enclosed in little pear-shaped gelatine capsules which are made of the finest and purest gelatine. As a result of our special process, Capsuloids have that particular and remarkable effect upon the hair through the medium of the blood which is so well and widely known. There is no other preparation which possesses anything like the same effect.

Capsuloids not only cause the death of those harmful germs which we have proved to be the cause of falling out and prematurely grey hair, but they also restore the injured growing cells of the hair roots, and nourish them, and cause them to multiply so that the roots become firm and grow rapidly, producing thick and luxuriant hair, and where there has been premature greyness, it is also cured. Recent scientific investigation has definitely proved this, and has demonstrated that hair cannot be made to grow by using external preparations.

Directions. To stop falling out of the hair and to restore the colour to prematurely grey hair, adults should take two, or in very severe cases, three capsuloids before eating or with the first part of each meal, three times daily. The dose for younger persons is one or two with each meal. Capsuloids never cause constipation or indigestion, nor do they in any way upset the stomach, or any part of the system.

A booklet of twenty pages is enclosed in the package, in which the above statements are repeated and further elaborated with the aid of a diagram of the root of a hair, with blood vessels, oil gland, "growing cells containing harmful germs," etc.

The capsuloids proved on examination to be elongated gelatine capsules containing a dark material, the average contents of one weighing 3·4 grains. The material yielded 32 per cent. to a solvent suitable for extracting fats, and this portion proved to be a mixture of about equal parts of a neutral oil and a fatty acid, agreeing in their characters with olive oil and oleic acid, respectively. Extraction of the residue with alcohol then removed 10 per cent. of an aromatic balsamic substance, generally resembling Peruvian balsam, but lighter in colour; a mixture of equal parts of Peruvian balsam and purified storax gave a practically identical substance. The residue, insoluble in both solvents, was a red-brown powder, which was found by its characters to be dried haemoglobin. Careful search was made for arsenic, alkaloids, and other ingredients, but nothing else was detected. The results indicated the following formula for the contents of the capsules:

Haemoglobin		1·97 grain
Olive oil } of each		
Oleic acid }		0.54 ,,
Balsam of Peru } of each		
Purified storax }		0.17 ,,

In one capsule.

Estimated cost of materials for contents of thirty-six capsules, one penny.

Other articles similar to the above appear to be largely sold. The following particulars are taken from price lists and advertisements intended for retail chemists; as haemoglobin is referred to as the principal constituent in each case, they were not submitted to analysis.

"Capsulated Haemoglobin Ovals for the Hair. Contain 2½ grains of Pure Haemoglobin." Supplied by A. H. Cox and Co., Brighton, labelled with name and address of retailer. Wholesale price: Tubes of twenty-five, 4s. per dozen.

"Capsules for the Hair. When falling out or turning prematurely grey, these capsules by enriching the blood make the hair glossy, luxuriant, and full of vitality." These are not described on the package as containing haemoglobin, but are quoted in the price list as "Haemoglobin Hair Capsules." Supplied by the Standard Pill and Tablet Co., Hove. "Store price, 1s. 6d." Wholesale price, 7s. per dozen packages.

"Soluble Capsules of Haemoglobin. A natural hair food. Produces Healthy, Strong, and Luxuriant Hair." Supplied by R. Ferber and Co., 191, Southwark Bridge Road, London, S.E. Wholesale price: Boxes of thirty-six, 5s. 9d. per dozen.

*Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL: 1904, vol. ii, p. 1585; 1906, vol. ii, pp. 27, 1645; 1907, vol. i, p. 213; vol. ii, pp. 24, 160, 209, 393, 530, 1653.

THE SOCIAL CONDITION OF WORKING-CLASS FAMILIES IN DUBLIN.

MR. T. J. STAFFORD, C.B., F.R.C.S.I., Medical Commissioner, Local Government Board of Ireland, and Mr. C. D. La Touche have prepared a report embodying the result of their researches into the social conditions and domestic economy of a number of working-class families in Dublin. The information has been obtained in a very complete way, actual dietaries have been taken and worked out in grams of protein, carbohydrate, and fat; and these figures have been reduced to their food values in calories, and tabulated along with the actual cost of the materials.

Of these tables, the first deals with 1 254 families, with special reference to their housing accommodation. These families are not chosen from the very poorest class, but are taken as typical of the average conditions of a working-class district in the city, yet only some 12 per cent. have housing accommodation which can be regarded as satisfactory in respect of air space, sanitation, and cleanliness. Almost 60 per cent. of these families occupy single-room tenements, but in these cases the amount of air space is not always bad, as many tenement houses in Dublin are houses once occupied by the wealthy classes, and the rooms are large and lofty. The sanitary arrangements, however, are found to be unsatisfactory in no less than 87 per cent. of all the cases investigated. This is not to be wondered at when it is shown that a single watercloset has to serve, on an average, 4·68 families.

The remaining tables are devoted to an elaborate analysis of the incomes, expenditure, and dietary of twenty-one families, of which records were obtained for periods of from four to ten weeks, the average period being 6·33 weeks. The average weekly earnings of these families amount to £1 3s. 2¼d., which gives an income of 5s. 0·8d. a head, but there are ten families in the list with incomes under £1 a week, and one case in which a charwoman and two children subsist on an average income of 7s. 7½d. a week. Taking the total figures, it is found that 98·35 per cent. of the earnings are spent, and even the remaining 1·65 per cent. which is saved is accounted for by eleven families, the other ten, or very nearly 50 per cent., showing a deficit on their budgets. In six of these cases, one of the items of expenditure is "Pawn-office and loans." Of the total expenditure, 68·38 per cent. is absorbed by food, and 14·51 per cent. by rent, leaving little margin for fuel, light, clothing, etc. Obviously recreation in the ordinary sense of the word can have no place in the great majority of these lives.

The average weekly expenditure of these twenty-one families on food works out at 13s. 3¾d., for which is obtained an average of 98·52 grams of protein per man per diem (consumption by women and children having been reduced to fractions of the average consumption of a man). If, however, the families of unskilled labourers only be taken, the amount spent weekly falls to 10s. 4d., and the amount of protein obtained to 80·6 grams per man a day. One of the columns in Table II shows the ratio of income to the "Poverty line" as estimated by Mr. Rowntree. This "Poverty line" is adopted as a matter of convenience, although, as the authors point out, it is open to criticism on account of its "arbitrary and speculative character." Taking it for what it is worth, however, the table shows that twelve out of these twenty-one families fall below the minimum income which may be regarded as necessary to procure them the simplest necessities of life. This class below the line consists mainly of the families of unskilled labourers, and in only one case does an unskilled labourer manage to keep above the line. But the main factor in

putting families below this sinister line is the presence of a very moderate proportion of children. The families above the line consist of twenty-two adults with ten children, while those below include twenty-nine adults with thirty-five children. Even these figures show an average of only 2.41 children to each pair of adults, or, supposing half the adults to be unmarried (these figures are not given), the average number of children in each family is still under five, which is certainly not excessive, and ought not to be such a handicap as to determine actual poverty under reasonable economic conditions.

It is pointed out by the authors, however, that in arriving at his poverty line Mr. Rowntree has adopted Atwater's standard of nutrition—namely, 125 grams of protein, and 3,500 calories per diem for a man doing moderate muscular work. These figures are only slightly in excess of Voit's estimate of 118 grams of protein and 3,000 calories, but both, as is well known, have recently been challenged by Chittenden, who maintains that "one-half of the 118 grams of protein food called for daily by the ordinary dietary standards is quite sufficient to meet all the real physiological needs of the body, certainly under ordinary conditions of life"; and that "even the man who is called upon to perform considerable physical work has no apparent need for a fuel value in his food of 3,000 calories per day." Applying Chittenden's scale to the dietaries under consideration, it appears that of eight families which show considerable deficiencies in their protein supply under Atwater's scale, seven show a surplus under Chittenden's and only one a deficiency of 13 grams. Notwithstanding this, the authors feel justified in drawing the conclusion that "in Dublin £1 a week is the minimum income needed to provide a family (of 3 3 men) with the prime essentials of life. This leaves no margin; but, judging from the habits of the people as ascertained in the present inquiry, that sum will be sufficient only if the family does not exceed four persons—two adults and two children. This is a grave conclusion from the standpoint of national increase, as it means that any tendency in the labouring population to increase in numbers must be accompanied by privation of some of the necessaries of healthy existence."

In addition to full tabulated figures of the twenty-one actual budgets and dietaries investigated, the authors give a theoretical dietary, following as closely as possible the tastes of the people as revealed in their actual dietaries, and showing that it is possible, with a reasonable variety of food, to obtain for 13s. a week for a family of two adults and three children the daily average of protein and fuel value required by Atwater's standards.

The authors conclude by pointing out that: "In view of the large proportion of income devoted to food, the nutritive qualities of the food are all-important. It is therefore advisable to attack the question of protein and fuel value sufficiency both from the empirical and from the scientific standpoint:

"(*a*) By collecting budgets on the same lines as in the present instance for representative families in the British Isles, both in town and country districts, as well as in foreign countries, in the most extended manner possible.

"(*b*) By showing from the statistics so obtained the maximum, minimum, and average protein and calories actually consumed per head over a very wide area and under a great diversity of conditions, and on the basis of the phenomena observed proceeding with a scientific investigation of the quantity of protein and calories needed for physical efficiency under varying circumstances of age, sex, occupation, season, and climate.

"(*c*) By educating the labouring classes as the result of the conclusions reached, how their living might be improved by a more economical and effective application of their expenditure on food."

The authors refer to the work done on these lines in Edinburgh and in York by Mr. Rowntree, and to the similar investigation carried out by Dr. J. Lumsden for Messrs. Arthur Guinness, Son, and Co., into the condition of their employés in these respects, but they do not appear to have seen the results obtained in Manchester by Dr. Niven, M.O.H. for that city, which are equally valuable and instructive[1]

In conclusion, we note that there is nothing in this report to indicate by whom it is published, or how copies are to be obtained which is the more regrettable as the authors are to be congratulated on having produced a singularly valuable and painstaking contribution to practical scientific sociology, and one which should be in the hands of all their fellow-workers in this field.

[1] See Feeding in Relation to the Health of the Young. By James Niven. *Archives of the Public Health Laboratory of the University of Manchester*, vol. i. Manchester University Press. 1908.

Mauritius.

PROFESSOR RONALD ROSS'S ANTIMALARIA CAMPAIGN.

A CORRESPONDENT writes to us from Port Louis: Professor Ronald Ross proceeded to Mauritius in October last at the request of the Colonial Government, to advise as to the best methods of diminishing malaria, which has been raging in the colony for the last forty-five years. He arrived in the island on November 20th, and is leaving to-day, February 25th, by a Messageries Maritimes liner. During his three months' stay Professor Ross has visited the most unhealthy localities, and found that the *Anopheles costalis* was to blame for the propagation of malaria, but did not find that *Anopheles mauritianus*, a species peculiar to the colony, played a similar pathogenic part.

His first step was to organize mosquito brigades, training a number of Indians in the art of finding and collecting mosquitos and larvae, especially those of the objectionable kind. In December Professor Ross delivered a most interesting lecture on the propagation of malaria before our medical society, of which he has kindly accepted the honorary presidentship. In January he gave a garden party in which practical demonstrations were given to a select gathering of gentlemen and ladies, and, in February he delivered two popular lectures, with lantern illustrations, before crowded and enthusiastic audiences. In a word, thanks to his world-wide authority and his persuasive eloquence, he galvanized public interest in this colony, and has given a strong impetus to the study of the malaria problem, in which every one here is so deeply concerned.

The medical practitioners of the Colony, wishing to testify their high appreciation of the invaluable services rendered by Professor Ross to the cause of humanity, in the tropics especially, gave a banquet in his honour on February 15th. His Excellency the Governor, Sir Cavendish Boyle, K.C.M.G., attended, and Dr. H. Clarene, M.D.Paris, President of the Medical Society, was in the chair. Forty-one medical men—exactly two-thirds of the medical corps of this island—were present, the others being unavoidably absent through pressing professional engagements. The party included Dr. Edwards, M.D. Paris, C.M.G., ex-member of the Legislative and Executive Councils; Dr. Lovano, M.B., C.M., D.P.H.Edin, Director of the Medical and Health Department, and member of the Legislative Council; Dr. Laurant, M.B., B.S.Lond., Mayor of Port Louis, and senior elected member of the Legislative Council; Dr. Rohan, M.B., C.M., ex-elected member of the Legislative Council; Dr. Paddle, M.D.Lond., F.R.C.S.Eng., Medical Superintendent of the Lunatic Asylum; Dr. Lafont, M.D.Paris, Director of the Bacteriological Institute; and Dr. Rouget, M.D.Edin., head of the principal hospital of the island.

Among the guests was Major Fowler, R.A.M.C., appointed by the Director-General of the Army Medical Service to work in association with Professor Ross, as regards the military aspects of the matter. The menu card, drawn by Mr. Gillet, one of our best artists, was partly allegorical, giving at the top a very good portrait of Professor Ross in a medallion, round which are inscribed his principal antimalarial campaigns. A swarm of mosquitos fly, as if scared, from the portrait, while one fixed to the "U" of menu as to a wall betrays by its position the species depicted; below is a view of the harbour of Port Louis, the capital of Mauritius. On the left is a line of palm trees, with an aloe tree and a cactus in the foreground. On the right is a tuft of sugar cane (indicative of the principal product of this land) by the side of a small pool, the dreaded breeding-place of the malaria propagator. The chairman, who spoke in French, in proposing Professor Ross, referred to the difficulties he experienced in his initial researches, expressed his gratitude, as a fellow student and countryman of Laveran, for Professor Ross's allusions in his lectures to the great French scientist, and for the congratulations sent to him from

Mauritius on the recent occasion of his winning the Nobel prize. He warmly eulogized Professor Ross for his devotion to the cause he had advocated, his self-sacrifice in leaving his quiet life at Liverpool for countries where he was exposed to risks and fatigue. He thus offered a remarkable example of a scientist being himself the apostle of his discoveries. He contrasted the little consideration scientists and benefactors of humanity meet at the hands of governments with the handsome rewards granted to the warriors for shedding tears and blood, and concluded by expressing in the name of the whole profession in Mauritius the admiration felt for Professor Ross's works and scientific campaigns, the appreciation of the honour conferred on them by his presence, and the wish that his campaign in Mauritius would have the desired results. Professor Ross replied in a humorous speech, which was repeatedly cheered. He alluded to the support he had received from the Governor in his endeavour to diminish malaria in the island, and to the high intellectual attainments of the medical men of this colony, who all gave him the greatest assistance. He pointed out what the medical men had still to do, and said that he relied entirely on their co operation to have his scheme carried out. Professor Ross concluded by wishing success and prosperity to the medical profession in Mauritius.

Dr. Edwards, C.M.G., the doyen of the medical profession, returned thanks in the name of the "Corps Médical." Speaking in French, he said that the medical practitioners of the island were always busy at the bedside of their patients, and had no time for scientific researches. Their life was a hard one, but whatever leisure they had they spent in reading. It was thus that they had followed step by step Professor Ross's discoveries and campaigns, and had known how to appreciate his invaluable services, of which the island was sure to reap the benefit at no distant date. Dr. Edwards concluded by proposing "The health of His Excellency the Governor," who deserved gratitude not only for what good he had always done to the Colony, but for having been largely instrumental in securing Professor Ross's services for it.

The Governor, in reply, said he was most desirous of carrying out Professor Ross's recommendations, but money was wanted. Taxes were never popular, but perhaps the best course was to tax people without their feeling it, just as doctors performed an operation under an anaesthetic. He assured Professor Ross that he would do his utmost to have the measures recommended carried out.

Dr. Laurent, who spoke in English, proposed the health of Major Fowler, R.A.M.C., who returned thanks, and proposed success and prosperity to the Medical Society. He traced the history of this Society, founded twenty-five years ago, and referred to the work done by its members in the present and past.

Dr. Chevreau, Secretary of the Medical Society, who replied in French, said that the Society was highly honoured by the acceptance by Professor Ross of its Honorary Presidentship. Around the table of the Society sat medical men belonging to the great medical schools of France and Great Britain, joined in a most cordial confraternity, so that the Society afforded a splendid example of a true scientific "*entente cordiale*."

The Governor then proposed "The Chairman," and Dr. Galot, a junior member of the profession, closed the list of toasts with "The Ladies," coupling with that toast the names of Miss Lane (the Governor's niece), Mrs. Ross, and Mrs. Fowler.

In departing to-day from our shores, Professor Ross may be sure that he is leaving behind many admirers and friends, and, as he said himself in his speech, not a single enemy.

Canada.

[From our Special Correspondent.]

Toronto.

Fees in Country Districts.

There has been a movement throughout the Dominion towards increasing the fees of medical men. For years past there has been little or no change in the rates, except in the larger cities, where the charges for operative work have increased materially. On the other hand, the general practitioner, even in the cities, has not only not increased but in some instances has decreased his fees for office and house consultations. In the towns and rural districts this cutting of rates has in some cases been carried to an extraordinary length, for example, a visit to a house, with medicine included, 25 cents. A visit to a town eight miles away, 2 dols. This is not the rule, but there is at least one place among the Eastern Townships where this holds true, and there are places where a confinement is carried through for 2 50 dollars. Such abuses usually correct themselves in large centres, and here anything in the way of a tariff would seem to be superfluous if not an anachronism; but in country districts matters apparently cannot be arranged without a mutual understanding between the members of the profession, and consequently reports have been coming in from many different places in regard to the adoption of a new tariff. Several different experiments are being tried, and it will be interesting to see how they will work out in practice. For example, in Hamilton the fee is to vary with the financial condition of the individual, and the people are divided into classes according to the hundreds or thousands which represent their income, and their bills are adjusted accordingly. Although it is understood that occasional variations from the true state of affairs are inevitable, few will envy the busy practitioner when his monthly accounts have to be made up. In the eastern townships the District of St. Francis Medical Association has determined to advance the rates of the old tariff, which was adopted in 1891, about 25 per cent., and as the cost of living has about doubled since then, the change is moderate. In surgical work the increase has been more marked, for the maximum fee for abdominal section used to be $100, while at present this remains as the minimum, and $150 to $200 is the usual figure. For the reduction of any fracture $20 used to be the maximum, while at present $50 to $75 may be charged for setting a broken femur or humerus. The change has, on the whole, been well received by the medical men, and is being enforced in the majority of places. In London (Ont.) and several other centres the same steps have been taken, and it is the fault of the medical man himself if he does not better his financial position at the present time when every one is looking for an increase in medical fees.

Proposed Tuberculosis Exhibitions in Montreal.

It is hoped that Montreal will have a tuberculosis exhibition next autumn which will rival that of Washington. The Montreal Tuberculosis League has had a most excellent year of work, some 230 new cases having been reported during the year. Six patients were transported, eight were sent to the country for various periods, and many have received coal, rent, etc. Twenty-two were supplied with milk amounting to 1,187 quarts, and fifty-four with 216 dozen eggs. About 350 garments were distributed during the year. The inspector's work for the year included 5,137 visits, and there were 685 disinfections. In the dispensary department there were 273 new patients and 1,840 consultations. The revenue was $3,092.95, with an expenditure of $2,836 96. This organization is now pushing forward the arrangements for the exhibition, and already has appointed the Committees of Finance, Education, Entertainment, Exhibition, Lecture, and Press. That the scheme will prove a success is a foregone conclusion, when such energetic men as Adami, Martin, Shepherd, McPhail, Lafleur, and Armstrong are seen to be on the Committee. It is desired to interest school children in the exhibition and popular lectures, and other attractions for the general public will be provided.

Not only is Montreal providing for its tuberculous cases and educating the public to appreciate the value of preventive measures, but it is also trying to take those who from their state of health might develop tuberculosis, and restore them to their accustomed vigour. The Brehmer Rest, which is situated in the Laurentian Mountains, takes no cases of definite tuberculosis, but those who are convalescent from typhoid fever, measles, pleurisy, pneumonia, etc, are welcome to take advantage of the sunshine and clear air of the mountains. This work has been going on for three years, and the institution has become a very valuable aid to the general practitioner, although still conducted on a very small scale. Forty-three patients were accommodated last year, of whom thirty-eight were reported as having benefited very much by their stay.

England and Wales.

[From our Special Correspondents.]

PORTSMOUTH.

Royal Portsmouth Hospital.

Resignations of Mr. Ward Cousins and Mr. Rundle.

At the last meeting of the Governors of the Royal Portsmouth, Portsea, and Gosport Hospital the resignations of Mr. Ward Cousins and Mr. Henry Rundle, Senior Surgeons to the Hospital, were announced. The Rev. W. C. Hawksley, in moving a resolution thanking Mr. Ward Cousins for his services during forty-eight years at the hospital, and appointing him Honorary Consulting Surgeon, said that, even before his appointment to the staff, Mr. Cousins had attended the hospital as a young man. He referred to the fact that Mr. Cousins had been Chairman of the Council of the British Medical Association, as well as President of the Association, and was now a member of the Council of the Royal College of Surgeons, and mentioned that he was one of the founders of the Portsmouth Eye and Ear Infirmary. The resolution was seconded by Sir John Brickwood, and carried unanimously. In moving a resolution thanking Mr. Rundle for his thirty-four years' service and electing him an Honorary Consulting Surgeon, Mr. H. R. Pink referred to Mr. Rundle's services with the German medical staff during the Franco-German war, and to the part he had taken in founding the Landport Provident Dispensary. The resolution was seconded by Mr. George Long, supported by the Mayor, and carried unanimously. In responding, Mr. Rundle mentioned that the work at the hospital had enormously increased during his term of office, the number of operations having risen from 104 in his first year to 2,000 last year. Drs. Munro Ford and A. Bosworth Wright were appointed surgeons, Drs. Scott Ridout and Burrows honorary assistant surgeons, and Dr R. G. Brown honorary assistant anæsthetist. New wards and a new operating theatre have recently been taken into use at this hospital, and plans for a new out-patient department to be erected at a cost of £4,000 have been approved. Mr. Ward Cousins has also resigned the office of surgeon to the Portsmouth Eye and Ear Infirmary.

BIRMINGHAM.

Mr. Hall-Edwards.

The news that the King has granted a civil list pension of £120 a year to Mr. Hall-Edwards has been received with great satisfaction in Birmingham and the Midlands. It will be of considerable help to the voluntary effort that is being made. The first list of subscribers to the fund was published on March 28th, and the donations received or promised amounted to £1,005 15s. 6d. Further sums will be gladly received by the Committee, and may be sent to the Honorary Treasurer, Mr. F. Marsh, 93, Cornwall Street, Birmingham.

The Children's Hospital.

A public meeting was held on March 27th in the Council House, Birmingham, in support of the scheme for rebuilding the Children's Hospital. The Lord Mayor presided, and there was a large attendance. The Chairman of the Management Committee (Mr. H. K. Beale) proposed:

> That this meeting approves of the resolution of the Governors of the Birmingham and Midland Free Hospital for Sick Children to rebuild the hospital, and resolves to support the appeal for the necessary funds.

In a most convincing speech he pointed out the very great necessity there was for taking this step. The hospital was started in 1861 in a small house in Steelhouse Lane, but the work of the institution speedily grew, and an out-patient department was opened in 1869. Further accommodation was required for in-patients, and in 1870 the hospital was moved to its present site in Broad Street. There were at that time forty-seven beds. Eight years later new wards were opened, and the number of beds was raised to sixty-two, and had so remained. The chief difficulties about the present buildings were that they were scattered and on a site of a very curious shape, rather like the figure eight, with a narrow neck in the middle. Another great difficulty was that the nurses were scattered in four different homes, and their quarters were such that it was almost impossible to provide adequate means against infection. Dr. Robertson, the medical officer of health, inspected the hospital two years ago and made an exhaustive report, in which he frankly said that the buildings were so out of date and inconvenient that they ought to be pulled down and rebuilt. It was necessary to commence to build now or the hospital would run the chance of extinction, as the lease of the present building was rapidly running out. The Committee had been fortunate in acquiring an estate in Ladywood Road of about 2½ acres, which was sufficiently central for all practical purposes. A contract had been entered into for the purchase of the site at a cost of about £16,500, and that amount of money was required at once. It was proposed to have 148 beds in the new building. A rough estimate of the cost of the building and its equipment would be about £75,000. Mr. L. P. Gamgee (Chairman of the Medical Committee) seconded the resolution. In the course of his speech he pointed out how very few beds there were in the present hospital, when compared with the number of out-patients. At Aberdeen there was one bed to every 27 out patients; at Derby one to 40; at Bradford one to 66; Nottingham one to 117; London (Great Ormond Street) one to 159; Liverpool one to 233; and Birmingham one to 262. The Rev. Canon Carnegie, Sir James Sawyer, and the Rev. J. Wood supported the resolution, which was carried unanimously.

The Royal Territorial Medical Corps.

A scheme is to be attempted in Birmingham with regard to the Royal Territorial Medical Corps which is very striking on account of its wide extent. The Worcester and Warwick Brigade Bearer Company is to be expanded into a medical force for the whole of the South Midland Division. Surgeon-Colonel Whitcombe has been appointed principal medical officer, and it is due to his enthusiasm and energy that the corps seems about to make a very successful commencement. Colonel Whitcombe proposes to concentrate in Birmingham the various ambulances, instead of having small and scattered units throughout the six counties of the divisional area. The following is the force that will be raised:

	Officers.	Other Ranks.
2 Field Ambulances	... 21	346
1 Cavalry Field Ambulance ...	... 6	116
Sanitary Corps	... 3	127
1 General Hospital	... 32	43
	62	632

It is probable that 86 additional men for hospital duties will have to be raised and trained in Birmingham for the South Midland Division, so that the total will be 62 officers and 718 men.

WEST YORKSHIRE.

Medical Inspection of School Children.

Appointment of Inspectors in Bradford.

At a meeting of the Elementary Education Subcommittee of the Bradford Education Authority held on March 10th it was determined to recommend the appointment of Dr. Lewis A. Williams and Dr. Margaret B. Dobson as assistant medical superintendents. The salary in each case will be £350 per annum. Dr. Williams is an M.D Edin., and at present is Assistant Medical Officer of Health to the City of York. Dr. Dobson is an M.D.Lond., and has held appointments in Hull, in London, and under the West Riding County Council.

Wakefield.

At a meeting of the Wakefield City Council held on March 10th the following scheme was adopted: That Dr. Gibson, M.O.H., should perform the duties of medical inspector of schools; that an officer should be appointed to perform the duties of inspectress of school children for the Education Committee, and of lady health visitor for the Sanitary Committee, under the direction of the medical officer of health; and that a clerk should be engaged to assist the medical officer.

West Riding County Council.

The scheme for the appointment of ten assistants to act as medical inspectors of schools in the West Riding, with

an extra assistant to the county medical officer of health, each at a salary of £300 per annum, was only adopted after considerable opposition, 41 voting for the appointments and 33 against them. The majority of the medical officers of health in the Riding were in favour of their own appointment to do the work, and that feeling undoubtedly stimulated the opposition to the scheme. It does not appear to be the intention that the officers appointed should be sent out from Wakefield. The idea is that the Riding shall be divided into ten distinct areas, and that one assistant be located in each area, and be inspector entirely for that locality.

Workhouse Medical Officers and Coroners' Fees.

This question has arisen lately in Bradford in connexion with the refusal of the City Coroner to pay fees for evidence given in his court by resident medical officers at the workhouse. The Honorary Secretary of the Division communicated with the coroner and laid evidence before him of the practice obtaining in other places. This appears to differ very much in different localities. The London County Council and some other authorities pay in all cases; in some cities fees are only paid for evidence on cases of death in the workhouse proper, as distinguished from the workhouse infirmary; in other places, as in Bradford, no fees are paid. The Town Clerk of Bradford has now intimated that instructions have been given to the coroner to pay for all evidence on persons dying in the workhouse, outside its infirmary or imbecile wards. This is better than the previous manner of treating these cases, but it would have been still more satisfactory if the authorities could have seen their way to pay for all cases dying within the Poor-law buildings on whom it was necessary to hold an inquest.

Bradford Medico-Chirurgical Society.

The annual dinner of this Society was held at the Midland Hotel, Bradford, on March 26th. The dinner was preceded by an address by Dr. Byrom Bramwell, of Edinburgh, on "The diagnosis and treatment of functional nervous disease with special reference to traumatic neurasthenia and hysteria," which was listened to with the greatest attention and interest. About seventy gentlemen attended the dinner, amongst whom were guests from Leeds, York, Harrogate, Scarborough, Halifax, and other places. The Bradford Society's dinner is usually a success, and this one was no exception to the rule. Every one was in good humour, and the toast of the guest of the evening, Dr. Byrom Bramwell, was received with the greatest enthusiasm.

Anthrax in Bradford.

Another fatal case of pulmonary anthrax occurred in Bradford recently, and was investigated by a coroner's jury on March 18th. The man was 19 years of age, and had been chiefly employed in lifting the wool, which came down into the warehouse in a "shoot," from a pile on the floor to the carrier of a washbowl. Disinfectants were used in the warehouse twice a day and they were put in the washbowls. The material manipulated was camel hair and low foreign wool. The bales were disinfected before being opened. Dr. Eurich stated that he had been able to cultivate anthrax bacilli from portions of the various organs of the victim, and that the cause of death was pulmonary anthrax contracted probably by inhalation.

Scotland.

[From our Special Correspondents.]

Sir Henry Littlejohn's Resignation.

A joint meeting of the Lord Provost's and Public Health Committees of Edinburgh Town Council was held on March 31st, to consider the arrangements consequent on Sir Henry Littlejohn's resignation of his offices as Medical Officer of Health and Surgeon of Police for the City. The Committees agreed to recommend that the resignation be accepted, that it should take effect on July 15th, or such earlier date as might be arranged, and that from the date of the resignation being accepted Sir Henry be appointed Consulting Medical Officer of Health and Surgeon of Police at his present salary of £750 per annum. A remit was made to joint subcommittees to inquire into and report upon the manner in which the posts of medical officer, police surgeon, etc., are filled in other towns, and whether the offices are held jointly or separately. After this report has been received the question of appointing divisional officers may be considered.

Glasgow Hospital Sunday Fund.

The fourteenth annual meeting of contributors and others interested in this fund was held in the Board room of the Merchants' House, when the Secretary submitted the financial report for 1907. The number of churches contributing was 410, and 243 Sunday schools also took part. The total income amounted to £5,026 16s. 8d., being a decrease of about £52 upon the previous year. Of this sum £4,800 was divided among the hospitals in the proportion of fully occupied beds. The Royal Infirmary was allotted £2 066 12s., and the Western Infirmary £1,893 15s. The Victoria Infirmary received £839 12s. 6d. After meeting all working expenses there was a small balance of £2 11s. carried forward to the next year.

Ruchill Hospital.

No definite action has been taken with regard to the report of the Local Government Board. At a meeting of the Town Council it was remitted to the Hospital Committee to investigate and report upon the findings of the Commission. The Hospital Committee has not finished its investigations. Meantime the four former assistant medical officers have published a *History of the Trouble at Ruchill Hospital*, as they state that apart from the evidence given before the Local Government Board Commissioners, they have had no opportunity of substantiating their complaints. They have made three requests to be allowed to state their case before the Hospital Subcommittee, but in vain. They maintain that the real origin of the trouble was not due to friction among the staff, but to a policy of economy which was unfortunately carried beyond the limits of efficiency, and to a tactless and indiscriminate manner of dealing with a large staff. From this point of view the various incidents are traced chronologically, and it is shown how the trouble gradually arose from the changes instituted with regard to the nursing staff.

The Administration of Falkirk Fever Hospital.

The Secretary of the Local Government Board for Scotland has intimated to the Town Clerk of Falkirk the conclusions arrived at by the Commissioners who recently conducted a public inquiry into the allegations made regarding the administration of the Hospital for Infectious Diseases at Falkirk. The conclusions, with which "the Board entirely concur," are in these terms:

1. The system of administration of this hospital prior to May, 1907, was not satisfactory. The responsible head of such an establishment should be the medical officer. That medical officer should be responsible to a Hospital Committee, which should not consist of the whole Town Council. Visiting the hospital should be confined to members of the Hospital Committee, and only for the purpose of transacting necessary business. Every precaution should be taken on those visits to avoid the risk of carrying infection.

2. The actual administration of the hospitals prior to May, 1907, was unsatisfactory in respect of the failure to provide the additional nursing asked by the medical officer, and the insufficient method of checking the consumption of such articles as alcohol.

3. The actual management of the hospital by Miss Chalmers was lax and inefficient as regards the preservation of discipline and the admission of visitors.

4. Except to the above extent, the charges made by Mr. Miskimmin in his public speeches and in his statements have not been proved.

5. In particular, there is no evidence in support of the charges made by him against Dr. Prangnell and Judge Flannigan.

6. The hospital as now reconstructed and reorganized is efficient and satisfactory, and should those recommendations in our first conclusion, which have not yet been adopted, be brought into force, we have no doubt but that the hospital will be usefully and creditably managed.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS]

THE LATE DR. CONOLLY NORMAN.

At a special meeting of the Joint Committee of the Richmond District Asylum, held on Thursday, February 27th, the Chairman (Mr. R. Jones) said a man was to be judged by his work, and the lifelong work of Dr. Norman compelled their unstinted admiration and praise. He moved that the following resolution be entered on the minutes:

> That with deep sorrow we record the death of our esteemed Resident Medical Superintendent, Dr. Conolly Norman, and the loss of his invaluable services rendered for so many years to this institution, recognizing that mainly to his great ability and medical skill is due the present efficient management of the Richmond District Asylum; and we desire to tender to Mrs. Norman and the members of Dr. Norman's family our very deepest sympathy and condolence.

Colonel Gore Lindsay, D.L., seconded the motion. Mr. Lyon (Deputy Chairman), Mr. James Brady, Mr. Ribton Garstin, and Mr. E. L. Richardson also spoke; and Dr. O'Conor Donnelan and Dr. Henry Cullinan and Dr. Redington, on behalf of the medical staff, expressed their deep sorrow. The motion was passed in silence, all standing.

At the quarterly meeting of the Central Committee of the Royal Medical Benevolent Fund the following resolution was passed unanimously:

> That at this, the first, meeting of the Central Committee held since the lamented death of Dr. Conolly Norman, the members of the Committee desire to record their sorrow at the sad event which has deprived the Royal Medical Benevolent Fund Society of Ireland of a staunch friend and annual subscriber, and the members of the Committee of a genial colleague. They would take this opportunity of conveying to Mrs. Norman an expression of their sympathy with her in the grievous and sudden bereavement which has befallen her.

THE ROYAL VICTORIA HOSPITAL, BELFAST.

The annual meeting of this institution was held on March 23rd in the hospital. The Rt. Rev. Dr. Crozier occupied the chair. The statement of accounts showed an excess of expenditure over receipts of £548, and a debt balance of £46 at the end of the year, but an increase of £1,500 in the capital account; 1,583 ambulance cases were attended during the year and 1,360 operations were performed. Altogether the year was one of great activity and success.

CAHIRCIVEEN AGAIN.

When we commented some weeks ago upon the generous increase of salary the Cahirciveen Guardians had voted to their medical officers we were at a loss, knowing the parsimonious nature of the Irish peasant, to understand their extraordinary liberality. We understand it now, however, and the letter which we print below explains the situation. It seems that in exchange for a salary starting at £130 and reaching £135 after twenty-five years' service, the dispensary doctors of this union had agreed to allow the guardians to fix the fees chargeable by them to their private patients; what those fees would have been reduced to only those who know the Irish guardian can estimate. Then the Local Government Board stepped in and refused to sanction more than £120, increasing to £160 after twenty-five years' service. The guardians jumped at the reduced scale, and, in addition, decided that it should not be retrospective. Two of the doctors, Dr. Trant and Dr. Behan, respectfully declined the offer, and Dr. Trant addressed the following letter to the clerk of the union.

Dear Sir,—From a report of the Cahirciveen Board of Guardians on the 4th instant, it would appear that a notice has been handed in to rescind the increases of salary granted to Dr. Behan and myself, on the grounds that we withdrew from any arrangement previously entered into relative to this matter. Now, I wish to impress upon you and the Board that such a statement is quite misleading, and, to say the least, very unfair to Dr. Behan and myself, and not in accordance with the facts. I would respectfully point out that the only agreement I subscribed to was that provided our salaries were fixed on a similar basis as laid down for other medical officers in the unions of this country, I had no objection to abide by the decision of the guardians respecting the payment of fees in "deserving cases" in my private practice, and it will be unquestionably within the recollection of all who were present at that meeting that I left the Board room before any decision was arrived at, when I saw the unreasonable attitude assumed by the guardians, the whittling down of our original application to a mere nothing. But on the whole the initial salary granted to us is not even equal to the salaries paid by a neighbouring union (Dingle) thirty years ago, and still we are told this is a progressive age. However, it is quite apparent that the adoption of the proviso relative to the fixing of fees, even with the deletion of the qualifying adjective "deserving," would not militate against some of the officials concerned, but in the case of Dr. Behan and myself it would act most detrimentally, and I therefore cannot agree to any such condition. —I am, dear sir, faithfully yours,

J. TRANT.

Notice was forthwith given to rescind the grant of the increase to these gentlemen, and, backed up by many insulting observations, was carried *nem. con.*

It shows plainly what straits these poor men were reduced to when they were willing to barter their birthright for such a paltry sum of ready cash. Indeed, unless they can live on pure air and grand scenery, we do not know how they contrive to keep body and soul together in a district of which one guardian said that there were not twenty independent farmers in the huge parish he represented. After all, perhaps Drs. Trant and Behan are best off, for the Local Government Board having sanctioned the reduced scale approved of by themselves, the guardians have rescinded their resolution too late, unless the Local Government Board are sympathetic again.

THE SAMARITAN HOSPITAL, BELFAST.

The annual meeting of this institution was held in the hospital on March 23rd. The Lord Mayor (Sir Robert Anderson) occupied the chair. The statement of accounts showed that the debt on the hospital had been reduced to £89. The Committee hoped that a recommendation which had been made by the medical staff for a reduced scale of charges for the poorer patients would be rendered feasible by increased subscriptions. There had been 149 operations, with only 4 deaths.

HEALTH OF KERRY DISTRICTS.

Dr. Coffey's report on the country districts of Kerry, more particularly in the neighbourhood of Tralee, is a sad record. He states that the houses of the labouring class, excluding those erected by the District Council, are in nearly all instances very defective. Practically, 260 houses in the rural district have been condemned as unfit for human habitation by the medical officers of health. Those houses are mostly one-roomed, mud-walled cabins, in which at present 1,300 people are condemned to live. This number does not by any means exhaust the list of unhealthy dwellings. It is to be hoped that the occupants of those condemned houses will be the first people provided with proper housing accommodation under the present scheme. It is little wonder that tuberculosis is rife amongst the poor. In this connexion Dr. Coffey mentions that from nine out of the sixteen half-yearly returns giving statistics on the subject he finds there were 115 cases of pulmonary tuberculosis amongst the dispensary patients. What, he asks, must be the number amongst all classes, for tuberculosis is not confined to any particular class? During the year 75 deaths were registered in Tralee Union as being due to tuberculous disease; 47 occurred in Tralee rural district and 28 in Tralee urban district. Fully 75 per cent. of the milk supply of the rural district is sent to creameries, of which there are about thirty in the union. Over this milk supply, either in its production on the farms or its further handling in the factories and creameries, there is no efficient supervision. Considering how widespread pulmonary tuberculosis is, and remembering the well-established fact that milk taken from a cow affected with tuberculosis of the udder will convey that disease to the human beings who use the milk, it becomes at once apparent how important it is to the health of the community that the milk should be produced under the best and most hygienic conditions. Yet in Tralee a large percentage of the cows is believed to suffer from tuberculosis. The cowsheds, generally, are badly constructed, ventilated, and lighted, and the prevailing characteristic is undoubtedly want of cleanliness. He urges that the district council should adopt and put in force stringent and efficient regulations for the inspection of milk and its products. In discussing the sewerage system, Dr. Coffey reported the water supplies were deficient, and required to be improved.

SPECIAL CORRESPONDENCE.

BERLIN.

Health of the German Army.—Increase of Perityphlitis.

An official sanitary report of the German army lately published contains some interesting figures illustrating the immense progress in hygiene and medical science made since the Seventies of last century. It appears that in 1873-74 medical treatment was given 1311.8 times per 1,000 men under the flag. In 1883-84 the figure had gone down to 845 per 1,000 men, and in 1904-5 to 630.8 per 1,000. The greatest number of cases was furnished by the cavalry, the smallest by the infantry. Of all diseases, those of the lung, the heart, the ears, and the nervous system were most refractory. Infectious diseases—and mechanical injuries, too—have considerably declined, thanks to efficient prophylactic measures. This decline of disease has been accompanied by a corresponding fall of the death-rate; whereas in 1873-74 the death-rate was 6.7 per 1,000 men, in 1904-5 it was only 2.0 per 1,000. Fatal accidents have diminished by 50 per cent.; suicides have fallen from 0.50 to 0.39 per 1,000.

In spite of all efforts to explain away the increase of perityphlitis among the general population of Germany, its greater prevalence is a fact that can no longer be denied. The *Statistische Correspondenz* has lately published tables of figures showing that in the general hospitals of Prussia

In 1903 the number of perityphlitis cases treated was							8,412
,, 1904	,,	,,	,,	,,	,,	,,	10,793
,, 1905	,,	,,	,,	,,	,,	,,	13,724
,, 1906	,,	,,	,,	,,	,,	,,	16,781

According to these statistics, the number of cases has almost doubled within the five years. As the disease was as universally known by doctors in 1903 as it was in 1906 or is at present, the argument so often adduced, that formerly perityphlitis often went unrecognized or was treated under another name, cannot hold good for the period covered by these figures. Steadily as the disease has increased in prevalence, its death-rate has as steadily decreased, the figures having fallen, in the general hospitals of Prussia, from 9.46 per cent. in 1903, 9.14 per cent. in 1904, and 7.91 per cent. in 1905, to 6.68 per cent. in 1906. Of these 6.68 per cent. slightly more than half were males. Certain callings seem to predispose to perityphlitis; thus, of the male deaths from the disease in 1906, 11.15 per cent. were army men or Government officials, whilst these two categories combined contribute no more than 2.56 per cent. to the general Prussian death-rate.

CORRESPONDENCE.

THE TERRITORIAL ARMY MEDICAL CORPS.

Sir,—Will you allow me to call attention through your columns to what seems to many of us a serious omission in the constitution of the Advisory Board of the new force? So far as I am aware, no one has been appointed to represent the active medical branch of the service.

It is true Sir Frederick Treves has been selected, but he represents only the purely civil element of the profession. I have the greatest respect for him personally, but he cannot know or understand the needs and aspirations of the Territorial Army Medical Corps. Probably it is to the lack of advice from one of ourselves that arise the many evidences of failure to appreciate the most essential part of the medical service, whilst everything is done to flatter and propitiate the men who have hitherto done nothing to help the Volunteer Medical Service. We who have borne the "burden and heat," and will still do the work, think we should be represented as other branches of the service are.—I am, etc.,

March 23rd. Senex.

MOTOR CAR TAXATION.

Sir,—The committee of medical men of which I was secretary recommended in their letter to you, which you were good enough to publish, that all medical men should approach their members of Parliament on the subject of taxation on a doctor's car. I am quite certain it is useless asking that we should be exempt, but we might reasonably expect that, though using our cars occasionally for pleasure purposes, they should be taxed at the rate of trade vehicles. This view of the question has been submitted to more than one member of the Cabinet, and if members of the Association would urge on their Parliamentary representatives that this concession should be made we are much more likely to gain our object than if we asked for total exemption. The Royal Automobile Club as well as the Motor Union are favourably inclined to the view that a concession should be made to medical men in return for the gratuitous work they do for the public.—I am, etc.,

H. E. Bruce Porter.

6, Grosvenor Street, London, W., March 27th.

DIVERTICULA OF THE INTESTINES.

Sir,—In your issue of March 14th, in your report of the discussion on Mr. Alexis Thomson's paper on this subject, read at the Edinburgh Medico-Chirurgical Society, I notice the following sentence: "Mr. Scot Skirving had met with several small diverticula directed inwards in cases of strangulated hernia." What I really said was that I had met with such diverticula in *a case* of strangulated hernia. It might seem hardly worth while to make this correction, were it not that the subject of intestinal diverticula is extremely interesting. External ones (Meckel's excepted) are by no means common, and, so far as I am aware, the only recorded case of *internal* diverticula is the one referred to. This case was pretty fully reported at the time.[1] Apart, however, from the correction, I am anxious to find whether I have overlooked any similar instance. Accordingly, I would ask your permission briefly to recapitulate here the chief facts of the case:

The patient was a man aged 33 at the time of the operation (November, 1905). The hernia was a right inguinal one. It had always been reducible since he first noticed it three years before. No truss had ever been worn. The amount of bowel involved was about 9 in., and there were no fewer than six hollow finger-like processes situated at about equal distances from one another. They sprang from the convexity of the loop, and projected obliquely into the interior of the bowel. The largest just admitted a Kocher's dissector, and was 2 in. in length; the smallest just admitted a Kocher's artery forceps, and was 1 in. in length. All ended blindly, and none of them could be drawn or pressed out of the bowel. They were, therefore, not due to any temporary, localized peristalsis. On drawing down some more ileum above and below, no depressions in its wall indicative of further diverticula could be seen. As the strangulated loop was viable it was returned, and as the patient made a good recovery no opportunity of further investigating the nature of the diverticula—whether congenital or acquired—was possible. No history of any previous intestinal affection capable of causing localized weakenings of the wall of the bowel was obtainable even after close questioning. The patient has since remained in excellent health.

I shall be grateful, therefore, if any of your readers can supply any information bearing on internal diverticula.—I am, etc.,

Edinburgh, March 26th. A. A. Scot Skirving.

ACUTE TUBERCULOUS FEVER IN INDIA.

Sir,—Reading the "Preliminary Note on Acute Tuberculous Fever in India" by Drs. Roberts and Bhandarkar, leads me to quote the highly instructive case of a young medical man who three years ago came out to Palestine to work in the country, and was for seven weeks a patient in my own house near Jerusalem with fever of a continuous and remittent type, which resisted large doses of quinine (30 grains daily for a week at a time). Though there were no typhoid symptoms whatever but slight constipation, vague abdominal and joint pains, and little else but anorexia, on this account enteric was diagnosed by at least one practitioner who saw him, and in the return made by his superior colleague malaria (though no parasites were ever seen) was specified in the printed report of the mission hospital to which he belonged. On recovery he returned to work, but was invalided home a few months later; and, to clinch the diagnosis, about which there can be no two opinions, I may say that I had several letters from my friend, who was at the time in a well-known open-air sanatorium at Cannes for

[1] Multiple Internal Diverticula (Invaginations?) of the Small Intestine, British Medical Journal, February 2nd, 1907.

well-marked phthisis pulmonum, of which I have since heard that he died about a year ago. I regret that no examination for tubercle bacilli in the urine was made.—I am, etc.,

Chepstow. JOHN CROPPER, M.A., M.D.Cantab.

LAËNNEC AND THE STETHOSCOPE.

SIR,—In your issue of July 6th, 1907, there is published an interesting lecture on Laënnec and his discovery of the stethoscope, by Dr. Theodore Williams, who also narrates the important part played by his father, Dr. C. J. Williams, in not only improving upon the original form of the stethoscope, but in introducing its use into England.

As there was another pupil of Laënnec's—a Welshman by birth and hence able to converse with Laënnec in his native Breton tongue—who also had an important share in the bringing of the stethoscope before his fellow-practitioners in England, I think it only fair that justice should be given to him as well for the part he played in this respect. I refer to my grandfather, the late Dr. Thomas Davies, Physician to the London Hospital, who died in 1839.

In his lectures on diseases of the chest, in which he explains percussion and auscultation, delivered at the London Hospital in the October session, 1834, Dr. Thomas Davies speaks of his own personal intimacy with Laënnec; after stating how much Laënnec was attached to antiquarian pursuits, particularly relating to the dialect of his own province, he says:

> Nothing seems to have pleased him more than meeting with a Welshman and conversing with him, and comparing the Armorican with the ancient British tongue.

He proceeds:

> Laënnec died of consumption. There is no doubt that he long believed himself to be predisposed to that dreadful disease. You could not be with him a very short time without seeing him frequently expectorate and examine the secretion with great minuteness. Indeed, while I knew him it was his constant habit. No doubt, a consciousness of this kind led him to his investigations of pulmonary diseases.

Dr. Thomas Davies also points out in his lecture that Laënnec was first in France to describe the adventitious deposit called by him "melanosis," and also the *matière encéphaloïde*, but the latter had been previously made known in England by Burn under the name of "spongoid inflammation," by Hey of Leeds under that of "fungus haematodes," and by Abernethy, who denominated it "medullary sarcoma."

In the *Medical Times and Gazette* of October 18th, 1862, is published an interesting account of the London Hospital and of the physicians and surgeons who had been attached to its staff. Amongst that of others is an account of Dr. Thomas Davies, in which it states that

> He was deeply impressed with Laënnec's discovery, studied the stethoscope carefully, and was the first to introduce to the British practitioner an accurate knowledge of the morbid anatomy of the lungs and heart as distinguished by the stethoscope, and gave a course of lectures at the London Hospital which were published in this journal, the *Medical Times and Gazette*, 1834. He went for many years by the sobriquet of the "Man with the Horn."

It seems to me that these few details bearing on Laënnec's life may add further interest to the excellent account which you have recently published of Laënnec in the JOURNAL of December 28th, 1907.—I am, etc.,

London, E.C. ARTHUR T. DAVIES, M.D., F.R.C.P.

CHLOROFORM AND THE STATUS LYMPHATICUS.

SIR,—In the correspondence on chloroform that is proceeding in the JOURNAL I fear that the great risk of deep anaesthesia, suffocation by the falling of the tongue into the pharynx, may escape notice, owing to the greater attention devoted to the more recently discovered dangers of the status lymphaticus.

I hope it is spoken in a happy hour, but I have not yet, in a considerable experience, had the bad fortune to lose a case under chloroform anaesthesia, and that I attribute mainly to the well-remembered teaching of Mr. Chiene, that the most dangerous stage of anaesthesia was that of incomplete anaesthesia. After that I think it is due to two diagrams that appeared in the BRITISH MEDICAL JOURNAL on November 17th, 1888, p. 1106, showing mesial sections of the head and neck, one in the ordinary recumbent position, with the tongue fallen against the back wall, the other with the neck completely extended and the back wall of the pharynx fallen away out of reach of the tongue, attached as it is to the symphysis menti. These diagrams I cut out and kept, and still have with me. Then it would be ungrateful of me not to mention the very valuable letter of Captain Clayton A. Lane, of the Indian Medical Service, which appeared in the *Lancet* of January 29th, 1898, and emphasized this risk of suffocation most clearly and most forcibly.

I have had my own difficulties, and others who have been giving chloroform for me have occasionally left me to extricate my patients from anxious situations; but I have never yet failed in recovering safety by the hooking forward of the root of the tongue, preferably by a finger or two in the pharynx. I have known trouble from inaccurate observation, people saying that respiration was going on when it was not, and I have known people try to get the tongue out of the pharynx and fail in doing so; but if the fingers are insinuated well behind the tongue it can always be lifted forward, and then there is generally a crowing inspiration which shows at once that all is well. Tongue forceps are, I believe, quite useful if the tongue is by them kept out from the first; but applied, as they usually are, to the tip, they are apt, when trouble has occurred and the base has got wedged in the pharynx, merely to stretch the organ and give a disastrous impression that everything possible has been done.

It is quite astonishing how rarely the reports of fatal cases enable one to judge that this risk has been considered and eliminated.

I endeavour to secure complete anaesthesia as quickly as possible to avoid vomiting and its dangers; this is managed by giving plenty of chloroform. Then I like to put a couple of pillows beneath the shoulders, that the head may hang right back. Under these conditions trouble is very rare.—I am, etc.,

W. E. HOME, Fleet Surgeon.

H.M.S. *Excellent*, Portsmouth.

INSUSCEPTIBILITY TO VACCINATION.

SIR,—Apropos of your remarks on this subject in your issue of February 22nd, the following incident may be instructive: When I was house surgeon to Scarborough Hospital and Dispensary some thirty-seven years ago an epidemic of small pox broke out in the town, and there being no infectious diseases hospital in those days, I attended a large number of small pox cases. I was greatly surprised to hear from the mothers that all the children attacked with small-pox had been vaccinated. Wishing to make sure of the fact before writing about it, I one day took a book with me to record all the cases. The first patient I came to I asked the mother to tell me truly whether the child had been vaccinated. On her affirming again, I asked her to show me the child's arm. She hesitated, and then began to cry and beg me not to get her into trouble by reporting to the authorities; that, although it was quite true that the child had been vaccinated, she, being opposed to the operation, directly the vaccination was done, hurried home, and washed and sucked the places, and washed again thoroughly, and so prevented it taking. I need hardly say she deeply regretted her folly when too late. This case, no doubt, had been returned as insusceptible to vaccination, and it is quite possible the same trick may be resorted to by some mothers at the present day.—I am, etc.,

Scarborough. J. A. CALANTARIENTS, M.D.

THE STUDY OF TWINS AND "DOUBLES."

SIR,—Mr. J. Lionel Tayler makes the interesting suggestion that, just as twins are especially liable to suffer from the same disease, so likewise are "doubles"—that is, unrelated persons presenting a striking physical resemblance to one another. One would certainly expect this to be the case. May I, however, be permitted to point out in this connexion that sufferers from the same disease tend to grow like one another? This is especially noteworthy in such diseases as myxoedema, exophthalmic goître, and acromegaly, but it may be observed in many other diseases. I have seen, for example, two granular

kidney patients—a man and a woman—so like one another that they might (though unrelated) well have been mistaken for brother and sister; and the likeness between diabetics must have struck many physicians. While, therefore, it is possible, that Mr. Tayler's two diabetic patients were, even before they fell victims to diabetes, more than usually alike, such likeness would have been emphasized by the disease. That, however, they presented an initial internal (metabolic) likeness may be regarded as almost certain.—I am, etc.,

London, W. HARRY CAMPBELL.

THE PHYSIOLOGICAL IMPORTANCE OF THE CALCIUM SALTS.

SIR,—In reference to Dr. Gordon Little's and Dr. Roaf's letters in the BRITISH MEDICAL JOURNAL of March 21st, I can only repeat what I stated in my communication of March 2nd, that I have no intention of being drawn into a controversy until my paper has been published *in extenso*. This will not be until other work I wish to publish about the same time has been brought into line.

Meanwhile I would ask those interested not to be biassed by the contra arguments adduced—if, indeed, such specious statements are worthy of the name—until they have the full account of my work, when I will deal with those criticisms which are worthy of consideration.—I am, etc.,

Liverpool, March 21st. W. BLAIR BELL.

MEDICAL EXAMINATION AND LIFE ASSURANCE.

SIR,—A few months ago there appeared in the columns of the BRITISH MEDICAL JOURNAL an interesting correspondence on the subject of life assurance without medical examination, in which the methods of certain insurance companies who will indiscriminately accept any proposal that comes their way, and eventually attempt to elude payment on the ground that some chronic disease existed at the time the insurance was effected, were fully exposed. As a result of this correspondence I have made a rule, when certifying the cause of death in a case of chronic disease, to omit from the certificate the duration of the disease.

A few days ago I received a letter from the manager of an insurance company, asking me to fill in a form stating the duration of the disease in a patient who died recently of chronic bronchitis, and enclosing the "usual fee" of 2s. 6d. To this I replied that I never give the information he asked for, and I suggested that the company would perhaps find it safer to have their candidates for insurance medically examined. I also returned the "usual fee." This morning I received the following polite reply:

> Dear Sir,—I have your letter, and am surprised that you should return us this form with the note you have done. I can only say that it is most discourteous. As regards having a medical examination for each case, any educated man, one would think, would realize that it is absolutely impossible to do this where the premiums are so small.—Yours faithfully, ——, General Manager.

If every medical man would refuse to play into the hands of these gentry, and would adopt the simple expedient of omitting the duration of disease from the death certificate, they would soon be compelled to alter their tactics, and for their own protection would require a medical examination. Their present methods appear to me little short of fraudulent, and for my part I do not intend to give them any assistance in this direction.—I am, etc.,

Trowbridge. FRANK F. BOND, M.R.C.S., L.R.C.P.

THE LATE PROFESSOR VON ESMARCH.

SIR,—Having known the late Professor von Esmarch for more than fifty years, I read with interest the obituary notice in your issue of March 21st, and some points occur to me that may be worth mentioning for some of your readers.

Esmarch did not (as stated in your notice) marry the daughter of Professor von Langenbeck, but the daughter of Professor Stromeyer, as I know, for I was present at the wedding—in 1854, I think. Stromeyer was at that time Professor of Surgery at Kiel, and Esmarch was his assistant. As Professor of Surgery at Kiel, Stromeyer had acted during the Danish war of 1849-50 as Surgeon-in-Chief of the patriot army. Esmarch used to tell how, after the Danish victory at Idstedt, he and Stromeyer, having remained to look after the wounded, became prisoners to the Danes.

At that time there was no Geneva Convention, but the Danes would not retain surgeons as prisoners, but sent them back. In order that they should not carry with them any information as to the position and movements of the Danish army, they had to go by sea to Lubeck and remain interned for eight days on the way thither in the Danish fortress of Nyborg. Arrived at Nyborg they were well received by the genial old Danish commandant, who said, "The orders are that you can stay here for eight days, so make yourselves as comfortable as possible;" and then he added: "By the way, there is a steamer leaving for Lubeck to-day, perhaps you would like to get home—but I'll ask my wife what she thinks." The Lady Commandant was of opinion that "can stay" in Danish also meant "shall stay," so they did stay, and Esmarch, who was longing to get back and see his betrothed, felt his respect for the sex much increased.

It is generally acknowledged that von Esmarch was the pioneer of antiseptic surgery in Germany, but it is not so well known that he was also the first to practise aseptic surgery, for he was operating and getting excellent results, without the spray or the usual elaborate precautions as early as the year 1880. At the same time he was an advocate of dry and infrequent dressings, leaving severe operations undressed for six weeks.—I am, etc.,

London, W., March 26th. L. STROMEYER LITTLE.

MEDICAL WITNESSES IN INDIA.

SIR,—Under the heading, Medical Witnesses in India, in your issue of January 18th last, one is naturally led to understand that no fund exists anywhere in India for remunerating such witnesses when giving evidence in criminal courts. My experience has been different to that of Dr. Stokes.

About four years ago I was called out one night to attend a native legal practitioner on whom a murderous assault had been made by a policeman. The grudge was directed, in the first instance, against this legal practitioner owing to disappointed litigation, and the culprit, after slashing his unfortunate victim, made off. My patient was left in a most deplorable state with over a dozen dangerous wounds on different parts of his body, which I sutured, and among other things I amputated two fingers of one hand. This, however, is not the point; but I mention what I have because when giving evidence in connexion with the case at the sessions court the counsel for the prosecution elicited from me—not by a process of extraction—evidence that might be classified as expert as to the nature and gravity of the wounds inflicted by the accused. Whether the evidence I had given was considered by the court as expert or otherwise, the upshot of it all was that I was told there was a fund from which I would be remunerated. I presented my account of 32 rupees, which was duly passed by the session judge, and I received the amount. I cannot imagine that this happy custom exists only in Tirhoot, where I am resident, or it may possibly be that such does not prevail in a native State as Mysore is.—I am, etc.,

E. A. C. HINDMARSH, F.R.C.S.E.,

Bengal, Feb. 5th. Honorary Magistrate.

INTERNATIONAL CONGRESS OF FIRST AID AND LIFE SAVING.

SIR,—The importance of the First International Congress on "First Aid" and Life Saving, to be held at Frankfort-on-Maine at Whitsuntide of this year, does not at present appear to have attracted in this country the notice which it undoubtedly deserves. In the United Kingdom, where the subjects embraced in the programme have received especial attention, it is hoped that great interest will be taken in this Congress, as well as in the exhibition which is to be held in connexion with it, and that this country will occupy a fitting position in a movement of such great importance. My Committee request your courteous permission to solicit through your columns the co-operation and assistance of such societies and public bodies as are chiefly engaged in life saving on sea and land, and in the means of giving "first aid," especially in our mining centres and in all accidents of civil life. Full information

will be published as soon as the scope and details of the Congress and exhibition have been received from Germany, and as honorary secretary of the Committee I shall be happy to reply to any communications that may be addressed to me as below. A list of the Committee is subjoined.—I am, etc.,

Maisonnette, Datchet, March 25th. S. OSBORN, F.R.C.S.

Committee.

The Duke of Marlborough, K.G. (Président d'Honneur).
Sir John Furley, C.B., Vice-Chairman, St. John Ambulance Association (Chairman).
Lieutenant-Colonel H. J. Barnes, Secretary, St. Andrew's Ambulance Association.
Mr. W. Collingridge, M.A., M.D., Medical Officer of Health, City of London.
Mr. Horace S. Folker, Vice-President, National Fire Brigade's Union.
Lieutenant-Colonel W. G. Macpherson, C.M.G., Royal Army Medical Corps.
Mr. G. H. Makins, C.B., F.R.C.S., Surgeon to St. Thomas's Hospital.
Commander St. Vincent Nepean, M.V.O., R.N., Chief Inspector of Lifeboats.
Mr. E. O. Sachs, F.R.S., F.S.S., Chairman of British Fire Prevention Committee.
Mr. S. Osborn, F.R.C.S. (Honorary Secretary).
Mr. Albert M. Oppenheimer (Assistant Honorary Secretary).

Official Programme.

Tuesday, June 9th.—Reception of delegates in the Rathaus, followed by a supper in the Ratskeller.
Wednesday, June 10th.—10 to 4, Meeting of Congress in the "Jügel Haus." Banquet in Frankfurter Hof.
Thursday, June 11th.—10 to 4, Meeting of Congress. Evening, Opera.
Friday, June 12th.—10 to 4, Meeting of Congress. Garden party, Palmengarten. On each day there will be a luncheon interval from 12 to 1.
Saturday, June 13th.—Final meeting of Congress. Visit to the Hochst Farbwerke, and supper at the Kurhaus, Homburg.
The exhibition of appliances connected with "first aid" and life saving will open on Saturday, June 6th, and remain open the whole week of the Congress.

*** References to this Congress and brief accounts of its programme appeared in the BRITISH MEDICAL JOURNAL of June 8th, 1907, p. 1384; December 21st, 1907, p. 1793; and January 18th, 1908 p. 160

UNIVERSITIES AND COLLEGES.

THE UNIVERSITY OF LONDON

The Chancellor on the Future of the University.

LORD ROSEBERY, as Chancellor of the London University, took the opportunity afforded by the opening of new buildings at University College on March 26th to review the position of the University in relation to the recent incorporation of University College. After a reference to the magnificent bounty of Sir Donald Currie, the Drapers' Company, Mr. George Bawden, and Mr. W. W. Astor, by whom £276 000 had been subscribed, the Chancellor dealt with the great improvements made possible by the additional space gained by the inclusion of the school buildings in the College. The gain in laboratory and lecture-room space and the new library arrangements, which were described in our last issue, were enumerated, and a warm tribute was paid to the foresight of the College in providing adequate accommodation for the Union rooms. The Union, he said, had already played a very important part in moulding the destinies of the College, and he hoped that through the College Union a University Students' Union might be founded to bring home to all members of the London University a sense of the importance of their corporate university life. In especial, he wished to call their attention to the proposed foundation of a University Residential Hall, for which, under the auspices of Sir William Ramsay, a house at Ealing had already been secured, and which was, he believed, destined to have a lasting effect on the life of the London University. After a brief sketch of the extraordinary development of University College from the days when it was known by the name of Stinkomalee, opprobriously bestowed upon it by Theodore Hook, Lord Rosebery passed to a consideration of the position at present occupied by the University. So great was the development of university feeling in London that there was a danger that a second university might be established, if the Senate did not affiliate the institutions that were anxious to join it. And at the same time there was a danger that the machinery of the University might not be equal to the great strain that was being thrust upon it. At times he wondered whether their constitution was sufficiently receptive and elastic to undertake the new tasks and burdens which they were being called upon to undertake. While they lacked the traditions of a long and glorious past, they had a great counter-balancing advantage—the vigour and adaptability of extreme youth. They were in fact a new bottle into which new wine could be abundantly poured without risk, and he felt that they should take full advantage of the strength and adaptivity which was given them by their youth. He expressed the hope that they would look on this, the visit of the symbolic head of London University to University College, as emphasizing and embodying the recent alliance between the University and the College, from which they augured such immense advantage in the future.

Other speeches were made by the Vice-Chancellor, by Lord Reay, and by the Provost, and in replying to the vote of thanks, Lord Rosebery expressed his keen sense of the loss the University was sustaining in the approaching departure of the Principal, Sir Arthur Rücker, to whom the University, the College, and the cause of education in general owed a very great debt.

On the conclusion of the speeches the guests inspected the library and the new buildings. The plant in the engineering workshops attracted considerable attention and high praise was accorded to the valuable work of Mr. Chambers in his rearrangement of the libraries.

UNIVERSITY OF MANCHESTER.

THE following candidates have been approved at the examinations indicated:

SECOND M.B., CH.B.—A. E. Ainscow, R. Briercliffe, J. Cowan, D. Davies, E. R. Eatock, E. Gray, H. Heathcote, R. C. Hutchinson, R. B. Jackson, G. Lapage, Mabel E. May, W. J. A. Quine, J. R. Rigg, J. B. Scott, *† W. A. Sneath, J. P. Stallard, Charlotte E. Warner, G. Whitehead.

* Distinguished in anatomy. † University prize in medicine.

THIRD M.B., CH.B., *New Regulations* (*Pharmacology and Therapeutics*).—H. E. Allanson, C. G. Brentnall, W. A. Bullough, D. I. Connolly, F. H. Diggle, H. A. Dunkerley, Gertrude H. Geiler, J. Gow, T. T. Higgins, N. T. K. Jordan, N. McDonald, C. B. Marshall, C. Pimblett, *H. Platt, T. M. Popple, J. Ramsbottom, A. A. Smalley, N. Tattersall, R. H. Titcombe, J. F. Ward. (*General Pathology and Morbid Anatomy*).—H. E. Allanson, C. G. Brentnall, W. A. Bullough, *D. I. Connolly, F. H. Diggle, Gertrude H. Geiler, *J. Gow, T. T. Higgins, N. T. K. Jordan, N. McDonald, Edith M. Marsden, C. B. Marshall, C. Pimblett, H. Platt, J. Ramsbottom, A. A. Smalley, N. Tattersall, R. H. Titcombe, W. B. Wamsley, J. F. Ward. (*Public Health*).—Elsie Brown, H. A. Dunkerley, W. W. Martin, C. Pimblett, T. M. Popple, J. Ramsbottom.

* Passed with distinction.

FINAL M.B., CH.B.—J. Allen, C. G. Howlett, J. L. Moir, J. V. Steward, B. V. Ward, E. Wharton. (*Obstetrics only*).—F. D. Walker. (*Forensic Medicine and Toxicology only*).—J. A. Bateman, R. J. Batty, T. B. Bolton, Elsie Brown, W. C. Denniston, Frances M. Huxley, M. C. S. Lawrance, E. K. Lomas, W. P. Marshall, W. W. Martin, J. Morley, J. Thomson, R. B. Thomson, S. W. Trevor-Roper, W. W. Uttley, T. G. Williams, A. E. Woodall.

UNIVERSITY OF DURHAM.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., B.S. (*all subjects*).—*H. Fairclough, E. L. Hancock, J. K. J. Haworth, J. R. D. Holtby, E. Kidd, C. Mearns, F. Phillips, B.A., A. G. Taylor.

One or more Subjects.—F. Appleton, R. G. Badenoch, W. L. Clements, A. T. Crilley, N. Hodgson, J. Kerr, F. J. Lidderdale, S. E. Murray, A. G. McFarlane, J. G. Ogle, C. H. Robson, S. Scott, W. A. Slater, T. C. Storey, S. K. Young, R. E. Bell, A. S. Hopgood, R. V. Steele, S. P. Bedson, B.Sc., Theonie R. Burrell, W. G. Lidderdale.

SECOND M.B., B.S. (*Anatomy, Physiology, and Materia Medica*).—W. G. Bendle, E. W. Blake, F. P. Evers, I. S. Gabe, C. Gray, H. T. Hunter, G. E. W. Lacey, T. A. Peel, E. Jessie Ramsbotham, H. F. Stephens, A. T. Thompson, C. S. Thompson.

* Second class honours.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examinations indicated:

SECOND M.B., CH.B.—*Anatomy and Physiology.*—A. Adams, A. Bamforth, J. E. Barnes, J. Campbell, A. A. Dear, E. S. Miller, Phoebe M. Powell, W. R. Wade, T. W. Wadsworth. (*Materia Medica*).—H. el Arculli, T. C. Clarke, W. F. Young.

FINAL M.B., CH.B.—*Part I.*—J. A. Parkes, A. A. Rees. *Part II.*—A. C. Edwards, J. F. L. McCann, A. M. M. Roberts.

DIPLOMA IN TROPICAL MEDICINE.—A. M. Caverhill, M.B., Ch.B.Edin.; Major G. Dansey-Browning, M.R.C.S., L.R.C.P.; Major J. Davidson, M.D.Edin.; A. M. Dowdall, M.R.C.S., L.R.C.P.; L. L. Joshi, M.D.Cornell Univ.; C. V. M. F. Le Fanu, M.B., Ch.B.Aberd.; C. W. L. Luethgen, M.B., Ch.B.Edin.; F. W. McCay, L.R.C.P. and S.Edin., L.F.P. and S.Glasg.; Major G. W. Tate, M.B., B.Ch.Irel.; R. Whyte, M.B., B.Ch.Irel.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examination indicated:

INTERMEDIATE MEDICAL (*Part II.*).—*A. Stokes, *C. M. Finny, *D. L. M'Cullough, M. A. Piemont, Beatrice Hamilton, J. H. Woodroffe, P. H. Lemass, H. de L. Crawford, R. Dixon, D. M. Moffatt, R. A. Albertyn, E. M. Maxwell, E. F. Lawson (Sch.), P. G. Leeman, T. M. Crawford, H. Müller, W. P. M. Smiley, V. M. Fisher, J. G. Ronaldson, A. K. Henry, J. B. Burgess, G. F. C. Healy, J. G. Dods, S. V. Richardson, A. C. Hallowes, V. S. Best, W. H. Mathews, C. H. Denham, B. H. Moore.

Passed on high marks.

UNIVERSITY OF ABERDEEN.

The following candidates have been approved at the examinations indicated:

First M.B., Ch.B. (*Parts I and II*).—B. G. Beveridge, H. G. Bruce, R. J. Creighton, W. E. Glover, *A. F. Legge, S. W. Lund, R. G. Martyn, E. H. Moore, E. A. Pearson, A. H. Smith.

Part I only.—C. Alison, M. M. Cruickshank, J. L. S. Fergusson, A. P. Gray, P. G. Milne, E. Newton, G. Pirie, W. B. Thomson, J. Wood.

Second M.B., Ch.B.—R. M. L. Anderson, H. Brayshaw, R. M. Chance, R. W. Eddie, T. C. Halley, J. A. Macarthur, A. Mackinnon, D. Miller, A. Mitchell, R. W. S. Murray, J. J. du Preez, J. Rae, W. J. Reid, *R. Richards, *H. E. Shortt, C. F. Simpson, H. E. Smith, D. J. S. Stephen, H. J. Thomson, J. W. Tocher, W. M. Tough, A. M. Webster, *R. Semple, S. G. Trail (under old regulations).

Anatomy and Physiology only.—J. K. G. Garbutt, A. Macintosh, E. L. Reid, J. D. Robertson, W. Smith, W. Taylor.

Third M.B., Ch.B.—*W. Allan, *A. G. Anderson, W. Anderson, J. S. Annandale, D. W. Baillie, J. A. Beattie, J. C. Bell, D. W. Bruce, W. J. Calder, A. T. D. Cameron, W. Chapman, D. Craig, R. G. Davidson, A. H. Duckett, H. Duguid, W. Dugnid, N. Dunn, R. W. Eddie, *J. D. Fiddes, G. C. Grant, A. Gray, J. Inkster, *W. W. Jameson, H. G. R. Jamieson, J. Johnston, C. A. McDonald, Elizabeth McHardy, C. McKerrow, C. R. Macleod, G. McPherson, *C. A. Masson, *G. S. Melvin, J. L. Menzies, H. S. Milne, J. Mitchell, D. C. Robertson, F. G. M. Ross, H. A. Smith, G. C. Soutter, D. M. Spring, W. L. Stephen, C. C. Twort, A. J. Williamson, *A. Wilson.

Pathology only.—J. Elder, W. J. Gerrard, J. McPherson, R. J. Morson, A. G. Stewart.

Final M.B., Ch.B.—J. Anderson, A. A. Bisset, *T. C. Boyd, J. Brown, D. Buchanan, J. R. Cruickshank, J. G. Danson, G. Davidson, A. Gilchrist, J. A. Hendry, E. Johnson, J. W. Littlejohn, W. G. Macdonald, J. D. Mackay, J. F. Macleod, R. McRae, A. Massey, W. Mearns, A. J. Milne, T. B. Nicholls, J. Ogilvie, A. W. R. Pirie, D. Porter, J. Rennie, R. Ross, A. J. Shinnie, W. A. Watson, †J. Watt, W. G. Watt, M. J. Williamson, D. Wood.

* Passed with distinction. † Passed with much distinction.

The Spring Graduation Ceremony is fixed to take place on Tuesday, April 7th, in the Mitchell Graduation Hall, Marischal College, at 12 noon.

There are 212 entrants for the Preliminary Examination in Arts and Science, as compared with 183 at the corresponding period last year. For the Medical Preliminary Examination there are 47 candidates, an increase of 12 over last year's total.

CATHOLIC UNIVERSITY MEDICAL SCHOOL.

The Governors of the Catholic University School of Medicine have appointed Professor E. J. McWeeney, M.D., D.P.H., F.R.C.P., to be Professor of Medical Jurisprudence and Hygiene, in room of the late Dr. Anthony Roche.

TRINITY COLLEGE, DUBLIN.

The following candidates have been approved at the examinations indicated:

Final M.B., Ch.B. (Part II).—*Midwifery:* *J. P. S. Dunn, *C. W. Laird, D. J. Miller, D. G. Madill, A. H. Laird, A. K. Cosgrave, J. F. Clarke, N. P. Jewell, E. J. H. Garstin, R. J. Attridge, F. R. Sayers, J. C. Baker, W. H. L. M'Carthy, A. S. M. Winder.

Intermediate M.B., Ch.B. (Part I).—H. de L. Crawford, D. M. Moffat, H. R. M. Ferguson (Sch.), A. K. Henry, G. F. C. Healy, T. A. Watson, J. B. Burgess, E. W. G. Young, T. M. Crawford, R. P. Pollard, C. H. Denham, J. Beckett, C. Greene.

* Passed on high marks.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

Preliminary Medical.—*B. Glasson, A. J. Almeida, D. W. Beamish, T. K. Beattie, A. E. Brandon, P. D. Daly, H. S. Digges, R. Edgar, J. J. Elliott, H. C. Hatch, Miss G. McHugh, J. H. Madden, A. Morris, M. J. Mullan, C. Murray, A. F. I. Patterson, G. E. Pepper, R. Slaney, T. S. Smith, F. R. Swanton.

* With honours.

Medico-Legal.

REPORT AND REMARKS ON AN INQUEST HELD BY MR. J. TROUTBECK AT THE CORONER'S COURT, HORSEFERRY ROAD, WESTMINSTER, ON MARCH 28TH.

By Walter G. Spencer, M.S., F.R.C.S.,
Surgeon to the Westminster Hospital.

C. J. J. B., the cause of whose death on March 24th was in question, was a man who in 1896, at the age of 27, was admitted into the Westminster Hospital under me with a mass of enlarged glands in the left side of the neck. I could not make an exact diagnosis, but after removing a portion, and the material having been examined by the pathologist, Dr. Hebb, I decided that the growth was a carcinoma, originating in some epithelial structure. As such, complete removal was contraindicated, because this could not be carried out sufficiently beyond the apparent margin; moreover, the situation of the primary origin had not been discovered. Ten years later, in 1906, the man returned, and Mr. Paton, who was then on duty, removed some glandular masses, and Dr. Hebb examined them as before; a similar conclusion was arrived at.

The patient was admitted for the third time on account of increased pressure upon the trachea and root of the neck by the glandular masses which had not been previously removed, in addition to that which had recurred. These had not greatly enlarged in the twelve years, but had become of stony hardness; they were still partially discrete and movable on the structures beneath. I then referred to the former notes. I re-examined under the microscope, with Dr. Hebb, the sections he had made of the growth, some of which had a carcinomatous, some a sarcomatous, appearance. Dr. Hebb also examined the man himself in several ways, and we formed the conjecture that we had to deal with a thyroid or branchial tumour.

I then agreed with the patient to remove it on March 24th. The anaesthetist, Dr. Bourns, commenced with gas and then went on to ether, from which he had no occasion to vary.

The operation consisted in dissecting out the glandular masses from both triangles of the neck, including the sterno-mastoid muscle, by dividing the attachments between clamps, and where the capsules were adherent to important structures, dividing the capsules and shelling out the tumours. The masses resembled old-standing benign tumours in having undergone partial calcification, with capsules largely calcareous, friable, and supplied with very numerous large veins. Of the important parts which had not been removed before, one mass corresponded to the position of the left lobe of the thyroid gland and pressed laterally upon the trachea, and another occupied the course of the internal jugular vein, the common carotid artery and vagus nerve being recognized in the capsule. Both these portions were shelled out quite as readily as had been anticipated. I noted that the capsules in which the veins were situated were calcareous and friable, but having applied numerous ligatures over the clamps, including the upper and lower ends of the jugulars, all bleeding appeared arrested.

After putting the end of a strip of gauze upon the lower ends of the jugulars, I proceeded to suture the skin from below upwards. As I did so, Mr. Square, the House-Surgeon, applied marine sponges, and kept up pressure with his hands, for it was my intention to have bandages over these marine sponges.

Just as I was finishing the suture under the jaw the patient, who had been allowed to come a little out from the anaesthetic, gave a forcible expiratory effort in the direction of vomiting. The house-surgeon felt a gush of haemorrhage beneath his hands, and some venous blood oozed out between the sutures. I therefore asked him to keep up the compression whilst I proceeded to carry out venous infusion, and the anaesthetist to stimulate respiration. But the patient, after a minute or two of gasping, ceased to breathe, after which the pulse and heart beat became imperceptible, and he was dead within five minutes.

The house-surgeon was instructed to inform the coroner that the patient had died at the end of an operation from the giving way of a ligature, allowing air to enter the circulation.

The coroner at once subpoenaed me and the anaesthetist; he did not subpoena the house-surgeon. He had the body removed from the hospital, and two days after death a notice was left at the hospital addressed to me and to the anaesthetist saying that the *post-mortem* examination would take place on the following morning, the third day, at 10 a.m. The Pathological Department received no intimation. As I had an engagement along with the anaesthetist which could not be avoided, I asked the house-surgeon to attend. When he arrived at the mortuary he was told by a porter that the examination had been postponed until 4 p.m. That was all the intimation any one had. I had that afternoon at the hospital work which lasted until after 5 p.m., in connexion with which I deemed the presence of the house-surgeon indispensable, so no one from the hospital attended the *post-mortem* examination.

At the inquest the deceased's wife was first examined and her account entirely agreed with the above details. Dr. Bourns was next examined and gave it as his opinion that the immediate cause of death was not the anaesthetic but the giving way of a ligature and the entry of air. I was then called and having given evidence as above, and the jury not asking any question, I said I wished to make a statement to the jury. I desired not to address myself specially to Mr. Troutbeck because that would have been a repetition of what had been done before by others. But the members of the jury were of the same standing as the deceased man, all living near the hospital, some of them known to me by sight.

I stated that the Westminster Hospital had provided a well-equipped pathological department, which was wholly independent of the surgical and anaesthetic departments, the only connexion being that both were under the House Committee of the Governors. As such, the Pathological Department was fully competent to inform the jury of the immediate cause of death, and that I therefore protested against Mr. Troutbeck's particular action in removing the body, to which there was the further objection that it prevented a complete inquiry into an obscure case of cancer. I further mentioned how the fixtures for the *post-mortem* examination and its postponement had prevented any one attending from the hospital.

Dr. Freyberger, upon the last point, remarked that another engagement had arisen, so he telephoned the postponement to the mortuary porter.

He then proceeded to read a clear account of the *post-mortem* examination as far as he had carried it out. But he stopped short of the very goal, which Mr. Troutbeck more than once told the jury was his aim—namely, the demonstration of the immediate cause of death to the jury by unprejudiced evidence. Indeed, not only did Dr. Freyberger not definitely prove the correctness of the assumption we all made, but he added information which may be said to have weakened the assumption that the immediate cause of death was the giving way of a ligature and the entry of air.

He said that having cut through the sutures he found some blood clot in the wound; after a careful search, however, he could find no opened vein, all the ligatures were holding. Now, in the Pathological Department of the hospital the examination would have been made within twenty-four hours instead of seventy-two hours after death. Also Dr. Hebb with his previous knowledge would have proceeded by means of injection to have discovered the opened vein. Dr. Freyberger went on to say that the right side of the heart contained frothy blood and that a clot extended from the right ventricle up into the pulmonary artery. He then stated that the immediate cause of death was the entry of air, but as he had not demonstrated the point of entry and had examined the body seventy-two hours after death he had not excluded the possibility of *post-mortem* gas formation. Moreover, he made no observation on the character of the clot in the pulmonary artery. Dr. Hebb would have been able to have given an opinion as to the *sub mortem* or *ante-mortem* character of the clot. As far as Dr. Freyberger carried his observations to the jury he did not exclude the possibility of the clot being *ante mortem*, when it might have been the immediate cause of death.

Dr. Freyberger described some small metastatic growths in the anterior mediastinum and liver.

Dr. Hebb, in the light of his previous knowledge, would have gone on to dissect out the thyroid gland and the right side of the neck. This was beyond Dr. Freyberger's interest, but it confirms what I had previously stated to the jury, that we were prevented from a complete inquiry into an obscure case of cancer.

Mr. Troutbeck, in his address to the jury, dealt with a number of matters terminating each section by saying that it did not apply to the case under consideration. He quoted some statements about surgeons and anaesthetists making reservations respecting the gravity of operations. In the present case the evidence of the deceased's wife had disposed of that question. Mr. Troutbeck then turned to the definitions I had given of the Pathological Department of the Westminster Hospital, which he repeated and fully accepted as correct. He then added that the members of the Surgical and Pathological Departments were colleagues in the same institution, and therefore it must be assumed, on behalf of the public, that collusion between them to obscure the immediate cause of death was likely to happen. Hence it was essential that the body should be removed for an independent examination.

The jury found that the cause of death was accidental, that no blame attached to the Westminster Hospital authorities, and that they agreed with the remarks of the coroner.

PROCEDURE OF THE GENERAL MEDICAL COUNCIL IN PENAL CASES.

IN The King *v.* The General Council of Medical Education and Registration and Another (*ex parte* Nicolas), heard by the Lord Chief Justice, Mr. Justice Ridley, and Mr. Justice Darling on March 31st, the General Medical Council was called upon to show cause against a rule for a mandamus and a rule for a prohibition which had been obtained against them by John Papa Nicolas, registered as of 87, Downhill Road, Catford, S.E., in relation to certain proceedings taken against him before the Council.

Mr. Montague Lush, K.C., and Mr. Lushington appeared for the appellants; Mr. F. E. Smith, K.C., and Mr. G. P. Hargreaves for the respondents; while Mr. Neilson appeared for the London and Counties Medical Protection Society.

Mr. Lush, in opening the appeal, said that he appeared to show cause against two rules which had been granted. The rule for a mandamus was directed to the General Medical Council to supply to Mr. John Papa Nicolas a copy of every statutory declaration, explanation, letter, and other document given or sent to or by the Council in reference to a complaint made against him. It also commanded the Council to hold a due inquiry into the matter of the complaint pursuant to the statute. The other rule was a prohibition to prevent the Council proceeding in the matter of the complaint until copies of those documents had been supplied. The rule was obtained upon an affidavit, which, having regard to the affidavits which he was about to read, did not mention material facts.

The Lord Chief Justice: What is the statute under which this duty is thrown upon the Council?

Mr. Lush read Section 29 of the Medical Act, 1858 which provides that "if any registered medical practitioner shall be convicted, in England or Ireland, of any felony or misdemeanour, or, in Scotland, of any crime or offence, or shall, after due inquiry, be judged by the General Council to have been guilty of infamous conduct in any professional respect, the General Council may, if they see fit, direct the registrar to erase the name of such medical practitioner from the *Register*."

The Lord Chief Justice: That imposes no duty. Where is the section which gives the duty under which the documents are called for?

Mr. Lush said there was no duty imposed by statute. It was alleged to be given by the Standing Orders which, for the purpose of regulating their own procedure, the General Medical Council had passed.

The Lord Chief Justice: Are these Standing Orders made under a statute?

Mr. Lush: They are not; at least I do not think they are. They are merely for the purpose of enabling the Council to conduct its business. Standing Order 8 provides that: "In every case in which the Penal Cases Committee resolve that an inquiry shall be instituted and a notice for an inquiry is issued accordingly, either party shall, for the purpose of his defence or reply, as the case may be, and upon request in writing for that purpose signed by himself or his solicitor, be entitled to be supplied by the Solicitor of the Council with a copy of any statutory declaration, explanation, answer or other document given or sent to the Council by or on behalf of the other party." It is under this Standing Order that the claim was made to see a certain document.

Counsel was proceeding to state the document when the Court adjourned for lunch.

After the adjournment, Mr. F. E Smith said that he could shorten matters. Having had an opportunity, which he had not at the time he applied for the rules, of reading the transcript setting out in detail what took place before the Medical Council, he could not resist their being discharged. He had so advised his client, and his client had taken his advice.

The Lord Chief Justice: Very well.

Mr. Lush: Then they will discharged, with costs.

The Lord Chief Justice: Yes.

Mr. Neilson: I appear for the London and Counties Medical Protection Society, who were served with the rules. We are improperly described in them as the "Medical Defence Union." We were appearing as prosecutors before the General Medical Council.

The Lord Chief Justice: Then you are entitled to your costs.

PROSECUTION UNDER THE DENTISTS ACT.

ON March 23rd Henry John Barnes, of 38, High Street, Marylebone, was summoned before Mr. Plowden for unlawfully taking and using certain descriptions which implied that he was specially qualified to practise dentistry, whereas in fact he was not registered under the Dentists Act, 1878, and was not a legally qualified medical practitioner.

Mr. Turner, on behalf of the British Dental Association, prosecuted; Mr. F. E. Smith, K.C., and Mr. Curtis Bennett defended.

According to a report in the *Times* the words complained of were: "H. J. Barnes. Finest artificial teeth at moderate prices. Extractions. Advice free. Hours 10 to 7. English and American teeth. Painless extractions." These descriptions, said counsel, were put up in different parts of the defendant's premises, and inasmuch as they implied that he was a skilled person, and led people who went to him to believe that they were getting the benefit of skilled advice, he had brought himself within the Act, and was liable to a penalty of £20. Mr. Smith, in defence, pointed out that there were a large number of persons who were lawfully engaged in dental practice without being registered or qualified, and the only thing that could be said against the defendant was that he had held himself out as having skill.

Mr. Plowden, referring to the defendant's claim to extract teeth without pain, said that that was not to be dismissed as a mere act of skill; it was the exercise of the highest possible skill, and any dentist who could perform it would deserve immortality, and statues would spring up to his memory in

every part of the country. It implied the very highest qualifications. He held that the defendant had deceived the public into a belief that he was specially qualified within the meaning of the Act, and he therefore fined him 20s., with £3 3s. costs.

Mr. Smith asked for a case to be stated, to which Mr. Plowden assented.

THE WORKMEN'S COMPENSATION ACT.

Compulsory Operations.

Fairweather v. Gilbert and Co.—This case, which was heard at the City of London Court on March 16th, raised the question whether a workman can be compelled to undergo an operation which will render him fit to work. It appeared that the applicant had hurt his right knee-cap and had received compensation for thirteen months at the rate of 13s. a week. The employers now applied to set aside the award on the ground that if the applicant would undergo a slight surgical operation involving the removal of internal cartilage, he would soon be perfectly sound and able to resume his former work.

Mr. Neilson, counsel for the employers, pointed out that it had been held in Scotland that if a surgical operation could cure a man, he must undergo it. In England, however, the matter had never been settled definitely one way or the other. He also pointed out that the operation in question was frequently performed with complete success at Guy's Hospital and elsewhere.

Dr. Rowlands, Assistant Surgeon at Guy's, Dr. Beach Johnston and Dr. W. Ettles, all gave evidence as to the simplicity and efficacy of the operation.

The applicant said he dreaded any operation, and feared that he might not recover or might be impaired in health, because with a previous operation he was a long time getting over it. Even if he were quite sure he would be a sound man afterwards he would not undergo the operation.

Dr. Barnstead and Dr. Felix Kempster, called on behalf of the applicant, said there was some small element of risk in taking chloroform, but they both admitted that they would submit to the operation, knowing how small was the chance of a mishap.

His Honour said that all the medical evidence was strongly in favour of the workman undergoing the treatment suggested, and he thought as a reasonable man that he ought to submit to it. But he would not go the length of saying that the applicant ought to submit to it, or of ordering in the alternative that he lose his 13s. per week, until the matter had first been submitted to the Court of Appeal.

MEDICAL INSTRUMENTS AS SAMPLES.

On March 27th, in the City of London Court, before Mr. Registrar Wild, the Roboral Company, medical instrument manufacturers, 8, Harp Lane, sued Dr. O'Connor, of 42, Oxford Street, for 17s. 6d. for a medical instrument supplied. The representative of the plaintiff said that the defendant gave him the order for the instrument personally, and it was forwarded to him through the post. An invoice was sent with the instrument for the amount now sued for, and delivery took place in October, 1906. Cross-examined by the defendant's solicitor, the plaintiff admitted that he had obtained the order while exhibiting his instrument at a medical exhibition. He denied that he had sent the instrument to the defendant as a sample with a view to doing business. Recently he had sent a typist to the defendant for the price of the instrument. Instructions were given to ask for the instrument back if not paid for, providing it was in good condition. Upon the return of the messenger, he was informed that an essential part of the instrument was missing. The defendant's solicitor: A matter of about twopence to put the instrument right. The plaintiff said that the value of the missing part was 5s. 9d. The defendant said he attended the medical exhibition in question; it was held every year. There were always a large number of exhibitors, and no doubt the plaintiff was one of them. He could not remember him. It was the custom for exhibitors to get the medical profession to take samples of the articles they exhibited for the purpose of getting orders. In the present case he had never ordered any goods, nor had any invoice been sent with the instrument. The instrument was partly a graduated glass tube, and was to be used for testing urine. It was an inaccurate instrument, and was one for which he had no use. The medical profession were always receiving samples, and there was scarcely a post which did not bring something. At the present moment a battery, the price of which was 3 guineas, was sent to him for his approval. The Registrar, in giving his decision, said he thought the plaintiff had made a mistake. He was suing the doctor for goods sold and delivered. The goods had been delivered but never sold. The goods had been sent as a sample, and the property in the goods was with the plaintiff, and had never passed to the doctor. If anything happened to the instrument and the doctor had lost part of it, he might or might not be responsible for the loss. The plaintiff's action would then be for damages. In the present case there would be judgement for the defendant, who would be allowed 1 guinea costs.

RECEPTION OF PERSON OF UNSOUND MIND.

Tetra.—As the law stands at present any one who takes into his house a person of unsound mind who is certifiably insane and who yet is not under certificates, renders himself liable to prosecution and a fine of £50 (Lunacy Act, 1890, Sec. 315). No one has a right to control a person of unsound mind whether (1) a relative, or (2) a stranger or friend, or (3) a medical man and in the latter two cases it is illegal to control or detain any person of unsound mind for payment, direct or indirect, unless there are proper *order, statement, and medical certificates.*

DEATH CERTIFICATES.

R. N. L.—Our correspondent is under a misapprehension. Solicitors cannot legally charge for making out a bill for a client; it is true they are not under a penalty for so doing, but the item would be at once struck out on taxing. For preparing a bill for taxing a solicitor may make a charge, and our correspondent is possibly confusing this with the ordinary process of making out a bill.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

FEES.

Cymro (Lancashire).—We are advised that the usual fee chargeable in a "mixed practice" to a patient of the class described (usual fee for visit 7s. 6d.; medicines, etc., extra) would be five guineas for the confinement, this fee to include one week's attendance; subsequent visits to be charged at the ordinary rate. For reducing the fracture of the fibula, two guineas; subsequent visits to be charged at the ordinary rate.

A DECEASED COLLEAGUE.

London writes that A., as a friend, without fee, for several weeks did the work of a medical neighbour who was taken ill and eventually died. "London" was asked to continue his services, although he pointed out that, as a rival practitioner, the continuance of his assistance might prejudice the sale of the practice. A locumtenent is now doing the work, and there is as yet no successor, but several of the patients attended by A. wish him to take them over, and express an intention of going elsewhere if he declines. What should he do?

*** Under the circumstances A. ought to do his best to keep together his late friend's practice, and to abstain from any conduct likely to attract it to himself; but if this has been loyally done, he is not obliged to decline patients coming to him under the conditions he describes.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE DISPUTE AT CASTLEFORD.

In previous issues—March 7th and 21st—details were published of the dispute between the Castleford Poor-law medical officers and the guardians. Notwithstanding the circumstances connected with the vacancies created, it appears that six applications were received by the guardians in response to their advertisement, and that each of the six applicants was requested to meet the guardians in committee on March 14th. We are informed that each applicant was made fully aware of the reasons for the action which Drs. Hillman and Kemp took in resigning the posts, and that only three of the six appeared before the Board. Drs. Hall (Tadcaster) and W. D. Hartley (London) were selected and subsequently appointed by the Board. Without delay the following letter was addressed to these two medical men signed by every practitioner in and around Castleford (there were no fewer than thirty-one signatories) and duly forwarded by the Secretary of the Yorkshire Branch of the British Medical Association:

We, the undersigned practitioners resident in Castleford and the immediate neighbourhood, having heard that you were on Saturday last selected as a candidate for appointments as District Medical Officer and Public Vaccinator for the Pontefract Union, desire, ere it be too late, to urge upon you the unwisdom of accepting the appointment. We are united in regarding the remuneration offered as entirely inadequate, and we feel that the dignity of the profession will suffer a serious blow at your hands, if by taking the appointments you enable a lay authority to defeat the just demands of two of our

number. We desire further to say that if you or any other practitioners desire to settle in practice in Castleford in a proper manner you will be received with every courtesy by ourselves as neighbours, but we do most strongly urge you not to assist so-called economists by taking paltry appointments which can be of no real service to yourself, and the taking of which can only result in still further reducing the already meagre fees paid for medical services.

We regret that this appeal has not yet influenced the applicants in the manner which might have been expected. They cannot complain of either the tone or temper of the letter addressed to them by the whole of the members of the profession in the district. Dr. W. D. Hartley has thought proper to publish in the *Pontefract and Castleford Express* of March 21st a letter which reads much like an apologetic explanation of his position. In this he states:

I am informed by my friends in Castleford that public opinion on this matter is in sympathy with Drs. Hillman and Kemp.

Further he says:

The bias of public opinion concerns me far more than the thunder of the BRITISH MEDICAL JOURNAL.

He concludes:

It was only the fear of being permanently shut out of my native place by the increased competition mentioned above (this referred to a suggestion that the present crisis necessarily involved two new practitioners in the town) which actuated me in applying for the vacancy. I should never have entertained the idea for a moment under any other circumstances.

The desire to practise in one's native town after very many years of non-residence in the district may be laudable and right, but cannot be urged in justification of taking up appointments in the present circumstances. So far as we are aware, the sanction of the Local Government Board has not yet been obtained for these appointments. As a distinct violation of the principles laid down by the Board is involved, it is difficult to see how such sanction can be granted. In any case it must be a source of gratification to Drs. Hillman and Kemp to know, on the authority of the friends of one at least of their would-be successors, that local public opinion is in sympathy with them. Their satisfaction will be enhanced by the certain knowledge of the approval and support of all their colleagues.

THE HUMANE SLAUGHTERING OF ANIMALS.

IN a circular recently issued by the Local Government Board to sanitary authorities attention is drawn to the recommendations of a Committee appointed by the Admiralty upon the subject of the humane slaughtering of animals. The Committee suggested the universal enforcement of the following regulations:

(*a*) All animals, without exception, must be stunned, or otherwise rendered unconscious, before blood is drawn.
(*b*) Animals awaiting slaughter must be so placed that they cannot see into the slaughter-house, and the doors of the latter must be kept closed whilst slaughtering is going on.
(*c*) The drainage of the slaughter-house must be so arranged that no blood or other refuse can flow out within sight or smell of animals awaiting slaughter, and no such refuse shall be deposited in proximity to the waiting pens.
(*d*) If more animals than one are being slaughtered in one slaughter-house at the same time, they must not be within view of each other.
(*e*) None but licensed men shall be employed in or about slaughter-houses.

Exception will no doubt be taken in some quarters to the recommendation that all animals should be stunned, for as blood very rapidly passes into decomposition it is important that bleeding should be as complete as possible. It is of importance, therefore, to recall the experiments of Goltz and others, who demonstrated by careful weighings that in the large food animals, bleeding after stunning was not less complete than after cutting the throat without stunning (*Handbook of Meat Inspection*, by R. Ostertag, third edition, p. 139). Heiss states that in all German abattoirs stunning before bleeding is strictly insisted on. For pigs and sheep he recommends the Kleinschmidt hammer with spring bolt. The provisions of the Public Health Acts with respect to slaughter-houses have reference only to urban districts, although the Local Government Board has power to sanction their adoption by rural district councils. It thus happens that there are many slaughter-houses in rural districts which are subject to no regulations at all. The Board now states in the circular referred to that, although it might not approve of a rural district council having power to provide public slaughter-houses, it is willing to confer on such councils powers to make and enforce regulations with respect to slaughter-houses.

EMPTYING CESSPOOLS.

RURAL M.O.H.—The emptying of cesspools is rendered less offensive by mixing the contents with ashes or earth which has been sprinkled previously with commercial sulphuric acid. Sulphate of iron is also an excellent deodorant.

OBITUARY.

ON February 25th Dr. JOHN F. CULLEN BROWN died at his residence, Alexandria, Dumbartonshire, aged 62. In September he took a trip to Egypt, and subsequently resided at Southport; but returned home about three weeks ago seriously ill. The deceased was a native of Alexandria. He received his medical education at Glasgow University, where he graduated after a successful college career, M.B., C.M., in 1867. He acted as Assistant Pathologist to the Royal Infirmary, Glasgow, for some time, and afterwards became Assistant Resident Surgeon in Chalmers's Hospital, Banff. Returning to Alexandria about 38 years ago, he by his skill, energy, and attention, built up a large general practice. Dr. Brown held various appointments, being Parochial Medical Officer for the Parish of Bonhill, Parochial Medical Officer for the Parish of Luss, and Medical Referee for several insurance societies, etc. He took no active interest in public affairs, doubtless due in great measure to his modest and unassertive character, and the exacting nature of his practice. In private life, to those who knew him best he was a man to love and respect. His tastes were refined and artistic, and his recreations were music and painting, in both of which he showed no mean attainment. Invariably kind and sympathetic in manner, his presence in the sick room was a comfort and a source of strength to the sufferer. He took an interest in church matters, and was an elder of the United Free Church of Scotland. Some years ago he was made a Justice of the Peace for Dumbartonshire. Out of the respect and regard entertained for him in the district, his funeral was a large and representative one. He leaves a widow, but no children.

THE death took place at the end of February of Dr. JOHN JOSEPH AYRE of Colne, one of the oldest medical men in England. Notwithstanding his advanced age, he continued to perform a certain amount of professional work until a comparatively recent period. Dr. Ayre, whose father was likewise a medical man, was born at King's Lynn, in Norfolk, in May, 1811, and, therefore, at the time of his death he was within a few weeks of completion of his 97th year. He was brought up in London by his uncle, likewise a medical man, and after a period of study at King's College became L.S.A. in 1832; becoming a Membership of the Royal College of Surgeons, he was elected some thirty years later. Between the time at which he first formally entered the medical profession and the date at which he died some seventy-six years had passed, and over fifty of these he devoted to active practice in Colne, where he held many appointments, including that of Factory Surgeon under the original Act of 1844. On the death of his partner in 1885 he sold his practice and nominally retired, but he retained his factory appointment for some fifteen years longer, and, as already indicated, continued to play the part of medical attendant to a certain number of his old patients and friends. He had three brothers, all of whom entered the medical profession, and two of whom, like himself, lived to an advanced age. He was able to get about up to the end of his life, and, indeed, died while on a visit to Blackpool, which he had undertaken as a way of shaking off the effects of an attack of influenza. He is survived by his wife, whom he married in the year 1844, and also by two daughters.

WE regret to announce that Dr. WILLIAM PIRRIE, eldest son of the late Professor W. Pirrie, who was appointed to the Chair of Surgery in the Marischal College and University, Aberdeen, when the chair was founded in 1839, died recently at Bournemouth. Dr. Pirrie, who had a distinguished career as a student, graduated in both arts and medicine at Aberdeen. He took the arts degree in 1854. Proceeding to the study of medicine, he took the degree of M.D. in 1857. For some time he was an Assistant Surgeon in the Army, and served in the Central Indian campaign of 1858, for which he received the medal. Returning to Aberdeen, he practised for a number of years, but his health gave way, and he left for the south of England. Dr. Pirrie, who was over 70 years of age, had been resident at Bournemouth for many years. He was the author of several medical works.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

HOLIDAY TRAVELLER will be glad to know of any book or journal in which he can obtain information of the action of hydrogen peroxide in sterilizing drinking water. Having suffered when travelling from the results of contaminated water on board ship and in insanitary countries, he has been informed that hydrogen peroxide is a ready means of preventing disease, but would like to know of any definite investigations.

SPES asks for advice in the treatment of a male patient, aged 56, who for more than two and a half years has suffered from spasmodic colic and tenesmus, especially during the act of micturition, so that until lately he has not been able to void urine without the passage of a liquid and offensive motion. Examination by several medical men has excluded malignant growth, but treatment founded on the diagnosis of ileo-colitis has not given any permanent benefit. Temporary relief can be obtained by the taking of lead and opium pills.

CANCER OF THE CERVIX.

MALIGNANT DISEASE writes: A hitherto very healthy woman, a farm servant, aged 33, has had abdominal hysterectomy successfully performed for cancer of the cervix, eight weeks after the first symptoms were noticed. The cancer was apparently confined to the cervix, and no involvement of the pelvic or other glands could be made out by the competent gynaecologist who performed the operation. No adhesions were present. The ovaries and nearly the whole of the broad ligaments were removed along with the uterus and upper end of the vagina. (1) What are the chances of permanent cure? (2) The woman is engaged to be married, and the man is prepared later on to marry her if there is no recurrence. Can I sanction marriage under any circumstances, and, if so, after how many years' apparent immunity? (3) Is there any real risk of the man becoming inoculated if both were warned as to the necessity for looking out for vaginal recurrence?

INCOME TAX ASSESSMENT APPEALS.

CARELESS writes: "For several years I have paid on income tax much too high. This is acknowledged; but I am told that by a recent Act no return can be now allowed." He asks for information on this point.

*** An objection to the amount of an assessment must be made within ten days after receipt of the notice of assessment. This has been the law for many years, and persons failing to appeal at the proper time have had no direct remedy. Prior to the passing of the Finance Act, 1907, however, there was frequently an indirect remedy under what was commonly known as the "133rd section." This section provided, in effect, that when a taxpayer discovered at the end of any year that his profits had fallen short of the sum assessed, he might claim an adjustment on the basis of striking out the profits of the first of the three years on the average of which he was charged, and bringing in the profits of the year of assessment. This was found to work unfairly in practice, and the section was therefore repealed last year. The result is that as the law now stands a taxpayer must appeal against an excessive assessment within the time fixed by the Commissioners and intimated on the notice sent to him. If he fails to do this there is no right of appeal at a later date.

MEDICAL INSPECTORS OF SCHOOL CHILDREN.

MAZAGON, D.P.H., asks how to obtain the instruction and training required to qualify for the post of medical inspector of school children.

*** We can perhaps best answer this question by quoting the following paragraphs from Dr. Kerr's annual report for 1904 to the London Education Committee:

"At present a school doctor will have to educate himself. The fact that a man has his name on the *Medical Register* does not imply that he will be suitable for such duties. He should have had the training in scientific methods that the possession of a diploma in Public Health implies, and be able to give sufficient time to school visitation. This is the first and most important of his duties, and for that reason he should be free from the large and irregular calls on time which the pursuit of general practice entails.

"He must make himself thoroughly acquainted with the means of education, the blackboards, slates, paper, print, ink, and all the manifold apparatus of school in their advantages and disadvantages. The technique of education, writing, even such details as mode of holding the pen, fine work, sewing, spurious result and quantitative excess of work, the length and succession of lessons, the periods of recreation, the ordered freedom or rigid restraint of school, modes of punishment, all call for thought and reason on his part. The whole hygiene of education, much of which is yet to be elucidated; exercises, attitudes, fatigue, exhaustion, and overpressure by different tasks at differing ages; the power of acquiring information and retaining it; the course of school life and physiological development must be made familiar.

"Apart from education in this sense, he should study the buildings, the classroom in relation to subjects taught, desks, ventilation, heating and lighting, the alteration of old buildings, the cleansing or disinfection of schools—what is practicable and what is reasonable.

"The hygiene of the child itself has also to be superintended. There is as yet no exact examination of our school children, but each child should be so tested that its defects will be known without arousing any morbid self-interest. Every defect which influences its future should be made obvious. It is in the interests of education and the individual that the special senses should be examined as far as regards their functions, that warnings may be given, and, if necessary, pressure may be brought to bear on those responsible. No one is suitable for the position of school doctor who is unable to do this thoroughly and completely if required. He must be clear on what is known regarding infectious disease. He should regard the teachers as colleagues who can give valuable service, and be prepared to act reasonably at all times, remembering that school is chiefly for educational purposes, and that extraordinary details as to prophylaxis, which might be advisable in individual cases, are often quite out of place in school.

"Failure to view things from the school position and to subordinate medical precautions to their relative position has been the fruitful cause of discussion abroad, and may easily result in want of confidence, or even active hostility to his work."

ANSWERS.

BHUDDA.—It is impossible to discuss the subject of the treatment of seborrhoea capitis in the course of a reply in this column. A useful application is a lotion containing salicylic acid and castor oil. The following is a formula recommended by Dr. Norman Walker in *An Introduction to Dermatology:*

℞	Acidi salicyl.	ʒj—lv	
	Ol. ricini	ʒij—vi	
	Ol. ros. geran.	mx	
	Spt. vini	ad	ʒvj

Sig. To be applied daily and well brushed in.

M. R. G. (Devon) writes: For the weakness—with or without actual pain—from which "B G" suffers, I would recommend him to try the subcutaneous injection of sterilized air. I have tried this in cases of neuritis and sciatica, supposed to depend on lymph stasis, with very good results. It cannot possibly do any harm if carefully used, and the apparatus is simple and cheap. Should "B. G." care to try it, and would like to hear further from me, I should be very pleased to reply to his inquiries. He will obtain my address from the editor.

RUSTICUS.—Supposing that the patient took by mistake a powder containing antifebrin, it is possible that this might cause death. Several cases of poisoning from acetanilide in ordinary doses have been recorded (see BRITISH MEDICAL JOURNAL, 1888, vol. i, p. 1539, and vol. ii, p. 987, and Swaine and Taylor's *Medical Jurisprudence*, edited by F. J. Smith, 1905, vol. ii, p. 631). If the patient had taken the same dose of the headache powder with impunity before, this possibility would be excluded. Acetanilide is converted by strong alkalies, but only with some difficulty, into aniline, also a poisonous substance, but it is improbable that this would take place by the action of sodium bicarbonate at body temperature.

B. R. B.—So far as we are aware, no regulations respecting admissions to the Sudan Medical Department have been issued. The number of posts open to Europeans in any department connected with the Government Service in Egypt is now very limited, and the portals are strictly guarded. In the case of non-professional appointments, candidates are expected to have taken university honours, and professional men must be either already well known to the Government or able to prove their special fitness for employment in some other way. Probably the best course would be to address a letter to the Director of the Sudan Medical Department, Khartoum, asking him to forward it to the proper quarter should nominations to vacancies in his department not lie in his hands so far as Europeans are concerned.

CONGENITAL DEFECTS OF THE RECTUM.

W. S. MCC.—All the statistics as to the relative frequency of the various forms of congenital defects of the anus and rectum, such as those given by Esmarch (*Die Krankheiten des Mastdarmes und des Afters*), Le Dentu (*Traité de Chirurgie*, vol. viii), and Holmes (*System of Surgery*, edit. 3, vol. iii), are based upon those compiled by Curling and published in vol. xliii of the *Transactions of the Royal Medical and Chirurgical Society*. They were amplified in his book, *Diseases of the Rectum* (1876). The *Treatise on the Pathology and Treatment of Congenital Malformations of the Rectum and Anus*, by Bodennauer of New York (1860), might be useful. Of more recent books, reference might be made to Cripps (*Diseases of the Rectum and Anus*) and to the work on the same subject by Goodsall and Miles. For isolated cases the reference catalogue of the Surgeon-General's Library and the *Index Medicus* should be consulted. Curling's 100 cases were classified as follows:

	No. of Cases.	Males.	Females.
Imperforate anus, rectum wholly or in part deficient	26	21	5
Imperforate anus, rectum wholly or in part deficient and communicating with male urethra	26	—	—
Imperforate anus, rectum wholly or in part deficient and communicating with vagina	11	—	—
Imperforate anus, rectum wholly or in part deficient and opening in abnormal situation externally by narrow outlet	6	4	2
Anus opening into cul-de-sac, rectum wholly or in part defective ...	31	17	14

INOPERABLE CANCER OF CERVIX.

E. M. writes: In reply to "Westmorland" (BRITISH MEDICAL JOURNAL, March 14th, p. 664), the following treatment for inoperable carcinoma was recommended in Schauta's *Klinik* in Vienna a few years ago: Curette, and then apply the cautery. Fill the cavity with iodoform and charcoal (equal parts), or, better, insert a tampon soaked in acidi arsenici, 1 pt.; alcohol dil., aq., āā 75 pts. Change every two days. The patient must douche.

DR. PERCY ALLAN (Croydon) writes: I have found extraordinary diminution of pain in a similar case follow the local application of trypsin and the subcutaneous injection of this ferment with amylopsin. The full technique has been published, but I shall be pleased to furnish "Westmorland" with details on application.

LETTERS, NOTES, ETC.

MEDICAL EGYPTOLOGY.

DR. T. ARCH. DUKES (Croydon) writes: In Mr. Wood Jones's extremely interesting paper on medical Egyptology (March 28th) there is some difficulty in supposing that the men executed had been hanged; since although great violence had been used, in no case had the vertebrae been injured, while the damage produced is different from that known to be caused by hanging. Had it been considered that perhaps these Nubian prisoners had been executed by being cast headlong from the walls of the fort? This would have caused the fractured base of skull with extravasated blood which is usually found, with occasional injuries to the vault of the skull. When the throwing was done clumsily the victim might have his ribs broken by the fall, or perhaps not be killed at all, and need the use of an edged weapon to finish him. This method of execution appears more probable, as being more convenient and exhilarating for the executioners than the very tedious process of hanging more than a hundred men.

GLASGOW MEDICAL SOCIETIES.

DR. JOHN PATERSON (Honorary Secretary, the Glasgow Western Medical Society) writes: I desire to call your attention to an omission on page 711 of the JOURNAL of Saturday, March 21st. In your columns devoted to Scottish news your correspondent, in announcing the inauguration of a new medical society in the Burgh of Partick, mentions that there are already existing in the City of Glasgow six other similar societies, of each of which he gives the title. In doing so he omits, probably through inadvertence, to mention another society, which has been in existence in the West End of Glasgow for the past two years, and which had its origin in the opposition on the part of the local profession to the institution of a new medical charity known as the Anderston Health Association. This society is also known as the Western Medical Society, a designation to which it lays claim by the right of priority. Its namesake is not a Glasgow society, being situated beyond the city boundaries, and ought, therefore, to be more appropriately styled "suburban." While wishing every success to our youngest contemporary, we of the original Glasgow Western Medical Society wish it to be known that we are still corporate and doing our best to hold aloft the torch of medical science.

THE CAUSATION OF CANCER.

THE HON. ROLLO RUSSELL (Haslemere) writes: I have seen the notice of my small book, *The Reduction of Cancer* (BRITISH MEDICAL JOURNAL, January 11th, 1908, p. 88), in which you say "it would be quite as logical to attribute cancer to the use of clothes." So long as this manner of treating evidence remains fixed, it does not seem likely that much advance will be made, and yet surely no subject more pathetically needs an unprejudiced or careful judgement. If clothes were found in every country to be accompanied, according as they were worn or not, by an increase or no increase of cancer; if, moreover, those classes which wore certain clothes had much more cancer than those which did not wear them; if certain communities which never wore such clothes had no cancer; if certain occupations requiring the continual or excessive wearing of such clothes had a great excess of cancer, and other occupations requiring the clothing only to a small extent had little cancer; if, moreover, the amount of cancer advanced *pari passu* with the amount of clothes, and if other conditions remained in all these cases fairly alike, then there would seem to be ground for attributing a bad effect to clothes. But surely with all the evidence we have of distinguished specialists who have emphatically attributed a liability to cancer to excess of food or drink, especially of a certain kind, statistical facts strongly supporting that opinion must have more weight than an irrelevant argument from clothes could possibly derive even from such coincidences. And we know for a certainty that what is eaten does affect blood and tissues. It is a whole bundle of facts, each one of which has significance, which makes the frequent connexion of cancer with food and drink so convincing. To take only one of many, why was the rate of cancer so excessively high among publicans and butchers during last century? Clothes, etc., must be out of the question.

*** If Mr. Russell had succeeded in showing a definite connexion between the use of and abstention from flesh diet, tea, coffee, alcohol, and tobacco, and the liability to or immunity from cancer, his argument might have weight; but in our opinion he has failed to do this.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Eight lines and under	0 4 0
Each additional line	0 0 6
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A page	8 0 0

An average line contains six words.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

Remarks

ON THE

TREATMENT OF FRACTURES OF THE PATELLA OF LONG STANDING.

By LORD LISTER, F.R.S.

Shortly before I retired from practice I devised a method of dealing with fractures of the patella of long standing which gave very satisfactory results. I failed to publish it at the time; but a surgical friend having asked my advice in a case of that kind, I wrote for him a detailed description of the procedure, preserving a copy of my letter, which I venture, even at this late period, to reproduce.

Fisher's Hotel,
Pitlochry, Scotland.
September 15th, 1895.

My dear Dr. ———,

I should have written to you long ago regarding Miss ———'s case, had I not known that you could not deal with it till you had returned home after your autumn holiday in Europe; Mr. ——— having given me your address in London up to the 15th inst. The limb is no doubt useful as it is; but it is very far from being as strong as we should wish to see it; and assuming, as I do in your case, that the surgeon can look with confidence to an aseptic condition of the wound, I think an endeavour should be made to improve it. Indeed, there is good reason to believe that it will be made as serviceable as ever. I doubt, however, whether you will be able to bring the fragments together without some special mode of procedure. When you visited my wards in King's College Hospital, now several years ago, I showed you a young man on whom I had operated on account of a fracture of the patella of long standing with considerable separation of the fragments, where I had attained my object by means of free division of the quadriceps extensor muscle. This, however, is a pretty severe measure and involves, at the best, more or less weakening of the muscle and a long cicatrix.

Since that time I have greatly improved on that practice, and have succeeded without touching the quadriceps by proceeding in two stages. The idea was suggested to me by a case published by Dr. Lucas-Championnière of Paris, who, being unable to get the fragments into apposition, wired them together nevertheless, and left the wire in as an adjuvant connecting medium. It occurred to me that, although such a use of the wire did not seem likely to be very satisfactory as a permanent arrangement, yet it might probably be adopted with great advantage as a temporary expedient; and that, after the quadriceps had been gradually stretched by the use of the limb in the position so produced, the fragments might by a second operation be brought into contact, and might then be wired in the usual way after paring the opposed surfaces. The first case in which I put this idea in practice was a sufficiently testing one. The patient was a young woman of very stout and heavy build who had fractured both patellae, one of them four years, the other three years before she consulted me. The fragments were, in both limbs, considerably separated; and in the left, where the bone had been injured four years previously, the separation was so great (about 5 in.), and the upper fragment, at the same time, so very small, that I at first despaired of being able to do anything.

But on the right side, the upper fragment being of good size and the separation more moderate, I determined to give the plan a trial. I made two short longitudinal incisions (A B and C D) over the two fragments (shown in dotted line) [Fig. 1], and having exposed them by a little dissection, drilled two holes in the upper one, and passed through them, from without inwards, the ends of a piece of the usual stout silver wire, so that, when the ends were pulled upon, the middle of the loop of wire would press upon the surface of the fragment, thus [Fig. 2]:

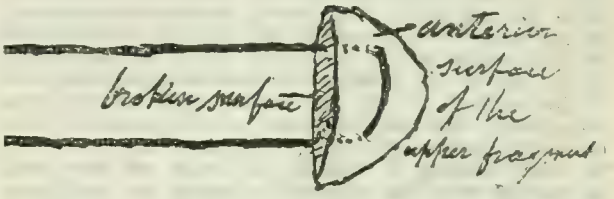


Fig. 2.

Next, passing into the lower incision a blunt instrument (a broad raspatory), I detached from the front of the femur the soft parts lying between the incisions, consisting, of course, only of skin and fat, as the muscle was absent at that part. Then passing a strong pair of forceps from the lower incision under the skin till their blades appeared in the upper incision, I seized the ends of the wire and drew them down into the lower incision. I then drilled two holes in the lower fragment and passed the ends of the wire through them from within outwards, and, after drawing the upper fragment well down, secured them in the usual way and cut the ends short. The immediate result, so far as the fragments were concerned, is indicated in this diagram [Fig. 3].

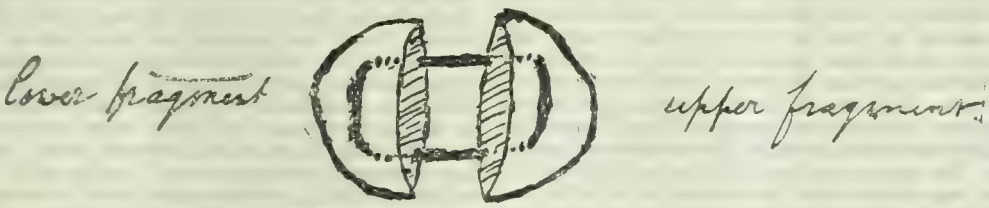


Fig. 3.

The incisions in the skin were then brought together by sutures and a dressing (the double cyanide gauze) applied.

In drawing down the upper fragment I found a great advantage from the use of a very strong sharp hook [Fig. 4], the point of which was inserted in the tendon of the quadriceps at its attachment. By this means I was able to exert much greater traction upon the bone than can be done by simply pulling upon the wire; and, in order to relax the quadriceps as much as possible, the limb was placed in the vertical position before the fragment was pulled down. The dressing having been put on, a trough of Gooch's

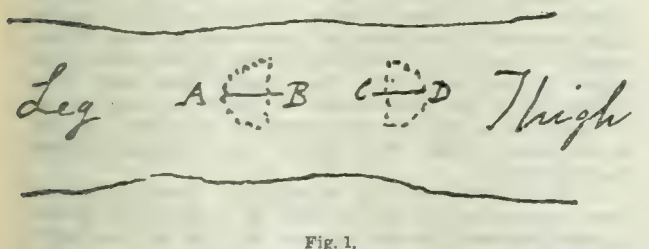


Fig. 1.

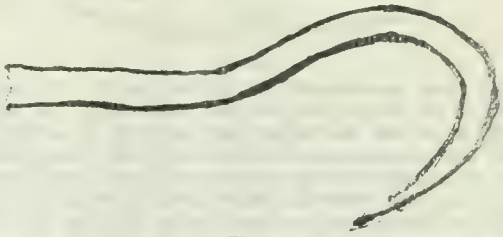


Fig. 4.

splint was applied to the limb still in the elevated position, and the same attitude was maintained as the patient was removed to the ward, and continued by attaching the end of the splint to a rope connected with the tripod and pulley used in applying Sayre's plaster of Paris jacket. This position of the limb did not cause the patient material inconvenience, and after two or three days the rope was slackened a little so as to allow the end of the splint to come down an inch or two, and the same thing was repeated every two days or so, till the limb could be placed quite horizontal.

This preliminary operation has taken a long time to describe; but in execution it is of the simplest character, no paring of the broken surfaces being done at this stage, and there being almost no bleeding and no shock. The wound having healed (I need hardly say without suppuration), the patient was allowed to leave her bed, and left the hospital soon after to practise using the limb.

Before long she was readmitted, and the second operation was performed. The lower cicatrix was opened and the wire removed, and two interrupted wire sutures placed in the tracks of the previous continued one; the fragments, of course, being this time pared to clear them of fibrous tissue of new formation, and produce smooth surfaces for coaptation. This was all satisfactorily effected, though not without the use of the powerful hook and the vertical position of the limb. The result was restoration of the use of the joint in a manner so satisfactory that I determined to try the same procedure in the other limb. The only difference which I made in this case was that, as the upper fragment was too small to bear drilling, I passed the ends of the wire, in dealing with that fragment, through the tendon of the quadriceps just above the upper border of the bone, the lower fragment, which was, of course, very substantial, being drilled as in the other limb. By this means, aided by the vertical position of the limb and the hook, I was able to bring down the upper fragment very satisfactorily, so much so that I did not feel it needful to have the patient use the limb in walking before proceeding to the second operation, but did this before she left her bed, soon after the wound had healed. In the second operation I applied two interrupted sutures, passing them, as in the first operation, through the track in tendon and bone, which the first wire had occupied.

The continued wire suture, which was first used by Dr. Hector C Cameron of Glasgow, has the great advantage, where much traction has to be made upon the fragments, that the pressure of the wire is distributed over the anterior surface of the bone instead of being concentrated upon the limited portion of tissue included in an interrupted stitch. And this is peculiarly valuable in old cases of fracture; in which, as a result of long disuse, the bone undergoes interstitial atrophy, that sometimes makes it very soft. But this suture has the disadvantage that it may tilt the fragments so that their anterior edges do not come well into contact with each other, as indicated in this diagram [Fig. 5.]:

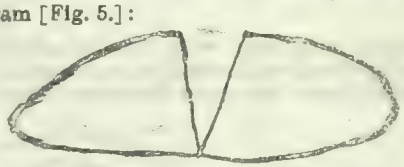


Fig. 5.

This was my reason for preferring the interrupted suture in the second stage of the proceeding. In the first stage, in which the principal dragging probably takes place, this circumstance is a matter of no consequence, as accurate apposition of the fragments is not then aimed at; and in any case admitting of being dealt with by a single operation, though not without much traction, this defect of the continued suture might be readily got over by introducing a superficial central stitch of comparatively thin wire to ensure coaptation of the anterior margins of the fragments.

The effect of the second operation in the above case was such as would have surprised me if I had not seen in other cases how substantial and strong a patella may result from wiring after thorough paring of the surfaces, even when one of the fragments is of quite insignificant size. Without my notes I cannot say how long it is since the case was treated, but I think it must be about four years. And I lately had the satisfaction of hearing from the patient that she could walk well, with strong and supple knee-joints.

In Miss ——'s case I would suggest that you should, in the first instance, before making any incision, but after she has been placed under an anaesthetic, apply the strong sharp hook to the border of the upper fragment through the skin, and, with the limb vertical, ascertain to what extent the quadriceps will yield immediately. If the upper fragment came pretty well down, you would proceed to do all by one operation, but if there were the slightest doubt as to the feasibility of this, you would adopt the preliminary procedure as in the above case.

Supposing you to be doing all by one operation and that it seems desirable to employ Cameron's continued suture, as the wire will be left in permanently, it would be better to introduce its ends first into the lower fragment and fix them over the upper one, where the fixed ends could not cause inconvenience in kneeling. The strong hook would keep the upper fragment well down during the fixing process. If I had published this case, as I ought perhaps to have done, I should not have had to inflict upon you so large an amount of manuscript.

I remain,
Ever truly yours,
(Signed) Joseph Lister.

Remarks
ON THE
RATIONAL TREATMENT OF FUNCTIONAL DYSPEPSIA.

By ROBERT HUTCHISON, M.D., F.R.C.P.,
PHYSICIAN TO THE LONDON HOSPITAL, AND ASSISTANT PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

The first step towards a rational treatment of functional dyspepsia—a consummation, it will be admitted, devoutly to be wished—must be a more scientific classification of its forms. The rough clinical division of cases, according to symptoms, into the "atonic," "acid," "flatulent," and other groups commonly adopted is unsatisfactory, because the same symptoms may be produced by totally different disorders of function which demand quite different treatment. Now, the physiological functions of the stomach as an organ are these: (1) Secretory, (2) motor, (3) sensory, (4) absorptive; and any case of functional dyspepsia must be due to disorder in the normal discharge of one or more of these functions. It follows from this that a rational classification of cases of dyspepsia must be based upon an accurate discrimination of the function or functions affected, and this, with a proper use of modern methods of investigation, should not be very difficult.

Investigation shows that the alterations in the functions of the stomach which produce the symptoms spoken of as "dyspepsia" tend to be in the direction of either excess or defect. This tendency may be discussed in the case of each function separately.

1. *Secretory Functions.*—An excess of secretion may be manifested by a total increase in the amount of gastric juice secreted (hypersecretion, gastro-succorrhoea, Reichmann's disease), or it may affect the hydrochloric acid alone (hyperchlorhydria). Conversely there may be a deficiency in the total amount of juice (hypochylia), or it may even be absent altogether (achylia), or the hydrochloric acid may alone be deficient (hypochlorhydria).

2. *Motor Functions.*—In considering the disorders of the musculature of the stomach it is necessary to distinguish between its more passive function of "tonicity" and its active "motility." Defect of these results in "hypotonicity" and "defective motility" respectively. Mere want of tone is responsible for many cases of "splashing stomach"; if the active movements are also in defect there is delay in the passage of the food onwards, but no actual stagnation such as occurs when the pyloric outlet is blocked. Increase of the motor functions is less important in the production of dyspepsia than their defect, but "pyloric spasm" may be regarded as an increased manifestation of the active movements, usually,

however, induced by the presence of an ulcer or fissure; of a mere increase of tone we know nothing.

3. *Sensory Functions.*—An exaggerated sensibility of the stomach (hyperaesthesia) is apparently a common cause of pain during digestion. Its existence can only be proved indirectly, but one is entitled to assume it when the secretion is normal, and there is no evidence of the presence of organic disease. Of a defective sensibility or anaesthesia of the stomach we have no knowledge, as the mucous membrane is normally insensitive to the ordinary processes of digestion, but it is possible that some profound cases of anorexia are due to a *minus* degree of sensibility in the gastric nerves or nerve centres.

4. *Absorptive Functions.*—The absorptive power of the stomach is at best but a limited function, and, so far as is known at present, alterations in it play no part in the production of functional dyspepsia.

We may therefore classify the disorders of gastric function which give rise to the symptoms of functional dyspepsia as follows:

1. Secretory	Excess	hyperchlorhydria and hypersecretion.
	Defect	hypochlorhydria and achylia.
2. Motor	Excess	pyloric spasm.
	Defect	atony and motor insufficiency.
3. Sensory	Excess	hyperaesthesia.
	Defect	? anorexia and achoria.

Any one of these disorders may occur alone, but frequently one finds two or more coexisting and giving rise to a group of symptoms characteristic of certain clinical types of dyspepsia. It is common, for instance, for an excess of secretion to occur along with some hyperaesthesia of the stomach in some forms of so-called "acid dyspepsia," and to these there may be superadded some excess of motility in the form of pyloric spasm; or there may be a greater or less degree of motor insufficiency with or without some disorder of secretion in what is commonly spoken of as "atonic dyspepsia." This, at least, is certain—that, did our knowledge only permit of it, every case of dyspepsia could be analysed into a disorder of one or more of the above functions of the stomach, and that accurate treatment depends upon the degree to which such an analysis can be carried out.

TREATMENT.

Seeing that disorder of the functions of the stomach is in most cases and in the last resort the expression of a disturbance of the nervous mechanism of the organ—that is, that dyspepsia is really only one way in which functional disease of the nervous system manifests itself—it will be obvious that treatment directed to the nervous system is applicable in all cases. It is in this way that such therapeutic agents as rest, liberation from worry and mental work, change of air and scene, and many of the "hydrotherapeutic" measures exert their beneficial influence, and the use of such agents is in the strictest sense rational. Putting these aside, however, we may now consider briefly the methods at our disposal for correcting disorder in each function of the stomach separately and more directly.

1. Secretory Disorders.

(*a*) *Excess of Secretion.*

1. *Dietetic Treatment.*—The rational use of dietetic means in the treatment of excessive production of hydrochloric acid or gastric juice must include, in the first place, the avoidance of those articles which are known to act as stimulants of secretion. These embrace such things as common salt, meat extracts, soups made from meat, alcohol, and all spices and condiments. Physiological research has also shown that less gastric juice tends to be secreted on some diets than on others. Milk, for instance, makes comparatively small demands upon the secretory activity. It would therefore be rational to adopt such a diet in cases of excessive secretion, and in bad cases such a plan may be adopted at the outset of treatment with undoubted advantage. In the majority of cases, however, it will be found better not to attempt to restrain the secretion, but to content oneself with prescribing such articles of food as will best tend to neutralize the excess of secretion if it appear, and the diet most adapted to fulfil this purpose is one in which the animal ingredients predominate. Such a diet has the further advantage of being comparatively rich in fat, and fat, as the researches of Pawlow have shown, inhibits gastric secretion. In practice, therefore, the dietetic indications in cases of over-secretion will be met by a regimen into which milk, eggs, meat, and fish enter freely, whilst the starchy foods are kept within strict limits.

2. *Medicinal Treatment.*—The most rational way of using drugs to counteract a tendency to over-secretion would be to select those, if there be such, which tend to inhibit the function of the gastric glands. Belladonna has been recommended for this purpose, and there seems no reason to doubt that it does tend to check gastric secretion just as it does that of the sweat glands. Its power in this direction, however, is feeble, and in practice it will be found to be disappointing unless given in such doses that its toxic effects make themselves felt. Nitrate of silver and vegetable astringents are also credited with some power of diminishing secretion; but, like belladonna, they are open to objection on other grounds. On the other hand, the bromides are undoubtedly useful, probably owing to their power of lessening the activity of reflex processes, and in many cases of hypersecretion in neurotic individuals they are very helpful.

Experimental observations seem to show that the administration of bicarbonate of soda has a restraining influence upon gastric secretion, and its exhibition before meals would seem to be indicated where it is desired to bring about this result. Clinical experience, however, does not seem to bear this out, and the prevailing opinion amongst physicians is that if bicarbonate of soda be given before meals it tends to increase secretion rather than to check it. Instead of using drugs to lessen secretion, it is simpler and quite rational to employ them to neutralize the secretion once it is formed. For this purpose the earthy are to be preferred to the soluble carbonates, as one can give them freely without the risk of over-neutralization of the stomach contents, and, if one wishes to avoid a copious ebullition of CO_2, the corresponding oxides (for example, magnesia usta) may be used instead. The neutralizing drug, whatever it be, should be given freely and at a time when the acidity of the stomach contents is beginning to reach its maximum—that is, about two hours after meals.

(*b*) *Defect of Secretion.*

1. *Dietetic Treatment.*—In this disorder such articles of diet may reasonably be given as are known to stimulate secretion. Amongst these are meat extract, soups prepared from meat, condiments of all sorts, and alcohol. It is of great importance that the food should be palatable and attractively served so as to excite as far as possible a flow of "psychical" gastric juice. On the other hand, there is no need to adapt the diet in its chemical composition to the diminished secretion. It might seem reasonable, for instance, to reduce the amount of protein—or, in practice, the animal constituents—because it is this ingredient which the gastric juice has chiefly to deal with. Fortunately, however, so long as the motor power of the stomach is not defective and the food is well chewed, diminution or even total absence of the gastric juice does not affect its length of stay in the stomach; its digestion is carried out in the intestine. The actual composition of the diet, therefore, is a matter of indifference provided it be presented to the stomach in a suitable mechanical form.

2. *Medicinal Treatment.*—When secretion is diminished drugs may rationally be employed, either (1) to stimulate the natural secretion or (2) to replace it artificially.

(1) The chief stimulants of secretion are the bitters. Seeing that their action is largely exerted reflexly through the nerves of taste, it is important that they should be given in solution and shortly before meals. This, indeed, has always been the traditional method of employing them. Whether or not the action of a bitter is increased by the administration along with it of small doses of bicarbonate of soda is a matter about which—as has already been pointed out—clinical observers and physiologists are not in agreement. Practical experience, on the whole, seems to favour the view that in small doses such an addition is of advantage.

(2) Both the chief constituents of the gastric juice—hydrochloric acid and pepsin—can be replaced artificially, and it seems most natural and rational to employ them for this purpose when the normal secretion is in defect. As a matter of experience, however, their use in this way

is disappointing. In the case of hydrochloric acid it is difficult to give enough to be of any real value in replacing the natural acidity, although if it be given in considerable doses (say half a drachm) after meals it is sometimes of service in restraining some of the secondary symptoms of defective secretion, such as "gastric" diarrhoea. In the case of pepsin, one is confronted by two obstacles: First, the difficulty of getting a really active preparation, and, secondly, the fact that its administration is useless unless the acidity of the gastric contents can be raised to the normal level at the same time. Ferment therapeutics, in fact, though rational in theory, is in practice almost worthless.

It would seem, however, that a diminution, or even total absence, of gastric juice is, in the majority of cases, of no serious consequence so long as the contents of the stomach are discharged normally into the duodenum; and, fortunately, this is usually the case. Drug treatment, therefore, resolves itself into the administration of bitters before meals, supplemented in some cases by the exhibition of full doses of dilute hydrochloric acid after meals.

2. Motor Disorders.

(*a*) *Excess* (*Pyloric Spasm*).

1. *Dietetic Treatment.*—As pyloric spasm is so often associated with the presence of an ulcer the diet suitable for it is the same as that for the latter condition—that is, it must be bland. In practice this means that it must consist mainly of milk, which may be supplemented by the use of soft farinaceous foods. Such a diet is not difficult to follow, inasmuch as patients who suffer from pyloric spasm are best treated in bed.

2. *Medicinal Treatment.*—The drugs which may reasonably be employed are those which lessen the acidity of the gastric contents (see above), and which diminish the sensibility of the mucous membrane (see hyperaesthesia). In addition to these there are grounds for administering the so-called "antispasmodic" remedies (for example, carminatives), and especially for the use of opium, which in small doses before meals certainly seems to restrain the tendency to spasmodic contraction.

3. *Hydrotherapeutic Treatment.*— Perhaps the most useful measure of all, however, is the local application of heat to the epigastrium in the form of fomentations or poultices, which seem to have a specific power of relaxing or preventing spasm and should always form part of the treatment in such cases.

(*b*) *Motor Defect* (*Atony, Motor Insufficiency*).

1. *Dietetic Treatment.*—In cases of simple atony, perhaps the most important rule of diet is to avoid burdening the stomach with a mass of heavy contents which tends to distend it by its weight. Fluids are particularly harmful in this way, and hence the chief characteristic of a suitable diet is that it should be dry, and that liquids should only be taken in small quantity and when the stomach is empty. Where there is defect of the active movements as well, the diet should be so constructed that its constituents will pass out of the stomach as easily as possible. In other words, its mechanical form is more important than its chemical composition. With this object in view, all tough, hard, and "indigestible" substances should be avoided, and the food should be thoroughly chewed, or, if there is any difficulty in this, its animal ingredients should be minced and the vegetable constituents sieved.

2. *Medicinal Treatment* —We greatly need a drug which could be relied upon to increase the tonicity and muscular efficiency of the stomach in the same way as digitalis acts upon the heart or ergot upon the uterus. At present we do not possess any such agent. Strychnine, however, is believed—and perhaps with reason—to possess this power in some degree; alcohol, also, is undoubtedly a stimulant of the movements of the stomach, and so, perhaps, are mineral acids. Ipecacuanha used to be prescribed with the idea that it acted in this way, but it has fallen into disuse, probably because in effective doses it is apt to produce nausea.

The power of certain aperients, particularly aloes, to stimulate the gastric movements needs further investigation; it is certainly noteworthy that some of the most popular nostrums for stomachic affections contain this drug.

3. *Physical Treatment.*—Massage is commonly used in cases of "atony" of the stomach to increase the contractions of its wall; such a use is certainly rational if massage really has that effect. This, however, has not been proved. Undoubtedly it can increase the firmness of the abdominal wall, and therefore of the external support of the stomach, and it is perhaps to this that the benefit obtained from it in some cases is to be attributed.

The utility of electrical treatment is open to even greater doubt, but the sinusoidal current certainly gives promise of producing a greater degree of contraction of the muscular coat than any other form, and deserves a more extended trial.

Various hydrotherapeutic procedures, such as different forms of douching, may also be expected to produce benefit by acting upon the stomach directly, apart from their general tonic influence on the nervous system, and are always worth trying.

On the whole, defect of motility is the disorder of function which it is most difficult to treat directly, and in many cases one has to fall back upon indirect means which act by improving the general nutrition and raising the "tone" of the nervous system, for it is this function which is in most direct relation to the general health and vigour of the patient.

3. Sensory Disorders.

The only sensory disorder which we have to deal with is, as we have already seen, an excess of sensibility or hyperaesthesia.

1. *Dietetic Treatment.*—The rational diet in this case would seem to be a bland one, such as is employed in the treatment of gastric ulcer, and that such a diet may relieve the patient's discomfort there is no doubt. It is, however, essentially palliative, and if one wishes to cure and not merely to relieve or conceal the excess of sensibility, it is often necessary to feed the patient up in spite of some pain until the general nutrition is so much improved that the hyperaesthesia disappears of itself. This, in short, is a case in which it may be necessary for a time to sacrifice the interests of the stomach to those of the organism as a whole.

2. *Medicinal Treatment.*—We are, fortunately, very well provided with drugs which act as gastric sedatives, and which may therefore be rationally employed in cases of hyperaesthesia. Of these, bismuth comes first in general utility, and its value is so well recognized that there is no need to dwell upon it. The bromides are also useful, and in severe cases opium may even need to be employed. Amongst other drugs which act as sedatives may be mentioned hydrocyanic acid, hyoscyamus, cannabis indica, chloral, and chloroform, all of which probably act directly upon the nerves of the mucous membrane.

3. *Physical Treatment.*—The local application of heat is, perhaps, the most potent of all methods of relieving oversensibility, and may be employed in the same mode as in the treatment of pyloric spasm.

In the above paragraphs the rational treatment of disorders of the separate functions of the stomach has been briefly sketched out, and it only remains to add that when more than one function is affected suitable combinations of these plans or compromises between them must be adopted according to the necessities of the case.

Conclusion.

It is not claimed that the treatment of functional dyspepsia on these lines will always be crowned with success, for sometimes the conditions of the patient's life are too adverse to be entirely counteracted; but it is asserted that this is the only way of approaching the treatment of the disorder which has any title to be regarded as rational and scientific.

A provincial meeting of the Royal Sanitary Institute was held at Hull on April 4th, its interests centring in a discussion introduced by Dr. J. Wright Mason on diphtheria in elementary schools and its prevention. Evidence was brought forward that some of the educational authorities in the country make a practice of excluding children in whose homes cases of diphtheria have occurred until they have been proved by bacteriological examination not to be carriers. This course seems to have been accepted by the meeting as wise and desirable.

Two Lectures

ON THE

PHYSIOLOGY OF THE EMOTIONS.

Delivered at King's College,

By F. W. MOTT, M.D., F.R.C.P., F.R.S.,

pathologist, london county council asylums; physician to charing cross hospital.

Lecture II.

The Path of Pain Impulses in the Spinal Cord.

Schiff taught that the grey matter is æsthesodic and the white matter kinesodic. A condition known as syringomyelia, in which the grey matter is destroyed and the white matter uninjured, is characterized by a condition of sensory dissociation. The patient feels tactile sensations, but no longer feels pain, or heat and cold. Sherrington has shown that the impulse of painful impressions coming from one half of the body leaves the grey matter and passes up the lateral column of both sides, rather more on the opposite. The painful stimulus is transmitted to the brain, but there is no certain evidence to show that pain is represented in any part of the cortex.

Painful sensations, together with all afferent sensory stimuli, meet in the optic thalamus, the principal function of which is that of a sensory relay station to the cortex. This mass of grey matter, including the external and internal geniculate bodies and pulvinar, sends afferent radiations to all parts of the cerebral cortex, but particularly to the projection centres about the primary fissures. It contains two forms of cells, large cells like those of the anterior horn of the spinal cord and the motor area of the cortex, and smaller cells. These large cells are in all probability motor in function, and control the subconscious, involuntary, instinctive, automatic, mimic reflexes of gesture, physiognomical expression, and of primitive vocalization. The evidence in favour of this is that experimental lesions in animals and spontaneous lesions in man invariably produce some degree of anæsthesia on the side opposite the lesion. Irritative lesions of the thalamus are frequently associated with severe pain in the opposite half of the body. It is a well known fact, first described by Sir Charles Bell, that in old cases of cortical hemiplegia the face on the diseased side can only be imperfectly moved by the will, yet if the patient, under the influence of the emotions, laughs or cries this side of the face is more strongly contracted than the non-paretic side. In lesions of the thalamus, on the other hand, the opposite is frequently observed. The patient, on the one hand, can voluntarily move the paretic side of the face well in all directions, as in showing the teeth, voluntary laughing, etc.; on the other hand, in emotional expressional movements this side of the face is immovable. According to that very reliable observer, von Monakow, this condition is not met with in any other cerebral lesion; therefore, although it does not occur in every lesion of the optic thalamus, yet the fact that it does not occur in other cerebral lesions indicates that some part of the thalamus is associated with these reflex mimetic movements. Monakow, moreover, cites cases which seem to show that it is possible "that secretory, vasomotor and other tracts of fibres in connexion with the sympathetic nervous system have an abundant representation in the thalamus opticus."

But let us return to pain, and for argument sake say that pain is produced by a strong excitation transmitted by the grey matter and lateral columns of the spinal cord to the thalamus; here the feeling of pain is produced, but this is always associated with perceptual cortical feeling of localization and cause, with secondary associations of time and space. If pain *per se* were represented in the cortex, then it should be continually revived in memory with the re-representation, but pain is forgotten as soon as it is over, and what we recollect are those intellectual perceptions which will enable us to avoid it in the future.

Stimulation of the cortex of the central convolutions has been performed without anæsthetics in man (Dana); the only effect was a slight numbness and tingling in the extremities, fingers, thumb, etc., not amounting to pain. The brain can be cut without causing pain. Stimulation of the thalami in animals, in contradistinction to the cortex, gives rise to manifestations of pain. Pain is unknown as an aura in cortical epilepsy, and no region of the cortex has been proved beyond doubt to be associated with pain, although it has been asserted that the gyrus fornicatus is a centre for pain.

Sherrington has shown that in a spinal animal the pain reflex is prepotent. Take, for example, the reflexes which engage all the muscles of the hind limb in purposive movements of a useful character; if a reflex, such as scratching, is set up in the right leg to remove a stimulus resembling a parasite among the hairs of the front of the body, and, while this scratching is proceeding, a painful stimulus (like a thorn) is applied to the pad of the left foot, a flexor withdrawal occurs, accompanied by a replacement of the right foot to the ground to act as a support. Experiments show that the sexual reflex in the lower animals—for example, frogs and tortoises, etc.—is even more potent than pain reflexes, and Sherrington rightly affirms "that reflexes arising in species of receptors which, considered as sense organs, provoke strongly affective sensations, *caeteris paribus*, prevail over reflexes of other species when in competition with them for the use of the final* common path."

If now we examine the effects of painful stimulation of the skin in a *decerebrate* animal, in which therefore a wider conjunction of reflex arcs is left than in the *spinal* animal, a number of reflexes are obtained which Sherrington terms "pseudo-affective," because the neural mechanism for the perception of pain is cut off from its connexion with the receptor; but it is still in connexion with a purposive instinctive reflex motor mechanism of offence and defence, the action of which is usually considered as the outward expression of the inward affective feeling, and it may be assumed that had the brain been present the feeling would have occurred. Such a decerebrate animal, when the sciatic nerve is stimulated, exhibits movements indicative of offence and defence, forward cyclic movements, as in progression, turning of the head toward the part excited, opening of the mouth, retraction of the lips, movements of the jaw as in snapping, movements of vibrissæ, lowering of the head, dilatation of the pupils, vocalization angry in tone (sometimes plaintive, sometimes snarling), and with these a passing increase of arterial blood pressure. These movements are ineffective and of *brief duration*† possibly because they are deprived of the perceptual reinforcement which the brain gives. Sherrington proceeded to ascertain how these pain reflexes can be abolished, in order to establish the probable path of pain reflexes in the cord. The method Woodward and he adopted was to compare by means of the above reaction the effect of two stimuli symmetrically but successively applied on opposite sides of the body after a semisection of the spinal cord or other lesion of the spinal cord headward of the nerve path stimulated. He concludes that each lateral column conveys impulses from both halves of the body, and somewhat preponderantly from the crossed half; and this is true for these arcs, whether they be traced from skin, muscles, or viscera.

Goltz, by a long series of careful and judiciously planned experiments, was able to remove the whole of the cerebral hemispheres and a large part of the basal ganglia from a dog in successive operations, and the animal by patient and careful feeding was kept alive many months, and valuable observations on a decerebrate animal were made. Its behaviour as compared with his own normal dog is a most valuable psychophysiological study, and I will briefly describe the more important features of this comparison. The animal would lie curled up like a normal dog, it could be aroused by the loud blowing of a horn, and by blowing through a tube a current of air on to its skin, when it would raise itself on its four legs and shake itself. If the animal had been roused by the blast of the horn it would put its paw up to its ear as if something unpleasant had happened. When the animal was removed from the pen, as it was every day, to be fed, it growled, snapped, and snarled like an

* Sherrington uses this term for nerves to muscles which are employed for the performance of reflex actions under the influence of different stimuli.

† More probably the brief duration is due to the fact that if we regard the whole nervous system as an accumulator of energy, the removal of the greater part of the brain takes away the greater part of the store of energy.

angry brute, and resisted and struggled to be free and return to its cage; it showed, in fact, exactly the same signs of anger as the decerebrated dog whose sciatic nerve was stimulated in Sherrington's experiment: lowering of the head, bristling of the hair, retraction of the ears, and growling, biting, and snapping. Although removal from the cage every day meant to the animal appeasement of hunger, yet this animal every day for eighteen months, until the day of its death under chloroform, gave the same instinctive sign of anger, and never joy, fear, or affection. Goltz compared the behaviour of this animal with the behaviour of his own animal, who would allow him to pull his tail and tread on his foot, showing, however, by his expression that he felt it painful, but he tolerated it and controlled his feelings because of affection for his master. The decerebrate bitch, on the contrary, made no distinction between the stranger and the man who had fed her every day. She had no memory,

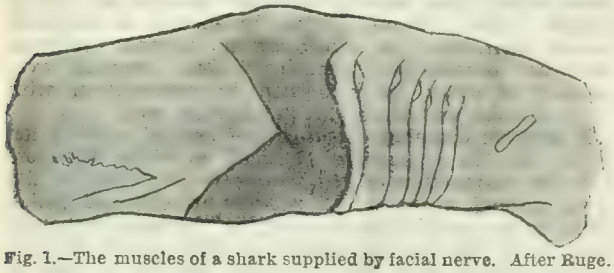


Fig. 1.—The muscles of a shark supplied by facial nerve. After Ruge.

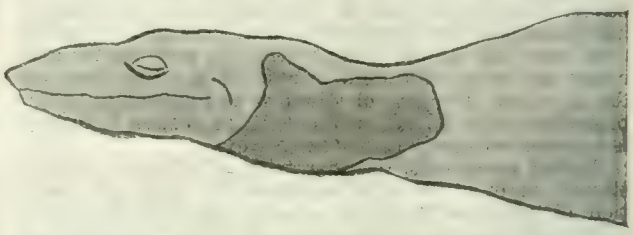


Fig. 2.—The muscles of a reptile supplied by facial nerve. After Ruge

but still possessed desires and instinctive reactions. When hungry especially, like the wild animals in the Zoological Gardens, she performed continuous pacing movements of locomotion in one direction from right to left, or the contrary; moreover, she would place her two forepaws on the front of the cage, standing on her hind legs. She could maintain her position on the four limbs on a smooth and sloping surface, and defaecated and urinated like a normal bitch. The expression of the dog was entirely devoid of intelligence, and it did not wag its tail, nor did it ever show signs while asleep of dreaming like other dogs. When fed the food was placed near its muzzle; it then masticated and swallowed it like a normal dog. An interesting experiment was made by Goltz in relation to the emotion of *disgust*. Pieces of meat were soaked in a solution of quinine and given to the animal; it refused to eat the meat. The same pieces were given to the normal dog; it wagged its tail, pulled a face, and looked to its master as much as to say, Well, this is unkind of you to give me this! I don't like it, but to oblige you I will swallow it, which he did upon encouragement. Not even hunger would make the dog without a brain swallow the bitter meat. Now this interesting fact supports Richet's view that bitter and acrid substances which are unpleasant are as a general rule poisonous or noxious, whereas sweet tasting things for which we have a gust (*goût*) are pleasant and beneficial. So that *disgust* (*dégoût*) is protective to the alimentary canal and the vital bodily organs, just as pain protects the external surface of the body. This animal ceased to have oestral periods and never showed the slightest sexual desires. The animal was deprived, however, not only of the cerebral cortex, but also of the basal ganglia, the corpus striatum and the optic thalamus. How it would have behaved had it been possible to destroy the cortex leaving these structures we do not know, but the experiments of Nothnagel, Bechterew and many others rather point to these structures being very important in relation to the emotions, and recently Pagano has published a number of experiments on adult and newborn dogs which I will briefly relate, although I am of opinion that the experiment of injecting fluids such as curare into the basal ganglia, even though controlled by simultaneous coloration by a dye so that the extent of the effect of the irritant can be gauged on *post-mortem* examination, is not altogether reliable. This experimenter claims to have demonstrated that excitation of the caudate nucleus and of the optic thalamus provokes in adult dogs movements of expression distinctly attributable to determined emotional states accompanied by visceral phenomena. It was, however, important to demonstrate that there was a real functional autonomy; he therefore excited the caudate nucleus in newborn animals. From his experiments he concludes that in the basal ganglia are found at birth the physiological pre-organized mechanisms of emotional reactions. The cerebral cortex not being functional at birth is, therefore, not indispensable for these emotions. He concludes also that the superior psychical centres which are superimposed on the lower centres are only a new source of stimulus for primordial expression, but at the same time the origin of secondary modifications of emotional expressions. He injects 0.1 c.cm. of 2 per cent. solution of curare coloured with thionine into various portions of the caudate nucleus. The results obtained are as follows: Excitation of the anterior third and of the middle third of the caudate nucleus, especially in their inner half, provokes the emotional phenomena of fear. They are characterized by the attitude of the body, the physiognomy, the cardiac and respiratory phenomena, intestinal and vesical, the state of the pupils, and menacing noises which exaggerate considerably these manifestations of terror. Excitation of the anterior extremity of the caudate nucleus produces phenomena of psycho-motor agitation of the same kind, and expresses a mingling of the two emotions fear and anger. Excitation of the posterior portion provokes manifestations of anger. Excitation of the anterior third produces erection of the penis almost as strongly as stimulation of the lumbar centre.



Fig. 3.—The muscles of a lower mammal supplied by facial nerve. After Ruge.

Sherrington has performed some notable experiments which show that an animal whose brain has been cut off in its connexion from the heart and viscera generally, still exhibits joy and sorrow, anger and fear, disgust and sexual instinct. He divided the spinal cord in a dog in the lower cervical region, and when the animal had sufficiently recovered from the effects of the operation he cut both pneumogastric nerves. In this way the brain was cut off from any afferent impressions from the viscera, yet the animal showed joy at seeing the attendant who fed him, anger at a stranger, and fear and sorrow when scolded. One animal only 9 weeks old, kennel-fed, was thus operated upon, and when given milk in which pieces of dog flesh had been placed, absolutely refused to touch this flesh under any circumstances and showed marked signs of *disgust*. Sherrington lays particular stress on this experiment as proving that "even the primitive emotions seem to involve perception, seem little other than sense perceptions richly suffused with affective tone." Of course Sherrington himself is aware that these experiments are not conclusive, for although the animals may have expressed emotion in their facial expression and attitude appropriate to the exciting cause, although the viscero-vascular and much of the muscular expression was cut off from the sensorium, yet we have no means of knowing the subjective feeling of the animal, and "a small but notable fraction of the latter—namely, the facial, still remained open to react in the centres with which consciousness is colligate." Again, Lloyd Morgan, in con-

nexion with this experiment, states: "The avenues of connexion were (only) closed after the motor and visceral effects had played their part in the genesis of the emotion on the hypothesis that the emotion is thus generated. Although new presentative data of this type were thus excluded, their representative after-effects were not thus excluded." In reply to this criticism, Sherrington remarks:

But it is noteworthy that one of the dogs under observation had been thus experimented upon when only 9 weeks old. Disgust for dog's flesh could hardly arise from the experience of nine weeks of puppyhood in the kennel.

Now this aversion to dog's flesh was due to olfactory impressions, and that "dog will not eat dog" may, in the long procession of the ages, have led to the establishment of a preorganized mechanism by which disgust at dog's flesh might occur reflexly in the medulla; the paths of smell and taste were still open, and the only means the dog had of showing aversion it exhibited. We see that Goltz's dog exhibited disgust at meat soaked in quinine, although the gustatory cortical centres could not have been acting.

Newborn animals are excited to the complex act of sucking and pressing forward the forelimbs, and it is said that the stimulus is smell, for such are not performed if the olfactory nerves of a puppy are destroyed. Moreover, anencephalous monsters cry and show signs of pain and desire for food, and they are capable of the complex acts of sucking and crying without any cerebrum. There must, therefore, be a preorganized mechanism for crying and sucking in the base of the brain. In mammals the lips and the muscles of the lips have been primarily developed for the purpose of sucking, the nostrils and the *muscles* that act on the nostrils for the purpose of breathing during the act of sucking. The senses of the young mammal require to be educated in order to be able to adapt itself to its environment, consequently it is for a time helpless and dependent upon its mother for nutrition and protection. But the mother must leave it to seek food, consequently the offspring requires a means of calling for her help to satisfy the needs of hunger or for protection; thereby has been evolved a preorganized nervous mechanism for crying which involves the integration of even a larger number of neurones than the act of sucking. Now, Sir Charles Bell showed that the respiratory nerves form a superadded system introduced in the higher animals in correspondence with changes of structure which the organ of breathing undergoes in the course of development in animals. Not until we arrive at the fishes, the lowest of the vertebrates, do we find the mouth connected with the organ of respiration. In the reptiles nostrils appear, and in the mammals lips, and for the better adaptation to environment as we ascend the scale of vertebrates we find a progressive reciprocal simultaneity of development in the circulatory, nutritive, and respiratory systems and the neural mechanism for their associated action. As Bell says, there is a remarkable consent between the muscles of deglutition and respiration.

Our present knowledge of comparative anatomy of the nervous system tells us the truth of Bell's remarkable foresight and philosophic deductions. Dr. Ariens Kappers, in a most interesting paper on the phylogenetic disposition of the motor cranial nuclei and the structure of the autonomous sympathetic system, points out that in fishes the seventh nerve innervates the constrictors and a muscle termed the "adductor mandibuli," which we find again in the higher animals as the posterior belly of the digastric. The constrictor group of muscles is supplied by a group of viscero-motor cells which acquire as we ascend the animal scale a secondary somatic importance. The great sphincter of the neck in reptiles and birds owing to the more complex arrangement of respiration is developed in mammals into the great group of muscles of the neck and face (vide Figs. 1, 2, 3). It is therefore the constrictor group which not only increases, but also becomes strongly somatic, in proportion to its function taking part in the life of external relation and less in the life of internal relation. We also see how intimately deglutition is phylogenetically associated with the muscles which express the emotions. As progressive development occurs the nucleus of those facial muscles of expression (phylogenetically of visceral origin) comes more and more under the influence of the will by innervation currents from the psycho-motor cortex; moreover, the centres of swallowing, respiration, vomiting, and all the centres in the bulb are influenced by impulses from the tertiary taste and smell centres from which nervous tracts arise, and wholly or partially terminate in the tegmentum bulbi.

The sensory division of the fifth and the superior laryngeal nerve stand as sentinels to the alimentary and respiratory tracts, and when stimulated by chemical or mechanical agents excite appropriate reflexes for

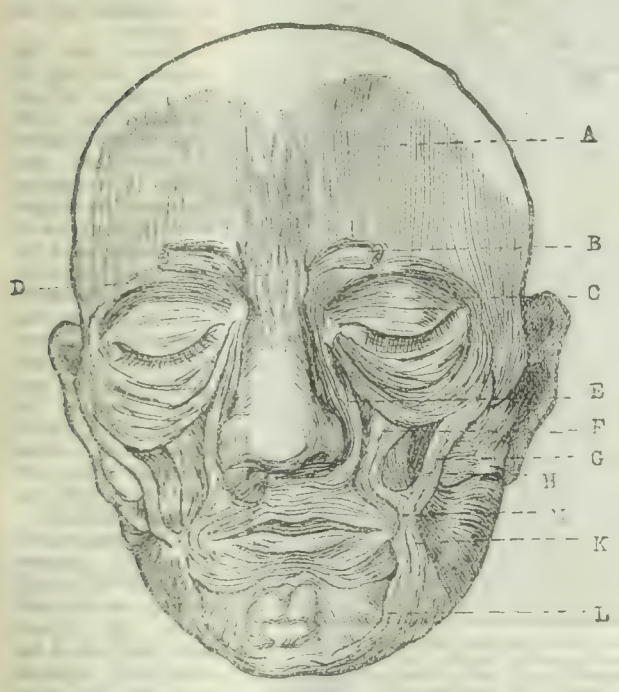


Fig. 4.—Diagram of muscles of face, from Sir C. Bell. A, Occipito-frontalis. B, Corrugator supercilii. C, Orbicularis palpebrarum. D, Pyramidalis nasi. E, Levator labii superioris alaeque. F, Levator labii proprius. G, Zygomatic. H, Malaris. K, Triangularis oris. L, Quadratus menti. M, Risorius.

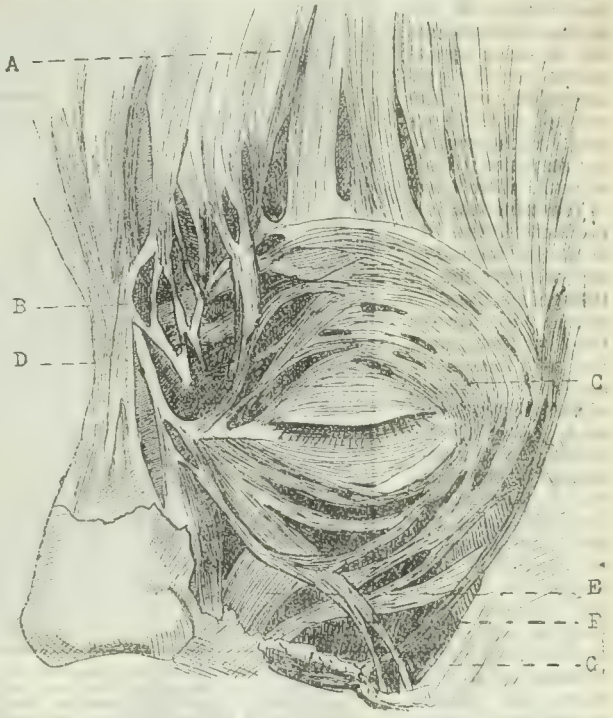


Fig. 5.—Diagram from Henle. A, Occipito-frontalis. B, Corrugator supercilii. C, Orbicularis palpebrarum. D, Pyramidalis nasi. E, Levator labii superioris alaeque. F, Levator labii proprius. G, Zygomatic.

the preservation of the individual, and these reflexes are instinctive and untaught, but nevertheless involve an associated co-order in vast systems of efferent motor neurones in the bulb and cord; inhibition of one group, impulsion to another, according to the purpose required; the same groups of neurones thereby bringing about entirely different actions according to the nature of the stimulus, just as we know occurs in the purposive spinal reflexes, only in a more complex way. But this can only be accounted for in the case of sucking, crying, laughing, and the expression of the primitive emotions, as witnessed in animals, children, and all races of men, by accepting Darwin's theory of the evolution and transmission of an associated habit serving some useful purpose in the preservation of the individual or the species. But integrative action or co-ordination, as Sherrington's important experiments on the spinal animals show, is effected by neurones of association linking up the spinal motor neurones in such a way that they discharge or inhibit innervation currents from the spinal motor neurones to groups of antagonistic muscles in such a way that the action in response to the stimulus is most appropriate for the preservation of the animal or the species. In other words, in response to all stimuli which are of fundamental importance to the life of the individual or the preservation of the species, nervous force will always tend to flow along the path formed by associated habit ancestrally innate, and therefore stable, by a transmitted preorganized mechanism. Darwin, aided by the investigations of Donders, supported the view of Sir Charles Bell that the use of the orbicularis palpebrarum was to compress the eyeball and protect its delicate structures whenever the chest is violently contracted (vide Fig 4). He, moreover, points out that when infants scream loudly from hunger or pain the circulation is affected, and the eyes tend to become gorged with blood; consequently the muscles surrounding the eyes are strongly contracted as a protective; this action in the course of many generations has become firmly fixed and inherited, but when with advancing years and culture the habit is partially repressed, the muscles around the eyes still tend to contract whenever some slight distress is felt; although under the control of the will, a certain amount of escape of nerve energy along the path of associated habit cannot be avoided. "There is no art to find the mind's complexion in the face" is well illustrated by the action of the depressor anguli oris; its action, signalized in popular language as "down in the mouth," is indicative of mental depression or suppressed grief; in the child, just before it is going to burst out crying, or when it is trying to suppress a fit of crying coming on, the drawing down of the mouth by this muscle is especially noticeable. The wrinkling of the forehead and drawing down of the mouth, when constantly present, indicate prolonged sorrow and suppressed grief. They may be looked upon as an involuntary, partial, but continuous leakage of nerve energy along preorganized paths of associated action expressive of a long-continued frame of mind, and therefore rudimental vestiges of the screaming fits expressive of bodily distress in early infancy.

Darwin points out that the pyramidales of the nose are less under the control of the will than the others, and their contraction can only be checked by that of the central fasciae of the frontal muscle; these latter fasciae draw up the inner ends of the eyebrows and wrinkle the forehead in a peculiar manner, which we instantly recognize as the expression of grief or anxiety (vide Fig. 5).

We thus see that there is a great deal of truth in Sir Charles Bell's statement:

> The organ of breathing in association with the heart is the instrument of expression, and is the part of the frame by the action of which the emotions are developed and made visible to us.

Again:

> That what the eye, the ear, and the hand is to the mind in exciting those ideas which have been appointed to correspond with the qualities of the material world, the organs of the breast are to the development of our affections.

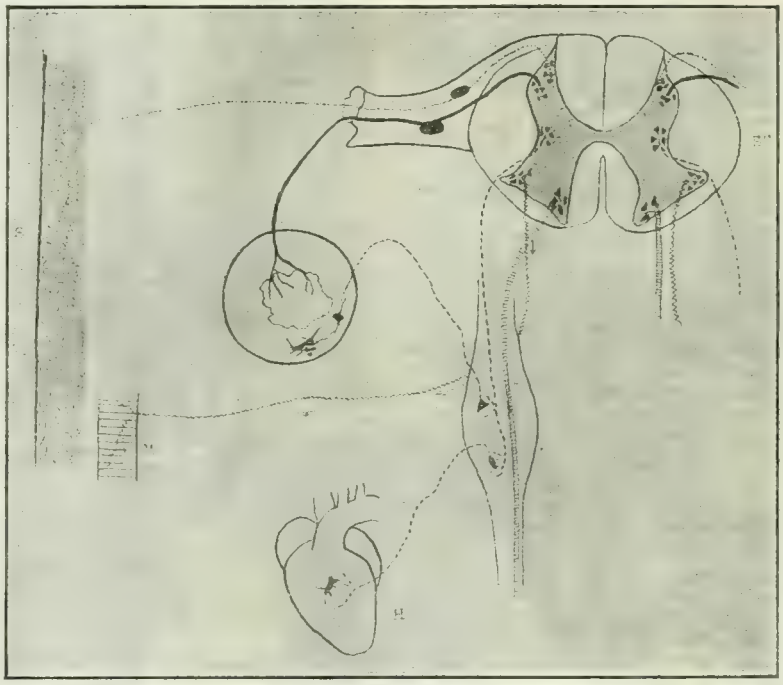


Fig. 6.—A diagram to show the various functional groups of neurones in an upper thoracic spinal segment. The most anterior group is *somatic*; the group in the lateral horn is *respiratory* somatic; the group of small cells at the junction of the anterior and posterior horns (intermedio lateral) is *viscero-vascular*. There are thus three groups of efferent neurones. There are two groups *represented here* of sensory neurones, *afferent visceral* and *afferent somatic*; they arborize around cells in the posterior horn. This diagram should be associated with the diagrams represented in Figs. 7 and 8. It will be observed that although the arrangement of the columns of cells is much more complex in the bulb, the same segmental functional groups exist. ~~~~~~, Respiratory. ·····, Visceral and vascular. ——, Afferent visceral. ...., Afferent somatic. ||||||| ||, Somatic. S, Skin. H, Heart. SC, Spinal cord. M, Muscle.

Henle on the natural history of the sigh in his *Anthropologische Vorträge* calls attention to the fact that there is a contest between the striped skeletal muscles of respiration and the unstriped muscles of the lungs which seek to narrow the bronchial tubes. "In the normal state the former easily conquer but under other conditions they either conquer with difficulty or are defeated" (James).

The contrasted emotions express themselves in similarly contrasted-wise, by spasm and paralysis of the unstriped muscles and for the most part alike in all the organs which are provided with them as arteries, skin and bronchial tubes. The contrast among the emotions is generally expressed by dividing them into exciting and depressing ones. It is a remarkable fact that the depressing emotions like fear, horror, and disgust, increase the contraction of these smooth muscles, whilst the exciting emotions like joy and anger make them relax. If there are pulmonary vasomotor fibres then these are constricted with the bronchial tubes, and a feeling of insufficient breath and oppression occurs, and the ineffective action of the diaphragm obtrudes itself upon consciousness by the fact that the external voluntary chest muscles have to be called to its aid to draw a deeper breath, and this is the sigh which we know is associated with anxiety and states of mental depression. It is quite possible that impulses from the higher centres in the brain may inhibit the inspiratory centre, and bring about the same effect as is produced by stimulation of the superior laryngeal nerve, causing thus an unpleasant sensation of resistance to the movements of inspiration which is relieved by a sigh.

I have already in my first lecture referred to fear and the physical phenomena associated with that emotional

state. Let us consider the opposite condition—anger—and see how far our knowledge of the functions of the systems referred to in the diagram (Fig. 6) serve to explain the phenomena of fear and anger. Darwin says Shakespeare sums up the chief characteristics of rage as follows:

> In peace there's nothing so becomes a man
> As modest stillness and humility;
> But when the blast of war blows in our ears
> Then imitate the action of the tiger.
> Stiffen the sinews, summon up the blood,
> Then lend the eye a terrible aspect;
> Now set the teeth, and stretch the nostrils wide,
> Hold hard the breath, and bend up every spirit
> To his full height! On, on, you noblest English.
> *Henry V*, Act iii, Scene 1.

Bell points out that the muscles of the arms in man and the forelegs in ferocious brutes (the tiger) before they spring must have a fixed *point d'appui*, consequently the chest walls must be fixed, and to give the forelimbs their fullest power it must be raised and expanded as well as fixed.

Summon up the blood: this can only be done by inhibition of vaso-constrictor influence on the skin and muscles.

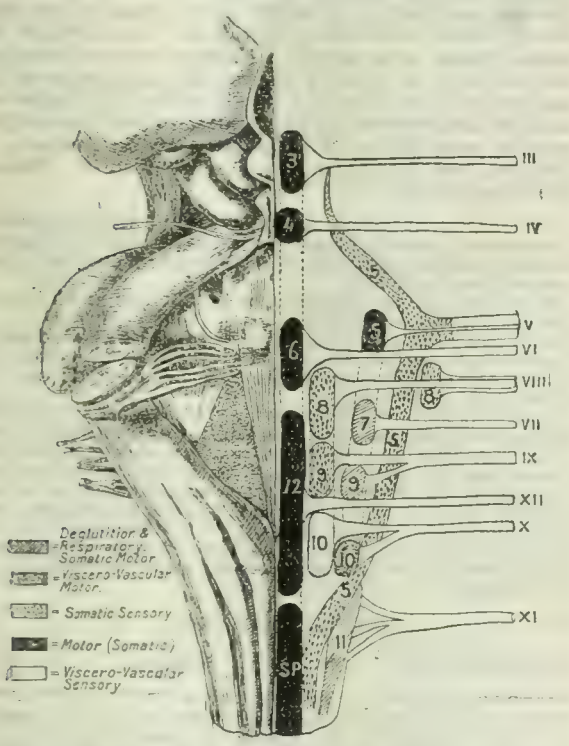


Fig. 7.—This diagram should be associated with Figs. 6 and 8. The important nuclei of the cranial nerves are functionally grouped as in a spinal thoracic segment. It will be observed that the sensory fifth is represented as spreading out like a fan to terminate in a column of cells continuous with the posterior horn; the three motor groups, as pointed out by Kappers, do not retain the definite alignment found in the thoracic spinal cord.

Set the teeth hard and stretch the nostrils wide: lend the eye a terrible aspect, will be effected by an increase of innervation currents to all the muscles supplied by the facial and motor fifth. *Hold hard the breath* is effected by a discharge of innervation currents to all the muscles supplied by the inspiratory column of cells. *Stiffen the sinews* necessitates a discharge from the whole motor somatic column of cells. In all these expressive actions of rage we *do imitate the tiger* before it springs. Can we explain the nervous mechanism which leads to this instinctive action showing antagonism between the action of the striped and unstriped muscle? In the dorsal region of the spinal cord where the original segmental arrangement is preserved we find somatic, respiratory, and viscero-vascular nuclei represented. In the normal and quiescent non-emotional state an equable reflex tonus by afferent stimuli is maintained in somatic, respiratory, and viscero-vascular muscle, but under the influence of the emotion (rage) there is a surcharge of nerve potential flowing out through the somatic and respiratory systems of neurones, consequently there may be a drainage away of the normal flow of potential by the viscero-vascular neurones and a vascular dilatation will occur; or the vascular dilatation may be explained by antidromic discharge along the posterior roots, which may, as Bayliss's experiments prove, lead to vaso-dilatation. But how are we conscious of this change in our bodily state? By the afferent impressions to the brain from the skin, muscles, and viscera, but mainly the two former, and these impressions will arise in the whole column of sensory cells, somatic and visceral, from the top of the fifth nucleus to the end of the spinal cord (see Figs. 6, 7, and 8).

Before reaching the seat of consciousness, however, these impressions will all be projected into the thalamic grey matter, where a fresh relay of neurones occur. But the thalamic region is also a station for receiving impressions from the special senses—hearing, sight, touch, taste, and smell—where relay neurones occur by which the several special sense stimuli are conveyed to definite regions of the perceptive cerebral cortex. The *thalamus* thus may be the great subconscious centre for the elaboration and co-ordination of sensory impressions derived from organic changes in the body and those brought by

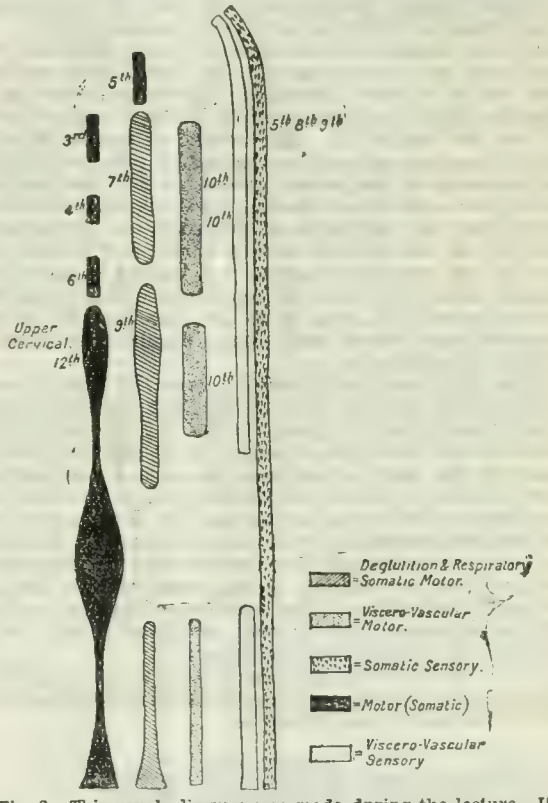


Fig. 8.—This rough diagram was made during the lecture. It shows the relative positions of the five systems of neurones from the top of the medulla to the end of the thoracic spinal cord. The large swelling of the *somatic motor group* and the *gap* in the *respiratory*, the *viscero-vascular motor*, and the *viscero-vascular sensory* columns corresponds to the innervation of the upper limb, which is entirely connected with the life of relation and in association with vision plays a predominant part. In order that the diagram should not occupy too much space, the twelve spinal thoracic segments have been much curtailed relatively to the remainder.

the special senses from the material world around. The thalamus is connected with the corpus striatum, and it is possible that both the basal ganglia may be primary centres of emotional discharge to the lower centres.

Every thought tends to activation, and thoughts based upon the revival of memories of past experiences are more or less suffused with affective tone, according to the nature of the experience and the temperament of the individual. There will thus be a tendency to revival of the physical concomitants (emotions) of that affective tone. It does not require a delicate instrument to prove the truth of this statement in many instances, for we know that the recollection (revival in consciousness) of a great sorrow or injustice will awake sometimes a more violent emotional discharge than actually occurred at the time it was experienced. The experiments of Féré, Tarchanoff, Veraguth, and Jung and Petersen tend to support this conclusion; these observers have shown that if the body of an individual is

introduced into the circuit of a galvanometer through which a weak current is passing, and the resistance, being so arranged by means of a rheostat as to enable them to bring the needle to zero on the scale, psychical conditions will lead to a deflection of the needle of the galvanometer. The inference is that the psychical change produces some physical change by which the current passes less readily or more readily through the body. The results previously obtained by Féré and Tarchanoff have been corroborated and further elaborated by Veraguth, who found that if an individual introduced into the circuit be read to, deviation of the mirror is noted when passages associated with emotional tone are reached. Or if a series of unrelated words is pronounced by him, the words connected with some emotional complex produce an effect on the galvanometer, while indifferent words have no effect. He is unable to explain the changes in resistance. Jung and Petersen, who have repeated and elaborated the above experiments and applied the method of investigation to cases of dementia praecox, conclude that the change in resistance is due to the relative condition of secretory activity in the sweat glands.

A perception or an idea arises; it may suddenly, and before it can be controlled by the higher centres, lead to a diffuse emotional discharge—that is, a stimulus irradiates downwards into lower centres before it can be controlled. But when a person is of a stable temperament and has habitually practised control, the tendency of the perception or idea is to irradiate into the higher association centres, resulting in deliberation, judgement, and inhibition of the emotions. Perhaps the tendency at the present time is to suppress the affective side of our nature too much. "It should be the aim of mental culture to *retain* the emotions within the sphere of intellectual life, and so to get the benefit in the supply of the interest and energy required for effective volition" (Maudsley).

I fear in these two lectures I have left unsaid many things which I ought to have said, and said some things which I ought not to have said, but if I have stimulated your interest in a subject which is of profound importance in the study of nervous diseases, I am satisfied. You will find in practice, as Maudsley says, a "disordered emotion may act upon the animal life, the organic life, and the intellectual life." "It may grave itself in the lineaments of the countenance, or declare itself in the habit of the body; it may initiate or aggravate organic disease, producing, according to its duration, a transient or lasting derangement, and it may temporarily obscure or permanently vitiate the intelligence."

I hope at some future time to give at Charing Cross Hospital four lectures on the application of the physiology of the emotions to morbid states.

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Jung and Petersen, *Brain*, vol. ii, 1907.

On March 19th the Maryland State Senate passed a Bill prohibiting Christian Scientists or faith-healers from practising in Maryland without the diploma of regular physicians. The Bill has already passed the House.

The American Therapeutic Society will hold its ninth annual meeting at Philadelphia on May 7th, 8th, and 9th. Among the features of the meeting is a "symposium" on diseases of the vascular system. Among the subjects to be discussed are: The pharmacology of heart stimulants, by Dr. Horatio C. Wood, jun. (Philadelphia); venesection in diseases of the heart, by Dr. Judson Daland (Philadelphia); and some conditions requiring caution in the use of digitalis, by Dr. Alexander D. Blackader (Montreal). Another feature will be a "symposium" on the treatment of tuberculosis.

THE CLINICAL VALUE OF THE PANCREATIC REACTION IN THE URINE, BASED ON OVER 250 ANALYSES.

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In recent years the clinical researches of Mayo Robson and other observers have directed attention to the comparative frequency of serious organic disease of the pancreas and to the various clinical tests which assist in its recognition. More particularly, attention has been directed to the value of the pancreatic reaction in the urine, a test devised by Cammidge, which has proved in Mayo Robson's experience of great value in diagnosis. This test, first described by Cammidge in 1904, has been elaborated and improved, and in 1908 is again advanced by its originator as a valuable diagnostic method, after an experience of 800 analyses.

My interest in this subject was aroused in the course of the autumn of last year through the admission to Sir Thomas Fraser's wards, then under my care, of a case of chronic pancreatitis, in which this diagnosis had previously been established by operation. The object of the present paper is to present a brief summary of results I have obtained in a series of over 250 analyses from 120 consecutive cases. The test employed was the "improved method" as described in Mayo Robson's and Cammidge's recently published work on *Diseases of the Pancreas.* I have empirically divided the positive results obtained into three groups:

(*a*) *Pronounced.*—Those in which the end reaction showed a pronounced deposit of the crystals of characteristic appearance and solubility, the deposit ranging from about ¼ in. to ½ in. in an ordinary test tube.

(*b*) *Marked.*—Those in which the deposit was much less in amount, but still considerable.

(*c*) *Slight.*—Those in which there was either a slight deposit on naked-eye examination or in which there was no naked-eye deposit, the presence of crystals only being determined on microscopic examination.

Note.—At the outset of my observations I experienced some difficulty with the test and failed to get any reaction. This failure may have been due to faulty chemicals employed. At a later date Dr. Cammidge kindly demonstrated to me the end reaction, and subsequently I have experienced no special difficulty with the test. The present series of analyses was carried out by a trained assistant in the laboratory of the Royal College of Physicians, the end reaction being determined by myself, a microscopic examination being made in every instance.

Pronounced Reaction.

Clinical Diagnosis.	Remarks.
1. Chronic pancreatitis	Pronounced reaction during acute attacks, on two occasions negative in interval.
2. Acute pancreatitis	Operation: Incision and drainage; cholecystenterostomy (Mr. Caird). Reaction gradually became less marked and was negative when patient was discharged cured.
3. Acute suppurative appendicitis and peritonitis	Died. Pancreas showed the naked eye and microscopic appearances of acute pancreatitis.
4. Malaria (aestivo-autumnal)	Jaundice with pronounced epigastric tenderness. Reaction became negative coincidently with recovery from jaundice and epigastric tenderness.
5. Pneumonia	Died. Pronounced reaction three days before death; reaction negative on day of death. Pronounced arterial sclerosis. No *post-mortem* examination.
6. Chronic bronchitis, arterio-sclerosis, and myocarditis	Pronounced reaction on three occasions. Man, aged 48. Incapacitated from work.
7. Alimentary glycosuria and constipation	Marked diminution in the degree of reaction coincidently with use of restricted diet and aperients.
8. Duodenal ulcer, chronic pancreatitis	Pronounced reaction associated with glycosuria. Extensive malignant disease was revealed at the operation.
9. Gall stones in common bile duct	Reaction negative on two occasions in December, 1907; slight positive reaction on day before operation (January 10th), reaction became very marked and patient died on fourteenth day. Pancreas showed the naked eye and microscopic appearances of recent inflammation.
10. Exploratory laparotomy	Palpable tumour in region of pancreas. Pronounced pancreatic reaction with trace of glycosuria; at the operation Professor Chiene found marked chronic pancreatitis.
11. Pregnancy, seventh month	Pronounced reaction associated with glycosuria (patient not seen by the author).

Pronounced Reaction—*(continued)*.

Clinical Diagnosis.	Remarks.
12. Mitral stenosis (pronounced)	Reaction negative on admission. A pronounced pancreatic reaction developed coincidentally with the occurrence of jaundice, epigastric tenderness, and general increase in severity of the symptoms. Died. At the *post-mortem* examination there was intense catarrh of duodenum, with muco-purulent blocking of the ampulla of Vater and recent inflammatory changes in the pancreas.

Moderate Reaction.

Clinical Diagnosis.	Remarks.
13. Chronic pancreatitis...	Probably a primary infective inflammation unassociated with gall stones. Symptoms of ten years' duration.
14. Uraemia	Died. At the *post-mortem* examination the terminal portion of the common bile duct was markedly bile stained throughout its course.
15. Colitis	Associated with pale stools of some years' duration.
16. Uraemia	Recovery. Reaction negative on discharge from hospital.
17. Gall stones in common bile duct	Reaction negative in December, positive in January, before operation; increased in degree after operation, and finally disappeared on recovery.
18. Acute gout	The administration of 1 grain of calomel at night for some days was followed by a copious discharge of apparently unaltered bile.
19. Tuberculous intestine. Phthisis	Died.
20. Chronic pancreatitis secondary to duodenal ulcer	Reaction negative in December, positive in January, and associated with glycosuria, followed by melaena and exacerbation of symptoms.
21. Constipation	Symptoms of six years' duration, ill-defined tumour in region of hepatic flexure. Reaction became negative after eight days' close attention to the bowels (eight enemata of warm oil, followed by soap and water, with, internally, castor oil, etc.).
22. Chronic nephritis, alcoholism	Patient not personally seen.
23. Cerebral haemorrhage Aphasia	Pronounced arterial disease. History of two previous cerebral haemorrhages.
24. Exophthalmic goitre.	Died in February, 1908. In December, 1907, it was observed that there was a notable, though temporary, improvement in patient's condition coincidently with the administration of pancreatic emulsion.
25. Exophthalmic goitre.	Died. Pancreas showed chronic interstitial inflammation, with areas of small-celled infiltration
26. Gastric ulcer	One examination made a few days before discharge from medical ward.
27. Malignant disease of stomach	Four analyses made after operation, reaction positive with distinct glycosuria.
28. Chronic pancreatitis...	Woman, aged 63. Abdominal pains eight months' duration Marked pancreatic reaction with considerable glycosuria. May be secondary to malignant disease.

Slight Reaction.

Other 18 cases gave a slight reaction. In 5 of these cases there was no trace of deposit visible to the unaided eye, the reaction being determined by microscopic examination only. This group includes cases of broncho-pneumonia, appendicitis, myelogenous leukaemia, malignant disease of the liver, cardiac disease, chronic nephritis, chronic bronchitis, arterial sclerosis, chronic intestinal obstruction due to new growth, simple catarrhal jaundice, and a fatal case of lymphosarcoma. In the last mentioned the reaction was negative on repeated examination after the patient's admission to hospital, but the reaction was positive on two occasions during the last week of life.

Negative Results.

A negative reaction, in many instances after repeated examination, was given in 75 cases. They included cases of

jaundice due to calculus in the common bile duct (the calculi being passed per anum), jaundice due to malignant disease, gastric ulcer, duodenal ulcer, indigestion and constipation, malignant disease of stomach, abdominal aneurysm, malaria (aestivo-autumnal), cancer of the uterus, rectal carcinoma, various diseases of heart, lungs, kidneys, and bladder, and a fatal case of anaemia and thrombosis.

The last mentioned is of special interest. During the last few days of life the symptoms, fever, collapse, abdominal pains, etc., closely simulated acute intra-abdominal inflammation, and the reaction of the urine was negative on two examinations. At the *post-mortem* examination the pancreas appeared perfectly healthy, and on microscopic examination of different parts of the gland an unusually good picture of a perfectly normal gland was found.

Comments.

It is of interest to refer in greater detail to some of the data which appear to warrant the conclusion that this reaction in the urine has a special relation to pancreatic disease. These data are furnished both from the clinical and pathological standpoint. For clinical facts reference may be made to the following cases:

Case 2, acute pancreatitis, successfully operated on by Mr. Caird, in which ten analyses were made, the reaction becoming less pronounced, and finally being negative on the patient's discharge from hospital cured.

Cases 4, 8, 12, and 21, recently under treatment in Sir Thomas Fraser's wards, are also noteworthy. Case 4 is specially interesting since there was a useful control. Two seamen were admitted to the wards on the same day suffering from well-marked malaria of malignant type. One of these (Case 4) was distinctly jaundiced; there was marked tenderness on pressure in the epigastric region, and the urine gave a pronounced pancreatic reaction, which became negative coincidently with the disappearance of the jaundice and the tenderness on pressure in the epigastric region. The other sailor was not jaundiced, the epigastric region was free from tenderness on deep pressure, and the pancreatic reaction was invariably negative (four analyses).

Case 8 is instructive, since the pancreatitis was associated with, and apparently a sequel of, duodenal ulcer, and was further complicated by glycosuria, doubtless of pancreatic origin. As already indicated, it was found at the operation by Mr. Caird that the pancreatitis was secondary to malignant disease.

Case 12 illustrates another point, namely, the development of the reaction in consequence of the congestion and catarrh, probably of infective origin, that may be present in advanced cardiac disease. In this patient the reaction was negative on admission, later the reaction was positive though slight, a pronounced reaction developing coincidently with the occurrence of jaundice, epigastric tenderness, and a general increase in the severity of the symptoms. At the *post-mortem* examination the duodenum showed intense catarrh, the ampulla of Vater was distended with muco-pus and the pancreas showed considerable swelling and detachment of the secreting cells with much oedema of the interstitial tissue.

Case 21 appears to show that the pancreatic reaction in the urine may result from a disturbance of the function of the pancreas from pressure of a faecal mass.

In this patient there was an ill-defined tumour in the region of the hepatic flexure, the subjective symptoms being abdominal pains and general weakness of some years' duration. The pancreatic reaction in the urine became negative coincidently with the relief from the constipation and general improvement in the patient's condition.

Cases 9 and 10 have special interest from the surgical point of view.

In Case 9, a female patient, deeply jaundiced, the reaction was negative on two occasions in December, a slight positive reaction was obtained on January 10th, the day before operation, the operation revealing several calculi impacted low down in the common bile duct with extensive adhesions around. The reaction became very pronounced, and the patient died on the fourteenth day, the pancreas showing the naked-eye and microscopic appearances of recent inflammation. The history of this case suggests that the chances of the patient's recovery were lessened from the fact that in the few weeks prior to operation the inflammation round the bile duct had extended and involved the pancreas.

Case 10.—This patient had a well-defined tumour in the epigastric region, with a pronounced pancreatic reaction in the urine, and slight glycosuria. At the operation Professor Chiene found that the tumour was an enlarged and indurated pancreas.

Before leaving these cases it is of interest to note that I have recorded in the above series no fewer than 5 cases of chronic pancreatic disease, which exhibited a marked pancreatic reaction, with associated glycosuria. Some details of two of these are given above (Cases 8 and 10). The others are Case 27, in which the *post-mortem* findings confirmed the diagnosis of chronic pancreatic disease; Case 26, a patient under the care of Professor Greenfield, regarded as pancreatitis secondary to duodenal ulcer; and Case 20 in Sir Thomas Fraser's wards, in which the pancreatitis may be secondary to malignant disease of the gland. In this connexion it is of interest to note that in 65 consecutive cases of chronic pancreatitis operated on by Mayo Robson, glycosuria was detected in 4 cases only.

From the pathological point of view, the facts so far obtained in the *post-mortem* room confirm the conclusion

arrived at from the clinical data as to the relationship of the pancreatic reaction to disease of the pancreas. In one patient, a case of chlorosis with widespread thrombosis, dying with a high temperature and symptoms resembling acute intra-abdominal inflammation, the reaction was negative on repeated examination, and the naked-eye and microscopic appearances of the pancreas were in all respects normal; whereas in 7 cases which gave a marked positive reaction, definite inflammatory or degenerative changes were present in the gland.

GENERAL CONCLUSIONS.

My results confirm the conclusion arrived at by Mayo Robson and Cammidge, that there is a definite and important relationship between the pancreatic reaction in the urine and disease of the pancreas. My results differ from those of Cammidge in so far that I have recorded a higher percentage of positive results in cases similar to those that may have been included in that author's list of control cases. Cammidge found in a group of cases described as miscellaneous—other than those having a direct surgical interest in relation to disease of bile ducts and pancreas—that 4 only out of 92 gave a positive reaction. The higher percentage of positive results recorded in my series may possibly be due to the fact that I made use of many serious medical cases of a nature commonly associated with advanced arterial disease, and chronic catarrhal conditions in the intestinal tract, conditions that are frequently attended with degenerative or inflammatory changes in the pancreas and other glands. My results lead me to divide the cases in which the pancreatic reaction was present in my series into the following groups:

1. A group in which there was definite clinical or pathological evidence of serious organic disease of the pancreas—for example, acute and chronic pancreatitis, usually associated with disease of the bile ducts.

2. A group in which the reaction in the urine is associated with pronounced arterial sclerosis, a condition usually accompanied by more or less sclerosis in different glands.

3. A group in which the reaction is dependent on congestion and catarrhal conditions of the gland ducts and substance, with associated toxaemia — for example, advanced heart disease, appendicitis, pneumonia, malaria, and the like.

This division is, it is hardly necessary to add, somewhat arbitrary, as most cases are in all probability of mixed origin. If these facts are kept in view, and this urinary reaction is carefully studied along with the other clinical features of a case, I have no hesitation in saying that this new test will prove of great value both to physicians and surgeons in the diagnosis and treatment of pancreatic disease.

I have much pleasure in expressing my indebtedness to Sir Thomas Fraser and other senior colleagues at the Royal Infirmary for the facilities afforded me in this investigation.

THE THERAPEUTIC USES OF NORMAL SERUMS.

BY E. C. HORT, M.R.C.P.EDIN.,
LONDON.

IN two papers recently published by the *Lancet* of December 21st, 1907, and February 15th, 1908, I have shown that the ulceration and destruction of tissue which characterize many diseases may be due to a deficiency in the patient's serum of bodies that normally restrain autolysis or self-destruction of tissue. I have also shown that, acting on these lines, I have been able in a number of cases of disease, both infective and noninfective, to inhibit such self-destruction by the internal and local administration of normal serums rich in anti-destructive bodies. This internal and local use of normal serums that I have employed in order to limit cell destruction in disease is, I believe, original. So also, as I have said in the papers referred to, is the giving of tuberculin and staphylococcal and other vaccines by the mouth, a practice which I began early in 1907, and which Dr A. Latham has subsequently and independently employed.* In 1905 Well of Paris gave intravenous and subcutaneous injections of normal serums in haemophilia, hoping thereby to increase the coagulation power of the blood to a deficiency in which he, I think, on insufficient grounds, attributed the haemorrhages. It was, in fact, this work that first suggested to me the possibilities inherent in normal serums.

In Australia M. Paton has for years been treating diseases other than diphtheria with antidiphtheritic serum, and has used "simple plasma" in tuberculous and asthenic conditions with a view to increasing nutrition. Metchnikoff, again, has for some time been using heated serum as a local application with a view to increasing phagocytosis. Of this work and of Paton's I was ignorant till after I had published my own observations, which were based on the use of untreated serum given for a very different reason.

The inhibiting power of serum on autolytic processes *in vitro* has been recently the subject of much experimental investigation. Such inhibition has been shown to be present when the serum of one animal is allowed to act on the tissues of another.

In the appended list of cases it will be seen that the arrest and cure of such lesions as are referable to autodestruction of tissue are remarkable illustrations of the inhibiting power of serum. There can be no question as to the direct action of the serum on local lesions such as the cases of varicose ulcer which had for many years resisted all other methods of treatment, including prolonged and absolute rest. In the cases of visceral ulcer, especially gastric, I am inclined to attribute the good results gained to the same local action.

In the cases of arrest by the serum of progressively destructive lesions caused by the tubercle bacillus, such as I observed whilst treating haemoptysis, it seems highly probable that such arrest is due to a heightening of the inhibitory power of the blood. It is this observation, reported in the *Lancet* in connexion with a case treated in June, 1907, that encouraged me to continue serum treatment in cases of tuberculosis. This raising of the clinical index of the blood's inhibitory power is likely to prove to be the expression of the reaction of the organism to normal serum treatment in all cases of cell destruction, whether due to bacillary invasion or not. It is more than probable that the opsonic index, which after all is only a measure of ingestion prior to lysis of bacteria, will be found to be only a supplemental factor to the true antilytic index of response, which is a gauge not only of antilysis but of restrained lysis. It is conceivable that ingestion and subsequent lysis of bacteria may give rise to an undesirable escape of poisonous enzymes, unless restrained from running riot by antilytic action. Opsonic estimation is and can be only a partial indication of the organism's response to bacillary invasion or vaccine injection. An index of antilytic response may prove to be a far truer guide. It is for this reason that I have neglected the opsonic content in cases treated by normal serum or by vaccines or by both.

That tissue destruction in many bacillary diseases is referable to the development of proteolytic enzymes in the damaged cells is almost beyond doubt, and the arrest of such tissue destruction would appear to be a problem of almost as great importance as the neutralization of the bacillary intoxication. That the antiautolytic power of the serum varies in different diseases has been shown in a rough manner by Diener using Loeffler plates after the manner of Müller and Koltschmann. It is obviously of great importance to establish an antilytic index or measure of the inhibitory power of the normal serum used, and I am informed by Dr. Golla that his method of gauging it by electrical conductivity, with which he is now investigating the subject, does establish such an index. For the fluctuating changes in the inhibitory power of a patient's serum can be readily followed during an illness dependent on autolytic processes. In dealing with such a universal and important fact as autolysis it is obvious that any power of raising the antilytic index, and hence the reciprocal resistance of the tissues, is of cardinal importance.

The action of normal serum would appear to be a sum of the two opposing actions of an antilytic and auxilytic body. The literature dealing with this antiautolytic power, as determined by experiments *in vitro*, is very large. The older observations on the antiproteolytic action of Cathcart, Landstegger, and Glaesner have

* It was shown, however, by Copeman in 1894 in his work on *Variola and Vaccinia* that in 1810 vaccine crusts given by the mouth produced in six days in a young girl 180 vesicles, all of "clearly vaccine type."

received striking confirmation from the more recent work of Baer, Opie, Müller, and Koltschmann.

The protein constituent of the serum with which the antiautolytic body is probably in combination is still a matter of dispute, the old view that it is in combination with euglobulin having been recently revived. I am at present endeavouring to have the antiautolytic protein body separated from the autilytic globulin of the serum, but at present the difficulties of obtaining it in a sterile and atoxic condition are considerable.

Summary of Cases Treated by Normal Serum.

Full details of these cases will be published later.

Cases Treated by Local Applications of Serum.

	Results.
9 cases of long-standing varicose ulcer ...	Vide below.
1 case of eczematous fissure	Rapid cure.
1 case of rectal fissure	Cure in 14 days.
1 case of intractable bedsore	Rapid healing.
2 cases of breaking-down carcinomata ...	Results doubtful.

Cases Treated by Internal Doses of Serum.

	Results.
5 cases of chronic gastric ulcer	Entire relief from pain in 4.
2 cases of acute gastric ulcer with haemorrhage	Haemorrhage arrested.
4 cases of tuberculous haemoptysis	Haemorrhage arrested.
1 case of acute pustular eczema...	Rapid cure.
2 cases of chronic duodenal ulcer with haemorrhage	Relief of pain.
1 case of chronic duodenal ulcer with no haemorrhage	Under treatment.

Cases Treated by both Methods Combined with Vaccines

	Results.
1 case of chronic alveolar suppuration ...	Under treatment.
1 case of acute pustular eczema...	Vide above.
1 case of suppurating rectal fissure	Cure in 14 days.

Cases Treated by Vaccines (by the Mouth) alone.

	Results.
1 case of tuberculous sacro-iliac disease ...	Practically cured.
1 case of acne	Doubtful benefit.

Cases of Ulceration treated with Serum.

The cases of varicose ulcer were mainly treated at St. George's Infirmary, where the courtesy of Dr. Muir and his assistant, Dr. Austin, who spared no trouble in the carrying out of the treatment, enabled me to observe the action of the serum under conditions eliminating the possible errors arising from the effects of recent rest and treatment. In all 7 cases were treated there, and only one failed completely to react, whilst in another the process of complete healing of the ulcer was interfered with by a papillomatous growth. In all the other cases healing was promoted to a great extent. One case, in which an ulcer of about 3 sq. in. had been without any change for eight years, and the patient had been confined to bed for some months previously, was completely healed up in about three weeks. In another, where an ulcerative condition had existed for thirty years, and healing with subsequent breaking down had last taken place two years before, the lesion was nearly completely healed after four weeks' dressing with serum when I last saw it.

The case which resisted treatment was one of a very unpromising old callous ulcer, covered by an almost horny slough. As a rule, the treatment was followed by a beginning of new skin formation at the edges within a few days from the first application of the serum dressing, the floor of the ulcer at the same time becoming healthy-looking and red. Two other cases at St. George's Hospital are at present being treated as out-patients and show improvement, notwithstanding the unfavourable conditions and a history of some months' unsuccessful treatment with various lotions.

With the ulcers I would include a case of severe bedsores under the care of Dr. Highet at Workington, where the application of serum led to rapid healing.

A case of eczematous fissure under the breast in a woman that had been treated unsuccessfully with zinc and antiseptic powders healed up after two days' local serum treatment.

Two cases of ulceration of malignant tumours were treated with doubtful benefit by serum.

It is necessary to dwell somewhat at length on the effects of serum on cutaneous ulcerations, as it affords an easily-observed demonstration of the inhibitory power of serum on what is generally admitted to be a purely autolytic lesion. The effect of serum on simple cutaneous ulceration was similar to the results of the treatment of gastric ulceration.

One case of undoubted gastric ulcer where the patient had suffered daily pain for nine years was relieved after two days' treatment, and said that this was the first time she had been able to lie on her left side at night since the onset. Serum was then omitted for five days and the pain returned, but again left her on resumption of the serum treatment, which was continued for three weeks. After this period she appeared to be completely cured.

The second case had a history of three years' symptoms of gastric ulcer with chronic pain. After five days' treatment she declared herself free from pain.

A case of duodenal ulcer is now under treatment with marked signs of improvement.

Early in 1907 I treated a case of tuberculous sacro-iliac disease by the administration of tuberculin by the mouth. I am at present treating a case of pyorrhoea alveolaris by the combined method. When treating cases of haemoptysis with serum by the mouth in May, 1907, I observed, in addition to the satisfactory results on the haemorrhage that I have recorded in my previous papers, that the treatment had a distinct inhibitory effect on the destructive process. This has induced me to undertake the treatment of a large number of other cases of tuberculosis in the hope of producing still more striking effects.

HYSTERECTOMY PERFORMED UPON A PATIENT WITH GLYCOSURIA.

By JOHN D. MALCOLM, M.B., C.M., F.R.C.S.Edin.,
Surgeon to the Samaritan Free Hospital.

Whether a patient with persistent glycosuria should be subjected to an operation that is not immediately necessary to save life is a question open to debate, and therefore the following notes seem sufficiently interesting for publication.

A married woman, aged 42, and the mother of three children, the youngest aged 14, was admitted to the Samaritan Free Hospital in April, 1907. She had an abdominal tumour, concerning which she consulted Dr. C. J. Beattie, who investigated the case and at once sent the patient to the hospital.

History.

She had known of the tumour and been treated for it six years. It steadily enlarged and during the last three years the menstrual flow was increasingly free. The patient was emaciated and anaemic, and her weight had fallen nearly a stone and a half. In the summer of 1906 she suffered from diarrhoea, which ceased after a week in the country. Shortly before admission to hospital she had a "cold," with cough and slight expectoration, but she had not been subject to such attacks.

Condition on Admission.

There were many fibromyomata in the wall of the uterus. Most of them were small, but in two the diameter was about 4 in., whilst a third was nearly as big. The mass rose as high as the umbilicus, the bulk of it was above the pelvic brim and with the uterus it was very freely movable in the pelvis and abdomen.

The quantity of urine excreted in twenty-four hours was between 40 and 50 oz., and its specific gravity was 1038 to 1044.

On April 21st 41 oz. were passed containing 34.5 grains of sugar to the ounce.* The skin was moist, and there was no increase of appetite or unusual thirst. Under a modified diet the amount of sugar diminished, the lowest quantity before the operation being found on May 1st, when 40 oz. of urine were passed containing 26.2 grains of sugar to the ounce. In other respects the patient's health was good.

If there had been no glycosuria the case was one in which the uterus and tumours should be removed without hesitation, because the patient's health was seriously deteriorated by the repeated and profuse losses of blood, which there was no prospect of arresting, and because surgical treatment when the uterus is freely movable is almost without danger. At the time of writing there has been only one death in my last 61 cases of hysterectomy for fibromyoma, and I have never lost a patient from this operation when the conditions were at all near being so favourable as in the case under consideration.

Obviously, it was important to know whether the causes of the condition of the urine would have an ill effect upon surgical treatment. In the opinion of some, and I think these constitute the majority, a persistent glycosuria is a very dangerous complication of any major operation. Others attach less importance to it, and we know that an operation for diabetic gangrene is not necessarily fatal. Moreover, in cases of obstruction of the pancreatic duct by gall stones or by inflammation of the ducts associated with glycosuria, the latter has been cured by removal of the stones and drainage of the gall bladder, which allowed pathological changes in the pancreas to subside.[1]

The opinion I have formed is that, if the conditions are otherwise suitable for surgical treatment, a patient should not be denied its advantages because of the presence of sugar in the urine. I understand, however, that cases of this kind have been known to collapse suddenly during or soon after an operation, and it seems to me that septic infection may be unusually difficult to eliminate in a glycosuric patient and may prove rapidly fatal before characteristic symptoms of microbic action have time to develop. In deciding whether to operate or not, it must be taken into account that the causes of the glycosuria may lead to a fatal issue within a few years in young and middle-aged people.

The uncertainties of the position were explained as fully as possible to the patient, who is an intelligent woman, and she expressed a strong desire to have the tumours removed. As I thought her decision justified by the circumstances, I performed panhysterectomy on May 3rd, 1907.

Operation and After-History.

A mixture of one part of chloroform with two parts of ether was selected as the anaesthetic, and the operation was delayed twice by respiratory difficulties, which were alarming in view of the reputed danger of anaesthetics in the cases under consideration, but on both occasions artificial respiration with traction upon the tongue quickly restored the patient to a condition of safety.

In all other respects the operation and convalescence were uncomplicated from a surgical point of view, the highest temperature being 99.8° F., and the highest pulse-rate being 100 to the minute. Strength with an appearance of perfect health was quickly regained, and the patient's weight rose 8 lb. to 9 st. 9 lb. during the first four weeks after she left the hospital. In December her weight was 10 st. 1½ lb., the bowels acted well, there had been little pain of any kind, flushings were hardly noticed and there was complete freedom from headaches, which had caused much suffering before the operation.

Immediately after the tumours were removed, the patient was placed on a diet consisting chiefly of beef-tea and broths, and the quantity of sugar in the urine rapidly diminished until on the fourth day there was only a trace, but it did not disappear. When the patient showed every sign of doing well, a mixed diet was given, and the amount of sugar excreted varied with the kind of food. After a time a fairly strict diabetic diet was arranged, and in the last twenty-four hours of the patient's stay in hospital she passed 44 oz. of urine, which had a specific gravity of 1013, and contained only 1.8 grains of sugar to the ounce. At a seaside convalescent home she was put on ordinary diet, or nearly so, and afterwards at her own house she seldom passed less than 3 pints of urine in twenty-four hours. On July 2nd this quantity contained 24 grains of sugar to the ounce. Under Dr. Beattie's care and under restricted diet, the amount went down to 2 grains to the ounce. In October the eating of one pear seemed to have a permanent unfavourable effect on the glycosuria. Dr. Beattie informs me that in January an attack of bronchitis almost proved fatal from cardiac weakness. The diet regulations were relaxed, and the patient recovered. When convalescent, on January 24th, she passed 70 oz. of urine with a specific gravity of 1036 and containing 30 grains of sugar to the ounce. On February 15th, the patient being again on restricted diet, 60 oz. of urine were passed, containing 26 grains of sugar to the ounce. The patient had recovered from the bronchitis. Recently the administration of codeina in ½ grain doses three times daily was followed by a reduction of the urine to 50 oz. in 24 hours, containing 10 grains of sugar to the ounce, but the improvement was not maintained, and on March 14th 75 oz. were passed containing 16 grains of sugar to the ounce. The patient now says she never felt better in health.

The evidence is strong that, on ordinary diet, there is a tendency in this case to a persistent increase of the quantity of urine and of the sugar in it, but from a surgical point of view it is hardly possible that the result of the operation could have been more satisfactory. It would be unwise to lay too much stress upon a single observation, but patients with a large amount of sugar in the urine requiring major operations are not very common, and this case would encourage the undertaking of surgical treatment in others if the circumstances seemed to demand it.

* Whilst the patient was in hospital the amount of sugar was estimated at the Laboratories of Public Health. Later it was estimated at 1 grain per ounce for every point lowered in the specific gravity by fermentation.

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SOME REMARKS ON THE IRISH POOR-LAW MEDICAL SERVICE.*

BY J. WALLACE BOYCE, M.D.DUB.,

M.O., M.O.H. BLACKROCK DISTRICT; PHYSICIAN TO THE CONVALESCENT HOME, STILLORGAN, CO. DUBLIN; PRESIDENT OF THE BRANCH.

ALMOST the first who called attention to the unfortunate position of the Irish Poor-law Service in a practical way was Sir William Thomson, C.B., who has laid its members under a deep and lasting obligation by the amount of time and trouble he so ungrudgingly devoted to their cause. Before him, however, the Branch had taken up the subject, and with the Royal Colleges, the Irish Medical Association, the Irish Graduates' Association, etc., formed deputations to chief secretaries and the Local Government Board where the view held by the former bodies was fully stated. Since then at least three presidents of our Branch have devoted their addresses to bringing forward the hardships of the dispensary medical officers and ably advocating the claims made on their behalf.

I think the actions of these representative members and bodies prove, if indeed proof is required, the need of a reform not only of the Poor-law Medical Service, but of the system as a whole, though it is only the medical department we have time briefly to consider.

DUTIES.

The Poor-law medical officers are so many—almost half the profession in Ireland—that anything affecting them affects the profession as a whole; and a feeling of discontent with their lot and dissatisfaction with the conditions under which their duties are carried out exists. The chief hardships seem to me to be (1) inadequacy of salary, and (2) want of superannuation.

What are a medical officer's duties, and how is he paid for performing them?

He attends his dispensary to afford medical relief to all "poor persons" coming there and presenting the "black ticket." When he gets the "red ticket" he must attend at the patient's house, and continue his visits until termination of the case. When necessary he orders medicines and medical and surgical requirements; each must be ordered on separate requisition forms, each made out in duplicate. He checks the supplies, cares for the instruments, and, unless he is fortunate enough to have the services of one of the 47 compounders allowed for the 1,197 dispensaries of Ireland, makes up all his own prescriptions.

He sends at least three samples of drugs for examination every quarter. He returns all empties, and is even expected to pack them himself.

He keeps a register of every patient attended, and sends the book monthly to guardians for inspection. He reports the hours and duration of his stay in each dispensary.

*An address delivered on February 29th at the annual meeting of the Leinster Branch.

He must send half-yearly to the Local Government Board a form giving the number of tickets, and dealing with zymotic diseases, lunatics, and vaccination; he must answer queries concerning dispensary arrangements, vaccine, drugs, births, and give his opinion on the capabilities of the midwife and the sanitary inspector, and also answer many questions concerning the public health. He must make two copies of his report, one for the guardians, the other to be kept for future reference. He sends quarterly to guardians the name and address of every child in the district over 3 months old who does not appear to have been vaccinated.

The Public Health Act makes the medical officer, medical officer of health of his district. His duties as such, if their value to the country as a protection against disease were duly appreciated, would be among his most important functions, as in this capacity he is responsible for the detection and destruction as far as is possible of every source of disease, and is responsible for advising the people as to the preservation of domestic and personal health, and where necessary enforcing or at least recommending protective measures. The public health is a national asset, and so the importance of preventive medicine is freely acknowledged; but in Ireland, outside the cities at least, it exists largely on paper. The medical officer of health receives a pittance of from £10 to £25 a year, salaries insufficient to offer any inducement to commence sanitary work, particularly in the face of strong opposition, frequently coming from members of the sanitary authority, so strong that it is little wonder that sanitation has remained a dead letter in many parts of Ireland, a country so wanting in sanitary improvements.

Remuneration.

Most of the country districts are extremely large, many of them having over 100 square miles, and often very difficult to work. The toil is very heavy; single journeys to see a patient sometimes take four or five hours. One man told Sir William Thomson: "A canoe is built of ribs of wood covered over with tarred canvas, and night and day, summer and winter, I have to turn out in it to do my red tickets." In another "district 100 square miles, very hard to work. There are roads where a horse is barely able to climb up, and lots of places where you could not take a conveyance at all."

The allowance for locomotion is *nil*—not one penny-piece; be the district 100 square miles or more, he must get over it by day or night, in fair weather or foul, as best he can at his own expense.

One does not know which to wonder at most—the audacity of the proposal or the softness of its acceptance. The officers of the Royal Irish Constabulary are allowed £50 a year for a horse, £45 for a servant, and draw salaries rising from £125 to £450, with an allowance for house rent.

Can any one dispute the right and justice of similar terms as regards travelling to those medical officers, and they are a large majority, who have, from the size of their districts, to keep one or more horses? The able Special Commissioner sent by the British Medical Journal to this country to report on this condition, writes:

> It is evident in all phases of the medical, sanitary, dispensing, and midwifery duties of the medical officers of the Irish Poor-law Service, that had they been drawing splendid salaries, with the smallest possible districts, and leading lives of utter idleness, no more stringent, thorough-going, and carefully-worded orders could be issued than are now issued to them by the Local Government Board. Had these unfortunate officers been entirely public servants, relieved of the demands of private practice, no more stringent orders could be issued, and I say this with full knowledge of the official routine of the other national services.

The salaries vary from something under to something over £100 per annum; £145 is probably a fair average of the total official income of the Irish dispensary doctors. Out of this he must spend £100 for locomotion; many have to spend more. The balance provides him with house, food, fuel, clothes, household expenses, support and education of children if he have any. Truly he must be an economist of the first water. But, then, it may be said he has private practice. He has, it is true; but listen to an epitome of the answers received by Sir William Thomson in reply to questions on this subject.

The great majority reply that private practice is poor, a few say that it is good. In the poor districts two return it at £10 a year, and then there are many who return it at £25, £40, £50, some at from £100 to £200, one at £500, one at "nothing," while another is glad to get an "occasional tourist." The causes assigned are chiefly the desertion of the country by many of the landed gentry, diminution of population and the abuse of the dispensary ticket system. In Ireland to a greater extent probably than in any other civilized country, the care of the sick devolves on State-supported officials. In England, for instance, none but those actually destitute are entitled to share, or do share, in the relief afforded by the Poor Law, and therefore the artisan, the small farmer and petty shopkeeper, etc., all provide for themselves in sickness by such agencies as "clubs," or by resort to cheap practitioners. In this country, on the contrary, all such citizens look as a matter of course to the dispensary medical officer, and though never so intended their claim on his services is tacitly admitted, and, indeed, we might say intentionally provided for by a studied vagueness in the wording of the Poor-law Regulations. The consequence is that every year thousands of persons receive medical treatment at the expense of the doctor, the ratepayer, and the country, who are well able to pay for it and who would at the same time be greatly affronted at the bare suggestion that they were receiving out-door relief. Seldom a day passes in which the medical officer does not feel that he is being "done." Looking at it from another point of view, it may well be doubted that such a condition of dependence on State help in time of illness is beneficial to the community, or is not rather pernicious because of the want of self-reliance and forethought which it inculcates.

Superannuation.

Almost the greatest grievance of the service, to my mind, are the conditions at present existing as regards superannuation. The law only permits a pension to be given; the guardians have the power to determine the amount, and also whether it shall be given at all, but the worst feature is the cruel and tyrannical rule that no medical officer can have his application for superannuation even considered until after he has resigned his appointment. He must then place himself at the mercy of his Board, when, if the vote is against him, he loses both his office and the expected pension. The wonder is how such an unfair and unjust rule can have existed so long; but in the face of it there is no wonder that there are many men broken down by long years of hard work, by old age and infirmity, quite unfit for efficient work, still in the ranks, simply because they are afraid to resign. Did time permit, many pitiful stories could be told of individuals who have suffered from this defective system. The argument that has been used against giving a pension to a medical man as he is not a "full time" officer is indeed a weak one. A civil servant works not more than forty hours a week, his evenings and all his Sundays are free, he knows nothing of the night bell or dislocation of his meal hours. The medical man is ever on duty, and if hours of work were totted up they would exceed those of any civil servant. In risk, wear and tear, anxiety, and exposure there can be no fair comparison made. The pension should be, as in the case of army medical officers, automatically given for efficient service. The State should contribute its full share as it does to salaries, for undoubtedly the difficulty of obtaining a pension is increased by the introduction into the permissive Superannuation Bill of 1869 of the fatal provision "that no contribution be made thereto out of any moneys voted by Parliament." Naturally enough the guardians are the less willing to grant a pension the whole cost of which must be borne locally, so that the pension may cost them more than the salary.

A National Medical Service.

Any proposal to reform the dispensary system must go further than any scheme having as its object increase of of salary and right to a pension only.

I am convinced that there should be a National Medical Service, entrance into which should be by competitive examination.

There could be local bodies to assist in administration of relief, but the Government should defray the whole cost, instead of half as at present.

The salary should be £200, rising to £300, with allowances for house and horse at Royal Irish Constabulary rates, and retirement at the age of 65 with a pension on Civil Service scale.

Medical inspectors to be chosen by competitive examination from dispensary and workhouse medical officers of over ten years' service who have a diploma in public health.

A post-graduate course about the tenth year of service should be attended by each medical officer, with full pay and free lectures. Every medical officer should be entitled to yearly vacation of one month.

Each county or group of counties should have a medical officer of health, a "whole-time" official, with adequate salary.

This is merely an outline, leaving many important matters of detail to be filled in; but it is on some such lines, I submit, that the much-needed reform in this system must be brought about.

The reformation is almost entirely in the hands of the profession itself. The service at present is hard and unattractive, and offers but little inducement to the young man starting in life. If this could be brought home to him, the unfailing law of supply and demand will bring the remedy, as it has, for instance, in our Army Medical Service, for which there is now keen competition among the best of our students.

We must remember that it is not only on professional grounds that reform is needed; the claims of the poor of Ireland should also be considered. It was for them the system was established. It is plainly the duty of the State to provide them with a service thoroughly efficient and up to date, and it is a reproach to successive Governments to have allowed the present conditions to have continued so long.

THE ATTENDANCE PRIZE SYSTEM;

ITS RELATION TO THE SPREAD OF DISEASE IN ELEMENTARY SCHOOLS.

By RALPH P. WILLIAMS, M.D.Lond., D.P.H.Oxon.,
MEDICAL INSPECTOR OF SCHOOLS AND ASSISTANT MEDICAL OFFICER OF HEALTH TO THE CITY OF SHEFFIELD.

PRIZES for regular and punctual attendance are given in nearly all the elementary schools of this country. Some few education authorities give prizes for efficiency and progress, but a high percentage of attendance is also required, and absence on account of illness, infectious or otherwise, is not taken into account, and therefore disqualifies. The giving of bronze and silver medals for consecutive perfect attendance during such periods as four and six years is also a common practice. The advantages and disadvantages of the system may be briefly summed up.

ADVANTAGES.

1. The Government grant is earned by means of attendance. Thus money spent in prizes is looked on as well invested, and likely to return great increase in larger grant obtained.
2. The children are trained in regular and punctual habits.
3. If children are absent there is a loss of sequence in their education.

DISADVANTAGES.

1. The wrong children often get the prizes. The child who tries and the brilliant child may have temporary illness, and therefore receive no reward; whilst the dull and backward and the idle child may win yearly.
2. In many cases the parents are most keen, they really deserve the reward. The child with neglectful parents has little chance, as it is kept away from school for trivial causes, and is thus not successful.
3. In the more enlightened cities, where absence on account of infectious disease is allowed the prize is a farce as a prize for regular attendance, as a child may be absent for months with ringworm or scarlatina, and yet receive a first-class reward for, perhaps, a month's attendance in the year.
4. The giving of prizes for attendance demanded by law, when by the child's absence parents are liable to be fined, is also an argument against the system, although a very trivial one compared with
   (*a*) The risk to individual health.
   (*b*) The risk to the public health.

THE RISK TO INDIVIDUAL HEALTH.

Children are sent to school with bilious attacks; they have to be kept recumbent, and even then vomit on the floor. The teachers allow them to remain simply to prevent their losing an attendance.

Again, in the case of children suffering from various physical defects, I often receive answers to my letters requesting the parents to obtain medical attention to the effect that the child will be attended to in the holidays, so as not to miss its special prize, and promises are very poor things compared with deeds. I know children have lost special rewards owing to one half-day's absence spent at the hospital for the removal of adenoids. No doubt many parents are over-anxious about their children, and keep them away from school for the slightest ailment; but if done in good faith this is much better than sending the child to school, well or ill, in order to obtain a first-class reward.

THE RISK TO THE PUBLIC HEALTH.

Children sent to school with the early symptoms of scarlatina, measles, etc., sit close to healthy children, and thus disease is spread.

In one case a mother brought a little boy to school, and begged the teacher to allow him to stay, although he was obviously far from well, so that he "might not miss his prize." This was on a Tuesday morning; on Thursday he died of scarlatina. In another case a child was kept at school all one day and till noon the next. During the afternoon she was delirious, and, on the family doctor being called in, she was sent to the fever hospital suffering from scarlatina. Another child was seen sitting by the fire on account of a sore throat. This child had diphtheria, and her reason for being in school was that absence would deprive her of a prize. In all these instances grave risk had been run of infecting other children.

In visiting schools when measles is prevalent in the district, how often colds in the head and red eyes are noted and excluded! Supposing these symptoms occur in the last fortnight of a child's six years' perfect attendance, with a silver medal full in sight, ignorant parents can scarcely be blamed for sending the child, although even to the unprofessional eye it ought to be in bed rather than at school.

I think all interested in the problem of health at school will agree that the weight of evidence is against the attendance prize system, and that some effort should be made to remedy it.

In Sheffield the system has been completely altered. The prizes in the future are to be given for progress and efficiency based on the class teacher's recommendation and the head teacher's examination. A high percentage of attendance will be required, but illness, both infectious and otherwise, will be allowed for, so that the child who is ill during the term will have as good a chance of a prize as the one who is ill in the holidays.

It is to be hoped that, in the near future, other education authorities will alter their prize system to one on the Sheffield plan, and thus a good deal of unnecessary misery be spared the children for whom they are responsible.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

PAROTITIS AS A SEQUELA OF PNEUMONIA.

THE patient in the following case, a man aged 42, was attacked by acute pneumonia on December 26th, 1907, the left lung being involved. Crisis occurred with five attacks of vomiting on the seventh day of the disease.

After-Progress.—On the following day the temperature and pulse ran up again, and what should have been the third day of convalescence was marked by the onset of tenderness and great swelling behind the right ramus of the lower jaw, below the lobule of the ear. Next day, owing to extension of swelling and symptoms of toxaemia, an incision was made over the inflammatory tumour, but no pus was evacuated. After the lapse of a further forty-eight hours, and the employment of boracic fomentations beads of pus appeared in the incision. As drainage was evidently deficient, and the whole parotid gland, superficially and deep, was suppurating freely, further extensive incisions were employed, and a thorough vent given to the loculated collections of pus, which welled up from deep tracks, reaching to the digastric fossa behind, the glenoid fossa and interpterygoid muscular area anteriorly, as also through Stensen's duct into the mouth.

Thirty-one days after the onset of the parotitis sinuses were healed, and induration and swelling remained, giving rise to slight limitation of movement of lower jaw.

Remarks.—The pus on cultivation yielded luxuriant growth of *Staphylococcus albus*, but no pneumococci. Thus the case was evidently one of original oral infection, and directs attention to the necessity of strict watchfulness over the oral cavity in every instance of ill or good health. The gravity of suppurative parotitis, by reason of the important anatomical relationship of the gland to the cranial cavity, ear, internal jugular and temporo-maxillary veins, calls for early free incisions and drainage, to avoid a fatal termination from toxaemia and pyaemia. Acute parotitis, or parotid bubo, with suppuration is known to occur rarely after the acute infectious fevers, typhus, typhoid, scarlet fever, measles, and small-pox, as a sequela of ovariotomy or other abdominal operations without apparent sepsis, as also after septic appendicitis and gastric ulcer, and is then usually regarded as of metastatic or unsatisfactorily explained origin.

But as sequelae of these operative abdominal cases may not the parotitis be more practically explained by oral sepsis arising by direct extension up Stensen's duct: the virus being part of that which has originated the lower alimentary septic process, or generated in post-operative aseptic cases by retention of milk and other fluid nourishment about the superior alveolar-labial sulcus into which Stensen's duct opens? More thorough and constant attention to oral cleanliness in health and disease would lead to less dental decay, greater freedom from infective processes like suppurative parotitis, tonsillitis, gastric ulcer, cholangitis, cholecystitis, and appendicitis; it being well known that the oral cavity is a most favourable nidus for most of the micro organisms to which flesh is heir, hence the pathological paradox of "that which entereth, and not that which cometh out of, the mouth, defileth a man." Having written this report, I note with interest that in the Epitome of the British Medical Journal of March 7th Legueu, discussing the etiology of post-operative parotitis, affirms that it always originates in oral sepsis and is not of blood or central origin.

G. Burton Robinson,
M.B.Durh., M.R.C.S.
Blundellsands.

ORAL FILTERS.

For some years past we have used at the Royal Victoria Eye and Ear Hospital an operating mask which has one advantage over the oral filter described by Staff Surgeon Duncan in your issue of February 22nd. It consists of a piece of butter muslin, which covers the head and face, and is buttoned under the operating coat. A slit is made in it for the eyes, and from each end of this slit a tape passes over the ears and is tied behind the head. The essential point of the mask is a piece of thin flexible wire, which is attached along the lower border of the slit for the eyes. When the mask is on, the wearer moulds this strip of wire to the shape of his nose, and thereby prevents his breath rising up at each side of the nose and obscuring his spectacles—an immense advantage, if he is, like myself, one of those who use glasses when operating.

John B. Story.
Dublin.

SPONTANEOUS INVERSION OF THE UTERUS.

Recently I was called hurriedly to a case of labour. On arrival, I found that the child had been born, and that the patient—a primipara, aged 21 years—was obviously suffering from profound shock—a small, rapid, and feeble pulse, sickness, and a cold clammy skin. On examination, I found the child and placenta expelled on the bed, and the entire uterus inverted, protruding as a globular mass. The entire organ was in a state of relaxation, but haemorrhage had not been excessive. My hand placed on the abdomen detected the absence of the round ball of the contracted uterus. I reduced the inversion by grasping the uterus in the hollow of my hand and pushing gently and firmly upwards into its natural position. On making inquiries, I was satisfied that there had been no mismanagement of the third stage of labour, either by traction on the cord, the placenta being still adherent, or by improperly-applied pressure on the fundus. No mechanical cause could be traced, and the occurrence was undoubtedly one of spontaneous inversion. Such an occurrence is, I believe, one of great rarity. It was only observed once in upwards of 190,800 deliveries at the Rotunda Hospital since its foundation in 1745, and not once in 250,000 deliveries in the Vienna Lying-in Hospital, and many practitioners have conducted large midwifery practices for a lifetime without ever having witnessed a case. My patient never recovered from the shock, and died twenty-eight hours after delivery. The case, especially occurring in a primipara, seems sufficiently rare and curious to be worth recording.

George Hall, M.A., M.B., Ch.B.,
Stockton-on-Tees.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

QUEEN'S HOSPITAL, BIRMINGHAM.

A CASE OF STATUS EPILEPTICUS: LUMBAR PUNCTURE: RECOVERY.

(Reported by Richard C. Allen, M.R.C.S.Eng., L.R.C.P.Lond., House-Physician.)

A. H., a domestic servant, aged 28, was brought to the hospital on November 5th, 1907, at 7 p.m., having been found unconscious in the street.

On admission she was comatose and cyanosed, the breathing was rapid and stertorous, foam was issuing from the mouth, and the whole body was in a state of clonic spasm. The pupils were equal, very contracted, and did not react to light; the pulse rapid (144) and very feeble; temperature 99°; knee-jerks slightly increased and plantar reflex extensor on both sides; there was no ankle clonus. Under the influence of inhalations of chloroform and the administration of 30 grains of potassium bromide by the rectum, the spasms ceased and the cyanosis and foaming disappeared, while the pulse became slower (106) and stronger. For about an hour the patient remained fairly comfortable, but at the end of that time the spasms returned, and she relapsed into a state similar to that on admission, and during the following eight hours she had no less than thirty-six epileptiform fits, in spite of the practically continuous administration of chloroform.

At 4.15 a.m. on the day following admission death appeared imminent, the spasms were worse than on admission, the pulse hardly perceptible, the breathing rattling and stertorous, the urine and faeces were being passed involuntarily, temperature 103°, respirations 52. At this crisis lumbar puncture was performed, the needle being inserted between the second and third lumbar vertebrae. The cerebro-spinal fluid at once spurted out, evidently under considerable pressure; 3 oz. was allowed to escape, and the result was immediate improvement. The fits ceased, the pulse became stronger and could be counted with ease (110), and the general condition of the patient greatly improved, although consciousness was not regained for over twelve hours. The cerebro-spinal fluid was quite clear, and on examination proved sterile and normal in every respect.

During the following six days the patient remained in a torpid and lethargic condition, pulse 76, respirations 24. On November 12th, seven days after admission, she seemed quite well, the pulse and respirations were normal, knee-jerks and plantar reflexes were also normal, the mind was clear and speech distinct, there was no headache, but pressure over the vertex and temporal regions produced a feeling of soreness. The urine was normal, both fundi normal. The patient was discharged in good health on November 18th.

The patient states that she had never had any illness until three months before admission, when she had an epileptic fit, followed by another a week later. The doctor who attended her stated that the fits were epileptic. She had been quite well from that time till the day of her admission. She was taken ill whilst returning from a friend's house, where she had been to tea. There is no history of epilepsy in any other member of her family.

The writer is indebted to Dr. O. J. Kauffmann for permission to publish this case.

Under the will of the late Dame Mary Tierney, widow of Sir M. E. Tierney, the Royal Hospital for Incurables receives a sum of £300.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

James Little, M.D., in the Chair.

Friday, March 20th, 1908.

Cirrhosis of Liver.

Dr. Peacocke showed a specimen of cirrhosis of the liver from a woman, aged 46, who had always lived a temperate life. For twelve months she thought she had been getting stouter, but did not complain of illness until a fortnight before admission to hospital. She then noticed that she was getting rapidly more swollen, but her condition did not interfere with her health. When he saw her in hospital she was suffering from extreme respiratory distress; her abdomen was enormously distended and tense, and the abdominal wall was oedematous; the lungs, too, were oedematous. The apex beat of the heart was palpable in the third space, and a systolic murmur was heard over it. The urine was very scanty, high-coloured, and slightly albuminous. The distension was due to fluid, which had come on with great suddenness. He had the abdomen opened and drained, 14½ pints of fluid being measured, apart from a considerable amount which escaped. Drainage was continued for forty-eight hours, 3 to 4 pints being measured daily. Her condition was never satisfactory, and he had no expectation that she would do well. In her history she had no vomiting. She remained with slight elevation of temperature for a few days, and then became duller, finally relapsing into coma for forty-eight hours, and then dying. The liver (exhibited) was cirrhotic. The surface was nodular and extremely hard, and a microscopic section showed very advanced cirrhosis. The spleen (also exhibited) was the ordinary enlarged spleen met with in such cases. The case was interesting from the fact that it showed that the intake of alcohol was not necessary to the condition. In some cases the intake of alcohol did excite the condition, but it was not the only cause. In such cases of atrophic cirrhosis of the liver, where very marked ascites came on, it was generally a terminal symptom. He did not think they could be satisfied with the explanation that the ascites was due to mere obstruction through the portal system; it might be somewhat akin to the marked oedema in advanced chronic kidney disease, and it might be that the production of ascites in those cases was of a toxic nature. Dr. Dawson said the contention that cirrhosis of the liver and alcoholism were not directly related was borne out by a converse observation. It had been pointed out by the late Dr. Conolly Norman and by Dr. Mott, of the London County Asylums, that cirrhosis was a rare occurrence in asylum *post-mortems*, although a large proportion of the cases admitted to pauper asylums were alcoholic. Dr. Mott explained the fact by saying that, owing to weakness of the nervous system, the alcohol acted on it before it had time to act on the liver. Although that explanation did not appear to him to explain the fact the fact itself bore out what Dr. Peacocke had said regarding the view which was gaining ground—that alcohol was not the direct cause of cirrhosis. Professor O'Sullivan said his experience was quite in accordance with Dr. Dawson's remarks. Within the last week he had three cirrhotic livers in his laboratory, in none of which was there the slightest suspicion of alcoholism. Dr. Travers Smith cited three cases of cirrhosis in children, in all of which there was a distinct history of alcoholism. In a case in which the patient declared that she had never taken alcohol, he had found she was taking a "quack" medicine which was largely whisky. He certainly thought that alcohol had something to do with the condition.

Section of Surgery.

Sir H. Swanzy, P.R.C.S.I., President, in the Chair.

Friday, March 27th, 1908.

Denys's Tuberculin.

Dr. Frank Dunne exhibited a man and a girl, both of whom had long-standing and extensive tuberculous bone disease. Treated for about a year with Denys's tuberculin (50 injections being given), they both recovered the use of their limbs. The Chairman said his practice had been confined to Koch's tuberculin, but Denys's tuberculin appeared to be a very effective preparation. Mr. Lentaigne said it was a mistake to think that tuberculosis had not been cured in the past. He had seen numbers of cases that had got well of themselves, and believed the cases shown would have recovered more quickly by surgical assistance. He himself was assisting surgical treatment by tuberculin. Perfect cure had been obtained by gauging the injections by the opsonic index, but it was a difficult method, and he had seen no increased negative phase produced by calculating in a rough way the time of the negative phase of the previous injection. Professor McWeeney said the method for obtaining Denys's and Koch's tuberculin was the same up to a certain stage. Both grew the tubercle bacillus on the surface of a broth containing 5 per cent. of glycerine, and filtered off the bacilli. But Koch's method from that point consisted in evaporating the liquor of the culture to one-fifth of its original bulk, while Denys used it without reducing it in volume. The difference, then, was that Denys's contained presumably toxic and presumably therapeutic materials which were easily destructible; and which were destroyed by boiling in Koch's. The latter was more concentrated than Denys's, but he was not aware of any difference in the dosage. As the result of his experience of the opsonic index, he stated deliberately that, in his hands at least, he had never been able to convince himself that the errors of experiment did not outweigh the very slight differences from the normal obtained by means of the method, and he did not think he would attach any importance to opsonic indices obtained otherwise than by Wright himself, his immediate assistants, or those who worked for a prolonged period under his immediate supervision. He had treated a few cases in private for tuberculous glands in the neck, and he did so deliberately without the opsonic index. After the injections of bacillary emulsion the glands had a tendency to swell, and afterwards they rapidly underwent diminution and practically disappeared, although he would not say that the patients were absolutely cured, as in some cases it tended to come up again. Mr. McArdle said it would be impossible to carry out the serum treatment in many cases if they were obliged to have some one capable of taking the index at their elbow all the time. The treatment of the cases before them had been carried on in what might be called a haphazard way, but he had seen cases where, with the persistent employment of tuberculin, the patient rapidly put on flesh. He had seen laparotomies, for instance, carried out without beneficial effect, and after the injection of tuberculin the patients recovered, and were now quite well. He had seen a vast improvement in some of Dr. Dunne's cases—cases which were apparently hopeless—under the influence of tuberculin. But while tuberculin exerted a beneficial influence in such cases, it exerted no influence but a harmful one once abscess formation had occurred. Dr. Dunne, in reply, said he had no hope of being able to use the opsonic index, as he had too many patients, and too little assistance, to be able to do so. He was guided, as to the dosage, by the effect of the injection on the patient. That might be a temperature or a local reaction, but as much as possible he avoided a temperature reaction. If there was marked reaction he either left a longer interval or reduced the dose. He quite agreed that operative treatment would in some cases materially hasten recovery. He had about ninety cases under tuberculin treatment, and he found that he got the best results with small doses at short intervals. After three and a half years of using tuberculin he was firmly convinced that, as far as their present knowledge went, there was no treatment anything like equal to it for tuberculous affections, no matter where situated.

Diagnosis of Impacted Ureteral Calculus.

Mr. C. Arthur Ball read a paper on this subject, and gave an account of a case in which an erroneous diagnosis of impacted calculus in the ureter was made even with the assistance of an excellent radiograph, taken with a shadowgraph bougie *in situ*. The case was that of a man who had been operated on elsewhere six months previously for renal calculus. Since the operation all the urine from that kidney came through a fistula in the loin. A shadow by the x rays of a supposed stone was found, apparently in the ureter; this was verified by several

radiographs, and the relation to the ureter established by use of a shadowgraph bougie. The ureter was exposed by an extraperitoneal iliac incision, but no stone was present. The ureter was dilated, and the final result was satisfactory. The origin of the shadow, which was still present, had not been established. The mistake could only have been avoided by a stereoscopic radiograph taken with a shadowgraph bougie *in situ*, and in future he intended to make use of this method in all similar cases. Dr. HARVEY said the diagnosis was a very natural one, but, since the result was not what was anticipated, it would be interesting to see in what way the diagnosis could have been avoided. The shadow on the photograph was evidently some substance which was denser in the centre than at the periphery; that was not generally the case in ureteral stone, nor was it oval. He understood that no urine was passing from the ureter, and in passing the ureteral catheter it would appear to him natural to expect the catheter to be stopped by the stone. In the photographs they got the superposition of a great number of parts of the body. In the position taken the appendix shadow occurred rather lower down, but it was just possible that the shadow might be a condition of the appendix, and the point might be cleared up by stereoscopic photographs. Dr. LANE JOYNT mentioned a case in which a shadow appeared in the neighbourhood of the base of the lung, and could not be explained, as the patient had no evidence of any lung trouble or history of old phthisis. Ultimately a diagnosis was made of calcification of the pleura. He quoted also a case of deformed elbow—from an injury twenty-five years previously—in which a soft mass, like a hernia of the muscles round the forearm, gave a dense shadow like iodoform, though there was no history of any such drug having been used in the treatment. Mr. GUNN said the line of the ureter varied a good deal, and it was difficult to conclude whether the shadow was really in the line of the ureter or not. Mr. BALL, in reply, said the stone might not cause obstruction to the passage of the bougie, as it might act as a kind of ball-valve, and might be pushed upwards into the dilated ureter. There were no symptoms connected with the appendix. He would try and get a stereoscopic photograph.

ROYAL SOCIETY OF MEDICINE.

LARYNGOLOGICAL SECTION.

AT a meeting on April 3rd, Dr. JAMES BARRY BALL, President, in the chair, the following were among the exhibits:—Dr. JOBSON HORNE: An autograph letter by Johann Czermak. Dr. JAMES DONELAN: A swelling of the right vocal cord with a projection at the left vocal process in a phthisical woman; the condition had improved under antisyphilitic treatment. Dr. STCLAIR THOMSON: Two radiographs showing the value of *x* rays in *Sounding the frontal sinus;* in one radiograph the probe had entered an ethmoidal cell, in the other it was with the help of the *x* rays passed correctly into the frontal sinus. Dr. DUNDAS GRANT: a case of *Thyrolingual fistula* successfully treated by electrolysis and excision; it had twice recurred after excision alone. Mr. BETHAM ROBINSON: A specimen of pedunculated lymphangeioma removed from the anterior commissure of the larynx of a man aged 35. Drs. STANLEY GREEN and LAMBERT LACK: A smooth, red, sessile growth, considered to be a *Tuberculoma*, springing from the posterior laryngeal wall below the cords in a phthisical woman. Dr. DAN MCKENZIE: A suppurating haematoma of the septum with a fistulous opening into the gingivolabial fold. Mr. W. H. KELSON: Bony outgrowths from the maxilla and mandible in a man aged 30; the case was generally considered to be one of *Leontiasis ossium*. Mr. CYRIL HORSFORD: A new instrument for passing a suture through the epiglottis to facilitate intralaryngeal operations.

LIVERPOOL MEDICAL INSTITUTION.

CLINICAL MEETING.

AT a meeting on March 26th, Mr. BICKERTON, President, in the chair, the following were among the exhibits:—Dr. H. R. HURTER: A case of *Acrocyanosis chronica anaesthetica* (cum gangrena), a condition allied to Raynaud's disease and erythromelalgia, in a man aged 35. Dr. A. GORDON GULLAN: A case of *Raynaud's disease*. The patient, a man aged 56, had had a previous attack eight years ago which lasted twelve months. Dr. NATHAN RAW: (1) A case of lymphadenoma, in a boy aged 14, whose spleen seemed normal in size; (2) a patient with extreme bradycardia, the pulse-rate averaging 26. Dr. J. OWEN and Mr. DOUGLAS CRAWFORD: Two cases of deformity of hands. (1) The "main en griffe" type resulting from cervical caries. (2) The reverse picture (flexion of proximal, extension of second and flexion of terminal phalanges), in a case of pneumoconiosis, and the subject of past attacks of rheumatoid arthritis. There seemed to be no structural changes in the joints. Dr. PERCY MARSH: A case of meningitis in which Calmette's reaction was positive, the cerebro-spinal fluid showing lymphocytes, but not reducing Fehling's solution. Koch's tuberculin (T.R.) had been administered and the patient recovered. Dr. MARSH and Mr. R. C. DUN: A case of *Tuberculous peritonitis* which steadily advanced under tuberculin, but showed marked improvement after laparotomy and mercurial inunction. Drs. STOPFORD TAYLOR and R. W. MACKENNA: A series of radiographs showing mercury lying in the tissues at varying intervals up to three weeks after intramuscular injections of grey oil. Mr. A. NIMMO WALKER: A case of tuberculosis of conjunctiva treated by excision and grafting of mucous membrane of lip. Dr. JOHN HAY: Two cases of *General paralysis of the insane* in women, aged respectively 39 and 48, who had no history of syphilis. One had locomotor ataxy also.

PATHOLOGICAL MEETING.

AT a meeting on April 2nd, Mr. BICKERTON, President, in the chair, the following were among the exhibits:—Drs. NIMMO WALKER and HAWKSLEY: Films from a fatal case of *Diphtheria of the conjunctiva*. The patient was a year old, and death took place on the ninth day of the disease. Mr. NEWBOLT: A section of a tumour removed from a male aged 50 years. The tumour began in the glands of the neck, and grew on to the parotid gland. It had lasted two years. It appeared to be a *Sarcoma*, with large angular cells packed closely together without any visible stroma. Mr. THELWALL THOMAS and Dr. ROWLANDS: (1) Tumour of coccyx removed from a man aged 45. The growth was firm and lobulated; microscopically it consisted of spaces filled with large cells. It was probably associated with the post-anal gut. (2) Cylindrical-celled carcinoma from the humerus from a man aged 53. It had caused spontaneous fractures. The primary source of the carcinoma had not so far been ascertained. (3) Early tubercle of the kidney removed from a patient aged 28. The diagnosis rested on cystoscopic evidence and the presence of tubercle bacilli in the urine. Dr. OWEN: A portion of small intestine with multiple diverticula. They were about a dozen in number, the largest capable of containing the whole thumb. They were situated close to the mesenteric attachment. The specimen was from a man aged 69 who had died from cerebral haemorrhage. Dr. J. S. ROWLANDS described an analysis of twenty-six renal calculi. Only three contained uric acid. The others consisted of calcium oxalate. The external appearances were no guide to the chemical nature of the calculi. The calculi had been removed by Mr. Thelwall Thomas, and the analysis carried out at his suggestion. Dr. O. T. WILLIAMS, in a paper on the etiology of appendicitis, showed that appendix concretions were largely composed of calcium and saturated fatty acids; they were concentrically laminated, and therefore formed *in situ*. The normal secretion of the appendix contained the same fatty acids as were found in the concretions. In cases of appendicitis there was even in children a large deposit of calcium soaps in the mucosa, in many cases almost a complete ring being laid down. This was quite sufficient to cut off the nutritive supply of the mucous membrane, and thus predispose to the invasion by micro-organisms. Slight amounts of free fatty acid were found in the submucosa, and also to some extent a formation of calcium soaps in the mucous membrane.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 13th, Dr. WALKER DOWNIE, President, in the chair, Dr. C. O. HAWTHORN, in an address on the cerebral and ocular *Complications of anaemia* and the probable relationship of these to thrombosis, referred to the occasional cases of chlorosis, in which such symptoms as stupor, coma, convulsions, various paralyses and double

optic neuritis appeared more or less suddenly. He related also some cases in which the evidences of cerebral disturbance were limited to double optic neuritis and ocular paralysis. As in a certain number of the more severe cases autopsy had proved the intracranial lesion to be thrombosis of the cerebral veins and sinuses, it was at least probable that the same condition was the cause of optic neuritis and ocular paralysis, when these appeared as the sole unusual events in connexion with chlorosis. The position was made still stronger by the fact that between the two groups thus defined there were cases showing intermediate degrees of cerebral disturbance. Hence a graded series of cases might be traced from those leading to a fatal issue, down to such relatively slight events as optic neuritis and ocular paralysis. From this position it seemed safe to claim that the optic neuritis which, without other complications, was at times found in chlorotic women (and the same might be said of an ocular paralysis) was probably dependent on thrombosis in the intracranial veins or sinuses. Further support for such a suggestion might be found in the occasional ocurrence of optic neuritis in acute anaemia and in suppurative diseases of the middle ear, in both of which conditions sinus thrombosis was a distinct possibility. Another complication sometimes seen in chlorosis was contraction of the visual fields, which might assume characters that demanded the diagnosis of an intracranial lesion, and this might quite well be a thrombosis. Other examples of the range of thrombosis in anaemia might be seen in the occasional occurrence of retinal embolism and in some cases of retrobulbar neuritis.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 1st, Dr. L. W. MARSHALL, President, in the chair, Drs. F. H. JACOB and J. H. THOMPSON showed a man aged 18, who had been the subject of *Acute pneumonic phthisis* involving the whole of one lung fifteen months before. Complete recovery had taken place, although the febrile temperature persisted for three months, and the case at first appeared too hopeless to warrant admission to a sanatorium. Dr. Jacob also showed an infant aged 16 months, the subject of multiple *Tuberculous gummata*, the sequelae of measles a year before. Dr. M. PARRY-JONES (Derby), in a paper on *Diachylon poisoning*, described three cases: (1) A woman aged 34, admitted to hospital as doubtful enteric fever, with a three weeks' history of headache and diarrhoea. The temperature dropped from normal to subnormal, and the pus from 80 to 60. Weakness of leg and wrist muscles without wasting developed into dysphagia and coma, but no optic neuritis occurred. A factor in the fatal issue was no doubt alcoholic disease of the liver. (2) A woman aged 24 who died a few hours after her admission in a helpless, semi-comatose condition. (3) A case which, after running a most critical course, recovered in three or four months' time with loss of memory and partial aphasia. The latter were perhaps partly attributable to an exploration of the temporo-sphenoidal lobe, undertaken at one stage in the illness when double optic neuritis, pyrexia, paralysis of one external rectus, and a misleading history of otorrhoea suggested a latent cerebral abscess. The relief of tension thus obtained greatly assisted recovery. In two out of the three cases no pregnancy existed. Dr. C. H. CATTLE read notes of a case of *Embolism of the abdominal aorta* in a man aged 39, the subject of mitral stenosis. It was probable that embolism of the right common iliac artery occurred six days before the graver event, and led up to it, as pain occurred in the iliac region accompanied by rise of temperature to 101°. Later on paralysis and anaesthesia of both lower extremities occurred, with absence of patellar and plantar reflexes, then livid mottling of the inner side of the right thigh, and both limbs became pulseless. Haematuria and albuminuria also ensued, and death occurred a day later. Dr. A. J. SHARP showed two specimens of *Psammoma* from the choroid plexuses of the brain, with microscopic sections.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—At a clinical meeting on March 12th, Dr. ALEXANDER MORISON in the chair, Dr. KNOX showed a case of uniform bony enlargement of one femur in a soldier, aged 30, with a syphilitic history. Potassium iodide relieved the pains, but did not alter the condition. The PRESIDENT showed a specimen of hydronephrosis from an infant which was found, on *post-mortem* examination, to have only one kidney.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 6th, Mr. R. LAKE, President, in the chair, Dr. ANDREW WYLIE said fetor of the breath was either purely subjective, entirely objective, or partly both. Its various types should be classified according to the different regions responsible for its source. The latter was bacterial, and the treatment was to localize the cause and remove it, or at least reduce the activity of the bacteria. Mr. W. H. BOWEN, in a paper on *Pneumococcal otitis media*, stated that the pneumococcus was the organism usually causing otitis media at any age. The occurrence of otitis during epidemic diseases was not considered. Special attention was called to the onset of otitis media after operation on the nose and nasopharynx, and its etiology carefully considered. Sponging over the face with cold water was strongly condemned, and the importance of avoiding draughts and keeping the patients warm emphasized. In the otorrhoea occurring in babies up to 18 months of age, "comforters" were so strong an etiological factor that the speaker labelled them "Comforter Otitis Media." Treatment should include cleansing of the mouth.

MIDLAND MEDICAL SOCIETY.—At a meeting on March 25th, Dr. JUSTIN MCCARTHY, President, in the chair, Mr. GILBERT BARLING described five cases in which he had operated for *Malignant growths in bone*. Some of the patients were shown. Three of the cases had necessitated excision of the scapula in whole or in part, and the others corresponding treatment of the humerus. One of the patients, in whom the disease had existed for four years, died a few months after operation from widespread recurrence, but the others remained well up to the time of the meeting; the time which had elapsed since the operation being in one case eight years, in another twenty-nine months, and in a third fifteen months. Mr. JAMESON EVANS showed a patient, aged 48 years, suffering from *Infantilism*, with some superadded cranial lesion, the whole being considered to be due to a blow on the forehead received at the age of 10 years. The general appearance of the patient suggested that of a boy in his early teens, but mentally he was somewhat better developed. There was optic atrophy in both eyes, vision in the left eye being hemianopic, and in the right reduced to perception of light. For ten years after the blow the patient had suffered from constant headaches. Dr. SMALLWOOD SAVAGE showed a specimen of *Unruptured tubal pregnancy*, which microscopic examination showed to lie outside the lumen of the tube. Its situation was assumed to be due to the eroding action of the trophoblast on the maternal tissues, the cause to which the eventual rupture of tubal pregnancies was, the author stated, commonly ascribed. The specimen was removed by laparotomy from a patient who sixteen months later presented symptoms of a second tubal pregnancy. This, however, proved to be a normal pregnancy complicated by salpingitis.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on February 13th, Sir HERBERT ELLIS in the chair, the following propositions were put forward by Dr. PEMBREY in a paper on the Physiological Principles of Physical Training: (1) The true object of physical training should be the increase in the recruit's strength, agility, and capacity for muscular work. The power of endurance is far more important than a conventional military figure or the acquirement of acrobatic tricks. (2) The principle of progression from easy exercises of short duration to more difficult exercises of longer duration is essential, especially for recruits. (3) Unusual movements or postures produce an amount of fatigue and expenditure of energy disproportionate to the work done. (4) The uniform development of all the muscles of the body is unnecessary and uneconomical. The soldier should specialize according to his work. Marching and digging are exercises in which infantry soldiers require progressive training. (5) A "strictly military position" does not "assist greatly in the free and full action of the heart and lungs, and the consequent development of the whole

body." (6) The position of attention is an abnormal position, which can be defended only as a discipline. (7) In marching the natural movements of the arms and the swing of the body should not be suppressed. (8) So-called "breathing exercises" are based upon an erroneous interpretation of the physiology of respiration. In practice they may produce emphysema and increase the risk of infectious diseases. (9) The natural method to improve the "wind" is progressive running. A good "wind" is something more than a big chest; it is the capacity of the heart and lungs to accommodate themselves to the demands made upon them by muscular exercise. (10) The idea that artificial expansion of the chest gives freedom of action to the organs within is erroneous and pernicious. (11) Exercises which produce prolonged fixation of the chest during muscular work are unsuitable for recruits. (12) Training involves the accommodation of the recruit to an outdoor life. Work in the open air "hardens" a man, diminishes his liability to "colds," consumption, and other infectious diseases, and improves his appetite and nutrition. (13) Games have a more beneficial effect than irksome exercises. (14) Obstacle races, boxing, wrestling, swimming, bayonet fighting and fencing should be encouraged. (15) Exercises with the horizontal bar, parallel bars, pairs of rings, Indian clubs, and dumb-bells should be discouraged. (16) Span-bending abdominal and dorsal exercises are not free from danger. (17) The official tests of proficiency should be those which bring out a recruit's capacity to co-ordinate his muscles, to accommodate himself to the demands of muscular work, and to bear fatiguing exercise without undue distress. (18) Military competitions and display should consist of exercises of military value. Commander Watson, R.N., said he was in agreement with most of the propositions, but thought that in the navy at least physical exercises should be continued throughout a man's service, as being the most healthy and convenient form of exercise for keeping the men in health. It was especially important that training should be progressive. Colonel Rolt, Inspector of Gymnasia, divided training into educational gymnastics and recreational gymnastics. He did not agree with Dr. Pembrey that the latter, including, as they did, boxing, fencing, etc., were neglected in the army. At least two years must elapse before the full results of the present system of training could be fairly judged. Dr. J. S. Haldane, F.R.S., condemned so-called breathing exercises, and pointed out that the rhythm of respiration was regulated by the percentages of carbon dioxide present in the blood, which was kept at a constant level of 5·6 per cent., a level which could not be altered by any artificial exertion. Dr. Pembrey, in summing up the discussion, said too much importance was given to personal experience; the fact of a man being a great athlete was no proof that he was at all acquainted with the great physiological principles that underlie all physical culture. There should be no slavish following of any foreign nation such as the Swedes, since the British nation was renowned for its physical efficiency.

South-West London Medical Society.—At a meeting on March 11th, Dr. Dumville Roe, President, in the chair, Dr. T. N. Kelynack, in a paper on recent researches regarding the *Pathology of alcoholism*, said that only strictly logical and scientific methods were of any value. It was, he thought, indisputably established that the offspring of the alcoholic were lacking in sound mental balance and vigorous bodily life. The chief measure of prevention lay in the education of the child and in increased powers of dealing with the confirmed inebriate. Dr. Mark Robinson gave some details of experimental work tending to show the destructive influence of small doses of alcohol upon protoplasm, and referred to the records of insurance companies as showing the vital as well as the economic value of abstinence. Dr. M. Biggs spoke of the natural craving for stimulant and sedative as ineradicable, and divided alcoholics etiologically into two classes of "luxury" and "misery" drinkers. It was impossible, he thought, to prove that moderate doses did harm. Dr. McManus gave instances showing that heredity was not a necessary factor, while Dr. Dyer held that heredity was a distinct factor among the criminal classes. Dr. W. G. Dickinson said that in his experience a certain proportion of women alcoholics could be cured permanently. Dr. Aitken said that among women alcoholics gynaecological patients were far the most difficult to deal with. Dr. V. Ryan discussed the geographical distribution of alcoholism, claiming that all races sought for some form of alcoholic intoxication.

Harveian Society of London.—At a meeting on March 26th, Mr. D'Arcy Power, President, in the chair, Sir A. Wright, in the Harveian Lecture, said that vaccines must be used with care as regards dosage if ill effects were to be avoided. The determination of the opsonic index both before and after inoculation always served as a useful guide as to the dose to be given, and as to the time of giving it. If the index was not determined, then for safety sake a very small dose of vaccine was usually given, and often the full beneficial effect was not obtained. (1) In some cases of staphylococcus infection where there was a local visible lesion—for example, a boil or carbuncle—the action of a given dose of vaccine could be observed by the local effects produced, and thus the dosage could be gauged; the same guide was present in some cases of tuberculous lesion of the skin. (2) In some cases the pyrexia present served as a guide to the therapeutic effect of the vaccine, but when the temperature became normal the lesion was often not healed, and then the opsonic index was the only reliable guide in dosage; this applied to the treatment of pulmonary tuberculosis by inoculation. (3) In some chronic cases where the treatment was of long duration and the progress slow—for example, in tuberculous disease of the joints, cases of cystitis, etc.—the determination of the opsonic index was necessary. (4) In some cases where the symptoms were latent and the lesion was not visible, the index must be taken. (5) In cases where the disease was running a rapid course—for example, in septicaemia—there was danger in attempting to determine the dose of vaccine by the therapeutic effect produced for two reasons—(*a*) time did not admit of delay. (*b*) An excessive dose might be fraught with great danger. In these cases the opsonic index was the only reliable guide. (*c*) In some cases a single dose of vaccine effected a cure, and here the experience of previous cases gave one an idea of the dose to be given. If this was followed by the desired result, it was, of course, unnecessary to determine the opsonic index.

Aesculapian Society.—At a meeting on March 20th Dr. Langdon Brown, President, in the chair, Dr. Harold Pritchard, in a paper on immunization, said that opsonins, as discovered by Wright, were an addition to the substances, such as agglutinins, precipitins, lysins, and antitoxins, which were known to defend the body against the effects of bacterial invasions. Mr. H. W. Armit said that the evidence of the existence of opsonin as a specific substance was very weak. It depended on the fact that bacteria were phagocyted more rapidly and more completely in the presence of serum than in its absence. The action was said to be a direct one on the bacteria, but how could one explain the fact that inert granules were more readily taken up by leucocytes in the presence of serum than in its absence? The rôle of phagocytosis in immunity was probably a small one, and phagocytosis did not necessarily mean destruction of bacteria. Nakayama had demonstrated on actinomycosis that phagocyted fungi could grow out of the cells which had ingested them. Wright's claim that the opsonic content varied from the normal level in bacterial infections could only be accepted conditionally. In anthrax, the opsonic index rose steeply as the animal was dying. This could not be explained from Wright's point of view. The opsonic index was liable to many fallacies of deduction, and the normal variation in its height was very high. Treatment by vaccines had not been discovered by Wright—only extended by him. As a guide in diagnosis, the opsonic index was dangerous and misleading. Mr. Girling Ball said that in using vaccines it was important to select the right cases for treatment. Many cases of skin affections notoriously did badly by ordinary methods of treatment, and when dealing with staphylococcic infections in the form of boils he had found they did badly when the vaccines were derived from mixed strains, which were allowed to autolyse, especially if injected at short intervals. But he

had obtained good results with the patient's own cocci given in small doses at comparatively short intervals. In acne likewise he had good results. In cases of so-called syringomyelia with suppuration of the fingers he had not been able to obtain satisfactory results. His experience of surgical diseases was confined to three cases of osteomyelitis. The first case was a severe one which was doing very badly under ordinary treatment. In spite of the fact that staphylococci were grown from the blood, the patient improved and recovered on being treated with vaccines, but he could not definitely state that the vaccines saved the patient. The second patient died, and the third patient was still under vaccine treatment and was holding his own. He did not use the opsonic index, but was guided as far as dose was concerned by the general condition of the patient, the reaction to the injections, and the conditions of the leucocytes which he was at present studying. The PRESIDENT agreed that from a theoretical point of view one must doubt the correctness of the opsonic doctrine. He would be glad if the opsonic index could be dispensed with altogether, and, indeed, he believed that many of the workers at St. Mary's Hospital were treating cases at present without its aid. The last publication of Wright (*Lancet*, November, 1907) had shaken his faith considerably. He could not approve of applying massage to a diseased joint to see whether the opsonic index altered for diagnostic purposes. A combination of serum-therapy and bacterial vaccines might lead to better results than vaccines alone. Dr. MORISON spoke of an attempt to treat a severe case of erysipelas by vaccines. The patient died after exhibiting symptoms which pointed to an ulcerative endocarditis. The vaccines seemed to influence the eruption but not the general condition. Dr. DURNO said that serum treatment of carbuncle had proved satisfactory in his hands. Dr. MARSHALL had obtained negative results with vaccine treatment of atrophic rhinitis. Dr. NIXON was convinced that Wright's work was reliable. He had successfully treated cases of staphylococcic infection by vaccines, and an attendant in the laboratory in St. Mary's Hospital had been cured of his tuberculous glands in the same way. So, too, had cases of Malta fever. Dr. BRIMACOMBE said he had himself been cured of a staphylococcal infection of the nose by Wright, and spoke in terms of high enthusiasm in respect of the value of the treatment.

SOCIETY OF ANAESTHETISTS.—At a meeting on March 6th, Dr. R. J. PROBYN-WILLIAMS in the chair, Mr. H. PERCY DEAN, in a paper on *Spinal anaesthesia*, said he thought that as produced by stovaine it would gradually displace general anaesthesia in cases within its radius of action—namely, serious abdominal disease, injuries associated with shock, and operations accompanied by shock. He had found it specially valuable in the prevention of shock; in cases accompanied by grave general symptoms, such as peritonitis and intestinal obstruction; in conditions of general collapse, in which a general anaesthetic would almost certainly cause death; and in cases with marked bronchial and pulmonary symptoms. He found that patients who had had experience both of general and of spinal anaesthesia preferred the latter. Mr. A. L. FLEMMING asked if Mr. Dean had used lumbar anaesthesia in Trendelenburg's position, and whether the specific gravity of the injection was as low as 1015. Mr. ARMIT said some competent observers had reported failures—vomiting in 60 per cent. and headache in 90 per cent. of cases. From a pharmacological standpoint, stovaine appeared to have advantages theoretically over cocaine and alypin, and the clinical results bore out this view. Novocain should be less toxic still, but clinically it appeared to be also less anaesthetic. Tropacocaine theoretically should be the best of the series, and Bier's and other German workers' experience bore this out. He himself could not accept Kroenig's contention that varying the specific gravity determined at will the height of anaesthesia. Mr. L. MCGAVIN likewise thought spinal anaesthesia would become the method of the future. It certainly abolished shock, but tended, perhaps, to cause tympanites. Dr. DUDLEY BUXTON thought it was questionable whether spinal anaesthesia was the safer. He had seen extreme faintness and respiratory shock. The personal factor must be taken into account in considering the comparative advantages of the two methods, but doubtless the method properly applied and in suitable cases was a valuable addition to the resources of anaesthetists. Mr. WARREN Low thought vomiting was less frequent than after general anaesthetics. Mr. F. R. HUMPHREYS asked Mr. Dean if he had had any complications, because in foreign literature he had found mention of 8 cases of diplopia, 2 cases of death (only one could be fairly attributed to stovaine), 6 cases of respiratory paralysis, and a large number of cases of vomiting, headache, and pain in the back. In Vienna they seemed to think that tropacocaine was the drug of the future. Mr. G. COLT said the chief difficulty was to find the way into the spinal canal. They must find the right angle and go straight in. Mrs. DICKINSON BERRY was surprised that so many of Mr. Dean's cases were of advanced age, as German authorities said it was contraindicated in very old or young subjects. Dr. J. BLUMFELD asked whether sitting or lying on the side was the best position of patient when making the puncture. Mr. DEAN, in reply, said he had not used the method in Trendelenburg's position, but Kroenig said an angle of 30° was safe. He had had no cases of vomiting. He believed no failures would occur if a second dose (half the first) were given in apparent failures. He had seen anaesthesia extend as high as the clavicle without respiratory paralysis. He preferred to have the patient sitting up when he made the puncture. He saw no reason to withhold it from old or young.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting on March 5th, Dr. W. H. TYSON (Folkestone), President, in the chair, Dr. G. CARPENTER, in a paper on *Seaside Treatment for Sick Children*, said that as a tonic after surgical operations, and after recovery from the exanthemata, sea air was most valuable; and that cases well-nigh moribund from summer diarrhoea and entero-colitis derived the greatest benefit from it; for rickets it was a most helpful adjunct. British physicians practising at the seaside did not make the best use of the natural advantages of their towns—namely, the sea-water; and in this respect were behind their Continental brethren. The effect of hot and cold sea-water baths and douches on the secretions and metabolic processes of children, and of the therapeutic effects of such remedies on their complaints, should be studied, and medical men at seashore resorts should give more information to physicians residing in other parts as to the peculiarities of the climates of their towns, and the class of cases which would receive benefit. The PRESIDENT thought there was no scientific reason for sending children to the seaside or to inland resorts, but his experience was that they did well at the seaside. He would not send children with anaemia to a bracing seaside resort. Cases of insomnia and rheumatism did not do well at the seaside. Patients who benefited were those requiring astringent treatment—those suffering from leucorrhea, nasal affections, and congestive conditions of the throat and ear. Skin cases did well at the seaside, but dermatologists never sent them there. With regard to eye cases, the only point against them was possibly the glare. Many children and adults who came for sea bathing actually did badly. The seaside physician was willing to treat cases scientifically, but the patients frequently treated themselves as far as the sea-bathing was concerned. He used sea-water for gargles and injections. He found excellent results from the early seaside treatment of tuberculous cases. Dr. BAGSHAWE (St. Leonards-on-Sea) had found the benefit of seaside treatment especially marked in tuberculosis, in bronchitis and asthma, and in chronic heart diseases. Dr. LEONARD WILLIAMS said the only English place which he knew of where the water was used in the form of baths and douches, was Sidmouth; but at many different French seaside places—for instance, at Biarritz—the water was used externally in the same way as at Aix-les-Bains and Vichy; and certain stations made a special point of attracting children for that type of treatment. Sea-water might be an exceedingly good thing, but it ought to be used in dosage, temperature, and amount, just as any other powerful therapeutic agent. Dr. GURNEY (Eastbourne) agreed that sea-bathing, baths, and the various applications of sea-water locally by douche and otherwise should be methodically prescribed by the medical attendant on the spot. He was inclined

to differ from the President with regard to eye diseases. Provided patients kept away from the glare of the sea front, and kept to the shady roads and walks, these cases did extremely well. Dr. Street (Westgate-on-Sea) considered an east wind more searching in London than on the East coast. Sea air was almost always good for children, but sea bathing by no means agreed with them all. Dr. Styles (Moreton-in-Marsh) said he formerly resided at Margate Infirmary, and recognized forcibly the advantages to delicate children of seaside residence if continued for a long period. Sea-bathing for children was sometimes advantageous, but must be regulated with great care. In many cases, children seemed to derive positive harm from sea-bathing. Dr. Ackerley (Llandrindod Wells) considered the great point in treatment at the seaside was to make the patient remain as much as possible in the open air and sunshine; and he was not sure whether a stay in an inland country place would not prove as beneficial. Children who came from the seaside and resided in the country, rapidly lost their bronzing. Possibly that implied the presence on the sea coast of those actinic rays which were so useful in tuberculous and glandular conditions.

Society for the Study of Disease in Children.—At a meeting on March 20th, Dr. C. Chapman, who was in the chair, described a case of *Granular kidney in a girl* aged 15, who died some eight months after she first came under observation. The conditions found *post mortem* confirmed the diagnosis. Inherited syphilis was suggested as the most probable cause of the conditions found. The bridge of the child's nose was depressed, her development that of a child six years her junior, and her face had an aged aspect. There was nothing in her personal history which threw light on the illness, but her mother had had four miscarriages, while of the two children born at term one died at 8 months from marasmus. Dr. F. Langmead showed (1) a case of Mongolian imbecility in an only child. It also had congenital morbus cordis and an accessory auricle on the right side. (2) A case of *Ballooning of the abdominal muscles* in a patient who showed evidence of very extensive anterior poliomyelitis having occurred eighteen months previously. Dr. Porter Parkinson showed a case of *Tuberculosis of the kidney* with pyonephrosis in a girl aged 9. During the last eighteen months she had suffered from attacks lasting a few days, during which she was feverish and complained of headache and pain in the left side of the abdomen. During the last attack the mother noticed that a quantity of custard-like material came away with the urine. The liver was not enlarged, but the spleen extended slightly below the costal margin, and immediately below this, but more deeply situated, was a mass extending downwards for 2 or 3 in., resistant and slightly nodular, with a rounded lower end like a kidney. It was dull except for the colon resonance which could be obtained over it. The right kidney was also thought to be enlarged. Tubercle bacilli had been found in the urine, which was reduced in amount, being 12 to 16 oz. daily. It was acid and deposited a large amount of pus; there was a trace of albumen, but no blood. During the last five weeks she had increased 5 lb. in weight, and the pus had almost disappeared from the urine. The urine from the two kidneys had not yet been separated, but it was thought that the left ureter was almost completely blocked, and that the pus in the urine came from the right kidney. Dr. F. Parkes Weber showed a boy, aged 10½, with enlargement of lymphatic glands, ankylosis of both knee-joints, and limitation of movement in the hip-joints. Attention was drawn to the relative painlessness and consequent insidious progress of such *Chronic rheumatoid affections* in childhood. Mr. Sydney Stephenson showed a case of *Juvenile tabes* in a girl aged 14. The family history was suggestive of syphilitic taint, although the patient showed no personal stigmata of inherited syphilis. Dr. F. W. Higgs and Mr. P. Turner showed a case of infantile hemiplegia in a girl of 8¾ years. The hemiplegia appeared after a series of fits at the age of 10 months. There was lower facial paresis, spastic paralysis of the arm with athetosis of the hand and fingers and paresis of leg, with a talipes varus which was only present when the child walked quickly, and was probably of an athetoid nature also. Dr. George Carpenter showed: (1) A case of *Laryngeal stridor* in an infant of six months. The affection dated from two weeks after birth. There was much muco-purulent discharge from the anterior and posterior nares. The naso-pharynx could not be examined digitally for adenoids. The epiglottis and aryepiglottic folds felt normal. The cords were apparently healthy. (2) Specimens and drawings of a case of *Acute pleuropneumonia*, in which extensive fibrinous plugs were visible to the naked eye in dilated lymphatics. The patient, a child of 9 months, died of pleuropneumonia of the right apex in forty-eight hours. On macroscopic inspection these plugs seemed to be bronchial in origin; microscopically, however, they were seen to be made up of leucocytes and fibrin in varying proportions. Their walls were thin, and consisted of an endothelial lining only. In no part of them was there any alveolar structure, or any suggestion of a destructive process. Dr. Ewart was inclined to regard the case as one of ulcerative peribronchitis, with subacute bronchopneumonia of mixed fibrinous and corpuscular type.

REVIEWS.

DISEASES OF OCCUPATION.

This book on *Diseases of Occupation from the Legislative, Social, and Medical Points of View*[1] is addressed by the author to all persons interested in schemes of social betterment, and as there is no person more competent in this country than Professor Oliver to write upon this subject, we commend it not only to the medical profession, but to the manufacturer, the workman, and the philanthropist. It is by no means a pleasant conclusion to have forced upon us that industrialism has brought with it so much suffering, disease, and death; and while some may wonder whether those who opposed the manufacturing development of England were not right, yet no one can doubt that, having the system with us, we are bound to do what we can to prevent or, if that be impossible, to diminish the causes of ill-health with which it is so frequently associated. Unfortunately, the best of laws and the most considerate of employers cannot succeed in removing these dangers without intelligent co-operation on the part of the workers, and too often the efforts that have been made on their behalf have met with opposition or have been defeated by the carelessness and indifference of those for whose benefit they were intended.

All workpeople should receive instructions in the special hygiene of their occupation, and its dangers should be pointed out to them and the methods of avoiding them explained.

The medical profession has more than a philanthropic interest in these questions, for, since the passage of the Workmen's Compensation Act, not only does it frequently become our duty to express an opinion upon the connexion between a state of disease and a preceding accident, but there are several diseases which are especially scheduled as giving the workman right to compensation. Dr. Oliver is emphatic upon the important bearing that alcoholic habits have upon accidents, and as alcoholism cannot be pleaded by the employer in order to escape liability, if Dr. Oliver's views on this point are borne out by experience it will become imprudent for employers to retain intemperate workmen. He is inclined to believe that the increased speed of machinery fatigues the workman proportionately, and that if the Americanizing of our factories continues, and all machinery is run at very high speed, it will be necessary to shorten the hours of labour or the effect will be to cause numerous breakdowns in health.

The question of the relation of injuries to disease is now of the highest importance, so that what Dr. Oliver has to say of the traumatic origin of tuberculosis, pneumonia, Addison's disease, delirium tremens, tumours, heart disease, diabetes insipidus and diabetes mellitus deserves most careful attention; and as there is such a strong temptation to commit fraud by counterfeiting disease the law should impose a definite penalty for such frauds when they can be detected and proved. In connexion with the question of workmen's compensation, many difficulties are bound to arise, and Professor Oliver suggests two: one

[1] *Diseases of Occupation from the Legislative, Social, and Medical Points of View.* By Thomas Oliver, M.D., F.R.C.P. London: Methuen and Co. (Med. 8vo, pp. 448. 10s. 6d.)

being the fact that apparently lead poisoning may remain latent for seventeen years, as he gives the case of a woman who had suffered from lead poisoning, recovered, left her employment, married, and at the end of that time came under his care as a hospital patient with brain symptoms which he attributed to lead, his diagnosis being confirmed by the detection of lead in the urine, although no recent source of poisoning could be discovered; the other is miners' nystagmus, which may in some cases be attended by no subjective symptoms and cause no incapacity for work, and yet at other times be associated with vertigo and other incapacitating complaints which are purely subjective, and of whose importance, therefore, it is difficult, if not impossible, to form a proper estimate.

There can be no doubt of the value of the work which Professor Oliver has done, especially in connexion with lead poisoning, and of the benefit which has accrued to the workers from the regulations which have been made at his suggestion; benefit which is now acknowledged even by those who were opposed to the reforms. The use of lead glazes used for pottery might, he says, be wholly done away with if the public would only help by demanding leadless ware; but, as they cost a little more, the manufacturers will not adopt them without such support. The British Government does not seem to have been as forward as we should like to think it was in promoting such reforms, as, for example, in insisting upon the use of the sesquisulphide of phosphorus in the manufacture of matches, a form of phosphorus which is absolutely free from any risk of causing poisoning, and from which matches can be made that will strike anywhere; yet under the influence of the exporters the Government has refused to prohibit the use of white phosphorus. Again, although we are still by far the largest producers of coal, we have not been pioneers in the development of rescue work, and if the Garforth outfit is as good as any, yet its use has been by no means generally adopted; in the accident at the Hamstead colliery in South Staffordshire valuable time was lost because there were no men trained to rescue work in the district, and a party had to be sent from Yorkshire. The medical profession can do much to promote progress in all these directions, and on this ground alone the perusal of Professor Oliver's book is to be commended, for it will go far to convince all members of the profession that they should exert their influence to diminish the dangers of industrial occupations.

HYPNOTISM.

DR. BONNET, a medical practitioner at Oran and Sidi-bel-Abbès in Algeria, who has written a small work on hypnotism,[2] states on the title-page that it is intended for the use of "medical men, apothecaries, professors, schoolmasters, and the general public," and in harmony with this aim the book is written in popular style, contains little theory, and no extraordinary experiences, but examples, observations, and practical counsels. Had Dr. Bonnet said that this book was intended for the *reading* instead of the *use* of the lay public, we should have been better pleased. Nevertheless, he has written an exceedingly clear, well-informed, and useful description of the methods and results of hypnotherapy. There is, perhaps, a tendency to exalt a conveniently assumed "nervous force" into a sort of neuro psychic deity, at whose powers we can yet only dimly guess, dwelling in the central nervous system. The chapter on "nervous force" is the only one in which the author ventures on theory, or indeed—except for a few paragraphs in the last chapter in which action *à distance*, Cumberlandism or thought-reading, and mental suggestion are mentioned—on debatable ground. In the whole remaining part of the book the author treats of the phenomena of suggestion from the point of view of common sense, and in the main follows the Nancy school. Readers will find in the chapter on "hypnotization" very useful and full accounts of the different methods of inducing hypnosis employed by the best known hypnotists, and also that of the author himself. According to Dr. Bonnet, all diseases, of whatever kind, are susceptible of improvement by hypnotic or suggestive treatment; not that all diseases may be cured by such means, but that all diseases, organic or not, have a mental element upon which treatment by suggestion may take effect. We commend this moderate and reasonable essay on hypnotic treatment to students of this branch of therapeutics with the addendum, obvious but often overlooked, that only the suggestible can be influenced by suggestion.

In his work on hypnotism,[3] G. VON VOSS first treats the subject from the point of view of history, then he criticizes the theoretical aspect of the subject, and lastly he gives the reader a general guide as to technique and as to the results gained in the several diseases for which he and others have employed it. On the whole the author supports the doctrine of Liébault, Bernheim, Vogt, and Forel, more especially in dealing with suggestion and suggestibility. He believes that the latter is one of the normal fundamental characteristics of man, but he objects to the term being taken to imply a general tendency to be influenced. His description of the hypnotic condition is clear and concise. In dealing with therapeutic results he is much more modest than many of the writers on this subject, but in spite of his own experience in such diseases as hysteria, in which he says he obtained disappointing results, he relies to a certain extent on the experience of others who have claimed more success. The difficulties, the dangers, and the forensic importance of hypnotism are also briefly dealt with. The pamphlet forms interesting and, to a certain extent, instructive reading, and since it can easily be digested in an afternoon, those who wish to make use of the psychotherapeutic methods of treatment can be recommended to read it. The author refers his readers to three of the larger and fuller works on the subject for further information. These works are by Bernheim, Forel, and Loewenfeld.

HEART DISEASE AND ANEURYSM.

DR. F. J. POYNTON has contributed a volume to the handy and well printed series of Oxford Medical Manuals, dealing with *Heart Disease and Thoracic Aneurysm*.[4] The efforts which he, in conjunction with other investigators, have hitherto made to unravel the mysteries of cardiac pathology are now well known, and in the appropriate section of the present work his views, and the observations upon which they are founded, are duly recorded, with becoming deference to the opinions of those pathologists who are not as yet prepared to accept the *Diplococcus rheumaticus* as the main factor in the production of rheumatic heart disease. The whole subject is dealt with in a masterly manner, and the author is to be congratulated upon the amount of information, some of it original, and all of it carefully thought out, which he has managed to present in such a limited compass. An early chapter on the general principles of clinical investigation in heart disease deserves careful attention at the hands of senior students, post-graduate or other, presenting as it does a clearly arranged scheme of the main points of importance, with explanation or discussion of some of the debatable questions which are often misunderstood. Taking rheumatic heart disease as the type, he follows out the course of the acute and chronic affections, and in later chapters applies the same process to those forms of disease which are associated with other than rheumatic symptoms. Treatment, both of the acute and chronic forms, is fully considered. Much stress is laid upon the value of the local application of cold in acute cases. Dr. Poynton's experience of this would appear to have been more favourable than that of many other physicians, but he would probably receive the support of the great majority of experienced clinicians in his faith in the use of digitalis and strychnine, and his want of faith in the salicylates in rheumatic affections of the heart. Within living memory the term "heart disease" was used as almost synonymous with valvular disease, but modern observation forces the attention to other than valvular affections, and in the chapters devoted to the myocardium and to neuro-muscular

[2] *Traité pratique d'hypnotisme et de suggestion thérapeutiques.* [Practical Treatise on Therapeutic Hypnotism and Suggestion.] By M. Geraud Bonnet, M.D. Paris: Jules Rousset. 1907. (Cr. 8vo, pp. 334. Fr.3.50.)

[3] *Der Hypnotismus, sein Wesen, seine Handhabung und Bedeutung für den praktischen Arzt.* [Hypnotism, its Nature, the Method of Employing it, and its Importance for the General Practitioner.] By G. von Voss. Halle a. S.: C. Marhold. 1907. (8vo, pp. 40 1s. 2½d.)

[4] Oxford Medical Publications. *Heart Disease and Thoracic Aneurysm.* By F. J. Poynton, M.D., F.R.C.P.Lond., Assistant Physician to University College Hospital, etc. London: H. Frowde; and Hodder and Stoughton. 1907. (Cr 8vo, pp. 320. 6s.)

affections will be found a clear, although of necessity much compressed, statement of the present range of knowledge on these points. The later chapters deal with aneurysm and arterial disease. The whole subject of heart and arterial disease is too large for a single manual, unless, indeed, the manual be used merely as a dictionary. In this respect the usefulness of the work before us is impaired for lack of a more comprehensive index. A book of reference so full of information needs a much fuller index than Dr. Poynton has supplied, but the excellent promise that is given in this compressed handling of a great subject leads us to the hope that a more extended and comprehensive rendering of the scientific and practical aspects of all forms of heart disease may at some future time be forthcoming from the same source.

RESPIRATION AND RESPIRATORY DISEASES.

RESPIRATORY gymnastics during active exercise have engaged the attention of many physicians in France and elsewhere, and the compact work before us, by Professor GUERMONPREZ of Lille,[5] presents the most modern views on the subject and endeavours to place them upon a scientific basis. The art of breathing, like the art of voice production, has had many professors, and in the multitude of counsellors there has not always been wisdom. Every one breathes and uses the voice, from birth onwards, and incorrect methods are usually acquired at an age when correction is impossible. That these can be unlearnt and better methods inculcated has been abundantly proved, and the manner of it is clearly shown in Professor Guermonprez's book by means of description, diagram, sketch, and photograph. The earlier pages are devoted to a historical account of the work of former advocates of regulated exercise, such as Dr. Amoroso and Professor Ling, and of the criticism, sometimes hostile, that has been passed upon it. The value of muscular gymnastics as an aid to convalescence from surgical injuries is insisted upon, but the need for correct respiratory gymnastics at the same time is emphasized, especially where the upper limbs are concerned. The use of singing during muscular exercise, vaunted by some and condemned by others, is fully discussed. The style of the whole book is controversial, and the writings of others are freely drawn upon. It may be commended, as a whole, to the notice of students and teachers of physical development.

The appearance of a second edition of Dr. CARRIÈRE'S large work on the clinical and therapeutic aspects of diseases of the respiratory apparatus affords proof that the original work has found favour in France. The present volume,[6] a bulky tome of nearly 700 pages, well printed and skilfully arranged for purposes of reference, forms a comprehensive treatise on a large subject. The general plan of the work does not differ greatly from that usually adopted in this country, but it will be noted that in many of the sections there is a far greater tendency to subdivide and to recognize subtle distinctions for diagnostic purposes than has ever been deemed necessary in our own medical schools. No separate section, however, has been allotted to those affections of the upper respiratory passages which have been shown of late years to exercise so marked an influence over the wellbeing of the apparatus below. The style of the whole work suggests the clinical lecturer in the hospital ward rather than the physician at the bedside of the suffering patient. Treatment is apt to become theoretical rather than practical. Abundant minutiae are mentioned. The author's pupils are advised to see that the points of duelling swords are sterilized before use, but in the section in which the treatment of acute pneumonia is under discussion they are recommended to administer four tepid baths daily, each lasting fifteen minutes! "'Tis certain," said Sterne, "the French conceive better than they combine," and of this time-honoured dictum we are frequently reminded in the perusal of the work before us. Bronchitis, acute and chronic, is very closely examined and its relation to rheumatic and other general conditions carefully demonstrated. The influence of heredity is dwelt upon. Asthma, whooping-cough, and other forms of spasmodic cough and dyspnoea are well described, without materially adding to the common stock of knowledge, or ignorance, of these mysterious maladies. A condition so common as bronchopneumonia, especially among children, calls for rather more attention than the author gives to it, and the forms of wandering inflammation so often met with in association with influenza and other infective conditions are but meagrely dealt with. Recognizing the pneumococcus as the prime factor in the production of acute pneumonia, the ideal treatment of the disease must involve the death or disarming of the microbe. Efforts in this direction would appear to have been vigorously carried on in France by injections into the lung, by inhalation through the trachea, and by injections of serum and vaccines into the blood stream. None of these, however, have achieved results which can be regarded as convincing. Some of the old-fashioned methods—such as bleeding, antimony, counter-irritation, etc.—are dismissed in a few sentences, but the use of digitalis and oft repeated tepid baths is commended. No clear definition is given of the class of case in which each should be used, and in this respect the whole work, as already stated, falls somewhat short of the ideal as a guide to therapeutic effort. Tuberculous disease of the lungs and pleura and every known ill that the respiratory tract is heir to finds mention in these pages, and to English readers the whole work will be of interest as showing us our diseases as others see them.

PARATOXIN TREATMENT OF TUBERCULOSIS.

IN a small volume on the paratoxin treatment of tuberculosis,[7] Professors E. GÉRARD and G. LEMOINE of Lille describe how they treat phthisis by bringing into fuller play the antitoxic powers of the liver. Their researches have extended over about three years, and were made upon over 250 patients. Setting out from the idea advanced by G. H. Roger that one function of the liver is to neutralize bacterial toxins and kill bacteria, they concluded that the bile should contain antitoxins, and they found that biliary cholesterin had some inconstant antitoxic powers. Next, treating bile with certain solvents, of which they only mention petroleum-ether, they got certain pigment-free substances which they term "paratoxin," which are more actively antitoxic than cholesterin. Injecting guinea-pigs with tubercle bacilli (whether bovine or human), they found that the animals rapidly became feverish, wasted, and died in about a month; animals similarly injected, but treated with paratoxin, had much less fever, did not waste, and at autopsy showed far fewer and smaller tuberculous deposits disseminated throughout their viscera. Clinically the authors have given paratoxin either by subcutaneous injection (dose 1 to 4 c.cm. daily), or by the mouth (dose 5 to 20 c.cm., or else dried and in pill form), or by intratracheal injection (dose 5 c.cm. daily). They have observed that it lessens almost all the unpleasant symptoms of tuberculosis, whether of the lungs, larynx, or intestine, while it promotes the general well-being of the patients. It is indicated in the treatment of tuberculosis of the first or second stages, but produces little change in patients who are in the third stage. Its action is particularly well and rapidly demonstrated in obstinate cases of tuberculous enteritis with diarrhoea; it stops the diarrhoea and restores their normal aspect to the stools in three or four days. Similarly it lessens the quantity and frequency of the expectoration very rapidly, and is admirable in the treatment of tuberculous laryngitis. Paratoxin is, as a rule, best given by deep subcutaneous injection in the interscapular region with strict aseptic precautions; details of 16 cases are given at the end of the paper.

ARTHRITIS DEFORMANS AND NELATON'S LINE.

Arthritis Deformans Coxae and the Variations in the Position of the Acetabulum[8] is the title of a small book

[5] *Gymnastique respiratoire pendant les mouvements.* [Respiratory Gymnastics during Exercises.] By Professor Guermonprez, Catholic University of Lille. Paris: J. Rousset. 1907. (Cr. 8vo. pp. 471, with 220 figures in the text.)

[6] *Traité clinique et thérapeutique des maladies de l'appareil respiratoire.* [Clinical and Therapeutical Treatise on the Diseases of the Respiratory Apparatus.] By G. Carrière of Lille. Second edition, revised and augmented. Paris: Vigo Frères. 1908. (Roy. 8vo, pp. 687. Fr. 15.)

[7] *Traitement de la tuberculose par la paratoxine basé sur l'action antitoxique du foie.* Par E. Gérard et G. Lemoine. Paris: Vigot Frères. 1907. (Demy 8vo, pp. 64. Fr. 1.50.)

[8] *Die Arthritis Deformans Coxae und die Variationen der Hüftpfannenstellung.* Zugleich ein Beitrag ueber den Wert der Roser-Nelatonsche Linie und die Bedeutung des Trochanterhochstandes bei Hüftgesunden. Von Dr. Georg Preiser in Hamburg. Leipzig: F. C. W. Vogel. 1907. (Roy. 8vo, pp. 86; 31 illustrations. M. 2.)

by Dr. GEORGE PREISER of Hamburg. Excluding the polyarthritic form and that immediately following gout or acute rheumatism, the author holds that arthritis deformans of the hip is secondary to a "statical incongruity," that is to say, an abnormality in the position of the acetabulum. Either the cotyloid cavity is placed too far forward or too far backwards, in the one case involving limitation of outward and in the other of inward rotation of the limb. The first variety is found in rachitic pelves; the etiology of the second is obscure. In 24 cases of arthritis deformans of the hip the author diagnosed one or other of these abnormalities. The Roser-Nélaton* line is not of much value as a means of diagnosis in these cases, because in over 60 per cent. of all individuals the trochanter is above it, even as much as 9 cm.; an elevation of 3 to 4 cm. is very common. But although the importance of the line is small as regards differential diagnosis, it gives useful information as to the relative positions of the anterior superior iliac spine, the tuber ischii, and the centre of the acetabulum as indicated by the tip of the great trochanter. In patients with healthy hips, but a high trochanter, the Roentgen rays show no anatomical coxa vara, and the angle of the neck and Alsberg's angle are normal. This elevation of the trochanter is due, not to bending of the upper end of the femur, but to pelvic anomalies. Nélaton's line passes through the plane of the centre of the acetabulum in only 43 per cent. of the specimens of pelves examined. In marked rachitic pelves the cotyloid cavity looks forwards, so that in order to point the foot straight forwards the limb must be rotated outwards to such an extent that only the posterior half of the caput femoris is contained in the socket. In order to support the body the hip joint has to be flexed, and hence comes rachitic lordosis. An acetabulum facing nearly outwards, on the other hand, is found in 28 per cent. of the pelves examined. These were of the infundibular type. In both types of abnormality Dr. Preiser maintains that the trochanter will be found above Nélaton's line, but we must say that we cannot admit the conclusion. These observations are interesting and suggestive, but it must be borne in mind that the specimens examined were all obtained from women who had died in childbed, and that they must not be assumed to be correct for male or for normal female pelves. The author discounts this objection by the statement that most of the specimens belong to the "preantiseptic period" when hospitalism was common, and that only 17 out of 103 were obviously abnormal. He says that the trochanter is above Nélaton's line in every case of arthritis deformans, but it will also be found on the side that is unaffected. It is a cause and not a consequence of the disease. The knee is often also affected in this disease. The book concludes with an account of a case of so-called "idiopathic" juvenile arthritis deformans coxae, and a consideration of 14 cases recorded by other German authors. We wish that if considerations of space make abbreviations necessary, German writers would provide a list of them at the beginning or end of their books. Dr. Preiser is particularly given to their use, and they are sometimes obscure.

ORGANIC CHEMISTRY.

THE *Organic Chemistry* of Drs. HASKINS and MACLEOD[9] is intended to provide medical students with such a course of study and practical work as shall impart a well-based knowledge of this subject, adequate to their special requirements but less exhaustive than would be needed by those for whom chemistry is to be the principal study. The plan which is followed is accordingly somewhat different from that of more general textbooks; the special object is kept well in view in the choice of experiments, etc., but without sacrifice of thoroughness. Purification of organic substances is dealt with at an early stage, followed by processes of ultimate analysis; a chapter is next devoted to physico-chemical methods, and the theoretical and practical importance of measurement of osmotic pressure, determination of molecular weight by the cryoscopic method and similar matters are very lucidly explained. Not until after this has been done is the systematic study of organic compounds entered upon, beginning with the hydrocarbons and proceeding to the molecular structure of the alkaloids. Directions are given for practical work, intended to occupy about four hours weekly for thirty weeks. The authors have succeeded in combining great clearness with economy of the student's time, and the book should prove very useful.

The publication of a second English edition of Dr. WALKER'S translation of HOLLEMAN'S *Textbook of Organic Chemistry*[10] has permitted of the incorporation in it of the results of the most recent work in important directions. This new edition is translated from the third Dutch edition, and has been rewritten by the translator with the co-operation of the author. The scope of the book is that usual in most textbooks of this subject, all the various classes of organic compounds being dealt with progressively, and the more important representatives of each class being studied in more detail. The discussion of the constitution of the benzene molecule embodies the latest theoretical considerations of the subject; the new nomenclature for proteids adopted by the Chemical Society in March, 1907, is given in an addendum to the chapter dealing with these bodies. Throughout the book the explanations given of various phenomena are in accordance with modern conceptions and theories; on occasion mathematical formulae are employed, but not to a sufficient extent to deter those unfamiliar with mathematics from employing the book, which is an excellent modern textbook of the subject for fairly advanced students.

NOTES ON BOOKS.

IT has been said that when a doctor writes well he writes very well; and, in spite of a slight taint of affectation the anonymous author of *Confessio Medici*[11] worthily maintains this flattering tradition. The little volume contains a preface, a short "epilogue," and ten essays embodying the writer's reflections on the medical life. Naturally, these essays are of unequal merit, and we doubt if many students, for instance, will appreciate the somewhat dilute philosophy and the not very profound criticism of "psychology" addressed to them in "An Essay for Students." But good essay writing is like a portrait, which always seems to have its eyes fixed on the observer, and every here and there the author succeeds in looking straight into our eyes and telling us something about ourselves that gives us a thrill as we recognize its truth. We like best the chapters on "Wreaths and Crosses" and "Retirement." In both of these the elusive spirit of the true essay is caught and made to obey the writer—a rare achievement. Particularly notable is the brief sketch of the young couple starting full of hope and confidence and the effect on their characters of the non-achievement either of failure or success. The author has a decided gift for aphorisms, and has produced some which Austin Feverel himself might not have disdained. We have only space to quote his definition of a hobby as "an artificial outside interest, which looks as if it were sustaining and impelling us, when we are sustaining and impelling it"; and the following: "The Spirit of Practice bids us to think of faith and hope as open questions, and confine our attention to charity." Altogether, this little volume has much literary charm, and the harrassed doctor will not read it without refreshment and pleasure.

The most elaborate attention to detail will not make a good nurse unless the latter is possessed in some degree of the qualities of imagination and sympathy. That this fact is recognized and emphasized by Miss MCISAAC in her *Primary Nursing Technique*[12] is evident from her excellent

*The Roser-Nélaton, or Nélaton's line is a line joining the anterior superior spine of the ilium and the tuberosity of the ischium. Alsberg's angle is the angle formed by a prolongation of the plane of the base of the articular surface of the femur with the axis of the shaft of that bone

[9] *Organic Chemistry, including certain portions of Physical Chemistry, for Medical, Pharmaceutical, and Biological Students.* By H. D. Haskins, A.B., M.D., and J. J. R. Macleod, M.B., D.P.H. New York: John Wiley and Sons, and London: Chapman and Hall, Limited. 1907. (Crown 8vo, pp. 377, figs. 24. 8s. 6d.)

[10] *A Textbook of Organic Chemistry.* By A. F. Holleman, Ph.D., F.R.A.Amst.; translated from the third Dutch edition by A. Jamieson Walker, Ph.D., B.A., assisted by Owen E. Mott, Ph.D. Second English edition. New York: John Wiley and Sons, and London: Chapman and Hall, Ltd. (Med. 8vo, pp. 607. Figs 80. 10s. 6d.)

[11] *Confessio Medici.* By the writer of "The Young People." London: Macmillan and Co., Limited. 1908. (Demy 8vo, pp. 168. 3s. 6d.)

[12] *Primary Nursing Technique for First-year Pupil Nurses.* By Isabel McIsaac. New York and London: The Macmillan Company. 1907. (Cr. 8vo, pp. 217. 3s.)

introductory remarks on the "comfort of the patient." The book is interesting as affording a comparison between English and American nursing methods, and in her account of the details of the nursing technique Miss Melsaac leaves nothing to be desired in the way of thoroughness. There is a preface for teachers, with a suggested syllabus for instruction which is suggestive and useful. Altogether the book may be recommended to the most experienced nurses as well as to the first-year probationers to whom it is addressed.

The twenty-second volume of the *Transactions of the Association of American Physicians*[13] contains a record of the papers read and the discussions held at the second session of this Association at Washington in May last year. Altogether some fifty papers were read, and as a rule followed by discussions. In spite of this number the volume is relatively small, for both papers and discussions are alike succinct; among them are some half-dozen dealing with the value of the opsonic index, and a record of the discussions which followed their perusal.

Dr. HALE WHITE'S well-known students' handbook on *Materia Medica* has reached its tenth edition,[14] the first having been published fifteen years previously, and this fact alone is sufficient to disarm criticism. It retains in entirety the arrangement of previous editions, the alterations and additions extending only to details, and not involving any important changes. On looking through the volume one is struck with the large number of detached facts which have been condensed into so small a space, making the work a synopsis rather than a treatise, and a test of memory rather than an appeal to the student's reason and to his knowledge of chemistry, physiology, pathology, and clinical medicine. It would seem an almost impossible task to acquire all the information detailed in these pages, and one can only hope that examining Boards take this charitable view in fixing their pass-standard in materia medica.

Professor HEINZ of Erlangen, in his textbook of materia medica,[15] expresses views as to the value of alcohol which do not agree with the recent condemnation of it by many eminent British doctors. He contends that it is a fallacy to draw conclusions as to the effect of small quantities of alcohol from experiments on animals with healthy hearts, the conditions in disease being so different, and gives his verdict in favour of wine, both as a beverage and as a stimulant in suitable cases, especially in fevers. On another vexed question—that of the influence of chloroform on the heart—he differs from the conclusions of the Hyderabad Commission, and states that the danger from heart failure in chloroform anaesthesia is greater than that from failure of respiration.

We have received a copy of the first volume of the sixth edition of *Mediterranean Winter Resorts*,[16] by Mr. REYNOLDS-BALL, F.R.G.S. Its special point is that it includes in addition to more or less ordinary guide-book information accounts by local medical men of most of the places described. The book is well put together and likely to be useful, though the chapter on Austrian winter resorts does not seem to be based on personal acquaintance with them.

Thermochemistry, by Professor JULIUS THOMSEN, translated from the Danish by Miss K. A. BURKE,[17] will be found of greater historical than practical importance. It contains the results of experimental work conducted between 1851 and 1885 and is of very real interest in showing the important theoretical conclusions that may be drawn from carefully-conducted scientific measurements. In many instances the translator has found it necessary to recast the author's words in order to convert older conceptions into their more modern form. In the experimental facts a large amount of material, quite independent of theoretical interpretations becomes available to the English reader.

[13] Philadelphia: Printed for the Association. 1907.

[14] *Materia Medica, Pharmacy, Pharmacology, and Therapeutics.* By W. Hale White, M.D., F.R.C.P. Tenth edition. London: J. A. Churchill. 1907. (Fcap. 8vo, pp. 700. 6s. 6d.)

[15] *Lehrbuch der Arzneimittellehre* [Textbook of Materia Medica]. Von Professor R. Heinz, in Erlangen. Jena: Gustav Fischer. 1907. (Roy. 8vo, pp. 434. M. 9.)

[16] *Mediterranean Winter Resorts.* Vol. I. South Europe. Sixth edition, revised, enlarged, and in part rewritten. London: Hazell, Watson, and Viney. 1908. (Price 3s. 6d.)

[17] *Thermochemistry*, by Julius Thomsen; translated from the Danish by Katharine A. Burke. B.Sc.(Lond.). London, New York, Bombay, and Calcutta: Longmans, Green and Company. 1908. (Cr. 8vo, pp. 512. 9s.)

MEDICAL AND SURGICAL APPLIANCES.

Hypodermic Syringes.

THE introduction of all-glass and all-metal hypodermic syringes has removed the old inconveniences of the always septic and often inefficient plunger, but the ordinary type of needle which fits over the nozzle is still a source of trouble, as there is almost always some leakage at this point when pressure is exerted to drive fluid into any resistant tissue. This "last infirmity" of hypodermic syringes is completely removed in the "Accosson" syringes manufactured by Messrs. Maw, Son and Sons. In these the needle is fitted with a cone which fits into the bore of a specially-made plug fitted into the barrel of the syringe. This reduces the surface exposed to pressure and we have found that the utmost pressure of the thumb is insufficient to cause any leakage or blow the needle out. The barrel and piston of these syringes are made of glass, and they are supplied with plugs of glass or "sterilite," a substance which is guaranteed to be unaffected by boiling or any drug used in hypodermic medication. These syringes are characterized by simplicity of design, efficiency, and excellence of workmanship, and the prices are very moderate. Messrs. Maw, Son and Sons also make a glass and metal syringe with an expanding "sterilite" plunger which acts smoothly and efficiently whether wet or dry. This is sold at a lower price than the others and appears to be a capital instrument, but the needles are of the ordinary type.

A New X-ray Plate.

We have received from Ilford, Limited, a batch of new *x*-ray plates specially prepared for radiographic work of every kind. Tests that we caused to be carried out upon these plates certainly gave most satisfactory results. They proved to work clean and to give good density. The makers particularly claim that in addition to being extra-sensitive the plates are invariably reliable, and this being the case they may be safely recommended to medical and general scientific workers.

MEDICINAL AND DIETETIC PREPARATIONS.

Dry Extract of Malt and its Combinations.

THE popularity of extract of malt seems to have increased of late years, both with prescribers and with the public, and new brands of the extract appear not infrequently. Most of these resemble pretty closely the articles previously obtainable. Wander's Dry Extract of Malt (prepared by A. Wander, Ph.D., Berne; and 24, Queen Victoria Street, London, E.C.) presents, however, some distinct advantages over the usual semi-fluid or fluid extract. It is in the form of a flaky granular powder, readily soluble in water or other liquids; it may be taken without admixture, is palatable, and does not cling about the mouth, thus avoiding the great objection which many persons have to the usual sticky form. The dry form of the extract also precludes the possibility of fermentative or similar changes which sometimes occur and to prevent which various preservatives are often added. Examination of a sample showed that it contained 77 per cent. of reducing sugars calculated as maltose; the diastatic activity was not very high, but superior to that of many extracts on the market. This dry malt extract is also supplied in combinations with various medicaments; we have examined samples of the following: Malt extract with iron oxide; malt extract with glycerophosphates of calcium, iron, magnesium, and sodium; malt extract with iron pyrophosphate; malt extract with calcium phosphate. These all possess the same general characters as the plain dry extract, and are attractive forms for the administration of the respective drugs.

Combretum Sundaicum, the "Anti-opium" Plant.

We have received from Mr. H. Matthews (30, The Mall, Clifton, Bristol) a sample of elixir combreti, in which the water-soluble constituents of the Malayan anti-opium plant are presented in a pleasant and stable form. We have previously (BRITISH MEDICAL JOURNAL, October 19th, 1907, p. 1086) published the facts so far as known with regard to the use that is being made of this drug in the East, where it is said greatly to facilitate the discontinuance of the use of opium, without producing any ill-effects on the patient or leading to the formation of a new drug habit. It is administered in Malaya in the form of a decoction, which, however, does not keep; the preparation before us appears well suited for the exhibition of the drug in a more elegant form. If the claims which have been made should be substantiated by further trials, the elixir will no doubt find plenty of demand in this country.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 822.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has just been issued.* It contains minutes of the evidence taken during the months of October, November, and December.

ANTIVIVISECTIONIST TESTIMONY.

Evidence of Mr. Stephen Francis Smith, M.R.C.S.

Mr. S. F. Smith said he was surgeon to the Antivivisection Hospital, and author of two works on vivisection, *Scientific Research* and *Fruitless Experiments*. He was also a member of the International Medical Antivisection Association. Asked by the Chairman if the title of the Antivivisection Hospital meant that no operation was performed there upon animals, or if it meant more than that, the witness said that primarily it was a hospital; secondarily, it had been founded by antivivisectors, who took that opportunity to make a kind of public protest against vivisection by the name which they gave to the hospital. Asked if in the treatment of patients they used the ordinary remedies employed in other hospitals, he said they did not bar anything that would do the patient any good. Asked in regard to his opinion as to the amount of sensibility of animals to pain as compared with man, he first mentioned the evidence from special senses in the lower animals. The senses of smell, sight, and hearing were stronger in many of the lower animals than in man. There was a widespread belief that sensibility to pain depended upon intelligence; if that theory were correct, it would prove that the lower animals could not smell, hear, and see as they did. Wherever a sense or structure was necessary to the preservation of the animal, that sense or structure would be highly developed. Pain had a function. The greater the sensibility to pain, the more care would the animal take to avoid danger and preserve life. Pain was a more important factor to the lower animals than to man. Man, inferior in the special senses which warned him of danger, inferior in strength, speed, and natural weapons to many of the lower animals, made up for those deficiencies by intelligence. Similarly, his intelligence guarded him to some extent against danger, and there was less need for acute sense of pain. The view that pain varied with, and depended on, intelligence was contradicted by the evidence of the special senses, and landed them in the absurdity of having to believe that a man could smell more keenly than a dog. The only right principles on which they could form a conclusion as to pain which the lower animals felt was by taking into consideration the surroundings of the animal. If pain was necessary to the survival of the animal, they might conclude by all analogy of evolution that the sense of pain would be highly developed. On the Chairman pointing out that there were some savage races which had a much acuter sense of smell and sight than some civilized races, and asking him if he thought that those savages had necessarily a more acute sense of pain, he said not necessarily. But there might be something in the surroundings of the savage which made it necessary that the sense of sight should be highly developed, and, possibly, about the sense of smell. Asked if he would say that the sensation of the negro in West Africa was more acute than that of a civilized man or as acute, he said it might be very difficult to judge directly; but if pain had been necessary to the preservation of the negro, he would say that it would be as well developed in him as in civilized man. He should not think that such a negro was equal in intelligence to a cultivated white man in England, but he would think his sense of pain would be the same, probably greater. In his occupation it had been his business to inflict a good deal of small pain without anaesthetics on patients, and he had never observed any difference between hospital patients and private patients. It was obvious that if this untenable belief was held by physiologists it was a danger to animals under experiment. He was for some time at the Pasteur Institute in Paris. He observed laparotomy performed on rabbits without anaesthetics. He asked an American medical man who had been for some years in the Pasteur Institute why an anaesthetic was not given, and he said it was because the rabbit did not mind the operation. He was not making a joke; that was his genuine opinion. The witness quoted the opinions of Professor Huxley, Dr. Anthony, Dr. Pavy, Dr. Pye-Smith, Dr. Burdon-Sanderson, Dr. Crichton-Browne, Mr. Schäfer, Mr. (now Lord) Lister, Professor Humphry, Dr. McDonald, Dr. Cleland, Dr. Sibson, and Mr. George Henry Lewes before the last Royal Commission, and, in the *Nineteenth Century* of December, 1881, by Sir James Paget, to the effect that animals did not feel pain as men did, and that their struggles were automatic or reflex movements. Dr. Cleland said that it was doubtful if frogs felt at all, and he would therefore no more think of anaesthetizing a frog for an experiment than a worm for fishing (Questions 4615 and 4616). It was admitted by Dr. Sibson (Question 4752) that he had no ground for believing curare an anaesthetic, but had employed it as such in painful experiments. There were similar admissions from Dr. Rutherford (Questions 2918 to 2935). He next referred to an experiment described by Dr. Rutherford at Questions 2918 to 2934, with his opinion and the opinion of Dr. Sibson:

> A dog was starved for eighteen hours; it was paralysed by curare through a cut in the throat, and artificial respiration was kept up. The abdomen was cut open and a tube inserted into the bile duct. The animal was kept in this condition eight hours, substances being frequently injected into the bowels. No anaesthetic was given, because, in Dr. Rutherford's words, the "result of the experiment might be interfered with."

He expressed his opinion of this operation that the pain was trivial. He did not know that any date was given. This opinion was endorsed by Dr. Sibson at Question 4760, because the animal was kept quiet by curare. Dr. Sibson's words were so remarkable that he gave them:

> There would be no struggling, the incisions would be made with great ease, the animal's mind would be withdrawn from what I would call the domain of attention, and when there is no attention there is no sensation, no sensitiveness, no pain.

There were many more similar opinions in the report of the last Royal Commission. At the present Commission the Inspector for Scotland (Question 750) expressed the opinion that pain varied as the intelligence, and when in Question 741 he was confronted with the evidence of the special senses, he made the curious and ambiguous statement that it was not every kind of dog that was good at smelling. He concluded that this evidence of special senses showed less susceptibility to pain. The witness gave two more proofs of this widespread belief. In Mr. Keetley's *Index of Surgery*, pp. 180 and 181, second edition, was the operation for hare-lip in children. He quoted:

> Chloroform unnecessary. Secure his limbs by rolling him up tightly but firmly in a towel. If desired anaesthetic vapour may be pumped through a catheter.

Then came a description of the operation for which chloroform was unnecessary:

> Begin by separating with the knife the two sides of the lip from the jaw subjacent. . . . Then pare the edges of the cleft. Remove enough. . . . In double hare-lip the intermaxillary nodule is pared.

Proceeding, he said he wished to point out that there were certain reasons why this belief was stronger in physiologists than in other people. The belief was strengthened by (1) the blunting of the sensibilities, of which he gave his own experience as an example; and (2) the fact, which he thought often deceived the experimenter, that animals which did not often use their vocal cords frequently did not give the manifestations of pain when under severe suffering. Another circumstance which he thought deceived the experimenters was that he believed when an animal was under very severe torture it might be to a certain extent paralysed. Mantegazza, in his work on pain, described how he kept animals quiet when he was subjecting them to torture. He said there were two ways: one was by nailing them down by their feet, so that they seriously increased their pain with movement; another means was by making the pain so severe that the animal was paralysed. Asked when that book was written, he said it was written a long time ago; he could not give the exact date. In reply to further questions he said the author belonged to Italy. Asked

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

as to evidence of pain inflicted by English experimenters, he said that, as to direct evidence, they had nothing but what experimenters disclosed. From an analysis of every experiment published in the *Journal of Physiology* from 1896 to 1900 inclusive, he had found that 71 per cent. were cutting experiments. Asked what was the gross number of experiments in those five years, he said he could not tell. It was not very great. This percentage referred to the nature of the experiments only, for in many cases these were treated on numerous animals, the precise number of which was not stated. Of these cutting experiments, the animals were not killed at the end of the experiment in 31 per cent. of the 71 per cent. The period for which they were kept alive afterwards varied from days to months. In the great majority of these cases he did not think there was much suffering, judging by the analogy of patients recovering from operations, but he thought there was some. In an animal there might be very great difficulties in operating with precautions as to surgical cleanliness. There was another disclosure in the *Journal of Physiology*, that in the cutting experiments curare was used in 10·3 per cent. That referred to those in the *Journal of Physiology* for the five years that he had mentioned. Asked if he could say what particular class of experiment it was in which curare was used, he said he could not. It was some years since he made that analysis. Asked the actual number of cases in which curare was used, he said he could not say, but one could easily find it out by going to the *Journal of Physiology* for those years. It was used in addition to anaesthetics. In reply to Sir Mackenzie Chalmers, he said he could not tell the number of animals experimented on, but he did not think there were 100 in the whole five years. Asked if he had a list of the names of the experimenters referred to, he said, No. These percentages were calculated on as many experiments as were mentioned in the *Journal of Physiology* for the five years. Asked about the use of curare with anaesthetics, he said the only authentic account of experiment on man was given by Liouville in the *Bulletin Général Thérapeutique*, 1865, page 404. An overdose had been given, and artificial respiration had to be kept up until the patient recovered. Liouville added:

> The patient then related all he had felt—the preservation of his intellect, the annihilation of all power of movement, of which he gave a clear account, witnessing all that went on around him without being able to take any part in it, the fears expressed by some assistants present being by no means reassuring.

Claude Bernard believed that curare greatly intensified the susceptibility to pain, and in dramatic language had stated that under it he inflicted the most atrocious suffering that the mind of man could conceive. That he was correct there was every reason to believe. Asked if he had got the quotation of Claude Bernard, he said he had not. Sir William Collins said he thought that at page 282 of Mr. Paget's book a reference was given. The Chairman said that was hardly a quotation, and very likely did not give the whole of what Claude Bernard said. Mr. Paget wrote:

> Claude Bernard believed that it did not in any way affect the sensory nerves, and he described in theatrical terms the animal as being unable to stir, but suffering horrible torture.

That was an extract from the *Edinburgh Review* for July, 1899. It did not profess to give the exact words beyond that. Proceeding, the witness asserted that every time curare was given to an animal there was danger of the most terrible suffering being inflicted. He thought it was certain that in the majority of cases—possibly in every case—the most appalling torture was perpetrated. His reasons were that in giving anaesthetics to human beings great care was necessary to give enough to produce unconsciousness and to avoid giving more than was required, so endangering life. There were certain indications as a guide. After a certain time absence of the corneal reflex showed that the anaesthetic might be stopped. Reappearance of the corneal reflex showed that more might be given. A slight movement of the patient (which, however, rarely happened with a skilled anaesthetist) showed that more must be given at once. With these guides in human patients, anaesthesia was safe and efficient, although the quantity of anaesthetic required by one patient might differ considerably from what might be required by another similar patient. In a curarized animal these guides were totally absent. Moreover, there was no means of knowing the idiosyncrasy of the animal as in human patients. His experience was that one animal required more anaesthetic than another of the same size. Further, his experience was that to give just the right amount to a dog without killing it was more difficult than in human beings. He did not think that in these curare cases with incomplete anaesthesia (he was presuming there was incomplete anaesthesia) the ether or chloroform given lessened the pain, as would be the case with morphine. There was absolutely nothing by which one could tell whether pain was felt. Asked if that was the view of anaesthetists, he said anaesthetists had nothing to do with curarized animals. Asked if all these statements were based on his own personal observation of attempts to anaesthetize animals that were curarized, he said, Yes. Passing on to the question of the usefulness or not of vivisection, the witness wished to state, first, that the reason why he was selecting certain claims was that when this book, *Experiments on Animals*, was published by the Secretary of the Association for the Advancement of Medicine by Research, a number of medical men, including himself, were requested to inquire into the accuracy of the statements made therein. The work was split up, and what he was giving the Commission now was what fell to his share. First, on drugs. He was giving only a small part of the evidence which existed—only those drugs which began with the letter A. He began with alkalis.

Referring to the experiments on the lower animals, Dr. Ringer said (*Therapeutics*, p. 127, fifth edition) that the results were contrary to experience of the action on the human body, and he indicated further that the animal experiments were in themselves contradictory. As regards acetate of ammonia, Stillé and Maisch (*National Dispensatory*, p. 836) pointed out that, given to healthy men, there were no decided symptoms, but that in rabbits there were fatal tetanic spasms and dissolution of the gastric mucous membrane. Amyl nitrite was discovered by the French chemist, Balard, in 1844. Later, Professor Guthrie, when distilling it, found it producing flushing of the face. The natural deduction is that the blood pressure would be lowered if the small arteries are dilated. Still later, animal experiments demonstrated that the blood pressure was lowered, but this was only corroboration of clinical observation. Apomorphine: The clinical effect of this drug on the heart was flatly contradicted by the animal experiments of Siebert and Moerz (Bartholow's *Materia Medica*, p. 459), and Wood (p. 437) pointed out further discrepancy between human and physiological investigation. He passed over as of less importance, though interesting, the various contradictions between physiologists themselves as to the action of this drug. Arsenic: Drs. Ringer and Murrell (*Journal of Physiology*, I, p. 217) obtained on frogs different results from those of Dr. Sklarck, of Berlin. They believed the discrepancy to depend on the time of year. He preferred to leave it to a physiologist to answer the problem: If arsenic had a certain effect on frogs in May, what effect would it have on men in March? The absurdity of these experiments was as obvious as the unconscious humour of the experimenters. Atropine (obtained from belladonna): Its well-known action of dilating the pupil in man was absent in birds (Stillé). Birds and herbivorous animals ate belladonna with impunity. "This was one of the many examples," remarks Stillé and Maisch (page 476), "which show the danger of concluding from the lower animals to man in regard to the uses of medicines." He passed over the disputes among physiologists as to the effects of this drug upon animals. He observed that morning that he had left out the drug aconite, which began with "A," about which similar observations could be made; but he stated briefly that similar observations could be made concerning the following: Benzoic acid, bromides, caffein, Calabar bean, camphor, carbonic acid gas, chloral, chrysophanic acid, citric acid, cocculus indicus.

Asked if he said that one could not argue from experiments on animals as to the effect on man in the case of these drugs, he said, No. Asked if prussic acid, for instance, was not fatal both to animals and man, he said, Yes. Asked what the difference was in the operation on man and animals in the case of prussic acid, he said he had not got his notes there at present. A drug might have common properties; it might kill both men and animals, but it might also have some properties which were different. The evidence was overwhelming that whether with old drugs or new, any conclusions from experiments on animals were absolutely untrustworthy, and would be dangerous if relied on. Mr. Berdoe in his brochure on drugs said:

> Let us imagine that a quantity of a new drug, called opium,

is being examined for the first time by a special committee. Let us assume that nobody knows anything about its properties except some vague travellers' tales. The physiologists proceed to investigate its action by a long series of experiments on animals. They give it to frogs, and they find that small doses throw them into tetanic spasms. They give 20 grains to a pigeon, which is none the worse for it; 30 grains are given to a rabbit with no effect. They are beginning to think the travellers' tales exaggerations, especially as they discover that ducks and chickens, like the pigeons and rabbits, are never the worse for its administration. They resolve now to try it on a human patient, and, proceeding with extreme caution, as they think, they decide not to venture at first beyond the dose they gave to the pigeon—namely, 20 grains. The patient is a powerful navvy. He is promptly killed. If physiological medicine were of any value, surely the method followed by these investigators was right and cautious. Yet how fatal their method when reduced to practice.

He wished to compare these facts with the statement of Sir Lauder Brunton, at Questions 6929 and 2930, before the present Commission, that animal experiments were absolutely necessary to learn the effects on man, and to learn, in Sir Lauder Brunton's own language, "a safe dose." He drew attention also to his statements at Questions 6893 to 6897 that Gamgee's animal experiments led to the observation that the pulse tension in man was lowered by nitrite of amyl, and that this observation pointed to the treatment of angina pectoris by nitrite of amyl. That might be, but it was previously known that nitrite of amyl caused flushing. The deduction that the pulse tension would be found lessened was so glaringly obvious that if it was really overlooked great want of common-sense was shown. Gamgee's experiments should have been unnecessary. The witness went on to deal with inoculation in typhoid fever. Dr. Washbourne wrote (BRITISH MEDICAL JOURNAL, April 20th, 1901):

With regard to the value of inoculation, I am satisfied, from clinical observation, that it does not modify the disease. Mild, severe, and fatal cases occur among the inoculated and non-inoculated, and, as far as one can judge, with the same frequency. Whether inoculation diminishes the incidence of enteric fever can only be determined by extensive statistics. From my own personal experience, I should not think that the incidence is diminished.

Dr. Melville, late civil surgeon to the Natal Field Force, wrote (BRITISH MEDICAL JOURNAL, April 20th, 1901):

Inoculation.—Of my 295 cases, 30 were inoculated, the remaining 265 being unprotected in this manner. A few statistics comparing the results obtained in the two classes of cases are not devoid of interest. From the following table it will be observed that the uninoculated cases compare very favourably with the inoculated. The complications were more numerous, the duration of the fever longer, and the death-rate higher in the inoculated.

He presented a table showing that the percentage of deaths in inoculated cases was 6.67, and in the uninoculated, 1.89.

On the Chairman asking if in Mr. Stephen Paget's book there were a good many tables where the inoculated had suffered less than the uninoculated, the witness said, Yes; all that he had said would show that there was a doubt about the matter. Passing to malaria, he said it was implied, though not definitely stated, by Mr. Paget that experiments on birds were necessary and essential in proving that mosquitos conveyed malaria. With regard to that, the witness said the following history was even admitted in Mr. Paget's book. It had long been suspected that mosquitos caused the disease. The question was obscured by the circumstance that the common variety did not convey the poison, and that the kind responsible, the *Anopheles*, did not buzz nor cause much irritation by its bite. In 1880 Laveran discovered the specific organism in the red blood corpuscles. In 1894 Manson suggested that this organism was removed from the blood by mosquitos, and by a special variety. In 1895 Ross made observations on the organism found in mosquitos after feeding them on malarial blood. The mosquito theory had now strong ground for credence. It remained to be proved that persons protected from mosquitos in a malarial district would not get the disease, and that men bitten by the *Anopheles* in a non-malarial district would get the disease. This was carried out and proved by a Commission from the Tropical School of Medicine in 1900. Where was the necessity for experiments on birds? It was true that Ross in 1898 showed that another variety of mosquito could convey an analogous disease to birds, and he also showed that this variety could not convey the malaria parasite to man. His experiment, then, was valueless, because it did not touch on malaria in man. That it was inconclusive was clearly the opinion of the Tropical School of Medicine, as evidenced by the fact that the final and convincing experiments on man were undertaken to settle the matter. One experiment was that they took a man who had had malaria previously, and therefore was very susceptible to it; they put him in a malarious district in Italy, where they kept him protected from mosquitos, and they found that he did not get malaria. The reverse experiment was that of, he believed, Dr. Manson's son, who allowed himself to be bitten in England, where there was no malaria, by malarial mosquitos brought from a malarial district, and he contracted the disease. He did not doubt that mosquitos conveyed the disease, but he said that experiments on animals had nothing to do with the discovery.

(To be continued.)

HOSPITAL AND DISPENSARY MANAGEMENT.

DENTAL HOSPITAL OF IRELAND.

AT the annual meeting of the Dental Hospital of Ireland, Mr. G. M. P. Murray, F.R.C.S., the honorary secretary, read the report, from which the following is quoted:

The dispensary cases (advice and ordinary extractions) amount to 13,042. There is a marked increase in fillings and inlays, which number 6,447 (about 10 per cent. being gold) against 4 396 the previous year. The number of operations under anaesthetics was 2,122, the average number of extractions in each case being 11.07; 397 cases of irregularity were treated mechanically, and the number of dentures supplied was 255. In the general cash account the receipts from subscriptions and from pay patients show a satisfactory advance, while the disbursements remain practically stationary. The separate account (No. 3) of the Prosthetic department, including pupils' fees, shows a very satisfactory increase, leaving to credit a substantial balance of £695 4s. 7d. Recognizing that the working of the institution is greatly handicapped by the cramped and inadequate space, your Board is of opinion that the time has come when an effort should be made to extend the premises, and confidently appeals to the public to place in its hands the means of carrying out this most necessary object.

The Dean, Dr. A. W. W. Baker, congratulated the Board on the very satisfactory state of the school. Thirty-two students had entered this session. Their work had been thoroughly satisfactory and the answering quite up to the average.

The reports were adopted.

The speakers were Dr. G. P. Moore, Dr. A. Wynne, Mr. Goldie, Mr. Bland, and Mr. J. S. Thomson.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

THE report presented to the annual meeting of this hospital stated that 1,701 patients had been received into the hospital and 1,996 had been attended and nursed in their own homes. The extension of the nurses' home, providing for 31 more nurses, would, it was hoped, be open by midsummer, and much needed additional accommodation would then be available; the residential college for students was also being enlarged so as to provide for 16 medical students instead of 6, with a view to meeting the recommendations of the General Medical Council on the instruction of students in practical midwifery. The chairman, in moving the adoption of the report, said that although a large number of difficult and critical cases were admitted to the wards, the maternal mortality was only 5 per 1,000, while there was not a single death among the 1,996 out-patients. In the in-patient department the rate of mortality of infants was 19 per 1,000, and in the out-patient department 8 per 1,000 only.

THE BRADFORD HOSPITAL FUND.

AT the annual meeting of this Fund it was stated that the amount received was £6,474, compared with £6,413 in 1906. This amount was allocated as follows: Royal Infirmary, £3,797; Royal Eye and Ear Hospital, £817; Children's Hospital, £1,063; St. Catherine's Home for Cancer and Incurables, £320.

DAVID LEWIS NORTHERN HOSPITAL, LIVERPOOL.

THE report brought before the annual meeting of the Northern Hospital stated that the in-patients during the year numbered 2 698, and the out-patients 14,296, with a total of 47,190 attendances. The total expenditure was £10,255, and the income £9,509, but there was a debit balance of £5,993 Several speakers urged the desirability of continuing to maintain the hospital on a voluntary basis rather than placing it upon the rates.

THE HAMIDIÉ HOSPITAL AT CONSTANTINOPLE.

The eighth annual report of the Hamidié Hospital for Children and Women has lately been issued, and it is gratifying to note the progress in the past year. Indeed, the hospital has progressed steadily and rapidly since it was founded eight years ago by H.M. the Sultan, Abdul Hamid, and a visit which we made to it last spring showed that it was difficult in a report to do justice to its management and merits. The youngest daughter of the Sultan died some ten years ago, and in memory of his child the monarch resolved to found what would be a living and lasting memorial to her. No time was lost in commencing to build, and eight years ago the first pavilions were erected; gradually fresh pavilions have been added, and last year the sanatorium for tuberculous children was opened. Since then the maternity pavilion has been completed and equipped with every comfort and appliance that modern science can suggest. Not yet tired of perfecting his splendid work, His Majesty the Sultan has now decided to build a sanatorium at Kutahia for phthisis and chronic diseases of the chest. The building will be erected in the midst of a forest of great pine trees, on the grassy plain dominating Kutahia, a spot noted for the purity and abundance of water and bracing air. The sanatorium will be, as it were, an annexe of the Hamidié Hospital, and will be administered therefrom. A more healthy spot could not have been chosen; it is within an hour of Constantinople, and is situated 120 metres above the level of the sea. A stream runs through the forest, falling here and there in waterfalls, and so swift that it is intended to utilize it as motor power for the electric lighting of the sanatorium. It is proposed to put into good order the road leading to the summit, which commands a view over the wide plain of Kutahia. The purity and salubrity of the air blown across this open space and aromatized by the pine trees, the running water, the quiet and retirement combine to make it a most ideal spot for an establishment of this kind.

By imperial irade the work of building has already begun. The sanatorium will consist of a pavilion of thirty beds, luxuriously fitted up, nothing being spared which will add to the comfort and well-being of the patients. During the past year the clinical laboratories of the hospital, having been found too small for the growing institution, have been rebuilt. The road which connects the hospital with that which passes through Chichli has been opened up and gas has been introduced into the pavilions and gardens.

His Majesty has also erected a graceful clock tower of brick and rose-coloured marble from the famous quarries of Hérékié on the Marmora; attached to it is a little oratory. The building is in old Turkish style and a wide balcony divides the tower into two stories; from this the Muezzin will call the faithful to prayer, so that it will serve the double purpose of minaret and clock tower. The two stories are pierced by tall windows framed in carved marble, delicate ornamentation copied from antique Turkish architecture being carried out in the cornices and the balustrade. The clock, which has two faces, is of transparent porcelain, and will, as at the tower of the palace of Dolma-Bagtché, be lighted artificially at night. One face will show the time *à la franque* and the other *à la turque*. This elegant building covers a space of 150 square metres. The women's pavilion, lately completed (Fig. 1), is isolated by means of a surrounding wall from the children's quarter. The building is of brick with basement and cornices of white stone; it is very solidly built and very comfortably furnished. It contains 36 beds and covers 596 square metres, and is divided into two buildings, one of one story and one of two stories, built on deep foundations of masonry. Entering the first by a flight of marble steps the visitor finds herself in a long glass-covered passage connecting the two buildings. Near the rooms reserved for the doctors and nurses are two large wards, well lighted by large bay windows. Communicating with the large wards are two smaller wards fitted up to receive women during and after labour. Adjoining are bath rooms and lavatories. The operating theatre is a separate building of graceful design in red brick faced with white stone. It is lighted by large bay windows on the four sides



Fig. 1.—Women's pavilion.



Fig. 2.—Group of boys at the hospital (circumcised August 19th, 1904).

In addition there are a number of small windows near the ceiling. The most princely lavishness with the most scientific methods characterizes the fitting out of the entire department, and more especially of the operating theatres, all the instruments being obtained from the most noted firms in Europe. In the wards everything is considered from a hygienic point of view. There is ample light and air, rounded angles and corners, and absence of ornamentation which might harbour germs, cemented or tiled floors, so that the whole gives an impression of simplicity with extreme comfort. An innovation by which the whole quarter of Chichli will benefit is the introduction of gas into the hospital, the grounds, and the surrounding streets. This year will probably see commenced a great reform in the nursing arrangements. Hitherto Turkish women, quite inexperienced, have been employed in the wards as nurses, their training having been solely by attendance, and consequently unsystematic. It is now felt that this is not sufficient, and there is a keen desire to have a training school for hospital nurses in the hospital, in which they could receive continued instruction in the theory as well as in the practice of nursing, passing examinations. Nurses for private cases would be supplied from the hospital. This would be a great advance, and it may be surely predicted that trained nurses will soon be the order of the day, for the speedy and practical carrying out of useful ideas has been the policy of the Sultan right through since he conceived the idea that an up-to-date hospital for children was the way to check disease by prophylaxis. It is curious to compare the account of the hospital of the Sultan Bayazed at Adrianople with the above:

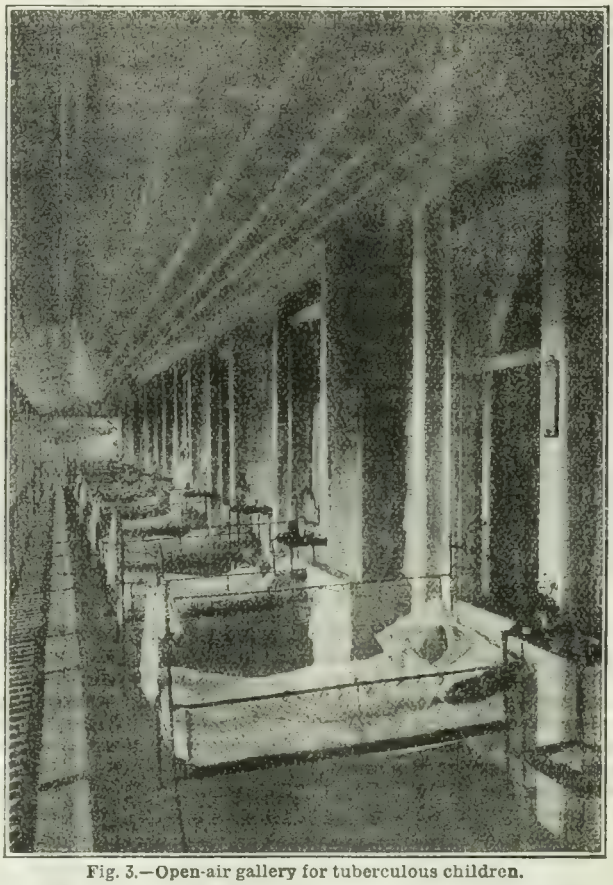


Fig. 3.—Open-air gallery for tuberculous children.

> There were eight rooms which "are ever full of sick people, poor and rich. In some of these rooms fire is lighted at winter time, according to the desire of the sick, and they are fondled with silk cushions, good beds, etc., for the spring, when madness is particularly raging. The madmen sick of mystic love are seen to lie here chained like lions in their dens, looking to the basin, and speaking in the cant of the Kalenders. Others, dispersing in the garden amongst the flower beds, yell and shout to the song of the nightingale without measure or art. In the season of the flowers the sick are often cured only by the sight and smell of them; and some lose their wits by the sweet scent of them. . . . Some of the mad are cured by music, and therefore Sultan Bayazed, the founder, established a pension for some musicians, who come thrice a week and play in the winter and summer rooms to the sick and mad. The mad begin to jump like apes to the tunes, Rast, Neva, Sigah, Bhehargah, but above all to the tunes Zengoole and Boslik, which, being accompanied by the great kettledrum, gives particular pleasure to the mad. Briefly, there is no hospital and no madhouse in the whole world like that of Adrianople. The sick and mad receive three times in four and twenty hours not only common food, but birds and all kinds of dainties from the kitchen founded for that purpose. Twice in the week the apothecary's room is opened, and medicines are distributed to those who ask for it—preparations of cardamom, caryophils, and all kinds of aromatic spices. On the door of the room a curse is written against those who, without being sick, should ask such medicines, that they should fall sick immediately.

Abdul Hamid has not only lifted his people out of this abyss of ignorance and superstition, but it is not too much to say that the Hamidié Hospital may stand comparison with the best-equipped and best-managed hospitals. To achieve this the Sultan has had to fight against prejudice and ignorance, has shown himself to be broad-minded, generous, and charitable, and to be a born organizer. The progress towards perfection has been steady; he has followed the most scientific lines, and has outstripped this country by grasping the vital importance of prophylaxis in the question of tuberculosis, establishing two years ago in his hospital a fine pavilion for the open-air treatment of tuberculosis in children (Fig. 3). The youngest children predisposed to it are received there, and by proper conditions and good food are generally cured before the disease becomes rooted. Every scientific and philanthropic spirit will wish continued prosperity and good luck to this enlightened and generous work of H.M. the Sultan.

LITERARY NOTES.

IN the *St. Louis Medical Review* of May 11th, 1907, there appeared a paper on Serenus Samonicus, Physician to the Emperor Severus, by Dr. Henry Barnes, of Carlisle, which has since been reprinted. Quintus Serenus Samonicus was the friend and physician of the Emperor Severus, and is, according to Dr. Barnes, the only physician whose writings have come down to us in Latin hexameter verse. The Emperor visited Britain in A.D. 208, when he organized a campaign for the purpose of subjugating Scotland. He penetrated so far into the north of Scotland as to be enabled to take notice of the length of the days and the shortness of the nights, which were so different from those of Rome. Although he never met the enemy in open battle he is said to have lost 50,000 of his troops. Unable to resist his arms, the tribes sought peace from his clemency. The peace was of short duration; but before the war broke out again there occurred an incident in the career of Serenus, who accompanied the Emperor in this campaign, which deserves to be held in grateful remembrance by all members of the medical profession. The Emperor had two sons, Geta and Caracalla. The latter gave great trouble and was so anxious to compass the death of his father that on one occasion he actually attempted to destroy him with his own hands. Foiled in this attempt he, according to Herodian, approached the Emperor's physicians and endeavoured to persuade them to use means to bring about the end he desired. This, however, they indignantly refused. War with the wild tribes in the North again breaking out, the Emperor issued orders for a fresh campaign, which was entrusted to Caracalla, but the latter, instead of prosecuting it with vigour, busied himself with gaining over the army to act against his father and brother. In the meantime the Emperor died at York on February 4th, 211 A.D., and his two sons, Geta and Caracalla, were proclaimed as emperors. In the year following Geta was assassinated by his brother, and this was followed by the massacre of many of the most distinguished men of the State, whom Caracalla

suspected of favouring his brother's cause, to the number of 20,000. Among those who lost their lives on this occasion was the physician Serenus. He left behind him only one book, consisting of a poem extending to 1,115 hexameter lines, and bears the title *Q. Sereni Samonici de Medicina Praecepta Saluberrima*. It contains a considerable amount of information extracted from the best authorities on natural history and the healing art, mixed up with a good many foolish and puerile superstitions. Various editions of it have appeared. There is one line in the poem which has given a considerable amount of trouble to the editors, and is often quoted in discussions which take place regarding problems of pronunciation. It is the line in which the word "angina" occurs, and each editor seems to have treated it in accordance with his own preconceived notions as to whether he considers the "i" should be pronounced long or short. Dr. Barnes gives translations of a series of extracts from the *Praecepta* relating to some common ailments and injuries. For purposes of reference the line in which the beginning of the treatment is given will be indicated. We may quote one on poisons:

1. 1061. "That you may be preserved from the guile of a hostile stepmother or of him who, pallid with envy, will be tormented by your prosperity, be ever on your guard against unexpected poisons. Before meals, therefore, let the young nut of a walnut tree be eaten. The embossed cups of amber betray poisons. Water, too, boiled with oak bark forms a suitable antidote and figs steeped in oil. Oft, too, the deity hath proclaimed that a radish should be eaten. The antidote of Mithridates is said to have been gathered together in many different ways, but Pompey when he seized as a victor the King's desk found nothing but a common mixture, and smiled at these well-known drugs. Mithridates used to take twice ten leaves of rue and a pinch of salt and two walnuts, and as many whole figs, sprinkled with a little wine at daybreak, fearing the cups which his mother had given him."

In *Leaves from the Notebooks of Lady Dorothy Nevill*, to which we have more than once referred, the following story is told:

At a great party which was given at the India Office during the Sultan's visit to England in 1867, the wife of the Turkish Ambassador (who was, of course, like most of the Turkish envoys sent to England, a Christian), a lady weighing some 25 st., completely succumbed, being overpowered by the heat. A doctor was present in the room, being in close attendance upon the Sultan, and every one thought that he would be at once sent to revive the enormous and prostrate Ambassadress. Her imperial master, however, instead of thus despatching his medical adviser, whom he kept in close attendance by his side, did not show the slightest desire to dispense even for a moment with his services, but on the contrary, fearing that the excitement consequent upon this unfortunate occurrence would heighten the august temperature, bade the physician keep his hand closely upon the imperial pulse till such time as all inflammatory symptoms should have subsided.

We are not surprised at the selfishness of the Oriental monarch, who naturally thought little of the welfare of a Christian woman. The importance which he attached to his royal pulse, however, reminds us of that great philosopher, Herbert Spencer, who seems to have kept so close watch on the action of his heart that he would even stop a carriage in the middle of a crowded street if he thought the motion was making his pulse beat too quick. Thus, in spite of Mr. Rudyard Kipling, East and West have met at least at one point. It is curious to think of the common weakness which brought the philosopher down to the level to the potentate.

Messrs. J. and A. Churchill will publish in time for the summer session an eighth edition of a *Manual of the Practice of Medicine*, by Dr. Frederick Taylor; a second edition of a *Manual of Ophthalmic Surgery and Medicine*, by Mr. W. H. H. Jessop; a fifth edition of a *Short Practice of Midwifery*, by Dr. Jellett; an eighth edition of *Qualitative Analysis and Practical Chemistry*, by Dr. Frank Clowes. The same firm will also publish the following new works: *A Manual for Midwives*, by Dr. Longridge, Examiner to the Central Midwives Board; and the *Thermal Treatment of Aix-les-Bains*, by Dr. H. Forestier, Physician to the Bathing Establishment of the Thermal Hospital, Aix-les-Bains.

Dr. Smith Ely Jelliffe, of New York, has translated into English the well-known work on the semi-insane and the semi-responsible by Professor Grasset of Montpellier. The author does not accept Lombroso's contention that genius is a special form of neurosis, "a true degenerative psychosis, belonging to the group of moral insanities," which he elsewhere describes as "belonging to the family of the epilepsies." Grasset holds that Lombroso's doctrine "cannot be scientifically upheld at the present time." In the first place, he says, the coincidence of epilepsy and of genius is not very frequent. The examples already cited are few in number, and for certain of them the diagnosis stood in need of discussion and of revision. Grasset's conclusion is as follows:

Scientifically, one thing only is demonstrated; that is, the frequent coexistence of intellectual superiority and a neurosis in the same individual. This coexistence is too frequent to be fortuitous, and one should not say, with Henri Joly, that Lombroso's book has nothing in it but a *simple* and *puerile* system, and that everybody's head may be afflicted as well as his heart or his intestines, and that certain superiors become insane just as others have inflammation of the lungs. Neither must one say, with Faguet, that the neuroses appear more frequently in superiors because they are better known, nor, with Bourget, that such neuroses are either a bluff or a wilful exaggeration, a pose or a form of snobbishness, and that they are put on or magnified for the mystification of the philistine.

Dr. Grasset's view is that intellectual superiority and nervous weakness are "distinct branches springing from a common trunk." This common root is characterized by a very marked nervous temperament and an acquired or hereditary neuropathic state. He continues:

Furthermore, the psychic centres are essentially multiple and complex; they do not form in any person a homogeneous whole of which the parts are all uniformly developed. It can be understood how in the same person certain centres may develop exuberantly, while others suffer and become diseased. A curious example of such unequal development of the psychic centres is furnished by calculators such as Inaudi and Diamanti.

That is to say, that when the same man is both neurotic and superior, he is neurotic by virtue of one zone of his nervous system, and superior because of another. . . .

The common trunk which unites superiority and neuroses is a temperament, but is not a disease.

Medically, therefore, genius and superiority are by no means to be considered as diseases to be treated and cured. The superior keeps his high social standing, which he must protect and develop; he is not necessarily ill, and if he be so it is not by reason of his superiority, but because of a coexisting neurosis which it is admissible to advise upon and treat, to take measures against it, and, if possible, to cure.

Summing up, Grasset says his belief is that genius is not a neurosis, but a neurosis is more often the penalty of genius. Intellectual superiority is not a symptom of neurosis. The neurosis is rather the scar or accident of superiority.

The scope of the *Zeitschrift fur Geschlechtskrankheiten*, which, as its name imports, is devoted to venereal diseases, has been considerably enlarged. The editor is Dr. A. Blaschko of Berlin, the publisher, Joh. Ambr. Barth, of Leipzig.

THE CASE OF SOUTHERN *v.* LYNN THOMAS AND SKYRME.

Through the kindness of Mr. Robert Jones, Liverpool, a "Statement" of the facts of the case "Southern *v.* Lynn Thomas and Skyrme" has been sent to a number of American surgeons, and to a few in Canada and on the Continent. A number of signatures have already been obtained, many accompanied by letters expressing the view of the writers that the treatment adopted was correct, and sympathy with Messrs. Lynn Thomas and Skyrme.

A further list of signatures will be published later.

PROTEST.

We, the undersigned, having had brought to our notice the facts of the case Southern *v.* Thomas and Skyrme, heard in the High Court of Justice in London, desire for the information of the public and of the medical profession to express our strong conviction that members of the medical profession must not be deterred by the verdict in that case from recommending the treatment which in the free exercise of their judgement they deem to be the best for the individual patient who applies for advice.

No medical practitioner, whether physician or surgeon, is justified in permitting himself to be tied down to the statements in textbooks which must generally be some years behind the most advanced methods of a progressive art.

With special reference to the details of this case, the public should be given distinctly to understand that after

serious fractures of bones *restitutio ad integrum* cannot be attained, and that *x*-ray photographs only demonstrate in the living to-day a fact well known to students of museum specimens in the past.

A surgeon cannot be held culpable if, after careful investigation, he advises treatment which he considers best even if different from all methods previously adopted. Every method of treatment embodying an advance must differ from existing methods.

Had physicians and surgeons in the past been tied down to routine and traditional proceedings, Ambroise Paré, Jenner, John Hunter, Dupuytren, Billroth, Nélaton, Volkmann, Rush, Czerny, Spencer Wells, McDowall, Lister, Péan, Pirogoff, Bassini, Senn, and all those who have advanced the science and art of medicine and surgery would have been thwarted in their beneficent work.

[*List of Signatories.*]

SWITZERLAND.

Theodore H. Kocher, Professor of Surgery at the University of Bern.
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Professor Tavel, Extraordinary Professor of Surgery at the University, Bern.
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Robert B. Osgood.	

John C. Munro.
Robert W. Lovett,
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R. KNIGHT SMITH, late Surgeon, U.S. Navy.
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MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this fund, desires to acknowledge the following subscriptions:

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MEDICAL INSPECTION OF SCHOOL CHILDREN.

LONDON.

AT the meeting of the Education Committee of the London County Council, held on March 18th, the Day Schools Subcommittee (we learn from the *Times*) presented a report which stated that the metropolitan branch of the Incorporated Society of Medical Officers of Health, in a letter to the Council, had said that it had considered the Education (Administrative Provisions) Act, 1907, together with the memorandum of the Board of Education on medical inspection of children in public elementary schools, and that it had unanimously approved the following suggestions:

(1) It is desirable "on the grounds of efficiency, economy, and harmony, that the work of medical inspection should be carried out in intimate conjunction with public health authorities," as enunciated in Paragraphs 5 and 6 of the memorandum of the Board of Education, and that the metropolitan cities and boroughs should for this purpose be made the units of administration; (2) that the medical officers of health of the metropolitan cities and boroughs be appointed by the London County Council as the local administrative officers, co-operating for this purpose with the medical officer of health of the County of London; (3) that it is desirable that the necessary executive assistants should be appointed by the London County Council and allocated to the metropolitan cities and boroughs, such assistants to be under the control of, and to receive instructions from, and to report directly to, the medical officers of health of the cities and boroughs; (4) that it is desirable that the medical officers of health should report directly to the London County Council in all matters relating to the administration of the Education (Administrative Provisions) Act.

The Incorporated Society of Medical Officers of Heath recognized the importance of uniformity in the administration of the Act, and expressed the hope that it might be given an opportunity of discussing with the Council the various points referred to in their communication. For this purpose it had appointed a deputation in the hope that the Council would consent to receive them at an early date. The Lewisham Metropolitan Borough Council, in a letter, had forwarded four resolutions in terms similar to the suggestions of the metropolitan branch of the Incorporated Society of Medical Officers of Health, and had asked the Council to consider them with a view to adopting and incorporating them in any scheme which might be prepared. The Lambeth Metropolitan Borough Council had suggested the advisability of the existing metropolitan health officers' administrative staffs being used, as far as practicable, in connexion with the medical inspection of schools and school children. The Day Schools Subcommittee of the London County Council reported after careful consideration as follows:

The Committee thought that the local medical officers of health, who were with very few exceptions "whole-time officers" in the service of the sanitary authorities, would be unable themselves to undertake the actual duty of inspection. Any part they took in the matter would necessarily be limited to their employment as superintendents in their districts of the work of inspection by officers appointed and paid by the Council. There was no doubt that advantages would result from this arrangement in so far that it would provide the medical officers of health with knowledge of the conditions affecting the children, and would enable them to consider these conditions in relation to those obtaining in the homes. Desirable as this opportunity was, however, the subcommittee could not regard as a practicable measure the employment for this purpose of officers appointed and paid by other authorities. In view of the heavy responsibility which rested upon the Council in connexion with the work arising under the Act in question, they were of opinion that it would be necessary for the Council to retain in the hands of officers directly responsible to it, and whom it appointed and paid, the direction and supervision of the whole of this work. The sanitary areas of London were not like those of provincial counties, which were often widely separated from each other, the schools of each sanitary area being attended solely by the children living in that area. In London, children living in one area frequently attended the schools situated in another area, and parents and children migrated from one district to another to much larger degree than they did in the provinces. The inspection must also relate to the needs of the Council as the education authority, and for this purpose it was necessary that the direction and supervision of the inspecting officers should be undertaken by officers appointed by and responsible to the Council. The medical officer of health, who was in close touch with the various local medical officers of health, would be able to supply such officers with all necessary information and

statistics, to keep them fully cognizant of the working of the medical side of education, and to enable them to make use of it in their ordinary duties connected with local administration.

Recommendations of the subcommittee framed in accordance with the terms of the report were agreed to.

WARWICKSHIRE.

A conference (we learn from the *Birmingham Post*) was held at Warwick on March 16th between the Education and Sanitary Committees of the County Council and various representatives of town and district councils in regard to the medical inspection of school children. Lord Algernon Percy, who presided, said it was calculated there would be from 10,000 to 15,000 children to be inspected in Warwickshire in the first year. Mr. McKenna had declined to make a special grant for the purpose. Mr. M. H. Lakin, chairman of the County Finance Committee, said the extra grant of 4s. a head would bring in £7,240, but the county would in future have to bear the loan charges now paid by the local districts, amounting to £7,823, so that it would be rather worse off than before, assuming there were no "contracted-out" schools. The inspection of schools would be an additional charge on the county rates, amounting to about ½d. in the pound. Dr. Bostock Hill, M.O.H. for Warwickshire, explained a scheme for the employment of two medical officers and two health officers, arguing that it would tend to efficiency of administration, and prove more economical than the plans adopted by Worcestershire and Derbyshire, for the cost of medical inspection would only work out at 1s. 8d. a child. Dr. Twomey suggested that one woman doctor should be employed for the work, and added that he believed the parents would prefer the inspection of the children should be made by a woman. The Rev. B. M. Bean (Warwick Rural) advocated the employment of local practitioners. The Rev. James Carter (Brailes) said the local practitioners would know the antecedents of the children better than a strange medical officer. The Rev. C. T. Eagles (Alcester) asked what would be done when they discovered defective children in the schools. The Chairman: "You must ask Mr. McKenna." The Rev. J. Mann (Solihull) insisted on the vital importance of a thorough medical inspection of schools in order to maintain the stability of the nation. By employing special county officers they would get rid of all local rivalries and jealousies, and the plan would be more economical and efficient. Councillor C. Smith (Erdington), speaking as a practical teacher, said they should have, as a natural corollary to medical inspection, better feeding and clothing of very poor children; and the teacher should be in a position to remedy the defects revealed by the medical inspection. The Chairman said that two committees of the County Council would meet after the conference to formulate a scheme for final adoption.

BIRMINGHAM.

The report of the Elementary Education Subcommittee, which refers at length to the Education (Administrative Provisions) Act 1907, has been carefully considered by the Birmingham Education Committee and has been adopted. The report points out that there will be three medical inspections during the school life of a child—the first on admission, the second in the 7th year of age, and the third at the age of 10. It is also desirable that there should be a further inspection in the year when the child leaves school. It is estimated that for the first examination there would probably be 10,000 children each year. Of children between 7 and 8 years of age there were last year 10,702, while those between 10 and 11 years numbered 9,901. The total number to be medically examined each year would probably be 30,000. It was recommended that three medical practitioners should be appointed, who would be required to devote the whole of their time to these duties during the school terms, and who would be subject to the general direction of the Committee's medical officer. Each appointment should be for one year, but the persons appointed should be eligible for reappointment for a second and a third year. The salary should be £250 per annum. The subcommittee also recommended that three women attendants should be appointed at a salary of £50 a year. It is proposed that a medical officer to the Education Committee be appointed to undertake responsibility for the whole of the work of inspection, and for the recording of the results, so that the character and continuity of the work would be preserved. The total expenditure was estimated at £1,500 a year. The Committee regarded their proposals as the minimum. Dr. Pooler criticized the recommendations of the Committee, and said that they were inadequate. He maintained that three medical officers would be quite unable to do the work required, and that, as the work was new, the supply of men competent to undertake it was limited. Not only were the proposals inadequate, but also the salary offered, as £250 a year with nothing besides—no security of tenure, no pension prospect, and the certainty of being turned off at the end of three years—would not be sufficient to bring forward candidates of the stamp wanted. After further discussion, however, the report was adopted.

NORTH RIDING OF YORKSHIRE.

A meeting of the Education Committee of the North Riding County Council was held at Northallerton (we learn from the *Yorkshire Herald*) on March 11th. Dr. W. H. Cheetham, M.O., reported that he had received replies from all the 32 medical officers of health, who all accepted the offer of 1s. a child for examination, with the addition of £1 a school in rural districts. He recommended to the Education Committee that the managers and the head teachers of the public elementary schools in the Riding be informed that (*a*) the Committee had arranged that the medical inspection of children as required by the Education (Administrative Provisions) Act, 1907, should be carried out—unless information were sent in special cases to the contrary—by the local medical officers of health under the direction of Dr. Cheetham; (*b*) that as the Committee believed that the full benefit of the inspection could only be secured by the hearty co-operation of the managers and the teachers, they trusted that all possible assistance would be given to the medical officers in the performance of their duties, and for this purpose requested that all concerned in the work would use every effort to carry out any suggestions which might from time to time be made by Dr. Cheetham; and (*c*) that the Committee further desired to call the attention of the managers to the desirability of inviting the assistance of any women who were members of their body in the medical supervision of children. Archdeacon Mackarness hoped that the recommendation of the appointment of medical officers of health as inspectors would be regarded as tentative. They usually were engaged in inspection of a different character to the inspection of the condition of children. There were people who would hold that a medical officer of health was not the kind of man who would do that work well, and who would require that the inspection of children should be carried out by men who had had a considerable experience of the medical treatment of persons, and especially of children. He would be prepared to find the inspection would take longer than was supposed—perhaps ten minutes a child. He would not move an amendment, but his remarks might be taken in the spirit of a warning. Councillor Trotter thought the appointment of local medical officers of health was a most sensible arrangement. After some discussion, the Chairman admitted that the arrangement must be regarded as tentative, and, in fact, the appointments had been made for a term ceasing on December 31st of this year. He did not think a private practitioner would have the right to enter the homes of the children, and that was one reason for preferring a medical officer of health. The whole arrangement was on its trial. The proposed subcommittee was appointed, and the report of the General Purposes Subcommittee was adopted.

THE tenth annual meeting of the American Proctologic Society will be held at Chicago, Illinois, on June 1st and 2nd, 1908, under the presidency of Dr. A. Bennett Cooke, Nashville, Tennessee.

THE old police court in Southwark, which has been converted into what Dr. F. J. Waldo said would eventually be one of the best coroner's courts in London, was formally taken over on April 1st. Dr. Waldo said that, while the duty of providing a court, which lay with the county council, had been fulfilled, the duty of providing a proper sanitary mortuary still remained to be fulfilled by the Southwark Borough Council.

MEDICAL NEWS.

The estate of the late Mr. E. R. Bickersteth, of Liverpool, has been sworn at a net value of £329,767.

At the recent examination for master and operative plumbers held by the Registration Committee of the Plumbers Company, nineteen candidates presented themselves, and three passed.

The Lord Chancellor, on the recommendation of The Mackintosh of Mackintosh, Lord-Lieutenant of the County, has placed the following gentlemen on the Commission of the Peace for the County of Inverness: Dr. Finlay Matheson Mackenzie (Inverness), and Dr. Alexander Maclachlan (Beauly).

Among the courses of lectures to be given at the Royal Institution after Easter will be two lectures on Animal Heat and Allied Phenomena, by Professor William Stirling; and three lectures on Mendelian Heredity, by Mr. W. Bateson. Among the Friday evening discourses to be given, one by Dr. H. T. Bulstrode is announced.

A meeting of the Provisional Council of the National Union of Public Health Authorities was held on March 26th at the Grand Hotel, London. The draft rules prepared by the Chairman and the Honorary Secretary, after being carefully considered and in a few respects amended, were adopted and will be submitted to a conference of the Union to be held on May 28th at Caxton Hall, Westminster.

The Society for the Study of Inebriety will hold its annual meeting in the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, on Tuesday next at 4 p.m. A short address will be delivered by the President, Dr. Harry Campbell, after which a discussion on "reasons for drinking" will be opened by Mr. Stanley B. Atkinson, M.A., M.B., B.Sc., J.P., of the Inner Temple, Barrister-at-Law.

The first meeting of the German Society of Tropical Medicine will be held in Hamburg on April 15th and 16th. Professor Nocht, Deputy Chairman of the Society, has informed Dr. G. H. F. Nuttall of Cambridge, Honorary Secretary-General of the International Society of Tropical Medicine, that the members of the German Society will be happy to welcome members of allied societies from other countries on this occasion. The opening meeting will take place at 9 a.m. on April 15th in the Institut für Schiffs- und Tropenkrankheiten, Hamburg.

To show the strong prejudice and woful ignorance that prevailed regarding sanitation among the subordinate officers and crews of the British Navy half a century ago and more, Admiral Moorman, the Senior Admiral of the Fleet, who is about to celebrate his 98th birthday at Exmouth, Devon, mentions in some reminiscences of his early days that he was once court-martialled for "tyranny" for daring to be a sanitarian. "They distinguished me," says Admiral Moorman, "by sending me from the West Indies to Portsmouth to be court-martialled. It was a most unusual thing. They wanted a written defence, and I said I would make only a verbal one, to which they yielded at last. I pointed out in my defence that I was being tried for keeping the yellow fever out of the ship, in which I was successful. I would insist on sanitary regulations being observed, and while I hadn't a single case on board the *Cossack*, of which I was then Captain, all the others were infected with yellow fever. I was most fully and most honourably acquitted at the court-martial, with a strong animadversion on the false swearing of witnesses."

Chicago Pasteur Institute.—A report recently issued by the Chicago Pasteur Institute deals with the total number of cases of hydrophobia treated there from the date of its foundation on July 2nd, 1890, up to December 1st, 1907. The number of patients who received the antihydrophobic treatment was 3,130. Of these, 2,779 had been bitten by dogs, 102 by cats, 109 by horses, 28 by skunks, 6 by wolves, 36 by cows, 12 by calves, 2 by burros, 4 by coyotes, 1 by a rat, 4 by mules, 6 by pigs, 2 by sheep, and 38 were infected by hydrophobic human beings. Of the patients treated, 1,685 were bitten by animals found to be rabid by microscopic examination of the brain or inoculation test, or by the death of persons or animals bitten by the same animal; 1,109 had been bitten by animals found to be rabid by symptoms shown in life, and 336 had been bitten by animals strongly suspected to be rabid. Seven deaths are reported, a mortality of 0.22 per cent. Of the 7 persons who gave up the treatment, 2 were subsequently attacked by rabies and died.

Smoke Abatement.—A movement is being organized in London with the object of persuading urban authorities throughout the kingdom to penalize the emission of smoke from domestic as well as industrial chimneys. The use of smokeless fuel is already enforced in New York and nearly all the great cities of America. The adoption of a similar regulation in this country, although long desired by sanitary reformers, has been prevented hitherto by the Englishman's devotion to the open hearth. It is urged that this obstacle has now been overcome, not only by the improvements in gas and electric fires both for cooking and heating, but by the successful adaptation of open grates to the smokeless consumption of anthracite and other varieties of hard coal, and by the introduction of coalite, a fuel consisting of soft coal purged of the products which ordinarily hinder combustion, and pass up the chimney as smoke. It is probable that the Public Control Committee of the London County Council will take some steps in the direction of encouraging the use of smokeless fuels in domestic grates, but a number of sanitary reformers are pleading for a compulsory ordinance which, they aver, could now be enforced, to the great benefit alike of the urban community and the individual consumer; and to this end a vigorous campaign is to be undertaken in London and the other great cities of the kingdom.

International Laryngo-Rhinological Congress.—The International Laryngo-Rhinological Congress, which is intended to be a celebration in honour of Türck and Czermak, to whom is due the application to medical purposes of the laryngoscope discovered by the *maestro* Manuel Garcia, will be held in Vienna from April 21st to 25th. The Congress, which is under the patronage of His Imperial Highness the Archduke Francis Ferdinand, will be presided over by Professor O. Chiari. An address in honour of Türck and Czermak will be delivered by Professor L. Schrötter, Ritter von Kristelli. Reports on laryngology and rhinology from the standpoint of general medicine, with reference to education and examination in these specialities, will be presented by Professor B. Fraenkel of Berlin, and Dr. Lermoyez of Paris. Among other subjects on the programme are the connexion of diseases of the nose and post-pharyngeal space with those of the eye, to be introduced by Professor Onodi of Buda-Pesth, and Professor Kuhnt of Königsberg; the general treatment of local affections of the upper air passages, to be introduced by Sir Felix Semon; the diagnostic and therapeutic importance of the *x* rays and radium in laryngology and rhinology, to be introduced by Professors Burger, of Amsterdam, and Gradenigo, of Turin; and the treatment of tuberculosis of the upper air passages, to be introduced by Dr. Gleitsmann, of New York, and Dr. Heryng, of Warsaw. The list of communications promised, though not yet complete, is already a long one. The number of members so far is 332.

The British Lying-in Hospital.—We have before us the annual report of the British Lying-in Hospital, Endell Street, W.C., the chairman's speech at the annual general meeting, and the medical report. We notice that 602 deliveries took place during 1907 with 2 maternal deaths. The chairman considered it very meritorious that the number of deaths was so small. But to medical men the question is not how many deaths occurred, but how many *preventable* deaths. We are glad to be able to say that in neither of these 2 deaths was the hospital at fault. One was from eclampsia, a disease that can neither be predicted nor prevented; nor can the effect of treatment be foreseen. The other was from *ante-partum* haemorrhage. The condition had been treated outside the hospital by the "Rotunda method"—that is, plugging the vagina; but the haemorrhage had not ceased, and the patient was admitted in a state of collapse. The "Rotunda treatment" was continued after admission, and the vagina replugged. Four hours later, however, the medical officers had to fall back on the old method recommended by Ramsbotham, R. Barnes, and Braxton Hicks. The patient, however, died an hour after delivery. The premature detachment of the placenta, which causes *ante-partum* haemorrhage, is, like eclampsia, a morbid condition, which we can neither predict nor prevent, for we know not why it comes about. Numerical statements do not help us much in judging the effect of treatment, owing to the impossibility of drawing any definite line between a slight case and a bad one. Slight cases recover under any treatment, and there are bad cases that nothing which can safely be done in a poor woman's dwelling house will save. The Chairman, in his speech, announced that the Board of Management had appointed a resident medical officer. This is a very judicious step, which cannot but make for the good administration of the hospital. It now appears to be as well managed as any in London.

British Medical Journal.

SATURDAY, APRIL 11th, 1908.

SECOND UNITED KINGDOM HOSPITALS CONFERENCE.

A full report of the proceedings of the United Kingdom Hospitals Conference last week is published in the Supplement, and those who study it with an open mind will, we think, not fail to see that much progress has been made towards arriving at an understanding between the lay managers of hospitals and the medical profession on many important points. Although in some instances the view expressed in the resolutions of the Conference was not in accord with medical opinion, every disposition was shown to consider what was said to be on the other side, and on certain subjects it is clear that more time must be allowed for discussion and for the formation of public opinion.

The members of the Conference represented a very large proportion of the chief hospitals both in London and in the provinces, and the debates were, as a rule, well sustained. The fact that this, the second Conference, extended over two days allowed time for full discussion of all the resolutions, and the intervals, including that on Wednesday evening, when many members dined together under the chairmanship of Mr. Cosmo Bonsor, Treasurer of Guy's Hospital, afforded many opportunities for the private interchange of opinions on subjects not included in the formal discussions.

Mr. Sydney Holland, Chairman of the London and the Poplar Hospitals, carried a resolution to the effect that patients who could afford to do so ought to be asked to pay for the food, medicines, and bandages supplied to them in hospitals. There is, we venture to think, a good deal of confusion of thought about this matter, the ambiguity being due to the fact that there is not at the present time a clear understanding as to the class of persons for whose benefit voluntary hospitals are intended. Mr. Holland, in his reply, said that the necessitous poor ought not to be treated at hospitals, because the State had already provided for them under the Poor Law. In the same breath, while maintaining that the hospitals existed for the class just above the necessitous poor, he had to admit that his theory could not be carried out in practice. The argument which seemed to have most weight was that persons should not be given for nothing anything for which they could afford to pay. He asserted that a considerable proportion, in fact the majority, of patients treated in hospitals, while they could not afford to pay for medical and surgical advice and operations, could afford to pay for materials, drugs, and food; and finally brought forward an argument which clearly appealed very strongly to him—namely, that by exacting such payments an important saving in hospital expenditure would be effected. It appears that this view has already found favour in a considerable number of hospitals, and it found support among medical as well as lay members of the Conference. Mr. Holland said that care was taken to impress on the out-patients at the London Hospital that they were not paying for advice as well as for medicines and bandages, by returning the fee of 3d. charged to out-patients if they received only advice and no materials. It is true that only about one in fourteen came under this rule, but the fact that even so small a number did come under the rule seems to us one of the most instructive facts brought out at the Conference, for it shows that the medical contention to the effect that an out-patient department should, as one of the speakers said, be the consulting room of the poor, is possible of realization. The great blot upon hospital administration at the present time, and one by which hospitals come mainly into competition with general practitioners, is the lax administration of out-patient departments. This is a glaring, but fortunately a readily remediable, defect. We do not think that Mr. Holland's threepenny bit is a remedy; he himself admits that it does not diminish the number of out-patients, and however little faith we may put in statistics, it can hardly be seriously contended that the circumstances of over 24 per cent. of the total population of London are such as to render them suitable for treatment as out-patients in any one year.

A motion to the effect that the general body of the profession in a locality should have the right to nominate representatives for election to the board of management of a local hospital was rejected by a considerable majority. The mover had, perhaps, not sufficiently realized that the proposal was probably new to most of the lay members of the Conference; moreover, he unfortunately miscalculated the time at his disposal, and his argument consequently was not fully developed. It must be realized that those responsible for the management and maintenance of voluntary hospitals will take a good deal of convincing on this point, for it introduces a new principle, or at least very materially widens the application of a principle the justice of which has only recently been recognized. The general principle has been that the management of a hospital should be conducted by a Board elected by those who directly contributed to its support. It has, however, been recognized at most well-managed hospitals that the share which the medical staff has in the efficiency of a hospital is so important, and that they have so great an interest in its wise management, that they have an equitable claim to be represented on the Board. The claim which it is now sought to establish, and which has been accepted in certain localities, is a considerable extension of the principle that medical representation on boards of management is desirable in the interests of the hospitals and of the medical profession, with which, as is now admitted on all hands, hospitals must be competitors unless conducted with safeguards against abuse not at present generally enforced. Such competition is socially and economically unsound.

The Conference was attended by a number of representatives of cottage hospitals, and the discussion which took place showed that they greatly valued the opportunity of exchanging opinions. It would seem, indeed, that there is not yet complete agreement as to the main objects which the managers of a cottage hospital should have in view; the original conception, we take it, was to provide a suitable building where patients could be properly treated as in-patients by their own medical attendants, and where the patient should pay the out-of-pocket expenses of his maintenance, or at least that the hospital should not be responsible for such expenditure. Any departure from this principle must injuriously affect the usefulness of these hospitals; an out-patient department, for example, is contrary to the proper conception of a cottage hospital, and we must confess that we are by no means

enamoured of the system at Hawick under which medicines are supplied free at the hospital to patients seen by the medical men at their own house.

Finally, in considering the results of the work of this second Conference—and we have, of course, here been able to refer only to a few points—it must always be remembered that it adopted and confirmed the model principles of hospital management which had been approved by the first Conference. Some of the matters discussed by the second Conference were really the application to practice of principles thus adopted. For instance, the affirmation of the opinion that the appointment of trained hospital almoners constituted one of the best methods for checking the misuse of hospitals, and the resolution to the effect that the use of out-patient departments by persons able to pay for their own treatment can be most effectually carried out by a close co-operation between hospitals, on the one hand, and provident dispensaries and similar institutions and local medical practitioners on the other, were in reality no more than the definition of methods for carrying into effect the principles primarily embodied in Rules 5 and 16 (Supplement, page 147).

The Conference has not completed the task of hospital reform, and it was hardly to be expected that matters should have moved faster than they have, but it has accomplished a great deal. It has put the medical position fairly and squarely before lay managers and the general public; it has afforded a common meeting-ground for discussion; and it has confirmed principles of the utmost importance, which have now been recognized by the majority of at least the chief hospitals in the country. This second Conference has made it abundantly clear that there is a growing public opinion in favour of the application of these principles to practice.

FUNCTIONAL DYSPEPSIA.

We have printed elsewhere (p. 850) a paper in which Dr. Robert Hutchison seeks to give a rational account of the treatment to be employed in cases of functional dyspepsia, by which term he means alterations in the secretory, motor, or sensory functions of the stomach, conditions which undoubtedly can be recognized by modern methods of gastric examination, although it is doubtful whether they are coextensive with the subjective complaint—dyspepsia. This word in the mouths of most patients is equivalent to flatulence, and flatulence in its turn is generally due to imperfect mastication, often the consequence of defective teeth.

Where flatulence is attended by pain there is usually some other condition present which removes the case from the category of functional diseases, though the pain may be due to pyloric spasm or excessive secretion of gastric juice of purely nervous origin. In connexion with the sensory functions of the stomach an interesting question has been raised respecting the relation of appetite to supposed sensations having their seat in nerve terminations within the stomach, and an answer would seem to be forthcoming from those patients who have had this organ completely excised. In Schlatter's case the patient, an old woman, made a good recovery, but, although she ate well, she would not admit that she was hungry; Moynihan,[1] however, states distinctly that his patient after recovery from the operation always felt hungry, "a sensation he "had not experienced for some time before," so that doubt is thrown on the theory that appetite is dependent upon nerve impulses originating in the stomach. Other sensory disorders, such as functional gastralgia and anorexia, for instance, are assuredly not properly to be classed as dyspepsia. Hypochlorhydria and hypersecretion may occur as purely nervous phenomena, although as a rule they are associated with ulceration of the stomach or some chronic inflammatory condition. These rarer cases are not regarded by the patient as "dyspepsia," and usually take the form of regurgitation or vomiting of acid fluid which comes on independently of digestion; hyperchlorhydria and achylia gastrica give rise to no symptoms at all, and, as Dr. Hutchison points out, neither call for nor are susceptible of specific treatment.

While pyloric spasm, like hyperchlorhydria, may possibly occur as a functional condition, dyspepsia is more especially associated with motor defect, giving rise to atony or atonic dilatation of the stomach; such atonic dilatation is, indeed, most commonly to be met with in persons so complaining.

We thus see that the classification adopted by Dr. Hutchison has a somewhat theoretical foundation, and has the disadvantage that only by test meals and the stomach tube is it possible to obtain the data for determining the presence or absence of these functional derangements, but where ordinary treatment has failed it is quite worth while endeavouring by careful analysis to determine the exact nature of the defect.

The treatment which Dr. Hutchison recommends is logically appropriate; but, as he in more than one place points out, physiological indications do not always harmonize with clinical experience. If we were to believe Pawlow, it should be possible to check excessive secretion of gastric juice by most moderate doses of sodium bicarbonate; yet unhappily experience does not confirm this, nor is the use of belladonna or its alkaloid, atropine, more uniformly successful. A highly nitrogenous diet may fulfil the physiological indication in hyperchlorhydria, but some of these patients do even better upon a vegetarian regimen. In defective secretion Dr. Hutchison shows that the composition of the diet is less important than the form in which it is presented; any food finely divided is little likely to cause symptoms of dyspepsia. Bitters to stimulate gastric secretion appear to be worthy of more extensive use, and the cups made of quassia wood, which were popular thirty years ago, might perhaps be reintroduced with advantage.

The most important of functional stomach disorders is *motor* defect; it is palliated by the food being given in small quantities and well masticated, all tough, hard, and indigestible substances being avoided, but our means of increasing the activity of the stomach are limited. Undoubtedly the organ empties itself more easily when the patient is lying down, and therefore there is reason in the prescription of a horizontal position after meals. Dr. Hutchison is in accord with most authorities in his doubts as to the value of many drugs, but his suggestion to try aloes deserves attention. Many patients with motor defect derive benefit from a "rest cure" with general massage and faradism, but the local application of these means in our experience has been generally disappointing and at times harmful.

The conclusions drawn by Dr. W. H. Willcox in his paper read recently before the Medical Society of London,[2] are interesting, but experience has shown the necessity for caution in accepting generalizations drawn from analyses of stomach contents. Hundreds of analyses of stomach contents after test meals have been

[1] *Lancet*, December 21st, 1907.

[2] British Medical Journal, February 29th, 1908, p. 502.

made and the results tabulated, so that there would hardly seem to be room for a very confident hope of great additions to knowledge from this method. Its value seems to lie rather in the information which each student of stomach disease derives from the careful investigation of his cases, and the help he may obtain in those difficult cases in which without an analysis a true diagnosis could not be made. The value of the rennin test has been insisted upon by Boas and his school, its advantages being delicacy, rapidity, and the facility with which it may be carried out, but it would be a mistake to suppose that a reduction of the amount of rennin ferment indicates the presence of cancer, as diminution may be observed even to an extreme degree in simple catarrh. According to Glaessner in carcinoma of the pylorus the amount of rennin ferment is normal, while pepsin is reduced, but in carcinoma of the fundus both ferments are diminished or absent. The etiology of gastric ulcer is confessedly obscure; it is certain that there must be some constitutional derangement present for the production of a typical chronic gastric ulcer, otherwise healing takes place. It has been shown experimentally that severe anaemia will interfere with this, but beyond this little is known on the subject. Such experiments as those of Dr. C. Bolton, related at the same meeting of the Society, suggest a way in which ulcers may spontaneously arise from the presence of poisons which injure the normal nutrition of the cells; his results are curious, but not very intelligible, and do not seem to explain the formation of chronic gastric ulcer. That a serum prepared by injecting the gastric cells of one animal into the blood vessels of another should have a specific action upon the stomach of an animal of the same species as that from which the cells were originally taken would seem to be of importance, but its value is greatly diminished when we are told that other cytotoxins from the liver, the intestine, or the blood produce necrosis of the stomach in exactly the same way by injuring the cells. It would not, however, be either wise or just to pass a hasty judgement on the value of the author's conclusions, and there can be only one opinion as to the interest and importance of the questions raised by these various papers or as to the obligation we feel to those who endeavour to advance our footsteps ever so little towards the truth.

THE HOSPITALS CONFERENCE AND TUBERCULOSIS.

The discussion on tuberculosis at the Hospitals Conference raised questions of the greatest importance to the community, but we are glad that Dr. Davy's amendment to postpone the consideration of the propriety of the notification of tuberculosis, and to ask the government to appoint a commission to recommend the best way to deal with tuberculosis, was accepted. Notification alone can never prove of any great value in stopping the ravages of tuberculosis, and there is great danger that, if adopted without full consideration of all the consequences that it ought to imply, the tuberculous would be made a sort of "leper" class, and would consequently suffer cruelly and unnecessarily. On the other hand, it cannot for a moment be admitted that nothing should be done to attempt to prevent the prevalence of tuberculosis. It is certain that this disease is communicated to healthy individuals through infected milk and meat, as well as through the dissemination of the sputum of affected patients. It is certain also that deaths from tuberculosis have decreased in areas in which sanitary authorities have adopted and enforced regulations against spitting in public places, requiring disinfection of the rooms of those who have died of tuberculosis, and compelling all butchers to use public slaughter-houses which can be adequately inspected. There are many other questions which require investigation from the administrative point of view, whether, for instance, local authorities ought to provide sanatoriums for early cases, and if so, what should be done to provide for the family of the breadwinner; whether the same authorities ought to provide homes for patients in an advanced stage, when they are most dangerous to others; and what means should be taken to check tuberculosis among children, a most important, perhaps the most important point; and finally other questions of second rank, such as whether meat and milk might be sold after sterilization by the authorities, as is done in some other countries, ought to be entertained. Many schemes have been put forward and worked with varying degrees of success in various towns, and the time seems to have come for a Royal Commission to inquire into the whole subject from the administrative side, and report on what steps, if any, could be taken to decrease the death-rate from tuberculosis which is still appallingly large. We cannot agree with the *Times* that "there are "other diseases, especially cancer and insanity, which in "the present day are of far greater interest to sanitary "reformers than tuberculosis because they are increas-"ing rather than diminishing." It is true that it is most important to find out the cause of these diseases, and the reasons for their increase, but this is not work for local sanitary authorities. Tuberculosis has passed beyond this stage, and since the nature of its ascertained cause gives a reasonable hope that a further diminution in its incidence is possible, the appointment of a Royal Commission would be useful to lay down the measures which are practicable and so to bring about a uniform system in the administrative control of tuberculosis which could be carried out by all the sanitary authorities in the United Kingdom. To do this the inquiry must be carried out by a body of influential persons whose recommendations may carry conviction and command the support of the nation at large. If such a commission accepted the view which seems to have been deduced from Dr. Bulstrode's recent report that tuberculosis is a disappearing disease which will of itself die out before increased sanitation, we should be content to abide by its decision. But for our own part we should be surprised if such a commission as has been asked for did not find that there were practical measures to be taken which might confidently be expected to do much to diminish the number of deaths from tuberculosis, which now averages 60,000 a year.

COUNTY COUNCILS AND PUBLIC HEALTH.

The bill which Dr. Cooper has introduced into the House of Commons to amend the Public Health Act, 1875, and the Local Government Act, 1888, is based on the London Act of 1891, and is the outcome of his many years' experience as a member of the Public Health Committee of the London County Council. Nearly every one who has studied the question is agreed that the greatest want in England is an effective and independent sanitary administration, above local pressure, and ready to carry out the laws without fear or favour; this the country has not got at the present time. In respect of housing, Mr. Burns in the Bill introduced at the end of last month sought to obtain uniformity by centralizing control in the Local Government Board, which would be given power to compel a local authority to exercise its powers. Dr. Cooper seeks to follow more directly in the line of policy recently favoured by Parliament and proposes that the county council should be the predominant sanitary authority of the county, and should have power to supersede any local authority which neglected or refused to carry out any of the duties imposed upon it by the public health statutes.

Like Mr. Burns Dr. Cooper would require every county council to appoint at least one whole-time medical officer of health, but he goes further, and recognizing the absolute necessity of giving independence to officials required to act under the Public Health Acts, would enact not only that every local medical officer of health shall be properly qualified, but also that he should not be appointed for a limited period only. Dr. Cooper's bill in fact recognizes that it is useless to introduce legislation to regulate the supply of milk, meat, or food, to rehouse the poorer classes, or effectively to apply sanitary by-laws so long as the local bodies to which the public health officials are directly responsible include the very farmers and tradesmen who are guilty of offences against the Acts, and who ought, therefore, to be the first persons compelled to comply with them.

THE MAN AT THE WHEEL.

On many occasions during the past few years it has been urged in these columns that all men entrusted with the management of machinery connected with the safe use of public vehicles, whether railway trains, motor-cars, or electric tramways, should be subjected to medical examination at frequent intervals. It is satisfactory, therefore, to note that some change of attitude on the part of the Board of Trade and its officials seems to be indicated by the report drawn up by Colonel H. A. Yorke with reference to an accident which occurred early this year. For once in a way the inquiry seems to have extended beyond machinery to a consideration of medical possibilities; indeed, the occurrence of the accident was finally ascribed to causes which proper medical examination would have obviated. Driver Fairhurst, says Colonel Yorke, was thoroughly experienced, and bore an excellent character as a sober, reliable man. He had, however, been suffering from diabetes for some time past, and had been absent from that cause for three and a half months during the summer of 1907. He returned to work in August of that year. It is probable that owing to the fatal complaint from which he was suffering he was daily losing strength, and that latterly he was not in a fit state to take charge of an engine. The regulator handles on the large engines of the London and North-Western Railway Company are placed rather high, and as Fairhurst is a man of small stature he would, in his weakened condition, find it difficult to operate the handle with the requisite ease and precision. "The evidence," Colonel Yorke concludes, "proves that on this occasion Fair-"hurst mismanaged his engine, but I attribute this and "the subsequent collision to his debilitated condition, "and to the fact that he was in the last stages of a fatal "complaint." This statement is alone sufficient to prove the justice and the public importance of the contentions long maintained in this Journal, and the final words of Colonel Yorke's report show that he, at any rate, among Board of Trade officials has no longer any doubt on the subject. This case, he says, points to the desirability of a more frequent examination of engine drivers, especially after a man has been absent from duty for some months owing to a serious illness. After this admission, it may fairly be expected that the Government will take early steps to bring about examinations such as those we have advocated.

THE "CARRIER" IN MILK-SPREAD EPIDEMICS.

The causation of the recent outbreak of enteric fever in the West End of Glasgow, as finally elucidated, presents features of exceptional interest. The outbreak began early in December, 1907, and continued into the third week of January, 1908. Seven of the cases sickened between December 5th and 14th. Then came a pause of four days, during which no cases occurred. This was followed by a period of twenty-six days, in the course of which 92 cases sickened. At an early period of the outbreak it became evident that it was milk-produced. All the persons attacked derived their milk supply from a large wholesale and retail dairyman. This dairyman at the date of the outbreak drew his supply from four farms. The milk from two of these arrived too late for the morning delivery on the day of arrival, and was sterilized. The dairyman's milk was distributed by three carts and three carriers. On December 19th, when the first batch of cases had occurred, the information of the sanitary authorities was that the cases which had occurred were in the delivery of what came to be known as Cart D. The milk delivered by this cart was stated to be derived from a farm in Renfrewshire, but the closest scrutiny failed to reveal any cause of suspicion at this farm, which was delivering milk in other quarters, where no cases had occurred. At the other farm, in Lanarkshire, from which the milk was distributed unsterilized, it was found that one of the inmates had been confined to bed since December 10th, and had been attended by a medical man, who regarded the case as one of influenza. This patient, by the time she was visited, was convalescing, but a specimen of her blood yielded a positive Widal reaction. She was removed to hospital on December 24th. It was evident that this patient's illness was coincident with the first series of cases in the West End of Glasgow, and that she could not under any circumstances have been the cause of cases occurring before December 21st. On further and more urgent inquiry at the distributing dairy it was ascertained that while the milk from the Renfrewshire dairy was sent out on the morning run by Cart D, the milk from that dairy fell short, three times out of seven, of the quantity required, and was on these occasions supplemented by milk from the Lanarkshire dairy. It was further ascertained that the remaining quantity of the milk from the latter dairy was reserved for the midday delivery of Cart D, until the introduction of a new supply set the milk from this dairy free for distribution by other vehicles, which had formerly supplied for the most part sterilized milk. The question emerged, What was the source of the first series of cases, including the case at the Lanarkshire farm, and of the cases which continued to occur in this milk supply after this patient had been removed from the farm? The county medical officer for Lanarkshire, in the course of his investigations at the farm, discovered that another milker, an elderly woman, who had had enteric fever sixteen years ago, had now and again since that time been associated with outbreaks of illness which proved to be enteric fever. She was removed to hospital for a few days, in order that reliable specimens of the dejecta and urine might be obtained for bacteriological examination. These specimens were examined by the city bacteriologist, and enteric bacilli were found in the dejecta. The mystery attaching to the causation of the outbreak was thus at last cleared up. The occurrence will serve as an inspiration to health officers in their efforts to trace the origin of outbreaks of enteric fever such as have in the past remained enveloped in mystery.

UNIVERSITY COLLEGE HALL, LONDON.

Although it is now many years since University Hall in Gordon Square passed out of the hands of University College and ceased to fulfil the objects of its founders—that it should provide a place of residence for men students of the College—the fact that University College is without a place of residence for those of its students who come from country homes, from the Colonies and from abroad, appears to be not known to many old students of the College. Old students generally, and those in particular who by residence in University Hall know the contribution which a residence of this kind

makes to the social life and general well-being of the College, will be glad to hear that a company known as University College Hall, Limited, has been formed by individual members of the Governing Committee and Professorial Board of University College, and other persons interested to supply a home for students whose parents reside at too great a distance to permit of their living with their families. The number of students coming from country homes at an early age to study at the College is very large, and the number coming from all parts of the British Empire is steadily increasing. Probably from 250 to 300 men students of the College are living in lodgings. To afford to these students the opportunity of living a collegiate life under suitable control is generally regarded as a desirable aim, and the company has been formed to give practical effect to the desire on what is conceived to be a sound financial basis. Students of all faculties will be admitted to the Hall, and it is anticipated that the needs of medical students, who are in the predominance among those who require a residence of this kind, will be specially met. A suitable home for about forty-one students with the necessary staff has been found in Queen's Walk, Castlebar Hill, Ealing, about half an hour by train from University College and a quarter of an hour's walk from the College athletic ground at Perivale. The Directors of the Company (Sir William Ramsay, Professor Trouton, and Mr. Walter W. Seton) have entered into a contract for the purchase of the freehold of this property, comprising 4½ acres of land with a residence for many years used as a school. It is hoped that the buildings will be opened on October 1st, and there will be no difficulty in finding a sufficient number of students of University College to fill the accommodation provided. In order to provide the necessary capital of £9,500 for carrying out this scheme, an issue of 9,500 £1 shares is being made and old students of the College and other persons interested in the future of university education in London are asked to help by taking shares. The dividend on the shares is limited to 5 per cent. per annum cumulative from October 1st, 1908. No application for less than five shares will be entertained. A prospectus of the Company, containing full information, will be sent on application to the Director and Secretary of the Company, Mr. Walter W. Seton, University College, W.C.

"ANTIVIVISECTIONIST MEETINGS."

IN the BRITISH MEDICAL JOURNAL of March 28th a short account was given under the above heading of a debate at the University of London Union Society held at Bedford College, at which it was stated that Miss Lind-af-Hageby said "a medical student was known by his love of cruelty "and his dirty linen." We have received a letter from that lady stating that she was not present at the meeting in question. We can only express regret that we were led into involuntary error by information which we regarded as absolutely trustworthy. If, however, we may be allowed to adapt a phrase of Artemus Ward's, the medical student perhaps escaped the wound to his feelings only owing to the fact that she was not there, for there appears to be reason to believe that she has said the same thing, or something very like it, elsewhere. In the April number of the *Zoophilist* we find a report of the debate at Bedford College, and in this account Mr. H. Lister, of University College, is reported to have said that he "had been at a "meeting at which one of these ladies [whom he had "previously referred to as the 'two ladies from Sweden'] "was speaking. He hardly knew whether she meant it "seriously, but she read out two extracts, the subject "of her lecture being on the medical student and vivi-"section. The extracts she read were to show what "kind of creature the medical student was. One of "them pointed out that he might always be recognized "by the fact that nothing but—he thought the word "was 'filth'—came out of his mouth. The second "thing was that you could always tell him by the fact "that he wore dirty linen." If a paragraph which appeared in the *Christian Commonwealth* of December 25th is correct, it may be inferred that the lady to whom he alluded was Miss Lind-af-Hageby, who is there said to have lectured at the Caxton Hall the week before on vivisection and medical students. Mr. Lister is reported to have spoken at the same meeting. It is true that in her letter to us Miss Lind-af-Hageby denies that she has "upon any occasion made such "a statement"; but she must excuse us if we say frankly that we do not accept unreservedly the mere assertion of a lady whose sworn evidence was disbelieved by a British jury, and who has excused herself for assenting to an inaccuracy in her description of herself before the High Court of Justice by the plea that her thoughts were fully directed towards the main points in her evidence! In her opinion, a brown dog is doubtless of much more importance than a medical student, and, with her thoughts fully directed towards the former, it would not be surprising if she said uncomplimentary things about the latter. Miss Lind-af-Hageby's opinion of the medical student is, however, a matter of no consequence. But as we do not wish to imitate the tactics of our opponents, who follow the cynical advice attributed to a famous Master of Balliol: "Never with-"draw, never explain," we are anxious to set ourselves right in regard to another matter connected with the same meeting, as to which we were misinformed. We said the resolution moved by Mr. Lister was carried unanimously; there was, we learn, one dissentient. We also expressed surprise that Mr. Coleridge and the other speakers who opposed the resolution did not vote against it. We are informed that only members of the Society are allowed to vote. We think this explanation is due to the antivivisectionist speakers and also to ourselves.

REBUFF OF ANTIVIVISECTIONISTS.

AT a meeting recently held at Folkestone Dr. C. Reinhardt said that the position towards vivisection held by medical men in general was usually one of sentiment. He belittled the knowledge derived from experiments on animals, denied that Harvey had discovered the circulation of the blood, and considered inoculations with animal serum a great mistake. Men had no right, he said, to avail themselves of any methods involving torture of the lower animals, the younger brothers of our race. Applause greeted him as he sat down; but ere long the tables were turned by the remarks of several local medical men, whose statements threw an altogether different light upon the subject of debate, and so changed the opinion of the meeting that no resolution in opposition to vivisection was eventually even proposed. Dr. Thomas Eastes spoke of the great advances in treatment and of the saving of lives thereby which have been the outcome of experiments upon animals, notably in the treatment of diphtheria by serum, in the treatment of myxoedema, and in the prevention of Malta fever; of the enormous advances in surgery due to experiments upon animals; of the prevention of tetanus in wounded soldiers and others which inoculation with tetanus antitoxin has effected; of Pasteur's treatment of hydrophobia and the lives it has saved; of trichiniasis and hydatid disease and their diminution since the discovery of their nature by experiments upon animals; of the wonderful success of the vaccination of cattle and sheep against anthrax, and that of swine against swine measles. Moreover, better knowledge of several important drugs had been gained by research upon animals, and diseases had been thereby robbed of many

terrors. These various incalculable benefits had been achieved in great part by "experiments on animals, "skilfully carried out, with immense care and trouble, "and with as little pain as possible, nine-tenths of the "experiments being almost painless." Lastly, "the "pain and suffering caused by disease are far greater "than all that ever has been or ever will be caused by "experiments, and we welcome every fresh means of "relieving it both in man and animals." Dr. Tyson, who followed, said it was a sad thing that, "under the "shadow of Harvey," they should have to listen to such a lecture as that they had heard that day. If they wished to follow out the question of experiments on animals they should read Mr. Stephen Paget's book on the subject. He denounced the inconsistency of those anti-vivisectionists who were foxhunters or bird-shooters, and referred to the safeguards secured by the Act of Parliament against cruelty in research laboratories, ending up his address amid much applause. Dr. Dodd and Dr. Wilgress also spoke in support of research work. Dr. Reinhardt replied; and the meeting concluded with a vote of thanks.

REPORT OF THE BUILDING ACCIDENTS COMMITTEE.[1]

THE Departmental Committee appointed by the Home Secretary in the autumn of 1906 to inquire into building operations, the processes incidental thereto, and accidents arising therefrom, has published its report. The Committee held 54 sittings and examined 61 witnesses. With the exception of agriculture, building is the largest industry in this country. The number of master builders is estimated at 60,000 and the number of workmen employed is 1,130,425, of whom 750,000 would be affected by the regulations which the Committee proposes. Buildings were first brought under the Factory Act in 1895, and further by the Act of 1901. Included in the word "factory" are (*a*) any building which exceeds 30 ft. in height, and which is being constructed or repaired by means of a scaffolding, and (*b*) any building which exceeds 30 ft. in height and in which more than twenty persons, not being domestic servants, are employed for wages. Hitherto the provisions of the Acts have not applied to buildings which exceed 30 ft. in height where power-driven machinery is not used in the construction and repairing of such by means of scaffolding. The Committee is of opinion that the regulations which it has drafted should be made applicable to buildings not 30 ft. in height and in which machinery is not used. The dangers to workmen in the construction of buildings, their alteration or repair, are due to insufficiency of plant, the use of defective materials for scaffolding, coupled with unskilled and careless workmanship. Jerry-building is condemned on account of the undue haste with which buildings are reared. Of the 2,000 accidents occurring annually in the building trades, 100 are fatal. Labourers are the principal sufferers from accidents, not only because they are the most numerous, but because their work is the most risky. Of the skilled mechanics, carpenters and joiners suffer most from accidents. It is impossible to lay down elaborate rules as regards scaffolding which will apply to all conditions of wind and weather, stress and strain. The regulations are so framed as to require sufficiency of material, and that it shall be of such soundness as to bear certain tests. Provision is also made for safeguarding men from falling from working platforms and for preventing material from falling on the men working or passing below. It is felt that if these two causes of accident could be eliminated, a large percentage of accidents would be prevented. As defective plant is a frequent cause of accident, and plant when exposed to the weather in a contractor's yard or in use on a building readily rots, attention is drawn to the desirability of periodical examination of the poles, planks, and ropes used by builders. Altogether the report forms an extremely valuable contribution to our knowledge of the dangers of a trade which is likely to come more before the public now that the Workmen's Compensation Act is in operation.

[1] Report of the Departmental Committee appointed to Inquire into the Dangers attendant on Building Operations. Messrs. Wyman and Sons, Limited, Fetter Lane, E.C. 1s. 9d.

PROFESSIONAL FEES.

THE layman is sometimes heard to protest against the fees charged by eminent members of the learned professions. Bolts of criticism are hurled impartially at the medical and legal fraternities. Only the other day it was mentioned in the daily press that in a case which is now proceeding in the High Court the leading counsel on either side had each received a thousand guineas on their briefs, not to mention substantial refreshers for each day of the hearing. While plums of this kind are few and far between, the fact that they do grow on the lofty branches of the professional tree is apt to create an erroneous impression upon the uneducated mind. Led astray by the contemplation of a few instances of phenomenal success, the uninstructed layman is apt to forget the toil which must needs be expended to attain distinction. There is a close analogy between the career of the lawyer and the doctor. Each has to serve a long apprenticeship, and the longer the apprenticeship in either case the greater the measure of ultimate success. The patient who quarrels with his doctor's fees, the lay client who cavils at his solicitor's bill of costs, often pays no heed to the years of unremunerative toil which in the one case may have placed his adviser in a position to restore him to health, and in the other may have enabled him to obtain his legal rights. Brief inquiry into the history of any professional man should disclose the fact that between the ages of 20 and 30, if not for a longer period, he has "eschewed delights, and lived laborious days." Skill, competence, and self-reliance are the result; adequate remuneration is the fair and equitable reward. The following anecdote may be found useful to members of the profession who have to deal with unreasonable patients. For a working man who came to consult him a doctor prescribed some simple medicine, which he compounded in his dispensary. He also gave certain advice and stated that his fee would be half a crown. The patient, who had some slight knowledge of the prices of drugs, pointed out that an ounce of the active ingredient could be bought wholesale for a few pence. He accordingly protested that the fee charged was too high. "Very well," said the doctor, pouring the medicine down the sink, "step in, and compound for "yourself. I shall only charge you cost price for the "drugs which you use." The patient said he could not do this because he did not know the right proportions. The doctor was then able to explain that he had the requisite knowledge; that it had taken him years of study to obtain his qualification; and that in charging a fee he was entitled to take his experience into account.

THE EVOLUTION OF FACTORY LEGISLATION.

IN a lecture at Bedford College on March 16th, Miss Anderson, His Majesty's Principal Lady Inspector of Factories, traced the evolution of legislation and administration in reference to factory inspection. Dealing first with the legislative side of the subject, Miss Anderson pointed out that, previous to the nineteenth century, legislation contained a good deal about a minimum working day and maximum wage; and at the beginning of that century the maximum working day and minimum wage were being discussed from the ethical standpoint. Parliament had devoted special

attention to factory workers during the last century, having passed no fewer than forty-two Acts dealing with this subject. In the earlier legislation the objects in view were the education and betterment of the conditions of children, apprentices, and young workers, more especially in textile factories. Then followed the prohibition of employment of women underground in mines, the regulation of hours of labour of women in textile factories, the institution of the half-time system, and penal compensation for certain accidents. From 1860 onwards the Acts were extended to most manufacturing industries, and progress in scientific knowledge in reference to health and safety of factory workers became reflected in the Acts. With regard to the administrative side of factory legislation, justices of the peace were entrusted with the enforcement of the Acts between 1802 and 1833. In the latter year inspectors were appointed with magisterial powers, and subsequently the inspectorate was reorganized and centralized at the Home Office. In 1844 certifying surgeons were instituted. Women inspectors were first appointed in 1893, and it had been necessary since that date continuously to increase the staff of the department. The field of that department could be judged of when it was stated that a third of all factory workers were women. Complaints from operatives received by the department had never fallen below 1,000 a year since 1894. Factory inspectors were expected to be human dictionaries in matters of industrial health and legislation. Without medical aid it was impossible to enforce the Acts. The lecture was highly instructive as illustrative of the evolution of a Government department designed for the object of bettering the conditions of factory workers and of safeguarding their health; and it would have been still more interesting had time permitted of Miss Anderson giving further particulars, notably with reference to the experience of her own department in regard to the efficiency of the present Acts for effecting the purpose for which they have been designed.

THE DEVELOPMENT OF TRYPANOSOMES IN TSETSE FLIES.

EVER since the discovery of trypanosomes as the cause of sleeping sickness, and their spread by tsetse flies, many individuals—generally, it must be admitted, on theoretical grounds and by analogy with other parasites—have supposed that trypanosomes undergo a cyclical development in such flies. Minchin, who went to Uganda to study this point in detail, has recently published his results and conclusions,[1] which are of importance in showing that for the *Trypanosoma gambiense* at least no cyclical phase can be demonstrated in *Glossina palpalis*, the fly generally associated as the carrier of this parasite from man to man. The summary of his work in his own words is as follows: "(1) In Uganda *Trypanosoma gambiense* begins, but "does not complete, a developmental cycle in *Glossina* "*palpalis*, the method of transmission by this fly in "this region being purely mechanical and direct. "(2) In other diptera also, *T. gambiense* starts on a "development in a precisely similar manner, but "without getting so far, or persisting so long, as in "*Glossina palpalis*. (3) The observations and experi- "ments of Koch, Stuhlmann, and others, show that "*T. brucei* goes through a developmental cycle in "*G. fusca*. (4) It is possible that *T. gambiense* has an "invertebrate host in which it completes its life-cycle "in regions where it is indigenous, and it is possible "that the true host may be *Glossina fusca*. (5) Con- "siderations of philogeny indicate that the life-cycles "of different trypanosomes should not be expected to "be in all cases of one invariable type. (6) The "encystation observed in *T. grayi* indicates that con- "taminative infection may occur as well as inocu- "lative." Though the passages quoted from Stuhlmann's work are convincing up to a certain point, namely, that a multiplication of parasites takes place in the intestines of *G. fusca* when infected with *T. brucei*, yet it is by no means proved that such forms find their way back to vertebrate hosts when the fly bites again. The subject as a whole must still be considered *sub judice*, direct mechanical inoculation certainly appearing to be the chief method of transmission, though other means of course cannot be absolutely excluded. Students of the subject who wish for more details might with advantage refer to the paper itself, as it is very clearly written, and gives due weight to both sides of the question.

[1] *Quarterly Journal of Microscopical Science*, vol. lii, Part 2, March, 1908.

TETANUS AND FULLER'S EARTH.

DR. WYNN WESTCOTT, Coroner for North-East London, has held two inquiries this month in cases of infants dying of tetanus, and in each case fuller's earth had been applied to the navel and nates. The coroner remarked that he had about four such cases of infantile tetanus every year, and that he had always found that fuller's earth had been used as a dusting powder; he considered its use should be stopped, and a powder of boric acid and starch used in its stead. Dr. Wynn Westcott speaks with so much authority that it must be almost superfluous to add anything to what he said, but we believe that medical opinion will fully endorse his condemnation of this old-fashioned powder. It is a porous aluminium silicate earth containing some iron; it used to be obtained from the neighbourhood of Reigate in Surrey, and perhaps still is. It has a strong adhesion to oily matters, and a watery paste made with it will as it dries extract a spot of grease from cloth, but the powder for that reason alone is usually unsuitable for application to the skin. A very limited acquaintance with bacteriology would moreover be sufficient to convince any one that there must be serious risk of infection of more than one kind from the use of unsterilized earth. Even before the tetanus bacillus was isolated by Kitasato in 1889 it was known that tetanus could be produced in animals by inoculation of garden earth, and the risk to which Dr. Wynn Westcott now again calls attention might have been foreseen. Yet the use of this dangerous dusting powder is still very common among the poor. It is a point which instructors of health visitors ought to note, and a warning might be with advantage posted in out-patient departments.

RELIGIOUS BODIES AND QUACK MEDICINES.

WE have frequently had occasion to protest against the support given to quack medicines by religious newspapers and ministers of religion, but no more flagrant instance has been brought to our notice than a leaflet entitled the *Birley Monthly Report*, which is headed, Supplement to Notes on Scripture Lessons, April, 1908, and is called a summary of Select and Typical Cases treated by Birley's Phosphorus Preparation. This is the ordinary illustrated leaflet of the proprietor of a quack medicine recommended for nervous debility, sciatica, lumbago, "ulcer "of the stomach and haemorrhage," loss of brain and nerve power, and so forth. It has, we are informed, been sent to every Sunday School teacher in the country, together with a certain publication known as *Notes on Scripture Lessons*, which is intended to help them in their scripture preparation, and this is under the auspices of those very excellent persons who form the Sunday School Union. If, as alleged, this remedy does contain plain phosphorus, it is a dangerous poison;

preparations of pure phosphorus ought to be sold with all the precautions with which the Legislature surrounds the sale of poisons, and we can conceive nothing more unscrupulous than to encourage persons suffering from such a terrible disease as ulcer of the stomach with haemorrhage to dose themselves with a nostrum of this kind, instead of placing themselves under medical care. If the Sunday School Union has been led into this collaboration through the action of its officials, the Committee ought to take prompt steps to repudiate what has been done and to prevent its recurrence; but if the Committee is to blame, we know of no words strong enough to condemn their interference in a matter which is wholly beyond their province, and in which they are taking upon themselves grave responsibilities, the serious and possibly fatal consequences of which they are incapable of appreciating, but which, unfortunately, cannot be brought home to them.

Sir Felix Semon has been appointed as the representative of His Majesty's Government at the forthcoming International Laryngo-Rhinological Congress to be held at Vienna on April 21st.

The proposal for the establishment of an International Sickness Bureau having fallen through, at any rate for the time, the British Government has decided to take independent action, and it has been determined to establish a British National Bureau, with a strong committee in London, to be maintained by annual grants made from the Imperial and Soudanese Governments. It is expected that the convention between Great Britain and Germany on the subject of joint measures for the prevention of sleeping sickness in Uganda and German East Africa will be signed at an early date.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Children Bill.—The debate on the second reading was resumed and concluded last week. The discussion was mainly concerned with industrial schools, reformatories, and children's courts, but Mr. Cochrane also touched on the clauses dealing with burning accidents, and criticized the provision by which an unfortunate mother might be taken before a court and fined up to £10 if her child was accidentally burned when the fire had not been protected by a guard. He also objected to the overlying clauses, saying that wilful overlying, he believed, was scarcely known. As to the question of juvenile smoking, he doubted the efficacy of the proposals to deal with this evil, and rather inclined to the infliction by the magistrate's order of three or four strokes with the cane. Mr. Maclean, who followed, said the strength of the case for the proposals in the Bill rested on the statistics. The deaths from burning during the last seven years numbered 10,500, and the deaths from overlying to 9 500 odd. There was a strong public opinion in favour of the clauses in the Bill. As regards juvenile smoking, he instanced the case of Sheffield, where it was computed that 30 millions of cigarettes were consumed by young smokers. The Bill would have an educative force. Mr. Bramsdon, as a coroner of twenty-five years' standing, believed that deaths from burning and overlying would be reduced by one half. Viscount Morpeth thought the juvenile smoking clauses went too far, and were contrary to the general aim of the measure, which was to remove children from the police and prison atmosphere. Mr. Haslam regretted that there were no provisions in the Bill to prevent foster parents insuring children, and after a few remarks by Lord E. Talbot the Bill was read a second time without a division, and will be considered by Standing Committee A.

Poor Law (Ireland) Bill.—On April 3rd, the private members' day, this Bill came on for discussion, and was moved by Captain Craig, who said the Bill was based on the report of the Viceregal Commission of 1906. It aimed at reforming the Poor-law system. There were now gathered together in Irish workhouses seven distinct classes of deserving and undeserving poor, and the Commission was of opinion that it was inadvisable and wasteful to keep so many classes in the one institution. He recommended a reform both for the sake of efficiency and of economy. Boarding out of children should be extended, and labour homes should be provided where the able-bodied paupers might earn something to relieve the rates. It would be necessary to set up a temporary Commission of two chief and three assistant Commissioners to carry out the reforms and promulgate schemes. Mr. John Redmond considered the Irish Poor-law problem too large to be settled by a private member's Bill, and urged the Government to take it in hand. The present system was extravagant and demoralizing. The cost was about 1¼ millions a year, or a rate of about 5s. 8d. a head of the population. There was a population of 45,195 in the workhouses, and of these only about 4 000 consisted of casuals, tramps, and able-bodied paupers. Mr. Birrell, in a sympathetic reply, urged that the Bill should not be read a second time, as he would do his best to secure that one of the Government measures next year should embody the reforms recommended by the Viceregal Commission. Mr. Long regretted the decision of the Government not to accept the Bill, and after further debate the second reading was rejected by 89 to 54.

The Coroners' Inquests Bill.—This Bill was moved by Mr. Higham on April 3rd after the debate on the Irish Poor-law Bill was concluded. The main clause of the measure proposed that, after the passing of this Act, it should "not be necessary for either the coroner or the jury at any inquest to view the body unless the coroner, or at the first sitting of the inquest a majority of the jury, shall deem a view necessary." He said in certain cases viewing might be necessary, but to make it imperative in all cases was on a par with the old idea of public executions, and he contended that with medical evidence and the evidence of identification the option should be given to the coroner. Mr. Luke White, speaking as a coroner with much experience, said that three-fourths of the coroners were in its favour. Sir F. Banbury opposed the second reading as a mere attempt to save the jury from a disagreeable duty, while it might really prove a great obstacle to the detection of crime, and might lead to wrangles between a coroner and his jury. Mr. Herbert Samuel, speaking for the Home Office, said that there was undoubtedly a strong body of opinion in support of the Bill. He admitted that it was a disagreeable duty, which involved occasionally a risk of infection, and, further, in some cases caused loss of time to busy men. In some cases, too, it led to delay in burying the body. On the other hand, it made juries take a more serious view of their duty; the original object of identifying the body was no longer valid, and in these days of expert evidence the viewing was less necessary than in ancient times. He found the Coroners' Society was in the main in favour of the change, and the Home Secretary had no objection to the Bill going to a Committee. There were many points connected with coroners' courts which required consideration, and for this purpose a Committee might have to be appointed later on. Sir Walter Foster supported the second reading, saying that nearly twenty years ago he had introduced a similar Bill, but had not been fortunate in obtaining a discussion. He urged that citizens doing public work as jurymen should not be required to perform a duty which was not necessary, and which was always disagreeable; it might in some cases be dangerous, on account of the possibility of infection, and it was in other instances especially painful when, in the case of accidents in mines and works, men had to view the mutilated bodies of their friends. He thought, however, that the coroner ought in all cases to view the body. Viscount Helmsley opposed the second reading because it was piecemeal dealing with an important branch of the law which would shortly come up for review. Mr. C. Duncan supported the Bill on behalf of the Labour party, and on a Division the second reading was carried by 118 to 45.

The Public Health Bill introduced by Mr. Cooper seeks to amend the Public Health Act 1875 and the Local Government Act 1888. Its object is to make the county council the predominant sanitary authority in its area, with power to supersede any local authority which neglects its duty. Every county council will be required to appoint at least one whole-time medical officer of health with a diploma in public health, the same qualification will have to be held also by the health officer of a local authority. Local authorities are empowered to appoint one or more sanitary inspectors, and also to appoint health visitors. These appointments will all be subject to the approval of the county council, must not be for a limited period, and on dismissal every such officer may appeal to the county council, who may reinstate him if they think fit. The second reading has been fixed for May 6th.

The Public Health (Markets in Rural Districts) Bill, which Mr. Burns introduced last week, is a small measure of two clauses. Its object is to make the provisions of the Public Health Act, 1875, with respect to the provision and regulation of markets applicable in rural districts. The Bill is backed by Mr. Macnamara and is put down for second reading this week. Mr. Randall has given notice to introduce a Bill for the same purpose.

Tuberculosis among School Children in Ireland.—In answer to Mr. Devlin, Mr. Birrell stated last week that his attention had not been specially called to the prevalence of tuberculosis among school children in Ireland, but he was, of course, aware of the regrettable prevalence of the disease in the country generally, and was fully alive to the importance of dealing with the subject. The Commissioners of National Education had no statistics as to the number of children affected with tuberculosis. They informed him that they had taken what steps they might to prevent the spread of tuberculosis by the exhibition of notices in the schoolrooms calling attention to the danger of the disease. The Tuberculosis Prevention (Ireland) Bill, which was in course of preparation, would provide for the compulsory notification of the disease, and would contain other provisions for dealing with the evil. In view of the proposed legislation a special inquiry into the case of the school children did not seem to be necessary.

Vivisection.—On Thursday in last week Mr. Hodge introduced a Bill to provide for the total abolition of vivisection. It is backed by Mr. Bruce, Mr. Macpherson, Mr. Lupton, Mr. Charles Duncan, Mr. Collins, Mr. Parker, Mr. John Wilson, Mr. Thorne, and Mr. John Johnson, and is down for second reading on Tuesday, May 5th. The Cruelty to Animals Bill, which seeks to restrict vivisection, is in the hands of Mr. George Greenwood, and is backed by Sir F. Channing, Mr. McNeill, Mr. Crooks, Mr. Schwann, Mr. Maddison, Mr. Luttrell, Mr. John Robertson, Mr. Winfrey, and Mr. Manfield.

American Preserved Kidneys.—Mr. John Burns has stated, in reply to Mr. Courthope, that a quantity of preserved kidneys imported from America had been seized in the City of London as unfit for human food. Two samples were submitted to the public analyst. In the first case he reported that the fluid in which the kidneys were preserved and the kidneys themselves each contained 2.1 per cent. of boric acid, which was equivalent to 1,470 grains per gallon of the fluid, 147 grains per pound of the kidneys respectively. In the other case the analyst's report showed that the kidneys contained 1.46 per cent. of boric acid (equivalent to 102.2 grains per pound), whilst the fluid contained 1.7 per cent. of boric acid (equal to 1,190 grains per gallon). The presence in imported kidneys of proportions of boric acid so large as those given above was decidedly objectionable from the point of view of public health, and he was advised that it was wholly unnecessary. He proposed to give special attention to imported preserved kidneys in the new regulations dealing with the importation and sale of unsound food, which were in an advanced state of preparation.

The Resignation of the Prime Minister, which was announced in the press on Monday morning, gave unusual interest to the meeting in the Commons at a quarter to three. The House and galleries were crowded, and at no time during this session has there been so large an attendance. It is possible that many were there who had obtained places to hear the debate on the Licensing Bill, but if so, they were doomed to disappointment. The resignation of the Prime Minister practically left the Government without a head, and consequently without authority to go on with legislation, and an adjournment was therefore necessary. After questions, which were asked and answered in surroundings that suggested preoccupation with other interests, Mr. Asquith, as Chancellor of the Exchequer and the Deputy Leader of the House, announced Sir Henry Campbell-Bannerman's resignation, and in a remarkably eloquent short speech expressed the general sense of sorrow and personal loss which the resignation and its cause had occasioned. Mr. Balfour and Mr. Redmond also paid their tributes in suitable words, and on the motion of the Chancellor of the Exchequer the House was adjourned to Tuesday, April 14th.

The Adjournment of the House till the 14th, when probably only a short sitting will be held to issue new writs rendered necessary by changes in the Government, must have considerable effect on the course of business. Practically no legislative work can be done till after Easter, when the House will meet on Monday, April 27th. The Licensing Bill will probably be taken as soon as possible, and the Budget proposals will have to follow. This will make the prospects of other Bills, such as the Housing Bill, much less promising, and may probably lead to a considerable diminution in the output of the session.

The Health of Engine-drivers.—Mr. Lonsdale, on Monday, asked the President of the Board of Trade whether he had considered Colonel Yorke's report that the collision on the London and North-Western Railway near Atherton was due to the debilitated condition of the driver, and whether he intended to take any measures to secure the more frequent medical examination of engine-drivers. Mr. Lloyd-George said he was already in communication with the principal railway companies on the subject of the medical examination of engine-drivers, and was now calling their special attention to Colonel Yorke's report on the Atherton accident.

The Rotunda Hospital and the Parliamentary Grant.—Mr. Ridsdale asked the Chief Secretary to the Lord Lieutenant of Ireland if he was aware that an annual grant of £15,850 to various Irish hospitals was divided according to an arrangement made over fifty years ago; whether the result of this ancient scheme was that one hospital (the Rotunda Lying-in Hospital) obtained an income above its expenditure; and whether, if the facts were as stated, he would consider the advisability of readjusting the grants. Mr. Birrell replied that the fact was as stated in the first part of the question. The Rotunda Hospital received an annual grant of £700 from the Parliamentary grant of £15,850. He was informed that it was a mistake to suppose that the normal annual income of the hospital exceeded its expenditure. A large debt was incurred in recent years by the building, at a cost of over £8,000, of increased accommodation to provide for the great increase (nearly 40 per cent. in the last twelve years) of intern patients. For the reduction of this debt special donations had been given and securities had been sold, and the annual income of the hospital had thus been apparently increased. The last account of the hospital, namely, that for the year 1906–7, showed, however, that there was a balance due to the bank of £1,112, the deficit of estimated income in that year being £960. The Parliamentary estimate for the year 1908–9 showed an estimated excess of expenditure over income, exclusive of the grant, of £672, and this was barely covered by the amount of the grant, £700. The estimated income, moreover, included voluntary contributions and other items of a precarious character, amounting to over £3,000, which might not be fully realized. His honourable friend might not be aware that the Hospitals Commission, which, in 1887, reviewed the grants to all the Dublin hospitals participating in the Vote, described the Rotunda Hospital as pre-eminently a national institution worthy of support. Upon the facts as they had been reported to him there did not appear to be any grounds for readjusting the Parliamentary grant to the detriment of this hospital.

England and Wales.

[From our Special Correspondents.]

BIRMINGHAM.

The King and Dr. Hall Edwards.

The following letter has been received by Mrs. Hall Edwards from the King, in reply to a letter of thanks which she wrote to His Majesty in acknowledgement of the pension granted to her husband from the Civil List:

Biarritz, April 1st, 1908.

Dear Madam,—I am commanded by the King to thank you for your letter, and to say that it has given His Majesty sincere pleasure to confer a Civil List pension upon your husband, whose services have been so extraordinarily self-sacrificing towards the advancement of science and the benefit of humanity. The King wishes you to express to your husband his deepest sympathy with him, together with the earnest hope that possibly his other hand may yet be saved.

I remain, dear Madam, yours very faithfully,

Arthur Davidson.

Health Lectures.

A series of health lectures have been given during the winter months under the auspices of the Birmingham Athletic Institute. Lectures were delivered every week in four centres in Birmingham, and a course of twelve lectures was given at Smethwick. All these were attended by large audiences. For the first time a course of six lectures was given in the Town Hall at West Bromwich, and the report of the Athletic Institute states that on no occasion did the audience number less than 700. Such a result can only be explained on the assumption that the teaching supplied is of practical value.

Care of Mentally-defective Children.

The Special Schools Subcommittee of the Birmingham Education Committee has recommended that the number of Birmingham children at any one time at Sandwell Hall Boarding School for mentally-defective children should be increased from 20 to 60. Sandwell Hall was certified to accommodate 150 children, and at present there were 130 inmates and 23 awaiting admission. In June, 1906, the Education Committee decided to contribute toward the maintenance and education of not more than 20 children at one time at Sandwell Hall. The accommodation at the institution was found to be quite inadequate to meet the demands of the many education committees in various parts of England, and it was of the first importance that Birmingham should make an application for more places. After a lengthy discussion it was considered that, as the Education Committee had decided to contribute towards the maintenance of not more than 20 children on the understanding that a report on the experiment would be submitted after the arrangement had been in operation for three years, it would be unwise to ask for 60 places, and that if the present number were increased the urgent cases would be provided for. A resolution was passed giving authority to the Education Committee to provide for the maintenance and education of not more than 30 children at one time at Sandwell Hall.

Proposed Sanatorium for Consumptives.

In order to commemorate the great services of the late Sir William Cook to the Hospital Saturday movement, it is proposed to establish a "Sir William Cook Memorial Sanatorium" for the treatment of consumptives. Such an institution has now become of real urgency, and its establishment has for some time been considered by the late Sir William Cook and the Hospital Saturday Committee. One of Sir William's last public achievements was the provision of the Municipal Consumptive Sanatorium near Cheltenham, but it provides for a small number only of those patients who would benefit by treatment in such an institution. It is proposed that the sanatorium be managed by the Hospital Saturday Committee, and provided for by that fund. The first list of donations amounts to £1,031, and a circular has been issued asking for donations, as about ten times this sum will be required. The Hospital Saturday organization may be expected to collect a very substantial sum from the thousands of working men who desire to honour the memory of their late chairman. By the co-operation of all classes the necessary amount should be raised without difficulty.

The Hospital Saturday Fund.

The annual meeting of the Board of Delegates of the Birmingham Hospital Saturday Fund was held at the Council House on March 30th. The annual report stated that the total receipts for 1907 amounted to £20,108. The subscribing firms numbered 2,149 as against 2,080 in 1906. The fund's convalescent homes have done a very good year's work. At Tyn-y-coed, Llanrhos, the convalescent home for men, 1,088 patients were admitted; at Marle Hall, the women's convalescent home, 1,188 were admitted; and at the Red House, Great Barr, the home for children, 533 patients were admitted. The total number of patients in 1907 was 2,809. Since the first convalescent home was established, sixteen years ago, 28,508 patients have been received. Special work is also performed, outside the fund's own homes, in that consumptive patients are sent to the South of England for the open-air treatment, and rheumatic patients are sent for treatment at the Droitwich brine baths. Out of the Hospital Saturday collection for 1907, £7,000 were voted for the maintenance of the convalescent homes, and £750 for the requirements of the surgical aid department and for the special treatment of consumptive and for rheumatic cases at St. Leonards and Droitwich respectively. The Committee's report states that the greatest possible efficiency and economy were exercised in the administration of the homes, and that there was a very satisfactory decrease in the cost per patient.

Lying-in Charity.

The new Birmingham Lying-in Charity was opened in November, 1906, and the first patient received on December 12th. During the past year 1,618 cases have been attended by the district midwives. The number of children born was 1,643, and the total infantile mortality was 73, or 4.4 per cent. Two maternal deaths occurred. The medical officers were called in 127 times, or once in 12·6 deliveries. The cost of building and equipping the new hospital was estimated at £16,500, and that sum had been obtained. Although the hospital was opened free from debt, yet the annual income is inadequate, and a further £1,200 a year is required. The objects of the institution are:

(*a*) To supply obstetric attendance, medicines, and nursing to poor women residing within the City of Birmingham in their confinements at their own homes.
(*b*) To provide and maintain a maternity hospital for the treatment of exceptional cases.
(*c*) To train midwives and midwifery nurses.
(*d*) To train medical students.

The charity consists of an out-patient and in-patient department. The out-patients are attended upon application without note of recommendation, but subject to approval after such inquiry into the circumstances of the applicant as shall be thought necessary. In-patients are admitted on the recommendation of the medical officers.

NEWCASTLE-UPON-TYNE.

Society of Medical Officers of Health.

At the branch meeting of the Society of Medical Officers of Health a most interesting paper was read by Professor Hutchins, of the Bacteriological Department of the College of Medicine, on the portal of entry of the tubercle bacillus. While not excluding the pulmonary organs as a channel of entrance, Mr. Hutchins was of opinion that the alimentary canal, even in adults, was a more frequent mode of entrance than had hitherto been believed. The paper gave rise to an animated and interesting discussion.

Durham University Convocation.

A Convocation for the purpose of conferring degrees was held in the University of Durham College of Medicine, Newcastle-upon-Tyne, on April 4th, under the presidency of the Sub-Warden, Dr. Jevons. Among those present were Sir George H. Philipson, the Bishop of Newcastle-upon-Tyne, Sir Hugh Bell, Bart., Sir Isambard Owen, Professors Page, Oliver, and Howden, Drs. McBean, H. E. Armstrong, McDowall, Lyle, Bolam, Wardale, Beattie, Hutchins, W. E. Hume, several of the professors of the Armstrong College, the Sheriff of Newcastle, and many members of the City Council. Only one honorary degree was conferred, the recipient being the recently appointed Bishop of Newcastle-upon-Tyne. The Right Reverend Dr. Straton was presented to the Sub-Warden for the degree of Doctor in Divinity by Sir Isambard Owen, who briefly

alluded to his claims to the distinction. The Bishop was warmly received by Convocation and by the students. The remainder of Convocation was occupied in conferring degrees in medicine, surgery, and hygiene. Owing to the alteration of the date of the examination for degrees in medicine fewer candidates than usual had presented themselves for examination, and as a consequence the pass list was smaller than at previous spring meetings.

Wane of the Influenza Epidemic.

Influenza, which was epidemic in the city and district a few weeks ago, has considerably abated. The cases are of a milder type and are fewer.

MANCHESTER AND SALFORD.

Hospital Abuse.

A representative of the Manchester *Evening Chronicle* has been making some inquiries into hospital abuse in Manchester. It appears that the officers of the District Provident Society, whose business it is to inquire into the circumstances of applicants for hospital treatment, during the last year made 44,304 visits, and found that no less than 17 per cent. of the applicants were not suitable for free treatment, being able to make some payment. The following remark is attributed to the Secretary of the Hospital for Skin Diseases: "We think that the clerk with a fair wage, who has a position to keep up, is quite as eligible for hospital treatment as the working man with no appearance to maintain." It may be pointed out, however, that many men earning £500 a year find it difficult to make ends meet, simply because they imagine they are bound to keep up a certain appearance; in other words, charity must be imposed on to enable patients to keep up the particular appearance to which their expensive habits may incline them. If that be so, surely it was very hard-hearted of the official of another Manchester hospital to refuse free treatment to the gentleman living in a £50 a year house. Perchance he felt absolutely compelled for the sake of appearances to live in such style, and on that account found it impossible to pay an ordinary practitioner 2s. 6d. for consultation and medicine. Again, it is asked what use is made of the results of the inquiries into the circumstances of applicants. Some are undoubtedly told that they are not suitable cases for hospital treatment, and are referred elsewhere. There is some fear, however, that in some hospitals, when a patient is found to be able to pay anything, he is not referred elsewhere, but simply considered fair game for a little mild bullying to get him to pay something to the hospital, and in some cases it has happened that a patient has for a considerable time gone on paying to the hospital quite as much as he would have been charged by a general practitioner.

Nationalization of the Profession.

At a meeting of the Fabian Society of Manchester on March 28th, Dr. Lawson Dodd pleaded for the nationalization of the profession of medicine. He said that of the 40,000 members of the British medical profession about 4,000 were already servants of the State in the army, navy, or the various public services. The competition for patients among general practitioners was an unmitigated evil, separating the practitioner from the educational part of his work and preventing him keeping pace with the improvements of modern practice. It was just as necessary for the hours of the doctor who had secured a good circle of patients to be shortened as those of the signalman on a railway. Doctors were feeling the pinch caused by hospitals and unqualified practice, but the public also had its grievances, especially the middle classes; for while a poor man who needed an operation was taken to a splendidly equipped hospital and treated free of charge, often by some of the most eminent men of the day, if a small grocer had appendicitis the operating table would probably be one brought from the kitchen into a room invaded by smells of cooking or from the shop beneath. The tax of the doctor's bill came at the worst possible time for the tradesman or clerk, and the result was the worst possible relationship existed between the medical man and those on whom he depended for his living. The remedy was to strengthen the public medical service. The number of medical officers of health should be increased. The part-time men should be abolished, for it was impossible to serve a private practice and a public service at the same time. The impression must be given to the people that the work of medical men was to prevent, not merely to cure. Crime, too, must be recognized as a sort of disease, and the retired army officers in charge of our prisons replaced by medical men. The goal to be aimed at was that it should be impossible for any one to decline to see a doctor because the fees could not be afforded, and to unite the Poor-law infirmaries and all hospitals under a public health authority. A Minister of Public Health ought to be appointed, and the office should be considered as important for the country as a Minister of Commerce, if not more important.

Lancashire Education Committee.

At the annual meeting of the Lancashire Education Committee on Monday, March 23rd, the Elementary Education Subcommittee reported that after a conference with the County Public Health Committee and the Chief Medical Inspector of the Board of Education, it advised that the medical inspection of school children should be treated in two parts, first, that affecting the existing sanitary administration of the district as now carried on by local medical officers of health, and, second, that of the examination of the children themselves. It was felt desirable to have separate staffs for the two classes of work. It was therefore recommended that the County Medical Officer of Health should be appointed medical officer to the Education Committee so far as school buildings and sanitary arrangements are concerned, at a salary of £100 a year, and that for the inspection of the children a school medical superintendent should be appointed at a salary of £500 a year, increasing by £50 to £650, with travelling expenses and allowances to be fixed by the Education Committee, office and clerical assistance to be provided at the expense of the Committee.

The Medical Guild.

The annual supper of the Medical Guild was held on March 27th at the Albion Hotel, Manchester. There was only a moderate attendance, perhaps owing to the fact that so many other social functions have recently been held by other medical societies of the district. After the loyal toasts had been given by the President, Dr. David Owen, and duly honoured, Dr. Skinner proposed "The Army, Navy, and Auxiliary Forces," and Surgeon-Major O'Grady, in responding, made some very flattering remarks about the members of the Army Medical Service in Manchester. Dr. Worswick, in proposing "The Medical Guild," spoke of the complete freedom of discussion which characterized all its meetings, and pointed out several valuable services which the Guild has rendered to the profession generally during the past year. Dr. Taylor, in responding, said he thought there were far too many separate medical societies in Manchester, and looked forward to the time when they would be united into one. Much good might be expected to result from the formation last year of a Joint Committee of all the societies for social functions, which was first suggested by the Clinical Society. The toast of "The Kindred Societies" was proposed by Dr. Wolstenholme, who expressed his regret at the feeling of jealousy that has sometimes been shown between the various societies. Dr. Price Williams responded for the Clinical Society, and Dr. Bagley for the Medico-Ethical Association. Dr. Broadbent, in proposing the health of "The President," reminded the members that Dr. Owen had been drawn into the Guild not many years ago by an extension meeting at Pendleton, and that, having served for a time on the Council, he undertook the duties of Honorary Secretary, and subsequently became Vice-Chairman, then Chairman, and finally President; this showed that the Guild knew how to recognize ability and enthusiasm. Dr. Owen, in reply, eulogized the work Dr. Broadbent had done for the Guild during many years in Manchester, especially in encouraging the younger men to engage in the work of medical reform and organization.

PORTSMOUTH.

The late Dr. Lloyd Owen.

In accordance with a very general feeling that some memorial should be erected to the late Dr. Lloyd Owen, a small committee was formed to further this object. It

was felt that the most fitting place in which to perpetuate his memory was within the walls of the Royal Portsmouth Hospital, in which he took the warmest interest, and where his chief work of a public character was done. A mural tablet in alabaster with Irish green marble border, bearing the following inscription, has recently been placed in the main corridor of the hospital:

In remembrance of
Alfred Lloyd Owen, B.A., M.D.,
Born August 18th, 1845. At Rest July 4th, 1907.
Assistant Surgeon 1870–1874, Surgeon 1874–1906,
Consulting Surgeon 1906–1907,
To this Hospital.
A wise Surgeon. A valued Colleague.
A Follower of all that is Good and True.
A man of quick sympathy and high integrity, beloved by a wide circle of friends, whom he attracted by his own capacity for friendship.
Fortiter. Fideliter. Feliciter.

[This tablet has been erected by his friends, who knew and appreciated his good qualities.]

WORCESTERSHIRE.

Sanatorium for Consumption.

The open-air sanatorium of the Worcestershire Association for the Prevention of Consumption at Knightwick, near Worcester, was opened in November, 1902. It provides accommodation for 26 patients (18 male and 8 females); and although the number (82) admitted during 1908 was larger than in any previous year, the Committee expresses regret that the number of patients applying in the early stages of the disease has not shown any increase. This fact makes the result of treatment less satisfactory than it might be. The results for the five years show that with early cases treatment in the sanatorium is of great and lasting benefit, for of 122 cases admitted during this period, 102 were at work in December, 1907, 9 were at home, 10 had died, and 1 patient could not be traced. Of 111 more severe cases, 38 were at work and 52 had died. The Committee wisely directs attention to the importance of making some systematic attempts to prevent and to treat tuberculosis in young children, and, in view of the recent regulations as to the medical inspection of school children, suggests that the county councils be urged to make some provision for the care of tuberculous children of school age. It is proposed to make provision at Knightwick for receiving children, and a double shelter has already been promised for them. The cost of maintenance is £70 to £75 per annum each patient, and there was a deficit of £160 on the maintenance account at the close of the year. The Medical Superintendent (Dr. J. H. G. Greensill) refers to the difficulty which discharged patients have experienced in obtaining employment on account of their supposed infectivity.

WESTMORLAND.

The Consumption Sanatorium.

The eighth annual report of the Westmorland Consumption Sanatorium at Meathop shows that this, which was one of the first established county sanatoriums, remains one of the most successful in its management. Almost entirely supported by the subscriptions for beds from local and other councils and Boards of Guardians, the Meathop Sanatorium has been able for the past five years to show a substantial balance of income over expenditure. The institution is being kept up to date by the erection of a disinfector for clothing and bedding, and by the installation of electric light, this latter being due to the generosity of Mr. J. M. Sladen, of Windermere. It is proposed to establish a home for advanced consumptives, the cost of building such a home for 12 patients having been generously offered by Dr. Paget Tomlinson, to whom the sanatorium already owes so much. The medical superintendent's report shows that during the year 1907, 107 patients were admitted, the average number in residence being 39. Altogether 539 patients have been treated in the institution since its opening in March, 1900, and a table showing the state on admission and history after discharge of a large proportion of these forms a valuable feature of this report and shows that the proportion of successful cases have been very encouraging. This satisfactory result is, however, only in respect of the cases which were admitted in an early stage of the disease; out of 68 cases of advanced consumption admitted during the first five years only 8 remained alive at the end of 1907. Dr. Hughes, the Medical Superintendent, gives some figures which support the view that, in consumption, environment is the predisposing cause rather than heredity. The report must be considered extremely satisfactory from both the financial and the medical points of view.

Ireland.

[From our Special Correspondents.]

The Irish Universities Bill.

This Bill, which was issued on Saturday last, consists of seventeen clauses. The general effect of these was made known in Mr. Birrell's speech. The annual grants are as follow:

New University, Belfast. £18,000.
New College, Dublin, £32 000.
Queen's College, Cork, £18 000.
Queen's College, Galway, £12,000.

And for the purpose of building the following sums:

New Belfast University, £60,000.
New University and College at Dublin, the combined maximum sum shall be £150,000.
Queen's College, Cork, £14,000.
Queen's College, Galway, £6,000.

The governing body, or Senate, for the University at Dublin will consist of thirty-five members:

The Chancellor of the University.
The three Presidents of the constituent Colleges.
Six persons nominated by His Majesty, of whom one at least shall be a woman.
Six elected by the governing body of the new College in Dublin.
Four elected by the governing body of the Queen's College, Cork.
Four elected by the governing body of the Queen's College, Galway.
Five elected by the Convocation of the University and six co-opted.

For the Belfast University the constitution of the Senate will be quite different, as will be noted by a comparison:

The Chancellor.
Either two or three pro-Chancellors.
The President of the University, who is *ex officio* Vice-Chancellor.
Six persons nominated by His Majesty, of whom one at least shall be a woman.
Six Professors of the University, elected by the Professors.
Six graduates of the University, elected by the graduates.
The Registrar.
The President for the time being of the Students' Representative Council, if a graduate of the University.
Six persons representing benefactors.
The Lord Mayor of Belfast for the time being.
Belfast Chamber of Commerce Chairman.
The Chairman for the time being of the Board of Management of the Royal Victoria Hospital, Belfast.
The principal of a secondary school in Ulster, to be co-opted.

There is no provision for "pro-Chancellors" or for a Vice-Chancellor in the case of Dublin. The Royal University Senate, under the Act of 1879, chooses its own Vice-Chancellor, who is at present Sir Christopher Nixon. The reason for the variation will no doubt be explained hereafter.

No list of members of the new Senates can yet be completed, but it is stated that General Sir William Butler, K.C.B., will be the Chancellor in Dublin. The Most Rev. Dr. Walsh, Roman Catholic Archbishop of Dublin, and the Most Rev. Dr. Healy, Roman Catholic Archbishop of Tuam, have consented to serve on the Senate. Others mentioned are Mr. J. S. McArdle, Dr. J. J. O'Carroll, and Dr. M. J. Cox. Among the seven Protestant members are Mr. Butcher, M.P., Dr. Douglas Hyde, and Mr. Stephen Gwynn, M.P.

Royal Victoria Eye and Ear Hospital, Dublin.

At the annual general meeting of this hospital on March 26th the chair was occupied by Sir George Roche. It was reported that the average number of beds occupied during the year was 76. In the out-patient department, 7,267 new cases were registered; 2,816 patients who returned for further treatment made a total of 10,083

attended during the year. The aggregate number of visits paid was 41,167. The Council wished to erect a special building for the treatment of out-patients. The investments, however, had fallen to £3,852, about one-third of the sum required. The income showed an increase of £716. Mr. W. M. Murphy said that the hospital was a credit to every one connected with it, but largely to Sir Henry Swanzy. Other speakers in support of the hospital were Mr. G. H. Lyster, Dr. Pollock, Mr. Hewitt R. Poole and Mr. Story, F.R.C.S. On the motion of Sir Henry Swanzy, seconded by Mr. F. Earle Bland, a vote of condolence was passed to Lady Aberdeen on the death of her mother the Dowager Countess of Tweedmouth.

Monkstown Hospital, co. Dublin.

The annual meeting of the Monkstown Hospital was held on March 27th, the Rev. F. Stewart Gardiner in the chair; 305 patients were admitted during the year, and the attendances at the dispensary numbered 6,447.

Health of Belfast.

The death-rate for the last month was 27.4; this was largely due to chest affections; there were 123 deaths from pneumonia as compared with 75 during the corresponding period of last year; and 154 from other chest affections, exclusive of tubercle, as compared with 112 last year. There was a slight outbreak of typhus fever, but only 7 cases are in the City Hospital; how many are in the Poor-law hospital is not published. There are some 15 cases of cerebro-spinal fever in hospital.

Ulster Medical Society.

The sixth meeting of the session was held in the anatomical department of the Queen's College, Belfast, on March 26th; the President, Dr. McCaw, occupied the chair. A large number of specimens were exhibited from the anatomical, physiological, and pathological departments illustrating recent advances, such as the relations of the lateral aspect of the skull with the deeper parts of the brain, *x*-ray photographs of developing teeth, the Rolandic fissure, the order of medullation in the spinal cord, the tympanic recesses, colour fatigue, microscopic slides of the organs of special sense, and a large number of bacteriological, gynaecological, and surgical specimens, with observations on the results of recent work on agglutination and opsonins, especially in cerebro spinal fever.

Results of the Belfast Poor Law Sanatorium.

The annual report on the working of the Poor-law Sanatorium for Consumptives at Whiteabbey shows that 30 per cent. of the 196 that left the institution were so far cured as to be able to return to their work; 33 per cent. were considerably improved, and 37 per cent. did not respond to the treatment; 10 per cent. of the total 311 patients died. Of these 311 patients, 45 were between 40 and 50 years of age. The majority of the patients, although accustomed to badly-ventilated homes, soon came to prefer the open-air life; 2 per cent. slept all the winter on the verandahs.

Refusal to Superannuate a Medical Officer in Tralee.

Dr. Hannafin was the other day refused superannuation allowance, though he had a service of thirty-five years, and had served almost forty-two years altogether under the Poor-law Board. In appealing to the Board, Dr. Hannafin said he thought that a man who had that length of service and had worn himself out in the employment of the guardians was entitled to some consideration. He did not think it was fair or generous on their part to treat an officer badly, to throw him out in his old age without a shilling; for when a man lost his public appointment the public soon forgot him. It was for that reason the law was passed to give superannuation to old and worn-out officers. Nevertheless, his application was refused by 22 votes to 16.

Sanatorium for Consumptives, Cork.

At last the sanction of the Local Government Board has been obtained for the erection of the Cork City and County Sanatorium for the Curative Cases of Consumption. The preliminaries in connexion with this project have taken three or four years, and probably two years will yet elapse before the institution is ready for the reception of patients. At the outset of the movement Dr. Cremen and those associated with him in getting the several sanitary authorities to become financial contributors to its upkeep experienced little difficulty in inducing the ratepayers, through their representatives, to do what was required of them; and when it came to the selection of a site there was something like keen competition to secure the sanatorium in one or other of a dozen suggested localities. This feeling was, however, short-lived. It gave place to a desire on the part of some of the sanitary boards to shirk the responsibility they had undertaken, but they found it too late to retreat. Everywhere opposition was offered to sites provisionally selected. Even that which has now been adopted had to encounter the opposition of the residents in the neighbourhood of Buttevant. This, however, has been overcome, and the future should be comparatively plain sailing. No county in Ireland needs a curative and educational institution like this more than County Cork.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Pinard on Obstetrical Clinics. — Action for Damages against Professor Berger. — Paris Municipal Council's Grants to Dispensaries and Hospitals.

At the last meeting of the Académie de Médecine Professor Pinard gave an interesting summary of the working of the obstetrical clinics and the results obtained during the past twenty-five years. From 1882 to 1889 Professor Pinard had charge of the maternity at the Lariboisière Hospital, and since 1889 he has had charge of the Clinique Baudelocque. Out of a total of 56,177 women, 291 died, giving a mortality of 0 51 per 1,000. Professor Pinard became *chef-de-service* at the time that M. Lucas-Championnière had been able to show the incalculable benefits of the methods of Lister, and had got them accepted. The following table will show how the general mortality and the number of deaths from infection have constantly and progressively diminished:

	Total Number of Cases.	Total Number of Deaths.	Percentage.	Number of Deaths From Infection.	Percentage.
Lariboisière, 1882–1889 ...	12 580	94	0.74	51	0.40
Baudelocque, 1889–1897 ...	15.558	96	0.61	42	0.26
,, 1898–1907 ...	28.039	101	0.36	39	0.13

During 1907 there were 3,034 accouchements in Professor Pinard's wards, and only one death occurred—in a woman who had a spontaneous confinement, proving the confidence that may be placed in the rigorous application of aseptic and antiseptic methods. In 1897 a permanent out-patient department for pregnant women was established, and has contributed largely to the good results obtained. In 1897, 5,451 women came to the department, and in 1907 the numbers had risen to 8 693; many of these returned to the hospital for their confinement in good condition, with the result that haemorrhage from placenta praevia had almost disappeared from the statistics; bad presentations and eclampsia had also considerably diminished, as shown in the following table:

Years.	Number of Confinements.	Shoulder Presentations.	Percentage.	Cases of Eclampsia	Percentage.
1889–1898.	13,244	60	0 45	41	0 29
1897–1907.	30,353	82	0.36	63	0.29

The infants, too, had benefited and several infantile complaints had completely disappeared; erysipelas of the umbilicus was seen no more after the linen was sterilized, and purulent ophthalmia was becoming much

rarer, as was shown in the following table, which indicates every case of conjunctivitis, mild or severe:

Years.	Number of Infants.	Cases of Ophthalmia.	Percentage.
1889-1903	28,804	304	1 05
1904-1907	10,907	23	0.21

Since 1904 Professor Pinard has rigorously applied the method of Credé—that is, the instillation of 2 per 100 solution of silver nitrate into each eye immediately after the birth of the infant, before even the cord is cut. Still-births had not in any way diminished, and fetal malformations were as frequent as in the eighteenth century. Professor Pinard said that of all the human instincts, that of reproduction was the only one which remained in its primitive state and had not been educated. Chance alone presided over the procreation of children. He appealed to his colleagues to use their influence in teaching alcoholics, syphilitics, those suffering from gout and rheumatism, convalescents, etc., to abstain from procreating under those conditions, as their offspring would have every chance of belonging to the class of degenerates. On reviewing the period of gestation, it was found that more than one-third of the infants were born before term, and were thus feeble and more exposed to disease and infirmities than infants born at full term. Fatigue and sexual injuries during pregnancy were the causes of this prematurity. For the preservation and amelioration of the human race puericulture before procreation and during gestation was important, and if carried out would bring about results as happy for the mothers as those shown in the statistics given above.

An interesting case was recently tried before the civil tribunal of the Department of the Seine. In 1905 Professor Berger undertook a rhinoplastic operation on the little daughter of a Madame Linder, who is a teacher living near Paris. He performed a preliminary operation, removing a cartilage from the nose, and then refused to complete the operation, as he was of opinion that any further intervention would be dangerous. Madame Linder then brought an action for damages, claiming 100,000 francs (£4,000) for the little girl and 10,000 francs (£400) for herself. Drs. Duplay, Schwartz, and Monod were appointed experts by the court, and as they declared that the operation was very risky and difficult, and that Professor Berger had acted rightly, Madame Linder was non-suited. Professor Berger, to substantiate the justness of his case, asked for 1 franc damages against Madame Linder. This the court refused, as the aim of Madame Linder was worthy of sympathy, and she had merely pushed to the extreme limits the expression of maternal affection.

The Municipal Council in Paris recently voted 141,000 francs to create a laryngological department at the Laënnec Hospital, 94,400 francs as subventions to the dispensaries for children, and 3 000 francs for distribution of sterilized milk in the dispensaries.

CORRESPONDENCE.

PAYMENTS TO MEDICAL PRACTITIONERS SUMMONED TO ASSIST CERTIFIED MIDWIVES.

SIR,—I am anxious to obtain information respecting the circular letter sent by the Local Government Board to all Boards of Guardians, dated July 29th, 1907, by which the guardians are empowered "if they think proper" to pay any medical man called in to assist certified midwives in cases of difficulty or danger.

I shall be very glad to hear from any medical practitioner resident in any locality where this circular has been in operation.

The Local Government Board considers that the exercise by Boards of Guardians of their powers "in a careful but liberal spirit will furnish a satisfactory solution of the difficulty" and that no reasonable ground of complaint should remain to the medical profession.—I am, etc,

Southsea, April 7th. J. WARD COUSINS.

DIPLOMA OR DEGREE?

SIR,—To the medical student of London about to enter on his course of study it is of great importance for him to realize the many advantages of a degree in contradistinction to a diploma, and also the fact that the former outside London can be obtained as easily as the latter in London.

In order rightly to understand that such is the case, it is necessary for him to be cognizant of the conditions of study in the various parts of the United Kingdom, and to thoroughly grasp some of the details and intricacies that surround this subject before he commences his career, and not after he has carried out a considerable portion of his studies in London, when it will be too late for the initial mistake to be rectified.

Now, if the London medical student, from whatever cause, does not desire or intend, or is unable to subject himself to the rigorous routine and examination of the London University, and yet wishes to pursue his studies in London, there is no other ordinary diploma, except the Conjoint Pass Diploma of the Royal Colleges.

London, for instance, has one University and Colleges of Physicians and Surgeons, and, owing to the severity of the examination of the University, only a very small percentage of men medically qualified in London take a degree in medicine, whereas at Edinburgh, where a University and Royal Colleges also exist, the majority of men who qualify in that city take a degree. At the outset it will suggest itself to most minds that this is some proof of the severity of the examinations of the University of London.

In connexion with this subject it must be remembered that the Royal College of Physicians and Surgeons of London grant what may be described as honour diplomas (M.R.C.P.Lond., F.R.C.S.Eng.), and also pass diplomas (L.R.C.P.Lond., M.R.C.S.Eng., granted conjointly), and that, though the former are absolutely necessary to a man who desires to obtain an appointment on the staff of one of the large London hospitals, it is not necessary to take the pass diplomas (L.R.C.P.Lond. and M.R.C.S.Eng.) as a preliminary step to obtaining the higher diplomas (M.R.C.P.Lond. or F.R.C.S.Eng.).

Now, if a London student feels himself unable to pass the rigorous routine and examinations of the University of London, there is no other ordinary diploma, except the Conjoint Pass Diplomas of the Royal Colleges.

It must, however, be remembered that there are numerous universities outside London granting medical degrees—for example, Edinburgh, Glasgow, St. Andrews, Cambridge, Liverpool, Manchester, Leeds, Birmingham, etc.

Now, if he will consider and realize the advantages of a degree over pass diplomas, and if at the same time it can be proved that the degree outside London can in most cases be as readily obtained as the diplomas granted in London (L.R.C.P. and M.R.C.S.), then it must be to the student's advantage to take the degree of a provincial university rather than the pass diplomas of the London Royal Colleges.

As to the advantages of a degree, an M.D. has the academic title of Doctor. An M.B. has, or assumes, the courtesy title of Doctor. Whereas the diplomate (L.R.C.P.Lond., M.R.C.S.) has not the academic title of Doctor, and is prohibited by the Royal College of Physicians of London (see by-law) from assuming the title of Doctor, while the Ethical Committee of the British Medical Association reserves the title of Doctor to M.D.'s and M.B.'s.

Now for a moment consider the enormous drawback these rules and decisions are to a diplomate practitioner of medicine, when it is considered that the public designate medical men by the term Doctor, for it gives every ill-disposed person the power to belittle him behind his back, by statements to the effect that "he's not really a doctor," and other such like malicious declarations, and the impression left on the minds of nine men out of ten is that the London diplomate is an inferior grade of practitioner, and that his knowledge of medicine and surgery is of an inferior type. It must also be remembered that many hospital appointments open to graduates are denied to diplomates. The authorities at many hospitals require their Physicians to be graduates of Medicine of a British University, and a member of the Royal College of Physicians, London, so that a provincial degree holder may take the membership of the College of Physicians of

London, and become eligible for any hospital appointment, whereas the Conjoint Diplomate (L.R.C.P.Lond., M.R.C.S.Eng.) of London would still be ineligible were he to take the membership of the College of Physicians.

Again, a university graduate is permitted to take an intelligent interest and active part in the affairs of his university, whereas the conjoint diplomate has no voice in the administration of the Royal Colleges (Physicians and Surgeons). The result of all these disadvantages associated with diplomas react unfavourably on the holder of the same, not only in his professional but in his social and monetary position, and, other things being equal, he has in many cases to content himself with the cheap, arduous and unpleasant work of the profession amongst the more humble members of society.

Attempts have been made to rectify the anomalous position of London medical students, one of those attempts twenty years ago has resulted in nothing. Another has recently been made, but will it have better results than the former?

The first attempted to obtain a degree for those who had obtained the Conjoint diploma. The second recent attempt is one to obtain a certain recognition for Conjoint diplomates in respect to hospital appointments. The Committee of Delegates appointed by the Royal Colleges drew up a report, dated July 7th, 1887, from which the following is an extract: "That the curriculum of study and the examinations to be undergone for the licence of the Royal College of Physicians and the diploma of the Royal College of Surgeons are equal to those required by most of the universities for degrees in medicine and surgery. (The licence and diploma above mentioned are those cited in this paper as pass diplomas of the London Royal Colleges)

Lastly, allow me to quote from Professor Osler's remarks recently uttered at St. Mary's Hospital: "Finally he expressed regret that so many London students passed examinations which were in all respects equal to those passed by provincial students, but nevertheless did not thereby obtain the degrees of M.D."; and also Sir W. Allchin, who, as examiner, affirms that the stringency of university examinations "was scarcely so real or the test so far reaching as is commonly imagined, and that the examinations of the Conjoint Board (London) taken as a whole are as satisfactory as any and more so than many."

So that, in conclusion, I think that the following is good advice: (1) That if the student does not intend or feel himself able to take the degree of the London University let him eschew the pass diplomas of the London Royal Colleges and take instead a provincial degree, carrying with it an unquestionable title to the designation Doctor together with the heretofore mentioned advantages to him as a general practitioner, and if he further desires to become a member of a London hospital staff as physician or surgeon let him take the Membership of the College of Physicians of London or Fellowship of the Royal College of Surgeons of England, as the case may be.

I do not expect these ideas and suggestions to cause any revolutionary changes to be effected in the difficult position in which many London medical students find themselves placed in comparison with students in other parts of the United Kingdom, still I trust these remarks may be instrumental in bringing to the notice of future medical students certain details which may help to bring their ideas to a focus about this important subject and cause them to be under no misapprehension as to the relative value of ordinary degrees and diplomas.—I am, etc.,

March 27th. FREDERICK W. COLLINGWOOD.

THE STUDY OF TWINS AND "DOUBLES."

SIR,—Dr. Harry Campbell, in his kindly allusion to my letter, points out, what I certainly ought not to have omitted, that there is a danger of fallacious reasoning on this subject, due to the fact that "sufferers from the same disease tend to grow like one another." There can be no doubt of this, and I am obliged to him for referring to it.

Another medical man has also, in a written private communication, called my attention to the likenesses existing, and which seem to increase with happily married life between husbands and wives. This is also a point I did not mention in my letter.

It was my intention in the first instance to obtain all the information I could on the subject, and then later discuss its value when all the facts were before me. Perhaps in this I was mistaken, so I will briefly consider the chief difficulties that have presented themselves to my mind during the time I have been studying this problem.

1. Very young children as well as old people have, from my point of view, many fictitious resemblances to each other, due in the former instance to their undeveloped bodily and mental conditions, and in the latter to obliteration of individual differences caused by advancing age changes. The full grown adult from 25 to 45 years is therefore the most suitable person to study for instances of "doubles."

2. Diseases, especially those to which Dr. Campbell refers, do tend to modify the appearance of those attacked and to create an unreal likeness that ought, of course, to be allowed for.

Instances in which, at the outset of the disease, the likeness was observable, are therefore preferable to those where the patients have been seen only when the disorder is far advanced.

I did not refer in my early letter to those cases where husband and wife suffer from similar diseases, because the problem is a very complex one. Karl Pearson has found from physical measurements that there is a greater amount of similarity between husband and wife than exists between the ordinary men and women members of a community. This is strongly suggestive of some kind of unconscious selection in marriage. In his mathematical researches he refers to random mating, preferential mating, and assortative mating, and of this last variety he recognizes two forms—homogamous unions, or mating of like with like; and heterogamous ones, where unlikes mate.[1]

From a biological and medical study of this same question I found that marriages might be grouped into three classes—normal, anomalous, and abnormal:

The normal, where mental, age, colour, height, and culture resemblances tend to be associated together, and where a similar stage of sexual differentiation, often giving a false appearance of contrast, exists.

The anomalous, but not unhealthy, marriage, only partially a contrast, one where deficiencies in one individual tend to be corrected by redundancies in the other.

The abnormal marriage, where factors of wealth and social position outweigh all natural feelings and cause unsuitable relations to be entered into.[2]

Now, though it is clear that kindred information to my study of diseases of twins and doubles could be obtained from investigations into disease incidence in normal and anomalous marriages, yet it must be evident that there are so many fallacies involved as to make such evidence, at any rate for the present, unreliable.

While, therefore, I will be only too pleased to receive any information on the subject that any medical practitioner can supply me with, I want particularly those instances of "doubles" that occur in adults of the same sex, with a description of the diseases which they have suffered from.

I may say, in conclusion, that I have already had two very interesting instances sent to me, strongly confirmatory of earlier data on this subject, which I hope to allude to when I summarize the whole evidence I now possess.—I am, etc.,

J. LIONEL TAYLER.

8, Adys Lawn, Willesden Green, N.W., April 7th.

CHLOROFORM AND THE STATUS LYMPHATICUS.

SIR,—In the letter by Fleet Surgeon Home (p. 840) on chloroform administration there seems to be a great risk ignored—that of overdose. There is no reference to the strength of the vapour employed. The writer gives "plenty" of chloroform. Is this safe teaching for students? Dr. Waller has shown that the continuous inhalation of 2 grains of chloroform in 100 cubic inches of air (vapour by volume = 1.5 per 100) has a tendency to embarrass the respiration if continued.[3]

It is singular that any one can be found to advocate the administration of this powerful drug in unmeasured doses when it is quite possible, by the use of a regulating

[1] See *Grammar of Science*, chapter on Sexual Selection and Assortative Mating in Man: *Biometrika*, vol. ii, part 4.

[2] *Sociological Papers*, p. 135, vol. iii. Paper, "The Study of Individuals," by the writer.

[3] BRITISH MEDICAL JOURNAL, April 23rd, 1898, p. 1059.

inhaler, to know what strength of vapour is being employed.

If it has been shown that safe anaesthesia can be secured by the continuous inhalation of 1 to 1·5 per cent., and not above 2 per cent., of chloroform vapour, why should needless risks be run with higher and unknown proportions?

With regard to the danger of circulatory failure in chloroform anaesthesia, I may quote Dr. F. W. Hewitt, who has written that:

> Although it is perfectly true that respiration generally, if not invariably, ceases before the heart muscle is finally paralysed, and that in chloroform administration attention should *primarily* be directed to the respiration, the clinical fact remains that in all threatening or fatal conditions dependent upon simple chloroform toxaemia circulatory depression is the characteristic and dangerous symptom. Death usually takes place, indeed, not from our inability to restore respiration, but from our helplessness in reinstating cardiac action.—*Anaesthetics and their Administration*, Ed. 1901, p. 354.

—I am, etc.,

Newquay, Cornwall, April 7th. HERBERT G. SHORE.

THE SPECIFIC TREATMENT OF LEPROSY.

SIR,—The lecture on the specific treatment of leprosy, published in the BRITISH MEDICAL JOURNAL of April 4th, contains material that will furnish the foundation for the treatment of other diseases, as hinted by Professor Deycke himself. Possibly more than leprosy and tuberculosis will be found reactive to similarly directed proceedings, and that on the following grounds.

Professor Deycke has shown that the lepra and the tubercle bacilli contain fats almost insoluble in ordinary solvents. This is the means by which they defend themselves against the vital processes of the organisms they attack—once deprived of their fat they readily succumb, like more delicately constituted parasites. Now, a high molecular fatty ester is a substance of very low chemical activity ordinarily. It can, indeed, be saponified, but not by any chemical process that would effect that change alone, without fatally injuring the human organism in preference long before. The fatty acid is almost as inert, except under special conditions, as I discovered some time ago in investigating the nature of a commercial product of French origin, made by a secret process. In short, a high molecular fatty acid shows considerable activity in ionic dissociation, as distinguished from simple solution. It can then attack metallic copper for instance. Benzoic aldehyde has the power apparently to perpetuate the ionic dissociation if once started, if not to start it also. So that I think the part played by benzoyl chloride in Professor Deycke's process is to effect complete or relatively great liberation of nastin-ions from the nastin solution, and that accounts for the speed with which it deprives bacilli of fat, as compared with other solvents.

A mass reaction is a very difficult thing to investigate in the case of acid-esters insoluble in water. If too much water gains access to the process at any time, soap is removed from the reaction; and if too much ether-like solvent is used, simple solution is substituted for ionic dissociation and the reaction does not take place. Probably, then, benzoyl chloride in olive oil as a vehicle brings the dissociated nastin into contact with the combined nastin of the organisms, and thereby renders it unstable, too, and liable to attack by the alkaline constituents of the blood or of the acidophile leucocytes. The same process would take place if one or other of the reacting bodies—the "nastic" acid or the alkali—were greatly reinforced, which for obvious reasons is impracticable and unnecessary, seeing that the blood contains sufficient excess of alkali—not, indeed, to decompose the fat but to combine with free acid liberated by a suitable solvent.

This process is probably applicable to cancer therapy. The reverse has been tried—namely, the administration of lactic acid—with a certain amount of success. In line with the nastin treatment of leprosy there are the enzyme treatment of cancer, the serum treatment, the thyroid extract treatment, etc. If anything common to these could be discovered we might be able to take a further step in cancer therapy. One thing seems certain: malignant cells contain something that enables them to resist the ordinary laws of the vital economy; in this they resemble such parasites as tubercle and leprosy; if once this substance is thrown into the ordinary commerce of the organism it will become amenable to the ordinary laws.—I am, etc.,

ALEX LUNDIE, M.B., Ch.B. Edin., B.Sc.

Dalmuir, Dumbartonshire, April 6th.

"LAËNNEC AND THE STETHOSCOPE."

SIR,—As a Welshman, I have read, and naturally with enhanced pleasure, the interesting communication from Dr. Arthur T. Davies in last Saturday's issue of the BRITISH MEDICAL JOURNAL.

Evidently Dr. Thomas Davies, a Welshman, Physician to the London Hospital, who died in 1839, preceded Dr. Charles B. Williams as a pupil of Laënnec, and appears to have been the first who, in Britain, lectured and wrote on the use of the stethoscope.

My chief object in now writing is to bring before our associates the name of another distinguished Welshman, who also was a pupil of Laënnec. Dr. Prestwood Lucas, Physician to the Breconshire Infirmary, graduated at Edinburgh in 1825, the same year in which his fellow-student, Dr. Charles B. Williams, took his degree. Both went to Paris, and I know that Dr. Prestwood Lucas had a great regard for Dr. Williams.

Laënnec gave Dr. Lucas one of his own stethoscopes, just like that figured in last year's JOURNAL in Dr. Theodore Williams's paper. Dr. Lucas presented this stethoscope to the Breconshire Infirmary, and after his death, in 1871, I had a silver plate affixed with the words, "This stethoscope was presented by Laënnec to Dr. Prestwood Lucas."

Dr. Charles B. Williams was known to me only by name and by his great reputation, but I had the honour of the intimate friendship of Dr. Walter Hayle Walshe, another brilliant pupil of Laënnec, who succeeded Dr. Charles B. Williams in the Professorship of the Principles and Practice of Medicine at University College in 1848. We all know that Dr. Williams did much to popularize stethoscopy, and that he was a distinguished physician, but the name of *Walshe* must not be forgotten, for almost more than any other man he ably taught in London the art of physical diagnosis, in which he himself so wonderfully excelled.

Sir Samuel Wilks supplemented Dr. Theodore Williams's paper last year with an extremely interesting and useful communication on the stethoscope. This beloved *confrère*, whose contributions we are always so glad to read, had a very high opinion of Dr. Walshe, and soon after Dr. Walshe's death in December, 1892, Sir Samuel wrote of him, "I recognized during his (Walshe's) life no greater man in our profession"; and I have myself heard the same from Sir Samuel's lips. Long may his valuable life be spared to help us with his sage advice!

Dr. Prestwood Lucas was born in Gower, S. Wales. His brother, Dr. Henry Lucas, also graduated in medicine at Edinburgh in 1825. Both brothers entered the Royal Artillery as medical officers, and both brothers subsequently settled down in private practice as physicians. Dr. Henry lived in Crickhowell, Breconshire, and became Consulting Physician to the Breconshire Infirmary. His daughter is the Dowager Lady Glanusk, his eldest grandson is the present Lord Glanusk, and a son is Sir Charles Prestwood Lucas, K.C.M.G., C.B., who bears the honoured name of Prestwood after his uncle, Dr. Prestwood Lucas of Brecon. I might add that Walshe's great friend, Dr. Oliver Wendell Holmes, was a fellow-student in Paris, and to him, in 1886, Walshe dedicated his book on *The Colloquial Faculty for Language*.—I am, etc.,

J. TALFOURD-JONES,
Consulting Physician to the Breconshire Infirmary.

Tunbridge Wells, April 6th.

"OPHTHALMIA" OR "CONJUNCTIVITIS" NEONATORUM.

SIR,—I think that the change of name suggested by Mr. Percy Dunn from "ophthalmia" to "conjunctivitis" neonatorum would not make any difference in the ability of midwives to recognize this condition, and it would be a pity to displace a classical term by a horrible hybrid; but I agree with him that the routine instillation by midwives of strong antiseptics into the eyes of newborn infants is to be deprecated. Apart from the risk to the

cornea, the irritation so produced lulls the midwife into false security, so that when the real disease occurs she thinks that it is only the usual hyperaemia, and neglects to call in a doctor at once.

Moreover, the instillation may be itself the cause of infection, from dirty fingers or sponge. That this is no imaginary danger was proved to me by a case brought recently to St. Paul's Hospital with opaque corneae and anterior synechiae, when the mother volunteered the statement that the midwife had washed out the baby's eyes with lotion squeezed from the same sponge with which previously she had cleansed the mother's genitals; this was making assurance of infection doubly sure, yet probably the midwife thought that she was carrying out Credé's method.

In a paper read at the Liverpool Medical Institution in March last I expressed the opinion that Credé's method, like Lister's spray, had done magnificent work in the past, but that, in these days of asepsis rather than antisepsis, both had served their purpose and were no longer necessary, and I advocated instead the immediate cleansing of the lids, with careful precautions against any fluid, particularly the first bath water, getting into the eyes; where, however, the infant's eyes were already opened, thorough irrigation with warm saline solution should be used. In the discussion which followed, in which obstetric and ophthalmic surgeons and general practitioners all took part, there was no objection taken to this view, and, as far as I could judge, there was a unanimous consensus of opinion against the routine use of strong antiseptics for the eyes of newborn children.—I am, etc.,

Liverpool, April 6th. A. NIMMO WALKER.

THE USE OF COCAINE BY NON-QUALIFIED PERSONS.

SIR,—No doubt the advice given by the judge recently to the Russian dentist acquitted of manslaughter was very sound—"not to administer cocaine until the heart had been previously examined," although some might interpret the dictum as almost amounting to "Not guilty, but don't do it again." However, we must be thankful for small mercies. "Pharmacopolae, mendici, mimae, balatrones, hoc genus omne," they flourish amongst us as they flourished in imperial Rome, as the weakness and effeminacy of a too luxurious civilization developed the seeds of decay, and paved the road for the access to power of a more virile and robust race. One cannot help thinking that if that eminent physician and classical writer, the late Sir Thomas Watson, was alive, and permitted himself to describe any of the present-day charlatans in the same language he used of Mr. St. John Long, "that ignorant, cruel, and rapacious quack," he would find himself mulcted in heavy damages. For is it not certain that Mr. St. John Long's liniment did good to numbers, and, not being a medical man, what obligation was imposed on him to acquire a knowledge of the component parts of the human body and its functions? The charge of ignorance was therefore purely libellous, as he had seen and perhaps received clouds of testimonials from the laity of chest cures performed—no doubt cases of dry pleurisy and muscular rheumatism. What was, then, cruel in "bringing consumptives up," to quote Sir Thomas Watson's words, "from comfortable homes in the country to die in uncomfortable lodgings in London"? Having no knowledge of medicine, and presumably full of faith in his specific, we have no right to impute cruelty or unworthy motive.

The labourer is worthy of his hire, and, with a record of suffering relieved and health restored, testified to by individuals from every station of society, what reward is too great for such a friend of humanity? The charge of rapacity is obviously but a base slander, the jealousy of some Sir Trimley Snuffins of the day. "Gaudent prenomine molles auriculae." To many minds such arguments are unanswerable.

"Fas atque nefas exiguo fine discernunt."

But to protest against these things is useless; to attempt to educate the laity, even the clerical laity, is vain. As long as human nature remains as it is, quackery is but one of the forms of evil and self-deceit which, like the poor, will be always with us.

If a Lord Chancellor was run over by a motor car, the law might reduce the speed of these pestilential nuisances for a time.

If an Archbishop was—I mean to say if an Archbishop was translated to a higher sphere of usefulness after taking a quack remedy, without having his heart examined, such nostrum would become unfashionable for a period, and heard little of; but it would revive again under some other name, for human folly and human self-deceit are alike eternal and inexhaustible:

"Nemo mortalium omnibus horis sapit."

And Gulliver is not the only traveller who has found those most credited for wisdom in their generation laboriously occupied in attempting to extract sunbeams from cucumbers.—I am, etc.,

March 16th. F.R.Hist.S.

THE SWEATING OF DOCTORS BY MUNICIPAL AUTHORITIES.

SIR,—The recent demand for doctors to fill the post of assistant medical officer of health and inspector of school children makes the present time suitable to call attention to the inadequate salaries offered to candidates by the authorities concerned. Two flagrant examples in this county have attracted my notice, and I do not doubt that the number could be increased by very little searching of the advertisements. The County Borough of Warrington advertises for an assistant medical officer of health and school inspector "who must have had special experience of infectious diseases and bacteriology," and to whom a salary is offered of £125 per annum with board and lodging at the Borough Fever Hospital, of which he is to have charge. A couple of weeks ago the County Borough of Bury advertised similarly and offered £150 per annum, with no mention of board and residence.

Such stipends must be regarded as quite inadequate remuneration for the duties imposed and the qualifications demanded, and are actually less than can be obtained by a young man newly qualified who is willing to become an assistant to a general practitioner.

The two towns cited are large and prosperous, not particularly heavily rated, and quite able to pay a fair wage to their servants. In smaller and less wealthy centres it is painful to reflect what the assistant medical officer of health may be asked to accept.

It is difficult to see, even dimly, how to remedy this state of things, for which we as a profession are largely responsible, for, however low the salary offered, some one will be found to take the post, to the detriment of the whole profession. When the Army Medical Service was at a low ebb and its officers were ill-paid, little considered, and considerably looked down upon by the authorities, pressure was exercised by the medical press and the leaders of the profession in the medical schools, who preached a *jehâd*—a holy war—against the Army Medical Service, which thereby became dangerously short of officers and a public scandal. This methodical boycott—in the interests, be it remembered, not of the medical profession alone, but the whole nation—produced the reforms which resulted in the R.A.M.C. of to-day.

I venture to think, Sir, that it is time a similar boycott was organized against the wealthy corporations which have to call for our skilled assistance, lest we see them in a little while offering us stipends at which an even moderately thrifty collier would turn up his nose.—I am, etc.,

A. E. HODDER,
Honorary Secretary, Wigan Division of the British Medical Association.

Wigan, March 31st.

THE PROPOSED HOSPITAL FOR MENTAL DISEASES IN LONDON.

SIR,—In your reference last week to the scheme of the Asylums Committee of the London County Council for the establishment of a hospital for mental diseases in London, you set forth without comment a suggestion which, I venture to think, calls for an immediate protest from the medical profession. The proposed hospital is the outcome of a private donation of £30,000, a sum which it is estimated will be sufficient to provide one half the cost of its establishment. "The balance," it is stated, "would be provided by the London County Council, which would maintain the institution when completed." The

hospital is, therefore, for all practical purposes to be a State-supported institution. Nevertheless, the Asylums Committee goes on to report that one of the features of this hospital situated in London would be the "possible association with the institution of *honorary* visiting physicians and surgeons." Surely, sir, if we look at this question from the point of view of justice to the profession such an association ought to be impossible. There must be some limit to the amount of free service the medical profession is willing to give to the community. The line may be difficult to draw in voluntary medical charities into which the provident and part-payment systems are being gradually introduced. But there should be no difficulty in establishing an absolute rule that where the State provides accommodation and maintenance for patients, there it shall also provide properly paid medical service. It is indeed surprising that such a proposal as I have drawn attention to should be seriously set forth in the report of a responsible committee. Nevertheless it is an indication of the extent to which the popular idea prevails that the opportunity of advancing medical knowledge and serving one's fellow-men is a sufficient *quid pro quo* for members of the profession attached to hospitals. I hope that before any alienist physician or any surgeon accepts an unpaid appointment at this proposed State-supported hospital, he will carefully consider the serious results that such a step may have upon the economic position of the whole profession.—I am, etc.,

London, W., April 4th. LAURISTON E. SHAW.

Medico-Legal.

MEMORIAL TO A COUNTY COURT JUDGE.

A short time ago Miss Cropper, of Horsham, sued Dr. H. F. Stokes, of Canonbury, in the Clerkenwell County Court for the return of £17. The plaintiff's allegation was that Dr. Stokes, who had attended her late father, promised that if a cheque was given to him for £42 he would return £17, that being the difference between the charge of 5 guineas a visit and 3 guineas a visit; Dr. Stokes in evidence denied that he ever consented to this arrangement. In giving judgement for the plaintiff for the amount claimed Judge Edge said he did not believe Dr. Stokes's evidence and refused leave to appeal.

On April 6th Mr. H. F. Dickens, instructed by Messrs. Hempson, solicitors to the Medical Defence Union, read a memorial to the judge, in which the signatories said they were deeply concerned to learn that in giving judgement his Honour did not believe the evidence given by Dr. Stokes, inferentially imputing perjury to him. They did not presume to discuss the merits of the case or to question the judgement; but it was quite incredible to them that Dr. Stokes could have committed perjury. Later the memorial urged that any inaccuracy in Dr. Stokes's account must have been the result of misunderstanding as to what passed between himself and the plaintiff's witnesses, and could not have been intentionally untrue, and that his omission to answer the letter could not have been due to any wrongful intention. The memorial was signed, among others, by Sir Douglas Powell, Sir Thomas Barlow, Sir Victor Horsley, and other medical men, besides clergymen and others.

Judge Edge said that in the course of his experience he had never heard of a proceeding of the kind before—that was, the presenting of a memorial to a judge who, in the course of his judicial duties, thought it his duty to make observations on the evidence given by a witness before him. In that case he was glad to have that memorial, because if he had unintentionally done a wrong, and certainly without any feeling against Dr. Stokes in the least except such as was caused by the manner in which he gave his evidence, then he was glad to be set right. In the present case all the parties concerned were equally unknown to him, and his observations were made solely on the evidence before him, and were made because he considered it his imperative duty to make them. Dr. Stokes, it appeared, was and had been long known to many learned and distinguished men, and they believed him incapable of stating that which he knew to be untrue, and that the evidence given before him upon which he commented so strongly was given under misapprehension and confused recollection, but believed by him to be true. There were circumstances in the evidence given by him which upon reflection led him (the Judge) to think that such might have been the case. He noted at the time and commented upon it in his judgement, that the evidence given by Dr. Stokes did not tally with the instructions given to his learned counsel. If his memory failed him as to the instructions given to his solicitor, though some considerable time before the trial, how much more might his recollection of circumstances which had occurred long before that have been likely to have become confused and blurred? The gentlemen who had signed the memorial thought that in the stress of carrying on a large practice that was a solution of his apparent untruthfulness, and he was quite willing to accept that explanation.

DAMAGES FOR IMPURE WATER.

An action was tried in the King's Bench Division of the High Court on March 27th, in which the defendants were the authorities of the Three Counties Asylum in Bedfordshire, and the plaintiff the widow of the farm bailiff of that institution. She claimed damages on the ground that the defendants had brought about her husband's death by negligently supplying the cottage in which he lived with impure water. The claim was further supported by an allegation of negligence in respect of the medical treatment furnished by the defendants' officers, but in the course of the proceedings this was withdrawn. The evidence given in the case, as reported in the *Times*, was to the effect that the official residence of the deceased was supplied with water from two wells, such water being passed through a softening apparatus, and then into a water tower before distribution to the asylum and its annexes. It was contended that there was communication between these wells and the earthenware-pipe drains through which the sewage of the asylum passed, and that the water was habitually unfit for use, that complaints had been made in respect of it, and, finally, that it was from the water supplied to his house that the deceased contracted the typhoid fever from which he eventually died. The defendants, on the other hand, suggested that the deceased must have contracted his disease during a short holiday at Yarmouth or in some way other than from the water supply of his cottage. They denied that there had been any communication between the wells and the drainage system which could have brought about such contamination of the water as was alleged to have existed, and suggested that the colon bacilli found in it might have been brought in by rats and not by sewage. It was argued, too, that had the deceased's illness been due to the water he drunk at the asylum there must have been a general outbreak at the asylum, and that this was not the case during the summer of 1906, in which the deceased fell ill, though it seems to have been admitted that a month later some fifteen or sixteen cases of enteric fever occurred among the inmates. The case ended in the jury finding a verdict for the plaintiff, and awarding her £650 damages.

WORKMEN'S COMPENSATION ACT.

R. N. L.—If our correspondent will furnish us with full particulars of the case we will endeavour to answer his question; but, on the information to hand, we are unable to add to our reply of March 21st—namely, that influenza is not an accident within the meaning of the Act.

CONTRACTS.

Monk.—In reply to the further question of our correspondent we are advised that in the case of a general contract, whether the latter be carried out by the contractor himself or by his agent, there would be no variation in the obligations created by the contract, so that the legal position of the contractor would be the same as that of his servant, so far as our correspondent is concerned.

PARTNERSHIP ACCOUNTS.

Saracen.—A. and B. are partners in proportion of two-thirds and one-third respectively. In their agreement, B. has the right to buy up to a half on the basis of two years' purchase at the end of five years, calculated on an average of the receipts of the last three years. The five years are now just completed. Many accounts are still out and owing, while accounts for the last three months have not yet been sent out. Ought they to be calculated on the last three years when settling the amount to be paid to B.?

*** No; the amount to be paid to B. ought to be calculated only on the actual receipts during the last three years.

Alpha inquires (1) what deductions should be made from the gross receipts in estimating the value of a practice? (2) When the outgoing gives the incoming partner an introduction, what portion of the receipts does each receive during the time of the introduction?

*** (1) No deductions are made from the gross receipts in estimating the value of a practice. (2) During the period of introduction, the profits are either (*a*) shared equally between vendor and purchaser; or (*b*) for the first half of the time the vendor takes all the receipts and pays all expenses, and for the last half the purchaser; or (*c*) one of them takes all the profits, paying all the expenses, and making an allowance to the other.

SUDDEN DEATHS IN NURSING HOMES.

Coroner writes: The following facts have recently come under my notice. A man suffering from villous growth in his bladder was under the treatment of a medical practitioner for some weeks. The patient decided to discontinue the

treatment, and the practitioner ceased his attendance. Two days later, in the evening, the practitioner received a telegram asking him to meet a gentleman from London in consultation at 10 o'clock the next morning. The practitioner, being very busy, was unable to do this, but received a letter from the London gentleman, who proved to be a Fellow of the College of Physicians, attached to a London hospital as Obstetric Physician, and Lecturer on Obstetrics. The letter stated that a diagnosis of stone in the kidney had been made, and that the patient had been advised to go to a nursing home in London, and place himself under the care of a surgical friend of the obstetrician. The patient was subsequently removed to London, to a nursing home, in a motor car, a distance of over 20 miles, and died during the night. A death certificate is refused in London, and the patient's wife is informed that she must obtain this from the practitioner in the country. The latter refused to do this without the consent of the coroner, on the ground that he had not seen the man during the last week of his illness, and was in ignorance of his actual condition at death, and the circumstances which caused death. On the day following the death the practitioner visited the widow in her home, and found that the body had already been removed there. The certificate of death was eventually signed by another practitioner, who was called in to decide whether the patient was in a fit state to be taken to London, and who had not attended the deceased in his last illness. The condition of affairs disclosed appears to me to be one which is dangerous, because it seems quite possible for inquiries into cases of sudden death by the coroner to be very easily prevented by the removal of the body to any part of the country before a certificate of death has been obtained.

*** The statement of our correspondent reveals a method of procedure which appears to us altogether unsatisfactory. It might indeed be inferred that the authorities of the nursing home in London, desirous that the sudden death should not be registered as occurring at their institution, quickly dispatched the body of the deceased back again to where the patient had come from the day previously after a journey of 20 miles in a motor car. If the deceased had had medical attendance at the home and died there, it would have been within the province of the medical man who last attended him there, presuming the death arose from natural causes, to have given the necessary certificate of the death. On the other hand, the patient having died so soon after admission, he may not have been seen alive by any of the medical staff, and that being so the question arose as to what really caused the sudden death. If this were so it would have been the duty of the proprietor of the home to acquaint the coroner of the district that a patient had died suddenly and that the cause of death was not known. Due inquiries would then have been made. Instead of this, the body is at once sent back to the country, and ultimately a certificate is procured from a medical man who saw the patient once alive with respect to his removal in the motor car to London. We presume the deceased was buried before the facts came to the notice of "Coroner," otherwise he would have made preliminary inquiries and ascertained whether an inquest was required or not.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

A QUESTION OF FEE.

H.—B. has been called in consultation, and has further performed an operation. He is therefore entitled to a special fee. Without knowing more of the circumstances of the patient, it would be impossible to specify the exact fee, but it may be suggested as a basis that it should be at least equal to the fee charged by A. for the whole attendance.

CAVEAT EMPTOR!

W. G.—It would be highly dangerous to issue anything in the way of a public warning or advertisement, and our correspondent should be careful what he says to any intending purchaser, even if asked his opinion, although he might express the hope that he would not do anything hurriedly; but he must not allow his own feeling of soreness at having made a bad bargain to lead him into imprudent action, which would look like revenge, and be sufficiently open to the suspicion of malice to make a jury give heavy damages against him if he had to defend his proceedings.

PUBLIC APPOINTMENTS.

J. P.—When the vacancy is formally announced a candidate will be fully justified in bringing his claims before the persons by whom the appointment is made.

SUPERSESSION BY A CONSULTANT.

VERTEX.—B was precluded by every principle of professional propriety from taking over the case. We think A. should first write for an explanation, and call upon B. to give up the case. If B. will not do this, the matter should then be referred to the Branch Ethical Committee.

FEES.

FERRY.—Half a guinea would be a moderate fee for each report. The charge for attendance ought to be proportional to the amount of time which the case has required; half a guinea might perhaps be sufficient for ordinary visits, but night visits and those that have made an extraordinary demand upon our correspondent's time should be charged more. A special fee of 2 guineas might quite well be charged for attendance at the operation.

ADVERTISING A SPECIALITY.

GOOD FORM.—There are obvious objections to systematic advertising of a speciality by placing an announcement of it upon the doorplate or prescription paper. A properly-equipped practitioner will find that his competence to undertake special lines of practice becomes known through his colleagues and patients without any direct form of advertisement. No obstacles exist where a speciality is practised by itself, but if it is hoped to combine it with general practice there are difficulties in obtaining support from neighbouring colleagues, who are mistrustful of allowing their patients to pass into the hands of another general practitioner. We should advise our correspondent to be content to make known his desire to give special attention to these diseases by reading papers and demonstrating cases at local medical societies.

DOCTORS AS AGENTS FOR TEA.

A MEDICAL correspondent sends us a circular received from the representative of a tea company offering to appoint him an agent for "the sale of their well-known blend of tea amongst his patients." He makes no comment upon this proceeding, but he evidently regards it, quite properly, as an unmitigated piece of impertinence, and we have no doubt that all members of the medical profession who receive this circular will take the same view. We have had brought to our notice attempts to enlist medical practitioners as agents for mineral waters, wines, and cigars. This is the first occasion on which we have known them asked to support the tea trade, but we trust the reception which this attempt will meet will discourage enterprising tradesmen from repeating this offer.

DISTRICT NURSES AND MIDWIFERY CASES.

TRIBUNE writes: I note that in answer to an inquiry on an ethical point (p. 784) you say the district nurse should have sent the order to the ordinary medical attendant of the family. With this few will disagree, and I should like to hear your opinion upon the following arrangements. There is in this city a district nursing association supported largely by voluntary subscriptions. In addition to ordinary district nurses for medical and surgical work, the association supplies a trained midwife to those who undertake to pay the fee of 10s. 6d. In several cases of late patients of mine have announced the wish to be attended by this midwife, and have asked whether in case of medical help being needed I would come if sent for. On my agreeing to this they have gone to the nurses' home, engaged the attendance of the trained midwife, and stated that if further help was wanted I, as their regular attendant, had agreed to come. Objection has at once been made by the matron to the effect that Dr. So-and-So was "their doctor" for that district, and that the patient had better accept him. On my patient objecting that she would prefer to have the doctor she knew, it was further pointed out that if their doctor came the fee would be only 10s. 6d., whereas if I came I should probably charge more. In other words, the inducement of cheapness is held out to oust one medical man from a family which he has possibly attended for years, and to introduce a rival in the most intimate of all professional relations. I do not think any comment of mine is needed to expose the outrageous unfairness of this proceeding, but I should be glad of your advice as to the course proper to be taken in order to protect myself and my friends from this kind of thing.

*** Such a state of things calls urgently for united action on the part of the local medical profession. We would suggest that a meeting of the Division should be called at which a resolution should be submitted condemning the system adopted by the local district nursing association and urging that there should be no interference between patients and their ordinary medical attendants, and that the association should do its utmost to maintain friendly co-operation between the whole of the medical profession in the city and the district nurses, the value of whose help in sickness is gratefully recognized.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Distribution of Prizes.

On April 6th Sir Dyce Duckworth, M.D., LL.D., visited the Royal Hospital, Haslar, to distribute the prizes won by recently-joined surgeons, R.N., at the termination of the course of instruction. Sir Herbert Ellis, K.C.B., the Medical Director-General of the Navy, was also present. The prizes were awarded as follows:

The Gold Medal for Hygiene, etc., to Surgeon G. B. Scott of St. Bartholomew's Hospital.

The Silver Medal and books for Practical Analysis, etc., to Surgeon J. McCutcheon of Edinburgh University.

The Microscope for Tropical Medicine, etc., to Surgeon G. Carlisle of Guy's Hospital.

The following is the list of surgeons who passed out, together with the combined marks obtained at both the London and Haslar examinations.

		Marks.			Marks.
1.	Surgeon Carlisle ..	... 4,468	6.	Surgeon Babington	... 3,537
2.	,, McCutcheon	... 4,127	7.	,, Wright ...	... 3,373
3.	,, Scott ...	... 3,974	8.	,, Carson ...	... 3,188
4.	,, Holl	... 3,793	9.	,, Hamilton ..	... 2,907
5.	,, Petch ...	... 3,593			

After distributing the prizes Sir Dyce Duckworth delivered a short address, in the course of which he said that the duty that he had just discharged had been especially pleasing to him, because it recalled memories of the time when he joined the Royal Naval Service. The conditions were very different at that time: there was then only one examination, held by a Medical Board at Somerset House; candidates had to translate a portion of Latin from Gregory's *Conspectus*, and prove their efficiency in medicine, surgery, and materia medica by papers and a viva voce examination. He had been appointed to Stonehouse Hospital, Devonport, but never served afloat, although he had gained valuable experience under one of the ablest and kindest inspector-generals, the late Dr. Stewart, well known for his splendid service in combating yellow fever in H.M.S. *Eclair*. Sir Dyce Duckworth said that his naval career had been brought suddenly to an end by his appointment as medical tutor in the school of St. Bartholomew's Hospital. Many years later his connexion with the service was resumed by his appointment to be an examiner in medicine for naval candidates. He congratulated all officers present on having entered the service, for to serve in it even for a short time was to be inspired with the spirit of discipline and patriotism which no other calling could so well supply. Sir Dyce Duckworth added that he had perhaps inherited such feelings from his grandfather, who had been surgeon of H.M.S. *Leander* in Nelson's time, and had kept very elaborate private journals. Passing on from these reminiscences, he asked his hearers to bear in mind that as medical officers they would be expected to give proof of their skill and quality as members of their profession and strenuously to maintain the highest standard of professional ethics and dignity. As wardroom officers they would be brought into daily contact with the best and ablest colleagues in the ship. If he showed qualities of good comradeship, good temper, and the grace of self-effacement, a surgeon might become one of the happiest and best-loved men in the ship. A lesson he had learnt in the service was never to be in a hurry about anything, and never to vex himself about position or to be unduly punctilious about precedence. Practically, a naval surgeon could make for himself his own position by common sense and cheeriness, and would then find that he was amply appreciated and wholesomely popular among all ranks. He asked them not to expect too much, not to grumble, but to take the rough with the smooth, always being ready and dependable to fulfil any duty or orders, however irksome or unpleasant. The medical profession was everywhere and always one of self-sacrifice and self-denial. The naval surgeon must remember that he was the only representative on the ship of a noble profession, and should always inspire respect; he was expected, in virtue of his calling, to take the high line in all walks of life, and by prudence personally, and by precept, to set a good example with respect to the employment of alcohol, so often a snare, especially to young men. There was nowadays no reason why naval surgeons should fall behind in professional knowledge and experience, but they would do so if they did not always do their best work in the best way. They would have time for reading, study, and cultivation of the mind, and no cruise could be dull or devoid of interest to men of education. He recommended them to work diligently at one or more modern languages, proficiency in which would assuredly bring them forward, and add largely to the pleasure and interest of visiting foreign countries. His advice might be taken as unbiassed, but he was speaking with knowledge of the life and career of some who had been colleagues and pupils in past years, who had reached high places in the splendid service, and he had, alas! also known some who had failed in making their position all that it might have been. He was reminded of one who was once a naval surgeon, but who rose afterwards to the highest position in a sister service: he was asked at the end of his long and distinguished career if he still believed in anything. "Yes," he said, "I still believe in a gentleman." Sir Dyce Duckworth agreed with that grand old man, Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., whose portrait adorned the neighbouring room. The honour of their profession and the honour of the uniform they were privileged to wear compelled them to exemplify that character in all the situations in which they might be placed in any part of the world; duty first and always, the highest skill and efficiency they could exert, a pride in their work and perseverance in it, with patience and honourable ambition, would not fail to secure for any one of them the esteem and regard of their commanding officers, and provide them with ever-increasing spheres of usefulness and responsibility.

THE ZAKKA KHEL EXPEDITION.

The *Gazette of India*, under date Calcutta, March 20th, publishes a dispatch from Sir James Willcocks, who commanded the force sent against the Zakka Khel, detailing the operations undertaken against that tribe. The Governor-General concurs in Lord Kitchener's favourable opinion of the soldierly conduct displayed by all ranks throughout the operations. Among the officers brought to favourable notice by Sir James Willcocks is the name of Colonel M. W. Kerin, R.A.M.C.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF ABERDEEN.

The Carnegie Trust.—New Scheme of Allocation.

The Carnegie Trustees have now issued their new allocations of grants for the next five years. September, 1907, saw the end of the first quinquennial scheme, and an interim allocation was made for the period up to September, 1908, the trustees meantime instituting inquiries as to the needs of the various universities and colleges, through the medium of a subcommittee consisting of Lord Elgin, Lord Balfour of Burleigh, and Mr. Thomas Shaw. A new scheme to provide for a period of five years from September, 1908, has now been completed, and under this arrangement, in addition to large grants to the University, the projected Technical College, and the Aberdeen and North of Scotland College of Agriculture (which is housed in the University buildings) will participate in the disbursement of the funds of the trust. The Technical College receives a grant of £2,000 spread over five years, and the Agricultural College a grant of £1,000 in yearly instalments of £200. The University receives an annual grant of £8,000 for five years. The trustees have gone on the principle of giving grants for building or permanent equipment or endowment, but money is also given, though sparingly, towards current teaching expenditure. In view of the recent extension, little is needed at Aberdeen University for buildings, and here we find that the money is almost entirely allocated to equipment or endowment. The lectureships in education, German, political economy, and constitutional law and history have been selected as suitable for endowment, and the trustees are to give £1,500 a year towards the endowment of education and German—that is, £7,500 to each—and £1,000 a year towards the endowment of political economy and constitutional law and history—that is, £5,000 to each. The library, under the new scheme, will receive £1,000 a year instead of £750. The details of the grants to Aberdeen University are as follows:

	Annual. £	Total. £
Library	1,000 ...	5,000
Permanent equipment	1,000 ...	5,000
Teaching—		
(a) Endowment—		
(1) Lectureship in Education ...	1,500 ...	7,500
(2) Lectureship in German	1,500 ...	7,500
(3) Lectureship in Political Economy	1,000 ...	5,000
(4) Lectureship in Constitutional Law and History	1,000 ...	5,000
(b) Income—		
(1) Lectureship in Education ...	300 ...	1,500
(2) Lectureship in German	300 ...	1,500
(3) Lectureship in Political Economy	250 ...	1,250
(4) Lectureship in Constitutional Law and History	150 ...	750
	£8,000 ...	£40,000

Under this new quinquennial arrangement Aberdeen University receives £1,000 a year less than under the last scheme, and similar reductions appear to have been made in the grants to the other Scottish universities.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., CH.B. (B., *Botany*; Z., *Zoology*; P., *Physics*; C., *Chemistry*).—M. J. Aitken (B., P.), J. Angus (B., P.), K. R. Archibald, M.A. (B.), C. Averill (Z.), R. B. Pain (P.), A. Baird (B., Z.), J. G. Becker (Z., C.), S. H. Bloom (P.), S. Blumenfeld (Z., C.), A. Brown (Z., C.), R. A. Brown (P.), W. Brown (Z., C.), J. S. Buchanan (Z.), E. T. Burke (Z., C.), N. Cameron (B., C.), J. Campbell (P.), J. M. Clark (P., C.), G. Cochrane (B.), R. C. Corbett (Z.), D. A. Cush (B., Z.), G. Dalziel (B., P.), A. R. Davidson (Z., P., C.), W. T. G. Davidson (Z., C.), J. H. Dible (Z., C.), W. B. Drummond (Z., C.), J. Dunbar (Z., C.), R. Findlay (Z., C.), J. M. Forsyth (C.), W. Forsyth (Z., C.), W. Fraser (Z.), J. E. Fyfe (Z., C.), L. L. Fyfe (P.), J. J. Gibb (B., P.), A. M. Gibson (Z., C.), A. Glenn (Z., C.), C. H. Haddow (B., P.), J. R. Haldane (C.), J. C. Hall (B., C.), J. Hamilton (Z.), D. C. Hayes (B., Z., P.), A. G. Henderson (C.), P. Henderson (B., Z.), J. G. Hendry (B., Z., P.), J. W. W. Hewitt (Z. C.), T. P. Inglis (Z.), A. J. Joubert (Z., C.), C. J. Kirk (C.), R. P. A. Kirkland (Z., C.), J. A. Kruger (C.), W. J. B. Lavery (Z., C.), F. Lawrie (Z.), N. V. Lothian (Z., C.), J. A. M'Connochie (Z., C.), J. F. M'Creath (Z., C.), J. R. M'Curdie (Z., C.), N. M'Farlane (Z., C.), C. A. M'Guire (Z., C.), J. G. M'Kinna (Z., C.), C. Mackinnon (B., Z., P., C.), G. D. M'Lean (Z.), J. M. Macpherson (Z., C.), T. Martin (Z., C.), O. H. Mavor (Z.), W. Montgomery (Z.), N. Morison (P.), A. Muir (B.), M. Murphy (B., P., C.), A. S. Neilson (B., Z., P.), J. B. Orr, M.A. (Z., C.), J. Purdie (Z., C.), J. C. Pyper (Z., C.), J. F. Quigley (Lambhill) (Z., C.), J. F. Quigley (Rutherglen) (B., P.), H. Y. Riddell (P.), E. Robinson (Z., C.), J. H. Robertson (Z., C.), J. I. Robertson (Z.), S. Rutherford (B., Z., C.), F. Shearar (Z.), N. I. Sinclair (B.), J. F. M'G. Sloan (Z., C.), H. C. van der W. Smit (Z., C.), J. Smith (B., Z.), A. R. B. Soga (Z., C.), R. A. Steven (B.), L. T. Stewart (B., Z.), R. Stewart (Z., C.), W. P. A. Stewart (Z., P.), A. H. Taylor (Z., C.), W. Taylor (Z., C.), J. C. T. Teggart (Z., C.), E. G. Y. Thom, M.A. (Z., C.), E. N. Thomson (C.), T. Waterhouse (C.), G. M. Whish (Z., C.), W. H. N. White (B.), W. Whitelaw (B., Z., P., C.), W. B. Wilson (Z., C.), W. L. Wilson (B., P.), W. F. Wood (C.), W. P. Yates (B., P.), F. H. Young, M.A. (C.). Women.—J. R. Anderson (Z., C.), A. B. Auchencloss (P.), M. M. Curtis (B., C.), J. M. Davidson (Z., C.), J. K. M'E. Hunter (Z., C.), M. L. Kirkwood (Z., C.), B. Macgregor (P.), J. M. M'Kechnie (Z., C.), E. B. Orr (B., Z.), I. J. Stark (P., C.), P. Stewart (Z.), M. B. Thomson (P.), M. Walker (B., P.).

SECOND M.B., CH.B. (A., *Anatomy*; P., *Physiology*; M., *Materia Medica and Therapeutics*).—T. Adam, M.A. (P., M.), D. R. Adams (A., M.), A. C. Anderson (P., M.), D. Arbuckle (A., M.), J. C. Auchencloss (A.), C. Auld (A., P.), R. B. Austin (P., M.), J. B. Baird, B.Sc. (A., P., M.), C. S. Black (M.), J. Broadfoot (A., P., M.), A. H. Brown (M.), J. Buchanan (A., P., M.), J. A. S. Burges (P., M.), T. S. Campbell (A., P., M.), W. G. Clark (A., P., M.), R. H. Deans (A., P.), J. T. Dick (A., P.), D. Downie (P., M.), P. Drummond (P., M.), R. Drummond (A., P., M.), A. M. Dunlop (M.), J. Dunlop, M.A. (A., P.), W. D. Dunlop (A., P.), A. S. Findlay (A., P., M.), N. Gebbie (A., P., M.), R. Gilchrist (A., P., M.), J. Graham (A., P.), J. Gray (A.), A. W. Gregorson (A.), A. C. Haddow (A., P., M.), G. Haddow (P.), A. B. Hamilton (P.), J. Jack (A., P., M.), T. J. Kirk (M.), A. Leishman (M.), J. Macallan (P., M.), D. C. Macdonald (A., P., M.), I. Macdonald (A., P.), M. A. MacDonald (A., P., M.), W. Macewen (A., P.), A. Macintyre (A., P., M.), B. M'Kean (A., P., M.), J. G. Mackenzie (P., M.), T. J. Mackie (A., P.), W. M. M'Kie (M.), M. Mackinnon (P., M.), A. B. MacLean (A., P.), W. A. Maclennan (A.), A. M'Leod (P., M.), M. H. M'Leod (M.), A. T. M'Whirter (A., P.), F. W. Martin (M.), A. Miller (A.), C. L. Miller, M.A. (A., P., M.), R. S. Miller (P.), J. Mitchell (P., M.), J. M'I. Morgan (M.), J. Mowatt (A.), A. R. Muir (A. P. M.), C. Nicholson, M.A. (M.), J. Paterson (P., M.), T. Paterson (P.), R. R. K. Paton (P., M.), J. Penman (A., P., M.), A. Poole (P.), A. S. Richmond (P.), D. W. Ritchie (A., P., M.), R. C. Robertson (A., P., M.), J. I. Russell (A., P.), J. H. N. F. Savy (A. P.), J. M'A. Scott, M.A. (A., P., M.), J. M'N. Scott, M.A. (A., P., M.), J. D. S. Sinclair (A.), W. Sneddon (M.), G. R. Spence (P., M.), R. Steel (A.), E. E. Stewart (A.), J. Stewart (A., P., M.), T. L. G. Stewart (P., M.), G. I. Strachan (A., P., M.), A. E. Struthers (P., M.), W. O. Taylor (A., P., M.), S. V. Telfer (A., P., M.), H. E. Whittingham (A., P., M.), J. Williamson (Holytown) (M.), G. J. Wilson (A., M.), H. Yellowlees (P., M.). Women.—C. Barrowman (M.), L. E. Dodge (P.), F. A. Gallagher (P. M.), H. S. Keer (M.), A. M. M'Michael (A., P., M.), J. D. M'Whirter, M.A. (M.), M. Muir (M.), M. A. Pilliett (A., P., M.), F. E. Sexton (A., P., M.), J. Wallace (A.).

THIRD M.B., CH.B. (P., *Pathology*; M., *Medical Jurisprudence and Public Health*).—A. Aitchison (M.), W. S. Alexander, M.A. (P., M.), J. Allan (P., M.), J. G. Anderson (P., M.), W. Anderson (P.), W. H. S. Armstrong (M.), A. Ballantyne, M.A. (P.), D. Barbour (P.), E. Barnes, M.A. (M.), A. M. Bayne (P.), D. M. Borland (P.), M. W. Browdy (P., M.), D. Y. Buchanan (P., M.), C. J. B. Buchheim (P., M.), J. A. G. Burton (P., M.), J. Cairns (P., M.), J. Cameron (P.), A. H. Clark (P., M.), A. B. Cluckie (P.), J. L. Cochrane (P., M.), C. Duguid, M.A. (P., M.), J. K. Dunlop, M.A. (P., M.), D. Fisher (P.), T. L. Fleming (P.), T. S. Forrest (P.), W. L. Forsyth (M.), R. Gale (P., M.), W. E. Gemmell (P.), A. G. Gilchrist (P., M.), R. D. Goldie (P., M.), G. S. Gordon (P., M.), A. T. A. Gourlay (P.), E. O'D. Graham (M.), J. Granger (P., M.), K. C. G. Gray (P., M.), J. M'L. Hendry (M.), D. Howie (P.), B. M. Hunter (P., M.), J. W. Jones (P.), J. P. Kinloch (P., M.), D. N. Knox (P., M.), W. T. Lindsay (P., M.), W. M'Adam, M.A., B.Sc. (P.), D. C. M'Ardle (M.), W. C. Macartney (M.), R. M'Carlie (M.), W. M'Connell (P., M.), A. M. Macdonald (P.), D. M'Intyre (P., M.), R. B. F. M'Kail (P., M.), G. Macleod, M.A. (P., M.), C. Macmillan (P., M.), J. W. M'Nee (P.), J. H. M'Nicol (P., M.), A. M'Pherson (P.), M. M. MacRae (M.), T. Marlin (P., M.), W. A. L. Marriott (P., M.), H. B. W. Morgan (P.), F. Murchie (M.), F. L. Napier (P.), W. Niccol (P., M.), C. M. Nicol (P., M.), D. Purdie (P., M.), J. Robertson (P., M.), H. G. Robinson (P., M.), A. Roemmele (P., M.), W. Rutherford (P., M.), W. W. Scott (M.), W. A. Sewell (P., M.), J. J. Sinclair (P., M.), J. S. Somerville (P., M.), W. Stevenson (P.), A. Stewart (P., M.), A. F. Stewart (P., M.), D. C. Suttie (P., M.), R. Sweet (P., M.), D. M. Taylor (P.), W. Telfer (P.), A. G. W. Thomson (P.), C. H. Wagner (P.), G. Wallace (P., M.), J. B. Whitfield (P., M.), H. J. Windzer (P., M.), J. Y. Wood (P.), D. Yellowlees (P.), D. Young (P., M.). Women—E. A. Hay (P., M.), M. C. Mitchell (P., M.), J. D. Rankin (P.), M. E. Robertson (P., M.), O. Robertson (P.), M. E. Rutherford (P., M.), J. H. Stewart (P.), E. M. Walters (P., M.).

The following passed with distinction in one or more of the subjects:

FIRST M.B., CH.B.—S. Blumenfeld, N. V. Lothian, J. H. Robertson, W. B. Wilson.—Janet R. Anderson, C. Averill, J. H. Dible, Maggie L. Kirkwood, J. R. M'Curdie, C. A. M'Guire, T. Martin, J. B. Orr, M.A., J. C. Pyper, W. Taylor, W. Whitelaw, J. Campbell, J. F. Quigley (Rutherglen), Mary B. Thomson, Margaret Walker, R. P. A. Kirkland, G. M. Whish.

SECOND M.B., CH.B.—E. H. Deans, T. J. Mackie.—J. T. Dick, M. A. MacDonald, W. Macewen, J. B. Baird, B.Sc., H. E. Whittingham, J. Buchanan.

THIRD M.B., CH.B.—W. M'Adam, M.A., B.Sc., G. Macleod, M.A., H. B. W. Morgan, C. M. Nicol, J. G. Anderson, D. C. Suttie.

UNIVERSITY OF LIVERPOOL.

APPOINTMENTS COMMITTEE.

THE Council of the University has organized an Appointments Department with a view to securing appointments for its graduates both at home and abroad. No fee is charged to employers, and no candidates are recommended except those personally known to members of the University staff, and upon whom every reliance can be placed. Among the graduates seeking employment are fully-qualified medical men. The Committee will be glad to receive notice of vacancies. All communications should be addressed to the Secretary, Appointments Committee, the University, Liverpool.

UNIVERSITY OF DURHAM.

THE following candidates have been approved at the examination indicated:

THIRD M.B., B.S.—*J. E. Dainty, W. Barkes, J. A. Caulerick, H. A. Cooper, H. F. Iliewicz, C. Marks, Theresa de G. Miller, J. A. Sacco, W. Sacco, R. H. Smallwood, M.A., W. B. E. Unthank, C. L. Wigan, G. H. Wood.

* Second Class Honours.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

COMPENSATION FOR LOSS OF OFFICE.

H. states that the guardians of his district have under consideration a proposal to supersede the present medical officers by appointing others who are to give their full time to their work. He asks, "What scale of compensation is usual in such cases?"

*** This is ruled by Clause 8 of the Superannuation Act, which provides that any officer who has not become entitled to superannuation allowance, and who loses his office by reason of reduction of staff or by any alteration of areas or boundaries or otherwise ceases to hold office by reason of any cause whatever other than his own misconduct or voluntary resignation, shall be entitled to receive a sum equal to the amount of all his contributions to any fund under this Act. There is a further provision that in any such case of loss of office, the guardians may also if they think fit, with the sanction of the Local Government Board, grant to the officer a gratuity not exceeding twice the amount of his salary and emoluments during the year ending on the Quarter Day immediately preceding the day on which he ceases to hold office. It should be noted that superseded officers can claim as their right a return in full of all their contributions paid towards superannuation, but that any gratuity for loss of office is dependent on the will of the guardians and the subsequent approval of the Local Government Board.

DUTIES OF WORKHOUSE MEDICAL OFFICERS.

X. writes as follows: Does it come within the duties of workhouse medical officers to furnish a lunacy certificate without a fee for the removal of a lunatic from a workhouse to a county asylum?

*** This form of certifying is not one of the duties of a workhouse medical officer, who becomes empowered to certify any case of pauper lunacy for removal to asylum only when authorized or ordered to do so by the magistrate who signs the order for the patient's removal thereto and his reception therein. The magistrate so acting can call to his assistance any medical practitioner he thinks fit to perform this special duty, and has, moreover, the power to order the guardians to pay him a reasonable fee for the assistance he renders by certifying in the form required by the Lunacy Act, 1890.

OBITUARY.

FREDERICK JOHN ALLAWAY,

WHANGAREI, NEW ZEALAND.

We regret to report the death of Mr. Frederick John Allaway, of New Zealand, a student who was engaged in his last year of medical work in Dublin. He had been appointed a resident pupil at the Richmond Hospital only two months ago, and was in charge of cases in the fever block. On Sunday week last he was taken ill, and cerebro spinal meningitis was diagnosed. On Monday he became insensible, and he died on Friday. His death is deeply regretted by the staff and the students, and on Monday last a large number of the students and the whole of the physicians and surgeons attended his funeral to Mount Jerome Cemetery. Mr. Allaway gave excellent promise as a student of medicine, and the sadness of his death is accentuated by the facts that he was the only child of a widowed mother, that he leaves a young widow with two infant children, and that he died far away from his home and relatives.

Mr. William Clarkson, L.F.P.S.Glasg., 1856; L.R.C.P. Edin., 1874, died at his residence, West View, Morpeth, on March 6th, in his 79th year. He was a native of Wiston, in the Upper Ward of Lanarkshire. After taking several classes of the Arts Course in the University of Glasgow, he turned to the study of medicine there, and obtained distinction in more than one branch of the science. Having obtained the first-named licence, he held appointments and assistantships at Sanchie, in the Island of Mull, at Maidstone, and at Dudley, under the late Dr. Davison, of Seaton Delaval, Northumberland. From there he went to Morpeth as Surgeon to the Dispensary in 1865. While there an outbreak of small-pox and an epidemic of scarlet fever occurred simultaneously, during which there were many fatal cases. Not one of these happened among the cases he treated although these were all among the poorer class of the people and in the less salubrious environments. Mr. Clarkson's marked success in treating his cases secured for him at once considerable patronage when he left the dispensary and became a private practitioner. His exposure of the insanitary conditions existing where many of his dispensary patients lived led to his being appointed medical officer of health for the borough. Other public appointments soon followed. Among them were Surgeon and Physician to the Union Workhouse, Medical Officer of Health to Morpeth Rural District Council—a very extensive and populous area, which included Ashington, said to be the largest colliery village in the world. It was separated from the Rural District, and is now an Urban District with a population of 20,000. Mr. Clarkson's annual reports as Medical Officer of Health were considered models of lucidity and valuable comment and suggestion. He was also Poor-law Medical Officer and Vaccination Officer for several large parishes in the Morpeth Union. Only these last did he retain till his death. On resigning his appointment for the borough he stood as a candidate for the Town Council, was returned, served for several years as a Councillor, and twenty years ago filled the office of Mayor. He discharged the duties thereof with advantage to the town and credit to himself. His was a striking personality, and his genial, cheery, optimistic spirit made him liked by all with whom he was brought in contact. Of late years he turned his comparative leisure to good account by lecturing on behalf of social, philanthropic, and benevolent institutions and objects. His subjects were particular classes of Scottish songs—Jacobite, for instance—and specially those of Robert Burns, of whom he was an ardent admirer. Endowed as he was with a fine voice and delicate ear, he was able to add to the attractiveness of his lectures by singing illustrative songs in excellent style.

Lieutenant-Colonel Edward Bovill, M.D., Indian Medical Service (retired), died on March 1st, at the age of 61. He joined the Bengal Medical Department as Assistant-Surgeon, October 1st, 1872, becoming Surgeon-Lieutenant-Colonel, October 1st, 1892, and retiring from the Service in 1902. He served with the Duffla Expedition in 1874-5.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* British Medical Journal *alone unless the contrary be stated.*

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look at the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not at his private house.

Communications respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

Telephone (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

F.R.C.S. desires to hear of a suitable home for a case of rheumatic arthritis in a young man of very limited means.

Experimenter asks for information as to the dosage of fibrolysin, and as to how long its employment may be continued. Are there any risks attached to its prolonged use?

Eosinophilia.

W. A. R. asks how long the condition of eosinophilia may persist in the blood after the expulsion of a tapeworm from the bowel. His patient was treated with male fern in the first week of December last and the worm was expelled, but the head was not found. He is still (April 3rd) very anaemic, and the eosinophiles in the blood are over 20 per cent. The patient has not seen any segments of the worm since December.

*** In cases of helminthiasis the eosinophilia may remain for many months after the primary cause has been removed, and our correspondent's patient may belong to this category. But as the head of the worm has not been found, there is another possible explanation which more readily suggests itself.

Coffee and Intestinal Haemorrhage.

Caffeine writes: I should like to know if any of your readers have in their practice met a case of intestinal haemorrhage arising from excessive use of coffee. I have been quite unable to ascertain any reference to this subject in recognized medical works on intestinal disorders; but in a book on domestic medicine, which by chance I cursorily read, I found a statement to the effect that coffee ought to be avoided by those who have a tendency to congestion of the abdominal viscera, as this beverage, unless taken in the strictest moderation, often causes intestinal haemorrhage in such cases. I recently treated a case which apparently gives some support to this warning. A man, aged 58, very temperate and careful in his diet, except perhaps in the matter of black coffee, who for more than thirty years was obliged to take a mild aperient daily, and who evidently suffered from irregular gout, had early one morning an attack of intestinal haemorrhage with true melaenic stools. On recovering from the haemorrhage he suffered from intermittent griping for some weeks, generally in the early part of the night. On one occasion the griping came on directly after drinking strong coffee, and he thereby was led to attribute to the coffee both the haemorrhage and the subsequent intestinal spasms. It may be stated that he had no return of the griping after leaving off coffee, that this was his first and only attack of intestinal haemorrhage, and that he does not suffer from haemorrhoids. Probably it was a case of so-called gouty intestinal haemorrhage.

ANSWERS.

TREATMENT OF RED NOSE.

T. W. B. (Bournemouth) writes in reply to "Senex's" inquiry (BRITISH MEDICAL JOURNAL, March 28th, p. 788): A young undergraduate, aged 19, sought my advice recently for his red nose. He is in every other respect healthy, and does not suffer from indigestion. I found he was much addicted to cigarette smoking, and to the habit of passing the fumes of the tobacco through his nostrils, the mucous lining of which I found glaringly red, the vessels dilated, and externally his nose was unnaturally red for a youth. The only advice I gave him was to moderate his smoking, and to discontinue the pernicious habit of passing the smoke through the nostrils. He has taken my advice, and the improvement in the appearance of his nose is a great joy to him. This should be a warning to young ladies and youths as to the possible effects of the cigarette habit. Some snuff-takers get the same congested vessels and redness of the nose.

DR. D. S. C. REID (Blackburn) writes: If "Senex" will give the following treatment a trial for a lengthened period I think he will be satisfied with the result. I have had several cases since coming to this part five years ago; one notable case of a lady who had a very ugly red nose, and this treatment acted well.

℞ Sulphur. præcip., calaminae ... ... āā gr. xxx
Ac. carbol. ... ... mvj
Lanolin. pur. ... ... ℥j

Sig. After steaming the nose over boiling water, apply this ointment at night.

℞ Fer. am. cit. ... ... ℥j
Liq. arsenical.... ... ... ℥j
Aq. chlorof. ... ... ad ℥vj
Sig. ℥ss three times a day after food.

F.R.C.S. writes: Your remarks are very good. Each case requires treatment for the cause. Many cases arise from dyspepsia. The one thing the whole profession neglect is cosmetics; yet nothing is more gratifying than the esteem young ladies hold their medical adviser in for beautifying their complexion. We are taught nothing of this at the medical schools. I would advise "Senex" to give some cascara tabloids every night, and let her use the following lotion:

℞ Calamine ... ... gr. x
Bismuth trinitrate ... ... gr. x
Acid. hydrocyanic. dil.... ... ... ℥ij
Pulv. tragacanth co. ... ... ℥j
Aq. ... ... ad ℥j
For external use.

A little to be sponged over the nose every night at bedtime and allowed to dry. Another practical hint is always to use the tragacanth powder for cosmetic lotions instead of pulv. acaciae.

DR. H. ELLIOT-BLAKE (Bognor) writes: The wind and the weather, besides falling circulatory equilibrium, sometimes play havoc with the normal cosmetic effect of the nose, apart or in conjunction with the other contributory causes. The nose shield I formerly described, for red noses, etc., helps any treatment, including a soothing lotio calaminae or antiseptic lotio hydrargyri perchloridi, or other dyspeptic, eczema, and skin treatments. With the nose shield the pattern should be first made in paper, to fit each side of the nose, and nearly triangular in shape, but with the apex truncated 1½ in. or more to fit the upper part. It will then cover the whole nose. The layers comprising my nose shield are dark blue or purple outside, yellow and red inside—odd and end bits of silk, velvets, or other opaque materials found in any lady's work-basket. Lead or tin foil may be added, to shield off the irritating and unknown rays, as well as the spectroscopic or revealed rays of the sun. The layers are all sewn together under the paper pattern, and the rough sides cut off neatly. The nose shield should be worn constantly, or as much as possible, and always in the sun. The sun colours the face by deposit in the rete and drying by congestion, and the nose shield blanches the nose, with a corresponding and direct cosmetic improvement. Clips to keep the nose shield in place on the nose have been made by Mayer and Meltzer, of Great Portland Street. But spectacles, or a piece of elastic with a disc of velvet in the centre worn round and above the nape, above or below the ears, act very well. Spectacles, however, often aggravate the causes of red nose, and, to modify the most uncomfortable glow, have usually to be restricted in use.

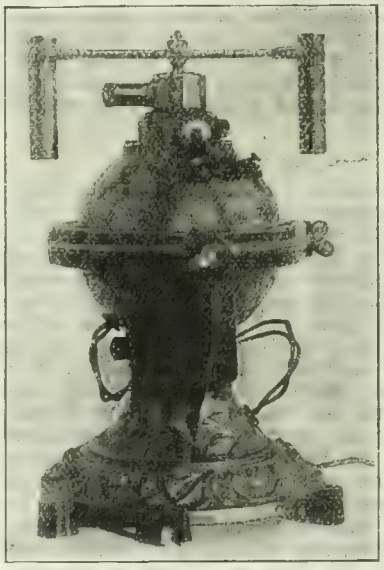
TREATMENT OF COMMON COLD.

DR. CORAM JAMES (London) writes: Several years' further experience has fully confirmed me in the opinion which I expressed in 1905 as to the almost invariable specific influence which sodium salicylate has in checking the development of the "common cold," and in cutting short the duration if it has been allowed to develop, provided always that the patient will put up with the inconvenience to which the drug sometimes gives rise in the way of deafness and noises in the ears. During the recent severe epidemic of influenza I found personally that in that disease, although it relieved the aching in limbs and headache somewhat, it had no influence whatever on the very severe nasal catarrh, although taken very freely indeed.

LETTERS, NOTES, Etc.

AN IMPROVED CENTRIFUGE.

FLEET SURGEON A. R. BANKART, R.N., writes: Some months ago I read a note in the BRITISH MEDICAL JOURNAL describing a method of using an electric fan as a centrifugal machine. As far as my memory serves me, the method consisted of fixing the glass tubes, etc., to the vanes of the fan by means of electric bands. Having some weeks ago found the want of a means to centrifugalize blood, urine, etc., I proceeded to transform an ordinary electric fan, such as is supplied to officers' cabins and sick bays. Having altered the axis of the fan from the horizontal to the vertical, I had a cross-piece of brass with forked ends (made to scale). Two brass buckets were made to swing with the forked ends. I find that I can get about 1,500 revolutions, and that I can centrifugalize blood for opsonic or other work in four minutes. As this idea may be useful to others as it has been to myself, you may, perhaps, think it worth noting. I think it is an improvement on the elastic-band method. The cross-piece can easily be removed by unscrewing a nut and the motor transformed from centrifuge to fan and vice versa in a few minutes. If the buckets are made of aluminium instead of brass, the number of revolutions can be much increased.



OVERDISTENSION OF THE BLADDER.

MR. JOHN R. LUNN, F.R.C.S. (London, W.), writes: A man, aged 65, was sent to Marylebone Infirmary, Notting Hill, W., for intestinal obstruction. He had been troubled with vomiting and constipation for five days, and appeared very ill. I found a large tumour occupying the region of his bladder. I drew off 9½ pints of urine, which was a unique quantity in my experience.

THE FIRST INTERNATIONAL CONGRESS ON "FIRST AID" AND LIFE SAVING.

MR. S. OSBORN, F.R.C.S. (Maisonnette, Datchet), Honorary Secretary of this Congress, writes: The following papers have been promised from Great Britain: Suggestions to Improve First Aid on Railways, by James W. Croston, Manchester; First Aid in the Fire Service, by Horace Folker; Suggested Rules for Recovering of Coal Miners after Explosions and Fires, by W. E. Garforth, President of the Mining Association of Great Britain; First Aid and Life Saving in Coal Mines, by Albert M. Oppenheimer; First Aid in the Streets of London, by S. Osborn.

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An Address

ON

SOME OBSERVATIONS ON BRONCHITIS AND EMPHYSEMA.

Delivered before the English Division of the Border Counties Branch of the British Medical Association.

By SIR JAMES BARR, M.D., LL.D., F.R.C.P., F.R.S.E.,

senior physician, liverpool royal infirmary.

I have chosen as my text to-day the subject of bronchitis and emphysema, a subject with which you must all be very familiar, and so there will be no necessity for me to traverse the whole ground; I shall therefore confine my attention to some practical points in the etiology, prevention, and treatment of these affections. I am afraid familiarity breeds contempt, and these diseases are not nowadays receiving the attention they merit.

At one time a chill was looked upon as the forerunner of a whole host of diseases, and so it was treated with the respect due to a progenitor; but since the introduction of microbes as the causal agents of all acute diseases, and owing to the fact that no specific one has been associated with bronchitis, a common cold was beginning to get neglected when influenza became a popular disease and carried in its wake nearly all catarrhal affections. Dr. Prosser White and others have spoken of a *Micrococcus catarrhalis*, but while many of us believe that there may be a regular flora of micro-organisms in the bronchial tree, we are not willing to credit any one with a specific action in the causation of bronchitis. If we could find any definite organism to which we could always ascribe this disease, it might help us along the road of prevention, though the discovery of the influenza bacillus has contributed nothing towards the prevention of that ubiquitous disease. In studying the etiology of bronchitis, we must content ourselves with the conditions under which it arises, and such a study will not, I hope, be barren of results. It has been said that if you know the cause of a disease you have advanced a long way towards its treatment, but in dealing with a disease which still holds the second place among the causes of mortality in this country, I think that prevention is of much greater importance than cure, and therefore it is with the object of prevention, and when not prevented with the object of obviating the dire effects of this insidious malady that I shall approach the subject.

Etiology and Prevention.

Heredity plays a very important part. It is often said that every one has got a weak spot in his composition, and those who have a tendency to any catarrhal or arthritic condition should be very careful in their mode of life, and pay special attention to the state of their digestive organs.

A *chill* due to exposure is often considered the most important cause of bronchitis, and while it is undoubtedly an etiological factor in the production of the disease, its importance can be easily overrated. A cold, dry atmosphere cures the bronchial catarrh frequently associated with tuberculous disease of the lungs. When a person is feverish or well supplied with internal fuel he can stand much external cold without any damage to his economy, but it is quite a different matter when the internal temperature is subnormal and the vital powers are depressed from any cause. A visit to Switzerland in the winter lessens the liability to bronchitis, provided your bedroom be clean and well ventilated and suitably heated, but it is very difficult to avoid *catching cold* on the return journey in the overheated, badly ventilated, and dirty Continental trains, which are nothing better than incubators for all manner of germs.

When the vital resistance of the individual is lowered, and during sleep, when the resistance of the nervous system is partially suspended, the individual is much more liable to the catarrhal effects of cold, hence bronchitis is more frequent and fatal in the very young and very old than in adults. In this cold, moist atmosphere many aged individuals contract a fatal bronchitis in bed. Dry air is a very bad conductor of heat, hence a very dry, still atmosphere, no matter how cold it may be, cannot do much damage to the bronchial tubes. Of course the dryness of the atmosphere is a very relative term, as the amount of moisture which it can hold will largely depend on the temperature; if, therefore, a cold atmosphere is not to do any harm, the amount of moisture which it contains should be a long way below the saturation point. The more saturated the atmosphere with moisture the less will it take up of the watery exhalations from the lungs, and there may be even a condensation in the bronchial tubes, hence the supersaturated atmosphere of a greenhouse soon becomes almost suffocative. When cold dry air becomes warm in the air passages it readily takes up a large amount of watery exhalation. It is, therefore, the excess of moisture rather than the coldness of the atmosphere which works mischief, but yet, strange to say, some physicians still continue to use the bronchitis kettle. I have often said that the inventor of that appliance should have been hanged, and I am now inclined to think that his disciples should each get ten years' penal servitude for attempting, and often succeeding in the attempt, to drown their young patients in their own secretions.

In the cold dry climate of Canada and Switzerland bronchitis is much less common than in the moist and comparatively mild climate of this country. With nasal breathing there is not much danger of any degree of dry cold damaging the bronchial tubes. There can be no doubt that sudden variations in temperature do injure the body; the intense cold of liquid air will as effectually kill the part with which it comes in contact as a red-hot iron. What we have to do is to protect the body from the injurious influence of the sudden abstraction of heat which is chiefly affected by a cold moist atmosphere, especially when in rapid movement. The natural protection arises from the reflex action of the nervous system preventing any rapid loss of heat, but the nervous system is not always on the alert, and its regulative mechanism is not always sufficient to meet the contingencies arising from the sudden variations of temperature in this country. In the young and aged much greater protection than that afforded by the nervous system is required.

The influence of cold acting reflexly through the nervous system on the bronchial tubes has been experimentally shown by Rossbach. He found that when he applied cold to the skin "the blood vessels of the trachea contracted reflexly after one to two minutes, and this was soon followed by venous hyperaemia and an increased secretion of mucus."[1] Personally I cannot put my foot on a cold stone without inducing nasal catarrh, hence I cannot recommend pedestrian exercise on bare feet, though I have no doubt this excessive reflex action might be easily overcome by a little hardening process. I recently saw a healthy old gentleman of 83 who was very lightly clothed, and did not wear singlet or drawers in this cold weather. He said that he believed in fresh air, which got much better at your skin when you did not wear any woollen underclothing. He acknowledged that for some years he had had some difficulty in maintaining his temperature and so had given up sea bathing in the winter. I noticed that his hands were enormous and spade-like, but his finger ends were not so bulbous as you find in pulmonary osteo-arthropathy; the enlargement was uniform, and to my mind due to chronic local asphyxia owing to the action of long-continued cold. There can be no doubt that cold sponging or a rapid cold bath in the morning with good friction afterwards has a marvellous effect in preventing one "catching cold," but, even with the experience of this old gentleman before me, I cannot recommend insufficient clothing. The hardening process is excellent when judiciously carried out, otherwise it may be a rapid Darwinian method of getting rid of the unfit; but you have got to deal with the fit and the unfit, chiefly the latter, so be careful in the application of your methods of prevention.

When the cold has damaged the mucous membrane and caused some shedding of the epithelium of the bronchi, the inflammatory reaction is readily maintained by the numerous micro-organisms which infest the air passages, and by the dust in the atmosphere; hence the necessity for a clean mouth and nose and a pure atmosphere. The streptococci, staphylococci, pneumococci, the influenza

and diphtheria bacilli, and numerous other pathogenic bacteria are often very active on the bronchial mucous membrane. Measles are usually associated with bronchial catarrh. In the majority of cases of enteric fever the *Bacillus typhosus* finds its way into the alveoli and bronchial tubes, and sets up a low form of congestive bronchitis in the lower and posterior aspects of the lungs. The bronchial mucous membrane, when intact, is not a good culture field for the micro-organisms; at any rate, it is chiefly the minute divisions and alveoli which are attacked by the tubercle bacilli, the pneumococci, etc.

The injurious effects of various dusts on the bronchial mucous membrane are too well known to require any attention here. Numerous gases and vapours, such as chlorine, bromine, ammonia, sulphuric acid, hydrochloric acid, nitric acid, chlorinated lime, ether, etc., damage the mucous membrane and set up a bronchitis which is readily perpetuated by the pus-generating organisms.

Various constitutional disturbances are credited with the production of bronchitis, but we need only here refer to gout, which undoubtedly is a causal factor. In mitral disease, especially mitral stenosis, which leads to overloading of the pulmonary circuit, we frequently get a congestive bronchitis affecting the alveoli, infundibulae, and bronchioles, the blood supply of which belongs to the pulmonary circulation, but in the early stages the bronchi escape as their circulation belongs to the systemic system and the venous blood is returned by the azygos vein to the right side of the heart. In chronic kidney disease acute pulmonary oedema is not at all uncommon, but a true bronchitis is rather rare.

I think a very large percentage of cases of bronchitis is due to the excretion of toxins or irritating substances absorbed from the digestive tract. In bronchitis, asthma, and emphysema you will very frequently find a dilated stomach, and constipation; and the best way to prevent and cure such attacks is by attention to the digestive tract. If we include alcohol among the toxic substances absorbed from the stomach, then I think we may associate 50 to 70 per cent. of the cases of chronic bronchitis with the digestive tract. It might be worth while inquiring how alcohol causes and maintains chronic bronchitis, and in this way is such a potent agent in the production of emphysema. It is generally supposed that the excretion of alcohol sets up an irritation, but I am very dubious about this, because if such arose from excretion we should get a capillary bronchitis owing to the alveoli being supplied by the pulmonic vessels, but in bronchitis due to alcohol it is invariably the bronchi, trachea, larynx, and throat which are involved, all supplied by the systemic system of blood vessels. I look upon the effect of alcohol as a vasomotor paresis of these vessels, which are not well supported, and this gives rise to vascular turgescence and oedema of the mucous membrane. In short I look upon alcoholic bronchitis as an active rather than a passive hyperaemia. These cases frequently end in emphysema. Tobacco tends to raise the blood pressure, and then there is the direct irritation of the smoke. In carbolic acid poisoning, where the irritation arises during excretion, we get a capillary bronchitis or a congestive pneumonia.

TREATMENT.

In dealing with the etiology I incidently referred to prevention. In the treatment of any disease the first indication is, if possible, to remove the cause, and when that is not possible to lessen or obviate its effects. The patient should be hardened, and protected against the injurious influences of cold, dust, micro-organisms, irritating gases, etc. He should live as far as possible in a pure dry atmosphere, which, at least during the acute stage of the disease, should be warm. In certain dry climates the amount of moisture in the atmosphere has to be considered, but in this country this is not necessary as there is always too much. Every person with a liability to bronchitis should forswear the use of alcohol in all its forms. It is one of the most frequent causes of the disease in the chronic form, and is never useful in treatment.

When bronchitis arises in connexion with any infectious disease, or with disease of the heart or other organs, the treatment is chiefly symptomatic in addition to that of the associated disease. When it arises, as it frequently does, from disturbances in the digestive tract, the attention should be especially devoted to the stomach and bowels. As a rule, carbohydrates and fats should be cut down, and the patient may be granted a liberal allowance of nitrogenous food. The diet should not be too liquid, though a fair amount of hot water is permissible. If there be any deficiency of lime salts in the blood, which is often the case when the expectoration is free and albuminous, a moderate amount of milk may be given, also some preparation of gelatine. In cases where the expectoration is scanty and tough, and where there is much bronchial spasm with sonorous and sibilant râles, I think the lime salts in the blood will be found to be excessive, and in such cases milk and gelatine should be avoided. Large, corpulent, plethoric individuals should be strictly dieted and their weight reduced. In my experience the use of sodium chloride, which has a high osmotic equivalent, should be restricted. In many cases a good emetic is an excellent preliminary treatment both for the stomach and the lungs; this is especially useful in the capillary bronchitis of children. In all cases the bowels should be well cleared out; calomel and sodium sulphate are perhaps the best purgatives.

Drugs.

I shall not say much about drugs, because in this disease the treatment should be largely hygienic and dietetic, and as a rule the fewer drugs you use the better. The so-called expectorants had better be reserved for the chronic stage of the disease; ammonium carbonate, which seems to be the basis of nearly every expectorant mixture, is certainly injurious in acute stages. I very seldom prescribe it except as a stimulating emetic in cases of children suffering from capillary bronchitis. I am very pleased to see that Dr. Eustace Smith has recently been strongly advocating the use of antimony, because antimony and opium have long been favourite remedies with me in the treatment of many chest affections. Compound tincture of camphor with ipecacuanha can also be highly commended. I am not likely to be accused of underrating the use of lime salts in disease, but I have long recognized that you can have too much of a good thing; and so, if there be much bronchial spasm and tough expectoration, decalcifying agents, such as the citrates of soda and potash, should be freely administered. When the expectoration is very liquid, profuse, and albuminous I think the lime salts will be found deficient; and as a certain amount of free calcium ions in the blood is necessary as a cardiac tonic and to lessen secretion, the administration of calcium lactate, milk, and jellies is desirable. Now that my friend Dr. Blair Bell has given us an accurate method of estimating the free calcium ions in the blood, I should like to see these observations of mine, which are based on long experience and, I think, fairly accurate investigations, either corrected or corroborated. In bronchial spasm the nitrites are very valuable, and potassium or sodium iodide is an important adjunct; when the acute stage has passed, tonics such as quinine, strychnine, and hydrochloric acid should be given. As a cardiac tonic digitalis is occasionally necessary, and apomorphine and strychnine make an excellent expectorant mixture. In very chronic cases terebene and others of the turpentine series are very useful.

Counter-irritation is often extremely valuable, and personally I prefer mustard poultices to anything else. The profession in this country are very much indebted to Dr. A. G. Auld of London for drawing attention to the lung reflexes of Albert Abrams of San Francisco, which afford a reasonable explanation of the good effects of counter-irritants. I have often corroborated the statement of Dr. Auld that if in a case of bronchitis you rub the chest for a minute or two over an area of lung where the breath sounds are deficient you can hear the air entering freely, and the percussion note becomes more resonant. For many years I have used *tapotement* for hastening the recovery of unresolved pneumonias, but since Dr. Auld drew attention to the lung reflexes of Abrams I have used a combination of *tapotement* and *effleurage*—*tapotement* makes the lung contract, and *effleurage* causes it to expand. These are facts which anyone can demonstrate for himself, and in bronchitis I think *effleurage* will be found of most value, though it may be alternated with *tapotement*.

Vesicular Emphysema.

In order to understand the production of emphysema I think it is necessary to have a working knowledge of the elasticity of the lungs. So far as the lungs are concerned, the best illustration of elasticity is a piece of rubber, and it is not with any abstract property of the lungs or rubber called elasticity with which you are concerned, but with the active manifestation of that property. Professor Bottomley recently said that if he were asked to tell what life was he would answer: "A metabolic activity of protoplasm, but candidly he knew nothing more than anyone else. He was simply telling them that life was life. You could only tell life by its manifestations." So elasticity is elasticity, and you all know what that is as well as the greatest scientist among us.

You cannot tell whether a body has the property of resisting a given deformation, or of recovering from the strain when the stress is removed, unless you try. The abstract question of the possession of a property is of no value until the use of that property is made manifest. You can only know whether the rubber or the lungs retain their elasticity by trying. You can stretch the rubber, and see if it recover its original form after you cease stretching, and with the spirometer you can test whether the lungs are elastic, and how elastic. The elastic force of even healthy lungs is not very great, but it is quite sufficient for all the purposes which it is called upon to perform. In fact, I can quite see that if it were much greater there would be a constant danger of producing pulmonary collapse. In my Bradshaw Lecture I showed that in exhausting diseases, where there was not much demand for oxygen, even a whole lung might collapse.

The first experiments on the elasticity of the lungs were performed by Carson, of Liverpool, at the beginning of last century. His results were rather higher than those which are given by physiologists in the present day.

In calves, sheep, and in large dogs the resiliency of the lungs was found to be balanced by a column of water varying in height from 1 ft. to a 1½ ft.; and in rabbits and cats by a column of water varying in height from 6 in. to 10 in.[2] (An inch column of water is equivalent to 1.87 mm. of mercury.)

Donders calculated the elastic pull of the lungs in the expiratory condition as about 7.5 mm. Hg. After an ordinary inspiration this is increased to 9 mm., and after the deepest possible inspiration to about 30 mm. It is evident that these figures also represent the negative pressure in the thoracic cavity under the same conditions.[3]

Even in expiration the lungs are in a state of elastic tension and therefore exert traction on the thoracic walls, and as Sir Douglas Powell has pointed out, there is a tendency for the thoracic walls to recoil in the opposite direction, thus the inspiratory muscles start work at an advantage owing to the elastic recoil of the chest walls balancing the tug of the lungs. The inspiratory muscles enlarge the chest and thus increase the negative pressure in the pleurae, but if the lungs were not free to follow the movements of the chest the inspiratory muscles would be absolutely powerless to expand the chest against the atmospheric pressure, and if the lungs were free to follow the movements of the thoracic parietes but non-resistant there could be no negative pressure in the pleurae. In cases of pleurisy with effusion, or pneumonia, or fibroid phthisis of one lung the inspiratory muscles have little or no power over the affected side of the chest, and in cases of advanced emphysema the chest is filled to its utmost capacity and the negative intrathoracic pressure disappears. In ordinary healthy breathing the negative pressure in the chest is slight and varies during the different phases of respiration, but it is continuous and affords a constant assistance to the forces carrying on the circulation. In my Toronto address I showed that

when the resistance is *nil*, a pressure-gradient of 5 mm. of mercury in a vein will give you a velocity of 1,120 mm. in the second,

but in order to obtain a similar velocity where the resistance equals 23 mm. of Hg, you require a fall in the pressure-gradient from 40 mm. to 23 mm. of mercury. It therefore follows that while a slight constant negative pressure affords great assistance to the circulation, in emphysema, where the negative pressure not only disappears but may become positive during expiration, not only is there no assistance but a positive hindrance to the circulation. I have demonstrated that in the Valsalva experiment the pressure can be raised so high as to shut the blood out of the chest. The lungs are always, both in inspiration and expiration, more or less stretched, and in order that the elasticity should be maintained in a healthy condition they should have free play. The inspiratory muscles starting at the end of expiration at an advantage, owing to the tendency to recoil of the chest walls, pull against the atmospheric pressure, and tend to leave a negative pressure on the inside of the thorax, but as these muscles when in most powerful action are only able to support a load of about 100 mm. of mercury, or less, the negative pressure in the thorax can never exceed that amount. The elasticity of the lungs only accounts for a fractional part of this amount, so you can only attain this great negative pressure by shutting the air out of the chest.

In emphysema the lungs have lost their elasticity, and hence the negative pressure due to their traction disappears; the non-elastic lungs fill the enlarged chest, and cannot be even partially emptied during expiration, so it is impossible to establish any marked negative pressure in the thorax under such circumstances. In tuberculous disease of the apices of the lungs with or without pleuritic adhesions, and in fibroid phthisis of the upper lobes, the affected portions of the lungs cannot take any part in filling up the enlarged thorax, consequently the costal cartilages are pushed in by the atmospheric pressure, not dragged in or sucked in; the healthy expansile portions of the lungs—which from over-stretching may lose their elasticity and eventually become emphysematous—fill up the rest of the enlarging thorax. Recently, in a very instructive case of pneumonia in a youth involving the whole of the right lung, I noticed that the costal cartilages over the sound lung were driven in during inspiration, while the lower part of that side expanded freely; this was an indication that pneumonia was starting in the left upper lobe, which was losing its expansile power, and the following day this lobe showed signs of consolidation. When the lobe becomes enlarged and hepatized the negative pressure over it disappears and the chest wall is not driven in. In cases of pleural effusion and pneumothorax which prevent the lungs from following the movements of the chest walls the inspiratory muscles are quite incapable of expanding the affected portion of the chest against the atmospheric pressure. However, the inspiratory muscles, like the individual, often attempt the impossible, and in cases of asthma and emphysema try to enlarge the chest beyond its utmost capacity in order to get air in. If patients were only taught to drive out a little of the air already in there would be no difficulty in inspiring a little fresh air to replace that displaced. The patient may have been foolishly *taught* that it was an advantage to keep his lungs *taut*, and that he should in emphysema get his thorax as large and rigid as possible so as to keep the lungs always on the stretch. If the patient were of an inquiring mind he might ask his mentor what he should do with his diaphragm, because on the same parity of reasoning it should be an additional advantage to have the diaphragm low down and rigid so as to keep the lungs *extra taut*.

Nature often gets credit to which she is not entitled. I do not look upon rigid chest walls as ever advantageous or a natural process at all, but a piece of bad art. Nature copiously provides for the perpetuation of the species, and has endowed man with a vital capacity five or six times more than is requisite in health, but if he fritters this away, for heaven's sake do not blame Nature, but his own crass ignorance or that of his physician. Those who ascribe to Nature anything which they do not comprehend should remember the advice of Samuel Haughton to beware lest *their* Nature be driving nails in their coffins. If you wish to keep your lungs healthy and free from emphysema you must keep your chest walls pliant and give your lungs plenty of exercise; the more their elasticity is exercised the longer it will last. The way to exhaust the elasticity of the lungs or of a piece of rubber is to keep it steadily on the stretch. An enormous number of people have never been taught how to breathe properly, or erroneously taught to breathe with their diaphragm. For very many years I have been teaching patients to breathe with their thorax, and Nature will look after the diaphragm.

Huttkrantz made a comparison between the diaphragm and the thorax in regard to their respective shares in respiration

by enclosing the lower part of the body and the trunk, with the exception of the head, separately in an air-tight metal vessel provided with a water manometer. He concludes from his experiments that of the 490 cubic centimetres (29·9 cubic inches) of inspired air, 320 (19·5 cubic inches) are accounted for by the expansion of the thorax, and 170 (10.4 cubic inches) by the depression of the diaphragm. The influence of the depression of the diaphragm, as determined by this method, may, it is true, be somewhat less than it is in reality, because the air in the abdomen suffers compression at each inspiration, but in spite of this source of error the experiments clearly demonstrate the great importance of thoracic movements.[1]

The lesson to be learned is, keep your thorax moving, and I know no better form of respiratory gymnastics than that to be obtained by hill climbing; you have got plenty of hills in Cumberland. This sets all the respiratory forces in action, and as a health-giving exercise golf and Scotch whisky are not in it with hill or mountain climbing.

In 1858-9 Freund stated that a certain number of cases of emphysema originate in a specific calcification of the costal cartilages, and are not primarily due to pulmonary disease. This, perhaps, is an overstatement, but it contains a large amount of truth, especially in the aged. Some old people retain pliant costal cartilages and healthy lungs; others, without even waiting to be aged, get rigid costal cartilages and emphysema without any previous history of catarrh or other pulmonary lesions. If the costal cartilages are not kept in healthy exercise some of the lime salts which are frequently in superabundance in the blood get deposited in them; they become rigid, the chest walls assume the inspiratory position; the lungs are kept constantly on the stretch, lose their elasticity, and become emphysematous. Freund recommended division of the affected cartilages, and three very successful cases have been recorded. I can refer you to an interesting leading article in the BRITISH MEDICAL JOURNAL of January 25th, 1908. I see no objection to this operation in advanced cases; but in this, as in everything else, prevention is better than cure. Make your patients exercise their chests, and keep down the unnecessary amount of lime in the blood. I have known physicians to forbid patients to drink hard water on account of the lime which it contained, and at the same time order them plenty of milk diluted with some Continental spring; really, the absurdities of medical practice are appalling. No wonder the surgeons have a frequent look-in. Whatever you do, do not continuously fix your chest walls either in the position of inspiration or expiration. I have known irreparable mischief done by the long use of spinal supports. Follow Nature, give your lungs plenty of exercise if you wish to keep them healthy, and do not adopt the deplorable art of some physicians and surgeons in fixing the chest walls.

In every complete examination of the lungs the spirometer should be used; it gives far more valuable information than any stethoscope. The extraordinary method of estimating the capacity of the lungs by the circumference of the chest in inspiration is still in force in the army. One of the best light-weight boxers that I know, a man who could have knocked any one of his examiners out in the first round, was nearly rejected because the circumference of his chest did not come up to the standard. A big, emphysematous chest would have more than satisfied them. The movements of the chest, and the vital capacity of the lungs should be considered rather than the tape-measure.

The foregoing considerations are extremely necessary for the clear apprehension of the causes and effects of alveolar emphysema of the lungs. A good deal of contention has arisen as to whether emphysema is inspiratory or expiratory in origin. My friend and teacher, the late Sir W. T. Gairdner, held to the inspiratory theory, but he also held that healthy lungs were always capable of filling the thorax which contained them, and consequently they could not become emphysematous until there was some destruction or loss of function of some part or parts of the lungs, so that the remaining healthy portions were incapable of filling the thorax and consequently became emphysematous. Thus emphysema follows such widely differing diseases as tuberculous disease of the lungs, fibroid phthisis, pleurisy with effusion, bronchitis, asthma, etc., and the emphysema does not occur in the collapsed or damaged portions of the lungs, but in the neighbouring healthy alveoli. He found perfectly healthy lungs in an aged piper, and therefore he would not accept the expiratory theory of the production of emphysema, because he held that during expiration the lungs were well supported and there was no tendency to excessive distension. According to him, emphysema was always *complementary*, so as to fill up the space left by the collapsed or otherwise damaged portions of lung, and never *compensatory*, as the enlargement of the alveoli with destruction of the septa must diminish the aërating space—the vital capacity is always diminished—and so there can be no increase of function.

I wonder what he would have said of that monstrous expression, "hypertrophous emphysema," which is commonly used in the present day. You may, if you choose, use the terms "large lung and small-lung emphysema" of Jenner, which imply no theory as to nature or causation, though I think the terms are unnecessary, as the emphysematous lungs are no larger and no smaller than the cavities which contain them; if the emphysema occurs late in life, in small, rigid chests, which are incapable of expansion, then you must get the small-lung emphysema.

Dr. A. G. Auld[4] says:

> Now, as to the air cells, the first effect of the increased tension is to produce a compensatory reaction in the respiratory elements. It is a mistake to suppose that they immediately submit to the injurious influence. Both the epithelial and connective tissue cells enlarge and many of them divide. They behave, in fact, like any other tissue on which an inordinate demand is made, and this hypertrophy is, indeed, the analogue of what occurs in the muscle nuclei of the infundibulae. . . . The reaction of the respiratory cells is not of long duration; they shortly enter into the degenerative stage. Their protoplasm becomes granular and fatty and the nuclei vacuolate and fall to pieces. The part has, however, become permanently enlarged through atony of the elastic fibres, and many of these show a granular change—a finely-beaded state of the fibrils. Small holes appear in the granular protoplasm, which speedily enlarge, and in this way many of the septa become completely destroyed.

This hypertrophy is a futile attempt to prevent further mischief, but it never can produce any increased respiratory function.

For a long time I implicitly accepted the teaching of Sir William Gairdner, until I began to work at the subject for myself; I then found that the inspiratory theory would not mechanically explain all cases of emphysema. I quite agree with Sir William Gairdner that there must first be loss of function or destruction of some parts of the lungs, and if this loss of function be at all considerable, and there be an increased demand for oxygen, then the inspiratory muscles, having been taught that it is their duty to get in the oxygen, start active work, and thus tend to increase the negative intrapleural and intrathoracic pressure; and all the more so as the healthy portions of the lungs, being still elastic, and the diseased portions collapsed, are not free to follow the movements of the chest walls. Let us suppose that under these circumstances the negative intrathoracic pressure is 30 mm. of mercury, and it is never likely to be much more than this, as these patients are not capable of doing a good Müller's experiment. In an atmosphere of 760 mm. of mercury pressure this would give you an intrathoracic pressure of 730 mm. of mercury. If, at the same time, the patient were breathing freely through the mouth, the intrapulmonary pressure might be 758 mm. of mercury. You could therefore have an intrapulmonary pressure of 28 mm. of mercury stretching the lungs at all points where they were not directly supported by the external atmospheric pressure. Above the clavicles, and to a less extent behind the soft pliant costal cartilages, and above the diaphragm, the intrapulmonary pressure would be to a large extent balanced, or more than balanced, by the external atmospheric pressure. Above the clavicles the intrapleural negative pressure might disappear, and so the inspiratory theory could not account for the emphysema of the apices of the lungs. Under these circumstances the lungs might be said to be taut, though the lungs can never be said to be taut in the sense of being tightly stretched. In these cases the stress in the lungs is slight, amounting, as I have said, at the most in inspiration to 28 mm. of mercury, but as it is greater than the elasticity of the lungs, there is more or less constant stress of a few millimetres of mercury in the healthy alveoli of the lungs, which diminishes, but in the early stages of the disease does not entirely disappear, during

expiration. This stress affects the healthy but not properly supported alveoli in the neighbourhood of the collapsed portions, and is probably sufficient to give rise to permanent distension with the production of emphysema. When the lungs have lost their elasticity and become emphysematous, they readily follow the limited movements of the chest walls and the intrapleural and intrathoracic negative pressures disappear. This readily explains a large number of cases of emphysema, but it will not explain those partial cases where it occurs at the apices, along the anterior margins, and at the bases, and for such we must consider the expiratory theory.

During a violent fit of coughing the intrapulmonary pressure may readily rise to 840 or 860 mm. of mercury; this not only abolishes the intrapleural and intrathoracic negative pressures, but exceeds the atmospheric pressure by 80 or 100 mm. of Hg. Where the lungs are well supported by the ribs this extra pressure cannot matter, because such support must equal the internal pressure, and there cannot be at these points any hyperdistension of the lungs; but the parts which are not thus supported, such as the apices, the anterior margins, and the bases lying on the diaphragm, are subjected to a stress equivalent to the difference between the atmospheric and the intrapulmonary pressures. The same stress will apply to cases of cicatricial puckering of the lungs, which prevent portions of the lungs being uniformly supported by the ribs. I have seen the whole surface of both lungs covered with large bullae, and fibrous bands down in the sulci between them. Of course this might be attributed to the strain of the lungs during inspiration, but I think I rather overstated the stress in such cases when I put it down at 28 mm. of mercury, and when the lungs begin to lose their elasticity the stress can never amount to anything like that, and under no circumstances in such cases can it equal a third or a half of that produced by coughing. During inspiration the stress on the lungs depends on the difference between the intrapleural and the intrapulmonary pressures, and as this perhaps never exceeds 30 mm., and, I think, rarely exceeds 10 mm. of Hg, it depends on your idea of strain as to whether you consider that inspiration can make the lungs taut or not. In Müller's experiment, where the intrapulmonary, intrapleural, and intrathoracic pressures are very low, the difference between the intrapulmonary and the intrapleural will entirely depend on the elasticity of the lungs. It therefore follows that Müller's experiment cannot produce emphysema of the lungs, and the best way to prevent inspiration causing any excessive tension in the alveoli is to make the patient breathe through his nostrils so as to keep the intrapulmonary pressure markedly negative. An even better way would be to teach the patient to expire so as to get rid of the supplemental air and allow inspiration to be largely performed by the recoil of the chest walls.

Nature's object in respiration is to oxidize the blood and render some assistance to the heart in carrying on the circulation; when the lungs are becoming emphysematous, the elasticity getting impaired, and the vital capacity diminishing, these objects can be better carried on at the lower end of the scale than at the upper. The individual and his inspiratory muscles have been taught and acquired the habit of getting air into the lungs by expanding the chest; but this is art, not Nature. You should determine which is the best way of aërating the blood under any given set of conditions. When in emphysema the chest is expanded to its utmost capacity the lungs are stretched; but they cannot be tense as they have in great part lost their elasticity, and the only means of getting air into and out of the chest is by the action of the diaphragm. Fortunately the diaphragm does not follow the example of the ribs and become taut, otherwise all the oxygen which could be introduced to the lungs would be through the natural diffusion of gases, which would be utterly inadequate. Don't blame Nature for your own bad art, keep your lungs as elastic and as slack as you can, the less taut the better so long as they are expanded; the tautness or tension depends on the difference between the intrapulmonary and intrapleural or intrathoracic pressures, and of course in healthy elastic lungs there must always be a certain amount of tension, as the pulmonary tissue is not completely relaxed even at the end of a deep expiration. When the pleural space is obliterated in cases of fibroid phthisis, there may be a negative intrathoracic pressure, in which case the pressure outside is greater than that within the chest, and when the thorax is expanding in inspiration the expansile portions of the lungs fill up the increased space as far as possible, but the portions of the chest over the non-expansile portions of the lungs, especially at the apices and behind the costal cartilages, are caved in by the atmospheric pressure, not dragged in by any fibroid adhesions, or imaginary suction power. If a negative intrathoracic pressure be constantly maintained there can be no obstruction to the entrance of blood into the chest as far as the right ventricle, and it must lessen the obstruction to the output of blood, but beyond this it is the duty of the right ventricle to carry on the pulmonary circulation, and in order to accomplish this in emphysema it often becomes much hypertrophied. In advanced cases of fibroid phthisis and emphysema the negative intrathoracic pressure disappears and may even become positive; there is then general venous obstruction, giving rise to enlargement of the liver, congestion of the kidneys and other abdominal organs, and clubbing of the finger ends.

I have dealt pretty fully with the mechanism of the production of emphysema, and it now remains to refer to a few of the ultimate causes of the disease. Incidentally I have dealt with those causes which give rise to destruction or apneumatosis of certain tracts of lung with complementary enlargement of neighbouring tracts. Among these causes may be mentioned pleural effusion, fibroid adhesions, chronic pneumonia, fibroid phthisis, tuberculous disease of the lungs, chest deformities, traumatism, chronic congestion of the lungs from heart disease, and chronic catarrh. Of all these causes chronic bronchitis is the most frequent, because the catarrh may involve the whole of the bronchial tree and give rise to extensive collapse of numerous alveoli, and this leads to complementary distension of the neighbouring alveoli under the inspiratory and expiratory forces. Alcohol maintains a chronic bronchial catarrh and gives rise to excessive strain from frequent coughing. Asthma gives rise to acute pulmonary distension of the inspiratory type, which, if long maintained, may lead to permanent emphysema, and more especially so as asthma is frequently associated with bronchial catarrh. In dealing with bronchitis we dealt with occupation, irritating dusts and gases, infection, and affections of the digestive tract, all of which take an indirect part in the causation of emphysema, but dilatation of the stomach is here not such a common feature as it is in bronchitis and asthma.

Emphysema becomes more common as age advances. It may occur in the young as a sequel of some destructive lesion, and when it occurs in association with asthma and bronchitis while the costal cartilages are still pliant it is fairly amenable to treatment. Senile emphysema occurs in the aged when the chest walls are rigid, and is generally looked upon as an atrophic lesion due to the loss of elasticity of the lungs, though I am quite willing to accept the opinion of Freund that the calcification of the costal cartilages and rigidity of the thorax may be the primal cause, and the loss of elasticity and atrophic condition secondary to the loss of free play of the lungs. The so-called hereditary tendency may, therefore, be the outcome of arterio-sclerotic change and early calcification.

Treatment of Emphysema.

What I have said about the treatment of bronchitis largely applies to emphysema; it should be chiefly dietetic and hygienic, and prevention is always better than cure. These patients have frequently too good an appetite, are stout and plethoric, and thus there is a demand for more oxygen than the lungs are able to supply; moreover, the plethoric and cyanotic conditions lead to congestion of the lungs, greater respiratory efforts are made, and the emphysema is increased. The patient thus gets into a vicious circle, from which it requires some judgement and determination to extricate him.

In cases of emphysema try and starve your patients as much as possible; they and their friends won't let you, as it is most difficult to restrict the diet of a patient with a good appetite who has never learned to practise any self-denial. At any rate, you should cut down the fats and carbohydrates, and you can give a fairly liberal

allowance of nitrogenous food so long as the excretory functions of the kidneys are well maintained. The thin, spare man with no excess of oxidizable material in his blood does best. The fat, pot-bellied individual cannot make proper use of his diaphragm, and there is an excessive demand for oxygen which his emphysematous lungs cannot supply. He can have a fair amount of hot water. Two or three pints of milk form a light diet if it be not supplemented by much else. If there be any excess of lime salts in the blood, milk and gelatine are objectionable, but frequently the lime salts are rather deficient, so I think it is always well to examine the blood. I prohibit the use of much table salt, but I allow plenty of fruit, and a fair amount of green vegetables. The latter have the advantage in helping to regulate the bowels, which are usually confined. Alcohol and tobacco should be strictly interdicted. Tea and coffee may be allowed in moderation.

Hygiene.

The patient should live in a clean, dry, moderately warm atmosphere, as pure and free from dust as possible. He should practise respiratory gymnastics, and be taught to expire rather than inspire; the difficulty is in getting rid of the stagnant supplemental air. Establish a negative intrapulmonary pressure, and the atmospheric pressure will soon drive some fresh air in. Teach the patient to keep his costal cartilages soft and pliant, give his lungs as much play as possible, and thus maintain their elasticity, and adopt thoracic breathing rather than abdominal breathing; from faulty teaching and long acquired habit the latter method of breathing is too deeply ingrained to require any special instruction. In order to give the lungs plenty of play I think there is no exercise equal to hill climbing; it calls all the respiratory muscles into play, and makes the individual expire as well as inspire; it has also a beneficial effect on the heart, and the amount of exercise can be easily regulated according to the capacity of the individual. In summer the patient can be sent to an elevated region up to 4 000 or 5,000 feet above sea level, provided the vital capacity be not below 150 cubic inches for the male and 100 for the female. A few years ago I saw an emphysematous man foolishly attempt the ascent of Mont Blanc, but he was very glad to turn back when he reached the Grands Mulets. For the injurious effects of very high altitudes on the circulation I cannot do better than refer you to the writings of the late Dr. Alfred L. Loomis[5] and Dr. Theodore Zangger.[6]

Numerous mechanical devices and pneumatic cabinets have been invented to assist respiration in these cases, but they have all practically gone out of vogue, except perhaps some simple elastic bands to assist expiration. Some patients find it more comfortable to sleep in the prone posture on account of the assistance afforded to expiration. Nasal and thoracic breathing should be encouraged; in this way the costal cartilages are not so apt to become rigid, but a watch should also be kept on any excess of lime salts in the blood. Cold sponging in the mornings, the Aix douche with massage, and other hydropathic measures can be commended, but the patient should not be left long in a moist chamber.

Drugs

Their name is legion, but comparatively few of them are of much value; the most generally useful are the iodides and the various preparations of iodine. When there is any deficiency in metabolism or the patient is too stout, I frequently add thyroid to the iodine. If there be any excess of lime in the blood, the citrates of sodium and potassium should be freely administered, or lemonade made with citric acid and cream of tartar may be freely given. Of course, in such cases milk should be forbidden. The bowels should be kept open with a dose of sulphate of sodium in the morning. Bronchitis should be treated as previously directed; if there be much cough, it should be assuaged by some preparation of opium. In the later stages, when there is cardiac failure, special attention should be directed to that organ. If the costal cartilages have been allowed to get very rigid, the surgeon may be called in to perform the operation recommended by Freund.

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Arris and Gale Lectures

ON

THE PHYSIOLOGICAL AND PATHOLOGICAL EFFECTS WHICH FOLLOW EXPOSURE TO COMPRESSED AIR.

DELIVERED IN THE THEATRE OF THE ROYAL COLLEGE OF SURGEONS ON MARCH 18TH AND 20TH, 1908.

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LECTURE I.

No races of mankind—indeed, no species of terrestrial animals—are habitually exposed to an atmospheric pressure which exceeds by more than a few millimetres of mercury that normally obtaining at sea level. Accordingly, our experience of the phenomena produced by such exposure is comparatively modern, not antedating the sixteenth century (Sturmius, Halley), and has only become wide since technical improvements in the diving-dress and the invention of subaqueous work chambers, or caissons, have rendered possible extensive aquatic engineering and marine salvage feats.

EFFECTS OF RAPID DECOMPRESSION: CAISSON DISEASE.

Whether we consider caisson workers or divers, we are faced by the same condition—exposure to compressed air. Broadly, the distinction between the two classes is that while caisson workers are usually exposed to a lower total pressure than divers, they remain under that pressure for a considerable time, while the diver commonly returns to the surface after a relatively short exposure. In both cases disease and death have been, and unfortunately still are, of frequent occurrence. The following are some caisson statistics:

Douchy Mines: 63 cases.
Kehler Bridge: 133 cases.
St. Louis Bridge: 119 cases out of 352 workers; 50 cases of paralysis; 14 deaths.
Brooklyn Bridge: 110 cases, 3 deaths.
Toulon Dry Dock: 43 cases, 2 deaths.
Oulsac Bridge: 104 cases, 3 deaths.
Eisler Bridge: 38 cases, 2 deaths.
Nussdorf: 320 cases among 675 workers.
Felesti Bridge: 55 cases and 5 deaths among 154 workers.
Hudson Tunnel: 3 deaths a month until the conditions were improved.
Since May, 1906, 10 000 exposures to compressed air have been associated with 16 deaths.

It would be unnecessary, even were it possible, to give a clinical description of the cases, varying from simple joint pain to severe paralysis and death. One of the best accounts we have of a rapidly fatal case is due to McKinlay (1900).

The subject was a man of 33, exceptionally strong, and in good health. He descended 24½ fathoms in search of a torpedo, being therefore exposed to a positive pressure of between 4 and 5 atmospheres. He remained below forty minutes, and ascended in half that time. He entered the boat without any trouble, and, when the helmet was removed, chatted unconcernedly about his work. He had suffered no inconvenience in the water, and only returned because the light was insufficient for his purpose; his comrades agree that he had never before come up in better condition. All was well for some eight or nine minutes, when suddenly he experienced pains in the stomach, and asked the attendants to get his dress off quickly, as he wished to go on board. In a few seconds he said, "Send for the doctor," and immediately collapsed. Fleet Surgeon McKinlay, who was in attendence at once, found the man cyanosed and breathing stertorously, the lips covered with foam; he was undressed and taken to the sick bay, but expired before arriving there, fifteen minutes after gaining the surface and six or seven counting from the first symptoms.

A careful autopsy revealed the following state of affairs: The surface of the brain was deeply engorged with dark fluid blood; many air bubbles were detected in the veins of Galen and choroid plexus, also in the superficial cerebral vessels themselves when the latter had been partly emptied of blood. The veins on the surface of the heart were beaded with air, while that organ felt like a bladder half full of water, gurgling loudly when pressed. On incision of the right ventricle air escaped with a puff; the left ventricle was empty. The mesenteric vessels were likewise filled with air and the liver frothed on section.

In its sudden onset, rapid termination, and *post-mortem* findings, this case gives a more harmonious picture than an exhaustive catalogue of the symptoms recorded by different observers.

We must next examine the interpretations of these results which passed current before 1879 and are still occasionally repeated.

The large majority of medical writers held that exposure to compressed air mechanically altered the distribution of blood within the body. They believed that blood was forced inwards, congesting the viscera, and that its subsequent return on decompression was the cause of symptoms. Others attributed the mischief to super-oxygenation of the blood, accompanied, as they believed, by extravagant metabolism. One writer held that the intestinal gas, expanding on decompression, acted like a huge cupping glass so that congestions and even haemorrhages were produced.

Amid this confusion two writers published statements not diametrically opposed to the principles of hydrostatics. These were Hoppe-Seyler and Bucquoy. The former wrote in 1857:

If, after an animal has remained for some time in compressed air, the pressure is suddenly lowered, the lungs have no time to eliminate the excess of gas; accordingly gas will be evolved in the great venous trunks themselves, and the symptoms described above will be induced. This is the explanation of the sudden deaths which have been observed in the French coal mines without anatomical lesions.

In 1881 Bucquoy wrote:

During and after decompression all the gas dissolved in the blood owing to the condensation of the air tends to escape from the liquid with efforts so much the greater, for equal times of exposure, the greater the pressure to which the subject has been submitted. This is a necessary consequence of the physical laws of the solution of gases in liquids, and we have a familiar and common illustration in the rapidity and force with which carbonic acid escapes from an aërated water when the bottle is uncorked.

These were, however, voices crying in the wilderness, as is shown by the approbation with which a memoir by Foley, published in 1863, was received. This monograph, characterized by Paul Bert, with delightful irony, as the most original work from the theoretical standpoint which he had ever encountered, reproduces and exaggerates all the absurdities of the "mechanical" school. I will quote one sentence in illustration:

When one enters the caisson one is flattened out, the arteries diminish in calibre, and one sweats easily. By all these effects the skin is emptied and dried up. On the other hand, the moment one leaves, by the mere mechanical force of its elastic fibres the envelope expands. Unfortunately the retractility of their yellow tunics preserves to nutrient vessels their minimum diameter. As a result, a sort of vacuum is formed around them:

If it be concluded that the early history of caisson disease reflects but small credit upon the logical powers of our profession, certain extenuating circumstances may fairly be pleaded. It is easy to make merry over these physical crudities, but we have to remember that the divorce of experimental science from clinical medicine was then nearly as complete as certain educational authorities desire to make it now. The victory of error over truth is attributable to that divorce. That the real cause of compressed air illness could be inferred from a consideration of known physical principles is true—in theory; but Hunter's advice to Jenner must be followed before such truth can incorporate itself as a real part of man's stock of knowledge.

Researches of Paul Bert.

To Paul Bert, and to him alone, is due the credit of making this great advance, of patiently and accurately employing the experimental method. It is a fact that the true pathology of caisson disease was suspected by at least two workers before Bert's time; it is also true that, since Bert's publications, some problems which he did not completely elucidate have been solved; it is not less certain that Paul Bert first placed the question on the firm basis of experiment, and that all subsequent advances are, in comparison with his work, trifles. His book has been exposed to searching and, in at least one instance, malicious criticism, yet not one important statement contained in it has been shown to be incorrect.

The relation of Bert to the physiology of atmospheric pressure closely resembles that of Pasteur to the science of microbiology and that of Lister to the practice of aseptic surgery. Merely as a literary composition, *La Pression Barométrique* is a model some physiologists could study with advantage. As an illustration, let me quote our author's criticism of an absurd experiment performed by Vivenot:

The curious part of the business is that an experiment so strangely conceived and so unhappily performed has been accepted and applauded on both sides of the Rhine. Vivenot has done an experiment! it is said, and this is enough for many people; for there exists quite a school of medical men the secretaries of which have not, be it understood, haunted the laboratories, but for whom the word "experiment" takes the place of everything like the cream tart in the comedy (Bert, 1878, p. 516).

By a series of well-planned and accurate experiments Bert proved that:

1. Increased air pressures up to +7 and +8 atmospheres do not in themselves produce any unfavourable symptoms. No serious modifications of the vital phenomena occur until the tension of the oxygen dissolved has attained a degree at which this gas itself behaves as a tissue poison, especially with respect to nervous elements. In other words, the "mechanical" effects of pressure upon which so much eloquence has been vainly spent by Foley and others, simply do not exist apart from an unimportant increase of the thoracic diameters resulting from a diminution in volume of the intestinal gases.

2. Pathological accidents occurring after decomposition are due to the liberation of nitrogen bubbles from the blood and tissue liquids, such bubbles leading in some cases to embolism, in others to transitory nerve irritation.

3. These effects can be prevented if the rate of decompression be sufficiently slow.

Since Bert's death Phillipon (1894–5) and others have carried out some interesting researches in France; in Austria and Germany, v. Schrötter, Heller, and Mager have published the results of work in which experiment and clinical observation are happily combined, publications which confirm Bert's conclusions in every detail. In England Professor Lorrain Smith (1899) has much advanced our knowledge of the poisonous effects of oxygen, showing that prolonged exposures to even comparatively low tensions are inevitably followed by pneumonia.

With regard to caisson disease itself, however, the most valuable and extensive researches are those of Dr. Leonard Hill (1900–8). Dr. Hill was assisted in his earlier work by Professor J. J. R. Macleod and Dr. C. E. Ham; in his later researches I have been allowed to help, and I now wish to describe some of the more recent observations. Although I adopt the conventional "we," no one acquainted with modern physiological literature can fail to recognize the sagacity in devising experimental methods, at once simple and effective, which characterizes all Dr. Hill's contributions to biological science.

Direct Effects of High Pressures.

A description of our work in chronological order would be tedious. I shall instead attempt to prove that each of our results is logically deducible from Bert's original hypothesis, or from a necessary extension of that hypothesis.

First of all, air pressure *qua* pressure should have no effect upon man, provided the oxygen tension do not attain a certain maximum, and equalization of pressure within and without the middle ear be not impeded by catarrh of the Eustachian tubes.

Although this is logically deducible from known physical considerations—is, indeed, obvious—many narratives of caisson workers and visitors to compressed air constructions suggest the contrary. As a matter of fact, the peculiar environment of, for example, the tunnel worker is calculated to enhance that subconscious tingeing of our bodily sensations which, even in the least imaginative, so powerfully contributes to any complex of feeling. A visitor to the tunnel now in process of construction at Rotherhithe cannot but be impressed by his surroundings, which are, in the eyes of a tyro, sufficiently strange to account for most "sensations of pressure." Observations uncomplicated by these modifying circumstances are not numerous for pressures greater than + 45 lb. In 1894 M. Hersent, an engineer, in collaboration with five members of the Bordeaux Medical Faculty, exposed workmen to pressures varying from + 68 to + 77 lb.

in a steel chamber. No ill-effects were produced; but we have not an account of the workmen's own sensations, so that Hill and I reinvestigated the matter with apparatus constructed by Messrs. Siebe and Gorman, whose assistance has throughout been of the greatest value. We used a steel boiler having an internal volume of 42 2 cub. ft., so that the subject could adopt a sitting or recumbent posture, and fitted with an electric bell and telephone, allowing him to communicate with the outside world.

In this chamber we have been exposed on eleven occasions to pressures greater than + 60 lb., once attaining + 92 lb. As a result, we found that no real "sense of pressure" is to be detected. Of course, even under such favourable conditions some degree of anxiety, especially in the earlier experiments, could not be avoided, but this soon ceased to trouble us. Two changes only are noticeable, which may, perhaps, be referred to an increased density of the atmosphere. The first is an alteration in the quality of the voice, which becomes nasal and metallic, losing its individuality; the second is an inability to whistle, no doubt because the necessary fine vibratile movements of the lips and tongue are damped; an apparent consequence of this inability is that the lips appear to be anaesthetic, the sensation being similar to that following an application of cocaine, although direct sensitivity to stimulation is unaltered. This would seem to be a state of pseudo-anaesthesia, mainly due to a lack of normal movement; but the power of whistling is to some extent regained by practice, at least for moderate pressures, and no doubt nervousness is influential even here.

The absence of direct action of increased air pressure upon the vital processes is shown by our observations on the pulmonary output of carbon dioxide.

Haldane and Priestley (1905) have demonstrated that the tension of CO_2 in the alveolar air varies normally within narrow limits only, being in most persons about 5 per cent. of an atmosphere. If highly compressed air do not change the output, this percentage must vary inversely as the pressure, being 2.5 per cent. at + 15 lb., 1 67 per cent. at + 30 lb., etc. We ascertained that this is actually the case. Samples of alveolar air were collected and analysed while under pressure, and the percentage of carbon dioxide found, multiplied by the total pressure in atmospheres, gave a constant value, as shown in the table:

Percentage of CO_2 Found.	Pressure.	Percentage Multiplied by Pressure (in Atmospheres).
	Subject M. G.	
5 3	+ 0 lb.	5.3
0.9	+ 75 ,,	5 4
1 0	+ 60 ,,	5.0
1 8	+ 30 ,,	5 4
2 7	+ 15 ,,	5.4
5.4	+ 0 ,,	5.4
	Subject L. H.	
4.7	+ 0 lb.	4.7
0 9	+ 60 ,,	4 5
0 7 and 0.8	+ 75 ,,	4.5
0 95	+ 60 ,,	4.75
1.2	+ 45 ,,	4 8
1 8	+ 30 ,,	5 4
2 5	+ 15 ,,	5 0
5 0	+ 0 ,,	5.0

So far, therefore, we have no evidence that gaseous metabolism is at all affected by a sojourn in compressed air.

Some determinations of the respiratory quotient from samples collected by the method of Zuntz testify in the same sense; thus, in one experiment, the respiratory quotient at + 0 was 0 85 and 0 9 under a pressure of + 45 lb, but the results are neither numerous enough nor sufficiently accurate to allow me to attach much importance to them.

Panum, G. Liebig, Pravaz, and others have published researches which seemed to indicate that oxidation is increased at pressures of about + 15 lb. Bert inclined to the view that some such increase did occur, but pointed out that "nothing is more difficult than such experiments, and the deductions are always hazardous" (Bert, p. 1139). Hill and Macleod (1903) exposed three dogs to + 6 and + 7 atmospheres for several hours a day in a series of observations extending over more than a week. The urine was collected, the total nitrogen, the urea nitrogen, the sulphates, and the phosphates were determined, but no distinct change was discovered.

A matter of greater importance is the diminished frequency of the pulse which has been noted by almost every writer as a constant phenomenon. The following observations are extracted from Heller, Mager, and v. Schrötter's treatise (p. 653):

Before Exposure.	At + 1 5 Atm.	On Decompression.	Fifteen Minutes Later.
72	59	62	69
66	58	63	72
77	66	70	78
75	62	60	73
88	73	79	90
82	88	74	80
81	73	73	80
70	65	70	75
80	75	71	79
82	72	74	86
86	67	110	72
88	73	79	85

These observers could not, however, find any definite relation between the increment of pressure and the lowering of the pulse frequency. Our own observations do not reveal any marked diminution. In one experiment, my pulse-rate was 43 at + 65 lb., 41 at + 60, 41 at + 45, 39 at + 15, 42 at + 10, and 41 at + 2 3 lb. My pulse frequency is normally low, rarely exceeding 60 in the sitting and 45 to 50 in the recumbent posture; the effect produced was not, therefore, great. Hill was also unable to detect any change in his pulse-rate at + 75 lb.

The interest of this point resides in the fact that saturation of the body with nitrogen is, ultimately, a function of the blood stream, so that if the circulation is less rapid under pressure, we could not draw any conclusions as to the time required for saturation from a knowledge of the normal pulse-rate. I shall refer to this in some detail later on, but would draw attention to it now as being, perhaps, one of the factors in the individual variations upon which stress has rightly been laid. Experiments on animals confirm the views just expressed, but there are influences at work which cause some results to appear contradictory. Hill and Macleod (1903) discovered the water output of mice to be diminished and their heat loss increased by exposure to moderately-compressed air. At first sight this would seem difficult to reconcile with my previous statement, but the observers were able to prove that the interference with metabolism was due to the saturation of the pressure chamber with water vapour, and was not a real consequence of exposure to compressed air itself.

The presence of carbon dioxide has been accused of exerting a specially unfavourable influence upon caisson workers, particularly by Snell, who published a good account (1896) of his observations at the Blackwall Tunnel. If carbon dioxide be regarded merely as a criterion of impurity, suggesting the presence of noxious substances, perhaps due to soil conditions, the accusation is just; but, as applied to the action of CO_2 *per se*, it is groundless. We have never observed any bad effects upon ourselves, although we have allowed the percentage of CO_2 in the cylinder to rise to a value corresponding to 1 8 per cent., measured at the ordinary pressure. I have, more than

once, exposed cats and dogs to as much as 4 per cent. CO_2 without untoward results, beyond increased frequency of respiration. Hill has made many similar observations.

We have now established the truth of Bert's assertion that compressed air, as such, does not affect the bodily functions, and may pass to the more interesting and important facts relative to changes of pressure.

Effects of Decompression.

It is scarcely necessary to adduce direct evidence in support of Bert's statement that bubbles of gas are liberated in the tissue liquids when the pressure is suddenly lowered. I wish, however, to describe some observations which make the proof logically complete, being of the nature of a control experiment. If the liberation of gas from circulating liquids be a principal factor in decompression effects, it follows that any animal devoid of a circulating liquid *respiratory* in function, must be immune.

Such animals are the larvae of Lepidoptera. In these creatures air is conveyed directly to the body cells by finely branching tracheae, and the vascular system is not believed to take part in the respiratory exchange. I have worked with numerous species (1906), including *B. rubi*, *S. populi*, and *C. cossus*, and have found them completely immune. An active third year's caterpillar of the goat moth was exposed to + 27 atmospheres for two hours forty minutes, and decompressed instantaneously without any ill effects; the larva subsequently pupated normally. A similar experiment on a larva of *Lasiocampa quercus* was followed by the emergence of a normal imago. On the other hand, these insects appear almost as sensitive to the toxic influence of high pressure oxygen as frogs. That the immunity is really produced in the manner described seems clear from the following experiments. Two active larvae of *L. quercus* were used; A. was placed in a small pressure chamber, with an observation window, together with some food plant, and raised to + 30 atmospheres. During the experiment the caterpillar consumed several leaves. After fifteen minutes the pressure was lowered rapidly, and on removal the insect was dead, the gut being enormously distended with semidigested leaves and air bubbles. On B. a similar experiment was performed, except that no leaves were put in the chamber. Sudden decompression did not lead to any unfavourable result, the insect pupating and emerging in the usual way. In the former case death was probably due to the expansion of air swallowed with the food and dissolved in the contents of the gut.

Experiments of this kind afford a pretty demonstration of the absurdity of primitive "mechanical" theories. If an active goat-moth caterpillar be enclosed in a glass-walled chamber, together with a cork, on raising the pressure, the cork, owing to the air contained in its pores, shrinks visibly, while the insect crawls about unharmed. If the pressure be instantaneously lowered the caterpillar is unaffected, but the cork suddenly reassumes its former shape.

Nature of Gases Liberated.

Bert found that the gas liberated in the tissues was almost entirely composed of nitrogen, and concluded that this gas was alone to be feared, since the avidity of the cells for oxygen is, normally, so great that the latter would never be yielded up in sufficient quantity to form emboli. Bert's analyses of the gas set free in the hearts of dogs rapidly decompressed from + 10 atmospheres, gave:

	Per Cent. Carbon Dioxide.	Per Cent. Oxygen.	Per Cent. Nitrogen.
1	15.2	2.0	82.8
2	16.9	0 0	84.1
3	20.8	A trace	79.2

V. Schrötter, Heller, and Mager found:

	Per Cent. Carbon Dioxide	Per Cent. Oxygen.	Per Cent. Nitrogen.
1. 4 dogs ...	4.71	15.31	79.98
2. 4 dogs ...	12 45	7.18	80 37

Hill and Ham (1905) decompressed rats from + 10 atmospheres, and dissected their bodies under a funnel filled with acidulated water. They found:

	Per Cent. Carbon Dioxide.	Per Cent. Oxygen.	Per Cent. Nitrogen.
1	10.7	2.1	87 2
2	16 0	4 0	80.0

Hill and Macleod (1903, C) submitted frogs and toads to + 20 atmospheres of oxygen (Brin's oxygen, containing 93 to 95 per cent. pure gas) for five minutes, and observed that after decompression the animals were not only convulsed, but enormously distended with gas. Mice exposed to + 10 atmospheres of oxygen were not so swollen, but went into tetanic spasms. Such convulsions could be evoked by a touch, and animals killed in this state occasionally showed bubbles in the capillaries of the central nervous system. Being composed of oxygen, these emboli supplied the nerve cells with that gas until the circulation was re-established. Accordingly, the nervous inco-ordination was but temporary, and the animals in most cases recovered.

A consideration of these experiments suggests that if the power of the cells to combine with oxygen be destroyed or injured, then not only nitrogen, but oxygen as well, would be liberated from solution and form emboli. In order to test this inference, we have exposed frogs, mice, and rats to high oxygen pressures until they showed signs of paresis, and then rapidly decompressed them. In all cases we have obtained large quantities of free oxygen from the peritoneal cavities, subcutaneous tissues, and blood vessels.

On one occasion 3 rats were exposed to +70 lb. of oxygen for an hour. Two were convulsed in thirty-five minutes, and at the end of the experiment all were moribund. One, however, still breathed after decompression, which occupied three and a half seconds; an analysis of its peritoneal gas gave 54.5 per cent. oxygen. In another experiment 5 rats were exposed to +75 lb. of oxygen for twenty-five minutes; all appeared to be affected, and 1 was convulsed. The pressure was reduced to +0 lb. in four seconds, and several of the others were immediately thrown into spasms. One of the latter was killed for analysis, and yielded 67 9 per cent oxygen and carbon dioxide, 32.1 per cent. nitrogen. (Hill and Greenwood, 1907, B)

We are therefore entitled to conclude that oxygen bubbles will be liberated when the tissues are damaged by prolonged exposure to that gas. The onset of convulsions immediately after decompression, as observed in the experiment last described, is suggestive, and we attribute it to bubbles, suddenly formed, stimulating the already poisoned tissues.

These results also follow naturally from the principles enunciated by Paul Bert, because the power of combining with oxygen has been lessened or abolished.

Having established these fundamental propositions, it becomes of importance to consider the manner in which the tissues are saturated with gas, and, subsequently, the methods by which that gas may be removed without danger.

It is clear that the absorption of gas is effected by the blood as it passes through the lungs. The vast surface exposure of blood in the pulmonary capillaries and the intimate relationship between blood and air in the alveoli favour rapid saturation of this liquid with gas. We have, indeed, no proof that blood, after one passage through the pulmonary circulation, is in equilibrium with the alveolar air, the experimental evidence being imperfect.

Analyses of Bert, v. Schrötter, Hill and Macleod demonstrate, however, that the nitrogen content of arterial blood is, in a relatively short space of time, in moderate agreement with the atmospheric partial pressure of that gas. The following table is an illustration (Hill and Macleod, 1903 B):

	Pressure.	Exposure.	Nitrogen Calculated (Percentage).	Nitrogen Found (Percentage).
Dog	+ 100 lb.	30 min.	11.9	8.41
Dog	+ 100 lb.	2 hr. 45 min.	11.9	11.61
Dog	+ 100 lb.	1 hr.	11 9	9 27
Cat	+ 100 lb.	1 hr.	11.9	10 14

The calculated amounts depend upon the assumption that 1·8 per cent. of nitrogen is dissolved in the plasma at +0. The actual values obtained in the control experiments of this series ranged between 1·46 and 2·16 per cent., a somewhat considerable variation.

In an experiment of v. Schrötter and his colleagues, a dog was exposed to +4·5 atmospheres for forty-five minutes, and the arterial blood yielded 9·2 per cent. of nitrogen as compared with a theoretical 9·9 per cent. on the former assumption. Bert's analyses are not strictly comparable with these, as he did not maintain his animals for long under a constant pressure, but they seem to suggest that the blood is not immediately saturated to the full amount. It is hard to arrive at satisfactory conclusions on this matter, because not only is the analysis of blood gases technically difficult, but the amount of nitrogen taken up by the plasma under normal circumstances is not accurately known. A less direct but simpler method of inquiry, which will be considered later, suggests that arterial blood is more rapidly saturated than the former analyses indicate, but we should be rash to assume that one circuit through the lungs necessarily equalizes the nitrogen tension of the blood with that of the alveolar air.

It is apparent that the time required to saturate the blood is not too easy to measure, but the problem is simplicity itself when compared with the more general question as to how long is required to saturate all the tissue liquids. As a matter of fact, absolutely complete saturation will not occur at all in a finite time. The reason of this is clearly explained by v. Schrötter (pp. 35-7, 1904, and p. 803, 1900).

Let us suppose that $1/p$ of the tissue liquids consists of blood, and that these liquids dissolve v volumes per cent. of nitrogen under normal conditions; let us further *assume* that under a pressure of n atmospheres all the blood passing through the lungs comes into gaseous equilibrium with the alveolar air at once.

Then, at the end of one complete circulation of the blood we shall have in the whole body

$$\frac{n.v}{p} + \frac{(p-1)v}{p} \text{ volumes per cent. of nitrogen.}$$

After another circulation we shall have:

$$\frac{n.v}{p} + \frac{p-1}{p}\left(\frac{n.v}{p} + \frac{(p-1)v}{p}\right) \text{ per cent. of nitrogen,}$$

and quite generally, after q circulations, we have:

$$n.v - \left(\frac{p-1}{p}\right)^q \text{ volumes per cent. of gas.}$$

Thus to attain full saturation—that is, $n.v$ volumes per cent. of dissolved nitrogen—q must be infinite.

In practice, however, the term $\left(\frac{p-1}{p}\right)$ diminishes rapidly at first and is small for relatively low values of q.

Thus, according to Haldane and Lorrain Smith (1900) the ratio of blood mass to body mass is about 1 to 20, and we have:

$$\frac{p-1}{p} = \frac{19}{20}$$

The value of this raised to the sixtieth power is less than 0·05. If, therefore, we assume all the blood to pass through the lungs in one minute, then at a pressure of +6 atmospheres—on the hypothesis that equilibrium is really attained in the lungs after one circuit—the body would be about 95 per cent. saturated in one hour. In other words, saturation is almost complete in a comparatively short space of time.

This investigation and the resultant formula are simple and interesting, but not very helpful in the solution of our real problem. To consider only one difficulty—the total circulation time as determined by experimental methods is misleading. Vierordt estimated (Heinz, 1906, p. 47) that the time required for the passage of a substance from one jugular vein to the other was, in the rabbit, 7·46 seconds; in a small goat, 14·14 seconds; in a dog, 16·7 seconds; in a horse, 31·5 seconds. As the pulse-rates of these animals are approximately 210, 110, 96 and 55 a minute respectively, he inferred that in each animal about the same number of pulsations is required to effect a complete circulation. This appears, at first sight, to afford a basis for calculation; but unfortunately it only gives us the time required for passing through the vascular system by the *fastest moving* blood. For instance, if a volume equal to the total volume of the blood passes through the lungs of a man in one minute, this is *not* equivalent to saying that all the blood in his body traverses the lungs once a minute. Some portions of the blood will have made the circuit more than once, others not at all. We know roughly the circulation time of the quickest blood, not of the slowest blood and the latter is just as important as the former. *A priori* reasoning will not, therefore, be of much assistance, and we can only have recourse to direct experiment.

PRIMARY PNEUMOCOCCIC PERITONITIS.

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Up to within the last few years the all-prevailing view of the origin of non-traumatic peritonitis was that it was without exception caused by some gross lesion, generally readily recognizable in the course of operation or *post-mortem* examination of one of the abdominal viscera. This opinion, held and taught dogmatically, and almost come to be looked upon as an axiom of surgery, had displaced the older conception of peritonitis as a clinical entity and a frequent primary condition. Recently it has been established beyond all doubt that cases of peritonitis do occasionally come under observation in which the most careful search, both *ante* and *post mortem*, fails to discover the expected lesion in an abdominal viscus; and not only so, but in the majority of these cases there is no other lesion in any other organ whatever. Such a condition may justly be described as a primary peritonitis.

The cause of many such cases, though probably not all, is the organism of pneumonia, the *Pneumococcus lanceolatus*. Pneumococcic peritonitis, whether "primary" or owing its origin to the existence of some infecting focus elsewhere in the body, is at all times uncommon. It is most often met with in children, and in adults would appear to be extremely rare. Ashdowne,[1] in 1906, when recording a case of the primary diffuse form in an adult, could only find the record of 29 similar ones; while Annand and Bowen,[2] with 4 cases of their own in the same year collected the records of 47 primary and 46 secondary cases in children. The disease, like that caused by other infecting agents, may be diffuse or localized in the form of an intraperitoneal abscess.

During the last two years the following instances of the disease have been under my care, and their record may, in spite of their small number, help with others to elucidate the nature of these obscure and difficult cases, the existence of which will have to be borne in mind when trying to arrive at the probable cause of peritonitis, and hence to its prognosis, for the diffused forms of pneumococcic peritonitis have a very high mortality.

The first case is an example of the localized form in the adult of very rare occurrence indeed, only 8 cases having been so far recorded.

LOCALIZED PERITONITIS: ABSCESS.

CASE I.—A girl, aged 17, was admitted into hospital complaining of pain on the left side of her abdomen.

History.

Ten days before admission she began to have rather severe pain all over her abdomen, like "stomach ache"; there was no vomiting, and the bowels were regular, being open every day. The pain continued to be diffuse until three days before being seen, when it became slightly less, though still rather severe, and became more localized to the left side. The patient had never had any previous illness, and her family, with the exception of her father, who suffered from heart disease and bronchitis, was a healthy one. Menstruation was in every way regular and normal.

Condition on Admission.

An examination of the abdomen showed that the left rectus muscle was rigid, and that there was little movement of the abdomen on that side. A mass extended vertically on this side from somewhat below the crest of the ilium to slightly above the level of the umbilicus, and transversely from just without the median line into the loin. The mass was extremely tender and dull to percussion. It was apparently firmly fixed to its deeper connexions. Nothing abnormal could be made out by a rectal examination. There was a slight vaginal discharge of muco-pus, but a vaginal examination showed that the uterus and appendages were of normal size, freely movable,

and unconnected with the abdominal lesion. Swabs were taken from the vagina and cervix, and bacteriologically examined. The discharge, the girl said, had only been there since the commencement of her illness. The temperature was 100° and the pulse-rate 94. The patient looked fairly healthy and well. The thoracic organs were normal.

Operation.

Abdominal section on the following day revealed an abscess lying to the outer side of the colon and sigmoid flexure; to the inner side some coils of small intestine also helped to wall it off from the rest of the peritoneal cavity. The pus was thick, white, odourless, and contained masses of lymph suspended in it. The wall of the abscess was coated with flakes of the same lymph. No lesion of the bowel was discovered, and no glands could be felt. A small drainage tube was placed in the cavity and the rest of the wound sewn up in layers.

After-History.

Next morning the temperature was 100.6° and at night 101.6°, the pulse and respiration-rate also being quickened. The following day, with slight pain in the left lower chest, the temperature was 102.6°, the pulse-rate 132, and respirations 35 to 40 per minute. Definite signs of commencing pneumonia were present in the left base. The attack was very slight and the patient was never in great discomfort, the temperature coming finally to normal on the seventh day after operation. The abdominal wound healed soundly, and the patient left hospital well.

The examination of the pus from the abdomen revealed the presence of the pneumococcus alone, without admixture with any other organism. The vaginal discharge contained no cocci of any kind, but many long rod-like bacilli, "probably putrefactive."

DIFFUSE FORM.

CASE II.—A woman, aged 43, was admitted into hospital complaining of intense pain in the abomen and vomiting.

History.

Two days before admission she had felt very tired, slightly shivery, but had gone about her household work in the usual way. Late at night, twenty-four hours exactly before admission, she was seized with intense pain in the upper part of the abdomen, with frequent vomiting and diarrhœa; this continued until her admission to hospital. She had never suffered from indigestion, nor had previous attacks of pain in the abdomen. There had been no sore throat. She put the onset of the pain down to having eaten at supper some chipped potatoes.

Condition on Admission.

The patient looked extremely ill. The face was pinched and cyanosed; the tongue brown and dry. The pulse feeble, 220; the temperature 101.6°. The abdomen was distended, its walls rigid, and very tender to touch. There was shifting dullness in the flanks, and absence of movement on respiration—in short, all the signs of a bad general peritonitis. Menstruation was regular and normal. There had been no previous illnesses. In view of the very sudden onset in the epigastrium of the pain, it was considered that the most likely diagnosis was that of a perforated gastric ulcer, although it was recognized that the case was anything but clear.

Operation.

Abdominal section revealed general peritonitis. The abdomen seemed to be full of a thin, absolutely odourless, yellowish-brown pus, somewhat like thin beef-tea, in which were floating numerous masses of a curdy lymph. The stomach showed no trace of disease either back or front; the lesser sac of the peritoneum was opened up, but only showed a quantity of the all-pervading pus. The wound was continued downwards, and the appendix and the uterus and appendages examined, but no lesion could be found. Indeed, a careful search everywhere showed no breach of surface. As this case, which happened two years ago, was my first experience of this class of peritonitis, I was considerably perturbed by not finding the expected visceral point of infection, but could see nothing else to do but to follow the fashion of that time—flush out the abdomen, and place drains in the pelvis and abdomen. Some of the pus was kept for examination, and showed that the organism present was the pneumococcus.

After-History.

The patient was very dull and apathetic, saying very little for many days afterwards, but otherwise made a slow but sure recovery. I saw her a short time ago, and she assured me that she had never felt better in her life.

CASE III.—A woman, aged 39, was admitted into hospital complaining of intense abdominal pain, worse in the lower half and in the right iliac fossa.

History.

Two days before admission she was suddenly seized with severe pain in the abdomen. The pain was bad all night, though there were slight intermissions in its severity. She vomited several times, and her bowels, usually constipated, were open several times, the motions being like diarrhœa. The pain, vomiting, and diarrhœa continued through the next day, and she got steadily worse. The patient up to this attack had always had good health, with the exception of typhoid fever thirteen years ago. She had not suffered from indigestion, menstruation was regular and normal, and there had been no uterine trouble. She had had a child ten months ago.

Condition on Admission.

The patient seemed to be almost moribund. The face was cyanosed, pinched, and looking very distressed. The hands were cold, the pulse 120, and temperature 102.2°; the abdomen was distended, and its walls rigid, especially in the lower half. There was very slight movement on respiration. The abdomen was very tender to palpation. There was shifting dullness to percussion in both flanks, otherwise the abdomen was resonant. Nothing further could be made out in the abdomen. The pelvic organs on examination appeared to be normal. There was nothing abnormal in the lungs or heart. The patient's tongue was dry and coated. A diagnosis of peritonitis of unknown origin was made.

Operation.

Abdominal section showed that the peritoneal cavity was full of a thin, brown, odourless pus, containing very numerous flakes of lymph, and other flakes attached to the abdominal viscera. A careful search of all the usual sites of infection revealed no visceral lesion. A drainage tube was placed in the abdomen and the rest of the abdominal wound sutured. The patient was put back to bed, placed in a reclining position, and the constant rectal saline given.

After-History.

Next morning she appeared to be slightly better; there was no vomiting, the distension was less, and the abdomen soft. The tongue also was cleaner and moist. Towards evening, however, vomiting came on again, together with increase in abdominal distension and pain. The patient rapidly became worse and died early on the following day.

Pus taken at the time of the operation showed the pneumococcus in pure culture, no other organism being present.

Necropsy.

A complete *post-mortem* examination showed a general peritonitis, the abdominal viscera healthy, the stomach and bowel mucous membranes being healthy. The thoracic and pelvic organs were normal.

CASE IV.—Whether this case should be included as one of pneumococcic peritonitis is doubtful. Unfortunately no bacteriological examination of the pus was made, and when ultimately the patient died no *post-mortem* examination was allowed; but a consideration of the appearances found at operation and the after-course of the case makes me believe that we had here to deal with pneumococcus infection.

History.

The patient, a woman, was admitted into hospital complaining of great pain in the abdomen. With the exception of slight discomfort and pain after food, she had been quite well up to twenty-four hours before admission. The illness commenced with sudden and severe pain in the abdomen, she had to go to bed, and could scarcely turn over on account of the pain. She felt sick, but did not vomit.

Condition on Admission.

The patient was obviously very ill, and appeared very near death. Her face was slightly flushed and cyanosed, her hands and feet cold and clammy. She was restless, and the respirations hurried and inclined to be irregular. The abdomen was distended, tense, and rigid, not moving with respiration. The abdomen was generally tender to touch all over, but perhaps more so in the epigastrium. The liver dullness was present, but its edge did not come quite to the costal edge, perhaps from the distension of the intestines present. The temperature was 99°, and the pulse-rate 136 and hardly perceptible.

Operation.

A provisional diagnosis of perforate gastric ulcer was made, and in view of the patient's serious condition it was decided that the abdomen should be rapidly opened above the pubes, the pus present allowed to escape, and a drain placed into the pelvis. This was done, and at the same time the patient was infused. On opening the abdomen a large quantity of clear brownish fluid was evacuated. In the fluid were a quantity of clots like curdled milk. A drain was introduced and the patient put back to bed, the head of the bed raised, and saline injections by the bowel instituted.

After-History.

For the next ten days the patient steadily improved. The abdominal condition rapidly cleared up; the drain was removed, and the wound completely healed. No tenderness was present anywhere, and the condition of the thoracic organs was normal. All the time it was noticed that the patient was very quiet, almost apathetic, and after the first five days she became more so. On the seventh day after the operation the pulse-rate began to increase, on that day being 112 at night. The temperature was normal, and the patient was taking food well. On the eleventh day after the operation the patient became somewhat drowsy, the temperature rose to 101.8°, and

she had three epileptiform fits. The urine was normal. The next day there were nine fits, the patient was more drowsy, was not taking nourishment, she scarcely moved or spoke, and the head was retracted. She became totally unconscious, had many fits, and died on the fourteenth day after operation. The temperature varied between 99° and 102°, and the pulse-rate between 120 and 164.

From a consideration of the cause of death, meningitis, the presence of the liver dulness area, the curious torpor of the patient, and the character of the fluid in the abdomen, I came to the conclusion that the case was probably one of pneumococcic infection, though unfortunately this could not be proved.

Case v.—One further case has come under my notice of pneumococcic peritonitis; it occurred in a man. Cultures of the pus showed the presence of the pneumococcus, but unfortunately, owing to the man being seen in a moribund condition, and dying within a few hours, no notes were taken of the history. My remembrance of it is that the pain occurred suddenly two days before, that it was accompanied with vomiting, that there had been no previous history of ill health. The patient was cyanosed, had a greatly distended and rigid abdomen, a high temperature, and a very rapid pulse. The pus, of which there was a great quantity, was thin, and contained masses of white lymph unusually large and numerous. All the fat of the mesentery, especially the appendices epiploicæ, were stuffed as it were with small foci of this white lymph. No *post-mortem* examination was allowed.

Pneumococcic peritonitis in its primary form seems to have, if we may judge from the reports of published cases, a symptom complex which in some cases, at any rate, should allow the surgeon to make a probable diagnosis of the disease. The majority of the patients are suddenly seized with severe abdominal pain. The pain from the first is generalized, remains so, and is accompanied more often than not by marked diarrhœa and vomiting. There has not usually been any previous ill health, abdominal or otherwise. The march of events is very rapid in the diffuse forms; the patients quickly have the aspect of intense poisoning, great prostration, rapid pulse, cyanosed face, and pinched expression. The abdominal condition rapidly assumes an advanced and severe form. The presence of free fluid in the peritoneal cavity seems to be an early sign. In many cases the presence of restlessness has been remarked, but this was absent in the patients I have observed, who were particularly quiet and indeed apathetic. The girl with the localized abscess was the most alert of all, for although she did not volunteer any information about herself, yet she briefly answered questions.

A peculiarity about the character of the pus in these cases, which is practically always noticeable, is the presence of a large quantity of coagulated lymph like curdled milk. The fluid portion may be plentiful and make up the bulk of the pus; when the curd-like masses are very much in evidence, or when the pus is thick and white, as in the localized forms, the lymph masses make up the bulk of the exudate.

The most common causes, excluding trauma, of peritonitis from which these cases will have to be distinguished are appendicitis, perforation of gastric and duodenal ulcers, and infection through some disease of the female pelvic organs.

It is difficult to say what symptoms or what order of symptoms may be safely relied upon as pointing to the presence of any one of these causes in a given case of peritonitis; indeed, in some cases it is quite impossible to make a diagnosis previous to operation.

Speaking generally, diffuse cases of peritonitis depending upon disease of the appendix have usually a history of abdominal discomfort, slight or severe localized pain, extending over several days or periods, before the severe symptoms come on. The abdominal tenderness, although it may be widely diffused, is most marked over the lower part of the abdomen, and often more marked still over the seat of the original mischief. Here, too, the rigidity of the muscles is apt to be more marked than elsewhere. Vomiting is common, but diarrhœa in this form, as it is in most forms of peritonitis, is rare. Pneumococcic peritonitis seems to start suddenly. The pain from the first is intense; it is generalized, more marked if anywhere in the epigastric region, not particularly marked in the right iliac fossa. Many of the patients have not previously had any form of abdominal trouble. Diarrhœa is a common symptom.

I have the impression, though it is difficult to be sure from the small experience I have had, that the actual rigidity of the abdominal walls in these cases is not so great as it usually is in an appendix peritonitis of the same severity.

In diffuse peritonitis due to the perforation of a gastric ulcer there is, as is well known, more often than not the history of previous indigestion, pain and vomiting after food. The onset of perforation is usually heralded by the occurrence of sudden acute pain in the abdomen and severe shock, often by the sensation of something having given way or burst.

The pain at first is referred to the epigastric region—indeed, often to that portion of the parietes actually overlying the ulcer. It then, though never disappearing, may moderate for a short time, to be often referred to the lower part of the abdomen, where the peritoneum is becoming irritated by the gravitating stomach contents. The tender, often acutely tender, spot over the stomach lesion, however, remains, and can be made out by gentle palpation. The warning signs at this time, if the condition of shock is moderating, are the stiffly-contracted abdominal muscles, the tenderness on touch, and the rising pulse-rate, and, after the initial fall, rising temperature. Vomiting in the early stage of perforation is extremely rare. Generally, too, there is the important sign of the disappearing liver dulness, though in some cases this may not appear for some hours after the onset of the disease.

The separation of pneumococcic peritonitis from these cases will in many cases be difficult. The two have many signs and symptoms in common. The history of the presence or absence of stomach trouble, of the situation of the first pain, whether localized or general, the presence of vomiting, and more particularly of diarrhœa, will have to be utilized to help in arriving at a correct conclusion.

As the majority of cases of pneumococcic peritonitis occur in women, the question of disease of the pelvic organs as the cause of a given case will have to be considered. History of present or previous disease in these parts and a careful pelvic examination will probably enable the question to be settled.

One of the theories of the origin of pneumococcic peritonitis, based upon this frequency of occurrence in women and girl children, is that the organism finds an entrance by way of the vagina. But this does not seem to be borne out by any clinical facts. Another theory is that the onset of the disease is preceded or accompanied by the presence of gastro-enteritis which allows of the passage of the micro-organism through the walls of the bowel; this idea, which might be supposed to be countenanced by the frequent occurrence of diarrhœa, does not find any great support from *post mortem* findings, whether in adults or children.

The most likely theory, though it still leaves unsolved the question of the point of entrance of the coccus, is that the peritonitis is but the localized expression of a general blood infection. It is well known that the organism can be isolated from the blood of patients suffering from pneumonia. The onset of pneumonia in the case of the girl with the localized abscess, twelve days after the commencement of the abdominal disease, would seem to support this theory. So, too, does the onset of meningitis ten days after laparotomy in Case iv. The aspect of extreme poisoning, the cyanosis, the early occurrence of diarrhœa, and vomiting, may also be used to support this view.

Conclusions.

The conclusions to which a study of these cases leads are briefly these:

That an acute diffuse or localized peritonitis may be the sole symptom of a pneumococcic infection.

That such cases possibly form a considerable proportion of those anomalous cases of peritonitis without visible lesion of any of the abdominal viscera.

That their sudden onset after previous freedom from abdominal trouble, together with the frequent accompaniment of diarrhœa, and signs of early systemic poisoning, may perhaps serve to assist in differentiating them from peritonitis caused by other infection.

That they may be followed by pneumococcic lesions in other organs of the body.

That their prognosis is extremely grave.

References.
[1] *Lancet*, vol. i, 1906. [2] *Ibid.*

OBSERVATIONS ON THE RECTAL TEMPERATURE AFTER MUSCULAR EXERCISE.

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The temperature of the human body is of frequent interest to the medical profession; that it is increased by muscular exertion is well known, but a difference of opinion exists as to the normal extent of this increase, and also as to the degree to which the temperature may rise without producing ill-effects. By many it is thought that the extra amount of heat generated is met, as a rule, by a corresponding increase in the amount of heat lost, so that the resultant body temperature is but little if at all raised, and that should any great increase take place a number of characteristic symptoms ensue. This view is probably due to the method of taking the body temperature. Pembrey and Nicol[1] have shown that thermometers placed in the mouth or in the axilla give very unreliable results, particularly during cold weather and after muscular exercise. The most reliable method, although unfortunately not the most convenient, is per rectum. In this way very accurate readings are obtained, especially if care be taken to introduce the thermometer to the same extent in all readings. The figures given in the subjoined tables show that the increase in body temperature during hard muscular work is often very great, Table I showing that the rectal temperature of a healthy individual may reach as high as 105° F. (40.55° C.) without producing any untoward results.

Table I.

Subject.	Race.	Rectal Temperature.	Observations.
C. M. R.	220 yards (1st)	100.85° F.	½ min. after race.
A. C. P.	220 yards (1st)	100.95	Immediately after race.
,,	Long jump (1st)	101.50	3 mins. after last jump.
W. V. F.	¼ mile (1st)	101.10	Immediately after race.
,,	½ mile (1st)	102.00	,, ,, ,,
H. S.	¼ mile (4th)	100.80	,, ,, ,,
R. M. L.	½ mile (2nd)	100.80	,, ,, ,,
,,	1 mile (1st)	102.60	1 min. after race.
,,	1 mile (1st)	100.20	After running from course.
,,	5 laps (1¼ miles) of three miles	102.10	After running from course.
J. F. P.	1 mile	101.00 (100° before race, stripped in dressing room)	Immediately after race.
,,	7 laps (1¾ miles) of three miles	100.00	After running from course.
H.	1 mile (2nd)	102.80	1 min. after race.
,,	3 miles (1st)	103.60	2 mins. after race.
H. P.	1 mile (2nd)	102.80	Immediately after race.
,,	3 miles (2nd)	103.80	,, ,, ,,
,,	3 miles (1st)	105.00 (101° before race, stripped in dressing room)	,, ,, ,,

These observations were made by Dr. Leonard Hill and myself at the London Hospital and Inter-Hospital Sports of 1907. On both days the weather was moist and bleak, with cold winds blowing. The temperatures were taken as soon as possible after the events, the competitors running back to the dressing-room for that purpose. At the same time the blood pressure was determined by the new form of Hill-Barnard sphygmometer, and a sample of the alveolar air collected by Haldane's method (see *Proceedings of Physiological Society*, July 20th, 1907). It will be seen from the table that the longer the effort the higher the body temperature rose, although J. F. P. showed no rise after one mile or after seven laps of the three miles race. This perhaps may be accounted for by the fact that J. F. P. had good vaso-dilatation with marked sweating after the races. H. P., on the other hand, had marked skin vaso constriction; this helps also to account for the temperature of 101° when stripped before the race.

Table II.

Subject.	Rectal Temperature.	Time after Match.
E. C. L.	102.60° F.	About 10½ minutes.
A. B. L.	103.40°	,, 13 ,,
A. C. P.	103.20°	,, 15 ,,
G. M. C.	101.25°	,, 19½ ,,
H. G. M.	102.20°	,, 22½ ,,
A. S. H.	102.00°	,, 24 ,,
M. B. B.	101.60°	,, 28½ ,,

The temperatures in Table II were taken after the Inter-Hospital Rugby Final on March 12th last from members of the winning team. The afternoon was sunny, fresh, and cool, with but little wind blowing. A thirty-second thermometer was used in taking the readings, and it was inserted for fifty seconds on each occasion. It is interesting to note also that each subject considered himself "quite cool now," and was exhibiting no signs of great warmth or dyspnoea; yet it will be seen that in every case, except, perhaps, that of G. M. C., the temperature was markedly raised, especially when allowance is made for the time which had elapsed since the cessation of hard muscular exercise.

Our best thanks are due to the athletes for the help given us in making these observations.

Pembrey and Nicol[1] found, as the result of 343 observations upon two healthy men, that the average rectal temperature over twenty-four hours was 98.24° F. (36.79° C.), so that most of the above figures show a substantial rise, although allowance must be made for the psychic condition of the individual upon such occasions. Most of the temperatures given above are higher than any so far noted for the effect of muscular exertion, that of 105° F. being easily the record for man. In the figures given by Pembrey,[2] Richet,[3] and Tigerstedt[4] there is no such temperature recorded.

Wunderlich cites one of 39.8° C. (103.1° F.), observed upon a runner, and Pembrey has recorded some almost as high after severe muscular exercise. Jürgensen had a temperature of 100° F. (37.8° C.) under the tongue after sawing wood, Vernet one of 101.48° F. (38.60° C.) after indulging in the same form of exercise. U. Mosso has recorded 38.8° C. (101.84° F.) after a hard walk, and Forel obtained a temperature of 39.13° C. (102.43° F.) by mountain climbing. Animals normally have a higher rectal temperature than man; it is subject, perhaps, to even greater variation. A well-marked increase has been noticed in horses after exercise (Hobday, Liska). Richet states that a dog's temperature rose from 39.2° C. (102.56° F.) to 41° C. (105.8° F.) from mere struggling; also that the temperature of a pigeon went up from 42.05° C. (107.69° F.) to 43.7° C. (110.66° F.) after flying while loaded with weights.

It is well known that many factors, such as food, age, sex, race, external temperature, besides muscular work, are held to play a part in determining the body temperature. It would appear, however, that muscular work is one of the most important. Indeed, Tigerstedt[4] expresses the opinion that, allowing for modification by food and the external temperature, the diurnal variation observed in man is due to a difference in metabolic activity. If this were so we should expect a reversal of the variation in night workers. The observations on this point are somewhat discordant; Tigerstedt thinks this may be due to the difficulty of sleeping during the day owing to the lack of quietude, and perhaps also to the imperfect exclusion of daylight, factors which must certainly alter the quality of the sleep obtained. Galbraith and Sutherland Simpson[5] have shown that such a reversal can be obtained in apes, and exists in night flying birds. Osborne,[6] too, has recently contributed some interesting observations made upon himself during a voyage from Australia to England, the evening maximum of the diurnal variation taking place rather in regard to local time than to that of the starting place (Melbourne). Although his figures do

not disprove the existence of a body periodicity, they tend to show the importance of muscular activity in determining the maximum of the diurnal variation.

The temperatures in the case of H. P. after the race are interesting, and as follows:

TABLE III.

Subject.	Time.	Temperature.
H. P.	After race 5 p.m.	105° F.
	5.45 p.m.	102°
	6.45 p.m.	101°
	7.45 p.m.	101.2°
	8.45 p.m.	100.4°
	Next day 12.15 a.m.	100.1°
	3.45 a.m.	98.6°
	8.15 a.m.	98.8°
	4.30 p.m.	100.2°

Any doubt as to the health of H. P. is dissipated by the fact that he was afterwards thoroughly examined by both physician and bacteriologist, and no signs of disease of any kind were found; moreover the subject continues in perfect health at the present time.

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CALMETTE'S OPHTHALMO-REACTION.*

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IT is well known to you that if Koch's tuberculin, a proteid glycerine extract of tubercle bacilli, be injected into a healthy animal no reaction follows, but that if the animal be tuberculous the temperature rises from 2° to 6° F. This *tuberculin test* is constantly used to detect tuberculosis in cattle. Exactly the same is true in man, and in the hands of an expert the reaction is perfectly safe. Osler[1] states that tuberculin is used extensively at the Johns Hopkins Hospital, both in the medical and surgical wards, with the most satisfactory results and without harmful effects.† In adults a milligram is injected, and if this has no reaction a larger dose of 2 or 3 mg. is given after an interval of some days. There is often slight local irritation following the injection, and within from ten to twelve hours the febrile reaction begins, the temperature rising to 102° or 104°.

This reaction, although valuable in large hospitals having a highly-trained staff, is of no real use to the general practitioner. After the injection, which should be made early in the day, the temperature must be taken every three hours. Special care is necessary in all cases of tubercle of the lungs or of the larynx.[2] In spite of all precautions the patient may become really ill, and very untoward accidents have been recorded. Living tubercle bacilli have been found in the New tuberculin,[3] so that extreme caution is necessary in its use. Those of you who have received injections of the typhoid or plague prophylactics will be able to form an idea of the feelings a patient would nourish towards his medical attendant who administered an injection of tuberculin for merely diagnostic purposes.

C. von Pirquet[4] has found that in tuberculous individuals vaccination of the skin with tuberculin produces a local reaction marked by redness and swelling coming on forty-eight hours after the operation. Lignières[5] has shown that scarification of the skin is unnecessary. If tuberculin be rubbed into the skin of a tuberculous person the reaction can be obtained, especially if the skin has just been shaved. V. Pirquet obtained a reaction in all but 11 out of 80 tuberculous children.

Even this *cuti-reaction* is not one likely to be tolerated by the average patient, and, as it involves a breach of skin surface, it cannot be entirely devoid of danger.

Last June, Calmette,[6] the well-known discoverer of anti-snake-bite serum, announced that if tuberculin be placed in the eye of a tuberculous subject a conjunctivitis is produced, whereas in a healthy subject there is no change. This has proved to be *approximately* correct. Calmette's serum can be obtained from Martindale in two forms, the liquid and the dry. The liquid form is now supplied in 0.5 per cent. strength, as the original 1 per cent. solution acted too violently in some cases. It is sent out in a pipette ready for use. All that is necessary is to break off the ends of the pipette and squeeze out the contents, which are enough for four or five patients. The solid form is supplied in a small tube, and it is only necessary to add 20 drops of sterilized water to make a 0.5 per cent. solution. If 10 drops be added we get a 1 per cent. solution, which is useful for a second trial in cases which have not reacted to the weak solution.

The patient's eyes must be carefully examined, and the condition noted in a book. It is essential that there be no pre-existing conjunctivitis, for the reaction would then be masked. One or two drops of the solution must be instilled into the lower cul-de-sac and the eye held open for a few seconds. If the subject be tuberculous the eye will begin to redden in about three hours, and lacrymation will be complained of. At about the sixth hour the caruncle begins to swell, and there may be a slight fibrous exudation which gathers in filaments in the lower conjunctival sac. The reaction reaches its maximum in from six to thirteen hours; there is no rise of temperature and no general malaise.

The inflammation may vary in degree from slight lacrymation, and an almost imperceptible enlargement of the caruncle, to a severe conjunctivitis which may last for several days, or in some cases even for weeks. But there is little danger to the eye unless it be affected with tuberculous disease, a rare ocular condition. Two cases were mentioned by Kalt to the Paris Ophthalmological Society, in which an old tuberculous condition was lighted up by a drop of tuberculin placed in the conjunctival sac.‡[3] M. Morax regarded these effects as mere unfortunate coincidences, for the serum has been constantly used to diagnose tuberculous conditions of the eye with no such bad results. In many cases some experience is necessary to decide whether the reaction be positive or not; a careful comparison should be made between the carunculae on each side.

The intensity of the reaction bears no relationship whatever to the severity of the tuberculous process.

It is now necessary to inquire: *Is Calmette's reaction such a simple practical test that it can be used as a routine diagnostic method by the general practitioner?* It is a safe reaction and a simple one; it hardly inconveniences the patient at all; but is it perfectly reliable? The answer is that it is a very useful aid to diagnosis; but occasionally its answer is, to say the least, equivocal. Cases have been recorded in which a severe reaction has been obtained in apparently healthy men,[8] and the reaction has failed in undoubtedly tuberculous individuals.

My personal experience has been very favourable. I have tried it in 5 or 6 cases of iritis and choroiditis which I did not believe to be tuberculous in nature but which might have been, and not one of them reacted positively. In another case of eczema of the brow a severe reaction was obtained, and as the child was apparently healthy I regarded the indication as false. But I had to take the child into the wards again, and this time she had a typically hectic temperature. We have not been able to find any tuberculous focus yet, but I think that a hectic temperature taken with a positive ophthalmo-reaction make the presence of tubercle very probable. A second trial gave no reaction, but probably the tube which had been opened some ten days previously, was not active, for it failed to elicit a reaction from three undoubted cases of surgical tuberculosis, which have since reacted to a second tube of serum.

Calmette's reaction is useful in cases of cerebral compression. Some months ago we had two cases of undoubted cerebral disease in the wards lying side by side.

* Read before the Coventry Division of the British Medical Association.

† See also Schumacher's paper, *Zeitschrift für Augenheilkunde*, March, 1908.

‡ Other cases have now been recorded. See *Archives of Ophthalmology*, March, 1908. Knapp records a case where interstitial keratitis followed the test.

The first case was sent to me by the late Dr. Hird. She had severe optic neuritis, headache, vomiting, vertigo, and fits. She was almost blind, and had lost all sense of smell. She had been very deaf for some years. I concluded that she had a gumma somewhere in the anterior part of the brain. She did not improve under iodides in large doses, so she was readmitted, and ultimately very successfully decompressed by Mr. Bennett. This case gave a negative reaction, and the subsequent history showed that the tumour was not a tuberculous one.

The second case, under Dr. Hawley, had headache, optic neuritis, and vomiting, with severe retraction of the head. She was pale and tuberculous-looking. The reaction was in her case positive, and we considered that she had tuberculous meningitis. This patient unfortunately discharged herself, and we have lost sight of her.

A third cerebral case is of great interest. A man was sent to me by Dr. Hawley suffering from headache, vertigo, and vomiting. He had old-standing, quiescent tuberculous disease of the ankle. I found that he had slight optic neuritis, and he gave a positive ophthalmc-reaction. Shortly afterwards he developed all the signs of typical tuberculous meningitis, and died.

All the cases of obvious tuberculosis in which I have myself performed the test have given a positive result, but in one the reaction was merely subjective, I could see no inflammation, but the patient, a medical man, assured me that his eye was glued up when he wakened in the morning, the serum having been put in the last thing at night. The case was one of tuberculous kidney, which has since been excised. Tubercle bacilli were found in the urine.

I have so far seen only one very slight reaction in an apparently healthy individual, although I have tried several, including myself and my whole family. A negative result in cases of tubercle may be due to an inactive serum, or to its having been washed out by the tears. In all cases where tubercle is suspected and the eye does not react, the experiment should be repeated with a 1 per cent. or even stronger solution, before the reaction can be said to have definitely failed.

Since Calmette published his results the test has been widely applied and extensive statistics are now at our command. The average opinion appears to be that the test is a very valuable aid to diagnosis, but that *it cannot be regarded as an infallible index of the presence or absence of tubercle.*

During the past week the kindness of my colleagues and the help of Dr. Richards, our senior house-surgeon, have enabled me to apply the test to most of the suspected or proved cases of tuberculosis in the hospital. They were first tested with the 0.5 per cent. solution, and the reactions were slight and in some cases equivocal. After an interval of three days the tests were repeated, the opposite eye being used. The results were as follows:

No. 1. Old-standing, advanced *phthisis*. Tubercle bacilli in sputum; slight reaction to 0.5 per cent. solution. This case gave a similar reaction three months previously.

No. 2. *Tuberculous knee.* Slight result with 0.5 per cent., very marked with 1 per cent.*

No. 3. *Tuberculous ankle.* Doubtful with 0.5 per cent., good with 1 per cent.

No. 4. *Tuberculous ankle.* Slight with 0.5 per cent., very good with 1 per cent †

No. 5. *Periostitis of tibia.* No result with either; the case is probably non-tuberculous.

No. 6. *Abscess of lung, with consecutive empyema.* No result with either strength of solution.

No. 7. *Case of Cystitis and Probable Nephritis.* Patient is suspected to be tuberculous, but no bacilli have so far been found in the urine. The reaction to 0.5 was very slight. Splendid reaction to 1 per cent., with filamentous exudate.

One or two of the cases reacted to the weak solution after twenty-four hours. The serum was placed in the eye last thing at night; next day there was a very slight and doubtful reaction, but on the second day it became marked.

These 7 cases are only the last series of some 30 I have examined, and so far, as I have already stated, my own results have been such as to confirm the usefulness of the test.

J. Eyre, B. Wedd, and A. Hertz[7] have tested 138 cases—63, or about half, gave a positive reaction, and of these the majority were unquestionably tuberculous. Two cases almost certainly tuberculous gave no reaction. A case of meningitis, which died thirty hours after the test, did not react, although tubercles were found on the meninges, but this harmonizes with the view now held that no reaction is to be expected during the last week of life.

[Dr. Harrison Butler then referred to the papers recently published in the JOURNAL by J. S. Gibb,[9] W. MacLennan,[10] J. Webster and Kilpatrick,[11] and Parkes Weber.[12]]

P. Brons[13] obtained an excessive reaction in 5 cases. He holds that the ophthalmo-reaction has dangers of its own, and should not be used indiscriminately. Sydney Stephenson[14] says that in his opinion the ophthalmo-reaction is a valuable means of recognizing tubercle.

The final verdict must be that of the physician, for a sufficient number of tuberculous cases do not come under the notice of the ophthalmic surgeon. I personally now use the test as a routine procedure in all doubtful cases of choroiditis or iritis, but *I regard it merely as a help in diagnosis, not as an infallible guide.* It is not nearly so accurate as the injection of tuberculin, but is probably as useful an indicator as is Widal's reaction in typhoid.

* This reaction became very violent in both eyes, there was a muco-purulent discharge for a *month*, and phlyctenules appeared in the eye which had received the 1 per cent. solution

† Very violent reaction, both eyes inflamed for a month, phlyctenules developed.

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A NOTE ON THE SO-CALLED STIMULATING EFFECT OF ALCOHOL ON PROTOPLASM.

BY W. HENRY KESTEVEN, M.R.C.S.

HAVING regard to the conflicting beliefs and statements as to the action of alcohol in the human body, it occurred to the writer that in one way—in one particular, at least—he was in a position to investigate and to see for himself the actual facts of the case, and thus to be independent of the evidence of others. This one point was the action of alcohol on simple living protoplasm as seen under the microscope. The following record of observations pursued steadily for several months seems to throw a considerable amount of light on the supposed stimulating action of alcohol.

The experiments were made upon amoebae, as they seemed to be the best examples of simple protoplasm which were easily visible.

There are different varieties of amoebae, but the point which makes them most useful for our purpose is the fact that although some of them are very small, and of little or no use for observation, others are decidedly the reverse. The writer has measured one such when it was extended in active locomotion, and found it to be $\frac{1}{25}$ in. in length, and about a quarter of that in width, that is, about $\frac{1}{100}$ in., other specimens only measured $\frac{1}{500}$ in., and others even less than that. All, however, present, according to the textbooks (Butschli, Gilbert Bourne, Calkin), an identical structure. They are said to consist of an ectoderm more or less hyaline, and endoderm with granular appearance, in which is imbedded a nucleus or sometimes two or more nuclei. When in active condition they move from point to point by means of projections or processes of the hyaline ectoderm, into which stream the granules of the endoderm. These processes are called pseudopodia. By means thereof they attach themselves to the substances with which the come in contact, and then by contraction of the pseudopodia they move their whole body.

They find their food in the water in which they live. The ectoderm closes over nutritious particles, which then pass among the granules of the endoderm. After a time such particles are found to be enclosed in a vacuole, containing also a clear fluid, in which the particles float. These are gastric vacuoles, and it is possible to recognize among their contents a variety of different objects which have been thus enveloped by the creature, for these vacuoles grow in size by coalescence, the granular appearance of the endoderm being in truth largely due to very minute specimens of such vacuoles, several of which will attach themselves or gather round a foreign body which has been thus sequestrated, and by coalescence form a vacuole large enough to contain the object and the solvent fluid secreted for its digestion. These, which may be called the secondary vacuoles, also coalesce, mingling their contents, so

that in the larger specimens it is easy to recognize different varieties of diatom shells, desmids, crystals, vibriones, etc. When, however, by the action of the gastric secretion, the nutritious portions of the contained particles have been dissolved out and digested, the indigestible residue is expelled by the rupture of the vacuole at some point in the periphery of the body.

In the endoderm, and sometimes in the hyaline ectoderm, other vacuoles appear, from time to time, which contain only clear fluid. These, which in their earliest form, like the last described, are minute granule-looking bodies, increase in size in the same way as the others; that is to say, by coalescence until the repetition of the process causes distension beyond the retaining power of the surrounding body substance, when rupture takes place and the contents are expelled, sometimes with considerable impulsive force, as testified by the sharpness of the current formed in the water outside. These vacuoles are no doubt excretory in function.

For our purpose these three functions—locomotion, digestion, excretion—are sufficient, as they are the real measures of the vitality of the animals under examination. Solutions of alcohol in water from 1 per cent. upwards were used.

Having fixed upon the specimen on which the experiment was to be made, as soon as it was seen to be firmly attached either to the slide itself or to the cover-glass, by means of blotting paper as much as possible of the water was withdrawn from the slide, without actually leaving the specimen dry. Then the solution was allowed to take the place of the extracted water, thus drenching the animal. The process of withdrawal of the liquid was then repeated two or three times and fresh solution added until the drenching or immersion of the animal was complete.

ONE PER CENT. SOLUTION.

Several different specimens of amoebae were treated with this solution. The following is a description of the effect of the solution on a typical example of these.

The amoeba was a medium-sized one, actively moving about the field of the microscope. Immediately the solution reached it the locomotion ceased, and the granules of the endoderm stopped streaming. They massed together toward the centre, the ectoderm or hyaline portion surrounding them. The animal remained stationary for seven minutes; then movement commenced in the ectoderm, movement which is best described by the word "sprawling." Nodular pseudopodia were projected in all directions, without locomotion. A vacuole in the endoderm ruptured; this contained only clear fluid. The closure of the breach and the filling up of the cavity by the surrounding walls did not seem to be slower than usual, but there did not seem to be so much "snap" as in the natural animal. After twenty minutes the granules began moving about, but feebly, and did not stream into the hyaline portion, which continued "sprawling"; after thirty minutes locomotion recommenced, the granules streaming into the pseudopodia. At the end of an hour and a quarter vigorous locomotion was continuing, and the condition of the animal seemed to be identical with what it was before the solution was applied, although the supply thereof was kept up. In fact, the animal was now living, and evidently capable of continuing to do so in a 1 per cent. solution of alcohol.

TWO PER CENT. SOLUTION.

The animal, as before, a typical example of many under observation, was streaming in an elongated shape across the field, when the solution drenched it. Locomotion immediately ceased; an irregular spherical shape was assumed, the granules streaming hither and thither, but not into the processes of the ectoderm. These the hyaline ectoderm began to form in a sprawling manner, about twenty minutes after the solution reached it. In half an hour locomotion was resumed, but feeble and sprawling in character. This continued for an hour or so. Four and a half hours later the animal was found to be quite quiescent, in spherical form, and entirely detached from the glass. No further change was detected, although it was watched for some hours.

On the same slide, four and a half hours after the addition of the solution, a very large specimen was found, which was apparently quite unaffected by the solution. It seemed quite able to live therein, but all smaller animals were either torpid or dead.

On another slide the experiment was repeated with the 2 per cent. solution, but with no other result discoverable upon two vigorous and fair-sized amoebae, than to produce temporary check to locomotion, followed by sprawling and irregular movements for about twenty minutes, after which living in the solution seemed to make no difference to either of them, though they were watched for eight hours.

THREE PER CENT. SOLUTION.

Movement of every kind suspended for seven minutes after drenching. Then the granules began to show movement, and the formation and rupture of vacuoles recommenced as before immersion in the solution. But there was no locomotion. In one specimen there were two or three vacuoles containing pigmented matter, reddish-brown in colour, and one that contained a clump of what looked like bacteria. This latter, about twenty minutes after drenching, ruptured, expelling its contents to a distance by the vigour of the closure of the space. After half an hour, all adhesion to the glass, either slide or cover, was lost, and the amoeba was floating loose, but occasionally projecting a nodular short pseudopodia, and the process of vacuolation still continued. No change took place for about twenty-two hours, except that when observed at that time the vacuolation had ceased, the animal was floating freely, no pseudopodia were being formed; it was, in fact, torpid or dead.

In some others observed the appearances were identical with that described. One only appeared to have greater resisting power, and recommenced locomotion about seven minutes after immersion; but it was jerky and irregular, compared with that of normal life. Vacuolation also seemed to have become slow; when the vacuoles ruptured the filling up was markedly deliberate. This retardation in the formation, rupture, and filling up of the vacuoles was observable in all the specimens.

FOUR PER CENT. SOLUTION.

Streaming locomotion, which was going on actively, was immediately suspended on drenching with the solution. After three minutes, sprawling projection of short pseudopodia commenced, with formation of vacuoles or clear fluid, then pauses lasting for periods varying from one to three or four minutes, during which no motion of any kind was detectable. About an hour later the torpidity became more marked; all attachment to the glass was lost, only a languid sprawling motion was occasionally visible. The animal assumed a mulberry shape and appearance, rolling about in every current excited in the fluid in which it was suspended. No change took place for seven hours, and though watched for twenty-four hours the condition remained the same, and was practically that of death.

FIVE PER CENT. SOLUTION.

A remarkably large specimen was found and drenched with the solution, but did not show any signs of being affected thereby for five minutes. Then locomotion quite stopped. Granular streaming became slow, sprawling set in, until about fifteen minutes after drenching, the body assumed a spherical shape, with the granules collected in a dense mass in the centre surrounded by a smooth hyaline margin. The appearance was very similar to that seen in the animal treated with 1 per cent. solution. It was quite detached from the glass, and in a state of complete rest. By close watching, however, about half an hour from immersion some slight movement was seen among the granules at one point. Also slight variations in the outer contour noted from time to time indicated that life was still present. Vacuoles then began to appear, first in the hyaline ectoderm, then, in about forty minutes later, in the granular endoderm.

About five and a half hours from immersion there was a formation of sprawling pseudopodia, the granular streaming being exceedingly slow. This condition without any locomotion continued for about sixteen hours, and then became more vigorous with sprawling locomotion, and in about two hours more—that is, in eighteen hours from immersion—the creature seemed quite recovered and as vigorous as in simple water.

This, however, was the only specimen that recovered; six other specimens, none of them so large, were examined, and all were undoubtedly dead in three or four hours, though watched for much longer.

SIX PER CENT. SOLUTION.

Immediate arrest of all motion. In about twenty minutes after drenching, it was a freely-floating, irregular,

spherically-shaped mass, all connexion with the glass having been lost, although it had been gliding along it with the regular streaming movement just before being drenched with the solution. In this condition, with absolutely no sign of life, it remained for six hours. At that point of time, the alcoholic solution in which it floated, was withdrawn entirely, and for it ordinary water from its native tank was substituted. But at the end of ten hours later there was no sign of change. The alcohol seems to have penetrated deeply into the bioplasm, for when the water took the place of the solution, the specific gravity of the body was less than that of the water, as shown by the fact that it floated against the under-surface of the cover-glass, rolling about with every current, in close contact therewith; whereas, when first discovered in the water, these creatures are always resting on the slide itself, though sometimes after they begin to project pseudopodia some of these in the larger specimens adhere to the under surface of the cover-glass. This specimen was a large and vigorous one, with vacuoles both digestive and excretory.

In another specimen treated with the same solution there was seen, following the arrest of voluntary movement, a peculiar shrinkage, the effect of which was to cause the hyaline portion of the body to appear almost to separate from the granular endoderm. In this latter there was observed for some hours a slow and irregular formation and rupture of vacuoles. But the result as to regaining activity and vitality was practically the same as that described above. This specimen was watched for about sixty hours, and with the exception of the formation of the vacuoles, mentioned above, and what was thought to be a slight attempt at sprawling motion in the hyaline part, about twenty-four hours after drenching with the solution, no signs of recovery were obtained. It might have been alive at the end of this period, as it was not tested with return to pure water. Admitting that it was still alive, it would appear that 6 per cent. of alcohol is really more than these creatures are capable of tolerating, and if it be not fatal to them yet renders them practically useless from deep torpor.

Seven per Cent. Solution.

This was a large size specimen, streaming along firmly attached to the slide, occasionally changing its direction, by the projection of pseudopodia, at various angles to the original axis.

In it there was one conspicuously large vacuole among several other in the endoderm. This large vacuole contained a solid spherical granular mass, which slowly revolved by independent motion within the vacuole.

Directly the animal was drenched with the solution it stopped its locomotion, nor did it again exhibit that power. The mass enclosed in the large vacuole continued to revolve for some ten minutes after all other motion had apparently ceased. There were other vacuoles, smaller, and containing clear fluid—excretory—or fluid with a few granules which might be the remains of some absorbed material. About six hours later all these smaller vacuoles had discharged, and therefore disappeared. The large one was left, but the granular mass within it was disintegrated, and seemed to fill up the space. The hyaline ectoderm had become more distinct from the granular endoderm, but otherwise there was no change. It was watched for forty-eight hours, but was evidently dead, though preserved by the spirit from active decomposition.

Several other experiments were made with this solution, but the result was the same in all, death being practically caused immediately the animal was drenched.

Conclusions.

No stronger solutions were used. It was evident that although these animals could live in solutions of alcohol which did not exceed 5 per cent, yet that the effect upon them was in all cases the same, it being simply a question of the degree of paralysis induced. There was absolutely no sign of any stimulating effect. Torpor, followed in many cases to which the weaker solutions were applied by what is known as alcoholism, was the rule; and if life was maintained, it was rarely as vigorous as before the alcohol was added to the medium in which the creature was living.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

MUMPS REPRESENTED BY A PRIMARY ORCHITIS.

A boy, aged 7, was attacked by mumps. Three weeks later the disease appeared in the boy's mother. Finally, after another six days, the father began to suffer from left sided orchitis. He has now almost recovered. The parotid gland has not been affected. The many recorded instances of "metastasis" from the parotid to the testicle prove that, in not a few persons, the latter gland is almost as liable as the former to this strange affection. We ought not, therefore, to have much difficulty in believing that the testicle may sometimes be even less resistant than the parotid. Musser, indeed, writes concerning mumps: "The infection is recognized by the swelling of the parotid and submaxillary glands, or by the occurrence of orchitis" (*Medical Diagnosis*, p. 264). Most of the text-books, however, do not clearly indicate the alternative which Musser appears to recognize.

London, N. O. E. Higgens.

HYPERSENSITIVENESS TO ANTIDIPHTHERIAL SERUM.

The interesting accounts given by Dr. Thorne Thorne[1] and Dr. Bligh[2] of the effect of antidiphtherial serum on them, encourage me to narrate certain experiences of the introduction of horse serums into my own person.

In the spring of 1901, as the result of infection of a scratch on my left thumb, the lymphatic glands in the corresponding armpit became red, swollen, and tender, and inflammation spread thence to the cellular tissue of that side of the chest. This was accompanied by vomiting, headache, sleeplessness, continuous high temperature for several days (104° F.), haemorrhages from the nose and bowel, and great prostration. Antistreptococcic serum was injected subcutaneously, and decided amelioration occurred in the symptoms, whilst shortly afterwards suppuration took place at various points over the left side of the chest and axilla, necessitating numerous incisions. Another injection of serum was given about four days later. On neither occasion was any ill-effect produced beyond slight itching in the neighbourhood of the punctures.

Some eighteen months later a child suffering from diphtheria coughed some of its membrane into my eye. The same evening a small dose (1,000 units) of antidiphtherial serum was injected beneath the skin of my left forearm as a prophylactic. Two hours later, feeling far from well, I went to bed, but within a few minutes itching, quickly followed by swelling of the skin, began on the fronts of the thighs, and rapidly spread over the whole of the body, limbs, and head, until I felt like one huge urticarial wheal. The irritation was intolerable, and it was quite impossible to refrain from scratching—indeed, the only difficulty which seemed at the time to be of any consequence was to scratch a sufficient number of parts at once. This urticaria was accompanied by pain behind the sternum, palpitation, and a feeling of faintness, but no vomiting. These symptoms lasted about two hours, and then gradually passed off, and on the following day I was quite well.

Not unnaturally I was inclined to attribute this catastrophe—or, at least, its occurrence so soon after the injection—to the extensive destruction of my axillary glands eighteen months previously allowing the alien serum to escape the usual delicate attention by these structures, and to pass almost directly into the blood stream. The sequel seems to show that this hypothesis was not correct.

Last year I suffered from an attack of unilateral membranous tonsillitis, in all probability diphtherial. Within twenty-four hours of the onset antidiphtherial serum was administered, but this time I was very insistent that it should be into the *right* half of my body, and it was put into the right flank. Notwithstanding this precaution, within two hours the same phenomena occurred as on the former occasion—intense itching and swelling of the skin,

[1] British Medical Journal, January 18th, 1908.
[2] Ibid., February 29th, 1908.

pain and a feeling of distension behind the sternum, and this time in addition there was vomiting and throbbing pain in the head. The itching lasted two or three hours only, and on the following day the rash had quite disappeared. I have never had urticaria on any other occasion.

The interest of these two attacks consists in the short interval between the injection and the onset of symptoms (not more than two hours on either occasion), in the intensity and short duration of the symptoms, in the striking similarity between the attacks as regards time of onset, symptoms, and duration (though the serums used were from different firms and so probably from different horses), and in the fact that on two previous occasions horse serum had been administered to me without ill effects.

Bath. RUPERT WATERHOUSE, M.D., M.R.C.P.

TAENIA CUCUMERINA IN SOUTH AFRICA.

In Allbutt's *System of Medicine* (Ed. 1907) the article describing *Dipylidium caninum* (syn. *Taenia cucumerina*, *Taenia elliptica*, etc.) mentions that there have only been 37 recorded cases of this tapeworm in man, and that Northern Europe, chiefly Scandinavia, is its usual seat of distribution. As I am unaware of its presence having been noted in South Africa occurring in the human subject, I should like to record a case from this district—Ceres, Cape Colony.

The patient was a little European girl, born in South Africa, between 4 and 5 years of age. She was passionately devoted to dogs, cats, and all kinds of animal pets, and I have no doubt the larvae were transferred from the lips or tongue of one of these pets after a successful flea hunt. I was unable to diagnose the worm from the proglottides brought to me; they were motile for some time after evacuation. I found, however, in Vierordt's *Medical Diagnosis* a description and illustration which accurately fitted my segments, with their so-called cocoons containing from six to fifteen eggs. The worm was easily expelled by a moderate dose of male fern. It was 31 cm. long, the riper segments 2.5 mm. wide, each about four times as long as it was broad, and in other respects conformed to the descriptions of Vierordt and in Allbutt's *System*.

The symptoms produced were attacks of abdominal pain, vomiting, capricious appetite, etc., accompanied by a moderately high temperature and rapid pulse (circa 136).

Ceres, Cape Colony. E. A. SEALE, M.D. Univ. Dub.

AN UNUSUAL ABNORMALITY.

A MINER, whom an injury recently brought to my surgery, presented the following anomalies in the hands: There was complete absence of the nails on the thumb, forefinger, middle finger, and radial half of the ring finger. The nail was complete on the little finger, and there was half a nail on the ulnar side of the ring finger. The feet showed a corresponding condition. Naturally the absence of nails gave a peculiar appearance to the fingers and toes. The ends were rounded in every direction, not unlike the appearance of an amputation stump. There was no thickening of the skin on the dorsal aspect of the fingers or toes. The utility of the fingers were very little impaired. A pin was picked up from the floor with ease. The only thing that bothered the patient was the opening of a small pocket-knife; he had to use a coin to open it. I obtained the following account with regard to the man's family history, which covers four generations. His maternal grandmother had the same condition, and his mother, and two of her brothers and one of her sisters. In the third generation it exists in all the patient's brothers and sisters, and among his cousins on the mother's side. The patient himself, aged 27, has had two children, of whom one, now dead, had the condition, and the other is free from it. It is obvious, therefore, that the abnormality was inherited and is being transmitted to the fourth generation. It will be observed that the defect precisely corresponds to the finger distribution of the median nerve, which supplies the extremities of three and a half outer fingers, and which seems otherwise perfectly normal. I have not been able to find any similar case in literature.

R. MALCOLM, M.B., Ch.B.St. And.

Thurnscoe, near Rotherham.

DIABETES MELLITUS IN CHINESE.

In reference to Dr. Lambert's statement (BRITISH MEDICAL JOURNAL, January 4th, 1908, p. 19) as to the occurrence of diabetes amongst the Chinese, further investigation is certainly needed. Working as I have in two large hospitals 150 miles apart during eight years, and treating both wealthy and poor amongst the Chinese, I unhesitatingly assert that the disease is extremely rare. Three instances have come under my notice, and of these one only was a typical case, and this in spite of frequent urine examinations carried out in the hospital. I may mention that both these hospitals are away from the coast, and in the one case few of the patients have been abroad; in the other case many have been to the Straits and Dutch Indies.

J. PRESTON MAXWELL, M.B., F.R.C.S.

Yung-chun, Amoy, Fuhkein Province.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE NORTHERN INFIRMARY, INVERNESS.

A CASE OF ANTHRAX.

(Reported by T. E. ROBERTS, M.B., Ch.B.Edin.)

THE patient in the following case, a ploughman aged 27, came to the Infirmary on February 8th, complaining only of a painful boil on both forearms, but presenting symptoms which led to his immediate admission.

State on Admission.—There was a dark plum-coloured oval area surrounded by vesicles on the flexor aspect of the lower third of the right forearm, with great congestion and oedema of hand and forearm. A similar condition was present on the extensor aspect of the middle third of the left forearm, with considerable redness and oedema extending up the limb. The epitrochlear and axillary glands were markedly enlarged and painful on both sides. Temperature 102.4° F. Pulse 102. Respirations 24.

History.—On being questioned, he related that on January 23rd a bullock on the farm where he worked was found to be ill, and died four days later. On that day (January 27th) the carcass was skinned by the patient and another farm hand. On completing the work the patient washed his hands well with both ordinary water and Condy's fluid, and when it was found that the animal had died of anthrax his clothes were destroyed. Nothing unusual happened for ten days, when he found he had an exceedingly itchy pimple on his right forearm, and attributed it to the fretting caused by a new jacket. This pimple rapidly extended, the skin turned dark, and the forearm began to swell. The following day, February 7th, he felt very listless, had slight vomiting, a general feeling of malaise, and noted another pimple on the left arm at the site of an old scar. A film from a scraping showed the presence of a few isolated bacilli.

Treatment and Progress.—Fomentations of mercury biniodide were applied the following evening, the diagnosis of anthrax having been confirmed by microscopic examination of a smear from one of the pimples (followed eventually by cultures and inoculation), 20 c.cm. of Sclavo's serum was injected below the skin of the abdomen, with the result that at 9 a.m. next day the temperate had fallen to 99.8° F. In the evening the temperature rose again to 100°, but at 8 p.m. on the 11th it had fallen to normal. Another 10 c.cm. of serum was given at midday; temperature at that time was normal, but it rose in the afternoon to 100.4°. By 9 p.m. it was again normal, and remained so until the patient's discharge on March 7th. The fomentations were continued throughout, but at lengthening intervals as the local conditions improved.

REMARKS.—A point of interest in this case is the long period which elapsed between the time at which the patient was brought into contact with the diseased animal and that at which evidence of infection appeared. Although the patient declared he had washed his hands thoroughly his nails were very dirty, and it seemed probable that bacilli lurked in them, and that he infected himself when scratching his arm to allay the itching caused by the rubbing of the sleeve of his new coat. For permission to publish this case I am indebted to the courtesy of Dr. Mackay, the senior surgeon of this infirmary.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

J. Kingston Fowler, M.D., F.R.C.P., President, in the Chair.

Monday, April 13th, 1908.

Clinical Evening.

Dr. F. Parkes Weber showed a case of primary (?) splenomegaly with anaemia in a Jewish woman, aged 50, said to come from a non-malarious part of Russia. He thought it possible that later on the condition would develop into that of so-called "Banti's disease" with leucopenia and hepatic cirrhosis. Dr. W. H. Willcox showed a case of cirrhosis of the spleen and liver (? Banti's disease). Mr. E. M. Corner showed a case of overgrowth of great toe with dislocation of the metatarso-phalangeal joint. The condition was in part congenital and in part acquired, the congenital factor being the overgrowth of the soft parts and bones and the acquired factor being the abducted position of the overgrown great toe, due to wearing boots. Mr. Corner also showed a case of old fracture of the head of the astragalus and the scaphoid in a working man. The injury was due to an accident in July, 1907, and as it was supposed that his ankle was "sprained" he came under the Employers' Liability Act, and there was dissatisfaction because he recovered slowly and could not work. In March, 1908, skiagrams were taken which showed that there had been a piece broken off the inner side of the head of the astragalus and a fissure-fracture through the scaphoid. The case was an example of what might be called the "obscure fracture" undiscovered until demonstrated by the *x* rays. Dr. O. K. Williamson showed a case of aortic and mitral stenosis in a child, and Dr. H. E. Symes-Thompson showed a case of bigeminal heart in a woman of 20. On palpation the heart beats were found to take place in pairs, a forcible beat being followed prematurely by another beat of less intensity. Each pair of beats was followed by a pause. As a rule the feebler beat did not reach the wrist. The condition was unconnected with the administration of digitalis. Mr. T. H. Kellock showed a case of paraffin injection for depressed nose four years after operation. The length of time that had elapsed since the operation justified the hope that the result might be permanent. Dr. StClair Thomson showed two radiographs illustrating the value of the *x* rays in sounding and washing out the frontal sinus. He also demonstrated, by means of a radiograph, a case of complete absence of the left frontal sinus. Dr. C. W. Chapman showed a case of bradycardia in a patient, aged 38, with valvular incompetence. Dr. F. S. Palmer showed a case of progressive muscular atrophy in a boy, aged 15, and a case of articulatory defect following attacks of transient hemiplegia in a female aged 21.

MANCHESTER MEDICAL SOCIETY.

A. T. Wilkinson, M.D., F.R.C.P., President, in the Chair.

Wednesday, April 1st, 1908.

Defective Fat Metabolism.

Dr. Mumford related a series of cases illustrating the influence upon the growth of children exerted by a defective metabolism of fat when this was prolonged over a series of years. The condition described was associated with chronic diarrhoea and with absence or alteration of the pigment of the faeces (acholia). There was no concomitant jaundice or glycosuria. In the cases described improvement or cure resulted from the administration of pancreatin, and assimilation of fat was thus secured after a treatment of coincident duodenal catarrh by mercurials, etc., had failed. Growth was resumed after it had been arrested for many years, and at least in one case permanent cure resulted. Dr. Dixon Mann said that in the absence of jaundice the faeces might be colourless for a considerable time owing to one of two causes—great excess of fat or over-reduction of the bile pigment. The fat-cleavage in the intestine might be defective owing to absence of the pancreatic juice; it might also be impaired by chronic intestinal catarrh. In such cases the faecal fat might reach from 50 to 80 per cent. When the amount of fat was very excessive the pigment present in the motions was obscured; their appearance then being quite pale, or they might even be devoid of all colour. In other cases the colourless stools were due to the bilirubin having undergone excessive reduction, on account of inordinate putrefactive processes in the upper part of the large intestine. Under normal conditions the bilirubin was reduced by the intestinal bacteria to urobilin, to which the normal colour of the faeces was due; if the reduction was carried beyond this stage, the colourless chromogen, urobilinogen, was produced, and the faeces were then deprived of their natural pigment. Such changes occurred in chronic intestinal catarrah, in tuberculosis of the abdominal viscera, in septic diseases, and also in some blood diseases.

Etiology of Psoriasis.

Dr. Chevers, in a paper on the etiology of psoriasis and allied conditions, brought forward arguments to show that psoriasis, eczema, pemphigus, and anglo-neurotic oedema were due to nerve disturbance. In the latter three conditions the exudation, as compared to the dry scaliness of psoriasis, depended on individual peculiarities with respect to the permeability of the capillary walls, the degree of coagulability of the blood, and the variability of skin elasticity. These troubles should not be classified as diseases originating in the skin, but as objective symptoms of general functional disturbance.

ROYAL SOCIETY OF MEDICINE.

Therapeutical and Pharmacological Section.

At a meeting on March 24th, Dr. Burton Brown, President, in the chair, Dr. J. M. Bramwell, in an address on hypnotism, described the gradual evolution of hypnotic theory from the time of Elliotson and the later mesmerists to the present day. The earlier workers in the field sacrificed their own interests through their devotion to their convictions, and were subjected either to neglect or abuse, Elliotson himself being forced to resign his appointment at University College Hospital. Mesmerism was the first anaesthetic, and hypnotic anaesthesia was still occasionally induced at the present day. It was, however, more of scientific than practical interest, for only a limited number of persons could be hypnotized deeply enough for operative purposes. In the therapeutic application of hypnotism his proportion of successes had been greater when he was able to choose his cases from amongst the patients of his own general practice. Now, when the cases sent to him were almost invariably long-standing ones, in which other methods of treatment had been tried without success, his difficulties were considerably increased. Still, even in such cases, success was often striking and sometimes rapidly obtained. He rarely found it necessary to induce deep hypnosis, but a restful drowsy state seemed to favour the action of suggestion. Why suggestion administered in this form acted with more force than the suggestions of ordinary life he was unable to explain adequately, but it was a fact which came under his daily observation.

Clinical Section.

At a meeting on April 10th, Sir T. Barlow, President, in the chair, Dr. Leonard Guthrie and Mr. Stephen Mayou showed a boy, aged 7, with *Left optic atrophy and right hemiplegia.* He had been run over by a cab in July, 1906. Three days afterwards he developed left pneumothorax, and three days later became aphasic and hemiplegic on the right side, and blind in the left eye. The aphasia and hemiplegia had improved, but he was still blind in the left eye, and had complete atrophy of the left optic disc. No trace could be discovered of the left common carotid or its terminal branches, which were believed to be blocked, together with branches of the left middle cerebral and left arteria centralis retinae. Mr. Charters Symonds showed: (1) A tax collector, aged 52, operated upon in 1904 for malignant disease of the larynx. *Complete extirpation* was carried out, with removal of the left thyro-hyoid and sterno-hyoid muscles, all surrounding fascia with lymphatics, and the left thyroid lobe. The trachea was attached to the skin above the sternum, and primary union obtained. Professor Gluck's device of inserting a rubber tube into the cannula, and thus carrying

a current of air to the lips, enabled the patient to speak so that he could be heard at some distance, and could continue his duties. There was no difficulty in swallowing. (2) A male, aged 55, from whom he had removed eighteen months ago the left vocal cord for a localized malignant growth. The excellent voice retained represented the average phonetic result when the arytenoid had not been interfered with, nor the opposite cord injured in the operation. Mr. W. S. HANDLEY showed 2 cases of *Brawny arm* of breast cancer which he had treated by the laying of four threads of white silk beneath the skin of the arm from the wrist to the soft tissues on the proximal side of the affected axillary glands and lymphatics. The oedema had disappeared, and the muscular power, previously lost, was gradually returning. Dr. CECIL LEAF had seen similar cases greatly improved for a time by venesection, though the oedema afterwards returned. Possibly Mr. Handley's operation might be advantageously supplemented by venesection. Dr. COPEMAN said the improvement after venesection was at first very great, both as regarded the oedema, muscular power, and general health; he also recommended the combination of the two methods. Mr. HANDLEY, in reply, thought it better, on the contrary, to employ the methods on different series of patients and compare the results. The method he had used might probably prove useful in the treatment of elephantiasis. Dr. F. HAWKINS (Reading) exhibited a man, aged 43, never a heavy drinker, nor sufferer from venereal disease, who in August, 1899, had oedema of legs, chest wall, and sacral region, with much *Ascites*; heart sounds normal the urine sometimes containing blood and albumen. The abdomen was tapped twenty-five times in fifteen months, the maximum amount of fluid withdrawn being 36 pints. Since 1900 he had had good health. Dr. F. PARKES WEBER showed a single woman, aged 21, with *Symmetrical oedema* of hands and feet, of five or six weeks' standing in the feet, three weeks' duration in the hands; she had also diminished breathing and voice sounds over the lower part of the left lung, especially in front, and below the axilla. Roentgen-ray examination showed a shadow over this area; there was no cough or expectoration; slight anaemia, tested by blood count; the temperature was usually about 100° F.; the swelling and cyanosis of the extremities had diminished during rest in bed; the nature of the mediastinal affection was doubtful. Dr. NORMAN MOORE showed a waiter, aged 44, admitted two months ago to St. Bartholomew's Hospital with defective sight and symptoms of *Myxoedema*. After continued administration of thyroid extract, the lethargy, slow speech, and other symptoms of myxoedema had disappeared. He could now walk well, and had no tremor of hands. But the remedy had not made any difference to the *Optic atrophy*. Both discs were atrophied, the left more than the right. The visual field was not markedly contracted, but slightly so on the nasal side. He could perceive light with his left eye, and count objects with his right. Dr. Moore said that he knew of no other case of myxoedema combined with optic atrophy. Dr. GRAHAM FORBES and Dr. F. S. LANGMEAD contributed a paper based on twelve cases of *Fatal lymphocythaemia in children*, the ages ranging from 7 months to 11 years, ten being under 4 years. The disease had an indefinite onset, with increasing pallor and languor, and ranged from two weeks to three or four months, averaging five weeks in duration. Haemorrhages, such as purpura, bleeding from gums, epistaxis, etc., occurred, with enlargement of glands, liver, and spleen, and diarrhoea and vomiting. Blood counts showed diminished red corpuscles, and considerable fall of leucocytes before death, and always a marked absolute or relative lymphocytosis. *Post-mortem* examination showed enlarged lymphatic glands, punctate haemorrhages on pericardium and pleurae, enlarged spleen, liver, and kidneys; no increase in the bone marrow. Short streptococci were obtained by cultivation in four cases, conforming to the *Streptococcus salivarius*. There were lymphocytic invasions, with occasional haemorrhages into the connective tissue of various organs, particularly the kidneys. The disease was probably of microbic origin. The PRESIDENT said that in a case he had seen the first event was a very septic throat, which favoured the theory of streptococcal origin. There was found *post mortem* slight localized necrosis of portions of glands. The haemorrhages, especially from the gums, were very characteristic. Dr. PARKES WEBER said that the latest German researches indicated that the disease was not a primary infection of the bone marrow. Dr. POYNTON thought the infectious theory of causation was probably the true one. Dr. LANGMEAD, in reply, said he was also of this opinion. The disease was of fairly frequent occurrence.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on April 8th, Dr. WALDO, President, in the chair, Mr. SAMPSON HANDLEY gave an address on *Breast cancer* in relation to the lymphatic system, in which he propounded his views on the spread of cancer and explained his reasons for believing that secondary deposits were not the result of haphazard lodging of the cancerous emboli, but were subject to definite laws which he summed up under the permeation theory of dissemination by the lymphatics. He also described his method of treating lymphatic oedema by insertion of silk threads subcutaneously. Mr. HEY GROVES, in discussing the address, inquired whether there was any method by which the microscopic growing edge of the outward spreading lymphatic permeation of cancer cells could be determined or approximately located during life. Mr. ROGER WILLIAMS subjected to critical examination the lecturer's proposal to substitute "lymphatic permeation" for embolism, as a general theory of dissemination. He considered that such a claim went far beyond what was justified by the ascertained facts. Restricted to local dissemination he thought that Mr. Handley might fairly claim to have captured most of the field for "lymphatic permeation"; and it was in this direction that valuable permanent results had been obtained. In his book on *Diseases of the Breast*, published in 1894, Mr. Williams had indicated the necessity for enlarging our conceptions in this direction; while Astley Cooper had long ago demonstrated the spread of cancer by direct extension to the thorax, and thence via the diaphragm to the liver; and he had also shown the direct invasion of the liver by direct extension along the course of the epigastric blood vessels. With regard to lymph gland dissemination and metastasis, Mr. Williams thought that the fact adduced by the lecturer in favour of "lymphatic permeation" were far from conclusive; while in favour of embolism there was an immense mass of detailed evidence the cumulative effect of which was overwhelming. Of these he could then only briefly refer to a few of the most salient. The fact that cancer cells existed and multiplied in the blood had been clearly established for almost every part of the circulatory system. Goldmann's researches were important in this connexion, for they brought the matter to a focus, and were confirmed by hundreds of other independent observations. Then, so far as intraosseous dissemination was concerned, Recklinghausen's very thorough study of its minute anatomy clearly showed that the cancerous disease originated and spread in the medullary blood vessels. Similar testimony was forthcoming from Councilman and others as to the dissemination of cancer originating within the portal area and its spread via the portal veins. M. Schmidt's observations as to the dissemination of mammary cancer in the lungs, were also conclusive as to the vascular route. The whole pathology of chorion-epithelioma testified to the like effect, and the same was true for the dissemination of most sarcomata. Then how could we account for the dissemination of mammary cancer in the choroid of the eye except by the embolic theory? To the same end, an instance of the dissemination of mammary cancer in an interstitial uterine myoma was cited, no other part of the uterus being invaded. These, and many other similar items, constantly presenting themselves in connexion with the metastasis of cancer, seemed to him inexplicable without the aid of the embolic theory. Certainly it was quite impossible to explain such occurrences on the basis of "lymphatic permeation," which, for this reason, must be regarded as an inferior working hypothesis to the embolic theory for the investigation of cancer metastasis. Mr. CARWARDINE spoke of the practical surgical application of Mr. Handley's researches, and asked whether in those cases of mammary cancer in which there was obvious enlargement of the supraclavicular glands there was also direct epigastric permeation into the upper abdomen, and if so, which was likely to be the more advanced. For it seemed to him that

operation might be contraindicated by the presence of secondary glands in the supraclavicular fossa. Mr. Vickery raised the question as to whether Mr. Handley could adduce any statistics showing increased freedom from recurrence resulting from the very extensive operations he advocated. If it was going to be necessary for every operation of mammary cancer to involve complete extirpation of the lymphatic planes as far as the epigastrium, supraclavicular fossa, and deltoid region, where were we going to stop, and did we really give the patient a better chance of recovery with non-recurrence? In reply, Mr. Handley said that he did not recognize a difference between local spread and metastasis, and brought forward the suggestion of "transcoelomic implantation" to explain some instances of remote metastasis; he was somewhat sceptical about the growth of cancer cells on culture media outside the body referred to by Mr. Williams. He admitted, however, that there was no reason for denying that occasionally cancerous embolism might occur, but he was anxious to displace this as the chief part for metastasis.

Aberdeen Medico-Chirurgical Society.—At a meeting on April 2nd, Dr. George Williamson, President, in the chair, Dr. Beveridge described a case of empyema and *Gangrene of the lung*, and demonstrated the patient. A preliminary exploratory puncture revealed the presence of pus in the pleural cavity. A rib was therefore resected, and a large quantity of fetid pus evacuated with but little improvement in the condition of the patient. A fortnight later there was a severe haemorrhage from the wound, which ceased spontaneously. Three days subsequently a gangrenous slough of lung tissue, of the size of a Brazil nut, was expelled through the wound. The patient is now (three and a-half months after operation) in perfect health. Dr. Mackenzie Booth showed a patient thirteen years after tracheotomy for *Laryngeal stenosis*. The stenosis was due to a cicatricial web in the plane of the vocal cords, with a small opening in it about the size of a crow quill. Tracheotomy had to be done hurriedly, owing to collapse of the left lung. The patient shows well-marked signs of specific rhinitis, with extension to the ears and consequent deafness. His voice is exceedingly husky, and he suffers from considerable discomfort from the tracheal aperture. Dr. John Gordon described a case of severe vesicular and bullous eruption resulting from the application of a *Proprietary ointment*. He also read notes upon two cases in which the external application of cantharides for sciatica had been followed by severe renal symptoms resembling those of renal calculus. In the first case a cantharides plaster had been applied for from two to three hours, without the production of redness or vesication, upon two different occasions. Curiously enough the pain in each instance affected the kidney of the side opposite to the application. In the second case the symptoms followed the application of a proprietary preparation of cantharides and capsicum. Mr. H. M. W. Gray and Dr. Levack exhibited lantern slides of skiagrams and of skiagraphic tracings illustrative of Mr. Gray's paper upon the Functions of the Stomach and the Operation of Gastro-enterostomy, published in the *Lancet* of February 22nd. They also demonstrated, by means of the *x*-ray screen, the stomach outlines of persons who had taken a meal mixed with carbonate of bismuth. Five cases were demonstrated in this manner—namely, 3 normal stomachs and 2 stomachs after gastro-enterostomy. They also showed lantern slides of skiagrams illustrating Beck's method of treating old-standing sinuses by the injection of a mixture of bismuth and vaseline. The slides, which included cases of psoas abscess and hip-joint disease with perforation of the acetabulum, showed very clearly the manner in which the bismuth mixture mapped out the various recesses of the sinuses. Mr. Gray had formed a favourable opinion of this method of treatment. Dr. Fortescue showed skiagrams illustrating the method of plastic radiography. From the original skiagram negative a transparency was prepared. The two plates were then superposed, and a second transparency was printed off. The two transparencies were next superposed, and a final print taken. The method consisted essentially in heightening the lights and darkening the shadows, and the final print thus obtained displayed a certain amount of perspective. The exhibitor did not think that the results were so reliable as those obtained by stereoscopic radiography.

Glasgow Medico-Chirurgical Society.—At a meeting on March 13th, Dr. Walker Downie, President, in the chair, Dr. W. B. I. Pollock showed a case of *Telangiectasis of the retinal capillaries* and venous radicles. In the right eye was a marked sclerosed condition of the branches of the superior retinal vein, and groups of convoluted vessels. Four telangiectases were also seen. They had undergone no alteration during the past six months, and, on careful focussing, the outline of small vessels could be made out. Dr. Kerr Love reported a case of *Aural tuberculosis* ending fatally. There had been an offensive discharge, and facial paralysis had ensued. The mastoid process was filled with broken down bone, granulation masses, and caseous material. Caseous glands in the neck were curetted. For a year the child remained well, till symptoms pointing to meningitis developed—stupor, subfebrile temperatures, fits, dilatation of the right pupil, and slow pulse. A loose fragment of bone was removed, but there was no discharge. Coma deepened, and the pulse and temperature returned to normal. The middle and posterior fossae of the skull were opened on the possibility of there being an abscess to account for the symptoms. Nothing was found, and the child died. *Post mortem*, a lepto-meningitis at the base of the brain was found. A caseous nodule the size of a pea was found in the anterior part of the pons on the left side. Another similar nodule was found on the right occipital lobe, just under the pia mater. The extension was probably by the blood stream. Dr. John Rowan showed a number of stereoscopic photographs illustrative of external diseases of the eye prepared by the *Lumière colour process*. He pointed out that by this means we had a valuable method of recording the different stages of many diseases, more especially those of the skin. Dr. Walker Downie described with stereoscopic photographs a very large external fibro-cellular tumour of the nose. Dr. Carl H. Browning read a paper on the treatment of trypanosome diseases by means of atoxyl and its derivatives. The strain of trypanosomes chiefly employed was nagana, which killed white mice in three days. The injection of the largest safe dose of atoxyl cured only 8 per cent. With acetyl-para-amidophenylarsenic acid (a derivative of atoxyl synthesized by Ehrlich and Bertheim) over 93 per cent. were cured. Treatment was started twenty-four hours after inoculation. When only started forty-eight hours after, the atoxyl derivative must be given in repeated large doses. In advanced infections another method of treatment was by a combination of the most efficient drugs of different chemical types—for example, acetyl-atoxyl plus trypan blue or by injection along with oral administration. The curative results were not due to an internal antisepsis in the ordinary sense of the term, as neither atoxyl nor trypan blue were trypanocidal *in vitro*. By treating infected animals with repeated small doses there was ultimately produced a trypanosome strain which was resistant to the largest doses of a drug of the same class. Thus an atoxyl resistant strain was developed which could not be influenced by repeated large injections of the atoxyl derivative.

Hunterian Society.—At a meeting on March 25th, Mr. F. Rowland Humphreys, President, in the chair, Dr. Sequeira gave a demonstration of patients illustrating various forms of *Tuberculosis of the skin*. He divided the cases into two groups—those in which the tubercle bacillus had been demonstrated, and those which were believed to be due to circulating toxine, produced at some distant tuberculous focus. The first group was illustrated by cases of lupus vulgaris of the skin, nasal mucous membrane, palate, and tongue, and by scrofuloderma following caries of the teeth and mandible. He also showed a case of pseudo-elephantiasis of the leg with tuberculous lymphangitis, and a case of verruca necrogenica, infected probably from tuberculous meat. In the second class, the so-called tuberculides, he showed a case of lichen scrofulosus in a patient suffering from lupus of long standing, a case of symmetrical necrosing tuberculides, and one of the erythema induratum of Bazin.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on April 8th, Dr. J. J. COX, the President, in the chair, Drs. ORR and ROWS showed lantern slides illustrative of the *Toxic lesions of the spinal cord* found in cases of abdominal cancer. The characteristic change consisted of atrophy of the myelin sheaths in the central portions of the cord, and was most marked in the cervical region. Dr. CORSAR STURROCK described a case of *Haemangeio-endothelioma* of the liver. It occurred in a woman of 44 years of age who died after four months' illness. All the organs except the liver were fairly healthy. The liver was greatly but uniformly enlarged and of normal shape, smooth on the surface, firm on section, and mottled or nutmeg-like in appearance. The capillary spaces within the lobules were dilated and filled with proliferated endothelial cells, many of these being free and mingled with blood corpuscles. These cells varied in size and shape, some of their nuclei showing mitotic figures. The columns of hepatic cells were atrophied and compressed, the atrophy occurring mostly in the peripheral zone of the lobules. No fatty changes or iron deposit were seen in the hepatic epithelium remaining. The endothelial proliferation did not occur in nodules, but was uniform throughout the whole liver, and in one place where a small cavernous angeloma existed the endothelium had taken on the same proliferative change. The very evident relation of the tumour to the vessels indicated a source of irritation connected with the blood, the tumour change seeming to originate in the same way as a specific inflammation. No metastasis occurred, although many of the proliferated endothelial cells must have been conveyed to the general blood stream, as if such cells when conveyed beyond a certain sphere of influence cease to proliferate so as to produce metastatic deposits. That sphere of influence must be the liver parenchyma in a state of more or less disordered activity.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on April 7th, Dr. HELEN BOYLE in the chair, Miss WOODWARD showed (1) a specimen of acute tuberculous pericarditis from a man aged 64, in whom no other tuberculous lesion was found; (2) an oesophagus showing varicose veins, one of which had ruptured and caused fatal haematemesis in a case of cirrhosis of the liver; (3) kidneys showing localized gummata and diffuse gummatous infiltration from a girl aged 12½, the subject of congenital syphilis. Papers by Dr. LILLIE SAVILLE (Peking) and Miss GRAY (Benares) on cases of *Dysentery* were then read. Both writers were strongly in favour of treating acute cases with sodium and magnesium sulphate, and recommended bismuth for chronic cases. Tr. Monsoniae was mentioned as being useful in some instances. Miss CORTHORN dwelt on the importance of a bacteriological diagnosis of the amoebic and bacillary forms with a view to serum treatment. Miss CHADBURN read the notes of a case of *Hernia of the bladder*. The patient, a servant girl aged 28, had noticed a lump in the right groin for six months. There was a dragging sensation on exertion, but there were no urinary symptoms. On admission a hard lobulated irreducible swelling, giving no impulse on coughing, was found in the position of a right femoral hernia. An incision over the swelling exposed a gland adherent to some structure which came through the crural canal and could not be reduced even when the roof of the canal was incised. There was no sac. The bladder was then filled with lotion. No fluid entered the hernial protrusion, but the latter retreated into the abdomen with the adherent gland. The roof of the canal was sewn up and Poupart's ligament was stitched to the pectineus muscle. The patient was ordered a femoral truss, and a year later had had no recurrence. Miss Chadburn mentioned as possible etiological factors in the case the occurrence of pregnancy three years earlier, lifting of heavy weights shortly before the lump appeared, and traction by the gland, and in conclusion suggested that in all hernia cases with unusual or urinary symptoms the bladder should be filled with lotion before operation, as its presence in the hernia might thus be detected.

UNDER the will of the late Mr. Edward Frith the following Sheffield institutions receive the sums stated: Royal Infirmary, £250; Royal Hospital, £250; Jessop Hospital for Women, £100; Free Hospital for Children, £100.

REVIEWS.

THE DICTIONARY OF NATIONAL BIOGRAPHY.

The Dictionary of National Biography[1] is an achievement of which all concerned in its production may well be proud. It was planned on broad lines, carried through by the publishers with a liberal hand, and edited with consummate tact and skill by the late Sir LESLIE STEPHEN and Mr. SIDNEY LEE, who showed the greatest discrimination in the selection of contributors. The first volume was issued on January 1st, 1885, and the sixty-two volumes of the substantive work which succeeded it appeared punctually at quarterly intervals, so that the alphabet was completed on June 30th, 1900; three supplementary volumes followed in the autumn of 1901. They contained memoirs of eight hundred eminent persons whom death only qualified for notice in the *Dictionary* during its progress through the press. At the same time some two hundred accidental omissions were supplied in the supplementary volumes. The record of national biography was thus carried, in the full total of sixty-six volumes of the *Dictionary*, to the opening of the twentieth century. The additional volume of index and epitome, published in April, 1903, is a brief and conveniently arranged guide to the varied contents of the whole work. Every name about which biographical information is given in the *Dictionary* is the subject in the index and epitome of a summarily condensed article, enumerating the leading facts and dates.

The publishers have now commenced the reissue of the *Dictionary* in twenty-two volumes in place of sixty-six, at one-third of the original price, and to occupy about one-third of the shelf space required by the original work. The type and size of page are unchanged, the reduction of bulk has been effected by using a thin but strong and remarkably opaque paper. Two volumes of the new issue, edited by Mr. Sidney Lee, have now appeared and amply fulfil the promise of the prospectus, for though they contain each about fourteen hundred pages, they are light and easy to handle, and are agreeable to read. They contain names in alphabetical order from Abbadie to Browell; these two names illustrate the comprehensiveness of the work, for Abbadie was a Frenchman, born near Pau, who after a cosmopolitan career became Dean of Killaloe, and died in Marylebone in 1727 while correcting a collected edition of his theological works, and Browell was a naval officer who was captain of the flagship *Sanspareil* at the battle of Lorient in 1795.

The complete work contains 30,378 separate articles, and the total number of pages is 30,500, so that the average length of an article is very little more than one page. The actual articles, it need hardly be said, vary very greatly in length, those of the more important historical personages being full, though at the same time concise, biographies. A list of sources of information is appended to each memoir, and a note is made of any known portrait. In the case of writers the title, scope, and date of their works are recorded. The first two volumes contain a fair sprinkling of medical names, and some idea of the scale of the work may be given by mentioning that a little over a page is devoted to John Abercrombie of Edinburgh, about two and a quarter to Abernethy, about a page to Addington, who gave a correct prognosis in the first illness of George III, and was the father of the Speaker (Viscount Sidmouth); a page to Addison of Guy's, a page and a half to Matthew Baillie, a little over a page to Baron the biographer of Edward Jenner, two pages to William Beattie the friend and physician of Campbell and Roger, and himself a poet; a quarter of a page to Sir William Beatty surgeon to the *Victory* at Trafalgar; half a page to Benjamin Bell of Edinburgh, three pages to Sir Charles Bell, a page to his brother John Bell; two and a quarter to Sir Gilbert Blane, half a page to Patrick Black of St. Bartholomew's, three pages to Richard Bright, and about one and a half to Sir Benjamin Brodie.

The *Dictionary* is, of course, primarily a work of reference to be consulted at the moment when information is urgently needed, but he who has acquired the pleasant

[1] *The Dictionary of National Biography.* Edited by Leslie Stephen and Sidney Lee. Reissue in twenty-two volumes, edited by Sidney Lee. Vol. i. Abbadie-Beadon; vol. ii. Beal-Browell. London: Smith, Elder, and Co. 1908. (Roy. 8vo, 15s. net. per vol. in cloth, 21s. in half morocco.)

habit of desultory reading will find in it many temptations for indulging in his favourite recreation. It contains, indeed, a history of the British people written from the point of view of the actual makers of that history, which to many is the most agreeable way of study. From this aspect it will appeal particularly to men trained in medicine or other departments of biology, who will take pleasure in tracing the influence of environment on the development of character and of character on events, the latter, perhaps, rather underestimated at the present day when more is attributed to the *Zeitgeist* than properly belongs to it. It is a book which it requires a certain strength of mind to use only for the special purposes for which it may first be consulted. There are cross references, and suggestions arousing curiosity which insensibly lead the reader on to take down one volume after another; and when times of short leisure come to the busy man, he may turn to it with the confidence that he will always be interested and sometimes amused. One impression that such a desultory turning over of leaves produces is of the little change which has after all come about in the fundamental things which make or mar human happiness, which cause or hinder success in life. Might not the following explanation of his limited success in his profession, written in 1773 by John Armstrong, poet, physician, and essayist, have been penned by some like-minded doctor of to-day?

> He could neither tell a heap of lies in his own praise wherever he went; nor intrigue with nurses; nor associate, much less assimilate, with the various knots of pert insipid, lively stupid, well-bred impertinent good humoured malicious, obliging deceitful, waspy drivelling gossips; nor enter into juntos with people who were not to his liking.

The "waspy drivelling gossips" one expected him to know, but it is a little surprising to find him so bitter against the influence of nurses, which we had thought to be a quite modern cross.

A volume will be published every month, and the reissue will be completed in December, 1909. Certain errors of fact and date detected in the original work have been corrected in the index.

THE DISEASES OF THE PANCREAS.

The Pancreas: Its Surgery and Pathology, by A. W. Mayo Robson and P. J. Cammidge,[1] is undoubtedly one of the most important additions to medical literature which has appeared of late years. It contains a record of original work on the pathology and surgery of the pancreas, and once for all places the study of the diseases of this organ and of their surgical treatment on a sure foundation. Many have of course already worked in the same field, and the contributions made by them are fully recognized in this volume; but if the share which has been contributed by its authors were subtracted the subject of inflammatory diseases, at any rate, would be comparatively little understood to-day. Prefixed to the discussion of the pathology and surgery of the organ are seven chapters on its anatomy and physiology. Under the heading of anatomy particular attention is devoted to the ducts and the variations which they exhibit. These variations and the relations of the common bile duct to the pancreas are of much importance in the interpretation of the signs of pancreatic disease. The fact, for example, that in about a third of all cases the common bile duct passes through the head of the pancreas explains the incidence of jaundice in inflammatory affections of the latter. The significance of the islands of Langerhans is discussed at considerable length, and after weighing the evidence the conclusion is drawn that they are independent of the ordinary parenchyma of the gland, and related to the control of carbohydrate metabolism within the body. In this conclusion much weight is attached to the important researches of Lydia De Witt. The chief interest of the chapter on physiology lies in the account of the work of Bayliss and Starling on secretin, the discovery of which has to a large extent revolutionized the study of the production of digestive ferments.

Chapter viii, on pathology, brings home to the reader the truth of the statement on p. 129 that "it becomes increasingly plain as our methods of investigation are improved that the pancreatic lesions are responsible for much that has been attributed to disease of other organs, or been altogether unexplained." The account of the chemical pathology of these lesions naturally attracts attention, owing to the considerable contribution to this part of the subject which has been made by one of the authors. Mr. Cammidge gives an account of a method for the estimation of the fat contents of the faeces, and also a full description of the "pancreatic reaction" of the urine which is associated with his name. Since the method was first published various alterations and improvements have been made as the result of further research. On p. 255 we find the results of the "improved" pancreatic reaction in 250 consecutive examinations. In 50 normal cases it was negative; 2 cases of acute pancreatitis were positive; in 65 cases of chronic pancreatitis the result was also positive. On the other hand, 16 cases of cancer of the pancreas gave a positive result in 4 only, and 117 cases suffering from miscellaneous affections including gall stones gave also only 4 positive results, which were ascribable to involvement of the pancreas in the primary disease. These observations show that the reaction is reliable for the diagnosis of pancreatic disease, and more particularly point to an inflammatory affection. Later it is shown that the test for stercobilin enables a diagnosis to be made with some certainty between malignant and inflammatory disease.

A chapter on diabetes precedes the clinical chapters. The pathological evidence is summed up as follows: "Most observers who have systematically investigated the islands of Langerhans in diabetes have either accepted the view that there is a causal relationship between the disease and the lesions of the islands, or suspended judgement until further evidence is available." It is further to be noted that the clinical records given later include several instances of the association of pancreatitis and diabetes, and of the onset of the latter after the former has existed for a considerable time, when fibrosis has advanced sufficiently to interfere with the functions of the organ.

A point arising from these observations is the importance of surgical treatment before this stage has been reached. Although pancreatitis has hitherto been found most frequently in association with gall stones in the common bile duct, evidence is brought forward to show that it may also follow directly from catarrhal conditions of the duodenum. It is further stated that pancreatitis arising in this manner is probably the most common cause of what is usually termed "catarrhal jaundice," the jaundice being due to compression of the bile duct, where it lies in relation to the head of the pancreas.

The clinical chapters deserve careful study, more particularly that on chronic pancreatitis. A point in technique which should be specially noted is the necessity in this condition for drainage of the bile channels for long periods, and the resultant advantages of cholecystenterostomy over cholecystostomy. Herein is found also an argument against the routine removal of the gall bladder in operating for calculi.

Succeeding chapters are on pancreatic calculi, cysts, and neoplasms. Considerable attention is devoted to the differential diagnosis of cysts.

There are many illustrations in the volume; among them the photomicrographs of chronic pancreatitis are specially noteworthy, illustrating the various types and stages of the disease. The book will be read with equal interest by surgeons and pathologists. It is a striking instance of advance in clinical knowledge based on pathological research and surgical observation.

On p. 279 (line 11) 17 should read 73; on p. 419 (line 33) ninety-nine should read ninety.

[1] *The Pancreas: Its Surgery and Pathology.* By A. W. Mayo Robson and P. J. Cammidge. London: W. B. Saunders Co. 1907. (Roy. 8vo. pp. 546; 175 illustrations. 21s.)

PATHOGENIC PROTOZOA.

The investigations on blood parasites,[2] which form the second part of Dr. von Wasielewski's important work on the pathogenic protozoa, deal with the distribution of animal blood parasites in Germany, human malarial fever, and the avian blood parasites. The work is a mass of carefully described detail, and though only a relatively

[2] *Studien und Mikrophotogramme zur Kenntniss der pathogenen Protozoen.* Von Th. von Wasielewski. Zweites Heft. *Untersuchungen über Blutschmarotzer.* Leipzig: Johann Ambrosius Barth. 1908. (Medium 8vo, pp. 180, with 25 figures in the text and 8 photographic plates. M. 12.)

small portion of the volume is directly concerned with human pathology, the account of the parasites met with in the blood of animals is not merely of scientific interest as a valuable contribution to comparative pathology, but also provides a useful guide to the interpretation of obscure questions in human parasitology. For many reasons, amongst which the opportunities for experimental inoculation and the ability to terminate the experiment at will take the foremost rank, parasitic infections in animals can be much more thoroughly investigated than infections in the human subject produced by parasites possessing a very close biological relationship to those capable of thriving in the bodies of the lower animals. By this means the difficult study of the developmental stages in the parasite's cycle of life are greatly facilitated, as is shown, for example, by the useful analogy which can be drawn between human and animal trypanosomiasis. The student of tropical medicine fully recognizes the debt he owes to the zoologist, and will appreciate the assistance which Dr. von Wasielewski's patient researches on animal parasitology afford him.

Mr. JACKSON CLARKE has been known for many years as an enthusiastic champion of the parasitic theory of malignant disease, and we observe that in the recently-published Part II of his work on *Protozoa and Disease*[4] he renews his arguments in favour of this view. As the author is aware, the cancer question is at present in an acutely controversial phase, and all supporters of any particular theory must be prepared to deal with adverse criticisms. Mr. Clarke replies to his critics by endeavouring to show in the present volume that the arguments in favour of a parasitic theory are steadily accumulating. The objection commonly raised against those who regard malignant growths as due to protozoon infection is that the peculiar bodies demonstrable in microscopic preparations are merely the result of degenerative tissue changes. This was the attitude adopted by the late Professor Kanthack, when, at a meeting of the London Pathological Society in 1895, Mr. Clarke submitted specimens of an alveolar sarcoma of the breast, and demonstrated the presence of peculiar bodies which he regarded as protozoa. From Professor Kanthack's comments, reported in this JOURNAL on April 6th, 1895, we quote the following passage, which expresses very concisely the difficulty which he and many other eminent pathologists have raised against the parasitic theory: "To draw a life-history from different appearances in a section was not true evidence; what must be done was to trace such a history in its living progress beneath the microscope. If so many diseases as Mr. Clarke had named—carcinoma, sarcoma, vaccinia, variola, syphilis, and others—were due to a similar cause, where did specificity come in, for they had scarcely anything in common? The speaker thought that the different appearances described by Mr. Clarke were degeneration products." But between 1895 and 1908 many important discoveries have been made about the life-history of various protozoa and their pathogenic properties. To these matters Mr. Clarke devotes the opening chapters of the present volume, and we agree with him that as our knowledge of the pathogenic protozoa increases it becomes less inherently improbable that malignant growths may be attributable to this class of parasites. Beyond this we are not prepared to go. About many of Mr. Clarke's statements and theories authorities of the first rank are unable to agree, and we are not convinced that either he or any one else has furnished us with the true solution of the cancer problem. But Mr. Clarke's point of view is one which demands serious attention, and he certainly deserves a fair hearing.

OTOLOGY.

THOSE who availed themselves of the special offer made by the publishers of the Oxford Medical Manuals of a free book and chose Mr. HUNTER TOD'S *Diseases of the Ear*[5] received a good five shillingsworth in return for the fourpence expended on postage. The title of the series calls to mind a little ambiguity about "Cambridge Sausages"; according to one theory they were not originally a local product but derived their title from a manufacturer of the name of Cambridge. Be that as it may, we gather from the publishers' announcement at the end of this volume that the series has been edited by a Cambridge graduate, that four of the nine manuals have been written by Cambridge graduates, and of the remaining five not one apparently has been contributed by a graduate of the University to which we owe this useful series. Mr. Hunter Tod in his preface states that "the aim of this book is to give a short and practical account of the diseases of the ear," and this aim he has attained. The general arrangement of the matter is clear and methodical. The anatomy of the different regions of the ear—which is commonly dealt with in one chapter at the commencement of a textbook on aural diseases, and is in itself at times sufficient to deter an impatient beginner from proceeding further—is distributed and briefly given at the commencement of the respective chapters, an arrangement which seems to make the manual more readable. The book is well illustrated; in a future edition some of the plates devoted to instruments might be used more usefully for photographs of anatomical preparations. The typography is good. Here and there one meets with faulty diction—perhaps commonplace elsewhere, but more noticeable in an Oxford manual written by a Cambridge graduate. Apart from these our complaints must be few, for the book is clearly written and to the point.

Professor HARTMANN'S work on *Diseases of the Ear and their Treatment*[6] has again gone through another edition, this being the eighth since its first appearance in 1881. The author strives for succinctness, and we find that although a considerable amount of new information has been added since the publication of the last edition in 1902, the number of pages in the book has not increased, judicious pruning and compression having been practised. The absence of any superfluous diction has probably contributed greatly to the popularity of the book. Among the changes which have been made we notice some very judicious limitations of the "graphic" representation of the results of testing with tuning-forks of different pitch. Thus forks of a higher pitch than c^2 are no longer recommended for testing "bone-conduction." Among new remedies the author recommends very highly the sodium perborate as being soluble and giving off peroxide of hydrogen while depositing sodium borate. Recent investigations concerning tests for equilibration are reviewed, and Barany's experiments in regard to vertigo and nystagmus receive due attention (p. 252). The section on disease of the vestibular apparatus and Ménière's group of symptoms has been almost entirely rewritten. The classification presented by Professor v. Frankl-Hochwart in the second edition of his monograph on the subject is adopted. A new and interesting feature is the form for the examination of deaf school children, as presented by the author to the Committee of the German Otological Society. It will be found of considerable practical help in investigating cases of backwardness or of possible deaf-mutism. We can again recommend most highly Professor Hartmann's new edition as a clear and reliable guide-book which has well stood the test of experience.

The subject of the treatment of suppuration of the middle ear may be said never to be exhausted, and although the lecture by Professor SIEBENMANN of Bâle now before us[7] does not contain any very sensational announcements, it is well worthy of study as the expression of his views founded on a long and studious experience. He divides the acute forms into four classes—the mild, running a cyclical course with a "crisis"; the severe, lasting more than four weeks, with empyema of pneumatic terminal mastoid cells; the scarlatinal, and the tuberculous. The two last often lead to the subse-

[4] *Protozoa and Disease. Comprising Sections on the Causation of Small-pox, Syphilis, and Cancer.* By J. Jackson Clarke, M.B., F.R.C.S. Part II. London: Baillière, Tindall, and Cox. 1908. (Medium 8vo, pp. 150, illustrations 219. 7s. 6d.)

[5] The Oxford Medical Publications. *Diseases of the Ear.* By Hunter Tod, M.A., M.B., B.C.Cantab., F.R.C.S.Eng. London: Henry Frowde (Oxford University Press), and Hodder and Stoughton. 1907. (Cr. 8vo, pp. 331. 5s.)

[6] *Die Krankheiten des Ohres und deren Behandlung* [The Diseases of the Ear and their Treatment]. By Professor Arthur Hartmann, Directing Physician to the Rudolf Virchow Hospital in Berlin. Eighth edition, with 74 illustrations. Berlin: H. Kornfeld. 1908. (Roy. 8vo, pp. 339. M. 7·50.)

[7] *Die Therapie der Mittelohreiterung in den Händen der praktischen Ärzte* [The Treatment of Middle-ear Suppuration in the Hands of the Practitioner]. By Professor F. Siebenmann. Basel: B. Schwabe. 1908. (Sup. roy. 8vo, pp. 16. M. 0·80.)

quent development of cholesteatoma. Among the chief causes of middle ear suppuration he places the habitual use of the nasal douche (especially with a continuous stream), and the presence of post-nasal adenoid vegetations. In the treatment of acute otitis he advises the icebag and deprecates poultices, passive hyperaemia, leeches, counter irritants, and instillations. For relief of pain he considers the most effective remedy to be paracentesis. On the occurrence of the discharge, he practises the boracic acid treatment, syringing, then politzerizing, and then insufflating boracic powder or fine crystals. He is opposed to dry tamponning. Great importance is attached to bodily rest and to attention to constitutional disorders, especially diabetes. Pain over the mastoid is no indication for operation during the first 8 to 10 days. In cases of chronic suppuration of the middle ear he draws a great distinction between central and marginal perforations. The former offer prospects of a benign course under simple treatment. The marginal perforations usually result in cholesteatoma and are therefore essentially "dangerous." He advocates in the latter intratympanic syringing, in the hands, however, only of the expert, and the insufflation of salicylic combined with boracic acid. In conclusion, he expresses the opinion that every form of middle-ear suppuration is curable as long as it is confined to the middle ear, but that there is no universally applicable method of treatment. The main point of his argument is that danger is due to delay, and that general practitioners must study the question of the treatment of these conditions as well as specialists. His essay will be found informing by both.

NEUROLOGY.

We have read Dr. A. G. Dampier-Bennett's short treatise on *The Re-education of Co-ordination by Movements*,[8] having special reference to locomotor ataxy, with considerable satisfaction, because, being based on what are probably correct principles, it is a simple and clear statement of the method of re-education of which Fraenkel has been the latter-day prophet. When Dr. Dampier-Bennett writes, "Although one of the chief characteristics of locomotor ataxy lies in the fact that for a long while muscular power is unimpaired, there is ample reason for believing that it is unwise to make use of this fact therapeutically without proper restriction, and, if necessary, supervision. Nevertheless, the fact remains that very considerable improvement may take place in patients suffering from this form of spinal cord disease by the employment of well-directed exercises, so long as they are not pushed to the point of fatigue," he states the case very well. He rightly insists that the hoped-for improvement depends not on the exercise, still less on exertion of muscular force, but on repetition of the movements, the aim being to beat out new paths or establish fresh channels of less resistance—in a word, to create physiological motor tracts, not to develop muscle tissue. Plain and simple directions are given for the systematic employment of the movements, and charts of large size are provided to act as guides for the hand or foot in its education. We recommend this book not because the peculiarities of technique advised in its fifteen pages have any special advantage over other systems, but because its principles are right and its instructions intelligible and practicable for the busiest of busy practitioners.

Dr. Pierre Marie has collected and published in a book of 240 large quarto pages,[9] the scientific papers contributed by him to the French medical literature of the last quarter of a century. It is indeed a noteworthy display. In the forefront of the collection are the original papers in which, as he on the whole justly claims, he gave the first methodical description of several now well-recognized morbid entities—acromegaly, hypertrophic pulmonary osteo-arthropathy, spondylitis *rhizomélique* (a spondylitis deformans), *dyostose cleido-cranienne héréditaire* (a hereditary hydrocephalus due to defect of development of the skull and brain), Charcot-Marie's amyotrophy, and hereditary cerebellar ataxia. He also includes among these leading papers what he believes to be the first published case of achondroplasia in the adult, and the first accounts published in France of paramyoclonus multiplex, Thomsen's disease, *migraine ophtalmique*, hereditary traumatic kyphosis, and the first case published in that country of the cure of myxoedema by thyroid treatment. In regard to this list, the only comment that seems to be called for is that we in England think what he terms Charcot-Marie's amyotrophy should be called rather Charcot-Marie-Tooth's amyotrophy, or even Charcot-Marie-Tooth-Hoffmann's, although the paper by M. Charcot and himself was published a few months before Dr. Tooth's thesis appeared and still longer before Hoffmann's paper. The papers following these epoch-making contributions are classified by M. Marie in the following groups: Anatomo-pathological, of which an important section contains ten papers on aphasia, combating, as already described in the British Medical Journal, the generally accepted view that motor aphasia is due to a lesion of Broca's convolution; technique; medicine and therapeutics, chiefly consisting of papers on the infectious origin of certain diseases, diabetes, thyroid diseases, bone diseases, and neurology. Appended there is a remarkable list of about 150 papers by different authors which have been inspired or in some way aided by M. Marie. This collection of reprints is one of which both France and M. Marie may be proud.

The little book on *Tumours of the Cerebellum*, by Dr. John Wyllie of Hull,[10] almost disarms criticism by the piety of its dedication. It is "affectionately dedicated" to the memory of the author's father, Robert Wyllie, L.R.C.P.Ed., "one of whose greatest desires was that his son should occupy an honourable position in the profession he himself loved so well." The work is based on an analysis of some 80 cases of cerebellar tumour recorded in British medical literature and verified either by operation or necropsy. Ostensibly it is for "students about to face the ordeal of their final professional examination." It is divided into three parts. Part 1, consisting of 13 pages, deals with the anatomy and physiology of the cerebellum, and is compiled from the "best English text-books" and from the written "opinions of men distinguished" in physiological science. Part 2, consisting of about 40 pages, deals with the symptomatology of cerebellar tumours; and Part 3, consisting of about 30 pages, with their pathology, diagnosis, prognosis, and treatment. The subject-matter, when the writer sticks to his text, is on the whole sound; it is fairly well classified, and the sketching out in plan is in fair perspective; but when he wanders into other departments of neurology, as he frequently does, it is necessary to say, in spite of the effect of his dedication, he is not altogether a safe guide. A few instances of this may be given. In writing of nystagmus as a symptom of cerebellar tumour he remarks: "It is seen in other diseases, both those having an encephalic origin, as basal meningitis and cerebral tumours, as well as those having no such origin, as disseminated sclerosis, and those having origin both in brain and cord, as chorea." This in spite of the earnestness of his effort must be classed as erroneous. For one thing disseminated sclerosis, as far as his argument goes, is as much encephalic as cerebral tumour, and for another chorea is not a matter of cord disease and nystagmus is not one of its clinical features. On the next page he says that convulsions usually occur in tumour of the cerebrum (which is much open to question), but rarely in cerebellar tumours, quoting however, three cases, one of which is "a cyst of the fourth ventricle." He says that albuminuria is very constant in all varieties of cerebellar tumour, which is certainly not in accord with general experience. His views on treatment, however, particularly the importance of trephining to save vision, are unexceptionable and might indeed have emanated from the last annual meeting of the Association at Exeter. But the author should certainly be awarded the honour due to painstaking endeavour.

The appearance of a fifth edition of Dr. Church and Dr. Peterson's *Nervous and Mental Disorders*,[11] seeing that

[8] *The Re-education of Co-ordination by Movements: with special reference to Locomotor Ataxy.* Accompanied by mounted charts for the movement exercises. By A. G. Dampier-Bennett. Bristol: John Wright and Co. 1907. (Scap. 8vo, pp. 15. With charts. 10s. 6d.)

[9] *Exposé des Titres et Travaux Scientifiques du Docteur Pierre Marie.* Paris: Masson et Cie. 1908. (Demy 4to.)

[10] *Tumours of the Cerebellum.* By John Wyllie, M.D. London: H. K. Lewis. 1908. (Cr 8vo, pp. 119. 4s.)

[11] *Nervous and Mental Diseases.* By Archibald Church, M.D., and Frederick Peterson, M.D. Fifth edition. Philadelphia and London: W.B. Saunders Co. 1908. (Roy. 8vo, pp. 937; illustrations 241. 21s.)

the first edition was published so recently as 1899, is clear testimony of its acceptability; its worth has been consistently recognized in the columns of the British Medical Journal as the successive editions have come out. In the present edition the section on nervous diseases has been revised with the object of bringing it up to date rather than of making material changes in the text. The alterations consist of a large number of short interpolations, and the substitution of new figures for certain of the old ones. In the section on mental disorders the classification of Kraepelin has been added to the chapter on classifications for purposes of reference, and two new chapters have been written on manic-depressive insanity, so called, and dementia praecox respectively. In other respects the book remains what it was—a clear, brightly-written account of the essentials of neurology and psychiatry. It does not profess to the exhaustive and even cyclopaedic character of some works on these subjects, particularly some on neurology, but the matter is well arranged, and as far as we have observed, always to the point. Some of the figures are, perhaps, not very well executed, but they have always real educational value.

PROSTATIC ENLARGEMENT.

In his book on *Prostatic Enlargement*[12] Mr. Cuthbert S. Wallace presents a complete discussion on the pathology and treatment of what has been commonly termed hypertrophy of the prostate, and also touches on the subject of cancer. He devotes a considerable amount of space to a well-illustrated discussion of the surgical anatomy of the organ, and among other points deals with the vexed question of the significance of the term "prostatic capsule." He discards the term "capsule" altogether, and for the outer layers of stroma which cover the gland he adopts Mr. Shattock's name, "cortex," and the fascial covering around the whole he speaks of as the "fascial sheath." In regard to the morbid anatomy of the enlargement, the chief point which he makes is that there is no evidence that infection has anything to do with it as a causative agent, and that bacterial infection is a secondary event and similar to that which often occurs in tumours elsewhere in the body. On the other hand, he supports the view that the neoplastic theory accounts satisfactorily for the observed facts found in most cases of enlargement, while admitting that it offers no explanation of the non-encapsuled, diffuse, or "fibrous" variety. In the chapters on treatment the author expresses a preference for suprapubic enucleation as the usual and routine method of operation. He considers operation indicated in recurrent haemorrhage, or when a catheter cannot be passed, or when, although catheterization is possible, retention is complete. Apart, however, from these urgent indications, he presages early operation as the plan of choice for all cases. To this view present-day statistics certainly lend support, as, although operation is now done at a comparatively late period after the onset of symptoms, the mortality is between 6 and 7 per cent., and the proportion of complete cures about 88 per cent.; operation at earlier stages would doubtless improve on these figures. As a preliminary to operation, Mr. Wallace lays stress on the importance of subduing infection, in the worst cases by cystotomy. In the chapter on prostatectomy the description of the suprapubic operation is satisfactory; air distension of the bladder is, however, certainly preferable to the fluid distension which is recommended. The description of the perineal operation lacks clearness. To describe five presumably alternative methods, and to give the reader little or no guidance as to their comparative advantages, is to leave the subject in a state of confusion, out of which it has really emerged during recent years. An instructive chapter on cancer completes the volume. The author's account of the cases which have come under his own observation is of interest. Prostatic enlargement is an affection which most medical men, whether surgeons or not, are called upon to deal with fairly frequently; the book will therefore no doubt be read by many. With the aid of its many good illustrations, it presents the subject on the whole effectively and clearly.

[12] Oxford Medical Publications. *Prostatic Enlargement.* By Cuthbert S. Wallace. London: Henry Frowde; and Hodder and Stoughton. 1907. (Demy 8vo, pp. 227, figs. 80. 12s. 6d.)

VITALISM AND NEO-VITALISM.

Dr. Windle has expanded a lecture which he gave two years ago in the Hall of Westminster (Roman Catholic) Cathedral into a small octavo volume of agreeably large print. He has given it the title *What is Life?*[13] but he does not answer, nor, if we understand him, has he attempted to answer the question. What he does is to show once more that the materialistic, mechanical, or automaton hypothesis will not do, and that it is very difficult, if not impossible, to find any true difference between the old vitalistic and the neo-vitalistic theories.

> Myself when young did eagerly frequent
> Doctor and saint and heard great argument
> About it and about, but evermore
> Came out by the same door where in I went.

Dr. Windle comes out with us, for at the end of his essay he says that he has not "desired . . . to debate the nature of the vital force." The scientific attitude has perhaps never been better expressed than in the following passage, which Dr. Windle quotes from Dr. Haldane's article in the *Nineteenth Century* (1898):

> It is frequently urged that vitalism amounts to nothing more than the mere assertion that a physico-chemical explanation of vital phenomena has not been found; and that even though this assertion be correct, the only possible way to advance in physiology is by the further application of the principles of physics and chemistry, since there are and can be no other kinds of explanation but the causal ones which these sciences afford. This argument in its widest form is undoubtedly based on the metaphysical assumption that the universe, interpreted as it is in the physical sciences as a universe of matter and energy, corresponds to absolute reality, and is for this reason incapable of any further interpretation. The work of modern philosophy since Berkeley and Hume has shown that the assumption in question is without foundation.

Dr. Windle writes in a style free from unnecessary technicalities, and succeeds in putting the present position of the debate very clearly, and without undue partiality. His essay is well worth reading.

NOTES ON BOOKS.

In the *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India*, Christophers completes his observations, already dealt with in preliminary contributions, on the *Piroplasma Canis and its Life-Cycle in the Tick.*[14] Nuttall and Smith have recently published a study of the asexual phase of this parasite, and Christophers goes over this work again, and also describes the sexual cycle in the tick, an exceedingly interesting study. Some of the preliminary ideas have had to be amended, and further work may have to be done on the facts now set before us. The development is on lines somewhat similar to that of malaria, and the description is highly technical. It is further complicated by the transmission of infection being twofold: (1) hereditarily through the egg, and (2) by stage to stage infection, which the author states has not been proved by experimental infection, but is practically certain from observations upon the parasite. In both methods the parasite goes through the same cycle of development: first it becomes a club-shaped body, then a zygote, this breaks up into sporoblasts and those again into sporozoits, which find their way to the salivary glands, and so back by the saliva to the dog. The work is clear and convincing, and the diagrams help the conception very considerably. A very full bibliography will be found useful for students of the subject, who certainly should not miss to make a careful study of this excellent monograph.

The aim of Dr. Trombetta in a small book[15] published recently in Turin has been to supply in a concise form all

[13] Expository Essays in Christian Philosophy. Edited by the Rev. Francis Aveling, D.D. *What is Life? A Study of Vitalism and Neo-Vitalism.* By Bertram C. A. Windle, M.A., M.D., Sc.D., LL.D., F.R.S., F.S.A. London and Edinburgh: Sands and Co. (Demy 8vo, pp. 162. 3s. 6d.)

[14] New series, No. 29. *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. Piroplasma Canis and its Life-Cycle in the Tick.* By Captain S. R. Christophers, M.B., I.M.S. Issued under the authority of the Government of India, by the Sanitary Commissioner with the Government of India, Simla. Calcutta: Office of the Superintendent of Government Printing, India. 1907. (Med. 4to., pp 83. Two rupees or 3s.)

[15] *Formulario Ragionato di Oculistica* [Vade-Mecum of Ophthalmic Therapeutics]. By Dr. Trombetta. Turin: S. Lattes and Co. (Med. 16mo, pp 366.)

most accredited formulae used in the treatment of eye eases. Old formulae which have become disused are carded, and only those modern formulae included with ich the author is practically familiar, either from his n experience or from watching the practice of others. e book is arranged in an alphabetical order, so that any rticular piece of information required may readily be nd. Special attention is paid to the commoner ail-nts—for example, iritis and conjunctivitis. As a handy rk of ready reference it is likely to be useful both to the neral practitioner and to the specialist.

Mr. Thorne Baker has produced within a small compass notable and severely practical work on a difficult branch physics. *The Spectroscope*[16] is intended to furnish the emical student with a *via media* between the elementary rtbook and the advanced treatise on spectrum analysis. first sight the book is unpromising; little attention is id to literary style, and in parts it seems on the point of coming an instrument-makers' catalogue. But it im-oves on acquaintance, and in addition to valuable advice specting apparatus Mr. Baker gives us a well-digested rvey of recent chemical and photographic research in lation to the spectrum. In the chapter devoted to the enomenon of fluorescence, the author mentions the teresting fact that recent spectroscopic investigations ve shown that the fluorescent rays from an *x*-ray tube ntain certain spectrum lines due to the metal of which e anticathode is composed.

Although Dr. Harold Scott has called his book *Post-raduate Clinical Studies*,[17] it would probably be more curately described as a collection of reprints of pub-hed papers or of papers read before various medical cieties. It consists of nine papers, the first being a port of a case of cranial injury offering some difficulties diagnosis, reprinted, with additions, from the *Journal of e Royal Army Medical Corps*; the second is on the diagnosis subphrenic abscess, being a paper read before the ropshire and Mid-Wales Branch of the British Medical ssociation; the third is on the difficulties of the diagnosis pleural effusion and on the diagnosis of empyema, espe-ally in children, without using the exploring needle, also Branch paper; the fourth is on the diagnosis of atypical rms of disseminated sclerosis; the fifth on the differential agnosis between cerebral haemorrhage, embolism, and rombosis; the sixth the report of a case of acute endo-rditis with cerebral symptoms, also a Branch paper; the venth on the importance of an examination of the dejecta diagnosis; the eighth the report of a severe case of nteric fever with complications. The ninth paper, which, ith charts and tables, takes up about half the book, is on yphilis in the army and its influence on military service; nd this, written as it is from wide personal observation, akes the book well worth acquiring. It was originally ntended for competition for the Alexander Memorial rize, which is open to all executive officers in the Army, aval, or Indian Medical Services, but it was not sent in ecause the writer's retirement from the service was ntecedent to the date fixed for the award.

Messrs. Kemp and Co., Limited, pharmaceutical hemists, of Bombay, are to be congratulated on the ccess of their *Prescriber's Pharmacopoeia*, of which a sixth dition has recently been published.[18] This more than ntains the well-earned reputation for accuracy and tility of previous editions. The work, which has been mpiled and edited by Mr. A. Pell, F.C.S., the general anager of the firm, has undergone considerable enlarge-ent, and contains a concise account of the sources and es of all drugs used in medicine, whether officinal, non-ficinal, proprietary, or indigenous. An elaborate table doses and a copious index enhance the value of the ok. An interesting chapter on antitoxins, vaccines, d organotherapy is contributed by Lieutenant-Colonel annerman, I.M.S., Director of the Bacteriological Labora-ry, Bombay; and another on bacteriology by Dr. U. F. rveyor, Professor of Bacteriology, Grant Medical College, ombay. Practitioners will find this manual a most handy, liable, and accessible companion.

[16] *The Spectroscope: Its Uses in General Analytical Chemistry.* An termediate Textbook for Practical Chemists. By T. Thorne Baker, C.S., F.R.P.S. London: Ballière, Tindall, and Cox. 1907. (Demy o. pp. 133, with 86 diagrams and illustrations. 5s.)

[17] *Post-Graduate Clinical Studies for the General Practitioner.* First ries. By H. Harold Scott, M.B., M.R.C.S. London: H. K. Lewis. 7. (Demy 8vo, pp. 175; 35 plates. 8s.)

[18] Kemp and Co.'s *Prescriber's Pharmacopoeia.* Sixth edition. Com-ed and edited by A. Pell, F.C.S. Bombay and London: Kemp and ., Limited. (Cr. 8vo, pp. 644. 8s. 6)

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Kellett, Deputy-Inspector-General L. H., R.N., Chatham.
Kidderminster Medical Society, per B. Addenbrooke.
Lloyd, David, Newcastle Emlyn.
Livingston, George R., Dumfries.
Lownds, J. R., Newcastle-on-Tyne.
McCutcheon, J. B., Blaengarw, Glam.
MacEwan, David, Dundee.
Macgregor, J. J., Cardiff.
Marshall, W. L. W., Huddersfield.
Martin, Albert M., Newcastle-on-Tyne.
May, Gould, London.
Paterson, H., Cardiff.
Price, D. R., Ammanford.
Prichard, R. D., Resolven, Glam.
Puzey, Chauncy, Liverpool.
Reidy, C., Bargoed.
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Robinson, F. W., Huddersfield.
Robson, J. D., Dumfries.
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Anon.

MEDICINAL AND DIETETIC PREPARATIONS.

Effervescent Piprazine Granules.

THE superior solubility of piperazine urate to that of the urates of other alkaline substances or alkalies has led to its being employed in all that class of diseases in which increased elimination of uric acid is required. Midy's effervescent piperazine (prepared by L. Midy, Paris; British agents, the Anglo-American Pharmaceutical Company, Croydon), of which we have examined a sample, provides a useful form for the administration of this drug. It consists of a mixture of piperazine with effervescing ingredients, made up into the form of granules; it gives a brisk effervescence with water, and produces a bright, sparkling draught.

Calcium Iodo-ricinoleate.

Various combinations of iodine have been tried from time to time in place of the alkaline iodides, the desideratum being to secure the effects of iodine while avoiding the digestive or other disturbances sometimes produced by the iodides. Among the substances that have met with some favour for this purpose are the iodine compounds of some of the fatty acids usually in the form of their calcium salts. Calcium iodo-ricinoleate is a preparation of this class, which is said to give the therapeutic effects of calcium and of the iodides, and to be tolerated by patients who cannot take potassium iodide. We have received from Messrs. Burroughs, Wellcome, and Co. (Snow Hill, London, E.C.) samples of capsules containing this compound; it is here presented in the form of a solution in an oily vehicle, each capsule containing 3 grains of the iodo-ricinoleate. The capsules are of the familiar shape of "Tabloid" products, and provide an easy means of administering the drug.

Tuberculin Preparations.

We have received from Messrs. Allen and Hanburys (7, Vere Street, London, W.) samples of their tuberculin in sealed glass tubes and bulbs. "Old tuberculin" for the ophthalmic reaction as a means of diagnosis is put up in glass tubes drawn out at both ends and furnished with india-rubber caps, so that by breaking the tube at the file-marks and replacing the caps a convenient dropper containing the liquid is obtained, by means of which one or two drops can be placed in the conjunctival sac. "New tuberculin" for hypodermic injection is supplied in glass bulbs or "azoules" containing quantities varying from 0.00005 to 0.0004 c.cm., suitably diluted.

The Alkaloid of Ergot.

FEW, if any, drugs as important and widely used as ergot have so long resisted the attempts made to separate the active principle or principles in a state of purity. The isolation of the alkaloid ergotoxine by Barger and Carr, and the demonstration of its physiological activity, have at length permitted the production of a medicinal preparation from which the inert and possibly undesirable matter of the drug is excluded. Messrs. Burroughs, Wellcome, and Co. (Snow Hill, London, E.C.) are issuing such a preparation under the name "Ernutin," in two forms respectively for oral and hypodermic administration, and have submitted samples which we have examined. Ernutin is an alkaloidal solution in a vehicle of glycerine and dilute alcohol, physiologically standardized by observation of its effects on the vasomotor functions of the sympathetic nervous system; such standardization secures uniformity and assured activity, while the absence of other ingredients, present in a probably varying degree in standardized extracts, is a distinct further advantage.

THE PRESERVATION OF FOODS.

THE subject of the preservation of foods from the time of production until they are actually required for consumption, is one which has attracted much attention in recent years, and which is of the first order of importance in connection with public health.

The practice of preserving food in some way or other is, of course, of extreme antiquity, and takes its rise in the fact that the food supply of primitive man was in its nature intermittent; a good hunt, the visit of a herd of roaming animals, or other occasional circumstances, may still provide a savage tribe with temporary abundance of food. Moreover, many important foodstuffs were obtainable only at one season of the year; and endeavours to carry forward some of the abundance to times of scarcity would necessarily lead to the discovery that certain methods of treatment were favourable to food remaining in good condition. Thus processes of preservation by drying, smoking, pickling, etc., have been empirically discovered and practised from early times; while the preserving of perishable foodstuffs by freezing was naturally familiar to the inhabitants of cold climates long before it came to be practised by artificial means.

In this, as in all other matters, the change from the empirical to the scientific stage rendered progress possible at a rate which makes the previous history of the subject appear by comparison almost stationary. The discovery by Pasteur of the real nature of putrefaction supplied the necessary scientific basis for the elaboration of new methods of food preservation. Since the middle of the nineteenth century enormous developments have taken place, and vast new industries have come into existence for the production of various kinds of foodstuffs not for immediate consumption.

The original form of the problem has changed, largely owing to the development of new countries and the growth of world-commerce; the principal concern is now not the preservation of the superfluity of to-day against the scarcity of to-morrow, but the feeding of dense populations of certain parts of the earth with the food products, both animal and vegetable, of other and distant parts. It would probably be safe to say that food preserved by artificial means forms to-day an important, and often the main, part of the diet of the majority of the people of Western Europe and America. Vegetables, fruits, and animal products of every kind are all preserved in great and increasing quantity; and there is scarcely an article of diet which is not obtainable in an artificially preserved state. In view of the magnitude of the industries concerned, and the comparative recent development of almost all of them, it is not surprising that many important questions in connexion with the subject are still matters of dispute. Public opinion is apt to alternate between a rather apathetic belief that "all's well," and a violent reaction against preserved foods almost without discrimination. The final verdict for or against particular kinds of preserved food must necessarily be given chiefly by the medical profession; and although in judging of the effects of food a knowledge of the methods of preparation is not necessary, such knowledge can hardly fail to be of assistance, and a short summary of the more important methods may therefore not be out of place.

Since putrefaction of organic matter is due either to the action of bacteria, of moulds or other low vegetable forms, or of unorganized ferments, it follows that any process which will effectually prevent the action of any of these will preserve food from decay; it is further requisite, however, that the process shall not itself cause such changes in the food as shall render it in any way unwholesome or unattractive. The processes fulfilling these requirements may be grouped under four heads: (1) Processes of desiccation, which have long been applied to some fruits and vegetables, such as figs, currants, and lentils; a somewhat primitive application of this method to meat is seen in the preparation of "biltong," the dried beef of South Africa; (2) processes of refrigeration, now of immense importance in marketing "fresh" meat at a distance of thousands of miles from where it is killed; (3) preservation by antiseptics, including processes of smoking, pickling, etc.; and (4) aseptic preservation, involving sterilization by heat and hermetical sealing, this being the method employed for almost all tinned and bottled foods. It will be useful to glance at all these methods, indicating their normal limitations, the dangers involved, and the conditions to be complied with in obtaining satisfactory results.

DESICCATION.

Desiccation is one of the most ancient methods of preserving meat, and its employment for this purpose is chiefly confined to less civilized peoples. The Tartars, the Mexicans, many South Americans, and others prepare forms of dried meat by simple exposure of fresh meat to the action of the sun; the material so obtained possesses increased portability from the loss of moisture, and will keep good for a longer or shorter time, usually from one to two months; after cooking it possesses but little taste, though its nutritive properties do not seem to be impaired.

Meat and Milk.

Dried meat products, such as powdered peptone and the mixtures of peptones and albumoses which constitute various proprietary articles, may be referred to here; the preservation of such products usually depends on their dry state, but their application is limited, and finds a place chiefly in the dietary of invalids.

One of the most important of animal foods preserved by desiccation alone, which is finding rapidly increasing application in Great Britain and other countries, is powdered milk. This is prepared in various parts of the world, two principal processes being in use. In one the milk is spread in a very thin layer on a revolving metal drum heated above the temperature of boiling water; evaporation is so rapid that the milk is protected from actual contact with the drum by a layer of vapour, and is speedily reduced to a thin solid film, which is continuously removed and reduced to powder. In the other process the milk is forced under high pressure through a fine aperture, and the spray so produced is exposed to a current of hot air, which rapidly converts it to powder. In both methods the milk becomes sterilized by the heat employed, but as it is afterwards freely exposed the processes cannot be classed as aseptic. A fluid milk is readily produced by adding hot water to the powder. Tablets of various sizes are made by simple compression of the milk powder. The casein of milk, and its compounds with alkalies, known by various proprietary names such as Plasmon, etc., depend for their keeping properties on their dry condition.

The simplicity of the process of desiccation is the cause not only of its being the method of preservation most in vogue among primitive nations, but also of improvements in its application being less dependent on a proper understanding of the process of putrefaction than is the case with other methods.

Vegetables.

Very extensive developments have taken place in recent years in the application of desiccation in preserving vegetable products; its employment in the case of vegetables has been largely due to Masson, a Frenchman, whose first patent for a process was taken out in 1850—that is, before Pasteur had begun to publish his investigations. The industry is carried out on the large scale in France and other European countries, a great variety of fresh vegetables being treated in this way. The drying is performed in a current of air at a comparatively low temperature, and injury to the flavour of the vegetables or to their power of again absorbing water is thus avoided. Since in many cases 90 per cent. or so of fresh vegetables consists of water, there is a great reduction in weight and in bulk when they are dried. The bulk is commonly further reduced by compressing the material in hydraulic presses. Such compressed vegetables naturally offer great advantages in provisioning military and naval forces, and find large application for that purpose. They are commonly supplied in cakes partly divided, like cakes of chocolate, for ready breaking up, and as many as twenty-five thousand rations can be packed in a space of 1 cubic metre.

Fruits.

The drying of certain fruits in hot countries by simply exposing them to the action of the sun has been practised from time immemorial, and has been much extended of late years. A great part, however, of the dried fruit produced in abundance to-day is dried by artificial heat. In this development, again, France played a leading part, but the almost boundless resources of America for food production, added to the readiness of the people to adopt improved processes, have had the inevitable result that the great development of the industry has occurred in that country. The drying is carried out by means of a current of hot air, and, unlike the case of vegetables, the best results are obtained by exposure for a short time to a rather high temperature, a gradual action being secured by the travelling of fruit and air in opposite directions; fresh fruit is thus exposed to the air that has already been nearly saturated with moisture, and it is progressively acted on by drier and drier air as the process proceeds. The chief fruits which are preserved in this way are apples and various kinds of stone-fruit, but many others are also treated in smaller quantity.

In its application to vegetable products and to milk, desiccation is perhaps the most satisfactory of all methods of preservation. No addition of foreign substance is needed, the material undergoes a minimum of change, and when required for use, the fresh state can be to a considerable extent reproduced. The most important requisite is that only sound material should be taken in the first place; and in most cases the consumer can judge of this as easily as in buying fresh produce.

Refrigeration.

Food preservation by means of low temperature depends on the production of conditions in which the development of bacteria cannot occur, and not on their destruction. Repeated experiments have shown that even extremely low temperatures are not capable of destroying the vitality of minute organisms, but on the other hand, their growth and development are completely arrested at or near the freezing point of water. The most important application of the freezing method is in the importation of freshly-killed carcasses of beef and mutton from countries where the animals can be more cheaply raised; but it is also largely employed for butter, eggs, milk, and fruits in great variety. Great Britain has by far the largest importation of frozen products, Australia, New Zealand, and South America being the chief exporting countries. This method of food preservation was first worked out practically and applied commercially in France; but although meat preserved in this way was shown to be perfectly wholesome, its slightly altered appearance seems to have prevented its finding favour. The extended use of frozen meat in England, however, has led to further attention being given to the thawing process, and improved methods of thawing now permit of these meats being marketed in such a condition that neither by appearance, touch, or any other means can they be distinguished from home-killed meats. If frozen meat is exposed to ordinary air, moisture naturally condenses upon it, carrying with it bacteria from the air in considerable numbers; the thawing is, therefore, performed in dried air, and very gradually, the surface of the meat being occasionally wiped if necessary. Large quantities of imported meat, however, are now not frozen, but merely "chilled" by being kept at a temperature two or three degrees above freezing point, preference being given to this over freezing when it is not necessary to keep the meat for many weeks. It is even asserted that chilling improves the taste of meat, and in Germany not only are municipal slaughterhouses furnished with refrigerating equipment, but in many towns it is compulsory on the butchers to place all meat for twenty-fours hours in the cooling chamber.

Many experiments have been made to compare the keeping properties of frozen meat, after thawing, with those of fresh-killed meat. The results have usually shown that the latter will keep for a slightly longer time before putrefaction becomes apparent; but if the time between killing and freezing and the time occupied in thawing are taken into account, the advantage lies with the frozen material. Chemical and histological comparisons have failed to show or to suggest any inferiority in meat that has been frozen; and when it has been properly thawed its suitability as food depends on precisely the same qualities and conditions as with fresh meat.

The Use of Antiseptics.

The preservation of food by treating it with substances which do not permit of the development of bacteria strictly includes the processes of salting, pickling, curing, etc., which are amongst the oldest of all methods, and the suitability of which in proper cases is beyond question. It is more convenient to class as antiseptic methods only those in which the antiputrefactive substance is employed in small quantity, and does not produce such changes in taste, appearance, etc., as are caused by pickling, salting, and similar processes.

Much controversy has occurred in regard to the innocuousness or otherwise of antiseptic methods in the more limited sense, and it is not intended in the present article to enter upon the question whether such methods are permissible, or, if so, within what limits. At present there can be no doubt that the bulk of expert opinion is in favour of their prohibition, more or less complete, and in several countries laws have been passed in accordance with this view. An important consequence of the hostility

with which antiseptics are regarded is that their presence in foodstuffs is never declared, and is in fact often denied by the manufacturer until analytical evidence has made such denial useless.

Antiseptics Used.

The principal substances used as antiseptics in foodstuffs are: Boric acid and borax, employed to an enormous extent in preserving milk, cream, butter, meat, and potted meats; formaldehyde, also largely used in preserving milk; and salicylic, benzoic, and sulphurous acids, which find very wide application, but are more particularly employed in wines, fruit syrups, and conserves, and sweet products generally. A considerable number of other antiseptics are in quite common use, but not to anything like the same extent as those that have been named. It is to be noted that the quantity of any of these that is added to food is not sufficient to render it sterile, but merely to prevent the development of the bacteria, etc., present; the method, therefore, is to be compared with those of desiccation and refrigeration rather than with aseptic methods.

Objections to the Use of Antiseptics.

Objection is taken to the use of antiseptics on three main grounds:

1. That the quantity of the antiseptic ingested in consuming the food may exert a poisonous action in the body; this is the line on which the use of boric acid is commonly opposed, and is the ground of the greatest diversity of opinion; it is unlikely that the question can be settled either way without a good deal more experimental evidence than has been hitherto adduced.

2. That the antiseptic, while not itself exercising any poisonous activity, has an inhibitory effect on the digestive process; saccharin has, perhaps, been more confidently opposed on this ground than any other substance, and its use is prohibited in France and Germany. It will not be disputed that any substance that can be proved to have such an effect on digestion should not be employed in food.

3. That the antiseptic may inhibit certain decompositions that would be readily detected—such as the souring of milk—while not preventing other deleterious changes; or that it may be added to foods that are already too far advanced towards putrefaction to be fit for consumption, preventing further change but not preventing ill-effects from the ptomaines and toxalbumins already produced. That this is the case with certain antiseptics and foods appears to be well-established and it is, perhaps, the weightiest objection to the employment of such substances.

Aseptic Methods.

It is interesting to notice that the preservation of foods by sterilizing them by heat was introduced and carried to commercial success long before anything was known of the microbes on the destruction of which its success depended. The first manufactory for goods of this kind was started in 1804 by a Frenchman named Appert who, owing to the care with which he worked, was remarkably successful. In 1810 Gay Lussac explained the results obtained by reference to the exclusion of oxygen, fermentation and putrefaction being regarded by him as oxidation processes; Appert himself, however, who was not a scientist, came nearer to the truth in the suggestion that the action of the fire destroyed or neutralized the ferments which would otherwise have produced changes in the material. The influence of the erroneous theory is apparent in many of the modified processes introduced subsequently, in which the exclusion of air was made the principal aim. In the process as carried out to-day, a great deal of the air is in fact expelled and excluded from the vessel in which the food is packed, but as a matter of convenience incidental to the sterilizing and not as a matter important in itself.

The preservation of food by aseptic means is an important industry in almost all the principal countries to-day, but it is in the United States and Canada that it has attained its greatest development, owing to the enormous surplus production of foodstuffs in those countries; the American Bureau of Statistics shows yearly exports of tinned foods to the amount of over 50,000,000 lb. weight.

Description of Process.

The foods which are preserved in this way include almost all kinds except cereals. Meat in the greatest variety, fish, fruits, and vegetables are canned or bottled in enormous quantities. Although many variations are, of course, necessary in the different cases, the general process is the same. The material, after preliminary preparation, is cooked or scalded; in the case of meat the cooking is usually thorough, while for many vegetable substances little or nothing in the way of cooking is permissible; it is then filled, usually while hot, into tins, when this form of packing is to be employed, and the ends of the tins soldered on, leaving a small central hole still open. If the material has been filled cold, the filled tins are then heated in a bath to from 120° to 180° F., and the small vent holes sealed with solder. When glass vessels are employed they are heated in the same way after filling, and then closed by some of the many devices in use for giving an airtight seal. The final treatment is the sterilization, technically known as "processing." In most cases the object aimed at is to bring every portion of the contents to a temperature of from 170° to 212° F., and not to heat longer than is necessary to secure this result; this is attained by heating with steam under pressure at about 240° to 250° F. for a shorter or longer time, according to the size of the packages; special registering thermometers are employed in ascertaining the length of time necessary to give the required temperature in the centre of the package, and this time, having been fixed, is subsequently always employed in treating the same kind of product. Since it is only the outer layers of the contents of a tin that are likely to receive bacterial contamination, and these layers become heated to well over the boiling point, there is no fear of bacteria escaping destruction.

The flavour of some vegetables and of milk is injured by heating to 212°; in such cases a temperature of from 165° to 212° is employed, heating being continued for a longer time, and the process repeated three or four times at intervals of one day. The principal danger of contamination of tinned foods is from spores which may exist in the material before cooking, or which may gain access to it during the process of filling and soldering down the tins. Many spores offer great resistance to the action of heat, and the final sterilization would not suffice for their destruction. A method has recently been introduced in which the cutting up of the cooked meat and the subsequent filling and soldering are done in a closed apparatus, to which only sterilized air is admitted. The risk of the development of spores is, perhaps, greater in the case of vegetables; many of the low organisms that infest these as parasites produce spores of great power of resistance, and far less cooking is employed than in the case of meat.

Importance of Factory Conditions.

The condition of the factory where food is canned or bottled is of great importance; if none of the waste products are allowed to remain in the canning departments, and scrupulous cleanliness of every kind is insisted on, the risk of any airborne contamination of the food is, of course, far less than in places where such precautions are not taken. For similar reasons there will be fewer cases of tinned or bottled food going bad after sterilization in factories where inferior or damaged material is not admitted than in those where it is allowed to infect the air. Many of the large packing firms have a reputation which inevitably generates confidence as regards those matters which cannot be judged by mere inspection of the products, and in accepting the goods of an unknown firm it should never be forgotten that the quality may be inferior from many causes in addition to those producing obvious faults. The presence of an antiseptic in tinned food is strong presumptive evidence that the material had begun to decompose before it was packed, and such food may be unhesitatingly rejected. Leaving out of consideration the comparatively small proportion of preserved food which is not fit to be marketed, it cannot be doubted that the consumer is the gainer—at least from the financial point of view—by the results of preserving processes. Such processes, by aiding production on a very large scale, have made possible improvements and economies altogether unattainable when the source of supply must be geographically close to the consumer, and have placed the world's produce at the disposal of people of small means in a way never before approached.

ROYAL COMMISSION ON VIVISECTION.

Fourth Report.

(*Continued from p. 878.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has recently been issued.* It contains minutes of the evidence taken during the months of October, November, and December.

Antivivisectionist Testimony.

Evidence of Mr. Stephen F. Smith, M.R.C.S. (continued).

Proceeding to the subjects of suppuration and blood poisoning, he said Mr. Paget wrote:

The study of the micrococci has not only proved and made perfect the present methods of surgery; it has also discovered a serum for the cases of micrococcic infection. Take, for example, the disease called ulcerative endocarditis, the growth of micrococci on the valves of the heart, whence they are carried by the blood into different parts of the body. Several cases have lately been reported where recovery from this most hopeless disease has followed the use of the anti-streptococcic serum. It has given excellent results in cases of puerperal fever and in cases of dissection wounds. Already, though it is a new thing, it has saved many lives, and is steadily gaining ground in practice.

The truth of that statement could be estimated by comparing it with the following, which appeared in a leading article of the *Lancet* (November 18th, 1899), which referred to a communication published in the *American Journal of Obstetrics* (September, 1899) by a committee appointed by the American Gynaecological Society to report upon and to investigate the value of the serum in the treatment of puerperal infection. A summary of the cases hitherto reported was given, showing that the results in 352 cases had been collected, with a mortality of 20.74 per cent., and after a careful study of the literature of the subject the members of the Committee formulated certain conclusions, amongst which they stated that clinical observation had shown that the results obtained by employment of the serum left a great deal to be desired, and apparently indicated that it had little, if any, effect upon the general course of streptococcic puerperal infection. The conclusions arrived at after careful consideration of the personal experiences of those forming the Committee included the following:

Experimental work has cast grave doubts upon the efficiency of antistreptococcic serum in clinical work by showing that a serum which is obtained from a given streptococcus may protect an animal from that organism, but may be absolutely inefficient against another streptococcus, and that the number of serums which may be prepared is limited only by the number of varieties of streptococci which may exist.

Again they said:

The personal experience of your Committee has shown that the mortality of streptococcus endometritis, if not interfered with, is sometimes less than 5 per cent., and that such cases tend to recover if nature's work is not undone by too energetic local treatment.

The report ended with the words:

We find nothing in the clinical or experimental literature, or in our own experience, to indicate that its employment will materially improve the general results in the treatment of streptococcus puerperal infection.

At the meeting of the British Medical Association held at Portsmouth this year (*sic*), Dr. Herbert Spencer opened a discussion on the treatment of fever following delivery, with special reference to serumtherapy, in which the general opinion was expressed that, although the whole question of serum treatment was too much in its infancy to justify any definite answer, the results hitherto obtained did not exhibit any material advantages over the methods generally adopted. In the *Lancet* of November 11th (pp. 1296, 1299) were published reports of meetings of the Obstetrical Society of London and of the Harveian Society of London, at which the subject was again discussed. At the first-named Society Dr. Herman read a paper on "Two cases in which life appeared to have been saved by antistreptococcic serum." The first was one in which a severe operation was followed by great prostation, from which the patient recovered, but the rally was followed by renewed prostration, such as in the speaker's former experience had ended in death. With antistreptococcic serum the symptoms quickly improved, and the patient got well. The second case was a puerperal one. Dr. Herman thought, however, that judgement as to the therapeutic value of the serum was difficult, because sufficient knowledge of the effects of the streptococcus was not forthcoming. The succeeding speakers all spoke in a doubtful tone as regards the therapeutic value of the serum. At the meeting of the Harveian Society Dr. J. W. Washbourn stated that as the results of his experience, the serum was of extreme value in certain cases, but that it was valueless in other cases apparently identical. Dealing next with myxoedema, the witness said it had been found that after removal of the thyroid gland—sometimes performed for hypertrophy—myxoedema followed. Now, since that disease did not come on when the patient possessed a thyroid gland, either healthy or enlarged, it was neither difficult nor brilliant to conclude that the gland produced something which prevented myxoedema. As a fact, it was found that patients with myxoedema were benefited by taking thyroid gland from the lower animals, swallowed in tabloids. What was there wonderful in this? It was only common sense applied. Mr. Stephen Paget tacitly implied that there was something difficult in this simple reasoning, and that it was necessary to ascertain, by removing the thyroid gland from monkeys, whether excision of a healthy gland would cause myxoedema. It might have been interesting; but why necessary? With a healthy gland—no myxoedema. With a hypertrophied gland—no myxoedema. With no gland at all—myxoedema. One who could not see the plain inference from this must be a person of diminished intelligence. If there had been any evidence that in goitre the function of the gland was destroyed by the hypertrophy, then something, though not much, might be said for the experiment on monkeys. But there was no such evidence. Goitres were only hypertrophy of one of the normal structures of the gland—the fibrous tissue, the vascular tissue, etc. There was no reason at all for assuming the function to be entirely lost. Asked if his view was that the cause of myxoedema was thoroughly and completely understood before any experiments were made on animals, he said, Yes. With regard to antitetanus serum, Mr. Paget remarked that it was only ten years since Kitasato first obtained pure cultures of Nicolaier's bacillus; yet there was a good record already of lives saved or protected. Dr. Whitla, in his *Dictionary of Treatment*, said:

Notwithstanding all the reported successes, there is little evidence of the value of injections of the antitetanic serum. Great numbers of cures are recorded in those cases where the period of incubation was prolonged much beyond the average noticed in severe cases, and it must be remembered that these are the class of cases where a spontaneous cure is the most likely to occur, and many reported successes would doubtless have been safe without the serum.

Rose and Carless stated in their *Manual of Surgery:*

At present the results of this treatment have proved disappointing, since few cases of acute tetanus have been cured by it, and the effect even in the more chronic cases is not at all certain.

Taking hydrophobia next, the witness said there were certain minor considerations. Those were, that Pasteur had published misleading accounts of his experiments, that he equivocated and was compelled to admit it, that some features of the treatment were empirical guesswork, and without foundation. Coming to the crucial point, the statistical evidence, the witness said this evidence was of two kinds: First, the gross mortality in France of French people from hydrophobia before and after Pasteur's treatment. Secondly, the case mortality. All the figures referred to French people. At the Pasteur Institute the figures of foreigners were kept distinct. His authorities for the following statements were the annals of the Pasteur Institute. Dr Dolan's book on *Hydrophobia, Etudes sur la Rage* by Dr. Lutaud, editor of the *Journal de Médecine*, and Dr. Auguste Marie's work on *La Rage*. He took the gross mortality first. There were three sets of figures: those of the Paris hospitals, those of the Department of the Seine, those of all France. Dr. Lutaud had shown that at the Paris hospitals the mortality before and after 1885 was the same. His figures gave the names of the patients at each hospital for each year. In reply to Sir

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 118, Grafton Street, Dublin. 1907.)

John McFadyean, he said the gross mortality meant the mortality among persons treated by Pasteur and not treated by him, not foreigners. By the gross mortality he meant the total number of deaths from hydrophobia in France of French people in a year. The total number of deaths did not go down after the Pasteurian treatment began. The Chairman said what they would particularly like to know was, where the rabies antitoxin had been tried, in how many cases it had been successful. Sir William Collins said he also thought it was important to know what was the gross mortality distributed among those treated and those not treated. In reply to further questions, he said he thought the date of the report from which he was quoting was 1886. Professor Peter showed in the *Journal de Médecine de Paris*, July 5th, 1890, that if the figures for the Department of the Seine were compared for four years before and after 1885, they were 38 in one case and 37 in the other. That was to say, there were 38 for four years before 1885 and there were 37 afterwards. Asked how many years afterwards this included, he said four years before and four years after. There was nothing about case mortality at present. It was the total number of deaths in the Department of the Seine of French people for four years before and four years after the introduction of Pasteur treatment. If, however, the figures were taken for five years before and after 1885, the figures were 41 to 59. That was to say, that whereas in the five years previous 41 died, in the five subsequent years 59 died. Asked if that included the figures for Paris, he said he did not know. It was simply given as the figures for the Department of the Seine. Proceeding, the witness said the average annual mortality for a great many years, as given by the French Government, was 30. Dr. Auguste Marie gave also 30. Tardieu, in 1863, gave 25 as the average annual mortality. That these figures were correct was supported by the statistics of other countries, which showed nearly the same mortality in proportion to population. The figures shown by the Dutch Government showed an average of less than 2, Belgium had an average of 2.6, Sweden, 4.2. In England, from 1864 to 1883, the average was 35. All these figures referred to pre-Pasteurian years. Pasteur's treatment began in July, 1885. In 1886 the deaths were of French people, 36, an increase above average, although Pasteur was treating immense numbers of patients. According to Dr. Dolan and Dr. Lutaud, the gross mortality continued higher than 30 in succeeding years. From the gross mortality there was an absence of any evidence that Pasteur had ever cured a patient of hydrophobia, and no such evidence had ever been claimed. If anything at all was proved it was that the treatment killed. There was next the case mortality. He proceeded to deal with the number of dog bites—that was to say, the number of deaths in each 100 people bitten by dogs mad or supposed to be mad. Pasteur's case mortality was about 1 per cent. Compared with the case mortality of any textbook or any authority, that was an immense improvement. But the question necessary to face was this: Was even a single textbook or authority right? There were two answers to the question. 1. There was strong presumptive evidence that every one was wrong. 2. There was direct and positive proof that every one was wrong, and that the real mortality from hydrophobia, without treatment was the same as Pasteur obtained. Taking the presumptive evidence first, he said, suppose that the age of some one named John Smith were in question. Suppose one authority gave his age as 5 and another authority as 75, and that every other authority gave a different age, not more than one could be right. If there were 20 authorities, 19 must be wrong. And if 19 were mistaken it was probable that the twentieth would be mistaken also. He cited some authorities on the percentage mortality of hydrophobia:

Brouardel gave 31 per cent. below the age of 20, and 62 per cent. above it. Tardieu, Bouley and the Comité d'Hygiène in France gave a mortality of 30 per cent. for cauterized wounds, and 80 per cent. for non-cauterized wounds. Bouley gave another estimate of 47 per cent. Faber (Wurtemburg) gave 20 per cent. Werner stated 22 per cent ; Poland (*Holmes's System of Surgery*) said it 25 per cent. ; Gamgee (*Reynolds's System of Medicine*) said it varied from 5 to 50 per cent. ; Gowers (*Quain's Dictionary of Medicine*) gave a mortality of from 50 to 75 per cent. Pasteur himself believed (or at least said he believed), it was 20 per cent. Mr. Paget with unconscious humour remarked: "What was the risk of a bite from a rabid animal in the days before 1885? It is a matter of guesswork."

The reasons for all this diversity of opinion was easy to see. There was the great rarity of the disease. Perhaps not one medical man in a hundred ever saw a case. There was the custom of killing the dog to prevent its biting more people. There was the fact that there were about half a dozen diseases simulating rabies. It was easy to see what had happened. A dog bit a number of people. Nobody died. Natural conclusions, the dog was not mad. The figures were excluded from statistics. The textbook figures were therefore worthless from their mutual contradiction, and from the fallacies which must have come in. Dealing next with the figures in the textbooks, he said he would show that the real mortality in the untreated people was about 1 per cent. Further, he would show that even a belief in the lowest figure ever given—that was, in the textbooks—namely, 5 per cent., was a hopeless absurdity. The figures which condemned Pasteur's pretensions came from the Pasteur Institute. In 1886, the first whole year of Pasteur's treatment, 36 French people died of hydrophobia; 19 were treated by Pasteur, 17 were not. These were French statistics taken from Dr. Lutaud's work on *Etudes sur la Rage* and Dr. Dolan's book on *Hydrophobia*. The average total mortality in France was 30. Seventeen was rather more than half of 30. They might therefore presume that rather more than half the dog-bitten people stayed away from the Pasteur Institute. Let it be assumed that at least half stayed away, which was conceding Pasteur a slight advantage; apparently by these figures more than half stayed away. If half stayed away, the other half went. The examination proceeded as follows:

(*Sir William Church.*) This is only supposition. You do not give us any figures?—I do give the figures.

(*Chairman.*) What you told us was that 36 was the number who died in that year?—Thirty-six French people died in the year 1886.

Then you must take your 19 who died as against the 36, and not against the 30?—The assumption is that Pasteur's treatment modified in some way the number of deaths. I am leaving that for a moment. I am taking 17 who died without going. I am only trying to show at present how many dog-bitten people stayed away from the Pasteur Institute. Do you follow?

I cannot see, if you deal with the figures of 1886, how you can diminish those who actually stayed away to 30. You say that 19 were treated and 17 were not. You must deal with those figures?—The 17 people, then, who died did not go to the Pasteur Institute. . . . Therefore, if 17 did not go, if 30 was the average, the presumption is that more than half the people untreated by Pasteur, bitten by dogs, mad or supposed to be mad, did not go.

(*Chairman.*) That I do not follow?—I think it is perfectly clear. It is a question of whether you understand me.

No, it is my understanding that is lacking?—It is no good my going on unless that point is clear.

Asked by Sir John McFadyean if he meant that a mortality of 30 would mean probably somewhere about 100 or 200 people bitten annually, the witness said he was not talking about that. "Then," said Sir John, "I am another who is unable to follow you." The Chairman pointed out that he introduced that 30 which did not seem to him to have anything to do with the question as to a year in which there were undoubtedly 36. The witness said it seemed to him it had very much to do with it. Seventeen French people in 1886 died in France who had not been to the Pasteur Institute. Supposing 34 people were the average, they might assume, then, that half the dog-bitten people stayed away. The Chairman said that to his mind it was not of the slightest importance whether half or one more or less than half stayed away. He could not either prove or disprove the usefulness of antitoxins by such distinctions as that. The witness replied that these were the best figures they had got. In reply to Sir John McFadyean, who asked how he knew the number of people who stayed away from the number who died of hydrophobia without treatment, he said this surely showed them. Sir John said he had tried to help him out by suggesting that he might have estimated the number of people bitten annually from the number of people who died from hydrophobia, but he did not take it. The reply was, "No, not at present." Continuing, the witness said what he wanted them to admit at present was that if 17 people in 1886 died of hydrophobia without going to Pasteur, it was probable that at least half the dog-bitten people stayed away. The Chairman suggested that he should present

his argument without asking them to admit it. The witness thereupon went on to say that 30 was the annual average; 17 was rather more than the half of 30. They might therefore presume that rather more than half the dog-bitten people stayed away from the Pasteur Institute. Asked by Mr. Ram if he meant that the other half might be supposed to have gone, he said that assuming that half stayed away, they must admit that the other half went. They knew the number who went. On arriving they were counted; they were, in round numbers, 1,500 (in 1887, 1,531; in 1888, 1,404). He took these figures in another aspect. If half the dog bitten people were 1,500, all the dog-bitten people were 3,000. In reply to Mr. Ram, who asked if he knew the number that went to Pasteur, he said, Yes. Asked what indication that gave of the number that did not go, he said that could be arrived at by observing the number of deaths of untreated people, and comparing them with the previous average annual deaths. If half the dog-bitten people were 1,500, all the dog-bitten people were 3,000. Now, for the first time in history they had some reliable figures on a large scale as to the number of dog-bitten people in a country in a year. Let the annual mortality in France—namely, 30—be compared with the number of people—namely, 3,000—bitten by dogs mad and supposed to be mad; 30 to 3,000 gave 1 per cent. That was the real mortality of hydrophobia in dog-bitten people. If they accepted any other percentage figure of the textbooks they were reduced to absurdity. If they accepted even 10 per cent., then 10 per cent. of 3,000 was 300. To believe that 300 would have died in a year would be to assume that from some cause the mortality suddenly jumped from 30 to 300. If they accepted the lowest figure ever given—5 per cent. mortality—they were in inextricable difficulties with a gross mortality of 150. The pretensions of Pasteur's treatment rested upon statistics and by statistics they were condemned. Asked if all the 36 who died undoubtedly had hydrophobia, he said, Yes. Asked why he reasoned from that that the 1,500 who went to Pasteur must undoubtedly represent half of the people who were bitten, he said he thought the figures undoubtedly were that in the first year (1886) 17 people who did not go to Pasteur died of hydrophobia. It was a certainty that the average mortality in France was 30. Then, as 17 was very nearly the half of 30, they might assume that half the people stayed away from the Pasteur Institute. The examination proceeded:

(*Sir Mackenzie Chalmers.*) There is a *non sequitur* there?—It is so absolutely clear—there is no *non sequitur*. Let us assume that in each year 30 people always died, never more and never less. Let us assume that in 1886 15 people died without going to Pasteur, surely that would show that half the dog-bitten people did not go to Pasteur.

(*Mr. Ram.*) Why are we to assume that?—To make it clear.

(*Chairman.*) It is not a question of assuming a thing to make it clear. The point is to make it clear that you have a right to assume it?—It seems to me already so clear.

(*Sir William Collins.*) Are you suggesting that the ratio of cases treated and untreated must be regarded as the same as the ratio of deaths of treated and untreated?—No, I am not assuming that. That does occur, but I am not assuming it.

In reply to further questions, he said Pasteur got 19 deaths out of 1,500 cases. Asked if he wanted them to assume that there were another 1,500 cases with a similar number of deaths that were not treated, he said, "with 17 deaths that were not treated." Mr. Ram asked if what he wanted to put came to this: That out of the total number of 1,500 of those that went to Pasteur he got no better percentage of deaths, rather worse, than out of the number of 1,500 who did not go to him and who died. The witness said "No, not quite like that. I have not worked it out; that is not the point I have been trying to make." In reply to the Chairman, who asked if he had been giving these figures with the object of showing that the number of deaths in the natural course of events without Pasteur interfering was 17, he said, Yes, that was his object. The Chairman remarked that it did not, to his mind, prove it. He was not at all satisfied that the same ratio existed between those who went there and died and those who went and survived. The witness replied that he would leave out of question at first all those thousands who went to Pasteur for the time being altogether, and would take the 17 who died without going to Pasteur, and as 17 was about half the average, they might assume, certainly that half stayed away. The Chairman said he quite saw what his argument was; but, from some deficiency in his own mind very likely, it did not convey to him proof that 1 per cent. of the people died. The witness said it seemed to him that the proof was absolute so far as any proof of that kind went—that these were the best figures they had on a large scale of the real mortality of hydrophobia. His point was to prove from these figures that the real mortality from hydrophobia was 1 per cent., and that Pasteur, in comparing his mortality with the figures in the textbooks, was comparing his mortality with a figment. When Pasteur's treatment was first introduced there was a great deal of scepticism among Paris physicians as to the value of it, and both his figures and the circumstances of the case were subjected to very close examination. Dr. Lutaud's book was published in 1891. Hydrophobia showed itself under two forms—the convulsive form or the paralytic form. All authorities agreed that the latter variety was extremely rare. In 1886 22 of Pasteur's patients died of hydrophobia. He said 19 a moment ago. There was a dispute; that was why he said 22 now. Seven of these, practically one-third, died of the paralytic form. This was significant, because the virus which Pasteur injected, the "fixed virus" of the laboratory, invariably produced paralytic rabies in the rabbit. All authorities were likewise agreed that a common symptom at the onset of the malady was pricking at the place of the bite. Now, in many of Pasteur's fatal cases this sign appeared not at the bite, but at the point of inoculation.

That occurred in the case of Bernard Sodini, who was treated on October 21st, 1886, and died November 24th. Such was the case also with Léopold Née, of Arras, who was treated November 17th, 1886, and died December 17th. Many more cases might be quoted. In July, 1887, Arthur Stobol was bitten by a dog at Lubline, in Russia. On the chance that the dog might be mad he was sent to the Pasteur Institute at Warsaw, where he was treated by Dr. Boniville till August 11th. He died of hydrophobia on November 11th. The disease was preceded by pains at the seat of inoculation. The dog remained healthy, and lived for years afterwards. The same test—the survival of the dog—proved that in the cases of Née of Arras, De Moens of Antwerp, and of others, Pasteur was the cause of death and not the dog.

Asked if he had had any experience of treating rabies, he said, No. Asked if he thought there was any antecedent improbability in an antitoxin being discovered that would cure rabies, he said it seemed to him that that question was too wide to answer. On the Chairman remarking that he meant, in fact, that he had never considered the subject sufficiently to say whether he did or did not see an antecedent improbability in treating rabies successfully by an antitoxin, the witness replied that the question seemed so wide that he was not quite sure whether it had some less wide meaning than it appeared to have. He was not prepared to give an answer to it. Proceeding, the witness said the value of the antitoxin for diphtheria had been disputed by a host of writers, especially Continental and American. There had been little scepticism in England compared with what there had been in other countries. The objection to belief in antitoxin fell into two classes: First, the theory underlying the treatment was not proved; secondly, the mortality statistics were a barrier. A patient attacked by such diseases as scarlatina, small-pox, or diphtheria, usually recovered. In some way Nature threw off the disease. But when they tried to explain how the "throwing off" was effected, they embarked on speculation. The witness proceeded to read long extracts from a pamphlet he had published first in 1904 and republished with corrections in 1906. He pointed out a fallacy in Dr. Martin's figures on page 215 of the Third Report of the Commission. First, taking the figures of the Metropolitan Asylums Board, he put these figures previous to the introduction of the antitoxin in a misleading manner. He lumped the years 1888 to 1893, and the witness had given the figures for each year instead of lumping them. By lumping them he left out of consideration the fact that there had been from year to year a decrease—that the mortality was already on the decline every year, which might be inferred but certainly was not apparent from the way in which Dr. Martin had given the figures. The witness pointed out that there was just as big a jump from 1889 to 1890 as there was in the year of the serum. But he wished to point out one

fallacy, for this reason, that occurred over and over again and nobody seemed to have recognized. If one took the mortality in 1895 it was 22.8 per cent. If one took it in 1896 it was 21 per cent. That was in the figures of the Metropolitan Asylums Board. They were always asked to take for granted that this reduction of practically 2 per cent. had been due to the antitoxin, but everybody seemed to overlook that one was comparing one antitoxin year with another antitoxin year, and if one kept on like that the error became greater and greater. The first error was that 1895 was an antitoxin year, and that 1896 was also an antitoxin year, and that by comparing an antitoxin year (1896) with an antitoxin year (1895) it was assumed that the improvement in the figures was due to the antitoxin. He could not see why it should be. The Chairman said that no doubt the figures did not absolutely prove one thing or the other, but the suggestion on the other side was that if one found antitoxin being taken up and used more and more in hospitals, one found a greater decrease. The witness replied that he did not think that had ever been shown. He did not think that it was because a larger percentage of patients had been treated by antitoxin.

(To be continued.)

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

X.—PREPARATIONS FOR ECZEMA.

PROPRIETARY articles for the cure of eczema and other skin affections include several which are as widely advertised as any nostrums of any kind. Some of them are advertised at the comparatively low price of 1s. 1½d.; but in almost every case further information with regard to the preparation shows that what is really recommended is a "treatment," including an ointment or other application, a special soap, and a medicine to be taken internally, and often also a dusting powder, and occasionally other articles. The importance of persisting in the treatment is strongly emphasized, with the result that any one who commences by spending 1s. 1½d. is likely to be drawn into spending quite a considerable sum. In the present article we give the results of the analyses of some only of these articles, but they throw sufficient light on the general nature of the whole class.

ANTEXEMA.

Prepared by the Antexema Company, 83, Castle Road, London, N.W. Price 1s. 1½d. per bottle, containing a little less than 1½ oz.

The "Antexema Treatment" includes Antexema, Antexema Soap, and Antexema Granules (to be taken internally). On a handbill enclosed with the bottle it is stated that "in most cases 'Antexema' will by itself effect a cure, but the permanence of this is assured by the continued use of a suitable soap, and the cleansing and purifying action of 'Antexema Granules' on the blood." A booklet on "Skin Troubles" is also enclosed, containing some "before" and "after" illustrations that would hardly be expected to convince any one; directions are given in this for the course to be pursued in a variety of disorders, including such "skin troubles" as in-growing toenails, lupus, piles, ulcers, etc. Incidentally, twelve other preparations, in addition to the three named above, made by the same firm, are recommended.

On the outer package it is stated that "'Antexema' is the most efficacious remedy known for the relief of all inflamed conditions of the skin. Its beneficial effects are not confined to the curing of Eczema, Psoriasis, Nettle-rash, Erysipelas, Boils, and other serious troubles, but it is also by far the best remedy for Cuts, Burns, Sores, Bruises, Chilblains, Blisters, Insect bites, and every variety of trouble to which the skin is liable."

Only "Antexema" itself was analysed. It consists of an emulsion, with more less of watery layer below it.

The directions for use are:

Shake the bottle well, and, if necessary, stir up the contents until a milky substance is formed. Then gently rub "Antexema" into the parts affected until dry, and if the case is a severe one it should be applied as often as possible. "Antexema" is odourless, non-poisonous, and invisible when rubbed on the skin, and it instantly allays irritation. Do not wash any weeping or inflamed surface until healed, and, if possible, avoid dressings and coverings.

Analysis showed it to consist of:

Soft paraffin	35.4 per cent.
Boric acid	1.5 ,,
Gummy matter	12.4 ,,
Water	50.7 ,,

The gum resembled in some respects a mixture of acacia and tragacanth, but could not be exactly identified.

Estimated cost of ingredients of 1½ oz., two-thirds of a penny.

PACIDERMA PREPARATIONS.

Supplied by Paciderma, 3, Swallow Street, Piccadilly, London, W.

These were advertised as follows (in the *Christian Herald*):

"New Cure for Eczema.—A victim who was cured after 5 years' intense suffering will gladly send to all readers of the *Christian Herald* full particulars (free) of an inexpensive guaranteed cure for Eczema, Bad Legs, Sore Hands, and all Skin Eruptions, on receipt of stamped addressed envelope.—Write to A. Paciderma, 3, Swallow Street, Piccadilly, London, W."

An application to the address given brought a letter typed on a multiple copy machine, from "Paciderma. Manageress, Mrs. E. Avice," signed "E. Avice," from which the following extracts are taken:

"Paciderma" . . . . consists of three preparations (in one package), one for internal use and two for external use. Both internal and external Remedies are absolutely necessary to eradicate the disease. . . . The price is most moderate, namely 6s. and postage 3d. for the package containing the three preparations for thirty days' full treatment. In conclusion I would point out to you that these Remedies have met with a world-wide success, even in the worst forms of these terrible complaints, and are in fact so wonderfully successful that they are

GUARANTEED EFFICACIOUS IN EVERY CASE

no matter what has previously been tried and failed. . . . Be sure to fill up the Order Form which I am enclosing you as carefully and accurately as you can so that I may be able to give your case my fullest attention and consideration.

This letter was accompanied by a booklet entitled "Eczema and how to Cure it," and by an order form with spaces for name, address, date, and the following further particulars: "Age; sex; occupation; how long been suffering? where the complaint is located; are the spots or wounds dry? is there any sticky discharge? are your bowels constipated? do you suffer from piles? do you suffer from indigestion? do you suffer from rheumatism or gout? Do you suffer from any other complaint? This form was filled up with the details of an imaginary case, and sent with a postal order for the requisite amount. A case of "Paciderma" preparations was at once received, and needless to say there was no evidence of their having been modified in any way in consequence of the "fullest attention and consideration" given to the particulars supplied. The preparations were accompanied by a further letter, typed like the first, from which the following is extracted:

One case of the remedies is generally sufficient to effect a cure, and I trust that it may be so in your case, but if the disease has been in the system for years it has got a firm hold, and naturally takes longer to eradicate; therefore, if this case of remedies should not cure you, you must lose no time in writing for a further supply so that no time may be lost between. You must avoid anything likely to irritate the skin, and be especially careful as to the soap you use, as many soaps are most injurious, being quite sufficient in themselves to cause an eruption. I should recommend you to use "Paciderma Skin Soap" to wash yourself with, as it is absolutely pure, and will keep your skin smooth and healthy.

After an interval a further letter was received, which ran as follows:

Dear Sir,—I have been expecting to hear from you as to how the treatment I sent you some time ago has affected you. I sincerely trust that you have derived benefit from it. As I think I told you before, some cases are naturally much more difficult to cure than others, and take longer time, as in most cases the disease has been for years getting a firm hold on the system, and cannot, therefore, be eradicated in a few days.

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL: 1904, vol. ii, p. 1585; 1908, vol. ii, pp. 27, 1645; 1907, vol. i, p. 213; vol. ii, pp. 24, 160, 209, 393, 530, 1536; 1908, vol i, p. 833.

I assure you I should be the last to induce you to spend money, unless I honestly thought and believed that the treatment would benefit you. I have been a fellow sufferer myself, and know what it did for me by persevering after everything else had failed. If, therefore, you are not yet cured, I think it is only my duty to strongly urge you to persevere with the treatment, and if you hesitate to do so owing to the money being a consideration to you, I am willing to meet you as far as I possibly can, and will send you the complete 6s. 3d. case for 4s. 6d. post free, which is just cost price, or I will send you the Blood Wafers for 2s. 2d. per box post free instead of 2s. 10d., or the Crème for 2s. 2d. post free instead of 2s. 10d., or the Powder for 7d. instead of 9d. post free.

I am offering you this very great reduction in price as I am most anxious that you should be cured, as I am quite certain that you will be if you persevere steadily.

Do not be afraid of troubling me by writing me fully as to how the treatment has affected you, as I can assure you that I am quite as anxious to cure you as you yourself are to be cured, and I take a special interest in your case.

Trusting soon to hear from you.

Yours truly,

E. Avice.

"Mrs. Avice," however, is not the only lady in the nostrum business who takes "a special interest" in the case of each of her customers, and is willing to supply them at a reduction when the full price is not forthcoming. The phraseology of the above letter presents, *mutatis mutandis*, a most striking resemblance to the letter from "Mrs. Hilda Manners" in regard to "Sanol Cones," printed in the British Medical Journal of December 7th, 1907, p. 1657. The resemblance seems, indeed, to be too close to be accounted for as a coincidence, and the question naturally arises, Are Mrs. E. Avice and Mrs. Hilda Manners one and the same person?

The booklet already referred to contains a sworn statement by Mrs. Avice detailing her own sufferings and cure, the latter being due to "a dear old friend, an M.D." A further paragraph, not in the sworn statement, proceeds:

It remained for my old friend, the Doctor, to whose discoveries I owe my cure, to find the only certain remedy for this dread complaint. For years he studied and searched to find a cure for that curse of hot climates, the "prickly heat," a very distressing form of Eczema which is very prevalent in warm countries, and which few Europeans escape. At last his perseverance was rewarded, and the long sought for Remedy found and used with the greatest success both abroad and after his return to England. Since his death I have still further improved on and perfected his ideas, and have evolved my now well-known "Paciderma," which has met with the most startling success in every case in which it has been tried. . . .

Paciderma cures all skin troubles without exception, all pimples, blotches, sores and eruptions of every kind, in sufferers of every age, from the infant at the breast to the old and infirm man or woman who has reached or passed the allotted span of three score years and ten.

It is absolutely the only cure for Eczema.

Paciderma Crème.—Price 2s. 9d. per box, holding nearly 4 oz.

Directions for use. Apply the Crème to the parts affected with the finger, or spread on lint or soft linen, and bandage.

The Crème consisted of a fairly stiff ointment, which on analysis gave results corresponding to the following formula:

Zinc oxide	25·6 per cent.
Calcium carbonate	2·7 ,, ,,
Calcium sulphate	15·8 ,, ,,
Boric acid	15·9 ,, ,,
Basis	58·7 ,, ,,

The basis consisted of soft paraffin, apparently with a small proportion of a saponifiable oil, such as olive oil.

Estimated cost of ingredients, for 4 oz, three halfpence.

Paciderma Powder.—Price, ninepence per box, containing about 3 oz.

Allays all itching and irritation, and should be applied freely and frequently to the affected parts, in fact whenever they itch or irritate.

Analysis showed the composition to be:

Maize starch	54 per cent.
Boric acid	14 ,, ,,
Mineral matter	19 ,, ,,
Moisture	13 ,, ,,

The mineral matter contained alumina, magnesia, and silica, corresponding to a mixture of talc and kaolin; this composition also agrees with all its other properties.

Estimated cost of ingredients, for 3 oz., three farthings.

Paciderma Blood Wafers.—Price, 2s. 9d. per box of thirty. "Directions. One to be taken every night at bedtime." The "wafers" consisted of cachets, each containing about 8½ grains of a powder, the composition of which was indicated by analysis to be:

Sodium bicarbonate	59 per cent.
Precipated sulphur	37 ,, ,,
Powdered ginger	3 ,, ,,
Aloin	1 ,, ,,

The ginger and aloin could only be estimated approximately.

Estimated cost of ingredients for thirty wafers, one fifth of a penny.

Cuticura Remedies.

Prepared by the Potter Drug and Chemical Corporation, Boston, U.S.A.

These are among the most widely-advertised of proprietary medicines, an advertisement of half a column or so appearing in most of the popular daily newspapers. The "system" consists of Cuticura (Ointment), Cuticura Soap, and Cuticura Resolvent (liquid or pills); the ointment and the resolvent liquid were taken for analysis.

A booklet is enclosed in each package, containing, with other matter, directions for the use of the remedies in fourteen languages. The following extracts are taken from this booklet:

In the treatment of torturing, disfiguring, itching, scaly, crusted, pimply, blotchy, and scrofulous humors of the skin, scalp, and blood, with loss of hair, the Cuticura Remedies have been wonderfully successful. Even the most obstinate of constitutional humors, such as bad blood, scrofula, inherited and contagious humors, with loss of hair, glandular swellings, ulcerous patches in the throat and mouth, sore eyes, copper-colored blotches, as well as boils, carbuncles, sties, ulcers, scrofulous rheumatism, and most humors arising from an impure or impoverished condition of the blood, yield to the Cuticura System of Treatment in the majority of cases, when the usual remedies fail. . . . Parents are assured that these Remedies are composed of the purest and sweetest ingredients known to modern pharmacy, and may be used on the youngest infants with complete satisfaction.

Cuticura Ointment.—Price 2s. 6d. per box, containing 1¾ oz.

Directions. . . . Cuticura Ointment may be applied to any part of the surface of the body by direct application with the finger, the palm of the hand, or spread on cotton, linen, or absorbent cotton, and covered with a light bandage, or by any means by which a remedy of this consistence would be used.

. . . In rare instances of individual tendency to acute eczema, acne, acne rosacea, erysipelas, and other highly inflammatory conditions, especially those affecting the face, it may act as an irritant, and hence those using it must observe what has been said in the foregoing directions in order that they may exercise judgment as to whether to continue it or not, should any unfavourable symptom present itself.

Examination of the ointment showed the absence of all metallic compounds, also of alkaloids or other active principles, and of saponifiable fat. It consisted of a mixture of hard and soft paraffins, slightly perfumed with rose, and coloured green. The chief green colouring matter present appeared to be an aniline dye, and a mixture of paraffins coloured with a trace of "malachite green" and a little chlorophyll agreed very closely with it in its properties. No other ingredient could be discovered.

Estimated cost of ingredients, of 1¾ oz., ¾d.

Cuticura Resolvent.—Price 2s. 6d. per bottle, containing 6½ fl. oz.

In the pamphlet quoted above it is stated:

Cuticura Resolvent is alterative, antiseptic, tonic, digestive, and aperient, and is confidently believed to be superior to other preparations for purifying the system of humors of the skin, scalp, and blood, with loss of hair. Cuticura Resolvent is prepared in accordance with the most advanced pharmaceutical and therapeutical knowledge from medicinal agents of ascertained purity and potency, and while in the highest degree effective, commends itself to delicate, sensitive, and refined people, especially women, because of its pure, sweet, and gentle action . . . It is believed to be one of the most successful of blood-purifying and strengthening medicines for children in all conditions which point to inherited impurities and weaknesses, and may be taken on the first appearance of glandular swellings, ulcers, sores, especially on the neck, pallor, weakness, and delicate, frail conditions, with every hope of success.

Directions.—Adult dose, two teaspoonfuls three times a day; for children over ten years of age and delicate females, one teaspoonful; for children from five to ten years of age,

one half of a teaspoonful; for children two to five years of age, 15 drops; from one to two years, 10 drops. To be taken three times a day, immediately after each meal.

Analysis showed the composition of the mixture to be:

Potassium iodide	17 grains
Sugar and glucose	486 ,,
Extractive...	8 ,,
Alcohol	10 fluid drachms
Water to	6½ fluid ounces

No alkaloidal substance was present; the extractive gave a slight indication of the presence of a preparation of rhubarb; all other drugs with well-marked characters were absent.

ZAM-BUK.

Sole Proprietors, the Zam-Buk Company, 15, Greek Street, Leeds. Price 1s. 1½d. per box, containing three-fifths of an ounce.

This preparation consists of an ointment; a Zam-Buk soap is also recommended for use as part of the treatment. In a circular enclosed in the package it is stated:

Certain medicinal plants were taken, and from them were extracted gums and juices possessing considerable healing and curative power. Costly experiments at last secured the right blending of these juices; and to the final product, a preparation virtually capable of growing new and healthy skin, the name of Zam-Buk was given. . . .

Zam-Buk practically contains those substances which Nature has intended for the use of man ever since she bequeathed to him the instinct to rub a place that hurts. . . .

Zam-Buk has proved itself to be unequalled for Cuts, Bruises, Burns, Scalds, Abrasions, Festering Sores, Poisoned Wounds, Lacerated Wounds, Old Wounds, Sprains, Strains, Swellings, Dog Bites, Cat Scratches, Obstinate Sores, Chafings, Itch (Scabies), Stings from Hornets, Bees, Wasps, Centipedes, and Spiders; Running Sores, Ulcers, Ringworm, Eczema (acute or chronic form), Psoriasis (tetter), Pimples, Acne, Abscesses, Boils, Carbuncles, Scrofula, Cramp, Barber's Itch, Heat Rashes, Sunburn, Freckles, Blotches, Blackheads, Scalp Irritation, Scurf or Dandruff, and other Scalp Sores; Colds, Chills, Raw Chapped Hands, Sore Lips, Raw Chin after Shaving; Inflamed Patches, Sore Nipples, Glandular Swellings, Swollen Knees, Bad Legs, Blind and Bleeding Piles, Cold-Sores, Sore Backs, Diseased or Weak Ankles, Sore and Aching Feet, Perspiring Feet, Chilblains, Soft Corns, Salt-water Sores. Rubbed well into the part affected, Zam-Buk gives great relief from Rheumatism, Lumbago, Neuralgia, Sciatica, Toothache, and allays all kinds of Inflammation, Itching, and Irritation.

The directions on the box are:

For Bruises, Cuts, Sores, Sprains, Open Wounds, Sore Breasts, Inflamed Patches, Ulcers, Eczema and Piles; first cleanse the parts with pure water and then apply Zam-Buk direct or on a piece of clean lint. For Burns, Scalds, etc., rub Zam-Buk lightly over the injured part and cover same as soon as possible in order to exclude the air. To use Zam-Buk as an Embrocation rub it in well, both into the muscles and tendons, when the healing, stimulating and strengthening ingredients in Zam-Buk will be absorbed into the system.

Analysis showed its composition to be—

Oil of eucalyptus ...	14 per cent. (approximately).
Pale resin (colophony) ...	20 ,, ,,
Soft paraffin	55 ,, ,,
Hard paraffin	11 ,, ,,
Green colouring matter	a trace.

An ointment prepared in accordance with this formula and tinted with chlorophyll agreed in all respects with the original.

Estimated cost of ingredients for three-fifths of an ounce, ¼d.

ZIP OINTMENT.

Supplied by the Zip Co., 177, Haydons Road, Wimbledon. Price 1s. 1½d. per box, containing 0·85 oz.

On a circular enclosed with the box this ointment is described as a "cure for Eczema, Ringworm, Psoriasis." It is also stated that

Zip is the product of many years' experience and trials, and will be found the best and most reliable remedy for the above troublesome complaints.

The directions given on the box are: "Wash well the parts with the Zip Skin Soap, and apply Zip night and morning."

Analysis showed the composition of the ointment to be:

Calomel	2.1 parts
Lead acetate	1.0 part
Lead oleate	2.5 parts
Oil (probably olive)	2 ,,
Glycerine	5 ,,
Creasote	A trace
Oil of lemon grass	Sufficient to perfume
Paraffin ointment	To 100 parts

Estimated cost of ingredients for 0·85 oz., ½d.

LITERARY NOTES.

A BOOK by Dr. George M. Gould, on Lafcadio Hearn, best known in this country as a writer on Japan, will shortly be published by George W. Jacobs and Co. Dr. Gould was intimately acquainted with that strange wanderer on the face of the earth, and it is said that the book brings out the complex personality which was the outcome of the mixed elements in his composition, national, social and religious.

Reference was made in the JOURNAL some time ago to the proposed publication in Germany of a *Corpus Medicorum Antiquorum*. According to the *Muenchener medizinische Wochenschrift*, the issue of a report, by Herman Diels, on the present position of the undertaking may shortly be expected. The International Association of Universities, at a congress held at Vienna on June 30th, 1907, sanctioned the publication of the work by the University of Berlin, on condition that it should appear under the auspices of the Association. An autonomous Committee was formed, consisting of Professors Gompertz of Vienna, Diels of Berlin, Leo of Goettingen, Heiberg of Copenhagen, Ilberg of Leipzig, Bywater of Oxford, and Krumbacher of Munich. The Committee selected as editor J. Mewaldt. The writings of the old Latin physicians are not to be included in the *Corpus*, as the Saxon Society of Sciences, which speaks in the name of the Puschmann Fund, the object of which is to support research in the domain of the history of medicine, has announced that it intends to publish a critical edition of the Roman physicians; already F. Marx has been entrusted with the edition of Celsus. Of the Greek writers, the publication of the collection of which has been undertaken by B. G. Teubner of Leipzig, the first to appear will be Galen. The Commentaries on Hippocrates are also in preparation. The first fasciculus of the *Corpus* is already in print and will shortly be published. It comprises the *Excerpa Vaticana* of Philumenos, edited by Max Wellmann, who has the highest reputation for his knowledge of ancient medicine. Besides the *Corpus Medicorum Graecorum*, an edition of all the medical and scientific writings of the ancient Greek physicians is in preparation by Greek scholars. A committee for this purpose has been formed, consisting of K. Lamera, M.D., Lecturer in the University of Athens, J. Rossi and Charitonides, Doctors of Philosophy, under the direction of Dr. Koutos, Professor of Philology in the University. It will appear yearly in two parts, comprising 300 pages. The price of each part will be 2s. Subscriptions will be received by Dr. Lamera, rue Victor Hugo, Athens.

Sir Patrick Manson's book on the diseases of hot countries has been translated into French by Dr. Maurice Guibaud, of the French navy. A second edition of the translation, made from the fourth edition of the original, has just appeared.

We have received a reprint of a memoir of Patrick Blair, an old surgeon-apothecary of Dundee, which was read to the Dundee Symposium in February, 1907. Robert Chambers in his *Domestic Annals of Scotland* names 1680 as the year when the first elephant was seen in Scotland. The beast (a female) had been exhibited over a large part of Europe, ultimately being brought to Scotland. It was shown in Edinburgh and then in the North, and on the way back along the sea-coast the poor animal, which had been sore driven, fell down exhausted within a mile of Dundee. All its keepers' efforts to get her on her feet again were fruitless. Then

They digg'd a deep Ditch, to whose Side she might lean till she were sufficiently rested; but that prov'd her Ruin; for shortly afterwards there fell great Rains, which filled the Ditch with Water. So that after lying in the puddle a whole Day, she died next Morning, being Saturday, April 27th, 1706.

The carcass was presented to Captain George Yeaman, then Bailie, afterwards Provost and Member of Parliament.

He took Blair with him to flay the body, and the surgeon-apothecary was glad of the opportunity there afforded him of opening the beast. He was just in time, for the "unruly butchers" were making sad havoc and, he says:

Whether I would or not, they did so slash the *Sternum* and mangle several of the *Cartilages* as to render them useless, cutting and tearing wheresoever their clumsy hands came.

Left to himself, he had not much above an hour to dissect the subject when light failed, and all the time he had to work as best he could "amidst a Throng and Rabble," and "in mighty hot weather." Night fell and Sunday intervened, wherein not even an anatomist might work, at least in the open; and on Monday the "mighty hot weather" had made itself apparent on the cadaver, and some of the parts had been carried away by the country people. However, thanks to the pains and care of Provost Yeaman, these parts were afterwards recovered, and ultimately Dr. Blair managed to elaborate from the material he secured an exhaustive paper which, entitled "Osteographia Elephantina," with four large copper-plates, filled over a hundred pages of the *Philosophical Transactions of the Royal Society for 1710*. The article was published in a separate form in 1715, largely owing to the fact that papers on the minute anatomy of the hair and skin of the same elephant were being read to the Society by Leeuwenhoek, the famous microscopist. These sections had been secured by him when the animal was being exhibited in Holland. Dr. Blair, then M.D. and F.R.S., dedicates the book to Dr. John Arbuthnot. He says of his plates that they

might have been finer done in London; but since I had the Original by me, whereby I was able from time to time to correct in the Engraving what Errors happened in drawing the figures, I rather chose to have them done in Dundee.

Notwithstanding the unfavourable conditions in which Blair had to work, we are told by Dr. Stevenson that his observations are spoken of by a scientific writer in the early years of the nineteenth century as "wonderfully accurate"; and Professor Boas of Copenhagen, who has a work on the elephant in hand, expressed the opinion that Blair described some points in the anatomy of the animal more accurately than any one who has written since. Blair was in great repute as a physician, an anatomist, and a botanist, and a naturalist. Little is known of his life, but he relates surgical cases with which he had to do in Flanders in 1695 and 1697, the results of fighting, duelling, and accidents; and in his botanical reminiscences he speaks of this or that plant having been seen by him growing profusely near Ghent, in Flanders, or near Vilvorde, in Brabant, and at other places. His intimate acquaintance with the work of Continental botanists would also seem to indicate that his wander years abroad had been somewhat prolonged. He seems to have been resident in Dundee as early as 1701, for the *Edinburgh Gazette* of September 29th of that year contains an advertisement by him in which he proposes to publish a

Manuductio ad Anatomiam, or a plain and easy method of dissecting, preparing, or preserving all the parts of the body of man, either for public demonstration or the satisfaction of private curiosity.

The work was said to be ready for the press, and the author only awaited suitable encouragement to present it to the public. Apparently the needed encouragement was not forthcoming. Blair took a leading part in founding a Natural History Society in Dundee; this society established a physic garden, of which he was overseer. Blair contributed a number of papers to the Royal Society, of which he was elected a Fellow in 1712. He was out in the '15, and the name of "Patrick Blair, Chirurgeon," occurs in the list of officers of Lord Nairn's battalion who surrendered at Preston. Blair was imprisoned in Newgate, and tried in March, 1716. He pleaded guilty, and was sentenced to death, but ultimately pardoned. On his release from prison he settled in London, where he found the struggle for existence so hard that in 1720 he retired to Boston in Lincolnshire, where he died in 1728. In his later years he wrote several treatises on botanical subjects, and his last work was entitled *Pharmaco-Botanologia, an Alphabetical and Classical Dissertation on all the British Indigenous and Garden Plants of the New London Dispensatory*. It was left unfinished at his death.

MEDICAL NEWS.

Dr. R. G. Nesbitt (St. Just), Dr. H. Davis, sen. (Callington), and Dr. J. C. Mackay (St. Columb) have been placed on the Commission of the Peace for the county of Cornwall.

The Ingleby Lectures in the University of Birmingham will be given this year by Mr. Christopher Martin, Surgeon to the Birmingham and Midland Hospital for Women on May 7th and 14th; the subject will be myoma of the uterus.

The authorities of the Factory Girls' Country Holiday Fund, now entering its twenty-first year, are asking for early subscriptions towards the summer work. In 1888, 39 girls were helped to take short holidays, and last year 4,211. The honorary secretary is Miss Paget, 28, Campden Hill Square, W.

The King has been pleased to give Mr. Arthur Ferguson MacCallan, M.B.Camb., F.R.C.S., Chief Ophthalmic Inspector in the Public Health Department of the Egyptian Government, His Majesty's Royal licence and authority to accept and wear the Insignia of the Third Class of the Imperial Ottoman Order of the Medjidieh conferred upon him by H.I.M. the Sultan of Turkey, in recognition of valuable services rendered by him.

A special course of practical training in food and meat inspection, for persons preparing for the examination for inspectors of meat and other foods, conducted by the Royal Sanitary Institute, will be given at the Institute, commencing on April 27th; the fee for the course is 5 guineas. Full particulars can be obtained on application to the Secretary of the Institute, Parkes Museum, Margaret Street, W.

The fourth International Congress of Medical Electrology and Radiology will be held at Amsterdam in September next (1st to 5th). The programme includes discussions on questions of electrophysiology and electropathology, electrodiagnosis, electrotherapy, and electrotechnics, and the diagnosis and treatment by means of the *x* rays. The President is Dr. J. K. A. Wertheim Salomonson; the Secretaries and Treasurers, Drs. J. G. Gohl and F. S. Meijers. The office to which all communications should be addressed is at Vondelstraat, 53, Amsterdam.

Judging from a pamphlet which has reached our hands, Maritzburg, in Natal, is making a strong bid for a premier position in South Africa as a health and holiday resort and educational centre. It lies on a plateau over 2,200 ft. above sea level, and claims to possess the finest winter climate in South Africa; in its neighbourhood are opportunities for sport and some beautiful river scenery. Proper attention seems to be paid likewise to the sanitation of the town. The pamphlet is issued gratis by the Association for Popularizing Maritzburg, 19, Timber Street, Maritzburg, Natal.

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 8th at 11, Chandos Street, when Dr. Blandford, President, was in the chair; sixteen directors were present. Five new members were elected and the death of one reported. Since the last court two widows, annuitants of the charity, had died. One had been on the funds since 1873, and had received in grants £1,500; her husband had paid in subscriptions £19 19s. The other had been in receipt of grants since 1905, and had received £205; her husband had paid in subscriptions £52 10s. A letter of condolence was sent to Lady Agnes Cooper on the death of her husband, Sir Alfred Cooper, who had been director of the Society. The report and audited accounts of the Society for 1907, to be submitted at the annual general meeting, were approved. The secretary reported that he had since the last court received eight letters from widows of medical men asking for relief, but this had in each instance to be refused as their husbands had not been members of the Society; relief is only granted to the widows or orphans of deceased members. Any registered medical practitioner who at the time of his election is residing within a twenty-mile radius of Charing Cross is eligible for membership. The subscription is £2 2s. a year, paid either in one sum, or in two half-yearly ones of £1 1s. each. Full particulars may be obtained from the secretary. The invested funds of the Society amount to over £99,000. The annual general meeting will be on May 14th at 5 p.m. at the offices of the Society.

British Medical Journal.

SATURDAY, APRIL 18TH, 1908.

THE PARALYSIS OF THE UNIVERSITY OF LONDON.

One of the first matters to claim the attention of the new President of the Board of Education must be the present position of the University of London, and the need for a comprehensive inquiry into the defects disclosed in its working since the new statutes were promulgated eight years ago. The Chancellor the other day, when he visited University College in his official capacity, said that the whole of London at this moment seemed to be teeming with university life in one form or another. The university was bound to continue the policy of affiliating the schools springing up almost every year, and the question had arisen whether its present machinery was adequate to the great strain thus put upon it, or whether it had not already become superannuated. He indicated very clearly that in his own view the present constitution of the university was not sufficiently receptive and elastic to enable it to undertake all the new duties which it was constantly being called upon to perform.

We believe that this opinion reflects that of the majority of those who take a broad view of the needs and possibilities of higher education in that province containing some six million people which is called London. It will be remembered that at the time when a departmental committee was considering the establishment of the Imperial College of Technology, the so-called "Charlottenburg scheme," it was decided that it was impossible to entrust its management to the senate of the University of London on account of the absence from that body of men capable of dealing efficiently with technical education. Indeed, if the list of men constituting the governing body of the new technological college be compared with that of those forming the senate of the university, it would be obviously absurd to place the former institution even nominally under the governance of the latter. In the report of the committee hope was held out that an alteration in the constitution of the senate might render it possible to bring the technical college within the university, and the suggestion was made that a new Royal Commission might be appointed in May of this year in order to consider and report on the question of the constitution of the senate. In a speech delivered recently by the member for the university the appointment of this commission was regarded as assured, but we trust that Mr. Runciman will perceive when he comes to look into the present position of the university that a Royal Commission is required to make an inquiry far wider than the mere determination of the relations of the technical instruction of engineers to the university. Experience in all faculties has amply shown that the constitution of the university laid down in 1900 was insufficient, and that it has had the effect of retarding rather than of advancing the cause of higher education in London.

Especially is this true as regards medicine. In no city in the world do we find such unrivalled material for clinical instruction and research. Mainly by the private enterprise of leaders of past generations, medical schools were established in London and have won reputations throughout the world. Formerly the maintenance of such schools imposed upon the teachers the expenditure of much time and energy, but the outlay in money was comparatively small, and the fees of students sufficed to pay salaries, though these were generally very modest. But with the extraordinary advance of medicine and the increasing recognition of the paramount importance of objective teaching in the sciences on which it rests, it had for some years before 1900 become clear that the continuation of the system which had grown up in this haphazard way was, for financial reasons alone, no longer possible. The reconstitution of the university was therefore hailed as affording a prospect of organizing the scientific branches of medicine in accordance with modern needs, and of co-ordinating the clinical instruction with the view of preventing waste of time, energy, and material, from which teachers and taught alike suffered. These hopes have not been fulfilled. The university has done nothing for pathology in London except to demand a somewhat higher standard in this subject for its examinations; a scheme for the unification of the teaching of the preliminary and intermediate sciences was put forward only to be withdrawn after some years; and the university is in the astonishing position of having to return the only money hitherto collected by it for academic purposes, and even of having to take a friendly action into court to obtain authorization to pay the greater part of the sum so collected to the representatives of deceased donors.

For this condition of vacillation and powerlessness several causes can be assigned, but one of the most important and most easily remediable is to be found in the unfitness of the senate by reason of its constitution to deal with the problems involved in the work of a university; indeed, if we consider how the senate is constituted, we see that it is impossible that any such body should frame a consistent policy or display any energy in carrying it out. The senate contains sixteen members elected by the faculties representing the various schools and colleges in London, and therefore, in many cases, interests which must often, to short-sighted persons who have not yet perceived the essential factors of the problem of university education in London, appear to conflict with those of the university as a whole. There are sixteen members elected by convocation, a body which nowadays very seldom gets a quorum; nevertheless its policy is interpreted to be nominally that of preserving the subservience of teaching to examinations; practically it amounts to the negation of any action. Further, these two bodies of representatives which form the majority of the senate are antagonistic, and to hold the balance we have half a dozen lawyers elected by bodies whose only ambition seems to be to have nothing to do with the university; representatives of the Colleges of Physicians and Surgeons; and five Crown members who are for the most part really men of experience and affairs. Lastly, to complete this paralysing confusion, the senate has no power to delegate any of its functions to its chief committees. Ineffective therefore in constitution, it is overwhelmed by a mass of administrative detail with which no body could possibly cope. Meanwhile those medical schools to which the three members of the senate elected as the medical faculty do not happen to belong have no official knowledge of what is going on in the university, and, therefore, are unable to co-operate in its counsels or policy;

yet they are nominally schools of the university, and have, in truth, given to it a body of graduates on whose reputation that of the university is in reality founded.

We trust, therefore, that His Majesty's Government, in appointing the Royal Commission, will not limit its functions to those suggested by the report of the departmental committee, but by a wide reference will instruct it to inquire into the constitution and the regulations of the present senate, which experience proves render it incapable of co-ordinating the work of existing institutions for higher education in London or of laying down and carrying through any settled policy.

CONJUGAL DIABETES.

The puzzling paradox of conjugal diabetes was not long ago brought up for discussion at the Berlin Medical Society by one of the most eminent as well as one of the sanest of medical thinkers, Professor Senator, who has found the subject at least worthy of investigation, although his speech leaves the reader in doubt how far he is inclined to believe in the possibility of the transmission of the disease from one married partner to the other.

It will be remembered that the possibility of this occurrence has been supported by Debove, in France, who, out of fifty cases of diabetes, found five in which husband and wife were both affected, and that similar cases have been recorded by Dreyfous, Gaucher, Labbé, Rendu, and Schmitz. The last had a very large practice at Neuenahr in which he had seen an immense number of cases of diabetes, and was certainly inclined to believe in the possibility of transmission. Senator in the recent discussion said that he had collected the histories of 516 married pairs, in which either husband or wife was diabetic, and in 18 cases the second partner had become diabetic, giving a proportion of 3.5 per cent. cases of conjugal diabetes. Although we have no data by which we can fix accurately the period of incubation of diabetes, supposing it to be an infective disease, yet as we know that traumatic diabetes develops in at least six months after the injury, and usually in less time, he accepts that period, and excludes from his list all those marriages which had lasted for only six months or less; in this way the percentage of cases rose to 3.7, while by eliminating other 74 couples whose marriages dated from less than a year the percentage rose to 4.1. He admits that it would be right to exclude all cases with distinct hereditary predisposition, but taking the figures as they are the proportion is too feeble to support the theory were it not that there are other facts in its favour. He quotes the case reported by Teissier at the first French Congress of Medicine, where a washerwoman, aged 62, became glycosuric after having washed for six months the linen of a diabetic, and her little girl also became affected with the disease. There was, too, the case of a gouty patient whose mother had been diabetic for twenty years, and who developed the disease in his turn; six months later the cook, who had washed the handkerchiefs of her master, became glycosuric; and finally the disease showed itself in a woman of 50 employed by the family for ten years to mend clothes. A coachman became glycosuric shortly after his master, and a restaurant-keeper who took his meals at the same table with a diabetic sister-in-law became diabetic at the end of six years. Kuelz has reported a case of conjugal diabetes in which four persons occupying the same house became diabetic, and Naunyn observed 5 cases of diabetes under the same roof. Professor Senator quoted also from his own practice the case of a doctor, aged 42, who became diabetic after amputating the thigh of a diabetic patient, and this practitioner discovered that there were 4 cases of diabetes in his immediate neighbourhood, all in the same street and all taking their meals at the same restaurant, which was kept by a glycosuric; he also referred to the experiments on animals which had shown the possibility of transmitting the disease by feeding with gastric or intestinal contents derived from diabetics, or with cultures of microbes isolated from such material, or by injecting diabetic urine, all tending to support the possibility of diabetes being contagious, or perhaps it is better to say of there being some morbid entity which is accompanied by intolerance of glucose. He concluded by admitting that the question was far from being settled, but he asked family practitioners to help in its solution by reporting their observations on cases of conjugal diabetes.

In the course of the discussion Dr. Neumann of Potsdam said he had endeavoured to do that which Professor Senator required, and during the last five years with the aid of his colleagues and the chemists of the town, he had collected 180 cases of diabetes from a population of 59,881; among these he found only three instances in which both married partners were affected, and two of these should be excluded, as in one case the wife was pentosuric only and in the other the husband became diabetic three years after the death of his wife. In the single remaining case the wife was diabetic and suffered from Graves's disease, and the husband developed the disease after an accident to her. Dr. Albu said he had seen no case to justify the view that diabetes was contagious, but he knew of two instances illustrating the fallacies surrounding such apparent cases; in one the wife became diabetic after her husband, and at the time Dr. Albu knew of no hereditary tendency on her side, but some years after he treated her nephew for diabetes and obtained unquestionable evidence of the family predisposition. In the other case the glycosuria developed by the second of the married pair turned out to depend upon cancer of the pancreas. Finally, Professor C. A. Ewald said he had met with no case of conjugal diabetes, and, considering that the statistics presented ranged from 1 to 20 per cent., he thought the entire relation was accidental.

Statistics such as have been quoted in this article seem to be valueless unless the influence of heredity has been excluded. In Germany Jews are numerous, and amongst them diabetes is so common that few families escape it altogether, and, as they only marry with their own people, among married Jews suffering from diabetes there should be a distinct proportion of cases in which both partners show the disease. On the other hand, races not predisposed to diabetes, among whom the annual mortality from it does not exceed 6 or 7 per 100,000 of population, the probability of both members of a married pair developing the disease becomes infinitely small, and it is in accordance with this view that so-called conjugal diabetes is very rarely met with in this country.

THE CLINICAL SIGNIFICANCE OF THE OPSONIC INDEX.

In an article published in the *Berliner klinische Wochenschrift* (March 30th, 1908) Dr. Jürgens describes and criticizes Wright's method of determining the opsonic index. Phagocytosis, he urges, is not entirely dependent upon the action of opsonin-containing serum or

bacteria, but may also take place when opsonin is completely absent. This latter action is termed by Wright "spontaneous phagocytosis"; it is relatively slow, not of high intensity, and can, according to Wright, be abolished by using as the liquid medium a saline solution of 1·5 per cent. But in the actual work of determining the opsonic index it is impossible, according to Dr. Jürgens, to exclude the influence of spontaneous phagocytosis. "If, for example, we find that in "one investigation 100 leucocytes contain 200 bacteria, "in another 220 bacteria, and in the control 210, the "opsonic index would be put down as 0.95 in "the first case and 1.05 in the second. We attribute "here the entire phagocytosis to the action of "opsonin, whereas, as a matter of fact, the 200 or 220 or "210 bacteria have only partly made their way into the "leucocytes by opsonin action; a portion of them has "entered spontaneously. But this spontaneous phago-"cytosis does not necessarily occur in precisely equal "degrees, and hence there is involved a source of error "which cannot be estimated." Moreover, the bacteria, as well as the leucocytes, give rise to difficulties in the practical work of opsonin determinations. "In the first "place we must take account of the fact that even the "best emulsion of tubercle bacilli or cocci has a ten-"dency to the formation of clumps; but it makes a "difference to our count if (1) the bacteria which come "into contact with the leucocytes are all single, or if "(2) the bacteria also occur in groups." As a typical case in point, Dr. Jürgens reproduces a photomicrograph showing three leucocytes; one of them contains five bacilli, another two, and the third none. The five bacilli lie close together; they were probably close together in the original emulsion, and presumably they all entered the leucocyte in a group. Ought this leucocyte to be excluded from the count? If it is, and if we lay down the rule that every leucocyte containing a group of bacilli must be disregarded as being suspicious, a further difficulty arises. Bacilli, not forming clumps, are often more numerous in some leucocytes than in others. Are these more richly-laden leucocytes to be excluded? If so, at what point and on what grounds are we to draw the line between what ought and what ought not to be included in the count? The same difficulty is, he says, felt still more acutely in dealing with cocci. Dr. Jürgens gives a table showing the details of an actual count of 100 leucocytes. The majority of these cells contained each either 2 or 3 cocci; but one contained 21 and another 29. These two, it may be said, ought obviously to be excluded. But then what should be done with several others, each of which contained 5, 6, 7, 8, 9, 10, or 11 cocci? Here, again, it seems impossible to lay down an objective rule for determining what is and what is not admissible. A further difficulty in the accurate counting of cocci arises from the fact that the cultures used generally contain many organisms which are commencing to divide. These examples are quoted by Dr. Jürgens as illustrating the "sub-"jectivity" of the technique involved in opsonic work. He also criticizes the alleged therapeutic value of vaccine treatment guided by determinations of the opsonic index. "If we take a general review of "Wright's clinical material, the treatment, in many "instances, unquestionably gives us a favourable im-"pression, and in some cases this favourable result is "remarkably striking; but the large majority of his "cases tend to cancel this impression. Precisely where, "according to the character of the opsonic curve, a suc-"cessful result should be anticipated, amelioration "often fails to take place; and in other cases the course "of the disease takes a favourable turn although vaccine "therapy has not affected the opsonic index precisely "as desired. Instances also arise in which, after the "onset of an improvement coincident with the com-"mencement of vaccine therapy, unmistakable changes "for the worse set in later, showing that the original "favourable impression was quite misleading." According to the opsonin theory, vaccine treatment produces favourable results when it causes a rise in the opsonic curve. Dr. Jürgens concedes that when we take a large number of cases many examples can be selected which support this theory, but he does not regard these results as proving a general law. "When, however, we "compare, in each individual case, the curve influenced "by vaccine therapy with the course of the disease, we "see at once that curves are not always produced which "correspond to Wright's theory. Many cases conform "to it, but many others do not."

THERAPEUTIC TENDENCIES.

THE arrangements in force with regard to the management of hospitals and allied public institutions in France differ materially from those on this side of the water and provide for study data not available here. Thus all the requisitions from the hospitals and the infirmaries in Paris, and throughout the department of the Seine, as well as from a number of other charitable institutions, pass through the hands of one official, and he in the person of Professor Grimbert has taken the opportunity afforded him of gauging the therapeutic tendencies of the day. To this end he has analysed the demands for various dispensing requisites made during the past ten years, and shows in the *Tribune Médicale* that they fall into three classes: Drugs of which the consumption (1) remains unchanged; (2) is rapidly falling; and (3) is falling, but falling slowly. The drugs which are holding their own are for the most part those which may be called classic remedies: for instance, opium, cinchona bark, diachylon, tincture of iodine, glycerine, potassium bromide, sodium salicylate, silver nitrate, and calomel. In the second class, drugs the use of which is rapidly decreasing, are included mercury perchloride, carbolic acid, mercury biniodide, iodoform, naphthol, cantharides, and caffeine. In the third, or slowly-falling class, are potassium and sodium iodide, quinine, antipyrin, sodium cacodylate, and calcium glycero-phosphate. On the other hand, the use of a certain number of drugs is increasing year by year, amongst these being formalin, theobromine, methyl salicylate (oil of winter green), acetyl salicylic acid (aspirin), pyramidon, urotropin, protargol, salophene, dermatol, and veronal. Some of these, however, are of such recent introduction that little weight can be attached to the fact that their use is increasing. How far they will hold their place remains to be seen. Professor Grimbert's studies of his requisitions, besides throwing general light on the tendencies of modern therapeutics, contain some indications of the difference between English and French practices. Thus, among the remedies which are holding their own in France are some now little used in England; for instance, antimony, a drug which, as recently pointed out in these columns, has fallen into perhaps greater disfavour than it deserves. The same may be said of leeches, which in France continue to be highly esteemed. The report also mentions a rapidly-increasing use of *eau oxygénée*. Of the identity of this preparation we are not certain, but if, as is probable, it is a term for peroxide of hydrogen, English and French practices may be assumed to be marching side by side so far as this preparation is concerned.

ANAESTHESIA IN PRIVATE PRACTICE.

THE detailed report of a series of anaesthetics administered in private is an opportunity for "orientation" not too frequently offered. Textbooks of anaesthesia reflect, no doubt, the combined hospital and private

experience of the writers, but a review such as that recently published by Dr. Caro[1] from Professor Israel's private practice has its value. Of some 1,400 cases, 850 were anaesthetized with chloroform alone, 45 with chloroform and oxygen, 128 with chloroform and ether, 200 with ether alone (by the drop method), 130 by scopolamine and morphine, and 50 by spinal anaesthesia. It may be said at once that scopolamine, introduced with *éclat* and exploited with enthusiasm, has practically been abandoned. The oxygen combination has also proved disappointing since it does not entirely abolish respiratory emergencies, and is followed by vomiting in 90 per cent. of cases. Ether, by the open method and preceded by a small dose of morphine, comes out best in this particular respect, vomiting occurring in only 20 as against 60 per cent. with chloroform, but the number of cases of pneumonia was proportionately much smaller with the latter drug. The cause of the vomiting is held to be the irritative action of the drug, swallowed with saliva, upon the gastric mucosa, and Dr. Caro points out that patients such as elderly people, women in labour, and the debilitated, who come most quickly under the influence of the drug and consequently escape most rapidly from the stage when voluntary and involuntary deglutition is most active, suffer little if at all from this symptom. If this be correct it is not difficult to explain the high figure of 90 per cent. of vomiting after chloroform-oxygen, the time allowed for induction of anaesthesia being from twenty to thirty minutes, a delay few surgeons would suffer gladly. Lumbar anaesthesia has been employed without any of the serious after-effects experienced elsewhere, and there have been no failures since tropacocaine was used. There was only one death directly attributable to the anaesthetic (chloroform), but three others died on the table, one from the entrance of blood into the bronchi during an operation for gangrene of the lung, and two from cardiac and pulmonary emboli from malignant tumours of the kidney. The patients were drawn almost exclusively from the wealthier and better educated classes, and though there were but few alcoholics amongst them, neurasthenia and severe psychic disturbance were common. Excitement and anxiety do not materially increase the risk from anaesthesia, but, on the other hand, conduce to a more rapid induction. An injunction—too often more honoured in the breach than in the observance—as to the maintenance of strict silence during the commencement of general narcosis and throughout the course of spinal anaesthesia, is, perhaps, not inopportune even in this country. The author, in his concluding recommendations, states boldly that the dangers of anaesthesia are in inverse proportion to the experience and skill of the administrator, and urges that, as a most important part of the operation, the narcosis should be entrusted only to those who have been skilfully taught, or preferably to those exclusively devoted to the work. It is instructive that, while speaking of private practice, Dr. Caro definitely recommends the employment of spinal methods for all operations below the rib margin.

[1] Leo Caro: Narkosenbericht aus Professor Israel's Privatklinik, 1890-1907, *Berl. klin. Woch.*, 1908, February 3rd, S. 243.

NATIVE WEST AFRICAN DRUGS.

The investigation of the substances used as medicines by uncivilized races is in itself not without interest, and possesses an additional attraction in the possibility that among them may be found some having real value and worthy of a place in our own materia medica. In a paper published in the *Quarterly Journal* of the Institute of Commercial Research in the Tropics, of Liverpool University, and now issued as a reprint (Williams and Norgate, Henrietta Street, London, W.C., price 6d.), Mr. P. H. Marsden, F.C.S., gives descriptions and illustrations of some drugs used by the West African natives, collected by the late Dr. J. Everett Dutton. Some of these have been identified by Mr. E. M. Holmes, F.L.S., and others remain known only by their native names. None of those described would appear to be possessed of great physiological activity, being mostly employed for biliousness, stomach complaints, or as purgatives, etc. One, identified as *Scoparia dulcis* (natural order, Scrophulariaceae), appears to be very widely distributed and employed in a variety of ways; thus, in West Africa the root is scraped and the scrapings rubbed over the stomach for stomach-ache; it is also pounded and put into water to make an enema for a child having griping, while when "chewed and rubbed into the "hand" it is said to be an antidote for poison; in Brazil it is used as an aperient and demulcent in haemorrhoids, and in the Straits Settlements in the form of tea as a cure for fevers; it is also said to be used as a remedy in Australia. Such a drug might repay investigation; but experience would indicate that such important discoveries as strophanthus or curare are more likely to be made among preparations used by natives for destroying life than among those used as remedies.

LACE-DRESSING OPERATIVES.

The Medical Officer of Health for Nottingham, in his annual report,[1] states that, as in other large manufacturing towns, the birth-rate is steadily declining. In 1856-60 it was 36.8, but in 1906 only 26.5 per 1,000 living. In 1906 he death-rate was 15.97, the lowest reliable death-rate recorded in Nottingham. The most interesting part of the report is an appendix giving the results of an inquiry Dr. Boobbyer undertook in 1905 to make at the request of the Home Office into the health of persons engaged in lace dressing. The inquiry was apparently not easy, owing to the large numbers of individuals who are not at work continuously and the difficulty of following up the workpeople who have abandoned the occupation. The lace-dressing rooms are heated by steam or hot-water pipes so as to raise the temperature to anything between 75° and 100° F. The temperature is made to vary in accordance with the requirements of the various materials that have to be treated and the temperature of the outside air. It is said that in the silk lace-dressing rooms of Lyons (France) the temperature often rises to 130° and 140° F. In Nottingham the dressing rooms are well ventilated and to each worker is allotted space varying from 2,000 to 6,000 cub. ft. The investigations of Dr. Boobbyer and his assistants show the occupation of a working lace dresser to be of a healthy nature. Several of the employees on undertaking the work for the first time are upset by the high temperature, and many of them abandon it altogether; but it would appear that those who overcome the initial inconveniences become tolerant and are capable of following the occupation to an advanced age, enjoying good health all the time. There is neither any special tendency to phthisis nor is lung disease prevalent among the women—a remarkable circumstance considering the poverty and intemperate habits of many of them. In several of the factories women are to be found still working—and efficiently, too—at the age of 65. The average age in one factory was 58.1 years, and the length of service 43.5 years. There are more than 1,000 women of all ages engaged as lace-dressers in Nottingham. The annual death-rate from phthisis of females employed in the industry for the past ten years has been 0.50 per 1,000, as compared with a rate of 1.4 for the city population as a whole and 0.881 for all

[1] City of Nottingham. Annual Health Report for 1906, together with a Special Report on the Health of Lace-Dressing Operatives (prepared for the Home Office), by Philip Boobbyer, M.D., Medical Officer of Health.

occupied females in Nottingham above 15 years of age. Dr. Boobbyer's report upon the health of lace-dressers may be taken not only as the most recent expression of opinion upon the points referred to him by the Home Office, but also as the most authoritative.

DISSENSIONS AMONG ANTIVACCINATORS.

The peace and concord of the National Antivaccination League has again been disturbed. A year ago our comment on the proceedings at the annual meeting of this league was under the above title, and included a reference to the platform skirmish between Mr. J. M. Robertson, M.P., and Dr. Scott Tebb. The former fiercely attacked what he called the "moral scrupu- "losity" of the medical profession, and made a number of ridiculous suggestions as to the alleged connexion between vaccination and the increase of cancer. Dr. Scott Tebb, though present as an antivaccinator and supporter of the league, emphatically protested and dissociated himself from the views expressed. From the report of the recent annual meeting published in the April *Vaccination Inquirer*, it is evident that the strange agglomeration of individuals who meet annually to disestablish and disendow and to abolish all regulations regarding vaccination again had their solemn conclave disturbed and enlivened by jarring notes. A resolution from one of the branches, opposing the advocacy of compulsory notification or isolation as an alternative to vaccination, had not been submitted by the executive to the general meeting for discussion. According to the *Inquirer*, this raises an issue "outside "the scope of our objects." The league is simply destructive in its function. Discussion of the means for preventing small-pox other than vaccination is burked by the executive on the ground that it might lead to the ruin of the alliance for the overthrow of vaccination. The President, however, in a moment of "good-natured submission" to cross questioning on the subject of isolation, has stirred up the wrath of a former secretary of the league, who, writing in the columns of the *Morning Leader*, March 16th, has found it necessary to dissociate himself from the opinions expressed at the meeting against compulsory isolation by the President and others. The *pièce de résistance* this year was supplied by the presence of Dr. Leverson, a delegate from New York. He evidently had not submitted a précis of his remarks to the executive for revision. He held up to scorn and derision the ideas clutched so eagerly by antivaccinators involved in the so-called "Leicester "method" of dealing with small-pox. "Isolation," he is reported to have said, "should be left entirely to "the discretion of the patient or his friends"! "The "general notion," he added, "of infection in small-pox "or anything else was utterly insane." He further insisted on the needless character of quarantine as well as vaccination. Dr. Leverson had evidently not been coached in the current sacred beliefs of most of his hearers, or as a guest he might have refrained from wounding their susceptibilities by so truculently attacking the argument in support of their cherished substitute for vaccination. The public dissociation of a former secretary of the league, mentioned above, is a matter on which he is to be congratulated, but it points to dissensions within the camp. The stock part of vilifier of the medical profession was this year in the hands of Dr. Hadwen of Gloucester, whose rhetoric appears to have tickled the palate of his auditors. "The work of "enforcing vaccination," he is reported to have said, "was becoming unprofitable, and it would be given up "directly there was no money in it. . . . They must be "on their guard against new professional methods, and "he particularly urged that the proposed medical "inspection of school children should be carefully and "earnestly watched, for there was no more dangerous set "of people than medical men when they had the power "against the bodies and consciences of the people." The character of the audience may be gathered from the fact that no protest was made, and we believe no one present has publicly dissociated himself from this bitter attack. It is not easy to believe that any member of the medical profession could have joined in the laughter and cheers which these remarks evoked. Dr. Scott Tebb's name does not appear in the official list of those who attended this meeting.

A CLERICAL GERMICIDE.

It is perhaps not altogether unnatural that clergymen, whose province it is to deal with the inhabitants of "Satan's invisible world," which a member of the fraternity long ago wrote a book to "display," should be interested in those material yet invisible enemies which constantly threaten man's health. From the healing of the soul to the attempted healing of the body is but a step, and that step is taken by not a few clerics. The latest instance which has come to our knowledge is one in which the leading parts are played by two Scottish ministers, the Rev. John Ross, of the Garnethill Established Church, Glasgow, and his brother-in-law, the Rev. George Jack, of St. Mungo's Established Church, Edinburgh. These reverend gentlemen claim to have discovered a marvellous germicide, which not only cures cancer—that is, of course, a trifle which everybody but the scientific doctor can accomplish—but lupus, appendicitis, eczema, rheumatism, asthma, and stomach troubles. Mr. Ross, according to the *Edinburgh Evening Dispatch*, has been in London for the purpose of having his germicide recognized by the Cancer Research Committee as a cure for cancer. In this we have reason to believe he has not been successful; but in the meantime his collaborator is doing a brisk business in Glasgow. Needless to say, the discoverers of the "germicide" scoff at bacteriology, which they describe as "chasing midges." Mr. Jack says he does not bother about bacilli, but he has something to kill them. The evidence is of the usual shadowy character. It would be more foolish than "chasing midges" to try to get hold of anything definite. We should not have thought the matter worth referring to at all but that a medical correspondent has written to us, enclosing a cutting from the *Weekly Scotsman* of April 11th, and saying with apparent gravity that "the fact that this 'germi- "'cide' is stated to have an effect on so many different "pathological conditions increases one's dubiety." We hope his dubiety will increase to complete scepticism. Man gulls himself, as Montaigne said, and to the end of time he will continue to be the dupe of his inborn love of the marvellous. At the present day there is a marked tendency to what a French writer has happily called *la nostalgie du miracle*. On this weakness pretenders of all kinds, deluded and self-deluded alike, prey and, it is to be feared, will always prey in spite of legislation and the march of science. To us the only surprising thing in the new "germicide" is that respectable newspapers should make themselves sponsors for what is so obviously a "vain thing."

SLEEPING SICKNESS IN UGANDA.

In the *Times* of April 9th Mr. H. Hesketh Bell, C.M.G., Commissioner of Uganda, gives an interesting account of the work done for the relief of sufferers from sleeping sickness by the White Fathers of the Algerian Mission. He says that some time ago he had an opportunity of visiting the refuge maintained by them at Kissubi, not far from Kampala. Even when the victims of the disease were shunned like the plague-stricken the missionaries had fearlessly collected large numbers of

"the sick, who, in many cases, had been thrown "out by their terrified relatives to starve in the "jungle or to be devoured by wild beasts." Almost entirely without extraneous assistance the Fathers, during the past five years, have maintained an average of a hundred unfortunate creatures, and at the time of the Commissioner's visit to the refuge the inmates numbered 110. They were lodged in large thatched banbas, and were divided according to sex and the various stages of the disease. In one enclosure was a number of infants, in whom the first outward signs of the scourge were appearing. In a row of sheds, surrounded by the banana groves which supply the food for the patients, were numbers of those who had reached the second stage of the disease. Most of them appeared to be suffering acutely. Further on, he came to those in the last stages of the disease. Lying about, on beds of withered leaves, they had reached a degree of emaciation horrible to see. On his way back through the lines of huts occupied by those in the second stage of the disease, Mr. Hesketh Bell asked the Bishop who is in charge of the mission what he might do to give pleasure in any way to the unhappy inmates of the *asile*. He replied that an inordinate craving for food was one of the signs of sleeping sickness. Bananas constituted almost their entire food, and these were grown in the large groves around the mission. An intense desire for meat or for any fatty substance was, he said, one of the characteristic symptoms of the disease, and it was not unusual for a native, who had contracted sleeping sickness, to recklessly kill and eat all his sheep and goats in a very short space of time. The Commissioner says that it is estimated that over 20,000 sick now remain to be dealt with, and they are being located in large camps capable of accommodating about 1000 at a time. The Imperial Treasury has authorized the expenditure of a considerable sum on the measures now proposed but everything has to be done on the most economical scale. Most of the unfortunate inmates of the camps are on very short commons, and those who have neither friends nor relations get nothing but a modicum of bananas and beans. Mr. Hesketh Bell says that cattle, sheep, and goats are cheap in Uganda, and a comparatively moderate sum would enable them to provide now and then a meal of meat for the unhappy inmates of the sleeping sickness camps. For the purpose he appeals strongly to the charitable public for help.

"ANTIVIVISECTION MEETINGS."

We have received a further communication from Miss Lind-af-Hageby relative to the address delivered by her in the Caxton Hall in December last. As her letter consists chiefly of a repetition of statements made in two articles which appeared in the British Medical Journal of March 28th and April 11th, we think it unnecessary to trouble our readers with the full text. Miss Lind-af-Hageby seems now chiefly concerned to deny her alleged designation of the medical student as being known "by his love of "cruelty." This she characterizes as a "gross defam-"tory misrepresentation." We accept her denial, and we welcome as a sign of grace the indignation with which she repudiates the use of these words. We do not, however, quite understand why she is so anxious to repudiate the utterance attributed to her, since a "love of cruelty" in medical students would only be the natural outcome of the callousness to the sufferings of animals on the part of their teachers on which she laid such stress in her evidence before the Royal Commission on Vivisection. In support of our belief that Miss Lind-af-Hageby had made or adopted remarks seriously disparaging to medical students at a public meeting, we have the testimony of Mr. Howard Lister, who heard her address in the Caxton Hall and himself spoke on the subject. We give his own report of what happened on that occasion: "To "give you some idea of the kind of things these anti-"vivisectionists spread about let me describe to you "what I heard at Caxton Hall from the lips of Miss "Lind-af-Hageby herself. She (you may not believe this, "but it is true) read extracts to show what medical "students have been made nowadays by vivisection, "describing the medical student as a brute from whose "mouth nothing could come but filth, and that he could "always be recognized by the fact that he always wore "dirty linen." Mr. Lister adds that "the words she "used are perfectly clear even now, and that they were "given with all sincerity." We learn from the *Morning Leader* that the statement that a medical student was known "by his love of cruelty and his dirty linen" was a quotation from that veracious authority, Miss Frances Power Cobbe. Did Miss Lind-af-Hageby, or did she not, quote these words at the Caxton Hall? If she did, it was not an unfair inference that she agreed with the sentiments Lastly, Miss Lind-af-Hageby can scarcely complain if we hesitate to accept her uncorroborated statements. We may remind her that she herself before the Royal Commission on Vivisection refused to accept a statement by Professor Thane, on the ground that he has made inaccurate statements on other matters. We do not for a moment impute to her deliberate falsehood. She is doubtless carried away by the seething current of her eloquence into saying things that she might not say in cold blood. But we may venture to hint that she is constitutionally incapable of following Cromwell's advice to his fanatical advisers: "For "God's sake, gentlemen, conceive it possible that you "may be mistaken!" There is a striking illustration of this in the report of the Royal Commission on Vivisection, where she asserted that in the trial of Bayliss *v.* Coleridge the Lord Chief Justice had said that the *Shambles of Science* was not libellous, and stuck to it in face of the fact that no such statement appeared in the official transcript of the proceedings, and the assurance of Lord Selby that he was sure Lord Alverstone never said such a thing. It is interesting to note that, according to the report of the debate at Bedford College, which appears in the *Zoophilist* for April (p. 192), even Mr. Stephen Coleridge has come to the conclusion that the ladies made a mistake in their account of the experiment on the brown dog. But doubtless Miss Lind-af-Hageby will not admit this.

ANTIVIVISECTIONIST *RÉCHAUFFÉS*.

The misrepresentations and lies scattered broadcast by antivivisectionists are so numerous that we have perforce to leave many of them unnoticed. It is only, indeed, when a particularly impudent specimen of mendacity comes before us that we think it worth notice. And it is often no easy matter to disentangle the element of true but misleading fact from the lie that barbs the shaft of calumny. Some time ago we received from a correspondent in India a cutting from *The Lady*, a periodical which, we are informed, is "in "much repute among ladies." The cutting was from an article entitled "The Lady in Society," which appeared in the issue of January 23rd, over the signature of "Cuckoo." The writer cited a passage purporting to be an extract from an address given before the Medico-Chirurgical Society at Nottingham by Dr. Charles Bell Taylor. This was an account of some experiments said to have been performed by Dr. Brachet, Professor of Physiology at the École de Médecine of Paris. It may be remembered by those interested in the subject that these experiments were described in the *Daily Mirror* of November 6th, 1903, as a sample of "the kind of facts which the Royal

"Commission is now discussing behind closed doors." No hint was given that, even admitting that the experiments were ever performed, they dated back to the Thirties or thereabouts. The gross *suggestio falsi* was exposed in the BRITISH MEDICAL JOURNAL in an article entitled "A Mirror of Falsehood," which was published on November 24th, 1906. But the writer in *The Lady* goes on to make an equally misleading statement, apparently on her own account. "Here," she says, "is "another called 'A Moral Experiment,' which I quote "from a speech by Dr. Shaw, delivered quite recently "before the Royal College of Surgeons in Ireland. The "operator began by treating the animal kindly, and won "its love and confidence. When these were secured he "cut off an ear of the dog, who looked astonished, but "manifested no resentment. Next day he cut off a paw, "and a few days afterwards another. Thus he went on "from one outrage to another, slashing and stabbing till "the experiment was complete. It was astonishing how "much the animal endured before his confidence and "his love turned to hate. After the second paw was "removed, he continued to gaze up into his master's "face and to lick the hand that maimed him." The tender-hearted writer concludes: "It almost makes me "cry to write this, let alone think of it" We have taken some trouble to trace this story to its source, and, thanks to the obliging courtesy of Professor W. H. Thompson of Trinity College, Dublin, we are able to inform "Cuckoo" that, in the first place, Dr. Shaw is not a doctor of medicine but of laws; and that his address was not delivered "quite recently before "the Royal College of Surgeons in Ireland," but at a meeting of the Senate of the University of Dublin as long ago as June 14th, 1892. There was a discussion as to the honorary degrees to be conferred on the occasion of the celebrations of the tercentenary of the university, and among the names put forward were those of Burdon-Sanderson, Michael Foster, Charles Richet, and L. Hermann. Professor Thompson says: "I have consulted three of the Dublin daily "papers of the 15th June, and all refer to the matter. "The most complete account is given by the *Daily* "*Express*. It relates the two experiments—one in which "the animal was made to dislike the experimenter and "the subsequent results of destruction of its hearing "and sight. The other is given as the converse of this "experiment, in which the experimenter is described "as first treating the dog kindly and afterwards "mutilating it. The name of the investigator is not "given, but the inference to be drawn from the report "is that both experiments were performed by the "same man. One of the reports (*Freeman's Journal*) "states that Dr. Shaw asked the Senate to defer con-"sideration of the Grace till he ascertained whether "the names of all of our physiologists were in the 'Vivi-"'sectors' Directory, Home and Foreign.' Possibly this is "the source of most, if not all, of Dr. Shaw's knowledge "of the matter. It does not seem to have been alleged "that these experiments were performed in Great "Britain, and certainly they were never performed "in Ireland. Professor D. J. Cunningham, who spoke "on the occasion, assured the Senate that 'nothing of "'the kind ever happened in a physiological laboratory "'in this country.' The names of those in attendance "as given by the *Daily Express* number sixty-four. Of "these, twenty-four were clergymen. All the honorary "degrees except the group of Doctors of Science were "passed in *in globo*. This group was then taken, and "Professor J. Burdon-Sanderson's name was voted "upon first. To quote the *Daily Express*, 'the Grace "'was put and carried with the greatest enthusiasm, "'there being only two dissentients' The remaining "names were then taken all together and passed with-"out opposition. It would seem—and in this Professor "Purser concurs—that Dr. Shaw's over-statement of the "case, and his attempt to saddle modern and British "physiologists with the crude and revolting experi-"ments he quoted, lost him all the sympathy of "the Senate." It is evident that what Dr. Shaw brought before the senate of Dublin University sixteen years ago was even then a mere rehash of "unhappy far-off things," which could not possibly happen in this country; while as for Professor Brachet's experiments, we know nothing of them, and can only say that if he did what he is alleged to have done, his name deserves to be covered with infamy.

SYPHILIS IN CAPE COLONY.

THE constant struggle of man against parasitic infections may be aptly compared with the interminable endeavours of Sisyphus with his recalcitrant and mobile barrel. What with the acute exanthemata, tuberculosis, plague, sleeping sickness, leprosy, and so forth, the question of the prevention of syphilis is sometimes allowed to recede into the background. But at this time of day, when it is fully understood how many morbid conditions follow in the train of lues venerea undreamt of by the sixteenth-century authors of *Le Triumphe de haulte et puissante Dame Vérol'e*, who were only familiar with the dreadful results of the disease's early onslaughts on the human frame, aggravated by the treatment which then obtained, it is of prime import to call attention to this enemy. On several occasions in these columns the increase of syphilis in the Cape has been alluded to. The last Health Report to hand (for the year 1906) from Capetown emphasizes this point once again, insisting, as it does, on the numerous cases of accidental infection of Europeans by coloured servants. In some cases the disease has affected in this way several members of a family. The state of things depicted recalls to some extent what is well known to occur in Russia—house epidemics. In the cases under review here European babies and children have contracted syphilis from coloured nurses, and subsequently infected their parents. Of course in London the accidental infection of quite young children, who are brought under notice for extragenital sores, is observed from time to time, as a result, no doubt, in some instances of the dangerous habit of allowing babies and children to be kissed in a promiscuous way, often by utter strangers. But in the Cape the incidence of such infection appears to be becoming widespread. In his report (p. xlviii) the Medical Officer of Health states that the prevalence of syphilis in Bechuanaland is appalling, and concludes by saying that in dealing with the disease stronger measures are required, but, in view of the reduced provision made by Parliament consequent upon the fall in the public revenue, such action cannot be carried out. Indeed, it is now hardly possible to persevere with the restrictive measures hitherto in operation. Dr. Gregory winds up with the serious, and no doubt perfectly true, utterance that the present inaction will entail permanent misery upon many hundreds of the population. It is no longer a far cry to South Africa. Be it remembered, the influenza microbe of our modern epidemic may possibly have come as a passenger per Trans-Siberian railway from remote Central Asian regions. This germ is still making the grand tour circling the globe.

SPECTRAL VISION.

EVERY one must at times have asked himself why familiar objects in a dim light tend to assume fantastic and oftentimes alarming appearances. Who, in walking across the fields after sunset, has not at times been startled by some shadow of uncertain outline and disconcerting mobility that has fallen upon the retina? It is not a question of courage because the boldest of

men may experience a momentary feeling of apprehension and the reflex movements to which the impression gives rise are the outcome of the instinct of self-preservation which is notoriously most active in presence of a danger the nature and extent of which are for the time unknown. Habits of mental analysis and self-control of course mitigate the effects of the visual impression which attain their maximum in the young and the inexperienced, but the general effect is the same and we have all known what it is to check a sudden impulse to run away. The explanation is to be found in the special conditions of night vision. The pupils are widely dilated and, as in the photographic lens with a large diaphragm, the apparatus of accommodation can only focus for one plane. As the faculty of estimating distances is in great measure lost in the obscurity we cannot focus with precision, and a blurred uncertain outline is thrown upon the retina. Then, too, colours viewed in a fading light lose their distinguishing hue in a fixed sequence until a point is reached at which everything becomes of one uniform grey tint whence no doubt the origin of the French proverb, "la nuit, tous les chats sont gris." The impression of form is principally transmitted by the retinal cones which are most abundant in the centre of the retina, whereas the appreciation of light and shade is provided by the rods, so that in man under the influence of dim light there is far more rapid depreciation of central than of peripheral vision. It follows that the images which are transmitted to the visual centres are profoundly modified in colour and outline, and as they enter the eye through the widely-dilated pupil at an altogether unusual angle, the movement of locomotion gives them a peculiar mobility. Now we rely on experience for the interpretation of sensorial impressions, and when these present themselves suddenly in an unusual form they create a feeling of insecurity which finds expression in mental perturbation and more or less violent motor impulsion—in fact, the subject finds himself in the position of a horse which sees a rapidly-advancing motor car for the first time and does not know what to make of it. Imagination aiding, these blurred, mobile, and uncertain images are susceptible of the most phantasmagoric interpretation, and in persons who are not accustomed to control sensorial impressions by the exercise of the intelligence the impressions are accepted as realities and acted upon accordingly. Gamekeepers and others who are accustomed to night work make allowance for phenomena of this class and correct the visual deficiency by the aid of other senses, such as hearing, which are not dependent on light.

THE ADMISSION OF WOMEN TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We are asked to state that the President has been informed that an unofficial circular is about to be issued to members of the Royal College of Surgeons of England regarding the admission of women to the membership and Fellowship, and that in this circular it is suggested that members should disregard the request of the council that the answers to the questions in the official circular should be in the form of simply "Yes" or "No." The President hopes that members will not allow themselves to be misled by this unofficial circular, and that, with a view to avoiding confusion as regards the result of the poll, they will record their answers on the official balloting-card in accordance with the instructions for voting contained thereon. We may add that the two questions on the official card are: (*a*) In your opinion is it desirable that women should be admitted by examination as members of the college? (*b*) In your opinion is it desirable that women, after admission to the membership, should be admitted by examination as Fellows of the college?

The announcement of the somewhat unexpected death of Dr. Oswald Browne will be received with much regret by all who know the unstinted services he rendered to the Royal College of Physicians of London as Assistant Registrar, an office to which he was appointed five years ago. We hope to publish some account of his career in a future issue.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The House of Commons met again on Tuesday last, after the week's adjournment consequent on the resignation of Sir Henry Campbell-Bannerman. The new Government under Mr. Asquith arranged for the meeting to be purely formal. New writs were moved and ordered for the vacant constituencies caused by the appointment of new Cabinet Ministers and by the death of Sir Howard Vincent. The Commons were then summoned to the Lords to hear the Royal assent given by commission to several Bills passed before the Easter recess, and when the members trooped back to their seats the Chief Liberal Whip, Mr. Whiteley, moved the adjournment to Monday, April 27th. This motion was expected to pass without any discussion, but, as so often occurs in Parliament, the unexpected happened, and Sir Gilbert Parker opened a short debate on the position of the hop industry in Kent, and called upon the Chancellor of the Exchequer designate (Mr. Lloyd George) to reply to a series of questions. These were adroitly met by the ex-President of the Board of Trade, but others members joined in, and a smart little discussion on Tariff Reform followed. Then the question of the unemployed was raised from the Labour Benches, and questions were asked as to when the Eight Hours Miners Bill would be taken and the Housing Bill, but no further reply was given than that these questions would be answered on Thursday, April 30th, and the House at last adjourned about a quarter past four.

Mr. Asquith's Administration.—The new Government now formed by Mr. Asquith as Prime Minister is chiefly remarkable for the removal of two old and tried administrators to the House of Lords, namely, Mr. John Morley and Sir Henry Fowler, who both retain their portfolios, and the inclusion of several young men in the Ministry who have had little or no experience. At the Board of Education Mr. Runciman succeeds Mr. McKenna, who, after some twelve months at the Education Office, takes charge of His Majesty's Navy as First Lord. Mr. Macnamara, who was Secretary to the Local Government Board under Mr. John Burns, now goes to sea with Mr. McKenna as Secretary to the Admiralty. The Secretaryship of the Local Government Board is given to Mr. Masterman, who has shown himself very keen on questions of social reform, and the co-operation of this young Minister with Mr. John Burns will prove very interesting. Mr. McKinnon Wood succeeds Mr. Lough, who has been advanced to the Privy Council, as Secretary to the Board of Education, while Colonel Seely takes Mr. Churchill's place as Under Secretary for the Colonies, his predecessor entering the Cabinet as President of the Board of Trade. The appointments generally do not touch on medical interests except that of Mr. Masterman, from whom useful influences may be expected at the Local Government Board.

The Course of Public Business.—It was announced before the adjournment that the first business to be taken after the Easter recess would be the Licensing Bill. The second reading debate will almost certainly occupy the Monday, Tuesday, part of Wednesday, and Thursday of that week. After Easter private members' motions are taken only on Wednesday evenings instead of on Tuesdays and Wednesdays. In this way there will be three and a half days for the Licensing Bill and the Wednesday evening will be occupied by some motion which will depend on the result of the ballot taken on the 27th inst., when the House resumes. On Friday, May 1st, The Shops Bill of Sir Charles Dilke has first place, and the second reading will probably occupy the whole sitting.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE LATE DR. CONOLLY NORMAN.

A MEETING was held last week in the Royal College of Physicians of Ireland to consider a proposal to erect a suitable memorial to the memory of the late Dr. Conolly Norman.

The President of the College presided, and there were also present Sir Henry Swanzy, President of the College of Surgeons; Dr. Little, Sir Francis Cruise, Sir Thornley Stoker, Dr. Magee Finny, Dr. W. R. Dawson, Dr. Maxwell, Dr. J. O'Conor Donelan, Dr. Baker, Dr. Fleury, Dr. Cullinan, Rev. M. Taylor, Mr. J. R. O'Connell, LL.D., and Dr. Carroll.

Dr. Little and Sir Francis Cruise expressed sympathy with the object of the meeting, and Sir Henry Swanzy paid a tribute to the memory of the late Dr. Conolly Norman. After some discussion an Executive Committee was appointed with Dr. Dawson and Mr. J. R. O'Connell, LL.D., as Treasurers, and Dr. Donelan (Richmond District Asylum, Dublin) and Dr. Fleury, as Secretaries.

THE PROPOSED NEW UNIVERSITIES IN IRELAND.

Belfast.

Since Mr. Birrell introduced his measure to improve the higher education in Ireland, there has been an intense undercurrent of feeling amongst all in Belfast who take an interest in education. Nay, more; many affirm that it is not merely an educational matter, but that a case of civil progress and liberty is on trial. Opinion is now more outspoken than at first, and it is easy to distinguish three parties. There is a strong and strenuous party in favour of the Bill; there is a strong and strenuous party who maintain that an attempt is being made to sacrifice the principle of non-sectarian education; and there are those who take no interest in the matter, or who have not as yet sufficient knowledge to arrive at a decided opinion. We may call these three parties the advocates, the opposition, and the man in the street. All are agreed that the whole question bristles with difficulties wellnigh insuperable; the judicial bench, the episcopal bench, the leading men of all professions differ; and no matter what course is proposed, strong arguments can be advanced on the other side.

The points that interest the medical profession are the vital questions whether the study of medical and the kindred sciences will be advanced, and whether the knowledge and the training that makes the well-qualified and cultivated medical man will be improved by the establishment of a Belfast University. The medical school has down to the present day been by far the most important part of the college.

This is not the place to discuss the larger question of sectarian or non sectarian education; but many will come to a decision purely on this ground. The constitution of the senate undoubtedly shows an honest attempt to avoid sectarianism; and if the Bill becomes law, the proposed university will become sectarian, if it does so, chiefly from the apathy or antipathy of other denominations than the Presbyterian. The only safeguard is to keep constantly before our minds and to use as a touchstone to test the metal of all proposals, the all-important question whether science and medical knowledge will be advanced.

With the increased endowments, there will be increased salaries, more lecturers and readers, and improved laboratories; but the opposition point out that the new institution will have to take over a number of expenses, pensions, a future pension fund, upkeep, etc., and that these will make a heavy inroad into the endowment fund; still, with economical management there should be something to be devoted to the real object of the institution—namely, the advancement of learning. It is very questionable whether much, however, will remain over for the medical faculty, when the other starved faculties are satisfied. With the present Better Equipment Fund, some £20 a year each was granted to the assistants of the professors of medicine, surgery, and midwifery. So miserable was this sum considered by the younger medical men that it was with difficulty that the posts were filled, and one of them remained unoccupied for months. Under these circumstances, then, before increased scientific medical opportunities can with confidence be anticipated larger endowments will have to be forthcoming. This brings us to the broad question of increased private munificence; and, by natural logic, to the debated point whether the town and the province desire a local university. Is there any strong feeling, as evidenced by an enthusiastic public meeting, of a demand for such an institution? It is a most curious commentary, that both the advocates and the opposition say that a meeting, no matter by which side convened, would be broken up in disorder. The advocates say that private munificence will be increased; that the city will begin to take an interest in its own local university; and that after a few years there will be a plethora of riches. The opposition deny this, and say no one wants the university except those immediately concerned, and that it is bound to be a failure. We thus clearly see that the uncertainty as regards advance and improvement in opportunities for medical science and study is not yet removed.

Closely allied with this aspect is that of the number of students who will avail themselves of the university. Here also there is the greatest diversity of opinion. All agree that there will be a falling off at first. When the old Queen's University was disestablished, there was a falling off of students, not only in the arts, but also in the medical faculties. From this Belfast has not yet recovered. The opposition are strong in the opinion that few fathers will enter their sons for a new provincial degree when they can, with little more expense, obtain a degree at the old Universities of Trinity, Dublin, or at Edinburgh. Will history repeat itself? Already it is gossiped that the London University will establish an examining centre in Belfast, so that if compulsory attendance at lectures is required, the earlier examinations of a better known degree can be obtained with equal facilities. It is also rumoured that Trinity College, Dublin, is entertaining the project of admitting students from Magee College, Derry; so that one is bound to admit that this question of students is one which may legitimately be disputed. The opposition also lays stress on the probable low value of the degrees, and denies that graduates will care to face other than local practice; armed with this degree alone few will be inclined to seek practice in the Colonies, in England, or enter the public services. The advocates say that everything must have a beginning; that the examiners and professors will receive more or less of a fixed salary, and so be independent of the number of students; that there will be an outside examiner; and that the new Examining Board will be freer and more jealous of the reputation of the new university than the examiners of an old-established institution, and that the intrinsic worth of the degree will thus be safeguarded.

Those who remember the old Queen's University naturally ask, Is this the very last change, or thirty years hence may we look for another? Undoubtedly the uncertainty that exists is a plague to scientific and and medical education in Ulster. It is a curious and one must admit a discouraging fact that, with nearly every one of over a dozen graduates in high positions, the subject of conversation was whether two religious bodies would "accept"—this was the term used—the Bill or not. This means that the advance of scientific and medical education depends at present in Ireland upon the decision of two bodies of men who are comparatively, if not positively, ignorant of medical education, and among whom those who are distinguished in scientific education have been few.

It is interesting to note what has been done in some other countries: Germany has some seventeen or eighteen universities; the Duchy of Baden-Baden has two itself—Freiburg with an annual endowment of £45 663 and Heidelberg with £53,950; the Germans have their State diploma, and there is reciprocity between the universities. Switzerland, with a population of three millions, has four universities—Geneva, Basel, Berne, and Zurich; the population of these towns is under 100 000. Holland has four universities—Amsterdam, Groningen, Leiden, and Utrecht. Belgium has three—Brussels, Liege, and Louvain. The analogies of Liverpool, Manchester, Leeds, Sheffield, Aberdeen are also brought forward, but arguments founded on analogies are always dangerous. The opposition say that if the local colleges in these cities had been united with Oxford or Cambridge—a plan which would have placed them in a position analogous to the

Queen's College to the University of Ireland—there would not have been the same reason for separation.

There is one way in which there is little doubt that the study of science in general and of medical science in particular will be benefited. At present there is eternal difficulty in arranging matters in committee meetings in Dublin. It is not easy for a medical man in practice to attend a committee meeting 100 miles away. A certain amount of friction is inevitable, and there is in addition a certain amount of undue interference with legitimate advance from one side or the other. With a new university having a local board or senate, the educational heads will be less trammelled and have a freer hand to advance with the times and to adopt improvements.

It is pretty generally admitted that a serious injury will undoubtedly be inflicted on the graduates of the Royal University; many medical men will be in the anomalous position of being graduates by examination of two extinct universities, and of being a graduate of a university they never attended or in which they never passed an examination. But everything would be borne with patience if there were a certainty that a final solution had been arrived at. There is little doubt that every graduate would unite in making the new institution a success if there was a conviction that the real interests of education would be advanced, and that a permanent solution had been arrived at.

Cork.

The citizens of Cork are not at all satisfied with the provision made for Cork under the new university scheme for Ireland. The amount of money Mr. Birrell proposes to allocate to Cork will be entirely inadequate to make Queen's College, Cork, a proper university centre for the province of Munster. The Lord Mayor, at a committee meeting of the whole borough council on April 10th, moved the following resolution:

> That we desire to express the great regret and disappointment with which we have learnt that the claim of Cork for a separate university has not been conceded in the Universities Bill recently introduced by Mr. Birrell. That we desire to express our opinion that no settlement of the question can be considered final or satisfactory which does not provide Cork with independent university powers. Further, that we express our opinion that the sum of money allocated for the purpose of the maintenance of the Cork College, and for the provision of new buildings, is utterly inadequate, and that we call upon the members of Parliament for the Munster constituencies to press upon the Government the urgent necessity for allowing sufficient sums of money for this important purpose.

It was decided to call a public meeting on April 25th to discuss the subject.

Scotland.

[From our Special Correspondents.]

Tuberculosis and Milk Supply.

The Public Health Committee of Edinburgh Town Council has had under consideration a letter from the Town Clerk of Birmingham, transmitting a communication from the chairman of a conference of representatives of the Corporations of Liverpool, Manchester, Birmingham, Leeds, and Sheffield on the subject of tuberculosis and the milk supply. The conference urged that the Government should be asked to include in their prospective legislation dealing with milk clauses calculated to bring about the eradication of tuberculosis from bovine stock within a measurable period of years. After some conversation, it was agreed to delay coming to a decision on the subject.

Edinburgh University Graduation Ceremony.

At the graduation ceremony closing the winter session of the University of Edinburgh, the honorary degree of Doctor of Laws was conferred upon Dr. J. O. Affleck, Consulting Physician to the Royal Infirmary, Edinburgh, and Dr. Richard Caton, Lord Mayor of Liverpool. Among other recipients of this degree were M. Senart, a well-known authority on Indian archaeology, the Maharaja of Jaipur, and Ramkrishna Gopal Bhandarkar, C.I.E., late Professor of Oriental Languages, Deccan College, Poona. After the ordinary degrees had been granted, Professor Chrystal delivered an address.

England and Wales.

[From our Special Correspondents.]

MANCHESTER AND SALFORD.

Medical Examination of Railwaymen.

Serious trouble has arisen among the employees of the Lancashire and Yorkshire Railway in South-East Lancashire, owing to an order issued a few weeks ago that all men seeking promotion or increase of wages would have to undergo a medical examination before their requests were granted. Hitherto the various grades have received periodical increases of wages and promotion from one stage to another, only having to undergo one medical examination when first they entered the company's service. This fresh examination, whenever there is an application for a better post, is in the case of the older men regarded as a serious matter, seeing that if a man fails to pass the doctor he may not only not obtain his promotion, but may even lose his old job. The result, it is asserted, will be that the older men will be afraid of ever making an application for promotion. Mr. Bell, M.P., speaking at a meeting of railway men at Accrington, said the men were being discharged by subterluge—the company getting the doctor to certify that they were unfit for work, and then replacing them by men at lower wages. He thought the doctors' reasons for rejection should be stated to the men on paper, so that they could be tested by other doctors. There can be little doubt that men who have the safety of the public in their hands should be subjected to medical examination periodically; there can be little or no doubt that more than one serious accident, not only to passengers but to the men themselves, has been caused by a passing weakness due to unsuspected disease. The safety of the public and the men themselves must be the primary consideration. At the same time, to use such examination in the way suggested would be unfair, not only to the men, but to the medical profession. An examination to detect serious organic disease which might endanger the public is one thing, an examination to see if a man comes up to some quite arbitrary standard fixed by the railway company is quite another, and its right or wrong depends on the standard fixed.

The Manchester Infirmary.

Last week the Lord Mayor of Manchester called a special meeting of the citizens to lay before them the urgent needs of the infirmary. An appeal was made for £100,000, needed to complete the payments for the new buildings, and also for an increase in the annual voluntary contributions of at least £12,000. For many years the number of beds available (292) has been far too few to meet the needs of the district. In the new infirmary there will be 500 beds provided immediately, to be increased to 600 as necessity arises. If only 500 are occupied, the annual cost, it is estimated, will be £30,000. In addition, £2 000 will be needed for the central branch and £2,500 for the Barnes Convalescent Hospital, making a total of £34,500 estimated annual expenditure. Towards this there is a reliable income of only £22,500, leaving a deficiency of £12,000. A subscription list was started by the Lord Mayor, and it now stands at rather over £30,000. It was stated that since the infirmary was established, 155 years ago, 2,600,000 persons have been recipients of its benefits.

The Ventilation of Public Buildings.

At the annual meeting of the Manchester and Salford Sanitary Association, Mr. W. Thomson, F.R.S.Edin., F.I.C., gave an interesting address on a simple method of estimating the carbonic acid in the air of buildings and in the exhalations of people who have breathed different kinds of air. The method recommended was that of forcing air into a bottle with an ordinary pair of bellows and submitting it to a simple chemical test, and it was claimed that it was so simple that persons in charge of buildings could readily make the test and take measures to purify the air when necessary. Some of the results obtained by Mr. Thomson emphasize the fact that the ventilation of many of our public buildings is lamentably deficient. Taking the normal amount of CO_2 in the open

air as from 3 to 4 volumes in 10,000, modern architects accept as permissible in buildings about 6 parts in 10,000. In a number of Manchester schools he found the CO_2 varied from 8 3 to 18.2. In a popular concert hall he found at the commencement of the performance 5.2, but an hour and a quarter later 11.1. Tests in the Manchester Art Gallery gave 10.3 in one room and 8.6 in another. Three railway carriages gave 12, 5.6, and 21.5, and a Manchester tram car had 7.2. The dress circle of a theatre before the performance had 5.9, and after the performance 19.2. In a free library there were 7 volumes, and in the sitting-room of a low-roofed country public-house 23. In a Methodist chapel near Manchester after the service the air contained no fewer than 44 parts of CO_2 in 10,000, while a good-sized room that had contained four persons and three gas jets burning for an hour and a half showed 22. The Manchester Technical School had only 6 5, and, though it was one of the best ventilated buildings in the city, its atmosphere was objectionable to many persons on account of its lack of invigorating qualities, and he thought that this was due to the method of washing the air employed.

The amount of CO_2 exhaled in the breath of an individual as given in the textbooks of physiology was from 4 to 5 per cent., but his experiments showed that the percentage depended on the quality of the surrounding air. In Manchester the amount was 4 per cent., and in the country about 5 per cent. The breaths of three men were tested. In Manchester the percentages of CO_2 were 4, 3 8, and 4; at the Buxton golf links, 1,000 ft. above sea level, the figures were 5, 5 2, 5.2, and after they had played 18 holes and had lunch each gave off 4.8 per cent. They then drove to the "Cat and Fiddle," 1,700 ft above sea level, and there the amounts were 5 2, 5 4, 5 4. These results suggested that the amount of CO_2 exhaled was influenced by altitude, but a test made at Blackpool did not support that theory. It was further found that when the air was inhaled through the mouth, the nostrils being closed, the CO_2 exhaled was 0 2 per cent. less than when the nostrils were used. Further, when the air was artificially heated, the amount of CO_2 exhaled increased from an average of 4.1 per cent. to an average of 5 2 per cent. When pure oxygen was breathed the CO_2 exhaled was 4.4, which was considerably below what one got from breathing country air. It would appear, then, that country air was better for reviving people who had been asphyxiated or nearly drowned than pure oxygen. The experiments also showed that country and seaside air produces about 25 per cent. more oxidation of the blood than the ordinary air of Manchester, whereas the air of a coalpit about two-thirds of a mile deep produced about 18 per cent. less oxidizing effect on the blood of the men working there.

The exhilarating effect of breathing dry air has long been recognized, though no scientific explanation has hitherto been given, and by far the most important discovery that Mr. Thomson claimed to have made was that thoroughly dried air had a much more powerful oxidizing effect on the blood than ordinary air, which always contained a greater or less quantity of water vapour; and further, that the oxidizing influence on the blood was still more increased by heating the dried air. It was also stated that the dried and heated air had a much greater oxidizing action on blood than pure oxygen, which, as obtained from cylinders, was a dry gas. Many people noticed that the air of the House of Commons had a peculiarly flat "taste." It was not invigorating, and people who sat in the House suffered considerably from influenza. This was due to the fact that the air forced into the House was first washed in water. If it were passed through strong vitriol or some substance that would absorb the moisture the air would be much healthier and pleasanter to breathe. These observations as to the effect of dried and heated air, Mr. Thomson suggested, might prove of great value in cases of life-saving when the action of the lungs was defective—as, for instance, after partial drowning or in collapse after the use of anaesthetics.

Mr. Thomson's figures relating to the various public buildings and showing the variation in the amount of CO_2 exhaled under different conditions may of course be taken as correct. But it by no means follows that his explanations are correct. In other words, he did not prove in his address that dry air has any more powerful oxidizing effect on the blood when inhaled than ordinary air. It would seem as if he had taken the amount of CO_2 exhaled as a criterion of the amount of oxidation going on at that time, but as Landois and Stirling point out:

> The quantity of CO_2 alone is not a reliable indication of the entire exchange of gases during respiration; we must estimate simultaneously the amount of oxygen absorbed and the CO_2 given off; the amount of CO_2 given off at any period is not necessarily an index of the amount of oxygen absorbed during the same period. The separation of CO_2 and absorption of O do not always occur simultaneously, and the one process may exceed the other in extent.

Thus the amount of CO_2 exhaled is not a criterion of the amount that is being formed in the tissues at the same time. It would seem almost impossible to say how much CO_2 is being formed at any one time, much less how much of it is fixed and how much either free or so lightly fixed as to be readily separated and exhaled. Thus a large part of the CO_2 exhaled at any one time may have been formed in the tissues a long time before, and have been slowly accumulating. That there is something in this is shown by Mr. Thomson's own statement that when a person goes from Manchester to the country the amount of CO_2 exhaled is increased to a percentage higher than that found in the case of people permanently residing in the country. In other words, this may mean that the visitor to the country may be exhaling CO_2 which was formed in his tissues while he was yet in the town. Thus what Mr. Thomson shows is only how much CO_2 is being exhaled at the particular time, not how much is being formed at that time by processes of oxidation in the body. The problem is far more complicated than his remarks would suggest. For instance, age has a very distinct effect on the processes of oxidation; weight for weight a child gives off twice as much CO_2 as an adult. Muscular exercise causes a considerable increase in the CO_2 given off, which may be three times as much during walking as during rest. Again, Lavoisier showed that while the body temperature remains the same, as the cold of the surrounding air increases, the oxidation within the body increases through some reflex mechanism. On the other hand, as the temperature of the air rises, the body heat remaining the same, the respiratory activity and the CO_2 given off diminish. The taking of food causes an increase in CO_2 given off, the increase generally occurring about an hour after the meal, and being greater in proportion to the amount of carbohydrates contained in the food. Again, the number and depth of the respirations have practically no effect on the formation of CO_2, that is, on oxidation processes, but they have a very marked effect on the removal of already-formed CO_2. Numerous other disturbing factors need to be taken into account, and before we can be justified in regarding the state of the surrounding air as the sole cause of any particular effect referred to, we need to be assured that all other causes have been kept in mind. Even then the fact remains that excretion of CO_2 is not a reliable criterion of the amount of oxidation going on at the same time.

Further, it must not be assumed that a feeling of exhilaration necessarily proves that oxidation is going on more rapidly in the body than normally. The greatest oxidation occurs in fevers, and it might even be held that anything above the normal rate of oxidation in the blood is injurious. Mr. Thomson suggests that heated and perfectly dried air may be useful in cases of collapse after anaesthetics, because he says it increases oxidation. As shown above, the latter statement still needs proof, but even if it were true, collapse from anaesthetics is nearly always due to heart failure, and the difficulty is generally to get the patient to breathe at all. Moreover, however dry the surrounding air may be, before it can reach the part of the lung where absorption of oxygen occurs it must have become saturated with moisture taken up from the upper respiratory tract, and thus any advantage from the dryness must be lost.

As far as ventilation is concerned, every one will agree that a moist warm air, like that of the House of Commons, is depressing. On the other hand, most people would find a very dry air, whether hot or cold, irritating to the respiratory organs. Perhaps most people breathe most easily and comfortably when the humidity is from 65 to 70; slightly lower might suit some people, but much lower would certainly be found objectionable, while to

pass the air over strong vitriol, as Mr. Thomson suggests, to extract every trace of moisture, would make it intolerable to most people.

New South Wales.

[From our Special Correspondent.]

Comparative Statistics.

Mr. G. H. Knibbs, on assuming the position of Federal Statist, undertook the translation of the Bertillion classification of the causes of death, and by the authority of the Minister for Home Affairs this has been issued widely to the medical profession throughout the Commonwealth, and the vital statistics are being conformed thereto in Australia. Mr. Knibbs has received a communication from Dr. Charles O. Probst, the Secretary of the American Public Health Association, covering a resolution passed at its meeting late last year, as follows:

> That the American Public Health Association extends its cordial congratulations to the Commonwealth Bureau of Census and Statistics, and to the Statistical Conference of Australasia, upon the adoption of the international classification of the causes of death, and welcomes the possibility of more satisfactory comparison of data for Australasia and America being made possible thereby.

Municipal Dispensaries.

The Sydney City Council, at its meeting on February 4th, passed a resolution by a majority of one vote instructing the City Solicitor to prepare a clause for insertion in the next amending Bill to give the council power to establish municipal dispensaries. In the course of the discussion on this resolution one of the Aldermen said that as there were many institutions such as infants' homes, hospitals, etc., in the city at present doing the work that these dispensaries would be expected to do, the proposal was unnecessary. He added that if care were not taken in regard to such proposals the council would find itself in the same position as some of the English municipalities, including the London County Council—burdened with responsibilities which involved heavy additional taxation on the people. There is no certainty, of course, that the proposed clause would be passed by Parliament even when the uncertainty which surrounds the proposed amending Bill has been dispelled, as there is certain to be much opposition to the proposal by the friendly societies as well as by the chemists and druggists of the city. A review of the work done by the United Friendly Societies' Dispensary for the past year shows that the dispensary has 11,141 registered members, and that last year 170,734 prescriptions were prepared for 101,507 patients. These figures, taken along with the out patient departments of the large general hospitals, show that the poorer classes of the community are amply provided for in the way of medical attendance and medicines, and there can be no doubt that, apart from the City Council taking upon itself a work which is quite foreign to it, the establishment of municipal dispensaries would inevitably tend to discourage thrift and favour pauperism. They would also further tend to the abuse of the charity of the profession.

Typhoid Fever.

An epidemic of typhoid fever of a severe nature has been passing over Sydney during the past few weeks, and quite recently more than one third of the medical cases in the Royal Prince Alfred Hospital, Sydney, were enteric fever. Some of the cases have been traced to milk coming from a dairy where a case of the disease had been unrecognized, but many of the other cases have not been traced to any definite source of infection. As a few of the nurses of this hospital have contracted the disease, the question of a nurse taking typhoid while engaged in looking after a case has been carefully studied by the hospital authorities. Large sums of money have been expended in the past in perfecting the sanitary arrangements of the hospital, but this has not proved effectual in preventing infection. In view of the great risk which arises from the nurses handling enteric patients an order has been given in the hospital that nurses engaged in nursing typhoid cases must wear gloves. As a further preventive measure it is now ordered that typhoid patients must have mosquito nets over their beds to prevent the flies from coming into contact with the patients, and this practice is now in vogue in the hospital.

The Patent Medicine Report.

As was to be expected, the report which Mr. O. C. Beale was commissioned by the Federal Government to make on the patent and proprietary medicine trade in Australia has come in for a good deal of adverse criticism from interested parties. At a recent meeting of the Manufacturing Chemists and Proprietary Association held in Sydney, it was decided to draw the attention of the various Australian legislative bodies to the nature of the report of Mr. Beale, Federal Royal Commissioner, on the subject of secret drugs, cures and foods. They resent what they call the one-sided nature of the report, stating that anything that might be said from their side of the case was carefully excluded; that much of the report is untrue and a great deal of it slanderous. The Association affirmed that its members had nothing whatever to fear from a thorough and impartial investigation into their products and their methods of doing business by an impartial tribunal. Further, that it would heartily welcome any legislation tending to check the sale to the public of useless, fraudulent, or dangerous preparations, and it invited the Federal Government to appoint another Commission to consider the whole subject, including Mr. Beale's report.

The Labour League.

At the annual conference of the Political Labour League of New South Wales, held in Sydney in January, it was decided to adopt the following recommendations for amendments in the Public Health Act:

(*a*) Heavier penalties, including imprisonment, for manufacturing, transmitting, or selling adulterated foods, tobacco, or drugs.
(*b*) That the sections dealing with the taking of samples shall be simplified to make the Act more effective.
(*c*) That on all compound foods the proportion of the different ingredients be stated on the packet or bottle.
(*d*) That the premises used for the manufacture or sale of foods or their ingredients be brought up to a specific standard with regard to sanitation and construction.
(*e*) That the name of the manufacturer must appear on all foods or drugs.
(*f*) That all packets and bottles of foods and drugs shall bear a copy of an analyst's report.
(*g*) That all patent medicines and foods shall be analysed by the Government analyst, and the result of the analysis published showing the contents and cost of the same.

At the same conference certain proposals with regard to the management of the public hospitals were submitted by the Platform Committee, and after some discussion approved. Among other things they suggest that all the public hospitals should be supported by shire and municipal rates, supplemented by Government subsidies, and that Boards controlling hospitals should be elected by adult suffrage. They also propose that in serious cases where patients are unable to reach the hospitals, Government medical officers shall attend to them in their homes or wherever located. The League is also strongly in favour of the proposal that women should have the same rights as men to be on the medical staff, and one member suggested that there ought to be a female medical officer in every hospital. They also advocated the establishment of a maternity ward in connexion with all hospitals, with provision for home treatment where necessary. It was further proposed that the nurses should not work more than eight hours out of the twenty-four, but this suggestion was amended in favour of a reduction in the working hours of the nurses to forty-four hours a week.

Canada.

[From our Special Correspondent.]

Government Grant to Ontario Hospitals.

A large deputation representing the hospitals of Ontario waited on the Cabinet at the Parliament Buildings with a petition that the Government should deal more liberally in the annual grant. It was pointed out that only in one year in the past seven had the hospitals of the province escaped a deficit on maintenance, and that while the Government grant in 1882 was 36 per cent. of the cost of maintenance, in 1907 it was only 13 per cent., on account

of the increase in living expense. The daily average cost of each patient was 1.16 dols., the Government last year allowed a grant of 20 cents. a patient a day; the deputation requested that this should be raised to 30 cents. a day. A special plea was made on behalf of the newer districts, where the hospitals, in many cases built and maintained by Catholic nursing orders, have to care for immigrants and others unable to pay anything, and where, as the municipalities are not as yet organized, they have nothing to fall back on. The Hon. Mr. Hanna promised consideration.

THE MILK STANDARD.

The laboratory of the Inland Revenue Department of the Dominion has issued a bulletin, No. 142, dealing with the question of milk supplies and the determination of a standard which may be adopted throughout the country. In 1887 the Chief Analyst examined 162 samples of milk obtained in June, July, and August, from herds of not less than four cows, from different places throughout all the provinces, and based on the result the following standard:

Total solids	12.0	per cent.
Butter fat	3.5	,,
Solids other than fat	8.5	,,

A further series of 105 samples of market milk as supplied to twelve towns and cities, after leaving out of account nine samples containing over 5.4 per cent. fat, and classified as partly cream, gave an average of 3.82 per cent. fat and 8.49 per cent. non-fat solids, showing that at that time the standard adopted was not too high. The objection was raised by the Dominion Dairymen's Association that the standard might be too high for May and June milk, and to meet this a further examination of twenty-four herds was made, one herd of pure Jerseys was omitted, as the fat and total solid average was very high, a number of samples were included known to be skimmed or watered, but even then the result was:

Total solids	12.58	per cent.
Butter fat	3.80	,,
Non-fat solids	8.78	,,

Similar results were obtained at examinations made from time to time up to the present, and while a considerable percentage of the whole number of herds fail to reach this percentage, there are so many that go above it that the average is reached or passed in every case of the examination of a large number. This would indicate that any careful dairyman could have a herd that would supply milk of this standard. If this were adopted, of the 2,011 samples examined 68 per cent. would be marked genuine, 23 per cent. doubtful, and 11 per cent. adulterated.

The examinations carried out along the same lines in 1907 show that the milk in the districts of British Columbia and around Toronto give the majority of the cases of "adulteration." In this respect Professor Ellis of Toronto University expresses the opinion that it is impossible to assert that a sample of milk has been adulterated with water if the solids not fat exceed 8 per cent., or that it has been skimmed if the fats exceed 2.5 per cent. It is not feasible in the presence of wide variations to make a national standard, but it is quite possible for municipalities to make regulations with regard to their milk supply which shall require some such standard.

TORONTO MEDICAL SOCIETIES.

Address on the Surgical Aspect of the Prostate.—On the evening of March 3rd, Dr. Young of Baltimore was the guest of the Academy of Medicine, Toronto, and gave an address on the surgical aspect of the prostate. His work and writings have made him an acknowledged master on this subject, and his address was very much appreciated by a large audience. He emphasized first the part the gland plays in the harbourage of gonorrhoea, and insisted that there should always be an examination of the prostatic secretion before any case can be considered cured. The results of infection to the wife and to the patient himself may be serious and prolonged. In the latter the enlargement and fibrous thickening of the gland and the seminal vesicles is the cause of many indefinite and widely-distributed symptoms, especially pains in the groin, hips, and flank, simulating appendicitis, sciatica, and renal colic. There may be haematuria from polypi in the posterior urethra, interference with micturition resulting in residual urine, cystitis, etc. The treatment of these cases may be effectively carried out by massage of the prostate, and large thickenings and troublesome symptoms made to disappear. True prostatic hypertrophy is quite a different condition, and is due to an adenoma; the cases frequently give no history of venereal disease, and treatment by massage is unavailing. The sufferers are forced to adopt the catheter life, which is irksome, and although many carry it on for years, is dangerous, and frequently results in fatal complications. The speaker discussed the suprapubic method and the wonderful success achieved by Freyer, but urged as objections insufficient drainage, the communication of the cavity with a suppurating bladder, and the lack of packing in the wound. Dr. Young then described the operation which he prefers, and to which he has added so much of value in technique that, did his modesty not forbid, he might almost claim it as his own.

The incision in the shape of a V with the apex forward is made so as to permit of a retrobulbar operation so as to avoid haemorrhage and is retroligamentous, passing in just posterior to the transversus perinei muscle and dissecting upper and forward, and keeping to the lateral aspect so as to avoid the ureter and ejaculatory duct. A retractor is used which is passed into the bladder through the incision made in the membranous urethra, and which opens out by turning a screw so that the prostate can be pressed down and out; the enlarged lobes of the gland are now readily delivered through the incisions made in the capsule. The space is packed and two tubes passed through the wound to the bladder and left in place. Irrigation is used for twenty-four hours, the patient is induced to drink large quantities of water, and if vomiting, rectal or submammary infusion is used. The gauze is removed the second day, and the patient got up; they leave the hospital within three weeks.

Dr. Young reported 252 cases operated on with 7 deaths in all, or 2.7 per cent. Of these 125 had used the catheter constantly before operation and only 1 since. Two were over 80, and several of the deaths could hardly be credited to the operation.

Of referred cases at present seen by Dr. Young for prostatic hypertrophy, cases of cancer are found in the relation of 1 to 3 to cases of simple hypertrophy. He has operated on 6 with good results. The operation is necessarily different from that outlined, because cancer does nor cause a similar tumour; it begins as a rule as a suburethral growth, but grows out not as a middle lobe but as a stricture around the whole urethra; it does not invade the bladder until later, and is felt as a broad flat mass, more like the infiltrations resulting from gonorrhoea. The operation must be wide, removing the whole growth and contiguous tissue, and is generally followed by incontinence. The cystoscope should always be used in examining the bladder before deciding on the diagnosis.

A Case of Caesarean Section.—At the meeting of the Ex House-Surgeons' Association of the Toronto General Hospital held on March 2nd, Dr. Fenton, of the obstetrical staff, reported a case of Caesarean section. The patient was a 2-para, aged 30, a Russian, and when admitted had already been seventy-two hours in labour. Examination showed a conjugate diameter of 2¾ in., a septic condition, and a living child, and in view of the impossibility of delivering a living child by the vaginal route, and the fact that the condition of the mother was in any case a grave one, it was determined to perform a section. The question as to the kind of operation was complicated by the fact that the patient could not speak or understand any English, and there was at hand no means of communicating with her; therefore it was decided that the uterus should not be removed, in view of the fact that no permission could be obtained for what was the operation of election in the case. The child was removed and readily resuscitated; there was a large amount of ascitic fluid present, and examination of the uterus showed that it was in aseptic condition; the wound in the uterus and parietes was closed with drainage. The woman died on the ninth day, after a rather peculiar course marked by little elevation of temperature, a fairly rapid pulse, apparently normal lochia after the fifth day, but the escape from the wound of large quantities of an ascitic fluid. *Post-mortem* evidence was found of a peritonitis involving the pelvis and adjacent portion of the abdomen. The child has lived and is healthy. The question of choice of operation in the case, where no permission could

be obtained, is one worthy of consideration by surgeons and officers of hospitals, as it is quite possible that were a mutilating operation performed, even though offering better chances of overcoming the septic condition, the surgeon and hospital might be called on to defend an action for malpractice.

Trinidad.

It is stated in the Colonial Office report on Trinidad that on January 30th, 1907, a case of yellow fever occurred on the island, followed at intervals by others, the outbreak lasting until the end of August, during which time 38 cases occurred, of which 20 proved fatal. The occurrence of cases of the disease, in some instances from ten to eighteen days after the isolation of the last case, shows the necessity of extending the period, which under the present regulations is six days, and the General Quarantine Conference, which met at Barbados in June, made proposals to this effect, the period of infection being extended to eighteen days. The birth-rate of the island was 33.7 per mille and the death-rate 24.6, both showing a decline from 36.3 and 25.9 respectively of the previous year. The population is just now in a state of unstable equilibrium, owing to the large number of labourers who are leaving Trinidad for work on the Panama Canal, where high wages are paid. At the same time the customary immigration of plantation coolies from the East Indies takes place, and four ships arrived from Calcutta during the year, bringing over 2 500 persons. Malaria is apparently very prevalent among these coolies, there having been 9,055 cases during the past year, and 1,236 cases of dysentery. The records for these people seem to be kept separate from the hospital returns, where 1,279 malarial cases with 82 deaths are entered. Of these, by far the largest number (1,119) were benignant tertian, 79 were malignant tertian, 37 remittent, and 4 blackwater. Ankylostomiasis does not seem as common as might be expected, 413 cases only being admitted. Yaws showed 1,000 cases but no deaths, and enteric 132 cases with the large proportion of 50 deaths.

CORRESPONDENCE.

THE CLINICAL VALUE OF THE "PANCREATIC" REACTION IN THE URINE.

SIR,—I am gratified to learn from your issue of April 11th that a British observer, and particularly one of such eminence as Dr. Chalmers Watson, is able to confirm my work on the urinary changes met with in inflammatory affections of the pancreas, and to know that the clinical value of the "pancreatic" reaction is now recognized here, as well as on the Continent and in America.

Dr. Chalmers Watson has had the opportunity, which has been denied to me in the majority of the cases on which I have been asked to give an opinion in my capacity as a consulting pathologist, of watching the cases he has examined, and in several instances of following them to the *post-mortem* room. His conclusions, therefore, are of peculiar value, and I am glad to find that he confirms the opinion I have formed that pancreatitis is a very much more common condition than is generally supposed, and arises from a variety of causes not generally recognized. When I first began to work at this subject, it was under the impression that most cases of chronic pancreatitis were due to gall stones, and my earlier experience of the pancreatic reaction tended to confirm this, but as my investigations progressed, and I was called upon to examine specimens of urine from a larger variety of more serious medical cases, and particularly those associated with advanced disease of the circulatory system and catarrhal affections of the intestinal tract, I was forced to the conclusion that either the pancreatic reaction was not as specific a test as I had imagined, or that chronic pancreatitis was much more frequently due to other causes than I had thought. Opportunities of investigating some of these doubtful cases personally, and the information kindly supplied to me by the medical attendants of others, convinced me that it was not the reaction that was at fault, but my too limited conception of the etiology of the disease. The causes of pancreatitis are discussed in considerable detail in the chapter on pathology in *The Pancreas, its Surgery and Pathology*, recently published by Mr. Mayo Robson and myself, and may be briefly summarized in the three following groups:

1. Gall stones and affections of the biliary passages.
2. Infections spreading along the pancreatic ducts from the intestine.
3. Diseases of the circulatory system and morbid processes reaching the pancreas by way of the blood and lymph vessels.

These, it will be seen, correspond fairly closely with the divisions adopted by Dr. Chalmers Watson in his paper. My experience of over 800 cases has demonstrated that by taking into account the results of a careful and complete analysis of the urine, and if possible of the faeces also, with a knowledge of the history and clinical symptoms of the case, it is possible not only to recognize the presence of pancreatitis, but also to determine the probable cause with a very fair degree of certainty.

Dr. Chalmers Watson states that an associated glycosuria was comparatively common in his cases, and draws attention to the fact that in a consecutive series of 65 cases of pancreatitis operated on by Mr Mayo Robson sugar was only found in the urine of 4. I may point out, however, that in Mr. Mayo Robson's series the pancreatitis was associated with, and was probably due to, the presence of gall stones in the common bile duct, and, as Opie has shown, this is a variety of pancreatitis that only gives rise to glycosuria at a very advanced stage. When one considers other causes, also, and more especially arteriosclerosis and duodenal infections, the proportion is considerably increased and probably works out at about the same percentage as that obtained by Dr. Chalmers Watson. The not infrequent association of glycosuria with pancreatitis and, as my experience would suggest, its still more common occurrence as a remote effect, only serves to emphasize the great importance of recognizing inflammatory affections of the pancreas in an early stage, when they can be satisfactorily dealt with, lest in the course of time the disease should progress and give rise to incurable diabetes. The means to this end is now available, and as I have shown elsewhere (*Surgery, Gynaecology, and Obstetrics*, June, 1908, p. 22), there is a strong probability that in the recognition and early treatment of pancreatitis lies the key to the prevention of a notoriously intractable disease.—I am, etc.,

London, W., April 13th. P. J. CAMMIDGE.

THE PROPOSED HOSPITAL FOR MENTAL DISEASES IN LONDON.

SIR,—With reference to Dr. Lauriston E. Shaw's letter upon the above subject in your last issue, it may be of interest to state that up to about 1893, at which time I was assistant medical officer at the West Riding Asylum, Wakefield, that institution was visited by the late Dr. Wright of Wakefield in the capacity of consulting physician; and I believe I am correct in saying that a salary was attached to the post, a point which could be verified by reference to that asylum. I quite agree with Dr. Shaw that adequate remuneration should be paid to visiting physicians in the case of an institution supported out of the rates. The "*quid pro quo*" which those who propose that these physicians should be "honorary" have on their minds—and to which Dr. Shaw alludes—may be assessed upon the cynical assumption that the altruistic motives which so frequently actuate medical men may be relied upon to operate in this instance also; but I suspect that the proposition is based upon the calculation that men will be found ready to act in an honorary capacity in exchange for the privilege of styling themselves Physician to the Hospital. No doubt this would be a sordid calculation, but very possibly also a shrewd one.

Must one turn to the rank and file of the profession for instances of sweating, or dare we suggest that pilocarpin-effects are sometimes to be noted in high places, as amongst members of the staff of some general hospital? However that may be, it is certainly adding insult to injury if the sweating is rate-supported.—I am, etc.,

City Mental Hospital, Cardiff, April 13th. EDWIN GOODALL.

THE WORD OF THE ORACLE.

SIR,—I can, from five years' experience as house-surgeon in various hospitals, fully corroborate "House-Surgeon's" letter.

1. One case I remember well was that of a young man who presented himself with the verbal message, "My doctor says I am to come into hospital to have a tumour tapped." Examination revealed a right inguinal hernia. Operation was refused, and therefore he was refused admission. Had his medical man merely informed the patient that he required further hospital treatment, and left the nature of such treatment to the discretion of the staff, he would have saved his own reputation and safeguarded the interests of his patient.

2. I also remember a patient being sent to hospital from a village five miles distant from the hospital. He arrived with an in-patient's letter and a half-sheet of notepaper, upon which were written the words, "For admission." The hospital was full. The case was one of glands in the neck, so, perforce, he had to return home. Of course, the house-surgeon was blamed for the non-admission of the patient. The real culprit was the aggrieved person.

I may add that "the oracle" at the hospital has not infrequently saved the reputation of his colleagues.

3. I remember a child being sent up because it was suffering from consumption and wasting very rapidly. The medical man had informed the parents that the child would not require to be admitted but would be given cod-liver oil and be treated as an out-patient. Here was another oracle speaking, *not* the house-surgeon scapegoat. Examination revealed a temperature of 104°, and the left side of the chest full of fluid, and, as anticipated, an exploring needle revealed the presence of pus. I had then *per vias devias* to point out to the mother that the patient would have to remain in hospital and a slight operation would have to be performed, and all this explanation was necessary, because the "oracle" outside the hospital had spoken so emphatically, given the parent a wrong diagnosis, and so prescribed wrong treatment.

My experience coincides not only with that of "House-Surgeon," but also with many house-surgeons, with whom I have discussed this question. But we have hopes that now the question of ethics is being brought constantly before the readers of the JOURNAL and from time to time before our Divisional meetings, we may yet see the time when general practitioners will recognize that a house-surgeon is one of their colleagues, and not a mere hireling, and that courtesy must be extended as freely to him as to every other colleague.—I am, etc,

Bedford, March 28th. S. J. ROSS.

"OPHTHALMIA" OR "CONJUNCTIVITIS" NEONATORUM.

SIR,—If Mr. Nimmo Walker will refer to the dictionary definition of the word "hybrid," he will find it given as "mongrel: produced from the mixture of two species." He claims that conjunctivitis neonatorum is a "horrible hybrid"—why he does not explain—and that "ophthalmia" neonatorum is classical. But while the former is obviously wholly of Latin construction, and is scientifically accurate, the latter is made up of a mixture of Greek and Latin, is wrong in a scientific sense, and illustrates the definition of a "mongrel" terminology, as aptly as it would be possible to conceive. Classical the word "ophthalmia" may be in the sense that it was used by Hippocrates, nevertheless posterity is scarcely treating that distinguished physician kindly by assuming that even he would prefer to continue an error than to correct it. The question of this special terminology will settle itself. Medical students who are taught in their bacteriological classes that certain specific organisms cause conjunctivitis will refuse to accept the definition of the disease under the name of "ophthalmia," not because they profess to know better than their teachers, but solely in consequence of the trend of present day medical education becoming more and more that of the insistence upon scientific accuracy.—I am, etc,

London, W., April 12th. PERCY DUNN.

* * This correspondence must now cease.

THE report submitted at the annual meeting of the Metropolitan Hospital Saturday Fund on April 11th showed that the income in 1907 was £27,140, or £680 higher than in the previous year. The receipts included £3,529 collected by 23 local committees, and £105 resulting from football competitions. A sum of £24,437 had been distributed among 208 institutions. A resolution was passed stating that the meeting approved of the principle of collecting small contributions weekly in aid of the metropolitan hospitals and kindred institutions.

Medico-Legal.

A GERMAN ANTIQUACKERY BILL.

THE struggle against quackery in every civilized country has opened up a road which up to the present has proved itself more difficult to negotiate than the road from Pekin to Paris, and the obstacles which have to be overcome in this real international race are more formidable than rivers in torrent and bridges which break down as the car is passing over them. In this country Parliament has hitherto not assisted in defending the public against the dangers and pitfalls connected with the practice of quacks and with the unrestricted sale of quack remedies. Indeed, it would seem that the charlatan and the unqualified person have no responsibility as compared with the registered medical man, and can endanger and even throw away human life without much personal risk. While examples of the unsatisfactory state of affairs are scarcely necessary, one parallel may be given. Within a few months past an unqualified chemist caused the death of a woman by injecting a highly toxic drug, but was not called to account by the law; while in the case of Lynn Thomas and Skyrme honest practitioners were condemned because they had the temerity of throwing off the yoke of tradition and acting logically and intelligently in the treatment of a surgical condition. The practice of medicine and of the treatment of diseases and injuries of the body by unqualified persons is forbidden in Austria Hungary, France, Russia, Italy, Sweden, Norway, Belgium, Holland, Brazil and other extra-European countries. In Germany and England the charlatan is tolerated by the law.

In order to overcome the difficulties and protect the public, a new Bill is being introduced into the German Legislature. It is based on the idea that recognition of unqualified practitioners and the limitation of the practice of these persons is more likely to diminish existing evils than a prohibition of unqualified practice. The Bill expressly avoids using the term "quack," partly because it is believed that a certain section of unqualified practice cannot be justly termed "quackery," such as a section of dental practice, which is largely carried out competently by unqualified persons, etc., and partly because it also deals with veterinary medicine and the traffic in medicaments, and in this respect the wider the term the more control is likely to result. The following is a summary of the paragraphs:

§ 1. Persons who treat diseases, affections and injuries of human beings or animals for gain without having passed the recognized examinations are bound to notify to the police their calling, address and name in writing not later than the time when they begin to treat persons or animals. Those who are so engaged when the Act comes into force must notify within 14 days of that date. Notice of change of address, etc., must be given within 14 days of such change.

§ 2. In notifying to the police, these persons must give information as to their social conditions, as far as these are of importance to their calling, and also as to their education and past practice if required. They must keep proper books of business, which have to be produced to the police when required. The Prussian Diet is to determine how such books must be kept.

§ 3. Such persons are forbidden to treat persons or animals by correspondence, to treat persons for gonorrhoea, chancre, or syphilis, to treat persons by means of narcotics, etc., which act beyond the site of application, by hypnosis or by any mystical processes. The Diet can determine whether the treatment by general narcotics, hypnosis and mystical processes shall in any special case apply to animals. The Diet can further add other procedures to the list without amending the Act. No notifiable disease may be treated by an unqualified person practising for gain.

§ 4. The practice of such persons may be prohibited when evidence can be adduced that their practice endangers the life of the human patient or animal or damages health, or that the persons employing them are being swindled. The practice can be prohibited if the practitioner is convicted of an offence in connexion with his calling or repeated convictions for misdemeanours. The same will result when a conviction carries with it the loss of civil rights, but the prohibition will then only hold good for the period during which the person is deprived of his civil rights. The prohibition to practise may be recalled by the Landeszentralbehoerde (analogous to our Local Government Board), or by some other Board delegated to carry out this duty, after the lapse of one year.

§ 5. Deals with the right of the Diet to limit the traffic in "means or objects" for the prevention, amelioration, or cure of diseases, affections, or injuries of human beings or animals, and to prevent the same, when it can be shown that the traffic threatens damage to health or when it is connected with deceit or imposition. A commission is to be appointed at the Kaiserliche Gesundheitsamt by the Prime Minister, and is to consist of judges or senior lawyers and medical, veterinary, and pharmaceutical experts. This Commission is to advise the Diet with regard to the preparations and "objects," etc., which are questioned.

§ 6. This and the following are the penal clauses: A person issuing public advertisements or recommendations of means, objects, or processes for the prevention, amelioration, or cure of diseases, etc., which contain statements essentially untrue may be sentenced to one year's imprisonment and a fine up to £150, or one of these two. The same applies to untrue statements concerning the person who inserts the advertisement or who manufactures the preparation, etc., and also concerning results claimed to have been attained by such persons.

§ 7. Persons who advertise or recommend treatment by correspondence, or who advertise or recommend means, objects, or processes for the prevention, amelioration, or cure of venereal diseases, or for the prevention of conception, etc., or advertise or recommend preparations, etc., the constituents, essential conditions, etc., of which are kept secret or are veiled, are liable to 6 months' imprisonment and a fine of £5 or one of these two.

§ 8. The same penalty applies to persons who act in contravention to the paragraphs 3 or 4. When the offence committed against paragraph 3 can be shown to be due to negligence the penalty is limited to 3 months' imprisonment and a fine of £30 or one of these two.

§ 9. Persons who treat human beings or animals without complying with Paragraph 1 and without being officially recognized by the State are liable to a fine of £7 10s. or to imprisonment, provided that they receive payment for such treatment. No penalty is inflicted when the treatment is undertaken in emergency and is only continued until the help of a person recognized by the State can be procured.

§ 10. Persons who keep for sale preparations, etc., forbidden by the Diet, or who introduce the same or offer them for sale or sell and hand over to others for sale or publicly advertise or recommend are liable to a fine of £7 10s., and the goods concerned can be seized.

§ 11. If a person charged under paragraphs 9 or 10 cannot be found or committed, the goods may be confiscated.

§ 12. Public advertisement for the purposes of this Act is taken to mean the publication of recommendations, of results of treatment, of opinions as to value, of thanks to the proprietors, etc., and of similar utterances.

§ 13. Persons who refuse to give full information or who give incorrect information under Paragraph 1, or who keep books of business in a manner other than that prescribed by the Diet, or in an incorrect manner, or who keep such books secretly and refuse to produce the same when required to do so, or who destroy any such books, are liable to fines up to £7 10s. or to imprisonment.

§ 14. Defines what authorities are meant under the term "police authorities."

§ 15. Repeals certain regulations with regard to the practice of unqualified persons, and also with regard to advertisements, etc., of preparations, etc., dealt with in the Bill, while the last paragraph gives the date when the law shall come into operation.

An editorial survey of the Bill, with explanatory notes, published in the *Berl. klin. Woch.*, gives much highly interesting information with regard to unqualified practice and traffic in secret remedies. The growth of the number of unqualified practitioners appears to be alarming—as far, at all events, as the German Empire is concerned—and the financial aspect of their practice and of the traffic has increased in recent years to very serious dimensions. It is, however, unwise in the interests of our German colleagues either to discuss the bases of the Bill or to illuminate the question from the outsider's point of view, since this might influence its passage through the Reichstag. If the profession in Germany is satisfied with the terms, and considers that the evils existing in that country will be best checked by its means, we can only express our sympathy with the members of that profession and wish them good fortune.

A NEW ZEALAND MAGISTRATE'S DEFINITION OF "QUACK"

At the police court, Auckland, New Zealand, on February 7th, Max Gotch, a herbal specialist, was, we learn from the *New Zealand Herald*, charged before Mr. R. W. Dyer, stipendiary magistrate, on the information of Dr. Purdy, district health officer, with wilfully and falsely using a description implying that he was recognized by law as a practitioner in medicine; with selling a certain poison, ergot of rye, without distinctly labelling the bottle "Poison," as required by the Sale of Poisons Act, 1871; with selling the poison without making an entry in a proper book for the purpose as required by the Act; and with selling the preparation without being a person registered under the Act to sell it. The defendant pleaded guilty to the three last charges, but denied falsely representing himself as a doctor. According to the evidence of the inspector who had consulted Gotch and purchased the drug, Gotch said that he was not registered in New Zealand but was registered over "on the other side." It was submitted for the defendant that this evidence showed that he had said that he was not registered as a fully-qualified medical practitioner in New Zealand. Further evidence having been tendered, the magistrate said that, even taking the most liberal view of the case, the defendant had pretended he was duly qualified by law. The prosecuting counsel asked for the full penalty with costs on the highest scale, saying that the man was "an arrant humbug and a quack of the worst type." Counsel for the defendant protested against these terms, whereupon the magistrate made the following observations:

Well, what is a quack? He is a man who states that he is a doctor, and practises medicine without any qualification whatever. At the same time I do not think that you are, under the circumstances, justified in making an attack upon the man. I certainly consider, however, that he comes within the term "quack."

Counsel withdrew the charge of failing to comply with the regulations by not putting the label "Poison" on the bottle.

Mr. Dyer said that on each of the two charges under the Poisons Act defendant would be fined £5, and costs £5 19s. "On the charge of falsely representing yourself to be what you knew you were not," continued the magistrate, "I am not going to inflict the maximum penalty, because, as far as I know, you have not been convicted before, but I am going to impose a fine which I hope will have the effect of stopping you and men like you from carrying on this sort of thing."

Defendant was fined £30, and costs £3 16s.

DEATH FROM INHALATION OF A TOOTH.

The *Jersey Times* of February 21st and 22nd gives a very full report of the inquest held on the body of the late Mr. C. G. Pirouet, who died as the result of the impaction of a molar tooth in the right bronchus. Mr. Pirouet was a resident of St. Lawrence, and, having occasion to have some teeth extracted, he made an appointment with his medical man to administer an anaesthetic on January 7th. Somnoform was administered, and the dentist proceeded to the extraction of a molar tooth, when symptoms of respiratory obstruction suddenly developed, followed by spasmodic coughing, as the effect of the anaesthetic began to pass off, and the dentist declared that the tooth had slipped down the throat. Another medical man was immediately summoned, an emetic administered, and the patient inverted, but without result. A radiograph of the larynx was taken the same evening, but without revealing the tooth. The patient, however, became more comfortable, and remained so for two days, when the cough became troublesome again. At the end of a week there were distinct signs of obstruction of the lower lobe of the right lung, and the operation of tracheotomy was performed. It was then decided, as the general condition of the patient continued to be good, to send him to London for further advice, but on February 1st, the eve of his departure, severe pain was felt in the right side, and the temperature rose. The pain and fever persisting, other local medical men were seen in consultation, and finally a surgeon was summoned from London. The symptoms then pointed to abscess of the lung, but, as no pus could be located, it was considered inadvisable to operate. Ten days later, however—on February 18th—pus was discovered, and about 2 pints were withdrawn by aspiration. On the following day it was decided to open and drain the abscess, and chloroform was administered, but the patient died suddenly under its influence, according to the report, from "heart failure." At the *post mortem* examination about 2 pints of pus were found in the right pleural cavity, the right lung was collapsed, the heart was "friable and flabby" and its cavities somewhat dilated, and the tooth was found lying crown downwards in the right bronchus, blocking one of the secondary divisions of that tube, the upper end of the fang being within an inch of the bifurcation of the trachea.

The accident which caused death in this case is fortunately a very unusual one, though teeth have been swallowed after extraction, and the escape of the tooth from the forceps on its emerging from the alveolar socket is not an uncommon occurrence. The subsequent history of this case presents several points of surgical interest. It was suggested by one of the medical witnesses at the inquest that, had tracheotomy been performed at a lower level, the tooth might have been found and extracted through the wound. However this may be, the case is certainly one in which Killian's method of bronchoscopy would have given the best chance of saving life, and serves to point the moral of Dr. Paterson's remark (British Medical Journal, February 8th, 1908) that "it behoves the profession to bring itself into line with the real progress which has taken place in this important branch of surgery."

LICENSING STATISTICS.

A Blue Book of Licensing Statistics for 1907 has recently been published. Many of the deductions which can safely be made from the mass of figures to be found in the volume are set out in the preface. It is stated with reference to the cause of drunkenness that "density of population is the dominating influence, and that a decrease in licensed premises does not lead immediately or clearly—at all events, so far as it has gone hitherto—to a decrease in convictions for drunkenness." This statement naturally tempts one to inquire a little more closely into the figures set out in the Blue Book. The first series of tables contains a list of all the licensing districts in England and Wales, showing, amongst other things, the number of on-licences in, and the population of, each district. Another table—printed at the end of the book—gives the total number of convictions for drunkenness during 1907. Assuming that convictions are an accurate index of liquor consumption—and there is no other guide—the figures recorded in the Blue Book afford a clear indication that the number of on-licences has little or nothing to do with drunkenness.

The following table—compiled with reference to a number of towns, etc., chosen at random—gives on the left hand the ratio of convictions to population, and on the other the ratio of licensed houses to population:

	Convictions.	On-Licenses.
Northampton...	1 to 561	1 to 296
Halifax	1 to 502	1 to 379
Huddersfield...	1 to 470	1 to 349
Sheffield ...	1 to 271	1 to 374
Leeds	1 to 245	1 to 595
York	1 to 214	1 to 340
Oldham	1 to 172	1 to 366
Manchester ...	1 to 161	1 to 310
Hull	1 to 113	1 to 539
Newcastle ...	1 to 88	1 to 462
Middlesboro'...	1 to 70	1 to 837

Statistics, of course, are always dangerous and can be made to prove anything; but it is startling to find that Northampton, which has the smallest number of convictions, has the largest number of on-licenses; whereas Middlesboro', which has the

largest proportion of convictions is last on the list in so far as the number of public-houses is concerned. Again, in the case of Leeds convictions are much more numerous than they are in Northampton, yet the houses for obtaining liquor are less numerous.

MEMORIAL TO A COUNTY COURT JUDGE.

THE CASE OF CROPPER *v.* STOKES

DR. H. FRASER STOKES (Highbury, N.) writes: In reference to the recent action, in which I was defendant, will you allow me to take advantage of your space to thank the numerous kind friends who have interested themselves on my behalf, and especially those gentlemen who have been good enough to sign the memorial to Judge Edge? The case has been already briefly but fully detailed by Dr. Morison in the *Lancet* of April 4th, so I need not enter further into it. All I have to state is that, acting under the advice of the Medical Defence Union, in whose hands I fully believed my interests to be secure, I resisted an effort on the part of executors to avoid payment of certain reasonable fees for medical attendance. My action in this case has throughout been perfectly simple and straightforward; the position which I adopted at the outset I still maintain, and have nothing to retract. With regard to the judgement itself, as such, I take no exception, although I cannot concur in it. The preponderance of evidence, as is almost unavoidable in many actions of this kind, was on the side of the plaintiffs, and it was perhaps to be expected, although a great surprise to me, that Judge Edge gave a verdict in their favour. I submit, however, that a mere deficiency of evidence is not sufficient basis on which to found the denunciations which were levelled against me. I maintain that his remarks, which have caused me great pain and annoyance, and very probably injury as well, were entirely undeserved by me, and were not justified by the circumstances of the case.

EASY CENSURE.

"M.D." sends us a letter and a copy of the *Exeter Express and Echo* which contains a report of an inquest held respecting the death of a woman who died from haemorrhage after childbirth. The labour came on a month prematurely, and the husband went to call the doctor who was engaged to attend his wife, but found that he was ill in bed and could not come. The husband then called on three others in succession, two of whom declined to come. When the third arrived he found the patient *in extremis*, and she expired ten minutes after his arrival. At the inquest the jury, after hearing the evidence of the witnesses and the explanations of the various medical men who had been called, to the effect that they had no knowledge of the serious nature of the case and had patients of their own to attend to at the time, adjourned until the next day, when they gave the following verdict and rider: "That the deceased died from haemorrhage after confinement, probably from the want of skilled attendance at the time"; and they added the following rider: "The jury are further of opinion that —— [the first doctor] was neglectful, not culpably, in not handing over his contracts and responsibilities to another medical man when he was obliged to take to his bed from severe illness, and that —— [the other medical men] are to blame, but not to the same extent, for not attending when they were informed that the medical man who was engaged was unable to do so" The names of all the medical men were mentioned by the jury and published, which we refrain from doing. The coroner is reported to have agreed with the rider of the jury. Our correspondent remarks in his letter drawing attention to the newspaper reports: "I know nothing whatever myself of the case, but the verdict seems to me to affect the medical profession very seriously."

*** It is to be regretted that coroners' juries do occasionally return riders similar to that recorded above; they do so in the belief that a medical man is bound to attend at once on being told that a person is in labour or ill and requires a doctor. The doctor may have no knowledge of either the messenger or of the person who wishes to see him, and may at the time be engaged in attending his own patients, and it should be known that he is not legally bound to attend, and may decline to do so without giving any reasons at all. In the present case the medical men had no knowledge that the case was urgent or dangerous, or otherwise than a natural labour. Medical men are, as a rule, ever ready to give their services and render aid at any time in cases of emergency or danger, and in the endeavour to save life often jeopardize their own. Such services are often rendered without fee or reward, sometimes even without thanks. Of all professions the medical is the most liberal in rendering its services, and had it been realized that the life of the woman was in danger or that it was an urgent case, we do not doubt that each of the medical men in question would have done his utmost to render assistance.

J. D.—We are not aware that the law of Scotland differs from that of England with regard to responsibilities for deaths under anaesthetics, and we would refer our correspondent to the report of the discussion on the legal liability of the anaesthetist at the Medico-Legal Society, published in the BRITISH MEDICAL JOURNAL of March 28th, 1908, p. 747.

ASSISTANTS AND FEES FOR ANAESTHETICS.

INNOCENT writes: A. has a patient whom he sends to a private hospital in a town some distance away to be operated on by a surgeon there. A. takes his assistant, B., with him to administer the anaesthetic, whilst he himself assists. Has B. any claim to be paid a fee for administering the anaesthetic?

*** If any fee were paid for the administration of the anaesthetic it would be due to A. B. has no more right to such a fee than for any other professional services he might render to A.'s patients. The fact that another surgeon assisted A. in the treatment of this patient in no way alters the contractual relations between A. and B.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CONDUCT OF MEDICAL OFFICERS OF ACCIDENT INSURANCE COMPANIES.

D. P. H. G.—The medical officer of an accident insurance company when visiting persons who have made claims should give due notice of his visit to the patient's medical attendant, and ask to be informed if the suggested time is inconvenient. When, as is sometimes the case, he does not know the name of the attending practitioner, he can only notify the patient and request that he will secure the presence of his medical adviser.

OBLIGATIONS OF HOSPITAL OFFICERS TO THEIR COLLEAGUES.

KENT writes: Dr. A. sent a patient to the local hospital to be operated upon for appendicitis; the patient had paid Dr. A.'s fees up to the time he went to the hospital. The operation was performed by Dr. B. The patient paid a guinea a week for maintenance. Some time afterwards, Dr. A. heard that his patient had been discharged from the hospital, and that he was being attended by Dr. B. at the latter's private house for unhealed stitches. Similar actions have occurred several times before. What ought A. to do?

*** We answered a similar question on January 18th, page 180. We may repeat that hospital officers should not as a rule continue in attendance upon the patients of other practitioners after they leave hospital. In the previous case the patient was poor and the attendance purely charitable. In the present instance, it is conceivable that the operator felt it his duty to see that the stitch-wounds were healed and we notice that our correspondent does not say that the patient paid for this attendance. As to A.'s future conduct, we should suggest that when sending patients to the hospital he could give them a letter of recommendation to a member of the staff in whom he has confidence, requesting that on their discharge they should be sent back to his care if any further attendance is necessary.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE MEDICAL STAFF OF THE METROPOLITAN ASYLUMS BOARD.

AT the meeting of the Metropolitan Asylums Board on April 7th, the General Purposes Committee advised that the proposal of the Asylums Committee that "provided no rations be issued in excess of the usual quantity, no charge be made for visitors to the assistant medical officers, but that such officers be empowered to purchase extra rations from the stores if required," was illegal. Mr. R. Brown moved that it be a reference to the Asylums Committee to consider and report as to the best means of carrying out the recommendations of the Medical Superintendent with reference to improving the conditions of service of the medical staff of the asylums. He said the young men who joined the staff as medical officers

were subject to the most tyrannical treatment. Professor W. R. Smith, whilst in every way desirous of improving the conditions of service under the Board, reminded the members that in the recent inquiries, particularly at West Ham, the Local Government Board had expressly laid it down that allowing visitors to partake of rations not intended for them was illegal. He did not consider the existing conditions were unreasonable in regard to entertainment. An assistant medical officer could have a friend to stay with him for three weeks, at a charge for entertainment of 2 guineas, whilst for separate meals the charges were: Breakfast, 6d.; lunch, 6d.; dinner, 1s. Surely serious objection could not be made to these charges? The Chairman reminded the mover of the resolution that the Asylums Committee had already considered the whole question, and had adopted every suggestion of the medical superintendent except this one with regard to rations. It seemed, therefore, inadvisable to reopen the matter. The motion was lost, only ten members voting in favour of it.

REGULATIONS FOR THE USE OF HORSEHAIR.[1]

The Chief Inspector of Factories has forwarded the regulations made by the Secretary of State for processes involving the use of horsehair from China, Siberia, and Russia. These regulations, which came into force on April 1st, 1908, require that disinfection of materials shall be carried out (*a*) by steam under defined conditions, or (*b*) by other means under certificate. If the latter method is adopted, the certificate must be signed by the director of a recognized bacteriological laboratory, and must state the methods employed for the destruction of the anthrax spores. A register is to be kept of such particulars as the date of the receipt of the material, the country of origin, the method and date of disinfection, and the name of the person from whom the material was obtained. By "disinfection" is meant exposure of the tail or horsehair to steam at a temperature of 212° F. for half an hour or to some certified disinfectant. Material thus disinfected is to be stored separately. All bales must be opened by the side of efficient screens for the removal of dust, and the dust is to be burned. Respirators are to be worn by the workpeople employed in certain processes, and persons employed must report to the foreman any cut on the skin or sore. The regulations, if loyally carried out, will do much to prevent anthrax in factory operatives.

NON-TEXTILE OPERATIVES.

A supplement to the annual report of the Chief Inspector of Factories and Workshops for the year 1906,[2] recently issued, consists mainly of a series of tables showing the number of persons employed in non-textile factories in 1904. It is also a summary of the medical reports for 1906. Information is supplied supplemental to that furnished in the returns of persons employed in factories and laundries for 1905, and therefore completes the return for 1904. At that date there were employed in non-textile factories children (half-timers under 14), 2,406 males and 895 females; young persons (full-timers under 18), 301,309 males and 165,049 females; while the numbers of adults employed were 2,146,398 males and 451,723 females. The total number of persons employed in non-textile factories for 1904 was 2,450,115 males and 617,667 females, compared with 2,507,770 males and 604,424 females for 1901; in other words, fewer males and more females were employed in non-textile works in 1904 than in 1901. If the total numbers of persons of both sexes thus employed in the United Kingdom be taken, they are for 1904 3,067,780, and for 1901 3,112,194.

MILK AND DISEASE.

In the Sheriff's Court at Hamilton, N.B., on March 27th, as reported in the *Aberdeen Daily Journal* of March 28th, a defendant met a claim made upon him for payment for milk supplied by a counterclaim in which it was alleged that the plaintiff, by supplying him with milk which was not fit for human food, had committed a breach of contract, and should therefore be cast in damages. The contention that the milk was unfit for human food seems to have rested on the fact that a case of typhoid fever had occurred on the plaintiff's farm, and that the authorities of Kirklands Asylum ultimately traced an outbreak of typhoid fever in their establishment to milk infection from this case, of the occurrence of which no notice was given either to the authorities or to the defendant. On the conclusion of the arguments the Court held that a milk-seller practically guaranteed that his milk would be free from disease germs, and that in this case there had been a breach of contract. Hence the defendant's counterclaim was considered to have been sustained.

THE PRICE OF SCARING CROWS.

The Falmouth Board of Guardians on March 26th decided to take no action on the suggestion of the Local Government Board that £20 a year was insufficient remuneration for the medical officer of the workhouse. Mr. Preston Thomas, Inspector to the Local Government Board, said he had been instructed by the Board to confer with the guardians on the matter. The remuneration was the lowest paid in Cornwall even in unions of a smaller size. It was only 7s. 8d. a week, and when they had deducted the amount the officer had to pay for supplying medicines, it fell to 5s. or 6s. a week, about the amount a boy was paid for scaring crows. It was not a reasonable payment, and they could not expect the officer to perform all the duties for such a remuneration. A proposal was made that in the event of the officer resigning the post should be advertised at £35 a year, but this was lost.

[1] Factory and Workshop Act, 1901. Regulations made by the Secretary of State. Wyman and Sons, Fetter Lane, E.C. Price 1d.
[2] Wyman and Sons, Fetter Lane. 1908. Price 2½d.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A meeting of the senate was held on March 25th.

Recognition of Teachers.

The following were recognized as teachers of the university in the subjects indicated:

University College: Dr. Frederick H. Scott (physiology).

King's College: Dr. Hugh J. M. Playfair (midwifery and diseases of women).

St. Thomas's Hospital: Mr. Cyril A. R. Nitch (surgery); Dr. Alfred E. Russell (medicine).

Middlesex Hospital: Mr. William G. Taylor (surgery).

St. Mary's Hospital: Mr. William H. Dolamore (dental surgery).

Physiological Laboratory.

Dr. Waller and Dr. Mears were reappointed Director and Treasurer respectively of the Physiological Laboratory.

The annual report of the Laboratory Committee, which was presented, gave particulars of the courses of lectures given and papers published in periodicals founded on work conducted in the laboratory, as well as summaries of the subjects of inquiry.

International Laryngo-Rhinological Congress.

Dr. St Clair Thomson was appointed to represent the university at the International Laryngo-Rhinological Congress to be held in Vienna.

The Franco-British Exhibition.

Among the special features of the exhibit of the university will be a medical education exhibit prepared by a subcommittee of deans of the medical schools, a social and recreative exhibit prepared by a subcommittee of representatives of various university societies and clubs, and a collection of original publications of teachers of the university and their students published in 1907.

Advanced Lectures in Physiology.

The following courses of advanced lectures in Physiology will be given during the coming term:

1. Eight lectures on cholesterol and lecithin from the chemical and physiological standpoints by Mr. J. A. Gardner, M.A. Oxon., F.I.C., in the Physiological Laboratory on Tuesdays at 5 p.m., beginning on May 5th.

2. Eight lectures on cells and tracts of the central nervous system by Dr. W. Page May at University College on Wednesdays at 5 p.m., commencing on April 29th.

3. Four lectures on some applications of physiology and industrial hygiene by Dr. J. A. Haldane, F.R.S., at Guy's Hospital on Thursdays at 4 p.m., commencing on May 7th.

4. Four lectures on chemical physiology of muscle by Dr. F. G. Hopkins, F.R.S., at Guy's Hospital on Thursdays at 4 p.m., beginning on June 4th.

5. Eight lectures on some aspects of the physiology of the heart by Dr. L. Hill, F.R.S., and M. Flack, B.A., at the London Hospital Medical College on Tuesdays at 4.30 p.m., beginning on May 5th.

Courses 1, 2, and 5 have been recognized by the senate as advanced lectures, which a candidate at the B.Sc. (Honours) Examination in Physiology may name as part of his practical examination.

Lectures by Professor of Protozoology.

Professor E. A. Minchin will give a course of twelve lectures on haemoflagellates and allied organisms at the Lister Institute, Chelsea, at 5 p.m., on Tuesdays and Fridays during May and June, beginning on May 5th. The lectures are open free to all members of the university and to all medical men or registered medical students.

Chadwick Lectures in Hygiene.

A course of four lectures on the engineering aspect of recent advances in connexion with sewering will be given at the university by Mr. W. D. Scott-Moncrieff on Thursdays at 5 p.m., commencing on May 7th. The lectures are free and are addressed to advanced students and others interested in the subject.

University Studentship in Physiology.

A university studentship in physiology of the value of £50 for one year will be awarded to a student qualified to undertake research in physiology, and will be tenable in the Physiological Laboratory of the University, or of a school of the university. Applications must be received by the Principal on or before May 31st, 1908.

UNIVERSITY OF EDINBURGH.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., C.M.—H. F. W. Adams, G. A. M. Anderson, S. H. Arthur, M. M. L. Atal, C. C. Cafferata, *S. B. B. Campbell, W. J. Candlish, P. W. Carruthers, A. L. Christie, A. Cohen, F. Eley Crew, J. H. Cuthbert, T. C. Dallas, J. P. Davidson, F. B. Dreyer, H. Evans, S. Fenwick, Margaret Ferguson, J. Gifford, B.A., J. G. Gill, W. L. Glegg, R. A. Greenwood, *J. W. C. Gunn, Mary I. Hemingway, J. A. Henderson, H. D. M. Imrie, W. N. W. Kennedy, A. M. R. Khan, M. B. Lawrie, H. Lewis, G. I. Linklater, S. J. Linzell, J. M'Caig, P. M'Cowan, W. Macdonald, *C. F. W. Mackenzie, H. M. M'Kenzie, W. S. M'Laren, G. G. Marshall, J. Maxwell, W. Mercer, H. S. Palmer, H. F. Penman, F. G. Power, W. A. Rankin, A. Romanes, W. Rose, M.A., W. J. Rosie, J. N. M. Ross, Agnes Rothé, M. Rougvie, W. M. W. Shepherd, *A. W. S. Sichel, B.A., J. T. Smeall, W. R. Stewart, J. R. K. Sutton, M. Teitelmann, G. ap Thomas, Ruby Thomson, J. S. Tomb, B. Weinbren, H. Whitaker, A. R. Wightman.

SECOND M.B., C.M. (*Old Regulations*).—P. Allan, F. G. Bell, W. Bisset, U. F. F. Brown, G. R. Bruce, M.A., G. Burnet, J. le F. C. Burrow, W. W. Carlow, M.A., W. Darlington, W. J. Feltham, Annie G. Fergus, E. L. Ferguson, J. B. Ferguson, F. P. Fouche, R. W. Greatorex, E. B. Gunson, T. E. Guthrie, H. F. G. Hall, W. R. C. Heslop, J. Honeyford, A. E. Huckett, G. J. Joubert, T. D. Kennedy, D. T. M. Large, J. P. Litt, J. M. Logie, A. S. Loutit, D. M. Lyon, W. V. Macaskie, T. M'Fetridge, J. R. M'Gregor, W. Macnaughton, R. C. Malhotra, S. Marshall, D. R. Maunsell, W. A. Miller, B. B. Morgan, O. A. J. N. Muriset, H. G. G. Nelson, P. J. Olivier, Dora E. Paterson, P. N. Pedersen, S. Pinion, S. H. Pugh, W. D. Reid, C. Rogers, W. A. Shafto,* F. M. Sinclair, J. Stevenson, C. B. Tudehope, S. H. Wilkinson, G. A. Wyon, B.Sc.

New Ordinance.—R. M. Allan, C. J. G. Bourhill, G. S. Brock, J. F. Brown, E. H. Cameron, J. Drummond, F. R. Fraser, B.A., A. Hood, J. Hunter, E. C. Lang, R. S. Lawson, M.A., E. C. Mackay, M.A., P. W. Maclagan, D. J. M'Laren, R. D. M. Macpherson, D. F. Macrae, N. F. Mann, H. M. Mills, A. A. Morison, D. M. Morison, M. M. Morrison, M. P. Paton, W. C. Paton, J. F. Penman, A. Z. Philips, C. K. Pole, A. H. Porter, N. Purcell, A. W. Rattrie, T. C. Ritchie, W. Russell T. R. Sandeman, A. N. Smith, J. R. Stott, J. Taylor, J. J. Tough.

THIRD M.B., C.M.—D. C. Adam, D. Aiken, R. J. Allsopp, A. Archibald, F. Armstrong, Alice E. M. Babington, T. H. Balfour, A. E. C. Beausoleil, R. A. Bell, Eveline R. Benjamin, W. M. Biden, T. C. Borthwick, F. A. J. Brodziak, G. S. Brown, A. N. Bruce, B.Sc., P. J. de Bruijn, W. F. Buist, O. S. Bulloch, W. L. Burgess, B. N. Burjorjee, A. W. Burton, Sarah E. Buyers, J. A. Campbell, J. Cathcart, G. L. Cawkwell, A. D. Child, H. A. Cookson, N. A. Coward, J. Crocket, Lucy E. Davies, J. K. M. Dickie, I. D. Dickson, Adelaide A. Dreaper, J. W. C. Drever, A. E. Drynan, A. M. Elliott, A. H. Elmslie, G. F. Fismer, *J. Fraser, E. L. Galletly, Mary M. Gardner, *A. W. Gill, T. J. Gilmore, W. E. Goss, W. T. Graham, A. G. M. Grant, R. D. L. Greene, S. C. Sen Gupta, A. G. Hamilton, H. F. Hamilton, R. C. Harkness, T. E. Harwood, B.A., J. Henderson, G. R. Inglis, Flora Innes, G. E. King, Lina Kurz, J. H. Lawry, H. Lipetz, W. R. Logan, H. A. V. Loots, H. F. Lumsden, D. C. Macaskill, M.A., J. C. MacCallum, D. R. C. Maclaran, G. E. G. Mackay, J. M. M'Keand, D. M'Phail, R. C. Macqueen, J. Malloch, T. H. R. Mathewson, W. Messer, *E. L. Middleton, A. W. F. Millar, G. M. Miller, A. M. Minford, L. M. V. Mitchell, J. Montgomery, S. P. Moore, W. Morrison, J. A. Mortimer, J. M. Moyes, C. C. Murray, R. M. Nicholson, F. H. Noronha, J. Oag, M.A., J. Renwick, *D. G. Robertson, W. S. Robertson, D. M. Ross, W. Ross, M.A., B. P. Rosser, A. C. Russell, C. M. Schafter, Jessie A. Scott, J. J. M. Shaw, M.A., J. C. Simpson, K. Simpson, G. H. Sinclair, J. D. Skinner, H. F. Smith, B.A., J. G. Smyth, J. Sprent, B.Sc., W. Stevenson, W. Stewart, C. P. A. Stranaghan, J. Swan, A. L. Taylor, H. W. Teague, J. A. Thompson, L. R. Thomson, W. S. Thomson, N. J. Watt, J. P. Whetter, S. Williams, J. Wilson, *J. D. Wilson, Margaret C. Young.

* With distinction.

ABERDEEN UNIVERSITY.

GRADUATION CEREMONY.

THE Spring graduation ceremony, which concludes the winter session, took place at noon on April 7th, in the Mitchell Hall, Marischal College, and was celebrated by the undergraduates in the hilarious time-honoured manner. As usually happens at the graduation in April the accommodation was taxed to its uttermost to find room for the great crowd which attended the ceremony.

Principal Marshall Lang, in the absence of the Chancellor, presided, and was accompanied on the platform by a large number of Professors and other members of the teaching staff. The honorary degree of Doctor of Divinity was conferred upon Rev. James Brebner, Forgue, Aberdeenshire: Rev. James Brown Craven, Kirkwall; Principal Sir James Donaldson, St. Andrews University; Professor Geden, Richmond; Principal Skinner, Madras.

Honorary Degrees.

The recipients of the honorary degree of Doctor of Laws were Professor W. D. Halliburton, F.R.S.; Colonel Johnston, C.B., of Newton Dee; Professor Larmor, Cambridge; Mr. George Morison Paul, Edinburgh; Professor Ridgeway, Cambridge; Mr. George Smith, Aberdeen, Director of Studies under the Aberdeen Provincial Committee for the Training of Teachers. Professor Irvine, Dean of the Faculty of Law, in introducing Professor Halliburton, said that among the achievements of modern science few were more wonderful or more beneficial than the discoveries made in the dim borderland between chemistry and physiology. To the advancement of knowledge in that field of research Dr. Halliburton had devoted himself for many years. In the department of chemical physiology he was a pioneer and is now an acknowledged chief. As a teacher he had attained signal success in initiating others in those methods of scientific investigation of which he himself is so great a master. The textbooks which he had published based on data gathered through long years of observation not only reflected the workings of a keen and unprejudiced intellect, but also exhibited a rare faculty of luminous exposition. The importance of these textbooks could not be expressed better than by saying that they were recognized as standard works throughout the English-speaking world. Professor Irvine then presented Professor Halliburton to the Chancellor as one pre-eminently worthy of the highest academic distinction of the University. In presenting Colonel Johnston, C.B., M.D., the Dean referred to his being a Graduate in Arts of Aberdeen University and a Doctor of Medicine of Edinburgh University, and that he entered the Army Medical Service more than forty years ago. Very early he had proved himself a man of capacity and resource, and alike in times of peace and on the field of battle had rendered distinguished service to his country. Seven years after his retirement he was recalled to active service, on the outbreak of the Boer war, and was appointed Assistant Director-General of the Army Medical Department—a notable tribute to the reputation he had gained and to the confidence he had inspired. His work in that office had been such as to win for him high mark of public recognition. In the field of literary labour Colonel Johnston had performed a unique service to the University of Aberdeen. The roll of graduates from 1860 to 1900, prepared by him at the invitation of the General Council, was a monument of scrupulous thoroughness and unsparing industry. Not less was it a monument of his leal and steadfast devotion to his old Alma Mater. It was with peculiar pleasure that the University inscribed Colonel Johnston's name on her roll of honorary graduates.

Degrees.

The capping of ordinary graduates was then proceeded with. There were ninety-six graduates in Arts, thirty of whom graduated with honours in some part of their studies. Among those who got degrees in the Science Faculty was John Wishart, B.Sc., M.D., Dudley, Northumberland, who was awarded the degree of Doctor of Science for a thesis entitled "A Contribution to our Knowledge of the Practical Pharmacognosy of some Indian and Colonial Drugs." Five candidates were awarded the degree of B.Sc.—two with special distinction in Chemistry—and one candidate got the degree of B.Sc. in Agriculture. The degree of Bachelor of Divinity was conferred on six candidates, three of these with honours; while the degree of Bachelor of Law was conferred on six candidates—four with distinction. In the Faculty of Medicine the following degrees and diplomas were conferred:

M.D.—W. F. Croll, M.A., M.B., Ch.B., Aberdeen* (thesis, "The Pharmacology of Belladonnine"); W. S. Garden, M.B., Ch.B., Portsoy (thesis, "Epilepsy: Its Care and Treatment"); J. Robertson, M.B., Ch.B., Aberdeen (thesis, "A Contribution to the Etiology and Treatment of Cholera"); Lieutenant-Colonel H. Thomson, M.B., C.M., I.M.S., Sanitary Commissioner for Madras, India (under old regulations).

M.B. and Ch.B.—With First-class Honours: †J. Watt, M.A., Warth, Aberdeenshire. With Second-class Honours: ‡T. C. Boyd, M.A., Aberdeen. Ordinary Degree.—J. Anderson, Macduff; A. A. Bisset, Morayshire; J. Brown, Aberdeen; D. Buchanan, Barra; J. B. Cruickshank, Aberdeen; J. G. Dawson, Aberdeen; G. Davidson, Mintlaw; A. Gilchrist, Rothienorman; J. A. Hendry, Keith; E. Johnson, Aberdeen; J. W. Littlejohn, Ellon; W. G. Macdonald, Tain; J. D. Mackay, Aberdeen; J. F. Macleod, Lewis; R. McRae, New Zealand; A. Massey, Aberdeen; W. Mearns, Gateshead-on-Tyne; A. J. Milne, Peterculter; T. B. Nicholls, Essex; I. Ogilvie, Ellon; A. W. R. Pirie, Mintlaw; D. Porter, Woodside; J. Rennie, Banffshire; R. Ross, Kincardineshire; A. J. Shinnie, Aberdeen; W. A. Watson, Norwich; W. G. Watt, Strathdon; M. J. Williamson, Aberdeen; D. Wood, Peterhead.

D.P.H.—W. Begg, M.B., Ch.B.Aberd., Rhynie; J. H. Moir, M.B., Ch.B.Aberd., Burton-on-Trent; G. Scott, M.B., C.M.Aberd., Lieutenant-Colonel, late R.A.M.C., Aberdeen.

* Honours for Thesis.
† Passed Final Professional Examination "with much distinction."
‡ Passed Final Professional Examination "with distinction."

Principal Lang closed the ceremony by delivering a stimulating address to the young graduates. In the evening a reception was given in Marischal College by the Principal and professors, which was attended by over six hundred guests, and proved a most successful function.

Honorary Degrees proposed to be Granted.

The Senatus proposed to confer the honorary degree of LL.D. also on the Earl of Cromer, Chief Judge Sir Harvey Adamson, India; and Sir John R. L. Macdonald, commanding the Presidency Brigade, India. It is hoped that the Earl of Cromer will be able to attend the July graduation ceremony, the other two on some future occasion.

UNIVERSITY PRIZES.

Faculty of Medicine.

Fife Jamieson Memorial Gold Medal in Anatomy.—William J. Reid, M.A., Portgordon.

Lugars Gold Medal in Anatomy.—Norman J. Calder, M.A., Stonehaven, and Harold E. Smith, M.A., Aberdeen—equal.

Keith Gold Medal for Systematic and Clinical Surgery.—Augustus G. Stewart, Garmouth.

Shepherd Memorial Gold Medal for Systematic and Practical Surgery.—James Watt, M.A., Wartle.

Dr. James Anderson Gold Medal and Prize in Clinical Medicine.—James Watt, M.A., Wartle.

Matthews Duncan Gold Medal in Obstetrics.—James Watt, M.A., Wartle.

UNIVERSITY OF DURHAM.

The following degrees were conferred at a convocation on April 4th:

M.D.—J. G. Gibb, S. G. V. Harris, A. H. Nott, J. C. Pearce, W. T. Sewell, E. Tate.

M.D. (*for practitioners of fifteen years' standing*).—D. Donald, B. W. N. Gowring, R. Hudson, W. W. Nuttall, R. G. Reid.

M.S.—J. G. Gibb.

M.B.—R. M. Davies, Helen M. Gurney, A. H. Hogg, E. L. Markham, Gertrude E. O'Brien, Charlotte Purnell, Elizabeth Patteson, H. Shield, E. F. Waddington, L. H. Walker, J. B. Williamson, J. F. Young.

B.S.—R. M. Davies, Helen M. Gurney, A. H. Hogg, E. L. Markham, Gertrude E. O'Brien, Charlotte Purnell, Elizabeth Patteson, H. Shield, E. F. Waddington, L. H. Walker, J. B. Williamson, J. F. Young.

B.Hy.—R. S. Trotter, M.D. Aberd.

The following received the *Diploma in Public Health (D.P.H.)*:

S. T. Cochrane, Lilian M. Chesney, E. G. D. Drury, G. P. Harlan, R. S. Trotter.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary comitia was held at the college on Monday, April 13th, the President, Sir R. Douglas Powell, in the chair.

Communication.

A letter was received from the Burlington Fine Arts Club asking for the loan of the Manuscript Psalter, in the possession of the college, for exhibition purposes. The petition was granted.

Presidential Address.

The President gave an address dealing with the notable events of the college year. He also gave brief obituary notices of Drs. W. H. Ransom, Markham Skerritt, Robert Barnes, Sir Joseph Fayrer, Dr. Dreschfeld, Sir William Broadbent, Drs. G. F. Elliott, Montague Murray, Sir Alfred Garrod, Dr. F. Willcocks, Fellows who had died during the past year; and mentioned with regret the recent death of Oswald Browne, Fellow and Assistant Registrar.

On the motion of Dr. J. E. Pollock, seconded by Dr. Norman Moore, a vote of thanks was passed to the President for his address.

Election of President.

Sir R. Douglas Powell then vacated the chair, and voting took place for the President of the ensuing year. This resulted in the re-election of Sir R. Douglas Powell by a large majority.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A quarterly council was held on April 9th, Mr. Henry Morris, President, in the chair.

The College Museum.

Mr. Arthur Keith was introduced, and made the declaration required on his admission to the office of Conservator of the Museum.

Mr. R. H. Burne was appointed Assistant Conservator, he having held the post of Anatomical Assistant since the year 1892; and an honorarium was given him for his services in carrying on the duties of Conservator during the illness and since the death of Professor Stewart.

The thanks of the council were given to Dr. Albert Gray, of Glasgow, for his presentation to the Museum of his collection of specimens of the membranous labyrinth of vertebrata.

Jacksonian Prize.

No prize for the year 1907 was awarded. The subject selected for the year 1909 is the Treatment of Surgical Affections by Vaccines and Antitoxines.

Egyptian Medical School.

A vote of thanks was passed to Mr. Edmund Owen for his report as Visitor to the Examinations of the Egyptian Medical School for the year 1907.

Dates of the Primary Examinations for the Fellowship.

The council resolved that the Deans of the Medical Faculties of the Universities of Leeds, Liverpool, and Sheffield be informed that, having consulted the several medical schools in reference to the proposal to alter the above dates, the council was of opinion that it was undesirable to make any change.

Election to the Fellowship of Members of Twenty Years' Standing.

The two following gentlemen was elected Fellows under Section 5 of the Charter of the 15th Vic.:

Thomas James Walker, Consulting Surgeon to the Peterborough Infirmary; residing at Peterborough; elected a Member, May 1st, 1857.

Henry Pottinger Keatinge, Director of the Egyptian Government School of Medicine at Cairo; residing at Cairo; elected a Member January 24th, 1883.

Board of Examiners in Dental Surgery.

Mr. Bernard Pitts was re-elected upon the above Board.

The Proposed New Irish University.

The following is the letter addressed to the President of the Royal College of Surgeons in Ireland in pursuance of a resolution adopted by the Council of the Royal College of Surgeons of England on March 12th, 1908:

Royal College of Surgeons of England,
London, W.C.,
March 20th, 1908.

Dear Mr. President,

At their meeting on March 12th the Council of this College had under consideration your letter calling attention to the proposed foundation of a new Irish University, and its probable effect upon the Royal College of Surgeons in Ireland; and we were desired by the council to write and express to you the strong sense which they entertain as to the importance of maintaining in Ireland a Royal College of Surgeons, and the hope that in any Bill, which is brought forward to establish a new Irish University, provision may be made to safeguard the interests of your college.

The Royal College of Surgeons in Ireland, like its sister college in England, was founded with the object of promoting the study of Surgery and regulating its practice for the benefit of the public, and we venture to think that the history and traditions of your college amply show that continuous effect has been given to this primary object of its foundation.

We highly esteem the important services to surgical education rendered by your college through its school and examinations, and specially do we regard your Fellowship as of great value as a mark of surgical skill and knowledge; and we believe that in promoting the study of Surgery, and maintaining a high standard of professional conduct among its practitioners, your college has been able to perform duties of great value to the State and public.

We should, therefore, regard it as a misfortune, not only to the profession but to the public, if legislation were introduced which should result in diminishing or impairing the functions now exercised by the Royal College of Surgeons in Ireland.

The council of this college sincerely trust that you may be successful in your appeal to His Majesty's Government, and that the Royal College of Surgeons in Ireland may be able to continue that career of usefulness which has won for it so much distinction in the past.

We are, dear Mr. President,
Yours faithfully,
Henry Morris, President, R.C.S.Eng.
Rickman J. Godlee, } Vice-Presidents,
W. Watson Cheyne, } R.C.S.Eng.

To Sir Henry R. Swanzy, President of the Royal College of Surgeons of Ireland.

A letter from Sir Henry R. Swanzy, thanking the college for the valuable aid rendered to his college by the council, was read.

Central Midwives Board.

The thanks of the Council were given to Mr. J. Ward Cousins for his services on the above Board. The report of Mr. J. Ward Cousins of the proceedings of the Board during the past year was received. It ends with the following statements:

The supply of certified midwives in the near future has received very prolonged and careful consideration, and the Board have adopted the following resolutions, and have decided to forward a copy of them to the Privy Council:

1. That midwives (who are a "necessity") will be unable to make a living in many localities without extraneous aid.
2. That such localities are often exactly those in which their presence is most necessary from the poverty, and in some cases the sparseness, of the population.
3. That voluntary contributions cannot be relied upon to supply the whole of the necessary financial aid.
4. That for this purpose a Government grant is a necessity.
5. That if such a grant were provided, a representative council of competent persons should be appointed to administer the fund thus constituted.

With reference to the question of fees for medical practitioners summoned to assist certified midwives in cases of difficulty and danger, I regret to report again that no satisfactory arrangement has been made. A circular issued by the Local Government Board in July, 1907, to the Boards of Guardians throughout the country does not offer any acceptable suggestion towards a settlement. The Boards of Guardians are directed to carry out the provisions given in the Section 2 of the Poor-law Amendment Act, 1848, which empowers them—"if they think proper"—to pay for any medical or other assistance rendered to any poor person suffering from accident or sudden illness. Moreover, the Local Government Board considers "that the exercise by Boards of Guardians in a careful and liberal spirit of their powers under the enactment quoted will furnish a satisfactory solution of the problem to which they have referred, and that no reasonable ground of complaint should remain either to the public or the medical profession."

Now, from the indifferent way in which this circular has been everywhere received, it is quite evident that these suggestions of the Local Government Board will not satisfy the just demands of medical practitioners. The attempt to place the payment of medical men wholly in the hands of the guardians throughout the country is an unfortunate effort in the wrong direction.

On the other hand, if the Local Government Board had arranged with the Boards of Guardians to pay the fees, provided that all applications for payment were made to them through the local supervising authorities, the whole matter would have assumed a very different aspect.

The Central Midwives Board has given much care and attention to this important subject, still to-day the solution appears to be a long way off. The Board has, however, decided to reopen the question with the hope that a way may be found to remove this serious obstruction; for, it is certain, that until this is accomplished the successful operation of the Midwives Act will continue practically impossible.

Fellows' Dinner.

The council decided that no Fellows' dinner shall be held during the present year.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THE following candidates have been admitted to the Membership:

G. FitzGibbon, M.B., B.Ch., B.A.O.Dubl., 1900; M.D., 1901. A. N. Holmes, M.B., B.Ch., B.A.O.Dubl., 1901.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following are the principal prize winners for the winter session: DESCRIPTIVE ANATOMY (*Senior*), J. T. Duncan; DESCRIPTIVE ANATOMY (*Junior*), J. Prendiville; PRACTICAL ANATOMY (*Second Year*), T. M. Thomson; PRACTICAL ANATOMY (*First Year*), V. J. White; PRACTICE OF MEDICINE, R. Adams; SURGERY, R. Adams; MIDWIFERY, J. Menton; PHYSIOLOGY, J. T. Duncan; CHEMISTRY, T. R. Roberts; PATHOLOGY, J. S. Pegum; PHYSICS, M. J. Hillery. The prizes were in each case a medal and a sum of £2. Second prizes were also awarded. The work for the summer session began on April 1st.

A meeting will be held on Tuesday, May 5th, at 4.30 p.m., to elect Examiners. Graduates of any university which may be from time to time recognized by the college shall be eligible for election as Examiners in the subjects of general education. All the other Examiners shall be Fellows or Licentiates of the college, or Professors or Lecturers in any school of medicine recognized by the college. Candidates are requested to lodge their applications in writing with the Registrar, at the college, on or before Tuesday, April 28th, at 10 a.m.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST EXAMINATION (PARTS I AND II).—W. S. Birch, K. B. Clarke, J. S. Cocks, W. Dale, †A. B. Danby, J. R. Davies, A. E. L. Devouald, †J. B. G. Dotto, W. K. Fry, *H. C. Godding, H. S. Groves, W. S. Hazell, *J. S. Higgs, H. G. Hockridge, †F. M. Hughes, *S. Hutchinson, *G. G. Jack, E. B. Jardine, E. L. Jones, K. J. T. Keer, G. B. King, A. O. Knight, E. T. H. Lea, E. M. Mahon, R. V. Martin, C. H. Medlock, J. Millard, A. V. Moberly, M. Peru, D. Power, †G. A. Pratt, †M. H. Ratton, W. A. Reynolds, †W. G. Reynolds, †A. W. M. Sawyer, †A. K. Selim, *H. D. Shore, J. W. Thomas, †H. Tuxford, W. Watkins, H. M. Whelan, †W. C. Whitworth, J. H. Wiles, L. D. Wright, *H. S. Young.

FIRST COLLEGE, PART III.—C. B. Alexander, E. B. Argles, S. L. Baker, H. W. Barnes, C. A. Bernard, H. C. Billings, W. H. Blakemore, T. P. Bremner, B. J. Brewitt, R. O. Bridgman, W. H. Broughton, C. G. Bunn, C. F. Burton, G. K. Butterworth, A. F. Camp, K. B. Clarke, H. D. S. Close, A. B. Danby, J. R. Davies, E. G. E. Ellman, F. R. Fletcher, V. W. R. Forbes, E. D. Fountain, F. C. Godding, S. S. Greaves, F. H. Guppy, O. Gwatkin, W. S. Hazell, S. K. Ho, H. S. C. Hooper, W. E. Ison, T. H. Jackson, E. E. Jardine, E. L. Jones, R. Jones, W. B. G. Jones, G. B. King, C. Kingston, A. O. Knight, J. L. D. Lewis, F. M. Loughnane, J. S. M. A. H. Lyne-Evans, W. F. Mason, P. U. Mawer, O. C. Morphy, L. E. Napier, H. B. Owen, R. C. Parry, H. R. Parsloe, J. R. Payne, L. R. Pickett, O. Pitt, S. O. Rashbrook, G. B. Richardson, J. E. Rivera, A. E. Saunderson, A. W. M. Sawyer, E. E. P. Sayers, F. Simpson, L. C. Smith, T. J. Taunton, A. R. Taylor, H. Topham, A. Viney, C. A. Webster, L. G. White, S. Wickenden.

* Part I only. † Part II only.

FIRST COLLEGE, PART IV.—H. Bardsley, J. J. H. Beckton, A. W. Bevis, H. D. S. Close, W. R. Cooper, R. B. Dawson, F. Dunphy, F. A. French, H. W. Heasman, J. K. A. Helm, J. A. A. Kernahan, B. R. Khanna, R. Lloyd, R. T. Macrae, V. C. Martyn, P. U. Mawer, R. A. Morrell, M. W. Morrison, J. H. Paget, M. W. Phipps, E. P. Stibbe, H. S. Thomas.

SECOND COLLEGE (*Anatomy and Physiology*).—H. G. Alexander, S. V. Appleyard, M. Barker, T. M. Bellew, J. S. Bhajiwalla, A. B. H. Bridges, W. E. Carter, E. E. Chipp, R. C. Clifford, J. Cowan, E. P. Crozier, G. L. Curnock, H. Daw, A. W. Donaldson, W. A. Dunn, W. H. Eggar, D. C. Evans, M. A. Farr, G. H. Garlick, H. E. Griffiths, D. Hamilton, C. H. Hart, W. H. T. Jones, G. A. E. Kelman, W. B. Lawrence, T. Legge, W. E. Levinson, E. C. Linton, B. McDermott, R. K. MacGregor, H. L. Mann, P. J. Monaghan, H. L. C. Noel, H. C. W. Nuttall, T. T. O'Callaghan, *J. F. O'Malley, W. H. Pickup, C. E. Reckitt, E. Smeed, G. H. Smith, R. G. Sparkes, A. M. Stuart, R. T. Timberg, J. S. A. Titmas, A. J. Tozer, J. W. Trevan, A. G. Trott, P. D. Warburton, A. F. Waterhouse, H. H. V. Welch, H. White, W. G. Wince, W. A. Young.

* Under four years' regulations.

CONJOINT BOARD IN IRELAND.

FIRST PROFESSIONAL, April, 1908.—The following candidates have been approved at the examination indicated:

T. D. Condell, N. S. Deane, T. Dillon, W. H. Johnston, J. Kearney, J. E. J. R. Kelly, W. Lumley, F. P. McDermott, L. O'Donovan, P. Walsh, V. White.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

ANATOMY.—G. S. Bate, J. A. A. Boddy, C. S. Foster, E. A. S. Hoare, A. J. V. Mathews, J. G. Reidy.

PHYSIOLOGY.—G. S. Bate, J. A. A. Boddy, J. Brearley, P. Hirschbein, E. A. S. Hoare, J. B. Holmes, J. G. Reidy, W. G. Tickell, C. B. Welsby.

BIOLOGY.—R. B. F. Frazer, R. H. Pettersson, S. J. S. Reid.

CHEMISTRY.—R. B. F. Frazer, S. J. S. Reid.

MATERIA MEDICA AND PHARMACY.—E. Carter, H. R. Coombes, F. C. Eberhardt, J. McManus.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL FORCE.

THE *London Gazette* of April 10th contains two Orders in Council bearing on the Territorial Force. The first specifies certain units of Volunteers which shall, from April 1st, be transferred to the Territorial Force. They will thereafter be units of that body, and will be respectively known by the titles specified in the Schedule to the Order in Council. The second Order states that the King may by Order in Council transfer to the Army Reserve such battalions of the Militia as may be specified. All officers and men of the specified units shall, before a date to be fixed by the Army Council, elect whether or no they will assent to such transfer. All officers so assenting will, subject to certain conditions, be gazetted as officers of the Special Reserve of Officers. Those not so assenting will be dealt with as may be directed, consistently with the conditions of their present service.

OBITUARY.

DEPUTY SURGEON-GENERAL JAMES BROWNE, M.D., Indian Medical Service (retired), died at Shanklin, Isle of Wight, on April 9th, at the age of 79. He joined the Bengal Medical Department as Assistant Surgeon, February 20th, 1856, and became Brigade-Surgeon with the rank of Lieutenant-Colonel, August 3rd, 1882, in which year he retired from the service.

COLONEL JOSEPH HENRY MOORE, Royal Army Medical Corps, retired, died at Wellington, Somerset, on March 24th, at the age of 63. He joined the Army Medical Department as Assistant Surgeon, April 1st, 1867; was appointed Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1879; granted the rank of Lieutenant-Colonel, April 1st, 1887; made Brigade-Surgeon Lieutenant-Colonel, April 26th, 1883; and promoted to be Colonel, June 13th, 1898. He retired from the service January 15th, 1902. He served in the Ashanti war in 1873-4, being present in the defence of the hospital at Toomanah, and receiving a medal with clasp. He was also in the Afghan war in 1878-9, and took part in the occupation of Kandahar-i-Ghilzie, and in the actions at Ahmed Khel and Urzoo; he was mentioned in dispatches and granted the Afghan medal with clasp.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. E. Peyron, formerly Director-General of the Assistance Publique in Paris; Dr. Ferdinand Frühwald of Vienna, a well-known authority on the diseases of children, in his 54th year; Dr. Vincengo Chirone, Professor of Materia Medica and Experimental Pharmacology in the University of Naples; Dr. Karl Theodor Fieber, Lecturer on Surgery, Vienna, aged 70; Dr. B. E. van den Corput, formerly Professor of Therapeutics at Brussels; Dr. Marandon de Montyel, Medical Superintendent of the Lunatic Asylum of Ville-Evrard, author of numerous works on mental diseases, aged 58; Professor von Hufner, Head of the Physiologico-Chemical Institute in the University of Tubingen, aged 62; Dr. F. Keppler, who attended Richard Wagner in his last illness; and Dr. Johann Mierzejewski, sometime Professor of Psychiatry and Neurology in the Medico-Chirurgical Academy, St. Petersburg, author of numerous contributions to the literature of his speciality, aged 70; and Professor Franz Mracek, Physician to the Rudolfspital, Vienna, and author of works on syphilis of the heart and on skin diseases, aged 60.

THE following Liverpool institutions each receive a sum of £500 under the will of the late Mr. John Waite, of Kensington: The Hospital for Women, the Royal Southern Hospital, the Royal Northern Hospital, the General Infirmary, the Children's Infirmary, the Consumption Hospital, and the Eye and Ear Hospital.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

MALE SERVANT.

D. S. desires to know whether he should take out a licence for a boy, aged 16, who helps in the stable yard with horse and motor under a coachman, and also delivers medicine, runs with messages, and makes himself generally useful.

*** Yes; the boy is a male servant within the meaning of the Inland Revenue Act, and a licence is necessary.

ANSWERS.

TREATMENT OF A COMMON COLD.

S. H. B. writes: If "Nasal" (BRITISH MEDICAL JOURNAL, March 28th, p. 787) will give his patients a mercurial purge, and a mixture containing sod. salicyl grain x, chlorodyne ♏ x to the ounce of water, it will remove the "stuffiness" of the nose, and greatly diminish the secretion. Patients who are susceptible to morphine will feel no better for the first twenty-four hours, and may find the headache increased, but many will feel practically well almost from the first dose. I generally give the mixture four-hourly for twenty-four hours and then three times a day, and have never known it fail to give great relief within thirty-six hours. I do not claim that this treatment is curative, but it certainly removes most of the discomfort of a cold in the head, and I have not found that checking the nasal secretion does any harm at any stage.

T. D. writes: All my life I have been very subject to colds, generally commencing with sore throat, and, if neglected, extending down to the larynx and trachea. I have stopped dozens of them within twenty-four hours or less by taking the following mixture *at once*, originally I think suggested by the late Horace Dobell:

℞	Ammon. carb.	gr. v
	Liq. morph. mist.	♏ v
	Vini ipecac.	♏ vijss
	Spt. chlor.	♏ x
	Tr. aurant.	♏ x
	Aq.	ad ℥ j

for each dose. Frequently four to six doses remove the attack. Occasionally a single dose of ♏ 15-20 of liq. morph. mist. at the very commencement of a cold (within the first half-hour if possible) will abort it, particularly when of the nasal form. Should it commence with sore throat, I always paint the fauces at once with sol. of silver nitrate grain 30, and repeat this twice or even thrice in the course of a day, until the inflammation is "killed." Prevention, however, is better than cure, and I have found the morning bath and open windows at night most beneficial. Some find a very hot bath in the morning highly efficacious both in preventing colds and keeping out rheumatism.

DR. C. CHRISTOPHER HEYWOOD (Manchester) writes: I should like to state that salicine given in doses of 15 grains every four hours will frequently abort a common cold if the treatment is begun on the very first appearance of catarrhal symptoms.

Dr. C. H. MELLAND (Manchester) writes: The value of salol in many cases of septic sore throat is well recognized, and the association of tonsillitis with acute rheumatism suggests that allied streptococci are responsible for the two conditions. Sore throat is often a prominent feature in a "cold," and it was this which first led me to try the effect of salol. I have personally found it of great value, both in relieving the local discomfort and getting rid, practically completely, of the general malaise. Unfortunately, I have found it of very little use unless begun at the very first sign of the onset of the "cold." In my own case, and I think in most others, the first indication of a cold is a feeling of rawness and discomfort at the back of the nose, in the nasopharynx, and as soon as I feel this I start with the salol, taking 5 grains every two hours; so that I take 45 or 50 grains in the day. I take rather less the second day (or if the symptoms do not go, keep on with the same dose), and again reduce it on the third day, by which time, if taken early, the main symptoms are relieved, though there is generally some slight excess of nasal secretion, but no real discomfort, for a day or two longer. The difficulty in applying it to patients lies in their not coming for treatment at the very early stage, leaving it till it is thoroughly established, when it is, I believe, beyond cure. I know that personally I feel miserable if threatened with a cold under circumstances which preclude my applying the salol treatment. I have never, either in my own case or in others to whom I have recommended the treatment, seen any ill results from the fairly large doses of salol required.

LETTERS, NOTES, ETC.

INSTRUCTION IN MEDICAL INSPECTION OF SCHOOLS.

MEDICAL INSPECTOR writes: I join with other of your correspondents in asking if a course of five or six lectures could not be arranged for those desirous of becoming better acquainted with the work of medical inspectors of school children. A course including the best methods of filling up the schedules and demonstration of how to examine the children systematically, a demonstration of diseases of children—that is, the out-patient class—and a lecture on school hygiene, ventilation, etc., would be very helpful, and also advice as to the best books to read. I trust it will be possible to invite the names of those wishing to join a class, and thus to see if there are enough wishing to join such a course to make it worth while of some post-graduate institution to form a class.

THE LOCAL TREATMENT OF DIPHTHERIA.

DR. J. T. MACLACHLAN (Glasgow) writes: I am glad that my note on the local treatment of diphtheria, published recently in the JOURNAL should have induced Dr. Cory of Bristol to extol the virtues of liq. ferri perchlor. as an efficient local application. The older generation of physicians recommended swabbing the throat with a strong solution of nitrate of silver. I have seen some country practitioners touch the affected parts with pure carbolic acid. I have never used the application recommended by Dr. Cory, although I have used a number of astringents and antiseptics, and have come to the conclusion that frequency of application is the vital point. We can by efficient local medication annul the activity of the organisms of diphtheria in the throat, arrest the absorption of their poisonous products, and clear away the membranes. But I do not think we have any local remedy that will clear the bacillus of diphtheria out of the throat in days, or for that matter in two or three weeks. I shall be particularly obliged if any one having the requisite information would say when does the throat become sterile after an attack of diphtheria. The case I recently recorded baffled me for weeks until I got the patient out to the fresh air. Another point is, Does the throat become sterile in a few weeks after the antitoxin treatment? And, lastly, What is the relation of post-diphtherial paralysis to the sterility or otherwise of the throat? for it seems to me its presence is very suggestive that the bacillus of diphtheria has not taken its departure.

F.R.C.S. writes: For some years I used Loeffler's solution to paint the throat, and found it a wonderful combination; the slough of tonsils and throat clear off in a few days. Latterly I have used antitoxin, and, after giving the little patient an injection, use the remainder to paint the throat. Some of my friends are administering it internally, in 20-drop doses, with great success.

COMPOUND LIQUORICE POWDER.

DR. BALMANNO SQUIRE (London) writes: The composition of the compound liquorice powder of the *Pharmacopoeia* is such as to preclude the use of that most valuable, easy, and harmless laxative by persons affected with diabetes, obesity, gout, and some other conditions—altogether a numerous class. It is thus precluded, inasmuch as exactly two-thirds of it is made of sweetstuffs, chiefly sugar, and as I think I shall be

able to show, very unnecessarily so. The pharmacopoeial preparation is thus composed: Senna 2 parts, fennel 1 part, sulphur 1 part (4 parts), to which are added liquorice 2 parts, sugar 6 parts (8 parts), in all 12 parts. Those who have attempted to remedy the difficulty have restricted themselves to the simple process of leaving out the sugar and retaining the liquorice, senna, fennel, and sulphur, thus reducing the dose to half the customary weight of a dose. But this plan has three grave inconveniences. One is that it gives rise to two preparations of the same name differing widely as to dose, and this is apt to cause mistakes attended with suffering to the patient. Another is that the amended preparation is not at all readily miscible with water owing to the absence of the sugar. The third is that the amended preparation still contains liquorice to the extent of a third of its weight. I find on experimenting that both the liquorice and sugar may be omitted and replaced by ingredients which have none of their disadvantages, thus preserving unaltered the original bulk, weight, and dosage of the pharmacopoeial preparation, and yet enabling the powder to be more readily mixed with water than is even the pharmacopoeial preparation. Another advantage—and an important one—of my preparation is that its flavour is less disagreeable, less mawkish, than that of the official and officinal powder. I attain these advantages by a very simple method. I replace the 2 parts of liquorice and the 6 parts of sugar (making 8 in all) by 8 parts of a powder composed of "sweet" almonds and gum acacia, in the proportion of 8 parts of almonds to 1 of gum. The almonds, having first been blanched and dried, are rubbed in a mortar to a smooth consistence. The powdered gum and the senna, fennel, and sulphur are then added, and the whole makes a very "elegant" powder. There is one difficulty about my amended powder, and that is the name. I have found it necessary to eliminate the very substance from which hitherto the powder derives its name, that is, the liquorice. One might then call it compound almond powder, but this name is already appropriated in the *Pharmacopoeia*. In perplexity, and as a temporary expedient, I am perfectly willing to lend one of my own names, but not my surname. For the moment, and for the nonce, if any one wishes, it can be called Balmanno's powder. The ingenuity of the powers that be can doubtless soon devise some better title.

Calmette's Ophthalmo-reaction for Tuberculosis

Dr. H. D. McCulloch (Bournemouth) writes, with reference to Dr. F. Parkes Weber's letter (February 29th) on this subject: In the light of recent knowledge it is generally recognized that in cases of advanced tuberculosis we have to deal with important secondary and tertiary infections. These secondary infections take place at the sites of the primary lesions, just as the secondary staphylococcic or streptococcic, or both, so often follow upon the primary lesions of variola, and with far-reaching results. The ravages of virulent pyogenic micro-organisms, under such circumstances, into the exposed lung, parenchyma, are too well known, and it is not my purpose to enter into them here. It will, however, be admitted that in the large majority of such cases many of the supposed autoinoculations of the primary tuberculous infection may be due to the secondary infections referred to above, and that these mainly contribute to the chronicity of such cases. One of the important and far-reaching conclusions of the Royal Commission on Tuberculosis last year was, if I mistake not, that when this infection occurs in a sufficiently minute dose, and is repeated at sufficiently long intervals, there is not any manifestation of the disease, the process being a latent one. At the same time, such infections were admitted to confer a degree of immunity on the individual, and to result finally in his complete immunity. It is conceivable that such partial or complete immunity to the primary tuberculous infection may take place immediately before the secondary infections in the lungs, and that these latter manifest their effects by somewhat similar symptoms. Under such circumstances it seems probable that a mutual tolerance between the phagocytes and the tubercle bacilli is at least temporarily established. Tubercle bacilli would, therefore, be found in the sputum. The important question arises, Does the presence of tubercle bacilli in the sputum of a consumptive patient necessarily indicate that the case is one of pure unmixed tuberculosis? The presence of the *Bacillus typhosus* in an individual who has passed through the experience of enteric fever does not indicate that he is still ailing from this malady. In fact, such persons may be passed as healthy individuals, and as far as the malady he has experienced is concerned, he is more healthy than those who have not had the disease, either in the latent or manifest form and who continue to live in the same environment. The same may be said of diphtheria and other infections to which man has been exposed in the course of his evolution. May we therefore not infer with safety that the tubercle bacillus may also be found in the sputum of those who have thus acquired temporary or complete immunity to the disease when it occurred primarily, though they show symptoms of extensively damaged lungs? An individual who is temporarily immune to tuberculosis and who does not react to the ophthalmo-reaction or to the cuti-reaction of von Pirquet resembles, in fact, a person who gives a tuberculo-opsonic index during a series of estimations, either immediately above or below the mean normal limits. He need not be manifestly ailing from tuberculosis pure and simple, but he is still short of the acquirement of absolute immunity, and is therefore predisposed to reinfection in a large dose, *but not in an extremely minute dose*, which he is really in need of to establish his absolute immunity. Dr. Parkes Weber also touches on the subject of a consumptive patient's "indifference" to tuberculin. To this the explanation I have stated above would also apply. The autoinoculations to which he refers would only bring about an indifference to tuberculin, when they chance to occur in sufficiently minute quantities and at sufficiently long intervals of time. These conditions would permit of the unhampered elaboration of true vaccine *in vivo*, followed by the sensitization of the plasma, which is necessary to the acquirement of immunity. In conclusion, I beg leave to point out that, in a monograph (*Stray Leaves and Some Fruit on Cancer and Tuberculosis*. London) contributed by me on this subject (pp. 26 to 30) in the spring of last year, before the announcement of either Calmette's or von Pirquet's methods, I indicated the importance of obtaining this reaction, *through the muco-cutaneous surface of the body*, preferably to the subcutaneous method in vogue. And there is good reason for concluding that, no matter what pathogenic micro-organism is so applied, in its vigorous form and in proper dilutions, the response or reaction will be less pathologically and more physiologically obtained. The risks of injury to the patient are thus reduced to a minimum. In fact, in ordinary vaccination against small-pox we obtain an exaggerated cuti reaction, when this is properly done, by abrasion and not scarification of the skin. So that, apart from its great and reliable diagnostic value, the same method may reasonably be resorted to for purposes of protection in all infections peculiar to the individual's environment.

Circumcision from the Bite of a Dog.

Dr. Jas. Hudson (Nelson, New Zealand) writes: In your issue of September 28th, 1907, Dr. Browne of Falmouth refers to the above accident as being rare, and I agree with him that it is; therefore the following notes of such a case may be of interest. Some years ago a middle-aged man consulted me as to whether he might marry; he told me that when a boy a dog had bitten off his foreskin, and on examination he certainly had not a vestige of a foreskin—it had been most completely taken off. He told me that on this account he had abstained from marriage, although desirous of marrying. I greatly reassured him by telling him that the accident would not prejudice him in any way; in fact, it was beneficial rather than otherwise. The result was that he married, and is now the father of several children. The circumcision was as complete as any circumcision could be.

Treatment of Ataxy.

Dr. H. Isaacs (Penrhiwceiber, Glam.) writes: Some months ago I utilized the columns of the British Medical Journal for making inquiries with regard to Dr. Fraenkel's method of treating locomotor ataxy. In reply I was introduced to a very simple method of treatment, suitable for the general practitioner, by the author, Dr. G. A. Dampier-Bennett, of Kingstown, co. Dublin (published by Wright and Co., Bristol). I have given the method a trial in a case of locomotor ataxy, in which the patient had lost the power of walking for the past four years. Both the patient and I have been pleased with the results so far obtained, though the treatment has had to be interrupted during the winter months. I am very sanguine of a favourable result in the course of next summer, and hope then to be able to publish details of the case. Though I have only, as yet, tried the method in a case of tabes, I am inclined to consider it of value in cases of chorea and other functional motor disorders. The object of this letter is not only to direct the attention of other members of the profession to the treatment, but also to express my appreciation of the value of the Journal as a means of interchange of ideas for isolated practitioners.

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A Clinical Lecture

ON

THE CYSTIC FORMS OF XANTHELASMA PALPEBRARUM.

Delivered at the Polyclinic.

By JONATHAN HUTCHINSON, F.R.S., LL.D.

[Abstract.]

We will start with Xanthelasma palpebrarum—the wash-leather patches on the eyelids. Every one knows them, and there is no difficulty in their diagnosis. They are conspicuous and like nothing else. Their usual site is in crescentic grouping above and below the inner canthus of the eyelids. They occur to adults or middle-aged persons who have usually accounted themselves "bilious," in the sense that they have been liable to sick headaches and other transitory symptoms which were attributed to "liver." They are more common in dark-complexioned persons than in the fair. After middle age they cease to develop and may disappear, just as we know that the liability to migraine ceases as years advance. This fact suggests that the sexual system in its turn has something to say to the recurring attacks of liver disturbance.

Those who develop these wash-leather patches have almost always been for long liable to periodic disturbances of pigmentation in their eyelids. Once a month, or oftener, the thin skin of the eyelids, especially that of the lower one and along the side of the nose, has been prone to become dark, not by venous congestion, but by temporary increase of pigment. Seldom noticed by the patients themselves, these appearances will often have excited comment from their friends. In women, to the educated eye they often reveal the menstrual periods, and in men a sense of being "liverish" or out of sorts will usually have been acknowledged. It is, I believe, from these attacks of temporary, but often recurring, pigmentation that the common xanthelasma patches take their origin. They are often attended by a certain amount of permanent discoloration of the parts. Cases in which such discoloration results without any wash-leather patches are infinitely more common than those in which patches are present. The patches result from the deposit of a fatty acid derived from the bile, and are to be regarded as a late result.

Having established these points, my next proposition must be that these wash-leather patches are not the only consequence of the recurring disturbances in the nutrition of the integument of the eyelids which occur in connexion with functional disturbance of the liver. The gland structures may suffer also, and now and then the papillae. Thus it will be seen that it is convenient to speak of changes in the xanthelasma regions as well as of xanthelasma itself. The skin glands likely to be affected are, of course, the sebaceous and the sudoriparous. The former often suffer, but it is only with extreme rarity that the latter reveal any change. In the sebaceous form, or what we may name comedonous xanthelasma, the glands affected form globular pea-sized cysts stuffed with very firm sebum and surmounted mostly by a conspicuous "black-head." They never increase beyond a certain moderate size, and they never inflame. When they are very small they may be numerous, and may occur in an almost confluent group, but more usually they are few in number and scattered. They are never attended by comedonous acne on the rest of the face. The sebum which they contain can with difficulty be squeezed out unless a little incision is made. The proof that they are really in connexion with the xanthelasmic process is afforded not only by the region which they affect, but by the fact that almost always some small spots of the wash-leather form may be found near them. I could easily show you a dozen drawings exhibiting these sebaceous cysts, whilst of the sudoriparous form, which comes next under our notice, I have but two or three.* I may, indeed, claim this pathological condition as almost my own property, for although it is many years since I first described and figured it† no one else has, I believe, recognized it. Once in every five years an example of it is sent to me, but never with any hint of diagnosis either correct or otherwise. One such we have examined this afternoon, and you will, I think, agree with me that its appearances were such that we could not wonder at its being overlooked. At the same time, I think you will also agree with me that when once pointed out the conditions are obviously real and very peculiar.

The patient whom we have just seen is a woman of 48, of a very dark sallow complexion. She has always considered herself bilious, and has suffered very much from headaches. Beneath her right inner canthus there is a little group of four or five confluent cysts, which show no orifices, and are so tense that they might almost be supposed to be solid. They are as large as swan shot. On the eyelid of the other side, in an exactly corresponding position, there is a single cyst of exactly the same character, but much smaller size. The bilateral symmetry is remarkable. No wash-leather patches can be detected.

In this instance the epidermic layers over the cysts are so dark that they cannot be said to be translucent, and we have to take on trust the nature of the contents. In other cases, however, I have seen them quite transparent, and have let out by incision a clear fluid which in its characters resembled sweat.

It remains to add that the patient whose case we have just examined is, as you have seen, the subject of acromegaly, and has been so for thirty years. We have been indebted to Dr. Vinrace for the opportunity of seeing her.

[An interesting item of confirmatory evidence as to my hypothesis of causation was afforded during my lecture. As I was descanting upon the association of all forms of xanthelasma with liver disorder, Dr. Vinrace interposed with the statement that the patient's sister had suffered from gall stones and had her gall bladder removed. The patient herself did not understand a word of English, and we could not ask for details as to her headaches, but she was, as stated above, of a bilious complexion, and very dark indeed on her eyelids.]

I purpose shortly to arrange in our museum a temporary exhibition of all that we possess in illustration of xanthoma and xanthelasma. It will include several showing the comedonous and cystic forms of which I have been speaking. A few words may conveniently be added as to the names which we use. That of vitiligoidea has been discarded, and we have now those of xanthelasma and xanthoma to choose from. These both have reference to the yellow colour. By general consent xanthoma is now used for all the forms in which the trunk and limbs are affected. It may perhaps be well that we should keep the name xanthelasma for those in which the eyelids are the parts affected, and if this be done we may drop as being superfluous the localizing addition of palpebrarum. All the various forms of xanthoma and xanthelasma are undoubtedly allied, and make up one family, being all caused by hepatic disorder. They are, however, very distinct from each other. Xanthelasma results from recurring functional disturbance, the generalized forms of xanthoma from organic or at any long persisting disease, whilst xanthoma diabeticorum is associated with special disturbance of the glycogenic functions of the liver, is of only temporary duration, and is not, as a rule, attended or preceded by any changes on the eyelids. These latter are very common without jaundice and without organic disease. If, then, we may conveniently use the term "xanthelasma" as applied only to cases in which the eyelids are alone affected, we may classify several forms as follows, all closely allied and often occurring together:

Xanthelasma planum or flavum, the wash-leather type described originally by Rayer.
Xanthelasma sebaceum, when comedones are present.
Xanthelasma cysticum, when cysts are present.
Xanthelasma pigmentosum, when dark pigmentation is the only condition.

* See *Archives of Surgery*, vol. i, plate 27, Fig. 2.

† I have seen several cases of which I have not preserved any portraits. I find that in 1878 I wrote that I had seen five or six cases, and since then the number has certainly doubled.

NOTES ON THE TREATMENT OF PUERPERAL FEVER.*

BY A. KNYVETT GORDON, B.A., M.B.CANTAB.,
MEDICAL SUPERINTENDENT, MONSALL FEVER HOSPITAL, MANCHESTER.

THE remarks I am about to make are based on a clinical and bacteriological study of 210 consecutive cases which have come under my care at Monsall Hospital.

Etiology and Pathology.

Puerperal fever is wound fever. There is always a wound, and there is always infection of this wound, but this infection is certainly not always introduced from without, though it is probably necessary that the infecting agent shall be always directly applied to the raw surface. We do not nowadays believe in the production of puerperal sepsis by obscure atmospheric agencies, such as sewer gas.

First, where is the wound? Well, it is present after every labour at the placental site, and there may also be some laceration of the cervix which may be due to natural effort or instrumental interference; also there may be perineal tears. Other things being equal, the seriousness of the wound depends upon its proximity to the fundus of the uterus. Thus, infection of the placental site is more likely to give rise to serious consequences than a septic laceration of the cervix (apart, that is to say, from the mechanical effects of such a lesion, which may be considerable); while perineal tears, even if sloughing, do not usually appear to be of very serious import; in fact, I may say that by themselves they seem seldom to give rise to systemic infection.

In normal labour, where there is no interference whatever, there is no reason why infection should be carried to the inside of the uterus at all, and, moreover, the placental site is soon sealed by involution, but directly any external agency comes on the scene puerperal fever is rendered possible. Thus infection may be carried from without by hands or instruments that are not sterile, or, being sterile, have touched the external genitalia in the process of vaginal examination. When intrauterine manipulations are necessary, the risk is of course very much greater.

The point, however, that I wish to make in this connexion is that it is not necessary that the organisms shall be introduced from without. It has been shown by Döderlein and others that the healthy vagina contains, both before and after delivery, certain organisms, amongst which are almost always streptococci. As long as the vagina is healthy its secretion is acid, and these streptococci are saprophytic only, and non-virulent to the patient herself; in fact, they seem to be beneficial in that they serve to rid the vagina of such organisms as the *B. coli* which may be accidentally introduced. But if by any means these streptococci reach the interior of the uterus, which is faintly alkaline and in health always sterile, they become parasitic and virulent.

The importance of this is that vaginal examinations by sterile hands may carry these harmless vaginal cocci into the uterus, and set up an attack of puerperal sepsis. It is in this direction that we must look, I think, for the explanation of the cases of puerperal sepsis that occasionally occur in the practice of the most careful physicians, and it is a reason for discouraging the making of too frequent examinations by the modern highly-trained obstetric nurse, who is certainly inclined to err in this respect.

Retention of the placenta, by preventing involution, renders the uterus more liable to infection.

Hitherto I have spoken of parturition infection, which takes place, that is to say, at, or immediately after, delivery. During the puerperium, however, infection may occur even though there has been no manual interference at all. For the explanation of this we must look to two factors—first, the use of the vaginal douche, which washes organisms, harmless enough in the vagina, into the danger area in the uterus, or against the surface of a cervical tear; and, secondly, to the neglect on the part of the nurse to treat the vulva as the orifice of a surgical wound, and keep it covered until danger of infection is passed. Of these, the vaginal douche is the more potent factor, especially when it is given with the quite unsterilizable enema syringe.

When the wound has been infected, we may have, either:

1. Rapid generalized septicaemia from passage of the organisms directly into the veins of the part. This form is usually fatal in from twenty-four hours to three days, and the circulating blood is generally found to contain streptococci.

2. Direct extension through the Fallopian tubes to the peritoneal cavity, and resulting general suppurative peritonitis.

3. Extension as far as the Fallopian tubes only, with formation of adhesions, shutting off the general peritoneal cavity, resulting in the occurrence of pyosalpinx, pelvic peritonitis, or tubo-ovarian abscess.

4. Lymphatic extension causing parametritis, which may go on to suppuration.

The infecting agent is usually a streptococcus, but in the varieties of infection which occur later on in the puerperium I have more frequently found the *B. coli communis*. Occasionally the whole system becomes invaded with this bacillus as a terminal infection only, and if the case is then seen for the first time, it may be erroneously thought to be the cause of the attack.

Treatment.

I do not intend dwelling on the prevention of puerperal fever, but it is evident from what we know of the pathology of puerperal infection, that the points to which attention should be directed are:

1. The avoidance of anything that may interfere with the closing of the placental site, such as the retention of placental tissue *in utero*.

2. Care should be taken that no other wound be made; here I cannot but think (from what I have seen) that the harm that may result from the application of forceps before the os is dilated is not, as a rule, sufficiently well recognized. I have seen, *inter alia*, lacerations of the vagina so extensive that the periosteum was stripped from the pubic bone below, while the upper part of the tear had laid open the peritoneal cavity, so that the intestine protruded into the vagina. Apart from such an extreme case as this, I may say that of the cases under my care in which infection took place at the confinement and forceps had been used, no less than 80 per cent. had diagonal laceration of the cervix, which appeared to be the source of the infection for which they were admitted.

3. We should endeavour to avoid the infection of the wound by abstention from too frequent vaginal examinations and by the wearing of rubber gloves when any manipulations are necessary.

4. There can, I think, be little doubt that douching the vagina is seldom necessary and always risky, and that it should never be performed with a rubber syringe.

5. The vulva should be kept covered with an antiseptic pad of sublimated wood wool or similar material.

Now that we have cleared the ground a little by these preliminary considerations, we come to the actual treatment of puerperal infection when it has occurred. Here we are brought face to face with the fact that the practice on this point differs widely in different countries, and even in different clinics in the same country. It is difficult to reconcile the utterances of the various authorities, and no *via media* seems to be possible.

It is important in any case not to lose sight of the fact that each patient must be treated on the information obtained from careful examination, and I do not know of any disease in which a thorough physical exploration of every accessible organ is so important as it is in puerperal fever. I do not think it is possible to use the term "routine treatment" at all in so complex and so fatal a disease as puerperal fever.

However, we may say that there are two main schools of teaching—the active and the passive. Those who counsel the minimum of interference do so in the belief that between the organisms and the host lies a barrier of leucocytes which it is important to leave intact, and not destroy by any active local disinfection. This barrier is stated to exist either in the uterine muscle and, according to later teaching, in the inflammatory thickenings round the uterus also. In the latter case it is difficult to see how disinfection of the uterus can have any mechanical action on it.

*Read before the Altrincham Division of the British Medical Association.

Those who prefer active local treatment, however, hold that when puerperal fever is established, the barrier of leucocytes is proved, *ipso facto*, to be ineffective, and that the best course is to remove the micro-organisms in so far as they are accessible, even if it involves the removal of part of the barrier wall as well.

For both of these views there is a good deal to be said, especially in theory, but it is an unfortunate fact that the literature of puerperal fever abounds in statements that have been made about purely clinical features by authors whose experience of the disease has been limited to the examination of cultures and histological sections. Perhaps it is in consequence of this that many clinicians of ripe experience have looked with undue disfavour on the emanations from the pathological laboratories.

The treatment of puerperal fever has also suffered, like many other departments of medicine, from the spirit of compromise which has shown itself in the common practice of attempting to combine both the active and the passive methods in the individual case, with the result that the uterus is neither left alone nor adequately disinfected. Concessions to the passive school are made by the administration of small doses of quinine internally, while a surgical aspect is added by the use of the intrauterine douche, and possibly by the removal of any large masses of retained placenta by the finger or the blunt curette. I do not, myself, believe that the uterine wall can be disinfected, or its contained organisms hindered in their growth by playing upon it with any chemical whatsoever that it is safe to use in the quantity required, and I have seen, not once only but again and again, general peritonitis set up by the practice of intrauterine douching. I think we may say definitely that whatever chemical be used for the uterine wall should be supplied with a swab, and not with the douche. If a Higginson's syringe be used for the latter the practice becomes indefensible.

For the passive method pure and simple there is something to be said, and I quite admit that many cases recover well on antistreptococcic serum and various drugs and stimulants internally without any local interference at all. But this method is not, I submit, universally applicable. It is, I think, very largely a matter of the severity of the case and the time that has elapsed before the patient is first seen or the diagnosis of puerperal infection made.

My own experience has been almost confined to very severe cases. I do not see the early cases at all, the average day of disease on admission to Monsall Fever Hospital being between the fifth and the sixth.

When I first began to see these I was impressed by what I had learnt from textbooks and so on, and, moreover, had been taught that any active interference with the puerperal uterus when once it had become infected was tantamount to signing the death certificate, but I had been accustomed to use the intrauterine douche. Out of 79 cases treated in this way, with or without serum, 37 died, a mortality of 46 per cent. I am unfortunately not able to say in what proportion of these intrauterine douching was employed, but it was at least 70 per cent.

These results were not encouraging, and I accordingly began to doubt the protective capacity of the granulation wall. What remnants of faith I still possessed were dissipated by the failure to discover the existence of the wall at all in a large number of sections taken from severe cases of puerperal sepsis that had not received active local treatment. So I commenced the use of the sharp curette, followed by swabbing of the raw surface with strongly bactericidal chemicals. After some trials, I fixed on undiluted izal fluid as the most suitable application, in that it had for streptococci a very high germicidal coefficient as compared with the phenol standard, and I had found it to be non-toxic. I have used this now for about five years.

The details of the method are as follows. A general anaesthetic is not given, but one hour previous to the operation a dose of brandy (usually 2 oz.) disguised with liquid extract of liquorice and hot water is administered, and half an hour later a hypodermic injection of morphine—usually ¼ grain. The vagina is cleansed and packed with a swab soaked in 5 per cent. solution of cocaine. When the patient is somnolent, she is placed in the lithotomy position and the cervix exposed and steadied with volsellae. Cultures are then taken (with a sterile swab) for bacteriological examination. After digital exploration of as much of the interior of the uterus as may be accessible, the endometrium is removed completely down to the muscle with a light sharp curette, having its extremity shaped like a hoop, with a broad flattened end. Perforation of even a friable uterus with this instrument is practically impossible.

The curette is then laid aside and the raw surface gone over very thoroughly and firmly with swabs soaked in the undiluted izal fluid. The uterine cavity is then packed with izal gauze and a tampon inserted in the posterior cul-de-sac. These plugs are withdrawn in twenty-four hours and are usually not replaced. No douching of any kind is given at the operation or subsequently. If the uterine discharge again becomes foul the swabbing with izal is repeated, and the uterus again plugged.

In a further series of 129 cases treated in this way, the mortality has been 24 per cent. only, though the type of case admitted to Monsall has not changed, nor have any alterations occurred in the methods of general medication or of nursing.

Now this reduction in mortality is somewhat striking, and it does not at all events support the opinion that active local interference must be entirely condemned, as so many would have us believe.

I should add (though there is nothing special in this) that all collections of pus, wherever they may be in the pelvis, have been opened either vaginally or by abdominal section whenever they have been diagnosed with certainty, and sometimes by a purely exploratory incision. Patients admitted with general peritonitis have been treated by laparotomy and drainage. Of these I have now had 13 consecutive cases with 8 recoveries. Flushing was resorted to in one case only, the others being treated (apart from free drainage) by propping up in the sitting position, combined with copious rectal or subcutaneous infusions of normal saline solution.

But there is another side to the question. I have seen the severe cases only, and perhaps I am not in a position to say very much about the mild or early cases. But inasmuch as almost all my own patients had been treated by intrauterine douches and quinine only until they were very nearly moribund, it is reasonable to infer that these methods are not the best, even if used early, especially as the statement was very frequently made by the practitioner that he did not regard the case as a severe one at first. We must, I repeat, condemn the douche.

I would, then, say that I cannot myself see why mild and early cases should not be treated by the sharp curette and the swabbing; but at all events the swabbing alone with the izal or other reliable antiseptic can do no harm even to our friend the granulation wall. It is curious, incidentally, to see how the nature of this structure changes. If it be suggested that the uterus should be disinfected, the wall is said to be delicate and fragile, so that we must take care not to hurt it; but at times it springs up to renewed vitality, and is then described as Nature's strongest line of defence.

I would suggest, then that when, during the puerperium, a rise of temperature occurs for which there is no extragenital cause to be found, in addition to the very useful 5 grains of calomel and saline purge which are usually given, the uterus should be mopped out with several swabs wet with the undiluted izal, and that if this is not effectual, then the sharp curette should be used, followed again by careful swabbing. Much of the condemnation with which the curette has been visited has been justly earned, and is due to the fact that the raw surface has not subsequently been adequately disinfected. To curette alone is certainly worse than to do nothing; to curette and douche is worst of all. I have not mentioned either the blunt or the flushing curettes because they are not weapons of precision and their use requires force, and is, therefore, dangerous. It is also a little difficult to see how the much-recommended process of exploration with the finger is carried out in the puerperal uterus. I have almost invariably found the fundus and cornua out of reach—in fact, it is no uncommon thing for the cavity to measure 6, 7, or even 8 in. in length. It is difficult to take the advocates of digital manipulation in puerperal fever seriously.

I have perforce confined myself mainly to the details of local treatment, as I believe this to be the most important point. In the treatment of the septicaemic symptoms

themselves there is, in my opinion, nothing to equal large quantities of sterilized saline solution given per rectum or subcutaneously. With these we may combine calomel and alcohol, both in fairly large doses. Antipyretic drugs are usually harmful. We do not usually need to treat the pyrexia *per se*, and, if we do, cold water is the best and safest remedy, used either in the form of a bath or cold sponging.

Antistreptococcic serum, I would say, is useful in a limited number of cases only, though probably never harmful.

I have given now a fairly large number of different serums, and time will not permit of discussing this question as its importance deserves. Briefly, the serum should be polyvalent—that is to say, prepared from many strains of streptococci, some of which should have been obtained from cases of puerperal fever. At least 50 c.cm. should be given subcutaneously, and 100 c.cm. are preferable. The dose should certainly not be repeated, as from so doing joint pains and pyrexia are apt to result.

The type of case in which these bactericidal serums are of benefit is that in which the streptococci are present in the circulating blood. I have never been able to satisfy myself that they affect the local lesion at all, and their value in checking absorption of toxins from the lesion is at least problematical. They are not supposed to have any antitoxic value. For myself, I now give them only in cases where the septicaemic symptoms are severe and no local lesion can be found to account for the intensity of the illness.

A Clinical Lecture

ON

THE DIAGNOSIS AND TREATMENT OF RENAL MOBILITY.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

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MOVABLE kidney is a condition which has, during the last few years, become the subject of much discussion, and opinion appears still to be divided upon several points in connexion with it. Is it of frequent occurrence? Is it responsible for the symptoms often associated with the mobility, or are these merely coincident? By what means can the mobility best be combated? Is fixation of the organ followed by relief to the symptoms complained of? These and some other points I propose to address myself to this afternoon. In the first place, let me point out that in the healthy living body the kidney is not an absolutely fixed organ; I mention this because in one of the best modern textbooks of medicine I notice it so described. When operating on the abdomen for other conditions I have had many opportunities of handling the kidneys, and find that both organs may be easily displaced downwards for an inch to an inch and a half. We have, then, in the condition known clinically as "movable kidney," simply an exaggeration of a normal condition, induced probably by loss of abdominal fat, by lax abdominal walls, occasionally by actual violence, influenced also probably by the lumbar pouches being more shallow in some individuals than in others.

SIGNS AND SYMPTOMS.

Of the frequency of undue mobility there should be no doubt; it is common in women, comparatively uncommon in men, though by no means rare in the male. Its detection is generally quite easy with proper method in examination. The patient should first be examined lying on the back in such a way as to produce muscular relaxation. The left hand is used to investigate the right side, the right hand to investigate the left side, the palm of the hand being pressed firmly against the lumbar muscles immediately below the last rib, the thumb lying on the front of the abdomen, close to the costal arch, so that the hand can grasp the patient's side. The patient is now told to take two or three deep inspirations, and at the second or third effort, whilst the palm pushes firmly up from the back, the thumb follows the retreating abdominal muscles at the beginning of expiration, and when the expiratory act is completed, if the kidney is movable, it may be found either in the grasp of the examining hand, or quite below it, and palpable by the hand which has hitherto not been concerned in the examination. If the kidney is not detected in this way a bimanual examination should be made in the semiprone and in the knee-elbow positions. Finally, the condition of the kidney should be investigated in the upright position, one hand pressing firmly into the loin from the back, the other being used on the front of the abdomen, the patient leaning slightly forwards and resting the hand of the side under examination upon some support. It is important to examine in this position, because there are some kidneys which do not reveal their displacement until the patient is vertical; or if the kidney is already found to be displaced downwards in one of the previous examinations, it will generally be found to come lower down when the patient is in the vertical position.

The kidney having been recognized will, when allowed to do so, often shoot back into the loin with a slip which is absolutely unmistakable, or it can alternatively be gently slid back beneath the costal arch. If the patient has been recumbent for some time mobility of the kidney is likely to be detected only on examination in the vertical position.

I have passed briefly over these less controversial points, but when I come to consider the symptoms complained of by patients with undue renal mobility I am upon less certain ground, and may fail to carry agreement with what I have to say. That such patients complain of many things is notorious: the real point at issue is whether the troubles complained of are due to the movable kidney, are merely coincident with it, or whether the symptoms complained of and the mobility of the kidney are both due to some common factor, such as gastroptosis, the stomach dragging down the kidney as it descends.

The symptom complained of most commonly, I think, is tiredness from inadequate cause, whether from physical or from mental work. Worse than the simple exertion of walking in some patients is standing about, whether at the wash-tub or at some social function. If pressed to explain why they get so tired, many patients attribute this to dragging and discomfort in the back on one or both sides. Exertion, such as is involved in stooping or in playing games such as golf, occasionally produces marked discomfort, amounting it may be to pain, and I have known riding also cause pain which is of a sickening character in women who hunt, though a feeling of complete exhaustion the same evening, and for a day or two after, is more often complained of than actual physical pain. Several of my cases have complained of the discomfort they experience when in bed if they turn to the side opposite to the mobile organ. Occasionally this produces a feeling of rather severe nausea; and if both kidneys are mobile, comfortable rest is only obtained when the patient lies on the back. Indigestion is a common trouble, pain coming on at irregular intervals after food, it may be independent of the nature of the food; flatulence is often associated. Suspicion of gastric ulcer may be excited, especially if the patient vomits from time to time. But ulcer and stenosis are generally excluded by the erratic nature of the symptoms, the absence of a fixed point of tenderness, the absence of stasis. The stomach will often be found proptosed and with atonic dilatation: and we may have the converse—marked gastroptosis and dilatation with nephroptosis.

As an uncommon condition we meet with attacks of renal pain so severe and so colic-like in nature as to suggest a diagnosis of calculus, blood in considerable quantity and pus may be found in the urine, the kidney may be very tender on palpation, vomiting may be persistent, and frequent micturition completes the picture. Such a case has been under my care during the last few months, a lady sent to me by Dr. Faulkner of Banbury. The symptoms had troubled the patient intermittently for twelve years; both kidneys were movable, but the principal symptoms implicated only the left side. Renal stone recently impacted in the ureter of a movable kidney seemed the appropriate diagnosis, but it was not confirmed by radiography. Exploration, which involved the opening of the kidney for digital examination and the passage of a bougie down the ureter, showed conclusively the absence of stone. A considerable degree of dilatation of the calyces

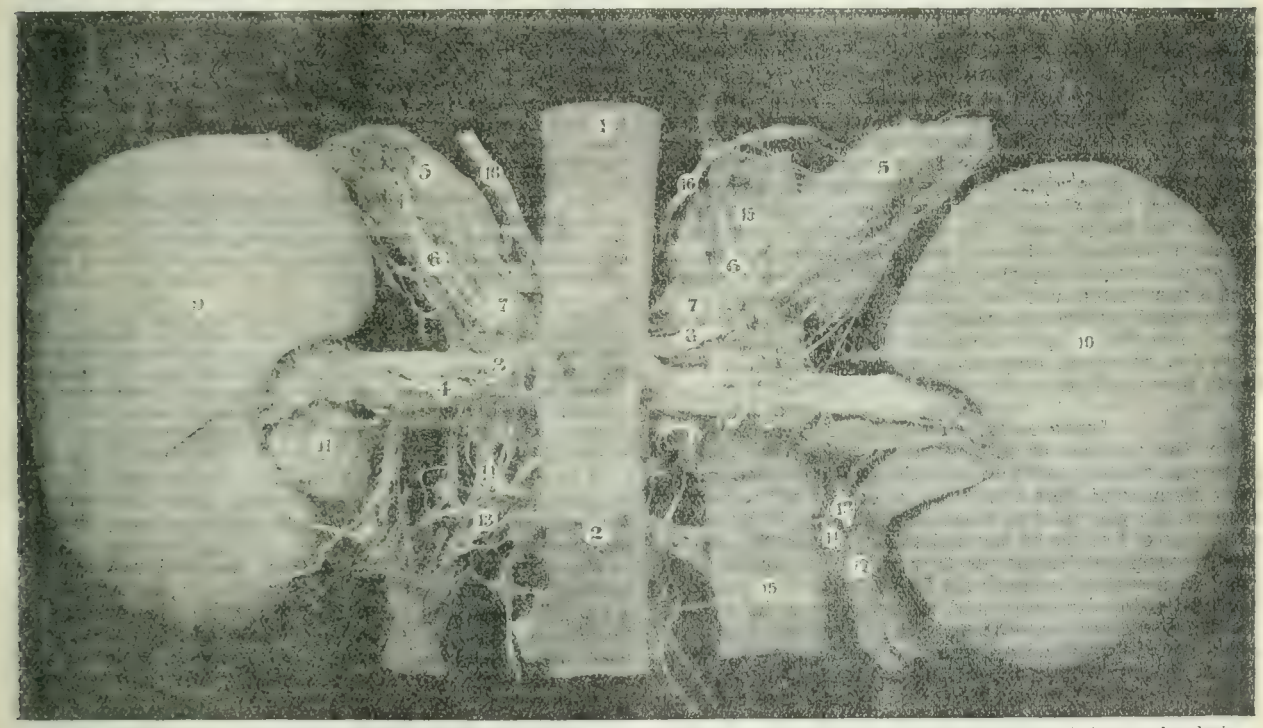
of the kidney was detected with but little noticeable change in the pelvis. Fixation of the kidney has resulted in complete relief to the symptoms, though there was a stormy convalescence of pain and vomiting for some days after the operation, due possibly to my fixing the kidney so high as to cause undue tension on the ureter. I can recall two other similar cases, and in all renal mobility with some degree of dilatation of the pelvis or its branches was present and appeared to be the only explanation of the painful attacks and the haematuria. Fixation in each case gave relief.

So far the picture I have drawn has been chiefly one of local symptoms such as may, without straining the imagination, be fairly ascribed to the drag of the movable kidney on its pedicle and to torsion of the vessels and ureter; that is, the symptoms are not merely associated with, but are really due to, the mobility.

Other symptoms met with are, however, not so easily explained. Amongst these are headache, very frequently associated with other symptoms such as those I have described, but in a few patients so severe and persistent as to dominate the whole case; it is *the* thing complained of and does not yield to treatment by drugs and general

another explanation which has much to be said for it—namely, that the symptoms are those of nerve irritation and exhaustion rather than toxic.

The illustration is a reproduction of a photograph from a dissection in the Museum of the Royal College of Surgeons; it was not made for the purpose of my thesis, but I came across it one day when examining some anatomical preparations at the college. The view of the preparation is from the back; it shows the aorta, the vena cava, both kidneys and suprarenal capsules with the renal pedicles, and, most important of all, the great plexus of nerves associated with the semilunar ganglia. The arrangement of the nerve plexus is clearer on the left side; to that I desire, therefore, to direct your attention. You will observe the large ganglion known as the semilunar lying on the lower part of the suprarenal body in the angle between the aorta and the renal artery. Entering the ganglion from above is the great splanchnic nerve. Descending from the lower margin of the ganglion is a large cord which is distributed eventually in the renal plexus and the lumbar ganglia, the branches of the former intertwining with the renal vessels. The splanchnic nerves are made up of fibres communicating with the



1, Posterior aspect of abdominal aorta. 2, Intercostal artery. 3, Renal artery. 4, Renal vein. 5, Adrenal body. 6, Great splanchnic nerve. 7, Semilunar ganglion. 8, Suprarenal artery. 9, Left kidney. 10, Right kidney. 11, Pelvis. 12, Ureter. 13, Spermatic artery. 14, Spermatic vein. 15, Inferior vena cava. 16, Inferior phrenic artery.

therapeutics. Sleeplessness is a not uncommon complaint; hysteria, irritability of temper, recognized not only by the friends but also by the patients. In a few patients flightiness and silliness of character and conduct is observed; such may complain of mental obscurity, of inability to remember or to think clearly; and finally we arrive at the worst group, in which there are well-marked delusions, varying in character and degree, at times of the religious mania type, at others of the persecution type, in many there is marked melancholia and suicide is either threatened or actually attempted. In practically all suffering from this group of symptoms just briefly outlined loss of weight is a very marked feature.

Is it permissible to assign these symptoms to renal mobility when that condition is found to be present, or is the condition of the kidneys a mere accidental association? I think the assertion of the latter is often made without due consideration, and I purpose now to indicate to you why renal mobility *may* produce these general nervous symptoms. It has been suggested that they are due to toxaemia, the higher nervous tissues being irritated by waste products imperfectly excreted by kidneys the circulation in which is interfered with or the excretory duct of which is rendered less patent than it should be.

I should like, however, to suggest for consideration thoracic ganglia, and through them with the anterior primary division of most of the dorsal spinal nerves, with filaments from both nerve roots. Through these roots the splanchnics have a wide distribution in the spinal cord. How does this arrangement of the nervous apparatus affect the question of renal mobility? In my view as follows: When the kidney descends below its ordinary position it leaves the suprarenal capsule behind. Closely connected with this body is the semilunar ganglion, which is also fixed by the attachment of the splanchnic nerves coming from above. When the kidney descends its pedicle is no longer horizontal, but is more or less vertical; it pulls directly on the great ganglion and through the splanchnics on the thoracic ganglia and on the branches of several if not all the dorsal nerve roots. The wide distribution of these spinal nerves in the cord ensures a very open path of communication with the higher centres in the brain through which stimuli can easily reach those centres. Is it unreasonable to believe that the frequent descent of the kidney, with its drag upon the nervous apparatus, is a source of nervous exhaustion from over-stimulation—a neurasthenia indeed? The kidney sometimes under the costal arch, at other times inches below, dragged down by its mere weight or at other times actually forced downwards by muscular effort,

does this make no impression on the sympathetic and cerebro-spinal systems? What does experience tell us when operating on the kidney for stone or in nephrectomy? Is it not that drag on the renal pedicle produces the most marked reflex disturbance of respiratory and at times of cardiac function, and is not the same true when, in operating, any part of the solar plexus is treated with any want of consideration? It may be said that the explanation is plausible so far as neurasthenic symptoms, such as headache, is concerned, but is insufficient when we are confronted with mania and delusions. Perhaps; but given patients with ill balanced nervous systems, who can limit and determine in them the ill effects of slight but constantly repeated over-stimulation of nerves?

However plausible a theoretical explanation such as I have suggested may be, it is to the practical test of experience we eventually turn.

What are the results of treatment, and what methods give the best result? As to methods, we may advise the patient to resort to some mechanical apparatus for the support of the kidney or to operative measures. I have tried several forms of support, but on the whole the results have been disappointing; the best device with which I am acquainted is the truss devised by Sir Frederick Treves, but even this is far from satisfactory; it is sometimes painful to wear, although produced by the most skilful surgical instrument maker; it is generally irksome, and often fails to give relief even when applied by the most intelligent of patients—and, needless to say, the hospital out-patient is hardly to be described under this heading. Even if some form of support is effective in relieving the symptoms, the apparatus will have to be worn a very long time, if not permanently, a discouraging outlook for the patient. To the alternative—namely, to operative treatment—I resort more and more readily, on the ground that it generally gives relief to the symptoms, that it is attended with but trifling risk to life, and that by increased experience satisfactory methods of fixation have now been devised which can, almost without exception, be relied upon to maintain the kidney fixed in its new position.

AFTER HISTORY OF PATIENTS.

For the purpose of this lecture I have been making inquiry as to the condition of patients operated upon at some distance of time as well as recently. My inquiries confirm the general impression I had formed as to the advantage of fixation in the majority of patients. Better than grouping them all together will be to divide them roughly into three groups: (1) Those in whom local discomfort, pain, dragging, and back-tiredness have been the main reasons for seeking relief, including the most severe cases with colic, haematuria, etc.; (2) those in whom exhaustion, headache, sleeplessness, and so on have been added to local discomfort, or have been by themselves the great subjects of complaint; and (3) those in whom the symptoms have been chiefly mental—either the patients have been uncertain and silly in their behaviour, merely depressed and hypochondriacal, or actually the subjects of mania and delusions.

Of Group (1) I have little but good to tell; they are nearly all relieved of their symptoms by fixation, and are restored to active participation in the affairs of life; few operations give more satisfactory results.

Of Group (2) the report is not so good, yet better than will be anticipated by many. Of these I think I may say that a considerable majority get fairly complete relief—that is, their lives are rendered comfortable and useful, whereas beforehand they were reduced to a condition of semi-invalidism.

Group (3) is not so hopeful, and yet it furnishes examples, I think, of real utility—that is, fixation of a movable kidney or of both organs has been followed by recovery complete and permanent up to the present. It would take too much of your time were I to quote at length all the cases of this class upon whom I have operated, but very briefly I may mention that I have operated upon eight patients with marked mental symptoms, chiefly delusions of varying type, of whom four had either attempted or threatened suicide.

CASE I.—A young married lady, a patient of Mr. George Elkington, upon whom I operated at the request of Dr. Suckling, and rather against my own judgement, about five years ago. The patient was very depressed, the subject of delusions, much pigmented about the face, very thin, and with a very bad family history of lunacy. The movable right kidney was fixed; speedy recovery followed. The patient has since borne two children, and has remained well to the present time.

CASE II.—A young athletic man, under the care of Dr. Orton and Dr. Suckling, was the subject of delusions, silly in his behaviour, hysterical at times, and greatly exhausted after physical exertion. Fixation of the right kidney was followed eventually by complete recovery; and the patient remains well, nearly four years after his operation.

CASE III.—A lady of about 30 years of age, under the care of Dr. Suckling, was the subject of long-continued delusions, mainly of the persecution type. She was deceitful, and suffered from violent outbursts of temper. The right kidney was fixed nearly four years ago, but there has been no improvement.

CASE IV.—A married woman of middle age, very depressed and suicidal, complaining greatly of headache, failure of memory; referred to me by Dr. Suckling. The operation of right kidney fixation was performed nearly four years ago, but there has been no permanent improvement; it should be mentioned, however, that the kidney was found to be rather freely movable again a few months after the operation.

CASE V.—A man of middle age, suffering from extreme depression, delusions, and loss of memory; referred to me by Dr Suckling. Kidney fixation was performed two years ago without improvement at the time, and with little, if any, since, according to an account I have of him by letter.

CASE VI.—A lady somewhat past middle life, the subject of delusions of long standing; referred to me by Dr. Suckling. Both kidneys were movable and were fixed at one operation, when they were found in an advanced stage of chronic interstinal nephritis with marked cystic degeneration on one side. Uraemic coma set in on the fourth day, and although improvement occurred, death from uraemia took place on the ninth day.

CASE VII.—A young lady with well-marked delusions, religious mania, and periods of excitement; referred to me by Dr. Suckling. Kidney fixation was performed a year and a half ago; slow but steady improvement followed, and I hear from a doctor with whom the patient has been staying that she is at the present time quite well.

CASE VIII.—A young lady who suffered from periods of excitement, from delusions, and from suicidal tendencies. She was under the charge of two nurses who found it impossible to restrain her. Her medical advisers were Dr. Oswald Lewis, Dr. Suckling, and Mr. Billington, and I was asked to operate upon her because the last mentioned had an infected finger. Kidney fixation was performed nine months ago, and I learn from Dr. Lewis that the patient is now quite well.

It is very desirable that patients of this type should receive careful after-treatment, and that they should for a time be kept apart from their ordinary home surroundings.

When discussing these cases of unsound mind with medical friends, especially with those who are alienists, I am often told by them that the recoveries are mere accidental coincidences due to traumatism and so on; and cases are from time to time quoted to me in which some injury, possibly self-inflicted, has been followed by complete recovery. Again, many people the subjects of delusions recover when under proper control and restraint. All this I am familiar with from my own experience, but I am not convinced by the arguments, and I would ask you to keep an open mind on the matter; on the one hand not to refuse to consider operation because of prejudice, perhaps excited by too rosy a view put forward of the benefits likely to be obtained from kidney fixation; on the other hand, not to promise too much if invited to give an opinion on the wisdom of kidney fixation as a means of helping to restore mental balance. Two patients referred to me for fixation were epileptics whose trouble had existed for years; neither of them was benefited by operation.

Were the operation one involving considerable risk to life, we might naturally hesitate to advise it unless there were something like certainty of success, but the risk to life is trifling. I have operated upon upwards of 100 patients, quite frequently fixing both kidneys at the one operation, and there has been one death, to which I have already referred, a death which was not due to any surgical mishap but to an unrecognized chronic nephritis; no doubt death was precipitated by operation.

METHODS OF FIXATION.

I have only now to deal with the methods of fixation. Numerous operations have been described, and I should encroach far too much on your time were I to go fully into the details. This is the less necessary as experience has led to many being discarded; either they have been

followed by relapse, were too complicated, or involved unnecessary risk. I shall speak only in general terms, and in the first instance I would recommend a vertical as opposed to an oblique or nearly transverse incision; the first mentioned gives easy access to the kidney, the abdominal wall is but little weakened, and a high reposition of the kidney is facilitated.

The kidney can easily be brought quite outside the wound, when the capsule should be unsparingly freed from the surrounding fibrous and fatty tissue; the former is extremely tough, and often can only be properly got rid of by free use of scissors. Whilst this clearance is being effected a careful look-out should be kept for accessory renal arteries, which are not infrequent at the upper pole of the kidney, and though not large may prove troublesome to secure if not recognized before they have been divided. There is practically no danger of opening the peritoneum; as far as my memory serves me, it has only happened when I have operated upon a relapsed case. The kidney once freed, we may decapsulate the upper part with the purpose of securing firm adhesions between the new surface of the kidney and the bed to which it is returned, at the same time using suspension sutures through the capsule after the method of Goelet, to retain the organ in position until firm adhesions have fixed it. Or we can separate portions of the capsule, leaving them attached at one margin to the kidney, and either suture the free margins of the flaps to the lumbar muscles or use a strip of the capsule to pass over the upper margin of the last rib, and so suspend the kidney. The last method, suggested, I think, by Mr. Jordan Lloyd, is probably the best, that is, the least likely to be followed by relapse, which has been the serious drawback of several methods. A good description of the operation is to be found in the British Medical Journal (November 30th, 1907), in a paper by Mr. Billington. Whatever the method of fixation, before the kidney is replaced in the loin a fresh cavity should be made for it as high as possible under the costal arch, and close to the quadratus lumborum, so that the posterior surface of the kidney may become adherent to firm supports, and not merely to loose fatty tissue. I practically always insert a tiny gauze drain at the lower end of the incision to provide an exit for blood if there should happen to be any unusual oozing from the separated tissues.

The abdomen should be firmly supported by bandages in case anaesthetic vomiting should be severe, and the patient should be kept strictly horizontal for at least three weeks. Relapse, if it occurs, most frequently happens, I believe, very soon after operation from tearing out of the fixing sutures or capsular flaps, and the best security against this accident is the precaution I have just mentioned. I have had occasion to operate on relapsed cases of my own and on those of other surgeons. The history in practically all has been of reappearance of mobility speedily after giving up recumbency, which points to early breaking away of the anchoring materials rather than to slow stretching of recent adhesions.

Finally, if both kidneys are movable, should both be fixed or one only? If we seriously believe that mobility of a kidney causes certain symptoms, how can we be so illogical as to advise fixation of one only? Whether both should be fixed at one operation or on separate occasions is a question which may reasonably be discussed. Personally, I have no hesitation in expressing the opinion that both should be dealt with at one time in nearly all cases. The operation, even if double, is of very moderate severity, and is well borne. The alternative of asking a nervous patient to wait a few weeks or months and then to face another anaesthetic and operation for the fixation of the second kidney has little to commend it.

An attempt is being made in Sierra Leone to pass an Act entailing registration by medical men, dentists, and chemists. It is meeting with a certain amount of opposition, which, so far as medical men are concerned, appears to be based upon the fact that the Act will give them no greater security against irregular competition by unqualified practitioners than the Act now in force in Great Britain and Ireland, and that it will subject them in their work to the jurisdiction of a body having the same powers as the General Medical Council, but formed of persons not deemed by the objectors to be sufficiently experienced or independent to wield such authority.

A CASE OF URETERO-TRIGONAL ANASTOMOSIS FOR ECTOPIA VESICAE.*

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Exstrophy of the bladder has exercised the minds and taxed the ingenuity of surgeons for many years. It is a rare condition—occurring once in six or seven thousand births—in which through defective development the anterior wall of the bladder and the abdominal wall in front of the bladder are wanting, and the mucous membrane of the posterior wall pouts forward red, inflamed, and even ulcerated and covered with stringy alkaline mucus. Numerous operations have been devised and practised, but the ideal has not yet been reached, for no one has been able to devise an operation which will secure a "*restitutio ad integrum*." The condition is much more common in males than in females. Cases are recorded where the patients have lived to a good age without any surgical help or treatment, but usually they die from kidney or other intercurrent disease. Their plight is indeed a miserable one, and as operation as presently practised provides a considerable degree of palliation to the sufferer, who can thereby lead a fairly normal existence, it is urged on the surgeon by the parents. Operation, however, should not be done too soon, certainly not before the fifth year of life.

Short of operation, instrument makers have striven, but only with partial success, to fashion protective shields fitted to portable urinals of indiarubber. Of these Earle's is probably the best, and gives a certain degree of comfort. The operations originally practised aimed at covering the defect by the transplantation or lateral gliding of abdominal flaps. Many ingenious plans such as those associated with the names of Roux, Wood, Thiersch and Neudörfer, were tried, but it may be said of all of these, that if successful—which they often were not—they merely provided a reservoir from which urine trickled constantly into a specially fitted urinal. Moreover, cystitis was a constant accompaniment, and concretions and calculi were formed which required further surgical interference. To secure a successful result meant generally a long series of operations over many months—in one recorded case nineteen operations in 22 months.

Trendelenburg, of Leipzig, then suggested a more severe but more successful form of plastic operation. As the pubic bones are widely separated in these cases, he advised division of the sacro-iliac synchondrosis on both sides and approximation of the pelvic bones. This allows the soft parts at the front of the abdomen to be brought together over the bladder, the edges of which are likewise sutured. It can be done with safety up to the 7th or 8th year, but is much more difficult and dangerous in adults. I saw two of these cases in Trendelenburg's clinic some years ago, but the treatment seemed somewhat protracted. Trendelenburg[1] still advises this operation in preference to osteotomy of pelvis or ureteral transplantation, and suggests that moulding of the pelvis be begun at the earliest possible age, so that as little as possible may require to be done when the child comes to the operable age of five or six.

The defect of all these operations is that no sphincter is provided for the bladder, and accordingly a plan which was advised as early as 1842 is now more generally followed, namely, to take the bladder away altogether and to implant the ureters. The objection to this, however, was that infection passed along the ureters to the kidneys, and the patients rapidly died from "surgical kidney." This is true both of implantation of the ureters into the loin—a plan which should never be followed—or into the bowel—the ordinary uretero-intestinal anastomosis.

Maydl of Vienna in 1894 pointed out that the true guardians of the kidneys from ascending infection were the ureteral valves or sphincters. He suggested an operation, which is probably the best at the present day, by which the trigone of the bladder, with the ureteral attachments intact, are transplanted into the sigmoid flexure.

* A paper read before the Aberdeen Medico-Chirurgical Society, November, 1907.

The bowel is thus converted into a cloaca, and becomes quite tolerant of the urine, which can be retained for from four to six hours. Ascending infection is also uncommon. In Maydl's plan, which I followed, "a ureteral catheter is introduced into each ureter after the operation field has been cleansed as well as may be, and an elliptical section surrounding the mouths of both ureters is then cut from the bladder wall, great care being taken not to injure the ureters. Next the peritoneal cavity is opened. A convenient loop of the sigmoid flexure or rectum is selected and brought out of the abdominal wound. The ureters, with their attached portion of trigone, are then freed, a longitudinal incision is made in the wall of the gut with the necessary precautions, and into this the section of trigone is sutured. The remainder of the bladder is now stripped of its mucous membrane, and the abdominal wound closed as tightly as possible with splitting and transposition of the recti if necessary. As a final precaution, the sphincter ani is stretched and a tube inserted and left in for several days to establish drainage and minimize the danger of leakage and renal retention."

More recently Peters of Toronto recommended transplantation of the ureters into the rectum extraperitoneally, and Moynihan[2] recorded a case where he had transplanted the whole of the exposed posterior wall of the bladder into the rectum extraperitoneally.

The credit of devising the extraperitoneal method of anastomosis belongs, however, not to Peters but to Dr. Alfred A. Lendon of Adelaide, South Australia, who performed the operation two months before Peters. Dr. Lendon published a very interesting and exhaustive clinical lecture on Extroversion of the Bladder, in the BRITISH MEDICAL JOURNAL of April 28th, 1906, in which number also will be found an account of an operation by Lendon's method performed by Mr. H. Simpson Newland, also of Adelaide. To Australia, then, and not to Canada, belongs the credit of introducing the improvement on Maydl's operation known as "extraperitoneal ureteroproctostomy."

CASE.

Mary M., aged 6, was sent to me by Dr. Petrie-Hay, Forres, in July, 1907.

On admission to the Royal Infirmary her condition was as follows: The posterior wall of the bladder lay in a line with the abdominal wall, and the openings of the ureters could be distinctly seen about half an inch apart No urethra could be found, and the labia were very imperfectly developed. The urine kept almost constantly dribbling from the openings of the ureters. There was a great amount of irritation and excoriation of the surrounding parts. The patient's mother stated that as the child grew older the condition seemed to affect her more, and that during the last eighteen months she had not been so active as before. On admission the patient's general condition was rather low, but she showed marked improvement under treatment, and was operated on on August 21st.

The operation was done according to the above description, but I thought it desirable to insert a small gauze drain above the pubes. For two days after the operation the patient suffered somewhat from shock, but the pulse then slowed down and her general condition markedly improved. Urine from the first escaped freely through the tube in the rectum. About a week after the operation a small quantity of urine with a fæcal odour began to escape from the wound at the pubic drain, but this ceased in about a week.

About a month after the operation the chart showed a rise of temperature at night with a quickening of the pulse, but no tenderness could be detected in either kidney. Small doses of salol were given and the rectum was washed out with boric solution The child was propped up in bed and encouraged to drink large quantities of water to flush the urinary passages. These symptoms disappeared after a time under treatment. The patient then commenced to put on flesh rapidly, and was able to walk about without discomfort.

On November 11th she was discharged from hospital, and at that time she was able to retain urine in the rectum for from three to four hours.

The patient was thus eighty-two days in hospital after operation. She could have been sent out weeks before, but I kept her in partly to be under observation and partly to show her as a somewhat rare case to the students of the clinical surgery class at the beginning of the winter session.

REFERENCES.

[1] *Annals of Surgery*, August, 1906. [2] Ibid., February, 1908.

DR. T. R. ST. JOHNSTON, of the Colonial Medical Service, has been appointed a Justice of the Peace for Padroga, Fiji.

PROLAPSE OF THE INVERTED BLADDER THROUGH THE URETHRA.

BY CHARLES LEEDHAM-GREEN, F.R.C.S.,
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IN May of last year, a girl, aged 18 months, was admitted to the Children's Hospital, Birmingham, under my care, on account of a small swelling which had recently appeared between the labia.

The mother stated that a similar swelling had been seen once before, when the child was a month old, but it had disappeared on being bathed with warm water. Four days before the baby was brought to the hospital the swelling had been again noticed, and, in spite of bathing, had persisted.

On examination, a soft red protrusion could be seen between the labia, about the size of a walnut, and covered with mucous membrane. On abducting the thighs, it was observed that this mucous membrane was thrown into several small longitudinal folds, which, at the neck of the swelling, were continuous with those of the urethra. The small openings of the ureters were distinctly visible on either side of the prolapse, and from them urine was intermittently ejected in a characteristic manner. The whole of the bladder was not affected by the protrusion, although it was large, for a metal sound could be passed in front of it for a short distance into the diminished cavity of the bladder. When the child cried or strained the swelling became tense and larger, and the mucous membrane of the rectum protruded at the anus (see Fig. 1).

Under an anæsthetic the prolapse was readily reduced through the dilated urethra, which was large enough to admit the little finger with ease. The protrusion of the bladder seemed to cause little or no pain. The urine was free to escape from the exposed ureters, and the urethra was so lax that the blood supply to the bladder was scarcely interfered with. The delicate mucous membrane, however, had suffered from its exposure, and several small ulcers had developed in consequence.

Apart from this special trouble nothing abnormal could be detected in the child. There was apparently no congenital defect of the bladder, urethra nor vagina. She was an unusually healthy, well-developed, breast-fed baby, without a sign of rickets or other constitutional disease. According to the mother the child had never suffered from worms, constipation or diarrhœa, and had never had any difficulty or straining when the bowels were moved or the urine evacuated. Apart from the baby's being somewhat weakly during the first month or two of its life, the mother could not suggest anything that might have predisposed to the condition. All her other five children were well and strong.

The cure was only effected after some difficulty. At first it was hoped that, if the prolapse were reduced and prevented from coming down for a few weeks, the urethral sphincter muscles would regain their tone, and the tendency to prolapse would disappear. Therefore the buttocks and thighs were simply strapped together and the urine drawn off with a catheter from time to time. As this method failed to keep up the prolapse, the vagina was packed with iodoform gauze, so as slightly to compress the urethra against the symphysis. The buttocks and thighs were fixed together as before and the child was suspended by the legs in a gallows splint, as in the treatment of fracture of the thigh in infants. This was more successful, but failed to cure the tendency to prolapse when the child cried or strained, and after a time the vagina became irritated by the tampon, and this treatment had to be abandoned. Finally, under an anæsthetic a small amount of liquefied hard paraffin was injected into the periurethral tissue at the neck of the bladder (see Fig. 2). This measure at once proved successful. The prolapse has not been down since; the cystitis which was present rapidly cleared up, and the child when last seen, some four months after the injection, had perfect control over the bladder.

Inversion and prolapse of the bladder is a condition which has received but scanty attention at the hands of most writers on vesical troubles, whether in the male or female. Yet scattered here and there in the medical literature there are a number of instances in which the condition has been noticed. Most of the references, it is true, are unfortunately so brief and inexact as to be of little value. But there are also a few accounts of carefully observed cases. It is evident that many varieties of the condition are met with, from the mere dimpling in of a portion of the bladder wall without any prolapse of the organ, as described by Foubert and by Rutti, to the complete inversion and prolapse of all the walls of the entire bladder, as in the cases mentioned by de Haen, Malagodi, and Meckel. In the majority of cases recorded urine can still collect in the unaffected portion, though its expulsion may be prevented or hindered by the inverted part blocking the urethra.

Remembering the firm adhesions, in the female, of the base of the bladder to the anterior vaginal wall, we

should neither expect to meet with an inversion of the whole of the bladder nor a partial inversion affecting the trigonum. Yet both of these conditions have been recorded more than once. In the case treated by de Haen the bladder was completely inverted and prolapsed, so that in carrying the finger behind the symphysis pubis it found itself in a pouch outside the abdomen. Malagodi also relates a very similar case associated with rectal and uterine prolapse. Meckel reports a case of complete inversion and prolapse, the only one on record without displacement of the other pelvic organs. All these cases were found in females, in whom, indeed, prolapse of the inverted organ is alone possible. Yet there are a few instances in which the first stages of a slight inversion of the male bladder have been noticed. Foubert describes one of an old officer who for some years before his death had suffered from retention of urine, which had to be relieved by the catheter. After death it was found that the bladder was pouched in at its upper and posterior part, the point of invagination reaching to the bladder neck. Rutti also mentions a similar case in a man where the caecum occupied the pouch formed by the invagination of the bladder. Noel, Patron, Malherbe, Pousson, and others also record instances of a prolapse affecting the mucous membrane of the bladder only. It is, however, open to serious doubt whether all of these were properly described as being prolapse of the bladder. Some of the accounts rather suggest a prolapse of the dilated lower end of the ureter; but the description attached to most of them makes it almost idle to speculate as to their true nature. For the same reason it is difficult to say whether it is more common for only the mucous coat or the entire thickness of the bladder wall to be affected. It would seem as if the latter were the more common. The causes which may give rise to the condition are evidently various. In a few cases there has been a gross congenital defect of the uterus, anterior vaginal wall, or urethra, which would deprive the bladder of much of its usual support. In others, there is a history of a fall or other injury from which the patient dated the onset of the trouble. A history of straining, such as that caused by prolonged diarrhoea or vesical tenesmus, is noted by others. Thomson, for instance, mentions the case of a woman, aged 40, who, during an attack of acute cystitis, suddenly experienced a violent pain on micturition. On examination he found a firm tumour, about the size of a walnut, projecting from the orifice of the urethra. Under an anaesthetic the finger could be passed into the bladder by the side of the tumour, and its pedicle felt to be springing from the posterior wall of the bladder. The incrustation was removed and the prolapse reduced. After the reposition the wall of the bladder could be felt by the finger to be quite normal, save for the cystitis present, which rapidly subsided under rest in bed. There was no return of the prolapse, and Thomson regarded the case as an invagination brought about by the natural straining of the bladder to get rid of the incrustation, whose weight had led to the first dimpling in of the bladder wall. It is easy to see that if, in consequence of intra-abdominal pressure or other cause, an invagination of the bladder wall takes place at any point, the irregular and violent contractions of the vesical muscles, occasioned by the interference to micturition, might tend to increase the inversion more and more till it prolapsed through the urethra.



Fig. 1.—Prolapse of the inverted bladder through the urethra.

Many of the cases of prolapse have been met with in infancy, even at the time of birth, occasioned perhaps by an abnormally wide urethra; but only rarely has any grave congenital defect of the urethra or bladder been noticed.

Pousson believes that when the vesical mucous membrane is alone prolapsed it is brought about, in the first place, by a dilatation of a pre-existing mucous crypt at the neck of the bladder, which pushes the urethral mucous membrane before it until it appears at the urethral orifice (see Fig. 3). He bases this view on microscopic observation of the extirpated prolapse in cases met with by Malherbe and himself. The diagnosis of bladder prolapse may be very simple, as in the case that came under my notice, where the detection of the openings of the ureters at once revealed the true nature of the condition. Or, when the prolapse is less complete, it may easily be mistaken for a simple prolapse of the urethral mucous membrane or the extrusion of a pedunculated bladder tumour, as in that case recorded by Crosse, where a surgeon was about to ligature the supposed tumour. But perhaps the most difficult case to diagnose is that in which there is prolapse of a dilated cystic condition of the lower end of the ureter, such as Englisch, Cohn, Fenwick, and others describe. But here the translucency of the cyst is characteristic, and a cystoscopic examination, made after returning the prolapse into the bladder, at once dispels all doubt.

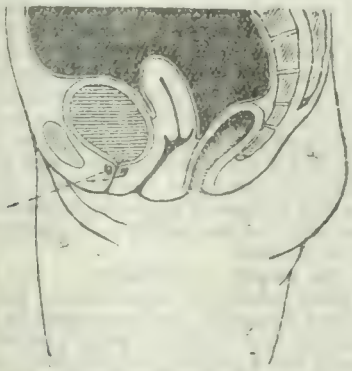


Fig. 2.—A, Site of injection of paraffin.



Fig. 3.

From the following list, which I have drawn up from the recorded cases, it will be seen that the treatment seems seldom to have given rise to much trouble; replacement of the organ, and a pad and bandage applied to prevent the extrusion of the bladder, was sufficient in many of the cases to effect a cure. Lowe's case was more difficult, inducing him to adopt the bold procedure of repeated cauterization of the urethra—a method hardly likely to be

followed by subsequent surgeons. Where the prolapse only affects the mucous membrane, then its excision, as practised by Patron, Malherbe and Pousson, probably offers the best method of dealing with it. It also has been suggested that the prolapse should be excised, even when it involves all the coats of the bladder, save when the ureters are involved in the displacement.

1. BUMKE (*Jahrb. f. Kinderheilk*, Bd. 29, 1889).—Female, aged 6 months. Partial prolapse of bladder. Reduced and kept up by pad and bandage. Cured.

2. CROSSE (*Trans. Provincial Med. and Surg. Assoc*, 1846).—Female, aged 3 years. Partial prolapse showing the openings of the ureters. Cured by pad and bandage, but slight incontinence of urine persisted.

3. FOUBERT (*Schmidt's Jahrbuch*, Bd. 100, S. 225).—Male of advanced age. First stage of inversion seen at autopsy.

4. DE HAEN (Reported *in extenso* by Hoin, *Essai sur différentes hernies*, p. 342. Paris. 1768).—Female. Inversion and prolapse of the entire bladder. Vagina and rectum also prolapsed. Death from gangrene of bladder.

5. LEEDHAM-GREEN.—Female, aged 18 months. Partial prolapse of bladder showing openings of ureters. Cured by injection of hard paraffin.

6. LEVRET (*Journ. de Méd., Chir., Pharm.*, etc., 1773, xl, 269).—Female. First stage of inversion seen at autopsy.

7. LOWE (*Lancet*, 1862, vol. i, p. 250).—Female, aged 2½ years. Congenital prolapse of bladder. Cured by cauterization of the urethra, but slight incontinence of urine persisted.

8. MALAGODI (*Raccoglitore Medico di Fano*, 1855).—Female. Complete inversion of bladder. Rectum also prolapsed. Death from gangrene of the bladder.

9. MALHERBE (*Ann. des Mal. Organes Génito-Urinaires*, 1884, ii, 734).—Female. Partial prolapse of mucous membrane of bladder. Cured by ligature and excision.

10. MECKEL (*Traité d'Anatomie pathologique de Lobstein*. Paris. 1829).—Female. Complete inversion of bladder. Only case unaccompanied by displacement of the other pelvic organs.

11. MURPHY (*London Medical Gazette*, vol. xi. 1833).—Female, aged 4 years. Partial prolapse, showing orifices of the ureters. No recurrence after replacement.

12. NIEHAUS (*Correspondenzbl. f. Schweiz. Aerzte*. No. 5).

13. NOEL (*Mém. de l'Acad. R y. de Chir.* 1769. T. ii, p. i).—Female. Congenital prolapse of a translucent cyst, the size of a hen's egg, filled with urine. (Probably a prolapse of a cystic ureter.—C. L G.)

14. OLIVER (*Edin. Med. Journ*, Bd. 22, p. 769).—Female, aged 16 months. Some congenital defect of uterus and vagina. Prolapse reduced and kept up by pad and bandage. Cured.

15. PATRON (*Archives Gén. de Méd.* 1857).—Female. Partial prolapse of mucous membrane of bladder. (Cystic lower end of ureter (?).—C. L-G.) Ligatured and excised. Cured.

16. PERCY (In Boyer, *Traité des Maladies Chirurgicales*. 1824. T. xi, p. 86).—Female, aged 52 years. Inversion and prolapse of portion of bladder. Cured by the tying in of an elastic bougie.

17. PILGRAM (*Inaug. Dissertat.* Bonn. 1892).—Female, aged 10 months. Cured by use of vaginal tampon.

18. POUSSON (*Ann. des Mal. des Org. Génit.-Urin.* 1894. Vol. xii).—Female, aged 30 years. Partial prolapse of mucous membrane of bladder. Cured by excision.

19. RUTTI (*Schmidt's Jahrbuch*. Bd. 100, p 225).—Male. Autopsy showed first stage of inversion.

20. SOLINGEN (*Observ de mulier. et infant. morb. chir.* P. 741).—Female. Prolapse of vesical mucous membrane. Cured by use of bougie, as in case of Percy.

21. THOMSON (*Lancet*. 1875. P. 46).—Female, aged 40 years. Did not recur after digital replacement.

22. TIZONI (*Gazzetta medica di Lombardia*. 1855).

THE Pan-American Medical Congress will hold its fifth meeting at Guatemala from August 6th to 10th, 1908. The work of the Congress will be distributed among twenty-one sections. English, Spanish, French, and Portuguese are the official languages of the Congress. The general secretary is Dr. José Azurdia, of the Guatemala School of Medicine.

"SOLITARY KIDNEY," WITH THE NOTES OF A RARE CASE.

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MY object in reporting this example of "solitary kidney" is to draw renewed attention to a class of case which now and again crops up, when least expected, and often ends disastrously.

Now that kidney operations are so often undertaken, these cases have been found to occur fairly frequently in the practice of any large hospital; a surgeon performs some operation (it may be only a slight one) on one kidney, which necessarily interferes with its function for the time being, and which under ordinary circumstances (the other kidney being healthy) would result favourably; but if the other kidney happens to be absent, or so diseased as to be incapable of dealing with the waste products of the body, uraemia ensues, and another of those appalling accidents which are the bugbear of every urinary surgeon has happened.

The term "solitary kidney" is widely and somewhat loosely used to denote several distinct and separate classes of case, but it has enjoyed such an extended vogue that it is useful to retain it, whilst recognizing that it includes the three following classes:

1. *Congenital absence of development of one kidney*, its vessels and the corresponding ureter. Occasionally this is associated with non-development of the genital organ on the same side of the body. In a few cases the ureter is only partially absent, the upper end being represented by a fibrous cord, whilst the lower end may even be pervious for a few centimetres and have an opening into the bladder. The kidney on the opposite side is hypertrophied, and may occupy its normal position in the loin or be displaced downwards into the pelvis or in front of the sacrum. Its ureter most frequently opens into the bladder in the normal position, but may open anywhere on the posterior wall or base. This is the rarest form of "solitary kidney," and the case which I am about to describe belongs to this class.

2. *Fusion of the two kidneys into one mass*, the simplest and most frequent form of which is the well-known "horseshoe kidney," in which two of the poles (usually the lower) are united by a bridge of kidney substance across the middle line; they vary from this to an irregular-shaped mass of kidney tissue. In this form there are never less than two ureters, which usually enter the bladder in the ordinary position; three or four ureters have been frequently met with in this type. They may unite before opening into the bladder or open separately, in which instance they usually open close together in the normal positions. I have throughout the above descriptions laid particular stress on the number and position of entrance of the ureters into the bladder, because any abnormality in either the number or position of these openings noticed during a cystoscopic examination should suggest some malformation of the kidneys, which might not otherwise have been suspected.

3. *Those cases in which one kidney is either rudimentary, degenerated, or so diseased as to be incapable of itself of carrying on the excretory needs of the body.* This class is probably that most frequently met with by surgeons, particularly in tuberculosis and nephrolithiasis, which diseases so frequently affect both kidneys at the same time, whilst the symptoms very often point to disease of one organ only, and it is not until suppression of urine follows some operation performed to relieve these one-sided symptoms that disease of the other organ is suspected.

The case which I am about to describe belongs to the first of these classes.

During the routine examination of the body of a man aged 30 years, who died from cardiac failure following chronic mitral disease, I was surprised, on feeling for the right kidney, to find that the usual site of that organ in the loin was quite empty; and, further, that on close inspection no trace of any kidney on this side was to be found, either in the pelvis or elsewhere. On dissection it was also apparent that neither the corresponding renal vessels or ureter had been developed: there was not even a pad of fat or other tissue to represent the missing organ.

The adrenal gland was present and in its usual situation, but was supplied with blood by branches of the diaphragmatic arteries only, the usual aortic branches being absent.

The left kidney was twice the normal size, and weighed 12 oz.; it was of the usual bean shape with a smooth surface, and it lay in the normal position. A section showed chronic congestion, the result of a gradually failing heart; its vessels were at least twice the normal size, but the pelvis and ureter were normal both in size and shape.

The bladder was healthy, but the trigone gave a very curious appearance, the result of the absence of the right ureteric opening, the plica ureterica, and the interureteric bar. The left ureter opened in the usual situation, and its orifice was healthy; but the band of muscle which passes down from the ureter, and which should interlace with its fellow of the opposite side before passing downwards (forming the prominences of mucous membrane known as the plica ureterica and the interureteric bar), in this case ran straight down to the crista gallinaginis of the prostatic urethra, which it appeared to join. The result of this was to give the base of the bladder a curious lop-sided appearance which must be quite characteristic and could not be mistaken if seen by the cystoscope.

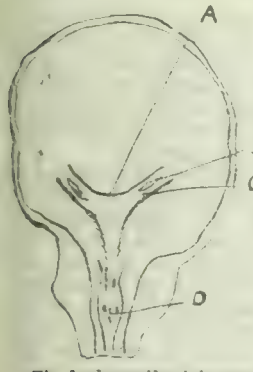


Fig. 1. shows the trigone and prostatic urethra of a normal bladder, the ureteric bands of muscle interlace to form the interureteric bar, and then unite to pass down to the crista gallinaginis of the prostatic urethra. A, Interureteric bar. B, Ureteric opening. C, Plica ureterica. D, Crista gallinaginis.

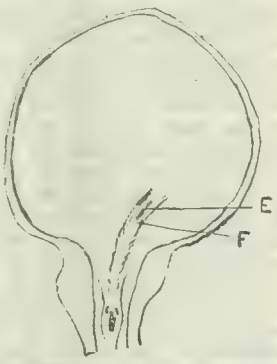


Fig. 2 shows the trigone and prostatic urethra as it appeared in the case of "solitary kidney" just reported. Only the left ureteric opening and band of muscle are present, and the latter passes straight down to join the crista gallinaginis, a condition which could be at once recognized by the cystoscope. E, Ureteric opening. F, Plica ureterica.

Having described the various forms of "solitary kidney" and given an example of one of them, the question arises, given one of these cases, how are we to diagnose it?

Beyond the usual clinical ones there are several methods at our disposal, one or other of which we should be ready to make use of when the occasion arises; and it is well to bear in mind that, although we may suspect complications in a given case, yet the accident usually occurs when the surgeon feels most sure of himself, therefore some attempt to estimate the working value of the *other* kidney should always be made before any kidney operation is undertaken.

The methods at our command are as follows:

1. *Cystoscopy.*—Examination of the bladder with the cystoscope may be done practically without risk by any one accustomed to its use. By means of it we can see the number, shape, and general appearance of the ureteric orifices and the state of the urine as it is expelled from each, and by the use of the ureteric catheter we can collect samples of urine directly from each kidney and apply the usual tests to them, which will often tell us all that we require to know; but, if necessary, we can also make use of special methods for estimating the comparative function of the two kidneys, such as their activity in excreting methylene blue, or in forming sugar after the injection of phloridzin. Within the last few years we have learnt that a diseased kidney will very frequently produce changes in the corresponding ureteric orifice, which in certain cases are quite characteristic, and in others allow us to draw valuable deductions as to the state of the kidney. These changes can only be observed by a skilled use of the cystoscope.

2. *Segregation*, or separation of the bladder into two halves by a special instrument, which enables us to collect the urine from the two kidneys separately. This process is valuable in those instances (happily rare when the observer is a skilled cystoscopist) in which, for some reason or other, it is not possible to use the cystoscope. It can also be combined with the methylene blue or phloridzin-glycosuria methods of comparing kidney function, but by its use alone the valuable positive evidence of sight gained by the cystoscope is lost, besides which it is not nearly so reliable as ureteral catheterization.

3. *Inspection of the two Kidneys.*—This requires a second operation to be undertaken and increases the severity two-fold, besides which it is often quite impossible, without bisecting an organ, to say whether or not it is seriously diseased; therefore, when either of the above non-operative methods is available, the extra manipulations, with their added risk, are not nowadays often made.

If this imperfect summary of an ever-increasing branch of urinary surgery should lead to a more frequent use of the cystoscope and its adjuncts before any operation is undertaken on the kidneys, I feel sure that surgeons will be convinced of its utility and feel amply repaid for the little extra trouble it entails.

REMARKS ON TRAUMATIC RUPTURE OF THE KIDNEY.*

By CORNELIUS A. GRIFFITHS, F.R.C.S.,
ASSISTANT SURGEON, CARDIFF INFIRMARY.

The remarks I have to make are based upon two cases of subparietal rupture of the kidney which came under my care during 1907.

Case I.

Arthur T., aged 22, a coal trimmer, was admitted to the Cardiff Infirmary on January 17th, 1907, at 4.45 p.m., with the following history: He was running along the iron deck of a ship, slipped and fell sideways to the left, and in falling struck his left side just below the ribs against a large piece of coal on the deck, with a sharp edge upwards. He got to his feet at once unassisted, and, though he felt very faint, managed to climb a ladder to the upper deck, down another ladder to the deck side, and walked to a shed close by and sat down; he felt no particular pain in his side, but was "generally bad." About five minutes after the accident he tried to pass water, and was alarmed to find he was passing what appeared to be pure blood; after this he felt much worse, and nearly fainted, but he did not lose consciousness, nor did he vomit. He was assisted on to an engine, and afterwards on to an ambulance, and brought to the Infirmary.

Condition on Admission.

The patient was suffering from shock; pulse 84, temperature 96.6°; not greatly blanched. He complained of pain all over the abdomen, but more especially over the left lumbar region. There was marked tenderness under the left hypochondrium and all down that flank, preventing deep palpation; the rest of the abdomen was only slightly tender. Percussion did not elicit any unusual dulness. There were a few slight abrasions upon the left flank but no fractured ribs. He passed 1 oz. of bright red bloody urine, and complained of a burning sensation on passing it. No clots were passed, and there was no pain in the bladder. He was put to bed, kept warm, and a hypodermic injection of ergotin citrate ($\frac{1}{30}$ grain) given. A little later the temperature was 98.5° F., the pulse 110; he was weaker, and had passed 1 oz. of nearly pure bright red blood. At 6.30 I saw the patient and decided to explore the kidney for rupture.

Operation.

The usual oblique lumbar incision was made over the left kidney. The perirenal fat was infiltrated with a quantity of recently-effused blood, which was cleared away; the kidney, when brought into view, was seen to be torn on its posterior aspect, about the middle, the tear extending from the convex border to the hilum, deeply into the kidney substance, and communicating by a small opening with the pelvis. The torn surface of the kidney was still bleeding freely. Having ascertained that the kidney contained no stone, the tear was sewn up with iodized catgut, and bleeding stopped. The wound was closed in layers with catgut, provision having been made for drainage by gauze wick reaching the kidney.

Progress.

The next day, January 18th, drain removed, urine blood-stained. January 20th, only a trace of blood in the urine. January 25th, urine clear, a trace of albumen. January 27th, urine clear, wound healed "primarily." January 29th, allowed up. February 4th, discharged well.

* A paper read at a meeting of the Cardiff Medical Society, February 11th, 1908.

CASE II.

John R., aged 48 from Pontypridd, a collier, was admitted to the Infirmary on June 13th, 1907. Patient was engaged in "timbering," and one of the pieces of timber became dislodged; he saw it falling and tried to get out of the way, but one end of the timber struck him on the left loin a severe blow. He left work and was sent to Cardiff (about 13 miles distance).

Condition on Admission.

When first seen by the house-surgeon the patient was in a kneeling position in the receiving-room upon the floor, unable either to sit up or lie down without pain. He was placed upon a couch and lay with knees drawn up, any attempt to straighten them causing great pain in the abdomen. The abdominal muscles were kept very rigid; tenderness was marked over the left lumbar region, which was also dull on percussion, the dulness extending forward in a curved line as far as the level of the anterior spine of the iliac crest. There was a good pulse of 88, but the patient was vomiting bile-stained material. A specimen of urine passed after the accident was brought with the patient, and contained bright red blood. A diagnosis of rupture of the left kidney was made and the patient removed immediately to the operating theatre.

Operation.

The usual lumbar incision was made and the left kidney found after removing large clots of blood. A large transverse tear was seen nearly separating the lower third of the kidney. The original incision was converted into a ⊥ shape in order to expose the upper part of the kidney, when another tear, longitudinal in direction, was found reaching nearly to but not quite joining the transverse one. This vertical wound was midway between the convex border and hilum, upon the posterior surface, but no wound was found in the pelvis or ureter. On attempting to close the wounds in the kidney with iodized catgut, it proved so extremely friable that the sutures cut through its substance on very slight traction (mattress sutures were employed); a few, however, were put in, and the surfaces of the wounds very lightly approximated. I then made use of the fibro-fatty capsule, and sewed the kidney up in that as in a bag. The wound was closed by a series of catgut sutures, provision being made for drainage by a rubber tube reaching the kidney capsule. The patient was put to bed in good condition.

Progress.

The next day (June 14th), there having been free oozing of blood, the dressings were changed. Temperature, 99°. Blood in urine. June 15th. Dressed; temperature, 100°; blood (less) in urine; condition good. June 18th. Drainage tube removed. June 19th. Urine free from blood; trace of albumen. July 4th. Patient got up; wound nearly closed. July 6th. Discharged well.

Subparietal—as distinguished from incised, punctured, and gunshot—injuries are the most common of the injuries to which the kidney is liable, and I think the two cases I have quoted are fairly typical of this class of injury; they are also more common than one might at first be inclined to believe, considering the protected situation of the organ in question.

The history also is fairly common—a severe blow over the region of the kidney; but crushes, falls from a height, and "run over" are more usual causes than simple blows. It also must be borne in mind that the kidney can be ruptured without any externally-applied violence at all. Morris[1] quotes three cases in which the kidney was ruptured by muscular violence, simple muscular contraction.

How far the condition of the kidney contributes to its rupture I cannot say, but I was struck by the extreme friability of the organ in the second case, and I could not help wondering whether its very friability had not much to do with its rupture, or whether contusion had made it friable. It certainly did not *look* particularly bruised.

Haemorrhage, indicated by blood in the urine, was present in both cases, and it is typical of ruptured kidney; but here, again, we must not forget those cases in which haemorrhage may apparently be absent because the ureter is blocked by clot, or those cases in which the ureter has been torn across, or, again, in milder cases of injury where there is a subscapular haemorrhage without haematuria. That haematuria following abdominal injury is not pathognomonic of kidney injury must also be remembered. Morris quotes the case of a boy with a villous growth in the bladder, but who only had haematuria after an injury to the abdomen.

Abdominal pain, especially in my second case, where it was most marked, raised the question of intraperitoneal injury, which is an unfortunate but not uncommon occurrence in cases of ruptured kidney, from the simple leaking of blood through a torn peritoneum to the crushing of other viscera, etc., but no peritoneal injury was discovered at the operation.

In each of my cases it was the left kidney which received injury, but I believe the accident is rather more common on the right side.

With regard to the treatment of ruptured kidney, it may be said, without going into statistics, that the percentage of cases operated upon followed by recovery is greater than that of cases treated by palliative measures.

As to the exact nature of the operation, that, of course, must be decided on the merits of the case; I would not hesitate to remove a hopelessly disorganized kidney, or a completely detached portion of a kidney. In both these cases the whole kidney was fortunately saved.

REFERENCE.

[1] *Surgical Diseases of the Kidney and Ureter* (Henry Morris).

CERTAIN INFECTIONS OF THE URINARY TRACT, WITH SPECIAL REFERENCE TO TUBERCLE, GONOCOCCUS, AND BACILLUS COLI COMMUNIS.*

BY G. LESLIE EASTES, M.B., B.Sc.LOND.

THE infections of the urinary tract might well be compared to antimony, of which the chemist of old said that a man might spend his lifetime in investigating it without exhausting its properties. Hence, to-night I am limiting my remarks to the three commonest microbic infections of the tract, dealing with certain aspects of the clinical pathology and treatment by bacterial remedies.

To those who, like myself, have suffered themselves to be bound to the seats of the mighty microbe, the outlook is necessarily narrowed though the magnification is increased, and in concentrating the vision upon the parasite the host may be overlooked, so I must ask your forbearance if I deal too closely with the minute.

The first essential in clinical pathology is to know the anatomy and histology of the normal, and I will briefly enumerate the salient points in order to elucidate the reasons for inferences drawn from observations upon clinical material.

The urinary organs consist of an unbroken epithelial tract, from the Malpighian bodies to the meatus. The character of the epithelium varies with its functions, being in part secretive and excretive, in part protective or transmissive. The structure of each organ depends upon the function of its epithelium. As the renal epithelium is wholly secretory and excretory, it demands a relatively enormous contiguity with blood vessels, hence the unusually close capillary network surrounding each Malpighian body and tubule, and hence also the length of the tubule.

As the intact epithelium of the Malpighian body affords the head of fluid which is to wash out the urinary salts in the tubule excreted by the lining membrane of that part, there is no need for any muscular apparatus. But in order that the secreting apparatus may be in the highest state of efficiency, the secretory layer is reduced to one cell thick, the cells being columnar, almost cubical, in shape.

The renal pelvis has a different part to play. It is but the gathering ground of all the minute tributaries to the combined stream, and acts as a conduit to the aqueduct which serves to convey the urine from the position of security in which the kidneys are lodged, to the organ which has been evolved in the course of ages for temporary storage. As neither renal pelvis, ureter, nor bladder plays any part in excretion, the epithelium is of a different character, and approximates to that of the skin, being several layers thick, to serve as a protection. As the ureter and bladder are transmissive in function, the walls of each are provided with involuntary muscular layers. The renal pelvic and ureteral epithelium is identical, and belongs to the small transitional type, and in transverse section it is seen to consist of a layer of cells, four or five thick, of which the superficial are flattened, the deeper pear shaped or spindled.

The epithelium of the bladder belongs to the large transitional type, the individual cells being larger than

* Read at a meeting of the Kensington Division of the British Medical Association.

those just described, and usually six to eight are superimposed. There are also slight microscopical differences in the finer structure of the cells. This vesical epithelium is continued through the neck of the bladder down to the upper layer of the triangular ligament, where it rather abruptly changes to the columnar ciliated type, which lines the urethra to the ampulla, where larger transitional or squamous epithelium is again found. The columnar ciliated cells are, of course, only one cell deep, and the direction of cilial activity is towards the meatus. Mucous cells, by which I mean cells which excrete mucus, are found in the renal pelvis and ureter and urethra. There are none in the bladder.

Certain peculiarities in the minute structure of these organs call for remark. Thus the lumen of the terminal collecting tubules, known as the ducts of Bellini, is double that of the more truly excretory tubules (or loop of Henle). The renal pelvis has an unusually rich plexus of lymphatics, and a very intimate connexion with the great sympathetic ganglia. The submucosa of the ureter is loose and relatively ill-supplied with blood vessels. Around the neck of the bladder is the pampiniform plexus of thin-walled blood vessels, relatively richer on the inferior aspect than on the superior. In the urethra are numerous crypts or lacunae, the use of which no physiologist has yet discovered, but the presence of which every urinary surgeon deplores.

In the male, too, in this region there are the openings of the prostatic ducts, some twenty to forty in number, and the openings of the genital ducts.

The knowledge of these facts and many more is an absolute essential to him who would rightly interpret analytical data, especially as, in the three diseases with which we are specially concerned to-day, the microscopical findings are all-important for diagnosis, for the composition of the urine is affected in respect to the cellular content vastly more than in its chemical composition. In fact, except for the presence of proteids, we may at once dismiss the chemistry of urine in these three diseases, as restricted to the urinary tract, with the brief remark that the saline ratios remain normal so long as there is no intercurrent renal or general metabolic dyscrasia.

I propose now to lay down some general rules for guidance in interpretation of analytical data. These data apply to freshly-passed urine, obtained in a proper vessel.

If the urine be bright and clear, free from threads or shreds, and from albumen, with rare exceptions, each of these three diseases can be excluded.

If pus be present, the item of prime importance is the associated epithelium, as that serves to locate the lesion. From what has been previously stated, a skilled observer can determine the source of any epithelium which is present in excess, except that, in chronic suppuration, there may be no epithelium on the site of disease, and the cells in its neighbourhood may be so altered by inflammatory changes involving chemosis, etc., as to be unrecognizable. Even in this case some help can be obtained by inferential diagnosis. A lesion involving any part of renal tissue, even if in the renal pelvis, will induce some reaction in the neighbouring tissue which finds its expression in the form of tube casts, hyaline or granular, sometimes comprising pus or blood cells. Any inflammatory lesion of the kidney or its pelvis will be accompanied by a higher proportion of serum-albumen than the same extent of lesion in the bladder or ureter remote from the kidney.

A lesion of the renal pelvis, or ureter, or urethra will be accompanied by more mucus than one of the bladder alone. In the absence of chronic renal disease, a vesical or urethral infection will not be accompanied by tube casts unless sufficient toxin is produced and absorbed to injuriously affect the kidneys.

In the presence of pus, next determine whether it appears in advance of the stream or intimately mixed with the urine, whether it is accompanied by gross or minute haemorrhage. Finally, whether it is only present in the form of threads or shreds.

The clinical symptoms do not come within the scope of this paper, so that we can pass on to some details of the three diseases seriatim.

My experience, extending now over eleven years devoted entirely to clinical pathology, enables me to say positively that when tuberculosis of the urinary organs has passed the miliary stage, tubercle bacilli can almost invariably be detected in the urine by the help of the centrifugal machine and microscope. In this disease I have noted again and again that a purulent deposit showing a visible trace of blood contains plenty of tubercle bacilli. When ulceration is in progress, if, after proper centrifugalization, no tubercle bacilli can be found in the deposit, it is almost certain that the case is not tuberculous.

Having established the presence of the bacilli, the inferential diagnosis as to the site of the lesion depends upon the factors previously noted—that is, the association of casts and specialized epithelium.

I know that tuberculosis of the tract is frequently suspected from clinical symptoms when not present, even when each organ is functioning normally, just as stone is suspected when renal neuralgia is the true cause of the pain. But the microscopical test in proper hands is so reliable and so easy of application, that there is no excuse for omitting it.

Finally, if ocular demonstration of active tuberculosis be required, it can be obtained with Calmette's ophthalmo-reaction, which is better than von Pirquet's skin inoculation.

In the great majority of cases previous to the use of instruments the infection is single, and will remain unmixed throughout the course of the disease if manipulation be avoided. And, as a secondary infection is the most undesirable complication, this leads me to enter a strong protest against instrumentation, except for the most cogent reason. I have so frequently seen disastrous results follow the introduction of a second organism, that instruments should be the last resource in diagnosis and treatment. This warning is intended to apply to all urinary diseases with as much force as in tuberculosis.

With reference to treatment by tuberculin, I know of cases which have improved and others which have not been benefited. The treatment should be adopted in all cases in which the opsonic index is fairly good—that is, above 0.6—when the case first comes under observation, and in which there is no secondary infection of the tract and no widespread pulmonary disease. Where the cost of controlling progress by the index is prohibitive I advise estimating the index on the fifth day after each injection, or, if still too costly, after every third injection, but then the doses of tuberculin used must be smaller and given less frequently than the patient may be able to respond to fully, and the course of treatment will consequently be prolonged.

If there is a secondary infection, vaccine treatment had better be suspended till the second organism has been abolished; or if it prove to be resistant to drugs, then a double vaccine, consisting of tuberculin and an emulsion of the secondary organism, may be used.

Occasionally I find that the secondary microbe is a streptococcus or, less frequently, staphylococcus, which is also secondarily infecting a tuberculous lesion elsewhere—for example, lungs. If the former, antistreptococcic serum should be given, and I have seen the streptococci subsequently disappear from sputum and urine, together with the symptoms due to the secondary organism—that is, most of the pyrexia, sweating, loss of flesh, and hectic. This factor of double infection is rarely taken into consideration, but in most cases it plays a very serious part in the illness; the tendency in simple tuberculosis is towards cure, most of the untoward symptoms being due to the associated organism. Witness the benign character of the so-called "cold abscess," and the riot and havoc that occurs when a freshly-opened psoas abscess becomes secondarily infected. This mixed infection theory is applicable to all microbic diseases, whether in the urinary tract or not.

The commonest of all organisms infecting the tract is beyond question the *B. coli communis*, but in general it may be stated that such infection is in the majority of cases unmixed.

This bacillus plays havoc with the perirenal tissues, the renal pelvis, the ureter, and the bladder, and is occasionally the cause of urethritis. It may be primarily infective in any one of these regions. I have been able to diagnose primary "coli" ureteritis from an examination of the urine, a diagnosis which was verified by the clinical features of the case, and later by the passage of veritable "mucous casts" of the affected ureter.

I am frequently asked the paths of infection in "coli" bacilluria. Dr. Box has recently insisted upon the upward infection from without in children, and there is no doubt that is very frequently the route. But as in adults it is a common sequela of appendicitis, mucous colitis, and other intestinal troubles, even following prolonged voluntary retention of urine, I am certain the lymphatic route is common. Few people are aware of the frequency of primary coli ureteritis, and the tendency of such an infection is undoubtedly to spread upwards rather than downwards. The manifestations and symptoms of coli infection are legion, and, though the commonest effect is pyuria, many patients exhibit general toxaemia of varying grade, from headache and slight feverishness to profound septic intoxication.

Passing over pure surgery, which I am convinced is the correct form of treatment in acute coli nephritis in some of its forms, it may be remarked that drugs fail us utterly all too frequently.

Many patients have been through the whole gamut of urinary antiseptics and disinfectants without receiving any permanent benefit. In passing, I would like to state that the addition of small doses (about 3 gr.) of an iodide renders more efficient the action of almost every urinary disinfectant drug with which it is not incompatible. It is these people with resistant coli-form bacilli who have provided such an immense field for treatment with bacterial emulsion. There is a consensus of opinion that such a vaccine cannot be prepared from a stock laboratory "coli," but must be made from each patient's own infecting bacillus. I find that in general 200 millions is an appropriate first dose, and that gradual increase of about 100 millions is sufficient. Such a vaccine may be given every eighth day, and it is not essential to control the treatment by the opsonic index.

A note of warning may be sounded that vaccines, to which lysol has been added as preservative, are occasionally the subject of complaint from ladies, who attribute rose spots, which are apt to appear on the face, to its use. Hence I use glycerine, which has the advantage of yielding a better emulsion of more lasting keeping quality. In my experience under vaccine treatment, the subjects of coli bacilluria can be promised diminution of pus, gradual loss of toxic symptoms, increased appetite, and consequent increase of weight. The outlook becomes brighter. A tendency to melancholia, so often exhibited by "coli"-infected people, completely disappears. They must not be promised absolute cure of bacilluria, but, under a course of vaccine treatment, the infected tissues will gain a certain degree of immunity, such as the intestinal epithelium may be considered to possess, and consequently the bacilli are rendered harmless.

The treatment of certain intestinal intoxications is at the present time being attacked upon novel lines. Briefly put, the practice is to turn out the entire intestinal flora by the introduction of a new and harmless intestinal inhabitant. There are two strains of the *B. acidi lactici* whose services have been engaged for this interesting operation. Metchnikoff, Tissier, and Fournier have shown that by frequent small doses of these lactic acid bacilli the other bacteria of the bowel are gradually eliminated and replaced by the *B. acidi lactici*.

I have wondered whether, in cases of intestinal disorder, accompanied or complicated by coli bacilluria, the turning out of the intestinal coli-form bacilli might leave the opsonins freer to work upon the coli bacilli infecting the urinary epithelium, and thus hasten the cure.

Again, speaking speculatively from the bacteriologist's point of view, I wonder whether malachite green, which proves in culture media inimical to the growth of the colon bacillus, would be of any service internally.

I do not intend to discuss gonococcus infection at great length. The subject of the sequelae of gonorrhoea is one of the utmost importance to the general practitioner, and which exercises a most peculiar influence upon the mental attitude of some patients.

The persistence with which the latter allow urethral threads to prey upon their happiness is most deplorable, and, as such threads are nearly always the expression of a secondary infection of soil prepared by the gonococcus, it behoves us to prevent such an event, or, if it has come about, to cure it.

All other remedial agencies failing, the assistance of the bacteriologist is invited, and his duty is first to examine the threads, carefully determining the presence or absence of gonococci, and isolating the other organisms. These threads usually present a staphylococcus, and a bacillus of the xerosis type. The latter is negligible, but a vaccine should be prepared from the staphylococcus. If gonococci persist, to each dose of the staphylococcus emulsion a small dose of gonococcus vaccine should be added. The latter vaccine is of the greatest service in gonorrhoeal rheumatism, and suffices, under properly graded administration, of itself not only to permanently cure the systemic infection, but also to remove the concomitant effects, such as infiltration of tendinous structures and the consequent swelling and stiffness.

In pure gonococcus infections of the urethra which light up with extraordinary virulence at each attempt at topical medication, gonococcus vaccine is again most useful, raising the resistance of the tissues until a point is reached when local applications act like a charm in curing the disease.

I may mention that this vaccine is the most difficult of all to prepare, owing to the well-known reluctance of the gonococcus to grow upon any artificial medium except such as contain human proteids or their derivatives, and to its own constitutional delicacy in artificial surroundings.

THE DIAGNOSIS OF IMPACTED CALCULUS IN THE URETER.*

BY C. ARTHUR BALL, M.D., F.R.C.S.I.,
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THE diagnosis of impacted stone in the ureter presents many difficulties. According to Hurry Fenwick:

Before the routine employment of expert radiography in cases of renal pain the diagnosis of stone in the kidney and ureter was merely speculative. The clinician was rarely certain as to whether a stone was present or not, or if he was assured in his own mind that a calculus did exist, he could not say whether it was imprisoned in the kidney or whether it had passed into and become arrested in the ureter, so similar are the symptoms of stone in either position. The surgeon was forced, therefore, to explore first the kidney and then the ureter before he could declare the patient free from stone.

In the BRITISH MEDICAL JOURNAL of June 17th, 1905, Fenwick gives the following three great features of ureteric stone shadows: They are in the line of the ureter; their outlines are sharp; and their shapes are more or less oval. He also draws attention to the value of a shadowgraph ureteric bougie in the precise surgery of renal calculus.

The case I wish to record is one in which an erroneous diagnosis of impacted calculus in the ureter was made in spite of the assistance of an excellent radiogram taken with a shadowgraph bougie *in situ*.

A man aged 26 was admitted to Sir Patrick Dun's Hospital on January 18th, 1908, suffering from two fistulae in the right flank, from which urine flowed continuously.

Previous History.

He stated that he had been operated on in another hospital about six months previously, and that four stones had been removed from his kidney, one about the size of a damson and three smaller ones. Since the operation urine had flowed continuously from the wound, which had never completely healed. He complained that he passed very little urine, and that more came through the fistula in his side than through the bladder. The pain he had suffered from had been relieved by the removal of the stones.

Examination.

An oblique scar was found in the lumbar region, from two small openings in which urine came in drops. The bladder was examined with the cystoscope. The right ureteral orifice appeared small and almost obliterated; no movement or efflux of urine was observed. Urine was seen flowing freely from the left ureter.

Diagnosis.

The possibility of obstruction of the right ureter by a calculus naturally suggested itself, and Dr. Watson kindly took a radiogram of the patient. A small oval shadow was found in the line of the ureter just at the upper part of the sacro-iliac articulation, and this was confirmed by a second radiogram a few days later. The diagnosis of an impacted stone in the ureter now seemed clear. There was obstruction of the ureter, and the *x* rays showed a suitable shadow in the right place. But in order to exclude the possibility of the shadow being

* Read before the Surgical section of the Royal Academy of Medicine in Ireland.

due to a calcified lymph gland or other cause outside the ureter, I thought it advisable to pass a bougie opaque to the *x* rays up the right ureter, to prove that the shadow was in the exact line of the ureter. This was done under cocaine, and I was rather surprised that the bougie passed easily without causing the slightest pain until it reached the kidney, when the patient said he felt a slight pain like the old pain he had suffered from before the stones were removed from his kidney. Another radiogram was then taken, and it was found that the shadow cast by the supposed stone lay exactly in the line of the ureter.

Operation.

The ureter was exposed by an iliac extraperitoneal incision. It appeared dilated down to the place where the shadow had been localized, but no stone could be felt. Thinking the stone might have moved during the necessary manipulations, the ureter was opened and explored, a sinus forceps being passed up to the kidney and a large probe downwards into the bladder, without finding a stone. The ureter was sutured and the wound closed, a cystoscope was then passed, as it was thought the stone might have entered the bladder; there was no stone in the bladder. Apparently the only solution now left was that the stone might have been assisted out of the ureter by the passage and withdrawal of the bougie, and escaped from the bladder while the urethra was still cocainized, and lost while the man was walking back to bed.

The mystery was not solved until another radiogram was taken a week after the operation, and the shadow found still present exactly in the same place, proving that it was due to some other cause besides a calculus in the ureter. What the shadow is due to I am not prepared to say; there were several enlarged glands in the region of the ureter, but they all felt soft and not calcified. An atheromatous patch in one of the vessels might explain the case, but the shadow is rather large, and the patient is young for this.

After-History.

This has been satisfactory, the patient being the only one not disappointed by the operation. The dilatation of the ureter with cauterization of the fistulae resulted in an immediate increase in the amount of urine passed by the urethra and a gradual diminution of the leak.

The mistake made in this case could, I think, have been avoided by means of a stereoscopic radiogram, and in future I intend to have this done in all cases of supposed calculus in the ureter.

In conclusion I wish to express my thanks to Dr. Watson, Radiographer to Sir Patrick Dun's Hospital, for his skill and trouble in taking several radiograms of the case.

Arris and Gale Lectures

ON

THE PHYSIOLOGICAL AND PATHOLOGICAL EFFECTS WHICH FOLLOW EXPOSURE TO COMPRESSED AIR.

Delivered in the Theatre of the Royal College of Surgeons on March 18th and 20th, 1908.

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Lecture II.

We have seen that the analyses of arterial blood in animals, besides being technically difficult, are not free from objection. In the case of man, the difficulty becomes a practical impossibility so far as the arterial blood is concerned. We have, therefore, attacked the problem indirectly. If a condition of diuresis be induced by drinking large quantities of water, the abundant secretion which results will, on analysis, give us some idea of the percentage of gas dissolved in the blood. When the kidney is actively secreting, the saturation of the urine must approximate somewhat closely to that of blood in the renal artery, and its study is of much interest. Our experiments (Hill and Greenwood, 1907, A) were carried out in the following manner. The observer drank at least two pints of water, and ten or fifteen minutes later entered the cylinder, the pressure then being raised a definite amount. As soon as the pressure was stationary he emptied his bladder and then, ten or fifteen minutes later, emptied it again. Samples of the urine were run into glass bulbs with rubber connexions, care being taken to drive out any bubbles of air that happened to be present. The junctions were then clamped and the dissolved gas subsequently pumped out and analysed. By this device, samples of urine actually secreted in definite intervals, after a given pressure limit had been reached, were available for analysis.

As a preliminary, we determined the volume of nitrogen dissolved in the urine under normal conditions. This was found to be 1·14 per cent. The individual analyses differed but little, so that we are not likely to be much in error in assuming the coefficient of solubility of nitrogen in urine to be, at body temperature and 760 mm. pressure, .01.

Table Summarizing Results at Various Pressures.
(Hill and Greenwood.)

Pressure and Time of Exposure.	Number of Analyses.	Mean.	Calculated Value, if Saturation were Attained.
+0 lb.	6	1·14	1·1
+30 lb. up to 10 min.	5	1·99	3·3
+30 lb. more than 10 min.	7	3·32	3·3
+45 lb. up to 10 min.	4	4·29	4·4
+45 lb. more than 10 min.	8	4·23	4·4
+30 lb. (during decompression) ...	7	3·63	3·3
+15 lb. (during decompression) ..	8	2·75	2·2
+0 lb. (on decompression)	6	1·99	1·1
+0 lb. 15 min. later	4	1·69	1·1
+0 lb. more than 15 min. later ..	3	1·13	1·1

It is evident from these results that saturation of the kidney and, *a fortiori*, of the arterial blood is practically complete in ten minutes under a pressure of three atmospheres. For a total pressure of four atmospheres the time would seem to be slightly less; on two occasions full saturation was attained in eight minutes.

Another point brought out in the table is the slowness with which equilibrium is re-established on lowering the pressure. We have always decompressed at a uniform rate of twenty minutes for each atmosphere, but the urine invariably contained an excess of gas at the end of the experiment. With rapid decompression the difference is yet more striking, as will be clear from the next table, the material for which we owe to the kindness of Lieutenant Damant and Mr. Catto.

Observations on a Diver.

Depth.	Time Below, and Nitrogen Percentage Actually Found.	Theoretical Amount.
80 ft.	Below 46 min. 20 sec. Ascended in 6 min. 5 sec. Sample taken 20 min. 30 sec. after ascent. $N_2 = 1.73$	1.1
84 ft.	Below 46 min. Ascended in 5 min. Sample taken 11 min. after ascent. $N_2 = 1.60$	1.1
80 ft.	Below 46 min. Ascended in 4½ min.:	
	First sample 4 min. after ascent $N_2 = 2.50$	1.1
	Second sample 20½ min. after ascent. $N_2 = 1.38$	1.1
72 ft.	Below 44 min. Ascended in 6 min.:	
	First sample 5 min. after ascent. $N_2 = 2.11$	1.1
	Second sample 20 min. after ascent. $N_2 = 1.03$	1.1

I think, therefore, we are entitled to conclude that the saturation of arterial blood is more rapidly effected than the analyses quoted above suggest; direct proof is, however, lacking.

Naturally, results obtained from an organ the circulation through which is so rapid as in the case of the kidney, under the conditions of our experiment, cannot be transferred to the tissue liquids at large. It would be illogical to conclude that ten minutes' exposure is adequate to produce any high degree of saturation in organs the circulation through which is slow. The best way to settle the point would be by the analysis of samples of venous blood, but we have not, so far, been able to overcome certain technical difficulties in the way of carrying out such observations. Some experiments, conducted by Drs. Haldane and Boycott and Lieutenant Damant (Admiralty Committee, 1907), are of interest in this connexion. They found that for a pressure of + 45 lb. rapid decompression is not, in the case of

goats, followed by serious symptoms if the exposure be not for longer than forty-five minutes. When the time under pressure has lasted two hours the results are much worse, but a further increase in the time does not greatly augment the number of accidents. This suggests that saturation is approximately attained in about two hours. Although the goat is nearer to man in size than are ordinary laboratory animals, it is, in other respects, not a satisfactory standard of comparison, but we are not at present able to cite better evidence.

The experience of caissons testifies that accidents occur more frequently when the shifts are of eight hours' duration than for working periods of six or four hours; it is not possible to say how far this is due to greater saturation in the longer shifts, because the question of cardiac embarrassment, due to fatigue, must be considered in an estimate of the factors which render decompression dangerous.

DECOMPRESSION.

Some further light will be thrown on the subject, indirectly, by studying the phenomena of decompression, to which I will now turn. If it be true that saturation depends upon the velocity of the blood stream, it follows that the rapidity of desaturation must also vary with the pulse-rate. Accordingly, the greater the velocity of the blood, the shorter the time required for the safe decompression of any animal. Since it is known that the velocity of the circulation and rate of respiratory exchange are greater in small than large warm-blooded animals, then the former should survive decompression periods too short to be borne safely by the latter.

As, by parity of reasoning, the small animals will be saturated more quickly than the large ones, we must expose the animals for a period sufficiently long in both cases to ensure that a high degree of saturation has been attained. We have experimented (Hill and Greenwood, 1908) with rats, mice, cats, rabbits, and guinea pigs, our observations on the first mentioned animal having been numerous. They were exposed to a pressure of + 105 lb. for an hour, and then decompressed in about 5½ seconds. In all we used 85 rats (31 large and 54 small). The mortality in the latter group was 25.9 per cent., in the former 77.4 per cent. Of these animals we recorded the weights in 65 instances, so that we had some material for a statistical analysis of the relationship between body weight and immunity.

Table of Results of Rapid Decompression.

Weight in Grams.	Recoveries.	Deaths.	Totals.
Below 124	23	13	41
Above 124	6	18	24
Totals	24	31	65

From this the coefficient of correlation was calculated to be 0.625 ± 0.095. Using the method of contingency, the coefficient of mean square contingency proved to be 0.544 ± 0.0978, so that there can be little doubt that the connexion between small body weight and immunity from decompression symptoms is more than a coincidence. On considering the results a little more closely, it will be evident that their interpretation is not so simple as might appear at first. Thus, the rats not only differed in weight, but also in age, and we must inquire how much of the immunity was due to small body mass and how much to youth. Unfortunately, it is difficult to obtain large numbers of rats differing in weight but not in age. If we test rats against other animals, a new source of error is introduced, because, as I shall try to show, specific differences exist. Perhaps the course least open to objection is to compare rats with mice, since the last-mentioned error is not so great as in the employment of other animals. We find:

	Died.	Survived.	Percentage Mortality.
Rats...	6	10	37.5 ± 8.26
Mice	3	27	10 ± 3.69
Difference ...	—	—	27.5 ± 3.96

It would seem, therefore, that full-grown mice are less affected than young rats, and the suggestion—it is little more—is that, in these animals, the weight factor is more important than the age factor.

Our observations upon larger animals tend to confirm these conclusions, and the following will serve as an example:

An old cat and two half-grown kittens were exposed to + 100 lb. for thirty minutes, decompression being effected in ten seconds. The cat was found dead on opening the chamber, while the two kittens survived.

Our results do not, however, admit of exact formulation, and I may remark upon the differences between various kinds of animals. Thus, it by no means follows that an animal of Species B will survive a rate of decompression found to be safe for an animal of the same mass, but belonging to a different species, A. We have found, for instance, that guinea-pigs bear rapid decompression ill even when young and light animals are used. It has seemed to us that herbivorous animals differ from flesh eaters in this way, but further evidence is required.

The importance of the preceding considerations is obvious. Results obtained on animals can only be transferred to man with great caution. Although, as we have seen, laboratory experiments have rendered, and will still render, priceless services to our knowledge of caisson disease, such work must go hand in hand with clinical observations and a direct study of human beings exposed to compressed air. This affords another proof—if such be needed—of the impropriety of segregating physiologists in institutes out of touch with applied medicine.

Bearing in mind these reserves, we must inquire how far the researches described elucidate the distribution of cases of illness among compressed air workers. Snell gives the following table of his observations at the Blackwall Tunnel (1896 p. 154):

Ages.	Number of Men Examined and Passed.	Number of Men taken Ill whose Ages are Recorded.	Proportion of Illnesses to every 100 Men Passed.
15–20	55	0	0
20–25	145	15	10.3
25–30	152	37	24.3
30–35	91	19	20.9
35–40	61	14	22.9
40–45	38	10	26.3
45–50	3	5	166.0
	545		

Unfortunately the first column of this table gives not the total number employed, but only those who submitted themselves to medical inspection, which was not at first compulsory. But if the men examined by Snell were a fair sample of the workers, which is not an unreasonable assumption, they can be used as a measure of the age-distribution in the whole class. If there be no special liability to illness at any particular age, then those in each age-group who suffer ought to be n/N multipled by the total number of cases, where N is 545 and n the numbers in each division of column 1. In this way the next table was obtained.

Ages.	Actual Number Affected.	Theoretical Number.
15–20	0	10.09
20–25	15	26.61
25–30	37	27.89
30–35	19	16.70
35–40	14	11.19
40–45	10	6.97
45–50	5	0.55

The odds against so great a discrepancy as that shown being a result of random sampling are more than a million to one, while an analysis of v. Schrötter's Nussdorf

statistics leads to a similar result. We cannot, of course, say whether these differences depend more upon age itself or upon the increased body weight of the older men; it is possible that a circumstance associated with changes in the tissues as time passes may reduce the two factors to a single one.

Vernon (1907) has recently proved that the solubility of nitrogen in fat or oil is more than five times as great as in water. We have extended these observations by exposing olive oil and water to +100 lb. air pressure. We found that the difference is considerable, but that the oil becomes very slowly saturated. For example, after an exposure of two hours twenty minutes, the water was almost fully saturated, containing 7 per cent. nitrogen, while the oil held 19 per cent. only. Relatively, the proportion of adipose tissue tends to increase with age, so that the increase in weight is peculiarly unfavourable because of the enhanced solvent power for gas. Perhaps we may say that bulkiness is always an additional source of danger, especially so when the condition is due to fatty accumulations. Whether Vernon's discovery will throw light upon the specific differences to which I previously alluded is not yet known; but, combining it with our experiments, we may say that young, spare men, possessing a vigorous circulation, should always be selected for compressed air work, and that we may expect this to be more important in caisson operations than for divers. With *very short* exposures, it may even be that young men are relatively at a disadvantage, provided their seniors be organically sound.

I should add that this partial immunity of small and young animals is also borne out by the observations of Bert, as will be found on comparing the results of his experiments on sparrows, rats, and dogs.

Methods of Decompression.

We note that age, weight, and species are all influential in the determination of appropriate decompression times, and we also know that the weight factor is itself complex, requiring a study of the bodily structure, with particular reference to its proportion of fat. We now come to the practical question as to the way in which decompression should be managed.

Uniform Decompression.

That this process must be slow is manifest; its details, however, require careful examination. At first sight, it would appear that since desaturation is effected by the same agency as saturation, namely, by the circulating medium, which intervenes betwixt air and tissues, compression and decompression are, in a sense, interchangeable. We have seen that the tissues are uniformly and gradually saturated; it is natural to suppose that they should be gradually and uniformly desaturated. This train of reasoning has been adopted by most of the authors following Paul Bert, although, as I shall point out, Bert himself had considered another aspect of the problem. In consequence, slow, uniform decompression has been generally advocated. Broadly speaking, we may say that the statistics of caissons and diving show that frequency of accidents has varied inversely as the time occupied in decompression. When we come to details, it is not possible to arrive at satisfactory conclusions. Experience shows that there is often a considerable difference between the time laid down by the authorities for "locking out" and the actual practice of the workmen. Heller, Mager, and v. Schrötter, who were in medical charge at the Nussdorf Works, remark on this with some bitterness. They say (p. 471):

> Unfortunately during our work we were able to convince ourselves how difficult it is, without possessing special authority, to carry out the necessary arrangements, with the result that well thought-out and energetically urged advice remains merely a pious expression of opinion, in that it is frustrated by external factors and opposition.

When, therefore, we read that decompression at a certain rate was attended by many accidents, we require to be sure that the prescribed rules were actually obeyed—an assurance not often afforded.

In those cases in which uniform decompression at the rate of twenty minutes for each atmosphere of positive pressure was actually effected, no serious accident has, I think, been recorded. In Hersent's experiment, the only symptom described was in the case of a man who experienced a few "picotements" after decompression from +68.27 lb. He was under the pressure one hour and was decompressed in two hours three minutes; a similar condition resulted after exposure to +71.16 lb. In our own experiments we had mild symptoms on three occasions—once "bends" in the arms; once slight pain in the knee; once hyperaesthesia associated with some purpuric eruption over the chest. As a matter of fact, the interpretation of these very trivial accidents is simple. From what has gone before it will be clear that an active circulation is a prerequisite for the quick discharge of dissolved gas. In the first experiments we remained motionless during decompression, so that the return of blood from the limbs, joints, and adipose tissues was not aided by the expressive action of contracting muscles, and it was in the second experiment of our series that I suffered from "bends." Subsequently I regularly flexed and extended my arms and legs, also massaging the chest. Once I omitted to flex the knees, and on that occasion had subsequently pain and stiffness in those joints. Hill was only once affected. He forgot to massage his chest and subsequently had pain and a purpuric rash in that part alone. It may be urged that no satisfactory evidence exists that accidents occur when a uniform rate of decompression is maintained. It is, however, manifest that the experiments are certainly not numerous enough to justify any assertion that decompression at the uniform rate of twenty minutes per atmosphere is necessarily safe.

Discontinuous Decompression.

I wish next to call attention to another aspect of the problem which was considered by Bert. He (p. 959) exposed a dog to a pressure of 10 atmospheres for a time not definitely stated, perhaps about an hour. Decompression was effected in the following way: The pressure was rapidly lowered to 8 atmospheres and maintained at this level for fifteen minutes; it was then diminished to 6 atmospheres and another pause of a quarter of an hour occurred. This plan was followed throughout the decompression; after each drop of two atmospheres there was a pause of fifteen minutes, the whole process occupying one hour and ten ten minutes. On opening the cylinder the animal seemed well, but two or three minutes later gave vent to cries of pain. It subsequently moved the left forefoot as if the limb were tender, but on the following day appeared quite well. Two days later the same animal was exposed to 10 atmospheres for fifteen minutes, and decompressed uniformly at the rate of eight minutes per atmosphere. It exhibited neither immediate nor remote symptoms.

Another dog was exposed to 10 atmospheres for seven minutes, decompressed to 6 atmospheres in two minutes, and after a pause of twenty-eight minutes, decompressed in two minutes to 3 atmospheres. There was then an interval of twenty-six minutes, subsequent decompression being carried out in less than half an hour. No symptoms followed.

In summarizing his results, Bert (1878, p. 975) writes:

> I have remarked no great differences between the cases in which decompression was effected continuously at the rate of eight or ten minutes per atmosphere and those in which it was carried out by means of sudden jumps, with intervals of repose. The facts are not, however, sufficiently numerous to permit of deciding in favour of one or other of these methods.

This other method—of discontinuous or staged decompression—has been reinvestigated by Drs. Haldane and Boycott, with the assistance of Lieutenant Damant, and they have repeated and amplified Bert's experiments on this point. The results of this research have been published in the report of an Admiralty Committee on Deep-water Diving (1907), and are accompanied by an interesting theoretical discussion.

In the first place some *a priori* considerations suggest that time might be saved by employing the method. From the point of view of *relative* increase in volume, the same effect is produced by falling from 8 to 4 atmospheres, from 4 to 2, and from 2 to 1. In each case there is a doubling of the initial volume. Further, since the calibre of the vessels is unaltered, even taking into account the absolute volume of the gas, it is clear that bubbles formed at 2 or 4 atmospheres are respectively one-half and one-

quarter of the size of bubbles representing the same weight of gas liberated at 1 atmosphere, absolute pressure. In other words, both considerations tell in favour of the view that a fall from 4 to 2 atmospheres of total pressure can be safely effected in the same time as a fall from 2 to 1 atmosphere. The state tending to cause a liberation of bubbles is the *relative* difference between internal and external gas pressure, which we see to be the same in both cases; the danger to life of the bubbles, when formed, will depend upon their absolute size, which is actually less in the former than in the latter case.

Following out these ideas, it has been proposed to substitute discontinuous decompression for the method usually advocated. The following example, quoted from the Addenda to the Diving Manual, which embodies the recommendations of the Admiralty Committee with respect to this point, illustrates the practice advised:

If a diver has been working at a depth of 144 ft. for between 45 minutes and 1½ hours, he is directed to ascend rapidly to 50 ft. and then pause 10 minutes; he next comes to 40 ft. and again waits 10 minutes; at 30 ft. he stops 20 minutes, at 20 ft. 30 minutes, at 10 ft. 35 minutes, and then leaves the water, the whole ascent occupying 108 minutes. By the method of uniform decompression the ascent would have been performed continuously in about 126 minutes. Had the exposure been longer, over 1½ hours, the same plan would have been followed, but the total time allotted greater—178 minutes.

In attempting to form a judgement as to the respective merits of the two systems, it is necessary to distinguish carefully between the cases of long and short exposure. When the diver has been exposed to the higher pressure for an absolutely short space of time, the advantage of staged decompression is, I think, considerable. We have seen how slowly the tissues are saturated with gas, hence it is of benefit to descend rapidly at first, because the tissues are not nearly in equilibrium with the higher pressure, so that no risk of embolism is faced. On the contrary, if we decompress at a uniform rate—from, say, 6 to 3 atmospheres—the subject, who was not saturated to the full pressure of +5 atmospheres, will, on arriving at +2, be almost saturated at that lower pressure. If he had descended rapidly to +2, he would have begun a further descent with a smaller quantity of dissolved gas requiring liberation.

For short exposures, therefore, the method is, so far as I can see, a distinct improvement. The question is somewhat more difficult if we suppose the subject highly saturated with gas, as would be the case after an absolutely long exposure to the maximum pressure attained.

The theoretical arguments are not, I think, so convincing as they appear at first sight. Consider one point: It is suggested that, on falling from 6 to 3 atmospheres of absolute pressure, if the gas freed does form bubbles they will be too small to cause danger. But suppose the excess is not so liberated? The tissues are charged with, approximately, 6 per cent. of nitrogen, and the normal carrying power of the blood has fallen to 3 per cent., so a considerable excess might be retained in the tissues to give trouble later. An obvious answer to this is that the blood may become supersaturated and dissolve more than its theoretical 3 per cent. Without remarking that the same argument applies to the tissues also, this would only help us if we assume that the blood passing through the lungs is *at once* brought into equilibrium with the alveolar partial pressure of nitrogen. Now, I do not think this suggestion rests upon an adequate basis of fact. To assert that it is a necessary consequence of the known mechanism of respiratory change—whatever that may be—is merely to beg the question.

Hill and I have more than once observed air bubbles in the aorta, and once in the pulmonary veins. Either those bubbles had passed through the pulmonary circulation, or the blood as a supersaturated solution had so passed, unless, indeed, the circulation had been instantly arrested at the moment of decompression, which is not, I think, usual. It would seem, therefore, to be rash to assert that instant equilibration occurs in the lungs.

The question cannot, however, be otherwise determined than by means of direct experiment. The Admiralty Committee has published the following observations (p. 72):

Staged Decompression, 75 lb. Positive Pressure.

Length of Exposure.	Number of Exposures.	No. Symptoms.	Bends.	Severe Symptoms.
15 min. ...	34	29	5	0
30 ,, ...	6	4	2	0
30 ,, ...	14	14	0	0
120 ,, ...	13	9	4	0
120 ,, ...	19	15	3	1
180 ,, ...	10	8	2	0
Uniform Decompression.				
15 min. ...	38	19	13	3 together with a death.
30 ,, ...	6	1	4	1
30 ,, ...	14	7	7	0
120 ,, ...	13	4	7	2
120 ,, ...	13	10	3	5 and a death.
180 ,, ...	10	5	5	0

The most valuable observations are those for exposures of not less than two hours, since the Committee have advanced some reasons for thinking that in such a time a high degree of saturation is attained. If we club together the cases of "bends" with the unaffected animals, which is perhaps best, since the criterion of a bend is rather uncertain, we find that for 42 cases of staged decompression 1, or 2·38 per cent., showed dangerous symptoms; with uniform decompression 8, or 19 per cent. of accidents occurred in the same number of observations. The actual numbers are very small; but, on the hypothesis that the case comes under those discussed by Pearson in a recent memoir (1907), the probable error of the difference can hardly be more than ± 1 per cent. We are entitled to say, therefore, that the results show a definite advantage in favour of the discontinuous method, but it is necessary to be a little cautious. I have drawn attention to the specific differences which are so remarkable in work of this kind. Hill and myself have been struck by the distension of the stomach and intestines associated with rapid decompression in herbivorous animals. It has seemed to us that this distension may be a factor in decompression effects. Thus it is possible that some mechanical obstruction may be offered to the return of blood from the abdominal viscera, which would markedly interfere with the process of desaturation.

Naturally, this does not account for the difference observed in goats treated by the two methods; but it is evidence that results obtained on these animals are not necessarily applicable to man and may be very variable under different conditions.

This is, to some extent, borne out by our own experiments on rabbits, although they are not sufficiently numerous to be of definite significance.

Rabbits exposed to + 100 lb. for One Hour.

	Uniform Method.		Staged Method.	
	Normal.	Paralysed or Dead.	Normal.	Paralysed or Dead.
A. Total time of decompression 2 min.	6	13	0	0
B. Total time 4 min. ...	15	1	5	3
C. Total time, 5 min. ...	7	0	1	0
D. Total time, 6 min. ...	1	0	1	

The details of one experiment are interesting:

Four rabbits were exposed to +105 lb. for one hour and decompressed uniformly in four minutes. In the afternoon of the same day these animals were once more submitted to +105 lb. for one hour thirty five minutes, and again decompressed uniformly in four minutes. No symptoms whatever were produced. The animals were kept under observation for a week, during which period they remained well. Seven days after the first experiment all four were again exposed to +105 lb. for one hour fifteen minutes; decompression was

then effected in stages, calculated from the corresponding times allotted in the Admiralty recommendations, the total time being, as before, four minutes. As a result, one rabbit was found paraplegic, with incontinence of urine on removal, and soon went into convulsions and died. A second animal became paralysed, after an attack of convulsions, while the two others remained normal.

It would, of course, be idle to draw far-reaching conclusions from these few experiments; they simply indicate that the advantages of staged decompression are not so overwhelming as might be supposed. I may remark that the advantage of shortening the decompression time which has been urged in favour of the staged method is non-existent for moderately long exposures. For high pressures the time demanded is more than twenty minutes an atmosphere. Thus, for +91.5 lb. the time recommended 1838 minutes, for +86 lb. 228 minutes, provided the exposure in each case be of more than an hour.

I have criticized these recent researches at this length in the hope of making it seem probable that a decisive opinion in favour of one or other method, as applied to man, can hardly be pronounced in the absence of more evidence. I desire, however, to express my admiration of the care and precision with which this Committee's experiments were conducted. One thing at least is clear: their results emphasize the importance of not hastening the later stages of decompression. I do not think it can be doubted, whatever fresh discoveries may be made, that the uniform method will require modification in this sense. It is, however, only just to those who are of a different opinion to say that we possess no satisfactory evidence of serious results following the adoption of uniform decompression at the rate of twenty minutes per atmosphere.

I am conscious that the attempt to describe so much within the limits of a couple of hours has resulted in some loss of focus. To me the history of the whole subject seems to throw light upon the mutual obligations of the clinician and the experimenter, to show that each is powerless without his fellow.

If you are satisfied that the subject is of interest and that modern researches have distinctly advanced our knowledge and contributed to the preservation of human life my object will have been fully attained.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF BELLADONNA POISONING.

THE following case of poisoning due to one application of linimentum belladonnae (*P.B.*) to the lumbar region of a healthy male seems worth recording. The patient, a strongly built male of about 30 years, consulted me for pains in the neck and lower part of the back. His temperature was 98 6°, pulse 60, urine healthy; in fact, nothing abnormal about him except these pains. I looked upon the case as one of so-called muscular rheumatism, and ordered lin. bell. to be rubbed into the back night and morning. This was on a Sunday. The next morning I was sent for urgently and informed that at 9 o'clock on the previous night he was well rubbed with the liniment, and at 10 was quite off his head, and remained so during the night, getting no sleep whatever. The patient was lying in bed with a startled, hunted expression upon his face, eyes bright and shining, pupils widely dilated, mumbling and muttering speech, dry tongue and skin, trembling lips and hands, delirious, pulse 120 compressible and running. He vomited several times, contents undigested food. After bowels and kidneys were made to act well and opium gave him some sleep he began to improve. Hypodermic injections of pilocarpin nitras had an excellent effect in quieting the pulse and making him more comfortable. That night the head symptoms were much better and in two days he was practically well, the muscular pains having also departed. Monday was a blank day to him. The amount of liniment taken from the bottle was ʒiij. The skin over the back was sound and normal in appearance. I have used the liniment extensively for many years and never before have I seen any poisonous symptoms develop.

H. KNIGHT RAYSON,
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Steytlerville, Cape Colony, South Africa.

TOXIC EFFECT OF PETROL FUMES.

THE note by Dr. Box in the BRITISH MEDICAL JOURNAL, April 4th, leads me to record the following case. The note of what took place is by the patient's mistress, who is a trained nurse.

The chauffeur took off half the cover of the inspection pit, leaving the other half in position. He got into the pit and proceeded to empty the petrol tank of the car. About ten minutes later a lad working near by heard a snorting and puffing sound, and found the chauffeur lying unconscious on the bottom of the pit, his clothes being saturated in petrol. When he was lifted out his face and hands were blue, he was foaming at the mouth, and no pulse could be felt. Eyes open and turned upwards, so that the pupils were not visible. After a short time he began to struggle, beating the floor with his feet, throwing himself from side to side and fighting with his hands. The pulse gradually returned and the blueness passed off. He retched several times but did not vomit. After about an hour he became violent, trying to bite himself and the attendants. He gradually came round, but could not answer questions or speak intelligently, and was extremely irritable and resented all assistance.

When I saw him he had come round and was comparatively well, except for headache, and burning pain wherever the petrol in which he had been lying had soaked through his clothes. Blistering occurred in various places and there was much reddening of the skin; except for these conditions he was quite well next day.

Yateley, Hants. ALEX. S. PETRIE.

MUMPS.

I WAS interested to read[1] that Dr. Higgens had met with a case of mumps represented by primary orchitis. If there be a group of diseases needing a commission of experts to revise our knowledge and to enunciate something definite, it is the group of the specific fevers. Textbook after textbook slavishly copies its predecessor in its ancient description of symptoms, incubation, quarantine, and the like. Practically we know much is inadequate and much is wrong; yet we are bound to follow official rules. To take instances: isolation of rötheln for fourteen days from onset is in the experience of most of us quite needless; we are beginning to realize the desquamations are not *per se* contagious or infectious, case after case of undiagnosed scarlet fever tells me this, Koplik's spots are to be seen in normal mouths, and certainly in rötheln. The book description of mumps is hopelessly misleading. In a recent epidemic I have met with orchitis and female pelvic disorder appearing some days before the parotid swelling, and mastitis very early; gastro-intestinal (? pancreatic) disturbances have been very marked, and profound cerebral symptoms might easily frighten a practitioner who trusted his book knowledge. It seems to take much to get truth into a textbook. Even now few, if any, mention the value of mouth or rectal administration of the serums. In diphtheria with nervous children it is very useful to remember this, and with pus about the body it is the best method of giving antistreptococcic serum. Possibly work is being done on these diseases, but if so one can find but little evidence of any recognition of it in the books. It is in the hope of hearing the experience of others in general practice that I venture to send this contribution. To the seasoned practitioner the books are at present rather causes of trouble than of help as regards this group of diseases.

Ilminster. W. H. MAIDLOW, M.D., F.R.C.S.

DISTRIBUTION OF *GLOSSINA*.

I HAVE just returned from a sojourn in Katanga, and I think the following points ascertained in respect of *Glossina palpalis* and *G. morsitans* are of importance in respect of the study of human trypanosomiasis: (1) The disease has been advancing southwards by the rivers and some of their larger tributaries, all of which run from south to north. Those in Katanga, six in number, have been searched for *G. palpalis* by myself and son. It has been ascertained that in the case of the five most western rivers the fly is continuous from the north wherever the banks are favourable to its existence, until almost exactly the same parallel of latitude—namely, about 10.40 deg., where it ceases for a long distance. The sixth river on the east, the Luapula, was searched by Dr. Spillane, P.M.O. of North-Eastern Rhodesia, and he informed me that he ceased to find *G. palpalis* after a place the latitude of which is about 11.20 deg. My son, Mr. S. A. Neave, B.Sc.Oxon, F.E.S., has found that where *G. palpalis* ceases other western fauna cease also, which is the more remarkable as in several instances the fly ceases at a point where the banks remain favourable to its life. This engenders a hope that the most southern limit of the fly is at these points, but more investigation is necessary to state it as a fact, and raise it above the region of theory. (2) I found a place on the Lufira river that had been infected both as to fly (*G. palpalis*) and man by caravans from a district on the Lualaba river, some 150 to 200 miles distant. Tracing the path of these caravans through the intervening country I found it infested with *G. morsitans*, which came right up and into some of the villages where the caravans rested. None of these were infected either as to fly or mankind. I consider this an extensive experiment on the part of Nature, which is of far more value than those made in a laboratory. Consequently, it may be fairly said, I think, that *G. morsitans* should be considered *not* to carry the disease in Nature until it is proved to the contrary.

Ingatestone, Essex. SHEFFIELD NEAVE, M.R.C.P.

INVERSION OF THE UTERUS.

I HAVE read with interest the case of spontaneous inversion of the uterus, reported in the JOURNAL of April 11th by Dr. Hall (Stockton-on-Tees), for not long since I had a similar experience. I received a call early one morning in September, 1907, to a primipara, 19 years of age. There was a midwife in attendance. The os was fully dilated, and the head of the child well fixed; the pains were strong and regular, but the progress very slow. The patient becoming fatigued, and her friends getting anxious, I applied forceps. The child was delivered with perfect freedom, and all seemed well. I waited ten or fifteen minutes before I expressed the placenta. (The Rotunda Hospital has taught its students that this is the best and safest course in the third stage of labour.) On expressing the placenta there was complete inversion of the uterus, with the placenta firmly adherent. The gravity and seriousness of the case I recognized at once. The treatment I adopted consisted in detaching the placenta, and returning the uterus at once. There was no haemorrhage. To combat the shock, which she was now suffering from, I gave hypodermic injections of strychnine and digitalin and adrenalin chloride solution, as well as large doses of brandy and champagne. The patient rallied for a little time. She never recovered from the shock, and died six hours after delivery. Opinions differ as to whether it is better to remove the placenta before attempting reposition, or to replace the uterus and remove the placenta afterwards. Dr. Playfair, in his *Science and Practice of Midwifery*, vol. ii, 9th edition, p. 159, states, "it is in every way better to remove the placenta, and endeavour to reinsert the organ as soon as possible." Dr. Jellett (Dublin) likewise recommends removal of the placenta, and immediate restoration of uterus. Dr. Playfair says that uterine inversion is of great rarity, only observed once in 198,000 deliveries at the Rotunda Hospital since its foundation in 1745, and not once in 250,000 deliveries in the Vienna Lying-in Hospital, while many practitioners have conducted large midwifery practices for a lifetime without having witnessed a case.

Abertillery. J. J. MCINERNEY, L.R.C.P. and S.I.

THE COBALT TEST FOR VISUAL ACUITY.

COBALT blue is a substance which possesses the property of excluding all but the blue and red rays when white light passes through it. A person looking through a piece of cobalt blue glass receives only the blue and red rays. Blue rays, being more refrangible than red, focus sooner than red. If the retina is nearer the lens than normal it will receive the focus of the quickly focussing blue rays, but will only receive a haze of the red rays, which will come to a focus behind the retina. If, on the contrary, the retina is a greater distance from the lens than normal, it will receive the focus of the slowly converging red rays, but will only receive a haze of blue rays, the blue rays having come to a focus in front of the retina. The only appliances required for the test are a piece of cobalt blue glass and a disc of white light. The latter is formed by placing a piece of thin parchment in front of a lamp, or using a lamp provided with a disc of ground glass. If the light thus formed be looked at through the cobalt-blue glass by an emmetropic eye a purple disc will be seen. If the eye be hypermetropic the blue rays will focus on the retina, the red rays behind the retina, the red rays forming a ring around the blue. The hypermetropic patient will therefore describe a blue spot surrounded by red. If the eye be myopic the red rays will focus on the retina, and the divergent blue rays will surround the red. The patient will therefore see a red spot surrounded by blue. The various forms of astigmatism may be also recognized by applying this principle. The distribution of the colours seen by the patients suffering from the various errors of refraction may be experimentally produced by the observer placing before his own eye a cobalt glass and adding various spherical and cylindrical lenses, thus making himself artificially ametropic. This method possesses some distinct advantages in the examination of recruits, candidates for various kinds of employment, and the investigation of cases of supposed malingering. It is possible to determine by one simple manœuvre—the placing of a cobalt-blue glass before the patient's eye—first, whether the patient is emmetropic or not, and, secondly, whether he is hypermetropic, myopic, or astigmatic. The test is particularly valuable in conjunction with other tests and methods of examination when examining a suspected malingerer. The dis-

[1] BRITISH MEDICAL JOURNAL, April 18th, p. 925.

advantage of the test is that the surgeon is entirely dependent for his conclusions upon the statement of the patient. However, the person under examination is unlikely to know that he can simulate emmetropia by saying that he can see a purple disc, but will describe the distribution of colours associated with his error of refraction. The malingerer, on the other hand, will see nothing incriminating in saying that he can see a purple disc. The investigation of a case of supposed malingering is beset with so many pitfalls that any additional means of examination is advantageous. A man may declare that he sees badly and may fail to read the test types, and retinoscopy is frequently difficult in these cases. The patient, by continually blinking, refusing to keep still, and screwing up his eyes, may make retinoscopy practically impossible. When the cobalt blue test is applied to such a patient he will see nothing incriminating in saying that he can see a purple light, and the examiner will be saved a good deal of trouble and time. In the case of a patient who declares that he cannot see with one eye, a modification of von Graefe's prism test may be employed. A cobalt-blue is placed before each eye, and the patient directed to look at the light. A blank is at first placed before the good eye, and the patient will probably say that he can see nothing. A prism base upwards is then placed before the good eye and the blank simultaneously withdrawn. The patient will then say that he can see two purple dots, one above the other, thus proving that he is emmetropic in both eyes.

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REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WESTMINSTER HOSPITAL.

COMPLICATIONS FOLLOWING CALMETTE'S REACTION.

(By H. Joseph Cates, M.B., B.S.Lond., House-Surgeon.)

Case I.—E. S., aged 45, married, was admitted with enlarged glands along the left sterno-mastoid. The glands at the angle of the jaw on the left side began to enlarge eighteen months ago; an abscess formed sixteen months ago, and burst, leaving a sinus. Three months ago she was treated elsewhere for "watering of the right eye, and a probe was passed down the duct." On admission the eyes appeared normal and the conjunctiva healthy. On February 19th, one drop of Calmette's serum, made by Meister, Lucius, and Brunning, was placed on the inner canthus of the right eye. Three hours later the caruncle showed signs of inflammation and the eye began to water; in twenty-four hours there was acute conjunctivitis and a copious muco-purulent discharge with oedema of the upper lid. In six days the inflammation quieted down. When the patient was discharged, on February 27th, the only sign of the past inflammation was slight enlargement of the caruncle. Eleven days later the patient returned with acute conjunctivitis and a small patch of keratitis on the lower margin of the cornea. *Staphylococcus albus* was cultivated from discharge. At the present time there is an ulcer at the site of the keratitis.

Case II.—M. M., aged 30, married, was admitted with a mass of enlarged glands along the right sterno-mastoid; two years ago the glands at the angle of the jaw on the right side began to enlarge, and have increased in size since. On admission the eyes appeared quite healthy, and she had had no previous trouble with them. On February 19th one drop of the solution from the same tube that was used in the previous case was placed in the right eye. In six hours there was watering of the eye and redness of the caruncle, and in twenty-four hours a muco-purulent discharge, with oedema of the upper lid. The inflammation gradually subsided, but does not completely clear up. Every four or five days there is an exacerbation. At the present time there is redness of the palpebral and ocular conjunctiva, and the caruncle is granular and inflamed; there is a slight muco-purulent discharge, which also in culture shows the same micro-organism. The cornea appears healthy.

Remarks.—The points of interest appear to be: Solution from the same tube was used on both patients; both on culture grew the same organism; both suffered from glands in the neck; one patient had had previous trouble with the eye.

I am much indebted to Mr. Tubby for permission to publish these cases, which were under his care.

KASHMIR MISSION HOSPITAL.

A CASE OF INTUSSUSCEPTION: OPERATION: RECOVERY.

(By A. Neve, F.R.C.S.E.)

The following case presents some features of special interest, such as the extreme amount involved and the difficulty in reduction by traction, the consequent amount of handling, and yet the absolutely uninterrupted recovery.

Ahamdhu, aged 8 months, was suddenly taken ill on February 13th with vomiting, which became faecal towards evening; there was also much straining with some bloody mucus. Next day he was brought to the hospital. The child was very quiet, with an anxious expression, not collapsed; evidently there was spasmodic pain. In the left flank a sausage shaped mass could be felt from below the ribs to the pubis.

Thorough aseptic precautions were taken, rubber gloves worn, warm saline solution freely used, and the intestines kept wrapped in warm sterile cloths. An incision 4 in. long was made above and to the left of the umbilicus. The empty contracted small intestine which presented was drawn outside; no large intestine could be seen. The mass in the left flank seemed entangled and could not at first be brought out. There were no distended coils. The end of the bowel could be traced into the mass in the splenic region. Steady traction failed to reduce more than an inch or two in spite of prolonged effort. But a second attempt to turn out the whole thickened mass was successful, and then by combined pressure on that and traction above, the intussusceptum was withdrawn. It consisted of the greater part of the ileum, the whole of the caecum, and ascending and transverse colons. Had reduction been impossible, the case must have been given up, for no short-circuiting operation was possible, the sigmoid flexure being involved. The operation lasted half an hour. A saline enema was given containing 60 minims of brandy.

There was no more vomiting. Every three hours an enema of peptonized milk with two parts of saline solution was given. The baby slept and was placid. There was no abdominal distension. Breast feeding was allowed on the day after the operation for five minutes at intervals of four hours. On the third day there was a healthy action of the bowels. The temperature never went above 99·5°, on February 16th, and 99° on one subsequent day, after that 98.5°. The stitches were taken out on the tenth day. Six weeks later the baby seemed in excellent health, and had only seemed off colour for one or two days in the interval.

Dr. E. F. Neve assisted me in the operation.

The Economic Aspect of Preventable Deaths.—In an interesting paper, read before the Pretoria Medical Society, on the economic aspect of preventable deaths, based on an inquiry into the financial loss due to unnecessary mortality in the Transvaal, G. D. Maynard, F.R.C.S.Edin., in the *Transvaal Medical Journal*, February, 1908, attempts to estimate the financial loss incurred by the community in the Transvaal as a consequence of death or disablement from diseases which may be regarded as wholly or partly avoidable. He shows that the expectation of life in the colony is, for nearly all the age groups, notably less than in England, and, on the basis of some calculations as to the capitalized value of wages, estimates that the loss which results from the enhanced death-rate is upwards of a million sterling. A consideration of the figures dealing with typhoid, dysentery, pneumonia, and tuberculosis suggests that the minimum annual loss attributable to deaths from these diseases (European) is £900,000. Summarizing his results, it would appear that the loss from these four diseases is roughly: From male adult natives (deaths), £940,000; from male adult Europeans (deaths), £1,700 000; sickness, £160 000. The estimates are admittedly rough approximations, but they amply justify the author's plea for an efficient public health Act, facilities for pathological and clinical research, and searching methods in the collection and analysis of vital statistics.

REPORTS OF SOCIETIES.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 2nd, Dr. G. THOMSON, President, in the chair, the following were amongst the exhibits: Dr. ARTHUR HALL: (1) A girl with a very *Movable liver*. On deep inspiration the lower edge was tilted forwards and formed a prominent tumour. (2) A similar case in an adult woman. (3) A case in which the diagnosis between herpes zoster and herpes febrilis was difficult. The eruption recurred every three months in the region supplied by the second division of the fifth nerve. (4) A patient with a cavity in his lung and much *Offensive sputum* which had been repeatedly examined for tubercle bacilli with negative results. Chaplin's creasote inhalation method had proved beneficial. Dr. H. HENRY: A case of acute anterior poliomyelitis in an adult and one of complete transformation of the viscera. Mr. SNELL: (1) Two cases of *Steel in the eye* removed by the electro-magnet. Both were in the vitreous. In one the chamber was filled with blood, but nevertheless eight weeks after the accident removal of the foreign body through the sclerotic was followed by excellent vision. In the second case the steel was adherent by one end to the posterior capsule, the other end being free and moving on the approach of the magnet. It was immediately removed through the sclerotic incision. (2) Six cases of hypopyon ulcer treated by antipneumococcic serum. (3) Streptococcal inflammation of the eyelids (treated by serum). (4) A case of ectropion treated by a non-pedieulated flap twenty years ago, the result remaining excellent. Mr. R. J. PYE-SMITH: A man, aged 30, with dislocation of the cervical spine. He had been caught in a revolving shaft; some thick, steel tools in his pocket were much bent. His head was permanently flexed and projected forwards. He could move the head at the occipito atlantal and atlanto-axial joints. There was no paralysis. The dislocation was thought to be between the third and fourth cervical vertebrae. Mr. GRAHAM SIMPSON: A boy, aged 16, suffering from *Spondylitis deformans*. The disease started four years ago in the right hip. Since then the spine had become increasingly stiff and there was now no movement possible from the seventh cervical to the coccyx. The disease resembled osteo-arthritis in its exacerbations of pain at the onset of wet weather.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 10th, Dr. ALLAN in the chair, Mr. LAWFORD KNAGGS showed a case in which the arm and scapula and part of the clavicle had been removed by *Littlewood's operation*, the dissection being conducted from behind forwards. The brachial plexus was first exposed, injected with cocaine and divided, then the artery was seen and dealt with, then the vein, and finally the clavicle was sawn through. This method was claimed to be easier than Berger's, in which there was often considerable difficulty in securing the vessels. The time occupied in Littlewood's operation was therefore considerably less, and this was an important factor in diminishing shock. Dr. TREVELYAN showed a girl, aged 9, who had recovered from meningitis. She had whooping cough in August, 1903, and this was followed by bronchopneumonia and severe intracranial symptoms—namely, headache, head retraction, vomiting, and drowsiness. A complete paraplegia was noted about fourteen days after the onset, but passed off in about two months. The squint developed during convalescence. The patient was now attending for vertigo. Mr. J. F. DOBSON showed a case of diffuse tuberculous peritonitis with acute intestinal obstruction. The patient was admitted in April, 1907, suffering from acute intestinal obstruction. On opening the abdomen the peritoneum was found to be thickly studded with miliary tubercle; the obstruction was caused by the adhesion of a coil of ileum to a breaking-down mesenteric gland. The adhesion was separated, and the dislocated gut opened and emptied of its contents. The opening in the gut was closed by suture; the diseased gland was enucleated from the mesentery. The patient when shown was in excellent health. Mr. ALEXANDER SHARP showed a case in which severe *Tuberculous laryngitis* had practically healed under treatment by creasote internally and the application locally of menthol in paroleïn, lactic acid, curetting, and the galvano-cautery. Dr. A. G. BARRS showed a case of rheumatoid arthritis, with enlargement of spleen. The patient's ankles began to swell in December, 1907, a fortnight after a fall in the street. The swelling was accompanied by severe pain, and both had persisted up to the present time. The swelling and tenderness affected both ankle joints. When admitted to hospital there was some oedema of the feet. The spleen was enlarged, but no enlarged glands were found nor any septic focus.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on April 9th, Dr. F. S. HEANEY reported a case of *Malunited fracture* of leg bones on which he had operated twice. The fracture of the tibia was spiral and comminuted, and, in spite of careful treatment, some fourteen weeks after the injury the lower fragment of this bone was found united with the upper fragment of the fibula. The fracture was identical with one shown by Mr. Lane in his recent work on fractures, and the same peculiar vice of union had supervened in both cases as well as in others that had come under observation. The exhibitor brought about union by screwing and wiring, and he advocated such operation in all similar cases in the first instance. Mr. NEWBOLT thought all cases of compound fracture of the tibia and fibula should be operated on as soon as possible. Mr. R. C. DUN reported a case of acute *General peritonitis* the result of perforation of a typhoid ulcer in the lower ileum. The patient was a child, aged 4, and the sudden appearance of acute peritonitis was the first indication of its illness, which was diagnosed as one of appendicitis. On operation no cause for the peritonitis was found, but the child lived twelve hours longer, and on autopsy were found definite changes in Peyer's patches characteristic of typhoid, and a small perforation 4 ft. above the ileo-caecal valve. The author pointed out the rarity of typhoid in early life, and especially of perforation, and the difficulty of making an accurate diagnosis in such a case. Dr. P. MARSH thought it quite possible for a child to have an attack of ambulatory typhoid as met with in adults, but agreed that typhoid, and especially perforation, was very rare in children so young. Dr. H. DRINKWATER, in a paper on *Brachydactyly*, gave an account of a family whose members showed an abortive condition of the middle phalanx in all the digits both of hands and feet. Sometimes in the middle and ring finger this middle phalanx was reduced to a small cubical bone, but in most instances it had become ankylosed to the ungual phalanx. In no instance was it seen as a separate bone in the first or fourth finger or toe. The first phalanx of the thumb was greatly shortened, and in young children showed no sign of an epiphysis. In this respect it had undergone precisely similar changes to the middle phalanx of the fingers. The epiphysis of the so called metacarpal bone of the thumb was at its base, whereas that of the other metacarpals was at the distal end. This showed that the metacarpal bone of the thumb was in reality the first phalanx and that the first phalanx was homologous with the second phalanx of any other digit. The same held good for the big toes. The metacarpals were all short, and undulated at the distal ends. There were twenty-five people living belonging to the family. The stature and the finger measurements of the abnormals of the families were always less than those of the "normals." The hands and feet were always symmetrically affected. The defect had been traced through seven generations, comprising 174 individuals. Among the children of the abnormal parents the defect was found in over 50 per cent., thus agreeing with Mendel's law of inheritance. The children of the normals were in every instance normal. The deformity prevented the abnormals from learning trades requiring manual dexterity. They were all English. Dr. T. BRADSHAW said the proof offered by the paper that disease could be transmitted on Mendelian lines was of interest, since it showed that in many cases unaffected individuals could be assured that they need have no fear of transmitting a family disease. Unfortunately there were many diseases which were clearly transmitted by unaffected people, as was shown by Dr. Gossage in the current number of the *Quarterly Journal of Medicine*. Dr. R. J. M. BUCHANAN had found a tendency to hereditary transmission in pernicious anaemia, and quoted an instance he had met with of a mother and two sons having died from this disease; there seemed to be an hereditary tendency in the splenic anaemia of adults. Dr. HUBERT ARMSTRONG recalled a

family of which some years ago he had been able to show before the Institution several members in three generations. The deformity in these was microdactyly, and their hereditary history was very similar to that of Dr. Drinkwater's series, the condition being likewise symmetrical.

Glasgow Southern Medical Society.—In his presidential address, dealing with "*Some Platitudes and the X Disease*," Dr. James Mackenzie of Burnley said that all his own work had been done in the capacity of general practitioner, and it was to general practitioners we must look for the greatest advances in medicine in the future. The first of his platitudes was "the necessity for careful observation of the patient and the understanding of what we see." In his own case, the first subject to which he had particularly directed his attention was that of pain. He had begun by making notes as full as possible as to the position and character of pains complained of by patients. He found that in a large number of cases of visceral disease—such as gall stones, intestinal and renal colic, etc.—hyperaesthesia of the superficial tissues was present, never in definite areas, as Head averred, but with an indefinite changing border which was characteristic. The muscles as well as the skin showed this hyperasthesia, and the abdominal muscles (unlike other long muscles) could contract in segments over the painful lesion. Two instances were cited where a hyperaesthetic area at a distance might be either a help or a stumbling block in the diagnosis, according to the experience and knowledge of the medical man. In the first case (one of gall stones) the hyperaesthesia was present in the shoulder and arm; and in the second case (one of renal calculus) the hyperaesthesia was in the skin of the scrotum. It was a striking fact that of all the serous membranes the tunica vaginalis was the only sensitive one. The second platitude was to "observe what becomes of your cases." There was the greatest need for this observation on the part of the general practitioner, since he was the only man who could finally answer such questions as "Was this cardiac murmur dangerous?" or "What would be the fate of this man with an irregular heart?" The third platitude was to "treat the patient and not the disease." Of course, all medical men agreed with that, but any one who analysed his treatment for a day would find that in the majority of cases he rather treated the disease. The "*x* disease" was a name which he applied to a well-marked congeries of symptoms which should not be dubbed "neurasthenia," as this name cloaked ignorance and tended to prevent a spirit of inquiry. The patient was generally spare and thin with a lined face, cold hands, and other evidence of a weak circulation. Some slight pelvic, visceral, or other stomachic lesion was often present, and attacks of minor ailments from which the patient quickly recovered were frequent. He had often a curious mental "twist," was very introspective, and generally a faddist (religious or dietetic), with strong opinions and beliefs. The condition was often quickly cured, possibly by (1) an appeal to the reason, (2) by some strong emotion, (3) frequently by pregnancy, (4) or by some marked change in the mental outlook or mode of life. The speaker hoped that the name "*x* disease" would remind medical men of their ignorance of its pathology, and thus stimulate research.

North of England Obstetrical and Gynaecological Society.—At a meeting in Manchester on April 10th, Dr. A. J. Wallace (Liverpool), President, in the chair, Dr. Briggs reported a case of *Pelvic kidney* with congenital absence of both Müllerian ducts in a patient aged 33 years, one year married, who had complained of occasional, never periodic, pain in the lower abdomen, and slightly increased frequency of micturition. She had never menstruated. She was a healthy, intelligent woman, the breasts rather small, and the pelvis somewhat under-sized. No abdominal tumour could be found. The vagina, 1½ in. in length, ended in a loose cul-de-sac, beyond which the lower pole of a pelvic tumour could be felt, partly in front and partly to the left of the rectum; the fingers could not reach to the upper limit of the tumour. On abdominal section the left kidney was visible, lying totally within the pelvis against the bladder, to which a 1-in. ureter passed. It was one-third larger than normal. The hilum was directed upwards and to the right, so as to face the direction of the renal vessels. A superficial vein 3 in. long passed to the inferior vena cava, and covered the renal artery, which was apparently derived from the bifurcation of the aorta, and corresponded in site of origin to a very large middle sacral artery. There was no kidney in the loin of the same side. The right kidney was two-thirds of the normal size. The total absence of uterus, Fallopian tubes, or ovaries, or any representation of them, was manifest. Dr. Arnold W. W. Lea (Manchester) showed a specimen of dermoid cyst of the mesentery, removed from an unmarried woman of 39, who complained of colicky abdominal and hypogastric pain, and vomiting. Menstruation was regular. There was frequent micturition. Per vaginam a tumour the size of a fetal head could be made out, which on abdominal section proved to be a cyst of the mesentery. The cyst was lined by large multinucleated cells, but did not show any specialized epithelial elements. Sir William Sinclair (Manchester) advocated the use of a combination of morphine, alcohol, and cocaine as an *Analgesic in minor gynaecological operations*, and in such manipulations as the removal of retained placenta following abortion, etc. He gave 2 oz. of alcohol, masked by the liquid extract of liquorice, about two hours before operation, followed by a hypodermic injection of ¼ or ½ grain of morphine twenty minutes before the operation. The vagina was then swabbed with a 10 per cent. solution of cocaine. By this method any minor operative procedure was possible. The amount of morphine required modification according to the type of patient. In some cases where a general anaesthetic was necessary the amount required was exceedingly small if morphine and alcohol were previously administered. Dr. Knyvett Gordon had used this method of producing analgesia in a large number of cases in which, on account of the serious condition of the patient, a general anaesthetic was contraindicated—for example, in vaginal operations in advanced puerperal sepsis. Dr. Arnold W. W. Lea (Manchester) also spoke in favour of the method. He had employed it in painful obstetric manipulations, as, for example, the removal of a macerated fetus from a patient with advanced cardiac disease. He attached importance to the influence of suggestion in producing analgesia.

Harveian Society.—At a meeting on April 9th, Mr. D'Arcy Power, President, in the chair, Mr. L. B. Rawling read a paper on the surgical treatment of the incompletely descended testis, based on an investigation of 120 cases admitted into St. Bartholomew's Hospital during the past five years. Among those in which only one testicle was abnormally situated, scrotal placement was attempted in 40 cases, and in 29 the ultimate result had been ascertained. In 25 it was unfavourable, the testis retreating either to the pubo-scrotal, pubic, or inguinal regions, and becoming small and atrophic. In 4 cases only was the result at all favourable. Scrotal replacement was held to be doomed to failure in all but exceptional instances, and in children under 7 years of age. An inguinal testis was a source of great discomfort to the patient, and was more than usually liable to infection, torsion, and malignant disease, whilst the uselessness of the replaced testis from a spermogenetic point of view was generally acknowledged. In fifty of the cases examined the testis had been removed, the patients being of all ages, its removal in no way interfered with the development, mental or physical, of the patient, and the procreative powers were in no wise impaired. The normally placed testis fulfilled all the desired functions, internal and external. In view of these circumstances, and providing that due time had been allowed for the further descent of the organ, it was held that removal was, as a rule, the right treatment of a single undescended testis. When both testicles were undescended every effort should be made to place them in the scrotal region, for the evidence showed that the abdominally replaced testes were functionless from a procreative point of view. If scrotal replacement failed, it was preferable to allow the testes to remain in the canal rather than replace them abdominally. Among the clinical cases was one of arterio-sclerosis with retinal changes following parenchymatous nephritis in a boy of 9, shown by Dr. W. H. Willcox.

REVIEWS.

CLINICAL CYTOLOGY.

THE object of Dr. KÖNIGER'S book on cytological methods of investigation[1] is to show that helpful clinical information can be obtained by the examination and identification of the cells present in the fluids of serous exudates. The employment of this method as an aid to diagnosis has been popular in France since its introduction by Widal in 1900; but in many quarters, both in Germany and in other countries, the alleged value of "cytodiagnosis" has been viewed with scepticism. One reason for this attitude, as Dr. Königer remarks, is that too much has been claimed for the method. In the majority of cases the examination of the exudate is not, in itself, sufficient to establish a reliable diagnosis of the nature of the case; it is merely an aid to this end, and must be considered in conjunction with the clinical condition of the patient. There is also the danger of a fallacious interpretation when stress is laid exclusively on the preponderance in the exudate of one particular type of cell, for example, the leucocyte, the lymphocyte, or the endothelial cell; it is necessary to observe all the types of cells demonstrable in the exudate, to consider their relative proportions, and to correlate these results with the stage of the disease and the condition of the patient at the time when the fluid was withdrawn. When the investigation is conducted in this intelligent and cautious spirit the danger of arriving at fallacious results is avoided, and the method will often prove an invaluable aid in clearing up the diagnosis of obscure cases. Dr. Königer provides many excellent examples of the proper way to interpret the cytological data, and amongst these his discussion of the evidence pointing to the tuberculous origin of a sero-fibrinous exudate is particularly good. The book is well worth reading; it bears the stamp of sound experience, and is free from the bias and exaggeration which are the common faults of less cautious writers who damage their case by claiming too much for it.

DYSPNOEA AND CYANOSIS.

AN English translation, by Dr. ANDREW MACFARLANE of Albany, U.S.A. of Professor VON NEUSSER'S *Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation*[2] will doubtless meet in this country with the same appreciation as it has found in America. The two cardinal symptoms of dyspnoea and cyanosis, indicating disorder of one or other of the circulating or purifying organs, may be present under a vast number of conditions, and it has been the author's task to discriminate, arrange, and demonstrate these conditions so that easy reference may be gained to any and every aspect of the subject. Beginning with disorders of respiration, he points out the limits of modern knowledge as to the actual causation of these two symptoms, showing how the lack of oxygen and the excess of carbon dioxide would each seem to have their special influences, whether associated or acting separately. The number of morbid conditions affecting, or liable to affect, the respiratory tract, especially in its upper part, is very great, but in his mention of them in their order the author does not sufficiently discriminate those which are of rare from those which are of frequent occurrence. Dyspnoea due to typhoid oedema of the larynx and aneurysms in young people are not often met with. Circulatory disorders, giving rise to dyspnoea and cyanosis, are fully dealt with, and chapters on congenital and acquired cardiac lesions, vascular disorders, cardiac neuroses, infectious diseases, poisons, and a large group of general diseases follow in that order. The whole work is not indexed, but the headings are so distinctly set forth in the table of contents that no difficulty need be found in referring at once to any required section. Although described as a treatise, the book cannot be regarded as a readable manual, but rather as a work of reference from which to ascertain all that is known—and a good deal that is only speculative—on the causation and occurrence of the two symptoms which serve as a text for the whole.

ORTHOPAEDICS.

IF the problems involved in the pathology and treatment of scoliosis are ever to be satisfactorily solved, this will probably be as the result of accumulated painstaking researches into the mechanism and functions of the normal as well as the abnormal vertebral column. From time to time during the last ten years Dr. LOVETT has published reports of investigations carried out by him, which are well known on both sides of the Atlantic; and now, in *Lateral Curvature of the Spine and Round Shoulders*,[3] he summarizes recent work by others on the subject, and adds his own personal views and experience. The subject is most difficult, but Dr. Lovett has approached it in a scientific spirit, and we applaud the persevering industry with which he has studied it. The most puzzling feature of this deformity and the most difficult to treat is the rotation of the vertebrae which accompanies the lateral curve. In the normal spine these two movements—side-bending and rotation—according to Dr. Lovett, never occur separately, but are always associated; and, to further complicate matters, when the side-bending is the active and primary movement, the twist is in an opposite direction to that which occurs when the rotation is the active movement. Moreover (speaking of the spine as a whole), the author states that, with the body erect or lying prone, side-bending is accompanied by rotation of the body towards the concavity of the curve (the opposite of what occurs in scoliosis), whereas with the body bent forward the rotation is towards the convexity, and chiefly in the dorsal region. As the dorsal region of the normal spine cannot be so extended as to obliterate the physiological curve, this conclusion is hard to reconcile with other observations of the author. The explanation probably is that this rotation towards the concavity does not really take place in the spine as a whole, or in the dorsal region at all, but in the lumbar region below it, when this is convex forward as in the erect position, and it is replaced by rotation towards the convexity when in the flexed position the lumbar region is straight or even convex backwards. We have read this book very carefully, but we cannot find in it a satisfactory explanation of the fact that in scoliosis the rotation in both the dorsal and the lumbar curves is towards the convexity. We do not raise these points in any spirit of hypercriticism of an excellent piece of work, but as showing the difficulty of the subject. The section on treatment is very good, and we congratulate the author on the sobriety of his views as to what can be done in the way of cure. The latest methods of treatment will be here found briefly described, such as Dr. Klapp's "crawling" cure. The chapter on faulty attitude and round shoulders is also good and to the point. The book is well illustrated and well printed on good paper, and, above all, it is concise. It is an excellent guide to the study of the subject.

TEXTBOOKS OF MEDICINE.

THE first edition of Professor A. A. STEVENS'S *Manual of the Practice of Medicine*,[4] intended especially for students, appeared in 1892, and a new edition or reprint has appeared in every year except three since. In the eighth edition now published, the author has endeavoured to bring the entire contents of the book up to date, and he has achieved considerable success in that attempt. The text has been thoroughly revised, much new material has been introduced, and many articles, especially in the section on diseases of the nervous system, have been entirely rewritten. Among short treatises on the practice of medicine this holds high rank, and it probably occupies in America the place that the similar work by Klemperer occupies in German-speaking Europe. It may be freely admitted that in its 540 pages it affords a clear and accurate, as well as concise, representation of the essential facts of practical medicine.

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[1] *Die zytologische Untersuchungsmethode. Ihre Entwicklung und ihre klinische Verwertung an den Ergüssen seröser Höhlen.* Von Dr. Hermann Königer. Jena: Gustav Fischer. 1908. (Roy 8vo, pp. 116. M.3.)

[2] *Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation.* By Professor E. von Neusser, M.D., of Vienna. Translated by A. MacFarlane, M.D., of Albany. Part I. Dyspnoea and Cyanosis. New York: E. B. Treat and Co. 1907. (Demy 8vo, pp 203 $1.50.)

[3] *Lateral Curvature of the Spine and Round Shoulders.* By Robert W. Lovett, M.D. Boston. London: Rebman, Limited. 1907. (Med. 8vo, pp. 188, 154 illustrations. 7s. 6d.)

[4] *A Manual of the Practice of Medicine.* By A. A. Stevens, A.M., M.D. Eighth edition; revised. Philadelphia and London: W. B. Saunders Company. 1907. (Post 8vo, pp. 558. 12s. 6d.)

A review of the seventh edition of the *Textbook of the Practice of Medicine*,[5] by Dr. J. M. ANDERS, was published in the BRITISH MEDICAL JOURNAL of July 20th, 1906. In the preparation of the present eighth edition the work has been subjected to careful revision. Some nine newly-recognized conditions of disease receive attention. There has been a radical rearrangement of one large section, that of the animal parasitic diseases, with the rewriting of several of its articles. Some good illustrations have been added, and what was always a strong point in the book, its teaching of synthetic inductive diagnosis, differential diagnosis, and especially treatment, has been still further elaborated. The book remains one of the best textbooks on medicine in the English language.

DARWINISM.

FROM the character of his book on the Darwinian doctrine pushed to its ultimate conclusions[6] Herr STEINER appears to belong to that not uncommon type of popular writer who takes himself very seriously and thinks he is impressing people, when he is really only causing them to smile. Possessed of unbounded self-confidence, he wields the iconoclastic sledge-hammer with terrific fury, fondly imagining, we suppose, that his own sense of exertion is an index of the havoc which is being wrought. Herr Steiner's notions of the critical art are delightfully funny. Here is an example—he is demolishing the silly people who attach importance to the study of comparative morphology:

> But it is obviously arbitrary to proceed as though the similarity of skeletal structure were of more significance in animal genealogy than the life of sense-experience which perhaps exhibited the most pronounced dissimilarities.

A footnote to this crushing sentence administers the *coup de grâce:*

> Antimony trichloride ($SbCl_3$) and market butter were once grouped in the same class of bodies, because antimony trichloride, at all events, strongly resembles butter. Let all morphologists take warning!

The author seems to have heard that recent chemical tests on blood relationship have a bearing on the evolution theory. But that is a consideration which is very lightly brushed aside:

> The modern chemist is very far from being prepared to deduce the relationship of two bodies from one reaction which they possess in common. . . . We should obtain a very peculiar table of relationships if we forced into one class all combinations which give a violet colour with ferric chloride.

These quotations are perhaps sufficient to illustrate the idiosyncrasies of the author, who thinks it his mission to "push Darwinism to its ultimate conclusions" in the sphere of "morals, politics, humanity, and sexual relationships." In the course of this enterprise he makes out Darwinism to be the antithesis of Christianity, and——But our space is limited; perhaps our readers would like to study the author at first hand.

Here is another enthusiast, Mr. GEORGE PAULIN, who seeks to show what a stupid mistake the whole world has made in being misled by the egregious fallacies of Darwinism. In the good old fighting style he nails his colours to the mast, or rather to the back of his book, which he terms *No Struggle for Existence: No Natural Selection*,[7] and at once opens fire with a broadside which effectively demonstrates his quality:

> No one, so far as I am aware, has ever before inquired into and examined the fundamental principles of the Darwinian theory. . . . It has therefore fallen to me to do what scientists have all along neglected to do—namely, to inquire if there really is in Nature such a struggle for existence as Darwin has formulated and stated to be the universal experience of life.

In the pursuit of this self-inspired mission the author has endeavoured to show that Nature has made special provision for eliminating all excess of reproduction without a "Darwinian struggle," and does not make use of individual variations to originate new forms. He also discusses the law of population and attempts to refute the Malthusian theory. We are not sufficiently impressed by our author's arguments to feel that they demand a detailed discussion, but we quote the following passage, which is interesting, because it shows the mistake of supposing, as most people do, that the old-fashioned hostility to Darwinism has completely died out amongst the educated classes in this country:

> Our ancestors believed in a benevolent Power ordering the arrangements of Nature, and providing for the welfare and happiness of her various tribes. But all this has been changed. Darwin came, saw, and conquered. He deposed the benevolent Deity from His throne, and put the devil in the place of honour; and now Ahrimanes reigns.

[5] *A Textbook of the Practice of Medicine.* By James M. Anders, M.D., Ph.B., LL.D. Eighth edition, thoroughly revised. Philadelphia and London: W. B. Saunders Co. 1907. (Roy. 8vo, pp. 1317. 24s.)

[6] *Die Lehre Darwins in ihren letzten Folgen.* Von Max Steiner. Berlin: Ernst Hofmann and Co. 1908. (Post 8vo. pp. 252. M 3.)

[7] *No Struggle for Existence: No Natural Selection.* By George Paulin. Edinburgh: T. and T. Clark. 1908. (Demy 8vo, pp. 291.)

NOTES ON BOOKS.

THE author of the *Aids to Surgery*[8] has in the second edition done much to render the book still more acceptable to the class of readers for whom it has been prepared. Alterations and additions have been made to keep pace with the progress of modern surgery, and the sections on gall stones and affections of the pancreas have been rewritten. Mr. CUNNING candidly disclaims any pretension to originality, and points out that his volume is intended to help students in preparing for examination. By those who really need a work of this kind as an adjunct to more comprehensive and practical teaching it may be found a reliable guide.

This clearly written booklet[9]—*Supplementary First Aid to Miners*, by W. B. ARTHUR, L.R.C.P., etc.—supplies a long-felt want, while its inexpensiveness brings it within the reach of all. Injuries and broken wounds occurring in the pit and their possibilities of infection are described and the treatment indicated. Attention is also directed to the effects of inhaling foul gases, and opportunely also to the dangers incidental to electricity, and how miners in contact with live wires may be rescued. By carefully studying the five illustrations in the text ordinary workmen who are ignorant of electricity should have little difficulty in rendering first aid to stricken comrades without themselves incurring risk. The book should be in the hands of all mining officials and their working deputies.

In *The Medical Annual*[10] which has now made its twenty-sixth appearance, will be found, as usual, a series of short articles dealing with the methods and ideas evolved in various departments of medicine and surgery during the preceding twelve months. These are all arranged in alphabetical order, and the writers are men for the most part well known in connexion with the subjects with which they deal. A great many of the paragraphs are illustrated by engravings, and in a considerable number of instances comprehension of the statements made is facilitated by the more ambitious means of coloured and uncoloured plates. A useful summary of such decisions reached in the Law Courts as are of special interest to medical men is included, as well as a chapter dealing with new inventions and new remedies which seem to the editors to be of special interest. The book as a whole is likely to be found at least as useful as its predecessors.

The fifth volume of the *Transactions of the Glasgow Obstetrical and Gynaecological Society*,[11] recently issued, covers the work done during the sessions 1904-5 and 1905-6. The papers are classified as either (1) relating to obstetrics, (2) relating to gynaecology, or (3) miscellaneous. In Class 1 there are fifteen papers; those in Class 2, fourteen in number, include an account of an interesting case of prolapse of the uterus in a virgin, by Dr. Nigel Stark. Among the five papers in Class 3 is a consideration by Dr. A. J. Wilson of some cases in which paternal heredity seems to have played a part in the occurrence of multiple pregnancies. Besides this classified catalogue of papers, there are lists of the Fellows still belonging to the Society and of those who have held office in it since it was founded in 1885, and also a good general index.

[8] *Aids to Surgery.* By Joseph Cunning, M.B., B.S., F.R.C.S.Eng. Surgeon to the Victoria Hospital for Children; Assistant Surgeon to the Royal Free Hospital. Second edition. London: Baillière, Tindall, and Cox. 1908. (Fcap. 8vo, pp. 410. 4s.)

[9] *Supplementary First Aid to Miners.* By William B. Arthur, L.R.C.P., L.R.C.S.Edin. Bristol: J. Wright and Co.; and London: Simpkin, Marshall, Limited. 1908. (Fcap. 8vo. pp. 28. 6d.)

[10] Bristol: John Wright and Co. 1908. Price, 8s. 6d.

[11] Glasgow: Alex. Macdougall. 1908.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 942.*)

AN appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has recently been issued.* It contains minutes of the evidence taken during the months of October, November, and December.

ANTIVIVISECTIONIST TESTIMONY.

Continuing his evidence, Mr. Stephen Smith said, in reply to Sir William Church, that he was the author of a book entitled *Scientific Research*. He agreed that it was written for the purpose of informing the public of what went on in physiological and pathological laboratories. Asked what was the meaning of the words "A View from Within" which were on the cover and also on the title-page inside, he said they meant a view from a person who had been inside a laboratory. Asked if he had ever worked in a physiological laboratory, he said he had, at Strassburg and Brussels. He was about a month in Brussels or more. He also worked a month at the Pasteur Institute, and he was about three months at Strassburg. At that time he had some idea of going up for the Fellowship, and he was working on the muscles of dead frogs. He did no experiments on living animals himself. He had never worked in any English laboratory, and was not conversant with English laboratories. Asked if he should not have put on this book "A View from Within of the Strassburg and Brussels Laboratories," so that the public should have known what laboratories he had a knowledge of, he said he presumed that if the public saw the outside of a book they would likewise read the inside of the book. He did not see any necessity to put it on the outside of the book. In reply to further questions, he said he was a Licentiate of the Society of Apothecaries first of all about 1884. He was then in practice to 1899; then he retired from practice. He agreed that during those sixteen years he had no practical experience of what was going on in laboratories, either foreign or English. On its being put to him that the whole of his experience had been a month at the Pasteur Institute, a month at Brussels, and a month at Strassburg, he said he was about three months at Strassburg. Asked if on that experience he thought he was entitled to say he was in a position to draw back the curtain disclosing the machine, he said, Yes, he thought so. Sir William Church said he was referring to what the witness said in the preface:

> A celebrated lawyer addressed a jury at length to prove that the wheels of a certain machine could not possibly be more than a certain size. His opponent was expected to argue at length in reply. Instead of doing so he merely drew aside a curtain disclosing the machine and remarked, "Gentlemen, there are the wheels."

The witness said that did not refer to English laboratories. The book must speak for itself. Sir William Church then quoted the following sentence:

> Curare is used daily throughout England.

Asked if he thought he was in a position to say that with his experience, the witness replied, Yes. He did not say that it was from his personal experience. The reason was this. He had taken the *Journal of Physiology* for five years, and found the proportion of cases of physiological experiments in which curare was used, and inasmuch as from that it appeared that in cutting experiments it was used in 10 per cent., if it was used in 10 per cent. of these purely physiological experiments, it was not certainly an exaggeration to say that it was in daily use. That would practically amount to 7 per cent. of the physiological experiments in England for a year, and take 7 per cent. of those, he thought there would be more than one a day under curare. The examination proceeded:

(*Sir William Church.*) Of course this book is for the public, and purports to be written by a person daily working in pathological and physiological laboratories, and as an authority. With regard to the use of curare, on page 32, you give us your opinion, the result, of course, of observation of your own—"That Bernard was right in believing"—curare—"to greatly intensify pain"?—Yes.

But have you ever worked on the subject?—Worked on what subject?

On the subject of trying to find out whether curare greatly intensifies pain?—No, I have not tried to find that out.

Therefore you are merely repeating what other people have said?—Yes.

You give it, as you say, "That Bernard was right in believing it to greatly intensify pain is clear also"?—I do not know what the context is there. The word "also" refers to some context which you have not given me. If you give me the context I shall see the reason for it perhaps.

The whole context is this: "We see clearly that the opinion of Bernard and all physiologists is correct—that curare is not an anaesthetic. That Bernard was right in believing it to greatly intensify pain is clear also." That is your statement on page 32, Chapter IV. Therefore you had no reason of your own for that definite statement?—Yes, I certainly had.

It is only repeating what you thought was the opinion of others?—I am repeating the opinion of Claude Bernard; but I do not know whether I put in the context or not the reason for believing that it intensifies pain. "We see clearly that the opinion of Bernard and all physiologists is correct—that curare is not an anaesthetic. That Bernard was right in believing it to greatly intensify pain is clear also." Then what follows goes on this way: "For the motor tracts being shut off, the whole of the stimulus goes to the sensory centre." That is the reason for the statement.

But that is not from any work of your own?—No, it is not. I do not profess it to be. I never said that it was.

Then you go on to mention, if you will turn to page 36, that you saw an experiment at University College, London, on October 19th, 1900, by Professors Starling and Bayliss. This is also with regard to what you say about curare. You say: "When I first saw the animal (a small dog) he was motionless under curare. A hole had been cut in the windpipe, and the bellows kept up artificial respiration. At each stroke of the bellows a little ether was pumped in with the air—a much feebler blast than that used at Strassburg." How did you arrive at that knowledge?—What knowledge do you mean?

That "a little ether was pumped in with the air—a much feebler blast than was used at Strassburg"?—By the sense of sight and the sense of smell.

Nothing further than you thought that because you did not smell more ether?—No. The sense of smell was as to the nature of the anaesthetic.

And the amount of the anaesthetic?—And the amount of anaesthetic by the bellows and the bubbling. By watching the apparatus.

You judged it, then, without either inquiring from Professor Starling or Professor Bayliss of the amount, or perhaps even seeing signs of Woulff's bottle or anything?—The bottle was in sight. At Strassburg they had the waterworks. There was a very powerful blast of air sent through the ether, and it was simply a matter of eyesight and observation that at University College the blast was much feebler.

(*Sir Mackenzie Chalmers.*) Was it a lecturer's experiment or a scientific experiment?—After the lecture certain senior students were called in to see the experiment.

(*Sir William Church.*) You really had no knowledge at all?—It was not a question of knowledge. It was a question of the eye.

(*Chairman.*) I understand you to say that you measured it by your eyesight and your memory of what had taken place at Strassburg?—Yes.

In neither case did you ascertain what the precise quantity or strength was?—No, not exactly. It was very easy to see. If I saw some person pouring water out of a glass and another out of a pail, I should know that more water was poured out of the pail than out of the glass without measuring in either case.

Do you wish to compare those two cases?—No, it is an exaggerated comparison.

(*Mr. Ram.*) It is your suggestion that the animal was not sufficiently anaesthetized. Is that what you mean?—The suggestion is that it was very probably insufficiently anaesthetized.

(*Sir Mackenzie Chalmers.*) Was the animal killed at the end of the experiment?—We were turned out of the room after being there about half an hour. I saw nothing more of the animal.

(*Mr. Ram.*) How do you mean that you were turned out?—Well, it was time to go.

Sir William Church pointed out to the witness that he said definitely (and it was for the information of the general public that his book was written) that morphine was not an anaesthetic. Surely, as a surgeon, he did not mean to say that he could not render an animal unconscious with morphine? The witness replied that when he wrote the book he made that statement on certain authorities, of whom he named Dr. Mitchell Bruce, in his work on *Materia Medica*, and Sir Lauder Brunton, who classified morphine among the narcotics. Another reason was the statement by Professor Rutherford before the last Royal

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Commission, quoting the opinion of Claude Bernard that in animal experiments morphine was not an anaesthetic. Since he had written the book he had come to the conclusion that morphine might be used as an anaesthetic in a lethal dose. Asked what he really meant by the following passage at page 36:

It is clear that in curarized animals anaesthesia is a practical impossibility,

he said that when curare was given the guides which existed in anaesthetizing a human patient were absent. He was proceeding to say that the quantity of the anaesthetic was an unsafe guide, because his observations had been——when it was pointed out to him that he had never made any observations. He replied that he had seen experiments. On its being put to him that that was a different thing from making experiments himself, he said it was just as good. Inasmuch as he had seen animals anaesthetized and observed the effects of a fixed quantity of anaesthetics upon these animals, he was in a very good position to judge. Asked next if anything was known as to the cause of myxoedema before experiments were made on animals, he said it was known from clinical experience that after the removal of the thyroid, symptoms of myxoedema arose. That might not tell them everything, but it gave a very good idea that something was elaborated in the thyroid which in healthy people prevented myxoedema. That was the inference. The examination proceeded:

You say it is so simple that one who runs could read?—Yes.

But simple as it was it had never been discovered?—What had never been discovered? You say "it." What do you mean by "it"?

I mean that the importance of the thyroid gland in our economy had never been discovered before experiments on animals were made?—Excuse me. It had been discovered by these operations on the thyroid in which the thyroid was removed and myxoedema supervened. So that this much was discovered by those clinical observations that something was elaborated in the thyroid which prevented myxoedema. If nobody ever thought of that, I can only say that everybody was very stupid; it seems to me so simple.

Nothing was discovered. It was observed that in certain cases this condition did follow the removal of the thyroid, but it was not known at all why it did follow?—Excuse me, I think it was known from a reasonable inference, because it was the absence of the thyroid.

In reply to further questions he said it seemed to him a very simple deduction, that if with thyroid of any kind, whether diseased or not, one had got first no myxoedema, and then, if one removed the thyroid and myxoedema supervened, something had gone. Sir William Church pointed out that even that would not have given them the knowledge of the remedy by which to treat it. It was the finding that removing healthy thyroids in animals produced symptoms similar to myxoedema in man that led them to think that it might be applied artificially by feeding with thyroids. The witness replied:

I say that was a simple deduction; you say it was not. The only comment I have made upon that is that if that was the case with those people at that time, they did not show much intelligence.

Asked if he believed there was such a specific disease as diphtheria, he said, Yes, certainly. He did not know whether there might not be some varieties. Still, he admitted that there was such a disease as diphtheria which could be communicated from one person to another. Asked if it could be communicated to animals, he said the evidence was not sufficient to show that the disease which was communicated to animals was really the same disease. Asked if he knew how antitoxin was standardized, he said he did not. Asked how he explained to himself that an animal poisoned with toxin, if it received the antitoxin in sufficient quantity, took no harm, he replied that he was unable to give any explanation of it. He did not deny that it was the case. In reply to further questions, he said he had had a certain amount of experience of diphtheria as a general practitioner, chiefly before the introduction of antitoxin; he had had none since. He had never had to do tracheotomy. He agreed that he was fortunate in not seeing very severe cases. Asked if he could mention the name of any one who had had a large experience of diphtheria, before and after the introduction of the antitoxin, who thought it useless, he mentioned Soerensen of Copenhagen, who made some very interesting experiments at Copenhagen. He recognized all the fallacies underlying these diphtheria statistics; the fallacy of time; the fact that the virulence varied from time to time; the fact that the virulence varied in two places at the same time; and he also recognized the factor that there had been a selection of cases. Soerensen guarded against these as far as possible. He treated certain patients in the same hospital at the same time, and he guarded against a selection of cases, and he got about the same percentage of mortality in each case. The witness said he had taken that apparently from *Die Diphtheriekrankheit*, by Buning of Haarlem. He could not give the date at the present moment, but it was about 1900. Asked the number of cases on which Soerensen's conclusions were based, he said that of 51 cases treated with serum, 17 died; of 46 treated without serum, 15 died; mortality in each case 33 per cent. Asked by Sir John McFadyean if the opinion he had expressed as to the difficulty of keeping wounds inflicted on animals surgically clean was justified by his own experience, he said it was only as regards his own dog. He had no extensive experience on that point. Asked if he would abandon his opinion if he was told on good authority that operations of most serious kinds on the lower animals were performed in thousands, including opening the abdomen, in veterinary practice, and that the wounds healed by first intention, just as in human beings, he said he thought it was possible. Asked if that did not dispose of his contention that in inoculating animals for physiological experiments it was difficult or impossible to ensure the wounds healing by first intention, he said he was speaking more particularly of dogs in physiological experiments. If a dog could get at the dressing or tear it off with its paws he would do so. Asked if he suggested that a dog behaved differently to a physiologist and to a veterinary surgeon, assuming that the wound was the same, he said, No, he did not, of course. Asked if he would take it that in a veterinary practice dogs frequently had extensive recent wounds inflicted upon them left uncovered, and that they displayed no tendency whatever to tear them open, he said if a veterinary surgeon told him that from his experience he would accept it. He agreed that there was nothing incredible in that; and that it was simply in agreement with the fact that aseptic wounds of human beings were comparatively painless. Asked how many dogs he had anaesthetized or seen anaesthetized, he said about seven or eight. It was pointed out to him that evidence had been given that a great deal of useful knowledge for the treatment of farm animals had been got from vivisection; he replied that he was disposed to regard it with very grave suspicion from his examination which he had made on these subjects. Asked to take any animal disease he liked as to which he said he had gone into the evidence, he said he knew nothing about animal diseases. He agreed he held a very strong opinion that drug experiments on animals intended to throw light on the action of the drugs on men were useless, and that he had cited some instances in which particular agents, poisons or medicines, had a different action on men and on some of the lower animals. There was a very large number of drugs in which that did occur, and supposing it could be shown that there were ten times as many cases in which the drug agreed as in which it disagreed, he said that if in one-tenth it did not agree it would be very dangerous to argue from animals to man. Asked again whether he wished the Commission to believe that these cases represented the rule or constituted the exception, he said he could not tell that. It was quite possible that it might be in a great minority of cases. Sir John McFadyean thereupon said that if he had answered otherwise he intended to ask how he could explain the extraordinary fact that the veterinary pharmacopoeia was practically the same as the human except with regard to doses. The witness said he was not aware of that fact. If Sir John said that was the fact he did not deny it. The witness's attention was then directed to statistics relative to typhoid inoculation given in the Third Report, which referred to a large number of persons uninoculated and inoculated, there being among the uninoculated 10,000 and among the inoculated 1,700, the percentage of incidence of cases being among the uninoculated 14.14, and among the inoculated 2.05. The witness said that the figures, as they stood, were certainly

strongly in favour of inoculation, but judging by the analogy of statistics in general, he would not like to say, off-hand, that there might not be some vitiating factor, but he was not able to suggest what the vitiating factor was. Asked if assuming that he found that these figures were actually reliable, he would admit that this method of inoculation appeared to be of value, he said he was bound to admit that it did appear to be of value. Asked next as to the statistics on page 214 relative to the treatment of rabies, where the evidence presented related to 3,127 tabulated cases of persons who were bitten by dogs reported to be rabid, and showing that the average mortality in these 3,000 odd cases was 16 per cent., if he would point out where there was any probable fallacy in these figures, he said the probable fallacy was that, owing to the habit of killing the dog for fear it should bite other people, it was not then ascertained whether the dog was mad or not. Assuming that a dog had bitten four or five people and nobody contracted hydrophobia, the probable conclusion would be that the dog did not have hydrophobia, and those cases would be excluded from the statistics. Asked why they should be excluded, he said, owing to the comparative rareness and the fact that these cases were scattered about, one would have selected cases where there was a very strong belief that the dog was mad or some reason of that kind. Sir John McFadyean said he did not follow. Asked if these statistics appeared to indicate that out of 3,000 persons bitten by mad dogs, selected or not selected, 16 per cent. might die from rabies if they were not treated, he agreed that they appeared to show that. Asked next with regard to antidiphtheria serum to explain the extraordinary different effect which the serum appeared to have according to the period after the onset of the disease at which it was administered, he said that in the first place, as regards these statistics, there was no uniformity. There was a general increase in the mortality the later the antitoxin was given. But there was no uniformity in them, which, for one thing, indicated that there was some other factor. Asked if the other factor might not be that the serum was not always absolutely of the same strength, and was not always given in the same dose, he said there was no reason that that should not be suggested. On its being pointed out that the varying factor might be in the human system, he said, Certainly, that was possible. He agreed that that did not affect the value of the serum. He had intended to point out to the Commission (but the Commission preferred it to be printed without his doing so) that there was a great fallacy in these statistics from the inclusion of selected cases; and he had there a very large amount of evidence to show that since the introduction, immediately on the introduction of the antitoxin, owing to bacteriological diagnosis, a large number of cases of mild sore throats were included as diphtheria. In the early stage of diphtheria there was great doubt about the diagnosis. Then in the first few days there were many mild sore throats which resembled diphtheria. Asked about a table at p. 218, in which there were 1,189 cases in one series, and 2,428 in another series, and in that large series there were only 22 on the first day, he said he gave two reasons for explanation. First, at the earlier stage of the disease the greater was the probability of error in diagnosis, and the greater the error in diagnosis the better were the statistics. If a child had a sore throat, apparently on the second day it was suspected of being diphtheria, and it was given the antitoxin. The child got well very quickly, and the result was put down to the marvellous effect of the antitoxin. But, assuming that some of these were hospital cases, we had to look for the reason—what was the reason for the delay in giving antitoxin? There must have been some reason for the delay in giving the antitoxin. The delay might have been that some doctors, before giving the antitoxin, would wait for the symptoms to be more marked, so as to make the diagnosis sure, while other doctors had said, "they would be on the safe side, and give the antitoxin at once." There were great fallacies coming in for that reason. If they were hospital patients, it might be assumed that a certain amount of delay occurred before the patient was sent to hospital; therefore the worst cases were sent in. Asked if he suggested that these two sources of fallacy would account for such a difference as 2.3 mortality on the first day, and 34.1 on the sixth day, he said, Yes. Asked if among hospital physicians and bacteriologists throughout Europe and the United States of America it was the almost universally accepted opinion that the Klebs-Loeffler bacillus was the cause of diphtheria, he said he could not say. He thought the facts spoke for themselves. Asked with regard to a statement made by him that there was something humorous about the suggestion that only those cases of disease in which the Klebs-Loeffler bacillus was found should be called diphtheria, he replied that Hanseman said:

> The Klebs-Loeffler bacillus is to be found in all cases of diphtheria, provided we select only those cases in which it is present.

There was some humour in that. Sir John McFadyean said nobody had ever made any such contention. He went on to ask if the witness saw anything wrong in that definition that tuberculosis was the disease in which the bacillus of tuberculosis was found? He replied, "In other words, where all the clinical symptoms exist the bacillus is found." Sir John pointed out that, on the contrary, it was now known that there were a good many other diseased conditions with lesions and symptoms simulating tuberculosis; they agreed to exclude them because Koch's bacillus was not found. Was it not perfectly logical in the same way to agree to exclude all cases which appeared at first sight to be diphtheria but in which the Klebs-Loeffler bacillus was not found? Where was the humour in that? The witness answered that the humour was in this: That bacteriologists had attempted to avoid—that was to say, deny—that these well marked clinical cases of diphtheria were diphtheria because the bacillus was not found. In reply to further questions, he said he did not know much about tuberculosis. Asked if he believed in bacteria as the cause of disease at all, he said he thought one must believe it certainly, of course in such cases as anthrax and so forth. Asked by Mr. Ram if he objected to experiments upon animals the object of which was to elucidate some fact for the benefit of humanity if no pain resulted from the experiment, he said that if he thought all experiments were and would be of such a character that pain would be trivial he would cease to be an antivivisection agitator. Asked if he suggested that there were infringements of the Act going on every day in England, he said he did. Asked if he could give any one instance which had come to his knowledge of an infringement of the law in England, he said he could not. Asked on what he justified his belief that there were many infringements of the law, he said he did not believe that the present restrictive law had made any practical modification of vivisection at the present day, although it might have modified what vivisectors had disclosed. In the first place the inspection had been a farce. Secondly, obedience to a law merely because it was a law did not exist except in a small percentage of the people. Proof of that existed in the fact that nearly all people would smuggle when they could do so with safety. Asked if he put the case of smuggling, when a man could do so with safety, on precisely the same footing as that of a man of intelligence and education who was bound by law not to inflict pain upon animals or not to do so in an operation without a licence, he said there was special reason for believing that physiologists held an exaggerated belief of this insusceptibility of the lower animals to pain. In reply to Mr. Ram, he agreed that his objections were two-fold, and went to the root of all his evidence: First, that pain was inflicted; and that, if there were no pain there would be no objection; secondly, that that infliction of pain, he believed, went on broadcast because the physiologist had a seared sense of sensibility. The witness replied "blunted sensibilities." The Chairman remarked:

> You say that, although these operations are never carried on in absolute solitude, there are always assistants, and in many cases spectators, and although there is no case that you know of that you have any evidence about, yet you say it is done every day.

The reply was, Yes. Asked by Mr. Ram if in the evidence of different witnesses he observed that time after time they said that they had never witnessed any cruelty at all, or any insensibility to the sufferings of animals, he replied, "They may have done so." Asked if he believed their evidence, he said he would disbelieve their judgement as to what pain was. Asked if he denied

that there were reflex actions under anaesthesia, he said, No; he thought that did occur to a trifling extent. Asked if in the absence of the use of curare the animal might be fully anaesthetized and yet might make reflex motions, he said he thought it was very rare indeed, and he thought reflex motions were very slight when they were purely reflex. Asked by the Chairman if the very gentlemen who performed these operations were not the most competent persons in England to observe reflex actions and to understand them, he replied, Yes. Asked by Mr. Ram if in his own hospital they used any antitoxins at all, or serums, he said, No. Asked further if they had any cases of diphtheria in the hospital, he said he could not tell him about that. He had never had any cases. He had been connected with the hospital four or five years. He was appointed surgeon very soon after the hospital was opened. The staff consisted of two surgeons, three physicians, and a house-surgeon. Asked if he could find out whether there had been any cases of diphtheria, and what the rate of mortality had been in his hospital, he said he thought that if they had been diagnosed at all they had not been taken in. They would not take them in if it could be helped, because they had only one isolation ward. He did not think it was always furnished, and it was in a very inconvenient place. Mr. Ram said:

If the general view with regard to the diphtheritic antitoxin is correct it is lucky for the patients, perhaps, that you do not take them in.

The witness replied:

Yes; if the view is correct, that is so.

Asked with regard to his book, if he suggested that vivisection was carried on to-day in England just as it is carried on, or as it was carried on when he was in Strassburg, he said, No, because there was probably a difference in the nature of the experiments here and there to some extent. Asked if they were operations of a cutting nature on animals not anaesthetized at all, he said, Yes. He did not suggest that all those experiments he mentioned there occurred in England. He suggested that it was probable, judging from human nature, that the vivisector did not always take care to see that the animal was properly anaesthetized, believing as he did that the animal felt little pain. Asked if he had any single fact upon which he could base that belief that he could bring before the Commission, he said, "No, not a single fact." Mr. Ram read the following sentence from the book:

My knowledge of what is done on the Continent, and my studies of the *Journal of Physiology*, which details some of the experiments carried on in this country, prove to me absolutely that vivisection in Great Britain is not different in nature or scope to what it is on the Continent,

and asked if that was his opinion to-day. He said, Yes. Asked again whether that passage represented his opinion of the facts to-day, he said his opinion (he had already told them that he had no first-hand information to go upon) was that experiments of the present day did not differ from what they were at the time of the last Commission; that the present law had made no difference, and he did not believe that out of respect for the law, merely as the law and nothing more, experiments had altered. The Chairman said:

Without having a single fact to go upon, speaking merely from what you call your knowledge of human nature, you mean to say that your opinion is that this Act has had no influence whatever upon the practice of vivisectors?

The witness answered, Yes. Mr. Ram quoted the following passage:

An anaesthetized animal is immobilized by the anaesthetic. Curare in this case would be unnecessary. To speak of immobilizing an anaesthetized animal would be equivalent to speaking of killing a dead animal,

and asked if that was his view. He said, Yes. Asked if he had seen the evidence given before the Commission of many cases in which, after the animal had been absolutely anaesthetized, curare had been given in order to prevent the possibility of any reflex action, he said he thought that the comment he put there was a fair one. In reply to further questions, he said anaesthesia was a practical impossibility in curarized animals except by a lucky chance. Asked with regard to an animal which he saw operated on by Professors Starling and Bayliss in 1900 if he suggested that the dog had no anaesthetic given to it at all, he said, No; the account stated that ether was given through a pump, but he suggested that it was very highly improbable that the dog was properly anaesthetized. In reply to further questions, he said that was the only experiment he had seen on a living animal in England. He thought it was a "fair example of what is going on daily throughout England," because, first, he had seen personally cases in which curare was used, and, secondly, there were any amount of similar experiments to be found in the *Journal of Physiology*. In regard to another passage in his book, he agreed that he had ascertained that there could be such a dose of morphine given as would produce complete anaesthesia. On its being put to him that, therefore, he was mistaken in what he thought when he wrote the book, he said he would rather say that the authorities upon which he made the statement were mistaken. Asked if he still believed that he was correct in saying that curare was used daily throughout England, he said, Yes. Asked if he believed that it was used daily throughout England on animals which were not absolutely anaesthetized, he said, Yes. Asked if he had any facts on which he could base that, he said he had pointed out that the evidence of the *Journal of Physiology* was as to the proportion of physiological experiments in which curare was used, and he had already given the reasons why, in his opinion, it was almost an impossibility when one used curare to have the animal properly anaesthetized. Asked if he knew anybody who held that opinion besides himself, he said he thought all his colleagues at the hospital and those who belonged to the society did so. Asked if, eliminating these gentlemen, he could give the name of any man of professional eminence in England who held that view, he said his acquaintance was so limited that he could not give any profitable information on the subject. With regard to certain statistics given in the book called *Figures in Favour of Serum*, he agreed that he brought them down to 1900 only. Asked why, in the edition in which he dealt with figures as late as 1904, and, later, why he did not bring these figures down to a later date than 1900, he said because he had not had the source to take them from. Asked again why he did not bring these figures up to date, he said because, first, he did not think it would have been of any interest whatever. Asked if he was aware that if they had been brought up to date they would have shown a decrease in mortality as the use of serum was continued, he replied:

We will assume that it would have done so considerably, but I do not see the use of it.

Asked again if he was aware that if he had brought the figures down from 1900 to 1905 (as he might have done) in this book, it would have shown a decreasing mortality since the use of serum became more common, he said that he was not aware of that fact.

LITERARY NOTES.

Messrs. Cassell and Co. have just issued a volume on *Electrical Treatment*, by Dr. Wilfred Harris, and another entitled *Diseases of the Nervous System*, by Dr. H. Campbell Thomson.

A new medical papyrus which throws light on the history of ancient Greek ophthalmology, has recently been published under the editorship of MM. J. Nicole and J. Ilberg. The expense of the publication has been defrayed out of the Ad. Cattaoni Fund in Cairo.

We have received the first number of a new monthly periodical entitled *Journal de Chirurgie*. The editors are MM. B. Cunéo, A. Gosset, P. Lecène, Ch. Lenormant, and R. Proust, all *professeurs agrégés* in the Paris Faculty of Medicine and Surgeons to the Paris Hospitals. It contains one original paper on the working of the gastric opening in cases of permanent gastro enterostomy by M. Guité, and a large number of abstracts representing all the leading surgical periodicals of the world.

Messrs. T. C. and E. C. Jack announce a new shilling series of cloth-bound volumes. The central idea of the series is to bring together the greatest of the world's stories. Mr. Arthur Ransome is the general editor, and will contribute introductions and chronologies of the authors' lives and works. Stories by Gautier, Hoffman, Balzac, Boccaccio, Cervantes, Maupassant, Dumas, Poe, Chateaubriand, Steele, Malory, and Goldsmith, will be included in the earlier volumes. The first two are nearly ready.

To the *Journal of the Royal Anthropological Institute* (July to December) Dr. John Beddoe contributes a paper on a series of skulls collected by Mr. John E. Pritchard from a Carmelite burying ground in Bristol. The Friary was founded about 1270—probably by Prince Edward, afterwards Edward I. It had a fine church, in which some eminent citizens were buried. The bones collected by Mr. Pritchard, however, were not found in any vaults or buildings, but in the open ground, though buildings of a later date had covered the greater part of the site. There were eleven skeletons, all of adult males; there was no vestige of a coffin, or of anything in the way of clothing. The collection, though small, seems to Dr. Beddoe of considerable value, owing to the conspicuous manner in which the skulls fall into two extremely dissimilar groups. Five are brachycephals of large capacity, some very large; all are lofty (over 74), with good frontal and general development; three are dolichos, small in capacity, low in elevation, narrow in forehead. Three, intermediate in cranial index, are all more or less imperfect; two at least are of good capacity, but they are of ordinary English or Anglo-Saxon type, and do not at all resemble the brachycephals. Dr. Beddoe believes that the mediaeval population of Bristol had a large element of French blood, and that this came more from the brachycephals of Gascony than from the less broad-headed Normans. The skulls would seem to represent two distinct elements of population of strongly contrasted types. Dr. Beddoe suggests that the broad, full-brained heads may have belonged to the friars, and the small and narrow ones to plebeian lay brothers. He thinks it possible that the first occupants of the Friary may have been brought by the founder from Gascony or even Burgundy and "brought their broad heads with them," and that "by some not inconceivable chance we may have got hold of the remains of them." Dr. Beddoe has now measurements of forty-nine male mediaeval skulls found in Bristol. Comparison with contemporary crania in Gloucestershire and Somersetshire shows that the modern head is distinctly narrower than the mediaeval one. He concludes his paper with the following interesting remark:

> Many of us think that the comparatively sluggish brachycephal is destined, like a phagocyte, to envelop and exterminate the restless and migratory dolichoblond in civilized countries. There are plenty of facts that point in that direction. On the other hand, Pittard's observations seem to indicate a converse process in the Wallis; and the same is said to be the case in Tyrol. Ammon and De Lapouge seem to find a dark, long-headed type to be the growing one. I think such is the case among the proletariat in England, but I cannot prove it; and I have a strong impression as to the important part which conjugal selection bears in such changes.

In a lecture delivered before the National Literary Society on March 30th, Dr. George Sigerson gave an interesting account of a Dublin surgeon in Elizabethan times. In those days the city of Dublin "shone with splendour," and its mayors kept up great state. In 1575 it was visited by a pestilence of some kind, and a dozen of the chief officers of the city, aldermen or sheriffs, with some hundreds of other citizens, fled from it in terror, and, in consequence, were deprived of all its freedoms and franchises. On the other hand, Denis Collier, "phisician and surgien," was admitted to all its liberties, and appointed medical officer to the city, "in consideration that he nowe adventured his life in this contagious time of plague into the citie." The common peril gave an impulse to the study of medicine. John Morphie (Murphy), "Chirurgeon," having served his apprenticeship to the liberal profession of medicine, was admitted to the franchise in 1581-2. His master was probably Denis Collier. His escutcheon, of which two sketches are extant in Ulster's office, show the armorial bearings of a branch of the princely line of Leinster. He had large possessions outside, as well as inside, Dublin. This likewise was the case with his apprentice, John Segerson, of old Norse extraction, whose extant arms recall the raven banner, and whose marriage with his daughter was a symbol of the inner life of the Pale. As alderman, John Morphie had to see to the defences of the city and place soldiers. As sheriff it was his privilege to wear a partlet gown, violet when junior, and scarlet when senior alderman, all the rest of the "members" wearing Turkey red. That John Morphie had a high conception of his duties as a citizen is manifest from the terms of his will. Perhaps the most striking evidence of his public spirit and fidelity to principle is to be found in his bequests to the prisoners in Newgate and the Castle. Some of these in Newgate may have been common culprits, dependent, as was then the rule, on the arms of the merciful. Others were, however, State prisoners—"men deprived of their liberty either because they were suspected of loving that more than umbrageous despots liked, or because they stood steadfast by the faith of their fathers and the dictates of their conscience." Morphie was a man of substance, as is shown by the large legacies left by him for the repairing and maintenance of churches, for works of general utility, and for the benefit of the poor. Dublin, in the days of Elizabeth, had but one bridge over the Liffey, and apparently none over the Tolka and lower Dodder, always subject to danger floods. For the building of the bridge over the latter river at Baggotrath he bequeathed £200; for that over the Tolka at Finglas, £100; and for the building of the bridge over the same river at Ballyboght, on the way to Clontarf, a similar sum of £100. This old bridge still stands. To the poor he was a great benefactor. He not only left a sum equivalent to £300 to be distributed amongst them at his funeral, with thirty frieze gowns, but also granted £5 to the companies of each poorhouse in Dublin. To each of the companies he allotted also an annual grant of one pound, whilst the rent of the garden in St. George's Lane was set apart for the poor of St. Stephen's. In addition to this, he made provision for the building and endowment of a house of residence for two or three poor men. The unfortunate beyond the city walls were not forgotten, as he bequeathed £30 to the poor people of Ashton, as well as £140 to those of the townland of Tesagard. Nor did he overlook those in gaol, for he directed that £5 should be bestowed upon the prisoners in Newgate at his burial, and he made an annual grant of £17 to the prisoners in the Castle, with a special donation of £20 to Father Henry Fitzsimons during the term of his imprisonment. Many private benefactions he also made, directing that all poor persons indebted to him for sums advanced them under £20 should be forgiven what they owed, and freely remitting all money due to him for professional services—for "any dealing in my sciens," save in the case of those who were able and "wyll willingly pay what they owe." Taking pains to provide for the education and maintenance of several, he made provision that £60 should be expended every year on poor scholars. This is the more noteworthy because the city, which had liberally made provision for a public teacher, had been compelled to suspend his salary for a time. Nor was his own profession overlooked, as among many mementoes to surviving friends he wrote:

> I wyll and bequeathe unto the Company of Chirurgeons one of my Siverton cupps and the heavy chist that is in the little chamber in the forestrete to kepe thyr wrythings in memory of me that wyssh to them encrease of vertuous knowledge.

Two records of his death are preserved in Ulster's office, with two sketches of his coat armour. One record is in these words:

> John Murffew, Surgeon, buryed, the xxix day of Maye, 1603.

The other, giving more details, is found among the funeral entries, vol. ii, thus:

> John Murfue, Chirurgeon, and some time Shirewe of Dublin, was buried the 29th May, 1603, Apais.

The conclusion of the entry by the Greek word "apais" (childless) is, as far as Dr. Sigerson has been able to discover, unique, the usual form being the Latin *sine prole*, or *s. p.* Possibly it was so recorded in recognition of his learning.

Nova et Vetera.

SAXON MEDICINE.

By the revolution of Britain, the limits of science, as well as of empire, were contracted. The dark cloud, which had been cleared by the Phoenician discoveries, and finally dispersed by the arms of Caesar, again settled on the shores of the Atlantic, and a Roman province was again lost among the fabulous islands of the Ocean.—Gibbon's *Decline and Fall of the Roman Empire.*

The colonizing genius of the Romans has stood unequalled until the present day. And Britain under Roman rule acquired a degree of civilization such as she had never previously known, and which, with the departure of the Romans, was to a great extent lost, only to be recovered after many years' relapse into comparative barbarism. The freedom of Britain was, however, short-lived, for the Saxons and other tribes from the mainland of the Continent soon overran the island. These Teutonic races had some self-acquired knowledge of the powers and uses of worts, and had learnt to apply this knowledge to the healing of the sick. But they also believed largely in charms and incantations, and when the Roman Empire was overrun by the conquering northern tribes. the physicians of the south adopted largely the superstitions of these victorious barbarians.

Pythagoras held that the whole air is full of spiritual beings, who send men diseases and the symptoms of disease and health. Galen confesses to having been "convinced at last that there is virtue in incantations, by plain proof before his eyes." And he says of these same incantations, "and many of them are excellent, generally, and they reach their mark."

But with the skill and the knowledge of the Greeks the medicine of the northmen compared but poorly. The Gothic invaders of Europe, as the Saxons and Angles in Britain, could make little of the Hellenic medicine, and so replaced it with their own herbs, and chants and prayers. Science gave way before a simple faith in spiritual influences. Marcellus gives many examples of the prevalent superstitions. He says, for inflamed eyes, "when you see a star fall or cross the heavens, count quickly, for you will be free from inflammation for as many years as you can count numbers." And again, for gout he recommends, before getting out of bed, to spit on the hand and rub all the sinews, and to say, "Flee, gout, flee." Saxon medicine, in fact, was a mixture of magic, religion, and superstition, combined with the use of certain worts indigenous to Britain, the Saxon leech knowing little of Indian or southern herbs.

Daemonic possession was held accountable for many diseases and conditions, and exorcists were appointed by the Church for the relief of the possessed, and were held in much dignity and esteem. The powers of the sorcerer, the witch, the wizard, elves, dwarves, and the whole goblin tribe held sway, and were the subject of numerous myths. But, strangely enough, we find that, though the spirit kingdom was held responsible for most diseases, yet resort was mostly had to some wort cure as well as to the appropriate charm or incantation.

Saxon medicine made use of other means of curing disease besides herbs. But of herbs, and especially of all those herbs which came most readily to hand, they made large use, both for potions and for salves. The Saxon translation of the *Herbarium Apulei* contains the names of many herbs which appear in the *Pharmacopoeia* of to-day. The preparations were generally decoctions of the root, stem, or leaf of the wort in wine or water, while the salves or external applications were made with animal fats. Honey was a vehicle much in vogue for both internal and external medication. A short account of some points of comparison between the *Herbarium* and the modern *Pharmacopoeia* will perhaps be of interest.

Henbane (*B.P.*) was called symphoniaca, and its sedative properties were evidently understood. Under the heading "dock" (rumex, *B.P.*) we find:

> For kernels which wax in the groin take the wort lapatium . . . lay it over the kernels, and wreathe thereto.

A patient suffering from "the stiffest fevers or devil sickness" was to be smoked with smear wort (serpentary rhizome, *B.P.*). The colchicum of the modern pharmacopoeia had its place as Great Wort or Hierobolbas, and was used for "sore of joint." Gout (fotadle) could be cured by marsh mallow (althaea, *B.P.*) mixed with old lard and laid on the affected part. Marrubium (*B.P.*) is found as horehound, and its use is thus described:

> For colds in the head, and in case a man break heavily, take this wort, seethe it in water, give to drink to them that break heavily; it will heal wonderfully.

Two other herbs, marjoram (origanum, *B. P.*) and fennel (anethum, *B.P.*) are also used as being "beneficial for cough and oppression of the chest." The analgesic and hypnotic powers of the poppy were recognized and used. Fern was employed externally. Rue was used both internally and externally for a variety of disorders. The foxglove (digitalis, *B.P.*) was used externally, and no mention is made of its being given internally. Of liquorice it is said:

> This wort healeth sore of the breast, and of the liver, and of the bladder, and of the kidneys, if sodden with wine.

For water sickness (dropsy), or stones in the bladder, the cure was elder (sambucus, *B.P.*), for which also it is claimed "all things which are generated on a man's body to loathe, it thoroughly will heal."

The violet cured wounds and swellings, ". . . and also swellings and all evil gatherings it dissipates." Here, perhaps, is the secret of the violet cure for cancer!

Of croton oil we read:

> For hail and rough weather, to turn them away, if thou hast in thy possession this wort, which is named ricinus, or if thou hangest some seed in any place whatsoever, it turneth away the tempestuousness of hail, and if thou hangest its seed on a ship, to that degree wonderful is it, that it smoetheth every tempest. This wort thou shalt take thus saying, *Herba ricinus, precor uti adsis meis incantationibus, et avertas grandines, fulgora et omnes tempestates, per nomen Omnipotentis Dei, qui te jussit nasci.*

Perhaps the croton-oil plant was endowed in the Saxon mind with these magical powers because of its being non-indigenous to Britain.

Stavesacre (staphysagria seeds, *B.P.*) was good against "scurf and scruf, and against scab." Colocynth taken internally "stirred the inwards."

The above extracts show that the Saxons used many of the herbs which we now employ. But they also derived some of their cures from the animal kingdom. And here, of course, their superstition ran riot; and many and strange—frequently, too, disgusting—are the consequent prescriptions. We find, "to cure blood-running from the nose, dry goat's blood and rub it down to dust; apply that to the nostril; it withstandeth." The dictates of common sense are apparent. Vanity, too, had its devotees, and the leechdom "for contrarious hairs, to do away with them . . ." opens a world of thought on the inherence of female vanity!

Manuscripts, which authorities ascribe to the tenth century, make it clear that the Saxons studied medicine from books, and that they searched the medical records of foreign lands. The *Leech Book*, which comprised the medical learning of the Saxons, makes mention of two names, Oxa and Dun, which, we must conclude, were the names of two medical men, natives of Britain. The leeches of the Angles and Saxons had undoubtedly a knowledge of the Greek medical writers. From these sources they derived their diagnostic methods, their anatomy, and their physiology, while for treatment they reverted to the more simple remedies of the herbalist combined with the use of prayers and incantations. Some foreign drugs, too, were known and used, such as scammony, aloes, spices, galbanum; and "oxymel" was frequently prescribed, and was referred to as "that southern acid drink."

That the Saxon leeches were men of keen observation is certain. They learnt in the hard school of experience. Some quotations from the *Leech Book* will give the best conception of the powers of diagnosis and the clinical methods of the Saxons. For instance, we find, "For ache of half the head," showing that varieties of headaches were recognized. Cold leechdoms would cure "the disease that cometh of mickle heat," and the converse, were rules to be observed.

> For mistiness of eyes many men, lest their eyes should suffer the disease, look into cold water and then are able to see far.

A very popular belief in the present day. Of broken head—

and again about three days syringe the wound, and if the hale sound part will have a red ring about the wound, know that thou mayest not heal it.

And again, of swarthened and deadened body—

If the swarthened and deadened body be to that high degree deadened that no feeling be thereon, then must thou soon cut away all the dead and the unfeeling, as far as the quick, so that there be nothing remaining of the dead flesh, which ere felt neither iron nor fire.

If thou must carve off or cut off an unhealthy limb off an healthy body, then carve thou not it on the limit of a healthy body; but much more cut or carve it on the whole and quick body; so thou shalt the readier cure it.

Surely rules of surgery on which it would be hard to improve. Splints were in use for broken limbs. Vaporization was employed in the treatment of many disorders, as the following passages show:

"If a man have a dry hast (cough) take a thin slice of lard, lay it on a hot stone, shed cummin on it, set it on a horn, let him drink in the smoke.

For thigh ache smoke the thighs thoroughly with fern; and, if the thighs be paralysed, delve up the netherward part of sedge, boil it in water, make it break on the limb that is helpless. For the dorsal muscle, . . . take goat's hair, make it smoke under the breech up against the dorsal muscle.

The method of applying the vapour bath is thus explained:

. . . boil the worts . . . in a basin, work then a stool of three pieces of wood, with a hole below, sit on a bucket, and robe thee over from above and with a garment lest the vapour escape: pour the hot liquor under the stool into the bucket, let it reek on thee. . . . Boil in water thoroughly . . . . pour into a hyden (bucket), and let him sit upon it.

The anatomy, physiology, and pathology of the liver are fully dealt with. We read:

The liver is extended on the right side as far as the pit of the belly, it hath five lappets it has hold of the false ribs, it is the material of the blood, and the house and the nourishment of the blood. When there is digestion and attenuation of the meats, they arrive at the liver, and then they change their hue and turn into blood; and it casteth out the uncleanness which is there, and collects the clean blood, and through four veins principally sendeth it to the heart, and also through all the body as far as the extremities of the limbs.

Though somewhat astray in his physiology, the Saxon leech nevertheless knew how to treat "the liver," for we read that he recommended, "against want of appetite . . . let them seek for themselves fatigue in riding on horseback."

Cuppings and scarifyings "where the sore is" were frequent, and blood-letting was very popular, then and for many a century. Directions for blood-letting are given:

If heat, or capacity to bear it forbid it not, let him blood from the left arm from the upper vein; if thou canst not find that, from the midmost vein; if thou canst not find that, from the head vein. Farther, if that cannot be found, let from the left hand, near the little finger, from a vein. If the blood be very red or livid, then must it be let flow more plentifully. If it be clean or clear, let it so much the less. It is, however, to be so taken as that his vital power may not be unsettled.

Hemiplegia was known as the "half-dead disease," and was recognized as a disease of later life:

Well, the half-dead disease cometh on a man after forty or fifty winters . . . if it happen to a younger man, then it is easier to cure, and it is not the same disease . . . and the true half-dead disease cometh after fifty.

Blood-letting and purging formed the basis of the treatment for this complaint. Inability to lie on the sound side, roughness of the throat, "sounding chiefly from within, whistling from the part on which the sore is," and foamy expectoration, form the symptoms of "sore of the side"; and a warning is given that "there is danger when a man's break is of many an hue and complexion."

Cirencester. G. G. ELLETT, B.A., M.B.

TUBERCULOSIS AMONG JEWS.

THE idea has long been prevalent that there are many diseases which are rife among the general population but which rarely or never attack Jews. Thus at different times cancer, syphilis, and tuberculous consumption have been put forward in turn as diseases from which Jews are free. This is by no means the fact; there are many Jewish sufferers from syphilis, and, allowing for the difference in age distribution, cancer probably numbers as great a proportion of victims in this section of the community as in any other. When, however, the question of phthisis is considered there would appear to be some foundation for the idea just alluded to; for although a considerable number of Jews succumb annually in London to this malady, still the deaths from this disease are certainly not as numerous as would be the case were there not some lessened susceptibility. It may here be said that in the Jewish community itself the view was for long generally held that consumption was rarely seen, and that cancer was exceptionally common among Jews; neither of these opinions seems to have been based upon any exact knowledge of the facts, while the latter idea is certainly altogether erroneous. More recently there has been a considerable stir in this community with regard to the increase of consumption, and there is probably some ground for this apprehension, although the increase does not appear to be nearly as great as is supposed, and even now the death-rate from this cause is far below the average for the country.

The inquirer who desires to investigate Jewish vital statistics is met at the outset with the difficulty that there is no exact means of estimating the total Jewish population of London, and it is therefore impossible to calculate either the general death-rate or the death-rate from any special disease. The only source from which any trustworthy figures can be collected is to be found in the annual returns of the Burial Society of the United Synagogue. This Society provides for about three-fourths of the interments of London Jews, and for the last ten years it has published statistics of deaths at different ages, and also of the deaths from some groups of diseases in cases where the cause of death could be ascertained.

Table I is compounded of figures taken from these returns in so far as they apply to phthisis, in addition to which a calculation has been made of the proportion of deaths from phthisis to deaths from all causes, both at all ages and at all ages above 5 years.

TABLE I.

Year.	Deaths from all Causes at all Ages.	Deaths from all Causes at Ages under 5 Years.	Deaths from Phthisis.	Percentage of Deaths from Phthisis to 100 Deaths from all Causes at all Ages.	Percentage of Deaths from Phthisis to 100 Deaths from all Causes at Ages over 5 Years.
1897 ...	1,523	814	91	5.9	12.8
1898 ...	1,649	942	84	5.0	11.8
1899 ...	1,725	855	69	4.0	9.0
1900 ...	1,612	879	91	5 6	12.4
1901 ...	1,768	986	94	5 3	12.0
1902 ...	1,839	964	79	4.2	9.0
1903 ...	1,813	1,080	86	4 8	11.7
1904 ...	1,971	1,054	137	6.9	14 9
1905 ...	1,782	932	104	5.8	12.2
1906 ...	1,845	953	112	6 0	12.5

It will be seen that the mortality varies considerably in different years, as was to be expected in view of the small numbers dealt with; if, however, the whole period be divided into two quinquennia the deaths from phthisis from 1897 to 1901 were 5.2 out of 100 from all causes, and in the years from 1902 to 1906 numbered 5.6 per cent. If these returns are to be depended upon, the disease would appear to be remarkably less frequent or less fatal in the community under consideration than in the general population, and even if all the deaths from this cause

have not been properly entered, the phthisis mortality must still be far below the normal. In his report for the decade 1891–1900 the Registrar-General gives the deaths from phthisis in London in the ten years as 78,520 in a total of deaths from all causes of 842,500—this is equal to 9·3 per cent.; and in the year 1905 the deaths from this cause formed 9.2 per cent. of the whole.

While some idea may be formed of the comparative frequency of any disease by calculating the percentage of deaths caused by it, still there can be no doubt that the most satisfactory method of estimating the mortality from any one cause is to find the death-rate per 10,000 persons living, and the Registrar-General gives the figure 17.9 as representing the annual death-rate in London from phthisis in the ten years 1891–1900.

Now although it is impossible to calculate the exact total of the Jewish population, still by taking the number of deaths at each group of ages and the general death-rate for the group it is possible to arrive at a fairly approximate estimate of the total population of which the mortality statistics figure in the Burial Society's returns. By such a method of reckoning it appears that this portion of the Jewish inhabitants of London numbered in 1900 about 73,000 and in 1906 about 84,000. Taking these figures as approximately correct, the death-rate from phthisis comes out at 12.3 in the former and at 13·3 in the latter year.

Table II.—*Proportional Fatality of Phthisis among the General Population and amongst Jews.*

	Proportion of Deaths from Phthisis to 100 Deaths from all Causes.	Annual Death-rate from Phthisis per 10,000 Persons Living.
General Population	1891–1900 ... ... 9·3 1905 ... ... 9.2	1891–1900... ... ... 17.9
Jews	1897–1901 ... ... 5.2 1901–1905 ... ... 5.6	1900 ... ... 12·3 1905 ... ... 13·3

The inference from these figures is confirmed by an examination of the deaths from consumption in different parts of the East End of London. During the ten years 1891-1900 phthisis was responsible for 10 per cent. of the total deaths in St. George's in the East, and for nearly 11 per cent. in Bethnal Green, while in the Borough of Stepney, where the bulk of the Jewish population resides, only 6.4 per cent. of the deaths were due to this disease.

The fact which is most evident from a consideration of all the statistics is that in London the fatality from tuberculous disease of the lungs is considerably greater among Gentiles than among Jews, and that therefore probably, although not necessarily, among these latter the disease is far less prevalent. A point, however, which must not be lost sight of is that there has been a decided though small increase in the Jewish mortality during the last five years, in spite of the general tendency for many years past towards a gradual decrease in the number of deaths from phthisis; this will again be referred to.

Many possible explanations may be suggested to account for the greater resistance offered by Jews to the attacks of the tubercle bacillus, and it is likely that their relative immunity may be due to the action of more than one cause. Difference of race will at once suggest itself, and it is probable that the special racial characteristics are not without influence in this matter. There can be but little doubt that Jews are peculiarly resistant to microbic diseases; in the great epidemics of the middle ages their immunity was so marked that they were often accused of poisoning the wells; they show an especial fitness for residence in malarial districts; it has been stated by doctors who were practising among Jews during the visitations of cholera that they had but few cholera patients in their Hebrew *clientèle*. Thus, perhaps, the Jew by virtue of his race alone would be less likely to contract tuberculous disease; other influences, however, must be at work in the same direction.

One reason why it seems unlikely that the greater power of resistance is to be explained by race alone is to be found in the fact that it seems doubtful whether this smaller mortality from phthisis has always been as evident as has been the case in London during the last twenty years, for in 1885 a Jewish observer came to the conclusion that consumption was actually fatal to a disproportionate extent in his community. It may be stated, however, that this observer had no scientific training, and it is quite likely that his inference was based on insufficient evidence.

The student of the conditions of life among the Jewish poor is at once struck by the strength of the family instinct, and if the Jew tends to be healthier than his neighbour one important agent in effecting this result must be found in the greater care which is given to the young. It is said to be rarely that a Jewish mother does not suckle her infants, and when old enough to attend school the children are anxiously watched, both by their parents and by the charitable of their own community, by whom every effort is made to secure that, as far as possible, they shall be sufficiently clothed and fed.

Recent evidence as to the communicability of bovine tuberculosis to man yield support to the view that the special dietary rules enforced by the Jewish religion may have some influence in diminishing the liability to tuberculous disease. Before the carcass of any beast can be declared to be *kosher*—that is, fit for food—a careful examination is made, and the lungs especially are most searchingly investigated; any induration or perforation renders the carcass unclean, so that there is little probability that a case of tuberculous disease in an animal intended for food could escape detection. It may therefore be confidently stated that there is no chance whatever that a Jew who strictly obeys the dietary laws of his faith should be affected in this way.

One fact which must never be lost sight of in considering all the influences which may affect the hygienic condition of the Jew is his habitual temperance. Whatever may be his vices, alcoholic liquor has for him little temptation. It is not here meant to discuss the question whether the abuse of alcohol can produce a predisposition to phthisis, although many observers have thought that it may. Among the poor there is another way in which the habitual drinker menaces the health of himself and of his family, and this perhaps is more far-reaching and destructive than any direct effect which alcohol may have on the system. The cost of intoxicating liquor is a grave burden to limited earnings, and while the injurious effects of the abuse of alcohol are constantly being pointed out, it is too often forgotten that among the poor every penny spent on alcohol means a penny less on food. Thus the poor Jew, who is always temperate, has usually more to spend on food than a less temperate neighbour of equal poverty—no mean advantage in the struggle for life. It may well be that the lesser mortality of Jews from phthisis is largely due to the greater quantity and better quality of the food taken by the poor of this race. It is not alone that a larger proportion of their earnings is spent in this way, every one who has worked in the East End of London must have noticed that the standard of living, as far as food is concerned, is decidedly higher with the Jew than with the Gentile. In addition to this the former is a better judge of food, his diet is more varied, he understands food values better, he knows where to procure it of the best quality, and he cooks it more appetisingly. Even the fact that so much of his religious ceremonial centres round the home and the dinner table no doubt has its influence in directing the attention of the Jew to the provision of a suitable meal.

All of the five characteristics mentioned above may possibly have some influence in diminishing the susceptibility to phthisis. In estimating the comparative importance of each of these, some light may be obtained from a consideration of the increase in mortality shown by the more recent figures.

This is difficult to understand, for not alone is it the case that there has been for some time past a general diminution in the deaths from the cause under consideration, but recently the authorities of the Jewish charitable institutions have adopted various precautions against infection. In spite of this, during the last five years the disease has certainly become more common among Jews. The fact must also be noted that in New York, which contains a large Hebrew population, the same relative immunity from phthisis has been observed; but in this city also the Jewish mortality from this cause shows a tendency to increase. Now, of the influences enumerated above as likely to lessen the predisposition to tuberculous disease, some remain altogether unchanged. All those conditions which may be described as racial characteristics evidently remained

the same for centuries. Again there is no reason for believing that poor Jews of the present day are any less notably careful of their offspring than in past years. On the question of alcohol it is difficult to speak as positively, as there are few facts on which to base an opinion, but there is no evidence to justify an assumption that there is any increased inclination to the consumption of strong liquors. On the other hand, there certainly has been a change in the habits of London Jews of late years in so far as the dietary laws are concerned, and they no longer consume exclusively meat which has been specially killed and prepared under the direction of the ecclesiastical Board. This laxness is, however, more particularly noticed among the wealthier classes, and it is in this class that there has been no increase in the amount of phthisis. The increase has been almost exclusively among the poor, who for the most part are as rigid as heretofore in observing all the tenets of their religion. This leads rather to the supposition that the careful examination of carcasses destined for *kosher* food may have less influence in diminishing the spread of tuberculosis than has been generally imagined.

The greatest change, however, which has taken place in the condition of London Jews in recent years is due to the great addition to their numbers following on the Russian persecutions. Before 1882 the immigration of Russian Jews was comparatively small, but since that year it has largely increased, and has been stimulated into renewed activity by the fresh anti-Jewish laws enacted in Russia in 1891, as well as by the anti-Semitic riots which have occurred in many towns in that country during the last few years. This steady stream of immigration of families who, in many instances, have been deprived of all they possessed, and have to earn their livelihoods under most unfavourable conditions, has lowered the whole standard of living among the Jewish poor, and has produced a depth of poverty previously unknown. The Jewish Board of Guardians, which ten years ago spent about £16,000 in the relief of the poor, required no less than £24,000 for the same purpose in 1906. In New York a similar state of things has come to pass in an even more marked form. Perhaps in this is to be found the most potent influence in promoting the spread of phthisis, for, as has been said, the increased mortality, both here and in New York, is almost entirely among the poor. Much harm may result to the Jewish working-class population from overcrowding alone, an overcrowding which becomes extreme at times through the sudden rush of immigrants at moments of renewed persecution. In addition, the poverty of these new arrivals, forced to leave their homes suddenly, is often very great, and many of them must exist for some months at least in a state of semi-starvation. A more favourable field for the ravages of the tubercle bacillus could scarcely be found. Although there are no means of ascertaining with any certainty whether the deaths from phthisis are disproportionately frequent among recent immigrants, it is known that many of them die from that disease.

In conclusion, it may be said that the whole question of the smaller Jewish mortality from phthisis is a matter on which it is unsafe to dogmatize; at the same time, the fact that the majority are better nourished than their neighbours is probably the most potent influence in this direction.

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ST. VINCENT AND GRENADA.—From the recently published Colonial Office report on St. Vincent it appears that the population of the island is 51,000, though it is probable that this does not make sufficient allowance for the very considerable exodus which has taken place to the Panama Canal works. The births registered during the fiscal year were 1,768, of which 1,018, or 57.5 per cent., were illegitimate. The death-rate was 18.2 per mille, which, taking into account the high rate of infant mortality, is decidedly low. There were 11 lepers in the asylum, of whom 4 died, but as there is no compulsory segregation no clue is afforded of the actual number existing on the island. The increase of work on the Panama Canal has also caused a large exodus of labourers from Grenada, and those returning have brought back with them a far more serious type of malarial fever than has hitherto prevailed on the island. This naturally spread wherever *Anopheles* abounded, and the year ending in July last, with which the Colonial Office report deals, was remarkable for the prevalence of malaria, while diarrhœa, dysentery, and enteritis were also unusually common. Two hundred and sixty cases of malaria were admitted to the hospital, mainly between August and November. The birth-rate sank from 41.5 of the previous ten years' average to 38 5, and the death-rate was 24.5 per mille, which was above the average. The peculiar type of small-pox (or what is regarded as such), an innocuous form of malady prevalent in these islands during the last few years, broke out in June, and it was found necessary to open an isolation station, 52 cases occurring.

MEDICAL INSPECTION OF SCHOOLS.

Monmouthshire.

A report on the medical inspection of school children in Monmouthshire was presented to the education authority for the county on April 8th. It is estimated that it will be necessary to inspect 45,000 children. The Committee recommended the purchase of 177 weighing and measuring machines, and the appointment of two assistant medical officers (a male and a female) at £250 per annum, rising to £300.

West Hartlepool.

At a meeting of the West Hartlepool Town Council on April 7th, it was recommended that four medical men of the borough be appointed for the medical inspection of children attending elementary schools for a term of one year, to act under the M.O.H., that a sum of £50 be paid to each of them for their services, and that an additional sum of £50 be paid to the M.O.H. for the work of supervision during the year. Alderman Macfarlane, who moved the adoption of the recommendation, said three alternatives were discussed by the Committee. One was that the M.O.H. should give up his private practice, and jointly with his present public work do this work of medical inspection. Another was that he should have an assistant, appointed for a year as an experiment, and that he should do the major portion of the inspection under the M.O.H. The third scheme was the one recommended. Amendments to refer the matter back to the Committee and to appoint a medical man to devote his whole time to the work at £200 a year were lost, and the Committee's recommendation was approved.

Children in Army Schools.

It is announced that consequent upon the powers given for the medical examination of children in civil schools by the Education (Administrative Provisions) Act of 1907, the Army Council has decided to apply the system of physical examination, with some slight modification, to children in army schools, both at home and abroad. The initial medical examination is to be made during the school term commencing after Easter and ended before the summer holidays.

Staffordshire.

At a meeting of the Staffordshire Education Committee held at Stafford on March 28th, the General (Education) Subcommittee reported that the candidates for the appointments of assistant medical inspectors of school children had been interviewed, and recommended the appointment of Miss Lila S. Greig, London; Miss Elizabeth J. Moffett, London; and Miss Myra Mackenzie, of Newcastle-under-Lyme, one to act in each of the three geographical divisions of the administrative county. The Medical Inspection Subcommittee reported that it had decided that arrangements should be made to carry out by December 31st, 1908, the medical inspection in elementary schools of all children in attendance who on January 1st last were not less than five but not more than six years of age, and who might be recommended by the managers or head teachers on the ground that their health caused serious difficulties with regard to their education. Where the medical inspector found that a child was suffering from some physical disability amenable to treatment, he should issue to the parent such notice as might enable the parent to provide for the necessary treatment. An estimate of expenditure on medical inspection for the year ending March 31st next was adopted as follows: Salaries, £1 134; travelling and subsistence expenses, £400; provision for preliminary organization and costs of administration, £526; total, £2,060.

York.

The York Corporation Health Committee and the Elementary Education Subcommittee have issued a report by the M.O.H., Dr. E. M. Smith, who recommends:

(1) That the administration should be delegated by the Council to the Education Committee. (2) That if the Council desired him to be the superintendent of the work, as the Education Board recommended, the additional responsibility entailed should not be regarded as voluntary work. He would direct and supervise the work, act as referee in difficulties, advise and attend the Committees when required, and supervise the sanitation of the schools. (3) He must be provided with at least one able and fully-qualified medical assistant, who would devote the whole of his time to the work of inspection and supervision and the allied bacteriological and other work. Such assistant should receive a salary of at least £300 per annum. (4) At least two school nurses would be required, each at £80 or £90 per annum. Such school nurses must have had training in the diseases of children and in hygiene, and would work under the direction of himself and assistant.

Dr. Smith adds that the Health Committee have at present one visiting nurse, whose chief duties are among the mothers of young infants; the recent Notification of Births Act will before long overload her with this work, and he suggests, as an alternative method possessing some advantages, that two additional nurses should be appointed to visit amongst the infants, school children, tuberculous children and women, and midwives, in an assigned district, the work and salaries being divided equally between the Education and Health Committees. The considerable amount of clerical work involved should be divided between the Education and Health Departments, and the co-operation of the teachers should be secured. He thought it not improbable that the authority would have to adopt the Board of Education's suggestion of establishing a school surgery or clinic for medical examination, the specialized treatment of ringworm, dental caries, or diseases of the eye, ear, skin, etc., amongst the poorer classes, unless it could be arranged for these matters to be adequately dealt with at the County Hospital or Dispensary. The Committee resolved:

> That the expenses of carrying out the provisions of Section 13 (*b*) of the Education (Administrative Provisions) Act, 1907, be charged to the Education Committee, and that the work in connexion therewith be controlled by that Committee, and that it be carried out under the superintendence of the Medical Officer of Health and his staff, with any additional staff necessary.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ended March 14th and 21st the deaths from plague in India numbered 6 739 and 6,980 respectively. During the same periods the seizures amounted to 8,048 and 8,319.

The principal mortality figures were: Bombay Presidency, 1,427 and 1,270; Bengal, 934 and 1,052; United Provinces, 1,290 and 1,426; Punjab, 1 659 and 2,046; Rajputana, 660 and 527; Central Provinces, 130 and 142; Central India, 42 and 130; Hyderabad, 7 and 26; Mysore, 200 and 122; Madras Presidency, 143 and 95; Burma, 246 and 248.

The plague returns show a marked improvement compared with recent years, especially with the corresponding weeks of 1907, when the mortality returns stood at 49 460 and 54,003 respectively. It must not, however, be hastily concluded that plague is permanently lessening, for during the spring of the year 1908 the mortality figures were almost as low as for 1908. It is to be hoped, however, that the great increase in the number of inoculated persons, the destruction of rats, and, it may be, the immunity of those who have had the disease and recovered, is at last having an effect upon the outbreaks.

Gold Coast.

During the weeks ended March 28th and April 4th the deaths on the Gold Coast from plague were 2 and 1 respectively. The deaths occurred at Oblogo during the former and at Accra during the week ended April 4th. There were no fresh cases or deaths from the disease in any other parts of the Gold Coast.

Turkey.

Jeddah.—From January 14th to March 1st there were 68 cases and 65 deaths from plague at Jeddah. At Yambo, between February 12th and 20th, 13 cases of plague were recorded and 12 deaths from the disease.

Egypt.

Between February 8th and March 7th, 95 cases of plague have been recorded, with a mortality of 60.

Persia.

At Kerbala, on March 13th, some cases of plague were reported amongst pilgrims.

Philippines.

During the month of January, 716 cases of plague were recorded, with 566 deaths from the disease. The city of Manila has suffered severely.

MEDICAL NEWS.

Dr. John Rutherford Skinner has been elected Mayor of the ancient town of Winchelsea.

The Royal Dental Hospital, Leicester Square, has received a donation of 50 guineas from His Majesty the King.

Dr. Thos. Frank Southam, of Newstead Bowden, Cheshire, has been elected a Fellow of the Royal Geographical Society.

The President of the Hospital of St. Cross, Rugby, Mr. R. H. Wood, J.P., D.L., has commissioned Mr. Harrison Dutton to paint the portrait of Dr. Clement Dukes, the senior physician, for presentation to the hospital.

The summer course of lectures and demonstrations at the Hospital for Sick Children, Great Ormond Street, will commence on May 7th, when Dr. Garrod will give the opening lecture on infantile scurvy at 4 p.m.; the course is open free to practitioners.

The annual general meeting of the Royal Sanitary Institute took place on April 15th. The report then submitted and adopted showed that the institution continues to carry out successfully the objects for which it was founded.

The Riberi Prize, of the value of £800, which is given every five years by the Royal Academy of Medicine of Turin, has been awarded to Professor Bartolomeo Gosio, Director of the Laboratories of Public Health of the Italian Ministry of the Interior, for his studies on the bio reaction of arsenic, selenium, and tellurium.

Every one must have felt that if the electric omnibus could be made a commercial success it would be the ideal public vehicle for large towns. It makes little noise, it does not shake itself like a wet terrier when stopped or going dead slow through traffic, and it does not smell. The Electrobus Company has issued a statement that in London the cost of working an electric omnibus is 9d. per car mile, while receipts have averaged for nine months over 13d. The economy is attributed to the immunity from breakdown so far experienced. On Easter Sunday an electrobus ran from London to Brighton on a single charge.

The spring meeting of the Medico-Psychological Association (South-Eastern Division) will be held at Colney Hatch Asylum next Tuesday (April 28th). After examining the asylum and grounds in the morning, the members will take luncheon with the medical superintendent, Dr. W. J. Seward; and afterwards papers on the history and new buildings of Colney Hatch Asylum will be read by Dr. Seward and Mr. Clifford Smith. A paper on the teaching of psychology will be contributed by Dr. D. G. Thomson, and another on insanity in Jews by Dr. Harvey Baird. The members will dine together at the Café Monico in the evening.

A meeting of medical practitioners in South London will be held in the Town Hall, Peckham Road, Camberwell, on Thursday next, at 4 p.m., when resolutions will be submitted disapproving of the admission of paying patients to general teaching hospitals, expressing the hope that such a system will not be adopted by King's College Hospital after its removal to Denmark Hill, and urging the authorities of the hospital to adopt the principle of admitting patients by certificates from medical practitioners. The meeting is promoted by the South London Hospitals Committee elected by the Lambeth, Norwood, and Wandsworth Divisions of the British Medical Association, the Brixton Medical Society, the Camberwell Provident Dispensary, and the South-Western London Medical Society.

The Mediterranean has become such a highway for English-speaking tourists, that it will be interesting to many to know how well provided in medical requirements for the treatment of casualty cases or sudden sickness are the fine steamers *Heliopolis* and *Cairo*, belonging to the Egyptian Mail Steamship Company, which, since the beginning of the present year, have been conveying mails and passengers weekly between Marseilles and Alexandria in a little over four days. On each ship there is a small emergency hospital, containing four beds for males and [illegible] for females. The dispensary or surgery, instead of [illegible] many ships a mere doctor's sleeping-place, being [illegible] shelves of six [illegible] boxes containing bottles and fitted up with [illegible] nveniently in the centre of the drugs, is a room placed co[illegible] which are at all likely to ship, and furnished with al[illegible] With the crews of these, ence in dispensing and all [illegible]t remains a favourite be needed in cases of emerge[illegible] sailors, who sometimes as of other ships, black [illegible] Ship surgeons will be remedy, often asked for by [illegible] ask for an extra strong

interested to hear that in the circulars issued by the Egyptian Mail Steamship Company passengers are informed that they are not to expect the gratuitous services of the surgeon on board.

The annual report of the Church of Scotland Medical Mission at Jehang, Central China, for the year 1907 affords evidence of a great deal of good medical, surgical, and sanitary work carried out under considerable difficulties among the Chinese. The table of operations performed in the hospital, with the results, is very creditable to all concerned; but, in spite of its always having "worked all right," we doubt the wisdom of entrusting the administration of chloroform to Chinese coolies. There is an interesting note on the alteration of the prevalence of different forms of malaria in the district, showing a remarkable increase of the aestivo-autumnal type at the expense of the tertian and quartan forms. As the authors suggest, there may be material here for valuable research work by people having time at their disposal, which the overworked hospital staff have not. We cannot see that anything is gained by throwing the account of the hospital and its working into the form of a dialogue somewhat reminiscent of the *Child's Guide to Knowledge*, but no doubt there is a demand for a certain note of sentimentality in missionary literature generally.

The Illinois State Board of Health has issued a pamphlet of sixty pages on The Cause and Prevention of Consumption. It contains a very complete epitome of the extent, mortality, and causation of pulmonary tuberculosis, with details of preventive and curative requirements. The various institutions in the State of Illinois for the special treatment of consumption are described and illustrated, and there is also a section devoted to a consideration of the home treatment of the disease. This is the best and fullest of such publications issued by a public health authority which has come under our notice. There is, however, a possibility that the very completeness of the pamphlet may tend to counteract to some extent the intention of the Board of Health, for its size may deter many from even commencing its perusal. Public bodies and medical practitioners will welcome it, and be ready enough to study it; but to the poor consumptive, and those amongst whom he lives, it will perhaps seem too long to read. In this country, where public departments often defer action until popular opinion has become insistent, the reason given by the Illinois Board of Health for the publication of this pamphlet is worth noting. "The Illinois State Board of Health, as created by law, is charged with the general supervision of the interests of the health and life of the people of the State. In view of the fact that consumption, a dangerously communicable disease, is causing more human suffering and greater loss of life among our people than any other existing disease, it becomes the duty of the Board to warn the people of its dangers, and to advise them of the measures necessary to prevent its spread."

Hydrophobia in Belgium.—From a communication presented by M. Bordet to the Royal Belgian Academy of Medicine on December 28th, 1907, it appears that the prevalence of hydrophobia in Belgium has increased during the last three years. In 1907, from January 1st to November 15th, the number of persons bitten by dogs who were treated at the Pasteur Institute, Brussels, was 300. In 176 of these cases the existence of rabies in the animal was proved experimentally. During the same period the Institute received the heads or complete carcasses of 279 animals suspected of being rabid; in 138 the suspicion proved to be well founded. These figures do not include the living dogs sent to the Veterinary School for clinical examination. Since the Brussels Pasteur Institute was opened on July 1st, 1902, till November 15th, 1907, the total number of patients treated has been 728. Among these there were three failures, besides a doubtful case in which the symptoms of hydrophobia manifested themselves before the completion of the treatment. The proportion of unsuccessful cases is therefore 0·39 per cent., a figure which closely approximates to that of 0.46 per cent. given by MM. Nocard and Leclainche as the proportion of failures at the Paris Institute during a period of twelve years. Since July, 1902, the number of "suspect" animals sent to the Institute was 635, of which 289 were found to be rabid. The disease is disseminated throughout the country, except in Luxemburg. The Academy appointed a committee, consisting of MM. Degive, Gratia, and Bordet, to inquire into the prevalence of the disease and to recommend measures of prophylaxis. The Belgian Public Health Department has placed hydrophobia in the list of notifiable diseases. Cases of persons bitten by dogs suspected to be suffering from rabies, as well as those known to be rabid, must be notified to the proper authority.

British Medical Journal.

SATURDAY, APRIL 25TH, 1908.

RESEARCH DEFENCE SOCIETY.

Elsewhere we publish a letter from Lord Cromer announcing the formation of a new society for the defence of experimental research. The announcement will, we are sure, be received with profound satisfaction, not only by the medical profession but by all interested in the prevention of disease and suffering among men and animals. The objects of the society are clearly set forth in Lord Cromer's letter. They are, in his words, "to make known the facts as to "experiments on animals in this country; the "immense importance to the welfare of mankind of "such experiments; and the great saving of human "life and health directly attributable to them." The society proposes to enter on a defensive warfare against ignorance and calumny such as has hitherto been left to the medical press and to a few volunteers here and there in the lay press and on public platforms who have championed the cause of science, which is also the cause of common sense and of humanity. The society will supply information with regard to the methods and results of vivisection to all who wish to know the truth, which is so grossly disfigured by its opponents. It proposes to found branches which will bring it in touch with every town in the kingdom. Antivivisectionism will be actively fought wherever it takes the field, and the "platform facts" which form the greater part of its controversial armament will be dealt with before the audiences to which they are offered.

It is a good augury for the success of the new society that, although its beginning dates only a few weeks back, it already has a membership of more than eight hundred. It should be clearly understood that it is not a medical society. Among its members are many representatives of the clergy, Members of Parliament, artists, writers, and hospital administrators. It is especially significant that in the list are many ladies and several of the chief members of the Society for the Prevention of Cruelty to Animals. In fact, all the component elements of the national life are represented in the society. This fact will give its educative work a force and authority that no purely professional body could possess.

The Research Defence Society has come into existence at a particularly opportune time. The antivivisectionists, seeing the pitiful figure made before Lord Selby's Commission by the representatives of the various sects into which they are divided, are straining every nerve to lead the public astray on the subject. Not satisfied with calumniating men engaged in experimental research in the fashion with which our readers are familiar, they denounce the Royal Commissioners themselves as biassed, and thus strive to discount the effect which the evidence must have on any mind open to conviction. The new society will carry the war into the enemy's camp, and will force him to change his tactics, with the inevitable result that truth will in time prevail.

The antivivisectionists, realizing this, are preparing for defence against the society by means of their usual weapon of misrepresentation. In the *Zoophilist* for March, Mr. Stephen Coleridge says that "as there "already exists a 'Society for the Advancement of "'Medicine by Research,' the particular field of effort "to which this new association proposes to address "itself is already occupied." As he goes on to insinuate that the function of the "previously existing society" was to protect its members "from any possible inter-"ference from the Home Office by advising that Office "privately about themselves," he shows either that he knows nothing of the real objects of the new society, which is an entirely distinct body from the other, or that he has been guilty of a misstatement. When he adds, "We shall await the activities of this new "vivisectionist association with some amusement, as "the presence among the first list of members of "the name of Mr. Sydney Holland is almost a "guarantee that the society will be somewhat crude "in its language and indiscreet in its methods," we cannot help thinking that the "amusement" would be appropriately expressed by a *risus sardonicus*, from which, by the way, he might possibly learn something of the nature of involuntary twitching. For our own part we cannot help feeling more than "some amusement" to hear Mr. Coleridge speaking of crudeness of language and indiscretion in methods. Again, in the *Abolitionist* for March, Dr. Hadwen, in an article printed side by side with one in which Mr. Coleridge is severely handled by that other ardent antivivisectionist, Miss Beatrice Kidd, professes to be anxiously waiting for the developments of the Research Defence Society and its participation in debates. He ought not, however, to spoil this noble sentiment—and to split an infinitive besides—by saying, "This is certainly a step in the right direction, and "as we have hitherto failed, in spite of every effort on "our part, to induce medical apologists *to willingly meet* "*us* in debate, we look forward with some degree of "pleasure to the probable fulfilment of this promise." Dr. Hadwen knows that "medical apologists" have met antivivisectionists in debate, for he refers to the fact that Professor Halliburton and Dr. Collingwood have done so. He does not, however, refer to a recent debate at Oxford in which Dr. Reinhardt was signally defeated by Dr. Gustav Mann; nor does he make any mention of another debate at Worcester in which the antivivisectionists themselves indulged in the pleasure they dearly love of abusing one another.

By a curious coincidence, a campaign against vivisection has lately been started in the United States. If not originated, it has been fostered by the *New York Herald*, an organ of opinion whose support can scarcely add weight or dignity to any cause. As *Collier's Weekly* puts it, the proposed new laws are an attempt to give ignorance a whip to hold over science. The following passage from the same journal may perhaps give some insight into the secret springs of the action that is being taken: "The New York County Medical "Society was instrumental in having the *Herald* "legally prevented from carrying certain medical "advertising, and that paper seldom forgets a grudge. "Moreover, this agitation happens to be extremely "good business. The most profitable part of a daily "paper is the dry goods advertising; women are the "buyers; and in this howl about our dumb friends "there is a mighty feminine appeal, especially to those "women who are unfortunate enough to have no "children."

We understand that it is not improbable that a society similar to that of which we announce the

foundation to-day will be formed in America, and that the two will join hands across the sea. It is scarcely necessary for the British Medical Journal to say that it is in fullest sympathy with the new movement of which the Research Defence Society is the outward and visible expression. We congratulate its initiators and promoters, and particularly its Honorary Secretary, Mr. Stephen Paget, on its auspicious beginning. We heartily wish it success, and in particular we hope that it will have the active support of the whole medical profession.

THE INFLUENCE OF ABNORMALITIES OF VISION UPON ART.

Painters fall naturally into three groups: those who render Nature with as great fidelity as possible, those who interpret and idealize Nature, and, finally, artists who paint her as they feel she should be but obviously is not. With these, the so-called impressionists, we are not concerned; they fall rather within the scope of psychology than of the more exact sciences. It is chiefly in the work of artists of the first group that we must look for the effect of errors of vision; and the more expert the artist, the more faithfully he can transfer to canvas what his eye sees, the more evident will any abnormalities be.

In the artistic world such aberrations constitute a "style," or if the artist be sufficiently distinguished and the peculiarity sufficiently pronounced, "a school." Any attempt to give a scientific explanation of those characteristics of the works of the great masters which the ordinary observer finds inconsistent with Nature is deeply resented. Art, we are told, is an instinct and is incapable of material analysis; it depends solely upon the free imagination and artistic sentiments of the painter, and is degraded if considered to be in any way a function of the organ of vision and dependent upon its diseases and defects. Some such considerations must have inspired Ruskin's futile criticism of Liebreich, whom he considered as stepping outside his province, when he ventured to explain, upon purely physical grounds, the peculiarities of Turner's later pictures.

In a lecture on "The Real and Ideal in Portraiture" at the Royal Institution in 1872, Liebreich discussed the influence of defects in the eye upon art. He spoke mainly of Turner and his later paintings. When Liebreich first saw the Turners in the National Gallery he was struck with the great difference between his early and his later pictures; he could hardly believe that they were by the same hand. Could the artist who had produced "Crossing the Brook" have also been the author of "Shade and Darkness"? If so, was the change caused by a cerebral or ocular disturbance? An analysis of Turner's pictures, especially of those of the middle of the pathological period, shows that there is a regularly recurring fault, a vertical streakiness, which is caused by every illuminated point having been changed into a vertical line. The elongation is in exact proportion to the intensity of the light. Thus, for example, there proceeds from the sun in one picture a vertical yellow streak dividing it into two entirely distinct halves which are not connected by any horizontal line. In Turner's earlier pictures the disc of the sun is clearly defined, the light radiating equally to all parts. Everything that is abnormal in the drawing, and even in the colouring of the pictures of the pathological period, can be explained by this vertical diffusion of light. Till the year 1830 Turner's works are normal; in 1831 a change in the colouring becomes apparent, which gives to his paintings a peculiar character not found in those of any other master. Optically it is caused by an increased intensity of the diffused light proceeding from the most illuminated parts of the landscape. From 1833 this diffusion of light becomes more and more vertical, till at the end of the period the pictures look as though they had been wilfully destroyed by vertical strokes of the brush before they were dry, and only from a considerable distance can the picture be comprehended.

Liebreich explained the defect upon the assumption that at the age of 55 Turner began to suffer from a diffuse haze of the crystalline lens which dispersed the light more strongly and in consequence threw a bluish mist over illuminated objects. In later years a clearly defined opacity was formed in the lens, and this caused light to be diffused vertically. Liebreich showed by an optical apparatus how Turner's early pictures could be made to look like his later ones, and how Nature could be distorted into the appearances Turner painted at the close of his life. Liebreich told his hearers that it might seem hazardous to designate as diseased a period the beginning of which art critics and connoisseurs have considered as Turner's climax. But he did not think that the two opinions were in decided contradiction. To be physiologically normal is not at all a fundamental condition in art, and Liebreich could not deny the legitimacy of the taste which regards that which is entirely sound and healthy as commonplace, trivial, and uninteresting; and which, on the contrary, is fascinated by that which approaches the borderland of disease and even goes beyond it.

Astigmatism, especially in a high degree, is not uncommon among artists, and in later life is apt to affect their work, especially if they be portrait painters. A well-known French artist was celebrated for the resemblance of his pictures to the original, but as he grew older he drew his necks too long and his faces too oval. Liebreich explains this deterioration by showing that when presbyopia is added to astigmatism the distortion of an image at a distance and of a close image are in different directions, and so the effect when put upon canvas is doubled. There is, moreover, little doubt that the young and mobile lens can and does contract irregularly in such a way as to correct a certain degree of astigmatism.

Frequently in advanced age the lens becomes yellow in tint, and in many individuals the intensity of the discoloration is considerable. This change does not essentially diminish visual acuity, but it does alter the value of colours perceived. A small quantity of blue cannot be appreciated, for the yellow excludes it. Liebreich showed his audience how this effect could be imitated by holding a yellow glass before the eye. A painter so affected will paint his pictures too blue, and as he gets older he will use more and more blue.

Mulready in his advanced age painted his pictures too purple. A careful examination shows that the peculiarities in colour of his later works are due to the addition of blue. Thus, for instance, the shadows on the flesh are rendered in pure ultramarine. Blue drapery is painted most unnaturally blue. Red becomes purple. If his pictures be studied through a pair of yellow glasses all the faults disappear; what formerly appeared unnatural and displeasing is at once corrected; the violet face becomes a natural red; the blue shades become grey, and the unpleasing glaring blue of the drapery is softened.

The works of the definitely colour-blind cannot be corrected by a tinted lens, for their characteristics are dependent upon an entirely false perception of colour.

Liebreich noticed a picture at the London Exhibition

of 1871 which was remarkable not so much on account of its subject, but for its amazing colour scheme. He concluded that the artist was colour-blind. The picture represented a cattle market. The roofs of the houses and the oxen were painted in red on the lighted side, in green on the shaded parts. This peculiarity—painting the high lights red, the shadows green—is characteristic of one type of colour-blind artists, and has been called "Liebreich's sign."

Professor Angelucci of Naples has made a collection, probably the only one of its kind in existence, of the works of painters who have abnormal colour perception. These pictures show the limitations of colour-blind artists, and the constant struggle of those among them who are conscious of their failing to overcome the defect, or at least to render it less evident. Angelucci has only bought works of art from artists whose colour sense he has himself investigated—a fact which makes his collection the more valuable. He contributes an article on the subject to the *Recueil d'Ophtalmologie* for January, 1908, which is not only of supreme value to medical men, but is also of great importance to all who are interested in art.

The first painting in the collection is by an artist who is so blind to red and green that he cannot differentiate them from each other. It is a full-size portrait of a Roman peasant. The author shows himself to be a master of line and possessed of admirable technical skill, but his choice of colours is unconventional. The shadows of the face and neck, which constitute more than half the canvas, are rendered in green; the same applies to the dark folds of the dress, and the shawl which covers the head. Red predominates in the lights of the face, and even in the conspicuous white of the linen. The green shadows look flat and appear to fall back from the red lights.

The work of another painter is characterized by similar errors of coloration. In this instance the two complementary colours intensify each other to such an extent that all the advantages of correct design and good drawing are nullified by the bizarre tones employed. A third highly-gifted artist, skilled in design and form, and possessing an exquisite appreciation of light and shade, was highly successful in black and white, but as soon as he took up oil painting he astonished the artistic world by his grotesque choice of tints. In a study from the nude in soft light he painted the chief part of the picture in leaf green. The shadows were all rendered in dark red, while the sky was an intense violet. When tested with Holmgren's wools he matched dark red with dark green and brown, and regarded them as identical colours. If shown a red and green of equal saturation, he said that the red was a more sombre colour than the green. This fact explains the persistence with which he used red for deep shades.

Angelucci, as the result of the analysis of his collection, finds six signs which are characteristic of the art of the Daltonian.

1. "Liebreich's sign," with its accompanying loss of perspective. In decorative art, green is sometimes used to give great contrast by eliciting the phenomenon of simultaneous colour contrast, but this effect is not obtained at the expense of correct perspective.

2. Most colour-blind individuals can, after long practice, learn to appreciate red, and so the mistakes in red are not always very evident; but this is not the case with green, which the colour-blind use in every shade and tone for the nude, especially on small canvases.

3. The abuse of violet. This is evident in the work of the absolutely colour-blind, and equally in that of those who are only red-green blind. The former use it extensively in representing skin, the latter only in shadows. This error enhances the contrasts in the colour scheme, and has been adopted by the normal sighted to such an extent, that at one time the abuse of violet in art was quite deplorable.

4. The exaggeration of the changes which green undergoes under different illumination, till the high lights become quite yellow, the shades absolutely blue.

5. An excessive mixture of colours; a maroon coat will be painted yellow in the lights, red in the shadows, and green in the half-lights. The skin of an ox becomes grey, red, and violet in different parts; a child's knickerbockers, yellow in the high lights, blue in the half lights, and violet in the shadows.

6. When the colour-blind after patient effort overcome their colour defect and become dexterous in line and perspective, their pictures, if confined to small subjects, are so powerful in light and shade that the relief effect obtained is equal to that of the great masters.

Angelucci is of opinion that if a colour-blind artist restrict himself to black and white, yellow and blue, he can become great in his art, because he is strong in contrast; if he be capable in design he has all the true attributes of Art. He should confine himself to nocturnes, and to snow scenes. He can never reproduce the diverse scales of colour presented by Nature bathed in sunlight.

Angelucci rightly urges that all art students should be tested for colour blindness to avoid the lamentable waste of time which ensues when a Daltonian takes up the profession of Art. From a consideration of Liebreich's lecture it is also obvious that he should have any error of refraction fully corrected, and so avoid the distorting effects of astigmatism and the partial vision of myopia. Unfortunately the senile artist cannot correct the yellow tint of his lenses, nor is he ever conscious of the gradual change in his perception of colour.

THE MAN ON THE FOOT-PLATE.

THE report of the Board of Trade on the Shrewsbury accident again brings up the question of the physical fitness for their duties of men placed in charge of trains and the like. In this case the accident is ascribed to the driver having run past his signals because he was dozing just at the moment when he should have been stopping his train. It is a conclusion which has caused a great deal of irritation amongst railway men, and by many the theory on which it is founded is derided. Nevertheless, there is nothing essentially improbable about it; for though it cannot be said that scientific knowledge of the condition known as sleep is exhaustive, everything points to the conclusion that sleep need not be complete, or, in other words, that a person may be "half asleep" in more than one sense. The whole of the functions of the higher animals, including motion and thought, doubtless depend upon the action of the brain, but that organ is not a unit. It contains multiple centres, and though usually acting together, they are capable of acting separately, and often do so. Thus, for instance, one portion of the brain may be totally inert, another still so far active as to continue to co-ordinate the muscles to a sufficient extent to preserve equilibrium. This being the case, it is as a scientific conception perfectly credible that a man should stand at his post apparently alert, with his hand on a driving lever, and yet for all essential purposes be really asleep. Nor does practical experience tend to support a belief that no man engaged in such an occupation as engine driving could possibly

fall asleep. That this should not be obvious to every one is not surprising, for between individuals there are great differences in the extent to which the nervous system as a whole responds to stimulation of one centre, and, while anything approaching sleep during active occupation must be incomprehensible to some, to others it will seem little surprising. Moreover, custom and wont count for much in the matter, and there must be many not specially placid persons who, for instance, can recall dropping into a doze while on horseback or driving in a motor car at a pace which in earlier days would have kept them quaking. Nor is the bluntness of sense born of custom an essential element in the case, for it is not an unknown thing for a soldier to fall asleep even when ostensibly taking an active part in an action. A case in point is supplied by an interesting communication from a London surgeon who served in South Africa: He writes: "Any one who has seen men in "situations of great tension knows that some of them "—in fact, a small minority of them—may be over-"come by an uncontrollable desire to sleep. It affects "some men more than others. At Honning Spruit, "June, 1900, the writer happened to be the only sur-"geon on the spot when Colonel Bullock (now "General Bullock) was attacked for about nine hours "by a Boer force double his own in numbers, better "armed and assisted by artillery. We were without "this invaluable assistance. The Boers failed to take "the post. During the attack the writer visited "a trench in which one man was badly hit, and another "was lying apparently dead, except that he had "not the colour of a man killed in action. The "writer turned him over to get a better look at "him, and found the man had been sound asleep; "and this was not the only case of sleeping "that day. Colonel Bullock's force were called upon "to repel an attack at about 7 a.m. on empty stomachs, "were obliged to lie face downwards in shallow trenches "and endure the shell and rifle fire from all but "invisible foes; and in the sun, after a sleepless night "of travel in railway trucks, a few of them went to "sleep. The main cause, the writer believes, was the "tension of the situation in the absence of active "physical exertion. The writer felt the same desire "for sleep, but active employment kept him awake. "The wounded, except the most severely wounded, "soon succumbed to the beautiful action of this "natural anaesthetic. Now, under these circum-"stances it would not be merciful to blame a "man who is unable to resist the seductive in-"fluence of sleep, and it should not be an insult to a "man's memory that he is said to have been the unfor-"tunate victim of its power. He is an unlucky man "who falls a victim while in the act of performing vital "duties. It would be safer to recognize the fact that "strain and exhaustion affect men differently and "accordingly to formulate regulations. At the end of "the particular attack to which the writer has alluded "he went to another man who was lying apparently "asleep, and who did not move when the rest of his "companions 'fell in,' but when this man was carefully "examined there was found a bullet wound in his "forehead which showed his sleep was permanent." It is therefore perfectly credible that a driver who has not had a thorough rest during the hours preceding his turn of duty, and whose work does not entail constant change of position, should occasionally doze off for a second or two, as is believed to have occurred by Colonel Yorke on the occasion of the accident at Shrewsbury. At the same inquiry the possibility of the accident being due to sudden illness of the driver or stoker was considered, but was dismissed on the ground that there was no evidence of its probability. The conclusion is very likely correct, but to make it convincing it should have been based not merely on lack of evidence of probability, but on the positive evidence of improbability such as would be afforded by the fact that the men in question had recently been subjected to medical examination and found to be free from physical defect of any kind.

DOES ATHLETIC COMPETITION CAUSE HEART DISEASE?

The question whether the pursuit of athletics injures the heart has often been discussed in this country, and an answer has been sought by tracing the subsequent life-histories of the crews of the University boats. This has seemed to show that no permanent harm results, but it must be remembered that these men are carefully selected, are always well fed, and that as a rule they do not engage year after year in heart-straining competitions, but are content after their great race to keep up their athletic form in a less strenuous manner. On the other hand, should a clerk or a shopman take to some form of athletics, and, finding that he has a natural aptitude for it, follow it year after year for the prizes that he hopes to win, should he combine this pursuit with a not very healthy breadwinning occupation, be poorly fed and housed, and perhaps drink and smoke more than is good for him, the results may be less favourable. Some such explanation would account for the condemnation of excessive athleticism published frequently in Germany, and based upon more or less extensive observations. Thus Schieffer came to the conclusion that bicyclists suffer more than should be the case from enlargement of the heart—not simple hypertrophy but dilatation—and that such hearts, although doubtless fully retaining their functional capacity and even probably capable of greater efforts than the average heart, suggest the existence of a certain risk. Herschell and Beyer examining bicyclists, Beck and Kienbock Selig swimmers and pedestrian tourists, found a higher percentage of heart disease than the histories of the patients would account for, and most of them showed that particular form of heart which has been called the "Tuebingen" heart; it is characterized by damaged heart muscle, slow and irregular pulse, increased heart dullness, muffled sounds, murmurs—sometimes heard constantly, at other times only after exertion—and abnormal accentuation of the sounds. These symptoms may occur singly or be variously combined. Drs. Rudolf Beck and Emil Epstein[1] of Vienna have examined the hearts of thirteen athletes, twelve of whom had been competitors in the great Vienna regatta of 1907, and their results give substantial support to the preceding statements. The men examined were for the most part shopmen and clerks; their ages varied from 17 to 42, the average being 26, and ten were under 30; all had been for several years engaged in athletic pursuits, and had taken part in many competitions. Of the whole number, one only had a heart that could be described as normal; one showed muscular degeneration without dilatation (muffled first sound), three showed slight dilatation, three marked dilatation, one simple hypertrophy, one hypertrophy with marked dilatation, one hypertrophy with slight dilatation, one mitral insufficiency, and one (aged 42) calcification of the aorta and peripheral arteries After the effort albuminuria was present in 70 per cent., the amount in some cases reaching 0.4 per cent. on Esbach's scale; blood pressure and temperature were also slightly raised, but these events have no serious consequences. Beck and Epstein believe that there is sufficient evidence to show that persistent athletic competition produces in the long run permanent organic changes in the heart, and that there is danger that where the functional capacity is not at first impaired

[1] Einfluss sportlicher Extremleistungen auf Herz, Niere, Blutdruck und Körpertemperatur, *Wien. klin. Wochenschr.*, 1908, No. 15, p. 620.

this may follow later; training does not avert these consequences, but Beck and Epstein do not disparage the results of training aimed at improving the muscular development and force, a training which has not for its sole object the participation in record-breaking competitions, which they regard as fraught with grave danger to those who year after year devote themselves to sport in that shape.

MEMORY.

The deepest problems lie in the most every-day occurrences. In every pebble and rain-drop is concealed one of the riddles of the universe—the nature and meaning of the ultimate force of which they are the manifestation. In the same fashion, behind the simplest memory processes there are hidden such profound questions as the nature of mind and the connexion of mind and body. These are the thoughts with which Professor Ziehen opened an exceedingly interesting lecture on memory, delivered at the Kaiser Wilhelm's Academy for Military Surgeons last December.[1] Naturally the distinguished psychologist does not discuss the whole question of brain and mind, but limits his lecture to the nature of memory and its mechanism. Curiously enough it is not till the end of his lecture that Professor Ziehen attempts a definition of memory, though his well-known views are led up to during its course. For Professor Ziehen, memory in the sense of retention of impressions is a universal phenomenon. The return on every light breeze of the branches of the tree which have previously been bent in a certain direction by the prevailing wind to their former inclination, and the marked tendency in the particles of sand lying on the disc whose edge has been previously stroked by a fiddle bow to reform at a light touch their Chladni's figures, differ quantitatively—but not, he thinks, qualitatively—from the retentive memorial processes of the higher animals. In all cases there is a responsive tuning of the material structures to certain stimuli, the difference consisting in this, that in the former the tuning is only in one direction, whilst in the latter the tuning is in innumerable directions. According to Professor Ziehen, the whole ascending scale of animal life shows only a continual accretion and complexity of responsive tunings. It is, however, necessary to distinguish two processes in memory—at any rate, in the higher animals, namely, that of retention, the *grandis recessus memoriae* of Augustine, and that of reproduction, corresponding to the Platonic division the *μνήμη* or conservation, and *ἀνάμνησις* or reminiscence. At what exact point in the phylogenetic development of the animal series the power of reproduction in memory first appears it is impossible to say, but experimental evidence seems to show that it exists as low down in the scale as the amphibia. It is at this point that the pallium or neo-pallium first appears, the fish, for example, having merely rhinencephalon or archi-pallium for cortex. From the amphibia upwards the neo-pallium undergoes progressive increase, and in man the cerebral cortex is almost entirely neo-pallium. This enormous development of neo-pallium is, according to Professor Ziehen, most closely related to the functional separation of cerebral sensational fields and cerebral memorial fields, or, expressed psychologically, of conservation and reminiscence; that is, that in precisely the same fashion that the visual (sensational) centre about the calcarine fissure on the mesial surface is functionally separate from the word (memorial) centre about the angular gyrus, so for all other of the avenues of the mind separate functions of sensational retention and recollection must be assumed. In this relation Professor Ziehen makes several remarkable statements, each of which involves several assumptions. In the first place, he states that the latent memorial impressions (*erinnerungsbilder*) are entirely material events, and that to describe them as subconscious processes is merely a play upon words, and "*ein hölzernes Eisen*," and that the doctrine of unconscious or subconscious processes neither explains facts nor has led to the discovery of new facts, but has, on the contrary, continually enveloped them in a mystical metaphysical fog. In the second place, his explanation not only reduces impressions to material events, but subjects reproductive memory to purely mechanical laws. But reproductive memory is a conscious process, and the consciousness of the reproduction is inseparable from the act of reproduction; and the origin of this consciousness calls for explanation. Either (1) the elements of consciousness are contained in the memorial element, or (2) they spring mysteriously into being with the reproduction, or (3) consciousness is a non-essential, epi-phenomenal appearance—as Huxley said, is what the sound of the whistle is to the locomotive—in fact, a by-product. This latter is the logical outcome of Professor Ziehen's account of memory. Now, a judgement is indisputably a psychical process; but every sensation, even the most elementary, every perception, implies judgement, for without it no sensation or percept could be disengaged from previous similar sensations or percepts, or simultaneously different ones, and therefore the psychical is given in each memorial element from simple retentive processes upwards. Professor Ziehen's definition of retentive memory as a material process without any psychical and complementary, or even parallel, process, and with it his condemnation of subconscious processes, thus falls into confusion, unless, indeed, the fact of consciousness be denied altogether. Either, then, mind in some form is a universal vital phenomenon or it is non-existent.

[1] *Das Gedächtnis* (The Memory). *Festrede gehalten am der Stiftungstage der Kaiser Wilhelms-Akademie für das militärärtzliche Bildungswesen*, December 2nd, 1907. By Th. Ziehen. Berlin: August Hirschwald. (M. 1.)

OTTO SCHMIDT'S CANCER PASASITE AND "CANCROIDIN."

In the third report of the Cancer Research Laboratories, published in the *Archives of the Middlesex Hospital*, 1904, vol. iii, Mr. Glenton Myler published the results which were obtained in the cancer wards of the hospital with Otto Schmidt's treatment. The importance of testing every new treatment suggested for this dire disease is recognized to its full extent at Middlesex Hospital, and it is not surprising that a fair trial was given to this treatment, in spite of the fact that at the time practically nothing was known of the parasite which Schmidt claimed to have discovered, and of the substance employed in the treatment, save that he stated that killed cultures of the parasite as well as the serum of animals injected with the parasite constituted his treatment. In the cancer wards, only the "killed cultures" were employed, as these were said to be more efficacious. Schmidt expressed himself as satisfied with the cases selected for treatment, but the results obtained were absolutely negative. The author says that neither a diagnostic reaction nor the slightest influence on the condition was observed in any of the 9 patients. With this record fresh in our minds, it comes as a sort of surprise to us that Baisch, who has been working with Excellenz Czerny in the surgical clinic of Heidelberg University, should publish[1] results which in some respects stand in contrast with those observed in London. It must, however, be pointed out that the therapeutic results in 7 cases of inoperable cancer were negative. Baisch first deals with the reputed parasite. With Schmidt's assistance he has been able to examine it microscopically in fresh preparations, and confirms many of the characteristics which Schmidt described.

[1] *Deut. med. Woch.*, February 13th, 1908.

The fine pale, ring-shaped bodies with a double contour were found in each specimen derived from malignant growths, while they were not seen in specimens prepared in the same manner from lymphomas, fibromas, goitres, and lipomas. He was not quite so successful with his cultures, although he gives some details with regard to the tubes which he prepared. It appears that Schmidt first obtained a culture of *Mucor racemosus* from the tumours, and then proceeded to cultivate the parasite on these cultures. In respect to the diagnostic test, Schmidt utilized his culture ground up (which he calls "cancroidin"), and injected 1 mg. in suspension. The dose has to be raised fairly rapidly up to 10 mg. The test in Baisch's hands proved negative in doubtful cases which eventually proved to be tuberculous, while in 6 out of 19 malignant cases it gave a "reaction." It, however, proved incapable of determining the malignant nature of gastric and intestinal tumours. Ulcerating malignant tumours appeared to yield a local reaction. This was not seen at the Middlesex Hospital. Baisch undertook four series of experiments by inoculations in mice. The first two series, embracing 50 mice each, yielded negative results. In the third series he used an older culture, and 1 mouse out of 100 developed a tumour at the site of the injection. Ulceration had already set in, so that transplantation and cultural experiments could not be carried out. Microscopically, he was satisfied that the tumour was either an endothelioma or a basal cell cutaneous carcinoma. There were no metastases. Another mouse showed miliary abscess formation, which might have raised a suspicion of metastatic growths if examined only macroscopically. The fourth series of 50 mice yielded negative results. Baisch is convinced that the one tumour was not a spontaneous tumour, but is not prepared yet to state that it was caused by Schmidt's parasite. Such is, then, the evidence up to date. That a parasitic-like structure has been observed in cases of malignant tumour which corresponds to what Schmidt has described we have no right to doubt; but this discovery alone would not lead us far. This parasite, when killed and injected in suitable quantities into the subcutaneous tissue of persons suffering from malignant disease, has no apparent therapeutic effect, and its diagnostic effect at best seems to be doubtful. While we cannot offer any criticism on the mouse tumour, we would require a little more evidence than Baisch has produced before we could be convinced that Otto Schmidt's cancer parasite will not share the fate of the host which preceded it.

THE GAIT OF MAN.

IN countries where the serious training of the territorial forces is not deferred until the six months following a declaration of war, universal military service and a short period with the colours involves very hard work for recruits. The practical and scientific spirit of Germany has caused this training to be most strenuous and thorough, and an attempt is made to give to peace manœuvres some of the actuality of war. Long and even forced marches are not uncommon, and it is not surprising that the feet of a certain number of young soldiers give way under the strain of their exertions plus the weight of the infantry equipment, which is over 51 lb. Besides the accidents which are common to civil as well as military life there is a special form of disability, of which Dr. Momburg treats in a recent essay on the gait of man and foot-swelling.[1] This *fussgeschwulst* is a well recognized affection; its symptoms are inability to march properly without pain, œdema of the dorsum of the foot, especially in the region of the metatarsus, and tenderness on pressure on certain points over the central metatarsal bones. Since the introduction of the *x* rays it has become known that fracture of either the second or third metatarsal bones, or rarely both, occurs in about 40 per cent. of the cases. In the remainder the symptoms are attributed to periostitis, the result of strain. Dr. Momburg has found that treatment by Bier's congestion method and hot air gives the best and speediest results. One good result of the attention which German military surgeons have bestowed upon this subject is a renewal of interest in the mechanical problems connected with human gait in general and keen inquiry in particular into the dynamics of the foot, when bearing or not bearing weight. The old teaching, as Dr. Momburg calls it, was that the weight of the body was borne on a tripod, consisting of the heel and the heads of the first and fifth metatarsal bones, and that besides the tarso-metatarsal vault, so-called, there was an anterior transverse arch, formed of the heads of the metatarsal bones. In 1882 Beely of Berlin first seriously combated this view, and showed that in the loaded foot at least, so far from the lines of the heads of the metatarsal bones being arched upwards, it was convex downwards, so that the middle bones, the second and third, pressed on the ground much more than the rest. Since that time the controversy has raged quite warmly, but with ever-increasing weight of argument in favour of Beely's views and against the old teaching. Dr. Momburg is one of those who maintain stoutly that the great toe is but slightly concerned in marching or standing, and that the awkward fact of the massive structure of its bones is to be explained by the important part taken by that digit in the actions of running and leaping. Besides the experiments of others, Dr. Momburg describes some that he himself carried out to elucidate this question they seem to show that in the passive state of the loaded foot the second and third metatarsals, owing to their rigid connexion with the tarsus, bear the greater part of the strain; but it may, we think, fairly be doubted whether, when the plantar-flexor muscles contract, these bones are not relieved by the first and even the fourth and fifth. The Parade March, that strange step, used in the German army on ceremonial occasions, has often been accused as the cause of foot-swelling. Dr. Momburg, while admitting that when performed by tired troops after a long march it may be so, holds that it is of such value as a means of developing the muscles that it ought not to be given up. He illustrates his theories, which should prove of great interest to all military surgeons, as well as to physiologists, by a number of diagrams, radiographs, etc.

[1] Bibliothek von Coler, Band XXV. *Der Gang des Menschen und die Fussgeschwulst.* Von Dr. Momburg. Stabsarzt beim Garde-Fussartillerie Regiment. Mit 22 Tafeln und 8 Textfiguren. Berlin: August Hirschwald. 1908. (Demy 8vo, pp. 87. Seq XXII. M. 5.)

SLEEPING SICKNESS.

THE Liverpool School of Tropical Medicine has recently received some interesting reports from the expedition which about a year ago was sent to Rhodesia to study on behalf of the Government and the Chartered Company the extent to which Rhodesia is threatened by sleeping sickness, and the means by which it may be lessened. The report deals with the search for the *Glossina palpalis*, the chief sources of danger, and the measures which can be taken to prevent infected natives entering Rhodesia. *Glossina palpalis* seems to be present right along the Congo Frontier of Rhodesia, together with apparently many other species of biting fly. To the latter fact importance is to be attached, because the writers indicate certain reasons for believing that a country freed from the *Glossina palpalis* will not necessarily be free from sleeping sickness. Thus they recall that in the Uganda the disease has been experimentally transmitted by the *Glossina fusca*; that in the Congo the *Stegomyia fasciata* has been accused; and

that the writers themselves have found that cattle trypanosomes can be transmitted by *Stomoxys* and *Tabanida*. It may be possible to rid a country of *Glossina palpalis*, but obviously if sleeping sickness can only be abolished by attacking the insects which can transmit trypanosomes—and they may prove to be practically all biting flies—the problem to be faced is even more difficult than hitherto has been realized. The expedition seems to have discovered only three actual cases of sleeping sickness. All were men who had recently returned from working in the Katanga Mines in the Congo territory, and this fact is regarded as of evil omen, for thousands of men have been recruited for these mines in different parts of Rhodesia. The expedition in its search for cases having examined large numbers of natives in the neighbourhood of the Congo frontier, estimates that roughly 30 or 40 per cent. of the population have palpable glands which come under one group of Dutton and Todd's classification. When the state of these glands was tested microscopically the results were uniformly negative, so it is concluded that in North-Eastern Rhodesia, at any rate, the statement that "every negro with enlarged glands must be considered, until the contrary is shown, to be a case of "trypanosomiasis" cannot be accepted. This is a further complication of the problem, since, if reliance cannot be placed on the rough-and-ready test of the existence or absence of certain enlarged glands, obviously only trained medical men can properly be employed in the search for cases of sleeping sickness. The chief danger for Rhodesia, it is considered, lies in the chance of the sleeping sickness spreading in the Congo State to the north end of Lake Nyassa, but it is clear that the expedition regards the whole frontier line between the Congo State and Rhodesia as a danger zone, for it has advised the Chartered Company to divide it into three sections, and to place in charge of each a native commissioner and a trained medical officer. The former will, among other things, arrange for the patrolling of the line in his charge and endeavour to secure that no native crosses it until his freedom from sickness has been ascertained by the medical officer. He will endeavour, too, to enlist the sympathies of native chiefs and headmen in a general crusade. The medical officer will establish a small hospital for the treatment of such cases as he may discover, and in searching for them will visit all villages within his area. These sections of frontier vary in length from 180 to 250 miles, and, when it is remembered that the natives in this quarter are savages who have never before been controlled in any way and can scarcely be made to understand the reasons of the measures to which it is proposed to submit them, the chances of success can in a measure be gauged. None, however, but those who have endeavoured to do scientific work at immense distances from civilization and in the neighbourhood of the equator can readily appreciate the magnitude of the problem which these young commissioners of the Liverpool School of Tropical Medicine are endeavouring to solve and the risks and discomforts they are facing.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

THE present section (a double one) of the *Oxford English Dictionary*,[1] running from *Monopoly* to *Movement*, contains many medical terms. The illustrative quotations are very happily chosen, and the most ordinary terms become attractive in the able hands of the editor, Dr. Henry Bradley. The word *mother* does not at first suggest any special medical relations, but it once had a meaning in anatomy now usurped by the Latin equivalent *mater*; *hard mother* was used to indicate the *dura mater*, and *mild* or *soft mother* the *pia mater*. An illustrative quotation of 1398 speaks of "the seconde "webbe and skynne of the brayne hyghte *pia mater*, "the meke moder"; and Crooke, in his *Body of Man* (1615), speaks of the "*pia mater*, the deere or neere "mother." Then there is the obsolete meaning of *mother*, the *womb*, as is made clear by Raynold (*Byrth of Mankynd*, 1545): "These thre woordes, the matrix, the "mother, and the wombe, do sygnyfie but one thyng." "Rising of the mother" was the old synonym of *hysteria*, and Bacon (1626) is called upon for the illustrative quotation: "They doe use for the Acci- "dent of the Mother, to burn Feathers [etc.]: and "by those Ill Smels the Rising of the Mother "is put down." "Fits of the Mother" was an old equivalent of hysterical attacks. More modern medical meanings of mother are found in such expressions as *mother-abscess* ("generally the pulmonary "abscess communicates with the mother-abscess in "the liver"), *mother-nucleus*, *mother-vesicle*, etc. *Mother-wort* is a name for various plants formerly supposed to be valuable in diseases of the womb—for example, the mugwort (*Artemisia vulgaris*). A most interesting term is *mordisheen*, meaning the cholera, and adopted apparently from the Portuguese *mordexim* and the Mahratti *modachi*, the cholera. A quotation of 1598 reads: "There reigneth a sicknesse called Mordexijn, "which . . . weakeneth a man, and maketh him cast "out all that he hath in his bodie." Curiously enough, this word appears as *mord-de-chien* and *mort-de-chien*; but this, the *Dictionary* tells us, is an "etymologizing "perversion" of the original Mahratti term, which has no such significance. It must have seemed to the Anglo-Indian in the midst of a cholera epidemic that there was a sort of grim humour and a special appropriateness in this synonymous expression (dog's death) for the dreaded scourge of the East. Still more curiously, there is an obsolete Scottish word, *mortechien*, upon which Dr. Bradley has the following interesting note: "Identical "with the alleged F. *mort d'eschine* (*lit.*, death of the spine), "for which Fitzherbert, 1534 (*Husb*, § 119), quotes the "proverb, 'Mort de langue et de eschine sont maladyes "'saunse médecine.' It is probable that *mort* here is a "mistake for *morve*, running of the nose, glanders (for "which, or its dialectical variant *mourve*, Cotgrave has "erroneously *mourrüe*). The notion that the morbid "matter of glanders came from the spine was generally "held. The 16th c. English name for the disease "*Mourning of the chine*, is probably a corruption of the "original form of the Fr. term. Fountainhall's *mord de* "*chien* is pseudo-etymological (as if 'bite of dog')." So we see, by these strange metamorphoses, that *mort de chien* in India has come to mean *cholera*, and that in Scotland it once meant *glanders!* This part of the *Dictionary* is rich in teratological words, for it contains not only *monster*, *monstrosity*, but the associated terms *monstricide*, *monstriferous*, *monstrous*, and *monstruous*. *Monster* is derived from *monere*, to warn, in reference to the old idea, as old as Chaldean times, that monstrous births were to be regarded as warnings of impending disasters; *monstrosity* comes from the late Latin *monstrositas*, and is defined by Darwin in his *Origin of Species* (1859): "By a monstrosity, I presume is meant some "considerable deviation of structure, generally injurious, "or not useful to the species." It is so rare to find that the *Oxford Dictionary* has let any terms, new or old, escape its wide-flung net, that it is worth while noting the absence of *monstripara* and *monstriparity*, the latter signifying the tendency to give birth to monsters and the former meaning a woman who has borne one or more deformed fetuses. The word *moon-calf* has an

[1] *A New English Dictionary on Historical Principles.* Edited by Dr. James A. H. Murray. Monopoly—Movement (vol. vi). By Henry Bradley, Hon. M.A Oxon. Oxford: At the Clarendon Press. London, Edinburgh, Glasgow, New York, and Toronto: Henry Frowde. April 1st, 1908. (Double section, price 5s.: $1.25.)

interesting history which is well summarized here; but, as its etymology and meanings were somewhat fully discussed in the British Medical Journal some years ago, no further reference need be made to it beyond the suggestion, which is not brought out by the *Dictionary*, that *calf* may mean here not the young of the cow, but a firm fleshy lump, as in the calf of the leg. Passing to the word *moon*, we find Dr. Bradley at his best in the definition and illustration of such terms as *moon-blasting*, *moon-blind*, *moon-eyed*, *moonshade*, *moonstruck*, and so on. *Moon-sick* is an obsolete word meaning lunatic, and carries its significance embedded in its form (*luna*, the moon). Probably few physicians now living have ever heard what a *medical*, *medicinal*, or *decretory month* may be: it is "the "space of 26 days 22 hours, formerly supposed "by physicians to represent the interval between "the crises of disease." Another interesting group of words, many of which have special medical meanings, is that derived from *mors*, death; for example, *mortal*, *mort bell*, *mortality*, *mortification*, and *mortify*; yet another set of words is associated with *morbus*, disease, and is represented by *morbid*, *morbidity*, *morbiferous*, *morbific*, *morbility*, *morbilli*, and *morbosity*. That *motion* has a special medical meaning has not escaped the notice of the lexicographer, and he gives the following illustrative quotations. One is from Shakespeare (*Merry Wives of Windsor*): "Shall I lose my "Doctor? No, hee gives me the Potions and the "Motions." Another is from the *Bath Guide* of 1766: "We must swallow a Potion For driving out Wind after "every Motion." Yet another brings to mind the days when aperient pills were taken with astonishing frequency: "Those who are dissatisfied with less than "two or three motions in the day." Finally, the *Dictionary* is not unaware of recent developments in transit, for under the rubric *motor* this quotation occurs: "Many doctors who use motors have joined the "Automobile Club." The following sentence from the *Daily Chronicle* of 1895 will serve to show how far we have travelled in twelve years: "A name has not yet been "found for horseless carriages. . . . The latest sugges- "tion we have had is 'motor car.' Mr. F. R. Sims is "responsible for it." We have no space to do more than name many other medical terms, such as *morphia*, *monorchism*, *mope eyed* (myopic), *morfrey* and *mophrodite* (corruptions of hermaphrodite), *morcellation*, *morfound* (to take a chill), *mormal* (a sore on the leg), *morphew*, *morphoea*, *morrhua*, *mortar*, and *morula*; the reader is referred to the *Dictionary* itself.

THE PATHOLOGY OF CONSTIPATION.

If we are to judge by the enormous fortunes acquired by the manufacturers of purgative pills, constipation of the bowels must be one of the most common ailments from which the human race suffers in this country, and yet little is actually known regarding the conditions under which it occurs, and especially of the mechanism of the bowel movements through whose means the residue of food is removed from the body. The entire subject is one which has been, perhaps, naturally shirked on account of its disagreeable nature, and also because it is too familiar to be interesting, and the accepted explanation of muscular weakness seemed to be adequate. But during the last twenty years so much more attention has been paid to diseases of the digestive system, and so strenuous an effort has been made to emerge from the ruts of routine which had been so long followed by the medical profession, that workers have been found to overcome their repugnance to the subject, several monographs have been published on the faeces, and simple methods for their clinical examination have been devised. By means of the *x* rays it is now possible to follow the passage of food from the mouth to the anus, and the researches of Cannon on the movements of the intestine in cats have added to our knowledge of this department of physiology. In a recent paper published in the *Proceedings of the Royal Society of Medicine* (February, 1908), Dr. Arthur F. Hertz has applied the same method to the study of constipation in the human subject, continuing the work already published in his lectures delivered at Guy's Hospital (see Journal, January 18th and 25th, pp. 130 and 191). Nothing could be more simple than the mode of examination. He gives at 8 a.m. a breakfast of bread and milk containing 1½ to 2 oz. of carbonate of bismuth, and watches the passage of this meal by means of the fluorescent screen. Under normal conditions the food arrives at the caecum in four and a half hours, two hours more are required for it to reach the hepatic flexure, and another two and a half hours to get to the splenic flexure; while on the following morning, if the bowels have not acted, the remains of the meal may be seen in the iliac and pelvic colon. Dr. Hertz has applied this method to the study of a case of severe constipation of seven years' standing in a girl of 17, whose disease was of that common type often met with in young women, which is brought about by neglecting the natural call. When she was examined it was found that the meal passed quite as rapidly as normal to the caecum and through the colon to the level of the left iliac crest—in fact, its passage was more rapid than is generally observed in normal individuals—but after the meal had reached the rectum no further progress was made; there was no inclination to defaecate, and attempts to do so were quite ineffectual. The administration of an enema was followed by a large evacuation, and subsequent examination by the screen showed that all traces of the bismuth had been removed. No doubt these observations will have to be confirmed, but they suggest that constipation of this type is due solely to over-distension and consequent atony of the rectum, and that the use of purgatives can only increase the evil by leading to further accumulation of the contents of the bowel in the rectal pouch; so that the only available treatment is to empty the rectum by enemas which operate more or less mechanically by softening the faeces and stimulating the rectal wall. In all 8 cases were studied. In a woman aged 54, whose constipation was of thirty-three years' standing, the condition was much the same as that just described, except that there was no abnormal rapidity of the passage of the contents to the rectum. In a case of tabes with constipation there was impaired motility throughout the colon and so, too, in a case of lead-poisoning. In a case of anaemia with chlorosis the transverse and descending colon and the sigmoid flexure were sluggish, but were readily stimulated by the administration of ordinary aperients. Marked enteroptosis does not seem to have any effect in delaying the passage of the bowel contents, and where constipation occurs in these cases it is due rather to debility of the abdominal muscles than to any other cause. While it may be admitted that so far these researches do not add a great deal to the knowledge that we have obtained empirically, they show the comparative ease with which cases may be brought directly under observation and indicate the true method to pursue in all cases of constipation of long standing. Further, so far as they go they are opposed to the somewhat heroic surgical proposals which would treat the colon as a superfluous and troublesome organ to be removed with as little respect as we are accustomed to accord to the appendix, for in the most obstinate cases of confirmed constipation the colon seems capable of performing its work remarkably

well, and the failure to defaecate is the fault of the rectum, which surgery, however heroic, has not so far proposed to eliminate.

"ANTIVIVISECTIONIST MEETINGS."

WE have received another letter from Miss Lind-af-Hageby, which, however, adds nothing but a little more scolding to her denial of having imputed, or having quoted the late Miss Frances Power Cobbe as imputing, a "love of cruelty" to medical students. That denial we accepted, and we took the liberty at the same time of congratulating her on it as a sign of grace. How gratifying the lady's conversion is to us may be gathered from the fact that only four years ago in the *Shambles of Science*, in a chapter headed "The School of Mercilessness," she and Miss Schartau wrote as follows (p. 183): "What "is the influence on the young students who attend "vivisectional demonstrations? We do not hesitate "to say that, as a rule, it is distinctly brutalizing, "that the majority of the students are tainted by "the callousness towards the sufferings of the animals "which is so clearly demonstrated by their seniors. "Very often vivisection is received like a kind of "entertainment; there is laughter and merriment, "and nearly always there is evidence that most of the "students find the proceedings extremely 'exciting.'" There seemed, therefore, to be nothing improbable in the statement that the writer or, to speak by the card, the joint author of these words had described, in her own character or vicariously, the medical student as a "brute," especially as in the mouth of a lady holding Miss Lind-af-Hageby's views such an expression might be intended as complimentary. By way of concluding a fruitless controversy we may be allowed to say that we are glad to have it definitely on record that she has not charged the medical student with a "love of cruelty."

WE regret to announce the death of Dr. F. Terrier, Professor of Clinical Surgery in the Paris Faculty of Medicine, and Surgeon to the Pitié Hospital. Professor Terrier, who was a member of the Paris Academy of Medicine, and editor of the *Revue de Chirurgie*, was one of the pioneers of aseptic surgery in France. He contributed largely to surgical literature, especially in relation to diseases of the liver and bile ducts.

THE announcement of the sudden death of Dr. von Schrötter, Professor of Medicine in the University of Vienna, will cause much regret to all who knew his eminence as a teacher and the important public work he did in organizing the crusade against tuberculosis in Austria. Professor von Schrötter delivered an inaugural address dealing with the work of Türck and Czermak to the International Laryngo-Rhinological Congress at Vienna on Tuesday; he died suddenly that night. He had previously won world-wide fame as a laryngologist, and was one of the specialists summoned into consultation on the case of the late Emperor Frederick. Professor von Schrötter, who bore the title of Ritter von Kristelli, was in his 71st year.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Vital Statistics of the Cork Post Office.—Last week no questions were answered when the House of Commons met on Tuesday, but some answers were circulated with the votes the next day. One of these replied to an inquiry addressed by Mr. Roche to the Postmaster-General. Mr. Sydney Buxton said that 7 deaths occurred among the indoor staff at the Cork Post Office during the quinquennial period ending December, 1902, and 5 during the five years ending December, 1907. The average annual sick-rate during the first period was 5.2 days for men and 6.9 days for women, and during the second period 8.5 days for men and 13.1 for women. The former rates were below the average for the Irish Post Office staff generally, while the latter rates were slightly above the normal as regards men and normal as regards women. Last year the sick-rate at Cork stood lower than it did in any of the preceding four years, with the single exception of the rate for women in 1904. There was no reason to think that the conditions of working which prevailed at Cork were unduly trying. The medical officer stated that while some temporary cases of nervous debility among the female staff might have been due to the strain of work, he had no specific case recorded of illness attributable to that cause; and as regards the staff generally, he had stated spontaneously in his annual reports to the chief medical officer throughout the last ten years that the various duties did not appear to have had any detrimental effect on their health.

London Post Office Medical Officers and their Leave.—Mr. Field asked the Postmaster-General to state the annual sick leave and the annual leave respectively of each of the Post Office medical officers in London, male and female, during the last five years. Mr. Sydney Buxton issued in reply the following table:

	Sick Absence.					Annual Leave Allowed
	1903.	1904.	1905.	1906.	1907.	
Chief medical officer...	Nil	Nil	Nil	3 days	Nil	5 to 6 weeks
Second medical officer	5 days	Nil	Nil	Nil	Nil	5 weeks
Female medical officer	Nil	Nil	Nil	Nil	Nil	5 weeks
Assistant female medical officer	Nil	Nil	Nil	Nil	Nil	5 weeks
First assistant to medical officer	Nil	3 days	Nil	Nil	Nil	4 to 5 weeks
Assistant to medical officer	Nil	1 day	104 days	Nil	Nil	4 to 5 weeks

The third assistant medical officer and the resident medical officer had been omitted as they had not yet been employed a full year.

The London Post Office Medical Staff.—Mr. Field asked the Postmaster-General whether he would state the name, age, length of service, medical qualification, salary from imperial funds, and emoluments from other sources, of each of the Post Office medical officers in London, male and female. Mr. Sydney Buxton answered that there were over 90 medical officers in the London postal district in addition to the head quarters staff. The preparation of the Return asked for by the honourable member would involve considerable labour, without, as it appeared to him, leading to any very useful result.

The Inspection of Imported Meat.—Mr. Field asked the President of the Local Government Board whether he was aware that the Glasgow veterinary surgeon was of opinion that all meat imported from over-seas ought to be presented for examination in such form as would enable inspectors here to revise the previous work of inspection and thus form a fair idea as to the wholesomeness for human food, and that all boneless meat or scrap should be entirely excluded; and whether the Government would consider the advisability of appointing and paying such a staff of inspectors. Mr. John Burns replied that his attention had been called to this report. He proposed that the regulations under the Public Health (Regulations as to Food) Act which he had in preparation should deal with imported boneless scrap meat. Other matters relating to the wholesomeness of imported meat were receiving his attention, but he did not think that inspection of the kind referred to in the last part of the question would be practicable at the present time. The regulations were in an advanced state of preparation, and he hoped they would shortly be issued.

Ireland.

[From our Special Correspondents.]

The Proposed New Universities in Ireland.

Dublin.

There has not been so far much discussion in Dublin of the Bill dealing with university education in Ireland introduced by Mr. Birrell. The general public seem to be rather tired of the subject, and are glad that there is a prospect of a termination of the disputes that have now been raging for so many years. Trinity College is silent in accordance with what some people believe is an arrangement that, if it is not interfered with, it will not object to any scheme. Yet many who are keenly interested in education do not mince matters in conversation. They maintain that, having regard to the future well-being of Ireland through the bringing together of the youth of the country, the Bill cannot bear comparison with the proposals made by Mr. Bryce. Among the younger members of Trinity College and one or two of the seniors this view is held, and they look forward with some anxiety to a competition which they believe will damage Trinity in the number of its students and the income derived from teaching. It looks, however, as though any regrets as to last year's attitude of opposition are too late, for the Bill is likely to go through and to shape the future of the country for good or evil, at least until some other Chief Secretary finds it necessary to modify the arrangements.

There appears to be no doubt that Dr. Denis Coffey will be the president of the new college in Dublin. The salary will probably be £1,400 a year, with, in addition, a suitable residence. There are rumours that the position was offered to other members of the profession, but declined on the ground of inadequate pay, and, having regard to the social duties which will attach to such an office, the refusal seems reasonable.

Nothing has been declared as to the probable injury to the school of the Royal College of Surgeons. Mr. Birrell has heard a deputation headed by Sir Henry Swanzy, the President, but has made no promise, and the college must seek to have some provision made in committee. That the College of Surgeons and Trinity College medical schools will suffer severely is generally accepted as certain. The former has no endowments, but it has done its work admirably, as is admitted. It has maintained itself during 125 years. In commercial competition the old-established firm is often overthrown by the new comer. That is the ordinary experience in legitimate trade. But it is entirely different when the State aids and becomes part and parcel of the new opposition. That is not legitimate competition, and it becomes a question whether the money of the taxpayers should be put to such a purpose as this. It certainly was never so intended, and if it should be carried into effect its unfair and damaging effects should be neutralized by a proportionate endowment of the school that is assailed.

The *Irish Times* announces on authority that the following will be members of the senate of the new Dublin University:—The Lord Chief Baron, General Sir W. F. Butler, Dr. D. J. Coffey, M.A.; Mr. A. Conway, M.A.; Dr. M. F. Cox, Rev. W. Delany, S.J.; Mr. Stephen Gwynn, M.P.; Sir Stanley Harrington, Cork; Mr. W. F. T. Butler, M.A.; Dr. Douglas Hyde, Miss Mary T. Hayden, Mr. John MacNeill, Surgeon J. S. M'Ardle, Mr. T. Maguire, Mr. Alexander Anderson, President Queen's College, Galway; Dr. Windle, F.R.S., President Queen's College, Cork; Mr. W. Magennis, M.A.; Right Rev. Monsignor Mannix, D.D., Maynooth College; Mr. J. A. M'Lelland, M.A.; Rev. A. Murphy, Sir C. Nixon, M.D.; Mr. T. W. Lyster, M.A.; Dr. J. P. Pye, Mr. William O'Brien, M.P.; Dr. A. Senior, Mr. L. A. Waldron, M.P.; Dr. Joseph O'Carroll, Mr. H. C. M'Weeney, M.A.; Dr. A. Dempsey, Dr. George Sigerson, Mr. P. Semple, M.A.

Belfast.

The following is a list of persons who, it is rumoured, will have seats on the Senate of the new Belfast University:

Chancellor.—The Earl of Shaftesbury.

Pro-Chancellors.—Sir Donald Currie, Sir Robert Hart.

Vice-Chancellor.—The President of the Queen's College.

Crown Nominees.—Right Hon. Robert Young, Mr. John Cooke, Dr. P. O'Connell.

Staff Representatives.—Professor Sir William Whitla, Professor M. F. Fitzgerald, Professor E. A. Letts, Professor T. Sinclair, Professor J. Park, and Professor S. Dill.

Graduates' Representatives.—Mr. Justice Dodd, Judge Shaw, Dr. J. Walton Browne (R.U.I. Senator), Professor M. Leitch (R.U.I. Senator), Professor Leebody (R.U.I. Senator), and Mr. R. T. Martin.

Registrar.—Professor J. Symington.

Representatives of Benefactors.—Sir Otto Jaffe, Mr. H. Musgrave, D.L.; Mr. F. Purser, F.T.C.D.; Dr. P. Redfern, Mr. R. Dodds, M.A.

Local Representatives.—The Lord Mayor (Sir Robert Anderson), President Chamber of Commerce (Sir Chas. Brett), Chairman Royal Victoria Hospital (Sir William Crawford).

Secondary School Representatives.—Mr. R. M. Jones, M.A.; Principal, Royal Academical Institution.

Meath Hospital, Dublin.

At the annual meeting of the Meath Hospital on April 13th, Mr. John Mulhall in the chair, the report showed that £6,908 1s. 4d. was the total income, being a deficiency of £1,229 8s. 4d. The total balance against the hospital was £8,610 19s. The committee fears that unless additional pecuniary help is forthcoming it must curtail expenses by closing a number of beds. The new home for nurses had been opened during the year at a cost of £5,900 15s. 7d. The number of patients admitted during the year was 1,521, and the mortality 6·43. The attendances at the out-patient department numbered 25,671. Mr. George Perry, Sir Lambert Ormsby, Sir John W. Moore, Mr. E. Andrews, Mr. Geo. Jacob, Colonel Dopping, the Chairman, Mr. C. Lawler, and Mr. W. Robinson addressed the meeting.

Castlerea Again.

We almost feel inclined to apologize to our readers for referring to this union again. Hitherto the struggle has been between the guardians and the medical staff who desire to obtain a living wage; the Local Government Board, which had maintained a masterly neutrality, has now taken a hand in the game, but, so far as we can judge, without any prospect of the condition of the doctors being bettered. It will be remembered that there are four dispensary districts in this large union, divided as follows: 45,700 acres, 28,500 acres, 51,000 acres, and 38,000 acres. The highest salary is £110, and the lowest £90. It is obvious that the districts are most unevenly divided, and the Local Government Board took advantage of a recent vacancy to send an inspector to confer with the guardians as to a rearrangement of the districts. About twenty members of the Board met him, and expressed each one his views as to what arrangement would best suit his own locality. Some were for having five dispensary doctors in the union, and others for only four, as at present; but on one point they were unanimous, that there should be no increase of salaries; indeed, a good many proposed that they should be reduced. The only concession they would agree to was that the doctors should be allowed to select their districts by seniority.

The majority of the Poor-law medical officers demand a State service, so that they may be freed from the intolerable tyranny of these men, and we hope that they will stick together and refuse to accept any other solution, for if they do not get it now they will, we fear, be worse off under a new Poor Law than they are at present.

Belfast Ophthalmic Hospital.

At the annual meeting of this institution, held on April 13th, with the Right Rev. Dr. Crozier in the chair, Dr. Cecil Shaw submitted the medical report, which showed that the attendances of patients in all departments exceeded all previous years. There had been 1,372 new eye and 703 new ear and throat patients; 135 operations had been performed, in addition to numerous minor ones in the out-patient department. The medical staff recommended alterations and repairs at a cost of about £500, which are urgently needed to render the place up to date, especially as regards operations. Dr. Walton Browne, senior surgeon, in speaking to the medical report, strongly supported the necessity of making these improvements.

Scotland.

[From our Special Correspondents.]

Post-graduate Classes: Glasgow Royal Infirmary.

During the last two years carefully arranged post-graduate courses have been conducted at the Glasgow Royal Infirmary, and have attracted practitioners not only from the city and neighbourhood of Glasgow, but also from considerable distances. This year arrangements have been made for two separate courses: the first, mostly devoted to special subjects, will begin on Friday, May 1st, and continue during the month; the syllabus of the second, which will commence at the beginning of September, has still to be arranged. The following subjects will be included in the first course: *Clinical Medicine*, by Dr. G. S. Middleton and Dr. W. K. Hunter. *Clinical Surgery*, by Mr. Henry Rutherfurd and Mr. A. N. M'Gregor. *Surgical Diseases of the Urinary Organs*, by Mr. David Newman. *Clinical Examination of the Urine*, by Dr. John Henderson. *Gynaecology*, by Dr. G. B. Marshall and Dr. W. D. Maclarlane. *Diseases of the Ear*, by Dr. J. K. Love. *Diseases of the Eye*, by Dr. John Rowan. *Diseases of the Skin*, by Dr. A. Morton. *Diseases of the Throat and Nose*, by Dr. R. Fullerton. *Operative Surgery*, by Mr. P. Paterson. *Bacteriology*, by Dr. David M'Crorie. Details of the course have appeared in our advertising columns, and a syllabus may be had by applying to the Superintendent of the Infirmary, who will be pleased to supply any further information. As many of the classes are limited in number, practitioners desirous of joining any of the classes are recommended to apply for enrolment as early as possible.

Nursing Home, Glasgow.

An addition to the McAlpin Nursing Home was opened last week by Lady Inverclyde. The new building, situated in Hill Street and Thistle Street, accommodates 24 patients in single rooms and 6 in double-bedded rooms, while there are two wards fitted each for 6 patients. The old building in Renfrew Street is to be converted into a home for the nurses. The new building is specially constructed for the purposes of a nursing home, and embodies the best features of recent hospital architecture. In presiding at the opening function, Lord Inverclyde recalled the history of the institution from its inception by Miss McAlpin in 1874 in a house in St. George's Road. It was the first establishment of its kind in Scotland. The primary object was to supply trained nurses to the public, which for a long time was more important than the nursing home itself. The institution was not a money-making concern. To a great extent it was a charitable institution. Almost one-third of the patients were treated at a fee below cost or without any profit to the institution. Indeed, the articles of the constitution stated quite definitely that no portion of the income shall be paid directly or indirectly as dividend. In the future, as in the past, any surplus would, after paying off debt, be devoted to improving the condition of the patients and extending the ward accommodation.

Hospital Ship at Aberdeen.

Considerable interest was manifested in connexion with the recent visit of the Royal Auxiliary Fleet steamer *Maine* to Aberdeen on her way to join the Channel Fleet at Invergordon. Through the courtesy of Fleet Surgeon Dalton the ship was thrown open to the medical and nursing communities, and many medical men, students and nurses took advantage of the opportunity afforded to see the arrangement and equipment of a modern hospital ship. Fleet Surgeon Dalton and his assistants spared no pains both in hospitably entertaining the many visitors to the ship and in showing them all the points of interest which the vessel exhibited, and for these courtesies deserve most grateful thanks.

Royal Territorial Medical Corps: Highland Division.

Recruiting and attesting of former members of the Royal Army Medical Corps (Volunteers), who are transferring under the new scheme, goes on in Aberdeen slowly but steadily. Up to the present 200 men have enrolled, and the prospects for the future appear quite favourable. All the former officers have transferred, and all are enthusiastic for the success of the new scheme. At present the corps is handicapped by the fact that it has no suitable head quarters, but as this is one of the matters deemed "urgent" by the County Association, it is hoped that on an early date it will be possible to report the acquisition of a suitable home for the Corps which is destined to play an important part in the equipment and personnel of the Highland Division.

Water Supply of Aberdeen.

For a number of years the condition of the water supply of Aberdeen has been the subject of much discussion and investigation, and various schemes have been proposed for the purpose of rendering the water supply of the city of a purer and more wholesome character. At present the water is taken from the river Dee, but at a point in its course which renders it in certain conditions of weather liable to risk of pollution from various villages higher up stream. A section of the town council favours the plan to obtain better purification of the present supply by additional filter beds and better supervision of possible sources of contamination. Another section, which has no small measure of support—and perhaps, it may be said, a gradually increasing amount of support—holds that it is impossible to purify the present supply sufficiently and still get enough water to meet the growing needs of the city. They advocate an entirely new scheme, namely, to get the city's water from the Avon, which it is said would give an ample supply of great purity and absolutely free from any possible source of pollution. The cost of this scheme, which is said to amount to about a million sterling, has caused the matter to remain in the discussion stage. Meanwhile the Water Committee had instructed Professors Hamilton and Hay to make weekly bacteriological and chemical analyses of the water, and this has been done for a period of fourteen months since November, 1906. The results of these analyses were submitted to the Water Committee of the council at the close of each month, and now, at the end of their investigation, Professors Hamilton and Hay submit a report giving their opinion based on these results on the quality of the water. The analyses show, as was already well known, that the water contains a remarkably small proportion of saline matter, and is in that respect much above the usual standard of water supplies. The proportion of saline matter, however, so long as it is not in great excess, is usually no criterion of the potable quality of a water. The amounts of free ammonia and of albuminoid ammonia were usually within the recognized limits for a potable river water, but on some occasions the limit for albuminoid ammonia was exceeded; the same remark is true of the amount of "oxygen consumed" and of "oxidized nitrogen." There were thus indications that at times the organic matter in the water was greater than is desirable in a good water. As regards the bacteriological examination the results were more decisive, especially in reference to the *Bacillus coli*. The number of germs or germ colonies growing at 20° C. varied from 90 to 2,770 in 1 c.cm. of the water, but both these figures were exceptional—the usual range being from 200 to 700. The maximum limit for a good river water is usually stated as 500. The number of germs growing at body temperature varied from 2 to 58, but was seldom above 20. The maximum limit for a good river water is put at 50. Judged, therefore, by the standards given the water was usually within the recognized limits in respect of the so-called germ counts, although it occasionally considerably exceeded these limits, especially after heavy winter rains. While a really first-rate water will not give evidence of *Bacillus coli* in the centrifuged residue of 100 c.cm. of water, very few, if any, unfiltered river waters attain this high standard, and a river water is held to be satisfactory if 10 c.cm. fail to give the reactions for the bacillus. The Aberdeen water was almost always considerably under this standard. On many occasions the bacillus was readily detected in as little as 1 c.cm. of the water. Accordingly there can be no doubt that the river suffers from considerable excremental pollution, and from a much greater amount than could be accounted for by fish and birds. Much of this pollution is probably due to surface drainage from grazing lands, occupied by cattle and sheep, and from cultivated land

recently manured. But part of the pollution is almost certainly due to domestic sewage. The river for many miles above the intake of the town's supply runs through land used for agricultural purposes, and several villages and numerous isolated houses exist within the watershed. The Professors go on to describe the risks of contaminated water of this kind, stating that while *Bacillus coli* in itself is not specially dangerous, it may, in so far as it is of human origin, be at any time accompanied by highly dangerous organisms, such as those of typhoid fever or cholera. Experience elsewhere has repeatedly shown that a community may have continued for years to drink, with apparent impunity, a water subject to domestic contamination, and then with explosive suddenness a serious epidemic of typhoid fever or cholera has arisen from the entrance of the special organisms from the same source. They have examined the sources of pollution, and are satisfied that it is not practicable to guard effectually against dangerous pollution at all these points and at all times. From a consideration of all these circumstances and results they have no hesitation in expressing the opinion that the water supply of the city in its present condition is dangerous, and that steps should be taken either to filter the water or to obtain a supply from a source not open to domestic pollution. Filtration of the present supply is in any case advisable in order to remove the turbidity which is so frequently observed after wet weather.

England and Wales.

[From our Special Correspondents.]

WALES.

Diphtheria in Flintshire.

For some time past diphtheria has been prevalent in the Holywell rural district in Flintshire. The district is large and has a population of about 24,000 persons, so that there ought not to be any great difficulty in dealing with an outbreak of this disease upon modern lines and in accordance with present-day ideas. There appears, however, to be an initial difficulty in doing so, in the fact that the members of the sanitary authority try to make themselves and others believe that the cases which are reported to the medical officers of health are not really diphtheria, one member of the council at a recent meeting expressing the opinion that the "mistake was the half-crown fee for notification." At the same meeting several others argued that a distinction should be made between sore throat and diphtheria, one member, a lady, remarking oracularly, "diphtheritic sore throat has a high temperature whereas diphtheria has a low temperature." The medical officer of health, in reporting upon a particular outbreak—including one case at the school house—recommended that the schools should be closed until the structural alterations to the outhouses mentioned in his special report of January last be completed, as the present condition of affairs was dangerous to health. He added that if there had been the means of isolating the first cases the epidemic would have been stamped out at the beginning. At another meeting of the same council the medical officer of health reported that there was much sickness among the school children in one part of the district, which be attributed to large accumulations of filth at houses, due to imperfect scavenging. The conditions he had found were a discredit to the sanitary authority. It may be well to remind the district council that insanitary conditions and the ill-health resulting from them will not be remedied by making disparaging remarks of the medical practitioners in the locality; some good may be achieved if more attention is paid to the statutory duties cast upon the authority by the Legislature.

BIRMINGHAM.

Homes for Epileptics and Feeble Minded.

A colony for epileptics and feeble-minded persons has been established at King's Heath by the guardians of the parish of Birmingham and the Aston and King's Norton unions. The representatives of these three Boards acquired Monyhull Hall and other buildings, together with 185 acres of freehold land, and on this estate six houses, a laundry, a general kitchen block, and a cottage for the head attendant have been built. Monyhull Hall has been altered to provide for administrative quarters and adapted as a residence for the matron and female staff, and as an office, dispensary, and stores accommodation. The houses at the colony provide for 216 persons, who will be able to work on the land which forms part of the estate, in the laundry, and in carpenters', fitters', and other workshops. The accommodation will be divided as follows: Birmingham 110, Aston 50, and King's Norton 50; children under 16 years, and persons over 45 will be excluded. The new buildings comprise three homes for men and three for women, and each will hold thirty-six inmates. Four of the homes are single-storied buildings, the others have two stories. Though constructed of the plainest materials yet the outward appearance is pleasing. The large dormitories are commanded by rooms which give the attendants a perfect survey of the sleeping chambers. In the two-storied buildings arrangements have been made to afford similar means of effective supervision of the dining and sitting rooms. The purchase of the estate for the colony cost £20,600, and the homes and other buildings and workshops which have been erected have been estimated to cost about £30,000.

LEICESTER.

The Notification of Births Act.

At the last quarterly meeting of the Leicester Town Council the question of adopting the Notification of Births Act, 1907, came up for discussion. A minute of the Sanitary Committee recommended that the Act be not adopted, in view of an offer made by the local medical men voluntarily to notify cases in which they thought the services of a health visitor might be of use. This minute was opposed, and an amendment, referring it back, was moved and ultimately carried by a small majority after a lively discussion. The arguments centred round the questions of the non-payment of a fee and the breach of professional secrecy involved, and incidentally revealed some very interesting aspects of what may be called "the municipal mind." Thus, the alderman who moved the amendment stated that the duty imposed by the Act involved "practically no labour or risk," and proceeded to enunciate the incontrovertible but charmingly irrelevant dictum, that "If every one who was called upon to comply with certain regulations wanted a fee the public outlay would be much greater than it is!" Another member based his support of the Act on the ground that medical men were only in attendance in a very small percentage of cases, which we had believed to be one of the strongest arguments for so amending the Act as to exclude the profession. Yet another could not see "why there should be any secrecy at all!" and so on.

MANCHESTER AND SALFORD.

The Branch Council and Organization.

It is generally felt that in the formation of a Standing Committee on Divisional and Branch Organization and Finance the Lancashire and Cheshire Branch Council has taken a step in the right direction. The Branch, with its 30 Divisions and about 1,640 members, is one of the largest in the kingdom, being only second to the Metropolitan Counties Branch, and few will be found able to devote the time, energy, and ability displayed by the late honorary secretary, now the President, and the present honorary secretary to the work of organization. How great that work has been is only now being realized, as the new Standing Committee has got fairly to work. The first business of the Committee has been to analyse and scrutinize the annual reports sent in by the Divisions, and a tabular statement has been prepared from which it is possible at a glance to see the financial position, and to some extent the work done by each Division. The value of this as an incentive to all Divisions must be obvious. Without entering into details, one fact which has come out will be something of a sur-

prise; it is often stated that the attendance at meetings of Divisions throughout the country is only about 10 per cent. of the members, but it is found that it is actually over 17 per cent. taking one Division with another in the Lancashire and Cheshire Branch. At the suggestion of the Committee, the Honorary Secretary of the Branch has sent round to the Divisions a circular letter containing the Committee's hints and suggestions for drawing up the Divisional reports, and a statement of the manner in which grants will be made to the Divisions by the Branch Council. To stimulate interest in the work of the Branch it is suggested that representatives of Divisions on the Branch Council should regularly report to their Divisions any resolutions of importance or interest passed by the council, and that Divisions should regularly place on the agenda paper of their meetings the item "Report of Representative on Branch Council." Divisions are further reminded of the importance of adopting ethical rules, and are advised that if they wish to deal with any question connected with contract practice they should, before doing so, adopt the Bradford rules or some modification thereof suitable to the conditions of practice in their respective areas. The Committee is finding as time goes on a very large scope of legitimate activity in co-ordinating the Divisions.

WEST YORKSHIRE.

Bradford Medical Men and Tramways Accidents.

The Chairman, Vice-Chairman, and General Manager of the Bradford Tramways recently invited the honorary secretaries of the Bradford Division, B.M.A., to discuss informally with them the question of medical fees in cases of tramway accidents in Bradford. A meeting took place on April 13th, and the Chairman of the Tramways Committee suggested that an endeavour should be made to obtain more general uniformity in medical charges than had hitherto obtained. Some medical men would only charge 5s. when called out to a tramway accident, and others for the same class of case would charge a guinea. It was suggested that some arrangement such as has been made between the profession and the Watch Committee in regard to street accidents—namely, a 5s. fee during the day and 10s. at night—might be adopted. The Tramways Committee, although they did not hold themselves responsible for every accident occurring on the system, were yet quite willing to pay the necessary medical charges in all cases if some definite arrangement could be made with the profession. It was pointed out to the representatives of the committee that it was a very difficult matter to arrange specific fees on account of the great variety of the cases to which the doctors were called. Very often a medical man had to rush away from his house to an accident when his surgery was full of patients, and a small fee did not then adequately compensate him for the disturbance in his work. In the case of street accidents, it was pointed out that formerly no one was liable for the medical fee, and consequently it suited the profession very well to have an arrangement with the Watch Committee on the question. But in the case of tramway accidents, in the bulk of cases there was undoubtedly a legal liability which allowed the surgeon some latitude in his charges. The honorary secretaries, however, promised to bring the question before a general meeting of the Division for discussion, and see whether a *modus vivendi* would be possible. At the same time, they cordially thanked the Tramways Committee for communicating with the Division before taking any action on the question. Many disputes between the local profession and the governing bodies which had occurred during recent years might have been amicably settled at the very outset if similar action to that taken in this case had been arranged.

NEWCASTLE-ON-TYNE.

Newcastle and Northumberland Sanatorium.

The Newcastle-upon-Tyne and Northumberland Sanatorium, Barrasford, Northumberland, was opened in May, 1907, and the first report was issued recently. The Committee of the Newcastle-upon-Tyne and Northumberland Branch of the National Association for the Prevention of Consumption resolved in March, 1902, to provide a sanatorium for the district and selected a site of 60 acres of moorland and woodland at Barrasford 650 ft. above sea level. The sanatorium has accommodation for fifty patients with an administrative block capable of serving 100 patients if it should later on be decided to increase the beds to this number. During 1907 the patients numbered 49; of these 24 remained in residence on December 31st, and 25 had been discharged. It is worthy of note that of the patients admitted nearly 70 per cent. had both lungs involved and that 70 per cent. also were febrile cases. Thus, the cases included a large proportion in whom the disease was beyond the stage when treatment should be commenced if the most favourable results are to be expected. The sanatorium has been open too short a time for any record of results to be published, but in all but 4 cases the patients showed improvement during their stay in the institution; 4 patients have died since their return home. The committee is to be congratulated upon having brought its labours to a satisfactory conclusion, in that the sanatorium commences its active work practically free from debt. The maintenance is, however, a large expense, which is not entirely covered by the contributions of the patients.

Hong Kong.

[From Our Special Correspondent.]

Royal Sanitary Institute.

The Governor, accompanied by Lady Lugard, presided at the annual distribution of prizes of the Hong Kong Branch of the Royal Sanitary Institute held on February 6th. Dr. Atkinson, President of the Hong Kong Branch, reviewed the work accomplished by the branch since its formation five years ago. The first lecture in connexion with this movement was given at Queen's College on January 13th, 1903. Since then a regular winter course had been held; up to the end of January 209 lectures had been delivered, the attendants at which numbered 2,441, giving an average of 16.46 per lecture. In addition to the lectures many practical demonstrations had been given at the cattle dépôt and slaughter-houses, Kennedy Town, by Mr. Gibson, and at the disinfecting station by Drs. Clark and Pearse. Visits have been paid to waterworks and to new buildings in course of construction, and lectures given on engineering and medical subjects, and on food inspection. The practical sanitary science examination was for those who had no intention of becoming sanitary officers yet desired to obtain from the institute a certificate indicating their knowledge of sanitary science. The branch was now self-supporting. Generally speaking, the work of the institute had been well supported and the local branch had done good work, judging by the fact that thirty-six certificates had been gained since the starting of the movement. At the request of Dr. Atkinson, the Governor then presented the prizes. His Excellency, at the conclusion of the presentation, said the branch was instituted in 1903 on the suggestion of Mr. Carter, and it took shape owing to the energy and organizing ability of its president, Dr. Atkinson, and of various other members of the body of examiners. He thought that the value of an institution like that, affiliated to a great institution in England, was immense. The certificates could be obtained there, and were recognized throughout the British Empire. The Hong Kong Branch had led the way in adopting that great principle of affiliation with institutions in England which was of the greatest advantage to the Colonies. It was the principle upon which the Hong Kong College of Medicine intended to frame its future; and it was, as Dr. Atkinson said, the principle which he hoped would find still further expression in the Hong Kong University of the future. The Governor went on to say that it was the business of the gentlemen who had gained certificates there to endeavour to impress upon the Chinese community the value of sanitation, and to try to get them to work with them. They wished to make the Chinese gentlemen of intelligence and standing co-operate with them in the work of sanitation. They wished to get them to show the right way to put a stop, for instance, to

the abandoning of bodies in the public streets. He had had, a day or two before, a return made of the number of bodies abandoned within the thirteen preceding days. The number was thirty-eight, and out of that just about one-half had died of infectious diseases. That was a standing reproach to the colony, and he was convinced they would never succeed in putting a stop to it until they got the Chinese to show them how they could stop this thing without wounding their prejudices and violating the sanctity of domestic life.

New Zealand.

MENTAL HOSPITALS.

THE annual report for the year 1906 of Dr. Frank Hay, the Inspector-General of Mental Hospitals for New Zealand, shows that on January 1st, 1906, there were 3,112 registered insane in the colony, and that on December 31st, 1906, there were 3,206, giving an increase of 94 for the year, as compared with the increase of 74 for the preceding year. The proportion of insane to population in New Zealand has risen since 1878 from 1 in every 471 (or 212 per 100,000) to 1 in every 286 (or 349 per 100,000) in 1905, this latter proportion being maintained in 1906. In examining the statistics of New Zealand's insane with regard to the countries of their birth Dr. Hay has ascertained some interesting facts bearing upon the progressive increase in the colony's insanity. The proportions of the insane in the population, arranged according to the country of birth, are: Maoris, 1 in 1,403; New Zealanders, exclusive of Maoris, 1 in 613·6; Australians in New Zealand, 1 in 472·5; English, 1 in 140·8; Scottish, 1 in 123·7; Irish, 1 in 68·4. The remaining foreigners are too small in numbers to be of use for comparison. The striking fact of this table is that the proportion of English-born insane to English-born immigrants into New Zealand is twice as great as the English home proportion, that the Scottish immigrant insane ratio is more than twice as great as Scotland's home proportion, and that the Irish immigrant ratio is almost thrice as great as Ireland's home proportion. The obvious inference is that the home countries relieve themselves of many undesirables at the expense of the colony, for whereas among the New Zealand born there is only 1 insane person in 613.6, there is 1 insane person in 129.2 among persons born outside the colony. These figures require correction by consideration of age periods, for insanity is preponderatingly a disease of adult life, and the immigrant class is generally of 20 years of age and over on landing. After putting the emigrants and the born New Zealanders on an equal footing as regards age, by eliminating all New Zealanders under 20 years of age the New Zealand insanity-rate thus obtained is 1 in 246·9, whereas the not New Zealand-born is 1 in 118.9. Further, this latter proportion is made less than it ought to be by the inclusion of immigrants from Australia who have a low insanity-rate. Expressed in terms of money cost to the State on account of insanity, the above figures mean that every Englishman landed in New Zealand costs 6s. 1½d. per annum, every Scotsman 6s. 11¾d., and every Irishman 12s. 7½d., whereas each New Zealander costs the State about 1s. 4¾d. In these circumstances Dr. Hay appears to be justified in recommending a medical inquiry in the case of every immigrant into his or her heredity and past mental history.

Admissions.

During the year 678 were admitted to the mental hospitals, including 120 readmissions. The proportion of admissions to population, which was 83 per 100,000 in 1878, declined to 59 per 100,000 in 1888, rose to 70 per 100,000 in 1903, and after a slight fall in 1904, again rose to 71 per 100,000 in 1906. As evidence that the growth of the increase of insanity is largely a matter of distribution, it is to be noted that the two years 1878 and 1883, in which the admission-rates were highest, were the two years in which the ratios of insane to population were lowest. Of the total admissions, 401 were males and 277 females. The markedly smaller proportion of female admissions is only partly explained by the excess of males over females in the general population (males, 53.01 per cent.; females, 46 99 per cent.), and is partly due, Dr. Hay considers, to the fact that degraded women do not emigrate, and that drunken and destitute women are practically unknown in New Zealand. Of the total admissions, the attacks were first attacks within three months of admission in 311, and within twelve months of admission in 65, not-first attacks within twelve months of admission in 113, and, whether first attacks or not, of more than twelve months or of unknown duration on admission in 189. No tables are furnished of the forms of mental disorders in the admissions, but a long list is given of the causes of insanity in the admissions, from which we extract the following: Alcoholism in 87, or 12 8 per cent.; syphilis in 17; previous attacks in 56; adolescence, puberty, and the menopause in 57; senility in 68; and various forms of mental or emotional stress in 55. Hereditary influences or congenital defect were ascertained in 165, or less than 25 per cent.

Discharges, Deaths, etc.

During the year 283 were discharged as recovered, giving a recovery-rate on admissions of 42 94 per cent. There were also 50 discharged as relieved, and 20 as not improved. The number of deaths was 231, giving a death-rate on the average numbers resident of 7.48 per cent. The deaths were due in 86 cases to cerebro-spinal diseases, including 27 deaths from general paralysis; in 64 cases to chest diseases; in 9 cases to abdominal diseases; in 68 to general diseases, including 12 cases of pulmonary tuberculosis and 30 deaths from senile decay. There were also 4 deaths from accident or violence. The striking features of the above list are, first, the small proportion of deaths from general paralysis, and, secondly, the unusually small number of deaths from tuberculous disease, there being but 1 case of tuberculous disease beyond the 12 cases of phthisis mentioned, making a proportion of tuberculous to total deaths of 5 6 per cent., as compared with the 16 4 per cent. of England and Wales.

Finance.

The total cost per patient, less receipts for maintenance, sales of produce, etc., in 1906, was £25 5s. 8¾d. per head per annum, this being a decrease of £1 6s. 10½d. on the cost of the previous year.

SPECIAL CORRESPONDENCE.

PARIS.

Spinal Analgesia.—Deaths of Professors Terrier and Cornil.

THE discussion on the production of anaesthesia by the intraspinal injection of stovaine, the earlier part of which was analysed in the BRITISH MEDICAL JOURNAL on March 21st, was continued at the meeting of the Société de Chirurgie on April 8th. M. Legueu said that during the last two years he had again taken up this method, but had limited its application to low operations—on the perineum, the genital organs, and the lower limbs. He had only used it for one or two laparotomies, and in appendicitis generally used chloroform. The dose of stovaine varied between 5 and 7 centigrams, and was used in 33 operations on persons of both sexes at all ages. In 250 cases the anaesthesia was perfect; in 20 cases it was insufficient, and the patient suffered but allowed the operation to be continued; in 43 cases no anaesthesia was produced, or it was so insufficient that chloroform was necessary. Serious accidents *during* the anaesthesia were rare; 7 times there were profuse perspirations, syncope, and slow pulse. In 1 case these symptoms were so serious that M. Legueu feared sudden death, and one old man was carried back to bed without being operated on. *After* the anaesthesia he had seen insignificant accidents, such as vomiting, headaches (frequent), sometimes retention of urine or incontinence. In one patient the retention still persisted nine months after the operation. In two cases syncope occurred during the day after the operation, but the patients rapidly recovered. Four patients had an intense meningeal reaction for four to six days, with severe headache, contraction of the back of the neck, Kernig's sign, and intense polynucleosis; but all recovered. M. Legueu had the following fatal cases:

On August 10th, 1907, a man, aged 66, was operated on for double inguinal hernia; the operation passed without incident

but later the patient vomited, had intense headache, incontinence of urine and faeces, and paresis of the lower limbs. The vomiting continued almost incessantly for six weeks; there was incontinence, and the patient became cachectic, lost much flesh, and died on September 23rd.

A man, aged 30 years, had a radical cure performed on March 11th, 1907: he went out of hospital on April 4th, but returned three months later, with incontinence of urine, very marked prolapse of the rectum due to considerable relaxation of the sphincter, and partial paraplegia, walking with two sticks like an ataxic, and with diminished sensibility of the lower extremities.

M. Leguen thinks that though this method should not be completely rejected, its insecurity should cause its use to be restricted to certain exceptional cases, more especially to those in which other methods of procuring anaesthesia are contraindicated. M. Guinard said the surgeon is often not consulted for complications occurring a long time after the operation, and quoted the case of a wet nurse, aged 26 years, who was operated on for an abscess of the breast, and nine days after her return home was taken with paraplegia, and went into the Laribosière Hospital, where she was treated on the medical side with nux vomica, massage, and electricity, and got quite well after two months' treatment. M. Guinard thinks that with the disposition of modern patients to bring an action against the surgeon he is bound to take precautions, and this was one of the reasons which had caused him to abandon the intraspinal method. M. Demoulin thought that lumbar puncture, medical or surgical, should never be done without the consent of the patient or his family. In his wards at the St. Louis Hospital he had used it 50 times for radical cures, and operations on the lower limbs, the anus and the scrotum. In 46 cases the anaesthesia was perfect, in 1 case incomplete, and in 3 cases none was produced. In 13 of the cases, there was subsequent headache or vomiting, or retention of urine, which generally disappeared in a few days: but one patient had difficulty in urinating for five months and another for two months. M. J. L. Faure, who had used the method sufficiently often to see that it was a marvellous method of producing insensibility, was convinced that it produced insensibility as complete as general anaesthesia, and that the immediate and remote dangers were not more considerable. Nevertheless, this conviction did not prevent him from thinking that it ought to be restricted to certain cases, for it was very inferior to general anaesthesia in the majority of the conditions in which it was applied. The patient witnessed the operation, and it was evident that the surgeon lost a portion of his freedom of action owing to this consciousness of the patient. There was no advantage in performing an abdominal operation, for example, a hysterectomy, under spinal anaesthesia, and it was almost impossible to keep the patient for the necessary length of time in the inclined position, on which often the success of the operation depended. Moreover, the method did not bring about the necessary muscular relaxation. Even the vomiting after chloroform was now exceptional when the methods of Roth or of Ricard were employed. M. Pierre Delbet, who had employed stovaine in intraspinal injections in 79 cases, had found the result absolutely satisfactory in 41. In 8 the anaesthesia was bad, in 4 it was insufficient, and in 4 chloroform had to be resorted to. M. Delbet had 2 fatal cases—one an old man of 71 years with strangulated inguinal hernia, the other an old woman of 75 years with strangulated umbilical hernia; the condition of both was bad when operated on, but both died suddenly, poisoned by the stovaine. Twenty-five patients had secondary symptoms; headache in one-third of the cases, epileptiform attacks in one case, incontinence or retention of urine in 9 cases, incontinence of faeces in 5 cases; slight and transitory paresis of lower limbs was observed in 2 cases; in 1 case more marked paralysis of lower limbs, bladder, and rectum, from which the patient had never completely recovered; in 1 case generalized progressive paralysis which recovered; and in 1 paralysis of the lower limbs, which lasted till the patient's death, several months later, and was attended by a large sacral sore.

The medical profession has lost two of its most well-known figures by the recent deaths of Professor Terrier and Professor Cornil. Professor Terrier only retired from the chair of Clinical Surgery in October last, and had been surgeon to the hospitals since 1873. He was one of the first to adopt in France the Listerian methods, introduced by Dr. Lucas-Championnière. He later became the apostle of so-called aseptic surgery in France, and the surgical organization of the Paris hospitals was modelled on his wards at the Bichat hospital. With his pupils Hartmann, Auvray, and Gosset he published many important papers on abdominal surgery. Professor Cornil succeeded Charcot in 1882 in the chair of Morbid Anatomy, from which he only recently retired on reaching the age limit. In addition to his scientific work he was an active politician. His friend Gambetta placed him at the head of a department; he was a deputy, and later in the Senate, and was the reporter on the law for the protection of the public health which was passed in 1902.

CORRESPONDENCE.

RESEARCH DEFENCE SOCIETY.

SIR,—A society has been formed, with the name of the Research Defence Society, to make known the facts as to experiments on animals in this country; the immense importance to the welfare of mankind of such experiments; and the great saving of human life and health directly attributable to them.

The great advance that has been made during the last quarter of a century in our knowledge of the functions of the body, and of the causes of disease, would have been impossible without a combination of experiment and observation.

The use of antiseptics, and the modern treatment of wounds, is the direct outcome of the experiments of Pasteur and Lister. Pasteur's discovery of the microbial cause of puerperal fever has in itself enormously reduced the deaths of women in childbirth.

The nature of tuberculosis is now known, and its incidence has materially diminished.

We owe the invention of diphtheria antitoxin entirely to experiments on animals.

The causes of plague, cholera, typhoid, Mediterranean fever, and sleeping sickness, have been discovered solely by the experimental method.

Not only have a large number of drugs been placed at our disposal, but accurate knowledge has replaced the empirical use of many of those previously known.

The evidence before the Royal Commission has shown that these experiments are conducted with proper care; the small amount of pain or discomfort inflicted is insignificant compared with the great gain to knowledge and the direct advantage to humanity.

While acknowledging in general the utility of the experimental method, efforts have been made by a section of the public to throw discredit on all experiments involving the use of animals. The Research Defence Society will therefore endeavour to make it clear that medical and other scientific men who employ these methods are not less humane than the rest of their countrymen, who daily, though perhaps unconsciously, profit by them.

The society proposes to give information to all inquirers, to publish *précis*, articles, and leaflets, to make arrangements for lectures, to send speakers, if required, to debates, and to assist all who desire to examine the arguments on behalf of experiments on animals. It hopes to establish branches in our chief cities, and thus to be in touch with all parts of the kingdom; and to be at the service of municipal bodies, hospitals, and other public institutions.

The society was formed on January 27th of the present year, and already numbers more than 800 members. It is not an association of men of science or of medical men alone; its membership has been drawn from all departments of public life, and includes representatives of every class of educated Englishmen and Englishwomen, including many who have taken an active part in the prevention of cruelty to animals. This fact is in itself a remarkable protest against the attacks which have been made on the researches that the society has been formed to defend.

The annual subscription is five shillings to cover working expenses; but larger subscriptions, or donations, will be gladly received. The acting Honorary Treasurer, *pro tem.*, is Mr. J. Luard Pattisson, C.B. (of the Lister Institute); and an account in the society's name has been opened with Messrs. Coutts and Company, 440, Strand.

The Honorary Secretary is Mr. Stephen Paget, 70, Harley Street, W., to whom all communications should be addressed.

Yours faithfully,
CROMER
(President).

THE FOLLOWING IS THE FIRST LIST OF VICE-PRESIDENTS.

The Duke of Abercorn, K.G.
Sir T. Clifford Allbutt, F.R.S.
Sir William Anson, Bart., D.C.L., M.P.
Sir L. Alma-Tadema, O.M., R.A.
The Right Hon. Lord Avebury, F.R.S.
The Marquess of Bath.
Lord Blyth.
The Very Rev. the Dean of Canterbury, D.D.
Lord Cheylesmore, C.V.O. (Chairman, Middlesex Hospital).
Earl Cathcart
Lord Robert Cecil, K.C., M.P.
The Very Rev. the Dean of Chester, D.D.
The Very Rev. the Dean of Christ Church, D.D.
Sir James Crichton-Browne, F.R.S.
The Right Hon. Sir Savile Crossley, Bart.
Sir Edmund Hay Currie
The Rev. Dr. Dallinger, F.R.S.
Francis Darwin, F.R.S.
Sir George H. Darwin, K.C.B., F.R.S.
Sir James Dewar, F.R.S.
Sir A. Conan Doyle, LL.D.
The Rev. Canon Duckworth, C.V.O.
The Bishop of Edinburgh, D.D.
The Right Rev. The Lord Bishop of Exeter, D.D.
The Rev. A. M. Fairbairn, D.D., LL.D., D.Litt. (Principal of Mansfield College, Oxford).
Lord Faber.
Lord Farrer.
Sir Luke Fildes, R.A.
Sir David Gill, K.C.B., LL.D., F.R.S.
The Right Rev. The Lord Bishop of Grantham, D.D.
H. A. Harben, Esq. (Chairman, St. Mary's Hospital).
Lord Claud Hamilton.
The Right Hon. The Earl of Halsbury, K.B., F.R.S.
J. T. Helby, Esq. (Chairman, Metropolitan Asylums Board).
The Hon. Sydney Holland (Chairman, London Hospital).
Sir Joseph Dalton Hooker, G.C.S.I., F.R.S., O.M.
Sir William Huggins, O.M., K.C.B., F.R.S.
J. Hughlings Jackson, M.D., LL.D., F.R.S.
Montague Rhodes James, Litt.D.
Sir Alfred Jones, K.C.M.G.
The Earl of Kilmorey (Chairman, Charing Cross Hospital).
Sir E. Ray Lankester, K.C.B., F.R.S.
The Right Hon. Lord Lindley, LL.D., D.C.L., F.R.S.
Sir Norman Lockyer, K.C.B., F.R.S.
Henry Lucas, Esq. (Chairman, University College Hospital)
The Right Hon. Walter H. Long, M.P.
The Hon. G. W. Spencer Lyttelton, C.B.
Frederick Macmillan, Esq. (Chairman, National Hospital for the Paralysed and Epileptic).
The Right Hon. Sir Herbert E. Maxwell, Bart., F.R.S.
Lord Methuen, G.C.B., K.C.V.O.
The Earl of Northbrook (President, Cancer Hospital).
Lord Northcliffe.
Professor Osler, F.R.S.
The Right Rev. The Lord Bishop of Oxford, D.D.
Sir Gilbert Parker, D.C.L., M.P.
Sir Frederick Pollock, Bart., LL.D., D.C.L.
The Right Rev. The Bishop of North Queensland, D.D.
Sir William Ramsay, K.C.B., F.R.S.
Sir James Reid, Bt., G.C.V.O.
The Very Rev. the Dean of Ripon, D.D.
Sir Henry Roscoe, F.R.S.
The Right Hon. The Earl of Rosse, K.P., LL.D., F.R.S.
Lord Rothschild, G.C.V.O.
Sir Arthur Rücker, F.R.S.
The Very Rev. The Dean of Salisbury, D.D.
The Marquis of Sligo.
The Right Hon. Sir Cecil Clementi Smith, G.C.M.G.
Sir Thomas Smith, Bart., K.C.V.O.
The Hon. W. F. D. Smith, M.P. (Chairman, King's College Hospital).
The Hon. Sir Richd. Solomon, K.C.B., K.C.M.G.
Sir Edgar Speyer, Bart. (President, Poplar Hospital).
Lord Stanley, K.C.V.O.
Lord Strathcona, G.C.M.G.
Sir Frederick Treves, Bart., G.C.V.O.
Sir John Batty Tuke, M.P.
James G. Wainwright, Esq. (Chairman, St. Thomas's Hospital).
Earl Waldegrave.
A. W. West, Esq. (Chairman, St. George's Hospital).
Sir James Whitehead, Bart. (First President of the Lister Institute).
Sir Samuel Wilks, Bt., F.R.S.
The Right Hon. Sir Alfred Wills.
The Rev. Henry George Woods, D.D.

MEMORIAL TO THE LATE PROFESSOR ANNANDALE.

SIR,—Many friends and former pupils of the late Professor Annandale, in the belief that a scheme for establishing a memorial to perpetuate his name would be received with general approval, are taking steps towards its accomplishment. For this purpose a large and influential general committee has been formed, also a small executive committee.

It is proposed that a fund should be raised for the purpose of awarding a gold medal annually to the best student in clinical surgery at the final examination, to be known as "The Annandale Gold Medal in Clinical Surgery." In addition to this, it is thought that a bust of the late professor should be placed in the lecture theatre of the Royal Infirmary, Edinburgh, so long associated with his teaching. As the late Professor Annandale identified himself so closely and for so many years with the athletic life of the university, it has been suggested that if there should be any surplus after providing for these objects, it might be devoted to some memorial in connexion with the Athletic Club.

The committee have appointed Mr. H. M. D. Watson, C.A., 13, Rutland Square, Edinburgh, to act as their Secretary and Treasurer, and those who desire to subscribe are requested to communicate with him as soon as possible, as it is thought important to carry through the scheme without delay.—We are, etc.,

WM. TURNER,
Principal of the University of Edinburgh.
J. M. COTTERILL,
President of the Royal College of Surgeons, Edinburgh.
H. M. D. WATSON,
Secretary and Treasurer.

Edinburgh, April 21st.

HOSPITALS AND MEDICAL CHARITY.

SIR,—Although bound to admit that there is no name associated with hospital management and administration better known or more respected than that of the Hon. Sydney Holland, I venture to think that, by a large section of that portion of the community that interests itself in hospital affairs, some of the remarks made by him at the United Kingdom Hospitals Conference, as reported in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL, will be considered, to say the least of them, uncharitable.

Holding the views he does of the obligations and requitals of the staffs of our larger hospitals, one can only feel indebted to him for having spoken so fearlessly and plainly upon a question that is evidently still matter of opinion, in that it might lead to such a ventilation of the question as will result in the better understanding if not a settlement.

It will, therefore, be clear that it is in no spirit of resentment that I venture to combat such views, even should I follow Mr. Holland's example of a forceful method in expressing a deliberate contention, which, in my case, is that the charitable nature of the services rendered by the hospital staffs, especially of the larger hospitals, should need no demonstration to any one who has given it any thought.

To be brief, the Hon. Sydney Holland asserts that members of hospital staffs get their *quid pro quo*—that is, their equivalent for their services in the following channels—they get *advertisement*, they get a *step up* in their profession, and they get *patients*. What a phalanx of rewards!

I suppose Mr. Holland will admit that those qualities, among which *skill*, *industry*, and *ability* are prominent, so essential in other callings, are of some value in the establishment of the reputation of a consultant, but let us see of how much value in the opinion of Mr. Holland. We will put it in the form of an equation:

$$\text{Status as a consultant of repute} = \text{advertisement, etc., by hospital} + \text{skill, etc.}$$

Now, take the case of a surgeon on Mr. Holland's own terms of market value—£100 an operation. I believe at the London Hospital it will be below the mark to state that a surgeon does at least ten major operations a week—that means £1,000 a week, or £50,000 a year, and in a hospital lifetime of twenty-five years the market value of his operative work alone amounts, without interest, to the modest sum of £1,250,000. We will not make the amount unwieldy by adding the value of his work in the wards. This is the *quid pro quo* from the London Hospital surgeon for hospital advertisement, etc.

Now, to return to our equation, if advertisement, etc., is of such enormous value, skill, etc., must be a minus quantity, for no one would contend that the mere establishment of a consultant of repute would be worth £1,250,000.

Granting, for the sake of argument, that Mr. Holland's terms are too generous, and that we have seriously overestimated the value of a hospital surgeon's services, surely

he cannot set much value upon the skill, industry, and ability of the surgeons of our country.

As Mr. Holland has, in my humble opinion, carried his contentions to their extreme limit, would I be going too far in asking him whether he is of opinion that the debt owed by humanity, past, present, and future, to Joseph Lister had its *quid pro quo* in the concession of a hospital appointment to him; or does he think that the labours of London Hospital men, who have made that institution famous wherever modern medicine and surgery are practised, received their equivalent by the gift of a post on the hospital staff?

These men either have received or will receive their reward, but it will be on a computation diametrically opposed to the methods of Mr. Holland.

Again, is it not to the advantage of any man, be he a lawyer, consulting engineer, actuary, or doctor, who by study, training, and qualification has made himself fit to apply for a certain position, to be selected as being the fit and proper person for the post? And is it not to his advantage to have such an opportunity of making himself, by experience and diligence, more and more proficient, so that his earning capacity may be thereby increased, and through advertisement, etc., his private practice augmented? Of course it is. And yet who would think of telling a lawyer, consulting engineer, or actuary that in return for those advantages he would be expected to give so many hours a week of his professional work gratuitously to his country?

As for "no one venturing to suggest that the staff of a hospital gives its services for nothing" I have no scruples in asserting that they do so as truly as would my hypothetical professional man under the circumstances I have assumed.

It might be contended that hospitals give medical men the opportunity of carrying out those observations without which there would be little progress in medicine or surgery, and that they should give something in return for those opportunities.

But if such contention be right, why confine its application to the medical profession? Why not affirm that, as naval constructors would be unable to acquire that skill in the evolving of armaments which they now possess without Government workshops and dockyards, in return for such privileges they would be expected to render such an amount of gratuitous service as would be a *quid pro quo* for their opportunities? or that, as the British Law Courts afford the legal fraternity the opportunity of maintaining peace and happiness in this wicked country, it would be expected to render such an amount of gratuitous service as would be an equivalent of its exalted privilege? In short, that a labourer is no longer worthy of his hire, but must count himself lucky if he gets what is left after the community has helped itself.

By Mr. Holland's method of argument it might be easy to prove that the House of Commons has made Mr. Lloyd George, and the British army Lord Kitchener. My contention would be that men like Lloyd George have made the House of Commons what it is, that men like Kitchener have made the British army what it is, and that men like Lister and Syme have made the British hospitals what they are. That these men owe the House of Commons, or the British army, or the British hospitals a great deal goes without saying, but to talk of *quid pro quo* would make such references a farce.

Perhaps it is thought that part of the services rendered by members of hospital staffs should go to wipe out the obligations medical students are under for the opportunities for medical study rendered them by the hospitals. But what would happen if medical students were debarred from hospital practice? To be able to dress and take efficient and full notes of cases their substitutes would need to be drawn from an intelligent and well-educated class, and would entail much expense in themselves, apart from the expense of payment and increase in number of the resident staffs, both of which would follow under the altered circumstances.

Mr. Holland is of opinion that there is nothing about "medicine different to every other business," and no wonder, when he takes the one-eyed view of it that he does of the work of the Good Samaritan, who, in Mr. Holland's opinion, would have been quite justified in asking the poor—Mr. Holland's adjective—sufferer to contribute out of his meagre purse—assuming such to have been left him—part of the expense to which the Good Samaritan had been put. It may have been just, but justice amid such surroundings would have been sheer sacrilege, for it would have smudged one of the most beautiful pictures in Christendom, and would have ensured its being relegated to oblivion ages ago.

Virtus laudatur et alget.

—I am, etc.,

Llanelly, April 14th. J. Edgar P. Davies.

THE ADMISSION OF WOMEN TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Sir,—In reference to your annotation on this subject, may I ask you to publish the following correspondence? If there has been any attempt to mislead the members, it was not by us. We stated our view and our reasons for it on our circular. The council on their polling card implied that women could only be admitted under the Medical Act of 1876, and suppressed the fact that there is no legal difficulty in admitting them under the Charters on an equality with men, and "with full collegiate rights."—I am, etc.,

London, S.W., April 18th. W. G. Dickinson.

[Copy.]

Royal College of Surgeons,
Lincoln's Inn Fields, W.C.,
April 11th, 1908.

Dear Sir,—With reference to the card which your Society proposes to circulate to the Members of the College and the request thereon that those Members who answer "Yes," to the Council's questions, will add the words "with full collegiate rights," I am desired by the President to call your attention to the fact that on the official card, which is about to be issued by the Council, Members are requested to answer only "Yes" or "No."

The President regrets that your Society should have thought fit to make this suggestion, which he must look upon as a direct incentive to Members to disregard the instructions of the Council as to the form in which they require the answers to the questions on their official card to be returned to the College.

Yours faithfully,
S. Forrest Cowell,
Secretary.

W. G. Dickinson, Esq., M.D.

[Copy.]

Society of Members of the Royal College of Surgeons of England.

West Hill,
Putney, S.W.
April 13th, 1908.

Dear Sir,—I am sorry to hear that the President does not approve of our postcard. I fear that it was drafted without regard to his approval or disapproval. I merely left a copy at the college as a matter of courtesy. We think that the Council's proposal to create the women diplomates into an inferior order of Members is a thoroughly bad one, and also that, if carried into effect, it will—in spite of the opinion obtained—probably be found to be illegal. Fortunately this is a free country (outside the College) and we are entitled to express our view of the matter. The Council has no power to "require" the replies of the members to be in any particular form, or even to require any reply at all.

Faithfully yours,
W. G. Dickinson.

S. Forrest Cowell, Esq.

P.S.—I propose to publish this correspondence.

*** The text of the postcard and explanatory statement issued by the college was published in the British Medical Journal of February 22nd, 1908, p. 408; but we here reproduce the sentence from the explanatory statement to which reference is made in this correspondence:

> "In regard to the corporate position of women, if the diplomas of the college be granted to them, the Council have taken legal opinion, and are advised that, while under the Medical Act of 1876 (39 and 40 Vict., ch. 41) women can be admitted as Members or as Fellows, no woman so admitted would thereby be entitled to take any part in the government, management, or proceedings of the college."

CENSURES AT INQUESTS.

Sir,—In the Journal dated April 18th I see a note, headed "Easy Censure," dealing with the rider added by a coroner's jury unjustifiably censuring the conduct of three medical men. I sincerely trust that this will be made a test case to try the right of such "censure." As I understand the law, neither coroner nor jury are within

their duties if they do more than find by their verdict the "cause of death"; anything further is beyond their powers, and while I fear no action would lie against either coroner or jury, still an action for libel could be brought against the newspaper which published such an extra-judicial pronouncement.

I term the censure unjustifiable because the medical man or layman so censured has had no opportunity for defence—may possibly never have even heard of the case; and if my information be correct and such censure or rider be illegal, it would be well to take this occasion for resisting its infliction by whatever means are in our power.—I am, etc.,

April 17th. X. R. X.

THE CASE OF CROPPER *v.* STOKES.

SIR,—I should be much obliged if you would publish the following. At an extraordinary meeting of the Islington Medical Society held on April 14th it was resolved:

> That the members of the Islington Medical Society in special meeting assembled express their sympathy with Dr. Henry Fraser Stokes in respect of the case Cropper *v.* Stokes. They refer especially to the extraordinary remarks of Judge Edge on the evidence of the defendant, an old and well-known member of the Society, and to the refusal of his Honour to allow any appeal or facilitate any rehearing of the case.

—I am, etc., T. D. JAGO, L.R.C.P., M.R.C.S.,
Honorary Secretary, Islington Medical Society.

London, N., April 19th.

FUNCTIONAL DYSPEPSIA.

SIR,—Your article and that by Dr. Hutchison contain a lucid explanation of the above malady; but from my experience another factor should be included which, whilst not exactly physiological, is very close on the border line, as its pathological significance is only temporary. I refer to the venous turgescence of the portal system during digestion. If the balance of *ad* and *ex* is not exactly equal there must be some amount of residual congestion; and there is no doubt in my mind this does frequently occur, and gives rise to those indefinite symptoms of functional dyspepsia with which we are all so familiar—symptoms of a temporary character, recurring with almost every meal with unvarying regularity for years. When we consider how frequently constipation and haemorrhoids accompany this complaint, we cannot with impunity leave the above factor out of court. Heredity undoubtedly exercises a great influence in such cases, for all observant practitioners find laxity of the blood vessels *is* a frequent condition; and it is obvious that while so many people suffer from varicose veins of various parts of the body from an inherent disposition, this is very likely to occur in the portal system, where, apart from the anatomical arrangements of the mesentery favouring this, other causes—such as any hollow viscera temporarily enlarged by flatulency, or abdominal organs temporarily congested, which happens physiologically in digestion, or some part of the mesentery elongated, twisted, or dragged upon—would have an influence in bringing about the symptoms of functional dyspepsia, more or less severe according to the degree of varicosity.

Again, note the frequency with which ulceration occurs in patients suffering from varicose veins of the lower extremities, very often from very slight injury. Arguing from this, when we come to a viscus like the stomach, with some of its vessels having connexions with both the systemic and portal systems, and remembering the hereditary disposition to varicose veins in certain individuals, we cannot wonder that varicosity should occur. Should some irritant in the food cause ever so slight an abrasion in the inner coating of the wall of the stomach, it would be very likely to go on to an extensive ulceration.—I am, etc.,

CLEMENT BELCHER, M.B., D.P.H.

Birmingham, April 14th.

SPECTRAL VISION.

SIR,—The annotation on "spectral vision" in the JOURNAL of April 18th is of great interest as showing the value of accurate observation in producing a realistic effect in literary, as distinguished from scientific, descriptions. It recalls to my mind a passage from Sir Walter Scott's *Pirate*, written in 1831:

> "And the demons of whom you spoke?" continued Minna.
> "I had my secret apprehensions on their account," said Cleveland. "In open daylight or in absolute darkness, I did not greatly apprehend their approach; *but in the misty dawn of the morning, or when evening was about to fall*, I saw for the first week of my abode upon the key many a dim and undefined spectre, now resembling a Spaniard, with his capa wrapped about him, and his huge sombrero, as large as an umbrella, upon his head; now a Dutch sailor, with his rough cap and trunk hose; and now an Indian Cacique, with his feathery crown and long lance of cane."
> "Did you not approach and address them?" said Minna.
> "I always approached them," replied the seaman; "but—I grieve to disappoint your expectations, my fair friend—whenever I drew near them, the phantom changed into a bush, or a piece of driftwood, or a wreath of mist, or some such cause of deception, until at last I was taught by experience to cheat myself no longer with such visions, and continued a solitary inhabitant of Coffin-key, as little alarmed by visionary terrors, as I ever was in the great cabin of a stout vessel, with a score of companions around me."

The point of interest is that the commonplace mind would have attributed such visions to inherent cowardice, bad conscience, or anything but physical phenomena. Sir Walter Scott, however, very clearly understood the conditions of light necessary to produce them, and so shows that he understood something of their nature.—I am, etc.,

Dalmuir, Dumbartonshire, April 18th. ALEX. LUNDIE.

THE WORD OF THE ORACLE.

SIR,—One sympathizes with Dr. Ross's colleagues. If, when the patient presented himself to have his hernia tapped, Dr. Ross had been possessed of a little of the milk of human kindness and a little of the sense of humour, he would have admitted the patient, cured him, and informed the doctor of the course of events. He would then have done no harm to either the doctor, the patient, the hospital, or himself. As it was he did harm to all concerned. Also, he would have obeyed the ethical law of doing unto others as he would they should do unto him, and at the same time he would have taught the doctor his much needed lesson in the best way.

Dr. Ross has been unfortunate in his experience of general practitioners. In London hospitals I was often surprised at the courtesy and even deference shown by general practitioners to the house officers.—I am, etc.,

Whitley Bay, April 17th. F. D. BLANDY.

TUBERCULOSIS IN NATIVES IN SOUTH AFRICA.

SIR,—I think Dr. J. Grant Millar (BRITISH MEDICAL JOURNAL, February 15th, p. 380) only expresses the common opinion when attributing the spread of phthisis in the native territories mainly to the filthy expectoration of the sick Kaffir; but he has omitted to mention one most important fact—that, although consumption is rampant, tuberculosis of cattle is absolutely unknown in this part of Cape Colony. This is a point for Dr. Nathan Raw. I have had twelve years' experience of these natives, after nearly as long in an English country practice, and tuberculous and what used to be called "strumous diseases" strike one as being far more prevalent here. Fresh cases of consumption and strumous glands of the neck one sees nearly every day; spinal caries is common, disease of the other bones is less frequent. Tabes mesenterica I have only seen once or twice, but that is always associated in my mind with the milkless bread slops that mill girls' brats used to be starved on, and here the unnatural feeding of infants with cold sour milk rather tends to end in amoebic dysentery.

The Kaffir of course only pays hut tax for his wife's hut, and so he might have a hut for every day of the week if he liked and yet only pay his 10s. a year so long as he was a monogamist. The red Kaffir's hut costs little, and every two or three years he makes a new one or shifts his whole kraal elsewhere. The school native makes a more substantial and expensive hut, and therefore sticks to it longer—unfortunately for himself, as most of them are about as filthy as the others. In one instance a married daughter came home dying to a healthy kraal, and her father and two sisters also died of phthisis in the same hut one after the other at intervals of about two years. But in spite of that, I am positive that the red Kaffirs suffer more heavily, and that neither mining nor clothing (the omniscient layman's stock argument) has anything do with it.—I am, etc.,

Tembuland, March 20th. A BELIEVER IN KOCH.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

H. C.—It would have been in accordance with established custom for "B." to have expressed his acknowledgements to "A." in some form.

HOSPITAL PATIENTS AND LETTERS OF INTRODUCTION.

J. M.—While it is quite true that etiquette in the case of an ordinary letter of introduction requires it to be left open, we have never heard of any one insisting upon the application of this rule to the letter sent from a medical practitioner by a patient to a consultant. It so often happens that the medical attendant may wish to lay his doubts and difficulties before the consultant, or to mention matters which it would not be well for the patient to read, that it is the general practice to send such letters closed, and our correspondent's patient had therefore no reason for regarding his action as discourteous. If any such rule existed it would be necessary for medical practitioners to give their patients merely a formal letter of introduction which could be left open, or a card, and to send an explanation of the case by post, and, although this is often done, the other is the more usual custom. The patient was certainly not justified in opening the letter and reading the contents; and it is difficult to see how he can justify himself if the letter was given to him at his request.

SHOULD A MEDICAL PRACTITIONER SUPPLY SPECTACLES?

C. S.—The ethical position of a medical man who undertakes to supply spectacles to patients consulting him about their eyes, may be illustrated by comparing this with the dispensing of medicine. The dispensing of medicine is clearly not part of the business of a medical practitioner, but it is defended, first, on the ground that it has long been the custom in England where the general practitioner is the lineal descendant of the apothecary of former times and the custom of including the supply of medicine in the fee paid for advice has become very general; and, secondly, because in many country districts it is inconvenient or impossible to refer patients to a chemist; the latter reason is admitted though, subject to stringent limitations, in France where the dispensing of medicines by medical practitioners is forbidden by law. A medical practitioner who desires to supply spectacles cannot plead the first of these reasons, but the second may be held to be valid where like conditions exist, that is to say, where there is no competent optician to whom patients could be conveniently referred.

UNIVERSITIES AND COLLEGES.

LONDON SCHOOL OF TROPICAL MEDICINE.

The examinations held at the end of the twenty-sixth session, recently terminated, resulted in the following students being adjudged to have passed with distinction: A. H. Skinner, A. R. Short, J. Jackson, Major, I.M.S.; W. T. Quaife, C. W. Branch, R. P. Cockin, A. A. Myers, C. D. Dawes, Major, I.M.S. The following candidates were also approved by the examiners: E. J. Porteous, J. McConaghy, A. E. Neale, C. M. Goodbody, Captain, I.M.S.; D. Burrows, J. S. Pearson, W. F. Roach, H. R. Morehead, J. H. McKay, R. Welply. With two exceptions all the candidates, other than the three shown to be in the Indian Medical Service, are members of the Colonial Service.

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

First Examination.—T. Gray,* S. D. Large, I. L. Asrani, W. F. Gibb, J. Remers, W. C. Davis, P. W. Laidler, J. M. Milne, D. S. Graham, B. M. Tembe, D. V. Giri, A. Butterfield,† W. W. W. Watt, E. Annequin,† J. N. Clark,† C. M. Bradley, M. M. Bainbridge.

Second Examination.—M. Greene,‡ C. L. Levers, R. E. N. Martyn-Clark, P. Walsh, R. A. Mirzan, S. G. Beveridge, L. Galdemar, A. C. Tait, H. G. Lamberty.

Third Examination.—S. G. Tibbles, R. W. A. Brown, T. Walsh, W. Crosse, D. Murphy, S. W. Hogg, R. C. Nazir, A. Singha, Ethel A. Mordaunt, Isabel Pulteney, W. C. L. Malone, R. F. Lunn, D. V. Giri.

Final Examination.—J. H. Johnston,§ A. D. Falkner, G. J. Mahimtura, D. L. Luckhoo, Millicent V. Webb, M. W. Locke, T. B. Eames, D. W. Kamalakar, R. C. Nazir, C. A. Paterson, R. W. Pickup, V. S. Delany, M. J. Hayes, H. Stokes, E. Lewis, L. Patchett, K. G. Dhairyawan, A. V. Bam, A. M. Davie, J. du T. Malan, Adeline M. Watts, J. B. Cooke.

* Under four years' regulation. † With distinction in chemistry.
‡ With distinction. § With honours.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE NOTIFICATION OF BIRTHS ACT.

We learn from the *Western Daily Press* that at the monthly meeting of the Taunton Town Council held on April 14th, Councillor Penny, as Chairman of the Health Committee, proposed, and Councillor Hitchcock seconded, a motion to the effect that the Council should adopt the Notification of Births Act, 1907. Councillor J. A. Macdonald (Chairman of the Representative Meeting of the British Medical Association) said that medical men were placed in an invidious position by the Act, and throughout the country they had felt it their duty to oppose it. There was, however, no class of men in the country who were so anxious to get the Act carried in a proper form as the medical profession, and in this form they had backed it up. But there was a clause in the measure which was most objectionable to them, and until that was excised they opposed its adoption by local authorities. Medical men should in no way be made responsible for notification of births. The parents of the child, or the people in whose house the child was born, should be made responsible. Yet this Act imposed on one class of the community a duty for the State, without fee, and with a penalty for omission to carry it out. The medical profession regarded this as unjust, and therefore they objected to it. But the main ground on which they objected to it was that the Act compelled medical men to break one of the most important unwritten laws of the profession—the preservation of confidence between medical men and their patients. It would, indeed, be a distinct cause of friction between medical men and their patients. To give notice by postcard was most objectionable. After some further discussion Dr. H. J. Alford, the Medical Officer of Health, was asked to make a statement. He said one of the objections of medical men to the Act was that under present circumstances medical men in attendance would have to report a birth and receive no remuneration; but this duty had existed for a great number of years under the Registration of Births Act, which stated that in default of other persons registering a birth it was the duty of the medical man present at the birth to register it. The only difference was that the Act of 1874 imposed a penalty of 40s., whereas the penalty under this Act was 20s. The Act had been almost universally adopted by sanitary authorities with a view to reducing infantile mortality, which was at present lamentable, and he regretted that anything should be done by any class of the community to thwart the measure because they did not get a miserable fee. Dr. Macdonald, in reply, said the Act of 1874 had been felt to be so unjust that it ceased to be enforced. Many men did not even know of it until the new Act was passed. The Act was adopted by 14 to 8.

THE COSTLINESS OF MAKESHIFT HOSPITAL ISOLATION.

In a report recently issued by the Local Government Board Dr. R. Deane Sweeting narrates the circumstances which attended an outbreak of scarlet fever in Burnham-on-Crouch during the summer of last year. The story is of interest because it shows how very uneconomical it is for a sanitary authority to be unprovided with adequate means of isolation at the very beginning of an outbreak of a disease such as scarlet fever. Burnham is an urban district in Essex situated on the north bank of the river Crouch, with a population of 3,200 persons, and during the period named there were 52 cases of scarlet fever in thirty families. Since 1902 the district council have rented for isolation purposes a four-roomed cottage, the two bedrooms containing respectively 1,300 and 800 cubic feet of air space. To this cottage five patients were sent; but, as other cases were rapidly notified, an old farmhouse 500 yards distant was acquired and put in order as speedily as possible. There were here six bedrooms, which were used as wards; four contained 2,000 cubic feet of air space, and the other two about half that amount. By May 10th there were 30 patients in this house, and a wooden annexe was erected. This was constructed of loosely attached ¾-inch wooden boards, supported on brick piers and covered by corrugated iron. Although its cubic contents were only 3,150 feet, it served for 8 patients and was always full during its use. All of the 42 patients who were treated in these buildings recovered. The cost of the epidemic was £510, to meet which a rate of 1s. 5d. in the pound had to be levied. The district council will be well advised if they give effect to the suggestion of Dr. Sweeting and seek combination for hospital purposes with some adjoining authority. With the Maldon Joint Hospital within a few miles this ought not to be very difficult.

YELLOW FEVER IN CUBA.

The monthly report of the National Sanitary Department of Cuba on the health of the island for November last shows a continuance of yellow fever cases, 25 of which occurred during

the month with 10 deaths. This is, however, a slight reduction from the figures of the preceding month, when there were 29 cases with 13 deaths. Three important districts, Habana, Matanzas, and Guanabacoa, in which cases had been recorded in the previous month, were nevertheless free in November. One of the curious isolated cases where no previous yellow fever had occurred was reported on a plantation in the district of Remedios, but no subsequent case has been recorded during the next sixty days. The progressive decrease in the number of yellow fever cases during the months of October and November is especially satisfactory in view of the fact that with the exception of two days only the mean daily temperature has always been over 73° F. The only quarantinable disease during the month was yellow fever.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Banbury Borough.—The population was 12,967, the birth rate 21 per 1,000, the death-rate 15 per 1,000, and the infantile mortality-rate 99 per 1,000 births. Four years ago the Banbury Corporation decided to discontinue taking scarlet-fever patients into the isolation hospital, excepting when there were very special reasons for doing so. During this period 73 cases of scarlet fever have been notified compared with 63 in the four years immediately preceding. In the earlier four years 39 patients were removed to hospital, and in the latter only 2. Dr. Innes considers that these figures show that the health of the inhabitants cannot be said to have suffered, and he congratulates the Corporation upon having saved £431. This amount is based upon figures given by the borough accountant. They disclose an unusually high cost per patient, though possibly there may be some special local reasons to account for it. The 39 patients isolated in the first four years cost on an average £11 9s. each, while the two isolated in the second period each cost only £8

City of Carlisle.—The population was 49,400, the birth-rate per 1,000 23.8, the death-rate per 1,000 16.3, and the infantile mortality-rate per 1,000 births 169. There was only 1 case of typhoid fever recorded in Carlisle during last year, a circumstance which has never before occurred in the sanitary history of the city. During the previous ten years the average number of cases yearly was 14, and during the ten years before then it was 33. Dr. William Brown attributes this remarkable decline to the removal of numerous private slaughterhouses, insanitary cowsheds and tripseries; the removal of ashpits and ashpit privies, and to general sanitary measures with a view to cleanliness. The Health Committee of the Corporation have had under consideration the question of providing a steam disinfector, but apparently on the score of expense arrived at the conclusion not to recommend the Council to purchase one of these very necessary machines. It is difficult to understand this attitude of the members of the Health Committee, for in the years 1905-6-7 the number of school children affected with scarlet fever was respectively 378, 670 and 177, and there were 5, 9 and 3 deaths in the same years. It is impossible not to believe that imperfect disinfection of clothing, etc., was responsible for many of these cases. The very high rate of infantile mortality—143 compared with 127 in the seventy-six great towns—calls for some comment. Dr. Brown considers that the personal supervision of a trained staff of nurses during the first year of the children's existence would undoubtedly reduce to a very considerable extent the infantile mortality by rescuing feeble children from the results of ignorance and neglect, but at the same time, he says, we must bear in mind the ulterior effect of fostering a weak population.

DUTIES OF SANITARY INSPECTORS.

N. N. S.—The Local Government Board has over and over again drawn attention to the impropriety of inspectors of nuisances examining patients suffering from infectious disease.

FEE FOR CERTIFICATION OF A PAUPER LUNATIC.

G. A. J. states that he certified a pauper lunatic, and was sent a form signed by a magistrate, who was also a guardian, authorizing the payment of a fee of 10s. 6d. as a reasonable remuneration. He sent a receipt *on account*. He asks whether he can demand a guinea, and, if so, what steps he should take to procure payment.

*** One guinea is now almost invariably paid for this duty. If the justice declines to alter the order he has already given, the only course open to our correspondent is to appeal to the Court of Quarter Sessions to order a reasonable fee to be paid, and the decision of that court would on this matter be final (Lunacy Act, 1890, clause 301). Fourteen days' notice of any such intended appeal must be given to the justice against whom the appeal is made.

AMONG the recently-elected members of the Portuguese Chamber of Deputies are fourteen doctors. Among them we note the name of Dr. Miguel Bombarda, editor of *A Medicina Contemporanea*, who was Secretary-General of the Fifteenth International Medical Congress held at Lisbon in 1906.

OBITUARY.

OSWALD BROWNE, M.D., F.R.C.P.,

ASSISTANT REGISTRAR, ROYAL COLLEGE OF PHYSICIANS, LONDON.

OSWALD AUCHINLECK BROWNE was the youngest of the five sons of Octavius Browne, of Courtlands, Lympstone, South Devon, all of whom went either to Eton or Harrow, and afterwards to Oxford or Cambridge.

Oswald was born in 1855, in the Isle of Wight, and was educated at Harrow, and Trinity College, Cambridge. He graduated B.A. in 1877, and went to St. Bartholomew's Hospital for his medical training, and became M.R.C.S. in 1881. In 1884 he took the degree of M.B.Cantab., and in 1886 became a Member of the Royal College of Physicians. In 1897 he proceeded to the degree of M.D., presenting as his thesis a paper on Aneurysms of the Aorta. In 1898 he was elected a Fellow of the Royal College of Physicians. In 1890 he married the third daughter of the Rev. Canon Tinling, of Gloucester.

Oswald Browne began his medical career by being House-Physician at St. Bartholomew's Hospital to Dr. Gee, in 1882-3, who writes, "He was a man of very good intellectual ability, and an excellent House-Physician." In 1886-7-8 he was Casualty Physician at St. Bartholomew's Hospital. He was elected Assistant Physician to the Royal Hospital for Diseases of the Chest in 1886, in due course became Physician, and on retirement from the active staff in January, 1908, he was elected Consulting Physician. He was also on the staff of the Metropolitan Hospital from 1890 to 1903, when he was appointed Consulting Physician. He was Physician to the Alexandra Hospital for Children with Hip Disease from 1896 to early in 1908, and he continued to hold the post of Physician to the Bloomsbury Dispensary until his death.

This is a brief enumeration of the medical appointments held by Oswald Browne, but the history of his life would be very incomplete if reference were not made to his work other than purely medical. For instance, from 1903 to the time of his death he was Assistant Registrar to the Royal College of Physicians, he rendered valuable service to the Universities' Mission to Central Africa, and he was for some years churchwarden to St. Mary Magdalene, Munster Square. In these posts, as well as on the various Hospital Committees on which he served, he displayed great ability, sound common sense, and much aptitude for business. Whatever he took in hand was done "not with eye-service as men pleasers, but in singleness of heart, fearing God." But though a man of deeply religious feeling, he had the saving grace of a keen sense of humour. In reference to his work as Assistant Registrar, Dr. Liveing writes: "The College has lost in him not only a capable and trained officer, but one who loved and honoured our old historic foundation and its worthies, and fully appreciated its past life and work as well as that of to-day, and would, I am sure, have been a worthy upholder of its best traditions."

It could not be truthfully said that Oswald Browne was a great physician, but his colleagues testify to his clinical acumen, and it is hardly necessary to add that he carried out the examination of his patients with great care and thoroughness. Still he seemed to stand somewhat aloof from the stream of medical progress, probably his energies and thoughts were devoted to other, but equally useful, work.

Oswald Browne was not a voluminous writer. He was somewhat diffident as to his own powers, and was not a frequent attendant at the meetings of the various medical societies. His admirable thesis on Aneurysms of the Aorta is a proof of the work he was capable of doing; it is a mine of facts carefully and systematically arranged. His two lectures to nurses, entitled Some Thoughts about Nursing and On the Care of the Dying should be read by every nurse, and indeed by every one who has anything to do with the sick. Both are full of practical information, couched in the most felicitous language. But if not himself writing much, he was the means of increasing the store of medical literature, as it was owing to his persistent urging that Dr. Gee was induced to give to the world his delightful little work entitled *Medical Lectures and Aphorisms*. This achievement was a great joy to Oswald Browne. So much for the medical side of Oswald Browne's character; socially he was a charming companion. He was exceedingly well read, particularly in

the older authors; Sir Thomas Browne's *Religio Medici* and Southey's *Doctor* were especial favourites of his, and as he had a retentive memory he was able to quote many an apposite sentence; and his quaint and ready wit, his mimic powers, and stores of anecdote, all combined to enhance the charm of his society. He had a great abhorrence of unseemly jokes, and no low or sordid expression ever polluted his lips. We may indeed say of him, as he said of Dr. P. M. Latham in a paper read before the Abernethian Society: "He was an example of that peculiarly English character, the unobtrusive but accomplished and high-minded Christian gentleman."

A few words on his last illness may be considered necessary to explain the apparent suddenness of the end. For some years past he had complained of abdominal pain which he regarded as neuralgic. Early in the present year he felt so unfit for work that, as mentioned above, he resigned two of his appointments. From the beginning of February until towards the end of March he was unusually well and bright. In the last week of March he had a very severe bout of pain; this yielded to remedies, but a week later the recurrence of pain led to a consultation. An exploratory operation was advised, and on opening the abdomen the duodenum was found to be bound down posteriorly. A gastro-jejunostomy was therefore performed. For the first forty-eight hours the patient went on well; then came acute dilatation of the stomach with heart failure. He was conscious almost to the end, and was comforted by the presence of those near and dear to him. He died on the evening of April 9th.

The first part of the Burial Service was held at the Church of St. Mary Magdalene, and the large attendance at the church testified to the affection and respect in which Oswald Browne was held. The President, the Treasurer, the Censors, and the Registrar represented the Royal College of Physicians; there were also present numerous medical and other friends and a great body of nurses. He was buried at West Wickham, Kent.

HENRY COLLIER LECKY, M.A., B.M., B.Ch.Oxon., D.P.H.Oxon.

On Tuesday, March 31st, Dr. Lecky died at the Sussex County Hospital, Brighton. His illness commenced with dramatic suddenness, as he fainted in a shop at Brighton, was taken to his rooms, and found to be suffering from right-sided pleurisy. A few days later pneumonia developed. Subsequently the opposite lung became involved, and death occurred at about the end of the third week.

Dr. Lecky had, up to the time of his illness, for some weeks been acting as Medical Officer of Health for Brighton. Previous to this he had for nearly two years acted as a Resident Medical Officer to the Borough Sanatorium and Deputy Medical Officer of Health for Brighton. He had also held important resident appointments at St. Thomas's Hospital, London, and the Radcliffe Infirmary, Oxford. Death has cut short at an early age what promised to be a more than usually successful and useful career. Dr. Lecky was but 29.

Highly trained, devoted to scientific studies, a most careful and exact investigator, and one who never shirked patient and laborious work, it seemed to his numerous medical friends that he had a splendid future before him. One who has had much to do with students writes: "A loss to all personally and to the profession. He will pass in my memory to a very select circle of young men of the very highest promise, eight or ten of them, cut off like Lycidas,

> Dead ere his prime,
> . . . . and hath not left his peer."

Throughout life he possessed to a remarkable degree the power of making friends and no one was ever the worse for his friendship. One who was a fellow student writes: "Quite unknown to himself, with his energy, keenness, and character, he set an example which many of us tried to follow."

Of his personality it is difficult to speak; throughout his school life, while at college, as a student at the hospital, and subsequently all who came in contact with him, were charmed by it. A Brighton medical friend writes: "In the short time we had known him, we had come to love him. His brightness, unselfishness, unfailing courtesy, his kindness to all—rich and poor—forced me to love him. I never heard him say a word I would have wished unsaid, and never saw him do a thing I would have wished undone. His modesty was almost a source of weakness, so over-anxious was he always not to hurt another's feelings. I cannot recall another character quite like his."

The memory of Dr. Lecky's charming personality, and of the high standard of life he had set himself, will long be retained by a large circle of friends who deeply mourn his early death.

EDITH PECHEY-PHIPSON, M.D.Bern, L.R.C.P.I.

Dr. Edith Pechey-Phipson died somewhat unexpectedly from a chronic malady at Folkestone on April 14th. It is now some thirty-eight years since she went to Edinburgh to join Miss Jex-Blake in the struggle then commencing for the medical education of women in that city. Miss Pechey proved herself not only a loyal comrade, but a most excellent student; she brought to the study of medicine quickness of perception and a genuine love of science, and won the first place in chemistry in a class of some three hundred students of both sexes. In 1877 she obtained the diploma of the licentiateship of the Royal College of Physicians of Ireland, and the degree of M.D. from the University of Bern; afterwards she worked for some time under Mr. Lawson Tait in Birmingham, where she gained experience in abdominal surgery which afterwards stood her in good stead.

After practising for a short time in Leeds she was appointed Physician to the Kama Hospital in Bombay. The provision for medical aid for the women of India was then in its infancy, and much of its subsequent success is due to the admirable way in which she planned out the work; a dispensary was speedily opened and by the end of a week a hundred patients were being seen daily. The opening of the hospital followed with as little delay as might be. Miss Pechey quickly established a creditable record in major surgery, organised the work of the hospital, and revolutionized the whole system of nursing. She was appointed a member of the Senate of Bombay University, an honour which so far has fallen to the lot of no other woman. Some years before this she had married Mr. Herbert Phipson, whose scientific tastes proved a bond of common interest. Jointly they founded a philanthropic sanatorium in the Deccan, and pursued the study of many scientific and social questions. From the first Dr. Pechey found the climate of Bombay very trying, aggravated as were its effects by hard work and heavy responsibility. After some ten years of arduous service she retired from her post with broken health, but on the outbreak of the plague in 1896 she was among the first to take part in the house to house visitation. To the end of her life she retained her keenness of intellect and her interest in social and scientific questions.

Dr. William Graves Aickin retired from active practice about four years ago, chiefly on account of failing health and decreasing strength; both these infirmities steadily became more marked, and he died on April 16th. Dr. Aickin was the son of a well-known medical man of the old school in Belfast. After studying in both Belfast and Dublin he obtained the M.D. of the old Queen's University in Ireland in 1855, and the diploma of M.R.C.S.Eng. in 1856; and, entering practice, succeeded his father in many appointments, such as that of Constabulary doctor and medical attendant on the Fire Brigade. In the days before specialism became so well defined, he devoted considerable time to gynaecology, and invented new forms of instruments for use in that department of practice. Dr. Aickin was a man of the kindliest nature, and was most upright and honourable in all his dealings; he was held in the most affectionate esteem, and will be deeply regretted by the older members of the profession who remembered him. He leaves a widow and family, who have the full sympathy of the community and the profession.

Surgeon-General Henry Young, retired Indian Medical Service, died on February 15th. He was appointed an Assistant-Surgeon in the Madras Medical Department, January 8th, 1842, and became Deputy Surgeon-General, October 9th, 1874. He retired from the service in 1876.

Surgeon-General Thomas William Fox, M.B., late of the Army Medical Staff, died at Rochester on March 28th, aged 77. He joined the Army Medical Department as Assistant Surgeon, July 23rd, 1852; was made Surgeon September 18th, 1860; Surgeon-Major, July 3rd, 1872; Brigade-Surgeon, November 27th, 1879; Deputy Surgeon-General, June 23rd, 1880; and Surgeon-General, May 18th, 1887. He retired from the service, February 15th, 1888. He served in the war with Persia in 1857, with the 14th Light Dragoons, and was present at the bombardment of Mohumrah, receiving a medal with clasp.

Colonel Robert Batho, M.D, Army Medical Service (retired), died on April 3rd at Sydenham, aged 70. He was the youngest son of the late Mr. George B. Batho, of Amesbury, Wilts, and entered the Army Medical Department as Assistant-Surgeon, April 1st, 1861; becoming Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1876; and Lieutenant-Colonel, September 16th, 1882. He retired from the service with the honorary rank of Brigade-Surgeon and the rank of Colonel, September 16th, 1882.

Lieutenant-Colonel Francis Samuel Peck, Indian Medical Service, died on April 9th, on board H.M.S. *Persia*, in the Mediterranean, aged 50. He entered the Bengal Medical Department as Surgeon, October 2nd, 1880, and became Lieutenant-Colonel, October 2nd, 1900. He served with the Burmese Expedition in 1886-7, receiving a medal with clasp. Last year, while at home on leave, he was unfortunately knocked down by a passing train at Sheringham. Although he was able to return to India, his health broke down, and he died on the voyage back to England.

Captain Thomas Herbert Stevenson, M.B., R.A.M.C., died at Woolwich on March 21st, aged 36. He joined the Army Medical Service as a Lieutenant, April 25th, 1900, and was made Captain three years thereafter. He accompanied the Tibet Mission in 1903-4, receiving a medal.

Surgeon-Major Edward O'Connell, late Army Medical Department, died at Netley Abbey on January 17th. He joined the Army Medical Department as Assistant Surgeon, September 22nd, 1858; was made Surgeon-Major, April 1st, 1873; and retired from the service, December 3rd, 1877. He served in the war in New Zealand in 1863–6, and had medical charge of the right wing of a flying column; during the East Coast campaign he was present in the engagements at Gate Pah and Te Ranga, for which he was mentioned in dispatches; he was also with General Chute's expedition from Wanganui to Taranaki and back, and was at the attacks on Okotuku, Putahi, Otapawa, Kitlioniti, Pukiti, Ketemarla, Waikoko, and Merimeri; he had received the medal granted for the campaign.

Brigade-Surgeon James Hornidge Finnemore, Army Medical Department (retired), died on January 23rd. He was made an Assistant Surgeon on June 23rd, 1854, and retired with the honorary rank of Brigade-Surgeon, February 11th, 1880. During the China war in 1860 he was in the actions of Sinho and Tangku, at the capture of the Taku Forts, in the engagement near Tanchow, and at the surrender of Peking, receiving a medal with two clasps. He was also in the Abyssinian war in 1867-8, being at the capture of Magdala (medal), and in the Ashanti war in 1873-4 (medal).

HOSPITAL AND DISPENSARY MANAGEMENT.

INVERNESS DISTRICT ASYLUM.

On May 15th, 1906, there were 688 patients, of whom 12 were absent on probation, on the register of this asylum, and on May 15th, 1907, there were 672, of whom 16 were on probation. The total number of cases under care during the year was 835, and the average number resident 674. There was thus a decrease of 16 of the numbers on the register, or of 20 of those in residence at the end of the twelve months under review. This encouraging decrease is also borne out by a smaller number of admissions, 145 as compared with 152 for the previous year, or with the average of 157 for the past ten years. The Medical Superintendent, Dr. Robert B. Campbell, states that this is evidence that there has been no actual increase of insanity in the northern counties (Inverness, Ross, Cromarty, Sutherland, and Nairn) served by the asylum. Of the total admissions, 107 were first and 38 not-first admissions. In 81 the attacks were first attacks within three and in 9 more within twelve months of admission; in 26 not-first attacks within twelve months, and the remainder were either of more than twelve months' duration (19) or of congenital origin (10) on admission. As to the physical state of the admissions, Dr. Campbell says that 37 were in average health, 77 in indifferent health, and 31 in a weak and exhausted condition. With regard to their mental prospect, 70 were considered hopeful and 30 as unfavourable cases, the remaining 36 being the subjects of incurable forms of mental disease. As to type, the admissions were classified into: Mania of all kinds, 65; melancholia of all kinds 40, dementia 22, general paralysis 3, acquired epilepsy 5, and congenital or infantile mental defect 10. Concerning the probable causes of the insanities in these cases, alcohol was assigned in 12, or 8 per cent., syphilis in 1, adolescence in 14, the climacteric in 19, old age in 22, previous attacks in 41, and moral causes in 30, the remainder being distributed over various forms of bodily disease. Hereditary influences were ascertained in 38, or 26 per cent., and congenital defect existed in 13. During the year 63 were discharged as recovered, giving a recovery-rate on admissions of 43.5 per cent., which is higher than the average high recovery-rate of this asylum of 41.8 per cent. There were also 13 discharged as relieved and 10 as not improved. During the year there were 75 deaths, giving the death-rate of 11 12 per cent. on the average numbers resident. In the preceding year there were only 28 deaths, giving a death-rate of 4.2 per cent. The deaths were due in 16 cases to cerebro-spinal diseases, with only 1 death from general paralysis; in 44 cases to chest diseases, including 15 from pulmonary consumption and 14 from acute lobar pneumonia; in 4 to abdominal disease, and the remainder to general diseases, including senility. The general health was good throughout the year, and beyond a severe epidemic of influenza the institution was free from zymotic disease. The asylum was twice visited by the Commissioners in Lunacy, who left exceedingly favourable reports on the asylum and its management.

STAFFORDSHIRE COUNTY ASYLUM, CHEDDLETON, NEAR LEEK.

On January 1st, 1906, there were 649 patients resident in this asylum, and on December 31st, 1906, there were 668. The total cases under care during the year numbered 842, and the average number resident 650. During the year 193 cases were admitted, of whom 163 were first admissions. In 63 the attacks were first attacks within three and in 42 more within twelve months of admission, in 28 not-first attacks within twelve months of admission, and in the remainder the attacks were either of more than twelve months' duration (43) or of congenital origin (17) on admission. Of the total admissions, Dr. W. F. Menzies, the Medical Superintendent, states, the condition was considered chronic and irrecoverable in 102, or 52.88 per cent., this large proportion of unfavourable cases being almost entirely due to an increase in epileptic and senile cases. The admissions were classified, according to the form of mental disorder, into: Mania of all kinds, 85; melancholia of all kinds, 53; secondary, senile, or organic dementia, 9; general paralysis, 19; acquired epilepsy, 12; and congenital or infantile defect, 15. As to the major probable causes of the insanities in the admissions, alcoholic intemperance was assigned in 48—that is, in 24 8 per cent., or almost one-quarter of the whole admissions. Dr. Menzies, however, is careful to point out that "it is abundantly proved that excessive drinking cannot produce insanity except in those hereditarily or constitutionally predisposed thereto, while a very small amount will cause grave disorders in unstable brains" Syphilis was assigned as cause in 17; periodic causes, including senility and congenital defect in 57; previous attacks in 32; mental causes, worry and so on, in 35; and the remainder were distributed over other usually cited etiological factors. Hereditary influences were ascertained in 71, or 36 per cent. During the year 58 were discharged as recovered, giving the low recovery-rate, as compared with the rates of the two previous years, of 30 05 per cent. of the admissions; there were also 12 discharged as relieved, and 8 as not improved. During the year there were 96 deaths, giving a percentage death-rate on the average numbers resident of 14 77 as compared with the rather high average death-rate for this institution of 13.67. The deaths were due in 30 cases to cerebro-spinal diseases, including 15 deaths from general paralysis; in 24 to chest diseases, including 11 deaths from pulmonary tuberculosis; in 24 to abdominal diseases; in 14 to general diseases, including 1 death from tuberculous joint disease; and in 4 cases to accident or violence. Some overcrowding was present during the year, particularly on the female side, and to this may possibly be attributed the considerable number of cases of dysentery—females 41, males 17—which occurred during the year. Additional buildings are in progress to cope with the increased demand for accommodation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

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Telephone (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

Pes asks for advice as to treatment of painful callosities on the sole of the foot.

H. G. L. asks for information as to the usual length of holiday given to an assistant who has been with his principal for a year.

Seborrhoea Oleosa desires advice, dietetic and other, as to treatment of a greasy condition of skin of face and especially of nose, with undue duct patency. Should smoking be forbidden?

Rusticus asks for information about the treatment of distended bursae—for example, bursa patellae—by means of injections of adrenalin. What amount and strength of adrenalin solution should be used? What are the details of the procedure? Is the method efficacious?

Dry Mouth.

H. R. S would be glad to receive some hints for the treatment of dry mouth and tongue. The patient, a lady of about 70 years, is in absolute misery; there seems to be no secretion from the salivary glands. There is no thirst, and there is no organic disease. This condition has existed for twelve months, and many drugs have been tried without the slightest benefit.

Treatment of Anginal Attacks.

Angina asks for suggestions to relieve pain in the following case: A married lady, aged 36, has suffered for the last eight years—since the birth of her last child—with pain of anginal character in the cardiac region after exertion or excitement. During the last year the intervals have been shorter, and lately the pain has come on at any time. At the beginning of an attack she is very fidgety, but becomes quite quiet, lying curled up on the left side. The pulse is slow, full, and even. Pain lasts from a few minutes to half an hour, and very often returns in a few minutes. The heart is slightly hypertrophied, and there is a well-marked systolic murmur at the apex and base, where it partakes of an aortic character. Constipation, requiring laxatives every night, is a feature of the case. Amyl nitrite has lost its effect and chloroform is not well borne. Potassium iodide and the nitrites between attacks have no effect. Morphine hypodermically gives relief, but one does not care to establish the habit.

ANSWERS.

Diana will probably find the information required in the following periodicals, which can all be obtained from Messrs. Williams and Norgate, 14, Henrietta Street, Covent Garden: The *Biochemical Journal*, issued by the University of Liverpool, 15s. a volume; the *Chemical News*, £1 1s. a year; *Journal de Chimie Physique*, 25s. a year; *Journal de Physique théorétique et appliquée*, fondé par d'Almeida, monthly, 18s. a year; *Annales de Chemie et de Physique*, 36s. a year; *Journal de Physique, Chimie et Histoire naturelle élémentaire*, à l'usage des candidats aux écoles du gouvernement, etc., 10s. a year.

H. G. P.—The observations and experiments of Dr. Bowles on the prevention of dermatitis from exposure to the sun at high altitudes in Switzerland indicated that the best protection was theatrical stick grease paint. The following is quoted from the *Pharmaceutical Journal Formulary:* White beeswax, 2 oz.; prepared suet, 3 oz.; bismuth oxycarbonate, 5 oz. The melted basis may be coloured to any desired tint by the use of aniline oil, soluble "fettfarbe" colours, or with vermilion, carmine, lampblack, siennas, and other inorganic colours. The melted and tinted basis is run into soluble moulds, such as glass tubes, and rolled when cold into waxed paper and tinfoil.

LETTERS, NOTES, Etc.

Income Tax.

Oxonian asks the following questions with regard to the making of his income-tax return: (*a*) Does painting come under the head of repairs to the professional part of the buildings? (*b*) May one deduct the payment of a locumtenent, say, for fourteen days or three weeks per annum? (*c*) In case a man owns his house may he deduct for repairs and drainage, etc.? (*d*) Would carpets, furniture, utensils, etc, come under the head of wear and tear of "plant" for "replacement" in consulting room, surgery, etc.? (*e*) Insurance of men-servants. (*f*) One's accident policy (self and motor car), also third-party policy (driver and car)?

*** The answers are: (*a*) Yes. (*b*) No; the expense is held to be part of the cost of a holiday, which is not allowable. Our correspondent may, however, be entitled to deduct income tax from the amount paid to the locumtenent, on the ground that the latter is receiving a part of the profits of the practice. (*c*) Yes, for repairs to the professional part of the house. The same applies to repairs to the drainage system, but the cost of an improved system of drainage would probably be regarded as capital outlay and not allowable. (*d*) No; it is not likely that the Commissioners would allow depreciation on these articles, but when renewal becomes necessary the cost might be claimed. (*e*) Yes, if employed solely for professional purposes. (*f*) Accident policy on own life: Not allowable as an expense, but may be claimed as life assurance if the policy covers the death risk. Insurance of car: Yes, if used solely for professional purposes. Insurance of driver: Yes, against liabilities under Workmen's Compensation Act; not for anything beyond this.

T. T. T. writes: I am in partnership. My surveyor of taxes tells me (1) that a deduction of one-third rent and taxes is too much; (2) that the cost of instruments and books is capital expenditure and cannot be deducted, but the cost of repairs to instruments may be; (3) that professional subscriptions, such as British Medical Association and Medical Defence Union, are barred; (4) that coal and gas used in rooms for professional use are not allowable; (5) that a maid servant could be replaced by a boy; (6) that expenses should not exceed one-third gross takings; (7) that partnership accounts cannot be separated, but that all items of personal professional expenses must be shown with books and vouchers to verify them; (8) that I could engage a couple of rooms as a surgery instead of having one at my own house. T. T. T. wishes to know what is the law on these matters, and also asks what proportion of rent and taxes can be deducted on a house rented at £120 per annum, and what would be a fair charge to make for a one-horse brougham and man.

*** Our correspondent should read the article on income-tax deductions in the British Medical Journal for August 24th, 1907, and the answer to B. W. G. in the issue of September 14th, 1907, where he will find that several of the points he raises are dealt with. Briefly, the answers to his questions are: (1) The question depends upon how much of the house is occupied for professional purposes. (2) The cost of repairs and replacements would be allowed. Whether particular items are or are not to be regarded as capital expenditure is a matter for the determination of the Commissioners. (3) These are, strictly speaking, not allowable. (4) These items are allowable. (5) The statement attributed to the surveyor is not understood. (6) If the expenses have been actually incurred there is no limit to the amount that may be claimed. (7) The return of the profits of a partnership must be made in one sum, and the partners must settle between themselves the amount of tax to be borne by

each. It is not usual to call for books and vouchers, but the commissioners are entitled to call for any evidence they think fit before reducing an assessment. (8) If our correspondent uses part of his house for profession purposes he is entitled to claim an allowance for the part so used, and the fact that he might hire rooms elsewhere has no bearing on the question. With regard to his final queries, the proportion of rent and taxes allowable depends entirely on the extent to which the house is used for professional purposes. The full cost of the brougham and man can be claimed if they are kept solely for professional purposes. Our correspondent should be in a position to say what this cost amounts to.

JUVENAL inquires whether the income-tax deductions mentioned in the BRITISH MEDICAL JOURNAL for August 24th, 1907, p. 461, are all that can be claimed, or whether there is anything else to take into consideration in making out a return.

*** The list referred to dealt with all ordinary deductions, but it would be practically impossible to compile a list of deductions which would be exhaustive. The two principles to be borne in mind are (1) that expenditure in the nature of capital outlay is not admissible; and (2) that, with this exception, all expenses incurred solely and entirely for professional purposes are allowable. The difficulties in the way of giving a complete list of deductions arise from differences between the circumstances of particular cases. The article to which our correspondent refers, however, deals with most of the expenses incurred in carrying on an average practice, and indicates how far they may be claimed as deductions.

THE THERAPEUTIC USE OF NORMAL SERUM.

WITH reference to a paragraph published in the JOURNAL of April 4th on the use of normal serum in certain diseases, Dr. David Walsh writes to point out that Mr. Montgomerie Paton published in the *Medical Press and Circular* on January 31st, 1906, a paper on the results which he had obtained during the previous eight years from the therapeutic use both of antidiphtherial serum and of the normal plasma of the horse, sheep, and ox. Dr. Paton also published a paper on this subject, entitled Serumtherapy by the Mouth, in the BRITISH MEDICAL JOURNAL of May 5th, 1906.

MEDICAL WITNESSES IN INDIA.

THE comments which we recently made upon the unfortunate position of medical men who are called as witnesses in criminal cases in India have brought us a letter from which it appears that in the Federated Malay States, where, we are informed, the Indian law is in force, a magistrate some ten years ago stated that the court had no power to pay a fee for expert evidence.

THE BRONCHITIS KETTLE.

DR. A. W. GILCHRIST (Nice) writes: By expressing the opinion that the originator of the bronchitis kettle should have been hanged (BRITISH MEDICAL JOURNAL, April 18th, p. 909), Sir James Barr evidently supposes that this inventor of an interesting appliance was an Englishman. Sir James Barr is probably mistaken. The inventor in question was presumably a Frenchman, who would therefore have preferred to be decently and artistically guillotined rather than roughly and vulgarly hanged. The use of the bronchitis kettle was doubtlessly suggested by the aspirations and inhalations so commonly practised in Continental watering places. Allevard-les-Bains is very proud of its *médication spéciale*, invented by Dr. Niepce; and Mont Dore has erected a statue to Dr. Bertrand, who first treated asthma and bronchitis by aspirations of heated spring water. When we hitherto have recommended our bronchitic patients to undergo a course of inhalations at a suitable altitude—Royat, La Bourboule, and Mont Dore rise successively in the same district to over 3,000 ft.—we have expected "une action franchement résolutive (sur l'appareil respiratoire) qui se manifeste par la fluidification des expectorations et le rétour de la perméabilité dans les régions congestionnées." What are we to do now, when Sir James Barr informs us that a similar treatment in acute conditions "may drown our patients in their own secretions"?

CLEAN COLLARS AND CUFFS.

WE have received from Messrs. Ellory and Fletcher, of Russell Street, South Shields, some samples of collars and cuffs of an unusual character, but entirely ordinary appearance. The peculiarity about them is that they can be purchased retail at prices which would barely cover the cost of washing of ordinary cuffs and collars. Of what material they are composed we have not endeavoured to ascertain, but it appears to be neither paper nor india-rubber; and in any case it is not easy to distinguish these articles from ordinary but well "got up" collars and cuffs. They thus have considerable claim on the attention of those whose occupation, habitual or temporary, renders soiling of linen specially unwelcome but difficult to avoid. To medical men and nurses the cuffs perhaps are most likely to appeal. Like the collars, they seem to be made in all shapes and sizes. We do not find that they are, as advertised, uninflammable. They can be destroyed as soon as soiled by throwing them into the fire as well as by tearing them up.

THE ORIGIN OF CANCER.

O. W. I. M. writes: I have followed the literature of cancer for a number of years, and think the following relating to the subject may not be out of place. Irritations and abrasions seem to be of prime importance. Take the alimentary canal as an example. How frequent do we find cancer attacking the commencement and terminal parts, and how comparatively seldom is it found attacking the middle portion—the small intestine. The commencement from the lips to pylorus of the stomach is subject to constant irritation and abrasion from unsuitable and imperfectly masticated food, ulcers, dyspepsia, etc. At the terminal part faecal masses, etc., irritate that part of the mucous membrane. In the small intestine the food is softened, digested, rendered fluid, and moved along more rapidly than in the stomach, so that a minimum of irritation is produced. It is often a very striking fact that long prior to positive signs of cancer of stomach there is a marked history of alimentary derangement. It is in old age more particularly and at these sites of irritation of epithelial surfaces that some change is produced in the functions of the nerves supplying the part. The exact nature of the change it is difficult to say. At any rate one important function of the nerve to the part is affected most—namely, the power of keeping the epithelial cell division under control, thereby preventing the epithelial cells when dividing from becoming free—free as the cell from which they grew, namely, the ovum. These epithelial cancer cells are thus parasites, and the victim the host. In the aged there is a tendency to excessive epithelial overgrowth, and if we imagine a loss or diminution of that restraining influence preventing the epithelial cells when dividing from breaking away and becoming free, besides the local effect acting upon the nerves to the epithelial cells still more diminishing the restraining influence, then we can understand how a cancer growth can arise at a point of irritation. In cancer of the breast we are apt to look upon the whole mass, designating it the primary cancer. Would it not be more correct to call the mass for the most part a very localized metastasis—the primary growth being represented by the accumulation of cancer cells at that part in the duct or acinus where the single epithelial cell or cells are, which being irritated, proliferated and became free? In deciduoma malignum we have a good example of epithelial cells becoming cancer cells. These epithelial cells possibly became free from nerve control at the time the fœtus died. In the embryo the nervous influences presiding over its epithelial growth is of a primitive kind, yet justly balanced for the needs of the organism. It is in a cavity protected and surrounded by fluid, and so is more or less free from irritation, yet a mitosis is seen in its epithelial cells somewhat akin to that in cancer cells. In a strong healthy adult cancer is undoubtedly rare. Here the nervous influences exerted on the epithelial cells are strong, yet irritation in its varied forms and degrees, if continued long enough, will overcome the restraining nerve influences preventing the epithelial cells from breaking away, and so a cancer might arise. No mention is made in textbooks of physiology of these restraining nervous influences over epithelial growth, but that does not signify. From the foregoing, the prospects of cancer prevention are not very encouraging. The cure of cancer is quite a different matter; something is wanted that will dissolve or kill these living parasitic epithelial cells without injuring the other cellular elements of the body during life. Trypsin seems to be therefore a rational treatment.

UMBILICISTS.

AT a medical meeting a speaker denouncing specialism said that as far he could see, the umbilicus was about the only portion of the human body not allotted to a specialist. A wag in the assembly reminded him that he was forgetting the naval surgeons.

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The Goulstonian Lectures

ON

THE INFLUENCE OF PREGNANCY UPON CERTAIN MEDICAL DISEASES, AND OF CERTAIN MEDICAL DISEASES UPON PREGNANCY.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY HERBERT FRENCH, M.A., M.D.OXON., F.R.C.P.LOND.,

ASSISTANT PHYSICIAN TO GUY'S HOSPITAL.

LECTURE I.—INTRODUCTION.

MR. PRESIDENT AND GENTLEMEN,—The title of these lectures perhaps requires a few words of explanation, in case it might be at all misleading. The subjects that it is proposed to discuss will not be dealt with from an obstetrical point of view, but purely from their medical or pathological aspect. The gynaecologist and the obstetrician must naturally be interested in the medical diseases which may arise in a pregnant woman, and in some cases the treatment in these circumstances may be gynaecological or obstetrical rather than medical. I have not the ability to deal with gynaecological or obstetrical treatment, and shall therefore say nothing about it. On the other hand, the fact that a medical disease arises, or is already present, when a patient has become pregnant by no means necessarily implies that the immediate treatment of the patient should be carried out from a gynaecological or obstetrical standpoint. It is true that there are conditions under which the aid of the obstetric physician may be required to terminate the pregnancy artificially, and it is also true that similar aid will be essential when the pregnancy reaches its natural term, or earlier if any accidental termination to it should arise. There are, however, many conditions in which the pregnancy may be, as it were, an accidental concomitant or complication of the medical disease; there are other conditions in which pregnancy is actually the cause of the medical disease, and many of these cases are of direct interest to the physician.

If in a given case it should be decided that the pregnancy may be allowed to run its natural course, the responsibility for the patient's health would rest with the physician until such time as the pregnancy either reached its term or ceased to be itself normal. It is, therefore, essential that the physician should be fully acquainted with the probable effects both of the pregnancy upon the medical disease from which the patient may be suffering and also of the medical disease upon the pregnancy. Two examples may, perhaps, assist this explanation. Suppose, for instance, that a pregnant woman contracts typhoid fever. Three questions at once arise—namely, Is the fact that this patient is pregnant likely to make the typhoid fever more severe than it otherwise would be? Is the patient's pregnancy likely to terminate abnormally on account of the typhoid fever? Ought the treatment of this patient to be different in any way from that of other persons suffering from typhoid fever? It is clear that, so far at least as the typhoid fever is concerned, the treatment should be carried out by those most familiar with typhoid fever if it can be shown that the treatment of such cases ought to be upon the same lines as that of non-pregnant persons suffering from the disease. So far as the typhoid fever is concerned the pregnancy may be an accidental concomitant, but it is important to the physician to know what is likely to be the result of the combination.

As my second example, may I take that of a patient who presents herself with that peculiar skin eruption, herpes gestationis? If she were not pregnant she would not have the eruption; but, having the eruption, the immediate treatment of the patient for her skin trouble is probably best carried out by one who is most familiar with skin diseases, provided it is known that the pregnancy is not likely to run an abnormal course.

It is only from the medical point of view that I am in a position to discuss the mutual effects of pregnancy and medical diseases; and seeing that there are few medical diseases that cannot either themselves arise during pregnancy or else permit of pregnancy occurring when they are already in existence, it is clear that the whole field cannot be covered in three lectures. I am obliged, therefore, to restrict the discussion to a few affections which appear to possess particular interest.

In the first place, there are certain medical diseases for which pregnancy appears to be itself directly responsible. One of the most definite of these, comparatively rare no doubt, yet full of interest from a pathological point of view, is

HERPES GESTATIONIS.

This disease is apparently related to pemphigus, to hydros, to erythema bullosum, and to dermatitis herpetiformis or Dühring's disease. The eruption is variable in the extent to which erythematous patches, pinkish-red papules, and wheals not unlike those of urticaria are present, but to whatever degree these may coexist the distinctive lesion is vesicular or bullous. Sometimes the blebs are comparatively large and widely separated, and they are preceded by more or less erythema, in which case the eruption is very similar to that of erythema bullosum. More rarely the bullae occur before any erythema is obvious and pemphigus is simulated. In other cases, again, the vesicles are smaller, and they may be arranged in groups upon an inflamed base like those of herpes zoster—the herpetiform variety. The cases that I have seen have exhibited a mixed condition, the majority of the vesicles being only moderate in size, with here and there amongst them a few that were large enough to be called bullae. The smaller vesicles have shown a slight tendency to be grouped together as in herpes, but it is not often that they are confluent, or that a single group contains as many vesicles crowded together as is the case in well-marked herpes zoster. The vesicles, whether large or small, have been preceded by an itching erythema, which has in the beginning been smooth, but which has rapidly become first papular and then vesicular. The eruption itself has been more like that of dermatitis herpetiformis than anything else, the chief clinical distinction between the two being solely the direct relationship of herpes gestationis to pregnancy.

*An Illustrative Case.**

The following is an illustrative case:

The patient, 41 years of age, was under the care of Sir Cooper Perry in Guy's Hospital, and was sufficiently ill to require treatment in bed for over a month. Her history was briefly this: She was the only member of her family troubled with the complaint. She had been perfectly well up to, and for some time after, her marriage, when she was 23 years old. She had had seven living children and four miscarrieges. The first miscarriage occurred after she had had three living children, and it was then that she suffered from her skin trouble for the first time. Since then, though quite free from it between whiles, she had had the eruption with each successive pregnancy, the itching erythema, vesicles, and bullae recurring constantly upon her hands and arms and sometimes upon her trunk, legs, and feet. She was three months pregnant at the time of her admission to the hospital; one month previously her ninth attack of herpes gestationis began with pains and irritation on the hands and forearms, rapidly followed by the eruption of discrete water blisters of moderate size, which, owing to scratching, broke down and discharged clear fluid. Each bleb dried in and healed in about a week, leaving a reddish mark which was slow to fade, whilst fresh vesicles kept on appearing daily in the neighbourhood. There was no pyrexia and no marked constitutional disturbance beyond what could be attributed to broken sleep, the result of irritation in the affected areas of skin. The arms and hands had been involved for three weeks before vesicles developed elsewhere, and then without apparent cause a precisely similar eruption came out upon the face and ears, spreading thence to the chest, abdomen, buttocks, lower limbs, and feet. The number of blebs upon the trunk was never so great as that upon the limbs. Flexor and extensor surfaces were equally involved, and the parts were not only irritable but also painful. The pains were doubtless due, in part at least, to the sore places being made worse by scratching. Left to themselves the blebs healed without breach of surface and without pyodermia. Some of the vesicles that had been interfered with either bled or became pustular; the latter change was always consequent upon inoculation by scratching. There was no involvement of mucous membranes, though there are doubtless cases in which the buccal mucosa and the colon may be affected, as

* See also C. A. Douglas Bryan, *Lancet*, June 4th, 1904, p. 1570, and numerous papers in the journals of dermatology.

has been observed in some instances of erythema bullosum. Under treatment by the yellow oxide of mercury ointment externally and by Fowler's solution of arsenic internally, together with rest in bed, light diet, and laxatives, there was some abatement in the skin trouble after about three weeks, but even during the continuance of the treatment a severe relapse ensued whilst the patient was still in the hospital. The trouble, waxing and waning in this way, persisted until the child was born, living, at term, and then, as on eight former occasions, the herpes gestationis rapidly got well by itself.

This case is fairly typical, and there are but few points to add before passing on to consider the pathology of the condition. It is not only possible for a patient like the above to have no trouble during the first pregnancies and then to develop the disease in later ones, but it is also possible that having had the skin disease in one pregnancy she may escape it at the next and yet develop it again in a later one. The time of onset is usually of the accelerating type—that is to say, in successive pregnancies it is likely that the date at which the herpes gestationis will reappear is a little earlier each time. It is, moreover, probable that the attacks will tend to become severer rather than the reverse. A few cases exhibit severe constitutional disturbance, with pyrexia and loss of appetite. It is, moreover, a curious fact that whereas the majority of the patients develop the trouble during pregnancy and lose it during the puerperium or soon after, it occasionally happens, as in another case under the care of Sir Cooper Perry, that the eruption first appears after labour, lasts a variable number of weeks or months, and then goes away spontaneously, not to reappear until just after another child has been born.*

Pigmentation.

Another point that may be of interest perhaps is the increased pigmentation of the skin that is apt to be left after each attack. The pigmentation may be generalized all over the body in much the same way as it is in severe cases of Addison's disease. Usually, however, it is most marked in those parts of the skin in which the eruption itself has been worst. It is well known that uterine disorders are apt to cause pigmentation—the uterine chloasma—but this is, as a rule, much more marked upon the face, especially upon the forehead and around the eyes, than it is elsewhere. There is little or no evidence that the pigmentation which follows herpes gestationis is in any way allied to uterine chloasma; indeed, there is seldom any obvious uterine derangement in the patients who suffer from it. The chief causes of the pigmentation are probably, first, the constant scratching or rubbing that the irritation in the affected parts gives rise to, just as it does in phtheiriasis, where pigmentation also becomes well marked as time goes on; and secondly, the arsenic which is administered in most of the cases. The darkening of the skin is so great in some patients that they may look as if they might be of coloured extraction. There is apparently no record as to whether or not the pigmentation ever occurs upon the buccal mucosa as well as upon the skin, but between the attacks of herpes gestationis it would sometimes not be difficult to mistake the general appearance for that of Addison's disease if the history of the skin trouble were concealed.

Pathology.

The direct relationship of the disease to pregnancy is very remarkable. It seems to be the only point distinguishing it from dermatitis herpetiformis. I should like in this connexion to say a few words about eosinophilia.

Eosinophilia.

It is often stated in a general way that eosinophilia occurs in a large number of skin diseases. To test this I have made differential leucocyte counts in a number of all kinds of eruptions, and in the great majority of the commoner varieties there is no eosinophilia at all.[1] If it be granted that nothing less than 5 per cent. of coarsely granular eosinophile cells in the blood can be termed eosinophilia, it is quite exceptional for cases of eczema, psoriasis, and the like to exhibit it. The reverse is true of the bullous dermatoses, however. There are, of course, a good many cases of pemphigus in which no eosinophilia is found at a single examination, and the percentage of coarsely granular eosinophile corpuscles varies not only in different individuals suffering from the same disease but also in the same individuals at different times. Nevertheless, in patients suffering from pemphigus or from dermatitis herpetiformis, eosinophilia is the rule rather than the exception, as Bettmann, Darier, and others have pointed out. The degree of eosinophilia in the blood is moderate rather than great, the coarsely granular eosinophile corpuscles numbering something between 5 per cent. and 15 per cent. of all the leucocytes in typical cases.

It is worthy of note that the eosinophilia is not in the blood alone, but that the eosinophile corpuscles are also present in the inter-epithelial lymphatic spaces, where they may be seen in the microscopical sections of the skin; and, further, that in the fluid of the blebs themselves there are leucocytes, of which over 70 per cent. may be of the eosinophile variety. It is recorded as a curious fact that, although the fluid in the natural blebs contains so large a preponderance of eosinophile cells, there is no such preponderance of these corpuscles in the fluid of an artificial blister made upon the patient's skin, by cantharides, for example.

Herpes gestationis agrees with the other bullous dermatoses in exhibiting eosinophilia. The differential leucocyte count in the case mentioned above was as follows: Small lymphocytes, 11 per cent.; large hyaline lymphocytes, 4 per cent.; polymorphonuclear cells, 71 per cent.; and coarsely granular eosinophile cells, 14 per cent. The significance of the eosinophilia is obscure. There are, of course, three main groups of conditions in which eosinophilia occurs. These are: First, those parasitic affections in which there is constitutional disturbance, notably in patients suffering from *Ankylostomum duodenale*, *Trichina spiralis*, *Filaria sanguinis hominis*, *Bilharzia haematobia*, hydatids, and sometimes with taeniae and scabies, but not with the milder parasitic affections such as those of *Trichocephalus dispar*, *Oxyuris vermicularis*, *Ascaris lumbricoides*, or *Tinea tonsurans*, and allied trichophytic affections. Secondly, true spasmodic asthma, in which eosinophilia is found during the attacks but not between them. Thirdly, certain skin diseases, chiefly the bullous dermatoses, as mentioned above. It is difficult to say why eosinophilia should be a prominent feature in these three groups of conditions and not in a great many other affections. It is thought that a poison of some kind is at the bottom of it in the parasitic diseases; that a toxin can produce a local eosinophilia was shown in the Johns Hopkins Hospital, where the vascular spaces around appendicular abscesses were demonstrated to be full of eosinophile corpuscles, although there was no excess of eosinophile cells in the general circulation. True asthma, however, is usually regarded as primarily a nervous phenomenon, and it is not at all clear why it should be associated with eosinophilia. It may be that there is an unknown poison which starts the neuro-muscular spasm in the bronchioles; otherwise it would seem that eosinophilia may have a nervous as well as a toxic origin.

The eosinophilia of skin diseases has been so little studied that it does not seem to be known whether the blood contains the excess of eosinophile cells before the eruption comes out, or whether the bullae always precede the eosinophilia. If the former were the case, then both the eosinophilia and the vesicles would probably have a common cause, whether that were nervous or toxic. The general opinion is, however, that the eosinophilia is the result of the skin lesion, due, perhaps, to the absorption of something from the skin in a way that would be comparable to the eosinophilia of ankylostomiasis, where there is supposed to be absorption of some toxin from the bowel. This raises the question of the pathology of the bullous dermatoses in general and of herpes gestationis in particular. It seems fairly clear that their causes arise within the body, and that the lesions are not due to agents acting directly upon the skin from without. Bacteriological investigations have proved negative, the only micro-organisms that have been cultivated from the blebs being such as are readily explained as derived from accidental contamination from the skin.

Histology.

The actual process by which the vesicle or bulla develops seems to be as follows. There is a local dilatation of the papillary and subpapillary blood vessels, and an almost simultaneous increase in the quantity of lymph

* For a case recurring at menstrual periods, see Douglas Bryan, loc. cit.

in the spaces around the prickle cells of the epidermis. The local erythema is caused by the vascular dilatation and the itching is doubtless due to the tension put upon the cutaneous nerve endings by the sudden increase in the quantity of pericellular lymph. There is no proliferation of the cells themselves, such as occurs in eczema, though leucocytes may accumulate in the part by diapedesis. The pericellular lymph goes on increasing in quantity until the protoplasmic bridges between the prickle cells are mechanically torn asunder; larger and larger numbers of dilated intercellular spaces in this way become united into a single cavity and a vesicle results. If the lymphatic dilatation is spread uniformly over a comparatively wide area, a single large bulla is formed; if within the same area the dilatation is irregularly distributed with several maximum points, a group of smaller vesicles is produced; if the original area of vascular dilatation is small, a single vesicle, too small to be termed a bulla, results. The size of the bleb is therefore to some extent an accident. The depth at which the vesicles form is also more or less accidental; in some cases the fluid accumulates quite close beneath the stratum corneum; in others, so deeply that only the papillary layer separates it from the corium. The transitional layer is the level at which the lymph is able to separate the cells with greatest ease, so that it is here that the vesicle or bulla originates most commonly. The surrounding prickle cells swell up, become more or less spherical, and assume an appearance which led Professor Unna to term them "balloon cells." Notwithstanding their altered appearance, they still retain their nuclei and their vitality for a long while, though many of them ultimately become more and more swollen and homogeneous, and finally break up.

Allied Conditions.[*]

It would not, I think, be surprising if the degree of lymph accumulation between the prickle cells sometimes stopped short of vesicle formation. Local patches of erythema, accompanied by much itching and even pain, would then be the only features of the disease, and, as Sir Cooper Perry has pointed out to me, there are not a few cases in which women during each successive pregnancy suffer from skin trouble of this kind. The characters of the lesion are then such as lead to a diagnosis of pruritus or urticaria, as the case may be. The relationship between urticaria and vesicular or bullous eruptions is well seen in young children. Infants have so tender a skin that ordinary urticaria in them not infrequently ends in the production of vesicles. Some of the cases of pruritus or urticaria of pregnancy are very probably examples of abortive or incomplete herpes gestationis. It would be very interesting to know whether or not there is eosinophilia in these patients too, but I have not yet been able to make any investigations upon this point.

The changes described above suggest that the trouble arises from there being something the matter within the vessels themselves. It would seem that the mischief is either primarily nervous or else that there is some poison circulating within the vessels at the time. The generally accepted view appears to be that the disease is primarily nervous, in which case it would be analogous to herpes zoster, or more correctly perhaps with factitious urticaria, or with angeioneurotic oedema. On the other hand, by analogy with the urticaria which sometimes follows the ingestion of certain foods, or with the vesicular or pustular eruptions that may follow the administration of certain drugs, such as the bromide or the iodide of potassium, it is at least quite as likely that there is a toxic agent or poison concerned in herpes gestationis. If the disease were purely the result of an angeioneurosis it would seem surprising that the eruption should so often be restricted entirely to the times of pregnancy. It is true that cases have been recorded in which the attacks came on apart from, as well as during, pregnancy, but this is distinctly unusual, and such cases would be termed true dermatitis herpetiformis rather than the distinct variety we are now speaking of. Pregnancy seems to be an essential cause of the latter. The patients are not necessarily of nervous disposition; the lady whose case has been given above was a most sensible woman; there was no history of nervous disorder in her family, nor of nervous shock nor of anything of that kind in herself. Moreover, one cannot trace any hereditary tendency to the disease, such as is well known in cases of angeioneurotic oedema. It is not at present possible to bring forward any conclusive arguments, however, one way or the other as to whether herpes gestationis is primarily nervous or primarily toxic in origin. No toxin is known, but this does not prove that none is present. It is even possible that no abnormal substance is present in these cases at all, but that the patients are unduly susceptible to some compound which is a normal metabolic product of the pregnant state. The idiosyncrasy of some persons in regard to strawberries might be used as a comparison. Most people can partake of this fruit in moderation with impunity, but a few cannot eat a single strawberry without suffering acutely from urticaria.

The pregnancy itself is not interfered with by the skin disease provided that suitable treatment is adopted to prevent pyodermia and to enable the patient to get a sufficiency of sleep. The children are born living and healthy, and it seems that the offspring of a mother who has been subject to the complaint are not particularly liable to any of the bullous dermatoses, nor are the females more liable than others to herpes gestationis. It is, however, very difficult to obtain direct evidence on this point, because few physicians see any large number of the cases, and fewer still are likely to pay particular attention to the point in question.

This may, perhaps, be a good opportunity for mentioning a subject which Dr. Lauriston E. Shaw has spoken to me about sometimes—namely, that of the necessity for collective investigations being made upon special clinical and pathological points of this kind. There are many questions which, owing to the smallness of the number of cases that any individual is likely to see, can only be elucidated by collective inquiry. The Clinical Society, the Royal Medical and Chirurgical Society, and other similar bodies have from time to time instituted inquiries of the kind, but for the most part the data have been collected *after* the cases have been seen—from ward reports, *post-mortem* records, and so forth. The very points upon which one wishes information are often not referred to at all in these, simply because the student or other person who wrote the report had not the knowledge or the interest to make a note about it. There are many conditions in which those who, having made a study of the cases up to a certain point, and having come across difficulties upon which they can nowhere find fuller information, could advise others as to special points to be upon the watch for and to pay particular attention to in *future* cases as they come under observation. The selection of the questions that might seem suitable for collective investigation in this way must necessarily lie with those who already know much. Dr. Mahomed when he was alive initiated a system of the kind, but it died with him. The anatomists have a list of points upon which collective investigation is required, and in the dissecting room at Oxford there was a book in which were entered certain features of the anatomy of the vermiform appendix in each cadaver that was dissected, in order that by the accumulation of these and of a similar series of records from various other dissecting rooms certain debated points as to this particular part of anatomy might finally be settled. Some similar scheme might be possible as an assistance in settling debated points in medicine a few at a time. It would require a central authority for the selection of the points to be investigated, and the collaboration of all physicians at all hospitals would need to be sought. The central authority would doubtless be a permanent committee of physicians, and if the scheme were feasible at all the selection of such a committee for the direction of collective inquiry into obscure or debatable points in medicine and pathology would best, perhaps, be made under the auspices of either the Association of Physicians of Great Britain and Ireland or else of the Royal Society of Medicine of London. If Dr. Shaw's suggestion commends itself to others it should not be a difficult matter for a beginning to be made.

One might be asked, for example, whether an unmarried lady who had suffered from severe dermatitis herpetiformis previously to marriage would be likely to have still worse attacks of this disease should she marry and become

[*] See also H. Radcliffe Crocker, Lettsomian lectures upon the Conditions which Modify the Characters of Inflammations of the Skin and their Influence on Treatment, Lecture II, the *Lancet*, March 7th, 1903, p. 643.

pregnant. There are, so far as can be ascertained, no statistics to help one to answer such a query, important though it might be in some particular case. The general impression that is left upon one's mind after seeing a few cases and reading of as many more as one can find is that dermatitis herpetiformis and herpes gestationis, though in many respects so similar to one another, are yet sufficiently different to warrant the statement that pregnancy is by no means likely to bring on an attack of the former, though almost certain to cause a repetition of the latter. Again, one might be asked whether a patient who has suffered from dermatitis herpetiformis before marriage or from herpes gestationis after marriage would be likely to transmit the tendency to either disease to her children. As has been mentioned, one's general impression is that there is no likelihood whatever of such transmission, but it would be much more satisfactory if there were clear facts to base such an opinion upon, and such facts could best be accumulated by a collective inquiry.

Other Skin Diseases in Relation to Pregnancy.—Impetigo Herpetiformis.

It has been suggested above that the pruritus, erythema, abnormal pigmentation, and urticaria which may develop during pregnancy may be regarded as minor manifestations of that which, in its full development, is herpes gestationis. There is another skin lesion known as impetigo herpetiformis, which may, perhaps, be regarded as coming at the opposite extreme of the same series; that is to say, it seems to be a virulent degree of herpes gestationis, dangerous to life. Fortunately, the disease is very rare, and a short account of it will suffice. According to Dr. J. F. Payne,[2] the majority of the cases have been met with on the Continent, and all but two of them have been in pregnant women. The eruption is not vesicular but pustular, groups of small pustules upon a red swollen base from ½ in. to 1 in. in diameter appearing first in the groins, armpits, and mammary regions, and thence spreading until the whole of the body may be covered. The pustules dry up with the formation of scabby crusts, fresh pustules appear in the adjacent skin, and so on, the process extending in a circinate manner. No ulceration results, but there is severe constitutional disturbance. The patient has continuous fever of the remittent type, and with each new crop of the eruption there may be an exacerbation of the pyrexia with occasional rigors. Vomiting and delirium are usual, and the patient nearly always dies within a few months. Parturition does not prevent the fatal termination. Cases of recovery from one attack have been recorded in which a succeeding pregnancy led to a return of the impetigo herpetiformis with fatal result.

The *post-mortem* examinations have shown no evidence of pyaemic or septicaemic infection. The general opinion appears to be that both the skin trouble and the constitutional disturbances are the result of an internal toxaemia, and it seems reasonable to suppose that a similar toxaemia rather than a primarily nervous cause is at the root of the whole series of lesions that have been mentioned, from apparently simple pruritus at the one end of the chain to herpes gestationis and to impetigo herpetiformis at the other.

There are only two other skin diseases upon which pregnancy seems to exert any definite influence. These are eczema and psoriasis, and it is only upon the latter that the effect of pregnancy is at all marked.

Eczema and Pregnancy.

Eczema is so very erratic in its behaviour that it is always very difficult to attribute any exacerbation in it to any particular cause. It is true that certain women, who never suffer from eczema otherwise, may develop a skin eruption which is apparently an eczema during pregnancy. The skin lesion may be papular or it may be vesicular—eczema papulosum or eczema maidans as the case may be; but when it occurs only during pregnancy and not between whiles it may be suggested that it is really allied to the urticaria and to the herpes gestationis that we have been discussing rather than to true eczema. The matter could be decided by microscopical examination of sections of the skin to determine whether there was epithelial cell proliferation, as in eczema, or none, as in herpes gestationis, but no histological work appears to have been done upon this particular point, and I have had no opportunity of doing any myself. When, on the other hand, a lady is subject to undoubted attacks of eczema apart from pregnancy, it by no means follows that the skin trouble will become worse during the pregnant state; if any general rule can be laid down it would be that the patient's eczema will very likely be mitigated rather than made worse during pregnancy.

Psoriasis.

Psoriasis is more definite in its behaviour during and after pregnancy. Before the birth of the child the mother, if she be already subject to psoriasis, will either be very much less troubled with it than before, or else will develop a severe exacerbation. It is not possible to give any certain prognosis as to which of these two things will occur, but more patients have their skin disease mitigated than increased whilst they are actually pregnant. On the other hand, the effect of lactation upon psoriasis is almost invariably bad. The eruption is liable to increase during the puerperium in any case, but if the mother suckles her child she is almost certain to develop a very severe attack of the psoriasis. This, therefore, is one of the conditions under which the mother ought not to suckle her child. Artificial feeding of the infant should be adopted from the beginning and immediate steps be taken to dry the mother's breasts.

The Pyelonephritis of Pregnancy.

Leaving the skin diseases now, we may pass on to the discussion of a condition in which, although the pathology is of quite a different kind, pregnancy again appears to be an important factor in the causation of the trouble. This is the pyelonephritis which of late years has been recognized with increasing frequency in pregnant women. Mr. G. Bellingham Smith has recorded several cases in the *Journal of Obstetrics and Gynaecology* (1905) and others in the Guy's Hospital Reports (vol. lx, 1906); upon the Continent and in the English journals there have been a good many papers upon the subject during the last few years, such as those of Reblaub, Jeannin and Cathala, Vinay, Cumston, and others. The observations made previously to 1899 were summarized by Cade in *L'Obstétrique* (vol. iv, 1899, p. 230).

Illustrative Cases.

The following are notes of two cases that have recently been in the medical wards at Guy's Hospital, the one under myself, the other under Dr. A. F. Hertz in the first instance and under Dr. G. Newton Pitt subsequently. These two examples are chosen, not only because they were in the wards almost at the same time, but also because they exemplify two very different degrees of the severity of the disease.

Case I.

The patient, aged 28 years, had had two children, now aged 5 and 2 years respectively; she had had no miscarriage and she was pregnant for the third time when, at the beginning of the fifth month, she was suddenly seized with severe pains round the waist. The suddenness of the onset of the symptoms may be gathered from the fact that she was in her usual health, preparing her husband's midday dinner, when the pain seized her acutely in the loins; she was unable to go on with the dinner preparations; she took to her bed and remained there a fortnight under treatment before she was transferred to the hospital. The pains across the loins persisted all the time, waxing and waning to some extent, but not in such a way as to suggest colic. Vomiting had been frequent, especially after food, and this notwithstanding her diet being milk and soda-water only. In addition to the vomiting there had been severe headaches and upon several occasions rigors. The skin was dry for the first five days but since then there had been copious perspirations.

Upon examination the chief abnormality was in connexion with the right kidney. The abdomen was supple, and it moved well with respiration. The kidney could not be palpated, but there was a slight degree of fullness in the right flank, and at a spot just below the right twelfth rib there was acute tenderness on the slightest pressure. The bladder was normal, and there was no frequency of micturition. The urine was alkaline, abundant, and of specific gravity 1010; it contained enough albumen to give a marked cloud with the boiling test, and microscopically there were large numbers of pus corpuscles, a few renal cells, and an occasional granular tube cast. A catheter specimen of the urine, examined bacteriologically, gave a pure culture of *Bacillus coli communis*. There had been considerable pyrexia during the fortnight previously to

admission. Here is the temperature chart for the first two weeks after admission:

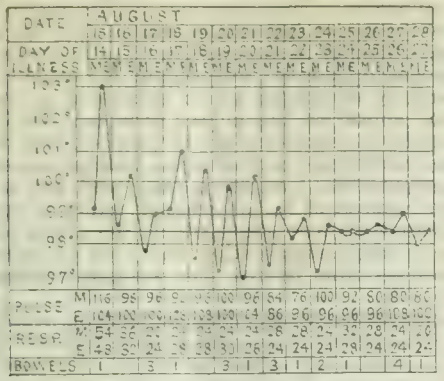


Chart 1.

Absolute rest in bed and the administration of urotropine were followed by rapid alleviation in the symptoms, and the patient went out in three weeks' time, feeling quite well, though there were still a few pus corpuscles in the urine. It was by her own desire that she went out, and it would certainly be wiser in other similar cases to continue the treatment till term; for within a fortnight she had all her acute symptoms back again, and she had to be put back to bed. Fortunately, the severer symptoms of the relapse passed off in a similar way to those of the original attack, but the patient had to be extremely careful for the rest of her time. Her baby was born alive at full term. The puerperium was normal, and the patient is now strong and well. Her urine has been quite free from pus and from other abnormal constituents since that time.

The above might be termed an ordinary case of the kind; the following is an instance of a much more severe type:

CASE II.

The patient, aged 24 years, had been married two years, and had had no living child, though nearly a year ago she had a miscarriage at the fourth month, followed by rapid and uninterrupted recovery. She was now five and a half months pregnant. She had been perfectly well until a fortnight previously to admission, when, without apparent cause, she suddenly experienced severe pain in the right loin, which persisted and soon extended round from the loin into the right iliac fossa. She had always been subject to constipation, her bowels being moved only twice a week as a rule, and during the fortnight previously to her admission to hospital enemata had been required upon several occasions. Vomiting had occurred only once. The patient's temperature was 103·6° F., her pulse-rate 124, and her respiration-rate 26 per minute. The uterus extended to just above the umbilicus, and, owing to the pregnancy, palpation of the rest of the abdomen was difficult. Tenderness was more marked in the right iliac fossa than elsewhere, and there was also cutaneous hyperæsthesia here. The general impression at first sight was that the patient had appendicitis, but more detailed examination showed that the tenderness extended from the right iliac fossa well back into the right loin and as high as the twelfth right rib. There was only slight rigidity of the muscles over the right iliac fossa. If the condition were appendicular the same symptoms might have been caused if the inflammatory trouble had tracked up behind the ascending colon into the perinephric tissue, but the patient herself was quite clear that the pain had started in the right loin and had thence extended into the right iliac fossa, and not vice versa, as would most likely have been the case if the trouble had been primarily appendicular. There was no lump to be felt and the right loin was not filled out. The urine was acid, of a specific gravity 1020, and a pale yellow colour. It contained a flocculent deposit of pus, a fair quantity of albumen, and no obvious blood. Microscopically pus cells without crystals abounded in the deposit, and there were also many renal cells, both from the pelvis and from the tubules, a few red blood corpuscles, and several tube casts, chiefly of the granular variety. The other general systems were natural, except that the vesicular murmur was deficient at the base of the right lung. A diagnosis of pyelonephritis of pregnancy was made.

One point of particular interest was that the patient's leucocytes were increased up to 25,000 per cubic millimetre of blood, so that a leucocyte count is apparently of no service in helping to distinguish this disease from appendicular abscess and the like, though it helps in excluding typhoid fever—a condition which the pyrexia might suggest. The accompanying temperature chart sufficiently indicates how ill the patient was.

A catheter specimen of the urine, examined bacteriologically, gave a pure culture of *Bacillus coli communis*, and a similar result was obtained upon three subsequent examinations. The vagina and uterus were perfectly healthy, and there was no disease of the bladder. The latter was examined with the cystoscope and purulent urine was seen issuing chiefly from the right ureter, but the mucosa of the bladder itself was perfectly normal. There was no dilatation of the vesical orifices of the ureters. The pain in the right loin, with exacerbations accompanied by vomiting, persisted in spite of everything that was done. The pyuria and albuminuria showed no abatement, and a moderate degree of jaundice developed. The patient seemed to be getting steadily worse, and at the end of the sixth week she consented to undergo an operation with a view to deciding whether there was anything

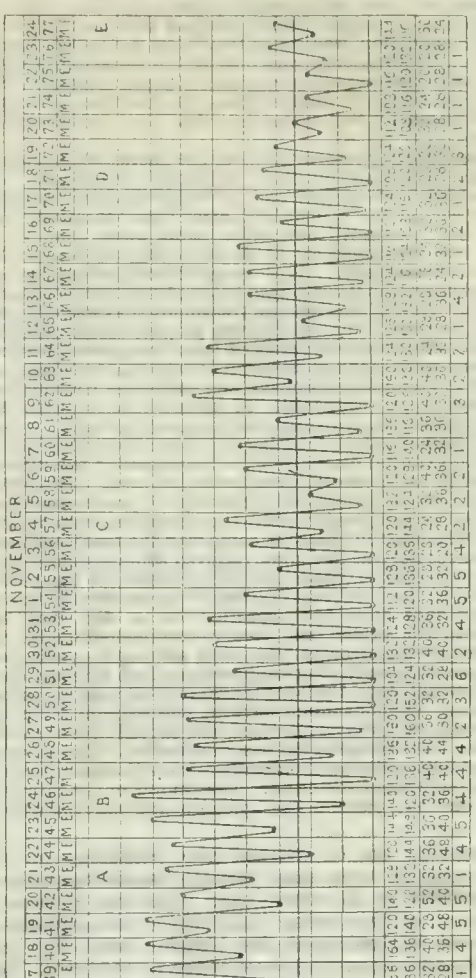


Chart 2.—A, Exploration of the kidney. B and D, Eight cubic centimetres of vaccine, 500,000,000. C, Urine began to discharge through the loin; eight cubic centimetres of vaccine, 500,000,000. E, Prematurely delivered of a living child. The temperature on November 25th, 26th, and 27th fluctuated between 97.4° and 100.2° F.; after the 28th it did not rise above 99.0° F. The patient began to get up on the 91st day (that is, on December 8th). She went home well on the 105th day. The temperature remained normal.

in the right renal region that could be either removed or drained. Mr. F. J. Steward exposed the kidney and found that it was studded all over with small abscesses. There was no large collection of pus that could be incised and drained, and the patient's condition was so critical—her pulse-rate being over 170—that nephrectomy was out of the question, so the wound was sewn up, a space being left for a gauze drain. The ureter had been felt to be dilated above the bladder, although it had been shown by the cystoscope that the vesical orifice was normal.

The patient steadily improved after the operation, notwithstanding the fact that nothing particular was done. It should be noted that no pus and no urine drained through the lumbar wound for a fortnight after the operation, but that upon the fourteenth day urine came away from it in abundance, and continued to do so for some weeks after the patient was convalescent. It is very difficult indeed to say what part the operation itself played in the subsequent recovery, particularly in view of the vaccine treatment that was adopted about the same time. The vaccine was prepared from cultures of *Bacillus coli communis* obtained from the patient's urine. The injections were made at intervals of about a fortnight, as shown upon the temperature chart, and each dose consisted of the products of 500,000,000 bacilli. To judge by the chart the improvement dated from the exploratory operation itself; it was already well marked before urine began to come through the loin, so that actual external drainage of the abscesses in the kidney did not seem to be the deciding factor in the case. The urine continued purulent; indeed, the quantity of pus in the urine was noted as being greater after the operation than it was before it. It is possible that in some way the manipulations which were necessary at the time relieved some pressure that had previously existed upon the right ureter in its pelvic course, and that the discharge of urine from the wound in the loin fourteen days after the operation was a sign that the obstruction to the ureter had then re-established itself. In any case, the patient steadily improved, although pyuria persisted. It was not until the temperature had already been normal for several days that the pregnancy showed any signs of terminating. Without much warning and without difficulty a living premature child was born on the seventy-seventh day of the illness. The puerperium was uneventful. The pus and albumen had both entirely disappeared from the urine within a month of the birth of the child. The wound in the loin had healed up, and the patient was soon up and walking about, quite well.

Before passing on to discuss the pathology of the malady in general, stress may perhaps be laid upon three particular points in the above case. The first of these is the dilatation of the ureter that was demonstrated—a dilatation not beginning at the bladder itself, but just above the bladder about the level of the pelvic brim. The second is the fact that the inflammation is not confined to the pelvis of the kidney in these cases, but extends right up into the cortex, as was demonstrated at the operation. And the third is that, notwithstanding the existence of large numbers of small abscesses in a kidney affected by an extreme degree of suppurative pyelonephritis of this kind, uræmia in the ordinary sense need not supervene and the patient may recover completely. No doubt it depends to some extent upon the nature of the organism present whether recovery is likely to occur or not, and in these cases it is always, or nearly always, the *Bacillus coli communis*. This organism, however, is usually accredited with particular virulence when it affects parts outside the alimentary canal; and if the miliary abscesses had not been ocularly demonstrated at the operation it would have been difficult, in view of the subsequent complete recovery, to have believed that such abscesses had actually been present. One wonders whether it is as true as it is usually held to be that multiple abscesses in another organ—namely, the liver in suppurative pylephlebitis—must necessarily be fatal also. In view of these multiple abscesses in the kidney getting well it would seem possible, if not probable, that similar multiple abscesses in the liver may get well too sometimes.

Pathology.

Turning now to the pathology of the pyelonephritis of pregnancy, there are certain points that are fairly clear. The cases that have been collected by Mr. Bellingham Smith and others all indicate that previous to the pregnancy there was no renal trouble. It is probable, therefore, that the gravid uterus is a responsible factor in the production of the mischief. It is also clear that the pyelonephritis is not secondary to cystitis, for in practically all the patients the bladder has been healthy—at any rate, at the beginning of the disease. Further, it has been demonstrated at the necropsy in some cases, and at operation in others, that there is dilatation of the ureter, beginning about an inch above the bladder. Putting all these facts together, it seems almost certain that the sequence of events is: Enlargement of the uterus; compression of the ureter against the brim of the true pelvis; consequent difficulty in the ejection of urine secreted by the corresponding kidney; infection of the urine retained in the partially obstructed ureter and renal pelvis; and subsequent spread to the kidney substance itself. The pyelonephritis of pregnancy would thus be comparable in some respects with pyelonephritis due to other causes, such as enlargement of the prostate in man; and just as in the latter case removal of the obstruction tends to cure the renal mischief, so does the birth of the child result in most cases in rapid amelioration and even complete cure of the trouble from which the pregnant woman has suffered.

It is a curious but very definite fact that in nearly every case the right kidney is very much more affected than is the left. In both the patients of whom notes have been given this was so. It is probable that the left kidney does not escape entirely; and, indeed, there is usually some pain in the left loin as well as in the right, but in the majority of cases the symptoms indicate that the mischief is mainly on the right side. There have been several explanations offered to account for this; perhaps the best is that of Cumston. He states that whilst the pregnant uterus develops its borders come nearer to the ureters, upon which they become pressed. The uterus develops much more to the right than to the left; it also inclines to the right, and besides this it undergoes a rotation on its vertical axis, and turns in the direction of its greatest development—that is to say, to the right, thus freeing the organs on the left side, and exerting a greater compression on those of the right. Be this as it may, the facts that the ureteral obstruction begins at the level of the pelvic brim, that it is in some way due to the pregnant uterus, and that the right ureter is, as a rule, more obstructed than is the left, have been repeatedly demonstrated.

Seeing that partial stenosis of the ureter by the pregnant uterus is generally regarded as the essential predisposing factor to this kind of pyelonephritis, it might very well be suggested upon theoretical grounds that the illness ought to be much more common and much more serious in those who have deformed and particularly contracted pelves and in those who have pelvic tumours, such as uterine fibromyomata or ovarian cysts, in addition to their pregnancy. These complications have existed in a few of the cases, and theoretically they should play an important part in the pathology of the condition. Nevertheless the existence of pelvic tumours or the like with pregnancy is by no means essential, or even common, as a cause of the pyelonephritis. The cases recorded have almost all had normal pelves and normal pelvic organs. The disease is therefore one which may arise in otherwise healthy women.

In regard to the question of whether a woman is liable to it during her first or a later pregnancy, opinions differ. It seems quite clear that the first few pregnancies may be quite uncomplicated and yet that pyelonephritis may develop during a later one; several observers lay stress upon its occurrence in primiparae, but the truth seems to be that it may arise during any pregnancy, and that in the differential diagnosis no stress can be laid upon the fact of the patient being a primipara or otherwise. It is clear that if obstruction to a ureter is an essential factor in the disease, the trouble is not to be expected in the earliest months of pregnancy. This is borne out by the cases themselves. The pyelonephritis may not appear until quite late in the pregnancy, but in the typical cases the mischief begins about the fifth month, as in the two cases described above.

Bacteriology.

The bacteriology of the condition is very constant. In all but a very few of the recorded cases the organism that appears in cultivations from the purulent urine has been the *Bacillus coli communis*. It has nearly always been in pure culture. Mr. Bellingham Smith found it in seven consecutive cases, and in only one case, recorded by Vinay, was the mischief attributable to another micro-organism—namely, a streptococcus.

There is some difficulty in determining the route of infection; this applies, of course, not only to the pyelonephritis of pregnancy, but also to the similar suppurative

lesions that may ensue when there has been residual urine in the bladder for a long time, even though no catheter or other similar instrument has ever been passed. The three paths by which the micro-organism might, it may be supposed, reach the kidney are: first, from the bladder, ascending by the ureters; secondly, by the lymphatic vessels; or, thirdly, by the blood stream. It must to some extent remain a matter of opinion as to which of these three paths is the more usual in these cases. Personally I agree with Mr. Bellingham Smith in thinking the blood stream the more likely route of infection, his arguments being as follows: Whereas it is true that, as Opitz urges, the female urethra always contains organisms and that the bladder in pregnancy is very liable to cystitis, nevertheless there are two objections to the view that the path of infection in the pyelonephritis of pregnancy is via the bladder—one anatomical, the other clinical. The anatomical objection is that the ureter in these cases is dilated, not in its whole extent, but only above the brim of the pelvis; the valve-like opening of the ureter into the bladder, which normally protects the former from infection, is still present and in perfect working order; there is no dilatation of the vesical end of the ureter, such as to cause a free communication between the latter and the bladder, and consequently there is no free path for the ascent of organisms from the bladder into the ureter. The clinical objection is still greater. The chief feature of pyelonephritis in pregnancy is the presence of pus in the urine without any symptom pointing to cystitis. None of the cases under discussion have afforded any evidence of preceding cystitis, and cystoscopic examination in the severer of the two cases of which notes have been given showed that the bladder was perfectly healthy. There are no doubt other cases of pyelonephritis secondary to existing cystitis, the symptoms being aggravated by the existence of pregnancy, and in such cases the path of infection would doubtless be from the bladder, just as it might be in a non-pregnant person; but in the cases of pyelonephritis under discussion there is no cystitis, pregnancy is an essential factor in the disease, and it seems unlikely that the organisms reach the kidney by ascent from the bladder.

Infection by the lymphatic vessels is very difficult either to prove or to disprove, and there is little or nothing that can be stated definitely about it. Infection by the blood stream, on the other hand, is possible, and, if the vesical and lymphatic routes can be excluded, even probable. Experiments have been made on animals in which, after artificial stenosis of a ureter, purulent nephritis followed injection of *Bacillus coli communis* cultures into the blood stream. Moreover, it has been shown that the healthy kidney sometimes excretes micro-organisms such as tubercle bacilli and typhoid bacilli in patients and animals who are suffering from an apparently local tuberculosis or from apparently uncomplicated typhoid fever. In these cases the micro-organisms have presumably reached the kidney in the blood stream, and if tubercle and typhoid bacilli can do so it would not be surprising if the *Bacillus coli communis* did so too. The healthy kidney would eliminate the bacillus without itself suffering. The existence of stenosis of the ureter might well cause the urine containing such bacilli to stagnate long enough to allow of infection of the walls of the passages, even without supposing that there was diminished resisting power in the parts owing to the obstructed outflow. The ease with which the *Bacillus coli communis* can reach the blood stream is well known from *post-mortem* examinations, where cultivations from organs situated far from the bowel nearly always yield this micro-organism in cultures made soon after death. It is held by some that a similar escape of the *Bacillus coli communis* from the bowel into the blood stream can occur during life, particularly when there are abnormalities in the functions of the alimentary canal.

This raises the question of whether the pyelonephritis of pregnancy can occur when there has been no abnormality in the intestinal functions, or whether, in addition to pregnancy and partial stenosis of the ureter, some error of the bowels, particularly constipation, is essential to its production. This is a very difficult matter to decide. It is very certain that a great many pregnant women may suffer from constipation without any other deleterious effects. Nevertheless, granted that a patient were on the verge of developing pyelonephritis, the existence of severe constipation might very possibly cause a certain number of colon bacilli to enter the blood stream and thus prove to be the final or determining factor in the illness. This seems to have been the case, for example, in connexion with the second patient described above; always very costive, she was suffering so much from constipation just before the pyelonephritis set in that she could only get her bowels to act by the use of repeated enemata.

Effect upon the Pregnancy.

A number of questions arise, to each of which the physician may be required to give an answer if he can. Amongst these are the following: To what extent does the pyelonephritis interfere with the course of the pregnancy? Is it likely that the child will be born dead? Seeing that pregnancy is a fundamental factor in the pyelonephritis, ought obstetrical measures for the termination of the pregnancy to be advised? Is the time of labour one of special danger? Is the patient particularly liable to uraemic symptoms? Is there any relationship between pyelonephritis and puerperal eclampsia? Is the condition likely to be completely cured after labour, or is a residuum of kidney inflammation to be expected? Is the patient very liable to have a recurrence of the pyelonephritis in a succeeding pregnancy?

It is only by a collective inquiry, in which mild as well as severe cases are included, that conclusive answers can be given to these questions. Under present conditions it is dangerous to base opinions upon published cases only, because those which are thought worthy of being published are often not the ordinary cases, but rather those which present points of special interest. On the other hand, an individual can scarcely hope to meet with a very large number of cases himself, so that until records of consecutive and unselected cases can by some means be gathered together it is only possible to base one's opinion either upon recorded, and therefore selected, cases, or else upon the few cases that one has oneself watched.

It would seem that, diagnosed early and treated by confinement to bed with antipyuric remedies, the condition usually tends towards resolution, notwithstanding continuance of the pregnancy. Moreover, in the majority of what may be called cases of ordinary severity the pregnancy is not particularly apt to come to an end prematurely. The children do not show any special liability to die *in utero*, and the mother is not subject to uraemic convulsions at the time of labour. No doubt there are individual cases in which the illness is so severe that it might be wise to advise relief to the ureteral obstruction by the use of obstetric measures for emptying the uterus. The kind of case in which this might be the best course to follow would probably be one in which the renal mischief had set in with severity during the earlier months of the pregnancy and had then persisted for a month or more without abatement in the symptoms, notwithstanding all the medicinal treatment available. Such cases as these are distinctly the exception, however. The majority of the patients require the adoption of no obstetrical measures for the time being. Treatment upon purely medical lines—by absolute rest in bed, light nourishing diet, laxatives, and such drugs as are known to benefit pyuria, begun early and carefully followed, will usually relieve the patient of her untoward symptoms comparatively soon—that is to say, within three weeks or a month. The pyuria will often persist for a month or six weeks after the patient herself feels quite well, and, unless considerable care is observed, a relapse is apt to occur before the pregnancy reaches term. Repeated microscopical examination of the urine is therefore essential, and medical supervision is required as long as any pus is present. Eclampsia is not to be expected, and the patients nearly always get perfectly well of their pyuria after the child has been born.

It would not be at all surprising if similar pyelonephritis were to recur in succeeding pregnancies, and cases are on record where this has actually been the case. This is not the invariable rule, however. If the pyuria is completely cured after one pregnancy, and care is subsequently taken to ensure that there is neither constipation nor diarrhoea such as might predispose to invasion of the body by the *Bacillus coli communis* from the intestines, it

is quite possible for a succeeding pregnancy to pass by without any symptom of pyelonephritis at all.

In conclusion of this lecture stress may well be laid upon the fact that the pyelonephritis of pregnancy may easily be mistaken for something else. The milder cases may be regarded as simple pain in the back, as lumbago, as influenza, and so forth; severer cases may be thought to have pneumonia, pleurisy, or the like; the most severe cases may be diagnosed as appendicitis or as some other intra-abdominal condition. The main symptoms of the disease are backache and pyrexia, with or without headache, vomiting or rigors, and unless the urine is carefully examined for pus corpuscles the real cause of the trouble might readily be overlooked.

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A Clinical Lecture

ON THE

TREATMENT OF WIDESPREAD SUPPURATION AND MULTILOCULAR ABSCESSES.

DELIVERED AT THE WESTMINSTER HOSPITAL.

BY WALTER G. SPENCER, M.S., F.R.C.S.,

SURGEON TO THE HOSPITAL.

I PROPOSE to refer in this lecture to some patients with widespread suppuration and multilocular abscesses, in whom, when admitted, the disease was already advanced and the patients weakened by septic absorption. In such cases as I am going to mention short incisions and the insertion of drainage tubes are apt to prove insufficient. A fatal ending may then soon take place, due to suppuration beyond the area drained, septic pneumonia and pleurisy often supervening. Even if the patient improve somewhat after the insertion of drainage tubes, suppuration may persist and sinuses form.

To avoid such terminations in the cases about to be described, an incision was made sufficiently long to lay open the full extent of the suppurating area, the septa between multilocular abscesses broken down, and all sloughs and pus as far as possible removed at once. Then the entire cavity was dressed with iodoform gauze. After changing the dressing until the cavity became lined with vascular granulations, the whole wound was sutured. Healing has followed: that is, the result has been union by second intention of granulating surfaces, with a sound scar.

SUBPECTORAL SUPPURATION.

Subpectoral suppuration commonly arises from septic infection of the hand, and is prone to spread to the thorax, either directly through the wall or by way of the neck. Only brawny induration may be noted; suppuration beneath the pectorals may not give rise to fluctuation, owing to the tenseness of the muscles.

A carman, aged 38, injured his thumb about a fortnight before admission, but he took no care of the septic sore which followed. Six days later pain was noticed in the left shoulder. On admission there was a deep brawny swelling involving the pectoral and axillary regions, beyond which the skin was reddened and indurated over the point of the shoulder and halfway up the neck. Three short incisions were made into the subcutaneous tissue of the inflamed area, and these were connected by drainage tubes. Three days later the brawny induration had become more marked and had extended further over the shoulder and neck, whilst the condition of the patient, owing to septic absorption, was grave. I therefore made a long incision from the clavicle at the junction of its middle and inner third, downwards and outwards to the posterior and inferior angle of the axilla. Several small subcutaneous abscesses were thus laid open. The incision was then deepened through both pectorals by dividing between clamps to limit the loss of blood, so that only one or two vessels required to be tied when the clamps were released. But particular care was taken to keep well internal to the line of the large vessels. Between the two pectorals were small abscesses, also others beneath the pectoralis minor. On retracting the divided muscles, a greenish oedema enclosing swollen lymphatic glands was seen to surround the large vessels as far up as the clavicle. All the cavity was dressed with gauze, and at subsequent dressings sundry suppurating pockets were well irrigated; gradually the wound became lined by granulation, and a month later it was drawn together by sutures; for immediately after this incision the patient began to improve, septic absorption was arrested, and the redness and induration in the neck subsided. The sutured wound has healed well.

A chronic case of subpectoral suppuration occurred in a young man admitted after sinuses had persisted for two years. A splinter of wood had been driven into the chest wall, but although the foreign body had been extracted, and some superficial incisions made on several occasions, suppuration had continued. A careful transverse division of both pectorals sufficiently exposed all the extent of suppuration, and laid open the sinuses. Sound healing resulted, and the man regained very fair use of his arm.

DIFFUSE SUPPURATION IN THE BREAST.

This is a class of case which is being continuously admitted. Many might be prevented if, when for any reason the mother stops suckling the infant, the breast were regularly emptied of the milk. I have several times arrested a threatened diffuse suppuration by putting the woman under gas, grasping the breast with both hands, and squeezing it out. A retention of milk in an inflamed breast may complicate puerperal septic absorption, and the woman comes into the hospital already exhausted by septic fever, and the breast riddled with small abscesses. There is superficial induration of the skin, and perhaps submammary suppuration. Supposing some small incisions to be made, and drainage tubes passed through the breast, yet, owing to multilocular collections of pus in dilated ducts, which do not drain away by the tubes, septic absorption may continue, and the woman dies. Or, if at length the suppuration is reduced, and discharging sinuses at last close, suppuration may recur at a subsequent lactation, or the scarred breast perhaps become the seat of malignant disease. The case recently in the wards is similar to others I have had previously under me. A woman, aged 30, was admitted much exhausted by puerperal infection, with the left breast entirely involved by suppuration, along with brawny induration of the skin around. An oval incision was made and the brawny skin turned back, when the whole breast, which was riddled by small abscesses, was excised. The wound was then dressed with iodoform gauze. Ten days later the skin around was no longer inflamed; the surface of the wound was covered with red granulations; the woman had begun to mend at once. Sutures were inserted, and on discharge there was a firm scar.

ABDOMINAL ABSCESS.

I have applied this method most often to the case of appendix abscess by extending the iliac incision backwards towards the loin, then breaking down septa, and seeking for the appendix in order to shell it out. I have frequently shown in the operating theatre that it is only when one has completely separated the appendix that one arrives at the deepest collection of pus. For instance, the appendix is found lying behind the caecum buried in firm inflammatory tissue; but it is not safe to leave it there encapsuled, for, on following it up from the caecum towards its distal end, one finds its tip enclosing a concretion and surrounded by a small abscess. This, if left, may well cause subdiaphragmatic or thoracic suppuration; or an abscess may be found between intestinal coils, enclosed by the omentum, or deep in the pelvis, to be discovered only when the appendix has been separated. There have been two such cases operated upon during the past week, both doing well.

A man of 18, who has just recovered, was admitted with marked aortic regurgitation and mitral disease, but this afforded no reason for limiting the operation. After opening one abscess, search was made until the appendix was shelled out; whilst doing this another small abscess, containing green, stinking pus, lying between the buried appendix and a coil of intestine, was opened; also a third abscess lay behind the umbilicus and was pointing at this spot. After the operation the patient at once began to improve, and healing followed.

The most extensive incision I have made was in a man

who had recurrence of suppuration for the fourth time, because the appendix had not been removed. A multilocular abscess extended from the level of the kidney to the recto-vesical pouch. To lay open this cavity, break down the septa, and excise the appendix required an incision reaching from the last rib at the outer border of the erector spinae downwards to end just above and external to the middle of Poupart's ligament. A week later the whole incision was sutured, and at the end of a month I was able to show the man at the Clinical Society with a sound scar. Indeed, I have not experienced any drawbacks from this method; the resulting scars remain firm and unyielding.

A woman who was transferred to me by Dr. Pollock was suspected of having an appendix abscess, but it was found to be pelvic in origin, for the appendix and caecum were quite healthy. It had started in Douglas's pouch, and extended up to the right kidney, being composed of numerous loculi. It was probably of puerperal origin, as was also a similar instance, of which I have notes. In the earlier one I made two small incisions and inserted tubes; but at the *post mortem* examination several small abscesses were found in the loin, quite near the track of the drains. In the present case the loculi were broken down until there was one cavity, the intestines were pushed back, covered with a sheet of protective, and then the whole cavity from the pelvis to the kidney filled with gauze. Three weeks later sutures were inserted, and the woman is now quite well with a firm scar.

SUPPURATION IN CONNEXION WITH AMPUTATION.

By similar procedures in some cases amputation may be avoided, in others the amputation may be done much lower down, and yet rapid healing and a good stump result. I have kept a note of one of my first cases of amputation, because at the time it seemed a good one, but the saying is that "the better is the enemy of the good."

A woman, from a sore heel, had a popliteal abscess which, being allowed to extend, on her admission was found to reach from the lower third of the thigh to the heel, and involved the calf muscles. But the suppuration had not spread to the bones of the leg or through the interosseous membrane. In another such case I would now lay the whole cavity open, break down the septa, and dress with gauze.

Some time ago a publican, a hard drinker, was admitted with a suppurating knee-joint, whose limb was saved as follows. He had fallen and grazed his patella; a fortnight later he again fell on his knee, and then acute septic inflammation spread to the knee-joint and popliteal space. When seen the knee-joint was distended with pus, which spurted out, on pressure, through a foul wound; there was an abscess in the popliteal space. The man was very exhausted; he screamed with pain when the limb was touched, and acute alcoholic delirium had set in. The knee was laid open as for excision, the necrosed patella cut away, also the whole fungous synovial membrane and the semilunar cartilages. By strongly flexing the knee the gauze could be passed between the ends of the bones into the abscess cavity in the popliteal space. As soon as healthy granulating surfaces appeared the knee was straightened and sutured. For six weeks alcoholic delirium continued, although septic absorption had been checked. But the limb, being fixed on a splint, could be kept still. Had I amputated, it would have been impossible to have kept the stump quiet during the delirium, and secondary haemorrhage would very likely have ensued. As it was, the man walked out of the hospital on a firmly ankylosed straight knee, quite healed.

A boy, aged 15, who has been in the wards for more than two months, was sent in for amputation at the hip joint. He had had sinuses in the thigh as long as he could remember, had undergone several operations, and latterly amyloid disease had set in. On examination scars of short incisions were seen along the inner side of the left thigh, all close over the line of the femoral vessels. Also in this line were four distinct sinuses leading down to necrosed bone in the upper and middle third of the femur. An *x*-ray examination showed that the necrosis was superficial, and not central, the main shaft giving a normal shadow. The spleen was enlarged, so that it projected a hand's breadth below the ribs, and the urine when boiled became almost solid from albumen. Obviously the previous operations had been limited to short superficial incisions and scraping of sinuses, for anything extensive in that line must have involved the large vessels. In order to try to save the limb—otherwise amputation at the hip-joint was required—I made a long incision at the outer border of the rectus through the vastus externus down to the femur. Then retracting the muscles and pushing aside the periosteum, I reached three sequestra lying on the surface of the femur underneath the line of the blood vessels. This was done without injuring any large artery, after which iodoform gauze was firmly packed against the bone, especially at the inner end of the sinuses. Every two or three days the gauze was changed under gas, for the dressing had to be applied firmly to the bone. First the sinuses closed, then the bone became covered with granulations, finally the whole incision has filled up and healed. From the time of the operation the boy's colour began to improve, the spleen shrunk until it could no longer be felt below the ribs, the albuminuria, which has been carefully estimated, has been reduced to a trace. At the moment there is no sign of further necrosis or suppuration and the amyloid disease seems on the way to disappear. The boy is up and walking about. At any rate, amputation at the hip joint has been avoided.

An instance of amputation lower down than could otherwise be done is afforded by the case of a man aged 40 who cut his thumb into the joint, and septic inflammation started which involved the palm and lower forearm. A fortnight after the injury I examined him under an anaesthetic, when I found that the deep tendon sheaths of the palm, also the carpal and metacarpal joints, were involved, and beneath the deep muscles of the forearm there was a chain of small abscesses upon the interosseous membranes, as well as numerous small pockets of pus between the muscles and in the subcutaneous tissue. Now to have obtained a healthy stump fit for immediate suture, it would have been necessary to have amputated through the arm well above the elbow, for the skin was already red and oedematous so far. However, I amputated by the circular method, cutting through the bone at the junction of the upper and middle third of the forearm. The skin incision exposed greenish oedema and small abscesses in the subcutaneous tissue, the cut through the muscles showed only septic oedema, the periosteum and bone had not been obviously invaded. After shortening the nerves and tying the vessels the stump was filled with gauze and kept dependent. Septic absorption stopped, the skin became healthy; after two dressings the stump was sewn up. He has now good movement of the stump of the forearm both as regards flexion and pronation. This will be of advantage when he comes to be fitted with an apparatus.

In a case I saw some time ago with Mr. Turner, in which septic infection had already spread from the hand up to the shoulder, a circular amputation through the upper third of the arm cut through numerous small abscesses, but a higher amputation would have opened the shoulder-joint and axilla. The patient seemed almost dying; he however got over the operation, and after the gauze dressing had been changed under gas the stump was sewn up and healed well.

The cases I have described, which have been recently in hospital, do not exhaust the forms of suppuration to which I have applied the procedure advocated, but they suffice to indicate the principles and to suggest adaptation for particular cases. In making free incisions and breaking down septa due regard must be had to important structures, and one should avoid the line of the large blood vessels, as I have noted in the case of subpectoral suppuration and in that of necrosis of the femur. The repetition of anaesthesia for dressing and suturing is a small matter as compared with the important results achieved by the immediate arrest of septic absorption, the avoidance of sinuses, and the production of firm scars.

AT the annual court of governors of the Evelina Hospital for Sick Children, London, Sir W. P. Treloar, Bart., who moved the adoption of the report, said that he hoped the home for crippled children at Alton would be opened in June or July; it would then be possible to afford accommodation for patients of the Evelina and other like hospitals which needed medical treatment in the country.

A Clinical Lecture

ON

A CONSECUTIVE SERIES OF 34 CASES OF EXCISION OF A PORTION OF THE RECTUM FOR CARCINOMA.

DELIVERED IN BRISTOL GENERAL HOSPITAL, JANUARY 22ND, 1908.

BY CHARLES A. MORTON, F.R.C.S.,

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GENTLEMEN,—I do not propose to-day to lecture on cancer of the rectum and its operative treatment. You will hear lectures on the subject in the systematic course of surgery, and can read about it not only in your textbooks, but also in recent books and journal papers by Sir Charles Ball and Mr. Harrison Cripps and others. What I propose to do in this lecture is to give you the result of my own experience in a series of 34 consecutive cases of rectal cancer treated by excision, and to discuss questions arising in connexion with these cases.

I find on looking up my case-books that I have removed a portion of the rectum for carcinoma in 34 cases,* and attempted to do so, but had to abandon the attempt, in one case in which I could not safely remove the whole of the growth. Curiously enough, this is the last of the series I have operated upon. I could have removed the growth in the bowel, but found a nodule high up behind the rectum, and too fixed to remove.

I have endeavoured to ascertain the number of cases in which the disease recurred, and I have met with the usual difficulty of tracing old cases, and have received my letter back inscribed "unknown" in several instances, and in 2 cases the relations simply stated that the patient was dead, without stating the cause of death; but I am glad to say that I have been able to examine, or another doctor has examined and reported to me, in 19 out of the 34 cases, and I propose presently to tell you the result. In order to find out if a patient has recurrence after excision of the rectum for malignant disease, nothing short of an examination of the rectum and abdomen will indicate the true condition as to recurrence, for rectal cancer is very insidious, and the patient may seem well although suffering from a recurrence, and it is not always easy to get the patient's consent to so thorough an examination if he feels quite well. In these 19 cases I have found 8 free from recurrence for periods ranging from one to three years after the operation, and in some others in which the growth recurred, it did not do so for some considerable period after the operation, so that the patient's life was considerably prolonged in comfort. In some, however, recurrence was unfortunately pretty rapid.

Now, a very important question is, How many of these patients lost their lives from the operation? There were 4 deaths in the 34 cases, or a mortality of 12 per cent., and one patient committed suicide one month after the operation. One death was due to shock at the time of the operation, another partly to shock, and possibly partly to peritonitis (but no *post-mortem* examination was made), and in this case when the peritoneal cavity was opened (Kraske's operation) I found an ovarian cyst on each side, and removed them both, so that the operation was an excision of rectum and a double ovariotomy; another case probably died of peritonitis, and the fourth died of acute mania three weeks after the operation. I am glad to say I have had no death in my last 18 cases, and 12 of these were what we call Kraske's operation—a portion of the sacrum was removed, the peritoneal cavity freely opened, and usually a circular union of the divided rectum was made.

Taking now the 8 cases free from recurrence from one to three years after the operation, I find 2 were free from recurrence three years after; 3, two and a half years after; 1, one year and nine months after, and appeared well (though no rectal or abdominal examination was then possible) four years after; another was free from recurrence two years after, but is now not to be traced; and one patient had no recurrence a little more than a year after operation.† In 1 case not included in these 8, there was no local recurrence three years after operation, but there was then a curious ridge-like swelling in the hepatic region. I hear he is now (nine months later) in fair health. In 10 cases the disease recurred: in 8 of these in the rectum, and in 2 in the liver. But amongst these recurrent cases was one in which recurrence did not take place until eighteen months after operation, and in another there was no recurrence for three years, and then only in the inguinal glands.‡ In one case I did not get an opportunity of seeing the patient for six years after the operation (Kraske's), and then found recurrence in the rectum, but for several years after the operation the patient was reported by her doctor to be very well, and leading an active life. This was a particularly unfavourable case, as before operation there had been an abscess between the rectum and uterus. Thus in both these cases life was considerably prolonged in comfort. In all the recurrent cases the disease was extensive; in one case the patient had an ischio-rectal abscess and fistula, and a considerable amount of the tissue in the ischio-rectal fossa had to be removed with the growth.

Another case, not included in any numbers I have given you, because we cannot be certain there is no recurrence, was one of removal of epithelioma of anus and glands, reported well by her doctor one year and nine months after operation, but he had not seen her for some time. One patient wrote in reply to my letter that she had lost flesh and appetite, but it was impossible to say from her letter if there were any symptoms of recurrence.

In the whole series of 34 cases, in 15 the coccyx was not removed, and the peritoneum was not opened; in 2 the coccyx was removed, but the peritoneum was not opened, and in the 17 remaining cases the coccyx alone or the coccyx and part of the sacrum were removed, and the peritoneum freely opened. During the last few years I have been inclined to operate in female patients (even in cases in which the growth is low down, and I do not expect to have to excise any bone or open the peritoneum) with the patient lying well over on the right side, almost prone (the position in which I always do Kraske's operation), for I find that I can so much better prevent haemorrhage working from behind, with an incision from anus to coccyx (as well as around the anus), clamping and dividing strand after strand of tissue until the gut is isolated, as we do when operating by the sacral method. If we find we want more room outside the gut to isolate it freely, there is no difficulty about excising the coccyx with the patient in this position, and no objection to doing so. In the case in which death occurred from shock at the end of the operation, the haemorrhage was very free, and I am inclined to think that if I had operated by the posterior method, and clamped and divided step by step, I might have had less haemorrhage, though by any method the condition was a very difficult one to deal with, as there were masses of growth outside the rectum, which would have been difficult to remove even by the sacral operation.

In the male it is of great assistance in separating the lower end of the rectum from the urethra and prostate to have a sound in the bladder, and therefore I think it better in such cases to start the operation with the patient on his back, his perineum facing the operator and his legs held up out of the way by some kind of apparatus (the old lithotomy position), and then, when the rectum is freed from these structures, to remove the sound and turn the patient on his side (almost prone) and work from behind forwards. You cannot safely retain a sound in the bladder with the patient almost prone.

In the cases in which the growth is fairly low down, but yet far enough from the anus for us to leave a healthy segment of bowel there, we may be able, by simply

* I have not included in the 34 cases one in which in June, 1905, I did colotomy for intestinal obstruction and then resected a growth at the junction of rectum and sigmoid from the abdomen. Three of the 34 cases were squamous carcinoma starting at the anus.

† In these 8 cases, with one exception, microscopic section shows carcinoma. The one exception is the case non-recurrent a little more than a year after operation. The growth was quite typical naked eye, but the piece of tissue preserved for section dried up, and the section made from it is of little value. The case non-recurrent after two years, and then lost sight of, was squamous carcinoma of anus; all the others were adenoid cancer of rectum.

‡ The case was one of excision of lower rectum and vaginal wall for adenoid cancer extending to anus.

excising the coccyx, to make a circular union and so preserve sphincter action, and yet not have to open the peritoneal cavity at all. Even in cases in which the disease involves the posterior vaginal wall and we have to remove a portion of this with the rectum, this method of operating (with the patient almost prone) answers very well.

It is usually stated that if the growth is fixed to the tissues outside the rectum the case is inoperable, but in the region of the prostate the normal rectum is pretty fixed, and because you cannot glide a rectal cancer on the prostate, it does not necessarily mean it is infiltrating it. I have removed such growths fixed to the prostate and did not find them infiltrating it, but you cannot be sure whether a growth in this position has or has not begun to infiltrate the prostate, and all you can do is to start your operation as an exploratory one, and see if you can separate the rectum from the prostate free of the growth. In such cases the presence of a sound in the bladder is especially useful as a guide during the operation. This leads me to speak of fixation in other directions. Fixation to quite the lower end of the sacrum or the coccyx need not contraindicate operation, for you can remove that portion of the bone; and, if the growth has invaded the posterior vaginal wall, you can remove that with the rectum. If the growth is high up, and you cannot get your finger through it and move it, the most useful way to ascertain whether it is free or fixed is to examine the patient standing up, and get him to strain down all he can. You will then, if the growth is free, feel it forced down on your finger, like a ring gripping it. You must prepare for some discharge from the anus at the same time by holding a mass of wool against it with your other hand.

I have seldom refused to excise the growth because it was too advanced, and not for many years because it was too high up, only in cases of fixed growth when the part they were fixed to could not be removed with them, or if secondary growths were present in the abdomen. Indeed, one patient (sent to me by Dr. J. Powell) who now, two and a half years after operation, is free from recurrence, had been refused operation by two well-known surgeons, one in London and one in a large provincial city. The growth was extensive, and very high up, but it came down well on my finger when he stood up and strained. Another patient (sent to me by Dr. Avery, who had then just been my dresser) had also been offered colotomy by a well known provincial surgeon as the only thing to be done for him. When I examined him last May he was free from local recurrence, three years after the operation, though there was a curious swelling in the hepatic region which might be growth, though he seems now still in fair health. If it should turn out to be growth, yet he will have had a very much greater prolongation of life than he would have had after a colotomy. If one is in doubt about the fixation of a very high growth, it seems to me it would be best to examine it from the interior of the peritoneal cavity, and be guided by that examination whether to go on with its removal either by the sacral or the combined sacral and abdominal route. By this method of examination you can also determine whether the iliac or lumbar glands are involved. An incision at the outer border of the left rectus would probably give the best access to the growth.

In only one case have I found a preliminary colotomy necessary. Even in cases in which there has been some distension of the colon, and many scybalous masses have been felt in it, oil and water enemata have (with the exception of one case) been quite satisfactory as preliminary treatment, even though the clearing out of the bowel in one case had to be commenced by an oil injection given through a soft rubber tube passed through the rectal stricture; and in another a mass of faeces in the rectum above the growth had to be dealt with in the same way. In the one case in which I had to do a preliminary colotomy, even by free purging for some days I could not clear the colon of scybala. There was in this case a very narrow lumen left through the growth. Free purging for several days, with abstinence from food likely to leave much débris in the bowel, and an enema the night before and on the morning of operation, with the administration of ½ grain of opium the evening before, and again the morning of the operation, is my usual preliminary treatment.

In the cases in which the anal segment of the rectum has been excised, if the growth has been quite low down I have always fixed the divided rectal wall to the skin, and it has united, and so a track of contracting scar tissue has been avoided, and with it the trouble of frequent dilatation or the production of stricture. If I have had to remove a considerable length of rectum with the anal segment, I have had to bring the divided end of the rectum out and fix it below the divided sacrum. I find I have completed 6 operations (Kraske's) in this way. But in 12 cases of growth in the middle part of the rectum I have united the divided ends. All these operations have, of course, necessitated removal of either the coccyx or a part of the sacrum as well, and in all cases but two required a free opening of the peritoneal cavity. In no case has complete immediate union resulted. In all some part, or even the whole union, has broken down, and my experience is that this is usually due to sloughing of the edges of the divided rectum. The surgeon has to divide strand after strand of tissue in these cases in order to bring down the upper end, and in this way you cannot avoid interfering considerably with the vascular sppply. As a rule the bowel gives way posteriorly; but though in some cases a fistula is left when the wound heals, in others complete healing occurs, and the continuity of the rectal channel is completely re-established.

These are most satisfactory cases, for they have their sphincters active. Even if sloughing did not occur, the rectum is a very unfavourable portion of bowel to get primary union in, after circular suturing, for hard faecal lumps are apt to form in it. Some surgeons recommend that if circular union is attempted, the bowels should be kept loose by purgatives so as to produce action of the colon similar to that of the small bowel. I have not adopted this practice myself, because I have never cared to sacrifice the cessation of the activity of the bowel one may expect for a few days, after the preliminary treatment I usually carry out. I think, perhaps, forty-eight hours of rest, and then purging, might be the best treatment to adopt. This tendency for circular suture to break down seems to have been the experience of several other surgeons who have tried the method. I do not think anything is to be gained by the use of a decalcified bobbin here, for if hard faecal masses form this would offer an obstruction. I have only once tried the method recommended by Moulonguet and now practised by some surgeons. By this method the mucous membrane is dissected out of the lower (anal) segment, and the upper one is dragged through it, and sewn to the anal margin. Union takes place between the raw surfaces left by removal of the mucous membrane in the lower segment and the outer coat of the upper end of the rectum drawn through it. In my own case extensive sloughing of the end of the upper fragment occurred, and no union took place, though there was no tension when I fixed it. If the growth were situated quite high up, and therefore a considerable portion of the upper rectum had to be excised, it might be possible to make a circular union, and yet quite impossible to get the upper end down to the anus. In other cases I may perhaps try this method again. In no case should I feel safe in immediately closing the sacral wound with deep stitches. I should continue my present method of packing it with iodoform gauze, both to shut off the opened peritoneal cavity and to ensure free drainage. In some cases I have been able to close the opening in the peritoneal cavity with a continuous puckering stitch (taking care not to constrict the rectal tube passing through), but even in these cases I have packed against the united peritoneum with iodoform gauze, and when I could not suture have always packed most thoroughly against the opening. I should not myself feel inclined to close the sacral wound, and leave the rectal union shut up beneath in the neighbourhood of the open peritoneal cavity, But it seems to me that we might improve on our method of making circular union. We might unite the two ends with a continuous, through and through stitch of Pagenstecher thread, and then pass up from the anus a short sponge holder, and when the blades reach the junction, open them slightly, and invert into them the joined edges, close the blades gently, and by withdrawing them a short distance down the rectum invaginate the union. The invaginated wall could then be fixed by some outside stitches. This process could be repeated until the whole circumference of the union had been invaginated and

fixed in this position. We should then get a union something like Maunsell's method. I tried it in one case, but the union was too near the anus, and therefore too fixed to invaginate. It would be more suitable for union high up the rectum.

As a rule there has not been any amount of shock after the most severe forms of the operation, even though it may have taken a very considerable time, and many of the patients were elderly men—half were 60 to 70 years of age. If the operation is done with the patient almost prone, very little blood is lost, because almost all vessels are clamped with the surrounding tissue before division. In one case (that of an elderly woman) the pulse was very bad at the end of the operation, and I was very much alarmed as to her condition, but directly we got her on her back again it improved so much as to completely relieve our anxiety. I see in my notes that one of the younger patients, a man aged 44, with no disease other than the rectal cancer, did suffer severely from shock, whereas the greater number of those between 60 and 70 had almost no shock at all with the same kind of operation.

I find the best position for drainage for patients in the sacral operation is on the back. They cannot, however, bear pressure on the wound, and you must take the pressure off by so arranging pillows beneath them (one under the back and another under the buttocks) that a hollow is left corresponding to the sacrum. But I see no object in keeping the patient rigidly on the back for any length of time. During the first twenty-four hours, when oozing is free and the peritoneal cavity is getting shut off by adhesions, I think it very desirable. After that I think it should alternate with the lateral position.

An interesting question in connexion with the results of operation is as to the amount of control over the evacuations which the patient possesses. As a rule the result is much what it is after a colotomy on the left side. The bowels act once or twice daily, and leaking is, as a rule, very slight or absent, unless the patient gets an attack of diarrhoea. As I have already said, after circular union the action of the bowels may be that of the normal rectum.

With regard to the age of the patients, I have just stated that half the total number of patients were 60 to 70 years of age, one Kraske case was 69; another case, a partial excision of the anal segment of the rectum and the inguinal glands, was 76. Neither of these two elderly patients suffered from shock. One woman with most extensive adenoid cancer (microscopic examination) of the rectum (the fatal case from shock) was only 26, and another, also with very extensive cancer, was only 28. It is sometimes stated that the prognosis as to recurrence is very bad in cases under 50, but one of my patients, who has gone three years without recurrence, was only 44 at the time of the excision, and the growth was so extensive I had to remove all the lower end of the rectum and make a sacral anus; and the case in which there was no evidence of recurrence until six years after operation was only 39 at the time of the operation.

I have not yet said anything about the method which I employ for draining the bowel in those cases in which a sacral anus has to be formed. There is no doubt that it is a good thing to conduct any faecal discharge right away from the wound, as we do by means of Paul's tube and a few feet of soft rubber tubing after a colotomy. But Paul's tube being of glass might get broken if fixed in the sacral region, by the patient accidentally lying on it. I have had a reel made of wood just like a Mayo Robson's decalcified one, and this I fix in the end of the bowel just as we do a Paul's tube, and to the other end a long soft rubber tube is attached. To tie up the end of the bowel, and so prevent the escape of flatus, seems to me objectionable. Neither do I think it wise to tie the rectum before division in excising the growth. I believe it is important first to open the rectum and define from within the exact limit of the growth, for it may run up on the mucous membrane further than we can feel it outside, and we always ought to cut so as to leave a good margin of healthy tissue. I always aim at removing an inch of apparently healthy tissue above and below the growth. A rubber tube can be temporarily clamped round the bowel at the highest point of its exposure before opening it.

There is another matter I have not referred to, and that is the removal of extra-rectal masses of growth in the sacral region. We not rarely find some enlarged glands, or if not glands, growth, in the fatty tissue outside the rectum, in the form of nodules, a tongue-like projection of the primary growth, and as a rule such growths are readily removable. One great advantage of the posterior method of operating is, I think, that you can the more readily detect and remove them, and I have done so in several cases. The upper attachment of such a nodule high up under the sacrum may be too high up to tie; I have left a long pair of artery forceps on it at the end of the operation. It would be very unwise to cut anything at such a level without clamping, or to take off the clamp when trying to tie, without a good prospect that you can get a ligature to hold well. A bleeding vessel, high up in the hollow of the sacrum may give a great deal of trouble.

What, then, does a study of these 34 cases show? I think it indicates (as does also the study of other published consecutive series of cases) that even including the cases of growth high up, the excision of which necessitates removal of a part of the sacrum and a free opening of the peritoneal cavity, the mortality is not very high. How many of the cases now free from recurrence will remain so I cannot of course say, but it seems possible—indeed probable—that there may never be any recurrence in several, and we know that life has been much prolonged in comfort in many.

CASE OF STRANGULATED FEMORAL HERNIA,

COMPLICATED BY PROLAPSE OF THE CAECUM AND ADHESION OF THE VERMIFORM APPENDIX TO THE SAC.

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THIS case is recorded because it presents features which must be very unusual.

History.

An elderly woman, aged 47, unmarried, was admitted to the Lockhart Hospital, Lanark, on a Sunday about 3 p.m., suffering from a right strangulated femoral hernia. The previous evening, about 6 p.m., she was seized with sudden sharp pain in the right groin, and a small swelling which previously existed there became tense, larger, and very painful; as the night advanced vomiting and hiccough set in. On the following morning her medical attendant saw her, and urged immediate operation, which she consented to. She stated that about three years ago she was seized with pain and swelling in the right groin. She did not consult her doctor at the time. The pain lasted several days and then gradually subsided, although the swelling still remained. From time to time, however, she had recrudescent attacks, and her friends state that she had not been well for years in consequence of such attacks.

State on Admission.

Temperature 99.4° F., pulse 115, thin and feeble. Hiccough was present, and shortly after admission she vomited about 6 oz of dark-brown material, which had no distinctive odour. There was a hard, tense, and very painful swelling in the right groin, about the size of a walnut, slightly to the inner side of the middle of Poupart's ligament.

Operation.

An incision was made over the tumour and the sac exposed and opened. A knuckle of bowel came into view; it was plum-coloured, lustrous, but could neither be withdrawn from nor reduced within the abdomen. The constricted area was so tight that the left forefinger could not be passed into it for fear of damaging the bowel, so a hernia director was passed down into the sac and beyond the constriction, which was freely divided. The bowel, a knuckle of small intestine, was drawn out, deemed to be viable, and returned within the abdomen. The sac still contained gut however, and on examination this was found to be the caecum lying in the mouth of the sac, and the appendix doubled upon itself and firmly adherent for about 2 in. from its free end to the inner wall of the sac near its fundus. The appendix was freed from its adhesions, amputated, and the caecum returned within the abdomen. The sac was closed, cut away, and the opening closed by a double layer of sutures and the skin wound sutured.

After-History.

The patient made an uninterrupted recovery and left hospital quite well several weeks later.

Description of Specimen

The appendix measured about 3 in. in length, had a well-developed fatty mesentery, was quite patent, admitting an ordinary silver probe and contained faecal matter. It was considerably thickened and congested at its blind end from old inflammatory exudation and adhesions.

Owing to the immediate urgency of such cases, it was considered advisable to operate at once. The delay of an hour or two materially lessens the chances of recovery. The hernia of the caecum and appendix was probably of three years' duration. The finding of the appendix in the femoral canal adherent to the sac and the subacute exacerbations of pain at different intervals, point to attacks of appendicitis. The supervening acute strangulation was caused by a portion of small intestine finding its way into the sac and overriding the original hernia.

The patient states that she was bending down at the time when she was seized with pain, and it was probably at that moment that the small gut was forced into the sac beyond the appendix, and there tightly constricted.

ACUTE FAECAL IMPACTION IN THE RECTUM.

By W. M. ROBSON, M.D.Lond., M.R.C.P Lond.,
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THE term "acute" has been chosen in order to avoid confusion with those cases of faecal impaction which occur in individuals afflicted with chronic constipation, and which give rise to total or partial obstruction. The subject is perhaps worthy of comment, because all the cases here referred to have occurred in persons normally free from irregularity of the bowels, but in whom a temporary alteration in conditions—more especially in diet—has taken place. In their description of faecal impaction the textbooks confine attention almost entirely to those cases in which it occurs either in the caecum or colon, that is, above the rectum. The reason is, that they refer solely to those cases which are here excluded, namely, the sufferers from chronic constipation. On looking up the *Lancet* for the last twenty years, and the BRITISH MEDICAL JOURNAL for ten years, I can find only one recorded case of acute faecal impaction in the rectum. This is chronicled by Mr. E. C. Ibotson,[1] and refers to a healthy boy, always regular in his bowels, who suddenly became unable to pass anything by the rectum. He was discovered to have a mass impacted in the rectum consisting of undigested tiger nuts, which he had eaten a day or two previously. The condition was relieved by glycerin enemata.

The cause of this condition has, in my experience, always been due to a diet leaving a glutinous residue, associated either with too great a loss of fluid from the tissues or too small an intake. In order to save more detailed explanation, I will describe one or two cases.

CASE I.—A male, aged 44 had severe haemorrhage from a duodenal ulcer. He was fed by the rectum for five days. This feeding consisted of three 9-oz. nutrient enemata and 1½ pints of saline in the twenty-four hours. For the next three days he was given 5 oz. of peptonized milk every two hours, and subsequently ordinary milk, jelly, custard, and soup, on successive days. During the first four days of mouth feeding the bowels acted with enemata. On the sixth day he complained of great discomfort. On attempting to defaecate there was great tenesmus, and nothing passed except a small amount of faeculent fluid. On examination the rectum was found to contain a large faecal accumulation of the consistence of putty. After being broken up by the finger this was easily evacuated by the aid of a soap enema. In this patient the body fluids were deficient, owing, in the first place, to the original haemorrhage, and subsequently to the too small amount of fluid given.

CASE II.—A male, aged 60, had an acute attack of diarrhoea and vomiting. He was kept in bed, and given milk diet and a bismuth mixture. Two days after the diarrhoea stopped, but during the continuance of the slop diet the patient complained of tenesmus accompanied by the frequent passage of small fluid motions. This continued for a week, at the end of which his doctor asked me to see the patient. He was then much depressed, complained that everything he took ran straight through him, and that the pain was almost unbearable when he passed those frequent fluid motions. There was fullness of the ischio-rectal fossae and redness around the anus. On rectal examination a huge mass of putty-like faeces was felt, quite as big as a fetal head. This had to be extracted piecemeal by means of the finger, after which he made an uninterrupted recovery.

CASE III.—A female, aged 40, had an acute attack of diarrhoea with pyrexia. When seen the condition had been present for three days. She was given milk diet and a mixture containing tr. opii and decoc. haematoxyli, etc. After two days the diarrhoea stopped, but remembering former cases of rectal impaction, I ordered a dose of the liquid extract of cascara sagrada. It was then, however, too late, and the same evening the patient had acute pain in the rectum with violent tenesmus. Examination again disclosed a mass of putty-like consistence, but not of very great size, and this was easily evacuated after being broken up by the finger.

During the past two years I have seen the same condition in three women under treatment for haematemesis. In each case a description would be practically identical with the first case described, and will therefore be omitted. In the last two described cases there was a loss of fluid from the body, due to diarrhoea or vomiting, or both. In all of the cases the most prominent feature was tenesmus, whilst in four of them there was spurious diarrhoea, due to catarrh set up in the rectal mucous membrane by the presence of the faecal mass; the stools therefore consist of mucus discoloured by some small amount of faecal material. The tenesmus is due partly to mechanical stimulation by the impacted faeces and partly to the catarrhal inflammation of the mucous membrane, the one tending to aggravate the other so long as the condition remains unrelieved. The character of the impacted mass was just the same in all the six cases. Globular in shape and pale yellow in colour, it is made up of finely divided particles, with just enough moisture to give a doughy consistence. The formation of such a mass is easily explained when the conditions are considered. In the first place the residue which passes into the large intestine after the digestion or partial digestion of milk, custard, soup, and gelatinous substances, although small in quantity is made up of very finely divided particles. These have a greater tendency to cohesion than have more granular residues, and the small bulk of the substance fails to give a sufficient stimulus to the motive power of the gut.

These factors alone, however, are not enough to cause a faecal impaction, but must be supplemented by the over-extraction of water from the residue. All the cases here recorded were suffering from shortage of fluid arising either from too small an intake or too great an output, and therefore whatever fluid could be extracted from the residue in the large bowel would be taken up by the blood vessels and leave a cohesive mass.

The accumulation does not remain in the colon, as so commonly occurs in cases arising from chronic constipation, but passes on until checked at the anal sphincter, where further addition may be made to its bulk. This onward movement is accounted for by the muscular efficiency of the gut in these cases, as compared with its sluggishness in chronic constipation. The impaction at the sphincter ani is purely mechanical. The diameter of the mass is too great to pass through a physiologically dilated sphincter. That the muscular power of the rectum is brought fully into play is emphasized by the painful tenesmus.

In order to avoid the occurrence of faecal impaction during the treatment of conditions requiring a milk diet, or a diet leaving a cohesive residue, it is of prime importance to give a sufficiency of water. A patient fed by the rectum probably does not retain and absorb enough fluid to meet his requirements. I always order 9-oz. feeds and half a pint of saline alternately every four hours, which are well retained. This represents a total of 57 oz. of fluid. The amount, however, is probably not enough, because the conditions which make rectal feeding necessary—for example, severe haematemesis or vomiting—also deplete the tissues of their requisite quantity of fluid. The demand of the tissues for more water is carried through the period of rectal feeding into the initial stages of feeding by the mouth, and it is during this period of slop diet that impaction takes place. The milk should, therefore, be diluted with water or lime water, or, better still, the rectal saline injections continued during the first three days of feeding by the mouth.

In cases of diarrhoea extra fluid should be given by the mouth, and is well taken in the form of lemonade. A safeguard is to give a small quantity of some saline aperient, which tends to prevent the absorption of too much fluid from the bowel. In such cases, whenever there is tenesmus associated with the passage of small quantities of faecal-stained mucus and pain on attempting to defaecate, it is imperative that an examination of the rectum be made.

In one of the above cases days of pain and anxiety would have been avoided had the rectum been examined as soon as the tenesmus arose. Breaking up the mass is a comparatively painless operation, and the immediate relief

after the passage of the fragments well compensates for any unpleasantness experienced by patient or physician.

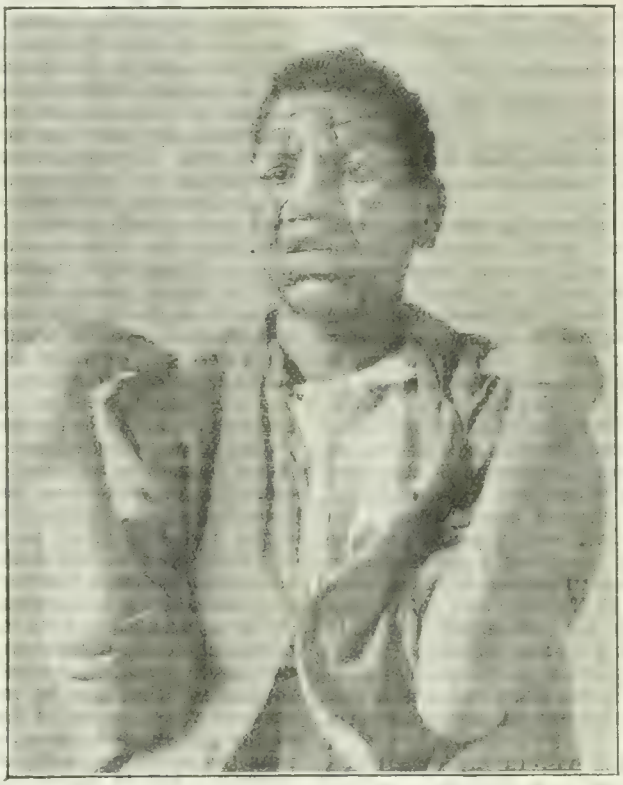
REFERENCE.
1 *Lancet*, 1907.

A CASE OF TUBERCULAR LEPROSY.

By M. MACKINNON,
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LEPROSY is a disease which is comparatively rare in this country and the cases that one occasionally meets with are, as a rule, patients who are natives of districts in which the disease is prevalent or have resided in such area for a number of years. The latter are rare, and even in the tropics where the disease exists with most frequency, its occurrence now is extraordinarily diminished, and in Norway, Russia and Greece, where the disease used to be very common, the percentage of cases that occur annually is much on the decline.

There are two kinds of leprosy—tubercular and nerve leprosy, though occasionally mixed forms also occur. The case which I am about to relate is a typical example of the former with as yet no indication whatever of the nerve type.



The patient, L. W., was admitted into the Seamen's Hospital about the middle of May with the appearance shown so well in the photograph. The face and feet were covered with a hard crusty exudate. The skin of the forehead was wrinkled, indurated, and nodular; the eyebrows fell over the eyes, lips thick and hard, and covered with crusts; the cheeks were hard and massive with large nodules; the whole producing a picture of the so-called "facies leontina" which is described as characteristic of this disease.

The disease commenced four years ago, nine months after the patient came back from a trip to Barbados. Patient is a native of Barbados, 29 years old, and left his native home ten years ago, and has only been twice home during that period. He admits having seen cases of leprosy, but never came in contact with any. He first noticed one or two enlarged glands below the angle of the jaw on either side; they were hard and painless at first, but in the course of a few weeks got rather tender. Gradually small nodules formed on his forehead and cheeks, and soon after the wrist-joints became swollen and tender, and the ankles thickened and nodules formed here and there along his thigh and up the forearm. The nodules increased in size and number, and the patient felt that he was getting weaker. In the course of about twelve months the nodules on his face began to exude a glairy exudate, which, on drying, formed hard crusty masses all over his face. His lips got extremely thick and crusty, and his teeth covered with sordes, with the result that his mouth and throat got very septic. He visited several hospitals, and on each occasion was told he was suffering from an intractable form of syphilis, and as such was ordered admission to this hospital. On admission the temperature was 99° F., but it gradually got higher, and in the course of a week it was up to 103° F., kept between 100° and 102° for seven days, and then came down to normal. For the next seven days it varied from normal to 100° F., and the following week again rose to 104° F., and for the following seven days varied from 100° to 103° F., and then dropped to normal, remaining fairly stationary for another week, and then rising again.

This high rise of temperature occurred fairly regularly about every other week, and during the high fever the patient had very severe pains all over him, not particularly confined to the joints. In the course of a few weeks several more nodules were discovered along his forearm and thighs, varying in size from a pea to a walnut. This variation of temperature was in all probability due to the septic condition of his mouth and throat, and, although regularly gargled and syringed with antiseptics, his temperature remained very unsettled.

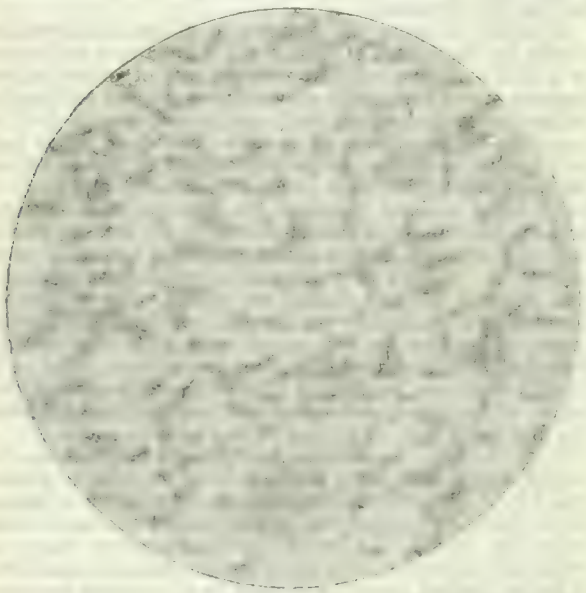


Fig. 1.—Section from a nodule, showing clumping arrangement of bacilli.



Fig. 2.—Swab from the throat, showing clusters of leprosy bacilli with a few epithelial cells.

The diagnosis of leprosy was come to—*first*, by the general appearance of the patient; *secondly*, by the marked wasting of the thenar and hypothenar eminences

and of the interossei, and the general distribution of nodules all over the body; *thirdly*, and most important, by the discovery of the leprosy bacillus.

With a sterilized platinum rod some of the nasal and throat discharges were smeared very thinly on a glass slide, dried, and stained with carbol fuchsin in exactly similar way to the method used for demonstrating tubercle bacilli. Both bacilli retain the carbol fuchsin stain after being treated with weak sulphuric acid.

The leprosy and tubercle bacilli resemble each other in size, shape, and staining properties, but the former tends to accumulate in masses, and, from the drawing taken, this clumping arrangement can be seen in a marked degree.

The bacillus can also be got by scraping a nodule with a scalpel until a little serum exudes, laying this on a slide, and staining it. This latter method, however, is rather painful if local anaesthesia is not used, and if there be no anaesthesia of the skin. In this particular case the skin has been tested from time to time, but no anaesthesia whatever can be made out. If anything, the skin is hyperaesthetic at certain places.

The recognized treatment of this malady is by one or other of three drugs—Chaulmoogra oil, arsenic, or mercury, but preference is given in most cases to Chaulmoogra oil, as distinctly beneficial results have been obtained by its regular and long-continued use. In cases like the above, where there are extensive nodules, and the formation of a crusty exudate on the skin, local as well as constitutional remedies must be applied.

Sir Malcolm Morris, by whose kind permission I publish this case, uses the following ointment for the skin, rubbed in twice a day:

℞	Ac. salicylic.	gr. xx.
	Ichthyol	ʒss.
	Hydrarg. oleates, 10 per cent. ...	ʒss.
	Zinci oxid.	gr. xxx.
	Vaseline	ad ʒj.

In addition the oil is given in capsule commencing with 10-m doses three times a day, and increasing the dose gradually, until about 1 drachm is tolerated thrice daily. Under the above treatment this particular patient has vastly improved. The nodules have subsided, and in many places disappeared altogether. Whether this improvement, however, will continue is doubtful, as the ultimate prognosis in all cases of leprosy is extremely unfavourable.

KALA-AZAR IN THE ROYAL NAVY,*

WITH ILLUSTRATIVE CASES.

BY FLEET SURGEON P. W. BASSETT-SMITH, R.N.
(Communicated by permission of the Director-General, R.N.)

WHILE employed in a naval hospital at home, and dealing with diseases from foreign stations, it is one's fortune to meet occasionally with some of the more obscure cases of irregular fever and cachexia, the etiology of which is unknown or only partially known. Of the latter, the disease called kala-azar, Dum-dum fever, etc., is of particular interest, especially when attacking Europeans, or when it has been possible to demonstrate the parasitic organism. That the disease is more common than is usually supposed is very likely: I can look back on 4 cases under treatment in my wards in which the clinical evidences were very strong, though it is only in the present instance that proof has been obtained; for want of this proof the other cases were returned as "splenic anaemia." In the latest account of the disease, by Leishman, the original endemic centre in Assam and Bengal has been widely extended, though definite cases from other regions



Fig. 1.—Hepatic blood multiplied 1,000 times.

are not common. He mentions Southern India, Ceylon, Burmah, China, Egypt, Tunis, and Algeria. In my 4 cases the first contracted his illness in South Africa; the second was originally a merchant seaman, and had been much to India. In both the symptoms were typical—very large spleens, very low white blood counts, and relative very low polymorphonuclear counts. In both 2 c.cm. of blood was drawn off from the spleen with negative results. These cases were fully reported in the BRITISH MEDICAL



Fig. 2.—Citrated culture forty-eight to seventy-two hours. Leishman bodies. Kala-azar.

JOURNAL of November 11th, 1905. I attribute the want of success in finding any parasitic organisms then to the large quantity of blood drawn off and not to their being absent from the organ.

Case 3 was a chief stoker, aged 38. There was a history of chronic anaemia, commencing while in South Africa, attended with slight fever, recurrent haemorrhages from nose, stomach, and bowel (at times severe), great enlargement of the spleen, a reduction of the red cells to 2,000,000, the white being 2,100, and haemoglobin 40 per cent. The

* Read before the Society of Tropical Medicine and Hygiene.

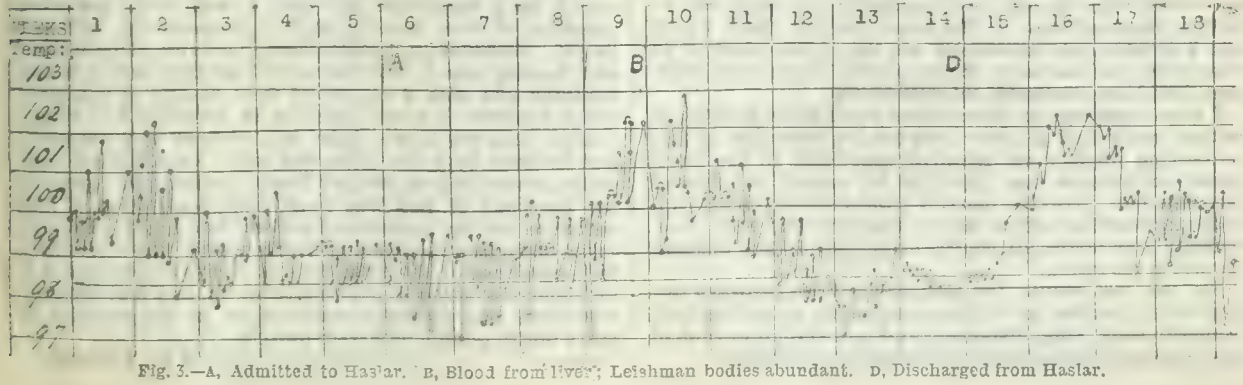


Fig. 3.—A, Admitted to Haslar. B, Blood from liver; Leishman bodies abundant. D, Discharged from Haslar.

polymorphonuclear cells were relatively much decreased. In this case no parasitic bodies were found in the peripheral blood, and he refused to have any drawn off from either spleen or liver; therefore although all the symptoms pointed to kala-azar, its existence was not proved.

Case 4. The patient the subject of this paper was admitted last November for malarial cachexia.

He gave the following history: From 1894 6 he served on the East and West Coasts of Africa, where he contracted malarial fever; from 1896-1901 on the Australian coast; in 1902-3 he was on the East Indian station, and lived on shore in Bombay and Trincomalee; in 1904-6 he was in China, being quite well; he lived on shore at Hong Kong and Wei-hai-wei, and visited Shanghai, Tientsin, Hankow, and Siam. On arriving in England in 1906 he began to feel ill, was treated for influenza for a month, and then, improving, went to the Mediterranean. After three months, vomiting, anorexia, loss of flesh, pallor, headaches, and irregular fever set in. He was treated for malaria, and invalided to England.

On admittance to Haslar he was a very old, cachectic-looking man, the skin was dry and earthy, he complained of headache, dyspepsia, epistaxis, and general weakness. The spleen extended to within 1 in. of the middle line and nearly down to the crest of the ilium; it was smooth and hard. The liver was also enlarged; the urine was not albuminous. The blood gave 3,800,000 red cells and 2 000 whites. A relative count gave polymorphonuclear cells 48 per cent, large lymphocytes 27 per cent., and small lymphocytes 25 per cent. There was irregular fever and a fast pulse.

These symptoms continued, the fever being of an undulant character. A small quantity of blood was drawn off from the liver, and Leishman bodies, both singly and in groups, were found. He was put on atoxyl, calcium lactate, iron, and bone marrow; under this treatment, the atoxyl being pushed to 12 grains a day, the haemorrhages stopped, the fever passed off, and he gained weight. A glance at the chart will explain how possible it is in such a case to confuse this condition with Mediterranean fever, as Bentley did; more particularly so as I have myself had one case of eighteen months' standing with such marked cachexia and splenic enlargement that I drew off some blood from his spleen to seek for the bodies, and found instead a pure culture of the *Micrococcus melitensis*. Only 0.5 c.cm. was drawn off from the liver of the present case; it contained some liver cells, fairly abundant Leishman bodies, most of which were single and piriform in shape, but collections of even fifty were found. The blood was sterile bacteriologically. A portion of the fluid drawn off was mixed with a citrate solution, incubated at 20° C., and daily examined for developmental forms. On the second day fission forms were seen, but from that day the bodies rapidly broke up, the swollen nuclei alone taking up the stain. The attempt to cultivate the organism was thus only partially successful, the bodies on the second and third day were like some seen on slides of Indian cases which were given me by Major Leonard Rogers, I.M.S.; they also resemble very much some stages in the evolution of trypanosomes as seen in rats.

After being discharged from Haslar, the following condition was noted: Appearance of a marked crop of petechiae over upper limbs and trunk lasting a short time, temporary enlargement of the cervical glands; after a short period of normal temperature there was another wave of pyrexia, the fever reaching 102 6°; this lasted two weeks, when he lost flesh markedly, but there was no further haemorrhage or diarrhoea, though more cough and a troublesome stomatitis set in. A film showed no change in the character of the blood. The atoxyl treatment had been continued intermittently.

I have ventured to bring these short notes forward, as further study and a better look-out for examples of this interesting disease are required, especially in the navy, where such cases may possibly be passed as malarial cachexia, etc. Also the marked improvement in his condition, at least for a time, under atoxyl treatment is noteworthy; and, lastly, all *positive* evidences of such diseases are worth recording.

For the last month the patient has been perfectly free from fever, has had no bad symptoms, has gained weight, is able to walk long distances, and now the improvement is so marked that he is about to return to Australia.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF RETROVERSION OF THE GRAVID UTERUS.

ON April 8th I was called to a young primigravida (at the end of her third month), who was suffering from retention of urine. I found the cause to be acute retroversion. After emptying the bladder by catheter, I tried, without success, to rectify the malposition. I then inserted a small rubber ring, wishing, rather than hoping, that it might prevent the recurrence of retention. A short time previously I had found a ring to be quite efficient in the treatment of retention due to the pressure of a fibroid; but in that case the uterus, though heavy, was free to move. The patient was directed to remain in bed and to adopt the knee-chest position frequently. She suffered no further inconvenience, and on April 11th I found that the pelvis was in the normal condition. Reviews of books quite lately published indicate that active treatment of this accident is not yet universally recognized as harmful. Until recently no one believed that the impacted uterus could escape unaided. How, indeed, should it escape? Impaction produces congestion, and congestion aggravates impaction. Clearly, then, the uterus ought not to release itself. Nothing can be more certain, except the fact that it does release itself—usually, if not invariably.

London, N. O. E. HIGGENS.

SOME USES OF PEROXIDE OF HYDROGEN.

ABOUT nine months ago I was called in to see a doctor friend who was suffering from a carbuncle on the back of the neck; it did not look very much—an area of inflammation about ½ in. in diameter with a central point of pus. With a probe charged with liquid carbolic acid I made a small opening so as to allow of free drainage, and I did this on three successive days; but the inflammation rapidly spread, until there was a red inflamed area involving the whole of the back of the neck. Under an anaesthetic I inserted a pair of dressing forceps, opened them at right angles, and then scraped away a quantity of rotten tissue, leaving a hole as large as a golf ball, with free drainage to the whole of the infiltrated area. Although this gave very considerable relief the inflammation still spread, until the whole area from the occipital protuberance to the seventh cervical vertebra was involved. I doubted the advisability of opening up any more tissue by an incision, and Mr. Tubby, who at this stage kindly saw the case with me, agreed with me, and suggested a trial of peroxide of hydrogen. Compresses of peroxide and cold water, 1 in 3, were therefore applied forthwith, and the effect was remarkable. The inflammation at once ceased to spread, the huge gaping hole took on a more healthy character, and in two months from the beginning of the original boil the neck was healed. Since then I have had further proof of the value of peroxide, this time in connexion with one of those apparently trivial and localized inflammations of a finger which start as a pustule, and which, in spite of attention, involve the tendon sheaths, demanding free incision with the insertion of drainage tubes, and ending in permanent deformity. The experience was a personal one. On the first phalanx of the index finger of the left hand a small boil developed, which, though opened with a sterilized instrument, rapidly spread, until it looked as if it would be a repetition of what I had seen before—a question of free opening and a permanently stiffened finger. Fortunately, I remembered peroxide of hydrogen, and, having wiped out the small opening leading to the inflamed area with a pledget of wool soaked in peroxide, covered it with a moist dressing of peroxide and water, 1 in 3. In a few hours there was obvious improvement, and in three days the place was well. On a similar condition developing on another finger no attempt at opening up the head of pus was made; an application of the peroxide cut the inflammation short in a night. I would lay it down as a rule that in dealing with these localized inflammations of the skin there is always the danger of a secondary infection in opening them up, and that the best treatment is a peroxide compress, as in the majority of cases nothing more will be required.

Barnes. G. S. HOVENDEN, M.D., B.S.Lond.

MUMPS.

IN the last two numbers of the JOURNAL attention has been directed to this disease. Dr. Higgens[1] pointed out that mumps may be represented by a primary orchitis, and Dr. Maidlow[2] mentioned the occurrence of orchitis and female pelvic disorders, mastitis, gastro-intestinal (? pancreatic) disturbances and profound cerebral symptoms. In addition to these it may be noted that the cervical lymphatic glands may alone be affected as the result of mumps, but more commonly there is a secondary lymphadenitis. I agree with Dr. Maidlow that "The book description of mumps is hopelessly misleading." Mumps is a much more serious disease than the textbooks would lead one to suspect. For instance, in an epidemic occurring two or three years ago in a public school of 250 boys, there were two deaths apparently due directly to mumps. Then, again, mumps may be complicated by acute nephritis, 2 out of 30 cases with this complication developed into chronic nephritis, and 1 case died. The ear affections of mumps also deserve careful consideration, as in some epidemics, otitis media is a fairly common complication, and permanent deafness may result. I think there can be no doubt that some cases of acute pancreatitis are due to mumps. I have discussed mumps and its complications in a paper read at a conjoint meeting of the Chelsea, Richmond, and Wandsworth Divisions of the British Medical Association in November, 1906 (published in vol. xv of *Westminster Hospital Reports*), and in the discussion which followed cases showing the gravity of mumps were described. Mumps is essentially a disease which belongs to the province of the general practitioner, and as textbooks are almost invariably written by consultants, a first-hand acquaintance with the disease is hardly to be expected, so that, as Dr. Maidlow complains, the practitioner does not get the help he should.

London, W. F. DE HAVILLAND HALL, M.D., F.R.C.P.

SPONTANEOUS INVERSION OF THE UTERUS.

IN the BRITISH MEDICAL JOURNAL of April 11th, 1908, p. 865, is a note of a case of spontaneous inversion of the uterus in a primipara, with remarks on the rarity of its occurrence. Last December I was called to a case, and found that labour had been in progress for three hours. The presentation was a normal L.O.A. with os fully dilated. I had not long to wait before the membranes ruptured, and the child was born after one or two rather severe pains. When tying the umbilical cord I was surprised to find a large globular mass protruding from the vagina. I found that I had to deal with a completely inverted uterus with an adherent placenta. The placenta I detached *in situ*, and then replaced the uterus, having first given the patient chloroform. She made an uninterrupted recovery. The patient was a young woman aged 22, tall and very thin. She had had one child twelve months previously. I attended on this occasion and there was not any trouble.

Dalbeattie, N.B. A. W. ANDERSON, M.B.Edin.

RIGOR MORTIS IN STILLBORN CHILDREN.

FOR some months past there have appeared in the medical papers records of cases of rigor mortis in stillborn children. The medico-legal aspect of the event has been discussed, showing how easily it might lead to false inference and trouble. That it may be a cause of difficult or delayed labour I found at a case I attended in October last. The mother had four children, and was expecting again at the beginning of December. In September she noticed the large size of her uterus and thought she was going to have twins. The movements of the fetus were unusually vigorous and frequent, and caused her uneasiness and pain. They ceased on October 6th. On October 8th, in early morning, labour pains came on; at 10 o'clock they were feeble; an examination was made and hydramnios found to exist. At noon the waters broke and an enormous quantity escaped, followed by some haemorrhage. Pains came on more vigorously and haemorrhage ceased, but there was almost no progress. An examination was then made, and the feet found presenting and planted against the pubes. They and the legs were so stiff that there was some difficulty in bringing them out of the vulva. The swollen body of the fetus was a tight fit, and required some strong traction to deliver; but there was no further difficulty, for the whole bony cranium was absent and the scalp membranous. The curious appearance of the body was striking; it looked, as the nurse said, "exactly like a soldier at attention, all straight and stiff." This acephalous monster had been dead apparently two days. I had a somewhat similar case some eight years ago, but there was no rigor mortis; the abdomen had to be perforated to empty it and enable the body to pass through the pelvis.

East Twickenham. H. H. MURPHY, M.D.

[1] BRITISH MEDICAL JOURNAL, April 18th, p. 925.
[2] Ibid., April 25th, p. 989.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LONDON TEMPERANCE HOSPITAL.

A CASE OF CHOLECYSTOTOMY AND CHOLELITHOTOMY.

(Under the care of Sir WILLIAM J. COLLINS, M.P., M.S., F.R.C.S., Senior Surgeon to the Hospital.)

ARTHUR D., aged 39, was admitted under the care of Sir William Collins on December 12th, 1907. His family history was good except that one brother died of cancer of the breast. Prior to May, 1907, his health had been good, with the exception of attacks of "indigestion"; in that month he was under treatment as an in-patient in the hospital (under Dr. Fenwick) for gall stones. He at that time had no jaundice.

On December 4th he was seized with severe abdominal pain, chiefly to the right of the umbilicus, and diarrhoea. He became jaundiced, but there was no vomiting. He was melancholic and sleepless.

On admission he was well nourished, the skin and mucous membranes were intensely icteric. Urine mahogany-coloured, specific gravity 1020, acid, bile-containing. The stools were clay-coloured; the breath very offensive; the abdomen was tense and very tender in the right hypochondrium. Resistance and indefinite hardness could be felt in the region of the gall bladder; there was no ascites. The temperature ranged between 101° and 103°. The pain continued severe despite medical treatment; the jaundice increased, and Sir William Collins advised laparotomy.

On December 18th, under chloroform, Sir William Collins made an incision 4 in. long from the eighth right costal cartilage downwards; later on a transverse incision outwards at right angles to this was made to give more room. Some adhesions of the omentum to the gall bladder were encountered and gently detached. The gall bladder was found to be contracted and firmly fixed in its appropriate fissure to the hepatic tissue. External digital examination indicated gall stones within the bladder. The wound was packed around with pads and the bladder incised, and the little finger inserted. Four multi-faceted stones were successively removed, each about 1 cm. by 1.5 cm. No pus or mucus escaped. Sir William then passed first his little finger as far as it would go and then a large probe down the cystic and common ducts into the duodenum to make sure that the orifice of the duct was free. He then inserted a drainage tube which filled the lumen of the contracted gall bladder and sewed the walls of the latter around it, also fixing the tube *in situ* by a catgut stitch through the liver substance. As the wound was deep—there being thick parietes and a retracted gall bladder—there was no possibility of attaching the bladder to the skin, and a gauze packing was employed. The end of the tube was conveyed through the dressings into a bottle fixed to the side.

The patient made an uninterrupted recovery. The temperature fell to normal on the second day after the operation and remained so. Perfect drainage was secured by the mechanism adopted. The jaundice slowly disappeared and the motions became bile-stained on December 26th. The gauze plugs were removed on the fourth day and the tube on the sixth. The sinus closed a week later, and on February 14th the patient was discharged quite well.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, April 27th, 1908.

MALTA FEVER.

COLONEL DAVID BRUCE, R.A.M.C., described how the Commission on Mediterranean Fever of the Royal Society in 1904 to 1906 worked at the problem of the cause of Malta fever. Their experiments pointed to the probability that the *Micrococcus melitensis* entered the body by way of the alimentary canal, and therefore by some infected food or drink. That led to the discovery that the goats in Malta acted as the reservoir of the virus of the fever. Several goats had been inoculated and fed with the micrococcus, and the result was that there was no rise in temperature and no sign of ill-health in any way. In a week or two, however, the blood of the goats was found to be capable of agglutinating the specific micro-organism. Even then the goat seemed such an unlikely subject for Malta fever that the observation was in danger of lapsing. Nothing more was done for several months, when, by accident, the matter came up again and the Commission decided to repeat the inoculation experiments. A small herd was secured for the purpose and, as an ordinary precautionary measure, their blood was examined before inoculation. Much to the surprise of the Commission, several of the goats were found to react naturally to the agglutination test, and that led to the examination and the discovery of the *Micrococcus melitensis* in the blood, urine, and milk of the herd. Some thousands of goats in Malta were then examined, and the epoch-making discovery was made that 50 per cent. of the goats in Malta responded to the agglutination test, and that actually 10 per cent. of them were excreting the micrococci in their milk. Monkeys fed on milk from an affected goat, even for one day, almost invariably took the disease. Preventive measures as a result of that discovery were first begun in Malta in June, 1906, and Malta fever, by goats being banished from the dietary, ceased in the garrison. In 1907 there were 7 cases among the soldiers, and there was not a single case among the sailors. The 7 cases that did occur were almost all traced to the drinking of goat's milk. In reply to questions from the CHAIRMAN, from Dr. J. V. BELL, and from Mr. E. D. MACNAMARA, Colonel BRUCE said that in the North-West of India and in the Orange River Colony of South Africa, and in other places where Malta fever occurred, the goats were found to be infected. It was possible to sterilize the infected milk, but in Malta the only way to prevent infected milk being drunk by the garrison was to forbid the use of goat's milk altogether. The Commission were unable to discover any sign or symptom indicating that a particular goat was infected. At the conclusion of the meeting the CHAIRMAN announced that the Fothergillian Gold Medal had been awarded to Sir Almroth Wright for his work on opsonins.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Dr. FINNY in the Chair.

Friday, April 3rd, 1908.

DUODENAL ULCER: ITS DIAGNOSIS AND TREATMENT.

MR. MITCHELL (Belfast) read a communication on this subject, based on a series of 19 cases on which he had operated during the previous year. Duodenal ulcer, he thought, occurred much more frequently than had hitherto been recognized. It was a more serious condition than gastric ulcer, being less amenable to medical treatment and more liable to terminate in perforation or fatal haemorrhage. It was commoner in men than in women. Prominent symptoms were: (1) "Hunger pain"; (2) discomfort after food; (3) local tenderness above and to the right of the umbilicus; (4) haematemesis and melaena; (5) early dilatation of the stomach. In chronic cases operation was the only reliable and efficient treatment. Dr. LITTLE agreed that duodenal ulcer was commoner in men than in women; he saw cases more frequently among private than among hospital patients. Dr. DRURY found that patients who suffered from duodenal ulcer had less of actual pain than of discomfort. Dr. DAWSON referred to a case in which symptoms of duodenal ulcer were present and remained unrelieved by medical means. An operation was then performed, but revealed no morbid condition. Dr. MOORHEAD said hyperchlorhydria had been a typical symptom in the cases of duodenal ulcer which he had seen. Dr. PEACOCKE asked if the diagnosis of duodenal ulcer had been made by the symptom of "hunger pain" practically alone, and if it had been confirmed. Dr. BEWLEY said that if the hunger pain could be considered a proof of duodenal ulcer the condition would have to be regarded under the categories of severe and slight, as they found cases which were relieved by food and by medical treatment. Cases in which apparently absolute health preceded a copious haemorrhage were not so uncommon, and he did not think the diagnosis was so absolutely clear as might be imagined. Dr. CAHILL said he had been able to diagnose duodenal ulcer through giving foods of different degrees of digestibility, such as beef and pork, and watching the time relation of the onset of pain. Mr. WHEELER asked if the cases of perforation occurred without symptoms, and whether a diminution in the amount of hydrochloric acid would account for the want of symptoms prior to perforation. Dr. O'CARROLL said they might regard gastric cases—other than mere indiscretions—as being either muco-gastric and associated with a diminution of acid secretion, or associated with an excess of acid secretion, or a necrotic or ulcerated condition. These three divisions would form a serviceable basis for diagnosis. They might assume that excess of acid was in many cases associated with ulceration in the stomach or duodenum. He hoped that they would in future be able to diagnose the condition at a stage that would prevent cases having to go to operation. Tests for acid were not always absolutely reliable, as in some cases the acidity of the stomach overstayed its emptying, and set up an ache which might be relieved by food. He agreed, of course, that if they could be sure of the diagnosis there should be operation on the spot. Mr. MITCHELL, in reply, said he agreed with Dr. O'Carroll's remarks, and had himself declined to operate in certain cases. While it was valuable to have an outstanding symptom that would give a direction to their thought, it would be a mistake to regard a single symptom as infallible. He had not, however, found a case of duodenal ulcer in which there was not "hunger pain." His experience of the locality of the pain was varied, and he had not found any diminished hydrochloric acid. In reply to Mr. WHEELER'S question he answered No. The condition of duodenal ulcer might be commoner in the North than in Dublin; since March 5th he had been consulted as to 10 cases having typical signs; in 4 operation was performed and an ulcer found.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNAECOLOGICAL SECTION.

AT a meeting on April 9th, Dr. HERBERT SPENCER, President, in the chair, Dr. H. MACNAUGHTON-JONES recorded three cases of primary unilateral tuberculosis of the Fallopian tube, in two of which only one tube was affected. The other genitalia were healthy in all the cases. One of the patients had given birth to five healthy children since a tuberculous pyosalpinx was removed 6½ years ago. Recently laparotomy had been successfully performed on this patient in the treatment of extensive septic perimetritis after labour, but no evidence of tubercle was found. Dr. C. NEPEAN LONGRIDGE read a paper on the creatinin excretion of lying-in women during the most active period of involution of the uterus, based on 90 estimations of creatinin, and 180 estimations of the total nitrogen in the urine. The patients were delivered in Queen Charlotte's Lying-in Hospital, and were kept upon a creatinin-free diet during the time they were under observation. The endogenous creatinin alone was estimated. It was found that the creatinin excretion maintained practically a level line, and it was concluded that it is probably not increased by the involution of the uterus. Dr. HERBERT WILLIAMSON and Dr. EARDLEY HOLLAND described a case in which fetal death had occurred in six consecutive pregnancies. Careful examination of the patient and her husband failed to reveal any signs of syphilis, and no history of infection could be obtained. In the fifth pregnancy the child was found to be alive in the thirtieth week, and the induction

of premature labour was recommended. Three weeks later the patient was spontaneously delivered of a stillborn child in Queen Charlotte's Hospital. Sections of the fetal organs stained by Levaditi's method revealed the presence of the *Spirochaeta pallida*. She became pregnant again before the menses reappeared, and throughout this pregnancy was treated with small doses of mercury and iodide of potassium. When examined on October 17th the uterus reached to the costal margin, and the fetal heart could be heard. It was believed that nine lunar months' gestation had been completed, and it was thought advisable to run no further risk, but to induce labour. Labour was induced on November 2nd, and she was delivered of living twins, a boy and a girl. Both children were obviously premature, and the amniotic sac of the female child contained an excess of liquor amnii. The children survived only a few days, and *post mortem* neither showed syphilitic lesions, nor could spirochaetes be discovered in sections of the organs.

HUNTERIAN SOCIETY.

RHEUMATISM.

At a meeting on April 8th, Mr. F. ROWLAND HUMPHREYS, President, in the chair, Dr. FREDERICK TAYLOR opened a discussion on rheumatism. In discussing acute rheumatism he said that no real progress could be made until all were agreed as to the exact pathology of acute rheumatism. It had been explained by numerous theories, but none had been accepted by all. He was convinced that it was an infectious disorder, and almost certainly microbic. The profession rightly demanded the most rigid proof of the specificity of an organism, and were justified in withholding agreement until there was a favourable consensus of opinion on the matter. Of diseases having a relationship to rheumatism, but once thought to be distinct, the first was chorea. Chorea was obviously a toxic rather than a purely nervous disease. That it belonged to the infectious group was shown by the occasional occurrence of endocarditis in cases in which there had been no previous rheumatism, by the great frequency of endocarditis in fatal cases, and by the resemblance in the manner of death between some fatal cases of chorea and other nervous diseases such as hydrophobia and tetanus. Those three diseases were alike in being almost solely infectious disorders of the central nervous system, and different in the area chiefly affected. The association of tonsillitis and various erythemata with rheumatism was recognized long ago. There were many forms of infective arthritis other than acute rheumatism, and it was reasonable to suppose that such affections in association with erythema and urticaria were due to some other condition, possibly some other toxaemia, than that of acute rheumatism. Wright thought that haemorrhagic, erythematous, and urticarial lesions were often due to deficiency of calcium salts in the blood. He (Dr. Taylor) did not adopt the idea that an erythema was necessarily a manifestation of rheumatism. Again, it was difficult to look upon tonsillitis as necessarily due to rheumatism. The tonsils were specially vulnerable to causative microbes. The researches of the skilled bacteriologist were specially needed in regard to the relationship between acute rheumatism and chronic rheumatism or osteo-arthritis. Osteo-arthritis in the middle-aged and the old was very widespread and occurred in many thousands who had never had acute rheumatism. As to endocarditis, myocarditis, and pericarditis, he had little to say which was not already known. Endocarditis was invariably limited to the valves, unless, as in malignant endocarditis, the organisms were conveyed by direct contact or by extension gradually to other parts. The first evidence of endocarditis derived from auscultation was a systolic murmur, rarely a diastolic. Hyperpyrexia was a complication of rheumatism which was a profoundly interesting mystery. From 1873 to 1877 there was an epidemic of hyperpyrexial cases in the British Isles, which he did not think had been repeated. A committee of the Clinical Society reported on a number of such cases, but without reaching any definite conclusion. It might be said that salicylic acid would guard against a recurrence of such epidemics, but the salicylate treatment was introduced, though, perhaps, not fully pushed, during the years when hyperpyrexia was rife. During eighteen years (1888–1905) the admission of cases of acute rheumatism to Guy's Hospital numbered 1,887, yet there were only 7 cases of hyperpyrexia, 2 of which proved fatal. With regard to the salicylates, he considered 20 grains every four hours to be the best dosage. The question remained how to prevent carditis, and he would be glad if any subsequent speakers could say whether that had been any less frequent during the last forty years. His impression was that rheumatic heart disease was as prevalent now as ever. Much had been said about the control of carditis, but he dissented from most of it, and when the heart was primarily affected, carditis could not be obviated. He asked what view ought to be taken of rheumatism in regard to insurance practice. What view ought to be taken with regard to a proposer who had had within a few years a sharp attack of acute rheumatism, when the heart on examination appeared quite sound? Fifteen or twenty years might intervene between an attack of rheumatism and the onset of cardiac disease.

Dr. F. J. POYNTON said that to him rheumatism was a specific disease. It was not strictly a fever, as there might be no fever. He and Dr. Paine had investigated 40 cases in ten years, and had isolated the diplococcus of the disease from many parts of the body. They were the first to reproduce experimentally and repeatedly rheumatic pericarditis and endocarditis. The conclusions which he and Dr. Paine had arrived at were that the micrococcus could be isolated in pure culture from the cardinal lesions of rheumatism, could by injections into animals cause similar lesions, and could be again isolated from those lesions in pure culture. He exhibited a number of specimens showing the artificially induced lesions in animals.

Dr. HORDER said that his attitude was that of a sceptic rather than that of an opponent of Dr. Poynton's views. In malignant endocarditis his results had been as positive as they had been negative in rheumatic fever. The great majority of the micro-organisms were streptococci; some might even be called diplococci; their source was the alimentary canal, and their virulence low. In some of the cases there had been no history of rheumatic fever, but a history of syphilis, of gonorrhoea, or of previous endocarditis. In some the valvular disease was congenital. Such of the specimens of the *Diplococcus rheumaticus* as Dr. Andrewes and he had been able to investigate had given reactions identical with those of the faecal streptococci obtained from cases of malignant endocarditis. He believed that the causal factor of rheumatic fever was as yet undiscovered, and that such bacteria as had been obtained had been connected with secondary invasions in a body invaded by the rheumatic virus.

Dr. A. P. LUFF dealt with the irregular manifestations of rheumatism. For every case of acute rheumatism the general practitioner perhaps saw a hundred of chronic rheumatism. The latter was really an affection of the white fibrous tissue, which had led Sir William Gowers to coin the word "fibrositis." The word "rheumatic" in that connexion was unfortunate. The condition was frequently started by cold and wet, and it might be started by strain, as in the case of tennis elbow, golfer's elbow, etc. In the treatment, the salicylates were useless except as relievers of pain. For the pain, he knew nothing better than a combination of aspirin and pyramidon; for the fibrositis he knew nothing to equal iodide of potassium, and he gave it in the largest possible doses. The local fibrositis might be relieved by the application of heat, or by ionic medication—that is, driving in substances by the aid of electricity, after an electric light bath for fifteen minutes. In his experience there was no necessity to diet patients suffering from fibrositis; there was no reason for the belief that it was associated with gout, and he urged that the profession should finally abandon the uric acid fetish, uric acid being a harmless by-product.

Dr. F. J. SMITH asked for a definition of malignant endocarditis. The difference between it and ordinary endocarditis was only one of degree, and he was in the habit of teaching that every endocarditis was ulcerative. The term "endocarditis" should be used with the addition of an adjective to denote the kind of microbe causing it, when that was known.

Dr. GRÜNBAUM asked Dr. Poynton in what percentage of cases his cultures were obtained during life, and ten days or more before death. That was very important as a terminal invasion occurred in so many diseases. More

evidence was wanted that the organism of Poynton and Paine was different from that of Andrewes and Horder.

Dr. Seymour Taylor said that not infrequently one or other parent of the choreic child was rheumatic, and the disease was preceded by or complicated rheumatism in many cases. In severe cases of chorea there was frequently a rise of temperature. In 30 per cent. of the cases the child had endocarditis or pericarditis. Moreover, chorea yielded to treatment by salicylates as quickly as to arsenic or other so-called remedies. He had had a child in hospital without a history of rheumatic fever, who suffered from chorea. Lumbar puncture was done, and Poynton's micro-organism discovered. That patient was quickly cured by salicylate of soda.

Dr. Poynton, in reply, said that the question of a terminal infection in his cases could be disposed of. Some of the patients from whom the micrococcus was obtained lived for years afterwards.

The discussion was adjourned until April 29th.

Nottingham Medico-Chirurgical Society.—At a meeting held on April 15th, Dr. L. W. Marshall, President, in the chair, Dr. W. B. Blandy showed a man, aged 23, the subject of *Thomsen's disease*. The symptoms of temporary stiffness of many of the muscles during voluntary movement had been present eight years, the muscles themselves being well developed. His only surviving relative, a sister, also suffered from similar symptoms. Dr. A. C. Reid showed three male patients, aged respectively 54, 35, and 60, who had suffered from varying types of *Cerebral syphilis* during the last twelve months. In all there had been headache, vomiting, ocular paralyses, and changes in the fundus oculi, while in the third case the illness set in with a sudden apoplectiform attack and loss of consciousness whilst in the street. In this case severe laryngeal ulceration also occurred. Dr. A. Waring, in a paper on *Infant binders*, condemned them as harmful and unnecessary. Warmth was supplied better by loose clothing, and support was not needed. The only justification for the use of binders was as a safeguard against rough handling, especially about the recently-ligatured umbilical cord during the first two or three weeks. The constriction of one or more binders was frequently responsible for such injurious effects as restlessness and loss of sleep, vomiting, inguinal and umbilical hernia, chest deformities, interference with free respiration, which was of great importance where there was already pulmonary disease, and interference with the cerebral circulation leading to convulsions and other serious results. Such constriction was probably largely responsible for many of the cases in which infants were said to be overlaid.

United Services Medical Society.—At a meeting on April 9th, Sir Herbert Ellis, K.C.B., in the chair, Captain W. Salisbury Sharpe read a paper on the diseases likely to occur on the occasion of the mobilization of a territorial army. He thought those of the alvine class would be by far the most important. He emphasized the importance of both constipation and diarrhoea being early recognized and treated, as being both of them apt to be precursors of more serious disorder, and urged the necessity of provision of isolation for cases of enteric fever. Measles was likely to be a danger when large numbers of men were congregated. Colonel Wardrop doubted if there would be so much enteric fever as Captain Salisbury Sharpe anticipated; with carefully selected camps and men coming from healthy homes better results might be hoped for. Indian experience made him sceptical of the infallibility of an earth system of disposal, as advocated by Dr. Vivian Poore and supported by the lecturer, in the absence of a highly trained conservancy establishment. Major Harrison thought it a pity that no reference had been made to the necessity of educating the soldier in peace for the necessary exposure to infection that he must expect in war. He referred to the desirability of protective inoculation, as against enteric fever, pointing out that the latest experiments showed that the enteric bacillus could live sixty days in unsterilized earth, and that, therefore, there would be a danger, in an earth system of disposal, of establishing foci of infection. Lieutenant-Colonel Fletcher referred briefly to the experience of the Americans during the early part of the Spanish war, and thought that principal medical officers of territorial divisions should take steps in advance of mobilization to counteract enteric fever.

Incorporated Society of Medical Officers of Health.—At a meeting on April 10th, Sir Shirley Murphy in the chair, Dr. F. E. Fremantle, in a paper on Garden Cities, Rural Housing, and the Government, said the garden city had an irresistible claim on the support of all interested in public health. It was the pioneer in England of the town planning movement, for it attacked the root of the conditions inimical to public health on the only scientific plan. It made it practicable and profitable to prevent to a large extent the creation of future evils, trusting to death and decay for the natural passing away of those evils that already existed. In the conception of the Letchworth Garden City the principle of sound "towning," in addition to that of sound housing, had been extensively applied, as also on private estates, such as Bournville, Port Sunlight, and Earswick; a further opportunity of the same nature was arising at Rosyth, the new naval base on the Forth. In relation to towns the doctrine of linear extension was of great importance. The conglomerate arrangement of the population was primarily due to the necessity for mutual defence and to the limits of pedestrian intercommunication, but with the more modern methods of communication the true method of urban development was along the tramway and railway lines. The whole force of Mr. Burns's Housing Bill depended upon the general provisions that were to be drawn up by the Local Government Board, and the carrying out of the Act depended in every clause upon the sanction and limitations of the Board. It was a thoroughly bureaucratic measure, but in one essential it failed grievously, for it sought to give effect to principles which ought surely to be effective wherever building was going on and not only when stimulated by the central authority. The Local Government Board had not the necessary staff or opportunities for keeping in such touch with every remote corner of the country as to know the bearing of local conditions on the future extension of every town or village. In dealing with economic difficulties attending the erection of cottages in rural districts, the real difficulties were due to the depression of agriculture preventing a rise in wages, and to the requirements of sanitation and decency as expressed in modern by-laws and customs; but there should be no reversion to former conditions, and the dictates of civilization must be taken as axioms. If the labourer could not afford to pay a rent of 3s. per week a certain proportion of the cost which might be said to represent the enthusiasm of the community must fairly be charged to the public funds. The crux of the housing question was the efficiency of the executive authorities and their officers, but the Bill did nothing to remedy the palpable and crying anomalies connected with the present position of many medical officers of health and nuisance inspectors. Mr. Montague Harris and Miss Churton, of the Rural Housing and Sanitation Association, agreed that the greatest need was an improvement in administration and in the terms of appointment of the administering officials. Dr. W. Butler thought people had become so accustomed to towns growing up in a happy-go-lucky fashion that it was difficult to convince sanitary authorities of the necessity for more methodical growth. The needs to be satisfied in a modern town were so many and various that it was absolutely necessary to proceed upon proper lines. Dr. F. J. Burman advocated the establishment of a central board of health and the securing of sanitary officials against loss of office through the caprice of the electing authorities. Dr. W. A. Bond approved of the Housing Bill as a whole; in Holborn the council had condemned houses which the justices had refused to order to be closed.

Society for the Study of Disease in Children.—At a meeting on April 10th, Dr. E. Hobhouse in the chair, Mr. Hugh Lett described a case of *Henoch's purpura* associated with intussusception. The patient, a child of 3, was quite well until two days before his admission to hospital. He then had pain and swelling of the left knee and elbow. The next day both legs were swollen, and he had severe paroxysms of abdominal pain. The same afternoon two purpuric spots were seen on the left leg. He was admitted the following morning, and a caecal intussusception operated upon and reduced. The purpura

steadily became worse, and he finally died from a second intussusception of the enteric variety nine days after the first operation. Dr. G. A. SUTHERLAND said that 'n Henoch's purpura all the signs of intussusception might be present with the exception, perhaps, of a palpable tumour. The diagnosis of spontaneous reduction, made sometimes after the abdomen had been opened, might be reserved for those cases in which no evidence of haemorrhage was present. If haemorrhage were present, he would regard it as a sufficient explanation of the symptoms. Mr. DUNCAN FITZWILLIAMS said that the presence of a tumour settled the diagnosis in practically every case, though he had seen one case where the tumour was caused by a blood clot in the caecum. Dr. J. PORTER PARKINSON described a case of *Tetanus neonatorum* possibly due to the use of fuller's earth as an umbilical dressing. The mother had had several other children, and one had died when 6 days old from "lock-jaw" with similar symptoms. Dr. GUTHRIE showed a case illustrating *Eustace Smith's bruit*. The patient was a boy of 7. The superficial veins were enlarged over the front of the chest. An undulating musical venous bruit could be heard at the base of the heart, occupying the whole of the cardiac cycle. The bruit was intensified and the venous engorgement became more pronounced when the head was retracted. The condition was probably due to pressure of enlarged mediastinal glands on the innominate vein or superior vena cava. Dr. LANGMEAD showed a case with the same bruit. The patient, a girl of 5½, had whooping-cough in April, 1907. Since then she had had frequent coughs, which were neither laryngeal nor paroxysmal. There was some impairment of note in the interscapular region on the right side. To the right of the manubrium sterni a definite to-and-fro rushing murmur was heard when the head was retracted, but it was lost when the head was flexed. Dr. GEORGE CARPENTER showed a case of recovery from *Encephalitis* in a girl of 1 year and 8 months. She had had screaming fits, double optic neuritis, and squint. The cerebro-spinal fluid was sterile and contained no cellular elements; the optic neuritis disappeared. The CHAIRMAN showed the heart of a child, aged 7, with infective endocarditis of the pulmonary valves probably supervening on congenital disease. As a result of ulceration there was a communication with the aorta. Dr. CAUTLEY showed specimens from a case of bilateral renal apoplexy occurring in a boy of 3 months. He died after an illness of two days' duration, characterized by convulsive movements and unconsciousness. There was no apparent cause for the condition. Mr. JOHN POLAND showed the specimen and skiagraph from a case of traumatic separation of the lower epiphysis of the femur in a lad of 14. The diaphysis was displaced outwards and backwards without injury to the popliteal vessels. The specimen showed the appearances at the end of thirty eight days after injury.

THE CONSCIENTIOUS OBJECTOR IN SOUTH AUSTRALIA.—According to the *Australasian Medical Gazette*, the Legislative Council recently passed a Bill dealing with compulsory vaccination. In 1901 an Act was agreed to providing that no parent or other person should be liable to a penalty if within six months of the birth of the child he made a declaration that he conscientiously believed that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivered to the vaccination officer such declaration. That Act had a time limit of five years, and in 1906 it was continued until 1911, with the provision that the time in which the declaration should be made was extended to within twelve months of the birth. Since then it was found that a large number of parents who believed that compulsory vaccination had been entirely abolished had neglected to have their children treated, while others thought it was not even necessary that a declaration should be made. In consequence a large number of people have rendered themselves liable to a penalty, and this session both Houses have passed a Bill, the principal clause of which states: "Nothwithstanding anything contained in the Acts of No. 761 of 1901 and No. 908 of 1906, no parent or other person shall be liable to any penalty under Section 21 of the Vaccination Act, 1882, in respect of any child born before the passing of this Act, if before the 31st day of December, 1907, he makes a declaration before a justice of the peace, in the form of the schedule to Act No. 761 of 1901, that he conscientiously believes that vaccination would be prejudicial to the health of the child in respect to which the declaration is made."

REVIEWS.

THE BACTERIOLOGY OF DIPHTHERIA.

The Bacteriology of Diphtheria, edited by Professor NUTTALL and Dr. GRAHAM-SMITH,[1] marks a new departure in bacteriological literature. Its purpose is to deal with the subject exhaustively, and to provide the reader with a work of reference which will spare him the task of hunting up the original articles, scattered throughout various English and foreign journals, on the particular point about which he desires information. This is the first textbook in the English language which has attempted to review our knowledge of diphtheria on this comprehensive plan, and although valuable summaries and monographs have been published in Germany, none of these are altogether satisfactory; when they aim at completeness they carry the art of condensation too far; they overwhelm us with statements of results and opinions attributable to this, that, and the other authority, but do not represent conflicting views on important controversial matters with sufficient detail to enable us to weigh the evidence for ourselves. The present volume, we are pleased to find, is not a dreary cut-and-dried digest of this nature; it is eminently readable, and the writers, at least in so far as they have fulfilled the intention of their editors, have stated the views of authorities holding contrary opinions to their own with a fairness and amplitude which generally makes reference to the original articles unnecessary, though when this is desired, the bibliography, occupying sixty-five pages at the end of the volume, will be found an invaluable guide to the literature.

The book is divided into six sections. The longest, the most important, and the best written is Section IV (pp. 122–448), by Dr. Graham-Smith. It deals with the characters and diagnosis of the diphtheria bacillus, and as this is the first subject demanding consideration in a book on the bacteriology of diphtheria, it ought to have been placed in an earlier position, immediately after the brief historical sketch by Professor Loeffler which comprises Section I. Dr. Graham-Smith gives an excellent and very full account of the morphology of the diphtheria bacillus, and then devotes two very valuable chapters to the distinction of this organism from Hofmann's bacillus. As to the difference between these two bacilli he holds decided opinions, which he supports by substantial evidence; but he does not neglect to give a fair and adequate account of the work of other authorities who take the opposite view that diphtheria bacilli are convertible into Hofmann's bacilli, and that the latter organism is a serious danger to man. The relationship of human to avian diphtheria, the modes of human infection, the bacteriological diagnosis of diphtheria, and the importance of the bacteriologist's guidance in the practical work of stamping out an epidemic of the disease may also be selected as examples of the subjects which Dr. Graham-Smith handles with particular skill in some of the later chapters of Section IV.

After the characters of the diphtheria bacillus have been described, the subject which ought to follow next, in natural sequence, is the study of the lesions produced by the bacillus in the human body. This part of the work has been entrusted to Dr. Mallory, of Harvard University Medical School, and occupies Section III (pp. 82–121) of the volume. Dr. Mallory's minute account of the lesions produced by the diphtheria bacillus in various parts of the body is based on the examination of material obtained from 251 cases of the disease which came to the *post-mortem* room of the Contagious Department of the Boston City Hospital. His experience is therefore exceptionally extensive; but in a work like the present, which claims to be representative of all important authorities on diphtheria, we think that the researches of other morbid histologists on the lesions of diphtheria ought to have been given their due place. Dr. Mallory tells us that,

[1] *The Bacteriology of Diphtheria, including Sections on the History, Epidemiology, and Pathology of the Disease, the Mortality caused by it, the Toxins and Antitoxins, and the Serum Disease.* By F. Loeffler, M.D., LL.D.; Arthur Newsholme, M.D., F.R.C.P.; F. B. Mallory, M.A., M.D.; G. S. Graham-Smith, M.A., M.D., D.P.H.; George Dean, M.D.; William H. Park, M.D.; and Charles F. Bolduan, M.D. Edited by G. H. F. Nuttall, M.D., Ph.D., Sc.D., F.R.S.; and G. S. Graham-Smith, M.A., M.D. Cambridge: At the University Press. 1908. (Sup. roy. 8vo, pp. 738. With numerous charts and reproductions from photographs. 25s.)

owing to the wide range of his own observations, "it has not been deemed necessary to furnish a list of authorities under each heading, or to give the views of each in regard to the process under discussion." He tells the reader where this information can be obtained, but we expect more from the present volume, which is intended, according to the editorial announcement, to save the reader the time and trouble of hunting out references. We esteem Dr. Mallory's histological work, but we cannot concede that he has acquired the rank of the one and only authority on the lesions of diphtheria.

When we have learnt what the diphtheria bacillus is, and the nature of the damage which it does, the next questions to consider are how the bacillus produces its pathogenic effects and how they can be counteracted. The discussion of toxin, antitoxin, and immunity by Dr. Dean occupies Section V (pp. 449-573). His method of handling these difficult topics is excellent, and his contribution to the volume ranks next in importance to that of Dr. Graham-Smith. We are glad to see that Dr. Dean's articles include a careful account of the methods employed in the standardization of antitoxin, and he is to be particularly congratulated on his exposition of the physico-chemical theory of Arrhenius and Madsen and of the criticisms which have been directed against it. Closely connected with the subject of antitoxin and immunity there is the practically important question of the irritant or toxic effects sometimes observed after the administration of antitoxic serum. For the discussion of this we have to turn to chapter xix (pp. 614-638) in Section VI, written by Drs. Park and Bolduan of New York. Their account of "serum sickness," largely borrowed from Pirquet and Schick, gives a very precise clinical picture of this complication and also records the results of experimental work bearing on the subject.

The study of diphtheria as a disease affecting the health of the community occupies two chapters, one near the beginning of the volume and the other near the end. The former, by Dr. Newsholme, comprises Section II (pp. 53 81). Treating the epidemiology of diphtheria with that mastery of statistics in which he has few rivals, he is largely occupied in advocating his well-known theory that diphtheria is a disease which prevails inversely with the rainfall. Attaching high importance to the condition of the soil as a factor in determining the spread of the disease, he suggests the following "working hypothesis" to explain the causation of diphtheria:

> The specific micro-organism of this disease has a double cycle of existence, as have apparently the specific micro-organisms of enteric fever, erysipelas, scarlet fever, rheumatic fever, etc. One phase is passed in the soil, another in the human organism. One is saprophytic, the other parasitic, though it is not contended that there is any regular alternation between these phases.

He then proceeds to argue that deficient rainfall implies that above the level of the subsoil water there is a subsoil "which is relatively dry and warm, probably the *optimum* conditions for the saprophytic life of the above pathogenic micro-organisms." The seasonal variations of diphtheria are thus accounted for:

> Diphtheria is most prevalent in autumn and in the early winter months, when the optimum temperature and the optimum degree of humidity of the soil are rapidly disappearing or have departed. It is also most prevalent after the wet weather occurring in or immediately following exceptionally dry years. Both these conditions tend to raise the ground-water and to drive out any pathogenic micro-organisms from the soil.

This last sentence is extremely puzzling. Taken in conjunction with the preceding sentences, it implies that bacilli, in consequence of being "driven out" of the soil, find a lodgement in human beings. But if the soil becomes an unfavourable medium it will obviously impair or destroy the vitality of the bacilli contained therein, and hence will diminish the supply of potentially infective material; and, apart from the minor fact that the diphtheria bacillus is a non-motile organism, it is bacteriologically inconceivable that this production of an unfavourable environment in the soil can account for the migration or transportation of any species of bacterium to another and presumably more favourable situation. Dr. Newsholme would do well to revise his "working hypothesis" in the light of known facts concerning the conditions of bacterial life, and the further study of this subject might also induce him to modify his sweeping generalization about the "double cycle of existence" of "the specific micro-organisms of enteric fever, erysipelas, scarlet fever, rheumatic fever, etc." He will not find that the leading authorities on bacteriology are prepared to substantiate this view; nor are they prepared to admit that any of the numerous and diverse organisms alleged to be causative of either scarlet fever or rheumatic fever are really specific.

The second article on diphtheria from the public health point of view is divorced from the first by a space of nearly 500 pages. It forms the first chapter of Section VI (pp. 574-613), and is written by two American authorities, Drs. Park and Bolduan, whose views appear to be quite irreconcilable with those of Dr. Newsholme. Discussing the influence of soil, they say:

> The assumption that conditions of the soil have much influence on the development of diphtheria, or on its epidemic diffusion, is one that seems to have no warrant.

They also consider that Dr. Newsholme's theory about the influence of rainfall is untenable:

> Newsholme (1898), in an exhaustive study of the effects of increased or decreased rainfall, has come to the surprising conclusion that diphtheria only becomes epidemic in years in which rainfall is deficient, and that the largest epidemics occur when three or more years of deficient rainfall follow each other. Our study of his charts does not convince us that he has shown this to be a fact. Some of the places cited could not have been so influenced—for example, Manhattan Island, with its rocky formation, where the amount of rainfall would exert little effect on the ground water, one of his supposed factors.

Without attempting to adjudicate between these rival views, we think that the editors have failed in their duty of co-ordinating the material which they present to the reader. At the beginning of the volume they place before him a strongly individualistic article by Dr. Newsholme, which, the reader might assume, is intended to be representative of currently accepted opinion. Not until the end of the volume is reached does it come to light that there is a substantial array of facts and expert opinion in support of an entirely different view. We hope that in their next edition the editors will eliminate this confusion. It would be an advantage to amalgamate the chapters on epidemiology and mortality, and to have them rewritten by an expert instructed to put before us all sides of the case in a spirit of impartiality and discrimination.

We have pointed out some features in which we think there is room for improvement, but these are relatively small and few in number; they do not greatly detract from the general excellence of the work, to which nearly every page bears evidence; and they are faults which may easily be corrected in a future edition by the exercise of a more vigorous editorial control. The authorities of the Cambridge University Press are to be congratulated on their enterprise, and we cordially welcome their announcement that if this work meets with success they will publish similar volumes dealing with the chief infective diseases. The present work certainly merits wide appreciation and a large sale; it ought to prove the starting-point for a system of bacteriology, in many volumes, which would rank as the standard authority in all parts of the world.

ST. BARTHOLOMEW'S HOSPITAL REPORTS.

Notwithstanding Royal Societies of Medicine, other societies, meetings of associations, and the weekly medical press, that now familiar type of annual, the hospital "report," still lives and apparently flourishes. The forty-third volume of the *St. Bartholomew's Hospital Reports*[2] is remarkable above previous volumes for the systematic division of the contents into "medical papers" and "surgical papers"—a very reasonable innovation for which Dr. Fletcher and Mr. McAdam Eccles deserve commendation. The first article occupies a little over a page; the author is Sir Dyce Duckworth, and it is entitled, Notes on a Painful Condition of Certain Bones in Gouty Subjects. He refers to chronic pains and

[2] *St. Bartholomew's Hospital Reports.* Edited by H. Morley Fletcher, M.D., and W. McAdam Eccles, M.S., F.R.C.S. Vol. XLIII. London: Smith, Elder and Co. 1908. (Med. 8vo, pp. 252; with statistical tables. 1906, pp. 187.)

extreme tenderness limited to small areas commonly involving the condyles of the humerus, and more rarely the head of the radius, the os calcis, and some of the smaller tarsal bones. The pains tend to recur but leave no permanent changes. Dr. Samuel West contributes a lecture on Raynaud's disease—"so-called" he adds to the title, in which the term "peripheral gangrene" is put first. It is followed by a report by the same author on a case of epileptiform fits of Jacksonian type in the puerperium. They were limited to the right arm and face, becoming continuous; the trephine was applied, right hemiplegia followed, and the patient died. No visible lesion could be detected either at the operation or after death. The medical section of this volume includes several other instructive articles on diseases of the nervous system. Amongst others we find a brief note on some points of treatment in enteric fever, by Dr. R. Derwent Parker, and Dr. Woodforde's report of three months' work in the extern midwifery district, in which Dr. West's case of puerperal epileptic fits is included (Case xxi). There seems some uncertainty as to whether thrombosis of the superficial veins of the cerebral cortex followed the operation, as Dr. West implies, or was directly caused by some puerperal change, as is suggested by the title of the case in Dr. Woodforde's report and a passage in his note of the operation. There are but five articles under the heading of "Surgical Papers." Mr. Bruce Clarke's interesting notes on spontaneous dislocations of the hip-joint come first, and are followed by Mr. Ernest West's observations on the infection in acute otitis media and consecutive acute suppurative mastoiditis. Two pages are devoted by Mr. Preston Maxwell to a case of repeated fracture of the spine. Two out of the five surgical articles claim special attention. The first is a case of migration of the caecum producing obstruction of the ascending colon. It is important not only on account of the rarity of the condition, but because all peculiarities which may cause intestinal obstruction deserve to be recorded. We hope that it will not escape the notice of others who in future may come across the same morbid condition, and we think that a report of this type should have been read by its author, Mr. Harold Wilson, at a meeting of a society. Lastly, Mr. Girling Ball's notes on six cases of general peritonitis deserve the notice of all who practise abdominal surgery, as Mr. Ball has much to say about treatment, and his observations were made when he was house-surgeon at St. Bartholomew's Hospital.

PUBLIC HEALTH.

PARKES AND KENWOOD'S *Hygiene*[3] has recently attained the well-merited honour of a third edition. The size of the page has been enlarged, by which means and by the compression and abbreviation of matters of minor importance it has been rendered possible to bring the book up to date, adding new matter and fresh illustrations, while reducing the number of pages from 760 to 620. A new chapter on school hygiene has been introduced, which will be found useful, although the subject is hardly treated with the fullness which its importance deserves; and a section on the medical inspection of school children might well have been substituted for the "Notes," which deal rather fragmentarily with the subject. The book is open to minor criticisms—such as that the form of cesspool delineated is somewhat antiquated, the modern arrangement being on the lines of a miniature "septic tank," and that no reference is made to the system of ventilating sewers by upcast shafts, which is increasingly resorted to. The table setting forth the periods for which patients attacked by infectious disease and contacts should be excluded from school is not quite up to date. Thus, in the case of measles, in which it is now pretty well accepted that the period of infectivity does not extend beyond a week or ten days after the appearance of the rash, a detention period of a month appears excessive, and there seems no sufficient reason why a contact who has had measles should be excluded from school for eighteen days, or at all. These, however, are minor blemishes. The section on communicable diseases is admirable. The book as a whole is lucid, and is excellently adapted to the purposes of students of hygiene and candidates for diplomas in public health.

[3] *Hygiene and Public Health.* By L. C. Parkes, M.D., D.P.H., and H. R. Kenwood, M.D., D.P.H. Third edition. London: H. K. Lewis. (Demy 8vo, pp. 631, 96 illustrations. 10s. 6d.)

The conditions under which a large amount of the milk supply of this and other countries is produced are admittedly bad. Those who are desirous of improving those conditions are often told that they will not succeed until a very definite demand for reform has been made by the public generally. Evidences are not wanting that this demand is being made, and it cannot fail to receive encouragement from the publication of a translation of Professor JENSEN'S book, described as a practical treatise on dairy and milk inspection, and on the hygienic production and handling of milk.[4] It has been translated and annotated by Mr. Leonard Pearson, Dean of the Veterinary Faculty of the University of Pennsylvania, so that in the volume to which he has given the title *Essentials of Milk Hygiene* we have placed before us the difficulties attending the production of clean milk, together with the regulations for overcoming those difficulties, not only in Denmark, the home of the author, but in the United States of America, the home of the translator. The chapter upon the regulation of production is essentially practical. It is urged with a great deal of truth that the exclusion of infective organisms from milk is of greater importance than the mere recognition of these organisms, for it is undoubtedly better from the standpoint of the public health to prevent contamination than by means of laboratory examinations to discover evidences of contamination in a sample representing a quantity of milk that has already been consumed. The frequent inspection of dairy farms by an official who is entirely independent of the owner is very properly insisted upon. This inspection, to ensure real safety, "must be broadened to cover the health and feeding of the cattle, the cleanliness of the producing plant, the method of handling and caring for the milk, and the condition of health of the people who come in contact with it."

M. MALMÉJAC'S small textbook on practical methods of water purification[5] is specially designed to meet the requirements of travellers and residents in districts where the water available for drinking purposes is open to suspicion. After a brief description of the more important ways in which water is liable to contamination, the elementary methods of chemical analysis are explained in clear and simple language, and the reader is afforded guidance in the interpretation of chemical results. The author then proceeds to give an account of the ways in which water may be purified, particular attention being paid to the different types of filter which are on the market, and to the various chemical reagents which have been recommended for the elimination, or at least the diminution, of dangerous contaminations. These matters are treated in an eminently practical manner, suitable for the reader who is not an expert in water analysis and purification, but desires to know how he ought to guard himself against the risks of infectious disease when the only drinking water available is under suspicion of dangerous pollution. This compact little volume may be recommended as being well written, interesting, and thoroughly useful.

SURGICAL DIAGNOSIS.

Surgical Diagnosis, by DANIEL N. EISENDRATH,[6] is a handbook written entirely from the clinical standpoint. Injuries and affections are grouped regionally, and after a well-illustrated account of symptoms and signs, each is discussed in relation to others which resemble it. The book is therefore suitable for use in connexion with work in the hospital wards, and dressers and others will find herein an aid to comprehending the relationships of the diseases they meet with there. The author's method may be illustrated by the plan followed in the chapter on acute affections of the abdomen. These he divides into (*a*) those in which inflammatory signs appear early and predominate, (*b*) those in which pain is early the most prominent symptom, (*c*) those in which obstruction symptoms appear from the onset,

[4] *Essentials of Milk Hygiene.* By C. O. Jensen. Translated by L. Pearson. Philadelphia and London: J. B. Lippincott Company. (Demy 8vo, pp. 275. 7s. 6d.)

[5] *Comment épurer son eau.* Par F. Malméjac. Paris: Vigot Frères. 1907. (Fcap. 8vo, pp. 224, 12 illustrations. Fr. 3.50.)

[6] *Surgical Diagnosis.* By Daniel N. Eisendrath, A.B., M.D. Philadelphia and London: W. B. Saunders Co. 1907. (Roy. 8vo, pp. 776, figs. 482. 28s.)

and (*d*) those in which shock or haemorrhage are most marked. Interpreted intelligently, such a classification is a useful clinical guide. The author has taken great pains in the preparation of tables showing differential diagnosis, a useful method of summarizing comparisons, although the student is encouraged by examiners to devote far too much attention to such taxes on the memory. The industry of the author in collecting suitable illustrations has been quite remarkable; they show not only morbid conditions, but also methods of examination and surface markings, and for the most part are from original photographs. Attention may be called to one or two paragraphs which require revision. The chapter on cerebral localization is not in accordance with the recent and accepted researches of Sherrington and Krause. The picture on p. 222 is not a correct representation of the lymphatics of the breast. We find nowhere a reference to internal derangement of the knee. As a whole, the book gives a reliable and complete presentation of the diagnosis of surgical affections, and will take a place in the front rank of similar publications.

Professor DE QUERVAIN's textbook of surgical diagnosis is a volume of considerable scope designed for practitioners as well as for students.[7] It covers the whole field of regional surgery in a fairly complete manner, the question of differential diagnosis being kept in the forefront throughout. What the reader looks for in a book of this type is a concise clinical description of each affection and a comparison with other conditions to which it is clinically related. This is the general scheme which Professor de Quervain has carried out, and the only criticism we have to offer is that more use might have been made of tables of comparison as a means of summarizing discussion. The book naturally begins with affections of the head, and here as elsewhere the author is able to illustrate his text richly with original photographs. The other regions of the body follow in order. While all are considered with commendable completeness, the author is exceptionally successful in the case of the abdomen. The chapter on acute inflammatory diseases of the abdominal cavity is an able piece of work, and the same is true of that on acute intestinal obstruction. The author recognizes the fact that the abdomen is the most difficult of all regions from the point of view of diagnosis, and has treated it accordingly. This is the most successful textbook on surgical diagnosis with which we are acquainted, a first-class handbook for the student working in the wards, and sufficiently advanced to appeal also to those who have left the wards for practice.

"THE ROMANCE OF MEDICINE."

IT is not the fault of medicine that its recent developments should have stimulated the curiosity and interest of the lay public, and this curiosity having once been aroused, it is better that it should be satisfied by an accurate and discreet statement in book form than by repeated doses of the uninformed sensationalism of irresponsible journalists. This is evidently the task which Dr. RONALD CAMPBELL MACFIE has set himself in writing his *Romance of Medicine*.[8] Although not entirely free from inaccuracies and indiscretions, Dr. Macfie's book is, on the whole, a successful solution of the problem, and is, at all events, an exceptionally interesting and readable work. As the work is avowedly popular, and covers the whole history of medicine from its first dawn amid superstition to the latest developments of pathology, the treatment is necessarily superficial; but Dr. Macfie is at his best in these rapid summaries of history. Particularly good are his sketches of Greece in the time of Hippocrates, the rise of the Alexandrian school, and the gradual elucidation of the mystery of the circulation, which culminated in the demonstration by Harvey. But even though Aristotle's contribution to natural science was small, it is surely unwise to say of the author of the Nicomachean ethics that "he owed his scientific reputation to his garrulity and to the ignorance of his audience." Again, Descartes is accused of describing the blood as "*un* (sic) *espèce de levain*." As the error in gender is repeated on p. 88 it can hardly be attributed to the printer. The statement on p. 166 that "alcoholic fermentation is a putrefaction of sugar, suppuration is a fermentation of flesh," is misleading. There is nothing in alcoholic fermentation analogous to the invasion and destruction of leucocytes in pus formation. We should prefer the book without the last chapter, on the Present and Future of Medicine and Surgery. Sensational operations may be good "copy," but insistence on them is only pandering to morbid curiosity. The remark that exophthalmic goître "can be cured by excising part of the thyroid gland" is one which ought to be modified, if not withdrawn. We have dwelt thus critically on what appear to us to be some of the faults in the book because we hope the author will have an opportunity of reconsidering them in a further edition, for the book should appeal to a wide public, and certainly deserves success.

[7] *Spezielle chirurgische Diagnostik für Studierende und Aerzte* [Special Surgical Diagnosis for Students and Practitioners]. By Professor Dr. T. de Quervain. Leipzig: F. C. W. Vogel. 1907. (Sup. roy. 8vo, pp. 622, figs. 248, M.15.)

[8] *The Romance of Medicine*. By Ronald Campbell Macfie, M.A., M.B., etc. London: Cassell and Co., Limited. 1907. (Demy 8vo, pp. 320. 6s.)

NOTES ON BOOKS.

THOUGH many unexpected places have in recent times been suggested as winter health resorts for the befogged Briton, it is still a little surprising to find a hilltop in Somaliland recommended for its extremely dry and cool climate. Yet Miss FRANCES SWAYNE waxes enthusiastic on the merits of Dara-Ass and has a good word to say for the lower ground. She makes light of the difficulties of the journey from England, but they are considerable, so that there is perhaps more in her suggestion that the hills of Somaliland could afford a suitable site for a sanatorium for Aden and perhaps for the Egyptian Delta. She spent three months in the country in the winter of 1905-6 and has given an account of her experiences in a small volume entitled *A Woman's Pleasure Trip in Somaliland*.[9] She was the guest of her cousin, Brigadier-General Swayne, at that time Commissioner, and saw the country under the most favourable conditions and at the best time of the year. Her book is simply and unpretentiously written and is illustrated by over sixty photographs, which have been very well reproduced. Many of them are excellent, especially perhaps those of scenery.

In the preface to his essay on the clinical significance of opsonins[10] Dr. MORLAND explains that he hopes to be of service to German readers by giving them in their own language a general summary and review of the results which opsonists in various countries have achieved. When Dr. Morland commenced his task, the available German literature on this subject was scanty and unsatisfactory, and though several important German articles have made their appearance whilst his work was in the press, there is plenty of room left for his treatise. It gives a useful and carefully-written account of Wright's theories, for which the author evidently possesses a profound admiration. The opinions of Wright's adverse critics are dismissed somewhat briefly, but that does not detract from the interest of the pamphlet as a clear and incisive exposition of what "opsonism" claims to do. Whilst working at Davos Platz the author made an extensive series of observations on variations of the opsonic index in cases of phthisis. These results are modestly sandwiched in amongst various sections which are mainly devoted to the already published records of other observers. They deal with a subject of great clinical importance, and ought to have been discussed in detail; by dismissing them so briefly Dr. Morland fails to do himself justice, and neglects an opportunity of interesting the reader.

In preparing the twelfth edition of his work on therapeutics Dr. H. A. HARE has taken the opportunity of revising it in parts, and has introduced new matter here and there.[11] Otherwise its plan and scope remain the same as before. The larger portion of the book is devoted to the action and uses of drugs and other remedial agents, while the remainder is concerned with the treatment of the commoner diseases. Many of the *B.P.* doses are given very inaccurately and even in dangerous amounts.

[9] *A Woman's Pleasure Trip in Somaliland*. By F. Swayne. Bristol: J. Wright and Co.; and London: Simpkin, Marshall and Co. 1907. (Imp 16mo. pp. 184. 4s.)

[10] *Ueber die klinische Bedeutung der Opsonine*. Von Egbert Coleby Morland, M.B., B.Sc. Samaden: Engadin Press Company. 1908. (Sup. roy. 8vo, pp. 40.)

[11] *A Textbook of Practical Therapeutics*. By Hobart Amory Hare, M.D., D.Sc. Twelfth Edition. London: Henry Kimpton. 1907. (Med. 8vo, pp. 939. 21s.)

IN a prefatory note to his pamphlet entitled *Some Successful Prescriptions*,[12] Dr. A. HERBERT HART states that he wrote out these prescriptions "on Monday, August 12th, after the evening surgery." Such occasional recording of experience is a habit much to be commended, but when the record is printed and offered to the profession at the price even of one shilling in the hope that it "will prove useful to many fellow practitioners in the Noble Art of Medicine," it inevitably challenges impartial criticism. We cannot, in fact, find anything in these prescriptions which is not well within the range of the therapeutic routine of the average practitioner, and there are sundry statements which we cannot endorse, for instance, that "Bismuth annihilates the hoards of pathogenic micro-organisms which turn the intestine into a huge armed camp." We only wish it did! Again, we must protest against the offering of a single prescription "For Skin Diseases." This prescription is salicine, which, we are told, "breaks up into salicylic acid and carbolic acid." There seems to be some confusion here between salicine and salol. We are sorry not to be able to commend more highly a piece of work which has evidently been actuated by the best intentions.

The German therapeutic year book[13] edited by Drs. POLLATSCHEK and NÁDOR for the year 1906, issued at the end of last year, contains in its 350 pages of double column of rather small print, abstracts of a large number of articles. Facility of reference is provided for by the insertion of a table of contents and separate indexes of authors and subjects. The year book is a useful guide to German literature on the subject with which it deals.

The council of the Institute of Chemistry has issued a second edition of the *List of Official Chemical Appointments*,[14] the first edition of which appeared about two years ago. It contains a list of official appointments held by professional chemists, including professors and teachers of chemistry, in all parts of the British Empire, together with an alphabetical index of names. The first part of the book contains appointments in Great Britain and Ireland under the various departments of State, local authorities, and public institutions, and the teaching appointments in universities, colleges, technological institutions; medical, agricultural and veterinary colleges, and in public and secondary schools. The second contains professional and teaching appointments in India, Canada, the British colonies and protectorates, and in Egypt and the Soudan provinces. An appendix gives concise information as to societies and institutions for the advancement of chemical science and of professional chemical interests. The new edition has been carefully revised, and the book will be found useful not only by professional chemists, but also by local authorities and by manufacturers.

The preface to *How to Nurse the Patient*[15] informs us that the work is primarily published with a view to obtaining funds for the Blantyre Cottage Hospital, and invites us to accept this as an excuse for the mass of advertisements which make it difficult to find either title-page or index. The book has been jointly written by Dr. William Grant and several nurses, under the editorship of Dr. J. COWAN WILSON, and, in fact, needs no apology. It is a complete, well-written, and reliable account of nursing technique in all its branches, and is much better illustrated than most nursing manuals we have seen. We wish the venture every success.

There are many things which the young married woman usually learns only by experience or by conversation with older women, and there can be no doubt that much anxiety and trouble, and even serious mistakes might be avoided if all the necessary information were carefully and wisely imparted to her beforehand, so that she should know what to expect, what to do, and what to avoid when her time comes to fulfil the functions of her sex. To fill this gap is the object of Mr. HAYDN BROWN'S volume, *The Wife: Her Book*,[16] which has been reissued in the form of a popular edition. Mr. Brown has been to a large extent successful in his attempt. The advice given in the chapters on pregnancy, childbirth, and its sequelae, which form the greater part of the book, is almost invariably sound and sensible. Unfortunately Mr. Brown's common sense is inextricably mixed up with commonplace, and there are whole chapters of what is little better than sexual small-talk. The book would be much improved by their omission.

The appearance of the sixteenth edition of *Chavasse's Advice to a Mother*[17] is in itself evidence that the book has become in its way a classic. The present issue has been revised and enlarged under the supervision of Dr. T. D. LISTER, and the sections on artificial feeding, milk supply, etc., embody all the most recent ideas on this subject. It is not too much to say of this book that while it never attempts to substitute written instructions for the personal supervision of the family doctor, it contains all the information that a woman should have who is responsible for bringing up young children, and in no case have we found it misleading. It is a book which admirably fulfils its purpose.

The second volume of the sixth and enlarged edition of *Mediterranean Health Resorts*[18] deals with Morocco, Algeria, Egypt, and the various islands. Included among the latter is Cyprus, a place which offers far greater attractions to persons with delicate chests and other constitutional weaknesses than might be gathered from the account given of it. In the appendix are some well-written articles on steam yacht cruises in the Mediterranean, and on wintering in the Indies and West Indies.

[12] *Some Successful Prescriptions.* By A. Herbert Hart, M.D. London: John Bale, Sons, and Danielsson, Ltd. Paper pamphlet, pp. 17. 1s.)

[13] *Die therapeutischen Leistungen des Jahres 1906. Ein Jahrbuch für Praktische Aerzte.* Bearbeitet vom Herausgeber Med. and Chir. Dr. A. Pollatschek und Med. U. Dr. H. Nádor. XVIII. Jahrgang. Wiesbaden: J. F. Bergmann. 1907. (Roy. 8vo, pp. 350.)

[14] *A List of Official Chemical Appointments.* Compiled by direction of the Council of the Institute of Chemistry, and under the supervision of the Proceedings Committee, by R. B. Pilcher. Second edition. London: The Institute of Chemistry of Great Britain and Ireland. 1908. (Demy 8vo, pp. 172. 2s.)

[15] *How to Nurse the Patient.* Edited by J. Cowan Wilson, M.B., etc. Glasgow and Edinburgh: W. Hodge and Co. (Cr. 8vo, pp. 324. 3s. 6d.)

[16] *The Wife: Her Book.* By Haydn Brown, L.R.C.P. Popular edition. London: Sisley's Limited. (Cr. 8vo, pp. 316. 2s.)

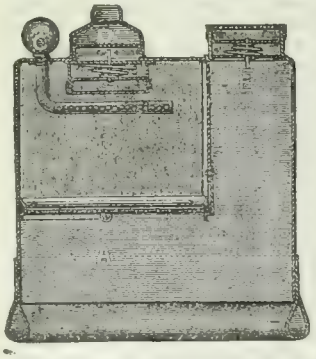
[17] *Chavasse's Advice to a Mother.* Sixteenth edition, revised and enlarged by T. D. Lister, M.D. London: J. and A. Churchill. 1906. (Cr. 8vo, pp. 454. 2s. 6d.)

[18] *Mediterranean Health Resorts.* By Eustace Reynolds, B.A., F.R.G.S. Vol. ii. London: Hazell, Watson and Viney. Sixth edition. 1908. (Price 3s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

The Open Administration of Ether.

DR. W. WEBSTER, Anaesthetist to the Winnipeg General Hospital, writes to say that the open as opposed to the closed method of giving ether is greatly to be commended, since it abolishes the asphyxia element with all its disadvantages. Moreover, it is easy to use in the case of young children; when dealing with adults its advantages are even greater, but in their case the induction period is unduly prolonged, it is sometimes not easy to keep the anaesthesia sufficiently deep, and the general atmosphere of the operating room becomes charged with unused, wasted ether. During the last two years, however, he has been using the inhaler here figured, which eliminates all these disadvantages and is of very simple construction. It consists of a face piece (A), which communicates with the general atmosphere by two valved apertures (D and E). The patient inspires through aperture D, the air passing through this traversing the ether chamber B (this is filled with gauze kept saturated with ether through the inlet C), and thus reaching the patient's lungs charged with ether. The expired air passes out through the aperture E, which, except during expiration, remains closed. All ether which escapes into the general atmosphere has thus played its part, while the patient at each inspiration draws in plenty of fresh air, but likewise plenty of ether. If desired, an oxygen tube can be attached to the aperture D and the patient be thus given ether and oxygen instead of ether and air.



Snake Bite Antidote Case.

Some thirty years ago the late Sir Joseph Fayrer suggested the immediate local application of potassium permanganate as an antidote for snake bites, and a few years ago Sir Lauder Brunton devised a small and very portable case containing a lancet and crystals of the salt. It was found that the user, native or other, sometimes opened the end of the case containing the crystals in such a manner that they fell to the ground at the critical moment. To avoid this mishap Mr. NUTTER COX, British

Consul at San Jose, Costa Rica, has devised a case in which the cap at the end containing the crystals is made of ebony, while the other end containing the lancet is made of boxwood, and has a drawing of the lancet stamped upon it. The following directions are placed round each case:—"Freely incise the part bitten, say ½ in. deep and 2 in. long, press out venom, insert crystals, moisten, bandage tightly, remove ligature (which should have been previously affixed), lay patient down, and await doctor."

MEDICINAL AND DIETETIC PREPARATIONS.

"*Cellulon*" *Diabetic Bread.*

A DIABETIC bread should fulfil three requirements. In the first place it should contain a very much smaller proportion of carbohydrates than ordinary bakers' bread; in the second, it should be palatable; and, in the third, its price should not be altogether out of proportion to its utility. As these qualities are more or less incompatible, a satisfactory diabetic bread is exceedingly difficult to provide. Ordinary white bread contains approximately about 50 per cent. of carbohydrates; it is very palatable, and is sold for about 2d. a pound; on the other hand, the best gluten bread contains 25 per cent. of carbohydrates, is not palatable, and costs about 1s. a pound. Supposing a given diabetic able to assimilate 1,000 grains of carbohydrates, he would be very unwise not to prefer 2,000 grains of of ordinary bakers' bread to 4,000 grains of gluten bread; in each case he would swallow 1,000 grains of starch, but in one he would have to be content with a little but palatable food at the cost of ½d., and in the other with twice as much unpalatable food at the cost of 6d. As many of the gluten breads contain as much as 35 per cent., often 40 per cent., of carbohydrates, the comparison may be much more unfavourable. In consequence of this, manufacturers of diabetic foods have made repeated attempts, with more or less success, to prepare a bread which shall compare more favourably with ordinary bakers' bread from the point of view of carbohydrates, and at the same time be more palatable. The first to achieve success in this direction was the Protene Food Company, which adopted a casein basis for its bread and produced a starch-free article, about the palatability of which, however, there was room for difference of opinion. This method has been developed by other makers, and there are many kinds of bread and biscuits now in the market which are practically starchless. One of the latest of these is that made by Messrs. Callard and Co., Ltd., of 74, Regent Street, to which they have given the name of "Cellulon." It is a brown loaf, and is recommended by the manufacturers to be eaten in thin slices with butter; being practically free from carbohydrates (it contains a minute quantity of starch, apparently derived from finely ground bran), it amply fulfils the first requisite of diabetic bread; the second is so much a matter of taste that it should be left to the determination of individual patients; in the absence of starch no bread can liquefy in the mouth, but if eaten with plenty of butter this defect is less noticeable. The price must always be a serious objection to these breads, but when they provide a bread substitute which is free from starch, and when they are indispensable in the treatment of certain stages of the disease, this question sinks in importance.

Pure Chloroform.

Messrs. May and Baker (Church Road, Battersea, S.W.) have submitted a sample of their "Planet Brand" chloroform, for which they claim absolute purity. A thorough examination of the sample showed this claim to be well based; not only did the chloroform pass all the tests of the *British Pharmacopœia*, but in all those cases where the latter authority allows traces of impurities the sample in question showed their complete absence.

Extract of Red Bone Marrow.

Messrs. Armour and Co. (Chicago; and Holborn Viaduct, London, E.C.) have submitted a sample of their glycerine extract of red bone marrow, for the treatment of various forms of anaemia. It is a bright liquid with a slight aromatic flavour, miscible with water, and pleasant to take either alone or diluted; analysis showed it to contain nitrogenous constituents equivalent to 1.25 grains of proteid in each fluid drachm.

ON April 11th the German Medical Society of New York gave a great banquet in honour of Professor Robert Koch. Dr. Carl Beck presided, and on the right of the guest of the evening was Mr. Andrew Carnegie.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 997.*)

AN appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has recently been issued.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Professor Gotch, F.R.S.

Dr. Gotch said he was Waynflete Professor of Physiology in the University of Oxford, and came there at the request of the Faculties of Medicine and Science of the University of Oxford. He had had experience in experimenting extending now over twenty years in research and such experiments as he considered necessary for teaching purposes. He went on to say that medical science was based upon the existing condition of knowledge in physiology and pathology, and the more extensive the knowledge of them became, the more helpful would these sciences be for the prevention and mitigation of suffering in regard to both human beings and domestic animals. These sciences were under an enormous debt to physics, chemistry, and biology; on the other hand, physiological and pathological discoveries and methods had in their turn helped the advance of these other sciences. The discovery of electricity, and the formulation of the law of the conservation of energy were notable instances of this. Certain phenomena observed in animals and animal tissues led to the discovery of electricity. Referring to the conservation of energy, he said that this law was practically discovered by Dr. Robert Mayer in consequence of his observations on the blood of patients in Java; from these he formulated the great law which had practically determined the advance of modern physics and chemistry. One of the peculiarities of physiological science was the necessity for accurately measuring time since the events occurred so quickly. The accurate measurement of time started by physiologists had been employed by engineers, and had been used for measuring the muzzle velocity of projectiles. The recording arrangements employed by physiologists, first brought forward by Helmholtz and Ludwig, had been employed by engineers for obtaining graphic records of the time and working of various parts of machines. Besides the branches of knowledge generally designated under the term "natural science," there were others which were of great importance for the social community. Such were the study of the effect of environment on men and animals, and the study of heredity; in addition there were such scientific branches as psychology and education, this last comprising the appropriate training of both mind and body. The extension of physiological knowledge was of the utmost importance for that of these subjects. All methods of extending physiological knowledge resolved themselves into two—observations on uncontrolled phenomena and observations on controlled phenomena; the control was the determining factor in what was termed experiment. Owing to the extensive scope of physiology, which comprised chemical, physical, and anatomical points of view, many of the observations of the experimental type did not necessitate the investigation of the actual living processes in the first instance. Others were simplified by extensive introductory study upon the isolated tissues of technically dead animals, cold-blooded or warm-blooded. By "technically dead" he meant that the animal as such was dead, but the muscular and peripheral tissues were not dead. The conscious life was dead, the animal being killed, and the particular organ or tissue removed from the body. But in all these cases a point was reached sooner or later when it became necessary to study the changes in an animal still possessing its co-ordinating mechanism. The co-ordinating mechanism brought about the further co-operation or the antagonistic restraint of the activity of any one set of organs through the presence of changes in another set. Such a co-ordinating mechanism was the transfer of chemical substances by means of

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

the circulation, and the more subtle transfer effected by means of the nervous system. For their continued investigation experiments upon higher living animals were necessary, since in these only did the particular co-ordinating mechanisms attain a sufficient degree of development. In regard to the first of these co-ordinating mechanisms—our knowledge of the circulation of the blood, of the condition by which it was modified, and of the part played by the character of the conveyed blood, was all due to experiments made upon living animals, in particular upon mammals. This knowledge had been greatly advanced during the last half-century, the advance being initiated by the introduction by Ludwig of accurate recording methods. As regards the character of the conveyed blood as a determining factor in this co ordination, there had been during the last twenty years a remarkable development through the discovery of a number of internal secretions. This discovery was entirely due to experiments on higher mammals, and by demonstrating an extensive co-ordinating mechanism, previously unsuspected, formed a new starting point, whose value was of the same order as that of the earlier discovery of the reflex activities of the nervous system. The co-ordinating mechanism, which was termed "the central nervous system," was so elaborate in higher animals that its investigation had to be conducted along many different lines. The extension of knowledge as to the structure and processes which constituted the two main aspects of neurology had a very special importance, inasmuch as psychology, and with it education based upon scientific principles, must be more and more based upon neurology. Such fundamental principles as the distribution of functions within the different parts of the whole nervous mass, the paths by which they were connected with other non-nervous body structures, were all the fruit of experiments carried out on higher mammals during the last quarter of a century. Speaking of the necessity of a free choice of mammals for physiological research, he said this choice was necessary even for the purpose of acquiring a knowledge of the gross and minute structure of tissues and organs, for which animals were painlessly killed and the dead animal then utilized. The frog and rabbit were only suitable for more general tissues, muscle, nerve, and such connective tissues as bone, cartilage, etc.; the tissues of carnivorous animals (dog, cat) must supplement the above, particularly in the case of the digestive and excretory organs; finally, the monkey's tissues must supplement the foregoing, especially in connexion with the nervous system. Similar freedom of choice was demanded for the purpose of acquiring a knowledge of the processes which, during life, were displayed by these structures, but in this case the study might be carried on during the stage of complete anaesthesia, thus absolutely eliminating all pain. It was, however, occasionally necessary to keep the animal alive after some particular experimental procedure had been terminated, and this was especially the case in connexion with the extension of our knowledge as to the working of the co-ordinating mechanisms. A most striking example of the great increase in knowledge brought about by experiments of this kind was that of the structure and functions of the central nervous system, as displayed by the degenerative changes and functional losses following definite nervous ablations. Here the introduction of aseptic conditions eliminated subsequent pain. The question of the localization of different functions in the cerebral hemispheres was carried out in the monkey with far greater detail than in any such animals as the dog and rabbit. If he wanted to discover what particular part of the brain governed the action of a particular limb or muscle or nerve, he would certainly not accept as convincing evidence for a higher mammal any experiment except one which was on a higher mammal—that was to say, the monkey, from that point of view. An experiment on a dog would not suffice, because the distribution of these functions in a dog was different from that in a monkey, inasmuch as the cerebral hemisphere of the dog was framed on a different plan. It was framed on what was termed the longitudinal plan of fissures. The transverse plan of fissures, which allowed for a large nervous mass without undue protrusion forwards, was the highest type; it began in the monkey, and went on to man. There was an ascending scale among monkeys. Experiments on the brains of dogs or cats gave useful information from the point of view of determining the action of the higher cerebral centres upon what might be termed the lower centres. The lower centres in the dog and cat had far more effective value than in the monkey and man, for the very reason that the cerebral hemispheres themselves had not replaced them to the same extent since they were less developed. By the lower centres he meant the nerve centres, including those which were at the base of the brain in what were known as the basal ganglia, the corpora striata, and the optic thalami. Teachers of physiology dealt with a subject which formed an essential part of every medical man's intellectual equipment. In many cases, as in universities, the subject had also to be treated as a branch of natural science, and, besides medical students, there were others who approached it chiefly from this point of view. Some of these scientific students might have, even at present, to conduct elementary courses of physiological instruction based upon sound principles, whilst it was probable that in the future the value of enforcing the physiological principles underlying national hygiene and the physiological improvement of the young would be more and more recognized by all branches of the social community. The demand for elementary physiological knowledge would increase. He had himself always had some students of this type, and in some universities these students formed a considerable part. Professor Sherrington, for instance, had a large number of students of this type. In all scientific teaching it was now recognized that the great desideratum was to help the student in drawing his own conclusions. This help could be afforded by personal intercourse, by lectures, and finally by enabling students to observe for themselves certain phenomena, instructing them how to control these phenomena and ascertaining that they did draw from these the legitimate conclusions. In order to accentuate this last and most convincing (practical) educational method, it was essential that the teacher should himself go through such practical work with or before his students. It was for this reason that every lecturer thus felt the necessity of illustrating his lectures by experiment; he did this not merely to display a phenomenon but to show the conditions of its control, to draw the logical conclusions himself, and make the student realize the intellectual steps by which knowledge of scientific principles had been attained. In physiology, as in all science, teaching methods had undergone a very notable change in this direction during the last thirty years. Practical work by students in microscopic study, in physiological chemistry, and in ascertaining such features of the muscular and nervous processes as could readily be observed on the tissues of the pithed and of the dead decerebrate frog, now formed a large part of the student's work. There were, however, certain fundamental aspects of physiology which these practical courses, however extensive, did not display, and, as already indicated, among these aspects were those connected with the co-ordinating mechanisms. The preservation of the circulation and of the chief co-ordinated reflex activities of the animal necessitated the animal being more or less intact. But the seat of consciousness might be absolutely paralysed by anaesthetics, or destroyed by decerebration without invalidating this preservation. On fully anaesthetized animals phenomena of this character could be displayed, and the questions for the physiological teacher to settle appeared to him to be four:

(1) Is it necessary for efficient teaching of the subject to display some of these phenomena on mammals so fully anaesthetized that no pain is possible? (2) Is it certain that such an animal can be effectually and completely anaesthetized? (3) What particular groups of phenomena should be chosen out of the whole extensive series as the most essential for students to observe? (4) What circumstances should determine the choice of animal and of anaesthetic in such demonstrations?

In answer to the first question, he personally had no doubt of this necessity; whilst as regards the second he was convinced by practical experience that complete insensibility could be easily produced in any mammal. He had anaesthetized mammals of different sorts in large numbers, and was familiar with all the different anaesthetics or mixtures of anaesthetics used. It was a certainty that, as far as his belief went, complete anaesthesia could always be obtained in experiments for a very great length of time. He had been under a severe operation himself which lasted two and a half hours.

The necessity of avoiding a lethal dose increased the difficulty. The most difficult animal to maintain in a prolonged condition of anaesthesia would be man for that reason. Asked about curare, he said he had assisted in its being used, but had never used it himself on mammals. He should, however, have thought that it was easy to see whether there were any of those violent and inco-ordinated reflexes which they took to be the ordinary indications of pain, even under curare, because whilst ordinary voluntary muscles with the dose of curare used were put out of court, the involuntary muscles remained. And with pain one got inco-ordinated activities of those involuntary muscles, which very readily displayed themselves, for instance, in extreme alterations of blood pressure in consequence of the varying contraction of the muscles and the arterials. The object was only to produce perfect stillness of such muscles as moved the limbs voluntarily, but not of the involuntary muscles which moved the intestines, for instance, and other things. It would prevent the animal from blinking its eyes, but there would still be the indication of uncontrollable and inco-ordinated reflexes through the altered activity of the involuntary muscles which were unaffected by the dose used. There would be something to tell the operator whether or not the animal was feeling pain in the alterations of blood pressure. In all experiments of this type the experiment would be vitiated if there were these sudden and uncontrollable rises of blood pressure which would be produced under curare if the animal had a consciousness of pain. In experiments of this nature (blood pressure) they were not produced. Asked if, supposing he was experimenting on a limb which would very likely move in case of pain, he would trust to the anaesthetic alone, he said one could not trust to the anaesthetic alone, because there were reflexes from the spinal cord. It was necessary to fix any animal, whether alive or dead, in order to make a proper dissection. Passing on to the third question which the teacher had to settle, the witness said that in making his selection the teacher must be influenced by a number of considerations. First, the character of the physiological principles underlying the displayed phenomena. They should be fundamental, and as such could not be convincingly set forth by experiments on the pithed frog or on any isolated organ of the dead animal. As examples of such demonstrations he mentioned the blood pressure, the working of the heart, the intrathoracic pressure and its changes during respiration, the respiratory movements, the action of such substances as raised and lowered the blood pressure, the reflex control exercised by the nervous system over the circulation and the respiration; the nervous control of secretion and the digestive organs; and, finally, the localization of reflex motor centres in special parts of the central nervous system. A further consideration was whether all these could be so displayed that a considerable group of students could observe and appreciate the significance of the phenomena. This depended very largely upon the possession of appropriate apparatus and of skill in its use. Associated with this was the circumstance that physiology offered extensive fields for work, so that the teacher naturally selected those phenomena whose display involved the technique in which he was most skilled. The Chairman here said some witnesses had spoken of students habitually and frequently making a jest of the operations on the animals, and had accused them of demonstrations of hard-heartedness or cruelty, as if they treated the whole matter as a jest. Professor Gotch said he could not say that he had ever seen anything of the sort at his lectures. On the contrary, he had always been impressed by the circumstance that this was regarded as the most serious part of practical physiological teaching. He had this year altogether about 70 students working in his laboratory. He had not demonstrated to more than 15 or 20. He demonstrated some things before the first-year students and others before the second-year students. Natural science was a very large subject, with about ten different ways of taking honours in it. Only the physiological students came to him, and most of these were medical students. He would not exclude a man who wished to become acquainted with physiology, but yet who probably wished to take his degree in arts rather than in science, provided he satisfied him that he had a serious intention. He also got students of philosophy and psychology who asked to come specially to the last course of lectures on the central nervous system. In an annex to his department which was now being built special rooms were reserved for psycho-physics, which was taken up, not only by philosophers, but by those who were qualifying for the education scheme of the university. In regard to the circumstances which should determine the choice of animals and anaesthetic in demonstration, he said the answer depended very largely on what experiments were selected out of that group, but might be influenced by other more special considerations. The size of the animal was an important element in some, such as blood pressure, nervous control of secretion, etc.; the character of the animal in others, such as the localization of cerebral motor centres. A considerable number could be shown upon large rabbits, and whenever that was possible it was, in his opinion, to be preferred. As regards the choice of an anaesthetic, he held that the demonstration of the anaesthetizing influence of chloroform and ether, singly or mixed, itself presented phenomena of the greatest practical importance to medical students. Apart from this, he was inclined to use, in his own demonstrations which were made upon rabbits, chloral-hydrate, or urethane, which, introduced some time previously in the alimentary canal in sufficient quantity, caused a profound and increasingly developed anaesthesia; the animal's condition gradually passed beyond anaesthesia into painless death. A rabbit would live under the anaesthetic an hour and a half or two hours, without a fresh dose. Asked if a dog or cat would live as long, he said he had had no experience upon dogs at all with chloral hydrate or urethane, and rather limited experience upon the cat. Asked if it was the mere action of the poison that took an hour and a half, he said it depended upon the amount of dose, but one could give it so that it would take two hours with perfect anaesthesia throughout, gradually deepening into death. There was no necessity to strap a rabbit down under chloral hydrate, except for the purpose of making the necessary dissection. The necessity would practically be the same as in a dead animal—to keep it in position. It would not lie in this condition of absolute profound anaesthesia on its back unless it was supported. The fact that in consequence of an ultimately lethal dose this could be produced with such certainty in the rabbit opened a further question. The demonstration method was not an ideal one as regards the students' acquisition of physiological principles. Viewed from this last standpoint such acquisition would be greatly aided if it were possible for senior students, under skilled and authorized supervision and guarded by careful regulations, themselves to carry out on such profoundly and lethally anaesthetized animals some of the experimental procedures previously alluded to. The responsible character of medical, and particularly of surgical, practice rendered it eminently desirable that this extension of existing possibilities should at least be seriously considered. Asked, supposing he was consulted on the subject, what advice he would give as to the regulations that should limit the power of senior students to operate, he said he would confine it to those who were in their last year in the university. The control he would exercise would be the control of a responsible person present.

[*The question of a correspondence which Mr. Stephen Coleridge had had with some undergraduates of Keble College (see* BRITISH MEDICAL JOURNAL, *February 15th, 1908, p. 397 et seq.) was here gone into. Mr. Coleridge was subsequently re-examined on the subject, and we think it well to leave this part of Professor Gotch's evidence over till a later issue when an abstract of both witnesses' statements can be given together.*]

Continuing, Professor Gotch said that, in speaking of a pithed frog, he always used the term for the destruction of the whole central nervous system, the spinal cord as well as the brain. He thought there was no evidence for the belief that a decerebrated animal was capable of feeling pain. It was a certain fact that if the spinal cord was cut off (functionally or structurally) from the higher cerebral centres below that point there was no sensation of pain. All scientific evidence appeared to show that consciousness was a late acquisition, and that pain was a specific form of consciousness having a specific value like

such definite forms as visual consciousness or tactile consciousness, and was related to the presence of the cerebral hemispheres. In reply to further questions, he agreed that the head of a laboratory, or of a department which might embrace more than one laboratory, should be entirely responsible for the work which went on there, and therefore that the decision should be trusted to his judgement as to the standing of the men who were working in that laboratory, and that, should they in any way either transgress the existing law, or even do anything which in his judgement he thought was not a fit experiment to be made, it ought to be in his power to be able in the first instance to represent the fact that they had gone outside their licence—if they had a licence from the Home Office—and, in the second case, to refuse that they should work any longer in his laboratory. He had held a licence about twenty years. He held only Certificate C at present. That enabled him to give demonstrations. He had never held Certificate A. Personally, he only gave a few demonstrations, not more than half a dozen. At one period he did a large number of vivisection experiments, so that he should think he must altogether have performed experiments upon 150 mammals—monkey, cat, dog, rabbit, mice, guinea-pig, rat, frog, and fish. He had used his licence for purposes of research as well as for purposes of teaching. He had never encountered any restriction in obtaining a licence or certificate, but a recommendation made by him for a certificate in his capacity as Professor of Physiology in the university was not accepted. It was a case which he considered to be a very important piece of work on the feeding of animals, and the effects produced by deprivation of food in a dog, in a carnivorous animal. Although the certificate had been signed, the Home Office intervened to prevent its coming into effect. Starvation was asked for either six or seven days. In his research work and in teaching he had never had occasion to perform experiments on living animals without anæsthetics. Asked if he thought it was ever necessary to do so, he said he thought it was absolutely necessary. He drew attention to the fact that in the working of the Act there was practically only one certificate—Certificate A—for all experiments which were done in which the anæsthetic was dispensed with. He knew it was realized that inoculation experiments coming under this certificate were now treated in a separate class, not from the point of view of the certificate, but in the returns that were made he thought they were put separately from experiments dispensing with anæsthetics. Whether that was so or not, he wanted to draw attention to the fact that there were a very large number of most important experiments which had to be done on animals without anæsthetics, for which he suggested that there ought to be some separate category. He instanced the experiments of feeding and experiments such as Dr. Haldane was carrying on at this moment on change of environment, alteration in the atmospheric environment. These experiments did not involve a cutting operation. As it went out to the public, people were likely to consider that all experiments coming under this certificate involved cutting operations, whereas he thought it was the rarest thing. He could not remember himself a case of an experiment which had involved a cutting operation having been done without an anæsthetic. He drew attention in the next place to the fact that he considered two of the most important sets of experiments that had to be done under this certificate were those as to food and as to altered environment. Experiments as to food were being largely done now in America, and he need not point out their importance. The matter had formed the basis of discussion in the British Association Physiological Section at the yearly meeting. The whole question of the minimum diet, whether of the army, navy, workhouse, of any diet of any type whatever, was bound up in it. The question of the alterations which occurred in the absence of food was not only a very important one from the point of view of ordinary starvation, but involved some principles of great importance for medicine. In fever there was semi-starvation, as well as a temperature, and they were not yet certain, in consequence of not having experiments sufficiently numerous on this particular head, whether the changes were produced by the temperature or by want of assimilation of the food. Asked if alteration of environment included such things as drowning, he said he should personally have said that that was an alteration of environment, and that experiments must be made upon it. In regard to Certificate D, concerning repetition of experiments, he pointed out that no experiment was a repetition; that every experiment was a display of a phenomenon and its interpretation by the mind of the person who experimented, and this interpretation must be one thing in one generation and another thing in another generation; and it was impossible, therefore, for one to repeat an experiment so far as the whole result was concerned. Asked as to the necessity of repeating Sir C. Bell's experiments with regard to the functions of the spinal cord, he said the introduction of the aseptic method had altered completely our whole knowledge of the way to do experiments so as to limit the structural alteration to the part which appeared to be involved; that the experiments made before the introduction of the aseptic method ought to be repeated, because the introduction of the new method involved a limitation which could not otherwise be attained. In the last thirty years the whole knowledge of the paths in the spinal cord had had to be entirely modified, owing to the circumstance that the introduction of the aseptic method had defined more correctly the obvious lesion. The method used was that of removing the part and seeing what happened; but one must be certain what part one had removed. Asked whether the action of curare in the case of the voluntary muscles was upon the muscular fibres or upon the ends of the nerves, he replied that he should say it was upon the ends of the nerves. Asked if it would not so act upon the terminations of the nerves in involuntary movements, he said not with the customary dose. He supposed it would with a very large dose, but he had no evidence of it. He had no evidence of its being able to paralyse really involuntary nerve endings, even in very large doses. Asked if there was any other objective sign which could be relied upon in addition to the variations in blood pressure, he said he had not got any evidence of another one, but he should imagine that most of the involuntary mechanisms which were largely influenced by pain would give objective signs of this type, in the alimentary canal or the urinary bladder, for example. In reply to further questions, he said the heart was rather in an intermediate position. He was not including that at the moment among involuntary movements. In reply to Sir William Collins, he said he would say unstriated rather than involuntary muscle. He agreed that that left the heart out. Asked further if in order to ascertain whether any changes were taking place in the blood pressure in a curarized animal it would be necessary to have a manometer, he said, Yes. He did not think that without apparatus it would be possible to determine whether consciousness or pain were present, but he did not really know. In reply to questions as to the granting of licences by the Home Office, he said that being a responsible teacher in a university was a better guarantee really than the guarantee of belonging even to such a great profession as the medical profession. Asked if he would go further in granting licences to physiologists who were not medical men, or if he would confine the licences to people holding university appointments, he said he should require additional information, but he should not exclude them if that information was given by people who would themselves accept the responsibility of giving it—people he had mentioned. In reply to further questions, he said that during the last fifty years there had been extraordinary advances in physiology, and in his opinion those advances were absolutely based upon animal experimentation, and further advances must equally be based on further animal experimentation. Asked if experiments before students had a brutalizing effect on character, he said he did not believe it. He did not consider that a serious pursuit for the attainment of knowledge was brutalizing. Asked what sort of licence he would suggest that students should have, he said they should have a licence for carrying out experiments belonging to a certain category, which he was not prepared then to frame, upon an animal which was presented to them in a fully anæsthetized state. The animal in that condition should be handed over to advanced students to do certain operations and then killed. The experiments should be done in the presence of a responsible official who understood anæsthesia, and who would be responsible that the animal was kept under

anaesthesia until death. He thought the Act ought to be limited to warm-blooded animals. The whole evidence on general grounds was that pain was a function of the higher animals, and evolved as a potent element for certain specific purposes, for producing or restraining certain activities. But that was only a view. It was inconsistent to penalize work upon fish and amphibia for purposes of scientific research, since procedures as regards these animals were quite unpenalized for other purposes—for instance, the whole fishing industry. In regard to the supply of animals, he suggested that animals like cats and dogs might be handed over by responsible people, on certain payment, and the only responsible people that he knew of were the police authorities. He meant stray animals that were, so to speak, under sentence of death. They should be sold by the police authorities for the purpose. In reply to further questions, he said he did not see why so many different experiments should be grouped together under Certificate A. That was the one certificate in which he thought categories could be made. The practical object of this would be that the public would receive more ample information from the publication. Inoculation experiments were divided at present into physiological, pharmacological, or pathological. He thought there ought to be three categories—A 1, A 2, and A 3. In reply to Mr. Ram, he said, in regard to the internal secretions, that the most important of them had been discovered entirely by experiments on animals. He did not know to what extent the discovery of those secretions had been a direct benefit to humanity; but it formed a new starting point, for the whole question of co-ordinating mechanisms had been practically brought forward. In the future it was likely to be as directly useful as the discovery of the nervous system control. He did not think there was any connexion whatever between special senses of sight and smell and the power of feeling pain. He would not advocate operations by a student in any case in which the animal was allowed to recover from the anaesthesia. He would not allow a student to do it as part of the physiological curriculum or for the mere purposes of teaching. Professor Osler did not agree with him in that; but that gentleman treated the matter from the point of view of the use of such experiments for subsequent medical and surgical practice, and thought that in many cases it would be necessary that the animals should recover. The witness himself only dealt with it from the point of view of physiology. The responsible person who was to superintend the student, and be present all the time the student was operating, should be a licensed person. He would further limit it to a person holding a responsible position in a university. Asked if he regarded the Act as to any extent penalizing scientific work, he said experiments on fish were extremely difficult to carry out. Perhaps he should say "restricting" rather than "penalizing." It was rather absurd that one should not be able to make any experiments for scientific purposes under the Act, at any rate on fish. It was very difficult to anaesthetize a fish. He thought all animals other than warm-blooded animals should be exempt from the protection of the Act. They should come under the ordinary law of cruelty to animals. With regard to warm-blooded animals, he did not think the Act restricted scientific research. He thought it had operated well. He was visited by the inspector two or three or four times a year. He did not find his visit any nuisance to him. He often was not there; that was because he did not know when the inspector was coming. He should have no objection to the inspectors being multiplied in number and their visits being multiplied. He saw no objection to its being enacted that there should be a special certificate for the use of curare. Asked if it would be possible in his opinion to allow starving experiments to extend, with regard to carnivorous animals, for such time as might be useful for science, and yet not so long as to cause any material pain to the animal, he said he did not know there was any material pain after the discomfort of the first few days. He would not feel justified in performing a starvation experiment without a licence. Asked if he would adhere to the Hon. Stephen Coleridge's desire that an inspector should be present every time, he said he did not think that possible, because then one could not perform even a simple demonstration to one's class without waiting for his arrival. He would not mind the inspector being there. He had used in his demonstrations either chloral hydrate or urethane almost entirely. He had used urethane the last two years, and chloral hydrate the last four or five years. He considered that as efficient an agent for producing anaesthesia as a respirable gas. He preferred it because the dose, being one derived from the absorption of the substance in the alimentary canal, must go on gradually increasing to a certain point. One was not dependent upon the working of an external apparatus for maintaining anaesthesia. Analgesia was not necessarily coincident with anaesthesia. Analgesia, by which he meant the absence of pain, would come first. Asked what other perceptions would survive when the analgesia came on and not yet anaesthesia, he said he thought sight, and hearing, and touch might still be left, as in the case of the hypnotic condition, in which it was evident that the person saw, and heard, and felt, and was entirely insensible to pain. Asked as to the meaning of the term "initial operation," he said he held, and everybody who had got Certificate B always held, that anaesthesia must be applied during the whole period of any cutting operation. The initial operation meant until the wound was not only sewn up, but dressed. Every physiologist he knew gave that interpretation to that term. Asked about a suggestion made by Lord Justice Moulton with respect to experiments that might involve pain such as those under Certificate B—that

> Certain men of acknowledged capacity in research, who have shown that they are not only capable of serious research, but have already done it, should have general certificates entitling them to perform such experiments, subject only to one thing, and that is that they should report fully every experiment. They are immeasurably better able to judge what is worth doing than any body of men that you could put over them. They are the people who are working at the subject itself, and they are, as a rule, men of such high position and high character in England that there can be no ground for being afraid of trusting them with this power—

the witness said he thought it a good suggestion, and agreed with it, but he did not think they were seriously hampered by the working of the present Act, except in regard to its scope. Asked in regard to another suggested alteration in the Act—namely, whether it would not be advisable, certainly in the case of animals operated on under Certificate B, to have an outside farm place in which such animals could be kept—he said he thought it would be an immense advantage, not only for science but for the animals themselves. In reply to another question, he said that almost all physiologists were fond of animals, and most of them were particularly attached to dogs and kept them as pets. Asked about the experiment of starvation on a dog, he said that in the particular experiment for which the Home Office refused a certificate water was not to be withheld. The experiment could not go on if water was withheld. An experiment might be made upon the effect of withholding water, but ordinary starvation experiments must be accompanied with allowing the animal to have large amounts of water. The general opinion of the pangs of hunger and the dreadful pain of starvation was somewhat exaggerated. Provided one took water or something into the cavity of the stomach one would not get these particular cramps. In reply to Dr. Wilson, he said some things could not be done without dogs, but, then, he did not do these things. He did not say that they were not advisable to be done. Asked if, supposing that it were possible to prove to his satisfaction that no further cutting experiments on animals were necessary for the advancement of medicine or surgery, he would still advocate the performance of these experiments before students, he said he could not conceive such a condition, but he would advocate the advance of scientific knowledge under any circumstances.

(*To be continued.*)

Dr. Joseph Edward Godfrey, M.B., Surgeon-General, and Chairman of the Local Government Board of British Guiana, has been appointed a member of the Executive Council of that Colony.

The German Association of Naturalists and Medical Men will hold its annual meeting this year at Cologne from September 20th to 26th. Among the general addresses to be delivered is one on trypanosomes by Professor Doflein of Munich.

THE TÜRCK-CZERMAK JUBILEE.

FIFTY years have passed since the practical application to clinical medicine of Garcia's discovery of the laryngoscope was established by Türck and Czermak. During the past week representatives of laryngology from all parts of the world, at the invitation of the Laryngological Society of Vienna, have met in that city to take part in the International Laryngo-Rhinological Congress held in celebration of this jubilee and to do honour to the memory of two men to whom investigators of disease will ever be under an obligation.

It is outside the scope of the present article, which is simply intended to place before readers some account of the lives and work of Türck and Czermak, to enter into the respective claims to priority of the three men whose names will always be closely associated. With the question of priority we have already dealt in previous articles.[1]

Sir Morell Mackenzie, the pupil of Czermak, and unquestionably the apostle of laryngoscopy and the founder of laryngology in this country, in his classical work on *Diseases of the Throat and Nose*, gives the following interesting historical facts:

> In the year 1857,[2] during the summer months, Professor Türck of Vienna, endeavoured to employ the laryngeal mirror in the wards of the General Hospital.
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> In the month of November of the same year,[3] Professor Czermak, of Pesth, commenced to work with one of Dr. Türck's laryngeal mirrors, and in a short time he overcame all difficulties. Artificial light was substituted for the uncertain rays of the sun, the large ophthalmoscopic mirror of Ruete was used for concentrating the luminous rays, and mirrors were made of different sizes. Thus it was that Garcia's reinvention of the laryngeal mirror led Czermak to create the art of laryngoscopy.

LUDWIG TÜRCK.

Ludwig T. Türck, a son of the court jeweller, was born in Vienna on July 22nd, 1810. Türck was born under a lucky star, and his life from the cradle to the grave was without a thorn. Embarrassments and distress, the inheritance of so many doctors during their student days, were unknown to him. He received his earlier education and pursued his medical studies in Vienna, where he proceeded to the degree of doctor in 1839. Fortunate circumstances of life enabled him to follow scientific research, and he applied himself with considerable zeal to the investigation of the anatomy and pathology of the nervous system. With a view of obtaining fresh ideas and further stimulus to his researches he visited Paris in 1844, at a time when the Paris medical school was in its zenith.

Baron Tuerckheim, the memorable leader of medical education in Austria, took an interest in Türck, and created for the young neuro-pathologist a special department for nervous diseases in the General Hospital in Vienna. In 1857 Türck became a senior physician. Through his investigations in this special department, Türck first founded his scientific reputation, and the numerous articles and monographs which he published show that his reputation was well deserved. Amongst his contributions may be mentioned those on "Spinal Irritation," "The Root of the Trigeminus," "On Ascertaining the Sensibility of the Skin."

In 1857 Türck turned his attention to a study of laryngoscopy, and his name must always be associated with the practical application of the laryngoscope to clinical medicine for operative as well as for diagnostic purposes.

The first communication by Türck on the laryngoscope appeared on June 28th, 1858, in the *Zeitschrift der Gesellschaft der Aerzte*, under the title "Der Kehlkopfrachenspiegel und die Methode seines Gebrauches."

In 1860 he published "Prakt. Anleitung zur Laryngoscopie."[4] In 1861 the Paris Academy of Science awarded to him a Monthyon Prize of 1,200 francs. In 1864 he became a Professor in the University, and there appeared his *magnum opus*, *Klinik der Krankh. des Kehlkopfes und der Luftröhre u. s. w.* Untiringly he worked to the end, which came on February 25th, 1868, when he succumbed to typhus after eight days' illness.

JOHANN NEPOMUK CZERMAK.

Johann Nepomuk Czermak came from a medical family. He was born on June 17th, 1828, in Prague, where his father, Johann Conrad Czermak, was a medical practitioner of high repute. His uncle, Joseph Julius Czermak, enjoyed a considerable reputation as Professor of Medicine and Physiology, first at Gratz and afterwards at Vienna. Johann the younger received his early education at the high school of his native town, and entered upon the study of medicine at the University of Vienna in 1845. In 1847 he moved to Breslau, where he had the great advantage of living with the distinguished physiologist Purkinje. From Breslau he passed on to Würzburg, where at the age of 22 he received the degree of M.D. About this time he paid the first of several visits to England. During the third and fourth decades—in fact, during the latter half—of a life far too crowded and far too short he made frequent changes. At first he settled in his native city of Prague, where he became assistant to Purkinje, who then held the chair of Physiology in that place. In 1855 he was appointed to the chair of Zoology at Gratz. Zoology, however, was not the proper province of Czermak, and in 1856 he gladly accepted the offer of the Professorship of Physiology at Krakau, which, however, he left in the following year for the like chair in Pesth. Whilst at Pesth he concluded his researches into laryngoscopy. The political agitation then rife in that city made life distasteful to him, and in 1860 he resigned his chair and returned to Prague. There he built and equipped at his own expense a private laboratory for research, in which he not only worked himself, but which he also placed at the disposal of others. He continued to reside at Prague until 1865, when the removal of von Bezold to Würzburg created a vacancy in the chair of Physiology at Jena, which was offered to and accepted by Czermak. At Jena he continued until 1869, when, finding that failing health was unfitting him for the energetic performance of his professorial duties, he withdrew to Leipzig, where he was made Honorary Professor at the University, and where he continued to reside until his death on September 16th, 1873.

From the foregoing it will be seen that during the relatively short period of twenty years, from 1850 to 1870, Czermak successively served the office of Assistant to a Professor of Physiology, held a chair of Zoology, filled the chair of Physiology in four universities, and became a Honorary Professor in a fifth, and five out of these twenty years were spent in his private laboratory at Prague. "Such frequent changes," as his contemporary and friend, Sir Michael Foster, remarks in the biographical sketch he contributed to *Nature*[5] at the time of Czermak's death, and from which we have largely drawn for the present article, "must have interfered greatly with sustained research; but by this time Czermak had made his name known as well by several investigations in experimental physiology and in subjective vision as especially by his researches on the laryngoscope, his treatise on which (*Der Kehlkopfspiegel und seine Verwerthung*), embodying the results made known in various papers in 1858 and 1859, he published shortly before his return to Prague."

"To Czermak," as we remarked in our leading article on the Evolution of Laryngology, on the occasion of the celebration of the Garcia centenary,[6] "unquestionably belongs the credit of making known to the world the laryngoscope." Between 1860 and 1865—that is, during the time that he had retired to private research work in his laboratory at Prague—he visited the principal medical centres of Europe, visiting at times England, to make the value of the laryngoscope better known to his fellow-workers in science and medicine; and luckily being gifted with a capacious and exceptionally tolerant throat, he was able to give convincing demonstrations of the value of the discovery. "We owe to him," to quote the words of Sir Michael Foster, "the real introduction into medical practice of this valuable instrument."

"Two talents he possessed deserve special notice. He had remarkable aptitude in devising apparatus for observing or for demonstrating physiological phenomena

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[1] BRITISH MEDICAL JOURNAL, vol. i, 1905, pp. 667-8; ibid., vol. i, 1906, pp. 93-8.

[2] *Zeitschrift der Ges. der Aerzte zu Wien*, 1858.

[3] *Wien. medizin. Wochenschrift*, March, 1858, and *Physiolog. Unters. mit Garcia's Kehlkopfspiegel*, mit iii Tafeln. Sitzber. der K. K. Akademie Wiss. in Wien, vom 29 April, Bd. xxix, p. 557. (Afterwards reprinted in a separate form.)

[4] *Allgemeine Wiener medic. Zeitung*, March 3rd, 1858, p. 75.

[5] Vol. ix, November 27th, 1873, p. 63.

[6] BRITISH MEDICAL JOURNAL, vol. i, 1905, p. 567.

It was this faculty which made him successful where others had failed in the use of the laryngeal mirror." "The other faculty," Sir Michael Foster goes on to remark, "that of popular exposition, less common in his country than in ours, he possessed to a very high degree." Doubtless it was Czermak's consciousness of the power he possessed of lucid exposition and the delight he took in teaching that caused him to feel the want of the stimulus which pupils afford, and to relinquish research in his private laboratory at Prague in order again in 1865 to take up professorial duties at Jena.

Whilst Czermak will doubtless be best remembered by his laryngoscopic labours, yet his field of research was by no means narrow. It included also the sister science of otology. Amongst his published papers will be found one entitled *Verästelungen der Primitivfasern des Nervus Acusticus*, Leipzig, 1850, and another entitled *Uber das Ohr und das Hören*, Berlin, 1873. It is also interesting to note that one of Czermak's earliest researches was in a special department of medical science which at recent congresses there has been a tendency to associate with the triple alliance of the ear, nose, and throat—namely, stomatology. His inaugural dissertation when he received the degree of M.D. at Würzburg was on the Microscopical Anatomy of the Teeth, in which he drew attention to the larger "interglobular" spaces so often found in the upper part of the dentine.

Czermak must have worked with an energy and an enthusiasm that knew no rest. Unfortunately, with all his gifts he was not endowed with that tranquillity of mind so essential to a calm consideration of scientific controversies. We should be using the language of euphony and not of extravagance were we to say that with a strange irony of fate the scientific instrument which was destined to bring relief to so many sufferers and to prolong so many lives did not lengthen the days of its illustrious elaborator.

The beginning of the insidious disease to which Czermak eventually succumbed he himself attributed to the irritation caused by the controversies which arose out of his laryngoscopic work. The deep melancholy and bodily suffering to which he had fallen a victim and the steps he took to overcome them are described in a letter from the collection of the writer of this article, and which we reproduce.

His last contribution to scientific literature was, perhaps, a paper on Hypnotism in Animals, to which he refers in this letter as a very interesting physiological problem with which he occupied himself whilst at Wartenburg, and which he found conducive to bringing him back to his way of successful scientific work. The paper was published in 1873 in Pflüger's *Archiv*.[7]

Leipsic, Dec. 10th, 1872.

My dear Mrs. Simon,—That I even did not answer the kind letter, which I have received from you in September may prove you how bad my health and humor has been at that period of this unhappy year for me, during which I have been the prey of a deep melancholy and chiefly in consequence of this state of mind also of bodily sufferings. I had so much anger and difficulties with my laboratory and the large amphitheatre connected with it, that I lost gradually all my power and pleasure to work and sunk more and more in real despair. I spent my whole time in going from one Spring and bathing place to an other but without finding the slightest mental rest and bodily relief.

From Karlsbad I went to Wildbad, from Wilbad to Tarasp, from Tarasp to St. Moritz, from St. Moritz to Interlaken, from Interlaken to Ems and back to Leipsic to assist at the Association of the German Naturalists hoping at least some distraction—but in vain.

At last, after a trip to Hamburg . . . I went to Wartenberg a small cold-water establishment in Bohemia, and there in the country-lonliness, in a charming forest I began to calm my despairing mind and to strengthen my weak and powerless body.

Moreover I met there, by mere chance with an very interesting physiological problem ("Hypnotism in animals") which occupied myself in an agreeable manner and brought me back to my way of successful scientific work.

Unfortunately I left Wartenberg, this blessed little spot to soon—but still the good effects of my stay there went on and I daresay that I am now really, though slowly recovering from the deepest mental an physical shock I had ever received in my life.

And so we will hope that I may see you and my dear friend Mr. John, who I wish is quite well again, one day under luckyer aspects than I would have expected some months before! But when and where? heaven knows!

Mr. and Mrs. S——, whom you call to my great satisfaction *delightful people* are well and now again in Vienna. They have been also delighted by their stay in London.

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Apropos German literature! have you seen already a copy of "the old and the new faith" by David Strauss? If not—then I engage you strongly to buy and to read it. It is published lately by S. Hirzel, Leipsic.

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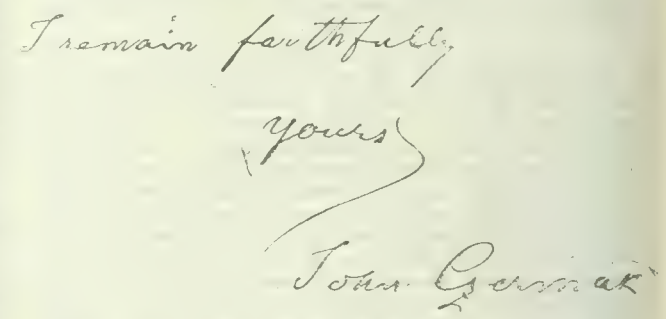
And now fare well. Mrs. Czermak and myself send our kindest regards to you, Mr. John, to your sister, to Mrs. Adams—and Boo, of whose luck and satisfaction I heard with the greatest pleasure.

A happy new year to all of you.

Our new dwelling-house becomes a true palace and will be quite ready next Easter!

The bohemian birds will make their appearance, as usual this year also in due time I hope.

To the credit of Mrs. Czermak's *english* I must confess that she did not look through this lines.



The letter, with some omissions, is printed as it was written, and shows that Czermak possessed no ordinary knowledge of English; it was written within a year of his death, and relates to a proposed visit to the late Sir John Simon in London. From a perusal of a previous letter it would seem that the invitation had been of some long standing. It was contemplated towards the end of 1869, and was postponed by Czermak in order that he might complete his negotiations for the piece of ground on which he subsequently built his house at Leipzig. It is more than probable that this particular visit was never paid. In the letter he refers to the laboratory and the large amphitheatre connected with it which he built in the grounds of his residence at Leipzig. In the amphitheatre, or "spectatorium" as he called it, it was his intention to give further play for his love of teaching and to deliver lectures on physiology, richly illustrated with experiments. "In connexion with the hall, the construction of which," says Sir Michael Foster in his biographical sketch, "was admirably adapted in every way for its purpose, he had also erected a private laboratory for research; and on both he had spent much time and labour. They were intended to be a supplement—not a rival—to the more technical institute of Professor Ludwig in the same city." Sir Michael Foster goes on to mention the delight with which Czermak showed this "Erklärungs-Tempel"—as he was fond of calling it—to Dr. Sharpey and himself in the summer of 1871, and pointed out all its ingenious contrivances, and the enthusiasm with which he looked forward to the lectures which would be delivered, and the work which would be carried on in it. He lived to open it by an inaugural lecture in December, 1872, but the effects of his fatal disease were already painfully evident; and, after a vain struggle during the following summer, Czermak was taken away from his unfinished work.

[7] Dr. E. F. W. Pflüger, *Archiv f. d. ges Physiologie*, vol. vii, 1873 p. 107.

Such is a brief sketch of the brief life of a man to whom medical science will ever be beholden. The controversies are ended. Our gratitude is due to all three. Honour to Garcia who brought the laryngoscope amongst its own, and, with shame it must be added, its own received it not. Honour to Türck, who endeavoured to give to humanity the benefit of Garcia's nearly forgotten work. Honour to Czermak who overcame the difficulties with which Türck had to contend, and caused to be known far and wide the untold possibilities lying hidden in the little mirror. Honour to all three. They rendered a lasting service to science, and conferred an inestimable boon upon suffering humanity.

W. J. H.

HOSPITAL ABUSE IN INDIA.

LAST June the Madras Government received a memorial addressed to the Government of India from M. R. Ry. Sam Manickam of Saidapet. The memorial contained a series of charges against the staff of the Government Ophthalmic Hospital, Madras, and alleged that in specific cases, of which the memorialist asserted that he had knowledge and proof, fees were demanded from patients resorting to the hospital for treatment, or patients had to leave the hospital without being treated because they were unable or unwilling to satisfy the improper demands of the staff, and that other irregularities were committed. The hospital is one of a group of Government hospitals in Madras consisting of the General, the Lying-in, and the Ophthalmic Hospitals; the whole group is entirely supported by the Government for the benefit of the poor of Madras, there being no private or municipal contributions beyond those made to Samaritan funds in connexion with the hospitals.

A report upon the charges made against the Ophthalmic Hospital was called for from Major R. H. Elliot, I.M.S., superintendent of the hospital, and the Governor in Council decided that, in the interest of the public and all concerned, the charges should be investigated and reported upon by an officer accustomed to weigh evidence. The Hon. Mr. J. Andrew, I.C.S., acting fourth member of the Board of Revenue, was accordingly appointed to inquire into the allegations. Mr. Andrew summoned in all 111, and examined 69 witnesses cited by the petitioner, and 23 on behalf of the officers belonging to the hospital. The order of the Madras Government in which the result of this inquiry was published concludes as follows: "A considerable part of the Commissioner's report is taken up with evidence indicating that there was a deliberate conspiracy between certain persons to ruin Major Elliot. The Government consider it unnecessary to refer to this in detail. It will be sufficient to state that they share the Commissioner's opinion that there was a deliberate conspiracy between M. R. Ry. Sam Manickam and others to injure Major Elliot. Far from establishing the charges made by M. R. Ry. Sam Manickam, the inquiry has unmasked this odious conspiracy. It has also drawn attention to the exceedingly good work which has been done at this hospital. As is shown by the statistics given in annexure A appended to these proceedings, the hospital has been growing in popularity under Major Elliot's management, in spite of the campaign of calumny and vindictive malice which has been carried on for admittedly the last three years against the officer in charge. The Government are satisfied that Major Elliot has conducted the administration of the hospital with propriety, energy, and efficiency. He is entirely exonerated from all blame in respect of the charges brought against him."

It appears to us that the Government of Madras was well advised in directing the inquiry to be held, but it is certainly surprising that no steps have been taken to bring the petitioner to justice. We congratulate Major Elliot that the Government by an official inquiry has shown to the public that the charges brought against him were false; that an attempt had been made to make him the victim of "an odious conspiracy," and that he has been entirely exonerated.

The case has, in addition, another interest for English readers, inasmuch as it must be held to illustrate the truth of the fact that there is abuse of hospitals in India as well as in England, and that a large number of well-to-do people avail themselves of the gratuitous relief afforded by public hospitals in India. The question, therefore, What should be done when a person, obviously unsuitable for charitable relief, presents himself at an Indian hospital? not infrequently arises. Should he not be told that he ought to seek and pay for private advice? Should this recommendation not be made because in India, where the number of doctors is relatively small, the private advice to be sought would not infrequently be that of the hospital surgeon himself? An experienced correspondent sends us the two following instances of abuse of hospitals coming within his own experience while in India:

A child was once brought to me as a hospital out-patient for advice and treatment. I saw the mother drive away in a carriage and pair and a day or two later I met her at the Vice-regal Drawing Room. When next she came to the hospital I declined to continue the treatment of the child.

A patient came into my hospital for operation for a tumour, paying one rupee (1s 4d.) daily for semi-private accommodation. As I was going on leave a few days later, she took her discharge and paid a private practitioner Rs. 2,000 (about £133) for the operation. Had I done the operation for her in hospital she would only have paid the hospital fee for a three weeks' stay, 21 rupees or 28 shillings! The patient told me this herself some months later.

We are informed that in Upper India well-to-do or rich natives often go to the eye departments of hospitals for free treatment, and it is more than probable that during the period covered by the memorial against Major Elliot (1904-7) many such persons attended and were treated at the Madras Ophthalmic Hospital. Some of these persons may have been detected by the native hospital staff, and may have been told, and most properly told, that they ought not to take advantage of the free medical relief intended for the poor, but should consult practising doctors and pay fees. Such persons would doubtless resent the criticism. Moreover, it is very possible that they may have attempted to bribe and even succeed in bribing menial servants of the hospital to secure earlier attendance, and to limit the period of waiting before the issue of medicine.

The moral of the case, therefore, seems to be that the Government of India should take steps to prevent the abuse of hospitals intended for the indigent, by well-to-do people; by checking this abuse they will diminish the temptations to which their porters and other employees of inferior grades may be exposed.

FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

A CONFERENCE of medical men practising in the Far East was held in Manila on February 27th to consider the advisability of establishing a society to further the knowledge of tropical medicine, and to promote friendly international intercourse among those whose medical or scientific duties and interests bring them into close contact with the natives of these regions.

The following took part in the conference: Dr. Black (Singapore), Dr. Francis Clark (Hong Kong), Dr. Cheng (Canton), Dr. Dudley (Manila), Dr. R. T. Edwards (Siam), Dr. H. Fraser (Federated Malay States), Dr. Paul C. Freer (Manila), Dr. Garrison (United States navy), Dr. Gurney (Philippine Constabulary), Dr. Hayward Hays (Siamese navy), Dr. R. D. Keith (Singapore), Dr. Kitajima (Japan), Dr. J. R. McDill (Manila), Dr. H. T. Marshall (Manila), Dr. W. E. Musgrave (Manila), Dr. Nichols (United States army), Sir Allen Perry (Ceylon), Dr. Pond (Manila), Captain Ryley, R.A.M.C. (Hong Kong), Dr. Saleeby (Manila), Dr. Tee Han Kee (Manila), Dr. J. J. Vassal (Annam).

It was unanimously decided to establish such a society, and articles of association and by-laws were adopted. The council will consist of a representative from each component medical organization, and it is hoped that during the ensuing year the Governments of Japan, China, Hong Kong, the Philippine Islands, Tonkin, Annam, Singapore, the Federated Malay States, Siam, Borneo, Java, Ceylon, and other Far Eastern States and Colonies will nominate representatives, and that each medical organization or branch of such organization will similarly nominate a representative, to serve on the council.

It was further decided to organize a conference every two years, to be held in one or other of the countries

represented, the first conference to take place in Manila early in the year 1910. Dr. Paul C. Freer, Director of the Bureau of Science of the Philippine Islands, was elected the first president of the association. At these conferences papers will be read, pathological and other scientific exhibits displayed, and the medical, sanitary, and other allied institutions and services of the country in which the meeting is held will be thrown open, so far as may be possible, and demonstrated to those attending the meeting.

Each component country will be represented for business purposes by a secretary-treasurer, and there will be a general secretary-treasurer for the association. Dr. Francis Clark, Medical Officer of Health for the Colony of Hong Kong, was elected the first general secretary-treasurer. The subscription was fixed at 10s. a year. Dr. Francis Clark's address for the next few months will be the Royal Societies' Club, St. James Street, London, W.

LYNN THOMAS AND SKYRME FUND.

SIXTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

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THE Senate of the State of Illinois has passed a Bill intended to give cities and villages "the power to establish and maintain a public sanatorium for the use and benefit of the inhabitants of such city or village for the treatment and care of persons afflicted with tuberculosis, and to levy a tax not to exceed four mills on the dollar annually on all taxable property of such city or village, such tax to be levied and collected in like manner with the general taxes of said city, and to be known as the Tuberculosis Sanatorium Fund." The Bill is now before the House of Representatives.

LITERARY NOTES.

To the *Scottish Medical and Surgical Journal* Dr. Norman Walker contributes a valuable article on the use of chrysarobin in psoriasis. The subject is discussed thoroughly, and in a practical and judicial spirit. The article is illustrated by several well-executed coloured plates.

Messrs. Cassell and Co. are about to issue a new and revised edition of *Hygiene and Public Health*, by Dr. B. Arthur Whitelegge and Dr. George Newman. The same publishers have also in preparation a new volume by Dr. G. Ernest Herman, entitled *The Student's Handbook of Gynæcology*, based upon his *Diseases of Women*. It contains 172 illustrations.

To the *Cairo Scientific Journal* for February Professor Elliot Smith contributes some interesting notes on mummies. In a previous communication he stated that the earliest example of undoubted mummification known to him at that time was the body of Sekenenres, the last king of the seventeenth dynasty, which is in the Cairo Museum. At the same time he pointed out that the evidence pointed distinctly to the practice of embalming as early as the twelfth dynasty. His reasons for this belief were the discovery of resinous matter among the bones of the royal mummies from the Dashur pyramids and the fact that the Canopic jars obtained from tombs of the time of the Middle Empire contain viscera. During the last twelve months the finding of three actual mummies of this early date has settled definitively the question. In a tomb of the period of the twelfth dynasty, discovered last winter near the more northern of the two Lisht pyramids by the expedition under the charge of Mr. A. M. Lythgoe, there was found the mummy of an old lady, richly bedecked with jewels. The tissues of the body were exceedingly brittle and already in a fragmentary condition, and the little that was left of them crumbled to powder at the slightest touch; but sufficient remained to show the embalming wound alongside the left groin and the resinous matter smeared over it. Moreover, the masses of linen with which the cavity of the body had been packed were still in position within the cage formed by the ribs. In these mummies of the period of the Middle Empire the heart was left in position when the other viscera were removed from the body, just as it is found in bodies embalmed a thousand years later. No attempt was made to remove the brain at that period. The extreme fragility of these mummies probably explains the absence of any such specimens in museums. Canopic jars occur in tombs of the Ancient Empire (Reisner), and, although viscera have never been found in them, such vessels are not known to have been used for any other purpose. There is a strong presumption that they were intended to receive the organs removed from the body; this, of course, would imply an attempt at embalming. In Dr. Reisner's excavations (Hearst expedition) at the Giza pyramids, a large mass of resin was found by Mr. Mace among the bones in a tomb of the Ancient Empire in such a position as to suggest that it had been stuffed into a wound in the left flank. The mere finding of resin in a tomb, especially at this early date, does not necessarily mean that embalming was practised, because Dr. Reisner has found masses of resin in many predynastic graves, in which there is nothing to suggest that any attempt has been made to preserve the body by artificial means. But the finding of resin in a position similar to that in which it occurs in the Middle Empire and in one of a series of burials, in some of which Canopic jars have been found, rather suggests, according to Professor Elliot Smith, that embalming may have been practised even at the remote time of the fifth dynasty. But if the disintegration of the tissues of the mummy of the twelfth dynasty had gone so far as to leave little more than a mass of powder surrounding the bones of the skeleton, it could hardly be expected that much trace of the soft parts of a mummy a thousand years older and perhaps less skilfully embalmed would be found. There is no evidence even to suggest that before the period of the fifth dynasty any attempt was made to preserve the body by artificial means. Although ancient Egyptian bodies are hardly ever found in a more excellent state than in some of the predynastic graves, the preservation is the result, not of art, but of the operation of natural agencies. The corpses of these archaic people

were placed directly in the dry sand and completely covered up, so as to shut out all access of air; as the result, in many cases they became desiccated and perfectly preserved. But in later times the body was put into a burial chamber containing a considerable quantity of air which favoured putrefaction and other processes of disintegration, even when the body had been mummified. In none of the many hundreds of prehistoric bodies that Dr. Elliot Smith has examined has he seen the slightest trace of any preservative material whatsoever; nor has Dr. Schmidt been able to detect any by means of chemical tests. The muscular tissues of these desiccated bodies simulate resin, but the resemblance is delusive. The material mistaken for resin and bitumen by Dr. Fouquet is certainly desiccated brain, unmixed with any foreign matter. There is nothing to support the suggestion put forward by certain writers that the practice of embalming was introduced into Egypt from some foreign country. In their search for materials with which to imitate by art the results obtained occasionally by Nature, the Egyptian quite early in his history selected salt and resin, or possibly even resin alone, as the most useful preservative agents. So satisfactory was this selection that it was not until late in Ptolemaic times, perhaps 3,000 years later, that the use of resin became superseded by the introduction of bitumen, which lent itself to the much cruder and less satisfactory form of embalming of this period. In late Ptolemaic and Roman times the appearance of the body itself was not taken into consideration, and most of the care was lavished on the more superficial bandages, so as to give the finished mummy a presentable exterior; but, so long as the preservation of the body itself was the supreme aim of the embalmer, resin was the chief material employed in the toilet of the dead. Whether or not the body was soaked in salt solution in the times of the Middle Empire it is impossible to say at present; but, without some such process, it would have been quite impossible to preserve the limbs and the solid parts of the body from putrefaction in the case of a corpse which was put into a coffin. It is known from observation that the body-cavity was opened by an incision on the left side, and that through this aperture all the viscera except the heart were removed and preserved, packed in a resin paste in Canopic jars. In no mummy earlier than the eighteenth dynasty has Dr. Elliot Smith been able to find any evidence of an attempt to remove the brain. The well-known procedure for removing that organ was accurately described in ancient times by Herodotus and Diodorus, whose accounts have been confirmed by Dr. Pettigrew and Professor Macalister. It seems to have been introduced at the beginning of the New Empire and remained in vogue until Roman times. At about the commencement of the Christian era, this practice and also that for the removal of the viscera from the body cavity fell into abeyance; and from that time until the sixth or seventh century it was the custom simply to pack the body, either naked or clothed, in enormous quantities of common salt and then wrap coarse cloth around the salted corpse.

MEDICAL NEWS.

THE fourteenth Chemists' Exhibition will open at the Royal Horticultural Hall, Westminster, on Monday next.

HIS Grace the Duke of Northumberland will preside at the annual dinner of the Royal Sanitary Institute on May 12th at the Langham Hotel.

WORK for the summer session at the West London Post-Graduate College, West London Hospital, Hammersmith Road, will begin next Monday. A syllabus can be obtained on application to the Dean.

THE new out-patient department, built in memory of his daughter by Mr. W. W. Astor, at the Great Ormond Street Hospital for Sick Children, is to be opened by Her Majesty Queen Alexandra in June.

THE Gresham Professor of Physic (Dr. F. M. Sandwith) will next week give a course of lectures on consumption, beginning at 6 p.m. on Tuesday. Three lectures will deal with prevention, the fourth on treatment. The lectures will be given at Gresham College, Basinghall Street, E.C.

THE annual meeting of the Invalid Children's Aid Association will be held, by kind permission of the Duke of Westminster, at Grosvenor House, on Wednesday, May 13th, at 3 p.m. Sir Edgar Speyer will preside, and among the speakers will be Father Waggett, Mr. Andrew Lang, Mr. D'Arcy Power, Mr. E. A. H. Jay, L.C.C., and Mrs. Bourchier (Miss Violet Vanbrugh). Tickets of admission can be obtained on application to the Secretary, 69, Denison House, Vauxhall Bridge Road, S.W.

MANY of Dr. Clouston's old assistants and clinical clerks at the Morningside Asylum, Edinburgh, desire on the occasion of his retirement from the office of medical superintendent of that asylum, which he has held since 1873, to present him with a suitable memorial at a complimentary dinner. Private communications have been sent to those whose addresses could be ascertained, but any one who has not yet heard through this channel can obtain fuller particulars by writing to Dr. Turnbull, Fife District Asylum, Cupar, N.B.

THE Electro-Therapeutic Section of the Royal Society of Medicine will hold a meeting at the rooms of the Royal Philosophical Society, Glasgow, on May 22nd, Mr. Deane Butcher in the chair. Papers will be read on interrupted currents for electrical testing and treatment, by Dr. Lewis Jones; on the work done in the electrical department of the Royal Infirmary, Edinburgh, by Dr. Dawson Turner, and on ionic medication in the treatment of some obstinate cases of pelvic disease in women, by Dr. Samuel Sloan. There will also be an exhibiton of electrical apparatus which will be open from 3 p.m., the meeting taking place at 8.30 p.m. The meeting and exhibition will be open to all qualified practitioners.

THE Medico-Legal Society will hold a meeting on Friday, June 5th, in Edinburgh. At 10.30 a.m. a discussion will be introduced by Mr. R. W. Renton, Procurator-Fiscal of Midlothian, on English and Scottish procedure in the preliminary investigation of sudden or violent deaths. Subsequently Dr. Urquhart, Physician-Superintendent, James Murray's Royal Asylum, Perth, will read a paper on certain imperfections in the law in connexion with insanity, and demonstrations will be given by Professor Harvey Littlejohn, Dr. Harvey Pirie, Sir Henry Littlejohn, and others. On Saturday the members will, at the invitation of Professor Glaister, visit the new forensic medicine and public health department of the University of Glasgow. Further particulars can be obtained on application to Dr. Stanley B. Atkinson, 10, Adelphi Terrace, London, W.C.

THE Düsseldorf Society for the Care of Infants has set an example which might be followed in this country, by arranging that two courses of lectures for physicians should be given under the direction of Professor Dr. Schlossman at the Clinic for Children's Diseases. The first course will begin on June 15th and end on June 27th, the second on November 2nd and end on November 14th. The courses will comprise attendance in the clinic and in the laboratories, lectures and demonstrations, and the members will have an opportunity of visiting various types of institutions designed for the benefit of infants and the diminution of infant mortality. Further information can be obtained on application at the Geschäftsstelle des Vereins für Säuglingsfürsorge im Regierungsbezirk Düsseldorf, Düsseldorf, 59 Werstenerstrasse. No charge will be made beyond an entrance fee of 20 marks.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 6, Catherine Street, Strand, London, W.C., on April 15th, Dr. de Havilland Hall in the chair. The accounts presented showed that the amount of sickness pay disbursed during the first three months of the year was greater than in any previous similar period of the society's working. This might be expected both from the increase in the number of members and the growth of their average age; but the epidemic of influenza produced a large number of sickness claims, and appreciably added to the totals of the payment sheets. The epidemic seems to have died down, and the number of claims now being received by the society is not greater than the expectation. The annual general meeting of the society will be held at the Medical Society of London, 11, Chandos Street, Cavendish Square, London, W.C., on Thursday, May 21st, at 4.30 p.m., and the accounts then to be presented will show that the Society has grown considerably both in members and in financial strength during the last twelve months. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

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THE RESEARCH DEFENCE SOCIETY.

Lord Cromer, who appeared last week in a new character as President of the Research Defence Society, has had what the French call a "good Press." Public opinion, as expressed by its leading organs, is strongly opposed to what the *Times*, quoting Lecky, calls the folly and wickedness of attempting to prohibit the most efficient of all methods of tracing the origin, course and filiation of disease, and the only safe way of testing the efficiency of remedies which may prove of inestimable value to mankind. The *Observer* says: "Scientific authorities have been too apt to pass by "with a shrug the reckless and absurd charges made "against their methods, forgetting that when it is one "man's business to propagate a delusion and nobody's "business to destroy it, Truth is apt to find herself "more than usually handicapped. The Research "Defence Society does not come a moment too soon "for the credit of English sanity."

We particularly commend this utterance to the attention of some medical men who think the best policy in regard to the pernicious agitation conducted by antivivisectionist societies is that of Brer Rabbit, to "lie low "and say nuffin'"—in other words, to let the case go by default. The voices raised against the new society have been few and feeble. Needless to say, Mr. Stephen Coleridge objects, but, of course, he has to make a demonstration or subscriptions to his society would begin to fall off; but that Mr. Coleridge should complain of the title of the new society as being misleading is grotesque. We hope he will continue to distribute the remarkable evidence given by him before the Royal Commission on Vivisection as widely as possible, that the British public may appreciate the value of such a charge as coming from the honorary secretary of the Antivivisection Society. Mr. Coleridge seems to have persuaded himself that there are many vivisectors who "candidly believe" that mankind would be greatly benefited by his assassination. Why any one should wish to assassinate him we cannot imagine. The only people we can think of who might conceivably object to his continued existence are some of his brethren in the antivivisectionist faith.

It is interesting to see in the list of Vice-Presidents of the new society the name of Dr. Wace, Dean of Canterbury, whose views have not always been in favour of the cause it has been established to defend. In the recently published *Life of Delane*, the famous editor of the "Thunderer" (vol. ii, p. 326), there is a letter, dated July 11th, 1876, to Dr. Wace, one of his most valued contributors, which we wish we had space to quote here in full. The gist of it is that Dr. Wace, in his editor's opinion, had always had "too much sympathy with the "sentimentalism which wept over the sufferings of a "few curs or other animals sacrificed in the most sacred "of causes and by the most humane of the human race," while taking no account of the cruelty inflicted in pure wantonness or to save trouble. After speaking of the "awful torture" inflicted in the trapping of rabbits, and the difficulty of defending fishing, he goes on: "Have any animals such claims upon our sympathies "as sheep and oxen, and has anything effectual been "done to minimize their sufferings in death? Who "prescribes that they shall have anaesthetics? Hun-"dreds of thousands are slaughtered every day for "every rat or dog. But the medical men who crowded "the Home Office yesterday, at the sacrifice of pro-"fessional time, have no objection to the prevention of "cruelty; they object—they, the most humane of men—"to being all treated as suspected criminals, addicted to "such abominations and compelled to give notice and "make reports like ticket-of-leave men. They will aid "in passing an effective measure having for its real "object to protect animal life from useless cruelty; but "they not unnaturally decline to put themselves on the "level of wretches from whom their whole practice "revolts, and they have every claim to be spared such "undeserved indignity." The essence of the matter is in these few words, and it is a shame to us as a nation that, at this time of day, it should be even more necessary to impress on the public mind the truth which they convey than it was thirty years ago.

THE TOXIN TREATMENT OF SARCOMA.

The treatment based upon the accepted clinical facts that sarcoma and even carcinoma has been known to disappear, and the patients to be permanently cured, after an attack of erysipelas accidentally acquired or artificially produced, is supported by the experimental work of Beebe and Tracy, who proved that multiple sarcoma in dogs frequently disappears entirely under injections of the mixed toxins. Dr. Coley, who has done more than any one else to perfect this line of treatment, has recently published twenty-eight cases, including every type of sarcoma except melanotic, in which good results have ensued. The growths were primary in various tissues, and in nearly every instance the diagnosis was based upon microscopical examination. Upon carcinoma the treatment has no more than an inhibitory effect, sufficient, however, in some cases to prevent recurrences.

The cases for which mixed toxins are suitable fall into three classes—(*a*) cases inoperable by reason of site, extent, failure of attempts at removal, or dissent on the part of the patient; (*b*) cases in which operation involves the loss of a limb; (*c*) as a prophylactic in operated cases. Of 430 cases of sarcoma treated, in 47, or 11 per cent., the tumour entirely disappeared, and of these 28 were well from three to fifteen years after. The chances of success are much higher if the case be taken in hand early, before the involvement of important organs, the occurrence of metastases, or the onset of cachexia; the prospect is better also when the growth is slow. Since the use of living bacteria has been discontinued, the risks involved have proved minimal; small doses of the toxins may be given whilst the patient is following his ordinary occupation. The method of preparation is as follows: 100 c.cm. of a three-weeks' broth culture of streptococcus (not specially standardized apparently) is added to 30 c.cm. of a suspension of *B. prodigiosus* (containing 12·5 mg. of proteid per c.cm., determined by Kjeldahl's method) and 20 c.cm. of glycerin. A small piece of thymol is added, and the whole sterilized for two hours at 75° C. It is kept on ice until used. Although potent for some months, it is better not to use it when more than a few weeks old. In a case of inoperable sarcoma, the first dose for an adult should not exceed ¼ minim, and should be injected deeply at a distance from the tumour. The amount

should be increased until the resulting reaction is accompanied by a temperature of 102° to 104° with or without a chill; Coley's maximum dose is 12 minims, but considerably larger doses have been given. After a few days the injection may be made into the tumour itself, but the dose should not exceed one-half that used systemically. Unless contraindicated for some special reason, injections should be made daily, and improvement is to be expected within seven to fourteen days; when none is observed within a month the outlook is poor. The average duration of treatment is between two and four months. Local pain caused by the injections may be controlled by cocaine. When used in the hope of averting amputation, if the tumour continues increasing in size, the full four weeks should not be completed, but operation undertaken and the prophylactic use of the toxins continued. For this purpose the dose should be such as to produce only a slight reaction, and should comprise two or three separate periods of three or four weeks each.

As examples of this procedure Coley gives three cases.[1] The first, an inoperable carcinoma of the floor of the mouth that disappeared entirely after four months' treatment, and the patient was well six years later. The second, an inoperable recurrent cancer of the breast, in which six months from the commencement of injections the ulcer was healed and an axillary mass had disappeared; two years later the patient succumbed to a recurrence in the abdomen. The third, an epithelioma of the uterus, was well and free from signs of the disease for three years, but finally died of local recurrence. He also reports three unusual cases of sarcoma, all treated successfully. In the first, a man aged 20, with a very large tumour of the vertebral column, who had lost 50 lb. in weight and was paraplegic, received daily injections for four months; in a year he was to all intents and purposes perfectly well, and remained so at the end of six years. In the second, a sarcoma of the femur, first noticed in 1901, was treated by *x* rays for some months, with apparent benefit; in 1902, however, metastases occurred, but toxins were given with such effect that in a year the patient recovered perfect health, and was well five years later. In a third, a veterinary surgeon aged 40 had a sarcoma of the upper jaw, removal of which had been attempted unsuccessfully; when toxin treatment was begun he was profoundly jaundiced, and there were, it was believed, metastases in the liver. He received 103 injections, and, as a result, recovered completely, remaining well six years after treatment. In all these cases microscopical examination of the tumour confirmed the clinical diagnosis.

These cases should direct attention once more to a method of dealing with inoperable tumours that had some vogue in this country ten years ago. At no time has there been greater demand for caution in recommending any treatment of malignant disease claiming to be specific than at present, and, in the face of the disappointing results obtained by other surgeons formerly, it is hardly to be expected that Coley's recent results will be accepted in any other than the most cautious spirit. At the same time there is no doubt that the general advance in knowledge of toxins and vaccines, with their therapeutic employment, has enabled Coley to effect considerable improvements in the details of the preparation of the fluid, whilst his experience has borne fruit in the betterment of technique.

It is not contended for the treatment that it should replace operation; all that is claimed is that in inoperable tumours a trial should be permitted; if any result is to be obtained it will be evident in a few weeks, and, if no good effect be forthcoming, at least no harm will have been done. It is well known that formerly there was grave danger in the injections themselves, but this has been minimized by recent modifications, and a most serious objection thus removed. Face to face with an inoperable case of malignant disease, the conscientious surgeon finds himself in a difficult situation, but he ought not to shirk his responsibility, and he is justified in resorting to any means of alleviating distress or bettering his patient's condition that can be employed without undue risk. It would appear from Coley's results that by employing the mixed toxins he has at least a one in ten chance of curing a patient suffering from sarcoma.

The number of partially or completely successful cases reported by other surgeons besides Coley in America is now so great as to make a further trial of the method in England desirable.[2]

[1] Coley, *Boston Medical and Surgical Journal*, vol. clviii, February 6th, 1908, p. 175.

[2] The Lister Institute supplies a preparation made according to Coley's latest directions.

THE INHERITANCE OF THE INSANE "DIATHESIS."

ANY attempt to formulate exact statements as to the degree to which mental abnormalities may be considered heritable is a difficult undertaking, and Mr. David Heron's recent memoir[3] frankly recognizes the fact.

It is evident that an exhaustive study of the problem will entail a separate investigation of many forms of mental disease, but the data at present available do not permit of this being carried out. In these circumstances, and bearing in mind the lack of unanimity among experts as to the proper classification of insanities, Mr. Heron has analysed the results which follow adoption of Dr. Urquhart's view that "Insanity "is a unity, not a fortuitous collection of kaleidoscopic "systems each requiring a proper name." This limitation is partly justified by the following indications: "In the mass of family histories slowly accumulating "in the Eugenics Laboratory, there appears to the "observer a certain 'correlation in heredity.' Insane "stock are liable to tuberculosis at a greater rate than "sane stock; mentally defective offspring occur in "families in which neuroses, alcoholism, or insanity "are more or less frequent. Physical or mental "degeneracy of one type will be found in one "member, and of a second type in a second member. "There is, as it were, an inherited tendency to general "degeneracy, which is something wider even than the "vague 'insanity,' where many types are clubbed "together under one name. This correlation in heredity "manifests itself in other directions: the inherited "tendency to digital defect may appear in one member "as excess, in another as a true defect; and ophthalmic "surgeons have drawn attention to the fact that "abnormality of vision may take different forms in "parent and offspring. It would appear as if the stock "suffered from hereditary determinants which were "unstable in character, and that the existence of such "unstable determinants may be the mark of 'degene-"'rate' stock; the instability may be marked by more "than one form of insanity, or states less emphasized "than the insane, such as the neuroses which may be

[3] *A First Study of the Statistics of Insanity and the Inheritance of the Insane Diathesis.* By David Heron, M.A. *Eugenics Laboratory Memoirs: II.* London: Dulau and Co. 1907.

"classed as want of mental balance. . . . We may "hereafter find that even a wider category than the "popular phrase 'insanity' is the more truly scientific, "that the inheritance of insanity is like the inheritance "of pulmonary tuberculosis—the inheritance of a "tendency, a condition, or state, which, under the "suitable environment, the special mental or physical "strain, the influenzal weakening, or some kindred "source, may become one form or another of accepted "insanity."

Even simplified in this way the problem is complicated. To employ the statistical method of "fourfold tables"[1] we must have information capable of being grouped under four headings: (1) Insane parents and insane offspring; (2) insane parents and sane offspring; (3) sane parents and insane offspring; (4) sane parents and sane offspring. The first three groups can be filled from good asylum records, such as the admirable data collected by Dr. A. R. Urquhart, of the James Murray's Royal Asylum, Perth. This material, which has been discussed from other points of view in Dr. Urquhart's Morison Lectures[2] and his interesting Presidential Address to the Section of Psychological Medicine at the Association's Leicester Meeting,[3] consists of 331 family trees, each giving the total number of brothers and sisters of the patient, the order of birth, and a medical classification (neurotic, alcoholic, epileptic, eccentric, normal). Similar information is given respecting the parental and, in some cases, the grandparental generation.

Before the first three groups in the scheme can be filled, it is, however, necessary to ascertain whether any correction ought to be made to allow for offspring or parents who become insane after completion of the record. It will be remembered that the basis of such a correction, in the case of pulmonary tuberculosis, was the subject of a lengthy correspondence in our columns. In the present instance it was found that the mean age of onset in males was 36.2 ± 0.5 years, in females, 36.5 ± 0.5 years. It is, therefore, fairly safe to assume that most of the parents will have passed the "danger zone," and that their history is completed.

In dealing with the offspring we are on less certain ground; it is possible that the insane descendants of insane parents are under represented. Mr. Heron draws attention to the following points: "(1) Dr. Urquhart's "data have been accumulating for thirty years, and in "many cases the record is actually complete, the "members of the same stock coming to the same "asylum. (2) Pearson's family records indicate an even "higher percentage. (3). The argument from tuber- "culosis is not valid; the present insanity data are "more complete than the tuberculosis data, because the "mean age of first attack is higher and because the "families have been under observation during a longer "period; yet the unmodified record gives a sensibly "lower percentage of offspring attacked than in the "case of tuberculosis—namely, 25 per cent., as against "30 per cent."

Some evidence that the record is incomplete is, indeed, afforded by the fact that a small but significant correlation exists between the age of the oldest member of a "sibship" and the number of insane (0.14 ± 0.04), but it is doubtful whether the correction would sensibly affect the results, and the author has not attempted to make it. Of course, as he says, such effect as it would exercise must tend to increase the measure of inheritance.

[1] Briefly described in the BRITISH MEDICAL JOURNAL, July, 1907.
[2] On Insanity, with Special Reference to Heredity and Prognosis, *Journal of Mental Science*, vol. liii. p. 233.
[3] BRITISH MEDICAL JOURNAL, 1905, ii, p. 1571.

The pedigrees can now be expressed as follows, each insane patient being counted twice, once with each parent:

Male Pedigrees.

		Parents.		Totals.
		Insane.	Not Insane.	
Offspring.	Insane	49	361	410
	Not insane ...	149	x	$149+x$
	Totals ...	198	$361+x$	$559+x$

Female Pedigrees.

		Parents.		Totals.
		Insane.	Not Insane.	
Offspring.	Insane	52	360	412
	Not insane ...	158	x	$158+x$
	Totals ...	210	$360+x$	$570+x$

In order to fill the fourth square in the table, we must know what percentage of the general population is or has been insane. This is another difficulty, because we have to allow for recoveries, and the fact that the insane death-rate is different from that of the general population. We cannot discuss the manner in which Mr. Heron approximates to a solution, but he finds, making three different assumptions that 1, 1.5, or 2 per cent. of the adult population have been, at one or other period of their lives, insane. Having filled the vacant spaces on these assumptions, the coefficients or correlation between insanity in parents and children were found to be for male pedigrees: 1 per cent. basis, 0.61; 1.5 per cent. basis, 0.58; 2 per cent. basis, 0.55; female pedigrees: 1 per cent. basis, 0.62; 1.5 per cent. basis, 0.58; 2 per cent. basis, 0.56. By extrapolation the coefficients on a 2.5 per cent. basis were found to be 0.52 and 0.53 respectively. Fraternal correlation was measured by a coefficient varying between 0.45 and 0.55.

This investigation seems to show that the insane "diathesis" is inherited with as high an intensity as any physical or mental characters of man so far examined, and, whatever light may be thrown upon matters of detail by fuller statistics, the broad conclusion is of great importance.

Another point of interest established by the author is that, in tainted stocks, the elder offspring are more liable to be diseased than the younger, a phenomenon which was also observed by Pearson in the case of pulmonary tuberculosis.

Mr. Heron's memoir is avowedly of a preliminary nature; it is, nevertheless, a valuable contribution to statistical literature and deserves careful study. Signs are not wanting that the importance of statistical methods is beginning to be realized by the profession. We understand that one of the largest hospitals in the metropolis is about to inaugurate a statistical laboratory, with the object of employing biometric processes in the investigation of medical problems. If this good example is followed by similar institutions the time is not far distant when the countrymen of Farr will be easily foremost in the field of statistical research.

THE CULTIVATION OF THE MIND IN CHILDREN.

A FEATURE, and a very hopeful one, of the present day is the importance that is beginning to be attached to the study of the child. The general idea on this subject that used to prevail is expressed in an old picture in *Punch*, where a lady sends an elder sister to go and see what baby is doing, with the injunction to tell him that "he mus'nt." The schoolmaster of former times flogged the elements of Greek and Latin into his pupils, but troubled himself little about their moral nature. Now, the importance of the child both in himself and as the hope of the future of the nation is better realized, and congresses are devoted to the study of his development and mental peculiarities. At the annual meeting of the Child Study Societies' Conference recently held at Exeter, Dr. Davy, President of the British Medical Association, delivered a very instructive address on the cultivation of the mind in children. He said it was a great mistake to look upon the mind as merely the result of central activity, and on the brain as the only organ in the body concerned in mental action. The brain contained the mechanism through which the mind might be developed, but unless the brain was used and trained properly the mind in its highest sense would never be developed. It was not true that mental activity depended entirely on the brain. The high state of mental activity demanded that all the organs of the body be healthy and properly nourished. Man's mental activity greatly depended on the vigour of his bodily organs. He (Dr. Davy) doubted very much if this was sufficiently recognized by those responsible for the care and education of the young. It was essential that children should have fresh air, proper food, and adequate muscular exercise if their minds were to be properly cultivated and healthily developed. Another mistake often made was that too much stress was laid on the mere acquisition of knowledge. The keynote of accumulating knowledge was constantly to learn and relearn, and unless they were constantly doing that it would fade out of their mental life. In attempting to form ideals it was necessary to remember that a tendency to imitation seemed to be one of the most potent in the human mind, and if they took that tendency into account, together with the disposition to "hero worship" they would understand more thoroughly how ideals in children might be formed. It seemed to him, therefore, very necessary to choose children's literature with a view to the ideals which they wished them to form from their reading. They should teach children more often than they did the lives of the great men who had made history, which, as it was often taught, had little or no effect in forming ideals for children. The Japanese gave them a practical proof that it was possible on a large scale to form ideals in children by introducing ideals into their system of education. Each Japanese child was from early infancy taught the love and respect due to its parents. Each one was also taught the lives of the great men who had done much for their country, and its ancestors were held up as an example to be followed. As a consequence, the ideal of the Japanese was respect for their parents and ancestors and a spirit of patriotism which was the most useful in their natural life. It must be recognized that these ideals would vary through life with the condition of the man at a given time, with the varying knowledge that he had accumulated, and with the environment with which he found himself surrounded. But the ideals of his childhood would remain with him more permanently than any others, and would last when those which had been later accumulated had passed away. The mind influenced the body, and the body the mind, and no organ of the body was independent of the other. Muscular vigour was of as much importance to a vigorous, well-developed mind as was a great accumulation of knowledge. We hope that Dr. Davy's words will be taken to heart not only by teachers whose sole idea of education is that of Mr. Gradgrind—to cram the unfortunate child's head with "facts"—but by parents and by all who have the charge of children.

CANCER IN THE COLONIES.

AN official document entitled "Further Correspondence "Relating to the Cancer Research Scheme" has recently been issued.[1] A summary of the last White Paper on the subject was published in the BRITISH MEDICAL JOURNAL of April 7th, 1906, p. 812. The present one is neither very interesting nor particularly illuminating. A large part of it is taken up with correspondence of a purely "red tape" character. From a letter addressed by Lord Elgin on June 30th, 1906, it appears that the investigations on the distribution of cancer in the British Colonies and Protectorates were seriously interfered with for a time by an unforeseen difficulty in interpreting the regulation governing the nature of articles admitted to the international post. Valuable specimens forwarded to London since September 1905 from Fiji, Gibraltar, the Gold Coast, Grenada, Malta, Mauritius, New Guinea, Nigeria, Penang, Sierra Leone, the Straits Settlements, and elsewhere, were destroyed by the postal authorities. This difficulty was overcome in March, 1906, by the General Post Office consenting to deliver such parcels, and it may be hoped that this particular stone of stumbling has now been removed from the path of those engaged in research under the auspices of the Cancer Research Fund. But the incident seems to reveal a want of co-ordination between different departments of Government which can scarcely be said to make for efficiency of administration. It would also seem that there is a certain amount of apathy on the subject of cancer research in some of our colonies; special attention is drawn to this by the Acting Governor of Barbados, and the White Paper supplies other instances. Lord Elgin found it necessary to impress on the officials to whom his letter was addressed the importance of the inquiry in which their co-operation is asked. From a scientific point of view the most important part of the White Paper is that containing a report from the Natal Cancer Research Committee for 1906. The death-rate from malignant disease among Europeans is given as 0.46, but it has to be borne in mind that only 3.4 per cent. of the European population in Natal, as against 5.9 per cent. in England and Wales, were in the age-period—55–65—which provides the maximum mortality from cancer. With respect to malignant disease among the native races of Natal and Zululand, little information of a statistical nature was obtained. It is but seldom that a native is attended in his last illness by a qualified medical man unless he happens to be an inmate of one of the hospitals. That cancer is comparatively infrequent among the natives would however, seem to be shown by the following facts: In a population of 930,000, with 12,255 deaths, no death was attributed to cancer. Again, the District Surgeon of Mapamulo—a district with a native population which in 1905 was estimated at 32,082—states that no cancerous disease occurred in the district during the year. Here, too, the age factor must not be left out of account, only 13.7 per cent. of the Natal natives reaching the age of 40 as against 25.7 in England and Wales. The Natal Committee states that no evidence is at present forthcoming which favours

[1] London: Printed for His Majesty's Stationery Office, by Darling and Son, Limited, 34–40, Bacon Street, E. And to be purchased, either directly or through any bookseller; from Wyman and Sons, Limited, Fetter Lane, E.C., and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Tweeddale Court, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. 1908. (Cd. 3995.) Price 3d. Eyre and Spottiswoode, East Harding Street, E.C.

the supposition that contact with the European races and the adoption of European habits render the native more prone to cancer. Among the Indian population of Natal, estimated at 98,049 in 1906, only 5 deaths were certified as due to cancer. Only 1.7 per cent. of the Indians, however, were in the cancer-age period. With regard to British Guiana, the total number of cases of malignant disease admitted into the Public Hospital, Georgetown, from April, 1906, to March 31st, 1907, was 140. Among these cases carcinoma of the penis and of the cervix uteri was particularly common.

THE COURTESY CALL.

We have received the following questions from a correspondent: "What is the correct course to pursue "towards newcomers who do not pay the usual call of "civility upon their near neighbours in the event of "their names being proposed for election at the local "medical society? Can such expect admission to a "society when they ignore its members?" The rule that a newcomer should call upon medical men already in practice in the locality is well established, and rests on the very solid ground that though medical men may be rivals in seeking the support of the public, they are colleagues in the profession. Therefore, a man who fails to take the early opportunity which this time-honoured custom affords of making the personal acquaintance of his neighbours and colleagues is blameworthy. But to say that he is therefore to be ostracized would surely be contrary to the spirit of the rule itself, and contrary to the objects for which local medical societies and Divisions of the British Medical Association exist. A man may fail to fulfil the obligation of courtesy not from any evil motive, but from sheer ignorance, even from mere shyness. Men who have never been afflicted by shyness cannot understand, and those who have outgrown it often forget the misery a shy man must undergo in making up his mind to go on this round of visits. He is apt to put it off from day to day, and this very procrastination increases his misery and hesitation, for he is conscious that he may already have incurred the reproach of discourtesy, and that his welcome may be the colder in consequence. The other charitable explanation we have ventured to suggest is that the failure in courtesy may be due to ignorance. We have very good reason to believe that a good many newly-qualified men have not heard of the custom, and it is a great pity that the fact is not brought to their attention either by the staff of the medical school at which they are educated, or by the officers of the medical corporations or the medical faculties from which they receive their diplomas or degrees. Professor Saundby set a good example by delivering a short course of lectures on medical ethics to senior students at Birmingham, and we have no doubt that he touched on this point. But short of a regular course of lectures, it ought surely to be possible for some senior member of the staff of a medical school from time to time to get together the men newly qualified from it, and to give a brief informal address on the duties and obligations of medical men to one another. Finally, if a man sins against knowledge, this is perhaps rather a reason why he should be admitted to the local medical society or Division, so that he may be taught better manners, and given a higher standard of professional conduct.

MEDICAL TERMINOLOGY.

Mr. Plowden, who, like the husband of Juliet's nurse, is a merry man, has been exercising his judicial wit on the vocabulary of medicine. A doctor recently called as a witness testified that a person was suffering from "haematoma." The magistrate, while professing not to have a notion what the word meant, thought it was in itself worth the fee. Without stopping to discuss whether legal phraseology is not at least as cryptic as that used by doctors, or insisting on the fact that every science must have what the toilers in other fields of intellectual labour call a "jargon" of its own, we freely admit that there is in medical terminology a good deal, not only of bad Greek, but of needless mystery. We will not quote the well-known description of a black eye said to have been given by a pedantic doctor, but we may be allowed to cite a story which we recently came across in a French medical journal. The narrator says that a gentleman recently brought his wife to him with the information that the lady was suffering from coccygodynia, which another doctor had obligingly explained to be a topoalgia. The patient was no better, but the husband was apparently satisfied with knowing what was the matter with her. "Topoalgia," like neurasthenia and cachexia, are words which are at least as well worth a fee as haematoma. And these are nothing to what a medical precisian can do if he cares to use the whole polysyllabic wealth of medical terminology. The mention of "cachexia" puts us in mind of a value, apart from the fee, which may lie in words of learned length and thundering sound. It is related that certain medical luminaries of the past, who had charge of a wealthy patient with Bright's disease, were much worried by his wife, who, like the pestilent caller at the Circumlocution Office, "wanted to know, you know." They were unwilling to tell her the state of things; she therefore —much against their will—called in another light of science, celebrated for his oracular utterances. When asked his opinion he said in solemn tones, "Madam, your husband is suffering from a "cachexia." The lady turned in triumph to his discomfited brethren and said: "There, I knew Sir Thomas "(let us say, though that was not his name) would tell "me what is the matter with my husband!" Technical language may thus serve to conceal thought. There is, however, a worse danger—that it may lead the doctor himself to mistake words for things. The moral is that, although scientific terminology is a necessity, we must treat it as our servant and never allow it to become our master.

CONSULTATIVE OUT-PATIENT DEPARTMENTS.

At the annual meeting of the Bolingbroke Hospital, Wandsworth Common, held on April 24th, under the Chairmanship of Mr. E. G. Thorne, special attention was drawn in the report for the year 1907 to the system of consultative out-patients which had continued to receive the support of the medical practitioners resident in the district, and had attracted considerable attention among those interested in the working of out-patient departments in other hospitals. On the invitation of the Chairman, Mr. Charles Ryall, one of the surgeons to the institution, addressed the meeting on the subject of the working of the hospital. Concerning the position of the institution in regard to the outside world, he said that when the Bolingbroke Hospital a few years ago found itself a new hospital with a new staff, without any traditions to hamper the work, the hospital authorities and the staff, recognizing that the future with a clean slate lay before them, determined to do their best for the sick and injured entrusted to their care. It was felt that no hospital could expect a large measure of success unless it enlisted the support and confidence not only of the public, but also of the general medical practitioner in the neighbourhood. The scandalous abuse of the overgrown out-patient departments of the big general hospitals in London was well known, and all were agreed

that reform was necessary. One class of patients included in the crowds flocking to the large general hospitals for gratuitous out-patient treatment consisted of those who could afford to pay for private treatment outside; another class consisted of those who belonged to clubs or provident dispensaries; another was made up of those who could, but would not, belong to clubs and dispensaries, and there was another class of patients who ought to be treated by the Poor-law authorities. The large general hospitals, by allowing abuse of their out-patient departments, were pauperizing the people and encouraging thriftlessness, while at the same time misusing the money entrusted to their care by the charitable public. Those in charge of the Bolingbroke Hospital recognized fully that their duty towards the patients was to see that they received proper treatment, but it was also appreciated that the funds of the charitable public must not be wasted by hospital abuse, and that to ensure this the work and influence of the medical practitioners in the neighbourhood must be recognized. An effort had therefore to be made to break away from the traditions of the old hospitals. Suggestions were accordingly invited and received from the South-West London Medical Society and from the Wandsworth Division of the British Medical Association, and, after conferences between the hospital authorities and the medical profession in the neighbourhood, the scheme of consultative out-patients was inaugurated. Emergency cases of course received treatment at the hospital, but, if fit to return home, were informed that it was impossible for them to be treated a second time at the hospital unless they brought with them a letter from their medical practitioner stating that they were fit and proper persons to receive hospital relief. By means of the consultative out-patients scheme the Bolingbroke Hospital avoided competition with the general practitioner. Out-patients of the ordinary kind received no treatment at the hospital, but any patient sent to the hospital with a letter from a general practitioner was seen in the consultation department, and the doctor sending the patient was informed of the opinion come to on the case by the consultant at the hospital, and any suggestions in regard to treatment were communicated to him. The endeavour of the Board of the Bolingbroke Hospital and of the medical staff had been to work in harmony with the medical profession in the neighbourhood, and they had found the local doctors of enormous value and assistance in stamping out hospital abuse and the waste of money subscribed by the charitable public. The assistance of local medical men in this direction was of far more use in checking abuse than the plan of distributing subscribers' letters or of the appointment of an inquiry officer. By utilizing the willing co-operation of the medical profession in this way the Bolingbroke Hospital had found that it had reliable agents, as it were, watching over the interests of the hospital in all the districts round; and, further, these agents were of all men the best fitted for the difficult task of choosing fit persons for hospital relief. It was especially gratifying to be able to report that the Wandsworth Division of the British Medical Association, in a circular recently issued, stated that the medical staff of that hospital was most desirous of doing all it could to lessen any opportunity for abuse, and the Executive Committee of the Wandsworth Division expressed its appreciation of the courtesy of the medical staff, and suggested that the method of friendly conferences should always be the first step taken in order to gain a complete professional understanding in any instance of hospital abuse. The system of consultative out-patients was worthy of being studied by the large general London hospitals.

MUSIC AND MOSQUITOS.

WITH reference to an article on the therapeutic uses of music which appeared in the BRITISH MEDICAL JOURNAL of March 14th, we have received an interesting communication from Dr. John Dixwell of Boston, Massachusetts, who says that precisely the line of study and experiment advocated by us has been pursued there for some twelve years past. He sends us a report of the Hospital Music Fund for 1906 and 1907, in which he says that "the movement to give to the sick and "unfortunate suitable music by suitably trained pro-"fessionals is no longer an experiment." He points out that "it is a way to help on the relief of suffering, "without risk of doing harm at the same time by lack "of knowledge, and is capable of very large develop-"ment." Among the subscribers to the fund we note the names of several physicians, such as Dr. William Appleton, Dr. Henry I. Bowditch, Dr. John Bryant of Harvard — whose death we regret to see announced in the most recent issues of the American journals which have come to hand— Dr. R. M. Lawrence, Dr. Frank P. Sprague, Dr. W. S. Bigelow, and Dr. J. C. Warren. In the list, too, are such well-known names as those of Professor Charles E. Norton, Miss Longfellow, and Mr. Percival Lowell. We cordially wish success to Dr. Dixwell and his co-operators in the good work, and should be glad to see a similar organization established here in the room of the Saint Cecilia Guild, which unhappily died ere its prime and has not left its peer. We need not dwell further on the effects of music in certain kinds of disease. There can be no doubt that the concord of sweet sounds exercises a soothing influence in suitable cases. But it is easy to make the thing ridiculous. The oddest application of music to any purpose that could be called therapeutic is as a call to mosquitos to come and be killed. We need hardly say the discoverer of this method is an American. He says that there is a certain musical note which, when sounded with a great degree of intensity, causes the immediate precipitation of every mosquito within hearing distance towards the source of the musical note, and at the same time causes in the mosquitos brought close to the source of the music a complete temporary paralysis. By sounding the note in proximity to a wire screen charged with electricity, the mosquitos are induced to precipitate themselves against the wire screen, upon which they are immediately "electro-"cuted." The apparatus proposed by the author for this pleasing death consists of a tuning-fork of the proper pitch operated electrically. All that is required when one hears the hum of the mosquito, on business bent, is to touch a button, when the fork gives off an answering hum of the correct pitch, and every mosquito within hearing distance will immediately precipitate himself—or, which is more important, herself—upon the electrically-charged screen, and be promptly and neatly electrocuted. The idea of making the mosquito die to slow music offers a solution of the problem of dealing with malaria which we fear is scarcely likely to be adopted by the practical workers who are striving to rid the world of that destructive scourge.

TROPICAL MEDICINE IN THE FAR EAST.

THE existence among medical men practising in hot countries of a desire for opportunities for conference and co-operation has been evidenced in many various ways since the great awakening of interest in the study of tropical medicine and hygiene. One piece of evidence was afforded by the formation of a Section of Tropical Diseases at the Annual Meeting of the British Medical Association, which has been carried on with so much energy and enthusiasm for a good many years. Another is the formation of a Society of Tropical

Medicine, which is now a section of the Royal Society of Medicine. Quite recently we had in the international conferences on sleeping sickness proof that the need for international co-operation, both for inquiry and administration, was enforced upon the attention of statesmen by the medical and pathological investigations carried on in various tropical and subtropical countries. Another interesting piece of evidence is afforded by the announcement made in another column that a Far-Eastern Association of Tropical Medicine has been founded, embracing representatives of Japan, China, the Philippines and the United States navy and army, Siam, Annam, Hong Kong, the Federated Malay States, and Ceylon. Dr. Francis Clark, medical officer of health, Hong Kong, was elected the first general secretary-treasurer, and it was arranged to hold a conference in Manila early in 1910, Dr. Paul C. Freer, director of the bureau of science in the Philippine Islands, being elected the first president. Judging from the provisional programme of this conference, it appears that the main object of the promoters of the association is the extension of knowledge by interchange of observations, and we have no doubt that much useful work will be done; but for the full success of the movement the support of the Governments of the various countries concerned will be necessary.

HOME OFFICE COMMITTEE ON INEBRIATE LEGISLATION.

The Departmental Committee promised by the Home Secretary a few months ago has now been appointed. The instruction is to inquire into the operation of the law relating to inebriates and to their detention in reformatories and retreats and to report what amendments in the law and its administration are desirable. The Commissioners are Sir John Dickson-Poynder, Bart., M.P., chairman; Mr. W. Ryland Adkins, M.P., who has a large experience in county council administration; Mr. T. A. Bramsdon, M.P., coroner for Portsmouth; Dr. R. W. Branthwaite, H.M. inspector of inebriate reformatories; Mr. W. C. Bridgeman, M.P.; Dr. H. E. Bruce-Porter; Dr. H. B. Donkin, H.M. commissioner of prisons; Dr. C. A. Mercier, physician for mental diseases to Charing Cross Hospital; and Mr. J. Rose, metropolitan police magistrate. This inquiry, it is pointed out, involves questions of urgency, and it is hoped that the committee may be able to report within a few months. It will then be reappointed with certain changes, to investigate the value of existing methods for the treatment of inebriety by the use of drugs. Correspondence may be addressed to the secretary, Mr. J. F. Henderson, at the Home Office.

THE LINACRE LECTURESHIP AT CAMBRIDGE.

The lectureship on physic founded at St. John's College, Cambridge, by Thomas Linacre in 1525 has hitherto been held by a single incumbent for a term of years. It is now converted into an annual office, and every year some person of eminence will be asked to deliver one public lecture in the Easter term. This ancient lectureship has been held in the past by many distinguished men; among them were William Barondale, Thomas Gisborne, and Sir Thomas Watson, all Presidents of the Royal College of Physicians of London, and by Sir Isaac Pennington, John Haviland, and Sir George Paget, who were Regius professors of physic in the university. William Heberden was also a Linacre lecturer, so were Henry Paman and Henry Briggs, who were also Gresham professors. The last named was the inventor of the decimal system of logarithms, and was not a medical man. Perhaps the most distinguished members of the laity who have held the lectureship were Matthew Prior, the poet and diplomatist, and Edward Stillingfleet, Bishop of Worcester. From 1894 until his appointment to be Principal of Glasgow University the other day, the lectureship was held by Dr. Donald MacAlister. The first lecture under the new scheme will be given on Wednesday next, May 6th, by Dr. Osler, Regius Professor of Medicine in the University of Oxford, who has taken for his subject Thomas Linacre, his life and work. The lecture will be delivered at 5 p.m. in the lecture room of anatomy and physiology at the New Museums.

A MEDICAL HERO

In his *Story of the Guides*, Colonel G. J. Younghusband C.B., writes that in many a hard fight the brave and devoted officers who have been surgeons to the corps have displayed the greatest gallantry, but he singles out one of these as especially worth recording. In the expedition of 1853 against the Jowaki Afridis, thirty men of the Guides under Lieutenant Turner had driven a superior force of the enemy into a stone breastwork at the top of a peak; but night came on, and the order to retire was given. Retirement meant practical annihilation for the little force, so, sticking to the rocks, Turner had the bugle sounded for reinforcements. Hodson, afterwards famous, who was near, but himself faced by great odds, sent all the men he could spare, but these were not strong enough to effect their purpose. "Then it was that Dr. R. Lyell, "Surgeon of the Guides, took on himself to carry "forward the much-needed succour. In reserve lying "near him was the Gurkha company of the Guides, and "also a company of the 66th Gurkhas under a native "officer. Taking these troops with great dash and "personal gallantry, he led them to the attack, drove "back the already exulting enemy, stormed their "position, and extricated Turner and his party from "their perilous position. It was a noble deed," says Colonel Younghusband, "nobly and gallantly carried "out, and when it had been achieved the brave fighter "returned to the tender care of the wounded and to "alleviate the pains of the dying."

A NURSING MOTHERS' AID SOCIETY.

In his annual report upon the health of Blackburn the medical officer of health, Dr. Alfred Greenwood, gives an account of a society which has been formed in the borough to encourage breast-feeding among poor mothers. A five-roomed house was taken in a poor neighbourhood, and a woman who was competent to do plain cooking and who understood the management of children was engaged as caretaker. The restaurant was opened on March 21st, 1907, and mothers, or expectant mothers, drawn from the poorer sections of the working classes, were invited to attend, and were offered, free, a good, plain, well-cooked dinner each day except Sunday. The period during which the dinners were given to individual women varied from about one month before the birth of the baby to the end of two months after birth. The number of meals was then reduced, in some cases to three days per week and in others to two days per week, while a month or six weeks later only one dinner per week was given. During the lying-in period the meals were sent to the houses. The meals were varied. Some days there was roast beef, potatoes, and milk pudding; on others, fish, potatoes, and milk pudding, or stewed meat, potatoes, and milk pudding. One of the conditions imposed upon mothers receiving meals was that they should bring the baby once a week on what was called "weighing day" to be weighed and also to be examined by a medical man. A record was kept for each baby. At the end of 1907 the number of babies weighed each week averaged twenty-five. The total cost, including rent, wages, coal, gas and food,

averaged £10 a month. Where the mothers attending the restaurant could afford to pay they were charged one penny a meal and in this way £4 was received.

MEDICAL MOTORISTS.

THE Motor Union has appointed from among its members a committee of medical motorists to watch over the interests of the general body of medical men using motor cars, and to advise the Motor Union on matters in which the interests of medical men as motorists are particularly concerned. The committee is constituted as follows: Mr. C. B. Lockwood, F.R.C.S., Chairman; Dr. J. Lewis Lock (Uxbridge), Vice-Chairman; Mr. W. Watson Cheyne, C.B., London; Dr. C. Barker, Watford; Dr. Lovell Drage, Hatfield; Dr. E. L. Rowe, Ipswich; Dr. Moss-Blundell, Thornton Heath; Dr. Russell Matthews, Peckham; Mr. J. R. Benson, F.R.C.S., Bath; Dr. W. G. Gilpin, Bourne; Dr. W. F. Burgess, Streatham; Mr. L. A. Bidwell, F.R.C.S., London; Dr. E. W. Marshall, Mitcham; Mr. W. E. C. Musson, F.R.C.S., Hammersmith; Dr. J. Hopkins Walters, Reading; Dr. P. P. Whitcombe, London; Dr. C. Buttar, London; Dr. H. Myddelton-Gavey, Eastbourne; Dr. O. R. M. Wood, Woolpit; Dr. Holroyd, Pannal; Dr. A. T. Falwasser, Maidstone; Dr. Travers, Maidstone; Dr. G. Horatio Jones, Deddington; Dr. A. Lindow, Plumstead; Dr. Priestley Leech, Halifax; Dr. D. J. Mason, Maidenhead; and Dr. A. Page-Robertson, Glasgow. At the first meeting of the committee the question of the position of doctors in reference to the proposed taxation of motor cars was considered, and it was resolved to send a letter to the Chancellor of the Exchequer expressing the opinion that "any additional "taxation upon motor cars would not be equitable, and "would press with special severity upon medical men "who use motor vehicles to enable them to carry out "their professional duties." The new charges of the Metropolitan Water Board for water for washing cars were considered, and it was resolved that the proposed charge of 20s. per car per annum was excessive and unfair as compared with the rate for water for horse carriages, and it was resolved to approach the Board upon the matter.

MARRIAGES OF COUSINS.

MEDICAL men are often asked their opinion as to the advisability of permitting marriages between cousins, and most of us feel a good deal of hesitation in answering. Every one knows cases in which no harm seems to have resulted, but most of us have seen instances in which the offspring have been in some respect abnormal. But nothing very definite is known, and the statistical evidence is altogether insufficient. We would therefore invite readers to make ready response to the appeal for information made by Professor Karl Pearson in his letter published in another column. The questions are simple and easily answered, but the analysis which he intends to make ought to yield results of the very greatest value to the medical profession. The case of every family will be of value, whether there have been cousin marriages or not—in fact, the risk will be that the families in which there have been such marriages will be more readily recorded than those in which there have not.

THE next session of the General Medical Council will begin on Tuesday, May 26th.

THE Emperor of Germany, in connexion with his recent visit to England, has conferred the order of the Crown, second class, upon Sir Felix Semon.

THE West Ham Borough Council lately decided to confer the freedom of the borough on Lord Lister, who was born at Upton House, Forest Gate, now St. Peter's Vicarage.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Course of Business.—The House of Commons reassembled on Monday after the recess, during which the Ministry has been reconstituted, and, after discharging some private formal business, adjourned, on the motion of Mr. Asquith, seconded by Mr. Akers-Douglas, as a mark of respect to the memory of Sir Henry Campbell-Bannerman. On Tuesday practically the whole of the sitting was occupied in discussing the second reading of the Licensing Bill.

Women and the Workmen's Compensation Act.—Mr. Stanger asked the Home Secretary whether he could give any estimate of the number of female workpeople, including domestic servants, who, in the United Kingdom, came under the provisions of the Workmen's Compensation Act, 1906; and whether he had placed or was intending to place any duly qualified female medical practitioners on the list of persons to act as medical referees or medical assessors under that Act, so that female workpeople, making claims under the Act, might, where the county court judge allowed it, have the services of a female medical practitioner. Mr. Gladstone said it was estimated that the number of female employees who came under the Act was approximately three millions. The question of appointing women doctors to act as medical referees in cases where women were concerned was one of much administrative difficulty. It had been carefully considered, but he had not seen his way to make any such appointments at present. There were only two references to medical referees in women's cases during the year 1907. He should always be ready to consider an application by a county court judge for the *ad hoc* appointment of a woman doctor to act as referee in a particular case where the circumstances were exceptional.

Sanitation of Small Houses.—Mr. Horniman asked the President of the Local Government Board whether his attention had been called to the fact that many houses built for the occupation of one family only were constantly let in tenements without any provision being made for proper sanitary accommodation for the same, or an adequate water supply; whether he was aware that in many cases the only sanitary accommodation for four or more families was situated on the ground floor, sometimes in the back yard, and water could only be procured from one tap in the basement or on the ground floor; and whether he proposed to take any action by legislation or otherwise to deal with this state of things. Mr. John Burns said he was aware that as regards houses originally built for the occupation of one family, but subsequently let in tenements, evils of the kind mentioned were apt to arise. The existing Law conferred on local authorities considerable powers for dealing with such cases, as, for example, outside London the power of making by-laws under Section 90 of the Public Health Act, 1875, as to houses let in lodgings or occupied by members of more than one family, and in London the power given by Section 37 of the Public Health (London) Act, 1891, as to sanitary accommodation, and the provision in Section 78 of the London County Council (General Powers) Act, 1907, as to the supply of water to tenement houses. He would, however, cause the suggestion for further legislation on the subject to be noted.

Practice by Companies.—The second reading of the Prohibition of Medical Practice by Companies Bill, which was down for Tuesday, was deferred till Wednesday, May 13th.

New Bills.—Lord Robert Cecil introduced on Tuesday the New Born (Protection) Bill, to provide for the better protection of the lives of newborn children. The Bill is supported by Mr. Shackleton, Mr. Simon, and Mr. Chiozza Money. Mr. Barnes presented the Home Work Bill, to provide for the better regulation of home industries; this measure has the support of Mr. Keir Hardie, Mr. Wilkie, Mr. Cameron Corbett, Mr. Cleland, Mr. Rainy, Mr. Charles Duncan, Mr. Summerbell, Mr. Parker, Mr. Jowett, Mr. Seddon, and Mr. Younger.

Ireland.

[From our Special Correspondents.]

The New Irish Universities.

The charters which are to be issued to the New University in Dublin and the Belfast University have been published.

Dublin.

That for the University in Dublin provides that the first Chancellor shall be elected by the senate at its first meeting, and if not a member of the senate shall be nominated by the King as an additional member thereof. Any succeeding Chancellor shall be elected by convocation. A Vice-Chancellor is provided for. He shall be elected by the senate from amongst the members of the senate, and shall hold office for a period not exceeding five years. Convocation will have power to discuss and pronounce an opinion on any matter whatsoever relating to the university, including any matters referred to them by the senate, and it will elect five members to sit on the senate.

The university may accept the examinations and periods of study passed by students of the university at other universities or places of learning as equivalent to such examinations and periods of study in the university as the university may determine. But in no case shall the university confer a degree in medicine, surgery, or midwifery upon any person who has not attended in the university or in a constituted college for at least three years the course of study recognized for the degree of the university.

Some changes have been made in the Senate List published in the last number of the British Medical Journal. The names of the Right Honourable Lord Justice Barton, S. H. Butcher, M.P.; the Most Rev. Dr. Healey, Dr. P. T. O'Sullivan, Dr. C. T. Y. Pearson, and the Most Rev. Dr. Walsh are to be added.

Belfast.

In the case of the Belfast University it is announced that the first Chancellor will be the Right Hon. the Earl of Shaftesbury, K.C.V.O. This charter provides that his successors shall be elected by convocation. Of three pro Chancellors two will be Sir Donald Currie, G.C.M.G., LL.D., and Sir Robert Hart, Bart. The third is not yet appointed. The first President of the University shall, by virtue of his office, be Vice-Chancellor and principal academic officer of the University, and the first President of the University is the Rev. Thomas Hamilton, M.A., LL.D., now President of Queen's College, Belfast. The names of Sir Hiram Shaw Wilkinson, Dr. Joseph Larmor, Secretary Royal Society; Lord Dunleath, Dr. Robert Kyle Knox, and Mr. Cecil Reginald Crymble are to be added to the list of the members of the senate published last week.

Claims of Munster.

On Saturday, April 25th, in the City Hall, a public meeting of the people of Munster, convened at the request of the Munster University Committee by the Lord Mayor of Cork and the chairman of the Cork County Council was held for the purpose of expressing the satisfaction of the public in the South of Ireland at the prospect of the settlement of the Irish University question, and at the same time of placing before Parliament the strongly felt desire of Munster for a separate university, and the necessity of providing further sources for University Education in that province than those contained in the Irish Universities Bill. The attendance was large and representative, and speeches were delivered by Mr. Wm. O'Brien, M.P., Dr. Windle, President of Queen's College, Mr. Thomas O'Donnell, M.P., Alderman H. Dale, Sir George Colthurst, Mr. W. McDonald, and others. The Earl of Bandon, K.P., occupied the chair, and was supported upon the platform by the Lord Mayor and representatives of all classes, professional, clerical, official, and lay.

Mr. William O'Brien, M.P., who was enthusiastically received, proposed the following resolution:

> That this meeting, whilst welcoming the prospect of a settlement of the Irish university question, and thanking Mr. Birrell for the spirit and courage which he has shown in this matter, expresses its deep regret and disappointment that it has not been thought fit to provide Cork with that separate university which has been so often and so long asked for, and demands that nothing shall be included in the present Bill which will prevent, or even place obstacles in the way of, an early attainment of the only settlement which can be regarded as final by the people of the south of Ireland.

He said that the refusal to Cork of an independent university, which had been almost thrust upon Belfast, was a grievance and a wrong which would justify the people of Munster in almost any form of protest. He declared further that a free university alone could be accepted by them as the final settlement of the question of university education. Before any one had a right to ask Munster to consent to the present measure it must be made perfectly clear that it would place no obstacle in the way of the speedy accomplishment of the idea of a separate university for Munster. While expressing his views thus clearly, Mr. O'Brien added he was not going to do anything to place the present measure in jeopardy. He believed if the people of Munster had been more active in their own interest during the year they would have had an independent university as well as Belfast. Taking the Bill as it was, there were certain blots which could not be defended, and at any cost would have to be amended. The £10 000 a year which the Treasury nominally conferred on the Cork College was in reality all but half swallowed up by the Treasury trick of throwing upon the college funds the burden of repairs and of the college pension list. The full amount allocated to the Cork College must be honestly given, as well as a more substantial allowance for building purposes.

The resolution was seconded by Alderman Dale and supported by Dr. Windle, who said that the Bill was a great step forward. Ireland was much too poor and much too hungry to refuse the half or even the quarter loaf. This measure gave the province of Munster several important things; first, a governing body in touch with the district on which both the Bishops of Cork had accepted positions on that governing body; secondly, examinations for Cork students with the supervision of extern examiners would be held in Cork and by Cork teachers; thirdly, the college would have some measure of control over its own courses of instruction. On the other hand, the college would be part of a federal university; it would necessarily be a good deal tied perhaps even more than it need be, but there was only one cure for their difficulties and he spoke as one having considerable experience in collegiate matters, and that cure was an independent university.

Mr. Wm. McDonald, Chairman, Cork County Council, said that in the regrettable absence of Professor Butcher he had been called upon to propose:

> That this meeting desires to call the attention of the Government to the fact that the sums suggested in the schedule of the Bill at present before Parliament for new buildings and for maintenance for the Cork College are utterly insufficient to provide for any of those developments which are so desirable in the interests of higher education in the south, and expresses the earnest hope that substantial additions may be made to the sums in question.

Mr. Thomas O'Donnell, M.P. for County Kerry, seconded the resolution, and in doing so said he represented all thoughtful men in that county of Kerry.

Mr. Leader, County High Sheriff, proposed:

> That the Bill before Parliament which contemplates the setting up of a Federal University, of which the Queen's College, Cork, is to be one member, cannot be accepted by the people of Munster as even a temporary settlement of the question unless the local college has complete autonomy, an effective voice in the appointment of its future teachers and the management of its own finances, and is given an adequate representation on the senate of the new university and on the body of commissioners who are to draw up statutes for that university and for its constituent colleges.

Mr. D. J. Daly, representing the Chamber of Commerce and Shipping, seconded; and, after a vote of thanks had been passed to Lord Bandon, the proceedings terminated.

The Royal University: Graduates' Protest.

The council of the Royal University Graduates' Association has drawn up a memorial in the course of which it is contended that the demand for denominational university education is repugnant to the spirit of modern

legislation, and that in the special conditions prevailing in Ireland the separation of university students into three sectarian camps would be an incalculable evil. Such a scheme is anti-education and unpatriotic. It is obvious that the effect of the prohibition of tests is destroyed by the sectarian constitution of the governing bodies which have the appointment of the professors and the university officers and the regulation of the courses of study. The prohibition of tests is illusory. The governing body of the new University in Dublin will assuredly develop into ecclesiastical control. The council considers that a reconstituted Royal University is the statesmanlike remedy.

THE BELFAST HEALTH COMMISSION.

The report of the Belfast Health Commission, appointed by the Local Government Board of Ireland in February, 1907, has at last been published, and a few copies have reached Belfast. It will be remembered that about fifteen years ago the Town Council appointed a special committee of its own to investigate matters connected with the health of the town, and this body made a report condemning in very severe terms the state of affairs. Subsequently, from time to time, articles and letters appeared in the local press and in medical journals on the same subject, drawing attention to alleged defects in the Health Department, and to the backward state of public sanitation.

In June, 1906, a public meeting was held to draw attention to these matters generally. A Citizens' Health Committee was formed, and on the resignation of the then Medical Superintendent of Health deputations to the Public Health Committee and to the City Council were sent by two public bodies, as well as by the Ulster Medical Society, to urge the necessity of offering a suitable salary for the post of Medical Officer of Health, of making certain changes in the administration of the Health Department, and of expediting certain pressing sanitary reforms. The Local Government Board likewise urged the necessity of such a salary as would attract highly qualified and experienced candidates. A public meeting was also held, and opinion was fairly outspoken. A majority of the council, however, again appointed one who had been a short time before a member of their own body, who possessed the statutory qualifications required, but was without previous experience of public health administration except such as he had acquired as a member of the corporation. A large deputation went to the then Chief Secretary for Ireland and asked him to appoint an independent commission to investigate the health of the city, and this request was acceded to.

The Commission.

The Commission appointed consisted of Colonel Harding, formerly Lord Mayor of Leeds (Chairman), Dr. Chalmers, Medical Officer of Health of Glasgow; Dr. Mair, Medical Inspector of the Local Government Board in England; Mr. Cowan, Chief Engineering Inspector, and Surgeon-Colonel Flinn, Medical Inspector of the Local Government Board of Ireland. The Commissioners began their sittings on February 27th, 1907, and terminated them them on July 24th, 1907. The public sittings occupied thirty-two days, and ninety-three witnesses were examined, innumerable visits (surprise and otherwise) were made, and consultations with the heads of departments and inspectors (local and Govermental) were held. The investigation was most thorough and impartial; and although no doubt individuals will abide by their own opinions, there can be no doubt of the immense value of such a report, and of the light it will throw on doubtful places. It will serve as a lever by which the reformers may force the changes that are so urgently needed.

The Report.

The report contains over 150 pages, many tables, charts, diagrams, and maps; there is an addendum by Dr. Mair on the typhoid fever and simple continued fever, and an appendix contains the reports of Drs. Houston and Gordon on the water supply.

Population and Death-rate

The estimate of the population of Belfast adopted by the Commission is 380,000, which is higher than that of the Registrar-General of Ireland, but lower than that arrived at by the method followed by the Registrar-Generals of England and Scotland. The Commission thinks a uniform plan of calculation should be adopted by all three Registrar-Generals. On this basis the Commission reports that although the death-rate from all causes in Belfast is by no means low, the allegation that it is, or has been in recent years, excessive, cannot be maintained; it is about the same as Manchester, a little lower than Dublin or Liverpool, but not so low as in other large cities of the United Kingdom. The death rate from infantile mortality is not unfavourable, but that among other young age groups appears to be excessive; the reasons for this should be investigated.

Enteric Fever.

The mean annual mortality from enteric fever has been so exceptional in Belfast for the last twenty-five years that it appears to have no parallel in any other city or large town in the United Kingdom. Neither local insanitary conditions, nor water supply, nor occasional outbursts from contaminated milk will account for it; on the other hand, the known features of the history of the fever in Belfast are consistent with an explanation attributing it to the influence, direct and indirect, of shellfish gathered from the grossly contaminated foreshores of Belfast Lough.

Tuberculosis.

Mortality from phthisis and other tuberculous diseases has been and is excessive in comparison with English and Scottish cities, but it has not been exceptional for an Irish city. The whole question of phthisis in Ireland seems to require fuller inquiry. The Commissioners do not make any recommendations with regard to notifications, sanatoriums, and dispensaries for consumptives, as the Local Government Board have advised local bodies recently, and a Bill on these subjects is about to be introduced.

Water Supply.

The Woodburn and Stoneyford catchment areas have recently been greatly improved, but there still remains sources of pollution which make it imperative that the supply from them should receive long storage and most careful filtration, and it is regretted that the advice as regards filtration contained in the reports of Professor Franklin was not more fully attended to. The early development of the Mourne supply should be the main feature of future policy. Although the Water Commissioners have done excellent work, the Commission expresses the opinion that the water supply should be in the hands of the corporation, because the water supply is a matter of public health, the corporation have wider financial sources, and the multiplicity of elections leads to reduced interest in them.

Main Drainage and Sewage Disposal.

Certain purely local recommendations as regards relief after heavy rainfall to prevent flooding, and to ensure proper ventilation of sewers, are made, and it is recommended that the present work of sewage disposal should be carried on more expeditiously, and some advances made. The necessary works will be very expensive.

Sanitary Administration.

The Commission advises that the Public Health Committee should have control of all departments closely concerned with public health. The existing organization of a superintendent medical officer of health and fourteen district medical officers of health—that is to say, fourteen dispensary medical officers and registrars—has not, it is stated, worked satisfactorily. The public health administration should be reorganized so as to bring it into line with that which obtains in the cities of England and Scotland; a special medical staff should be appointed for public health work, independent of those whose first duty must be to tend the sick. The whole responsibility of the administration would thus be placed on the medical officer of health. A bacteriologist of experience should be added to the staff, and the veterinarian surgeon should be placed under the medical officer of health. The number of sanitary subofficers should be increased. There should be systematic interchange of information as to infectious disease with school managers. The hospital accommodation for infectious disease provided by the corporation is stated to be inadequate, and it is recommended that the guardians should be relieved of all responsibility in respect of these diseases. Cases of simple continued fever should be examined to ascertain whether they have relationship

to enteric fever. Efficient steam disinfectant apparatus in a properly equipped station should be provided, and the methods of disinfecting of houses should be reorganized All ashpits should be done away with and dustbins substituted. Additional destructors should be provided. The local Acts should be codified, the revision of the building by-laws pressed forward, and certain congested areas dealt with as insanitary areas and cleared.

Milk and Meat Supply.

The regulations in force under the Dairies, Cowsheds, and Milkshops Order should be more stringently administered. The staff for this purpose is inadequate. More careful supervision should be exercised in future as to the class of shops or premises from which milk is retailed. Fresh legislation is urgently needed with a view to prevent the distribution of milk capable of causing disease in man. Steps should be taken without delay to provide a more modern and commodious abattoir. The existing private slaughter-houses should be closed.

Schools.

The Commissioners are of opinion that no effective progress will be made until the ratepayers are called upon to take their share of the burden of education; but they advise the corporation meanwhile to enforce rigorously the powers it has, and to require that its own regulations shall be observed in all plans for new schools.

Conditions of Employment.

The special incidence of phthisis mortality amongst women at the ages 25–45 suggests the possible influence of occupation; but, on the other hand, Belfast's record as regards phthisis mortality at all ages and for both sexes is not exceptional for Ireland, and, indeed, shows signs of improvement, which that for Ireland as a whole does not.

Post-Graduate Classes at Trinity College, Dublin.

Trinity College four years ago organized post-graduate classes open to all qualified medical men. In former years the classes have been held only in the summer, but the syllabus for 1908 announces that it has been decided to hold a summer and an autumn course this year. Each course will occupy three weeks, the first begins on June 8th and terminates on June 27th, while the autumn course begins on September 21st and ends on October 10th. The classes will be conducted on those lines which have been found successful and satisfactory in the past. Instruction will be given in medicine, surgery, gynaecology, diseases of skin, eye, ear, throat, nose, and also in pathology, physiology, anatomy, cystoscopy, and *x*-ray work. With the permission of the Provost arrangements have been made by which a limited number of members of the class can reside in college and dine on commons at a moderate cost (£1 1s. a week); the composite fee for each course is £5 5s. a week. A reference to our advertising columns in a recent issue (April 18th) will give additional information respecting these classes, and a detailed syllabus can be had on application to the honorary secretary, Dr. Parsons, 27, Lower Fitzwilliam Street, Dublin.

Scotland.

[From our Special Correspondents.]

Treatment of Incipient Mental Diseases.

In his introductory lecture delivered in University College, Dundee, Dr. Rorie, Lecturer on Mental Diseases in the University of St. Andrews, referred to the proposed treatment of "incipient cases." He said at present the only means available for the clinical study of insanity were the wards of lunatic asylums, and in this respect they were at a considerable disadvantage compared with the Continental and other universities, because in British asylums the patients were either chronic cases—some of many years' standing—or cases where, owing to legislative requirements, the disorder had to be so far advanced as to be certifiable. The individual must be not only mentally affected, but had to be also dangerous to himself or the community. But they would no doubt have seen that a very important change might ere long be looked for in connexion with this matter. Indeed, the Scottish Local Government Board had already taken action in proposing the opening of wards in parochial hospitals, where patients mentally threatened might be brought under treatment in the initial stages of their illness and before it was necessary to have recourse to the Lunacy Boards or Sheriffs for warrants of lunacy. This in many cases would avoid the stigma which undoubtedly attached not only to the individual but to the whole family circle when a person had to be confined in a lunatic asylum under present legal arrangements, but also afford in these hospitals valuable opportunities for the clinical study of nervous and mental affections as they were met with in general practice. This view of the subject had had the serious consideration in Dundee of the directors of the Royal Asylum. This institution, which from the year 1820 to 1903 served as the public lunatic asylum for Dundee and the southern portion of Forfarshire, and in its earlier days for Fifeshire and part of Perthshire as well, being one of the seven chartered asylums—the only public asylums then available for the treatment of the insane in Scotland—was in 1903 sold to the Dundee District Lunacy Board. The directors of the Royal Asylum, fully impressed with the importance of early treatment, had since been endeavouring to get their charter so amended that, in addition to the private insane, they might also be enabled to devote part of the funds realized, and now amounting to over £58,000, to the treatment of what might be best described as functional nervous disorders which, if neglected in the earlier stages, might readily pass into certifiable insanity. Their original ideas included the erection or provision of a special building for this purpose, as well as securing the use of wards in Dundee Royal Infirmary, with which the asylum was long incorporated under the first charter. From the account given of the recent quarterly meeting of the Directors of the asylum, it would seem, however, that, apparently through jealousy on the part of the General Board of Lunacy, the former part of the scheme might have to be in the meantime given up; but a sufficient amendment of the charter would no doubt be secured to provide for the treatment of these patients in the infirmary wards and in other public institutions, and thus not only supply a long-felt want, but also open a wide and valuable field for clinical study to the students.

Edinburgh Post-Graduate Course.

The Autumn Post-Graduate Course will extend this year from August 31st to September 26th. The general arrangements will be very similar to those of previous years. A new feature this year will be a special surgical course, which will include classes upon operative surgery, surgical anatomy, *x* rays applied to surgery, surgical pathology, and pathological methods. Attendance upon these classes will be confined to those who have entered for the surgical course, the fee for which will be ten guineas. The entries for the surgical course will be limited to twenty-five. So far as possible the same department of regional surgery will be treated of simultaneously in the various classes, while the subject-matter of the daily clinics and ward visits will be, whenever possible, arranged to correspond. Six hours' surgical instruction will be obtainable each day. The general course will include medical and surgical clinics, ward visits and operations, diseases of the eye, dermatology, neurology, fevers, applied anatomy, lectures upon dietetics, demonstrations on morbid anatomy, etc. The fee for the general course will be 5 guineas for the month, or 3 guineas for either the first or second fortnight. An extra fee of 1 guinea will be charged for each of the following classes—(*a*) bacteriology, (*b*) ophthalmoscopy, (*c*) diseases of the blood; (*d*) diseases of the ear, nose, and throat, which are open only to those who have entered for the general or surgical course. Each day throughout the course, at 5 p.m., a lecture open to all graduates attending will be delivered by one of the leading members of the school upon some subject of general medical or surgical interest. The Committee of Management of the University Union has kindly arranged to open the Union during September for the benefit of graduates. A monthly ticket of membership may be obtained on payment of a small fee. During the last fortnight of August a series of post-graduate classes will be held on methods of diagnosis. A syllabus containing

all information regarding the September course and the above-mentioned classes may be obtained on application to the Secretary, The Faculty Office, University New Buildings, Edinburgh.

Professor McKendrick and Professor Cleland.

In connexion with the recent commemoration ceremonies at Glasgow University two interesting presentations were made to the university. On the retirement of Professor McKendrick, after thirty years' service in the chair of Physiology, a movement was started about a year ago to perpetuate the memory of one so long associated with the university. The proposal met with cordial sympathy, and a large sum of money was collected. Part of this was used to obtain a portrait, which has been entrusted to the hands of Mr. J. H. Lorimer, R.S.A. There remained a considerable surplus, so that it was possible to devote a sum of £450 towards the equipment of the recently-instituted Laboratory of Experimental Psychology in the new Physiological Department. It was felt that this would be a very suitable form of perpetuating the very special interest which Dr. McKendrick had always taken in the special physiology of the sense organs. As a more personal gift, a beautiful silver salver with a suitable inscription was prepared for presentation to Dr. McKendrick. The presentation of the portrait was made by the Rev. Dr. John Smith.

On the same afternoon Principal Jule Mackay presented to the university a bronze medallion of the head of Professor Cleland, to be permanently preserved in the anatomical museum. He stated that the presentation was made on behalf of the seventeen men who had had the good fortune to have acted as assistants to Professor Cleland, and was a token of their gratitude and admiration for their master. Both presentations were gratefully accepted by Principal MacAlister.

The Royal Infirmary, Glasgow.

The ex-Secretary of the Royal Infirmary, Mr. Henry Lamond, who along with his partner, Mr. John Stewart Lang, were arrested on the charge of embezzling moneys belonging to the Royal Infirmary in connexion with a trust estate, pleaded guilty to the charge, and have been sentenced to five and four years' penal servitude respectively. Lamond was charged with embezzling £6,100, and Lang with embezzling £1,400. The former had acted as Secretary to the Royal Infirmary for forty-nine years, and the embezzlements had extended over a period of nearly sixteen years.

Death of Miss Rachel Frances Lumsden, of Aberdeen.

Aberdeen graduates in all parts of the world will hear with sympathy and much regret of the death of Miss Rachel Frances Lumsden, formerly Superintendent of the Aberdeen Royal Infirmary, which occurred on April 22nd at the residence of her sister in Aberdeen. Miss Lumsden, who was a daughter of the late Mr. Clements Lumsden, advocate in Aberdeen, was intimately related to several leading Aberdeenshire families, and, like many other ladies of gentle birth, had all her life been deeply interested in hospital administration, and the work she did for the Royal Infirmary and other institutions were beyond all praise. Her services were secured, as honorary superintendent, when the movement to establish a hospital for sick children in Aberdeen began, and in every detail in connexion with this matter her advice and assistance were invaluable. Her conspicuous success in this capacity attracted general notice and commendation, and at a serious and critical period in the history of the Royal Infirmary, Miss Lumsden agreed to undertake the office of superintendent. She refused to accept any payment, and her services were bestowed without fee or reward. She set herself resolutely to effect reforms, which her large experience in nursing and hospital management in London enabled her to organize and carry through successfully. After twelve years of strenuous effort and enthusiastic service she retired in 1897, leaving the hospital efficient in every way and a model of what a large infirmary should be. Soon after her retirement she was the recipient of a unique honour at the hands of the medical profession in Aberdeen in the form of an address couched in graceful terms recalling with gratitude the great work she had performed. The address was engrossed in a beautiful album, and the signatories, numbering 63, represented all the men in the medical profession connected with the University, the Infirmary, Sick Children's Hospital, and other public charities, and many of the private practitioners in the city. On the occasion of the presentation of the address Professor Ogston and Dr. Angus Fraser expressed the sentiment of the medical community in giving public testimony to Miss Lumsden's worth. In 1891 Miss Lumsden was appointed by the late Queen Victoria a member of the Council of the Scottish Board of the Queen Victoria Jubilee Institute of Nurses. She was also one of the first ladies to organize a Scottish Hospital on the English system of admitting probationers for a three years' training under the direction of Sisters. A gratifying testimony to Miss Lumsden's services was a message from the late Queen Victoria, which graciously stated that Her Majesty had learned "with interest and deep appreciation of the great and valued services" which Miss Lumsden had given "with untiring zeal and self-denial to the sick and suffering of the poorer classes of Aberdeen." Miss Lumsden was about 73 years of age, and had been in ill-health for some time.

The Braemar Medical Officership.

The Parish Council of Braemar, which recently discussed its medical officer in rather an arbitrary manner, is experiencing considerable difficulty in filling the vacant post. At a meeting of the council on April 21st, at which all the members were present, applications for the post of medical officer were examined, but no appointment was made. A subcommittee of three members was instructed to make inquiries with a view to getting a suitable man to apply, instead of continuing by advertisement. It is understood that the present medical officer's appointment expires on April 30th, according to the finding of a majority of the council. After that date it is probable that the parish will be without a fixed medical officer, and consequently will lose the medical relief grant.

England and Wales.

[From our Special Correspondents.]

MANCHESTER AND SALFORD.

The Hospital Conference.

Many, probably the majority, of the general practitioners of the Manchester district are dissatisfied with some of the resolutions of the United Kingdom Hospitals Conference. There is, in fact, a strong feeling that the British Medical Association is being used as a stalking horse to a certain extent by the conference, for though, of course, the opinions of the conference cannot be binding on the profession, yet the impression has gone abroad, in spite of protests to the contrary, that the Association is partly responsible for the findings of the conference. The resolution against which the greatest resentment is felt is that proposed by Mr. Sydney Holland "that where they can afford to do so, hospital patients ought to be asked to pay for the food, medicines, and bandages supplied." This is felt to be utterly contrary to the first of the suggested model principles, to which the conference agreed, "that inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment." So contrary are these two resolutions felt to be that the latter might just as well have been rescinded at once. It is being freely said that Mr. Holland's resolution is introducing a new principle into the profession, for if a hospital charges only for materials supplied, not for skill, why should a general practitioner do otherwise? Of course it is a very obvious quibble to lay all the stress on the word "treatment" in the first model rule and to say that when a patient pays 3d. for medicine he is paying only for the medicine, not for treatment. At any rate, nothing is more certain than the fact that when that rule was accepted by the Manchester Divisions, "treatment" was understood to cover everything, and if Manchester practitioners could have dreamt that any one could have been found so ingenious as to reconcile Mr. Holland's resolution with that first rule, the wording of the rule would certainly have been altered. The fact is, Manchester men are

smarting under the feeling that the conference was somewhat hustled into accepting the resolution; it will certainly not be allowed to pass as the sentiment of the British Medical Association without some vigorous protests from Manchester.

MEDICAL EXAMINATIONS OF WORKMEN.

Probably no one could have imagined how widespread would be the effects of the Workmen's Compensation Act. It has almost without doubt had something to do with two regulations recently issued in Lancashire. First, there is an order issued that in future the members of the Lancashire County Constabulary are required to be medically examined as to their fitness to remain in the force after twenty-five years' service. Secondly, there is the order issued by the Lancashire and Yorkshire Railway Company that all men earning 17s. a week who apply for an increase of wages shall be subjected to a medical examination. A meeting of railwaymen convened by the General Railway Workers' Union was held last Sunday in Manchester to protest against the latter order. The men freely state that the aim of the order is to get men earning 17s. a week refused by the doctor and replaced by raw recruits at 15s. How far this may be correct may be open to doubt, but it is certainly to be hoped that no such use will be made of an examination which, if properly used, would be valuable in the interests of the public safety.

WEST YORKSHIRE.

THE POSTMASTER-GENERAL IN BRADFORD.

THE Right Hon. Sydney Buxton paid a short visit to Bradford during the past week, and in the course of a speech to a large gathering of postal officials discussed some interesting health questions connected with his department. An endeavour was being made all over the country to put the post offices into the best possible sanitary condition and improve the ventilation, which had often been found to be defective. An inquiry was taking place into the condition known as "telegraphists' cramp," a disability which was affecting some of the operators. An attempt was being made to see how far the disease could be diminished, and where it did occur what openings could be found for those who unfortunately broke down under it. Amongst telephone operators on the large exchanges there had recently been a great deal of illness, and Mr. Buxton stated that he was going to ask one or two medical men to inquire into the whole matter; to ascertain to what extent illness prevailed; how far it could be prevented, and what steps could be taken to remedy such a state of affairs.

Hong Kong.

[FROM OUR SPECIAL CORRESPONDENT.]

PROPOSED UNIVERSITY.

THE Governor, Sir Frederick Lugard, convened a meeting on March 18th, to consider the possibility of establishing a university in Hong Kong. He announced that Mr. Mody, a Parsee, had placed £15,000 at his disposal for that purpose. The Governor was willing to recommend the Government to provide a site, and personally was anxious to see the project take shape. He believed that a university at Hong Kong would attract a large number of the wealthy Chinese students who now went to Japan, America, and Europe, and would increase the prestige and influence of Great Britain throughout the Chinese Empire. To provide an adequate endowment for even the modest beginning proposed, a sum of about £100,000 would be required.

UNDER the will of the late Mr. Stewart Clark, a director of the firm of J. and P. Coats, Ltd., thread manufacturers, the following institutions, all at Paisley, benefit to the amount against their names: The Royal Alexander Infirmary, £5,000; the Annie Clark Home for Incurables, £2,000; the Gleniffer Home for Incurables and the Royal Victoria Eye Infirmary, each £1,000; and the Deaf and Dumb Institution, £500. The will also directs that £2,000 shall be paid to the Annie Clark Fund for Incurables at Larne, and £1,000 to the Paisley Convalescent Home at West Kilbride.

CORRESPONDENCE.

THE PROPORTION OF COUSIN MARRIAGES IN THE GENERAL POPULATION.

SIR,—I have recently been dealing with the question of how far a certain abnormal condition is or is not associated with consanguinity in parents and grandparents, but I can find no really adequate statistics of the proportion of cousin marriages in the general population of this country. Over and over again one finds most valuable data as to number of consangineous marriages among the parents of sufferers from this or that disease; but these statistics are at present of small use, because we have no data with regard to the general prevalency of cousin marriage in England. I feel quite certain that many medical writers have already lamented this want. What is needed is a record of the amount of cousin marriage in a normal sample of the population of two or three thousand cases. This normal sample will then be available for comparison with selected groups.

The matter is of such vital importance that I venture to make the following suggestion to the readers of the BRITISH MEDICAL JOURNAL—namely, that they should on reading this letter fill in a postcard and send it to me at the Biometric Laboratory, University College, London, W.C., stating—

1. Whether their father's parents were or were not cousins, and, if so, whether they were first, second, or what cousins.
2. Whether their mother's parents were cousins, and in what degree.
3. Whether they and their wives (or husbands) were cousins.
4. Whether any of their brothers and sisters, who are married, have married cousins—and if so how many out of how many?

In this way each postcard will contain on an average perhaps 4 or 5 cases; and if the readers of this JOURNAL will only appreciate the importance of the question, a normal sample of the population, giving the percentage of cousin marriages, can be collected in a few days. In case it may be argued that the medical profession as a whole has a feeling against cousin marriage, it would be well to put the letter (M) against those marriages where one member is in the profession. Should this appeal meet with a ready response, I would ask the Editor of the BRITISH MEDICAL JOURNAL to allow me to insert in his columns the resulting numbers, in order to supply, if only roughly, a measure of the normal amount of cousin marriage in England.—I am, etc.,

KARL PEARSON.

University College, London, W.C., April 27th.

MEMORY.

SIR,—I do not usually concern myself with questions of priority of discovery or of publication, and if views that I believe to be correct are brought into prominence and made to prevail, my satisfaction in the establishment of what appears to me to be the truth is sufficient to make me indifferent as to who gets credit for its origination. When I have seen doctrines that I had enunciated many years before rediscovered, and brought forward as novel by their rediscoverers, I have been content to attribute to its proper cause my failure to get them accepted, that is to say, to my own incapability of displaying them so as to attract attention, or to carry conviction; and have let the matter pass. But the theory of memory that you ascribe, in your issue of April 25th, to Professor Ziehen, appears to be so identical with my own, published as recently as 1901, both in a lecture at the Royal Institution and in my book on *Psychology*, that it is not in human nature to ignore the similarity.

The difficulty that you find in accepting Professor Ziehen's views, which are mine also, is stated, in the publications named, to be due to the confusion, under the one title memory, of several distinct states and processes. The following quotation is proof of what I say:

Thus there are four different conditions to which the term Memory is applied. There is Structural memory, which is an alteration in the position of the particles in the tissue. There is Dynamical memory, which is an alteration among the stresses of the shifted particles. There is Active memory, which is the altered process that takes place in the altered tissue; and there is Conscious memory, which is the conscious accompaniment of active memories in certain regions of the nervous system. . . . The entire structure, not only of the

nervous system, but of the whole organism, may be regarded as a group of statical memories; nay more, it is obvious that the same is true of the whole material universe. Every modification of form, whether gross or molecular, in every material body, has arisen under the stress of incident motion, and may be regarded as a structural memory of that experience.

It is a great satisfaction to me that so high an authority as Professor Ziehen has arrived independently at conclusions which appear, from your account—I have not seen the original—to be practically the same as my own, though they appear to be less extensively elaborated. The German school of psychology is justly esteemed, both in this country and in America, but the high estimation in which it is held need not lead us to ignore the contributions to knowledge of our own countrymen. A country which has produced such psychologists as Hobbes, Locke, Berkeley, Hume, Reid, Butler, Dugald Stewart, Hartley, Hamilton, James Mill, John Stuart Mill, and Herbert Spencer—a list without parallel or approximation in the annals of any other country—need not wait for the sanction or approval of the philosophers of other countries before it allows merit or validity to the work of its own.—I am, etc.,

London, W., April 27th. CHAS. MERCIER.

FEES FOR INSURANCE REPORTS.

SIR,—I wish to draw attention to a practice carried out by some insurance companies in connexion with an endeavour to obtain medical certificates without paying any fee whatever to the medical man concerned. I have recently received a form of medical report from the London Guarantee and Accident Company, Limited, asking something like seventeen questions concerning a patient of mine who has suffered from a small accident to his thumb. The joint secretaries to this company inform me that they wish me to return the form with full particulars filled in at my early convenience, and that any fee for the report should be charged to the person injured. I wrote to the secretaries and informed them that my fee for filling up such a report was half a guinea, and that I should have pleasure in doing so on receipt of the money. To this they have replied, again referring me to the person insured for payment. I have pointed out that it is most inadvisable for a medical man to give a report to a company without the direct instructions of the person concerned, and also that it is the company who are asking for all the details required and not my patient. The secretaries apparently consider that seventeen questions do not form a "lengthy report" and they generously say "that there is no objection on our part to a doctor asking his patient's permission before sending a report." They also say that they "have every confidence in the fairness of the medical profession, otherwise they would not be prepared to accept the report of a claimant's own medical attendant as evidence of liability." But these gentlemen desire all this fairness and loss of time at somebody else's expense, not their own!

It is to be hoped that the medical profession all over the country will protest against this ungenerous method of treatment by some insurance companies. These companies know that no patient wishes to pay for a lengthy report for the gratification of its directors; but as they require it for their own purposes, they refer the doctor for payment to the insured, thinking in this way to get it done free of charge. The company gets its report, the insured obtains his money, and the medical man is only able to obtain a very small fee.

I trust the Divisions will take the matter up, and show the companies who insist on such methods that there will be unanimity in the medical profession in resisting their applications for certificates without payment.—I am, etc.,

Bradford, April 27th. JAMES METCALFE.

CENSURES AT INQUESTS.

SIR,—The following may show that a coroner's jury have no right to add a rider to their verdict, whether of censure or otherwise; and, if they do persist in adding one, I think the medical man would be justified in refusing to accept it. I quote the following from the report on an inquest held at Tottenham by Mr. Hodgkinson, coroner, in September, 1900:

The jury found that death was accidental, and they wished to add a rider.

Mr. Avery: Mr. Coroner, I object to any rider. . .

Mr. Windsor: I must protest against Mr. Avery dictating to the jury.

The Coroner: I am afraid if Mr. Avery objects, I cannot take any rider. The jury have only to find a verdict.

—I am, etc.,

Twickenham, April 26th. F. A. BALDWIN, Colonial Medical Service.

TUBERCULOSIS AMONG JEWS.

SIR,—A few facts may be added to your very exhaustive article upon this subject. When a resident at an East End hospital largely frequented by Hebrew patients, I was much struck with the few cases of typical pulmonary tuberculosis and with the many cases of symptoms of diaphragmatic pleurisy. As a chairman of managers of an East End group of schools, in which are many Hebrew scholars, two facts have impressed themselves upon me during school visitation: (1) The Hebrews are invariably provided with a good mid-morning lunch, which often consists of a meat sandwich and a banana; (2) if the weather is inclement, many Jewish mothers will be waiting with coats and umbrellas at the entrance to see that their children do not get wet as they return home.

Although their prevalent sin, owing to the virtue of large families, may be overcrowding, yet the Jews are not a stay-at-home people; they enjoy long spells of open-air life, whether by promenading or by sitting in front of their houses; nor do they preserve the fetish of a parlour which is sacred from use on week-days. Windows are more freely opened and kept open in Jewish than in many Gentile homes.

The Jewish Board of Guardians have two lady health visitors at work who pay special attention to any cases of consumption they meet.

"The gospel of fatness" is firmly believed by the Hebrews, as their diet continually evidences. They nourish well, therefore they flourish well; indeed, one of the Psalmist's ideals was to be "fat and flourishing."—I am, etc.,

London, E., April 26th. STANLEY B. ATKINSON, M.B., J.P., Vice-Chairman, Mile End Guardians.

P.S.—In discussing the alien invasion it must be remembered that many immigrants are ordinary Russian peasants whom persecution has persuaded that they are Jews.—S. B. A.

CHEST MEASUREMENT IN THE ARMY.

SIR,—I read Sir James Barr's contributions to the JOURNAL with pleasure and I hope with profit, but my faith in his accuracy is shaken by the statement attributed to him on page 912 of the JOURNAL for April 18th. He there says: "The extraordinary method of estimating the capacity of the lungs by the circumference of the chest in inspiration is still in force in the army." That is, I take it, by the circumference when fully expanded. I am sure that Sir James Barr will be glad to know that this is not the case. I quote from the "Regulations for the Army Medical Service, Rules for the Inspection of Recruits."

> The recruit will then be directed to take a deep inspiration several times, and the maximum expansion of the chest will be carefully noted. It is often attempted to conceal the true minimum measurement, but it can be obtained by a little manipulation and by drawing off attention. . . . The maximum and minimum will then be recorded. . . . A recruit must also reach the range of chest expansion laid down in the table of physical equivalents.

In line two of the above it is the maximum expansion, and not the maximum measurement, that is to be carefully noted.—I am, etc.,

Netley, April 27th. R. R. H. MOORE, Lieutenant-Colonel R.A.M.C.

HOSPITALS AND MEDICAL CHARITY.

SIR,—The absurd laudations bestowed on the Hon. Sydney Holland by some correspondents are quite out of place. If medical men were to suggest that he does his work at the London Hospital for the sake of the social advertisement it gives him, they would merely be returning his remarks in kind. There is, of course, no doubt that his importance in society is enhanced materially by his position at the London Hospital. But we medical men would consider any such statement as *bad form* as it would be untrue. In like manner his suggestions are also

bad form as well as untrue, and one is surprised that he should have allowed himself to make them. The fact is that our great medical charities are the joint undertaking of the public and the medical profession, and each of the two deserves its own credit. The public is now trying to evade its share in the good work and to leave the medical men to bear the burden almost alone. That Mr. Holland makes himself the apologist for such a state of affairs scarcely redounds to his honour. The attempt, however, to excuse the evasion will fail and the classes for whose benefit the hospitals exist will see why their usefulness is crippled and through whose fault.—I am, etc.,

Exeter, April 27th. W. GORDON.

SIR,—While agreeing in general with Dr. Davies's letter, and especially with his contention that doctors no more than other men should be expected to pay for the opportunity of acquiring experience in their profession, I must point out that Mr. Holland has some grounds for saying that the hospital man gets a *quid pro quo*. Dr. Davies accepts Mr. Holland's valuation of a major operation as £100, and should realize that this sum represents not only the price of the paid operation but of the unpaid hospital operations. Practically all such operations are in the hands of hospital men, who place them at that figure to recompense them for their hospital practice. Were it not so; were all operations distributed amongst the thousands of capable surgeons outside as well as inside hospitals; and were no operations to be done gratuitously, the price would be probably less than £10, and the hospital surgeon himself with twelve operations a week at £10 would not make as big an income as now with two at £100 and ten in hospital for nothing.

That medical men themselves regard the *quid* as equal to the *quo* must, I think, be evident to any one who regards intelligently the fierce struggle to get on to the staff of a hospital.

The moral is obvious. Let the hospitals pay their doctors as they have to pay every one else, and this curious jumble of charity and business will disappear, with enormous advantage not only to the profession but to the public, the middle-class members of which have to choose between being the recipients of charity and paying what is to them an exorbitant fee for operations.—I am, etc.,

April 28th. BRISTOLIAN.

INVERSION OF THE UTERUS.

SIR,—Students and junior practitioners look to your columns for guidance, and sometimes are puzzled to decide which of various methods of treatment are to be trusted. I have had a fair amount of experience in midwifery, and one thing I have learned is the danger of relying on expression to remove the placenta. For several years after beginning practice I thought it always easy to get away even an adherent placenta, but within one year I met two cases in which separation in a mass seemed quite impossible, and I simply scraped away friable material from the surface of the uterus with my fingers. Both patients recovered without any very heroic treatment. I have been left alone at the last with two extremely severe cases of placenta praevia, in both of which haemorrhage was so severe as to leave the patients blanched for months, yet both recovered. I have only had one death from confinement, and that was a case of placenta praevia in which septic poisoning occurred from my neglect to use the syringe myself instead of trusting to an unqualified nurse. I have had many bad miscarriage cases with removal of placenta by hand, and have had most dangerous cases of *post-partum* haemorrhage only stopped by strong solution of perchloride of iron. What I want to impress on the young practitioner is that I never found it necessary to give anything stronger than hot milk with one or two teaspoonfuls of brandy for the shock, and fluid saline injection for the loss of blood. Thus it is surprising to me to find that in a fatal case of inversion of uterus reduced without haemorrhage or other complication, it was considered necessary to administer within six hours of delivery hypodermic injections of strychnine and digitalin and adrenalin chloride, as well as large doses of brandy and champagne. Was there no special complication?—I am, etc.,

April 27th. SENILE DECAY.

SIR,—On reading Dr. McInerney's account of his case I was amazed to learn that the Rotunda Hospital teaches its students that the best and safest course in the third stage of labour is to wait ten or fifteen minutes and then express the placenta. Even Credé advised waiting for twenty minutes *at least*, and then to express the placenta. Jellett, in his *Short Practice of Midwifery*, says that Credé's method is "very liable to cause *post-partum* haemorrhage, as the uterine fibres will not have had time to retract properly and so obliterate the vessels; also small portions of placenta are frequently left behind." He says that no attempts should be made to express the placenta as long as it is in the uterus, but that we should allow Nature to expel it into the vagina, and then only should we express it. Personally, I think there is a terrible amount of injury done in the way of producing sapraemia and *post-partum* haemorrhage by not allowing the uterus to do its legitimate work in detaching and expelling the placenta into the vagina. Once the placenta is free in the vagina it can be expressed or even pulled out by traction on the cord with safety and with the assurance that there will be a more complete contraction and retraction of the uterus and a minimum risk of retained placental fragments and haemorrhage. At one time I followed Credé's method, which was taught me as a student, but I have found from bitter experience that it is followed occasionally by bad results, especially sapraemic trouble and at times haemorrhage. I used to be astonished at the excellent results obtained in the practice of some old practitioners and even midwives who thought very little of antiseptics, and I have since observed that the secret of their success is first to allow the placenta to come away itself, and secondly to avoid frequent vaginal examinations. Every practitioner knows how well cases born before the arrival of the doctor do when the placenta has either been expelled or lies in the vagina ready to be expressed.

Another point I wish to remark upon is the following sentence in Dr. McInerney's contribution, namely, "The patient becoming fatigued and the friends getting anxious, I applied the forceps." I wish to protest against the state of mind of the patients' friends being accepted as an indication for the use of the forceps.

Finally I wish to express my thanks to the BRITISH MEDICAL JOURNAL for publishing Dr. Peter Horrocks's addresses on midwifery, which have been of the utmost value to me, and indirectly to my patients.—I am, etc.,

April 28th. RATIONAL TREATMENT.

A MEDICAL LANTERN SLIDE EXCHANGE.

SIR,—I am sure that many medical men find, like myself, a great difficulty in procuring lantern slides to exhibit at the medical societies when needed. There is so small a demand for them that the commercial slide publishers do not keep a very large stock, and, as a rule, for purchase only. Medical men make them personally, or have them made to illustrate addresses at the societies. These slides would be most valuable to others if some system of exchange and hire could be instituted.

I would suggest that the library department of the Association would be a good centre from which a list could be published from time to time.

Any member of a recognized medical society on application might be furnished with the list. The rates of hire (of a higher rate than usually charged) would of course be agreed on by the medical man owner of the slides. Postage and insurance paid also by the hirer.

I think such an exchange system would be most useful, as it is a great pity to have valuable slides relegated to oblivion after their immediate use is over, when they might be of the greatest use to some one else. A little organization is all that is needed to have such a circulating system similar to many photographic societies have at present. I hope that lantern workers in the profession may take the hint and some plan be formulated.—I am, etc.,

Cork, April 22nd. P. G. LEE.

THE WORDS OF THE ORACLE.

SIR,—I think that the notes I gave of the empyema prove that I have the saving grace of humour, and that Dr. Blandy is not the sole possessor of the milk of human kindness. I can appreciate Dr. Blandy's difficulty in writing his letter when he informs us he has not had similar experience to mine. He is at once placed in the disadvantageous position of those armchair critics of the tactics of our generals in the field during the South

African war. The patient mentioned in Dr. Blandy's letter was informed that an operation would be necessary. (Note that the nature of the operation was not mentioned.) The patient refused the operation. Dr. Blandy thinks I should have admitted the patient, cured him, and then written to the doctor. Unfortunately, in giving this otherwise excellent advice, he omits a rather important element in the case—namely, the patient, and the latter refused to be cured. I shall not trouble you with any further communication upon this subject, as I have accomplished my object in citing my cases.—I am, etc.,

Bedford, April 25th. S. J. ROSS.

THE ADMISSION OF WOMEN TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

IN order to remove any misapprehension which may have arisen in connexion with the correspondence on this subject published last week, p. 1021, we have obtained permission to reproduce the opinion of counsel upon which the council of the College of Surgeons relied for the statement contained in the paragraph on the voting card to the effect "that while under the Medical Act of 1876 (39 and 40 Vict., ch. 41) women can be admitted as Members or as Fellows, no woman so admitted would thereby be entitled to take any part in the government, management, or proceedings of the college."

Opinion.

EX PARTE THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.
DIPLOMAS OF WOMEN.

Queries.	*Opinion.*
1stly. Whether, if a woman not already possessed of a registrable qualification is admitted to the Diploma of Member or Fellow under the Act of 1876, she would be entitled to the rights of a Member or Fellow as regards the government or proceedings of the College.	1stly. The intention of the Statute of 1876 is in our opinion plain, but the words are not apt to carry that intention into effect. In our view, however, the Statute would be construed in such a manner as to make the proviso at the end of Section 1 commensurate with the privileges that that section confers; a woman, therefore, would not be able to take any part in the government, management, or proceedings of the College by reason of obtaining a registrable qualification under the terms of the Act.
2ndly. Whether the case would be different in the case of a woman already possessed of a registrable qualification.	2ndly. No. There would be no difference in this case from the one dealt with in question 1.
3rdly. Whether the College could under that Act admit women to the Diploma of Member whilst declining to admit them to that of Fellow.	3rdly. Yes. There is nothing to compel the College to admit women to the Diploma of Fellow.
4thly. Whether, if a woman were admitted to the Diploma of Member, she could claim by virtue of her Membership to be admitted to examination for the Fellowship.	4thly. No. The right to claim admission to the examination of Fellowship is derived from Clause 5 of the Charter of 1843, and this has no application to women.
5thly. Whether new Bye-laws would not be necessary to admit women to either Diploma.	5thly. Yes. The Bye-laws before us do not provide for the admission of women to either Diploma.
6thly. Whether the College under their Charter can, independently of the Act of 1876, admit women to the Diploma of Member and whether a woman is entitled to claim such Diploma on passing the requisite examination.	6thly. No. The rights and privileges conferred by the Charter can, apart from the Act of 1876, only be shared and enjoyed by men.
7thly. As to what would be the rights of a woman who had accepted a Diploma expressly stated to be granted under the powers conferred by the Act of 1876, assuming that she is entitled to receive the Diploma independently of the Act and whether she would be in a more favourable position for asserting any rights she may have independently of the Act.	7thly. A woman can gain no additional rights by virtue of obtaining a Diploma under the Act of 1876.

R. B. FINLAY,
STANLEY BUCKMASTER.
Lincoln's Inn. 21 3 1907.

The council had previously on November 6th, 1906, obtained the opinion of Mr. Danckwerts, K.C., who in the course of his Opinion wrote with reference to the Medical Act of 1876: "I think the real intention was that a qualification granted only under the enabling power of the Act, and not otherwise grantable, was not to confer privileges in regard to the government, management, or proceedings of the body granting the qualification."

As the Act of 1876 is not very well known, it may be well to quote the enacting Section:

1. The powers of every body entitled under the Medical Act to grant qualifications for registration shall extend to the granting of any qualifications for registration granted by such body to all persons without distinction of sex: Provided always, that nothing herein contained shall render compulsory the exercise of such powers, and that no person who but for this Act would not have been entitled to be registered shall, by reason of such registration, be entitled to take any part in the government, management, or proceedings of the universities or corporations mentioned in the said Medical Act.

The annual report of the Council of the Royal College of Surgeons for 1907 contains the following:

In the course of discussion questions were raised as to the powers of the Council in the matter and the position and privileges of women if admitted Fellows and Members, and it was determined to take Counsel's Opinion on these points.

As a result of these inquiries it has now been ascertained:

(*a*) That the Council have no power under the Charters of the College to admit women to examination for the Diplomas of the College, but that they have that power under the Medical Act of 1876 (39 and 40 Vict. Ch. 41)

(*b*) That the Council can, if they think fit, admit women to the examination for the Diploma of Member, and decline to admit them to the examination for the Diploma of Fellow.

(*c*) That a woman, admitted a Fellow or Member under the Act of 1876, would not be able to take any part in the government, management, or proceedings of the College by reason of obtaining a registrable qualification under the terms of the Act.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE LIABILITY OF PATIENTS TO PAY FOR OPERATIONS PERFORMED IN HOSPITAL.

P. B. and W. R. are surgeons to a hospital to which, according to the by-laws, "patients shall be admitted free," but when they are "able to repay to the institution the whole or part of the cost payment will be demanded." Recently two cases were admitted for operation in which the circumstances seemed to the committee to warrant this demand, and in both cases there was also reason to believe that the parents (both cases were minors) would have been perfectly able to pay surgical fees for treatment outside. Our correspondents ask what steps could be taken to recover payment under the circumstances?

*** If the hospital committee would sue the parents we believe moderate fees could be recovered, but any claim on the part of the surgeons concerned would meet with the difficulty that they are "honorary" officers. In both cases the hospital (as well as the surgeons) was imposed upon, and it is the duty of the committee to check such abuse, which could be done most effectively by obtaining payment not only of the cost of maintenance, but of the operation fees. Our view, therefore, is that the surgeons have themselves no remedy in respect of these two cases, but that steps should be taken to amend the hospital rules so as to prevent the recurrence of such incidents. The point is one which, we think, might profitably be referred to the Hospitals Committee of the Association, so that the general principle might be discussed.

HOUSE-SURGEONS AND PAYING PATIENTS.

UNFORTUNATE says that he is house-surgeon at a hospital to which private wards for paying patients are attached, and he complains that he has to assist at these operations or administer anaesthetics to these patients for nothing; he also complains that his fee for workmen's compensation certificates, which used to be 3s. 6d., has been reduced by the committee to 2s. 6d. His appeal to the committee was referred to the Medical Board, but has been "squashed."

*** It must be presumed that "Unfortunate" knew the duties of the post before he accepted it; if any alteration has been made in these without notice he has not been fairly treated. With regard to the fees the usual plan is, we believe, for the hospital to pay a salary and to take all fees, but if these fees were reckoned as part of salary in this instance, it is obviously unjust to reduce them without giving compensation.

CONDUCT OF MEDICAL OFFICERS TO ACCIDENT INSURANCE COMPANIES.

SWAFFHAM sends us the report of a judgement delivered at the Norwich County Court by His Honour Judge Mulligan, K.C., in which he referred to some reflections that had been made upon a company's doctor, who had thought it right to pay a surprise visit to the complainant in the case, which was an action brought under the Workmen's Compensation Act. The judge said that he found no ground for any complaint

against the doctor, whose duty it might be to make a surprise visit at a reasonable time, and that he should be allowed to exercise his discretion as to doing so.

*** With reference to the answer given under this heading on April 18th, we may say that we there stated the rule, but that we quite agree with the judge that there may be exceptional cases in which the medical officer of the company, exercising his due discretion, would be justified in paying a surprise visit without giving any notice of his intention.

THE OBLIGATIONS OF A SUBSTITUTE.

A. R.—A. B. seems to have a strange notion of the obligations of a substitute, but we may credit him with giving frank warning of his intention to annex for himself any cases that may be sent to him. Of course, the adoption of such a course would render it quite impossible for practitioners to ask their neighbouring colleagues to act as their substitutes during absence. There is no rule of greater importance in medical ethics than that which obliges a practitioner who has seen a patient as the substitute of another to decline to take over the case or to continue his attendance except as a substitute.

ADVERTISING A SPECIALITY.

PERPLEXED writes that he practises as an ophthalmic surgeon in an outskirt of London. If he puts his name only on his doorplate he is "apt to be mistaken for a dressmaker," whereas "Surgeon" would imply a general surgeon, which he is not, and his friends have often asked him why he did not put up "Ophthalmic Surgeon" on the plate? As he is now moving to a better part he presumes his name only on the plate will suffice, but he wishes to have an opinion.

*** We may sympathize with our correspondent in the peculiar difficulty he has experienced in his part of London, but he should remember that hard cases make bad law; the best of rules would soon be torn up if its application were in no case to involve inconvenience. The objections to putting the name of a speciality on a doorplate have often been stated, one being that there is no means of guaranteeing the fitness of the person who advertises himself to the public as "Ophthalmic Surgeon." In Germany, where it is the custom to indicate the speciality upon the doorplate, the medical law insists upon previous special training, and medical men may be brought before the Courts of Honour and censured or fined for so styling themselves without proper qualification. An American correspondent wrote some short time ago to say that even in that country, which is not hide-bound by tradition, he had never seen a doorplate so distinguished belonging to any one who was not a quack. A specialist ought to seek practice not from the public direct but through his colleagues in general practice.

MEDICAL EVIDENCE AT INQUESTS.

COUNTRY PRACTITIONER writes: A., an employer, requested B. to go at once to see an employé, who had fallen dead in the road. A. then informed the police. B. drove to the place, examined the body, and gave necessary instructions, but in the meanwhile the police informed C., another doctor, who arrived as B. was leaving. Should B. or C. be called upon to make the *post-mortem* examination and give evidence at the inquest?

*** This is a matter for the coroner to decide, but that official, we believe, almost invariably issues his order to the medical practitioner first called to examine the body.

A QUESTION OF FEE.

WE have received a further communication from A., the practitioner in attendance on the case discussed under the above heading in the JOURNAL of April 11th. A. is of opinion that B. should be satisfied with a smaller fee than that suggested. He argues (1) That the professional service rendered by B. was in itself trifling; (2) that the patient is not well off, and that B.'s fee will have to be paid by himself out of the remuneration received from the patient; (3) that B. and himself have often helped each other in a friendly way without exacting the maximum fee. The first and third of these arguments are not relevant to the case in point. B. was called in as a consultant, and performed an operation; neither is B bound by the precedent of previous professional relations with A. The second point raised by A.—the circumstances of the patient—is a matter which B. is bound to take into consideration, and one for mutual arrangement between A. and B. We should suggest as a basis for compromise that A. and B. should divide the fee received by A. from the patient.

A CLAIM TO FEES.

LICYPHUS writes: X. and Y. are friends, and often see patients for each other. A stranger motoring through the town ran over a child and was directed to Y.'s house, but on finding him out hurried across the road to X., who was at home and attended to the child without knowing that the stranger had called on Y. Should X offer the fee to Y., who appears to claim the case as his?

*** If there was a general understanding between X. and Y. to see patients for one another during the absence of either, Y. might have a claim to the fee. If the stranger had been sent to X. by any one at Y.'s house the position would be clear, but this does not appear to have happened, and on the facts as stated Y. appears to have no claim to the fee.

Medico-Legal.

CORONERS AND CERTIFICATES OF DEATH.

THE Honorary Secretary of the Worcester Medical Society has forwarded to us a newspaper report of an inquest held on a man who died of fracture of the ribs and pneumonia. The deceased was attended by a duly qualified medical man, who gave a certificate of the cause of death in the usual way, without communicating with the coroner. An inquest was held, in the course of which the following colloquy took place:

Why was this case not reported to me?—Because I signed a death certificate knowing it would come to you.

I disagree with you there. Here is a man who dies as the result of an injury, and I ask you why it was not reported to me?—Why, because I deliberately put "broken ribs" on the certificate, so that it should be reported to you.

You were depending upon somebody else to do your duty. Your duty is that when there is a case for inquiry you ought to report it yourself—It was an absolute certainty that it would come to you.

Only by a roundabout way. You inform Mr. Everton, and Mr. Everton has to inform me, but he is under no obligation to do so.

The matter was discussed by the members of the Worcester Medical Society, and the following letter was sent by the secretary to the coroner:

It has been brought to the notice of the Worcester Medical Society that one of our number was publicly censured by you for not informing you direct that a man had died as the result of an accident (see *Worcester Daily Times*, March 19th, 1903). We shall be obliged if you will kindly give us your legal authority for stating that it is our duty to notify you in such cases, as we are advised that no such duty is placed upon us. As your censure has been publicly reported we consider that, if you cannot show us authority for your statements, an equally public withdrawal is due from you.

As the meeting of our Society has been adjourned until Friday, 10th inst., a reply at your convenience before that date will much oblige.

To this the following reply was received from the coroner:

I cannot agree with the interpretation put upon what passed at the inquest on March 19th. There was a discussion between the medical witness and myself as to the course he ought to have followed, but no censure.

It is the common law duty of every person in attendance upon or about the deceased to give information to the coroner. The medical attendant is clearly one such person, and he should therefore, in a case where there is any doubt as to the death being due to natural causes, either withhold his certificate as authorized by Section 39 of the Registration of Births and Deaths Act, 1874, and give notice to the coroner; or if he gives such a certificate, he should at the same time communicate with the coroner drawing his attention to the circumstances of the case. In my opinion the former is the better course to take, since it involves less trouble to all parties.

When a certificate is given by a medical man under the circumstances I have mentioned, there is a risk that from some cause the matter may not be referred to the coroner. Further, the making out of the certificate involves the drawing up of a further document by the registrar when referring it to the coroner. Altogether more trouble is involved by the roundabout procedure than can be incurred in the far simpler course of communicating with the coroner or the police direct.

From the foregoing you will gather that I have nothing to withdraw. At the same time I am sorry if anything I have said has caused any annoyance or pain.

The honorary secretary of the society asks for an expression of opinion as to whether the coroner was right or not. In reply we may say that this matter was the subject of a good deal of comment and discussion in the BRITISH MEDICAL JOURNAL in the second volume for 1899 and the first for 1900. The discussion arose in connexion with the adoption by the Council of the Coroners' Society of the following resolution:

> That it is the opinion of the council that in cases of death from violence or from any unnatural cause, it is a common law duty imposed upon the medical practitioner in attendance, among others, to report to the coroner.

The advocates of this view failed to show that there is any statutory obligation on members of the medical profession to report to the coroner, and the arguments adduced in favour of the contention that there is an obligation under the common law failed to carry conviction. A good deal of friction would be avoided if coroners would frankly admit that this is the state of the case.

The statement in the letter of the coroner quoted above, that the medical attendant in a case in which there is any

doubt as to the death being due to natural causes is "authorized" by Section 39 of the Registration of Births and Deaths Act, 1874, to withhold his certificate, is rather an inversion of the actual provision; Section 39 says:

Every person who refuses or fails without reasonable excuse to give or send any certificate in accordance with the provisions of the said Acts, shall be liable to a penalty not exceeding forty shillings for each offence.

We take it that the words upon which the coroner relies are "without reasonable excuse." No doubt a reasonable suspicion that death was not due to natural causes would be a reasonable excuse for withholding a death certificate, but the onus of showing that his doubt was reasonable appears to rest upon the doctor—another point to which some coroners do not appear to attach sufficient importance.

Another case in which a somewhat similar point arises has been sent to us since the above was received.

In this instance an old lady, aged 86, had for seven or eight years suffered from cerebral anaemia and cardiac failure; she was under the constant care of her medical adviser, and the special attention of her daughter and an attendant by night as well as by day. The doctor's directions were carefully attended to, and he enjoined that special care should be taken to prevent injury by fall of any kind. One day, however, she fell in rising from her chair. The doctor was at once sent for; the patient was placed in bed, and as a fracture of the thigh near the hip was suspected, a splint was applied. Some few days afterwards she became weaker, then unconscious, and died eight days after the fall. The doctor then told the son that he must decline to give a certificate, on the grounds that the lady died from the effects of an accident, and that he must communicate with the coroner first, but that he would give the coroner the whole history of the case, and hoped that it might not be considered necessary to hold an inquest. The coroner, however, decided to hold one, and the jury returned a verdict that the death was due to old age, accelerated by the fall from an accidental cause.

The question which our correspondent asks is: Was the doctor justified in refusing to give a certificate? and was the coroner, presuming the doctor gave him a full history of the case, justified in holding an inquest?

We are advised that, on being informed that a death has been caused or accelerated by injury or violence, a coroner may consider it to be his duty by law to hold an inquest, and may hold that no information or history of the case given by relations or the medical man attending should influence him in his decision where the law strictly defines his duties. The medical attendant in this case acted with proper discretion in withholding his certificate, and by informing the coroner at once delay in the necessary proceedings was avoided. The responsibility for any distress caused to the family by the inquest must rest with the coroner. The law with regard to inquests requires amendment, and a Subcommittee of the Medico-Political Committee of the British Medical Association has the matter under consideration.

CHARGE OF OBTAINING MONEY ON FALSE PRETENCES.

AT Exeter on April 22nd, Bertram Mortimer, about 50 years of age, of superior education, who described himself as "Dr. Mortimer, U S A.," was remanded for a week on charges of obtaining money by false pretences from a number of persons in Exeter. The false pretences consisted in his representing that he could cure persons of serious ailments, that he was engaged for specially difficult cases at the Royal Devon and Exeter Hospital, and that he was the father of Dr. John Mortimer, Surgeon to the Exeter Dispensary. The accused was brought over in custody from Swansea, where he had been committed for trial on similar charges. Evidence was given that he took lodgings in Exeter, that he affixed a brass plate to the door with the words "Dr. Mortimer, U S A.," and that he distributed thousands of handbills and circulars throughout the city offering advice free to all who were suffering. Large numbers of people visited him and became his patients. In every case, including chronic cases of heart and lung disease, and dysentery, the accused was alleged to have undertaken for a specified prepayment to effect a complete cure within a certain period. He gave a receipt to his patients in that form. After he had been in Exeter a short time he suddenly left, and set up practice at Swansea. The payments made to him ranged from £8 15s. downwards. The patients derived no good from the treatment. The medicines he gave them were described by the public analyst as ordinary pick-me-ups, and the pills as cheap rhubarb pills such as were sold by chemists at 1d. a dozen. He was described as a voluble speaker, and a man who made pretensions to great skill; one person, a lady, stating that she regarded him as an angel until his sudden flight undeceived her. In his consulting room the prisoner had a table covered with surgical instruments, which he told his patients he was obliged to keep ready to deal with accidents and emergencies. The accused made a long defence, in which he claimed that he had been guilty of no fraud, that he was a qualified medical practitioner, and that the patients could only sue him for breach of contract by civil remedy. His application to the magistrates for bail was refused.

At the adjourned hearing on April 29th the prisoner said he had no witnesses to call in his defence. He appealed for counsel under the Poor Prisoners Defence Act, 1903, asserting that, provided he had legal assistance, he could show that he was entitled to practise, both medicinally and surgically, and that he purchased his drugs in Exeter. He could produce patients from the local hospital who had benefited by his treatment.

The prisoner was committed for trial at the assizes, and was told that if he wished to have legal aid at his trial he must make a written defence.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

PRELIMINARY—*Animal Physiology*: G. H. Allington, Trinity. *Zoology*: R. G. Barnes, Christ Church; W. A. Barr, Exeter; J. H. Peattie, Corpus; C. M. Burrell, University; E. W. Carrington, Keble; J. C. Davies, New; C. Dean, Trinity; R. C. Fairbairn, Exeter; R. A. D. Gillis, St. John's; D. B. I. Hallett, University; R. S. A. Heathcote, New; H. S. Knowlton, Keble; G. A. Maling, Exeter; E. E. Mather, Exeter; Hon. P. A. Methuen, New; J. C. Moulton, Magdalen; A. L. Pearce-Gould, Christ Church; T. L. Price, Keble; N. D. Pringle, Lincoln; M. O. Raven, Trinity; F. C. Reynolds, New; A. S. Robinson, Exeter; E. R. Speyer, New; G. B. Tarring, Merton; F. J. Tear, non coll.; T. O. Thompson, St. John's; B. H. Walker, Queen's; W. W. Waller, New.

UNIVERSITY OF CAMBRIDGE.

PROFESSOR WILLIAM OSLER, M.D., F.R.S., will deliver the Linacre Lecture on Wednesday, May 6th, at 5 p.m., in the New Museum. Subject: Thomas Linacre, his Life and Works.

SANITARY SCIENCE EXAMINATION.

The following candidates have satisfied the examiners in both parts of the examination:

W. Anderson, A. W. G. Bagshawe (Gonv. and Cai.), A. Beeley, J. M. Bernstein, J. Brunton, W. J. Corbett, W. F. Corfield, R. M. Courtauld (Pemb.), A. M. Jukes, S. J. Killen, H. C. T. Langdon (Gonv. and Cai.), F. T. C. Linton, T. C. Lucas (Clare), J. F. Macdonald, A. Mathieson, Mabel L. Ramsay, C. D. Rankin, T. S. Ross, Sophia Seekings, E. P. Sewell (Pemb.), D. Stiell, T. Strain, T. W. Wade, W. N. Walker.

UNIVERSITY OF LONDON.

Presentation Day Service in Westminster Abbey.

THE service in Westminster Abbey for members of the university on presentation day last year was well attended, and in response to a request the Dean of Westminster has arranged that a special service shall be held in the Abbey on presentation day this year, Wednesday, May 6th, at 6 p.m.; the sermon will be preached by the Bishop of Birmingham. Further particulars can be obtained by sending stamped addressed envelope to the honorary secretaries of the Westminster Abbey Service Committee, University College, Gower Street, W.C.

SPECIAL LECTURES.

The course of lectures on inheritance in its physiological and pathological aspects will be continued on May 6th and 13th at 4.30 p.m., in the Physiological Theatre of the London Hospital Medical College, when Mr. G. P. Mudge will further expound his views on Mendelian inheritance.

The course of eight lectures on the structure and functions of the central nervous system to be given by Mr. W. Page May, M.D., D.Sc., in the Physiological Department of University College, will begin on May 13th at 5 p.m. and not as previously announced.

UNIVERSITY OF GLASGOW.

COMMEMORATION DAY.

THE biennially recurring event known as Commemoration Day was held on April 22nd, Principal MacAlister, Vice-Chancellor, presiding. The proceedings took place in the Bute Hall, which, in spite of its large size, was well filled by representatives of the academic and civic life of the city. The company also included delegates from the sister universities of Edinburgh and St. Andrews, and from University College, Dundee, the first of these being Sir William Turner.

The customary oration in honour of the memory of some distinguished son of the university was devoted to a review of the work and the life of Lord Kelvin, and was appropriately delivered by Professor Gray, who succeeded Lord Kelvin in the chair of Natural Philosophy.

On the conclusion of the oration a number of honorary degrees were conferred, the recipients in each case being introduced by the Dean of the Faculty immediately concerned. Six Doctorates in the Faculty of Divinity were conferred, among those thus honoured being M. C. Lucien Gautier, a former Professor of a Theological Faculty at Lausanne, and well known in connexion with Old Testament studies; and the Rev. J. Estlin Carpenter, Principal of Manchester New College, London; the rest were all well-known Scottish clerics. In the Faculty of Law nine honorary degrees were conferred,

the recipients being G. T. Beilby, F.R.S., Head of the Glasgow and West of Scotland Technical College; Colonel David Bruce, C.B., F.R.S., J. J. Dobbie, D.Sc., F.R.S., Director of the Scottish Museum; R. Kidston, F.R.S., well known in connexion with paleophytiology; D. M'Cowan, for many years Treasurer of Glasgow Royal Infirmary; Dr. J. C. M'Vail; Neil Munro, an author and journalist prominent in connexion with what has been called the Celtic Revival; the Right Hon. C. S. Parker, P.C., who has rendered distinguished services to Secondary Education in Scotland; and J. S. Templeton, an old student of the university and a Glasgow man, prominent in connexion with all branches of public progress.

Speaking of Colonel Bruce, Professor Cleog said:

"A graduate of Edinburgh University, Colonel Bruce has had a distinguished career in the Royal Army Medical Corps, and rendered eminent services to the nation in the Egyptian and South African campaigns. But his services have been not only to his country, but to humanity. To his discovery, at great personal risk and by untiring labour, of the microbe which forms the inducing cause of Malta fever, and to the researches to which that discovery led, the naval and military population of Malta owe their present immunity from a disease which has been the bane of the island for centuries. Similar work in Africa has resulted in extending our knowledge of the causes which produce the dreaded tsetse fly disease of South Africa, and the epidemic sleeping sickness of Uganda. Work of this kind, requiring all the courage of the soldier, all the patience and acumen of the man of science, renders him amply entitled to any honour which a university can bestow."

The tribute of the same speaker to Dr. M'Vail was as follows:

"A graduate of the University of St. Andrews and a former Examiner in Medical Jurisprudence and Public Health in this University, Dr. M'Vail holds the highest position in that important department of modern civil administration—the care of public health. For eighteen years County Medical Officer of Health for Stirling and Dumbarton, he has been President of the Incorporated Society of Medical Officers of Health of Great Britain, of the Incorporated Sanitary Association of Great Britain, and of the Glasgow and West of Scotland Branch of the British Medical Association. In 1906 he delivered with acceptance the Lane Lectures in Cooper Medical College, San Francisco, and next year acted as Medical Investigator to the Royal Commission on the Poor Law. His published works, dealing with broad questions of State medicine and sanitary science, are recognized as authoritative in these important subjects."

ROYAL UNIVERSITY OF IRELAND.

THE following candidates have been approved at the examination indicated:

SECOND M.B., B.CH., B.A.O.—*H. L. Barneville, *W. K. Calwell, *F. Crooks, *S. R. Foster, *R. J. McConnell, *L. P. Mulligan, *W. Wilson, M. J. Black, J. L. Brown, D. Calwell, P. E. Carroll, P. A. Clearkin, P. Cotter, J. F. Craig, A. J. Dempsey, L. Doyle, F. H. Duke, D. J. Foley, H. A. Gillespie, T. D. Graham, H. P. Hannigan, R. Harrington, J. Horan, M. J. Horgan, B.A., N. L. Joynt, I. P. Kelly, J. L. Kilbride, Jane L. Law, H. H. C. Lynch, P. McCartan, D. I. MacClancy, H. T. S. McClintock, L. J. E. McHugh, D. McSparron, W. M. Millar, E. Morison, Mary A. Murphy, D. O'Brien, W. O'Brien, P. J. O'Grady, J. Patrick, J. H. Porter, A. E. H. Reid, T. G. Rothwell, J. J. Ryan, S. I. Turkington, P. W. White, S. J. Yeates.

* Upper Pass.

SOCIETY OF APOTHECARIES OF LONDON

THE following candidates have been approved at the examinations indicated:

SURGERY.—*†E. M. Adam, O. C. Andrews, *A. J. K. Brayton, *J. Brierley, *A. C. J. Elwin, *†F. S. Hawks, *H. E. Middlebrooke, *†L. G. Powell, *†J. V. Steward, *N. C. Wallace.

MEDICINE.—*†A. J. K. Brayton, †W. J. G. Gayton, *F. S. Hawks, *†J. K. A. Helm, J. Jones, *J. M. Murray, †C. S. Ormsby, *†P. D. Pickles, *†S. Speelman, *H. B. Waller.

FORENSIC MEDICINE.—A. J. K. Brayton, W. C. Death, J. K. A. Helm, J. Jones, J. M. Murray, C. S. Ormsby, F. H. P. Wills.

The Diploma has been granted to Messrs. A. J. C. Elwin, J. Jones, C. S. Ormsby, P. D. Pickles, L. G. Powell, S. Speelman, and J. V. Stewart.

* Section I. *† Sections I and II.

HOSPITAL AND DISPENSARY MANAGEMENT.

TENBY COTTAGE HOSPITAL.

THE annual meeting of the governors of the Tenby Cottage Hospital was held on February 1st. The committee reported that during 1907, 80 in-patients had been received, as compared with 40 in the preceding year, and an annual average of 44 for the past ten years. The income was £390, a decrease of £10 as compared with the previous year, and the expenditure amounted to £416, an increase of £76. The balance in hand at the close of the year was £5 9s. Mr. Clement J. Williams had generously contributed £24, the cost of extra nursing assistance during the year. The report and accounts were adopted. It was unanimously decided to elect Mr. Thomas Jones one of the employees at the Tenby railway station, to a life governorship in recognition of services rendered to the hospital in the last four years.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DIPHTHERIA IN BEDALE (YORKS.).

THE prevalence of diphtheria in the rural district of Bedale, in the North Riding, was the subject of investigation by Dr. F. St. George Mivart, on behalf of the Local Government Board, at the end of last year. In the report giving the result of his inquiries Dr. Mivart makes the very grave statement that delay had occurred in the dispatch to the Local Government Board of the copy of a special report of the medical officer of health owing to the rural district council having taken the unusual course of requiring their medical officer to "amend" his report. Such action on the part of a responsible body is very much to be deprecated, and steps ought to be taken to prevent its recurrence not only in Bedale but elsewhere. The population of the rural district is about 6,500, and during the twelve months ending September, 1907, there occurred 110 cases of diphtheria, of which number 75 were notified during the second six months. The mortality was said to be low, though the actual number of deaths is not stated. The low mortality was attributed by Dr. F. R. Eddison, M.O.H., to the employment of antitoxin, of which in 1906 the use, whenever it was judged necessary, was sanctioned by the district council. It appears probable that the mild type of the disease and the rapidity with which in most cases it responded to the administration of antitoxin, contributed to a prolongation of the outbreak. The indifference, too, of parents to the isolation of infected children seems to have been a considerable factor in keeping the epidemic alive. Among the measures taken to prevent the spread of the disease, recourse was not had to bacteriological examinations for the purpose of ascertaining the existence of otherwise unrecognizable cases. The responsibility for this neglect must not, however, be laid upon Dr. Eddison, who, when he suggested that arrangements should be made for making the examinations, only met with rebuff at the hands of the district council. Dr. Mivart points out that the spread of diphtheria is undoubtedly favoured in areas wherein houses, themselves ill-ventilated, are set close together without proper circulation of air all around them, upon ground saturated with wet and with decomposing organic matter. There is ample evidence in the report of the existence of these unsatisfactory conditions in Bedale, and if the members of the district council have any sense of responsibility they will without delay carry out the very proper and reasonable recommendations of the Board's inspector.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Herefordshire Combined District.—The report of the Medical Officer, Dr. Herbert Jones, relates to a population estimated at Midsummer, 1907, as 51,308, scattered in six rural districts with an average of 0.13 persons per acre. The corrected death-rate was 13.4, being lowest in Ledbury, 10, and highest in Hereford, 15.4. The birth-rate per 1,000 of population was 20.5, or 5.6 per 1,000 lower than the average in rural districts of England and Wales. When estimated, however, on the number of married women in the area between the ages 15 and 45 the birth-rate seems to be above the average in other parts of the country. When estimated on the same lines the illegitimate birth-rate seems likewise higher than usual. The infantile mortality-rate was 90, or 4 less than the average of the preceding ten years, and 16 less than the rate for rural England and Wales last year. Particulars were obtained as to the feeding of 242 of the children born, and showed that 83 per cent. of these were being breast-fed. Dr. Jones ascribes this high proportion to the influence of the village nurses, but they in their turn may be safely assumed to have been influenced by the course of lectures on the subject which we observe Dr. Jones gave last summer. In his covering letter to his authority he draws attention to the work of the village nurses, expressing a wish that their services might be rendered more directly available for public health purposes. The phthisis death-rate was 0.72, or 5 per cent. of the deaths from all causes. Dore and Westley were responsible for an undue proportion of these deaths. It is considered the phthisis-rate would be lessened if cottages were better protected from damp, and to this end sections 23, 25, and 34 of the Public Health Amendments Act, 1907, might well be adopted. Good would also probably result from treating a selected number of cases in an institution. The cowsheds and dairies of the district require more continuous inspection. Particulars are also included as to Bromyard Urban District, which covers 194 acres of land and has a population of 1,712. Its birth-rate, general death-rate, and infant mortality-rate were all materially higher than those of the general district in which it stands, being respectively 28 per 1,000, 16·3 per 1,000, and 113 per 1,000.

AN institution of industrial hygiene has recently been founded at Frankfort. Among the members of the council is Professor Ehrlich.

OBITUARY.

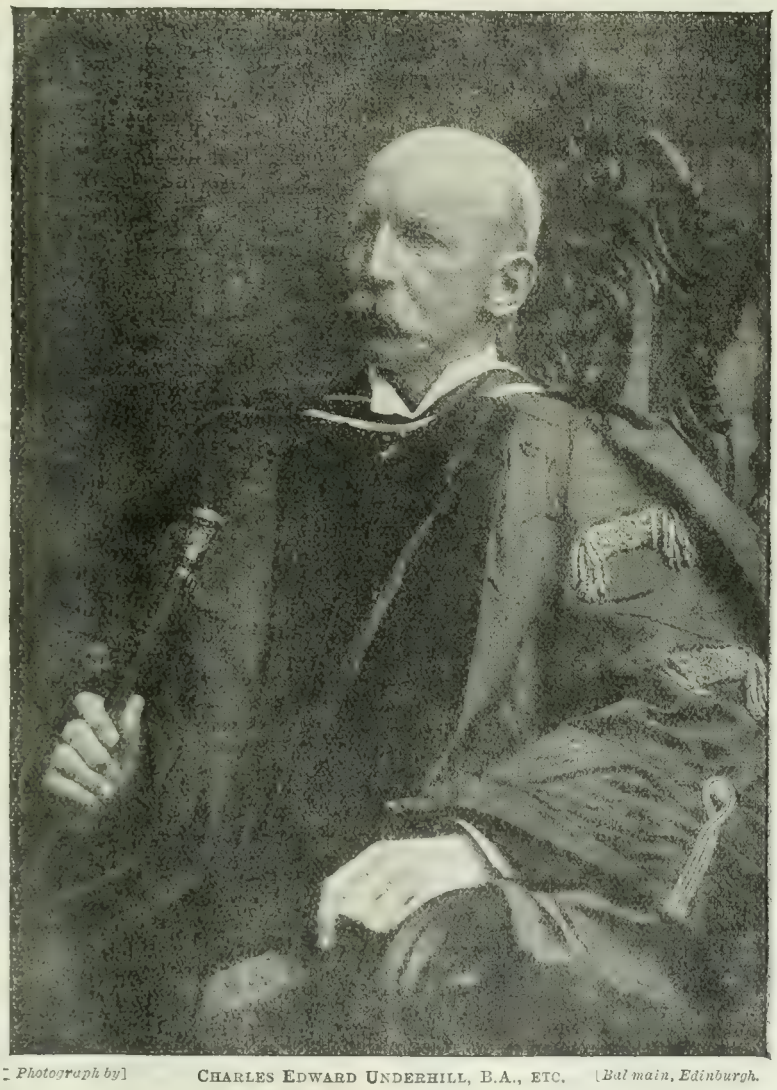
CHARLES EDWARD UNDERHILL, B.A., M.B.CANTAB., F.R.C.S., F.R.S EDIN.,

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE President of the Royal College of Physicians of Edinburgh, Dr. Underhill, died in the afternoon of Friday, April 24th. Although he and his intimate friends had known for some two or more years that he was suffering from a progressive cardiac affection, he refused to give in, and stuck to his work in the profession and in the college until some two months ago. Four weeks ago he moved out to Baberton House, kindly lent him by his friend, Dr. Byrom Bramwell, in the hope that this quiet and lovely resting place, with spring sunshine, would help him. It was not to be. He was never out of doors, and never out of bed. He became steadily worse.

Charles Edward Underhill was born at Tipton, Staffordshire, on March 8th, 1845, where his father, Mr. W. Lees Underhill, J.P., F.R.C.S., was in practice. His paternal grandfather and only paternal uncle were also doctors. He was the second of eight sons, six of whom entered the medical profession. He was educated at Bromsgrove School and Shrewsbury School. From Shrewsbury he went to Caius College, Cambridge, where he was scholar and Tancred student of medicine. He was captain of the Caius College boat, and reserve man for the Inter-University Race in 1866. He took the B.A. degree with honours in 1867, and the M.B. with honours in 1870. In the session 1869–70 he was one of the Presidents of the Royal Medical Society, and a Demonstrator of Anatomy in the University of Edinburgh. He became a Member of the Royal College of Surgeons of England in 1872, and a Fellow of the Royal College of Surgeons of Edinburgh in the same year. In 1876 he became a Fellow of the Royal College of Physicians of Edinburgh, and later was elected a Fellow of the Royal Society of Edinburgh. In 1875 he became assistant to the late Dr. Matthews Duncan, and when Duncan moved to London some years later Underhill succeeded to a very considerable part of his practice. For many years thereafter he had the finest obstetric practice in the city of Edinburgh and surrounding districts, and no one better merited it. It naturally followed that he was elected one of the Physicians to the Royal Maternity and Simpson Memorial Hospital, became a Lecturer on Midwifery and Diseases of Women and Children in the Extra Academical School of Edinburgh, and an Examiner in Midwifery to the Royal College of Surgeons of Edinburgh. He was one of the physicians to the Royal Edinburgh Hospital for Sick Children, to which he was at the time of his death Consulting Physician. In 1905 he was President of the Edinburgh Harveian Society (the Circulation Club it was originally called), and gave a most scholarly oration on "The Writings of Harvey." He was for several years Secretary, and later President, of the Edinburgh Branch of the British Medical Association. He was one of the Managers of the Royal Maternity Hospital, and, till a few months ago, when it became necessary not to overtax his strength, he was one of the representatives of the Royal College of Physicians on the Board of Management of the Royal Infirmary. He was a member of the Royal Company of Archers, the King's Bodyguard for Scotland.

In December, 1906, Dr. Underhill was unanimously elected President of the Royal College of Physicians of Edinburgh. This manifestation of esteem and trust was renewed last year. Dr. Underhill accepted the honourable office as a public duty, although, especially on the latter occasion, some of his close friends ventured to dissuade him, and none knew better than himself what the severe strain on his wearied frame might entail.



[Photograph by] CHARLES EDWARD UNDERHILL, B.A., ETC. [Balmain, Edinburgh.

The multifarious calls on his time and thought were responded to most ungrudgingly. Every duty was performed with unfailing punctuality and conscientious thoroughness. The presidential chair was filled with dignity and grace. His speeches on ceremonial occasions were of a high order. Both in matter and style they bore the impress of thought and culture. Without affecting to be a public speaker, he had a refined eloquence all his own. He was equally at home whether the occasion were strictly academic or of more convivial nature.

His presence in the chair, whether in college, council, or committee, meant that the business in hand would be presented clearly and fully, and that all its bearings would be sufficiently considered. Courteous and patient towards every one, he would not brook any approach to hurried and one-sided judgement. It was recognized by all that in delicate issues his ruling was sure to be wise, and almost as certainly right. Throughout his tenure of the Presidentship, the utmost harmony prevailed within the college. His influence, both as President and indeed throughout all his professional life, did much to maintain a high tone and good understanding among his medical colleagues. He was the embodiment of courtesy and professional rectitude.

No less happy as a host, the two banquets where he sat at the head of the college table were among the most successful in its records. His after-dinner speeches were

bright, and sparkled with humour. He had a large conception of the significance and value to the State and municipalities of such bodies as the Royal Colleges. As representative of the college, he was an acceptable member of public Boards. His wise, calm advice was much appreciated in these wider circles, and in turn served to enhance the reputation of the college.

In obstetrics and in the diagnosis and treatment of disease in children he was in the front rank. He was devoted to children and they to him. The writer's three children are as deeply distressed at his death as if he had been their own father. What finer tribute could be paid to his memory? He had a wonderful and winning way with children. How tenderly he examined them! The shy, timid, frightened sick child was in a minute or two at perfect ease with him, and submitted to the most searching examination without fear. The spoiled, petted, fractious child, who would do nothing for either mother or nurse, became perfectly docile and pliant in his hands, and yet he seemed to make no special exertion to attain this. One of the leading consulting physicians in Edinburgh said the other day: "Any one who comes after Underhill in examining a child can glean nothing. He has left nothing; he has missed nothing.' But while he was supreme in the departments of obstetrics and diseases of children, he was one of the most widely-read physicians and one of the most skilful in all departments of medicine. He was, indeed, an omnivorous reader, and in making an examination of a patient he seemed to think of everything. He would recall this, that, and the other out-of-the-way paper as throwing light on some obscure condition.

He contributed many important and valuable papers to the literature of his profession. Among these may be noted: Case of Spurious Pregnancy, in 1874; On the Structure of Three Cervical Polypi, in 1876; On the Structure of a Channelled Polypus of the Cervix, in 1878; Measles in Relation to Pregnancy and the Parturient State, in 1880; Historical Note on a Case of Abdominal Section in the Sixteenth Century, in 1881; and Three Cases of Rupture of the Uterus. He wrote reviews of several important books on obstetrics and diseases of children, and the obituary notices of his friends James Matthews Duncan and Thomas Keith for the *Edinburgh Medical Journal*.

He was a many-sided man. He was fond of fishing, rowing, swimming, golf, and tennis. He enjoyed the social side of life. One of the characteristics of Edinburgh professional life is the existence of many social medical clubs. The oldest of these, "The Aesculapian Club," was founded in 1773. The secretaryship of the Aesculapian, although its duties have been continuously discharged since that year, is an office which only six members have held. "How much Underhill's friends appreciated this, the social, side of his character was shown a year or two ago, when he was selected to fill the place long held by that great humorist and singer, Dr. John Smith, as the secretary of the oldest and most famous medical club in Scotland"—the Aesculapian. Although Underhill does not appear to have contributed to the original songs of the club, he could sing a good song and tell a good story. He was one of the members of the Round Table Club, founded in 1877, about half of the original twenty-two members of which survive.

It is difficult to appraise Dr. Underhill. He was in many ways a big and remarkable man. He was in the truest sense an English gentleman, and was saturated with the best traditions of English university life. He had nothing small, nothing mean, nothing self-conscious, nothing of self-seeking in his build. He had no jealousy, and no bitterness. He was a man of shrewd judgement, and wide mental outlook. He saw the good in those about him, rejoiced in their success, and helped them in their failure. He was a wise friend and far-seeing counsellor. He was very human, finely sympathetic, and full of consideration for others. Only three days before his death he said to the writer, though he spoke with difficulty and pain, "I hope you are going to get away for a holiday. You need it badly and have earned it well." That was the man all over, always thinking of others and never of himself. There was an indefinable charm about him—a simplicity, a frankness, a transparency, a modesty, an unselfishness, and an innate courtesy that endeared him to every one. He did not hesitate to criticize very plainly and very severely when he saw need, but he always had as his maxim, "*Noxite judicare sine scientia, amore, necessitate. Tamen canis pro cane, et porcus pro porco est habendus.*" He was besides a Christian gentleman. And he was a scholar; not only in the literature of his own calling, but in literature in the largest sense was he widely read. He seemed to read everything about Shakespeare for instance. He was fond of history and biography. He was a fine classical scholar. In his carriage, in his journeys, in his holiday, he constantly had Horace by him, and, like many others, seemed to find never-ending pleasure in reading and re-reading the *Odes*.

His patients were devoted to him in a singular and personal way, and feel now that they have lost their best friend. To Edinburgh, to its medical profession, to the

colleges, to the Royal Infirmary his death is a very severe blow. As he himself wrote on the death of Matthews Duncan in 1890, so may we write with truth of him to-day, "We feel that a great man has passed away from among us: a great, strong, capable man, the like of whom we shall not soon see again."

He married in 1872 Anna Wilhelmina Lambe, daughter of Mr. A. I. Lambe, of Berhampur, Bengal, by whom he is survived, and to whom the deep sympathy of a wide circle of friends will be lovingly given.

The funeral took place from the Church of St. John the Evangelist to the Dean Cemetery on Tuesday, April 28th, at noon; the service was conducted by his two old friends, the Bishop of Edinburgh and Canon Cowley Brown. The church was crowded; the funeral procession was very large. The Royal College of Physicians was represented by the Vice-President and the majority of the Fellows in their robes. The Royal College of Surgeons was represented by the President and many of the Fellows in their robes, the Town Council of Edinburgh, the Royal Infirmary, the Children's Hospital, and many other public bodies sending representatives likewise. Among the many wreaths laid on the coffin was one sent by the medical officers of the Channel Fleet.

LEOPOLD VON SCHRÖTTER, RITTER VON KRISTELLI,

PROFESSOR OF MEDICINE, UNIVERSITY OF VIENNA.

PROFESSOR VON SCHRÖTTER, whose sudden death a few hours after he had delivered an address as Honorary President of the Laryngo-Rhinological Congress then in session, was announced in the BRITISH MEDICAL JOURNAL of April 25th, was the son of the well-known chemist of Graz, the discoverer of amorphous phosphorus, and was born on February 5th, 1837. He studied medicine at the University of Vienna, where he took his doctor's degree in 1861. For two years afterwards he worked at operative surgery under Schuh; from 1863 to 1869 he was Assistant to Skoda. In 1867 he qualified as *Privatdozent* in laryngology. On the death of the famous clinician, Oppolzer, Schrötter took his place during the summer semester of 1871, and in the winter semester of 1872, during which time he had charge of the First Medical Clinic of the University. Three years later he was appointed Professor of Diseases of the Larynx and Chest. From 1877 to 1881 he was physician to the Rudolf Hospital. In 1881 he was appointed head of the clinic of laryngology, and physician to the great General Hospital of Vienna. In 1885 he was granted the *venia legendi* for the whole province of internal medicine, and in October, 1890, he became Ordinary Professor of Internal Medicine, and head of the newly-established Third Medical Clinic of the University. From this brief record of his career it will be seen that he was no mere specialist, but a physician in the widest sense. But so great was his reputation as a specialist, that he was called to San Remo in 1888 to see the late Emperor Frederick of Germany; and he was one of the physicians who had to pronounce the doom of the ill-fated prince.

Professor von Schrötter contributed largely to the literature of laryngology, and also to that of general medicine. In 1866, while still assistant to Skoda, he wrote on the endolaryngeal removal of growths of the larynx, on pneumonia and on aortic disease. In 1876 he described a method of treating stenosis of the larynx and trachea by means of special bougies; he also published a successful case of endolaryngeal operation for sarcoma of the trachea. Schrötter was also the author of a textbook on diseases of the throat. Among his contributions to general medicine may be mentioned a treatise on heart diseases, which appeared in Ziemssen's *Handbook*, and an account of a new method of treating ecchinococcus cysts. He is said to have been the first to describe the occurrence of pemphigus in the larynx, and he published papers on laryngeal perichondritis, rhinoscleroma, diseases of the pericardium, caisson disease, etc. He also contributed a paper on diseases of the blood vessels to Nothnagel's *Handbook*.

In his later years Schrötter was an ardent supporter of the movement for the prevention of tuberculosis, to which he gave the first impulse in Austria. He also took an active part in the promotion of all schemes for the betterment of the public health and welfare, taking a special interest in the establishment of a hospital for poor students, and of sanatoriums for tuberculous patients. He was a member of numerous learned bodies in Austria and other countries. He was a delegate of the Austrian Government at the Congress on Tuberculosis held at Berlin in 1899, where he delivered an address on the curability of phthisis. In 1896 the distinction of Aulic Councillor was conferred upon him.

By the death of Professor von Schrötter the University of Vienna has lost one of its most distinguished teachers. He has left a name which will live in the history of medicine by his scientific work and which deserves a place among those of the men who have laboured for the benefit of humanity.

DR. THEODORE WILLIAMS writes: Professor von Schrötter's death deprives Vienna of one of her most accomplished professors and Austria of one of her most distinguished sons. Though it is probable he had accomplished most of his scientific work and had attained in Europe and America a grand position, it is sad to think that the congresses and conferences of tuberculosis will no longer be graced by his genial presence or their discussions directed by his sound judgement. Professor von Schrötter was a good pathologist—perhaps a little of the old type—a fine clinician, and especially a great laryngologist; and it is in this department that he will probably be best remembered. He was also a skilful organizer, as witness the fine sanatorium of Alland, which will ever remain as a monument of his powers of organization, and which confers great benefits on hundreds of consumptives of various classes. When several of us visited Alland during the Conference on Tuberculosis at Vienna in September, 1907, we were glad to see that the Professor's services had been recognized by the erection of his bust in the grounds of the institution. Professor von Schrötter's command of languages was remarkable. He made public speeches in English, French, and German with very great facility. At the Congress of Tuberculosis in London he spoke in excellent English, and his English letters to me were admirable; the last of these now lies before me and is highly treasured. His geniality was delightful, and his warm sympathy will never be forgotten. He seemed to think his career was closing, as on my pressing him to attend the next Congress of Tuberculosis at Washington in September, he shook his head and said he did not think it was for him. Von Schrötter will be greatly missed by a large circle of friends of many nations.

KARL GUSTAF LENNANDER, M.D.,

PROFESSOR OF SURGERY AND OBSTETRICS, UPSALA.

BY the death of Professor Lennander at the early age of 51, Sweden has lost one of her most distinguished surgeons. Esteemed highly in his own country for his operative dexterity and resourcefulness, Lennander was known the world over by his masterly contributions to medical science.

From early youth he suffered from cardiac troubles, which increased as the years passed. For many years he had to spend a considerable proportion of his time in sanatoriums, and latterly he was compelled to sit while performing some of his operations. Last autumn cerebral embolism occurred, and this left him with defective speech, and partial paralysis of the right side. Recently bronchitis and signs of pulmonary oedema appeared, and death took place on March 15th.

Lennander was born in the aristocratic little town of Christianstad in 1857. In 1875 he matriculated at the Upsala University. After completing his preliminary studies he proceeded to the Carolinska Institut and Serafimer Lasarett in Stockholm for clinical work. He was appointed Docent in Surgery and Obstetrics at the Upsala University in 1888, and in 1891 was named Professor in the same subjects, and became Chief Surgeon of the Upsala Hospital.

With characteristic energy Lennander used his new position to reorganize the scientific side of the hospital work, which at that time was in need of considerable improvement. The amount of work he got through at this time was enormous. His days were filled with administration as well as operative work. His evenings were devoted regularly to reading. Ever on the alert for the application of new observations, he kept himself abreast of all the advances in English and American and German surgery, and yet found time to write abundantly.

Perhaps his most important records were those upon the sensory nerves of the peritoneum. It was characteristic of the man that he at once realized the full import of his observations, and the following extract from his introductory address at the first meeting of the International Society of Surgeons, held at Brussels in 1905, is well worth quoting:

If the author's opinion on abdominal pains proves right, and is generally accepted, it will bring about a better understanding of the symptomatology of abdominal illnesses. He is of opinion that the sensation of pain in the abdomen never issues directly from the viscera, but is produced by an irritation, proceeding from these organs, of cerebro-spinal nerves in the parietal serosa and subserosa in a mechanical, chemical, or infectious —toxins or microbes—way. From this we may draw a conclusion already confirmed by experience: a peritonitis in the centre of the abdomen—namely, below the colon, above the pelvis, behind the omentum, and between different portions of the small intestine—may spread over a vast portion of the serosa and seriously affect the wall of the small intestine before it gives any local symptoms. The same is true with regard to every case of peritonitis that does not affect, or at least very little, the parietal serosa.

As a recognition of his researches Lennander was made a member of the Swedish Academy of Science—a highly coveted honour; and at the centenary of the Royal College of Surgeons in 1900, an honorary F.R.C.S.; while Edinburgh conferred upon him her Doctorship of Laws, and numerous societies made him honorary member.

There are many who will remember his visit to the Ipswich meeting of the British Medical Association in 1900, when he took part in the discussions, and read a paper describing a new operation for "incontinentia ani." Although he then made an exceedingly good impression upon those who came in contact with him, he was not at his best, as he had just been laid up, and had hardly recovered. It was at Upsala, and in his own operating theatre, that one came to know the man fully. Of medium height and figure, his head first caught the eye, and called forth admiration of its massive powerfulness. Brusque in manner, and careful of words, he lacked the polish of the Swede, and reminded one somewhat of the Norwegian type of Scot; yet the testimony of his patients—and that, after all, is the best—showed that he never lacked kindliness and consideration. "He understands suffering," said the simple peasants of the Upsala *län*, "because he himself suffers." During his operations the man came out of his shell. To watch him was to know that he loved his work; to hear his instructions to his assistants was to perceive the good comradeship with which he regarded them and the care he took in their progress and welfare. To see him as he sat placidly in his favourite chair listening to the notes of the case taken by the student was a lesson in expressions. Now he would question the accuracy of the student's description, and slowly get up and examine the patient from this particular aspect. Now he would flash out some pertinent inquiry as to some fact omitted, and then, with the utmost attention to detail, would take the single student slowly but incisively through the principles involved in the case. He was a good teacher, and his clinic was always well attended.

Lennander had the advantage of working under ideal conditions. There can be little doubt that the charm of the natural surroundings largely influences a man's trend of thought. Upsala lies in the middle of a large plain, but in itself is one of Nature's beauty spots. Whether it is approached by the Upsala river, by way of the picturesque Malar Sea, or by rail, its lovely gardens and wooded hills, its grim old castle, and its fine university, stamp it as a place for contemplative thought. "To think freely is great, to think right is greater," says the inscription over the large hall of Upsala University; and Lennander spent his life in close touch with his comrades Hammarsten, Pétren, Ohrvall, Dahlgren, and others, who lived to carry out these ideas. Consequently we find Lennander stopping his surgical work only to think and write and plan.

The new wing of the Upsala Hospital stands as a monument of his care in detail, and of his full appreciation of the advances made elsewhere. No one can visit the building without feeling the impress of the man who left no stone unturned in order to avoid mistakes in construction and furnishing, and who achieved the end he aimed at.

He is best known to the world by his works on acute peritonitis and peritoneal innervation, but he also wrote on tracheotomy in croup, the relations between croup and diphtheria, operations for myoma and diseases of the bile passages, the treatment of perforated gastric and duodenal ulcers, surgical measures in nephritis and local anaesthesia, and contributed to German and English-American textbooks and encyclopaedias.

That, like all of us, Lennander had his faults, is only to say that he was human. But they were not many, and they are easily forgotten as we think how, in spite of physical drawbacks, he earned the admiration of his own people and the gratitude of the whole medical world for his personal contributions to operative surgery.

He leaves an aged mother to mourn his loss.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Robert Luedeking, Dean of the Medical Department of Washington University, St. Louis; Dr. Barthélemy de Nabias, Professor in the Medical School of Bordeaux; Dr. Franz von Leydig, a former Assistant of Kölliker, and sometime Professor of Anatomy at Halle and afterwards at Bonn, aged 67; and Dr. Leo Ragosin, President of the Medical Department of the Russian Ministry of the Interior, in his 61st year.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL FORCE.

THE medical units in the Western Command are to be located as follows: At Manchester, three field ambulances and one general hospital; at Liverpool, two field ambulances and one general hospital; at St. Helens, Blackpool, and Kendal, three sections and one field ambulance; at Chester and Hereford, each one cavalry field ambulance; at Cardiff, one field ambulance and one general hospital; and at Swansea and Ebbw Vale, each one field ambulance.

In the April issue of the *Monthly Army List* an outline of the organization of the Territorial Force is given, with the commands of the United Kingdom.

The *London Gazette* of April 17th publishes the names of the battalions of militia which are to be disbanded.

A Special Army Order, dated April 23rd, has been issued dealing with the transfer of certain units of the Royal Army Medical Corps (Volunteers) to the Territorial Force. An Order in Council, which is appended to the Army Order, points out that in the schedule accompanying it the particular units to be transferred are specified, and the names are given by which they will be known in future. The schedule also states the particular county associations to which the units will belong.

INDIAN MEDICAL SERVICE.

GOVERNMENT RESTRICTION OF MEDICAL FEES.

IN discussing this matter last August (BRITISH MEDICAL JOURNAL, 1907, vol. ii, p. 556) reference was made to the Regulating Act 13 George III, cap. 63, which was attributed to the year 1772; the date should be 1773. We reproduce two extracts from the Act which will be of interest to officers of the Indian Medical Service.

(Sec. 24) provides that "No person holding a civil or a miltary office under the Crown shall accept any donation or gratuity."

(Sec. 25) makes the following exception: "Provided always, and be it further enacted by the authority aforesaid, that nothing herein contained shall extend or be constructed to extend, to prohibit or prevent any person or persons who shall carry on or exercise the profession of a counsellor at law, a physician, or a surgeon, or being a chaplain, from accepting, taking or receiving any fees, gratuities, or rewards in the way of their profession."

As will be seen, this proviso distinctly reserves to Government medical officers the *right* to private practice, and that it is not a mere privilege or concession at the goodwill of the Government for the time being.

ROYAL ARMY MEDICAL CORPS.

As will be seen by a reference to the advertisement columns, an examination of candidates for not less than thirty commissions in the Royal Army Medical Corps will be held on July 28th and following days. Candidates who are over the regulated limit of age at the date of the examination will be permitted to deduct from their actual age any period of service in the field after October 1st, 1899, that they could reckon towards retired pay and gratuity if such deduction will bring them within the age limit. Applications to compete should be made to the Secretary, War Office, London, S.W., not later than July 20th, on which date the list will be closed. Candidates will be required to be in London from July 27th.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ **We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.**

INCOME TAX.

J. P. writes: A firm of surgeons have purchased a motor-car, to be used entirely for professional purposes. Can the whole amount of purchase-money be deducted from income-tax return?

*** If the motor-car was purchased to replace an old one which has become worn out, the cost of replacement can be claimed. If, however, the partners had not a car before, the outlay would be regarded as an outlay of capital and the cost could not be deducted.

VERBASCUM THAPSUS sends the following queries: (1) Is money paid for a practice an allowable deduction from income? (2) Is money received for a practice "assessable income"? (3) A., on relinquishing practice, is succeeded by his neighbour B. As no sufficient introduction can be given no definite purchase price is agreed upon, but it is arranged that for a definite period B. shall pay over to A., in lieu of purchase price, the profits of attendance on A.'s patients. Is the income tax on these profits payable by A. or by B.?

*** (1) and (2) Money paid and money received for a practice are capital, and not income. Money paid is, therefore, not a deduction, and money received is not assessable. (3) The answer to this question follows from the answer to (1) and (2). The income tax on the profits referred to must be paid by B., the purchaser of the practice. When paid over to A. they become capital in his hands, as, however, they may be arrived at, they really represent the purchase-money of the practice. This statement is subject to the qualification that if the payments to A. are to extend over a number of years, so as to constitute an "annual payment" out of the profits, B. will be entitled to deduct income tax when making the payment to A.

D. E. F. writes: An indoor assistant receives a salary which makes him liable for income tax. Should he make his return simply on his salary, or has he also to consider his board as income and add to his salary an amount to cover that?

*** Only money and benefits which are capable of being turned into money by the person enjoying them are assessable to income tax. The indoor assistant, therefore, who clearly cannot sell his right to board and lodging, should make his return on the amount of his salary, and is not required to add an amount to cover board.

TREATMENT OF MUCO-MEMBRANOUS COLITIS.

J. H. asks for advice in the treatment of muco-membranous colitis, in a lady aged 38. The casts each day are very numerous and large, one lately measuring 2 ft. in length. There is also marked abdominal pain, which is not relieved by pil. morph. hyd. grain ¼. The patient has been troubled with constipation since the age of 12, and now requires three drachms of liq. ext. cascara every night, combined with rectal injections in the morning to move the bowels. Retroflexion of the uterus is prevented by pessary.

*** Our correspondent might consult Dr. Caley's paper entitled, Some Clinical Features of the Several Types of Colitis, published in the BRITISH MEDICAL JOURNAL, 1906, vol. i, p. 1330, and the discussion on the Causes of Colitis before the Royal Medical and Chirurgical Society, briefly reported in the JOURNAL of 1907, vol. i, p. 1424.

ADMISSION TO CONSUMPTION SANATORIUMS.

PEMBROKESHIRE writes: At a recent meeting of the Sanatorium Committee of the three counties (Pembroke, Carmarthen, and Cardigan) three doctors were appointed for Pembrokeshire to examine all cases before being sent to the sanatorium to be again passed by the resident medical officer. In my experience it is customary to accept the report made out by the medical attendant subject to the resident medical officer's decision.

*** The rule usually followed, we believe, in regard to the admission to hospitals and sanatoriums for consumption is that the certificate of a patient's medical attendant is accepted as qualifying the patient for examination by some representative of the hospital, whether a member of the resident or visiting staff; but in some cases persons not directly acting on the hospital staff are appointed examiners in certain localities, in order to save prospective patients a possibly useless journey to the hospital.

ANSWERS.

D. M. does not send his name, nor does he state clearly the point on which he thinks a charge of advertising might be founded.

J. C. writes: "Pes" would find great relief from pain by wearing cork soles in his boots, cutting holes where required.

TREATMENT OF ANGINAL ATTACKS.

DR. LESLIE THORNE THORNE (London, W.) writes: In answer to "Angina," I have done a great deal of good in cases similar to the one he mentions, by giving a course of "Nauheim" baths, and in some instances the patients have been entirely cured. If his patient has a high arterial tension, a course of these baths is practically sure to be of great benefit to her.

DR. CHARLES W. CHAPMAN (London, W.) writes: Looking at the age of the patient and her history I would suggest abstention from all forms of vaso-dilators and iodides, and attention to the digestive organs, especially as regards the bowels. When an attack comes on, a draught containing 1 drachm of tinct. valer. ammon. and 20 grains of ammon. bromid. should be given and the patient placed in a darkened room and allowed to go to sleep.

DRY MOUTH.

DR. DOUGLAS MACDONOGH, D.P.H. (Tottenham), writes in reply to "H. R. S.": I am attending a similar case—an old lady, 71 years of age, who has been suffering the most intolerable discomfort from dry mouth and tongue which keeps her from sleeping. She is suffering from malignant disease (intestinal). The tongue is inclined to be somewhat swollen. I have tried many remedies—refrigerants, mineral acids, ice, lemon water, salicylate of soda, calomel in grain doses, and, finally, pilocarpine tabloids grain ¼ (B. W. and Co.) placed on the tongue. These give relief and increase salivation. I have latterly had the pilocarpine made up in glycerine tablets. She tried thirst tabloids (B. W. and Co.), but said they would not dissolve—her tongue was so dry. Having known of glossitis being relieved by pilocarpine it struck me that it might possibly have some effect, but the result exceeded my expectations. Tea made in Russian fashion with sliced lemon and allowed to get cold seems grateful as a drink; beef-tea, or anything made from meat, made my patient worse.

LETTERS, NOTES, ETC.

SUBSIDIZED HOLIDAYS.

W. G. R. writes: The inquiry of "Salutaris" as to any seaside institution for medical men's holidays reminds me how well provided are the clergy in this respect. Recently a clergyman at the end of my (gratis) attendance was in doubt to which of a Margate or Hastings clerical institution he should go with his wife to board for 15s. a week. He also mentioned several similar establishments elsewhere. I suppose our constant gratuitous work leads those who might be disposed to help us similarly to regard us as wealthy men in no need of help.

THE BRONCHITIS KETTLE.

SIR JAMES BARR (Liverpool) writes: Dr. A. W. Gilchrist evidently does not comprehend my reasons for objecting to the bronchitis kettle when he compares it with "the aspirations and inhalations so commonly practised in Continental watering places." I object to the bronchitis kettle because it saturates the atmosphere with aqueous vapour, and thus prevents the air taking up the aqueous secretions from the bronchial tubes. I often recommend patients to wash and disinfect their mouths and throats with a steam spray, but I know that very little of this vapour gets as far as the larynx, and none of it beyond the division of the trachea. I look upon a good many of the "cures" at Continental watering places as merely gold-extraction processes which I can admire from a distance, but for which I have no use, as I have not got a mine of my own. I must therefore continue to treat patients in my own way, and leave the "cure" of diseases to the *Badearzt*. I should think that the good people of Mont Dore erected a statue to Dr. Bertrand, not because he "first treated asthma and bronchitis by inspirations of heated spring water," but because his *methods* attracted English and other foreign gold to the place. We had a Mont Dore establishment in this country, which failed, and no statue has been raised to the man who introduced the methods to this country. Possibly in the elevated regions of Mont Dore and in the hot, dry summer climate of Allevard, if the patients kept their mouths clean, they might get on as well without any special aspirations.

PNEUMATIC TYRES.

A PAMPHLET issued by the Continental Tyre and Rubber Co., of Clerkenwell Road, which has reached our hands, contains an interesting little history of the genesis of the pneumatic tyre, and a good many useful hints on its preservation. One fact emphasized is that a collapsed tyre subjected to pressure degenerates much more quickly than an inflated tyre in use. The company manufactures tyres not only for motor cars and motor cycles, but for ordinary cycles likewise; it also supplies belts made of canvas and rubber in four standard patterns or sizes.

PAYNE'S REAGENT FOR SUGAR IN URINE

VARIOUS modifications of Fehling's test for sugar have been introduced from time to time, usually with the purpose of making the end-point of the reaction more easily observed when the test is applied quantitatively; with Pavy's solution and some other variants, no precipitate is formed, and the point at which the blue colour finally disappears is therefore easily noted. In Payne's reagent (prepared by the Payne Chemical Company, 71, Gamage Buildings, High Holborn, E.C.) the same advantage is secured, and the reagent is presented in the form of one solution ready for use. The reagent contains ammonio-sulphate of copper, with excess of alkali and glycerin; when heated to boiling and a solution of glucose dropped in, decolorization of the liquid occurs. With the solution are supplied a test tube with a graduation mark at one fluid drachm, and a dropper for adding the urine drop by drop. The test is very easily and rapidly carried out, and a number of trials (made with a sample of the reagent that had been kept for nine months) showed that fairly satisfactory results were obtained. The following figures were obtained with glucose solutions of known strength:

Actual Strength.	Found.
0·26 per cent.	0·31 per cent.
0·45 ,,	0·63 ,,
0·50 ,,	0·48 ,,
0·79 ,,	1·04 ,,
1·58 ,,	1·56 ,,
3·16 ,,	3·13 ,,

(Solutions above 3·3 per cent. are directed to be diluted to below that figure before testing.)

Thus, while it gives less accurate results than the recognized laboratory methods, the information yielded is near enough to be of considerable value, and the convenience and simplicity of the test will greatly favour its adoption.

MEDICAL EXAMINATION AND LIFE ASSURANCE.

FOREWARNED writes: The suggestion of omitting the duration of disease from death certificates contained in Dr. F. F. Bond's letter in the JOURNAL of April 4th, p. 841, is a very valuable one. Upon the life of a patient of mine who died recently I found there were six assurance policies, all effected without medical examination by different parties. I believe the registrar receives 2s. 7d. for each copy of the certificate of death, and the companies do not accept the medical man's certificate.

THE LOCAL TREATMENT OF DIPHTHERIA.

A. T. writes: The use of liq. hydrarg. perchlor. in diphtheria, not only as an application but also internally, was a favourite treatment of the late Dr. Illingworth. I gave it a fair trial, even up to 1 in 500, as an application, but found it inferior to equal parts of liq. ferri perchlor. fort. and glycerine. It is strange how soon the use of a good drug is laid aside. Some fifteen years ago, at a meeting of the Medical Society in London on the treatment of pneumonia, the late Sir Andrew Clark said that the liq. ferri perchlor. had a direct effect on the prevention of consolidation of the lung. That, together with cardiac stimulants (not alcohol), has been my experience for many years, leaving so-called expectorants alone. If one waits till the heart shows signs of failure before using digitalis and strychnine one will probably lose his patient. I have had fewer deaths under this treatment, and have known cases to abort.

THE TREATMENT OF ASCARIS LUMBRICOIDES.

KOBBEKADUWÉ TIKIRI BANDA, M.R.C.S., L.R.C.P.Lond. (Kandy, Ceylon), writes: For the last eighteen months in the course of my varied practice, and for about six months before that in my practice in the General Hospital, Colombo, where I was one of the resident physicians, and had the pleasure of being house-physician to Dr. H. Marcus Fernando, I have used hydrargyri subchloridum in combination with santonin in the treatment of *Ascaris lumbricoides* in very nearly one hundred cases with very satisfactory results. The formula I use is: Santonin, hydrargyri subchloridum, and saccharum album in doses appropriate to the age of the patient. At first I order six powders, and direct one to be given twice a day, morning and evening, for two days; and on the third day a dose of oleum ricini in the morning. If the results are not satisfactory I order the remaining two powders to be given on the fourth day in the same way as the four previous ones, and followed by the oil on the fifth day. (*a*) By prescribing santonin in small doses the ill-effects of a single large dose are avoided. (*b*) As the worms are dislodged from their habitat by the santonin they are at once removed from the intestinal canal by the purgative action of the calomel, and this I confirm by statements that have been made to me that at least two motions containing worms are passed on the days the powders are given. (*c*) Given that santonin dislodges the worms, it is most desirable to combine a purgative with it to get rid of them within a few hours, for most of the ill-effects attributed to santonin may be due to the worms that are only dislodged, but not killed, by santonin. (*d*) Patients have not been known to be uncomfortable at any time during this treatment. (*e*) The increased flow of bile caused by the calomel, and that coming in contact in an undecomposed state with the dislodged worms, I am inclined to believe, would act as a parasiticide. (*f*) That santonin would always act better if prescribed in the powder form, for it has often been told me that santonin lozenges were tried and had not the desired effect.

AN IMPROVED CENTRIFUGE.



WITH reference to a note published under this title in the BRITISH MEDICAL JOURNAL of April 11th, p. 908, Messrs. Maw, Son, and Sons write to say that they have for some time made a simple electric centrifuge, as illustrated in the accompanying diagram. They also make a larger but still compact instrument suitable for institutions.

THE ABDOMINAL SURGEON: THE DIFFERENCE.

J. M. writes:

Said the child of a Northland chirurgeon,
"Pray what's an 'abdominal' surgeon?
Does he live in the stomach, like ane's head in a bonnet?"
Said I, "Stomach is scarcely the word, 'twill do;
Have you not heard of the young kangaroo
(The charming and cute kangaroo),
That 'don't' live in his mither's inside, but 'pon it?
Same way, the abdominal surgeon
Don't live *in* the part that you mention, but *on* it
(The 'cute abdominal surgeon lives *on* it)."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Eight lines and under	0 4 0
Each additional line	0 0 6
A whole column	2 13 4
A page	8 0 0

An average line contains six words.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address

ON THE

DIAGNOSIS AND OPERATIVE TREATMENT OF DISEASES OF THE STOMACH.

DELIVERED TO THE SWANSEA DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

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MR. PRESIDENT AND GENTLEMEN,—The only criticism which can be directed against the choice of subject which I have the honour of bringing before you is that it is too wide for the time at my disposal. I selected the subject, however, in conjunction with your President because it is one which appeals to both the medical and surgical branches of the profession, because at the present time it is pregnant with interest, because it is one on which our opinions have not taken any final form, and, therefore, one in which discussion is profitable. It is a subject, moreover, in which I take considerable interest and to which I have given special attention. The question of the adoption of surgical treatment in any given case of stomach disease belongs to the province of the physician, but it is needless to say that with operative methods and technique he has neither the knowledge nor competency to deal, and these will form no part of my paper.

That surgery has achieved great things in the treatment of diseases of the stomach every thoughtful man will acknowledge with admiration and gratitude. It will achieve more and more if the conditions which make for and mar its successful employment are from time to time passed under review.

To judge of a treatment fairly, sufficient length of time must have elapsed since its inception. In the earlier cases methods are imperfect, and time and experience have not yet produced good judgement. Again, it is important that cases which have been operated upon should be followed for a sufficient length of time, so that benefits which are lasting may be distinguished from those which are transitory. In studying the results of a treatment no data are so satisfactory as the records of a hospital. Here you can see all the results, whether they be good, bad, or indifferent, whereas if you only read results published in the journals you get a picture which is too much *couleur de rose*. It is only human nature that good results should hold a more prominent place in publications than bad ones; it is hard lines enough to have to face a failure at the time it occurs without having to reconstruct it at a later date in print.

The numerous cases I have studied do not go back further than the year 1902 and in the large majority the diagnosis was confirmed either by operation or by *post-mortem* examination. The operations were performed by surgeons of position and experience, so that their technique may be safely assumed to have been perfected. In judging of results it is the cases classified as "relieved" which are so difficult to estimate fairly. People adjudge relief so variably. Some account mere prolongation of life as relief, without regard to the quality of the life. That, in my judgement, is not the true criterion of relief. We should not look at the quantity of life detached from its quality. If an operation will add to the comfort as well as to the length of life, by all means perform it, but if not, to prolong the life is to prolong the suffering, and it is far better to let Nature take its course.

GASTROSTOMY FOR MALIGNANT DISEASE OF THE OESOPHAGUS.

This point is well illustrated by the operation of gastrostomy for malignant stenosis of the oesophagus. Gastrostomy may prolong life, but prolongs misery also. Unless and until there is some definite urgent symptom like thirst calling for relief, the operation should be avoided. Contrary to what is taught in some textbooks, insatiable thirst is not a frequent feature of this distressing illness; in most cases the body is able to obtain enough water. The disease deprives the patient of appetite, and sufficient nourishment can usually be taken to avoid the pangs of hunger. In 34 consecutive fatal cases at the London Hospital, only 5 could not readily swallow water, and in only one of these was thirst a distressing symptom. In 25 of the 34 cases the causes of death were ascertained as follows:

Causes of Death.

Bronchopneumonia	8 cases
Perforation into a neighbouring viscus ...	8 ,,
Secondary deposits	4 ,,
Gangrene of lung	1 case
Exhaustion	3 ,,
Death under anaesthetic	1 case

To do gastrostomy on most of these patients is not to do them a service.

MALIGNANT DISEASE OF THE STOMACH.

The operative treatment comprises excision, for instance, pylorectomy and gastro-enterostomy. In the few cases where the disease is discovered early enough, the results of excision are promising, and all would agree that the operation should be recommended. With gastro-enterostomy it is unfortunately different; here statistics from varied sources fail to show an immediate mortality of less than 25 per cent. Nor does the operation materially arrest the disease. It does palliate suffering where there is pyloric obstruction, but not often otherwise. Let me quote the published statistics of Kronlein and Mikulicz,[1] and the mortality of the cases I have studied myself.

	Immediate Mortality.	Average Prolongation of Life as Compared with Cases not Operated upon.
Kronlein	24.3	3 months.
Mikulicz	25	3½ months.

The cases I have studied similarly show an immediate mortality of not less than 25 per cent.

I recently made inquiries about 8 patients who had had gastro-enterostomy done for cancer. In 7 of these the duration of life after the operation varied between six weeks and six months, and the quality of the life in every case was bad the symptoms being unrelieved. The eighth case had gained 2 st. in weight, and was enjoying his food; he turned out to be a pylorectomy combined with a gastro-enterostomy. Thus, you can only put against the risk of 25 per cent. immediate mortality an insignificant prolongation of life and the chance of a partial relief of suffering.

I can conceive of some disagreeing with that statement and maintaining they have witnessed improvement in weight and other symptoms after gastro enterostomy for cancer. That is true, but the improvement is transitory, and the patient drops back quickly after a short lapse of time; nor is it an infrequent experience to find malignant stomach patients improved in weight under medical treatment and after simple laparotomy. It is due to careful feeding and nursing, and due also in the case of laparotomy to the fact that hope is brought back for a time into the patient's life. Not long ago a patient with malignant disease of the stomach came into hospital for gastro-enterostomy, but improved so much in weight while waiting in the medical wards that he refused operation and discharged himself.

In stenosis of the pylorus due to scirrhus the results are better. Here life and certainly comfort are often promoted.

The conclusions, then, that I should like to urge are these: (1) In cases seen sufficiently early I should advise the radical treatment, for there is something substantial to gain in return for the risk. (2) In cases too late for this it is best, in most instances, to advise against gastro-enterostomy, because the immediate risk is great, and there is not a sufficient prospect of advantage to balance the risk. Even where an exploratory operation has been done, I should be against a gastro-enterostomy, unless there were some definite object to be gained and the conditions of success were favourable. Where, however, the pylorus is obstructed by a hard *circumscribed* growth, the advantage of providing an exit for the food outweighs the risk, but even here it is important to remember that if the stomach is very dilated and its wall thin the danger of the operation becomes greatly increased, and lavage would often be a better treatment to prevent overloading and

stagnation of contents, for lavage is less dependent on efficient motor power than is a short circuit.

In face of the much surgery can do in the early stages of cancer and the little in the later, accurate and early diagnosis becomes of increasing moment. The presence of pyloric tumour, and especially one which is movable, means cancer, and probably one too far advanced to be removed with advantage. We cannot wait for a lump to make a diagnosis.

SIGNIFICANCE OF PAIN.

Although pain is a familiar symptom of cancer, it is often not a prominent early feature. Discomfort and vomiting may both exist without it. In contrast to this the absence of actual pain in gastric ulcer is almost unknown, and if there is vomiting it follows this pain. In 60 consecutive cases of chronic ulcer which I have collected, in all but one pain was the most prominent symptom. While investigating this subject of pain I have been impressed with the fact that former views—that lesions near the cardiac end of the stomach are associated with pains soon after food, and lesions in the pyloric end of the stomach with pain a long time after food—are erroneous. I find that pyloric lesions, whether due to ulcer or malignant disease, are often associated with pain immediately after food. Out of a series of 60 cases in which both the exact time of the onset of the pain and the condition of the stomach, either at operation or at the necropsy, were plainly recorded, I found the pain was immediately after food in 23, and in these 23 the lesions found were as follows:

Limited to the pylorus, producing obstruction	... 19
Ulceration at the lesser curvature near pylorus	... 3
Many and numerous adhesions everywhere	... 1

Of the remaining 37 cases in which pain was *some time* after food, 7 showed pyloric lesions. All these 7, however, showed other lesions besides those at the pylorus.

Where stomach discomfort appears in an adult over 30, who has previously had a good digestion, and especially if there is no obvious cause like overwork or bad habits, further investigation is needed, and if there is occasional vomiting the case for inquiry is even stronger. That investigation should, briefly, consist of:

1. Inflating the stomach with gas to see if it is enlarged or prolapsed.
2. Passing the tube eight hours after an ordinary meal to see if the organ has emptied.
3. The analysis of stomach contents after a test meal for active hydrochloric acid.
4. The microscopic examination of the fasting stomach contents.

The search for physiologically active free hydrochloric acid should be both qualitative and quantitative. If it is done accurately and the proper conditions observed it is most valuable evidence. Hydrochloric acid is found in three forms in the stomach: (1) Free; (2) combined with proteids and other nitrogenous organic bases; (3) combined with inorganic bases. The first two forms are physiologically active and are the only ones which concern us. The relative quantities of these forms of hydrochloric acid will depend on the amount of proteid and other nitrogenous substances contained in the test meal. Both forms are of equal significance, but the free form is somewhat easier to demonstrate. The best test meal for most purposes is one without meat; then hydrochloric acid, if secreted, will be present in the free state. It should consist of a round of well-toasted bread and a pint of weak tea or thin gruel. It should be given on an empty stomach early in the morning, and should be withdrawn one and a half hours later without the addition of any water. Willcox,[2] who gives the best methods of analysis, examined 60 cases, and in most of them the conclusions were confirmed by operation or necropsy. Those conclusions were as follows:

In gastric and duodenal ulcer the total acidity is high, from 0·2 to 0·3 per cent.; most of the acidity was due to active hydrochloric acid and free hydrochloric is present.

In carcinoma the total acidity is low; active hydrochloric acid in the free form is absent and in the combined form present in small amount.

If these further inquiries strengthen the suspicion of malignant disease, operation should be advised without delay, in the hope that if carcinoma is present a radical operation can be performed.

GASTRIC ULCER.

The treatment of acute perforated ulcer calls for no comment. All are agreed that immediate operation is its only treatment. The operative treatment of subacute and chronic ulcer resolves itself into a study of gastro-enterostomy. To estimate what gastro-enterostomy can do for this condition we might content ourselves with judging it by the clinical results.

The Modus Operandi of Gastro-Enterostomy.

But we shall never arrive at a complete view of its virtues and limitations until its *modus operandi* is determined. If gastro-enterostomy is performed does the food select the new route in preference to the old? Do the stomach contents drain out through the stoma, or are they pushed through it gradually by muscular action? How far is the virtue of gastro-enterostomy due to modifications it effects in the quantity and quality of the gastric secretions?

The stomach is not a passive bag, but one which during digestion is constantly changing its size and shape. Its muscular fibres—longitudinal, circular, and oblique—are so arranged as to impel the contents in a definite direction. As soon as a meal has been taken peristaltic waves may be seen to travel over the pyloric region and converge on the sphincter. The muscles at the cardiac end appear rather to contract tonically, and thus exert a steady pressure on their contents, gradually pushing them into the grasp of the pyloric region. It is not to be supposed that the making of a hole in the stomach wall will alter the direction in which the food is propelled. This is incidentally illustrated by the fact that in perforated gastric ulcer stomach contents are not found in the abdominal cavity. The intragastric pressure during digestion is by no means uniform, and it has been shown by experiment that the pressure at the pylorus may be at least three or four times as great as it is at the cardiac end. Even if the pylorus is closed, the contents are still driven towards it. It almost stands to reason, therefore, that as long as the pylorus is patent the food will by preference leave the stomach by that route even if a stoma exists. If the pylorus is obstructed the contents will still be carried towards it, then will travel back to the stoma and leave by that exit. But they will do this not in virtue of anything that can be called drainage, but in virtue of muscular action. This is shown by the fact that one of the most important factors for a successful gastro-enterostomy is efficient muscular action. The spent muscular coat is one of the greatest dangers that besets operation, and accounts for a large proportion of its failures. That is one of the reasons why gastro-enterostomy does harm rather than good in cases of atonic dilatation. If anything like drainage occurred the greatest benefit would follow, making the stoma at the most dependent part of one of these large stomachs. Our knowledge of the movements of the stomach in digestion have been greatly contributed to by feeding animals and human beings with bismuth, and studying the shadows seen through the *x*-ray screen both before and after gastro enterostomy. Cannon and Blake,[3] Leggatt and Maury,[4] Barclay[5] and others have added much to our knowledge by this method of investigation. Their conclusions do not altogether agree. Cannon, judging from researches on animals, concludes that food will only travel through the stoma if the pylorus is obstructed, whereas Barclay, from his observations on human patients submitted to gastro-enterostomy, states that the contents do go through the stoma. My own experience supports that of Barclay.

In my view, the conditions after gastro-enterostomy are as follows: The food is churned by the muscular fibres of the pyloric region and impelled towards the pylorus. If the pylorus is obstructed the contents leave by the stoma; but if the pylorus is patent the major part of the contents take this route, and only a minor portion leaves by the stoma, and in both cases in virtue of muscular action. Cameron,[6] in his exceedingly valuable paper, Some Physiological Aspects of Gastro-enterostomy, quotes a case of duodenal fistula, which remained open after gastro-enterostomy, but closed forthwith when the pylorus was subsequently ligatured. The advantage of the stoma where the pylorus is obstructed is obvious. Where the pylorus is patent the benefit of the stoma would seem to be that it acts as a safety valve and prevents the intragastric pressure from being too high. If

the contents are being pushed hard on to the pylorus, some will come back and escape by the stoma, and thus the stay of the food in the stomach is shortened. If, further, spasm of the pylorus occurs, as it undoubtedly does in gastric ulcer, the conditions temporarily become those of pyloric obstruction, and the stoma is an emergency exit, which, being devoid of a sphincter and a nervous mechanism, is not liable to closure from the stimulation of acid duodenal contents. It would appear, further, that gastro-enterostomy modifies the composition of the gastric secretions. One often has found evidence of bile in stomach contents after this operation. It never seems to do harm, and it probably does good. As Cameron points out, there is probably distinct advantage in the alkaline duodenal contents regurgitating into the stomach, which they are able to do when the tide of digestion is slack, for in this way the acidity of the stomach is diminished. The benefit, then, which gastro-enterostomy does on an ulcer away from the pylorus is probably due to:

1. Diminished acidity when the stomach is quiet in the intervals of digestion.
2. The evils of pyloric spasm are eliminated.
3. The intragastric pressure is kept lower, and therefore the movements and tension of the stomach wall are less.

Our knowledge, however, of gastro-enterostomy is very far from being complete.

GASTRO-ENTEROSTOMY FOR ULCER JUDGED BY RESULTS.

In addition to those in private practice, I have investigated 240 cases of ulcer treated at the London Hospital, belonging to the years 1903-1906 inclusive, and I have to thank my colleagues for permission to refer to their cases, all of which have either been operated upon, or have died and been examined *post mortem*. The results altogether are strikingly good. Sixty patients have been personally interrogated not less than two years after operation in order to show their condition now as compared with their condition prior to operation. In answer to the inquiry as to which was the symptom above all others which led them to consent to operation, the almost invariable and prompt answer was "pain." To-day with most of them the pain is much less, and with some has disappeared, but many of them are unable to do heavy work like lifting or pulling; if they do, they feel pain. One man stated that if he did his work, which was rather of a heavy character, for one week, he often had to rest completely during the next. The best results seemed to be with patients whose occupations are not physically onerous. Several patients stated that they have to be careful of what they eat both as regards quantity and quality of food. Adhesions which are tough or so situated as to restrain peristalsis prejudice complete recovery, pain being liable to persist. For this reason ulcers which are found at the operation to be partly or wholly healed with adhesions round them do not seem to do as well as ulcers which are open. Ulcers on the lesser curvature, which, equally with the pylorus, seems to be a most frequent site, appear to do especially well. Either adhesions do not readily form in that position, or if they do they fail to tether the stomach in such a way as to restrain its movements, it being remembered that the cardiac portion of the lesser curve is one of the most fixed parts of the viscus. Relapses are not unknown. Thus, a laundryman had been well for three years, but was now getting periodical attacks of the old symptoms. Two patients had had attacks of haematemesis since the operation, and in one of them the pain was still great.

The immediate mortality after gastro-enterostomy in the benign cases is about 6·5 per cent. (Mayo). As evidence of the improvement in methods, in Bulstrode's 500 cases recorded up to 1902 peritonitis caused more than half the total mortality, whereas in 89 cases subsequent to 1902 investigated by me only 1 died of peritonitis, and of the total deaths four-fifths died of exhaustion, due, as it seemed, to the motility of the stomach wall being spent beyond recuperation. But although the results lack perfection it is abundantly clear that the ulcers heal, and the patients for the most part are placed in a secure and relatively healthy position. If the symptoms of ulcer do not abate within reasonable time under medical treatment, or if the symptoms recur and recur as soon as the patient is up and about, or if there is repeated haemorrhage, the right advice is operation. If the stomach shows signs of failure of motor power, there should be a period of rest in bed with careful dieting and strychnine immediately prior to the operation, bearing in mind that most of the risk belongs to those cases in which muscular power of the stomach is spent.

DIAGNOSIS OF GASTRIC ULCER.

One of the greatest difficulties belonging to gastric ulcer is its diagnosis. The experience of the last ten years has made us realize that many cases which were previously diagnosed as gastric ulcer were not in reality ulcer at all. Ten years ago the patient who had pain or tenderness in the upper abdomen related to food and associated with vomiting and haematemesis, was usually thought (if hepatic cirrhosis and cancer could be excluded) to be suffering from gastric ulcer. But it has been shown by Bouveret, Hale White,[7] Allchin, and myself,[8] amongst others, that this is far from being the case.

Anaemic Dyspepsia.

There is first the group of young women, who are usually anaemic, have pain after food, who vomit, though not always as an immediate sequel to pain, have a diffused tenderness of the epigastrium, and sometimes vomit blood. These symptoms do not necessarily or usually denote ulcer, as has been many times proved at operations. The diagnosis of ulcer, however, may be difficult. The points to which to pay attention are in my judgement these: (1) The patients are exclusively young females; (2) the symptoms have been preceded by anaemia; (3) on the patients being put to bed, the symptoms improve much more rapidly than in the case of ulcer; and (4) solid food and iron are tolerated almost from the first. Incidentally it may be remarked that the deletion of this large group of curable cases from the older statistics of gastric ulcer presents in a less favourable light the results of medical treatment.

Haemorrhagic Gastralgia.

But when we have cut away from gastric ulcer this group of anaemic dyspepsias our difficulties are not over. There is yet another group of cases, which I have ventured to call "haemorrhagic gastralgia," in which the clinical manifestations are identical with those of ulcer, making certain diagnosis in the present state of our knowledge impossible. These cases are not confined to the young, are not necessarily associated with anaemia, and though the patients are most often women, instances amongst men are met with. It has been stated by some authorities (for example, last edition of *Allbutt's System*[15]) that the existence of well-defined areas of deep and superficial tenderness in addition to the usual symptoms makes the diagnosis of ulcer certain. This distinction, I am convinced, is incorrect, as the two following examples will show:

1. E. W., aged 36. Symptoms four years. No anaemia. Pain localized to small area of epigastrium going through to back, following food, relieved by vomiting. Definite area of skin tenderness, and well localized area of deep tenderness in epigastrium. Haematemesis.
2. A. P., a woman aged 26. Symptoms three years. No anaemia. Pain localized to epigastrium, relieved by vomiting. Haematemesis. Well-localized skin and deep tenderness, etc.

In both of these patients I thought that ulcer was present, and my surgical colleague, Mr. Eve, in each case opened the stomach, thoroughly explored its interior with electric light and speculum, found in one instance a mammillated mucous membrane, and in the other case numerous punctate haemorrhages, but in neither case any ulcer. I quoted similar examples in a previous paper.[9] Hale White[10] reports 29 *post-mortem* examinations on these cases, which he styles gastrostaxis. No ulcer was present in any of them; 12 cases occurred between 21 and 30, 11 cases between 30 and 40; the ages of the remainder were 18, 19, 41, 44, and 54. Of the 29 cases 27 were women and 2 men. Herringham,[11] Fredk. Smith, Mayo Robson,[12] Moynihan and Lejars[13] have also recorded examples. It is probable that some cases reported as ulcer, and in which the stomach interior has not been explored at the operation, in reality belong to this group.

As regards treatment, if the indications are present these cases of haemorrhagic gastralgia get operated upon. As far as my experience goes at present gastro-enterostomy

may benefit them, but not to the same extent as it benefits ulcer. The chief reason why the operation benefits is apparently due to the fact that increased acidity, which is so often a feature, is diminished by the passage of alkaline intestinal contents through the stoma into the stomach. A good practical rule when one contemplates advising gastro-enterostomy in cases presenting the manifestations of ulcer is to pause longer if the patient is a woman and if she is under 30.

HAEMATEMESIS.

Stomach bleeding has already been dealt with in previous sections. It sometimes occurs, however, unexpectedly and profusely, unassociated with other manifestations, and has to be dealt with as an emergency. Should such haematemesis be operated upon with a view to ligaturing the bleeding points? In my judgement the answer is an emphatic negative, and for these reasons:

1. The operation must be a severe one, involving pulling on the stomach, and incision into its wall and a search of its interior, and all this at a time when the patient is exhausted by a loss of blood.

2. Haematemesis may have multiple points as distinct from a single point of origin, and, as has already been shown, we have no means of knowing beforehand which condition exists in any given case, nor even is there opportunity to inquire. To place sutures round numerous small bleeding points of the mucous membrane is almost a futile proceeding, for one point that is seen there are several that are unseen.

3. Medical treatment of haematemesis is successful, and the mortality is not appreciably more than 3 per cent., though it is only fair to state that Mansell Moullin puts it at 6 per cent. In first attacks of haematemesis the mortality would probably be even lower. It is surprising how near death a patient may be from haematemesis and yet recover. Fredk. Smith[14] had the interesting experience of 13 cases admitted for haematemesis under his care in a little over three months. Of these 11 were women and 2 men. In 2 patients the haemorrhage was so severe that they were thought to be moribund, yet both recovered.

NON-OBSTRUCTIVE DILATATION AND GASTROPTOSIS.

Obstructive dilatation has already been dealt with. For the atonic or non-obstructive dilatation gastro-enterostomy, whether judged by the modifications in function it produces or by actual clinical results, is rarely a necessary or desirable treatment. Failure of motor power, which is its marked characteristic, not only makes the operation risky, but detracts from the chances of its success. Muscular efficiency is as essential for the stoma as it is for the pylorus; and it has been shown that, in virtue of the arrangement of the muscular fibres, the pylorus is the preferential route, and if it is not obstructed, the stomach contents having reached it will leave by it. If pyloric spasm were a feature of atonic dilatation there would be some justification for the stoma, but it seldom is. Again, atonic dilatation is more often associated with diminished rather than increased hydrochloric acid, and therefore no benefit can accrue from the passage of alkaline intestinal contents through the stoma.

In certain cases where dilatation is associated with marked gastroptosis, in which the contents have to be propelled, so to speak, uphill towards the pylorus, or there may even be something approaching to kinking at the exit, under these circumstances it is conceivable that the pyloric path may be so difficult that a stoma becomes of use. Further, medical treatment of dilated stomach, whether it is or is not associated with gastroptosis, is often satisfactory in its results. Mere enlargement or prolapse of stomach is not necessarily a bar to efficient motility. Such stomachs can be made to empty in spite of the mechanical disadvantages which they present, provided their motility is kept at top hole. This is done by careful dieting, which makes the work as easy as possible, by periodical massage, keeping the patient fit, drugs like strychnine, and insisting from time to time on periods of rest on a bed or couch the foot of which is raised. It is surprising how well these patients do with such treatment. I will instance two examples in my own practice:

1. A woman aged about 42. About four years ago her stomach was enlarged and prolapsed, the greater curvature was nearer the pubes than the umbilicus, and the lesser curvature a little above the umbilicus; the pylorus was not much displaced from its natural position. She had the usual symptoms associated with this condition. They did not directly result from the stomach being too big or prolapsed, but because its motor power had failed. Under treatment the size and shape of the viscus only partially improved, but the motor power was restored in spite of the mechanical disadvantage; and the patient got well and remains well, provided she keeps fit, does not get over-tired, and is cautious with her food.

2. In this patient, a man aged 81, an even more striking case, the stomach in size and position was almost identical with the foregoing case, and the condition has been under observation for ten years. At intervals during these years, generally once or twice a year, there has to be a period of strictly suitable diet, much rest, regular massage, etc., and each night the stomach contents are rendered alkaline by a large dose of sodium bicarbonate in hot water. By these means this patient has been able to lead an active life. An operation—gastropexy (lifting and fixing) is sometimes performed. Frederick Eve has done it several times, and reported on 3 cases under his and my care. The success which follows this treatment is apt to be partial, and I doubt in the long run whether it will produce better results than the medical treatment to which I have referred above.

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An Address
ON
GASTRO-ENTEROSTOMY AND AFTER

DELIVERED TO THE SUNDERLAND DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

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ON September 27th, 1881, Wölfler, then assistant to Billroth, in Vienna, was engaged in operating upon a patient suffering from carcinoma of the pyloric portion of the stomach. Resection, which it was the intention of the operator to perform, was found to be impossible, and the abdomen was about to be closed when Nicoladoni, who was acting as assistant, suggested that a new outlet from the stomach, to replace that which the disease had obstructed, might be made by attaching the jejunum to the stomach. There are few surgeons who can afford to neglect the whispered hint of a well-trained and familiar assistant, and Wölfler immediately acted upon the suggestion thus quietly made to him. In this way there was introduced to surgery an operation which has been the means of saving unnumbered lives, and of restoring to many thousands that enjoyment of perfect health which would otherwise have been for ever denied them. In surgical work the perfect method is rarely, if ever, a matter of instant accomplishment, nor is it often the work of a single individual. The very great majority of the operations practised to-day are, so to speak, composite procedures made up of details suggested here by one authority, there by another.

In the constant endeavour to find the simple and the safe method of gastro-enterostomy mechanical aids, almost beyond computation in their infinite variety, have been exploited by one surgeon after another. Happily we have at last arrived with confidence at the conclusion that nothing more is necessary to ensure the firm union of the intestine to the stomach than the simple continuous suture. But though these bobbins, buttons, elastic ligature, and strings of all kinds are relegated for ever to the museum shelves, we owe it to their inventors, and, above all, to Dr. J. B. Murphy, to say that, without the knowledge and the confidence which these things generally have given us, the progress of intestinal surgery must have been long delayed.

In the original operation of Wölfler the jejunum was attached to the anterior surface of the stomach, and it was

placed in such manner that its proximal end lay to the right, its distal to the left. The jejunum, that is to say, was anti-peristaltic in relation to the stomach. Various disabilities, the chief of which was regurgitant vomiting, followed this operation, and in 1885 von Hacker attempted to overcome them by utilizing the posterior surface of the stomach rather than the anterior for the anastomosis. The results at first were little, if at all, better, and it was not until the year 1900 that the real causes of the distressing complications of the operation began to be understood. In that year Petersen, in reporting the results of Czerny's clinic at Heidelberg, called attention to the need for the attachment of the jejunum to the stomach at a point as close to the flexure as possible. He gave good reasons for the adoption of the "no loop" method, and by degrees the opinion has become widespread, if not general, that the posterior no-loop operation gives results, both immediate and remote, which are decidedly more satisfactory than those attainable by any other method. In this operation, as I described it some years ago, the attachment of the jejunum to the stomach was made along a line which ran from above downwards and to the right, to end at the lowest point of the greater curvature. In my own hands this operation gave excellent results; but this experience was not repeated by all surgeons. Dr. W. J. Mayo, for example, found that in some instances, generally after a period of a few weeks or a few months, bilious vomiting became troublesome, and in certain cases necessitated a secondary operation. He considered that this symptom was due to a mechanical obstruction, a kinking of the jejunum either at the flexure or at the upper end of the attachment of the bowel to the stomach, due to a double displacement of the intestine from its normal position. The normal position he described thus:[1]

> The jejunum from its origin drops at once into the left abdominal fossa. Not only does it pass to the left, but it gravitates backwards into the left kidney pouch underneath the splenic flexure of the colon, so that at a point 4 in. from its origin it lies on a plane to the left and posterior.

Accordingly he suggested that the attachment of the jejunum to the stomach should be made in such manner as not to alter this "normal position." The opening in the stomach was therefore made to run from above downwards and to the left.

There can be no doubt that the position Dr. Mayo describes is that in which the jejunum is often (by no means always) found when the abdomen is opened upon the operation or *post-mortem* tables. And it is so found for a very good reason—that is the position into which it falls by gravity when the patient lies on the back. The duodenum ends and the jejunum begins on the left side of the front of the body of the second lumbar vertebra, and from here, in the recumbent position of a patient, the gut, if free to move, will naturally drop backwards into the kidney pouch. But a moment's consideration will make it clear that this can be no fixed position. The jejunum is pendent from the flexure and alters its position from time to time; it can swing from one side to the other with ease, and without obstruction occurring at the flexure. The little meso-colic ligament prevents it sagging too tightly down towards the pelvis. I think it probable that this slender ligament exists purely for the purpose of suspending the flexure in order to prevent a kink occurring in any of the various movements of the gut. If a patient be made to lie on the right side before the abdomen is opened the jejunum will be found to fall to the right. If a patient dies while lying on the right side the jejunum will be found to pass almost horizontally to the right, as I have clearly demonstrated. There can be no "normal position," therefore, of the jejunum in the sense described by Dr. Mayo. The jejunal origin is so constructed that an easy play of the gut in all directions is possible. The best position, therefore, for an anastomosis of the jejunum with the stomach to take is determined by the most frequent or easiest position taken naturally by the jejunum. This is, in my opinion, the vertical position; and for some time now I have attached the bowel as nearly as possible in the exact median vertical plane, and have made the anastomosis as close to the flexure as possible. In a paper elsewhere I have discussed the causes of the "bilious vomiting" which occurs after the "no-loop" operation; here I need only say that it is probably due to a mechanical obstruction, slight indeed and perhaps intermittent, caused by a partial rotation of the gut around its longitudinal axis at the time the attachment to the stomach is made. It is therefore necessary to see that the part of the jejunum selected for the suture lines can be approximated easily, and without a twist or kink, to the posterior surface of the stomach at the place where the attachment is to be made. This, then, is the method of gastro-enterostomy which I believe to be the best; it is that which I have practised for almost four years in all cases, except in some few instances, about 20 or 30 in all, in which I have performed the anastomosis along Mayo's line. The immediate mortality of the operation has varied according to the type of case for which it is done. If cases of perforation and acute haemorrhage are excluded the mortality is less than 1 per cent. In cases of chronic duodenal ulcer it has been in my hands a little over 2 per cent. I have had no deaths among the cases of chronic gastric ulcer. When the very enfeebled condition of many of the patients is remembered, I think it will be conceded that a smaller mortality than this is hardly to be expected in an operation of this character. The immediate results of gastro-enterostomy thus performed are, then, quite satisfactory. What are the ultimate results? Before endeavouring to give a satisfactory reply to this most important question I would ask you first to consider what manner of operation gastro-enterostomy is, and what is the precise purpose we should expect it to fulfil. I am an ardent and a sanguine advocate of this operation, than which I think there is none in all surgery more completely satisfactory; but I must confess to a feeling of amazement when I see the operation advocated, as it not seldom is, for conditions for which hardly anything could be more inappropriate.

Gastro-enterostomy is, of course, a "short-circuiting operation" so called. It affords an opportunity to the stomach contents to avoid the long passage by the pylorus and duodenum into the jejunum. Do the contents avail themselves of this chance? This question raises the further question as to the effect of short-circuiting operations in general in the alimentary canal. Supposing entero-anastomosis to be performed, does the opening encourage all or any of the contents to pass by the new route, or is the old route more easily followed? This question has been answered both by clinical and by experimental work. For example, in a case of acute general peritonitis due to gangrenous appendicitis upon which I operated twelve months ago, a faecal fistula followed and refused to heal. I therefore decided to operate, and, making an incision over the sigmoid flexure, I anastomosed the lowest piece of small intestine available above the fistulous opening to the sigmoid, the new opening being about 3 in. in length. After the operation the faecal fistula discharged for several weeks, exactly as it had done before, and continued to do so until I obliterated the part distal to the anastomosis by suture. This case exemplifies what I believe to be a fact—that artificial openings are not preferred to the natural channels, unless in the course of the latter some obstruction is present. A great deal of valuable experimental work has been done, by several observers, the first of whom was Kelling.[2] In a long series of investigations he performed gastro-enterostomy by all methods—anterior, posterior, Roux's; attaching the jejunum at a high point, at a low, and the ileum at any part. The results were always the same. Nothing passed by the new anastomosis; all food, solid or liquid, went through the pylorus. Cannon and Blake[3] demonstrated the same facts. When the jejunum was joined to the stomach the new opening was not made use of, except in one case where it lay very close to the pylorus, and then only in a small measure. Delbet[3a] divided the intestines and attached the distal end to the stomach and the upper to the skin, so that all food passing by the gastro-enterostomy opening would be discharged by the rectum, all leaving by the pylorus would escape at the artificial anus. Nothing ever passed through the anastomosis; everything ingested, fluid or solid, left by the pylorus, and was discharged on the surface of the abdomen.

Tuffier[5] showed the truth of these observations in similar experiments, when the working of the parts was demonstrated by feeding the animals with food containing bismuth. In all cases and in the hands of all observers the same fact was disclosed: with an

unobstructed pylorus nothing is ever transmitted through a gastro-enterostomy opening. Why is this? The explanation given by Cannon and Blake is probably correct; it is that the new orifice becomes stretched in the movements of the stomach, and so becomes, as it were, a part of the gastric wall, not the slightest aperture remaining.

Much of the literature dealing with the surgery of the stomach has been hitherto concerned with the details of technique, with the complications which follow immediately upon the operation, and with the mortality. Upon all these points there is now very little left to say, except with regard to a very formidable sequel, destined, I believe, to prove the most serious of all—namely, peptic ulcer of the jejunum. Almost nothing has been written as to the after-results of the operation, and, so far as my knowledge goes, there has been no close examination into the history of patients at some long period after operation, nor any considered opinion passed upon the information so discovered. Of the immediate success of gastro-enterostomy and of its small death-rate many surgeons can now speak with the authority of adequate experience. But there is great need for a close scrutiny of late results, in order that we may learn what disabilities may attach to the operation, what are the limits to be put to its performance, what exactly are its sustained effects upon the general nutrition, and, finally, whether there is a possibility of any recurrence in the stomach or in the duodenum of whatever disorders first made the operation imperative.

In order to be able to speak with some authority upon these points, I have collected the records of all cases operated upon by me up to the end of the year 1905. Owing to the kindness and courtesy of the many medical men who referred the patients to me in the first instance I have been enabled to obtain written answers to a series of printed questions as to the present condition (February, 1908) of most of them. The reports in the great majority of cases have been made by the medical men, but a few have been received direct from the patients themselves. In order to eliminate all prejudice these reports were then handed over to my colleague, Mr. H. Collinson, who very kindly undertook the heavy task of summary, analysis, and criticism. For convenience and to ensure greater accuracy the cases were divided into four groups, in accordance with the plan always followed by me:

	Number of Cases.	Number of Deaths.
1. Perforating ulcer	9	1
2. Cases of acute haemorrhage	26	3
3. Cases of chronic ulcer	205	2
4. Cases of hour-glass stomach	15	3
Totals	255	9

In all there were accordingly 255 cases with 9 deaths, a mortality of 3.5 per cent. But in order to assess the actual risk which a patient undergoes it is more accurate to compute the death-rate in each separate class; for in the cases where the operation was done because death was imminent from haemorrhage the risk must obviously be greater, and in the cases of hour glass stomach gastro enterostomy may be only one-half the operation necessary; in no less than 6 of the 15 cases in my series has gastro gastrostomy or gastroplasty to be performed at the same time. These complications add perhaps a greater increment of risk than does strangulation to the ordinary operation of radical cure of a hernia. In my series of cases from the first I have performed up to March, 1906, including every case and all complications, the mortality is under 2 per cent. But mere recovery from an operation is by no means all that is necessary. There is an unfortunate habit of describing an operation as "successful" almost at the moment of its completion. We are all accustomed to be asked by the relatives of patients who are interviewed when an operation is immediately over, whether the operation has been "successful." That is a question which may be answered satisfactorily only after the lapse of many months. In an operation of the severity of gastro-enterostomy, an operation, moreover, by which certain physiological principles seem to be set at naught, the lapse of two years is certainly not too much to allow us to speak with confidence as to its success. I propose to consider the after-results of my cases in the following manner.

GROUP 1.—PERFORATION OF THE STOMACH OR DUODENUM.

During the period mentioned, that is, to the end of 1905, I operated upon 27 cases of perforating ulcer; 18 patients recovered. In 6 cases gastro-enterostomy was performed immediately after the closure of the ulcer because of the narrowing at or near the outlet of the stomach which this procedure had caused. In 2 other patients symptoms due to a cicatricial stenosis near the pylorus developed within a few months, and gastro-enterostomy was necessary to afford relief. In one patient I have recently had to operate four years after the closure of a perforating ulcer, which had caused a contraction in the centre of the stomach. Gastro-enterostomy was performed to the greatly hypertrophied cardiac pouch of an hour-glass stomach. In 9 cases, therefore, in a total of 18 who recovered the operation of gastro-enterostomy has been necessary. All these cases are reported to be now quite well. Of the remaining 9 cases, 8 are quite well and are free from stomach symptoms, one suffers from slight indigestion and occasional vomiting; the ulcer in this case was prepyloric. The freedom from suffering of these patients in whom the ulcer was on the lesser curvature and away from the pylorus is significant in connexion with the question as to the need for gastro-enterostomy in cases of chronic ulcer so placed. Infolding or the excision of such an ulcer, it is clear, suffices to effect a cure.

GROUP 2.—ACUTE HAEMORRHAGE.

In the series of haemorrhage cases there are 23 patients who recovered from the operation. All are alive now, and reports as to the present state of health have been received from 22. One patient, who was admitted to the hospital from prison, cannot now be traced; 18 are reported as being "perfectly well," "cured," "absolutely cured"; in each one a complete restoration to health, good digestion, and normal appetite has occurred. One case is improved in health, but is rather delicate. His medical man reports "the operation was for urgent and grave haematemesis, and undoubtedly saved the patient's life, but he is still as he was before—weak and frail. There are no symptoms of dyspepsia." Three patients have suffered from post-operative vomiting. Two of the cases, operated upon in January and March, 1903, had the posterior long-loop operation; in one vomiting of bile occurred infrequently for a year and then disappeared. The patient is now "quite well" In another it has continued at intervals of two or three weeks up to the present time; the patient, moreover, says that she is "far better" than before, and "able to work now." In the third case the no-loop operation was performed, the jejunal direction being downwards and to the right. This case is to me the most interesting of all, for it is the only case in which after the no loop operation any bilious vomiting has occurred. The operation was in February, 1905, upon a patient seen with Dr. Nicholson Dobie and the late Dr. Dreschfeld. Bilious vomiting occurred every week or two up to three months ago, when it disappeared after repeated lavage. In this case, after the anastomosis was completed, it was noticed that the jejunum did not fit well; it seemed to be twisted above the point of union with the stomach: a remark to this effect is made in the notes written on the day of operation. In over 200 cases of the posterior no-loop operation in which the jejunum was applied to the stomach vertically or with a slight inclination to the right, this is the only one in which bilious vomiting has occurred, and it is of great interest to note the fact that the appearance of the parts at the completion of the operation did not seem to me to be as satisfactory as usual.

GROUP 3.—CHRONIC GASTRIC OR DUODENAL ULCER.

There are 205 patients upon whom 214 operations were performed.

The following table shows the classes classified:

	Cases.	Deaths.
A. Gastric ulcer, duodenal ulcer—singly or together	174	2
B Cholelithiasis with ulcer	4	0
C. Cholelithiasis causing obstruction	8	0
D. Cases in which no ulcer was found	11	0
E. Pyloroplasty (secondary gastro-enterostomy)...	3	0
F. Secondary operations, the primary being performed elsewhere	7	0
G. Secondary operations in cases classed under A. and F.	9	0
Total	214	2

Late Results.

In 14 cases no report was furnished in 1908, but in 11 of these the patients were seen by me or reports received over two years after operation, and I have notes to say that all were well; in 3 cases no report can be obtained.

In 12 cases the patients were reported to be "no better" or "about the same." In 6 of these cases, all women, no ulcer was found at the operation, nor any evidence of obstruction. One of the cases was a secondary operation by myself, the primary operation having been performed elsewhere. I found no lesion of the stomach, and closed the abdomen without doing anything further. There has been no relief from the symptoms, pain, and haematemesis. In another case the lesion was very slight, a small scar only being found on the posterior surface. One case is an example of Finney's operation. Three suffer from regurgitant vomiting, but are kept fairly comfortable and free from symptoms by lavage.

A close study of the unsatisfactory cases has seemed to me to be especially necessary, in order to discover the circumstances in which the operation of gastro-enterostomy does not give satisfactory results. All the patients had suffered much from "indigestion," pain of sufficient severity to make them consider hopefully the question of operation, and from vomiting, haematemesis in two cases, and loss of weight. Nine of the patients were women. Of the 3 cases in men, 2 were relieved entirely of their original symptoms, but suffer from regurgitant vomiting; both operations were performed in 1903, and a long jejunal loop was left; the third was a case of Finney's operation. Among the 9 women there were 6 in whom no ulcer could be demonstrated; and there was neither stasis nor evident obstruction in any of them. Three of the patients are pronounced to be "intensely neurotic," and the operation has "not made much difference." It is satisfactory to be able to report that only one case in this series was operated upon later than January, 1904. The lessons to be learnt from this series are: That the mimicry of the symptoms of ulcer in women may be very exact; that in the absence of a demonstrable lesion, or some evidence of stenosis, gastro-enterostomy must not be performed; that the long jejunal loop is the cause of regurgitant vomiting; and that relief to symptoms may be completely given by an operation which is mechanically imperfect, and which therefore entails that distressing sequel, bilious vomiting.

In 5 cases there has been complete relief from the symptoms for which the operation was done, but in all there is slight, very occasional vomiting of bile. The intervals of this vary from "two to three weeks" to "every few months." In all, the patients have returned to work, eat well, have gained weight, and attribute the onset of the vomiting to slight or grave indiscretions in the matter of diet. In 4 of the cases the patients are "well satisfied" with the result of the operation, though their surgeon does not share their feeling of content.

In 10 cases the improvement is doubtful or has been tardy; 3 of these were secondary operations, the original operation being done elsewhere. In one case of duodenal ulcer with the most intense hyperchlorhydria there was a recurrence of symptoms one year later, and at a second operation elsewhere some adhesions and a jejunal ulcer (?) were found. The patient recovered and improved subsequently. One patient, after improving considerably, began to suffer, subsequent to pregnancy, from severe dragging pain in the abdomen. Ventrifixation of the uterus was performed, and she is now well and at work. The remaining patients have still some of their former symptoms, and usually have to make occasional calls upon their medical men. The chief symptom that remains is vomiting. In all, the ulcer found was small, and at some distance from the pylorus, in the body or on the lesser curvature of the stomach.

Eight patients have died since the operation; one six and a half years later of carcinoma of the pancreas; one six years later after operation by another surgeon for carcinoma of the caecum; one eight months later of acute pneumonia; one four years later of cardiac disease; one three months later of acute abscess of lung; one one year later of cardiac disease; one two years later of pernicious anaemia; in one case the cause of death three years later is not mentioned.

In 7 cases death occurred from malignant disease of the stomach developing at the site of the ulcer. The deaths occurred two years, four years, two and a half years, three and a quarter years, one year, one and a half years and two and a half years subsequently. The deaths in these cases are very significant. The interval in most of them between operation and death suggests that the condition present at the time of the operation was not then malignant, but rather that a carcinomatous invasion of the diseased part occurred at a later period. They were, perhaps, examples of ulcus carcinomatosum. There can be no doubt that in some of these cases Rodman's operation—excision of the ulcer-bearing area—would have been the better procedure.

Two patients died as a direct result of the operation; one from uraemia, one from acute obstruction due to hernia of all the small intestine into the lesser sac, and strangulation at the margin of the opening through the transverse mesocolon.

The final results in this group may be briefly stated thus:

Living.	
Cured	148
Relieved	5
Doubtful	9
No better	12
No recent report (11 of these may be considered certainly as cured)	14
Dead.	
As result of operation	2
Of carcinoma of stomach	7
Of other causes...	8
	205

GROUP 4.—HOUR-GLASS STOMACH.

In 15 cases gastro-enterostomy was performed, being combined in 6 with other operations—gastroplasty or gastro-gastrostomy. There were three deaths. In one patient regurgitant vomiting occurred so severely as to need the secondary performance of entero-anastomosis. All the 12 patients are now perfectly well, and in the enjoyment of good appetite and sound digestion. They are all cured of their stomach disorders.

Such is the detailed analysis of the cases included in each separate group. In order that an accurate general statement as to the effects of gastro-enterostomy may be made the cases must be brought together.

A summary of the cases gives the following result:

Group 1.	8	patients	living;	8	patients cured
Group 2.	23	,,	,,	19	,, ,,
Group 3.	188	,,	,,	159	,, ,,
Group 4.	12	,,	,,	12	,, ,,
	231			198	

The present condition of all the patients is as follows:

Patients cured	198
Improved	8
No better	12
Doubtful	9
Not recently reported	4
	231

Twenty-four patients are dead—9 as a result of the operation, 7 of carcinoma of the stomach, 8 from other causes unconnected with the disease of the stomach or the operation performed for its relief.

Conclusions.

Such is a brief abstract of the analysis of all the cases upon which I operated from the beginning of my experience to the end of the year 1905. The result of the inquiry into the after-history enables certain conclusions to be drawn which may guide us in our treatment of the chronic disorders of the stomach in the future. I would submit to you the following propositions:

1. Gastro-enterostomy is a short-circuiting operation, and, like all such procedures, acts best when a gross mechanical obstruction exists in the normal path of the intestinal contents.

2. Experimental work shows that when the pylorus is normal, and there is no impediment to the passage of food through it, the opening made in the operation of gastro-enterostomy does not allow of the escape of any of the gastric contents into the intestine.

3. The operation, therefore, gives the best results in cases where there is organic disease in the prepyloric or pyloric regions of the stomach or duodenum, or when performed on the cardiac side of a stenosis in the body of the stomach.

4. When an ulcer is found on the lesser curvature towards the cardia it should be excised if possible; gastro-enterostomy is not necessary, and if performed is either almost useless or entirely harmful.

5. When there is a suspicion of malignancy in an ulcer or ulcers in the pyloric region, Rodman's operation should be performed.

6. Under no circumstances, and in compliance with no persuasion however insistent, is gastro-enterostomy to be done in the absence of demonstrable organic disease.

7. Regurgitant vomiting, formerly the most troublesome of all complications, is dependent upon faults in the operation which result in some mechanical obstruction to the intestine. These faults are chiefly dependent upon the presence of a "loop" in the jejunum, but may also be caused by a twist in the intestine around its longitudinal axis at the time of its application to the stomach.

8. The posterior no-loop operation with the vertical application of the bowel to the stomach is the best procedure.

References.

[1] *Annals of Surgery*, 1906, xliii, 539. [2] *Arch. f. klin. Chir.*, 1900, lxx, 259. [3] *Annals of Surgery*, 1905, xli, 686. [4] *Bull. et Mém. de la Soc. de Chir.*, 1907, xxxiii, 1250. [5] *La Semaine Médicale*, 1907, ii, 513.

ERYTHROCYTHAEMIA AND CYANOSIS.

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A certain time ago a lady was sent to me for consultation whose case was unusual. She was 38 years of age, and had been a strong woman, fond of taking long walks. She had had no severe illness, but about six years before she had become very pale, and was told she was anaemic. This had given place to a colour higher than natural, and she had ever since been subject to attacks of shortness of breath, in which she became very blue. She had been seen by another physician, who had examined the blood, and had found it polycythaemic.

She was a rather thin person, but healthy looking, except that her complexion was too florid. Her fingers were rather purple, but not her face. She was breathing rather rapidly, and as if with some difficulty, but I could not clearly find out why. There was no sign of laryngeal or tracheal or bronchial obstruction; the chest moved fairly, and was resonant; there were no abnormal sounds in the lungs. The breath sounds were a little weak, but not weaker than they are in some healthy chests. The heart's apex was inside the nipple line, the sounds clear, the pulse regular, and the maximum systolic blood pressure was 120 mm. Hg Neither liver nor spleen was palpable. The urine, though turbid with urates, contained neither albumen nor glucose.

The only complaint beside that of short breath was of extreme constipation, and I at first thought that it might be a case of enterogenous cyanosis. But I could find no indican, which is generally present in the urine when any poison of a putrefactive kind is being absorbed from the intestines.

The blood was examined for me by Dr. Pritchard in the Clinical Research Department of St. Bartholomew's. He reported:

Count.—Haemoglobin = 120 per cent. (Haldane).
Red cells = 7,630,000 per c.mm. Shape and staining natural; no abnormal cells seen.
Colour index = 0.78.
White cells = 8,800 per c.mm., namely:

Polymorphonuclears	64 per cent.	= 5,632 per c.mm.	
Lymphocytes ...	25 ,,	= 2,200	,,
Hyalines	8 ,,	= 704	,,
Eosinophiles ...	2 ,,	= 176	,,
Basophiles	1 ,,	= 88	,,

Culture.—Six tubes were inoculated, and all remained sterile.

Spectroscopic Examination.—Dr. Hurtley reported: No trace of either methaemoglobin or sulph-haemoglobin; not even on adding a reducing agent did the band of the latter appear.

In spite, therefore, of the extreme constipation the blood did not resemble that of enterogenous cyanosis, which shows one of these two abnormal forms of haemoglobin, each of which is probably due to reducing agents in the blood. Methaemoglobin is regularly thus produced *in vitro*, and Hurtley[1] conjectures from his experiments that the same is true of sulph-haemoglobin. Nor did it conform to the splenic form of cyanosis, for though there was a great increase in the red cells there was no enlargement of the spleen.

I was puzzled, and said so, and a little later the patient came up to a nursing home for further investigation. But two days after her arrival, when she was beginning to menstruate, she was seized, as was not infrequent at those times, with one of her attacks of dyspnoea. It was chiefly expiratory and was extreme in degree, so that she became very cyanosed. In fact it was like a very bad attack of asthma. But it differed from every asthmatic attack that I have ever seen in the entire absence of any signs that could be referred to the bronchi. I have never seen asthma without being able to hear sibilus or rhonchus or râle. In this case there was no such noise. The chest was moving with great efforts, it was highly resonant, and the breath sounds, especially on the right side, were exceedingly weak. The attacks recurred, and she died in about two days.

I was allowed to make an autopsy. The lungs were emphysematous, but small, and from the larynx to the finest divisions of the bronchi there was no sign of any disease of the air tubes. They were not thickened, and the mucous membrane was free from any secretion. There was a patch of congestion at the left base, where we had heard fine crepitation the day before death. The heart was rather small, neither hypertrophied nor dilated, and free from vavular disease. I was unable to weigh the viscera. The liver was congested, but was not enlarged. The *spleen was not enlarged*, and seemed natural on section. I regret that the marrow of the long bones was not examined.

I thought at the time that this case was one of atrophic emphysema in a youngish person, which had led to polycythaemia in compensation for deficient aëration. But the more I think of it the less am I satisfied with that explanation. I have seen the red cells much increased in emphysema, but only when there was much bronchitis and dilatation of the right side of the heart. In the emphysema of old age, which this case resembled, I have not counted the blood, because I have never seen any marked congestion or cyanosis, and I have not been able to find such records in literature.

The other alternative is that it was a case of polycythaemia or erythrocythaemia of the usual type, but without any splenic enlargement, that the emphysema was a more or less accidental addition, and that the fatal dyspnoea was chiefly due to the state of the blood.

There is a general agreement, I think, that enlargement of the spleen is of secondary consequence, and is not a cause, but in some way an effect, of the state of the blood. In several instances the spleen has not been recognized as large during life, and in one or two cases which have been dissected (Cabot, Osler) there appears to have been very little enlargement after death. There is no doubt that enlargement is the rule, but there are exceptions. I think it is allowable on the evidence to suppose that the disease may exist without any enlargement.

On the other hand, paroxysmal dyspnoea is a symptom that has been recorded in a good many cases. It is rather a surprising symptom under the circumstances. It may

possibly be due to the viscosity of the blood. Parkes Weber showed this to be much above the natural in his cases, and the observation has been confirmed. But this could only act by delaying the flow, and when, as in my case, the heart is natural, the pulse regular, and the blood pressure at the usual level, it cannot reasonably be supposed that the blood is passing the lungs with such difficulty as to cause dyspnoea.

On the other hand, dyspnoea is not a natural consequence of a mere increase in red cells. Rather the contrary. If they were good red cells they would increase the amount of oxygen in the blood. It does not seem likely that this would cause dyspnoea, but the condition has never been reproduced in experiments.

But even if we remain doubtful about dyspnoea, we can safely say that the polycythaemia, or erythrocythaemia, would not by itself cause cyanosis. Now cyanosis is not a constant symptom. Some of the cases are at any rate rather florid than cyanotic. But cyanosis is frequently found, and it has often been noticed that the blood when drawn for examination is very dark. And again, even florid cases become blue on exertion. How can this be explained? It looks as if, in spite of the erythrocythaemia, and in spite of the amount of haemoglobin, which has been sometimes as high as 130 per cent., there was less oxygen in the blood than usual. I do not think this has ever been measured, but it seems worthy of investigation, for it seems possible that in this may lie the secret of the disease. Suppose for a moment that there is some fault in the cytoplasm or in the haemoglobin of the red cells which prevents them from being good oxygen carriers, or make the more likely supposition that there is some abnormal reducing agent in the blood which reduces oxyhaemoglobin but does not turn it into methaemoglobin or sulph-haemoglobin. The want of oxygen might stimulate the bone marrow to form fresh cells, as it does where high altitudes or heart disease is the cause. This increase of the cells, erythrocythaemia, may be in some cases adequate. There will then be much more blood in the body, but it will be fairly red, though each cell carries less than a healthy cell. These patients will be florid. In other cases increase in the red cells will not suffice. The fresh cells may be affected from the first with the same illness as the others, or the reducing agent may be of such power that they cannot counteract it. Then the patients will be blue. And whether they are florid or blue a little effort, by calling for more oxygen, will at once deepen the cyanosis. Even the florid patients will have very little margin.

Such an explanation, which I propose with great diffidence, would not change the part ascribed to the bone marrow. The replacement of the natural marrow by erythroblastic tissue was noticed by Rendu and Widal in 1899, and they referred the erythrocythaemia to this source. Their observations have been confirmed by Parkes Weber, and, I believe I am right in saying, by every observer who has examined the bones.

I am merely supposing that the erythroblastic tissue is stimulated to activity, not by the destruction of red cells, as is suggested by Weber, but by some disease which, without destroying them, renders them inadequate for their office. As far as I know, there is no evidence of haemolysis in this disease. The red cells do not, as in pernicious anaemia, vary greatly from the normal. They are usually described as natural in appearance. A few normoblasts are occasionally seen, and that is all. Nor has any iron been found in the viscera, as the result of destruction of the red cells. On the other hand, if there were in the blood an abnormal reducing agent, or even a normal reducing agent in excessive quantity, this disease would be analogous to the conditions of methaemoglobinaemia and sulph-haemoglobinaemia, which is not a great stretch of the imagination.

REFERENCE.

[1] Wood Clarke and Hurtley, *Journ. of Physiology*, xxxvi. 1907, p. 62.

THE report for the year 1907 presented by the Committee of Visitors to the annual meeting of the Royal Institution on May 1st, testified to continued prosperity and efficient management; 41 new members had been elected; 63 lectures and 19 evening courses were delivered, and 896 volumes had been added to the library, including 203 presented. The Duke of Northumberland was re-elected President, and Sir James Crichton-Browne, who presided, Treasurer.

THE RECOGNITION AND TRAINING OF CONGENITAL MENTAL DEFECTIVES.*

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MEDICAL INVESTIGATOR TO THE ROYAL COMMISSION ON THE CARE AND CONTROL OF THE FEEBLE-MINDED.

CONGENITAL mental defectives are not entirely a product of modern civilization; there can be little doubt, however, that in recent years their numbers have increased out of reasonable proportion to the ordinary population. This is probably the real reason why public attention has at last been focussed upon them. It is to be hoped that the report of the Royal Commission on this subject, when issued, will lead to measures calculated to prevent continued rapid increase in their numbers. The fact that the Sandwell Hall Boarding School for mentally defective children was opened last autumn, and that the Monyhull Colony for mentally defective and epileptic persons will be ready in a few days, indicates that in this district the authorities are alive to the exigencies of the situation, though it is doubtful whether they have yet fully grappled with the problem. While work such as this is being done at home, we find that Canada refuses any longer to be a dumping-ground for wastrels, but will only admit and retain such individuals as are capable of paying their way and keeping out of the hands of the police. These considerations emphasize the necessity for recognizing congenital mental defect as early as possible, and the importance of being able to forecast whether a particular case can ever be turned loose at home or abroad.

Increasing experience would seem to show that there is no single sign on which a diagnosis can be based; for this purpose both an intellectual and a physical examination are necessary, together with an investigation of the attitude and demeanour, and an inquiry into the conduct and mode of life. In many cases the examination can be much curtailed, only a few intellectual tests being required. The omission of any of the means for detection, however, always involves a possibility of error; for instance, a few days ago a boy of 5 was brought to me; he answered questions pretty well for a child of his age, and showed but little sign of abnormality; I was, however, informed that he was dirty in his habits, and could not be broken of this. As he was in a well-regulated institution, and had been there much longer than is generally necessary to put all right with normal children who are suffering from neglect, this fact had much significance. Again, it is matter of common knowledge that children are sometimes branded as feeble-minded when they are only deaf or short-sighted; the same mistake may be made with children of 10 or 11 who cannot read or write because they are suffering from such a condition as cardiac disease, which has involved never going to school.

The examination must be adapted to the age of the child. Reading and writing are, of course, important tests, while the power of calculation must be carefully appraised. With young children the objective method should be employed; counters, pennies, or matches are always available; only the simplest questions are necessary, as a feeble-minded child of 9 or 10 is often unable to add 4 to 7, if, indeed, he does not fail with an easier sum. For older children, the number of halfpennies in so many pence and the comparative value of three halfpennies and two pennies are useful questions. In the case of adults, the value of half a crown and then of three or four half-crowns can be asked; three half-crowns is often the limit of defectives. Arithmetic is a great stumbling-block to weak brains, but alone does not constitute a sufficient test; those who are very weak in other directions are sometimes surprisingly quick at figures. The child may also be asked—what animal says "bow-wow"? what the cat says? where milk comes from? the use of horses? and so on. Here again with young children the question should always take an objective form, pictures being shown in the absence of the real object. Questions on these lines readily suggest themselves. Colour tests can also be easily applied, but are of no great value. Ordinary individuals are sometimes colour blind, and among the very poor at least young children are sometimes ignorant of the names even of the fundamental colours, unless they have been taught them at school.

* A paper read at a meeting of the Midland Medical Society on April 8th, 1908.

Backward children, who suffer entirely from neglect and an abnormal environment, but are not really defective, are not very uncommon in these days when parental responsibilities are so readily undertaken by the State and charitable people. If the father drinks and loafs, and the mother goes out to work all day, leaving the children shut up in a back room with no food, and without a fire, for fear of accidents, it is little wonder that the offspring fall greatly behind the standard of more fortunate children. This type, when properly fed and placed in a more stimulating atmosphere, soon responds to educational influence.

In the case of children under 7 an intellectual test is of comparatively little value; a history of dirty habits, and of backwardness in walking and speaking, counts for much. An exact history is of real value in prognosis, for Lapage, after examining over 300 cases, was able to demonstrate that the later the child learns to talk and walk the greater is the degree of mental deficiency. The defective child is slow in learning to sit, to hold up his head, or use his hands. In infancy want of muscular power in the lower lip or peculiar formation of the lower jaw often makes it impossible to take hold either of the breast or the bottle. When, in addition to signs such as these, the cranial configuration and features clearly conform to one of the recognized types of congenital mental defect, such as the microcephalic or Mongolian, a diagnosis can be made at a very early stage; if there is the least doubt, the decision is better deferred till the child is 7 years of age.

In all cases a study of the attitude and demeanour gives great help; a feeble-minded child seldom carries himself well. When a group of children is marched past, those who are mentally defective can often be picked out immediately by their evident lack of spontaneity and vitality, and also of muscular power and control. Even with adults the weaklings can often be recognized quickly in the same way. The face should be carefully watched, for defects of expression are common; it is difficult to describe or classify the deficiencies, but with practice they can often be recognized. During an examination sometimes more importance must be attached to the manner of the suspect when questions are asked, rather than to the actual answer. The power of attention is an important point; its duration and intensity greatly influence the prognosis. In some instances it is impossible to come to a decision without an account of the habits and conduct; if these cannot be supplied from a reliable source, it is well to place the child or young person for a few weeks in an institution, where he can be under the eye of a competent observer; under such circumstances his real capacity soon declares itself.

In discussing the physical examination it is necessary to deal first with the stigmata of degeneration. At one time there was a tendency to think that one or more of these would constitute an all-sufficient test. Careful investigation has, however, shown that they may be present in normal individuals, while defectives may be quite free. Lapage made a careful investigation in Manchester of 250 defective children and found that 90.5 per cent. showed some well-marked physical anomaly. This confirms the observation, frequently made, that the more common abnormalities are twice as frequent among the feeble-minded. Lapage, however, found that a distinguishing feature between an ordinary school child and a feeble-minded one was that the anomalies in the former tend to be single, while in the latter they are usually in combination. My own experience would amply confirm this. The stigmata to be looked for are irregularities and peculiarities of the ear, of the teeth, face, tongue, cranium, and hand. An epicanthic fold is not in itself of great significance; associated, however, with a small and oblique orbital fissure, a transversely-furrowed tongue, or some other distinguishing feature of the Mongolian, it carries full weight. I have already stated that there is no one diagnostic sign; a possible exception to this rule exists in the case of a small head circumference. Normal school children with a measurement of less than 19 inches are very rare. All the same a typical microcephalic is a person with a head of a characteristic configuration rather than of a special size, the distinguishing feature being the two pointed angles at the nose and vertex, due to the absence of chin and the rapidly receding forehead. Excessive size of the head is also suggestive. There is no difficulty about putting a tape round the widest part of the head, and this should always be done; antero-posterior, transverse, and other diameters can be readily taken with a special head spanner or a pair of callipers, but are not usually necessary for an ordinary examination. Marked asymmetry of the head or face is a bad sign. Dental irregularities should always be looked for. Having thoroughly examined the head, the hand should be placed under review; a little finger falling short of the distal interphalangeal joint of the fourth has sometimes been accounted a sign of considerable importance; after examining a large number of individuals, normal and defective, it appears to me that while of some value in association with other abnormalities it is no guide whatever as a mark by itself. The appearance of the whole hand should be noted; the little broad hands with short squat fingers, often characteristic of the Mongolian type, being decidedly suggestive. The state of the skin should always be noted; it is frequently dry or scaly, or even eczematous, and often there is a growth of hair in abnormal situations.

The special types into which defectives are often divided, such as macrocephalic, microcephalic, Mongolian, etc., are largely matter of academic interest; the practical point in connexion with them is this: if a child has such a combination of distinctive features as will assign it to one of these groups, no doubt is left as to the want of mental capacity. Special classification, therefore, is not without value, especially as I believe it often gives a clue to the predominating cause.

No examination is complete without an investigation of the other organs, and especially of the heart. I have already alluded to the possibility of apparent mental defect being due to serious cardiac mischief, which has prevented any education. The heart is often diseased in defectives; indeed, this is one of the reasons why their careers, as a rule, are comparatively short; 40 is a limit beyond which most defectives never go. Barr collected records of 625 cases, and found that only 8 of them, or little more than 1 per cent., survived 40; more than half the whole number died between 10 and 20 years of age.

Turning to education, it may be said at once that practically nothing can be done with idiots and imbeciles; with those of a higher grade the first point is to make sense impressions and arouse attention; objective methods are of paramount importance throughout; the pace must always be exceedingly slow. The great essential for success is that the teacher should adopt Froebel's motto, and "live with the children." School work must not be attempted till 7 years of age, and as the large majority, if not all, of this class stop developing at 16, in marked contradistinction to ordinary individuals, we may well exclaim at the limited time in which we have to work. Before 7 the time must often be occupied in training to cleanly habits and in developing functions which the normal acquire almost of themselves. If there are defects of speech they must be dealt with in the ordinary way by teaching first abdominal breathing, and following it up with tongue drill; to start by calling upon the child to pronounce difficult words or combinations of words is but to court failure. When the very elements of sound are a stumbling-block great patience is necessary; making the vowel sounds to music acts as a useful stimulus in certain cases. If learning to walk is such a laborious task as to tire out even the mother's patience something may be achieved by placing the child in a square frame on wheels with a hand-rail.

As regards school work, when there is but little capacity, the less time spent with books the better. To be able to read is, however, such an incalculable advantage to every individual, that as long as there is any hope great efforts are legitimate. Wherever possible, too, every one should be taught the name and value of the various coins, especially the less valuable ones. Having achieved this, the sooner attention is devoted almost entirely to manual work the better. It must never be forgotten that the education of the power of attention is of paramount importance. With this object tasks and lessons must be made as interesting as possible. By means of manual work not only does the defective learn to contribute to his own support, and that with considerable satisfaction to himself, but also some of the best avenues to the brain are opened up. Till recently America has been far ahead of this

country in the practical instruction provided for degenerates. During the last year, however, Mr. Burden, assisted by Mrs. Hume Pinsent, has set a splendid example in the arrangements of the work at the boarding school at Sandwell. Gardening, carpentry, bootmaking, brushmaking, laundry work, carpet weaving, and tailoring are all in full swing. It is anticipated that each of these departments with, as a rule, only one instructor, will soon be capable of meeting the requirements of the whole institution. One of the most satisfactory departments is the garden, where fourteen of the boys, working with two men, have at the end of nine months cleared expenses and made a profit, although the land was previously in a neglected state. As these unfortunate individuals must be segregated, it is of great importance that they should contribute something to their own support; Sandwell has demonstrated the possibility of accomplishing this, even in aggravated cases, for it must be remembered that as a rule only those children are admitted to Sandwell who are unfit for the special schools that now exist in most of our large towns. In conclusion, I have only to add that amusement has always been a recognized agent in training feeble minds and bodies; due provision for simple entertainments should be made in every institution for defectives.

AN OUTBREAK OF BERI-BERI ON BOARD A MERCHANT VESSEL.

BY STAFF SURGEON SIDNEY ROACH, R.N.
[Communicated by the DIRECTOR GENERAL, R.N.]

A SAILING ship left Rangoon on July 3rd, 1907, for Queenstown with a cargo of teak. She had 15 persons on board, all told, comprising captain, 2 mates, carpenter, sail-maker, steward, and 9 hands (10 Norwegians, 1 Dane, 1 Swede, and 3 negroes).

Soon after leaving Rangoon the carpenter was taken ill with what the captain described as bronchitis; but I am inclined to believe, from the account of his death given me by one of the mates, that the cause of death, which took place on August 18th, was a cardiac attack of beri-beri.

The ship arrived at Ascension on October 11th, as the captain wanted medical assistance. I went on board, and found that the captain realized the cases to be beri-beri and had been diligently treating them with tincture of digitalis. I found five well-marked cases of beri-beri, one of sore throat, one of secondary syphilis, and one of so-called rheumatism. Two of the cases of beri-beri were acutely ill, and these two the captain wished to land, and then proceed on his voyage. I advised him to give up all idea of proceeding to sea with such a sickly crew, and pointed out the danger of leaving cases of beri-beri in the ship where they had apparently contracted the disease. He accordingly took my advice, and anchored that evening.

With the captain's permission, I went over the ship in order to ascertain the condition under which his men lived. The crew lived in a deckhouse forward, which struck me as being very clean and airy and, under the circumstances, not crowded. The officers and one man working his passage lived aft in cabins.

The following itinerary will show the movements of the ship previous to her arrival at Ascension, and also the occurrence of the disease, which would appear to have started on the voyage from Rio de Janeiro to Rangoon.

Itinerary.	Length of Voyage.	Cargo.	Incidence of Sickness.
Left Sweden Nov. 9th, 1906	69 days	Wood	*Nil.*
Arrived Rio Jan. 17th, 1907		Goods	One accident at Rio.
Left Rio Feb. 26th, 1907		Stone	
Arrived Rangoon May 9th, 1907	72 days	Ballast	Two slight cases of beri-beri. Some illness; no beri-beri while in harbour.
Left Rangoon July 3rd, 1907		Teak	
Arrived Ascension Oct. 11th, 1907	99 days		Several cases of beri-beri.

It is worthy of note that the carpenter who subsequently died was one of the slight cases of beri-beri which occurred on the passage from Rio de Janeiro to Rangoon. The former voyages of the ship are here appended. It is noticeable that the usual cargo of the ship appears to have been timber.

Former Voyages.

Leith to North America	... ...	Ballast.
North America to Buenos Aires	...	Lumber.
Buenos Aires to Europe	... ...	Quebrache wood.

Unfortunately, as the captain and crew only joined the ship before she sailed from Sweden, no information could be gathered as to whether beri-beri had appeared on board before this particular voyage.

It appeared that the cargo of teak was shipped in the river at Rangoon. The teak was brought down the river in rafts, taken alongside, and hoisted into the hold while wet and muddy. The hatches were taken off when about three weeks out from Rangoon, and the timber was then still hot, wet and steamy, so much so that the captain deemed it advisable to sprinkle carbolic acid over it. The presence of a damp, hot, steaming atmosphere may be sufficient to account for the outbreak of the disease, as it fulfils the conditions under which, according to Sir Patrick Manson, the disease occurs.

DIETARY.

The question of food revealed nothing that shed any light on the outbreak of the disease. The actual diet table differs little from that of any European sailing ship, and would appear sufficient so far as the food value is concerned.

The question of the use of rice was inquired into. The master informed me that rice was used in small quantities on board for ordinary purposes, such as stews, puddings, etc.; it was not issued as a vegetable or in any large quantities. The rice was of good quality, and was not weevily; it was used whole, and not ground. Bread was baked on board once or twice a week. The bread was made of wheaten flour. Biscuit was, of course, in store, but the master being suspicious of its appearance, and noting that it was very hard and unpalatable, would not issue it to the crew. The master was well posted up in the theories of the origin of beri-beri, and was aware of the danger of the excessive use of rice. With reference to the biscuit, he was suspicious that it was made of rice flour, and on that account would not use it.

All drinking water used on board was boiled before being put into the scuttle-butts.

On leaving port the master was in the habit of taking on board fresh vegetables, fowls, pigs, etc., but necessarily these supplies did not last long. It will also be noticed that dry fish was used on board. No rum or spirit of any kind was issued on board; lime-juice was, as will be seen, issued regularly. The use of quinine was also inquired into. The master issued it whenever he thought it necessary.

Daily Ration.

	Grams	Ozs. Average.
Bread *ad libitum* per man	—	—
Salt beef, per man, per day, thrice a week	625	22
Pork with beef, per man, per day, thrice a week ..	101	3½
Preserved meat, per man, per day, twice a week ..	250	8¾
Dry fish, per man, per day, once a week	350	12 3/16
Fish balls, per man, per day, once a week	350	12 3/16
Potatoes, fresh, per man, per week	3000	105
Vegetables, fresh or salt, per man, per week	1100	38
Dried fruits, per man, per week	150	5 3/16
Condensed milk, per man, per week	150	5 3/16
Coffee, per man, per week	225	7 9/16
Tea, per man, per week	25	⅞
Sugar, per man, per week	350	6 3/16
Butter or marmalade, per man, per week	500	17 5/16
Oatmeal, per man, per week	500	17 5/16
Lime-juice, per man, per day, about	25	1
Peas, beans, rice, per man, per week, a little	—	11 3/16 fluid oz.
Salt, mustard, vinegar, as required.	—	—

The ship having anchored on the evening of October 11th, 5 well-marked cases of beri-beri were next day admitted into hospital; 2 were desperately ill.

Between October 12th and November 4th, 5 more cases of beri-beri and 1 of sore throat were admitted. Of the 11 cases admitted, the one of sore throat was discharged to his ship after a few days in hospital.

Of the cases of beri-beri, 1, unfortunately, developed tuberculous meningitis while in hospital, and died within nine days of its onset. He was admitted with undoubted symptoms of beri-beri, and appeared to be recovering from that disease. The remaining 9 rapidly recovered, and were discharged on November 7th to the mail steamer for passage to England.

The master, having obtained a fresh crew from England, sailed on November 4th. Before leaving he was supplied with some drugs, etc., to replenish his medicine chest. During the stay of the ship in Ascension, she was supplied twice a week with fresh vegetables and meat for the use of the crew.

I am inclined to the belief that every man on board, with the exception of the case of sore throat (a West Indian negro), was affected with beri-beri. The master was suffering from it, but would not give in owing to his responsibility, and I believe the first mate and the remaining deck hand were also labouring under the disease.

TREATMENT OF BRONCHIAL CATARRH BY ALKALIES.

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As I have elsewhere pointed out, Dr. T. H. Buckler wrote an article in the *American Journal of Medical Sciences* for July, 1882, in which he said that what he regarded as a special form of bronchial inflammation, and attributed to uric acid irritation or rheumatism, could be successfully treated by salicylates, but that if they were not given it was most difficult to cure the disease. He further said that the salicylates would succeed best in cases where the acidity of the urine was high, but would be likely to fail where it was low; he therefore advised examination of the urine before prescribing.

Since my attention was drawn to this article I have often been able to confirm Dr. Buckler's observations, and have used salicylates with good results not only in the special form of inflammation he described, but in all forms of ordinary bronchial catarrh or bronchopneumonia.

But salicylates do undoubtedly fail, as Dr. Buckler observed, when the urinary acidity is low; and as the effect of dyspnoea is to increase the alkalinity of the blood and lower the acidity of the urine, it follows that salicylates will often fail us just at our time of greatest need, namely, when dyspnoea is considerable and the heart is beginning to dilate. In fact, salicylates are only successful in early cases or in the special form described by Dr. Buckler, in which there is little dyspnoea, as it affects chiefly the large bronchial tubes.

Following this matter up and believing with Dr. Buckler that salicylates act in these cases merely as solvents of uric acid, it occurred to me that the condition (dyspnoea with falling acidity of the urine) which is unfavourable, as I have elsewhere shown, to the solvent action of the salicylates would, on the contrary, be quite favourable to the solvent action of alkalies. I therefore began to try these older solvents of uric acid, with results which soon demonstrated that my conjecture was correct. I found that it was only necessary to give alkali in sufficient dose to render the urine alkaline to cause an immediate fall of temperature and speedy resolution of symptoms in many cases of bronchitis and bronchopneumonia, besides those described by Dr. Buckler. That to do this it was necessary to give alkali almost alone (say sodii bicarb. grains 20 to 60 for a child, or 90 to 120 for an adult in the twenty-four hours) and on no account to give ammonium with it, as this raises the acidity of the urine and has been proved by others to do harm in rheumatism. If a cardiac tonic is required digitalis can be used, but everything that raises the acidity of the urine must be avoided, and even such flavouring matters as orange and sugar, which tend to raise acidity, are better left out.

I shall not take up space by narrating cases; I had hoped to show one illustrating this treatment at the recent clinical meeting of the City Division of the Association at the Metropolitan Hospital, but was unfortunately detained at the last moment.

If the alkali is going to do good, the temperature generally drops decidedly in from twenty-four to forty-eight hours, but it should not be given up as useless till the urine has been rendered alkaline. After the temperature has been normal for one or two days, I reduce the alkali to a small dose (gr. 10 ter.), and add a little belladonna to dry up secretions, and the trouble is at an end.

In conclusion, I will again point out the rules that must be followed if this treatment is to be used with success, namely: (1) Give the alkali in sufficient quantity to make the urine alkaline; (2) avoid combining it with drugs that raise the acidity of the urine, or in fact with anything which acts as a precipitant of uric acid, such as lime, the metals or their salts, or even the chlorides, sulphates, or nitrates of the alkalies. Ammonium, so often given in these conditions, is one of the worst things to combine with the alkali, for it not only raises the acidity of the urine, but its urate is insoluble.

The Goulstonian Lectures

ON

THE INFLUENCE OF PREGNANCY UPON CERTAIN MEDICAL DISEASES, AND OF CERTAIN MEDICAL DISEASES UPON PREGNANCY.

Delivered before the Royal College of Physicians of London.

By HERBERT FRENCH, M.A., M.D.Oxon., F.R.C.P.Lond.,

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Lecture II.—Other Suppurative Renal Affections in Relation to Pregnancy: Tuberculous and Calculous Diseases.

Mr. President and Gentlemen,—The pyelonephritis which pregnancy itself gives rise to having been discussed, there remain two other suppurative renal affections to be mentioned. These are the various degrees of kidney mischief that may be due to stone and to tuberculosis respectively. There is little evidence to show that pregnancy is itself liable to give rise to either of these, and in the case of a tuberculous kidney the patient is, as a rule, so invalided that pregnancy is but rarely to be found associated with it. There has been no case of pregnancy coincident with tuberculous kidney in Guy's Hospital in the last twenty years. With renal calculus, on the other hand, the symptoms may be in abeyance for longer or shorter periods, and the patient is not necessarily such an invalid that pregnancy may not occur. The question will then arise as to what the effect upon the kidney is likely to be in such a case. It is clear that if a previously healthy woman may develop pyelonephritis during pregnancy, as described in the previous lecture, a woman who already has a lesion which also predisposes to pyuria must be in a position of increased danger when pregnancy occurs. On the other hand, the degree to which the kidney, or kidneys, may be already damaged by the calculi is so extremely variable that it is almost impossible to say what is going to happen when such a case comes under observation. If the calculus is a small one confined to the renal pelvis, the general substance of the kidney being but little affected, it is quite possible for the pregnancy to run its course without any trouble arising from it at all. If the stones are confined to one kidney and have led to its conversion into a hydronephrotic bag, the other kidney may have hypertrophied by way of compensation, and the effect of pregnancy will be similar to that in cases where, after operation, only one kidney is left—a point to be mentioned again below.

Colic and haematuria may occur in either of these cases, just as they may in non-pregnant persons. Treatment should then be directed to the renal condition, and the

probability is that the untoward symptoms will subside and that the pregnancy will run its natural course, as was the case in six out of seven patients in the hospital. On the other hand, a patient with a renal calculus that is already causing suppurative inflammation of the kidney is bound to be a source of grave anxiety to her medical attendant should she become pregnant, especially from the fifth month onwards, that is to say during the time when there is particular liability for the pregnancy itself to cause pyelonephritis. It is doubtless possible by keeping the patient at rest, by preventing constipation or diarrhoea, and by administering antipyuric remedies, to enable her to reach her full term of pregnancy; but there are cases in which the suppuration in the kidney will become worse, and the question will arise as to whether or not obstetric measures for terminating the pregnancy should be advised. One of the seven cases alluded to above proved fatal; it may probably be regarded as one in which pregnancy was the main cause of death by leading to a pyelonephritis upon the top of calculous disease. The following are brief details of the case:

The patient was a young woman who had had pain in her right loin, which in view of the subsequent events was doubtless due to a calculus. She was otherwise in excellent health. She married and remained well until she was five and a half months pregnant. She then began to suffer from aching pains across her loins and from repeated vomiting. There was no oedema, but the urine was found to contain 5 parts per 1,000 of albumen, with a fair number of renal tube casts, red corpuscles, and a considerable excess of leucocytes. Day by day the leucocytes in the urine became more numerous until they amounted to pus, and the quantity of pus rapidly increased until there was no doubt about there being a progressive suppurative nephritis. No tubercle bacilli were found in the deposit. The urea still amounted to 1.7 per cent., but the patient became steadily worse, vomiting on the slightest exertion and after all food. There was no pyrexia such as there nearly always is in cases of ordinary pyelonephritis of pregnancy, and there were no rigors. The bladder became infected by acute cystitis, and the question of recommending obstetric measures for emptying the uterus had arisen, when spontaneous delivery of a living female child occurred at the seventh month. The patient's general condition improved for three days afterwards, though no day passed without the occurrence of vomiting. The latter then increased in severity; drowsiness with muttering delirium and hallucinations set in, with incontinence of urine; and on the fifth day after labour the patient became comatose and died without convulsions.

At the necropsy the only abnormal organs were the kidneys and the bladder. The uterus was perfectly healthy. Both kidneys were in a state of pyonephrosis, with secondary suppurative pyelonephritis, and in the pelvis of each there were numerous irregular calculi of oxalate of lime coated with white phosphates. The ureters were but slightly dilated. The bladder was in a condition of acute cystitis without ulceration.

Apparently the sequence of events had been renal calculi, hydronephroses, pregnancy, microbial infection of the kidneys, pyonephroses, suppurative pyelonephritis, cystitis, uraemia, death. Unfortunately no exhaustive bacteriological examinations of the urine were made. One would not be surprised, in view of what has been already said in connexion with the pyelonephritis of pregnancy, if the micro-organism had been the *Bacillus coli communis* in pure culture. This is a point for investigation in future cases.

NON-SUPPURATIVE RENAL AFFECTIONS IN RELATION TO PREGNANCY.

We may now pass on to consider the non-suppurative lesions of the kidney in their relation to pregnancy, and although these constitute a very big subject, and one which might easily occupy many lectures, it will be best to touch only upon a few points of it here, because there is already a great deal of literature upon the matter, much of which is easily accessible to all.

There is still a good deal of discrepancy in the views held by different observers as to the nature of the lesions in question, for whereas some pathologists describe them as inflammatory, others insist that they are not so, but are rather acute toxic degenerations of the renal cells.

Clinical Groups.—Clinically there are three quite distinct groups of cases which some would distinguish from one another in kind as well as in type. (1) The cases in which renal mischief of the nature of Bright's disease has been known to exist previously to pregnancy. (2) The cases in which, previously to pregnancy, the urine was perfectly healthy and no previous attack of Bright's disease had occurred; but in whom during pregnancy, and beginning, as a rule, at or before the middle of the pregnancy, puffiness of the ankles, back, and eyelids appears, the urine at the same time becoming less in quantity and containing albumen, renal tube casts, and possibly blood, in a way which closely simulates ordinary acute Bright's disease. For the sake of brevity these are referred to as the "oedema cases." (3) The cases in which the patient has seemed to be in perfect health until the later months of pregnancy, or even until immediately after labour, and then without much warning and usually with only slight evidences of oedema, develops the well-known symptoms of puerperal eclampsia.

It is not at all improbable that there is a fourth clinical variety of renal disease that has a relationship to pregnancy—namely, the granular contracted kidney. It is very difficult to prove or to disprove this, because even if a granular contracted kidney in a given case owes its inception to renal trouble arising during pregnancy, the patient can still continue to live for many years without untoward symptoms, and, by the time death occurs, there will be nothing in the *post-mortem* examination to show either how long the renal mischief has been present, or how this mischief first began.

Recurrent obstruction to ureters is a potent cause of renal fibrosis, and it is conceivable that many successive pregnancies may lead to sclerosis of the kidneys without there having been any of the symptoms of acute Bright's disease. I have accumulated some evidence to show that not only pregnancy but also pathological affections of the pelvic organs, such as prolapse of the uterus, may lead to fibrotic kidneys, with hypertrophy of the left ventricle of the heart, and all the other changes that are usually associated with red granular kidney, even including cerebral haemorrhage. The data, however, are not yet complete, so that it will be best to leave the red granular kidney out of the question now under discussion, and to confine attention to the three different clinical types of renal disease mentioned above.

First, in regard to pregnancy arising in a patient known to have Bright's disease at the time conception occurred. It is so clear that pregnancy is apt to have a deleterious effect upon the kidneys, that it is manifestly unwise for a girl or woman with existing nephritis to get married. If the urine already contains both albumen and renal tube casts, there is a great risk that pregnancy will make the condition far worse and accelerate the end. The surprising thing is that some patients known to have persistent Bright's disease before pregnancy sometimes live to bear many children, even in spite of exacerbations of their renal symptoms during pregnancy. Such cases are exceptional, no doubt, but on going through the hospital records one finds several of this kind. In one there had been all the signs of chronic tubal nephritis for thirteen years; the patient had been married for eight years, she had borne five children, and bore a sixth alive at term in the hospital. This was not a case of recurrent acute nephritis, but of persistence of both albuminuria and tube casts; it is the more remarkable in that, even without the additional strain of pregnancy, it is unusual for a patient with such a renal condition to survive so long. Such an exceptional case merely shows that both pregnancy and survival may occur in a case of chronic Bright's disease; it does not follow that medical advice should not be against marriage in other cases of the kind.

There now remain the two groups of cases in which the renal disease is directly attributable to pregnancy—namely, those who develop renal oedema in the middle months and those who develop eclampsia at the end. The fact that these two forms of renal disease are really attributable to the pregnancy is so well established that it needs no discussion. In the majority of the cases both albumen and renal tube casts disappear from the urine in a remarkable way when the pregnancy has terminated. Clinically, the two types are so different that many authorities regard them as absolutely distinct renal affections; and some hold that both these two forms, besides differing from one another, are also entirely different from those renal affections which arise from other causes, and which are usually grouped together under the title acute or subacute Bright's disease. It is very probable that the question of whether these pregnancy kidneys are really forms of Bright's disease or not will remain a matter upon which

there will always be differences of opinion. The extent to which opinions differ at present is well exemplified in Sir T. Clifford Allbutt's *System of Medicine*, where the accounts given in different volumes by such authorities as Dr. G. E. Herman and Dr. W. Howship Dickinson respectively, are remarkably at variance. Speaking of the morbid anatomy and histology of the kidneys in the two types of disease under discussion, Dr. Herman says of the first—namely, that in which œdema of ankles and eyelids in the earlier months is the main symptom—which he calls the "chronic renal disease of pregnancy":

We know nothing of the morbid anatomy of this chronic disease, for it is not fatal. The morbid changes in the kidney can only be found out by examining the kidneys of a pregnant woman who, having the disease, died from some accidental cause, and I know of no such record. A few necropsies have been published, but the accounts are not harmonious, for the evident reason that the patients who died were suffering from forms of renal disease such as occur independently of pregnancy and not from that which depends upon pregnancy.

This does not seem to be altogether fair, for it is as much as to say: "The chronic renal disease of pregnancy is different from that of chronic tubal nephritis due to other causes; therefore, if at a necropsy made upon a patient dying pregnant, or recently pregnant, lesions resembling chronic tubal nephritis are found, the nephritis is not that which pregnancy causes." It appears to be an argument in a circle in which the conclusion that is drawn is also one of the premisses of the syllogism.

Dr. Howship Dickinson, on the other hand, writes very differently. He says:

The changes which occur in the kidney as consequences of pregnancy may be briefly indicated. They are the changes of heart disease and something more. To passive congestion is superadded an acute inflammation. In an early stage there is much hyperæmia, with obvious fulness of vessels, general redness, and some increase of size. In a case destined to further trouble, a somewhat peculiar form of diffuse nephritis succeeds; the tubes become loaded with epithelium which early takes on fatty change and imparts a yellowish colour, in streaks or otherwise, to the section. The fatty change is not limited to the epithelium, but may be somewhat general. The tubal change is accompanied or quickly followed by interstitial contractile growth, with consequent compression of the tubes, particularly near the surface, and superficial granulation. The condition is one of general nephritis, upon which granular contraction ensues with inordinate rapidity. So early does the contractile process become superadded to, or intermixed with, that of inflammatory swelling that the more bulky results of renal inflammation are excluded; the large white kidney does not, under these circumstances, present itself. The early access of inflammatory change would seem to imply that other causes are at work beside the mechanical, and that these are analogous to those to which other forms of nephritis have been traced. It has been suggested that the kidneys are irritated by some product of pregnancy, possibly an excrementitious result of fetal nutrition. The conjunction of the two morbid agencies, the mechanical and the vital, may account for the greater activity of the disease as compared with the granular kidney of other origin. The puerperal kidney has a mixed nature: it is one of diffuse nephritis, upon which granular contraction is rapidly superimposed.

Referring now to the kidneys found at necropsies in cases of fatal puerperal eclampsia, Dr. Herman says:

Very different conditions of kidney have been found. A comparison of the different accounts that have been published shows that they may be divided into three groups. First, disease of the kidney, such as may occur apart from pregnancy, . . . such as lardaceous disease, hydronephrosis, or dilatation of the ureters and renal pelvis. Secondly, in most cases there are changes in the kidneys which to the naked eye resemble those of acute or chronic tubular nephritis. Thirdly, in some cases the kidneys have shown no sign of disease appreciable by the unaided senses. When these kidneys—either those looking like kidneys with acute and chronic nephritis, or those which look healthy—are examined with the microscope, the changes are not those of inflammation but a degeneration like that which is seen in blood poisoning.

These changes have been variously described by various authors, the following being some of the descriptions. Professor Hamilton says:

Judging from the naked-eye appearances, we expected that parenchymatous inflammation of the tubular epithelium in the cortex, passing into a state of fatty degeneration, would be revealed. The first glance at a section of the organ, however, showed conclusively that this was not the case and that the lesion was not an ordinary parenchymatous inflammation. It consisted of degeneration of the epithelial cells of a certain proportion of the tubules in the circumferential aspect of the cortex. The degeneration appeared to be of a colloid nature. The products of these degenerated cells ran down and blocked up, more or less completely, the other convoluted and straight tubules, so as to render them functionally useless, although their tissues were not diseased.

Dr. Charlewood Turner, in a case of Dr. Herman's own, says that the sections—

Show recent degenerative changes of the cortex, without any older or cirrhotic lesions, changes attributable to some toxic matter in the blood. Granular degeneration and swelling of the epithelium of the convoluted tubes, the nuclei of which are invisible, and swelling of the connective tissue throughout, without infiltration of leucocytes. In the medullary tissue the epithelium of the loops and connecting tubes appears normal. Some of the loops contain casts. There is much vascular congestion in this part. The glomeruli appear normal. There is no exudation in the capsules.

Dr. W. J. Fenton, reporting upon a case, says:

Most tubules show what is apparently a running together of the cells, having no definite structure, and having their nuclei obscured, the whole condition of the epithelium being similar to that often found in acute toxic conditions.

And so on—Dr. Herman's conclusion being that—

From these different observations, made by independent pathologists, having no hypothesis to support, it follows that, although the kidneys often look like inflamed kidneys, yet that the lesion of puerperal eclampsia is not nephritis but an acute degeneration such as is caused by blood poisons.

It would serve no useful purpose to give all the multitudinous literature of the subject here. The above quotations sufficiently show that the greatest authorities are in complete opposition as to the nature of the renal changes in the kidney diseases to which pregnancy gives rise. One says that they are not nephritic at all; another that they are nephritic, and nephritic in remarkable degree. The matter must remain largely one of opinion.

The crux of the whole question is: What is nephritis? and What are its different kinds? and even to these questions no absolute answer can be given. The varieties of non-suppurative affections of the kidney included under the heading "Bright's disease" run so much into one another, and so much confusion has arisen from attempts to keep up a distinction between tubal and interstitial nephritis, that it is not to be wondered at that that which some authorities would term a nephritis is refused that title by others.

Dealing with the question from another point of view, it will probably be granted that the kidney lesions which occur during and immediately after scarlet fever are those of nephritis. Whether or not the fibrotic changes which may occur in kidneys which have been inflamed during scarlet fever are also inflammatory is doubtful. It is probably incorrect to speak of chronic nephritis in many instances, for that which is usually referred to as such is the fibrosis which results from former acute or subacute inflammation, the inflammation itself having ceased long since. A similar misapplication is frequent in regard to valvular heart disease: valves which are crippled as the result of former endocarditis are often spoken of as being the site of chronic endocarditis, when what is really meant is fibrosis from former endocarditis, all actual inflammation being now past. Scarlet fever may cause nephritis which, instead of either resolving completely or leading comparatively soon to a fatal result, may leave behind it a fibrosis. It is not this lesion which is at present under discussion, but the acute or subacute lesions which are on all hands allowed the title scarlatinal nephritis.

The kidney which may be found *post mortem* in such cases is very variable in its naked-eye appearances. Sometimes it is a large red, blood-dripping organ, without much blurring of the structural outlines; sometimes it is a large pale kidney, with lack of clear definition between cortex and medulla; more often it is a combination of these two types—a large organ variously mottled with pallid and with crimson streaks and blotches, the general effect being in the direction of redness in some, in the direction of pallor in others, whilst sometimes there is about an equal proportion of redness and of pallor in the mottling. Granted time between the onset of the inflammation and the time of the patient's death, a variable degree of contraction of the kidney will have resulted, with unevenness of the surface owing to irregularity in the distribution of the fibrosis, the colour varying here again between pallor on the one hand and redness on the

other as much as it does in the large kidneys of the earlier stages of the disease.

The microscopical changes are equally variable. Confining attention mainly to the acuter stages, the most striking feature is the obstruction and distension of the tubes, which are stuffed with epithelium, granular débris of cells, and often blood and fibrin, to the more or less obliteration of their channels. Sometimes the fibrin is so abundant as to occupy most of the tubes to the exclusion of their epithelial lining. Often the epithelium of whole groups of tubules seems to have undergone a sort of coagulation necrosis, the line of demarcation between each cell and its neighbour being no longer visible, and the nuclei no longer taking the ordinary stains. In the more protracted cases the periglomerular and intertubular connective tissue shares in the inflammatory process, displaying hypernucleation and proliferation of the connective tissue cells. The degree to which small round-celled infiltration occurs is extremely variable. Sometimes it is almost entirely absent, sometimes it is very obvious, particularly around the glomeruli and in the cortex. The patient may not die until, although there is still actual inflammation present in some places, in others there has been time for fibrosis to have occurred. In short, both the macroscopic and the microscopic appearances of kidneys that are the seat of scarlatinal nephritis are extremely variable, though it can scarcely be said that the different appearances constitute intrinsically different kinds in the inflammation. If any broad rule can be laid down it would be that the sooner after the onset the patient dies the more will the appearances be those of a coagulation necrosis of the epithelium; the longer the patient lives, supposing always that the renal mischief does not entirely resolve, the more will be the connective tissue change, first that of hypernucleation, and finally that of fibrosis.

If the description that has been given of the acute and subacute changes in the non-suppurative renal diseases of pregnancy be now recalled, it will be found that these are extremely similar to those that occur in connexion with scarlet fever. If the scarlatinal changes are to be termed nephritis then those associated with pregnancy are surely nephritis too. There have been in Guy's Hospital of recent years 4 fatal cases of the oedema type and 15 fatal cases of the eclamptic type of renal trouble in pregnancy out of a total of 71 cases of the former and 51 cases of the latter. There is little need to recount the changes that were found at the necropsies, because there is little to add to the descriptions already given above. If the kidneys themselves or microscopical sections of them had been mixed up amongst a large number of different scarlatinal nephritis kidneys and their sections, it would have been next to impossible to have gone through them and sorted the pregnancy kidneys from the scarlatinal. Large red, large mottled, large pale, contracting red, contracting mottled, and contracting pale kidneys were all represented, with a predominance of the large mottled and large pale kidneys in the eclampsia cases and of the contracting kidneys in the oedema cases. There were great variations in the microscopical appearances in different cases also. Sometimes cloudy swelling or coagulation necrosis of the epithelial cells in the cortex was the main thing; sometimes even in the eclampsia cases there was hypernucleation of the connective tissue as well. In the oedema cases there was a variable degree of fibrosis, mature and immature, which occasionally reached an extreme degree even in kidneys that were not very obviously contracted. It would seem that every kind of change which may be found in scarlatinal nephritis may also be found in these kidney affections of pregnancy. I therefore range myself with those who regard these kidney changes in pregnancy as essentially similar in kind to those which may occur in scarlet fever, and I believe that there is no intrinsic difference, but only one of degree and acuteness, between the renal changes in eclampsia cases and those in cases where renal oedema is a prominent symptom less late in the pregnancy.

The Cause of Pregnancy Nephritis.

It is not possible to say precisely what is the cause of the nephritis in pregnancy. It is generally believed to be a toxin—that is to say, a poison of unknown nature—elaborated during pregnancy. To term the changes in these pregnancy kidneys "toxic" does not imply that they are intrinsically different from those of scarlatinal nephritis, where the precise cause, being equally unknown, is termed toxic too. There are doubtless many different substances which can cause similar inflammatory lesions in the kidneys. Pneumococci have been recovered from these organs in cases of acute non-suppurative nephritis associated with lobar pneumonia. Streptococci have been recovered in a similar way from some scarlatinal nephritic kidneys. Cantharides, turpentine, and oxalic acid can cause very similar renal changes. It is more than likely that in certain cases pregnancy gives rise to a poison of some kind which in turn is the cause of the nephritis.

Nothing is really known as to why in some cases eclampsia should be the prominent feature, whilst in others oedema is marked and eclampsia absent, and whilst in yet others both occur. The parallel with scarlet fever nephritis still holds good in this respect, however. There are cases of scarlatinal nephritis in which oedema is entirely absent, and uraemic symptoms are the first to attract attention, whilst there are other cases in which oedema is a marked feature without uraemia. There is an admirable paper upon the subject by Dr. F. M. Turner.[1]

Notwithstanding all the work that has been done upon uraemia its pathology is still unknown. Of late years attention has been directed less exclusively to the kidneys in the study of the subject, and there is some evidence to show that the liver as well as the kidneys may play an important part in the origin of uraemic or eclamptic symptoms. The liver is nearly always abnormal in these cases, the chief changes being cloudy swelling, fatty change, and acute necrosis of the hepatic cells. It would not be surprising if the liver condition had something to do with uraemia, seeing that if jaundice were deducted from the later symptoms of acute yellow atrophy of the liver, the clinical picture of the latter would not be very unlike that of uraemia.

Before leaving the question of whether or not the renal lesion of eclampsia is really similar in kind to the renal lesion of the cases where general oedema is the main symptom, it may be of interest to note that 4 out of the 71 cases who were admitted for the oedema type of nephritis in association with pregnancy had suffered from typical acute eclampsia in a former pregnancy. Eclampsia is not so common that this can be a mere coincidence. If the same patient is liable to acute eclampsia in one pregnancy and then to the oedematous form of nephritis without eclampsia in a later one, it is very suggestive of there being a relationship in kind between these two clinical forms of renal disease. If these were cases in which the oedema type of nephritis had come first and then eclampsia in a later pregnancy the argument would not be so good, though there are cases of this kind too. The 4 cases referred to had never had symptoms of nephritis apart from pregnancy; their first symptoms of renal trouble were those of puerperal eclampsia towards the end of their first pregnancy. Recovery from this appeared to be complete, and in a subsequent pregnancy there was the nephritic type of oedema associated with albumen and renal tube casts in the urine and without eclampsia. The renal symptoms and urinary abnormalities again resolved after the later child was born.

It would be interesting to trace the after-histories of all the cases of eclampsia that have recovered for the time being and note what happened later. The writer has tried to do this with hospital patients, but the number of cases lost sight of is so great that the statistics obtained so far are too small to be of value. This would be a subject very suitable for a collective inquiry. The cases that have been traced show that puerperal eclampsia has recurred in some without necessarily proving fatal; that in others, as has been mentioned, renal oedema without eclampsia has taken its place in a subsequent pregnancy; whilst others, again, having recovered from eclampsia, have borne subsequent children without either oedema, albuminuria, or eclampsia. It is not improbable that the same would be true of scarlatinal nephritis if scarlet fever could recur in the same patient as often as pregnancy can.

Returning now to a consideration of all the cases together, they are found to bear out entirely what has been noted by others in regard to: the relatively better prognosis in the oedema type of pregnancy nephritis as compared with the eclamptic; the high proportion of primiparae amongst the eclampsia cases and the prepon-

derance of multiparae amongst those who develop the oedema type of nephritis; the relatively high percentage of cases in which albuminuric retinitis occurs; the relatively greater severity of the symptoms when the uterus contains twins; and the liability for the children to be born prematurely or dead, or for them to die soon after birth.

The Immediate Maternal Mortality.—Out of 71 patients with renal oedema and no eclampsia 4 died whilst in hospital, an immediate maternal mortality of 5 per cent., whereas out of 51 cases of puerperal eclampsia 15 died—an immediate maternal mortality of 29 per cent. This is a relatively small mortality as compared with that of acute uraemia not associated with pregnancy.

The Number of Previous Pregnancies.—Of the puerperal eclampsia cases 76 per cent. of the patients were primiparae; of the remainder most had had only one previous child, but in 2 cases there had been ten and twelve previous pregnancies respectively. Of the cases with renal oedema and no eclampsia, on the other hand, only 36 per cent. were primiparae, 64 per cent. having borne a former child or children, whilst a considerable number of the multiparae had had from four to twelve pregnancies without evidence of nephritis before. Leaving the eclampsia cases aside, as being of less interest to physicians, it is found on analysing the 71 cases in which there was renal oedema without eclampsia that 70 per cent. had never had symptoms of renal disease until the time when they developed during the pregnancy; that 10 per cent. had passed through a former pregnancy without symptoms of nephritis, but subsequently developed them when not pregnant, and suffered from an increase in the symptoms during a later pregnancy; that 7 per cent. had had acute nephritis before they were married and suffered from recrudescence of that trouble during pregnancy; that 6 per cent. had had eclampsia with a former pregnancy and now had symptoms of ordinary nephritis during pregnancy; that 6 per cent. had had symptoms of nephritis during a former pregnancy, recovering between whiles, but exhibiting the nephritic symptoms again when subsequently pregnant (in one of these cases nephritis with oedema, but without eclampsia, had recurred with each of four successive pregnancies); and that 1 per cent. had had no symptoms of nephritis during pregnancy and had had no eclampsia, but developed the symptoms of acute nephritis, with general oedema, during the puerperium.

As regards the month of pregnancy at which the renal trouble became manifest, that of eclampsia was, as all observers agree, in the latest months or immediately following labour; whereas in the cases where renal oedema was the main symptom the onset was at any time between the second and the eighth month, the trouble manifesting itself about the fifth or sixth month in the majority of cases. In this connexion it might be asked: If a pregnant woman develops evident oedema of renal type, with albumen and tube casts in the urine, during the eighth month of pregnancy, what is the likelihood that she will also have eclampsia? It would require a larger number of cases than the above for any absolute answer to be given to this question. It is fairly clear that if nephritis with oedema develops in the early or middle months of pregnancy it is quite exceptional for eclampsia to occur when the pregnancy is more advanced. It is also quite clear that the majority of cases of eclampsia have little or no oedema. Thus in 49 per cent. of the eclampsia cases there was no oedema at all; in 35 per cent. there was definite, though slight, oedema of the face and ankles; but in 8 cases, or 16 per cent., the general oedema was extensive, though it only developed in the later months.

Amongst the renal cases in which no eclampsia occurred there were nine in whom generalized oedema developed for the first time during the eighth month or later. There were thus 17 cases in whom extensive renal oedema first appeared in the eighth month, 8 of them subsequently developing eclampsia and 9 of them not doing so. It seems, therefore, that a broad answer to the question propounded above is, that when renal oedema first develops as late as the eighth month of pregnancy, the chances as to whether the patient will suffer from eclampsia or not are about equal.

Albuminuric Retinitis.

It is generally allowed that albuminuric retinitis in these pregnancy kidney cases is more common than it is in other forms of nephritis. The above cases conform with the general conclusions arrived at by others. Unfortunately, there was not an opthalmoscopic record kept in every instance. Of the 71 cases without eclampsia 13 had albuminuric retinitis, two dying; 10 had no albuminuric retinitis, none dying; and in 48 cases the condition of the eyes is not noted. Even if it be assumed that there was no albuminuric retinitis in all of these, which is improbable, the incidence of the retinal changes is nearly 20 per cent.; whereas in 312 consecutive cases of chronic nephritis not associated with pregnancy the incidence of the retinitis was 11 per cent.—14 per cent. in those diagnosed as chronic tubal and 9 per cent. in those thought to be chronic interstitial nephritis.

It is generally acknowledged that albuminuric retinitis is less likely to occur in acute Bright's disease than it is in chronic; nevertheless, it was well marked in 3 of the eclampsia cases, 2 of them dying. It was absent in 9, of whom none died; and there is no mention of the retinae in the remainder.

Amaurosis was present in several cases in which the optic discs and retinae were normal.

It has been said that pregnancy cases with albuminuric retinitis have a less unfavourable prognosis than have others with a similar lesion. This is perhaps true to the extent that in a few instances the retinal mischief has been known to disappear again after the pregnancy is over. In at least one of the above cases in which albuminuric retinitis was well marked during pregnancy the albuminuria, the oedema, and the retinitis disappeared entirely after the child was born. Nevertheless, the presence of the retinal changes is a sign of extreme gravity even in the pregnancy cases, the immediate mortality amongst the 16 cases who had it being 25 per cent.—15 per cent. in the non-eclamptic cases and 66 per cent. in those who had eclampsia.

The Effect of Twins.

The deleterious effect of twin pregnancy upon the kidneys is more marked in the eclampsia cases than it is in those with general oedema without eclampsia. Amongst the 71 cases of the latter there was not one of twin pregnancy, whereas amongst 51 of the former there were twins in 4; that is to say, in 8 per cent. The normal proportion of twin to single pregnancies is as 1 to 80, so that the incidence of twin pregnancies in eclampsia cases is more than six times greater than the average. This is precisely what has also been quoted by Schauta,[2] Hofmeier,[3] Löhlein,[4] Schreiber,[5] and others, whose conjoint statistics show that in between 7 and 8 per cent. of eclampsia cases twins are present. This remarkable fact strongly supports the view that the nephritis is due to a toxin elaborated by the placenta or by the fetus, for, as Dr. Herman and others point out, the mere bulk of the uterus will not account for it. "Nothing like eclampsia is ever met with in cases of abdominal tumours—ovarian cysts, uterine fibroids, and so forth—which sometimes get much larger than any pregnant uterus. The frequency of eclampsia with twin pregnancy arises from the presence of two children in the womb and not from mechanical distension of the abdomen."

The Effects of the Nephritis upon the Child.

Whether it is that the influence of the nephritis upon the fetus is bad or that the poor condition of the fetus is in some way the cause of the nephritis is a moot point. The fact, however, that some of the children are born healthy and live to grow up notwithstanding the renal trouble in the mother would seem to indicate that in the other cases the fetus suffers because the mother has nephritis rather than vice versa. All statistics show a high mortality amongst the children and those under discussion form no exception. Leaving the eclampsia cases out of account, the other type of patients show that in 18 per cent. of the cases the child was born too premature to live; in 23 per cent. the child was born near to, or at, term, but dead; whilst in the remaining 59 per cent. the child was born alive, but in a number of instances with too little vitality to continue to live long.

Treatment.

It is not the province of these lectures to enter upon treatment at any length, so that but a few words will be said about it. Clearly the treatment of an eclamptic case lies mainly with the obstetrician. That of the nephritis

of the earlier months of pregnancy, however, calls for immediate obstetric measures in but a few cases. Rest in bed, with medicinal, dietetic, and other measures precisely similar to those employed in other cases of acute or subacute nephritis, ameliorates the renal symptoms in many of the cases. The oedema and the albuminuria may thereby almost disappear before the end of pregnancy is reached. The average patient of this kind does better when treated upon the same lines as a non-pregnant case than if obstetric measures for the termination of the pregnancy are recommended and adopted. If, however, the renal mischief increases instead of diminishing, as is sometimes the case, notwithstanding all medicinal treatment—particularly when the latter has not been adopted and insisted upon at the very beginning of the trouble—the case will probably require the assistance of an obstetrician before term, although the relief to the nephritis after an artificial termination of the pregnancy is not as a rule so rapid as it is after natural delivery.

PREGNANCY IN PATIENTS WHO HAVE ONLY ONE KIDNEY.

Seeing that so much stress has been laid upon the renal affections that pregnancy itself may cause it might well be asked whether a patient who for one reason or another has had one of her kidneys removed ought to be advised not to marry. It must be remembered that although pregnancy sometimes gives rise to nephritis or to pyelonephritis the total proportion of all cases in which it does so is exceedingly small. Moreover, it is well known that after excision of one kidney the other, if healthy, has a very remarkable power of hypertrophying by way of compensation. Such a single kidney is seen in the *post mortem* room now and then, and it may weigh nearly as much as two ordinary kidneys. It would be expected, therefore, that if there was no evidence of disease in the remaining kidney, and if the patient was otherwise in good health, pregnancy might be incurred without any untoward symptoms whatever. This is, in fact, what Mr. G. E. Twynam[6] has found to be the case. It may be added that since the greater strain is put upon the right kidney during pregnancy the case is more likely to do well if it is the left kidney that remains; and, further, that since compensatory hypertrophy of the kidney must take some time to become complete, a year or more should elapse between the nephrectomy and the occurrence of pregnancy in any given case.[7]

TETANY AND PREGNANCY.

Another condition of which pregnancy seems to be one of the causes is tetany. One of the most interesting points in regard to the association of pregnancy with tetany is perhaps its apparent rarity in London. There does not seem to have been a single case of the kind in Guy's Hospital during the last thirty years. The writer has not seen a case of the association, though he has seen several instances of tetany in adults, chiefly in conjunction with gastric lesions. Incidentally, as a point which possibly supports the toxic theory of the disease, it may be mentioned that more than one case excreted quantities of diacetic acid and acetone in the urine. It is well known that both these substances appear in the urines of many cases of gastric disorder quite apart from tetany, and that they also appear in conditions of starvation, so that possibly the gastric disorders lead to acetonuria, partly or wholly as the result of semi-starvation. Nevertheless, in an instance recorded by Dr. David Forsyth,[8] the paroxysms of tetany in a patient who also had evidence of gastric ulceration were always associated with an increased degree of acetonuria. It would be interesting to know whether diacetic acid and acetone were also present in the urine in cases of tetany associated with pregnancy or in those following operations upon the thyroid gland; and, further, whether large doses of sodium bicarbonate had any beneficial effect upon the symptoms and course of the tetany, as might be the case by analogy with the treatment of acidosis in cases of diabetes mellitus.

That pregnancy and tetany are not all generally related to one another as cause and effect is further shown by the comparatively small amount of literature there is upon the subject. One of the best known monographs about it is that of Frankl-Hochwart. From this and from other papers one learns three particularly interesting points about the disease—namely, first, that in places where it occurs at all it bears a remarkable relationship to the time of year; the great majority of the cases arise in the late winter and early spring. Out of 59 cases collected by Frankl-Hochwart[9] 39 occurred in January, February, March, or April, whilst only 13 occurred exclusively in the remaining eight months of the year. Secondly, that there is a noteworthy tendency for the disease to be almost epidemic. There is a little difficulty in interpreting some of the accounts, for the disease was undoubtedly diagnosed erroneously in years gone by. Epidemic cerebro-spinal meningitis was formerly confused with tetany, for example. Hysteria affecting many individuals of a township, analogous to that of the dancing Dervishes or to that of the chorea of the ancients, constitutes another difficulty. Even allowing for this, however, the records show clearly that in places where tetany occurs there are some years in which the cases are quite numerous, and then others when the disease almost disappears from the neighbourhood. In Paris, for example, where the tetany of pregnancy used to be quite frequent, it is now said to be a condition of great rarity. Thirdly, in correspondence with the above, it appears to be a disease of extremely local distribution. Very rare in London, and apparently throughout Great Britain, formerly common in Paris and now rare there, rare throughout America, the two places where it seems to be the reverse of rare are Heidelberg and Vienna. It appears to be endemic in these two cities. It by no means follows, of course, that it is microbial in origin. It is well known that such diseases as cirrhosis of the liver or acute gout, common though they are in some places, are quite rare in others, although there is not yet any proof that either of these is of bacterial origin. There is no reason to suppose that the tetany sometimes associated with pregnancy differs essentially from adult tetany due to other causes. There is no need to discuss its general symptoms here, for they are well known.

The Pathology of Tetany.

The pathology of the condition is obscure, though there is much evidence to show that a toxin, and possibly not always the same toxin, is at work. The morbid lesions that have been described have chiefly been changes in the anterior cornual cells of the spinal cord and the corresponding cells in the medulla oblongata. Such changes would agree with the altered electrical reactions noted in the muscles during life. There is no complete reaction of degeneration, for excitability to the faradic current is retained; but with the galvanic current, instead of the kathodal closure contraction being more easily obtained than the anodal closure contraction, there is an altered polar response which may be summarized by saying that anodal closure contraction and anodal opening contraction are both obtained more readily than kathodal closure contraction. The changes in the spinal cord cells do not seem to be permanent, for the majority of the cases get perfectly well, though there is a tendency for the tetany to recur in several different pregnancies, not necessarily successive, in the same person. The other points that may be of interest are, briefly, the following. The patient usually escapes during the first half of pregnancy, the affection developing in the later months as a rule, though it occasionally shows itself earlier. The spasms are rarely met with during labour—a remarkable point, seeing that they are so readily produced by muscular efforts at other times. They may occur for the first time during lactation, though this seems to be less common than for them to arise during pregnancy, and then continue during lactation. If they occur during lactation it is clearly impossible for the mother to suckle the child, for she is unable to hold it securely. It is necessary to feed the baby artificially, not only for its own sake, but also because it leads to the more rapid subsidence of the tetany in the mother. The treatment of the condition is similar to that of tetany in non-pregnant persons. Finally, the tetany in the mother seems to exert less ill-effect upon the fetus than might be expected.

We may now leave the medical diseases of which pregnancy is itself the exciting cause, and pass on to the discussion of other medical affections which, though not actually caused by the pregnancy, may yet arise or be already present in a pregnant woman. There is hardly a medical disease, from a common cold to a cancer, that may not be thus present, and it is of essential importance to know in what respects, if any, the prognosis and the treatment in the case of a pregnant woman suffering from

such intercurrent malady differ from the prognosis and the treatment in other cases. It is manifestly impossible to discuss every such disease in the time at our disposal; many must be left unmentioned.

Appendicitis in Association with Pregnancy.

The question of appendicitis is always one of interest. What is the influence of pregnancy upon appendicitis and vice versa? This would be an excellent subject for a collective inquiry. The number of cases of pregnancy in association with appendicitis seen by a single individual is not likely to be great, and the cases that can be collected from the literature are almost necessarily those which are the more severe. The mild cases, which get better without anything very active being done, escape publication, and a collective inquiry which would cover all cases, whether mild or severe, would probably lead to conclusions that could not but be helpful to all.

There is a certain amount of literature upon the subject, some of which has been collected by Mr. George Heaton[10] of Birmingham General Hospital. One of the chief difficulties in connexion with the matter is that of diagnosis. Inflammatory and other lesions of the right Fallopian tube or ovary may simulate appendicitis very closely. The ordinary vomiting of pregnancy may be regarded as the whole trouble when there is really appendicitis, whilst, on the other hand, when a special outlook is being kept for appendicitis, the latter may be diagnosed when none exists. The difficulties that may arise when the lesion is really in the kidney—the pyelonephritis of pregnancy—have already been discussed, and in every case of suspected appendicitis in pregnancy the urine should be carefully examined with the microscope for pus corpuscles. The pains, again, may be referred to the abdomen when the real mischief is in the chest. Indeed, the diagnosis of appendicitis in a pregnant woman is beset with all the difficulties that occur in non-pregnant cases, together with others peculiar to pregnancy. Assuming, however, that the difficulties of diagnosis can be overcome by experience, the questions which arise are—Does pregnancy predispose to appendicitis when there has been no previous attack? Does pregnancy in a patient who has formerly had appendicitis without operation render her particularly liable to another attack during or after the pregnancy? Does the coincidence of pregnancy with appendicitis make the latter more severe than it is in average cases? Does appendicitis in the mother render the pregnancy more liable to terminate prematurely, and does it militate against the life of the child if the attack occurs when the latter is of viable age? Should the treatment of the appendicitis be precisely similar to that of corresponding attacks in non-pregnant persons, or should the physician's advice be more in the direction of inviting surgical assistance sooner, or more in that of continuing expectant treatment as long as possible in these cases? Should obstetric aid for artificially terminating the pregnancy be sought in any of these cases? These are very vital questions, and yet it is by no means easy to answer them. It may be urged that no definite rules can be laid down and that the action to be taken in each instance that arises must be decided entirely upon the merits of the particular case. This is true to a considerable extent; but when it is borne in mind that very different interpretations are put upon these "merits of the case" by different observers, even in cases of appendicitis in non-pregnant persons, it becomes evident that it is still more difficult to decide what is best to be done in cases that are at the same time pregnant.

In answer to the first of the above questions it would seem that pregnancy does not predispose to a primary attack of appendicitis. Amongst all the patients that have been in Guy's Hospital suffering from appendicitis during the last twenty-seven years only one was at the same time pregnant. She was a woman, aged 24 years, who had had no former attack, who had had no previous child, and who was six and a half months pregnant when she was suddenly seized with acute appendicitis of moderate severity. The trouble was localized from the first with the usual fullness in the right iliac fossa. Premature labour came on spontaneously a day or two afterwards, and the appendicular trouble rapidly resolved without operation.

The second question receives the following answer from Mr. Heaton: "If a patient have previously suffered from the complaint and afterwards becomes pregnant, the pregnancy may light up another attack. This it probably does by stretching or breaking down old inflammatory adhesions as the uterus enlarges and rises out of the pelvis. . . . On careful questioning it will often be found that there have been one or several previous attacks, though in some cases they have been of so mild a character as to have been almost disregarded. . . . Some surgeons would in every case remove the appendix in women immediately after an attack of appendicitis, if they be of a child-bearing age." It is manifestly of the greatest importance to have a clear answer to the question and to know whether the above views are correct or not. A young woman might contemplate marriage, and, having had one attack of appendicitis when she was a girl, and having recovered from it without operation and having had no symptoms of it since, she might ask the advice of a physician as to whether she ought to have her vermiform appendix removed before her marriage or not. She might be loth to undergo the operation and yet willing to follow the advice that might be given. Ought the operation to be advised in such a case or not? The answer can only be given when the results in a large number of such cases in whom no operation has been done have been collected and analysed. I have attempted to follow a number of hospital cases in this way, but to be of value the statistics obtained in a similar way by many different individuals should be put side by side and compared; the results found so far seem to indicate that there is no particular liability for pregnancy to light up fresh appendicular trouble in cases where the former attack occurred years before and appeared to resolve completely. The fact that a girl with ordinary appendicitis may some day become pregnant and might then have a recurrence of the trouble, may doubtless be an additional argument in favour of appendicectomy during convalescence from the attack, but if a patient has not had that operation at the time and has had no return of the symptoms since, the chances of her developing fresh appendicitis later when she becomes pregnant seem to be sufficiently small to warrant the advice that she needs no operation previously to marriage. If, on the other hand, a woman has her first attack of ordinary appendicitis after marriage, at a time when she is not pregnant, and the question arises as to whether she should have her vermiform appendix removed when the acute phase of the attack has passed, the fact that she might become pregnant very soon would seem to be a very real ground for advising that the operation should be done. Although there seem to be practically no statistics upon the subject, pregnancy arising within a few months of an attack of appendicitis would be very liable, one would think, to stretch and break down the immature adhesions in the way that Mr. Heaton describes, and lead to a recurrence of the trouble at a time when it would be particularly unfortunate. For the same reason it would be unwise for a young woman who had had appendicitis, not years ago but within the last few months, to get married; and such a patient would probably be advised to have appendicectomy performed, even though for a similar state of affairs in a man the operation might not be essential.

The answer to the third question—namely, whether or not the co-existence of pregnancy makes an attack of appendicitis more severe than the average—cannot be given until, by some process of collective inquiry, all the milder as well as the more severe cases can be collected. This is not at present possible, for the more striking cases become published, the simpler remaining in the background. The proportion of mild to severe cases is thus lost sight of; consequently the severity of appendicitis during pregnancy is very apt to become exaggerated. Nevertheless, those who have seen cases give it as their personal opinion that pregnancy is a complication which greatly increases the risks and dangers of the disease. The attack may occur at any stage of the pregnancy, as early as the sixth week and as late as the eighth month. The illness may be of all degrees of severity, from transient appendicular colic to the acute fulminating appendicitis which proves fatal in a few hours. In mild attacks, during the early months of pregnancy, the inflammation may completely subside and pregnancy go on uninterruptedly to term. "Owing, however, to the

increased blood supply and to the congestion of the parts due to pressure of the enlarging uterus," cases of appendicitis in pregnancy seem to run an unusually rapid course. Though some subside, the majority, if left, seem to go on to suppuration, and the further advanced the pregnancy the more likely this seems to be.

The danger to the mother's life does not cease with the opening of the abscess, for even after drainage of the cavity in the later stages of pregnancy, or in cases where miscarriage has taken place already, a septic salpingitis or endometritis may be set up with a further liability of extension to the peritoneal cavity. As regards the effects upon the fetus, the latter was born dead in 90 per cent. of the cases collected by Abrahams.[11] When pus forms in the later months of pregnancy miscarriage almost invariably takes place whether operation be performed or not. Even in cases where no pus is proved to have been present miscarriage or premature labour is more common than is the rule in healthy cases. It is not surprising that an untoward ending of the pregnancy is so frequent when one considers that the enlarged uterus is almost certain to be in contact with the inflamed tissues and to form one wall of the abscess cavity when pus is present.

The answer to the question of whether or not the treatment should be different to that of appendicitis in non-pregnant cases seems to be this: That, upon the whole, operative measures should be accelerated rather than postponed in these pregnancy cases. There are, of course, quite mild cases in which it is better to do nothing active; but in cases of the next degree of severity, where if the patient were not pregnant it might be thought best to wait, the opinion seems to be that operation should be advised on the very ground that the patient is pregnant, particularly in the later months of pregnancy. Doubtless this will not be the opinion of all,[12] but the reasons given for it seem sound; in the first place, owing to the vascularity of the parts, pus is even more likely to occur in these cases than it is in others; in the second place, the prospect as regards the child is so poor in any case that the course followed should be almost exclusively that which is in the greatest interests of the mother: and, in the third place, the emptying of the uterus by spontaneous miscarriage or premature labour is so likely to occur and with it a rending open of a previously localized inflammation, with consequent spread to the general peritoneal cavity, that it is very dangerous to wait.

The foregoing argument gives the answer to the last of the questions that were put above. It is in the last degree undesirable that obstetric measures for terminating the pregnancy artificially should be resorted to for fear of breaking down adhesions that are helping to localize the inflammation.

Pinard[13] has collected 45 cases of appendicitis complicating pregnancy, the diagnosis being confirmed in 30 by operation or *post-mortem* examination. He concludes that appendicitis may attack a pregnant woman at the beginning or at any time during pregnancy; that in the majority of cases it causes abortion, the reason for which is that the fetus becomes infected with the *Bacillus coli communis*, this organism being recoverable from its blood; that every type of appendicitis may occur, the severer cases predominating; and that operation should be advised as early as possible, both for the mother's sake and with a view to diminishing the chances of fatal infection of the child by the *Bacillus coli communis*.

If a pregnant woman develops an attack of appendicitis that is in any degree severe, the statistics that are available all indicate that the best chance of saving both the mother and the child is by early operation.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

CASE OF CONGENITAL ABNORMALITY OF HANDS AND FEET.

ON January 31st, 1908, Mrs. C., aged 28 years, was delivered of a male child, who survived twelve days. The mother, who had had four children previously, none of whom had any bodily deformity, was healthy, the father likewise was healthy, and there have been no deformities in the family of either parent. The mother asserts she was frightened by a drunken woman in September, 1907, who hit her on the face and chest, knocked her down, and hurt her right arm. She went to the hospital, where the arm was bandaged. Both knees were also hurt through falling. She had complained ever since the fall of itching and swelling of both hands, but the feet were not affected. Of her children one was stillborn at full term, one died at the age of 2½ years from pertussis and bronchopneumonia, and the subject of this note from wasting and convulsions. The two surviving children are both healthy and with no abnormality. The skull was markedly prominent in the frontal region, the anterior fontanelle greatly increased in size—1½ in. wide at the widest part, and open right down to the base of the nose; cleft palate was also present, and the following abnormality of the hands and feet:—*Right Hand:* The last phalanx of the thumb was twisted



inwards, and was ununited to rest of hand; the fore, middle, and ring fingers were united up to the end of last phalanx, and bony union appeared to exist between them; there was one nail, grooved in the centre, for all three fingers; the little finger was united with thick muscle half way up, and by a fold of skin from the base of the last phalanx, which reached to a point ¼ in. from the end; this finger had a nail on it. *Left Hand:* The two phalanges of thumbs looked inwards when the hands were crossed on the chest. The three middle fingers were all united together, and there was one nail, grooved in the centre, for all three; the little finger united up to end with muscle, and a fold of skin carried up the side of the



third finger. *Right Foot:* The toes were blended together, and there was distinct cup-shaped hollow from twisting. The fifth and fourth toe nails were united, the third and second distinct, as was that of the great toe. *Left Foot:* The hollow in front of the toes was not so great; all the nails were distinct; there was creasing of the skin in front, and the ends of both great toes were doubled over and on to nails.

York. A. B. NORTHCOTE, M.D.

PAROTITIS AS A SEQUELA OF PNEUMONIA.

DR. BURTON ROBINSON'S report in the JOURNAL of April 11th, p. 864, of a case of parotitis following pneumonia prompts me to record a similar case still under my observation. A man, aged 34, developed pneumonia of the left lower lobe with pleurisy on January 8th, 1908, complicated by delirium tremens of a violent character, the heart's action during the attack becoming intermittent and extremely rapid. The temperature fell by lysis, reaching normal on the seventh day. On January 15th he complained of pain, tenderness, and swelling in front of the right tragus. Four leeches were applied and afforded great relief. Next day the swelling had extended deeply behind the ramus of the jaw and downwards along the carotid vessels. There was also complete facial paralysis of the right side. An incision was then made immediately behind the angle of the jaw and sinus forceps introduced, but only a small bead of pus was evacuated. A small drainage tube was inserted, larger sizes being substituted at intervals, which for several days gave exit to large quantities of thick pus and sloughs. On January 21st pus was discharged from the external meatus and a sinus was found at the junction of the cartilaginous with the bony meatus, leading into the deep portion of the gland. This is now closed, but a sinus remains at the site of the incision leading upwards and backwards towards the mastoid. Several small boils in the axilla, buttocks, and lumbar region were subsequently incised. At the present time the facial paralysis remains, and it is probable that the entire gland is destroyed, as no saliva escapes either by the wound or by the duct, and dryness of the right side of the mouth is noticeable. No bacteriological examination of the pus was made, but I was convinced at the time that an extension of infection had occurred from the mouth, which was unusually foul, while very little could be done to cleanse it on account of the delirium. The infecting agent in this case was certainly of a highly virulent type, and there can be no doubt that its rapid development in the extensive ramifications of this gland in a patient already debilitated by an attack of pneumonia might give rise to a toxaemia of extreme gravity.

Patricroft. J. H. MORT.

TRAUMATIC TETANUS, BEGINNING WITH CLONIC SPASMS.

J. H., aged 32, a cowman, was first seen on February 19th suffering with a punctured wound, caused by a pitchfork while bedding down cattle. There was a small punctured wound in the front of the right leg at the upper trisection. A probe was passed vertically upwards for 2 in. just beneath the skin. The wound was laid open and dressed with lysol, iodoform, etc. For the next four days the wound was dressed daily and the patient kept absolutely at rest. On February 28th the wound was clean and healthy; but on that day, after I had left him, clonic spasms began, but I was not informed of this till I saw him on March 2nd, when I found the patient periodically convulsed with a peculiar type of clonic spasm in the affected leg. The wound appeared quite healthy, but the slightest mechanical stimulus in the region of the wound elicited a clonic spasm, which appeared to be composed of unbalanced contractions in the extensors and flexors of thighs. Dr. Eaton of Bingham saw the case with me, and we discussed the diagnosis. A vague history only of stiffness in the neck lasting for an hour or two on February 29th and March 2nd was obtainable. On March 3rd the wound was dressed with hydrogen peroxide and tincture of iodine, and a dose of 10 c.cm. antitetanin (Pasteur) was injected into the abdominal wall. A mixture containing potassium bromide gr. xv and chloral hydrate gr. x was given every four hours. The spasms were still clonic, but steadier and not so easily obtained. He had very little rest that night, and on the following day the spasms were apparent in the right gluteal region. Temperature, 99.5°. The dressing was repeated. Morphine gr. ¼ hypodermically kept him quiet till the evening, when we injected 30 c.cm. antitetanin—10 c.cm. into lumbar spine (though I am doubtful if this really entered the canal). The spasms were now distinctly tetanic, but still unilateral, and had affected the right lumbar region, causing a peculiar opisthotonos. Chloroform was administered and the seat of injury freely excised and packed with flowers of sulphur. Morphine gr. ¼ was administered. On March 5th the symptoms were much worse and elicited by the very slightest sound or movement. He was taken to Nottingham Hospital under chloroform. The house-surgeon tells me that after this the case got progressively worse and defied all treatment. Chloroform and morphine were constantly administered. The disease became bilateral in a couple of days and the respiration hampered. Death ensued on March 10th. The pathologists at Cambridge report to me that a mouse was injected with scrapings of the wound, but died on the fourth day without symptoms. Microscopically no tetanus bacilli were found. The points in the case which seem deserving of note are: (1) Onset on tenth day; (2) unusual train of symptoms; (3) defiance of antitoxin; (4) known source of infection; (5) sterility of the wound; (6) rapid course after wound was excised; (7) where were the bacilli in the patient?

Bingham. EDWARD BIGG, M.A., B.C.

AN EARLY CASE OF INTUSSUSCEPTION.

I AM led to report this case, not from its general surgical interest, but from the rather unusual experience of practically being present at the onset of an intussusception. I was visiting a patient, when I was called to see a baby a few doors away which was said to be in a convulsion. The baby, 5 months old, seemed in pain, kicked its legs about, and cried. I examined its chest, and found nothing wrong. I thought I felt an indefinite swelling in the right lumbar region, and made suitable inquiries. The child was well a few minutes before, it had passed a normal motion about half an hour before, and it had not vomited. The thought of an intussusception came into my mind, and as quickly went out. I went away after making a few remarks about teething fits, and said I was to be fetched if the child became worse. In the evening I was told that the child had vomited several times, and had passed slime and blood by the bowel. The swelling in the abdomen was no more definite than in the morning. Nothing could be felt in the rectum, but some bright blood came away on the finger. The child was rapidly getting worse. After consultation with Dr. F. D. Crew I proceeded to run a pint of milk into the bowel under an anaesthetic, but this did not reduce the swelling and caused a good deal of shock. Without further delay the abdomen was opened, and several coils of much-distended intestine escaped. An ileo-caecal intussusception was found, and reduced easily. The bowel for about 2 in. above the ileo caecal valve was so thickened by oedema as to give one the impression of containing a solid body. The child was very collapsed, there was a great difficulty in returning the distended intestine, and the wound was hurriedly closed with salmon-gut sutures, and covered with a collodion dressing. The child vomited frequently for about eighteen hours, when its bowels were moved, and then the vomiting ceased. The stitches were removed on the fourteenth day, and the child made an uninterrupted recovery.

Rushden. DUDLEY G. GREENFIELD, M.D., F.R.C.S.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GREY'S HOSPITAL, PIETERMARITZBURG.

FIVE CASES OF VESICO-VAGINAL FISTULA.

(By O. J. CURRIE, M.B., M.R.C.S., Surgeon to the Hospital.)

As cases of vesico-vaginal fistula are now comparatively rare in Europe, an account of these five cases might prove of interest to your readers. Four of the cases were of a very severe type. In all of them the operation described by Kelly (*Operative Gynaecology*, first edition, vol. i, page 345) was performed, in three with complete success.

CASE I.—T., a native woman, aged about 30, admitted March 3rd, 1903. Had suffered from vesico-vaginal fistula since her last confinement, about seven years previously. The vaginal walls were hard and cicatricial,

completely concealing the cervix uteri. The fistula readily admitted three fingers, and was situated just behind the neck of the bladder, involving the internal orifice of the urethra, its left edge being adherent to the pubic ramus. At a preliminary operation, lateral incisions were made through the cicatricial vaginal walls so that a speculum could be inserted. The cervix uteri was then dissected out and freed from cicatricial adhesions, so that a uterine sound could be passed, and the uterus drawn down to a certain extent by means of a vulsellum. The vagina was then plugged with iodoform gauze for twenty-four hours, and hot douches ordered. A week later the following operation was performed: An incision was made round the posterior edge of the fistula, and the bladder separated from the mucous membrane of the vagina until it could be drawn down and approximated to the anterior border of the fistula without tension. The anterior part of the fistula was then pared and a small flap of mucous membrane turned up. An endeavour was then made to separate the left angle of the fistula from the bone to which it was adherent; but this was unsuccessful, and only caused further tearing. A row of buried catgut stitches was now inserted to unite the bladder to the anterior part of the fistula. In dealing with the left corner, three deep stitches of stout catgut were passed by means of a uterine needle on a long handle. The denuded bladder wall was then covered in as far as possible with the flaps of the vaginal mucous membrane which had been left, and which were united with stitches of silkworm gut. A soft catheter was left in the bladder and a light plug of iodoform gauze in the vagina. The result of the operation was quite satisfactory, although for a few weeks there was a slight leakage, presumably from the left angle of the wound which was adherent to the bone. This ultimately ceased, and the patient left hospital cured in eight weeks from the date of admission.

CASE II.—P., a native woman, admitted May 19th, 1903, with a fistula much resembling Case I. In addition, the bladder contained a number of phosphatic calculi. At the first operation the vagina was incised and the cervix uteri freed, as in Case I, and seven large phosphatic calculi were removed from the bladder through the fistula. A week later Kelly's operation was performed. In this case the wound partially broke down and leakage occurred, which was permanent. The patient refused any further operative treatment, and left the hospital improved but not cured.

CASE III.—S., a native woman, aged 40, admitted February 12th, 1907, with a large vesico-vaginal fistula involving the internal orifice of the urethra and part of the bladder. The anterior remaining part of the urethra was barely half an inch in length. The fistula had existed for twenty years, and the vagina was a mass of hard cicatricial tissue. Similar operative proceedings were adopted in this case. The bladder, after having been dissected off the mucous membrane of the vagina, being stitched to the anterior part of the urethra and the anterior margin of the fistula which had been pared. After the operation the patient complained of incontinence of urine, but refused to submit to any further examination, and left the hospital in three or four weeks. This patient was again admitted to hospital in February, 1908, still complaining of incontinence of urine and pain in the vagina. Chloroform was administered and a careful examination made. Two phosphatic calculi were removed from the vagina, which was then carefully examined. It was found that the fistula was completely closed, and on injecting a weak solution of potassium permanganate none leaked through the scar of the fistula, but on withdrawing the syringe the fluid was immediately expelled from the urethra. Although the fistula had healed completely, there appeared to be incontinence of urine, due to absence of the sphincter, which had unfortunately been destroyed, together with the posterior part of the urethra and part of the base of the bladder, by the original injury.

CASE IV.—A., a native woman, aged about 35, admitted March 12th, 1907, suffering from a large vesico-vaginal fistula which admitted two fingers readily, situated at the base of the bladder close to the internal orifice of the urethra. The vagina was incised and plugged for a few days, and the fistula then treated as in the former cases. In this case there was never any leakage, and she left the hospital cured.

CASE V.—Mrs. H., European, aged 32, admitted August 15th, 1907, suffering from vesico-vaginal fistula of about two years' duration, situated anteriorly and to the left side of the cervix uteri, and readily admitting the point of the forefinger. She had been twice unsuccessfully operated upon by Sims's classical method. In this case a modification of the operation prescribed by Reed[1] was performed. The margin of the fistula was split and the bladder freely separated from the mucous membrane of the vagina until the walls of the bladder fell together without any tension. The edges of the bladder were inverted and its walls stitched together by catgut sutures, the mucous membrane of the vagina being approximated by sutures of silkworm gut. The result in this case was perfectly satisfactory; there was never any further leakage from the fistula, and she left hospital cured.

REMARKS.—These five cases form an interesting series. The first four illustrate the class of case usually met with amongst natives, the severity of the injury being due to the fact that they are often left in labour five or six days with the child's head impacted in the pelvis before a European practitioner is called in. There is also great delay before they come under the hands of the surgeon, from five to twenty years being the duration in the four cases reported. Cases II and III, I think, would have been cured by a second operation. I attributed the failure in Case II to the cystitis caused by the presence of the phosphatic calculi, and in Case III to the long duration of the fistula and the amount of dense cicatricial tissue surrounding it, which made the operation one of extreme difficulty. If a second operation by the vagina had failed in these cases, I should then have endeavoured to close the fistula from the inside by the suprapubic operation.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

LARYNGOLOGICAL SECTION.

AT a meeting on May 1st, Dr. J. BARRY BALL, President, in the chair, the following were among the exhibits: Dr. W. S. SYME: A series of stereoscopic photographs of patients operated on by various methods for frontal sinusitis, one of which showed the effect of injection of paraffin to remedy the resulting deformity. Dr. JOBSON HORNE: Specimens from cases of sarcoma and others simulating sarcoma in the upper air passages; in all, the diagnosis of sarcoma was suggested on clinical or pathological grounds, but the large majority proved eventually to be innocent growths. A case of lupus of the epiglottis in a girl, aged 17, who had no sign of tuberculosis or of lupus in other organs. Dr. DAN MCKENZIE: A case of mucocele of an anterior ethmoidal cell in a man aged 35; it had been successfully opened from the nose. Dr. DUNDAS GRANT: A case of lupoid tuberculous ulcer of the interior of the nose in a phthisical patient. A case of congenital laryngeal stridor in a boy, aged 3½ years; the stridor was marked, except when breathing very quietly, and had existed all his life, with hardly any improvement. Dr. J. W. BOND: A case of malignant growth, situated behind the cricoid cartilage in an elderly woman, and associated with enlargement of the thyroid gland.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

E. H. TWEEDY, F.R.C.P.I., President, in the Chair.

Friday, April 10th, 1908.

TREATMENT OF PUERPERAL INFECTION.

AT the adjourned discussion on Sir A. Macan's paper on the operative treatment of puerperal infection, Dr. HOLMES said it was very hard to make up one's mind, with a case not undoubtedly septic, as to whether an operation was justifiable or not. When one considered the number of septic cases that existed the mortality was really very small, and the number of cases of sepsis that recovered was very large, and it would be unwise to operate in all cases until differential diagnosis was more perfect. Professor ALFRED SMITH said Sir A. Macan had proposed a special operation with a view to preventing the occurrence of general peritonitis; but he could not see the advantage of packing the entire pelvic cavity, seeing that the uterus,

[1] *Operative Gynaecology*, second edition, p. 147.

in a septic woman, after confinement, was almost up to the umbilicus, and that on the posterior wall of the uterus there was the great lymphatic plexus carrying large numbers of streptococci. The success of surgical procedures would be found in an early recognition of grave cases, and early operation. When they had more knowledge as to the type of bacillus that was causing the trouble they might be able to do something to stem the fatal cases. Dr. Purefoy said that in cases of streptococcus infection the spread of the disease was so rapid, and its diffusion through the system so general, that surgical measures did not hold out hope of saving life. They were unwilling to resort to early operation in these cases, because they were aware that apparently hopeless cases had recovered, and they were unable to determine the power of resistance in the patient. Dr. FitzGibbon said that the great difficulty in treating by non-operative methods depended on diagnosing whether the condition was still localized or general, and in anticipating general infection. If the infection had become general, it then became a question of whether the patient could fight the infection by natural resistance, and the only possible treatment they could adopt was the introduction of antitoxins or vaccines to assist the system. Dr. H. Jellett said he could not understand where the operative treatment of acute puerperal fever came in. The operative treatment of local infections had been recognized for some time, but this was not what they were concerned with. Even if the presence of streptococci in the uterus was shown, the bacteriologist could give them no help as to the virulence of the organism until after injection into animals, and by that time either the patient was better or it was too late for operation. If the infection had not extended into the peritoneal cavity, it was contrary to all our present ideas to open up that cavity. Dr. Horne said it was comparatively seldom that one now saw a case of acute septic infection. The paper stated that the fifth rigor was an indication for operation, but in some of the very worst cases there was possibly only one rigor at the beginning, and to wait for the fifth would be to wait until too late. The plugging of the uterus and the opening of the posterior cul-de-sac was an admirable treatment, which he had adopted with very good results. Sir W. Smyly said it was very unlikely that any one of them would meet with more than a very few cases in which operative interference was required, and as it had been laid down that they could not judge the value of any particular line of treatment upon less than 100 cases, it would probably take some centuries before any one institution would yield a sufficient number of cases. They had, therefore, to collect results from a great number of hospitals, and Sir A. Macan's paper was a valuable epitome of such results. He (Sir W. Smyly) objected to the title "puerperal fever." In the old days it was restricted to acute lymphatic sepsis. Dr. Churchill had stated long ago that he had only seen 7 cases of puerperal fever, and it was evident that the great majority of cases spoken of by Sir A. Macan were localized, not general, sepsis. In treating puerperal fever, they should be careful not to take the part of the micro-organisms against the organism of the woman. The contest going on in her system was one of such great complexity that one felt very diffident to interfere, and it was very doubtful whether a serum would not take the part of the bacteria against the tissues. The President said his experience was that puerperal infection was common. Fortunately, in the majority of cases it was of a mild type, and there was, in his experience, no complaint so amenable to surgical treatment. He divided it into the mild, acute, and chronic types. The mild type was eminently suited for surgical interference; the chronic type was that dealt with for the most part by Sir A. Macan, and the acute type was outside the pale of all treatment. He divided operative treatment into the mild, the intermediate, and the drastic. Under the mild he put raising the bed, douches, exploration of the uterus, draining pus pools in the uterus, replacing a retroflexed uterus, the removal of pieces of placenta and membrane by the fingers. These could be undertaken without chloroform in the patient's own bed, and were highly successful. As for drastic methods, until knowledge was more precise and methods of operation less calculated to bring about the dreaded shock, he did not think he would ever again open the abdomen above the pubes with the idea of tying off veins or removing a septic uterus. Antistreptococcus serum was worthless when the disease had developed, though valuable as a prophylactic remedy. Where pus had burst into the abdomen he gave the serum straight off. Vaccines were not applicable for such cases. Lactate of calcium would probably lock up the blood in the veins almost as well as a ligature. Sir A. Macan, in reply, said it might require 100 cases to make statistics, but it did not require that number to enable them to have ideas on the subject. He had himself expressed his objection to the term "puerperal fever," but there was no other term that embraced all the states including sepsis. The uterus had been recognized for a long time as the source of the infection, and theoretically they must recognize a point at which, if they could settle it, the removal of the septic centre would be sufficient to stop the spread of the disease. The earlier they operated the more successful they would be, but the more doubtful it would be as to the success of the operation. There was no finality in the operation; they were only at the beginning of it, and he believed there was a great future before it.

Sheffield Medico-Chirurgical Society.—At a meeting on April 16th, Dr. R. Gordon in the chair, Dr. Arthur Hall, in a paper on *Some difficulties of diagnosis*, divided the common causes of these into: (1) Insufficient knowledge, (2) insufficient experience, (3) insufficient data. The third class could be further subdivided according to whether the data were really non-existent, or whether they existed but had not been obtained. Allowing for a certain number of cases in which insufficient experience led to erroneous deductions, it must be generally admitted, he thought, that the most common source of difficulty in diagnosis was insufficient data, and due to hurried or careless examination. These points were illustrated by numerous examples, particularly of functional nervous disorders simulating organic disease, and of abdominal cases with unusual and confusing symptoms. The paper concluded with some remarks on the difficulty of diagnosing malignant disease of the digestive tube from functional disorders, and a plea was made for a more general use of the assistance which the laboratory offers to the clinician in clearing up doubtful cases. Mr. Arthur Connell described and illustrated by specimens (1) A case of *Bicornuate uterus* removed from a girl, aged 15, who had menstruated for two days on one occasion only. Having missed three periods, she began to have great pain at the fourth period, and became very ill—vomiting, abdominal colic, etc. Rectal examination revealed a large globular mass, elastic in character, occupying the vagina, and continuous with a similar tumour to the right of the mid-line. On admission to the infirmary no cervical opening could be detected. A trocar was inserted into the globular swelling, and the usual chocolate-coloured fluid escaped. After 6 weeks' drainage by a glass tube it became necessary to remove the uterus by abdominal hysterectomy, owing to a rising temperature and the discharge becoming purulent. A special feature of the case was the extreme rapidity of growth in the girl after the operation. A weedy, stunted child on admission, she was discharged after three months' treatment as a buxom young woman. (2) A case of *Acute intestinal obstruction* in a woman aged 53, due to columnar carcinoma at the junction of the caecum and ascending colon. The growth was removed in two stages. The patient died from stercoraemia. (3) *Columnar carcinoma* of the caecum in a patient admitted for great pain in the right side of abdomen, with obstinate constipation. An end-to-side anastomosis with a Murphy button, after removal of the growth, was followed by uninterrupted recovery.

Medico-Psychological Association.—At a meeting of the Northern and Midland Division held at the West Riding County Asylum by the courtesy of Dr. Adair on April 30th, Dr. Macdonald, President, in the chair, Dr. Guy R. East, of Northumberland County Asylum, Morpeth, read a paper on a case of *Cretinism*, illustrating it by photographs. The patient presented all the typical symptoms of this disorder. He was dwarfed and stunted; the face was degraded, showing coarse, thick lips, depressed nose, receding forehead, sparse hair, skin generally dry,

harsh, and wrinkled, with absence of sweat and sebaceous secretions. The temperature was subnormal and the pulse-rate 48. A further interesting feature was the enlargement of the thyroid gland, which was chiefly confined to the right lobe. This tumour was elastic to touch, freely movable, painless, and in no way hampered respiration. The blood revealed a reduction in the percentage of haemoglobin and the urine showed an increase in the amount of urea excreted. The abnormal sensitiveness to cold was also noted. The intellectual state was marked by apathetic enfeeblement, sluggish mentation, deficient memory, slow speech, and lethargic movements. The patient had been under treatment with thyroid extract, but had shown no signs of mental improvement. The PRESIDENT (Dr. Macdonald) remarked upon the rarity of cretins in asylums, and that after careful inquiry he had not found a single case in Dorset. Dr. COLIN MCDOWALL, of the City Asylum, Newcastle, read a paper upon the occurrence of general paralysis in father, mother, and son. The cases were recorded, not that individually they were remarkable, but collectively they were extremely interesting, if not unique. Fortunately, in the only case—that of the boy, which might have caused a moment's hesitation in diagnosis—a *post-mortem* examination revealed characteristic lesions of general paralysis. The duration of the mother's attack lasted ten years, while she had previously been under control in an asylum. The signs of *General paralysis* were only seen in her case five years before death. She was then living apparently contented in an asylum, and why the cerebral degeneration should have commenced appears obscure. She was exposed to no strain or stress, nor did she suffer privation. Syphilis could not be definitely proved, but it could not be excluded. The man was a loose liver, while the boy showed certain suggestive lesions of congenital syphilis. The son was regarded as an undoubted example of juvenile general paralysis. In the discussion which followed, the PRESIDENT (Dr. Macdonald, Dorset) suggested that there was not sufficient proof that syphilis was present, and he did not accept the proposition "no syphilis, no general paralysis." He could name cases of general paralysis in country districts in which he was satisfied there was no syphilitic taint. He said it was remarkable that the mother had such a long period of excitement. Dr. MIDDLEMAS (Sunderland) remarked on the long history in the mother's case, and the weight of the son's brain (65 oz.) was unusual. He quoted a case of a congenital imbecile developing general paralysis in Morningside Asylum. Dr. HAROLD R. CROSS, Senior Assistant Medical Officer at Storthes Hall Asylum, Huddersfield, showed two interesting cases; one presented marked conical cornea; the other atrophy of the right deltoid and weakness of the muscles of the arm, the cause of which could not be ascertained. Dr. MICHAEL WILLIAM KELLY, Assistant Medical Officer at Storthes Hall Asylum, also showed: (1) A boy aged 14, with *petit mal*. During the attacks, which last about twenty seconds, he uses bad language. He wakes at night with a shout as if dreaming, but states he does not dream. He sometimes has twenty of these fits during the night; at other times may go four or five weeks without a fit. (2) A female, aged 39. In January, 1906, she exhibited acute melancholia, with active suicidal tendency. In September and October, 1906, she refused food, was tube-fed, and appeared to be becoming demented. Transferred to Storthes Hall, March 5th, 1908, she began to take interest in her surroundings, and when shown appeared on the road to recovery.

WIGAN MEDICAL SOCIETY.—At a meeting on April 14th, Mr. W. MITCHELL ROOCROFT in the chair, Mr. W. THELWALL THOMAS, in a paper on the diagnosis and treatment of *Renal calculi*, emphasized the inactivity of so-called solvents in the removal of such bodies, and the very great assistance afforded by *x* ray photographs if good and taken a short time before the operation. Without them an operation must always be more or less of an exploratory character.

THE Incorporated Institute of Hygiene will hold an exhibition of objects illustrating the requirements of infant life and the care and health of children next month.

AT the recent annual meeting of the Chorley and District Medical Society, Dr. James Lea was elected president and Dr. J. W. Maskell reappointed to the office of honorary secretary.

REVIEWS.

MALADIES OF THE HEART.

IN his selection of Sir James Sawyer as Lumleian Lecturer for 1908, the President of the Royal College of Physicians of London followed the traditions of the lectureship, whereby the choice falls upon one among the seniors of the Fellows. As a physician of over forty years' standing in Birmingham, and as a teacher in the medical school, the lecturer brought ripe experience to bear upon his chosen subject of *Maladies of the Heart*.[1] Few subjects have received more attention, at the hands of clinicians and pathologists alike, during the last twenty years. Much has been written about it, twice over it has formed the text for Lumleian lecturers, and many valuable observations have been recorded, but for practical purposes of treatment the teachings of individual experience must still be largely relied upon at the bedside. Hence the views of the older physicians, modified and enlightened by the revelations of modern pathology, have their peculiar value in the study of cardiac maladies.

"There is nothing which pathology touches which does not adorn a physician's understanding of the heart. No therapeutics can ignore that organ's weal." The many aids to diagnosis, instrumental and otherwise, the results of experimental research and minute pathological investigation, have each in turn directed the attention of physicians into new channels of thought. For a time the value of each new method or the importance of each fresh theory has been over-estimated, but of late years a more mature judgement of them has found expression in the authoritative works of the late Sir William Broadbent and others.

The history of the growth of knowledge of heart-disease may be said to begin with Corvisart, whose work in 1810 was, according to Dr. P. M. Latham, "in the hands of all the students, as containing full knowledge of the best kind given in the best way." No further advance seemed possible until Laënnec's invention of mediate auscultation opened up a new line of investigation. The value of hygienic management of heart disease, pointed out by Walshe in 1873, has been fully recognized and utilized in recent years, mainly by the careful interpretation of physical signs. It is satisfactory to note that in the experience of the lecturer

> The frequency of heart affections, relatively to that of other human maladies, does not appear to have increased of later times. The forces which make up the stress and strain of the later civilization do not seem to have caused increase in the relative number of cardiopaths amongst us, if, perhaps, we may except those heart ailments which go with certain neuroses, of which neuroses a marked phase is what may be called an exaggerated consciousness as to the heart.

Moderation and temperance in eating and drinking, together with the cultivation of personal hygiene, have doubtless lessened the frequency of heart disease arising from alcoholism, gout, and syphilis. Although among the commonest of our diseases at the present time, heart disease was, in the recollection of Sir Thomas Watson, "thought to be a very rare thing," but this is to be explained by the simple fact that it was frequently unrecognized in his early days.

Derangement of any of the so-called systems of the human body may cause disturbance of the heart, and, further, "a heart case is never only a heart case." For the true understanding of such a case all its accompaniments must be appreciated "by the light of experience in practice and by the illuminating light of a temperate clinical imagination—so we may take in the whole image at once, with its lights and shades in due array." The great mystery of the heart's movement certainly calls for the exercise of this clinical imagination, whether the neurogenic or the myogenic theory be accepted: but a momentous conclusion may be drawn from recent knowledge, that the heart possesses within itself a power of recovery of movement after temporary suspension which can save it from final stoppage under the stress of inhibitory shock, whether produced by violence, by emotion, or by an anaesthetic.

Turning in the second lecture to the consideration of the physical signs of heart diseases, Sir James Sawyer reminds

[1] *Points of Practice in Maladies of the Heart.* Lumleian Lectures at the Royal College of Physicians of London. By James Sawyer, Knt., M.D. Lond., F.R.C.P., F.R.S.Ed. Birmingham: Cornish Brothers, Limited. 1908. (Small 8vo, pp. 114.)

his hearers that the use of the eye and the hand should take precedence of other methods of diagnosis, and he shows how much may be learnt from a careful application of this rule. Palpation, thoughtfully interpreted, gives abundant local information; but inspection of the patient—his expression, his attitude, and his general aspect—may tell in a moment, to the practised eye, of those other morbid conditions which must be removed before the labouring heart can be relieved. In common with the older generation of physicians, the lecturer entertains a fitting respect for the teachings of Dr. Walshe, whose writings on the subject, although sometimes spoken of as "out of date," yet contain a store of clinical wisdom for those who take the trouble to seek for it.

In the concluding lecture, the subject of the so-called functional disorders of the heart is discussed at considerable length. Organic cardiac affections depend upon coarse changes in the organ, which are for the most part clearly indicated by physical signs, but a vast number of metabolic or dynamic influences may cause disorder of function, and these in turn must vary in degree with the presence or absence of organic lesions. In practice it may often be noted that drugs directly affecting the heart will prove useless, while a simple purgative will restore the equilibrium. The influence of individual temperament plays an important part in the course of cardiac irregularities. In discussing this point the lecturer draws a distinction between the nervous and the neurotic type of temperament, but only regards the latter as an extreme degree of the former and out of control. His conclusions upon these points are not very convincing, but the subject is one which is of necessity open to wide variations of opinion. Among the indications of the nervous temperament he describes the appearance of broken rows of small air bubbles on the dorsum of the tongue when protruded, an appearance which he regards as pathognomonic and dignifies with the title of "lingual physallization."

A close examination of the conditions giving rise to accentuation of the second sound of the heart and some interesting remarks on treatment bring the course of lectures to a close. Conveying as they do the carefully-considered conclusions of an experienced physician, these lectures will doubtless receive the attention to which the eminence of their author entitles them.

TROPICAL MEDICINE.

THE well-known book entitled *The Practical Study of Malaria and Blood Parasites*,[2] by STEPHENS and CHRISTOPHERS, has reached its third edition. The type and general characters remain the same, but so much recent work has had to be included that the authors have found it necessary to omit some other matter that appeared in former editions. Mosquitos have had to be considered no longer as a whole, but specially the Anophelinae, which alone are concisely described. This is a step in the right direction, and saves valuable space for more important subjects. The chapter on Filaria has been deleted altogether, and, after all, as this is a purely helminthological subject, and not so interesting to many as the protozoal blood parasites, it is perhaps right to omit it. Probably by the time the next edition appears the authors will find it to be of advantage to cut out the accounts of many of the parasites found in the lower animals and limit themselves to those of man and perhaps those of the higher mammals. It is extraordinary how the subject has developed since the appearance of the first edition, and every month or so something new falls to be recorded. The brief description of the new human parasite *Histoplasma capsulata* is a case in point. For a concise and clear account of blood parasites the student cannot do better than buy this book and carefully study it. He will be well repaid for his trouble.

A Handbook of Clinical Microscopy[3] by Drs. KESAVA PAI and P. S. RAMACHANDRIER, is primarily put forward to supply a want which has long been felt, especially amongst the members of the subordinate medical service in India, who have now to undergo a post-collegiate course of instruction in clinical bacteriology. The book has been written specially to give them in short compass the amount of information required, and follows in its general outlines the practical works on tropical medicine by Daniels and Stephens and Christophers. One at once recognizes many of the diagrams from those sources, duly acknowledged of course, and they help to enhance the value of the book. Clearly and tersely written, it should answer its purpose very well, and might in time with advantage be enlarged.

Books specially written for nurses going to the tropics are not very numerous, so the little one termed *A Guide to Sick Nursing in the Tropics*,[4] by Dr. ANDREW DUNCAN, should prove very useful. It is more than an ordinary nursing treatise, as descriptions and a very good account of the etiology of the individual diseases are also given. It is clearly and tersely written and should prove easy of assimilation. Enteric fever, dysentery, cholera, malaria, yellow fever, plague, beri-beri, and blackwater fever are amongst the diseases mentioned The latter exemplifies perhaps more than any of the others what nursing may do in improving the chances of recovery. A good nurse who understands the special causes of death in this complaint and who knowing them guards against them will certainly save many lives. The book can be thoroughly recommended.

VENEREAL DISEASES.

THE *Manual of Venereal Diseases*,[5] by officers of the Royal Army Medical Corps, recently issued in the Oxford Medical Publications Series, gives in a small compass an excellent survey of the subject, and although the book is designed for army surgeons, civil practitioners will find it a very useful guide. Sir Alfred Keogh, Director-General of the Army Medical Service, contributes a short introduction, in which he insists on cleanliness and personal hygiene in the prevention of venereal disease. He touches lightly also on legislative control, and states that the heated discussions that have arisen to obscure the question depend more upon differences regarding the nature and morality of legislative control of prostitution than upon the denial of the scientific fact that the spread of an infectious or contagious disease, venereal or otherwise, can be and is limited by such measures as notification, isolation, and adequate treatment. Lieutenant-Colonel C. H. Melville gives an interesting account of the history, statistics, invaliding, and so forth; and Colonel Leishman supplies a valuable chapter on pathology, which should be extensively read. The subject of paternal infection, however, must be regarded as unsettled, evidence pointing to the mother as the source and origin of congenital syphilis in the child. The chapters on the clinical aspect and treatment by Major C. E. Pollock are clearly written, and should prove of value. In conclusion, the manual, giving, as it does a terse, practical account of venereal diseases, can be strongly recommended.

In his *Syphilis in the Army*,[6] Major H. C. FRENCH, of the Royal Herbert Military Hospital, Woolwich, has brought together a mass of information on a subject of vast importance from the point of view of military efficiency. The large amount of venereal disease in the British Army is frequently pointed out by Continental critics, but in arriving at any conclusion the very special nature of our service, as compared with that of Continental nations, must be taken into account. Another factor is the manner in which our statistics are, or rather have been, made up. Since Major French called attention to the necessity of revising the collection of the figures dealing with venereal

[2] *The Practical Study of Malaria and other Blood Parasites.* By J. W. W. Stephens, M.D.Cantab., D.P.H., Walter Myers Lecturer in Tropical Medicine, University of Liverpool, and S. R. Christophers, M.B Vict., I.M.S., Members of the Royal Society's Commission on Malaria in Africa and India 1899-1902 Third edition. London: Williams and Norgate (for the University Press of Liverpool). 1908. (Demy 8vo, pp. 432 12s. 6d.)

[3] *A Handbook of Clinical Microscopy.* By M. Kesava Pai, M.B., C.M. (Madras), Assistant Surgeon, Madras Medical Department, and P. S. Ramachandrier (Mysore Medical Department). Bombay: The Times Press; and Chickpet, Bangalore: Moni and Co. (Demy 8vo, pp 112; 2 plates; 34 illustrations. Rs 3 8.)

[4] *A Guide to Sick Nursing in the Tropics.* By Andrew Duncan, M.D., B.S.Lond., F.R.C.P., F.R.C.S., Physician to Seamen's Hospital Society; Lecturer on Tropical Diseases, Westminster Hospital Medical School, etc. London: The Scientific Press Limited. 1908. (Cr. 8vo, pp. 162. 2s 6d.)

[5] Oxford Medical Publications: *A Manual of Venereal Diseases.* By Officers of the Royal Army Medical Corps. London: H. Frowde, and Hodder and Stoughton 1907. (Crown 8vo, pp 292 5s.)

[6] *Syphilis in the Army (Syphilis in the Army and Its Influence on Military Service, its Causes, Treatment, and the Means which it is advisable to adopt for its Prevention.)* By Major H. C. French, R.A.M.C. London: J. Bale, Sons, and Danielsson, Ltd. (Royal 8vo, pp. 134. 6s.)

diseases in the army, fresh instructions have been issued by the War Office. The author deals with the subject of control in India in an illuminating manner. His contention that venereal diseases are very imperfectly studied in England is quite true. In general hospitals the place given to these scourges is utterly inadequate. At this time of day, when we have arrived at the knowledge of the great number of serious complications which are apt to follow in the train of syphilis and gonorrhoea, the indifference to the proper teaching of efficient treatment of these maladies becomes a serious matter. It is an error on the part of the author to say (p. 43) that the use of grey oil is now ordinarily discredited on the Continent. The employment of insoluble mercurial preparations is the greatest advance that has been made in the adequate treatment of syphilis, and it is a treatment of the utmost value in the public services. As far as the British army is concerned it is to be hoped that this form of treatment, introduced by Major Lambkin, will not be given up. Space does not allow of reference to various other points. The book is one that should be in the hands of all syphilographers; but it would have been more useful had it been supplied with a good index.

ANTIRABIC IMMUNIZATION.

THE monograph of Captains HARVEY and MCKENDRICK on *The Theory and Practice of Anti-Rabic Immunisation*[1] is based on investigations extending over a period of eighteen months. Comparing the infectivity of rabies nerve-material (rabbit's cord) exposed to different periods of drying, they find that desiccation produces a rapid diminution in virulence during the first three days; between three-day and five day cords there is again a diminution of about one-half; after this period the progressive diminution is very gradual down to the ninth day of drying, when the cord was found to be non-infective. It was also shown by experiments on dogs that prolonged inoculation with nine-day cord failed to confer immunity. The authors dispute the existence of a rabies toxin as distinct from living rabies virus, and maintain that "the quantity of living fixed virus and the duration of time of administration are the only points which need be considered in making out a scheme of antirabic treatment." Slow desiccation, as is well known, gradually kills the rabies virus, and, according to the author's view, "the immunizing power of a given portion of rabies cord is a function of the unkilled remnant of rabies virus contained in it." They therefore consider that in antirabic immunization it is a great advantage to use fresh material rather than dried or heated material; a much smaller bulk of the former is required, and consequently much less injurious foreign nerve substance is introduced; it is also found that the dosage of the fresh material can be determined with greater accuracy. Another interesting and practically important point to which they call attention is that for the continued upkeep of "fixed virus" in rabbits, selection of the animals is necessary. They were first led to investigate this matter by a careful scrutiny of the periods of incubation of rabies in their rabbits, which for some years past had continued to be inoculated with a virus known to be "fixed" when first used. They discovered marked differences, the incubation periods varying from six to nine days. These irregularities, however, they were able to eliminate almost entirely by employing for subpassage material derived only from rabbits which had developed definite symptoms of paresis by the sixth day. The result of careful attention to this point was that in seven months' time the percentage of rabbits showing paresis on the sixth day had been raised from 24.5 to 95.

A NOTABLE SCOTTISH TRIAL.

MANY readers will probably remember the trial of Alfred John Monson[2] for the murder or attempted murder of Windsor Dudley Cecil Hambrough at Ardlamont in 1893. Cecil Hambrough, aged 20, had lived for three years with the defendant, A. J. Monson, for the purpose of being educated for the army, Monson professing to be an army teacher, though there was no evidence that he ever gave any instruction himself. Major Hambrough, the father of Cecil, was the life tenant of considerable property, but had so completely exhausted his own interest in the estate that he was in great straits for money, and seems to have been glad to accept the offer of Monson to keep and educate his son until he had passed into the army, on his promise that when Cecil arrived at the age of 21 the entail should be broken and a sufficient sum of money raised to pay Monson at the rate of £300 a year for his services. Monson and his wife were both respectably connected but had no adequate source of income, although they had managed to get along by raising money upon their expectations. At the time that he undertook the charge of Cecil he was practically at the end of his resources and had been adjudicated a bankrupt. In spite of this he made a series of proposals, the effect of which if carried out would have been to have made him master of the situation when Cecil came of age. All these projects failed owing to the opposition of Major Hambrough, who had become distrustful of Monson and wished his son to leave him, but he declined to do this because he was living in a comfortable country house, while his father's establishment was reduced to lodgings in London, and the boy was genuinely fond of Monson, whom he considered to have done his best for him. It is unnecessary to go through all the various expedients by which Monson tried to raise money, but in the end he effected an insurance on Cecil's life for £20 000 in two policies, each for £10,000, with the Mutual Life Assurance Company of New York, and he paid the first half-yearly premium out of a cheque given him by Mr. Tottenham, a moneylender with whom there had been previous dealings, and who at this time was his chief financial support. Monson had previously been living in Yorkshire, but managed to obtain the tenancy of Ardlamont House and shooting in Argyllshire, and there the family moved in June; Cecil joined them when he had finished his training with a militia battalion of the Yorkshire regiment. On August 8th a mysterious person known as Edward Scott arrived at Ardlamont; he was described by Monson as an engineer who had come to examine the boilers of a yacht which they were negotiating to purchase. He was not of the same social position as his hosts, and while there he did not examine the boilers. On the evening of August 9th Monson and Hambrough went out in a boat on a dark night to try fishing with a splash net, and the butler was told to sit up for them. They eventually returned wet through, and Monson said the boat had been upset by bumping on a rock, that he had swum ashore to fetch the other boat, and had rescued Hambrough, who had climbed on the rock. The matter seemed to be treated as rather a joke than otherwise, but as on examining the boat a freshly cut hole was found, the theory was put forward by the Crown that this had been done by Monson to swamp the boat with the intention of drowning Hambrough, who could not swim, but that this plan was defeated by the boat sinking before they got into deep water, so that both scrambled ashore. This part of the case for the prosecution was weak; the Crown failed to disprove the existence of the rock either by a careful survey of the bay or by the production of the Admiralty charts, and there was nothing incredible in Monson's story. The following morning Monson, Scott, and Hambrough were seen by a visitor lodging in the schoolhouse, to enter a plantation, Hambrough being on the right, Scott in the middle, and Monson on the left. Hambrough was never seen again alive. According to Monson's story, after they had walked some way through the wood he heard a shot, and called out to Hambrough, "What have you got?" On getting no reply, he walked towards him, and found him lying below a sunk fence with his gun beside him. Scott, who had followed, assisted Monson to lift the body, and laid it on the top of the dyke, but there were no signs of life. They went to the house, and told the butler what had happened. A doctor was sent for, and some men went down, wrapped the body in a rug, put it in a cart, and brought it up to the house, where it was washed and dressed and laid upon Hambrough's own bed.

When the doctor arrived he found that there was

[1] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 30, *The Theory and Practice of Anti-Rabic Immunisation*. By Captain W. F. Harvey, M.B., I.M.S., and Captain Anderson McKendrick, M.B., I.M.S. Calcutta: Superintendent of Government Printing. 1907. (Med. 4to, pp. 43, with charts. 1s. 2d.)

[2] *Notable Scottish Trials. Trial of A. J. Monson.* Edited by J. W. More, B.A.Oxon. Glasgow and Edinburgh: W. Hodge and Co.; and London: Sweet and Maxwell. (Demy 8vo, pp. 472. 5s.)

commencing rigor mortis, that there was a ragged gunshot wound in the back of the head, and, having heard Monson's account, he was satisfied that it was the result of an accident, and reported to that effect to the Procurator-Fiscal, the Scottish official part of whose duty it is to inquire into cases of sudden or violent death. Scott had to go to Glasgow that day, and the doctor saw no reason to detain him; he left in the afternoon, and all trace of him was lost, in spite of the efforts made by the Crown and the defence to find him. The theory of the Crown was that he was a bookmaker named Edward Davis, living in London, and known to Monson, while Monson refused to give any information beyond his original statement that he was an engineer from Greenock, which was plainly false. The Lord Justice Clerk, in summing-up, said it was difficult to understand what tenable theory the Crown put forward to explain Scott's connexion with the crime, unless he was there as the hired assassin, of which there was no shadow of proof; there was no evidence that Scott had anything to do with the boat accident, and when he turned up some time after the trial, and applied to have the sentence of outlawry removed, which had been passed against him on account of his non-appearance at the trial, the Crown entered no opposition. No suspicion of foul play was aroused until a claim was made by Tottenham on behalf of Monson for the proceeds of the policies of life assurance which had been assigned to Mrs. Monson by a letter written by Hambrough as security for the money advanced by him, but as a minor the assignment was not valid. The inquiries made by the insurance company revealed to the doctor that Monson had an interest in Hambrough's death, and fearing that he had made a mistake he asked leave to withdraw his reports to the Fiscal and the insurance company, and from that time forward saw everything as much in black as he had previously seen it in rose colour. Meanwhile the body had been buried at Ventnor. Monson was arrested, the body was exhumed, and a *post-mortem* examination was made by Dr. Henry Littlejohn and Dr. Macmillan, acting on behalf of the Crown, in the presence of Dr. Gordon Sanders, representing the prisoner. The result was to show that there was a triangular wound at the back of the head, the apex of which was about 1 in. from the occipital protuberance and the base behind the ear; part of the flap of the ear was torn off; the petrous bone was shattered, and the skull fissured forwards and upwards, while the lateral sinus was torn. On examining the brain only four pellets of shot were found in the cavity of the head; there were no wounds in the scalp, or any other evidence of scattering of the charge. It was agreed on both sides that the injury had been caused by a No. 12-bore gun charged with amberite powder and No. 5 shot; this gun was generally used by Monson, but he explained that on the morning of the accident Hambrough had taken it to try the amberite powder, as there were no amberite cartridges for his own gun. According to the theory of the Crown, Monson carried the 12-bore gun and shot Hambrough from behind at a distance of not less than 9 ft. A great deal of ingenuity was wasted in endeavouring to show that certain marks in the trees were caused by the shot, as the defence showed that the wood was full of shot marks, and this evidence failed to impress either the judge or the jury. The main discussion and the chief medico-legal interest of the case turned upon whether the injury to the head could have been made at any distance compatible with the theory that Hambrough was shot by his own gun. According to the theory of the Crown, the gun must have been at least 9 ft. from his head, otherwise the charge would have entered *en balle* and have shattered the opposite side of the skull; but, according to the defence, there would have been at that distance such scattering of the charge that there would have been shot marks in the clothes, the neck, and the head. Medical witnesses were found to support both sides, and the evidence given by Dr. Littlejohn for the Crown and by Professor Matthew Hay for the defence was admirably conceived to maintain their respective theories. In his summing-up the Lord Justice Clerk was manifestly inclined to the opinion that the Crown had failed to prove the charge, and the characteristically cautious verdict of "Not proven" admitted by Scottish law will fairly describe the state of mind of most readers who follow the account so carefully compiled by Mr. More.

NOTES ON BOOKS.

PROFESSOR W. N. PARKER'S English adaptation of Professor WEIDERSHEIM'S *Comparative Anatomy of Vertebrates*[1] has all the qualities of a good original work, and none of the usual deficiencies of a translation. It is very readable, the descriptions are clear and concise, and collectively they embrace in a relatively small space a most attractive and a wonderfully exhaustive survey of the main features of the various anatomical systems of vertebrated animals. The arrangement of the subject-matter is practically the same as previous editions; a suggestive introduction is followed successively by accounts of the integument, the skeleton, the muscular system, the nervous system, the organs of special sense, the alimentary system, the respiratory system, the vascular system, and the genito-urinary system. All the descriptions are profusely illustrated by diagrams, and figures will render still more clear the already lucid text. Appended to the volume is an extensive bibliography, which will greatly facilitate the work of students who are stimulated to seek for further knowledge. The work of author, adapter, and publisher is well done, and there is little or nothing to which exception can be taken either in the figures or the descriptions. Where so much is good it is difficult to select the better parts, but the accounts of the osseous system and the genito-urinary system are particularly strong both in arrangement and execution.

Mr. C. H. FAGGE'S *Pocket Anatomy*[2] is an old acquaintance under a new name. Originally it was the *Pocket Gray*, but the present edition is based not only on *Gray's Anatomy* but also on *Quain's Anatomy*, Cunningham's *Textbook*, and Morris's *Treatise of Anatomy*: it was therefore decided that the old name was no longer applicable. No change in character is associated with the changed name, for the little book is still a series of condensed and incomplete notes on human anatomy. The present edition is a distinct improvement on the last, inasmuch as it is more up-to-date, and therefore better adapted for its purpose of enabling students to make a rapid survey of the main points of the subject before examinations.

The volume containing the proceedings of the second meeting of the German Laryngological Society opens with an obituary notice, prefaced by an excellent portrait, of the late Professor Moritz Schmidt, from the pen of Dr. GEORG AVELLIS.[3] Of the scientific papers, thirty-three in number, about a third deal with diseases of the nasal accessory sinuses. Amongst the latter is a paper by Professor Hajek on the indications for operative treatment in chronic inflammation of the frontal sinus. Professor Rosenberg contributes a paper on cold abscess of the larynx. Dr. Avellis and Dr. Saenger write on the causation and treatment of asthma, and Dr. Heymann and Dr. Hoffmann contribute papers on the therapy of hay fever. The remaining communications for the most part deal with the larynx itself.

The seventh edition of Dr. PRAUSNITZ'S work on the characteristics of hygiene in Germany and Austria was reviewed in these columns on December 30th, 1905. The eighth edition[4] just published contains 13 more pages and 29 more illustrations, and slight additions have been made to most of the chapters. The subject of cerebro-spinal meningitis, which was not dealt with in previous editions, receives due attention here. The author gives it as his opinion that the disease is often disseminated by the saliva of healthy persons who have been in contact with those affected, and recommends that all such "contacts" should rinse mouth and nose with disinfectant solutions daily for a week. He is in favour of the medical inspection of schools, but considers it even more important that the teachers should be properly instructed in hygiene.

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[1] *Comparative Anatomy of Vertebrates.* Adapted from the German of Dr. R. Wiedersheim by W. N. Parker, Ph.D. Third edition. London: Macmillan and Co. 1907. (Med. 8vo, pp. 588, 372 figs. 16s.)

[2] *The Pocket Anatomy.* Sixth edition. By C. H. Fagge, M.B., M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1908. (Foolscap 8vo, pp. 270. 3s. 6d.)

[3] *Verhandlungen der deutschen laryngologischen Gesellschaft auf der II Versammlung zu Dresden vom 15–18 September, 1907.* Herausgegeben von Dr. Med. Georg Avellis, Frankfurt-a-M. Würzburg: Curt Kabitzsch (A. Studers Verlag). 1908. (Roy. 8vo, pp. 188; M. 5.)

[4] *Grundzüge der Hygiene unter Berücksichtigung der Gesetzebung des Deutscher Reichs und Oesterreichs.* Bearbeitet von Dr. W. Prausnitz, Professor of Hygiene, etc. University of Graz. 8th edition. München: J. F. Lehmanns. 1908. (Roy. 8vo, pp. 992, 253 illustrations. M. 8.)

An excellent collection of papers is published in the *Transactions of the American Ophthalmological Society*,[5] which held its forty-third annual meeting last year. An interesting paper, with ophthalmoscopic drawings and a skiagram of the head and face showing extensive disease of the retinal vessels, followed by proliferating retinitis, in a young coloured man, is contributed by Dr. de Schweinitz: the frontal and sphenoidal sinuses were enlarged. Dr. Risley records two cases of profuse lacrymation and sneezing in two young women, caused in one case by emanations from horses and in the other from cats. A primary melanotic sarcoma of the corneal limbus is described by Dr. Veasey. Dr. W. E. Lambert advocates the removal of the lens in cases of high myopia, and considers that the dangers of the operation have been exaggerated. Dr. Charles S. Bull gives the post-operative history of 60 cases of glaucoma. Several cases of removal of foreign bodies with the magnet are reported with some good results. This by no means exhausts all the interesting papers which are to be found in these *Transactions*, but it will be observed that the subjects discussed ranged over a very large field.

Most of the plates in the twenty-seventh fasciculus of the New Sydenham Society's *Atlas*[6] are from specimens illustrating Dr. Cullingworth's experience, being taken from his well-known *Clinical Illustrations of the Diseases of the Fallopian Tubes and Tubal Gestation* and from contributions to the *Transactions of the Obstetrical Society of London*. As that well-known authority has done so much to throw light on the morbid anatomy of the female genital organs, it is satisfactory to find some of his previously scattered work collected in this *Atlas*. Besides the familiar drawings representing tubal inflammation and tubal abortion, there are five illustrations of two cases of squamous-celled carcinoma of the labium. The remaining plates, taken at the London Hospital, represent late secondary symptoms appearing simultaneously in the vulva and mouth or lips of the same patients, and are, like the drawings of carcinoma, most instructive for clinical study.

It is a relief to turn now and then from the study of works on human ills to books which treat of flowers, trees, and gardens. Mr. WROE'S little book on dahlias[7] is a perfect essay upon the subject. It begins with the family history of the plant, and speaks of its childhood, education, feeding, protection, and propagation. It speaks also of its enemies and of its diseases, and shows how they may best be dealt with. And all this for the modest sum of 1s. The pathology of the various ills of the dahlia is thoroughly gone into, and only one thing seems absent—that is, the way to make one enthusiastic about a flower which, except for the brilliance of its colouring, fails to arouse any fond desire. To the writer of this little review the dahlia is destitute of charms. But his view is no doubt peculiar, and no doubt to the enthusiastic author of the book in hand, quite unintelligible. The writer must confess, however, that if he had been fortunate enough to see the prize vase of cactus dahlias which is reproduced on the frontispiece to the book he might have been less unsympathetic in his remarks upon the volume, which—he wishes it to be clearly understood—he considers to be of great practical merit.

The twenty-third volume of the *Transactions of the American Climatological Association*[8] records the work done at the annual meeting of this body in May, 1907. Among volumes of transactions the book is notable for the number and attractiveness of its illustrations, the subjects dealt with lending themselves easily to these embellishments. As has not always been the case, papers of a truly climatological order predominate, a large number of them discussing in interesting fashion the effects of climate and sanatorium treatment on tuberculosis. As a whole, they tend to support the belief that persons suffering from tuberculosis may recover in any and every climate. Included among the papers is a description of the formation and advantages of what the author, Dr. C. Denison, of Denver, Colorado, calls the "sleeping canopy." Its intention is to secure for those who sleep in rooms a full measure of fresh air without draught. As the canopy described could be arranged in any bedroom, the paper is worth study by those likely to be interested.

[5] *Transactions of the American Ophthalmological Society*. Forty-third Annual Meeting, Washington, D.C., 1907. Vol. ii, Part II. Hartford: Published by the Society. 1907. (Med. 8vo, pp. 250-453.)

[6] *An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology, chiefly from Original Sources*. Fasciculus XXVII. Diseases of Ovary, Fallopian Tube, and Uterus. London: The New Sydenham Society (H. K. Lewis). 1907. (Dbl. demy 4to.)

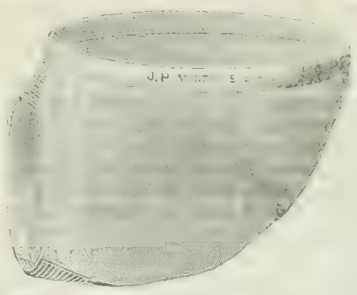
[7] *Dahlias and Their Cultivation*. A Practical Treatise by J. B. Wroe. London: W. H. and L. Collingridge. 1908. (Cr. 8vo, pp. 90. 1s.)

[8] Philadelphia: Printed for the Association. 1907.

MEDICAL AND SURGICAL APPLIANCES.

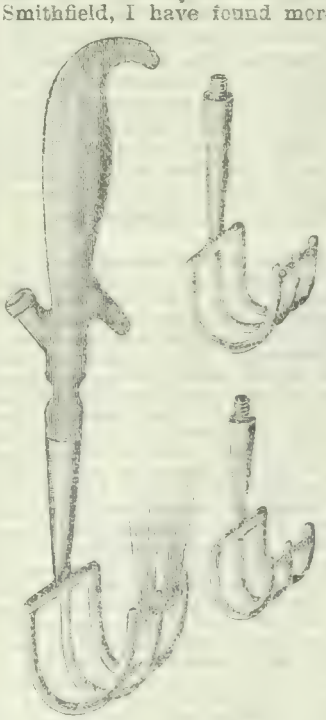
Artificial Pelvic Floor for Demonstration.

DR. C. NEPEAN LONGRIDGE (London, W.) writes: Every one who teaches midwifery to nurses must be aware of the difficulty of making them really understand what the pelvic floor is and does. The article illustrated was designed with a view to lessening this difficulty. It consists of a ring of whalebone which fits into the pelvis at the level usually described as the plane of the cavity of the pelvis. A hammock-like arrangement of batiste is suspended from the ring, and opens forward. At the two extremities of the opening pieces of elastic are inserted, thus allowing of considerable distension of the artificial vulval opening. This improvement was suggested by Dr. R. J. Collie. When placed in the pelvis and folded up, the model gives a nurse a rough idea of the pelvic floor in its ordinary condition. When a fetal head is passed through, a pupil cannot but appreciate the action of the pelvic floor in rotating the head, and the distension of the vulva by the various diameters of the head is demonstrated. These pelvic floors are used in the London County Council lectures to midwives. The model is constructed by Mr. J. H. Montague, 69, New Bond Street, London, and can be obtained for 4s. 6d.



Retractors.

Mr. H. J. GODWIN, Honorary Surgeon, Royal Hants County Hospital, Winchester, writes: The retractors made for me by Messrs. Arnold and Sons, of West Smithfield, I have found more useful than the various other retractors I have previously used. Being made in various sizes to fit one holder, a large size can be very quickly changed to a small size during any operation. The curve is made so that it is easy to insert gauze or a flat sponge between the retractor and the tissue so as to prevent any injury to the tissues retracted. The retractors are specially useful in the rectal sheath incision in abdominal operations. The retractors are also made so that the wound can be irrigated at the same time as it is being retracted, so that it is useful in operations on the brain and for continual saline injection during an abdominal operation.



Sphygmometer Armlet.

Dr. GEORGE PARKER (Clifton, Bristol) has devised an alteration in the armlet of a sphygmometer which he finds does away with the cumbersome buckles and straps and makes it easier to fasten it on the arm. One end of the leather cover is prolonged 3 or 4 in., and two rows of well-made glove-studs are inserted on its under surface parallel to the edges of the armlet. These studs are 1 in. or less apart, and correspond to spring sockets fixed in two rows on the other end of the cover. A couple of studs on each side can be pressed into sockets in a moment, and, if properly made, cannot be displaced when air is pumped into the bag. The armlet can be fitted to any arm if the rows of studs are long enough, and some adjustment for tapering is also easy. Messrs. Ferris and Co., Bristol, have made for me a loose cover with studs and sockets which fits over an ordinary armlet or bag and fulfils its purpose admirably. Studs must be especially chosen for firmness.

ROYAL COMMISSION ON VIVISECTION.

Fourth Report.

(*Continued from p. 1058.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, has recently been issued* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Professor Gotch, F.R.S. (continued).

The following abstracts of evidence given by Professor Gotch and the Hon. Stephen Coleridge are given here, out of their chronological order, because, as was explained in the Journal of May 2nd, it seemed desirable to have all the evidence on the particular point dealt with together for comparison. Professor Gotch, during his examination, was asked about the correspondence which Mr. Coleridge had had with some undergraduates of Keble College (see British Medical Journal, February 15th, 1908, p. 397 et seq.).

The Chairman recalled that it was practically stating that an undergraduate had heard the yells of a dog at the University Museum, that he had satisfied himself that they proceeded from a dog under actual operation, and he spoke in strong language about the cruelty and the torture, "devilish practices," and so forth. That was signed by several other undergraduates, and then there was read a letter from the witness denying that such a thing had taken place. Then Mr. Coleridge read a letter from Mr. Sharpe, the undergraduate in question, in which he in very strong language denies the truth of what Professor Gotch stated, language probably which he did not, when he wrote it, intend to be read out to the Commission or anybody else, but thought he was writing to Mr. Coleridge only. However, it was read, and there the matter was left. Some questions were asked as to what Mr. Coleridge knew, and of course he said that he knew nothing about it personally, but that these gentlemen had given him this information, and he had no doubt that they were speaking the truth. The Chairman said he understood that since then Mr. Sharpe had stated that he had inquired into the question, and had withdrawn the charge, and apologized for having made it. Professor Gotch replied: Yes; adding that he would like in that connexion to read two letters he had been asked to read, in order that they might appear in the minutes. The first was a reprint of a published letter which appeared in the *Oxford Times* and the *Oxford Chronicle* of October 19th, 1907, from Dr. T. H. Warren, President of Magdalen College, and Vice-Chancellor of the University of Oxford:

Vivisection at the Oxford Museum. To the editor of the *Oxford Times*.—Sir,—In your last issue you published an article with the above heading, taken from the *Morning Leader*, which consisted largely of certain extracts taken from the evidence given by the Hon. Mr. Stephen Coleridge, before the Royal Commission on Vivisection. Mr. Coleridge quoted letters received by him from certain undergraduate members of Keble College, stating that it was within their knowledge that vivisection was being practised upon dogs in the Museum, and, further, that Dr. Francis Gotch, Professor of Physiology, when he stated that no vivisection on dogs had been carried on in the laboratory during the present year, was not speaking the truth. I think it is just, alike to Professor Gotch and to the undergraduate members of Keble College who wrote or supported the letters, to say that I have had placed in my hands a complete apology by those undergraduates to Professor Gotch, a recognition by them of the correctness of Professor Gotch's statement, an explicit and unqualified withdrawal of the letters and statements sent and made by them to Mr. Coleridge, and an expression of their willingness that the fact of their apology and withdrawal should be published. I should be obliged, therefore, if you would now give the same publicity to the apology and withdrawal that you gave to the original statement.—I am, yours faithfully, T. Herbert Warren, Vice-Chancellor.

The second letter was from the Rev. Walter Lock, D.D., Warden of Keble College, October 18th:

I am very glad to find that you are satisfied with the apology which Mr. Sharpe and his friends have made to you, and with the action that the Vice-Chancellor is taking to make the apology public. And now that the matter is at an end, I should like to express my regret, and that of my colleagues, that you and the Museum authorities should have had this trouble, and that the relations between our college and the Museum, which have always been close and friendly, should have had even a momentary clouding. Mr. Sharpe and his friends are all excellent well-meaning fellows, who were actuated by a humane feeling, and honestly believed that the evidence which they were giving was true. But none of them is a science student or acquainted with the details of laboratory work, and I am afraid that they were not competent to estimate the real value of their evidence, the worst portion of which was based on a complete misunderstanding. They made some attempt to make inquiries, but the attempt was obviously inadequate, and I think that Mr. Coleridge treated them a little badly in accepting and making public the second letter without further investigations on his own part. As soon as further inquiries were made, and explanations given to them, they at once saw how their mistakes had arisen, and how impossible it was to substantiate their charges, and they have wholly withdrawn them. May I also thank you for the way in which your own patience and forbearance have contributed to reduce this matter to its true proportions, and to lead to a friendly settlement of it? Pray make any use of this letter that you may think fit.—I am, yours sincerely, W. Lock.

Asked if he had Mr. Sharpe's letters referred to there, he said they were in the hands of the Vice-Chancellor. He would rather not produce even a copy of them. He was satisfied with his apology, but he would like to inform the Commission as to what the complete misunderstanding was. Asked by Mr. Tomkinson if one of those letters just read was from Mr. Sharpe himself, he said, No. Proceeding, he said the misunderstanding was one which might seem incredible, yet at the same time he knew it did happen. These gentlemen imagined that dissection and vivisection were the same thing, and the evidence of the gentleman who was in for anatomy resolved itself into their having overheard a conversation between two students describing the work that they were doing for an examination in zoology involving the dissection of the rabbit; these students were not in the witness's laboratory. It was a dead rabbit. That was their misunderstanding. The second point was that they heard dogs bark, and jumped to the conclusion, therefore, that it had some relation to the dogs. The third point was that they made inquiries of what they termed an official. They made these inquiries by going in one Sunday morning, when they saw a man going round with the keys of the museum, and they asked him whether animals were cut up in that place, to which he said, Yes. Those were the three facts upon which the whole statement was based. His laboratory was at the back of the museum. There was a dissecting room for human anatomy, and also a zoological laboratory, where dead animals were dissected. No dog was vivisected at that time. In reply to Mr. Tomkinson, who asked if any dog was persistently howling there day after day, the witness said the puppies made a great noise. There was no concealment in the matter at all. These puppies played in the yard, and the students themselves going through the museum used to play with them, and certainly they made a very considerable noise. The puppies were his. They were not there for experiments. The puppies were in a yard, lying 160 yards from Keble College, with two buildings in between. But the yard opened on the parks, through which anybody might walk. There was no concealment of the animals in the physiological department, and any of these gentlemen could have walked through a public way into this yard, where the puppies were barking, and have seen them, but they did not. The puppies were kept in order that some of them might be killed in the lethal chamber later, and the tissues used for the histological class of the present term. They were so killed. They were not all wanted, and two of them were given away, at the request of two of the students who used to play with them. Asked by Mr. Ram if the apology contained a complete withdrawal of the assertions they made, he said, Yes. The Chairman said if there was any doubt about the fullness of the apology, he thought the apology had better be read. He thought it would be better, because there were several suggestions that the charge might not have been withdrawn. Nothing was clearer than what the opinion of the Vice-Chancellor and the Warden was. Mr. Tomkinson said he had a letter direct from Mr. Sharpe, which he had authority to read. He had written to that gentleman to ask whether he had anything further to say. His last letter said:

By all means read my letter at the Commission. I quite realize the publicity it will receive, and I am perfectly prepared to take the consequences. I have heard indirectly from

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

Professor Gotch, through the Warden, and it is his intention to make my full apology as public as possible. I do not in the least mind that, as, through false information, I made unjust charges against him with reference to the points I mentioned to you. I have therefore no wish to make a simpler withdrawal.

Mr. Tomkinson said he asked Mr. Sharpe whether he would like this letter to be read, or to make a simpler or more formal withdrawal. Mr. Sharpe authorized him to read this:

Dear Sir,—In reply to your letter of the 19th inst., I am sorry to say I have no more evidence to give. I have found that on closer investigation the facts which were told to me as true—namely, that a dog and rabbits had been cut up, and had been yelling—were entirely false. I felt therefore compelled to withdraw these statements, and to apologize to Professor Gotch for my language concerning him when I heard he denied this. I offered to see Professor Gotch when I knew this, but he refused to see me. I am sorry he did so, because I think he might have given me further proofs if I was wrong in *all* my charges. I cannot possibly withdraw my statements in which I said I frequently heard the cries of dogs or animals of some kind in pain, nor that when I asked an official if vivisection was carried on he replied in the affirmative. I did not ask him, it is true, whether it was done with or without anaesthetics. But, at any rate, I have not yet had a sufficient explanation of the cries I heard, although, as a gentleman, I am willing to believe Professor Gotch's statement that "no vivisection experiments had been carried on in the past year." I shall be glad to answer any more questions you might like to put to me, and might I ask if I may have a copy of the report of the last sitting of the Royal Commission?

In reply to the Chairman, Professor Gotch said he would read the letters, if they were desired. The first letter was from Mr. Geoffrey Heald, the person quoted by Mr. Sharpe. None of them were students of anatomy or science students at all. Most of them, the only ones he knew of, were theological students.

Dear Sir,—I have just seen a statement from the book relating to evidence given before the Royal Commission, and I find therein a statement made as follows: "Dr. Gotch is a liar." I entirely disassociate myself from such a discourteous remark, and hereby beg to assure you that I never lent nor gave authority for my name to be joined to those who have made such an imputation. I did hear from a student in the museum that a dog had been vivisected, and I concluded that that was the noise that I heard. But since you have informed me to the contrary, then I accept your statement that no vivisection has been performed during the past year.—Yours truly,

GEOFFREY HEALD.

Professor Gotch said he was prepared to state what the student said. It was a student who was discussing the question of his examination in zoology. On that letter he made inquiries. Mr. Sharpe wrote to him first:

Dear Sir,—I wish to write and apologize to you for the rude way in which I have spoken of you recently, and which, I am sorry to say, has been published, a thing I never dreamed of. In my hastiness last term I said many things which I have since regretted. I hope you will accept my sincere apology, and regret that this should have happened.

The witness did not accept that. Then Mr. Sharpe wrote again:

Dear Sir,—I have seen the Warden, and find from him that you do not regard the apology in my letter of yesterday as adequate. As this is so, I should like to state quite explicitly now (1) I am quite prepared to withdraw my letter of June, and to express my regret for having written it. I find that these points—namely, a dog and rabbits having been cut up alive—were quite untrue, but they were told me as facts. I was misinformed, and I cannot substantiate the charges which I and those who supported me honestly then believed to be true at the time. (2) I heartily apologize for having spoken as I did of yourself in my second letter, and withdraw my statement about you. It never occurred to me for one moment that that second letter would ever become public property. I knew that it might go before the Royal Commission, but did not know their evidence would be published. I will do what I can to cancel the publicity given to it by the press without my consent by writing to Mr. Coleridge withdrawing my charge. I leave you free to make the withdrawal public in any other way that may seem fit to you.—I am, Sir, yours truly, Harold S. Sharpe. We, the undersigned, beg to corroborate this.—Arthur H. M. Peate, Cyril A. Bonser, Alfred C. C. Harvey Evans, Basil W. Truman.

Asked whether Mr. Sharpe did communicate it to Mr. Coleridge, Professor Gotch said he did not know. The witness had had no communication with Mr. Coleridge, except that first letter on this subject, at all from first to last. The Chairman said that cleared up the matter entirely, and made it probable that what Professor Gotch said he learnt from some student was correct, that it was a mistake made as regards vivisection, and that what really was spoken of was dissection. Professor Gotch said he had explicit information that that was the source of it. Asked by Sir Mackenzie Chalmers when was the last time that a dog was operated on under anaesthetics before, he said he should think four years ago. [The witness subsequently wrote that after careful inquiry, he could not find any evidence of any licence in Oxford for performing vivisection on a dog with or without anaesthetics during the last five years.] The examination proceeded:

(*Mr. Ram.*) We have an absolute withdrawal of the charges that were brought before us. Need we go further?

(*Witness.*) I should like to say one thing more. The undergraduates were all freshmen in their first year, who knew nothing about science, and I consider that you cannot view them quite in the same light as you would view other people. But I cannot in the same light, I am bound to say, acquit Mr. Stephen Coleridge. He received this second letter; he never communicated it to me; he took no pains to find out whether this was or was not a true statement, and he interpreted it to mean cruelty without any inquiry.

(*Mr. Ram.*) Although he had received your denial?—Although he had received my denial. Moreover, I want to point out again that the second letter which came before him was written in the sort of language which ought, on its own showing, to have awakened his suspicions. I note, for instance, that Mr. Coleridge himself, commenting in the *Times* on a statement of Lord Justice Moulton, given before this Commission, uses this very excellent language—this is quoted from his letter to the *Times*: "Violence of language is only indicative of shallowness of thought and inaccuracy of statement." This is from one of Mr. Coleridge's own letters. It appears to me, therefore, that Mr. Coleridge, on his own showing, in consequence of the violence of the language of the second letter, might have suspected inaccuracy of statement. I have nothing more to say.

(*Chairman.*) I think that closes that particular incident.

Evidence of the Hon. Stephen Coleridge.

The Hon. Stephen Coleridge was recalled and examined in regard to Professor Gotch's evidence, an abstract of which is here given. The Chairman said:

Some questions were asked as to what Mr. Coleridge knew, and of course he said he knew nothing about it personally, but that these gentlemen had given him this information, and he had no doubt that they were speaking the truth.

The witness said he did not think that he ever said he had no doubt that they were speaking the truth. The examination proceeded:

But you said something rather like it?—No, my lord, I did not.

You said something to the effect that they were credible persons?—I sent their statement down to Dr. Gotch, that is what I did with it.

I should have thought that that was not a matter which you need have brought forward?—I had some doubt because I sent it down to Dr. Gotch. If I had had no doubt I should not have done that. I did not accept their statement without further explanation. I read out the letters, and the comment upon them begins at Question 11,455.

You say at 11,444 that you received a letter, and you say, "I should like on this to show you the kind of evidence that is constantly brought before me"?—Yes.

Then you go on to say at Question 11,446, "I am only showing the sort of evidence that comes before me. I did the obvious thing that a gentleman ought to do. I wrote at once to the head of the laboratory, told him the information that I had received, and asked for his explanation; and he gives the lie to the six gentlemen at once. All I can say is that in a court of justice the six witnesses would go against the one"?—Yes.

That surely is saying that Professor Gotch's evidence is not to be believed as against those of six gentlemen?—I do not think that.

Surely it was not a very unfair representation for me to put it shortly as I did?—Surely it is a question of the weight of evidence.

I think we should hardly have recalled you as to that?—Then at Question 13,668 you, my lord, say: "The language probably which he (that is, Mr. Sharpe) did not, when he wrote it, intend to be read out to the Commission or anybody else"; you are alluding there to Mr Sharpe's letter to me, in which he says: "Professor Gotch is a liar." When your lordship drew that inference——

This is really replying. This is not a question of fact. I did think so, but after that there was a letter from Mr. Sharpe, who said that he did give you leave, or leave was given to you in a second letter to read it out to the Commission, but he did not think it would go into the press?—I want to defend myself upon this very strongly, because I sent a letter down to this

young gentleman by messenger. I sent him the following letter because I was coming before the Commission in a day or two afterwards: "Dear Sir,—I am forwarding you by special messenger copy of a letter which Mr. Coleridge wrote to Professor Gotch, and his reply. Owing to the nature of his reply, do you think you could send me any fresh information which would explain all the discrepancies between the accounts before Wednesday, as Mr. Coleridge is to give evidence before the Royal Commission on Vivisection there?" So that it was in answer to a deliberate invitation to him to give me more evidence that I might put it before this Commission that he wrote the letter, which I am now vilipended for producing here.

I do not see that you are vilipended. I said what seemed extremely natural from the evidence which I had before me?—Further on I am attacked equally by Dr. Gotch. He says at Question 13,691 that he is bound to say he cannot acquit me. Then, further, there is a letter from the Warden of Keble, who actually writes in these terms.

(*Mr. Ram.*) Will you give the reference to it, please?—It is Question 13,668, near the bottom: "They" (that is, the (undergraduates) "made some attempt to make inquiries, but the attempt was obviously inadequate, and I think that Mr. Coleridge treated them a little badly in accepting and making public the second letter without further investigation on his own part." This young man knew, therefore, that this letter would be read out to the Commission. I asked him for a letter to read here.

(*Chairman.*) Are you complaining of what the Warden wrote?—Yes, I am, very bitterly; most decidedly I am. He cannot have known, I presume, that this young man had an invitation from me to write that letter, that I might produce it here, or he would not have accused me thereafter of producing it here. What else could I do?

I do not see anything further than that the letter is one which shows that the Warden thought you ought to have made investigations not merely by asking these young men, but by finding out what really happened at the laboratory?—How could I do that? I had no warrant to enter the laboratory.

You had as much power of finding out as they had?—Quite so.

What do you expect us to do? You are now making a speech upon the Warden's letter.—No, my lord, not a speech.

You are not contradicting any question of fact; you are making observations upon the Warden's letter as not being fair to you.—Quite so, it is not; it is extremely unfair to me. Now, I go further, and I will say this: I wish to point out that when these various people announced that these gentlemen had withdrawn and apologized for the only thing that I think is of any value at all in their original letter, Dr. Warren, the Vice-Chancellor, says that he has had placed in his hands "a complete apology by these undergraduates to Professor Gotch, a recognition by them of the correctness of Professor Gotch's statements, an explicit and unqualified withdrawal of the letters and statements sent and made by them to Mr. Coleridge." I say that no such withdrawal has ever been made. They contend, and they have never withdrawn it, that they heard the howls of the dogs in agony.

The Chairman said surely this was a speech upon the evidence. There were the letters before them, and the witness was saying that those were not an unqualified apology. They had before them the fact; they had what the letters were, and they had the statement which the witness had just made, that this was an incomplete apology. They must judge of that. Mr. Coleridge said he had a letter from Mr. Sharpe, in which he said that he did not apologize. Asked if that letter had been read there, he said, No. He had another letter from him to himself. The Chairman remarked that all he could say was that if Mr. Sharpe wrote a letter apologizing, and then wrote another saying that he had not apologized, they would not pay much attention to anything that he said. The witness said he had only withdrawn the statement made to him by the laboratory attendant that such and such things took place in the laboratory. He had not withdrawn that he heard the howls of dogs. The examination proceeded:

He says that in a letter to Mr. Tomkinson, which was read?—Yes.

If you say that the only thing of importance is whether the dogs howled, although they were not being vivisected?—That is all I referred to.

We must judge of that?—That is the only evidence that had the slightest weight with me. What the laboratory attendant said to him I do not care.

Sir Mackenzie Chalmers said he wished to understand now if Mr. Coleridge accepted Professor Gotch's statement, that during last year no experiments were made on dogs in his laboratory when the undergraduates heard this howling. Mr. Coleridge asked in reply:

Was he there all the time himself? I should want to know whether he was there all the time.

In reply to a further question, he said he accepted his statement that, so far as he was aware, no operations were performed there, of course, but unless he was there all the time he did not know what happened in his absence. The students might operate there in his absence. Asked if he really suggested to them that any operation was performed there, he replied:

I do not suggest anything. You ask me whether I accept a statement of a man as to whether a certain thing is done or not done at a place where he may not have been. I will accept his statement that it did not happen when he was there, certainly; but I am not prepared to accept that he knows what happens in the laboratory when he is not there. No one would accept that.

The Chairman said it was not merely a person who was not there. Professor Gotch was the head of the laboratory, and there could hardly have been any vivisection of dogs without his knowing it. And the statement in the letter was that that happened every day. Mr. Coleridge said: "The howls of dogs, yes." The examination proceeded:

And "in consequence of vivisection," the letter goes on to say?—Yes.

Do you mean to say that Professor Gotch is not to be believed?—I have not said that. I carefully do not say that.

You are carefully refraining from saying that he is to be believed?—I am not indeed. I believe his statement so far as he has a right to make it.

Then has not the head of the laboratory a right to say, "There was no vivisection in my laboratory"?—No, no more than a magistrate has the right to say that no crime happens in his district.

If you think those two things are the same?—But many things may happen in a laboratory when he is not there.

Sir Mackenzie Chalmers asked if, without more hypotheses, he was satisfied himself that no experiment took place upon a dog in that laboratory during that year. Mr. Coleridge asked, in reply, if he was not entitled to ask how Professor Gotch explained the fact that six young gentlemen said that they heard these howls. He did not suggest an explanation. He should have liked him to be asked that. No one asked him how he explained that these six young gentlemen, with no motive of any kind except that of humanity, should have said that they heard day after day the howls of animals in agony. The Chairman pointed out that Professor Gotch said that the only explanation he could offer was that there were puppies there, and these puppies were very noisy, and that these gentlemen who were so ready to attribute illegal vivisection to him were perhaps a little predisposed to think that they were the howls of dogs in pain. In reply to Sir Mackenzie Chalmers, who asked if the witness's mind was quite relieved on the subject of what happened there or not after having heard Professor Gotch's explanation, he said it was not quite relieved. He was quite ready to accept Professor Gotch's statement that, so far as he knew, no vivisection had taken place there, and he was sure that he did not do it himself; but the explanation of the puppies did not sound to him a very adequate explanation. These young gentlemen said that they knew well enough what the cries of puppies were, and they said that these were not the same; and it was half a dozen young men, with no other motive, so far as he knew, except that of humanity. On Dr. Wilson pointing out that they apologized, Mr. Coleridge said they had never apologized for saying that they heard the howls of dogs. They maintained still that they did hear the howls of dogs, and they had not withdrawn it; they declined to withdraw it. Sir Mackenzie Chalmers asked if they declined to withdraw the statement that the howls of dogs which they heard were the cries of dogs in pain. Mr. Coleridge said, Yes, absolutely; they still said that they heard the howls, and they still thought that they were the howls of dogs in agony. What they had withdrawn was that they had been told by a certain official that vivisection had been going on. That certain official said that he did not say so, and they accepted that. Mr. Ram asked at what date he first learned that they had made the withdrawal which they had in fact made; was it before he gave evidence there or afterwards? Mr. Coleridge said the whole thing was afterwards—long after he was there, of course. He had heard no whisper of withdrawal when he was before the Commission. Mr. Ram asked if he received a letter from these young gentlemen in which they did make such withdrawal as they did make; because he saw they stated that they sent him a letter.

Mr. Coleridge said "Yes, they told me that they had to withdraw."

(*Mr. Ram.*) "An explicit and unqualified withdrawal of the letters and statements sent and made by them to Mr. Coleridge." The date of that is October 19th, 1907?—I have the letter here, because I wrote at once in reply—I want to point that out—and said, "Am I to understand from you that you withdraw the fact and you now say that you did not hear the howls of these dogs?" and they wrote back, "Oh, dear me, no; we do not withdraw that."

What they did withdraw was this—it is in a letter to Mr. Tomkinson of October 19th, in which one undergraduate writes, "I am sorry to say I have no more evidence to give. I have found that on closer investigation the facts which were told me as true—namely, that a dog and rabbits had been cut up, and had been yelling—were entirely false. I felt, therefore, compelled to withdraw those statements, and to apologize to Professor Gotch for my language concerning him when I heard he denied this." That is what they withdrew?—That is all they ever did withdraw.

Since you received that letter in which they withdrew that statement have you published anything which has incorporated any facts concerning this undergraduate case either in your evidence or otherwise?—I do not think so. I have not dealt with it at all until I came here.

I think in one of the papers which some one has been good enough to send to me, there is an intimation that the evidence which you have given before us here was either published or about to be published?—Yes, it has been published by the Commission.

But I mean otherwise published?—I have reprinted in a large type for our own use just a facsimile, and we have had an index put to it.

Has that been circulated?—Not sold.

(*Sir Mackenzie Chalmers.*) How many copies have been circulated?—Oh, a lot.

Some thousands?—Yes, it has been circulated widely.

Will it be circulated further?—Yes, I presume so. We have got about 200 or 300 copies left.

Mr. Ram asked if it was his intention with regard to either a further circulation of this particular book or the further circulation of his evidence to give the withdrawal as given in this letter to Mr. Tomkinson of October 19th. Mr. Coleridge said he proposed to incorporate his evidence of that day with it. The examination proceeded:

(*Chairman.*) But you are not proposing to incorporate in your book the whole of Professor Gotch's evidence on this point?—No, I shall not do that. At least I might do it. I had not really considered that.

(*Sir Mackenzie Chalmers.*) Would it not be rather more fair to include Professor Gotch's evidence?—I only want to do what is fair. I will consider whether I will not incorporate everything that has to do with it.

(*Chairman.*) It should be made sufficiently clear that the statement is contradicted by Professor Gotch and withdrawn to the extent that it is withdrawn by these gentlemen, and in their own words?—Yes. My lord, if it would give you any satisfaction I should be very pleased to submit what I propose to incorporate to the Commission, so that they may see that it is fair.

I think I will not take that responsibility upon myself, but I really think it is a responsibility that you ought to undertake yourself, not only as being fair to Professor Gotch, but because I really doubt whether you might not be made answerable at law for publishing anything without it?—Now that you mention it, I will consider whether it would not be proper to put in what Sir Victor Horsley said against me before I put in my reply to him.

[This answer refers to evidence given by Sir Victor Horsley, an abstract of which will appear in a later issue.]

(*To be continued.*)

SOUTHWARK SICK KITCHEN.

IN October, 1859, an article by Harriet Martineau, entitled, "The Cook or the Doctor?" appeared in *Once a Week*. In it she says:

Why are not our national schools in the country like that of Sandbach in Cheshire, where the girls cook for the sick, and thereby learn the economy of the table? By a report of that school published in the *Times* a year ago, it appears that upwards of 2,000 meat dinners, well cooked, hot and savoury, were supplied in the year 1857, besides puddings, broths, arrowroot, and vegetables, at a cost of less than £70, including Christmas dinner of roast beef and plum pudding to a large party of old folks. The money was supplied mainly from the offertory. The girls of the parish were qualified for service, and, what is of more consequence, to be good wives; and the surgeons of the parish found a wonderful power of recovery in their patients. As the vicar says: "While a return to a generous diet after sickness, in the case of those who have been habituated to it, naturally renews the strength, with the poor, unaccustomed to animal food, the improvement is so marked as to be almost like life from the dead. Here is a hint as to lessening the unnecessary mortality of the kingdom—a kind of mortality which, we fear, hardly enters into the recognized 100,000 of the registrar's reports."

Now, fifty years, later we have before us the second annual report of the Southwark Invalid Kitchen which has been working since December, 1905. The invalid kitchen is not administered by girls, as the sick kitchen of Sandbach was, but its objects are almost precisely the same. "It provides daily well-cooked, nourishing dinners for invalids, whose recovery is always retarded, and often rendered impossible, through lack of nourishment," and the dish sheet is very like that mentioned in the *Times* of 1858:

(*a*) Chicken, mutton, or rabbit, with Yorkshire pudding and vegetables.

(*b*) Boiled fish with sauce and potatoes.

(*c*) Beef-tea (each pint to contain 1 lb. of meat), mutton or chicken broth.

(*d*) Milk pudding, containing 1½ pints of milk, 2 eggs, and 2 oz. of rice, etc., or custard pudding.

(*e*) Jelly.

The dinners consist of one or other of the above diets, as ordered by the doctor, nurse, or visitor. During 1907 11,749 dinners were supplied. The recipients are recommended by the Charity Organization Society, Guy's Maternity Nurses, and other visitors appointed by the Executive Committee, who are in touch with the doctors, dispensaries, and trained nurses in the neighbourhood. Every care is taken that the meals are only supplied to those who really need them. The sum of 1d. is charged for each dinner, the actual cost being 5d.

The following is the list of cases to whom dinners were supplied last year:

Maternity	152
Pleurisy and pneumonia ...	40
Rheumatism	32
Bronchitis	63
Phthisis	31
Erysipelas	3
Cancer	3
Various, including tonsilitis, influenza, accidents, etc.	241
	565

A shop has been adapted as a kitchen, where the dinners are cooked. There is an entrance hall, and here the messenger who calls for a dinner hands in his empty dish or bowl through a small opening in a boarded partition and receives it full through another opening. Each person must subscribe for not less than one week, and hand in a ticket daily. Thus no one need pass through the kitchen. The kitchen is administered by a housekeeper and an assistant. Everything is beautifully cooked and the materials are the very best, only English meat being used, so that the meal is most appetising and nourishing. A notice ticket containing the diet for one week ordered for the sick person and selected from the diet sheet of the invalid kitchen must be handed in the day before the first dinner is required. Though not less than six dinners must be subscribed for by any patient, as many more as may be thought necessary can be obtained. The actual cost of each dinner is 5d. for food and 4d. for rent, wages, and administration. Since the kitchen was started two years ago dinners have been supplied at the rate of 12,000 a year.

We sincerely wish that these invalid kitchens may be multiplied, so that there may be one in every district in London and in the large provincial towns. We note that 152 maternity cases received food. If it were possible for the committee to induce these mothers of young infants to continue the nourishing and well cooked food for three or four months in order to nurse their own infants, more would be accomplished to check infant mortality than by the establishment of armies of milk dépôts. This is realized and done in France. Such admirably practical work would only have to be known to receive warm support and financial help.

In the hope that it may stimulate others to go and do likewise we may mention that information can be obtained from the Honorary Secretary, Lady Muriel Paget, Clive House, Roehampton; or from the Secretary, 273, Seevell Road, Battersea.

PELLAGRA.

The researches of von Deckenbach, published in the *Centralblatt für Bakteriologie*, Band xv, Heft 6, upon the question of the etiology of pellagra, are of considerable importance, seeing that he finds the constant presence of a fungus, the *Oöspora verticilloides* (Saccardo), affecting the maize in those districts of Bessarabia where epidemics of pellagra have occurred.

In Northern Germany and Russia rye is a staple article of food, and epidemics of "ergotismus" have occurred in districts where the grain has been infected by the *Claviceps purpurea*, but these epidemics are practically non-existent now, for the cause is well known and easily recognized by the smut on the grain. A population subsisting on bread made from this diseased grain is affected with a general cachexia, associated with characteristic chronic degenerative changes of the central nervous system, causing psychical disturbances and epileptiform convulsions; the posterior columns of the spinal cord are usually affected, causing symptoms not unlike tabes. How the ergot produces the degeneration is not well understood; however, the causal correlation of the fungus on the rye and the degeneration of the nervous system is not doubted. Von Deckenbach claims a similar association for the fungus he finds on maize and the disease pellagra, which manifests itself in many morbid conditions affecting the nervous system and the skin. A chronic insanity, in some respects like general paresis, is a common result, and in some instances a symmetrical degeneration of the lateral and posterior columns of the spinal cord is found associated with the cortical changes. It is of interest to note that some authorities assert that the alcohol which is derived from diseased maize produces similar injurious effects.

Tiraboschi in 1905 discovered besides Aspergillus and Penicillium the *Oöspora verticilloides*, but von Deckenbach claims that he had already published in Russian and German, in 1895 and 1899, an account of this parasite. The ripe maize cobs infected with the fungus are easily distinguished from the uninfected; the amber grains appear split, the cracks being filled with a chalky powder consisting of the spores of the fungus. Sometimes there are cavities filled with a white powder like the cavities in a carious tooth. Cultures can be made on agar, potato, and flesh peptone gelatine, which last is rapidly liquefied. It can also be grown on sterile maize and maize meal by inoculation, when the culture shows the following peculiarities. The mycellum, at first white, becomes in three or four weeks rosy in colour, and in six to eight weeks it turns violet. Treated with 90 per cent. alcohol, a substance can be extracted which gives a ruby-red solution; it contains a much larger quantity of oil than is contained in sound maize. The spectroscopic examination of the red solution gives one band at E. Von Deckenbach concludes that this fungus, which is a parasite of maize, plays the same rôle in the production of pellagra as the *Claviceps purpurea* in the production of ergotismus.

This conclusion would have been strengthened had he extracted from the diseased maize a substance with such definite physiological toxic properties as those of ergot.

To countries where maize is a staple article of diet, the cause of pellagra is of great importance; the chronic meningo-encephalitis and degenerative changes of the central nervous system which lead to chronic insanity and death occur in epidemic form in Bessarabia, Moldavia, Wallachia, and Northern Italy. Apart from Egypt, where the disease is common, as Dr. Sandwith has shown, the question of the cause of pellagra is of importance to the British Government; in support of this statement, we may refer to the subjoined extract, kindly supplied by Major Beveridge, who investigated the subject:

Extract from Appendix 37 (Report on Foodstuffs).

Report on the Medical Arrangements in the South African War. By Surgeon-General Sir W. D. Wilson, K.C.M.G. (late Principal Medical Officer, S A. Field Force).

Maize, Indian corn, or mealies is largely grown as a staple ...le of diet over the whole of South Africa. . . .

...ring the war a large amount of foreign maize was ...ted to meet the great demand, being used as a food, for natives and cattle. As mealie meal, it was ...es used by the troops in the form of porridge.

...to the large amount of nitrogen it contains, it constimulating food of high nutritive value, and on ... can subsist for some time. Many of the natives at one time suffered from a form of disease diagnosed as scurvy by some, and as beri-beri by others.

The disease was evidently a form of pellagra, caused by the ingestion of old or inferior corn in which a fungus had developed. In three samples of corn from Bloemfontein, Elandsfontein, and Middelburg, where many of the natives who ate it were suffering from a disease considered to be scurvy, I found a fungus of the nature of the *Sporisorium maidis*. I understand that the disease ceased on the mealies in question being condemned and a fresh supply substituted.

LYNN THOMAS AND SKYRME FUND.

SEVENTH LIST OF SUBSCRIPTIONS.

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Edwards, J. Chas., Aberfan, Glam.
Forde, Thos. A. Munro, Southsea.
Frost, T. J., Llanhilleth.
Hosking, E., Turner's Hill, Sussex.
J. C. W., London.
Jones, D. Rhys, Cardiff.
Knaggs, Robert Lawford, Leeds.
Martin, D., Liverpool.
Pagden, T. C., Horley, Surrey.
Peck, William E., Hastings.
Rix, B., Tunbridge Wells.
Sharpley, C. W., Ulceby, Lincs.
Sheehy, Michael, Brynmawr, Breconshire.
Wilks, Elizabeth, London.

Subscribers of Half a Guinea.

Batten, Raglan W., Gloucester.
Buxton, Edward, Great Crosby
Bunting, W. Hartley, Birmingham.
Derham, T. H. C., Preston.
Evans, W. G., New Quay, Card.
Freer, Alfred, Stourbridge.
Melvin, James, Rochdale.
Rigg, John, Preston.
Stevenson, C. W., Arnold, Notts.
Worth, E. H., London.

Subscribers of Ten Shillings.

Evans, Eric, Cardiff.
Goyne, John S., Earswich, York.
Henry, R. W. W., Leicester.
Holland, R. C. B., Matlock.

Subscribers of Five Shillings.

Durbridge, H., Matlock.
Edleston, R. S. C., Baslow.
Evans, C. W., Bakewell
Fentem, P. S., Bakewell.
Fentem, Thomas, Bakewell.
Fletcher, J. L., Winster.
Hoole, J., Parwich.
Jackson, R. G., Bakewell.
Lander, H. W. G., Hathersage.
Lee, J. A., Fyam.
Moxon, H. W., Darley Dale.
Moxon, W., Matlock.
Orme, A. L'Estrange, Darley Dale.
Parke, T. H., Tideswell.
Pearce, F. H., Redhill, Surrey.
Tindall, J. B., Preston.
Wrench, Edward, Baslow.

Subscriber of Half a Crown.

Burges, G. A. L., Birmingham.

Private munificence has called into existence at Bangalore, in India, an educational institution which may possibly do much good for the country when fully developed. Matters at present have only got so far as the appointment of (1) a director, (2) a Board of Management, and (3) a council. The Board of Management will concern itself solely with the administration of the property of the institute, and the council with carrying out the objects in view. These are to furnish graduates of Indian universities and others with facilities for studying science in direct relation to Indian arts and industries, with the hope that they may help to solve many of the problems connected therewith. To this end it is proposed to appoint some five or six professors, each in charge of a different department of science, none of them being allowed to take more than six or eight pupils, in order that the post-graduate character of the work may be thoroughly retained. One of these professors will deal with bacteriology, but only in relation to agriculture and the like, the opportunities for studying bacteriology in relation to medicine being considered to be ample elsewhere. The institute will confer diplomas of association and fellowship, the former being granted to students who have followed an approved course of study, and the latter to those who have carried out some approved piece of research work.

BRITISH MEDICAL BENEVOLENT FUND.

AT the April meeting of the Committee 20 cases were considered, and grants amounting to £202 were made to 18 of the applicants, 2 cases being postponed for further inquiry. Three vacancies for annuitants of £20 were filled by selected candidates. Appended is an abstract of the cases relieved:

1. Daughters, aged 54 and 47, of late M.R.C.S. Since loss of means some years ago through the dishonesty of a trustee, applicants have supported themselves by acting as companions, etc., but just at present have no engagements. Voted £10.

2. L.R.C.P., L.R.C.S.Edin., aged 48. Had one eye enucleated twelve years ago, and has since lost sight in the other. No income. Wife lets lodgings; five children, aged 13–9. Voted £18.

3. Four children, the eldest 13 and the youngest 1 month, who have lost both parents during the current year. Are given a home by maternal grandfather, a clergyman with small means and a large family. Voted £10, with leave to apply again in six months.

4. Daughter, aged 65, of late M.D.Lond. Only income £4 a year from savings during forty years of teaching. Now endeavours to support herself by knitting and needlework. Voted £12.

5. Daughter, aged 57, of late L.S.A. Lets lodgings and has to support a sister incapacitated by ill health. Voted £12.

6. Daughter, aged 51, of late L.R.C.P., L.R.C.S.Edin. Has maintained herself as a nurse-companion, but is now incapacitated by rheumatoid arthritis. No income. Voted £10.

7. Widow, aged 57, of M.D.Edin. Has a post of housekeeper, but at present has to support a daughter who is temporarily incapacitated. Voted £5.

8. Widow, aged 60, of M.R.C.S. No income; children unable to help and health very bad. Relieved twice, £24. Voted £12.

9. Widow, aged 45, of L.R.C.P., L.R.C.S.Edin. No income. Health very indifferent. Two sons who are sailors only just self-supporting. Relieved four times, £39. Voted £12.

10. Daughter, aged 58, of late M.R.C.S., who was an annuitant of this Fund. Is given a home in exchange for services as working housekeeper, but receives no salary. Relieved seven times, £103. Voted £10.

11. Daughter, aged 58, of late M.D.Aberd. Endeavours to support herself by teaching music, but finds increasing difficulty in obtaining pupils. Relieved once, £10. Voted £10.

12. Widow, aged 53, of M.B.Aberd., whose means were exhausted by a long illness which preceded his death. For some time past applicant has held a post as nurse-companion, but has been obliged to give it up on account of ill-health and at present is incapacitated. Children just self-supporting. Relieved once, £5. Voted £10.

13. L.S.A., aged 60. Is incapacitated by paralysis agitans. Only income £30 a year from Epsom College. Four children aged 18 to 12. Relieved twice, £36. Voted £18.

14. Widow, aged 59, of M.R.C.S. No income. Slight help from children; health indifferent. Relieved ten times, £111. Voted £12.

15. Daughter, aged 69, of late M.R.C.S. Has supported herself for many years as a governess. Now dependent on a small weekly allowance from a benevolent institution. Relieved once, £12. Voted £12.

16. Widow, aged 47, of M.B., C.M.Edin. Income £16 a year, and is allowed a small weekly sum by a relation. Takes boarders. Seven children, of whom six are still at school. Health indifferent. Relieved nine times, £102. Voted £12.

17. Widow, aged 48, of M.R.C.S., L.S.A. Has been a housekeeper for some years, but salary has been insufficient for the bringing up of her two children, who are still barely self-supporting. Relieved nine times, £110. Voted £5.

18. Daughter, aged 62, of late M.R.C.S. No income; occasional slight help from friends. Relieved once, £12. Voted £12.

OUT-PATIENTS AT GENERAL HOSPITALS.

THE NEW KING'S COLLEGE HOSPITAL AT DENMARK HILL.

A MEETING of medical practitioners of South London, held in the Camberwell Town Hall on April 30th, was attended by more than 130 medical men.

Dr. ROBERT CAPES, who presided, stated that the South London Hospitals Committee, of which he was Chairman, came into existence in consequence of a letter written by Dr. Silk, the Secretary of the Watching Committee of the King's College Hospital, to the British Medical Association, asking that body to inquire of the local medical authorities and societies as to the best means of safeguarding the interests of practitioners in the conduct of the out-patient department to be built at Denmark Hill, and of the admission of in-patients, and to procure an expression of the views of the practitioners on the question of paying patients. The letter from Dr. Silk was referred to the Lambeth, Norwood, and Wandsworth Divisions of the British Medical Association. Each of these Divisions chose three members to represent them on the South London Hospitals Committee and the Brixton Medical Society, the Camberwell Provident Dispensary, and the South-West London Medical Society were asked to send one representative each. The Watching Committee of King's College Hospital was appointed by the Board of the Medical School as a means of communication between them and the general practitioners. The following resolutions passed by the South London Hospitals Committee were approved by the Watching Committee of King's College Hospital:

That there be no issue of subscribers' letters.
That sickness and poverty be the qualifications for hospital treatment.
That no charge be made for the treatment of any patient of the hospital, or for the supply of medicine or dressings.
That urgent cases receive attention without inquiry.
That each applicant for treatment, on the first visit, be seen by a registered medical practitioner and, if found suitable for hospital treatment, attended to; and that the name, age, address, occupation, or position be entered in a register.

Dr. M. G. BIGGS moved the following resolution:

That this meeting strongly disapproves of paying patients being admitted into general teaching hospitals erected out of charitable funds, and sincerely hopes the authorities of King's College Hospital will not adopt any system for the admission of paying patients.

He said that they owed a debt of gratitude to the Watching Committee of King's College Hospital for approaching the general practitioners of South London and asking their opinion on the question of the administration of the hospital; it was a new departure in the medical world. There was no objection to paying wards being connected with a hospital, provided they were open to any member of the medical profession who should be paid by the patients or the patients' friends. The Watching Committee, however, thought that such a plan was unsatisfactory and unworkable, and could not take it into consideration, because all patients in the hospital must be under the care of the hospital staff. There was an objection to a hospital having paying wards, because the funds were supplied by charitable people for a certain definite charitable object, and it was not wise in his (Dr. Biggs's) opinion for these funds to be converted into what were practically commercial purposes. He described a plan of nursing homes owned and conducted by medical men which he thought might meet the difficulty.

Dr. SILK said that it would be three or four years before the hospital would be ready to receive patients, and therefore the matter was not urgent. Not only in regard to King's College Hospital, but also in the case of hospitals all over the country, the laity were urging hospital authorities to accept some form of paying patients. Inasmuch as the laity found the money for the hospitals, therefore the laity had the right to ask for the admission of paying patients. In the new hospital of King's College every possible precaution would be taken to prevent the admission of people who were not fit subjects for acceptance as contributory patients. By means of the "almoner system" it was quite possible to insist on a very careful examination of the position and means of every patient before admission to the hospital, and there was therefore no reasonable probability that the plans of the hospital for contributing patients would interfere with the interests of the general practitioners in the neighbourhood. He considered that the precautions which would be taken would be sufficient to prevent anything of the kind.

In reply to Dr. SWAYNE and Dr. W. T. PARTRIDGE, in regard to the weekly sum to be paid by paying patients, Dr. SILK said that it was impossible for him to supply the information, as it was a matter for the lay committee, but the Watching Committee had laid down that it was not to be a matter of gain to the hospital.

Dr. BARKER SMITH commented on the desire of the public to send special cases to hospitals as paying patients because those institutions were so well equipped for the purpose.

Dr. KEY referred to the remarks made by Dr. Silk concerning the demand by the laity for accommodation for paying patients in hospitals, and declared that if any

plan could be shown to be opposed to the interests of the community, then the mere question of money must stand aside.

The resolution was put to the meeting and carried *nem. con.*

Dr. ESLER moved the following:

That it is the opinion of this meeting that the system of admission to King's College Hospital by certificates from the medical practitioners, as set forth in Resolution 6 of the South London Hospitals Committee, should be given a fair trial, and this meeting strongly urges the authorities of King's College Hospital to incorporate this system into the rules of the hospital.

He said that he had accepted the duty of bringing forward the resolution with a light heart, but on consideration he had found as many arguments against as for it. Nevertheless, he would move it. He had heard that the out-patient department would be established much sooner than three or four years.

Dr. E. ROWLAND FOTHERGILL moved the following amendment:

That this meeting of South London registered medical practitioners understanding (1) that at the present time a Royal Commission is inquiring into the Poor-law system; (2) that the King Edward Fund has decided to inquire into the system prevailing at the large general hospitals of London with regard to the admission of out-patients; and (3) that for the uses of the sick poor resident in Camberwell and district there are already provided 26 hospitals, 5 infirmaries, 18 dispensaries, and 9 other institutions; considers that there has been no evidence offered of the necessity for any out patient department at the proposed King's College Hospital on the lines of those at the large London general hospitals; regrets that a contract for £65,000 for such a department has been placed; and is of opinion that a small out-patient department to which will be admitted either for consultation or treatment only those recommended as suitable by registered medical practitioners as suggested in resolutions 6, 7, 8, 9, and 11, would amply meet the needs of the district; would fulfil all requirements for the education of students, and should be given a fair trial.

That the Lambeth, Norwood, and Wandsworth Divisions, the Metropolitan and South-Eastern Branch Councils, as well as the Central Council and Representative Body of the Association, be urged to approve and support this resolution, a copy of which shall also be sent to King Edward's Hospital Fund, the Hospital Saturday and Sunday Funds, the Charity Organization Society, King's College Hospital Board, the *Lancet* and JOURNAL and the press generally.

The resolutions referred to in the above are:

6. That, on a second application for treatment, a patient bring with him a recommendation signed by a qualified medical practitioner, stating that such patient is a suitable person for hospital treatment.
7. That such certificate be written on a form supplied by the hospital.
8. That such certificate, duly filled up, be appended to each patient's prescription paper or attendance card.
9. That the following be submitted to the authorities of King's College Hospital as the ordinary form to be supplied to patients attending the hospital for the first time.

MEDICAL CERTIFICATE.

I hereby recommend.....aged.....

as a suitable case for treatment at the .....

Hospital.

.....Registered Practitioner.

.....19.....

No charge is made for this certificate.

Across the certificate, printed in red ink, are the words: "For the sick and poor. Not to be used for begging purposes."

(REVERSE SIDE OF CERTIFICATE.)

In signing this certificate, the practitioner is requested to keep in view two points.

(1) That the applicant in not in a position to pay for treatment;

(2) That the case is, from a hospital point of view, suitable for treatment.

11. That it would be satisfactory if a system could be arranged whereby obscure and interesting cases might be brought or sent with a note by practitioners for an opinion when a consultation fee cannot be paid.

He said that the fundamental rule to be kept in mind was that the interests of the profession were the interests of the public. Any scheme that pauperized the public harmed the medical profession. He pointed out the danger to the community of hospital rivalry in regard to out-patients. King's College Hospital was building an out-patient department, and it would endeavour to prove its necessity by publishing the numbers of attendances in competition with the out-patient departments of rival hospitals. Guy's Hospital, when it had an attendance of 71,000 out-patients, advertised for more funds, and received a quarter of a million in money, the result was that the out-patients at that institution now numbered 140,000. Any hospital that advertised for money for patients advertised for patients. In other words, touting for money was touting for patients. The facts stated in the amendment showed that if an out-patient department was required for King's College Hospital it was required to a very slight extent. The Watching Committee of King's College Hospital had not furnished any evidence of the necessity for this department. At Bolingbroke Hospital the scheme of a consultative out-patient department was a great success. With reference to the teaching of students in the proposed out-patient department of King's College Hospital, the elimination of the crowds of chronic cases by means of the plan proposed would help the students. The scheme of consultative out-patients would save the money of the laity and prevent abuse of charity. He concluded by appealing to the senior practitioners of South London to help the efforts of the junior practitioners, and he declared that if they would all stand by the plan he proposed then the profession would be restored to that status of dignity and respect which it had lost. He was confident that the practitioners of South London would decline to have a hospital out-patient department at the new King's College Hospital run on the lines of a big general London hospital.

Dr. COX seconded the amendment.

Dr. MCMANUS said that he was a Governor of the Bolingbroke Hospital, and in his work as a practitioner he had used that hospital for eighteen years. Medical men were properly represented on the board, and the lay members did their best to meet in every way the wishes of the medical men. He detailed the scheme of consultative out-patients at the Bolingbroke Hospital, and urged the importance of King's College Hospital carrying out the same plan. The rank and file of the profession would appreciate such action by the King's College Hospital. Things were changing; the medical profession was becoming united through the agency of the British Medical Association, and if all their forces were combined the Association would be able to brush aside all attempts at sweating the members of the medical profession.

Dr. GARDNER supported the amendment.

Dr. SILK said it was a little late in the day, for the contract for the out-patient department was already made and the work begun. It was no good to pass the amendment, because the inevitable result would be that it would go into the waste-paper basket.

Dr. HOGARTH said that a good plan was to employ almoners and write to medical men asking if patients were suitable people for relief.

Dr. H. HARVEY NORTON said that the plan of certificates from local medical men had failed utterly at the Belgrave Hospital in a few months' time.

Dr. KEY said the amendment was a vast advance on the system of almoners and was a step in the right direction.

Dr. PARTRIDGE spoke in favour of the amendment.

Dr. FOTHERGILL said that the employment of almoners was not such a useful means as had been suggested, and urged that the best possible information was to be obtained from the medical practitioners.

The amendment was put to the meeting and carried with 9 dissentients, and on being put to the meeting as a substantive motion was carried *nem. con.*

Dr. SOPER then moved that a deputation should wait on the King's College Hospital authorities to emphasize the importance of the question, and this was duly carried after it had been seconded.

The meeting concluded with a vote of thanks, moved by Dr. ATKINSON, to the Camberwell Borough Council for the use of the Town Hall.

THE NUISANCE OF FLIES.

A report recently presented to the Public Health Committee of the London County Council by its medical officer, Sir Shirley Murphy, contains a record of an inquiry very carefully conducted by Dr. Hamer, one of his assistants, into the extent to which accumulations of offensive matter give rise to fly nuisances. As a subsidiary of the investigation some attention was paid to the relation of flies to disease. The inquiry originated in a dispute between the Education Committee and one of the boroughs respecting the use as a dépôt for street sweepings and other refuse of a certain piece of land not far from an elementary school. Out of this arose a question as to whether accumulations of refuse, however carefully tended and supervised, did not lend themselves to the breeding of flies to such an extent as to suffice to condemn them as a nuisance when in the neighbourhood of houses, merely on the ground of the detriment and annoyance caused by innumerable flies. In the dépôt originally in question this seems to have been indisputably the case, but it was thought well to investigate the whole subject.

Method of Investigation.

Hence during the hot months of last year note was made of the number of flies to be found in the neighbourhood of some twelve premises, such as cowhouses, stables, manure dépôts, a jam factory, a knacker's yard, and a place where catgut was manufactured. In the neighbourhood of each of these sundry observation stations were established, the houses selected for the purpose being as far as possible of the same character, and in each case at a corresponding distance from the fly centre in question. In all cases at least two stations were arranged at 50 yards away from the centre, and at least two others 200 yards away, the places selected as stations being ordinary dwelling-houses inhabited by working people, and neither too clean nor too dirty. In these houses squares of paper smeared with honey-gum were suspended at a definite height, collected at definite intervals, and calculation made of the number of flies caught. Those who undertake a similar inquiry might do well to consult the original report; here it need merely be said in addition to the foregoing that there is ample evidence in the report that sources of fallacy were foreseen and so far met that the general conclusions reached by Dr. Hamer may be accepted without hesitation.

Conclusions.

These are to the effect that the most productive of all factors in fly genesis are accumulations of horse manure; but all collections of dust and other refuse act as breeding grounds, though less actively, and promote fly nuisance in their neighbourhood. Their influence is manifested in marked degree even at distances of 100 to 150 yards, and is still distinctly appreciable as far away as 200 yards or even further. Given a collection of horse dung or other refuse as a starting point, the circumstances likely to influence the number of flies haunting any particular dwelling are numerous. Rooms with dirty walls and ceilings are favoured by flies, but much more potently attractive are crumbs and particles of food on the floors, in crevices, and upon rugs and coverings. Of two houses otherwise corresponding but one occupied by numbers of children, the latter is the most likely to be fly-ridden. This attraction of children for flies seems to be only indirect, as occupied class rooms in ordinary schools were found during the inquiry to be comparatively free from flies. Warmth of rooms also favours flies; so, too, does keeping open of windows during the daytime; in premises where the doors and windows were kept closed during the greater part of the day comparatively few flies were caught. It would even appear that the cleanest rooms may often be fly-ridden if the windows are kept open. In this case the flies seem to haunt the room not in search of food, but because they are trapped by the open windows in their flight from the place at which they have been feeding or at which they have been born. Finally ground floor rooms furnish more flies than those in the upper stories, dark rooms are less favoured by them than those which have a sunny aspect. Houses in streets down which dust-carts pass are specially liable to invasion, and failure to remove refuse promptly from the curtilage of any given premises exercises a marked influence on the number of flies which invade them.

The Species of Fly.—As to the character of the flies caught, the vast majority belonged to the species *Musca domestica*—the common house-fly—but there were large numbers of *Homolomyia canicularis*, which closely resembles *Musca domestica*, but is rather smaller. No specimens of the *Stomoxys calcitrans*, a stinging fly, were detected. The common bluebottle—*Calliphora vomitoria*—was secured in fair proportion, especially at the houses in the neighbourhood of stables, but bluebottles are very strong, and probably many escaped from the gummed papers used in this inquiry.

Flies and Disease.

As for that part of the inquiry which touches on the relationship, whether coincidental or sequential, between flies, disease, and hot weather, Dr. Hamer rightly regards the data obtained as an insufficient basis for drawing conclusions. Owing to the low temperature prevalent last summer, summer diarrhœa of children was practically conspicuous by its absence. The work done in this connexion cannot, however, be considered altogether abortive, for it has led to a clear and impartial exposition by Dr. Hamer of the considerations which affect the whole question of flies and diarrhœal disease. Its value is circumstanced by the poverty of the data, but as the heat, diarrhœa, and curves recorded do not differ materially from those obtained elsewhere, his observations are worth careful attention.

There are certain difficulties, he says, in the way of accepting the thesis that correspondence in fly diarrhœa and temperature curves affords reason for concluding that flies and diarrhœa stand to one another in relation of cause and effect. At the commencement of the hot summer weeks, when the number of flies has begun to show marked increase, the diarrhœa curve is rapidly rising. After some weeks the number of flies reaches the maximum, and then diminishes, and so, in almost precise correspondence, does the amount of diarrhœa. A period is later reached, towards the close of the hot weeks, at which the number of flies is still as markedly excessive as at the earlier period when the amount of diarrhœa was increasing, but at the later period the amount of diarrhœa is declining; it even anticipates decline in the number of flies. If the fly is to be regarded as the carrier of the organism which causes diarrhœa, it might perhaps have been anticipated that at the later period—the number of flies still being excessive and infective material being then presumably more widely distributed than even before—the amount of diarrhœa, instead of showing early and rapid decline, would still be increasing. It would almost appear that the advocate of the "flyborne diarrhœa hypothesis" must necessarily fall back, in support of his theory, upon the hypothetical organism, conveyed by the fly, which he may claim is affected by temperature in such a way as to bring about correspondence between the diarrhœa curve and the fly curve. The very closeness of the correspondence between these curves may indeed from this point of view be thought of as constituting a difficulty rather than a point in favour of the hypothesis that summer diarrhœa is caused by flies.

An attempt has, however, been made to explain the fact that the diarrhœal curve has already begun to decline, while the number of flies still remains excessive, by the hypothesis that so many persons have at that time been attacked by diarrhœa that then at length, the "susceptible material" having all been exhausted, a decline in the diarrhœal curve has become inevitable. Thus, Dr. Niven writes (Annual Report for 1904): "It is noticeable that the descent in the number of deaths precedes the diminution in the number of flies. It is possible this is due to exhaustion of material." Against this exhaustion of material hypothesis two considerations must be set. First, that the comparatively early fall in the amount of diarrhœa is observed not only in years of excessively high mortality, but also—as, for example, in London last year—in years of very low mortality. In the case of the former, a hypothesis of "exhaustion of susceptible material" may hold good, but it fails to explain the phenomena in the latter instance. The second consideration is that the "exhaustion of susceptible material" hypothesis does not adequately account for the almost identically similar behaviour of the two curves, for even small variations in the one—the fly curve—are generally accurately reflected in the other—the diarrhœa curve—and this not only in their ascent, but also in their descent. This close correspondence of the variations in these curves better accords with the view that both are dependent on temperature variations than with the hypothesis that diarrhœa stands in direct causal relation to fly prevalence. The difficulty caused by the fact that the diarrhœa curve follows so closely upon the fly curve may perhaps be in part met by an assumption that only the newly fledged fly can transmit diarrhœa—the disease being an infantile disorder, so to speak, in the fly—and by further assuming that immediately upon its becoming a perfect insect the fly is infected, and in its turn

infects; for the exigencies of time, having in view the close correspondence of the fly and diarrhoeal curves, admit of little delay. Even in the event of no time whatever being lost, it is, however, difficult to understand why, despite the large increase in the amount of infective material which presumably occurs during the hot weeks, the fall in the diarrhoea curve so closely corresponds with arrest of increase of flies. It might be thought that a comparatively small number of flies would serve to maintain a high level of diarrhoea prevalence at this period, if it be legitimate to assume that there is then especially widespread distribution of infective matter. But on turning from the left-hand side of the curve, that is, to the descending curves, it will be seen that the time difficulties are now greater than before, for the descent of the diarrhoeal curve actually precedes that of the fly curve (see Diagram III). On the whole, therefore, while it is not easy to reconcile the behaviour of the curves with an hypothesis that flies transmit diarrhoea, it must be admitted that the phenomena accord quite well with the supposition that both flies and diarrhoea stand in close relation with temperature. On this latter hypothesis the delayed fall of the fly curve, as compared with that of the diarrhoeal curve, presents no difficulty.

The conclusion of the whole matter is aptly summed up by Sir Shirley Murphy, who says that even in the absence of direct proof of disease dissemination the well known habits of flies justify their being regarded with disfavour. Moreover, the physical discomfort caused by flies, extending even to loss of sleep, is sufficiently great to warrant further effort being made to deal effectively with the fly nuisance.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

DR. F. ZERNIK publishes his tenth, eleventh, twelfth, and thirteenth contributions on new drugs, secret remedies, and proprietary preparations in the *Deut. med. Woch.*, October 17th, November 7th, December 19th, 1907, and January 9th, 1908.

Formidin is supposed to be a methylen disalicylic acid iodide, and its action as a substitute for iodoform is said to depend on the splitting off of salicylic acid, formaline, and iodine. Were the preparation what it is supposed to be, it would contain about 46 per cent. of iodine, but on analysis it was found only to contain about 36·5 per cent. Only a trace of formaldehyde was found in the dissociation *in vitro*. It is therefore similar to iodofan, but the difference between the supposed iodine content and the real iodine content is not so great as is the case in the latter.

Cystopurin is another preparation which yields on analysis a different composition to that which is mentioned by the makers. According to the Berlin firm, it is a combination of hexamethylentetramine and sodium acetate, having the chemical formula of $C_6H_{12}N_4+2CH_3COONa+6H_2O$. While the differences were only slight, and it appears to be quite possible that the therapeutic effect claimed for it may be present, the results of the analysis led the author to believe that the preparation was not a double salt, but only a mixture of the two substances in approximate quantities.

In dealing with the antidiabetic remedies, he finds that *senval*, said to be an extract of senecio, a similar plant to arnica, has been found quite innocent of any therapeutic action. "*Antidiabeticum Stock*" is made by a firm in Düsseldorf. It is said to consist of an extract of senecio fuchsii and salicylic acid (0·2 per cent.), trypsin (0·02 per cent.) and alkalies (2 per cent.). The bottle, containing 250 c.cm. of a turbid fluid, having a greyish-brown colour, a pleasant herb-like odour, and an astringent taste, costs 5s. Not a trace of trypsin or any similar ferment could be detected on analysis.

Doremz is prepared by the same firm which introduced *Amrita*, and its composition varies but little from the latter. It consists of saccharated carbonate of iron, rye, and calcium phosphate. It is supposed to be a nutrient preparation and also an aphrodisiac.

Fulgural is said by its makers to be a medicament which has proved of value in the treatment of all impurities of the blood, all diseases of metabolism, plethora, corpulency, and disturbances of digestion. The bottle costs 3s. 9d. Adults take from one to two tablespoonfuls, while children take less. It is a light brown turbid fluid, having a bitter taste, and containing about 10 per cent. alcohol, sugar, small quantities of extracts of plants, including those containing emodin—that is, purgative—and about 10 per cent. of a bitter salt. Its action is weak.

"*Grossmann's Strength and Nutrition Emulsion*" is supposed to be the most easily digested and best tolerated form of cod-liver oil. The makers state that it is not a secret remedy or a curative drug, but advertise it as a much-appreciated home remedy, a nutrient in a highly-concentrated form. It proved to be a whitish thick emulsion of cod-liver oil, flavoured with peppermint, glycerine, and containing 0.1 per cent. of calcium hypophosphate as well.

Parisol is advertised as a condensed product of formaldehyde and phenol. Its activity is said to exceed that of any other preparation. The analysis revealed that it contained 10 per cent. of formaldehyde in an alcoholic potassium soap solution, as well as carbolic acid, menthol, and traces of a hydrocarbon. It cannot possess any advantages over numerous similar preparations.

Antiscabin is recommended for the treatment of scabies. It is a thick fluid, having the colour of the solution of potassium soap. It has a pleasant odour. It proved to be a semifluid alcoholic glycerine potassium soap, containing storax, gum benzoin, and β naphthol. The quantity of the last-named constituent was very small, so that poisoning is scarcely to be feared, but its use under any circumstances is only justified when there is medical control.

Cista is a tonic. It is a pleasant tasting and smelling blackish-grey, turbid fluid, and consists chiefly of a sweet red (desert) wine, sugar, water, some tincture of the pomate of iron, and either a spirit or an alcoholic extract of some plant. The bottle costs 3s. and contains 300 c.cm.

Herniol, *Hernia Tea*, and *Hernia Pills* are three preparations of *Herniaria glabra*, a herb which used to be employed as a diuretic. The first named is recommended for nephritis, in doses of from 20 to 30 drops several times a day, as the only medicament which is capable of rendering the urine free from albumen. It is supposed really to effect cures. It costs 1s. 2½d. per bottle of 20 c.cm. It proved to be a dark-coloured, aqueous, alcoholic plant extract, containing the active principles of uvae ursi leaves, but no ascertainable characteristics of herniaria. The second preparation was a mixture of uvae ursi leaves and herniaria herb in equal parts; it costs 6d. per 65 grams. It is supposed to remove the pain of gonorrhoea, but for the cure of the same disease the pills should be taken. These contain small quantities of sandal-wood oil and salol as well as the extract of herniaria. A box of 48 pills costs 2s.

White Iodine Tincture is recommended as an infallible rapidly-acting external preparation. It may be used for rheumatism, etc., and also headache, stomach, intestinal and pelvic diseases, and cardiac oppression, etc. It is a yellow fluid, containing 0.24 per cent. of iodine, some camphor and menthol (about 16 per cent. in all), in alcoholic solution.

Okterin is the name given to a water derived from a mine containing ochre. It is supposed to be good for herpes, eye affections, diseases of women, etc. It is a colourless and odourless, astringent, acid fluid containing considerable quantities of sulphates in aqueous solution, as well as free sulphuric acid, manganese and magnesium compounds, and traces of copper.

Anton Ambrunn's Dropsy Remedy is described as a true quack remedy. It possesses the characters of a starch paste which has become acid. It has a most putrid odour. Chemically it was found that the substance was a product of acid fermentation of gluten. Probably it is made from wheaten flour paste.

Boran Freckles Cream does not contain borax or boric acid, as its name would suggest, but consists of 5 per cent. of white mercurial precipitate and of bismuth subnitrate rubbed up in paraffin ointment containing wax, water, and some scent. The tube of 20 grams costs 1s.

Professor Max Dana's Asthma Remedy is stated to be an English medicament. It is a powder, the fumes of which when burned are inhaled. It contains 50 per cent. of nitre, stramonium, lobelia, and thea nigra.

Epileptol is prepared in Berlin, and is supposed to be a condensed "amido-formic acid." This nomenclature means nothing in chemistry. It appears to be a solution of formamide, a combination of formaldehyde and formamide, and traces of hexamethylentetramine. The total quantity of formaldehyde, which can be readily split off, is about 4 per cent. The only publications concerning this remedy have been written by the discoverer and the introducer; 100 grams cost 7s.

LITERARY NOTES.

MESSRS. SMITH, ELDER AND COMPANY will shortly issue a new book of travels by Sir Frederick Treves entitled *The Cradle of the Deep*. The same publishers have almost ready for publication a work on *Animal Life* by Dr. F. W. Gamble, Lecturer in Zoology, Owens College, Manchester. The volume comprises a series of studies in the life history of typical members of the animal kingdom, describing their vital activities in relation to their structure, and the general scheme of development, based upon a series of lectures delivered to the students of Owens College, Manchester. It will include a coloured frontispiece and numerous line and half tone illustrations.

Messrs. Henry Frowde and Hodder and Stoughton will publish during May a second edition of *Operations of General Practice*, by Mr. Edred M. Corner and Dr. H. J. Pinches. They will also issue the following new works: *A System of Syphilis*, vol. i, edited by Mr. D'Arcy Power and Mr. J. Keogh Murphy; *The Writings of the late Sir William Broadbent, F.R.S.*, collected and edited by Dr. Walter Broadbent; *Glandular Enlargement and Other Diseases of the Lymphatic System* by Mr. Arthur Edmunds, of the Great Northern Central Hospital; *The Law in General Medical Practice, or Clinical Jurisprudence*, by Dr. Stanley B. Atkinson, Secretary of the Medico-Legal Society; *Diseases of the Eye*, by Mr. Stephen Mayou, of the Central London Ophthalmic Hospital; and *Gunshot Wounds*, by Major C. G. Spencer, R.A.M.C. The same publishers have in active preparation *Heart Diseases*, by Dr. James Mackenzie, and *The Rectum: Its Diseases and Developmental Defects*, by Sir Charles Ball, F.R.S.

The Rev. Alfred John Church, author of innumerable books and reviews, in his lately published *Memoirs of Men and Books*, states that at one time he was curate to the celebrated F. D. Maurice at St. Peter's, Vere Street. He says:

The congregation of St. Peter's was indeed one to which it was not easy to minister. It may be said to have included two main elements: one local, the other personally attached. Standing as it does in the near neighbourhood of Cavendish Square and Harley Street, an eminently medical quarter, it has been called the "Doctors' Church." A clergyman, now risen to eminence in the Church, relates that when he was in treaty for the post, which I afterwards held, with Mr. Maurice's predecessor, he was told that though the stipend was small—it had been increased in my time—there was this advantage to be taken into account, that he might have the advice, should it be needed, of thirty of the most distinguished physicians and surgeons in England. It was largely then from the chiefs of the medical profession that the local part of the congregation was drawn. I frequently received the hospitality of one of its most distinguished members, Sir Thomas Watson. Sir Thomas, who was born in 1792, had been a Fellow of St. John's College, Cambridge, and was then one of H.M. Physicians in Ordinary. He reached his 91st year. Never was there a man who came nearer to the ideal of the ἰατρος πολυπειροτατος. His talk, his manner, his very look, were full of the mild wisdom which his profession, honourably and faithfully exercised, is fitted to reach. I wish that I could remember more of his talk. The one thing that has clung to my memory is this: "When I was young," he said, "I was always keen to use new remedies; in my old age I have come back to the employment of a few, and those well known." In the matter of diet his habits were of the simplest. His luncheon, I remember, consisted of a glass of milk and a biscuit.

Sir Thomas Watson's remark about remedies reminds us of that attributed to John Radcliffe, that "when a young practitioner he possessed twenty remedies for every disease; and at the close of his career he had twenty diseases for which he had not one remedy."

The *Glasgow Medical Journal* for April contains the full text of Dr. Norman Moore's Finlayson Memorial Lecture, entitled "The Schola Salernitana: Its History and the Date of its Introduction into the British Isles." He discusses the question in a manner at once scholarly and interesting, and concludes that the work first became known in England in the middle of the reign of Henry III. Copies of it became more numerous in the next two centuries. The *Schola Salernitana* is quoted many times in the *Rosa Anglica* of John of Gaddesden, and in both the *Breviarium* and the *Florarium* of John Mirfeld, works of the middle and end of the fourteenth century. It was, Dr. Moore says, at the height of its fame in manuscript at the time of the invention of printing, and was first printed at Montpellier in 1480. The numerous later editions and translations show that it had many readers and was a favourite both with the public as well as with doctors. Dr. Moore ends with a passage on the study of the history of medicine, the importance of which has often been urged in the BRITISH MEDICAL JOURNAL. We therefore quote it in the hope that, coming from one who is distinguished as an archæologist not less than as a physician, it may help to arouse the interest of those who hold that a progressive science such as medicine need not concern itself with the past:

"Some members of our faculty think the history of medicine not worth study. They are inclined to dismiss it with some such remark as that of Thucydides, that neither in their actions nor in anything else were the men of past times great. Such a conclusion is to be regarded as merely the impatient remark of a man who grows oats, and therefore has no care for the cultivation of flax. Such men often come later to see that they were wrong. Thus Sir Michael Foster once at Cambridge made some depreciatory remarks on the study of the history of medicine, yet himself some years later made a valuable contribution to the subject in his lecture on Glisson. Medicine is a study and an art which has to do with every aspect of man, and the more we can learn of the operations of the human mind the more useful can we be to our patients. The physician, moreover, enlarges the usefulness of his own mind by the association of his observations and experiments with other kinds of academic work. Every subject, whether scientific or literary, gains in breadth by being examined in the past as well as in the present."

Dr. Moore might have added that Sir Michael Foster wrote what was virtually a history of physiology, originally delivered as the Lane Lectures at San Francisco. He was also the author of a life of Claude Bernard, published in the "Masters of Medicine Series."

In the recently published life of John Thadeus Delane, the famous editor of the *Times*, the following story is told:

A very slight hint was often sufficient to put Delane on the scent of an early piece of news. One day he met his doctor, the late Sir Richard Quain, at the Athenæum. In the course of a few minutes' conversation the latter said: "Lord Northbrook called on me to-day, and asked me how a hot climate would be likely to suit his daughter, whom I have had under my charge. I said it would suit her very well indeed." Delane said nothing at the time, but the next day the first article in the *Times* astonished everybody, including the official world, by announcing that Lord Northbrook was going to India as Governor-General. A few hours afterwards an acquaintance of Lord Northbrook met him and offered his congratulations.

"But it is altogether premature to congratulate me" (said the new Viceroy). "It was only settled this morning, and how the *Times* got hold of it I cannot imagine, for no one but myself and Gladstone have even discussed it."

Delane had merely thought over his talk with Quain, put two and two together, and ventured for once into the domain of prophecy.

As we related the same story some time ago, giving however, the names of the personages who figure in it as the second Lord Lytton and the late Sir Andrew Clark respectively, we think it right to give what may be taken as the correct version. The moral which we used it to point is equally applicable to the authentic version. That is, that a physician should never talk about his patients in society—especially, we may add, to shrewd journalists who are always going up and down the world seeking for "copy."

Sir Andrew Clark figures in his true character in the interesting reminiscences of Mr. Gladstone in 1890 which appear in the May number of the *Cornhill Magazine*. There the Grand Old Man is reported as saying:

Now my doctor, Sir Andrew Clark, he's a very clever man and a very hard-working man. Eight hours a day? Sir, he works more like sixteen. He often gets no fees, though he has made a fortune larger than any doctor ever made. People send for him long distances into the country, and then give him nothing or the ordinary fee. He takes what he can get. He is utterly unmercenary.

This is a high testimonial, and we believe it to have been fully deserved. Nevertheless, Sir Andrew got, or was offered, one or two of the biggest fees on record. It used to be said that he got £12,000 on one occasion for going to Cannes, but perhaps he did not accept it. But it does not fall to the lot of the ordinary man to have the refusal of such a fee.

EGYPT AND THE SOUDAN.

SIR ELDON GORST has issued his first report on Egypt and the Soudan;[1] it deals with the year 1907.

EGYPT.

A decree, amending the constitution of the provincial councils and enlarging their powers, has been drafted, but has not yet passed the legislative council. The scheme proposes that they should in future act as advisory councils to the Moudirs and have the right to put forward representations as to the administrative requirements of their provinces, including those affecting public health and education.

Population.

The census taken on April 29th, 1907, showed an enumerated population of 11,192,000, an increase of 1,457,595, as compared with the census of 1897—a growth of almost 15 per cent. These statistics do not include a large number of nomad Arabs, estimated to number about 80,000. Including these, the entire population of the country is 11,272,000, or nearly 16 per cent. more than in 1897.

Cairo.

After the consideration of many alternative projects a satisfactory scheme for the drainage of Cairo has been evolved, and as soon as it has been approved by the Government details will be got out, and it is hoped that the conditions of contract may be issued before the end of this year. The estimated cost is £2 000,000, and it is proposed to raise a portion of the cost by an increase of the house tax in Cairo. Sir Eldon Gorst refers to the report of the special commission on the water supply of Cairo, noticed in the JOURNAL of January 25th last, p. 217. The question at issue, he says, was as to the relative merits of filtered Nile water, which the native population prefers on the one hand, and of water taken from deep wells on the other; and as the commission was not able to make a clear and definite pronouncement on this point, it will be necessary to ascertain what practicable and reasonable methods can be adopted to free the Rod-el-Farag water from the iron and manganese present in it, so as to make it a high-class potable water, approximate in character to that of the Nile, for which the native population evince a preference.

Alcohol, Hashish, and Insanity.

The number of public establishments in which alcohol was sold increased by 234 in the course of the year. This was due to the fact that the number of new establishments opened in the European quarters of Cairo, Alexandria, Port Said, Ismailia, and Suez, where, under the existing law, a licence is not necessary, was 288. Throughout the rest of Egypt, where the local authorities have the power to refuse an application, there was a reduction of 54 licences; 113 establishments, 54 of them belonging to foreigners, were closed during the year by decision of the tribunals. A considerable amount of hashish is smuggled into the country, chiefly in single camel-loads, but also on the person and in the luggage of passengers arriving by steamer at Alexandria and Port Said; 172 public establishments for the sale of hashish belonging to Europeans and 1,648 belonging to local subjects were ordered by the tribunals to be permanently closed in 1907, as against 101 and 2,266 in 1906. For the last four years the admissions to the lunatic asylum of cases classified as due to the abuse of hashish have been less frequent than formerly, and only 60 out of 444 male patients admitted during the course of the year came under this category.

The accommodation for lunatics is still very inadequate, although progress has been made in the extension and rearrangements of the Abbassieh asylum. The new buildings, affording accommodation for 237 beds, will bring up the total to 877. The capital cost works out at only £E 100 a bed. It is hoped that accommodation for 300 lunatics will be available in about three years' time at Khanka, in an area of seventy-five acres of desert land, which, owing to the presence of a good water supply, could be converted into an agricultural settlement. Cases of pellagra have been observed among the inmates of the asylum; the balance of opinion is in favour of attributing the disease to the ingestion of diseased maize, but the precise connexion between it and lunacy has not yet been determined.

[1] Cd. 3963. London: Eyre and Spottiswoode. (2d.)

Hospitals.

The number of voluntary entries into the hospitals increased, as has also the number of those attending the out-patient department, the total number of out-patients in 1907 being 165,000 as against 128 000 in 1906. The value of hospital treatment in case of illness is now very generally recognized, and several hospitals have recently been founded by private charity. The first example was set by the late Menshawi Pasha, who built and endowed the Tantah infectious hospital; next came the hospital at Galioub, established by Shawarbi Pasha. Subsequently the notables of Assiout subscribed a sum of £E.5,000 towards the provision of an ophthalmic hospital in their town, the largest and most important centre of Upper Egypt. A proposal has now been made by the leading inhabitants of Manfalout for the construction at their expense of a small hospital in that town.

The number of new patients treated at the travelling eye hospitals, which owe their origin to the liberality of Sir Ernest Cassel, was 7,446, but there were 14 584 applicants who could not be treated owing to the deficient resources. The result of the examination for eye disease of the pupils in the Government school at Tantah, undertaken last October, was that only 16 out of a total of 485 boys were found to be free from granular ophthalmia, a disease directly or indirectly responsible for a very large number of the cases of blindness in the country. Permanent hospitals are being erected at Tantah and Assiout, and it is hoped that the former will soon be completed.

Plague and Cholera.

Plague prevailed in Egypt during the course of the year. In Upper Egypt it was commonly of the pneumonic form, and had a mortality of practically 100 per cent. In Lower Egypt it was mainly of the bubonic form, and the mortality rarely exceeded 40 per cent. In 1905 in Upper Egypt only 3 cases of plague were reported as occurring in 2 localities; in 1906 there were 412 in 26 localities, and in 1907 there were 838 in 71 localities. The increase in the number of infected localities, adding as it must to the difficulty of stamping out the disease, is regarded as serious. The chief requirements for dealing successfully with plague, especially in its pneumonic form, are considered to be early information of an outbreak, segregation without delay of all who have been in contact with infected cases, and thorough disinfection of the locality. At the end of 1907 the presence of cholera in southern Russia, in Constantinople, and subsequently in the Hedjaz, rendered it necessary to take stringent precautions and to keep a careful watch on the movements of possibly infected immigrants and pilgrims, but no case of cholera had been reported within the confines of Egypt. The risk of the disease entering the country had been as far as possible reduced, and measures have also been put in hand for dealing with an outbreak without delay should one unfortunately occur.

School of Medicine.

During the year 22 students obtained their diplomas, and in October 38 new students joined. In all there are 158 students in the school. Of late years the growth of the school has been so rapid that, had it not been for the recent appointment of assistant professors, the work could not have been carried out with efficiency.

Two Egyptian students who qualified in 1906 spent six months in post-graduate study in the Kasr-el-Aini Hospital, and decided to devote themselves to midwifery and gynaecology as a speciality. With this end in view they went in June, 1907, to the Rotunda Hospital in Dublin.

SOUDAN.

Population.

No accurate figures are available, but the population is known to be increasing rapidly, and must now, it is believed, exceed 2,000 000. There has been a remarkable increase, especially notable in the Khartoum province, in the number both of European merchants and skilled artisans and of Egyptian artisans and labourers.

Public Health.

Though the Soudan has been comparatively free from infectious disease during 1907, Dr. Christopherson has brought to notice an increase in the number of cases of enteric fever. The existence of Malta fever at Kassala, due, probably, to goat's milk, is confirmed. The number

of in-patients treated at the civil hospitals was 7,266, and out-patients 94 051. The number of persons vaccinated was 49,722. Preparations have been made to prevent the introduction of cholera from the Hedjaz, especially at Suakin, the port for the departure and the return of pilgrims.

Reference is made to the report by Captain Ensor, R.A.M.C., on his visit to the Bahr-el-Ghazal on special duty, in connexion with the Soudan Sleeping Sickness Commission. He found the *Glossina palpalis* in eleven localities in the southern district, and although so far none of the natives had developed symptoms of the disease, he pointed out the possibility of their having become infected through intercourse with the Congo State troops recently in occupation of these districts, among whom several cases occurred. Captain Ensor also found the *Glossina morsitans* or tsetse fly. Stringent local regulations have been issued with a view to preventing the introduction of sleeping sickness.

MEDICAL INSPECTION OF SCHOOLS.

GLOUCESTER.

AT a recent meeting the Gloucester County Council considered the report of a joint committee appointed by the Sanitary and Education School Management Committees, which recommended that the County Medical Officer of Health should be appointed to undertake the ordinary sanitary work of the county, and also, with the aid of assistants, the medical inspection of school children. The joint committee had also considered the expediency of employing the services of medical officers of health of district councils, who were also in private practice, or of resident private practitioners for the inspection of the children, and was of opinion that, apart from other objections, the cost would be considerably greater than under the scheme it suggested. The report was carried by a large majority.

NOTTINGHAM.

At a meeting of the Nottingham Education Committee, held on April 15th, a report was presented by Dr. Boobbyer, M.O.H., stating that the work during the current year would chiefly consist in the inspection of new children, of whom there were between 7,000 and 8,000, and those finally discharged, which, although they were returned as only about 3 500, could not fall far short of the number newly taken on. Taking a total of 15,000 for a basis the first year there would be an average of 75 children to examine on every working (school) day. It was undesirable that the more lengthy examinations of children should be made on school premises, and Dr. Boobbyer suggested the appointment of one male and one female medical assistant and two additional lady health visitors, advising that the town be divided into four inspecting districts, and that each health visitor should be the responsible intermediary between the school and the inspector and the homes in her own district. In an appendix to the report it was stated that the public elementary schools of the city numbered 76, 48 being Council and 28 Trust schools. The further consideration of the matter was eventually adjourned.

DURHAM.

The Durham County Education Committee had under consideration on April 22nd a recommendation by a special subcommittee regarding the medical inspection of school children in the county. A previous recommendation by the subcommittee had been referred back. The subcommittee now proposed that three medical men should be appointed to assist the county medical officer in carrying out the duties of inspection, the salary of each to be £300, with travelling expenses and reasonable out-of-pocket expenses. The assistants would be required to devote the whole of their time to the work. It was also recommended that three lady health visitors should be appointed, at a salary of £120, rising to £150, to act in conjunction with the medical inspectors. The recommendations were based on the assumption that of the 130,000 children on the school registers approximately 30,000 would have to be examined. The proposals were adopted.

WEDNESBURY.

The Education Committee has approved a recommendation to appoint four local medical men, to be paid at the rate of 1s. each child examined. The town has been divided into districts and a medical man allocated to each. The whole subject is to be reconsidered at the end of twelve months.

BRADFORD.

At a meeting of the Bradford City Council held on April 28th, the Chairman of the Education Committee stated that the salaries of the three medical inspectors would amount to £1,200. Judging, however, by experience, he was compelled to admit that this was merely the beginning of a scheme which would result in a large expenditure, for medical inspection was of little use unless it was followed up. A great deal of the work in this direction had been nullified on account of the neglect of the parents to take the advice tendered to them, and there was absolutely no doubt that the establishment of the department meant not merely medical inspection, but in many cases medical treatment.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research.

Applications for sums to be granted should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing:

(*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached.

(*b*) A general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers.

(*c*) And references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council provided the whole term of office shall not exceed three years.

The Scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

ERNEST HART MEMORIAL SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council provided the whole term of office shall not exceed three years. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Forms of application for Scholarships and Grants can be had on application to the General Secretary.

GUY ELLISTON, *General Secretary*.

6, Catherine Street, Strand,
February, 1908.

MEDICAL NEWS.

Lieutenant-Colonel Falvey, R.A.M.C.(ret.) has, on the recommendation of the Duke of Abercorn, been appointed a magistrate for co. Donegal.

King Edward has appointed Dr. Egeberg, Physician in Ordinary to the King of Norway, to be a Commander of the Royal Victorian Order; and King Haakon has conferred the Grand Cross of the Order of St. Olav upon Sir Francis Laking.

The Royal Mail Steam Packet Company, 18, Moorgate Street, E.C., has arranged that its twin screw ship *Amazon*, 10,000 tons, shall leave Southampton for a sixteen days' cruise to Norwegian fiords on July 31st; the boat will call at Boulogne, Hull, and Leith en route.

The fifth Welsh medical dinner will be held at the Criterion Restaurant, London, on Friday, May 29th, when the chair will be taken by Mr. Edmund Owen at 7.30 p.m. Further particulars can be obtained from the Honorary Secretary, Mr. J. Howell Evans, M.Ch., F.R.C.S., 25, Berkeley Square, London, W.

The Société de Pathologie Exotique of Paris, of which Professor Laveran is the President, has, in recognition of his researches, elected Dr. Ian Macdonald of Huelva, Spain, a graduate of the Universities of Edinburgh and Paris, a corresponding member. The membership is confined to seventy.

Professor David W. Finlay, M.D., LL.D., F.R.C.P., will preside at a dinner of the Glasgow University Club, London, at the Trocadero on Friday, May 29th. Further particulars can be obtained on application to Mr. W. Craig Henderson, Honorary Secretary, 2, Paper Buildings, Temple, E.C.

A series of post-graduate lectures will be given at the Royal Dental Hospital, Leicester Square, during October and November next. The first lecture will be delivered on October 20th by Dr. Dudley Buxton, who will deal with anaesthetics in relation to dental surgery. Further particulars can be obtained from the Dean.

A provincial sessional meeting of the Royal Sanitary Institute will be held at Shrewsbury on Saturday, May 23rd; a discussion on the inspection of dairies and cowsheds will be opened by Dr. T. W. H. Garstang, M.O.H., Bucklow R.D., at 11 a.m. After luncheon at the Crown Hotel members will visit the Shrewsbury sewage farm.

The King of Italy has conferred upon Dr. Thomas Reid, LL.D., F.F.P.S., Honorary Consulting Oculist to the Western Infirmary and Sick Children's Hospital, Glasgow, the distinction of "Commendatore of the Crown of Italy," in recognition of his merit as an ophthalmic surgeon, and also of his services to the Clinic of Ophthalmology in the University of Turin.

The annual dinner of the Association of Scottish Medical Diplomates will be held at the Hotel Waldorf, Aldwych, London, W.C., on Tuesday, May 26th, the President, Dr. David Walsh, in the chair. Tickets 10s. 6d. each, exclusive of wine, may be had of the Honorary Secretary, Dr. Arthur Harries, 11, Chandos Street, Cavendish Square, London, W. Ladies are invited, and all holders of Scottish qualifications will be welcomed as visitors.

At the recent rifle meeting of the London District, Private C. Wirgman, of the London Scottish, won the first prize in Series I of the General's Cups for members of the *Daily Telegraph* Cup teams. We congratulate the victor in this competition, which ranks high in the shooting world, all the more because Private Wirgman in civil life is known as C. W. Wirgman, M.D.Lond., F.R.C.S., and is chief clinical assistant at the Royal London Ophthalmic Hospital. He is also a member of the British Medical Association.

The annual general meeting of the Medical Defence Union will be held on May 21st at the Medical Institution, Hope Street, Mount Pleasant, Liverpool, at 4.30 p.m. The annual report of the council, together with the balance sheet and accounts as certified by the auditors, will be presented to the members and the usual statutory business as required by the articles of association carried out.

A concert is to be given in the Great Hall of St. Bartholomew's Hospital on May 21st in aid of the fund for the new nurses' home. The programme will be in charge of the orchestra and chorus of the Hospital Musical Society, Sir Charles Santley, Madame Agnes Nicholls, and other well-known musicians lending their assistance. Tickets can be obtained from the Honorary Secretaries of the Society at the Renter's office, price one guinea, half-a-guinea, and five shillings.

The programme for the summer session at the North-East London Post-Graduate College includes, in addition to the ordinary work of the school, some fourteen special clinical demonstrations, all of which are free to qualified medical practitioners. The first of these is to be given next Thursday afternoon (May 14th), at 4.30 p.m. Further particulars can be obtained on application to the Dean, at the head quarters of the school, Prince of Wales's General Hospital, Tottenham, N.

One of the attractions at the Franco-British Exhibition, to be opened at Shepherd's Bush next week, will be a reproduction of an Irish village, which has been organized by Messrs. D. Brown and Son; the whole of the profits of the village, and everything sold or made in it, will be devoted to the prevention of consumption in Ireland, Mr. Brown, a member of the firm, being secretary of the Ulster Branch of the National Association for the Prevention of Consumption. Demonstrations similar to those given in the itinerant exhibitions organized in Ireland by the Countess of Aberdeen will be given daily in the village hall.

At Hertford General Infirmary on April 30th, Dr. J. T. Tasker-Evans was presented by a number of persons interested in the institution with a silver tea and coffee service and a cheque for 40 guineas. The tea service bore the following inscription: "Presented to J. T. Tasker-Evans, Esq., M.D., by the governors and friends of the General Infirmary at Hertford on the occasion of his resignation, as a slight token of the high esteem in which he is held, and as a mark of appreciation of services rendered during the past 29 years as Honorary Medical Officer. April 30th, 1908." Dr. Tasker-Evans's connexion with the institution will not entirely cease, as he has been appointed consulting physician.

The London Motor Garage Co., Limited, which has for some time undertaken to maintain motor cars at an inclusive annual charge, is now prepared to make a similar arrangement, with the addition that the car can be purchased by instalments spread over three years. The car supplied will be a 15-22-h.p. Charron car with a body of any description. The annual charge under the agreement includes every running expense, the supply of a driver, the insurance of the car, and the provision of another car in case of accident or breakdown. At the end of the period the car becomes the property of the hirer. The company has a general form of agreement, but would be willing to meet the wishes of any customer. Inquiries may be addressed to the company, 33-37, Wardour Street, London, W.

At the annual general meeting of the Association of Medical Men Receiving Resident Patients, over which Dr. David Walsh presided, the honorary secretary, Dr. Hubert Biss, reported that there had been a considerable increase in the number of applications from persons desiring to place resident patients with medical men, and also of medical men wishing to join the organization. The transfer of the secretary's office from Bournemouth to 55, Outer Temple, Strand, London, W.C., had been found advantageous. The amount payable by a new member for the first year was reduced to 1 guinea, the subscription in subsequent years being retained at 5s. The principle that no member should take less than 3 guineas a week for a patient save under exceptional circumstances was reaffirmed.

Dr. Meredith Young, who was recently appointed Medical Officer of Health for St. Marylebone, was the recipient of several presentations on leaving a similar appointment at Stockport. The staff at the Isolation Hospital presented him with a handsome silver tea-kettle; the staff at the Health Office with a silver inkstand; the North-Western Branch of the Incorporated Society of Medical Officers of Health, for which he had acted as Secretary during five years, with a case of silver dessert knives and forks; and the National School Women's Ambulance Class with a silver penknife, pencil, and pen in case. The Stockport and District Medical Society presented him with a handsome oak roll-top desk at a complimentary dinner given jointly to Mr. B. W. Housman and Dr. Young on their leaving the town. Mr. Housman on this occasion was presented by the Stockport, Macclesfield, and East Cheshire Division of the British Medical Association and the Stockport and District Medical Society with a massive and elegant silver rose-bowl in recognition of the unselfish and valuable work he had done for both societies.

In response to the desires of a number of school medical officers, arrangements are being made for a short course of lectures and demonstrations on the medical inspection of school children to be given in London during Whit week. Dr. James Kerr, Dr. H. Meredith Richards, Dr. C. J. Thomas, and other experienced medical inspectors have already promised to give addresses, and demonstrations of the details of the actual medical inspection will also be arranged. Further particulars can be obtained from Mr. William A. Lawton, at the offices of the Incorporated Society of Medical Officers of Health, 1, Upper Montague Street, Russell Square, London, W.C.

British Medical Journal.

SATURDAY, MAY 9TH, 1908.

THE INDICATIONS FOR STOMACH SURGERY.

THE improvements in surgical technique which have enabled surgeons to ensure, as Mr. Moynihan shows in his address, published at page 1092, so large an amount of safety in their operations on the stomach, and the brilliant advocacy by which some surgeons have supported their claims, have fallen upon ears only too willing to accept promises that hold out hopes of a short and ready cure of tedious and painful conditions, and in some quarters there has been a somewhat uncritical acceptance of the claims of surgery to cure all diseases of the stomach that have resisted the routine of rhubarb and soda and blue pill. It is, therefore, instructive to find Mr. Moynihan, who professes himself an ardent advocate of gastro-enterostomy (than which, in suitable cases, he finds no other operation of surgery more completely satisfactory), confessing at the same time to a feeling of amazement when he not infrequently hears the operation advocated in conditions "for which hardly anything could be more "inappropriate."

It would seem that there are practitioners disposed to readily dispense with the special knowledge of those who have devoted attention to the treatment of digestive diseases, and straightway to seek surgical help. But routine is the enemy of successful practice, and the best of remedies, whether medical or surgical, become thereby discredited. No method of treatment can supersede the necessity for careful diagnosis; and until this has been made, and the indications established of the presence of a condition which surgery can relieve, it is irrational to seek its assistance. Whether it takes the form of a conservative adherence to old-fashioned and in many cases useless remedies, or a hasty adoption of new methods of surgical intervention, routine must be avoided and a judicious discrimination exercised in the choice of treatment.

It is difficult to judge of surgical results from the papers published by operators who reckon as cured all those patients lucky enough to escape from their hands with their lives—a custom which Mr. Moynihan mildly describes as "unfortunate," urging that in an operation of such severity, by which physiological principles seem to be set at nought, an interval of two years is not too long a period to be allowed to elapse.

Physicians who study their cases thoroughly and avail themselves liberally of surgical assistance render great service to the profession when they review their results and publish for our guidance the impressions derived from their large experience, giving us the remote rather than the immediate effects of surgical operations upon those conditions which they were designed to relieve. Dr. Bertrand Dawson in his address (p. 1089) has done this; he points out that an operation, to be justified, must not merely prolong life but diminish suffering, and that otherwise it is better to let Nature take its course. Thus, for example, in malignant disease of the œsophagus it is rare to find the patient unable to take sufficient fluid nourishment to relieve thirst, and gastrostomy is seldom of service; so, too, in malignant disease of the stomach, except in early cases, where the results of excision are promising, it is only in pyloric obstruction that a surgical operation should be recommended. In gastric ulcer, apart from acute perforation, gastro-enterostomy may do good by diminishing acidity, eliminating pyloric spasm, and lowering the intragastric pressure and the tension on the walls of the stomach. Mr. Moynihan recommends that an ulcer on the lesser curvature towards the cardia should be excised, gastro-enterostomy being not only unnecessary but useless, or even harmful. Among sixty cases seen by him a year after operation Dr. Dawson found that the *pain* in some had disappeared, in most it was less, but many could not do heavy work without its recurrence, and several had to be careful both as regards the quantity and quality of their food, while in several cases there had been a relapse. Surgeons are often too optimistic about their results, and do harm by telling their patients that they may eat what they like; but, as Drs. Parmentier and Denécheau have pointed out (see JOURNAL, December 28th, 1907, p. 1842), relapses after operation from carelessness in eating and drinking are not infrequent.

When rightly directed medical treatment after a reasonable trial has failed, or when the symptoms recur as soon as the patient gets about, or when there is repeated haemorrhage, Dr. Dawson recommends operation. He alludes to the difficulty of diagnosing gastric ulcer with certainty, pointing out the frequency with which symptoms simulating it occur in young women, and urges the wisdom of waiting longer in such cases before operating. He says nothing about duodenal ulcer, which some authorities—including, it would seem, Mr. Moynihan—regard as affording less hope of relief from ordinary medical means, and therefore in itself constituting an indication for surgical intervention. In reference to this it may be pointed out that the observations quoted both by Dr. Dawson and Mr. Moynihan to show that when the pylorus is patent the food does not pass readily by the stoma, have suggested the propriety of suturing the pylorus as well as performing gastro-enterostomy for duodenal ulcer.

Finally, Mr. Moynihan lays it down that under no circumstances and in compliance with no persuasion is gastro-enterostomy to be done in the absence of demonstrable organic disease; and Dr. Dawson recognizes the discouraging surgical results in cases of gastric atony and gastroptosis. If our readers realize what a very large proportion of chronic stomach diseases belong to this class, they will admit that we are a long way from accepting the recommendation of some surgeons to transfer for gastro-enterostomy all cases of chronic dyspepsia that do not recover readily under routine medical treatment; but Dr. Dawson shows that much may be done for these sufferers by suitable rest, careful diet, and periodical massage.

THE DISTRIBUTION OF TYPHOID BACILLI IN THE HUMAN BODY.

As we have already pointed out in these columns, recent research has shown that in exceptional cases persons who have apparently made a complete recovery from typhoid fever may continue to harbour and excrete typhoid bacilli for many years, in fact for a period which must be regarded as indefinitely long; and in these dangerous "carriers," or at least in a considerable number of them, it has been ascertained that the gall

bladder is the nidus where the bacillus continues to thrive and whence it infects the intestinal tract. A consideration of these remarkable and highly important cases forms part of the larger question as to the general conditions under which typhoid bacilli may occur in different parts of the human body. This is a very wide subject, and we cannot attempt to deal with it exhaustively here, but we think it may be useful to give a brief outline of some of the bacteriological facts which are of particular interest and importance in clinical and preventive medicine.

It is desirable to begin by considering the bacteriological condition of the ordinary typhoid patient during the febrile and convalescent stages of the disease. We know that the infective organisms have been ingested by the mouth, that they travel to the intestine and there attack the Peyer's patches and solitary glands, and that some of them are excreted per rectum. How soon do they make their appearance in the faeces, and how long are they likely to be passed in these discharges? The first part of this question is difficult to answer, because the disease sets in insidiously; it is not easy to date its onset, and the opportunity for early bacteriological examination is often lost. Sixty-four cases where the commencement of the disease could be determined with some degree of certainty were investigated by von Drigalski. The bacilli made their appearance in the faeces during the first five days in 10 cases; from the sixth to the tenth day in 15; from the eleventh to the twentieth day in 21; during the fourth week in 8; from the fifth to the tenth week in 7; and in 3 cases they persisted for three months. The facts of particular interest in this series of observations are that the bacilli were most frequently detected during the third week, when the ulcers were breaking down, and that occasionally the bacilli persisted long after the febrile stage has been passed. The accuracy of these observations has been confirmed by several other observers. A further point worth noting in connexion with the presence of bacilli in the alimentary tract, and their possible dissemination from this region, is that they are not always confined to the intestine. They have been demonstrated by von Drigalski on the surface of the tongue, the tonsils, the œsophagus, and the mucous membrane of the stomach.

Next in importance is the relationship of the typhoid bacillus to the blood stream. The bacillus does not appear to thrive in the blood, and is not regarded by most authorities as comparable to the ordinary septicaemic organisms; but it is now well known that it can be cultured from the blood, and this fluid acts as a vehicle for its dissemination over the body. The earlier attempts to obtain cultures from the blood of infected persons met with only scanty success, but recent investigators have introduced valuable improvements in the technique; they use a large quantity of blood, about 4 c.cm. being withdrawn from a vein, and in order to obviate its bactericidal action they at once dilute it with a large quantity of the culture medium. When these rules are observed the demonstration of circulating bacilli is comparatively easy, and systematic employment of the method has proved a valuable aid to the identification and study of the disease. Cultures may sometimes be obtained from the blood at a very early stage of infection, before the Widal test gives a positive result and before the bacilli are discoverable in the faeces. Some of the examples collected from the literature by Kutscher are worth quoting. Curschmann has isolated the bacillus from the blood on one occasion on the third day of the disease, and on eight occasions before the ninth day. Schottmüller once obtained a positive result on the second day, several times he has been successful on the third and fourth days, and in the case of a relapse he recovered the bacilli during the first twenty-four hours. Busquet, who investigated the blood in a series of 43 cases, found that 22 patients yielded cultures of the bacillus during the first week, 16 during the second, and 5 during the third week. The numerous successes which have been obtained during the early period of the disease indicate that this method of examination may often prove a valuable means of establishing an early diagnosis. It must, of course, be recognized that even after repeated attempts the endeavour to demonstrate bacilli in the circulation of any particular patient may result in failure. But several observers have obtained a positive result with more than 80 per cent. of the patients they investigated, and it appears that sufficiently weighty statistics have been accumulated to justify the general statement that there is usually a dissemination of bacilli by the blood stream during some part of the febrile stage of the disease. Another observation, pointed out by Kutscher, which has been brought to light by systematic bacteriological examination of the blood, is that the circulation of bacilli appears to be limited to the febrile period. In his review of the literature he has not been able to find a single well-authenticated case where bacilli have been discovered in the blood of a patient with a normal temperature. These negative observations, whilst not amounting to a direct proof that distribution of bacilli by the blood stream is necessarily confined to the febrile period, at least indicate that the bacilli harboured by convalescent or apparently normal persons are probably shut off from this channel.

It has long been known that typhoid bacilli are of common occurrence in the urine of infected persons, and recent observations have confirmed the view that their presence is a consequence of the conveyance of bacilli to the kidneys by the blood stream. The bacilli are not filtered through the normal kidney, but they collect in this organ, form minute capillary infarcts and inflammatory foci, and their escape into the urinary tract is associated with the breaking down of these lesions. The frequency with which typhoid bacilluria may be found in a series of cases of enteric fever varies within wide limits. Some observers have found it in half their cases, or even more; with others the positive results have shown a percentage of 20, 17, or less. There is, however, a consensus of opinion that this complication is very common. There is also a general agreement that this condition may persist for a prolonged period during the convalescent stage. Its duration for a month after the fever has disappeared is not uncommon; it has been found as late as the sixth and seventh weeks of convalescence, and a few cases have been recorded where bacilli were found seven months after the attack of fever.

In addition to this very common type of bacilluria there is the rarer condition which is complicated by cystitis, and may run a protracted course. Cases of cystitis typhosa have been described where the authors state that they have found the typhoid bacillus in the urine several years after the attack of enteric fever. As our readers are well aware, it is only recently that the importance has been realized of disinfecting the urine of typhoid patients until the suspicion that it may contain bacilli has been removed; and the spread of the disease is often attributable to a neglect of this precaution. Fortunately we possess in urotropin a valuable

drug for the elimination of bacilli from these troublesome cases.

Other sites in the body where the typhoid bacillus occurs may be briefly mentioned. From the roseolar spots of the typical eruption cultures have often been obtained. When cases which have died at the height of the fever have been brought to the *post-mortem* room the spleen is practically always found to contain the specific organism and is the usual region selected for the raising of cultures. Other situations where it is usual to find the bacillus in these fatal cases are the gall bladder and the bone marrow. Still further evidence of the wide dissemination of the bacillus by the blood stream is afforded by its bacteriological identification in lesions which come to light months or years after the febrile stage has been passed. Its remarkable capacity for persisting in the gall bladder has already been discussed in these columns (page 584). The bone marrow has also been found to be a particularly favourable situation for the retention of its vitality. And in addition to bone affections, post-typhoid abscesses, where the bacilli have been isolated either in pure culture or contaminated with other organisms, have been found in so many and diverse situations that it seems possible for the bacillus to settle down and survive in almost any part of the body. Fortunately most of these localized foci are not in communication with the intestinal or urinary tract, and therefore there is extremely little danger of the disease being transmitted from these sources to other persons.

In reviewing some of the salient points concerning the distribution and occasional persistence of typhoid bacilli in the human body, it ought not to be forgotten that the ordinary typhoid patient and that comparatively rare individual, the chronic "carrier," are not the only two classes of persons who may harbour and excrete typhoid bacilli. There are also the obscure cases of typhoid fever which are not identified as such, and amongst these the unrecognized cases of the ambulatory form are obviously of particular danger to the community. Moreover, it is not very uncommon, apart from these milder cases, for persons to ingest and subsequently to excrete typhoid bacilli without experiencing any disturbance of their health at all. This has been proved by actual demonstration of typhoid bacilli in their stools. A small dose of bacilli may pass through the alimentary tract of a person in vigorous health without his suffering the least harm, though the bacilli excreted may spread the disease to others. And when the recipient is a person immunized by a previous attack the danger of his becoming an unrecognized vehicle for the dissemination of the disease is still greater. All these considerations serve to emphasize the importance of the human subject as the primary agent in the dissemination of typhoid fever, and they help us to realize that the investigation of any particular outbreak cannot be regarded as completely satisfactory until the full extent of this primary source of contamination has been ascertained.

THE ANTIVIVISECTION AGITATION.

As has already been mentioned in the BRITISH MEDICAL JOURNAL, that organ of pure philanthropy, the *New York Herald*, has for some time past been striving to arouse the feelings of its readers to the iniquities of vivisection. It shows all the zeal of the new convert, and uses the familiar methods of the "yellow" journal. Voltaire is credited with the saying that England had three hundred religious sects, but only one sauce. We do not know how many sects of antivivisectionism there are in existence, for new ones seem to spring up every few weeks. Some of them have, however, been on the war-path a considerable time, and it can scarcely be pleasant for Mr. Coleridge, in particular, to read—as he might have read in the *Herald* of April 25th—that "the "continual agitation which had long been going "on against vivisection had not been successful." "In fact," it is unkindly added, "it is not certain "that it has done anything more than keep the "embers alive." Now, however, all is changed. The *Herald* has "entered the arena and by opening its "columns to the campaign against the cruel practice "has evidently fanned the embers into a flame." The letters to which our contemporary has opened its columns are of the usual character, only perhaps a trifle more foolish and illiterate. We scarcely think that either the *Zoophilist* or the *Abolitionist* would allow a correspondent to sign himself "Voc Clamanti." The egregious Mr. Sidney Trist says charitably that "Vivi-"sectors are what Colonel Ingersoll so tersely described "them—as mere 'intellectual wild beasts.'" He thinks "it is time they were effectually muzzled or put in the "criminal lunatic asylums as morally insane." This is how your "animals' guardian" loves his fellow man! Another writer, who from the style would seem to be a hysterical woman or an excitable Babu, writes as follows: "None who resort to the knife, making wounds "or solution of continuity now existing should be per-"mitted to practise on families or hospitals. We don't "want 'Artists in Vivisection,' considering them on a "level with burglars who enter our homes for booty "and put their knives into our flesh." "Give up," cries the writer, who signs the letter "Anglo-Saxon," "the "list of surgeons, physicians, vivisectors, etc., per-"mitting themselves to order operations that we may "protect our helpless dear ones against them!" These be brave words. But what does the antivivisectionist do when he needs the advice of these monsters whom he denounces? Let us hear Sir Victor Horsley, who, giving evidence before the Royal Commission on Vivisection, after expressing the opinion that antivivisectionists, holding the views they do, have no right to derive benefit from experiments on animals, says: "I would add that the editor of the *Zoophilist*, one of "Mr. Coleridge's employees, Dr. Berdoe, stated in "the *Times* that he would rather be treated with "the knowledge of Hippocrates than the knowledge "of the present day. I can only say as a commentary "on that, that from my own personal experience "he does not rely on the knowledge of Hippocrates, "but he sends his family to receive the opinion of "men like myself."[1] Have we not heard of a prominent member of an antivivisectionist society who, when bitten by a dog, at once betook himself to the Pasteur Institute in Paris? Some twenty years ago a lady of title sent round a letter to several physicians saying she wished to consult them, but must first, for her conscience sake, have an assurance that they did not approve of vivisection. The thing was obviously a baited trap, which, we imagine, few fell into, or more would have been heard about it. Such are the ethics of antivivisectionism. In New York an attempt is being made to get vivisection prohibited. The doctors are opposing the movement, and at a recent hearing at Albany, before the Judiciary Committee of both Houses of the Legislature, arguments against the Bills were presented by Dr. Thomas Darlington, President of the New York City Board of Health, Professor Simon Flexner, and other leading members of the medical profession. "Perhaps," says the *Boston Medical and Surgical Journal*, "the most telling effect was pro-"duced by Dr. Adrian Lambert, of the visiting "staff of Bellevue and Lincoln Hospitals, who related

[1] Appendix to the Fourth Report of the Commissioners. Minutes of Evidence, October to December, 1907, pp. 118-119.

"how his infant daughter, when only five days old, had "recently been saved from impending death by trans- "fusion of blood. This was performed by Dr. Alexis "Carrel, of the Rockefeller Institute, and Dr. Lambert "himself supplied the blood for the purpose. 'If Dr. "'Carrel,' he said, 'had not first practised that delicate "'operation on thousands of cats, he would not have "'been able to save the life of my only child.'" But your true antivivisectionist—especially if she be a lady who has avoided the doom pronounced on Mother Eve—would sacrifice a wilderness of babies rather than allow an experiment to be tried on a cat.

MENDELISM.

IN delivering the first of his three Tyndall lectures at the Royal Institution on April 30th, on Mendelian Heredity, Mr. Bateson covered a great deal of the material dealt with in his lecture before the Neurological Society, reported in our issue of July 14th, 1906. Since that date, however, new facts have been discovered, and the theory of Mendelism has been considerably advanced. The instance of brachydactylism, reported by Farabee from Pennsylvania, has been duplicated by Drinkwater in this country, and an attempt is being made to discover whether the two families are or are not related. The Mendelian hypothesis was shown to be in accordance with the facts of inheritance as illustrated by experiments with the so-called rhinocerous mice and with varieties of beetles. Rhinocerous mice, it may be said, are mice possessing the peculiarity of losing their fur on reaching maturity. At the same time their skin becomes corrugated, giving them the appearance of a rhinoceros hide on a small scale. In discussing its application to horses, Mr. Bateson remarked that the fact was notorious among breeders that American trotters frequently threw pacers, a variety with an ambling gait, rendering them valueless for the breeders' purpose. Pacers, on the other hand, never apparently threw trotters; this pointed strongly to "pacing" being a recessive, and "trotting" a dominant, character. The question is still under investigation. The result of crossing a white and black pigeon was to originate in the first generation a black variety, and on inbreeding this a number of varieties came out, including a pure white, a pure black, and the famous blue-rock pigeon. The explanation of the appearance of the blue-rock type was in no way inconsistent with Mendelian principles. The blue was present in the first generation, but upon it was superposed the stronger black, masking its presence. In the second generation there was a reassortment of the colour determinants and the consequent emergence of the blue-rock type. In the course of the lecture Mr. Bateson considered the possibility of the quality of dominance or recessiveness being dependent on relative ages of the characters considered. It had, he said, been suggested that there was a progress of evolution from dominant to recessive. The evidence, however, failed to bear this out. It was also noted that Mendelian principles were equally applicable to wild and to domestic species. In the two following lectures (May 7th and 14th) Mr. Bateson will deal with further colour phenomena and will then pass on to consider Mendelism in relation to man and in relation to sex.

PUBLIC AUTHORITIES AND POLLUTED WATER.

ON turning to the medico-legal column in this week's issue readers will note that the verdict against the Malvern District Council, obtained by Dr. J. C. Fergusson last January, and awarding him damages in connexion with an impure water supply, has been upset on appeal. Comment on the matter is necessary, as at first sight the result of this action might seem to be a set-back to the public in a matter of much importance. Rural district councils cannot be expected to supply every householder in their area with water, as, owing to the size of many districts in the country, houses may often be built far away from any public water supply. When, however, local authorities do undertake the supply of water, either directly or through a company, we hold strongly that they are morally bound to supply water not only in the agreed quantity, but of pure quality for drinking purposes, and that in default they should be legally liable for damages. This is a point which so far, we believe, has never been fought out in the courts, though a short time ago we recorded a case of closely corresponding character. This was an instance in which an action for damages was successfully brought against the authorities of an asylum by the widow of one of their employees who had died from typhoid fever, brought about, it was alleged, by impurities in the water which was supplied to his official residence. That case gave considerable support to the view in question, and the proceedings in the Appeal Court in connexion with the Malvern case not only leave the point unprejudiced, but may even be held inferentially to be an affirmative precedent. Thus the Judges of Appeal upset the judgement of the lower court, not on the ground that public authorities are free from legal responsibility as to the quality of the water they supply, but on the ground that, since Dr. Fergusson had no right to use the water of the well which gave rise to the outbreak of typhoid fever in his establishment, he used it at his own risk, and consequently could not rightly be awarded damages against the public authorities to whom the well belonged. They had not conferred upon him, either by licence or sale, any right to use this water, and hence, so far as he was concerned, were under no compulsion to keep the water it contained free from percolation of sewage or in any wise fit for domestic use. The public, however, will not be in a satisfactory position in the matter until failure to supply some ratepayer with water of sound quality for drinking purposes has been the direct subject of a successful action for damages against a public authority.

DANCING AS A PHYSICAL EXERCISE.

IT is rather a curious fact that an interest in folk music and folk dancing should have been awakened at the same time in England and in America. In America the awakening seems to have had its origin in the desire of school managers and teachers to find some way of interesting children in singing and physical exercises, something better than monotonous drill on the military model. The idea was sound, for there can be no special reason why exercises devised to make a good fighting man should be the best for boys and girls. In America the mixed nationalities in the schools seem to have rendered it easy to bring into use many excellent examples of the wedding of song and action, the popularity of which has been established in various countries for many generations. In England the awakening interest seems to have been due to the same sort of feeling that made some people fifty years ago, very much to the advantage of their heirs to-day, buy and store old furniture; it was the regret to see beautiful old things lost or destroyed. The idea of reviving and cultivating old English folk music and song and dance seems to have originated with the Espérance Club for working girls a few years ago, and now there has been founded an organization with the unfortunate name, "Associa- "tion for the Revival and Practice of Folk Music"—why not the Folk Music Society?—to provide teachers; its offices are at 35, Craven House, Kingsway, W.C. We hope that this revival of interest may lead many readers to procure *A History of Dancing*,[1] by Dr. Reginald

[1] London: Simpkin, Marshall, Hamilton, Kent and Co. 1906. (Demy 8vo, pp. 147. 3s. 6d.)

St. Johnston, a treatise which we have too long left unnoticed. He discusses the relation of dancing to religion, and some of the ancient forms in Greece, Italy, and the East. He then gives an interesting account of early forms of English dancing, illustrated by a reproduction of a wood engraving from an early copy of the *Pilgrim's Progress*, showing the "Dance of "Joy at the Overthrow of Doubting Castle," and after chapters on allegorical dances among primitive nations and special dances in civilized countries, such as the jig, goes on to consider the origin and development of stage dancing and the history of dancing as a social pastime in this country. As Dr. St. Johnston says in his preface, there is a tendency to introduce on the stage ungraceful styles of dancing or prancing, such as cakewalks, and into ballrooms romps which may be very good romps but are not dances. What recreation, however, is not open to abuse? and perhaps a study of his book may induce ladies to revive some of the old dances and song dances, not only in the schoolroom but in the country house.

PEOPLE'S HEALTH DEFENCE LEAGUE.

COMPETITION among leagues and associations antagonistic to medical men is becoming keener and keener. One of the latest of these organizations, the People's Health Defence League, is the brilliant idea of a lady who is *persona grata* among the antivaccinators by reason of her liberal donations to their funds. Her modest appeal to the nation is for one million names and one million shillings. The signatures, if obtained, will form a monster petition for the overthrow of vaccination, and the shillings, if forthcoming, after defraying the expenses of the petition, will be devoted to a campaign for the enlightenment of the people on the laws of life and health. It is confidently anticipated that this league can and will accomplish the salvation of the bodies of the people. All who sign the petition must pay the shilling, and all who pay the shilling must be members of the league. With commendable foresight and merciful consideration the founder makes a concession as to another point. In an address given at a Glasgow Conference and reported in the issue of the *Vaccination Inquirer* for November, 1907, we find the following words: "While our helpers may advise this or that means "of attaining health, and this or that diet, as the best they "know of, there will be no *compulsion* to accept the one "or the other." We have not heard of any phenomenal run on shilling postal orders, but the work of popular education by leaflet has already commenced. "Small-"pox and Enteric Fever" is the title of a sheet now in circulation. By following the instructions given, and 'passing on the message whenever you see a brother in "need," these and all other fevers can be absolutely prevented or cured. This leaflet contains the following amusing statements: "Small-pox is one of 'Nature's "'beneficent angels' appointed to clear out the unfit "from among us, or to render these once more "fit for the duties of earth-life. It is well known "that where there is inherited or acquired disease "a sharp attack of small-pox will either kill or cure the "individual. . . . But surely we need not mourn over "those who have severed their earth-connection by "enteric or small-pox if we really believe in Almighty "Love. . . . Then why should we interfere with this "beneficent angel who has come to help the race by "cleansing or by removing the unfit members of "Society?" A more appropriate name for a league supporting and teaching such views would be the "People's Disease Defence League," which, if consistently constituted, would no doubt seek powers to make the use of germicides and disinfectants a penal offence on account of their interference with the mission of the "beneficent angels." The astounding thing is that movements of this kind should receive support from any one at all. A glance at the names of those attending the meetings of kindred societies prompts the observation that the same small but somewhat noisy band is more or less active in each of them. An irrational dislike of medical men is the one common bond of union. Disparagement of the medical profession as a whole may be regarded as a decisive token of narrow or ungenerous views. This possibly accounts for the fact that those who declaim with such vehemence against the regular practitioner are themselves invariably the easy prey of the quack. Already the mistrained among the people are probably more numerous than the untrained. The activity of the People's Health Defence League, if continued on its present lines, will increase the preponderance of the mistrained. Fortunately for mankind, these societies as a rule are short-lived, as the independence of anything like organization or control, which is a characteristic of the crank, generates a centrifugal tendency that leads to disintegration.

THE INEFFICIENCY OF CHAUFFEURS

IN the medical journals published on the Continent there is plenty of evidence that the vastly increased risk to the public brought about by automobile traffic is not confined to these islands, and quite recently a proposition on the subject, originally put forward in these columns, has been revived and strongly advocated. It is useless to multiply traffic regulations and increase penalties for breaches of speed rules or to perfect the driving gear of motor-cars unless at the same time steps are taken to ensure that no one can legally take charge of a motor-car, when in use in a public highway, who is not in every way fit for such occupation. At present the law seems to take it for granted that application for a licence to drive a motor-car is *ipso facto* proof of capability to do so efficiently, and no local authority can refuse a licence to an applicant provided he is over 17 years of age. It is true that he must not have previously disqualified himself under the Act, but, once licensed, an incapable motor driver may commit a good many breaches of regulations and, incidentally, maim and kill a good many people before his licence is rescinded and before any local authority is entitled to refuse him a new one. Even if the regulations required applicants for a licence to afford proof of competent knowledge of automobiles, the objection raised in this JOURNAL will still hold good, for the first question put to an applicant for a licence should not be "Can you "drive well?" but "Can you see well?" and the truth of an affirmative answer to the latter question should be supported by scientific proof. Good vision, in short, should be a primary and essential qualification, for it is scarcely open to doubt that a large proportion of the injuries which motor drivers cause to themselves and others are due to visual defects. Of the importance to be attached to good vision many experienced drivers give unconscious proof by refusing to wear goggles in spite of the discomfort of dust. A sudden twist of the wheel to avoid an unexpected obstacle is one of the commonest causes of serious accident, and in many cases the obstacle is only unexpected because it was not observed, although it might have been observed by any one attending to his duties and gifted with sufficiently good sight. The standard to be demanded of applicants for driving licences is, of course, a matter for discussion, but there are reasons for believing that it should be high, perhaps not less than absolutely normal vision in one eye and two-thirds normal vision in its fellow. Furthermore, it is doubtful if it should be permissible to raise the vision to the required standard by the use of correcting glasses. Not only do glasses become obscured by moisture and dust, but it is doubtful whether persons whose vision is merely

artificially improved are capable of that instantaneous judgement of pace, distances, and angles essential to driving at anything like the legal limit of speed. The subject is one which should receive attention at an early session of Parliament.

SLEEPING SICKNESS IN NYASALAND.

DR. HEARSEY, Principal Medical Officer of the Nyasaland Protectorate, in his diary on sleeping sickness for the months of November-December, 1907, indicates the extent to which this disease has spread from Uganda to the south. Imported cases have been observed as far south as Mvua on the western shore of Lake Tanganyika, and at Lukonzolwa on the west of Lake Mweru. As the tsetse fly, *Glossina palpalis*, has also been noted in the former place the danger of further spread is manifest. The idea lately suggested that every negro with enlarged glands apart from definite cause must be suspected of being affected with sleeping sickness has been put to a practical test in Nyasaland with negative results. Out of 5,000 natives examined among various tribes 8 per cent. of healthy individuals were found to have enlarged neck glands and yet no trypanosomes were present when the gland juice was examined. Similar results had been obtained by other observers previously. Precautions are being taken to prevent natives from infected districts moving elsewhere, and if these are vigilantly carried out further extensions will be minimized if not actually stopped. In Uganda natives are, as far as possible, only allowed to travel by the Uganda railway to East Africa after medical inspection, and segregation of infected persons in isolated camps is being attempted. In another part of his diary Dr. Hearsey quotes Dr. Kinghorn of the Sleeping Sickness Commission as the authority for the statement that *Glossina fusca* is known to be capable of transmitting the infection of sleeping sickness, and constitutes a danger which cannot be overlooked. Dr. Kinghorn thinks there is too great a tendency to regard *G. palpalis* as the only infecting agent, and points to the fact that "the work on cattle trypanosomes shows "that while one or two species are normally concerned "in the extension of the disease, it is quite possible to "effect this by the employment of not only other "species of tsetse, but also other distinct genera, for "example, *Stomoxys* and *Tabanids*." He therefore holds that "all biting flies, and particularly all species "of *Glossinae*, must be regarded with suspicion," and is of opinion that "it is most important that some "definite effort should be made to find exactly what "flies, tsetse and others, are capable of carrying "the virus." From these observations it is clear that the whole question of the tsetse flies as sole spreaders of trypanosomes will have to be attacked afresh, and the need is all the more urgent, as such flies are absent in India, where surra is rife. Some other interesting information as regards the treatment of sleeping sickness in Uganda is given, but a somewhat disquieting note is struck when we read that the atoxyl treatment has been followed in a certain percentage of cases by disturbance of vision, ending in some cases in blindness. Such an eventuality ought not to be lost sight of in the treatment of European cases. It is to be hoped that the continuous work now being done on sleeping sickness and the information that is being gradually acquired will result in a diminution of this scourge in the near future.

KENSINGTON GENERAL HOSPITAL.

THE institution formerly known as the Queen's Jubilee Hospital, and more recently dubbed the Kensington General Hospital, is again figuring in the newspapers in somewhat unhappy fashion. Some years ago the majority of the medical staff resigned as a protest against the way in which the institution was being conducted, and the board of the hospital asked the King's Fund to investigate the affairs of the institution and make recommendations for its management. The King's Fund, while expressing the opinion that no hospital in Earl's Court was necessary, recommended that every one who had hitherto been connected with the institution should tender his resignation and that for a year the place should be put into commission, a staff being temporarily appointed by the Royal Colleges and the Fund making itself responsible for all expenditure. At the end of the year the subscribers to the institution were to have it handed back to them, and could then decide whether they would maintain it as a hospital, convert it into a dispensary or close it altogether. A number of medical men had, however, accepted office immediately after the resignation of their predecessors, and the Board refused to accept the offer of the King's Fund on the ground that, having thus precipitately appointed a new staff, it was bound to maintain these gentlemen in their places. At the end of the year, however, a change of view was evident, for at the annual meeting the new chairman moved a resolution that the wards should be closed for six months and a general meeting be held then to decide what should be done for the future. He showed that for some time past the wards had only been kept going by advances made by the staff for the payment of current accounts. His proposal was supported by an influential section, but on being put to the vote was defeated by a narrow majority. It was then decided to make a charge to the occupants of half the beds, and to all out-patients other than those sent by general practitioners in the neighbourhood. At the annual meeting held at the beginning of this year the chairman showed that though a considerable sum had been received both from in-patients and out-patients, the general position was not less hopeless than before; he, therefore, again proposed that the wards should be closed, but was again defeated. The net result is that the hospital on several occasions recently has been in possession of a broker's man, and that appears to be the present position of affairs. From first to last this hospital has been a black spot on the map of medical charities of London. It originated in a fashion which nowadays should be impossible, and though the wealthier residents in Kensington are being reproached for having failed to support it, there have been plenty of good reasons why they should decline to do so. Looking to the opinion of the King's Fund that a hospital at Earl's Court is unnecessary, to the past history of the hospital, and to its present financial position, it would seem better that it should be allowed to die quietly without further effort.

REGISTRATION OF NURSES.

THE Official Directory of Nurses Bill, the second reading of which was moved in the House of Lords by Lord Balfour of Burleigh on Wednesday, was opposed by the British Medical Association as well as by various nursing organizations, and rejected on a division by more than two to one. The opposition to the bill was led by Lord Ampthill, who in an able and temperate speech set out the objections felt to the bill both by the medical profession and by nurses. The debate disclosed a general feeling in favour of the establishment of registration of nurses by the State, and Lord Lansdowne put the main objection to this bill, promoted by the Central Hospitals Council, very tersely when he said that it was in fact, if not in name, a registration bill, and the question for the House to consider was whether it was a good registration bill. The scheme embodied in the bill, it may be pointed out, is

essentially the same as that to which the Board of Trade in 1905 refused recognition after an inquiry at which evidence was given on behalf of the British Medical Association. The system it sought to establish was, moreover, not in accord with the recommendation of the Select Committee of the House of Commons, to the effect that a register of nurses should be kept by a central body appointed by the State. The object of the State registration of nurses has received the very careful consideration of the British Medical Association, and after it had been for two years under the consideration of the Divisions, the principle was approved at the Annual Representative Meeting in 1906, by a vote in which 90 out of 93 present were in favour of it. The Association has expressed the opinion that the public interests can be adequately protected only by the creation of a council having statutory duties and powers subject to the general control of the Privy Council. The Official Directory of Nurses Bill ignored the principle which the legislature has followed in regard to the registration of medical men, solicitors, dentists, pharmacists and midwives, and its effect would have been to place the control of the public safeguard for the efficiency of nurses entirely in the hands of hospitals and other training institutions, the governing bodies of which are selected for their administrative capacity in hospital management and not with any regard to their capacity for directing the training of nurses. There are at the present time before the House of Commons two bills for the state registration of nurses. They present a general similarity but differ in detail, and the Council of the Association, acting on the report of the Medico-Political Committee, has expressed the opinion that the Nurses Registration Bill promoted by the Society for the State Registration of Nurses is, on the whole, preferable to that promoted by the Royal British Nurses' Association; the bill provides for the appointment of a council consisting of eleven persons, of whom three would be representative of medical bodies, seven of nurses, and one, to be appointed by the Privy Council, of the general public.

FLIES AND DISEASE.

IN another part of this issue will be found a summary of a report by Dr. Hamer of the London County Council, on the fly nuisance. Its value lies not in the novelty of any of the conclusions reached, but in the fact that it puts on what may be regarded as a scientific basis a number of beliefs generally held with regard to flies, and emphasizes the moral to be drawn from them. First and foremost, it is clear that no public sanitary authority is justified in using as a dépôt for the temporary storage of street sweepings, or indeed of refuse of any kind, ground in the neighbourhood of dwelling-houses. The striking distance of a fly factory, so to speak, seems to be at least 200 yards, so there should be a space of not less than 300 yards between refuse dépôts and houses. It is clear, too, that the common belief that horse manure is particularly congenial to flies, and specially favourable to the development of grubs, is well founded, and that of all the sources of fly nuisance street sweepings are the most redoubtable. Other familiar views confirmed by this report are that, to prevent their rooms being haunted by flies, householders must see that their rooms are kept scrupulously clean, and in particular avoid providing flies with a readily accessible meal by not allowing crumbs to remain on the floor. But even houses with very clean rooms cannot be kept free from flies unless great care is exercised in promptly removing all refuse from the premises, including the house yard. The case of those who are unfortunate enough to live in fly-ridden localities is even worse. However irreproachable their rooms and back yards, flies must be expected unless windows and doors are kept carefully closed during the daytime. The report includes a careful review of some of the considerations underlying a belief in a sequential relation between fly prevalence and epidemic disease. Dr. Hamer supplies fair ground for believing that the connexion between the two is not truly direct, his remarks on this point being likely to be somewhat disturbing to those who found their belief in the potency of flies as disseminators of disease on curves showing the relative prevalence of flies and disease during certain periods of the year. Those, however, who call out for the destruction of flies or regard them as a danger to the public health, as the outcome of what may be called clinical observation, will remain entirely undisturbed; and quite right, too, for even though flies may not have been absolutely proved guilty of causing diseases such as cholera infantum and other common intestinal troubles prevalent in warm weather, they are decidedly dirty in their habits. They contaminate food, blemish walls and ceilings, and by their activity annoy the occupants of any room to an extent which really constitutes a nuisance. They are, in short, irrespective of disease, in all respects undesirable co-partners in a dwelling-house. In this connexion a story quoted by Sir Shirley Murphy in his preface to the report, if not *vero*, is at least *ben trovato*. It is to the effect that a visitor at an American hotel, on complaining of the multiplicity of flies in the lavatory, was seriously advised to pay his visits thereto during the meal times. On hearing the dinner bell the flies apparently flocked with the rest of the visitors to the dining-room.

TYPHOID FEVER AMONG COLLIERS.

THE possibility of colliers contracting typhoid fever owing to the absence of proper means of disposing of excreta in underground workings has perhaps not hitherto been sufficiently recognized. A recent report by Dr. R. Deane Sweeting to the Local Government Board upon the sanitary condition of the borough of Leigh, a colliery town in Lancashire with a population of about 43,000 persons, draws attention to this subject. It appears that for many years past typhoid fever has rarely been absent from the town, the number of cases averaging yearly about 43, and the deaths 10. During the five years 1902-6 the yearly incidence of cases among the collier population was 2·8 per 1,000, and among the non-colliers 0·7 per 1,000. This fourfold greater incidence among the colliers as compared with the rest of the inhabitants was largely referable, in Dr. Sweeting's opinion, to the conditions of excrement disposal obtaining at the collieries. This view is emphasized by the account which he gives of the conditions found in seven collieries he visited. In four there were no means provided underground for the reception of excrement, which was voided anywhere and everywhere, and he heard of cases where colliers had literally to wade through faeces during their daily task, some of this adhering to their hands and beards. At one colliery a dozen boxes were provided underground for about 620 workers, and at the remaining two there were forty-four pails provided for 630 men, a scavenging cart going round the workings periodically to collect the contents. These arrangements appear to have been in force only a few years, and were made in consequence of the scare of ankylostomiasis in the Cornish mines. With the knowledge we now possess concerning the long period during which a typhoid patient may remain an effective "carrier," the underground workings of a colliery would appear to present ideal conditions for the dissemination of the disease.

INFANT LIFE PROTECTION.

WHEN the Children's Bill was before the Standing Committee of the House of Commons on May 5th, Mr. Samuel, Parliamentary Secretary to the Home Office, the Minister in charge of the bill, moved an important amendment to bring within the scope of the measure for the purpose of inspection, nursing homes where only one infant is maintained. The amendment was carried, and subsequently, at Mr. Samuel's instance, the age bringing children in nursing homes within the scope of the bill was increased from five years to seven. These amendments will greatly strengthen the bill; they have been demanded for a long time by the majority of those having experience of the working of the present Act. Mr. Samuel, however, carried a clause authorizing a local authority to exempt from inspection, either unconditionally or subject to such conditions as it thought fit, any particular premises within its district.

THE MECHANISM OF RESPIRATION.

IN a communication to the Royal Society on the mechanism of respiration with especial reference to the action of the vertebral column and diaphragm, Dr. J. F. Halls Dally claims to have obtained, by means of Groedel's orthodiagraph, data which may be considered more exact and reliable than those recorded by previous observers. The most interesting and novel parts of the communication refer to the ordinary respiratory movements of the vertebral column, which hitherto have escaped notice, and to the movements of the diaphragm, which Dr. Halls Dally asserts are less extensive than has been believed. During inspiration there is a backward movement of the vertebral column to the extent of 6 mm. at the level of the first dorsal vertebra; 7.5 mm. at the level of the fifth dorsal vertebra, and 9 mm. at the level of the tenth dorsal vertebra. The movement is due, in Dr. Halls Dally's opinion, to the "backward "push of the sternal ribs when the sternum is raised "upwards and forwards by the contraction of the "cervical and thoracic muscles." Dr. Halls Dally believes that the vertebral movement has an important influence upon the aëration of the apices of the lungs. The methods and apparatus which have demonstrated the movement of the vertebral column during respiration have shown at the same time that the movements of the diaphragm, on which much stress has been laid, have been exaggerated, for the average vertical movement of the right cupola does not on the average exceed 30 mm., while that of the left cupola averages 28 mm., that is to say, the actual amount of movement which occurs is only about half what we have been asked to believe. The weak point of Dr. Halls Dally's communication lies in the fact that there is no reference to the type of respiration which is being dealt with. It is obvious that where the presternum is said to move 30 mm. upwards and 14 mm. forward in inspiration forced thoracic inspiration must be referred to, for that amount of movement certainly does not occur in quiet abdominal respiration; and if the sternal movement is much less in some forms of respiration than in others it follows, if Dr. Halls Dally's explanations are correct, that the extent of the movements of the vertebral column will also vary, but upon these points the communication gives no light.

SERUMTHERAPY IN THE GERMAN ARMY.

A RECENT publication[1] issued from the Department of Military Hygiene in the German army reports the results of a conference which was convened on November 30th, 1907, for the purpose of considering the employment of curative and protective serums in the army. The serums especially recommended for military use were those manufactured under State control, and, in particular, the diphtheria and tetanus serums, the testing of which is made compulsory. Other serums prepared under proper precautions in State-regulated institutes were also recommended, and special mention was made of the importance, for military requirements, of dysentery serum and meningococcus serum. With regard to typhoid fever it was pointed out that the curative treatment of this disease would be very greatly facilitated if a serum could be obtained possessing active powers to counteract the toxins of the typhoid bacillus. Consideration was given to the possibility of deleterious effects resulting from serum administration, and the question of "serum hypersusceptibility" was discussed; but from these alleged dangers, it was decided, there was nothing to be feared, provided the material used had been prepared with due regard to the regulations laid down, and that the patients were treated with properly regulated doses and received competent medical care. The provision of tetanus serum for use in the field was regarded as of special importance, and a supply of dysentery, diphtheria, and streptococcus serums was also considered desirable; but with regard to the last the hope was expressed that further improvements would be effected in its preparation. On the subject of preventive antityphoid inoculations a guarded opinion was adopted; the results already obtained were considered to be encouraging, but it was considered that more work must be done before the problems of antityphoid inoculation could be regarded as completely solved.

[1] *Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens.* Herausgegeben von der Medizinal-Abteilung des königlich Preussischen Kreigsministeriums. Heft 37. *Ueber die Anwendung von Heil- und Schutzseris im Heere.* Berlin: August Hirschwald. 1908. (Roy. 8vo' pp. 42, Tafeln 3. M.1.20.)

PRESENTATION TO DR. REEVE, OF TORONTO.

AT the first open meeting of the Toronto Academy of Medicine, which took place some time ago, a portrait of himself was presented to Dr. Reeve, Dean of the Medical Faculty of the University of Toronto, who was President at the meeting of the British Medical Association held in Toronto in 1906. The presentation was made on behalf of the executive of the Toronto Branch by Mr. Irving Cameron in felicitous terms. Dr. Reeve was received with acclamation when he rose to accept the portrait. Those members of the Association who were privileged to attend the Toronto meeting must have a vivid remembrance of the tact and dignity with which he discharged the functions of President, and the whole Association will join in congratulating him on the signal honour conferred upon him by the members of the Toronto Branch.

SIR SAMUEL WILKS, who underwent a serious operation on May 1st, has been very greatly benefited thereby, and is, we are glad to learn, doing very well. In spite of his illness and his eighty-three years he retains his cheery interest in life.

THE Croonian Lectures before the Royal College of Physicians of London will be delivered on Tuesdays and Thursdays, June 18th to 30th, by Dr. A. E. Garrod at 5 p.m. on each day. The subject of the course is inborn errors in metabolism.

THE annual conversazione of the Medical Society of London will be held on May 18th, the guests will be received at 8.30 p.m. by the President, who will present the Fothergillian medal to Sir Almroth Wright, M.D., F.R.S., at 8.45, and at 9 p.m. Mr. Clinton Dent will give the annual oration, the subject being the after-results of injuries.

Medical Notes in Parliament.

The Official Directory of Nurses Bill.—Lord Balfour, in moving the second reading of this Bill in the House of Lords on Wednesday, said that it would provide for a directory to be compiled from official sources giving such particulars as the Privy Council might think necessary, and every nurse who had received training in a hospital, infirmary, or other institution for the cure of the sick in Great Britain or Ireland, not being an institution carried on for private gain, would be entitled to have his or her name entered in the directory. It had been made a grievance that no ladies were associated with the Privy Council in the formation of the directory, but if the Council were willing there need be no difficulty on that head. The number of trained nurses in the country was estimated as from 40,000 to 60,000, but, so far as he could gather, at the most 5,000 had joined the Society for the State Registration of Trained Nurses, which objected to the bill on the ground that the class for whom it was proposed to legislate had not been consulted. He thought the establishment of a directory would afford machinery for obtaining an adequate expression of opinion from nurses in the future. The rejection of the bill was moved by Lord Ampthill in a vigorous speech; he drew attention to the fact that the Select Committee of the House of Commons had reported in 1905 that it was desirable that a register of nurses should be kept by a central body appointed by the State, and that two bills had been introduced to carry out this recommendation. The promoters of those bills, which were approved by an immense weight of medical opinion, were very earnestly opposed to the bill introduced by Lord Balfour, because they regarded it as deliberately, avowedly, and wantonly hostile to the principle of State registration. The advocates of the present bill, finding themselves baffled by the report of the Select Committee of the House of Commons and the verdict in the Board of Trade inquiry, had inveigled Lord Balfour into drawing a red herring across the scent of true legislation; it was in fact a blocking bill, an antiregistration bill. The opinion of neither doctors nor nurses had been sought or obtained. It had been objected that the character of nurses could not be ascertained by examination; but the same objection could be brought against all the legislation for the registration of doctors, solicitors, dentists, chemists, and midwives. The object of registration was to guarantee professional efficiency. The promoters of the bill had deliberately refrained from making any attempt to ascertain the opinion of the medical and nursing professions, because they knew that they would not meet with any encouragement in proceeding with a bill which would be misleading to the public and useless to the nurses. Lord Ashbourne, who followed on the same side, said that the nursing profession had increased and developed in a way which commanded respect and won sympathy; its members now asked for their own protection and for the assistance of the public to have a State register; the bill now before the House was really intended to prevent the views of the nurses from being carried out. Lord Balfour having asked what authority there was for that statement, Lord Ashbourne replied that it rested on a mass of correspondence he had received. The introducer of the bill had not been able to mention the name of a single medical corporation or body supporting the bill, and there was evidence that the great body of the nursing profession was opposed to it. The principle of the registration of nurses had been adopted by many British colonies, and by thirteen of the States of America as well as by several countries in Europe. Lord Tweedmouth denied that the bill would interfere with the registration of nurses, regarding it rather as a step towards registration; it was the business of the hospitals to train the nurses and whatever arrangement was eventually made the views of the hospital authorities must be taken into account. Viscount Goschen, Lord Monkswell, and Earl Russell opposed the bill, which was supported by the Earl of Crewe, who said that while a registration bill might be preferred, it was really a question of this bill or nothing, since the passing of a registration bill was not an easy matter. The medical profession and the nurses both claimed that they should have the majority upon the council to be formed. He regarded Lord Balfour's bill as a step which would be of assistance to registration. The Marquis of Lansdowne asked whether it was really clear that the Bill was better than nothing; it dealt with a matter of great importance not only to the nursing but to the medical profession and to the public at large, and he would prefer to leave the matter alone rather than resort to legislation which might increase the confusion which apparently already existed. Lord Balfour had attempted to draw a distinction between the bill for establishing a directory and a bill for what he called the more ambitious scheme of registration, but the present bill was really a registration bill; moreover, under it registration would not be compulsory, and a nurse whose name was not on the directory would be allowed to practise as at present; he was afraid that the bill, instead of affording materials for a settlement would aggravate the existing difficulties. Lord Balfour, in reply, said that there was so much divergence of opinion with regard to the bills before the other House that it was not likely that a solution would be found this session; no one had proposed that registration, either under this bill or under any other bill, should be compulsory. The House divided, when there voted for the bill 20, against the bill 53; the second reading was therefore rejected by a majority of 33.

The Shops Bill.—The sitting on Friday, May 1st, was occupied by this bill. Sir Charles Dilke explained, in moving the second reading, that the subject had been before the House for many years, and that the Act passed in 1904, while fully admitting the principle of interfering with adult labour in shops, had practically failed, on account of its permissive character and because it did not deal directly with the hours of shop assistants. The present bill proposed to make it compulsory on local authorities to make closing orders, subject to a referendum to the ratepayers. The public health aspect of the question was admitted on all sides, and the promoters of the measure could not accept a part of their demand; they must have not only an hours bill more general and compulsory, but they must also have a sixty hours week for shop assistants. The Home Secretary rose at once to admit the first-rate importance of the bill and to say that all were practically agreed that the hours of work in shops were too long, and that whenever it was shown that the hours and conditions of labour were detrimental to health, it was imperative that the State should interfere to remedy the evil. He accepted the principles of the bill, but he was bound to criticize in a friendly spirit some of its details, and to reserve to the Government a free hand in dealing with the methods of obtaining the ends sought. Owing to the state of public business, the bill could not possibly make progress this session, but if it were passed and referred to a Committee of the whole House, he would undertake to prepare and introduce next year a bill strengthening the existing law on this subject. Mr. H. H. Marks moved the rejection of the measure as an undue interference with individual liberty, and likely to injure the small shopkeeper. Sir F. S. Powell seconded the motion for rejection. In the course of the subsequent discussion, several Labour representatives, namely, Mr. Summerbell, Mr. Steadman, Mr. J. Ward, and Mr. Thorne, supported the bill, and a fifth, Mr. Seddon, made a strong plea for a sixty hours week for shop assistants on the ground of health. He said the health of those engaged in distributive trades was far worse than it was fifty years ago. The Shop Assistants' Union now embraced 46,000 members, and they demanded a sixty hours week. Sir F. Banbury, Sir F. Cawley, and Mr. Harold Cox opposed and criticized the arguments advanced for the bill, and the debate was closed by speeches from Mr. Samuel and Mr. Cochrane. The second reading was carried by a majority of 145 after the closure had been granted, and the Bill was referred, as suggested by the Government, to a Committee of the whole House by a majority of 116. This practically disposes of the bill for this session.

Mortality of Males Engaged in the Liquor Trade.—Mr. Charles Roberts asked the President of the Local Government Board if he could give particulars of the mortality for the period 1900–2, at five age-groups of ages, from 25–35, 35–45, 45–55, 55–65, and 65 upwards, for all occupied males, brewers, publicans, including innkeepers and inn

servants, publicans in London, publicans in industrial districts, and publicans in agricultural districts respectively. Mr. John Burns gave in reply the following particulars of the mortality in England and Wales in the period 1900–2 at five age-groups of males (aged 25 and upwards) engaged in the supply of intoxicating liquors, as compared in each age-group with that of all occupied males taken as 100:

	25.	35	45.	55.	65.
Occupied males	100	100	100	100	100
Brewers	121	157	143	145	108
Publicans, innkeepers, inn-servants ...	230	217	167	150	99
,, in London	220	252	194	146	93
,, in industrial districts ...	238	226	193	175	107
,, in agricultural districts ...	194	163	140	134	95

A Standard for Preservatives in Food.—Mr. Field asked the President of the Local Government Board whether he would include in his forthcoming food regulations a clause fixing a standard for preservatives in food. Mr. John Burns replied that, in view of the importance of the public health and trade interests concerned, regulations dealing with preservatives in food generally could not be made without considerable preliminary inquiry or without supplementing the investigations of the Departmental Committee in various directions. In these circumstances it had not been found practicable to include regulations on this subject in the series now in preparation, but he had not lost sight of the matter, and had already directed inquiries to be made with regard to the present position of preservatives in certain food stuffs.

Scarlet Fever at Tidworth Barracks.—Mr. Secretary Haldane stated last week in answer to Captain Faber that four cases of scarlet fever had occurred at Tidworth, and that the cases were being treated in the Isolation Hospital, Bulford.

The Dairies and Milkshops (Ireland) Order and its Cost.—Mr. Hugh Barrie asked the Chief Secretary to the Lord Lieutenant of Ireland whether, having regard to the fact that the Dairies, Cowsheds, and Milkshops (Ireland) Order, 1908, was compulsory, and that its provisions were for the purpose of improving the general health of the community and assisting to stamp out the disease of tuberculosis, he would urge upon the Government the necessity of contributing one-half of the cost of giving effect to the Order. Mr. Birrell said the answer was in the negative. There was no reason why the Government should contribute one-half of the cost of giving effect to the Order in question that would not equally apply to the case of every order which aimed at improving the general health of the community.

Imported Fresh Milk and its Purity.—Last week, in answer to Mr. Collings, Mr. Burns stated that, according to figures which he had obtained from the Commissioners of Customs, the quantity of fresh milk imported into the United Kingdom during the nine weeks ended February 1st, 1908, and during those ended February 2nd, 1907, was 499 cwt. and 94 cwt. respectively. Samples of imported milk, as of any other milk, might be taken under the Sale of Food and Drugs Act, with a view to their being analysed and dealt with under those Acts. Moreover, samples of imported milk were from time to time taken by the officers of Customs and sent to the Government laboratory under the same Acts. If adulteration was discovered the cases were reported to the Commissioners, who instituted legal proceedings where this seemed to them desirable. Further, he was arranging to have some samples of imported milk examined as to bacterial contamination and the presence of dirt.

The Coroners' Inquests Bill and Death Certification.—Last week Sir W. J. Collins asked the Home Secretary whether, in connexion with the proposed reforms in the law relating to coroners, he would have regard to the representations made to the Lord Chancellor on this subject in March, 1907, by the Medico-Legal Society and by the London County Council. The Under Secretary of State for the Home Department replied that the subject of death certification was fully dealt with by a Select Committee of the House of Commons which reported in 1893, and the proposals to which he referred were substantially covered by that Committee's recommendations. The Secretary of State had under consideration, as was announced on the second reading of the Coroners' Inquests Bill, the question of appointing a Departmental Committee to inquire into certain points relating to coroners' inquests, and so far as the proposed reform affected coroners, they would come within its scope, and form part of its investigation. Sir W. J. Collins asked whether the Under Secretary was aware that the report of the Select Committee to which he referred had not achieved any legislative result at the present time. Mr. Herbert Samuel said he was aware of that, and he thought it very desirable that the Departmental Committee, so far as the terms of reference allowed, should review that question.

Medical Fees under the Midwives Act.—Mr. Eugene Wason asked the President of the Local Government Board on Monday whether he was aware that valuable lives of poor women were sometimes sacrificed in their confinement through the absence of a doctor owing to their inability to pay the fee for his attendance; and whether the Local Government Board would so far vary their circular of July 29th to the Boards of Guardians on the Midwives Act of 1902 as to make the payment of the doctor's fee compulsory by the guardians instead of permissive, as at present. Mr. Burns said in reply that the guardians were authorized by the Poor-Law Amendment Act, 1848, to pay for any medical assistance rendered to a poor person on the happening of any sudden illness, although no order had been given for the same by the guardians or any of their officers or by the overseers. Under this provision the guardians might pay the fee of any medical man called in, on the advice of a midwife, to attend a woman in childbirth in any case of difficulty. The Board were not empowered to alter this provision so as to make it compulsory. Under the regulations which were in force in most unions, it was compulsory upon the guardians to pay a fee to a Poor-law medical officer who was called on to attend a woman in childbirth by order of a person legally qualified to make the order. They must also pay the fee if, under circumstances of difficulty or danger, he visited, without any order, such woman who was actually receiving relief, or whom the guardians might subsequently decide to have been in a destitute condition.

The Royal College of Surgeons of Ireland and the New University.—Sir W. J. Collins asked the Chief Secretary last week whether he had considered a memorial from the Royal College of Surgeons of Ireland praying that that body might become a constituent college in the new university to be established in Dublin; and whether he would be prepared to advise the inclusion of that college within the university. Mr. T. W. Russell said that it was not intended to make the Royal College of Surgeons in Ireland a constituent college of the proposed new university in Dublin.

The Sleeping Sickness Bureau.—On Monday Mr. Rees asked the Under Secretary of State for the Colonies whether the Government had decided to establish a national sleeping sickness bureau, with head quarters in London; whether a convention between Great Britain and Germany for the prevention of the spread of this malady was contemplated; and whether he could give the House any information on this subject. Colonel Seely said the answer to the first two portions of the question was in the affirmative. The Secretary of State hoped to be in a position to publish detailed information regarding the bureau shortly.

Diphtheria in Pigeons and its Relation to Human Diphtheria.—Major Anstruther-Gray on Tuesday last brought this subject under the notice of the President of the Local Government Board, who stated that he had already caused a pigeon suffering from diphtheria to be examined at the Lister Institute. It was found that the disease in it was not due to the same organism or microbe as human diphtheria, nor to the organism which caused a rather similar outbreak in pigeons in 1907, which was investigated by the Local Government Board at the time. The nature of the organism causing the recent outbreak was still being investigated, but there was some difficulty in continuing the investigation, as the disease had apparently now died out. He was advised that, so far as could be gathered, there was no evidence that the disease was dangerous to man.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SIR HENRY LITTLEJOHN.

At a meeting of the Edinburgh Town Council on April 29th a letter was read from Sir Henry Littlejohn thanking the magistrates and council for their kind appreciation of his long connexion with the corporation; and another from the Secretary of the Local Government Board, transmitting, for the information of the corporation, a copy of a letter which the Board had sent to Sir Henry Littlejohn on the occasion of his retirement from the post of medical officer of health, in which it expressed its high appreciation of the zeal and ability with which he had discharged his duties.

MEDICAL APPOINTMENTS TO THE CITY OF EDINBURGH.

The Lord Provost's Committee and Public Health Committee of the Edinburgh Town Council made the following recommendations to meet the altered circumstances caused by the resignation of Sir Henry Littlejohn: "That the offices of medical officer of health and surgeon of police be disjoined; that a medical officer of health be appointed at a salary of not less than £800 per annum; that a casualty surgeon be appointed, and that the office should be held by the occupant of the Chair of Medical Jurisprudence in the university at a salary of £100 per annum; that three district police medical attendants be appointed for three divisions of the city, at salaries of £75 each per annum; and one for Portobello district at a salary of £15 per annum; and that the holder of the office of casualty surgeon should act as medical referee to examine candidates for admission to the police force and the fire brigade, and grant medical certificates in cases of superannuation." The recommendations were adopted.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers of the Edinburgh Royal Infirmary, on May 4th, reference was made by Mr. Alexander Scott Ireland, by the Very Rev. Dr. Scott, of St. George's Church, and by Dr. R. McKenzie Johnston "to the splendid work done by the late Dr. Underhill as a manager of the Royal Infirmary." It was agreed to remit the matter to the Medical Managers' Committee to draw up an appropriate minute.

A letter was read from Dr. F. W. N. Haultain, resigning his post as assistant gynaecologist, owing to the demands upon his time in connexion with outside duties. He much regretted that he had to do so, as his association with the hospital had always been of the most pleasant character. On the suggestion of the chairman (Professor Harvey Littlejohn) it was resolved that the resignation be not accepted meantime, and that the matter be remitted to the Medical Managers' Committee.

There was likewise read a letter from Mr. Henry Wade, resigning his post as one of the assistant pathologists in consequence of his having been appointed assistant surgeon at Leith Hospital.

The following gentlemen were appointed clinical assistants for the period to 30th September:—Percival D. Cameron, M.B., Ch.B., to Dr. George A. Gibson; and G. A. Davies, B.A., M.D., to Dr. Norman Walker.

RUCHILL HOSPITAL, GLASGOW.

The final stage in the matter of the Ruchill Hospital was reached on May 1st, when a special meeting of the corporation was summoned to consider the report of the Hospitals Subcommittee. It was remitted to this subcommittee to consider the report of the commissioners appointed by the Local Government Board. The subcommittee held numerous meetings, and have evidently gone into the questions at issue with considerable detail. Yet on the crucial points of the future position of the matron, physician-superintendent, and medical officer of health the subcommittee was unable to come to a unanimous recommendation. On all these points two findings were issued in the form of majority and minority reports. The majority report accepted the explanation of the medical officer of health as satisfactory, and exonerated him from any responsibility for the distribution of the patients in the hospital. Beyond sending him daily reports of the number of patients in the hospital and in each ward, the physician-superintendent never officially reported to him in such a way as to call his special attention to the fact of the excessive number of patients in certain wards of the hospital. The medical officer of health was not implicated in the questions of understaffing and friction.

The minority report considered that the medical officer of health should have called the attention of the subcommittee to the overcrowded condition of certain wards during last year. He received daily returns of the number of patients in each ward (returns which were not made to the subcommittee). By the hospital regulations the physician-superintendent was placed under the control of the medical officer of health as well as of the subcommittee, so that it was the duty of the medical officer of health to have carefully considered these returns and called the attention of the subcommittee to the excessive overcrowding of particular wards.

With regard to the physician-superintendent, the majority report recommended that he be asked to tender his resignation—though possessed of high professional attainments and many admirable qualities, on the ground that during the periods of epidemic last year he had shown lack of administrative capacity necessary to the successful administration of a great hospital. The minority report recommended that the physician-superintendent be put upon probation for six months. Dismissal was a punishment altogether out of proportion to the failure in duty. The majority report considered that the matron should be retained in her position, though it expressed disapproval of the tone and the terms of her address to the sisters and staff nurses. She had expressed her regret for this indiscretion, and the subcommittee had confidence in her ability and capacity adequately to discharge her important duties. The minority considered that she should be censured for her general want of tact with the nursing staff.

With regard to the dismissed assistant physicians, the majority report recommended that they should not be reinstated, though their complaints to the Local Government Board had been largely substantiated by the finding of the commissioners. The report cast no imputation on their personal character or professional ability. They were dismissed not for any complaints regarding the management of the hospital, but solely because, after due warning, they refused to obey an important regulation for the government of the hospital. In the interests of discipline they must suffer the consequences. The minority recommended that they should be reinstated subject to their agreeing to obey loyally the regulations imposed upon them by the corporation. The discussion of the subcommittee's reports proved rather acrimonious. After a prolonged sitting, lasting over ten hours, the corporation adopted the majority reports in the case of the medical officer of health and the matron, but carried the minority report on the physician-superintendent by a narrow majority. The majority reports as regards the dismissed assistant physicians was carried, so that these unfortunate gentlemen seem alone to have suffered as the net result of all the investigations.

THE NEW MATERNITY HOSPITAL, GLASGOW.

The Glasgow Maternity and Women's Hospital was formally opened last week by the Duchess of Montrose in the presence of a distinguished company of laymen and members of the profession. The Lord Provost of Glasgow presided, and in an excellent speech traced the gradual development of the institution from a very small commencement in the Grammar School, Wynd, seventy-three years ago. He made an earnest appeal for extra funds to raise the remaining £30,000 required to free it from debt. Among the subsequent speakers was Principal MacAlister, who congratulated the directors on the provision of new and better accommodation for the work of an important hospital which would alleviate suffering and aid in the prevention of disease and death. It enlarged the means of teaching students and brought nearer the time when Glasgow would be recognized as among the schools best equipped and most amply provided with facilities for clinical study in the United Kingdom. The new buildings enabled the directors to give effect to the recent recommendations of the General Medical Council respecting the teaching of midwifery. In this measure it was a pioneer. Sir Halliday Croom,

on behalf of his Edinburgh colleagues, congratulated the directors on their great achievement. The new hospital was second to none in the United Kingdom, and had few equals on the Continent. At a later stage of the proceedings it was announced that a handsome donation of £5,000 had just been made to the hospital by Mr. Alexander Walker and Mr. James Walker in memory of their father, who was at one time a director of the old Maternity Hospital.

ABERDEEN PARISH COUNCIL.

For a considerable time a certain section of the Parish Council of Aberdeen has been endeavouring to introduce changes in the regulations regarding the appointment of its medical officers, mostly in the direction, it would appear, of limiting the tenure of office. Practically no progress in this direction was made until the last meeting of the council, when a motion was made that at the next ordinary meeting the council proceed to consider and, if thought fit, to alter or vary the appointment of all or any of the district medical officers. This was seconded, but the previous question was also moved and seconded. An amendment, however, to the effect that, with a view to establish a rotation the senior medical officer of the council be asked to retire, became the finding of the meeting. In accordance with this decision Dr. Fowler (Woodside), who is the senior medical officer, will be asked to resign. Dr. Clark (Woodside), who was a member of the board, intimated his resignation, with a view to qualifying for the position.

HEALTH OF ABERDEEN.

In the report of Mr. Kenneth Cameron, sanitary inspector of the city of Aberdeen, recently published, it is stated that serious defects in the condition of the drains were disclosed on 8.84 per cent. of those tested in 1907, as compared with an average of 11.08 in former years. The powers conferred by the Public Health Acts and the local Acts are quite inadequate to deal with recalcitrant tenants and others as to the cleanliness of dwelling-houses and their surroundings, a difficulty which might be met were the Town Council to adopt certain clauses of the Burgh Police Acts, 1892 and 1903. In regard to city lanes, the writer states that a good deal has been done to get them kept in a sanitary condition, though much remains still to be done. The work done by the two female health visitors appointed by the Town Council has been of a twofold nature, and has been energetically carried out. They have visited and advised mothers as to the proper methods to be followed in rearing their infants, and they have visited the older parts of the town with a view to encouraging cleanliness among the inmates. Out of 4,511 births intimated to the health department by the various registrars, in no less than 2 683, or 59 per cent., the mothers have been visited. Revisits to the number of 770 have also been made, giving a total of 3 453 visits in connexion with this branch of the work. The report further deals with the inspection of dairies and cowsheds and with meat and fish inspection, and in the latter connexion it is stated that in every case during the year where attention was drawn to the unwholesome condition of the fish, the parties in charge readily agreed to its destruction. Under the Food and Drugs Act, the new departure made during the previous year of taking samples, for the purpose of analysis, of milk delivered by contract to public institutions in the city was continued during 1907. The disinfection of houses in connexion with phthisical cases had been actively continued during the year. The proportion of persons in charge of phthisical cases who accept the offer of disinfection is steadily increasing from year to year, and during 1907 at least 85 per cent. of those whose attention had been called to the matter agreed to have the premises and clothing disinfected.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE NEW IRISH UNIVERSITIES.

DR. O'DWYER, Roman Catholic Bishop of Limerick, speaking for himself, says the feelings of the people regarding the proposed new university in Dublin is, "We don't like it, but ought we refuse it?" It is a great disappointment in many respects, and hurts the religious sense of Catholics. The people are waiting for a clear lead from the bishops. The Bill makes no provision whatever for religion. The proposed university would be as applicable to a Mohammedan as to a Catholic country. The university is to have no religion, whereas Trinity College is by law a place of religion. He objects to the absence of bishops' names from the senate, and regrets that persons who pretend to speak in Parliament for Irish Catholics are not slower in divesting themselves of every shred of Catholic principle. The ostracism of Maynooth College will shut out from the university the priesthood of Ireland.

Belfast.

The General Assembly of the Presbyterian Church in Ireland held in Belfast on April 29th to consider the Irish Universities Bill was very largely attended. The formal opinion was expressed that the bill could not be approved as a solution of the Irish university question, because it did not conform to the principles of religious equality and non-sectarianism which formed the educational policy of the Presbyterian Church. A committee was appointed to take steps to obtain the amendment of the bill.

DUBLIN HOSPITAL FUND.

The Committee of Distribution of the Dublin Hospital Fund, 1907, reports that it has distributed £3,360 among fifteen participating institutions. Since 1874, when the fund was first established, a sum of £130,135 15s. 9d. has been so given. This money is contributed altogether in churches belonging to various Protestant denominations.

DEVELOPMENT OF PURDYSBURN ASYLUM FOR BELFAST.

At the quarterly meeting of the Belfast City Council on May 1st the minutes of the Asylum Committee were passed after considerable discussion. These minutes recommended the proposed development of the Purdysburn Asylum at an estimated cost of £83,000. This would give accommodation for 700 patients, while 450 patients would be left in the old asylum at Grosvenor Road. To remove the entire number from Grosvenor Road, eight to nine more villas would be required at a further cost of about £45,000. If this were done Belfast would have an asylum for 1,150 patients at a cost of a little over £150,000. In speaking to the report, the Chairman of the Asylum Committee said that about fifty years ago Ireland had a population of about eight millions, and now it had only four millions. In the counties of Down and Antrim, and in Belfast, there were then 350 lunatics; to-day there were some 2,420. Many members advocated the whole scheme. Owing to the overcrowded state of the old asylum in the Grosvenor Road, there is no doubt that the Purdysburn development should be pushed forward in some form.

INSANITARY IRELAND.

Surgeon-Colonel Flynn, Local Government Board Inspector, attended at a recent meeting of the Rathdrum, co. Wicklow, Rural District Council to confer with the members in reference to the action to be taken under the Dairies, Milkshops, and Cowsheds Order, issued by the Local Government Board. The inspector, having called the attention of the council to the great mortality occasioned by tuberculosis, and stated that the disease was frequently due to impure milk, said that the proper way to guard against the plague was to appoint an officer to inspect dairies and cowsheds, and see they were kept clean. Needless to say, the rural district councillors did not jump at the prospect of having to pay an inspector to make them clean up their cowhouses, and the inspector had to inform them that the order was mandatory. Of course the order is a very proper one, but, so far as we can see, it lacks one thing that would make it useful—it prescribes no qualification for the inspector.

A similar defect has been one of the chief reasons for the failure of the sanitary Acts in Ireland. The rural guardians did not want sanitary Acts; they had not and have not any conviction that cleanliness is a necessity, and bring living proof of their convictions in most cases; when compelled to appoint inspectors of nuisances, they sought the men who would do what had to be done on the lowest terms, and as no qualification was required for the office they generally appointed the rate collectors, who had to go from house to house at salaries of about £5 a year. In all probability the same officers will be appointed cow-house inspectors, at perhaps £2 a year, and would be expected to earn it. As few

of them have ever even seen a clean cow-house in Ireland, and are not required to know what a clean and sufficiently ventilated cow-house is any more than they are required to possess any knowledge as to similar conditions in a dwelling-house, we fully expect the Dairies and Cowsheds Order will be a failure, and that, so far as checking the spread of bovine tuberculosis goes, it might as well never have been made.

In connexion with this subject, we would call attention to an important paper, written by Dr. Hayes, the medical officer of Rathkeale Workhouse, co. Limerick, who has spent half a century in the Poor-law service. He attributes the increased susceptibilities to tuberculous disease to the change in the diet of the people, who live now on tea and bread and porter, instead of milk, potatoes, and oatmeal, as in his younger days; and we have little doubt that his contention is right, and that this change of diet is a large factor in the deterioration in the physique of the people, obvious to those who have lived long in the country. There are other factors, however, especially the vast emigration of the young and healthy, not alone to America, but even more to England and Scotland, and the consequent breeding from the unfit.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

GIFTS TO THE INFIRMARY.

THE appeal for funds for the new infirmary is meeting with a fairly liberal response, though a large amount is still required. One of the most generous gifts is that of Mr. W. P. Hartley, who has promised to endow five beds with £40 a year for twenty years, or ten beds if the building is opened free from debt. This gift far exceeds in amount any other donation which the recent appeal has called forth. It is also announced that the Tramways Committee of the Manchester Corporation will increase its annual subscription from £50 to £100. The Paving and Highways Committee has also promised a donation of £50.

THE EFFECTS OF SUNLIGHT.

Last week before the Manchester Literary and Philosophical Society, Dr. G. J. Fowler read a paper on the chemical effects of tropical sunlight. The chemical intensity of sunlight in Calcutta and at various places on the homeward journey to Marseilles was compared with the measurements obtained in Manchester some years ago by Dr. G. H. Bailey. The tests employed were the same in each case, consisting of observations of the amount of iodine liberated from certain solutions of potassium iodide. The greatest photo-chemical effect was found at sea, near the coast of Arabia. The chemical intensity there was three times the highest summer record of Manchester, and over forty times as much as was recorded on a bright winter day in Manchester. The averrge record for Calcutta was about double the highest for Manchester. There did not appear to be any relation between the chemical effect of sunlight, as shown by its power to liberate iodine, and the liability to cause sunstroke, and Dr. Fowler agreed with some other authorities in expressing the opinion that sunstroke did not appear to be purely a heat effect. In the same way sunburn did not seem to depend altogether on the chemical or heat intensity of sunlight; so far no full and satisfactory explanation of these phenomena had been given.

THE NOTIFICATION OF BIRTHS ACT.

The Town Council of Accrington recently decided to adopt the Early Notification of Births Act, and in due course applied for the requisite permission from the Local Government Board. While adopting the Act, the council did not propose to appoint health visitors, but simply to continue its present plan of issuing to mothers printed circulars with instructions as to the feeding and the general care of infants. The Local Government Board replied that such a procedure was not sufficient properly to carry out the intentions of the Act, and that before permission to adopt the Act could be given the council must employ one or more health visitors to visit and give personal instruction and advice to mothers. The visitors must be under the supervision of the medical officer of health, though it was not necessary for the council to appoint whole-time visitors, as the work might be done by co-operation with some voluntary agency. The essential thing was that the mothers should be personally visited when the medical officer of health considered it desirable. Until arrangements for that purpose were undertaken permission to adopt the Act could not be granted. This is not the first instance in the neighbourhood of Manchester where permission has been refused, and, from the point of view of the Local Government Board, it is quite right. It is bad enough to impose the duty of notification on parents, doctors, and others, even when the information obtained is to be properly utilized, but to give them the trouble of notifying for practically no good purpose—except, perhaps, to provide officials with the opportunity of a little more statistic making—cannot be justified for a moment. It is evident that the Local Government Board is determined not to allow the Act to be brought into disrepute in this way by corporations whose idea seems to be that they can prevent infant mortality, without any cost to the ratepayers, by Act of Parliament.

WEST YORKSHIRE.

UNUSUAL SOURCE OF ANTHRAX.

AN inquest was held at the Huddersfield Infirmary on April 27th as to the death on April 24th of a plasterer's labourer from anthrax. The deceased had been handling goat's hair while mixing mortar, and was supposed to have become infected from this material. Dr. W. H. Thorman, in describing the man's condition, said that a small pimple on the neck rapidly assumed the appearance of a boil. From this he took a swab which he sent to Wakefield for examination; it was proved to contain the anthrax bacillus. Later on the boil showed all the appearances of a malignant pustule. He could find no probable source of the deceased's infection other than the hair he had handled. It appears that the goat's hair came in bales, and was opened near the mortar mill. Sometimes it was kept stored, and opened when required. It was purchased by the contractor through a merchant, who imported it along with wool from India. No precautions were observed in its use, as it was not considered dangerous, although it contained a great deal of dust.

BEQUESTS TO WEST RIDING MEDICAL CHARITIES.

Through the death of Miss Culpan a good many medical charities in the West Riding are to receive large legacies free of duty. Amongst these are the Leeds and Bradford Infirmaries; the Halifax and Dewsbury and District Infirmaries; the Children's Hospital, Eye and Ear Hospital, and St. Catherine's Home for Cancer in Bradford; the Royal Albert Asylum, Lancaster; the Yorkshire Home for Chronic and Incurable Diseases, Harrogate, each of which is to receive £1,350. The Batley and District Hospital and the Dewsbury and District General Infirmary are each to receive £500. These generous donations to the medical charities in the West Riding are much appreciated, as most of the institutions find great difficulty in making both ends meet.

BRISTOL.

UNIVERSITY COLLEGE PUBLIC HEALTH LABORATORY.

THE inaugural meeting of this laboratory was held on March 14th. Dr. Michell Clarke, who presided, explained that the council of the college had recently taken over the clinical research work hitherto carried on by Professor Stanley Kent, and had appointed Dr. J. Fortescue Brockdale director. A consulting board of experts had also been constituted, so that the laboratory was able to undertake research work or inquiry in all directions. He then introduced Lieutenant-Colonel R. H. Firth, who addressed a large and appreciative audience on the Sanitary Service of the Territorial Army. Professor Dreyer of Oxford was also present, and described his method for the performance of Widal reactions in enteric fever. In the evening a dinner was held at the Queen's Hotel.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

THERE was a large and representative attendance at the meeting of the Canadian Association for the Prevention of Tuberculosis in Ottawa in March. A number of interesting papers were read, and a largely attended public meeting was held.

Resolutions.—The results of the work of the meeting are embodied in a series of resolutions which were presented to the Parliament of the Dominion. They recommended (1) the formation of a Bureau of Public Health for the Dominion under a Minister of the Crown; (2) that, as the medical inspection of schools is of the greatest importance in the fight against tuberculosis, the report on this subject should be sent to all trustees, teachers, and inspectors of schools; (3) that the provincial governments should be petitioned to make the grants to hospitals dependent on their accepting tuberculous patients and providing accommodation for the same; (4) that the Dominion Government should extend the system of tent sanatoriums among the Indians (among whom 95 per cent. of deaths are from tuberculosis) as rapidly as nurses for this work can be found; and (5) that a bureau of vital statistics should be formed.

Tuberculosis among Immigrants.

Dr. P. H. Bruce, Chief Medical Officer of the Department of Immigration for Canada, read a paper on tuberculosis in immigrants coming to Canada. He stated that during the year 1907 there were 196,143 immigrants to Canada, the largest in any year to date. Circulars were sent out to all hospitals and public institutions, and the returns were compiled from these replies taken with the returns from the examining officers of the department; the circulars asked for the name, age, sex, nationality, date of arrival in Canada, date of entering any institution, and final disposition of each case; 127 cases were reported, of these 59 were returned to their own countries, having arrived within two years, 11 died, and 16 were debarred from entrance at the examining station. Of the 59 returned, 25 were evidently and 17 probably already suffering from tuberculosis when admitted to Canada. Of 22 cases visited in Winnipeg it is stated that all had the disease before leaving the Old Country; 18 in the Royal Victoria Hospital, Montreal, had arrived within three years, and four in Notre Dame within one year. In summarizing the statistics, Dr. Bruce said that 100 immigrants coming to Canada developed tuberculosis within two years and became public charges; of these 50 were probably tuberculous on arrival, 25 badly so; 25 probably contracted the disease after arrival. In this two years in round numbers the immigration was 350,000, so 0·3 per 1,000 became tuberculous within two years of arrival, and 25 were probably in such a condition that they should have been recognized; but as this means only one in 14 000 overlooked, it does not mean careless examination. Comparison with the ordinary population of a Canadian city shows that there are probably 6.2 per 1,000 suffering from pulmonary tuberculosis as compared with 0.3 among the immigrants. Probably, as we know by personal experience, a number of these knew the condition they were in before coming, and many were advised doubtless to come in the hope that an outdoor life in a new country would save them. No doubt the hope was fulfilled in many cases, and in the writer's opinion there is a great opportunity to help these unfortunates by providing for them by subscription made in the homeland as well as in Canada proper accommodation in farm institutions offering healthy occupation and a chance of making their own way in time, when the methods of the new life and care of themselves had been learned. The Canadian North-West offers the dry pure air and cold winters which have been shown to suit many cases of the catarrhal type where the heart has not been affected.

CANADIAN MEDICAL ASSOCIATION.

The forty-first annual meeting of the Canadian Medical Association will be held in Ottawa on June 9th, 10th, and 11th. The Address in Medicine in the General Section will be delivered by Dr. Risien Russell.

India.

REPORT OF THE BOMBAY BACTERIOLOGICAL LABORATORY.

THIS institution, formerly the Plague Research Laboratory originally organized by Dr. Haffkine, has now been reconstituted to supply the wants of the whole Presidency. The present report, submitted by the Director, Lieutenant-Colonel W. H. Bannerman, M.D., is for the nine months ending December 31st, 1906, the date of submission having been altered so as to cover the calendar in place of the financial year. The preparation of plague vaccine still constitutes the main work of the laboratory. The demand for the prophylactic was less than in 1905, but during the present year inoculation seems to have come into increased favour. Dr. Bannerman presents a large amount of evidence indicating that the use of the vaccine caused no damage to health and was attended by marked preventive and curative success. He states that the Plague Commission has established (1) that plague is conveyed from rat to rat and from rat to man by means of fleas, and (2) that plague houses are infective only so long as they harbour fleas. Segregation, evacuation, disinfection, and destruction of rats and fleas are difficult to accomplish effectively in India, and inoculation remains as the easiest and most hopeful means of reducing incidence and mortality. The possibility of the introduction of sleeping sickness into India, and the actual existence of surra in horses and cattle produced by a trypanosome, has suggested investigation regarding biting flies, and an important collective inquiry has been started to this end. The training of hospital assistants in the laboratory is in abeyance in consequence of the want of appliances, which are to be supplied, but many outside workers have been accommodated. A good deal of general work of a diagnostic and clinical kind was done during the year, and a useful co-operation has been arranged between the laboratory and the Bombay hospitals. Several special investigations have been conducted by the officers of the laboratory. Captain Mackie, I.M.S., has made interesting observations regarding the spirillum of relapsing fever, which he considers to be different to that of African tick fever. He also attempted, unsuccessfully, to convey the parasites of kala-azar to monkeys, rabbits, guinea-pigs, and rats.

INDIAN SANITARY REPORTS.

City of Bombay.

The report for the year 1906 submitted by the executive health officer, Dr. J. A. Turner, D.P.H., is very elaborate. A special census, completed in February, disclosed a population of 977,822, being 201,816 in excess of the census of 1901, in which year plague mortality was very high, and a great exodus of inhabitants had consequently taken place. The rates are calculated on the later census. The birth-rate was 21.24, the number registered being unprecedentedly high. The male population of the city is nearly double the female; 2,193 stillbirths were registered —9.5 per cent. of the whole. The vaccination staff assisted in inquiries regarding births, but their agency would be more effective if vaccination were placed under the health officer instead of constituting a separate service. The mortality of the year was high, owing to increased prevalence of fever, cholera, and dysentery, and the influx of ill-fed fugitives from districts in which, from the scanty rainfall of the preceding year, food was scanty and employment difficult to get. The death-rate was 54.07. The plague mortality was 10,823, or 11.06 per 1,000 lower than in any year since 1896, when the disease was introduced. Male deaths were twice as numerous as female, the proportion being similar to that of the sexes in the population. The disease was worst, as usual, in the months of March, April and May. The campaign against rats was continued, and disinfection of houses largely resorted to. A new plague hospital was opened in Colaba. Trials of treatment by the Yersin-Roux serum by Dr. Choksy in the Mahrata Plague Hospital gave hopeful results. A severe epidemic of cholera, attributed to importation by pilgrims, prevailed in Bombay during the hot season, causing 1,240 deaths, against 26 in 1905. Active measures were taken to check the progress of the disease. Small-pox mortality was relatively low, but fevers, mainly malarial, were in excess. Both enteric and relapsing

fevers gave increased mortality, the death-rates of diarrhœa and dysentery were also high, probably owing to the influx of impoverished strangers. Phthisis caused a mortality of 3.64—a considerable rise. Infantile mortality amounted to 534 per 1 000 of registered births. The high rate is attributed to insanitary conditions, bad midwifery, and impaired health of mothers by labour and other causes. Visiting nurses are employed to investigate the conditions affecting infant health, and give aid and advice. The report gives full details regarding sanitary administration of works, and discusses intelligently many special sanitary questions. The municipal laboratory conducts a large amount of useful investigations, chemical and bacteriological.

British Central Africa.

THE Colonial Office report on the British Central Africa (Nyasaland) Protectorate deals at considerable length with questions of health and sanitation. The European population has decreased from 608 to 583, but the death-rate has advanced from 34 to 48 per mille, 24 adults and 4 infants having died during the year. It is noteworthy, however, that 14 of the former were employés working on the Shiré Highlands Railway.

Five deaths from blackwater fever occurred. This is more prevalent at the end of the wet season (February to May inclusive) than at other times, and 18 cases were treated during the year. Dr. Hearsey, Principal Medical Officer of the Protectorate, makes some remarks upon it in his report, which is published as an appendix. In Nyasaland every case has at some time or other—generally only a short time previously—suffered from malaria, and those who suffer from repeated attacks of malaria are the most frequently affected. In districts where malaria is most intense and *Anopheles* most numerous blackwater fever is most common. Natives never suffer from it, but all Asiatics may, and two cases have occurred in half-caste children. Dr. Hearsey is one of those who are of opinion that quinine is a determinant. In 50 cases collected quinine had been taken within a few hours previously in all, and in many cases when quinine is given after the initial attack blackwater again supervenes, and he therefore claims that experience has shown conclusively that, at all events in Nyasaland, quinine should not be given as a routine treatment; though after the third day, when the urine has cleared and the temperature remains high, with malarial parasites in the blood, quinine may be cautiously administered, preferably by intramuscular injection. If no parasites show in the blood, quinine should not be given. Malarial fever reached its highest point in the quarter ending March, thus corresponding with the heaviest rainfall. There were 305 cases and 7 deaths, as against 189 cases and 4 deaths of the previous year. Malarial fevers of the country are generally irregular in type, and often show a tendency to become subcontinued. A pernicious type with hyperpyrexia occurred in 5 cases reported from one station, 4 ending in death.

Dysentery showed marked decrease with only 480 cases as against 963 of the previous year. There were only two cases of enteric fever, and this disease is practically unknown among the natives. On the other hand, acute pneumonias are among the most widespread and fatal of all the acute diseases affecting the natives, especially during the cold season from May to July. An endemic form is not infrequent, affecting the occupants of one hut or one camp. The mortality is very high, and about 50 per cent. of deaths in the villages during the cold season are from pneumonia.

Some facts of interest are recorded about yaws. In one instance, the first recorded case of its kind, the subject was a European, in whom the infection was distinctly traceable to the accidental inoculation of a finger. Yaws being very prevalent in the villages on the south-west arm of Lake Nyasa, an isolation camp was formed for 28 cases, most of them being husband and wife or mother and children. The clinical features were marked and persistent headache and pains in the limbs, but no fever or debility and no regular enlargement of the lymphatics. Fresh crops of pustules made their appearance from time to time, and the localities involved were the chest, face, arms, neck, and axillæ, nearly as frequently as the scalp. There was no evidence of syphilis, but treatment by mercury and potassium iodide seemed to have a distinct effect.

Thirty cases of beri-beri occurred, with eight deaths, and it is noteworthy that 24 were repatriates from the Johannesburg mines, which bears out the opinion expressed in a former report that the disease is an introduced disease and has no connexion with the ingestion of infected food. Tick fever, carried by the tick *O. moubata*, is prevalent in the villages on the west and north of Lake Nyasa, and a considerable degree of immunity or tolerance is acquired by natives of the infested localities.

A detailed account of the sanitary condition of the various townships is given. Greater attention requires to be given to the providing of locations for natives at a distance from the European quarters—one of the most important of sanitary measures in the tropics—but it may fairly be said that there has recently been a marked improvement in the health of Europeans in the country. The great mortality among the employés of the Shiré Highlands Railway was probably due to the malarious nature of the district, the lack of proper house accommodation, and perhaps most of all to the carelessness of the employés themselves. There was no death among the officials of the Administration during the year.

Southern Nigeria.

SOUTHERN NIGERIA is daily coming more and more into notice, and the British public are becoming gradually aware that, with the northern territory, it forms an immense possession which at some future date will witness great developments. The report just issued for 1906 gives a good deal of information upon matters medical. Antimalarial work has now been going on steadily for six years, and has made considerable progress. Quinine is issued free to all Government officials, and its use has been encouraged among the natives, and especially in the treatment of children. Every effort is made to reclaim swamp land and destroy breeding places of *Anopheles* in the neighbourhood of stations, and mosquito-proof wire netting is supplied to all officers' quarters. Lagos, now the seat of administration, has metalled streets and new public buildings, and promises to be a well laid-out and healthy tropical town before long. Its rainfall is 75 in., about half that of Bonny (142 in.) and Calabar (156 in.), but at Epwanga in the Eastern Province the enormous fall of 251 in. was registered. Benin showed both the maximum and minimum temperatures recorded—99° F. in March and 54° in January.

There were 1,022 Europeans resident in Southern Nigeria on January 1st, 1907: 622 in the Eastern and Central Provinces, and 400 in the Western; and, in spite of the strenuous efforts to improve the sanitation and conditions of living, the death-rate was very high. In the former, including homeward-bound invalids dying on board the steamers, it was about 44 per mille. In the Western Province no similar statistics are available, but out of the population of 400, 5 died of malaria and 5 of blackwater fever. Although the death-rate is considerably higher than that of the preceding year, it is to be remarked that the health of Europeans, curiously enough, was better than it had been for years, only 29 being invalided from the Eastern and Central Provinces—an invaliding rate of 46 6 per mille. The death and invaliding rates are much higher among officials than among non-officials, no doubt owing to the fact that the former are much more exposed, as a rule, by the nature of their work in opening up new country, and having to live on tinned food, etc. At the same time, it is more easy to get the officials under proper medical treatment and regular methods of quinine prophylaxis.

Lagos hospital has ten European beds in addition to the native wards, and there are four European nurses attached to the institution. The cases, which numbered during the year 135, with 8 deaths, included 64 malaria, 11 blackwater fever, and 8 dysentery. There were 1,218 native cases treated in the hospital, but unfortunately no records are given. The Calabar European hospital had 155 in-patients, 73 being malaria, 8 blackwater fever, 2 dysentery, and 3 filariasis. Twenty-eight leprosy patients were

treated at the Yaba leper asylum during the year, and a beri-beri hospital with two wards was opened at Bonny. The report claims that marked improvement has taken place all along the line during the year, both in the condition of the country and the people.

SPECIAL CORRESPONDENCE.

VIENNA.

Action for Damages against Surgeons.—Night Tax for Dispensing Medicines.—Influenza in Vienna.—Perforation of the Nasal Septum in a Baby.

AN action was recently brought against a surgeon and his assistant, in which a woman, suffering from tuberculous disease of the vertebral column, charged them with having caused the disease by manipulations executed to bring her back to life when she was collapsed from the effects of an anaesthetic. At the hearing of the case it appeared that the operation performed was of a gynaecological nature, and that, as sometimes occurs, respiration ceased, whereupon recourse was had to Silvester's method, and within a few seconds the woman was breathing again. She was able to leave the hospital after four days. Nevertheless, she had accused the operating surgeons of having injured her spine, when she noticed a few weeks later that there was something wrong with it. It was proved by the history of the woman, obtained before operation, that she had already been under hospital treatment for tuberculosis of several organs, including bones, for some years. Luckily for the defendants, the vertebral trouble could be diagnosed without any doubt to be of tuberculous nature. Therefore the judge not only dismissed the case, but added that he had hardly ever known a charge so unjustly made. The woman, he said, should be grateful to the doctors for having saved her life, even if they had really done her some harm, which the judge was glad to say was not the case.

The Society of Apothecaries has agreed to the addition of a small tax of about sixpence to the price of making up a prescription between 9 p.m. and 7 a.m., in recognition of the disturbance of the night rest of the pharmacist. The tax will go to the fund for the widows of pharmacists' assistants. The medical profession, however, is at liberty to add the letters "E. N.," signifying "*expeditio nocturna*," to such prescriptions which are either urgent or which are intended for the poorer classes, and on these the tax will not be levied. This measure, which is chiefly meant to ensure the pharmacist freedom from unnecessary trouble during the night, has been accepted with equal pleasure by the profession and the apothecaries.

The wave of influenza, coming both from the east and the north-west against Austria, has only recently been stopped by the change of the weather; it was so prevalent that it dislocated not only business but scientific life. Thus lectures had to be interrupted at the university, and not a few physicians were obliged to leave the city for their health. At one time there were 600 to 800 fresh cases daily, and altogether about 50,000 cases were reported. As a rule, the epidemic was mild. It was of the pleuropneumonic type, and many complications of the ear and the accessory sinuses of the nose were noticed, but happily these, too, were mild in character. It is possible that the numerous previous epidemics in Vienna (since 1837 there have been seven) have made the population partially immune or less susceptible to the virus. The hospitals were nearly constantly overcrowded from November till February. About the end of the latter month a white flag was hung out from the General Hospital, signifying that within the previous twenty-four hours nobody had died in the buildings (2,600 beds normally, containing about 3,000 patients at the time in question). This is so rare an occurrence that the daily papers considered it worthy of notice.

At a meeting of the Medical Society a rare case of hereditary syphilis was demonstrated by Dr. Goldreich, the patient being a child aged 6 months, with perforation of the nasal septum. Apart from the family history, which gave no conclusive proof of infection, the baby itself presented unmistakable signs of syphilis. Its head was hydrocephalic, 16 in. in circumference, with ectatic veins. The skin of the head, face, and back presented small brownish patches, small papules; the skin of the soles was red and swollen, the hands and lips were infiltrated, and showed similar papular excrescences, whilst the ridge of the nose was sunken (saddle nose), and by means of a probe a perforation of the cartilaginous part of the septum was easily demonstrated. The child suffered from coryza, having had "snuffles" since birth. Perforation of the septum in so young a child is a rarity; it is not due to a gumma, but to a hyperplastic inflammatory process in the mucous membrane, leading to destruction of the perichondrium and cartilage, and thus causing the change of the configuration of the nose: the tip is drawn inwards and upwards. It is typical of syphilitic disease of the nose both in adult and the young.

CORRESPONDENCE.

A NEW VIEW OF THE EARLY NOTIFICATION OF BIRTHS ACT.

SIR,—It is astonishing how a single word may entirely alter one's view of a subject, even when the subject is one to which one has given a good deal of thought.

We, in common with many others, have waxed indignantly eloquent over the disgraceful way the profession has been treated in the new Notification of Births Bill. The speeches we have made must have run into a dozen or more, and yet now, sitting in one's chair, one almost bursts into laughter at what, from one's present point of view, seems to have been a ludicrously absurd position.

We consider that a great mistake has been made by a misinterpretation of one word of the new Notification of Births Act. The word "attendance" in Clause 1 (1) has been misconstrued to mean *medical* attendance.

In Liverpool the adoption of the Act was not strenuously opposed by the medical profession, as it was urged upon us that the public desired it, the high infant mortality demanded it, and hopes were held out that a fee for the certificate would be forthcoming.

After its adoption nothing was heard of the fee, and we waited in deputation upon the Infant Life Preservation Committee of the City, to urge upon them the unfairness of demanding of us a public service under penalty without remuneration, and of forcing us to yield up the possible secrets of our patients. We were then asked how we came to assume that such a demand was made of us and to show where we were specifically mentioned as persons of whom the demand was made.

We could not do this.

The fact is, we have somewhat conceitedly arrogated to ourselves a duty which the Act does not put upon us.

The Act first lays the duty of notification upon the father, and, failing him, upon "any person in attendance upon the mother at the time of, or within six hours after, the birth"—that is to say, upon any one who happens to be about the lying-in chamber doing anything for the woman.

It is true the Act twice mentions medical practitioners.

In Clause 1 (2) it makes a concession to medical practitioners by giving them free stamped post-card forms, if they like to apply for them; but it neither compels them to apply for nor to use them.

Clause 2 (3) orders local authorities adopting the Act to notify medical practitioners that they are doing so. And our friends who support the Bill tell us that these are simply acts of politeness and consideration extended to medical men, and there is no reason why we should not accept them as such.

That the Act does bear this interpretation is borne out by comparison with the Births and Deaths Registration Act of 1874 (37 and 38 Vict., c. 88). This Act places the responsibility of attending at the registrar's office to give particulars of a birth and of signing the register, first on the father and others specified, and, failing them, on "each person present at the birth." This certainly includes the doctor, if present, and he with others may be summoned by the registrar to attend at his office and give the information. Medical men have, however, never assumed that it was their duty to register births, and there is absolutely no more reason why they should consider that it is they who should notify under the new Act.

Clause 10 of the 1874 Act is still more instructive, for it actually uses the words "in attendance."

Speaking of the persons whose duty it is to register a death, it says "it shall be the duty of the nearest *relatives* of the deceased present at the death or *in attendance* during the last illness." Here "in attendance" cannot possibly mean in *medical* attendance.

It seems, therefore, perfectly clear that medical men are not directly called upon to notify; that they are only included among the crowd, are in no way specially signalled out, and if they ever are, it will be due to their own fault. They should consider that they are the very last of many on whom the obligation falls. Of course, if at the outset we get in the habit of notifying, a custom, which it will be difficult or impossible to alter, will become established. If, on the other hand, we see that the woman's relatives or associates do it, custom will soon lay the burden on their shoulders, and in a few years the public will learn to do it, as a routine, in the same manner as they now *register* births.

Clause 1 (3) provides that if any one is prosecuted for non-notification, it is a good defence to show he had reason to believe some one else had notified. Therefore, until the custom of notification has become established, it would be well for medical men, in their own interest and in that of their patients, to inform them before leaving the house that they must notify, and to ask at the next day's visit if they have done so.

Regarding the post-card forms, we think medical men should have nothing to do with them. They should look upon them as an attempt to make the profession accept the responsibility of notifying and of giving details which the Act does not demand; and not only that, but in a form easy of manipulation and reference, and easily pigeon-holed so as to give officials dealing with them a minimum of labour. Moreover, they would give the local authority an opportunity of seeing exactly what each practitioner was doing, and of classifying and comparing his work and his results with those of his fellows.

In those rare cases where a medical man is the only person about the lying-in chamber during the birth or for six hours after, and where consequently he will have to notify, he should do so on ordinary notepaper, and give only the absolutely necessary statement that a child has been born to So-and-So.

Medical men are compelled to give the death certificate, and they voluntarily fill up a form giving details which supply much useful information in the interests of the public, for which they get neither fee nor thanks. Moreover, they supply the registrar with a saleable commodity, which he actually does sell, and so makes a profit out of their brains and deprives them of a natural source of income.

If to the death certificate we add the birth certificate, it will not be long before the fee for the infectious disease certificate will be withdrawn. Indeed, there will be no reason why it should be paid. If it is just to compel gratuitous certification of birth and death, it is equally just to compel us to certify anything else in the public interest without fee.

There is no body of men that does as much gratuitous work as we do, but what we do we must do voluntarily. When compulsion is applied we must resist.

The combined Divisions of this district are strongly urging all medical men in our area to adopt the practice embodied in this letter, which, we believe, is a perfectly fair interpretation of the new Act.

We are in hopes that other parts of the country will see their way to adopt the same course, and it will be our endeavour to get the Association to accept it as its policy.—We are, etc.,

F. CHARLES LARKIN,
KARL GROSSMANN.

Liverpool, May 4th.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

SIR,—I have been instructed by a meeting of the Liverpool and Birkenhead combined Divisions, held on April 10th, to forward you the enclosed correspondence for publication in the JOURNAL.

On December 30th, 1907, I forwarded to the various local authorities the resolutions concerning the medical inspection of school children arrived at at a meeting of the Liverpool and Birkenhead combined Divisions, held on December 27th, 1907. These resolutions were in accordance with the Medico-Political Committee's Report published in the SUPPLEMENT of December 21st, 1907.

Among others, the following reply was received from the Chairman of the Lancashire Elementary Education Subcommittee (Mr. J. J. Cockshott).

31, Queen's Road,
Southport,
January 4th, 1908.

Dear Sir,

Your letter of the 30th ult. to Sir John Hibbert* has been handed to me as Chairman of the Lancashire Elementary Education Subcommittee. I am sure that the representation of the important association on whose behalf you have written will receive careful consideration by my Committee.

May I ask for my own guidance how many inspections of the kind indicated in your letter could conveniently be taken by one school medical officer at an attendance of one-half a school day? Also if the "two hours" mentioned in the letter would be spent at the school or other place of inspection, and if the time occupied in going to and from the place would not be counted in the two hours?

Also whether in your opinion the ameliorative treatment which may follow inspection and be provided by the Education Committee should be given by the school medical officer, and if so what scale of further remuneration would in your opinion be suitable?

The memorandum of the Board of Education shows that the Board will before long compel the Education Committee to provide ameliorative treatment, and it seems to me that our arrangements for medical inspection should be made so as to render the after-care easy of accomplishment.

I am,
Yours faithfully,
J. J. COCKSHOTT.

Karl Grossmann, Esq.,
70, Rodney Street, Liverpool.

To this the following reply was sent:

70, Rodney Street,
January 5th, 1908.

Dear Sir,

I am obliged to you for your letter of yesterday's date. With regard to your questions, I beg to say that it is difficult to estimate accurately the number of inspections that can be carried out in one-half a school day. The general opinion seems to be that 20 to 24 might be taken as an average: but it is obvious that, while many would take but a few minutes, some would certainly take a full half-hour. Much will depend upon the organized preparation and assistance given to the examiner at the school.

In the beginning, no doubt, the progress will be much slower than when the work has systematically developed.

The time occupied by going to and from a place of examination would not be included in the two hours.

The question of ameliorative treatment has not yet been considered by the Association, but I shall take an early opportunity of seeing that this point is thoroughly considered, and will reply to you as soon as I receive the necessary instructions.

Yours faithfully,
K. GROSSMANN,
Honorary Secretary.

The Chairman,
Lancashire Elementary Education
Subcommittee.

On February 8th the Schedule of Medical Inspection issued by the Board of Education on January 23rd appeared in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL, and was considered by the combined Divisions February 28th. It was found to be much fuller than was anticipated, and as the result of the meeting the following letter was written:

70, Rodney Street, Liverpool.
March 4th.

Dear Sir,

Since my last letter of January 5th, 1908, was written the Schedule of Medical Inspection under the new Act has been issued by the Board of Education and was considered by the combined local Divisions of the British Medical Association. I have been asked to inform you that the meeting was unanimously of opinion that the examination required according to the schedule could not be properly carried out in less than fifteen to twenty minutes per child on an average.

Yours faithfully,
K. GROSSMANN, Hon. Sec.
Comb. Div. B.M.A.

The Chairman, Lancashire Elementary
Education Subcommittee.

In reply to this the following was received on March 6th:

Southport,
March 5th, 1908.

Dear Sir,

I beg to thank you for your letter of the 4th inst. I have reason to believe that it is a medical *inspection* and not a

* Then Chairman of the Lancashire County Council.—K.G.

medical or clinical *examination*, which is required by the Statute, and that in the opinion of the Board of Education many of the questions in the schedule issued by the Board could be filled in by a school nurse or school teacher.

My own view is that the medical inspection will disclose defects in a large percentage of children, who will afterwards have to be medically examined.

I am obliged to you for your letter.

Yours faithfully,
J. J. COCKSHOTT.

K. Grossmann, Esq.,
70, Rodney Street, Liverpool.

To this letter the Secretary, after consultation with the Branch Secretary (Mr. F. C. Larkin), replied on the same day.

70, Rodney Street, Liverpool,
March 6th.

Dear Sir,

I beg to thank you for your letter of the 5th inst., which I shall submit to my committee in due course. Meanwhile I would point out that the distinction that you make between *inspection* and *examination* appears to me a distinction without a difference. Whatever word is used to describe the act, it is certain that to fill up the schedule properly a careful *examination* would be necessary; further, in the notes instructing the inspecting officer as to how he should perform his duties the term "examination" is frequently used, and still more frequently implied, for example, in Note 10: "The skin must be *examined* for vermin, and the hair for nits, ringworm, etc."; in note 14: "The eyes must be 'examined' separately, and fuller 'examination' must be made under certain conditions"; in Note 16 "certain instructions are given as regards *examination* of the ears; Note 20 demands a careful "examination" of the condition of the heart, including its sounds and position, which can be obtained only by careful *examination* with the stethoscope and otherwise; and it is to be noted that the examination must be conducted with sufficient care to form an opinion on which advice can be given; Note 21 demands a careful physical *examination* of the lungs and a record including clinical signs and symptoms, the use of the word "clinical" clearly contradicting the interpretation given in your letter.

Under the heading of tuberculosis, Note 23 demands an examination of the glands, bones, lungs, and will also entail careful examination of all the bones of the body.

These are some of the demands stated explicitly in the schedule; and unless the schedule is filled up by conscientious examination and not by guess-work, it is obviously valueless.

You suggest that much of the examination can be done by the school nurse or teacher. It is true that a few minor things might be done by such an official, but it must be noted that if the medical inspector has to vouch for their correctness, he must confirm them all personally. The first six items, and partly 7 and 8, might be left to lay persons, and if this were done at most a couple of minutes of the medical inspector's time would be saved; but none of the remaining sixteen numbers could be answered by any but a medical practitioner.

Apologizing for troubling you with so long a letter on my own behalf,—I am, yours faithfully,

K. GROSSMANN, Hon. Sec.

The Chairman, Lancashire Elementary
Education Subcommittee.

At the meeting of the Combined Divisions on April 10th the Secretary's letter was unanimously approved, and the correspondence ordered to be published after Mr. Cockshott's sanction had been obtained.—I am, etc.,

K. GROSSMANN,
Honorary Secretary, Combined Liverpool and
Liverpool, May 4th. Birkenhead Divisions.

THE BACTERIOLOGY OF DIPHTHERIA.

SIR,—In your review of *The Bacteriology of Diphtheria* your reviewer states that my contribution to this volume is one "which the reader might assume is intended to be representative of current medical opinion." In justice to the editors of the above work he should have quoted or referred to the following remarks with which I concluded a summary of the hypothesis to which he objects:

The working hypothesis given above is unproved. It may not be supported by further investigation. It is possible that dry periods favour epidemic diphtheria otherwise than I suggested in the preceding remarks written in 1897. They may act by increasing the invasion of the mucous membranes of a large portion of the population by auxiliary organisms which favour the pathogenic action of the Klebs-Loeffler bacillus; or some other explanation may be forthcoming. But the fact out of which these theories grow remains. Diphtheria prevails epidemically on a large scale only during dry periods of years; and the same relationship between these two phenomena exists as was previously shown by Dr. Longstaff to hold good for erysipelas, scarlet fever, etc. Minor differences, however, are shown, the occurrence of a pandemic of diphtheria appearing to necessitate a more protracted continuance of deficient rainfall than is required to favour the epidemic prevalence of the other diseases named above.

The matter may be left as I left it above, until further investigation which I indicated as necessary throws light on the true nature of the close association between pandemic diphtheria and periods of deficient rainfall.—Yours, etc.,

London, May 3rd. ARTHUR NEWSHOLME.

PAYMENTS TO MEDICAL PRACTITIONERS SUMMONED TO ASSIST CERTIFIED MIDWIVES.

SIR,—With reference to the letter of Dr. Ward Cousins which appeared in the JOURNAL of April 11th, p. 899, I had just previous thereto raised the question for consideration by the Wolverhampton guardians, and, as I consider the matter important, herewith append a copy of the correspondence.—I am, etc.,

HENRY J. DEAN, L.R.C.P., L.R.C.S., etc.,
Willenhall, April 29th.

[Copy.]
Willenhall, April 9th, 1908.

Dear Sir,—With reference to the circular letter of the L.G.B. to clerks to guardians dated July 29th, 1907, and issued from the Privy Council Office, 1908, and especially to the third paragraph of the circular, I shall be glad if you will kindly inform me whether your Board is prepared to pay the fees of medical men, other than the district medical officers, who may be requested to come to the assistance of registered midwives in cases of abortion, illness of patient or child, or any abnormality occurring during pregnancy, labour, or lying-in, as I have already had several such cases in which an insufficient fee has been paid.—I am, etc.,

HENRY J. DEAN.

Frank Harrison, Esq.,
Clerk to Guardians, Wolverhampton.

[Copy.]
Union Offices, Wolverhampton.
April 21st, 1908.

Dear Sir,—I duly received your letter of the 9th instant, which I submitted to the guardians, and am directed to inform you that their present arrangements do not provide for the payment of a fee to medical practitioners (other than their district medical officers in Wolverhampton) whose services are requested by a midwife under the provisions of the Midwives Act, 1902.—Yours truly,

FRANK HARRISON,
H. J. Dean, Esq., L.R.C.P., etc. Clerk to Guardians.

[Copy.]
Willenhall, April 29th, 1908.

Dear Sir,—I beg to thank you for your letter dated April 21st, and to say that, having regard to the decision of the guardians, I shall in future consider myself free to decline to go to the assistance of any midwife, unless my fee is paid in full at the time application is made.—I am, etc.,

HENRY J. DEAN.

Frank Harrison, Esq.,
Clerk to the Guardians, Wolverhampton.

HOSPITALS AND MEDICAL CHARITY.

SIR,—"Bristolian" makes two big blunders in one sentence. He says: "Practically all such operations are in the hands of hospital men, who place them at that figure to recompense them for their hospital practice."

I know personally of one fine surgical consulting practice—of course, and very properly, with the usual operating fees—entirely built up without a hospital appointment; also of a great medical consulting practice, similarly built up in the North. Others could no doubt furnish other instances.

As to fees, "Bristolian" probably does not grasp the fact that there is no profession in civil life on which the same onus rests as on ours of responsibility, of hard work night and day, and of the need, not merely for arduous and highly technical initial training, but for strenuous lifelong study, to keep up with an ever-growing science. It is for this that the public pay, and will have to pay. If the public like to aid the payment of hospital work to what they pay already, well and good; but they will find that that, too, will have to be adequate.

The real inner meaning of "Bristolian's" letter makes his third blunder. He thinks the medical profession can be further sweated. He will do well to consider its rapidly-growing protective organizations. Does he think he could also sweat the legal profession?

I would commend "Bristolian's" letter to the attention of our protective organizations, and would suggest that the question of suitable payment of hospital work should be thought out in preparation for future contingencies.—I am, etc.,

Exeter, May 4th. W. GORDON.

INVERSION OF THE UTERUS.

SIR,—My attention has been called to Dr. McInerney's letter in the BRITISH MEDICAL JOURNAL of the 25th ultimo.

In this letter he states that the Rotunda Hospital teaches its students that the best and safest course in the third stage of labour is to wait for ten or fifteen minutes before expressing the placenta.

"Rational Treatment" in this week's issue expresses his amazement at this. I am not surprised. Credé learned in the Rotunda Hospital that the uterus should express the placenta without extraneous aid. This is its teaching still. *Rotunda Hospital Practical Midwifery*, p. 64, sets forth: "The uterus may expel the placenta at once after the birth of the child in five, ten, thirty, or more minutes. If it has not done so within an hour, the case is from a practical point of view abnormal."

"Rational Treatment's" amazement has doubtless been shared by such past students of this institution as have seen the statement referred to. Its inaccuracy is inexcusable in that it might have been easily avoided by a reference to some of our authoritative publications.—I am, etc.,

E. HASTINGS TWEEDY.
Dublin, May 2nd. Master, Rotunda Hospital.

THE CIRCULATION CLUB, EDINBURGH.

SIR,—In the interesting and sympathetic appreciation of the late Dr. Underhill of Edinburgh which appeared in the BRITISH MEDICAL JOURNAL of May 2nd, the writer, in referring to Dr. Underhill having been President of the Edinburgh Harveian Society, states that that Society was originally known as the Circulation Club. This, I think, is not quite correct, although the error, from an association of ideas, is a very natural one.

The Circulation Club—like, I believe, the Æsculapian Club—was founded by Dr. Andrew Duncan, senior, whose memory, as also that of his son, is still green among Edinburgh men who take an interest in the history of their profession in that city. The Circulation Club derived its name from the circulation of manuscripts (!) among its members, not from any connexion with the circulation of the blood. This fact, as also the information that the Circulation Club was merged in the Æsculapian Club, not in the Harveian Society, I give on the authority of the late Dr. Peel Ritchie, a reliable source for such information, and conveyed to me in letters written in 1899.—I am, etc.,

London, W., May 3rd. ALEXANDER MORISON.

THE ADMISSION OF WOMEN TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE have received a further letter, dated May 2nd, from Dr. W. G. Dickinson, Secretary of the Society of Members of the Royal College of Surgeons of England, in the course of which he says:

> "Our complaint against the College Council is that they implied on their polling card that they had no alternative but to proceed under" the Medical Act (Qualifications, 1876).

The alternative to which Dr. Dickinson now points is that the Council should apply for a new charter.

We feel bound to point out that there is an obvious discrepancy between this ground of complaint and that expressed in the concluding sentence of Dr. Dickinson's letter published in the JOURNAL of April 25th, p. 1021—namely, that "the Council on their polling card . . . suppressed the fact that there is no legal difficulty in admitting [women] under the Charters on an equality with men, and 'with full collegiate rights.'" We regret that our columns should have been used to give currency to an allegation which, on Dr. Dickinson's own showing, was not only misleading, but positively erroneous.

Medico-Legal.

A CONTAMINATED WATER SUPPLY.

THE action between Dr. J. C. Fergusson and the Malvern District Council reached the Court of Appeal on May 4th, and the proceedings ended in the judgement given in favour of Dr. Fergusson in the Lower Court being set aside, the appeal of the District Council being allowed with costs. At the hearing before Mr. Justice Lawrance, a special jury awarded Dr. Fergusson £7,500 damages and costs, his claim being that the local authorities had permitted sewage to contaminate water which he used for his hydropathic establishment, with the result that a number of cases of typhoid fever occurred amongst its inhabitants, and that he had to pay heavy compensation in respect of them. In the Appeal Court it was argued that on the findings of the jury Mr. Justice Lawrance ought to have entered judgement for the defendants. The water which caused the damage came from a well, and one of the questions left to the jury was whether the plaintiff had any proprietary right in the water flowing from this well into his tanks. The answer the jury gave was, "No." Another question was, "Had the plaintiff any licence to use the waters from the owners, who were the defendants?" The answer to this question was also, "No," and it was argued that in view of these two answers no action could be maintained against the defendants. On the other side, it was urged that the defendants had been rightly held responsible, because it was shown that the water in the well in question had been contaminated by percolage of sewage which could have been prevented by the defendants. On the conclusion of the arguments on either side, the Appeal Court held unanimously that the defendants were entitled to judgement on the ground that a man who took without licence water belonging to another had no right of action against that other, even if it were contaminated by sewage, or rendered unfit for domestic purposes from any cause whatever. The appeal of the District Council was therefore allowed with costs.

THE RIGHT TO A NAME.

A CASE is reported in the *Author* for May which, in view of the improper use sometimes made of names of medical men, seems worthy of note. There were several points in the case, but the only one that we need mention was as to the *nom de plume* of the plaintiff, Mrs. Lauda. She contributed a column or supplement to a periodical under the name of "Aunt Naomi"; the proprietor dispensed with her services, but continued to use the words "Conducted by Aunt Naomi" on cards after her dismissal. The case was heard before Mr. Justice Eve, who held that the *nom de plume* belonged to the plaintiff, it constituted part of her stock-in-trade as a writer, and it became identified with her name. His lordship said: "I am not dealing here with an alleged misuse of Mrs. Lauda's name as a private individual, but as an authoress and journalist. The name in such a connexion constitutes part of the owner's stock-in-trade, and its use without her authority may inflict grievous harm and result in pecuniary loss." He added that the plaintiff was entitled to a declaration against the defendant that "the right to print, publish, and use the *nom de plume* 'Aunt Naomi' for all purposes belongs to the plaintiff."

FEES FOR ATTENDING CONSULTATIONS.

RECENTLY the county court judge for North Lancashire heard a case in which Dr. R. H. Beardsley sued a lady for the sum of £80 17s. 6d. for medical attendance and medicines supplied. The plaintiff stated that he had charged for ordinary visits 10s., and for consultations 1 guinea *plus* the ordinary charge of 10s. It appeared further that the defendant had stipulated that the plaintiff should be at her house at 10.30 each morning. His Honour, in giving judgement, said he considered from the evidence given before him—indeed, there was no evidence to the contrary—that 10s. a visit was a proper charge to make for a person residing in a house like Holme Island, which was a mile and three-quarters from plaintiff's surgery, especially when it was taken into account also that plaintiff was inconvenienced in not being allowed to visit the patient at any time. He did not consider that the degrees (L.R.C.P. and S.Ed., L.F.P.S.G.) held by Dr. Beardsley entitled him to charge for medicines, and that part of the claim must come out. He accepted the evidence of Dr. Carmichael that the proper charge for a doctor to make for consultation with a physician was double the ordinary fee, which in this case was 20s. He therefore deducted from the account the amount charged for drugs and the excess charged for consultations, together amounting to £11 14s. 3d. As to £5 5s., the defendant having pleaded the Statute of Limitations, that had to go, making a total of £16 19s. 3d. to be deducted from the claim, leaving a balance due to plaintiff of £63 18s. 6d. He considered that £50 had already been paid, and was now in the possession of plaintiff's solicitor. He therefore gave judgement for £13 18s. 6d., with costs upon the higher or B scale, including costs of witnesses.

PARTNERSHIP ARRANGEMENTS.

PARTICEPS writes that he has been approached about taking a third share in a partnership, but does not care to be tied to a third all his life. He also possesses a valuable collection of instruments and books, and wishes to know if these would belong to the partnership.

*** It is usual to stipulate for an increased share after a certain time, to be paid for at an agreed price. Our correspondent's books and instruments would remain his private property unless purchased by the firm.

ASSISTANT LEAVING WITHOUT NOTICE.

T. B. writes that his assistant abruptly left him when ill in bed, without giving any notice. The assistant is now claiming a fortnight's salary due to him. Has he a legal claim to this, and can the principal claim against the assistant for leaving without notice?

*** We are advised that, as leaving without notice is misconduct on the part of the assistant, he could not claim to be paid the salary due to him at the time. The principal might also recover from the assistant damages for loss sustained in consequence of the latter's misconduct.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE following dates of examinations have been announced:

Examinations for the Degree of Bachelor of Medicine:—Thursday, June 18th, to Friday, June 26th. Names to be sent in by 10.30 a.m. on Tuesday, June 2nd.

Examination for the Degree of Master in Surgery:—Thursday, June 25th, et seq. Names to be sent in by 10.30 a.m. on Friday, June 5th.

Examination in Preventive Medicine:—Tuesday, November 17th, Part I. Wednesday, November 18th, Friday, November 20th, Part II. Names to be sent in by 10.30 a.m. on Tuesday, October 27th.

Natural Science Scholarships.

Scholarships in Natural Science are announced at Balliol and Brasenose Colleges. The examination will commence no Tuesday, June 30th.

UNIVERSITY OF CAMBRIDGE.

NEW schedules in Chemistry and Physics have been issued by the Special Board for Medicine which will come into force at the Christmas examination, 1908.

The following degree was conferred on May 1st:

B.C.—C. B. Ticehurst, Joh.

UNIVERSITY OF LONDON.

SPECIAL LECTURES.

THE course of eight lectures to be given by Dr. Leonard Hill and Mr. Martin Flack at the London Hospital Medical College, on some aspects of the physiology of the heart and circulation, will begin at 4.30 p.m. on May 12th, and not as previously announced.

VICTORIA UNIVERSITY OF MANCHESTER.

THE CHAIRS OF MEDICINE.

THE Council of the University having decided on the appointment of a second Professor in the Department of Medicine, one of the Chairs will be devoted to Clinical Medicine and the other to Systematic Medicine. Dr. Graham Steele, now Professor of Medicine in the University and Senior Physician in the Royal Infirmary, will hold the Chair of Clinical Medicine, and Dr. George R. Murray, who until recently held the Heath Professorship of Comparative Pathology in the Durham University, has been appointed Professor of Systematic Medicine. Under the agreement entered into between the University and the Royal Infirmary, Dr. Murray becomes on his appointment a member of the honorary staff of the Royal Infirmary. It is expected that he will undertake the duties of the Chair in the University at the beginning of the next session and at the Infirmary when the new buildings are opened.

ROYAL UNIVERSITY OF IRELAND.

THE usual *Supplement to the University Calendar*, containing the examination papers for 1907, has been issued, and can be obtained at the University Press (Ponsonby and Gibbs).

The following candidates have been approved at the examinations indicated:

THIRD M.B., CH.B., B.A.O.—*†G. Cooper. †W. Hamilton, B.A.; †A. V. J. Harrison, *†M. C. Irwin, †D. Lynch, *†J. M. McCloy, †J. P. J. McGivern, *†W. Mooney, B.A.; *†C. J. Simpson, *†W. W. D. Thomson, B.A. W. Boyd, F. J. Burke, J. Byrne, P. J. Campbell, J. B. Crawford, P. J. Cullinane, J. J. Dennehy, M. G. Devine, E. Doherty, G. S. Glass, B.A.; W. E. Graham, J. L. Jackson, S. P. Kerrigan, B. C. Letts, B. McCullough, B.A.; T. P. McMurray, H. D. Manderson, M. Moloney, H. C. Mulholland, W. M. J. O'Connor, J. O'Sullivan, W. Prendiville, A. H. Rentoul, T. W. Ruttledge, G. Sheridan, R. A. Smith, B. Teeger, R. W. Vint, E. F. Ward, T. Woulfe

* Upper pass. † Qualified to sit for honours.

FINAL M.B., CH.B., B.A.O.—*D. Barry, *A. R. Boyd, *T. A. Carson, †J. K. P. Clarke, *T. J. Hollins, B.A., *M. F. Huston, *J. G. Johnston, *A. H. Joy, *R. G. Kevin, *T. P. Linehan, †G. H. Martin, T. Arnold, R. N. Berman, W. Bradbury, T. G. Buchanan, R. J. Clarke, Mary Cowhy, B.A., E. H. Flanigan, W. S. Graham, H. J. Grant, P. J. Grogan, R. G. C. M. Kinkead, R. J. Ledlie, S. Levy, J. C. Macaulay, J. McCausland, B.A., M. McNiff, J. F. Neary, J. F. O'Brien, M. Waldron, G. P. White, M. White

M.D.—J. G. Campbell, W. H. Davis, J. P. Dee, D. J. Keane, T. D. Luke, W. Rice, J. Thompson.

* Upper Pass and entitled to sit for honours in one or other subject of the examination.

† Upper Pass.

UNIVERSITY OF DUBLIN.

THE following degrees were among those conferred at the summer commencements on April 29th:

M.B., CH.B., B.A.O.—T. P. Dowley, L. V. Hunt, W. S. Thacker.

M.D.—E. C. Crawford.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary quarterly comitia was held at the College on Thursday, April 30th, the President, Sir R. Douglas Powell, in the chair.

On the motion of the President, it was unanimously resolved that a message be sent to the Royal College of Physicians of Edinburgh expressing the sympathy of the sister College with it in the loss it has sustained in the death of its President, Dr. Charles E. Underhill.

Membership.

The following gentlemen were admitted Members of the College: Robert Alexander Chisolm, M.A., M.B.Oxon.; James Clark, M.D.Aberd.; Thomas Bogie Hamilton, M.B.Edin.; Eardley Lancelot Holland, M.D.Lond., L.R.C.P.; James Mackenzie, M.D.Edin.; Alexander Manuel, M.B.Lond., L.R.C.P.; Richard John Morris, M.D.Durh., L.R.C.P.; John Norman Walker, Capt. I.M.S., L.R.C.P.

Licences.

In conjunction with the Royal College of Surgeons, the Licence of the College was granted to 105 gentlemen.

Murchison Scholarship.

A report was received from the examiners, and the scholarship awarded to Edward Leslie Martyn Lobb, a student of Guy's Hospital.

On a motion moved and seconded by the examiners, Drs. Sharkey and Hale White, it was resolved that a committe be appointed to consider by what means the competition for the Murchison Scholarship may be increased.

Drs. Hawkins, Ormerod, Lauriston Shaw, Sharkey, and Hale White were appointed a committee to consider the matter and report to the college.

Fellowship.

On the nomination of the council, the following gentlemen were elected Fellows of the College: Robert Charles Brown, M.B.Lond.; George Ogilvie, M.B.Edin.; Charles Henry Cattle, M.D.Lond.; John Elliott, M.D.Lond.; Guthrie Rankin, M.D.Glasg.; Theodore Fisher, M.D.Lond.; Robert James McLean Buchanan, M.D.Vict.; Arthur Francis Stabb, M.B.Cantab.; William Henry Butter Stoddart, M.D.Lond.; Arthur Latham Ormerod, M.D.Oxon.; Walter Langdon Brown, M.D.Cantab.; Alfred Ernest Russell, M.D.Lond.; Reginald Cecil Bligh Wall, M.D.Oxon.; Thomas Wardrop Griffith, M.D.Aberd.; Leonard Stanley Dudgeon.

Communications.

The following communications were received:

1. From the Secretary of the Royal College of Surgeons, reporting proceedings of their council on April 9th.

2. From the Secretary of the Royal College of Surgeons in Ireland, thanking the college for their letter and resolution of March 20th.

3. From the Registrar of the University of Wales (New Faculty of Medicine), inviting the college to appoint a Representative to serve as a member of the Medical Board. The invitation was accepted, and it was left to the President to appoint a Representative at a future comitia.

4. From the Secretary of the Society of Arts, giving notice of the award of the Swiney Prize, jointly by the society and the college, in January next, for the best published work on medical jurisprudence.

5. From the Board of Trade (Marine Department), thanking the college for their report on beri-beri.

Reports.

The following reports were received:

1. From the Committee of Management, dated March 16th, reporting that the Visitor to the Examinations of the Egyptian Medical School for the year 1907, Mr. Edmund Owen, had duly presented his report, and that, in accordance with the conditions laid down by the Royal Colleges in July, 1905, they had addressed a communication to the Education Department in Egypt in reference to various matters dealt with in the Visitor's report.

The report was adopted.

2. From the Pharmacopoeia Committee suggesting numerous alterations in the forthcoming new edition of the *Pharmacopoeia*.

After a prolonged discussion, in which Drs. Frederick Taylor, Gamgee, Theodore Williams, Hale White, Nestor Tirard, Ewart, and Sir Dyce Duckworth took part, the report was adopted, subject to one or two slight corrections.

The remaining business before the college was postponed until the next comitia.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

GENERAL MEETING.

A MEETING of the college will be held on Saturday, May 30th, at 1 o'clock, to receive the annual report of the council.

Election of Officers.

A meeting of the college will also be held on Monday, June 1st, at 1 o'clock, pursuant to the provisions of the charters, to elect a president, vice-president, council, and secretary of the college for the ensuing year.

CONJOINT BOARD IN IRELAND.

SECOND PROFESSIONAL EXAMINATION (April, 1908).—The following candidates have been approved at the examination indicated:

*F. W. Warren, *A. A. Russo, *T. M. Thomson, R. J. Barlee, J. Brereton Barry, D. F. Curran, C. A. Farrell, E. E. Holden, J. T. Hill, A. Kennedy, L. A. Moran, T. J. McDonnell, P. J. O'Reilly.

* Honours.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

BUILDING ON TIPPED REFUSE.

C. J. R.—Section 25 of the Public Health Acts Amendment Act, 1890 (an adoptive Act), provides that "It shall not be lawful to erect a new building on any ground which has been filled up with any matter impregnated with faecal, animal, or vegetable matter, or upon which any such matter has been deposited, unless and until such matter shall have been properly removed by excavation or otherwise, or shall have been rendered or have become innocuous." A very similar requirement is to be found in By-law 9 of the model series of building by-laws of the Local Government Board. Burdon-Sanderson and E. A. Parkes, in a report upon the sanitary condition of Liverpool, stated that experiments having for their object to ascertain what effect lapse of time had upon organic and other matters used to fill up inequalities in the ground, showed that the process of decay in the case of all the most easily destructible matters was completed in about three years. The length of time before a refuse tip would become usable depends upon many diverse conditions. If, for example, there were any quantity of soil, teeming with bacterial life, mixed with the refuse the period of disintegration would be short. On the other hand, if, as is usually the case, the refuse consisted of vegetable matter and burnt, therefore sterile, ashes the tip would not become innocuous for a long time.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended March 28th and April 4th the deaths from plague in India numbered 6,859 and 9,015 respectively. The sudden increase is more apparent than real, as during the latter week the returns include a fortnight's plague mortality for Bengal instead of a week only.

The mortality occurred as follows: Bombay Presidency, 1,486 and 1,561; Bengal, 2,601 (two weeks); United Provinces, 1,734 and 1,290; Punjab, 2,379 and 2,545; Rajputana, 671 and 583; Central Provinces, 205 and 175; Central India, 21 and 15; Madras Presidency, 80 and 73; Mysore, 98 and 64; Burmah, 156 and 108. During the week ended March 28th, 2 deaths were reported from Kashmir, 7 from the North-West Frontier Province, and 10 from Hyderabad State.

GOLD COAST.

During the weeks ended April 11th, 18th, and 25th the deaths from plague on the Gold Coast numbered 3, 0, and 0. During the week ended April 11th, of the 3 deaths reported, 2 occurred at Accra and 1 at Dodowah.

HONG KONG.

During the week ended April 25th, 29 fresh cases of plague occurred in Hong Kong, with 26 deaths from the disease. The announcement of the recrudescence of plague in Hong Kong for 1908 comes at the usual time of the year at which the disease has appeared during the past fourteen years.

OBITUARY.

HENRY J. PRANGLEY, M.R.C.S., L.R.C.P.,

ANERLEY.

ON April 24th, at an early hour, Dr. Henry J. Prangley gently passed away at his residence, Tudor House, Anerley. He had suffered intermittently for the past year or two, but no one was prepared for the event or suspected its approach. The suddenness of his death has intensified the grief which prevails in the neighbourhood, where he was so justly popular. The cause of his death was atheroma of the coronary arteries with its attendant angina pectoris, and finally heart failure.

Henry John Prangley was born on September 14th, 1857, at Haytesbury, Wilts, where his father practised as a solicitor. His schooldays were spent at St. Nicholas College, Hurstpierpoint. He commenced his medical education with Dr. Willis, of Monmouth, with whom he remained as pupil for two years. He continued his studies at St. Thomas's Hospital, and afterwards became House-Physician to the City of London Hospital for Diseases of the Chest. He played regularly in St. Thomas's football fifteen, and was one of the fifteen which won the Inter-hospital Cup in 1878. At the time of his death he was Honorary Surgeon to the Crystal Palace Football Club.

In July, 1883, the post of Medical Officer to the North Surrey District Schools at Anerley was vacant, and Prangley applied for it. At the time he was only 25 years of age. The early evidence of his professional ability and merit, in the opinion of those most competent to judge, may be found in the fact that his application was supported by nearly every member of the staff of each of the hospitals above mentioned. Their united testimony was such that Prangley was selected out of 70 other candidates for the post, which he continued to hold for the rest of his life. In 1904 he was appointed, by the then School Board for London, Medical Officer to the Anerley Residential Schools for Deaf Boys. At the time of his death he had held for several years the appointment of Medical Officer of Health to the District Council.

He was for fifteen years Honorary Secretary of the East Surrey Division of the British Medical Association, and afterwards of the Norwood Division, which post he only vacated last year, and always took the keenest interest in all the doings of the Association. During his twenty-five years at Anerley his practice grew to be very large. He realized the promise of the early years, and never relaxed the thoroughness which had marked his studies and work in the beginning. A determination to master his subject, the concentration of all his faculties towards the achievement of his purpose characterized the man in everything he put his hand to, and dominated him in his professional work. Every detail must be worked out; nothing, however small, which he himself could usefully provide for must be left to others or to chance. To that end no trouble and thought were too great, no means too trivial. He had a high conception of professional duty. It may truly be written that to him his work was as a religion he professed: its demands were imperious, its obligations inviolable. To the end he sustained that faith; his sufferings in his last years failed to shake it or to tone down its exactions or to excuse away the need of obedience to it.

His social qualities secured for him the goodwill of all in the locality. No one could know him for long and remain a bare acquaintance. Affection followed knowledge, so that in the case of his patients they regarded him not merely as their doctor but as a faithful friend. Such he was to them, and such he became to every one who had the opportunity of associating with him. Their attachments to him endured because his kindliness and sympathy were the outcome of a disposition wide in its generosity, strong in its affection, absolute in its sincerity. To-day, through recognition of these qualities, a whole neighbourhood is joined in mourning his untimely end.

The funeral service was held on April 29th at St. Paul's Church, Upper Norwood. The streets from his house were lined with people, while most of those who filled the church after the service there, accompanied on foot the hearse and funeral carriages on the way to Elmer's End Cemetery. There a still large gathering, composed of all

classes, from all parts of the neighbourhood and many from great distances, had collected to greet with honour his remains. The public and local authorities and bodies, the medical profession, the Freemasons and his own lodges, were largely represented at both church and cemetery. The interment at Elmer's End took place in radiant sunshine, in a very garden of flowers, which the love of his friends had provided. At the conclusion of the usual service, the customary rites of the Order of Freemasons were duly performed. He was a Past Master of the Anerley Lodge, and was Master of the Cheseldon Lodge, London; and P.Z. of the Anerley and Cheseldon Chapters.

Dr. Prangley married in 1895 the youngest daughter of Mr. C. W. Dommett, solicitor of Anerley, and Mrs. Prangley in her bereavement has the sympathy of all who knew her husband.

PROFESSOR V. CORNIL, M.D.,

PARIS.

THE death of Professor Cornil, already announced in the JOURNAL, speedily followed the resignation of the Chair of Pathology which he held for many years. He died of tuberculosis at Mentone, and up to the very end, even when confined to his bed, he was at work on a book. His whole life was given to work. Born in 1837, he gained in due course the post of *interne*, and took his degree. Almost immediately afterwards he founded, in conjunction with Ranvier, a laboratory of histology, where the work was done which made their names famous throughout the world. In 1869 Cornil became *professeur agrégé*, and in 1870 Physician to the Bureau Central. In 1882 he was appointed to the Chair of Morbid Anatomy. For the first time in France a practical system of *post-mortem* teaching was established at the Hôtel-Dieu under his direction. Among his works the principal are the well-known *Manuel d'histologie normale et pathologique*, written in collaboration with Ranvier; a book entitled *Etude Anatomo pathologique et clinique sur la phtisie pulmonaire*, in conjunction with Hérard, whose pupil he had been, and who, it is interesting to note, was, notwithstanding his 89 years, at the church behind the coffin. Cornil also wrote on nephritis, epithelial tumours, cancer, melanosis, syphilis; on bacteria in conjunction with Babès; and on the pneumo-enteritis of pigs in conjunction with Chantemesse. He made experimental researches on the cicatrization and regeneration of mucous membranes, and on the generation of osseous and medullary tissues, and many other things. Cornil was beloved by his pupils, whom he was ever ready to serve. He played a considerable part in political life, and it was largely owing to his influence that the law regulating the practice of medicine was passed. He was also instrumental in the passage of many other measures concerning the public health.

Cornil was elected a Member of the Académie de Médecine in 1884, and was President of the Société Anatomique.

PROFESSOR F. TERRIER,

PARIS.

PROFESSOR TERRIER, whose death was recently announced in the JOURNAL, was born in 1837, and, after a distinguished career as a student, took his doctor's degree in 1870, the subject of his thesis being external oesophagotomy. He became *professeur agrégé* in 1872, and was appointed surgeon to the Paris hospitals in 1873. In 1894 he was appointed professor of operative surgery. He won for himself a world-wide reputation as a surgeon, especially in the domain of abdominal surgery. He was also a pathologist and the author of a manual of surgical pathology. He wrote much on surgical diseases of the liver, on cirsoid aneurysm, on intermittent hydronephrosis, and other subjects. He was the author of a manual of antisepsis and asepsis; a manual of surgical anaesthesia; and monographs on trephining, on the surgery of the heart and pericardium, etc.

He was a man whose mind was to the last open to progress in surgical thought and methods, and he gave his whole life to his profession. He was a pioneer of antisepsis in France and later took the lead in introducing aseptic methods. He also in his service at the Bicbat Hospital furnished a model for the other hospitals. To him is due the development of nursing homes for patients who have to undergo operations.

He was elected a Member of the Académie de Médecine in 1890 and was named a Commander of the Legion of Honour last year. Although certain asperities of manner created enmities, he was a man of the most perfect integrity and straightforwardness of character and of sterling scientific honesty.

PROFESSOR BÉCHAMP, who was probably best known in this country as a critic and rival of Pasteur, died recently at the age of 92. He studied in the old faculty of Strassburg, and was successively professor of medical chemistry at Montpellier and in the Faculté Libre de Médecine of Lille. He was a zealous worker on such subjects as fermentation and diseases of the silkworm and the vine. His name is associated with bygone controversies as to priority which it would be unprofitable to recall.

WE regret to have to announce the death from heart disease of Dr. FREDERICK WILSON, which occurred at his residence, Aberdeen House, Spring Bank, Hull, on April 24th. Dr. Wilson, who was 50 years of age, had been in practice in Hull for twenty years, having succeeded the late Dr. Lowther, one of the oldest practitioners in the city. In addition to his family practice he had an extensive shipping practice, and it was whilst so engaged in attending members of the ss. *Friary*, which arrived in Hull in 1901 from Alexandria stricken with plague that he himself contracted that disease, and was the only one of nine attacked who recovered. He was treated in the Infectious Diseases Hospital for some weeks. This illness undoubtedly impaired his constitution, although after a trip to the Canary Islands he appeared to make a good recovery. A year ago he had a breakdown and was ordered away for a rest. After spending a few weeks on the west coast he returned to work with his usual regularity and energy. He was educated at the Leeds School of Medicine, afterwards proceeding to Edinburgh, where he obtained the diplomas of the Royal College of of Physicians and Surgeons. Dr. Wilson was a well-known Freemason and had held provincial honours. He was probably one of the most gifted amateur musicians in Hull, and his "musical at-homes," at which he gave great personal encouragement to rising genius, were quite a feature of the musical life of the city. He was a most regular attendant at the meetings of the British Medical Association. Dr. Wilson leaves a widow, but no family.

BRIGADE-SURGEON EDWARD HARFORD LLOYD, M.B., retired, Army Medical Service, died on May 3rd, in his 73rd year, at the Royal Naval Hospital, Chatham, suddenly, from heart failure, while on a visit to a friend. He joined the service as an Assistant Surgeon, June 13th, 1859; became Surgeon March 1st, 1873; Surgeon-Major, January 6th, 1875; and Honorary Brigade Surgeon, on retirement, May 20th, 1885. During the Nile Expedition in 1884-5 he had charge of a Field Hospital at Kaibar, receiving a medal with clasp and the Khedive's bronze star.

WITH reference to the death of Lieutenant-Colonel F. S. PECK, which we announced in our issue of April 25th, p. 1026, "One Who Knew Him Well" writes: The death of Lieutenant-Colonel F. S. Peck is a great loss not only to Calcutta, where he has done so much good work, but also to the whole Indian Medical Service. He was one of the most skilful operators and reliable diagnosticians in India, a man who abounded in sound common sense, and of a most generous and kind-hearted disposition, yet withal one who never feared to say boldly and freely exactly what he believed to be true and right, no matter if at times it might be to his own detriment. He had the very highest ideals of professional and personal conduct, and was always willing to do all that lay in his power to help any who came to him in their troubles and difficulties. The amount of gratuitous work he did will probably never be fully known to any one, but the writer has knowledge of numerous cases where he had given freely and fully of his time and skill to those whom he knew were not in a position to afford to pay him, and who are now left, with many others, to mourn the loss of a skilled surgeon, a kind and generous friend, and one who at all times inspired the respect and confidence of all those with whom he was brought in contact.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

DR. ARTHUR THOMSON (Stratford-on-Avon) asks for information as to a place in Algeria or neighbouring country where, during June and July, the range of temperature is lowest and the air dry. The condition to be treated is rheumatism and sciatica.

FAIR HAIR DYE.

FORTY wants to know of a harmless vegetable preparation. The victim is 40 and his hair is going white, though his hair generally is very fair indeed—true blonde.

ANTS IN THE LARDER.

EUCLID asks a question which has been asked before on several occasions, but to which, so far, no satisfactory answer has been returned. He wants to know how to get rid of ants which are overrunning a larder. Somebody once tried iodoform, which expelled the ants, but tainted all food for months afterwards.

PRACTICAL PATHOLOGY.

S. C. desires "suggestions upon suitable recent books for practical pathology."

*** In Delafield and Prudden's *Textbook of Pathology* (Baillière, Tindall, and Cox) there is an account of the method of making *post-mortem* examinations, and instructions are given on histological methods, and the way to preserve and mount large pieces of tissue for macroscopic demonstration, as museum specimens. Gaylord and Aschoff's *Pathological Histology* (Henry Kimpton), which is a large book beautifully illustrated, gives an excellent account of histological methods, and also contains a useful chapter on photomicrography. *La Technique histo-bactériologique moderne* (Baillière et Fils), by Lefas, is a small manual containing many useful formulae for the preparation and employment of differential stains. Jaksch's *Klinische Diagnostik innerer Krankheiten mittels baktertiologischer, chemischer und mikroskopischer Untersuchungsmethoden* (Urban and Schwarzenberg) is an exceptionally full and valuable book on the wide range of subjects indicated by the title; the sections devoted to chemical pathology will be found particularly helpful. Eyre's *Bacteriological Technique* (W. B. Saunders and Co.) is an excellent guide to the work of the bacteriological laboratory. Emery's *Clinical Bacteriology and Haematology for Practitioners* (H. K. Lewis), in addition to the bacteriological details, gives good general accounts of blood work and cyto-diagnosis.

ANSWERS.

PELAGIUS.—There is no method of which it can be said that it is always effective and never injurious. Information on the subject is contained in Dr. Herman's work on *Diseases of Women.*

IGNORAMUS.—We understand that the Fellows of the Royal College of Physicians of Edinburgh have from "time immemorial" worn distinctive robes—a black gown with crimson velvet facings. In addition, the hood of a university degree is almost always worn, most frequently that of M.D. The cap is a doctor's cap of velvet of John Knox type. Licentiates have no robes.

CALLOSITIES ON SOLES OF FEET.

T. S. D. writes: May I suggest to "Pes" that he can remove the callosities on the soles of his feet by painting them with collodion saturated with sodium salicylate. It should be applied three or four times every other day, when the hardened cuticle can be peeled off.

PURINS IN DIETS.

PURIN-FREE will find tables of the purin-N contained in the various foodstuffs in *The Purin Bodies of Foodstuffs* (Walker Hall, Manchester: Sherratt and Hughes); and in vol. iii of *Metabolism and Practical Medicine.* (London: W. Heinemann.) There are also other data to be found in the BRITISH MEDICAL JOURNAL, June 14th, 1902. In "Clinical Estimations of Gouty Urines," BRITISH MEDICAL JOURNAL, 1906, January 20th, p. 128, there is a detailed account of the methods available for the determination of the "tolerance" for purin bodies, and of the results obtained in a number of experiments.

DARWINISM.

DR. W. HALL CALVERT, of Melrose, sends us a letter, too long for publication *in extenso*, in which he reproaches us for not having reviewed more favourably Mr. Paulin's book on *Darwinism* (BRITISH MEDICAL JOURNAL, April 25th, 1908, p. 993). He complains that we do not deal with Mr. Paulin's arguments or facts, which, in his opinion, are probably new to members of the medical profession. He then proceeds to tell us that Mr. Paulin has discovered the "natural law" which prevents the undue increase of prolific animals. This law is to be found in the habit of the male parent to devour its newly-born young, a propensity not found amongst less prolific animals, such as bears. In regard to natural selection, we learn, Mr. Paulin adduces "a very able argument proving that all variations are very soon destroyed by the potent influence of marriage, which reduces all variations at once to the average, and that we have in nature not the survival of the fittest, but the survival of the average." With reference to the theory of Malthus, Dr. Calvert writes: "Paulin seems to me to demolish this doctrine absolutely. He proves that the birth-rate, following the marriage-rate, depends entirely on the state of the labour market, and is regulated only by the food supply. In other words, the population can never outrun the means of subsistence." Dr. Calvert concludes his letter by stating his opinion that Mr. Paulin "has demonstrated that the Darwinian theory is unsupported by the phenomena of nature, and has reduced it to a mere hypothesis devoid of scientific data on which to rest."

*** We see no reason to modify the opinion expressed in our review. The propensity of animals to devour their young is well known to every schoolboy who keeps rabbits, and we are unable to agree with Dr. Calvert that Mr. Paulin's observations and theories ought to have received more detailed consideration at our hands. The number of semi-popular writers on scientific subjects is legion; it is impossible for us to swamp our review columns with lengthy discussions of their opinions, and we did not feel called upon to make an exception in Mr. Paulin's favour.

LETTERS, NOTES, Etc.

CHROMIC ACID IN PRURITUS ANI, ETC.

DR. WM. ROBERTSON (Natal) writes: In the case of a patient, W. R. R., aged 23, a vigorous young adult, free from any dyscrasia, but complaining of great discomfort from bromidrosis (sweating feet), I recommended that he should rub and massage his feet, toes, etc., with plenty of a solution of chromic acid, 1 per cent., night and morning. The case was a severe one, aggravated by tight boots, which bunched up his toes into a ball. The skin of the toes was thin, sodden, pale, and tender, whilst cracks were plentiful at the flexures. Suitable boots and the use of the solution once or twice rapidly effected a cure. While under treatment he complained of itching at the anus. I found two cracks round the anus and the cuticle slightly swollen, moist, and pale. The itching was severe and prevented sleep. Local application of the chromic solution here also was followed by the most satisfactory result. In two days the itching was gone, and the parts appeared braced up, and nature's [illegible] precautions were insisted on, such as ablutions [illegible]

AUSTRALASIA AND THE SONS OF PROFESSIONAL MEN.

THE President of the Immigration League of Australasia, Richard Arthur, M.D., writes that the executive committee of the league is prepared to give information about Australia and New Zealand to farmers desirous of sending their boys to become farmers in Australasia, and communications addressed to him at Bull's Chambers, Moore Street, Sydney, Australia, will receive attention. Dr. Arthur adds that three courses are open to a lad who has decided to make Australia his home:

1. That he should enter as a student at one of the Government agricultural colleges, where, for about £30 a year, he will receive a thorough training in scientific and practical farming. The sum quoted includes board and lodging, both of which I can guarantee to be excellent—quite as good as, if not better than, that provided at any English public schools. At the end of his two years' course there he could take up land for himself, or spend another year in gaining experience with a practical farmer before launching out for himself.

2. He could be placed, as far as New South Wales is concerned, with a farmer holding high qualifications as a teacher of agriculture, who for £12 a year and his labour would give him a training almost as good as that he could obtain at a college. I am again prepared to guarantee that any lads entrusted to this man would be properly looked after and instructed.

3. The third alternative is that he could go to a Government farm for three months and receive, free of cost, instruction in milking, ploughing, and the care of horses, pigs, etc. At the end of this time his services would be of sufficient value to enable him to be placed with a respectable farmer who would pay him about 10s. a week and his board, and would increase his wages gradually to 15s. or 20s. After an apprenticeship of this kind for a year or two he would be fitted to start on his own account.

HEREDITY IN CANCER.

MR. W. ROGER WILLIAMS (Clifton Downs, Bristol) writes to express surprise that when an inquiry was undertaken at the Middlesex Hospital (*Archives of the Middlesex Hospital*, 1904, vol. ii, pp 104 and 127; also ibid., vol. v, p. 103) as to the influence of heredity in cases of cancer, in which Professor Karl Pearson was invited to exercise his biometric skill, the result showed that the proportion of cancerous relatives amounted only to 8.36 per cent. of 1,000 breast cancer patients interrogated. Mr. Roger Williams points out that the proportion of women with cancer of the breast, among whose relatives there was a history of cancer, has been estimated by Butlin at about 37 per cent., by Nunn at 29 3 per cent., by himself at 24 2 per cent., and by Leaf at 23 per cent. He thinks that whenever inquiries of this kind are made in a careful and systematic manner, the proportion of relatives affected will always be found to vary within these limits or in close approximation thereto.

THE LOCAL TREATMENT OF DIPHTHERIA.

M.D., M.R.C.S., writes: Before the discovery and use of antitoxin I always treated cases of diphtheria, ulcerated throat, and similar affections by the application of powdered sulphur, and the use of a carbolic gargle, and in the past by a spray of diluted sulphurous acid. Very commonly I fumigated the room with burning sulphur. The treatment was very generally successful, and I see no reason why such local treatment should be omitted even if antitoxin be administered in genuine cases of diphtheria. Insufflations of sulphur can be very easily administered, and there can be no question that the remedy is effective. It is, at the same time, perfectly harmless. Others have used it, and written about it, and here I merely give my experience.

QUACK ADVERTISEMENTS.

A CORRESPONDENT amused himself one Sunday lately by cutting out from an issue of a local newspaper all the quack advertisements he could find. In that issue there were eighteen altogether, fifteen being advertisements of proprietary drugs, or so-called patent medicines. Two were for kidney diseases, two for skin diseases, two for gout or rheumatism, three for piles, two for blood disorders, three for nervous diseases, and one was a "lightning" cough cure. There was one advertisement of a tooth powder, one of an optician who sold also an antirheumatic ring, and one of an itinerant curer of diseases of the eye and ear without operation. Our correspondent thinks comment unnecessary, but his collection may perhaps indicate one difficulty which will probably stand in the way of any reform in the law.

AN APPEAL TO BACTERIA.

A STORY good enough to be worth repeating, although, of course, we cannot guarantee its accuracy, was not long ago sent from America by Dalziel's news agency. It is to the effect that at the end of March two students of the Baltimore Medical College challenged the local Christian Scientists to a test of their respective methods of curing disease. The challengers suggested that they and two Christian Scientists, after being proved by medical examination to be thoroughly sound, should be subjected to equal inoculations of some deadly bacilli. "We are perfectly willing," they stated, "to allow ourselves to be inoculated with a pure tested culture of *Streptococcus pyogenes*, provided any two followers of the faith do the same. We are to rely on medical treatment, and our Christian Science friends upon their mode of treatment, for relief." The Christian Scientists replied that they were ready to accept the challenge, provided they received medical attention and the students Christian Science treatment. This reply, whether by accident or intention, was received by the challengers on April 1st, and the readiness it expresses to waive objections to medical treatment on this occasion in return for a similar compliment to Christian Science lacks nothing in humour if much in faith.

THE INHALATION TREATMENT OF RESPIRATORY DISEASES.

DR. EDWIN ASH (London, W.) writes: The use of volatilized drugs naturally has its chief field in the treatment of diseases of the respiratory tract, and inasmuch as the physical properties of a drug existing in the form of a vapour offer no obstruction to its passage with the air into the deepest parts of the respiratory system, inhalation of vaporized antiseptics offers an efficient line of treatment in all infective conditions of the trachea, bronchi, and in some cases of the lung tissue itself. Especially is this the case where fetid secretions are adding to the discomfort of the patient and those about him. Some twenty years ago there appears to have been a movement in favour of inhalations, and many forms of small oro-nasal inhalers, most familiar to us in the pattern suggested by Yeo, came into use. No less an authority than Wilson Fox expressed himself in favour of these small inhalers and quoted excellent results in support of their use. The remarkable effect of prolonged inhalations of creosote in reducing the temperature and diminishing the fetor in cases of bronchiectasis has long been known, and a summary of the method and its results was included by me in a paper on the treatment of bronchiectasis published some months back (vide *Medical Press and Circular*, December 19th, 1906). One would have thought that the excellent results obtained in this somewhat rare disease would have led to a more extended use of creosote inhalations in the treatment of subacute and chronic catarrhs of the respiratory tract; and I think the reason this has not been the case is to be found in the fact that, whilst a specially constructed "creosote chamber" is not at the disposal of the majority of practitioners, no efficient substitute has been suggested. Now I think that an efficient substitute for these older creosote chambers is to be found in a small chamber or cabinet containing the air impregnated with the creosote vapour or other volatile antiseptic that it is required to use. I have had such a chamber constructed, measuring 3½ ft. high and 1½ ft. in width and depth, and air-tight with the exception of two openings—inlet and outlet—which are guarded by simple flap valves. The air in the chamber can be impregnated either by the slow volatilization of suitable substances from strips of thick towelling suspended from side to side, or more rapidly by warming the air in the chamber. The patient breathes the antiseptic vapour through a tube and close-fitting mouthpiece or facepiece. Further, a more rapid passage of air through the chamber, and consequently a greater concentration of antiseptic vapour in the air inhaled, can be obtained by connecting a cylinder of compressed air to the inlet opening. I have tried both this and an electrically-driven fan, and of the two I prefer the compressed air pressure. This plan of driving the air through the chamber should be found useful in cases where the slightest obstruction to respiration, such as necessarily occurs when inspiration is made through a tube, is likely to distress the patient. There is all the difference between taking a few intermittent breaths through a small poorly-charged oro-nasal inhaler apparatus, and continuously breathing—without effort—the vaporized drugs for, say, ten minutes, half an hour, or for perhaps several hours at a time.

THE TREATMENT OF COMMON COLD: A CORRECTION.

IN the reply from "T. D," published in the BRITISH MEDICAL JOURNAL of April 18th, 1908, p. 967, under this heading, "Liq. morph. mist." was incorrectly printed for *Liq. morph. mur.* (that is, hydrochlor.).

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THE

Mitchell Banks Memorial Lecture

ON THE

ANATOMY OF THE PANCREAS IN RELATION TO ITS DISEASES.

DELIVERED AT THE LIVERPOOL UNIVERSITY, NOVEMBER 27TH, 1907.

BY A. W. MAYO ROBSON, D.Sc., F.R.C.S.

INTRODUCTION.

I CANNOT but feel, Sir, the great honour which the Council of the Liverpool University has conferred on me by asking me to deliver the Mitchell Banks Memorial Lecture, which, along with the establishment of an out-patient department to the Royal Infirmary, was the means adopted by his colleagues and a large number of his fellow citizens for keeping green the memory of one whom to know was to love and with whom to have been associated as a colleague was a valuable asset in life's pilgrimage.

I had the good fortune to be associated with Mitchell Banks for some years, both on the Council of the Royal College of Surgeons of England and as a teacher and examiner in the Victoria University, but what I valued more than all was the privilege of enjoying his friendship.

In the College of Surgeons and all its functions he took a great interest, and towards the end of his last term of office he proposed and carried a motion which will be remembered as long as the College lasts, since it resulted in the Fellows and members having the right to wear a distinct academic costume. This resolution had, however, more than a merely academic interest, in that it showed Mitchell Banks's broad minded sympathy with his professional brethren in supplying a want that I know had been felt by many eminent men, who, only possessing the college diploma, frequently shirked public ceremonies because they had no right to wear a gown, thus appearing at a disadvantage when compared with their colleagues who were university graduates.

Besides being an accomplished and learned anatomist and an excellent teacher, Mitchell Banks was a skilful and scientific surgeon, who left his mark on many branches of the art and science of surgery. He was among the early pioneers in advocating and practising the radical cure of hernia; but the work with which his name must be always associated is in connexion with the radical treatment of cancer.

In a memorable address delivered in 1877 entitled, "A plea for the more free removal of cancerous growths," he plainly advocated the now universally-accepted treatment of cancer—an early, free, and wide removal with excision of the nearest lymphatic glands, whether or not they can be felt.

In selecting a subject for my address, the council was kind enough to give me a free hand; but at the same time I cannot fail to remember that the occasion is one designed specially to do honour to the memory of a distinguished surgeon and a no less distinguished anatomist. I am, therefore, taking as my subject one which I think Mitchell Banks would have approved of could he have been with us, since it is an attempt to show how the anatomy of an organ may influence its diseases, and how surgery is able to deal with them.

For some years I have been devoting much time and thought to diseases of the pancreas, which, until comparatively recently, were but little known, hardly ever recognized, and therefore seldom treated. On this account I have selected as my subject "The anatomy of the pancreas in relation to its diseases."

ANATOMY OF THE PANCREAS: HISTOLOGY.

I hope to demonstrate that from an anatomical, a physiological, a pathological, a medical, and surgical point of view, the pancreas is one of the most interesting and important organs that the medical man can be called upon to treat.

I consider that the pancreas is belittled in being called the salivary gland of the abdomen, for its structure and functions are much more complicated than those of the parotid and other salivary glands, to which it bears some resemblance. Histologically, in addition to the ordinary secreting parenchyma with its ducts, there are the peculiar structures known as the islands of Langerhans.

The parenchyma of the gland is mapped out by clefts filled by loose connective tissue into lobes 1 cm. or more across. These are further subdivided by less well-defined bands of areolar tissue into lobules, and microscopically it is found that they are again divided by well-defined septa into still smaller lobules. The connective tissue forming the septa is less compact than in the salivary glands, so that normally the pancreas is looser and softer in texture, a fact which is not sufficiently borne in mind when considering its morbid anatomy. The functions of the pancreas are now known to be much more complex than was formerly supposed, for not only does it secrete the pancreatic juice, which plays a most important part in the digestion of all food materials, but it is intimately related to the general metabolic phenomena of the body, and particularly to carbohydrate metabolism.

Pathological changes in the pancreas may originate in any of its constituent parts, and according to the structures primarily affected and the nature of the change will the effects on its anatomy and function vary. Inflammation starting in the ducts is at first of a catarrhal nature analogous to cholangitis, with which, indeed, it is frequently associated.

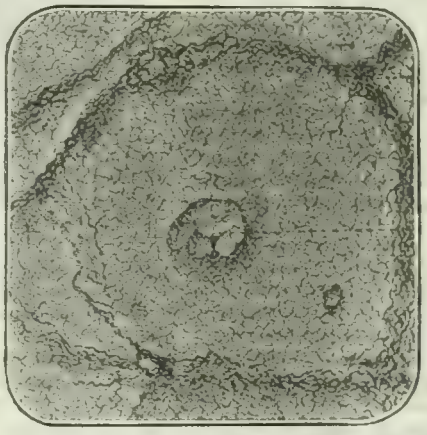


Fig. 1.—Piece digestion of a human pancreas, showing the limiting membrane of a lobule and the reticulated basement membranes of the alveoli. In the centre is an island of Langerhans with its capsule of trabeculae (Flint).

INFLAMMATORY CHANGES.

If the infective catarrhal condition is acute in character, it may go on to diffuse suppurative catarrh or to a localized suppuration ending in abscess; or, if the infection be less virulent, it may not assume the more immediately dangerous suppurative form; but a chronic inflammation may extend to the parenchyma of the gland, leading to an increase of the connective tissue, eventually resulting in a condition resembling that seen in cirrhosis of the liver. Again, an increase of fibrous tissue may occur primarily around the blood vessels as the result of changes in them or their contents and give rise to a cirrhotic condition. In some instances it is probable that, as a result of toxic substances circulating in the blood, the islands of Langerhans become first affected, as in amyloid disease of the gland. On the other hand, the acute infective parenchymatous inflammations known as acute haemorrhagic, suppurative, or gangrenous pancreatitis, give rise to the most terrible and rapidly fatal diseases that the surgeon can be called on to treat.

The following shows the classification of the various inflammatory conditions:

Catarrhal Inflammations.

(*a*) Simple catarrh, acute and chronic.
(*b*) Suppurative catarrh.
(*c*) Pancreo-lithic catarrh.

Parenchymatous Inflammations.

Acute.—(*a*) Haemorrhagic pancreatitis.
1. Ultra-acute, in which the haemorrhage precedes the inflammation, the bleeding being profuse and both within and outside the gland.
2. Acute, in which inflammation precedes the haemorrhage, which is less profuse and is distributed in patches through the gland.

(*b*) Gangrenous pancreatitis.
(*c*) Suppurative pancreatitis (diffuse suppuration).
Subacute.—Abscess of the pancreas (not diffuse suppuration).
Chronic.—(*a*) Interstitial pancreatitis.
1. Interlobular.
2. Interacinar.
(*b*) Cirrhosis of the pancreas.

THE TOPOGRAPHY OF THE ORGAN, AS AFFECTING ITS SURGERY.

The situation of the pancreas at the back of the abdomen as far from the surface as possible, affords an explanation of the difficulty of making an exact physical examination of the organ, and may be one of the reasons why until lately its diseases have received so little recognition.

The anatomical relations of the pancreas, its fixation, and its great vascularity, would render an operation for its complete extirpation extremely difficult even were it justifiable from a physiological point of view; but as its complete removal in animals is practically universally followed by fatal glycosuria, this operation can never be justifiable in the human being. The relations of the gland to the aorta and vena cava, to the coeliac plexus, the spleen, the left suprarenal body, the left kidney, the portal vein, the duodenum, the stomach and colon, and even to the uterus during pregnancy, render any attempt even at partial excision somewhat difficult; nevertheless, in the case of disease invading the distal part of the body or the tail of the pancreas, the extirpation of that portion is practicable, and may be justifiable in the case of certain cystic or solid, benign or malignant growths.



Fig. 2.—Chronic ulcer of the posterior wall of the stomach eroding the pancreas (Fenwick, London Hospital Museum).

These relations also explain the difficulty at times experienced in the diagnosis from physical signs alone of tumours of the pancreas from swellings in the various regions surrounding it, and how impossible it would be for the pancreas to be injured alone by a gunshot or stab wound. I have known it, however, to be fatally bruised by a blow in the epigastrium, and to be torn by a fall, without any other visceral injury.

Severe injuries of the pancreas not operated on terminate fatally in nearly every case, as demonstrated by von Mikulicz. Out of 45 cases of pancreatic injury collected by him, 24 were perforating, 12 were gunshot, and 9 were stab wounds. Of the gunshot injuries, 5 were operated on, 3 recovering; the 7 not operated on all died. Of the stab wounds, all were operated on and 8 out of 9 recovered. Of the 24 subcutaneous injuries, 13 were not operated on and all died; of the 11 operated on, 7 recovered. No hard-and-fast rule can be formulated as to the method of treatment. The injured part must be exposed and either ligature of vessels or suture of surfaces adopted; but gauze tampons and drainage form important features in any of these operations, and where the peritoneum has been generally soiled with blood and pancreatic effusion, the abdominal lavage with hot saline fluid affords the double advantage to under-lying shock and cleansing the abdomen. In view of the favourable results obtained by operation and the lethal effects of non-operative treatment, the only lesson that can be drawn is that we should make an exploratory laparotomy whenever there is a question of severe pancreatic injury.

The intimate relations of the head of the pancreas to the duodenum may lead to its invasion by disease of the gland, as I have seen on several occasions; or to the converse—invasion of the pancreas from the duodenum.

I recently observed a case of this kind in which the first effect of the disease was to cause a stricture of the duodenum, which was relieved by gastro-enterostomy, and the next effect was a gradual invasion of the pancreas and the supervention of diabetes, which ultimately proved fatal within a year.

The duodenum may also be invaded, compressed, or distorted by a cyst or other tumour of the pancreas, or by a pancreatic abscess which may burst into it or the stomach, and so be discharged, as in a case that came under my observation, and which I have reported in a work on the surgery of the stomach.

In the *Annals of Surgery* for August, 1899, a case is reported by Gallaudet in which a cancer of the head of the pancreas so far obliterated the lumen of the duodenum as to call for gastro-enterostomy.

The proximity of the pancreas to the stomach renders it liable to invasion by ulcer or cancer of that organ, and it is well recognized by surgeons how adhesion to, or invasion of, the pancreas by a cancerous growth of the stomach or pylorus not only adds seriously to the danger of operation, but renders a return of the disease extremely probable if removal be attempted.

Von Mikulicz's experience is most instructive; of 91 partial gastrectomies without injury to the pancreas the mortality was 27.5 per cent., but in 30 cases of gastrectomy in which the pancreas was injured or partly removed it was 70 per cent. Nevertheless, as part of the operation of gastrectomy, a partial pancreatectomy has been successfully performed by Mikulicz, Kocher, myself, and others.

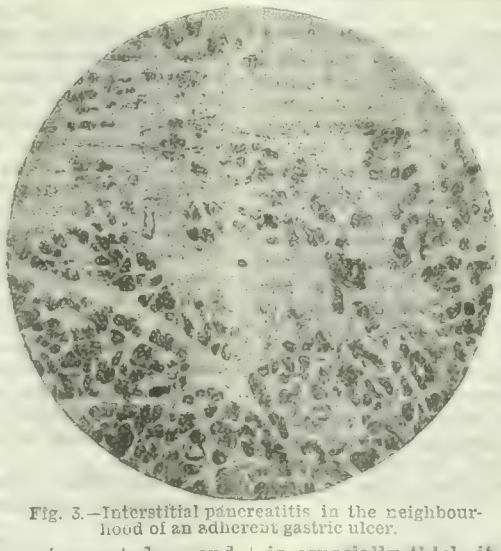


Fig. 3.—Interstitial pancreatitis in the neighbourhood of an adherent gastric ulcer.

I have found a chronic peptic ulcer invading the pancreas from the stomach, pylorus, or duodenum on several occasions, and setting up interstitial inflammation. In such cases I have, as a rule, deliberately left the adhesions intact, and performed a gastro-enterostomy which has proved curative in a very large percentage of cases.

The accompanying photographs show a gastric ulcer invading the pancreas and a microscopic slide of the invaded pancreas demonstrating the presence of interstitial pancreatitis.

When the head of the pancreas is especially thick it overlaps the sides of the second part of the duodenum, and may even embrace one-third of its circumference. In rare cases it may actually surround the bowel, and lead to constriction of the duodenum, should the pancreas become enlarged from any cause, such as catarrh of the ducts or chronic interstitial pancreatitis, or should it be attacked by new growth. At least six of these cases resembling pyloric stenosis have been recorded.

I have seen a case of acute obstruction due to an

abnormal tail of the pancreas embracing the third portion of the duodenum close to the duodeno-jejunal flexure; it had become cancerous, and by pressure had caused acute symptoms, which were relieved for a few weeks by a gastro-enterostomy.

Accessory pancreatic nodules may be found by the side of or within the duct of Santorini, or in the walls of the stomach, duodenum, jejunum, or ileum, and in all such cases a small independent duct empties into the contiguous intestine. An accessory pancreas has been found by J. H. Wright close to the umbilicus, it being apparently connected with the persistent remains of the Vitelline duct. These may be of importance in serious diseases of the pancreas itself, as the histological characters, and presumably the physiological functions, conform to those of the normal pancreas. Thus may possibly be explained some cases where there is an absence of glycosuria in atrophy or extensive disease of the true pancreas. These accessory glands tend, like the pancreas, to undergo chronic interstitial inflammation and other diseases, the inflammatory process being probably due to infection from the intestine into which the ducts open directly. In some cases these ducts have been found dilated and tortuous, and in other cases narrowed close to their intestinal outlet.

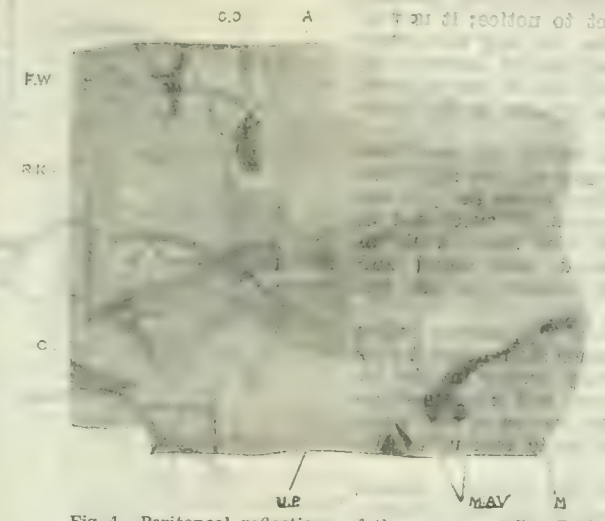


Fig. 4.—Peritoneal reflections of the pancreas (after Testut). G O, Gastro-hepatic omentum; F W, foramen of Winslow; R K, right kidney; C, colon; U P, uncinate process; M A V, mesentery artery and vein; M, mesentery; L T M, layers of transverse mesocolon; T O, tuber omentale; A, aorta,

Accessory pancreas is not very uncommon, at least 39 have been recorded. In one case I found a tumour of the kind in the wall of the duodenum which I feared might be malignant; but a portion removed and microscoped proved it inflammatory, and as the patient recovered after a short-circuiting operation it was clearly simple.

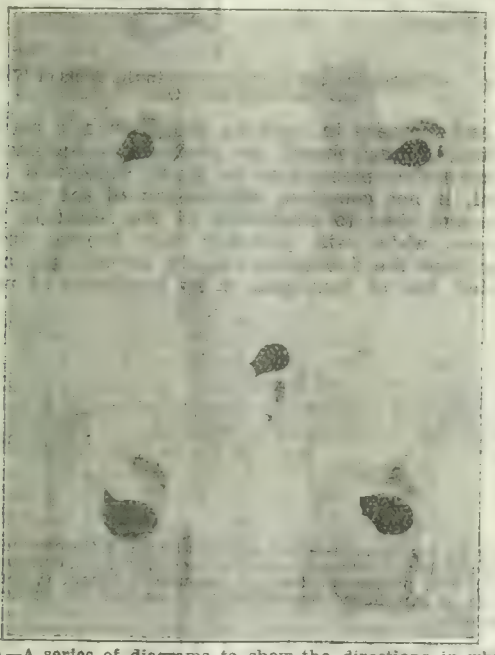


Fig. 5.—A series of diagrams to show the directions in which pancreatic cysts may develop.

Anatomy of Pancreas in Relation to Cystic Disease.

It is well recognized that pancreatic cysts afford more examples of mistakes in diagnosis than perhaps any class of tumours. The photographs and diagrams will serve to explain why this should be, and how the peritoneal reflections, taken with the site of origin of the cyst, are responsible for the various anatomical relations when it has fully developed.

For instance, a tumour springing from the anterior surface of the head or body of the pancreas above the transverse mesocolon will project into the omental bursa, and if small will bulge the stomach forward, or if large will either reach the surface above the stomach, between it and the liver, or pressing forward below the stomach it will bulge between it and the transverse mesocolon. On the state of the stomach will depend the extent of contact of the tumour with the abdominal wall. If a cystic tumour arise from the pancreas to the right of the omental bursal reflection it may make its way forwards to the right hypochondrium and simulate a gall bladder or right renal or suprarenal cyst. Should a cyst arise from the posterior part of the head or tail of the gland it may project either into the right or left lumbar region and resemble a cyst of the kidney. If a tumour springs from the head of the pancreas below the reflection of the transverse mesocolon but to the right of the mesenteric vessels, it will reach the surface below the hepatic flexure of the colon on the right side and may simulate a right renal tumour or a tumour of the caecum or ascending colon, as the mesentery will prevent it passing to the left of the spine; but should it arise from the small portion of the processus uncinatus on the left of the mesenteric vessels, but below the attachment of the transverse mesocolon, it may burrow between the layers of the mesentery and simulate a mesenteric cyst, or it may bulge on the left of the mesentery and reach the surface below the transverse colon on the left of the spine, when it may resemble a left renal, an ovarian cyst or a tumour of the descending colon or of the small intestine.

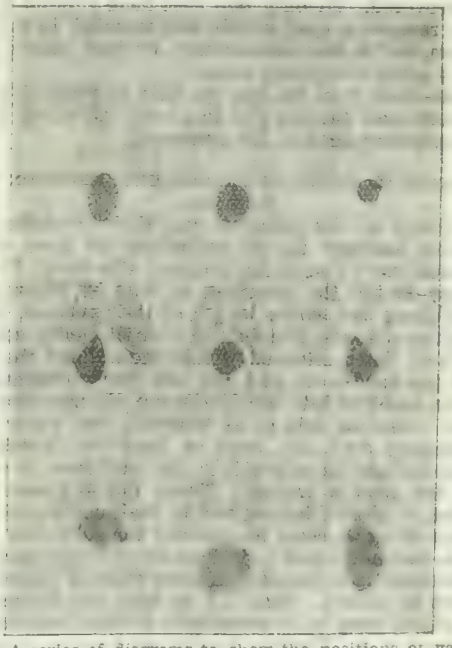


Fig. 6.—A series of diagrams to show the positions of various cysts of the pancreas treated by the author.

Cystic tumours springing from the pancreas on the left of the duodeno-jejunal junction where the lower surface

of the gland lies on the transverse mesocolon, have a tendency to press the great omentum forward and to project above the transverse colon, but they may grow downward toward the central region of the abdomen and arch the transverse colon or even project below it so that the colon lies above the tumour.

The relations of the pancreas to the peritoneum are of the utmost importance from a surgical as well as from a pathological point of view. The retroperitoneal position of the organ is an important fact to notice; it is well shown in the diagrams and explains not only the course taken by pus in some cases of suppurative pancreatitis, but also shows how such a collection may be reached from the loin, especially the left, by an incision in the costo-spinal angle.

The diagrams serve to illustrate how in one case I was able to reach a pancreatic abscess from the right loin above the kidney; how in another, where the pus had passed down behind the peritoneum, I succeeded in draining the abscess in the left iliac fossa, while in another the pus, travelling upward, was found and evacuated as a subdiaphragmatic abscess on the left side.

The fact that the anterior surface of the pancreas bulges into the back of the lesser peritoneal sac renders it easy to explain why that large bursa may become invaded by inflammatory affections or in injury, and from its shape it is easy to see why the filled lesser peritoneal sac is not infrequently mistaken for a true cystic tumour of the pancreas.

In non-parasitic cystic disease of the pancreas, chronic pancreatitis is nearly always present; in fact, it is probably the compression of the smaller ducts by the contracting newly formed fibrous tissue that gives rise to the cysts. Hence in doubtful cystic tumour in the abdomen the discovery of the pancreatic reaction in the urine forms an important point in diagnosis. I have found it present in all the cases of pancreatic cyst that have come under my observation since I have been working at the subject, and absent in pseudo-cysts and in cysts of other organs.

As might be supposed from the pathology of pancreatic cysts and the anatomical relations of the pancreas, cystic disease, with few exceptions, is best treated by incision and drainage. Out of 11 cases that I have treated, 10 have recovered. In only one case have I found it necessary to remove a cyst which was situated in the tail of the organ, and it was successfully excised after drainage had only given temporary relief.

Pseudo-cysts may be due not only to distension of the lesser peritoneal sac but also to a local collection of fluid in the neighbourhood of the pancreas.

Variation in Ducts of Pancreas in Relation to its Diseases.

The ducts of the pancreas and their variations have important bearings on its pathology, as have also the anatomical variations of the common bile duct. The chief excretory duct of the pancreas, or duct of Wirsung, after passing along the whole length of the pancreas, ends by joining the common bile duct in a small cavity called the ampulla of Vater, situated within the walls of the second part of the duodenum, and the two ducts discharge their secretion together into the duodenum through the biliary papilla. Besides this chief channel, the pancreas has an accessory duct, the duct of Santorini, which opens through the papilla minor into the duodenum 2 or 3 cm. above the papilla major. These ducts present great varieties in their relations and in their course, and as we shall see when we come to consider the subject of inflammation, the anatomical variations are probably responsible for pancreatitis appearing in some cases of cholelithiasis and not in others. First let us take the common bile duct, which may be conveniently divided into four portions—*a*, *b*, *c*, *d*. The first two for our present purpose are unimportant, but the varieties of the pancreatic and the intraparietal portions are all important in the relations of jaundice to pancreatitis. According to Helly, the duct is completely embraced by the head of the pancreas in 62 per cent., and lies in a deep groove in that gland in 38 per cent. of cases. It will be readily seen that if from any cause the head of the pancreas becomes swollen, say from an inflammation set up by the passage of a gall stone or from a catarrh creeping up Wirsung's duct from the duodenum, the common bile duct in the former variety will certainly be compressed and jaundice will follow, though in the latter variety, where it only lies in a groove in the gland, this compression may not take place, and the patient may then escape jaundice.

But this relation may act in another way, which we can reasonably infer must always occur in certain circumstances. When a gall stone is passing down the common

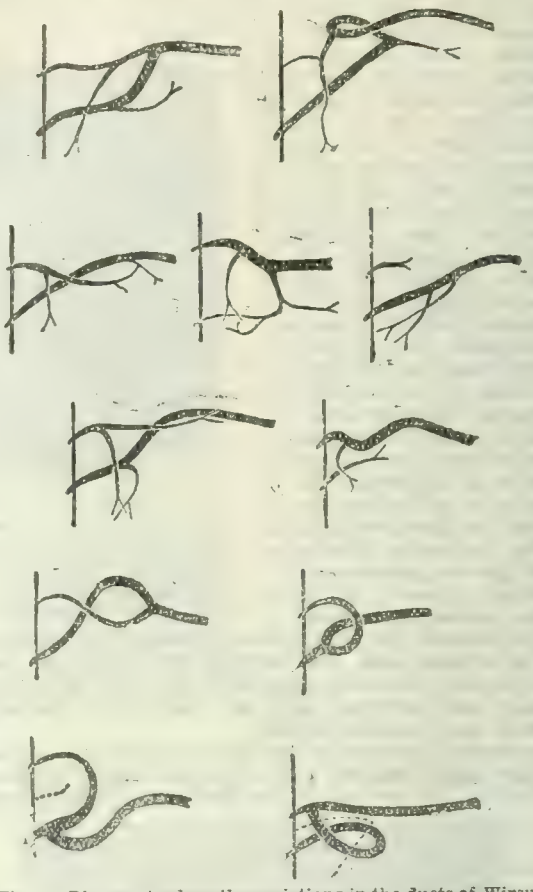


Fig. .—Diagram to show the variations in the ducts of Wirsung and Santorini (after Opie).

duct and succeeds in reaching the pancreatic portion of the duct, it must, should the pancreas be embracing it, produce serious pressure on the gland, which will lead to partial, if not complete, obstruction of the pancreatic ducts, and thus to stagnation of the secretion in the pancreas, which will probably soon become infected, either from the duodenum directly, through the already irritated duct of Santorini, or by continuity of mucous

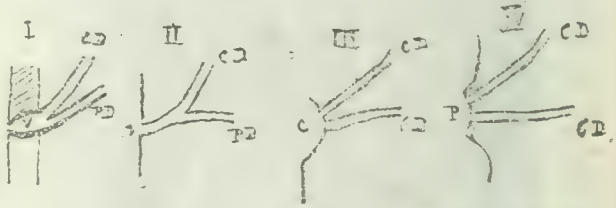


Fig. 8.—Diagram of the four methods by which the common bile duct and duct of Wirsung enter the duodenum: C D, common bile duct; P D, pancreatic duct; V, ampulla of Vater; O, common orifice; C, cup-shaped depression in the wall of the duodenum; P, papilla.

surfaces through the duct of Wirsung, where it opens into the ampulla of Vater, for it is well known that in many, if not all, cases of common duct cholelithiasis the bile becomes infected, and we may reasonably argue from the one to the other. Thus, this anatomical arrangement is probably responsible for many cases of pancreatitis of greater or less severity.

It may be argued—and, in fact, the argument is used in the textbooks—that if one duct of the pancreas be obstructed the other will take up its work; but this is not so in 50 per cent. of cases, as shown by the result of

the examination of 100 cadavers by Opie, who found that in more than half of all individuals the lesser duct is at its orifice obliterated or so contracted that it cannot assume the functions of the larger duct when that is obstructed.

The following statistics show the analysis. In 90 specimens the two ducts are united; in 10 two wholly independent ducts enter the intestine.

1. Of the ducts in anastomosis:
   (1) Duct of Wirsung larger in 84.
      (*a*) Duct of Santorini patent in 63.
      (*b*) Duct of Santorini not patent in 21.
   (2) Duct of Santorini larger in 6.
      (*a*) Duct of Wirsung patent in 6
      (*b*) Duct of Wirsung not patent, 0.
2. Ducts not in anastomosis, 10:
      (*a*) Duct of Wirsung larger in 5.
      (*b*) Duct of Santorini larger in 5.

In 89 per cent. the duct of Wirsung was larger than the duct of Santorini. In 21 per cent. the duct of Santorini was apparently obliterated near its termination. In 6 cases the duct of Santorini was larger than the duct of Wirsung. In all cases where the duct of Santorini is patent it diminishes in size towards the duodenum. Thus the duct of Santorini can seldom be relied on to supplement the duct of Wirsung if it be obstructed; moreover, the duct of Wirsung, even if patent and communicating with the duodenum, may itself be compressed by a moderate-sized gall stone passing down the pancreatic portion of the common duct.

The normal termination of the common bile duct and of Wirsung's duct is into the ampulla of Vater, which is a conical shell-shaped cavity, into the base of which the ducts enter, and which Testut describes as from 6 mm. to 7 mm. in length; but this varies considerably in different individuals, from 0 mm. to 11 mm., the average, according to Opie, in 100 bodies examined being 3.9 mm. In only 30 did the diverticulum exceed 5 mm. The orifice of the ampulla at the papilla is only 2.5 mm. in diameter, it being thus narrower than any other part of the common bile duct. In a proportion of cases the ampulla of Vater is absent, when the terminations of the common and pancreatic ducts are liable to great variations. There may be said to be five types, as shown in the diagrams. First, the characteristic type which is described as the ampulla. In the second type the pancreatic duct joins the common duct some little distance from the duodenum; the ampulla is absent, and the duct opens into the duodenum by a small, flat, oval surface. In the third type the two ducts open into a smaller fossa in the wall of the duodenum, while the caruncle and the ampulla of Vater are both absent. In the fourth type the caruncle is well developed, the ampulla of Vater being absent, its two ducts opening side by side at the apex of the caruncle. Among Opie's 100 cases there were 11 examples of this last type. In the fifth form there is a third duct opening into the ampulla of Vater. If the diverticulum be large it is possible for a small stone to occlude the orifice of the papilla and yet to leave the two channels entering the diverticulum patent, when bile passing down the common duct may be forced into the duct of Wirsung and bring on acute pancreatitis. The accompanying diagram illustrates another abnormal condition in which the common bile duct joins the duct of Santorini.

In a fatal case of acute pancreatitis under the care of Halsted, Opie had the good fortune to find a gall stone actually occluding the papilla, and converting the bile and pancreatic channels into a single duct. This case led him to adopt the theory that the injection of pure bile into the duct of Wirsung was the cause of acute pancreatitis, a theory which has since been found to be correct by other observers, and by Flexner from experiments on animals; but as acute pancreatitis occurs frequently in the absence of gall stones this cannot be the only explanation, and I have long held, and still believe, that the true cause is, as a rule, acute septic infection, the infective organisms entering from the duodenum through the ducts, or in some cases through the blood channels.

HAEMORRHAGIC PANCREATITIS.

The term "haemorrhagic pancreatitis" has been somewhat loosely applied to conditions in which haemorrhage is associated with pancreatitis.

What has been said concerning pancreatic haemorrhage will show that neither clinicians nor pathologists are agreed on this subject, some believing that inflammation precedes the haemorrhage, among these being Fitz, who designates the disease "haemorrhagic pancreatitis"; others holding that the haemorrhage precedes inflammation, which is, in fact, caused by bacterial infection of the haemorrhagic effusion. Time will not permit of my pursuing the arguments employed in favour of each of these views, but a careful study of the cases that I have seen and of all the cases reported, inclines me to the opinion that both views may be correct in different cases, for, although a primary pancreatitis may be accompanied by haemorrhage, yet this origin is not the only one, and there are many cases in which haemorrhage precedes, and, in fact, is the cause of, inflammation: first, owing to the great tendency of the gland to disruption, because of its soft structure when haemorrhage does occur; secondly, owing to the setting free of the pancreatic secretion, which decomposes and digests the damaged tissues; thirdly, owing to the communication of the gland with the intestine rendering the access of putrefactive organisms likely; and fourthly, owing to the great tendency of the damaged gland and the effusion to become decomposed as soon as organisms gain access. From its proximity to the peritoneum acute peritonitis rapidly follows acute pancreatitis. I think that these two varieties of haemorrhagic pancreatitis may at times be clinically differentiated, the ultra acute with a violent and sudden onset, accompanied by collapse, and ending fatally with extreme rapidity, being for the most part those where the haemorrhage precedes the inflammation; and the somewhat less, though still acute, cases, where the onset is more gradual, where the symptoms are ushered in by collapse, and where resolution and relapse are liable to occur, being the ones where the inflammation precedes the haemorrhage. The varieties in which the inflammation precedes the haemorrhage may in the severer forms approach to the ultra-acute, or in the less severe examples approach the subacute varieties of pancreatitis. It seems to me that these views simplify the subject and place the disease of haemorrhagic pancreatitis in a line with other well-known inflammations.

Flexner described a most interesting fact—that if the bile be diluted by the admixture of mucus its effects are modified, and it becomes less and less irritating according to the amount of mucus blended with it, so that ultimately, if injected into the pancreatic ducts, it only produces an interstitial instead of an acute phlegmonous inflammation. This fact seems to me to show how desirable it is not to unnecessarily sacrifice the gall bladder in operating for gall stones, as is advocated and preached by some surgeons, for the purpose of the gall bladder is to store the bile, mix it with mucus, and then to discharge it into the intestine in a harmless form.

Unless it is seriously damaged or ulcerated, or is the seat of malignant disease, or unless there is ulceration or stricture of the cystic duct, removal is quite unnecessary. I think it better practice, for other reasons, where possible, to drain it simply and not to perform cholecystectomy, since, should trouble develop on some future occasion in the deeper ducts or in the pancreas and the gall bladder be absent, it will be impossible, with few exceptions, to short-circuit the obstruction.

The treatment of acute pancreatitis is no longer in doubt, for it has been amply proved that, by abdominal section, incision of the inflamed gland, and free drainage, life may be saved in a fair proportion of cases if operation has not been too long delayed. I have personally operated on 4 cases, of which 2 recovered, and out of 59 reported operations 23 have recovered. If the disease assumes the subacute form, ending in abscess, the immediate prognosis is much more hopeful, as out of 8 cases of abscess of the pancreas that I have seen, I have operated on 6, with recovery in 5.

CATARRHAL JAUNDICE USUALLY CATARRH OF PANCREAS.

It has hitherto been generally accepted that so-called catarrhal jaundice is always due to a catarrh of the bile ducts leading to swelling and obstruction to the passage of bile from the secreting part of the liver. My own view, which is supported by a large experience of such cases on the operating table, has led me to the conclusions that compression of the common bile duct by the swollen head

of the pancreas accounts for many cases of so-called catarrhal jaundice, both of the acute and chronic variety.

Seeing that acute catarrhal jaundice does not *per se* lead to death, *post mortem* evidence can only be obtained when the disease coincides with some other local ailment or fatal accident, and in such cases where this opportunity has arisen there has been no sign of internal obstruction of the ducts, as shown by the easy passage of a probe from the papilla and by laying open the bile passages. Neither can *post-mortem* evidence always be relied on to prove the pressure that may be exercised by the inflamed head of the pancreas, as after death the swelling of the head of the pancreas from engorgement may subside, and only by microscopic examination or by examination during life with the abdomen open may it be possible to prove the condition of the pancreas. I had the opportunity of observing the condition in one case of jaundice on which I operated for gall stones, in which death was due to apoplexy occurring during anaesthesia, and where a *post-mortem* examination of the pancreas, which surrounded the common duct, revealed nothing abnormal to the naked eye, but in which a careful microscopic examination showed a small-celled infiltration between the lobules of the pancreas and swelling of the secreting cells of the gland. In this case the swollen head of the pancreas was felt at operation after the presence of pancreatic inflammation had been proved by an examination of the urine and faeces.

If, however, it is difficult to prove the cause of the obstruction in acute catarrhal jaundice from lack of *post-mortem* evidence, there is not the smallest difficulty in demonstrating the cause in so-called chronic catarrhal jaundice, which is, I believe, practically always dependent on catarrh of the pancreas or on interstitial pancreatitis.

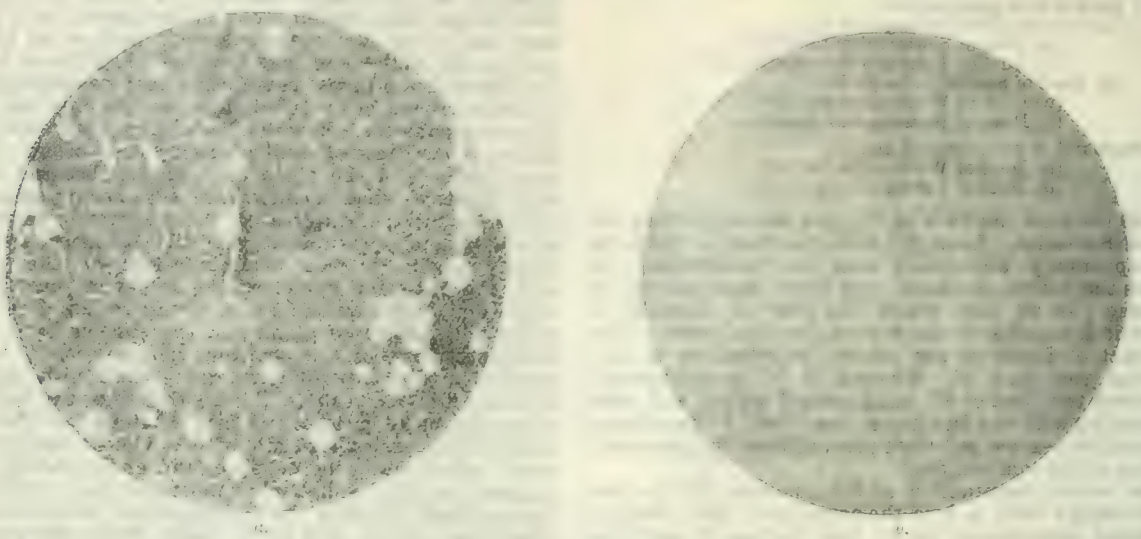


Fig. 9.—*a*, Catarrh of the pancreas during incipient stage of interstitial pancreatitis; *b*, a portion of the same more highly magnified, showing the round-celled infiltration.

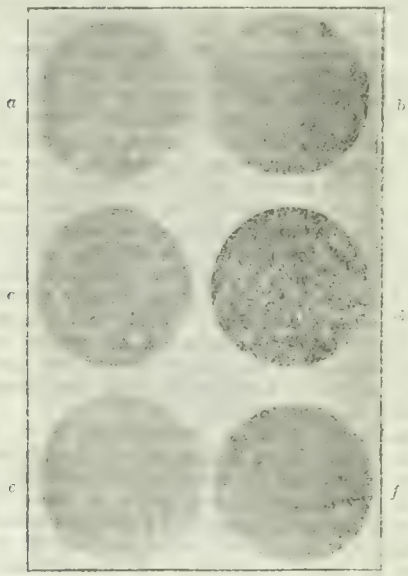


Fig. 10.—Microphotographs of the pancreas in six cases of chronic pancreatitis under my care, showing the steges of the process: *a*, catarrhal pancreatitis; *b*, slight interlobular pancreatitis; *c*, more advanced interlobular fibrosis; *d*, advanced interlobular pancreatitis; *e*, very advanced fibrosis; *f*, cirrhosis of the pancreas from a case of diabetes.

Interstitial Pancreatitis.

I had the honour, in a lecture given before the London Polyclinic in July, 1900, of drawing attention to the clinical and pathological importance of chronic inflammations of the pancreas, which diseases were up to that time considered merely as pathological rarities of no practical importance.

I then demonstrated the fact that interstitial pancreatitis might simulate in many of its symptoms cancer of the head of the pancreas, owing to pressure on the common bile duct and the consequent presence of jaundice, and that such cases, if not treated, might terminate fatally under the supposition that the disease was malignant, whereas, by a recognition of the cause and efficient treatment, life might be saved in a very large proportion of cases.

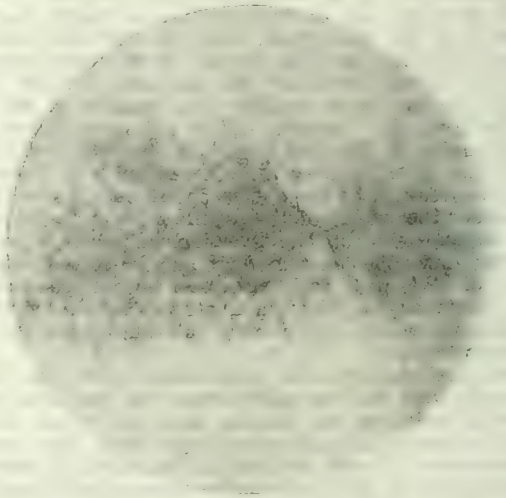


Fig. 11.—Improved, or C-, "pancreatic" reaction-crystals from a case of chronic pancreatitis with gall stones in the common bile duct.

The lecture was based on observations extending over a period since 1890, and I was able to illustrate my subject by a large series of cases treated surgically.

Within a short period of the publication of that lecture

numerous surgeons both at home and abroad confirmed the accuracy of these observations and reported cases successfully treated.

An extended experience of over 200 cases in which I have operated on patients suffering from chronic interstitial pancreatitis or from chronic pancreatic catarrh as clinical entities, or from those affections complicating other diseases of the duodenum or gall bladder, has confirmed my original observations, and the subject has been established on a firm basis both with regard to pathology and treatment.

Diagnosis.

The difficulty of making an accurate diagnosis of chronic inflammatory disease of the pancreas was at first considerable, but in a lecture that I gave before the American Surgical Association in 1901, I was able to announce the fact that, while working in conjunction with Dr. P. J. Cammidge to try and find some evidences of metabolic changes in the urine of these cases, my colleague, working on the theories that we had previously discussed, had discovered by an elaborate chemical investigation that certain characteristic crystals could be obtained from the urine in cases of inflammatory diseases of the pancreas, which were peculiar to the disease in question. The usefulness of this test has as yet not been fully appreciated in this country, though in Germany, in Russia, and in some other countries reports as to the

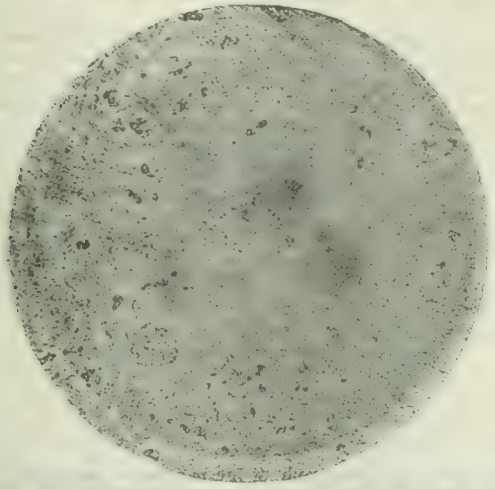


Fig. 12.—Congenital syphilitic pancreatitis, with almost complete destruction of the secreting acini and persistence of the islands of Langerhans (Rolleston's case). No diabetes.

value of the method have been received. This chemical test has proved of the greatest help to me clinically, as it enables a diagnosis to be made in a very large proportion of cases, even in the early stage of catarrhal inflammation.

For the details of the process I would refer my hearers to a work on the *Surgery and Pathology of the Pancreas* just published by Messrs. Saunders and Co., where may be found a full description of the technique employed.

Another valuable help in diagnosis may be obtained by a careful chemical analysis of the faeces, especially for fat, of which the greater part in pancreatic disease is unsaponified neutral fat.

Although in any single case we may not have all the typical symptoms and signs, yet in no case ought we to fail to find evidence of digestive, metabolic, or physical signs if chronic inflammation of the pancreas be present.

There can be, therefore, no justification for the view still entertained by some clinicians that chronic pancreatitis or even catarrh of the pancreas can be rarely recognized during life as a clinical entity, for from the information obtained by a careful physical examination of the patient, a knowledge of the history of the case, and the results of a chemical and microscopical examination of the excreta, a correct opinion may be formed in a large majority of cases.

It is not my intention to consider fully all the questions bearing on chronic interstitial pancreatitis in its advanced stages, but rather to show that the so-called chronic catarrhal jaundice is pancreatic in origin, that it is the first stage in the more serious disease, chronic pancreatitis, and that by timely treatment the morbid process can be arrested.

If under appropriate treatment the congestion or inflammation subsides the jaundice will rapidly pass off; but if the inflammation continues and chronic interstitial pancreatitis supervenes, the jaundice will persist, and with it a serious train of symptoms.

If the interstitial pancreatitis has persisted for some length of time the recovery may be incomplete, and although the jaundice may disappear and the digestive symptoms may be alleviated, the metabolic signs found in the urine many months or even years subsequently show that the recovery is only partial, as shown by cases I reported in my Hunterian Lectures, examined several years later.

Chronic Pancreatitis in Relation to Diabetes.

Chronic interstitial pancreatitis has been frequently observed in association with diabetes; but in the majority of cases, where interstitial changes in the pancreas arise from obstruction of the ducts by gall stones or from other causes, glycosuria is not met with as a symptom. In my personal experience of my last series of 65 consecutive cases where biliary calculi were found in the common duct at operation, and in which the pancreas was enlarged and hard, sugar was detected in the urine of only four (16 per cent.). In three of these the amount was under

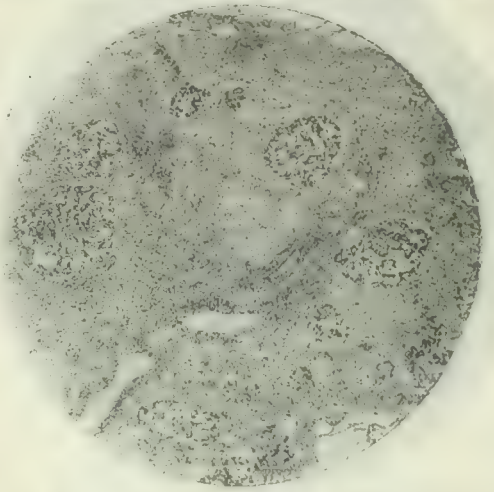


Fig. 13.—Obstruction of the pancreatic duct by carcinoma of the head of the gland, giving rise to atrophy and fibrosis of the body with persistence of the islands of Langerhans (Scott). No diabetes.

0.2 per cent., and in the fourth 0.4 per cent. After operation the sugar disappeared from the urine in all but the last, in which it slowly increased in amount, the patient dying from diabetic coma ten months subsequently.

Since the interstitial changes arising from the presence of gall stones in the common duct principally affect the head of the gland in the first instance, and the results of experiments upon animals have shown that even a small portion of healthy pancreatic tissue will prevent the onset of diabetes, or at least delay the appearance of the symptoms, so long as it remains undestroyed by fibrotic changes, the comparative rarity of glycosuria in these cases is not difficult to explain. When, however, a great part of the parenchyma has been destroyed, or is functionally impaired by the progressive changes consequent on repeated or long-continued irritation, either from gall stones or an unrelieved duodenal catarrh, the islands of Langerhans will necessarily suffer, and sugar will make its appearance in the urine, first, as an alimentary glycosuria, and later as a permanent diabetes.

In some cases where operation has been delayed, or drainage of the bile ducts not performed or not long enough continued, the original interstitial pancreatitis may pass on into the interacinar variety, in which the islands of Langerhans become involved and glycosuria ensues, or the condition may pass on to complete cirrhosis and atrophy of the gland. In these cases the islands of Langerhans are destroyed along with the secreting part of the gland, and diabetes results.

Glycosuria is by no means a common symptom of

pancreatic disease, and cannot be relied upon as a diagnostic symptom. When present it indicates a serious, although not necessarily a hopeless, condition. The relation of diabetes to disease of the pancreas has been clearly established in a considerable proportion of cases, but both experimental and clinical observations have shown that pancreatic glycosuria occurs only when the greater part of the pancreas has been removed or destroyed. The appearance of sugar in the urine, along with other signs of disease of the pancreas, therefore, points to a widespread and advanced lesion. This is even the case in chronic interstitial pancreatitis of the interlobular type, which is the form that follows obstruction of the ducts by calculi, or which is produced by ascending catarrhal inflammation from the duodenum. *Interacinar pancreatitis*, on the other hand, gives rise to glycosuria at an earlier stage, but is a much less common disease than the interlobular variety.

Malignant disease of the pancreas rarely causes diabetes, and then only, as a rule, when the whole organ has been destroyed by the growth; nor does congenital syphilitic pancreatitis cause diabetes, as it spares the islands of Langerhans.

The suggestion that the islands of Langerhans are

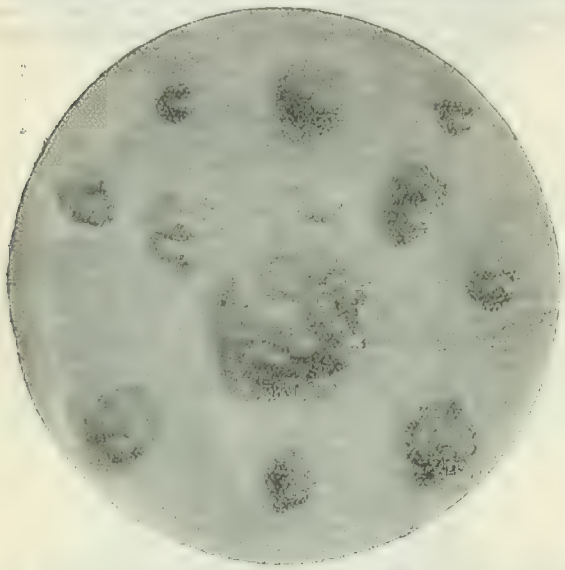


Fig. 14.—Gall stones and pancreatic calculi.

concerned in the production of the "internal secretion" of the pancreas was first made by Laguesse. This view was subsequently adopted by Schäfer, Diamare, and others. The theory that such a relationship exists is based partly on histological grounds and partly upon the results of experimental work, but the most important evidence in support of it has been furnished by pathological observations, which suggests that pancreatic diabetes is due to a disturbance of the functions of the cell islets. The peculiarity of their structure, their independence of the duct system of the gland, and their comparative resistance to certain morbid changes by which the secreting acini are destroyed, point to their being independent organs with an independent function; while their rich blood supply may be taken to indicate that they are possibly vascular glands engaged in the elaboration of some internal secretion which is poured into the blood stream.

Opie considers that diabetes is peculiarly related to interacinar pancreatitis, and that in the interlobular form it is rare. The difference, he considers, depends upon the relation of the fibrous tissue overgrowth to the islands of Langerhans, which he, in common with many other observers, believes are responsible for the elaboration of the internal secretion by means of which the pancreas exerts its influence upon carbohydrate metabolism. The newly-formed fibrous tissue in interacinar pancreatitis is diffusely distributed within the lobules and between the individual acini, so that the islands are affected at the same time as the other elements of the gland; but in the interlobular form, which is the type following duct obstruction, the proliferation of fibrous tissue takes place between the lobules and invades them from the periphery, so that the cell islets suffer only when the process is far advanced and the secreting parenchyma has been replaced by masses of scar-like tissue. Opie found that diabetes was present in 7 out of 9 cases of interacinous pancreatitis, but that in only one out of 21 cases of chronic interlobular inflammation of the gland was there sugar in the urine. In this one case of interlobular inflammation the induration of the gland was far advanced, and the islands of Langerhans were fibroid. The 2 cases of interacinous pancreatitis in which diabetes was absent were both, he found, in an early stage of the disease.

The pathological changes that have been met with in the interacinar islets in cases of diabetes are hyaline degeneration, necrosis, atrophy with vacuolization and liquefaction of the cell protoplasm, acute and chronic inflammation with haemorrhage, sclerosis, or calcification, and diminution of the number of islets.

The islands of Langerhans usually escape in interstitial pancreatitis, both in the acquired and in the congenital forms, which are therefore seldom accompanied by glycosuria, except in advanced stages, as shown in the photograph of cirrhosis of the whole gland, a sequel of interstitial inflammation.

In considering the question whether operation ought to be declined in a case of pancreatic disease because of the presence of a small amount of sugar in the urine, my

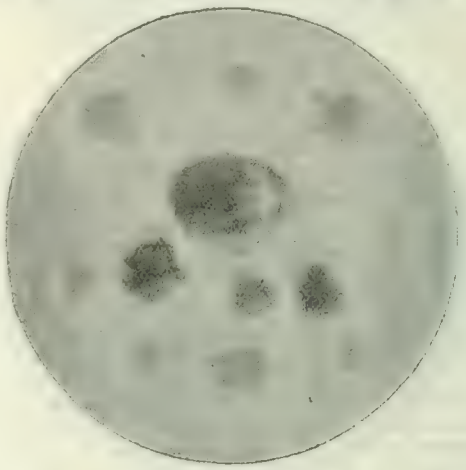


Fig. 15.—X-ray photograph of the pancreatic calculi and gall stones shown in Fig. 14, showing that the former are opaque to the rays.

feeling is that, should the patient's condition be fair, operation ought to be performed in order to remove the obstruction, or by drainage to arrest the pathological process going on in the pancreas.

The difficulty that attends all methods of treating diabetes is vastly increased by the obscurity of the etiology, but where it follows, or is associated with, evidences of pancreatic or gall stone trouble, the origin of the disease is plain, and in the early stages appropriate means of treatment can be adopted with a fair hope of success. There have been four cases of cholelithiasis in my own experience that were accompanied by glycosuria, and in three of which operation was followed by disappearance of sugar from the urine. Gifford Nash's case of acute pancreatitis with glycosuria may also be cited as an example of the satisfactory results attending timely operative interference. It is essential, however, that the disease should not be too far advanced, and for this reason I strongly recommend that all cases of pancreatitis and gall stones likely to give rise to a pancreatic lesion should be operated on with as little delay as possible after they have been diagnosed. I have shown that the early recognition of those conditions is not now a matter of great difficulty, if all the signs and symptoms to be obtained by a careful consideration of the clinical and pathological features of the case are taken into account; so that difficulty of diagnosis cannot be urged as a valid excuse for cases of pancreatitis being permitted to proceed untreated to a stage at which diabetes supervenes.

OPERATIVE TREATMENT IN CHRONIC PANCREATITIS.

The advantage of cholecystenterostomy in interstitial pancreatitis is that it provides for permanent drainage of

the bile passages, so that should the inflammatory tissue in the pancreas further contract and cause increased pressure on the bile duct, no jaundice will occur, and, should the inflammatory process pass away, the patient will not be distressed by the presence of a biliary fistula or inconvenienced by the absence of the bile from the intestines; moreover, there will not be the anxiety of any further operation to face, as there would be after a cholecystotomy. But, besides the relief of jaundice, the operation acts on the pancreas by relieving tension, and thus enabling the gland to discharge its contents, which when infected and imprisoned in the ducts tends to keep up inflammation, and to lead after a time to atrophy of the gland substance proper and the formation of fibrous tissue.

It will be gathered from the foregoing arguments that I believe cholecystenterostomy to be the operation of choice for the treatment of interstitial pancreatitis, and only in case of absence of or contraction of the gall bladder, or in case of unusual difficulties from adhesions or from the serious condition of the patient, would I counsel cholecystotomy or choledochotomy being done.

Pancreatic Lithiasis.

Pancreatic calculi are rare, about 80 cases only having been recorded, and surgical treatment of this condition is so uncommon that I can only find reports of five operations.

Pancreatic lithiasis is apparently the result of catarrh of the ducts with stagnation of secretion, and instead of calculi being formed, the ducts may actually be lined with calcareous material. To this condition I have applied the term "pancreolithic catarrh," a condition which is simulated in the bile passages by cholelithic catarrh.

From the diagnostic point of view the composition of pancreatic calculi is important, since the presence of lime salts renders them opaque to the *x* rays, a fact which I had the honour to point out first in the Hunterian lectures.

The value of this diagnostic method, which is demonstrated in Figs. 14 and 15, is, of course, limited by the depth of the pancreas from the surface, but in exceptional cases it may prove of service.

Although the normal pancreatic secretion contains no calcium carbonate, it is interesting to note that in all cases of interstitial pancreatitis crystals of calcium oxalate are found in the urine except when bile salts are present, in which case the bile acids take them up.

The ultimate effect of pancreatic lithiasis is towards complete destruction of the gland by a process of interstitial pancreatitis ending in fibrosis.

Surgery offers a reasonable chance of cure if the disease is attacked in an early stage, as in a case that I operated on in February, 1903, in which I removed calculi from the ducts of Wirsung and Santorini by direct incision into the pancreas and from the termination of the duct by opening the duodenum and laying open the papilla. The patient, a lady of 61, is now well, over five years later.

Cancer of Pancreas

Cancer of the pancreas is much more common than was previously recognized, as secondary growths in the liver were at one time frequently mistaken for the original disease.

My experience of the disease is that it is in the greater number of cases practically painless, especially in its earlier stages, and when the body or tail of the gland is affected the only available evidence of the disease may be failure of health and loss of flesh, together with signs of disturbed metabolism, as revealed by examination of the urine and faeces; for it is to be remembered that obstruction of the ducts by a neoplasm induces chronic inflammatory changes in the gland beyond the obstruction.

When the head of the gland is affected the common bile duct becomes obstructed, and jaundice rapidly becoming intense and absolute, manifests itself, producing characteristic signs of the disease—rapid loss of flesh and jaundice of painless onset, with distension of the gall bladder—conditions which may be simulated sometimes by chronic interstitial pancreatitis. In the latter case it should, however, be noted that the pancreatic reaction will afford valuable help in diagnosis.

While cancer or sarcoma of the head of the pancreas is necessarily rapidly fatal and incapable of marked relief either by medical or surgical treatment, yet when the disease invades the distal part of the gland it is capable of removal if recognized sufficiently early, as shown by the results of 16 recorded operations, of which 8 recovered.

Even the palliative operations of short circuiting the obstruction by cholecystenterostomy or draining the bile passages by cholecystotomy are peculiarly fatal in malignant cases, and the relief afforded is merely temporary. Such operations can therefore only be justifiable if undertaken in the hope that the disease may prove to be inflammatory and not malignant, in which case cholecystenterostomy has proved successful in 97 per cent. of cases.

FRACTURE OF THE PATELLA TREATED BY MOBILIZING THE LOWER FRAGMENT.

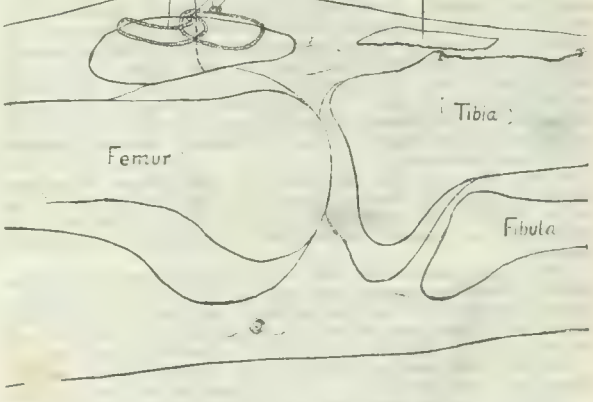
By J. LYNN THOMAS, C.B., F.R.C.S.,
HONORARY SURGEON TO THE CARDIFF INFIRMARY AND THE HAMADRYAD HOSPITAL.

The interesting and most instructive paper in the Journal of April 11th, p. 849, by Lord Lister, our revered master, induces me to record a method I successfully adopted in a case that was sent to me in 1902 by Mr. Wyndham Randall, from the Bridgend Workhouse Hospital.

C. D., a labourer, aged 43, fractured his patella in July, 1901, but did not consult a doctor for six weeks. Various methods of non-operative treatment were tried but proved useless, as apparently no attempt at union took place between the fragments.

When I examined him there was a gap of about 1½ in. between the fragments, and nothing but skin apparently existed in the gap between the examining fingers and the femoral trochlear surface.

On May 6th, 1902, I operated, and failing to get the fragments to within ½ in. of each other by traction, and realizing that division of the quadriceps extensor muscle



The anticathode was placed so as to show the gap between the tubercle and the tibia, hence the overlapping of the shadows of two silver wires placed one on each side of the patella, forming parallel loops in the long axis of the limb. S W, Silver wire; L F, line of fracture; K E W, knots on ends of wires; T T, tubercle of tibia detached from between T and T.

is followed by much weakness of the limb, I decided to attempt to bring the *lower fragment* towards the upper by mobilizing it. This was readily done, as I took advantage of my experience in the performance of arthrotomies and excision of the knee joint by Kocher's excellent method of the curved external incision and chiselling off the tubercle of the tibia, and applied it to this case. After making a long curved incision well down over the shin, the tubercle of the tibia with the ligamentum patellae attached to it was chiselled off from without, care being taken not to detach the tendinous and periosteal attachments along its inner edge. By forcible traction upon the lower fragment of the patella and its ligament, the fragments were soon brought into contact, and their bared surfaces were kept in apposition by means of two loops of silver wire. The tubercle of the tibia retained considerable strength of anchorage in its

displaced position by means of the untorn fibrous attachments of the ligamentum patellae along its inner side. The wound was closed without drainage, and the patient left the infirmary on June 5th. Nothing could be more satisfactory than the immediate result of mobilizing the lower fragment, whilst the functional result in time was also satisfactory.

I took a skiagraph of the knee about a fortnight after the operation, and Mr. S. W. Allen kindly made from it the outline here reproduced in order to show the new position of the tubercle of the tibia, and the limitation of its range of displacement upwards towards the knee-joint.

Lord Lister's article is a notable contribution towards the conservative treatment of the hitherto masterful quadriceps extensor in the class of cases described by him.

A CASE OF ECTOPIC GESTATION WITH UNUSUALLY EARLY SYMPTOMS.*

BY E. A. SEARLE, B.A., M.D., B.CH., B.A.O.DUB.

IN the BRITISH MEDICAL JOURNAL of May 25th, 1907, Dr. Nigel Stark reported a case of unusually early rupture of the gravid tube. In his case menstruation ended May 11th, and rupture occurred, without any previous sign or symptom, on May 28th—seventeen days later. He dated conception from May 19th, only nine days before rupture. My case is chiefly interesting from the very early occurrence of symptoms.

History.

A healthy 2-para of 25 years, married three years, had a normal period of five days ending June 15th, 1906. The earliest possible date of conception was June 17th. On July 1st (fourteen days later) she was seized with a very severe attack of spasmodic pain in the lower right abdominal region, which began with vomiting and lasted from two to three hours. The temperature was subnormal, and the pulse fell to 60 from its usual rate of 80 *circa*. There was a moderate amount of collapse with greyish pallor. In the region of the right iliac fossa tenderness was very marked, but no muscular rigidity was present. Her condition rapidly improved and she was getting about the house again, when a similar attack occurred on the evening of July 4th. Additional features on this occasion were painful micturition, and a slight blood-stained vaginal discharge beginning shortly after the pain ceased.

Next day I made a vaginal examination and found a distinct fullness, with marked tenderness in the right fornix and behind the uterus. The cervix seemed to be shorter and more flattened out than usual. By this time the vaginal discharge had ceased, but defaecation became painful, and so continued to the end of the illness. After a few days she was fit again for household duties.

On July 9th—the day menstruation was due—a chocolate-coloured vaginal discharge showed for the first time; it was rather scanty, and only lasted a few hours. This was the first sign that seemed to confirm my suspicions of ectopic gestation.

Three days later—July 12th—a discharge began and continued like an ordinary severe "period" to July 19th. During this a third attack of abdominal pain occurred on July 16th, less severe, but more noticeably spasmodic in character, and not attended by vomiting as the previous attacks had been.

Next day there was a similar seizure, during and after which some blood clots came away. On examination of this discharge I found distinct decidual remains; this discovery was sufficient to confirm my fears.

On July 19th the discharge ceased. By this time the patient began to feel and to look very miserable, and was losing weight and strength.

On July 26th the chocolate-like discharge again came on, and from this date continued almost daily to the end of the illness. I now found, on vaginal examination, that the swelling in the right fornix was larger and more definitely rounded, distinct from the uterus, and seemed to be lower down and consequently more easily within reach than at the previous examination. Tenderness about the swelling was so marked and pain caused by the finger so acute that a complete investigation was not attempted.

Having made arrangements for the journey to Capetown—10 miles by road and four hours by train—for operation, she travelled very comfortably on July 30th, and arrived apparently none the worse.

Operation.

Next day she was seen by Mr. S. W. F. Richardson, who diagnosed a right tubal pregnancy, and advised its prompt removal by operation. This he did on August 2nd. Through a 2½-in. incision in the middle line, midway between the pubes and umbilicus, the right tube and contents were brought out after slight delay due to some trifling adhesions, ligatured, and removed. Included with the tube was the right ovary, which contained a small cyst about the size of a large Graafian follicle and a well-marked corpus luteum. There was no free blood or clot in the abdominal cavity. The left ovary and appendages were quite healthy.

After-History.

With the exception of unusually severe and prolonged chloroform sickness, the patient had an uneventful recovery, and now, after a lapse of more than a year, says she never felt better in her life.

In commenting upon this case I would chiefly call attention to the unusually early date of the onset of symptoms—namely, fourteen days after the earliest possible date of conception. In Dr. Stark's case rupture occurred seventeen days after a normal menstrual period, but, according to his patient's most emphatic assertion, nine days after the earliest possible date of conception. The only reference to such early rupture that I can find in the textbooks is in Hirst's *Obstetrics* (1906). He says rupture may occur as early as the fourteenth day, and that in two of his own cases it happened no later than that date.

At the annual meeting of the British Medical Association at Toronto in 1906, Professor Ross read a paper on 70 cases of ectopic gestation upon which he had operated. In this series I can find no mention of symptoms noted as early as those in my case, and in only 5 of the 70 was operation done before bleeding had occurred into the abdomen.

No doubt bleeding within the tube is answerable, together with the embryonic growth, for every attack of paroxysmal pain, but it is a very interesting problem to determine why haemorrhage should occur so early at all.

Dr. Herman, in the last edition of *Diseases of Women*, writes:

> Dr. Russell Andrews and others have shown that in tubal pregnancy the ovum develops in the wall of the tube, not in its lumen; the trophoblasts eat their way into the wall of the tube, as they do into the uterine mucosa in normal pregnancy. The ovum comes to lie in a cavity bounded at one part by muscular tissue and peritoneum.... At another by muscular tissue and mucous membrane. During the first seven or eight weeks the trophoblasts go on eating up tissue, and in the process they open up vessels so that haemorrhage takes place. This haemorrhage causes tension within the cavity and then rupture. This rupture may be on the peritoneal aspect of the sac, or it may be on the mucous aspect. If the latter, the ovum will escape into the lumen of the tube, and blood along with it.

That this latter mode of rupture was what occurred in my case an examination of the specimen prepared by Dr. G. W. Robertson, Government Pathologist, will show. The specimen itself gives no indication of pre-existing tubal disease, and the patient's history was one of marked fertility—three times pregnant within as many years.

Dr. Paul Kroemer, of Giessen, by a series of over 4,000 sections of the Fallopian tube, put together upon Born's system of reconstruction models, has shown that the diverticula, formerly considered pathological conditions, are, in reality, to be found in the normal state.

In my patient menstruation from its first appearance was always accompanied by very severe spasmodic pains coming on with the flow, lasting some hours, and causing prostration. On these occasions the chief seat of pain was the left ovarian region.

In her 17th year and while at school in Belgium the monthly attacks became so serious that an operation was done, which, from the appearance and site of the scars left, was, doubtless, Alexander's operation for shortening the round ligaments for the cure of uterine retroposition.

From this date, nearly eight years ago, relief has been complete and enduring.

* Extract from a paper read before the Capetown Branch of the British Medical Association.

THE Board of Education have been informed through the Foreign Office that the Sixteenth International Congress of Americanists will be held under the presidency of Baron Weckbecker in Vienna at the University from September 9th to September 14th, 1908. The object of the Congress is to promote scientific inquiries into the history of both Americas and of their inhabitants. Communications may be oral or written, and may be in one of several languages, English included. For further information application should be made to Herr Franz Heger, Vienna (Austria), I. Burgring 7. A programme will be issued early in the summer.

A METHOD OF OBTAINING RAPID HEALING OF ACUTE ABSCESSES.

BY JAMES PHILLIPS, F.R.C.S.ED.,
SENIOR ASSISTANT SURGEON TO THE BRADFORD ROYAL INFIRMARY.

FOR seven or eight years past my partner, Dr. Handcock, and I have been treating acute abscesses systematically by a method which, although not at all original, has probably been used more regularly by us than by most medical men; it possesses advantages which perhaps make it worth while to describe it here.

The method is based on the theory that if all the dead material in a localized abscess is removed, and means taken to prevent the collection of further dead material in the abscess cavity to act as a culture medium, rapid healing will take place.

"In union by the first intention," says Erichsen, "after the surfaces of the wound are brought into apposition and put at perfect rest, every source of infection is absent, and consequently inflammation, with its accompanying exudation, ceases as soon as the injured tissues have recovered from the . . . injury. In wounds which unite by granulation there is always some source of irritation present which continues to act for a considerable time after the injury, and thus gives rise to a prolongation of the inflammatory process with the formation of pus."

My contention is that in almost every case of acute abscess there need not be left any "source of irritation" to "continue to act for a considerable time" and that unless dead bone or some other irremovable irritant is present, something not unlike primary union can be obtained.

METHOD.

1. Cleanse the skin as in operating on sterile tissues.
2. Make an incision long enough to permit of the pus being freely evacuated and the pyogenic membrane rubbed clean and smooth with gauze wrapped round the finger.
3. Having emptied the abscess cavity as completely as possible, pack it tightly with gauze (we use 1 in 1,000 mercury perchloride gauze, dry) and apply a wool dressing and bandage as firmly as possible.
4. At the end of forty-eight hours remove the packing and dress the wound as if it were a simple incision; that is, do not pack or drain at all, but simply fix a gauze and wool dressing firmly in place with a bandage. This dressing will require changing only once in three or four days until the incision is soundly healed, and it will be found that the sides of the abscess cavity unite promptly and that there is no outpouring of pus from it. From the time when the packing is removed it is practically a simple incised wound that is being treated.

Illustrative Cases.

CASE I.—In January, 1907, I was asked to see the sister of a medical man, who, following influenza with throat symptoms, had developed an abscess in the neck. Under ether an incision was made in front of the sterno-mastoid, and on burrowing beneath that muscle two or three ounces of pus were evacuated. The cavity was rubbed clean with gauze and packed tightly. Two days later the packing was removed and a superficial dressing was applied. The temperature never rose after the operation; the patient almost at once felt quite well; there was never any discharge of pus and the incision healed quickly and perfectly.

CASE II.—Mrs. W. was seen on May 9th, 1907, and then had a right mastitis, and as on May 16th there was certainly pus present, the breast was incised under ether, the pus let out, loculi broken down, all débris cleared out, and the cavity packed tightly. The temperature at once dropped from 103° to normal, and did not rise again. The packing was removed on the second day and a simple dressing applied. Next day the patient was attending to her household duties with her right arm in a sling; she felt well, and was eating ordinary diet. The wound was looked at two or three times until the incision was firmly healed.

CASE III.—Mrs. G., who had suffered from anal pain for several days, was found on October 20th, 1907, to have a perirectal abscess. Under ether the sphincter ani was stretched, and the abscess found to extend upwards some 2 in. or 3 in., burrowing between the rectum and vagina. It was opened by dividing the sphincter freely, cleaned and tightly packed. On going to remove the packing forty-eight hours later, it was found that the patient had had a motion and that the packing had come away. No more packing was used, but a daily sitz bath and a perineal pad of boric wool were ordered. On examining the parts on the ninth day, the cavity was found to be completely closed, and only a superficial ulcer, about 1½ in. by ¼ in., remained, which had healed in another week. The patient was in bed only six days after the operation.

CASE IV.—In cases of small abscesses, general anaesthesia is not required. Mr. C. attended at the surgery on November 28th, 1907, with an ulcer inside the left cheek, produced by the sharp edge of a carious tooth. The skin of the cheek was red and indurated. The tooth was removed and the ulcer soon healed, but a small abscess developed and pointed externally. On December 7th, 1907, the skin was cleaned and anaesthetized with a streak of pure carbolic acid and incised. The pus was squeezed out and the cavity packed with gauze, which was fixed with strapping. The gauze was removed after forty-eight hours and not replaced, but a simple gauze dressing was applied, which was changed by the patient every morning after his toilet. There was no discharge, and the incision was soundly healed in a week.

At my suggestion, the infirmary residents have treated cases similarly. Here are notes of two cases.

CASE V.—E. B. was admitted to the infirmary on November 4th, 1907, suffering from an acute glandular abscess in the femoral region. Mr. McEwan incised it, rubbed it clean with gauze and packed it tightly. Two days later the packing was removed and a simple dressing applied. Practically primary union took place, the incision being looked at only on two other occasions—namely, November 13th and 15th. The patient was up on November 20th, and after the first dressing the temperature never rose above 99°, or the pulse over 84.

CASE VI.—Mrs. C. was admitted to the infirmary on January 6th, 1907, under the card of Mr. Horrocks (whom I have to thank for permission to quote the case). She was suffering from puerperal pyaemia: her temperature was 102.2°, and pulse 118. Both forearms were red and swollen, being practically bags of pus. There were similar but smaller abscesses over the left tibial tuberosity and the left buttock. Under ether Mr. McVean evacuated all these and scraped them out with gauze and tightly packed them. His note says "the amount of pus evacuated was remarkable for its quantity." The packing was removed two days later (January 8th). On January 10th another abscess formed, and had to be emptied and packed. Mr. McVean appears from the notes to have repacked the abscess cavities every second day for some time, which I think was probably unnecessary; but, even so, the patient was disturbed only once in forty-eight hours instead of every four hours, as in the treatment by fomentations. From January 26th, when the septicaemia appears to have expended itself, the temperature remained about normal, except for a couple of days after the patient was allowed up. She was discharged cured on March 16th.

We claim for this method that it results in rapid healing; that constitutional symptoms are got rid of almost at once; that as the dressing requires doing so seldom the doctor can do it himself and so avoid the risk of a secondary mixed infection, of which one has seen some ghastly examples where the patient's friends have been doing the dressings; and that it effects quite a marked economy in dressings—just think what amount of dressings would have been required had the pyaemic patient I have quoted been on four-hourly fomentations instead of the dressings which were used!

TUMOUR OF THE ORBIT REMOVED WITHOUT ENUCLEATION AND WITHOUT LOSS OF SIGHT.

BY G. APTHOMAS, M.B.,
OPHTHALMIC SURGEON, MANCHESTER EYE AND EAR HOSPITAL, AND OLDHAM AND ASHTON INFIRMARIES.

As the reported cases of removal of tumours from the depths of the orbit without enucleation and without removal of the outer bony wall of the orbit (Krönlein's operation) are rare, and with the retention of useful vision still rarer, the following case is of some interest.

History.

Mrs. G., aged 24, married, consulted me in November, 1895, on account of gradually-increasing prominence during the previous three years, with loss of sight, of the right eye. Her general health was good. There was no history of injury, no pain or tenderness, no enlargement of the thyroid gland nor of any of the cervical glands, no bruit, no cardiac signs; the pulse was normal. There was well-marked proptosis of the right eye, the eye being pushed directly forwards. The movements of the eye were fairly free in all directions, and the lids just able to close over the cornea. Pupillary action was normal. Right vision was reduced to perception of shadows. Left vision ⅔ and J. 1.

Ophthalmoscopic examination showed the media clear and some congestion of the optic disc. The field of vision was not taken.

The patient did not consult me again until March 18th, 1902 (six and a half years later), when she complained of increasing prominence of the eye. Since 1895 she had been under treatment at various eye institutions and had been told the eye would have to be removed. The sight had improved since the former consultation. R.V. = $\frac{6}{24}$ c. + 2 D. = J. 4; L.V. = $\frac{6}{9}$ and J. 1. She was extremely anxious to save the eye, although her present condition made it impossible for her to go out and enjoy the society of her friends. I got leave to do what I thought prudent.

Operation.

On March 23rd, 1902, the patient being anaesthetized by Mr. F. Falconer, M.B., I slit up the outer canthus of the proptosed eyeball to its full extent, that is, to the bony boundary of the orbit. The conjunctiva was incised horizontally, and separated above and below. The external rectus was next divided some 5 or 6 mm. from its insertion and thrown back. On passing a finger into the orbit behind the eyes, a mass of soft tissue was felt on the outer side. Through this the tip of the finger was forced, and long shreddy strips of soft granulation tissue were torn away. The haemorrhage was free. After the removal of this tissue the finger came on a well-defined lump of firmer consistency with a smooth surface, which resisted attempts to free it. It extended towards the apex of the orbit in close contact with the lower and outer side of the sheath of the optic nerve. With the tip of the finger and the help of a blunt dissector and patience, the tumour, which was fully encapsulated, was separated and removed without tearing its capsule. It had no pedicle. During these manœuvres the eye was drawn forwards and upwards, and every care was taken not unduly to press on it. The orbit was washed out freely with warm perchloride of mercury lotion (1 in 6,000), and all haemorrhage stopped; the parts were replaced, and approximation of the cut ends of the external rectus was attempted, a matter of difficulty, owing to the collapse of the orbital tissue.

After-History.

The after-history of the case was uneventful. In April, 1905 (three years after the operation), there was no proptosis. R.V. = $\frac{6}{9}$ and J. 4 at 6. L.V. = $\frac{6}{9}$ and J. 1. There was some paresis of the right external rectus and slight convergent strabismus and enophthalmus. Since the operation the patient says her health has been better, and she is no longer troubled with headaches or dizzy feelings, which were constant before.

When seen in July, 1907, she remained quite well, and there was no sign of any recurrence.

PATHOLOGICAL REPORT.

The tumour was sent to Professor Delépine, Victoria University, and examined by Professor Delépine and Dr. Arthur Sellers. The following is the report:

The tumour was about the size of a pigeon's egg, and had a fairly distinct capsule. The surface was smooth, dark brownish-red in colour, with several small areas more deeply pigmented. It was generally soft to the touch, but at one end there were several somewhat hard nodules about the size of a pea. On section at one end there was seen a cyst containing blood. The rest of the cut surface was composed of strands of tissue with small intervening spaces filled with blood.

On microscopical examination the cavernous spaces were seen to be very irregular in size, and to have thin walls with a lining of endothelial cells. The stroma was very abundant, part of it in a state of hyaline degeneration. The connective tissue round many of the spaces was very cellular, and there were several masses of lymphoid tissue, some of them forming a sheath to small vessels. The majority of the connective tissue corpuscles, connected with fibrous bundles, contained large, pale, irregular pigment granules. These granules were very numerous round some of the vessels. They appeared to be derived from the blood.

The tumour has the structure of a cavernous angioma. There is no clear evidence that it is angio-sarcomatous. Considering its slow growth the tumour, if malignant, is of low malignancy, though some of the cellular patches are indistinguishable from a round-celled or lympho-sarcoma. Nests of embryonic cells are, however, not uncommon in angiomatous tumours, which are frequently of congenital origin, so that, though the prognosis should be guarded, it need not be unfavourable.

A communication by J. Herbert Parsons on Primary Extra-dural Tumours of the Optic Nerve is published in the *Transactions of the Ophthalmological Society*, vol. xxiii, 1903, p. 117, and includes an abstract of eighteen cases and a biography.

ACCORDING to the German *Universitäts-Kalendar* the number of medical students in the several universities of Germany during the summer semester of 1907 was as follows: Munich, 1,248; Berlin, 376; Freiburg, 645; Leipzig, 493; Wurzburg, 449; Heidelberg, 397; Kiel, 340; Marburg, 291; Bonn and Breslau, 277 each; Jena, 275; Tubingen, 242; Strassburg, 233; Konigsberg, 216; Halle, 210; Greifswald, 201; Erlangen, 199; Göttingen, 176; Giessen, 173; Rostock, 122.

APPENDICITIS COMPLICATED BY HEPATIC ABSCESSES.

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THE following case of appendicitis presented certain unusual features which render it worthy of record:

Previous History.

On April 14th, 1906, I was called to a well-developed man, aged 48, who had felt "chilly" the previous day, and who during the hot weather of the preceding week had on several occasions got very hot cycling. He had had "dysentery" ten years before, but no other serious illness.

History of Illness.

He looked slightly yellow and complained of vomiting; the temperature was 99.6° F. He was sent to bed and put on light diet and given 3 grains of calomel that night. Next morning he was downstairs, and his temperature normal, but his sister (a nurse) informed me that he had had a rigor during the night and his temperature had gone up to 106° F. The vomiting had lessened, and on examination there was no evidence of tenderness. He was sent back to bed. He had a rigor that night, and his temperature rose to 104° F. just after. He was given quinine in 3-grain doses four-hourly.

On April 17th I witnessed a rigor; it lasted a quarter of an hour, and during it the temperature rose rapidly and continued to rise for a quarter of an hour after, finally reaching 105.6° F. I then found a slight ridge 2 in. long and ½ in. broad lying obliquely about one finger-breadth internal to the right anterior superior spine, and best felt by standing on the right side of the patient facing his face and using the ulnar border of the left hand. It was slightly tender, and the tenderness was relieved after examination.

On April 18th the late Mr. F. W. Storry of Stroud kindly saw him with me, and we could find no physical sign except the ridge, but the jaundice was slowly increasing. After this date the rigors temporarily ceased and the ridge became more superficial and larger, but I could make out no fluctuation. The temperature varied between 102° and 103° F.

Operation.

On April 22nd (eight days after the first rigor), as the temperature still kept up and the ridge was getting still more distinct, Mr. Storry operated. A small abscess containing very offensive pus was opened; the appendix, which was much thickened, was removed, and on opening it the mucous membrane looked very unhealthy, and was "shed" in places. A small perforation was found just on the distal side of the ligature, which was tied round the stump, as, owing to its thickened condition, it was impossible to suture it in the usual way. The patient stood the operation well, and that night his temperature fell.

After-History.

On April 25th he had a rigor, the first since April 18th, and on April 26th, Mr. Carwardine of Bristol kindly saw him with Mr. Storry and myself. He agreed with us that the case was probably one of pyaemic liver abscess, but said that the presence of a pocket of pus shut off from the rest of the abscess cavity could not be altogether excluded, especially as he thought that, per rectum, there was slightly more resistance on the right side than on the left, and that the patient should have the benefit of the doubt.

Accordingly, the next morning we explored the wound under an anaesthetic, but found no pus in loin or pelvis. Two large drainage tubes were inserted, the one towards the loin, the other towards the pelvis; and he was given daily 30 c.cm. of antistreptococcus serum (B. and W.) by hypodermic injection. An April 28th the quinine, which had been left off since the operation, was resumed.

The jaundice lessened, but varied a good deal; the rigors persisted daily, till on May 1st, I have a note, 3 p.m.: "Sweating—possibly in lieu of rigor," and after this he had no more rigors for ten days. They then returned, but there was no enlargement of the liver nor tenderness over it. The skin then began to show signs of oedema.

On May 17th diarrhoea set in; the motions were reddish, and a report by the Clinical Research Association says of the faeces: "No pus detected, but specimen contains a marked excess of unaltered fat." Hiccough also began and was troublesome for a week.

On May 19th he began vomiting dark matter, and, still thinking of liver pus, I had the vomit examined; but it was probably only a symptom of the septicaemia, for the report of the Clinical Research Association was: "The vomit contains much altered blood, of which the remains of the corpuscles are still visible. There are also streaks of mucus containing abundant leucocytes. There is no evidence of liver pus, but we doubt if it could be detected unless present in very large amount."

The antistreptococcic serum was omitted on June 1st, as it was not thought to be doing any good, and on

June 7th he complained of pain over the right lobe of the liver. This continued till, on June 9th, after taking a little nourishment, he suddenly collapsed and died in a few minutes.

Necropsy.

At a *post-mortem* examination on June 11th—forty hours after death—the following facts were noted: The wound was healthy and well shut off by adhesions, and neither in loin nor pelvis was there any pus. The peritoneum itself was normal, but its cavity contained a quantity of serous fluid mixed with pus. A number of small abscesses were found in the substance of the right lobe of the liver, and also two larger ones, which had communicated, and by projecting on the right surface of the lobe had caused the abdominal pain complained of from June 7th, and by their rupture into the general peritoneal cavity had caused sudden death. The left lobe and gall bladder were normal. The portal vein was normal, and had no communication with the abscesses, so that it was a lymphatic infection of the liver.

The interesting points of this case are:

1. That, though the patient had his first rigor on the night of April 14th, it was not till the evening of the 17th that the first physical sign was noticed, and then only a slight one.

2. That the antistreptococcus serum did no apparent good, whereas the quinine certainly appeared to lessen the frequency of the rigors.

3. That the right lobe of the liver was affected, but not the left.

The Goulstonian Lectures

ON

THE INFLUENCE OF PREGNANCY UPON CERTAIN MEDICAL DISEASES, AND OF CERTAIN MEDICAL DISEASES UPON PREGNANCY.

Delivered before the Royal College of Physicians of London.

By HERBERT FRENCH, M.A., M.D.Oxon., F.R.C.P.Lond.,

Assistant Physician to Guy's Hospital.

Lecture III.—Pregnancy in Relation to Certain Fevers.

Mr. President and Gentlemen,—The next variety of cases that deserves consideration is that in which the mother, being at the time pregnant, develops one of the commoner fevers. Generally speaking, the pregnant state seems to confer some degree of immunity, the reverse being true of the puerperium. Scarlet fever, for example, shows less tendency to attack a pregnant woman than other persons equally exposed to the infection; whereas a woman who has been recently delivered of a child is particularly prone to take the disease if it is in the vicinity. Nevertheless, pregnancy confers no absolute immunity to the specific fevers, and should the patient contract one the question will arise as to what is likely to be the result both as regards the mother and as regards the child.

Typhoid Fever and Pregnancy.

Typhoid fever, for instance, may develop during pregnancy. There are a fair number of papers upon the subject, references to several of which have been given by Mr. H. T. Hicks and myself in the *Lancet*.[1] The illness may begin at any period of the pregnancy, and, like typhoid fever in England generally, it is less liable to develop in the summer months than it is in the autumn and winter.

The course of the disease is precisely similar to its course in other persons. Pregnancy does not seem to have any particular influence on the severity of the illness nor upon the prognosis as regards the mother. The death-rate will doubtless vary in different years; in our own cases it was 14 per cent., in Vinay's 17 per cent., and in Duynot's 16 per cent., figures which do not differ widely from those given by the Metropolitan Asylums Board for all cases. The effect of enteric fever upon the pregnancy is, on the contrary, bad. In the majority of the cases abortion or premature labour takes place. This was the result in 85 per cent. of our cases, in 66 per cent. of Vinay's, in 63 per cent. of Martinet's, and in 65 per cent. of Penot's. The reasons for this high mortality amongst the children will be discussed below. Meanwhile it is right to mention, however, that it is quite possible in a minority of cases for the mother to pass through a typical and fairly severe attack of typhoid fever and yet for the pregnancy to continue to term and for the child to be born living and well. This was the case in one of our patients who developed typhoid fever in the fifth month of her pregnancy, recovered in due course, and was delivered at term of a healthy child who lived to grow up. There is no period of the fever at which a premature ending of the pregnancy seems more likely to occur than at another. The time at which it takes place depends rather upon the month of the pregnancy than upon the day of the fever. If the patient is already eight months pregnant, for example, delivery may occur during the first week or ten days after the onset of the fever; but if the pregnancy has not passed the fifth or sixth month it may continue into the third or fourth week of the fever and yet end prematurely. The mother seems to suffer remarkably little from the labour. Of course, she may already be in an extremely bad way from her typhoid fever, just as any other person might be, and then the prognosis is grave. It might have been expected that even if she had not hitherto been more than ordinarily ill from her enterica, the additional strain of labour must necessarily have made her considerably worse; this, however, is not the case as a rule. The delivery is most often easy and the patient experiences considerable relief. The uterus involutes just as if there were no maternal illness, and the fever usually runs just the same course as if the incident had not occurred.

Transplacental Transmission of Toxins, Agglutinins, and Bacteria.

Several points of considerable scientific, if not clinical, interest arise in connexion with the child. The following questions might be asked:—If the child were born dead during the course of typhoid fever in the mother, would it be likely that typhoid bacilli might be found in the fetal tissues; in other words, can typhoid bacilli be transmitted directly from the mother to the fetus? If the child's blood serum were tested by Widal's test, would it be likely to give a positive reaction? If so, does the fetus produce its own agglutinins, or does it receive them ready formed from the mother? If the fetus can and does become infected with typhoid bacilli, does it develop ulceration in the Peyer's patches of its intestine; in other words, can the macroscopic condition of the fetal bowel be relied upon as a certain indication as to whether the fetus is infected with typhoid organisms or not? If the fetus becomes infected with typhoid bacilli, does this happen soon after the mother falls ill? and, if not, how long after the mother's infection is that of the fetus likely to occur? Would the child, if it lived, have a natural immunity to typhoid fever, supposing it had remained *in utero* until after the mother had recovered from her fever? If the fetus is not affected in any of the above ways, or even if it is, are there any other lesions that it is likely to have suffered as the result of the mother's illness—lesions which may show their effects if the child lives and grows up?

It is only possible to give limited answers to some of these questions, and no answer at all to others; but it should some day be possible to give full answers if every case as it came under observation were fully investigated. The difficulty is that one does not always realize at the time the precise points to which attention should be particularly directed, and the cases are sufficiently few and far between to make it difficult for a single individual to investigate any large number of them. Here, therefore, is another subject upon which a carefully directed collective inquiry would be good. The great point about typhoid fever in this respect is that it affords a natural experiment in human beings upon the placental transmission both of chemical substances—the agglutinins—and of bacteria—the typhoid bacilli—simultaneously.

Before entering upon the facts known in regard to the placental transmission of agglutinins and bacteria in typhoid fever itself it will be well to summarize shortly what is known about placental transmission generally. It seems clear, in the first place, that transmission might conceivably take place from mother to fetus in one other way than through the placenta; it might occur via the liquor

amnii. Ferrari[2] has shown this to be possible, materials being able to pass from the maternal lymphatics into the amniotic fluid, and thence, by being swallowed, into the alimentary canal of the child. It is generally held, however, that the only path of fetal infection that is at all common is that across the placenta. Dr. J. W. Ballantyne[3] points out how important this fact is in connexion with the site of the subsequent lesions, for the substances so transmitted reach the child by the blood stream, and therefore if bacteria are conveyed to the unborn child they pass first the placenta, then the umbilical vein, then either the liver or the ductus venosus, then the heart, and so are distributed all over its body. The condition is thus one of general blood infection from the onset. The lesions may consequently be different in the child from what they are in the mother. As an illustration of this, Bidone[4] records a case in which erysipelas in the mother gave rise to fungating endocarditis in the child.

In the second place, it is clear that the placenta allows chemical substances to pass across it from the maternal to the fetal circulation; the nourishment of the child is thus conveyed.

In the third place, it is evident that a converse transmission of chemical substances takes place across the placenta from fetus to mother; the child gets rid of the effete products of its metabolism in this way. It has been shown that quite abnormal substances may pass from fetus to mother in a similar manner. Charrin[5] injected diphtheria toxin into animal fetuses *in utero*, the mother dying from the toxaemia. It has been suggested that toxins elaborated by the fetus and absorbed by the mother may be at the root of the herpes gestationis, the nephritis, and the tetany of pregnancy.

In the fourth place, even as regards chemical substances, the placenta can apparently exert some power of selection; that is to say, whereas some elements and compounds pass from the mother to the fetus with comparative ease, others do so with much less readiness. Porak[6] performed a considerable number of experiments upon guinea-pigs in this connexion; and he found, for example, that whereas copper and lead were easily transmitted to the fetal tissues, arsenic passed across with greater difficulty, whilst mercury, though it reached the placenta and accumulated there, apparently passed no further. This feature of the placental functions has been termed its "barrier action."

Fifthly, this "barrier action" of the placenta, decidedly limited even in health, becomes still less marked when the mother is ill. Charrin and Duclert[7] showed that the presence in the maternal circulation of certain chemical substances or of various microbial toxins renders the placenta permeable to things which otherwise pass across it with difficulty; in other words, the placental barrier often breaks down when the mother is unwell, and things which would not be allowed to pass across to the fetus if the mother were healthy are then able to do so.

Sixthly, it has been fully established that bacteria can pass from the mother to the fetus via the placenta. There is a good deal of evidence to show that the placenta itself acts to some extent like a filter, and that it may contain an abundance of bacteria before any have escaped past it to reach the fetus. Consequently the fetus seldom contains bacteria in anything like the numerical proportion that the mother's tissues do. Nevertheless, Küss[8] has shown in animals that tubercle bacilli may actually reach the fetus from the mother via the placenta; and other observers[9] have demonstrated the same fact in regard to the bacilli of anthrax and of fowl cholera, the pneumococcus, the streptococcus, the meningococcus, the *Spirillum obermeieri*, and the bacillus of glanders.

It must be remembered, of course, that the experiments that have been made upon the subject have been upon animals; that the placentae of different animals, varying as they do in size and thickness, vary also in the extent to which each exerts a barrier action against this substance or that; and that, therefore, the facts that have been found to be true of animals are not necessarily true of man. However, although the details may vary it is unlikely that the general principles taught by animal experiments do not apply to man. These principles are: (1) that abnormal chemical substances and toxins are able to pass from mother to child via the placenta; (2) that the placenta when healthy exerts some degree of "barrier action," allowing some things to pass less readily than others; (3) that this "barrier action" is not only imperfect but becomes less effective when the mother is ill; and (4) that not only substances in solution but also actual bacteria, even those of the size of anthrax bacilli, can reach the child from the mother.

To return now to the discussion of typhoid fever and the way in which the child is affected when the mother has the disease. It has been found repeatedly that the typhoid bacilli can cross the placenta, reach the child, and be recovered from the infant's tissues immediately after birth. There are, it is true, many cases in which the bacilli have been looked for and not found. This was so in the case investigated by Mr. Hicks and myself,[10] but negative evidence in many cases counts for little as compared with positive evidence in even only a few. Typhoid bacilli have been recovered from the tissues of the human fetus by such observers as Fordyce, Freund and Levi, Etienne, Bolton, Eberth, Hildebrandt, Giglio, Durk, and Ernst.[11]

The fetal blood stream has been examined by Widal's test in a few cases, and although it has sometimes given no reaction[12] in cases recorded by Fordyce, Chambrelent, Griffiths, Mosso and Danic, Bolton, and Kirton,[13] it gave a positive Widal's test.

No answer can as yet be given to the question whether the fetus produces its own agglutinins or receives them ready formed from the mother, but it would be a most interesting point to investigate further, especially if it could be shown that the fetus did produce agglutinins for itself. There are at least two ways in which light could be thrown upon the question, neither of them very difficult provided they were kept in mind when an opportunity for using them arose.

First, in every case of maternal typhoid fever the child, if stillborn, should be thoroughly examined by cultural methods for typhoid bacilli, whilst at the same time its serum should be subjected to Widal's test. If several cases occurred in which the latter was positive whilst at the same time no typhoid bacilli could be obtained from any of the fetal organs, it would tend to prove that the child could receive agglutinins ready formed from the mother. Apparently no such case has yet been recorded; in every instance in which the child's blood serum gave a positive Widal's test bacilli were either shown to be present also or else they were not looked for.

Secondly, the precise degree of the Widal's reaction should be determined in all such cases both for the mother's and for the child's serum, with a view to ascertaining whether the child's blood will sometimes give a positive reaction in greater dilution than the mother's does. If, for example, a positive reaction were given by the child's serum diluted 500 times whilst the mother's serum failed to give it when diluted more than 200 times, it would be some evidence in favour of the agglutinins being formed, in part at least, by the child itself. These are points upon which observations are still required, and it is only now and then that an opportunity for making the investigation presents itself.

The next question—namely, whether a child that has become infected by typhoid bacilli *in utero* is likely to exhibit macroscopic evidence of this in the form of ulcerated Peyer's patches similar to those of adults suffering from typhoid fever—may be answered both yes and no. In a few cases, such as those recorded by Charcellay,[14] definite ulceration of the fetal Peyer's patches has been noted. Such macroscopic lesions, however, are quite the exception, and the great majority of the children whose blood and organs have yielded typhoid bacilli on cultivation, or whose serum has given a positive Widal's test, have shown no such macroscopic lesions in the bowel. The absence of intestinal ulceration, therefore, is no proof that the child has not become infected by typhoid bacilli *in utero*. Consequently, it is essential to cultivate from the fetal organs if it is desired to find out whether the fetus has become infected from the mother or not.

The fourth question, as to whether the child, if it lived, would have a natural immunity to typhoid fever, is unanswerable at present. It would be possible to give an answer if a watch were kept upon all children born alive from mothers who had suffered from, and survived, typhoid fever during the pregnancy. If even only one or two such children subsequently developed typhoid fever it would make it probable that none of them had an immunity, acquired either actively or passively *in utero*.

It is a point that is not of any great clinical importance because the number of living persons concerned is very small; but from a scientific point of view it would be of great interest to obtain an answer to the question, seeing that it bears upon the very complex subject of immunity and constitutes a natural experiment in man. It may, perhaps, be mentioned that the presence or absence of a positive Widal's reaction in the fetus is by no means synonymous with the presence or absence of immunity to typhoid fever. The agglutinins upon which the Widal's test depends disappear rapidly from the blood after typhoid fever in the great majority of cases, as Dr. M. G. Louisson and myself[15] have shown. Acquired immunity to the disease does not disappear in this way. Consequently the fact that Widal's test is negative in a child born of a mother who has had typhoid fever during her pregnancy does not prove that the child is not immune to typhoid fever. The longer before the child's birth the mother recovered from her illness the less likely would the infant's blood be to give a positive reaction, if one may argue by analogy with adults, in whom the rapidity with which Widal's test, having been positive during the fever, becomes negative again a few weeks or months later is often remarkable.

Next comes the question as to whether or not the child, if it survives in spite of the mother having had typhoid fever during the pregnancy, is likely to suffer in other ways as it grows up. There is a considerable amount of evidence to show that this is very likely to be so, though it would be too much to say that it must be so. Professor Osler[16] has recorded a case in which the mother died from typhoid fever and the unborn child was found to have a large recent blood clot in its brain. Had the infant lived, it must have exhibited the effects of this lesion, which was apparently due to the mother's illness. Dr. Ballantyne[17] quotes numerous observers who have found "important pathological changes in the fetal viscera, more particularly in the liver, thyroid gland, brain, and suprarenal capsules, which have a far-reaching effect upon the post-natal life of the offspring. . . . They consist in degenerative and sclerotic alterations unaccompanied by the presence of microbes, but productive of a slackening of body metabolism and lowering of body temperature, along with a tendency to develop bronchopneumonia, gastro-enteritis, and infantile atrophy. The same results are produced by other infectious maternal conditions also, and they are probably due to the transmission of toxic principles through the placenta. . . . It has been thought that typhoid fever of the mother in pregnancy may be the cause of intellectual peculiarities in her offspring developed many years afterwards."

The Question of Advising Artificial Delivery.

Before leaving this subject there is one matter of great practical importance that arises from the question of fetal infection, and that is, At what period of the maternal typhoid fever does the fetus become infected with typhoid bacilli? It is held by some bacteriologists that these bacilli are present in the maternal circulation from an early date in the illness, though it has by no means been established that this is an invariable rule. One would like to know precisely when typhoid bacilli are most numerous in the mother's blood, because that would be the time when the fetus would be exposed to the greatest chance of bacterial infection. In our own case[18] the mother died upon the twenty-fourth day and the fetus was not infected. In the cases recorded by others[19] of recent years—that is to say, since the methods of distinguishing the typhoid bacillus from the *Bacillus coli communis* have been rendered more accurate than they formerly were—the examinations were made in five cases when the mother's illness was in its second or third week, and in none of these did the fetal tissues yield typhoid bacilli, whereas in the three cases when the examination was made during the fourth or a later week of the mother's illness the organism was present in the child each time. This number of patients is too small to generalize from, but the results seem to indicate that before the end of the third week of the mother's illness the child is much less likely to have become infected than it is in the fourth or a later week. It seems probable that the prognosis as regards the immediate and subsequent life of the child will be much better if the infant could be born before this bacterial infection occurs. If, therefore, the pregnancy has reached the time when the child is viable, and if for any reason it is much desired that a living child should be born, it would seem that the best advice for the physician to give would be that of obtaining obstetric assistance for bringing about delivery before the mother's illness had reached the end of the third week. This advice would not be necessary if the mother's interests alone were to be considered, for in her case the prognosis is not materially affected by allowing the pregnancy to take its own course; but if the child's life is a material consideration it would appear to be very risky to allow it to remain *in utero* beyond three weeks from the beginning of the typhoid fever. With each week of the fever the chances that the child will become infected with typhoid bacilli rapidly increase.

Other Specific Fevers in the Unborn Child.

The discussion upon typhoid fever in conjunction with pregnancy has been somewhat dwelt upon, because, owing to the comparative ease with which both typhoid bacilli and agglutinins can be looked for, the cases afford an admirable field for investigation; they constitute natural experiments in man upon the transplacental transmission of disease upon which there is scope for much more work in future cases. Much might be said about the other specific fevers also, but there is only room for a few words about each here.[20]

Small-pox has long been known to be transmissible from the mother to the fetus *in utero*. It by no means follows, of course, that the child has the eruption in every case in which the mother suffers from the disease during her pregnancy. Sometimes the fetus has died before the exanthem could appear upon it. Sometimes the child will be born quite healthy and catch the complaint at birth—a postnatal, and not an antenatal, infection. Sometimes when the mother has had variola early in her pregnancy the latter has continued to term, and the child, though exhibiting no external evidence of having had small-pox, has been noted to possess a natural immunity to the disease in after-life. In quite a number of cases, however, the child has been born with the typical eruption of small-pox upon it. The degree to which the infant is affected is very variable, bearing no direct relationship, apparently, to the severity of the disease in the mother. The stage of the eruption in the child may be almost identical with that in the mother, varying from vesicle to scar according to the length of time the pregnancy has continued after the mother was taken ill. It is noteworthy that the eruption goes through a pustular stage in the unborn child just as it does in an adult; and, as a rule, the size of each lesion is greater than that seen in grown-up people. On the other hand, the duration of the eruption on the skin of the child may apparently be much longer than it is in adults, for in Laurens's case,[21] quoted by Dr. Ballantyne, the mother had small-pox early in her pregnancy, and two and a half months later the premature infant was born still covered with the eruption. Dr. Allan Warner[22] records an interesting case of the same kind. The mother was taken ill with small-pox upon January 8th when four months pregnant. The eruption appeared upon her on January 11th; by the 23rd the crusts were falling off, and by February 3rd she was quite free from all scabs. Pregnancy continued until the 15th, when miscarriage occurred; twin female children were delivered, both being well covered with a typical small-pox eruption in the pustular stage.

Another very remarkable fact is that the father may have small-pox at the time of conception, the mother may show no sign of the disease, and yet her child may have it *in utero*—a point which seems directly analogous with some cases of congenital syphilis. This opens up a wide field for discussion, but one upon which it is not possible to enter here.

Three further points may be briefly noticed. First, there seems to be no stage of fetal life, from the third month onwards, at which the child may not be born with the eruption upon it. Secondly, even if there is no eruption upon the child's skin it is very possible that, owing to the route of infection being by the blood stream, the lesions might be found upon mucous surfaces, a point which, as Dr. Ballantyne says, deserves full investigation

in future cases. Thirdly, it might well be asked, What would be the behaviour of the child in regard to vaccination if the mother had been vaccinated successfully during the pregnancy? It seems clear[23] that two-thirds of such children are just like other children and "take" well at the usual time after birth, but that one-third prove insusceptible to vaccination for a short time after birth. The latter cases will, however, "take" six months or so later. It seems, therefore, that there may be a transmission of immune substances from the mother to the child *in utero*, but that even when this passive immunization of the infant by maternal vaccination occurs it is quite transitory. It is therefore no argument against vaccination of the child that the mother has been vaccinated during the pregnancy, though it might be wise to counsel waiting for six months or a little longer before vaccination is performed in order to be more sure of its being successful at the first attempt.

Dr. Cordes has published an interesting case. The mother had small-pox during pregnancy and recovered. The child was born later, and was vaccinated in the usual way, but failed to "take." When it grew up, vaccination was repeated on two further occasions, failing to "take" each time. Soon afterwards the young man went to China, caught small-pox, and died from it. It would seem here as though the mother's small-pox had rendered the child insusceptible to vaccination without at the same time rendering him secure from small-pox itself. Not only was he not secure from the disease, but he took it with fatal severity. The importance of a possibility of this kind is obviously great.

Just as variola may be transmitted from mother to child *in utero*, so may other specific fevers. The total number of cases in which such a disease as measles coincides with pregnancy is naturally not great, and the number of instances in which the child is born during the stage of the exanthem in the mother is still smaller. The total number of recorded cases of fetal measles is therefore not great, but Dr. Ballantyne[24] describes some and has collected altogether 20. He also records cases of fetal scarlet fever, chicken pox, mumps, pertussis, influenza, rheumatic fever, relapsing fever, yellow fever, cholera, malaria, and even cerebro-spinal fever and anthrax. There is clearly too little time at our disposal to give an account of all of these, but after what has already been said in regard to the transmission of typhoid bacilli from the mother to the fetus it may be of special interest to say a few words about the last two.

A most conclusive case of fetal cerebro-spinal meningitis is recorded by Dr. Ballantyne. The mother died from the disease, the seven months child remaining *in utero*. At the necropsy there was the typical lesion in the maternal meninges, over both the brain and the spinal cord, whilst the meninges of the fetus exhibited precisely similar changes, and the *Diplococcus intracellularis meningitidis* was cultivated separately both from the mother and from the child.

In regard to anthrax, Rostowzew[25] investigated three cases in which the mothers died from the effects of malignant pustule, and he found numbers of the anthrax bacilli in the placental intervillous spaces and in the fetal villi, smaller numbers being also present in the fetal blood and viscera.

There is abundant proof, therefore, that notwithstanding the "barrier action" that the healthy placenta may exert in protection of the child from injurious substances, the barrier may become broken down, or at least passed, as the result of many different diseased states in the mother; and that not only chemical substances in solution but also comparatively large concrete bodies such as bacteria may then gain access to the child. Before leaving this subject a few words may be said as to the effects of some of these fevers upon the mother.

The Effects of Measles upon the Pregnant Woman.

Pregnancy does not confer any immunity against the taking of measles. A pregnant woman who has not had the disease should therefore avoid exposure to infection. Should she develop the illness the prognosis as regards herself is good, but there is a considerable danger of abortion or premature delivery during the eruptive stage. It has been suggested[26] that measles affects the mucosa of the uterus as it does that of the nose, pharynx, eyes, stomach, bronchi, bladder, and bowel, causing an inflammatory congestion similar to that which has been observed in some cases of variola, and thereby accelerating miscarriage. If the exanthem stage is past there seems to be little or no danger either to the mother or to the child, unless the former should develop bronchopneumonia, in which case, owing to the abdominal condition, especially in the later months, the dyspnoea and the repeated attacks of coughing may be a source of greater trouble and anxiety than usual.

The Effects of Pertussis upon the Pregnant Woman.

The latter applies also to whooping-cough during pregnancy. Pertussis in an adult is very apt to be exceedingly distressing in any case, but when it is combined with pregnancy the patient may be in a very pitiable plight. The paroxysms of rapidly repeated cough, each bout sometimes terminating only in the ejection of some of the gastric contents, render the patient abjectly miserable. There is a danger of premature emptying of the uterus in consequence of the extreme and constantly repeated contractions of the diaphragm and abdominal muscles, but otherwise the prognosis is good both as regards the mother and the child.

The Effects of Scarlet Fever upon the Pregnant Woman.

Scarlet fever arising in a pregnant woman has a relatively much graver prognosis than it has in other cases. The complication is least serious when it occurs early in the pregnancy and when it does not lead to abortion. It is, however, much rarer at this time than it is towards the end of pregnancy—so much so that it has been thought that the pregnant state confers some degree of immunity to it. The converse is true of the puerperium, when the patient is particularly liable to the infection, and whether the scarlet fever begins either immediately before or immediately after labour, not only is the intensity of the disease itself, its rash and its pyrexia, apt to be extreme, but also there is a very great liability to sapraemia, or, still worse, to actual septicaemia from streptococcal invasion. This view is not held by all; indeed, Dr. R. Boxall,[27] in a series of papers before the Obstetrical Society in 1888 contended that scarlet fever begets scarlet fever even in a pregnant woman, and has no relation to puerperal septicaemia. Dr. F. Foord Caiger, however, gives it as his opinion, from personal experience, that the conjunction of scarlet fever with present, or recent, pregnancy near to term cannot but be viewed with the gravest anxiety. The maternal mortality varies in different epidemics, but it may be as high as 75 per cent.

The Effects of Chicken-pox and Mumps upon the Pregnant Woman.

Chicken-pox is often much more severe an illness in adults than it seems to be in children, but there is no evidence to show that its occurrence in conjunction with pregnancy makes it any worse. The prognosis as regards both the mother and the child is good, though, as has been stated, the child may be born with the eruption upon it if the mother suffers late in the pregnancy.

The same remarks apply to mumps. It is, perhaps, a little surprising that mumps do not act very detrimentally upon the pregnancy, seeing that there is a considerable tendency for the parotitis to be associated with inflammation of the genital organs—ovaritis in woman, orchitis in man. The existence of pregnancy does not seem to render the patient more liable to ovaritis than usual, however, and the pregnancy often continues undisturbed.

The Effects of Diphtheria upon the Pregnant Woman.

The pregnant state confers no immunity to infection by diphtheria, and the disease appears to have a particular virulence in the case of pregnant women. There was a discussion upon the subject in the *Lancet*[28] in 1905, and Dr. Chambrelent and Dr. Michelean[29] have collected together a number of cases in Bordeaux. The statistics available are open to the objection that they are based upon cases taken from the literature, and not upon a consecutive series of unselected cases. Nevertheless, two things seem clear: first, that the diphtheria is particularly prone to attack the larynx in these cases, as in children, rather than the fauces, as in other adults;

secondly, that if antitoxin is not employed the mortality is very great. Of Dr. Chambrelent and Dr. Michelean's cases there were 12 who received no antitoxin, and 6 of them died, a mortality of 50 per cent. All their cases in which serum was given recovered. Mr. A. E. Kennedy[30] points out that even the giving of antidiphtheritic serum early will not save every such case; nevertheless, the proportion of recoveries is so much greater when serum is used early than when it is not that it should always be given at the earliest possible moment to a pregnant woman who has diphtheria.

The Effects of Small-pox upon the Pregnant Woman.

The effects of small-pox upon pregnancy have been closely observed in an epidemic during which there were opportunities of watching 432 consecutive cases in women under 50, 80 of whom were pregnant.[31] Of the latter, 15 per cent. died, whilst the mortality amongst the non-pregnant women was 11 per cent. The prognosis is, therefore, rather worse when the woman is pregnant, though not so much worse as might have been expected. The statistics are here, but I need not read them. In the 80 pregnant cases confluent small-pox was seen in 4 and haemorrhagic in 6; all 10 died. In the 352 non-pregnant cases the confluent form was observed in 3 and the haemorrhagic in 11; 2 of the confluent cases recovered. Two pregnant women died, though their small-pox was of the mild type. Of the primiparae, 9 per cent. died; of the multiparae, 17.25 per cent. The general impression during the epidemic was that there was a tendency for the pregnant women to suffer from a severer type of the disease than the others. The prognosis as regards the child is grave. Of the 80 cases, 23 aborted or had premature delivery; 16 other children were delivered alive in cases where the small-pox was in progress—8 at term and 8 prematurely; only 3 out of the 16 children lived longer than six months. In 2 cases the small-pox eruption was present upon the child at birth.

Cholera and Pregnancy.

Cholera is fortunately of rare occurrence in European countries, but occasionally there are epidemics such as that at Hamburg. Schütz[32] published a complete report of the influence of cholera upon menstruation, pregnancy, labour, and childbed, in the annual report of the Hamburg State Infirmary at that time. He treated 2,500 adult females during the epidemic, and found that cholera shows a marked tendency to affect the uterus. In the cramp stage of the disease uterine bleeding occurs in one-third of the non-pregnant cases. It is not surprising, therefore, that the effects of cholera upon pregnancy are disastrous. One hundred and fifteen of the patients were pregnant at the time they were taken ill with cholera; and Schütz puts this disease upon a level with small-pox in the way it is almost certain to provoke interruption of pregnancy. Kovalsky[33] finds the same to hold good in Russia, where over 80 per cent. of the pregnancies come to an untimely end in cholera patients. The prognosis as regards the mother, bad as it is in many of the cases, is not much worse in pregnant than it is in non-pregnant persons, particularly if the mother is taken ill when the pregnancy is not advanced. There is nothing to be gained by advising steps to be taken to terminate the pregnancy; indeed, convalescence is greatly impeded during the puerperium, and the risk of sepsis is greatly increased, so that the pregnancy should be allowed to continue if it will.

Plague and Pregnancy.

The above remarks concerning cholera apply with equal force to plague. Pregnant women show no particular immunity to this disease. The prognosis as regards the mothers is no worse than it is in non-pregnant patients, but the disease terminates the pregnancy in the great majority of cases. Dr. B. H. F. Leumann[34] records some instances in which the mothers recovered exceedingly well, but there seem to be fewer statistics in regard to the effects of plague upon pregnant women than there are concerning cholera.

Malaria and Pregnancy.

The effects of malaria upon pregnancy are necessarily variable, both on account of the varying severity of the malarial attacks in different patients and in different climes, and also because the immediate surroundings of the patient are so very diverse in different parts of the tropics. It is not easy, therefore, to summarize them in any but quite a broad way. There are papers by Italian observers[35] upon the subject and a few in English, notably one by Mr. F. H. Edmonds[36] of Demerara. The general conclusions which may be drawn are that malarial cachexia has almost no influence upon pregnancy and its course; that in mild cases of intermittent malaria pregnancy usually continues normally to term notwithstanding the ordinary attacks of fever in the mother; that in cases where the maternal temperature reaches 104° F. during the attacks abortion takes place in a large proportion of cases; whilst in the bilious remittent type of the disease not only is the pregnancy almost certain to terminate prematurely, but also the child, even if it has reached a viable age, is nearly always dead, and the prognosis as regards the mother is distinctly graver than it would be in a non-pregnant person with the same degree of malarial illness. There is a very great tendency for both the fetal movements and the uterine contractions to become excessive during the acute malarial attack. It has sometimes been urged that quinine should not be given in such large doses, or even at all, to a pregnant woman with malaria, on the theoretical ground that this drug itself increases uterine contractions and predisposes to abortion, but in practice it has been found by Mr. Edmonds and others that the greatest tendency to premature delivery is in the cases where no quinine is given, and it is emphatically urged by those who have had experience that quinine should be given all the more on account of the conjunction of pregnancy with the malaria. It actually makes the uterine contractions less than they are in cases in which no quinine is given, and by diminishing the pyrexia and lessening the frequency of the attacks not only is the prognosis as regards the mother's life greatly improved, but also the chances that the child will be stillborn are very considerably diminished. It may be incidentally remarked that the infant is sometimes born with a greatly enlarged spleen though there is not yet any absolute proof that the child's blood may actually contain the *Plasmodium malariae* at the time of birth.

Influenza and Pregnancy.

Influenza is a disease the severity of which is so variable in different seasons that its effects upon pregnant women in particular are difficult to gauge. The statistics show that the prognosis is much graver in times of widespread epidemic than it is in sporadic cases, but this applies equally to non-pregnant as to pregnant patients. Jacquennier,[37] as long ago as 1837, came to the conclusion that influenza was no more dangerous to pregnant women than to anybody else. The type of the disease was different in those days, however, from what it is now, and Cazeaux regards it as likely to be detrimental to the child. The weakness that is left after the acute phase is past is apt to last even longer in the pregnant woman than it is in other persons, and therefore even if the pregnancy does not come to an untimely ending the child is very apt to be born with deficient vitality and a tendency to die young. Lambinon[38] regards the bronchitic or pneumonic form of influenza as the most grave as regards both the mother and the child; but all observers agree that nothing is to be gained by interfering with the pregnancy, and the treatment should be, first, prophylactic in times of epidemic; and, secondly, that of extremely careful medical supervision should the disease be contracted in spite of all precautions taken to avoid it.

During an epidemic of influenza in Paris M. Bar and M. Boullé[39] carefully watched the effects of the disease in 40 pregnant women. One of these had the nervous, 2 the gastro-intestinal, and 37 the respiratory form of the disease. Four of the latter developed influenzal pneumonia, 2 recovering slowly after delivery, 1 dying a few hours, and 1 on the third day after the child was born. The prognosis as regards the mother is, therefore, grave in the pneumonic type of influenza, but as regards the course of the pregnancy itself these observers came to the conclusion that it was not affected even if the influenza was severe.

Lobar Pneumonia during Pregnancy.

As regards ordinary lobar pneumonia in a pregnant woman, exclusive of pneumonia developing during the puerperium, the cases that have been in Guy's Hospital point to the following conclusions:—*1. If the pneumonia occurs early in the pregnancy*, the prognosis as regards the mother is little, if any, worse than it is in other patients of the same age. As regards the pregnancy, there is a probability that abortion will take place in about one-third of the cases, whilst in two-thirds of the cases there is a likelihood not only that the mother will recover completely, but also that the child will be born living and healthy at term. *2. If, on the other hand, the pneumonia develops during the second half of pregnancy*, the probability is that the latter will be then terminated in two-thirds of the cases, and the chances of the mother surviving will be greatly diminished, nearly half the patients dying if the pneumonia sets in after the sixth month. In other words, the more advanced the pregnancy the greater is the probability of an expulsion of the fetus and the graver the prognosis for the mother. Dr. Hirst[40] found that out of 43 cases of lobar pneumonia in pregnant women, 28 were less than six months pregnant and of these 11 aborted; of the 15 who were more than six months pregnant 10 aborted, and of these 15 mothers 7 died.

The question might be asked: Seeing that the prognosis as regards the child is in any case grave, might it not be wise to counsel termination of the pregnancy for the mother's sake if pneumonia sets in? The answer is definitely, No. Matton[41] records that out of 38 cases of pneumonia during pregnancy labour was induced in 18, and 9 of these patients died—a mortality of 50 per cent.; whereas of the 20 cases left to themselves only 1 died. These figures are not very new, and in interpreting them it must be remembered that labour would probably be induced chiefly in the worst cases, so that the high mortality cannot be entirely attributed to the treatment; but it is clear that the chances of the patient's recovery are at any rate not increased by interfering with the pregnancy, so that the right course to pursue is to treat the patients exactly as if they were not pregnant, unless Nature itself makes obstetric assistance necessary.[42]

It is wonderful how much illness a patient, even though she be pregnant, can pass through and yet recover from. Dr. Francis Hawkins,[43] for instance, records a case of a lady, aged 35 years, who, when four months pregnant, developed double basic pneumonia, followed by endocarditis, severe bronchitis, acute dilatation of the heart, and finally by empyema. The pregnancy continued up to the sixth week after the onset of the illness, and had it not been for the empyema it would apparently have continued to term. The empyema was treated in the usual way, by rib resection, and ultimately, after a long illness of extreme severity, the patient got perfectly well.

Another case[44] illustrates the possibility of good results in spite of a grave prognosis. The patient was 38 years of age, and when eight and a half months pregnant she was seized with lobar pneumonia in the left lung. She was extremely ill. The crisis came on the seventh day, but very shortly afterwards she was as dyspnoeic as ever and the temperature rose again. A week after the crisis pus was located in the left pleural cavity and 34 oz. of it were drawn off by aspiration. It was hoped that rib resection might be avoided, but three days later it was necessary to give chloroform and drain the empyema. The patient was now at full term, and a few hours after the operation a strong healthy child was born, labour being easy and convalescence uneventful.

The pneumococcus may cause other lesions than pneumonia in a pregnant woman, but there is little evidence to show that the association is not due to chance. Vinay,[45] for example, records the case of a woman who, having suffered from great gastric irritability throughout her pregnancy, developed multiple subcutaneous abscesses during the seventh month. The pus gave cultures of pneumococci. The patient made a long struggle, but ultimately died nineteen days after delivery. There was nothing in this case to show that the pregnancy was in any way directly concerned as a causal factor in the pneumococcal infection.

Addison's Disease and Pregnancy.

We may now pass on to quite a different class of illnesses in the mother.

Addison's disease in conjunction with pregnancy is necessarily rare. There seem to have been only two cases of the kind in Guy's Hospital in the last 20 years, and both patients died. It is always very difficult to give an accurate prognosis in any case of Addison's disease, patients often dying almost suddenly when there has been no objective alteration in their general state for months previously. Consequently it is not possible to say that it was the pregnancy that hastened the end in these two cases. Nevertheless, the impression left upon one's mind is that the added strain of pregnancy was the immediate cause of death, and that pregnancy is therefore a very bad thing for a patient who has Addison's disease.

There is another point to mention, and that is the possible difficulty in diagnosis. Pregnancy itself may cause considerable increase in the pigment of the patient's skin, and the symptoms of weakness, vomiting, and even syncope may be attributed to the pregnancy itself in a case in which the pigmentation is not extreme, and in which the buccal mucosa has not been examined in a good light.

The two cases mentioned above were so similar to one another in most respects that the following notes of one of them may be taken to apply to both. The patient was 40 years of age, had had eleven children, the last two and a half years previously, and she was now five and a half months pregnant. She had begun to suffer from weakness, syncopal attacks, and undue pigmentation of the skin and buccal mucosa six months before she became pregnant, and Addison's disease had been diagnosed. At first the symptoms were not greatly increased by the pregnancy, but from the fourth month onwards the patient became distinctly weaker; attacks either of vomiting or syncope became so frequent that obstetric measures for terminating the pregnancy were adopted in the middle of the sixth month. The pulse-rate rose rapidly after delivery, and the heart's action became very feeble. There were several ill-defined convulsive seizures, and death occurred two days after labour. It may be mentioned that treatment by adrenalin had been pursued. At the necropsy both suprarenal capsules were typically caseous, and there was no other macroscopic disease.

Leukaemia and Pregnancy.

Turning now to leukaemia, the cases may be divided into the acute and the chronic; and these are almost synonymous with the lymphatic and the spleno-medullary varieties. The acute form ends so rapidly in any case—usually within a few months of its first symptoms—that pregnancy is not at all likely to arise in a person who already has the disease. Acute leukaemia may, however, develop in a woman who is pregnant, and the summary of what then happens is that, bad though the prognosis is in other cases, the conjunction of pregnancy with the disease makes it still worse. Whether the association is accidental or whether something anomalous about the pregnancy may perhaps cause the leukaemia, it is hardly possible to say; but, judging from the rarity with which the two are associated, their conjunction would seem to be accidental. Hilbert[46] records the case of a woman, aged 37 years, who had been perfectly well up to the eighth month of her eighth pregnancy. She then complained of severe headaches, diarrhoea, fever, and gingivitis. Rhinitis and purpura followed, and blood examinations indicated typical lymphatic leukaemia. The pregnancy continued to the ninth month, when a macerated child was born spontaneously. The mother died from complete exhaustion ten hours after the labour and a little more than a month from the onset of her symptoms.

Spleno-medullary leukaemia, on the other hand, may last for three or four years after the first symptoms lead to its diagnosis, and pregnancy may arise in a patient who is already known to have the disease. Dr. Herman[47] has recorded one such case and has collected altogether seven undoubted others. Owing to the enlarged spleen pregnancy gave much more abdominal distension than normal; in some cases, indeed, it is wonderful how both the huge spleen and a full-term pregnancy can be included in the same abdomen. It is not surprising that there is a great tendency to premature delivery. The

puerperium is a very dangerous time, some of the patients dying very soon after the termination of the pregnancy, though if the patient survives the particularly dangerous time that immediately follows delivery considerable temporary improvement in her general health is to be expected. Dr. Herman concludes that pregnancy does nothing but harm to a leukaemic patient, and diabetes mellitus itself. Nevertheless, seeing that pregnancy thus predisposes to glycosuria, and seeing that, if they can become pregnant, the patients who are suffering from this complaint must necessarily be comparatively young, and therefore predisposed to the worst form of diabetes mellitus, it might well have been expected that pregnancy would be very harmful if it occurred in a patient already suffering from diabetes mellitus. It is difficult amongst hospital cases to be sure that the glycosuria has antedated pregnancy, and only two clear instances of the kind have occurred in Guy's Hospital lately. One of these patients was a very stout woman, aged 36 years, whose pregnancy went naturally to term, although her urine was loaded with sugar, and also contained both diacetic acid and acetone in abundance. The other was a younger woman, aged 23 years, whose urine also contained sugar, diacetic acid, and acetone, and whose pregnancy ran a perfectly normal course, ending in the birth of a healthy child at term. In both these cases there was a large excess of liquor amnii; this has been noticed by several observers as being almost characteristic in the case of diabetic mothers, and the amniotic fluid often contains sugar.

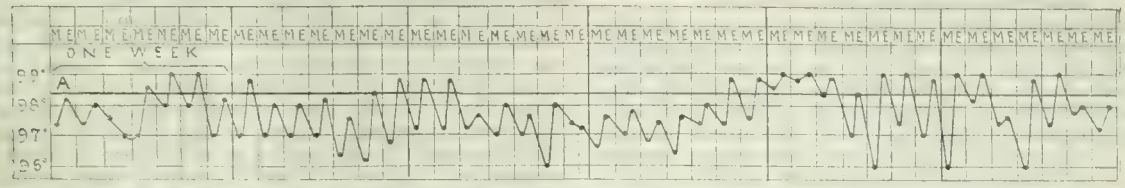


Chart 3.—Chorea and pregnancy. Movements violent. No pyrexia. Recovery. A, On admission.

recommends that it should be artificially terminated as soon as possible.

It would be very interesting to know whether the children of leukaemic patients are ever born with enlarged spleens similar to the enlargement of that organ sometimes found in the offspring of parents suffering from malaria.[48] It would also be interesting to know what effects upon the pregnancy repeated applications of the *x* rays to the maternal abdomen would have. There are no statistics upon the subject. Evidence is accumulating to show that *x*-ray applications may be very efficient in diminishing the size of the spleen and in ameliorating the symptoms for the time being in cases of splenomedullary leukaemia. If it were known that their application to the splenic region in the mother had no ill effect upon the child, it might be well to advise leaving the pregnancy to run its course whilst the leukaemia was simultaneously being treated with the *x* rays. In the absence of evidence either way, however, it would seem likely that the *x* rays would do harm to the child, in which case, rather than risk the mother's life unnecessarily, the right course to advise would seem to be to have the pregnancy terminated as soon as possible, and then to adopt the *x*-ray treatment if it still seemed good to do so.

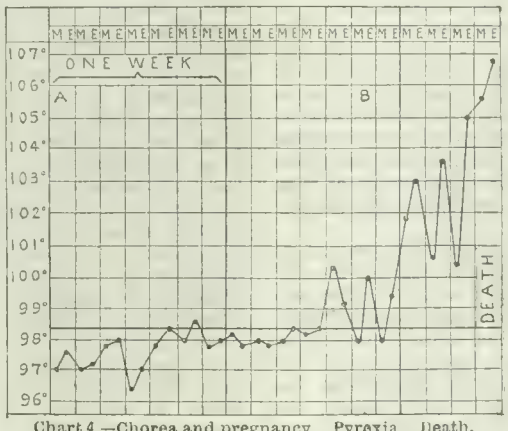


Chart 4.—Chorea and pregnancy. Pyrexia. Death. A, On admission. B, Accouchement forcé.

DIABETES MELLITUS AND PREGNANCY.

Diabetes mellitus in conjunction with pregnancy has many points of interest. There has been much discussion as to the nature of the reducing bodies that are often present in the urines of pregnant women, especially in the later months. There is no doubt that lactose is commonly present, both towards the end of pregnancy and during the puerperium; but it seems equally clear that a considerable proportion of pregnant women have actual glycosuria.

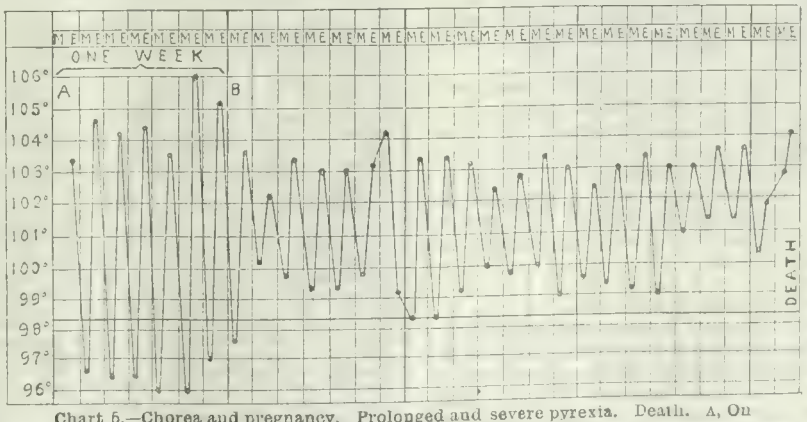


Chart 5.—Chorea and pregnancy. Prolonged and severe pyrexia. Death. A, On admission. B, Spontaneous premature delivery.

Saleim,[49] as the result of careful examinations, states that two-thirds of all pregnant women pass increased quantities of glucose in this way. This glycosuria of pregnancy causes no symptoms, however, and it disappears without treatment. It seems, therefore, to bear no relationship to

It is not every case that passes through pregnancy with as little trouble as the above. Ludwig,[50] for example, records a severe case in which a woman, aged 42 years, was in her ninth pregnancy. Marked diabetes mellitus had existed for two and a half years, but she had reached the last month of this pregnancy without any trouble beyond pruritus vulvae. The abdomen now became suddenly larger and the patient was admitted to hospital very ill, semi-conscious, with abundance of sugar, diacetic acid, and acetone in her urine. Labour was induced, nine pints of liquor amnii escaping. The fetus was in an advanced state of maceration. The patient was very ill for two days afterwards, but she slowly recovered, though her diabetes persisted as before. It is interesting to note that the hydramnios occurred suddenly in this case; and it is also noteworthy that the fetus was macerated, for it may have been on this account that the mother was so ill.

The general conclusions that other recorded cases[51] point to are: That diabetes mellitus is by no means incompatible with pregnancy; that cases of moderate severity are not made materially worse by pregnancy; and that there seldom seems to be any reason for interfering with the pregnancy.

Some observers[52] have even stated their opinion that pregnancy, instead of making the diabetes worse, actually

ameliorates it for the time being—a point of great interest when one recalls the effects of typhoid fever, for example, in similar cases. A patient with diabetes mellitus may develop typhoid fever, and during that illness the glycosuria may entirely cease, returning again when the fever subsides.

DIABETES INSIPIDUS AND PREGNANCY.

Diabetes insipidus is a condition which may actually arise during pregnancy as a result of a severe mental shock at that time. Should it do so, it seems that it does not go away again after the child is born. It may also have existed previously to pregnancy. The chief trouble to the patient is the fact that when the uterus enlarges there is less room for the bladder; micturition becomes annoyingly frequent and acute retention of urine is apt to occur if micturition is postponed. Sleep may become very broken in consequence of this and also because of the constant necessity for drinking water or other liquid. The pregnancy itself runs no abnormal course, the children may be perfectly healthy, and there is no marked tendency to hydramnios with its inordinate abdominal distension such as occurs in diabetes mellitus.

There seems to have been no case of extreme diabetes insipidus in association with pregnancy in Guy's Hospital, but in one medium case the patient, a very stout woman, was passing up to 15 pints of limpid urine daily, of specific gravity 1003. The water alone was increased, the total solids being normal. In this instance the polyuria and polydipsia had not been present until the middle of the fifth pregnancy, when these symptoms came on suddenly after a severe fright. If the patient failed to micturate directly the desire came she developed retention of urine, necessitating the use of a catheter, and on some such occasions the bladder contained as much as four pints at a time. The child was born normally, but the polyuria and polydipsia persisted.

Cases of diabetes insipidus in association with pregnancy have been recorded by Bennett, Matthews Duncan, Esterle, Merbach, Kleinwachter, Vinay,[53] and others. The two following may be mentioned in particular because they are instances of diabetes insipidus developing from mental shock and because they show that although the diabetes insipidus does not seem to be in itself dangerous the patients are apparently more liable than others to contract, and die from, intercurrent maladies of the lungs.

One patient was a woman, aged 32 years, who kept a farm. When she was pregnant a flood destroyed all her crops, and immediately after this severe mental shock, polydipsia and typical diabetes insipidus set in. The patient passed up to 5¼ gallons of urine daily, yet became pregnant for the second time. During the pregnancy the polyuria abated somewhat, the least quantity of urine passed in one day being 9 pints. Delivery was normal; thereafter the urine at once increased in quantity again, but the patient left the hospital otherwise in good health. Shortly afterwards, however, she died from double pneumonia.

The second patient was a woman, aged 26 years, who was four months pregnant for the fifth time when a fire destroyed her house and all she possessed. Diabetes insipidus set in directly, 20 pints of almost pure water passing daily; the total solid constituents of the urine were normal. Labour occurred normally at term, but the child was sickly and died in two weeks. The patient continued to have polyuria; she developed phthisis and died 19 months after the fire.

MYXOEDEMA AND PREGNANCY.

There do not seem to be many recorded cases of pregnancy in patients suffering from myxoedema. Apparently this disease is not incompatible with conception, at any rate in persons who are receiving thyroid treatment. In the one case observed by me the pregnancy had no ill-effect upon the mother's condition, and if it had not been for the accident that her pelvis was much contracted, there seems to be no reason why she should not have borne children naturally. As regards the child, the main danger is that it will have a deficient thyroid gland and be a cretin, unless upon the first suspicion of this, treatment with some preparation of thyroid gland is begun. The patient in question was 40 years of age and enormously stout. She had been receiving thyroid treatment for her myxoedema for over two years. Her pregnancy went to full term and natural labour came on, but there were great obstetrical difficulties which need not be recounted. The recuperative power of the patient, notwithstanding her myxoedema, is evidenced by the fact that she ultimately got quite well in spite of long-continued sapraemia and a "white" arm due to thrombosis of the right axillary vein.

There is no time left for the discussion of a number of other conditions that one would like to enter upon, such as the effects of pregnancy upon Graves's disease, upon ordinary goitre, upon malignant disease, upon phthisis, upon heart disease, upon chorea, and upon many other things which are full of interest. The varieties of jaundice that may occur during pregnancy might form a chapter by themselves. There is a whole group of cases in which a pregnant woman dies and nothing very abnormal is found at the *post-mortem* examination to account for her death. It is with regret that one is obliged to leave out these for want of time. My views have already been expressed about some of them elsewhere,[54] however; and if I may be pardoned for making one more remark it is in connexion with chorea gravidarum.

CHOREA AND PREGNANCY.

Mr. H. T. Hicks and myself[55] have expressed the view that "'simple' chorea gravidarum is to fatal chorea gravidarum as 'simple' endocarditis is to fungating endocarditis," and that the violence of the choreic movements is not of nearly so great importance in estimating the prognosis as is the presence or absence of pyrexia. Out of 29 consecutive cases of the disease at Guy's Hospital, 26 patients recovered and 3 died. In none of the 26 cases of recovery was there any material pyrexia, although in some of the cases the movements were very violent; in the cases that died, on the other hand, there was marked pyrexia in every instance. There will doubtless be exceptions, but, as a broad rule, we suggest that, provided the temperature remains almost normal, as in Chart 3, the prognosis is good even if the movements are very violent; whereas if the chart shows marked pyrexia, uninfluenced by salicylates, as in Charts 4 and 5, the prognosis is very grave, provided no obvious cause—such as pleurisy, acute tonsillitis, and the like—can be found to account for the fever. It will be very interesting to see whether other observers will find this to hold good in future cases that may come under their notice.

I thank you, Mr. President and gentlemen, for listening so patiently to these lectures, and I will conclude by reverently recalling to your thoughts the name of their founder, Dr. Goulston.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

CALCIUM CHLORIDE IN MELAENA NEONATORUM.

CASES of melaena neonatorum are sufficiently rare to justify the following report. On March 29th I was called at 10 a.m. by a midwife to see an infant she had delivered on March 27th. I found the clothes stained with blood, and saturated with a dark, treacly fluid, and from the anus bright blood was issuing. The child appeared pale and collapsed, previously having been, I was told, the ruddy hue usual to infancy. There was no vomiting or jaundice. I paid two further visits during the day, and found the discharge still continuing, but of a brighter colour. On my second visit I took with me a solution of calcium chloride, a teaspoonful of which was given every half hour (the child during the following thirty-six hours taking 20 grains). On the following morning the discharge was less in amount, and the child appeared better. On the third day the discharge stopped, and the child made a rapid recovery. The child took the breast well throughout. The midwife informed me that the labour was normal in all respects. There was no sign of sepsis in mother or child, and the latter appeared healthy in other respects. The cord was quite healthy, coming off on the fifth day. I certainly think that the calcium chloride had a beneficial effect in this case, as when first seen the prognosis seemed anything but good.—I am, etc.,

Worcester. S. C. LEGGE, M.R.C.S., etc.

A CASE OF GASTROSTOMY.

DR. BERTRAND DAWSON, in the JOURNAL of May 9th, makes the statement that "Gastrostomy prolongs life, but prolongs misery also." I quite agree that to perform the operation when the patient can swallow liquids is not good practice. The following case shows that the operation can prolong life and allows the patient to die a less painful death than if Nature had been left to herself. W. C., aged 61, came to me on August 24th, 1907, complaining of difficulty in swallowing. On several occasions bright red blood was thrown up. There was no evidence of aneurysm and I concluded that the case was one of cancer of the gullet near the lower end. The patient rapidly lost flesh, and, to satisfy his relatives, I sent him to a consulting physician in Manchester. He agreed with the diagnosis and advised gastrostomy, although he pointed out that the relief given was so temporary that many physicians did not strongly advise their patients to submit to the operation. Within a few days the patient could with the greatest difficulty only swallow about a pint of milk a day, and, I believe, for three days before the operation, which was done on November 22nd, 1907, he could not swallow water. Gastrostomy was performed in the Blackburn and East Lancashire Infirmary by the method of E. J. Senn. The object of the operation is to invert a cone of stomach wall into the cavity of the organ, a No. 10 soft catheter passing through the apex of the cone. The principle is the same as that of a safety ink bottle. The patient can be fed at once, and there is no regurgitation if the operation is properly done. There was considerable shock after the patient left the table, but he rallied and went home on December 1st, as he seemed likely to die, and asked to be allowed to go home. Instead of dying, he improved so much in appearance and strength that he was able to go out of doors, and even attended meetings of the board of a philanthropic society of which he was a member. There was no regurgitation, and he was able to take and digest four or five pints of milk and two or three eggs daily, and he could not be said to be in anything like so miserable a state as he was before operation. He died rather suddenly on May 7th, 1908, having been confined entirely to bed for about a week. One case is of no value if for every one which does well a dozen do badly, but I think the operation has a sphere of usefulness in picked cases, and that this operation of Senn's gives the best results. Mr. Moynihan, in his recent book *Abdominal Operations*, gives his reasons for this opinion: it is simple, speedily performed, effects a valvular opening and does not sacrifice any part of the stomach wall.

ROBERT Y. AITKEN, M.D., F.R.C.S.,
Surgeon, Blackburn Infirmary.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

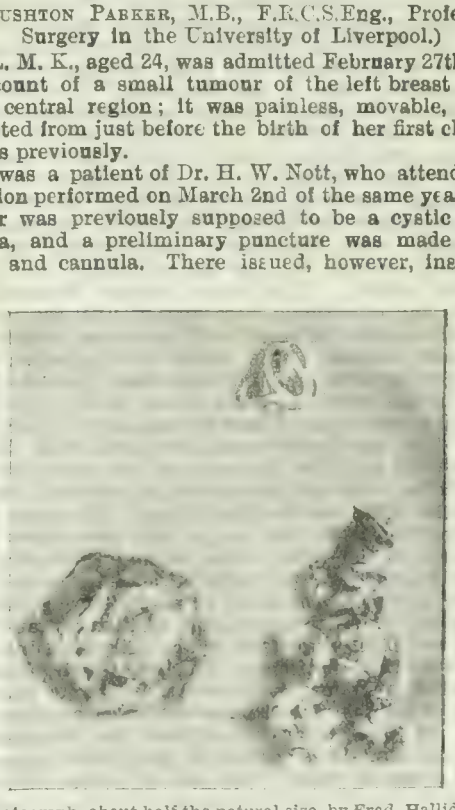
LIVERPOOL ROYAL INFIRMARY.

A CASE OF GALACTOCELE.

(By RUSHTON PARKER, M.B., F.R.C.S.Eng., Professor of Surgery in the University of Liverpool.)

MRS. L. M. K., aged 24, was admitted February 27th, 1905, on account of a small tumour of the left breast in the upper central region; it was painless, movable, elastic, and dated from just before the birth of her first child six months previously.

She was a patient of Dr. H. W. Nott, who attended the operation performed on March 2nd of the same year. The tumour was previously supposed to be a cystic adenofibroma, and a preliminary puncture was made with a trocar and cannula. There issued, however, instead of



Photograph, about half the natural size, by Fred. Halliday, museum assistant.

any thin liquid, an intensely white, inspissated, milky substance which was caught on a plate in a coil, as shown in the photograph. On cutting down upon the growth, it was found to be a single cyst filled with similar material, and was accordingly dissected out. A portion of the white milky substance, and the cyst itself containing the remainder, were separately put on the plate, and are shown in the illustration. The wound healed somewhat slowly, and the patient went home in four weeks.

REMARKS.—The case derives its chief interest, in addition to its rarity, from the illustration. In spite of the rarity, much has been written about true galactocele, which is due to the obstruction of a duct during lactation. Milk is found in other morbid conditions of the mammary gland, mostly tumours, but the term "galactocele" is not applicable to them.

REPORTS OF SOCIETIES.

LIVERPOOL MEDICAL INSTITUTION.

Mr. T. H. Bickerton, President, in the Chair.

Thursday, April 30th, 1908.

Pericolitis Sinistra.

In a paper on chronic colitis, Dr. J. Lloyd Roberts expressed an opinion that pericolitis sinistra was more common than was generally thought and deserved more attention. It might occur in an acute or chronic form. The acute was usually circumscribed, and arose from ulceration of the mucous membrane of the colon, which might be stercoral, traumatic, tuberculous, dysenteric, typhoid, or malignant in character. It spread through the walls of the bowel and led to circumscribed tumours outside and in contact with them. These tumours had often been mistaken for malignant growth. Occasionally the inflammatory product spread round the bowel and caused obstruction. These tumours were capable of resolution under appropriate treatment, as occurred in two cases of which details were given. Occasionally they suppurated and formed abscesses, which burrowed along the length of the bowel. Two cases were mentioned in which abscesses were diagnosed and opened, one near the splenic flexure and one in relation to the iliac colon. Rarely peritonitis might occur from bursting of the abscess or extension from the underlying ulcer. The chronic form was usually diffuse, and arose from spread of inflammation from neighbouring organs or the mucous lining of the bowel. The latter form, where the inflammation infiltrated through and involved all the coats of the bowel, generally occurred in the ascending colon or the iliac colon. The latter situation was most frequently affected, and the disease had been known as perisigmoiditis or pericolitis sinistra. Of this form, the author had met with 9 cases, 4 in men and 5 in women, 6 of the 9 occurring between the ages of 21 and 26. The clinical history and the physical signs were described. He showed that they were all preceded by long-continued constipation with retention of faeces within the colon. The faecal masses became dry and rough, and set up irritative colitis. The walls became distended and pouches and diverticula were formed. All the layers of the walls became infiltrated and lymph was deposited on the serous surface. This tended to form adhesions to neighbouring structures and sometimes caused obstruction. In the early stage the bowel, when emptied, felt firm and of less diameter than normal, and was easily rolled about. This was the hypertonic or spastic type. Later on the muscular coat lost its tone and the bowel felt like a thick ribbon, with still thicker edges, soft and doughy to the touch. This was the atonic stage. The cause of this condition lay in a late origin and narrowness of the mesentery of the pelvic colon, owing to which the bowel became kinked near the bony brim of the pelvis. The medical treatment consisted in administering intestinal antiseptics, external application of mercury and belladonna, and, most important of all, daily douching of the colon with hot antiseptic douches, which should be persevered with for many weeks. Patients should be warned of the risk of recurrence should constipation again occur. Dr. A. G. Gullan confirmed the statement that pericolitis sometimes resembled malignant disease, and quoted a case in point. The pain of colica sinistra was usually definitely localized over the sigmoid or ascending colon, and in only very rare instances was the pain diffuse. Mr. Keith Monsarrat considered that the worst cases of infiltrative colitis required some form of surgical treatment which gave rest to the affected part; without this they tended to persist indefinitely. The suppurative and adhesive types of pericolitis required surgical treatment. Dr. Blair Bell drew attention to pelvic peritonitis in women as a cause of the condition. Of the last 500 cases seen by him in the gynaecological out-patient room, 22 per cent. had pain in the left iliac fossa, and in one-third of these the cause had been ascribed to chronic constipation with trouble in the pelvic colon. In cases of abdominal section he was surprised to note how many had adhesions around this part of the bowel either from intrinsic or extrinsic causes.

Exhibition of Cases.

Mr. Colin Campbell read a case of *Abscess of the lung* following pneumonia successfully treated by intratracheal injections of izal. Mr. Campbell exhibited the patient, a male aged 42, who had been placed under his care by Dr. McNair of Manchester. The illness commenced with an attack of acute pneumonia on July 17th, 1907. On the fourteenth day a large quantity of pus was expectorated, and the acute symptoms were relieved. Pus continued to be expectorated freely; empyema was diagnosed, but exploration failed to find pus. His condition remained the same until October 29th, when he commenced the izal injections. He was bringing up 10 oz. of pus daily. At the end of a week he was taking 2½ oz. of 10 per cent. izal solution at each daily sitting. On December 16th he discontinued treatment, cured, having gained 21 lb. He had remained well since and followed his usual occupation. Mr. Rushton Parker related cases of completion of union by *Bone implantation* in ununited fracture. He grafted small pieces of bone removed from the ununited fragments between the ends, after removing all unossified material from between them. By thus planting minute grafts of living bone between the bared ends he was provided with a means of procuring reunion which was both easier and less deforming than wiring or other methods of suture, and less dangerous.

ROYAL SOCIETY OF MEDICINE.

Clinical Section.

Spontaneous Disappearance of Recurrent Carcinoma.

At a meeting on May 8th, Sir T. Barlow, President, in the chair, Mr. Watson Cheyne showed a woman, now aged 51, admitted to King's College Hospital, September, 1901, suffering from malignant disease of right breast. The tumour, situated in the centre of the breast, was 3 in. in diameter, and adherent to skin and pectoral muscle; there were numerous large glands in the axilla; others in the posterior triangle of the neck. On October 2nd, 1901, the usual extensive excision of the mammary gland, the axillary glands, and the fat and glands in the posterior triangle was done. The wound could not be closed, and skin grafting was performed on October 22nd. The wound was soundly healed on November 5th. The tumour proved to be carcinoma. Early in 1903 she returned with many small nodules in and under the skin of the right side of the thorax, and subcutaneous nodules of the upper part of the abdomen and elsewhere in the vicinity. These nodules were not examined microscopically, but Mr. Cheyne and his colleagues had no doubt they were of cancerous nature and represented diffuse skin infection. Further local operation was evidently useless, and oöphorectomy was suggested, but declined. In 1904 the lumps began to disappear soon after the menses ceased; the patient's health improved and her strength increased. She had taken no medicine, but had lived as before, only, in place of drinking ale, had used fresh lemons. Now there was no trace of any nodules or of any sign of recurrence of the disease.

Birth Palsy.

Sir T. Barlow and Mr. C. A. Ballance showed a child whose muscular reactions under chloroform, in 1903, showed that the right deltoid, biceps, brachialis anticus, coraco-brachialis, and supinator longus were totally paralysed. The brachial plexus was exposed by operation in 1903, and the fifth cervical nerve found ruptured just where it joins the sixth; reunion was effected by suture. The child was then taken to Hong Kong, and after four years' absence had returned, the paralysed muscles having quite recovered, though complete supination could not be voluntarily effected and the pectoralis major was shortened. Mr. C. H. Fagge said that Mr. Ballance's first diagram showed a lesion of the trunk formed by the fifth and sixth cervical nerves, whereas the second diagram, drawn at the operation, showed a mass of fibrous tissue on the fifth cervical nerve above the origin of the suprascapular nerve. Which was correct, as the supinators were reported not to have been affected? The speaker related 3 similar cases of his own, and asked if Mr. Ballance could give any time limit up to which nerve suture would prove beneficial. Mr. Ballance, in reply, said that the fifth nerve was not entirely affected, and that as long as a muscle acted to electrical stimulation so long was suture of the nerve likely to produce benefit. Mr. Lockhart Mummery had noted in cases of birth palsy a marked tendency for ankylosis to occur between the humerus and scapula as a compensatory effect. He

suggested that in inoperable cases such ankylosis at a favourable angle might be produced and the development of the scapular muscles encouraged.

Astereognosis.

Dr. PURVES STEWART showed a man, aged 50, who, without history of syphilis, after twelve years of advancing nervous symptoms, developed astereognosis, failing to recognize objects such as a watch-chain with the right hand, but succeeding with the left; he also had some aphasia, but no hemianopia. Mr. Ballance explored, on October 28th, 1907, the left parietal region, found the pia arachnoid thick and yellow over part of the left post-central gyrus, and removed the diseased area of meninges and subjacent cortex. The aphasia had since lessened, but the astereognosis was as before.

Gout showing Destructive Changes in Bone.

Dr. J. BARNES BURT exhibited two men and a woman, chronic sufferers from gout, in whom skiagrams showed necrosis of certain phalanges of the fingers. Sir DYCE DUCKWORTH said that the theory of Ebstein, that before a uratic deposit took place there must be necrosed condition of the bone, was incorrect. Gouty irritation provoked enlargement of bone quite apart from uric acid. When such deposits in cartilage were dissolved out the original structure of cartilage remained, it was not necrosed. Dr. POYNTON said that collections of biurate of soda were probably produced locally by chemical reaction, not by simple deposit from the blood.

Hair Balls.

Dr. G. F. STILL showed a girl, aged 9, who for five or six years had pulled out her own hair and eaten it. At length a tumour of the stomach was noticed, and she vomited almost daily. The bowels were regular. She became wasted and pale, but not acutely ill, and took very little food. Mr. Burghard did laparotomy, and removed the mass, which weighed 17 oz., and measured in its long axis 6 in., and was a cast of the stomach. A tail-like portion at the cardiac end extended 2 in. up the oesophagus.

ODONTOLOGICAL SECTION.

AT a meeting on April 27th, Mr. H. LLOYD WILLIAMS in the chair, the CURATOR exhibited some recent *Additions to the museum*, including specimens of tusks of female dugong, odontome in an antelope, jaws of a horse, and skull of lemur affected by "swollen head" and tumour of palate of twenty years' growth, apparently a fibroma undergoing malignancy. Mr. TRENTY showed models of a case of incomplete eruption of the molars. Mr. NORMAN G. BENNETT read a paper on the *Movements of the mandible*. He described how a wire framework had been made to attach to the lower teeth, and to carry two small electric glow lamps in a vertical plane parallel to the median plane. One lamp was immediately opposite the right condyle, the other opposite the sulcus below the lower lip. The subject had sat during experimentation with the apparatus, with his right side opposite a wall with a large sheet of paper pinned upon it, and a biconvex lens being interposed was so arranged as to focus the images of the lamps on the screen. In this way the paths of the condyle and symphysis during opening of the mouth had been obtained, and corresponding points for different positions of momentary rest marked on the paths. A diagram showing lateral movements of the jaw had been obtained by the subject sitting facing the wall. A demonstration was then given of the geometrical theory of the centre of rotation for plane motions. It was shown how for any such motions of translation combined with rotation two polygons and curves called "centrodes" could be derived, these "centrodes" being uniquely associated with the particular movement. The movement can be reproduced by rolling one centrode upon the other. Charts and models were exhibited illustrating the paths of the condyle and symphysis and the centrodes derived from these paths. It was argued that these means proved that for the ordinary movements of the mandible in opening and closing the mouth there was *no* fixed centre of rotation, and that the centre was constantly shifting its position, and its path might be marked out, starting behind and below the condyle, passing backwards and downwards, then forward, and finally upwards and forwards, finishing at a point a little below the condyle path. The general characters of this path as also the successive positions of the instantaneous centre of rotation were shown in a large wooden link-work mechanism based on mathematical calculations. The movement of the condyle and symphysis was demonstrated, and the instantaneous centre at any particular movement found at the point of intersection of two moving indicators. Other details in connexion with the correlative positions of the paths of the condyle and symphysis were referred to, and several interesting observations regarding lateral movements of the jaw made. The reader concluded by making some remarks on the bearing of his investigations on the question of an ideal articulator and the taking of "bites" for edentulous cases.

OTOLOGICAL SECTION.

AT a meeting on May 2nd, Dr. PETER MCBRIDE, President, in the chair, the following were among the exhibits: Dr. W. S. SYME: (1) A case of *Lateral sinus thrombosis* in which recovery took place as a result of operation; (2) a case of *Bezold's mastoid empyema* which discharged into the pharynx. Dr. DUNDAS GRANT in conjunction with Dr. PURVES STEWART: (1) A case of *Unilateral hysterical nerve deafness*; (2) a case of *Lateral sinus thrombosis* following chronic suppuration of the middle ear, in which ligature of the jugular vein was necessary. Mr. MACLEOD YEARSLEY: Specimens of *Necrosis of the labyrinth*, the sequestra consisting of part of the vestibule with the openings of the semicircular canal and of part of the promontory and cochlea. The patient, who was extremely ill before operation and suffered from vertigo and tinnitus, is now almost well again. Dr. E. FURNISS POTTER: A case of *Chronic eczema of the auricle and meatus* on each side; the hyperplasia was so great that the lumen of the auditory canal was almost completely obstructed and the auricle was markedly thickened, causing considerable deformity. Mr. HUNTER TOD: A case of complete *Atresia of the posterior nares*, with flattening of the nose externally and almost complete absence of the nasal septum. The condition was due to congenital deformity or syphilis, probably the latter. Dr. WYATT WINGRAVE demonstrated specimens, photographs, and diagrams illustrating his paper on the *Clinical pathology of aural discharges*, which represented the result of over five years' uninterrupted research work. The author pointed out the importance of obtaining as much information as possible from the character of the discharge, both from a bacteriological and cytological point of view. Such examination would be useful in determining whether the disease was acute or chronic, or whether the deeper structures were involved or not; in addition, the character of the epithelium would show what part of the middle ear was affected, and if of a cholesteatomatous nature. Further, a careful record of the bacteriological examination of a large series of cases in conjunction with the clinical symptoms might in the future considerably assist the surgeon in determining the question of operation and prognosis. Although cytology was still in its infancy, the author felt sure that it would soon be as justly appreciated as the examination of other discharges, such as sputum, blood, urine, vomit, faeces, and cerebro-spinal fluid, which were now so necessary to the clinician.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

R. MARCUS GUNN, F.R.C.S., President, in the Chair.

Thursday, May 7th, 1908.

THE RELIEF OF PTOSIS.

DR. A. FREELAND FERGUS (Glasgow), in a paper on the relief of ptosis, divided the possible operations into several classes: (1) Those which, like the procedures of Dransart, Pagenstecher, and Hess, depended upon the production of cicatricial contraction. (2) Procedures which left ligatures permanently embedded in the tissues, as in the operations of Mules, Worth, and Harman. (3) Attempts at advancement of the occipito-frontalis, such as the author had previously described, or attaching the superior rectus to the upper lid; others had advanced what they believed to be the levator palpebrae superioris. (4) Plastic operations, such as that described by Pannas. He greatly

objected to the unsurgical method of those operations which depended upon cicatricial contraction with sutures, for unless they became septic they were useless. He preferred the advancement operations. Recently he had had marked success by a new method, which consisted of shortening, rather than excision, of a large portion of the tarsus. A portion of skin and tarsus was removed between two incisions in the lid, and the strong fibrous tissue which comes down from the occipito-frontalis was attached to the portion of the tarsus remaining with absorbent sutures. The skin was then closed with superficial sutures. He showed several photographs of patients who had been treated with this method with excellent results.

CONGLOMERATE TUBERCLE.

Mr. ERNEST CLARKE described a case of conglomerate tubercle of the choroid treated with tuberculin. A mass was seen in the choroid which raised the retina to the extent of 3 D. There was keratitis punctata, but no swelling of the disc. There was no history of tubercle or syphilis, nor were there any other lesions to be found elsewhere. The patient, a boy, was treated with Wright's tuberculin, and also mercury and iodide were given. Six months after the commencement of treatment things began to improve, and after a year treatment was stopped, and the eye recovered with vision of $\frac{6}{9}$, and but for the scarring of the retina and choroid, no sign of the tumour remained. The case now resembled others shown by Stephenson. The opsonic index was low at first, but subsequently it rose. The boy was now in perfect health. He described also another somewhat similar case. Mr. JESSOP doubted the diagnosis, as there was no other tuberculous lesion in the body.

ARTERIO-VENOUS ANEURYSM.

Mr. GEORGE MACKAY (Edinburgh) gave details of a case of arterio-venous aneurysm which he had shown a year ago to the society, and which was due to a severe injury to the head. Shortly after the previous exhibition the common carotid was ligatured, and the result was a perfect cure. Since August last the patient had been able to follow his occupation as a coachman. The squint which had followed this injury had been cured by operation.

PHLYCTENULAR KERATITIS.

Mr. MACKAY also described a case of phlyctenular keratitis with pustular episcleritis which had resisted ordinary treatment and was constantly recurring, while the attacks became more severe. The opsonic index for tubercle did not show any conclusive evidence of the disease, neither were tubercle bacilli found. Treatment was then commenced with antistaphylococcic vaccine. Under this treatment improvement took place, but recurrence generally took place if too long an interval was left between the injections. The opsonic index gave valuable information, but apparently prophylactic doses were needed although the patient appeared to be in perfect health. A detailed description was given of the opsonic index found and of the dosage employed.

GLASGOW MEDICO CHIRURGICAL SOCIETY.—At a meeting on May 1st, Dr. WALKER DOWNIE, President, in the chair, Dr. JAMES ADAMS described *Atrophic rhinitis* as the end-stage of hyperplastic purulent rhinitis—that is, of a septic process in which infiltration of round cells went on to fibrosis, and in which there was already in the hyperplastic stage metaplasia of the epithelium. In support of this view he adduced the frequency with which purulent hyperplastic rhinitis occurred in the children of mothers suffering from atrophy and ozaena, the histological changes of atrophy in these cases and the same changes in the turbinals of cases of simple chronic sinusitis, and also the frequency (over 50 per cent.) of sinusitis in both stages of the disease. Sinusitis should be suspected in every case and negatived only after repeated careful examination. Sphenoidal sinusitis was very frequent with atrophic pharyngitis. Hypertrophic rhinitis was histologically quite distinct, and did not go on to atrophy. Ozaena was merely an accidental symptom. Treatment by paraffin injection and by ionization gave good results, but the best treatment was that of the hyperplastic stage in the young and the early treatment of sinusitis. Mr. J. H. PRINGLE showed a patient on whom he had performed the interilio-abdominal amputation for *Sarcoma of the ischium*. The patient had stood the shock of operation well, which was partly due to the fact that the operation was done under spinal analgesia by means of stovaine. The stump was now firmly healed and there was no hernia. Drs. T. K. MONRO and L. FINDLAY showed preparations from a case of *General tuberculosis* with diffuse spinal meningitis and tuberculous nodules in the medulla and cord. An extensive ascending degeneration had resulted from a nodule in the lumbar region and the meningitis. The nodule in the medulla had almost entirely destroyed the left olivary nucleus, and had affected to a slight degree the pyramidal bundle on that side. The fact that the mischief was limited to the olivary nucleus and its immediate neighbourhood rendered the case eminently suitable for the study of the course of the much-debated cerebello-olivary fibres. These fibres were, excepting to a very slight degree, only degenerate in the immediate circumference of the nodule, so that it would appear that for the most part this bundle was descending in type. Dr. T. K. MONRO reported a case of *Rheumatic hyperpyrexia* successfully treated by the cold bath. The patient had had an attack of rheumatic fever seven years ago, from which she had made a good recovery. At the present illness treatment by sod. salicyl. 20 grains was started, but had to be stopped on account of tinnitus. She became very noisy, passed evacuations in bed, and soon became delirious. The pulse was uncountable and the temperature rose to 106.9° F. She was placed in a warm bath which was cooled to 61° F. by the addition of ice water. The temperature rose at first to 107° F., but when taken out of the bath after 32 minutes' immersion it fell to 103.5° F. She remained unconscious all day, and the temperature remained febrile. After some days, improvement gradually set in, and she was dismissed well six weeks after admission, but with slight mitral and tricuspid murmurs.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting on May 1st, Dr. J. ALLAN in the chair, the following were among the exhibits:—Mr. J. H. LAMB: A specimen of ruptured spleen, without history of injury. The patient had been found in bed in a collapsed condition, and was dead on the doctor's arrival. At the autopsy, the abdominal cavity was filled with fluid blood. The spleen showed marked thickening of the capsule at the upper end, lessening towards the lower end, at which place the rupture had occurred. All other organs were healthy. Microscopic examination showed nothing but fibrous capsulitis of the spleen. Mr. SECKER WALKER: Two eyes showing pyaemic panophthalmitis, from a case (1), of septic arthritis of knee: and (2), of a crushed hand. In the latter both eyes were affected. Dr. MAXWELL TELLING and Mr. H. LITTLEWOOD: A case in which partial hepatectomy had been performed for an actinomycotic nodule in the liver adherent to the omentum. At the operation other nodules were noted in the liver. The patient when shown appeared to be doing well on iodide of potassium, of which she had been having 6 drachms daily for many weeks without the slightest discomfort. Dr. HELLIER described the case of a woman of 42, who had suffered from osteomalacia for six years, and whom he had delivered by craniotomy in 1906. The pelvis was contracted and rostrated with a true conjugate of about 2¾ in. In June, 1907, he performed Caesarean section with cophorectomy, and the relief to the symptoms of osteomalacia had been very decided. Dr. TREVELYAN, in a paper based on 100 more or less selected cases of *Epilepsy*, dwelt on the disadvantages of the prolonged and excessive use of bromides. Whenever possible, the time of occurrence of the fit should regulate the treatment. Chronic epilepsy, with at all frequent fits, should be dealt with in epileptic colonies, and suitable treatment in genuine traumatic epilepsy, and in so-called reflex epilepsy should be adopted before the epileptic habit became stereotyped.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on May 1st, Mr. R. LAKE, F.R.C.S., President, in the chair, Dr. HERBERT SPENCER, in an address on the examination of the pelvis and abdomen during pregnancy, urged its necessity, if women were to have the full benefit of obstetric science at the time of labour. There should be both external and internal examination at the end of

the third month and external examination at the end of the seventh month. Forcible bimanual examination and the eliciting of Hegar's sign were liable to produce abortion. The height of the top of the pregnant uterus above the pubes was erroneously stated in English text-books. At the end of the third calendar month it was as high as the promontory (3¾ in. above the symphysis); at the end of the fifth calendar month it was on a level with the umbilicus. The height above the symphysis during the first six calendar months was obtained approximately by adding ½ in. to the number of the month. It could be felt at 2½ in. above the symphysis in all ordinary cases at the end of the second month. By timely examination greater safety for the patient and child could in many ways be secured. Dr. SEYMOUR TAYLOR, in a paper on *Some neglected remedies*, deprecated the modern tendency to run after new drugs and remedies and to discard the old methods. Fashion had much to do with modern prescribing, but it was not necessary that the profession should be told, and even mildly coerced, by interested drug vendors to sell their special form of new remedy. Such an attitude presupposed that pharmacy was not nowadays taught in our medical schools. The seton was useful in some forms of congestive headache and even in epilepsy. In the latter disorder a judiciously-applied seton deferred epileptic attacks, and even rendered them less severe. Venesection, again, was valuable treatment in those diseases in which the circulation through the right heart was embarrassed. But bleeding should never be regarded as a routine practice, as was the case formerly. It was useful in many cases of pneumonia, but chiefly when cyanosis was a marked symptom. The indications for bleeding were afforded by the heart rather than the lung. The blister was also a somewhat neglected remedy, yet it afforded great relief to the acutely inflamed rheumatic joint, and the smart of a blister was more tolerable than the dull throbbing of a swollen joint. Blistering in pericarditis has been revived, and with advantage. Consistency also demanded that if we blistered a rheumatic knee we should also blister a rheumatic heart, and this in many instances was done with the utmost benefit. In the treatment of chlorosis, arsenic, if persevered with, was in numerous instances as efficacious as iron. It must be continued for a lengthened period, and if it acted as a slight aperient so much the better. Sarsaparilla, an old-fashioned remedy, still retaining the confidence of the laity, was undoubtedly a corrective remedy in some skin affections which were not syphilitic; but it was chiefly efficacious as an adjunct to iodide of potassium in the treatment of cutaneous syphilides and of nodes. It should be prescribed in large doses.

MEDICO-LEGAL SOCIETY.—At a meeting on April 28th, Mr. WALTER SCHRÖDER in the chair, Mr. F. G. FRAYLING read a paper on infanticide, its laws and punishment, and suggested alterations. He held that, owing to the slight possibility of being able to prove the dead child's "separate existence in law," and to the ordeal of the mother committed for trial on a capital charge, the crime should no longer be regarded as ordinary murder, from which it differed in several particulars; a distinct offence should be created, or it should be regarded as a misdemeanour or a felony, otherwise the Prevention of Cruelty to Children Act, 1904, might be modified and applied to the newly-born. The CHAIRMAN felt that juries often realized that they were not dealing with the person most concerned; further, the death sentence was not a deterrent in these cases as it was never carried out. Dr. CHARLES MERCIER thought that the personal appearance of the accused girls led juries to exhibit a leniency to which they had no claim; he doubted if such women were so sensitive as was sometimes alleged; juries might fancy that a newly-born child was hardly endowed with a conscious being, yet such an idea was not present when charges of abortion were considered. The sanctity of human life must be regarded, and the death penalty retained as a real deterrent. Dr. W. H. WILLCOX regretted the present attitude of the law, which led to almost farcical proceedings in these cases. Mr. JOHN TROUTBECK held that coroners were the only officials who saw what a wicked and important crime infanticide was. They had to deal with the many unidentified babies which were cast away; the criminal courts only dealt with such cases as had been traced; usually no clue was available. If violence had preceded the attempted concealment of birth, the matter deserved to be treated seriously. It was notable that sober married women regarded this offence very seriously; in no case should it be treated as of little consequence. Dr. L. FREYBERGER thought that the proof of "separate existence" should be no longer required, as it was a stumbling-block to the due execution of the law. Infanticide might at times be due to the irresistible result of a dominating idea. Dr. JAMES MAUGHAM believed that insanity of parturition was a possible, if rare, condition. The penalty for the offence was in practice inadequate. Dr. C. H. WISE thought that in this matter the public suffered from the ingenuity of lawyers. It was absurd for a hiatus to exist between procuring abortion and killing a child after its birth. All legal punishments should be sure and certain. The violence exhibited by mothers in childbirth might be explained by ignorance, terror, and frenzy. Dr. E. H. SPILSBURY urged that ignorant women would have much more difficulty than medical men in deciding whether a given child was alive or dead after its birth; the law should require evidence of viability, and should test the presence of wilfulness on the part of the alleged offender. Dr. F. O. ARNOLD held that infanticide was more prevalent than criminal statistics would suggest, hence great caution was needed before the law was varied. Probably the peculiar conditions of each case influenced the jury more than the application of the strict law. Mr. FRAYLING having replied, the meeting closed.

HARVEIAN SOCIETY OF LONDON.—At a meeting on May 7th, Mr. D'ARCY POWER, President, in the chair, the following were among the exhibits: Dr. LEONARD GUTHRIE: (1) A case of *Cerebral diplegia* in a child aged 4, which had come on after an attack of measles at 2. (2) A case of *Cirrhosis of the liver* in a child aged 10, with marked ascites. There was no evidence of congenital syphilis. (3) A case of obliterating endarteritis in a woman aged 42. The arteries of the right upper extremity were affected, and no pulse could be felt. Pain and coldness of the affected limb were present, and there had been troublesome whitlows. There was symmetrical malformation of the clavicles. Dr. SUTHERLAND: A case of *Sclerodermia* following an attack of measles. Dr. LANGMEAD: (1) A series of cases of congenital malformation of the nose—"frog nose"—occurring in members of one family. (2) A case of *Tetany* associated with dilatation of the large intestine. Dr. TURTLE: Three cases with marked *Eustace Smith's murmurs*. In one of them there were signs of enlarged tuberculous glands in the superior mediastinum with distension of veins over the upper part of the chest, and characteristic cough. Mr. LAMING EVANS: A case of *Fragilitas ossium*. There had been twelve fractures, involving the right humerus and both femora. There was great deformity of the limbs, and false joints had formed.

ASSOCIATION OF MEDICAL OFFICERS OF MISSIONARY SOCIETIES.—At a recent meeting Dr. R. HINGSTON FOX read a paper on *The present position of antityphoid inoculation*, and the desirability of its use for missionaries and others proceeding to tropical climates. The death-rate from enteric fever in Europe had, he stated, much diminished, but in India and other hot countries the fever prevailed, despite some improvement in sanitation. About 2 per cent. of the British army in India sickened with typhoid each year. In the Friends' Foreign Mission Association one missionary in six in India, and one in seven in Madagascar, had been attacked with the disease. Details of the preparation of vaccine for typhoid as devised by Sir A. E. Wright were given, and the constitutional and local reactions described. A "negative phase" of increased susceptibility was stated, he remarked, to follow the inoculation, and to be succeeded by the positive phase of immunity. With present doses there was little or no evidence of the negative condition. Reliable statistical returns of the results of the inoculations in the British army had been hard to obtain. Only recent statistics were of value, and they show a greatly diminished incidence of infection on inoculated persons. In seven large Indian stations, during the first half year of 1907, amongst 10,220 troops, 21 per cent. of the non-inoculated suffered, against 6.8 per cent. of the inoculated. There was good reason to believe that the liability was

reduced to about one-third, and the case-mortality also largely reduced. The partial immunity probably lasted at least two years, and it might be longer. It was submitted that antityphoid inoculation was now shown to be a useful measure of prevention, and unattended with material risk.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on May 5th, Dr. MAY THORNE in the chair, Dr. LAURA VEALE read a paper on the Value of Harrogate Spa Treatment in Relation to Diseases of Women, in which, after pointing out the mode of action of baths, she described the various iron and sulphur waters of Harrogate, and the kinds of baths to be obtained there. The diseases of women most benefited by such means were chlorosis, neurasthenia, leucorrhoea, and especially chronic inflammatory pelvic conditions. In the latter the peat baths were useful in hastening the absorption of inflammatory products. Dr. MARY MORRIS, in a paper on the Waters of Bath, laid stress on their value in promoting elimination, and expressed the view that the hot baths owed their stimulating effect to the presence of radium in the water. Dr. CLARA FITTER described the watering places of Schüls and Tarasp in the Engadine as having waters suitable for the class of case that benefited by treatment at Carlsbad; but they also had the advantage of lying at a high elevation and possessing a bracing climate.

REVIEWS.

LINNAEUS: PHYSICIAN, PHILOSOPHER, AND BOTANIST.

THE University of Upsala must be heartily congratulated upon the excellence of their publications in connexion with the 200th birthday anniversary of Caroli Linnaeus. One volume contains a full account of the 515 paintings, busts, and medallions which exist as memorials of the great botanist. It is illustrated with some 39 admirably executed reprints, and a frontispiece (in colours) of the oil painting by I. H. Scheffel in 1739, now in the possession of the Hammarby Linnaean Institute. The volume on dietetics is of particular interest to Englishmen, because the original manuscript was lent by the Linnaean Society of London. The manuscript consisted of 317 leaves with 257 loose insertions. Considerable difficulties were met with in deciphering it, as the text was partly in Latin — rather free Renaissance than classical Latin—and partly in old Swedish with interpolations written across the text in bizarre fashion. A sentence in Latin would contain two Swedish words, and vice versa. This manuscript, with very ample explanatory notes as to the terms, abbreviations, and signs employed, forms the first part of the book. The second half consists of notes of the lectures delivered from the manuscript by Linnaeus. These "notes," made by his pupils, are preserved in some twenty-three Swedish, Finnish, and Russian libraries. Like all lecture notes, they contain many misstatements, but after subjecting them to critical comparison with the original manuscript, an exceedingly interesting account of Linnaeus's lectures has been obtained. It is sometimes forgotten that Linnaeus was Professor of Medicine at Upsala as well as Professor of Botany; these records show Linnaeus as the doctor and philosopher rather than the botanist. According to the calendar of the university, Linnaeus gave no fewer than eight courses upon dietetics—1742 43, 1748-49, 1752 53, 1759-60, 1763 64, 1767 68, 1771-72, and each course extended over three full terms. The lectures were always well attended, an audience of 300 being by no means uncommon; and any one who knows Upsala will appreciate the success these numbers imply. One of his pupils says: "When Linnaeus lectured on dietetics he often allowed us to laugh heartily at his graphic descriptions, while he frequently employed some joke or skit to impress upon us the newer observations concerning health and good living." Linnaeus himself never lost an opportunity of enforcing the need for an accurate knowledge of dietetics—a need which the universities of the present day have generally failed to appreciate. The lectures were really on human philosophy, and covered such subjects as regulations for child and adult life, air, water, respiration, clothes, home life, sleep, athletics, and baths. The section on dietetics includes considerations upon all kinds of drinks as well as solid foods. The work closes with an account of the bodily excretions, and the value of tranquillity and contentment. The details supplied in the "notes" show the remarkable power of observation possessed by Linnaeus. He knew of the *Acarus scabei*, of yeasts, of putrefactive changes, of the tendency of granite miners to tuberculosis, and of the infectiveness of the condition. He warns his hearers against consumption houses and consumption clothes, instancing the case of an Italian muff which infected five of its successive owners with tuberculosis. He talks of "consumption houses." He has much to say upon the relation of clothes to health and incidentally introduces much information concerning contemporary modes of dress. One of his special warnings is against the drinking of spirits, and he fought the intemperate use of alcohol with all his vigour When one remembers the enormous contributions Linnaeus made to botanical literature, it is really remarkable how he was able to compass the amount of work the preparations for these lectures must have entailed.

[1] *Linné porträtt vid Uppsala Universitets Skrifvest pa Tvahundra Arsdagen af Carl von Linnés födelse.* By Tycho Tullberg. Stockholm: Aktiebolaget Ljus. *Linné's dietetik pa grundvalen af dels hans eget Originalutkast till forelasningar—Lachesis naturalis Quae tradit diaetam naturalem—och dels järjungeanteckningar efter dessa hans forelaeningar.* By A. O. Lindfors. Uppsala Universitets Årsskrift. 1907.

OTOLOGY.

THE masters have been silent and the disciples have worked only for the day; such, with a few notable exceptions, is the general impression created by the recent output of otological literature, and with equal truth the same may be said of the sister science of rhinology. That silence has been broken by the appearance of Professor LUCAE'S monograph on chronic progressive deafness.[2] With modesty the author tells us in his preface that it is only after long consideration he has decided to publish his experiences in this important and difficult subject. It would have been a distinct loss to the science and its literature had his conclusions, based upon clinical observations extending over nearly half a century, been withheld from publication. Professor Lucae has inscribed his work to Joseph Toynbee and Rudolph Virchow, and thereby has done honour to the memory of his illustrious teachers. This takes us back to a time when Toynbee was bringing the treatment of diseases of the ear out of that *terra incognita* where it had remained for too long. The stimulus which the arts and sciences had received by the holding of the Great Exhibitions in 1851 and 1862 was being shared by otology. Toynbee, by his researches, was attracting pupils to this country; von Troeltsch, who declared himself a disciple of Toynbee, was diffusing a better knowledge of diseases of the ear through Germany; Helmholtz was writing his monograph on the mechanism of the ossicles and the membrana tympani, and the mastoid operation had not come to be regarded as the "begin-all" and the "end-all" of otology. In the opening chapter Professor Lucae gives a historical review of the work done and conclusions arrived at by his predecessors in this research, and defines the standpoint from which he intends to approach the problem. He takes a comprehensive and broad-minded view of chronic progressive deafness, both as regards its pathogenesis as well as its treatment. He clearly shows our indebtedness to Toynbee, who first distinguished by his own pathological observations the cases of chronic progressive deafness due to what he termed "rigidity" from other conditions, and showed the far-reaching consequences of this rigidity:

> The membrana tympani also partakes of this rigid condition, and, what is of far greater importance, the base of the stapes may become much more firmly fixed to the border of the fenestra ovalis than is natural. As a consequence, the membrane of the fenestra rotunda and the fluid of the labyrinth participate in this fixed condition.

Thus wrote Toynbee fifty years ago. What Toynbee termed "rigidity" is now called "sclerosis." Apart from this difference in nomenclature, it would be difficult to mention any important addition to our knowledge of the intrinsic morbid anatomy of this form of deafness. The

[2] *Die chronische Progressive Schwerhörigkeit: Ihre Erkenntnis und Behandlung* [Chronic Progressive Deafness: Its Nature and Treatment] By Dr. August Lucae. Berlin: Julius Springer. 1907. (Roy. 8vo, pp. 400; 25 figures in text and 2 plates. M. 18.

pathological anatomy Professor Lucae discusses in the second chapter. He considers that in the majority of cases we have to deal with a post-catarrhal condition. The third chapter is given up to the etiology of the disease, and contains an important section on the influence of nasal catarrh as a factor in chronic progressive deafness—a factor which is becoming more widely recognized and the imperative necessity for its treatment better appreciated. The symptoms and course of the disease as well as the methods of investigation are dealt with at considerable length: these chapters occupy nearly a third of the book; the various tests of hearing are critically considered, and this discussion may be found too tedious by the too practical type of mind impatient for results. In the matter of treatment and prognosis Professor Lucae is by no means disposed to accept the *non possumus* too readily uttered by many teachers. The chapter on treatment is, therefore, an important feature; it fills one-fourth of the pages, and is divided into two main sections, dealing with local and general treatment respectively. In a disease which only too often baffles treatment it is natural that numerous remedies should have been tried. The more commonly accepted of these have received the careful attention of the author, who gives in detail the results obtained in his own practice. The volume is profound; it is certainly not a book which could be read from cover to cover and then laid on one side; it is a work to which one may turn many times and yet again with advantage. It is a κτημα ές ἀεί in otological literature. It deals with a group of cases which, owing to their frequency and intractable character, deserve the utmost attention, but have been overshadowed by the surgical interest of the more prevalent varieties. Anent this Dr. Thomas Barr (*Trans. Otol. Soc. United Kingdom*, vol. v, 1904, p. 14), in his presidential address to the Otological Society of the United Kingdom, in 1904, made some very pertinent remarks. He said:

> Of the 144 papers, demonstrations of cases, specimens, and discussions contained in these *Transactions*, I find that 86, or 60 per cent., relate to purulent diseases of the ear or their intracranial or intravascular complications. Another class not less frequently met with in practice is conspicuous by its absence from these *Transactions*—namely, the non-exudative or interstitial inflammations of the middle ear—including the dry catarrhal and sclerotic groups—affections which bulk so painfully in our daily practice.

On turning over the pages of Professor Lucae's book one is struck by the possibilities of research, and by the thought that aural surgery is becoming, perhaps, a little too surgical. However gratifying it may be to day to the student burdened with a heavy curriculum to be taught the *non possumus* in chronic progressive deafness of the dry catarrhal or sclerotic type, to-morrow there may be a sad awakening to the fact that a little ignorance is a dangerous thing.

The contents of Dr. DAN MCKENZIE'S manual, bearing on the cover an abbreviated but somewhat comprehensive title of *Diseases of the Throat, Nose, and Ear*, is more correctly described on the title-page itself as a guide to diagnosis in these diseases.[3] The work does not include the pathology and treatment. The introductory chapter opens with some account of lamps and mirrors required in the examination of patients, and then suddenly passes to remarks on the method of note-taking as practised at the hospital with which the author himself is connected. A statement by the author that these remarks are intended for the guidance of clinical assistants at his hospital, and that the ordinary reader may skip them if he pleases, at once explains a little difficulty at first experienced in ascertaining the general scheme of the book. The several regions dealt with are taken in anatomical order, and the various affections that may be met with are mentioned, commencing with the buccal cavity, the fauces, and the pharynx, and then passing down to the larynx, the trachea, the thyroid body, and the œsophagus. Chapters dealing with the nose, the naso-pharynx, and the nasal accessory sinuses follow, and, finally, the examination of the ear and its affections receive attention. Dr. Wyatt Wingrave contributes a chapter on the microscopical examination of aural, nasal, and throat discharges and tissues. The author, evidently with a desire to be brief and yet complete—objects both laudable and ambitious, but, in view of the present wide range of the subjects with which he deals, quite incompatible—has attempted to bring too much within the limits of a small manual and has erred on the side of being sketchy. As the junior colleague, he has modestly confined himself to the views and teaching of the senior members of the staff of his own hospital, almost to the exclusion of his own views and those of other English or Continental authorities, which might have been cited more frequently without detracting from the usefulness of the book. As we have already indicated, it is evidently intended for the guidance of students commencing a course of instruction in these departments of practice, and as such it will be found readable, but its scope is hardly sufficient to meet the requirements of the modern practitioner. The illustrations appear to be confined entirely to instruments and diagrams of service in teaching the investigation of these diseases, but the diseases themselves are not illustrated.

DR. ARNOLD JONES'S *Short Practice of Aural Surgery*,[4] like the preceding, is one of the small books on diseases of the ear, the nose, or the throat, or on all three, of which there has been a mushroom growth within recent years. Apparently the supply has not yet satisfied the demand created by the increased interest taken in these special departments of medicine. To the consultant and the specialist remunerative practice of necessity comes slowly, and in a sense it is fortunate that this is so—it has given to us many excellent textbooks. The smaller textbooks on a developing science all have this in common, that whilst they contain nothing really bad they contain nothing really good; their value to the student and the practitioner must be of a very fleeting nature. A microscope that is adequate for a first course in histology but useless for the subsequent course in bacteriology cannot be regarded as an economical purchase. Moreover, there is a regrettable tendency to regard the ear more as an objective for surgery than as an organ of hearing, with the result that our knowledge of conditions, such as chronic progressive deafness, about which practitioners are desirous of information, remains very much where Toynbee left it half a century ago. In a new production like the one before us, we naturally turn to the section on otosclerosis, and we meet with the statement—only too true, but none the less disappointing:

> The number of pathological observations of this condition on record is very scanty, and helps but little in elucidating the true pathogenesis of the disease.

The question, therefore, suggests itself whether the time expended in multiplying our textbooks, without adding to our literature, might not be more usefully devoted to pathological research. The author states in his preface that he has devoted special care to the treatment after operations. Here, indeed, there is room for missionary work. On the one hand, the practitioner is often desirous of carrying out the after-treatment; and, on the other hand, the specialist knows that the after-treatment of many operations in the ear, and more particularly in the nose, calls for quite as much special skill and knowledge as the operation itself. The operator may, therefore, find himself in a difficult position. Dr. Jones's book is largely based upon knowledge gained as a house-surgeon to a special hospital. Unfortunately, throughout the book the methods of treatment are largely confined to the teaching of one hospital. In a speciality in which, owing to a lack of pathological knowledge, there is only too much room for two opinions, these methods might have been usefully supplemented. The author is evidently alive to this, and has added an appendix of some of the more common German medical terms used in relation to aural surgery, with conversational examples. This appendix is inserted in the hope that it may be of some assistance to those who, with little knowledge of the language, visit hospital clinics in German-speaking countries. We do not question the advisability of combining a knowledge of German with that of otology. On the contrary, a digest of the conclusions arrived at in Professor Lucae's authoritative work noticed above might have been most advan-

[3] *Guide to Diagnosis in Diseases of the Throat, Nose, and Ear.* By Dan McKenzie, M.D.Glasg., C.M., Assistant Surgeon to the Central London Throat and Ear Hospital. London: Rebman, Limited. 1908. (Cr. 8vo, pp. 334. 5s.)

[4] *A Short Practice of Aural Surgery for the Use of Students and Practitioners.* By J. Arnold Jones, M.B., Ch.B.Vict., F.R.C.S.Ed. London and New York: John Lane. 1908. (Post 8vo, pp. 278. 6s.)

tageously incorporated in Dr. Jones's book. We fear, however, that the student armed only with the amount of technical German given in this appendix would find himself in a similar position to the poor girl who, prior to going to Germany to learn music, acquired a smattering of the language, which on her arrival was immediately fired off at the droschke driver; he, with an equal kindness of heart and in equally good English, replied, "If you will speak one language, miss, I can help you." We cannot refrain from quoting one—it happens to be the very last—of the conversational examples rendered into German, because it shows that in our criticism we are absolutely in agreement with the author of this book. It runs as follows: "You have a chronic catarrh of the middle ear, which causes the deafness and buzzings, and it cannot be cured." We also venture to forecast the German reply: "Das ist traurig aber wahr."

The *Surgical Treatment of Chronic Suppuration of the Middle Ear and Mastoid*[5] undoubtedly lends itself to the making of picture books. Dr. Seymour Oppenheimer's monograph, which may be conveniently noticed here, is rivalled in its plethora of plates and illustrations only by Dr. Frederick Whiting's book on *The Modern Mastoid Operation*, of which a notice appeared in these columns (British Medical Journal, vol. ii, 1906, p. 1494.) For both these works we are indebted to American writers. The volume before us, as stated in the title, deals exclusively with the technique of the surgical treatment; any detailed consideration of the pathology and etiology of this very important and far too prevalent disease does not come within its scope. The book is divided into two parts. Part I describes the operations through the external auditory meatus, whilst Part II describes the complete mastoid operation with its various modifications, and the plastic operations used to aid in healing the cavity made in the temporal bone, and also those suggested for more or less cosmetic reasons. Some of the intrameatal operations practised for the cure of chronic suppuration of the middle ear seem to have dropped out of favour in this country during recent years, and to have been supplanted by modifications of the mastoid operation, more particularly by Kuster's original method of entering the tympanum. Dr. Oppenheimer's book is not without its disappointments. We have looked in vain for some account of the extension of chronic suppuration within the labyrinth and its surgical treatment. The indications for ligation of the jugular vein with a view of preventing general pyogenic infection of the circulation do not receive consideration. A critical consideration of these complications would have evidenced the usefulness of the book. It is also disappointing in a monograph of this size dealing with a single—though it is true very important—disease not to meet with any mention of the intracranial complications of chronic suppuration of the ear. The fact that the majority of intracranial suppurative lesions are otitic in origin and the difficulties which the differential diagnosis of the intracanial complications present are sufficient evidence of the importance of the subject and to justify its selection for special discussion at the forthcoming meeting of the British Medical Association at Sheffield. Whilst we regret that the author should have kept himself so strictly within the terms of his title, a careful study of the book should be the means of preventing many cases of suppurative disease of the ear from developing the dangerous complications to which we have referred.

[5] *The Surgical Treatment of Chronic Suppuration of the Middle Ear and Mastoid.* By Seymour Oppenheimer, M.D. London: Rebman, Limited. (Demy 8vo, pp. 425. 27s. 6d.)

OBSTETRIC HANDBOOKS.

Most Irish doctors are proud of the Rotunda Lying-in Hospital. It is, we believe, the largest and the oldest lying-in hospital in the British Empire. It is a curious and interesting fact, to be noticed and explained by the medical historian, that nearly all our lying-in hospitals were founded about the middle of the eighteenth century. We know not what cause or causes at that time attracted public sympathy to the needs of lying-in women. The Rotunda has numbered among its masters many eminent obstetricians, made so by the abundant clinical experience which the Rotunda offers. We have, we think, observed a tendency among those trained at the Rotunda to believe that this hospital is so far at the head of the world's lying-in institutions that the practice there followed is the model which the profession outside it should study and follow. *The Rotunda Practical Midwifery*[6] is a purely personal work. The voice is that of Dr. Hastings Tweedy: the pen is that of Dr. G. T. Wrench. He has written down the oral teaching of the Master of the Rotunda. He, or Dr. Tweedy, has enriched obstetrics with a new word—namely, the "conduction" of labour. Is this very superior to "conduct"? There are some other little things that mark the personal note. Thus, in what the author concisely calls the obstetrical "kit," he mentions an American preparation of ergot, and the opium of one particular firm. Are there no chemists in Dublin who can supply trustworthy preparations of ergot and opium? In this kit figure two pairs of india-rubber gloves. The present master is a warm advocate of what he terms the "Rotunda treatment" of accidental haemorrhage—that is, plugging the vagina. He believes, although he admits that his view is "stoutly denied by most authorities," that it is possible so to plug the vagina as to compress the uterine arteries and thus stop bleeding. We must confess that our own belief is on this point that of "most authorities." Dr. Tweedy hardly makes enough of the objections to this treatment. A grave one is that it is so distressing to the patient that in private practice she would probably not let the medical man who did it have a second opportunity of practising the Rotunda treatment upon her. Dr. Tweedy admits that it causes shock. Another is that if the patient is examined half an hour after the vagina has been plugged as tightly as the medical attendant has been able to do it, the plug will be found to be a slippery ball, between which and the vagina blood can trickle down. If so, the doctor who follows Dr. Tweedy's instructions will take it out and plug the vagina again. The reader is told to plug the vagina in all cases, "even when the haemorrhage is slight." This injunction rather weakens the effect of the figures given by the author to show the success of his treatment. F. H. Ramsbotham has told us:

> In my own practice, out of 25 successive cases of this kind, of very aggravated nature, occurring within the space of eleven years, in 23 instances the labour was terminated naturally and safely after the rupture of the membranes.

These figures are better than those of the Rotunda. Our quotation is from an obstetric classic with which the Master of the Rotunda would seem to be unacquainted; for he tells his pupils to decapitate with Braun's decollator, or the still slower method with the scissors alone. The author describes pubiotomy, an operation which we cannot believe will ever take its place among the resources of the general practitioner. He compares pubiotomy and symphysiotomy: but his judgement on this point cannot be final, because he does not perform symphysiotomy subcutaneously. Subcutaneous symphysiotomy is one of the simplest of all operations, and all we want to know about it is its immediate and ulterior results. We notice that the authors unreservedly accept and recommend as a routine measure the method of preventing ophthalmia neonatorum introduced by Credé, but with the qualification which more recent experience has led ophthalmic surgeons to make—that is, a 1 per cent. instead of 2 per cent. solution of nitrate of silver. Although we are not among those who regard the Rotunda as the supreme court of appeal in all matters obstetrical, yet we are grateful to Dr. Tweedy and Dr. Wrench for an interesting and stimulating original work.

Dr. Wrench also has the happy assurance of faith that there is no better place in the world than the Rotunda Hospital for women to be delivered in; and therefore that he cannot do a greater service to nurses and midwives than to teach them the Rotunda practice. Even those who may dispute the claim of the Rotunda to be the unique infallible head of all lying-in institutions in the world will nevertheless recognize that Dr. Wrench has given midwives and nurses a very good book of midwifery

[6] Oxford Medical Publications. *Rotunda Practical Midwifery.* By E. Hastings Tweedy, M.D., F.R.C.P.I., Master of the Rotunda Hospital, and G. T. Wrench, M.D., late Assistant Master. London: Henry Frowde, and Hodder and Stoughton. 1908. (Demy 8vo, pp. 484. 16s.)

instruction: interesting, readable, and clear.[7] His faith in the Rotunda prevents his being blown about by every wind of doctrine, and so enables him to be dogmatic and simple. The illustrations are not of the highest artistic merit. The author takes care to explain the derivation of words, and is sometimes singular in his method of transliteration; we are, therefore surprised to see Fig. 104 lettered "labiae." On page 31 the author gives some excellent, and too often very necessary, advice to nurses as to things that they should *not* talk about. He is sound in his teaching as to the prevention of ophthalmia neonatorum. We cannot see with him the benefit of the Trendelenburg position in prolapse of the cord. In this position the axis of the uterus is horizontal; and the horizontal position of the uterine long axis can be attained much more easily by putting the patient on her side.

The first section of the *Edinburgh Stereoscopic Atlas of Obstetrics* consists of twenty-five stereoscopic photographs of pelves, healthy and deformed, with descriptive letterpress.[8] There is no attempt to explain the production of the pelvic deformities. A brief statement of the effect of the different shapes of pelvis upon the mechanism of labour is given; it states only the broad, well-known, and undisputed facts. The box of illustrations is accompanied by a smaller box containing an ingeniously constructed folding stereoscope. The *Atlas* will be a luxury for the student of obstetrics. We must confess we should have liked to see the authors' explanation of why it is that while both in rickets and osteomalacia the bones are deformed because they are soft, yet in rickets the pelvis is widened, and in osteomalacia crumpled in. But the authors grapple not with obstetric difficulties, they keep to the broad and beaten road.

The second edition of the *Practice of Obstetrics, by American Authors*, was noticed in our issue of May 16th, 1903. The chief alteration in the third edition[9] is the addition of two chapters on the duration and on the hygiene of pregnancy. That on the duration very properly states that "a routine examination of the fetal head in cases suspected of going beyond the usual time should determine a more frequent resort to the induction of labour." Why not examine the relative size of fetal head and pelvis in every pregnancy before it has gone far enough for the head to be too large? In the article on the hygiene and management of pregnancy the writer says: "Decades of obstetric teaching have succeeded in impressing both physicians and the laity with the idea that a woman's mental condition during pregnancy differs normally from that of the non-pregnant state." The meaning of the word "normally" here is an esoteric one. Is there any doubt that insanity, chorea, tetany, and other nervous diseases are more common in pregnant women than in women of the same age who are not pregnant? We think the "decades of obstetric teaching" were correct. The section on embryotomy still contains the statement that Braun's decollator is the most efficient instrument yet devised for its purpose. It is a thing for breaking the neck, after which the head has to be detached with scissors. Ramsbotham's hook will completely detach the head in a minute or less. The writer knows not what a good cephalotribe will do, for he is not acquainted with a good cephalotribe. The book contains no practical account of subcutaneous symphysiotomy. The proceeding described under that name we can, from experience, say is impracticable.

The *Reference Handbook of Obstetric Nursing*[10] is designed for nurses who attend upon ladies who can afford to have everything done in the best possible way. It does not teach the midwife how to maintain cleanliness in the scantily furnished room of a poor woman. As is usual in those whose business it is to attend the rich, there is a tendency in some monthly nurses and doctors to magnify their office; and to rather impose unnecessary restrictions than let the patient run the smallest avoidable risk. Thus the patient is not to be allowed to travel, she is not to have a cold bath, nor a hot bath, but only a tepid bath; and this she is not to take without the assistance of the nurse, who is to help her step into the bath, and pour water over her when she has got into it. There are what to us are oddities in nomenclature; but they may not be strange to American readers. Thus at p. 58, among the supplies to be prepared for the infant are "two Afghans." What these may be we have no idea—doubtless an American nurse will understand. The cause of haemorrhage during the puerperium, which in England we call secondary *post-partum* haemorrhage, is said to be "acute subinvolution of the uterus." The teaching as to the prevention of ophthalmia seems to us to err gravely. The nurse is to flush the eyes, holding the lids apart, with a mild boric acid solution, and then to instil a drop of silver nitrate of ½ grain to the ounce (p. 218). So far as we know, a solution of 5 grains to the ounce is the weakest that has been found effective. The illustrations are not of a high order. The book is nicely bound.

NEUROLOGY.

DR. ARCHIBALD CHURCH, of Chicago, whose name is well known as a joint author of an excellent textbook on nervous and mental diseases, has edited a translation of a series of articles on *Diseases of the Nervous System*,[11] from *Die deutsche Klinik*. This authorized translation has been made under the general editorial supervision of Dr. J. L. Salinger. The volume opens with two articles on the macroscopic and microscopic anatomy of the central nervous system by Dr. Rothmann and Dr. Rosin respectively. Then come two articles on methods of neurological diagnosis by Dr. Schuster and Dr. E. Redlich. These are followed by systematic accounts of individual disease conditions. Aphasia and speech disturbances are described by Dr. Wernicke and Dr. Gutzmann; Dr. Wilhelm Erb writes on tabes dorsalis and paralysis agitans; Dr. Fr. Schultze on tumours of the spinal cord, syringomyelia, and progressive muscular atrophy; Dr. E. von Leyden and Dr. P. Lazarus on myelitis; and Dr. R. Cassirer on neuritis and vasomotor and occupation neuroses. Other articles are signed by not less distinguished names, as C. Wernicke, R. Geigel, H. Lüthje, H. Eichhorst, L. Edinger, L. V. Frankl-Hochwart, E. Remak, A. Eulenburg, W. Vorkastner, P. Schuster, and Th. Ziehen. The General Editor states that at first the editorial work was taken up with the expectation of making numerous addenda to the text, but when the proper scope of the work was realized it was deemed expedient to let each author stand responsible for the subject-matter which he had personally presented, and not to confuse the medical reader by discussions of disputed and unessential matters. This decision appears to have been wise, although in a book compiled on such a plan it is inevitable that there should be some overlapping and some still more to be regretted omissions. Thus, while there is a fairly complete article on spinal cord tumours, nothing is said, except incidentally, of cerebral tumours, and, although there is an article on cerebral haemorrhage and embolism, nothing is said about cerebral thrombosis. In spite of a good many typographical errors, as "germ" of the corpus callosum (on p. 316), for genu, C. H. Bastian (on p. 318), and "reflexs" (on p. 395), the presentation of the book is clear and good. Articles from such authorities on subjects peculiarly their own cannot but be highly acceptable to English readers of medical literature.

In the fourth edition of Dr. H. E. SANTEE'S *Anatomy of the Brain and Spinal Cord, with Special Reference to Mechanism*

[7] Oxford Medical Publications. *Rotunda Midwifery for Nurses and Midwives.* By G. T. Wrench, M.D., late Assistant Master, Rotunda Hospital, with introduction by the Master of the Rotunda Hospital. London: Henry Frowde, and Hodder and Stoughton. 1908. (Post 8vo, pp. 338. 6s.)

[8] *The Edinburgh Stereoscopic Atlas of Obstetrics.* Edited by G. F. Barbour Simpson, M.D., F.R.C.P.E., F.R.C.S.E., Senior Assistant to the Professor of Midwifery in the University of Edinburgh, and Edward Burnet, B.A., M.B., Ch.B. With a preface by Professor Sir J. Halliday Croom, M.D., F.R.C.P.E., F.R.C.S.E., F.R.S.E., Professor of Midwifery in the University of Edinburgh. London: The Caxton Publishing Company. 1908. (In four sections, each containing twenty-five subjects, with descriptive text. Price for the four sections, 84s.)

[9] *The Practice of Obstetrics, by American Authors.* Edited by Charles Jewett, M.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, New York. Third edition, revised and enlarged. London: Henry Kimpton; Glasgow: Alexander Stenhouse. 1907. (Royal 8vo, pp. 833. 21s.)

[10] *A Reference Handbook of Obstetric Nursing.* By W. Reynolds Wilson, M.D., Visiting Physician to the Philadelphia Lying-in Charity, etc. Philadelphia and London: W. B. Saunders Company. 1907. (Fcap. 8vo, pp. 258, illustrated. 6s.)

[11] *Diseases of the Nervous System.* Edited by Archibald Church, M.D. London: Sidney Appleton. 1908. (Roy. 8vo, pp. 1228. 28s.)

and Function,[12] existing knowledge on the subject of which it treats is well and comprehensively represented. Among the multitude of works on the anatomy of the central nervous system it is conspicuous for the fashion in which it correlates function with structure and the development of parts, as revealed by embryology, with both structure and function. That it includes the last words of present-day teaching in its sphere will appear from the use of such recent work as that of Sherrington on cerebral localization, of A. W. Campbell on the histological localization of cerebral function, and that of Head, Rivers, and Sherren on the mechanism of sensation. It is less exhaustive, certainly, than, for example, Professor Barker's *Nervous System*, but it is more anatomical, and for both reasons might, under certain conditions, be preferable. Its 128 illustrations, about half of which are original, are in every respect excellent; those which are borrowed are from the best Continental, American, and English sources. The book, although not one of the larger, is one of the best of its kind.

VACCINATION SCIENTIFICALLY CONSIDERED.

The Association of Public Vaccinators has done valuable service in publishing in a pamphlet entitled *Vaccination Scientifically Considered*,[13] an excellent address given before it last October by Dr. de Korté. The author speaks with the confidence of one who has thoroughly investigated his subject. Half an hour would be well spent in reading this address, which completely refutes the often-repeated error that vaccination is unscientific. The practical value of the clear, concise, and admirably condensed essay will be highly appreciated by readers. Arguments based on the "lurid pathology" of the antivaccinator, and the erroneous views of certain medical men who are actively associated with the agitation against vaccination, are exposed and corrected. This vindication of Jennerian vaccination cannot fail to be of interest, for it contains evidence of much care and original research which entitle the writer to speak as an authority on the histology and pathology of vaccinia, and the relationships of variola and vaccinia.

NOTES ON BOOKS.

Professor Borelius deserves our hearty congratulations upon the early appearance of the Transactions of the Norwegian Surgical Congress,[14] which affords evidences of the progress which is being made in surgery in Scandinavia. The volume opens with a valuable paper by Borelius on the technique and results of resection of the colon. Berg discusses his combined method of operation for rectal carcinoma. Krogius contributes a practical paper on the treatment of the duodenal stump after removal of the pylorus. An important discussion on the treatment of inflammation of the uterine appendages was opened by Engström and Kaarsberg. Berg emphasized the value of sklagrams in calculus of the bladder: and Gundersen and Jervell introduced the subject of prostatectomy. Other papers are concerned with endometritis, spinal anaesthesia, rhinoplasty, and haemolysis in cancer. We have said enough to indicate the contents to those interested in the several subjects.

The *Daily Mail* has issued a *Yearbook of the Churches for 1908*,[15] edited by Percy L. Parker; it contains an enormous amount of condensed information with regard to churches, orthodox and unorthodox, with digressions on agnosticism. Particulars are also given with regard to religious societies and associations, and biographical notices of religious leaders.

[12] *Anatomy of the Brain and Spinal Cord, with Special Reference to Mechanism and Function.* By Harold E. Santee, M.D., Ph.D. Fourth edition. London: Sidney Appleton. 1908. (Roy. 8vo., pp. 490. 16s.)

[13] *Vaccination Scientifically Considered.* (A paper read before the Annual Meeting of the Association of Public Vaccinators of England and Wales at Leeds on October 25th, 1907, by Dr. W. E. de Korté, M.B.Lond. Published by the Association and can be obtained from the Secretary, 1, Mitre Court Buildings, London, E.C. Price, 6d.)

[14] *Förhandlingarna vid Nordisk Kirurgisk Förenings Tde Möte i Kristiania, Aug. 8–10, 1907.* [Transactions of the Norwegian Surgical Congress held in Christiania August 8–10, 1907.] By Professor Borelius. Suppl. Bd. *Nord. Med. Arkiv*, 1907. Stockholm. 1908.

[15] *Daily Mail Yearbook of the Churches for 1908.* Edited by Percy L. Parker. London: Associated Newspapers, Ltd. (Cr. 8vo, pp. 298. 6d.)

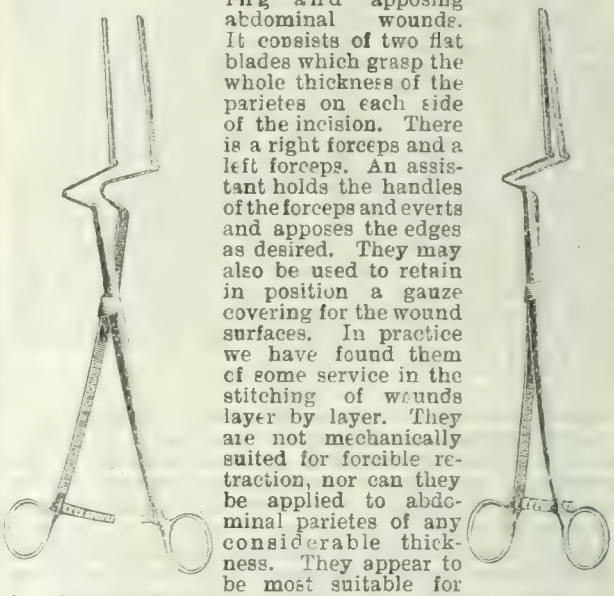
MEDICAL AND SURGICAL APPLIANCES.

Compound Dressings.

In the form of "Tetra" compresses and bandages, Messrs. Allen and Hanburys are supplying a new form of surgical dressing. The material is made of four layers of gauze united at the borders by a woven edge. For compresses it is made up in sizes from 5 by 5 cm. to 50 by 50 cm., and for bandages in widths of 5 cm. upwards. It is also made up into sheets, caps, operating coats, and other articles of surgical attire. The material is excellently suited for these various purposes; it is absorbent, pliable, and sterilizable. The compresses in particular are sure to be popular; they answer the purposes of towels, swabs and pads, or ordinary dressings.

Retractor Forceps.

Mr. Maybew Bone, M.B., C.M., F.R.C.S.Edin. (Lancaster), has designed a pair of forceps for use in retracting and apposing abdominal wounds. It consists of two flat blades which grasp the whole thickness of the parietes on each side of the incision. There is a right forceps and a left forceps. An assistant holds the handles of the forceps and everts and apposes the edges as desired. They may also be used to retain in position a gauze covering for the wound surfaces. In practice we have found them of some service in the stitching of wounds layer by layer. They are not mechanically suited for forcible retraction, nor can they be applied to abdominal parietes of any considerable thickness. They appear to be most suitable for the abdominal walls of children; any forcible retraction tends to displace the blades. They have been made for the designer by Messrs. Reynolds and Branson, of Leeds.



MEDICINAL AND DIETETIC PREPARATIONS.

Physiologically Standardized Tinctures.

The large amount of research that has been carried out on the chemical constituents of the cardiac tonics, digitalis, squill, and strophanthus, has resulted in the separation and characterization of a number of active principles to which their various effects are due, but hitherto no satisfactory methods have been introduced for the assay of these drugs by chemical means; this is doubtless partly due to the fact that these active principles, being glucosidal and not alkaloidal in nature, can only be separated from the inert constituents by complicated procedure, and partly also to the physiological activity being exercised not by one only, but by several principles occurring together. In these circumstances standardization by physiological tests on animals has been resorted to, and must at least be regarded as affording a great advance on the uncertain strength of preparations that are not standardized at all. Messrs. Burroughs, Wellcome and Co. (Snow Hill, London, E.C.) have submitted samples of their concentrated tinctures of digitalis, squill, and strophanthus, standardized to definite and constant strength in their physiological research laboratories. The strophanthus tincture is ten times and the other two are five times as strong as the official tinctures, the latter being assumed to be prepared from good drugs of average strength, and only dilution with a mixture of alcohol and water is necessary. While the uniformity of strength of these preparations is to be welcomed, it must be questioned whether the use of the term "tincture," even in combination with the adjective "concentrated," is advisable. There is no recognized class of concentrated tinctures, and the accidental employment of one of these in place of ordinary tincture could not fail to have undesirable consequences.

ROYAL COMMISSION ON VIVISECTION.

Fourth Report.

(*Continued from p. 1110.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Sir Victor Horsley, F.R.S.

Sir Victor Horsley, giving evidence as representing the British Medical Association, said the medical profession considered that every effort ought to be made to increase knowledge for the prevention of suffering and disease, affecting not only man, but also the lower animals; and they considered that any one who opposed such pursuit of knowledge was acting immorally. He would compare in this particular the fact that the British Medical Association had subscribed £30,000 for the pursuit of knowledge, while of the antivivisection party, Mr. Coleridge's society, to take that alone, had collected from the public £86,000 and had not added one item of knowledge for the relief of suffering or the prevention of disease. Several witnesses had spoken as though the antivivisection party were morally justified in accepting the knowledge gained by vivisection. He pointed out that it had always been the feeling of the profession that the antivivisectionists were not morally justified in accepting knowledge thus gained. The profession would, in fact, regard it thus: that if the antivivisection party considered that facts had, as it were, been immorally obtained—stolen from Nature—the persons who benefited thereby were practically receivers of the stolen facts, and they suggested that the legal position of the moral responsibility of a receiver being almost as bad as that of the thief held in that particular. Asked if he meant that the fact that Harvey discovered the circulation of the blood by experiments on animals bound everybody in the present day not to be an antivivisectionist, he said, Certainly. That was because it was impossible for him to avoid the conclusions arrived at. In that connexion he had placed upon his *précis* a very brief reference to the Antivivisectionist Hospital, because the money for that hospital was originally collected many years ago, by Mr. Coleridge's society in part, on the idea that medical practice could be conducted without any reference to vivisection, past or present; whereas they knew of course that no one felt the pulse of a patient and derived any information therefrom without being indebted to vivisection. Morally speaking, it seemed to him that the antivivisectionists had no right to derive benefit from experiments upon animals, holding the views that they did. He passed then to the single example he had selected to illustrate the action of the British Medical Association in promoting the pursuit of knowledge, and he had taken the instance of the Pasteur Institute as being also a subject of considerable controversy and object of attack by the antivivisectionist party. In the evidence of Mr. Stephen Coleridge, on page 144, line 14, he used these words:

> The first striking achievement of my society with which I had the honour to be associated was the prevention of a public meeting held at the Mansion House [it should obviously be "to be held"] in 1889, the object of which was to start a fund to erect a Pasteur Institute in England. We prevented that public meeting taking place, and the result was that no Pasteur Institute was set up. England to-day is, I believe, one of the few European countries of importance that is spared a Pasteur Institute, and in England there is no rabies.

Sir Victor Horsley proceeded to say that he took the freedom of England from rabies to be one of the great achievements of modern science, and they owed it entirely to Pasteur. The position was as follows: In the first place Mr. Coleridge informed the Commission that that meeting was prevented by his society from taking place. It was not so. The meeting took place at the Mansion House, the Lord Mayor in the chair, on July 1st, 1889. In the second place, the object was not as he stated it. It was not called for the purpose of establishing a Pasteur Institute in England; it was called

> for the purpose of hearing statements from Sir James Paget and other representatives of scientific and medical opinion with regard to the recent increase of rabies in this country, and as to the efficiency of the treatment discovered by M. Pasteur for the prevention of hydrophobia.

At that meeting speeches were made and resolutions were passed in favour of thanking M. Pasteur for the treatment that he had given to English patients. Another resolution was as follows:

> Professor Horsley proposed, and Dr. Farquharson, M.P., seconded, a resolution to the effect that rabies might be stamped out of these islands, and inviting the Government "to introduce without delay a Bill for the simultaneous muzzling of all dogs throughout the British Islands as provided in the measure drafted by the Society for the Prevention of Hydrophobia, and for the establishment of quarantine for a reasonable period of all dogs imported."

The witness had the honour of acting as Secretary of a Committee appointed by the Government to inquire into M. Pasteur's treatment, and when the Committee was in Paris M. Pasteur said to them:

> Why do you come here to study my method of a curative for inoculation? You do not require it in England at all. I have proved that this is an infectious disease; all you have to do is to establish a brief quarantine covering the incubation period: muzzle all your dogs at the present moment, and in a few years you will be free.

When the Committee returned and reported to the Houses of Parliament, this point was always before them, and the witness moved that resolution with the sympathy of the Committee appointed by our Government. No proposal to set up a Pasteur Institute for the treatment of rabies was made at all. The resolutions were all carried. Immediately this point of universal muzzling was raised, the antivivisection party, Mr. Coleridge's society in particular, entered upon a virulent campaign against them, held meetings, and endeavoured to show that M. Pasteur's discovery of the real infective nature of the disease was wrong; they revived the old ideas that it was lunacy in dogs, that it was not a disease, and they revived also the particularly dangerous idea (from the public point of view) that it could spontaneously generate in the dog; whereas M. Pasteur had proved that the exact opposite was the case. Partial muzzling was obtained in spite of this opposition. The witness showed from the records of the Brown Institution, the laboratory of which he then directed, that the effect was wonderful in immediately cutting down their admissions of rabies, and that it also cut down another contagious disease—distemper, which was due to a respiratory infection. Mr. Long, when he was at the Board of Agriculture, imposed a universal muzzling and brief quarantine, with the result that now the United Kingdom was free from rabies, and that was the only correct statement in the passage he had read. But it was not due to anything but the scientific knowledge that they derived on the subject of rabies. Two resolutions were passed at the meeting—one thanking M. Pasteur for his discovery and labours, and the other in favour of the universal muzzling of dogs. Mr. Coleridge and his society attacked both resolutions. They attacked muzzling as being cruelty to the dog and because the disease, as they said, could arise spontaneously; therefore, what was the good of muzzling dogs? The witness added that subscriptions were collected at that Mansion House meeting, and later this country sent 40,000 francs to M. Pasteur as a token of the work he had done for British subjects. The desirability and efficacy of muzzling dogs were proved by Pasteur's inoculation experiments on animals, which for the first time proved the existence of a distinct virus and of its transmissibility to different animals. Up to that time these absurd ideas prevailed that it could be spontaneously generated, that it was not a contagious disease at all, that it was really lunacy in the dog and insanity. It required the scientific investigation of M. Pasteur to demolish that. Of course anybody who had had personal experience of rabies in dogs recognized that it was a contagious disease, and that M. Pasteur was quite right. But all the action of the authorities previously had been in ignorance of the proved fact. The British Medical Association sent a special deputation of their Scientific Grants Committee to that meeting to express the feeling of the profession as to the value of M. Pasteur's work. The action of the antivivisection party in

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that respect they considered to have been immoral. They considered that it was opposing the results gained by scientific research, that those results were of value to the human community and also to the lower animals, and that that opposition was immoral. He had also brought the incident before them because there were a great many passages in this evidence by Mr. Coleridge to which he would like to take similar exception, but that was such a striking contradiction of the actual fact that that was why he had taken it as an example of the rest. The second part of his *précis* dealt with the question of teaching students by means of experiments on animals. He desired to lay before the Commission the view that such teaching was desirable in the following subjects: Physiology, pathology, pharmacology, and surgery, because, with the exception of the third, he had had experience in teaching each of these subjects. In the first place, he would suggest that Subsection (5) of Section 3 of the Act should be repealed. It was in effect abrogated in the Act by the second part of Section 3, because experiments might be shown to students in illustration of lectures under a special certificate; but as he hoped to conclude by persuading the Commission that the certificate system had so many faults that they should get rid of it, he would suggest also that the recommendation should be that this Subsection (5) of Section 3 should be repealed. The argument in favour of the repeal of that subsection would be an argument against the so-called disadvantages of showing experiments to students; therefore he would allude to the evidence given by Sir Thornley Stoker, because it was evident that that evidence was offered in complete ignorance of the subject. Sir Thornley Stoker said at Question 761, p. 32, after reference to the Act:

> I am strongly of opinion that . . . experiments on living animals should be forbidden in illustration of lectures, on the ground of their uselessness, and, perhaps, cruelty also.

The witness thought that Sir Thornley Stoker's further evidence in which he informed the Commission that he was cruel in early life showed that his education as a student had been neglected by his not witnessing experiments on animals, because it would have assisted him in becoming more humane, and, at any rate, would have prevented him from giving expression to such an opinion as that. Sir Thornley Stoker went on to say:

> Such demonstrations cannot but be demoralizing to the young men and women who witness their performance. They seem to be an offence against humanity.

Mr. Coleridge also referred at length to this in Questions 11,372 and 11,396. All the witness could say was that he had shown a very large number of experiments to students, that they had always evinced the utmost interest in them, and they had told him that the facts which the experiment illustrated had been imprinted upon their memory in a way that they could not have obtained by any other means; in fact, they had simply emphasized the statement of Professor Huxley before the 1876 Royal Commission, where he said:

> There is no teaching of physical science worth anything as thorough teaching unless it is accompanied by practical instruction.

Sir Victor Horsley unhesitatingly affirmed that there was no demoralization whatever such as has been suggested. He also drew attention to the fact that in the report of the previous Commission, on page 17, the Commissioners said:

> The evidence we have quoted above seems to show conclusively that at the medical schools where such demonstrations are exhibited under anaesthetics the sense of humanity in the students is not in fact impaired.

That statement was as true now as it was thirty years ago. To justify his suggestion, he pointed out that, for instance, in physiology, he thought it most essential that students should see, and that the senior students should perform, an experiment on the heart and the circulation in a warm-blooded animal. No one could acquire a proper knowledge of the action of the heart or of the real phenomena of the pressure of the blood within the vessels unless he had witnessed and, indeed, taken part in such an experiment. Asked as to the comparative knowledge of medical men of the present day and of medical men of fifty years ago on such a matter as the circulation, the witness said that at the present time they had greatly increased knowledge. Take the question of the blood pressure: They now measured it accurately in the human being, and it was one of the essential phenomena which indicated the condition of shock after a surgical operation. The question of the pressure of the blood was unquestionably going to be one of the cardinal points in this great question of surgical shock. When he was a student the blood pressure was looked upon as a scientific amusement, as it were, by many practising physicians and surgeons. They took no heed of it and never attempted to measure it. Passing on to pathology, he said that, having lectured on that subject, and having illustrated his lectures by experiments on animals, the necessity of this method of teaching students had been borne in upon him very closely. As an example he had chosen epilepsy, with convulsions of all kinds, as being a very common form of disease, and yet one which the student had no means of analysing in ordinary hospital work; very often he hardly saw a patient in a fit at all. Yet epilepsy, for instance, could be reproduced experimentally with absolute fidelity by the simple injection into the veins of a drop of essence of absinthe. In twenty-five seconds a typical epileptic fit was produced, and a student who had once seen it, and watched it develop through the body of the animal never could forget it. The animal would be under anaesthetics, which would not interfere with the development of the epileptic symptoms, nor would the animal be allowed to recover. In reply to Dr. Wilson, who asked if he distinguished in that case between epilepsy and convulsions, he said, No, he was using both the words because he believed that practically in all convulsions the cortex of the brain was involved. Dr. Wilson put it that supposing the animal were to recover it would not be made an epileptic animal; Sir Victor Horsley said, Not permanently epileptic, the fit was produced at the time toxically. In the same connexion the electrical excitation of the cortex of the brain for the localization of the different centres was also an absolutely essential part, or should be, of a student's physiological education. Not only was he taught the geography of the brain, but he was shown another kind of epilepsy, called Jacksonian epilepsy, in the most perfect degree; there was no other way of showing it. Asked by the Chairman if there were any of these demonstrations which it was desirable in his view to use before students, in which it was also necessary in order to complete the demonstrations, that the animal should be allowed to survive, the witness said only under Certificate B. He agreed that there were no experiments used by him for demonstrations to students in which the animal was not put to death before it came to, unless, for instance, one wanted to show them some points in regard to paralysis. Supposing, for instance, an experiment in which one divided one half of the spinal cord antiseptically, and then dressed the wound, and allowed the animal to recover from the anaesthetic, and it healed up, and one showed that animal to the class, say in three weeks' time, he could conceive that that was a demonstration which would be considered useful to students certainly as demonstrating the symptoms produced by paralysis of one half of the spinal cord. The animal would afterwards be put to death. Asked if he knew of that demonstration having been made, he said, No. As far as he knew, they had all been cases in which the animal had died under anaesthesia. Proceeding to deal with pharmacology, Sir Victor Horsley said that at the present moment the student was taught materia medica to recognize drugs, but he was only told their action. If students in pharmacology were made to perform practical experiments, for instance on an isolated frog's heart, they would receive valuable information. He gave one example. He took the two alkaline metals, potassium and sodium; they were almost exactly alike, they were spoken of as simple alkalies, and yet their physiological action on the heart was absolutely different. If a student performed the simple experiment of irrigating a frog's heart with a solution of one and then a solution of the other, he would see that their action was totally different. The same could be said of a great many drugs, especially of drugs that acted on the heart. He thought a student ought to see all those in action on an isolated frog's heart or even on a mammalian heart before he went into the hospital to give them to human beings. The next subject in which he suggested that students should be taught from experiments upon animals was

surgery. At the present moment the only practical teaching in surgery that a student received was from operations on a dead body, and those from the anatomical point of view were lamentably few. Operating upon a dead body was practically only the revision for the student of his anatomical knowledge. The texture and the method of dealing with the live tissue was quite different from that in dealing with the dead tissue; and from the ethical point of view it seemed to him that it was not moral for students to gain their knowledge on man when they could perfectly well gain it on a lower animal or an anaesthetized lower animal. In that sense he would bring the use of animals for education in surgery on to exactly the same level as the use of animals for food. What was justifiable for the one was justifiable for the other. Again, as regards Section 3 of the Act, Subsection (6), relating to manual dexterity, ought to be repealed. It said

. . . experiments shall not be performed for the purpose of obtaining manual skill.

That was precisely the reason, he thought, why they should be performed by a student; he ought to obtain his manual skill by operating on lower animals, not on man. Before a student received a hospital appointment, he certainly should do such a course. On the average he would be about 22 before he got a hospital appointment. That meant before he was qualified, because practically now they did not admit any students to hospital appointments until they were qualified. It was always very difficult to understand why some of these sections and subsections were introduced into this Act, even when one read the report of the Commission of 1876; and that one, in particular, he felt sure, must have got in somehow under the impression that students would practise on animals without anaesthetics. The method of teaching to which he referred was in operation at the Johns Hopkins Hospital, Baltimore, perhaps the most advanced school of medicine. Professor Harvey Cushing, at that hospital, had now a building for this practical work. The usefulness of this was greatly enhanced by the fact that Dr. Cushing had copied the constitution of the Brown Institution in London, that he had also instituted hospital wards as part of the building for animals, rooms for the care of the animals, and in that way the poorer classes in Baltimore brought diseased animals to the laboratory to be thus operated upon by the students and cared for in the animals' hospital. Of course, very often the work was also combined with the requirements of the physiological laboratory. If, for instance, a physiologist wished to investigate a stomach which had a fistulous opening in it, it was made under these circumstances in the laboratory, and the animal was transferred to the physiological department when the fistula was healed. There was a demonstrator in charge in the laboratory. It was conducted most strictly, like any other practical class, and the demonstrator saw to it. The different students were told off to act in different ways; one to act as anaesthetist, another to take the notes, another to do the operation, two or three more to act as dressers, and so forth. They kept records of all their work. In association with that point was the very important question of anaesthesia. The risk of death from anaesthesia had always been justly looked upon as a great reproach, and he wished to express his personal opinion that it was purely a matter of knowledge of the dose required, and that as regards the education of students in anaesthetizing patients no one ought to be allowed to render a human being unconscious before he had had practice on animals. He had to study particularly the signs of danger, the signs of an overdose with an anaesthetic drug. He could observe all these points exactly as in man. The investigation of the actual dose was now under the consideration of the British Medical Association, which had already spent on this subject over £500 to try to determine the exact dose which should render a person unconscious to pain and at the same time not put his life in any danger. Asked, if they had ascertained the dose for a man, whether there was any scale that had been ascertained to be the proper dose for a rabbit, the witness said it was apparently the same. The percentage of chloroform in the atmosphere breathed that led the heart or the respiratory centre to fail was apparently very much the same in warm-blooded animals. It was the same proportion, not the same amount. The difference of weight, of course, came in there. One had to poison so much per pound weight. In reading the evidence offered to the Commission, he was struck by the extraordinary ignorance that prevailed even now on the question of anaesthetizing animals. Over and over again witnesses had spoken as though anaesthetizing an animal was a totally different thing from anaesthetizing a human being. It was nothing of the kind. There had even been revived before this Commission the absurd statement made thirty years ago that one could not keep a dog under chloroform for—he forgot what the limit was—two hours, or something of that sort. One could keep it under chloroform for a week if one only took the trouble. He had kept an ourang-outang under ether for eight hours, and he would keep a dog or any other animal under an anaesthetic as long as was wished. By this he meant a condition of absolute unconsciousness to pain. That, from one's personal experience in the human subject, applied to chloroform as well as to ether, and it applied to morphine—those three narcotics. Asked if he thought that ought to be practised upon animals before any one practised it on human beings, and if the student's experience gained upon animals was an education for applying it to man, he said he did. In reply to Dr. Wilson, he said the experiments going on now were refinements, in order to water down, as it were, the limit. They wanted to extend the margin of safety without encroaching upon the consciousness to pain. He looked, therefore, upon the importance of teaching anaesthesia by experiments upon animals as quite equal to the importance of teaching manipulative dexterity and the recognition and handling of tissues in ordinary surgical operations. He also drew attention to the fact that the anaesthetic substances used in surgery fell into two classes—the respirable and those which are injected as liquids, such as morphine, for instance, in solution. The action of the respirable gases on the body and the use of vapours in anaesthesia really dated back as long ago as Priestley's experiments on mice with oxygen. Then followed the experiments by Davy on nitrous oxide: those were experiments on men. Again, that was a respirable gas. Then they came down to ether and chloroform; but, as regards ether, Morton, the American, made experiments on dogs. He very quickly, and on slender evidence, applied it to man, but he made experiments on dogs, and so did Flourens. Sir Victor Horsley would accordingly propose that all such experiments with new drugs should always be made on dogs rather than upon man. The next point in his *précis* was the question of new operations in surgery. He would show directly that many of the operations performed now were based entirely on experiments on animals; but from the ethical and moral point of view it seemed to him that this was an absolutely essential procedure, which ought to be adopted before any new operation was carried out, for the reason that if a new operation upon an organ or tissue of the body was performed no one could foretell what would be the immediate consequences to the animal as a whole. This not only applied to the operation, but also to the actual details of execution. In operations upon the alimentary canal, the mere handling of the organ to be operated upon, the mere handling of the bowel, for instance, the method of inserting stitches, and so forth—all that came in as essentials in execution of the operation, and that had to be learnt *de novo*, he suggested ought to be done upon an animal and not upon man. There could be very little doubt that some of the antivivisection agitation relating to so-called experiments in hospitals actually bore upon this very point. The antivivisectionist party said it was immoral to try a new operation or a new drug upon a human being in a hospital. They called it an experiment. But, then, they also said it was immoral to do it upon an animal. The only conclusion was that there should be no more new operations and no more new drugs used in the endeavour to relieve suffering or avert disease. It seemed to him an absolute *impasse*, and that if attempts had been made upon patients in hospitals, it had been because a physician or surgeon thought he had a new idea and wished to put it in practice for the relief of humanity. In reply to Sir William Collins, he said he recognized that the distinction was between voluntary and involun-

tary. A very great many investigators had swallowed a great many drugs. Simpson inhaled chloroform. He had seen a physician say to a patient, 'Here is a remedy that has been suggested; I do not know what its effect is. Will you try it?" In reply to a question from the Chairman, he said that in the case of an absolutely ignorant person the physician probably would not consult him. Coming to Part III of his *précis*, the first head he wished to speak of was antiseptic surgery. The Chairman pointed out that Dr. Bantock in his evidence seemed to think that surgery as practised now aseptically was nothing but a return to the practice of any really careful surgeon before Lord Lister's views about antiseptic surgery were promulgated. Sir Victor Horsley said the answer to that was extremely simple. In the practice of the so-called careful surgeon of forty or fifty years ago there occurred numerous deaths from pyaemia, septicaemia, erysipelas, hospital gangrene, and so forth, and those did not occur now. Consequently the practice of that careful surgeon was not modern aseptic surgery at all, and for a very good reason—he did not know his danger; he did not know that it was not merely sufficient for him to wash his hands; he did not know that he had to exclude every avenue of entry of microbes into the wound. It was wholly incorrect to make a statement of that sort. The vast majority of infection in surgical cases was introduced into the wound from outside. The Chairman said Dr. Bantock seemed to think that Lord Lister's antiseptic treatment had proved a complete failure, and that then they had had to resort to aseptic surgery, and said that aseptic surgery, in his view, was nothing more than what careful surgeons did before Lord Lister touched the matter. Sir Victor Horsley said, in his opinion, that was absolutely a perversion of the actual position. He began his surgical work in 1876, just after the introduction of the antiseptic system; consequently he had seen the whole thing develop, and he affirmed that the present practice was nothing but the logical outcome of Lister's teaching thirty-five years ago. Lord Lister taught that one had to exclude the microbes from the wound. Apparently they were in the air, and were ubiquitous; one had therefore to employ antiseptic substances to kill them as they fell into the wound, and that was the reason why he employed the spray for one thing and antiseptic lotions for another—that one could not trust the condition of one's instruments and dressings unless they were saturated with antiseptics. But Lord Lister himself said over and over again that, inasmuch as these precautions were exceedingly irksome to the surgeon, he would be only too delighted to get rid of them, and no one was more delighted than he when it was shown that the risk of infection from the air was so slight that certainly the use of lotions was enough to avert it, and therefore away went the spray. That was Lister's own position, and always had been. On this very matter of technique in experimenting, he referred to the investigations which had been made on animals with regard to infection from the peritoneal cavity, because most of the controversy had arisen over the surgery of the peritoneum. Their ideas now about the physiological action of the peritoneum and its resistance to microbes and infection had entirely altered in the last ten years, and consequently the technique had been altered with regard to the use of antiseptics with regard to the peritoneum. He had seen the absolute disappearance from his hospital—University College—of certain diseases. Anybody who would be asked now to write an article on pyaemia or blood poisoning in a dictionary of surgery could not do it; the diseases were gone, and that was wholly due to the introduction and the proper execution of antiseptic surgery. Then, in regard to the saving of pain, the invention of antiseptic surgery had saved a degree of pain which was absolutely incalculable. He believed it had saved more pain than anaesthetics. He supposed that most of them had been operated upon at one time or another, and one knew that the pain of the wound only lasted for about forty hours, and with a wound that had been well made it was a perfectly tolerable pain. After that, in the healing, there was no pain. But when he was a student a simple case like the removal of a breast for cancer used to have painful dressings for six or eight weeks, and amputations still more. If an amputation now was not healed in a week, one blamed himself or the house-surgeon. Fortunately they very rarely did amputations now—again owing to Lord Lister; but in the old days amputations used to go on for a couple of months of very painful dressing. Asked what it was that rendered the dressing unnecessary, he said the immediate healing; the complete exclusion of microbes from the wound, and therefore, immediate healing of the tissues. As a third point, he said, the antiseptic system had led to the discovery of new operative treatment; it had led to the discovery of absolutely new operations, by which conditions were now easily and safely treated by surgery which, when he was a student, were looked upon as hopeless. Asked if he connected antiseptic surgery with experiments on animals he said: Entirely, from beginning to end, because until one could show that a microbe had a toxic or destructive effect on animal tissues there was no basis for antiseptic surgery. It was Pasteur's work by experiments on animals which proved that point. It was the crucial proof that was requisite. And the Antivivisection Society, in their opposition to antiseptic surgery and their repeated quotation of Lawson Tait, for instance, showed a distinct lack of moral feeling. Anybody who could oppose the means of relieving humanity and relieving the lower animals by a means so simple in execution as antiseptic surgery, he thought could not be actuated by proper moral feeling. He had seen over and over again Mr. Lawson Tait's name mentioned in this connexion. He was not there in any way to answer for Mr. Lawson Tait, who was dead, but he would like to point out his action in regard to the question of the institution of the Pasteur Institute in his country. Mr. Coleridge informed the Commission that no Pasteur Institute was established. If he meant that no institute like the Pasteur Institute in Paris was established, that statement was contrary to the fact, because the British Institute of Preventive Medicine, now called the Lister Institute, was a Pasteur Institute of the same class, established on the Embankment. The committee for its founding, he thought, was instituted in 1891. At any rate a meeting was held in 1893 in favour of it at Birmingham, and as he was very keenly interested in the subject from a public point of view, he went to that meeting. Mr. Lawson Tait attended that meeting, and the first resolution was:

> That the members of the medical profession in Birmingham and district cordially approve of the objects of the British Institute of Preventive Medicine.

"Mr. Lawson Tait said that he fully assented to the resolution, feeling that, while he objected to a certain class of surgical investigations, bacteriological experiments on animals had proved of great value." Evidently he did not agree with Dr. Bantock's views about microbes, and yet he was quoted very widely by Dr. Bantock and by Surgeon-General Thornton. In reply to further questions, he said the views of Lord Lister on both the subjects of bacteriology and surgery had been adopted over the whole civilized world.

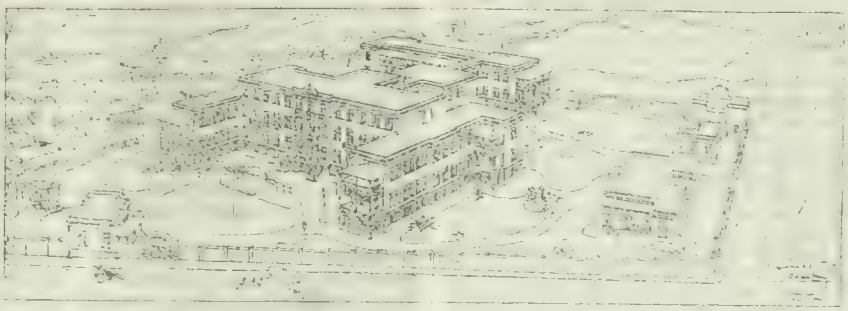
(To be continued.)

A short time ago Queen's University, Kingston, Canada, conferred the honorary degree of LL.D. upon Walter B. Geikie, M.D., C.M., D.C.L., Toronto, in recognition of his long and valuable services to medical education in Canada. Dr. Geikie has been a zealous medical educationist for fifty-one years. He founded Trinity Medical College, Toronto, was its executive officer for thirty-two years, and its Dean and representative on the Medical Council of Ontario for twenty-five years.

The ninth Congress of Hydrology and Climatology was held at San Remo from April 12th to 15th, under the presidency of Dr. U. Martemucci. Dr. Frederic Bagshawe of Hastings, chairman of council of the British Balneological and Climatological Society, was present as a delegate of that society. Among the numerous papers read and discussed on April 13th and 14th was one by Professor Maragliano of Genoa, explaining the reasons why sanatoriums for the tuberculous were not used along the Riviera, and another by Professor Vinaj on the treatment of hypertension. On April 12th there was a garden party at the golf links at Taggia, near San Remo; on April 13th members dined together to the number of 125 persons; on April 15th an excursion was made to Bordighera, where the party was entertained at luncheon by the hotel keepers, and at a garden party by Mr. Berry at the Villa Monteverde. Subsequently the party drove to Ospedaletti, a sheltered bay between Bordighera and San Remo, and on April 16th made a trip to Monte Carlo.

ENGLISH HOSPITAL WORK IN EGYPT.

By an arrangement between the British Government and the authorities of the German Deaconesses' Hospital at Alexandria, the English consular surgeon, Dr. Morrison, has permanent charge of half the fifty beds which the hospital contains; to them are admitted sailors and others of British nationality suffering from illness or accident. What excellent work is being done there may be learnt by an enumeration of the cases operated on during the year 1907 by Dr. Morrison. In all there were 698 operations large and small, 660 under chloroform and 38 under stovain. Operations for hernia were performed on 155, hydrocele or haematocele in 39 cases. In 52 cases stones in the bladder were removed by operation, in 16 by the suprapublic operation; 107 rectal operations were performed, and 36 laparotomies; 10 cases of liver abscess were incised and drained, 3 lumbar nephrectomies were performed, and 2 cases of pyelonephritis were drained; 17 cases of vaginal hysterectomy, and other vaginal and obstetric operations, including 19 cases of curettage, were performed; there were 12 major amputations, and 11 fractures and dislocations were reduced under chloroform; 37 abscesses opened, and 10 benign and 13 malignant tumours removed; the other cases included empyema, skin grafting, clubfoot, caries, cholecystotomy, castration, stricture, and elephantiasis.



Perspective view of the new hospital in course of construction at Alexandria, Egypt.

The accommodation at the present hospital has long been quite inadequate, and patients have constantly to be refused admission, so that beds had to be made up in the general sitting room and also in the doctors' room. A site has been secured for a new hospital in a healthy position, and by the sale of the present building and site £35,000 has been secured towards the erection of a new hospital, which is expected to cost between £40,000 and £50,000.

Built of light grey brick, specially manufactured for the purpose, the building, which has already reached half its full height, produces a very pleasing effect in the bright Egyptian sunshine. The perspective shows what its appearance will be when finished. It will then contain 120 beds, and half of this number will not be too many for those seeking admission under Dr. Morrison.

At Cairo the building occupied as a hospital at Kasr-el-Ainy was originally a palace. It occupies three sides of a quadrangle, and contains 420 beds. In the centre is a garden and in the middle of this is a mosque with covered archways from each side. As might be expected, a good many ophthalmic cases are admitted, and the other principal diseases treated in the surgical wards are stone, hernia, hydrocele, and tuberculous disease of bones.

Attached to the hospital is the school of medicine, of which a good deal has been heard lately. Its library is not, we are informed, very well supplied with recent medical or scientific works, so the librarian will be glad to receive donations from libraries having spare copies.

LITERARY NOTES.

Mr. H. K. Lewis has just issued a fourth edition of *Public Health Laboratory Work*, by Professor H. R. Kenwood, of University College, and has ready for immediate publication a sixth edition of Dr. William Murray's *Rough Notes on Remedies*, which will contain the address recently delivered before the Royal Society of Medicine, together with other new matter. The same firm will also issue Professor Ehrlich's Harben Lectures on *Experimental Researches on Specific Therapeutics*.

Mr. Murray will publish in the course of the present month a work entitled *The Law of Hospitals*, by Mr. Arthur Turnour Murray. It is said to deal with the legal aspect of every question likely to arise in the history of all kinds of hospitals.

The *British Journal of Tuberculosis* for April contains, among other interesting matter, special articles on the crusade against tuberculosis in Sweden, by Dr. B. Buhre; on the antituberculosis movement in France, by Dr. Fernand Barbary; and on the control of tuberculosis in Finland, by Dr A. Palmberg. Dr. J. J. Galbraith contributes an original paper on the dietary of the consumptive, and Dr. A. Howard Pirie one on the treatment of tuberculous glands by *x* rays. A good deal of information is also given as to institutions for the tuberculous. The editor, Dr. Kelynack, contributes an interesting illustrated article on the winter sanatoriums of Norway.

By order of the American Physiological and American Biochemical Societies a series of recommendations have, we learn from the *Medical Record*, been published in regard to the nomenclature of the protein bodies, which are in part as follows: First, the word "proteid" should be abandoned. Secondly, the word "protein" should designate that group of substances which consists, so far as at present is known, essentially of combinations of a-amino acids and their derivatives—for example, a amino-acetic acid, or glycocoll; a-amino propionic acid, or alanin; phenyl-a-amino-propionic acid, or phenylalanin; guanidin-amino-valerianic acid, or arginin, etc., and are, therefore, essentially polypeptids. Thirdly, that the following terms be used to designate the various groups of proteins: I. Simple Proteins.—Protein substances which yield only a-amino acids or their derivatives on hydrolysis. This group includes albumins, globulins, glutelins, alcohol soluble proteins, albuminoids, histones, and protamines. II. Conjugated proteins.—Substances which contain the protein molecule united to some other molecule or molecules otherwise than as a salt. This group includes nucleoproteins, glycoproteins, phosphoproteins, haemoglobins, and lecithoproteins. III. Derived proteins.—(1) Primary protein derivatives. Derivatives of the protein molecule apparently formed through hydrolytic changes which involve only slight alterations of the protein molecule. This group includes proteins, metaproteins, and coagulated proteins. (2) Secondary protein derivatives. Products of the further hydrolytic cleavage of the protein molecule. This group includes proteoses, peptones, and peptids.

Dr. Julian Marcuse, in an article on medical ethics, says the oath of Hippocrates has had new clauses added to it in almost every century, and there have always been men thoughtful enough to carry out the ideals embodied in these additions. One of these was Charles Frederick Henry Marx, who was born at Karlsruhe and began his academical career at Göttingen in 1822, where he taught till his death in 1877. He was at once a professor of pharmacology, a medical historian, and a moralist. Besides treatises on pharmacology and toxicology, he wrote a number of books and memoirs on classical, historical, and ethical subjects; the most important of these was, perhaps, his monograph on Paracelsus entitled *In Honour of Theophrastus von Hohenheim*, published in 1842; his *Historical Survey of Toxicology:* his *Essays on Marcus Aurelius della Torre and Leonardo da Vinci as Founders of Figurative Anatomy:* on *The Relation of the Representative Art with the Art of Healing:* on *The Services of Doctors in Relation to the Disappearance of Demoniac Diseases:* and on Lord Bacon. A work of special interest from the ethical point of view appeared in 1844, under the title of *Akesios*. This work is the expression of the thought of a deeply philosophical

and noble-minded man, anxious to determine the real scientific aim of medicine, who sees in doctors not only students of natural science, but, still more, feeling and sympathetic men. Akesios, or the Healer, was one of the names by which the Greeks designated the demi-god called by the Egyptians, Harpokrates. Marx says:

The politician has public fame for his object; the doctor's aim is silent success. With the former, words are everything; with the latter, only deeds count; the former does not often listen to the voice of conscience; the doctor seeks instinctively only good and moral beauty: the former assumes any aspect in order to carry his point [one might almost fancy that the author, with prophetic soul, had foreseen certain recent elections], the latter struggles to overcome himself. He knows no boundary of nationality, but loves the whole human race, and this love he considers the fulfilment and end of every precept. His religion in action is the love of mankind. He knows nothing of opposition, but only of equalization, of union not separation, of reconciliation not hostility, of forbearance not violence. He considers all that is right and true, as well as moral refinement and perfection, to be essential for spiritual health. He sacrifices himself that the sick may have relief. As breath is necessary to the lungs, so is doing good to the doctor; he looks on himself as a seeker for the right way, an alleviator of pain, a defender of the weak and advocate of mercy, the mediator between factions, an apostle of universal peace and human brotherhood. The heroes of the profession were for the most part men of noble minds; what they did was more an exercise of their conscience than of their knowledge, and medicine appears in them as a practical and moral philosophy; the doctor is not merely a merciful brother, but we might almost look on him as a Trappist who digs his own grave, inasmuch as his thoughts, aims, and endeavours are to make illness an impossibility.

In his letters Marx deals with the problem of ethical medicine. In one he writes:

The shady side of the profession, and bitter experiences accumulated by sick beds and in families, sometimes cause dissatisfaction with the calling that one has embraced, and a disgust for its conditions, though it is not easy to throw them off completely. Such a battle of the individual with the world originates very early in the noblest natures. Their delicacy of feeling is too often unpleasantly affected, their conscientiousness too often put to the test, and their sense of honour too often violated. The day that sees the wound inflicted, however, sees it heal again; one cannot allow deep feelings to gain the ascendancy, and a thorough knowledge of human strength and human weakness compels one to compromise.

To Philippe Pinel, the celebrated authority on mental disease, he writes:

No one knows better than you that nothing is of any account but the consciousness of innocence and the most absolute devotion to goodness. As a guardian spirit is to the sick, so were you to your listeners an inspiring teacher, and to your medical colleagues a model of unsullied morality. Every delusion is the consequence of confusion of thought. Wrong and crime are closely allied to ignorance. The doctors, who strive to check the causes of mental diseases, are not mere guardians of health and the servants of sick Nature, but also champions of the peace of the soul and virtue. Psychology still awaits its Meckel, who will prove that the worst men are to be regarded as having suffered arrest in their development from lower stages.

Writing about Richard Mead, who, both as a physician and as a man, was more respected than any one else of his time in London, he says:

There are doctors who, whilst practising, lose no opportunity of opposing the older members of the profession; they are like alligators, who bite as they crawl out of their eggs. But the fault lies mainly with the older men, who consider budding doctors as intruders and blood-suckers. . . . Strife and contention are unworthy of the science of healing. Its only war should be against sickness; and harmony and outspoken honesty should be the rule of medical intercourse. Certainly Hogarth takes the curved line to be that of beauty, but in everyday life the straight way is to be preferred to the crooked. On the other hand it appears as if the want of unity and confidence lay in the fact that the positions and characters of doctors are so heterogeneous in character that this difference is impressed on their conduct. Physicians in ordinary, court doctors, military doctors, naval doctors, country doctors, doctors practising at watering places, fever doctors, literary doctors, medical economists and teachers, all these display peculiar characteristics, but people often merge the species in the genus.

Marx held that the doctor should not merely look upon medicine as part of a natural science, which teaches him to know men like plants, and to find out satisfactorily his attributes and powers by means of microscopes, tests, and the anatomical knife. The doctor's chief work in all circumstances is to relieve pain and make life more easy, and to spend himself in exploring humanity in all its phases and rendering the remedies of the healing art as simple as possible. He should ever be gathering knowledge by research and daily experience. From the ethical point of view, the simple natures are the noblest and strongest. They do not need artificial means to develop their own inward life. The wise live, speak, and act simply; the foolish cannot find enough variety. Marx very clearly recognized the connexion between ethical defects and quack practices. Doctors, he says, do not like to be questioned about their remedies and method of treatment. Hence the prevalence of quackery and medical dilettantism. Doctors can only make good their title to be true members of their profession if each individual will look on every subject not merely as a matter of knowledge but of as one of conscience, accepting the strictest responsibility for the most trifling as well as the most important illness, all treated without exception with the utmost care. Pretence in word and much more in deed should be avoided. *Akesios* is, as Marcuse says, a work written with the heart's blood of the author, and embodies the very spirit of medical ethics.

Messrs. P. Blakiston's, Son and Co., of Philadelphia have nearly ready a translation of *Ophthalmic Surgery* by Dr. Josef Meller. It is described as a handbook of the surgical operations on the eyeball and its appendages, practised in the clinic of Professor Fuchs of Vienna. It is edited by Dr. Walter L. Pyle, whose name is a guarantee of the high literary merit of the text.

We have received the first number of a new periodical the title of which, *Zeitschrift für Laryngologie, Rhinologie, und ihre Grenzgebiete*, describes its scope and the nature of its contents. It is edited by Dr. Felix Blumenfeld of Wiesbaden, who has among his collaborators Professor Chiari of Vienna, Professor von Noorden of Vienna, and Professor Luc of Paris. If the new periodical fulfils the promise of its first number, it will be one of the most important journals devoted to the special branches of medical science with which it deals.

Professor Joseph Jastrow's work, *The Subconscious*, has been translated into French by M. E. Philipi. M. Pierre Janet has contributed an introduction. The book is published in Alcan's Bibliothèque de Philosophie Contemporaine.

A new periodical entitled *Zeitschrift für Balneologie* has recently appeared. It is published in Berlin and the editors are Sanitatsrat Graeffner and Dr. Kaminer. It is to be the organ of the Standing Committee for the sanitary regulation of German watering places and health resorts.

Messrs. J. and A. Churchill have a second edition of Eden's *Midwifery* almost ready. It will contain about fifty more pages, sixteen additional plates, and other new illustrations. The text has been thoroughly revised. The same publishers will shortly issue a small book on military hygiene, by Lieutenant-Colonel R. H. Firth, R.A.M.C., which is intended to meet the needs of army officers who have to pass examinations in sanitation and hygiene. The text will be illustrated by original drawings.

NATIONAL ASSOCIATION FOR THE FEEBLE-MINDED.

THE annual meeting of this Association (the offices of which are at Denison House, Vauxhall Bridge Road) was held on May 8th in the Indian Room attached to Lord Brassey's mansion in Park Lane, and there was a crowded attendance.

Lady FREDERICK BRUDENELL-BRUCE, President of the Association, occupied the chair, and in her opening remarks referred to the satisfactory character of the report as showing considerable expansion of the activities of the society in the way of forming new centres in the provinces, of helping to organize homes, and of promoting the establishment of a comprehensive colony for the permanent care of feeble-minded cases requiring it. Her Royal Highness Princess Christian, Patroness of the Association, had graciously permitted her name to be attached to the Farm Colony Fund. Contributions to this now amounted to about £2,000, but to complete the scheme some £8,000 additional would be required. It was hoped that a practical beginning would soon be made by the transfer of the youths trained at Upshirebury to

a suitable farm, but ultimately not only an ordinary farm for feeble-minded youths and adults but a flower farm for girls and a residential school for the young children were contemplated. The association had great need of practical workers to assist in carrying out the various schemes, and its activities, extending as they did to distant parts of the Empire (for advice had recently been asked from New Zealand), were shown by the fact that during the last year no less than 662 cases had been under the consideration of its committees.

Mr. Anthony Hope Hawkins said that it was for the kind of people who were not so wrongheaded as to need consignment to an asylum, but were yet subnormal so as to be unfit for the duties and responsibilities of ordinary life under the conditions of present-day complicated civilization, that help was required. It was no good sending such cases for a few months or even years to an institution, and then returning them to their old surroundings; what the majority needed was permanent care. He thought the colony scheme was ideal in providing for these unfortunate beings a scope for such abilities as they possessed, and the highest enjoyment of life of which they were capable.

Sir Clifford Allbutt pointed out the growing necessity for individual charitable effort to promote the welfare of the feeble-minded inasmuch as year by year social progress tended to set the less capable individual more and more on one side. When acting as a Lunacy Commissioner he had been impressed with the fact that outside the circle of certified insane there was a fringe of persons so wanting in power of self-control and self-management as to render them unfit for the ordinary life of the community. They stood in need of protection for they seemed unable to protect even their own personality, and in the wards of workhouses and elsewhere too often were to be seen feeble-minded girls who had had the misfortune to become mothers. What was to be done for such incapables? In some cases the State might with propriety intervene; in others—and there were many which might be called borderland cases—voluntary workers who possessed the necessary sympathy, wisdom, and knowledge might render more effectual service. The principles of eugenics were not as yet sufficiently precise to render it likely that any large scheme of marriage by medical schedule would become operative in our time. Yet such problems might be elucidated by the work of this association so as to educate public opinion, and as regards defective offspring kindly methods would avail in directing their training where Government interference with parental authority might be resented. In his opinion a Ministry of Public Health was much needed to combine and consolidate the various departmental authorities dealing with the sanitary condition of the people, but there would always be room for individual charitable effort not merely to relieve the evil effects of the errors of the past, but as far as possible to ascertain and combat the causes of mental deficiency.

Mr. W. H. Dickinson, M.P., in referring to the early history of the association, testified to the active progress it had made in recent years under the guidance of the energetic secretary, Miss Kirby. He stated that while at first he was in favour of small homes for the feeble-minded he had come to the conclusion that a comprehensive industrial colony for both sexes had preponderating advantages. As one of the Royal Commissioners he had had the opportunity of visiting institutions and colonies for various grades of defectives in America, and he thought that this country might learn practical lessons from them.

Dr. Robert Jones maintained that the question of prevention should come before the question of care. In London it was found that about one out of every 120 elementary school children was so far defective as to need special educational provision. The weak-minded children of to-day were the material from which would come the future inmates of asylums, prisons, penitentiaries, and inebriate retreats. If the special needs of the feeble-minded of school age were not judiciously ministered to, they would be a burden for the whole of their after-life. The association was of supreme social importance, and its scheme of an industrial colony deserved to be widely known and liberally supported, as furnishing the means of preventing the perpetuation of an evil which was a growing menace to civilization and national our welfare.

Miss Adler referred to the work of the after-care associations which had grown up under the auspices of the association, and pointed out their indispensable utility in making the best of the results of the training received by defective children in the special schools.

MEDICAL INSPECTION OF SCHOOLS.

Cardiganshire.

At a conference of members of the Higher Education Committee, sanitary and public health bodies, and medical officers of health for the county of Cardigan, recently held at Lampeter, it was resolved to recommend that the medical inspection of school children be done by the medical officers of health of the different districts. It was pointed out that the cost of travelling a county like Cardigan would be very heavy for one medical officer.

Llanelly.

At a meeting of the Llanelly Education Committee held recently, the clerk reported that there were at present on the registers of the elementary schools (council and non-provided) 6,200 children. In each year about 1,000 children were admitted, and all these would have to be examined, together with those leaving. It was decided that all the infants should be examined in the first year, and that three medical officers be appointed at a salary of £100 per annum each. It was decided that Dr. Roderick, M.O.H., be one, and at a subsequent meeting Drs. H. H. Roberts and Samuel Williams, both practitioners resident in the town, were appointed to the other two offices.

Cheltenham.

At a meeting of the Cheltenham Education Committee held on April 27th, the following recommendation by the School Management Subcommittee was considered:

> That a medical officer, who would be debarred from private practice, be appointed as assistant medical officer of health, at a salary of £200, rising by £25 annually to £250, to carry out the work of medical inspection as required by the new Act.

Alderman Norman, who was in the chair, proposed that the recommendation be adopted. He said the arguments in favour of this course could hardly be more powerful than those which had been set forth by Dr. Garrett, M.O.H., in his report to the committee. Mr. Gurney seconded, and the Vice-Chairman (Rev. Canon Gardner) supported the resolution. A member moved as an amendment:

> That this committee disapproves of the appointment of a whole-time medical officer for the inspection of school children under the new Act, and prefers the appointment of a lady medical practitioner to inspect the girls, and a medical man to inspect the boys, each to receive £100 per annum, and be under no restriction as to private practice.

He intimated that there was a lady doctor in the town, and seven or eight medical men prepared to accept the office under these terms. Mr. Steel seconded the amendment. After some discussion, a further amendment by Mr. Merrett—that the matter should be referred back to the subcommittee—was carried.

Exeter.

Mr. Percy H. Stirk has been appointed School Medical Officer to Exeter City Council at a commencing salary of £250, rising by annual increments of £25 to £300. It is a whole-time office, and there are no outside fees. There were fifty-nine candidates; seven of these appeared before the Education Committee, and three were interviewed by the Council. The new School Medical Officer will be assisted by a nurse.

West Riding.

The West Riding Education Committee has adopted a report of the Elementary Education Subcommittee, which stated, in reference to the medical inspection of school children, that as a result of the conference with the West Riding Sanitary Committee, the committee recommended that the West Riding Education Committee contribute a further sum not exceeding £600 on account of expenditure falling upon the Health Department, such sum to include the salary of the assistant medical inspector to be stationed at head quarters, but to be exclusive of the ten medical inspectors and their equipment for the purposes of the inspection of school children, which would also be charged to the Education Committee.

LYNN THOMAS AND SKYRME FUND.

EIGHTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

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MEDICAL NEWS.

THE first Spanish Congress on Tuberculosis will be held at Zaragoza this year from October 2nd to 6th.

THE amount subscribed for the Aberdeen and North of Scotland Technical College is now £115,520 11s.

THE Congress of the German Ophthalmological Society will be held this year at Heidelberg on August 5th and two following days.

THE annual general meeting of the United Service Medical Society will be held at the Royal Army Medical College, Millbank, on June 18th, at 3 p.m.

DR. H. R. SILVESTER, of London, whose name is associated with a well-known method of resuscitation of the apparently drowned, left estate valued at £25,412.

SIGNOR COCCO ORTU, Italian Minister of Agriculture, has drafted a bill for the amendment of the laws as to friendly societies in Italy and for the promotion of assurance against sickness.

THE annual dinner in London of the officers of the Indian Medical Service will be held on Thursday, June 18th, at the Gaiety Restaurant, Strand; the guest of the evening will be Viscount Morley of Blackburn, O.M., Secretary of State for India.

WE regret to learn from a Reuter's telegram that Drs. Raikes and Wray, Government medical officers, Singapore, have died of plague contracted while performing a *post-mortem* examination on a patient who had died while in quarantine.

To avoid misconception, the Committee of the Kensington Dispensary and Children's Hospital, 49, Church Street, Kensington, wish it to be known that that institution has no connexion with the Kensington General Hospital, Richmond Road, Earl's Court.

THE King has been pleased to approve of the retention of the title of "Honourable" by Sir William Bisset Berry, M.D., on his retirement from the office of Speaker of the House of Assembly of the Colony of the Cape of Good Hope, which he has held for a period of more than three years.

THE King has been pleased to give to A. Granville, Esq., M.R.C.S., L.R.C.P., licence and authority to accept and wear the insignia of the Fourth Class of the Imperial Ottoman Order, which have been conferred upon him by the Khedive of Egypt in recognition of valuable services rendered by him.

THE will of the late Mr. Thomas Webb, of South Kensington and Tunbridge Wells, directs the payment of £500 to the General Hospital, Tunbridge Wells, and of a similar amount to Cardiff Infirmary. Sums of £5,000 each are bequeathed to University College, London, and the University College of South Wales and Monmouthshire for the promotion of physical research.

THE opening lecture of the summer Post-Graduate Course of the Mount Vernon Hospital will be given by Sir William Allchin, M.D., F.R.C.P., in the lecture room at the out-patient department of the hospital, 7, Fitzroy Square, W., on Thursday, May 21st, at 5 p.m. The subject of the lecture, to which qualified medical practitioners are invited, will be some inter-relations of thoracic and abdominal disease.

WE learn from the American journal *Science* that the Royal College of Surgeons of England has presented to the Harvard Medical School, through Dr. Walter G. Chase, about seventy engravings and mezzotints of celebrated medical men. These, together with loan collections of Dr. Chase and Dr. E. B. Young, numbering about 600, have been arranged for exhibition in the Warren Anatomical Museum of Harvard Medical School.

THE exhibition at Earl's Court this year offers serious attractions to those interested in puericulture, infant protection, and elementary and secondary education of all forms. The central feature of the exhibition is a display of the productions and manufactures of the Kingdom of Hungary and included in this is a section devoted to the subjects named and this will well repay a visit. An admirably compiled pamphlet can be obtained gratis giving a succinct account of the whole subject, or rather aggregation of subjects. It is worth perusal quite apart from the display, to which it forms a handbook.

THE Royal Dental Hospital in Leicester Square, the first to be established in England and the parent in this country of dentistry as a scientific art, has now completed fifty years of work, and wishes to celebrate its jubilee by extinguishing the heavy debt still outstanding on its buildings. This amounts to over £47,000, and the sum which has to be paid by way of interest and sinking fund seriously cripples the working possibilities of the institution. This is a great pity, as the administration of the undertaking is excellent, the treatment it affords to the poor of the most admirable kind, and the educative influence alike of the hospital and its school of national utility. It is to be hoped, therefore, that the public will contribute freely towards the object in view.

THE Department of Health of the city of Chicago is analysing the well water of all the farms supplying milk to the city. More than twenty wells have already been condemned and notice served on the farmers that new wells must be dug, or their milk will be excluded from the city. A system has also been instituted requiring every dairy farmer to send to the department on the 1st and the 15th day of each month a written report stating the presence or absence of contagious disease in the families of dairymen or other attendants employed on his premises. If the notices are not received in due time, the supply of milk from the dairies will be regarded as suspicious, and excluded from Chicago until investigation has been made.

WE regret to learn that an alarming fire broke out in the Wellcome Research Laboratories, Gordon Memorial College, Khartoum, on May 11th, and that, before it was got under control, considerable damage was done.

INTERNATIONAL FIRST AID CONGRESS.—Mr. S. Osborn, F.R.C.S., Matsonette, Datchett, near Windsor, honorary secretary for Great Britain of the congress on first aid to be held at Frankfurt-on-Maine from June 9th to 13th, has compiled a list of routes and fares to Frankfurt, and also a list of hotels with their charges.

AMBULANCE DOGS.—Count Benckendorf, the Russian Ambassador, through General Germaloff, Military Attaché, by special order of the Empress Marie Feodrovna, President of the Imperial Russian Red Cross Society, has presented Major Richardson with the war medal of the Society, together with a letter conveying the heartfelt thanks of the Society for the services of his ambulance dogs in Manchuria during the Russo-Japanese war.

British Medical Journal.

SATURDAY, MAY 16TH, 1908.

ADMISSION OF WOMEN TO THE LONDON COLLEGES.

THE question of the admission of women to the examinations of the Royal Colleges of Physicians of London and the Royal College of Surgeons of England has been before these bodies for a considerable time. A petition was presented by the London School of Medicine for Women in 1895, and although it was rejected by the College of Physicians by a narrow majority, the Council of the College of Surgeons was in favour of admitting women to its examinations. The history of the movement, which may be gathered from the report of the debate published in the BRITISH MEDICAL JOURNAL of November 2nd, 1895, p. 1121, affords an interesting illustration of the progress of ideas which even the most conservative institutions find it impossible to resist. At the College of Physicians the late Dr. Charles West, who opposed the granting of the petition, stated that the question had been debated eighteen years before, when a similar petition had been rejected by 68 votes to 18. Dr. Payne pointed out that Dr. West and those who thought with him had used precisely the same arguments in opposition to the admission of women that were used in the previous discussion. Although Sir Richard Quain "objected "very strongly" to the surplus of women being "shoved" into the College, and expressed the perhaps not altogether disinterested view that the pulpit and the bar were more fitted for their intellect than medicine, while Sir William Jenner declared that women were "physically, mentally, and morally unfitted for "the practice of medicine," Dr. West's motion was carried only by 59 votes against 50. This showed a notable change of feeling among the Fellows of the College. The attitude of those who opposed the motion on the subject may be gathered from the following passage in a letter which was circulated among the Fellows shortly before the meeting: "To the argument that the admission "of women to the College is 'inevitable' we desire to "offer the fullest resistance; believing that the principle "is wrong, we refuse to submit to considerations of "expediency, and regard it as a duty which we owe to "the College, to the profession, and to the public at "large, to prevent, to the utmost of our ability, the "Royal College of Physicians being made a portal to "the obtaining that which our reason and judgement "condemn." There the matter remained until lately, when the Council of the College of Surgeons spontaneously took into consideration the question of admitting women to its examinations. Upon this hint the champions of the women spoke again. Petitions were addressed to the colleges showing the progress that had been made since 1895. It was pointed out that the entry of women into the medical profession had steadily increased, and that the number now on the *Medical Register* was over 750, and of these more than 400 had been students of the London School. In 1895 the corresponding numbers were 200 and 150 respectively. The number of students at present attending the school was, it was stated, 169. Of the students qualified from this school 204 had taken the M.B. degree of the University of London, 112 the B.S. degree, 48 the M.D. degree, and 5 the M.S. degree. The gold medal in every subject of the Intermediate and Final M.B., B.S. Examinations of the University of London had been obtained by students of the school—in some subjects more than once. It was added that the school had been wholly rebuilt at a cost of £30,000, and its laboratories were fully equipped to meet the requirements of the University of London, of which it was an affiliated school, while the clinical opportunities afforded to students at the Royal Free Hospital had been largely increased. The petition went on to say that there was a considerable number of women on the staffs of various hospitals throughout the country, and many held resident posts in such hospitals. They also held appointments in the Post Office, in Poor-law Infirmaries and Asylums, under the Central Midwives Board, and under the Education Department of the London and of provincial County Councils. In London there was a general hospital for women of 60 beds, officered entirely by medical women, and there were similar hospitals in other towns. In India women held medical appointments in hospitals under the Government and under the Rulers of Native States; in the hospitals of the Countess of Dufferin's Association for Supplying Female Aid to the Women of India; and in those belonging to all the missionary societies, not only in India, but also in China, in Persia, and in Africa. In Egypt medical women held appointments in the Government School at Cairo and under the Sanitary, Maritime and Quarantine Council. Among those supporting the petition are many of the most distinguished names in the medical profession of London. We need only mention Sir Thomas Smith, Sir Samuel Wilks, Sir W. R. Gowers, Sir Victor Horsley, Dr. Rose Bradford, Dr. Goodhart, Professor Halliburton, Dr. Hughlings Jackson, Sir Malcolm Morris, Dr. Mott, Dr. Pye-Smith, Dr. G. H. Savage, Professor Schäfer, and Professor Starling. The petitions have not been without effect.

At the annual meeting of the Fellows and Members of the Royal College of Surgeons held on November 22nd, 1907, the President, Mr. Henry Morris, said that, having cleared up the legal points relating to the matter, the Council passed a resolution in favour of the admission of women; but, as a matter of constitutional necessity and in fulfilment of the conditions under which the joint board was brought into existence, the adoption of the principle must depend on the attitude of the Royal College of Physicians, to which the question had been referred. This, he was careful to explain, was done not in any way with a view of getting out of a difficulty, or gaining moral support for the admission of women; it was because it was most desirable that every step should be taken in a proper and amicable manner between the two Colleges. The position of the Colleges at that time was therefore that of the British general and admiral who commanded in the ill-fated Walcheren expedition:

> Great Chatham, with his sabre drawn,
> Stood waiting for Sir Richard Strachan;
> Sir Richard, longing to be at 'em,
> Stood waiting for the Earl of Chatham.

It was the College of Physicians that led the way. The Fellows at the Comitia held on December 12th, 1907, passed resolutions in favour of the admission of women. The President of the College of Surgeons had already intimated that if the vote of the College of Physicians was in favour of the admission of women a vote of the Fellows and Members of the

College of Surgeons would be taken, and on the result of that vote the final decision of the Council would, he said, very largely depend. Accordingly a referendum was issued asking for a categorical answer to the questions: A. In your opinion is it desirable that women should be admitted by examination as Members of the College? B. In your opinion is it desirable that women, after admission to the Membership, should be admitted by examination as Fellows of the College? It was pointed out in an accompanying postcard that if the diplomas of the College were granted to women, the Council, having taken legal opinion, was advised that, while under the Medical Act (Qualifications) of 1876 women could be admitted as Members or Fellows, no woman so admitted would thereby be entitled to take any part in the government, management, or proceedings of the College. As to this, it need only be said that in this respect women Members would be little, if at all, worse off than are men under the present dispensation.

We have thought it worth while to give this brief history of the movement in order that those holding the diplomas of the London Colleges should know the present position of the question. We do not wish to discuss contentious matter which has been imported into the question and with which readers of the JOURNAL are conversant. But it may be well to point out that unless the answers to the questions of the referendum are confined strictly to "Yes" or "No" the votes might be held as invalid.

We think the time has come for the removal of the barriers which have prevented women from acquiring the diplomas of the London Colleges. It is a real grievance that students of the London School of Medicine for Women should have to go to Edinburgh or Dublin for a College diploma. There is, of course, the University of London, and some women have done well there. But if we may apply the Latin proverb, *Non cuivis homini contingit adire Corinthum*, in a new sense, and the medical degrees of the London University are for the few. At present the London Colleges—if we except Oxford and Cambridge, which by tradition and constitution may be expected to stand upon the antique ways until they are driven off them by the rising tide of newer thought—are in a position of "splendid isolation" in their refusal to admit women. We hope the votes of the Members will show that men are not animated by any spirit of narrow and selfish exclusiveness. We may recall to them the example shown by the British Medical Association, which in 1892, on the proposal of the late Dr. Galton, passed a resolution admitting women to membership in a meeting of about three hundred members with only ten dissentients.

BEVERAGES AND FATIGUE.

DR. W. H. R. RIVERS, Lecturer on Experimental Psychology at Cambridge, is an accomplished student of that branch of psychology which deals with the differences in the mental constitution of different people, and with those characters which distinguish the members of different races. The physician is interested in this subject owing to its bearing on those differences of temperament or constitution which influence the incidence of disease and the reaction to therapeutic measures. It is a matter of general experience that different persons are susceptible in very different degrees to the influence of drugs, and Dr. Rivers has pointed out in his Croonian lectures on the influence of alcohol and other drugs on fatigue, which have just been published in a volume,[1] that it is very necessary to be careful in ascribing differences of effect on bodily functions to definite variations of physiological constitution. "There can be little doubt," he says, "that many of the differences which have been "found by previous workers are due to variations in the "part played by psychical factors which have been "allowed to complicate most work on this subject."

Dr. Rivers deserves the blue ribbon of science for his personal sacrifice in giving up alcohol, tea, coffee, in fact all stimulants, for a year, in order to fit himself for the exact observations he set out to make on himself. He found that his best experiments were made during quiet holidays in the country away from all the excitements and distractions of the university term.

The subject with which he deals particularly in these lectures is the immediate action of the drugs on the physiological mechanism as a whole. He hardly touches on the question of the effect the drugs produce if taken over prolonged periods, and so far his work has not enabled him to realize one of his ultimate aims, the analysis of the fatigue process itself. He had hoped to find a drug which could be shown to be without action on the isolated peripheral mechanism, the nerve muscle preparation, but which influenced the work records of man, for this would have afforded an instrument for the detection of the part taken in fatigue by central factors. Such a drug is not to be found in either alcohol or caffeine, but preliminary trials seem to show that strychnine may prove to possess the desired properties.

Soon after beginning his investigation Dr. Rivers became aware of the unsatisfactory nature of previous researches on the capacity for muscular work in man, and much of his work has been occupied in perfecting exact methods and eliminating disturbing factors. The method he used was to take six series of ergographs a day, at intervals of one hour, the subject not being allowed to see either the weight lifted or the tracing produced. To eliminate physical factors the subject took control mixtures, so that he did not know the days when he took the drug. This last precaution is obviously most important, but does not seem to have been taken by any previous worker. Professor Dixon compounded a mixture of gentian and citric acid to which caffeine could be added without altering the taste, whilst a mixture of capsicum, cardamom, and a small amount of chloroform, was used to simulate a similar mixture containing alcohol, or capsicum and cardamom were used to conceal from the subject the fact whether a small or a large dose of alcohol was taken. Dr. Rivers constructed an ergograph which prevented extraneous muscles coming into play, former researches with Mosso's ergograph having been shown to be untrustworthy in this respect. To study the fatigue of attention, McDougall's method was used. This consists in hitting a succession of dots printed on a Morse tape made to pass before a slit, the rate of movement being just the maximal rate for the subject. The mental effect was also tested by prolonged multiplications, and by typewriting, the number of corrected and uncorrected errors in the latter being taken as an indication of mental fatigue.

Dr. Rivers observed in himself that symptoms of neurasthenia at first followed the giving up of tea and coffee, and that his sleep was upset by caffeine. On a fellow worker caffeine had no such disturbing influence, and the action of the drug on the work curve showed

[1] *The Influence of Alcohol and other Drugs on Fatigue.* By W. H. R. Rivers, M.D., F.R.C.P. The Croonian Lectures delivered at the Royal College of Physicians in 1906. London: E. Arnold. 1908. (Royal 8vo, pp. 144. 6s.)

variations both quantitative and qualitative, pointing clearly to individual physiological differences. "Caffeine "increases the capacity for both muscular and mental "work, this stimulating action persisting for a con- "siderable time after the substance has been taken "without there being any evidence, with moderate doses, "of reaction; . . . taken in excess, the stimulating "action may be so transitory, that it (caffeine) may "legitimately be spoken of as an accelerator of fatigue; ". . . experiment suggests strongly that caffeine is a "dangerous remedy as a stimulant in cases of prolonged "fatigue, or of that enhanced tendency to fatigue which "is the characteristic feature of neurasthenia."

As to alcohol Dr. Rivers says with regard to muscular work, "there is definite evidence that small doses, "varying from 5 to 20 c.cm. of absolute alcohol, have "no effect on the amount or nature of the work per- "formed with the ergograph, either immediately or "within several hours of their administration, the "results previously obtained by other workers being "almost certainly due to defects of experimental "method," one of the chief being that the per- son tested knew whether he had or had not taken alcohol. With a larger dose of 40 c.cm. the evidence was uncertain and inconstant. With doses larger than 40 c.cm. Hellsten's experiments showed a decided falling off in the amount of work when a dose of 80 grams was taken. In the case of mental work the available evidence points to a decrease in the amount, but in some instances it was not possible to detect any effect at all; there would, indeed, appear to be very great individual differences, if we are to accept the observation that even the large dose of 100 c.cm. (3½ fluid oz.), equivalent to about 6 fluid oz. of whisky, failed to show any effect in some persons. It must, of course, be remembered that any pleasurable emotion excited by the ingestion of alcohol was excluded by Dr. Rivers's method of disguising the alcohol, and that emotion and excitement undoubtedly affect the work records. The ergographs taken after the fatigue and excitement of giving a scientific address, or after a public dinner, showed more, not less, sustained effort, which again is a rather surprising result. The effect of taking alcohol on prolonged fatigue, as, for instance, during a campaign, is the part of the problem which most requires answer, but what this is can with diffi- culty be elucidated by the exact methods of laboratory inquiry, the varying factors of daily life being unavoid- able. In the case of a co-worker, Mr. Webber, the taking of 40 c.cm. of absolute alcohol was followed by sweating, flushing, and irritation of the skin, some salivation, symptoms of giddiness, lassitude, and dis- inclination to use either body or mind. The usual time allowed for the adjustment of instruments between successive readings seemed too short; several small accidents occurred, and the drawing of lines in the note- book was often careless. A fellow-worker noticed distinctly the irritability of Mr. Webber on the 40 c.cm. days. With smaller doses of 10 to 20 c.cm. (about 3 to 6 fluid drachms) absolute alcohol, none of these symptoms occurred.

Tobacco proved to have a most unfavourable effect on muscular work, and a distinguished physiologist informs us that he can confirm this from his own experience; he found that the giving up of smoking had a most evident effect on his energy and power for work. Dr. Rivers is to be congratulated on the exact scientific spirit in which he has carried out these researches, and we hope to see them carried a step further.

AN ANTIVIVISECTION DEMONSTRATION.

WE are not exactly aware, as Mr. Micawber said of the "gowan," what the body which calls itself "Miss Lind-af- Hageby's Antivivisection Council" may be, unless it be an additional illustration of the fissiparous tendency of anti- vivisectionism. Whatever it may be, a "demonstration "against vivisection" was held under its auspices at the Caxton Hall on May 12th. Sir George Kekewich, M.P., Honorary Secretary of the Parliamentary Association for the Abolition of Vivisection, was in the chair. An "anti- "vivisection declaration" signed by Miss Lind-af-Hageby was submitted. It stated among other things that "they"—that is, doubtless, the council aforesaid— "oppose the practice of vivisection because it is "inseparable from cruelty to animals"; that they "repudiate the vivisector's assertion that animals are "incapable of feeling pain or suffering distress" (what vivisector ever said this?); that they "decline to accept "the vivisector's tenet that cruelty is justifiable provided "it be useful"; that they "proclaim the ultimate unity "of the greatest usefulness with the highest morality, "and are confident that a practice which is spiritually "repulsive and morally deteriorating cannot be scien- "tifically necessary"; that they desire completely to disassociate themselves from scientific research and medical theories tainted with cruelty and from participation in the use of the alleged "benefits" of vivisection. They conclude that the "formation of the "'Research Defence Society' and the promulgation "of its guiding principle—as laid down in the letter to "the press by the President, that 'the small amount of "'pain or discomfort inflicted is insignificant compared "'with the great gain to knowledge and the direct "'advantage to humanity,' cannot stay or undermine "the Antivivisection Movement." On this we may remark that the antivivisection movement scarcely needs further staying or undermining than it has received in the evidence given by its supporters before the Royal Commission, if only the public could be got to read it. Sir George Kekewich said that he had not the smallest doubt that the report of that Commis- sion would be against them. His conviction is pro- bably well founded, for he must have felt that his own examination was enough to damage any cause in defence of which he appeared. We need not rehearse the details of the meeting. The antivivisectionists have left themselves nothing to say in the way of argument, and are reduced to shrieking. When Miss Lind-af-Hageby says she and her council "believe deliberate cruelty to animals to be an "evil," we can only say with Mrs. Gamp, "Who "deniges of it, Betsy?" When they "proclaim the "ultimate unity of the greatest usefulness with the "highest morality," we ask—without any hope of an answer—Why should the good of man be separated from the highest morality, or be made subordinate to the comfort of a guinea-pig? These good people seem never to realize that they owe a duty to their suffering fellow creatures. Dr. Snow, who not long ago confided to the Royal Commission that he had never read the Act, did not shed much light on the complex questions, which he said were obscured by a mass of vivisection fallacies. He evidently bored his audience, and we can only wonder at the presence on such a platform of one who, a few months ago, expressed his belief that experiments on animals might sometimes be necessary. We con- gratulate Mr. Stephen Paget on a telling speech made before people who showed too clearly that they had no wish to hear the truth. Mr. Cunningham Graham made what we can only characterize as a disgraceful appeal to the passions of the mob. A large part of it was political, and was simply a personal attack on Lord Cromer; but he said (we take the report of the words from the *Standard*): "There are many operations conducted in

"the hospitals to-day, useless, cruel, and only able to be "conducted for precisely the same reasons that they "were conducted on animals—namely, that those "who undergo them are poor and helpless." Mr. Cunningham Graham is a sort of understudy to Mr. Bernard Shaw. Both play to the gallery, and, like Gratiano, "speak an infinite deal of nothing"—that is to say, of themselves. But Mr. Cunningham Graham's charge is too serious to be made in a mountebank spirit, and we ask him to give some proof of his statements. Has he ever, we wonder, been inside a hospital? That is the last place in which your anti-vivisectionist is likely to be found. His charity is generally reserved for cats and dogs, and besides he probably would not like to have his vain imaginings dispelled.

THE ROYAL SOCIETY'S CONVERSAZIONE.

THERE was nothing sensational at the annual conversazione on Wednesday, but from the medical standpoint the exhibits were of greater interest than those of previous years. The most prominent of them was the exhibit of the Executive Committee of the Imperial Cancer Research Fund. There were photomicrographs showing every phase of the change from carcinoma to sarcoma, and diagrams illustrating the means whereby immunization had been secured in mice through the injection into their system of an extract of the skins of embryo mice; it was pointed out that, given a mouse infected with a cancerous tumour, a fresh tumour could not be ingrafted into the animal if it had been in the meantime protected by the extract of a mouse embryo's skin. It was further illustrated by photomicrographs that the types of cancer in vertebrates differed with the different species, and that it was consequently perfectly intelligible that immunity could be acquired by a member of a given species only by injecting the skin extract of a member of the same species. It was also shown that cancer was prevalent throughout the whole of the vertebrate kingdom, with the exception of the reptiles, in which no case had as yet been observed. An instrument was exhibited by Mr. Gray for the purpose of simplifying colour determinations. In principle it resembles the Lovibond tintometer. There is an aperture at the end of the stage for the observation of the hair, eyes, skin, or what not, and the colour is compared with standard colour glasses, which are placed on one side of the aperture. The instrument should prove of value in view of the importance at present rightly attached to accurate determinations of colour. Professor J. Symington and Dr. J. C. Rankin showed a series of very remarkable skiagrams illustrating the development of teeth in man from birth to puberty. In order to take the photographs, the x rays were directed from within outwards and somewhat forwards to avoid the overlapping of the shadows of the lateral and incisor teeth. Mr. Barnard exhibited mercury vapour lamps for microscopic illumination. The advantage claimed for this is that inasmuch as the visible spectrum given by the light consists almost entirely of three bright lines, in the orange, green, and blue-violet respectively, it is possible by the use of suitable absorbent screens to secure with ease a monochromatic source of light. The elimination of the red rays gives a marked increase of resolving power; the colours of differential stains are not seen as such, but the difference of shade permits of their being readily determined. Dr. Hewlett and Mr. Barnard showed a machine for disintegrating bacterial and other cells. Professor Bottomley exhibited the beneficial effects of nitrogenous fixation in non-leguminous plants, illustrating his work not only by a number of pot experiments, but also by a collection of turnips, radishes, and beetroot taken from crops inoculated in the field. The exhibits showed that the treatment increased the nitrates present in the soil, added to the weight of the crop and hastened maturity. Professor Bottomley's success depends, according to his own statement, on his having brought about co-operation between pseudomonas, azotobacteria, and other nitrogen-fixing organisms. Professor Wood showed that the baking value of wheat was dependent on two factors—the relative efficiencies of the diastatic capacities of the wheat and the physical properties of the gluten which depended on the acid and salts present in the grain. A big and little loaf were exhibited, which had been made from the same weight of flour. The Grouse Disease Commissioners exhibited a large number of the birds, the grits and foodstuffs recovered from their crops, and the parasites to which they were liable. A very frequent cause of death was the presence of nematode worms in the intestinal canal. Mr. C. V. Boys gave an interesting and amusing demonstration of the dynamics of diabolo; Mr. Francis Fox took as his subject the saving of Winchester Cathedral and other ancient buildings which, owing to the fact that the foundations rested on a layer of peat, involved the employment of a diver; and Mr. Gordon Hewitt described the life-history of the house-fly. After pointing out that the small fly of the spring and the biting fly, popularly considered as specimens of the house-fly, were distinct species, he discussed the breeding grounds of the fly and the danger it was to public health because its habits and its origin brought it into contact with excremental organisms and favoured their propagation. The only economic benefit the house-fly conferred was that it showed the existence of dirt, because wherever dirt was it was sure to be found.

FATAL CONTUSION OF PANCREAS.

EARLY last year a man, aged 32, was knocked down in the streets of Paris by a dray, one wheel passing over his abdomen. Two hours later he was admitted into the Charité. Drs. Piquand and Toupet, who have reported the case before a French Society,[1] state that the face was pale, the pulse small and quick, and the abdomen tender but not retracted. One hour later the right rectus muscle became very distinctly contracted, and the patient appeared to be sinking from internal haemorrhage. Rupture of the liver was suspected. Abdominal section was performed, and the peritoneal cavity was found full of blood. The most remarkable feature in the nature of the injury was its limitation to the pancreas. The haemorrhage was traced to an almost vertical rent severing the head of the pancreas from the remainder of that organ. The laceration extended on to the transverse mesocolon above, and along the peritoneum in front of the third part of the duodenum below. The head of the pancreas itself was for the most part reduced to pulp. Nevertheless, none of the main mesenteric vessels appeared to be torn. The tampon was tried and failed, as might have been expected. The crushed part of the head of the pancreas was removed. Then the remainder was united to the body of the pancreas by five stout catgut sutures passed deeply into the pancreatic tissues. This stage of the operation proved even more difficult than was anticipated, not only because of the friability of the tissues, but also because great care had to be taken not to include any of the mesenteric vessels. The bleeding was well controlled by the sutures, and the transverse mesocolon was closed with catgut and sewn over the pancreas, being united by a few interrupted sutures to the peritoneum over the second and third part of the duodenum. The patient, after rallying for a while, died

[1] Rupture isolée du pancréas par contusion abdominale, *Bulletins et Mém. de la Soc. Anat. de Paris*, July, 1907.

thirty hours after the operation. At the necropsy it was found that no other lesion existed, and that the sutures had held well, and had stopped the bleeding. The laceration was complete, as made out at the operation, excepting that there was a little untorn bridge of tissue above, between the head and body. The canal of Wirsung was torn through, together with the entire middle and lower part of the head. The great vessels had escaped damage. The authors observe that Ceccherelli thought that rupture of the pancreas without lesion of the intestine was impossible, but Wilks and Moxon, Le Gros Clarke and Wagstaff, had reported instances of this injury without damage to the other solid and hollow viscera. The injury cannot be accurately diagnosed, even abdominal section has failed in one case to enlighten the operator. Piquand and Toupet admit that they discovered the source of haemorrhage by chance when searching for a suspected laceration of a mesenteric vessel after they had made sure that the liver and kidneys were unharmed. They found that the total number of immediate operations for rupture of the pancreas amount to 9, inclusive of their own; 3 ended in recovery. In the first of these three, Fontoynont excised the tail of the organ; in the second, Garré sutured the severed tail on to the body of the organ; in the third, Guillemin successfully stopped haemorrhage from a partial contusion of the head by means of the tampon. Morestin added a tenth case, under his care at the Hôpital St. Louis a few years ago. The injury was caused, as in Piquand and Toupet's case, by the wheel of a vehicle. Operation was delayed until a day or two after the accident, the intestine was perforated at one point and Morestin believed that, so far as he could remember, the spleen was damaged. The pancreas was lacerated through the body a little to the left of the bodies of the lumbar vertebrae. The peritoneum and great omentum were covered with numerous thick white marks like grease spots from a candle, caused by the effusion of pancreatic juice. There was diffuse peritonitis which proved fatal. At the time of the operation the haemorrhage from the pancreas had ceased.

MENDELISM.

In the second of the three Tyndall lectures delivered by Mr. Bateson at the Royal Institution, he continued the discussion of the inheritance of colour and its exemplification of the Mendelian law. After quoting a number of experiments, he considered in some detail the observations made by Mr. Hurst on the inheritance of eye colour in man, and based on the material available in Burbage, Leicestershire. Mr. Hurst divided eyes for the purpose of classification into the duplex and the simplex type. Both duplex and simplex eyes have black pigment behind the iris, but duplex eyes have also brown or yellow pigment in front of the iris, while in simplex eyes this pigment is quite absent. Twenty simplex females had mated with twenty simplex males, the hundred and one offspring all possessed simplex eyes. Fifty duplex females had mated with fifty duplex males. Thirty-seven of the families, having a hundred and ninety-five offspring, had only descendants with duplex eyes; in the remaining thirteen families the offspring numbered sixty-three, and of these forty-five were duplex and eighteen simplex. The mating of duplex and simplex parents produced the following results: Seventeen families produced sixty-six offspring, all of the duplex type, fifty-two families produced two hundred and fifty-eight offspring, a hundred and twenty-one being duplex and a hundred and thirty-seven simplex. Analysis of of these results gave a striking illustration of Mendelian principles as applied to man. For the union of simplex with simplex gave only simplex, of duplex and duplex either families entirely duplex, or duplex and simplex in the ratio of about three to one, and the union of duplex and simplex parents gave either all duplex or duplex and simplex in the proportion of about one to one. The simplex type in heredity behaved consequently as a Mendelian recessive to the duplex type which was dominant. It was noted that the mating of simplex and simplex, in view of the experiments described in the previous lecture, might have been expected to have given rise to some duplex, owing to the meeting of complementary factors, but the fact that no such reversion occurred pointed to the strong probability that the duplex and simplex types of eye colour in man constituted a simple Mendelian case of presence and absence of a pigment. It was also noted that the duplex type has three prominent varieties: (*a*) *Self-coloured* duplex. In this the anterior pigment is distributed over the whole front of the iris, obscuring the posterior pigment as in ordinary brown eyes. (*b*) The *ringed* duplex. In this the anterior pigment is confined to a ringed area round the pupil, the posterior pigment being visible round the periphery of the iris. (*c*) The *spotted* duplex. In this the anterior pigment is broken up into spots or blotches, irregularly scattered over the posterior ground pigment. Evidence suggested that the ringed pattern was recessive to the self-coloured pattern. With regard to the genetic relations of the spotted pattern to the ringed and self-coloured pattern, practically no evidence was available. The lecturer also noticed a number of abnormalities in man and their relation to Mendelian heredity. The cases had recently been collected by Dr. Gossage, and included conditions such as a peculiar horny state of the palms and hands; in this case the abnormal condition appeared to be dominant to the normal, and was in fact in accordance with the usual experience. Other abnormalities, seeming to be in harmony with theory, were the negroid type of hair, a congenital white tuft of hair, xanthoma, the tendency to baldness, and so forth.

IMMUNIZATION AGAINST TUBERCULOSIS.

Many experimenters have attempted to produce artificial immunity against tuberculosis, and some of them have claimed to have solved the problem A discussion of many of the attempts to produce immunity by means of the bacilli of cold-blooded animals, and also of similar acid-fast bacilli, has recently been published by Lydia Rabinowitsch,[1] who concludes her remarks with an account of some experimental tests which she and Orth have carried out with regard to the supposed immunity claimed by Friedmann. Orth takes up the thread of her arguments and details the experiments in some length, discussing the results obtained. Briefly, it may be stated that various attempts have been made to produce immunity in animals by injecting the bacilli of mammalian and avian tuberculosis, and also the butter, timothy grass, and "mist" bacilli. All these attempts have led to practically negative results; a certain degree of inhibition toward the growth of true tubercle bacilli was attained in some, but it never reached any degree of protection worthy of the name of immunity. Moeller appears to have gone a stage further, in that he infected blind worms with tuberculous sputum and carried out immunizing experiments with the culture gained from the worm. His claim that a satisfactory degree of immunity can be obtained —as far as we remember, this was connected with some immunizing experiments on himself with subsequent inoculation with small quantities of virulent human bacilli—has remained unconfirmed, and his experiments

[1] *Virchow's Archiv f. Pathol., Anatom.*, etc., vol. cxc.

themselves are too few to justify a conclusion. Bacilli which have adapted themselves to cold-blooded animals, such as the frog, were also the material with which others worked, but the result was always the same: some inhibition, but no actual immunity. Dr. Rabinowitsch next deals with von Behring, who is said to have realized the possibility of tubercle bacilli of various types being able to exert a protective action against a type of slightly increased virulence. Dr. Rabinowitsch does not criticize these experimental observations closely, and indeed it would seem that more data are required to justify any expression of opinion. Friedmann worked with a culture isolated from a case of spontaneous tuberculosis in the tortoise. This bacillus was supposed to have certain characteristics which differentiated it from other forms found in cold-blooded animals. Among other things, Friedmann claims that this bacillus has been proved to be absolutely harmless to guinea-pigs, rabbits, dogs, goats, donkeys, cattle, sheep, pigs, and horses. He stated that by treating guinea-pigs with these bacilli he could render them immune to the extent that they could withstand an injection of a culture of human bacilli, in a dose which killed normal guinea-pigs in three weeks. As his claims were challenged, he submitted the question to Orth to decide whether the guinea pigs which he had "immunized" were immune or not. The experiments showed that Friedmann's guinea-pigs were capable of being infected with tubercle bacilli, that the degree of inhibition was small, and that his claims to have solved the problem of immunizing against tuberculosis, like those of others who have preceded him, have failed.

THE HYGIENIC CONQUEST OF TROPICAL AFRICA.

DR. ZIEMANN[1] is a believer in the possibility of the conquest, from the hygienic point of view, of tropical Africa for the black and, with certain limitations, for the white races. It may be suggested that for the black races this conquest is already an established fact, but the author points out that the black population is really numerous only in some favourable regions, while in many parts of tropical Africa the population is not large enough for the opening up of the country. The difficulties in the way of progress depend upon the peculiarities of the tropical climate, the diseases peculiar to the tropics, and also upon other circumstances harmful alike to the white and the coloured races. Dr. Ziemann considers first the causes which tend to diminish in number and impoverish the physique of the coloured races. The tracts of primaeval forest often mechanically hinder the spread of the population. The conditions as regards housing, food, and clothing are bad. The absence of clothing is injurious in the rainy season; underfeeding is the rule amongst the natives, and especially is the supply of animal proteids inadequate; the supply of carbohydrates is very irregular, partly because the natives in many regions do not cultivate products such as rice and maize, which could be preserved after the harvest, but only the more perishable bananas, maniok, etc. As regards the conditions of marriage, the women are married too young, sometimes as children of 7 or 8; artificial abortion is common; the heavy work is done by the women, and there is much inbreeding in some regions. The importation of alcohol is an especially serious injury to the black races. The diseases which work havoc amongst the negroes are malaria, small-pox, sleeping sickness, dysentery, ankylostomiasis, yellow fever, and leprosy. A spread of the knowledge of elementary hygiene will tend to the diminution or removal of many of these harmful conditions. The prevalent diseases are already, to some extent, preventable, and the power to prevent them is increasing. In the white races the problem of climate is largely the problem of the preservation of the proper balance between the intake and output of heat. Theoretically, the problem could be solved by a diminished heat production, by diminution in the amount of food taken, or by increase in the muscular activity; but these latter methods, if carried to an extreme, lead to the ruin of white races. The amount of food taken can, it is true, be diminished to some extent, and the nature of the food taken can be chosen to suit the climate with the utmost advantage, but it is found that the amount of proteid taken by a white man cannot safely be less than 100 grams a day; on the other hand, fat, of which 1 gram corresponds to 9.3 calories, and alcohol, of which 1 gram corresponds to 7 calories, are both to be avoided as far as possible; indeed, alcoholism, according to the author, is in the tropics almost as great an enemy to the European as the climate itself. The loss of heat from the body by conduction, radiation, and evaporation should be increased, as far as possible, by attention to the sort of clothing adopted, and by adequate ventilation, the use of punkahs, electric light, etc. The author believes that the effect of the climate upon Europeans can be so far overcome that they can be kept fit for both mental and moderate physical work throughout the period of one and a half to three years' service customary in the bad climates. Malaria is the only disease which needs to be considered in connexion with the white races. Against malaria no single method is to be relied upon, but all employed as occasion demands. The author has made great use of quinine prophylactically, and has adopted the method of administering 1 gram of quinine every fourth day, modifying this plan when necessary. He has also had gratifying results from the use of intramuscular injections of the drug. In spite of the small number of doctors the fight against malaria in Cameroon has succeeded in some of the chief districts in bringing down the mortality during several years from 10 per cent. and 11 per cent. or more to *nil*, and there are now a number of officials who have remained free from malaria during their term of service, and have returned home as well as when they went out. In dealing with the question of the medical staffs in the Colonies, Dr. Ziemann says that more doctors are needed; and, above all, the subordination in each colony of the medical service to a single head. It is, further, much to be desired that a kind of tropical institute should be founded in each of the larger Colonies, with a bacteriologist and a physiological chemist, both working under the medical chief. Finally, he expresses the opinion that an international committee for tropical medicine and hygiene should be established.

[1] *Beihefte zum Archiv für Schiffs und Tropen Hyg.*, December, 1907.

THE VETERINARY AND MEDICAL ACTS CONTRASTED.

IN the recent appeal in the case of the Royal College of Veterinary Surgeons *v.* Collinson, a decision was given in the King's Bench Division, which goes much further than any previous judicial pronouncement in protecting the interests of veterinary surgeons. The defendant, who, it was proved, was not a member of the Royal College of Veterinary Surgeons, or registered as a veterinary surgeon, or the holder of the certificate of the Highland and Agricultural Society of Scotland, exhibited outside his residence a board with the words "M. Collinson. Canine Specialist. Dogs and Cats "treated for all diseases." He was prosecuted before the justices of the Borough of Kingston-on-Thames, but acquitted on the ground that the description quoted was not in fact a statement by him either expressly or by implication that he was specially qualified to practise

a branch of veterinary surgery within the meaning of the section, and the justices further held that the section said "state," and that they were not justified in taking this to mean "imply." The Royal College of Veterinary Surgeons appealed against this decision, and the Lord Chief Justice, in giving judgement, held that the justices were wrong. In his opinion the section meant to deal with cases in which a person did not call himself a veterinary surgeon or veterinary practitioner, but indicated by an addition or description that he was "specially qualified to practise the same," and he thought "the Act was meant to stop the treatment of "domestic animals in return for fees by persons who "were not qualified unless they told the public so." That is to say, any public announcement by any person that he would treat domestic animals professionally is a violation of the Act unless accompanied by an express disclaimer of being qualified to do so. The Veterinary Act differs from the Medical Act slightly, although the preambles agree in stating that the object is to distinguish between qualified and unqualified practitioners. The penal clause, Section 17, prohibits the use of the title of veterinary surgeon or veterinary practitioner, or any name and title, addition, or description stating that he is a veterinary surgeon or a practitioner of veterinary surgery or of any branch thereof, or *is specially qualified to practise the same*. It is these last words that constitute the strength of the penal clause in the opinion of the Lord Chief Justice, as he evidently held that the words "Canine specialist,' taken together with the words "Dogs and cats treated "for all diseases," amounted to a description of the defendant as "specially qualified to practise." The other two judges, Mr. Justice Ridley and Mr. Justice Darling, agreed, although the former expressed doubts. We notice the Lord Chief Justice seemed to think that as animals are not able to speak for themselves they need special protection, and therefore the Veterinary Act should be stricter and be interpreted more strictly than the Medical Act; but while it is true that animals cannot speak, it is also true that they cannot read, so that the false assumption of titles can hardly be more prejudicial to their interests. But there can be no doubt that the Veterinary Act does, by the words we have quoted, afford greater protection to the veterinary profession than the medical obtains from Section 40 of the Medical Act. Public opinion is apparently more tolerant of quackery in relation to men than to dogs; but it can only be by educating public opinion that the amended legislation which the medical profession so much desires can be obtained or rendered effective, and it is therefore most desirable to draw attention to anomalies such as that disclosed in the judgement delivered in this case.

THE ROYAL SANITARY INSTITUTE.

THE Council of the Royal Sanitary Institute is unusually successful in attracting to its annual dinners a number of distinguished guests, and the dinner held last Tuesday was no exception to the rule. The chair was taken by the President, the Duke of Northumberland, and among those present were: The President of the Royal College of Physicians, the Earl of Plymouth, Lord Robert Cecil, M.P., Sir Francis Sharp Powell, M.P., Mr. Justice Grantham, the principal medical officer (Dr. Newsholme) and the chief engineering inspector of the Local Government Board, Surgeon-General Branfoot, President of the Medical Board of the Colonial Office, the Lord Mayor of Cardiff, Dr. Davies, Chairman of the Health Committee of the London County Council, and Sir Shirley Murphy. The President, the Duke of Northumberland, said that the number of members was well maintained, and that the Institute had secured an appropriate site for new premises at Victoria. In commenting on the political tendencies of the age, the Duke said that not long ago all legislation seemed to aim at decentralization and the placing of executive power in the hands of local bodies; but he seemed to discern in recent legislation a recognition of the fact that local inclinations and the personal interests of county councillors and the like sometimes stood in the way of such bodies taking full advantage of the powers given them by the Houses of Parliament and of their carrying out their duties with real efficiency. Such decentralization of authority seemed not undesirable, as future progress in sanitation probably required less in the way of really new legislative laws than the adoption and application of powers already existing. He thought, however, that when effect of the adoption and thorough utilization of certain Acts would be general, not local benefit only, and when local authorities were handicapped in their work by lack of adequate means it was the duty of the legislature—if it insisted on the performance of the duties in question—to relieve the local exchequer by throwing the charges on the national treasury.

PENSION PROBLEMS.

ALTHOUGH in a general way the medical profession shares the common lot of humanity and the weal or woe of the community at large, the ramification of its interests is so wide that nearly every fresh piece of domestic legislation brings a fresh problem special to itself. The Pension Bill, which is likely soon to become an Act, promises to be no exception to this rule. One of its principal objects appears to be to relieve a certain section of the population from the stigma of pauperism, or, in other words, to obviate the necessity of their having recourse to the relieving officer, and such persons, even should the age at which a pension becomes payable be reduced by five years or more below that at present determined, will in any case be of advanced age. Obviously, therefore, a large proportion of them will stand in need of more or less constant medical advice and treatment. Who is to provide it? Is a person over 65 drawing a pension of five shillings a week one whom medical men can reasonably expect to pay the smallest sort of fee, even should he or she have the highest permissible amount of other means in addition? If not, what means can a medical man adopt when application for his services is made to him by such a person? Probably the Legislature will never foresee this difficulty, and still more probably if it does so it will, as in so many other instances, rely upon the fathomless generosity of the medical profession to meet the difficulty at its own cost. On the other hand, it seems possible that it will be found when the bill is read that Mr. Asquith has contrived that a person may receive the services of a Poor-law medical officer and yet still stand within his description of those who will be entitled to draw pensions. In any case, the prospect so far as the medical profession is concerned is not inviting. In the one alternative, medical men in poor-class districts will be exposed frequently to unmerited obloquy for refusing to admit on the list of their private patients persons who cannot possibly pay them. In the other, those who occupy positions under boards of guardians will find the number of their official patients enormously increased, and the whole profession be a step nearer that position of State-provided and State-controlled medical treatment for all and sundry so dear to the hearts of a certain number of idealists, including a few medical men.

THE MOSSO LABORATORIES.

IN the summer of last year, a well-equipped institute for the study of botany, zoology, physiology, bacteriology, and meteorology in their application to high

altitudes was opened on the Col d'Olen, on the south side of Monte Rosa, 3,000 metres above the sea. Besides a number of special laboratories, there are fifteen comfortable bedrooms, as well as library, dining room, kitchen. Workers are afforded free lodging, but are expected to contribute about 2 francs a day to the expenses of lighting, cleaning, service, etc. Two places are reserved for persons nominated by the Royal Society. Applications for these places should be made in the first instance to the Royal Society by the end of June, as the laboratory opens for work at the beginning of July, and remains open for about three months.

TERRITORIAL FORCE GENERAL HOSPITALS.

It will be remembered that in his exposition of the arrangements for the organization of the medical corps of the Territorial Army, Sir Alfred Keogh stated that general hospitals would be established in all the great centres; they would be part of the organization of the several divisions, and it was intended to invite members of the staffs of local hospitals to undertake to act on the medical and surgical staffs of these military general hospitals. It is now announced that it is proposed to form twenty-three such hospitals, four in London, two in Glasgow, and one each in Edinburgh, Birmingham, Plymouth, Manchester, Sheffield, Aberdeen, Newcastle-on-Tyne, Liverpool, Leeds, Lincoln, Leicester, Oxford, Cambridge, Cardiff, Bristol, Portsmouth, and Brighton.

Sir Samuel Wilks, who had for some time suffered from a painful internal disorder, obtained complete relief after an operation performed a fortnight ago by Mr. Charters Symonds. He takes food, sleeps fairly well, and will, it is hoped, be able to get up for a short time next week. Dr. Jessop, his old friend and neighbour, is in constant attendance. Sir Samuel Wilks, if he lives until June 2nd, will complete his 84th year. It is just four years ago since he was successfully operated upon for acute septic appendicitis, and made a satisfactory recovery.

The announcement of the death on Monday last of Dr. C. J. Cullingworth, Consulting Obstetric Physician to St. Thomas's Hospital, London, will be received with deep regret both in Manchester, where the early part of his medical career was passed, and in London, where he had lived and practised for the last twenty years. In both cities his professional skill and the charm of his character, at once frank and gentle, won for him general esteem and regard. Dr. Cullingworth had for some years suffered from anginal attacks, which during the last six months had been more frequent and severe. We hope to publish a full obituary notice in our next issue.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Budget, which Mr. Asquith introduced on Thursday in last week in the most important Budget speech of recent times, contains little to affect the medical profession. Last year the differentiation of the income tax on earned and unearned incomes was of special interest to professional men with incomes under £2,000 a year from all sources. In the course of the speech it was pointed out that the long-delayed act of justice to the 750,000 persons who have been affected by it has only cost the country £1,240,000, or £10,000 less than was estimated, and has been associated with an increase of income-tax payments for the year amounting to £1,880,000 over the estimate. It is matter of congratulation that this wise remission of a tax on earned incomes has been accompanied by and produced, as the Prime Minister said, a financial as well as a moral reform. The great feature of the Budget was the initiation of old-age pensions. The scheme proposed by the Government will give £13 a year or 5s. a week to every man and woman of 70 years and over. Married couples living together are to have £19 per annum instead of £26. Forfeiture or suspension of pensions will be incurred by misconduct, and aliens, criminals, lunatics, and actual paupers will be excluded. The pension will be paid through the Post Office and there will be no connexion whatever with the Poor Law. The scheme is calculated to cost six millions a year for the estimated 500,000 pensioners. The scheme was very favourably received and is practically the same as that proposed in Sir Walter Foster's bill of 1892 when he first brought the subject before Parliament with this difference that the commencing age was 65. The other great feature was the reduction of the duty on sugar by ½d. per lb. This will cost £3,400,000, but will, it is maintained, be a boon to the poor and a help to a number of industries that depend on cheap sugar. The reception of the Budget was, generally speaking, very favourable.

The Irish Universities Bill was read a second time on Monday night after a debate which occupied most of the sitting. The opposition to the measure came from the Nonconformist section for whom Mr. A. Hutton and Dr. Hazel were the spokesmen. They were supported by some of the Ulster members, who also objected to denominational colleges. There was little about medical education in the discussion except in the speech of Mr. Campbell, one of the members for Trinity College, Dublin, who strongly criticized the proposed senate of the new university in Dublin. Twelve out of the thirty-five were medical doctors, six of them being professors of the St. Cecilia Street School of Medicine. One seemed to have no university education of any sort or kind; another was a prominent member of the United Irish League, and a third was a clerk in the Civil Service, who owed his place to being a vice-president of the Gaelic League. The most grievous blot of all was the gross injustice the bill sought to perpetrate on the School of Medicine in connexion with the College of Surgeons. It was notorious that in the south and west of Ireland no medical applicant for any post had a chance with local bodies unless he could show he had the diploma of the St. Cecilia Street School, which was controlled and governed by the Roman Catholic hierarchy. What was going to be the position of the school of medicine of the College of Surgeons under this bill? That old institution had flourished on its own merits, having no endowment from the State. The university would at once recognize the St. Cecilia Street School as a school of medicine, with all the benefits of State money and equipment, prizes, bursaries, and professorships, and how then would it be possible for the school of medicine attached to the College of Surgeons to compete? He feared the result would be that every man who came out of Dublin with a medical degree would bear a religious brand upon him, because they would have killed the only extra school of medicine that at present existed in Ireland. If they were going to set up a richly equipped and endowed school of medicine in rivalry with the medical school of the College of Surgeons, how could they resist their demand to be placed on a footing on which they would be able to compete with their powerfully enriched rival? That was a demand consistent with ordinary justice and the practice of the House. He made a strong appeal to the right hon. gentleman not to allow the State to inflict a cruel injustice on this medical school attached to the College of Surgeons. Personally he did not believe that the House would tolerate the crushing out of this school for the benefit of a rival, thereby leaving no school for the attendance of students who detested the infusion of a religious atmosphere in connexion with the pursuit of their professional studies. The other representative of Trinity College, Dublin, Sir Edward Carson, gave the Bill warm support. Mr. Birrell, in winding up the debate, referred to the powers of affiliation which the universities would possess, but hoped they would be exercised with profound caution. After the closure had been carried, the second reading was adopted by a majority of 313.

The Housing Bill came up for second reading on Tuesday last, and occupied the whole sitting. Mr. John Burns, in moving the second reading, made a long speech, full of characteristic touches, in which he dealt at length with overcrowding in town and country and the inevitable increase in the death-rate associated with insanitary conditions. He defended London, as compared with other great cities. In Berlin, with two millions of people living in 26,000 houses, 290 per acre, as against 62 in London, and 77 people per house, as against 8 in London, the death-rate ranged from 18 to 20, while in London it ranged from 14 to 16. And in every aspect of physical life they found that London, notwithstanding its drawbacks, owing to its small houses and fewer people per acre, was, in all the diseases that were due to congestion of population and density per house or per room, such as infant mortality, scarlet fever, diphtheria, typhus, and, above all, tuberculosis, a long way ahead as compared with towns and cities in foreign countries. He thought it would interest the House to know the difference in the matter of certain diseases between the ordinary cottage and the back-to-back houses that too frequently prevailed, which the Local Government Board never sanctioned now, and which they ought to get rid of as quickly as they could. The general death-rate in the back-to-back houses was 135, as against 100 in the ordinary cottage; in zymotic diseases it was 155, as against 100; and in diarrhoea 182 to 100. Overcrowding produced disease to an extent that they had a right to terminate, and a proof of that was to be found in the deaths from consumption. Taking the figure of 100, he found that, whereas in the general population 711 persons died of consumption in the less crowded portions, 1,400 died in the overcrowded portions. In Glasgow the conditions were even worse than that, due, mainly, to the fact that 54 per cent. of the Glasgow people were living more than two in a room. These were conditions which they hoped to modify and ultimately to abolish. He also dwelt on the town-planning provisions of the bill, and the increased powers as well as the financial advantages offered by the bill to rural districts, and concluded by saying that he disapproved of commissioners for the work of housing, and proposed to appoint additional inspectors and to reorganize the Housing and Public Health Department of the Local Government Board. Within the last two years a hundred housing schemes had been undertaken, projected or sanctioned by the Board. He hoped also to publish monthly a local government journal which should do for housing, infant mortality, public health, and kindred matters what the *Labour Gazette* did for labour.

Mr. Long, who followed, as he said, in no partisan spirit, criticized the bill as obscurely drafted and ill digested. It did really little for rural districts where the question of expense stood in the way. He argued for giving the county council greater powers instead of throwing the responsibility on the Local Government Board.

Sir Walter Foster complained of the short time given for the consideration of the bill, and contrasted it with the more generous treatment given to the House over the Small Holdings Act of last year. He considered the bill disappointing, especially as regards the rural districts, as it proceeded very much on the lines of previous Acts which had failed. There was a lack of originality in the treatment of the subject. He pointed out the futility of central control when the pivot on which all action turned for better housing was the action of local health officers. Unless these officials could be rendered more independent in the execution of their duty all driving power from above would be useless. He regretted that the right hon. gentleman had not adopted the first recommendation of the Select Committee and made the county council, with its enormous power, its control of money, the more secure tenure of its officers, and the volumes of information at its command, the local authority under the bill. He hoped that, at any rate, he would see his way to accept an amendment providing that none of the officers of the district councils should be dismissed without the approval of the Local Government Board.

Sir J. Dickson Poynder, as Chairman of the Select Committee, criticized the bill at length, and said the housing part was weak and in many of its clauses was a highly Germanized and bureaucratic measure. There was too much centralization, and the county councils should have been recognized. He asked for a periodical survey of all cottages, and advocated conditions of security of tenure for health officers.

The debate was continued by several speakers, among whom Sir John Brunner put in a strong plea for whole-time medical officers of health. Mr. Lyttelton afterwards spoke of the action taken in Birmingham in clearing insanitary areas, and Mr. Masterman, the new Parliamentary Secretary of the Local Government Board, replied in a well-informed and sympathetic speech.

The question of land valuation was then raised in an amendment moved by Mr. Hart Davies and Mr. Wedgwood, who contended that a measure for land valuation and the taxation of land values must precede any effective bill for housing. The Prime Minister, in reply, promised that at an early date a valuation bill would be introduced which would meet the objects of the amendment. The amendment was then withdrawn, and the bill read a second time without a division.

The Pay of Medical Officers in Charge of Gaols in India.—Mr. Rees last week called attention to the fact that uncovenanted medical officers in charge of gaols had not shared in the new scale of pay for Indian Medical Service officers doing the same kind of work, and the Under Secretary of State replied that the recent improvement of the pay of members of the Indian Medical Service in charge of gaols was part of a general improvement of the pay of that service introduced with a view to making the service more attractive, and securing more and better-qualified recruits. The same considerations did not apply in the case of the officers referred to in the question, who were not members of the Indian Medical Service, and whose rates of pay were determined by the conditions of their own service. The Secretary of State did not, as at present advised, see sufficient reason to take any action in the matter, which was primarily one for the consideration of the Government of India.

Deaths under Anaesthetics.—Mr. Bramsdon, who is coroner for Portsmouth, recently asked the Prime Minister whether his attention had been called to the large number of deaths that occurred annually from the effects of anaesthetics administered to patients who were about to undergo or were undergoing operations, or after such operations had been performed; whether he was aware that there was no official record of the number of deaths that really occurred during anaesthesia, partly because such deaths were sometimes certified as due to causes other than anaesthesia, and in that case were not reported to the coroner, and partly because notification was not followed by official inquiry; whether he was aware that those persons who administered anaesthetics were not necessarily specially trained to do so or always registered medical practitioners; and whether, having regard to the greater safety of the public and for the advance of scientific medicine, he would consider the advisability of securing a more accurate and comprehensive knowledge of all the facts connected with the administration of anaesthetics, whether fatal or non-fatal, by appointing a Royal Commission with advisory powers to investigate and report upon the whole question. The Home Secretary, replying on behalf of the Prime Minister, said he had not yet completed the inquiries referred to in the answer which he gave to the honorary member on March 30th. He was not certain that a formal investigation was either necessary or desirable, but the matter was receiving careful consideration.

The Cost of the Belfast Health Commission.—In reply to a question by Mr. Devlin on Tuesday, Mr. Birrell said that the cost of this inquiry was not yet ascertained. Five hundred pounds would be paid by the Exchequer, and the remainder would fall on the local rates.

Irish Poor-Law Reform.—Mr. Birrell stated, in answer to a question by Mr. Patrick O'Brien on Tuesday, that the importance of dealing with the question of Poor-law reform in Ireland was fully recognized by the Government, and it was intended to introduce a Bill on the subject with as little delay as possible. It was, however, out of the question to introduce such a measure during the current session, but he hoped it would be one of the first to be introduced next year.

Ireland.

[From our Special Correspondents.]

The New Universities.

[A note on the debate on the second reading of the Irish Universities Bill will be found at page 1198.]

Royal University.

At a meeting of convocation on May 12th, over which the vice-chancellor, Sir Christopher Nixon, presided, a report from the annual committee of convocation, urging upon the Government the importance of assigning to convocation of the proposed universities such large powers as would give these bodies real weight, was unanimously adopted. The following resolution was also adopted unanimously:

> That, in the opinion of convocation, the number of representatives on the governing bodies in the proposed Universities Bill to be elected by the graduates of these universities is totally inadequate.

A resolution was also adopted claiming that extern students should be eligible for degrees.

The Royal College of Surgeons.

The Council of the Royal College of Surgeons is naturally alarmed at the effect which the medical school of the new university is likely to have upon its school. It has circulated among all members of Parliament a statement in which it justifies its claim to special consideration. It points out that the college school instituted in 1784 is without any endowment, and that under the bill it is proposed to set up the Catholic university medical school, with large State endowments and splendid equipment, to compete with an institution which is obliged to live upon the ordinary fees. The result, it is submitted, must lead to the closing of both school and college. We have already pointed out that serious damage is likely to be done to the medical schools of Trinity and of the College of Surgeons. The council of the college has done everything in its power to arouse interest in its case, and to impress upon Parliament the unfairness of using the money of the taxpayers to crush out an institution which for a century and a quarter has done such admirable educational work in Ireland. In the debate on the second reading, Mr. Campbell, M.P. for Dublin University, urged the case of the College of Surgeons, but Mr. Birrell, with an overwhelming majority behind him, could afford to remain silent on the point.

The bill is assuredly going to pass, but there will still be opportunities to press this grievance upon Parliament, and it may be found possible to assist the college by a sufficient grant to enable it to meet the coming competition. The English College of Surgeons has done what it could to help its sister in Ireland, but there are other schools in England and Scotland which ought to take part in the struggle for justice. It is not too late to make their voices heard.

Criticisms of the Senate of the New University in Dublin.

A list of the proposed senate of the new university in Dublin was published in the Journal on April 25th, p. 1014. Its constitution has come in for a good deal of criticism.

Dr. J. P. Mahaffy, S.F.T.C.D., has written to the *Irish Times* explaining that when he gave his support to the "three universities" solution of the vexed question of higher education in Ireland he did so because the alternative seemed to be the Bryce scheme. He thought the solution, though not the best, better than none. But the publication of the proposed senates shows that it is a bill not for promoting education but for endowing conflicting creeds. Among the proposed governors of the new establishments there are very few whom any sensible man would consult on the education of his child, far less entrust him to their care. The Irish public are gathering into separate camps. The argument that at all events this bill "leaves Trinity College alone" seems to him both selfish and short-sighted. If Trinity College is really "left alone," it will of course die presently of atrophy.

A Catholic layman writes to the papers expressing the opinion that, leaving out the Protestant representatives, on whom he makes no comments, and the bishops and clergymen, the list is not likely to command the confidence of the parents from the three provinces, or the respect of the new professoriate. If, in addition to the exceptions he makes, four or possibly six names of eminence be expunged, would any body of Catholics select these as the best men to represent learning, culture, experience of affairs, and knowledge of the educational needs of Ireland? He complains that the senate is dominated by a disproportionate medical element, and says that it was not for a glorified medical school that the Catholics were besieging Parliament. Mr. Birrell, the writer asserts, has chosen to ask the opinion of a small coterie of Dublin doctors, making one of them his principal adviser and negotiator. Was the scheme submitted to the Education Committee of the Irish party, or were the bishops directly consulted?

The Constituent Colleges of the New University in Dublin.

The Charters for the Constituent Colleges have been published and declare the various representative persons of whom the various councils shall consist as follows:

The Dublin College.

*Denis Joseph Coffey, M.A., M.B., B.Ch., President.
Stephen James Brown.
Arthur W. Conway, M.A.
M. F. Cox, M.D.
The Rev. Wm. Delany, S.J., LL.D.
Alexander Dempsey, M.D.
Robert Donovan, B.A.
Charles Doyle, M.A., K.C.
Miss Mary T. Hayden, M.A.
H. P. Lane.
J. S. M'Ardle, M.Ch.
J. A. M'Clelland, M.A., D.Sc.
John M'Neill, B.A.
H. C. M'Weeny, M.A.
Wm. Magennis, M.A.
The Right Rev. Monsignor Mannix, D.D.
J. Mooney.
Sir Christopher Nixon, Bart., M.D.
Charles A. O'Connor, M.A., K.C., First Sergeant-at-Law.
Miss Agnes O'Farrelly, M.A.
Patrick J. O'Neill.
*Alderman Gerald O'Reilly, the Right Hon. the Lord Mayor of Dublin.
The Right Hon. Christopher Palles, LL.D., Lord Chief Baron.
Patrick Semple, M.A.
George Sigerson, M.D.
Laurence Ambrose Waldron, M.P.
A few other persons will be proposed.

The Cork College

*B. C. A. Windle, M.A., D.Sc., M.D., F.R.S., President.
The Rev. G. S. Baker, B.A., B.D.
The Rev. Michael Barrett, Ph.D.
*W. Bergin, M.A. (Professor).
*W. F. T. Butler, M.A. (Professor).
John Walsh Clery, D.L.
Eugene Joseph Ignatius Conolly.
*Henry Corby, B.A., M.D., M.Ch. (Professor).
Henry Dale, J.P.
*Augustus E. Dixon, M.D. (Professor).
Thomas Donovan, J.P.
Michael Edward Fitzgerald, J.P.
Sir Stanley Harrington, B.A., J.P.
*Marcus Hartog, M.A., D.Sc. (Professor).
Maurice Healy.
William Henry Hill, B.E., F.R.I.B.A.
James Long, J.P.
William McDonald, J.P.
D. D. Madigan.
The Right Rev. William Edward Meade, D.D.
Michael Murphy.
The Most Rev. Thomas O'Callaghan, D.D.
*Charles Yelverton Pearson, M.D., M.Ch., F.R.C.S. (Professor).
Augustine Roche, M.P.
Robert Uniacke Fitzgerald Townsend.

The Galway College.

*Alexander Anderson, M.A., LL.D., President.
P. J. Boland, B.A.
The Rev. J. Clarke, B.A., D.D.
*Nicholas W. Colahan, M.D., M.Ch. (Professor).
The Rev. E. A. D'Alton, M.R.I.A.
The Very Rev. Canon Daly, D.D.
William Daly, J.P., D.L.
The Very Rev. Peter Dooley, P.P.
Joseph Glynn, B.A.
Stephen Gwynn, M.P.
His Grace the Most Rev. John Healey, D.D.
John Patrick Henry, M.A., M.D., B.Ch.
The Very Rev. Michael Higgins, D.D.
The Lord Killanin, D.L.
*Richard J. Kinkead, B.A., M.D. (Professor).
The Most Rev. F. J. MacCormack, D.D.
Martin M'Donogh.
The Rev. T. O. Kelly, B.D.
The Right Rev. James O'Sullivan, D.D.
*Joseph P. Pye, M.D. (Professor).

*Alfred Senier, Ph.D. (Professor).
*Valentine Steinberger, M.A. (Professor).
*Edward Townsend, M.A., D.Sc. (Professor).
*Wilbraham F. Trench, M.A. (Professor).
Another person or other persons will be proposed.

In the case of the persons whose names are marked with asterisks it will be proposed that the nomination shall have effect only while they hold the offices a description of which is attached to their names, and that if any such persons cease to hold such office a vacancy will occur to be filled by a further nomination.

IRISH MEDICAL ASSOCIATION.

The Committee of the Irish Medical Association has nominated Sir William Smyly President for the ensuing year.

"NO SURRENDER." CASTLEREA.

Londonderry will have to look to its laurels for the Castlerea Board of Guardians seems disposed to filch its favourite motto.

This must be the deduction from the following recent incident: Dr. McDermott, one of the dispensary medical officers, resigned on the grounds of bad health, and a Mr. Sweeny had the temerity to ask that he be granted the highest superannuation allowable on the Civil Service scale in consideration of his thirty years' service. Then the celebrated Mr. Webb spoke up: "I oppose anything in the name of a pension," he said. "I hold it is a precedent we should not lay down, and I will oppose the giving of pensions to men who are already well paid for the services they render. If we once adopt this principle we can't deviate from it, and we will have to give pensions all round." After further discussion it was mentioned that Dr. McDermott was on his deathbed, and it was decided to postpone further consideration in the expectation presumably that the applicant would have no need of a pension, and the guardians could go to their constituents at the coming elections with the cry of "no surrender to the doctors."

The Poor Law Association of Ireland has a superannuation bill printed, but unfortunately Mr. Ginnel, M.P., a good friend to the service, has only been released from prison after four months' incarceration, on the grounds of bad health, and it is unlikely he will be able to resume his parliamentary duties in time to have the bill considered this session.

This bill is not at all so favourable to the officers as the English bill, but it was the best the association could devise with any prospect of getting it accepted, and practically makes them provide the entire sum required by deductions from their meagre salaries; and yet, so great is their need for some provision for their old age that they are willing to accept it rather than remain at the mercy of the class who compose the Boards of Guardians of these times.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEMORIAL TO THE LATE PROFESSOR ANNANDALE.

As a memorial to the late Professor Annandale it is proposed that a fund should be raised for the purpose of: (1) Awarding a gold medal to the best student of clinical surgery in the final examination, to be known as the Annandale Gold Medal in Clinical Surgery; (2) providing a bust of the late professor to be placed in the clinical theatre of the Royal Infirmary; and (3) devoting any surplus to some memorial in connexion with the athletic club of the university, with which the late professor was so long connected and so deeply interested in. Those—and there must be many all over the world—who desire to subscribe are asked to communicate with Mr. H. M. D. Watson, C.A., 13, Rutland Square, Edinburgh, the Secretary and Treasurer of the Committee in charge of the memorial.

THE LATE DR. UNDERHILL.

At the weekly meeting of the managers on Monday, May 11th, Mr. Geo. A. Berry moved that the managers should place on record the high appreciation of the services of the late Dr. Underhill to the Royal Infirmary. The minute, which was agreed to unanimously, was to the effect that, as a member of the Board, Dr Underhill took an active and interested part in the management of the hospital. A large amount of work devolved upon him as convener of the Medical Committee. The members of that committee more particularly had constant opportunity of observing how untiringly, how thoroughly, and how conscientiously he made himself acquainted with the details and with the merits of all matters specially referred to them. They had also reason to admire the impartiality and soundness of judgement which he showed in guiding their deliberations. As a physician he enjoyed in the highest degree the esteem and confidence of the many members of his own profession to whom he was personally known, and to whom he ungrudgingly gave much valued advice and help. In his death they mourned the loss of a good man, whom they knew as a cultured, able, upright colleague, and esteemed as a sympathetic friend. They desired to convey to his wife an expression of their complete sympathy with her.

EXTENSION OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The Royal College of Surgeons of Edinburgh is about to add new museum premises to the college buildings and to increase the present accommodation of the college generally. The existing Surgeons' Hall buildings are to be joined, by an overhead bridge of stone with concrete floor and fireproof doors, to the tenement blocks, 7 and 9, Hill Square, behind. The hall is to be extended, a new public staircase to the museum is to be made, and certain of the other rooms in the college are to be rearranged.

EDINBURGH POLICE MEDICAL ATTENDANTS.

In connexion with the appointment of five district police medical attendants, one for each police division of the city, the magistrates and council of Edinburgh have prepared a memorandum of duties for the information of intending applicants. The successful applicant in each case is to give medical and surgical attendance to every member of the police force in his division who may require such attendance either on account of illness or on account of injury in the discharge of duty; to attend daily at the head quarters of the division, at such time as may be appointed by the Chief Constable, to see such of the sick and hurt constables as may be able to attend, and to certify whether any of such constables are fit to go on duty; to give medical attendance at their homes, as often as may be required, to all constables who are unable to attend at the divisional police station; to certify the weekly pay bills as regards the number of men off duty on account of illness; to give medical attendance to such of the prisoners in the cells in the district police stations situated within the division as may require his services on account of illness, and to act as district casualty surgeon, and to attend to emergency cases in the division. The salaries offered are: A Division, £80 per annum; B Division, £52 10s per annum; C Division, £40 per annum; D Division, £52 10s. per annum; and E Division, £15 per annum. We understand that the appointment of casualty surgeon and the three appointments of district police medical attendants for the three divisions of the city of Edinburgh have been filled, but that no appointment has been made for the Portobello district, owing, apparently, to the insufficiency of the salary offered.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

NEWCASTLE-UPON-TYNE.

THE UNIVERSITIES AND ARMY OFFICERS.

WHEN in Newcastle-upon-Tyne last week, Lieutenant-General Baden-Powell addressed a large and spirited meeting of students at the College of Medicine on the subject of the Officers' Training Corps. The chair was occupied by Sir George H. Philipson. Before the meeting commenced the students indulged freely in song and mirth, so that on the entrance into the theatre of the President of the College and the speaker a most cordial and enthusiastic reception was given to them. After a few introductory remarks by the Chairman Captain Garrett, of

Armstrong College, was called upon to explain the position of the late K Company of Volunteers in reference to the new Territorial Army Scheme. The old company contained 115 men, but the present idea is to have three companies instead of one, and to get, if possible, 50 officers. Lieutenant-General Baden-Powell in his remarks expressed the hope that before two years had passed several of the men whom he was addressing would be under his command. When the new scheme was in process of initiation the General had suggested to the Minister of War the advisability of tapping the public schools and universities. The country required officers who would command respect and inspire the men with confidence. In the event of war breaking out there would always be found plenty of men willing to render assistance, but the Territorial Army scheme required that these should have been already trained and be ready for service at any moment. He looked to the younger men to support the movement and thus to help their country in time of need. The address, which was listened to with attention, was enthusiastically received.

DR. GEORGE R. MURRAY.

The appointment of Dr. George R. Murray to the post of Professor of Systematic Medicine in Victoria University, Manchester, is regarded in the North with mingled feelings of regret and congratulation. In the new sphere to which he has been called Dr. Murray will find plenty of scope. He will leave Newcastle with the best wishes of his colleagues and the members of the medical profession for his continued health and prosperity.

GENITO-URINARY TUBERCULOSIS.

In the College of Medicine, on May 7th, Professor Rovsing of Copenhagen gave an address on genito-urinary tuberculosis to the Northumberland and Durham Medical Society. The chair was occupied by the President of the Society, Mr. A. E. Morison. Professor Rovsing dealt at considerable length with the modes in which various parts of the genito-urinary passages became infected by tuberculosis, and discussed the arguments in favour of the theories of ascending and descending infection respectively. The Danish professor gave a most interesting lecture in excellent English. The audience listened with close attention to his remarks upon the diagnosis and treatment of the various parts of the tract affected, the information to be derived from the use of the segregator and by catheterization of the ureters, and to the opinion expressed as to the effect that toxic albuminuria was not a bar to the removal of a tuberculous kidney, but a reason for its extirpation, care having previously been taken to analyse the urine coming from each kidney. Professor Rovsing had had only six deaths out of 114 operations; most of these operations had been of a severe character. On the motion of Sir George H. Philipson, seconded by Mr. Rutherford Morison, Professor Rovsing was accorded a hearty vote of thanks for his lecture, and was congratulated upon the success of his surgical operations, and in the evening he was entertained at a banquet in Tilley's Rooms. The chair was occupied by Mr. A. E. Morison, who was supported by the Guest, Mr. Sanderson (Lord Mayor of Newcastle), Mr. Caird of Edinburgh, Sir George H. Philipson, Professor Oliver, the Danish Consul, Drs. Beattie, Bolam, W. E. Hume, Messrs. Martin, Angus, Clay, etc. Replying to the toast of his health given from the chair, Professor Rovsing made an admirable speech. It was at once an appreciation of what English surgery has accomplished and at the same time a plea for the existence of smaller States, like Denmark, which with fewer responsibilities could give themselves to the study of the arts of peace and thus lead to the advancement of science.

At the Royal Victoria Infirmary Professor Rovsing gave a demonstration on the use of the gastroscope invented by himself, which was much appreciated by the staff and the students.

MANCHESTER AND SALFORD.

SALFORD AND THE MIDWIVES ACT.

LAST week a deputation representing the Manchester Medical Guild and the Salford Division of the British Medical Association waited on the Salford Board of Guardians to ask them to revise their recent circular about payment of fees to medical men called in to the assistance of midwives. The circular was fully explained in this column in the BRITISH MEDICAL JOURNAL for March 28th.

Dr. Worswick having briefly introduced the deputation, Dr. Wolstenholme said that though the Manchester City Council had adopted a scale of fees which it was paying to medical men called in to assist midwives, the Salford Town Council had declined to take any steps in the matter. Sometime or other the Midwives Act might be amended, but meantime the Local Government Board and the Privy Council had suggested that boards of guardians should inform medical men and midwives that the guardians on being satisfied that a woman was too poor to pay the medical fee, would pay a reasonable remuneration to the medical man called in by a midwife under the the rules of the Central Midwives Board. The Salford Guardians had admitted the utility of the suggestion by sending out their circular. As far as the deputation understood the circular, it appeared that the guardians only meant to pay for people who were distinctly paupers, though these were already fully provided for. If the guardians intended to do nothing more than that, he submitted that they were not carrying out the intentions of the Local Government Board, who wished to provide for people who were just above the scale of pauperism. The expressed intention of the Local Government Board was to remove any reasonable cause of complaint either by the public or the medical profession, and the guardians had a perfect legal right to determine who were entitled to medical assistance at the expense of the rates. Further, the guardians ought not to attempt to restrict the medical attendance to their own district medical officers. That, again, was not the intention of the Local Government Board, which suggested payment of any medical practitioner who might be called in. The seven district officers could not possibly deal with all sudden emergencies over so large an area as Salford. Again, the fee of 21s. (maximum) which the guardians offered was quite inadequate in many cases which might require attendance for several months, for, according to the circular of the guardians, the fee would only be paid if the doctor attended the case all through. The scale of the Local Government Board already allowed £2 to district officers in difficult cases, and there was no reason for offering less to other medical men.

Dr. Taylor said that the births in Salford numbered about 7,000 a year, and of these about 2,000 were attended by medical men. The Midwives Act had attempted to place on medical men a sort of semilegal responsibility, and though there was still no legal obligation to attend at the summons of midwives, it was practically impossible to refuse in urgent cases. Medical men had no wish to shirk any moral duties, but they did strongly object to any public body exploiting their moral sensibilities. The fee of a guinea offered by the guardians for cases which might have to be attended several months was quite inadequate and below the Local Government Board scale, but what made it worse was that if a doctor found, after attending a patient for some time, that it was advisable to send her into hospital for an operation which could not be done at home, he would get no fee at all.

Several guardians said that was not their intention, and that the circular might be revised in that particular.

Dr. Taylor said further that it was not fair to their district medical officers, who had all contracted at fixed salaries to have to attend to all the difficult cases unless their salaries were increased. Neither was it fair that other medical men should be deprived of patients who would prefer to have them rather than the Poor-law doctors. It was not intended by the Local Government Board to pauperize all these patients. The further stipulation that the cases must be proved to have been urgent put the doctors in an awkward position, for if a medical man, on receiving an urgent summons, after a proper examination decided to leave the case to Nature, it might be said that it had not been urgent and he would not get his fee. He had full confidence in his fellow practitioners, but it was not right to put a premium on the use of instruments. It ought to be sufficient that the midwife had considered the case to come under the regulations. Another stipulation must surely be an error in the drafting of the circular, for it was required to be proved that "the husband, the nurse, the nearest relatives and the friends of the patient

were unable to pay a fee." Surely the nurse, relatives and friends had nothing to do with the matter.

Several guardians agreed that this was an error and needed some revision in the wording.

Dr. Taylor said that the most important thing was the meaning attached by the guardians to the words "inability to pay." Did they only intend to pay for recognized paupers?

A Guardian: That is all we are able to do.

Dr. Taylor: But we do not think that is the intention of the Local Government Board, which evidently wished to provide for cases just above the line of paupers. Take the case of a family where the weekly income was only 18s. The woman, by dint of great care, saved up 7s. 6d. for the midwife's fee, but if anything went wrong at the confinement, she was quite unable to pay for a doctor in addition to the midwife. Surely such a case would come under the phrase "inability to pay." He suggested that a wage limit might be adopted such as that adopted in Manchester, where in the case of a man and wife with no children and with a weekly income of under 21s., the corporation paid the medical fee As ratepayers, the deputation fully appreciated the desire of the guardians to save the rates by not paying for people who were able and ought to pay for themselves, but in justice to the medical profession as well as in consideration for the struggling working classes just above the line of pauperism, the deputation asked the guardians to revise their circular in the directions indicated.

The chairman and several guardians assured the deputation that they would consider the matters referred to and would not deal with them in any niggardly spirit.

The County Council Midwives Act Committee.

From a report by Dr. Sergeant to the Midwives Act Committee of the Lancashire County Council we gather that in the administrative county there are now 944 midmidwives on the register, of whom 866 are in actual practice and 75 have temporarily ceased to act as midwives. In addition to the official roll there are over 200 certified midwives residing in the county area. Enquiry has shown that 14 of the 200 are actually practising, though they have failed to give the required notice of their intention to practise in the area. For the quarter ending March 31st, 1908, there are records of midwives sending for medical assistance in 404 cases, against 211 cases in the corresponding quarter of last year. The increase is due to the midwives more fully realizing their obligations under the rules of the Central Midwives Board. The stillbirths notified during the quarter numbered 184, while death of mother or child before the attendance of a medical practitioner occurred in 32 cases; 31 cases of puerperal fever, with 11 deaths, came under the notice of the M.O.H. Of these, 8 were attended by medical practitioners, the rest being midwives' cases. In 8 instances the midwives failed to comply with the rules about notification, and letters of caution were sent. A number of charges of negligence or misconduct were preferred during the quarter, and there were 2 convictions of certified midwives for drunkenness; 1 of these women has been struck off the *Roll*, and the other is to be kept under observation.

The reports of the lady inspectors of midwives show that the midwives are visited at their homes regularly, their bags and appliances carefully inspected, and attention paid to their personal cleanliness, as well as to the condition of their homes. As a rule the midwives carry on their work more intelligently and follow out their instructions better than formerly. Only in a few instances had they failed to recognize certain abnormal symptoms so that delay had taken place in calling in medical assistance in cases of puerperal fever.

The report concludes with a summary of the resolutions of the National Conference on Infant Mortality, which was attended by the Chairman of the Committee and the M.O.H. The committee's attention is drawn to the resolution of the conference recommending all local authorities to adopt the Notification of Births Act and to appoint qualified women to carry out its provisions, also the resolution urging the "importance of securing to all girls in every grade of school a satisfactory training in domestic and personal hygiene and the duties of womanhood." Another recommendation of the conference was "that all preparations offered or sold as foods or drugs for infants should be certified by a Government analyst as non-injurious, and that each packet shall contain its analysis." The conference also urged upon Parliament the necessity of at once taking steps to amend the law in view of the unsatisfactory conditions under which milk is produced and distributed. The report ends with a tabular statement of the number of midwives in each of the urban and rural districts of the county.

LEEDS.

The Post-Graduate Course at the Public Dispensary.

Arrangements have been made for the holding of a course of post graduate meetings by the members of the post-graduate committee of the Leeds Public Dispensary. The meetings will be held on Tuesdays and Fridays, from May 26th to July 21st, except during Whit week. Mr. Moynihan will give a lecture on some surgical subject, Mr. Joseph F. Dobson will discuss the modern methods of diagnosis of genito-urinary diseases, and Mr. A. E. Pearson, the Medical Superintendent of the Borough Fever Hospital, will give a demonstration on cases at the Manston Infirmary. Dr. Alexander Sharp will show cases of disease of the nose and throat, and Mr. Douglas Seaton will give a demonstration on cases of surgical interest. The other members of the committee will hold two meetings each. Dr. Wardrop Griffith will give a demonstration on medical applied anatomy in the anatomical theatre of the School of Medicine, and will take as his second subject at the dispensary the more modern methods of investigation of diseases of the circulatory system. Dr. Trevelyan will deal with the physical examination of the chest and with the subject of facial palsy. Dr. Telling will demonstrate cases of diseases of the skin, and will discuss the vascular lesions of the brain. Dr. Watson, who is now on the honorary staff of the dispensary, will take as his first subject cardiac affections other than valvular, and in his second meeting will deal with some cases of chronic lung disease. Mr. Michael Teale's two demonstrations will be on diseases of the eye.

Leeds Association for the Prevention and Cure of Tuberculosis.

The eighth annual report of this association, dealing with the year 1907, has recently been issued. At the sanatorium at Gateforth the number of patients treated was 103 as against 135 for the preceding year, but the average number of days spent by each patient in the institution was 107 as against 96 for the year 1906. At the Armley Hospital, which is reserved for the more acute cases, 190 patients were admitted. Owing to lack of funds it was found necessary last September to limit the number of beds at Garforth to 20, the ordinary number being 34. In the report it is incidentally pointed out that the death rate from phthisis in Leeds during the year 1907 was 12.9 as compared with 13.8 per 10,000 for the decade 1896–1905. During 1907 there died in Leeds of consumption 605 persons, and of other forms of tuberculosis 248. In the face of these figures it is, indeed, a pity that the association finds itself obliged to limit its sphere of work.

Holiday Camp for Poor Children.

Some reference was made in the Journal of March 28th to the excellent work of the association which has as its object the provision of a fortnight's holiday annually for a certain number of necessitous children living in the less healthy districts of Leeds. The camp was opened for the season on Saturday, May 9th, under very favourable auspices and in fine weather, by the Lord Mayor of Leeds, who commented on the valuable work of the association. It is intended materially to enlarge the camp, so that double the number of children may be accommodated. In seconding a vote of thanks to the Lord Mayor for opening the camp, Dr. Hawkyard, replying to some criticisms which had been made as to the work of the association, expressed his strong opinion as to the educative value of such a holiday on the children. He had watched many of them, and he held that the lessons of tidiness and discipline and the refining influences of having received kindness were not readily forgotten.

SOUTH WALES.

ROYAL SANITARY INSTITUTE CONGRESS.

At a meeting of the Reception and Hospitality Committee of the Royal Sanitary Institute Congress at the City Hall, Cardiff, presided over by Sir Clifford Cory, Bart., M.P., it was arranged to hold a public luncheon on the first day of the congress, Monday, July 13th. Several garden parties were also arranged, and Dr. Robinson, Chairman of the local general committee, announced that he would give a reception and conversazione.

CARDIFF MENTAL HOSPITAL.

Patients are already being admitted to the new Mental Hospital, and on May 1st three persons who had been under observation in the city were received. On May 4th the first party of 70 from Talgarth Asylum were brought to Cardiff under the direction of Mr. Pritchard of the Cardiff Union.

WHOOPING-COUGH AT NEWPORT.

Dr. Jones reports that the epidemic of whooping-cough, which began at Newport (Mon.) during the fourth quarter of last year, continued with increased virulence during the past quarter, and caused 28 deaths. No part of the town escaped the infection. Altogether there were 696 cases, 378 among school children and 318 among non-school children.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

The sum of £5 000 has been bequeathed by the late Mr. Webb, a director of the Ocean Collieries, Limited, to the University College of South Wales and Monmouthshire. The money is to be devoted as far as practicable to physical research.

Australia.

[FROM OUR SPECIAL CORRESPONDENT.]

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE Government of South Australia (we learn from the *Australasian Medical Gazette*, February 20th, 1908), recognizing the importance of the movement for the medical inspection of school children, has approved of a scheme drawn up by Mr. Williams, the Director of Education. The work, which is to be begun immediately, embraces the inspection of 1,000 public school children selected from metropolitan schools, country town schools, and distinctly rural schools. The details of inspection are based on the schedule of the Royal Commission on Physical Training (Scotland). If the parents, for any special reason, wish a particular child to be exempted from selection for inspection, their wishes will be respected. No remarks on any individual pupil will be made, no medical advice tendered about either home conditions or physical condition, no surgical operations recommended, no spectacles or respirators ordered to be worn, no cuspidores or pocket filters advised to be used, no unnecessary inquiries instituted or recorded. A good many of the schedule entries will be made by the teacher alone, and some of the entries will be made by the teacher under the inspector's supervision. To ensure uniformity of standard in entries like "health appearance," "state of nutrition," "keenness of hearing," etc., these preliminary inspections will be made by one inspector. The actual work has been entrusted to Dr. R. S. Rogers, who recently gave the teachers in training a preliminary course of instruction in the subject, and has devoted a large amount of attention not to general and special psychology alone, but to the practical details and the summarized results of anthropological measurements.

EXAMINATION OF MILCH COWS IN BELFAST.—During the winter, 255 visits to cowsheds were made, and 3,452 milch cows examined. The milk of 18 cows was objected to, and the animals and milk dealt with were as follows: Cause of withdrawal: tuberculosis, number of cows affected, 1; mastitis, number of cows affected, 17. Belfast seems to enjoy a most exceptional freedom from tuberculosis amongst milch cows; surely 1 in 3,452 is unique in the British Isles.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Hayem on the Alkaline Treatment of Gastric Disorders.—Dr. Louis Martin on Diphtheria Mortality since Introduction of Antitoxin Treatment.—The Jubilee of the French Ophthalmological Society.

AT a recent meeting of the Académie de Médecine, Professor Hayem discussed the utility and the indications for the use of sodium bicarbonate and other alkaline drugs in gastric disorders. Professor Hayem said that he had almost completely given them up, as he obtained better and more complete results by other means. To hypopeptics the use of alkalies should be forbidden. In certain cases, such as hypopepsia due to medicinal intervention, alkalies determined an increased secretion and an improvement in the chemical type, but these cases must not be confounded with true hypopepsia caused by atrophy of the glands of the stomach. In cases in which the hydrochloric acid is not diminished two results were obtainable—(1) a calming effect; (2) a modification of the digestive process. With regard to the first of these results, when a patient experiences pain one and a half to three hours after meals, the ingestion of sodium bicarbonate dissolved in water is followed by a few eructations of gas and the pain is calmed. The result is so quick and constant that sodium bicarbonate might be termed the opium of the stomach. In more intense and obstinate cases these attacks of pain come on more frequently and last longer, especially in those treated by alkalies; the patients increase the dose, and sodium bicarbonate keeps up and exaggerates the hypersecretion of hydrochloric acid. Professor Hayem uses instead large doses of bismuth subnitrate given in the morning when fasting, the effect of this drug being maintained and really curative. In respect to the second result, a course at Vichy in these cases accelerates the digestive process; the hydrochloric acid is set at liberty sooner and the stomach is emptied more quickly, but Professor Hayem has given up this method because the effects are less pronounced and last a shorter time than with artificial Carlsbad water, in which sodium bicarbonate does not play the predominant part.

M. Louis Martin, in a paper on the causes of mortality in diphtheria since the introduction of antitoxin treatment, said that many of the patients did not get the benefit of the treatment, for one-third of the children who died in hospital within twenty-four hours of admission had not had an injection of antitoxin before admission. Every suspicious case should be injected immediately. The death-rate of children under 2 years of age was 20 per cent. in spite of serum treatment. They came generally from contaminated surroundings, and the disease could be avoided by preventive injections. Every very young child who had been exposed to infection should be given a preventive injection. Of the deaths among other patients, the larger number were due to toxaemia, generally attributed to nervous lesions, but M. Martin had frequently noted symptoms of renal, hepatic, and especially of suprarenal insufficiency. These deaths might be avoided by giving an intensive serum treatment in serious cases at the beginning, and by reinoculating convalescents who showed symptoms of toxaemia.

The French Ophthalmological Society celebrated its jubilee on May 3rd in the large amphitheatre of the Faculty of Medicine. M. Bayet, Director of Higher Education at the Ministry of Public Instruction, took the chair at this twenty-fifth anniversary of the foundation of the society, and in addition to the Dean of the Faculty of Medicine, Professor Landouzy, there were present numerous French and foreign delegates. Professor de Lapersonne traced the history of the society and of ophthalmology during this period. He was followed by the delegates of foreign societies: Professor Hess (Würzburg), for the Ophthalmological Society of Heidelberg; Dr. George Berry (Edinburgh), for Great Britain; Dr. Van Dayse (Ghent), for Belgium; Dr. Verderaü (Barcelona), Professor Angelucci (Naples), for Italy; Dr. Briend, for Egypt; and Dr. Beauvois for Mexico. In the afternoon all the members and their

guests met at the Museum of Saint Germain, when Dr. Albert Terson read a paper on the instruments of the Gallo-Roman oculists.

CORRESPONDENCE.

RESEARCH DEFENCE SOCIETY.

SIR,—The Committee of the Research Defence Society will be greatly obliged to you if you will make known the following facts. The society has at present about 1,100 members, of whom about 100 are ladies. The following gentlemen have recently consented to be vice-presidents of the society: The Marquis of Salisbury, Lord Ludlow, Mr. Briton Rivière, Earl Egerton, Sir William Turner, Lord Fortescue, Sir Thomas Fraser, Sir John Banks, The Bishop of Chester, and Count Plunkett. By the death of Lord Poltimore, who also was a vice-president, the society has lost a good friend.

The *minimum* subscription for membership is 5s. yearly, but medical students are eligible for membership for a subscription of 2s. 6d., and it is to be hoped that a very large number of students will join the society. Branch Societies are already being formed in many parts of the country. A considerable quantity of leaflets and pamphlets has been sent out in reply to requests for them, and the printing of other leaflets and pamphlets is going on rapidly. These publications include an essay by Colonel David Bruce on the Extinction of Malta Fever, an essay by Professor Cushny on the Experimental Study of the Action of Drugs, reprints of Lord Justice Fletcher Moulton's evidence before the Royal Commission, and of Professor Osler's evidence on yellow fever and malaria, and leaflets on diphtheria antitoxin, the administration of the Act, the character and extent of the researches made in this country at the present time, the facts about the use of anaesthetics, etc.

Arrangements are being made for an inaugural meeting of the society, at an early date, in London. Arrangements are also being made for debates in London or elsewhere; but of course the committee do not think it necessary to accept every "challenge" to a debate.

The committee feel very strongly the urgent need of Branch Societies, and of corresponding members in those places which are not large enough for a Branch Society. They are well aware that the work of the Research Defence Society must be done all over the country, and that no further advance can be made except by united and organized effort. They will be very happy to receive promises of help in this matter. The Research Defence Society has had a magnificent welcome, and is bound to justify the confidence which the public has given to it.—I am, etc.,

70, Harley Street, W., May 13th. STEPHEN PAGET.

MEDICAL QUACKERY.

SIR,—One of the most common consequences of our ineffective Medical Act is the constant use by unqualified men of so-called American degrees. "M.D.U.S.A," whatever that may mean, is the "medical degree" usually assumed by the worst characters in this respect. Only a short time ago a person styling himself thus was sentenced to a long term of imprisonment for a grave criminal offence; his career of fraud and crime was for a long time masked and covered by his medical practice, and there is no doubt that, had he not posed as a medical practitioner, he could not with impunity have carried out his many frauds. Lately I have been investigating the career of a much advertised "Professor" styling himself "M.D., D.Sc.Boston," "the great American doctor," and "eminent American expert." I find that he has spent some portion of his life already in prison for various crimes and misdemeanours, and is at present in custody for other alleged offences against the law. Yet for many years he has succeeded in deluding the public into the belief that he is a reputable American practitioner, and has carried on his frauds under cover of his assumed medical qualifications and many aliases.

Such use of medical titles purporting to hail from America cannot but bring discredit to the country of their assumption.

It behoves the honourable practitioners of America, for whose universities and medical colleges we have a high respect, to do something to put a check upon this reprehensible conduct and to enable the public here to detect the true from the false holders of medical titles.

If the American Medical Association could only induce the Federal Government to issue a State medical register, which could be accepted in our English courts as a register of bona fide medical practitioners of the United States, it would have a good effect and lasting result. At present, in prosecuting these unqualified persons, we are handicapped in not being able to prove the falsity of their pretences in assuming American titles.

It is an interesting factor in unqualified practice that the titles of no other nation are so often utilized by unqualified practitioners as those of the United States. It is also interesting to note that the Medical Acts of the United States are more stringent against unqualified practice than in any other country. Not only has each State its own Medical Act, but each individual practitioner has to take out a licence, and the penalties against unqualified practice vary from fines of $25 to $1,000 for each offence, but in many instances are doubled for any additional offence; imprisonment, which may be additional to fines, varies from nine days to one year, also doubled for subsequent offences. A medical practitioner of one State cannot practise in another without taking out a licence, which licence has to be granted by the State Board of Medicine.

Here in England we have to see daily the use of American medical titles by men who not only have in all probability never been in America, but in addition were they in America and were they to practise medicine would be promptly haled by the District Attorney before a judge and fined and imprisoned. Even our own disregistered men and those from whom English medical qualifications have been removed do not hesitate to add to their names American medical titles. To be removed from the *Medical Register* one day and be "off to Philadelphia in the morning" seems to be the natural sequence in this respect.

I have called the attention of the American Medical Association to the subject of my letter to you, and hope that by the ventilation of this important matter in the BRITISH MEDICAL JOURNAL something may be done to stop this gross scandal, and I hope I shall have your valuable support.—I am, etc.,

A. GEORGE BATEMAN.

Medical Defence Union, 4, Trafalgar Square, London, W.C., May 7th.

A NEW (?) VIEW OF THE EARLY NOTIFICATION OF BIRTHS ACT.

SIR,—*Lucus a non lucendo!* Whatever merits the *new* view of Messrs. Larkin and Grossmann may have, it certainly is not new. It is in fact the precise view which the medical men of this town have taken of the Act and from which they have evolved a practical *modus operandi* with the sanitary department. To us it does indeed seem "ludicrously absurd" that it has required a "good deal of thought" to discover that "attendance" does not mean *medical* attendance.

In the matter of diagnosis we are in absolute agreement with these gentlemen on the following points:

1. The 1874 Registration Act *may* compel any one of the "contacts" (persons present at birth) to register the birth in person at the Registrar's Office—*but* the father and mother are specifically mentioned as standing in the forefront to be shot at.

2. In the Notification Act any "contact" ("person in attendance") *may* be called upon to notify, but the father is distinctly mentioned provided he is in residence at the time of the birth.

3 Medical men are only included "among the crowd" and we cordially agree with the authors of the "New View" that it will be our own fault if ever we become "specifically signalled out" as notification agents.

Treatment of the case resolves itself into how best to avoid this, and here we differ, as medical men proverbially do. Messrs. Larkin and Grossmann say, "See that the woman's relatives or associates do it"—notify; and to effect this: (1) "Inform them, before leaving the house, that they must notify"; (2) "at the next day's visit ask if they have done so." Presumably, if they have not done so, again inform them that they must notify, and again, at the next day's visit, ask if they have done so, and don't be happy till you get it!

The Stockport method seems simpler. On leaving the house, hand a letter card to the woman's husband, "relative, or associate," to fill in and post, and do not worry any further! That, surely, is a practical and efficient method of teaching the public that it is *their* business, and not the medical man's, to notify the birth.

Now, let me explain our letter cards.

Messrs. Larkin and Grossmann speak of them as if they were some unholy, defiling thing that no self-respecting medical man should touch. This is our form. It is coloured blue to signify that it is a medical man's, and not a midwife's. Only medical men are supplied with these blue cards.

NOTIFICATION OF BIRTHS ACT, 1907.

I hereby give you notice of the birth of a live (or stillborn) child at

Address .....

Surname of child ..... Sex .....

Date of birth .....

Notice given by: Name .....

Address .....

This notification applies to any child which has issued forth from its mother after the expiration of the twenty-eighth week of pregnancy, whether alive or dead.

Now, Sir, if the Sanitary Department recognizes, as it does, the handing of this card to the father, "relative or associate," as the medical man's compliance with the Act, is it not unfair to use the words of Messrs. Larkin and Grossmann that "medical men should look upon them (these cards) as an attempt to make the profession accept the responsibility of notifying"?

Again I quote: "And of giving details which the Act does not demand." Can this be said truthfully of this notification form? Now, a more important point in the next sentence: "They (the cards) would give the local authority an opportunity of seeing exactly what each practitioner was doing and of classifying and comparing his work and his results with those of his fellows." This would be true if medical men were so foolish as voluntarily to undertake to notify all their cases themselves. But this form conveys no more information respecting the doctor in attendance than would the half sheet of note-paper upon which Messrs. Larkin and Grossmann would advise their patients' friends to notify.

Once more I quote: "There is no body of men that does as much gratuitous work as we do, but what we do we must do voluntarily. When compulsion is applied we must resist." We heartily agree. The Act does not and cannot compel medical men to apply for or distribute these notification cards. We *voluntarily* undertake to use them:

1. For our own benefit: to save ourselves from any worry under the Act beyond the handing of the card, from the necessity of giving details of the required notification form to each patient and making daily inquiries as to the patient's actions in the matter, and clearly to demonstrate to each individual case we attend that *they* must notify and not the doctor.
2. For the benefit of the local authority, which obviously cannot distribute these notification forms broadcast.
3. For the benefit of the patient. Messrs. Larkin and Grossmann say to their patients, "You must notify this case in any way you like on any paper you like." We say, "Just fill in these details on this form and post it. Don't worry about a stamp, for the form is prepaid. And we promise you that, having done this, you will *not* receive any visit from the sanitary authority."

The blessed word "voluntarily" explains this. We *voluntarily* take these cards and *voluntarily* hand them to patients' friends or relatives; further we *voluntarily* undertake to indicate to the sanitary authority the few cases in which good may be done by a visit from the Sanitary Department, by *voluntarily* notifying these cases in our own name either on the form as given above or by private note in addition to the patient's notification. In other words, we *voluntarily* notify in the interest of the infant mortality-rate where our professional conscience calls upon us to do so—say in 5 per cent. of our cases—and refuse to notify in the 95 per cent. of other cases. The sanitary authority in return *voluntarily* undertakes only to visit such cases as are thus specifically marked by medical men for visitation, and not to go near any other case notified upon a *blue* card (that is, a case attended by a medical man) within one month from the date of notification. May I suggest to Messrs. Larkin and Grossmann that their views and ours in Stockport form a perfect basis for a medical concordat upon the Notification of Births Act?—I am, etc.,

Stockport, May 11th. J. M. Brennan.

Sir,—There is still another view which may be taken of the wicked exploitation of the poor general practitioner to which Drs. Larkin and Grossmann so manfully advocate a method of resistance just a little suggestive of unreason.

In the city of Newcastle, where the Act has been adopted and is in full activity, and, I am told, working smoothly, special forms, franked and folded, are supplied to the medical men; these they are asked to give to the father, or other person in the house of the parturient woman, with instructions for prompt filling up and forwarding to the M.O.H.

On the form is printed the following:

A doctor is in attendance.
The assistance of the Public Health Department is NOT required.
(The doctor to cross out the word NOT if assistance is desired.)

It is specially pointed out to them that the Corporation does not wish to attend cases for which medical men are responsible, unless specially requested, as shown above; nor does it desire to know the identity of the practitioner in attendance.

It is also pointed out that the lady visitors of the Corporation will call to see all cases, except those notified on the above special forms.

It is generally admitted that there is urgent need of special attention to the many infants assisted into the world by the more or less skilled midwives, registered and otherwise; and as the Act compels the notification of all births, surely the use by medical men of the special forms for their private cases is a protection against official inquisition rather than, as Drs. Larkin and Grossmann would almost make it appear, the presentation to them of a rope, with the request to hang themselves!—I am, etc.,

Charles S. Thomson, M.B., Ch.B.

Newcastle-on-Tyne, May 12th.

Sir,—We must all feel grateful to Mr. Larkin and Dr. Grossmann for the discovery that "attendance" does not necessarily mean "medical attendance." If they will go a step further and prove to us and the general public that "medical attendance" is not "attendance," and that the doctor (or midwife) is not a "person in attendance on the mother," we shall be still more grateful, and quite ready to join in their mirth over the revealed mare's nest. As a matter of fact, however, Clause 1 (1) was drafted with the specific intention of rendering doctors and midwives responsible for notification, though, to do them justice, the original promoters of the Act intended to pay for such service. I have the best possible authority for this statement.[1] The idea was that somebody who could be "got at" should be made responsible along with others. If we obey the law we must either notify or take care that some one else notifies, and the fact that the father and one or two other people are in the same position does not relieve us of our own legal obligations. Your correspondents advise us to take care that the father notifies, though later they say, "When compulsion is applied we must resist." We are at once to obey and resist the law—voluntarily to secure notification under compulsion of the Act! The Liverpool and Birkenhead Divisions (almost alone of the Divisions) recommended their sanitary authorities to adopt the Act as it stands, and yet they seem to be no better satisfied than the rest of us.[2] This is a fairly strong argument in favour of amendment of the Act, and a hopeful sign. We had better recognize clearly that the Act will never be amended if it works smoothly and notification is secured in the majority of cases, even though it is secured through the agency of doctors and midwives, who feel themselves to be unjustly treated. If the Association adopts and carries out the policy embodied in your

[1] See British Medical Journal, December 21st, 1907, p. 1805.
[2] See Supplement, May 9th, p. 246.

correspondents' letter, it tacitly admits that there is no need for any amendment of the Act, and accepts another imposition on the profession with a charming good grace. Amendment of the Act, so as to leave the responsibility for notification with the father, is the policy which most general practitioners would support, and which, so far as one can judge, the Association is adopting, and combined attempts to make the Act work well in its present form tend to postpone amendment indefinitely. I understand that one of our committees is considering what form any proposed amendment should take, and venture to suggest that it should be based strictly on principle, and carry with it as a matter of course the emancipation of the midwives along with ourselves. They are almost, if not quite, as badly treated as we are in the Act, and if we are to gain the support of the public, we must show them that our opposition to the Act is based on principle, and not merely on our own personal inclination. Public authorities have no more right to bleed midwives than they have to bleed us, and the man in the street will find it hard to see why we should be exempt and they not. The mere fact that they attend and notify more cases does not alter the principle, and if the sanitary authorities really consider their services indispensable, they will not mind paying a small fee for them. Exemption from penalty for doctors, and the provision of a small fee for the midwives, would put matters on a just and equitable footing.—I am, etc.,

Manchester, May 10th. J. PRICE WILLIAMS.

RENAL DISEASE IN PREGNANCY.

SIR,—Dr. Herbert French, in his Goulstonian lecture, published in your issue of May 9th, does me the honour of quoting my opinion that "the chronic renal disease of pregnancy is different from that of chronic tubal nephritis due to other causes," and this, he says, is "not altogether fair"; it is "reasoning in a circle." May I put forward my main reason for thinking that the chronic renal disease of pregnancy is different from any other form of kidney disease? This is that when the pregnancy is over the albuminuria disappears within a few days. Is there any kind of nephritis of which it can be predicted that when a certain causal condition has been removed the patient will be well in a few days?—I am, etc.,

London, W., May 13th. G. E. HERMAN.

COUSIN MARRIAGES.

SIR,—I wish heartily to thank your readers for the ready response to my request for information as to cousin marriages. I have up to the present received data concerning nearly 1,200 marriages. I should like, however, to double or treble this number, and there are one or two points in the answers received which prove to me that I had not made my questions sufficiently lucid.

I did not ask for any information about parents, because I wished if possible to leave an interval between the two generations inquired about, and this in order to ascertain whether there was any significant change in the amount of cousin marriage taking place. The information as to parents has, however, been frequently given, but I think, from an examination of the cards, that it has been chiefly given when the parents were cousins, thus to some extent vitiating the random nature of the sample of parents. Again, in many cases the total number of married brothers and sisters is not stated, but only the statement made, "No brother or sister married a cousin," so that the proper proportion of non-consanguineous marriages cannot be deduced, and we may be in danger in using these cards of getting too high a proportion of cousin marriages.

I should be very grateful for further replies and would suggest the following form:

1. Were paternal grandparents cousins? If cousins, in what degree?
2. Were maternal grandparents cousins? If cousins, in what degree?
3. Is the recorder married? If so, did he marry a cousin? If a cousin, in what degree?
4. How many married brothers and sisters has the recorder? How many of these married cousins? If they married cousins, in what degree were they cousins?

If, in addition to these questions, the recorder states whether his parents were cousins, the information will be used, but the information must not be given because the parents chance to be cousins. If we could get a good flow of information next week, there would be data enough to publish a preliminary report.

A postcard bearing the answers should be addressed to me at the Biometric Laboratory, University College, London, W.C., and should indicate the issue of the JOURNAL to which they are a reply.—I am, etc.,

London, W.C., May 13th. KARL PEARSON.

THE OPERATIVE TREATMENT OF CERTAIN DISEASES OF THE STOMACH.

SIR,—At a meeting of the Swansea Division of the British Medical Association, Dr. Bertram Dawson presented in a necessarily succinct but exceptionally lucid manner the *pros* and *cons* regarding operative intervention in certain organic affections of the stomach; and I should not venture to traverse any of the good teaching inculcated in his address were there not one or two points which I hardly feel do justice to the relief afforded in certain cases, or to the particular operation performed.

I allude in the first place to the employment of gastrostomy for malignant diseases of the oesophagus, in connexion with which is the following statement: "Gastrostomy may prolong life, but prolongs misery also." I speak, perhaps, from an experience of a not very large number of cases, but out of a series of 16 with 1 death (in an extremely advanced case) I have seen instances of most marked relief. My last operation, performed a few weeks ago, was in a particularly distressing case. The growth involved the recurrent laryngeal nerve, and caused such paroxysms of coughing, both when taking food and at other times, that life was wretched. The operation was completed in six minutes by the Kader-Senn method and gave the greatest possible relief. In other cases also in which efforts to swallow have been accompanied with pain the operation with its attendant after feeding has allowed the oesophageal spasm and inflammatory thickening, which so often accompanies the growth, to subside, and the patient is enabled later to resume nourishment by the mouth.

The other point refers to the operation of gastro-enterostomy *per se*. The knowledge which any particular physician has of the results of an operation is, I presume, determined by the special method adopted by the surgeon who undertakes to execute the treatment required, and I cannot help feeling that some more hopeful and helpful conclusions would have been drawn regarding the practical value of the operation in cases in which an easy exit from the stomach was required, if, in all the cases referred to, the artificial orifice had been made as close to the pylorus as possible. The tendency, as Dr. Dawson indicates and as others have so clearly proved, is for the contents of the stomach to be driven towards the pyloric aperture. Hence the closer we make our artificial opening to the normal outlet the better the drainage and the easier for a weakened or irritated viscus to eject its contents. A communication so established by the posterior "no-loop" method needs not that the gastric contents should "travel back to the stoma"—a distinctly disadvantageous and unnatural process, to which Dr. Dawson rightly, forcibly, and frequently draws attention. It is impossible, therefore, not to see how the particular method of performing the operation may very materially affect the result; cure might follow in one instance, while only temporary relief be afforded in another.

With all else that Dr. Dawson has said I should have more to express in terms of appreciation than in the way of criticism. I would only say in conclusion, that the percentages of mortality after the operation of gastro-enterostomy are, in experienced hands, lower than those quoted. Thus, 6·5 for benign cases is somewhat high. I find, in looking up my last consecutive series of 100 gastro-jejunostomies, I have had three deaths, and this series includes malignant as well as benign cases. I mention the fact to show how comparatively safe the operation is, and how readily it may be employed in cases in which we may reasonably hope to effect a cure or to afford relief.—I am, etc.,

Glasgow, May 11th. A. ERNEST MAYLARD.

"THE ANTIVIVISECTION AGITATION."

SIR,—In your article, "The Antivivisection Agitation," published on May 9th, 1908, you say: "Let us hear Sir Victor Horsley, who, giving evidence before the Royal Commission on Vivisection, after expressing the opinion that antivivisectionists, holding the views they do, have no right to derive benefit from experiments on animals, says: 'I would add that the editor of the *Zoophilist*, one of Mr. Coleridge's employees, Dr. Berdoe, stated in the *Times* that he would rather be treated with the knowledge of Hippocrates than the knowledge of the present day. I can only say, as a commentary on that, that from my own personal experience he does not rely on the knowledge of Hippocrates, but he sends his family to receive the opinion of men like myself'" (Minutes of Evidence, October and December, 1907, pp. 118, 119). I consider this false charge against me calculated to injure me in my practice and position, and request you to be good enough to publish in as prominent a part of your JOURNAL as that in which the accusation is made, that I have never sent any member of my family to consult Sir Victor Horsley, nor has any member of my family or any one else, with my advice or desire, ever sought Sir Victor's professional aid.—I am, etc.,

EDWARD BERDOE, M.R.C.S., L.R.C.P.Ed.

London, N.E., May 8th.

We have referred this letter to Sir Victor Horsley, who writes:

25, Cavendish Square.

Sir,

With reference to Mr. Berdoe's letter I have only to state that a member of his family brought a child to see me explaining in so doing that both Mr. Berdoe and herself wished me to examine and advise upon the case. It appears that we are to understand that this incident has passed from the memory of Mr. Berdoe.

Yours, etc.,

May 11th, 1908. VICTOR HORSLEY.

INVERSION OF THE UTERUS.

SIR,—With reference to the comments and strictures on Dr. McInerney's statement *re* the Rotunda Hospital teachings,[1] will you kindly permit me to state that when I was attending that institution, about twenty-eight years ago, the practice followed by all the pupils under orders from their teachers was to express the placenta after twenty minutes had elapsed if the uterus had not accomplished the work unaided. Many and good reasons were given for this course, though I learned to modify the procedure in most cases as a result of my experience in practice.

Many of the details of management in such cases have been changed more or less since 1830, which fact only proves that Dr. Tweedy can be perfectly accurate in his statements as to the teachings of to-day without Dr. McInerney's being less accurate with regard to the lessons which he received at the same famous school at an earlier date.—I am, etc.,

Waterford, May 9th. D. KENNEDY, L.R.C.P. and S.I., etc.

ABUSE OF HOSPITALS: A MINOR REMEDY.

SIR,—I think the question of the abuse of hospitals—so far as operative work goes—might be met to some extent if general practitioners would be at the trouble—having inquired into the financial position of patients—to arrange with young surgeons for operations at cheap fees. I am so situated that I am often constrained to tell people that their position ought not to entitle them to hospital (free) treatment. In such cases I generally find that they are willing to pay what they can afford, and I have had no difficulty in being met half-way by young and capable men in the profession. I always insist on the matter being a ready-money transaction, and the payers are usually rather pleased with and proud of their share in the contract.—I am, etc.,

London, E.C., May 7th. GEORGE H. R. DABBS, M.D.

[1] BRITISH MEDICAL JOURNAL, April 25th, p. 988.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have been approved in all three sections of the examination indicated:

THIRD M.B., PART II.—G. D. Alexander, B.A., Cai.; H. T. Ashby, B.A., Emm.; J. H. Board, B.A., Pemb.; J. R. Briscoe, B.A., H. Selw.; L. B. Cane, B.A., King's; G. G. Collet, B.A., Trin.; T. R. Elliott, M.A., Trin.; E. G. Fearnsides, B.A., Trin. H.; H. G. Frean, inc., Joh.; B. C. Gosh, M.A., Joh.; P. Hall-Smith, M.A., Pemb.; C. H. Ilott, M.A., Cai.; R. L. Ley, B.A., Pemb.; H. N. Little, B.A. Cai.; W. B. Marshall, B.A., Joh.; A. J. May, B.A., Sid. Suss.; J. B. Mennell, M.A., Pemb.; H. E. H. Oakley, B.A., Joh.; M. Phillips, B.A., Cai.; K. Pretty, B.A., King's; E. C. Priest, B.A., Cai.; K. D. Pringle, B.A., Cai.; M. R. Sawhny, B.A., Down.; L. W. Sharp, B.A., Cai.; R. W. S. Walker, B.A., Trin.; E. G. Wheat, M.A., Christ's; C. E. Whitehead, B.A., Cai.; J. F. Windsor, B.A., H. Selw.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

PROFESSOR STARLING commences the Mercers Company course of eight lectures on recent advances in physiology on May 15th at University College, at 5 p.m. The first four lectures will deal with the physiology of absorption from the alimentary canal, and the last four with the physiology of the respiratory movements. The lectures are open without fee to all students of the London medical schools, as well as to registered practitioners, on presentation of their cards.

UNIVERSITY OF EDINBURGH.

General Council.

THE statutory half-yearly meeting of the General Council of the University of Edinburgh was held in the Examination Hall on May 6th, Principal Sir William Turner, the Vice-Chancellor, presiding.

In the report of the Business Committee reference was made to the death of Sir Patrick Heron Watson and Professor Annandale.

Discussion took place on the subject of chairs of modern languages, and on the place of the universities in the Education (Scotland) Bill.

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of convocation on May 12th the following were elected representatives on the senate: Dr. J. Walton Browne, Belfast; Dr. Leslie, Belfast; J. Anderson, President, Queen's College, Galway; Rev. Dr. Leitch, Belfast; Edward Cuming, K.C., Dublin.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE proceedings at the quarterly meeting on May 5th, 1908, included the passing of a minute recording the sympathy of the College with the relatives of the late Dr. C. E. Underhill, and expressive of the great loss which his death has entailed to the College. Two new Fellows Drs. G. D. McRae and H. S. Ballantyne, were introduced and took their seats as Fellows, and Drs. G. H. R. Gibson, M.B., Ch.B.Edin., and T. G. Nasmyth, M.D., D.Sc., D.P.H.Edin., were admitted to Membership of the College. The Registrar reported that since the last quarterly meeting the Licence of the College had been granted to thirty-four persons after examinations. The report of the Curator of the laboratory regarding research work was submitted, and showed that during the past year thirty-three workers had been engaged in research, and 3,022 specimens had been reported on, this being an increase of 291 on the number for the previous year. The expenditure had amounted to £1,060 5*s.* 10½*d.* Dr. Norman Walker was re-elected as Representative of the College on the Conjoint Committee of Management of the Triple Qualification, and it was intimated that Dr. Frederick W. Mott had been appointed Morison Lecturer for the ensuing session.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE result of the elections held on May 5th is that the Board of Examiners for the ensuing year now stands as follows:

COURT A.—*Anatomy:* A. Fraser and B. C. A. Windle. *Surgery:* C. A. K. Bell, E. Conway-Dwyer, and J. Horsley. *Physiology and Histology:* J. Coffey and E. L'Estrange Ledwich. *Pathology and Bacteriology:* A. H. White. *Midwifery and Gynaecology:* F. W. Kidd. *Biology:* J. J. Burgess. *Ophthalmology:* A. H. Benson and H. S. Cunningham. *Sanitary Law and Vital Statistics:* E. F. Stephenson. *Engineering and Architecture:* J. H. Fergusson, F.R.C.S., D.P.H. *General Education:* J. Woodroffe, M.A., and J. W. Trisham, M.D.

COURT B.—*Anatomy:* P. J. Fagan and A. Fraser, F.R.C.S. *Surgery:* C. A. K. Ball, F.R.C.S., A. Blaney, F. Conway-Dwyer, L. G. Gunn. *Physiology and Histology:* D. J. Coffey and E. L'Estrange Ledwich, L.R.C.S. *Pathology and Bacteriology:* R. J. Rowlett and A. H. White. *Midwifery and Gynaecology:* F. W. Kidd. *Chemistry and Physics:* E. Lapper and R. J. Montgomery. *Dental Surgery and Pathology:* G. M. P. Murray and W. G. Story. *Mechanical Dentistry:* D. L. Rogers and E. Sheridan.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

THIRD PROFESSIONAL.—W. Coffey, F. J. Colgan, C. H. Christal, W. Crymble, J. Donoghue, T. Duncan, J. Healy, D. J. Harty, F. J. O'Donoghue, P. O'Farrell, E. Ryan, T. Sheedy, P. T. Warren, R. S. White.

OBITUARY.

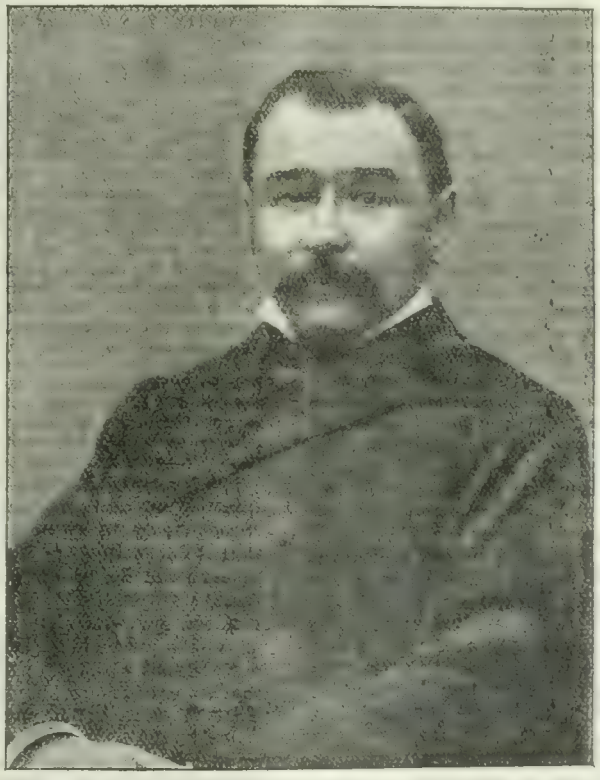
WILLIAM BOWEN-DAVIES, M.R.C.S., L.R.C.P.,

LLANDRINDOD WELLS.

THE many friends and patients of Dr. W. Bowen-Davies, of Llandrindod Wells, will hear with regret of his death on April 24th at his residence at Exmouth, which he had named "Gorphwysfa" (the Welsh for resting-place). For the past few years he had been suffering from a cardiac affection, which compelled him to relinquish his practice in July of last year and settle in Devonshire. Indeed, he ought to have given up his work earlier, but his indomitable energy kept him going, and he hoped that he would die in harness.

William Bowen-Davies was born at Llandingat, Carmarthenshire, on April 26th, 1847. He was educated at Llandovery College, and was a student of St. Bartholomew's Hospital. He obtained the diplomas of M.R.C.S., L.R.C.P., and L.S.A., in 1870–1, and then became Medical Officer to the General Infirmary, Jersey.

In 1872 he commenced practice at Llandrindod Wells, then only a small hamlet without any resident medical practitioner, but he was always convinced that it would rise to prominence among the health resorts of Great Britain. He was appointed Poor Law Medical Officer for a wide district, and a few years later the first Medical Officer of Health, a post which he held till the formation of the urban district of Llandrindod Wells. For years he worked hard as a general practitioner, and soon gained the confidence and esteem of the neighbouring gentry, and the love of the poor, to whom he gave the best of his care and skill, often riding for miles over the hills to attend them. In 1881 he took a prominent part in the establishment of the Llandrindod Wells Convalescent Home and Cottage Hospital, and became the Medical Director and Honorary Secretary. He filled both these offices with great energy for many years, and continued as Medical Director till 1903, when he was appointed Consulting Physician.



Photograph by] WILLIAM BOWEN-DAVIES, M.R.C.S. *[Elliott and Fry*

He was President of the Shropshire and Mid Wales Branch of the British Medical Association in 1884-5, choosing as the subject of his presidential address, Llandrindod Wells as a Health Resort, in which he gave a lucid account of the value of the mineral waters. He was one of the founders and a Fellow of the Balneological and Climatological Society, and was appointed one of the Vice-Presidents, and in due course succeeded to the Presidential chair.

During this time Llandrindod Wells was becoming more and more widely known as a health resort, owing in great measure to the efforts of Dr. Bowen-Davies, who devoted his time during the summer months almost entirely to work among the visitors, among whom he had a very large connexion, many of them returning to consult him year after year; the thoroughness with which he entered into each case, coupled with his cheery and genial manner won for him the highest personal regard. He devised a simple and effective method of note-taking that enabled him to keep a continuous history of his patients which proved invaluable. He was a capable physician, and a courteous man, beloved alike by his friends and patients. His professional work was his delight; he spared no pains and grudged no time, and taxed his iron constitution to the utmost during the press of work in the summer season. To counteract this, for several years he took a winter holiday abroad, spending it in Egypt, Palestine, or the Canary Isles, the latter being his favourite resort.

In politics Dr. Bowen-Davies was a staunch Conservative, and was deeply attached to his native land; he took a lively interest in every movement which tended to the progress of his fellow-countrymen, and was one of the promoters of the first Eisteddfod held at Llandrindod.

He was a staunch Churchman, and for considerably over thirty years filled the office of churchwarden of Holy Trinity Church, in the many improvements and enlargement of which he took great interest. In memory of him it is proposed to build a new aisle in the church, and appreciation of his past services has already taken a practical form in subscriptions from his patients and friends.

In 1879 he married the second daughter of Mr. William Rankin of Handsworth, Staffordshire, by whom he had two sons and four daughters, all of whom survive him.

He was a keen lover of Nature, had made a careful study of botany, and delighted in country rambles with his children, which he made full of interest, as the haunt of every flower and rare fern on the surrounding hills was known to him. He also had an intense love for animals.

In addition to his work as a physician, Dr. Bowen-Davies never spared himself in any effort to promote the welfare of the place in which he lived. He was closely associated in the establishment of the first elementary school, and in subsequently securing a county school for Llandrindod; he was one of the first members of the Radnorshire County Council, and became a member and afterwards Vice-Chairman of the Radnorshire County Governing Body. He was also the first Chairman of the Llandrindod Local Board, and subsequently of the Urban District Council. In 1896 he was placed on the Commission of the Peace for the county, being the first local resident magistrate. One of his last interests was the formation of a new golf club, now a highly successful undertaking, of which he was the first President.

He was buried in the cemetery at Llandrindod Wells, in the arrangements for the construction and laying out of which he had taken infinite pains. The first part of the burial service was held at Holy Trinity Church, and he was followed to his last resting-place by a large gathering of friends and townsmen who were desirous of paying their last tribute to one who had shown such public spirit, and to whose strenuous efforts the Llandrindod Wells of the present day owes its foundation.

WILLIAM HENRY DE SILVA, M.B., C.M.ABERD., F.R.C.S.EDIN.,

LATE VICE-PRESIDENT, CEYLON BRANCH, BRITISH MEDICAL ASSOCIATION.

THE medical profession and the general community in Ceylon have alike sustained a great loss through the death of Dr. W. H. De Silva, which took place almost suddenly from choleraic diarrhœa on April 3rd, at the early age of 40. Dr. De Silva, in spite of his European name, was of pure Cingalese birth and a direct descendant of a native family of distinction which played a great part before and during the days of the Portuguese occupation of Ceylon. The head of the house at that time became converted to Christianity, and on baptism was given a European

name and Portuguese rank. Dr. De Silva, who was the inheritor of considerable wealth as well as of distinguished traditions, received his medical education at the Ceylon Medical College and completed it at Marischal College, Aberdeen, where, in 1892, he graduated M.B., C.M., with honours, in several subjects, having previously carried off a good many prizes. Subsequently he studied at the Moorfields Eye Hospital, and in ophthalmological hospitals at Paris, and shortly after his return to Ceylon was appointed Lecturer on Diseases of the Eye, and also on Materia Medica, at the Ceylon Medical College. A few years later he threw an immense amount of energy into the movement started by Lady Ridgway for the establishment of an eye hospital as a memorial to the late Queen Victoria, and on the completion of this project became its surgeon. Although entirely independent of medicine as a livelihood, he took an active interest in his professional work, and carried on a large practice. Ordinary professional occupations, however, by no means absorbed all his capabilities for work. He was a many-sided man, strongly impressed with the possibilities for good of hygiene on the lives of the people, and, with a view to its promotion, early became a successful candidate for municipal honours. At the time of his death he had served on the council for some five years, and, though not a fluent speaker, he compelled attention by his earnestness and broad knowledge, and thus effected a great deal of good. He also held a commission in the Medical Corps of the Ceylon Light Infantry (Volunteers). He was, too, a strong believer in exercise, and one who, keeping himself in thorough condition, was never slow to impress its advantage on his companions, and especially on the young men whom he met at the Young Men's Christian Association, of which he was local president. Work in connexion with the British Medical Association also absorbed a good deal of his time. He joined it immediately he had qualified, and became secretary of the Ceylon Branch not long after his first return to Colombo. He also held office as vice-president in 1906, and at the time of his death was a member of the council. Apart from those on this side of the world who will remember him as a student at Edinburgh, there are many who have had the pleasure of meeting him on one or other of the several visits he made to Europe; in 1901 he was present at the annual meeting at Cheltenham as delegate of the Ceylon Branch, and before going home obtained the Fellowship of the Royal College of Surgeons of Edinburgh, and paid a round of visits to hospitals in Great Britain and on the Continent devoted to eye surgery; later on during another expedition he was elected a Fellow of the Royal Colonial Institute. The latest annual meeting at which he was present was that last year at Exeter, when he read an interesting paper on the climate of Ceylon. It was his intention to make this paper the foundation of an elaborate book, but unfortunately at the time of his death the volume was only in skeleton form. Dr. De Silva was married, and leaves a widow and four children, the eldest being a boy aged 9.

Mr. A. J. BALMANNO SQUIRE, who died on May 7th at his house in Weymouth Street, received his medical education at University College, London. He was House-Surgeon at University College Hospital. After taking the diplomas of M.R.C.S.Eng. and L.S.A. in 1853 he took the degree of M.B.Lond. in 1862, gaining a gold medal. He chose dermatology as his special province of practice, and was formerly Senior Surgeon to the British Hospital for Diseases of the Skin. He was the author of numerous contributions to the literature on skin diseases. Among them may be mentioned an *Atlas of Coloured Photographs of Diseases of the Skin*; *A Manual of Diseases of the Skin*; *The Influence of Age on the Causation of Skin Disease, as ascertained by the Analysis of 10,000 Consecutive Cases of Skin Disease*; *Lupus Disease of the Skin and its Treatment*; a paper on Occipital and Constitutional Diseases of the Scalp, read at the annual meeting of the British Medical Association in 1864; one on the Diagnosis between Syphilitic and Non-Syphilitic Diseases of the Skin, read at the Harveian Society; and the article on Diseases of the Skin in Reynolds's *System of Medicine*. Mr. Balmanno Squire took an interest in etymological and philological subjects, and short notes by him on such questions have appeared from time to time in the BRITISH MEDICAL JOURNAL.

THE medical profession in North Devon has suffered a serious loss in the death of Mr. E. W. EMTAGE, on May 6th, at the early age of 47. Dr. Emtage was born in Barbados, educated at University College Hospital, and after taking the diplomas of M.R.C.S. and L.S.A., settled down in Bradworthy in 1885—a typical old-established and extensive North Devon practice. He was not long in making his merits known, for he had an immense appetite for work (to which, unfortunately, his premature decease must be attributed), an unconquerable patience, and an innate capacity for winning the love and respect of all with whom he became associated. His working hours and the mileage he would cover in a day would astonish even many country practitioners. He was deeply interested and thoroughly versed in his profession. A man of sincere but unostentatious piety, deeply mourned by his patients and his professional brethren alike, he leaves a gap not easily to be filled. The cause of death was influenza followed by pneumonia.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MANIACAL PATIENT IN A WORKHOUSE INFIRMARY.

A. W., who is medical officer (non-resident) to a provincial workhouse, writes: A patient in the infirmary, where there were no lunacy attendants, developed acute mania with suicidal tendencies. I wrote urgently to the relieving officer to have him removed to an asylum. The magistrate called to the case by the relieving officer refused at first to make the order required, on the ground that he thought the patient would get better where he then was. I then requested the master to procure a proper attendant for the patient, but he only obtained the services of an inmate of the workhouse. Such employment of an inmate was contrary to the regulations of the Local Government Board. The case occurred on a Sunday, and on the following day the magistrate gave the order for the removal of the patient to the asylum; removal was not effected till the next day, Tuesday. If another similar case occurs, who would be responsible—the relieving officer or myself? Should the patient be homicidal, would it be my duty to procure proper lunacy attendants at any cost?

*** We apprehend that the relieving officer, acting on the information received from the medical officer, and having, consequently, in a formal way and in accordance with Section 14 Subsection 2 of the Lunacy Act of 1890, brought the case to the notice of a magistrate, would be relieved of further responsibility in reference to the case until he received an order signed by the magistrate to remove the patient to the asylum. In the meantime some responsibility must in such a case rest with the medical officer and also with the master of the workhouse, who would be responsible for the patient's safety as long as he remained in the workhouse. It would be the duty of the medical officer to certify in writing to the master for any extras *of any kind whatever* (lunacy attendants, of course, included if required) and to leave the master to provide all such extras as certified for. The Lunacy Act casts great responsibility on both medical officer and master in all such cases, and, this being the case, they ought both to be prepared to act with decision and, of course, with discretion. It appears to us that the magistrate who was called upon by the relieving officer to act in this case carried out the duty which he had to perform, as he seems to have delayed making the order for the removal to asylum, not because he doubted the insanity of the patient and his fitness for removal, but because he thought the patient would get better without such removal. It is to be regretted that he allowed himself to be influenced by this opinion, inasmuch as it was not a matter upon which it was his duty to enter. The only question for him to decide was as to the lunacy of the patient and his fitness for removal to asylum; as to this removal it was his duty to be guided solely by the written report made to him by the certifying medical practitioner.

COMPETITION FOR APPOINTMENTS.

M. B. writes that, the post of public vaccinator in a certain provincial town having fallen vacant, some of those who desire the appointment have shown undignified haste in approaching the guardians; it is even asserted that the guardians were canvassed by one practitioner before the vacancy was generally known, another circulated with his

application copies of testimonials, although the guardians stated that they did not require testimonials. We agree with our correspondent that it is improper to canvass for an appointment not yet vacant; we also agree with him that the applicants would have done well to have attended to the following note on the form: "Testimonials as to character and proficiency not required."

DEFECTIVE DRAINS.

M.C.—1. An untrapped drain, whether an old stone drain of past ages with a good fall, or one of modern construction, would certainly come under the definition of a nuisance in Sec. 91 of the Public Health Act, 1875, and a district council if satisfied that a nuisance exists is bound to take steps to secure an abatement. 2. For the purposes of the Public Health Act, 1875, nuisances are defined in Sec. 91 of that Act, and in Sec. 35 of the Public Health Acts Amendment Act, 1907, where the latter has been adopted. 3. The duties of an inspector of nuisances are set out in Art. 19 of the General Order of the Local Government Board, dated 23rd March, 1891. 4. Except where the Local Government Board for reasons brought to their notice may see fit in particular cases specially to allow, no person may be appointed a medical officer of health or deputy medical officer of health unless he is legally qualified in medicine, surgery, and midwifery; the medical officer of health for a county or for a district or combination of districts having a population of 50,000 or more persons must in addition have a Diploma in Public Health, or have been for three consecutive years prior to 1892 medical officer of health to a district or districts having a population of not less than 20 000 persons, or must have been for three years prior to 1888 a medical inspector of the Local Government Board. One half the salary of a medical officer of health can be claimed by a district council from the county council provided the appointment of the medical officer of health has been sanctioned by the Local Government Board.

Medico-Legal.

FEES OF MEDICAL WITNESSES.

M.B. writes that he attended Court under a summons issued by plaintiff's solicitor, and on a written statement from him that his proper expenses would be paid. The case was won by the plaintiff, but the judge disallowed the doctor's costs, and he received from the solicitor afterwards only a guinea. Is he not entitled to more?

*** It is to be feared that no more could be recovered. As the judge disallowed the costs, the solicitor might claim that the proper expenses had been paid. A registrar is entitled to make a charge of 3s. 7d. for a certified copy of a death certificate.

ITEMS OF AMOUNT.

ARDCLARE writes that a patient demanded from him items after he had sent in his account. An inspection of the doctor's account book was offered, but the demand for items was insisted on. Is it customary in the profession to furnish items?

*** It is not customary to allow patients to inspect the doctor's account book, but it is quite within the right of the former to ask for items, and there is nothing unprofessional in furnishing them. Where an action is brought in the county court items must necessarily be given.

VACCINATION OF PRIVATE PATIENTS.

A. vaccinated a child privately as his patient; the vaccination did not take, and A. promised to call again and revaccinate. On visiting A. finds that the child has been vaccinated in the interval by the public vaccinator.

*** If the child had reached the age of 4 months and 1 week, it would be the duty of the public vaccinator to call at the home of the child and "offer" to vaccinate. It would be his duty to vaccinate if requested to do so by the parent. If the parent explained the circumstances of A.'s previous visit and informed the public vaccinator that A. had arranged to call again, the proper course would be for the public vaccinator to retire at once. It would be improper for the public vaccinator to attempt to interfere with any such arrangement between A. and his patient. It must be noted, however, that the parent has an undoubted right to "request" the public vaccinator to vaccinate, and the latter would not be justified in refusing, even under the circumstances mentioned.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Articulate, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

INDIA asks for a prescription for a depilatory suitable for the removal of hairs from the inside of the nose; pulling them out causes pustules.

J. R. P. would like to know if cases of asthma occur in Cape-town, and if Cape Colony is a place to recommend an adult sufferer from asthma to emigrate to.

NESCIO asks for advice in the treatment of a man who is kept awake at night by formication of the perineum, scrotum and inside of thighs. He dries very thoroughly after the morning bath and uses a soft dry towel and emollient powder at bed time. He cannot sit on any but a wooden seat as a cushion increases the itching. He is otherwise quite well, and lives wisely; mixed diet.

DR. JAMES GARDNER (Burnley) asks readers of the JOURNAL who use the motor in working-class practices in a town kindly to give non-motorists their opinion of its utility or its disadvantages compared with horses in such practices. I can (he writes) quite see the superiority of the motor in country practice, but am not so sure of its superiority in a manufacturing town where stops are frequent and distances short. I think the opinion of those who use cars every day of the year is a better guide to prospective purchasers than the results of trials.

THE TARNISHING OF SILVER ORNAMENTS.

R. K. writes: My father has been in bed some months with neuritis, possibly caused by a little glycosuria. He wears his silver watch between flannel garments and it persistently blackens, although he is not taking sulphur in any form. When my sister on her return from a visit to a lady, who also suffers from neuritis, saw the watch she exclaimed that her late hostess's watch looked the same, and that whenever she had neuritis her silver necklace, watch, etc., always became black.

*** It is by no means only those persons who are taking sulphur as a drug whose body emanations may tarnish silver, but we do not think it probable that there is any connexion between "neuritis," a term which includes a number of conditions of greatly varying causation, and the formation of sulphur compounds. A diet containing much meat is one of the conditions which would favour the elimination of sulphur.

CONTRACT PRACTICE: FEES FOR SPECIAL CASES.

ANTISWEAT asks for the experience of readers on the point raised in the following story: For several years I have attended a local branch of the Ancient Order of Foresters

at 4s. a head per annum, but have no written contract or agreement with them. I was called to a member who as the result of an accident was suffering from a dislocated shoulder. I thought an anæsthetic advisable, as he was a stout, thick-set man, and told his wife that I could not treat the case as a club attendance, but should make an inclusive charge of 1 guinea. To this she agreed, and also the patient subsequently, but not in writing. I did what was necessary, and the man did well, only being "on his club" about three weeks. Have I a good claim to this fee? The local club secretary has advised the man not to pay, but to dispute the case in county court. The club refuses to help with any contribution towards the fee, although they assist a member who wishes to consult a bonesetter! The patient, I may say, could certainly afford my fee. How do we club doctors in the country, who practically have to take certain clubs as a matter of course and with no contract, stand in such a matter?

ANSWERS.

STATHERN.—There is no institution into which a child, both blind and imbecile, would be received without payment, except the imbecile ward of a union. For a moderate payment, however (£35 a year), children, both blind and defective, if educable, are received at a certified home at 48, Kenilworth Road, St. Leonards.

VIBRATION AS A METHOD OF TREATMENT.

DILATATION.—(1) Mechanical vibration was introduced for the treatment of nervous diseases, especially neuralgias, by Bourneville twenty-five or thirty years ago, and was used at the Salpêtrière without very convincing results. A vibrator was also introduced about the same time by the late Dr. Mortimer Granville; his machine was worked by a magnetic battery, and was made by Weiss. The method plays an important part in the treatment conducted at the Zander Institutes and establishments for mechano-therapeutics, which are to be found at many Continental watering places, for example, at Vichy and at Carlsbad; it is carried out by means of indiarubber hammers of various sizes driven from shafting worked by an electric motor. It is used for all sorts of local pains and conditions for which massage is indicated. Various hand-driven vibrators are sold, and one constitutes an important part of a quack system of treatment. Atonic dilatation of the stomach depends upon a general neurasthenic condition, which in our opinion can only be benefited by means calculated to restore the general health, but (2) considerable relief is sometimes found from wearing a well-fitting abdominal belt or the so-called Glénard's bandage.

ANTS IN THE LARDER.

M.D.'S WIFE writes: In answer to "Euclid's" inquiry, I, too, had a larder—a larder overrun with ants—and tried everything likely to expel them without doing the least bit of good until I hit upon the idea of placing a 2 lb. golden syrup tin with the lid off, and about a quarter full of syrup, in the larder. Upon this the ants concentrate all their energies, thousands are unable to extricate themselves from the syrup, and die. By replacing the tin with a fresh one when necessary, say about once a week or when the syrup has become too full of ants to be any longer inviting, "Euclid" will soon trap all that are there, and rid his larder quickly of these very objectionable little pests in a cleanly and easy way.

DR. ALEX. LUNDIE (Dalmuir, Dumbartonshire) writes: Perhaps "Euclid" has not tried carbon disulphide. It is used by grain merchants for killing insects in grains. A few cubic centimetres of the liquid are sprinkled over the grain, and this at once kills the insects, their larvæ, and eggs. I do not know if it destroys the germinating power of the grain; probably it does. It utterly destroys rose buds, but a derivative—potassium thio-carbonate—is used successfully to destroy the phylloxera of vines. The carbon disulphide is easily got rid of in the grain by exposing it to the air. Brazilian houses are often infested with the *sauba*, a large burrowing ant, which excavates the foundations. It is effectually dislodged by the vapour of carbon disulphide. The temperature of ignition is under 300° F.; therefore great care must be observed to avoid fire.

ALGEBRA writes: I have found Keating's insect powder dusted well about the place a few times most efficacious. Liq. hydrarg. perchlor. applied with a brush to the floor near the place where the ants come in seems to be a good preventive.

I.M.S. also recommends the use of Keating's insect powder.

*** There are two sorts of insect powder known in general commerce, both consisting of the half-expanded flower heads of species of chrysanthemum; the blue, Persian, or Caucasian insect powder is derived from *Chrysanthemum roseum*, the white, or Dalmatian, from *Chrysanthemum cinerariifolium*. From the fact that both varieties were formerly named pyrethrum, the products are sometimes spoken of as pyrethrum powder.

CERTIFICATES OF NATURE OF INJURY FOR EMPLOYER.

G. A. J.—The granting to a company of a certificate in connexion with the Workmen's Compensation Act as to the nature of injuries received by their employees may involve little additional trouble when, as in the case submitted to us, all the employees are members of a club to which the medical man signing the certificate is medical officer. It must, however, be recognized that the giving of such a certificate involves a certain degree of responsibility. We believe that the fee considered suitable in similar instances has not been less than half a crown.

LETTERS, NOTES, Etc.

AMBULANCE TRAINING FOR LONDON BOYS.

LIEUTENANT-COLONEL SIR J. FAYRER, M.D., R.A.M.C. (Duke of York's Royal Military School, Chelsea, S.W.), writes: Having the honour to be Principal Medical Officer of the London Diocesan Church Lads' Brigade, I wish to point out to the members of my profession the voluntary and excellent work being done by the officers of the brigade in gathering together the lads of the diocese and promoting amongst them habits of reverence, obedience, self-control, and all that tends towards Christian manliness. It is not for me to dwell upon the splendid results already attained, but as Principal Medical Officer I take a keen interest in that branch of the work which comes immediately under my supervision—namely, ambulance and first aid. There are at present 43 companies in which instruction in ambulance and first aid is being given, and it is only the lack of qualified medical men to act as lecturers that prevents the work being enormously extended. Companies in every part of London are eagerly waiting to welcome instructors, and I shall be glad if any medical men who can spare the time to give lectures weekly or fortnightly would communicate with the Honorary Secretary for Ambulance, Captain Fred. W. Jones, 28, Sach Road, Upper Clapton, N.E. Gentlemen offering their services have the option of being gazetted officers in the brigade or not, as they wish. On receipt of any such names I shall be glad to interview or write very fully, giving all details, for the importance of this work cannot be overestimated. The brigade consists of 170 companies who meet every Sunday for religious instruction, and are also regularly trained in all branches of military drill, in addition to which seaside camps are held in August at Bexhill and Eastbourne.

PROPRIETARY MEDICINE VENDORS.

IN connexion with the death of one of the proprietors of Scott's Emulsion, the *Daily Express* has recently given a list of the amounts at which the estates of various owners of successful proprietary medicines have been declared for probate purposes within recent years. Among the more notable sums are £1 311,000, being the English estate of the proprietor of Dr. Williams's Pink Pills; £86,680 left by the inventor of Beecham's Pills; £147 860, the sum declared under the will of Mr. G. Handyside, Newcastle-on-Tyne, proprietor of a "Consumption Cure"; £67,187, the fortune in England of one of the proprietors of the Bile Bean Manufacturing Company; and £112 214 left by the proprietor of Owbridge's Lung Tonic. £119,777 was left by the inventor of Areca Nut Tooth Paste; and £73,588 was the amount of the estate of one of the partners in Day and Sons, animal medicine manufacturers. In considering these sums it is to be remembered that in several instances the amounts named represent only the estates subject to probate duty in this country, and therefore only a part of the whole, and that in nearly all instances the deceased had only a part interest in the businesses mentioned.

A WARNING.

WE are informed that Mr. H. Clay, who gives as his address No. 27, St. Paul's Street, Huddersfield, has not been in the employment of the Caxton Publishing Company, London, Leeds, and other towns, for some time. This information may be of value and service to medical men to whom Mr. Clay may apply for a temporary loan.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Experimental Inquiry

INTO

THE RELATIONSHIP OF ACTION TO DOSE ESPECIALLY WITH REFERENCE TO REPEATED ADMINISTRATION OF INDACONITINE.

BY J. THEODORE CASH, M.D., F.R.S.
REGIUS PROFESSOR OF MATERIA MEDICA, UNIVERSITY OF ABERDEEN.

ALTHOUGH the consideration of amount of dose, as well as of the principles of readministration in the treatment of cases calling for more or less prolonged medication, are of prime importance therapeutically, it must be admitted that they have scarcely received the amount of attention to which they are obviously entitled. Stokvis asserts that there is perhaps no part of our science which does not defy our aspirations to precision more than the posology, whilst Harnack laments the inattention of medical practitioners towards such an important question, remarking that there exists a surprising carelessness and caprice in the matter. Sir Benjamin Brodie recognized the error of the assertion, which is even to-day occasionally propounded, that by doubling a dose a double effect is to be anticipated; and exact experimental observations have shown that such a theory if applied to many active remedies must certainly lead to disaster.

Harnack regards Juckuff's attempt to experimentally establish some mathematical correspondence between dosage and effect as one of the few serious efforts in the direction of a more exact therapeusis. Juckuff's work was based upon a historical case of poisoning in which a fatal issue was barely averted. The case was that of Koppe, who, experimentally, took 0.5 mg. of digitoxin. This dose proving ineffective, the experimenter, after an interval of twenty-four hours, swallowed double the quantity. The ensuing results were so trifling that Koppe at that time regarded them as chance occurrences, and so, after the lapse of four days, undeterred by any anxious anticipations, the dose of 2.0 mg. was taken, with the result that violent, almost fatal, poisoning was produced. This clearly indicated that the effect of 2.0 mg. of digitoxin was not merely of twice, but of many times the activity of 1.0 mg. This fact, established with regard to the action of a single glucosidal body, was expanded by Juckuff, who tested the activity of chloroform (of which Paul Bert had already said that double the active dose constituted a surely lethal proportion), ether, amylenhydrate, and other bodies with reference to their action upon the respiration of certain animals and to their potency as haemolytics. His results led to the promulgation of certain laws which are of considerable practical utility, into the discussion of which it is not my present purpose to enter. Let it suffice that the nearest fulfilment of a mathematical relationship seemed to be achieved by working upwards from that amount of any drug which produced the minimum of appreciable action. For such a proportion Harnack has used the term "Grenzdose," or limit dose, and this minimal effective dose stands above that amount which is unproductive of action. Of this Buchheim speaks as the "Compensazions grösse," on the supposition that to that proportion the tissues offer a compensatory resistance, any appreciable action being thereby obviated. Perhaps the term "maximal ineffective" dose may be accepted as expressing the fact more clearly, without the introduction of theoretical consideration. To apply these terms to the case already detailed. In Koppe's experience of digitoxin 1 mg. was the minimal effective or "limit" dose, and presumably 0.9 mg. might be regarded as the maximal ineffective (though of this there was no experimental confirmation); his bare escape with life after a dose of 2 mg. led to the supposition that 2.1 mg. (or × 2.1 of the minimal effective) would have proved a lethal proportion. There was recognizable, therefore, a very narrow variation in dosage between that amount which caused a slight but by no means toxic effect (for its importance was ignored by Koppe in the first instance) and the lethal, for if this is correctly represented by 2.1 mg., the lethal is but × 2.1 of the "limit." Juckuff inferred that the addition of 0.1 mg. to the (active) 1 mg. practically doubled the effect of the larger dose; that by + 0.2 the result would be trebled; by + 0.3 quadrupled, and so on, though it is open to criticism whether the equal increments would not become progressively more active as the total dose underwent increase.

It is improbable that any universal law of uniform applicability associating dosage with its certain effect could be formulated which would prove adaptable to all classes of remedies, or even to such remedies as presumably belong to the same class. The individuality of the remedy must be closely studied before an appropriate position can be given it, and even when we have learnt its value towards the healthy organism, the reaction of disordered organisms which vary within such wide limits in the degree of departure which they manifest from the normal, even though they pass under one and the same name, must necessarily be of a less easily predicted character.

We may safely follow Harnack in his recognition of two main classes into which potent remedies may be divided:

(*a*) Those in which the lethal dose lies far above the active; and

(*b*) Those in which the lethal dose lies near the active.

Whilst atropine would be placed in the first group, its active dose being, relatively to the lethal, but very small, digitoxin would obviously be included in the second. Strychnine would also be grouped under (*b*), as whilst 1.5 mg. causes but a partial effect upon dogs (Harnack), twice this amount proves lethal. It is obvious that the contrast of activity of this poison with digitoxin is not quite satisfactory, as in the experimental testing of the latter the human subject could record symptoms indicative of a feeble toxicity; whereas in the strychnine observations only objective symptoms could be recognized. Whilst these two bodies are evidently members of the same class, it is not yet proved that they would submit themselves to an identical law or mathematically-expressed formula connecting activity with dosage. Though indaconitine possesses a medicinal action in doses remote from the lethal, it will be shown that this is by no means the case when objective phenomena are regarded as the standard of activity.

Experimental.

The following experiments, which are of a very simple character, were undertaken in the hope that they might yield definite information regarding the effect of a dosage bearing varying but known proportion to some uniform standard. They have necessarily been of an extensive character numerically, whilst in many long-continued observation has been essential. My assistant, Dr. Croll, has kindly taken my place occasionally in order that the record of such prolonged experiments might be completed.

As it seemed advisable in the first instance to work downwards from the lethal proportion, which may be regarded as the most definite standard available, one of the aconitine series of salts—namely, indaconitine hydrobromide, of which the lethal proportion for rabbits had been previously established—was selected. This salt, which had been prepared in the laboratories of the Imperial Institute, was kindly supplied to me by Professor Dunstan. It is, as already shown, active in reducing body temperature.

Method.

For the following observations either fully or two-thirds grown rabbits were employed. The animals were abundantly fed up to the evening of the day preceding the morning on which the observation was to take place. The body weight was ascertained immediately before the experiment, and from it the dose was calculated.

A sensitive thermometer, certified at Kew, with a long stem permitting of very close reading, was used. All temperatures were taken deeply in the rectum. The observation room was kept at a uniform medium temperature, the animals being contained in a large run enclosed by netting, which was abundantly littered with straw.

As it had been found that such weak solutions of the alkaloidal salt as were suitable for accurate measurement (0.000005 per 1 c.cm.) soon underwent partial decomposition, only perfectly fresh solutions either in 0.75 per cent. NaCl or Ringer's solution were employed. Medication was invariably by hypodermic injection in the region of

the flank. The solution of the alkaloidal salt was drawn into the barrel of the syringe (which had already been charged with a few minims of salt solution) from a narrow and accurately calibrated pipette, graduated to one-hundredths of 1 c.cm. After the injection had been made the syringe was detached from the needle, partially recharged with salt solution, and discharged through the needle, so that the administration of the entire dose was assured. The needle and solution were sterilized; in no case was any subsequent irritation or inflammation produced in the animals employed.

All doses are quoted in relation to the kilogram weight of the animal (a large rabbit weighs fully 2 kg.). The toxic action produced by doses bearing a stated relationship to the lethal unit will be briefly described in the first place, and afterwards the action of subtoxic doses upon the temperature. Though individual results are frequently given, most of the figures represent averages derived from several similar experiments in which different animals were employed.

Abnormal susceptibility and the reverse are met with in animals as well as in man, and the examination of many rabbits with regard to their receptivity towards indaconitine has yielded four or five well-marked examples of it. The deviation from the normal (average) effect more usually takes the form of insusceptibility than of the reverse condition.

The Lethal Dose of Indaconitine Hydrobromide and the Toxic Action of Smaller Proportions.

Lethal Dose.—The lethal dose, as previously established, is 0.12 mg. per kilo body weight. Such a proportion occasions brief acceleration of respiration followed by slowing with dyspnoea, pupillary dilatation, free salivation, paresis with characteristic movements of the head and lower jaw. Diversified circulatory changes, leading up to inco-ordinate action of the various parts of the heart, coexist, but are not appreciable, unless in blood-pressure experiments. Final dyspnoeal spasms followed by unconsciousness (these symptoms usually being intermittent in character) precede death. There is naturally a fall of rectal temperature, but, as death supervenes in fifty to sixty minutes, the reduction is only a fraction of that produced by a large but non-lethal dose.

Eleven-twelfths of the Lethal.—A dose of 0.00011 g. per kilo is occasionally, though exceptionally, lethal. When the unusual results follow, there is associated with the symptoms above described (in character if not entirely in degree) a fall of rectal temperature, averaging from 2.6° to 2.7° C.; this reduction usually passes its maximum two hours after administration, but the normal temperature is not regained until two or three hours after the lowest point had been recorded.

Two-thirds of the Lethal.—Such a dose (0.00008 g. per kilo) causes all the symptoms enumerated above to some extent, but dyspnoea is distinctly less evident, though the respiratory movements are usually reduced to two-fifths of the original number. Salivation lasts for about twenty-five minutes. The fall of temperature is from 1.5° to 1.7°—average 1.6° C.

Half of the Lethal.—All the symptoms previously mentioned are present, but dyspnoea less marked, and brief paresis not so conspicuous. The reduction of rectal temperature averages 1.2° C., the maximum fall being from sixty to seventy minutes after administration. Usually a commencing rise is noted in seventy-five to ninety minutes, normality being reached in 170 to 220 minutes. (Renewal of muscular activity favours an earlier return towards the normal.)

One-third of the Lethal.—This proportion causes little evidence of dyspnoea or paresis. The animal is capable of hopping, though for a short time its movements are somewhat uncertain, and it rests on the abdomen more than is customary. The pupil is not widely dilated; salivation, though distinct, lasts for not more than eighteen minutes. The average fall of rectal temperature is 0.95° C., its maximum being attained in about sixty minutes; normality is regained in 130 to 160 minutes.

One-quarter of the Lethal.—A rabbit having received this dose appears for a time somewhat apathetic—indifferent to the proximity of other animals or to the approach of food. Excepting that there may be an occasional chewing movement at the height of action, no motor symptoms are present. There is no external salivation (exceptions to this statement are quite rare); if the secretion is increased it is swallowed. The average fall of rectal temperature is 0.8° C., the duration of effect being slightly shorter than that recorded after a one-third dose.

We may, then, conclude that the objective toxic action of indaconitine is comprised within limits, the lowest of which is 0.25 of the lethal, or in exact figures 0.00003 g. per kilo body weight (rabbit). In the case of digitoxin poisoning, already cited so often, subjective symptoms were recorded after a dose bearing the proportion of 1 to 2.1, the latter figures in milligram representing the lethal. In these observations dealing with indaconitine only objective symptoms are available, but assuming that the subjective symptoms would disappear at one-fifth of the lethal (the objective symptoms are ill-defined and not certainly characteristic of the poison at one-fourth), then the proportion of the minimal effective towards the lethal would be as 1 to 5. Although such a variation is evidently greater than that stated for digitoxin (Juckuff) or strychnine (Harnack), indaconitine would be classified with these rather than with the atropine group, as being productive of an obvious action only when given in doses which are not far removed from the lethal.

When the dose of indaconitine is reduced below the proportion at which simple observation fails to detect any action, it nevertheless remains effective in modifying the body temperature. In order to shorten description a diagram is given below (Fig. 1), which shows the average reduction of internal (rectal) temperature caused by indaconitine given in fractional doses of the lethal. The greatest effect is that produced by $\frac{11}{12}$ths of the lethal (the nearest attainable to the unit), the second is by two-thirds, the subsequent proportions being in series of geometrical progression from the unit and two-thirds respectively, so that we have $\frac{11}{12}$ths (for one), $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$, and $\frac{2}{3}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{12}$, $\frac{1}{24}$ as the fractions examined.

Average Reduction of Temperature by Single Doses of Indaconitine Hydrobromide.

Proportion of Dose to Lethal.	Fall of Rectal Temperature.
$\frac{11}{12}$	2.2° C.
$\frac{2}{3}$	1.6°
$\frac{1}{2}$	1.2°
$\frac{1}{3}$	0.95°
$\frac{1}{4}$	0.8°
... ...	0.7°
... ...	0.6°
$\frac{1}{12}$	0.5°
$\frac{1}{16}$	0.4°
$\frac{1}{24}$	0.3°
$\frac{1}{32}$	—

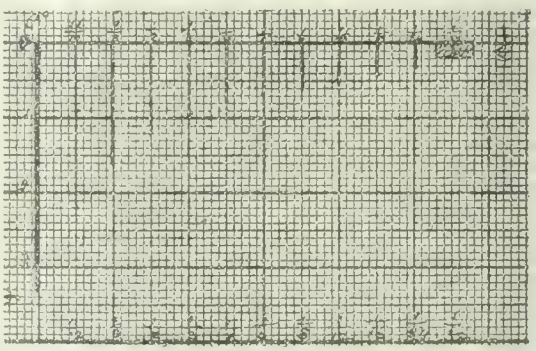


Fig. 1.—Reduction of temperature by single doses given in fractions of the lethal unit. The shaded block indicates area of physiological variation.

It is, therefore, obvious that some effect upon temperature is producible by doses of the indaconitine salt which bear such a relatively small proportion as the $\frac{1}{16}$th and even the $\frac{1}{32}$nd to the lethal, but the latter may be regarded as being upon the border line of activity and inactivity; in other words, it is the "limit" or "minimal effective" dose so far as temperature is concerned.

It is undeniable that slight fluctuation of temperature may sometimes be recorded where still smaller single doses are administered, but these I have not felt justified in regarding, inasmuch as the temperature of a normal animal to which no administration has been made has been frequently found to vary from 0.15° to 0.2° C. during the time occupied in making an average observation. Such variation may be without detectable cause. On the other hand, we anticipate a change of temperature under certain conditions. Unfed rabbits when offered food show at first a transitory fall in rectal temperature of 0.1° to 0.2° C., but this is rapidly succeeded by a rise of 0.3° to 0.35° C., so that the original level is exceeded. There may, therefore, be an oscillation about the normal of 0.35° C., occasionally more, attributable to local changes in vascular areas adjacent to the bulb of the thermometer. Pembrey

and Nicol have indicated the occurrence of increase in rectal temperature of man by 0.17° to 0.39° C. when a meal is taken in the earlier part of the day. Movement is also a factor bearing upon the general body temperature; Woodhead mentions that in horses subjected to exercise by trotting for thirty minutes an average rise of internal temperature by 0.16° to 0.2° C. was produced.

Such variations as these may be anticipated and their occurrence obviated, but when everything is done to avoid adventitious causes, a small variation of temperature, amounting to about 0.2° C., may yet be recorded. As this appears to be a usual physiological variation, it would not be justifiable to attach importance to reduction of temperature not exceeding this figure. Now when a dose of indaconitine bearing a lower relationship than the $\frac{1}{4}$th to the lethal unit is administered, the oscillation of temperature which may ensue will fall within this area of physiological variation, and therefore it may be concluded that at or about the $\frac{1}{2.5}$th lethal the "maximal ineffective" dose for temperature must be supposed to lie. This statement applies to the healthy normal animal, in which we may regard the temperature around the normal as being in a state of instability in so far as it varies, though of course within narrow limits, under the influence of impressions which are natural to the daily life of the animal. The slight effect caused by the very small proportions of the lethal dose of indaconitine, such as the $\frac{1}{10}$th or $\frac{1}{15}$th, are yet considerable when contrasted with the action of $\frac{1}{8}$th or $\frac{1}{12}$th, which produce their effect in part upon an area without the limit of imperfect stability, and consequently meet with an increased resistance to their operation. So it is probable that a febrile temperature, unstable as it is and dependent upon causes against which the organism is, in one way or other, exerting itself, is still sensitive to doses of so small a proportion as to be altogether outside the limit of effective action where the normal fever-free organism is concerned.

Fig. 2 shows an approximate toxicity curve for indaconitine hydrobromide, associated with the temperature-reducing power of fractional doses down to the $\frac{1}{15}$th lethal. The intermediate line indicates the geometrical progression in dosage.

Proportion of Dose to Lethal.

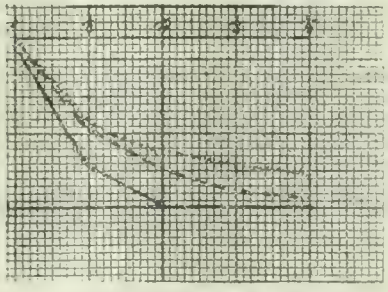


Fig. 2.

Geometrical prognosis of dosage — — —

Temperature reduction ·····

Approximate toxicity curve ——

REPETITION OF DOSAGE.

The main object of this inquiry has been to ascertain what relative values may be attached to repeated doses bearing a known proportion to the lethal when administered at varying time intervals. The method of procedure was that already detailed for single dose administrations, except that the dose was repeated on two or more occasions. The shortest time elapsing before readministration was 45 minutes; the longest four hours. The doses employed were from one-half to one-fortieth of the lethal proportion.

Now to turn to the reduction of temperature brought about by large (one-half lethal) doses of indaconitine hydrobromide administered at stated intervals. In every instance two repetitions were made, so that in all one and a half times the lethal proportion was administered.

Table Showing Effect on Temperature of Three Doses of Indaconitine Hydrobromide, each of One-half Lethal Proportion. Administration at Various Time Intervals.

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Rectal Temperature.	Time of Greatest Reduction.	Notes.
	3	45′	3.8° C.	After third dose	Maximal reduction after first dose, 0.9°; second dose, 2.3°; third dose, 3.8°.
		60′	3.3	After third dose	—
	3	75′	2.0	—	—
	3	90′	2.3	After second dose	First dose, 1.6°; second dose, 2.3°.
		105	1.5	After second dose	—
	3	120′	1.2	After first dose	First dose, 1.2°; second dose, 1.0°; third dose, 0.5°.
	3	180′	1.3	After first dose	—
	3	240′	1.2	After first dose	First dose, 1.2°; second dose, 0.7°; third dose, 0.5°.

The above results are graphically represented in the figure below (Fig. 3), in which the ordinates represent the greatest fall of rectal temperature (centigrade scale). Thus, repetition of the one-half lethal dose at intervals of 45′ and 60 respectively is followed in each case by summation of effect of the second upon the first, and subsequently of the third upon the second. When the interval is increased to 75′, the greatest fall may be either after the second or third dose, but when it is 90′ the second only summates, and the temperature is never so far subnormal after the third. The 105′ interval is interesting, inasmuch as it is at about this time that the summation of the second dose action upon the first tends to fail; for, though the greatest reduction of temperature may still be recorded after the second, it ensues occasionally upon the first administration of the alkaloidal salt. In either case the fall of temperature after a third dose is less than after those preceding. When time intervals amount to 120′, 180′, and 240′ respectively, the greatest reduction of

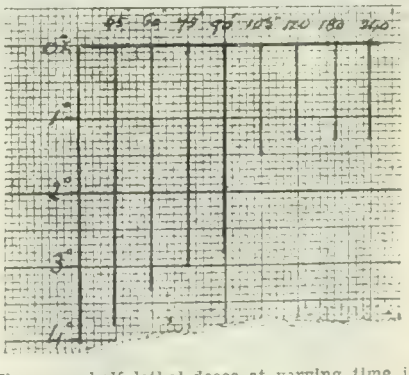


Fig. 3.—Three one-half lethal doses at varying time intervals. Ordinates indicate extent of greatest fall of rectal temperature.

temperature occurs after the first and before the second dose, whilst the effect of the third is less than that of the former. If reference is made to the previous statement regarding the time of commencing rise after the initial fall occasioned by one-half lethal proportions, we note that this takes place in about 75′, so that a second dose timed at 90′ after the first—allowing a few minutes for absorption—would begin to be effective when the rise is established, and when manifestly the disorder occasioned

by the first dose is waning. The temperature-reducing effect of the first dose is not reproduced by the second, nor is that of the second reproduced by the third when the time interval is of 120′ or longer, whereas if the time interval is short (45′) a progressive increase is recorded. A glance at the subjoined table will make this clear:

Proportion to Lethal.	Number of Doses.	Time Interval	Greatest Reduction of Rectal Temperature.	Lowest Temperature recorded below Normal after each one of three Doses.		
				1.	2.	3.
½	3	45′	3.8° C.	0.9°	2.3°	3.8°
½	3	90′	2.8	1.5	2.8	1.2
½	3	120′	1.2	1.2	1.0	0.9
½	3	240′	1.2	1.2	0.7	0.6

Readministration of One-third of the Lethal Dose.

The average reduction of temperature for a single administration of this proportion is 0.95°. Recovery to the normal is complete in 130′ to 160′.

Table taken from a Series of Observations in which such a Dose was twice readministered at varying Time Intervals (see also Fig. 4).

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Rectal Temperature.	Time of greatest Reduction.	Notes.
⅓	3	45′	2° C.	After third dose	—
	3	60′	1.7	After third dose	—
	3	75′	1.4	After second dose	—
	3	90′	1.15	—	—
	3	120′	0.95	After first dose	After second − 0.7° C.
	3	240′	0.95	After first dose	After second − 0.45° C.

Summation of effect of the second upon the first, and of the third upon the second, occurs when time intervals are of 60′ and less, but the third dose does not summate on the second when 75′ to 90′ elapses. The first dose is succeeded by the greatest fall when two hours or longer elapses before incidence of the second. The second dose is more effective when the interval is of two rather than of four hours.

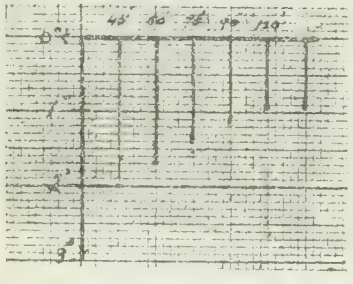


Fig. 4.—Three one-third lethal doses at varying time intervals. Ordinates indicate extent of greatest fall of rectal temperature.

Readministration of One fourth of the Lethal Dose.

The average reduction of temperature following a single dose of one-fourth of the lethal is 0.8° C. (It will be recalled that this is the smallest proportion which produces an obvious toxic action; external salivation is quite rare; there is some degree of apathy, but the symptoms have ceased to be characteristic.) Recovery of original temperature takes place in 120 to 140 minutes.

Table giving the Result of the Administration of Four Doses each of One-quarter of the Lethal Proportion (see also Fig. 5).

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Rectal Temperature.	Time of Greatest Reduction.
¼	4	45′	1.6°C.	After third dose.
¼	4	60′	1.4	After third dose.
¼	4	75′	1.1	After second dose.
¼	4	90′	1.0	After second dose.
¼	4	105′	0.8	After first dose.
¼	4	120′	0.8	After first dose.

There is, therefore, a summation of effect up to the third dose, when the intervals between administrations are of 45′ and 60′. At and after 105′ summation disappears, the greatest temperature reduction being after the first dose, the subsequent reductions becoming progressively less extensive.

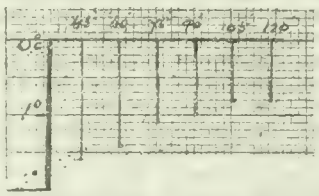


Fig. 5.—Four one-quarter lethal doses at varying time intervals. Ordinates indicate extent of greatest fall of rectal temperature.

The unit dose of one-quarter of the lethal having such slight toxicity it is possible to repeat it many times, even at short intervals, without the least danger to life.

Thus eight administrations, at intervals of forty-five minutes (that is a total dose of double the lethal distributed over six hours), caused a temperature reduction of 2.3° C., the lowest point being attained after the fifth administration; thereafter each successive dose showed a diminishing effect.

Six administrations of one-quarter proportion, at intervals of ninety minutes (that is one and a half times the lethal dose in nine hours), caused a total fall of 1.2° C. only, the greatest reduction being after the second dose.

Readministration of One-sixth of the Lethal Dose.

The average temperature reduction following a single dose of one-sixth lethal proportion is 0.7° C. The temperature attains the original level again in about 120 minutes. No obvious toxic effect follows this dose.

Table giving the Result of Six Administrations each of One-sixth of the Lethal Proportion.

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Rectal Temperature.	Time of Greatest Reduction.	Notes.
⅙	6	45′	1.25°C.	After second dose	Fell 0.65° after first and 0.6° further after second.
⅙	6	60′	1.1	After second dose	—
⅙	6	90′	0.9	After first or second dose	Rose after third to −0.5°. Normal after fourth.
	6	105′	0.7	After first dose	—
⅙	6	120′	0.7	After first dose	Normal 30′ after fourth.

This table indicates that when the dose is reduced to one-sixth of the lethal proportion the maximal effect falls after the second administration when this occurs in 45′, 60′, or 90′ (occasionally), but after the first when the interval is longer, and occasionally when it is of ninety minutes.

Readministration of One-eighth of the Lethal Dose.

A single dose of this proportion occasions a fall of 0.55° to 0.6° in rectal temperature, the normal being regained in the course of two hours. The occurrence

of hypernormality (to be referred to later) modifies the time of maximal effect produced by repeated doses. There is less regularity in response to this dosage than to the larger proportions already considered.

Readministration of One-eighth of the Lethal at Varying Time Intervals. (Fig. 6)

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Rectal Temperature.	Time of Greatest Reduction.	Notes.
$\frac{1}{8}$	6	45′	0.95° C.	After second dose	—
$\frac{1}{8}$	6	60′	0.85	After second dose	Rising after third, hypernormal after fourth.
$\frac{1}{8}$	6	90′	0.7	After first or second dose	—
$\frac{1}{8}$	6	105′	0.6	After first dose	—
$\frac{1}{8}$	6	120′	0.55	After first dose	Rise well established before second and continued to hypernormality without check by subsequent doses.

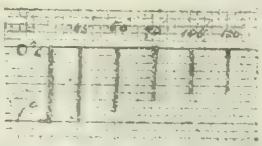


Fig. 6.—Six one-eighth lethal doses at varying time intervals. Ordinates indicate extent of greatest fall of rectal temperature.

Exceptionally the result of the first injection is to develop a phase of hypernormality, which may last until a second injection, falling in 45′ occasions a fall which, though passing below the normal, does not amount to such an extensive reduction as would have resulted if hypernormality had not preceded. (Larger proportions of indaconitone frequently cause initial hypernormality, but under such conditions this effect is transitory, being replaced by a fall before 45′ have elapsed. Thus the duration of a hypernormal temperature disappears within 30′ after proportions of $\frac{3}{8}$ and $\frac{1}{2}$ lethal proportion.)

Readministration of One-twelfth of the Lethal Dose.

The average fall of temperature following a dose of one-twelfth of the lethal is 0.45° to 0.5° C. Normality is regained in 110 minutes; thereafter the temperature exceeds the normal. There is still evidence of summation on repeating the administration, but it is only to a slight extent, as the following table shows. (See also Fig. 7.)

Readministration of One-twelfth of the Lethal Dose at Varying Time Intervals.

Proportion to Lethal.	Number of Doses.	Time Interval.	Greatest Reduction of Temperature.	Time of Greatest Reduction.	Notes.
$\frac{1}{12}$	4	45′	0.65° C.	After second dose	—
,,	5	60′	0.6	After second dose	—
,,	3	90′	0.55	After first or second dose	—
,,	3	105′	0.5	After first dose	—
,,	3	120′	0.5	After first dose	—

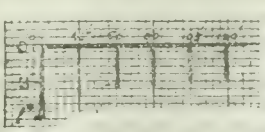


Fig. 7.—One-twelfth lethal dose, repeated at varying time intervals. Ordinates indicate extent of greatest fall of rectal temperature.

A point has now been arrived at in the reduction of dosage which only admits of slight summation; the increase occasioned by a second administration after such intervals as 45′ and 60′, being in excess of the single dose action by 0.15° and 0.10° respectively.

Even up to a 90′ interval some summation may be observed, although it does not average more than $\frac{1}{10}$° to $\frac{1}{5}$° C.

The summation does not, however, extend beyond the second dose; even when the interval is only of 45′ a third dose does not check the tendency to rise, and hypernormality is reached within 20′ to 30′ after the fourth administration (Fig. 8). It is worthy of note that, feeble though the temperature reduction is by such a proportion, almost as long a period is required for reinstatement as after a much larger proportion.

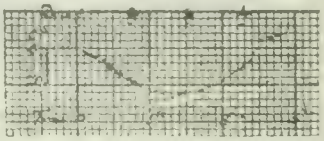


Fig. 8.—Four doses, each of one-twelfth lethal.

One-sixteenth of the Lethal Proportion.

A single dose of this proportion is still productive of a positive effect, either an immediate fall or an initial rise succeeded by a fall. In the former case the reduction is of 0.35′ to 0.4° C., but in the latter it is somewhat less. Summation of effect of a second dose upon the first is present after intervals of 45, 60, and occasionally 90 minutes. If the second dose is separated from the first by intervals of 105′ or more there is no increase or summation of effect attributable to it.

Fig. 9 shows the course of temperature under four doses each of $\frac{1}{16}$ lethal proportion.

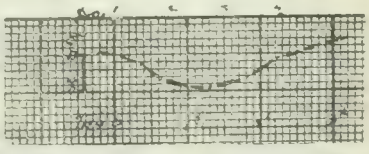


Fig. 9.—Four doses, each of one-sixteenth lethal.

One-twentieth of the Lethal Proportion.

The effect of such a single dose is an immediate fall, or, as often, a rise succeeded by a fall, after which return to normality and thereafter hypernormality ensues. The average fall is 0.3° C. If readministration occurs in 45′ after the first dose the greatest effect will be observed after the latter if the fall is initial (Fig. 10, A), but if a rise above normal is initial the greatest reduction will be recorded after the second (Fig. 10, B), in this case reduction will be less and the advent of hypernormality relatively earlier.

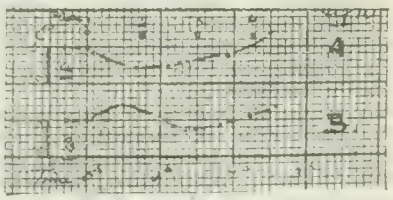


Fig. 10.—Four doses of one-twentieth lethal, interval 45′.

The result of repetition of such a dose may best be described as an oscillation of temperature around the normal, the extent of the variation being (for intervals of 45′) about 0.4° C. For longer intervals there is no evidence of summation.

I convinced myself that doses as small as $\frac{1}{25}$ and $\frac{1}{30}$ of the lethal are yet capable of producing a fluctuation of temperature very slightly beyond the limit of physiological variation. As the result of repeated observation, it appears that the limit of action ("minimal effective dose") must be located at or about the $\frac{1}{20}$ of the lethal.

One Twenty-fourth of the Lethal.

A single dose of this proportion may exceptionally have no effect whatever upon temperature, but usually it originates an oscillation totalling about 0·25° C. This may be of the nature of a rise, having its maximum in 30 to 40 minutes, after which a gradual return to, but seldom below, normality ensues, or else a slight reduction occurs without antecedent rise. On repetition of dosage there may be a slight additional effect (Fig. 11), followed by a reversion to normality and hypernormality. After such a proportion there is usually more oscillation above than below normality, whether the dose is repeated or otherwise.

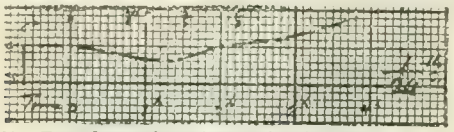


Fig. 11.—Four doses of one twenty-fourth lethal, interval 45'.

Whilst the results discussed in this paper appear to be generally applicable to the large group of aconitines in so far as these have been investigated, it cannot be assumed that they are necessarily strictly applicable to other bodies which would find their place in the same class as indaconitine.

Divergent potentiality for absorption and excretion might obviously cause variation in the advent of maximum intensity of effect, and consequently of the probability of summation by subsequent doses.

CONCLUSIONS.

1. Objective toxicity is produced by indaconitine hydrobromide when administered hypodermically in doses which are not less than ¼ of the lethal proportion. The characteristic symptom of obvious salivation is produced by ⅓, rarely by ¼ of the lethal. Perceptible toxic effect is therefore restricted to a very limited range of dosage.

2. The temperature-reducing activity caused by single doses of the salt, which decrease in geometrical progression, does not show a parallel diminution, but is more gradual, excepting for doses of ½, ⅓, and ¼, which are approximately proportionate in effect.

3. Some modification of the internal (rectal) temperature of the normal animal is observed as the result of hypodermic medication after doses bearing a proportion down to the $\frac{1}{25}$ of the lethal, which may, therefore, be regarded as the "minimal effective dose" for temperature. Smaller proportions may occasion a slight effect within the area of physiological variation. At or near the $\frac{1}{25}$ of the lethal is to be located the "maximal ineffective dose."

4. Although the total reduction of temperature becomes very small as the reduction of dosage proceeds, there is by no means a commensurate abbreviation in duration of effect.

Repetition of Dose.

5. A second dose causes a summation of temperature reduction for practically all fractions of the lethal down to the $\frac{1}{25}$ (provided the interval before readministration is not more than forty-five minutes), but the extent of this summation declines very rapidly after the dose falls below the proportion of ½ to the lethal, and is quite inconspicuous when below $\frac{1}{15}$.

6. When there is an interval of sixty minutes before readministration there is still summation of effect of the second dose, though to a lesser degree than after a forty-five minutes' interval. When ninety minutes elapse it is still recognizable for doses which bear a larger proportion than $\frac{1}{15}$ to the lethal unit.

7. When the interval is of 105 minutes, summation, though greatly reduced in extent, follows doses of ½ and ⅓ of the lethal proportion, but for ¼ and smaller proportions there is no summation, the greatest reduction of temperature falling after the primary administration. After intervals of 120 and 240 minutes there is no summation, successive doses causing a diminished effect, which is more or less in direct proportion to the increase in time interval.

8. It has already been shown that a slight degree of tolerance is established towards the action of the aconitines when administered daily or every second day, but this is inconspicuous compared with the decline in temperature-reducing activity of all proportions from ½ of the lethal downwards when given at intervals of 120 and 240 minutes.

9. Hypernormality of temperature may occur as a transitory condition after administration of indaconitine in large proportions. The larger the dose and the sooner this phase is superseded by a fall to subnormality. When the proportion is reduced to ⅓ or less, hypernormality may endure for 45', and under these circumstances there is a relative delay in the time of occurrence of subnormality by a second administration. As the limit of active dosage is approached in the descending scale, the result is often of the character of an oscillation of temperature around the normal, in which hypernormality is conspicuous.

It is observed that as the effect of practically all doses which are sublethal passes over, there is a tendency to a condition of hypernormality after the original temperature has been regained.

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Remarks

ON

THE INTERNAL USE OF THE OIL OF TURPENTINE.

BY EUSTACE SMITH, M.D., F.R.C.P.,

PHYSICIAN, EAST LONDON HOSPITAL FOR CHILDREN; CONSULTING PHYSICIAN, VICTORIA PARK HOSPITAL FOR DISEASES OF THE CHEST.

AMONGST old remedies which in these days are fast falling into disuse oil of turpentine stands out as a prominent example of undeserved neglect. In experienced hands the oil is often capable of bringing relief in cases where more modern and fashionable remedies have been given with very inadequate and unsatisfactory results. In the matter of haemorrhages, for instance, so many newer specifics have been placed upon the market that the value of turpentine in arresting the effusion of blood is now comparatively seldom referred to.

This modern avoidance of a most serviceable drug may be due in some measure to vague apprehensions as to possible irritation of the kidneys by the use of the oil, and perhaps to some natural repugnance to the taste of the remedy. With regard to the latter point, the oil can be given made up into capsules, but if comparatively small doses are required, it acts more efficiently and is fairly well disguised if it be rubbed up with the mistura amygdalae of the *British Pharmacopoeia*, well sweetened, and flavoured with oil of cloves. As to irritation of the kidneys, small doses such as 5 or 10 minims have little tendency to produce this result, and in large aperient doses (2 drachms to ½ oz. and upwards) the action of the drug is upon the bowels, and little of the oil gets absorbed into the circulation to pass through the kidneys and give rise to irritation. Either small doses or very large ones, then, may be given without misgiving. It is only the moderate dose of 30 to 60 drops which is to be used with caution, and its effect upon the kidneys heedfully observed.

Any one who wishes to test the value of turpentine as a haemostatic should note its curative influence upon a case of haemorrhagic purpura. For years I have been in the habit of treating cases of purpura—when the complaint occurs, as it does so often, in well-nourished, full-blooded children—with purgatives, and look upon oil of turpentine given in conjunction with castor oil as the best form in which the aperient can be administered. Now it is only in large doses that turpentine has any appreciable aperient effect, and therefore to give it value in a case of purpura we must see that enough is taken to produce the result we desire. I have found that for

child of five or six years of age a dose of less than drachms of the remedy combined with an equal quantity f castor oil has no aperient action upon the bowels nor ny visible influence in checking the effusion of blood. f the dose first given is insufficient, the quantity may be ncreased without fear of doing harm; and for children of en or twelve years I have prescribed as much as ½ oz. ach of the two oils, given every morning or every other norning, not only without any ill consequences but with reat benefit to the patient. In one case in my recol ection there was some haemorrhage from the kidney, ut whether this symptom was to be ascribed to the eneral haemorrhagic tendency or to the special action f the remedy I cannot say. I think the former; t any rate, it ceased with the other haemorrhages fter the turpentine had been discontinued. Turpentine s not a violent aperient, as any one can judge for himself f he will make trial of it in a suitable case. After using t for many years I can confidently assert that, given as an perient in the manner recommended, the drug is as armless as colocynth and far less drastic in its action. The best time for its administration is an hour after food, nd the patient should be enjoined to remain quiet for nother half-hour after the dose has been taken. I must gain insist upon the importance of prescribing the oil in mple purgative measure in a case of purpura if we wish o secure its full action as a haemostatic. I have given mall doses of 5 or 10 minims in the same class of ase, and repeated them every four hours or so, but cannot eport favourably upon the result, for the haemorrhagic endency appeared to be in no way lessened by this nethod of using the remedy. In the larger quantity, nowever, oil of turpentine given as recommended in conunction with castor oil may justly be regarded as a pecific, for a long experience has proved to me that a lose of 2 to 4 drachms given once in the day, either norning or evening, for a week or so will in the large majority of cases quickly put an end to the disorder. In ases where it does not succeed—and one meets with these rom time to time—I have noticed that the aperient effect of the drug is uncertain and ineffectual. In other words, he dose has been insufficient and should be increased; for it is only in cases such as these, where the quantity aken has been too small to induce a copious action of the bowels, that the oil is apt to get absorbed nto the circulation in sufficient amount to irritate the kidneys and cause haematuria. But even if this symptom should occur, there is no reason for alarm, for the haemorrhage ceases quickly when the drug is discontinued. I may repeat that this form of treatment is only adapted to the sturdy, well-nourished patients in whom the disease breaks out suddenly upon a state of health. The weakly, wasted infants, who are also apt to suffer from the complaint, require very different medication.

Besides purpura, other forms of haemorrhage may be arrested by the free internal use of turpentine. In haemophilia a brisk terebinthinate aperient will sometimes bring about a cessation of the bleeding after local styptics have been used in vain. If necessary the dose may be repeated in six or eight hours. Great pallor and apparent weakness in the patient furnish no objection to this method of treatment.

I have often noticed, and not without amusement, a look of surprise and almost of alarm when I have recommended the administration of oil of turpentine in aperient dose for a child, as if the suggestion were a novel and daring device of my own invention. But the internal use of turpentine in substantial dose is no new thing. As a remedy for purpura, it was first introduced many years ago by Dr. Neligan, who gave 2 fluid drachms night and morning to a child 5 years of age. Sir Thomas Watson recommended its employment in chorea. As an anthelmintic, its value has long been established; and in cases of tapeworm, Dr. Mason Good used to advise 1 oz. to be given in a single dose to a child of 10. Many of the old writers extol the virtues of large doses of the remedy in various forms of illness. Dr. Graves recommends it in doses of 6 drachms every six hours in cases of continued fever, and also in "considerable doses" for the nervous headaches of hysterical girls. Other authorities advocate its use, always in large doses, in puerperal fever (Brennan, Copland, etc.), epilepsy (Cheyne), flatulent colic and ileus (Copland), and in bronchitis associated with emphysema (Corrigan, Waters). The above authorities give no hint that early life is any bar to the use of the remedy; indeed, in some cases they definitely recommend its employment for children of tender years.

Local bleedings, such as haemoptysis and the melaena of typhoid fever, may be judiciously treated by the same remedy, but in smaller doses. I have seen arrest of the haemorrhage to occur in both of these complaints under the use of the drug in doses of 10 or 15 minims three times a day; but its effect when thus administered is much more uncertain than in the case of the aperient doses recommended for purpura.

In addition to haemorrhages, other complaints are found to be benefited by turpentine in more moderate but still substantial dose. For iritis in the adult patient, both the syphilitic and rheumatic forms, oil of turpentine in drachm doses, given three times a day, was at one time a remedy held in high esteem. It was introduced as such by Carmichael in the year 1829, and recommended especially for cases in which mercury was unsuitable. Its value for this purpose was confirmed by Arnott and others; and I am told by Dr. Dawson Williams that he has himself seen the oil used in this manner by the late Mr. Wharton Jones with conspicuous success. Copland and Hockin found it useful in cases of amaurosis; and night-blindness has also been cured by this means. The oil should be given in the dose and with the frequency recommended above. If strangury be produced, the use of the drug must be suspended, and the patient be made to drink freely of linseed-tea, as originally advised by Mr. Carmichael.

One of the most valuable uses of turpentine is its internal administration in small doses as an antiseptic and sedative in cases of flatulent colic and unhealthy states of the intestinal mucous membrane. In the abdominal cramps to which some children are subject, 3 or 4 minims of the rectified oil of turpentine, with or without double the quantity of castor oil, may be given three times a day rubbed up with a spoonful of mistura amygdalae. If the attacks are severe, a small quantity of codeine may be added. In cases of tuberculous peritonitis I have found great benefit from this combination. Thus, for a child of 7 or 8 years, we may order 4 minims of oil of turpentine and 20 of the spirits of nitrous ether, with ⅛ grain of codeina, to be made into an emulsion with the almond mixture and taken three times a day. The addition of some extract of liquorice still further disguises the strong taste of the turpentine. If there be much tympanitis the external application of turpentine on hot flannel may be used in addition. Codeine is a better sedative than morphine or chlorodyne in cases of abdominal discomfort, on account of its small tendency to constipate the bowels.

Young children who are brought up by hand, and sometimes even breast-fed infants, are apt to suffer from an aggravated form of flatulence and colic which may even give rise to convulsions. Such cases are often greatly relieved by turpentine in minute dose given with a few drops of castor oil. The remedy acts upon the kidneys, and sometimes also upon the bowels as well. For an eight months child we may order 1 minim of the rectified oil to be rubbed up with 3 minims of castor-oil and 2 grains of gum tragacanth. This must be made up to a teaspoonful with water. For such young patients it may be successfully disguised by adding to each ounce 1 drachm of the liquid extract of liquorice, 5 drops of the oil of cloves, and 20 drops of spirits of chloroform. It should be given every four hours and will do much to prevent the distressing accumulation of wind. If the paroxysms of colic are severe, $\frac{1}{30}$ grain of codeine may be added to each dose of the mixture.

In cases of hiccough 10 drops or so of turpentine given with 30 drops of spirits of nitrous ether in an aromatic water have a striking effect in putting a stop to a symptom which in a weakly patient is apt to be not only intractable but harassing and even dangerous. I may say, however, that of all remedies for obstinate hiccough there is none to be compared for a moment in rapid and successful action with an aperient dose of the old-fashioned rhubarb and magnesia. Some years ago I saw in consultation an elderly gentleman who was suffering from kidney disease and dropsy, with much digestive disturbance. For a whole week previous to my visit the patient had been worried by a persistent hiccough, both night and day,

which took him every few minutes, and so completely prevented any refreshing sleep that his weakness had begun to be alarming. He had been treated for this symptom with a variety of sedative and antispasmodic remedies old and new, but the attacks had resisted every effort to suppress them. Finding the tongue excessively foul and the stomach considerably dilated, I advised a good aperient dose of rhubarb and heavy carbonate of magnesia, made up into a draught with tincture of cardamoms, spirits of chloroform and peppermint water, to be given without loss of time. This was done, and I heard later that the hiccough had ceased immediately that the draught had been taken, and that the patient had eventually made a good recovery—in fact, he lived for some years afterwards. I have used the same treatment in many cases of a similar kind for patients of all ages and cannot remember a single instance in which it has failed to relieve.

The action of turpentine upon the mucous membranes is utilized in the treatment of hepatic concretions. A dose of 10 or 15 drops given two or three times a day after food I have found not only to relieve the catarrh of the bile ducts but also to have a solvent action upon the gall stones—if I am correct in drawing that conclusion from the long period of relief which I have known to follow a course of the remedy. Again, in pyelitis arising from the irritation of retained gravel in the pelvis of the kidney, turpentine given in the same dose is very useful in checking the inflammation, although it has no solvent action upon the concretions. In these doses it is most conveniently prescribed in capsule.

The curative value of turpentine when given by the mouth may often be supplemented and enforced by its internal use in enema. In cases of threadworms the vermicidal action of the remedy is strikingly manifested, and it has also a salutary influence upon the mucous irritation which is a constant accompaniment of ascarides if these be numerous. For a child of 7 or 8 years of age ½ oz. of the terebinthinate oil may be used for the injection at bedtime diluted with 10 oz of barley water. The late Dr. Elliotson used to treat obstinate cases of amenorrhœa in young women with the same injection repeated once or twice a day, and maintained that its action was attended with almost invariable success. It has been employed, too, in cases of catalepsy. One ounce of the oil well mixed with a pint of thin gruel and thrown slowly into the bowel acts as an energetic stimulant to the torpid nervous system; and the injection, if followed by vigorous frictions along the spine with a strong irritating liniment, is said to be attended with very satisfactory results. In flatulent colic a terebinthinate enema, if given hot, is a welcome addition to the use of remedies by the mouth and will often bring a severe attack to an immediate close. In the seizures of this kind which have been before referred to as common in infants the derangement is a cause of so much suffering that nothing which tends to shorten the attack should be neglected; and the injection of a drachm of the oil in 5 or 6 oz. of hot barley water thrown slowly into the bowel will often put an end to the distress and send the child into a quiet sleep. Employed in this manner the remedy is a diffusible stimulant of extreme excellence, and in taking stock of the various curative expedients at our command in such a case to omit it from the list would be voluntarily to abandon one of the most trustworthy of our resources.

THE French Medical Congress will be held this year at Geneva on September 3rd, 4th, and 5th, under the presidency of Professor Ad. d'Espine, of Geneva. The subjects proposed for discussion are: (1) The clinical forms of arterio-sclerosis, to be introduced by Dr. Huchard, of Paris, and Professor Jacquet, of Bâle. (2) The pathogeny of neurasthenic states, to be introduced by Professor Dubois, of Berne, and Dr. Jean Lépine, of Lyons. (3) The treatment of biliary lithiasis, to be introduced by Professor Gilbert and Dr. Carnot, of Paris, and Dr. Mongour, of Bordeaux. On September 6th there will be an excursion to Evian at the invitation of the Société des Bains of that town. A circular tour through Switzerland is also being organized. Doctors of any nationality can enrol themselves as members of the congress, but French is the only language in which communications will be received or discussions allowed. The General Secretary of the Congress is Professor A. Mayor, 6, Rue Adhémar-Fabri, Geneva.

An Address

ON

PUERPERAL ECLAMPSIA, WITH SPECIAL REFERENCE TO ITS TREATMENT WITH NITRO-GLYCERINE.

BY JUSTIN M. McCARTHY, M.D.,

PRESIDENT OF THE MIDLAND MEDICAL SOCIETY.

PERHAPS there is no more trying—indeed, one might almost say, no more terrible—way of spending a night than in a struggle with death for the life of a patient in the throes of puerperal eclampsia.

Having been brought into contact with 15 such cases, it seemed that the classification and tabulation of the notes relating to them, considered in the light of information gained from the writings of those who have made a special study of this subject in recent years, would well form the subject of a paper, which might possibly be of benefit to others who may yet have to go through a similar ordeal, be of some service in the mitigation of suffering, if not in saving life, and at the same time call forth a fruitful discussion.

CASES.

Apology is offered for the incompleteness of the records, the reason being that the cases occurred in country practice, with a minimum of help, so that one's time was almost entirely taken up in rendering the necessary attendance.

In Table A we have a list of these cases with their leading characteristics, 15 of them being puerperal eclampsia, 2 epileptic, and 1 due to tuberculous meningitis during which labour took place—these last 3 being convulsions during labour, and so puerperal eclampsia, but still not of the type that presents itself to one's mind when thinking of true puerperal eclampsia. One of these, No. 18, was having a fair labour, having previously been confined of twins; the head was on the perineum, when she had a most violent epileptic fit. Her face became livid, there was much frothing at the mouth, and the breathing was stertorous. Only a partially-trained midwife was present, so that the difficulty of applying forceps, which step seemed absolutely necessary, was very great. This, however, was fortunately accomplished without injury and the patient delivered of a living boy, who, with his mother, eventually did well. This patient had had true epileptic fits on many occasions. Another point in connexion with the case was the marked post epileptic stupor which followed and lasted some hours. Such a condition might have an important medico-legal bearing on cases of infanticide.

Coming to the true puerperal eclampsia, they are Nos. 1 to 15 in Table A. They occurred at different times from February, 1878, to December, 1906. One interesting item is that the two cases, Nos. 3 and 4, both of which were fatal, occurred within twenty-four hours. This is possibly a unique experience in the obstetric woes of a general practitioner. The 13 are taken out of some 2,800 cases attended in my part of the practice from 1875 to the present time—a proportion of 1 in 215.4. This is admittedly an excessive proportion, Galabin giving the general proportion for Europe as about 1 in 500 deliveries. It should be further noted that, of the 15 cases in question, only 8 occurred among those for whom attendance had been arranged, and that with regard to the other 7 medical aid was in the first instance summoned for convulsions. The periods of occurrence are shown in Table B.

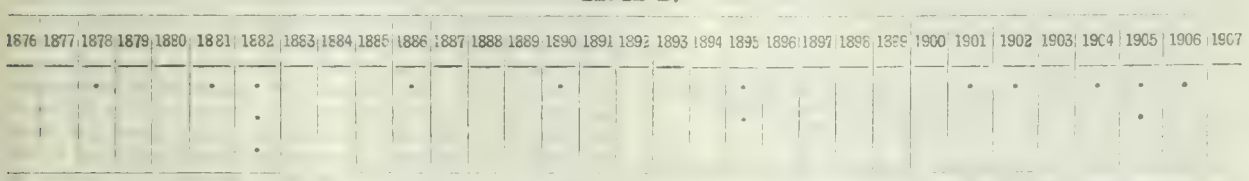
These are so erratic that it would be quite possible for a practitioner with a small obstetric practice to have a large average of such cases, whilst another with an extensive practice might have none.

There was no possibility of infection in the two cases occurring within twenty-four hours. One sent for help in the evening, but the child was born before the arrival of the doctor. The third stage was attended to, and the patient comfortably settled for the night, when the second patient sent for help because of convulsions. Next morning No. 1 patient sent for help, as a convulsion had taken place. This came on about twelve hours after labour, and the patient had not been seen since visiting No. 2.

TABLE A.—*Cases of Puerperal Convulsions.*

No.	I. Name.	II. Age.	III. Married or Single.	IV. Engaged or Not.	V. Primipara or Multipara.	VI. First Convulsion Before, During, After Labour.	VII. VIII. Result. Mother.	Child.	IX. Nitro-glycerine Used. Internally.	Hypodermically.
1	S. C. Feb. 26, 1878	19	S.	No	P.	Before	D.	D.	No	No
2	L. April 23, 1881	39	M.	Yes	M. 2	After	R.	L.	No	No
3	M. A. F. Jan. 20, 1882	21	S.	No	P.	Before	D.	D.	No	No
4	D. Jan. 20, 1882	30	M.	Yes	P.	After	D.	D.	No	No
5	B. Oct. 14, 1882	20	M.	Yes	P.	Before	R.	L.	Yes	No
6	S. June 4, 1886	35	S.	No	M. 3	After	R.	L.	No	No
7	W. May 26th, 1890	33	M.	Yes	M. 3	During	D.	D.	Yes	No
8	O. June 19th, 1895	40	M.	No	M. 2	Before	R.	L. 7 months	Yes	Yes
9	S. Oct. 6, 1895	19	S.	No	P.	During	R.	L.	Yes	Yes
10	G. Dec. 27, 1901	38	M.	Yes	P.	After	R.	L.	Yes	Yes
11	J. May 11, 1902	31	M.	Yes	P.	During	R.	L.	Yes	Yes
12	B. Dec. 23, 1905	35	M.	Yes	P.	After	R.	L.	Yes	Yes
13	H. Jan. 9, 1906	26	M.	Yes	M. 2	After	R.	L.	Yes	Yes
	In consultation with partner (Dr. Thornton).									
14	J. Dec. 16, 1903	27	S.	No	P.	During	D.	L.	No	Yes
15	J. Mar. 25, 1904	32	M.	No	P.	During	R.	L.	very late Yes	Yes
	Convulsions not true puerperal. Two epileptics and 1 meningitis (tuberculous).									
16	A. Feb. 5, 1900	—	M.	Yes	M. 6	After	R.	L.	—	—
17	M. Nov. 28, 1903	25	M.	No	M. 2	Before	R.	L.	Yes	No
18	G. July 14, 1906	—	M.	Yes	M. 2	During	D.	L.	—	—

TABLE B.



Etiology.

Columns II to VI are of interest from an etiological point of view, and must be considered together. A paper by Dr. Cotton, quoted by Dr. More Madden,[1] states that the majority of patients are under 30 years of age. In the series we are considering they are about equally divided, eight being 30 or under that age, the other seven over 30. The youngest was 19 years, and the oldest 40, covering a space of twenty-one years, so that if this number be divided into three periods, we get slightly more in the first and last periods respectively than in the middle period. This is certainly in favour of the idea that the younger and older are more susceptible to eclampsia, a point which has been emphasized by another observer. Coming to the third column, namely, married or single, the same author says: "A woman illegitimately pregnant is more susceptible to this disease than one that is married." This statement introduces a psychological element. The table of my own cases shows 9 married and 4 single. You must remember that in the series of cases from which these are taken 2,740 were married and 61 single, that is, 9 out of 2,740 married, or about 1 in 304, and 4 out of 61 single, or about 1 in 15. This fact is strongly confirmatory of the above opinion—indeed, perhaps, too much so—one, I suppose, of the freaks of statistics.

The column showing the proportion of multiparae to primiparae is replete with interest. The former are five, the latter ten in number. The ages of the five multiparae are respectively 39, 35, 33, 40, and 26. All, except the last one, have a special history.

The first, aged 39, married late in life, had lost the child of her first confinement, and was particularly anxious about the accouchement in question. She was, moreover, a chronic dyspeptic, eventually dying from malignant disease of the stomach.

The second, aged 35, was single; this, however, being her third confinement. Up to the time of labour she was working every day on the pit bank, attending to her house and family, and, in addition to all this, sitting up many nights, nursing her father, with whom she lived, through an attack of acute bronchitis, her means of living at the same time being very restricted.

The third, aged 33, was confined of the first child since marriage, but in her young days had given birth to an illegitimate child, which fact preyed greatly on her mind.

The next, aged 40, had convulsions in her previous labours. She is one of two surviving, so far as have been traced, who at the present day have albumen in the urine. There was most likely a pre-existing kidney factor in this case. In addition to this must be added the fact that, previous to her confinement, her husband had treated her very badly.

The last, aged 26, was the only case that could give no history likely to be helpful in dealing with such an attack.

The primiparae call for some notice with regard to their ages. Whilst these range from 19 to 38, the ages of five are 19, 21, 20, 19, and 22, one is 27, and four 30, 38, 31, and 35 respectively. Now, excepting the one at 27, a woman who came home in trouble to her parent's house to be confined, and who felt her disgrace very keenly, the ages are very young or rather advanced. The authority previously quoted gives four-fifths as the proportion of primiparae, whilst these figures give two-thirds. He further adds: "Old primiparae are thought to be more liable . . . than those who are younger." As the number of young primiparae attended would surely be greater than that of old, the proportion of old that suffered would certainly be greater than that of the young. You will admit that it was practically impossible to work out the ages of nearly 3,000 cases.

The first convulsion occurred before labour in 4 cases, during labour in 5, and after in 6. These figures do not appear to call for much comment.

Albuminuria occurring in pregnant women has, in my experience, been a cause of anxiety in some cases, but in not one of the few observed had it led up to puerperal eclampsia.

So far as the etiological factors are concerned in these cases, it would seem that the most marked feature is the

Table C.—*Urinary Analysis in Nine of the Cases of Puerperal Convulsions.*

No. of Case in Table A.	Date.	Albumen.	Sp. Gr.	Reaction.	Sugar.	Urea.	Deposit, etc.	Subsequent History.
2	April 23, 1881	Present	—	—	—	—	—	No further pregnancy, died of malignant disease (Sept. 26, 1903).
	Dec. 11, 1900	Nil	1010	Acid	Nil	—	—	
5	Oct. 14, 1882	Coagulum on boiling in spoon	—	—	—	—	Smoky	Now living in Yorkshire, 5 children since, all alive, no further convulsions.
6	June 4, 1886	—	—	—	—	—	—	No further family.
	Dec. 12, 1907	Trace	1015	Acid	Nil	1.5 p.c.	—	
8	June 19, 1895	Cloud 0.75 per cent.	1020	Acid	Nil	0.7 p.c.	Granular casts	No more family.
	Dec. 4, 1907	Trace	1012	Acid	Nil	1.2 p.c.	No casts	
9	Oct. 6, 1895	Loaded	—	—	—	—	Scanty and smoky	Five children since, all well, no further convulsions.
	1907	Nil	1016	Acid	Nil	1.6 p.c.		
10	Dec. 27, 1901	0.45 per cent.	1022	Acid	—	—	—	No children since.
	1907	Nil	1022	Acid	Nil	2 p.c.	—	
11	May 11, 1902	Moderate amount present	1016	Acid	Nil	1.6 p.c.	—	One child and one miscarriage since, no further convulsions.
	1907	Nil	—	—	—	—	—	
12	Dec. 23, 1905	0.4 per cent.	1018	Alk.	—	—	—	Perfectly well, no further family.
13	Jan. 9, 1906	0.4 per cent.	1024	Acid	Nil	2.1 p.c.	Casts	Health good since, no further family.
	1907	Nil.	1024	Acid	Nil	—	—	

disturbance of the nervous system. The vasomotor system also must have a severe strain thrown upon it in the regulation of the blood supply under such altered conditions. Dr. Cotton writes: "Emotional disturbances, arising either from grief or joy, are conducive to its development." The suggested causes, up to the present time, so far as one has been able to compile them from Galabin and Eden (amongst other authorities), are:

1. Increased abdominal pressure
   (*a*) On the renal veins;
   (*b*) On ureters.
2. Products of fetal metabolism discharged from maternal blood, and eventually eliminated by maternal kidneys. To this may be added the placental toxin theory.
3. Arterial strain.
4. Reflex nervous influence, starting from uterus and disturbing circulation in kidneys.
5. A special micro-organism.
6. Insufficiency of activity in the thyroid gland.
7. Hey Groves's theory of increased coagulability of the blood giving rise to minute capillary thrombi with haemorrhagic infarctions surrounded by necrotic tissue, to be found more or less in all the organs, but especially in the kidney and liver. Carstairs Douglas,[2] experimenting since, finds little difference in the coagulation time.

Dr. Boxall,[3] in 1905, writes:

While many ingenious theories have been advanced to explain the renal insufficiency which is prone to supervene in pregnancy, no adequate solution has yet been obtained, nor is it precisely known on what the process of fatty degeneration of the renal epithelium depends. Further, although the occurrence of eclampsia, and the presence of albumen in the urine are intimately associated, it by no means follows that either bears a causal relationship to the other.

The precise cause of the eclamptic fit is equally obscure; but it is now generally regarded as being dependent, in the main, on toxins. Marx[4] divides the toxaemia of pregnancy into (1) due to heart disease, (2) due to acute pregnancy nephritis, (3) due to exacerbation of chronic nephritis, and (4) acute toxaemia.

Pathology.

Among the pathological changes found *post mortem* by different authorities, the following appear of chief importance:

Ureter.—Somewhat dilated above pelvic basin.
Kidney.—Early stage of tubal nephritis; degeneration of renal cortex; interstitial haemorrhage; areas of necrosis.
Liver.—May be reduced in size; pale; haemorrhage; outlines of lobules indistinct; thrombotic hepatitis with degeneration of liver cells.
Spleen.—Similar to liver.
Brain.—Anaemia; oedema; congestion of meninges; small thromboses; haemorrhage.

Now these, as far as they go, point to changes in the small vessels generally, throughout the organs of the body, of which the kidney is only one, and in conjunction with them one calls to mind such clinical facts as visual disturbance, which is recorded, and about which some oculist may be able to enlighten us. The vomiting, indeed, may be the result of a like condition of stomach, as also the glandular disturbance, especially noted lately in the thyroid.

Passing on to the clinical aspect, what is to be noticed? First, it is generally admitted that puerperal eclampsia, unaccompanied by albuminous urine, is quite exceptional. Galabin states that of all the cases which occurred in Guy's Charity during forty years up to 1875, in which the urine was examined, two only were entirely free from albumen. In one of these convulsions were produced by arachnitis, as verified by an autopsy, while in the other they followed severe *post partum* haemorrhage in a girl that had been seduced. The urine in our cases was albuminous in all examined. For No. 6 the report is missing. However, as there were traces of albumen in her urine when recently examined, it is more than likely that it was present during the eclampsia. The earlier specimens were tested in the house by boiling in a spoon; the later ones were sent home for methodical examination. "Urine scanty, smoky, with coagulum on boiling"—such is the commonest description.

Of the series 1 to 13, nine recovered, and in Table C. you will find what was the condition of the urine at the time of the attack, and also the result of a subsequent examination, most of them at the end of 1907. Nos. 5 and 12 had left the district, one having gone to Canada, and the other to Yorkshire, so it was impossible in these cases to ascertain the condition of the urine. They are both, however, reported to be well, one having since given birth to five children, all living and well; nor had the eclampsia reappeared in any confinement. As this report was received fifteen years after attendance for eclampsia, there could not have been much permanent damage done to the kidneys. No. 8, referred to earlier in this paper as having had a previous attack of eclampsia, still has a trace of albumen, as also No. 6. Five are marked "*Nil.*" The urea was estimated in one case, No. 8, 7 per cent. at the time of illness. This healthy condition of the kidneys in such a large majority of the cases in later life is very remarkable, and up to the present time has not, perhaps, received the attention to which it is entitled. It clearly points to the fact that, severe as the affection may be at the time, it is temporary, and one from which in many instances perfect recovery is possible. The ages of those who had no further family should be noted, as having a bearing on this point.

The puerperal eclampsic convulsions are very similar to uraemic convulsions. Indeed, in very many instances the conditions appear to be identical so far as causation is concerned—that is, in each case the convulsions are probably brought about by a toxin the origin of which is faulty elimination on the part of the kidney. Uraemic convulsions, however, are, as a rule, due to permanent

disease of the kidneys; whereas in the majority of cases of puerperal eclampsia the disease is only temporary.

Looking at the *post-mortem* appearances of those who die in eclampsia, especially having regard to the widespread changes in the small vessels of the body, may it not be possible that we have vasomotor changes due to inhibitory nerve influence, and that the kidneys are only the prime offenders among all other organs of the body by virtue of the suspension of their usual function? That nerve influence over the kidney may lead to death, as in suppression after severe operations or accidents, is generally admitted. Of the suggested causes mentioned above, arterial strain, reflex nervous influence, insufficient activity of the thyroid gland, and Hey Groves's blood condition might be accounted for.

There remain, therefore, for consideration as accessory: the products of fetal metabolism, although it remains still for this to be demonstrated as a cause; and, lastly, a special micro-organism, which has yet to be isolated.

Coming to the question of mortality, we have five mothers dying out of fifteen. Standard works state the mortality to be 40 to 50 per cent. This has recently come down to from 20 to 25 per cent. Our cases, old and new, show about 33 per cent., which agrees in the main with the more recent data. But if we divide the mortality into three classes, having respect to the use or otherwise of nitro-glycerine, as follows—(1) cases in which it was not used, (2) used only internally, (3) used hypodermically—we get the following results:

Without nitro-glycerine, 5 cases, 3 deaths.
With nitro-glycerine internally only, 2 cases, 1 death.
With nitro-glycerine hypodermically, 8 cases, 1 death.

The mortality among infants was four out of fifteen, or about 26 7 per cent. And here, by the way, it may be noted that, in selecting the treatment to be employed in any particular case, the life of the infant should have careful consideration; what effect, for instance, is a prolonged period of convulsions in the mother likely to produce on the life of the infant, and, if not on its life, on its future? In the case of a patient of the Roman Catholic persuasion, the first question would be a very important one.

Treatment.

In Table D we have a list of drugs that have been recommended, and also the number of times that they were used in our cases. This, however, is not perfect, as drugs such as opium and aperients were used in some cases and no record kept. Such a list would be somewhat confusing to any one, if presented to him, when on the point of attending his first case of puerperal eclampsia. This shows the need for determining general lines of treatment.

TABLE D.

Drugs Suggested.	No. of Cases used in.	Drugs Suggested.	No. of Cases used in.
Amyl nitrite	1	Potassium bromide	2
Aconite	—	Phenacetin and caffeine ...	2
Chloral hydrate	1	Potassium iodide	—
Chloroform	11	Pilocarpin (hypodermically) ..	1
Cocaine	—	Potassium citrate	—
Calomel	—	Sodium nitrate	—
Codeine	—	Spartein	—
Digitalis	—	Strychnine	—
Ergotin (hypodermically) ...	1	Sodium salicylate	—
Guaiacol	—	Squills	—
Hot-pack	1	Strontium lactate	—
Hyoscin	—	Sodium bromide	2
Iron perchloride	2	Saline injection (rectal) ...	1
Morphine (hypodermically) ...	2	Thyroid extract	—
Nitro-glycerine (internally) ...	8	Veratrum viride	—
,, (hypodermically) ..	8	Venesection	2
Opium	—		

This does not include ordinary aperients, enemata, and uterine douches.

The stage at which the convulsions threaten or occur will indicate the nature of treatment. First, we have the premonitory stage, in which they threaten before labour occurs. Here the treatment should tend to avert toxaemia and convulsions. During this period thorough examination should be made daily. And all that care in treatment which would be given to an early case of Bright's disease, especially that relating to diet, should be carried out. Nitro-glycerine may be very useful. Marx,[6] referring particularly to the toxaemia of pregnancy complicating nephritis, writes: "We have a large class of cases in which the continuous administration of from $\frac{1}{100}$ to $\frac{1}{300}$ of a grain of nitro-glycerine . . . gives brilliant results." This was in 1898. The first one on our list treated with nitro-glycerine and nitrite of amyl inhalations was in 1882.

Second, the period of labour itself, which may well be divided into two stages:

(*a*) Where the convulsions are slight and the labour slow. Here again the object should be to avert convulsions. Perhaps the subcutaneous administration of morphine and nitro-glycerine, used alternately, will at this stage be found beneficial. It is about at this time that the greatest difficulty arises in determining what course of treatment to adopt in order that both patients—namely, mother and child—may have the best possible chance. It is even possible that, with a rigid os and increasing convulsions, such difficulties might be encountered as would warrant the consideration of Caesarean section.

But when we come to (*b*), when convulsions are increasing and labour advancing—even if the os is dilating kindly—then all the energies should be directed to expediting labour. There has been, I know, considerable difference of opinion on this point, some even at this stage preferring morphine. But whatever be the cause of the death-dealing toxin, surely the source of its manufacture should be got rid of as speedily as possible. This is the stage where chloroform is essential and a drug of the greatest utility. It should be remembered that at this stage and the next, when the convulsions are at their worst, it is a question whether any reliance can be placed upon drugs given through the mouth. Some may never reach the stomach, and, if they do and the stomach shares the general condition of the other organs of the body, they may not be absorbed. Therefore, wherever possible, give medicine hypodermically.

Lastly, when labour is over, the treatment should aim at the restoration of the function of the kidneys and the recovery of the nervous system from the shock it has sustained.

The experience of some—that the convulsions cease with the emptying of the uterus—was not confirmed by our cases, for 6 of them were not attacked until the labour was completed, while 1 of them, No. 4, died at this stage, and another, No. 13, nearly died. Of the other 9 who were attacked before or during labour, 4 died and 5 recovered, the deaths in every instance occurring after the completion of labour.

Now here it is just possible that nitro-glycerine may prove to be one of the most useful drugs. In Case No. 5, attended in 1882, nitro-glycerine was used internally, at the first combined with amyl nitrite inhalations. This, a case of severe convulsions continuing after labour, recovered. Previously, 3 out of 4 cases had died from continued convulsions following delivery. Passing over No. 6, of which the record has been lost, we come to No. 7, where nitro-glycerine was administered internally only, and which died also of continuous convulsions after labour was completed. Cases 8 and 9 were those that impressed one most. Labour in both cases was concluded, and yet the convulsions continued. Bearing in mind the necessity of hypodermic treatment, and the manifest success of nitro-glycerine in No. 5, this drug was administered hypodermically with No. 8, commencing with 3-minim doses, increased to 4 minim, when diuresis was established, and recovery followed. In October of the same year No. 9 occurred. Here also the convulsions continued to get worse after labour was over, until things could not have been more critical. Nitro-glycerine hypodermic injections were then resorted to, and continued up to 7 minim doses. The patient recovered, and has had healthy children since; no return of eclampsia at the time of delivery, while the urine in 1907, as will be seen by

glancing at the table, was normal. In both these cases chloroform had been given every chance, before pushing nitro-glycerine. Since then nitro-glycerine has been used in every case, with only one death, No. 14, where the treatment was commenced very late, perhaps too late.

The value of nitro-glycerine in Bright's disease commenced to exercise the minds of professional men about 1879. Murrell[6] had discovered that this drug caused great arterial relaxation. Ringer[7] wrote: "Nitro-glycerine is employed in cases of contracted kidney, to lower arterial tension; it relieves the distressing headache of Bright's disease, and is said to increase the quantity of urine in chronic parenchymatous nephritis." The diuretic effect had further been verified by Dr. Fancourt Barnes in a case of epispadias. Then arose in my mind the similarity of condition existing in patients suffering from puerperal eclampsia and those suffering from uraemic convulsions, and thus I was led to try nitro-glycerine for the former class of patients.

As regards the use of other drugs, the usual routine treatment was tried. Venesection was used once, in addition to which one was a placenta praevia where the bleeding was necessarily free. This case died. The hot pack was tried with No. 7, but the result was not encouraging. Chloral and bromide of potassium were used internally and per rectum, but failed. Saline injections, per rectum, were used once, and should, perhaps, prove valuable in later stages, especially following the complication of haemorrhage. Veratrum viride, which has been highly recommended recently, was not used.

In conclusion, whilst the results quoted above necessarily produced a great impression on my mind, yet the suggestions are not offered in a dogmatic spirit, but rather for the purpose of encouraging further investigation in this complex subject.

Finally, I would suggest that the scope of the use of nitro-glycerine hypodermically might be extended into the physician's domain. It is quite possible that this series, with its results, may be only one of those remarkable coincidences which occur from time to time. But should the consideration of them in any way tend to a more successful treatment of these painful cases, in which the joy that should come with morning is often turned into the sorrow of darkest night, my object will have been fully attained.

REFERENCES.

[1] *Medical Annual*, 1897, p. 495. [2] BRITISH MEDICAL JOURNAL, 1904, vol. i, p. 709. [3] Ibid., 1905, vol. ii, p. 715. [4] *Medical Annual*, 1898, p. 448. [5] Ibid. [6] *Lancet*, 1879, vol. i, p. 113. [7] *Handbook of Therapeutics.*

ON THE CAUSES OF INVERSION OF THE UTERUS.

BY LOMBE ATTHILL, M.D.,

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IN the BRITISH MEDICAL JOURNAL for April 11th there appeared a communication from Dr. George Hall, of Stockton-on-Tees, in which he related a case of inversion of the uterus after parturition. A few days subsequently I received a copy of the report of the Rotunda Hospital from the Master, Dr. Hastings Tweedy, in which mention is made of a similar case. The nearly simultaneous occurrence of these cases attracted my attention, as I had in bygone days paid some attention to the subject of inversion, and endeavoured to find an explanation for its occurrence and the causes tending to produce this rare accident, for did it follow on pulling on the funis or on pressure applied to the fundus, it would be very common instead of rare.

In 1881 I read before the Dublin Obstetrical Society a paper on the subject[1] founded on a case in which inversion had been produced by the action of the uterus in its efforts to expel a sessile tumour which grew from the very centre of the fundus, and I stated that I doubted the correctness of the view commonly held that inversion rarely occurs except immediately after delivery, inasmuch as out of five cases of inversion which had come under my own observation only two had occurred as a sequence of parturition. In the other three it had been due to the presence of sessile tumours which had grown from the centre of the fundus. In former days when dilatation of the uterus mechanically was little practised, indeed hardly known, I have removed quite a large number of pedunculated tumours from the uterine cavity, some so large as to compel me to remove them in sections, others protruding through the os, the pedicle having elongated so as to permit this, but never have I met with a pedunculated tumour which caused inversion. I therefore laid it down as a rule that for an intrauterine tumour to cause inversion it must in the first instance spring from the very fundus, and next that it be sessile; I further laid it down that in cases of inversion following on parturition the placenta was invariably found to have been attached to the central portion of the fundus. Further, so far as my own experience went, I came to the conclusion that fundal attachment was not alone the predisposing but was the only cause of inversion occurring.

I had during my long professional life—extending as it did over more than fifty years of active practice, including in it ten years' residence in the Rotunda Hospital, first as assistant and then as Master—introduced my hand very many times in cases of retained placenta, some of them very firmly adherent, and in no single case did I find the attachment anywhere except laterally, and in none of these was there the least tendency to inversion. I have often wished to have had some independent testimony on this point, but none that I am aware has been offered; therefore, on seeing the report of the two recent cases mentioned above, I wrote asking for information as to the site of the placental attachment in each case, and have received the following replies, for which I desire to thank the writers.

Dr. George Hall writes:

> The placenta in my case was attached pretty nearly to the centre of the fundus uteri.

Dr. Arthur N. Holmes, late senior assistant, Rotunda Hospital, who had charge of Dr. Tweedy's case, writes:

> The patient, a primipara, delivered herself normally. About fifteen minutes after the infant's birth the patient cried out, saying the pains were returning. A few minutes after, she having cried out again, the placenta was noticed bulging through the vulva. Then, placing my hand on the abdomen, I realized the absence of the fundus above the pubes, and immediately after complete inversion of the uterus took place. I then noted that the placenta had a fundal attachment, and was adherent by its centre.

Dr. A. W. Anderson (Dalbeattie, N.B.), who published particulars of a third case in the BRITISH MEDICAL JOURNAL for May 2nd, writes:

> The placenta in my case was centrally attached, and was comparatively easily detached.

These three cases go a long way in confirming the opinion I enunciated in the paper referred to, and which was published in 1881—"that for inversion to occur immediately after parturition the placenta must be attached nearly centrally to the fundus"—but I have as yet seen no case reported confirming the remainder of the paragraph, in which I said that for it to occur under any other circumstances it must be "in consequence of the presence of a fibrous tumour springing from the fundus." I also pointed out that such never occurred except when the tumour was sessile. Perhaps some of the readers of the BRITISH MEDICAL JOURNAL may have seen cases bearing on this point.

The two classes of cases in which inversion occurs being analogous, so far as the site of attachment of placenta or tumour is concerned, the question to be solved is, Why does a sessile tumour springing from the very fundus, or a placenta attached there, predispose, if not actually cause, inversion of the uterus?

Any gynaecologist who uses with frequency the uterine sound must have been struck as I often was, by the fact that, while the patients seldom feel any pain while it is being passed through the cervical canal, if that be skilfully done, they will cry out if the point of the uterus be pressed even gently against the fundus. Again, if tangle tents be used to dilate the cervical canal—and I used them very frequently during my long years of actual practice—they were borne without causing much discomfort for hours, and remained *in situ* till removed by the operator, provided they were so short as not to touch the fundus; but they would, if too long ones were used, soon induce pain and be expelled long before they had swollen sufficiently to dilate the cervix. I think from these facts it may be inferred that not alone is the centre of the fundus the portion of the uterine wall most

susceptible of irritation, but that very probably it is the centre from which the expulsive action of the uterus takes its origin, the further inference being that if a placenta be unduly adherent when it happens to be located at the fundus, or that a sessile tumour grew from the fundus, the uterus is stimulated to get rid of what has become a foreign body, and, failing to detach this, becomes inverted in consequence of its own efforts.

Long before I retired from practice I became convinced that the late Dr. Robert Barnes, who was one of my most highly esteemed friends, was mistaken when, on the authority of Rokitansky, he stated that the fibres of the uterus at the placental site are paralyzed and do not contract equally with the uterine fibres, and that so inversion occurs; nor can I agree with him that the "fundal zone" is the natural site for placental attachment. The number of times I have introduced my hand to remove an adherent placenta were very numerous, and in not one of these was the placenta situated at the fundus uteri.

I should be glad to think these remarks of mine may call the attention of practitioners to the subject of the causes of inversion of the uterus, and that the particulars of such cases as may be observed be published.

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THE ABSORPTION OF OINTMENTS.

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IN the selection of a topical application for use in cutaneous disorders the most important factors to be considered are those of protection and penetration. It is not a difficult matter to find an agent which fulfils the first requirement, but the last is a much more difficult proposition.

Until within the last few years, experiments made with the view of testing the rapidity with which substances were absorbed by the skin were confined for the most part to repeated quantitative examinations of the various excretions, especially the urine, immediately following the application of the medicament under trial. Aubert incorporated atropine in various ointments, and, after rubbing them on the surface of the skin, had his patients exercise. The perspiration from other parts of the body was then collected and examined. Another method consisted of the microscopic inspection, after sectioning, of skin which had been treated with mercurial salves for varying periods prior to excision. The minute globules of metal served as penetration indicators. Some time ago, while visiting Dr. P. G. Unna's laboratory in Hamburg, I undertook, at his suggestion, a series of experiments along this line, guinea-pigs and white rabbits being used as subjects for the tests.

In order to get more direct results, various tissue stains, in the form of aniline dyes, were employed. These were thoroughly mixed with diverse vehicles and applied to the bare skin, the hair having been carefully clipped off. In some instances friction was used, in others the fluid or ointment was simply painted or smeared on. After the lapse of a certain period, varying from fifteen minutes to several hours, the patch was excised under anaesthesia.

The pieces of tissue were at once blocked, frozen, and cut, the sectioning being done in a direction parallel with the hair shafts and from below upward, in order to prevent the stain from being carried further into the tissues by the microtome blade. For the same reason the knife was cleansed with ether after each stroke. The sections were immediately placed in a filtered mixture of honey (10 0), glycerine (20 0), and water (70 0), later being mounted and examined in the same media. The use of vaselined rings on the slides prevented evaporation if the specimens could not be examined at once. Of the great number of different methods tried the one here given has proved the most satisfactory.

Only a few of the aniline dyes answered the required purpose. For oily and ethereal vehicles I have found scarlet (scharlach) best, and for spirituous ones, fuchsin.

The accompanying table represents the comparative values in penetrative power of the substances most commonly employed.

Substance.	Stain.	Duration of Application	Penetration.
Acid. carbolic. ..	Fuchsin	1½ hours	Slight.
Alcohol	,,	3 hours	Very slight.
Ol. olivae	Scarlet	4 hours	Considerable. Glands well tinted.
Ol. santali	,,	4 hours	Fairly good.
Lanolin	,,	5 hours	Slight.
Lanolin 1.0 / Ol. olivae 1.0	,,	3½ hours	Good. Glands quite pink.
Ol. lini	,,	4 hours	Slight.
Goose grease	,,	3 hours	Excellent. Gland deeply stained.
Cetaceum	,,	4 hours	Very slight.
Lanolin 9.0 / Cedar-wood oil 1.0 ...	,,	3 hours	Quite good.
Petrolatum	,,	4 hours	Very slight.
Petrolatum, with friction	,,	4 hours	Considerable.
Petrolatum 9 0 / Cedar-wood oil 1.0 ...	,,	3 hours	Fair only.
Adeps	,,	3 hours	Excellent.
Adeps benzoinatus ..	,,	4 hours	Very good.
Adeps 9 0 / Cedar-wood oil 0.1 ...	,,	3 hours	Excellent. Gland well stained.
Ichthyol	,,	4 hours	Fair only.
Ichthyol 2,0 / Ol. olivae 8.0	,,	4 hours	Good. Glands well tinted.
Suet	,,	3½ hours	Fair.
Ung. aquae rosae ...	,,	5 hours	Fair only.
Ung. aquae rosae 9.0 / Cedar-wood oil 1.0	,,	4 hours	Much better than ointment alone.
Ol. terebinthinae ..	,,	3 hours	Considerable.

CONCLUSIONS.

Lard, simple or benzoinated, and pure goose grease are the most quickly absorbed of all the substances tested. Petrolatum is a poor penetrant unless applied with friction. Lanolin, alone, is absorbed very slowly; mixed with a more fluid material, as olive oil, it readily enters the skin. The addition of a small amount of cedar-wood oil to an ointment considerably increases the rapidity of absorption.

ON RECENT ADVANCES IN THE SURGICAL TREATMENT OF SYPHILIS.*

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IT is useful to review our knowledge from time to time, though it would seem difficult at first sight to tell anything new about syphilis. Its history has been studied for a longer time and with greater care than that of any other disease, because its sudden appearance in Europe occurred at a time when printing was becoming general and was coincident with a general revival of learning. The earliest records of the disease, therefore, were made by observant men capable of giving a detailed account of a condition which appeared to them to be new, whilst its occurrence as a pandemic drew immediate popular attention to the affection and called forth many references to it from the pens of non-medical writers. The interest thus aroused led surgeons to devote a special portion of their treatises to the subject of venereal disease, and when other subjects of equal importance were dismissed in the textbooks in a few paragraphs, venereal disease was often treated of at inordinate length. An enormous mass of literature has thus grown up around the subject, a mass which it is impossible now for any one to master, merely

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on account of its bulk, even were it worth while to do so for the few grains of truth which it contains.

The very expression "venereal disease" carries with it a recognition of one of the most important advances made in connexion with syphilis during the last fifty years. For many years the term was used very loosely, though the writers before the year 1786 had a tolerably clear idea that three distinct diseases were included under the general heading of venereal disease: the lues venerea, now called syphilis, gonorrhoea, and a condition leading to bubo and associated with a multiple chancre which is known to us as "soft sores." John Hunter, by a single unfortunate experiment, followed by an unscientific generalization which was quite foreign to his usual caution, taught that there was but a single venereal poison which manifested itself in different ways. It took the French school many years of hard work to combat this mischievous error, and to show that Hunter was wrong, that the poison of syphilis was distinct from that producing a soft sore, and that the virus of a soft sore was incapable, when pure, of causing gonorrhoea.

The clinical evidence brought forward by Ricord, by Lancereaux, and by Fournier was convincing. It has been confirmed by bacteriology, and it has happened by a remarkable coincidence that the truth of the French teaching about syphilis was first established on the firm basis of experiment in France itself, when Professor Metchnikoff at the Institut Pasteur in Paris gave in his adherence to Schaudinn's work which showed that the *Spirochaeta pallida* was the specific cause of the disease.

Every advance in knowledge reacts upon many departments with which at first sight it appears to have but little in common. Improvements in the science of optics led to the invention of the compound microscope, by means of which morbid anatomists were enabled to gain a better acquaintance with the structure of the tissues of the body in health and disease. Thus arose the science of pathology, from which grew bacteriology, whose theory and practice have revolutionized surgery.

Syphilis quickly shared in the general advance in surgical diagnosis which followed upon an increased use of the microscope. One of the great surgical advances in the knowledge of syphilis due to this means has been a clear recognition of the manner in which syphilis affects the joints. A few years ago many allied conditions were grouped together under the general heading of white swelling or "tumor albus." The general characters in which this group of swollen joints agreed was the indolence of the process, the slight degree of pain, and the absence, at any rate for a long time, of any inflammation of the skin over the affected joint. The use of the microscope soon showed that the appearances found in the thickened synovial membrane differed in joints which were superficially alike, and that the old classification under a single clinical heading was no longer capable of subdivision. Tumor albus was therefore divided into a rare sarcomatous synovitis and a very common tuberculous inflammation of the synovial membrane. Further examination showed that the appearances seen in tuberculous synovitis were not always identical. In some cases there were many giant cells, the cartilages were ulcerated and there was a tendency to suppuration; whilst in other cases the giant cells were few, the articular cartilages remained unaffected, and there was no suppuration. The differences were noticed and recorded, but no further subdivision was possible until after the birth of pathology. It was then found that tubercle bacilli could be shown to exist in those cases where the articular cartilages were affected, whilst they were absent in the other cases: moreover, guinea-pigs died when they were inoculated with fragments of synovial membrane from one set of cases, whilst those inoculated with pieces of synovial membrane from the other cases showed no ill effects. It was clear, therefore, that tuberculous synovitis existed, but that some of the cases called tuberculous differed essentially from the more common form. Both cases occurred in young people more frequently than in those of mature age.

Clinical experience gave further clues, for the painless and non-suppurating forms of white swelling were found to be frequently symmetrical, and to be associated with interstitial keratitis and other forms of inherited syphilis. They were, moreover, curable by mercury. It thus became evident that there was a form of syphilitic synovitis which was perhaps less common than the tuberculous form, but it was distinct from it, was recognizable, and was capable of treatment.

The following case, occurring as lately as 1894, shows how difficult was the diagnosis of between white swelling due to syphillis and that caused by tubercle:

A boy aged 14 came under my care with an inflammation of the right knee. He had suffered from diphtheria in September, and about a month afterwards sores appeared on his body. He was noticed to be walking lamely about the end of December, and I saw him at the end of the following January. The patient's complexion was muddy, and scattered over his limbs and scalp were patches of superficial ulceration covered with thick scales or with black and raised crusts. The voice was husky, but his teeth were healthy, and there was no evidence of keratitis or iritis either recent or remote. The lymphatic glands at the posterior border of the sterno-mastoid muscle were slightly enlarged on both sides. The right knee was affected with synovitis and there was some increase of synovial fluid in the left knee. The synovial membrane in both joints was thickened, especially at the sides. The patient felt a little throbbing pain, but unless the knees were moved it was never severe and he had not been awakened by starting pains at night. The boy was brought by his mother, who said that a younger brother had had one ankle-joint excised for a similar condition, which had been presumably mistaken for a tuberculous arthritis; but she presented such obvious signs of tertiary syphilis that the boy she brought to me was at once taken into the hospital, and put upon a course of grey powder. In ten days' time his complexion had cleared, and he was less husky. There was also a smaller quantity of fluid in his right knee, and none in the left. The improvement continued until March 7th, when the patient was allowed to go about with his knee in a plaster-of-Paris case, and he was discharged from the hospital. He returned on March 26th without the case, and complaining of much pain with increased swelling in both knees. The joints were again fixed in plaster splints, but he returned on April 2nd with more swelling in the knees and with some synovitis of both elbows. He then confessed that he had not taken the powders for more than a fortnight. The boy was made to understand that mercury was necessary for his cure, and he was ordered to continue the grey powders. His elbows were less swollen and painful on April 9th, though his knees still remained enlarged. He was therefore given half-drachm doses of the solution of perchloride of mercury, with 5 grains of iodide of potassium three times a day. He returned a week afterwards, saying that his elbows were well, his knees better, and that he had suffered no pain since he began the new medicine. He increased in weight from 64½ lb. on April 16th to 71½ lb. on April 30th, and he has since remained well and at work.

Such a case as this is not very likely to be overlooked at the present day, because, as I have said, the occurrence of syphilitic synovitis is tolerably well recognized. The most recent advances in our knowledge of syphilitic disease of the joints is taking us back into the region of white swellings. We are beginning to understand that tubercle and syphilis may coexist in a joint. The co-existence occurs in two ways, for either a person with tubercle acquires syphilis, or, as is much more frequently the case, a child who has inherited syphilis becomes tuberculous. Tuberculous infection is so frequent in the subjects of inherited syphilis that it seems as if the tissues, weakened by the action of the syphilitic virus, were thereby rendered more susceptible to infection with tubercle bacilli.

There is evidence, too, that this statement can be made much more general. Patients with acquired syphilis have long been known to be especially liable to phagedaenic inflammation, due to infection with some form of anaërobic micro-organism whose exact nature is as yet undetermined; and the prevalence of influenza during the last few years has taught us that an attack of influenza may be followed by very chronic disease of a joint in those who are the subjects of acquired syphilis, the type of inflammation in these cases being syphilitic rather than septic. Here is such a case:

A night porter, aged 38, was admitted into St. Bartholomew's Hospital under my care on January 15th, 1907, complaining of pain and swelling in his right knee. He said that he had been quite well until November, 1906, when he was suddenly seized with shivering, and pain in his knuckles, fingers, wrists, knees, and ankles. The joints swelled and were hot, but on the third day the pain and swelling left them all except the right knee, which got worse instead of better. An Austrian by birth, he had travelled extensively, and had suffered from venereal disease in his youth, but there were no signs of tabes.

On admission, he was found to be a healthy-looking man, whose right leg and thigh were swollen, the tissues pitting on pressure. The leg was kept extended, and any movement

of the knee caused great pain. The right knee was swollen and the tissues surrounding it were much thickened.

The pain continued unabated until, on January 24th, I opened the joint and let out several ounces of blood stained synovial fluid. The wound never healed satisfactorily, and the joint afterwards suppurated. I amputated the thigh in the lower third on April 8th, and on April 19th there was such severe haemorrhage from the stump that I tied the femoral artery in Scarpa's triangle. The haemorrhage was a general oozing from the whole of the flaps, and, although ten days had elapsed since the operation, no repair had taken place. The patient made a satisfactory recovery, and left the hospital on May 21st with a soundly-healed stump.

An examination of the diseased joint showed that the synovial membrane was oedematous and greatly thickened, for it was ½ in. thick at the point where it was reflected upon the side of the joint. The villous processes were enlarged into lobules, and did not present the appearances usually seen in cases of osteo-arthritis. The articular cartilages were extensively destroyed, leaving the underlying bone exposed and rarefied. The remaining cartilages were succulent, blood-stained, and pitted by crescentic erosions, and the bone was marked in parts by a linear striation, though it was nowhere eburnated.

A microscopic examination of the synovial membrane showed the arteries to be thickened in the manner often seen in syphilis, whilst the synovial membrane contained softened and caseating patches which were not tuberculous. The cartilages were fibrillated parallel with the surface of the bone and not vertically, as is usual in joints affected with osteo-arthritis.

The patient was treated with mercury administered by the mouth as well as by injections. Potassium iodide was also administered in full doses, but he obtained no relief from either of these drugs until after his thigh had been amputated.

Our present conception of tumor albus, therefore, has undergone a material change. A few years ago we spoke dogmatically of a tuberculous arthritis and of a syphilitic arthritis. To-day we know of an intermediate form, which is generally a tuberculous infection grafted upon tissues modified by the action of the spirochaete, whether that syphilitic virus has been acquired or inherited. But the intermediate group is not necessarily due to a combination of syphilis and tubercle, because syphilis and other micro-organisms may also lead to inflammation of the tissues of a joint.

Advances in the science of optics led to improvements in the microscope, and thus to the advances in the knowledge of syphilitic disease of the joints, to which I have already called your attention. Still further advances in physical science led to the discovery of the Roentgen rays, which have been of such signal service to the surgeon for purposes of diagnosis in the diseases and injuries of bones. Many of these diseases and injuries, which were formerly left unrecognized, are now known and seen as clearly during life as if they were museum specimens.

The application of the *x* rays in cases of syphilitic bone disease has been very instructive and has enabled the effects of inherited syphilis to be carried onwards to a far more advanced period of life than has hitherto been considered possible, whilst it has enabled the surgeon to distinguish syphilitic osteitis from the allied inflammations due to tubercle and rheumatism in young children.

I have recently had under my care the following case, which illustrates very excellently the value of radiographs in the recognition of syphilitic disease of the bones where it might otherwise have passed unrecognized:

A carman, aged 26, had his left arm crushed between two vans in 1903. The arm was swollen and painful for a short time, but the man continued to work for six months after the accident, when it became so painful and tender that he applied for relief at St. Bartholomew's Hospital, saying that his elbow was getting stiff. It was noticed that he had an ulcer on the right side of the neck and that the ulcer had a shallow base with serpiginous edges. Further examination showed a tender, boggy, and fluctuating swelling over the central area of the left parietal bone. The left elbow joint could not be bent beyond an angle of 75°, nor straightened beyond an angle of 145°. The lower half of the left humerus was irregularly thickened, the thickening being nodular. The left humerus measured ½ in. more than the right in girth, but it was not lengthened, and there was only slight tenderness on pressure.

Close questioning failed to elicit any history of acquired syphilis. The man had married early, was the father of two healthy children, his wife had never miscarried, and he had never been under treatment for any previous illness so far as he could remember. He was well grown, of dark complexion with good teeth, but the characters of the ulcer and the puffy swelling on his head led me to think he was suffering from syphilis. I therefore ordered his arms to be skiagraphed, and the negative showed that the lower half of the left humerus was affected by an extensive rarefying osteitis, which began just above the condyles, and extended upwards for a considerable distance. The rarefaction at one point had involved the whole thickness of the bone. The adjoining surfaces of the radius and ulna were also involved in the inflammatory process in the upper third of the forearm, but the elbow-joint was healthy.

I had no hesitation, therefore, in placing the patient upon antisyphilitic treatment. He was ordered the hospital mixture of perchloride of mercury and potassium iodide, which contains a drachm of the solution of corrosive sublimate and 5 gr. of potassium iodide. This draught given three times a day made the ulcer on his neck heal quickly, whilst the puffy swelling on the head disappeared, and the movements of the elbow became so free that he was able to return to work, saying that he could use both arms equally well.

The case is interesting because it shows how late the signs of inherited syphilis may be before they are manifested. The man appeared to us to be perfectly truthful in what he told us, and he said that, so far as he knew, he had always been in good health; at any rate, he had never been told of any infantile illnesses from which he may have suffered, and he had certainly suffered from no inflammation of the eyes so long as he could recollect.

An accidental injury to his arm led to a chronic inflammation which was not only syphilitic in itself, but actually caused syphilitic inflammation in other parts so far removed as the side of the neck and the side of the head. The injury, in the language of our present knowledge of syphilis, brought about renewed activity of the spirochaetes, the prime cause of the disease which he had inherited, and when they had once been roused their effects were not limited to the injured part.

The Roentgen rays are also serviceable in distinguishing the large and often symmetrical nodes seen in children as a result of inherited syphilis. These nodes are often shaped like a funnel, for they shade off into the shaft of a cylindrical bone, and gradually widen out as they approach the joint. They may be so large as to involve half the length of a bone like the humerus or the femur.

The radiographic appearances of syphilitic disease of the joints, too, is distinguishable in many cases from those caused by tubercle or rheumatism. The inflammatory changes in syphilis are often limited to the fibrous tissues in and near the joints, whilst the articular surfaces show but little change. When the bone is affected by syphilitic rarefaction, the subperiosteal changes are seen to extend much further up the shaft than is the case in tubercle, whilst the irregularity and sinuous outline of the thickened parts serve to distinguish syphilitic periostitis from the allied condition due to tubercle or rheumatism.

The advances in physical science, therefore, have enlarged our knowledge of the age incidence of inherited syphilis, for the disease may first show itself at a much later period than has hitherto been thought possible, and it may then affect people who might reasonably have supposed themselves to be free from any disease. I have already quoted a case to show that an attack of influenza may be followed by an arthritis which was indistinguishable from chondro-arthritis; and a second case, in which an injury to a bone was succeeded by a typical attack of syphilitic osteomyelitis. In the one case the disease might have been acquired; in the other it was inherited, and had apparently been latent until the patient reached the mature age of 26.

With these cases as guides it is easy to give a correct explanation of the leukoplakia which affects the tongues of young men and women who are absolutely above any suspicion of having acquired syphilis. These cases puzzled me for a long time. The inflammation may be either of the sclerosing or gummatous type. It occurs, so far as I have seen it in young adults, men as well as women, and usually in well-developed and attractive-looking people who show but little, if any, indication of the taint which they have inherited. The condition has lasted for long periods of time, and is not very amenable to treatment. In two cases which I have seen lately a tuberculous infection was grafted upon the syphilitic inflammation; in another case the patient developed cancer, whilst in a fourth the original condition remains in spite of all treatment, and is unaltered, although he smokes.

The following notes of two cases will be sufficient to indicate the chief features of this condition, to which very little attention has as yet been paid.

An unmarried woman, aged 39, was admitted into St. Bartholomew's Hospital under my care on February 16th, 1907, suffering from a sore tongue. She said that nine months ago she first noticed a small and hard lump on the left side of her tongue. The swelling was soon surrounded by a number of white spots, which slowly increased in size and discharged thick white matter. An ulcer formed over the sore part of the tongue, and shrank until it became a mere crack, which was painful, and bled from time to time. She thought that the original swelling might have been caused by bad teeth, and she accordingly had all the teeth removed from the upper and lower jaws on the left side.

A second nodule formed upon the right side of her tongue about a week before she was admitted to the hospital. It ulcerated very quickly, and left a soft and rounded nodule from which blooded-stained pus could easily be squeezed. The pus was submitted to microscopical examination as well as to bacteriological tests, but no characteristic growth or micro-organism could be discovered.

The patient was an anaemic woman with a very scanty growth of hair on her head. She was deaf from sclerosing catarrh of both tympanic membranes and she complained of a constant pain shooting from her tongue towards her left ear accompanied by a continual dribbling of saliva from her mouth.

The patient came fourth in a family of nine. Her brothers and sisters seemed healthy with the exception of one brother who was being treated for melancholia. The mother had never miscarried and the father was dead of enlarged prostate complicated with aortic disease, which it is thought might have been syphilitic in origin. The patient herself had always been delicate. She had suffered from some painful affection of her eyes when she was a child and she became deaf about puberty.

Examination showed that the tongue was capable of free movement, though it was usually kept as quiet as possible because talking and eating were painful. A fungating ulcer was situated upon the left side of the dorsum and rather on the upper surface of the tongue. The margin of the ulcer was indurated and the surrounding part of the tongue was deprived of papillae and was fissured exactly like a tongue affected with chronic syphilitic glossitis. Pressure upon the left side of the tongue caused pus to exude from a number of small holes, whilst there was only a single aperture on the right side from which pus could be squeezed. There was an enlarged lymphatic gland underneath the chin and there were numerous shotty glands at the back of the neck, but the anterior cervical glands were not increased in size.

I made a diagnosis that the patient was suffering from a chronic inflammation of the tongue, due in all probability to inherited syphilis associated with tubercle and cancer. A piece of the edge of the ulcer was removed from the left side of the tongue, and was submitted to the pathological department for examination. A report was received in due course stating that it presented no evidence of malignant disease. The patient did not react to injections of tuberculin, and I therefore ordered her 15 grains of potassium iodide to be taken three times a day with 2 grains of grey powder twice a day, her mouth being kept clean by the frequent use of a dilute solution of Condy's fluid. The pain and salivation quickly disappeared under this treatment, and the ulcer on the right side of the tongue soon healed. In the course of a month the anterior third of the tongue underwent a process of sclerosis until it was crossed transversely by a deep fissure which threatened to separate the tip of the tongue from the middle third throughout its whole thickness.

The patient went home after a prolonged stay in the hospital, and her doctor kindly told me that she died of exhaustion on September 11th, 1907. The glands beneath her jaw first softened and then ulcerated, whilst the ulcer on the floor of the mouth gradually deepened and extended in spite of a weekly injection of 1 grain of mercury given in the form of Lambkin's cream.

I am not yet sure what the secondary infection was in this case. There was a large syphilitic element which was almost certainly of an inherited character, but the evidence of tubercle and of cancer was negative, though the patient died of one or the other. The next case was clearer.

In 1902 an unmarried lady, aged 24, was sent to me on account of a sore tongue. She said that it had been painful for the preceding five years, and examination showed that it was in the ordinary condition of a tongue affected with leukoplakia due to acquired syphilis, the patches being more marked in front than behind. The papillae between the patches were hypertrophied, and the ulceration extended not only to the tip of the tongue, but also along the under surface. The fauces were slightly congested, but were not ulcerated. The glands in front of the left sterno-mastoid muscle were enlarged, but those on the right side could not be felt. The glandulae concatenatae on both sides of the neck were numerous and shotty.

The patient was a well-grown, well-nourished, and attractive-looking young woman without any evidence of inherited syphilis. She said that her tongue became inflamed and painful after an attack of pneumonia. The condition was not materially improved by local applications or by the administration of mercury and potassium iodide. The puckering and scarring remained unaltered until she died of pulmonary phthisis in 1905, eight years after she had first begun to complain of her tongue.

I have no doubt that this patient suffered from inherited syphilis, upon which a tuberculous infection was afterwards grafted. If the patient had not inherited syphilis the peculiar characters of a leukoplakic inflammation would not have been impressed upon the tuberculous ulceration of the tongue; indeed, the tongue might have been sufficiently resistant to withstand the invasion of the tubercle bacillus, as is usually the case, for primary tuberculosis does not often affect the tongue.

So far as these two patients knew, the changes in the appearance of their tongues dated from a definite time, and they were able to say that there was a time when the surface did not differ from that which they were accustomed to see in other people; and as they were both women who gave some attention to their personal appearance, it is tolerably certain that they would have been accurate in this observation.

The next case is simpler, for the boy had inherited syphilis and was free from tuberculosis.

A schoolboy, aged 17 years, was admitted into Henry Ward on April 26th, 1887, under the care of (Sir) Thomas Smith. His mother said that two years previously abscesses formed on the back of his forearm, and burst, leaving ulcers. The boy was taken to the Shadwell Hospital for Children, but was discharged because his parents refused to allow an operation for the removal of some dead bone from his arm. The patient has had a sore tongue for a long time, and he has had sores about his mouth. He had snuffles when he was an infant.

The patient is the youngest of five children, two of whom are dead. The parents appear to be healthy.

Examination showed that the patient had an ulcer about the size of a penny situated over his olecranon and another half way down the forearm on the dorsal aspect of the ulna. Both the ulcers look as if they had been punched out. They are circular, and dead bone is exposed at the base of each. A foul discharge comes from them.

The tongue shows an inflamed patch, which is roughly oval in shape, and occupies nearly all the dorsum of the tongue. The oval patch is deeply fissured, the fissures running for the most part antero-posteriorly. It is devoid of papillae, but the epithelium has the pearly-white appearance characteristic of leukoplakia. The outline of the patch is sharply defined, but is upon the same level as the rest of the tongue. The epithelium covering the dorsum of the tongue is smooth and devoid of papillae in the greater part of its extent, though fungiform papillae still remain in the immediate neighbourhood of the circumvallate papillae. The bald epithelium covering the sides of the dorsum is also leukoplakic in character. The left-hand border of the tongue is indented by the pressure of the teeth. The appearances presented by the tongue, therefore, are identical with those seen in the later stages of leukoplakia due to acquired syphilis.

The patient was treated with potassium iodide, and the ulcers were dressed with lotio nigra. Their condition gradually improved, but they did not heal completely, though no bone was exfoliated. The tongue improved slightly, but still retained its syphilitic characters when the boy was sent to the Convalescent Home at Swanley three months afterwards.

These cases raise several points of interest. They seem to me to be undoubted instances of inherited syphilis in which the symptoms only appear long after birth—*Syphilis héréditaire tardive* of the French writers. But the cases of late inherited syphilis hitherto described have not appeared so late in life and have usually shown some other signs of the inherited taint. One of the women with a sore tongue and the boy whose case I have just described did show signs of inherited syphilis, but in the other instances the patients appeared to have been absolutely free from symptoms, until in one case an accident and in the other an infection with tubercle caused an awakening of the syphilitic virus which had long remained latent in the system. It would be extremely interesting to know whether in these cases the patients were those offspring of syphilitic parents who were born "healthy" after a course of treatment, or, in other words, were the youngest members of a family where there had been a series of miscarriages or where the elder children had died of the infantile diseases to which syphilis predisposes. The children who are born after such a train of accidents often appear healthy, and it is said either that treatment has been effective in destroying the virus or that syphilis tends to wear itself out in course of time. These statements are probably true, and yet there may remain a

residuum, like those to which I have called attention this evening, where the implanted virus remains latent for an indefinite time until it is called into activity by accidental, and, it may be, trivial causes.

The conclusions at which I have arrived surgically appear to be identical with those come to by Dr. Mott on the medical side. In his address on Some Recent Developments in our Knowledge of Syphilis in Relation to Diseases of the Nervous System, read at a meeting of the South Wales and Monmouthshire Branch of the British Medical Association and published in the BRITISH MEDICAL JOURNAL (vol. i, 1908, p. 10), Dr. Mott quotes the following interesting case of juvenile general paralysis:

A boy aged 16, of the better class, died in an asylum; at the autopsy no sign of congenital syphilis was found on the body, but the most advanced morbid condition characteristic of general paralysis. I interviewed the father, who told me that he had suffered from syphilis five years before marriage; he had been treated by eminent men and told that there was no fear of unfortunate results in marriage. The first child died within twenty-four hours of birth; the second within two days; the third, at 10 years old, developed interstitial keratitis, and later specific nerve deafness; and the fourth was the patient.

Now if this boy had been seen as an isolated case, without any family history, it would have been difficult to account for the early appearance of general paralysis. He showed no other evidence of any syphilitic taint, and was healthy except as regards his nervous system—in the same way that my patients were free from disease except as regards their joints and tongues. Dr. Mott believes that in disease of the nervous system due to syphilis the stress of puberty is sufficient to precipitate the changes which end in juvenile tabes or juvenile general paralysis. In my own cases an injury was sufficient to produce a syphilitic osteomyelitis in a patient who had no other signs of inherited syphilis, whilst in others infection of tubercle was followed by syphilitic ulceration of the tongue. It seems, therefore, that any condition which lowers the resisting power of the economy, whether it be physiological or pathological, is able to awaken a latent syphilitic infection which has been inherited, for similar recrudescences have long been known in patients who have acquired syphilis. The lowering of resistance in inherited syphilis may occur early in life, as is usual; it may occur late, which is rare; or it may never occur at all, which is quite common, for many children of syphilitic parents never show any trace of their morbid inheritance.

The existence of these cases of late hereditary syphilis without early symptoms of the disease makes it difficult to accept the spirochaete as the only cause of the syphilitic changes in the tissues. It is probable, therefore, that when the life-history of the disease is fully known the micro-organism will prove to be only the motive power which starts a long series of tissue changes. These changes, indeed, which were formerly looked upon as symptoms of the disease, are now known to be the means by which the tissues endeavour to protect themselves from the action of the virus and render the body immune to the further action of the toxins produced by the action of the micro-organisms.

This knowledge has revolutionized the modern treatment of syphilis. The infection of syphilis is followed by ulcerations, by gummata, and by inflammations of the bones and blood vessels. It was known empirically and from very early times that mercury cured these inflammations. But the cure was often disproportionately costly. Mercury was given irrationally, and the patient was at the same time so sweated and weakened by bleeding and purging that he died of the effects of treatment. Syphilis is remarkable in the periods of remission which it presents. It is a chronic disease, exhibiting periods of activity followed by intervals, often of long duration, in which the patient seems to be free from disease. But the end shows that during these intervals the tissues have been silently working against the virus, and have formed interstitial scar tissue in such vital parts as the brain, the spinal cord, and the arteries. Ignorant of this peculiarity of syphilis, and distrusting the action of mercury as it was then given, many practitioners and quacks, from the time of Ulrich van Hütten to our own days, treated syphilis by decoctions of herbs and woods, especially of guaiac and sarsaparilla; more recently by iodide of potassium. This treatment seemed to be less harmful, and was certainly productive of more immediate and better results than were obtained by the administration of mercury. But it left the patient with a legacy of paralysis, a lonely old age, and sudden death, because few knew the relationship of syphilis to early death in children, and none were aware of cerebral, visceral, or arterial syphilis.

It has been left to our generation to ascertain the curative effects of mercury in syphilis, a fact which we have learnt as clinical surgeons, whilst the bacteriologists have taught us that as the gummata and ulcerations are mere masses of dead tissue which have already served their purpose, they may be removed advantageously by ordinary surgical means when they are accessible to such means, or by absorption under the action of drugs when they are less conveniently placed.

The result of this better knowledge of the causes and course of syphilis has materially changed the method of treatment. It is now well recognized that the mere treatment of symptoms is useless, but that in every case a determined attempt should be made to cure the disease. Mercury is at present the only drug which is known to cure syphilis, though atoxyl (meta-arsenic acid anilide) is on its trial, with encouraging results. The modern treatment of syphilis, therefore, consists in a clear recognition of the fact that mercury must circulate through the affected tissues for long periods of time. The exact amount of mercury or the particular form in which the drug is administered does not seem to matter so long as it circulates, and there is no evidence to show that the tissues become used to its presence. But there are still many medical men who only treat syphilis so long as there is a rash or a mucous patch, without impressing upon their patients that such treatment is useless unless it is continued long after the disappearance of symptoms, since the object of treatment is cure and not merely relief—to destroy the syphilitic virus, not to hide its effects.

Iodide of potassium, too, is often given irrationally or unsuitably in the later stages of syphilis. It is given irrationally when small doses of 5 or 10 grains are administered for long periods of time, and it is given unsuitably when an attempt is made to remove large masses of necrotic tissues or of fully-formed fibrous tissue by its means alone.

Potassium iodide is absorbed and eliminated with equal rapidity. The tissues quickly become used to its presence, and its action upon them is then inappreciable. The rational administration of the iodides therefore consists in the administration of comparatively large doses for short periods of time. Fifteen or twenty grains of potassium iodide given three times a day for seven days and then omitted for a week give better results than 5 grains of the drug continued three times a day for an indefinite period. The larger doses are best given in milk or in an effervescing water, and not in the usual ounce mixture. It will often be found, too, that the ammonium and sodium iodides are better tolerated than the potassium salt which is generally prescribed, whilst iodipin may be given when the iodides cause digestive disturbances; but iodipin contains much less iodine, and has to be given in correspondingly larger doses.

The effect of the iodides is to promote the absorption of newly-formed inflammatory tissue, or, in the language of pathology, of the polymorphonuclear cells. These cells are replaced by, or are converted into, fibrous tissue, upon which the iodides exercise no more absorptive power than they do upon newly-formed fibrous tissue, pus, or masses of dead tissue. It is useless, therefore, to order iodides unless the grosser products of syphilitic and ordinary inflammatory changes have been first removed, and it is worse than useless to expect any change from their administration when the fibrous tissue has become converted into scar tissue. The best results are obtained from the use of iodides in the later periods of syphilis by first removing any large areas of gummatous inflammation by the scalpel and sharp spoon, securing union by first intention, and by then treating the patient with potassium iodide whilst the wound is healing. Better results are obtained in this way than by the routine practice, which consists in abstaining from operating as far as possible upon cases of syphilitic inflammation.

CONCLUSIONS.

1. Experimental evidence has shown that syphilis is due to infection with *Spirochaeta pallida*, an organism

which lingers for a short time at the seat of inoculation and then rapidly spreads through the body. This organism transmitted from parent to child is the cause of inherited syphilis.

2. Many forms of arthritis formerly classed as syphilitic are due to other infective agents acting upon tissues modified by the action of the syphilitic virus.

3. Syphilitic changes in the bones, joints, tongue, and other parts may occur as a result of inherited syphilis much later in life than is usually recognized. They are then the result of accidental causes, and they are often the only evidence of the inherited taint.

4. The modern treatment of syphilis consists (*a*) in the more careful administration of mercury, which is now given to cure the disease itself, and not merely to relieve the symptoms as has hitherto been the case; (*b*) in a recognition of the limitations of the absorptive power of the iodides; (*c*) in a freer use of surgical methods to remove the products of syphilitic inflammation before the iodides are administered.

A CASE OF OCHRONOSIS.

BY

L. C. E. HARSTON, F.R.C.S ED., HON. SURGEON, KINGSBRIDGE COTTAGE HOSPITAL, DEVON.

and

A. B. SOLTAU, M.D.LOND., F.R.C.S., PHYSICIAN, SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH, ETC.

THE case which is the subject of this communication seems worthy of being placed on record, owing to the unusual features which it presents and the absence of any discoverable cause of the abnormal pigmentation which is to be described.

History.

J. A., a farmer, aged 60, first came under observation in October, 1907. He complained of an increasing discoloration of the skin of the face, which he had first noticed early in that month, and which was then sufficiently marked to cause comment amongst his friends and in the streets. His previous health had been entirely good, and may be dismissed without comment beyond the statement that in the month of September he had suffered from "eczema" of the chest. This was apparently nothing more than a "flannel rash," for which he was treated by a chemist. The latter, as we found on investigation, had supplied him with ung. hydrarg. nit., and this was applied to the chest but not to any other part of the body.

Condition on Examination.

He was a healthy-looking man, well nourished, and somewhat inclined to stoutness. The colour of the skin of the face was a slaty-blue, which, over the malar eminences, where it was first noticed, was almost black. Towards the forehead it gradually faded away into normal pigmentation, and in the less pigmented area the skin could be seen to be thickly sown with minute patches of deep brown pigment, less than half a millimetre in diameter. The pigmentation extended backwards as far as the ears, which were both discoloured, the helices especially being of a dark-blue tint. The patient being bearded, the skin of the jaw was not so easy to examine, but apparently it was not pigmented. In fact the pigmentation was confined to those parts of the face which were exposed to the weather, for it faded rapidly above the level of the hat brim, and in those areas protected by the growth of hair. The hands and forearms showed the tanned and brown condition common to men living in the open air, but there was no abnormal discoloration. The skin over the trunk was also free from excess of pigment, but over the abdomen, chest, and back were scattered numerous black warts. These the patient said he had had all his life, and, as far as he could tell, not one of them had recently altered in size or given him any pain. A careful examination of them did not disclose any evidence of ulceration, irritation, or growth, nor were any of the superficial lymphatic glands enlarged or tender. The mucous membranes were almost free from pigmentation. On the right side of the hard palate, just in front of its junction with the soft palate, there was a small, round, bluish patch about 1 mm. in diameter, and in the left eye, on the temporal side and just external to the cornea, there was a slight brownish discoloration. The fundi oculorum were normal, beyond a little excess of pigment round the discs.

The urine was repeatedly examined, but nothing abnormal was found. Its specific gravity was 1020, the colour a pale amber, and it contained no albumen or casts.

All his organs appeared normal, there being no evidence of disease in any of them.

The diagnosis will best be considered by discussing the various possible causes for such a condition.

It is not a case of vascular dilatation and turgescence, since the coloration is permanent and cannot be lessened or removed by pressure. It must be remarked, however, that exposure to cold causes a deeper coloration, superimposing a vascular congestion on the pigmentation. Neither is it a case of cyanosis, for the same reasons, and from the fact that the mucous membranes preserve their normal colour.

Melanosis.

This seemed a possible cause, and diligent search was made to discover a primary melanotic growth. As stated, there were numerous pigmented warts on the skin, but they all seemed to be quiescent. Rectal examination revealed nothing, nor was there any history of blood being passed with the stools, nor of any rectal pain. The eyes also, so often the seat of such a primary growth, were quite healthy. Moreover, in the event of its being melanosis, it would be expected that the urine would contain melanin, but there was no history of dark-coloured urine ever having been passed, nor of its having darkened after being voided. The addition of oxidizing agents to the urine caused no darkening, as would have been the case had melanogen been present. Further, the patient's general good health, the absence of any lymphatic enlargement, and the fact that he maintained his body weight, all seemed to negative this diagnosis.

Metallic Poisoning.

The long-continued use of certain metals, notably silver, arsenic, and lead, have often led to a permanent pigmentation of the skin. Inquiry was therefore made into the patient's history, to ascertain whether he had been in the habit of using preparations of any of these metals, either industrially or medicinally, but without result. Even in his farm duties he had not been brought into contact with them. Special attention was paid to the question of sheep-dipping, as many of the preparations used for this purpose contain arsenic, but it appeared that he had not had anything to do personally with this work. The ointment prescribed by the chemist was a simple mercurial preparation, and the small quantity (less than half an ounce) used was obviously not to blame.

As far as possible, therefore, the question of metallic poisoning has been excluded. On the other hand, the pigmentary distribution, in the parts of the skin exposed to the weather, corresponds with that seen in argyria.

Ochronosis.

From the description of the case it will be seen that it corresponds very closely with those rare cases which have been described under this title. A case was fully reported by F. M. Pope in the *Lancet* of January 6th, 1906; and in the *Quarterly Journal of Medicine* for January, 1908, Professor Osler and other writers critically review all the recorded cases, and describe a new case, supplying also a complete bibliography.

The association of ochronosis with alcaptonuria is still undetermined. In our case there was at no time any evidence of the presence of alcapton in the urine. The urine did not contain a reducing agent, nor did it darken on the addition of oxidizing agents. Further, there was nothing in the patient's history to indicate that he had been exposed to the possibility of poisoning with carbolic acid, which is occasionally the precursor of alcaptonuria. He had not used any carbolic preparations since the previous lambing season—that is, a clear six months previously, and then only to a small extent in the weak solution of one ounce in a pint of oil as a lubricant.

In the case of ochronosis recorded in the *Quarterly Journal of Medicine* there was a clear history obtainable of the use of carbolic acid in the immediate period before the appearance of the pigmentation. Other cases, however, have not given this history.

For the present we are inclined to classify this case as one of ochronosis, and the chronicity would favour this view, for at the time of writing, six months after its first appearance, the pigmentation is, if anything, more pronounced than when first seen in October.

THE late Mr. Caleb Ashworth Tate, of West Dulwich, whose will has recently been proved, bequeathed £5,000 each to the National Hospital for the Paralysed and Epileptic and the National Society for the Employment of Epileptics. He also left sums of £1,000 each to the Surgical Aid Society and the British Home for Incurables, Streatham.

SATINWOOD DERMATITIS,

WITH A SUGGESTION AS TO TREATMENT.

BY FREDERICK GARDINER, M.D., B.Sc., F.R.C.S.E.,
ASSISTANT PHYSICIAN, SKIN DEPARTMENT, ROYAL INFIRMARY, EDINBURGH.

SEVERAL cases of this condition have been recorded, among them being the outbreak described by Dr. Jones in the BRITISH MEDICAL JOURNAL of June 25th, 1904 but its occurrence is so readily passed over that it is right that it should be again brought to notice.

J. S., aged 51, who had worked at his trade of cabinet-maker for thirty years, and never suffered from any irritation before, was attacked with an eruption on the face and arms whilst working with this wood. He was aware that irritation sometimes followed the working with teak, but although he had previously worked with satinwood he never had heard of it causing any trouble. After going to his present situation he was engaged for six or seven weeks in planing and sawing mahogany, and only after subsequently working with satinwood did his symptoms develop. The present attack had lasted for nineteen weeks when I first saw him, and as far as could be gathered it had started after a week of exposure to the irritation. During this time he attempted to work on two separate days, but a recurrence immediately ensued on each occasion. In the same workshop there were other five men similarly affected, although not to the same extent. Some of these were only employed in shifting the blocks, but others, like my patient, were more in contact with the dust, their duties being planing, sawing, and veneering.

The first signs noticed were itching at the back of the neck, and the presence of a papulo-vesicular rash on the backs of the hands. This soon became moist, and spread up the forearms, whilst at the same time the face became so erythematous that the doctor whom he then consulted diagnosed erysipelas, a diagnosis which he, however, altered next day, as the eruption had subsided partly.

The history is thus fairly typical, commencing on the exposed parts, namely, the hands and face, and when examined at the Skin Department of Edinburgh Royal Infirmary, the face, neck, backs of the hands and forearms were still swollen and showing a tendency to exfoliation. The posterior aspects of the fingers were the seats of a moist dermatitis, the papular rash was mostly at the upper parts of the forearms and neck, and here and there vesicles could be observed.

The reason for the present attack, previous contact with the same wood having left no ill effects, may be explained in various ways.

1. The large amount of the wood being used may have had some influence. The patient stated that he had never seen so much of it together at once.

2. There are various kinds of satinwood, and they are not all equally harmful. Unfortunately I have been unable to ascertain the source of the present supply; the patient informed me, however, that it comes from West Africa and India.

3. It is a well-recognized fact that a man may work for several years with various irritating substances, and at the end of that time develop dermatitis. General debility is the reason in some cases, but in others no determining factor can be found out. None was found here.

4. The presence of seborrhœa is of importance. I have frequently noticed that patients who are prone to any kind of trade dermatitis suffer at the same time from seborrhœa, and it was so in this individual. This should occasion no surprise, as this class of case has an imperfectly lubricated skin—that is, there is a faulty flow of sebum, not always an excessive flow. If this sebum is of a thick, claggy type, it stands to reason that many parts lack their proper supply of lubricant, and therefore are more exposed to the effects of irritating substances. Unfortunately, even with the added lubricants so often used in these cases, there is still the presence of decomposed sebum which mars the result.

The report of the Chief Factory Inspector, published in 1906, gives details of previous outbreaks, and states that the removal of dust is of no value. He also mentions the fact that one man was enabled to continue at his work by using dilute acetic acid (1 in 4 of water). I found that the wood had a faintly alkaline reaction, and this may explain its effect to a certain extent. Furthermore, I examined the sawdusts of different woods microscopically, but could draw no conclusions from this. Most observers hold that the resin or oil in the wood is the actual cause of the eruption.

TREATMENT.

A mixture of putty and linseed oil was used by one of the sufferers from the present outbreak, and, according to my patient, it cured the condition. It could not have been universally successful, or the others would have followed suit.

From the present standpoint one has to deal with a trade dermatitis of an obstinate type, therefore what is the best method of treatment?

Naturally cessation from working with this wood is the first suggestion, but at once economic reasons for not doing so have to be met. Work is scarce and money still more so. Lubricants are generally ordered and often succeed in mitigating the evils of the irritant. When this patient was first seen a lotion of boric acid and calamine was prescribed, but as after a week there was little or no improvement, even with cessation from work, other means were thought of.

In one of the French periodicals I had noticed a suggestion as to the use of *x* rays in trade dermatitis and determined to try their value here. The patient was given 10-minute exposures thrice weekly to the various parts and a beneficial result was soon evident. The first change was a cessation of the oozing, later the redness commenced to decrease, and after ten days the condition was practically cured. Still more interesting is the fact that on his returning to business and again working with satinwood there was no recurrence. The use of this wood soon ceased, however, and the man has remained well ever since.

The explanation may be theoretically propounded that the *x* rays act by hardening the skin and enabling it to resist the irritant effects of the wood; at any rate, we know that they have a distinct anti-inflammatory action.

Another case came under my notice shortly after—it was that of a teacher of chemistry who had a similar condition on his forearms and hands, produced probably by alkali, which he used in his demonstrations. The eruption was very stubborn, and constantly recurred in spite of intelligent treatment by the patient, and accordingly I tried *x* rays in the same manner as in the preceding case. Here the result was equally gratifying, as the condition rapidly improved, and ultimately got quite well. Six weeks later there was a slight recurrence, which also rapidly disappeared with treatment.

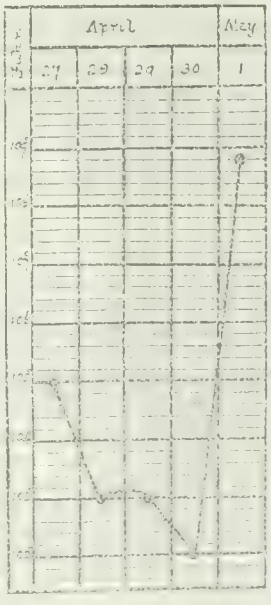
If these results are borne out by other observers, then the *x* rays have an added field of usefulness.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

HYPERPYREXIA IN PNEUMONIA.

THE accompanying temperature chart of a case of acute croupous pneumonia at the left apex presents unusual features.



I was called to see the patient, a child aged 2 years and 2 months, on April 27th. The case was then in the second stage, and the temperature as shown in the chart was 105°. Sponging was ordered, and this was continued throughout. The child seemed to be progressing on the whole favourably, and on April 30th showed rather more marked improvement. I was called on May 1st at 8 a.m. to see him, as he was said to have become worse. I found him in a collapsed condition with a temperature of 108.8°. The wet pack was applied (the bath being objected to), but the child rapidly sank and died at 9.20 a.m.

London, E. EDWARD TOWNSEND TUCKEY, M.B., B.Ch.

ACUTE FAECAL IMPACTION IN THE RECTUM.

The following case bears out several of the points referred to by Dr. W. M. Robson in his paper (p. 1041). A few weeks ago I was asked to see a lady who had had very severe haemorrhage in connexion with abortion at two months. She had no action of the bowels for four days, and she then began to pass slight watery stools containing a good deal of mucus; there was violent tenesmus, and she also had very severe vomiting; the vomited matter was bile-stained, but did not become faecal. On examination per rectum I found a hard mass of faecal matter about the size of the clenched fist, which was broken up with the finger, and was evacuated after a copious enema of soap and water. This gave immediate relief, and there was no further trouble.

In this case no doubt the cause of the condition was the loss of fluid consequent upon the haemorrhage. The patient had had no previous attack of the kind, nor had she ever suffered from constipation.

London, W. W. H. Peacock, M.B., B.S.Durh.

A FATAL CASE OF INVERSION OF THE UTERUS.

In view of the cases reported in recent numbers of the British Medical Journal, an experience of my own may be of interest.

A few weeks ago I received through my chief, Dr. Septimus Farmer, one of those now familiar summonses of the certified midwife requesting my immediate assistance. On my arrival at the house I was informed that the patient had fainted, but a short examination soon revealed to me that life was already extinct. I then learnt the following facts. She had had a normal delivery some six hours before, the placenta following spontaneously in about half an hour, and, everything having been satisfactorily arranged, in due course the midwife left her. All went well until some five hours afterwards, when, expressing a desire to pass water, she was assisted on to her knees in bed, and there strained considerably to void the urine, with the result that "something else began to come away." The midwife was again sent for, and she diagnosed the tumour which now showed at the vulva as the head of a twin about to be born. The patient was by this time showing signs of exhaustion, and the midwife deemed it wise to have medical assistance, and, as a consequence, I was soon on the scene. After ascertaining that life was extinct, I discovered between the woman's thighs a flabby, sac-shaped mass, larger than a large child's head, which I had no difficulty in determining to be the completely inverted uterus. The placental site seemed to be in the usual place, but the perineum, which had not been recently torn, was much reduced in size, about half an inch only remaining between the vaginal and anal orifices. The patient was aged 27, and had had six children, one premature, in very rapid succession.

I concluded that the act of straining during micturition while in the kneeling posture, coupled with a large and gaping vaginal orifice, had been too much for the feeble, non-contracting uterus, and had given rise to the condition which I have described. Death, I imagine, was due to shock following on the sudden withdrawal of the uterine mass from the abdomino-pelvic cavity.

A. R. Gunn, M.B., Ch.B, Edin.

Spennymoor, co. Durham.

ASCARIS LUMBRICOIDES.

On March 17th, 1908, I was called to see an Armenian child aged 3 years, suffering from typical bronchopneumonia. As the mother stated some worms had been passed, santonin, gr. ij, was given, and 42 large round worms were passed; the next day 38 were passed. Santonin was again administered, and the day following 7 were passed by the rectum and 2 by the mouth, making 89 in all. The pneumonia ran a normal course and terminated favourably. The mother stated that the child had had enteric fever the year before, and that 62 worms had then been passed. I have recorded this case, as even in this country (where practically the whole of the population, adult and juvenile, harbour worms) such large numbers are rare. I have to thank Dr. Aganoor, in whose practice this case occurred, for permission to report it.

E. N. MacBean Ross, M.B., Ch.B., L.M.

Ispahan, Persia.

TREATMENT OF CARBUNCLE.

In connexion with the very interesting memorandum on Some Uses of Peroxide of Hydrogen, by Dr. G. S. Hovenden, in the Journal of May 2nd, may I invite attention to a very simple method of treating carbuncles which I have never known to fail? Immediately a case is seen, unless an opening already exists large enough to allow a free discharge of matter, an incision sufficient to ensure this is made. A thick pad of lint, large enough to overlap the inflamed area by at least an inch all round, is then thoroughly soaked in a hot saturated solution of boracic acid. This is placed over the inflamed area, covered with oiled silk, and retained in position by a lightly applied bandage. The pad, resaturated as often as necessary, is left *in situ* for twenty-four to thirty six, or, in bad cases, for perhaps forty-eight hours. By this time the pain, induration, and inflammation will have subsided, and the wound will present a quite healthy appearance. A light dressing of lint moistened with boracic lotion is then all that is needed to ensure rapid healing.

G. H. Younge, F.R.C.S.I.,
Lieutenant-Colonel, R.A.M.C. (Ret.).

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE MILITARY HOSPITAL, GIBRALTAR.

A CASE OF MULTIPLE INJURY.[1]

(By T. du B. Whaite, M.B., B.Ch.Dub., Lieutenant-Colonel, R.A.M.C.)

The patient in the following case, a lance-corporal in the Royal Engineers, aged 24, was brought in unconscious on September 12th, 1907, it being stated that, together with the car of the aërial railway, he had fallen from a height of some 30 ft.

State on Examination.—He had a double depressed fracture of the right parietal bone, with a scalp wound communicating, and also several slighter wounds of the scalp. There was rupture of the lateral internal ligaments of right knee joint, with large extravasation of blood in popliteal space. In addition there were in this leg numerous abrasions, showing he must have fallen on his right side. There was no paralysis and he was very restless, the pupils remaining dilated but reacting to light. His breathing was stertorous, his pulse slow and full, his temperature normal, and there was nothing pointing to a fracture of the base.

Treatment.—On the following day a trephining operation was performed close to the site of the fracture and the depression raised. The dura mater was punctured but there was no extravasation of blood. After the operation he remained unconscious, but his general condition improved and he could swallow.

Progress.—The unconsciousness persisted till the 18th, when, on being loudly addressed, he mumbled some incoherent sounds. The following day he answered questions and was more coherent. The scalp wound looked healthy and the other wounds were doing well. On September 23rd, or four days later, he got a sharp attack of diarrhoea and passed much mucus and had an evening rise of temperature, and from this date until September 30th his condition was very serious and nothing seemed to have any effect on his diarrhoea. He became restless, irritable, and actively violent, and broke everything that was used to keep his knee in position, but there was nothing which pointed to any localized cerebral lesion. During the next ten days he lost control of his bladder and rectum, making it very difficult to prevent bedsores, but the knee-joint was secured by placing it in a poroplastic splint, after reducing with some difficulty the internal semilunar cartilage which had become displaced. From October 10th he began to improve, and five days later he became sufficiently sensible for his splint to be removed and the limb massaged daily. On October 25th and 26th he showed sign of returning irritability and needed constant supervision. This lasted some days, but at the end of a fortnight he had no more brain trouble.

Result.

On November 13th his knee splint was removed finally and he was allowed to get up and move about with the aid of a stick. A month later he was sent for change of air to England, and has since returned to Gibraltar for duty perfectly well.

[1] A paper read at the April meeting of the Gibraltar Branch.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

ULSTER BRANCH.

Dr. WARNOCK, President, in the Chair.

Londonderry, Saturday, May 2nd.

PAPERS.

MR. H. H. B. CUNNINGHAM (Belfast) read a paper on the complications of chronic otorrhoea. The paper, which was illustrated by drawings and specimens, was based on a research carried out with the aid of a grant from the British Medical Association, and a full report will appear shortly. The paper was discussed by Drs. MOWBRAY (Castlederg), CUNNINGHAM (Londonderry), DARLING (Lurgan), CECIL SHAW (Belfast), HUNTER and KILLEN (Londonderry).

CANCER OF UTERUS.

Mr. R. J. JOHNSTONE read notes on some cases of cancer of the uterus treated by abdominal hysterectomy. The paper was discussed by Dr. DARLING and the PRESIDENT.

Mr. ROBERT CAMPBELL read: (*a*) A short paper on chronic swellings behind the ligamentum patellae; (*b*) notes of a case of extensive resection of the intestine for malignant disease. The communications were discussed by Mr. JOHNSTONE and the PRESIDENT.

TETANUS.

Dr. J. G. COOKE read a paper on cases of tetanus—17 cases with 6 deaths. Among the cases were one of cephalic tetanus (recovery) and one of tetanus caused by the punctures of a hypodermic needle in the case of a patient with the morphine habit. An interesting point about the latter case was that the patient had had a mild attack of tetanus twelve months before. The second attack was fatal. Dr. Cooke emphasized the fact that the interval between the injury and the onset of symptoms in cases of tetanus was the really important factor in prognosis. He lost all cases in which the interval was less than ten days, and none in which the interval was longer. As to treatment, feeding, the use of chloroform during severe spasms, and local treatment of the wound were emphasized. The use of artificial respiration after severe spasm was also laid stress upon. The antitetanic serum was not regarded as curative or useful during an attack of tetanus, but was used by the writer in cases of severe injury infected with earth as a possible prophylactic.

PERFORATED ULCER OF STOMACH.

Dr. J. G. COOKE read notes of a case of perforated ulcer of the stomach in a patient aged 70. The patient was operated upon eighteen hours after onset of symptoms, which were those of acute peritonitis. A leaking ulcer of the stomach was found and sutured, and three large gall stones removed from the gall bladder. The patient made an uninterrupted recovery. The interest in the case lay in the fact that some months before the patient had had an attack of appendicitis with a phlegmon, which would have been operated upon had not haematemesis and melaena set in, pointing to stomach or duodenal mischief. From this attack the patient recovered completely. The knowledge of the previous attack served as a guide for operation in the second illness and prevented the exploratory incision being made in the iliac region, which otherwise would probably have been the case, as the symptoms were quite compatible with appendicitis.

REMOVAL OF VARICOSE VEINS.

Dr. COOKE showed Mayo's instruments for removal of varicose veins, and pointed out the advantages, as regards rapidity and size of incisions required, resulting from their use in suitable cases. Mr. CAMPBELL discussed Mayo's operation, which he said was not rightly so called, as it was first performed and described by a Glasgow surgeon. The instruments designed by Mayo, and whose use was advocated by Dr. Cooke, he did not think necessary. The PRESIDENT discussed the question of tetanus and antitoxin. Before the introduction of antitoxin, he had had three cases of tetanus in his practice, one of them fatal. Since its introduction he always used it as early as possible in cases he considered dangerous, and he had seen no further cases of tetanus. He believed in it as a prophylactic. Dr. COOKE replied, and the meeting terminated.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

J. KINGSTON FOWLER, M.D., F.R.C.P., President, in the Chair.

Monday, May 11th, 1908.

RECENT ADVANCES IN THE SURGICAL KNOWLEDGE AND TREATMENT OF SYPHILIS.

MR. D'ARCY POWER read a paper on recent advances in the surgical knowledge and treatment of syphilis, which is published at p. 1225.

The PRESIDENT said that what interested him as a physician was the possibility of tracing the effects of inherited syphilis to a far more advanced period of life than had hitherto been described. In regard to the coexistence of syphilis and tubercle he said that the syphilitic element produced a lowered resisting power, and that would predispose to tuberculosis.

Mr. CAMPBELL WILLIAMS said a difficulty arose in diagnosing whether a patient was suffering from inherited syphilis or modified acquired syphilis. He described a case of late development of congenital syphilis in a girl of 19. He advocated giving iodides in heavy doses, but the patient must be watched. He regarded leucoplakic tongues as syphilitic, and recommended the use of iodide of glycogen.

Colonel F. J. LAMBKIN said that he was told when in Uganda that any native would be salivated with 1 grain of mercury, but he persuaded the medical men in that region to use mercurial injections, and no harm resulted. If mercury was given by inunction it must be properly done, but he thought that intramuscular injection was the best treatment.

Mr. STCLAIR THOMSON said that in nasal syphilitic affections the destruction of the septum did not cause the saddle-back nose; the reason was the great tendency of syphilitic scars to contract. He described the good results obtained in syphilis of the larynx when tracheotomy was performed.

Mr. C. SYMONDS raised the question whether the cases considered as late congenital syphilis were not really cases of syphilis acquired in early life. He described the immense value of rest in bed in the treatment of syphilis. He advised intramuscular mercurial injections for the destructive syphilitic conditions of the pharynx that did not yield to ordinary methods.

Mr. CHARLES RYALL agreed that leucoplakia arose from acquired or inherited syphilis. From the point of view of cancer a patient with chronic superficial glossitis had a weak point in his armour, and all sources of irritation of the tongue should be removed. His experience was against large doses of iodide, because patients responded well to five and ten grains given in a large quantity of water. He agreed that rest in bed in an equable temperature was an invaluable aid to treatment.

Mr. C. F. MARSHALL pointed out that the syphilitic condition predisposed to gonococcal infection.

After Dr. FORBES WINSLOW and Dr. PARAMORE had spoken.

Dr. VOELCKER commented on the fallacies connected with the radiographic appearances seen in bones and in the neighbourhood of joints, and described a case confidently diagnosed as central sarcoma when syphilis was the correct interpretation.

Major H. C. FRENCH recommended inunction as the treatment of syphilis in the early stages. During the past nine months he had noted in a large number of cases treated by inunction that there was a systematic gain of 6 or 8 lb., whereas in cases treated by injection as often as not there was a loss in weight.

The meeting closed with a brief reply from Mr. D'ARCY POWER.

Monday, May 18th, 1908.

THE AFTER-RESULTS OF INJURIES.

MR. T. CLINTON DENT delivered the annual oration and discussed this subject. He said that in fracture of the leg the early fixation in plaster for a period judged to be long enough to allow of sound union, while it might give less trouble in treatment, appeared to him undoubtedly to delay adequate restoration of function longer than

other methods. A fracture of the leg, owing to its after-effects, was from the point of view of the wage-earning capacity of the individual a very serious injury; it kept a man from following efficiently a fairly but not unduly exacting employment for six months under the most favourable circumstances. But if, as constantly happened, the patient broke down when he resumed work and was permanently incapable of following that work as a direct consequence of the injury, the after-effects must be regarded as extremely grave. The attitude of hospitals generally with regard to injuries of that nature was changing; those institutions had come of late to be regarded by those in medical charge as educational establishments. That view should be encouraged, because while essential for the student it was of great and direct value to the patient. Simple fractures usually excited but little interest, but that did not imply that they were in any measure neglected; still, few would deny that patients with simple fractures were hardly as closely supervised by the visiting surgeon as cases of more pronounced clinical value. In all the labouring classes fractures involving the ankle-joint almost without exception gravely interfered with wage-earning capacity. The after-effects of a psychical nature were frequently determined by the circumstances under which the injuries were sustained, and the injuries need not have been in their purely surgical aspect of any gravity. The truth of the maxim that no injury to the head was too trivial to be despised or too serious to be despaired of was borne out by the experience of every one, though with regard to apparently slight cases the lesson was still too often enforced by practical neglect of its wisdom. The essential necessity of rest was recognized by all, and it was agreed that the rest should at all times be protracted, but it was less universally recognized that it must be prolonged in proportion to the degree of responsibility attaching to the patient's occupation and his normal mental capacity for bearing the same.

Mr. EDMUND OWEN moved a vote of thanks to the orator, which was seconded by Sir WILLIAM CHURCH and carried with acclamation.

The Fothergillian Medal was presented by the President to Sir Almroth Wright for his work on opsonins.

ROYAL SOCIETY OF MEDICINE.

THERAPEUTICAL SECTION.

AT a meeting on April 28th Dr. BURTON BROWN, President, in the chair, Dr. LEONARD GUTHRIE, in a paper upon rheumatism and chorea in children, maintained that salicylate of soda and allied drugs were palliatives but not cures for rheumatism. Carditis and nodules appeared in patients fully under the influence of chorea, and the use of large doses of salicylates was not devoid of danger. Sodium bicarbonate was an antidote to the poison of salicylates, but to give poison and then antidote at the same time was a questionable therapeutic measure. The treatment of the acute stage of chorea was by rest in bed, quiet, isolation, protection from injury, nourishing food. In severe cases hypnotics were necessary—chloral and bromide, chloralamide or chloretone. Arsenic, given on the intensive method, was not to be commended. Ill results in the shape of gastro-enteritis and peripheral neuritis were too frequent. Dr. CECIL WALL said that some statistics, published in the *Transactions of the Therapeutical Society* for 1905, and compiled by him in an attempt to estimate the effect of different drugs in chorea, showed that of cases treated by arsenic 38 per cent. were cured in less than two months. Similar figures were given for treatment with salicylate of soda and with other drugs. Of cases treated by aceto-salicylic acid 92 per cent. were discharged from hospital in less than two months, the majority in four weeks from admission. After two more years' experience of this treatment, he still felt very strongly in favour of it. With regard to the dangers of the use of aspirin—the vomiting to which Dr. Guthrie had alluded—it was possible to avoid it if the aspirin were only given when there was food in the stomach. Moreover, it should never be given in tabloid form, but invariably as a powder. Very large doses would give rise to haematuria. In violent cases sedatives, such as chloral and chloralamide, were useful. The bromides were very harmful. Any such depressing drug was liable to exaggerate rather than ameliorate the condition. Dr. D. B. LEES, believing that chorea was probably the effect of the rheumatic toxin on the brain, advocated the use of very large doses of salicylate of soda. They were more readily tolerated if a double dose of sodium bicarbonate was given at the same time. When unpleasant symptoms occurred, the dose should be decreased, not omitted. It was usually possible to educate the patient to tolerate without difficulty three or four times the dose which at first caused unpleasant symptoms. The use of ice in pericarditis was of such benefit that he was surprised to hear Dr. Guthrie say that he gave opium in that condition because he did not know what else to do. Dr. GORDON SHARP had never found that depression resulted from the use of salicylates, and agreed that large doses did great good. As regards arsenic, his own experience in the North of England was that it was a most valuable drug. There must be something peculiar in the London constitution that could not stand that important drug. Dr. J. GRAY DUNCANSON also found treatment by arsenic successful in Scotland.

SECTION OF SURGERY.

Surgical Treatment of Sciatica.

AT a meeting on May 12th, Mr. WARRINGTON HAWARD, President, in the chair, Mr. CRAWFORD RENTON, in a paper on sciatica, directed special attention to the form of peri-neuritis in which, after an acute attack had subsided, the patient was free from pain only so long as he kept perfectly still; while any attempt to walk brought on within ten or fifteen minutes severe pain. Such cases were very intractable, and resisted all forms of drug or physical treatment; the simpler forms of surgical measures, too, were useless, because powerless to destroy the adhesions to which the pain was due. To cure the patient, the thicker adhesions must be cut through and removed, whilst the nerve trunk must be carefully stripped of even the most delicate and tenuous inflammatory attachments. An experience of some thirty-two cases permitted the good results to be looked upon as cures. Mr. HAWARD asked if any attempt was made to prevent the reformation of adhesions; Mr. EDWARDS wished to know how the adhesions were located and what length incision must be employed. Dr. CURTIS WEBB believed that some, at least, of the cases described would have yielded to static electricity. Mr. RENTON replied that he took no special measures to prevent adhesions reforming; he found an incision in the usual position and about 3 to 4 in. in length quite sufficient. He reserved his operation for cases in which other methods had failed.

Ulcerative Proctitis.

Mr. F. C. WALLIS and Dr. IRONSIDE BRUCE, in a paper on the treatment of ulcerative proctitis by zinc cataphoresis, said they were led to seek some such method by the very disappointing results of any measures short of excising the affected area and bringing down healthy mucous membrane to the skin margin. The usual routine was to introduce a rod of zinc wrapped in several layers of lint soaked in zinc sulphate; this was made the positive pole, and a large indifferent electrode, connected with the negative, was applied to the back; 20 to 30 or 35 milliampères was found sufficient, and the applications were made about once a fortnight or oftener. It was found best to use a Kelly's tube to facilitate the introduction of the electrode. For cases requiring applications higher up the bowel, the authors had invented a special electrode so arranged as to allow tamponage of the bowel by an inflatable bulb and subsequent distension of the part below with a solution of zinc sulphate, four grains to the ounce. Five successful cases were detailed. Dr. CURTIS WEBB said he had had eight or ten cases of ulcerative colitis and had treated them by cataphoresis, but he had used a one-tenth per cent. solution of silver nitrate. Mr EDWARDS said that for low cases of infective ulceration he found curetting and escharotics adequate, whilst for those in which the whole large intestine was involved he relied upon appendicostomy. Mr. WALLIS, in replying, said that he had not used cataphoresis for ulceration high up in the colon, but he had used it for fistula and was trying it for sinuses. Dr. IRONSIDE BRUCE, who likewise replied, said that zinc was used in preference to silver, not because it caused less pain after the application, though this was the case, but

because zinc salts were so much more easily dissociated. Cocaine might be used to facilitate introduction of the electrode, but was ineffectal to stop the pain which came on some hours after. They certainly thought an anaesthetic desirable.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

CASES AND SPECIMENS.

AT a meeting in Leeds on May 15th, Dr. A. J. WALLACE (Liverpool) President, in the chair, Mr. R. FAVELL (Sheffield) exhibited a specimen of fibroma of the ovary successfully removed by abdominal section from a patient, aged 25 years, who had complained of abdominal pain for three years. Menstruation was regular, of the twenty-eight day type, and lasted three days. The tumour was of the diffuse variety, undergoing cystic degeneration, and microscopically proved to be a pure fibroma. There was no ascites. Dr. HELLIER (Leeds), related a case of *Cornual gestation* in one horn of a bicornuate uterus, in which rupture was attributable to a blow. The patient was aged 23, and had enjoyed good health previously. Her first pregnancy terminated in normal labour in April, 1907. She ceased to menstruate in the following November, and was perfectly well until March 15th, 1908, when about 12 p.m. she received a violent blow on the lower part of the abdomen on the right side. Either she was directly kicked in this region, or was driven against a sharp corner. She felt faint at once, and was unable to lie down properly on account of vague abdominal pain. She became seriously ill next day, and on March 17th required catheterization, and was admitted into the Leeds Infirmary. The lower half of the abdomen was full and tender, respiratory movements in this situation were defective, and there was some dullness in the right flank. The pulse was weak and rapid. The usual signs of pregnancy were present. It was considered that the case was one of internal haemorrhage, and that either the uterus was ruptured, or some vessel in the pelvis. There was no vaginal bleeding. Abdominal section was performed the same day, and a four-months fetus enveloped in the amnion lay superficially as soon as a median incision was made. A very large quantity of blood clot was in the abdomen and pelvis. The sac lay on the right side, and looked very much like a ruptured uterus with retracted walls, the placenta having escaped into the abdomen, but retaining a slight attachment to the interior of the sac. On the left of the sac there was a uterus of normal size, to which it was attached by a thin, fleshy pedicle about 2½ in. broad and ¼ in. to ½ in. thick. This was ligatured and divided, the ovarian artery being separately secured. The abdomen was cleared of clot and closed without drainage. The pulse varied from 144 to 156 immediately after the operation, and the temperature rose to 101° on the second night. After this the patient made an uninterrupted recovery, and was discharged quite well on April 11th. On examination of the specimen, which was also shown, the sac wall appeared to consist of muscular fibres exactly like the uterine muscle, and this was confirmed microscopically. The Fallopian tube was attached on the distal side of the sac. The uterine end of the round ligament was attached in front of, and slightly below, the tube. The cornu did not communicate with the cavity in the left side of the uterus. The exhibitor thought it a curious coincidence that the blow which caused the symptoms should have fallen on the gestation site; if the patient had succumbed to the injury, an interesting medico-legal question would have been raised, and the case might have been compared to those in which blows on the chest had ruptured aneurysms. Dr. LLOYD ROBERTS (Manchester) described a case of *Epithelioma of the left labium majus* recurring in a woman, aged 45, eighteen months after the removal of the clitoris and right labium majus for a similar growth. Complete relief followed for twelve months, when a painful nodule appeared on the left side. It did not seem to be a direct extension from the original growth, as healthy tissue intervened between it and the scar. No glandular infection was found. The growth was widely excised. The chief feature of interest lay in the possibility of the second growth being due to direct contact and infection from that in the right labium. Dr. CROFT (Leeds) mentioned a case of pyelonephritis in a primiparous patient aged 26. Persistent vomiting, abdominal pain, and pyuria, with severe febrile disturbance, were present, and it was deemed advisable to terminate the pregnancy at the fifth month. The membranes were punctured, and following the delivery all the symptoms subsided: since then the pyuria had been gradually disappearing.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on May 14th, Sir HERBERT ELLIS, President, in the chair. Lieutenant-Colonel A. DUNCAN in a paper on the effects of *Heat in the tropics*, said there were four main theories regarding sunstroke: the caloric, the toxic, the microbic, the actinic. The author favoured the latter. He had himself greatly suffered from sun effects until he took to wearing orange-red coloured protections for the head and spine, as advocated by Colonel F. N. Maude, C.B., R.E. There were two features in his own case not described in text-books: (1) After the initial violent symptoms of sunstroke had passed off he was tormented for from three to five months with the most excruciating pains in the head, coming on regularly as soon as the sun had risen and lasting all day until it had set. (2) He experienced at intervals for about eighteen months sudden attacks of distressing palpitation accompanied with a feeling of impending dissolution. With regard to prickly heat he agreed with the view of Dr. Pearse of Bombay, that the sebaceous glands were primarily at fault, their own secretion caused an acute obstruction which was then secondarily maintained by the continued irritation of excessive perspiration. Dr. Pearce's treatment of applying oily preparations to the body surface and the wearing of cotton next the skin was attended with success, but the author himself would not advise the use of cotton underclothing. In the discussion which followed, all the theories regarding sunstroke received a certain amount of support, but the actinic theory was generally adopted. Testimony was given as to the value of red or orange lining for the head-dress and the wearing of a garment of the nature of a singlet and spinal pad, both coloured red. It was stated that with the old pattern red uniform the sun was much less powerful for harm than with the modern dress. Sunstroke and heatstroke were regarded as distinct diseases. On the subject of cotton underclothing it was pointed out that Indian cotton was absorbent, and that while the twill lining of India was comfortable and safe, a garment of English manufacture was unsuitable.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting on May 8th, Dr. W. EWART, who was in the chair, read a paper on "The empty bronchus treatment by posture in the bronchiectasis of children." The treatment, he said, was likely to be successful in proportion to its early adoption, and continuity was essential. The bronchus must be kept empty and the lung must be kept active both by night and by day. Dr. PHILIP G. LEE (Cork) reported the following case for diagnosis: The patient was a strong, healthy child of 2 years and 6 months. Four weeks previously she had marked wry-neck, but otherwise was perfectly well; a week later she had extreme retraction of the neck; while on her way to see him she fell, and when he saw her both legs were paralysed. Four days later she had three convulsions, and the retraction of the neck completely disappeared. Subsequently the calf muscles wasted with the reaction of degeneration. There was no paralysis of the bladder or rectum. The peculiar features of the case were the nature of the onset and the entire absence of fever and malaise. Dr. PARKES WEBER, Dr. PORTER PARKINSON, and the CHAIRMAN discussed the case, considering it one of anterior poliomyelitis. Mr. HUGH LETT showed: (1) A case of supernumerary digits on hands and feet in a baby 2 months old. A similar condition was exhibited in the mother and brother of the patient. (2) A baby aged 15 months with hydrocephalus, genu recurvatum, and talipes valgus. The genu recurvatum had been treated by massage for six months with considerable improvement.

REVIEWS.

WHITLA'S MEDICINE.

THE remarkably comprehensive manual of the *Practice and Theory of Medicine* would not be the work of Sir WILLIAM WHITLA[1] if it were not characterized by great literary ability and skill. In two small octavo volumes of the usual size of Renshaw's manuals Sir William Whitla has contrived to collect together an extraordinary amount of information; and although it would be impossible in the allotted space to discuss every point of interest as fully as some may desire, yet we have tested the book over and over again, and found that our point had not been missed by the author, although only a word or two might have been allotted to it. The only serious complaint that we could imagine a reader bringing against this book is the brevity of the sections in each article devoted to treatment, but in his preface the author says that he intends these volumes to be regarded as an introduction to his *Dictionary of Treatment*.

It is, of course, inevitable that the writer of a systematic work of this kind, however great his experience and his industry, should not have an equal practical acquaintance with all the subjects on which he is impelled to write. It is therefore almost a truism to say that the articles in the work before us vary in merit; but it is nevertheless only just to add that all attain a very high level of excellence. The articles on dyspepsia may be taken as an example of the method of the book; there are two, one under the head of simple dyspepsia, and the other under that of dyspepsia the result of gastric neurosis. In some preliminary remarks Sir William Whitla lays it down that the term "simple dyspepsia" should be restricted to a type of case often met with in which there is no organic or inflammatory lesion, and in which the nervous apparatus presiding over the digestive process is not in an abnormal condition. The symptoms are then described under the head of acute and chronic dyspepsia respectively. In the second article cases of neurosis are divided into (1) sensory, (2) secretory, and (3) motor neuroses; the latter, again, is subdivided. This classification strikes us as highly practical, and illustrates the use to which the book may be put for immediate reference when the practitioner is in search of hints in diagnosis and treatment. In the article on gout the author states, apparently with approval, that the trend of opinion seems to be in the direction of regarding the presence of uric acid in the blood and its deposition in the tissues as but a symptom of some grave error in metabolism, probably caused by a toxin. The forms of chronic Bright's disease are classified as large white kidney, small white kidney, small red kidney, and amyloid. Sir William Whitla protests against the confusion produced by classifying types of chronic Bright's disease as chronic, tubal, and chronic interstitial neuritis, but we must take exception to the description of the symptoms of amyloid kidney, inasmuch as they must be held to be attributed not to waxy degeneration of the blood vessels of the kidney, but to a form of chronic nephritis which is often complicated by the presence of this degeneration; where waxy degeneration occurs alone, as it does sometimes, the quantity of urine is not increased, the specific gravity is not low, the amount of albumen is small, and there are few, if any, casts, so that such a question as the discussion of the differential diagnosis between diabetes insipidus and waxy kidney (p. 271) could only be justified by acceptance of a purely conventional description of the latter condition.

Sir William Whitla draws a sharp distinction between cholera infantum—a term which he uses as identical with summer diarrhœa—and acute entero-colitis, or inflammatory diarrhœa. We are aware that there is a great deal to be said for this view, but it must be confessed that the diagnosis between the two conditions is difficult, and that a case of acute inflammatory diarrhœa occurring in the summer is with difficulty, if at all, to be distinguished from acute epidemic diarrhœa of children.

In the article on influenza the author, in addition to the ordinary types, febrile, catarrhal, pulmonary, abdominal, and nervous, recognizes a cardiac type, the main feature of such cases being sudden cardiac failure dating from the onset of the disease, showing itself by extremely rapid and feeble pulse, dyspnœa, and a tendency to syncope which may prove fatal during the first week. Among the complications of this type he mentions phlebitis and malignant endocarditis or pericarditis.

In the article on phthisis Sir William Whitla has some excellent remarks on the part played by heredity, and we rather wish he had had the courage to drop the phrase "hereditary predisposition" altogether, inasmuch as his own explanation does not really involve this assumption, which is so distasteful to many persons. After pointing out that the enormous amount of tuberculosis existing in the cattle affording the milk and meat supply of the world makes it obvious that the bacillus must be practically ubiquitous, and that some process of immunization must be in operation among the majority of persons or otherwise the human race would soon disappear, he argues that the minority must be held to succumb, because the immunizing power inherent in all human beings is either continuously lower in them than in the majority, or more readily undergoes diminution under unfavourable hygienic surroundings. Sir William Whitla, who from the fact that he practises in Ireland unfortunately has had special opportunities of watching family histories bearing upon this point, tells us that he can recall instances in which one young member after another of a large family in a small Irish homestead was compelled to push out abroad into different climates, each dying of phthisis at middle age or beyond it; in one remarkable instance twelve members succumbed in this manner, though several of them left home before their successors were born, and some lived to the age of 40; he therefore does not accept Cornet's theory that such instances are to be accounted for by the assumption that the children were already tuberculous before their separation. He further observes that in examples of this kind the disease may resemble a family and not a hereditary disease, in so far as both parents may survive their entire offspring and die at extreme old age, the predisposition or, as we should prefer to say, the defective immunity being transmitted, as in the case of bleeders, by one or other or both of them. In the section of this article dealing with diagnosis, we observe that the tuberculin test is referred to as quite safe when applied under careful regulations, and that the author regards Calmette's ophthalmo-reaction as a very marked advance in the physical diagnosis of tuberculosis in all its forms. There is a good account of the theory of opsonins and of the application of the opsonic index as a guide to the tuberculin treatment.

In a book containing so enormous a mass of material it would of course be easy to find points upon which to disagree with the author, and we may perhaps enter a protest against the statement that the Talma-Morison operation of epiplopexy will become the routine treatment of alcoholic cirrhosis in the future. We think that any practitioner who proposes to adopt this line of treatment should study the admirable article by Mr. Sinclair White published in the BRITISH MEDICAL JOURNAL in 1906, vol. ii. p. 1287. If he does so, he will perceive that the reference in the text of the treatise before us to "continuous draining" does not give quite a correct impression of the line of treatment recommended as the result of practical experience by Mr. White.

The account of the treatment of diabetes, a subject of great importance to practitioners, is not altogether satisfactory, for it is purely quantitative and not qualitative, as we venture to think the rational treatment of diabetes should be.

In conclusion, we may repeat the opinion with which we began, that the work is remarkably comprehensive, and may add that there is throughout an individual note which gives unity to the whole.

[1] *A Manual of the Practice and Theory of Medicine.* By Sir William Whitla, M.A., M.D., LL.D. In two volumes. London: Henry Renshaw. 1908. (Cr. 8vo, pp. 1900. £1 12s.)

VISUAL EXAMINATION OF AIR PASSAGES AND STOMACH.

DR. CHEVALIER JACKSON'S work on *Tracheo-bronchoscopy, Œsophagoscopy, and Gastroscopy*[2] reminds us that amongst the more noteworthy advances in clinical medicine during recent years a prominent place should be accorded

[2] *Tracheo-bronchoscopy, Œsophagoscopy, and Gastroscopy.* By Dr. Chevalier Jackson. St. Louis, Mo.: The Laryngoscope Company. 1907. (Imp. 8vo, pp. 200, 83 illustrations, 5 plates. 17s.)

to the further development in the technique of direct ocular examination of the larynx, the trachea, the bronchi, the oesophagus, and the stomach. The technique and the instruments required have been brought up to a standard which makes groping in the dark after disease and foreign bodies in these regions hardly permissible in the present day; as the author remarks:

The oesophagus has been for some years granted, though somewhat grudgingly, a place among the organs to be examined.

Sir Morell Mackenzie—who must be regarded as the father of oesophagoscopy—as far back as 1880 demonstrated that it was possible to pass a rigid instrument down the oesophagus and through it, not only to make important clinical observations, but also to remove foreign bodies and pieces of new growth for examination. By November, 1880, Mackenzie had used the instrument on fifty patients, and had succeeded thirty-seven times. By the labours of Professor Gustav Killian on similar lines the trachea and bronchi have in recent years been brought within the range of direct ocular investigation. Dr. Chevalier Jackson has demonstrated how the stomach may be examined by endoscopy. The book is divided into three parts. The first, after some introductory chapters on the history, the instruments, the technique and the acquisition of skill, deals with direct laryngoscopy and tracheo-bronchoscopy, or the inspection of the interior of the trachea and bronchi with the aid of tubes which serve as specula, bringing into view successively the various passages, by pushing aside structures that would obstruct the view, or by dragging the passages into a new position where they will be in the direct line of vision. The second part entirely concerns oesophagoscopy, and the third describes gastroscopy which is usually practised through the natural passages, though it is occasionally done through an abdominal wound or fistula. It is unnecessary to dwell upon the value to medical science of the development of these highly special and technical methods of examination of vital regions. To appreciate its value, one has only to recollect the difficulties in the diagnosis and extraction of foreign bodies, and the risks to life incurred by patients who have had to undergo external operations for their removal. At the same time it is as well to emphasize the fact that these special examinations are not without dangers and contra-indications, as well as difficulties. To these the author rightly draws attention, for it would be deplorable were this relatively recent development in medical science to meet with a fate that has befallen more than one advance in medicine, and fall into abeyance, or in any way be retarded by a lack of proper regard for the dangers and difficulties against which even the most experienced have to contend. For these reasons the dangers, the difficulties, and the contraindications might well have formed the subject of a separate chapter in the earlier part of the book. The volume concludes with an excellent and most complete bibliography, a glance at which at once demonstrates the service rendered by Dr. Chevalier Jackson to those following this special department of practice. Hitherto the only available information in the English language on the subject have been scattered reports of cases. This is the first book published in the English language in this rapidly developing department in special surgery. Dr. Jackson's monograph, which is profusely illustrated, having numerous pictures in the text and five coloured plates, is a noteworthy addition to the literature and doubtless will be accorded an enthusiastic reception.

THE ROENTGEN RAYS.

THE second volume—the first was published three years ago—of DESSAUER'S essays on the subject of curative rays,[3] is in large part devoted to the consideration of how far *x*-ray energy may be utilized therapeutically in deep-seated diseases without injury to the skin or intervening tissues. By carefully noting how much sooner labile cells succumb to the influence of radiation than normal cells, and generally by observing the differences in the reaction of the diseased and healthy parts to the *x* rays, the author arrives at some interesting conclusions. To those who follow German this little book will furnish a concise summary of the manner in which the newer and bolder radiotherapy is understood and practised in the country of Roentgen. The author, who is known beyond the borders of Germany for the improvements he has introduced into *x*-ray apparatus, claims with some justice to have been a pioneer in this matter, inasmuch as for years past he has given expression to the belief that *x*-ray therapy is at least equally as promising as *x*-ray diagnosis, and he takes particular pleasure in noting how well grounded and indubitably right are methods which for a long time were resisted by prejudice and conservatism. He also devotes attention to the danger involved in the use of the Roentgen rays, although he thinks that this has been somewhat over-rated.

The making of an atlas of the normal for the use of the surgeon is no inconsiderable business, but the making of a pathological atlas comprehensive enough to be of practical value and yet not unnecessarily tedious is a work that might well daunt the bravest. Dr. GRASHEY'S *Atlas* of surgical-pathological Roentgen pictures[4] is, in its own sphere, surely the last word in atlas-making. It is the sixth of the Lehmann series, and the second of those which are based upon *x*-ray diagnosis. No trouble seems to have been spared in making the choice of representative cases, nor expense in their suitable reproduction. The different conditions, which are separately and amply treated, include diseases of the bones and joints, deformities, tumours, pathological changes in the soft parts, dislocations, fractures, and the presence of foreign bodies. Each condition has its explanatory chapter, as well as its illustrated section, and the lucid text will assist the individual worker in the interpretation of *x*-ray shadows he makes for himself. The chapter on dislocations, for instance, deals not only with the ordinary displacements of the separate joints, but also with incomplete dislocations, those accompanying fractures, and others which are frequent in children; other abnormal conditions are treated in a similarly thorough manner. The compiler reminds his readers that a note of interrogation stands after much Roentgen diagnosis, and therefore he emphasizes the importance of using the Roentgen method in combination with others, on the principle that the more methods the surgeon has at his command the less subject to error will be his diagnosis. In the chapter dealing with foreign bodies, Dr. Grashey sets forth his usual plans of examination, the position of the tube, etc. The reproductions are carried out on a twofold system, some of them being in half tone and others photographically reproduced on gelatinized paper. An example or two of the plastic method of reproducing *x*-ray pictures in relief—a method which was brought forward at the Roentgen Congress in Germany two years ago—might very well have been included, if only to show how some of the difficulties incidental to reproduction can be overcome; but in so far as the method of reproducing the *x*-ray picture direct from the ordinary negative is concerned, the present publication is a triumph for radiographer and block-maker alike.

TEXTBOOKS OF PHYSIOLOGY.

PROFESSOR HOWELL is to be congratulated on being called upon to produce a new edition of his excellent *Textbook of Physiology*[5] within a year and a half of the appearance of the first. He has made no fundamental change in the arrangement or scope of the book, but has added and changed freely where required so as to keep the book abreast of the times. At the same time he has deleted such matter as could be spared in order to prevent an increase in the bulk of the book. That he should do this is no more than necessary, for, as the book numbers over 900 pages, the task set before the student is no light one. How the unfortunate medical student survives under the continual growth of the textbooks he is set to digest is a mystery. If we think of the thin and

[3] *Heilende Strahlen. Arbeiten über die Grundlagen und die praktische Ausübung der Strahlentherapie.* Von Ingenieur Friedrich Dessauer. Vol. ii. Würzburg: A. Stuber (Curt Kabitzsch). 1908. (Royal 8vo, pp. 106; 7 illustrations. M. 2.50.)

[4] *Atlas chirurgisch-pathologischer Röntgenbilder.* Von Dr. R. Grashey. Lehmann's Medical Atlas Series, vol. vi. Munich: J. F. Lehmann. 1908. (Post 4to, pp. 160; 345 illustrations, of which 105 are photographically reproduced on gelatinized paper; also 66 sketches in text. M. 22.)

[5] *Textbook of Physiology.* By Professor Howell. Second edition. Philadelphia and London: W. B. Saunders and Co. 1907. (Med. 8vo, pp. 939; figs. 281, 18s.)

reasonable-looking size of *Gray's Anatomy* and *Kirkes's Physiology* twenty years ago and the appalling size of these tomes to-day, the explanation of the falling entries of medical students in England seems partly explained. In Scotland students need buy no textbooks, and can pass on the lecture notes which they take down almost verbatim. The publishers should reduce the uncomfortable weight of Professor Howell's textbook by printing it on thin paper, as was done in their new edition of Boehm and Davidoff's *Histology*. They know how to do this, and therefore have no excuse for burdening the readers with the gross weight of the volume in addition to the philosophic weight of the learned author. For the English student, too—who likes the book—a special edition with English spelling should be prepared. We do not want our students to learn to destroy the fine sound of the words "honour," "labour," by learning first to spell and then to pronounce them as "honor" and "labor." The coloured plate representing the nuclei and origins of the cranial nerves we regard as set to catch the purchaser's eye rather than as an aid to learning. It is a mistake to confuse the clearness of the student's mental vision by such figures, which mingle diagrammatic representation with drawings from Nature. All such criticisms are, however, on points of minor importance, and do not deter us from saying that this is one of the most interesting and stimulating textbooks of physiology at present in existence.

Professor NÖEL PATON has issued a new edition of his *Essentials of Human Physiology*,[6] the third demanded since the book first came out about four years ago. The popularity of the book is well deserved. It is written with great lucidity, and illustrated by many excellent and simple diagrams which enable the student to fix the facts by visual as well as by word memory. Those parts of physiology to which due prominence has been given have a direct bearing upon the study of medicine. The book is designed to be used for systematic study in conjunction with a practical course, such as is given in Schäfer's *Histology* and the *Practical Physiology* of Beddard, Pembrey, and others. In his third edition Professor Paton has rewritten the parts on the chemical constitution of the proteins as elucidated by Emil Fischer, and on reflex action so as to include Sherrington's valuable work, and the part dealing with the digestion and absorption of proteids, etc. This is probably the most suitable book for the ordinary pass man now on the market. But by itself the book is not enough. The student needs in addition a course of lectures from a teacher capable of giving him a wider outlook than can be gained from the author's terse expression of physiological facts.

Professor NÖEL PATON'S *Essentials of Physiology for Veterinary Students*[7] seems to be the same as his book for medical students, with the addition of a few plates showing the structure of the horse, with a few passages inserted here and there dealing with the gait, digestion, metabolism and secretion of this animal, and the pig and cow. The value of the excellent plate of the nervous system of the horse taken from Chauveau is greatly lessened by the absence of any descriptive text. As most experimental work is done on the domestic animals much of the same ground must be covered by the veterinary as by the medical student, but we cannot help thinking that a veterinary textbook should be written from the standpoint of the domestic animals, and illustrated by comparisons with human physiology, and not vice versa.

Professor RENÉ DU BOIS-REYMOND has written a textbook[8] designed to take the place of the well-known textbook of *Physiology* of the late Immanuel Munk which for many years occupied a place in the list of Messrs. Hirschwald, the Berlin publishers. Professor du Bois-Reymond has continued to uphold the famous name of his father in the annals of physiology, and has made himself an authority on a difficult subject—the movements of the joints and locomotor mechanisms. He has executed this task in rather a dull but perfectly correct manner, producing a textbook of moderate dimensions, and containing a clearly written and accurate account of the principles of physiological science. The success of the book lies in the fact that the author gives in succinct form a definite view of each subject based on opinions reached by himself after many years of study. He quotes almost no authorities and discusses no rival hypotheses, and thus makes the task of the student simple and definite. To the more strictly human side of physiology Professor du Bois-Reymond appends interesting but brief comparisons and illustrations drawn chiefly from Ellenberger's work on comparative physiology. To give full-page illustrations of Regnault and Reiset's complicated respiratory apparatus, now over 70 years old, and of Pettenkofer's, seem to us to be not only out of date but a mistake. Simpler figures of more useful and modern methods, such as Zuntz's or Haldane and Pembrey's, might have been chosen. So, too, in dealing with the doctrine of cerebral localization. It is absurd to give the student no other chart than that of the dog's brain representing the very questionable localization doctrine of H. Munk. The book is dedicated to Professor H. Munk, but the author nevertheless need not, in respect to his master, have omitted the charts of the anthropoid brain worked out by Sherrington and Grünbaum, or even the pioneer but admirable work of Hitzig, which have, or has, so direct and important a bearing on man.

PRACTICAL PHARMACY.

IN LUCAS'S *Practical Pharmacy*[9] the author has given a wide meaning to the term "pharmacy," and has included much information on subsidiary subjects which fall within the province of the pharmacist. The book has been largely rewritten for the present edition, and recent additions to pharmaceutical knowledge incorporated with it. The first hundred pages are devoted to descriptions of the processes and apparatus employed in the production of galenical preparations and chemicals; much of the apparatus described is only suitable for work on a large scale, but the excellent illustrations which supplement the text will render it quite intelligible to students who have no opportunities of handling such plant for themselves. The pharmacopœial preparations are then discussed in their respective classes, and this is followed by chapters on the assay of alkaloidal drugs, of essential oils, and of some other organic substances. The fourth part of the book consists of a treatise on dispensing, in which the methods to be adopted and the difficulties to be avoided in producing mixtures, pills, suppositories, etc., are described. A section containing tests for pharmacopœial substances, tables of strengths, doses, synonyms, specific gravities, and much other useful information concludes the volume. It is to be regretted that the author has occasionally put forward statements without comment which differ materially from those ordinarily accepted; thus, among the characters of cod-liver oil, the iodine value is given as 141.03 to 145.41 (the use of two decimal places giving a false appearance of precision as to the limits), and the unsaponifiable matter 4.12 to 6.21 per cent., whereas the best recent authorities agree in giving the iodine value as about 167, and the unsaponifiable matter in a genuine oil as not over 1.5 per cent. Again, the statement that aloin is practically all imported into this country from the United States, and "contains so much resinous matter that it can scarcely be regarded as more than decolorized watery extract of aloes," will certainly not be assented to by British manufacturers. In spite of such defects, however, the book will prove extremely useful to the medical or pharmaceutical student.

VACCINATION LAW.

Shaw's Manual of the Vaccination Law[10] will prove a useful guide to those who wish to understand the Vaccination

[6] *Essentials of Human Physiology.* By Professor Noël Paton. Third edition. Edinburgh and London: W. Green and Sons. 1907. (Demy 8vo, pp. 492. 12s.)

[7] *Essentials of Physiology for Veterinary Students.* By Professor Noël Paton. Second edition. Edinburgh and London: W. Green and Sons. 1908. (Demy 8vo, pp. 480. Figs. 177. 12s.)

[8] *Physiologie des Menschen und der Säugethiere.* By Professor René du Bois-Reymond. Berlin: A. Hirschwald. 1908. (Roy. 8vo, pp. 708; 122 figures. M. 14.)

[9] *Practical Pharmacy.* By R. W. Lucas, F.I.C., F.C.S. Second edition. London: J. and A. Churchill. 1908. (Royal 8vo, pp. 432, 224 illustrations. 12s. 6d.)

[10] *Shaw's Manual of the Vaccination Law.* Containing the Vaccination Acts, 1867, 1871, 1874, 1898, and 1907; the Vaccination Orders, 1898, 1899, 1905, and 1907; and the Instructional Circulars and Memoranda issued by the Local Government Board. With Introduction, Notes, and Index by John Lithiby, C.B., LL.B. Eighth Edition. London: Butterworth and Co.; and Shaw and Sons. 1908. (Cr. 8vo, pp. 332. 7s. 6d.)

Acts now in force in this country. Complete details are supplied of the five Vaccination Acts passed from 1867 to 1907. All the statute law in force on the subject is included, as well as all the decisions of the High Court bearing thereon. Much relief from the dry details of Acts now superseded, and of orders no longer in force, will be found in the introduction. In this the author has concentrated into 41 pages a historical statement of the law and an epitome of the principal conclusions of the Royal Commission on Vaccination. This effort, intended by the author to assist the vaccination officer in what is described as a duty which "devolves upon him to persuade rather than to compel parents to avail themselves of the protection afforded by vaccination," possibly throws a sidelight on the departmental view of the effects of the modifications in the provisions of the law. The invitation to exemption and the absurdly easy facilities provided for making the new declaration, deprive the vaccination officer of the opportunity to exercise to any advantage this new function, which is now part of his duty according to the *Manual*. The vexed question of the fees payable to public vaccinators is dealt with by reference to the Departmental Inquiry appointed in 1903. The introduction deserves a much wider circulation than the *Manual* can possibly be expected to attain. As a work of reference it will be invaluable to all engaged in vaccination work or interested in the administration of the Vaccination Acts.

NOTES ON BOOKS.

A USEFUL pamphlet issued by the Bombay Bacteriological Laboratory[1] describes in detail how Haffkine's plague prophylactic or vaccine is prepared, and also the methods employed in using it. In the history of the Bombay Bacteriological Laboratory which forms an introduction to the pamphlet, we are reminded that the institution was originally started by Mr. Haffkine in 1893, a fortnight after plague had been officially declared to exist in Bombay; in this laboratory he first devised and prepared his plague prophylactic, which has probably saved thousands of lives. From this small beginning the institution (first known as the Plague Research Laboratory) has gradually grown in dimensions, until it is now a general research institute for the Bombay Presidency, though plague work still remains its chief duty. The recent Plague Commission also used it, and several of their discoveries as to the part fleas play in the transmission of the disease were made at it. Recently, in a lecture delivered before the Epidemiological Society in London, Mr. Haffkine strongly urged the use of his vaccine treatment, expressing the belief that it is the most efficacious of preventive measures, and the enormous difficulty in the way of killing off rats and their fleas tends to support this view. The pamphlet describes antiplague measures under two heads: (1) Measures of permanent utility, and (2) measures of temporary utility. The first part deals with measures directed against those habits of rats and men which bring about the association of the one with the other, and urges the erection of well-built houses, with concrete floors and roofs of materials that will not harbour rats. The second part contains a description of (*a*) measures for protecting the people in their homes from rats and their parasites (rat destruction); (*b*) measures for removing the people from their homes in order that they may avoid infection from rats and their parasites (evacuation); and (*c*) measures rendering the individual to a high degree immune from attack and death from plague (inoculation). It is with the latter method that the pamphlet specially deals, and minute details of the method used in the laboratory for the preparation of the plague vaccine are described, from the beginning of growing the plague bacilli to the operation of inoculating the individual. It is very important that none of these steps should be omitted by any one engaged in this work, so the publication will be of great value to students in other countries where it is proposed to employ this method. The pamphlet contains very good reproductions of a number of excellent photographs illustrating the work carried on in the laboratory.

Dr. HEARSEY, Principal Medical Officer of Nyasaland, in a pamphlet entitled *Notes on the Treatment of Blackwater Fever*, strongly recommends a modified Sternberg treatment as best for this disease. He states that he has now treated 21 consecutive cases without a single death, and other medical officers from the same protectorate and on the West Coast of Africa have also had good results. The following is the method of administration: Sodium bicarbonate and liquor hydrargyri perchloridi, in doses of 10 grains of the former and 30 minims of the latter, are given every two hours for the first twenty-four hours, and subsequently every three hours until the urine is free from haemoglobin. With the exception of the occasional occurrence of mercurial stomatitis, no ill-effects have resulted in Dr. Hearsey's cases; but, on account of this risk, the practice on the West Coast of Africa is to give the mixture every four hours only until the urine begins to clear, and then three times a day until the urine has been free of haemoglobin for twenty-four hours. It is claimed that the combined action of the two drugs is antacid, diuretic, and gastro-intestinal disinfectant, and that vomiting is thus allayed, diuresis freely established, no suppression of urine occurring. Large doses of quinine, recommended by some, are strongly condemned, and diet and nursing are also given their place in the routine treatment.

In a volume entitled *Careers for Our Sons*[2] the Rev. G. H. WILLIAMS, M.A., head master of Carlisle Grammar School, endeavours to furnish parents and guardians with practical information as to the possibilities which lie before a boy on the completion of his ordinary education. The careers dealt with are those of the church, the army and navy, the mercantile marine, law, medicine, teaching, the civil service, engineering, journalism, farming, commercial work in the city, and various occupations in the colonies. Under each of these headings is set forth some description of the financial, educational, and other fences which must be crossed by any one who desires to take up the work in question and of what return he may expect to get from it. The book may be useful to many hesitating parents, and would be valuable to a great many more were the information as to work in the colonies, in the city, and in other less familiar directions somewhat more specific and detailed.

The thirty-eight annual issue of the *City of London Directory*[3] has now been published, and constitutes, like its predecessors, an invaluable reference book for all those who have dealings with the City of London. The fact that its publication is always delayed until changes of address, so frequent at the beginning of the year, have been completed, alone makes it of exceptional value; and in addition there is a great deal of information about city institutions, municipal, official, and commercial, such as is contained in no other reference volume. The list of members forming the various committees of the London County Council is a case in point.

[1] *The Bombay Bacteriological Laboratory. The Preparation and Use of Antiplague Vaccine.* Bombay: Printed at the Times Press. 1907.

[2] *Careers for Our Sons.* By the Rev. George Williams, M.A. Oxon. Carlisle: Charles Thurnam and Sons. London: Simpkin, Marshall and Co. (5s., post free.)

[3] *The City of London Directory for 1908.* Thirty-eighth annual edition, including a coloured map. London: The City Press Office, Aldersgate Street. Price 12s. 6d.

MEDICINAL AND DIETETIC PREPARATIONS.

Black Mercurial Lotion Soloids.

THE extemporaneous production of liquid medicaments of various kinds is continually being facilitated by the preparation of tablets or similar products containing the essential ingredients for a given quantity of the liquid, the weighing of the ingredients and the bulkiness of the liquid in transport being thus both avoided. The soloids of lotio hydrargyri nigra, which Messrs. Burroughs, Wellcome, and Co. (Snow Hill, London, E.C.) have recently put on the market are intended for the production in this way of black wash corresponding to the official lotion. Specimens which we have examined were easily reduced to powder in a fold of paper, and on then shaking up with water, reaction rapidly took place with formation of the black mercurous oxide. The glycerin is, of course, omitted in this preparation, and apparently the gum also; their place is taken by a considerable proportion of sugar.

Compound Bromoform Syrup.

The occurrence of toxic symptoms in several cases after the last dose of a mixture containing bromoform had been taken has indicated the importance of administering this drug only in a medium which will not allow of any precipitation of the bromoform taking place. We have received a sample of bromoform syrup from Messrs. Duncan, Flockhart, and Co. (143, Farringdon Road, London, E.C.), which fulfils this requirement. Even after long standing no separation of bromoform occurs; the mixture

is very palatable without dilution, and the addition of water is not recommended. The amount of bromoform present is 2 minims in a fluid ounce; the syrup also contains aconite, codeine, tolu, and Virginian prune, but the doses of these are not stated.

"Black Wash" Tablets.

Messrs. Parke, Davis, and Co. have submitted samples of the tablets which they issue for the rapid preparation of black mercurial lotion. Each tablet represents 10 fl. oz. of the lotion, and is directed to be crushed and rubbed down with ½ oz. of glycerine and water to the stated quantity; experiment showed that reaction occurred at once. Lime water is extremely liable to undergo loss of strength unless preserved with special precautions, and any uncertainty arising from its use can be avoided, so far as the preparation of "black wash" is concerned, by the use of these tablets.

Glycerophosphates with Nuclein in Tablets.

In spite of some adverse criticisms levelled against them, the use of glycerophosphates appears to be constantly increasing, and new combinations with other drugs are of frequent introduction. We have received from Messrs. Parke, Davis, and Co. (111, Queen Victoria Street, London, E.C.) samples of their tablets containing 1 gr. each of glycerophosphates of sodium, calcium, and iron, with ½ gr. of nuclein. They are recommended as a tonic and nutritive in tuberculous disease, etc. The tablets are enclosed in the brown coating conventionally known as "chocolate coating" and well prepared.

Formidine Antiseptic.

We have received from Messrs. Parke, Davis and Co. (111, Queen Victoria Street, London, E.C.) a sample of a new iodine-containing powder which they are supplying under the name formidine. It is stated to be a condensation product of formic aldehyde, iodine, and salicylic acid, having the constitution of methylene disalicylic acid iodide, and is recommended for internal and external use. It is a brown powder, of faint, not unpleasant, odour, insoluble in water or dilute acids, and almost insoluble in alcohol; it dissolves easily in alkalies, and the alkaline solution undergoes gradual decomposition, and iodine and salicylic acid can then be detected in the liquid by appropriate tests. This slow decomposition is said to occur when the powder is in contact with alkaline organic secretions, and it is accordingly recommended in the treatment of bacterial infection of the intestinal tract, and also as a dressing and dusting powder for wounds and skin affections.

MEDICAL AND SURGICAL APPLIANCES.

A Bed-pan.

WE have received from Mr. F. S. PITT TAYLOR, M.B., Ch.C.Vict., of Birkenhead, a specimen of a bed-pan named by him the "Bed-Easee," and made to his design by Messrs. James Woolley and Sons of Manchester. Some idea of its general make and shape will be gathered from the annexed engraving. Its special claim to the popularity which it seems likely to obtain lies in the skill and care with which the desiderata of a good bed-slipper and douching vessel have been thought out and combined. The form of the pan distributes the weight of the patient equably, and obviates all pressure on the thinly-covered sacrum. The vessel also admits of very ready cleansing, as the whole of its interior is well in view; it can be easily inserted under the patient and as readily withdrawn without spilling of the contents. It has a well-fitting cover, made, like the pan itself, of strong glazed earthenware. The special needs of male patients have been considered, and the pan could be used for douching and ordinary purposes either in the sitting or lying posture.



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ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 1186.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Sir Victor Horsley, F.R.S. (continued).

Coming to the question of the surgery of the nervous system, Sir Victor Horsley said that again was a very typical instance of the influence of experiments on animals. There was no special surgery of the nervous system; it was simply the application of Lord Lister's principles to the treatment of diseases of the nervous system. There was not a single function of the nervous system, the principle of which was known now, which was not derived from experiments on animals. Frequently in the history of medicine the greatest mistakes had been made because people had endeavoured to reason from structure to function, and had endeavoured, by mere anatomical investigation, to guess at function. With regard to the nervous system, Aristotle said that the function of the brain was to temper and soothe the heart, to cool the heart; and it was nothing but the experiments of Galen, who opened the rigid box of the skull and showed that the brain was as hot as the heart, that got rid of that idea. The nerve roots were known to Galen, but their function was not dissociated until Bell did it, and then only in the case of one root. What he did was to expose the roots in a rabbit, and as he had no electrical means of stimulation, he touched the two roots, first one with a point of a knife, and then the other, and he found that if he touched one there was no movement as the result, but if he touched the other, immediately there was a movement of the muscles; in other words, that the two things had different functions. He said:

> I now saw the meaning of the double connexion of the nerves with the spinal marrow.

The thing had been known to anatomy certainly (Galen lived in the second century, A.D.) for 1 600 years, but it was not until an actual physiological experiment was done that the investigator saw the difference between the two things. As regards Bell's position, which had been referred to again and again in the evidence, the facts were extremely simple. Bell did a great many experiments. His original pamphlet of 1811 (which was in the library of the Royal Society) was covered with manuscript notes of his experiments on the brain, the respiratory centres, and a great many other experiments on animals. He noted over one hundred that he did, and as long as he was investigating the physiological side of nature he made discoveries. He gave it up, and later became involved in a certain amount of controversy, because Magendie and the French physiologists by their experiments discovered the function of the other root—the sensory root. They proved that it was sensory by stimulating its central end, which was again the only way of discovering its function. Then Bell unfortunately entered on a priority discussion, and with a good deal of feeling said he did not owe anything to his experiments. As a matter of fact, from the moment that he gave up experiments on animals he equally gave up his contributions to science. As he was speaking about Bell, Sir Victor Horsley mentioned that it was Bell's experiments on the facial nerve, which was a motor nerve, as contrasted with his experiments on the fifth nerve, which also went to the face but was a sensory nerve, which saved people from having unnecessary operations performed upon them for neuralgia. But it was not until he made this experiment on a donkey that the difference of function between these two nerves was understood at all. Sir Victor Horsley went on to say that by far the most illuminating way of investigating the anatomy of the nervous system now was the method of Marchi, which was very simple. The animal was anaesthetized; the portion which it was desired to investigate was excised by a little operation, the wound was closed, it healed in a few days, and the animal was kept for three weeks alive, apparently in perfect health: it was then killed, the brain was taken out, hardened, and stained in a particular way with osmic acid. The nerve fibres degenerated from the injured spot, and when the brain was hardened and stained in this particular method, only those degenerated fibres stained jet black; all the rest formed a pale yellowish-brown background. The result now was that if they made a small lesion in the front of the brain, and there was a fibre going all the way down the nervous system, they could trace it all the way down to its very end. A single fibre was a thing which was absolutely microscopic, and until this method was devised their knowledge of the bundles of fibres which connected different parts of the nervous system was to a large extent surmise, because the fibres interlaced so that it was impossible to follow one fibre. But by the degeneration method, as it was called, they had a means of investigating the anatomical structure of the nervous system which was already adding every day enormously to knowledge. So that anatomy, which rather misled them in regard to the functions of the nervous system, was now actually being helped from the physiological side. That was rather interesting in this matter of experiments on animals. Then the surgical treatment of nervous disease included operations on the brain, the spinal cord and the nerves. In the case of operations on the brain, for instance, it was a question of being able to treat disease within a closed cavity; one could not examine the part: one had to form one's opinion as to what was going on entirely from one's knowledge of the physiology of the brain, and that they owed in the greatest measure to the discoveries of Hitzig and Fritsch, and in this country to Dr. Ferrier. That had all happened since 1870, and they were now able to cure abscess and tumours of the brain—conditions which were invariably fatal and caused blindness, severe pain, vomiting, and so forth. In operations on the spinal cord the same thing prevailed. The witness was responsible for the first operation on the spinal cord, so that he knew the history of that subject. The technique of that operation he owed entirely to experiments on animals. As regards operations on the peripheral nerves, he had already referred to Bell's operative treatment of neuralgia as being guided entirely by his experiments on animals. Coming to the great subject of nerve suture, he said injuries to nerves were now dealt with successfully by dividing the nerves again and sewing them together in various manners. The initial work bearing upon that subject was carried out by Flourens, who was the first, to the witness's knowledge, to suture nerves together in animals in order to investigate their function. He had not got the exact date; he thought about 1845. Sir Victor Horsley passed from the nervous system to the alimentary canal, because operations on the stomach and intestines were now done on a very large scale, with great benefit to man, and this was being extended to the lower animals for obstructions of various kinds, and for cancer and tumours generally. The first direct experiments—this was an instance of direct investigation for a surgical purpose—were made by Barischewsky in 1875; but Barischewsky himself was already indebted to the experiments of Lembert in 1836, who, by his experiments on dogs, showed what had always been the weakness of this department of surgery—the correct manner of applying a suture. He only mentioned that again to emphasize what he said about the teaching of students—that the actual technique, even in such a minutia as the passing of a stitch, ought first to be done by experiment. Travers in 1821 had made similar experiments, but in 1875 Barischewsky showed a remarkable series of experiments on dogs, in which he had extirpated portions of the bowel, and proved the detailed technique whereby dogs could be got to survive. Following upon his work, in the next year, Gussenbauer and Wiolwarter made direct experiments on joining the stomach and the bowel of the same kind. Then Billroth, on the strength of these experiments, performed the first successful excision of cancer of the stomach, and that really inaugurated not only the operations for the extirpation of the disease but also operations for the anastomosis of different parts in the canal, getting round obstructions and removing dilatations. While speaking on this

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question of the surgery of the intestinal canal, the witness said he would like to make a remark with regard to fistulae, because here again constantly the antivivisection party represented that it was an exceedingly painful proceeding to make a fistula on a dog to connect one of its ducts or its bowel with the external surface and to let it heal up. The historical case of Beaumont's experiments on Alexis St Martin was always against that. Every case of colotomy for cancer of the bowel was a direct negation of that assertion, and yet it was repeated that a fistulous opening between the bowel and the surface of the skin caused pain, and that the making of a fistula caused pain. He would like to point out that in one method of performing operations to relieve the bowel the wall of the bowel was sewn up to the surface—he was speaking then of an operation on man—but the bowel was not immediately opened. Three or four days later the bowel was slit open, and the patient was not conscious of it in the least. One could cut open the bowel and the stomach without anaesthetics without the patient being aware that he had been touched. It was an entire misrepresentation to suggest that animals with fistulae were suffering pain, although they were kept alive for months. Coming to the surgery of the thyroid gland, he said he chose that subject also because it was one that he was personally interested in, and therefore, perhaps, knew more about. Here, again, it was most interesting to see how anatomy misled, and, in fact, hindered investigation, because even the great anatomist Luschka, as late, he thought, as 1880, suggested that the thyroid gland really was of no service, and that it might have been put by the Creator in the neck for cosmetical reasons to pad it out, exactly like a bolster, for support. Luschka was unaware that Schiff, as long ago as 1859, had made experiments on the extirpation of the thyroid gland, and had shown that it was not an accidental structure but an organ necessary to life. The rest of the history of the subject also was interesting, because it showed the necessity of experiments on animals for the direct scientific proof of a biological fact. Sir William Gull, and more especially Dr. Ord, had shown that certain patients exhibited symptoms resembling those of the cretins in Switzerland, and that this could come on them, as it were, as a disease; and Dr. Ord described that the thyroid gland was diseased in these cases. He had one autopsy. Then Professor Kocher had noticed the same thing in his operations on the thyroid gland; but it was suggested universally, especially in this country, that this was a disease of the sympathetic nervous system, and that if it had occurred in surgery of the neck it was because the sympathetic nerve in the neck had been damaged during the operation. A committee was appointed, and the witness was appointed to make the crucial experiment of removing the thyroid gland in a monkey, in order to see whether that was the cause, or whether it was due to damage of the nerves in the neck. His experiments proved that it was due to the loss of the thyroid gland. The cost of the work was partly defrayed by the Royal Society and by the British Medical Association. That was twenty-two years ago. He also suggested, in consequence of these results, that they ought to graft a healthy gland into people as a means of cure. He had no opportunity of doing that himself, but it was done abroad with apparent success. The result of these experiments and of his own researches led Dr. George Murray of Newcastle to suggest that the loss of the gland could be compensated for by injecting the secretion of the gland. That was the beginning of the successful treatment of myxoedema and sporadic cretinism. In ordinary typical cases of myxoedema the people lost their hair, they became stupid, the subcutaneous tissues were swollen, and so forth. After treatment their hair began to grow again, and they recovered their mental activity and resumed their work, as the Commissioners would see (*handing in Murray's Book with Examples*). The thyroid gland, he would say in parenthesis, had no duct, and that was the reason, no doubt, why it was looked upon as unimportant; but in those days people did not know what was known now—that there was a whole chapter in physiology on internal secretion which was not dreamt of when he was a student, and that these researches and others of even a more striking character on the suprarenal gland by Professor Schäfer and Dr. Oliver had opened up a whole new field of work, which certainly would occupy several laboratories alone; so that both from the practical point of view in medicine and surgery, and from the physiological point of view, these experiments on animals had been of very considerable service. That was all he proposed to lay before them as mere examples of direct advantage accruing from experiments on animals. He hoped the Commission recognized that he had only touched on three or four, and that one could spend a great many days on that subject. He now came to a rather more personal point, because a great deal had been made of it in the evidence laid before the Commission, which he also connected with what he had been stating—namely, Experiments on Animals in Relation to Surgical Shock and Incomplete Anaesthesia. In the first place, with regard to surgical shock, it was probably not recognized by the public that in getting rid of blood-poisoning Lord Lister had left practically only one cause of death from operations. That was shock, or collapse; it was the one thing they dreaded. They never expected a patient to die nowadays from the operation unless an accident had occurred, or if he died from this shock. The importance of this was obvious as long ago as 1895, and Dr. Crile, now Professor of Surgery in Cleveland, Ohio, came to University College to study British surgery, and being naturally interested in the question of shock, Sir Victor Horsley suggested to him that they ought to know more precisely what was the condition of the circulation resulting from an operation performed in the ordinary way. Dr. Crile therefore commenced, under the guidance of the witness, at University College, an investigation which he understood also had been put in evidence there, and which had been described as "a series of tremendous experiments," as "very horrible experiments"—in fact, all sorts of adjectives, "repulsive," "loathsome," "filling decent people with disgust and horror," and so on. Those adjectives had been applied to these experiments chiefly by Mr. Coleridge. Any one who was not a surgeon might naturally apply such expressions to any surgical procedure. In surgery many things were naturally repellent, but they did not hesitate from completing an operation because it was unpleasant. If they did, surgery would be in a bad way. What he wished to point out was that there was nothing unusual about these experiments of Dr. Crile. What he described as manipulations in ordinary language were exactly what they did upon the human being. Mr. Coleridge selected two things. Sir Victor Horsley would select those two also. He thought it was in his introductory statement—pouring boiling water into the abdomen—on page 146, Question 10,265, in answer to Colonel Lockwood. He would like to begin there:

> From the dog we can learn courage, constancy (and so on); it is the weight of its spleen, or the pressure of its blood, which elicits his curiosity, and he digs into its living body in his horrid quest. I desire to bring before the Commissioners the sixteen experiments performed by Dr. Crile in Sir Victor Horsley's laboratory, in one of which the foot of a dog was deliberately crushed "under incomplete anaesthesia."

Then followed the adjectives to which he had referred; and a little lower down:

> The knowledge of what will happen to a dog when its feet are crushed in pincers and boiling water is poured into its inside, seems to me as a layman as remote from any practical service to humanity,

and so on. To any one completely ignorant of the difficulties of surgery these things might, no doubt, seem extraordinary; but he would take these two points—the crushing of a dog's foot with pincers, and the pouring of boiling water into the abdomen. Taking, first, the crushing of the dog's foot with pincers, that was an ordinary description of what they called tarsectomy, which was an operation performed on man. A fortnight ago he operated on a young fellow whose leg had been severely smashed in Canada; the bones of his foot were all welded together, and fixed on to the rest of his leg—absolutely welded on by callus in such a way that he could not walk. It was necessary, therefore, to perform a partial tarsectomy. If he were to describe that operation in this sort of language he should say a large gash was made in the side of the foot, the astragalus was seized with pincers and was crushed with other cutting pincers, and was dragged out; then other portions of the bone were similarly crushed with pincers, and the wound was closed. In that

case the patient survived. In these cases of Dr. Crile the foot was similarly gashed open, if they liked, the bones were crushed with pincers in a precisely similar way, but the animal was not allowed to survive. These experiments were all done under a licence, and the animal was anaesthetized from beginning to end of the experiments, and its death was described by Dr. Crile in his paper in each instance, and he often made a *post-mortem* examination. Asked as to the object of the experiment on the dog, the witness said that in an operation on the periphery of the body (the foot, ends, limbs, and so on) for accidents in manufactories, the crushing of the bone had been known from the time of Pirogoff to be a fertile source of surgical shock, so that the first thing to do in investigating shock was to devise some operative procedure, such as was done upon man, which should involve the cutting of bone. All cutting of bone was crushing or sawing. Therefore there were these descriptions of Dr. Crile of repeatedly crushing bones and sawing bones. The witness thought he sawed one bone six times. That was in order to imitate on the lower animal what was done on man, and yet they were spoken of as something extraordinary. Asked by Mr. Tomkinson whether they were done with a view of seeing whether that operation would be likely to be fatal, Sir Victor Horsley said, No, with a view of seeing what effect it produced on the circulation. He showed tracings displaying the state of the circulation as registered by the blood pressure in a mercurial manometer. If one got an indication of fall of blood pressure it would mean that the patient was becoming subject to which was called surgical shock, and, therefore, one must alter one's procedure and do something to avert it. That was the object of the experiment—to investigate the effect of blood pressure, so that in all these cases he recorded respiration, effects on respiration, and effects on blood pressure. In reply to the Chairman, who asked, supposing they did find at a certain point of the operation on a dog that collapse ensued, or threatened to ensue, how he applied the knowledge gained by that experiment to a human being, the witness said by trying further remedies on the dog. For instance, Dr. Crile tried an injection of strychnine and an injection of adrenalin to raise the pressure artificially, and all those things they used nowadays invariably in the operating theatre; no operating theatre was complete without them. The witness next took the other point, because apparently more had been made of that. What were the words?

> The knowledge of what will happen to a dog when its feet are crushed in pincers and boiling water is poured into its inside,

and so on. As regards the application of boiling water to intestine, probably no one was aware of what was done to the human being in many respects. The use of the actual cautery, of the hot iron, or flame, on the effect of which again Dr. Crile experimented, was very common, and was known to the public. But he did not think it was known to the public that a jet of scalding steam was injected into the womb of a woman for certain forms of inflammation, of course, under anaesthetics, and it was also injected to stop violent haemorrhage when one was operating on the liver. These procedures were carried out, and what they must know was how far it was safe and justifiable to use such things. All these things were done under anaesthetics in the case of an animal, and to his mind it was perfectly ridiculous to select a set of experiments on an animal which were parallel to what was done on man and hold them up to reprobation. He did not care whether Mr. Coleridge or anybody else reprobated a thing if one was conscious that one was only fulfilling a moral duty — namely, investigating the causes of suffering, and the means of alleviating it and preventing disease without inflicting pain on the animal. If an animal was anaesthetized, and was kept anaesthetized until it died, it did not matter morally what one did to it. He repudiated entirely the comments passed upon these researches, and the personal allegations of Mr Coleridge against Dr. Crile's character. At Question 10,285, Mr. Coleridge said:

> "I want to show that the personal taste of Dr. Crile does not prevent him from torturing animals."

Now, in 1899, Dr. Crile proved in the New York press that these statements of Mr. Coleridge regarding him, namely, that he had made unnecessary and cruel, painful experiments upon animals without anaesthetics, and that the words "incomplete anaesthesia" meant that the animal was conscious of pain, were untrue. He was quite aware that Mr. Coleridge accepted nothing, but the witness's point was that he repeated these charges again and again after they had been publicly proved to be incorrect. Asked by the Chairman as to Mr. Coleridge's statement at Question 10,285:

> In Experiment CXXXIII we find these words: ". . . experiment lasted two and a half hours. Flame was applied to the dog's paw, and we are told in the control experiments, as well as in this, the dog was not under full anaesthesia. In the former the animal struggled on application of the flame."

Sir Victor Horsley said the statement there that the dog was not under full anaesthesia meant that some reflexes were present, and that was certainly probable—the withdrawal of the leg on application of the flame; but that dog was perfectly unconscious to pain. Asked if he was present at the operation, he said, No; but Dr. Crile said in his introduction to his paper that all these experiments were done on animals anaesthetized. In reply to Mr. Ram, he said that in Experiment CXXXIII what happened was that the flame was applied before and after. It began: "Fox-terrier, weight 15 kilos," and so forth, "Chloroform and ether anaesthesia." It was under chloroform and ether. Then "applied Bunsen's flame to the paw" before and after he had injected the sheaths of certain nerves in the leg with cocaine, keeping up the general anaesthesia. Then he said:

> In the control experiments as well as in this, the dog was not under full anaesthesia. In the former the animal struggled on application of the flame; after the injection of cocaine he did not,

showing that the cocaine paralysed the nerves. That was the point of that experiment. In reply to Dr. Wilson, he said purposive movement and struggle were not the same at all. People struggled violently, and required several people to hold them down sometimes in an operation, but that was quite a different thing from purposive movement. His point was that although these experiments had been treated as something particularly outside the ordinary, they were not so. They were what they were deliberately intended to be in the orginal purpose of the investigation, a repetition of procedures performed upon the human being which were capable of producing shock; and if so, they ought to know how that shock was produced. The Chairman read the following extract from a description of an operation by Dr. Crile in the witness's laboratory:

> Under incomplete anaesthesia crushing the foot caused a sharp rise, followed by an equally sharp decline, of pressure. This was repeated several times,

and asked what "incomplete anaesthesia" meant there. Sir Victor Horsley replied that it meant that the anaesthesia was not so deep as to exclude a reflex effect upon the blood pressure. The sharp rise and sharp fall were the rise and fall of blood pressures which were produced when one stimulated the central end of any sensory nerve. He wished now to devote a certain portion of his evidence to the subject of incomplete anaesthesia, because the amount of ignorance that prevailed on the subject was very great. By the term "incomplete anaesthesia" they did not mean that the subject of the operation or experiment was conscious of pain at all. All they meant was that its nerve centres were not so poisoned that it was not capable of making various demonstrations, even reflex acts. Another expression for the same thing very frequently used was "light anaesthesia," or "very light anaesthesia." These were common and well understood terms among surgeons, and any surgeon reading that account understood it in the sense that he was giving to them. A surgeon, Mr. Berry, was reading a paper the previous night on the removal of goitres, and he insisted that anaesthesia should be very light, and that it should be such that the patient could be roused even to vomit. The real thing was that hitherto, owing again, he suggested, to want of knowledge, the anaesthesia in most operation cases had been far too deep—of that they were quite certain in ordinary surgery; and the introduction of the method of giving chloroform by known doses had brought them now to find that during an operation one could very often give no anaesthetic at all for eight or ten minutes, and in the case of a child for twenty minutes. The person would remain sound asleep and absolutely

indifferent to pain. Then came the question, when was one to give any more? In answer just now to a Commissioner, he said that his guide was what he called a purposive movement. If he saw a movement which was not a simple reflex withdrawal, and seemed to have a more purposive character, he always at once ordered the anaesthetic to be increased. It was perfectly easy to recognize. Asked if they waited for a purposive movement, or anticipated it in any way, he said that frequently they waited for it. If there was any reasonable evidence of shock they waited for it. People admitted into hospitals with a leg completely smashed did not usually suffer pain. A man might have his leg completely crushed by machinery up to the middle of his thigh, and, as a rule, he was not in pain; he was simply lying there absolutely shocked, perfectly conscious; he would talk about it, not exhibiting any sign of pain. Further, there were many factors during anaesthetization which had yet to be worked out, and this "incomplete anaesthesia" was a degree of anaesthesia under which it was only safe to perform some operations—on the tongue, the throat, and so forth. This was really a much wider question than a mere mistake as to the degree of unconsciousness to pain, because, as a matter of fact, the anti-vivisection party had preserved their existence wholly, he thought, on the assumption that cutting operations were performed in England without the employment of anaesthetics, or with a very inadequate employment of anaesthetics. This subject dated from 1899, when the first attack was made upon Dr. Crile. In 1899 Mr. Paulton, in the House of Commons, asked a question of Sir Matthew White Ridley, which conveyed the assumption that experiments of this kind were done. In 1899 Mr. Coleridge attacked Dr. Crile at the Home Office, and after he had been fully informed by the Home Office as to the meaning of this term "incomplete anaesthesia," he wrote to several surgeons, and asked them a question about incomplete anaesthesia, and he informed this Commission that he wrote exactly in the terms in which the Home Office had written to him. As a matter of fact, he did not write exactly in the terms of the letter of the Home Office, because he omitted the all important sentence which defined this term "incomplete anaesthesia." The result was that he deceived these surgeons into thinking that it was suggested that operations were done upon human beings in hospitals without adequate narcosis. Subsequently they found out (but not until 1902) the manner in which they had been deceived, and the way in which it all came out was so striking that he ventured to lay it before the Commission. In 1902 Mr. Coleridge issued a letter to ladies:

> Dear Madam,—This catalogue, which I respectfully ask you to look at, has been translated from the German. In reproducing it thus, I have followed the immortal injunction:
>
> . . . Nothing extenuate,
> Nor set down aught in malice.
>
> I place it, therefore, in your hands, and leave it to exercise its influence upon your heart. If it lead you to feel that anything is better than that such things should be, if it lead you to know, beyond the reach of gainsay, that pitifulness is a higher thing in the sight of God than knowledge thus obtained, you will send me your help, great or little, according to your means, that I may do what I can as effectively as you make me able to put an end to these unspeakable deeds; and I shall continue to be your and the poor animals' Ever faithful servant, Stephen Coleridge.

That letter was fixed into a catalogue, which was a translation of the German catalogue of an ordinary surgical instrument maker, who made physiological apparatus for holding animals. In that letter nothing was said about these animals being fixed in that way on tables and boards under anaesthetics. There was not a word about the use of anaesthetics. The witness had had that catalogue sent to him over and over again by ladies asking what it meant. It was all part of this constructive misstatement that experiments were done in England without anaesthetics. That particular instance, he thought, was the most immoral of any act of the anti-vivisection party. The *Times*, in 1902, published a serious article upon it, drawing attention to it, and subsequently a correspondence arose in which the witness took part, and in which they appealed to Lord Llangattock, the Duke of Portland, and several bishops who had supported the issue of this misleading document, to withdraw it. They had not done so. It did seem a terrible condition of things that persons holding such high authority should lend themselves to the issuing of a statement of that sort. Further, this misrepresentation was still going on; some 50,000 copies of this apparently had been circulated. It was corrected, as he said before, in 1902 and Mr. Coleridge stated to the Commission, at Question 10,559, that where he was shown anything which was wrong he liked to correct it. Sir Victor Horsley said in parenthesis that Mr. Coleridge had never corrected anything which he had been shown repeatedly was incorrect, nor had he ever apologized. From Mr. Coleridge's evidence they now knew that he based it all on his reading of Certificate B, which was that Certificate B enabled workers in this country to do experiments without anaesthetics or to do them incompletely. He spoke of an initial operation and then of the rest of the experiment. Neither the Home Office nor the scientific workers in this country had recognized such a distinction as regards any cutting operation. And as regards the actual term "narcosis," "anaesthesia," and so forth it had always been interpreted by the workers to mean unconsciousness of pain; therefore, whatever phenomena were observed (struggling, the corneal reflex, change in pupils, change in vasomotor pressure), were all phenomena which obtained with the animal unconscious of pain.

(To be continued.)

SLEEPING SICKNESS.

At the instance of the late Secretary of State for the Colonies and with the co-operation of the Government of the Sudan and the Royal Society, His Majesty's Government have decided to establish in London a bureau for the collection and general distribution of information with regard to sleeping sickness. The Royal Society will find accommodation for the bureau at Burlington House, and one-fourth of the cost of up-keep will be borne by the Sudan Government.

The bureau will be under the general control and direction of an honorary committee of management, appointed by and responsible to the Secretary of State for the Colonies. The committee will be composed of the following:

Chairman: The Right Honourable Sir J. West Ridgeway, G.C.B., G.C.M.G., K.C.S.I., who is also Chairman of the Advisory Committee of the Tropical Diseases Research Fund.

Members: Sir Patrick Manson, M.D., K.C.M.G., F.R.S.; Sir Rubert Boyce, F.R.S.; Dr. Rose Bradford, F.R.S. (representing the Royal Society); Colonel D. Bruce, C.B., F.R.S.; Mr. E. A. Walrond Clarke (representing the Foreign Office); Mr. H. J. Read, C.M.G. (representing the Colonial Office).

Secretary: Mr. R. Popham Lobb, of the Colonial Office.

The main function of the bureau, which will be administered by a paid director, will be to collect from all sources information regarding sleeping sickness, to collate, condense, and, where necessary, translate this information, and to distribute it as widely and quickly as possible among those who are engaged in combating the disease. The publications of the bureau will be divided into two categories, namely, scientific publications intended for those who are engaged in research work or in carrying out medical administration in the infected districts, and publications of a less technical character for the use of Government officials, missionaries, and others whose duties involve residence in those districts. One important piece of work will be the preparation of a map of the whole of tropical Africa, showing the distribution of the disease and of the different species of blood-sucking insects which are suspected of conveying it. A map of this kind, showing, as it would, the extent to which the distribution of the disease coincides with the distribution of the different species of insects, is expected to supply valuable information to scientific investigators and to give guidance to the different administrations, by indicating the lines of advance of the disease and the districts which require special protective measures.

The duties of the Director of the bureau will for the present be undertaken by Dr. A. G. Bagshawe, of the Uganda Medical Staff, who has been seconded from the Protectorate Service for the purpose.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

NOTTINGHAMSHIRE.

At a meeting of the Notts County Council held on April 28th, a report by the Education Committee was submitted, in which it was stated that applications and testimonials had been received from 121 doctors for the appointment of school medical officer, and they had appointed Mr. E. T. Holmes, M.D., B.C., M.A., at a salary of £300 per annum, with travelling and out-of-pocket expenses, to be increased to £350 per annum when he obtained a Diploma in Public Health. Dr. Holmes would also be available to assist the county medical officer of health in his other duties if required. The committee also asked the council to authorize them to appoint a nurse at a salary not exceeding £90 a year, with travelling and out-of-pocket expenses, or £100 per annum should the nurse possess a sanitary certificate. Lord Galway said the time had arrived when the county councils should put strong pressure upon the Government in respect of the medical inspection of children. It was not sufficient to have merely the promise of help held out to them. Lord Belper, the chairman, referred to the deputation of the County Councils' Association which waited upon Mr. McKenna, and to that gentleman's promise that his bill would probably meet the demands upon the counties after the lapse of this year. Lord Belper regretted to find that the effect of the bill, if passed in its present form, so far from providing any of the cost of medical inspection, would involve a serious extra charge on the ratepayers—in Notts something approaching a 3d. rate. In his view the least the council could do was to hold its hands until it was assured that a considerable part of the charge would be furnished from the Consolidated Fund. Eventually a resolution was passed regretting that no satisfactory answer had been received to the request of the council for help towards the cost of medical inspection, and declaring that it was impossible to embark upon further expenditure until it had an assurance of help.

BRISTOL.

At a recent meeting of the Bristol Education Committee, Dr. E. H. Cook (chairman) presiding, the report of the Elementary Education Committee embodying the scheme of medical inspection of children drafted by the Hygiene Committee was considered. The scheme recommended was, briefly, as follows:

(1) That three part-time medical officers be appointed who shall each give two and a half hours per day for the five school days of the week, at a salary of £150 per annum each; or as an alternative, five part-time medical officers who shall each give two and a half hours per day for three days per week, at a salary of £120 per annum each. Medical men and women to be eligible for appointment, but at least one of the officers to be a woman; (2) that two medical health visitors, who shall be duly qualified nurses, be appointed at a salary of £70 per annum each and uniform; (3) the work of the medical department shall comprise the following: (*a*) Report to the Sites and Buildings Committee any alleged defects in ventilation, sanitation, etc., in school buildings; (*b*) inspection of all children on admission to school, and on such other occasions as may be required; (*c*) examination of special cases, as requested by the Education Committee; (*d*) examination of children apparently suffering from under-feeding or bad home conditions; (*e*) to visit each school at least once a year, and to report in writing as to the sanitary condition of the premises, and to attend when requested at any meeting of the Education Committee or subcommittees; (*f*) to examine when required by the committee any child who is stated to be physically unfit to attend school, and to make out a certificate; (*g*) to give the committee the benefit of advice on special occasions as required.

It was not proposed that at present there should be a systematic examination of every child, and it would be practically impossible to carry out such examinations on existing school premises. The committee recommended that five part time medical officers be appointed to give two and a half hours per day for three days a week at a salary of £100 per annum each, such appointments to be for one year only. Alderman Elkins, in moving the adoption of the report, said the committee was of opinion that the medical inspection and systematic examination of the child if carried out to the extent suggested in the memorandum of the Board of Education would at the commencement meet with a good deal of hostility. The scheme suggested was a moderate one, but it went further than the official memorandum in some respects. A chief feature was the provision for the out-visitors. Miss Townsend moved, as an amendment, that three part-time medical officers be appointed, who should each give two and a half hours a day for the five school days at a salary of £150 each. Dr. Devis thought both the schemes were inadequate, but the lesser evil would be to have the five medical men. They would get a better choice in appointing the medical men for three half-days than they would for five half-days. At a recent gathering of medical men they were unanimous in saying that they would not apply if it meant five half-days, but they would apply if the three half-days' proposal was adopted. The amendment was negatived and the report was adopted in its entirety.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of this society was held on May 14th at the offices, 11, Chandos Street, Cavendish Square, Dr. G. FIELDING BLANDFORD in the chair.

Seven directors were elected to fill the vacancies in the court, and a cordial vote of thanks was passed to the editors of the medical journals who from time to time publish notices of the society.

The report for 1907, which was adopted, was as follows:

During the past year 11 new members were elected; 10 died. The society consists at the present time of 1 honorary member, 144 life, and 144 paying members, making a total of 289, which, considering the number of medical men who are eligible for membership, is but a very small proportion.

The advantages of the society and the great amount of good which it does cannot be better shown than by a short study of the balance-sheet for the year.

The invested funds amount to £99,260, from which is derived in interest the sum of £3,118 2s. 5d.; £435 0s. 3d. was received in subscriptions and donations.

Amongst the annuitants of the charity, namely, forty-nine widows and seventeen orphans, the sum of £3,151 10s. was distributed; forty-three widows received £50 each, four £40, one £30 and one £25, and £10 extra at Christmas, and each orphan £12 and £3 extra at Christmas.

The Copeland Fund is a special fund which enables the society to grant to any widow or orphan already in receipt of the society's ordinary relief, extraordinary relief in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident, or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years (at which, under the society's existing by-laws, the ordinary relief ceases) for such further period as the Court of Directors may think fit.

During the year two widows in receipt of grants died. One, whose husband had paid in subscriptions £26 3s., received £490, the other, whose husband had paid in annual subscriptions £27 6s., received £2,824; she had been in receipt of grants since 1866.

Two new widows were elected during the year, and on December 31st there were 48 widows and 16 orphans in receipt of grants.

One of the widows has been on the books since 1854, and has already received over £2,060.

Relief is only granted to the widows and orphans of deceased members, who have paid their annual subscription for three years, or who are life members. During the year nearly fifty letters were received from widows of medical men, who, in many instances, had been left practically penniless, asking for relief, but this had to be refused, as their husbands had not been members of the society.

The directors cannot too strongly urge upon the members of the medical profession, especially the younger ones, the desirability of joining the society. Membership is open to any registered practitioner, who at the time of his election is resident within a twenty-mile radius from Charing Cross. Should any member remove beyond the limits of the society, he nevertheless continues to be a member.

The annual subscription is two guineas: every member who has paid this sum for twenty-five years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant.

Further particulars and application forms may be obtained from the Secretary at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

The meeting closed with a vote of thanks to the Chairman.

MR. RICHARD ROTHWELL DAGLISH, of New Romney, Kent, who died in April, aged 66, left estate valued at £58,419 gross, and bequeathed £1,000 to Guy's Hospital for the endowment of a "Daglish" bed.

LITERARY NOTES.

WE congratulate the *Standard* on the column headed "Science of the Week," which is in future, we understand, to appear in the *Standard of Empire*. The first article is published this week, and deals with sleeping sickness, "wireless" developments, photographing cancer, Canadian and English wheats, and the wizardry of nitrogen. This will serve to give an idea of the variety of subjects dealt with; we may add that all are handled in a manner at once scientific and in language understanded of the people. Medicine is no longer among the inner mysteries of science, a knowledge of which is jealously withheld from the *profanum vulgus* by the priests of the Temple of Knowledge. It is coming to be recognized by the medical profession that the diffusion of knowledge is the best safeguard against quackery. Our objection to newspaper medicine is that for the most part it has hitherto been either ignorantly sensational or has savoured of advertisement. There is no trace of this in the "Science Notes" of the *Standard*, and if they continue to be written in the same enlightened and enlightening spirit that marks the first article, the public will have placed before it week by week an admirable summary of the best that is written and thought in the world of science. We may perhaps be allowed to add that we are particularly pleased that the *Standard* has, as Castlereagh might have said, "embarked on this new feature," since from the disproportionate space it has lately given to antivivisectionist utterances, we had begun to fear that our contemporary, whose distinguishing characteristic has always been sound sense, had suffered itself to be decoyed into a wrong position.

A memoir of the late Dr. Edmund Symes Thompson has been prepared by his wife, and will be issued immediately by Mr. Elliott Stock. Lord Balfour of Burleigh is a contributor to the volume, which also contains a portrait of Dr. Symes Thompson, and other illustrations.

The elaborate work entitled the *History of Medicine*, by Professor Neuburger of Vienna, of which one volume has appeared is, we understand, being translated into English, and will be published by the Oxford University Press. Professor Max Neuburger's name is known to all students of medical history as the collaborator of Professor Pagel in the well known *Handbuch der Geschichte der Medizin*.

Messrs Rebman Limited have just ready a work entitled *Vitality, Fasting, and Nutrition*, which is described as a physiological study of the curative power of fasting, together with a new theory of the relation of food to the human vitality, by Hereward Carrington.

Writing in the *Journal of the American Medical Association* on the Congress of Internal Medicine recently held in Vienna, Professor Osler gives an interesting account of his visit to the Hofbibliothek of that city which is unusually rich in manuscripts and early printed books. He was anxious to see the copy of the *Christianismi Restitutio* of Michael Servetus, 1553, in which for the first time the lesser circulation is described. It is one of the only two known copies in existence. The entire edition was confiscated, and the author, at the time a practitioner in the little town of Vienne, near Lyons, fled for his life to Geneva. Here his heterodoxy was quite as obnoxious to Calvin, into whose hands he fell, and he was burnt at the stake in the same year. The *Restitutio* is one of the rare books of the world. Only two of the 1,000 copies known to have been printed have survived. The one in the Bibliothèque Nationale originally belonged to Dr. Mead, and the history is fully given in an appendix in Willis's work, *Servetus and Calvin*. The Vienna copy, says Professor Osler, is in excellent preservation, beautifully bound, and on the title page it is stated that it came from the library of a Transylvanian gentleman living in London. It fell into the hands of Count de Izek, who presented it to the Emperor of Austria. It is a thick, small octavo of about 700 pages. The first one to give credit to Servetus for his discovery of the lesser circulation was Wotton, whose *Reflections Upon Learning, Ancient and Modern*, 1694, is a most interesting book, for an introduction to which Professor Osler acknowledges his indebtedness to Dr. Norman Moore. Another work he was anxious to see was the famous manuscript of Dioscorides prepared at the end of the fifth century for Julia, daughter of the Emperor Flavius. It is one of the great treasures of the library. Dioscorides, who was an army surgeon of the time of Nero, fills a great place in the history of medicine, and is still an oracle in the East. He was not only a great botanist, but he was one of the first scientific students of pharmacology. Scores of fine editions of his work, with commentaries, were issued in the fifteenth and sixteenth centuries. Two years ago this Vienna manuscript was reproduced in facsimile at Leyden. Though very expensive, the two volumes costing £30, it is, says Professor Osler, a work which all the larger libraries should get, and it is just the sort of present libraries should make our wealthy consultants feel it a privilege to give.

We are in the habit of saying that medicine has no politics. Yet there have been times when political storms have disturbed the calm of the atmosphere of serene aloofness from the quarrels of ordinary mankind in which the priests of Aesculapius live and have their being. During the French Revolution the Academy of Surgery, which was established by Louis the Fifteenth at the suggestion of his surgeon in-chief, found itself in an embarrassing position. The story is told in an interesting book by MM. Cabanès and L. Nass, entitled *La Névrose Révolutionnaire*. The grateful surgeons had adorned their house with two statues of their pious founder—one of marble, the other of bronze. The latter was promptly taken possession of by the "patriots," and used for the manufacture of cannon. The problem what to do with the marble statue was discussed at a meeting of the academy, and finally Sabatier, its director, wrote as follows to the Minister of the Interior:

> Citizen Minister,
>
> I am directed by the Academy of Surgery to inform you that there are within its precincts a pedestrian marble statue of Louis the Fifteenth, and several pictures with decorations suggestive of feudal times. The Academy has not thought fit to take any step with regard to these without first consulting the Minister of the Interior, who will give such orders as his wisdom may consider necessary.

To this humble epistle the Minister vouchsafed no answer. The date of the annual general meeting was near at hand, and no decision had yet been arrived at. The academy therefore, having to do something, resolved on a compromise which shows a certain ingenuity of resource. In the minutes of March 21st, 1790, it is recorded that

> The Academy not having received an answer from the Minister of the Interior to the letter written on its instruction by the director, and deeming that it would be unseemly that the marble statue of Louis the Fifteenth should remain exposed to the public gaze on Thursday, April 11th next, the day of the public meeting of the Academy, has resolved that the statue should be surrounded by planking till the Minister decides what is to be done with it.

It seems fair to assume that the statue of the "tyrant" remained thus hidden from the public view for three years. At any rate, nothing more is heard of it till July, 1793, when the question was finally settled by a band of *sans-culottes* who invaded the premises of the Academy, and, after tearing down the planking, destroyed the statue. The academy thereupon took fright and appointed a committee of three with full power to destroy everything, furniture or decorations, which had about it any taint of monarchical symbolism. The academy itself soon afterwards shared the fate of the University of Paris and all other institutions of the *ancien régime*. Fortunately our own Royal Society of Medicine, in spite of the growing aggressiveness of socialism, is not likely, at least in our day, to find itself in a like predicament.

Dr. Byron Robinson of Chicago has reprinted a brief memoir of the late Nicholas Senn from the *American Medical Compend*. We hope the author is not responsible for the headlines in which Senn is described as "The Foremost Surgeon of the World," "The Plumed Knight of Medicine," and "The American Socrates," terms which only tend to make his hero ridiculous. Senn was too genuinely great a surgeon to need such fulsome praise. We mention this "in memoriam" because it records the generosity of Senn as a giver. He gave £18,000 to Rush Medical College towards the foundation of a laboratory. He also gave the library of Wilhelm Baum, sometime professor of surgery in the University of Goettingen. It consists of some fifty thousand books and pamphlets. To this gift Senn added the Meissner manuscripts. As an author he was prolific, some fifteen books and two hundred and fifty papers standing to his credit in the catalogue of the world's literature.

MEDICAL NEWS.

MR. THOMAS H. BICKERTON, oculist to the Liverpool Royal Infirmary, has been appointed to the Commission of the Peace for the city of Liverpool.

MAJOR R. J. BLACKHAM, R.A.M.C., was called to the Bar at the Middle Temple on May 13th. He is, we believe, the first military medical officer to become a member of the English Bar.

THERE will be a special demonstration of instantaneous radiography in the out-patient buildings of the London Hospital at 3 p.m. next Wednesday, at which any qualified medical man will be welcomed.

THE shooting for the Spens anniversary medal of the Royal Company of Archers (the King's Bodyguard for Scotland) took place at the archery range in the Meadown on the 13th. It was won by Dr. Robert A. Fleming.

THE annual general meeting of the Asylum Workers' Association will take place on Friday next, at 3.30 p.m., at the Medical Society's House, 11, Chandos Street, W., under the presidency of Sir William Collins, M.B.

THE annual meeting of the Society for Training Teachers of the Deaf and for the Diffusion of the Pure Oral System will be held, by kind permission of Mr. and Mrs. Fletcher, at 20, Devonshire Place, on Wednesday next, at 3.30 p.m.

THE annual meeting of the State Children's Association will be held, by invitation of Sir Edwin and Lady Durning-Lawrence, at 13, Carlton House Terrace, on Tuesday next, when the chair will be taken by the Earl of Lytton at 4 p.m.

AN examination for not fewer than twenty commissions in the Indian Medical Service will be held in London on Monday, July 27th, and the five following days. Particulars as to pay, promotion, etc., may be obtained from the Military Secretary, India Office, London, S.W., and should be carefully studied by intending candidates.

THE annual Wightman Lecture of the Society for the Study of Disease in Children will be delivered at 11, Chandos Street, W., at 5 p.m., next Friday, by Mr. Watson Cheyne, who has chosen as his subject the defensive arrangements of the body as illustrated by the incidence of disease in children and adults.

THE late John William Crombie, M.P. for Aberdeen, who died on March 22nd, aged 50, left estate of the value of £146,494 net. In the contingency of failure of issue and subject to his widow's life interest, he left one fourth of the residuary estate to the University of Aberdeen to found and endow chairs and laboratories or for other educational purposes.

THE diplomas, medals, and certificates granted by the National Health Society will be presented by the Duchess of Westminster at a meeting at Grosvenor House on Wednesday, June 3rd, at 5 p.m. The Earl of Derby, President of the Council, will take the chair, and among the speakers will be the Lord Chief Justice and Dr. Baxter Forman, late Chairman of the Public Health Committee of the London County Council.

THE towns of Breslau and Bremen have given £500 each; those of Halle and Koenigsberg, £150 each; those of Stettin, Duisburg, and Altona, £50 each; and the German Medical Societies' Union, the German Public Health Association, and the German Surgical Society, £25 each, towards the establishment of the Robert Koch Institute. The St. Blasien Sanatorium for Lung Disease has contributed £77 for the same purpose.

OFFICERS of the Indian Medical Service intending to be present at the annual dinner of the service to be held at the Gaiety Restaurant on Thursday, June 18th, at 7 45 p.m., under the presidency of Surgeon-General A. M. Branfoot, C.I.E., are requested to communicate with the honorary secretary, Lieutenant-Colonel P. J. Freyer, 27, Harley Street, W. As already announced, Viscount Morley of Blackburn, O M, Secretary of State for India, will be the guest of the evening.

A MEETING of the National Union of Public Health Authorities will be held at Caxton Hall, Westminster, on Thursday next, May 28th, at 2.30 p.m., when the draft articles of association prepared by the provisional council will be considered and officers for the current year appointed. A report of the provisional council as to paid secretary, officers, and an official organ will be submitted, and Dr. A. E. Thomas, M.O H. Chester, will read a paper on milk and its undesirable contamination.

DURING the last year or two the number of operations at the Throat Hospital, Golden Square, have so largely increased, that the authorities have often been in great straits to find room even for very pressing cases. A little time ago a suggestion was made by which the number of available beds could be materially increased, but it seemed impossible owing to lack of the necessary funds. This difficulty, however, has been now overcome owing to one of the surgeons, Mr. C. J. Heath, presenting the committee with a cheque for a sum sufficiently large to allow it to carry out the suggestion forthwith.

WE have already referred to the International Congress on Tuberculosis which is to be held at Washington, U.S.A., September 21st to October 12th, 1908. We have received from Dr. J. J. Perkins, Honorary Secretary of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, a list of the Executive Committee for Great Britain and Ireland, of which Sir William Church is Chairman, Professor Osler, M.D., Vice-Chairman, and Dr. T. D. Acland Honorary Treasurer. Among the representatives of England are Sir Thomas Clifford Allbutt, Professor Sims Woodhead, Dr. H. Timbrell Bulstrode, Mr. Watson Cheyne, Dr. J. Kingston Fowler, Dr. James Kerr, Dr. Arthur Newsholme, Dr. Theodore Williams, Sir Isambard Owen, Professor Sheridan Delépine, and Dr. Nathan Raw. Dr. William Williams, Medical Officer of Health for the County of Glamorgan, represents Wales. Among the representatives of Scotland are Professor Matthew Hay, Dr. R. W. Philip, and Professor Ralph Stockman. Among the representatives of Ireland are Sir John Byers, Sir John William Moore, and Professor E. J. McWeeney.

IT is now very generally acknowledged that a sanitary staff employed in large centres of population is not complete unless it includes among its members one or more women health visitors. In twelve of the metropolitan boroughs such officers have been appointed and have done admirable work. Although Stoke Newington is not yet included in this number, the medical officer of health has for some time had the assistance of a small staff of voluntary workers, each member of which is expected to devote two half-days a week to the work. Dr. Kenwood sends particulars to one of their number as to the various visits required to be made, and she gives the necessary instructions to her colleagues. Once a month they meet Dr. Kenwood and they see him at other times when necessary. The houses principally visited are those in which there has been a birth; where a case of zymotic diarrhoea or other sickness, not of an infectious nature, amongst young children has come to the knowledge of the medical officer of health; and where an infant has recently died. A fourth class of house visited is where a person is suffering from consumption. In 1906 the five ladies who undertook the duties visited 320 houses and in 1907 the number visited was 363. Valuable as this work is, it must not be supposed that it will altogether take the place of that which would be done by a paid worker, and the Stoke Newington Council will be well advised if they act upon the advice of their medical officer of health and give him the assistance of a paid official.

THE annual dinner of the Pharmaceutical Society was held on May 19th in the Whitehall Rooms, Hotel Métropole. Mr. J. Rymer Young, who was in the chair, in proposing "The Houses of Parliament," thanked Mr. Lough and Mr. Idris for their efforts on behalf of the society. He spoke in a depressed way of the pharmaceutists fighting for their very existence against combinations of moneyed interests; the very title of the members of the society was in danger of being wrested from them. Mr. Lough, in replying, said that the society had presented the serious problem to Parliament of preserving the designation of chemists, and the question had been passed on from one Parliament to another. Mr. Idris, who also replied, appeared to be disappointed with the action of a certain section of the House of Lords, and warned chemists and druggists of the possibility of their privileges and title being filched from them. They might soon have to influence every intelligent member of the House of Commons on their behalf. The chairman then proposed "The Medical Profession" in most eulogistic terms, adding that there was no member of the community that was so preyed upon as the everyday general practitioner. Sir R Douglas Powell, who acknowledged the toast, spoke of the advances that had been made in medicine and surgery, and in the purity and the standardization of drugs. He did not share in the pessimistic view taken by the President of the present position of the pharmacist. Sir B. Redwood, in proposing the toast of the society, said that it was not and never had been a trade protection society, or even a trade society. It had never had any concern with the question of the prices of drugs. It protected in the broadest sense those who carried on the business of chemists and druggists by elevating their status. The toast was responded to by the President. Mr. M. Carteighe submitted "The Chairman of the London County Council," which was suitably acknowledged by Mr. R. A. Robinson.

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SATURDAY, MAY 23RD, 1908.

THE IRISH COLLEGE OF SURGEONS AND THE NEW UNIVERSITIES BILL.

The Irish Universities Bill has passed the second reading, and its provisions are now being considered by a Grand Committee. The opposition to it has faded to insignificant proportions. Ministers have been supported by the general Opposition in driving it through the House of Commons, because the subject is one which both political parties are anxious to clear out of the way to make room for other questions which, in their turn, are pressing upon the attention of the country. The rapidity with which it is being pressed is, however, attended by the disadvantages of all hasty legislation. Last year we had a scheme to which large numbers of thoughtful persons gave their adhesion. This year we have proposals essentially different, which have been received with a sort of tired acquiescence in the turmoil of political conflict, and Mr. Birrell has been wise enough to take advantage of his opportunity. He has given little time for hostility to be organized, and just when notes of dissatisfaction began to be heard, he crushed the awakening malcontents with an overwhelming majority. It is possible that before the committee some hearing will be given to those who feel that there is ample room for improvement, and it is certain that it is the duty of that body to consider carefully any allegation that the bill will inflict injustice.

We have repeatedly called attention to the damaging effect which this bill must exercise on the school of the Royal College of Surgeons in Ireland, and it is much to be regretted that Mr. Birrell has so far treated this great institution with unwarrantable indifference. The college dates its chartered life from 1784, and in days when surgery was a very elementary science it was among the first institutions to organize a school officered by men who in their time were recognized as intellectual leaders in the profession. It has during succeeding years maintained a high efficiency. It has educated a very great number of medical men who have since done duty in civil life in their own country or in the services. Before the Queen's colleges were established, or even the Medical School of Trinity College had developed, it went on its useful course, attracting the youth of Ireland and sending into the world surgeons who have added to the sum of human knowledge and done credit to their college and their country. It did this and is still doing it without any outside help, while Trinity College has enjoyed its own large revenues, and the Queen's colleges have been supported by the State. Until now there has been no proposal to establish a new school in Dublin, to support it by Government grant, and to place it in direct opposition to the college which has borne the brunt of the fight without any kind of help from any one.

In the debate on the second reading this aspect of the operation of the bill was brought before the House, but it is obvious that further effort must be made before the committee to press this matter home. Whatever opinion may be held upon the policy of establishing a new university, there can surely be no difference of view as to the right of the Government to enter into a destroying competition with an existing venerable and efficient institution. We believe very strongly that it has no such right, and that it is establishing a most dangerous precedent to use the taxpayers' money to do a grave injustice to the college and to deprive its professors of their income; for, with a new medical school, richly endowed, lavishly equipped, manned by a highly paid professoriate, and charging low fees, it requires no special wisdom to foresee what the fate of the college school will be. It must gradually dwindle, and in a few years an institution which represents no political or religious creed, which is supported by Catholic and Protestant alike, will have ceased to exist. Speaking in the interests of the profession in general, we do not hesitate to say that this would be a most unfortunate result, and would certainly be discreditable to the reputation of Mr. Birrell as a statesman. We have already suggested that the way to prevent this catastrophe would be to give a suitable annual grant to the college to enable it to maintain itself, and to continue its most useful career. By its services to the country at large it has earned a right to recognition, and to stamp it out of existence now would be against the common interest, serving to deter public enterprise. This is a matter which ought to appeal to all similar institutions in the country, and they ought to take care to make speedy declaration of their opinions.

THE EARLY DIAGNOSIS OF STOMACH CANCER.

No one doubts the desirability of attaining to such a degree of knowledge as will render it possible to recognize stomach cancer before the formation of a palpable tumour; and although the success of surgery in dealing with cancerous growths elsewhere is not so great as to justify an optimistic opinion of the benefit that would be derived by cancerous patients if our diagnostic means enabled us to recognize cancer of the stomach as early as surgeons now recognize cancer of the breast, yet some prolongation of life and diminution of suffering at least would undoubtedly result. The true diagnostician pursues his end regardless of his present ability to recognize the means by which therapeutics may be able to make use of the newly-acquired knowledge, as he is well assured that any advance in diagnosis lays a sure foundation for medical progress, and paves the way along which treatment must advance. At present the early stages of cancer of the stomach are so obscure, and the disease is so indistinguishable from other common disorders of the digestive system met with in persons past middle age who from loss of teeth, injudicious habits of eating and drinking, unhygienic modes of life and other allied conditions are particularly liable to suffer from stomach derangements but of whom only an infinitesmal percentage develop cancerous disease, that it is obviously impossible to accept the surgeons' solution, and cut the Gordian knot by making an exploratory incision whenever an elderly person suffers from the stomach-ache. Physicians have therefore turned their attention to searching out the value of every suggested means by which light on this problem may be obtained.

It is a mistake to suppose that cancer of the stomach is always preceded by other local disorders, as in "a surprisingly large number" (Osler) it supervenes in persons who have previously enjoyed an excellent digestion. When such a person begins to suffer from

progressive weakness and emaciation, loss of appetite, pain in the stomach with or without eructation of gas, and vomiting, the probability of cancer is much greater than where similar symptoms have become gradually intensified in a person whose stomach complaints go back for many years. In any case, however, if no tumour can be felt, the diagnosis remains doubtful. The examination of the gastric contents may show stagnation in the stomach, absence of free hydrochloric acid, and the presence of excess of lactic acid; but these symptoms, while pointing to pyloric obstruction, stagnation of food, and atrophy of the gastric mucosa, are not decisive in favour of cancer, nor does the absence of lactic acid exclude it. The finding of the Boas-Oppler or lactic acid bacillus carries us no further than the presumption reached by the discovery of considerable quantities of lactic acid. The condition of the blood has been carefully investigated without any positively characteristic condition having been disclosed, although the great decrease of haemoglobin affords a confirmatory criterion. It has also been asserted that in cancer there is an absence of digestive leucocytosis, but the constancy of this has been disputed by so many observers that its validity can no longer be maintained.

In a recent paper[1] Dr. von Aldor of Carlsbad has carefully reviewed in the light of his own researches the value of certain other diagnostic means which are not so well known. The first of these is the recognition of the presence of albumose in the urine. Unfortunately both Salkowski's test with phosphorotungstic acid and the biuret reaction with copper sulphate are fallacious in the presence of urobilin, and the latter can only be got rid of by an elaborate process of precipitation and washing with alcohol. When he had done this, Aldor says that in a series of 56 patients (apart from fever patients who give a positive reaction) he met with only five examples of albumosuria, four of which had stomach cancer and the other cancer of the peritoneum. Other observers, notably Chvostek and Stromayr, have found albumosuria in tuberculous ulceration of the intestine, and even Aldor goes no further than to claim that the test is of some value in differential diagnosis.

The second is the so-called "Salomon's test," which is based upon the fact that the cancerous stomach secretes an albuminous gastric juice. In order to carry out this test it is necessary on the day preceding that upon which the examination is to be made to restrict the patient in the morning to fluid nourishment, such as milk and soup; in the afternoon to fluids free from albumen, such as tea and coffee; in the evening his stomach is washed out thoroughly; the following morning he gets no breakfast and his stomach is washed out with half a litre of normal salt solution, the same water being poured into and withdrawn from his stomach three or four times. The fluid is then tested for albumen by Esbach's reagent and for nitrogen by Kjeldhal's process. According to Dr. von Aldor this method gives an early indication of an ulcerating process, but does not distinguish between a simple and malignant ulcer, and fails to reveal any disease previous to the occurrence of ulceration.

The last method is that associated with the name of Boas—the detection of "occult" blood in the faeces and gastric contents. This is carried out by looking for blood in an ethereal acidulated extract of the gastric contents or faeces by the guaiacum, aloin, or benzidin tests, the delicacy of which is in inverse order to that just given, guaiacum being the least sensitive. In order to carry out the test, the patient must be fed for three days on food containing no raw meat; and if, under these circumstances, it is trustworthy, the main result is that a negative reaction makes the presence of cancer extremely improbable. Dr. von Aldor is not inclined to attach a very high value to any of these methods of diagnosis, as no one of them can do more than reveal secondary conditions, consequent upon the cancerous growth. Thus, Salomon's test and the detection of occult blood merely point to ulceration, while the presence of albumosuria is probably dependent upon metabolic disturbances the result of the cancer. The stage at which the disease must have arrived in order to fulfil any of these indications is too late to afford the needful help in view of possible surgical intervention and he adds that, in spite of the apparent increase during the last few decades in the number and variety of our diagnostic methods, cancer of the stomach remains still accurately described, in the language of Brinton, as "obscure in its symptoms," and he expresses the hope that J. C. Hemmeter may be justified in his confident opinion than in the bio-chemical examination of the blood plasma and blood corpuscles the solution of this diagnostic problem will before long be found.

[1] *Wien. klin. Woch.*, 1907, No. 20.

LUNACY ACCOMMODATON FOR LONDON.

THE decision of the London County Council that it is not advisable to commence another asylum at present is, in our opinion, a very prudent one. Soon after the council took over from the magistrates the administration of lunacy matters it set to work to augment the accommodation, and it should be acknowledged that in doing this the council acted with commendable promptitude, because the state of affairs was fast becoming deplorable. This was owing to the delay of its predecessors in taking steps to cope with the numbers of patients who, though strictly chargeable to Middlesex, as it then was, were boarded out in provincial asylums, at extra cost to the ratepayers, and to the great inconvenience of the friends of the patients themselves. It is true that the council found the building of Claybury Asylum making good progress, but it was even then apparent that more building was necessary, and it set to work to increase the already existing housing power at the old asylums of Colney Hatch, Hanwell, and Banstead, and acquired the Horton Estate, with all its potentialities of building expansion for many additional thousands of inmates.

As the new authority began to show its willingness to meet the demand which had been long pressed forward both by the guardians and the Lunacy Commissioners, a great rise became apparent in the annual increase of lunacy in London, as may be seen by reference to the yearly reports in the Red Books issued by the lunacy department of the council.

This increment, which was startling in its magnitude, was in reality due to the very much greater facility afforded to the parishes of getting rid of the senile encumbrances which had accumulated in the workhouses. As long as there was difficulty in obtaining room for the most urgent cases it was natural that the more chronic and doubtful would be kept back in the lunatic wards in other parts of the workhouses; they existed, indeed, but they did not count in the enumeration of the statistics given in the asylum reports of the number of insane persons in the county. With the provision of additional means the bottled-up supply was rapidly emptied, and as it was found that applications were readily granted it is not surprising that vacancies were filled, because the opportunity was now given for clearing the

workhouses of people who could be sent from the overcrowded wards to the asylums.

Among these were many persons in a state of mere mental decay (largely senile), who could equally well have been kept in the workhouses, and who really did not require the elaborate provision made in the new asylums. The asylums become inundated with persons who, whilst swelling the numbers of the "insane in "London," were but harmless persons for whom the plainest housing conditions were adequate. We do not mean to say that admission was procured for any but persons suffering from mental impairment, but the annual reports of the medical superintendents make it abundantly clear that many—large numbers, indeed—were admitted who might with more satisfaction to themselves have been left in the workhouses. Among the temptations to accept the facilities offered by liberal lunacy provision was the fact that for each patient sent to the asylum the guardians received a Government grant, whilst it became, of course, unnecessary to keep up so expensive a staff as before in the lunatic wards of the workhouses. It would seem that the demand has now fallen off—not, we fear, as has been suggested, owing to the greater sobriety of London, but because, by the outspreading of the population, other counties have to accept much of what was until recently kept within the confines of the County of London. Hundreds of cases of simple mental weakness now detained as "lunatics" in the county asylums are not there on account of troublesome or dangerous habits.

Large numbers of such cases are in the asylums because it is easier for the parishes to keep them there, but it is quite another question whether the detention of harmless dements is necessary under such special conditions. If these people had been in a better social position there would have been no idea of putting them into asylums. That because they are paupers they should be treated differently serves but to justify the distrust with which statistics as to lunacy percentages are received. It is to be hoped that when the report of the recent Lunacy Commission with its recommendations is received, suggestions will be made as to the feasibility of a well-regulated boarding-out system, and authority given to experts, such as the body of Lunacy Commissioners, to direct the form and amount which any new accommodation should take. The action of the London County Council in postponing the erection of a new large asylum is most commendable, and we hope that its wise judgement will be further evidenced by the adoption in the future of a plan of asylum-structure more calculated to increase the efficiency of the treatment of acute cases, as well as simpler means of providing for the care of those who cannot be cured.

BIRTH-RATES AT HOME AND ABROAD.

The diminishing birth-rate and its causes is the subject which occupies the greater part of the Registrar-General's summary of the vital statistics for 1907. After showing that the proportion of births to population has now fallen in England and Wales to as low as 26.3 per 1,000, he endeavours to discern what light is thrown on this fact by a detailed examination of the statistics regarding London. In any minute examination of the matter the number of marriages, the proportion in the population of unmarried women and widows at child-bearing ages, or, in other words, between 15 and 45, and the number of married women between the same ages, must all be points of material importance; it is therefore on these ratios and not on the whole population that he makes his calculations. When the birth-rate is calculated on the total number of possible mothers in the population of London, it is found that it has fallen 30 per cent. in the last thirty-seven years; and when the marriage-rate is calculated on the total number of marriageable persons, it is shown to have fallen no less than 21 per cent in the same period. Similarly, when the fertility of married women last year is compared with that exhibited thirty-seven years ago, it is found to have diminished by 25 per cent. The number of illegitimate births also has decreased, and the decrease has been even greater than amongst the married women, for the diminution has been 38 per cent. as compared with thirty seven years ago, when calculated on the number of unmarried women and widows at conceptive ages present in the populations of the two periods. The general conclusion drawn is that of the total decline in the birth-rate shown at the present time 19 per cent. must be ascribed to the decrease in the proportion of married women at conceptive ages resident in the area of London, while over 5 per cent. is due to a decrease in the number of illegitimate births. What about the remainder? The view of the Registrar-General is that, although some of it may be ascribed to changes in the age constitution of that part of the population which is represented by married women, there can be no doubt that much of it is due to deliberate restriction of child-bearing. In spite of everything, however, London may still console itself with the thought that its married women remain considerably more fertile than those of Paris, Berlin, Vienna, and St. Petersburg. Among all European cities, with the honourable exception of Dublin, there has been a heavy fall in the fertility amongst married women at child-bearing ages during the last twenty years, and in Berlin it amounts to as much as 33·1 per cent. On the other hand, it is somewhat depressing to find that, though married women in London remain relatively more fertile than their sisters in other great cities in Europe, much of their superiority in this direction must be ascribed to certain neighbourhoods, such as Stepney, Bethnal Green, Poplar, Shoreditch, Finsbury, and Southwark. All of these are comparatively poor and overcrowded districts; and, though they are relatively more fertile than others, their fertility in 1907 was below the average of the previous five years. The most fertile borough of all was Stepney, which contains a considerable proportion of foreign Jews.

ANTIVIVISECTIONIST MEETINGS.

The British Union for the Abolition of Vivisection held its tenth annual meeting on May 14 h under the presidency of Sir Francis Channing, M.P. The speeches were, as usual, in the style of that famous orator, Elijah Pogram, only that instead of defying the universal earth, the speakers denounced vivisectors and the Royal Commissioners. The Chairman, speaking of the inoculation of animals, characterized those operations in somewhat cryptic language as "forms of speculative torture." Dr. Hadwen followed with an attack on the Royal Commission on Vivisection, which (we learn from the *Standard*) he described as "a packed body formed with a view to "giving the vivisectors a chance of airing their opinions "and thus shelving the question." Dr. Hadwen knows, or at any rate ought to know, that it was not the vivisectors but their opponents who asked for a Commission. Dr. Hadwen has a grievance, however, because he was not given a seat on the Commission. We are almost inclined now to regret that he did not have his heart's desire in this matter, for he would have learned a good deal which might have opened his eyes, as it is said to have done in the case of certain other Commissioners, to the emptiness of the cause which he advocates. Sir George Kekewich, who is probably still smarting from the effects of the cross-

examination to which he was subjected by the Commission, said with the charity characteristic of the antivivisectionist that he could not discover one of the members of the Commission who had the smallest sympathy for the sufferings of animals. Doubtless there are many things which this ornament of our Legislature has failed to discover, but that is his own private misfortune, with which the world has no concern. There has been some interesting correspondence in the *Times* about the "stewards" at the meeting of Miss Lind-af-Hageby's Antivivisection Council, to which reference was made in our last issue. From what we were told by persons present, we gathered that the Swedish lady's bodyguard was composed of working men of a low class. This was confirmed by a correspondent of the *Times*, who in turn was corroborated by the representative of the *Times*. That gentleman, on inquiring into the organization of the corps, found that a circular was issued about a fortnight before the meeting from an address in Battersea Park Road, asking for assistance "to ensure a peaceful meeting." Most of the "stewards," he says, came from Battersea, and were organized by the local trade union branches. The reporter goes on: "The apparently preconcerted onrush "of twenty or thirty of the stewards upon the three "students synchronized with a little satirical applause "by the latter. The suggestion was afterwards made "that they had chemical cartridges. The stewards "seemed to aim less at ejection than at assault and "battery. If the Westminster City Council lets "Caxton Hall for such a purpose again, it should "stipulate that the preservation of order is entrusted "to the police and not to private adventurers." Miss M. M. Dawson, Honorary Secretary of Miss Lind-af-Hageby's Antivivisection Council, contradicts the statement that the stewards were "men of "the lowest type," and that they handled the students roughly. Dr. E. H. T. Nash, however, who says he was sitting in the gallery and had a perfect view of what went on, confirms the *Times* correspondent. As we have said, our private information, received before the correspondence began, is to the same effect. We wonder if Miss Lind-af-Hageby, before inviting the assistance of roughs to keep order at her meetings, satisfies herself that they treat animals kindly. As for their treatment of their wives and children, that would naturally be a secondary consideration to the mind of an antivivisectionist.

"OVERLAY" OR "OVERLIE."

WE have always looked upon "overlaying" as a vulgarism, and we have done all in our power to stamp it out. Now, however, the Government has given the form whatever sanction it has to give in a matter of philology by substituting it for "overlying" in Mr. Herbert Samuel's Children's Bill. The change was made after consultation with Dr. J. A. H. Murray, whose letter was published in a recent issue of the *Times*. We think it of sufficient interest to reproduce here. First of all, it should be stated that the *Oxford Dictionary*, of which Dr. Murray is one of the editors, says: "Overlay, II. (4), "to lie over (something else), more properly 'overlie': "Overlay, II. (5) a., To lie over or upon (a child, etc.), "so as to suffocate it; to smother by lying upon: = "overlie 2, a.; and overlie, in use from the twelfth "to the sixteenth century; in the seventeenth–"eighteenth century displaced by 'overlay,' reintro-"duced in the nineteenth century, chiefly in geological "use. 2 a. To smother by lying upon (cf. overlay, 5 a.)." Dr. Murray's letter is as follows: "The question which "you put to me is not very easy to answer, there being "a good deal to say on both sides, and historical usage "being conflicting. To lie is an intransitive verb of "posture (κεισθαι), but, like other verbs of the same "kind, it becomes transitive when combined with a "preposition: 'a stiff clay overlies the coal'; 'some-"'thing underlies your objection to him'; hence these "may have a passive: 'the coal is overlain (not overlaid) "'by sandstone.' It is quite logical to say 'the nurse "'overlay or has overlain the child,' and 'the child has "'been overlain by the nurse'; the meaning is that "the nurse (herself) has lain over or above the child. "'To lay' is the causal derivative of 'lie,' as 'set' is of "'sit,' and 'bait' of 'bite.' Being causal it involves two "objects—'one lays a thing upon something else,' 'one "'lays a carpet on the floor'; but by a sort of 'cut "'across' known to the Aryan languages generally, one "can go direct to the ultimate object, and make an in-"strumental adjunct of the other; 'one lays the floor "'with a carpet' ('murum urbi circumdedit; urbem "'circumdedit muro'). In 'overlay' this later con-"struction is apparently the only one; 'one overlays a "'surface with varnish, a wall with ornamentation, a "'child with a pillow or a blanket.' The instrument "may be unexpressed, if immaterial to the fact; 'a "'nurse overlays a child,' no matter with what. If she "herself lies upon it, you can with minute accuracy say "'she overlies it,' but even then she may be said to "overlay it with her body (instead of with a pillow), "overlying being thus one form or kind of overlaying. "Therefore, if a general word is wanted to cover "all cases of the instrument, or to leave the instru-"ment out of sight, it appears that the general word is "'overlay,' past tense and past participle 'overlaid.' "Apparently we ought in the *Dictionary* to have pointed "out that 'overlie' as applied to a child is not merely "an equivalent of 'overlay 5 a,' but that it also belongs "to 'overlay 3; to cover . . . excessively or so as to "'smother or extinguish.' But, like the earlier English "usage, we thought only of the particular or usual case "of the nurse doing it with her own body. I do not "know how far back in the Bible versions of I. Kings "iii., 19, 'she overlaid it' goes; Wyclif has 'she over-"'laye him.' But the version of 1611 is, I think, quite "good precedent to follow for the general use—with-"out, of course, condemning 'overlie' when strictly "used. The Act could, of course, say 'by overlying or "'overlaying it,' so as to cover both cases; but this is "apparently not necessary. There will be another "slight advantage of differentiation by adopting 'over-"'lay," since it will tend to confine 'overlie' (and "'underlie') in strictly position senses, without "expressing any effect on the object, as in the geo-"logical use where mere superposition is expressed." Dr. Murray is our leading lexicographical authority, and, as was said in a political sense of a famous statesman, one seeks counsel of him as of the oracle of God. But we cannot say that Dr. Murray's reasoning, which is somewhat subtle, has convinced us. Precedents could no doubt be found for every vulgarism which disfigures popular speech. Overlaying a floor with cement or a picture with varnish seems to us altogether different from lying over a child. If the ruling is to be accepted, Byron committed no solecism in his famous "There let "him lay." On Dr. Murray's principle of usage we may absolve the poet on the plea that man, whom the ocean sends shivering in its playful spray and "howling to his "gods," *laid* his body on the beach. Similarly if a Cockney says of some one that he *lays* on the floor, it may be justified by the formula, so convenient to the grammarian, "*Subaud.* himself." On the whole we do not think "overlaying" should be granted the *droit de cité* in correct speech.

CREMATION CERTIFICATES.

SPEAKING at the annual dinner of the Royal Sanitary Institute on May 12th, Lord Robert Cecil remarked that the usual history of legislation was that somebody

drafted a bill, the two Houses of Parliament altered it according to their fancy and passed it, and, finally, His Majesty's judges, by a series of laborious processes, informed the drafters of the bill, the Houses of Parliament, and the public at large what it all meant. It has been otherwise with the Cremation Act, which, though now in existence for some six years and in active use throughout that period, has proved of so practical and comprehensible a character that it came under consideration of the law courts for the first time only last month. On this occasion, moreover, not the meaning of the Act, but a direct breach of the regulations drawn up by the Home Office in accordance with it, was in question; and it is greatly to the credit of the London Cremation Company, the parent of all cremation societies in this country, that it should have been directly and intentionally instrumental in bringing about the action in question. As a rule, neither this company nor any of its juniors seem to have any difficulty in securing absolute compliance with the regulations on the part of those who demand their services; but on this occasion the company was entirely deceived until a certain period, and then, discovering the true facts, took prompt action, with the result shown in the account of the case at page 1263. The value of cremation to the general cause of public health is so great, and medical men as a body are so desirous of seeing its practice extend, that all must desire that nothing shall occur to arrest its progress. Hence it is curious that the first action brought under the Act should have been one in which the moral, though not legal, defendant was a medical man, and that two other medical men partly contributed to its occurrence. The certificates required in connexion with cremation do not present the slightest difficulty, but those furnished on this occasion were so worded that the medical referee, Mr. Herring, had no reason to suspect that there had been any breach of the stringent provisions of the Act. Owing to the fact that the certificates failed to reveal a circumstance which may be regarded as of essential importance, or at all events, when cremation is in view, they secured the cremation not of one but of two bodies. It was only in connexion with this point that the prosecuting counsel made the stringent criticism recorded on the page indicated, but it seems to us that similar observations might be made in regard to any death certificate which avoided mention of corresponding facts. Doubtless in the filling in of death certificates a good deal of latitude is not only permissible, but inevitable; it must often be difficult, too, to distinguish accurately the primary and secondary cause of death. But when death takes place immediately after an instrumental or even natural delivery, it can scarcely be legitimate to omit all reference to the pregnancy, even though the signer of the certificate considers that it in no way contributed to the decease of the patient.

THE ANNUAL MEETING AND BUXTON.

In connexion with the approaching annual meeting of the British Medical Association at Sheffield, the arrangements for which are in a very forward condition, we are asked to state that the members of the Association in Buxton have made arrangements with the hotels and hydropathic establishments to receive members attending the meeting at Sheffield at special reduced rates. Buxton is within an easy railway journey of Sheffield, and it is believed that some members may prefer to take advantage of the first-rate accommodation in this well-known watering place, more especially as Sheffield itself is not particularly well provided in the matter of hotels. Return tickets between Buxton and Sheffield will be issued at reduced rates, and, if a sufficient number decide to stay at Buxton, special trains will be run enabling members to attend comfortably all the meetings and entertainments in Sheffield and to return to Buxton each night. The Thermal Mineral Baths, the Gardens Company, and the Opera House Company at Buxton have all offered special facilities for the week. Dr. G. H. Thompson, Grafton House, Buxton, is acting as the local secretary, and will be pleased to give any further information.

THE ADMINISTRATION OF ISOLATION HOSPITALS.

Since the proper administration of isolation hospitals is of essential importance to the whole population, including private medical practitioners, the Isle of Thanet Division is to be commended for having devoted a good many meetings during the past winter to a consideration of the subject. Its activity in the matter arose out of a paper read in October by Dr. Styan, Medical Officer of Health for Ramsgate, and resulted in the appointment of a small committee to examine in detail several of the points raised, one or two resolutions being adopted meanwhile. The net outcome was that the Division managed to secure the acceptance by the House Management Committee of the Isolation Hospital of a series of recommendations, all calculated to increase greatly the utility of this institution to the public, and to lessen the incidence of infectious disease, and on request it followed up these recommendations by a second report showing what structural alterations were necessary, and their cost. Unfortunately, however, when the matter came before the General Board the latter refused to see eye to eye with the Committee of Management. Although the board seems to have been much impressed by the fact that the Division which brought forward the matter included all the medical officers of the districts which support the isolation hospital, it nevertheless declined to accept the most important of the recommendations, and more particularly those which had the obvious utility of confining the use of the observation block to doubtful cases, instead of allowing it to be occupied by cases of mixed infection as well. Nevertheless, the *verbatim* report of the proceedings contained in the *Ramsgate and Margate Gazette*, though it indicates that the meeting finally broke up in some disorder, shows clearly that so large a proportion of those present were in sympathy with the suggestions of the Division that if the latter persists in its good work complete success is likely to crown its efforts in the end. Among the recommendations actually adopted are some of more than local interest. One of them was to the effect that before notifying a case, or sending the patient to the hospital, practitioners should take a second opinion if the case were mild and doubt existed as to its exact nature; another was that the notifying practitioner should be informed at once if the isolation hospital medical officer considered that the diagnosis made was incorrect; a third, that every case should be inspected in the ambulance by the official in charge of the hospital at the time of its arrival, and that if it seemed of doubtful nature or was certified as such, or of unusually mild character, should be placed in the observation ward pending formal examination by the medical officer himself; and, finally, that if any patient while in hospital contracted a second disorder, a letter should be sent to the certifying medical practitioner notifying him of the fact, and that the same step should be taken when any patient died or was discharged.

MENDELISM.

The last of his three lectures on Mendelian Heredity was delivered by Mr. Bateson at the Royal Institution on Thursday, May 14th. The lecturer continued the discussion of diseases in man and their relation to

Mendelian principles. The obscurity of mental diseases and their descent was attributed partly to the inevitable imperfections in diagnosis, and still more to the fact that specific causes were often necessary to bring out insanity. It must, therefore, be considered unlikely that precise rules would ever be devised for its inheritance. The phenomenon of night-blindness was dealt with in considerable detail, and the elaborate table drawn up by Cunier in the beginning of the nineteenth century was thrown upon the screen. The analysis of the figures by Nettleship showed that the number of unaffected persons was considerably over the number expected on theoretical grounds, but it pointed to the phenomenon of night-blindness being a dominant. There was reason to believe that the table illustrated the rise of an entirely new variety and of its propagation. The facts were well worth sociological investigation. On collecting the instances known of night-blindness in families a rough equality was found—705, 725. Was it possible that this was an example of the transmission of a disease through the gametes? Certain human diseases were recessive characters, though they did not show the regularity seen in guinea-pigs, mice, and plants. An example was albinism, where, instead of the ratio 3 : 1, there were 197 non-albinous to 126 albinous. The recessive character of albinism was the more probable, because albinos were usually the result of consanguineous marriages. This fact should not, however, be used as a general argument against consanguineous marriages, because recessive characters might be very valuable in society. The whole question of sex in heredity was one of very great difficulty. It had been suggested that it was determined by varying conditions of nutrition, good nutrition giving a bias towards females and bad nutrition a bias towards males. This was so improbable that it might be neglected. It was possible, however, that external conditions of the sort influenced the output of the germ cells, though, once fertilization had occurred, the sex was probably determined. Facts pointed to the view that it would have to be recognized that egg cells and spermatozoa each carried male and female determinants. This was rendered probable because such conditions as malformations were often interrupted by sex inheritance. Thus in the inheritance of haemophilia bleeding appeared to be a dominant in males, but a recessive in females. The view found support from results obtained by crossing two varieties of moth, in both of which the males were winged, but in one of which the females were winged and in the other wingless. Confirmation was also got by studying the behaviour of a cross between horned Dorset and unhorned Suffolk sheep, and from the transmission of colour blindness in man. An illustration was also given of the effects produced by crossing a gooseberry and a laticolor moth. It is probable that in the female the male is present but undeveloped, as is seen, for example, when the ovaries of an animal, such as a fowl, are attacked by disease. Under these conditions the male character appears, having apparently been kept undeveloped owing to the female influence. The converse does not apparently apply to females in this species, but in certain species the relation between the sexes appears to be reversed. Mr. Bateson concluded by pointing out that though Mendelism was at present only in its infancy, it already offered a very promising weapon for the elucidation of the mysteries of heredity.

THE FEE ORDER OF THE GOVERNMENT OF INDIA.

WE hear from India that the Government of India has found it necessary, for reasons which we need not now discuss, to consult the various local governments on the subject of the notorious fee order of July 1st, 1907. It is most unusual for such a course to be taken once an order has been issued by the Viceroy and is actually in force; but when a Government whose orders are subject to criticism and revision by the Home Government issues such an unworthy and unwarrantable order as that in question, it is not wonderful that something unusual should occur. From information that has reached us from time to time, we understand that there is but one opinion in India, lay as well as professional, on the order, and also that it is objected to by some, at least, of the local governments. We have refrained from recommending resort to a course which would undoubtedly otherwise have been suggested, because we had reason to believe that the order need not be considered as final, and that there was a strong probability that it would be either withdrawn or greatly modified. Nearly a year, however, has passed since the issue of the order, and the Indian Medical Service is still smarting under its conditions and expecting relief. The matter has been before the Council of the Association, and for the present action is suspended, in the expectation that so mischievous and vexatious an order will be cancelled by the Government which issued it.

BLACKWATER FEVER.

A DISPATCH from the members of the Blackwater Fever Expedition of the Liverpool School of Tropical Medicine has been received by Sir Alfred Jones, Chairman of the School. The expedition, which is to a certain extent financed by the British Government, left for Central Africa in August, 1907. Drs. Wakelin Barrett and Yorke, the members of the expedition, state that they have been occupied since their arrival in studying the mechanism of production of blackwater fever, particularly the mode of action of quinine in producing blackwater and the path by which haemoglobin is liberated. Their work, they say, is progressing satisfactorily, and, though yet incomplete, has already put the mechanism of blackwater on a different footing from that which it at present occupies. They are not, however, sufficiently advanced to publish the results, and they think it would be desirable to publish their work as a whole rather than in several separate reports. The work is written out as they go along, so that when they return the manuscript will be complete—at any rate, as far as blackwater fever is concerned. They go on to say that the number of cases they have had, though furnishing some valuable material, has not yet been sufficient for their purpose. Twelve cases of blackwater fever have occurred in the colony since their arrival. Only nine of these were within reach, and four of them were seen during passage of blackwater. Drs. Waklin Barrett and Yorke add that they are anxious to study the mechanism of production of red water in cattle and dogs, as this is likely to have an important bearing upon blackwater, and will, moreover, supply histological material which in blackwater is likely to be very scanty. So far, their efforts to find animals suffering from haemoglobinuria have been unsuccessful; but they have the assistance of the principal medical officer, Dr. Hearsey, and they expect to be successful later.

HOSPITAL OUT-PATIENTS.

THE question of abuse of out-patient departments was considered recently in the *Daily News*, being treated in somewhat interesting fashion, and from the point of view of the "hospital abuser." The article was signed, and the writer shows why both in her early youth and later on when a struggling journalist she had to attend out-patient departments on frequent occasions for long periods, not as an observer but as a real patient. Her account is sufficient to show that her experience has

been wide and genuine; this makes her conclusions of interest. She notes in passing that she has rarely seen any but obviously poor people among her companions, but her main object is to show that though out-patients do not pay for their treatment they by no means get it for nothing. Apart from the distances which they travel to the institutions of their choice, they commonly have to wait many weary hours for their turn to see the doctor, and after this have to wait again for their medicines; they spend the time in the midst of distressing sights, and the whole thing constitutes so trying an ordeal that most people would, she thinks, rather pay a fee, could they do so, than undergo it. Nevertheless, for her own part, the writer deems the value of the treatment thus obtained so high as fully to outweigh the drawbacks attending its receipt. Quite independently of financial considerations, it is better, she thinks, in some ways than that which can usually be obtained either in a Harley Street consulting room or at home at the hands of a general practitioner. It is notable that the writer throughout indicates a preference for hospitals whose clinics are attended by students. The presence of the latter, she says, and the fact of being treated as a case to be lectured on is often very trying, especially to sensitive patients and women, but it has the indubitable advantage of securing that every case is probed to the very depths. One remark in this connexion is worth quoting in the writer's own words. "I have never," she says, "seen the faintest "indication on the part of the doctor or the student of "any perception of the humanity of the case before "them." This is high testimony to the tact, good taste, and scientific spirit prevalent amongst students of the present day; but lest the sentence itself should be seized upon by persons of the Lord-of-Hageby school as proof of an atmosphere of callousness, its meaning should be punctuated by quoting the concluding words of the article: "On glancing through "this article, it seems that I have approached a "grumble at the treatment of out-patients. The "nurses and porters are often unnecessarily harsh, "but the doctors and students, in spite of their haste, "are invariably kind, and as considerate as is possible "in the circumstances."

THE PEOPLE'S LEAGUE OF MEDICAL FREEDOM.

The objects of this league are set forth in a leaflet announced as a "reprint of advertisement which "appeared in the programme of the Conference of Free "Churches held at Southport, March, 1908," commencing "Religious and Physical Liberty." The league has its own official organ, *The Herb Doctor*, "a health defence "monthly, the organ of medical Nonconformity." Divested of the catch phrases which serve to conceal the real objects of the league, its aims are at once apparent. By dubious strategy an attempt is made to convince the public that the Medical Acts exist, not for the benefit of the people, but to further the interests of the medical profession. Vendors of packets of herbs are unjustly treated, because, forsooth, coroners refuse to regard them as witnesses competent to give medical evidence at inquests. The *Herb Doctor* considers that "even Christians have much to learn as to the value of "the Mosaic Health Code." It teaches that "the "human organism is a Vital Realm, energized by a "beneficent spirit or vital force, in contradistinction to "the materialistic allopathic (!) theory which regards "it as a chemical combination into which inorganic "drugs, minerals, and poisons may be poured with "impunity." The league also "encourages the "establishment of unorthodox colleges and schools "for teaching natural systems of healing the sick." As secretary of this league, Mr. J. P. Swan has found a wider scope and outlet for his bitter attacks on medical men than is afforded by the narrower groove of mere antivaccination controversy. With wearisome iteration he refers to the British Medical Journal as a "trade" organ—and this in the columns of the *Herb Doctor*, whose proprietor and publisher is himself a herbalist! The medical inspection of school children is exciting the wrath and indignation of this league, and has called forth a hysterical manifesto to parents and guardians. The inspection is characterized as "odious treatment" of the children. Parents are urged "to assert their rights "and protest against this iniquitous class legislation by "refusing to allow their children to be medically examined "at the schools." We do not anticipate that the factitious scruples of this league will influence many parents, but this organized opposition may serve as a temporary hindrance, preventing a few children from obtaining the benefits which in many cases will follow the inspection. The whole scope and object of the examination is grossly misrepresented when it is stated to be "an "insulting attack on the rights of working-class "parents." Working men are asked if they will "allow "their children to be physically inspected like convicts "and made the butt of inquisitorial medical officers?" Such twaddle will be despised by the working man who has any regard for the welfare of his child, himself, or the State. It is evidently an axiom of the "People's "League of Medical Freedom" that the careful study of all the branches of medical science is an absolute disqualification and that the less a person has investigated a subject the more competent he becomes to pronounce an opinion upon it.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS

The election of members of council will take place on July 2nd. There will be four vacancies. Mr. Howard Marsh has withdrawn from the council, being out of sympathy with its policy in certain respects. Mr. Ward Cousins and Mr. Pearce Gould retire, having been elected in 1900, so that they have served their full term, and Mr. W. Harrison Cripps retires, being substitute member since 1905 for the late Sir Alfred Cooper, who was elected in 1900.

ASSISTANT MEDICAL SECRETARY OF THE ASSOCIATION.

In accordance with the resolutions of the Annual Representative Meeting at Exeter to the effect that an assistant medical secretary should be appointed competent to undertake any part of the Medical Secretary's work which might be delegated to him, the Council, after consideration of the balance sheet for 1907, which is published in the Supplement of this issue, decided on April 29th that a permanent assistant medical secretary be appointed, and instructed a special committee, composed of the chairmen of those committees of which the Medical Secretary acts as secretary, together with the officers of the Association, to make a report as to the terms of the appointment. This report will be presented to the next meeting of the Council, which is summoned for July 1st, and we understand that, subject to the approval of the Council, the terms of the appointment will then be advertised forthwith, in order that the appointment may be made at an early date.

A SUCCESSFUL CASE OF SPLENECTOMY.

Last summer a groom, aged 19, was occupied in changing horses at an omnibus yard in Paris.[1] A horse kicked him on the left forearm and he was thrown down, striking the ground with violence. No more precise history could be obtained when the lad was admitted into the Pitié under Professor Terrier. It

[1] Splénectomie pour hémisection complète traumatique de la rate, Le Moine and Lévêque, *Bulletins et Mém. de la Soc. Anat. de Paris*, July, 1907, p. 511.

seems clear that he was not kicked in the abdomen; this point is important, for a reason which will be explained. On admission a little over two hours after the injury the patient showed all the symptoms of acute intraperitoneal haemorrhage. MM. Le Moine and Lévêque, *internes* on duty, immediately operated. An incision was made in the middle line below the umbilicus, the peritoneal cavity was found full of fresh blood and clots. After searching several other organs and the mesentery, the operators found that the spleen was ruptured. In order to reach it thoroughly another incision was made, transverse to the median, which had already been much extended upwards, and running for 4 in. to the left, four fingerbreadths below the lower border of the ribs. This incision, made very low, proved highly convenient. The spleen could be seen torn completely across, the two halves being only united by a slender bridge of splenic tissue at the hilum. Fortunately for the patient the pedicle was long; the operators therefore had no difficulty in delivering the damaged organ out of the abdominal wound. The vessels and peritoneal connexions were readily secured, ligatured, and divided. The splenic fossa and also the hypogastrium were drained. The operation lasted one hour and forty minutes. Subcutaneous injections of artificial serum and hypodermic injections of cardiac stimulants were given, and the patient was doing well on the tenth day, when his case was reported at a medical society. The spleen, though torn in half and emptied of much blood, weighed nearly 1¼ lb. It was carefully examined: no sclerosis nor any other chronic pathological lesion was discovered. The great size and weight of the spleen appeared, in the opinion of M. Joltrain, medical *interne* at the Pitié, to be due to intense congestion consecutive to the recent injury and not to any previous local disease. The study of the patient's blood seemed to confirm this opinion. As cases of death following a slight blow on an enlarged spleen are familiar to those who practise medicine in malarious districts in the tropics, the fact that the spleen may, it appears, enlarge very soon after an injury is worth bearing in mind. The surgical treatment of this case was, of course, sound and satisfactory.

CONOLLY NORMAN MEMORIAL.

THE Executive Committee appointed to erect a suitable memorial to the memory of the late Dr. Conolly Norman has decided that if sufficient money be collected it shall be devoted to two objects: (1) The formation of a Conolly Norman after-care association to benefit the poor and friendless patients on their discharge from the Richmond Asylum; (2) to have a portrait of the deceased physician painted, to be hung in the Royal College of Physicians of Ireland, of which he was a vice-president. If sufficient funds are not subscribed to realize both objects preference will be given to the after-care association, provided that sufficient support be forthcoming to justify the hope that the charity may be permanently maintained; if otherwise, the portrait may be the sole memorial. Subscriptions may be forwarded to either of the Honorary Treasurers, Dr. W. R. Dawson, Farnham House, Finglas, Dublin, or Mr. J. R. O'Connell, LL.D., 34, Kildare Street, Dublin.

THE forty-eighth annual dinner of King's College, London, will be held at the Hotel Cecil on Wednesday, June 3rd, Viscount Milner in the chair.

READERS may be interested to know that the current issue of the JOURNAL and the SUPPLEMENT contains, exclusive of all advertisements, over 264 columns of reading matter, or over 211 000 words. This is in size more than equivalent to the amount contained in two average-sized six shilling novels. When the advertisements are also brought into account there must be added a further 150 columns.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Typhoid Outbreak at Kelvinside, Glasgow.—Last week, in answer to Mr. Watt, who referred to the delay of action in connexion with this outbreak of fever, Mr. Sinclair said that he had made inquiry and had been informed by the Local Government Board that the source of infection in the earlier cases was traced, not to a typhoid patient, but to a healthy woman, who had had typhoid fever sixteen years ago, and was still capable of spreading the disease, thus acting as a "carrier" case. This woman was employed on a farm, but her condition was not discovered until some weeks after the beginning of the outbreak. The first notification was received by the city authorities on December 17th, and two others followed on the 18th and 19th. On the last-mentioned date a large milk supply was suspected in Glasgow, and on the following day one of the sources of supply was reported to the county medical officer for inquiry. The farm was visited on Saturday, December 21st, by the assistant medical officer, who found a dairy worker being treated for pneumonia. The time between this date and the 24th was fully occupied in completing a very difficult diagnosis, with the result that the case was found to be one of typhoid fever complicated with pneumonia. This patient, to whose illness some of the later cases in the city were due, was removed as soon as typhoid symptoms were detected to hospital on the evening of December 24th, and the premises were disinfected. For some days the milk was sterilized by the city dairyman, who then ceased taking milk from the farm. The milk, however, was sold in another dairy in Glasgow without any bad result. The difficulty, therefore, in controlling this short epidemic was due mainly to (1) the impossibility of discovering, without prolonged investigation, typhoid germs in the healthy woman, and (2) the complications involved in ascertaining the true nature of the illness of the patient removed to hospital on December 24th. But, once the disease and infection were recognized and the patient removed to hospital, there was no need to stop the milk supply. The facts showed that the city and county authorities conducted their investigations with promptitude, and that no delay occurred between the knowledge of the facts and the action resulting from them, and, accordingly, he saw no ground for issuing instructions to any of the authorities concerned.

Medical Certificates for Postal Officials.—Last week Mr. Field asked the Postmaster General whether instructions had been issued to the effect that post-office officials of certain ranks who might receive sick certificates from a certain duly qualified private medical practitioner in the north-western district of London should be allowed sick leave but no pay; would he say whether this medical officer had any charge preferred against him in which he was given an opportunity of defending himself; if not, would he say why these instructions had been issued; and, seeing that the post-office medical officers had frequently been in conflict with private medical practitioners on the question of sick leave of post office officials, and that several cases of death had occurred in which these official medical officers had refused sick leave shortly preceding such deaths, would he now grant an inquiry into this subject? Mr. Sydney Buxton replied that the acceptance of private medical certificates in justification of sick leave was in the nature of a concession to the post office staff, for whom competent medical attendance was provided at the expense of the State. It was obvious that this concession must be subject to certain restrictions and limitations if a proper check was to be maintained upon the sick absence of the staff. Circumstances came to his notice which threw doubt upon the reliability of the certificates issued by the doctor to whom the honourable member referred, and he felt it right to lay down that such certificates should not be taken in future as conferring a title to sick pay. The doctor was given an opportunity of explaining the circumstances. He saw no reason for granting an inquiry into the subject.

The Infant Life Protection (No. 2) Bill, which was introduced last week by Lord Robert Cecil, is backed by Mr. Shackleton, Mr. Simon, and Mr. Chiozza Money. It is a short bill of three short clauses, and the memorandum states it is felony, punishable by penal servitude for life, to procure miscarriage. It is murder to kill a fully-born child. To destroy a child while it is being born and before it is fully born is no offence whatever. The object of this Bill is to put an end to this anomaly.

The Report of the Royal Commission on the Feeble-Minded will, the Home Secretary states, be ready for submission to the King by the end of June.

The Lady Medical Officer of the Post Office.—Mr. Field brought up two cases, in the form of questions, connected with deaths in the female staff of the Post Office. In connexion with the first case, he stated that two specialists had given opinions that the death was caused by suppressed influenza and that proper treatment had not been applied at first, and he inquired what were the medical qualifications of the official lady doctor. Mr. Buxton replied that the patient in question visited the official medical officer on March 30th last, with the complaint that she was run down after influenza. She did not appear to have asked for sick leave, and was given a tonic and instructed to see the medical officer again. There was nothing in her appearance or symptoms to suggest the presence of serious disease. She voluntarily remained at work till April 4th, and made no application for relief from duty. The assistance given on April 4th was solely because she happened to be engaged on work of an unfamiliar nature. On the evening of that day she developed tuberculous meningitis, of which she died on April 27th. He saw no reason to attribute neglect of duty to the medical officer, in whose skill and care for the welfare of the staff committed to her charge he had full confidence, and to whom considerable injustice was done by the terms of the question. In the second case Mr. Field explained that the patient was ordered back to duty a short time before her sudden death. Mr. Buxton said the patient was under the care of a private medical attendant, and had not been treated by the official medical officer since October 21st, 1907—that is, five months before her death. No question of neglect on the part of the medical officer therefore arose. He might say that the patient had not been absent on sick leave between October last and the day before her death, nor was there anything to indicate the seriousness of her condition. He had entire confidence in both the skill and the kindliness of the lady medical officer concerned in this case, and much regretted the implication unjustly thrown upon her by the terms of the question.

The Irish Universities Bill and Cork and Galway Professors.—Mr. Birrell informed Mr. William O'Brien on Tuesday last that existing professors of the Cork and Galway Colleges who might be offered, and might accept, equivalent positions in the reconstituted colleges would have the same tenure of office secured to them as that under which they held their positions at present.

Medical Inspectors under the Irish Local Government Board.—Mr. Hazleton asked the Chief Secretary to the Lord-Lieutenant of Ireland whether it was proposed to increase this year the salaries of any of the medical inspectors under the Local Government Board for Ireland; if so, by what amount, for what reason, and under what regulation; and the names, present salaries, and length of service of the inspectors in their present appointments. Mr. Birrell said the reply to the first part of the question was in the negative. The salary of each of the present medical inspectors was £700 a year. Their names and length of service were: T. J. Browne, 19 years; C. J. Clibborn, 17 years; D. Edgar Flinn, 10 years; Sir J. A. MacCullagh, 10 years; E. Coey Bigger, 8 years; Brendan MacCarthy, 6 years; and Joseph Smyth, 6 years.

Declarations under the Vaccination Acts and Commissioners for Oaths.—Mr. Lehman brought up a case in which a commissioner for oaths had recently refused to take a statutory declaration under the Vaccination Acts when applied to, and Mr. Burns stated that the commissioner for oaths informed him that he had had a case in which he questioned a person who attended before him to make a statutory declaration under the Vaccination Act, 1907. He stated that his object was to ascertain the bona fides of such person, and that the answers given did not satisfy him that he would be justified in taking the declaration. This was probably the case referred to. He thought the commissioner acted under a misapprehension of his duties in the matter, and he would communicate with him on the subject.

The Vacant Medical Chairs in Glasgow and Edinburgh.—In asking when these appointments were to be filled up, Mr. Watt called the Secretary of Scotland's attention to the fact that this session the offices of lecturers and examiners will be dissociated to the disadvantage of the students. Mr. Sinclair said he hoped to make the appointments shortly, and that the point mentioned should not be lost sight of. No avoidable delay should occur.

The Medical Inspection of Transvaal Natives.—Sir Gilbert Parker last week asked the Under Secretary of State for the Colonies what was the record of service of Dr. C. Lane Sansom in the Transvaal; what position had he held during the last seven years; what pension or compensation had been granted him; and whether employment would be found for him in the Colonial Service or in some department of State in this country. Colonel Seely said that Dr. Sansom was appointed to be District Medical Officer of Health for the Witwatersrand on November 16th, 1901, at a salary which was latterly fixed at £1,200 a year, with a horse allowance of £180, and he held that appointment until recently. He was also medical officer of the Foreign Labour Department. He was not aware on what terms he left the Transvaal service, but the post was not pensionable. The Secretary of State had had a note made of Dr. Sansom's name, and it was hoped that some suitable opportunity might present itself of offering him some employment. In answer to further questions, Colonel Seely said he was not aware of the arrangements which the Transvaal Government had made or proposed to make in consequence of Dr. Sansom's retrenchment, but he had no reason to suppose that the Transvaal would fail to maintain a high standard of administration, and therefore trusted that the health of the natives would receive no less attention than during Dr. Sansom's tenure of office. The district doctors were at present in attendance, and Dr. Sansom had general supervision.

Vaccination Officers' Fees.—Mr. Burns last week informed Mr. Courthope that in a few instances representations had been made to the Local Government Board by vaccination officers to the effect that the increasing number of conscientious objectors had seriously affected their income. He did not, however, think that sufficient time had elapsed since the Act of last year came into operation to enable a definite opinion to be formed as to its effect on the work and remuneration of vaccination officers.

Scarlet Fever on Salisbury Plain.—Mr. Ashley asked the Secretary of State for War on Monday whether he was aware that a serious outbreak of scarlet fever has occurred in the villages of Nether Avon and Fittleton in houses belonging to the War Office Salisbury Plain estate; whether, beyond paying a few visits, the military medical officers had taken any steps to check the spread of the disease by isolating the cases or otherwise; and what immediate steps he proposed to take in this matter. Mr. Haldane replied that he was aware of the outbreak. The military medical and civil authorities had been working closely together throughout the epidemic, but the cases had all been treated by the civil practitioners residing in the neighbourhood. Stringent rules were in force to prevent communication between the affected villages and the troops. The Pewsey Council had been recently approached with a view of providing the necessary isolation accommodation.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WALES.

ANTHRAX IN GLAMORGAN.

THE sudden death of two milch cows at a farm near Mountain Ash have been proved by bacteriological examination at the county laboratory to have been due to anthrax.

HEALTH OF MERTHYR.

In his annual report on the health and sanitary condition of the borough of Merthyr Tydfil, Dr. Alex. Duncan stated that the death-rate was 19.2 per 1,000, whilst the birth rate was 35 8, and the infantile mortality-rate 154 as compared with 179 in 1906 and 204 in 1905. Of the deaths among infants 81, or nearly 20 per cent., occurred in the first week of life, and 129, or 30 per cent. of the whole number during the first month. In the second month there were 44 deaths, in the third 38, making a total of 211, or practically 50 per cent. of the whole in the first three months of life. The first week is the most fatal to infants and it is maintained that the number of deaths occurring during this period will probably not be greatly reduced by improvement in the sanitary surroundings of the patients: antenatal conditions are held to be the cause of the majority of deaths occurring during the first month of life. Premature birth accounted for 56 deaths, congenital defects for 28, atrophy, debility and marasmus for 53, want of breast milk for 6, convulsions for 58, bronchitis and pneumonia for 93. Measles was the cause of 12 deaths. To help to reduce this large infantile mortality the council is about to appoint a health visitor, who will also act as inspector of midwives for the borough. The medical officer of health recommends the adoption of the Notification of Births Act, so that the health visitor may have an opportunity of visiting suitable cases and of giving advice as to the proper feeding and rearing of the baby. Dealing with the work done under the Housing of the Working Classes Act, the report states that action is still taken under Part II; 181 houses have been dealt with, 72 closed, 65 rendered habitable, in 24 cases extension of time has been granted, and in 20 others the time of expiry of the closing orders has not yet elapsed; 38 new corporation houses have been erected at Penywern, Dowlais, and 50 houses are nearing completion.

Land is being acquired in various parts of the district for the erection of other houses. The corporation and its officers deserve unstinted praise for the thorough manner in which they have grappled with this important and difficult problem. There are 37 slaughterhouses in the district, 35 of which are in constant use.

The council has had under consideration a scheme for the erection of a public abattoir, but unfortunately little progress has been made. The difficulty has been with regard to the site, which should be in a sufficiently central position.

Owing to the length of the borough—over 10 miles—and in order to do away with all the private slaughterhouses, 3 abattoirs would be required. When these are erected the corporation would still be faced with the competition of 24 registered slaughterhouses—that is to say, those that were in existence prior to the passing of the Towns Improvements Clauses Act, 1847, after which date all slaughterhouses had to be licensed. There are 13 licensed slaughterhouses in the borough, and these could be closed when public abattoirs were built. With regard to the registered slaughterhouses, however, the corporation has no such powers, and, realizing this, inserted clauses in a bill at present before Parliament giving power to close these slaughterhouses on the payment of reasonable compensation when sufficient public abattoir accommodation had been provided. This system is already in force in Scotland with good results, and the Royal Commission on Tuberculosis recommended that similar powers should be conferred upon English and Welsh local authorities.

MANCHESTER AND SALFORD.

PARLIAMENTARY REPRESENTATION OF THE UNIVERSITY.

AT a meeting of the Convocation of the Manchester University a letter was read from the Convocation of the Liverpool University suggesting joint action to obtain Parliamentary representation for the four northern universities of Manchester, Liverpool, Leeds, and Sheffield. Mr. Percy McDougall moved a resolution to the effect that Manchester ought not to support the action proposed, as it would result in an increase of plural voting at Parliamentary elections, and would not be endorsed by the present democratic Parliament. He thought that the recent decision of the House of Commons against plural voting represented the feeling of the country; the mere passing of an examination for the degree of B.A. ought not to confer on any person the voting powers of two men. Professor Weiss seconded the resolution. Mr. G. B. Hertz moved an amendment to the effect that, having regard to the justice of plural voting and university representation, convocation strongly supports the proposal for the representation of the northern universities. The amendment was carried by 20 votes to 17, and thus became the substantive resolution. A further amendment was then proposed by Mr. Worthington:

> That the members of Convocation of the University of Manchester do not consider it advisable to join in the action proposed.

This amendment was eventually carried by 12 votes to 9.

INQUESTS.

It appears to be beyond doubt, from a careful inquiry made by a subcommittee of the Lancashire and Cheshire Branch Council, that the Lancashire County Council is strictly within its legal rights in refusing to pay medical men more than 1 guinea for each inquest, instead of 1 guinea a day when an inquest is adjourned. To be more accurate, only 1 guinea an inquest is authorized by the Coroners Act. It is not, however, yet proved that the county council may not, if it likes, pay more under some other Act. The Midwives Act itself did not authorize the payment of any fee at all to medical men called in to assist midwives, but inquiry elicited from the Local Government Board the fact that such fees could be paid under two other Acts, which were in no way concerned with the Midwives Act. Nevertheless, any powers obtained in this way are by no means satisfactory except for temporary use, and it is very evident that the Coroners Act requires amendment in more ways than one. For instance, according to the reading of the Act by the Lancashire County Council and its auditors, the fees paid to medical men are inclusive—that is, no travelling expenses can be paid in addition to the fees named, and yet it is a fact that in some parts of the country the auditors allow travelling expenses over and above any fees mentioned in the Coroners Act. Of course, this is important, for if an inquest is adjourned and a medical witness has to travel backwards and forwards for several days, it may easily happen that the guinea fee, which is not too much in any case, may be all spent in railway travelling.

Several of the Manchester medical societies have also had under consideration the growing custom of coroners' juries adding riders to their verdicts. In some cases which have recently occurred, the riders have been calculated to cause serious damage to the reputation of medical men. A jury has, for instance, blamed a medical man for not answering more quickly a call for his services, though in reality he was under no legal compulsion to attend at all. It ought to be distinctly recognized that in adding such riders, juries are acting *ultra vires*, and it is by no means certain that substantial redress could not be obtained if damage were proved to have resulted from any such rider.

Again it has often been pointed out that medical men are under no legal obligation to give any professional information to coroners' officers unless they are to be summoned to appear in court. But it is quite common in some parts of the country in cases where a medical man has found himself unable to give a death certificate practically to force him to give expert information to a coroner's officer under a veiled threat that if he refuses he

will have the opprobrium of causing an inquest. In others an inquest is held in spite of the information given, and a coroner actually uses the information without summoning the medical man to court. It is felt in Manchester that whether an inquest is held or not, expert information ought to be paid for, and it is suggested that while the present fee of a guinea may be retained for information given when an inquest is held and the medical man has to appear in court, a fee of at least half a guinea ought to be paid for written information which saves the necessity of an inquest, assuming, of course, that the medical man was not justified in giving an ordinary death certificate. All these points ought to be borne in mind in any amendment of the Coroners' Act.

ARSENIC IN BEER.

Since the discovery of arsenic in beer several years ago, a most careful watch has been kept by the public authorities in the Manchester district. The public analyst for Salford recently reported that of twelve samples of beer analysed eight were quite free from arsenic, but four contained from the faintest traces up to about $\frac{1}{100}$ grain per gallon. Traces of copper were also found in some samples, the largest amount being one part of metallic copper in 1,500,000 parts of beer. In no case was the amount of either arsenic or copper enough to cause any danger.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

A TUBERCULOSIS SANATORIUM FOR CONNAUGHT.

A MEETING of the Connaught Tuberculosis Conference, held in the Claremorris Workhouse on May 4th, was attended by the chairmen of several county and district councils in the province, as well as by many of the leading medical men of the Poor-law service.

Resolutions were passed in favour of compulsory notification and recommending the extension of the Labourers' Housing Acts to the towns; but the two principal resolutions were saddled with conditions which will, we fear, defer for many a day the efficient control of the disease in Connaught.

It was proposed and carried *nem. con.* that a county medical officer of health should be appointed by each county council, who would have charge of the crusade against tuberculosis, provided half his salary was paid by Government, and also that a sanatorium of eighty beds should be established for the province, provided half the cost of erection and maintenance was paid from the same source.

It is to be hoped that the Connaught people will get these concessions, but we very much doubt if the Treasury will be easily induced to find the money. We do not say that it should not be granted, for unquestionably the ten millions Ireland pays to the excise alone burdens her with taxation out of proportion to her resources, but, seeing that the cost of the proposed sanatorium is only estimated to add one halfpenny to the rates, it is, perhaps, a pity that the Connaught people do not show in this most important matter a little more independence, set up their sanatorium first, and then worry the Government into giving them the assistance to which their poverty entitles them, for however stingy the British Government may be, it is not unjust when the matter is properly put before it.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SURGEONS OF POLICE FOR EDINBURGH.

THE Lord Provost's Committee of Edinburgh Town Council has agreed to recommend the Council to appoint the following gentlemen to be divisional surgeons of police for the city of Edinburgh:—Central: Dr. A. Gordon Price; Southern: Dr. R. J. Johnston; Western: Dr. G J K. Carruthers; Northern: Dr. H Torrance Thomson. There were no applications for the Portobello Division, obviously because casualty work was added to the work of surgeon of police, and the remuneration was to be the paltry sum of £15 per annum. There were twenty-eight applications for the other four appointments.

BRAEMAR: THE MEDICAL OFFICERSHIP.

The Braemar Parish Council is experiencing considerable difficulty in finding a medical man to take up the duties of parish medical officer in place of Dr. Brown, who was dismissed the post, and whose tenure of office expired on April 30th. At the last meeting of the parish council the subcommittee appointed at the previous meeting for the purpose of trying to find, otherwise than by advertisement, a suitable applicant for the post submitted its report. The members stated that they had been in communication with several good men, but as yet had no applicant to recommend, their proceedings being greatly hampered by the action of the Scottish Poor-law Medical Association and by other counter advertisements. The report recommended that in the meantime Dr. Littlejohn (at present a locumtenent in Braemar) should be employed in the event of any parochial medical work being required, and that the subcommittee be allowed to continue to exercise its present powers and search for suitable applicants and report to next meeting. A motion approving of the report was proposed and carried, one member, however, entering a protest on the ground that the council had no assurance that Dr. Littlejohn would take up the work, and also that Dr. Littlejohn was ineligible for such an appointment, being only a temporary practitioner in Braemar. A letter was also read from Dr. Brown's agents relating to his attitude towards the council.

MEDICAL SUPERINTENDENT FOR LARBERT ASYLUM.

At a meeting of the Stirling District Board of Lunacy on May 7th, Dr. Robert B Campbell, M.B., C.M., Medical Superintendent of Inverness Asylum, was appointed Medical Superintendent of Stirling District Asylum, Larbert, in succession to Dr. Robertson, who has been appointed to Morningside Asylum, Edinburgh. Dr. Campbell was born in Edinburgh thirty-seven years ago, and was educated at the University of that city. He had been Senior Assistant Physician at Montrose Asylum and the Crichton Asylum, Dumfries as well as at Inverness, before he became Superintendent of the last named.

ADVANTAGES OF EARLY TREATMENT OF MENTAL DISEASE.

The ninety fourth annual report of the Royal Asylum, Glasgow, contains some points of general interest. The physician-superintendent draws attention to the increasing number that seek admission as voluntary patients. Out of a total of 145 admissions 48 were voluntary. So far as he knows, no other mental hospital has received so many voluntary patients as the Glasgow Royal Asylum. During the past three years 105 persons sought treatment for mental disease of their own free will. Dr. Oswald has investigated the results of treatment in this series of cases, and comes to the conclusion (1) that the recovery rate of voluntary patients is greater than that of certified patients, (2) that the duration of treatment is shorter, and (3) that it is only in a few instances necessary to resort to certification. Among the voluntary patients the recovery rate was 50 per cent., or almost 10 per cent. higher than among the certified. Of those that recovered about one-half were under treatment for less than three months, which is a considerably higher ratio than among the certified patients. Further, the voluntary patient seems to come under treatment at an earlier stage than the certified. Thus in 62 of the voluntary cases the duration of illness was less than three months, and in only 31 was it longer than six, which contrasts favourably with the certified patients. Only 11 of the voluntary patients required to be certified, and of these 8 had been ill for more than six months and the other 3 had already had previous attacks of mental illness. These results were therefore strongly in favour of early admission as voluntary patients. It is perhaps not sufficiently well known that voluntary patients can be admitted to any Royal mental hospital in Scotland on making application by letter to the Board of Lunacy, without medical certificate or sheriff's warrant being required. The public are slowly realizing that abnormal mental conditions mean disease, often due to a removable cause, and that the best hope for the sufferer lies in an early resort to such special treatment as can only be got in institutions equipped and adapted for the treatment of such disorders.

During the past year an interesting innovation was made by introducing on a small scale the tent treatment of the insane, which is largely used in America. Though the weather was very unsuitable, the results were sufficiently encouraging to warrant a repetition of the experiment. The patients were accommodated in a large tent containing eight or ten beds. They remained the whole day in the open air either in bed or reclining in long wicker chairs. The calmative effect of the open-air rest cure was very marked, and it was often displayed most markedly in those who were extremely restless when confined indoors.

As is usual, the reports of the visiting commissioners are very satisfactory.

Victoria.

LUNACY IN 1906.

THE annual report for the year 1906 of Dr. W. Ernest Jones, the Inspector-General of the Insane for Victoria, shows that on January 1st, 1906, there were on the registers of the department 4,771 insane persons, and that on December 31st, 1906, there were 4,944, giving a total increase for the year of 173. This increase, which appears greater than usual, is partly accounted for by the fact that insane persons in licensed houses are now included in the official returns. The actual increase on those in State hospitals, computed on the old basis, was 105, as compared with 126 for the preceding year. The total numbers under care during the year in State hospitals numbered 5,553, and the average number daily resident 4,523.

In Victoria, as in England, there has been for some years an increase in the number and proportion of the insane to general population, so that at the end of 1906 there was 1 insane person in 250·4 of general population. Twenty years ago, or in 1886, the proportion was 1 in 296. Contemporaneously with this increase there has been a notable increase in the numbers of females employed in registered factories, and to this factor Dr. Jones attaches considerable importance. He says:

> I view with considerable apprehension the steady rise in the number of female factory employés, and the consequent deterioration of that best of all institutions—home life; the interference with the training of housewives, and, in spite of the most perfect of factory legislation, the manufacture of bodily diseases in the younger employés, unfitting them to fulfil their highest obligation to the State—namely, motherhood.

The proportion of 1 insane to every 250.4 of general population given by Dr. Jones, however, is calculated on the total insane, including licensed houses, which are not included in any of the preceding returns, and we see that, if the numbers of those in licensed houses in 1906 be excluded so as to make the returns fairly comparable with those of other years, the proportion of insane to population in 1906 was 1 in 254. That is, the ratio of insanity to population increased during the period 1866–1906 by about 14.2 per cent. The admission-rate to population—a much truer index of the ratio of increase of insanity—has in the same time only increased from 1 in 1,681 to 1 in 1,577 of general population—that is, an increase in the ratios of admissions of only 6 per cent. In this same period the female employés have increased from 11,027, or 1 in every 90 of population, to 27,931, or 1 in every 44 of population; that is, whilst the ratio of female employés in factories has increased by 51 per cent., the ratio of occurring insanity has increased by 6 per cent.

During the year, 785 cases were admitted, of whom, however, 12 were recaptures, giving actual admission of 773, as compared with 738 for the previous year. Of the total admissions for 1906, 687 were first admissions. In 304 the attacks were first attacks within three, and in 114 more within twelve months of admission; in 120, whether first attacks or not, the attacks were of more than twelve months' duration, and the remainder were either congenital cases (32) or of unknown duration (50) on admission. A fairly large number were senile cases, 104 being over 60 years of age on admission. No tables are appended showing the forms of mental disorder among the admissions, but as regards the probable causes of insanity we see that among others alcohol was assigned in 74, or 9½ per cent., venereal disease in only 6, previous attacks in 106, puberty, old age, and the menopause in 97, various bodily diseases or disorders in 36, "moral" causes in 136, and in 153 no cause could be assigned. Hereditary influences were ascertained in 102, or 13 per cent., and congenital defect in 70

During the year 273 were discharged as recovered, giving a recovery-rate on admissions of 35.32 per cent.; 87 as improved, and 10 as not improved. During the year also there were 293 deaths, giving the low death-rate on the average numbers resident of 6·47 per cent. The deaths were due in 46 to cerebro-spinal diseases, including 24 deaths from general paralysis; in 160 to chest diseases, including 45 to pulmonary consumption; in 39 to abdominal diseases, and in 48 to general diseases, including 22 from senile decay, 1 from tuberculosis, and 4 from accident. The proportion of tuberculosis to total deaths was thus just under 16 per cent., or about the same proportion as in English asylums.

CORRESPONDENCE.

A NEW VIEW OF THE NOTIFICATION OF BIRTHS ACT.

SIR,—The letter of Drs. F. C. Larkin and K. Grossmann in the BRITISH MEDICAL JOURNAL of May 9th is an admirably clear description of the procedure of notification under the Notification of Births Act, 1907, and deserves the thanks and congratulations of the medical profession for its lucidity. But when it claims to be a *new view* of the Act permit me to say that this was the view adopted by the St. Pancras and Islington Division of the British Medical Association at its meeting on December 3rd, 1907, held at the London Temperance Hospital under the chairmanship of Dr. Wynn Westcott, who in his threefold capacity of physician, barrister, and coroner endorsed this interpretation as the sections of the Act were read to the meeting and the corresponding sections of the Births and Deaths Registration Act were quoted. The only point in which the Division differed from the advice of Drs. Larkin and Grossmann was in regard to the postcard, and it was agreed that (in order to ensure privacy) this should assume a folded form, stamped and addressed on the back, and that this form should be handed to some relative, friend, or other person in attendance to fill in and dispatch, thereby relieving the medical attendant and affording printed proof of his having reason to believe that some other person would give the necessary notification.

I have the pleasure of enclosing (attached hereto) a copy of the circular letter addressed to medical men and midwives and of the stamped and addressed form of notification, and of adding that this conciliatory method has worked smoothly and with good results since the Act came into force in this borough on March 9th.

It must be added also that careful instructions have been given to visit only the poorest houses in the poorest streets, and in no case to visit until the medical attendant or midwife has ceased attendance, so that instead of being regarded as an intruder the health visitor has come to be regarded as a welcome assistant.—I am, etc.,

JOHN F. J. SYKES,
Medical Officer of Health.

London, N.W., May 14th.

The circular letter addressed by the medical officer of health to medical men and midwives contains an offer to supply on application addressed and stamped forms of notification, and the following summary of the provisions of the Act:

> Primarily the duty of notifying a birth to the Medical Officer of Health devolves upon the father of the child. If he be non-resident at the time in the house where the birth takes place, then it devolves upon any person in attendance upon the mother at the time of or within six hours after the birth. The notice must be given in writing and be posted to or delivered at the office of the Medical Officer of Health within thirty-six hours after the birth. The local authority must supply without charge addressed and stamped forms of notice to any medical practitioner or midwife residing or practising in their area who applies for the same. The notification is in addition to, and not in substitution for, the requirements of the Act "relating to the registration of births," and it applies to any child born after the twenty-eighth week (six and a half calendar months) of pregnancy, whether liveborn or stillborn. Liability to a penalty not exceeding twenty shillings is incurred by any person who fails to give notice of a birth, unless there is

reasonable ground to believe that notice has been duly given by some other person.

The letter concludes with the following paragraph:

I shall be greatly obliged if, in future, when in attendance on a maternity case, you will kindly make known the provisions of the Act to the father or other relative or member of the family. There is no prohibition in the Act against the father or other relative or member of the family using the form of notice supplied to the medical practitioner or midwife by the local authority, nor is there any prohibition against the medical practitioner or midwife informing the father, or, if present within six hours of the birth, any other relative or member of the family in attendance on her or his duty to notify the birth, and handing to her or him a form of notice for this purpose; on the contrary, the Act provides that a person shall not be liable to a penalty if he or she has reasonable grounds to believe that notice has been duly given by some other person.

The form of notification is shown below, and the address is printed on the back.

P.S.—The further correspondence under this head in the British Medical Journal of May 16th prompts me to add to my letter the opinion that the addition of the influence of the Notification of Births Act to the Report of the Committee on the Certification of Deaths must before long lead to the remoulding of the Births and Deaths Registration Act. Let us hope that the British Medical Association will then be prepared to represent as the unanimous view of the medical profession that it is not conducive to the welfare of the State that any Government should set an example to the people of avoiding to discharge just debts incurred for professional or expert services.

METROPOLITAN BOROUGH OF ST. PANCRAS.

Notification of Births Act, 1907.

I Hereby Give Notice that—

(1. Here insert place of Birth) ... ... 1. at .....

(2. Here insert Date of Birth) ... ... 2. on .....

(3. Here insert Male or Female) ... 3. a Child.....

(4. Here insert alive or dead [stillborn]) 4. was born.....

(*The Act requires the notification of the birth of any child, whether liveborn or stillborn, after the 28th week or six and a half calendar months of pregnancy.*)

(5. Here insert Names of Parents) ... 5. to .....

.....

Occupation of Father.....

Name of Person notifying .....

Address of Person notifying .....

Name of Medical Practitioner, Midwife, or professional Assistant.....

(*Erase titles which do not apply.*)

N.B.—Notification of birth must be sent to the Medical Officer of Health within thirty-six hours after birth, under a penalty not exceeding twenty shillings in case of default.

The duty of notifying falls firstly on the father, but, if he is not living at home at the time, secondly upon any person in attendance upon the mother at the time of, or within six hours after, the birth.

Therefore, those in attendance upon the mother, whether relatives, or members of the family or not, should arrange amongst themselves who will send the notification to the Medical Officer of Health.

Sir,—The new view of the Early Notification of Births Act propounded by Messrs. Larkin and Grossmann in your last issue seems to contain nothing new except a somewhat startling confession of weakness on the part of the profession in their district in not having opposed the adoption of the Act, and a few rather misleading statements.

Messrs. Larkin and Grossmann say that "we have somewhat conceitedly arrogated to ourselves a duty that the Act does not put upon us"; and "The Act *first* lays the duty . . . upon the father, and *failing* him" (the italics are mine). Can Messrs. Larkin and Grossmann so misconstrue Clause 1 (1) as to consider that the medical attendant is not included? And further, included on exactly equal terms with the father or any other person? Again, there is no word of "*first*" lays the duty upon the father . . . and *failing* him" in the Act at all; the wording is "the father of the child if he is . . . *and* of any person in attendance," etc.

The "father" is expressly excluded if away from home, and the only "other person in attendance" at practically every confinement is a doctor or a midwife; from the point of view of enforcing the Act, it will be much more effectual to prosecute one doctor or midwife, who may attend 100 or more births in the year, than one father who will probably not be present at more than one; and to prosecute twenty-five of the fathers will hardly appeal to the local authorities at election times.

The fact that in Clauses 1 (2) and 2 (3) special arrangements are made for obtaining notifications from medical men, and not from "fathers" or other "persons in attendance," clearly indicates the intention and probable direction of enforcement of the Act. If these arrangements are merely "acts of politeness and consideration extended to medical men," they are the first examples the profession has received from the Legislature in connexion with this or any other Act.

The Registration of Births and Deaths Act *was* made applicable to medical men only "*in default of* the parents," and the official instructions to registrars expressly enjoin them not to apply to medical men except in very special circumstances. That is to say, medical men have no duties laid upon them under this Act until other sources of information have failed and they are specially applied to, so that the application of the Act has fallen naturally into its present groove. The exact opposite applies to the Early Notification of Births Act; medical men are as clearly called upon to notify under this Act as any other person, and from the wording of the Act, with the present-day tendency of officialdom, there is not much doubt that medical men and midwives are the *only* persons who will be officially called upon, and in due course compelled, to notify.

"Resistance to compulsion" I am in hearty agreement with; and the suggested clever evasion of an unjust Act, the adoption of which ought to have been most strenuously opposed, is perhaps the only course now open in those districts where it is in force. But I sincerely trust that the policy of the Association will be not simply an evasion of this most ill-considered Act, but an earnest and continued effort to secure its amendment in accordance with the reasonable requirements of the profession, whose co-operation is essential to secure the fulfilment of the objects of the Act, and to assist these endeavours for amendment, a strong opposition to any further adoption of the Act.—I am, etc.,

Manchester, May 12th. R. G. McGowan.

*** We may perhaps be allowed to point out that the provision under discussion was strenuously opposed by

the Association at the time, and that an understanding was come to which would have excluded medical men from the operation of the Act. The way in which this came to be set aside by the House of Commons was reported in the BRITISH MEDICAL JOURNAL of August 31st, 1907, p. 545, and led to a good deal of comment at the time.

SIR,—May I write a few lines in reply to the critics of the joint letter signed by Dr. Grossmann and myself?

I am sorry Dr. J. Price Williams should put on such an appearance of hostility to the suggestions of our letter on the position of medical men to the new Notification Act. It is quite evident that he and I agree in so much that it seems a pity we should fall out over the little that remains. I quite agree with him that the Act requires amendment. I agree that there has been a desire and an attempt to place a responsibility on the profession; but I submit that the attempt has failed, or at any rate can be made to fail. It really does not matter what the proposers of legislation intended. The only question that need interest us is what they have succeeded in doing. When an Act has become law all that is necessary is to see what it effects. In our letter we held, and I still hold, that it fails to place the burden of notification on us. We wished to show medical men (and midwives can take the hint if they like) that the view that it exacts anything of them is erroneous.

As regards Dr. Brennan and Dr. Thomson the case is different. But before making the remarks I am going to make I should like to say that I have the best reasons for believing that Dr. Brennan is as ardent a worker for what he believes to be for the good of the profession as any of us, and he is a man for whom I have the greatest esteem. I am more than willing to believe that Dr. Thomson is equally deserving of my respect. I should value nothing more highly than to be able to win them over to my view.

Dr. Brennan will forgive me, I am sure, for not entering into any discussion as to whether or not our view belongs to the genus Castanea, and if so, what is the exact degree of maturity of the fruit. All I will say is that I have lived long enough to have appreciated the fact that there is little under the sun that is really new, and that it would evoke in me only feelings of mild surprise if it were demonstrated that views precisely similar to mine were to be found inscribed in cuneiform characters on tablets of clay of the time of Sargon of Akkad.

Dr. Brennan's views have been known to me for some time, as they came under my notice in the business of one of the committees in London, and their insidious perniciousness, coupled with his advocacy, made me regard them as specially dangerous. He seems to agree that medical men are in much the same position (as what he very tersely calls "contacts") under the 1874 Registration Act and the 1907 Notification Act. That is to say, they stand in the same relation to the registrar under the 1874 Act as they do to the medical officer of health under the 1907 Act. Now I should like to ask how we should be placed to-day if the Dr. Brennan of a generation ago had managed to persuade the medical men of his day that, inasmuch as they were "contacts," they must *voluntarily* carry round and distribute to their patients certain pieces of blue or other coloured paper supplied to them by the local registrar. Had he have done so every medical man for the last thirty-four years would have been *voluntarily* acting as agent or bill distributor for that official. And I submit a custom *voluntarily* performed for thirty-four years would by now have become about as *compulsory* as it is possible to make anything. I ask Dr. Brennan for how long he proposes that he and his colleagues shall continue voluntarily to carry round these handbills or notices for the local authority? Does he propose that this voluntary act shall continue for ever?

Our policy differs from his in that it comes in time to an end. We propose to educate the public, and feel sure they will soon learn to notify as they have to register. Moreover, in telling them the law, we are only giving them a little information in exactly the same way as we often do on other matters. I claim that our policy is to educate the public—the other to make the profession into unpaid touts.

So Dr. Brennan suggests that the sanitary authorities of Stockport have made some sort of bargain with the doctors. They will not cause the patients to be visited if the doctors will distribute their coloured tickets. Does he really think such a bargain will hold? Suppose the Stockport doctors have acted as amateur bill distributors for, let us say, ten years, and the sanitary authority changes its mind and professes to consider it its duty to make its inspectors visit all cases, will the doctors be able to prevent it? Or will the doctors be able to shake from their shoulders the burden that their own folly and ten years has placed upon them?

No. Once fix this obligation on the profession by any overt act, whether labelled *voluntary* or not, and it will soon become a hidebound custom.

When will we become alive to the fact that Parliament but strings together sequences of words and the real law is made by the interpretation put on them by custom and the courts?

I absolutely agree with Dr. Thomson that the Stockport and Newcastle methods are but ropes for hanging, though soft words and fancy colouring make them look ever so tempting.—I am, etc.,

Liverpool, May 19th. F. CHARLES LARKIN.

THE NOTIFICATION OF BIRTHS ACT.

SIR,—The action of the Local Government Board in refusing permission to the Accrington Town Council to adopt the Notification of Births Act, unless under certain specified conditions as to the appointment of Health Visitors, is one which may, I think, be commended. In our own district, as elsewhere, strenuous opposition was offered by the local medical men to the adoption of the Act, and at least one of their number has forcibly voiced the existing feeling here through the medium of your columns, but such a course was amply justified owing to the unfair manner in which the medical profession was needlessly penalized, and was in no sense due to any lack of enterprise on the part of the local authority in failing to make provision for carrying out the evident *intention* of the Act (as would appear to have been the case at Accrington).

May I add that our own local authority, acting on my advice and suggestion, appointed a very efficient and highly-trained lady health visitor, to work under my supervision, sometime previous to the passing of the Notification Act, and that, of course, greatly strengthened the case for its adoption here? We have every reason to feel quite satisfied with our experiment, and I am confident that the work which is now and has been carried on by our visitor (for nearly twelve months past) will before long show excellent results in a very material reduction of our hitherto somewhat heavy infantile mortality.—I am, etc.,

SAML. HOSEGOOD,
Medical Officer of Health, Swinton and Pendlebury.

Swinton, May 13th.

SUFFERERS FROM X-RAY DERMATITIS.

SIR,—The attention of the public has been drawn by articles in the press to certain radiographers and others who are suffering from *x*-ray dermatitis. It seems but right that something should be done for the early workers whose sufferings have led to the introduction of protective measures which render the present users of the rays free from risk. I understand that money is being subscribed already in certain cases; but there are others, lay operators, electricians and nurses, who are suffering to a greater or less degree. I am endeavouring, with the assistance of Mr. E. W. Morris, the Secretary of the London Hospital, to obtain information about all the cases, and shall be glad if your readers who know of such will send me particulars. Before anything further is done, it appears to us to be only fair that all should participate in any scheme suggested by the sympathy which has been aroused.—I am, etc.,

JAMES H. SEQUEIRA.

8A, Manchester Square, W., May 14th.

THE ELECTIONS TO THE CENTRAL COUNCIL.

SIR,—There are in the SUPPLEMENT notices of annual meetings and elections by the Branches. I regret that it is not stated whether the method of Proportional Representation is to be used. The advantage is so obvious, both

to the candidate and to the elector, that I would hope that even at the last minute Branch Councils will adopt the scheme.

For instance, in the South-Eastern Branch there are about 1,250 electors and three to be elected. If half the members vote, the quota will be between 150 and 160. Any candidate with 1 opposite his or her name on 160 voting papers is elected. As the vote is transferable, an elector whose first choice is at the bottom of the poll, will probably find his second or third choice effective in securing the election of one whom he approves.

Is it too much to ask of the members of the Central Council themselves to influence their own Branches in respect of this reform? Nearly one-half of all the Branches elect a plurality of members. (If the transferable vote were used in single-member constituencies, then it would be equivalent to a second ballot or second choice, which is rather a different thing.) But where two or three are to be elected by one Branch, undoubtedly the old, or *block*, method is very inaccurate.—I am, etc.,

London, W., May 19th. GEORGE CRICHTON.

MEDICAL QUACKERY.

SIR,—Dr. Bateman furnishes once more some forcible illustrations of the complete inefficiency of medical law. The Veterinary Act, as you have shown, is much more effectual than the Medical Acts, whilst lawyers' law renders it virtually impossible for an unqualified solicitor to exist. At the East Ham police-court on May 15th, a man was fined £2 and costs for "falsely pretending to be a solicitor." He had used no professional designation, but in a debt-collecting letter had employed terms which might be construed to imply the false pretence alleged against him.

The case for medical law reform is overwhelming; it needs only to be demonstrated fully and incontrovertibly to compel the attention of the Legislature, and I am glad to see from the report of the Medico-Political Committee on p. 278 of the SUPPLEMENT of May 16th that another important step has been taken in the movement for which I have so long been working—the promotion of a Royal Commission. Such a Commission has been made more than ever necessary in consequence of the changing attitude of the newspaper press. Hitherto it has been possible to name a certain number of leading papers which have refused admission to fraudulent advertisements, and on occasion have exposed and denounced medical quacks and quackery. The number of such papers is rapidly diminishing. Nearly the whole press is practically suborned by quackery, and it is, as a rule, impossible for an editor to attack this gigantic system of cruel fraud without stultifying himself in a fashion at once ludicrous and deplorable. I have before me a recent issue of one of the foremost papers of the day, containing an editorial article dealing with a system of quackery lately exposed in the law courts, and deploring the fact that advertisements, on the face of them misleading, should find admission to respectable papers, whilst in the same issue of this same paper appears the advertisement of the quack referred to; an advertisement which had appeared previously in an especially expensive column of the paper for months, and has been since printed in the same place on many occasions.

I am glad to notice, further, that the Medico-Political Committee recommend that a report be prepared before an application for the appointment of a Royal Commission is made. The Association has it within its power to draw up a report on medical law and quackery, including the trade in quack medicines, which will not only suffice to show the need for Governmental inquiry, but will be alone almost enough to compel the interference of Parliament. I base this opinion upon a study of the report of the Australian Commission, with a copy of which I have been favoured by Mr. Beale. Mr. Beale was commissioned to inquire, but had no power to call witnesses and examine them on oath; and nearly everything he has set down can be repeated with equal authority, and with more power, by the Association. Mr. Beale, as a layman, unaware of the magnitude of the evils he was called upon to lay bare, was evidently filled with amazement, horror, and indignation, as the story unfolded itself; and his report is to some extent weakened by the constant expression of his emotions. But discount it as one may, it is an astonishing narrative of popular credulity on the one hand and of cynical knavery on the other. Presentation of a similar report to our home Government would make the demand for a Commission irresistible, and a Commission would make it plain that, whatever advantages to the profession might be given by adequate legislation, these advantages would be outweighed literally a thousand times by the benefits conferred upon the people, and upon the classes—the poor, the ignorant, the weak—who have most claim upon the guardianship of the State.—I am, etc.,

Earlswood Common, Surrey, May 16th. HENRY SEWILL.

CHEST MEASUREMENT IN THE ARMY.

SIR,—My attention has just been drawn to the letter of Colonel Moore on the above subject in your issue of May 2nd, p. 1077. I am always anxious to be accurate, and I am therefore pleased to have my inaccuracy corrected, and glad to learn that the medical examiners in the army do take into account the expansion of the chest; but, unfortunately, his correction does not improve my opinion of the medical methods in the army. The regulation which he quotes leaves little or nothing to the intelligence of the examiner. I should have thought that it would have been sufficient to have told a medical man that he should obtain the maximum and minimum measurements of the chest, say at the level of the nipple, without telling him how to do it. In fact, I should like to see all examinations conducted with intelligence rather than with red tape. "It is often attempted to conceal the true minimum measurement, but it can be obtained by a little manipulation and by drawing off attention." If recruits were only treated as reasonable and rational beings, and it were intelligently explained to them what was wanted, there would not be the slightest difficulty in any case in getting the maximum and minimum measurements. Colonel Moore does not tell us when the regulation came into force, but it is only about seven years since my athletic young friend sent a wire to his father that he was rejected on his chest measurement; there was and could be no question in his case about defective "physical equivalent." I recommended that he should at once be examined by a leading man in London, where the examination had been conducted, and accordingly he was examined the same day by Mr. Reginald Harrison; the following day he was accepted by the army examiners.

I should like to know "the table of physical equivalents," as the range of chest expansion is not always a correct expression of the capacity of the lungs. If you wish to get the vital capacity you must use the spirometer. I have no objection to a strict medical examination, and I think the best possible physique should be obtained for the army. Having picked your men, I would go further, and, like Mr. Haldane, I would say that work and responsibility should go together, and I would make the medical officers responsible for the maintenance of the health and physique of the army.

Now that Colonel Moore is in a position of authority, I should like to ask him how this is carried out in the present day? What percentage of men in the army of twenty years' service have a vital capacity of, say, only 200 cub. in.? It would be well for the army if there were more boxing and fencing and wrestling, and less standing at attention and saluting officers with the chest fixed in the inspiratory position. I hope Colonel Moore will not rest satisfied with the belief that everything is for the best in this best of all possible worlds, but throw the whole weight of his influence into the much-needed reform in the medical management of the army. I must say that I look upon it as a disgrace to the medical service that in every war hitherto, except perhaps in the late Japanese war, soldiers should have run a much greater risk from disease than from the bullets of the enemy.—I am, etc.,

Liverpool, May 13th. JAMES BARR.

THE ANTIVIVISECTION AGITATION.

SIR,—My memory is not at fault with reference to the subject of Sir Victor Horsley's letter. It is quite true that a medical man, related to me only by marriage, some years ago sought the advice of Sir Victor on the state of his son's health. This, as I have already declared, was done without my knowledge or desire, and it is as

unreasonable to make me responsible for that consultation as it is singular to make a professional interview of the kind the subject of public comment.—I am, etc.,

EDWARD BERDOE, M.R.C.S., L.R.C.P.Edin.

London, N.E., May 16th.

MEDICAL DEFENCE UNION.

SIR,—A paragraph on page 8 in the annual report of the Medical Defence Union referring to the fact that members of the Union and of the British Medical Association who are *elected upon the General Medical Council* have to resign their membership of the Association and of the Union has been misinterpreted by a few into the incorrect meaning that membership of the Union is incompatible with membership of the Association. I need hardly point out that this latter reading is not accurate. I regret that the paragraph should have been in any way ambiguous. We have to our great satisfaction many thousands of members of the British Medical Association on our register of members and nothing would please our council more than to find that the membership of each was commutual.—I am, etc.,

A. G. BATEMAN,
General Secretary.

London, W.C., May 16th.

PUBLIC AUTHORITIES AND POLLUTED WATER.

SIR,—The article entitled "Public Authorities and Polluted Water" which appeared in the BRITISH MEDICAL JOURNAL of May 9th was discussed at the last meeting of the Malvern Medical Society, which consists of all the medical men practising in the Malverns, and the opinion was unanimously expressed that it was calculated to convey the impression that the water which caused the trouble was part of the town supply. That is not so.

The town water is and always has been above suspicion, and there was an abundance available at the time from which the plaintiff could have obtained all he required.

It is due to Malvern that this should be made perfectly clear, and I am requested to ask you to be good enough to insert this letter in the next issue with a view to correcting any misapprehensions that may be existing in the public mind.—I am, etc.,

JOHN J. COWAN.
Honorary Secretary, Malvern Medical Society.

Malvern, May 19th.

*** No one who read the articles at p. 1132 and p. 1147 of the BRITISH MEDICAL JOURNAL of May 9th with the slightest attention could, we think, have fallen into this error.

Medico-Legal.

ANALYSES AND ADVERTISEMENTS.

ABOUT two years and a half ago Mr. E. F. Harrison, B.Sc., and a Fellow of the Institute of Chemistry, made an analysis of dried currants, and in conjunction with his then partner gave a certificate in the following terms:

We have analysed the above named sample, and we find the composition of the currants to be as follows:

Grape sugar	73.00	per cent.
Proteids (albuminous substances)	1.77	,,
Amido compounds (nitrogenous substances not proteid calculated as asparagin)	0.04	,,
Tartaric acid	1.36	,,
Citric acid	0.16	,,
Malic acid	0.19	,,
Cellulose and woody tissue	0.89	,,
Water	20.30	,,
Mineral matter	1.68	,,

No opinion was expressed as to the food value of currants, and no comparison was made with any other article of diet; and Mr. Harrison was naturally much astonished when a few months ago his attention was called to an advertisement under the heading of "Currants" in a popular book then enjoying a large sale, in which the following statement was made:

Mr. E. F. Harrison says: "Currants contain 52 per cent more nutriment than lean beef."

It is, of course, impossible to state with scientific accuracy that currants contain any percentage more nutriment than lean beef, for the grape sugar of currants and the proteid of lean beef are two substances of entirely different nature and food value, and cannot properly be the subject of any such comparison. Mr. Harrison, therefore, rightly considered the advertisement, apart from the fact that it attributed to him words which he had never used, to involve serious reflection upon his scientific knowledge and professional competence. Further, had he given for publication any such statement, he would have contravened the regulation of the Institute of Chemistry which declares it to be discreditable to the profession of analytical and consulting chemist to issue or allow to be issued certificates of purity or superiority concerning advertised commodities, such certificates being either not based upon the results of an analysis, or containing exaggerated, irrelevant, or merely laudatory expressions, designed to serve the purposes of a trade puff. Legal proceedings were consequently instituted, and Mr. Harrison has now received an ample apology from the parties concerned, who admit that he never made any such statement as was imputed to him by the advertisement, and that the analysis he had made did not warrant or justify the conclusion imputed to him, and expressing their regret that their agents had imputed the statement. They also paid reasonable damages, and the legal proceedings have been brought to an end. The incident is one of considerable interest to members of the medical profession, who will congratulate Mr. Harrison upon so promptly taking steps to put a stop to the unwarrantable attribution to him of a statement which he never made.

THE LAW CONCERNING CREMATION.

AT Edgware Petty Sessions on May 6th an undertaker appeared to answer two summonses accusing him (1) of unlawfully and knowingly procuring the burning of the body of a stillborn child; and (2) of contravening the regulations made by the Secretary of State by causing and procuring the cremation of the body of a stillborn child otherwise than on the written authority of the medical referee acting on behalf of the London Cremation Company, Limited. The facts of the case as disclosed in the opening statement of the counsel who prosecuted on behalf of the Home Office, and as admitted or stated by witnesses, were as follows. After pointing out that the Home Office had drawn up a number of regulations designed to prevent any possibility of a crime remaining undiscovered owing to cremation being permitted, counsel said that the defendant must be assumed to be aware of these regulations, not only because they had been in force six years, but because he himself had already been instrumental in the conduction of four cremations. Of the two bodies cremated in the present case one was that of the wife of a medical man and the other that of her child. The former fell ill of measles, complicated by bronchitis, when in the eighth month of pregnancy, and was attended by several doctors. On the day of her death the deceased's husband, with the consent of her brother, likewise a medical man, delivered his wife instrumentally in order to relieve the dyspnœa from which she was suffering. The child was born dead, and the patient also died on the same evening, but would have died, the husband considered, earlier but for the relief afforded by her premature delivery. The defendant was then sent for, and when informed that it was desired that the lady's body should be cremated he produced the necessary forms to be filled up. He was informed that the deceased had given birth to a stillborn child, and he then stated that the child could not be placed in the same coffin with the mother, and did, in fact, later, bring to the house a second coffin for the reception of the body of the child. The father, however, expressed a wish that both bodies should be placed in one coffin. The defendant superintended the preparation of the bodies, and placed both of them in one shell, and afterwards took part in the removal to Golder's Green, where the bodies underwent cremation. Meanwhile the forms which have to be filled up under the regulations were sent to the London Cremation Company. These included a certificate of death, which was filled up by a medical friend of the husband, a confirmatory certificate signed by another medical friend, a certificate from the registrar of deaths, and an application for the performance of cremation signed by the husband himself. These documents appearing to be in order were placed before Mr. Herring, the medical referee under the regulations, who, finding no reason to object, gave authority for the cremation. On March 10th, after a service in the chapel, the remains were placed in the incinerating chamber, and when, after the space of about half an hour, the sides of the coffin fell away, the superintendent saw the body of a child lying at the feet of the adult corpse. As the necessary warrants referred to one body only, the officer duly reported the facts to the secretary of the London Cremation Company, who at once communicated with the Home Office, from which it received its licence.

The prosecuting counsel in the course of his opening speech made some observations on the death certificate supplied. There appeared, he said, to be a want of frankness in the way it was made out. In the certificate by a medical man which must be given before any person shall be cremated it was, he said, in the highest degree desirable that all the circumstances should be set out in regard to a death. As the

deceased was suffering from two diseases—measles and bronchitis—it was clear that her death was accelerated by the birth of a child, whereas the certificate made no reference whatever to that contributing cause of death. He explained further that for sentimental reasons it had been decided to deal with the undertaker who had aided and abetted an illegal act as a principal (a course made possible by the Summary Jurisdiction Act) instead of the bereaved husband.

The husband, when giving evidence, said that when the defendant brought the coffin for the child he thought it better that the child should be placed in the same shell as its mother. The defendant raised no objection. He himself knew nothing about the regulations, nor had he any intention to deceive the company, or anything to do with drawing up or signing the certificates. He might possibly have drawn special attention to the child, but for the impression that but for sentimental reasons he could have buried the child's body in the garden, as he believed was done in some parts (this the prosecuting counsel informed him was illegal).

The Secretary to the Cremation Company stated that no notice had been given him that the shell contained the body of a stillborn child, and Mr. Herring gave evidence to the same effect. If the question of the cremation of two bodies in one shell had been raised the Medical Referee would have taken advice on the matter before giving his authority, but there was no reason why, subject to two proper certificates, the two bodies should not have been cremated together.

The defence admitted the statements which have been set out, but argued that the defendant was not required to do anything but carry out his instructions, and therefore could not be held responsible.

The Court held that the responsibility of the defendant had been proved, and said that to mark the importance of the regulations being carried out literally and properly the defendant must be fined £10 and £5 5s. costs.

DEATHS UNDER ANAESTHETICS IN LONDON HOSPITALS.

Dr. Waldo, Coroner for the City of London and Southwark, has recently held two more inquests on the bodies of persons dying during or after the administration of chloroform in hospitals. In the first, a middle-aged woman, it appeared that the death was not directly due to the anaesthetic, but had been caused by the rupture of an abscess in the lung during the operation, the pus passing down into the lung and suffocating the patient. In the second case, a boy, aged 4 years, died from convulsions 33 hours after the administration of a drachm of chloroform. The coroner drew the attention of the jury to the fact that many of the licensing bodies in the United Kingdom did not require evidence of instruction in anaesthetics from students before admitting them to examination. The same coroner held inquests in other cases which show the need of a refrigeratory apparatus being provided in mortuaries and the necessity for legislation to include certain drugs, such as potassium chromate, in the list of poisons.

PREVIOUS ILLNESSES OF APPLICANTS FOR LIFE ASSURANCE.

A recent case confirms the belief that courts are disposed to deal leniently with insurers who are inaccurate. In the case in question an application by a woman for a policy of life insurance contained the following questions: "Have you had any illness or infirmity?" and "If you have had any illness or infirmity, have you fully recovered from it?" Her answer was, "Had none." It appeared that ten years before the policy was issued the assured had a miscarriage and part of the fetus had to be removed by instrumental means. In these circumstances the company disputed its liability upon the ground that the answer was untrue. Although the company was held liable on other grounds, the judge who tried the case expressed the opinion that the miscarriage was not an illness or infirmity, and that therefore the answer was not untrue. This decision is in accord with many older cases, which appear to establish the proposition that the court will not readily avoid a policy on the ground that the assured has answered a purely medical question untruthfully. So where a policy contained a warranty that the assured "has not been affected nor subject to gout, vertigo, fits, etc.," such warranty was held not to be broken by the fact of the assured having had an epileptic fit in consequence of an accident. The court held that in order to vacate such a policy, it must be shown that the constitution of the assured was naturally liable to fits, or by accident or otherwise had become so liable.

Again, where a man who was filling up an application form made the assertion that he had never been afflicted with gout, the fact that he had had a slight attack of suppressed gout, and had not disclosed it, was held not to vitiate a claim put forward on his death. In spite of these old cases, it seems that a misstatement of fact, however innocent, is sufficient to justify a company in refusing a claim. In a case which was noted some years ago in the Journal,* an applicant was asked: "Have you ever met with an accident?" To this he replied, "No." Whereas in truth he had had a fall only a month before, and had actually made a claim against an accident insurance company in respect of the injury so sustained. The Court of Appeal held that this was sufficient to vitiate the policy, although the jury had found that "the injury received was not of sufficient importance to need mentioning," and that "the answer was in substance true."

In a still more recent case, which was decided on May 18th last, it appeared that a lady insured her life in 1902. The following question appeared in the proposal form: "Have you at any time had brain fever or any other disease of the brain?" To this she replied in the negative, and obtained an insurance upon her life to the amount of £3,030. In March, 1906, she was found dead with the remains of a bottle of poison at her side, denoting suicide. The company resisted a claim by her executors on the ground that the deceased had concealed the fact that prior to 1895 she had a severe attack of influenza which was followed by acute mania. After spending some time in a doctor's "home" she subsequently recovered. Not knowing the malady from which she had suffered, she innocently answered the insurance company's question.

The jury found that the deceased, at the time of answering the questions, neither knew nor concealed the fact that she had suffered from mental derangement, but they further said that "she had foolishly, though not fraudulently," concealed the fact that she had consulted a doctor in 1894 about nervous breakdown.

The Lord Chief Justice, upon these facts, gave judgement for the company, but said that, as no fraud had been proved, the premiums must be returned.

* Jewsbury *v.* British Natural Premium Life Assurance Association, March 4th, 1905, p. 492.

"MEDICAL SPECIALIST" SENTENCED.

Bertram Mortimer, aged 50, describing himself as a medical specialist, was found guilty at the Clerkenwell Sessions on May 14th of having stolen a gladstone bag containing property value £12 from the cloak-room at Victoria Station; the bag had by mistake been issued to Mortimer, who retained it. The police record of the accused showed, according to the report in the *Daily Telegraph*, that he had undergone imprisonment on several occasions for various offences, the last in 1897, when he was sentenced to fifteen months' hard labour. Since his release he had been travelling about the country calling himself Professor Sylvester, medical specialist, and represented that he had discovered a wonderful gold-dust cure. All the cure consisted of apparently was to receive the fees, no remedy being supplied. It was also stated that the Medical Defence Union had for some time past received inquiries about him from all over the country. The police official read the following circular issued by the accused:

"A revelation to sufferers. To heal the sick. To cure the diseased. To restore the suffering to health. The great American doctor, Professor Sylvester (M.D., D.Sc. Boston, Mass., U.S.A.). This eminent American expert has opened a practice for the benefit of the sick and the suffering, and is equipped with every modern appliance for the diagnosing of every disease, and to give every one the opportunity of benefiting from his marvellous advice and skill, he will give consultation and advice absolutely free. The astounding skill and ability of this medical man has restored thousands to health and strength who have been pronounced incurable. Countless numbers have been saved from early graves, and hundreds are rejoicing who have been told their cases were hopeless. See this marvellous expert and be convinced. No quackery, no patent medicines. This eminently-qualified medical specialist is at your service—absolutely free."

It was also stated that Mortimer had been brought up under a Home Office order, he being under committal for trial at Swansea and Exeter for obtaining money under false pretences. Mr. Robert Wallace, in ordering Mortimer fifteen months' imprisonment in the second division, said he would assume that the sentence would put an end to the other proceedings at Swansea.

EX-ASSISTANT STARTING IN OPPOSITION.

Alpha.—A., a qualified assistant, takes an engagement with B. for the winter months. At the termination of the engagement, A., who has signed no bond, wishes to start in practice in the same place. Can B. restrain him, or recover damages for injury to his practice?

*** As no bond was signed by A. he is under no agreement not to practise. B. has no legal remedy.

LIABILITY FOR FEES.

Novice asks advice in the following cases: (1) A gentleman's son, who is of age, asked him to see his father's groom, who was in a carriage accident, and sustained a compound fracture of the leg. After rendering first aid, "Novice" sent the patient to hospital. His account was sent to the first individual, but no notice has been taken. Who is liable for the charges? (2) He received an urgent message to attend a single woman in her confinement, and on arrival was met by the girl's mother, who promised to pay his fee in the presence of her husband, using the words, "We will pay," the husband saying nothing. The daughter has since got

married, and none of the parties will pay. What is the remedy?

*** (1) The person asking our correspondent to attend is legally responsible, and can be sued in the county court. (2) The father of the patient is liable, being bound by his wife's pledge, given in his presence without repudiation.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL ADVERTISING IN INDIA.

L. M., writing from Bombay, asks: Can any Fellow of any college in the United Kingdom advertise in the daily or weekly papers? (2) Can he open a dispensary and can he dispense his own prescriptions? (3) Can a tracing of an organ like an ear or an eye be placed on a signboard, if he be practising in a town where 70 per cent. of the population cannot read or write?

*** (1) The by-laws of the Royal College of Physicians of London and of the Royal Colleges of Physicians and Surgeons of Ireland contain express prohibition of advertising in the lay press, and we believe all corporations would regard such action as derogatory, and would take disciplinary measures against any Fellow who practised it. (2) Most of the Royal Colleges have regulations expressly forbidding their Fellows and Members to keep an open shop; we are not sure whether such a dispensary as our correspondent contemplates would come under this description. (3) It seems not unreasonable that under such special circumstances some addition to the ordinary name-plate should be permitted, but the matter is one upon which local medical opinion should be consulted.

ADVERTISING A SPECIALITY.

GLAUCUS writes with reference to the answer under this heading which appeared in the JOURNAL of May 2nd, p. 1080, to say that in the city in which he resides the members of the staffs of the eye hospitals use in the telephone directory the designation "ophthalmic surgeon," and he proceeds in a somewhat rhetorical manner to argue that this is an infinitely more "eloquent advertisement" than placing the speciality upon a doorplate.

*** We do not care to follow our correspondent in attempting to estimate the comparative advertising value of the telephone directory and the doorplate, but when the use of the telephone became general twenty years ago there were no precedents to guide us. At the present time the example of the ophthalmic surgeons in the city mentioned is not being followed; in other large centres where specialists reside the telephone directory merely gives the names and addresses of practitioners, followed by "Physician," "Surgeon," or "Medical Practitioner," or the initials of their qualifications.

MEDICAL SECRECY.

W. G. S.—The circumstances related resemble those of Kitson *v.* Playfair, which were fully reported in this JOURNAL in 1896 (vol. i, pp. 815, 882). No doubt the lady's conduct has provoked her medical attendant, and it was natural for him to apply for payment of his account to her husband. We think, however, he acted wrongly, although perhaps some excuse might be pleaded for his action, and he has thereby put himself into a difficult position. He would not be justified in revealing any information he acquired as the lady's medical attendant, but, if summoned as a witness, he must answer such questions as the judge may direct or run the risk of being committed for contempt of court.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE TERRITORIAL FORCE.

THE following Field Ambulances have been reported as having attested at least 30 per cent. of the establishment authorized, and have been recognized as units by the Army Council: 3rd Home Counties (Surrey), 1st North Midland (Derby), 1st South Midland Mounted Brigade (Buckingham), 1st South Midland (Warwick), 2nd South Midland (Warwick), 3rd South Midland (Gloucester), South Wales Mounted Brigade (Hereford), Welsh Border Mounted Brigade (Chester), 3rd Northumberland (East Riding of Yorkshire).

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Seaham Harbour Urban District.—The population was 11,750, the birth-rate per 1,000 41 6, the death-rate 20.0, and the infantile mortality-rate per 1,000 was 141. Dr. Dillon points with satisfaction to the absence of typhoid fever from the town, where the disease has been almost endemic during past years. The abolition of the insanitary privy-middens, of which as many as 676 have been removed during the past six years, no doubt accounts in great measure for this decline in the incidence of the disease. It is not stated in the report whether waterclosets, and of what type, have been substituted for the privies. The council would be well advised to take some steps to lessen the number of deaths of young children, either by the appointment of women health visitors, or in some other way.

Brighouse.—The recently-issued annual report of Dr. Martin, M.O.H. for Brighouse, shows the death-rate of 13.7 to have been the lowest in the history of the borough. The birth-rate is also, unfortunately, very low, being only 18 94 per 1,000. Infantile mortality is also lower than for several years past, and is nearly as satisfactory as the Hudderfield rate, although Dr. Martin regrets the fact that he has been unable to secure any voluntary health visitors as he hoped a few months since. Generally, the borough is reaping the benefits accruing from a large expenditure during recent years on sewage works, sewage treatment, and other sanitary improvements.

PRIVATE LUNATIC PATIENT SENT TO COUNTY ASYLUM

A., a general practitioner, was sent for to a patient of his own, said to be in an excited condition. A. replied he could not go that night, but sent up his groom with medicine to see how the patient was. Next morning A. found the patient excited, restless, but not as he thought insane; as the family did not wish the patient removed, A. prescribed. On going to the house next day he found that the relieving officer had been there, had sent the parish doctor, on whose certificate the patient had been removed to the county asylum. A. was never consulted in the matter, nor called upon by the parish doctor.

*** In this case the usual course seems to have been followed. When a private patient with no means available for private treatment becomes insane, the case drifts into the hands of the relieving officer or one of the parochial officials, and it then passes out of the hands of those who have previously had medical charge. If the relieving officer thinks fit to give a medical order for the Poor-law medical officer to attend the case and advise upon it the latter is then *bound to act* in accordance with the regulations of the Local Government Board under which he holds office. Such cases are of common occurrence, and we believe in these it is not usual for the parochial medical officer to communicate in any way with the previous medical attendant, though of course if they should happen to meet it would be common courtesy to mention the subject. To write specially about it or to seek an interview in order to discuss with him the merits of the case could hardly be considered requisite, and it would be too much to expect a hard-worked Poor-law surgeon to spend time in a useless process from which no good could possibly result. Apart from the question thus far considered, it is well for A. to bear in mind that though he himself was the first practitioner to be summoned to attend the case, he did *not* attend that day nor did he send any *qualified* substitute. Under such circumstances he ran a risk for which he ought to have been prepared to take the consequences. Many a good patient has been lost under somewhat similar circumstances.

THE German School Hygiene Association will hold its ninth annual meeting this year on June 8th, 9th, and 10th. The subjects proposed for discussion are the hygiene of high schools for girls, including private schools (to be introduced by Dr. Wehrmann, Director of the Municipal High School for Girls at Krefeld, and Dr. Alice Profé, physician to the seminary for teachers at Berlin); and the advantages and disadvantages of boarding schools (to be introduced by Professor Boesser of the Royal Cadet Corps, Karlsruhe; Dr. Friedrich Schneeberg, director of a seminary for teachers, and Dr. Erler, of Meissen). Among the other subjects to be discussed are the higher education from a hygienic point of view, the care of the teeth and schools, and mouth breathing in school children.

HOSPITAL AND DISPENSARY MANAGEMENT.

AYR DISTRICT ASYLUM.

THE last report of Dr. C. C. Easterbrook as Medical Superintendent of this asylum for the year 1907 shows that on January 1st, 1907, there were 488 patients on the Asylum Register, and that on December 31st, 1907, there were 499 The total number of patients under treatment during the year was 588, and the average number daily resident 511, giving an increase of 23 in the average daily resident population for the year. Although there was thus an increase in the asylum population, the number chargeable to Ayrshire parishes at the end of the year was 27 less than at the beginning. From statistics given by Dr. Easterbrook, there appears to have been in the last few years a decline in the ratio of pauper lunacy to population, the proportion having fallen steadily from 2 65 per 1 000 in 1903 to 2.45 per 1,000 in 1907. During the year there were 198 admissions to this asylum, of whom, however, 31 were out-county cases and 23 private cases, the admission of private cases—after an interval of thirty years—having been reinstituted in 1907. Excluding these cases, the admissions (144) are slightly below the average admission-rate for this asylum for the past fifteen years. Of the total admissions, 47 were transfers, and, excluding these, of the 151 remaining, 116 were first admissions to any asylum. In 72 per cent. the illness was of less than six months' duration on admission, in 15 per cent from six months to two years, and 13 per cent , including congenital cases, were chronic cases. The usual statistical tables are not included in the present report, but from Dr. Easterbrook's summary we see that 72 per cent. of the admissions suffered from "constitutional insanities" (mania, melancholia, stupor, delirium, confusion, dementia, and epileptic insanity), 9 per cent. from alcoholic insanity, and 8 3 per cent. from general paralysis.

Concerning the probable causes of the insanities in the admissions, Dr. Easterbrook discusses these factors only in general terms, and states that "nearly all were persons with atypical disposition or faulty habits; that fully one-half had been the subjects of some earlier mental or nervous disorder of greater or less importance, or showed some actual congenital defect; and that nearly one-half presented a nervous physiognomy or physical signs of degeneracy." Their family histories, further, revealed the occurrence among their near relatives of mental and nervous disorders in 72 per cent., of paralysis and apoplexy in 9 per cent., of tuberculous diseases in 19 per cent., of rheumatism in 8 per cent., and of heart disease in 5 per cent.

During the year 81 were discharged as recovered, giving a recovery-rate on the admissions, excluding transfers, of 40 0 per cent. There were also 44 discharged unrecovered and 62 deaths during the year, giving a percentage death-rate on the average numbers resident of 12 1. All deaths were due to natural causes, 19 per cent. being general paralytics and the same proportion suffering from tuberculous disease.

The general health was good throughout the year, the open-air treatment instituted here by Dr. Easterbrook being systematically carried out, and, apart from a few cases of influenza and one of erysipelas, there were no cases of zymotic disease. As is indicated in our opening lines, Dr. Easterbrook's connexion with Ayr District Asylum is now at an end, he having been appointed Medical Superintendent of the Crichton Institute, Dumfries.

ADELAIDE HOSPITAL, DUBLIN.

THE report presented to the fiftieth annual meeting of the Adelaide Hospital, Dublin, under the presidency of the Bishop of Clogher, showed a favourable position. Since 1906 the Committee had cleared off an accumulated debt of £8 000, leaving the hospital practically free from financial liability at the commencement of the jubilee year. The number of patients treated in the hospital last year was 1,298. The Protestant poor of Ireland of all denominations participate in the advantages offered by the hospital. There were 34 312 attendances at the dispensaries. Among the speakers were Dr. Bewley, Mr. Heuston, Mr H. Drummond, Rev. W. McNeill, Mr. J. H. Campbell, M P., and Rev. W. Ballis.

BERWICK INFIRMARY.

AN important addition to the accommodation of Berwick Dispensary and Infirmary, recently completed, was formally declared open on April 10th. It is an annexe comprising an operating theatre, with a room for the administration of anæsthetics, a kind of surgery and out-patient room, and a waiting hall for patients. Including fittings and a fresh supply of instruments this addition has cost £976, of which some £250 remains to be collected. The institution contains sixteen beds and one cot, and hitherto operative work, and even ordinary out-patient work, has been conducted under great difficulties, owing to the absence of any accommodation such as that now provided.

FIFE AND KINROSS DISTRICT ASYLUM.

THE annual report for the year ending July 31st, 1907, for this asylum of its Medical Superintendent (Dr. A. R. Turnbull) shows that on July 31st, 1906, there were 589 patients on the asylum register, and that on July 31st, 1907, there were 601. The total cases under care during the year numbered 724, and the average number daily resident 588.92.

During the year 135 patients were admitted, which is 17 below those of the previous twelve months. Of the 135 admissions 101 were first admissions. In 51 the attacks were first attacks within three and in 15 more within twelve months of admission; in 33 the attacks were not-first attacks within twelve months of admission, and the remainder were either of more than twelve months' duration (30), of congenital origin (5), or of unknown duration (1) on admission. Of the total admissions 81 were in average health and condition, 46 in indifferent health and reduced condition, and 8 in very exhausted condition on admission. In 72 the mental condition was considered to be curable. As to the forms of mental disorder, the admissions were classified as follows: Mania of all kinds, 70; melancholia of all kinds, 39; dementia, secondary, senile, and organic, 11; general paralysis, 4; acquired epilepsy, 6; and congenital or infantile defect, 5. As to the probable causation of the insanity in these cases, alcohol was assigned in 21, or 15 5 per cent., venereal disease in none, adolescence in 13, change of life in 5, senility in 14, brain disease in 6, epilepsy in 8, various other bodily diseases in 15, previous attacks in 37 and "moral" causes in 25. Hereditary influences, direct or collateral, were ascertained in 43 or 31.1 per cent., and congenital defect existed in 5. During the year 44 were discharged as recovered, giving a percentage recovery-rate on the admissions of 32.59. There were also 33 discharged as relieved of whom 10 were sent to other Scottish asylums, 17 were handed over to the care of their relatives and 5 were boarded out while still remaining on the roll. During the year there were 46 deaths, giving a death-rate on the average numbers resident of 7 81 per cent. With 3 exceptions all deaths were due to natural causes; in 19 to cerebro-spinal diseases including 4 deaths from general paralysis; 13 to chest diseases with 6 deaths from pulmonary consumption; in 10 to abdominal diseases including 1 case of acute gastritis, probably due to corrosive poisoning before admission, and in 4 to general and other diseases, including 1 case of fractured femur in an aged patient, and in 1 to severe burns, self-inflicted with suicidal intent before admission. An unusually large number of patients with dangerous suicidal or homicidal tendencies were received at this asylum during the year under review. The circumstances attending one of these led to a question being asked in Parliament as to the propriety of sending such cases to ordinary asylums. In his annual report Dr. Turnbull takes the opportunity of discussing this question, in the course of which he makes two admirable suggestions. The first refers to the two procedures in Scotland, one or other of which may be adopted when a criminal act is done by a person believed to be insane. The ordinary criminal procedure may be followed, and if the accused be found insane he may be sent to the Criminal Lunatic Asylum at Perth, or on the other hand this procedure may be departed from either temporarily or permanently and the accused, being found insane, may be sent to his district asylum either temporarily or permanently. Dr. Turnbull finds these provisions reasonable and well adapted for the object in view, but argues that better steps ought to be taken at the commencement of the action in order to determine in any one case which procedure should be adopted. The second suggestion refers to transfer of patients between ordinary asylums and the Criminal Lunatic Asylum. At present criminal lunatics becoming harmless, statutory provision is made for their removal from the Perth Asylum to ordinary asylums. Most reasonably Dr. Turnbull considers that statutory provision should be made for the converse process—that is, for the transfer of patients in ordinary asylums who are or have become dangerous to the Criminal Lunatic Asylum. The point is one well worthy of note.

KEIGHLEY VICTORIA HOSPITAL.

THE report presented to the annual meeting of this hospital showed that 378 cases were dealt with during the year ending December 31st last—63 less than in the preceding twelve months. The average daily number of beds occupied was 36, and the average period of residence 35 days. One of the most gratifying features of the financial statement was the large increase in the workpeople's contributions, which had increased from a little over £74 in 1906 to over £316 in 1907.

ROYAL EYE AND EAR HOSPITAL, BRADFORD.

THE forty-first annual meeting of this hospital was held on February 21st, the Lord Mayor presiding. It was stated that the number of in-patients (1,141) for the year was 50 more than in 1906, and that the attendances of out-patients were 26,352, nearly 2 000 more than in 1906. The number of major operations performed was 1,064. Attention was again drawn to the inadequacy of the hospital for the requirements of in-patients. Dr. Bronner stated that he considered that an extension of the hospital was absolutely necessary. There were the same number of beds now as twenty years ago, though the number of patients had increased three or four fold.

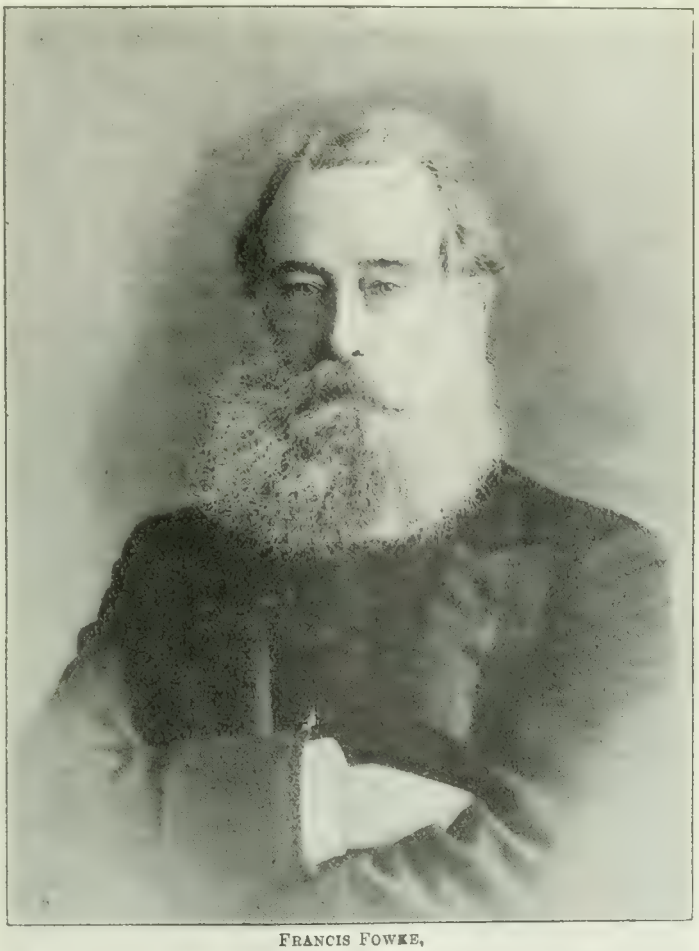
OBITUARY.

FRANCIS FOWKE,

FORMERLY GENERAL SECRETARY OF THE BRITISH MEDICAL ASSOCIATION.

We have to announce with deep regret the death on the morning of May 19th of Mr. Francis Fowke, who from 1871 to 1902 was General Secretary of the British Medical Association.

Mr. Fowke had suffered all his life from asthma, and his retirement was largely due to the fact that his medical advisers insisted that he should spend the winter in a more genial climate than the neighbourhood of London affords. When he went to Torquay about last Christmas, he seemed to be in his usual, not very robust, health. Soon afterwards, however, his condition began rapidly to deteriorate, and before long symptoms of malignant stricture of the œsophagus declared themselves. He bore his sufferings patiently, and faced the prospect of death with courage.



FRANCIS FOWKE.

Francis Fowke was born on October 8th, 1839, the youngest son of Mr. John Fowke, F.R.C.S., of Wolverhampton. He came of a medical family, and his grandfather also practised at Wolverhampton. Both his father and grandfather were original members of the British Medical Asssociation, and the latter was member of the first Council. It was the desire of Francis Fowke himself to enter the profession, but his father, after a period of ill-health, had died prematurely, and the resources of the family did not at that time justify the expenditure which a medical education would have involved; he accordingly, much against his inclination, entered the offices of Messrs. B. and S. Thompson, merchants in Birmingham, and remained with them until 1867, when the then house-governor and secretary of the General Hospital, Birmingham, having become borough treasurer, Mr. Fowke was appointed to succeed him. A member of the medical staff at that time tells us that as secretary to the hospital Mr. Fowke enjoyed the esteem and regard of the committee, owing to his thoroughness and his devotion to his work, the successful management of the affairs of the institution being the great object and pleasure of his life; while as house-governor he was kind and tactful, and exercised his authority with firmness and yet without giving offence.

Early in 1871 the Committee of Council of the British Medical Association, after a prolonged inquiry into the then very unsatisfactory financial position of the Association, due as they found to defective organization and supervision, resolved to appoint a general secretary to reside in London and to give his whole time and attention to the management and work of the Association. At the suggestion of medical friends in Birmingham who knew the excellence of the work he had done at the General Hospital, Mr. Fowke applied and was appointed, taking up the duties of his new office at the end of that year. To form an adequate idea of the services which Mr. Fowke rendered to the Association it is necessary to recall the state of things which existed at the time when he was appointed. The total number of members was 4,403, the total income was £5,261, and the balance of income over expenditure was only £38. The business of the Association was conducted in two rooms in the printing establishment of Mr. Richards, who then printed the BRITISH MEDICAL JOURNAL in Great Queen Street, Lincoln's Inn Fields; and the staff consisted of two clerks, one for outdoor employment and the other for indoor work and the keeping of books. An examination of the financial position showed that, had it been necessary to wind up, the assets would not have been sufficient to meet the liabilities; Mr. Fowke, therefore, began the work of General Secretary of the Association and business manager of the JOURNAL under somewhat depressing and discouraging circumstances, but he was imbued with the determination to bring his task to a successful issue. At first, indeed, the results seemed somewhat slow in coming, although in 1874 increasing business rendered it necessary to take additional premises in the next house. In 1878, the growth in the circulation of the JOURNAL, the increased revenue from advertisements which in consequence ensued, and careful financial administration had so far improved the financial position that the Association, largely at Mr. Fowke's instigation, decided to undertake itself the printing of the JOURNAL. Premises suitable for the purpose and to the then income of the Association were accordingly leased at 161A, Strand. From this time the affairs of the Association began to improve with remarkable rapidity. Among the many factors which contributed to this increase not the least important was the self-denying energy, devoted labour, and grasp of all the details of administration which consistently marked Mr. Fowke's career. The membership of the Association, together with the circulation of the JOURNAL, and the receipts from advertisements rapidly expanded each year, and a substantial balance of income over expenditure varying from £1,500 to £3,500 was shown on each year's working. These surpluses judiciously invested warranted in 1886 the acquisition of the lease of the house 429, Strand. In the purchase of this lease, and the alteration and furnishing of the house a sum of £9,500 was expended, and two years later the Association was able to purchase for the sum of £3,200 the lease of the two adjoining houses Nos. 2 and 3, Agar Street, while eight years later it acquired the lease of Nos. 4 and 5; in 1894 two houses in Harvey's Buildings, a court immediately behind 429, Strand, were purchased, and in 1898 the Association, already the leaseholder of 429, Strand, and 2, 3, 4, and 5, Agar Street, purchased the freehold of these houses, and thus stood possessed of the commanding site upon which the new building, now so far advanced, have been erected. When the purchase was completed the

property was subject to a mortgage of £38,000, but this was completely paid off in December, 1902, and the land tax also was redeemed. The freehold site thus possessed by the Association free of all incumbrances and restrictions has an area of 5,600 square feet, a frontage to the Strand of 40 ft., and a return frontage of 180 ft. in Agar Street, while the depth, including that part on the north side of Harvey's buildings, is 60 ft. The fact that during the thirty-one years and nine months for which Mr. Fowke held the office of General Secretary the finances of the Association were advanced from a position in which the assets were insufficient to meet the liabilities to a position in which it was the owner of such a site in such a position is the best testimonial to Mr. Fowke's abilities as an administrator.

Mr. Fowke tendered his resignation on the score of health at the annual meeting of the Association at Manchester in 1902. It was accepted with the deepest regret, and he was elected an honorary member in recognition of the distinguished services he had rendered to the Association. Subsequently many Branches of the Association adopted resolutions recording their appreciation of the work done by Mr. Fowke for the Association, and on September 30th, the day on which his resignation took effect, a number of past and present honorary secretaries of Branches presented him with a large two-handled silver amphora bearing a suitable inscription; this was accompanied by an address, in the course of which the signatories, who numbered sixty-three, said that the success of the Association "in the past, and the firm basis on which it is established in the present, are, in our judgement, largely due to the business capability you have brought to bear upon your work, and to the tact and courtesy which have distinguished your relations with your co-workers."

Francis Fowke was a man of strongly-marked character—quiet and reserved in demeanour, not ready of speech; the special quality which distinguished him was tenacity of purpose. He had also a remarkable grasp of details and a power of looking all round a subject, not making up his mind until he had collected and thoroughly digested every fact bearing upon the question under consideration. His occasional reports to the Journal and Finance Committee or the Council on matters of business or finance were models of thoroughness, and though he was not quick to meet criticism at the moment, his facts were so carefully ascertained that the opinion he had formed on them generally commended itself sooner or later to the Association.

During his early years in London Mr. Fowke devoted himself so strenuously and continuously to the work of building up the business and finances of the Association that he left himself little time for recreation, and his delicate constitution and liability to asthma precluded him from indulging in those sports which involved much exposure or severe exercise. He was however very fond of canoeing, and for a good many years during the prime of his life kept a sailing canoe on the upper Thames in which he went out in all weathers, rather to the alarm of his friends, as he could not swim. His chief hobby was photography; he began to take an interest in the art early in life, and followed all its developments. He reached a high pitch of excellence in its exercise, and some of his photographs have been shown at public exhibitions. He was also skilful in photomicrography, and was always glad to help his friends, so that many medical papers and books contain illustrations made from his photomicrographs.

Mr. Fowke never married, and for many years past had made a home for his sisters in London.

The funeral has been arranged to take place at Albrighton, near Wolverhampton, on Friday.

Professor SAUNDBY (Birmingham) writes: During my term of office as President of the Council I was very intimately associated with Mr. Fowke, and learnt to value his services to the Association very highly. It is no exaggeration to say that he was devoted body and soul to the interests of the Association, that the great preoccupation of his mind was its prosperity and how to promote it. During the thirty years he was Secretary he had the pleasure of seeing the Association growing gradually but surely greater and richer year by year, and although no doubt this progress was due to general causes, his careful management played an important part in it. He was always anxious to see the Association settled in its own building, and he thought this the most desirable object for which the Association should save up its surpluses. He was a thoroughly loyal official, and did not allow himself to side with any party in the Council; he was always ready to give his best assistance to the executive officers elected, whoever they might be. Since his official connexion with the Association was terminated his interest has been as great as ever. He has carefully looked over every balance sheet, and I have generally received letters from him commenting upon the results. It is literally true that his devotion to the Association knew no limits and that it was part and parcel of his life. Since his retirement he has never ceased to express his regret to me that he was no longer able to take part in its management.

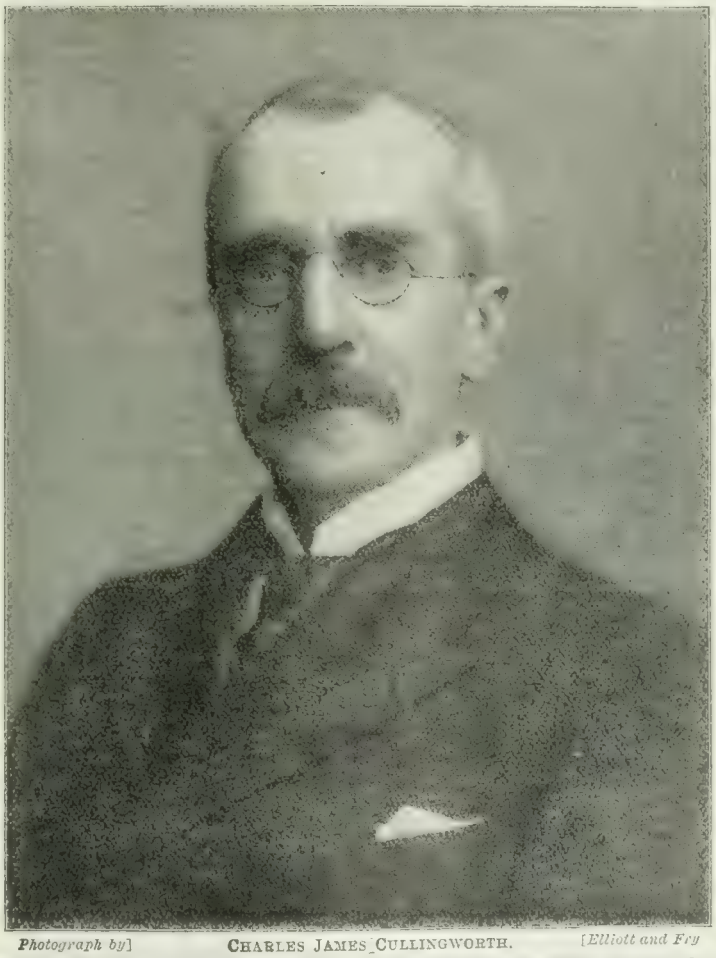
BRIGADE-SURGEON WILLIAM PIERCE KELLY, F.R.C.S., late Indian Medical Service, and Inspector-General of Prisons, Burmah, died at Dublin on May 2nd. He joined the Madras Medical Department as an Assistant-Surgeon, June 9th, 1857; was made Surgeon-Major, June 9th, 1869; and retired from the service with the honorary rank of Brigade-Surgeon, January 28th, 1884. He was in the Indian Mutiny campaign in 1858, with the North Canara Field Force, and received a medal.

CHARLES JAMES CULLINGWORTH,

M.D., D.C.L., LL.D., F.R.C.P.,

CONSULTING OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL; FORMERLY PROFESSOR OF OBSTETRIC MEDICINE AND GYNAECOLOGY, VICTORIA UNIVERSITY, MANCHESTER.

IT is with profound regret that we had last week to record the death of Dr. Cullingworth. The earliest indication of grave mischief occurred eight years ago, when he was seized with a severe attack of angina, while paying an early morning visit to his ward. From that time until his recent illness there have been frequent warnings that the trouble was still present. In spite of this Dr. Cullingworth continued his professional and social duties with his usual earnestness and cheerfulness, and it was only at the beginning of the present year that he yielded to the advice of his medical friends, and took absolute rest in bed. Unfortunately this had no effect in diminishing the frequency and severity of the anginal attacks, and he passed away peacefully after one of these attacks in the early morning of May 11th.



Photograph by] CHARLES JAMES CULLINGWORTH. *[Elliott and Fry*

Charles James Cullingworth was born in Leeds on June 3rd, 1841. He was educated at the Wesley College, Sheffield, and matriculated at the University of London in 1858. It was intended that he should follow the legal profession, but, owing to his father's illness, he had, on leaving school, to assist him in his business in Leeds, and from 1858 up till the time of his father's death two years later he had to take the management. Having disposed of the business, and being then free to choose a profession, he determined to take up that of medicine. He was apprenticed to a general practitioner in Leeds, and lived for four years in his house, going through the required course of medicine and surgery at the Leeds School of Medicine at the same time. He became M.R.C.S. in April, 1865. Having so far had experience only of private practice amongst the poorer classes of a large town, Dr. Cullingworth next took an assistantship in a country practice at Bawtry in Yorkshire, where for eighteen months he worked in a purely agricultural district. In December, 1866, he was elected to the post of Resident Physician Assistant at the Manchester Royal Infirmary. A few weeks later the Resident Medical Officer, wishing to devote himself entirely to administration work, obtained leave to relinquish the professional part of his duties; Dr. Cullingworth was elected to the new office thus rendered necessary, and held it for two years. He then commenced private practice in Manchester, and from 1872 to 1882 he held the office of Police Surgeon in Manchester. In 1879, having in the meantime become M.R.C.P.Lond., he was appointed Lecturer in Medical Jurisprudence at the Owens College. Dr. Cullingworth's admirable work as police surgeon, his sound judgement and well-balanced mind specially qualified him as an ideal teacher of forensic medicine. During the seven years that he occupied the chair his pupils on four occasions distinguished themselves highly at the honours examination for the M.B. degree of the University of London. In 1873 Dr. Cullingworth obtained the appointment of Surgeon to St. Mary's Hospital for Women, Manchester. In 1881 he took the degree of M.D. at Durham University, and from that time gradually relinquished general practice and devoted himself to consulting work in the department of obstetrics and gynaecology. On the death of Professor Thorburn in 1885 he was elected to succeed him in the chair of Obstetric Medicine at the Owens College. When the Victoria University obtained its supplemental Charter in 1883 and became entitled to confer degrees in Medicine, Dr. Cullingworth was appointed Honorary Secretary of the Board of the Studies for the Department of Medicine, which office he held down to the time of his leaving Manchester in 1888. He also held the posts of Honorary Librarian and Honorary Secretary to the Manchester Medical Society, and spent an enormous amount of time and labour in preparing a catalogue, subsequently printed, of the library of the Society.

On the resignation of Dr. Gervis from the post of Obstetric Physician to St. Thomas's Hospital in 1888, an intimation was sent to Dr. Cullingworth to the effect that if he were willing to apply for the vacant post, the medical and surgical staff would be glad to support him. The serious importance of such an offer need not be emphasized. At the time the invitation was given, Dr. Cullingworth was engaged in a very large and lucrative consulting practice in Manchester; he was surrounded by valued and intimate friends; his sympathies and his closest ties were centred in the great manufacturing town which had been the seat of his labours for some of the best years of his life. A good deal of courage was needed to lay aside all these considerations, and embark on an entirely fresh field of work in London. After a very short interval, sufficient for careful consideration and consultation with a few friends, Dr. Cullingworth decided to apply for the vacant post and was unanimously elected to the staff of St. Thomas's Hospital. The announcement of his retirement from Manchester was received with profound regret by all who had enjoyed the pleasure and advantage of working with him. What Manchester lost, however, London, and especially St. Thomas's Hospital, gained. Soon after coming to London Dr. Cullingworth was elected Visiting Physician to the General Lying-in Hospital, York Road, a post which he held for many years.

So soon as Dr. Cullingworth took charge of the gynaecological department of St. Thomas's Hospital he at once settled down to steady work in that earnest, thorough, conscientious manner with which all who knew him are familiar. He was one of the first in this country to devote himself to the study of the pathology of pelvic inflammation. At St. Thomas's Hospital a large field of work was at his disposal, and he proceeded to

investigate these cases with special care, in order to prove the frequency of disease of the Fallopian tubes in cases of pelvic peritonitis. The admirable work of Dr. Cullingworth and others in this field of pathology conclusively proved that perimetritis is, with rare exceptions, a secondary condition, an effort of Nature to localize the process of disease in the Fallopian tubes or ovaries, which is the primary cause of the inflammation. The results of Dr. Cullingworth's extensive operative experience in this special field of research were embodied in a paper read before the Obstetrical Society of London in 1892 entitled, the Value of Abdominal Section in Certain Cases of Recurrent Peritonitis, Based on a Personal Experience of Fifty Cases. The reading of this paper was followed by one of the most interesting and important discussions that had taken place for years, in which all the leading gynaecologists in London and the provinces took part. The propositions laid down by Dr. Cullingworth were severely criticized by many speakers, but the majority supported the views of the author of the paper. To show that the support was justified, it is only necessary to mention that the statements which were so vigorously attacked in 1892 are accepted at the present day by every gynaecologist engaged in the active work of his profession. This valuable and laborious piece of work fully established his position as a great pioneer in gynaecology.

Dr. Cullingworth's pen was never idle for long, and his writings are too numerous to refer to in detail. One must, however, specially mention an admirable little work on *Diseases of the Fallopian Tubes*, which was published in 1895. It contains a series of beautiful illustrations representing the various diseases of the Fallopian tubes, with a short clinical picture of each case. Dr. Cullingworth's articles on pelvic inflammation in Allbutt, Playfair, and Eden's *System of Gynaecology* are well known to all. Among the most important addresses delivered by him were that on Puerperal Fever, a Preventable Disease, given as an introductory address at St. Thomas's Hospital in 1888; the address in Obstetrics and Gynaecology, delivered before the meeting of the British Medical Association at Newcastle in 1893; and an address on The Importance of Personal Character in the Profession of Medicine, delivered at the opening of the winter session of 1898 at his old Medical School of Leeds.

Dr. Cullingworth had the honour of being invited to deliver the Bradshaw Lecture at the Royal College of Physicians in 1902 and the Ingleby Lecture at the University of Birmingham in 1904. In the case of the Bradshaw Lecture, the invitation was much appreciated, as it was the first occasion on which an obstetric physician had been asked to deliver the lecture. Those who were present or who read the lecture were satisfied that the high standard expected on such an occasion had not suffered in his hands.

In addition to his writings on purely professional subjects Dr. Cullingworth was the author of two small volumes relating to the history of medicine, the one a biographical sketch of a famous Manchester surgeon, Charles White, and the other an appreciation of Oliver Wendell Holmes's *Essay on Puerperal Fever*. In both volumes the happy choice of word and phrase reveals a genuine love of English literature and a wide knowledge of its classics; his bent towards historic research is evident in the extreme care which he takes to verify even the smallest details, and every page is illuminated by the writer's sound judgement and broad-minded enthusiasm.

Dr. Cullingworth was one of the founders of *The Journal of Obstetrics and Gynaecology of the British Empire*, and gave it his warm and active support from the time of its inception. He was a member of the editorial committee, and during the last two years acted as editor. He expended an immense amount of time and energy in his endeavour to extend the usefulness and popularity of the journal, and to establish firmly its position as the leading journal of its kind in this country. The loss of an editor of his administrative ability and exceptional literary gifts will be keenly felt, and it will be very difficult to replace him.

His interest in the midwife question is seen in the number of his papers and addresses on the subject of puerperal fever and its prevention, and in the active part he took in advocating legislative measures for the registration and control of midwives. On the Midwives Committee of the Obstetrical Society of London and in the Midwives Bill Committee of the Midwives' Institute he did much valuable and perhaps little recognized work, and by his writings greatly assisted the cause he had at heart. Whilst President of the Obstetrical Society he selected puerperal fever and its prevention as the subject of his inaugural address. Perhaps his most influential contribution to the subject was a paper in the *Contemporary Review* for March, 1898, in which he stated the case for registration with much force and judgement. He drew attention to the support such a measure had from many medical societies, and carefully analysed the grounds on which it was opposed by other sections of the profession. His words on this point will bear quotation:

> It cannot, therefore, be said that the promoters of legislation on this subject are without strong medical support. That there is also strong medical opposition is, alas! too true. That opposition is, it seems to me, based on an utterly erroneous idea as to the position of the doctor in the social edifice. Even if it be granted, which I do not for one moment believe, that the interests of the medical profession would be injuriously affected by the passing of this measure, it must be remembered that no class interests ought to be permitted to stand in the way of what can be shown to be for the good of the community.

After the passing of the Midwives Act he served for two years on the Central Midwives Board as the representative of the Midwives' Institute and indeed only gave up that work when his health began to fail.

Dr. Cullingworth retired from the active staff of St. Thomas's Hospital in 1904, and in recognition of the

valuable services he rendered to that institution during the sixteen years he had filled the office of obstetric physician, he was after his retirement placed upon the consulting staff.

Dr. Cullingworth will long be remembered among his old pupils as a lecturer and clinical teacher. His clear enunciation and deliberate delivery made his lectures easy to follow. He possessed a wonderful power of holding the attention of his hearers. He was of opinion that a full hour's lecture was a severe tax both on the lecturer and on his audience, and was in the habit of limiting the time to fifty minutes. As a clinical teacher Dr. Cullingworth placed a very high value on careful and concise note-taking as an important part of a student's training. Many of his old clerks will remember the severe but kindly cross-examination when the notes were discursive and wanting in accuracy, or if the composition was faulty. It is possible that this critical attitude may at the time have seemed a little tiresome, but the habit of careful and accurate analysis of symptoms which was by these means instilled into the student was in later years fully appreciated. Dr. Cullingworth had a remarkable influence over those who had the privilege of working with him. He himself was a man of the highest ideals and was able to get the best work out of those associated with him. His remarkable keenness and never-failing interest were most inspiring to his pupils.

Dr. Cullingworth was always ready to give warm and active support to any scheme which was intended to improve medical education. His opinion was highly valued by his colleagues in the manifold problems met with in hospital management. He was also a staunch advocate of the claims of medical women. His firm conviction was, that as women were admitted to the medical profession the same advantages should be open to them as were available to men.

Dr. Cullingworth was a man of very strong opinions, and a keen fighter. He was, however, a generous opponent, entirely free from prejudice, and always ready to give an attentive hearing to those who held views opposed to his own. As a friend and colleague it would be impossible to conceive one more true, constant, and loyal. The longer one knew him the greater was the affectionate regard one felt for him personally, and the deeper one's admiration for his sterling and manly qualities. One admired the modesty and nobility of his character, his complete absence of self interest, his kindness of heart, and his public spirit. His valuable advice was frequently sought in matters of difficulty, and was always willingly given. He never spared himself where any effort or assistance from him could be of service to others. Dr. Cullingworth married Emily Mary, daughter of the late Richard Freeman, and is survived by this lady and one daughter.

Dr. Cullingworth was buried at St. Marylebone Cemetery, Finchley. A funeral service—previously held at St. Thomas's Church, Portman Square—was largely attended by his colleagues and professional friends. There was a very large number of floral offerings. Amongst those who were present were representatives of the University of Manchester, the University of Liverpool, the Royal College of Physicians, the London Association of Old Students of Owens College, Manchester; the medical and surgical staff of the New Hospital for Women, the General Lying-In Hospital, the Society for Promoting the Training and Supply of Midwives, and the Victoria Jubilee Institute for Nurses. There were also present the President of the Obstetrical Section of the Royal Society of Medicine, the Chairman and Secretary of the Central Midwives Board, the Regius Professor of Medicine at the University of Oxford, the Treasurer of St. Thomas's Hospital, and the senior surgeon and senior physician of that hospital.

We are indebted to Mr. WALTER WHITEHEAD (Consulting Surgeon to the Manchester Royal Infirmary) for the following appreciation:

It is a melancholy duty, but at the same time it is a privilege, to have the opportunity of expressing one's appreciation of an old and revered friend after he has gone, more especially when that friend stands out conspicuously as having been everything a friend and a professional man ought to be.

Charles James Cullingworth was always destined by the sheer strength of his personality to take a prominent position in the profession, or in any other sphere of activity, and his success in life was long anticipated by those who knew him in his early days.

When first I settled in Manchester he was in general practice at the junction of Plymouth Grove and Upper Brook Street, and then his one ambition was to become a member of the medical staff of the Manchester Royal Infirmary. When, however, I retired from the staff of St. Mary's Hospital in 1878, I and a number of his most intimate friends with the greatest difficulty induced him to become a candidate for the vacant post, as we were well assured that he would meet with little opposition, and that the appointment would afford him an opportunity of showing the excellent work he was capable of doing. Within a week, however, after his election he declared his determination to abandon the appointment, as he had found it impossible, he said, to overcome some of the minor technicalities of the work to which he had hitherto been unaccustomed; but, after a few lessons of instruction from his colleagues, he soon settled down, and became quite enthusiastic about his duties. After this he diligently concentrated his mind on gynaecological surgery and obstetrics, and devoted his rare intelligence to these subjects.

The reputation he rapidly made for himself at St. Mary's, together with his universal popularity amongst the profession, ultimately led to his being selected by the Owens College as Professor of Gynaecology and Obstetrics, and this in turn resulted in his leaving Manchester when he was offered a similar position in London at St. Thomas's Hospital, eventually becoming one of the most distinguished representatives and authorities on his own subjects in this country. He left Manchester in 1888, beloved, respected, and regretted, and carried away with him the sincere good wishes of the profession and the goodwill of all. Had Dr. Cullingworth never joined St. Mary's Hospital he would most probably never have gone to London, and more than probably he would have died premier physician to the Manchester Royal Infirmary.

We have not far to seek the cause of the eminent, if not pre-eminent, position he made for himself in London—a career that affords an object-lesson worthy of imitation, and one that will long command recognition. Whilst in Manchester his fifteen years' voluntary services to the Medical Society were invaluable, and the library and the minute book still bear evidence of the methods he inaugurated. His teaching when lecturer on medical jurisprudence at Owens College will long be remembered for its clearness and conciseness—lectures which really taught without, as is too commonly the case, bewildering the students.

His genial and amiable disposition ever made him a welcome guest at any gathering of his colleagues and friends, and his versatile and instructive conversation always made him doubly welcome. He could also recite with considerable effect and feeling.

He lived an unblemished life, and yet few men suffered more from unmerited causes. He had also from time to time to contend with indifferent health, which crippled his energy and lowered his zest for work. His abilities were unquestionably of the highest order, and his diligence and perseverance enabled him to make the best use of his splendid opportunities. He had a slight characteristic eccentricity of manner, which, however, only added to his attractive personality.

Out of a small coterie of ten who formed a close friendship and intimate, almost daily, companionship, seven—Sir William Roberts, James Ritchie, David Little, Sam Bradley, James Ross, Daniel Leech, and Julius Dreschfeld—have passed away, and now, to our sorrow, Charles James Cullingworth has joined them. All of these men contributed generously to the literature and practice of medicine and surgery, and probably formed the best group of medical men Manchester ever possessed.

Within the last two years he conveyed to me his intention of shortly retiring from practice in London and going to live in some quiet country place, confining himself to such desultory work as opportunity offered.

To afford suitable recognition to Charles James Cullingworth would require an abler pen than mine and more space, I fear, than your JOURNAL can reasonably afford. Always a willing slave to the dictates of his conscience

and to the highest principles of a true Christian, he won the attachment and the affection of most men. He inspired confidence and respect amongst his patients and subordinates. He had none but high ideals and noble impulses, a lofty sense of duty, fidelity to great convictions, and loyalty to his profession and to his professional brethren.

Dr. Lloyd Roberts (Physician to St. Mary's Hospital, Manchester)writes: My acquaintance with Dr.Cullingworth began soon after his appointment as house-physician to the Manchester Royal Infirmary. When he left the Infirmary he commenced general practice. In 1873, at the request of the Chairman of the Board of Management of St. Mary's Hospital, Manchester, I invited him to become a candidate for a vacant post on the honorary staff of the hospital. The suggestion took him by surprise, but after some manifestations of diffidence he accepted the invitation. He was elected, and thus became my colleague during the remainder of his stay in Manchester. My friendship with Cullingworth lasted nearly forty years. For a considerable portion of this period we were in close professional relationship. He was also one of my most valued personal friends. At an early period of our friendship I was impressed with the high sense of integrity and honour which he exhibited in all his actions both social and professional. He never allowed personal convenience to interfere with the performance of duty. I have known him frequently to sacrifice his comfort and convenience for the benefit of others, many of whom had no real claim on his consideration. Cullingworth was a skilled diagnostician and a careful operator. He had strong literary proclivities, and was a great admirer of Wendell Holmes and Sir Thomas Browne, taking the works of these fascinating writers as the subjects of essays and addresses on several occasions. He also greatly admired Tennyson and Browning, and occasionally gave recitations from their works before select audiences at philanthropic gatherings.

His essay on Charles White, the founder of the Manchestel Royal Infirmary and the St. Mary's Hospital, is a record of patient and appreciative work.

Although of Wesleyan antecedents, he became an ardent Churchman, and I have occasionally heard him read the Lessons of the Day during divine service in the church of one of his many rector friends.

A correspondent writes: Undoubtedly the best literary work undertaken by Cullingworth was his *Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation.* No doubt he ably discussed his views and experience of the treatment of chronic inflammatory disorders of the uterine appendages, but many others were and are occupied in debating the same subject. His *Illustrations* supplied a distinct want: the demonstration of this class of disease and tubal pregnancy by the aid of drawings of a high type, and their excellency has been recognized, as they have been copied by British and foreign authors up to the present day. Pictorial representations of naked-eye morbid anatomy, carefully prepared by good artists under Cullingworth's superintendence, make up the main feature of his work, to which is added his own admirably concise descriptive text. Microscopic art changes almost as rapidly as the pathologico-histological science, to which it is a more or less efficient handmaid. But the efficiency of a good drawing of a diseased organ is permanent. Let us glance at Rayer's splendid atlas of diseases of the kidney and suprarenal body, published over seventy years ago in Paris. We can recognize conditions well known to us which were imperfectly understood by the author himself. As with Rayer so will it be with Cullingworth. In short I am of opinion that his *Clinical Illustrations* will outlive his generation. Dr. Cullingworth was President of the Obstetrical Society of London in 1897 and 1898. He filled the chair to the satisfaction of all concerned in the welfare of the society. In the President's annual address delivered on February 2nd, 1898, Dr. Cullingworth had to accomplish a difficult task, namely, to relate in detail the lives of four distinguished Fellows who had died in 1897—Braxton Hicks, Lusk, Tarnier, and, greatest of all, Spencer Wells. He rendered full justice to the illustrious dead at the cost of great trouble in collecting details of their family, social, and professional relations. He went even further, adding to his address when published in the fortieth volume of the *Obstetrical Transactions* a full list of Sir Spencer Wells's and Braxton Hicks's published writings, arranged chronologically. The writings of the former amounted to 216, whilst Braxton Hicks's medical papers reached the still high figure of 133, exclusive of 22 purely scientific memoirs, mostly on algae and the invertebrata. Thus did Cullingworth aptly honour the dead, and trust that the societies to which he has been attached, especially the present evolution of the old Obstetrical Society, will honour him in a similarly suitable manner when the time comes to make official mention of his decease. Under the circumstances, there is no better way of showing respect to a dead member of a society than to take pains to set forth his work before his surviving colleagues.

WILLIAM THOMAS GARRETT WOODFORDE,

M.D.Lond.,

M.O.H., Berkshire Combined Sanitary District.

In the early morning of April 25th Dr. William Thomas Garrett Woodforde peacefully passed away at his residence, Oakbank, Spencer's Wood, near Reading, within a month of having completed his 82nd year. He was born at Kingsland on May 26th, 1826. He was the son of a medical practitioner, and had two brothers and three sons in the profession. He received his medical education at University College, London, graduated M.B. London University, in 1848, and obtained the M.D. degree in 1852. He was at one time Medical Officer of Health and Public Analyst at Poplar, but in 1873 he was appointed Medical Officer of Health of the Berkshire Combined Sanitary District, and actively carried out the duties of that office to within a few days of his death. At one period he held also the appointment of Public Analyst for Newbury.

Dr. Woodforde was a Vice-President of the Incorporated Society of Medical Officers of Health; President of the Society, 1893-4; President of the Home Counties Branch, 1897-8; and President of the Reading Branch of the British Medical Association in 1882 and 1883.

Throughout his exceptionally long tenure of office, by virtue of his ripe experience, great energy, and assiduity, he was instrumental in effecting an immense amount of good in his very extensive district, in which he was everywhere held in high esteem. A man of many parts, a thorough musician, a devoted lover of flowers and gardening and of everything connected with art and literature, he led a quiet, peaceful life in the midst of the beauties of Nature he loved so well. His was a singularly happy temperament; he was ever bright and cheerful, and so he remained up to the last day of his life, retaining all his faculties unimpaired to the end, and keeping well abreast of the most advanced knowledge of his branch of the profession.

For very many years he gave his services as organist of Grazeley Church, and was churchwarden for upwards of a quarter of a century. Now at a ripe old age has ended a strenuous and exemplary life, full of work well and conscientiously done for the public good. His loss to his family and parish will be very great; he will be sorely missed by them and in every part of his wide district, especially by the writer of this notice, who was intimately associated with him in his professional work, and thus learned to appreciate his great worth and sound judgement.

At the interment, which took place in the family grave in the City of London Cemetery, Little Ilford, on May 1st, the Society of Medical Officers of Health was represented by Dr. Sanders of West Ham, Dr. Sowden of East Ham, Dr. Gerard Charles Taylor, M.O.H. Berkshire County Council, and Mr. Alfred Ashby of Reading. There were many beautiful wreaths of flowers, amongst the senders being the President and Council of the Society of Medical Officers of Health, the Home Counties Branch of that Society, and the Oxford and Reading Branch of the British Medical Association.

Under the will of the late Mr. Joseph Cawthra, of Bradford, a sum of £1,000 is directed to be paid to Bradford Royal Infirmary; while the Children's Hospital and the Eye and the Ear Hospital each receive £350, the Morecambe Cottage Hospital £100.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Applied Anatomy.

A. P. PARKER, M.A., B.M., Magdalen College, F.R.C.S.Eng., has been appointed University Lecturer in Applied Anatomy for five years from the first day of Michaelmas Term, 1908.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on May 14th:

M.D.—R. H. Robbins, Trin.; A. E. Brehaut, H. Selw.
M.C.—H. T. Grav. Trin.
M.B., B.C.—L. Shingleton Smith, Joh.
M.B.—W. P. Morgan, Cla.
B.C.—H. G. Freau, Joh.; H. E. H. Oakeley, Joh.; A. H. Falkner, Pet.; W. B. Grandage, Cla.

The Final M.B. Examination begins on Monday, June 15th.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

THE foundation oration of the Union Society of University College, London, will be delivered on Thursday evening, June 4th, by Mr. J. Lewis Paton, M.A., who will deal with the subject of the university and the working classes. Visitors will be received by the President at 8 p.m.

LONDON HOSPITAL MEDICAL COLLEGE.

A course of four clinical lectures will be delivered by Mr. Jonathan Hutchinson, F.R.S., Emeritus Professor of Clinical Surgery to the London Hospital, on Tuesdays, beginning on June 16th. The lectures, which will be delivered in the Clinical Theatre at 3 p.m. each day, are free to all students of the university and to medical graduates. The lecture on June 16th will deal with the liver and jaundice in reference to skin diseases; that on June 23rd with stigmata insectorum; that on June 30th with vegetable pathology; while the last, on July 7th, will treat of the present state of the leprosy question.

UNIVERSITY OF ST. ANDREWS.

CHANDOS CHAIR OF PHYSIOLOGY.

THE Secretary to the University Court desires, in order to remove misapprehensions which have apparently arisen upon the subject, to state that the University Court of the University of St. Andrews (which is patron of the now vacant Chandos Chair of Physiology in the United College, St. Andrews) has resolved that the appointment shall be open, and that the person (to be elected shall be the person whom it deems to be the best candidate, whatever may have been his previous sphere of work. The Court is not pledged to any one candidate, and the election is not a foregone conclusion.

UNIVERSITY OF WALES.

ANNUAL COLLEGIATE MEETING.

THE annual extra-collegiate meeting of the Court of the University of Wales was held at the Victoria Hall, Llandrindod Wells, on May 13th. Sir Isambard Owen (Senior Deputy Chancellor) presided over a very large assembly. Reference was made to the loss sustained by the university through the death of the Hon. George T. Kenyon, whose name had been inseparably connected with the University of Wales. Congratulations were accorded to Mr. Lloyd George on his appointment as Chancellor of the Exchequer, to Sir Samuel T. Evans (an old student at Aberystwith) on his appointment as Solicitor-General, and to Principal Ellis Edwards upon the honour recently conferred on him at Edinburgh. On the recommendation of the senate, which met the previous evening, it was unanimously resolved to confer the honorary degree of LL.D. upon the Right Hon. David Lloyd George, M.P., in recognition of his great services to the nation as President of the Board of Trade and of his appointment as Chancellor of the Exchequer. The recommendation was carried with acclamation. Sir Isambard Owen was re-elected senior Deputy Chancellor and Sir David Brynmor Jones junior Deputy Chancellor. In addition to *ex-officio* members, namely, Sir Isambard Owen (senior Deputy Chancellor), Sir D. Brynmor Jones (junior Deputy Chancellor), Lieutenant-General Sir James Hills Johnes (Treasurer), Principal T. F. Roberts (Vice-Chancellor), Principal Sir Harry Reichel, and Principal E. H. Griffiths thirteen members were appointed on the standing executive for the ensuing year. Sir John Williams, Sir Isambard Owen, Dr. Emrys Jones (Manchester), and Dr. W. Williams, County Medical Officer for Glamorgan, were appointed to serve as members on the medical board of the university.

UNIVERSITY OF MELBOURNE.

FROM the *Calendar of the University of Melbourne* for the present year it would appear that the number of students on the roll at the end of the first term of the year 1907 was 853, an increase of about 33 per cent. in four years. Of this total over three-quarters were students taking full courses for a degree, and the number does not include 90 students attending the Conservatorium of Music, which is affiliated to the University. In the Faculty of Medicine the number of students was 285. The degrees granted during the academic year ending in 1907 numbered 284, among them being 53 degrees of Bachelor of Medicine, 68 degrees of Bachelor of Surgery, and 19 degrees of Doctor of Medicine. The university also grants diplomas in a few subjects, the number awarded in the year in question being 24. Provision is made for a diploma in Public Health, but would appear to be of recent introduction since there is no record of such diploma having been awarded during the year. A point to be noted in connexion with the degrees in the Medical Faculty is that in regard to almost all parts of the examinations certain books are recommended for study and others for reference purposes, and that in regard to special departments of medicine, such as ophthalmology, only one book is commonly recommended. A new scheme with regard to hospital attendance, proposed by the staff of the Melbourne Hospital and approved by the Faculty of Medicine, comes into operation this year, and under it all candidates for the M.B., unless specially excused, will have to attend *post-mortem* examinations daily in the second, third, and fourth term of their fourth year, and in the first term of their fifth year, and not less than three times a week in the remaining terms of that year. From the statements made as to fees, it would appear that the cost of a medical education at Melbourne is somewhat higher than is usual in Great Britain and Ireland.

Throughout the *Calendar* women figure largely; they contribute 128 to the total number of students on the University roll in 1907, besides forming about 85 per cent. of those attending the Conservatorium, and they are fully represented among the degree winners in the Medical Faculty. They take considerable part likewise in the teaching provided at the constituent colleges of the University. Thus at Queen's College the lecturer on biology is a lady, at Trinity College the German, French, and English lecturers belong to the same sex; and at Ormond College four out of the total staff of twelve are ladies, the subjects on which they lecture being history, English, French, and German.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held at the College on Thursday, May 14th, the President, Sir R. Douglas Powell, in the chair.

Announcements.

The President announced that he had nominated Sir John Williams as the Representative of the College on the Medical Board of the University of Wales.

The President further announced that he had received a notification that the Third International Congress on the Care of the Insane would be held at Vienna on October 7th to 11th, 1908.

Fellowship.

The gentlemen who had been elected at the previous comitia were admitted Fellows of the College. The list was published in the JOURNAL of May 9th, p. 1148.

Pharmacopoeial Committee.

On the motion of Dr. Norman Moore, seconded by Dr. Theodore Williams, a vote of thanks was passed to the Pharmacopoeial Committee for the labour and care displayed in their report presented at the preceding comitia.

Conversazione.

On the motion of the President it was resolved that a conversazione be given in the College in the course of the summer, and the College officers, with Sir William Allchin and Drs. Theodore Williams, Wethered, and Morley Fletcher, were appointed a Committee to make the necessary arrangements.

Communications.

The following communications were received:

1. From the Clerk of the Privy Council, in continuation of previous correspondence, forwarding regulations and a provisional programme of business for the International Congress on Medicine, to be held at Buda-Pesth, August 29th to September 4th, 1909. On the motion of the President, Dr. Pavy was appointed to represent the College.

2. From the Royal College of Physicians of Edinburgh, acknowledging with thanks the vote of sympathy with that College on the death of its President, Dr. Charles E. Underhill.

Reports.

Reports were received from Dr. F. Roberts, the representative of the College on the Court of Governors, University of Sheffield, and from Sir Felix Semon, the representative of the College at the first International Congress on Laryngology and Rhinology at Vienna, and cordial votes of thanks were passed to them. The quarterly report, dated April 24th, of the College Finance Committee and the quarterly report of the examiners for the licence on the results of the January examinations were received and entered on the minutes.

Library.

Books and other publications presented to the library during the past quarter were received and thanks returned to the donors.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Coming Council Election.

The Council is at present constituted as follows:

President.

Mr. H. Morris; C, (1) 1893 (substitute), (2) 1888, (3) 1906.

Vice-Presidents.

Mr. Rickman J. Godlee; C (1) 1897, (2) 1905

Mr. W. Watson Cheyne, C.B.; C, (1) 1897 (substitute), (2) 1901.

Other Members of Council.

Mr. F. H. Marsh; C, (1) 1892 (substitute), (2) 1894, (3) 1902.

Mr. Mayo Robson; C (1) 1893, (2) 1901.

Mr. Butlin; C, (1) 1895, (2) 1903

Mr. Edmund Owen; C, (1) 1897, (2) 1905.

Mr. F. R. Cross; C, (1) 1898, (2) 1906.

Mr. J. Ward Cousins; C, (1) 1895 (substitute), (2) 1897 (substitute), (3) 1900.

Mr. Pearce Gould; C, 1900.

Mr. R. Clement Lucas; C, 1901.

Mr. J. H. Morgan, C.V.O.; C, 1902.

Mr. H. H. Clutton; C, 1902.

Mr. C. W. Mansell Moullin; C, 1902 (substitute), (2) 1907.

Mr. Clinton C. Dent; C, 1903.

Mr. G. H. Makins, C.B.; C, 1903.

Mr. F. S. Eve; C, (1) 1904 (substitute), (2) 1907 (substitute for Sir J. Tweedy till 1912).

Mr. A. A. Bowlby, C.M.G.; C, 1904.

Mr. G. Barling; C, 1904

Mr. C. H. Golding Bird; C, 1905.

Mr. W. H. Cripps; C, 1905 (substitute for Sir Alfred Cooper till 1908).

Mr. G. A. Wright; C, 1906

Mr. W. Bruce Clarke; 1907.

Mr. Charters J. Symonds; 1907.

The following list shows the proportional representation of metropolitan medical schools and of the provinces:

St. Bartholomew's	...	...	4
Charing Cross...	...	...	1
Guy's ...	...	...	3
King's College...	...	...	1
London ...	...	...	2
Middlesex ...	...	...	2
St. George's ...	...	...	1
St. Mary's ...	...	...	1
St. Thomas's ...	...	...	2
University College	...	...	1
Total number attached to London schools ...	...	...	18
London member unattached to any hospital ...	...	...	1
Provincial members (Birmingham, Bristol, Cambridge, Manchester, Southsea) ...	...	...	5
Total	...	...	24

At an ordinary Council on May 14th, diplomas of Membership were issued to 101 candidates found qualified at the recent examinations.

Dental Surgery.

The following report was adopted:

The Board of Examiners in Dental Surgery report to the council that they have considered the communication from the Registrar of the University of Liverpool, forwarding the following recommendation from the Senate and the Board of Dental Studies of that University, namely:

> "That application be made to the Royal College of Surgeons of England to accept two summer sessions and the second winter's attendance at general hospital practice for the L.D.S. Eng., instead of two winter sessions as required by their present regulations."

The board are of opinion that the suggestions made would simplify the arrangement of the student's curriculum, and they recommend that it be adopted, and that the regulations be altered accordingly.

As the Board of Examiners are nevertheless of opinion that a student should be required to attend a recognized medical school during two winter sessions, the board further recommend that a note be added to the regulations requiring that the courses of lectures on medicine and surgery be attended after the completion of the courses of lectures on anatomy and physiology.

The following are the clauses in the present regulations referred to in the above recommendations, namely:

8. Of having attended at a recognized medical school:
   - (*a*) A course of lectures on anatomy.
   - (*b*) A course of lectures on physiology.
   - (*c*) A separate practical course of physiology.
   - (*d*) A course of lectures on surgery.
   - (*e*) A course of lectures on medicine.
10. Of having attended, at a recognized hospital or hospitals, the practice of surgery and clinical lectures on surgery during two winter sessions.

In the event of the Council adopting the recommendations of the board, it is proposed to alter the regulations as follows:

8. Of having attended at a recognized medical school:
   - (*a*) A course of lectures on anatomy.
   - (*b*) A course of lectures on physiology.
   - (*c*) A separate practical course of physiology.
   - *(*d*) A course of lectures on surgery.
   - *(*e*) A course of lectures on medicine.

* These must be attended after the completion of the courses of lectures on anatomy and physiology.

10. Of having attended at a recognized hospital or hospitals the practice of surgery and clinical lectures on surgery for twelve months during the ordinary sessions.

Mr. Howard Marsh.

The resignation of Mr. Howard Marsh was accepted with regret. The vacancy so occasioned on the council will be filled in, with the other vacancies, in July.

University of Wales.

The President reported that under powers conferred upon him by the University of Wales, he appointed Mr. J. H. Morgan, C.V.O., a member of the Medical Board of the University.

The Fellowship.

The following candidates have been approved at the examination indicated:

First Fellowship.—A. P. Bacha, Bombay and University College; H. J. Baldwin, St. Bartholomew's; E. S. Calthrop, Charing Cross; R. H. Campbell, Glasgow and London; R. H. Candy, London; W. E. Carswell, Otago and Middlesex; R. N. Coorlawala, London; W. C. Dale, St. Bartholomew's; K. K. Dadachanji, Bombay and Middlesex; D. W. Daniels, St. Mary's; A. C. Devereux Edinburgh, Middlesex, and King's College; J. Eadie, Glasgow and London; S. B. Gadgil, Bombay, University College, and Birmingham; S. Glendining, Durham and Guy's; C. D'O. Grange, Leeds; F. R. Hotop, New Zealand and King's College; G. Jefferson, Manchester; J. S. Jobson, Cambridge and London; H. D. Kanga, Bombay; R. W. Knox, Edinburgh and St. Bartholomew's; N. C. Lake, Charing Cross; T. W. Letchworth, Cambridge, St. Bartholomew's, and King's College; S. G. MacDonald Cambridge, St. Thomas's, and King's College; A. V. McMaster, Belfast and King's College; G. Maxted, Guy's; A. L. Moreton, St. Bartholomew's; B. Nauth, Punjab and St. Thomas's; H. Neame, London; E. H. B. Oram, St. George's and King's College; H. G. Pinker, St. Bartholomew's; A. T. Pitts, Middlesex; J. B. Reid, Toronto and King's College; N. C. Rutherford, Edinburgh; P. M. Smith, St. Mary's, King's College, and Charing Cross; E. G. Stanley, St. Bartholomew's; A. Stokes, Dublin; T. E. A. Stowell, St. Thomas's; H. H. Tanner, St. Mary's; T. W. Todd, Manchester; J. R. H. Turton, St. Bartholomew's; J. E. P. Watts, Westminster and King's College; R. J. Willan, Durham; A. C. T. Woodward, Edinburgh

CONJOINT BOARD IN ENGLAND.

At a meeting of comitia of the Royal College of Physicians on April 30th, and at the quarterly meeting of council of the Royal College of Surgeons on May 14th, the diplomas of L.R.C.P. and M.R.C.S. were conferred upon the following candidates:

A. R. Alguire, K. C. Anklesaria, C. J. Aveling, A. P. Bacha, H. Bardsley, D. D. Bária, J. W. Bennett, C. T. V. Benson, R. N. W. Biddulph, B. R. Billings, G. S. Candy, G. D. H. Carpenter, G. F. Carr, W. J. Carr, E. V. Connellan, E. N. Cook, C. D. H. Corbett, A. E. Cullen, D. I. Dakeyne, A. Davidson, T. B. Davies, E. J. Dermott, H. B. Ellison, R. C. T. Evans, A. W. Ewing, E. G. Fearnsides, C. J. Fernandes, H. H. B. Follit, H. G. Frean, H. S. Furness, A. H. Gifford, W. C. Gilday, H. L. Grabham, H. M. Grey, K. G. Haig, W. R. Harris, A. E. W. Hird, F. W. Hobbs, F. G. Hodder-Williams, E. H. V. Hodge, C. E. Howden, H. T. Howells, E. E. Isaac, G. L. H. Johnston, J. M. Johnston, R. B. Kambata, F. J. Kolaporewalla, A. V. Ledger, W. E. Lloyd, A. A. Lynch, C. K. McKerrow, O. W. McSheehy, E. K. Martin, J. B. Mennell, A. Miles, J. G. Morgan, R. Mugliston, B. Muir, M. A. Nicholson, K. H. Nolan, A. C. Oliver, M. Onslow-Ford, A. H. Owen, W. N. A. Paley, †K. D. Panton, †R. K. Paterson, N. C. Patrick, T. G. Percival, W. J. Petty, G. H. Pooley, D. A. Powell, J. W. Power, K. Pretty, C. E. Price, R. C. Priest, K. D. Pringle, E. A. Pywell, W. E. Roberts, H. A. H. Robson, H. A. Sandford, C. F. O. Sankey, J. E. Sawdon, F. S. Scott, C. L. Seccombe, †G. C. E. Simpson, F. R. Smyth, R. Svensson, A. J. Symes, J. Thompson, P. S. Tomlinson, G. Viner, B. Wallis, P. I. Watkin, C. H. S. Webb, T. A. Weston, C. F. O. White, S. E. Whitnall, H. F. Whittall, W. Wijegoonewardena, C. M. Wilson, G. L. J. Wilson, H. A. F. Wilson, C. S. E. Wright.

† Diploma of M.R.C.S. granted on Thursday, April 9th.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

Final Professional.—S. Broderick, H. C. Burbidge, G. Collins, M. B. Dooley, E. Evans, F. N. Holden, G. S. Levis, F. W. Mathews, A. E. S. Martin, K. A. P. R. Murray, J. J. McGreal, D. O'Dwyer, M. Power, G. W. Stanley, J. F. Walsh.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ **We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.**

ENTERPRISE writes: What is the minimum horse-power required for a two-seater car suitable for a very hilly district (Anglesey coast)? Has steam advantages over petrol for medical practice? Speed is no object, but the car must be able to travel over ruts on soft farm roads, and hills of 1 in 4 and 1 in 6 are common, though short. Is it more economical to motor than drive if one buys a second-hand car? No steam rollers are used for the roads.

W. W. asks for suggestions for the treatment, dietetic or medicinal, of a female patient aged 42 who has suffered for some years with flatulent dyspepsia. During the last six months the flatulence has become very troublesome, even to the extent of causing dyspnœa. The usual remedies, sodium bicarbonate, ginger and peppermint, have given no relief, nor has creosote or salol.

TREATMENT OF ECZEMA.

MIDLAND COUNTY would be glad of advice in the treatment of a case of eczema in a middle-aged single lady who is rather stout. The eczema is chronic and in large patches, with dry skin and silvery patches on chest, shoulders, buttocks, etc.; there is great irritation, and on pressure spots and places where the folds of skin are in contact the affected areas become inflamed and sores appear. Arsenic, colchicum, and tonics have been tried internally, at different times, and applications of tarry ointments, sedative lotions, etc., without much success. The condition is of some years' standing, with occasional acute periods.

INCOME TAX.

ANALGESIC writes: I receive a salary as ophthalmic assistant at a London hospital. During February and March I was away on special study leave for the F.R.C.S., but have to pay my locumtenent the full fees. Can I deduct this from income tax?

*** No deduction can be made. The payment to the locumtenent is not an expense necessarily incurred in earning the profits, but rather a part of the cost of our correspondent's education, for which no allowance would be made.

ANSWERS.

X.; SAINT.—No notice can be taken of anonymous communications.

MR C. B. ROSSITER, F.R.C.S.Ed., writes in reply to "J. R. P.": Having practised in Cape Colony, I can inform him that asthma is very common in Capetown, and the only district worth considering in his case is the Karroo, which is a very arid dreary waste, very Dutch, and with poor social surroundings. The climate is, however, very dry and bracing, and for one who does not mind lonely farm life has many advantages. It has a great reputation for asthma.

ANTS IN THE LARDER.

M.D.'s sister writes that a tablespoonful of golden syrup mixed in half a jam pot of warm water will act as a trap for the ants; a little syrup can be spread round the edge of the pot.

A LADY writes to say that ants may be expelled from the larder by the use of powdered sulphur; it should be placed around the larder shelves and wainscoting so as to form a ring, which the ants will not break through; everything should be removed from the larder for a couple of days; the ants will not go near the sulphur, and after a night or two disappear not to return.

ROBES OF SCOTTISH DIPLOMATES.

WITH reference to the answer to "Ignoramus" published on May 9th, 1908, p. 1151, Mr. M. V. Everett McLaren, L.R.C.P. and S. Edin., L.F.P.S. Glasg., has sent information from which it appears that the official robe and cap to be worn by Licentiates of the Royal College of Surgeons, Edinburgh, are: Robe, navy blue alpaca; yoke, azure silk; sleeve loops, white silk; cap, navy blue alpaca, John Knox type. Registered number 450637. Messrs. Christie and Kilpatrick, 104, South Bridge, Edinburgh, are robemakers by appointment to the college. The Licentiates of the Royal Colleges of Surgeons and Physicians, Edinburgh, being also Licentiates of the Faculty of Physicians and Surgeons, Glasgow, are also entitled to wear a gown of black cord similar to the Fellows' gown with facings of gold-coloured silk, the colour of whin blossom (*Ulex europæa*) together with an ordinary trencher or John Knox velvet cap. In the case of a Licentiate the facings do not extend to the back of the gown and are a little narrower. Messrs. James Thomson and Son, 189, West George Street, Glasgow, are robemakers to the Glasgow Faculty.

LETTERS, NOTES, Etc.

CRETINISM.

DR. A. KINSEY-MORGAN (Bournemouth) writes, with reference to Dr. Macdonald's statement at the meeting of the Medico-Psychological Association on April 30th (BRITISH MEDICAL JOURNAL, May 9th, p. 1110), to the effect that he had not found a single case in Dorsetshire, as follows: I have more than once exhibited two such cases at our local medical society, of which he is a member, and I remember a third case coming from Dorsetshire, which was under my care at the Royal Victoria Hospital. Of the two exhibited cases, one, a boy aged 9, who has been under my care since he was about 1 year old, has made good progress under thyroid treatment, and has recently been admitted to Earlswood; his intelligence is very good, and I have every hope that he will there be taught a useful trade. The other was aged 33 when I first saw him, and the thyroid treatment was of no benefit. All three cases were males, and I believe cretinism is more common in males than in females.

INDECENT ADVERTISEMENTS.

IT is at least a sign of progress to see an announcement in the *Medical Record* that the prosecutor of the city of Chicago will undertake to prosecute those physicians and business houses that advertise cures for certain diseases and weaknesses. According to the ordinance, fines may be imposed varying from £5 to £40 for conviction in such cases. We do not know that Chicago is worse in this particular respect than other places in America and elsewhere, but we have no doubt the prosecutor will have his hands full. We should like to see the law equally active here.

AFGHANS.

IN our review of Dr. Reynolds Wilson's *Reference Handbook of Obstetric Nursing* we quoted his recommendation that "two afghans" should be prepared for the infant, and said that we had no idea what the two "afghans" might be. A lady member of the Association has kindly enlightened us. She says: "'An afghan' is merely a knitted or crocheted woollen rug, generally used to cover a baby in a bassinette. I did not know the word was exclusively American; it may be so, of course, but I think any of my fellow-women who are knitters would have understood it." We thank her for her information. Our reviewer was not a knitter. He did ask some ladies if they could tell him what an "afghan" was, but they also happened not to be knitters.

THE TREATMENT OF BRONCHIAL CATARRH BY ALKALIES.

A. T. writes: With regard to Dr. Haig's remarks on this subject in the JOURNAL of May 9th, I would draw his attention to the medicinal properties of sodii salicylas given in Squire's *Companion*, 1899, wherein it is stated that "it increases the acidity of the urine." I have often thought this must be incorrect, so would like to see an authoritative statement. A solution of sod. salicylas does not affect either blue or red litmus paper.

Two Cases of Extreme Harelips in One Family.

Dr. E. H. Thomas (Dehra Dun, India) writes: There is nothing extraordinary in cases of single harelip occasionally seen, but two cases of the same deformity occurring in one family of six children is not without its interest. There is no history of any deformity among parents or grandparents either on the mother's or the father's side. Out of six children born in this particular family two are boys and four girls. The deformity of harelip has appeared in the fourth and sixth children, both girls. The fissure is on the left side, there being complete absence of a portion of the upper lip, hard palate and soft palate, the left nasal cavity forming one huge cavity with the left portion of the mouth. The point of interest is that both the children had exactly the same kind of deformity. They could not press the mother's breast or nipple of the feeding bottle. The feeding was extremely difficult. The first child died of cholera at the age of 18 months, the second is still living and is about 4 months old.

The Origin of Cancer.

Exoascus Pruni writes: The letter of "O. W. I. M." on the origin of cancer, in the Journal of April 25th, p. 1028, calls for some remark. Without attempting to contradict any statement made therein, one is naturally constrained to ask why cancer does not universally attack all paralysed parts. It is well known that a nerve lesion such as herpes zoster is followed by an atrophy of epithelium and scar formation instead, as one would expect from "O. W. I. M.'s" hypothesis, of epithelial proliferation. The skin of paralysed parts invariably becomes thin and polished, and bedsores tend to form. It would be interesting to have the statistics of the incidence of cancer in all such cases—for example, infantile paralysis, hemiplegia, transverse myelitis, herpes zoster, locomotor ataxia. It is quite true that irritations and abrasions seem to be of prime importance, but in the case of the alimentary canal it is only right to compare, with reasonable allowances, the incidence of cancer with that of tuberculosis, for instance. It is, perhaps, not so much lack of nerve control that causes unlimited cellular proliferation as perverted control of the internal working of the individual cells. How otherwise would it be possible to explain the behaviour of skin grafts on a prepared surface? What brings the epithelial cells of these into harmonious relationship to the nerve mechanism of the host? Plant pathology yields abundant material for the study of tumour growth. Certain ascomycetous fungi are frequently the cause of tumours on trees. A villous papilloma or witch's broom is caused by the intracellular growth of *Taphrina deformans*. A fairly random parenchymatous growth like a sarcoma is caused by the *Plasmodiophora brassicae* in turnips, and a selective growth limited to the cambium tissues is caused by *Nostoc cycadiarum*, an alga, in the aërial roots of *Cycas revoluta*. This last type gives one a faint memory of glandular cancers. In all cases these growths are not caused by inhibited nerve control, for there is none known of, to be inhibited, but by irritation of the nucleus of the affected cell. The disorderly conduct of the cells is not due to the lack of law, but to the action of an irritating and intoxicating process upon the parties for whom the law is intended, that is, the nuclei.

Tuberculosis.

Colliery Surgeon writes: After spending a few years in a colliery district, where the conditions are favourable to the development of tuberculosis, I am firmly convinced that it is a process of decay brought about by disobeying the simple laws which govern health, and indiscretion on the part of the patient. How is it to be avoided? We will begin with child life. The mother must be taught to be sensible, and instructed in the way the child should be brought up. She herself must be brought to a good state of health, so that she may be able to suckle her child. Artificial feeding, after all, is but a poor substitute. She should feed the child at regular intervals, clothe it in light flannel garments, allow it to have as much fresh air and sunshine as possible, and keep it clean. Under these conditions the child will thrive and show no signs of decay. When tuberculosis develops later in life it is usually the result of some indiscretion on the part of the patient. Nature is very kind to us. When we do that which we ought not to do she warns us. Unfortunately, only too often, we heed not her warning, and the process of decay has begun. What, then, is to be done? We must find out what this indiscretion was, and, if we have a sensible patient to deal with, he will not repeat the indiscretion when told what the consequence will be. It is our duty, then, to prevent this process of decay from spreading. It is useless attempting to repair the mischief already done. We can only hope that Nature will be pleased at some future time to put that right. It is sheer waste of time at this stage to treat the various symptoms as they appear. We must treat the cause of those symptoms, by so doing the symptoms disappear one by one, and the progress of the decay is arrested. The treatment I have adopted in all my cases is, first, to see that the patient's food is good, plain, well cooked, and given at regular intervals—indigestibles strictly avoided—no milk. The reason that milk is not given is that cattle are not now fed on the natural produce of the land. There is a great deal of artificial feeding, which cannot have any beneficial effect on the cow more than on the child. Another thing. These patients do not seem able to digest milk. Secondly, to sacrifice appearance for comfort and health, by discarding flimsy articles of clothing for the warmer woollen ones. Thirdly, to spend as much time as possible in the open air and sunshine, avoid close stuffy rooms, and to keep their windows open at night. Fourthly, to insist upon cleanliness in themselves and their houses. As a medicine I have found citrate of iron and quinine do much good in these cases. By following the above rules, my patients have been much benefited. All symptoms disappear, and they put on flesh at a rapid rate. In fact, some of them are so well that they have not consulted me for four or five years, and have followed their occupation regularly since that time. Tuberculosis should be diagnosed as soon as it makes its appearance, then much can be done for the patient; and if he but follows the rules laid down by his physician, there is no reeson why that patient should not live to a ripe old age, and eventually die of senile decay.

Indecent Circulars and the Post Office.

A correspondent recently sent us a price list of surgical and other goods, indicating that in his opinion its contents were disgusting and immoral. As the circular had come through the post, we advised our correspondent to communicate with the Postmaster-General. This he did, and has received, in reply, a notification that in the absence of the cover in which the circular was received no useful action could be taken in the matter by the Post Office. This is a hint upon which other correspondents may be glad to act.

Practice in California.

A young English medical man who comparatively recently settled in California has been good enough to send us a letter dealing with his impressions of this State from a medical point of view, and more particularly with the examinations which are imposed upon all who wish to obtain registration as medical practitioners. These examinations, he understands, are credited with being more stringent in character than those imposed in many of the States of the Union, and at that at which he presented himself there was a heavy mortality amongst the eighty-five candidates. It is intended for persons who have already obtained a qualification elsewhere after a course of training recognized to be adequate by the Association of the American Medical College, and covers eleven subjects. In each of these not less than ten questions must be asked and answered wholly or partly in writing, and to be successful a candidate must obtain not less than 60 per cent. of marks in each subject, and an average of 75 per cent. on the whole examination. The subjects are anatomy, physiology, bacteriology, pathology, chemistry and toxicology, hygiene, obstetrics, histology, gynaecology, and general diagnosis. The fee is £5. These conditions appear somewhat formidable, and at first sight the papers do not look as if they would be inviting to men who have been in practice for any lengthy period, while to answer them completely would seem impossible in any ordinary examination time. On closer inspection, however, it is seen that many of them could, and probably are expected to be, answered in a dozen words, and that almost without exception they lend themselves exceedingly well to the arts of the crammer. Our correspondent obtained a general average of over 77 per cent. of marks, only falling below 75 in the subject of histology, in which he seems to have just passed the rejection limit. His British qualification, derived from the Irish College of Surgeons, is some three years old, and after obtaining it and up to the time that he left for California he held a post as house-surgeon to a large provincial poor-law infirmary. Before presenting himself for examination he did some reading and was coached in various subjects. He regards the climate of California as ideal, and the country as exceedingly attractive. On the other hand, it does not appear to offer much opening to medical men, or in this respect to be tempting to those on this side of the water. The competition, in short, appears to be about as keen as elsewhere, for there are plenty of practitioners already established in practice and many flock in from the Eastern States who are in possession of money and can get on comfortably in the pleasant climate of California without doing much professional work.

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Oliver-Sharpey Lectures

ON THE

PRESENT CONDITION OF OUR KNOWLEDGE REGARDING THE FUNCTIONS OF THE SUPRARENAL CAPSULES.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON ON APRIL 7TH AND 9TH, 1908.

BY E. A. SCHÄFER, LL.D., Sc.D., F.R.S.,
PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF EDINBURGH.

LECTURE I.

No more congenial position can well be conceived for a physiologist than to be honoured by an invitation to address upon a physiological subject the College before whom the illustrious Harvey expounded the discovery which has been the starting-point of all physiological research. The congeniality of the position is for me enhanced by the fact that the great English teacher of physiology, Sharpey, in whose memory this lectureship was founded, was my honoured master, and that the founder of the lectures, Dr. George Oliver, was my collaborator in the research which has led me to select the suprarenal capsules as the subject of the present lectures.

WILLIAM SHARPEY.

There must be many of my auditors who remember Sharpey and some who had the privilege of listening to his lectures. But since the death of Michael Foster, which we have so recently had to deplore, there is no one living who had so intimate a personal acquaintance with him as myself. It will not, therefore, I trust, seem inappropriate if I preface these lectures with a sketch of the career and character of a man who has exerted, directly or indirectly, a more profound influence upon British physiology than any of our countrymen since the time of Harvey.

It is curious to note that Sharpey was the son of a native of Folkestone, the birthplace of Harvey. Sharpey himself, however, was born in Arbroath, of a Scottish mother (in 1802), and his education was entirely Scottish. His father died before the son saw the light, and William Sharpey was brought up by his mother and her second husband, Dr. Arrott, a medical man in Arbroath, who became in all respects a second father to him. At the age of 15 he was sent to the University of Edinburgh as a student of Arts, and at 16 he began his medical studies in the same university and in the extramural school which is attached to it. At 19 he obtained the diploma of the College of Surgeons of Edinburgh; and in 1823, at the age of 21, he took the degree of M.D. in the university, the subject of his thesis being cancer of the stomach.

Although engaged for a short time in assisting his stepfather at Arbroath, Sharpey soon came to the conclusion that the study of anatomy and physiology would be more congenial to him than medical practice, and both before and after taking his degree he spent some years in the anatomical schools of London, Paris, and Berlin, besides undertaking a prolonged and mainly pedestrian tour in Switzerland and Northern Italy, visiting the great university centres in those countries and making acquaintance with many distinguished anatomists. In Berlin he worked assiduously at anatomy under Rudolphi, making full and minute dissections of all parts of the body and storing up in a retentive memory a mass of facts destined to be drawn upon with great profit in his subsequent teaching.

Having finished his *Wanderjähre*, Sharpey settled down in Edinburgh in 1829, devoting himself at first entirely to research, and subsequently (1831) becoming installed as an extramural lecturer on anatomy in association with his lifelong friend Allen Thomson, who took as his subject physiology. It is interesting to note that while Sharpey subsequently became a famous teacher of physiology, eventually Allen Thomson developed into a no less distinguished teacher of anatomy.

In 1836 Sharpey was invited to fill the Chair of Anatomy and Physiology in the new University of London, which was then about to be transformed into University College; this chair eventually developed into one of physiology alone. Here he at once made a mark as a teacher. His lectures were followed throughout with unabated interest by a long succession of students, for he held the Chair during thirty-eight years, and his influence in spreading a knowledge of the principles of physiology must have been immense. I believe that there is no actual teacher of physiology now living who sat under him except myself, but when it is remembered that Michael Foster, the founder of the Cambridge School of Biology, was his pupil and friend, and that Burdon-Sanderson came early in his career as a physiologist into intimate relations with him, it will be apparent how widespread was the influence which Sharpey's teaching has exerted upon the progress of physiology in this country.

And not only had he thus a large share in the promotion of physiological science, but indirectly the progress of scientific medicine and surgery owes much to his influence, for many who have since become eminent in those subjects were taught by him, and the character of their work has manifested the thoroughness of his teaching. It would be invidious to mention names—they will occur to all present. Some are still with us; fortunately, this is the case with the most eminent of all, Lister.

The secret of Sharpey's influence is to be found in the personal character of the man, which was reflected in his teaching, and gave to it the attributes which all successful teaching must possess: accuracy, clearness, and a due subordination of the several parts of a subject.

Sharpey's quality of accuracy is reflected in his researches. These were neither numerous nor extensive; but most of his observations have stood the test of time and criticism, which is, I fear, more than can be said for the contents of very many scientific memoirs. The best example of this is furnished by his account of the structure and development of bone, which was written for the fifth edition of *Quain's Anatomy*, and which, with little modification, still holds good for the eleventh edition of that work. He was a man of singularly sound judgement, kind disposition, and genial nature, qualities which procured for him the esteem of an extensive acquaintance and the affection of those who had the privilege of closer intimacy. He was Secretary to the Royal Society during nineteen years, and the initiation of the Catalogue of Scientific Papers, as well as important improvements in the constitution of the society, were largely due to his initiative. He died on April 11th, 1880, at the age of 78, and was buried within the abbey churchyard of his native town of Arbroath.

HISTORY OF THE INVESTIGATION OF THE SUPRARENAL CAPSULES.

It is almost exactly forty years since I, then a young student of medicine, attended for the first time Sharpey's course of lectures on physiology. And this event—a momentous one in my own life, for it unquestionably was the means of determining my future career—brings me directly to the subject which I have chosen for these lectures—namely, the present condition of our knowledge regarding the suprarenal capsules. To understand the position at which our knowledge has arrived on this subject we must have something to compare it with, and for this purpose nothing can be better than a brief statement of the condition of knowledge regarding these bodies at the time of which I am speaking.

To illustrate this I have borrowed from the Museum of the Medical School of University College Hospital, by the kind permission of the Committee, the stuffed rats which are placed upon the table. The legend regarding these in the catalogue is as follows:

3415. Two stuffed rats. The white one had the spleen and suprarenal capsules extirpated when it was only a month old and quite small. It increased in size after the operation quite as fast as its fellows which had not been touched. The animal was killed when five months old, and no discoloration of the skin or hair could be detected. The lumbar and other lymphatic glands were found enlarged.

The piebald rat had the right adrenal removed and died on the seventh day. The organ was considerably enlarged. On microscopic examination it was found to be the seat of extensive tuberculous disease. At the *post mortem* it was found that the left suprarenal was quite healthy (4026).—Vide *British and Foreign Medico-Chirurgical Review*, 1858, vol. xxi, p. 204, Harley on the Suprarenal Capsules.

We need not trouble further about the piebald animal, but the albino may fairly be said to typify the then

condition of knowledge—which was negative—regarding the organs we are dealing with. To understand how these experiments came to be conducted it is necessary to go back some thirteen years further, fifty-three years from now. In the year 1855, Addison, a Fellow of this College and Physician to Guy's Hospital, described the disease which bears his name. He showed that in man a certain group of symptoms occurs occasionally—fortunately, we may add, rarely: "anaemia, general languor or debility, remarkable feebleness of the heart's action, irritability of the stomach, and a peculiar change of colour in the skin," the disease being usually fatal. Pigmentation of the skin and of certain mucous membranes is the sign which is, perhaps, most characteristic of the disease and in many cases first attracts attention. It is, says Addison, "the great distinctive mark of this form of anaemia." Another of its most pronounced features is the profound asthenia, which is out of all proportion to the general condition" (Osler). The symptoms were shown by Addison to be associated with destructive disease—usually tuberculous—of the suprarenal capsules.

Addison's monograph attracted immediate attention, and soon led to experiments upon these bodies. The earliest were by Brown Séquard (1856), who removed the capsules in various animals (dogs, cats, rabbits, and guinea pigs), with an unfailingly fatal result—usually within twelve hours in adult animals, young animals surviving the operation somewhat longer. Removal of one capsule produced in some cases death within a few days, but in other cases had no obvious effect; when the second was removed, even after a long interval of time, the symptoms of total ablation rapidly showed themselves, although death followed less rapidly than after simultaneous removal of both capsules. The symptoms following the removal were those of Addison's disease, but more acute and without the pigmentation. Brown Séquard supposed, and doubtless correctly, that the absence of pigmentation in these experiments is due to the rapidity with which a fatal result supervenes, for the formation of pigment must be a somewhat slow chemical process. More recent observers—Tizzoni, Nothnagel—who have succeeded in slowly destroying the suprarenals of animals by other means, such as crushing, state that they have been able to observe such pigmentation in the animals experimented on. Brown-Séquard's results were repeated by other observers; amongst these may be mentioned Phillipeaux, George Harley, and Schiff. Besides employing ordinary domestic animals, such as the cat and the dog, in which, as Brown-Séquard had done, they invariably obtained fatal results, these observers also selected for experiment the ordinary tame white rat, and one of these, operated upon by Harley, is now before you. It was by a curious chance that this animal was not employed by Brown-Séquard, because the rat happens to be the one common animal which is able to withstand complete removal of both suprarenal capsules. The reason for this was not at the time apparent, although it is now known, for the rat is exceptional in possessing in various parts at the back of the abdomen and pelvis numerous small glandular structures which are composed of cells having the characteristic features and functions of the cells of the suprarenal medulla. Harley, as well as Phillipeaux and others, accordingly found that a rat may indefinitely survive entire removal of the suprarenals, and although they had got contrary results with other animals, they put the fatal results down to injury to adjacent nerves and blood vessels, and, generalizing from the negative effect of removal in the rat, they came to the conclusion that these organs are not, as Brown-Séquard supposed, essential to life. They regarded the contrary results of Brown-Séquard as being also due to collateral injuries to adjacent nervous and other structures, and not to the absence of the suprarenal capsules. They were fortified in this opinion by the fact that in many of their cases death supervened after removal of one capsule only—a result by no means surprising when we remember the situation of the capsules, the fact that they were usually attacked from the peritoneal cavity, and that this was before the days of asepsis. We now know that Harley and the others were, in the conclusion they drew, wrong and Brown-Séquard right; but we can recognize that it was a natural conclusion to draw, and are not surprised that it was shared generally by physiologists, and amongst them by Sharpey, who must have witnessed the experiments, and not improbably had been consulted by Harley about them. Such negative results—their real cause being at that time not understood—had the effect for the nonce of so effectually obscuring the inferences to be drawn from ablation experiments upon this organ that it was not until a lapse of thirty years that experimentation upon the subject was recommenced. It is therefore a simple statement of fact that positive knowledge regarding the functions of the suprarenal capsules, as reflected by the teaching of the most prominent physiologists of the time, was forty years ago *nil*; while the information regarding these structures which has since accumulated is in all respects—as regards development, structure, and functions—so large that it would occupy the greater part of the time devoted to one of these lectures merely to enumerate the papers which have been published upon them, and upon important collateral questions which have been raised in the course of the investigations made to elucidate their functions.

The ball which was set rolling by Addison and Brown-Séquard in the middle of the last century was, after a prolonged period of rest, again started by Tizzoni (1884), and has been now kept going uninterruptedly for four and twenty years. Tizzoni himself, although obtaining a fatal result from complete removal, also in some cases got a like result from removal of one capsule, and was inclined to come to the same conclusion as that arrived at by the earlier experimenters—namely, that when death occurred it was due to an effect upon the nervous system, and that these organs are not essential to life. But before long Brown-Séquard's results were confirmed by many observers, among whom may especially be mentioned Dominicis (1894) and Langlois—who, partly in conjunction with Abelous (1891-2), partly in investigations carried out independently and with others (1893-7), performed a large number of partial and complete extirpations—always, in the case of the complete removal, with the same fatal result. Dr. George Oliver and I, in the course of the experiments to which I shall afterwards have to refer, and as accessory to them, also obtained similar results to those described by Brown-Séquard. The animals we employed were monkeys, dogs, cats, rabbits and guinea-pigs. But the most extensive observations of this nature seem to be those of Strehl and Weiss (1901), who extirpated the suprarenals in as many as 114 animals, all of which died in times varying from four hours to five days with the symptoms characteristic of this deprivation.

It may, therefore, be admitted that the conclusion which Brown-Séquard arrived at in 1856—namely, that these organs are essential to life—has been abundantly justified, although their mode of action was not understood by him in the sense in which it is now for the most part conceded. Although he speaks of them as secreting glands, Brown-Séquard appears to have been of opinion that the cause of death on their removal is the accumulation of toxic substances in the blood. He considered that one of their functions consists in modifying a substance which is endowed with the property of being easily transformed into pigment, and that they prevent this transformation. In a later communication he ascribed the immunity of the white rat to its albinism—that is, its inability to produce pigment.

It is curious to notice that, in resuming the consideration of the subject thirty years later, Brown Séquard considered that he was in error in regarding these organs as essential to life and in attributing death after their removal to suppression of their functions. He now (1887) believed that the fatal result was due to irritation of nerves as the result of the operation, an opinion which had been pretty general amongst those who immediately followed him, and who had failed—in the rat—to confirm his observations regarding the effects of complete removal in other animals.

Brown-Séquard did not conceive the idea that the fatality following complete extirpation might be due to suppression of an internal secretion, useful and even necessary in the economy, but regarded the main function of these organs as being for the prevention of the formation of a toxic body, and therefore as *antitoxic*—an opinion which seems to have had a marked influence upon the conclusions arrived at by physiologists, especially those of the French school, when interest in the

subject became revived. And this, doubtless, led to the crystallization of the idea that there is present in the blood of animals deprived of suprarenals a definite toxin producing muscular paralysis, in the opinion of Langlois similar in action to curare (theory of autointoxication). But with the demonstration of the fact that the glands yield a substance which produces beneficial physiological effects, such as increased tone and contraction of the heart and muscles, blood vessels, and of the muscular system in general, the actual cause of the muscular weakness and lack of tonicity which results from their extirpation became manifest and led to the establishment of the theory of internal secretion.

But before this phase was arrived at the subject had been approached by another mode of experimentation, that of the determination of the physiological action of hypodermic injections of extracts of the capsular substance. The first to adopt this method of research was Pellacani (1879) associated later with Foà (1883). These observers were engaged in investigating the effects of organ extracts in determining the formation of coagula, and amongst other substances they injected a water extract of six suprarenal capsules of the ox into the auricular vein of a rabbit. The injection produced death by arrest of respiration within two minutes, preceded by rapid respirations, general convulsions, strong intestinal peristalsis, and dilatation of the pupil. Subcutaneous injections in other animals produced death within twenty-four hours. They believed death to be due to the formation of coagula *intra vitam*. It will be seen that the doses they dealt with were enormous. They made no observations upon the blood pressure. Pellacani and Foà's results were confirmed by various other Italian investigators—Marino Zucco, Dutti, Guarneri—who concluded that the toxic material obtained from the capsules owed its activity to the presence of *neurin*. Dr. Oliver and I, however, later were able to show that neurin has entirely different physiological effects. Other observers (Tizzoni, 1884, Alexais and Arnaud, 1890-1) denied the pre-existence of a toxic substance, and regarded the toxic effects sometimes produced as due to some chemical change occurring in the capsules after removal from the body, or during the manipulations employed for the extraction of the supposed toxic substance. But the different results obtained by these observers seem rather to have been due to the varieties of animals chosen, and to the relative dosage of the extract. As Dr. Oliver and I subsequently found, the rabbit is more susceptible to subcutaneous injection of the extract than other laboratory animals, the lethal dose for some species being much greater. Lesage (1904), indeed, states that the lethal dose of adrenalin injected intravenously is 0.1 to 0.2 mg. per kg. for the dog, rabbit, and guinea-pig, and 0.5 to 0.8 mg. for the cat; but Taramasio (1902) found the lethal dose injected subcutaneously to be 0.02 g. per kg. for the guinea-pig and 0.01 g. for the rabbit. Further, it is found that in some animals with repeated doses a certain degree of immunity may be established. Swale Vincent (1898) obtained results leading to the same conclusion: he also showed that the toxic effects, like the physiological effects, are due to a substance contained in the medulla alone.

The final stage of our knowledge regarding the functions of these organs was entered when the effects of intravenous injections was investigated with the aid of the apparatus (manometer, oncometer, cardiometer) ordinarily in use in physiological laboratories. This was first attempted by Dr. George Oliver and myself, and the results were exhibited to the Physiological Society and published in its *Proceedings* in 1894. Investigations carried on by these methods showed that the gland extracts exert a potent influence upon the heart and blood vessels, and to a less degree upon skeletal muscles. Combined with the effects of subcutaneous injections, and with the fatal effects of extirpation of both capsules in a number of animals of different kinds, there was no room left for doubt that a substance is produced within the gland which is not only beneficial in maintaining the tone of muscular tissues and particularly that of the vascular system, but which is, at least in most kinds of animals, essential to life, although in excessive doses it exhibits toxic properties. We felt justified in regarding this in the light of a true internal secretion, and in looking upon its absence in animals deprived of their suprarenal capsules, and in cases in the human subject in which both capsules were involved in disease, as the true cause of the symptoms which manifest themselves under these circumstances, not, as was then generally believed, the result of the action of a toxin accumulating in the blood, which it was the normal function of the suprarenals to destroy.

The position of the question in 1895 is thus summed up by Dr. Rolleston in his Goulstonian lectures. After first stating that three deductions are possible from the various researches which had up to that date been published regarding the physiology of the suprarenal bodies: (1) That they have no proper function, and are important only from their close relation to the sympathetic; (2) that they are excreting glands, removing pigment and toxins from the circulation; (3) that they are secretory glands, providing an internal secretion which is of use in the economy, he continues: "the evidence is sufficiently strong to warrant the conclusion that the adrenal bodies are functional glands," and that "Addison's disease is due to an inadequate supply of suprarenal secretion."

STRUCTURE AND DEVELOPMENT OF SUPRARENAL CAPSULES.

Before entering into details regarding the physiological effects of this internal secretion of the suprarenals it may be of interest to give a brief account of certain special features which are exhibited in the structure and development of these organs. The general structure of the suprarenals in man and mammals is well known. Each is composed of a broad, striated (in section), yellowish cortex, and a deep-red medulla, the colour of the latter being due to blood in its sinus-like vessels. Between cortex and medulla is a boundary layer, usually reckoned with the cortex under the name of zona reticularis, and developed along with it, but differing both from it and from the medulla in arrangement of blood vessels, and to some extent in the appearance of its cells. The cells of the cortex are epithelium-like, are arranged in solid columns with blood vessels running in connective tissue between them, but not penetrating into the columns, and contain a fatty or lipoid substance, which imparts to the cortex its yellow tint. The course of the blood stream is from the surface towards the medulla. The cortical columns near the surface may exhibit a semitubular arrangement; their cells in some animals are long and cylindrical. In the boundary layer (zona reticularis) of the cortex the cell columns have a more open arrangement, they are separated by vascular spaces, and in some animals are characterized by the presence in the cells of a special brown pigment. The cells of the medulla are also epithelium-like; they are set vertically around the vascular spaces, which appear to be not true capillaries, but to have a sinusoid character, like those of the liver. The blood is collected from these spaces by veins most of which join to form the capsular vein which emerges from a groove in the anterior surface of the gland. The blood which flows from the gland contains distinctly more oxygen and less carbon dioxide than ordinary venous blood (Langlois and Chassevant, 1893). It also contains a larger amount of the active principle of the organ than ordinary blood; there is therefore no doubt that this material leaves the organ by the blood vessels. This is corroborated by histological evidence. The cells of the medulla stain intensely brown with chromic acid or its salts (Henle); they and similar staining cells found in other parts (sympathetic ganglia, coccygeal gland) have therefore been termed chromophil cells (Stilling, 1890), or chromaffin cells (Kohn, 1898). Granules or globules of a material yielding this reaction have been described not only within the cells of the medulla (Stilling, 1887), but also in the blood within the medullary sinuses (Gottlieb, 1883; Pfaundler, 1892; Manasse, 1895; Carlier, 1893; Auld, 1894), and in that of the suprarenal vein. There is, therefore, strong histological evidence that the cells of the medulla pass a secreted substance into the blood.

Many observers have described sympathetic ganglion cells within the medulla, but their existence has been denied by others. There is apparently considerable variation in this respect in different species of animals; they may be absent or present, and may be scattered or grouped into small ganglia. In any case they lie in the course of nerves which the gland receives from the sympathetic. Biedl (1897) states that stimulation of the splanchnics causes both an increased flow of blood

through the gland (due to excitation of vaso-dilators) and an increased formation of the active material of the medulla (due to excitation of secretory fibres); the secretion and blood flow are therefore, as with ordinary secreting glands, governed from the central nervous system.

The comparative anatomy of the suprarenals has been investigated most satisfactorily by Swale Vincent (1898), who has described the structure and relations of these organs in various fishes, in tailed and tailless amphibia, in reptiles, birds, and several mammals. The most important of these observations from the point of view of their physiology is that in elasmobranch fishes the cortex and medulla are represented by two entirely distinct sets of glandular organs. The cortex of higher vertebrata is represented by the so-called *interrenal body*—"an ochre-yellow, rod-shaped body, paired in the rays, unpaired in the sharks, lying usually in the region of the posterior part of the kidney," and having the appearance microscopically of a secreting gland, but without ducts. The medulla, on the other hand, is represented by paired bodies, segmentally arranged, extending on each side of the vertebral column from the sinus of Monro to the posterior end of the kidney. The paired bodies are closely related to the sympathetic ganglia, have a superficial layer of non-chromophil cells and a central mass of chromophil cells, and also possess cells which appear to be transitional to sympathetic nerve cells. F. Balfour (1878) first put forward the view that these paired organs represent the medulla of the mammalian capsules, and the interrenal body the cortex; Vincent found by experiment that the paired bodies yield an extract which produces the same physiological effects as suprarenal medulla. In other fishes no organs representing the medulla have hitherto been found. The suprarenals are represented in teleostei by paired, roundish pink bodies (corpuscles of Stannius) attached to the kidney near its posterior extremity. Microscopically they resemble suprarenal cortex in structure, and their extracts have no physiological activity (Moore and Vincent, 1898). Swale Vincent removed these bodies in the eel, and three specimens survived the removal 28, 64, and 119 days respectively, whereas the longest time that a frog will survive complete extirpation of its adrenals is 12 or 13 days (Abelous and Langlois). In ganoids similar bodies lie embedded in the substance of the kidney. In amphibia both cortex and medulla are represented as occurring in small yellow masses or streaks adherent to the kidney, each mass containing always both cortex and medulla, the latter lying next to the kidney substance and possessing chromophil cells. These yield a physiologically active extract. The medulla in urodela is intimately related to the sympathetic ganglia, and there are transitions between the sympathetic cells and those of the medulla (Leydig, 1853; Vincent, 1898).

In reptiles and birds the suprarenals are in close anatomical relation, not with the kidneys but with the reproductive glands. The cortical part is formed of columns; medullary chromophil cells are distributed throughout it in isolated masses of various sizes and shapes, but most of the medulla forms a layer along the dorsal surface of the organ.

In birds the cortex and medulla are more intimately mixed than in any other animals, and the medulla is more abundant in proportion. As Vincent remarks, it is interesting to note in this relation that birds have a very high blood pressure. There are also intermediate cells between those of the sympathetic ganglia and those of the medulla. It may here be remarked that the terms *cortex* and *medulla*, although here used to denote the two specific parts of the suprarenals, are in their relationship to one another only applicable to mammals, in which alone the medulla is enclosed by cortex.

In one invertebrate only, up to the present, has any evidence been forthcoming of the existence of structures corresponding, at least physiologically, to the capsules of vertebrata. Roaf and Nierenstein (1907) have obtained from the hypobranchial gland of a mollusc (*Purpura lapillus*) an extract which both chemically and physiologically resembles in its action the active substance of the vertebrate suprarenal medulla. But the identity of the substance with adrenalin is denied by Dubois (1907), who seems to have previously subjected this gland to investigation. Vincent was able to obtain no such reactions as are given by suprarenal medulla from certain cells within the nervous system of *Palidina vivipara*, which Leydig had conjectured might represent suprarenal tissue.

Development.—Balfour and Mitsukuri (1881) described a separate origin for cortex and medulla, the former being developed from mesoderm, the latter from the same blastema as the sympathetic ganglia. This view is now universally conceded. Actually the cortex is derived from the mesodermic epithelium which covers the mesial aspect of the forepart of the Wolffian body, in front of the germinal epithelium, appearing first as a series of buds which grow together. The cells become arranged in columns, and the three series are early visible. In an embryo of 15.5 mm. it is depicted by Bryce (*Quain's Anatomy*, eleventh edition, 1908) as a rounded mass (on section) with sinus-like vessels in its central part and extending towards its attachment; they open into a central venule, as in a liver lobule. Between this organ and the aorta are masses of embryonic sympathetic cells, and groups of these grow into the gland. These have, like the sympathetic generally, been derived from neural ectoderm, but they are not yet differentiated into definite nerve cells. Those which grow into the gland do not for the most part undergo this differentiation at all, but are transformed into the cells of the medulla, which becomes marked off from the cortex in the fourth month. Ultimately they acquire chromophil substance; it is stated that this is not actually found in them in man until some little time after birth (Svehla, 1900; Moore and Purinton, 1900). But it occurs in the embryos of ox and sheep long before birth. It is well known that the suprarenals are relatively large throughout fetal life; this must have some functional significance, but what it is is unknown. It probably concerns the cortical substance.

Some cells of the sympathetic ganglia which differentiate into chromophil cells may remain as such within the ganglia, and occasionally small independent masses occur in the neighbourhood of the suprarenal or elsewhere at the back of the abdomen. As has already been stated, these are constantly present in the rat, and doubtless account for the fact that this animal can more readily than any other survive the extirpation of both capsules. Hence the results of Harley and others, as typified by the stuffed animals in the case before you.

What is the Use of the Suprarenal Glands?

In 1716 the Academy of Sciences of Bordeaux proposed as the subject of a prize, "What is the use of the suprarenal glands?" The competing essays were submitted to Montesquieu, the celebrated author of *Lettres Persanes* (a satirical description of French society and politics); *Causes de la Grandeur des Romains et de leur Décadence; De l'Esprit des Lois* (which, although published anonymously and put on the *Index Purgatorius*, passed through twenty-two editions in less than two years); *Défense de l'Esprit des Lois; Lysimaque*, a dialogue on despotism; and a novel termed *Arsace and Isménie*. Montesquieu had not yet attained to literary fame, but was a young man of 27. Nevertheless he had been made Counsellor of the *Parlement* of Bordeaux two years previously, and was at this time its President. It is recorded of him that although he discharged the duties of his office faithfully, he by preference devoted himself to researches on the physical characters of bodies, on sound and the causation of echoes, and on physiological problems such as the use of the renal (? suprarenal) glands. It is therefore probable that the subject of the essay had been suggested by him.

Montesquieu's report is curiously satirical. He commences with an account of the views which up to that time had been entertained regarding the function of these bodies (I quote from Langlois):

> Some have imagined that they (the capsules) are placed in the situation where they occur in order to hold up the stomach, which would otherwise press too hard upon the renal arteries; others to strengthen and consolidate the venous plexus which is in contact with them; conclusions which, says Montesquieu, appear to have escaped the ancients, who were content with simply expressing ignorance of the functions of these glands.
>
> Gaspard Bartholin was the first to relieve them from the stigma of performing so menial an office and to render them more worthy of the attention of savants. He is of opinion that a humour which he terms "black bile" (atrabilious humour) is preserved within their cavity, and believes that there exists a communication between the capsules and the kidneys, the atrabilious humour serving to dilute the urine.

Some anatomists, such as Spigelius, teach that the only use of the capsules is to collect the humidities which leak out of the great vessels which surround them; while others have held that a bilious juice is formed within them, and being carried to the heart, mingles with acidity which is there present and excites fermentation, this being the cause of the heart's movements; others, again, consider that the humour within the capsules is nothing more than the lacteal juice which is distributed by the mesenteric glands.

Montesquieu then proceeds with the analysis of the memoirs which were presented to the learned Academy of Sciences.

We have one author who affirms the existence of two kinds of bile; one, grosser, secreted by the liver; the other more subtile secreted by the kidneys with the aid of a ferment. This ferment flows from the capsules through ducts the existence of which is completely unknown to us and as to which, adds Montesquieu, we are threatened with perpetual ignorance.

Another describes to us two small canals which serve to carry the liquids which are found in the cavity of the capsule into the vein which belongs to it; this humour, which many experiments lead us to believe of an alkaline nature, plays, according to our author, the part of restoring fluidity to the blood which is returning from the kidney, and which has parted with its serosity in the formation of the urine.

Another competitor who begins by giving "*assez heureusement*" a description of the difference between conglobate and conglomerate glands, puts the suprarenal glands into the category of conglobates. He believes that they are nothing but a continuity of blood vessels within which, as within so many filters, the blood becomes more subtile. . . . The reason why there are no ducts to these glands, nor in any conglobate glands, is that there is no question of their separating liquids from the blood, but only of effecting the process of subtilization.

Finally after declaring that no single memoir amongst those submitted to his judgement can be looked upon as capable of satisfying the legitimate curiosity of the Academy, Montesquieu concludes:

Perhaps chance may some day effect what all these careful labours have been unable to perform.

And after a lapse of 177 years chance effected this result and enabled some sort of reasonable reply to be given to the question which was enunciated in 1716 by the Academy of Bordeaux, "What is the use of the suprarenal glands?"

In the autumn of 1893 there called upon me in my laboratory in University College a gentleman who was personally unknown to me, but with whom I had a common bond of interest—seeing that we had both been pupils of Sharpey, whose chair I at that time had the honour to occupy. I found that my visitor was Dr. George Oliver, already distinguished not only as a specialist in his particular branch of medical practice, but also for his clinical applications of physiological methods. Dr. Oliver was desirous of discussing with me the results which he had been obtaining from the exhibition by the mouth of extracts from certain animal tissues, and the effects which these had in his hands produced upon the blood vessels of man, as investigated by two instruments which he had devised—one of them, the haemadynamometer, intended to read variations in blood pressure, and the other, the arteriometer, for measuring with exactness the lumen of the radial or any superficial artery. Dr. Oliver had ascertained, or believed he had ascertained, by the use of these instruments, that glycerin extracts of some organs produce diminution in calibre of the arteries and increase of pulse tension, of others the reverse effect.

Although these conclusions were interesting, it was easy to see that results which were obtained under mechanical conditions which were somewhat complex and not easy of interpretation, could not be expected to decide an important physiological question of this nature, and that it was essential, in order to obtain exact knowledge of the action, if any, of such extracts, to conduct the investigations with the employment of all the means at the disposal of the modern physiologist. With the suggestion that we should undertake such an investigation Dr. Oliver promptly agreed, and it was then and there arranged to devote that winter to a thorough examination of the physiological effects of such extracts.

The result of this conjunction of effort, brought about by the fortunate chance foreseen by old Montesquieu, speedily showed that, whilst many of the extracts which had been dealt with clinically by Oliver were inert or at any rate not specific in their action, the suprarenal capsules, and to a less extent the pituitary body, yield to glycerine and to water and saline solutions principles which have an extraordinary effect upon the tone of the heart and arteries, transcending that of any known drug. We therefore decided to confine our attention during the time at our disposal in that winter to investigating the details of this action, and in the following March we were in a position to bring our results, which were already fairly complete, to the notice of the Physiological Society. In the meantime Mr. B. Moore, who is now Professor of Bio-Chemistry in the University of Liverpool, set to work to endeavour to isolate the active principle of the extract and to determine its chemical relationships. Although neither Moore nor other chemists who in various countries busied themselves with the solution of the same problem at the time succeeded in obtaining the active principle in a completely isolated condition, sufficient evidence was forthcoming to prove that it is a substance of relatively simple constitution. We had, in fact, already determined that it may be boiled for a short time without deterioration (although a temperature of 140° C. is said to destroy the blood-pressure raising principle, and, according to Gürber, to reverse the action of the extract); that it is dialysable and insoluble in absolute alcohol, and is not destroyed by acids or by the gastric juice. Moore found it to be identical with a powerfully reducing substance, first described by Vulpian (1857), in the medulla of the organ, and giving a characteristic colour reaction with oxidizing agents. Abel, of the Johns Hopkins University, and other physiological chemists who continued these investigations before long succeeded in obtaining crystallizable compounds of the active substance, and in determining a definite formula for it; Abel suggested for the substance the name epinephrin. Somewhat later (January, 1901), Takamine, a Japanese chemist, settled in New York, and independently Aldrich (August, 1901), worked out a method for the complete isolation of the active principle in a crystalline form (rhombic plates or needles), and Takamine gave to this product the name adrenalin. Other designations for the same substance are sphygmogenin (Fraenkel), suprarenin (v. Fürth) and hemisine, although the one which is most commonly employed, and by which it is best known, is adrenalin. It is, however, for various reasons advisable to adopt a name which has no commercial attachments, which "adrenalin" seems to have acquired; and, since it is hardly possible to use a term which will signify the precise chemical constitution of the active substance, this constitution being somewhat complicated,* it would, I think, be well to substitute the term "adrenin" for the proprietary name "adrenalin."

An adrenin or adrenalin which has been produced synthetically in the laboratory by Stoltz (1907)—other substances nearly allied in constitution and action, but not identical, having been previously obtained by synthetic processes by Friedmann, Stoltz himself, and Dakin—is said by Hofmann (1907) to show all the activity of the natural substance. But Professor Cushny, who has tested it physiologically, informs me that the activity of the artificial adrenalin is very inferior to that of the natural product.

Nothing is certainly known as to the substances from which adrenin is formed in the organism, but W. L. Halle suggests (1906) that one of these may be tyrosine, which undergoes transformation into adrenin under the influence of a ferment in the suprarenal. In support of this conclusion, he found that when two portions of emulsion of fresh ox or pig suprarenal were taken, to one of them tyrosine being added, both being kept, with addition of toluol to prevent putrefaction, for six days in an incubator, the sample containing the tyrosine was found to have from 14 to 33 per cent. more adrenin than the control.

* The empirical formula which is given for adrenalin is $C_9H_{13}NO_3$. The constitution of the artificial product obtained by Stoltz is dioxyphenyl-aethanol-methylamin.

UNDER the will of the late Mr. Edmund Richardson the following institutions each receive a sum of 200 guineas: Charing Cross Hospital, the London Hospital, Middlesex Hospital, Brompton Cancer Hospital, University College Hospital, the Consumption Hospital, Fulham Road; the Royal Hospital for Incurables, the North-West London Hospital, the Royal Free Hospital, the Hospital for Sick Children, Great Ormond Street; and the Royal National Orthopaedic Hospital.

ON RECENT PROGRESS IN THE SERUM-THERAPY OF PLAGUE.

BY

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MEASURES for the prevention of plague have absorbed so much of the energy and attention of those concerned that the progress made in its clinical study and the application of newer methods of treatment have to a great extent been overlooked. The clinician, however, has not been idle, and his continuous study, now extending over eleven epidemics at Bombay, has enabled him to evolve something like a rational system of treatment. One of the means that science has placed at his disposal is the antiplague serums associated with the names of Yersin and Lustig. Too much, however, was expected of them. The virulence of plague and the unfavourable conditions existing in India were not taken into account. It is therefore not surprising that the results obtained by Yersin when he went to Bombay in 1897 caused great disappointment. The antiplague serum of Professor Lustig of Florence had a more extended trial, but after having been applied in 1,551 cases, was also abandoned for similar reasons, as well as on financial considerations, etc., that need not be entered into here.[1]

Further trials were subsequently made with Yersin's serum improved by Roux, as also with Terni's (Milan), Brazil's, Tavel's (Berne), Haffkine's (Bombay), Palthauf's (Vienna), and the Japanese serums. These observations were conducted from time to time, chiefly at the Arthur Road, Maratha and Modikhana Hospitals, Bombay, and may be tabulated as under:

Serums.	Number of Observations.	Case Mortality per Cent.
Lustig's	1,551	63·4
Yersin-Roux's	570	62.0
Terni's	112	81.2
Brazil's	70	82.8
Tavel's	28	64.2
Haffkine's	15*	73.3
Palthauf's	8	50.0
Japanese...	4	25.0

*Haffkine had also made about 100 other observations at Poona on the "alternate system"; the exact results are not known, but the case mortality was found to be 14 per cent. higher in the serum than in the control cases.

These observations having been made prior to 1905, possess but an academic interest now. The results which I shall bring forward in the present paper have been obtained during the last two and a half years by thirty observers in different parts of India. They possess the advantage that all the cases were treated with one variety of serum—namely, Yersin-Roux serum from the Pasteur Institute of Paris.

PRELIMINARY CONSIDERATIONS.

It is requisite that for the adequate estimation of the results of serumtherapy in plague due account should be taken of certain unfavourable factors which militate against its successful application. These are:

(*a*) *The complex nature of the affection*, necessitating two distinct and separate processes—bacteriolytic and antitoxic—before recovery can ensue.

(*b*) *The great virulence and high mortality*, as demonstrated by a series of epidemics. The epidemic at Poona, in 1906, yielded a case mortality-rate of 93.5 per cent., while in Bombay 50,969 attacks, with 44,540 deaths, have been recorded within the last three years and seven months—equivalent to a mortality-rate of 87.38 per cent. If hospital cases were to be excluded from these the rate would be 89 per cent., which means that the natural expectation of recovery from plague in this city is but 11 out of every 100 attacked.

(*c*) *Early and grave septicaemia*, as noted by Mayr, Berestneff, the present writer, Greig, and the Plague Research Commission.* It has been estimated that from 55 to 60 per cent. of hospital admissions at Bombay are septicaemic and therefore practically not amenable to any treatment. Almost all succumb within forty-eight hours of admission; if any survive, the ultimate result is death from toxaemia and marasmus.

(*d*) *Multiple foci of infection* exist in the numerous buboes, superficial and deep, contiguous and distal, and owing to direct communication between the lymphatics on the one hand, and veins and even arteries on the other, a constant stream of blood infection is kept up.[2]

(*e*) *The rapid course of the disease and late treatment* carrying off the largest proportion of cases by the sixth day, with the period of maximum mortality from the third to the sixth day. As most of the hospital cases are admitted between the third and the sixth day of illness they are already too late for special treatment.

RECENT OBSERVATIONS (1905–7).

The recent observations now amount to 1,081 cases, distributed as follows: Bombay, 690; Poona, 118; Indore, 218; Karachi, 32; and Calcutta, 23.

Observations at Bombay.

The observations at Bombay were conducted at the Maratha Plague Hospital by the present writer, and concerned 438 cases; 243 cases were treated by him and others in private practice.†

The Method of Treatment.—Clinical experience having repeatedly demonstrated that the "alternate method" as hitherto applied was unsuited to an affection of the nature of plague, as also the fact that the 55 to 60 per cent. of hospital admissions already septicaemic do not respond to treatment by drugs or serum, the method adopted consisted in rejecting all those who appeared to have hardly any probability of benefiting by the serum treatment. Convalescent and semiconvalescent cases were further eliminated, as well as those in whom the illness had already lasted for six days or more. The latter were excluded since experience has shown that patients who are alive on the sixth day are either too far advanced for treatment or are just beginning to improve spontaneously. The observations were thus restricted to the most acute cases within the first five days of illness, and 238 cases were treated in this way. This method met with the approval of Professor C. J. Martin, of the Lister Institute (member of the Advisory Committee for Plague Investigation in India). He suggested that, after rejecting the unfit cases, every alternate case might be treated with the serum, so that those left untreated would serve as controls. This system of "rational alternation" for testing the utility of the serum in hospital practice, and thus obtaining an exact numerical demonstration of the benefit derived from its application, was adopted in a further series of 400 cases.

Table Showing Results of Serum Treatment.

		Number.	Died.	Recovered.	Case Mortality per Cent.
	Serum cases	238	141	97	59.2
Alternate series.	Control cases...	200	148	52	74.0
	Serum cases	200	127	73	63.5
	Difference in favour of the serum cases	—	—	—	10.5
	Total of serum cases ...	438	268	170	61.1

In the first series of 238 cases the case mortality-rate was 59.2 per cent., and among the 200 cases treated alternately with 200 controls, it was 63.5 as contrasted with 74.5 among the latter. There was thus a difference of 10.5 per cent. in favour of the serum cases, which is

*The ratio arrived at by the Plague Research Commission was 58.5 per cent. among 94 patients examined; vide also the *Journal of Hygiene*, September, 1906.

†The remaining 9 patients were treated at the Parsee Fever Hospital, of whom 4 died and 5 recovered.

indicative of the present limit of the usefulness of the serum treatment as applied to suitable cases under the by no means favourable conditions of Indian hospital practice. The foregoing figures, therefore, demonstrate that if applied to such cases as are likely to be benefited by it, the serum treatment is capable of increasing the ratio of recovery by 33 per cent. as compared with ordinary drug treatment in hospital practice. The limit of its usefulness does not end here, for apart from this, it prolongs life. By comparing the time of death after admission between the serum and control cases, it was found that whereas 79 per cent. of all deaths among controls occurred within four days after admission, the proportion was 58.2 per cent. among the serum cases, a difference of nearly 21 per cent. Such prolongation of life is of great importance where patients have to settle their worldly affairs, and it is no uncommon occurrence to find an unconscious patient so far improved after one or two injections of the serum as to be in his perfect senses and able to execute his will.

The Rejected Cases.—Upon the ultimate fate of the cases eliminated from the above observations rests the real test of the soundness or otherwise of the method of treatment now adopted.

Table of Cases Rejected as Unfit for Serum Treatment or Controls (557).

Rejected Cases: Duration of Illness.	No.	Died.	Recovered.	Case Mortality per Cent.
Between first and fifth day ..	386*	376	10	97.4
Between sixth and ninth day ..	116	71	45	61.2
Ten days and over	48	15	33	31.2
Pestis ambulans†	4	—	4	—
Too recently inoculated with Haffkine's prophylactic‡ ..	3	1	2	33.3

* The Plague Research Commission found from blood examination of only a few of these cases that 67 were septicaemic, all of whom succumbed.

† These cases were rejected because they are extremely mild and always end in recovery.

‡ Inoculated within a week of illness, during the period of incubation.

A glance at the above figures shows that the exclusion of the 386 acute cases, within the first five days of illness, was fully justified, inasmuch as only 10 recovered, although the same remedial measures were used, except, of course, the serum. Similarly, the exclusion of cases of over six days' duration and those over ten days' (semiconvalescent or convalescent) was equally justified by their larger ratio of recoveries without the aid of the serum.

Nature and Gravity of the Cases Treated with the Serum.—With the exception of 20 cases of septicaemic plague and 10 of pneumonic plague among the rejected cases, all the patients suffered from the bubonic type of plague. Each patient received the same general drug treatment,[3] without alcohol in any shape, and all were placed under practically identical conditions.[4] The treatment was carried out during the greater part of two severe epidemics and a part of the third. As the serum was applied under the same conditions to all the patients, whether treated alternately or not, both the series of cases have been grouped together for purposes of comparison with the control cases. The serum cases exhibited a lower mortality-rate than the control, the difference varying between 7.8 per cent. in the cervical form of buboes and 27.7 per cent. among the multiple form. As regards the grave complications and sequelae of plague, it was found that they preponderated largely in the control group. Haemorrhages and terminal pneumonia existed in almost double the frequency among the serum cases; and so also marasmus due to the rapid bacteriolysis induced by the serum, and consequent surcharging of the system with the toxins thus set free, and their combination with the tissue cells of the body. Here it is that the want of a purely antitoxic serum is badly felt which alone could avert the fatal issue in such cases. Early treatment is by far the most important point in serumtherapy. The proportion of first-day cases treated with the serum was only 8.4 per cent. For this reason the results in hospital have not been so encouraging as those gained in private practice. The mortality-rate was lowest among the patients treated on the first day; it increased by 15.6 per cent. on the second day, and by 20.9 per cent. on the third. The control cases also behaved similarly.

Recovery of Septicaemic Cases under Treatment.—The fact that in the earlier observations no amount of serum injected either intravenously or subcutaneously had been effective in septicaemic cases led the investigators to believe that this type of disease was necessarily hopeless. The investigations of the Plague Research Commission, however, have shown that this is not invariably the case. Among the cases examined by them, seven which were under the serum treatment were found to be septicaemic, and two of these recovered, one of them having no fewer than 500 to 600 plague bacilli per c.cm. of blood. This patient, a child of 7, had received 270 c.cm. of the serum in six injections from the second day to the sixth day of illness. The other patient, a female aged 25, had received 420 c.cm. in six injections between the third and seventh days.

The Influence of Serum Treatment among those Protected by Haffkine's Prophylactic Inoculation.—Among the cases under serum treatment 6 were inoculated by Haffkine's method, of whom 5 recovered and 1 died. Of 6 other inoculated cases (3 among controls and 3 among the rejected cases) 2 died and 4 recovered. The application of the serum thus appears to be more beneficial after protective inoculation.*

Observations in Private Practice at Bombay.

Three out of the six observers who applied the serum treatment in private practice were responsible for 235 out of the 243 cases. The results show that 99 died and 144 recovered; this is equivalent to a case mortality-rate of 40.7 per cent., as contrasted with 61.1 per cent. among hospital patients. The reduction in the mortality was chiefly due to the larger proportion of first-day cases—namely, 47 per cent. as against 8.4 per cent. Better social conditions might account for a small proportion of this gain. The mortality of the private practice cases treated on the third day, however, was practically the same as that of the hospital patients treated on the same day.

Table showing Results in Private Cases.

Duration of Illness.	Hospital Cases.		Cases in Private Practice.	
	Number.	Case Mortality per Cent.	Number.	Case Mortality per Cent.
First day	37	45.9	116	28.4
Second ,, ...	138	61.5	77	42.8
Third ,, ...	145	66.8	37	67.5
Fourth ,, ...	72	56.9	5	40.0
Fifth ,, ...	36	58.3	7	71.4
Sixth ,, ...	7	57.1	1	100.0
Seventh ,, ...	3	100.0	1	100.0
Total	438	61.1	243	40.7

Observations at Poona.

It was during the severe visitation of plague at Poona, in 1906, that the serum treatment was tried for the first time. At the General Plague Hospital Dr. Anklesaria submitted 56 patients to the treatment, of whom 34 died and 22 recovered, the case mortality-rate being, therefore, 60.7 per cent. (cf. the 438 cases at Bombay with 61.1 per cent.) Nine other observers treated 62 patients (51 in private practice and 11 in the regimental and cantonment hospitals); there were 24 deaths and 38 recoveries, equivalent to a mortality-rate of 38.7 per cent. (cf. the 243 cases similarly treated with 40.7 per cent. mortality). The epidemic at Poona was of great virulence, the case mortality for the city being 93.5 per cent.; the mortality-rate at the General Plague Hospital among the patients under the ordinary drug treatment was 65.2 per cent. No first or second day cases were treated with the serum at the hospital. There was no material difference in gravity

* At Poona two patients who had been inoculated six and ten days previous to attack, recovered under the serum treatment.

between the cases treated in Poona and those treated in Bombay.

Observations at Indore.

Dr. Tambe reports on 92 cases treated at the Indore Plague Hospital with 39 deaths and 53 recoveries, equivalent to a case mortality-rate of 42 3 per cent. Among 101 cases treated in private practice by him and others there were 27 deaths and 74 recoveries, the mortality-rate thus being 26 7 per cent. The epidemic at Indore (1906) was of lesser virulence than that at Bombay or Poona, as indicated by the general case-mortality rate, which varied from 74 to 78 per cent, as compared with 89 per cent. at Bombay and 93.5 per cent. at Poona; the mortality-rate among patients under the usual drug treatment was 61.1 per cent., as compared with 65.0 at Poona and 75 2 per cent. at Bombay. The proportion of first-day cases treated with the serum (hospital and private) was 64 per cent., as against 21 per cent. at Poona and 22 4 per cent. at Bombay. The above facts go to show that the serum treatment was applied under far more favourable circumstances at Indore.

Observations at Calcutta.

Only 20 cases were treated at Calcutta, 6 of whom were practically moribund at the time of treatment. The serum was generally injected late, the doses employed too small, and in more than half the number of cases only one injection was administered. The mortality-rate was 65 per cent. as compared with 78 per cent. among hospital cases under the usual drug treatment.

Observations at Karachi.

Two observers have treated 32 cases, with 17 deaths and 15 recoveries, equivalent to a case mortality-rate of 53.1 per cent.

GENERAL SUMMARY.

A general survey of the observations related in the preceding pages shows that out of 1,081 patients subjected to the serum treatment, 537 died and 544 recovered; the mortality-rate was 49 6 per cent. The disparity in the results between hospital and private cases owing to the greater preponderance of first and second day cases among the latter, apart from their better social condition, is shown below:

Table showing General Results in Hospital and Private Cases.

	Number.	Died.	Recovered	Case Mortality per Cent.
Hospital cases	613	350	263	57.0
Private cases	468	187	281	39.9
Total	1 081	537	544	49.6

The difference of 17 per cent. between the two is a striking testimony to the advantage of early treatment, which is still better demonstrated by the following tabulation of 1,037* patients, according to the duration of illness when they came under treatment:

Table of Results according to Duration of Illness before Treatment.

Duration of Illness.	No.	Died.	Recovered.	Case Mortality per Cent.
First day	316	96	220	30.3
Second ,, ...	300	153	142	52 6
Third ,, ...	246	155	91	63 0
Fourth ,, ...	105	60	45	57.1
Fifth ,, ...	52	32	20	61.5
Sixth ,, ...	14	8	6	57 1
Seventh ,, ...	4	4	—	100.0

This table shows that the lowest mortality was observed among patients treated on the first day of illness, that it increased from 30.3 to 52 6 per cent. among those treated on the second day, and that it more than doubled itself among those treated on the third day.

Finally, the racial distribution of the patients and the death-rate for each group are indicated by the following analysis of 1,051* cases:

Table showing Racial Distribution of Cases.

Races.	No.	Died.	Recovered.	Case Mortality per Cent.
Europeans	15	5	10	33 3
Parsees	115	46	69	40 0
Mohammedans	151	67	84	44.3
Native Christians (Most Goans)	217	97	120	44 7
Hindus	547	301	246	55.0
Japanese	1	—	1	—
Chinese	1	—	1	—
Jews	3	2	1	66 6
Eurasians	1	1	—	100.0

The mortality was lowest among European patients, but as the number treated was small, much importance cannot be attached to this. Of the other communities, Parsees stand next to Europeans, with the mortality-rate of 40 per cent.; then Mohammedans, with 44.3 per cent.; followed by native Christians, with 44.7 per cent.; and, lastly, by Hindus, with a mortality of 55 per cent. These results bear a corresponding relation to the natural mortality from plague among these races.[5]

CONCLUSION.

The main conclusion to be deduced from the study of the foregoing facts is that in Yersin-Roux antiplague serum we possess a useful and efficacious remedy against plague. *The absence of all antitoxic action* is responsible for its limited utility. It must, however, be pointed out that a disease like plague, with a mortality of 89.9 per cent., is not likely to yield to serumtherapeutics as well as diphtheria has done. Professors Simpson[6] and Kitasato[7] both realized the limited but at the same time undoubted action of the serum. The whole secret of the treatment lies in applying the serum very early. Among patients subjected to the treatment within the first few or even twenty-four hours, it is noticed that the whole course of the disease becomes altered, the normal duration of eight to ten days is reduced to four to five; serious complications of the nervous, circulatory, and other systems are averted, the buboes get absorbed, and convalescence is rapid. If applied between twenty-four and forty-eight hours, its action is not so well marked; and after the expiration of forty-eight hours it does not appear to influence the course perceptibly. Comparatively small as these gains would appear to the enthusiast, they are by no means to be despised in a disease of the virulence of plague.

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* Particulars of 44 patients are not obtainable.

* Particulars of 30 patients are not obtainable.

A SOCIALIST medical fellowship society is to be organized at a meeting to be held in London on June 25th. The object of the promoters is to afford members of the medical profession who are socialists an opportunity of acting together to enlighten the profession and the public on the questions with which the medical profession is more essentially concerned, especially the nationalization of the medical profession and the socialization of medical education.

CATS AS PLAGUE PREVENTERS.

BY LIEUTENANT-COLONEL A. BUCHANAN, I.M.S.,
CIVIL SURGEON, AMRAOTI, BERAR, INDIA.

IN the BRITISH MEDICAL JOURNAL of January 18th reference is made to the newly-established National Society for the Destruction of Vermin. It is stated that Ashburton Thompson, Haffkine, and other practical workers admit that the stamping out of rats is impossible. In his address at the inauguration of this society, Sir James Crichton-Browne referred to the following agents for rat destruction—the gun, the trap, the ferret, the terrier, poisons such as phosphorus and arsenic, and bacteriological preparations such as Danysz's virus, but it is somewhat curious that he did not, as far as I can see, mention the cat. It is now about eighteen months since I began to advocate the employment of the cat for the destruction of rats, and I propose to give a brief summary of the arguments which have been brought forward from time to time and published in Indian papers on the value of the cat. In a pamphlet which was published by the *Pioneer Press*, Allahabad, at the beginning of 1907, I gave reasons for thinking that the ultimate solution of the plague-prevention problem would be to "keep cats," and further inquiries made almost daily since that time convince me that this is the principal way to check plague in India.

THE VILLAGE OF AIRLA.

Airla is a village situated on the roadside between Nagpur and Kalmeshwar, which are thirteen miles apart. At Nagpur over 22,000 people, and at Kalmeshwar nearly 2,000, died from plague. When plague occurred at Nagpur many went to Kalmeshwar, and when plague occurred at Kalmeshwar many went to Nagpur; but although these people would pass through Airla this village has always been exempt from epidemics. There were several cats and practically no rats in this village.

IN AMRAOTI DISTRICT.

Following up this hint, somewhat elaborate inquiries were made in the Amraoti district in Berar. A census of cats was taken in nearly all the villages and towns (over 1,000), and it was found that in 145 villages where the percentage of cats to houses was 50 or above, plague had never occurred; some cases had occurred in villages in which the percentage was between 20 and 50, but the great majority of cases occurred in the towns and villages in which the percentage was under 20. The total number of cats in the district was estimated at 33 000, the population of the district being a little short of 800 000.[1] As statistics are liable to mislead, it was necessary to inquire into the matter from other points of view. It has been now generally admitted that rats are the cause of plague epidemics. The first question that will be asked is, Will a cat keep away rats from a house? There were many rats about the house in which I am now living, but since I kept cats a rat is practically never seen. Occasionally I have brought a few rats from the town and let them go in a room with the cats, and it did not take long to convince me that the Indian cat is a good rat-catcher. I have asked hundreds or perhaps thousands of people what is their experience of the Indian cat, and whether it is a good rat-catcher, and the almost invariable reply is in the form of a query, How can a rat remain in a house with a cat?

INQUIRIES IN VILLAGES AND TOWNS.

There were five thousand odd cases of plague in this district last year, and in most of the towns or villages in which cases occurred inquiries were made by my assistants or myself. It was found, as a rule, that there was no cat in the houses in which cases of plague occurred, but there were exceptions.

These exceptions could generally be explained in one or other of the following ways. A man who had a cat in his own house had gone to work or visit in a house in which rats were present; or a rat from another house may have come and died in a house in which there was a cat. It has been recognized that safety depends rather on a number of cats in a group of houses than on one cat in a single house. It often happens that the people in one group of houses in a village keep cats, while the people in another group of houses do not keep cats. When plague attacks the village the group of houses with the large number of cats escapes, while the people in the other group of houses are attacked. Many such instances have been found; but the occupants of a house with three cats, although it is situated in an area in which plague has been prevalent, will usually escape plague because the cats visit adjacent houses.

RELIGION AND CUSTOMS.

The people of India, if we may speak of them as a whole, are exceedingly practical, although it would be difficult to find any people more influenced by prejudices. In choosing a method of plague prevention it is necessary to give full consideration to their prejudices and customs, and it would be difficult for a society in England to realize how strongly the people of India are influenced by such prejudices. Among the Hindus the rat is the *sowari* (means of locomotion) of the god Ganpati, and many of them would prefer to run the risk of taking plague rather than kill a rat. The Jains object to taking life of any kind. Many of the Hindu weavers buy some grain on Friday and feed the rats in their houses, with the understanding that the rats will not cut the threads on their looms. The Waddars, a somewhat jungly tribe, eat rats, but chiefly field rats, and the Pardhi enjoys eating a cat. Many Hindus will catch rats in traps, and release them in the fields. On the other hand, a Mohammedan has no hesitation about killing a rat, and there are many of the more enlightened Hindus who do not object to killing rats.

MOHAMMEDAN CUSTOMS REGARDING CATS.

In the religious books of the Mohammedans there is a great deal about the cat. The keeping of cats was strongly commended by Mohammed. In the *Quasasul Ambia* there is an account of the creation of rats and cats which appeals to the Mohammedans very strongly. Noah had got the ark afloat; the sanitary condition of the ark was very unsatisfactory, and pigs were created to clean up the ark. At the instance of the devil, rats were created from the pigs; the rats multiplied rapidly, and began to make holes in the ark, so that the lives of all on board were in danger. The Angel Gabriel then appeared and advised Noah to pass his hand over the nostrils of the tiger, and forthwith cats came into existence. The cats soon cleared off the rats, and the ark was saved. I have had this story printed and circulated in this district, pointing out how the cats saved Noah from the devastation of the rats, and how the people can now save themselves from plague by following the advice of the Prophet. It is now the exception to find a Mohammedan in this district who has not a cat in his house.

HINDU CUSTOMS REGARDING CATS.

It is considered a great sin for a Hindu to kill a cat or to injure even a single hair of a cat. The penalty, which is very widely known among natives, though known to probably only a few Europeans, is that the person who kills a cat is to have a golden cat made, and be either presents this at a shrine in Benares or wears it hung round his neck. It will thus be seen that the cat is sacred both among Mohammedans and Hindus, and it is also important to notice that it is the only animal that is sacred among both. I have found that many natives have taken to keeping cats of their own accord since they began to have a suspicion that rats are the cause of plague, and it seems to me that there is good reason to believe that the origin of the customs regarding the cat is based on the idea that cats keep away rats and therefore prevent plague. Plague is a very old disease in India. An old pundit has given me a quotation from an old book (*Shushrat*) which was written perhaps some thousands of years ago, in which it is stated that when you see rats falling in your house you should get out to the jungle as fast as you can. Whilst scientists recommend segregation, disinfection, etc., the practical villager says, as soon as he realizes that plague is spread by rats, "Let us keep cats." Plague has been prevented and stopped before the introduction of the modern methods referred to, and there is little doubt that the cessation of earlier outbreaks of the disease was due to the fact that people kept cats.

CUSTOMS AMONG OTHER CLASSES.

The Parsees, who are among the most enlightened of the people who live in India, have a strong prejudice against

keeping cats, but there is not, as far as I can find out, any religious objection. As soon as they realize the advantage of keeping cats they willingly agree. The Bhowani Dhers, who are not a numerous people, object to keeping cats because the death of a cat in their house puts them out of caste, and they have to break all their earthen vessels and perhaps entertain their caste fellows. The birth of kittens in their house is also a serious matter, but to avoid this latter misfortune, those who have recognized the value of keeping cats now keep male cats. These people sometimes suffer severely from plague, for example, in Dhaba village the Bhowani group of houses suffered from plague while the group of houses occupied by the Telis, where the percentage of cats was over fifty, escaped.

RAT-PROOF HOUSES.

Dr. Ashburton Thompson is a strong advocate of the rat-proof house, and theoretically this idea is excellent. But most houses in an Indian village are built of mud, and in all probability will be built of mud for centuries to come. The mud wall might be called the black rat's home, for it is in the mud wall that it likes to make its burrow and nest. The Bhowani Dher in this district often lives in a wattle hut, and those who live in such huts are remarkably free from plague, because there is little attraction for the rat.

INOCULATION *versus* CATS.

While we did not know how plague was spread, there was a great deal to be said in favour of inoculation; but now that we know that plague is spread by rats and that without rats there will be no epidemic, surely it is much better to try and remove rats; and when we know that rats can be kept away by cats there can be little question that the best way to prevent plague is to keep cats. In this district, where vaccination is an exceedingly popular measure and where the elder men could soon convince the doubter who has perhaps never seen a case of small-pox of the value of vaccination, the people have not readily taken to inoculation, and their reasons might be stated somewhat like this:

Inoculation.	*Keeping Cats.*
Efficient for a few months.	Permanent efficiency.
Does not strike at the root.	Destroys the root.
Very expensive.	Cost to the public *nil*.
Large establishment required.	No establishment required.
Necessary to inoculate every member of household.	One cat protects a household.
Not an absolute preventive.	When the number is sufficient all risk of plague is abolished.
Sore arms, fever, and absence from work.	No inconvenience.
Many objections on the part of the people.	Extraordinary willingness.
Not favoured by tradition or religion.	Strong tradition in favour of keeping cats (Parsis and Bhowani Dhers excepted).

CONCLUSION.

In the early days of plague epidemics many mistakes were made. Cordons were drawn round villages and towns so that infected people could not get in, but infected rats might steal in unobserved. Disinfection was practised with great vigour, but while this operation was in progress the rat was sitting comfortably in its burrow, ready to come out as soon as the disinfection operations were over. The plague patient was hastily segregated to a plague camp, but we now know that plague (bubonic) is practically never conveyed direct from man to man, so that it has come to be a common saying that "the safest place in a plague epidemic is a plague camp," and those of us who have had charge of plague camps know that those servants who lived in the camp practically never took plague, although they were handling plague patients all day. A few cases of plague have been occurring daily in this district for some time, and from daily inquiries which are being made I think there is good reason to believe that the duration of plague in India depends on the time it will take before it is generally recognized that the cat is the best plague preventer. At any rate, I hope I have shown that there are reasonable grounds for making further inquiries on the lines suggested here.

REFERENCE.
1 *Indian Medical Gazette*, October, 1907

SPORADIC KALA-AZAR IN CALCUTTA, WITH NOTES OF A CASE TREATED WITH ATOXYL.

BY U. N. BRAHMACHARI, M.A., M.D.,
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KALA-AZAR, as used in this article, may be defined as the disease caused by the Leishman-Donovan bodies. Its epidemic manifestation, which is seen in Assam, more frequently goes by this name. It is endemic round about Calcutta and probably occurs in the city itself.

Last year I examined the spleen blood of nearly 150 cases of enlarged spleen admitted into my wards in the Campbell Hospital, and found the parasite of kala-azar in 60 cases. From this it is seen that cases of this disease are frequently admitted into the Calcutta hospitals.

No two cases came from the same house, and I have not succeeded in corroborating the fact that the disease is limited to individual houses or families; 91.7 per cent. of my cases were Hindus, while 8.3 were Mohammedans, giving a proportion of nearly 11 to 1. Out of the total number of patients admitted into my wards in 1907, about 75 per cent. were Hindus and 17.5 per cent. Mohammedans, giving a proportion of nearly 4 to 1. It will thus be seen that Hindus are more frequently affected by the disease than the Mohammedans, and if this fact is corroborated by more extended observations it may probably throw some light on the etiology of the disease; 33 per cent. of my cases were below the age of 20. I have not met with any case above the age of 55. The cases came to my wards during all the parts of the year, the largest number of admissions being during the period of April to August, but especially in the month of May.

It was difficult to trace from the history of the cases where the disease was contracted. Most of them pointed, however, to the disease having been contracted in the neighbourhood of Calcutta, and a few seemed to have contracted the disease in the city itself, as they never went out of it. None of my cases came from the epidemic area of Assam. Some came from Orissa, Eastern Bengal, district of Murshidabad and Behar.

Most of my cases were chronic, with history of illness for several months, and with the spleen extending 3 in. or more below the costal arch. In a large majority the liver was also moderately enlarged, while in a very few cases the liver was very much more enlarged than the spleen, which extended just an inch or so below the ribs. I have not met with a case in which the spleen was not at all enlarged.

SYMPTOMS.

As regards the early symptoms of the disease, knowledge is still very limited. The patients met with in the hospital wards have suffered for a long time. I give here a summary of the early symptoms of the disease as gathered from the patients.

In one class of cases we get a history of intermittent attacks of fever, quotidian for some time, and later on becoming irregular with or without rigors, lasting for several months and not benefited or only temporarily benefited by quinine. In a second class there is a history of a few previous attacks of fever, continuing for some time on each occasion, the spleen becoming slowly and steadily enlarged. In a third class there is a history of attacks of low fever, continued for several months, with a progressive enlargement of the spleen not benefited by any treatment. In a fourth class there is a history of one or two attacks of remittent fever more or less resembling typhoid. In a fifth class the patient gives a history of gastro-intestinal troubles, with dysenteric or diarrhoeic attacks followed by oedema of the lower extremities, and attended from time to time with ague-like attacks of fever. In all these cases the patient invariably says that there was very slight or no benefit from quinine. Possibly a large majority of cases begin with attacks of remittent fever.

Among the other symptoms I have observed may be mentioned progressive emaciation, with anaemia, cachexia, oedema of the extremities, diarrhoea, dysentery, which may sometimes be very obstinate, and haemorrhages from various parts of the body, such as the skin and mucous membranes.

Oedema of the extremities is sometimes an early symptom; on the other hand, it may be absent even up

to the last. It is not easy to explain the cause of this oedema. It appears that we can distinguish two classes of cases—one in which oedema is a marked symptom and the other in which it is not. These two types are well shown in the two accompanying photographs.

I have elsewhere described in detail the various types of pyrexia that I have observed in this disease.[1] Besides



Fig. 1.—Advanced case of kala-azar with no oedema.

these, there may sometimes be pyrexia of the pyaemic type, there being more than two remissions or intermissions in twenty-four hours. Rarely the disease takes on an apyretic course for an indefinite length of time.

BLOOD COUNT.

In the main my observations corroborate those of Major Rogers.[2] Leukopenia is extreme, and in many cases the proportion of white to red is less than $\frac{1}{100}$ (Table I).

TABLE I.

	Red Corpuscles.	White Corpuscles.	Proportion.
1	2,390,000	1,720	$\frac{1}{1389}$
2	2,530,000	2,530	$\frac{1}{1000}$
3	2,740,000	1,792	$\frac{1}{1529}$
4	3,440,000	2,386	$\frac{1}{1441}$
5	3,170,000	2,350	$\frac{1}{1349}$
6	2,660,000	1,160	$\frac{1}{2293}$
7	2,760,000	1,527	$\frac{1}{1807}$
8	2,920,000	1,320	$\frac{1}{2212}$
9	2,120,000	1,736	$\frac{1}{1221}$
10	2,330,000	1,660	$\frac{1}{1404}$

In a number of cases, though there was a marked leukopenia, yet the proportion of white to red was higher



Fig. 2.—Advanced case of kala-azar with marked oedema.

than $\frac{1}{100}$. These are probably very advanced cases with extreme anaemia (Table II).

TABLE II.

	Red Corpuscles.	White Corpuscles.	Proportion.
1	1,400,000	2,170	$\frac{1}{645}$
2	860,000	2,250	$\frac{1}{382}$
3	1,480,000	3,870	$\frac{1}{382}$
4	1,300,000	3,300	$\frac{1}{393}$

In many cases complications often lead to increase in the leucocyte count (Table III).

TABLE III.

	Red Corpuscles.	White Corpuscles.	Proportion.	Complication.
1	2,880,000	7,662	$\frac{1}{376}$	Pneumonia.
2	896,000	2,768	$\frac{1}{323}$	Cancrum oris.
3	3,070,000	3,500	$\frac{1}{877}$	24 hours after application of a large blister over the splenic region.

Lastly, cases that have been recovering or have recovered from cancrum oris, or have been treated with atoxyl for some time, may give a higher relative leucocyte count than $\frac{1}{1000}$ (Table IV).

TABLE IV.

	Red Corpuscles.	White Corpuscles.	Proportion.
1	2,340,000	4,569	$\frac{1}{512}$ (Recovery from cancrum oris)
2	2,600 000	3,340	$\frac{1}{778}$ (Treatment with atoxyl)
3	3,410,000	0'909	$\frac{1}{2625}$ (Treatment with atoxyl)

Comparing the leucocyte count in kala-azar with what we observe in malarial cachexia, exactly the same conclusion as that of Major Rogers is reached—namely, that a ratio of red to white corpuscles below $\frac{1}{1500}$ is almost diagnostic of kala-azar; but, as we have shown above, we may meet with cases without any apparent complication, or some with well-marked complications, or others that have taken a favourable turn, in which the proportion may be higher than $\frac{1}{1000}$.

I append here a table showing the blood count in malarial cachexia, in which the proportion of white to red is much greater than $\frac{1}{1000}$ (Table V).

TABLE V.—*Malarial Cachexia*.

	Red Corpuscles.	White Corpuscles.	Proportion.
1	3,240,000	8,000	$\frac{1}{405}$
2	2,208,000	3,372	$\frac{1}{655}$
3	2,384,000	4,863	$\frac{1}{490}$

COMPLICATIONS.

(1) Pneumonia; (2) phthisis; (3) dysentery; (4) diarrhoea; (5) cancrum oris and its attendant complications; (6) haemorrhage from the gums or under the skin in advanced cases; (7) delirium or coma, in some cases, shortly before death; (8) albumen in the urine in a few cases, which might be due to concomitant kidney disease; (9) paraphimosis; (10) haemoptysis; (11) haematemesis; (12) melaena; (13) epistaxis; (14) oedema of the extremities; (15) splenalgia due to infarcts in the spleen; (16) haemorrhoids, which may bleed obstinately and profusely; (17) large abscesses. I have not met with a case in which there was perforation of the bowels, which Captain Christophers describes in some of his cases.

PROGNOSIS.

According to my observations, the prognosis is always grave. I have not the record of a single case which I could pronounce cured; 40 per cent. of my cases died in the hospital, the most frequent cause of death being intractable diarrhoea or dysentery.

TREATMENT.

So far as my observations go, no drug can kill the parasites. I have used the following drugs without success: (1) Quinine internally; (2) quinine hypodermically; (3) fluorides; (4) arsenic and some of its new preparations, such as sodii cacodylas, arrhenal, and atoxyl; in some cases arrhenal and sodii cacodylas were given hypodermically; (5) methylene blue internally; (6) methylene blue hypodermically; (7) izal in increasing doses; (8) cyllin in increasing doses up to half a drachm thrice a day.

Encouraged by the results of the use of atoxyl in trypanosomiasis, I gave it an extensive trial in a few cases,—one of which has been under my observation for nearly eight months and under atoxyl treatment for nearly six months. As far as I am aware, there are no records of a single case in which atoxyl was used for such a prolonged period in kala-azar.

The patient, aged 30, a Hindu, had slight oedema of the lower extremities at the time of admission, the spleen extending 8 in. from the left nipple in the middle line.

The effects of the treatment were as follows:

1. *Body Weight.*

	St	lb.
May 25, 1907	6	0
August 12, 1907	7	4
September 9, 1907	7	5½
November 16, 1907	8	0
December 29, 1907	8	5½

2. *Blood-count.*

Date.	Red Corpuscles.	White Corpuscles	Proportion.
May 2, 1907	2,760 000	1,527	$\frac{1}{1807}$
August 16, 1907 ..	2 500,000	1,600	$\frac{1}{1563}$
September 7, 1907 .	2,280,000	1,950	$\frac{1}{1170}$
November 18, 1907 ..	2,600,000	3,340	$\frac{1}{778}$
January 7, 1908 ..	3 440,000	6,600	$\frac{1}{521}$

3. *Pyrexia.*

4. *General Condition.*—The patient looks much better in health; the oedema of the extremities has completely disappeared. He is fatter than before, is less anaemic, has no cachexia, and has got better appetite.

5. *Toxic Action.*—There were never any symptoms of arsenic poisoning.

6. *Local Action.*—The drug was almost non-irritating. Except on one occasion there was very slight local irritation; on this occasion there was a slough formed, which I think was due to the solution being too hot. In other cases in which I have given injection of atoxyl no untoward local symptoms were met with.

7. *Effect on the Parasites.*—They are still found in the splenic blood. Some of them present a granular appearance, but they are still to be seen in large numbers.

8. *Spleen.*—Not much diminished in size.

Before concluding, I would just mention one point, that spleen puncture, though it has been pronounced dangerous by the highest authorities, has never led to any single accident in any of my cases. I have found that a large hypodermic needle is sufficient to enable one to draw one or two drops of blood, which are almost always sufficient to show the parasites if they are present. I would therefore recommend that not more than one or two drops of blood should be drawn from the spleen for ordinary diagnostic purposes. It appears to me that the danger of spleen puncture may be reduced to a minimum if one uses a hypodermic needle, gives the patient calcium chloride before and after puncture, enjoins absolute rest in bed, and puts pressure upon the punctured spot for about fifteen minutes after the operation.

CONCLUSIONS.

1. Sporadic kala-azar is frequently seen in Calcutta hospitals, and is probably endemic in Calcutta itself. Hindus are probably more affected than Mohammedans.

2. The leucocyte count is of great diagnostic help, but not absolutely so in kala-azar.

3. Atoxyl is borne in very large doses (gr. xv, in one injection) by kala-azar patients. It is perfectly harmless and non-irritating. Its effect on the parasites is perhaps very slight. While improving the patient's health, it does not remove the cause, though it has apparently some effect upon the pyrexia. In order that it may do any good it must be given in very large doses (gr. xv) as injection every seven or ten days, continued for several months.

4. *Spleen Puncture.*—It is practically safe if one uses a hypodermic needle and does not draw more than one or two drops of blood.

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[1] *Indian Medical Gazette*, January, 1906. [2] *Lancet*, March 2nd, 1907.

A COMMITTEE on the use of lead in the manufacture of earthenware and china has been appointed by the Home Secretary. The committee is to consider the dangers attendant on the use of lead in pottery, and to report how far these can be obviated by improved appliances and methods in lead processes, by the limitation of the use of lead, by the substitution of harmless compounds for raw lead, or of other materials for lead, and by other means. The committee is also instructed to consider the danger and injury to health arising from dust or other causes in the manufacture of pottery, and the special rules regulating the decoration of earthenware and china. The members are: Mr. E. F. G. Hatch (chairman), Mr. A. Vernon Harcourt, F.R.S., Dr. George Reid, Mr. William Burton, and Mr. Bernard Moore.

ON MEASLES.

BY E. WARD, M.D.CANTAB., F.R.C.S.ENG.

THE following remarks are founded on a number of cases, seen for the most part in private practice, and upon a series of 100 cases observed from beginning to end of the disease during an epidemic which occurred in a country town. Certain points were noticed in the onset of the disease, in the type of eruption, and in the complications met with which do not appear to be mentioned in books, and I have, therefore, been led to record them.

ONSET.

A form of onset which does not appear to be generally recognized, but which must, nevertheless, be well known to practitioners of experience, is that in which symptoms are present from the time at which the infection takes place, and yet the rash only appears at the end of fourteen days or so, as it would have done if there had been no previous symptoms.

There is, of course, great difficulty in deciding the date when infection has taken place; but now and again the date of infection is pretty clear, as the following cases will show:

CASE I.—An infant, aged 18 months, was seen on November 30th, about whose health the parents were always solicitous, and who was kept indoors except during especially fine weather. There was a measles rash one day old and Koplik's spots were present. Fourteen days before I saw the infant it had been taken on a visit to the next door neighbour, whose child had a "cold" and developed a measles rash on the following day. The day after this exposure to infection, and thirteen days before I saw the case, the baby vomited, and it had been sick on and off and had a "cold in the nose" ever since.

CASE II.—On December 1st I saw a little girl with red eyes and a coryza with no measles rash but with Koplik's spots. Instructions for isolation were given, but on the next day, when the rash had appeared on this patient, her sister, aged 3, had vomited, was unwell, and continually sneezing. Koplik's spots were looked for but were not found, and when from day to day they were not seen and no rash appeared, it seemed probable that the case was one of measles without the usual skin eruption; on the tenth day (December 11th), however, definite Koplik's spots were found; on December 12th there was diarrhœa, vomiting and epistaxis; on the 13th the rash appeared and a typical and severe attack of measles began to run its course.

CASE III.—A girl, aged 15, living in a village where there was no measles, paid a visit to a school in a distant town on November 28th. She felt ill next day, and on December 1st a doctor was called in, who found the patient "out of sorts," but was unable to arrive at a diagnosis. Fourteen days later a profuse urticarial rash appeared, which was attributed to eating pork; next day the urticaria faded and measles appeared. It was afterwards ascertained that two pupils of the school visited on November 28th developed a measles rash on the day following my patient's visit.

In a paper by Dr. Goodall appearing in the BRITISH MEDICAL JOURNAL for August, 1907, the onset of symptoms in specific fevers at the time of infection is briefly mentioned, but is considered exceptional. In measles, at any rate, I believe that this form of onset is not very exceptional, and its occurrence may be moderately estimated at 5 to 10 per cent.

The symptoms may be present from the time of infection, or they may occur at any time between this and the appearance of the rash. The apparent delay in the appearance of the rash in certain cases is to be explained by the presence of symptoms since infection, although it is true there are cases in which, after a normal incubation period, the onset of the rash is delayed for a further period of seven days or longer.

The two conditions—measles without a rash, and measles with a rash but without catarrh—are generally recognized, although Fagge and Pye-Smith doubt the existence of this latter, and mention that Dr. Eustace Smith takes the same view. In the cases coming under my own observation both these varieties have been seen quite definitely from time to time; a coryza also seems not uncommon in members of the household of the sick child, who are therefore under indirect observation.

It is highly probable that in measles, as well as other endemic specific fevers, the disease spreads from one individual to another as a simple coryza, until at length some suitably susceptible person is attacked, the virulence of the organism is enhanced, and a new epidemic then breaks out.

It is probable also that some of the patients with "morbilli sine morbillis" develop at some time or another a transient rash which may pass unnoticed. In a case of my own in which no rash was noticed, though looked for every day on account of a suspicious coryza, Koplik's spots were present, but disappeared again in two or three days.

In some cases, perhaps, after the primary symptoms of malaise and catarrh occurring at the time of infection, the patient is able to recover without the development of secondary symptoms, just as in syphilis there are cases which are said to have "aborted" owing to the administration of mercury before the appearance of the secondary symptoms.

SYMPTOMS.

Prodromal rashes in the 100 cases carefully observed during an epidemic were less common than would be expected from the usual descriptions. In two there was an urticarial prodromal rash, in one a general erythema without urticarial wheals, and in a few there was the fine papular eruption frequently described. The exact percentage occurrence of this fine papular eruption could not be estimated accurately, as in several cases it seemed to be the first appearance of true measles rash of the fine type.

General glandular enlargement is well known as a useful sign of the onset of specific fevers, and it certainly occurred in several cases before the rash appeared, though rarely present before Koplik's spots. The enlargement seems dependent to some extent on the rash, for in some cases there was no enlargement at all until the rash appeared, and in others, though the rash was not present when the glands enlarged there was irritation of the skin as shown by the child's constant scratching: while in other cases again the groin glands did not enlarge until the rash was well out on the legs, though the axillary and cervical glands had been enlarged for two days. That the enlargement is not entirely dependent on the rash, but on a general infection, is shown by the fact that in cases of well-marked general glandular enlargement the spleen was palpable. In 4 per cent. of cases the spleen was felt at the height of the disease; but it retreated rapidly beneath the ribs within a week; the glandular enlargement lasted not infrequently well into convalescence.

Koplik's Spots.

A careful search for Koplik's spots on the buccal mucous membrane in the 100 cases which came under observation at a sufficiently early date has convinced me that they are as constant in occurrence as the rash itself; indeed, in one case previously mentioned Koplik's spots were present without the rash.

To see them and be sure of their presence requires some experience; for on the one hand they are difficult to identify until the medical man is used to their appearance, and on the other hand there are certain appearances in the mouth which are normal and which may yet be easily mistaken for the spots unless one is aware of this difficulty. A good light is essential; they should be looked for only in bright daylight by any one who is not quite familiar with them.

The spots have been very differently described by different writers, but none of the descriptions seem quite satisfactory. They may best be likened to miliary tubercles, especially to the fine tubercles that are seen on the brain in cases of tuberculous meningitis; and, just as in the case of these tubercles, the Koplik spots are often best seen by noting small irregularities in the light reflected from the surface of the mucous membrane. This is especially so when the light available is not very good, as, for instance, that given by a candle or a match. The spots are scattered irregularly over the mucous membrane of the cheeks and gums, and I have also seen them on the soft palate and fauces. They occur in groups most frequently, that remind one somewhat of the blotches formed by groups of papules in the measles rash on the skin, and the spots of a group may coalesce and form a whitish patch. There is generally some reddening of the mucous membrane at the base of the spots, but this may be absent and a fairly copious eruption of Koplik's spots may be present with no reddening of the mucous membrane.

It may be considered fanciful to describe anatomical groups of spots when they are distributed irregularly,

none the less it is convenient to bear these groups in mind, as it leads to a more systematic examination of the mouth. There are:

1. A group round the opening of Stenson's duct.
2. A group above and behind this opposite the upper molar teeth.
3. A group opposite the lower posterior molar teeth, spreading on to the gum behind the teeth.
4. A group in the vertical fold behind the teeth where the labial mucous membrane becomes continuous with that over the ascending ramus of the mandible.

Of the appearances likely to be mistaken for Koplik's spots there may be mentioned a number of small pale projections found normally in the fold mentioned in (4) and spreading in front of this; and there is also seen in many mouths a tiny speck on the labial mucous membrane, about ¾ in. below the parotid papilla, which may be mistaken for a Koplik's spot, but which is, I believe, a tiny congenital projection, possibly an accessory Stenson's papilla. Small white ulcers, too, due to stomatitis, may be mistaken for groups of spots.

With the outbreak of the measles rash on the body there generally is an accompanying stomatitis which reddens the whole of the buccal mucous membrane, sometimes in patches at first; and in this general catarrhal stomatitis Koplik's spots rapidly disappear. The spots are sometimes late in appearing, and may not appear till after the rash; if catarrhal stomatitis is then present they may easily be missed. This stomatitis occasionally causes a peeling of the tongue exactly like the strawberry tongue of scarlet fever. In 2 per cent. of cases I have seen petechial haemorrhages in the mouth at an early stage of the disease, and have been able to correctly prognose a severe attack.

The Character of the Rash.

The types occurring may be roughly classified into:

1. The fine.
2. The medium.
3. The coarse.

It is the fine type which is most likely to be mistaken for rubella or for scarlet fever, and the coarse type which often goes with a mild attack, and may be taken for simple urticaria.

Although the mode of spread of the rash usually described in books is the commonest, it is not generally mentioned that the first appearance of the rash is frequently not on the face, but on the buttocks and around the anus. This occurs probably in one case in every three if carefully looked for, and the rash spreads from the buttocks slowly up the back before there is anything to be seen on the face.

It is stated in nearly all textbooks that the cases of black measles described in the later middle ages were more likely haemorrhagic small-pox; this may be true, but cases of black measles still occur. In one of the following cases haemorrhages were associated with a severe attack, in the other the attack was mild.

CASE IV.—A small boy was seen on December 2nd with an early measles rash and with Koplik's spots. His infant brother was seen for the first time on December 11th; the baby had been ailing since the day before, there was a nasal discharge, and I thought there were a few Koplik's spots, but could not be sure. There was a pale fine papular eruption about the gluteal folds and buttocks. Two days later the buttock eruption had slowly spread up the back, and there were definite Koplik's spots in the mouth. The attack was very severe, the rash came out very slowly, double otorrhoea and bronchopneumonia supervened, and large black patches, due to ecchymosis, appeared on the buttocks and neck shortly before death, which took place on December 21st.

CASE V.—A boy aged 5 had been ill one week when seen on December 18th, complaining of headache, nausea, and malaise. There were pyrexia, vomiting, and diarrhoea; no rash and no Koplik's spots. The rash, which came out on December 21st, was slow in spreading and fine in type. On December 24th it was found that the rash was definitely purpuric all over both legs and arms.

COMPLICATIONS.

Apart from the usual and well-recognized complications, bronchopneumonia, laryngitis, stomatitis, diarrhoea, otorrhoea, and conjunctivitis, as mentioned by Dawson Williams in *Allbutt's System of Medicine*, there is a corneal complication which seems to have escaped description.

CASE VI.—In the case of a boy aged 7, when the rash was well out there was, in addition to the usual redness of the eyelids, so much photophobia as to suggest the existence of a corneal ulcer. On careful examination of the eyes by reflected light I found that the surface of the cornea was smooth but stippled; and the reflection from the cornea looked like a reflection from wet fine sandpaper. There was also a very slight haziness of the cornea. In ten days the cornea was absolutely smooth again and there was no photophobia.

This lesion I have since seen in about 2 per cent. of cases, and now always look for it in cases of well-marked photophobia. There seems to be no abrasion of the surface, for no staining occurs with fluorescin; it may be due to an irregular subepithelial collection of lymph.

Of other diseases which may develop during the course of measles diphtheria is considered the most common, and it is often stated that a membranous laryngitis or pharyngitis in measles is measles plus diphtheria. The combination is common, but the following cases show that all membranous laryngitis in measles is not diphtherial, and I suspect that some of the cases considered to be diphtheria after measles come under this heading.

CASES VII AND VIII.—A girl, aged 3 years, and her brother, aged 10 months, were admitted to hospital with a fading measles rash and marked laryngeal obstruction. In the case of the girl there was membrane on the fauces, while the boy had a greyish-yellow membrane on the lips, inner aspect of the cheeks, and on the palate. In both patients there were also signs of extensive bronchopneumonia. At the autopsy there was a false membrane in the case of the girl extending down as far as the larger bronchi; there was a similar condition in the case of the younger patient, but the membrane was relatively more extensive. Cultures, taken in each case before death, grew only staphylococci and streptococci; and no diphtheria bacilli were found even in the false membrane removed after death.

One family I saw had measles and varicella running through the household at the same time.

Cases of Coincident Measles and Chicken-Pox.

On October 30th, F. W., aged 4, was first seen when she had reached the fourth day of an attack of measles; her brother, C., had an eruption like a fading varicella.

On November 8th the baby, aged 1 year, showed a varicella eruption, and on November 9th, when seen by me, had also a typical measles eruption, and but for the other cases in the family it would have been difficult to arrive at a correct diagnosis.

C. W. developed a typical measles rash on November 9th, and F., who had had measles, commenced on November 12th a severe attack of varicella with pocks on tongue, fauces, and buccal mucous membrane, as well as on the edges of the lids, and one pock on the conjunctiva spreading on to the cornea.

Paralysis of Soft Palate.

A complication of measles which is mentioned in *Allbutt's System* is paralysis of the soft palate. It might be thought that this is due really to a concomitant diphtheria, but in the following case there was never any clinical evidence of diphtheria, though it is true a bacteriological examination was not made. The patient in the case was a baby aged 9 months, which had a mild attack of measles, and when the rash had faded it was found that the infant returned all its milk feeds through the nose. There was a definite paresis of the soft palate, which cleared up in about fifteen days.

PROGNOSIS.

It is useful to be able to tell the parents of a child with measles whether the attack will be severe or not, and to be able to foretell a special liability to bronchopneumonia or other complication. As measles is usually a mild complaint and is quickly over, most authors do not dwell on the prognosis.

In the cases I have seen, the patients on whom the rash came out slowly had a severe attack, as a rule, while those with a rapid outbreak of a profuse eruption did well. A profuse eruption of Koplik's spots generally preceded a profuse skin eruption, and was therefore an aid to prognosis; the finer the type of rash the more severe the disease.

Bronchopneumonia occurred more frequently in cases where the physical signs found at the first examination were mostly at the base of the lungs, or were confined to one lung only. The cases with extensive signs in both lungs with dyspnoea and slight cyanosis occurring early in the disease quickly recovered, although the general condition of the child seemed at first sight to justify a guarded prognosis.

In a case of extensive eczema of the head and face it seemed to me that the eczema would probably be worse

after the attack; but it was distinctly better. A week later, however, the eczema relapsed, and was worse than ever before.

IMMUNITY OF INFANTS.

The immunity to measles of infants under 6 months old is well known, and the following case shows this immunity in a striking way.

A family of ten, consisting of father, mother, and eight children, were living in two rooms. The three youngest children had not had measles. One of these contracted measles, and the day afterwards the mother was delivered of a sickly male child. In a few days the two other children had measles; but the baby never contracted the disease, although the three children ill with measles were sleeping in the same bed as the mother and baby, and the mother alternately nursed the suckling baby and the fretful children.

This immunity of sucklings has been explained by some experiments of Ehrlich on mice. A female mouse immunized to the castor-oil poison bore mice that were immune also to the poison, but whose immunity passed off in about forty days. The immunity passed off more quickly if the mother did not suckle the young mice; and if the mother suckled the young of other mice not rendered immune, instead of her own young, some immunity was transferred to those, showing conclusively that the immunity of the mother is partially transmitted by the milk as well as through the placenta. Some such explanation is necessary in the case cited above, as the exposure to infection could not have been more complete.

TREATMENT.

Most writers seem to regard the treatment of measles as of little importance apart from the treatment of complications. This view is not correct, for I have known of epidemics in which one practitioner who takes an interest in treatment has a very low mortality, while others practising in the same district have a high mortality. This cannot be altogether a matter of chance.

Every practitioner knows the drugs which are usually given in measles, but it is sometimes forgotten that there are three lines of treatment for every disease.

First, there is *physical treatment*; and it is after this that hospital training generally stops; the treatment I mean by rest in bed, warmth, local applications, and by drugs.

Secondly, there is *mental treatment*, at present largely in the hands of the Christian Scientists. Means are taken to give the patient a suitable confidence in himself and in his medical adviser, and to give him a suitable hopefulness.

Thirdly, *social treatment*. It is necessary to create a suitable social atmosphere around the patient. The relatives must have confidence in the doctor; they must believe that he thoroughly understands the case, and that he is doing all that can possibly be done for the patient.

With children there is comparatively little mental treatment required, but social treatment is very necessary; and it is only by recognizing this, and by strict attention to this line of treatment, that it is possible to get instructions carried out properly.

Poor mothers are often very careless with children suffering from measles, for they regard the complaint as trivial; and it requires much eloquence to persuade them to take more care and keep the children warm. The equanimity that Osler preaches is an excellent general attitude for the practitioner; but every one must be prepared to lay this aside and use such means of persuasion that may occur to him. One practitioner had such a difficulty in persuading the mothers in a certain colliery village to take reasonable care of their children during a measles epidemic, that he told them he would sign no death certificate if any child died, as it would be the mother's fault. The threat of an inquest was the most effective means of persuasion he could find, and for the children's sake he was certainly justified in using this means.

THE International Association for Cancer Research, which has had to encounter not a few difficulties in its birth, has at last come into being. The objects are the promotion of the investigation of cancer, methods of treatment, the collection of statistics, and the establishment in Berlin of a central bureau of information on everything relating to cancer. The directors of our own Cancer Research Fund have not seen their way to join the Association.

THE USE OF SERUM IN SCARLET FEVER.

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THE most commonly accepted nomenclature as regards the severer cases of scarlet fever is that which classifies them into toxic and septic. In the present state of ignorance as to the nature of the organism that is the cause of scarlet fever, the pathology of the toxic state must remain obscure; the septic condition, however, is known to be due to streptococci. Although this arbitrary classification may on bacteriological grounds be open to criticism, yet it furnishes a satisfactory clinical nomenclature. The clinical manifestations of the two conditions are briefly these:

Toxic.

The onset is sudden, and is characterized by rigors, convulsions, rapid rise of temperature, sore throat, and generally the appearance of a brilliant scarlet rash. The temperature rises, perhaps, to 104° to 105° F. in the first twenty-four hours. The child becomes delirious, the tongue is heavily coated, and vomiting and diarrhoea with loose green stools set in. The condition becomes progressive, convulsions perhaps continue, the rash becomes more pronounced and deeper in colour, till finally, in spite of treatment, the delirium passes into coma, and the child dies. Death ensues often within forty-eight hours after onset, and rarely occurs later than the fourth day. There is in this condition generally no ulceration and little swelling of the fauces, no purulent discharge in nose or pharynx, and little swelling of the cervical glands.

Septic.

In this condition the onset is slower, the illness frequently, indeed, beginning as an attack of simple scarlet fever with generally some swelling of fauces and some deposit on tonsils. As a rule, about the third, fourth, and fifth day of illness the temperature, previously between 101° and 102° F., makes a fresh rise, and the average temperature level becomes higher. At the same time there is seen an exacerbation of the faucial inflammation—the fauces often swelling so much as almost to meet in the mid line, the pharynx becomes full of muco-purulent discharge, and the cervical lymphatic glands swell often to a large size, and become tender. During the next few hours the faucial mucous membrane becomes ulcerated, and a profuse purulent nasal discharge begins. This nasal discharge is often fetid, and is always irritant, causing excoriation of nares and upper lip. At one or other stage the punctate scarlet rash takes on a petechial or haemorrhagic character, due probably to extravasations of blood at the bases of the papillae. This is mostly seen on the extensor aspects of the elbows and knees, less often the wrists, and sometimes is seen on the lower part of the abdomen. This rash will be referred to as the "septic rash." The onset of this complication in the course of the disease is often marked by diarrhoea, but the almost invariable symptoms which should arrest the attention of the attendant are the fresh rise of temperature, the enlargement of the cervical glands, which is generally rapid, and the onset of the profuse acrid rhinorrhoea.

The subsequent course of scarlet fever which has assumed this type is generally protracted. The fauces remain ulcerated, becoming frequently necrosed until large sections of the soft palate and fauces slough away; the glands remain large and tender, the infection spreading through the periglandular tissues until a general cervical cellulitis is set up, producing—when bilateral—the "bull-neck" condition, and frequently the cellulitic condition becomes suppurative, requiring incision and drainage—occasionally it sloughs extensively. This cellulitic condition has even been recorded to have extended and involved the mediastinal tissues. If death does not supervene, the ulcerative condition of the fauces is always troublesome; the mucous membrane sometimes takes weeks to heal, and may involve so much of the muscular structures as to produce a paralysis of the soft palate and consequent difficulty of swallowing, with nasal regurgitation of food. The recovery may be prolonged over three, four, or five weeks, and be, perhaps, accompanied by such

pyaemic manifestations as suppurative arthritis, subcutaneous abscesses, bronchopneumonia, or even suppurative mesenteric glands, for these were discovered *post mortem* in one case.

The pathology of this "septic scarlet" condition is fairly well defined. The occurrence of scarlet fever is accompanied by a large increase in the number of streptococci in the mouth and pharynx, and itself probably produces a condition of lowered resistance on the part of the faucial mucous membrane to the invasion of those streptococci. These organisms settle on and produce ulceration of the faucial mucous membrane and find their way along the lymphatics to the glands, where they produce the conditions of adenitis, periadenitis, and cellulitis, often even abscess. They also, as has been shown, find their way into the general circulation and set up pyaemic manifestations.

Whether the several constitutional disturbances which accompany this septic condition are the result of the absorption of toxins manufactured by the streptococci resident in the fauces or the result of bacterial poisons produced by the general systemic streptococcal infection cannot at present be stated. Clinically, however, it cannot fail to be recognized that this "septic scarlet" condition is accompanied by profound constitutional disturbances, and is, as a general rule, protracted over a long period. The slow healing of the faucial mucous membrane, the persistence of the rhinorrhoea, and the long-continued discharge from the cervical suppurative area are its most troublesome features.

Some time ago the first attempt was made at a scientific treatment of this septic condition, when it was proposed to inject a weak solution of phenol into the peritonsillar tissues on the onset of this condition, the object being the absorption of the phenol along the same lymphatic route as the streptococci themselves and the consequent destruction of such of the streptococci as came under the influences of the phenol.

Polyvalent Serums.

Since then various attempts have been made with different types of antistreptococcic serum and combined polyvalent serums to obtain the same object by a physiological rather than a therapeutic method. Recently Messrs. Burroughs and Wellcome have used for the purpose of making an antiscarlatinal serum only streptococci which had been obtained from the scarlatinal cases, and I am indebted to the courtesy of that firm for the following account of the method of its preparation:

The antistreptococcus serum (scarlatina) is obtained from horses immunized against cultures of streptococci which have been isolated from various cases of scarlet fever. These streptococci have been found in some cases in the blood, in other cases in the suppurative lesions which complicate pure scarlet fever, such as ulcerated throat and middle-ear disease. No particular type of streptococcus is therefore exclusively employed, the object having been to obtain as many organisms from as many cases as possible, so as to include a variety of strains.

It is thus seen that the serum is a polyvalent one, and during about a year Burroughs and Wellcome's serum was used on many of the worst cases of "septic scarlet" that came into the wards of the Western Hospital. Forty-two cases were treated, and as these were the worst cases among over 2,000 consecutive admissions the test of the efficiency of the treatment was as severe as it could be under the circumstances. The results are best shown in the form of a table (see Table I).

The table accounts for 37 cases; the remaining 5 were typical "toxic" cases, in all of which a fatal result ensued; these were of ages 2, 4, 5, 7, 5 years, and died on the third, fifth, fourth, third, and sixth days respectively. It was thought, however, by experienced observers that in two of these some distinct modification of the usual course of a toxic attack was obtained. These were the cases that died on the fourth and sixth day. In the latter venesection was first performed, about 10 oz. of blood being removed and the serum (50 c.cm.) then injected.

These 37 cases, then, show 26 recoveries and 11 deaths. Two of the deaths may fairly be excluded, as one had a chronic post-rheumatic endocarditis and the other a congenital cardiac condition with chronic cyanosis of skin. As the cases were all very severe "septic cases," the proportion of recoveries, though not startling, is yet sufficiently encouraging.

TABLE I.

Age.	Recovery.	Deaths.
1 to 2	0	1
to 3	3	1
3 to 4	2	3
4 to 5	3	3
5	5	0
6	4	2
7	1	1
8	0	0
9	2	0
10	1	0
11	0	0
12	1	0
13	2	0
14	1	0
15	1	0
	26	11

The efficiency of the treatment is, however, to be judged in another way—by the marked improvement in symptoms seen in those that do recover. This improvement has been manifested in the cessation of delirium, the fall in the temperature, the disappearance of the muco-purulent pharyngeal secretion with subsidence of faucial swelling, the cessation of rhinorrhoea, or, in those cases in which the rhinorrhoea persisted, the disappearance of the purulent character of the discharge, and the comparatively rapid cleaning and healing of the fauces. Another less obvious result is the prevention of suppuration in cervical glands. In only three of the series was there any suppuration, while experience teaches that a much larger proportion of these cases would under ordinary conditions have shown cervical suppuration. The rapid recovery of the patients from deglutition paralysis is part of the recovery of the fauces, for this phenomenon is not in scarlet fever of nerve origin, as in diphtheria, but is a mechanical condition due to infiltration of the muscles of deglutition by inflammatory exudates.

Time of Administration.

The streptococcal invasion gives abundant evidence of its own onset in the superadded rise in temperature, the rapid enlargement of the glands, the exacerbation of faucial inflammation, and the onset of rhinorrhoea. The occurrence of one or more of these conditions during the first week of a case of scarlet fever should be taken as the indication for the use of serum. Appended is a table showing the results according to the day of disease on which serum was administered.

TABLE II.

Day of Disease.	Recovery.	Death.
2	1	0
3	3	1
4	7	1
5	4	1
6	2	2
7	5	1
8	1	0
9	1	1
10	1	1
11	1	0
13	0	1
14	0	1
	26	11

It will be seen that the proportion of recoveries to deaths increases according to the earliness of administration. On or before the fourth day the ratio is 11 to 2; fifth day, 15 to 3; sixth day, 17 to 5; fourteenth day, 26 to 11.

Method of Administration.

In 4 cases 50 c.cm. were administered intravenously and the impression formed from the few cases observed is that the intravenous injection produces more rapid and satisfactory results than the subcutaneous. It is not, however, always feasible and in one case (*vide infra*) was followed by undesirable results. In this series of cases the dose used was at first 25 c.cm., but it was found that 50 c.cm. gave much better results. In 5 cases every sample of urine passed was collected for four days after injection and examined. In no case was there any abnormality. The serum was not eliminated as such, nor did it produce any renal irritation.

Undesirable Results.

The most serious was that seen in one case in which within an hour after the injection of serum intravenously a rigor and a temperature of 105.6° occurred. The attack soon passed off, and recovery was normal. Three cases were followed by an abscess at the site of injection. Two other cases showed an erythematous rash on the trunk twelve and fourteen days after injection respectively; this rash may or may not have been produced by the serum. Six cases showed an urticarial rash one, one, two, three, eleven, and twelve days after injection respectively; one of these was followed by a brilliant erythema circinata. Three cases of suppuration occurred, while experience teaches that a much larger proportion of these cases would have under ordinary conditions shown cervical suppuration.

CONCLUSION.

It is difficult with such a small series of cases to give anything more than the impressions of the observer, and it is impossible to detail each of the cases. The recovery-rate is certainly better than usual, and the fact that the earlier the administration of the serum the better are the results is also favourable evidence.

But I could not help being struck with the clinical course of many of the cases that recovered. Within forty-eight hours of the injection the temperature began to fall, became normal in another forty-eight hours, and remained normal, the cervical glands began to subside, the necrosis of the throat began to clear up, and the rhinorrhoea either ceased or lost its purulent character. Not all of the cases showed so satisfactory a course, but most did very much better than would have been expected in the ordinary way without serum injection.

In one case the temperature reaction to the first dose of serum was marked, but the improvement was not sustained. It may be that there was a case of invasion by several types of streptococci, some of which the particular serum used did not affect.

Observation of these 42 cases leaves the distinct impression that the injection of the "antiscarlatinal" serum in large enough doses (not less than 50 c.cm.) and early enough in the disease—that is, as soon as the onset of rhinorrhoea, swelling of cervical glands, and superadded rise of temperature, the signs of septic invasion, occurred—will produce a marked improvement in "septic" cases.

In "toxic" cases little can be said in favour of the use of serum, but here some slight improvement was noticed in 2 cases.

HORSE-POX DIRECTLY TRANSMITTED TO MAN.

BY A. F. CAMERON, M.A., M.D., D.P.H.,

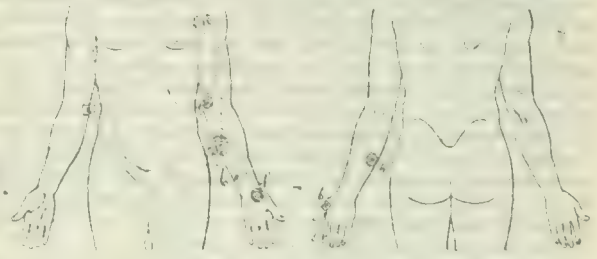
SENIOR ASSISTANT MEDICAL OFFICER, SOUTH-EASTERN FEVER HOSPITAL; LATE SENIOR ASSISTANT MEDICAL OFFICER, SMALL-POX RECEIVING STATION, METROPOLITAN ASYLUMS BOARD.

DURING the small-pox epidemic in London in 1901-2 about 10,000 patients were re-examined at the receiving stations, and about 1,000 of these were found not to be suffering from small-pox. The cases included many of great interest and variety. The following is an account of one of the non-small-pox cases which deserves to be placed on record.

F. K., 32 years of age, a stableman, was admitted to the receiving station, South Wharf, Rotherhithe, on March 31st, 1902, certified to be suffering from small-pox.

Condition on Admission.

He complained chiefly of pain in the left arm and armpit. His temperature was 100·4° F., his pulse 100. He was at work up to March 25th, but first felt out of sorts on March 23rd, when he noticed two red spots on his left arm in the position indicated by 1 and 2 on the diagram. These "spots" became painful and



enlarged, and others appeared in the positions indicated. At the time of admission the rash on which the diagnosis of small-pox had been based was confined to the arms and left hand. It consisted of only eight lesions, of which seven were on the left forearm and hand, and one was on the right arm just above the level of the bend of the elbow. There was severe lymphangitis of both arms, and the axillary glands on both sides, but particularly on the left, were much enlarged and very tender.

The lesions varied in size, but not in type. They resembled the lesion of a primary vaccination about the eighth or ninth day of its development, but they were more severe. The vesicular ring with turbid contents was well raised above the level of the surrounding skin on an indurated and tender base. Within the ring was a brownish-black, slightly depressed crust. In the larger lesions on the arms the diameter of the vesicular ring varied from 12 mm. to 9 mm. In two, situated one on the left forefinger, the other near the base of the left thumb, the vesicle was much smaller. In two to three days after admission the severe pain in the arms abated. The local indurations and lymphangitis gradually disappeared as the lesions crusted and the gland swelling subsided without suppuration. A point to be noted is that for several days the patient had severe constitutional disturbance.

The fact that the lesions were confined to the left arm and hand (there was only one on the right arm), their uniform type and synchronous development, and above all their resemblance to the lesions of a primary vaccination, suggested that they were due to inoculation.

History.

He stated that for some time before the onset of his illness he had been engaged in treating a horse suffering from "ulcers of the mouth and throat." The treatment consisted partly in washing out the mouth, and for the purpose he used an ordinary syringe. The horse's head was raised and held in the usual way. The man held the charged syringe in his left hand, while he pressed home the piston with the right. His left forearm and hand were fully exposed to the stream of fluid returning from the horse's mouth. His right hand and arm were out of the way of the return stream, and were exposed only to the fluid which might splash or trickle along the outside of the syringe. This appears to explain the severe affection of the left arm and the comparative immunity of the right. The attitude of the arms in using the syringe, and the man's habit of keeping his shirt-sleeves rolled above the elbow when at work, probably accounts for the grouping of the lesions below the elbow, and the complete immunity of the left upper arm.

The patient had been successfully vaccinated in infancy and not since. He was vaccinated at the receiving station on three occasions with lymph of two strains known to be potent, but on no occasion did any reaction follow.

Consideration of all the circumstances of the case led to the diagnosis of horse-pox.

From time to time, since Jenner's and Loy's work, other cases have been reported of the direct transmission of the disease to man from a horse suffering from "sore heels." Eighteen months after the occurrence of the case F. K., my attention was called to a similar case which had been reported to the Clinical Society of London by Mr. John Langton in 1877, a case indeed so similar, that the coloured plate which accompanies the report in volume x of the *Clinical Society's Transactions*, might serve, with but slight alteration, for the case now recorded. In Mr. Langton's case, however, the horse from which the disease was contracted was "suffering from inflammation of the legs and cracked heels," and no eruption or ulceration in the mouth was noted. In the case here described the patient did not say that the horse was suffering from any other local condition of the nature of "sore heels" or "grease," but

unfortunately the veterinary surgeon who was in attendance was unable to give any accurate information on this point.

Still it appears almost certain that the man derived the infection directly from the "ulcers" in the horse's mouth, so that the case resembles the one investigated by Bouley in 1863, and reported by him at the time to the French Academy of Medicine. Bouley was then engaged in experimenting on the possibility of transmitting diseases of the horse to other animals by inoculation. His horse had pustules in the mouth but no eruption elsewhere, and at first he described the condition as an "aphthous stomatitis." By inoculation of the matter from the pustules he produced "true pustules of cow-pox," from which he subsequently inoculated an infant of 11 months. Bouley afterwards recognized that the condition in his horse was not an aphthous stomatitis, but that it was one of the possible local manifestations of the same horse disease as was dealt with by Jenner and Loy, and shown by the latter to be a constitutional disease.

I am indebted to Dr. W. M. C. Wanklyn for permission to publish the notes of F. K.

PRIMARY PNEUMOCOCCIC PERITONITIS.

BY ANDREW SMITH, M.D EDIN.,
WHICKHAM, DURHAM.

I WISH to thank Dr. Archibald Cuff for his excellent paper on Primary Pneumococcic Peritonitis in the JOURNAL of April 18th, and to supplement it by two cases that have come under my own observation.

CASE I.—A girl, aged 8 years, was suddenly taken ill during the night with severe abdominal pain, prostration, and restlessness. When I saw her next morning she looked flushed, had somewhat hurried breathing, and looked ill. Abdominal pain was evidently severe and definitely located in the right inguinal region, there was marked tenderness and rigidity, and she lay with the thigh flexed. The temperature was 103° and pulse quick. The general aspect was, however, most suggestive of pneumonia, and the chest was carefully examined without result. Next day the condition was much the same and I felt very anxious, still suspecting pneumonia, but fearing to allow an acute appendicitis, which it entirely resembled, to go wrong without the chance of operation. Early next morning, still finding no physical signs of pneumonia and the patient obviously getting worse, I sent her to hospital with a diagnosis of acute appendicitis, stating in my letter that I had endeavoured to eliminate all other possible conditions, including pneumonia. Two days later I received a note from the hospital surgeon, stating that his diagnosis was pneumonia, though even then the physical signs were very indefinite; two days later they became more pronounced and the patient was removed to the medical wards. The following week I saw the patient in hospital and was surprised to find her still very ill, with high temperature, and still almost wholly complaining of abdominal symptoms; the abdomen was now somewhat distended. There had been something of a crisis, but the temperature speedily rose again and continued high but very irregular. An extension of pneumonia to the left lung was suspected, but there were no physical signs, and the temperature was essentially a pus temperature. Empyema was negatived after use of the exploring needle. Things went on much in the same way for several days more, the abdomen increasing in size, when the surgeon under whose care I originally sent her was asked to see her again. By abdominal incision he evacuated, as he described it, "not pints, but gallons of pus pneumococcal in origin." Recovery was speedy and complete.

I do not doubt that a true pneumonia did exist in this case, but I feel equally certain that the peritoneum was also attacked from the very beginning of the illness, and in any case there was a genuine pneumococcic peritonitis.

CASE II.—Not long afterwards a child 4 years old, a relative of my own, was taken ill during the night with severe abdominal pain, again definitely located in the right inguinal region. When the doctor saw her next day he recognized the seriousness of the attack, and from the situation of the pain with tenderness and rigidity he suspected acute appendicitis, and called in a surgeon, who reserved his judgement, and advised against operation. Two days later I was asked to see her, and on entering the room I was struck by her appearance; it seemed so typical of pneumonia—flushed cheeks, hurried breathing, and herpetic eruption on the lips; there was an occasional short cough. The pain complained of was entirely abdominal in the right inguinal region, where there was marked tenderness and resistance and sense of fullness. Thorough examination of the chest failed to discover definite signs of pneumonia, though I satisfied myself that over a small area near the base the respiratory sounds were not quite pure. The temperature was high and the pulse quick. I saw her again on the eighth day of illness, when she looked much better, and the temperature was 99°. This certainly looked like a definite pneumonic crisis, but there were no further physical signs of pneumonia to be elicited on examination of the chest and the abdominal symptoms and signs persisted. The temperature rose again the same night; it continued to be irregular and the abdomen increased in size and fluid formed. We again had a surgeon to see her, some of the abdominal fluid was removed by an exploring needle and found to be a pure culture of the pneumococcus. The abdomen was incised and drained and the patient made a speedy and complete recovery.

Here, again, I think there can be no doubt that the peritoneum was attacked from the very beginning; I think the right lung was also invaded, but that view was not supported by the other doctors who examined her and not by the doctor under whose care she was throughout and who gave her the most devoted and anxious attention. In both these cases the general aspect was most striking, being so characteristic of ordinary pneumonia, including the herpetic rash in one case. The imperfect crisis is also worth noting, especially in the second case, if the peritoneum was alone attacked.

I am rather surprised at the bad prognosis which Dr. Cuff gives in these cases. Both my cases did very well, though they looked very ill before operation. Simple incision and drainage relieved them at once, and they recovered without untoward symptoms, just as does empyema when it follows pneumonia. I can scarcely believe that they are nearly as dangerous as septic peritonitis.

The great point, however, is that cases of primary pneumococcic peritonitis occur, and that we cannot afford to ignore them. Though in all cases of peritonitis one must still make every effort to discover a probable local origin—a centre of infection—it is well to keep this possible origin in mind.

I do not know what significance is to be placed on the fact that in both my cases the symptoms were located in the right inguinal region long before the peritonitis became generalized.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

CASE OF CHLORODYNE POISONING.

I WAS called to Mrs. T. B., aged 50, wife of a coal-heaver, at 7.30 a.m. on April 25th. She was said to have been found lying on the floor of the day room "stiff and cold." There was a bottle in the room containing ℥ss of liquid having the odour and appearance of chlorodyne; there was also a diluted mixture of the same in a teacup. The patient's breath smelt of chloroform, the skin was of an ashy grey tint, the pupils were equal, moderately contracted, and did not react to light. She answered questions when spoken to loudly. The pulse was regular and of fair volume. Zinc sulphate ℈j was given without result, ol. ricini ℥j, and also a teacupful of strong coffee and liq. strych. ♏v by mouth. At 9.30 the patient could not be roused, and the tint of the skin was greyer. There had been no emesis nor any action of bowels. A pint of urine was drawn off by catheter to prevent involuntary micturition. The pulse was regular and of good volume; there was slight conjunctival reflex, but she was quite unconscious except for an occasional opening of eyes. Liq. strychninae ♏iv was injected under the skin, and the stomach washed out. At 11.30 solution of potassium permanganate (gr. v in ℥iv of water) was poured into the stomach and retained there for half an hour, when it was removed by a second washing out, and half a pint of strong coffee was given through tube. An enema of brandy (℥ss in water ℥iv) was given and retained. The pulse at 12.30 was still good, 128. About 3 p.m. the patient recovered consciousness sufficiently to recognize her daughter and to drink some tea.

She stated that she had been taking chlorodyne "for years" for sleeplessness. She is in the habit of drinking strong tea without milk at all three meals, and eats little.

Farningham. T. F. HUGH SMITH.

HYDATID OF THE HEART.

ON April 4th, 1908, I was called to see a lady, aged 29, who had been taken suddenly ill that morning. I had not attended her previously. She had enjoyed fairly good health, but her doctor, who lived at a distance, had been seeing her recently for digestive trouble, and in the light of the subsequent history it is interesting to note that great irregularity of the heart's action had been noticed. She was in her usual health at 7.30 a.m., but on her sister visiting her an hour later she was unable to speak, though able to understand what was said to her. She subsequently got up and went to the lavatory but had to be helped back to bed. Her sister left the room for a few minutes and on her return found that Miss C. had fallen out of bed and was unconscious. She was lifted into bed and shortly afterwards vomited. I saw her at 10.30 a.m. She was completely unconscious, breathing stertorously and foaming at the mouth, the face pale and sweating, the lower limbs rigidly extended, the arms flexed and rigid, but there were no signs of paralysis. Pulse, 60. The heart sounds could not be well heard owing to the noisy respiration, but no valvular murmurs were detected. When I saw her later in the day there was not much alteration in the symptoms, the respiration became of the Cheyne-Stokes character and she died at 10.15 the same evening without recovering consciousness. *Post mortem* the heart was found markedly enlarged, and the pericardium universally adherent. On the surface of the left ventricle there was a projection the size of a Tangerine orange with two smaller prominences nearer the apex On opening these they were found to be hydatid tumours; they were caseating, and filled with numerous daughter cysts of all sizes. On opening the heart a small patch of recent ulceration was found on the outer wall of the left ventricle leading into the larger hydatid tumour and on slight pressure small hydatid cysts could be extruded into the cavity of the left ventricle. The valves were healthy.

The symptoms prior to death were evidently caused by one of these cysts or perhaps some of the caseous material being washed by the circulation into one of the larger cerebral arteries. The brain appeared perfectly healthy, and the embolus, though looked for, could not be discovered. There were several hydatid tumours in the liver, the largest about the size of a walnut, and these, like those in the heart, were full of small daughter cysts and were also caseating. All the other organs were healthy.

As regards the probable origin of infection in this case it is interesting to note that in the house where Miss C. had been living up to a year ago five or six dogs had been kept, some of them being allowed to sleep in the bedroom.

Bromley, Kent. H. B. SEDDON, M.R.C.S., L.R.C.P.

MUMPS.

THE notes of Drs. Higgens and Maidlow, in which the testicle and not the parotid was attacked, lead me to record three cases which occurred in this district in the spring of 1907, during an epidemic of "mumps." The epidemic was practically confined to our historic Glen of Imaal, a glen shut in completely with a circle of mountains, and nearly isolated from the other parts of the country. The three patients were young adults.

CASE I.—In the first of the three cases under notice, the testicle was the only part of the body affected; never at any time did the patient complain of pain or swelling of the parotid. The swelling was very painful, large, and felt tense; the temperature went as high as 105° F.; delirium was very marked, and the greatest difficulty was experienced in keeping the patient quiet. It was only on the fourth day that it struck me as likely that the orchitis was in some way connected with the mumps, but I was not sure. The attack passed off about the seventh day, leaving the patient very weak for some time.

CASE II.—I was called in by another medical man to see a case of a similar nature in which he experienced the same difficulty of diagnosis. The symptoms were similar and alarming, as in the first. This patient also recovered, but remained weak for a considerable time I understand.

CASE III.—This patient was a brother of Case I; delirium was very severe, with complete prostration and much difficulty in getting the patient quiet (very like delirium tremens). About the seventh day he also began to recover, but had a long convalescence.

In all three, anything venereal, or of the nature of an injury, may with certainty be excluded.

I examined the patients lately—that is, twelve months after the attacks—and in each case found marked atrophy of the testicle to about one-third the size of the sound one.

Textbooks of medicine in most cases do not refer to the condition at all, and then only in a casual way in those that do. In Musser's *Medical Diagnosis*, at p. 264, there is a slight reference, and the only other reference I could find among many books is in Osler's *Medicine*, from which I take the name "parotid orchitis," thus:

> The orchitis may develop before the parotitis, or, in rare instances, may be the only manifestation of the infection (orchitis parotidea).

The point in the cases to which I would draw attention, apart from the fact of the parotid not being affected at all, is the marked and violent delirium and the after-occurrence of atrophy.

Kiltegan, co. Wicklow. FREDERICK WALSH, L.R.C.P.E.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CITY OF BELFAST INFECTIOUS DISEASES HOSPITAL, PURDYSBURN.

ISOLATION OF THE BACILLUS TYPHOSUS FROM THE SPINAL FLUID OF A CASE OF TYPHOID WITH CEREBRO-SPINAL SYMPTOMS.

(Reported by ERNEST H. M. MILLIGAN, M.B.R.U.I., L.R.C.P. and S.I., Resident Medical Officer.)

A MAN, aged 37, was admitted to hospital on August 23rd, 1907. Ten days earlier, while at work, he became ill with severe pain in the head and had to go home to bed. The following day he had severe vomiting and became delirious. The headache and delirium lasted with slight intermission till admission.

On admission he was pretty sensible and had no headache, but complained of seeing double. Temperature, 103.4°; pulse, 104. There was slight purulent conjunctivitis and internal strabismus of the right eye. There were dried up herpetic vesicles about the lips. The mouth was very foul and the tongue covered with thick white fur. The neck was rigid and tender. Kernig's sign was present. The glands, posterior cervical, axillary, and inguinal, were shotty and enlarged. The abdomen was slightly tympanitic and the spleen palpable. The heart's apex beat was at the nipple line; a systolic murmur heard over precordium with maximum at the pulmonary area. The lungs were normal. The next day the temperature was 100.8° in the morning and 101.8° in the evening. The pulse was 88. The patient was delirious at times, but otherwise as before.

On August 25th the temperature was 98.4° in the morning and 99° in the evening. The pulse was 108. Delirium was still present, with tremor of lips and tongue. The hands were tremulous and picking at the bedclothes. The reaction of the pupils to light was sluggish, and there was occasional twitching of the facial muscles. The skin was slightly icteric.

On August 26th the temperature was 100° and the pulse 124. Delirium was still present, and there was continuous twitching of the muscles of the face, trunk, and limbs, and purposeless movements of the arms and legs; the eyeballs were constantly rolled from side to side. Strabismus was still present and the right pupil was larger than the left. A fresh crop of herpes had appeared about the lips. Towards the afternoon bubbling rales were heard and the respiration increased in frequency and the patient died at 4.30 p.m. Lumbar puncture was performed *post mortem* and the fluid examined by Dr. W. J. Wilson, Queen's College Laboratory, who found the *Bacillus typhosus* to be present in pure culture.

On August 25th an opsonic index with the meningococcus was estimated by Dr. Houston and the index was normal. On August 26th the blood gave a positive Widal reaction with the *Bacillus typhosus*.

Remarks.—According to Curschmann[1] cases of typhoid with cerebro-spinal symptoms are fairly frequent where the two diseases exist together as they have recently in Belfast. Out of 38 cases mentioned by Curschmann only two were over 35 years of age, the condition being commoner in children. The diagnosis of a case such as this would be impossible without a blood examination or lumbar puncture. The fact of there being a positive Widal reaction to the *Bacillus typhosus*, however, cannot be relied upon as this has been obtained in typical cases of cerebro-spinal fever from which the meningococcus has been isolated. After the fifth or sixth day the opsonic index with the meningococcus, as has been shown by Drs. Houston and Rankin of Belfast, is of much help. The isolation of the specific microbe from the lumbar puncture fluid of course clinches the diagnosis. The isolation of the typhoid bacillus from the meninges has, according to Curschmann,[2] only been accomplished in 10 cases. This case is also interesting from the fact that the bacillus was obtained in pure culture.

I must thank Dr. Gardner Robb, Visiting Physician of the hospital, for permission to publish this case.

NATIVE GENERAL HOSPITAL, SAMARAI, BRITISH NEW GUINEA.

COMPOUND FRACTURE OF THE SKULL IN THE MOTOR REGION, WITH ENTIRE ABSENCE OF FOCAL SYMPTOMS.

(Reported by R. Fleming Jones, M.D., Government Medical Officer, Samarai, British New Guinea.)

History of Injury.

A male Papuan, aged about 16 years, on the night of December 4th, 1907, *walked* from the landing place to the top of the hill on which the hospital is situated, a distance of more than a quarter of a mile. He was plentifully besprinkled with dried blood, and stated that he had fallen from a tree on a neighbouring island several hours before, and that his head was injured. Subsequent inquiry showed that he had fallen a distance of about 16 ft., his head striking a log of wood on which the short stumps of several broken branches were protruding. There was a very evident compound fracture of the skull, with escape of brain substance, but the patient was quite rational, and merely complained of a pain in his head. The pulse was 70, the temperature 99° F. There was no paralysis.

The scalp was cleansed, and a liberal wet lysol dressing applied with a view of further disinfecting it before operation, the disinfection of a Papuan scalp being no easy matter. On the following morning the dressing was removed and the scalp shaved. About a teaspoonful of brain matter mixed with blood was adherent to the gauze, and as much more exuded during the shaving.

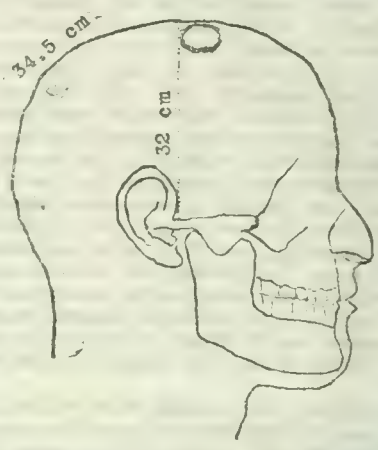
Operation.

Under chloroform an antero-posterior incision was made, revealing an irregularly circular wound in the skull, 3 cm. in diameter, but no fragments of bone were visible. The dura was much lacerated. With the finger, some fifty or sixty hairs about half an inch long, and having the appearance of having been cut off in bundles with some sharp instrument, were extracted, and the end of the finger felt a fragment of bone embedded in the brain at a distance of 4 cm. from the surface of the scalp, directly beneath the opening. This was removed with some difficulty, and also two smaller fragments which were revealed when the first was extracted. The three fragments together accounted for the missing portion of the skull. The haemorrhage which followed the removal of the fragments was alarming, and difficult to control. A small artery in the dura was twisted, and the arterial blood which gushed up from the bottom of the wound was at last checked by a jet of hot water, but not until the patient was showing the effects of loss of blood. No more hairs could be found, but it was not considered advisable to make a very extensive digital search. The dura was too much lacerated even to draw together, and the scalp wound was closed with catgut and dressed in the usual way.

After-History.

Three-quarters of an hour afterwards the patient was discovered walking about looking for the watercloset, and feeling perfectly comfortable. He showed a tendency to vomit rather easily for the next two days, but the temperature did not exceed 99·6° F. at any time, and the course of the healing was uneventful.

The cranial index is 78; the distance from the glabella to the inion 34·5 cm.; from the anterior edge of the external auditory canal to the same point on the opposite side 32 cm. The exact position of the wound is shown in the diagram. The opening in the skull was irregularly circular, being almost 3 cm. antero-posteriorly by 2·5 cm. in breadth. The centre of the wound was 2.5 cm. to the right of the median line at a point parallel with 15 cm. on the glabella-inion line, and 1·5 cm. anterior to the transverse line, the posterior edge of the wound touching this line. The longitudinal sinus had escaped injury. No electric apparatus was available, but according to the rules of cranial topography the position of the opening



was over the posterior portion of the superior frontal convolution, and into this portion of the brain the fragments had been driven. The patient showed no sign of disturbance of motion or sensation at any time, except that when the fragments were extracted there were some movements of the body which were not carefully noted.

During the period of convalescence he was caused to make various complicated motions involving the muscles of the trunk as well as of the limbs, but nothing abnormal was discovered, and there was no interference with normal sensation.

Several other cases of compound fracture of the skull in Papuans have been observed in this institution which have done remarkably well, but I have not seen, during my three and a half years' service, another case with such marked laceration of the brain or one involving the same area. The fact that these people to a large extent fail to realize the dangerous character of their injuries is undoubtedly a factor of importance in their recovery from them, but this does not account for the absence of focal symptoms in this case.

The patient was, if anything, rather superior to the average coast Papuan in intelligence, and the coast boys are, generally speaking, mentally superior to those from the interior.

[1] *Nothnagel's Practice.* Typhoid, pp. 271 and 273.
[2] Ibid, p. 271.

The London Intercollegiate Scholarships Board, which was constituted in 1904 with the approval of the governing bodies of University College, King's College, and the East London College, for the purpose of holding a combined annual examination for entrance scholarships and exhibitions tenable at those colleges and at such other schools of the University of London as might agree to make use of the organization of the board, now gives notice that on September 22nd next and following days it will hold a combined examination for medical entrance scholarships and exhibitions in the faculties of medical sciences of University College, King's College, and in the medical schools of King's College Hospital, St. George's Hospital, Westminster Hospital, and the London School of Medicine for Women. Further information will be found in our advertisement columns, and forms of entry can be obtained on application to the Secretary of the London Inter-Collegiate Scholarships Board, University College, Gower Street, London, W.C.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.

G. D. PIDCOCK, M.D., in the Chair.

Thursday, May 14th.

URETHRAL AND PROSTATIC SURGERY.

DR. J. MACMUNN read a paper on some points in urethral and prostatic surgery. The lecturer started with a brief description of the anatomy of the urethra, showing drawings taken from wax models. He pointed out that stricture and gleet had their stronghold in the bulb, the most capacious portion of the urethra. He showed an automatic urethrometer of his own invention which was of great service in urethral measurement, and would also reveal infiltrations. He also showed an apparatus for irrigating the urethra, by which the force of irrigation could be regulated. As regards the physiology of the urethra, etc., he stated that the anterior urethra in health is full of organisms. As regards the prostate, this was a purely sexual organ. There was no normal third lobe in man. In animals (with the exception of the seal) it was a double organ. Cowper's glands when enlarged could be felt between the finger passed into the rectum and the thumb pressing on the perineum. Turning to the subject of gonorrhoea, he found injections of protargol solution (½ to 2 per cent.) useful. Arhovine was of service in allaying inflammation. It was essential that injections should be kept in long enough, to ensure which he often made his patients use a particular clamp instead of trusting to pressure by finger and thumb. If a gleet had lasted for four months the patient must be examined for stricture. This examination must be scientific. He showed instruments for measuring the size of the meatus and for the diagnosis of spasm, and bulbs of improved shape. To cure gleet it was essential to open up the urethra while applications were being made. The follicles of the deep urethra often required emptying of their secretion, which could be done by means of a special exhausting syringe. As regards urethrotomy (internal) a good result could be obtained if the lips of the incision could be kept apart. He varnished the lips of the incision with an orthoform or xeroform ointment, and passed a special instrument with an edge sharp enough to keep the wound open, but to do no damage, until healing took place. In the treatment of stricture he had tried fibrolysin twice, but without effect. He showed an ingenious urethrotome of his own invention, which would cut from behind forwards or vice versa. He thought external urethrotomy less effectual than internal as usually done. In cases of retention of urine, cocaine and adrenalin or hot flushing would often help to overcome obstruction. Every urethra should be cocainized before using instruments of any kind. Turning to prostatectomy, he thought that the chief merit for the introduction of this operation was due to Freyer. Incontinence of urine occasionally followed the operation, but not stricture. They should not be in too great haste to resort to the operation. The prostatic urethra was always removed. Perineal prostatectomy, though difficult, gave very good results in certain cases. Hypertrophy of the prostate was now generally thought to be due to inflammation of the posterior urethra, but, in the speaker's experience, it was quite as common amongst those who had never had urethral inflammation or sepsis. Increased length of the urethra was a valuable sign of enlarged prostate; over 8½ in. in the living indicated this condition. The cystoscope was of little use in diagnosis. The most accurate way to measure the length of the urethra was to find out first the length of the anterior urethra, due regard being paid to the degree of stretching of the penis, and to deduct this from the length of the catheter required to reach the urine; in that way the exact length of the deep urethra was found out. He had seen atrophy of the prostate in disseminated spinal sclerosis. In the discussion DR. PIDCOCK asked if argyrol was used for urethritis; were there any other sequelae of prostatectomy? DR. HILLS asked for details as to cocainizing the urethra. DR. OPPENHEIMER laid stress on the value of meatotomy in urethritis and stricture, as a small meatus often kept up the disease. He asked if urethral exhaustion caused haemorrhage. He agreed that the cystoscope was of little value in diagnosing prostatic disease. After retention had been relieved it was a good plan to fill the bladder half full of warm boracic lotion. DR. MACMUNN, in reply, said that he used 15 to 20 minims of a 5 per cent. solution of cocaine for cocainizing the deep urethra. He thought that this was a safe amount, and showed a syringe which he used for the purpose. He did not employ urethral exhaustion if the urethra was very inflamed or irritable. The proceedings closed with a hearty vote of thanks to the lecturer for his paper and demonstration of ingenious instruments.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

A. R. PARSONS, M.D., President, in the Chair.

Friday, May 8th, 1908.

HODGKIN'S DISEASE.

DR. F. C. PURSER showed the organs of a patient who had been under the care of Dr. Travers Smith, suffering from Hodgkin's disease. The glandular enlargement had been general, the tonsillar enlargement having led to very urgent symptoms. The blood count had shown generally 2,500,000 red cells and 12,000 to 21,000 white cells, with a high percentage (41 to 88) of lymphocytes. The latest count, made a fortnight before death, showed 12,500 white cells, 41 per cent. being lymphocytes. The case was further interesting in that he was first seen five years ago with typical primary and secondary syphilitic lesions, and there was a most definite history of the same symptoms twenty-seven years previously. At the time of his death the patient was 53 years old. The pleural cavities and abdomen were full of fluid. The right lung was partly collapsed; both were oedematous. The pleurae were extensively infiltrated with lymphoid cells. There was no infiltration of the lung parenchyma. The heart was a marked example of brown atrophy. The liver on the surface was almost typical of atrophic cirrhosis, though no interstitial inflammation could be detected on section. The nodules on the surface were composed of masses of lymphoid cells, which also infiltrated Glisson's capsule and the interlobular capillaries. There was little or no overgrowth of fibrous tissue. The spleen was described as three times its normal size; it was soft, but not otherwise remarkable. Though no lymphatic glands had been found enlarged in the thorax, the abdominal aorta was sheathed several layers deep in lymphatic glands, which had lost all typical structure, and were in many cases welded together; into some haemorrhage had occurred. One nearly occluded the portal vein and explained the ascites, which had been latterly a very urgent symptom. No organ had undergone fatty or amyloid change. DR. TRAVERS SMITH said the case was interesting as that of a man who had acquired syphilis on two occasions with an interval of twenty-seven years. There was more evidence than Dr. Purser had mentioned that the first attack was genuine syphilis, for he had had a condition of partial blindness, which Dr. Joyce had considered to be indubitably of syphilitic origin. The enlargement of his tonsils and retropharyngeal adenoid tissue was so great at one time on the last occasion that it led almost to his death from asphyxia. There was great enlargement of his spleen and liver on his last admission to hospital, and he had no doubt that both they and the superficial glands became smaller before he died, though he would be inclined to think that his abdominal glands became larger. He inclined to the diagnosis of Hodgkin's disease rather than lymphatic leukaemia.

A SPINAL ABNORMALITY.

DR. HARVEY showed a girl aged 17, who had complained of pain in the back for the last two months. She was engaged in collar-making, and the pain only came on after prolonged stooping over her machine. Her father had noticed some three months previously that the patient held her right shoulder higher than the left. She herself, however, believed that she had never had a

straight back. The pain complained of did not seem to be very acute, nor did ordinary physical methods of examination cause any distress. The case appeared to be an ordinary lateral curvature, but a radiograph taken of the patient's spine showed an irregularity in the vertebral bodies which led him to make the erroneous diagnosis of caries of the dorsal vertebrae. More careful examination of the negative, however, showed that there were only eleven ribs on the left side, and that the left side of the fourth dorsal vertebra was also absent. The case, then, seemed to be one of failure to develop the left side of the fourth dorsal vertebra, with total absence of the corresponding rib on the same side. Professor DIXON said the rarity of the condition might be gauged from the fact that whenever it was alluded to, practically always the same two cases as Dr. Harvey had quoted were mentioned.

AT a meeting of the Section of State Medicine on April 31st, Dr. W. R. DAWSON, President, in the chair, Mr. TOBIN read a paper in which he urged that, in order to promote uniformity in the registration of diseases in hospitals, the official books should have added to them a column, and in this column should be inserted the number of the disease according to the classification in nomenclature of disease drawn up many years ago by the Royal College of Physicians. The proposition, was well received, the members present recognizing the need for some such step, and for the most part considering that though some modifications in the nomenclature might be required by modern developments, the plan indicated would be advantageous. Dr. LEDWICH read a paper in which he stated that during the twenty years he had been physician to the Old Men's Asylum 98 old gentlemen had been under his care. Of these 71 had died, 22 were still living, and 5 had resigned. Of the total number who died, 5 lived to be over 90 years of age and 1 to be over 100. The records of death only dealt with 65 cases, because in 6 cases the notes had been lost. In these 65 cases senile degenerations accounted for 24.6 per cent. of the deaths, while lung diseases were responsible for 15.3 per cent., and apoplexy for 9.2 per cent., an interesting feature of the statistics being that there were only 3 cases of malignant disease and 4 cases of enlarged prostate. Another feature of interest was that in the summer of 1891 there occurred an epidemic of contagious skin disease resembling pityriasis rubra; 8 of the inmates and 3 female servants were attacked. A similar epidemic took place at the same time in the Paddington and Marylebone Infirmaries, and was reported in the BRITISH MEDICAL JOURNAL for December 5th, 1891. He then referred to longevity, and showed an interesting table in which he had recorded the ages, ages of parents, and, where possible, of the grandparents of 37 of the old gentlemen. This table also showed their past habits as to alcohol, tobacco and exercise, and the state of their hearts and blood vessels. On studying the table, Dr. Ledwich said that he was forced to the conclusion that heredity had more to do with longevity than had habits, as nearly all of the men who had lived to a great age could show longevous parents, while many of them had been addicted to the use of alcohol and tobacco in immoderate quantities. He had great difficulty in obtaining information about syphilis, and had not examined for scars. The inmates got meat once a day. Alcohol was stopped on admission to the asylum, and he had never found any harm from the sudden stoppage.

HUNTERIAN SOCIETY.

THE NATURE OF RHEUMATISM.

AT a meeting on May 6th, Dr. F. ROWLAND HUMPHREYS, President, in the chair, the discussion on rheumatism was resumed. Dr. G. OLIVER (Harrogate) said that cases of so-called rheumatism commonly met with at mineral spas were a heterogeneous group of painful somatic affections when viewed from a diagnostic standpoint. What Sir Thomas Watson wrote fifty years ago was probably true to-day, namely, that rheumatism was an inflammation of the fibrous tissue; and it was merely necessary to add to it our conceptions as to auto-intoxication and infectivity. As to the immediate cause of fibrositis, apart from the invasion of the organisms of rheumatism, an important rôle was played by the tissue lymph circulation in the causation of gouty and rheumatic fibrositis. In gout there was a reduction in the physical interchange of lymph, the chief reduction being in the area of the fibrositis. Lymph stagnation favoured the deposition of salts and less soluble materials in the lacunae of the cellular and fibrous tissue. A diffused precipitate was the cause of the fibrositis and the fibrous proliferation. Cold and damp, especially when combined, were well recognized causal factors of chronic rheumatism, and humidity aggravated the condition. Professor William Thompson had shown that when damp air was breathed less carbonic acid was exhaled than when the air was dry. Bence Jones regarded rheumatism as a suboxidation disease, and it was well known that pain and neuritis were frequent in diabetes. Dr. FORTESCUE FOX thought people suffering from the results of acute rheumatism should take a course of mineral waters as a routine, as they would do much to prevent relapses and contractions. Warm baths and douches should also be used. Arthritis deformans should never be treated by spa courses, but by dry air and sunlight, with perhaps cold salt douches, a tonic, and supporting regimen. The typical arthritis of middle age was usually a far more amenable condition, and balneological treatment would give the best possible results. The arthritis of the aged was generally far more limited in site, and was often an expression of general decay. Dr. LEONARD GUTHRIE, speaking of rheumatism in childhood, thought that the sore throat which sometimes occurred was coincidental, and due to a condition of lowered health, which favoured the activity of the rheumatic virus. Erythema nodosum he did not regard as rheumatic, nor did purpura rheumatica seem to be specific. Epistaxis was a common early sign in rheumatic children, and it might be associated with articular trouble. Rheumatic nodules were undoubtedly rheumatic, but they were not necessarily of fatal omen, though he had never seen them except in association with endocarditis, pericarditis, or myocarditis; they were evidence of an active toxaemic process. Articular rheumatism was exceedingly rare in children under 5. In children under 3, cardiac signs were due to congenital malformations as a rule, and when choreiform movements occurred under 3 years of age they were more frequently due to gross cerebral disease than to rheumatism. Any evidence of cardiac implication in a child suffering from rheumatism should be treated at once by rest in bed for at least three weeks. Rest did not avert the danger of endocarditis, but a child allowed to go about in that condition was far more liable to be rendered incurable than one which was under proper treatment. Salicylates, including aspirin, relieved pain, but he did not think they prevented cardiac complications. Some thought that giving sodium carbonate in combination with salicylates prevented ill results, but with that he did not agree. The treatment of rheumatism in children was the treatment of the heart trouble. Digitalis was useless when myocarditis was present. When acute distension of the right heart occurred, digitalis combined with squill and mercury was of great value, but it should be preceded by leeching or dry-cupping. He believed the relief of pain was due to the effusion of fluid which prevented the pericardial surfaces rubbing together. The use of the ice-bag, as recommended by Dr. Lees, was useful. But when there was much pain and restlessness morphine was the only drug which could be given with good effect. Chorea, he believed, was a rheumatic outcome in neurotic children. The movements of chorea he regarded as due to an uncontrollable impulse to perform several actions. Arsenic, in his experience, had never done any good, no matter how it had been given, but he had frequently known it to do harm. Among sedatives and hypnotics he preferred chloral and bromides to any other. Some said that chloral caused mania in chorea, but mania occurred without the use of the drug. Bromides alone were not very serviceable. Salicylates and aspirin were useful when pain was present. Dr. ARTHUR T. DAVIES said people in the lower classes were much more liable to recurrent attacks of rheumatic fever than those in a better position. Salicylates reduced the pain and fever, but they had not reduced cardiac lesions. Blisters applied around the joints seemed to have a tendency to prevent endocarditis, as his father had maintained. The PRESIDENT read a letter from Dr. Horder, justifying his use of the term "malignant endocarditis" at

the last meeting. His view was that when the endocarditis took on the ulcerating or fungating form, the micro-organism was isolated from the patient, and another chapter was opened, the organism having no causal connexion with acute rheumatism. Dr. FREDERICK TAYLOR, in reply, said he had hoped to hear some definite decision on the question of the bacteriology of acute rheumatism, but there was great difference of opinion. He admitted that the term malignant endocarditis had to be defended. A term was needed to express the fact that the endocarditis was something beyond its immediate locality. A name was wanted for the general condition with endocarditis as the qualifying epithet. Sir Samuel Wilks's term, arterial pyaemia, would be a better name, or endocarditic septicaemia; fibrositis was an ugly and unsatisfying term for the chronic condition. In dealing with patients, it would be well to retain the term rheumatism until a better one was found. He fully recognized the value of baths, but there was need of some cure which would prevent the necessity of resorting to baths. There seemed to be no evidence that heart disease had been less frequent during the last thirty years in consequence of the abundant use of salicylates.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

AT a meeting of the Medical Section held on May 26th, with Dr. S. J. GEE, President, in the chair, in introducing a discussion on the tuberculin treatment of phthisis, Dr. A. LATHAM gave a summary of the paper he had read before the Society two months before.

Dr. E. C. HORT said he had administered horse serum in 150 cases of various diseases. The serum should be fresh and sterile, and be given immediately after meals. It was of little value in acute diseases, as phthisis or pneumonia, but often of real value in haemorrhagic diseases, and in those associated with internal and external ulcerations. In bacterial lesion it seemed to stimulate repair, and inhibit the activity of the bacteria. He referred to some 20 cases treated by vaccine by the mouth, the cases being mainly of staphylococcal infection, and all he would say was that the results so far were only encouraging.

Dr. HECTOR MACKENZIE said that in regard to staphylococcal infection he was perfectly satisfied that in the administration of vaccine by the mouth they had a very valuable remedy. He was still in doubt as to the value of the employment of tuberculin vaccine. In recovering cases there was an aptitude to attribute the recovery to some new method applied in the stage of recovery. Cases that were not improving before the serum treatment was started he had found did not do well afterwards. In a case of acute pneumonic phthisis tuberculin was given in doses of $\frac{1}{50000}$ mg. three times a day, with little, if any, change in the rate of improvement under open-air methods. In cases of tuberculous glands in the neck he had seen much improvement in some cases from the administration of tuberculin by the mouth. So far he had not been impressed with the results in pulmonary tuberculosis, and the opsonic index was not a feasible routine control in actual medical practice.

Dr. A. G. AULD thought the cases too few to be conclusive of the value of the matter of treatment. He suggested a possible relation between the development of an empyema in a case of pneumonia and the administration of a pneumococcus serum.

Dr. H. D. ROLLESTON said, in regard to one case of tuberculosis under his care, in which tuberculin was given by the mouth, that there was a great improvement. He had given horse serum by the mouth in cases of gastric ulcer, and had felt the need for standardization of the serum. He had found it to have an effect in stopping haemorrhage and in relieving pain, also in improving the condition of herpetic ulceration of the mouth.

Dr. JOHNSTON LAVIS referred to the method of treating tuberculosis of the peritoneum with raw meat juice and suggested the possibility of having given tuberculin at the same time from tuberculous animals.

Dr. VERE PEARSON referred to cases treated at the Mundesley Sanatorium, and said that with the old method of tuberculin injection he had seen more harm than good, but his bias against tuberculin as at present used was less. Of 8 cases treated he had seen some improvement in 3 of genito-urinary tuberculosis, 2 of which had pulmonary tuberculosis as well, also in a case of spinal caries in which there was relief from pain. He referred to 2 cases of failure in the employment of horse serum against haemoptysis. Also to a case of pulmonary tuberculosis with continuous fever for six months in which the pyrexia ceased in three weeks after tuberculin had been given by the mouth.

Dr. STUART LOW alluded to the local use of horse serum after the mastoid operation.

Dr. R. A. HODGSON asked if the pyrexia following exertion might be taken as evidence of the vitality of the tubercle bacilli.

Dr. LATHAM replied.

LEEDS AND WEST RIDING MEDICO CHIRURGICAL SOCIETY.—At a meeting on May 15th, Dr. J. ALLEN in the chair, Dr. BRONNER (Bradford), in a paper on the intranasal treatment of *Asthma, hay fever, and vasomotor rhinitis*, drew the following conclusions: (1) That many cases of asthma were of nasal origin and could be cured by intranasal treatment. (2) That an unstable condition of the respiratory centre was present in most cases and was the most important factor in the causation of asthma. (3) That the most successful method of treatment was to cauterize certain hypersensitive areas of the nares, these areas being the anterior parts of the lower turbinates and the middle of the septum. (4) That the mucous membrane of these parts was in most cases apparently normal. (5) That intranasal disease (except hypertrophic rhinitis and polypi) were very rarely the direct cause of asthma. (6) That when once asthma had developed it might easily be produced by other than intranasal irritation. (7) That general treatment was in many cases necessary. (8) That hay fever and vasomotor rhinitis could also be cured by the destruction of one or more of the hypersensitive areas, especially the lower turbinates. (9) That in some cases of hay fever Dunbar's serum (pollantin) was very useful, but not in all. (10) That the cautery points should be broad and thick. The small narrow points generally used were much too small, and this was probably the reason why in many cases the treatment did not effect a cure. (11) That by the careful and prolonged local application of cocaine and adrenalin the operation was rendered practically painless. Mr. J. KAY JAMIESON and Mr. J. F. DOBSON showed specimens to illustrate the anatomy of *Lymphatics of the colon*, demonstrating that though the lymph vessels mainly accompanied the arteries, those of the region of the splenic flexure are diverted along the upper part of the inferior mesenteric vein to the more superior mesenteric glands, and that from the transverse colon certain vessels turned to the left in the omentum and ended in the splenic glands. Dr. E. F. TREVELYAN showed: (1) A case of hemiplegia following convulsions and semicoma in a girl aged 5 years with whooping-cough; the paralysis disappeared in a week. (2) A case of complete facial paralysis in a boy aged 4, dating from birth. Labour lasted eighteen hours. The child was the eighth, and was not instrumental. Beyond slight asymmetry of skull there was no malformation and no deafness. Mr. H. LITTLEWOOD (with Mr. TEMPEST) showed a specimen of malignant disease of thyroid, removed by operation. A goitre had been present for twenty years, but had recently undergone considerable enlargement.

THE late Sir Alfred Cooper, F.R.C.S., left estate valued at £14,250.

A CASE OF HEART SUTURE.—Robert Inglis, a young American athlete, who was, we learn from the *Boston Medical and Surgical Journal*, stabbed in the heart in the early hours of April 5th, died on April 24th in St. Joseph's Hospital, Boston, where he was operated upon, having survived the operation nineteen days and seven hours. For the first few days after the cardiac wound had been sutured his condition was extremely favourable. Sepsis then developed, and he gradually sank. When death occurred he had lost some 40 lb. since the stabbing. At the autopsy it was found that the knife wound had severed the cartilage of the fourth rib and penetrated deeply into the heart substance, and that, although it had been successfully closed by the sutures inserted, all the organs had become more or less involved in the septic process which resulted.

REVIEWS.

FUNCTIONAL DISEASES OF THE HEART.

No better monument could be set up to commemorate a great clinical teacher than a complete edition of his lectures, arranged and edited by those of his pupils who have felt the personal influence of the master and have thoroughly assimilated his lessons. Dr. PIERRE MERKLEN'S clinic at the Hôpital Laënnec in Paris was a veritable centre of attraction, and whoever peruses the volume[1] now before us will not have far to seek for the explanation of his popularity as a teacher. Originality of thought, coupled with a striking power of presenting his train of ideas in due order, perfect simplicity of diction associated with an enviable clearness of expression, are the features which at once impress the reader of these lectures. The study of abnormal action of the heart is somewhat meagrely dealt with in some of the recognized textbooks in this country. Much attention—perhaps too much—is bestowed upon the study of the gross lesions of valve or muscle, although every clinician of experience must be aware of the limitations of our power of accurate diagnosis. Dr. Merklen set himself to make a close study of the various ways in which the function of the heart may be disturbed, both in the presence of obvious valvular disease and in cases in which the heart sounds appeared to be normal. In the course of twenty-two lectures he passes in review the functional disturbances met with in various forms of actual heart disease or deformity, the effects of vascular degeneration, of emotion, of pleurisy, and of emphysema, and then proceeds to the examination of the phenomena of cardiac failure in diseases of other organs, such as the liver and kidneys, finally devoting a good deal of space to the vexed questions of the heart's participation in asthma and angina. In most of the lectures he has taken a typical case as a text, and in every case has examined the phenomena presented by such a case with a minuteness and precision that characterizes the highest form of clinical teaching. Under the term "asystolie," he implies permanent dilatation of the cardiac cavities with stasis and increased tension within the venous system, and he reserves the term "cardiac insufficiency" to indicate the physical insufficiency of the myocardium. Asystole is, in fact, the outcome of insufficiency, but the latter may be present for a long time before it produces any symptoms to indicate the former condition. He traces out with minuteness not only the secondary effects of the cardiac insufficiency upon other organs, but shows how in turn the defective circulation, whether it be defective from simple feebleness or from physical circulation in the smaller vessels of the part, may react upon the heart. The symptoms of these conditions and the manner in which they are modified by different degrees of actual pathological change in disease are skilfully demonstrated, and being illustrated by constant reference to actual clinical cases, present at once a suggestive and an interesting picture of a type of case which is too apt to be summarily diagnosed as cardiac failure, without any great pains being taken to probe to the bottom the changes underlying it. The distinction between the physiological and the pathological conditions producing hypertrophy, for instance, afford much material for thought and are finely illustrated by the life-history of a typical navvy with a physiologically hypertrophied heart in which dilatation had slowly occurred as a result of alcoholic excess. Very interesting, too, are the chapters dealing with the changes wrought by emotion of various kinds, changes which are doubtless more often observable amongst the more excitable races than amongst the phlegmatic temperaments of northern climes. These lectures have been arranged and edited by Dr. Jean Heitz, a former pupil of Dr. Merklen, who has dealt reverently with the large amount of material at his disposal. They are worthy of special attention as presenting some aspects of a familiar subject which have not received that amount of attention in the clinics of this country that their importance would seem to warrant.

[1] *Leçons sur les Troubles Fonctionnels du Cœur (Insuffisance Cardiaque—Asystolie).* [Lectures on Functional Disturbance of the Heart (Cardiac Insufficiency—Asystole).] By Pierre Merklen, Physician to the Laënnec Hospital in Paris. Published by Dr. Jean Heitz. Paris: Masson et Cie. 1908. (Roy. 8vo, pp. 436, 38 figs. and portrait of Dr. P. Merklen. Fr.10.)

PREGNANCY IN CONTRACTED PELVIS.

THE preface which Professor CHROBAK has written for Dr. PEHAM'S book on the contracted pelvis will be to many the most attractive part of the book. The work itself is a careful detailed report of the cases of labour with contracted pelvis that have been watched by Dr. Peham in a Vienna lying-in hospital.[2] In the preface the general impressions made upon the mind of Professor Chrobak, the head of the clinic, are summed up in a few pages. Dr. Chrobak's first paragraph rightly insists on the importance of exact and complete numerical records of the cases observed in lying in hospitals. He remarks on the difference in the results of different accoucheurs in patients delivered in apparently similar circumstances, the difference depending partly on technique, but much more upon diagnosis. He expresses the opinion that in the study of labour with contracted pelvis, too much attention is given to the dimensions of the pelvis and too little to other and more important things. Among the things that ought to be more carefully observed and recorded are the frequency and strength of the pains, and the plasticity of the fetal head. He laughs at people who give the measurements of the pelvis in millimetres. He holds digital measurement to be the best, and advises his students to well practise this. He points out that in Austria (and, we may add, in other countries) the large majority of women in childbirth are attended by general practitioners who are not specially skilled in surgical operations. Methods of delivery may be successfully carried out in hospitals that would lead to disaster if they were often done by men not accustomed to operate. He thinks that teachers of midwifery ought to bear this in mind when they are recommending such operations as Caesarean section, and the methods that have been employed of widening the pelvis. In olden times he thinks accoucheurs may have acted too much on the principle that the mother's well-being was always to be preferred to that of the child. But at the present day the tendency is to go too far in the opposite direction, and the duty of obstetric teachers is to use their influence for the protection of the mothers. The life of the mother is not the only thing to be thought of. A living child may be bought too dearly if it is paid for by lifelong discomfort and diminished wage-earning power of the poor mother.

Dr. Peham has classified his cases according to the size and shape of the pelvis, primiparity or multiparity, method of delivery, etc. We shall best meet the interest of our practising readers if we quote Dr. Peham's final conclusion as to the proper treatment of pregnancy with contracted pelvis. For the general practitioner, he says, the induction of premature labour must remain for the present the method of choice in the higher degrees of contraction of the pelvis. At the end of pregnancy, prophylactic version, or if this is impracticable, a careful high forceps operation. If this fail, perforation even of the living child.

As to the results, we observe that of the children delivered by turning, 40 per cent. died, but none of the mothers. Of the children delivered by the ordinary forceps operation, 17.2 per cent. died; none of the mothers. The average length of labour in these cases was forty-one hours. The average length of labour in the cases in which the forceps were employed before the head had engaged in the brim, was forty-four and a half hours. Among these 2 mothers died, and 19.2 per cent. of the children. It cannot be said that this practice errs on the side of doing too much or interfering too soon. We should have thought that diagnosis of the need for operative delivery might have been made earlier. We observe that Caesarean section was performed in 29 cases, with 1 death; "Hebeosteotomy" was done once, symphysiotomy not at all.

[2] *Das enge Becken* [The Contracted Pelvis]. *Eine Studie über den Geburtsverlauf und die Indikationen zu operativen Eingriffen* [A study of the course of labour and the indications for operation]. Von Dr. H. Peham. Privatdozenten in Wien. Mit einem Vorworte von R. Chrobak. Wien and Leipzig: Alfred Hölder. 1908. (Sup. roy. 8vo, pp. 224. M. 5 Pf. 40.)

SURGERY.

THE fifth edition of STIMSON'S *Treatise on Fractures and Dislocations*[3] has followed rapidly on the fourth, which

[3] *A Practical Treatise on Fractures and Dislocations.* By Lewis A. Stimson. Fifth edition, revised and enlarged. London: Henry Kimpton. 1908. (Roy. 8vo, pp. 854, illustrations 404. 25s.)

appeared in 1905. The additions consist chiefly of radiographs and tracings from radiographs. It is also noticeable that the alterations in the text are almost entirely due to new facts revealed by radioscopy. The most important of these in the chapters on fractures are as follows: Fracture of the tuberosities of the humerus is stated to be a not infrequent complication of dislocation of the shoulder, and to be responsible for the disability and stiffness in a certain number of cases. Additional cases are quoted of fracture of the head and neck of the radius and of the carpal scaphoid. Since 1904 Dr. Stimson has seen several cases of scaphoid fracture each year; immobilization for five weeks and massage is, as before, the treatment recommended, with removal of any dislocated fragment. Fractures of the tarsal scaphoid and cuboid receive separate consideration for the first time, the latter being illustrated by a unique radiograph. Few changes are to be found in the chapters on dislocations, and, as in the case of the fractures, they chiefly concern the carpus and tarsus; thus, we find special mention of dislocation of the semilunar. It is stated that the *x* rays have shown that dislocation of this bone is far from uncommon, either alone or in combination with fracture of the scaphoid or with disturbance of the relations of other carpal bones. The displacement is always forwards, with rotation on the transverse axis. With regard to the tarsus the author gives further details concerning dislocations of the astragalus and scaphoid. This book has been recognized for several years as a standard work, and the new edition is sure of an appreciative reception, and will add to its well-deserved popularity.

Mr. COMPTON'S little book, *Essentials of Surgery*, dealing with the main details relating to both the principles and the practice of modern surgery, is an excellent addition to the elementary manuals on medical subjects, which form Kimpton's Essential Series.[4] This, though of a class of books in too many instances useless to the practitioner, and of questionable value to the student, seems very likely to be found useful by both, as it is capable of giving to the former a good idea of modern surgery, and of affording to the latter much help in arranging and digesting the instruction derived from bulky textbooks. The information here given, though much condensed, is still remarkably full and clear, and its comprehension is aided by many illustrations, most of them diagrammatic.

Dr. MACARTNEY'S small volume on the *Vermiform Appendix and its Diseases*,[5] which, we need hardly point out, deals for the most part with acute and chronic appendicitis, though it contains very little that is new, will be found a useful epitome of the present knowledge of most branches of this subject. The author has not only carried out with success his idea of giving in small compass a plain account of the subject as viewed by the surgeons of the present day, but has by his statements of his own study and experience rendered this a thoroughly practical treatise. It may also be said that this book is likely to be found a full and sufficient one, for, though of small bulk, it gives in a very readable form all the chief and essential facts relating to the pathology, the clinical characters, and the therapeutics of appendicitis. In his teaching as to how to deal with acute forms of the disease Dr. Macartney is a supporter of the latest views, and advocates early operation in almost every case, such intervention being regarded, in opposition to medical or expectant methods, as the only logical rule.

The ninth fasciculus of the *Nouveau Traité de Chirurgie*, edited by LE DENTU and DELBET, is on the affections of muscles, aponeuroses, tendons, tendon-sheaths, and bursae.[6] It is written by M. LOUIS OMBRÉDANNE. Amongst the various recognized surgical and pathological doctrines which the author discusses there are few, if any, on which he does not exhibit a wide acquaintance with the literature, and a fine talent for the analysis of observations. The reader might expect that some of the subjects would prove rather dry reading, but in this he is pleasantly disappointed. In all sections morbid anatomy and etiology receive full consideration, although illustrations are scanty. The affections of tendon-sheaths naturally occupy considerable space, and form the most attractive chapter in the book. Some original observations on the formation of rice-bodies are included, and it is also shown that the fungous form of tuberculous tenosynovitis is usually secondary to a neighbouring bony focus. Another chapter which deserves particular attention is that on muscular osteoma, which the author holds is due in most cases to ossification in the scar of a muscular tear. The author uses the term "hygroma" as synonymous with bursitis; it is surely better that it should disappear altogether than that confusion should result from its employment in different senses in the literature of different countries. The volume forms a comprehensive treatise on the affections with which it deals, and is well worth possessing for its own sake.

Dr. GEORG SULTAN'S atlas of special surgery, of which the first part is published, promises to be one of the most successful of the well-known series of Lehmann's hand atlases.[7] As in other volumes, a short outline of the various affections accompanies the pictures. These are partly in colour, partly in black and white, and the latter are either drawn from photographs or are reproductions from photographs coloured for the sake of increased clearness. Most of the pictures are the result of this last method, and they form a most successful series. As far as can be judged, they are true to life, and yet show a definition which could hardly be obtained from a series of photographs simply reproduced. Some coloured photomicrographs add to the usefulness of the book. The text consists of clinical descriptions of the appearances of the various affections, of their course and treatment. It is uniformly and carefully written. Its perusal makes the reader again wish that there were some uniformity in the use of clinical terms throughout the medical world.

Professors SOUBEYRAN and ARDIN-DELTEIL have written a book on minor surgery and surgical methods[8] which has much to recommend it. It is chiefly devoted to the description of methods of surgical treatment most generally and frequently in use in wards and in practice. The first chapters give an account of aseptic and antiseptic practice. The chapters which deal with the disinfection of hands, nose, mouth, and other channels and surfaces are particularly useful. Chapters 4 and 5 describe the application of the ordinary bandages and plaster splints, and in the case of the latter there are several useful new suggestions. Part II ranges over the various methods of daily hospital work, and also describes a number of minor operations. General and local anaesthesia, haemostasis, the general treatment of fractures, the administration of injections, and catheterization are among the subjects treated. The general scope of the book is such as to make it a practical guide to the dresser at work in the wards and the practitioner in his surgery. The procedure described is quite modern, and out-of-date methods are conspicuous by their absence. In the account of operation for cancer of the lip it should be stated that lymphatic glands always require removal. Lumbar puncture is easiest in the middle line, not laterally as figured. The picture on p. 366 illustrating catheterization of the urethra requires redrawing.

Dr. C. C. MILLER has writtten his book on *Cosmetic Surgery*[9] for the instruction of those called feature surgeons, for whom there is, it seems, a well-established demand in the United States. The special branch of

[4] *Essentials of Surgery: an Outline of Surgical Pathology, Diagnosis, and Treatment, for Students and Practitioners.* (Kimpton's Essential Series.) By Alwyne T. Compton, F.R.C.S. London: Henry Kimpton. 1908. (Cr. 8vo, pp. 438, 98 illustrations. 4s.)

[5] *The Vermiform Appendix and its Diseases.* By Duncan Macartney, M.A., M.D., Surgeon to the Glasgow Cancer Hospital. Glasgow: James Maclehose and Sons. 1908. (Cr. 8vo, pp. 104; 10 illustrations. 3s. 6d.)

[6] *Nouveau Traité de Chirurgie.* Publié sous la direction de A. Le Dentu et P. Delbet. IX, Muscles. Aponévroses, Tendons, Tissus péritendineux, Bourses séreuses Par Louis Ombrédanne. [New Treatise on Surgery. Published under the direction of A. Le Dentu and P. Delbet. IX. Muscles, Aponeuroses, Tendons. Peritendinous Tissues, Bursae.] Paris: J. B. Baillière et Fils. 1907. (Roy. 8vo, p. 198; 45 figures. Fr.4.)

[7] *Grundriss und Atlas der speciellen Chirurgie.* Teil I. Lehmanns med. Handatlanten, Band xxxvi. Von Professor Georg Sultan. [Outline and Atlas of Special Surgery. Part I.] Munich: J. F. Lehmann. 1907. (Cr. 8vo, pp. 474. Figs. 268. M.16.)

[8] *Petite Chirurgie et Pratiques spéciales courantes.* [Minor Surgery and Special Modern Methods.] By P. Soubeyran and P. Ardin-Delteil. Montpellier and Paris: Masson et Cie. 1908. (Med. 8vo, pp. 406. Figs. 326. Fr. 9.)

[9] *Cosmetic Surgery; or, the Correction of Featural Imperfections.* By Charles C. Miller, M.D. Second edition. Chicago: C. C. Miller. 1908. (Cr. 8vo, pp. 160; illustrations 98. $ 1.50.)

work to which Dr. Miller's pages are here devoted is defined as an elective surgery for the correction of those featural imperfections which are not natural deformities. The portion of the volume which deals with malformations and defects of the internal ear contains some useful instructions on such objects of surgical work as may be found described in any good textbook; but when we find sections describing the treatment of "scowls," of "hump," and "tip-tilted" nose; of "hardness of mouth expression" and of double chin, and also instructions for making dimples, we seem to have gone far beyond the limits of surgery as understood and practised in this country.

DISEASES OF THE URINARY ORGANS.

DR. VIKTOR BLUM'S work on the symptoms and diagnosis of urogenital diseases[10] is to be published in three parts, and the first part, issued recently, deals with diseases of the urinary organs. The second part is to deal with the male generative organs, and the third with morbid conditions of the urine. The book is based on work done in Professor von Frisch's urological department at the Vienna polyclinic. The symptom of pain in connexion with affections of the kidney is first considered. Then the forms of dysuria due to diseases of the bladder, prostate and urethra, and as connected with these pain in the testicle is also included. Next in succession come increased frequency of micturition and strangury, polyuria, oliguria, anuria, retention, incontinence, alterations in the stream, urinary fever and infection, and uraemia. On all these matters, which are carefully treated, Dr. Blum gives useful information which should be of service both to students and practitioners, but in view of the quite moderate bulk of the present instalment it does not seem clear why Dr. Blum should have decided to divide his work into three separate parts.

DR. RICHARD WOHLAUER, a former assistant to the late Professor MAX NITZE in his clinic and polyclinic in Berlin, states that his small book on urology and the use of the cystoscope[11] has been written for the purpose of presenting a brief account of the diseases of the genito-urinary organs and their treatment according to Professor Nitze's teaching. The book is methodically divided into ten sections, and as Dr. Wohlauer has managed to cover the whole field of genito-urinary affections in the course of less than 180 pages, it is clear that the space available for each subject must be small. Still, what there is is concise and practical, and the book—which, by the way, contains a very fair index as well as a table of contents—may be commended to the student as a trustworthy guide and to the practitioner as a useful reminder.

MOVABLE KIDNEY.

THE little book on *Movable Kidney*[12] that H. W. WILSON and C. M. HINDS HOWELL have expanded and reprinted from their articles in the *Practitioner* is easily read, and notable for the judgement with which they review the symptomatology and the question of operative treatment. The work is based on careful anatomical observations and animal experiment. They describe somewhat elaborately the arrangement of the perinephric fascia and the potential space provided as a path for the mobile organ, by its continuation towards the pelvic crest at the sacro-iliac joint; they do not mention the ligament of Longyear, though they speak of the pull of the hepatic flexure of the colon upon the right kidney. Neither do they allude to Cunningham's observations on the indications on the anterior surface of the kidney, hardened *in situ*, of direct support from intraperitoneal viscera. These are small omissions however. There is one sentence to which exception must be taken; they remark, in speaking of Senn's and Carwardine's operations, "One would have thought that methods of this description would long ago have been relegated to the present position of such barbarous procedures as the injection methods for the radical cure of recurrent hydrocele." We can only say that these "barbarous" methods are sometimes employed by surgeons whose technique and consideration are beyond reproach. The authors give four classes of case as requiring operation: all cases showing acute exacerbations; those showing evidence of pathological changes in the kidney; cases in which the kidney is mechanically causing changes in other viscera, and those in which an efficient truss has failed to relieve severe lumbar aching. The operation they recommend is suture of the partially reflected capsule. The descriptions of symptoms, of criteria for diagnosis, and of the pathology of the condition are so simple and clear, and the case for operation is presented with such moderation that we can recommend the book with confidence to physician and surgeon alike. No attempt is made to describe the numerous special operations that have been devised from time to time.

THE MAKING OF NECROPSIES.

PROFESSOR WESTENHOFFER justly entitles his small monograph, an atlas of pathologico-anatomical *post-mortem* procedure,[13] for the methods he describes and advocates are admirably designed to display both normal anatomical conditions and relationships, and deviations from them. The author recognizes that many of the methods of *post-mortem* examination already in vogue are more or less well adapted for scientific and forensic purposes, whilst some are perhaps better for the one than the other. He also recognizes that, by their variations from each other, the different methods render common forms of description difficult or impossible, and, as a result, the intelligibility of many *post-mortem* records is not all that could be desired. Moreover, it is not a universal custom to make a thoroughly complete *post-mortem* examination in all possible cases, hence the operator, when he has to make some unusual examination, is perhaps not sufficiently familiar with anatomical landmarks, and errors result. Further, in the absence of regular and complete *post-mortem* examinations, many interesting bodily anomalies are overlooked, and the percentage records of variations are less complete than they might be. Professor Westenhoffer quite rightly sees that many of these difficulties and deficiencies may be remedied if the methods he advises are generally adopted, for the system which he describes and illustrates is well adapted to meet all requirements. Stated generally, his plan is, in the first instance, to display fully the relative positions of the various parts and organs, and in the succeeding and more detailed examination to separate those most naturally associated together as little as possible, whilst in the final macroscopical examination of each organ he commences and terminates his exploratory incisions in such a manner that the various segments into which the organ is divided remain attached, and are easily replaced in their proper positions. All these precautions are of the greatest importance, and if they were generally adopted we should not so frequently have to regret the marring or destruction of what might have been beautiful and instructive specimens. As the illustrations are so important a part of the atlas, more care might with advantage have been given to the revision of Figs. 13, 15, and 17. As a whole, however, the illustrations are good, and the atlas will be particularly useful to medical men who are only occasionally called upon to make *post mortem* examinations.

THE ART OF THE INSANE.

THE genius, by his despisal of conventional standards of behaviour, his absorption in pursuits which to the general often appear vain and chimerical, his creation of much of that which

> "all the world's coarse thumb
> And finger failed to plumb,"

in a word by his detachment from the obvious and practical, has usually been held to be "a little mad." From Socrates downwards many of the greatest creative thinkers and artists have been insane when tried by conventional standards. Volumes indeed might be, and much has been, written on the insanity of genius. Comparatively little, however, has been written on the genius

[10] *Symptomatologie und Diagnostik der uro-Genitalen Erkrankungen.* Von Dr. Viktor Blum. Erster Theil. Leipzig und Wien: F. Deuticke. 1908. (Med. 8vo. pp. 226. M. 6.)

[11] *Urologisch-Kystoskopisches Vademecum.* Von Dr. Richard Wohlauer, Berlin. Wiesbaden: J. F. Bergmann. 1907. (Pp. 190; 34 illustrations. Octavo.)

[12] *Movable Kidney, its Pathology, Symptoms and Treatment.* By H. W. Wilson and C. M. Hinds Howell. London: E. Arnold. 1908. (Demy 8vo, pp. 112; 11 illustrations. 4s. 6d.)

[13] *Atlas der pathologisch-anatomischen Sektionstechnik.* Von Professor Dr. M. Westenhoffer. Berlin: A. Hirschwald. 1908. (Roy. 8vo, pp. 61; 34 figs. Mk 2.)

of the insane, and for this reason we welcome this small book by M. RÉJA on the art of the insane in design, prose, and poetry.[14] It must be admitted that most of the productions of the certified insane are either puerile or hopelessly chaotic, and still more absolutely devoid of meaning to the casual critic. Nevertheless, to the psychologist and philosopher even the most immature attempt at self-expression of the imbecile or demented has its profound significance. The dissolution, or it would be better to say reversal of psychological evolution, which occurs in insanity is evidenced in the design of the insane as well as in many other directions, and readers of M. Réja's book will be struck with the startling resemblance of the carved wooden figures made by an insane inmate of an asylum, depicted on Fig. 4, to the idols of many savage peoples. M. Réja's book is not a mere catalogue and show of curious drawings and documents, but is a readable and able, though too brief, attempt to explain their true psychological import. Many of the effusions quoted by M. Réja are more rhythmic than sensible, but the reverse holds for the following:

Mais tout ce monde est enragé
Car tout ce monde est fanatique
Et rebelle à toute critique
Voyant là Diable et Bélial
Au lieu d'un tout physique mal.

"VACCA PAUPERIS."

"*Vacca pauperis*," the poor man's cow, is the inscription on the badge of the British Goat Society, and one of the arguments with which the author supports his *Case for the Goat*[15] is that did the British cottager keep goats the dearth of milk from which his children now so frequently suffer would cease out of rural England. The goat is a cleanly eater, a matter of some consequence in an animal kept for the sake of its milk; but it has a catholic taste, and few fresh greenstuffs come amiss to it, so that a cottager living on a road with a broad riding can keep a goat, or even two goats, from March to November for almost nothing. It is also, as compared with the cow, very easily kept clean; the faeces are not liquid, and the goat prefers a hard bed, so it be dry, to a soft but damp resting place; in the Alps the tourist may often observe goats lying on outcrops of rock instead of the turf by which they are surrounded. It is therefore easier to get clean milk from a goat than from a cow; and this is a point which the suburban resident should bear in mind, for goats can be hand-fed in a yard with a small shed, and kept in health. The author of this book, who writes under the pen name "Home Counties," is a practical goat-keeper, and discusses the financial aspects of goat-keeping very fairly; even if the milk is used only for home consumption, there will be no saving in money unless a good milking strain of goat is chosen, and it is necessary to keep two goats, or even three, as, with the majority of animals, the yield of milk falls off rather rapidly. These are among the reasons, no doubt, why the English rural labourer so seldom keeps goats. If amateurs take to keeping goats the breed will be improved, and the difficulty due to the diminution of the yield and drying-off could be met by some system of co-operation which might be easy to establish if the keeping of goats became common among cottagers. One great advantage of the milk is that the goat is a healthy animal if reasonably well looked after. The chief accusation to be made against it is that it is responsible for the dissemination in Malta of the fever that goes by the name of that island. This is a serious objection to which the author of this volume hardly gives sufficient attention; it is not sufficient to say that no one is particularly desirous of importing Maltese goats, for the fever is not confined to Malta, as the name Mediterranean fever, also applied to it, shows. On the other hand the goat, though susceptible to tuberculosis, seems very seldom to suffer from it. From the medical point of view, if the English goat is to be improved by crossing, or replaced, it will probably be safest to resort to Alpine stocks. Nearly half the book is made up of an appendix containing the replies of twenty-four expert British goat-keepers to a series of questions propounded by the author. Altogether the book, which is well illustrated by photographs of goats and their stables, is well worthy of studying by residents in the country or in suburbs, more especially by ladies so situated.

[14] *L'Art chez les Fous* (Art in the Insane). By Marcel Réja. Paris: Société de Mercure de France. 1907. (Cr. 8vo, pp. 228; with 26 designs. Fr.3.50.)

[15] *The Case for the Goat, with the Practical Experience of Twenty-four Experts.* By "Home Counties." London: G. Routledge and Sons, Limited; and New York: E. P. Dutton and Co. 1908. (Cr. 8vo, pp. 177. 3s. 6d. An edition containing the entire text but 4 of the plates only, bound in paper boards, is issued at 1s.)

NOTES ON BOOKS.

THE etiology of mycetoma is fully dealt with in a recent number of the *Philippine Journal of Science*[16] by W. E. MUSGRAVE and M. J. CLEGG. They report a case of what they call the ochroid variety, occurring in the Philippine Islands and caused by a new species of streptothrix (*Streptothrix freeri*); they claim to have established for the first time definitely, so far as they have been able to determine, the etiology of mycetoma according to the usual requirements of investigators, including the transmission of the disease by animal experiment. They believe that the streptothrix found is different from those previously described in such conditions when its characteristics are compared with them carefully. It is quite possible that there are several species of streptothrix capable of producing mycetoma or Madura foot, but only careful observations like the present will prove or negative the point. A most comprehensive bibliography is appended.

In recent numbers of the *Annals of Tropical Medicine and Parasitology of the University of Liverpool*[17] the following papers appear: Observations on the So-called Canary Fever, by C. E. Walker; On the Habits, Life-Cycle, and Breeding Places of the Common House-fly (*Musca domestica*, Linn.), by R. Newstead; Some Notes on the Morphology of *Spirochaeta duttoni* in the Organs of Rats, by J. J. Van Loghem; Malaria and History, by W. H. S. Jones; Two New Human Cestodes and a New Linguatulid, by J. W. W. Stephens; Atoxyl and Trypanosomiasis, by Sir Rubert Boyce and Anton Breinl; and My Experiences of Trypanosomias in Europeans and its Treatment by Atoxyl and Other Drugs, by Sir Patrick Manson. If one might single out any one of these very interesting papers for comment, it would be that on the habits, life-cycle, and breeding places of the common house-fly, by Mr. Newstead. By a series of very clear photographs he represents the various sites where these pests may deposit their eggs, and it is only by knowing these accurately that we can hope for preventive methods. Such must necessarily prove difficult in the absence of any special legislation to enforce them, but many intelligent individuals, by following the suggestions given, especially if their abodes are more or less isolated, could easily rid such places of these pests. In many situations they are certainly a very great nuisance, and the chance of them acting as carriers of pathogenic microbes is not a mythical one. Boyce and Breinl, in their paper on atoxyl and trypanosomiasis, give the history of the introduction of this drug as a curative agent for this disease, and the record of Manson's cases treated by it show that, though perhaps not absolutely specific, it is the best remedy we have at our command for the present.

The twenty-first issue of *Merck's Annual Report*[18] contains the usual summary of results published during the year of the employment of all the more recent additions to the materia medica. Some two hundred drugs and preparations are dealt with, a paragraph being allotted to each, in which the results of the work of the observers quoted is given in abstract, references to the original papers, usually published in the Continental medical journals, being given in footnotes. Older drugs on which new observations have been recorded are also included. Indexes of authors' names and names of drugs increase the convenience of the book.

A recent number of the publications of the Military Health Department issued by the Prussian War Ministry[19]

[16] Vol ii, December, 1907, No.6. *The Philippine Journal of Science.* Edited by Paul C Freer, M.D., Ph D.; co-editors, Richard P. Strong, Ph.B., M.D., and E. D Merrill, M.S. Published by the Bureau of Science of the Government of the Philippine Islands. B. Medical Sciences. Manila Bureau of Printing. 1907.

[17] *Annals of Tropical Medicine and Parasitology of the University of Liverpool.* Issued by the Liverpool School of Tropical Medicine. Vol. i, No. 4, February 29th, 1908; and Vol. ii, No. 1, March 2nd, 1908.

[18] *E. Merck's Jahresberichte.* XXI Jahrgang, 1907. Darmstadt. 1908. (Demy 8vo, pp. 318.)

[19] *Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens.* Herausgegeben von der Medizinal-Abteilung des Königlich Preussischen Kriegsministeriums. Heft 38. Arbeiten aus den hygienisch-chemischen Untersuchungstellen. II Teil. Berlin: August Hirschwald. 1908. (Sup. roy. 8vo, pp. 120. M. 2.80.)

is devoted to reports of researches carried out in the laboratory of the chemistry of hygiene of the Kaiser Wilhelm's Academy, and in the research departments of the different army corps. The subjects dealt with vary considerably and include the preservation of lemon juice, the detection of husk in cocoa preparations, researches on cresol soap solutions, etc., with more technical matters, such as the valuation of vulcanized caoutchouc and the behaviour of certain dyes to various reagents. Among the more interesting of the results arrived at are those on the keeping properties of lemon juice: after a number of trials of various methods, quite satisfactory results were obtained by first fermenting the juice, with or without added yeast, filtering, and pasteurizing. Juice so prepared was kept in closed vessels under different conditions, and underwent no perceptible change and was afterwards found to have retained the flavour of the fresh juice. No other method of preservation gave equally good results.

Dr. SCUDDER'S useful treatise on *The Treatment of Fractures*[20] has in its sixth edition been carefully revised. Additions have been made to many sections of the work, and endeavour has been made, though not with much success, to render more comprehensive the bibliography of its subject. In this, as in previous issues, especial attention has been given to the drawings, and to the copies of *x*-ray plates. These are supplied in great profusion, and by their clearness and, in many instances, by their realism, serve as much as the text to render this an excellent guide to the most efficient treatment of the common forms of fracture.

[20] *The Treatment of Fractures, with Notes upon a Few Common Dislocations.* By Charles Locke Scudder, M.D., Surgeon to the Massachusetts General Hospital, etc. Sixth edition. Thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders and Co. 1907. (Roy. 8vo, pp. 660; 85 illustrations: 24s.)

MEDICAL AND SURGICAL APPLIANCES.

Card Index for Medical Notes.

MESSRS. DICKINSON AND CO., LIMITED, Apsley Mills, Hemel Hempstead, Herts, send us copies of cards which they recommend as suitable for the tabulation of medical or dental cases, with particulars of the making-up of the cards in outfits to economize time and money. The method appears to be simple and adaptable to small or large practices, whilst it ensures facility for reference. Both sides of the cards for medical cases are similarly ruled for the insertion of name, age, occupation, and history of a case, with outline of symptoms and treatment, and columns for charges and amounts paid, and a square for every day of one year; each card consequently is so fashioned that it may last two years. Of course, as is evident from this description, the space available does not permit the record of elaborate medical observations. Leather wallets for the pocket, holding a few cards, are supplied at 3s. each; and polished oak cases, containing 200 cards and instructions for use, cost 21s. each, complete; whilst the price of red leatherette cases with similar contents is 8s. 6d. each, complete. The dental record card contains a dental chart, and is spaced for notes of operations, date, charges and payments. The schedule for medical inspection of school children, as printed on page 51 of the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of February 8th, 1908, is also supplied in card form by the same firm, its size being similar in every respect to that of the cards for medical or dental cases.

Iodized Catgut.

Hartmann's iodized catgut, supplied by the Sanitary Wood Wool Company, Thavies Inn, Holborn, E.C., is a ligature material of good quality, easy to handle, and of smooth surface. It will stand any ordinary strain, and the knot is good. Bacteriologically it is sterile. It is stored in glass tubes in an alcoholic solution of iodine, and in this it appears to preserve its quality satisfactorily. It fulfils all the requirements of a satisfactory ligature material.

Japanese Silk for Ligatures.

Japanese silk has already attained a degree of popularity as a ligature and suture material. It is a twisted silk; a certain stiffness is imparted to it in the process of preparation, but on boiling this stiffening disappears and the silk swells slightly. It retains, however, a smoothness of texture which makes for a rigid knot. It is suitable for all the purposes to which silk is ordinarily applied. It is supplied in hanks of 25 metres by Messrs. Allen and Hanburys, 48, Wigmore Street, W.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

DORSETSHIRE.

AT the quarterly meeting of the Dorset County Council held on May 5th, Lord PORTMAN in the chair, reference was made in the report of the Finance Committee to the question of the medical inspection of school children. The committee recommended:

> That the Council should invite the district medical officers of health or other medical practitioners in the county to undertake the duties imposed upon the Council by the Education (Administrative Provisions) Act, 1907, and the memoranda issued by the Board of Education thereunder (including such consultations and correspondence with parents and others as may be necessary, and reports to the Council), at an inclusive fee per child, per annum, inspected in the urban districts of 1s., and in the rural districts of 1s. 6d.; that such fees shall include travelling and all other necessary out-of-pocket expenses for instruments or otherwise, except weighing instruments, register cards and cases, or registers, stationery, and postages, which will be provided or allowed by the Council. That the committee be authorized to obtain the services of a medical practitioner to receive, supervise, and tabulate the returns, and the committee, acting as a joint committee, with the addition of the Rev. Canon E. W. Goodden, chairman of the County Education Committee, be reappointed to bring the scheme into operation at once.

Mr. R. DOUGLAS THORNTON, Chairman of the Finance Committee, in moving the adoption of the report, said that at the request of the Chairman of the Education Committee, the Finance Committee had budgeted for £1,250 to meet the anticipated additional cost for medical inspection. He had good hopes, however, that they would not only spend less than that this year, but that they would also be able to pay for the very heavy initial cost of equipping the 250 odd schools with weighing machines and other paraphernalia. The Education and Parliamentary Committees proposed at the last meeting of the council the appointment of a full-time medical officer of health at an estimated initial cost of £800 a year, rising in two years to £1,200. The council referred the matter back to the Finance Committee with instructions to see whether the district officers of health could be employed, and with an instruction that the total cost should not exceed 6d. a head. The Education and Parliamentary Committee, apparently relying upon the Government's statement that it would take only a few minutes to examine each child, crystallized that very loose phrase into a rigid five minutes for each child, and based their calculations accordingly thereon. They had gone very carefully into the whole matter with the help of the Chairman of the Education Committee, and had had a great deal of correspondence with the district medical officers of health; they had also had the benefit of receiving a deputation from the medical men of the county, and they found that it would clearly take more than five minutes conscientiously to examine each child. They also found that the proposed scale of 6d. a head was insufficient, and therefore recommended, first, the appointment of local medical men instead of a whole-time central officer; secondly, the payment of a fee for each child examined, and not, as proposed before, for every child on the register; the object of this being that they should pay only for work actually done, and that that fee should be 1s. a head for the concentrated urban schools, and 1s. 6d. for the scattered rural schools, where, of course, the work was the same, and the time spent in travelling longer than in urban districts. It would also be necessary to appoint some central medical man to collate and tabulate the reports received. The financial results of the scheme compared with that of the scheme previously rejected were as follows—that whereas for the first year the rejected scheme would have cost £800 and subsequently £1,200 a year, the expenditure now contemplated was £400 for the first year, £600 for the second year, and, when the scheme got into full working order, about £800, as compared with the £1,200 under the rejected scheme. In the course of their inquiries many and good reasons were brought forward to show that the children themselves would benefit by being under the care and supervision of local medical men, rather than of a central officer who would not be so closely in touch with them and would not be able to follow up any defect or ailment which he detected. He thought, too, that the committee had another feeling, and that was that upon

the threshold of what might be a very much larger scheme it was not well to bring in what might be a competing element against the medical men in the county. In the rural districts this scheme would, for the first year or so, be less remunerative to the doctors than afterwards; because the number of children would be less in the first year than at any time afterwards, while the distances to be travelled and the difficulties in arriving at the schools would be the same. But he hoped that the medical profession would feel that, in a difficult and rather complicated matter, the committee had tried to advise fairly and considerately, and would meet it in the same spirit as that in which the committee had tried to meet the whole case, recognizing that any hardship would only be for the first year.

Dr. J. MACPHERSON LAWRIE said he had the honour, as President of the Dorset and West Hants Branch of the British Medical Association, of introducing to the Finance Committee a deputation representative of the medical profession in Dorset; and on behalf of that profession he begged to express his thanks to Mr. Thornton and the members of his committee for their kindness and courtesy in listening to their suggestions. None of the deputation were candidates for any appointment under this Act, and therefore they had no private interests to serve. He went on to say that it was difficult to reconcile the very elaborate directions for medical examination with the rather ill-considered remark in the department report that the examination of a child would not take more than a few minutes. Even after the most cursory examination it was evident that the amount of work required must involve the expenditure of a great deal of time and patience and many long journeys, unless its provisions were to be treated as a sham. Information regarding the height and weight, nutrition, cleanliness, and clothing of the children must require an appreciable amount of time. And a search for possible diseases of the nose and throat, the eyes (including sight testing), ears, teeth, and so on, could not be carried on in a hurry. And, after all this had been gone through, time must be given for a careful investigation of mental capacity, and the existence of disease of the heart, lungs, and other organs. If a medical officer was to do the whole examination with any pretence at thoroughness, it would take close upon half an hour, or with all the assistance of teachers and clerk, at least 20 minutes. It was important to make this clear, for obviously local authorities, in their laudable efforts to keep down the rates, would only engage the minimum amount of medical assistance; and if this was calculated on the basis that the examination of a child need only take a few minutes, the result would be that the statistics would be unreliable, many defects would be overlooked, and the medical officer would hardly have time to think of what he was doing. He thought the public spirit of medical men was generally recognized, and was sure that the profession in that county was anxious to take its full share of responsibility in assisting the operation of this most important Act. But at the same time too much should not be demanded from it. Suggestions for carrying out the Act, and the question of a fair remuneration for services had received the serious consideration of the profession—not altogether on the basis of what might be reasonable, but of what might be possible. They were fully in accord with the proposal that the work required should be handed over to the local medical officers of health, and they were prepared to make an honest attempt to carry out the duties on the proposed basis of 1s. for each child examined in urban districts, and 1s. 6d. in rural districts, with one slight modification. It would be noted that in 1910, when the Act would be in full operation, the number of children to be examined in the rural schools would be 8,353; but in 1908 there would only be 4,187 examinations, although the number of journeys required would be about the same, and in order to get over the difficulty by a reasonable compromise he moved the following amendment:

> That inasmuch as the scheme does not come into full operation until 1910, when the number of rural children will be 8,353, and inasmuch as the same travelling will have to be done in 1908, when the numbers will be 4,187, a bonus of 6d. for each child examined be added to the fee of 1s. 6d. per head in rural schools, and for the year 1908.

Mr. BUDGE said he thought, and he believed many others agreed with him, that the proper persons to be appointed to this post were the Poor-law district medical officers. They were always in their districts day by day, they knew the family history of the cases much better than the medical officers of health, and they would always be able to advise what should be done, and if necessary order any medicine or anything that might be required. It seemed to him that it would be infinitely preferable to appointing the medical officer of health in the district. The latter had a good many parishes to attend to, he had a large area to go over, and it was impossible for him to be in touch with each village and each school as the Poor-law medical officer would be. He quite agreed with Dr. Lawrie as to the extra sixpence for the first year.

Sir RANDOLF BAKER said that Mr. John Burns was bringing in a bill to be passed as, he understood, a non-contentious measure, in which it was provided that the county councils should appoint a county medical officer under Section 13 of the Local Government Act. The bill would take effect on January 1st next, and in consequence he asked whether the present proposal should not stand over?

Mr. THORNTON said the suggestion made by Dr. Lawrie was reasonable and met the case fully, and, as far as he was concerned, he should vote for it. The extra expenditure to the county would be for one year £104 13s. 4d., but it would be doing away with a grievance. It only referred to 1908, however, and he understood that Dr. Lawrie accepted the proposals as to 1909 and 1910. Mr. Burns's bill had been before the committee, and it was thought that very possibly, amongst the other duties which the county medical officer would be asked to do in his spare time might be the tabulation of school inspection returns. The recommendation simply asked the council to allow the committee to obtain the services of a medical practitioner; there was no idea of going into any heavy or continuous expense. In reply to Mr. Budge, he said that the committee meant to have the alternative of appointing, as found to be most useful, either district medical officers of health or other medical men, when circumstances arose in which the district medical officers of health were not available. The district health officer was a reporting authority already, and it would be unwise to introduce another reporting authority. Again, the district health officer had the power and duty to close the schools, and it would be unwise to introduce another authority if it could be avoided. Further, the district health officers were twenty-five in number, whilst the others numbered fifty-four, and it was undesirable to have more forms and more kinds of reports than could be helped. Dr. Lawrie's amendment was then put and carried, and the report, as amended, was adopted.

GLENDALE.

The following resolution has, we learn from the Newcastle papers, been unanimously passed by the Glendale Rural District Council:

> The members of this council view with extreme disfavour the proposal of the County Education Committee with regard to the medical examination of school children. They consider such a system would entail a large and useless expenditure of ratepayers' money; they think it would be distasteful to very many of the parents; and they are, moreover, of opinion that if Parliament makes such an order the funds to pay for the working of it should be provided out of the Imperial Exchequer and not out of local rates. They hope that the county council will not adopt the proposal, and suggest that a strong protest should be sent to Parliament against such a method of legislating.

MONMOUTHSHIRE.

At the meeting of the Education Committee of the Monmouthire County Council on May 12th Mr. T. W. Wade, M.B., B.S.Lond., D.P.H Camb, of Llanelly and Cardiff, and Miss Laura Powell, M.B.Lond., etc., of Cardiff, were appointed Medical Inspectors of School Children.

HERTFORDSHIRE.

Dr. Francis Fremantle has been appointed whole-time county medical officer by the Hertfordshire County Council to carry out, as to one-half of his time his public health duties as hitherto, and as to the remainder of his time to superintend a system of medical inspection in schools by the fourteen district medical officers of health and two other local school medical officers.

Nova et Vetera.

A PIONEER IN RESEARCH ON YELLOW FEVER.

It has been said, with some show of truth, that no accepted discoverer, whether in the world of science or travel, is really the first in the field, and that practically in every case he has been forestalled by some one else whose voice has failed to reach the public, or has fallen upon unheeding ears. Such would appear to be the case with regard to the discovery of the part played by the mosquito in yellow fever and malaria, and we owe it to Dr. Aristides Agramonte of Havana that the name of Dr. Beauperthuy of Venezuela, who in an unenlightened age first realized this, is rescued from oblivion.

In a recent article in the *Cronica Medico Quirurgica de la Habana* on sporadic cases of yellow fever, Dr. Agramonte, who has evidently been at some pains to collect his information, tells his readers a good deal about this "inglorious Milton," who nevertheless, as we shall see, was by no means "mute," and, indeed, on one occasion was within an ace of getting his discovery recognized. Born in Guadeloupe in 1808, Louis Daniel Beauperthuy was "medico de la facultad de Paris," and practised in the province of Cumaná in Venezuela for some period of his life, but afterwards appears to have passed into the British service, becoming physician to the Leper Hospital at Georgetown in Demerara, where he died in 1871. He would seem to have brought some of his work to the notice of the French medical authorities while in Guadeloupe, for a Dr. Brassac of the French Navy was specially sent to the island to investigate his theories. The result was unfortunate for Beauperthuy. Dr. Brassac, to his eternal shame be it said, would have none of them, and science remained in the dark for another half century.

We next hear of Beauperthuy in Venezuela in 1845, going about the pueblos of that country, always taking with him his microscope, with which he examined the blood and excreta of his patients. He visited Trinidad several times and also British Guiana, and contributed several papers to the Académie des Sciences of Paris. "A happy chance," writes Dr. Agramonte, "put into my hands the papers relating to this man—so notable yet so unknown," and from some of these he gives long extracts, though none of them, apparently, are from the contributions to the French scientific journals; indeed, it is not clear that Dr. Agramonte has seen them.

Writing in the *Gaceta Oficial de Cumaná* in May, 1853, Beauperthuy says:

> To the work I undertook (health officer in a yellow fever epidemic in Cumaná) I brought the knowledge gained during fourteen years' microscopic observation of the blood and secretions in every type of fever. These observations were of great service to me in recognizing the cause of yellow fever and the fitting methods of combating this terrible malady. With regard to my investigations on the etiology of yellow fever I must abstain for the present from making them public. They form part of a prolonged study, the results of which are facts so novel and so far removed from all hitherto accepted doctrines that I ought not to publish them without adducing fuller evidence in support. Moreover, I am sending to the Académie de Paris a communication which contains a summary of the observations I have made up to the present, the object of which is to secure the priority of my discoveries concerning the cause of fevers in general.

He then goes on in no uncertain voice to enunciate his credo:

> The affection known as yellow fever or black vomit is due to the same cause as that producing intermittent fever.
>
> Yellow fever is in no way to be regarded as a contagious disease.
>
> The disease develops itself. . . . under conditions which favour the development of mosquitos.
>
> The mosquito plunges its proboscis into the skin. . . . and introduces a poison which has properties akin to that of snake venom. It softens the red blood corpuscles, causes their rupture. . . . and facilitates the mixing of the colouring matter with the serum.
>
> The agents of this yellow fever infection are of a considerable number of species, not all being of equally lethal character. The *zancudo bobo*, with legs striped with white, may be regarded as more or less the house-haunting kind.

Our author now goes a little astray in finding the *fons et origo* whence the mosquito derives its primary infection in the decomposing products of the mangrove swamps and seashore at low tide, pointing out the invariable rule that the disease breaks out only in the neighbourhood of these places. It is, however, only fair to remark that Hernandez of Cuba and others have sought to ascribe the occurrence of sporadic cases of yellow fever to a possible telluric infection. On the subject of fevers in general, Beauperthuy gets remarkably close to the truth:

> Remittent, intermittent, and pernicious fevers, just like yellow fever, have as their cause an animal, or vegeto-animal virus, the introduction of which into the human body is brought about by inoculation.
>
> Intermittent fevers are grave in proportion to the prevalence of mosquitos, and disappear or lose much of their severity in places which, by reason of their elevation, have few of these insects.
>
> The expression "winged snakes" employed by Herodotus is peculiarly applicable to the mosquito and the result of its bite on the human organism.

Beauperthuy seems to have been no less ahead of his generation in stoutly denying "miasms" and the unhealthiness of swamps in themselves. He says:

> Marshes do not communicate to the atmosphere anything more than humidity, and the small amount of hydrogen they give off does not cause in man the slightest indisposition in equatorial and intertropical regions renowned for their unhealthiness. Nor is it the putrescence of the water that makes it unhealthy, but the presence of mosquitos.

It was to the *Gaceta Oficial de Cumaná* that Beauperthuy seems to have written most fully, but, as already stated, he made more than one communication to the Académie des Sciences. One of these, dated from Cumaná, January 18th, 1856, is entitled "Researches into the Cause of Asiatic Cholera and into that of Yellow Fever and Marsh Fever," and in this he says that as early as 1839 his investigations in a large number of unhealthy localities in South America had convinced him that the so-called marsh fevers were due to a vegeto-animal virus inoculated into man by mosquitos (*par des insectes tipulaires*). He then states that the intestinal contents of patients in these fevers consist entirely of monads and vibrios similar to those in putrifying animal and vegetable matter. After a short digression on snake-bites (in which he recommends large doses of quinine as a very successful treatment) he passes on to yellow fever, and again introduces the idea of a primary telluric infection. Yellow fever, he says, "seems in like manner due to the introduction into the system of septic fluids sucked up (*pompés*) by the insects on the seashore. The black matter vomited in the advanced stages of yellow fever consists of myriads of very minute monads. I can best compare them to the globules of the pigment of the choroid."

Beauperthuy's work was fated to obtain no recognition during his lifetime or after his death. To-day the knowledge of fresh scientific discovery flies over the earth; but it was otherwise half a century ago, and working, as he did, alone in a far and little-known country having but rare communication with Europe, it is little wonder that his theories, like those of Gregor Mendel, perished at their birth. But workers in science may fittingly pay a belated tribute of respect to the memory of one who made a great discovery, though his voice was the voice of one crying in the wilderness.

International Urological Congress. — The International Urological Association, which was founded in October, 1907, on the same lines as the International Surgical Society, has elected Professor Guyon of Paris its President; Professor Israel of Berlin is Vice-President; Dr. Desnos, General Secretary; and Dr. Pasteau, Secretary. The first congress will be held at Paris from September 30th to October 3rd, under the presidency of Professor Albarran. The programme of discussion is as follows: (1) Pathogeny and treatment of anuria, to be introduced by Drs. Kummel of Hamburg, Watson of Boston, and Achard of Paris. (2) Retention of urine without mechanical obstacle, to be opened by Drs. von Frankl-Hochwart of Vienna, Albarran of Paris, and d'Hoenens of Brussels. (3) Normal and pathogenic physiology of the prostate, to be introduced by Drs. Posner of Berlin, Pardoe of London, and Haberern of Buda-Pesth. (4) Indications for operation in renal tuberculosis, to be introduced by Drs. Ceccherelli of Parma, Brongersma of Amsterdam, Guisy of Athens, and Herescu of Bucharest.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE twenty-fifth annual meeting of the Medical Sickness, Annuity, and Life Assurance Society was held in the rooms of the Medical Society of London on May 21st, under the presidency of Dr. DE HAVILLAND HALL, Chairman of the Executive Committee.

CHAIRMAN'S ADDRESS.

The CHAIRMAN congratulated the members on the work of the society during the year, and said that the number of new proposals had been 192, which, after allowing for members dying, lapsing, and going out of benefit at the age of 65, left a net gain of 95, and brought the total of membership on December 31st, 1907, up to 2,583. There were 2,532 members assured for sickness benefit, of whom 225 had secured six guineas, 21 five guineas, 1,492 four guineas, 436 three guineas, and 358 two guineas a week. The number of sickness and accident claims was 668, as against 646 in the preceding year; of these, 590 were sickness claims, and 78 arose from accidents, 17 of which were poisoned wounds; the amount in sickness claims was £12,700, an excess of more than £1,200 over the previous year. The half-pay experienced was in excess of expectation, and was caused by a number of members being permanently incapacitated, and therefore entitled to an annuity, generally £109 4s. up to the age of 65. No other society offered such provision of half-pay up to 65, and he considered it an inestimable boon to incapacitated members. Cash bonuses amounting to £556 10s. had been distributed to members attaining the age of 65, and he was glad to be able to report that the bonuses had been much appreciated by them. During 1907, 8 more members entitled to annuities reached the age of 65, the number now drawing annuities being 22, and the amount paid to them during the year was £624 5s. The society was not taking any more contracts in annuity and life assurance, but members could obtain favourable terms from the Rock Life Assurance Company through the agency of the society. He regretted that more members did not take advantage of the facilities offered for obtaining an annuity on reaching the age of 65. Three members reached the age limit, had secured endowments payable at 65, and had received the sum of £1,125, and £62 10s. had been paid to the representatives of a member who had secured the return of three-fourths of his annual contributions on his death before attaining 65. The Investment Fluctuation Fund, to which was added all interest earned by the society's investments above a certain margin, now amounted to £11,031 13s. 1d. The funds of the society at the end of 1907 stood at £215 039 8s. 3d., being an increase on the previous year of £6 682 4s. 5d., so the members had every reason to be well satisfied with the result of the year's working. He expressed his pleasure at the smooth working of the society, and as a proof of this mentioned that though arbitrators were appointed it had never been necessary to refer a case to them. Owing to a vacancy having occurred in the list of arbitrators, Mr. Henry Morris, President of the Royal College of Surgeons, had been asked to serve, and had consented. The society were much indebted to the trustees for their attendance at the investigation of the securities, and also to their able secretary, Mr. Addiscott, and his assistant. He thanked the BRITISH MEDICAL JOURNAL, the *Lancet*, and the *Medical Press and Circular* for their valuable assistance in making the work of the society known. Dr. Hall concluded his remarks by proposing the adoption of the report of the committee and audited accounts for the year 1907.

Dr. W. G. DICKINSON moved that the reserve for the sickness branch should not be more than £100,000, and Dr. BARKWELL that the age limit of the membership should be raised to 70 years without increase of contribution. Dr. J. B. BALL, medical examiner, and Mr. H. H. CLUTTON, one of the treasurers of the society, spoke against the resolutions, which on being put to the meeting were lost.

The annual report was then adopted.

VOTE OF THANKS TO THE CHAIRMAN.

On the motion of Dr. ALLAN, seconded by Dr. BRINDLEY JAMES, a hearty vote of thanks was accorded to the Chairman for presiding. This brought the proceedings to a close.

MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was, by the permission of the committee of management, held at the Medical Institution, Liverpool, on Thursday, May 21st.

The chair was taken at 4.30 by Dr. STAMFORD FELCE, the President of the Union, and he was supported by a large number of members.

The PRESIDENT gave an address in moving the adoption of the annual report and traced the history of the Union from its inception to the present time. The Union had to thank several well-known members of the profession in Liverpool, notably Dr. Carter and Sir James Barr, for valuable help and assistance upon the Council. He detailed certain matters which were mentioned in the report, and spoke generally upon the efficient services rendered both to the members of the Union individually and the profession by the advice given by the Secretary and the legal aid afforded by the Solicitors. Mention was made of the defect of the present Medical Acts and a hope expressed that some day the protection against unqualified practitioners in respect to human beings under an amended Medical Act would be equal to that given to dogs under the Veterinary Act. The death of Dr. Dreschfeld and the loss sustained thereby was feelingly referred to by Dr. Felce, and it was mentioned that the last public appearance of Dr. Dreschfeld was at the annual dinner of the Union last year at Manchester. The rapid growth of the Union from 400 members in 1888 to 7,000 in the present year was referred to as proving the absolute necessity for such an organization. It was a fact that no one could claim immunity from the attacks of unscrupulous patients, and the register of cases brought before the council showed that even consultants of the highest repute in the profession were occasionally made defendants in actions for alleged negligence and required the services of the Union for defensive purposes. Without the assistance promptly and efficiently given by the Union many a practitioner would either be ruined in pocket or harassed almost beyond endurance. It was a great relief to members to know that their cases were taken over by skilled officials, and the responsibilities removed from the individuals concerned to the broad shoulders of the union itself. Dr. Felce called attention also to the large number of cases of threatened litigation against members which were stopped at once by the mere knowledge that the union would defend—"action collapsed!" as reported in the Secretary's schedule of cases. Reference was also made to the steps taken by the union to stem the torrent of unqualified practice by raising actions for damages against quacks; such actions had been successful in several cases. The President considered that greater protection could not be afforded to medical practitioners than that given by the union even if insurance companies took up the matter. It was suggested that some scheme could be adopted by which the whole risk of adverse verdicts and damages should be taken over; but after serious consideration it was decided that it was not possible, and, further, that it would be against public and professional polity, and likely to lead to serious injury to the profession, if not to actions for champerty and maintenance. Dr. Felce concluded by moving:

> That the report be received, adopted, and entered upon the minutes.

The resolution was seconded by Mr. LOWNDES, and after several members had supported it was carried unanimously.

A MEMBER called attention to the numerous instances of chemists prescribing and acting as medical practitioners, and the risk of increased infant mortality which, as it appeared to him, such practice entailed.

The PRESIDENT said the matter should receive attention.

The other statutory resolutions required under the Articles of Association were carried also unanimously.

An election for three vacancies upon the Council then took place, and Mr. F. C. Larkin was elected, and the two retiring members of the Council, Dr. Gunton Alderton and Dr. Messiter, J.P., were re elected.

A cordial vote of thanks to the Committee of Management of the Medical Institution for the use of the rooms

for the meeting was then passed, and, after a similar vote of thanks to the Council of the Union for its valuable services had been adopted, the meeting terminated.

LITERARY NOTES.

Messrs. Rebman Limited will publish the following works in the course of June: *A Manual of Practical X ray Work*, by Drs. David Arthur and John Muir, of the West London Hospital; *The Theory of Ions, a Consideration of its Place in Biology and Therapeutics*, by Dr. William Tibbles; *Electric Ions and Their Use in Medicine*, by Professor Stéphane Leduc, translated by R. W. Mackenna, M.A., M.B., Ch.B.; and a little book entitled *Death and Its Verification*, being a description of the various tests which should be adopted to prevent the risk of premature burial, by J. Brindley James, L.R.C.P.

Accident has brought us acquainted with a series of papers entitled "Moral and Religious Estimate of Vivisection," by Henry Nutcombe Oxenham, reprinted from the *Gentleman's Magazine* (1879) which show that the antivivisectionist of the present day, like the Bourbons, has learnt nothing and forgotten nothing. Oxenham was one of the so-called Oxford converts, but he seems in his theological beliefs to have been somewhat wobbly. He is a typical example of the antivivisectionist "ethos"—that is to say, he talked with the most arrogant confidence about matters as to which he had no first-hand knowledge. It is all wonderfully like what we hear at the present day. Thus we are told that anaesthetics in many cases cannot be applied to the lower animals, and we are asked to believe on the authority of Dr. Hoggan that they have proved "the greatest curse to vivisectable animals." Dr. Haughton, of Dublin, is quoted as saying that the demonstration of vivisectional experiments before students would let loose on the world "a set of young devils." It might be Sir Thornley Stoker giving evidence before the present Commission. Hunting, though a healthy and invigorating sport, is admitted to be "incidentally cruel"; but, "on the other hand, the whole interest and excitement of a physiological experiment on a living animal, both to operators and spectators, is necessarily dependent on closely watching its contortions on the rack(!) which their scientific training enables and binds them to appreciate minutely." This kind of thing enables one to understand the fanatical joy with which mediaeval ecclesiastics could witness the burning of a heretic. Lord Coleridge is quoted as referring, in the debate in the House of Lords on the Act of 1876, to some "frightful statements" by a Mr. Maitland as to the treatment of paupers in our hospitals "for purposes of research." Here again we seem to be listening to Mr. Cunynghame Graham in the Caxton Hall two or three weeks ago. But the cream of Mr. Oxenham's pamphlet is in a footnote, which we cannot refrain from quoting in full:

> Towards the end of last century a system of infusing the blood of one living animal into the veins of another for experimental purposes was devised by a Doctor Brown. It was soon found that human blood was the most effectual instrument for the purpose, and two ruffians, Burke and Hare by name, made a lucrative trade of kidnapping boys in the dark "wynds" of Edinburgh and selling them while their blood was yet warm to medical practitioners who wanted them for the purpose for which vivisectors want their victims now. The law was at length happily brought to bear on this beneficent variety of the "propitiatory sacrifice." Burke and Hare were hanged and some of the authors of the Brownonian system were transported.

Seldom indeed, even in antivivisectionist literature, has such a mass of absurd misstatements been packed into a few lines. Experience, however, has made us so familiar with this sort of thing that it has almost ceased to be amusing. The point on which we wish to lay stress is that there is not one of the statements there made that might not have been corrected by a few minutes' investigation. But any lie, however foolish, is thought good enough for the antivivisectionist mind. It is curious, too, that it is just those whose business it is to exemplify in their own persons all Christian virtues who, in regard to medical investigators, seem to think themselves justified in leaving out of the list the charity that thinketh no evil.

In view of the place now claimed for German surgery, it is curious to read the following extract from a letter of John Thadeus Delane, the famous editor of the *Times*, written in the mid-Victorian period:

> Lowe's account of the treatment of Lady Harriette makes me shudder. It is almost as bad as what she endured in Scotland. I have sent him up to Simon to take his opinion of it. The use of mortar and plaster of Paris in such a case is what one would have expected in the Middle Ages. None of the new inventions in either medicine or surgery seem to have penetrated to Germany. I believe they were better surgeons when they relied on sorcery.

It will be noted that in the opinion of the great editor of the *Times*, the patient fared even worse in Scotland than in mediaeval Germany. And yet at that very time the light that was to illuminate the world and transform surgery from an almost barbarous art to a beneficent science was beginning to glimmer!

Dr. W. C. Wood, of Gloversville, New York, has sent to the *New York Medical Journal* the following extract from the *Herald of the United States*, published by Nathaniel Phillips at the Post Office in Warren, State of Rhode Island, Saturday, October 20th, 1792:

> Warren, R.I., October 20, 1792.
>
> On Sunday, the 8th inst., Dr. Nathaniel Miller, of Franklin in Massachusetts, performed a chirurgical operation in Barrington. Mrs. Allen, the amiable Consort of Samuel Allen, Esq., having a Tumor on her left arm which had been collecting upwards of 20 years. The excrescence (by its bulk) had become troublesome; rational resolution stimulated her submission to the operation which was performed by Dr. Miller, in presence of Dr. Baylis of Dighton, and several other gentlemen of the faculty. The tumor was extracted by incision and weighed 2½ pounds. Before the operation began, a pertinent prayer was made by the Rev. Mr. Townsend, to the Author of Goodness for Divine countenance in the operation: After it was performed, a grateful acknowledgement was made to Heaven for its supporting hand. Mrs. Allen sustained a fortitude highly becoming the principles of reason and decency. Much credit is due to the skillful Gentleman in his chirurgical performance as well as his attention in the healing art. His patient is now out of danger from the extraction.

There is nothing particularly remarkable in this except the fortitude of the patient. Had all sufferers in pre-anaesthetic days been like Mrs. Allen, surgeons like Sir Charles Bell would not have spent sleepless nights before performing operations of any importance, nor would they, like another old surgeon, have thanked God when the patient whose leg he was about to amputate got off the table and hopped away. What surgery was without anaesthetics may be gathered from Dr. George Wilson's own account of his experiences of an amputation done without any "sweet oblivious antidote." It is well known that Sir James Simpson was so overcome by the sufferings of a poor woman whose breast was amputated in the Edinburgh Royal Infirmary when he was a student, that he seriously thought of giving up all idea of entering a profession in the practice of which such torture had to be witnessed. Thanks to him and to Morton those horrors are things of the past.

It is doubtless an honour for a doctor to minister to a hero, but, like many honours, it may entail certain disadvantages. It is related by some of the eighteenth century chroniclers that Marshal Saxe insisted on taking the field when just recovering from an illness, but, as a measure of precaution, he took his physician, Sénac, about with him wherever he went. His army had laid siege to a town, and the Marshal wished to make a personal inspection of some of the works. Having driven well within cannon shot in his carriage, in which sat the doctor, he mounted his horse, telling Sénac that he would soon be back. The doctor, who felt rather uncomfortable in the midst of the cannon balls which were flying about, ventured to point out that he could see some artillerymen training their gun on the carriage. The Marshal said: "Oh, put up the windows!" Sénac, however, chose the less heroic part of getting out of the carriage and awaiting his illustrious patient's return in a safer place.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 1244.*)

An appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Sir Victor Horsley, F.R.S. (continued).

Sir Victor Horsley, coming to the last part of his *précis*, the existing statute of 1876, its administration by the Home Office, and suggestions for its amendment, said the statute itself naturally, as it was thirty years old, was no longer quite up to date; and it was originally constructed by some one who was evidently not a scientific physiologist or pathologist, because it might have been very much simplified. In the first place, he took it that the principles of licensing and registration would both be preserved; there was no objection to them, and they certainly must be a satisfaction to the public. The only question came to be a consideration of how they could best be regulated. In the first place, as regards special conditions in the licence, assuming that a man had been given a licence, he noticed that Mr. Coleridge made several so-called charges against the Home Office. Sir Victor Horsley said it was not his purpose to go through those; it seemed to him that they were all baseless; but there was one particular charge, in which he mentioned the witness's name frequently, and therefore they might as well turn to that. These were Mr. Coleridge's words:

(10) I am here to charge the Home Office officials with placing a certain vivisector year after year beyond the reach of the safeguards erected by the Act—(that is the important sentence)—to protect animals from illegal treatment by licensees, by giving him permission to vivisect in private places, thereby placing him beyond the possibility of legal inspection; because by Clause 10 of the Act of 1876 the inspector has no right of entry into, or inspection of, any unregistered place.

That would come up again afterwards. The next question was:

What is the name of that particular person?—*A.* Victor Horsley.

There was further detail of it at Question 10 645, on page 170. The next day it came on again at 11,089, page 190. He would like to read the words in the first part of Mr. Coleridge's answer to Question 11,089:

We say there is no reason in the world why Sir Victor Horsley should be placed by the Home Office outside the possibility of inspection.

The witness said that charge against the Home Office was utterly baseless. The facts were these: On November 10th, 1893, he received a letter from the Home Office in answer to an application of his for leave to do two experiments away from a laboratory, in a private house. These experiments were the inoculation of blood from a patient suffering from *Filaria sanguinis hominis*. That was a particular worm which discharged its embryos into the blood of a patient at night time. The embryos did not come into the blood until about 10 o'clock at night, and they flourished in the blood when the patient was lying half unconscious or unconscious in sleep, and when he woke in the morning and began to move about, these embryos disappeared again; hence the only time one could get the living embryos was in the night, so that it was necessary to do this inoculation in the night time. All the laboratories were closed at night, and Sir Patrick Manson, for whom he was going to do the inoculation, brought the patient to a private house for him to do it. As a matter of fact, they examined the man's blood, and found that he had no embryos in his blood, or hardly any, the reason being that he had injured the lymph glands in which the parent worm was living, which had caused inflammation and the death of the parent worm, and there was an end of the experiment. There was an end of the whole matter, because he had never done any experiment in any unregistered place at any time in his life before or since. As regards the action of the Home Office, their action had always been perfectly clear. They had never given him any such leave as had been alleged. Their first letter was as follows:

I am directed by the Secretary of State to acknowledge the receipt of your letter of the 9th inst. respecting permission to inoculate two monkeys at your private house, if possible, in pursuance of the licence held by you for the performance of experiments under the Act 39 and 40 Vict., c. 77, and, in reply, I am to acquaint you that the Secretary of State will, under the circumstances, consider the experiments proposed as experiments to be performed under your licence, which will be treated as current.

I am to add that a special condition will be appended to the licence, exempting these particular experiments from the condition restricting the performance of experiments to the specified places.

In other words, the Home Office knew exactly what he proposed to do—to inoculate monkeys with this infected blood and nothing more—and they gave him leave to do that and no more, so that it was an absolutely restricted state of things. That was on November 10th, and on November 21st, his licence being due for renewal, he sent it in, and, when the Home Secretary renewed the licence, he said:

The following condition has been added to your licence: "And whereas the said licensee was authorized on the 10th day of November, 1893, to perform certain experiments at 25, Cavendish Square, in the County of London, I hereby vary the first condition of the said licence, so that the said licensee may perform experiments at such place or places as may be necessary, provided he report to the inspector on each occasion that he performs any experiment at other than the registered places as authorized by his licence."

The reason why that permission was given at all was that Sir Patrick Manson and the witness had not time between November 10th and 21st to do the experiment. He mentioned that to the Home Office, and they gave him this condition, but they would observe that when he proposed to do an experiment at all he was to report it to the inspector, and his original permission was only to do two experiments, and, finally, no experiments had been done under these permissions at all. In reply to the Chairman, who asked if the operation which he intended to do, if the patient had been suitable, would have been taking some blood from the patient, he said, Yes, and injecting it with a hypodermic syringe into a monkey like a vaccination. That was the whole thing, but he wished to produce documentary evidence that the Home Office had not given him, to use Mr. Coleridge's words, unrestricted leave to do experiments when he liked, where he liked, and what he liked. They never did anything of the kind, because, in the first place, the nature of the experiment was strictly defined, and, in the second place, he was to give notice to the inspector if he did anything at all. In reply to Mr. Ram, who asked as to Mr. Coleridge's suggestion that his licence or his leave was withdrawn, in an illuminating way, as he put it, just before that Royal Commission was appointed, Sir Victor Horsley said the matter was certainly referred to when the licence was renewed at the beginning of 1906, when the Home Secretary said that he did not propose to continue the condition. That was all so far as he remembered. He had not kept that letter, but the leave was not withdrawn in any special way. With every letter they received the Home Secretary put down such-and-such conditions, and if they were conditions which were no longer necessary, or were not operative, he withdrew them when the licence was sent in for renewal. The Chairman said Mr. Coleridge described the withdrawal in this way:

It is a very remarkable thing that, contemporaneously with the knowledge in the Home Office that there would be a Royal Commission, this leave was withdrawn from Sir Victor Horsley to vivisect where he liked and beyond the reach of inspection.

Sir Victor Horsley replied that that statement was absolutely untrue. He never had leave to vivisect where he liked, or beyond the reach of inspection. The leave the Home Office gave him was for two operations only, and he never used it. Asked if the Home Office wrote to him that that condition was no longer in force, he said the Secretary of State did not continue it. That was about seven years

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after it had been given. Asked by Sir Mackenzie Chalmers if they came across any other cases of *Filaria sanguinis hominis* afterwards, he said they did not. In reply to a suggestion that the probability was that the condition was kept open because he might have come across another case, he said: Quite so. It was only obtained for a special occasion, and he never bothered about it any more. In reply to further questions, he said these cases were extremely rare in England, and one might wait some years before getting another suitable case. It was the disease which produced elephantiasis. The matter brought him to the certificate system, because, on looking through the so-called charges against the Home Office, and casting his memory back now over the Act, he could trace special cases of which the antivivisection party had made capital in a large measure to the certificates; and he would like to mention points on each certificate in exemplification of his meaning, and then he would like to conclude by pointing out why the certificates were not necessary at all, and why that only complicated legislation on the subject. In the first place, Certificate A, the inoculation certificate, said that the experiment was going to be done without anaesthetics, and yet it was an inoculation experiment. When he was Secretary to the Government Committee on Rabies it was his business to inoculate rabbits through a little trephining operation. He gave them an anaesthetic in order to make that trephining operation to do the inoculation, but Mr. (afterwards Sir John) Erichsen told him that was violating the Act, because he was giving these animals an anaesthetic, and he reported them under Certificate A, which said that the experiment was done without anaesthetics; Mr. Erichsen said that his conduct under Certificate A ought to be that he should do the trephining operation on the rabbit without anaesthetics. The witness pointed out to him that it might be a breach of the law, but that it was an absolutely absurd position. He suggested that this was a difficulty that cropped up from time to time. He knew of other experimenters who had performed rather considerable inoculations, who had always given the animal an anaesthetic, but, owing to the unnecessarily hidebound wording of the Act of Parliament, it happened that that action of the experimenter conflicted with the Act. Asked if that was in the Act or in the form of certificate, he said it was in the form of certificate. Sir Mackenzie Chalmers pointed out that the only thing would be that he would do it under Certificate B; if he had Certificate B, there would be no difficulty. The witness replied that it was not classed as an inoculation experiment. Sir Mackenzie Chalmers went on to say that that might be scientifically wrong, but practically for him to do that under the existing Act he would be recommended to take out Certificate B as well. Sir Victor Horsley replied, Yes. He agreed that he would do the operation under anaesthetics, and the animal would be allowed to recover from the anaesthetic for the purpose he wanted. He then passed to Certificate B, as regards which he once more would draw attention to Question 10,319. Mr. Coleridge in his evidence endeavoured to persuade the Commission that the practical administration of Certificate B was that the operator would do the cutting operation, then the fixing on the apparatus, and then he would go on making his observations, not giving the animal any more anaesthetic. The witness said he had seen a great deal of experimental work in this country, and such an idea had never, to his knowledge, entered the head of any experimenter, and he was perfectly certain it was never in the mind of the Home Secretary in issuing the licence and certificates. The whole idea of Certificate B was that an animal which was going to have a cutting operation performed upon it should be under an anaesthetic from the beginning of the operation until the dressing was applied and the animal removed to its cage, exactly the same as with a human being; and on that idea alone had Certificate B been worked. Coming to Certificate C, he said it was a special certificate required for demonstration to students. He thought it absolutely unnecessary. A person who was duly licensed and registered was perfectly fit to demonstrate to students; he did not require any guarantee in the shape of Certificate C. Then Certificate D was constructed in consequence, apparently, of the original drafting of the Act, which made the extraordinary statement that

> Experiments may be performed not only directly for the advancement by new discovery of physiological knowledge, or of knowledge which will be useful for saving or prolonging life or alleviating suffering, but for the purpose of testing a particular form of discovery alleged to have been made [and so on], on such certificate being given as in this Act mentioned, that such testing is absolutely necessary for the effectual advancement of such knowledge.

That presupposed two things: In the first place, that one could repeat a former experiment absolutely; and in the second place, that such repetition ought to have the special sanction of the Home Secretary. That was wholly contrary to science. No man had ever repeated an experiment without learning something additional and new. As to the necessity of having special permission to extend work, it seemed to him that that was contrary to the whole spirit of the Act, which, after all, was to promote the further discovery of physiological knowledge. He would repeal it altogether. It was not only not necessary, but also contrary to the fact. It was evidently inserted in the Act by some one who had no knowledge of physiological experimentation. Coming to Certificate E, he said that although he had no charge to bring against the Home Office, he did not say that he had no charge to bring against the Home Secretary. Certificate E, he took it, was never applied for now. Certificate E proposed to allow experiments on dogs and cats without anaesthetics—those were the words. When Mr. Matthews was Home Secretary he insisted on Certificate E being filled up by all the experimenters who wished to use dogs and cats, and they protested. They went to him as a deputation—Sir James Paget, Sir Andrew Clark, and himself. They pointed out to him that this placed experimenters in an entirely false position; that they did not do experiments on dogs and cats without anaesthetics; that if the Home Office wished to know when dogs and cats were used they could be notified, but that to compel them to sign a paper which was not true seemed to them most unjust; they asked him, therefore, to withdraw Certificate E. Mr. Matthews refused, and it was not until they came under the enlightened régime of Mr. Asquith that this question was settled; they made exactly the same representation to Mr. Asquith, and he immediately said, "Certainly, I recognize the injustice," and constructed the Certificate EE to take the place of Certificate E, which was exactly the same certificate, only it left out the words "without anaesthetics." The witness mentioned this to show that as regards the plenary power of the Home Secretary under the Act—although as a rule, of course, it was worked extremely wisely—there might be examples in which it might be worked extremely badly. Asked by Mr. Ram if Mr. Matthews gave any reason for adhering to Certificate E, the witness said, No; he simply wrote a letter in which he regretted that he was unable to comply with the wishes of the deputation. That occurred in 1888. Consequently the statistics of the experiments on animals then were not correct. For instance, when he was called upon (and he knew many other experimenters when they were called upon) to send in this Certificate E, he struck out the words "without anaesthetics"; he had the document returned to him twice, and sent it in again twice. He would not sign the original Certificate E, and ultimately it was allowed with the words struck out by him. Proceeding, he said that now the working was perfect, there was nothing to complain of at all. The last certificate, F, was another of these special certificates. It was absurd that a special certificate should have to be got for experiments on ungulates. There was no reason why any one animal should be removed from the sphere of the Act. Summing up, he suggested to the Commission that these certificates, which gave endless trouble to fill up, were really of no use. Then the question arose, what use was made of them at the present time, and how were they going to meet it. Very important use was made of them at the present time. The Home Secretary must know what was going on during the research, and he must know what the results of the research were, for his own information, and also for report to the House of Commons. They need not trouble about the middle point, what was going on during the research, because that was provided for by the system of inspection; but as regards the first point, all that was necessary was to do what was actually done

at the present time, to insert on the application for the licence that the applicant proposed to do such and such experiments on such and such animals in such and such a way. It covered all that. Then when it came to the collection of statistics for report to the House of Commons, that depended simply and solely on the form. The present form they filled up at the end of the year could very easily be expanded in this sort of way. They could have the first column "Class of Experiments: (1) Animals killed before recovery from anaesthetic; (2) animals allowed to recover from anaesthetic; (3) animals inoculated." That really covered the whole ground. Then the next column would be "Number of Experiments Performed"; the next "Number in which Pain was Observed to Occur"; the third, "Animal Employed." In a simple form of that kind there were all the facts supplied by those certificates, and in a form which would make their being collected and reported upon extremely simple and easy. So that the certificates were wholly unnecessary. The witness went on to say that some years ago, when Mr. Ritchie was Home Secretary, the blue form on which the experiments were recorded was given up, really he thought in answer to a protest of his own—namely, that the investigator ought not to be put to the trouble and annoyance of having to write all the records of experiments twice over. Mr. Ritchie then made a standing regulation that the records of all the experiments were to be open for the visit of the inspector, as, of course, they were. Consequently these details, which were inserted on the certificates, and under which the certificates were allowed to be obtained, were always available. There was another reason for regarding the certificates as unnecessary. Asked by the Chairman if he would have a licence and no certificates, he said, Yes, a licence drafted in the way he had suggested, and a form of return to be filled up by the investigator at the end of the year would cover the whole ground. The plenary power of the Home Secretary would remain, of course, and he would insert any special conditions on the licence which he thought necessary. These conditions would last for a year, because the licence always expired at the end of the current year. In reply to Sir Mackenzie Chalmers, the witness said the advisory bodies of scientific people would have their place in the granting of the original licence; and they would be the people to appeal to as to whether the investigator was a fit person to conduct the investigation which he proposed to do. Now their advice was sought really three times over for the same thing. If a man got a licence and Certificates A, B, and EE, which was about the average, they really signed the same thing three times over. Sir Victor Horsley said that exhausted his *précis*. In reply to Dr. Wilson, who asked what body he would recommend to advise the Home Secretary as to the need of new experiments in the field of research instead of the Association for the Advancement of Medicine by Research, the witness said he had not thought of it. He did not know of anybody at that moment that he could name. He would object very strongly to the General Medical Council. It was not at all a body that could do it. It might be done through a committee of that body, but the expense question was always a very difficult one. Asked whether the grants made by the British Medical Association did not tempt some of the best students to go in for research, and some of the ablest young men who were just starting in practice, he said they enabled many who could not otherwise afford to do so, the scholarships especially. He agreed that many of the students who obtained these scholarships went to Continental schools to complete their studies, and that they became imbued with the doctrines there taught. He agreed also that the majority of the teachers in medical schools were selected from those young men who went to Continental schools. Asked whether the consensus of medical opinion was not always a somewhat unreliable court of appeal, he said he did not personally think that they could be mistaken on the point, because one saw the present position of scientific research was nothing but the logical outcome of all knowledge that had been going on for centuries since the time of Galen. He could not believe that the medical profession was mistaken on a matter like that. Asked if he thought that if his proposal to operate on dogs to teach students practical surgery, as was done at the Johns Hopkins Hospital, Baltimore, were submitted to a plebiscite of the profession they would obtain a large majority in its favour, he said he did not know. He thought there would be a majority. He went on to say that he had not limited the number of animals to be operated on to dogs at all; on the contrary, he had always held the view that the sheep was an animal that particularly lent itself for students' work. The arteries in sheep were of the same size as those in man; the circulation in many respects was the same. The difficulties of operating upon it were the same. The sheep was really a very good animal for research; it was only a question of cost. In reply to a further question, he said that the discovery of the antiseptic system had completely revolutionized medical and surgical practice. In old days surgical practice used to be reserved to so-called operating surgeons. General practitioners nowadays did all operations—many of them did very large operations—such as extirpation of the kidney. That had all altered even within his time. General practitioners operated very largely in cottage hospitals all over the country. On its being put to him that the revolt against the use of the carbolic acid spray which constituted the leading feature of antiseptic surgery was not brought about by experiments on animals, he said there was no revolt against the use of the carbolic spray at all. The question was whether it was necessary to have this disinfection of the air. It was shown by experiments that air was not toxic to the degree it was believed to be; that organisms present in the air to a large extent were moulds and fungi, which were not particularly poisonous to animals; that the organisms which were dangerous to animals and to man were those which were carried in on instruments, and for that reason people began to risk leaving off the spray, and gradually it was left off altogether. But the spray was not the leading feature of the antiseptic surgery. Asked if he agreed with the statement of Dr. Waller in his address at the meeting of the British Association at Leicester, that "the province of vivisection, essential as it was, was a very narrow and restricted province indeed in the domain of physiology," and that vivisection was, in fact, an infinitesimal fraction of practical physiology, Sir Victor Horsley said that passage from Dr. Waller's address, taken by itself, might easily be misunderstood. What Dr. Waller meant was that in the work of the physiologist in his laboratory and in his class rooms, the actual amount of vivisection he did was extremely small. So it was; the total net work done by a physiologist in his ordinary routine rarely included an experiment on an animal of a nature which might be termed vivisection, compared with the mass of his other work. But it all depended upon the investigator. If one was making a research, for instance, on the nervous system in the way he had indicated, tracing out the track by the Marchi method, one would make, perhaps, ten vivisections; it would take one ten months to work up that material microscopically. In reply to a further question, he said he thought that experiments on dogs were absolutely necessary for teaching. On its being put to him that Professor Gotch had stated there that for two years he had not used living dogs for teaching purposes, and Dr. Pembrey admitted before the Commission that during all this year, at least, he had not vivisected any animals at all before his class, and his being asked if from that he would rather criticize the efficiency of the teaching, he said, Certainly he would. Asked if when they had to propagate the virus of rabbits at the Pasteur Institute they did so from rabbit to rabbit, he said, Yes. He did not know whether they occasionally used dogs, but the animal used for propagation of the virus was the rabbit. On its being put to him that the symptoms of rabies as seen in the rabbit bore no resemblance to rabies in the dog, he said it all depended upon the rabbit. One might take twenty rabbits, and one or two would be quite playful, and when one inoculated those rabbits a rabbit which was naturally excitable would bite as viciously as a rabid dog. So would a guinea-pig. He had had a guinea-pig inoculated with rabies fly at him exactly like a rabid dog. The majority of rodents simply became paralysed in the hind legs; they had the paralysed form of rabies and not the excitable form. But it depended upon the animal. In reply to further questions, he said he had devoted a very long time to working out accurate statistics

at the time of the Government Commission, and considering that the Pasteur system had reduced the death-rate from 15 to 0.3 per cent. it was such a margin of difference that he never could have any doubt. On its being put to him that over 1,200 cases had died either during or immediately after treatment within the time stated by Pasteur, he said those statistics were collected by Dr. Lutaud; that evidence was certainly not received by anyone who knew the facts. But there was the evidence which the English Committee collected for themselves. They went over to France, and the witness was over there for two months hunting up the cases which had been treated, and hunting up the authenticity of the rabidity of the dogs, and there was no doubt that the death-rate which Pasteur then obtained was about 1.5. Since then it had been brought down to 0.3, which was a very usual death-rate of a preventive inoculation. He believed that there was very little pain inflicted on the rabbit by it. He had seen rabbits completely paralysed in their hind legs, and beginning to be paralysed in their fore legs, eating and looking about absolutely unmoved. It was a kind of painless paraplegia in the rabbit, evidently. Human beings only suffered when they got the spasm and the apprehension of dying from an inevitably fatal disease. The witness was then asked about the functions of the thyroid gland and the diseased conditions connected with it. He said he had performed many operations on monkeys and dogs, and an exceedingly large number of experiments had been performed by others engaged in this research. Asked if it was right to assume that though the initial operation—the removal of the gland or part of the gland—might be carried out painlessly, the conditions induced might be accompanied with very considerable pain, he said, Oh, dear, no. The animals ran through the same category of symptoms as the myxoedema and cretinism patients; they became more and more stupid and idiotic, they were not sensitive to their surroundings. Asked if it could be said that after all these experiments on the thyroid and parathyroid glands the functions of these glands were perfectly understood now, he said, Of course not; they will not be understood in our lifetime. Asked if it had not been pretty fully established by the experiments of Professors Swale Vincent and Jolly that the functions of these glands appeared to differ very widely in different classes of animals, Sir Victor Horsley replied that he showed that himself a good many years ago. They differed only in degree but not in kind. Asked if there had not all through these experiments been a great discrepancy in the results obtained by different observers, he said, No. Every pioneering investigation was sure to arouse other investigations, and new facts came to light which were not explained by the conclusions of the first investigation, and consequently so-called discrepancies had arisen. That was the ordinary concomitant of the results of scientific work, and it was only necessary to wait twenty, thirty, forty or fifty years to get the real truth. Asked if cases of myxoedema and cretinism were ever completely cured, he said, Certainly, and that was not the end of it. For instance, to cure cancer of the thyroid gland by an operation it was absolutely essential to take out the whole gland. If one took out the whole gland one would make the patient myxoedematous, but if one gave thyroid the patient did not become myxoedematous. In other words, the thyroid treatment under those circumstances had enabled surgeons to remove the cancer, which was a fatal disease. He had dealt with cancer cases in the way he suggested by giving thyroid. Asked as to brain surgery, he said the successful operative treatment of the brain and spinal cord was wholly due to experiments on animals. The technique was simply Listerism, but the application of the technique to a particular spot in the nervous system was entirely the result of physiological research. Asked if the results of an operation, for example, on a tumour or abscess of the brain were not very unsatisfactory still, he said of course there was a great deal to be done in the way of improving them. Asked if the surgical treatment was imperfect often because the cases came too late. Diagnosis was very imperfect still, patients were referred for operation which ought to have been operated upon a year before. Asked if Professor Berlin, had not stated at the meeting of Congress at Moscow a few years ago that brain localization is often most doubtful; the diagnosis of brain abscess from brain tumour is often, if not always, quite impossible,

Sir Victor Horsley said he might have made that statement ten years ago. He had recently published with Professor Borchhardt a certain series of cerebral tumours in which he diagnosed them successfully, and Professor Borchhardt removed them successfully by surgery. He should think Oppenheim would not repeat now what he said at Moscow ten years ago. In reply to a question about Dr. Crile's experiments, he said when one used the word "terrible," he thought that any mutilation of a human being or an animal was conceivably terrible in one sense, but it seemed to him unreasonable to apply the term to an operation on an animal and to deny the term to an operation on a human being. If it was terrible to one it was terrible to the other. He believed they were all absolutely painless. Asked if he was of opinion that more experiments of this kind were still required, he said, Undoubtedly. In reply to further questions, he said there was not any operation that he could think of at that moment which had been performed experimentally on an animal, such as the removal of the kidney or the removal of a portion of the liver, which had not been equally performed on a human being. In other words, the parallelism between such operations on animals and man was absolutely close. Even through every stage of the operation and the effects produced the parallelism was absolutely close. Asked if it was not sometimes very difficult to determine whether a patient dying on the operating table died from the mere shock of the operation or from the anaesthetic, he said that was purely a medical point. Personally he had never seen anybody die from shock on the operating table. He had seen people die, as he considered, from an overdose of chloroform. That was his personal opinion. If he were asked whether it was possible to differentiate between the two, that was a very difficult question. Therefore continuous experimentation was bound to go on. This was still more the case in respect to drugs and doses. There he thought they had neglected pharmacology disgracefully. There was hardly a university that had a pharmacological laboratory. They were beginning to found them now. Asked about alcohol, whether there had not been many experiments performed upon animals, to say nothing of experiments that man had performed upon himself, he said, Yes, a great many. On its being put to him that still there was no consensus of opinion in the medical profession about the dietetic or pharmacological value of alcohol, he said these were two different points. First, as regarded the dietetic value, he should have said that there was a very considerable consensus of opinion in the medical profession that alcohol was not a food—he meant in the proper sense of the word, a food without any adverse effects. As regards the position of alcohol as a drug, the general consensus of opinion of the medical profession now was, not to use it as a drug, but to use other drugs instead, because they had a less injurious effect, like strychnine, and so forth, and heart tonics, and one thing and another, which could be employed with better advantage to the patient than alcohol. Asked by Mr. Tomkinson whether, supposing there were no such things as anaesthetics, he held that they would be justified in experimenting in surgical and other operations on the animal world for discovery, Sir Victor Horsley said, Yes. In old days, before anaesthetics were discovered, he thought the old surgeons were quite justified in making the experiments that they did, and they made a great many useful experiments to discover new operations and new facts. On its being put to him that it was very much contested in some quarters whether the same discoveries could not have been made by other methods than by experiments on animals, he said he knew that had several times been asserted, but the fact remained that the thing was discovered by an experiment on an animal, and it was no good saying afterwards: "I could have discovered it in some other way." For instance, it was once said of the circulation by Mr. Tait that any one with a syringe and a dead body could have discovered the circulation of the blood. A statement like that was monstrous in itself. They could always say: "Oh, yes, I might have discovered it in some other way." The answer to that was perfectly simple: "Why did you not?" In reply to further

questions, he said that all the idea of experiments abroad without anaesthetics dated from the barbarities performed at Alfort thirty years ago in the Veterinary School, but all that was ancient history. In the experiments that one saw abroad now the animals were anaesthetized as they were in their laboratories. Some investigators might not use anaesthetics, but as a rule they all used them abroad. He was as certain that animals experimented on under anaesthetics were free from pain as he was that the patients whom he operated upon in the hospital and in his practice were free from pain. In reply to Sir Mackenzie Chalmers, he said he had been operated upon often. Mr. Tomkinson asked if it was quite clear that human beings did not suffer, because he had witnessed the case of a person who has a broken leg, and whose muscles round the ankle had stiffened during the process of healing; after a time the patient determined to have those fixtures broken down; he saw the operation, and the patient not only struggled but moaned so as to give him a very painful impression, and he could hardly believe it, although he admitted that afterwards the patient said he felt nothing. Sir Victor Horsley replied that he once removed an infra-orbital nerve—which was an extremely sensitive nerve—from the face of a woman who had had enormous quantities of morphine and drugs for neuralgia before. During the whole of that operation that woman commented on every remark that he made to the house-surgeon, and when he tore the nerve out she burst out laughing; yet they went on with the operation, because she did not make the slightest purposive movement to avoid it. She obviously was not feeling it. They finished the operation, and the next day she knew absolutely nothing of what had occurred; she never felt any pain whatever, and she would not believe the statement of what she had done. He saw another case operated on by a colleague, and the patient read that colleague a homily on the future life the whole time. He knew nothing of it. It was a large plastic operation for a burn in the neck—a most sensitive thing—in fact, it was the sensitiveness probably that stimulated the brain. But neither of those patients suffered anything at all. He was quite satisfied on that point. One's own knowledge of anaesthetics was that one went off suddenly and as a rule came to gradually, but one had no consciousness of pain during the time the operation was going on. The brain could receive sensation. It was only a question of paralysing the highest centres of all. That was the object of all this modern research on anaesthesia. They wanted to know how just to abolish consciousness, and at the same time to enable all the lower processes to go on unhindered. When they had solved that question they had solved the whole thing of safety to life. On its being put to him that Dr. Crile's operations had created a tremendous sensation, he said, Yes, because of the gross misrepresentations of those operations. Asked if the description of them was not by the operator, he said, Yes, certainly; but not the description that had been given of them to the public. On the contrary, several times they had been made the subject of pamphlets which he had been advised legally he could take no action upon, because in an ingenious way the fact of anaesthetics having been given was not introduced; but the whole effect of the pamphlet was to convey to the ordinary man in the street that those operations were done without anaesthesia. The whole strength of the antivivisection party was the capacity for writing a thing and giving a false impression by means of innuendo. That was very glaringly shown in the evidence which had been laid before the Commission. In reply to a further question, Sir Victor Horsley asked on what authority the statement had been made, that anaesthesia could not be kept up under such tremendous operations. Why, operations that they did on human beings were far more tremendous by way of nerve stimulation. It was sheer ignorance to say that a dog could not perfectly well be kept under chloroform, or any other dangerous anaesthetic. Asked if the system of introducing chloroform, or whatever the mixture might be, from another room, pumped through a tube and brought under the mask, was perfectly satisfactory to him, he said, Yes, quite; as much so as in the case of a patient having the chloroform held to his mouth, in fact, probably more so. In administering the atmosphere one must give the atmosphere to the individual loaded with a certain amount of the anaesthetic. What they had found now was that during the operation it was quite sufficient to have only 0.5 per cent. of chloroform, an incredibly small amount, quite indistinguishable by smell in the room. If one blew that to the patient it would probably arrive at him more regularly than if he drew it in himself. The only thing was that it involved so much apparatus that one could not do it in practical working.

(To be continued.)

LYNN THOMAS AND SKYRME FUND.

TENTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

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FIRST AID IN NEW YORK.—The Grand Legion of the Red Cross is, we learn from the *New York Medical Journal*, the name of a trained volunteer army of first aid which is being organized by the American National Red Cross. It is made up of four or more legions; each legion has four relief columns, each column four detachments, each detachment four squads. The first relief columns were formally organized on January 22nd, 1908, in Brooklyn, under the direction of Dr. Glentworth Butler, assisted by Major Charles Lynch, of the Medical Department of the United States Army, who was specially detailed by the Surgeon-General to aid in the work. The members of the Legion will be taught to give first aid under all conditions, and will be prepared to serve as a body in time of need. They will not be obliged to serve in the Army Hospital Corps in time of war, but may do so if they wish. The chief work of the Legion will be directed against preventable accidents, and it is estimated that about two-thirds of the 10,000,000 accidents a year in the United States are preventable. The Grand Legion will not be composed of men alone; each relief column will eventually have attached to it a relief corps of women trained in first aid and home nursing.

TROPICAL MEDICINE IN AMERICA.

At the fifth annual meeting of the American Society of Tropical Medicine, held in Baltimore at the end of March, a number of communications of interest were made. Among these was a good review by Dr. Anders, the President, of the year's work in this department of medicine, and a paper by Dr. C. W. Stiles, in which it was suggested that a dry skin, dry hair, winged scapulae, and tibial ulcers were constant phenomena of *Uncinarial infection*. The latter, he stated, was, and might be expected to be, commoner in localities where the soil was sandy than elsewhere, for one of the main factors in its dissemination was soil infection.

An account of *the rat population of the United States* was supplied by Mr. D. E. Lantz, of the Agricultural Department. There were, he said, some 300 species of rats in the world, but of all those in the United States 98 per cent. belonged to the species *Mus decumanus*. This, commonly called the grey rat, could adapt itself to all kinds of temperatures; it would even breed in cold storage rooms; the female had from three to five pregnancies a year, with an average of ten young at each pregnancy in the latitude of Baltimore; in the South the number in each litter was smaller. Its fecundity was increased by a plentiful supply of food, and it was omnivorous and the most destructive rodent in the world. Likewise it carried plague and disseminated trichiniasis and septic pneumonia. The latter disease was, he believed, often due to drinking water in which a rat had died, and in which its body had decomposed. In San Francisco the sanitary authorities were catching 10,000 a week, and about 1 per cent. of these rats were found to be infected with the *B. pestis*. A war against rats should include careful protection of their natural enemies—hawks, owls, and skunks—none of which was nearly as destructive to game. Human habitations should be rendered rat-proof by proper construction, the importance of screening low windows not being forgotten. Of traps the guillotine form was the best device, and the best bait was "wienerwurst." Poisons were less useful, and in any case could not be used in inhabited buildings.

Dr. Ashford gave a description of *Puerto Rico* as a field for research. While on duty in the island he had himself seen about 15,000 patients in hospitals and dispensaries; among them uncinarial disease was the most important. Chyluria and other forms of filarial disease also prevailed, and in one battalion he had found that 7 per cent. of the strength harboured *Filaria nocturna*. Bilharziosis was also fairly common, and in one district about 5 per cent. of the whole rural population was infected with *Schistosomum mansoni*. The patients passed blood-stained mucus and painful stools, but showed no eosinophilia, nor were any found in the urine. Other common parasites were Strongyloides and *Trichocephalus trichiuris*; on the other hand, cestodes were rare, and amoebic dysentery was infrequent, nor was there any trypanomiasis, kala-azar, plague, cholera, or Malta fever. The successful work of the Commission which dealt with uncinarial anaemia in Puerto Rico had brought about a great improvement in the attitude of the people towards hygienic methods. Dr. J. M. Swan reported that he had found the thymol treatment of trichiurial infection recommended by the Puerto Rico Commission useful. Dr. Stiles urged that in dealing with oxyuris infection it should be remembered that the adult worms lived in the small intestine; hence they should be driven into the large intestine by an anthelminthic before local injections were given.

Dr. W. S. Thayer advocated the continuous as opposed to the intermittent use of prophylactic doses of quinine by residents in *malarious districts*. The quinine should be supplied by Government at a low rate, and in some comparatively pleasant form, such as the tannate of quinine made into a confection of chocolate. Dr. L. O. Howard gave reasons for believing that before malarial prophylaxis based on mosquito extermination could be carried out effectively on a large scale the habits of these insects would have to receive further study, and further evidence be obtained as to the varieties which were capable of transmitting malaria. Mosquitos as a general class would breed in salt water, bilge water, in holes in the trunks of trees, and in many other out of the way places. Dr. E. R. Stitt, of the Naval Medical Service, suggested that when collections of water could not be absolutely abolished the breeding of tadpoles should be encouraged, as they were useful in destroying mosquito larvae. Other speakers urged that when local and other authorities undertook to deal with malarious districts they should not rely on any one method; to aim at exterminating mosquitos by destroying their breeding places was good, and so, too, was the protection of individuals from mosquito bites, as also the use of prophylactic doses of quinine, but it was a mistake to press the advantages of mosquito extermination in such fashion as to suggest that it was the only method of prophylaxis available; for in some places mosquito destruction was not feasible.

BRITISH MEDICAL BENEVOLENT FUND.

At the May meeting of the Committee twenty-two cases were considered and grants amounting to £156 made to seventeen of the applicants. A vacant annuity was filled by the election of an approved candidate. Appended is an abstract of the cases relieved.

1. Widow, aged 64, of L.F.P.S.Glasg. Since husband's death after a long illness, about a year ago, applicant has endeavoured to support herself by letting lodgings. No children. Voted £5, with leave to apply again in six months if necessary.

2. Widow, aged 57, of L.F.P.S.Glasg. Left quite unprovided for at husband's death about ten years ago. Nine children, who do all that is possible. Relieved 9 times, £125. Voted £5.

3. Daughter, aged 37, of late M.D.Glasg. Is a daily companion to an invalid lady, but earnings are insufficient for her own maintenance and a little help she is obliged to give her mother. Relieved 4 times, £22. Voted £5.

4. Daughter, aged 66, of late M.R.C.S. Has supported herself for many years, but is now dependent on relations, and is a candidate for the Epsom pension. Voted £5.

5. M.R.C.S., aged 67. Is incapacitated and dependent on a son whose earnings are small. Voted £5.

6. M.R.C.S., L.S.A., aged 68. For some time past been quite incapacitated by paralysis and heart disease. Eight children, of whom only three are entirely self-supporting. Has a small pension from a board of guardians, but it is quite inadequate for unavoidable expenses. Relieved 6 times, £90. Voted £12.

7. Daughter, aged 76, of late M.R.C.S. Has a small annuity and hopes shortly to be elected to a U.K.B.A. pension, but requires a little help meantime. Relieved once, £12. Voted £5.

8. Daughter, aged 52, of late M.R.C.S., L.S.A. No income, and regular work impossible owing to bad health. Relieved twice, £20. Voted £10.

9. Daughters, aged 47 and 45, of late M.R.C.S., L.R.C.P. No income; endeavour to support themselves by letting lodgings in the summer and by knitting in the winter. Relieved eight times, £87. Voted £12.

10. Daughter, aged 66, of late M.D. No income, and only able to obtain occasional employment. Relieved ten times, £91. Voted £12.

11. Widow, aged 43, of L.R.C.P., L.R.C.S.Edin. Quite unprovided for at husband's death several years ago and is in extremely bad health. Is assisted by the Ladies' Working Guild. Children unable to help. Relieved thirteen times, £148. Voted £12.

12. Daughter, aged 51, of late L.R.C.P.Edin. No income. Is a great sufferer from rheumatic gout and dependent for a home on two unmarried sisters who have to earn their own living. Relieved three times, £26. Voted £10.

13. Widow, aged 51, of L.R.C.P.Ire. No income, and has not yet recovered from the effects of a very serious operation. Relieved once, £12. Voted £12.

14. Daughter, aged 51, of late M.D.Lond. Income £20 a year from the Home for Incurables. Has had a serious illness during the winter, and in consequence lost a lodger, and is in arrears with rent. Relieved nine times, £78. Voted £10.

15. Widow, aged 67, of M.D.Edin. Children unable to help, and is dependent on this fund and a little assistance given locally. Relieved four times, £42. Voted £15.

16. Widow, aged 61, of L.R.C.P., L.R.C.S.Edin. Has a small pension from a City company, but it is insufficient for bare necessities, and children are unable to help. Relieved once, £6. Voted £6.

17. Wife, aged 43, of L.R.C.P., L.R.C.S.Edin., who is confined in an asylum. No income; dependent on a sum collected locally and now nearly exhausted, and earns a few shillings a week by fancy work. Two children, aged 15 and 12. Relieved once, £15. Voted £15.

THE late Professor Lennander of Upsala, an obituary notice of whom appeared in the BRITISH MEDICAL JOURNAL of May 2nd, has, it is announced, bequeathed his entire estate to the university for the endowment of scholarships for medical students, for stipends for research work, and for the establishment of a fund to provide post-graduate courses in surgery, hygiene, and other branches of medicine.

MEDICAL NEWS.

MR. R. BLEMELL-POLLARD has been appointed secretary to the Income Tax Reduction League, the central office of which is at Guildhall Annexe, E.C.

DR. MARC ARMAND RUFFER, C.M.G., President of the Egyptian Maritime Sanitary and Quarantine Council, has received the Royal permission to accept the insignia of Commander of the Order of the Crown of Italy, conferred upon him by the King of Italy in recognition of valuable services rendered by him.

A CIRCULAR letter signed by Lord Goschen (Chairman of Council, Queen Victoria's Jubilee Institute of Nurses), the Chairman of the Executive Committee of the Association for Promoting the Training and Supply of Midwives, the Chairman of the Executive Committee of the Rural Midwives' Association, the Honorary Secretary of the Home for Mothers and Babies, Woolwich, and the President of the Midwives' Institute, has been issued to county councils asking them to take into consideration the desirability of obtaining Parliamentary power to incur expenditure when necessary to ensure a due provision of midwives in each county, in co-operation with or supplementary to existing nursing and other associations. The signatories believe that in many areas the year 1910 will bring great difficulty unless prompt action is taken. Further particulars on the subject can be obtained from Miss Wilson, 12, Buckingham Street, Strand, London, W.C.

WE have received a communication from the Honorary Secretaries of King's Hospital Fund of London, enclosing a copy of a letter from Lord Mount-Stephen to its president, the Prince of Wales. The purport of the letter is to offer the fund a number of railway shares, which, on the basis of the dividends paid for many years past, Lord Mount-Stephen estimates will mean an addition of some £7,000 to the annual income of the King's Hospital Fund, and bring it up to some £60,000. Lord Mount-Stephen further suggests that an effort should be made to collect at once a further sum of £300,000 for investment purposes, as the capital income of the fund would then stand at about £75,000. With this assured income behind it, the fund would have no difficulty, he thinks, in collecting yearly from other sources a sufficient sum to ensure the annual distribution of the £150,000 which His Majesty the King, when he established the fund, mentioned as the goal to be reached. The annual report of the fund has also been issued this week, but contains no important statement which has not already been noted in these columns. It may be remarked, however, that of the total fixed income of the fund from invested capital as it at present stands about half is due to donations in the past by Lord Mount-Stephen himself.

The Flag was published last week for the Union Jack Club by the *Daily Mail*, and nobody but the Club is to get any profit out of it. The Union Jack Club was opened by the King last July. It has a house near Waterloo Station where soldiers and sailors are provided with the conveniences of a club, and, more than many offer to their members, for there are over two hundred bedrooms. In the first nine months of its existence it was used by over sixteen thousand sailors, over twenty-two thousand soldiers, and over three thousand marines; though practically self-supporting it is embarrassed by its own success, for the number of applications for bedrooms is in excess of the supply, and the Committee wish to build 150 more. The buyer of *The Flag* will have the satisfaction of knowing that his shilling goes intact to the fund for the purpose. He will also have the satisfaction of getting good value for his money—a poem by Mr. Meredith, a continuation of Shakespeare by Mr. Kipling, a gibe at physical culture systems by Mr. Pett Ridge, a very excellent short story of Sir William Gilbert's gallant adventure involving a question of bank notes, a short but very apposite illustration of feminine psychology by Sir Conan Doyle, a drawing-room charade by Mr. W. W. Jacobs, and a number of special plates including three photographs by the Queen, and many drawings in colours and black and white by the principal illustrators of the day. It should be added that the Committee has the ambition to start Union Jack Clubs in all the chief ports and towns on the model of the club in London but on a smaller scale.

ARMY AND NAVY MALE NURSES' CO-OPERATION.—Her Royal Highness Princess Henry of Battenberg opened a novel sale at the Caxton Hall on May 22nd, which was organized to raise funds for the Army and Navy Male Nurses' Co-operation. The sale lasted two days, and the poor flocked from all quarters. A very substantial sum was realized. The Co-operation is in full working order. Every month the demand for nurses is becoming greater, and the only drawback to the scheme is the want of funds to equip a residential home where the men can lodge in between their cases. It is for this reason the committee is appealing for support. There is no doubt that in a short time the Co-operation will be self-supporting, as the men pay a percentage on their earnings, and when the home is started they will pay for their residence there. We commend the scheme to the public as an enterprise of distinctly patriotic character.

THE FRENCH HOSPITAL.—The fortieth annual banquet of the French Hospital was held at the Hotel Cecil on May 16th. The chair was occupied by M. Paul Cambon, the French Ambassador, supported by the Lord Mayor, the two Sheriffs, many members of the Diplomatic Body and of the medical profession. There were altogether about 300 persons present, and the subscriptions to the funds of the hospital amounted to £4 300. The Ambassador proposed the usual loyal toasts, which were drank with enthusiasm. He then proposed the toast of "The Corps Diplomatique, the Lord Mayor, and the Corps Médical" in most felicitous terms. Dr. George Ogilvie, the Senior Physician, replied in French in his usual felicitous style on behalf of the medical and surgical staff. We are sorry that considerations of space prevent us reporting the speech at full length. The following extract will show its general tenor. Speaking of the medical profession, he said: "Nous sommes un corps uni, et si quelquefois nous ne sommes pas tous d'accord, nos différences d'opinion s'évanouissent comme un léger nuage d'un beau jour d'été, sous l'influence d'un doux zéphyr. Nous faisons tout ce que nous pouvons pour nos chers malades, et nous reconnaissons tous, médecins et chirurgiens, que, si c'est la curiosité des maladies qui fait le savant, c'est l'amour des malades qui fait le médecin. Messieurs, il est inutile de vous dire que tout l'art de la médecine ne consiste pas à écrire une ordonnance, ou à faire une operation. Nous avons à l'hôpital bien des malades dont la guérison est assurée, par le repos, le bien-être, et une bonne nourriture, et leur guérison est accélérée par le plaisir qu'ils ont à entendre parler, autour d'eux, leur langue maternelle—quelque imparfaitement que ce soit."

STATE CHILDREN'S ASSOCIATION.—The annual general meeting of the State Children's Association was held on May 26th, under the presidency of the Earl of Lytton. The Chairman, in his introductory speech, referred to the large number of children supported at the present time out of the rates; 11,602 of these were in barrack schools, and over 23,000 were still in workhouses throughout the country. Their association opposed the placing of children in barrack schools and workhouses, and recommended boarding out, the establishment of small certified and scattered homes, emigration in certain cases, training ships, and trade training schools. There had been a slight decrease during the past year in the number of children placed in barrack schools, while in the number of those placed in scattered homes there had been an increase of nearly two thousand; but there had been an increase during the same period in the number of children admitted to the workhouses. The aim of their association was to abolish the workhouse system with reference to children. A large number of guardians throughout the country were endeavouring to send the children out of the workhouse to be placed in scattered homes, and up to the present seventy unions had either established or were establishing scattered homes. Mrs. S. A. Barnett, the honorary secretary, in giving an account of the year's work, said the association was trying to bring home to guardians that family life was the best life for children. Since the report of the Poor-law Schools Commission in 1896, she had understood that matters had altered a good deal for the better in large schools, and on a recent visit to a barrack school she found no ophthalmia, no ringworm, no feeble-minded children to be the butt of the healthy ones. There still remained, however, the same dull monotony, the same huge dining halls and the entire absence of joy in the faces of the children. All this she hoped would be done away with in time. Lord Edmund Talbot, M.P., spoke with reference to the probation system and said that the association had a very large share in placing that measure on the statute book; while Mr. Pembroke Stephens, K.C., referred to the drawbacks of village communities. Mr. George Toulmin, M.P., and Sir Albert Spicer, M.P., having spoken on the boarding out of Poor law children and the Children's Bill respectively, the proceedings terminated with a vote of thanks to the chairman.

British Medical Journal.

SATURDAY, MAY 30TH, 1908.

SCOTTISH POOR-LAW MEDICAL SERVICE.

We have repeatedly had occasion to point out the extent to which the time, energy and resources of the British Medical Association are expended on behalf of all sections of the medical profession, and the fact receives another illustration by the issue of the report on the Scottish Poor-law Medical Service which is published in the Supplement of this week.

The Council of the Association having put sufficient funds at the disposal of the Scottish Committee for the preparation of evidence to be laid before the Royal Commission on the Poor Laws and Relief of Distress, an elaborate inquiry was undertaken and the interest of the medical officers in their parochial duties was shown by the return of detailed replies dealing with about half of all the parishes in Scotland and the great majority of the poorhouses. As all types of the service were found fully illustrated, the summarized results of the inquiry constitute a record which should be of permanent value for future reference, and afford a convincing demonstration of the necessity of certain changes in the conditions of the service for which the Association has been striving, especially in regard to the want of security of tenure.

Riccardo Stephens, himself a Sutherland doctor, in his novel *The Eddy* describes a pauper trying to coerce the doctor by threatening to get his brother, who is a member of the parish council, to propose his dismissal, and any one who might be tempted to doubt the probability of such an incident may be recommended to read the droll history of a Sutherland parish which is given in detail in the report of the Committee. In these Highland districts the conditions of the parish economics are as extreme as is the land question itself, and the coincidence of poor rates rising to 5s. in the pound with medical visits which cost for hire alone 25s. and take three days, affords ground for the conclusion of the report that only a national medical service such as has been recommended for Ireland would solve the difficulty of supplying medical attendance in such areas.

The report adds to the increasing list of documents which give detailed information as to the return which the medical practitioner receives for certain services; the actual remuneration, which the report describes as from one-quarter to one-half of the rate paid by the poorest paying class in the district, cannot be called generous, and compares unfavourably even with the lower rates of club practice. In one town, with about 10,000 inhabitants, the return is about 3½d. for each attendance, and it is said that an inspector of poor in this place declared that he believed in his medical officers being well paid, but he believed in them working for it. The demonstration of his faith is surely convincing enough. We regret to note that the pernicious system by which drugs are supplied by the medical officer, either for a fixed sum or in respect of his salary, prevails in almost 40 per cent. of the appointments. Of supplement to the remuneration, such as is represented by an allowance for holidays, there is practically none, and the absence of any system of superannuation is quite congruent with the fact that eleven medical officers have held their appointments over forty years and four over fifty.

It is evident that the Scottish Poor-law Medical Service is underpaid to an extent for which the absence of bad debts in the payment is no adequate consideration, and that in addition it has serious grievances in the possibility of vexatious dismissal and the absence of any provision for holidays or for superannuation.

Apart from the fact that it is intimately concerned in the conditions of efficiency of service, the public interest, as is usual in the medical profession, is directly involved, and it is probable that the information collected and summarized in answer to Schedule C of the inquiry may have some influence with the Royal Commission in directing necessary changes in the Poor Law.

With regard to the poorhouses, the report points out the necessity for making special regulations for those that have and those that have not a resident medical staff respectively and for the approximating of the staffing, nursing, and diet in Poor-law hospitals to the high standard now reached in charitable institutions.

With regard to the proper way of dealing with pauper children and chronic inoffensive lunatics, it is interesting to see that there is a large preponderance of opinion, which is of course based on personal observation, in favour of the system of boarding out in preference to institutional treatment. In the management of lunatics this is one of the advantages which the differences between Scottish and English law have made practicable. The experience of the medical officers as to the inadequacy of the present Poor-law administration is marked by their expression of a desire that not only relief but advice and direction should be afforded by the parish council in such cases as unemployment, and perhaps the recommendation for further compulsory powers of detention and removal may be a summary of the studies they have so much opportunity for making on the psychology of the Scottish poor.

INSANITY AND AUTO-INTOXICATION.

In the etiology of insanity the constitutional or, to use a perhaps somewhat question-begging term, the hereditary factor, is admitted on all hands to be of essential importance, and most alienists will endorse the dictum of Dr. John Macpherson[1] that "the difference between the person who may become insane and the person who will not become insane is one entirely of hereditary predisposition." The origin of those latent defects or tendencies predisposing to insanity, which probably follow some natural law of variation, is of course a biological question, but unfortunately, unless some teleological hypothesis be assumed, their occurrence is at present inexplicable.

With regard to the factors which may be called exciting, or perhaps better, determining, we are, however, on somewhat surer ground. Given definite and ascertained constitutional defect we know that certain bodily illnesses, disturbances and stresses, and also certain noxious agents introduced from without, light up insanity in numbers which comparative statistics prove to be fairly comparable proportions within their respective categories. The connexion of various bodily disorders and insanity is, of course, as old as Hippocrates, and has ever since been noted by subsequent writers. The frequent concomitance of fever and

[1] J. Macpherson: *Mental Affections*, 1899.

phrenzy, for instance, described by Sydenham and causally connected by Esquirol, has been the subject of many treatises and an enormous literature has grown up concerning the insanities which follow fevers, such as typhoid and intermittent fevers, influenza, pneumonia, acute rheumatism, erysipelas, the acute exanthemata, and the chronic infections of tuberculosis, leprosy, and syphilis. Of late years also there has been a steadily accumulating mass of information regarding insanities occurring with known disturbances of bodily metabolism either of endogenous origin—as in diseases of the thyroid glands, diabetes and glycosuria, uraemia, jaundice, and gout; or of exogenous origin—as in ergotism, pellagra, and intoxication by alcohol, morphine, lead, and so on. The weight of this mass of information has driven conviction into the minds of most that in poisoning of some form or other must be found the general exciting cause of nearly every form of insanity. Kraepelin,[2] for example, wrote that outside the causes of insanity inherent in the central nervous system there were but two, intoxication and exhaustion, and Dr. John Macpherson,[3] who was one of the first in this country to direct attention to the importance of this subject, said that "The toxic basis "of all forms of insanity is a presumption for which "there is fairly good foundation but no direct proof.' This opinion of Dr. Macpherson's as to the lack of direct proof, though published in 1891, may be taken as expressing fairly well the views of most writers to-day, notwithstanding the great advances made since that time; not because of any lack of published material—for theories and hypotheses have been uttered without end—but because of the fragmentary and often mutually contradictory nature of the results obtained by the various workers. Whilst there is a general agreement that in most forms of insanity there are to be found evidences of disturbed metabolism, which in some of these forms is undoubtedly due to the development, either inside the tissues of the body or on the surfaces of the mucosa, of bacteria or other organisms, there is a distinct cleavage of opinion, first, as to whether the bacterial overgrowth, when present, or the metabolic disorders are the causes of, or only permitted by, the psychosis; secondly, whether the intoxication, however produced, is a specific intoxication, that is, whether or not there can be established any definite relation between nosological form and specificity of pathogenic agent; and thirdly, whether the facts warrant any conclusion as to the exact part played by these agents in the production of mental disorders.

The investigations which have been carried out for many years in Italy, Scotland, Germany, England, and America, naming these countries in the order of priority and extent of publication, have been prosecuted along the lines of general medical research by examination of the changes in the processes of digestion, assimilation, and excretion; changes in the composition and character of the formed elements of the blood; and, lastly, bacteriological examination of the blood, body tissues and more particularly of the gastro-intestinal tract In the insane generally it has been found that digestive processes are retarded and at times almost annulled, and according to several authors chronic enteritis is common in some forms of insanity. With regard to urinary output, although departures from normal standards are common, a review of the literature shows that no particular urinary abnormality can be related to a definite type of mental disorder; thus, whilst Bianchi[4] states that the phosphates are diminished and indican increased in melancholia, Jones[5] found the phosphates increased, and Funk[6] indican present in only 11 out of 44 melancholics, whilst Folin, Shaffer and Hill,[7] after a most exhaustive study extending over several years of the urine of the insane, were unable to establish any constant metabolic irregularity with any particular form of mental disease. This result of these American workers confirms the opinion expressed by Kraepelin and by Bianchi that the same intoxication may produce very different forms of psychosis; that just as alcohol may produce exhilaration in one person and weeping in another, so may all other toxins behave.

Turning to the results of the examination of the blood of the insane, it has been claimed that just as outside the insanities certain infective conditions and toxaemias are followed by changes in the blood and serum, one being a marked increase in the white corpuscles, chiefly in the polymorphonuclear or neutrophile leucocytes, so in the acute insanities these changes are found to occur. According to Dr. Lewis Bruce, an abstract of whose Morison lectures was published in our columns recently, this hyperleucocytosis is to be found particularly in acute mania, katatonia, the excited stages of melancholia, manic-depressive insanity, and in some stages of general paralysis and the insanity associated with epilepsy. It is true, however, that whilst these and similar results have been obtained by so great numbers of other investigators as to prove that a hyperleucocytosis is a frequent feature of several forms of insanity, its presence has been found by other responsible authorities (we need here only mention the recently published work of J. H. Schultz[8] on this subject, carried out with the most modern methods at Göttingen) to be so variable in these same clinical categories that no conclusion as to its specific or necessary nature can be drawn therefrom. The same objections may be urged against the too sweeping generalizations which have been drawn from the toxicity of the sweat and urine of the insane (Cabitto[9]); the reduced resistance of blood cells to solutions of sodium chloride in general paralysis, pellagrous insanity, and dementia praecox (Obici and Bonon[10]), and many other abnormal conditions. A further and very obvious possibility in all of these cases is the existence of some intercurrent malady to which the blood condition may be due, and whose exclusion, at least judged by their writings, has not always been effected by the various authors.

This question of the cause of blood conditions found in the insane raises the possibility of their bacterial origin. Ever since Bianchi and Piccinino published in 1893[11] their account of a special bacillus isolated from the blood and meninges of two cases of acute delirium—an observation subsequently confirmed in nine other cases—the eyes of many neuro-pathologists have been fixed upon the hopeful field of bacteriology. In this same disorder, called "acute bacillary delirium," many others have found either the same bacillus or other micro-organisms — staphylococci, streptococci, diplococci, etc. Bianchi candidly admits that it remains to be seen whether such micro-organisms are really pathogenic or aggravating concomitants, but the treatment of such cases by intestinal antisepsis and free

[2] Kraepelin: *Psychiatrie*, Ed. 1903.

[3] J. Macpherson: Mania and Melancholia, *Journ. of Ment. Sci.*, 1891, p. 212.

[4] Bianchi: *Textbook of Psychiatry*, Eng. trans., 1906.

[5] R. Jones: *Journ. Ment. Sci.*, Jan., 1906.

[6] K. Funk: *Revue v. Neurol.*, 1907.

[7] Folin, Shaffer and Hill: *Amer. Journ. Insanity*, April, 1907.

[8] J. H. Schutz: *Monats. f. Psych. u. Neur.*, xxii, 1907.

[9] Cabitto: *Riv. Sperim. di Fren.*, xxiii, 36.

[10] Obici and Bonon: *Ann. di Nevrolog.*, xviii, 5.

[11] Bianci and Piccinino: *Ann. di Nevrolog.*, 1893.

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lavage has given very satisfactory results. The researches of Dr. Ford Robertson in this department are well known, and he and Dr. M'Rae recently published results obtained with antiserums in general paralysis, which, though so far unconfirmed by other workers, suggest strongly that the diphtheroid organism isolated by him and his colleagues plays a certain part in producing some of the phenomena of general paralysis. Outside these results there is very little that is more than suggestive.

Dr. Lewis Bruce, whose *Studies in Clinical Psychiatry* we commend to our readers, maintains that in practically all of the insanities attended with excitement a hyperleucocytosis is to be found; that the urinary excretion indicates an excess of metabolism similar to that found in known infective diseases, and that in the blood serum of maniacal patients agglutinins to certain organisms of the streptococcal group are present, though similar agglutinins are rarely present in the blood of apparently sane and healthy persons. Coupling these facts with an ascertained overgrowth of bacterial flora in the intestinal tract of the same class of patients, Dr. Bruce concludes that the bacterial overgrowth results in the formation of intestinal toxins which, becoming absorbed by the blood, attack the nerve structures of the brain, and precipitate an attack of mania or of a "chronic delusional state," the mental state being decided by the sudden and great, or gradual and small, amount of toxin present in the blood. The results obtained by Dr. Bruce are extremely interesting, and will no doubt encourage others to prosecute a promising line of research. It is to be noted that the coccal intoxication is related here to states of excitement, mania and excitement being for Dr. Bruce synonymous terms, and that a specific connexion between the intoxication and the nosological form is affirmed. In his book he carries this tendency to classifying types of insanity according to physical symptoms still further, and in his preface he says: "When "psychology is divorced from psychiatry, and the study "of psychiatry is prosecuted along the lines of advance "in general medicine, our knowledge of mental diseases "cannot fail to be added to." Whilst freely admitting that diligent study along the lines of advance in general medicine cannot fail to add to our information, we fail to see how a neglect of psychology can increase our knowledge of mental diseases.

PARLIAMENTARY ANTIVIVISECTIONISTS.

Sir George Kekewich was again in the chair at an antivivisectionist meeting on May 21st. This time he presided over a body bearing the imposing title of "The Incorporated Parliamentary Association for the "Abolition of Vivisection." A remarkable feature of the meeting was that it was composed chiefly of ladies, mostly of a certain age. This is, perhaps, prophetic of the Parliament of the future. Several of the M.P.'s whose names were on the bill did not put in an appearance, or at any rate reserved their eloquence for another occasion. Those who did speak, however, made up in truculence for what they wanted in argumentative force. The Chairman made the amazing statement that the duration of the plague in India had been prolonged to eleven years as the result of the serums used by vivisectors when it might have been stamped system in seven months by the adoption of a proper either for of sanitation and isolation. It is easy to in almost 40 ories in India when you stand on a ment to the re England. Another speaker patriotically allowance for b belief that the use of serum would lead iny! An involuntary compliment was paid by a third orator to Sir John McFadyean, who from his knowledge of animals has made himself a terror to the antivivisectionist witnesses before the Commission. Mr. Cathcart Wason moved, "That this "meeting regards with concern, with repugnance, and "with condemnation the cruelties to defenceless living "creatures and the demoralizing effects upon medical "students and doctors which are inseparable from the "practice of vivisection." He said the association had a mission which the churches had not fulfilled—to fill men with love and humanity. Whatever the antivivisection societies have filled men with, it has not been with love and humanity, if one may judge from the ultra-theological hatred with which they regard each other. Mr. George Greenwood, M.P., who seconded, appealed from the point of evolution. Animals, he is reported to have said, were their brothers and cousins. Mr. Greenwood should speak for himself; for all we know he may be related to Mr. Jones, of the "Society "upon the Stanislow," who, in the words of Bret Harte, when Brown of Caleveras had read a paper on some fossil bones—

> . . . asked the Chair for a suspension of the rules,
> Till he could prove that these same bones was one of his lost mules.

The poet goes on:

> Then Brown he smiled a sickly smile, and said he was at fault,
> It seems he had been trespassing in Jones's family vault.

Has any wicked vivisector been taking a similar liberty with Mr. Greenwood's kindred? No antivivisectionist meeting nowadays would be complete without the presence of a doctor who professes to believe that the beginning of surgical wisdom is to express contempt for Lord Lister. At the meeting of the Parliamentary Association this part was played, with indifferent success, by Dr. Granville Bantock. To judge from remarks made by persons in the audience, there would seem to be an impression abroad that the surgeon is becoming the tyrant of society and must be kept down. It was said of some minor poet that his works would be read when those of Homer and Virgil were forgotten—but not till then. In the same way it may be said that the surgeon will be suppressed—when sickness ceases to be. When the people have no longer need of the surgeon he will die out naturally; but, till that golden time comes, all efforts to keep him down will be as futile as those of the London magistrate who set himself to the task of "putting down" suicide. From the speakers and the audience one got the idea that the only animal for which the Parliamentary Association really cares is the dog—an impression confirmed by the evidence of more than one witness before the Royal Commission. As the ancient Egyptians looked upon the cat as sacred, so many people in this country erect the dog into the object of a cult. If dogs were exempted from vivisection, we believe the antivivisectionist bodies would shrivel into what, if we may borrow the words of Sir George Kekewich and apply them to our own purpose, may be called a few "hysterical and half-crazy old men "and women, or a lot of washy-washy, weak-minded "sentimentalists." But has the dog a right to be exempted because Mr. George Greenwood regards him as a brother or a cousin? The reasons laid before the Royal Commission by Professor Starling and others showing that experiments on dogs are absolutely necessary are conclusive to any one whose mind is open to conviction on the subject.

WORKMEN'S COMPENSATION AND COMPULSORY OPERATIONS.

A workmen's compensation case, which is noted elsewhere, appears to raise a new point in connexion with the vexed question whether a workman can be com-

pelled to undergo an operation. It appears that a man had one eye put out in the course of his work. It was shown that this made some difference in his capacity for work, and he was awarded compensation; but although two doctors advised that the injured eye should be removed to prevent a possible deterioration of the other eye, the man refused to undergo the operation. The county court judge who tried the case refused to compel him to submit to an operation, or to reduce the compensation because of his refusal. The point raised appears to be a new one. In other cases recently reported the question was whether a man can be compelled to undergo an operation which will increase his powers of work. In the case under notice it was, Can a man be compelled to submit to treatment which will obviate the risk of more serious secondary consequences of the original injury? The consensus of medical opinion is that if a useless injured eye is allowed to remain, sympathetic inflammation of the other sound eye may ensue, and does in fact ensue in a considerable proportion of cases. Having regard to the decisions upon the other point, which are by no means satisfactory from the employer's point of view, it is probable that the courts will hesitate long before they compel any man to submit to any operation, howsoever it may be advantageous to the employer. In a recent Scottish case it was laid down that each case must be decided on its own merits, and the circumstances must guide the court in deciding whether or not the refusal to submit to an operation is or is not reasonable. The points to be considered are (1) whether the operation is difficult or simple; (2) whether, if performed, it will effect the purpose in view—that is, whether it will remove or diminish the incapacity for work; (3) whether there is any risk owing to the necessary use of anaesthetics; (4) what is he opinion of medical men as to the advisability of the operation. Applying these criteria, the Scottish judges in that case refused to order an operation. Had the learned judge in the case under review asked these questions, only one of them would have presented any difficulty. Thus, it would have been difficult to show that the immediate effect of the operation would have increased the capacity for work. Although there have been several decisions on the question, it is noteworthy that the English court of appeal has never yet been asked to decide whether a man can refuse to undergo an operation which, according to medical opinion, is attended with no risk.

SANATORIUMS AND TUBERCULOSIS.

AN interesting discussion has taken place recently at the Medical Society of Berlin in which very sharp divergences of opinion were expressed as to the value of sanatorium treatment. The diminution of the mortality from tuberculosis in Prussia has been continuous since 1860, and Dr. B. Fränkel demonstrated statistical curves which he believed to indicate that the discovery of the bacillus and the establishment of sanatoriums had been respectively marked by a distinct drop in the figures. This conclusion was disputed by Dr. Mosse, who said that the lowering of the death-rate had been quite as marked in England, where popular sanatoriums existed to a very limited extent. Dr. Guttstadt, on the other hand, claimed that no fewer than 90,000 tuberculous patients per annum benefited by sanatorium treatment, and he insisted upon the sanitary importance of the practice of eliminating tuberculous cases from the army and the railway service. Dr. A. Fränkel doubted whether sanatoriums as at present conducted had much to do with the improved death-rate, as the patients admitted were all in the first stage, in which they were not the most dangerous disseminators of bacilli, while at least a third of the patients were merely suffering from anaemia. These last ought to be discharged and their places taken by cases in the second stage, while some arrangements should be made for getting third-stage cases into hospitals where they would cease to be a source of danger to the non-infected. Dr. Lennhoff thought that economical conditions lay at the root of the prevention of tuberculosis, poverty and a high death-rate from this disease being inseparable. Dr. Max Wolff thought early diagnosis and popular instruction in prophylaxis were of great importance. Dr. C. Hamburger said that in France, according to Dr. Bertillon, there had been a progressive reduction in the mortality from tuberculosis without sanatorium treatment, and expressed the opinion that every tuberculous patient should have a bed to himself. Later in the discussion he quoted Dr. Bertillon as writing of sanatoriums as a national means of combating tuberculosis among the poorer classes as being "childish," in contradiction to the opinion expressed by a speaker who said that French physicians desired the establishment of sanatoriums; he considered the supply of good tap water was a sanitary improvement which counted for something in the improved death-rate. Dr. Plehn said that there were difficulties in the sanatorium method, as shown by the fact that last October there were eighty empty beds, and a circular had to be issued to procure patients. Dr. Kraus agreed with the criticism of Dr. A. Fränkel, but pointed out that his suggestions were originally made by Professor Senator. In his reply Dr. B. Fränkel disputed the statement that non-tuberculous cases were admitted, or at any rate retained, in the sanatoriums, and claimed that many second and third stage cases were treated in them. The discussion shows that even in Germany the value of sanatorium treatment as a means of combating tuberculosis amongst the poorer classes is by no means universally accepted.

SIMULATED DEAFNESS.

A RUSSIAN medical man has put forward as a sure means of detecting simulated deafness a procedure based on the theory that in certain circumstances a deaf person has a kind of minor advantage over his more perfect fellow. To use the test the patient, wearing an overcoat, should stand with his back to the observer, and it should be impressed upon him that he ought to be able to distinguish between the feeling of a brush being passed down his back and the feeling of a hand executing the same movement, and it is shown that this is the case by doing the two things alternately. The hand is then rubbed down the subject's back, while at the same time the observer passes a brush down his own coat, which should be of the same material as that worn by the patient. The brush is then passed down the subject's back and the hand down the observer's coat, and so on alternately. Before long the subject, who can hear, is unable to tell which movement is going on; his brain receives simultaneously an impression from his ears and an impression from his back, and he confuses the two together, but a deaf man is never deceived, because he depends solely on tactile sensation; his brain only receives one impression, and he is always able to distinguish what is causing it. From a statement in *Les Annales des maladies de l'Oreille* it would appear that this test has been investigated in France and found to be useful, but an experiment of our own seems to indicate that it can only be a conclusive proof of malingering in a very limited number of cases. Thus the statements made would only seem to apply fully to persons who are absolutely deaf, and in whom there is nothing in the way of bone conduction of sound. If this is so, the test might lead to unjust conclusions in some cases, for many

persons who say they are deaf, and truly are so for all practical purposes, might yet emerge unsatisfactorily from the trial indicated. There are many exceedingly deaf persons in whom bone conduction of sound is very marked, and others equally deaf who are unexpectedly alive to certain sounds, and especially to high-vibration notes, such as the sound most brushes when drawn over a firm rough surface produce. There are, it may be remarked, more problems in connexion with hearing than either physiologists or aurists have yet solved, among them being the true cause of the difference of the effect on the human ear of rapid and slow vibration notes and the connexion between this and what is commonly known as deafness. Simulated deafness is, perhaps, one of the most difficult forms of malingering to deal with; but if the alleged defect is stated to be of considerable duration the presence or absence of that indefinite kind of aloofness which characterizes so many deaf people should throw some light on the question to be determined. There are some experienced observers who hold that if a person is not really deaf the fact can be revealed by holding a sufficiently well-designed conversation in his presence, the mouths of the speakers being concealed. Man is a sensitive animal, and there are few persons who have such perfect control over their features and eyes that, if certain remarks reach their ears, they can prevent any evidence of the fact appearing in their faces. The nature of the remarks must, of course, be left to the choice of each examiner, according to his judgement of the cords in the subject's composition most likely to respond. Those of a cutting nature are commonly most effective, but what is likely to be cutting is not always easy to determine. If a politician, for instance, were being examined, it might prove futile to accuse him of breaking his promises.

EMPLOYERS' LIABILITY FOR MEDICAL ATTENDANCE ON WORKMEN.

Is a master liable for medical attendance upon his servant? This is a question which has often been propounded in the courts, and upon which we are very often invited to express an opinion in particular cases. In former days there was some divergence of judicial opinion upon this point; but it has long been decided that there is no implied promise on the part of the master to pay for medical attendance on his servants. In the case where this principle was finally enunciated an action had been brought by a surgeon to recover the amount of his bill for medical attendance upon a servant of the defendant, who had his arm broken while driving a team, and who had been hired by the defendant at the yearly wages of £3 10s. and victuals. The defendant had made no express promise to pay the plaintiff, and it was held that there was no implied promise on his part to do so. One of the judges who decided the case remarked: "It must be left to "the humanity of every master to decide whether he "will assist his servant according to his capacity or "not." But, though a master is not impliedly liable, he may render himself liable by conduct—as, for instance, if he calls in his own medical attendant to see his servant. A further question has recently arisen in a county court case—namely, Can an employer be made liable by the act of his foreman or manager in calling in the doctor? The facts of this case, which is reported elsewhere in this issue, may be very briefly stated: A duly-qualified practitioner sued a firm of ship-breakers for professional services rendered by him to four of the defendant's employees. One of these men had been sent to him suffering from a strained back, and the others were suffering from minor injuries. The men were sent by the manager of the defendant's branch works. It was admitted that the manager had never expressly asked the plaintiff to see these workmen; but the plaintiff relied on the fact that the defendants had paid his account for similar attendances on former occasions. It seems that all the workmen were suffering from injuries occasioned by accident, in respect of which they were awarded compensation. The employers denied liability to pay the doctors' fees, and repudiated the authority of the manager to bind them. In spite of this the doctor had judgement. The judge took what appears to us to be a common-sense view of the matter. He held that, inasmuch as men who are injured may now prefer claims for compensation, it is in the employer's interest that the damage shall be minimized as much as possible. He therefore held that the manager had implied authority to send the injured men to the nearest medical practitioner. We understand that this case is under appeal. It will be very interesting to see what the high court has to say on the subject.

SELFISH INVALIDS.

PHYSICAL suffering is often said by those who take it upon themselves, like Milton, to "justify the ways of "God to man," to be the cause of moral improvement in the victims. How much Milton himself was morally improved by his blindness may perhaps be seen in his treatment of his daughters, whom he made his slaves, forcing them to read to him for hours together in various languages which they did not understand. Doubtless it was a great honour to read to the author of *Paradise Lost*, but it is to be feared that the poor women would have given a part of the honour for a little liberty. Dr. Weir Mitchell, the distinguished American neurologist, is reported to have said that in all his experience as a physician, he had not seen more than a a dozen men or women who had been improved morally by long-continued suffering. Although he admits that acute illness, which brings the patient close to death, often has a beneficial effect upon the disposition, he cannot agree with the assertion frequently heard from the pulpit that suffering usually brings about moral improvement. The chronic invalid, he says, is almost invariably selfish and peevish, and it is a hard task to find a nurse who can stand the strain of such a service. Nearly every one must have known cases in which an infirm mother or an invalid daughter played, in a figurative sense, the part of a vampire to those about her, sucking from them the very life-blood of their existence. The more devoted the victims the more ruthlessly does the invalid prey upon them. Men are not by any means free from this particular form of selfishness, and they are as remorseless as women in their exactions from their attendants. We have known a man, nursed by a self-sacrificing wife, who would wake her up whenever exhausted nature claimed its meed of sleep. That a dangerous illness which brings a man within the valley of the shadow of death may make one think of his misdeeds is true enough, but that is only another form of selfishness. Moreover, the fleeting nature of the moral improvement is well expressed in the proverb about the devil who would be a monk. A good many of us have recently had experience of the effect of illness on the temper and character, and we venture to think that when influenza for instance is playing variations of the Devil's Sonata on one part or another of the nervous system, few can honestly say that they feel morally the better for the suffering. As Charles Lamb says, supreme selfishness is inculcated upon a sick man as his only duty: "He lies pitying himself, honing and "moaning to himself: he yearneth over himself: his "bowels are even melted within himself to think what "he suffers; he is not ashamed to weep over himself. Suffering has been called the school of saints. But

then, in these degenerate days, as is said in the *Legend of St. Medard*, "Sins are so many and saints are so few." If by relieving suffering the medical profession does not make saints, it at any rate helps many to avoid the sin of selfishness and chronic ill-temper, which we agree with Harriet Martineau in holding to be one of the worst of sins.

INSANITY AND CONTRACT.

IN the case of Jackson *v.* Jackson, decided by Mr. Justice Bargrave Deane on May 26th, an interesting question as to the validity of a marriage contract made by a person suffering from delusions formed the subject of discussion. The wife sued for nullity of marriage on the ground that her husband, when he married her, had morbid delusions, although she could not show that he did not understand the nature of the contract. It was proved, amongst other things, that before the marriage he had written to say that he had admired her courage; that there were people plotting against him; and when crossing the Channel to go to the Continent for his honeymoon, on seeing Mr. Chamberlain, who happened to be on board the vessel, he is said to have declared that the Government were watching him. From this time onwards his delusions became progressively worse, until finally he had to be placed in an asylum. Upon these facts, the Court has decreed nullity of the marriage. Mr. Justice Bargrave Deane said: "The question to be decided is, Was the respondent at "the time the marriage was contracted suffering from "illness which, although it did not prevent him under- "standing the nature of the contract, rendered him a "prey to the influence of morbid delusions on the "subject? I think it is clearly established that this "gentleman's condition of mind—he is now admitted "to be insane—has been one of gradual growth; that it "commenced before the time of his intimate ac- "quaintance with this lady; that it existed at the time "of the marriage, and has progressed up to the present "moment." It is probable that the judge was the more inclined to pronounce the decree in view of the fact that all the medical witnesses who had been called deposed that this form of insanity was practically incurable. A number of curious facts were elicited during the trial. Thus it appeared that the respondent, who was in a retreat at York, had read the report of the first day's proceedings in the paper. He immediately wrote saying that some of the statements were so untrue that he must contradict them. Amongst other things, he denied the story about Mr. Chamberlain on board the Channel steamer, but added: "I was conscious of "being watched, but was ignorant of the cause for it." Counsel for the petitioner appears to have relied on this very letter as showing that the respondent was subject to delusions. He cited a number of old cases which illustrate the difficulty of showing that a man is suffering from delusions. In one of these, which is reported in the State trials, it appeared that a person indicted his brother for having confined him as a lunatic. The prosecutor was himself examined, and stood a very long cross-examination by Mr. Erskine, who, not being furnished with the clue, could extort no symptom of insanity. At length, a medical man who had attended the witness having furnished the clue, his delusion immediately appeared, and he said: "I am "the Christ." Another case was cited to show the extraordinary cunning sometimes displayed by a person suffering from delusions. A man named Wood had twice indicted Dr. Monro for false imprisonment in a madhouse. On the first trial his insanity became apparent, after a long cross-examination, and after the clue had been furnished by another doctor. The subject of the delusion was corresponding with a Princess in cherry juice. Wood again indicted Dr. Monro, knowing that he had lost the first case by speaking of the Princess, and such (said Lord Mansfield) is the extraordinary subtlety and cunning of madmen that when again cross-examined, all the ingenuity of the Bar and all the authority of the court could not make him say a word upon the topic, although he still had the same indelible impression upon his mind as he signified to those who were near him. "These instances," said Lord Mansfield, "proved (1) that persons may be insane on particular "subjects or *quoad hoc*; (2) that apparent sanity on some "subjects is no proof of the non-existence of insanity; "and (3) that insane persons have great powers of "restriction upon occasion."

REFORM OF MEDICAL EDUCATION IN FRANCE.

A COMMISSION appointed in March, 1907, to report upon medical education in France has recently completed its labours, and has made a number of recommendations which may be studied with interest by all who are dissatisfied with our own arrangements. The Commission emphatically affirms that the general education of the medical student should be intellectual, literary, and philosophical, in view of the nature of his future studies and because the profession of medicine demands the highest moral standard. While some may doubt whether any examination test can secure "moral excellence," it is certain that our requirements fall far short of what should be required from men who seek to enter a liberal if not a learned profession. It is recommended that a number of new practical courses should be added, but these are on subjects already generally taught in this country; we notice that gynaecology is excluded, but that special courses in diseases of children are to be required. A course of instruction in the laws relating to the medical profession and the principles of professional ethics (*législation et déontologie*) has been advised, and might well be included in our own curriculum. There is no mention of botany or zoology; apparently these subjects form part of the medical curriculum only so far as the structure and function of plants and animals are taught in the general courses of anatomy, histology and physiology. Chemistry and physics, it is said, should be limited "strictly" to their application to clinical work. It is recommended that hospital work should consist of five *anni medici* of nine months each, but the last may be passed in any hospital in France or abroad provided proper evidence of attendance be furnished. At the end of each year a viva voce examination conducted by one of the hospital staff (*maître de service*) must be passed and the student's certificate must testify (1) to his assiduity and (2) to his proficiency as shown at this examination. A great change is proposed in the method of examination, the old examination in a number of subjects being abolished and its place taken by (1) a practical and viva voce examination at the end of each practical course and (2) an examination at the end of each year in each subject that the student has studied during that year. That is to say, university class examinations are to replace the periodical examinations in groups of subjects. This is a true reform, as by this means the student will be examined after he has had the best opportunity of learning each subject and there will be every inducement to him to work hard while he is attending the class instead of trusting to his ability to cram enough to scramble through the examination at some future time. This is a reform which should commend itself to the General Medical Council.

THE SANITARY INSPECTION OF THE CITY OF LONDON.

DURING the past few years the tenement dwellings and poor-class houses which were at one time to be found in the City of London have gradually given place to large office buildings. It might be supposed, therefore, that

the need of sanitary inspection would have decreased. That such is not the case is well shown by Dr. William Collingridge in his annual report. The increased number of sanitary conveniences in the modern buildings is alone enough to add to the work of the nine inspectors who are now employed by the corporation, for, included among their other duties is the supervision of the works required in the reconstruction of systems of drainage, a duty which needs tact and discrimination to ensure that the requirements are properly carried out. The steps to be taken to control the spread of infectious disease are more elaborate than they were in former years; food supplies must be more rigidly controlled, and the sections of the Factory and Workshops Acts referring to sanitary matters require more stringent administration. The growth of the work done by the sanitary department of the City corporation may be illustrated by the increased staff required by the medical officer of health compared with that of ten years ago. In 1898 there was only one clerk employed, now there are four; the six inspectors of slaughterhouses and meat have been increased to eleven; and instead of eight sanitary inspectors there are now eleven, of whom two are women. These two officers have shown so much enthusiasm for their work that they have acquired a knowledge of Yiddish, in order that they may more successfully carry out their duties among the foreign Jews dwelling in the neighbourhood of Houndsditch. There is ample evidence in Dr. Collingridge's report of the efficiency of the sanitary inspection of the City.

AN AMERICAN NATIONAL HEALTH COMMITTEE.

Reference has already been made in the British Medical Journal to the American National Health Committee. The Committee of One Hundred was organized in April, 1907, with the object of promulgating the idea of a national bureau of health. The scope of the Committee's work, however, includes the whole subject of national health. President Roosevelt, referring to the Committee, said he hoped there would be legislation increasing the power of the National Government to deal with certain matters concerning the health of the American people everywhere. The federal authorities, for instance, he said, should join with all the State authorities in warring against the dreadful scourge of tuberculosis. Professor J. Pease Norton, from whose paper on "The Economic Advisability of Inaugurating a National Department of Health," read before the American Association, the whole movement originated, was elected executive secretary of the Committee. At the present time, the organization consists of a Committee of One Hundred; a Press Council, consisting of leading editors, of 100 members; an Authors' League, consisting of prominent authors, able and willing to create sentiment in favour of better health conditions, both personal and public—the number of these enrolled up to January, 1908, was 1,000; a Press Writers' League, consisting of editorial writers, journalists, and reporters interested in the movement; a Research Council, which is to consist of leading investigators interested in original research along public health lines; a Council on Co-operation, which is to consist of American leading officers of religious, fraternal, learned, secret, and educational organizations; a Local Advisory Committee of the American Health League, consisting of 500 members; and the members of the American Health League, numbering 2,500. In all it is estimated that the organization already numbers 6,000.

THE PRESCRIPTION QUESTION.

Questions as to the ownership and the repeated use of prescriptions have often been raised here. The manner in which it has recently been proposed to deal with it in America may therefore be interesting to our readers. The following declaration was, we learn from the New York *Medical Record*, adopted at the April meeting of the New York branch of the American Pharmaceutical Association: (1) The prescription should be a signed and dated order from the physician to the pharmacist to prepare and deliver certain medicines, etc., to the patient. The prescription should be written plainly and distinctly, in ink if possible. It should bear the full name of the prescriber, either printed or written, and should state the name of the patient, and if a child, also the age. A telephoned prescription, that is, a prescription which in case of emergency the physician telephones to the pharmacists, should, so as to avoid misunderstandings, be followed, especially in the case of potent drugs, with a written order from the physician. In case the physician intends to prescribe an unusually large dose, the quantity of drug should be underlined and be followed by an exclamation mark. General directions, like "As directed," etc., should be avoided. (2) The pharmacist who dispenses the medicine should invariably retain the original prescription for future reference, and as a record, for a limited period, say five years. This for his own protection, as well as that of the prescriber and the patient. (3) The medicine prescribed should be supplied not more than once on the same prescription, in the following instances: (*a*) If ordered by the prescriber "not to be "repeated," or marked "Ne repetatur;" (*b*) if it contains medicinal substances, commonly called narcotic or habit-forming drugs; (*c*) if asked for by some person known not to be the original holder. (4) One copy of the prescription may be furnished to the patient, but to no other person. This copy should be marked "copy" or "copia," and should be plainly and distinctly written in ink. In the event of the prescriber not desiring a copy to be given, he should note this on the prescription by writing the words, "Give no copy." It would be desirable to have such notation appear on every prescription. Under no circumstances should a copy of the prescription be given, without consent of the physician, after the patient has recovered.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

We are requested by the local secretaries for the Dublin meeting of the British Association for the Advancement of Science to call the attention of officers of that Association and members who intend to be present, to the urgent necessity of filling up and returning forthwith the postcard sent out with the invitation circular. Many have already done so, but we learn that the work of the Hospitality Subcommittee, which has to be completed months beforehand, and which everybody knows is of a delicate and difficult nature, is now at a standstill owing to the fact that information has not yet been received from a large number of prominent members of the British Association as to whether or not they will be accompanied by lady members of their families. This information is asked for on the card referred to, which is the only source the local committee has to rely upon.

THE INTERNATIONAL SURGICAL SOCIETY.

The International Surgical Society will hold its second congress at Brussels this year, from September 21st to 26th. The questions proposed for discussion are: (1) Cancer; (2) the surgery of the liver; (3) anæsthesia; (4) the surgery of the pancreas; (5) hernia. A special feature of the congress is to be a cancer exhibition. This will consist of specimens and objects of all kinds bearing on cancer. The following list will give an idea of the nature of the exhibition: (1) Macroscopic and microscopic preparations of surgical and pathological interest from any point of view, especially in regard to site and

mode of propagation of the disease. (2) Anatomo-topographical specimens, or drawings of operations performed for cancer of any organ. (3) Anatomo-topographical preparations showing the lymph channels and glands of certain regions. (4) Tables for exhibition on walls, showing the remote results of the treatment of cancer. (5) Similar tables displaying statistics of primary cancer and of metastases in the different organs, based on clinical or anatomo-pathological data. (6) Similar tables showing the diffusion of cancer in different countries; detailed plans of places to which the terms of "cancer nests or islets" have been applied; genealogical trees of families in which cancer has occurred in several generations. (7) Plans of institutes for the study of cancer—cancer hospitals, their scope, their work, and their financial resources. (8) Movement in favour of the early treatment of cancer; appeals to the public; suggestions for the instruction of the public in the early diagnosis of cancer without causing panic. Persons other than members of the congress may take part in the exhibition. All objects intended for it should reach the general secretary, Professor Depage, 75, Avenue Louise, before August 31st, 1908.

THE HAMPSTEAD HOSPITAL.

THE Secretary informs us that at a meeting of the Council of the Hampstead General Hospital (with which is amalgamated the North-West London Hospital), held this week, it was agreed that the regular out-patient department at the Hampstead Hospital should be closed, and any necessitous cases be referred to the separate department at Kentish Town. This is in accordance with the statement made in the Council's report for the past year, to the effect that under the recommendations of the Committee of Subscribers which reported on the proposal for the reconstitution of the medical staff and the amalgamation scheme, it was intended when practicable to discontinue the out-patient department at Hampstead so far as the regular attendance of ordinary cases was concerned. The out-patient work at the Hampstead Hospital will therefore be confined to casualty cases.

THE FOODS AND DRUGS EXHIBITION AT THE ANNUAL MEETING.

THE usual exhibition of instruments, electrical apparatus, foods, and drugs is being arranged in connexion with the Annual Meeting of the British Medical Association in Sheffield. The Drill Hall in the Glossop Road, within two minutes of the University buildings, has been secured for the exhibition, which promises to be of special interest. All the space has been let with the exception of five stands, so that firms desirous of exhibiting who have not already secured space should apply at once. The exhibition at Sheffield will be one of the largest on record.

SIR FREDERICK TREVES will take the chair at a dinner to be held at the Hotel Cecil on Thursday, June 25th, in celebration of the jubilee of the Royal Dental Hospital, Leicester Square. He makes a strong appeal for contributions which will help to pay off the debt on the building of £47,404, which weighs heavily on its resources. The charity is one which thoroughly deserves the support of the public.

IN furtherance of the Entente Cordiale Médicale, Dr. Raymond, of the Salpêtrière Hospital, Paris, will deliver an address in the large library of the Royal College of Physicians on Monday, June 22nd, at 5 p.m. The subject will be "Les maladies dites familiales "(sénescence physiologique prématurée localisée à "certains systèmes organiques)." Members of the profession will be admitted on presentation of their cards.

THE Earl of Cromer will preside at the inaugural meeting of the Research Defence Society, which will be held at 20, Hanover Square, on Friday, June 19th, at 5 p.m.

MR. LYNN THOMAS, C.B., surgeon to the Cardiff Infirmary, and the Hamadryad Seamen's Hospital there, intends to offer himself as a candidate at the forthcoming election to the Council of the Royal College of Surgeons of England. Wales has not at the present time, and, so far as memory serves, has never hitherto had, any representative on the council of the college.

General Medical Council.

NOTES.

THE General Medical Council assembled for the summer session on Tuesday last, and a report of its proceedings on that day will be found in the SUPPLEMENT. The Executive Committee had met on the previous day, but as the business it transacted will come before the Council for confirmation it is unnecessary to refer further now to its proceedings.

The Presidency.—Dr. Donald MacAlister having resigned his appointment as representative of the University of Cambridge, which he held for some nineteen years, the legal advisers expressed the opinion that the President's chair was thereby vacated, although Dr. MacAlister had been appointed representative of the University of Glasgow as from May 27th. Accordingly on that day he left the chair, was reintroduced as the representative of Glasgow University, and at once unanimously re-elected President. He has already held that office for three years and a half, and during that time has shown very conspicuous ability both as Chairman of the plenary meetings of the Council and in the general direction of the large amount of business which has to be carried on between the sessions. The Council is to be warmly congratulated on retaining his services.

Finance.—The President, in his opening address, was able to congratulate the Council on a very satisfactory improvement in its finances. Four years ago the expenditure of the Council exceeded its income by over two thousand pounds, and the average annual deficit for the seven years then completed was over sixteen hundred pounds. In 1905 there was, for the first time for ten years, a surplus, and this year the surplus is estimated at a little over one thousand pounds. In bringing about this satisfactory result the influence of the President in expediting the conduct of business has had no small share.

The Reporters' Gallery.—The reporters have always found a difficulty in following the proceedings of the General Medical Council, owing, in part, to the defective acoustic properties of the council chamber. These difficulties were aggravated by certain alterations made a few years ago. Very practical consideration has been given to representations recently made to this effect, and in his opening address the President, after an appreciative reference to the care and skill with which the discussions of the council had been reported in the past under somewhat adverse circumstances, expressed the hope that the new reporters' gallery would be found materially to facilitate the work. The alteration has resulted in a great improvement, and there seems every reason to hope that the President's anticipation will be fulfilled.

Medical Notes in Parliament.

The Colour Industry.—Mr. Chiozza Money asked the Home Secretary whether his attention had been directed to an inquest recently held on a labourer lately in the employ of colour manufacturers, of Hackney, who was poisoned by arsenite of copper in the course of his employment, and whether he was aware that it was brought out in evidence that the deceased had been working overtime on green paint; and made a number of other inquiries relating to the matter. Mr. Gladstone said that his attention had been called to the inquest on

this case and the facts disclosed in the evidence. The man was employed in the grinding mills during the ordinary period of employment, but about a month before his death he commenced to work overtime in the emerald green department. The actual cause of death, however, did not appear to have been clearly ascertained. The factory at which the man was employed had been frequently inspected by the Factory Department; nine visits were paid last year and four this year. The "Regulations for Paints and Colours containing Lead," which were made last year, were in force in the factory, but did not apply to the emerald green department. He was informed, however, that similar precautions to those required by the Regulations were voluntarily observed, and also that the firm, which had only recently taken over the works and had been engaged in remodelling the whole place, intended entirely to reorganize the work in the green department. The case was one of interest and importance, and his inquiries into it were not yet concluded.

Medical Examination of Engine Drivers.—Mr. Lonsdale asked the President of the Board of Trade whether he would state what results had attended the representations made to railway companies on the subject of the medical examination of engine drivers, following upon Colonel Yorke's report upon the accident near Atherton. Mr. Churchill replied that the companies informed him that generally speaking, engine men were medically examined on entering the service, after illness or injury, and in any other case where the superior officer thought it desirable. They added that they recognized that the subject was an important one, and that it would continue to receive their attention. The question was one of difficulty, and the Board of Trade was bound to consider the various and conflicting interests involved.

Conscientious Objectors and Attendance in Court.—Last week Sir Maurice Levy called the Home Secretary's attention to the fact that several benches of magistrates had passed resolutions requiring conscientious objectors to vaccination to attend at a police-court to make their declarations, and Mr. Secretary Gladstone said that he thought the "long title" of the Act correctly indicated its object—that was, to substitute a statutory declaration for the certificate previously required, and thereby to relieve an applicant from the necessity of convincing the justices that he had a conscientious objection. Several benches had passed a resolution to the effect that it was undesirable for justices to take these declarations except in open court, on the ground, as he understood, that generally speaking, it was proper that justices should not transact magisterial business in their own houses, except in cases of urgency, though he was not aware that the Bolton and Hanley magistrates had done so. Such scruples seemed to him to be unnecessary. A resolution could not override the power of any justice to act individually by taking a declaration at his own house if he saw fit, and he thought that few justices would wish to put poor persons unnecessarily to the expense and trouble of attending a distant court by refusing to take their declarations. Moreover, a statutory declaration could be made before a commissioner for oaths or other officer authorized for that purpose as well as before a justice. In these circumstances he did not think that a circular pointing out that such resolutions were opposed to the spirit of the Act was called for.

The Belfast Health Commission.—Mr. Devlin asked the Chief Secretary whether any action had been taken either by the local authority or by the Local Government Board in Ireland with regard to the report of the Belfast Health Commission; whether he was aware the Commission attributed the recurrence of typhoid to shellfish and insanitary conditions; whether any figures were available as to the quantity and source of supply of the shellfish referred to; whether he had any official reports showing that not more than one-third of the drains and sewers in Belfast would stand the smoke test; and whether the report was to remain a dead letter, or whether the Local Government Board would take action to see that the recommendations of the Commissioners were carried out. After referring to a previous answer given on this subject, Mr. Birrell said that the report was still under the consideration of the Belfast Corporation. Having regard to the many important recommendations made therein, the corporation must be allowed a reasonable time for decision before the Local Government Board could take action. The various matters mentioned in the question were referred to in the report, but the Board had no more definite information on the subject than was therein contained.

The Post Officials and Private Medical Attendance.—Mr. Devlin brought up the case of a Mr. Long last week bearing on the question of the acceptance of a private doctor's certificate, and Mr. Sydney Buxton replied that Mr. Long was brought before the Postmaster of the South-Western District on a charge of insubordination; but that officer, being of opinion that ill-health was at the root of Mr. Long's conduct, sent him to the official medical officer on February 21st. There was no evidence that Mr. Long informed his colleagues, before his second visit to the doctor on February 28th, that he was in a state of collapse; and the provision of an officer to perform his duty in case sick leave should be recommended was only the usual measure of precaution taken in such cases. Sick leave was not granted by Dr. Brabant, because there was nothing in Mr. Long's symptoms to indicate that it was essential; and on both occasions Mr. Long himself expressed anxiety to return to work. Dr. Brabant made such examination of Mr. Long as he thought desirable, having regard to his symptoms and appearance; and he saw no reason to question the correctness of his treatment of the case. He was advised that no more extended examination would have revealed the approaching haemoptysis, which could not have been foreseen. It was not the case that Dr. Brabant refused to accept a private certificate furnished by Mr. Long. Such a certificate was received on March 2nd, and was returned by Mr. Long's superior officer for amendment in accordance with the rules. Dr. Brabant had nothing to do with its return. He was satisfied that Dr. Brabant was not in any way prejudiced against Mr. Long, and he must express his regret that a public insinuation against a member of the medical profession should be thus made.

Poor-Law Children in Separate Establishments.—In reply to Mr. Lewis Haslam, Mr. John Burns stated last week that the number of children in separate establishments belonging to guardians of Poor-law unions in England and Wales on January 1st, 1908, was as follows:

	London.	Outside London.	Total.
In district and separate schools ...	7,281	4,321	11,602
In cottage, scattered, and other homes	4,782	12,303	17,090

Poor-law Children Boarded Out and Emigrated to Canada.—In answer to a question by Mr. Toulmin, Mr. John Burns said that the most recent return related to January 1st last. On that date 6 689 children were boarded out within the union and 1,876 beyond the union. During 1907 the Local Government Board issued orders authorizing expenditure by boards of guardians in respect of the emigration to Canada of 397 orphan or deserted children. Expenditure in respect of the emigration to Canada of 447 other children was authorized during the year by orders relating to the emigration of persons with their families.

The Indian Medical Service and Special Appointments.—Dr. Rutherford asked the Under Secretary of State for India whether the chief appointments at the hospitals and medical schools and colleges in India were confined to members of the Indian Medical Service; and whether His Majesty's Government would advise the Government of India to open these important appointments to Indian subjects of the King, without bias of race, creed, or colour. Mr. Buchanan answered that it was the case that a certain number of appointments in the presidency hospitals and medical schools were reserved for members

of the Indian Medical Service. That service was recruited by open competition, in which Indian subjects were freely admitted. The Secretary of State was not altogether satisfied with existing arrangements, and was in communication with the Government of India on the subject.

Examinations for the Indian Medical Service.—Dr. Rutherford asked the Under Secretary of State for India on Tuesday whether it was necessary for Indian gentlemen to come over to England in order to enter the Indian Medical Service; and whether His Majesty's Government would advise the Government of India to hold examinations for the Indian Medical Service simultaneously in India. Mr. Buchanan replied in the affirmative to the first part of the question, and said that it was not contemplated to hold examinations for the Indian Medical Service simultaneously in England and India.

The Plague in India.—Mr. Buchanan stated on Tuesday that the incidence of plague deaths per mille of the population in the first quarter of this year was:—Punjab, 0.6; Bombay Presidency, 0.8; United Provinces, 0.3; whole of India, 0.2. For the corresponding quarter of 1907 the incidence was:—Punjab, 7.6; Bombay Presidency, 2.1; United Provinces, 2.4; whole of India, 1.3. The total number of plague deaths in India was 68,648 in the first quarter of this year as compared with 380,236 deaths in the corresponding quarter of 1907.

The Typhoid Outbreak at Kelvinside.—Mr. Watt asked the Secretary for Scotland what was the nature of the diagnosis which occupied the medical officers of health from December 21st to 24th in connexion with the outbreak of typhoid fever at Kelvinside, Glasgow; whether he was aware that a typhoid case could be diagnosed in three hours by means of a bacteriological test; had his attention been called to the fact that one or more of these medical officers had since admitted that they waited during these days to see what would develop; and whether, in view of the results of this delay, he would issue new regulations with regard to the future. Mr. Sinclair replied that the period between the 21st and 24th was occupied by the assistant county medical officer in making inquiry into the circumstances of the case, in communicating with the private practitioner in attendance on the case, who was absent at the time of his visit, and in obtaining from him material for the bacteriological investigation. He was aware that the actual process of making the bacteriological test only occupied a very short time. He had no information as to any admission having been made by any of the medical officers to the effect suggested. As regards the last sentence of the question, he was satisfied that medical officers were fully alive to the necessity for prompt action in such cases, and, from the information before him, he saw no reason for issuing any special instructions.

Grant for Medical Attendance to Postal Officers.—In reply to a question by Mr. Sloan, asking why the officials at Ahoghill Post Office did not receive free medical attendance, Mr. Sydney Buxton said that there was no medical officer attached to the Ahoghill Post Office, and the staff employed there had not therefore had the benefit of free medical attendance. In accordance with the recommendations of the Select Committee on Post Office Servants, an allowance of 8s. 6d. per annum would in future be made to each official at this office who would be entitled to free medical attendance if a doctor were attached to it.

Poor-law Children.—Mr. John Burns stated on Monday last that the total number of children who were entirely dependent on Poor-law relief on January 1st last could not be stated. To a very large extent children were relieved with their parents, who were not necessarily entirely dependent on the relief given them. He might, however, state that on that date the number of children in England and Wales in receipt of relief was 236,900. If from this total the children who had a parent living and who received only some form of out-relief were deducted, the number left was 73,309. Over 63,000 of them received indoor relief.

Whole-Time Medical Officers of Health.—Mr. Brodie asked the President of the Local Government Board to state how many whole-time medical officers of health there were in England and Wales, exclusive of London, and how many of this number came up for periodical reappointment; and whether the Board was prepared to recommend the electing authorities of those who were re-elected periodically to appoint them without reference to time. Mr. John Burns replied that he could only give the information desired as regards cases in which the appointment was sanctioned by the Local Government Board, and thus it did not extend to medical officers of health appointed for counties or for the majority of county boroughs. There were 104 medical officers of health for districts outside London who gave their whole time to the duties of that office either by itself or in conjunction with some other appointment of a public character. Of this number 75 were subject to periodic reappointment. The officers referred to included those who acted for more than one district. The total number of districts for which they acted was 345. The question of the tenure of office of these officers was receiving attention, but he must state that in suitable cases it was already the practice of the Local Government Board to recommend local authorities to appoint their medical officer of health permanently or for a lengthened period.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE HUMOURS OF AN IRISH WORKHOUSE.

A CASE which recently occupied the Vice-Chancellor's Court in Dublin for several days is the culmination of proceedings of the Londonderry Board of Guardians; these have afforded much amusement for some years past. Amongst the guardians of that union there were two who distinguished themselves above all the others—a Mrs. Morris and her husband. Mrs. Morris is a lady with opinions of her own, and possesses the courage of her convictions. Mr. Morris is a gentleman who never presumes to differ from his lady, at least in public. Mrs. Morris at an early stage of her official life took the workhouse infirmary under her especial care, and being a member of the visiting committee proceeded to pay surprise visits at any hour she thought fit, and to express her views to the officers upon their conduct of the institution in no uncertain terms. Her special subject was beef-tea, about the quality of which she was always complaining, and she went so far as to take some away for examination, contrary to the orders of the master. As may be supposed, friction soon arose between Mrs. Morris and the staff of the infirmary, and resulted in an action by one or more of the nurses for slander, which, however, did not teach Mrs. Morris wisdom. Proceedings at the board meetings were more than lively; in fact, the clerk described them as often resembling a bear-garden. The great majority of the board sided with the officers, and eventually directed them not to admit Mrs. Morris or her husband to the infirmary unless accompanied by the other members of the visiting committee. This order was upheld by the Local Government Board, but Mrs. Morris informed them she would disregard it, and she did, for when refused admittance by the door she on several occasions climbed in through the window, and refused to leave when asked. Failing all other means of controlling this energetic lady, the board of guardians instructed their solicitor to apply for an injunction on the following grounds:

The statement of claim states that on or about June 1st, 1907, at a meeting of the guardians, duly summoned, certain rules and regulations were made as to the hours at which visitors might be admitted to the workhouse and workhouse infirmary. It further stated that the defendant, who is a member of the board of guardians, at a meeting of the board expressed her intention, in the event of the rules being adopted, of disregarding the rules, and of remaining in the workhouse or the infirmary as she pleased. On August 19th, 1907, the defendant entered the workhouse and remained, although required to leave, beyond the hour prescribed, and subsequently the medical officer, by an order in writing, prohibited the defendant from entering the infirmary until the matter should have been dealt with by the board. In spite of

this prohibition of the plaintiffs, the defendant persisted in entering the infirmary, and on several occasions in August and September, 1907, she entered the infirmary by climbing in at one of the windows. The plaintiffs asked for a declaration that the defendant is not entitled to enter or visit the infirmary except subject to the rules and regulations; an injunction to restrain the defendant from creating disturbance in or in the vicinity of the infirmary to the detriment of the patients.

On behalf of the board of guardians, evidence was given by the clerk of the union that at several of the meetings of the board Mrs. Morris stated she would never obey the rules. She would drive a coach and four through any regulations they would make. A guardian named Mr. O'Hagen tried to speak, but Mrs. Morris would not allow him; she kept shouting: "Sit down, O'Hagen!" She said she thought the reason the rules were made against her was that she saw too much. Dr. M. Loughlin, a member of the board, said that this idea had no foundation except in Mrs. Morris's imagination. Further evidence was given by nurses and patients bearing out the charges made in the statement of claim and the injurious effects of Mrs. Morris's proceedings upon the discipline of the house and the condition of patients seriously ill. Mrs. Morris, in her defence, denied all the charges made against her, and stated that she had refused to obey the rules because they were made owing to the lying statements of the nurses.

The Vice-Chancellor gave judgement on Monday, May 18th, and in the course of it he said the court had power to grant an injunction as to disputed rights. But it was a formidable legal remedy, involving imprisonment for disobedience, and he always liked to give defendants some time to consider their position in regard to an authoritative declaration of law. The case was a disagreeable and painful one. Mrs. Morris was elected a guardian in 1899, and some time afterwards she made a number of complaints, ten out of eleven of which were declared to be frivolous, and the Local Government Board in their report stated that the defendant had visited the infirmary at an unreasonable hour. One result of this was that what were called the old rules were made in July, 1900. The new rules were made in July, 1907. In his opinion the board of guardians had authority to make those rules. It had been suggested that such regulations would not be binding on the guardians themselves. In his opinion it would be binding of all others upon the guardians. A guardian, as such, had no power except at a meeting of the board. On September 1st and on September 8th Mrs. Morris visited the infirmary, disregarding the prohibition issued by the doctor, and on the 19th, failing to get in by the door, she entered by a window. The allegation that there was loud knocking at the door on one occasion was denied by a witness (one of the nurses) for the defendant, but it was admitted that such was the commotion outside the room in which the witness was that the room was crowded by inmates attracted by the noise. He held that the defendant was not entitled to enter or visit the infirmary when not there as a member of the visiting committee, except subject to the rules and regulations. As to an injunction, he had jurisdiction; but it was one thing to have jurisdiction, and another thing to exercise it. The defendant appeared to be excitable. She called one of the guardians a "goggle-eyed old fraud." Of another she said, "It's on a bread cart you should be." Two of her co-religionists she called traitors. On the other hand, she seemed to take a deep interest in the poor, and many matters were put right through her complaints. He would make the required declaration, and he would give liberty to the guardians to apply for an injunction if that should be necessary, the costs of which would certainly fall on the defendant. As to the costs of the present proceedings, if he were to throw the costs on the defendant it would ruin her, and he would make no order as to costs.

The evidence of several of the nurses showed that Mrs. Morris was very kind to the patients, and it seems a pity that her want of tact and ordinary discretion should have rendered visits which might have been of benefit both to the patients and the staff only a cause of strife, for it is rare to find a member of any Irish rural board of guardians who takes any interest in the institution he is elected to control.

The duties of the staffs of these institutions are so thankless and irksome that encouragement and not captious abuse is what they need. Unlike the staffs of general hospitals, the doctors know they will best please their masters by doing as little as the general orders of the Local Government Board require; if they try to make the hospital a success they will be scolded for raising the rates.

Naturally the nursing staff take their cue from the doctor, and we have rarely met an indoor officer of an Irish workhouse who did not regret the day he or she joined the thankless service over which the baneful influence of the Irish Poor Law ever hangs. If the contemplated alteration of the law leaves the control of these institutions in the same hands as at present the hospitals will continue as inefficient as many—perhaps, one might say, most—of them are now, for neither doctors nor nurses can make bricks without straw.

The Universities Bill.

The students of Queen's College, Galway, have forwarded a testimonial to Mr. Birrell in which they state that no non-academic bodies should have such a disproportionate share in the government of a university college as is assigned to the councils under the bill. They had been unable to find anything like the system proposed in the governing bodies of the universities of the United Kingdom, France, Germany, and the United States. They claim that the number of representatives of the graduates should be increased from 3 to 6, or at least 4. They point out that there are over 1,000 graduates of the college now living, including four of his Majesty's judges, over 50 members of the India and higher home Civil Service, one third of the county surveyors of Ireland, very many distinguished members of the medical profession, and a large proportion of the professors of the colleges of university standing in Ireland.

Royal College of Surgeons.

The annual meeting of the Royal College of Surgeons will be held on Saturday, May 30th, when the annual report and the statement of accounts will be submitted.

The election of President and Council will be held between 1 and 3 o'clock on Monday, June 1st. Sir Henry Swanzy, having held office as President for two years, will be succeeded by Mr. John Lentaigne, the Vice-President, and Mr. Robert H. Woods will be the new Vice-President. For the Council of 19 there are 27 candidates, of whom Mr. Louis A. Byrne, Mr. F. F. Porter Ulwell, Mr. H. Benson Goulding, Mr. T. E. Gordon, Mr. G. Jameson Johnston, Mr. Thos. O'Connell Redmond, Mr. Andrew Charles, and Mr. R. Atkinson Stoney are not members of the outgoing council.

Coronation Fund for Nurses.

His Excellency the Lord Lieutenant, in the absence of Lady Aberdeen, presided at the fourth annual general meeting of the Coronation Fund for Nurses, held in the Royal College of Surgeons, on Monday, May 25th. The report showed that there were 229 members. The capital of the society consists of £4,868 18s. 6d. Midland Railway debenture stock. The trustees of the Pembroke Irish Charities Fund had presented £300 to the society, the income to be devoted to the creation of one permanent annuity to be called the Gertrude Countess of Pembroke Annuity. His Excellency delivered a very sympathetic address in favour of the fund, and speeches were also made by Major D. C. Courtenay, Dr. R. D. Purefoy, the Rev. Canon Mahaffy, Miss Machonachie, Miss Phillips, Miss Kelly, Mr. Richard Dowse, Sir William Thomson, C.B., Miss Shuter, Miss Donovan, Sir Andrew Reed, K.C.B., Miss Whammond, Sir Lambert Ormsby, Mr. Marcus T. Mores.

Scotland.

[From our Special Correspondents.]

Resignation of Professor Crum Brown.

At a meeting of the Edinburgh University Court on Monday, May 18th, a communication from Professor Crum Brown was read, requesting to be allowed to retire from his office as Professor of Chemistry on a retiring

allowance, after the completion of a tenure of office of thirty-nine years. The court, in granting the application, resolved to record in their minutes its regret at the severance of so long and honourable a connexion with the university, and its sense of the services rendered by him to it. It was agreed that the resignation should take effect as on July 25th next. Professor Crum Brown was born in Edinburgh in 1835, the son of the Rev. Dr. John Brown, a distinguished Scottish Presbyterian theologian. One of his brothers was Dr. John Brown, the author of *Rab and His Friends* and of the *Horae Subsecivae*. He graduated M.A. in 1858, and M.D. in 1861, at the University of Edinburgh; and Doctor of Science of the University of London in 1862. He was appointed Professor of Chemistry in 1869. He is a Fellow of the Royal Society of London, and he was for many years one of the secretaries of the Royal Society of Edinburgh.

In connexion with the vacancy in the Chair of Chemistry caused by this resignation, it is announced that applications and testimonials should be lodged with Mr. R. Herbert Johnston, W.S., Secretary to the Curators of Patronage (in whose hands the appointment lies), on or before Saturday, July 4th next.

Clinical Surgery in Edinburgh.

The Medical School in Edinburgh is being taught a lesson in patience; the senior students in surgery are facing unknown ordeals; the university and the Royal Infirmary have for five months lacked the services of an important member of their staff, and for five whole months the fate of the candidates for the Regius Chair of Clinical Surgery has lain on the lap of the gods—or god. The expectant school mildly wonders how much longer it may continue there to lie.

The Staff of the Royal Infirmary, Edinburgh.

The resignation by Dr. Haultain of his position as Assistant Gynaecologist to the Royal Infirmary is a matter of some interest and importance, inasmuch as it is the resignation of a man in his prime from a subordinate position in the institution devoted to the particular branch of medicine of which he is a distinguished ornament. The progress of a member of the medical staff in any hospital in Edinburgh is, as a rule, slow if stately, and in none more so than in the Royal Infirmary. Precedence by seniority is the dominating instinct of the managers of the institution. There has recently been instituted an age limit for compulsory retirement, but the age for original appointment has so far been left indeterminate. It would, however, appear probable that, unless the two ages are to be allowed very closely to approximate, the time-honoured custom of precedence by seniority, at least in connexion with the original junior appointment, must suffer the rude shock of alteration.

The Association of Scottish Medical Diplomates.

The Association of Scottish Medical Diplomates held its annual dinner at the Waldorf Hotel, Aldwych, London, on May 26th with Dr. David Walsh in the chair. The association was founded about four years ago to promote the general and professional interests of the Scottish diplomates in all parts of the United Kingdom.

The Chairman, in proposing the toast of "The Association," said the members laboured under grave disadvantages; hospital appointments were closed to them as well as to Irish diplomates; by joining with the Irish they hoped to remove those grievances. The members felt that the licentiateship of the Scottish Colleges placed them at a disadvantage as compared with the membership granted by the Royal College of Surgeons of London, for the membership carried with it an implied superiority over the licentiateship. The Scottish colleges would be wise if they extended to their licentiates the membership, which had a potential and real value. The association had approached the Scottish colleges, and was still working to secure the real solid advantage of a membership qualification; this endeavour was really an approach towards the one-portal system.

Dr. J. G. Fitzgerald, who replied, said that the Irish graduates would help their Scottish brethren in their endeavours.

Mr. Sydney Stephenson proposed the toast of "The Visitors." To this Dr. McManus replied, and, in referring to the General Medical Council, said that the future was full of hope for the general practitioner. Never in the annals of that council had the direct representatives been so kindly or so courteously received, or their wishes more thoroughly considered, than by the present members of that body. He believed that the council was about to take a very material step to set its house in order, and to accept the position of standing between medical men and gross quackery which was rampant in the land. Between the present time and next November its action would rejoice the heart of every general practitioner in the country. The toast was also replied to by Dr. H. Macnaughton Jones.

Dr. P. H. Parsons submitted "The Council and Officers," which was acknowledged by Mr. Skene Keith.

After Dr. Fitzgerald Powell had spoken to the toast of "The Ladies," the proceedings terminated.

Clinical Research in the Edinburgh Royal Infirmary.

A personal friend of Dr. George A. Gibson has placed in his hands a considerable sum of money to build and equip a laboratory for clinical research in the Royal Infirmary. Dr. Gibson has communicated the fact of the gift to the managers and has suggested that active steps should be taken without delay. Dr. Gibson is to give the introductory address at the University of Montreal in September, and will make careful examination of the laboratories there, as well as those at Baltimore and Harvard, in order to be able to see that those in the Edinburgh Royal Infirmary are equipped in the best and most efficient way.

Cerebro-spinal Meningitis in Scotland.

The Registrar-General for Scotland reports that during the month of April deaths, in eight of the principal towns of Scotland, from cerebro-spinal meningitis numbered 28, as against 27 in the preceding month, but 149 fewer than in April, 1907. Of these 28 deaths, 20 were in Glasgow, 4 in Leith, 2 in Edinburgh, and 1 each in Dundee and Greenock.

The Secretary for War in Edinburgh.

On the afternoon of Thursday, May 21st, the Right Hon. R. B. Haldane, the Secretary of State for War, presented prizes to the nurses in the Edinburgh Royal Infirmary, who had been successful in the examinations following the usual courses of voluntary lectures given in the infirmary, and afterwards addressed the nurses on the steadily growing importance of their position and function in relation to medicine and surgery, and of their intervention in the affairs of the State and of public life. They were wanted for the working out of the business of local government, for the care not merely of the sick, but of those who came very close to the sick—the poor, the poor who suffered, the poor who must be watched and studied, that their situation might be understood. They were wanted in great hospitals like that, they were wanted in private life, and they were wanted in the country districts. He then referred to the place of nurses in relation to army medical work. They had created a reserve of nurses—those who were pursuing the nurse's calling, and who had taken an engagement with the State to come forward and go to the theatre of war on its outbreak, there to do their part in the formation of the organization necessary for the treatment of the sick and wounded. That they had carried out, or they were carrying out so far as the regular forces were concerned. As regards the second line, the line of home defence—the territorial, or home, army—they were endeavouring, and he hoped before very long to see it in operation, to provide there an organization of territorial army nurses who would take the same part in home defence as would be taken by their sisters who undertook to go abroad with the troops. These things really showed what a far-reaching profession theirs was. They came in at points which would not have been dreamed of by their forefathers, and he ventured to think that there were ahead more openings. He knew of no profession which had more scope than the profession of the highly trained nurse.

In the evening the Secretary of State for War delivered an address under the auspices of the Edinburgh

University in the M'Ewan Hall on the subject of the officers' training corps. The chair was occupied by the Vice-Chancellor, Principal Sir William Turner.

England and Wales.

[From our Special Correspondents.]

WALES.

West Wales Sanatorium for Consumptives.

The West Wales Branch of the National Association for the Prevention of Consumption is to be congratulated upon the completion of the sanatorium at Alltymynydd. Three years ago the foundation stone was laid by H.R.H. Princess Christian, who has signified her intention to open the institution formally in July next. Altogether the scheme for providing a sanatorium for the poorer inhabitants of the counties of Carmarthen, Cardigan, and Pembroke has taken six years to develop, but at length the sanatorium is finished, and it is satisfactory to note that it will commence its active work free from debt. Patients will be admitted on letters of recommendation, which will be issued to subscribers, and thus the maintenance of the institution will be provided for. The accommodation is for twenty free patients.

Mr. D. H. James, a farmer in Carmarthenshire much interested in the subject of tuberculosis, has added to a guide to the neighbourhood a description of the foundation of the sanatorium, illustrated by a photograph showing it standing among trees.

Cardiff Infirmary.

The formal opening of the new out-patient department of the Cardiff Infirmary, which has cost some £9,000, took place on May 20th, when a large number of ladies and gentlemen attended at the invitation of Major-General Lee, Chairman of the Board of Management, who presided. The opening ceremony was performed by Professor William Osler, M.D., F.R.S., Regius Professor of Medicine at the University of Oxford, and he was presented with a suitably inscribed key by the architect, Mr. F. Seward, F.R.I.B.A. The new building is in some sense an extension of the old out-patient department, and the chief feature is the enlargement of the former waiting rooms into a spacious hall, about 100 ft. long by 30 ft. wide, well lighted and specially ventilated by extraction fans worked by electric motors. The walls are faced with cream and green coloured tiles of simple but good designs; the floors are of terralith of reddish tint, silent to the tread, but with a smooth and jointless surface. The new entrance is at Longross Street, and a broad lobby leads past the porter's and registrar's rooms into the great hall. This is surrounded by groups of rooms, each of which may be described as an independent and self-contained hospital devoted to the consultation, examination, or treatment of the various classes of cases—general, surgical and medical, ophthalmic, ear, nose and throat, gynaecological, and dental. All requisite space, ample lighting, special ventilation, dark rooms where needed, up-to-date spray taps, slabs of pure white glass, and the best appliances distinguish each of these departments throughout, and there is a well-furnished sterilizing room for instruments and dressings. The efforts to equip the whole in a manner commensurate with the needs of Cardiff are fully successful, even when compared with the best of their kind in the kingdom. An important addition to the nurses' sleeping accommodation has been made by the erection of cubicles above the south wing. The dispensary has been extended by the erection of students' rooms, secretary's rooms, and other additions which conduce to efficiency. The proceedings were opened by a prayer offered by the Bishop of Llandaff, and after the ceremony was over a prayer was offered by the Rev. W. E. Winks. Professor Osler, addressing the meeting, congratulated the citizens, the University College, the managers, and particularly the architect, for he had done an admirable piece of work. It was a model out-patient department, and a credit not only to Cardiff but to the whole country. He appealed for a close and intimate affiliation between the hospital and the University College for such work was a great part of any university. Principal E. H. Griffiths, in proposing a vote of thanks to Professor Osler, said that Cardiff possessed all the material of a great medical school for the Principality. The Rev. Father Hudson, in seconding, regretted that only 400 people out of a community of half a million subscribed to the institution. General Lee proposed a vote of thanks to Colonel Bruce Vaughan for his great efforts in initiating and carrying to a successful issue the out-patient department scheme. Mr. J. Tatham Thompson seconded. Colonel Bruce Vaughan, in responding, detailed the history of the scheme, and referred in glowing terms to those who had subscribed. The department, he said, had only been open three weeks, and 1,500 new patients had already passed through its doors. The building was well arranged, and in planning it regard had been had to the future, and provision had been made for the attendance of students and for clinics in every department; there were at the present time some 28 students receiving instruction in dispensing, under the able tuition of Mr. Williams. Since 1905 the number of medical students from the University College who had received instruction in practical pharmacy was 184, and since 1904 54 pharmacy pupils had received certificates as dispensers from the Apothecaries' Hall, London. Dealing with the new wing, he said that Mr. John Cory had been most munificent in his gift, and this had been followed up by several others in a most generous matter. The increased income required by the infirmary after the new wing had been opened would mean an addition of 0.75 per cent. to the contributions; he had received the following letter from Mr. John Cory:

> If the infirmary committee will proceed without further delay with the new wing, being satisfied with respect to the increased income, with your very kind and generous offer to do your utmost to secure during this and next year an addition of £7,000 per annum needed to meet the present expenditure and that of the new wing completed; then to help you in the good work you are willing to undertake, namely, as you say, to undertake and use all your energy until that increased income is secured, then I will consent to your request to promise to add 25 per cent. thereto, which, if you succeed as you expect you will with the challenge, I would add a donation of £2,000 to the funds.—Yours sincerely, John Cory.

Mr. John Cory, then, was evidently determined that the one general infirmary in the city of his birth should not only be efficient and sufficient for the district, but that it should keep out of debt. In conclusion, Colonel Bruce Vaughan made a strong appeal for practical sympathy and assistance. A vote of thanks to General Lee for presiding was passed, on the motion of Dr. Paterson, seconded by Mr. H. C. Ensor.

Llanfrechfa's Low Death-rate.

Dr. W. C. Murphy, Cwmbran, Medical Officer of Health to the Llanfrechfa District Council, in his annual report for 1907, just issued, states that 136 births were registered last year, giving a rate of 30.7 per 1,000; 44 deaths occurred, or a rate of 9.9 per 1,000; 11 of these deaths were of children under 1 year, giving an infantile mortality-rate of 80.3 per 1,000 registered births.

BIRMINGHAM.

The Birmingham Medical Benevolent Society.

The eighty-sixth annual meeting of the Birmingham Medical Benevolent Society was held at the Midland Hotel, Birmingham, on May 20th. The good work of granting relief to those who are in need of the society's assistance has been accomplished, as usual, in a quiet and unostentatious manner. During the past year three annuitants have been added to the list, making a total of twenty-six at the end of the year. The annual value of the grants ranged from £18 to £36, and the sum of £763 has been expended in this way. The society has £15 940 well invested, bringing in an income of £535. The total income was £836, and of this £279 was derived from subscriptions and £21 from donations. The total number of benefit members was 390, and nine members were elected during the year. The society lost nine members through death, including Dr. Thomas Savage, who was killed in the earthquake at Kingston, Jamaica, on January 14th. Dr. Malet, of Wolverhampton, was elected president in the place of Dr. E. B. Whitcombe, Sir Thomas Chavasse

president-elect, Dr. Short and Dr. Armitage vice-presidents, Mr. Marsh and Mr. Haslam were re-elected treasurers, Mr. Garman, Dr. Rickards, and Mr. Bennett May trustees, Dr. Stacey Wilson and Sir William Fisher auditors, Mr. C. F. Crowder honorary solicitor, and Dr. Sawyer, honorary secretary. Mr. S. H. Agar, Dr. Malins, Dr. Thomas Nelson, and Dr. A. S. Underhill were appointed to fill four vacancies on the board of directors A most successful dinner took place at the Midland Hotel after the annual meeting.

THE MEDICAL INSPECTION OF FACTORIES.

Dr. Edgar L. Collis, one of the best-known medical practitioners in Stourbridge has been appointed by the Home Office as a principal medical inspector of factories. He will take up his new duties in June, which will include the supervision of local surgeons who act under the Factory Acts and the investigation of industrial diseases in various parts of the country.

THE PROBLEM OF THE MILK SUPPLY.

A conference has been held in Birmingham on the milk supply problem, under the auspices of the Midland Branch of the Incorporated Institute of Hygiene, Dr. Alfred Carter being in the chair. The following resolutions, embodying suggestions made by Dr. Thresh in a recent lecture at the university, were submitted for consideration:

1. That the veterinary inspection of all milk cows, and the elimination of all diseased cows, with compensation to the farmer under certain circumstances, are desirable.
2. That regulations should be applied uniformly throughout the country in regard to the ventilation, cleanliness, etc., of cowsheds, as well as the cleanliness of the operations necessary for the collection of milk.
3. That all milk not sold loosily, and within three or four hours of being drawn from the cow, should be cooled down to 40°, and placed in locked churns, and railway companies be compelled to retain them at this temperature until delivery.
4. That all premises used for producing, cooling, or storing, and for the sale of milk should be registered, and every cowkeeper or milk dealer be licensed, the registration and licences renewed annually, and withdrawn for persistent breach of the regulations.
5. That the sale of milk from a diseased cow, as well as the sale of unclean milk, should be made a criminal offence, and one of a far more serious character than the mere adulteration of milk by the addition of water or preservatives or the abstraction of fat.

Dr. Pooler formally moved the adoption of the resolutions, with the following alterations: The third resolution to read that milk should be cooled down "as nearly to 40° as practicable," and the fifth resolution to read: "That the sale of milk from cows known to be diseased should be made an indictable offence." He pointed out how very frequently tuberculous diseases occurred in children, saying that in eight of the large children's hospitals in the country 20 per cent. of the cases treated were tuberculous. When an analysis of the figures was made it was found that 40 per cent. on the surgical sides of the hospitals were tuberculous. A very long and interesting discussion followed, and it was decided by a very large majority to adjourn the conference to a date to be fixed hereafter.

THE INGLEBY LECTURES.

The Ingleby Lectures, which are held annually at the university, were delivered this year by Mr. Christopher Martin, Surgeon to the Birmingham and Midland Hospital for Women, the subject of the lectures being myomata of the uterus. The lectures were of considerable clinical value, and highly appreciated by the many who attended.

WEST YORKSHIRE.

BRADFORD ANTHRAX INVESTIGATION BOARD.

A MEETING of this board was held at the Chamber of Commerce on May 21st, the Lord Mayor presiding. A discussion took place in connexion with the question of the saturation of bales with a germicidal disinfectant so as to penetrate thoroughly the wool or hair contained in them without opening the bales themselves. Dr. Eurich reported that since the last meeting in March three cases of anthrax had occurred; one was fatal, one recovered, and the third was still under treatment. He had examined 135 samples of wool, hair, and dust; of these 59 were blood-stained and represented 45 lots, and of these 59 he found anthrax in 8. He also found anthrax in a sample of shoddy blend. Dr. Eurich stated that so far as experience went, cases of anthrax arose chiefly in persons who had not been long engaged on the work from which they were infected.

THE BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

The annual provincial meeting of this society was held in the Winter Gardens at Harrogate on May 16th, and was largely attended. The Mayor of Harrogate (Dr. N. Williams) extended a hearty welcome to the members. In the course of his remarks, he said that Harrogate was now perfect from a sanitary point of view, and that the death-rate was only 11·5 per 1 000. Harrogate had spent £202 000 on the baths and pump rooms, and £69,699 on the Kursaal and grounds. Mr. J. Fox Strangeways read a most interesting paper on the geology of Harrogate in relation to its mineral waters. Dr. Lever, President of the Harrogate Medical Society, gave an address on the therapeutic qualities of the Harrogate medicinal waters. The members were afterwards shown over the Royal Baths and Mineral Springs. In the evening they were the guests of the corporation at the Kursaal, and on the following day (Sunday) went to Ripon by special train and attended service at the cathedral.

THE TREATMENT OF TUBERCULOSIS.

A numerously-attended conference of representatives of public governing bodies in the Huddersfield district was held on May 19th, in the union offices, to consider this question. Ten per cent. of the deaths in the Huddersfield Union are caused by tuberculosis, and the conference was called to devise means to lessen this large mortality. Open-air shelters have already been adopted, but it was felt that something more should be done. Dr. S. G. Moore, M.O.H., suggested that the only way to deal with the problem was on a national basis, and to require, as in Germany, that every artisan and professional man should insure himself from the time he started work, by subscribing a small percentage of his earnings, so that when sickness overtook him he was prepared for it. Eventually a committee was appointed to consult and frame a scheme for submission to a further meeting of the conference.

BEQUESTS TO BRADFORD CHARITIES.

It was mentioned in the JOURNAL last week that under the will of the late Mr. Joseph Cawthra, of Bradford, the Royal Infirmary, the Children's Hospital, and the Eye and Ear Hospital had all benefited. The most important of Mr. Cawthra's bequests was, however, omitted. This was the transfer of 300 ordinary shares (free of legacy duty, and worth over £3,000) in J. Cawthra and Co. to the trustees of St. Catherine's Home for Cancer and Incurables as a permanent endowment for that charity. Under certain contingencies, also, one-third of the residue of his estate will pass to St. Catherine's Home. This one-third will probably amount to about £40,000, and would place the home in the happy position of being, after the Royal Infirmary, the most largely endowed of all the Bradford charities. Mr. Cawthra built the present beautiful institution, and has always been a generous donor to the funds for its upkeep.

MR. SEEBOHM ROWNTREE has sent us a food chart published by the York Health and Housing Reform Association. It is intended to give information as to the best methods of expending money for food. The chart, printed in colours, shows the amount of starch, protein, and fat in various articles of food, such as bread, bacon, fish, potatoes, milk, and cheese. There is a dietary for each day, and a scheme for feeding a family of five for 12s. 9d. a week. Copies can be obtained on application to Miss Hutchinson, 3a, Bootham, York, at 1d. each, or 4s. a hundred. The chart seems to have been very carefully prepared, and states the facts about ordinary articles of diet in a very striking manner.

AT the annual meeting of the Association for the Promotion of the Higher Training of Midwives on May 21st an urgent appeal was made for funds to keep up and extend the work of the institution which the association has established in Wood Street, Woolwich. At present it has only twelve beds, and its output of nurses is small. The object of the association is to recruit a totally new order of midwives from among the educated classes, and to make possible for them a period of two years' training in the combined study of nursing and midwifery.

SPECIAL CORRESPONDENCE.

PARIS.

Spinal Anaesthesia.—Death of M. Chamberland.—Election of Professor Dejerine to the Académie de Médecine.

THE interesting discussion on spinal anaesthesia before the Société de Chirurgie, to which reference has already been made in the BRITISH MEDICAL JOURNAL of April 25th, was concluded at the meeting held on May 13th. Professor Tuffier argued that to prove the utility of spinal anaesthesia it was necessary to show that a patient in whom an operation was indispensable had not been able to undergo general anaesthesia, and had perfectly well supported spinal anaesthesia. In proof of this he related the following cases:

1. A woman, aged 33 years, with appendicitis and salpingitis on the right side. Twice Dr. J. L. Faure had given chloroform, but on each occasion the patient, who suffered from aortic insufficiency, had presented symptoms which compelled the abandonment of the operation. Dr. Faure advised her to rest and endure her sufferings if compatible with her existence; otherwise to ask M. Tuffier to give a spinal anaesthetic. M. Tuffier determined to operate, one of his "internes" holding the pulse throughout the operation, ready to interfere in case of syncope. Everything passed off with the greatest simplicity, the heart did not make a single false step, and the patient had no bad symptoms immediate or remote, as he saw her one year after the operation.

2. A woman, aged 48, entered the wards of Dr. Prat, surgeon to the Nice Hospital, to be operated on for a small epithelioma of the neck of the uterus; the cancer was limited, and just beginning. Dr. Prat tried to perform an abdominal hysterectomy, but the patient was stout and suffered from mitral insufficiency with fatty degeneration of the heart. After the abdomen was opened, she had syncope, and in spite of several attempts to continue, the abdomen had to be closed without touching the uterus. On December 15th Professor Tuffier examined the patient, and found the epithelioma to be very limited, and the culs-de-sac free; the lesion, therefore, was one for which an operation could and ought to be performed. On December 17th he did vaginal hysterectomy, injecting 5 centigrams of stovaine. The operation was somewhat laborious, the vulva being narrow, the body of the uterus very voluminous, and the annexe adherent to the intestine. There were no incidents, anaesthetic or operative. The convalescence was excellent, and the patient went out of hospital on January 8th, 1908. There have been no after-effects, for on March 22nd the patient wrote: "Since leaving Paris one month after my operation I am well. I eat and sleep well, and I often go out. . . . I walk more than 3 kilometres."

A form of anaesthesia which permitted an operation which was necessary, and impracticable without it said to be carried out, ought to be retained in surgical therapeutics. The second portion of Professor Tuffier's communication dealt with the comparison of spinal anaesthesia with chloroform or ether. Between July 2nd, 1904, and April 1st, 1908, Professor Tuffier had 1,597 operations, of which 565 were under spinal anaesthesia with stovaine, the rest with chloroform, ether, or local analgesia.

Summary of Operations under Spinal Anaesthesia.

(*a*) Inguinal or crural hernias free or strangulated (301 cases)	266	stovaine.
(*b*) Appendicitis (160 cases)	55	,,
(*c*) Female genital organs (515 cases—including curettage, 60 cases; colpotomy, 14 cases; vaginal hysterectomy, excision of vaginal cysts or tumours, each 9 cases)	100	,,
(*d*) Perineorrhaphy (18 cases)	18	,,
(*e*) Male genital organs (65 cases—including hydrocele, 18 cases; prostatectomy, 7 cases; castration for tubercle, ablation of tumour of testicle, plastic operations on penis, each 5 cases)	57	,,
(*f*) Tumours, abscesses, etc., of abdominal wall	7	,,
(*g*) Laparotomy for intraperitoneal collections of pus	2	,,
(*h*) Interventions on bladder and urethra (including ablation of 4 vesical tumours)...	6	,,
(*i*) Interventions on large intestine and rectum (Whitehead's operation, 3 cases; artificial anus, 2 cases)	9	,,
(*j*) Operations on the lower limb (74 cases—including amputations, 7; resections, 17; sutures of bone, 18; sections of tendons, popliteal cysts, extraction of foreign bodies, scrapings for tubercle, of each 4 cases)	45	,,

Professor Tuffier went on to speak of accidents resulting from the injection of stovaine, immediate, consecutive, or remote. After the operation no patient had ever had to prolong his stay in hospital owing to an accident due to the anaesthesia, and he had never had a case of death, immediate or consecutive. Vomiting, headache, and retention of urine were the three complications he had seen. Vomiting had been rare and transitory, and had been treated by rest. In one case he withdrew a little more cerebro-spinal fluid for severe headache. Retention of urine was commoner in the male; and, though it was not rare after general anaesthesia, it was certainly more persistent after spinal anaesthesia, but it had never gone on for weeks. Professor Tuffier used stovaine exclusively in a warm 1 in 10 solution; he evacuated little or none of the cerebro-spinal fluid, and did not move the patient by Bier's method to try and make the solution ascend towards the dorso-cervical region. The indications for spinal anaesthesia were limited to the cases in which its success was certain and when local anaesthesia was impracticable. Operations on the lower limb, perineum, vagina, urethra, prostate, anus, lower portion of rectum, and the hernial region were within its sphere, but operations could be performed higher, as he had performed vaginal hysterectomies and operated for appendicitis; but success could not be guaranteed in these cases. He had absolutely abandoned this method for major operations on the abdomen and thorax. Spinal anaesthesia should be reserved as a surgical therapeutic measure for cases in which general anaesthesia could not be applied, and for those in which it had not been supported. For operations on regions situated below the anterior superior iliac spines, spinal might be used in place of general anaesthesia. Stovaine had drawbacks due to its general action on the nerves, while the true surgical anaesthetic need only act on the fibres of sensibility and pain. Efforts should be directed to discovering a chemical product related to cocaine having this property. M. Segond said that he had always opposed spinal anaesthesia because he considered it more dangerous than general anaesthesia, but he allowed that exceptionally it had its indications, and he had used it successfully in two cases of suppurating salpingitis in a patient with heart disease who had had very grave syncope when under chloroform. M. Hartmann considered that spinal anaesthesia should be reserved for cases in which general anaesthesia was contra-indicated on account of cardiac or other lesions. He had also used it for difficult setting of fractures in alcoholics, in whom general anaesthesia might produce a state of agitation followed sometimes by mobilization of the fragments and perforation of the skin. M. Chaput, in closing the discussion, said that a large number of accidents had been wrongly ascribed to spinal anaesthesia. The cases of death reported by MM. Hartmann and Delbet related to old, exhausted patients who received large doses of stovaine, and who had not been treated by caffeine and intravenous injections of serum indicated in such cases. Retention of urine disappeared easily with the regular use of the catheter, astringent injections, and electricity applied to the bladder. Paralysis of the limbs always got well spontaneously or by suggestion, for it was always of hysterical origin. Sudden deaths, which were frequent after chloroform also, had nothing specially to do with stovaine. Headaches could be prevented by free evacuation of cerebro-spinal fluid. Failures were due to fear on the part of the patient, and could be prevented by surrounding the patient before operation with successful cases. To avoid retention of urine and paralysis of the legs the lumbar puncture should be made high enough up, using weak solutions of stovaine, and taking care not to prick the cauda equina. The statistics collected by M. Chaput showed more than 7,000 cases without a death. MM. Delbet, Hartmann, and Beurnier protested against M. Chaput's statistics, as they did not take into account the cases of death which they had reported during the discussion.

Charles Chamberland, who succeeded M. Duclaux as one of the subdirectors of the Pasteur Institute, has recently died. He was one of the best collaborators of Pasteur, helping him to build up a rigorous technique and to carry out the research in the laboratory of the rue d'Ulm from 1877 to 1886. He took part in the great discoveries of the attenuation of virus and prevention inoculations, etiology and prophylaxis of anthrax, and the treatment of hydrophobia. At the time of the controversy

between Pasteur and Bastian, it was Chamberland who showed that the temperature must be raised to 115° C. for twenty minutes in order to kill the spores, and thus established the rules for the sterilization of culture media. To carry this out conveniently he invented the autoclave. He introduced also the porcelain filter which bears his name. In 1885 Chamberland was elected deputy for the Jura, his native department, and while in the Chamber of Deputies was reporter on the law for the protection of the public health.

Professor Dejerine has been elected a member of the Académie de Médecine in the section of pathological anatomy, replacing the late Professor Grancher.

CORRESPONDENCE.

THE EXPULSION OF THE PLACENTA.

SIR,—In the EPITOME of the JOURNAL of May 23rd, p. 275, under the heading "Obstetrics," is an account of a clinical lecture by F. von Winckel in which the vexed question of the mechanism of expulsion of the placenta is dealt with. The view is taken that the method of expulsion described by Schultze—namely, with the amniotic surface presenting and the membranes turned inside out—is the more usual and the more favourable. This was the view taken by me in my Ingleby Lecture, which was published in the BRITISH MEDICAL JOURNAL in June, 1906, and I there ventured upon an explanation of the causation of the method of expulsion known as "Duncan's" (with the uterine surface presenting), which, so far as I know, had not been given before. Further observation has confirmed my view of the correctness of this explanation, which is briefly as follows: Under normal circumstances the placenta is born with the fetal surface outermost, a point of the placenta near its margin presenting; a considerable amount of clotted blood is usually contained in the bag formed by the inverted membranes. If uterine contraction is brought on too quickly after the birth of the child, before the membranes have had time to separate, this retroplacental blood forces a way through the membranes, tearing them along the edge of the placenta; in this way the uterine surface of the placenta is exposed and allowed to present. I have seen this actually happen in more than one case.

If this view is correct, it follows that Duncan's method is abnormal and one attended by danger, and I believe that this is the case, and that there is a possibility of the whole of the membranes being torn off the placenta and retained.

I would ask those of your readers who are engaged in obstetric work to record their observations on this point, and I think that it will be found that in every case in which the uterine surface of the placenta presents the membranes are more or less torn from its edge.—I am, etc.,

Birmingham, May 26th. C. E. PURSLOW, M.D., M.R.C.P.

APPENDICITIS COMPLICATED BY HEPATIC ABSCESSES.

SIR,—The case recorded by Dr. Bletchly in the JOURNAL of May 16th is of such general interest that I venture to ask for further information upon the following points:

1. Had the patient, with a history of dysentery ten years before, been resident in the tropics?

The fact that "quinine certainly appeared to lessen the frequency of the rigors" would be rather in keeping with the liver trouble originating in connexion with previous attacks of dysentery and malaria. This might account for the very early onset and frequence of the rigors, which would be remarkable supposing them simply to indicate a sudden pyaemic infection of the liver following so soon after an acute appendicitis abscess, especially remembering how speedily and completely this healed up after appendicectomy, as confirmed at the autopsy.

2. Were there any physical signs at the bases of the lungs; and, at the autopsy, was the chest found normal? Was the diaphragm intact, and were there any adhesions between the right lobe of the liver and the parietes in the neighbourhood of the fatal rupture?

3. Was the pus evacuated from the appendix abscess at the time of the first operation, or subsequently, blood-stained, or brownish, if not like typical liver pus? Was this pus, and that found in the liver abscesses, investigated for organisms and amoebae?

4. On May 1st, sweating was recorded, "possibly in lieu of rigors," and there were no more rigors for ten days. Was sweating noted at any other period of the disease? At this time, too, the skin began to show signs of oedema. Was this located to the region of the liver? A liver abscess approaching the surface, as is well known, gives a very useful warning in this way, the skin becoming red and oedematous; in a difficult case such as Dr. Bletchly's, this, if present, would have formed a most useful hint to explore. On June 7th, with the onset of pain over the right lobe of the liver, the indication to explore became urgent, though it is easy to be wise after the event. Tapping the abscesses—noted at the autopsy to have reached the surface—might have staved off the collapse occurring on June 9th, which proved fatal as the result of rupture into the general peritoneal cavity (following, probably, some sudden movement), and also afforded a considerable chance of cure.

The diagnosis of pyaemic abscess of the liver does not contraindicate operation, which should be more often undertaken than it is, since it affords the patient his only chance; the actual state of the liver, whether the seat of one or two large foci, or many smaller ones, being often impossible certainly to ascertain before exploration.

In the absence of information, positive or negative, which I trust Dr. Bletchly will be kind enough to place at our disposal for the elucidation of this most interesting and difficult case, it will be safer to defer any discussion of the questions as to the relation between the appendix and hepatic abscesses, and the route of infection of the liver. The portal vein being found normal, the existence of the usual precursor of pyaemic liver abscesses—pylephlebitis—appears to be negatived. As an instance of the rarer condition of several hepatic abscesses preceding appendicitis abscess, in 1906 (*Trans. Med. Soc.*, London, 1906; also briefly summarized in a Lecture on Liver Abscesses, published in 1907) I recorded a case under my care in 1904, which was happily successful, in spite of the further complications of rupture of the liver abscesses through the lung, with two attacks of haemoptysis, and the presence of gummata in the liver. The appendix was removed, and the first liver abscess drained; on the occurrence of haemoptysis, a deeper abscess was detected and drained; then, when things seemed going well, such profuse discharge set in that the outlook became almost hopeless.

Iodides, pushed to 35 grains, four times a day, for twenty-nine days before iodism set in, rapidly produced a complete and permanent cure, by the absorption of gummata, which, unsuspected previously, were complicating the amoebic abscesses.—I am, etc.,

HENRY CURTIS,
Assistant Surgeon at the Metropolitan, and Branch Seamen's Hospitals.

London, W., May 16th.

A NEW VIEW OF THE NOTIFICATION OF BIRTHS ACT.

SIR,—When Mr. Larkin abandons argument and stoops to the use of cheap ridicule, his case must indeed be in a parlous state. He would certainly find "in cuneiform characters on tablets of clay of the time of Sargon of Akkad" the adage, "When you have a rotten case abuse your opponent!" To speak of his professional *confrères* who elect to use certain notification forms as "unpaid touts," as "carrying round handbills" (*sic*), and as "amateur bill distributors," is not far removed from insult, and is paying his own brain-power, as evinced by his intelligent appreciation of other men's actions, a scurvy compliment. Ridicule is not argument! I fancy Mr. Larkin must be a fellow countryman of mine, for after a delicious bit of blarney he says, "I should value nothing more highly than to be able to win them over to my view." If he would do so I can help him. (1) He must take the trouble to understand my points; (2) he must meet reasoned argument with reasoned argument; and (3) he must eschew misconstruction, misrepresentation, and satire.

On May 9th Messrs. Larkin and Grossmann made certain statements anent notification forms in general:

1. That they were "an attempt to make the profession accept the responsibility of notifying." I clearly showed

this to be untrue in substance and fact. No reply from Mr. Larkin!

2. That "they exacted more details than the Act required." I gave our form in refutation of this statement. Again no reply!

3. That "they gave the local authority an opportunity of seeing exactly what each practitioner was doing, and of classifying and comparing his work and his results with those of his fellows." I showed this to be impossible. Once more Mr. Larkin is discreetly silent! His reply is "unpaid touts," "amateur bill-posters" (or was it distributors?), "insidious perniciousness," etc., all of which, I submit, is not in quite Chesterfieldian taste. It cannot be called argument of any sort.

Now, practical men in general practice have long since recognized the fact that *the* vitally important question in this Act is "*right of entry*." I ask Mr. Larkin to kindly read what I say carefully. Is the local authority to have "right of entry" to any or all of our cases, after notification, at its absolute discretion? I am sure Mr. Larkin will say, "No." Then I answer, "Your policy, Mr. Larkin, is not "*insidiously* pernicious." It is openly and flagrantly pernicious, for it is the sacrifice, *hic et nunc et in aeternum*, of the rights of a medical man over his patient—rights which his professional honour should compel him to hold sacred. You waive this right, and you leave your patient after notification wholly in the hands of the sanitary authority, to be visited or not, as it pleases.

On the other hand, the policy denounced as that of "unpaid touts" by Mr. Larkin leaves the patient in the hands of the medical man! If this desirable result be brought about by a "sort of bargain" (in Mr. Larkin's disparaging words), I say boldly that it is a commonsense and admirable thing, and a bargain which reflects the utmost credit upon both parties to it—the sanitary authorities and the medical men. We say: "Our professional duty to our patients compels us to object to and resist any interference with or visitation of them without our knowledge and consent." The sanitary authority replies: "We recognize that position. We have an Act here to administer in the interests of infant life. We cannot work it without your co-operation. Signify to us where you want us to visit, where not to visit, and we will carry out your wishes." And our coloured cards, which Mr. Larkin sneers at, do this—that is, they signify when we want the authority to assist simply, effectually, and with a minimum of trouble to us.

Now, Mr. Larkin will permit me, in turn, to ask a question: Which is in the best interests of our profession—the scheme I advocate, which leaves the patient in the hands of her medical attendant, or his scheme, which makes no provision for her but leaves her absolutely in the hands of the sanitary authority?

I answer his questions now. The Registration Act, 1874, is an end. The Notification Act is a means to an end—namely, visitation where required. If in the 1874 Act registration might be followed by visitation of the registrar soon after the birth, then it would have been well for "the Dr. Brennan of a generation ago" to suggest a scheme whereby a medical man's patient should not be subjected to "official inquisition" in Dr. Thomson's apt words. Without such a scheme as the Newcastle or Stockport methods friction is inevitable between medical men and sanitary authorities. "How long," Mr. Larkin asks, "are we to work this scheme?" I answer, "as long as we are forced to attend confinements, and as long as we are true to our code of professional conduct, which requires us to see that our cases shall not be interfered with by any one without our knowledge and consent." This I hold to be a sacred duty we owe to our patients, and till Mr. Larkin can do some constructive work and show us a more perfect way to fulfil that duty I am not the only medical man prepared to carry it out by the use of a card, despite the sneers and taunts of Mr. Larkin.

"If ten years from now the Stockport authority changes its mind and professes to consider it its duty to make its inspectors visit all cases, will the doctors be able to prevent it?" Mr. Larkin asked. I am not a prophet. But how blind Mr. Larkin is to the beam in his own eye! During those ten years we shall have been strenuously resisting this universal right of entry, and shall have a ten years' precedent to fight with. While during those ten years Mr. Larkin's policy will have given this right of entry to the local authority when and where it lists, and will have gone far, in his own argument, to establish a "hidebound custom."

One word more, Sir, in respect of your editorial comment in the JOURNAL of May 23rd. If medical men had been specifically excluded from the terms of the Act, our profession would still be face to face with this difficulty of "right of entry." Either we should have to give the sanitary authority *carte blanche* to visit our patients at its discretion or we should have to indicate to it when we wanted its help and when not. This difficulty, I claim, is effectually met in Newcastle and Stockport.—I am, etc.,

Stockport, May 24th. J. M. BRENNAN, M.R.C.S.

MEMORY.

SIR,—In reference to Dr. Mercier's letter on memory (BRITISH MEDICAL JOURNAL, May 2nd), it occurs to me to remark that Professor Ewald Hering, in an address delivered before the Imperial Academy of Sciences, Vienna, in 1870, on "Memory as a General Function of Organized Matter," may be thought to have anticipated Dr. Mercier and Professor Ziehen without being considered original. Dr. Mercier's ways of putting his ideas might easily be better than Professor Hering's, but the failure to get such ideas accepted is not in either due to "incapability of displaying them so as to attract attention or carry conviction," but to an opposition arising in the rational expression of idea generally, which is apparently insurmountable.

No rational or full expression of idea can be absolute in form; it must be relative and contradictory. The proposition "snow is white" would be meaningless if it did not cover at the same time "snow is not black, not red, and so on." The proposition, therefore, expressing a mnemonic idea does not reproduce a simple fact of existence but also concurrent facts of non-existence indefinite in number and incongruous in any physical sense. "The organic memory," Ferrier says, "is the physical basis of retentiveness," but how can we ascribe to any physical basis what contradicts the physical nature, concurrent existence and non-existence, or make it account for the simultaneous judgements of Yes and No, now and then, of the contingent, possible, impossible, and imaginary? Memory fixes *now* because it fixes the non-existent *was* and *will be* at the same time, telling us that what *was is not*, and that much more than a record of the past is needed to determine the future. The survival or reproduction of a physical impression does not account for a time sense, which is essentially expectant and projective. The time factor introduced into cognition makes it recognition, but the factor has the full and not a partial time sense—that is, memory connotes equally the non-existent future and non-existent past. Professor Hering says that, given the element of a curve, we determine the curve, but if so we determine it in both directions. This, so far, makes memory purely conceptual and ratiocinative. Wundt describes processes eventuating in a memory image, but how can an image exist where reason forbids us to postulate existence for what it is the image of? The question really is whether organized—that is, living matter—is a product of memory, recognition, and cognition, or *vice versa*, these faculties products of matter organized independently of them. In the latter sense only can memory be stated as a "function" of organized matter. V. Feuchtersleben in his *Medical Psychology* (1844) said that every nerve, every sense organ, has really in *some degree* its own memory, but it does not minimize our problem to say that every discrete element of organic tissue is ordered by impressions of the non-existent.—I am, etc.,

Newry, May 11th. W. R. MACDERMOTT, M.B.

MEDICAL QUACKERY.

SIR,—I am sure every general practitioner will be pleased to see Dr. Bateman's letter, and will hope that some good may come of it. I am just afraid it is too much to ask our American cousins to free us from the weaknesses of our own laws, and that more hope would spring up in the poor practitioner's breast if Dr. Bateman had proposed some drastic home reform. Surely this is possible. The present laws do not seem to have been framed in the interest of either patient or doctor, either public or profession, and while we doctors may not

practise without a qualification which takes us five years to acquire, any one may practise and swindle the public if he have the assurance begotten of ignorance and villany to pose as an expert from America or elsewhere and even with no degree at all but the "gift." We are inundated with laws framed for our guidance so multifarious and complicated that none of us trouble to understand them; with reports of procedure and other paraphernalia copied from parliamentary schedules and the rules of other scientific bodies, that we have no time for considering the first requisites of our own mere existence. We are threatened with trade-unionism as a panacea by some, while others resist the term as undignified or retrograde. While one would not wish to see every worker in medicine placed on a pecuniary equality, still there surely would be no derogation of dignity were our councillors to see that opposition should not come from non-registered quacks. I admit that quackery may exist inside the profession, but with that professional opinion and our numerous by-laws can deal, but there seems to me to be no valid reason or excuse for the existence of bonesetters, herbalists, and specialists from America or elsewhere, and were our councillors to lower their vision to the level of the general practitioner, and plead his cause with the same earnestness and even dignity as they discuss a trivial point of procedure at their meetings, I am of opinion that something might be achieved. General practitioners have too much to do to earn a living to be able to fight their own battle out. The men who represent us on the council, and who could not live as specialists but for us, might see that it would be to their own advantage to exclude competition from which they themselves sometimes suffer. The scandal of unqualified practice is even greater in the dental profession, and the use of local anaesthetics has rendered these unqualified dentists quite independent of medical goodwill; and it is extremely unfair that certain men should be asked to study for three years to qualify them legally to do what others are permitted to do freely and safely next door to them, and are allowed in addition the extra pull of unblushing advertisement. I know all this is an old story, but the pity is that it should be so, and I am sure Dr. Bateman would get more thanks and support from the ordinary practitioner were he to try some home remedies—such as a determined suffragette-like appeal to public opinion or Parliament—than by throwing the burden on our busy cousins.—I am, etc.,

May 23rd. DON QUIXOTE.

SOUTHEND AND ITS LATE MEDICAL OFFICER OF HEALTH.

SIR,—My successor as Medical Officer of Health for Southend having now been appointed, following on my resignation when I was appointed County Medical Officer of Health for Norfolk, I should like to express my warm thanks to the BRITISH MEDICAL JOURNAL, and, with your permission, through the BRITISH MEDICAL JOURNAL, to the medical profession generally, for the magnanimous support I received when a small majority of the Town Council of Southend-on-Sea attempted to punish me for personal reasons in the manner which you exposed in your columns last August and September.

My immediate refusal to accept reappointment except as an independent officer whose duty is to the public, and not that of a vassal to a few interested persons who may happen to be in a small majority on a governing body, backed by the powerful and united support of the whole medical profession voiced by the BRITISH MEDICAL JOURNAL and the *Lancet*, will, I hope, be a lesson to be remembered in future by all corporations similarly constituted.

I am glad now to have stood the brunt of an outrageous attack, for the outcome has demonstrated that the great medical profession (which I love, and to which I have the honour to belong) will jealously guard its honour and interests even in the person of a single member belonging to it if that person deserves its support or is being subjected to unfair or malignant treatment.

The power and excellent administration of the British Medical Association were illustrated by the prompt energy of the local Division, through the intervention of my friends, Dr. Hinks, J.P., Chairman, and Dr. Bluck, Honorary Secretary of the Division.

The injustice to myself and the insult to the profession were at once brought before a special meeting of the Division, with the results so well known to all that the perpetrators were thunderstruck to find themselves objects of derision and scorn throughout the country. Later on I received most kind and unexpected support from the Stratford Division.

I feel that it is only due to Southend to say that the men of light and leading on the Town Council were horrified at the attack made on me, as evidenced by the words and actions of my friend Alderman J. Francis, J.P., then Chairman of the Health Committee, already chronicled in your columns. Further, the independent local press and the educated burgesses at large were stirred with indignation.

I have received so many letters of kind sympathy, even from places abroad, and so many kind congratulations more recently on my appointment to Norfolk County, that it will take me some time to acknowledge them all individually.

I fear lest I may inadvertently overlook some kindly message. May I beg the courtesy of your columns to ask my very numerous friends to accept my grateful thanks? and I venture to tender the same to you, Sir, for all your kindness and powerful support in my hour of trial and of later victory.—I am, etc.,

Southend-on-Sea, May 19th. J. T. C. NASH.

REPORT OF THE SPECIAL FINANCE INQUIRY COMMITTEE.

SIR,—In the report of the Finance Inquiry Committee, published in the SUPPLEMENT of May 2nd, page 204, is a recommendation by the Committee that the whole work of the Association be arranged in three co-ordinate departments. With this recommendation no doubt every member of the Association will be in accord.

This subject, having been referred to the Divisions for consideration, it is to be hoped that they will take a broader and more generous view of the matter than that suggested in the report.

The Committee appear to have been so imbued with the idea of finance, that they go as far as to recommend[1] that one of the departments be called the "Financial Department," altogether ignoring the fact that in a large Association like ours there is much general business which does not come under the heading of finance.

That the British Medical Association is a large business concern should not be overlooked by those who are interested in its welfare.

The more reasonable and practical arrangement of the departments would be (*a*) general business, (*b*) editorial, and (*c*) medical and professional.

In the Committee's report there is no intimation as to whether it is proposed to appoint another secretary, to be known as the Financial Secretary, or whether our General Secretary and Manager is to drop his present designation and to become the Financial Secretary. This point should certainly be made clear to the Divisions before they are asked to express an opinion on the matter.—I am, etc.,

Walthamstow, May 10th. ST CLAIR B. SHADWELL.

THE HALL-EDWARDS FUND.

SIR,—Your readers will be glad to learn that the fund which has been raised on behalf of Dr. Hall-Edwards has received generous support, the sums contributed amounting to £2,001 9s. 6d. The fund being now closed, the committee would like to take this opportunity to thank the many donors for their practical sympathy.—We are, etc.,

ROBERT M. SIMON, M.D.Cantab.,
J. C. VAUDREY, M.Inst.C.E.,
Honorary Secretaries.

Birmingham, May 26th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE INDIAN MEDICAL SERVICE.

NEW REGULATIONS.

A NEW Royal Warrant amending the rules for promotion of the officers of the Indian Medical Service is published, under date Simla, April 24th. It contains the following provisions:

The substantive ranks of medical officers in our Indian Medical Service shall be as follows: Surgeon-general (ranking as major-

[1] SUPPLEMENT, May 2nd, p. 221.

general), colonel, lieutenant-colonel, major, captain, lieutenant. The Director-General of our Indian Medical Service shall hold the substantive rank of surgeon-general, but may rank as lieutenant-general when approved by our Secretary of State for India in Council, except as otherwise herein provided.

A lieutenant shall be promoted to the rank of captain on completing three years' full-pay service, if he has previously qualified in such manner as may be prescribed by our Secretary of State for India in Council. An officer who has not so qualified may be provisionally promoted, if in the opinion of our Secretary of State for India in Council he has not had a reasonable opportunity of qualifying. Such provisional promotion may be cancelled as soon as he has had such an opportunity and has not qualified except as otherwise herein provided. A captain shall be promoted to the rank of major on completion of twelve years' full-pay service, but this period may be reduced by six months in the case of an officer who produces satisfactory evidence of progress in any branch of knowledge which is likely to increase his efficiency, except as otherwise herein provided. A major shall be promoted to the rank of lieutenant-colonel on completing eight years' full-pay service in the rank of major. Time on half pay not exceeding one year shall be allowed to reckon as service for promotion under Articles 2, 3, and 4, where removal to half pay has been the consequence of medical unfitness caused by duty, military or civil.

A captain after at least six years' service, a major, or lieutenant-colonel may be promoted to the next higher rank by brevet for distinguished service in the field or distinguished service of an exceptional nature other than in the field. A certain number of lieutenant-colonels may be specially selected for increased pay, for ability and merit. Promotion from the rank of lieutenant-colonel with increased pay to that of colonel, and from the rank of colonel to that of surgeon-general, shall be given by selection for ability and merit, and the grounds of such selection shall be stated to us in writing and recorded in the office of our Secretary of State for India. A lieutenant-colonel may also be promoted to the rank of colonel, and a colonel to the rank of surgeon-general, for distinguished service in the field. In any such case the officer shall remain supernumerary in the higher rank until the vacancy to which, in the ordinary course, he would have been promoted, or in the case of an officer promoted to the rank of colonel until selection for the rank of surgeon-general. On appointment as our honorary physician or surgeon under Article 13 an officer below the rank of colonel shall be promoted to that rank, remaining supernumerary to his rank until he would have attained the rank of colonel in the ordinary course. An officer below the rank of colonel who may be appointed as our honorary physician or surgeon after retirement from the service shall be granted the honorary rank of colonel.

Exchanges between officers of our Indian Medical Service and officers of the Royal Army Medical Corps below the rank of major, and transfers of such officers from either of the above services to the other, shall be permitted, subject to the approval of our Secretary of State for War and of our Secretary of State for India in Council and on the following conditions: (1) That the officers shall have less than seven years' service. (2) That the senior officer exchanging shall take the place of the junior on the departmental list, and shall not be promoted under Articles 3, 4, and 5 until the officer next above him shall have been so promoted. (3) That the junior officer exchanging shall be placed for seniority next below all medical officers whose commissions have the same date as his own. (4) That the officer transferred shall be placed for seniority below all medical officers holding the same rank at the time of his transfer, and shall not be promoted under Articles 3, 4, or 5 until the officer next above him shall have been promoted.

With a view to maintaining the efficiency of the service, medical officers shall be placed on the Retired List when they attain the following ages: Director-general, 62; surgeon-general and colonel at 60; lieutenant-colonel and major at 55; but a lieutenant-colonel who has been specially selected for increased pay, if he attains the age of 55 years before he becomes entitled to the pension for thirty years' service, may be detained for completion of such service, and in any special case where it would appear to be for the good of the service that an officer should be continued in employment, he may be so continued, subject in each case to the sanction of the Secretary of State for India in Council.

An officer appointed on and after September 11th, 1890, who may retire on pension before completing thirty-five years' service shall be liable, till he completes 55 years of age, to be recalled to duty in case of emergency.

Six of the most meritorious medical officers of the service shall be named honorary physicians and six honorary surgeons.

THE MEDICAL EMERGENCIES OF PEACE AND WAR.

The National Volunteer Emergency Service of America, instituted in 1900, has recently, we learn from the *Boston Medical and Surgical Journal*, been reorganized by the election of Dr. James Evelyn Pilcher, the editor of *The Military Surgeon*, as its Director-General, and Dr. F. Elbert Davis, of New York, as its Adjutant-General. Its work will be conducted on military lines, the details being worked out in three separate corps, a First Aid Corps, a Public Health Corps and a Medical Corps, the latter consisting of doctors, with rank from lieutenant to colonel, according to length of service, to whom are afforded special opportunities for emergency training. The organization includes among its personnel a large number of notable personages, and is rapidly extending its membership throughout the country.

THE ZAKKA KHEL EXPEDITION.

The *London Gazette* of May 22nd publishes the dispatch, dated March 5th, from Major-General Sir James Willcocks, regarding the operations of the Bazar Valley Field Force against the Zakka Khel Afridis between February 13th and March 2nd. After describing the nature and results of the task undertaken, Sir James enumerates the officers and men who did extra good work during the operations, among them being Lieutenant-Colonel M. W. Kerin, Senior Medical Officer of the Force.

Medico-Legal.

WORKMEN'S COMPENSATION.

Prophylactic Operations.

In the case of Nudd *v.* Riches, which was heard by His Honour Judge Mulligan at the North Walsham County Court on May 14th, the question whether an injured workman can be compelled to submit himself to a prophylactic operation was raised.

The applicant, a man of 69 years of age, was a harvest man and "dydler." He was employed by the respondent, a farmer. In August, 1905, the applicant was on a cart building up sheaves of wheat, when his right eye was put out in the course of his work. He worked on as long as he could, but finally told his employer what had happened. In the event he was out of work for sixteen weeks, at the end of which time his employer gave him £5 12s. He now applied for compensation on the ground that he was less able to work than he was before the accident. Thus he could not work properly at the dykes, that was in "dydling"—that is, keeping clear and deepening the bottom of dykes with a metal scoop or dredge fixed to the end of a long pole—it being necessary to see where to throw the pole and land the mud taken from the bottom.

His Honour, in giving judgement, after stating the facts, said that it was clear that the man could not work so well now as before the accident. A doctor had no doubt maintained that the loss of the right eye made no difference in the man's capacity for work. But had he been given two eyes in vain? The facts in evidence must outweigh the opinion of any ophthalmist however eminent. He found as a fact that the applicant was partially disabled. Both doctors had advised that the right eye should be removed to prevent possible deterioration of the left. The applicant was afraid of anaesthetics, and refused to submit to a surgical operation. He (the learned judge) saw nothing in the statutes requiring a workman to submit to such an operation. He could not add a new ordeal—trial by lancet—to the words of the Act. After dealing with the other facts of the case, he made an award of 5s. a week with costs on the Oscale.

EMPLOYERS' LIABILITY FOR MEDICAL ATTENDANCE ON INJURED WORKMEN.

The case of Hamilton Hart *v.* the Shipbreaking Company, Limited, which was heard by his Honour Judge Eardley Wilmot at the Felixstowe County Court on May 19th, raised a question as to the liability of an employer to pay the fees of the medical practitioner who attends his workmen. According to a report which appeared in the *East Anglian Daily Times* for May 19th, the action was brought by Dr. J. Hamilton Hart to recover £6 4s. 6d. for services rendered by him as a medical practitioner, and for medicine supplied to four of the defendants' employees "on and by the defendants' request." It appeared that four men employed by the defendants at the Felixstowe Branch had been attended by the plaintiff on various occasions. He did not contend that he had any specific request from the defendant company to attend these men, but he relied on the fact that he knew, when they arrived, that they had been sent by the company. He also relied on the fact that he had been paid by the defendants for similar work on a former occasion. One of the workmen deposed that when he met with his first accident in the defendants' employment he was told to go and see a doctor as soon as possible; and on another occasion, when his hand was injured, he was told by his foreman to go to the plaintiff, who was the nearest medical man.

On behalf of the defendants it was submitted that there was no evidence to connect them with any liability for the plaintiff's bill. The former payments to the doctor had been made *ex gratia* in respect of attendances upon men who had left the neighbourhood, the company not desiring to see the doctor unpaid. It was also argued that as the injured men had received considerable sums in compensation the company ought not to be held liable. The defendants' foreman repudiated the suggestion that responsibility for the medical attendance was undertaken by him on behalf of the firm.

In giving judgement, His Honour said that the first question he had to consider was whether the defendant company's manager or timekeeper had an implied authority to pledge the credit of the company. He thought that, under all the circumstances, he had such authority. He was left at the works wholly in charge, looking after the interests of the company. It was quite clear, therefore, that the company, under the Workmen's Compensation Act, being liable for accidents, the manager had to do his best for them. It was therefore his first duty, when a man was injured, to send him at once to a doctor, otherwise what was comparatively a slight injury might develop into a serious one, or even end in death. In His Honour's view, the manager having seen the injured men, it came within the scope of his authority, and in the interests of his employers, to send the men to a doctor, and he so bound his employer. He would give judgement for the amount claimed.

SCHOOLMASTER'S RESPONSIBILITY FOR FEES.

AN action of some interest was tried recently in Clerkenwell County Court, the defendant being the principal of a school, and the plaintiff a medical man who at his request had attended one of his pupils. The guardian of the latter was resident in Paris, and on being informed of the boy's illness replied, "Spare no expense. Have everything necessary." The boy's illness was very serious, but he recovered. A nurse had been in attendance, and her bill being sent on by the principal, the guardian paid it forthwith, but took no notice of applications subsequently made for payment of the medical man's bill. The principal of the school would not pay the bill himself, and when giving evidence said that he disclaimed responsibility. When the doctor first came he told him that the boy had a guardian in Paris, and that he (the principal) must communicate with him. The Judge said that a school principal was in a peculiar position. If a boy living with him was taken ill he was bound to call in assistance, but he could rid himself of further responsibility by giving full notice to the doctor that he would not be responsible for any future attendance. But to make such a notice a valid defence it must be quite clear that the doctor had agreed to accept some one else, and in this instance he was not satisfied that this was the case. Judgement, therefore, must be for the plaintiff.

MEDICAL FEES AT INQUESTS.

"MEDICAL PRACTITIONER," residing in Hertfordshire, writes to ask whether he is not entitled to more than £2 2s. for making a *post-mortem* examination and attending an inquest, also an adjourned inquest, and giving evidence. He thinks also he ought to be allowed his expenses for travelling from Southampton, as he was taking a holiday there when the adjournment took place. He then wrote a letter to the coroner, expressing his views, and suggesting that if the coroner himself had no power to pay more than the two guineas he would forward his letter to the public authorities having control of such matters. This the coroner did, enclosing the letter sent, to the county council of Hertfordshire, and received the following reply from the Clerk of the Peace: "I am directed by the Hertfordshire County Council to advert to your letter of the 7th inst., and in reply thereto to inform you that the fees paid to the medical witnesses are fixed by the Coroners Act, 1887, Sec. 22, and there is no power to increase the same. I am to return you herewith Dr. H.'s letter."

*** By the section of the Act above referred to, the medical fee allowed in this case is 2 guineas, and there is no mention of travelling or other expenses. In the majority of counties the bare travelling expenses are paid to witnesses living over two miles from where the inquest is held and compelled to attend, but this is paid under a schedule of fees and allowances made by the county or municipal authorities, as they may think fit. In the present case our correspondent went to Southampton doubtless with a knowledge of the date of the adjournment, and the journey from his residence was to suit his own convenience. We do not think that under the circumstances he can make any claim for travelling expenses, supposing they were allowable. Any number of adjournments are all considered as one inquest, no extra fee to the medical witness for attendance being allowable under the Coroners Act.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL ADVERTISING.

A CORRESPONDENT sends a cutting from the *Penistone Stocksbridge Hoyland Express* for May 16th, which contains the portrait and notice of a doctor who has recently taken up his residence at a village in the district. It is said that "his extensive experience will inspire confidence with those who seek his advice"; that he has "an attractive personality"; that "he will become as popular at ——— as he has been with the patients at the hospitals at which he has practised"; and that he "served in the Boer war."

Such notices are, of course, objectionable from a professional point of view, and if responsibility for them could be brought home to the practitioner concerned his conduct would be open to grave censure.

A DISCLAIMER.

DR. G. NIXON BIGGS (London, S.W.) desires to state that the notice which appeared in the *Daily Telegraph* of May 26th with regard to a recent appointment received by him was inserted without his knowledge or consent.

POPULAR HEALTH LECTURES.

T. O. H.—The delivery of popular lectures on personal hygiene and public health has been so general throughout the country that it may be said to be sanctioned by custom. In a relatively small number of cases exception has been taken to these lectures, sometimes on account of the subject but more often because of the way in which they were advertised, and we think that any lecturer should be careful, in giving his consent, to make it a condition that he shall see the proposed form of advertisement so that he may be able to prevent the publication of anything which would be likely to offend professional opinion. The opportunity afforded to a medical officer of health to address the public on some subject included under "public health" is one of which, we think, he may properly take advantage to teach those lessons which the medical profession has much at heart and thereby be doing good service to his profession while he is endeavouring to enlighten the public.

PATIENTS AND PRACTITIONERS.

INQUIRER asks: A. was called to a new patient, but before he got there B. was summoned and was in attendance when A. arrived. Should B. retain the case or hand it over to A.?

*** As A. had not attended the case before and as the patient apparently sent for both he should be left to decide which of them should continue in attendance, but the practitioner who is not chosen is entitled to be paid for his visit.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

IN consequence of a report by the Special Board for Medicine it has been decided to change the dates of the Third M.B., Part II, from April and December to June and December. The Board is of opinion that hardship is experienced by candidates, especially in the case of failure at the examination, owing to the unequal intervals between the examinations under the present system. The December examination will, therefore, remain as at present, but the first examination next year will be held in the Easter term on the last Tuesday but one before the end of the term.

Mr. Shipley, M.A., of Christ's College, has been reappointed the representative of the university on the Council of the Marine Biological Association.

Professor Liveing has announced his intention of resigning the Professorship of Chemistry on June 20th next. The council of the senate has recommended that the degree of Doctor of Science be conferred upon him.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

Medical Entrance Scholarship and Exhibitions.

ELECTIONS will take place in September to the following Medical Entrance Scholarship and Exhibitions:

Bucknill Scholarship, value 135 guineas, entitling the holder to the Intermediate Medical Course (including Part II of the Preliminary Scientific) at University College, and the Final M.B., B.S., at the University College Hospital Medical School.

Two exhibitions of the value of 55 guineas each, entitling the holder to the Intermediate Medical Course (including Part II of the Preliminary Scientific) at University College.

Next week will be foundation week. The new athletic ground will be opened by the Vice-Chancellor of the University of London on Wednesday, June 3rd, when the annual athletic sports will be held, and Lady Collins will distribute the prizes. On Thursday, at 8.30 p.m., Mr. J. Lewis Paton, high master of Manchester Grammar School, and formerly head master of University College School, will deliver the foundation oration on the University and the Working Classes, and afterwards the President, Mr. S. J. Willcox, will receive the guests of the Union Society. On Friday the annual smoking concert for the benefit of University College Hospital will be held at Holborn Restaurant at 8.30 p.m. The tickets of admission on these several occasions can be obtained on application, stating the date of period of study, to Mr. P. V. Thomas, Honorary Secretary of the Union Society at the College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ON May 21st the president and council of the Royal College of Surgeons of England entertained at dinner among others Viscount Selby, Lord Aldenham, Mr. Justice Phillimore, Mr. Justice Eve, Sir R. Douglas Powell, Sir William Church, Sir William Collins, M.P.; Sir William Matthews, Sir James Reid, Sir Mackenzie Chalmers, Sir Philip Magnus, M.P.; the Master of the Apothecaries Society, Sir Thomas Crosby; Dr. James Porter, C.B., Director-General of the Medical Department of the Royal Navy; Sir Alfred Keogh, K.C.B., Director-General of the Army Medical Service; Sir Herbert Ellis, K.C.B., late Director-General of the Medical Department of the Royal Navy; Sir Thomas Smith, Mr. Thomas Bryant, Sir John Tweedy, Sir William Bennett. The members of the council present were Mr. Mayo Robson, Mr. H. T. Butlin,

Mr. Pearce Gould, Mr. R. C. Lucas, Mr. J. H. Morgan, Mr. H. H. Clutton, Mr. C. M. Moullin, Mr. Clinton Dent, Mr. G. H. Makins, Mr. Frederic Eve, Mr. Anthony Bowlby, Mr. Harrison Cripps, Mr. Bruce Clarke. Mr. F. G. Hallett, Mr. Victor Plarr, Mr. Arthur Keith, and Mr. S. F. Cowell were also among the guests.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting on May 18th, the following were elected Fellows: E. F. Bianchi, W. H. O. Garde, Staff Surgeon, R.N.; J. L. Gilks, D. J. H. Hamman, W. C. Horton, J. Jardine, J. B. Lockerbie, G. McNeill, D. M. Ross, C. W. Smith, and R. H. Swindells.

The Bathgate Medal and Books have been awarded this year to Lucy M. Muir of Edinburgh.

ROYAL UNIVERSITY OF IRELAND.

At a meeting of the Senate on May 14th, Dr. J. M. Meenan was appointed an Examiner in Medical Jurisprudence and Hygiene.

A resolution was unanimously adopted urging upon the Government the claims to favourable consideration of the Secretaries, the Fellows, the Curator, the Chief Clerk, and the other members of the staff of the university.

On the motion of Lord Killanin, seconded by the Earl of Rosse, it was agreed unanimously:

That in the judgement of the Senate the sums proposed to be allotted for the new universities and their constituent colleges for buildings and maintenance are entirely inadequate.

The following degrees were conferred:

M.D.—J. G. Campbell, W. H. Davis, J. P. Dee, D. J. Keane, T. D. Luke, W. Rice, J. Thompson

M.B., B.Ch., B.A.O.—R. G. Kevin, A. H. Joy, J. G. Johnston, M. F. Huston, T. J. Hollins, B.A., D. Barry, A. R. Boyd, T. A. Carson, J. K. P. Clarke, T. P. Luichau, G. H. Martin, T. Arnold, R. N. Berman, W. Bradbury, T. G. Buchanan, R. J. Clarke, Mary Cowby, B.A., E. H. Flanigan, W. S. Graham, H. J. Grant, P. J. Grogan, R. G. C. M. Kinkead, R. J. Ledlie, S. Levy, J. C. Macaulay, J. McCausland, B.A., M. McNiff, J. F. Neary, J. F. Neary, J. F. O'Brien, M. Waldron, G. P. White, M. White.

The following gentlemen have been awarded exhibitions in connexion with the recently completed Honours Examination: H. L. Barniville, Catholic University School of Medicine, First Class Exhibition, £25, for the Second Examination in Medicine; W. K. Calwell, Queen's College, Belfast, Second Class Exhibition, £15, for the Second Examination in Medicine; W. W. D. Thomson, B.A., Queen's College, Belfast, First Class Exhibition, £30, at the Third Examination in Medicine; W. Mooney, B.A., Catholic University School of Medicine, Second Class Exhibition, £20, at the Third Examination in Medicine; R. G. Kevin, Exhibition of £21 in the Medicine Group of the Final M.B., B.Ch., B.A.O. Examination; A. H. Joy, Exhibition of £21 in the Surgery Group of the same examination; J. G. Johnstone, Exhibition of £21 in the Midwifery Group of the same examination. The latter three gentlemen are all students of Queen's College, Belfast.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have been approved at the examinations indicated:

Surgery.—*H. R. Coombes, †L. G. H. Furber, ‡E. Lakovski, †G. R. McCowen, †G. Rollason.

Medicine.—†E. Lakovski, †G. R. McCowen, ‡J. M. Murray, *B. Robertson, ‡H. F. Wright.

Forensic Medicine.—E. Lakovski, G. R. McCowen.

Midwifery.—E. Lakovski, G. R. McCowen, J. G. Morgan, S. K. Poole.

* Section I. † Sections I and II. ‡ Section II.

The diploma of the Society has been granted to Messrs. L. G. H. Furber, E. Lakovski, G. R. McCowen, and G. Rollason.

OBITUARY.

JOHN COOPER TORRY, M.D., M.R.C.P., J.P.,

CONSULTING PHYSICIAN, MARGARET STREET HOSPITAL FOR CONSUMPTION.

Dr. John Cooper Torry, whose death occurred on May 1st, was a man who in the course of a long life played many parts, and in all of them upheld the dignity of the profession to which he belonged and added to the esteem in which it is held by laymen. Though his career proved eminently successful, Dr. Torry started life in unpromising circumstances, and what he won was the outcome almost entirely of his own good qualities. A cadet of an old Yorkshire family, and left an orphan at a very early age, he was brought up by his grandfather, whose means were very limited. Thanks, however, to young Torry's own industry and steadiness he was able to obtain a good general education, and at length to find himself in a position to commence a medical career; and it was at a somewhat later age than usual that he began formal work as a medical undergraduate in Scotland. These initial difficulties overcome, his progress was rapid, and after the due periods of study at Edinburgh and Glasgow he took the degree of M.D. at St. Andrews in 1845. Meantime he had seen something of life abroad, and he again travelled for a short time when a full-fledged M.D. In less than a year he married the only daughter of the late Mr. Kirton, of Canwick House, Lincoln, a step which in all respects exercised an auspicious influence on his career. Torry did not settle down forthwith in England, but, accompanied by his young wife, went abroad again. He took up his quarters in South Africa, in what was then the newly-founded colony of Natal. There he added to his general attainments by studying law and gaining admission as a qualified advocate in the High Court of Natal, then administered by the somewhat famous Judge Cloete. Torry must thus have been one of the first to effect the now sufficiently common combination of law and medicine. Life in Natal, however, was in those days none too peaceful; there was a constant danger of Zulu inroads, and when, after some five years, a child had been born to him, and he had gained a wide experience of men and affairs, Torry returned home and settled down near his wife's relations in Lincoln. There he quickly won an enviable position in the esteem of his new fellow-townsmen and professional colleagues. Each of the principal medical institutions in the town welcomed him in turn, and long before his career in Lincoln ended he had become Senior Physician to the County Asylum, to the Lunatic Asylum, the General Dispensary, and the Penitent Females' Home. But he possessed other qualities than those which are necessary to success in medicine, and for the exercise of these likewise found scope and leisure. A man of broad views and experience and ready sympathy with ideals and ambitions, he possessed the happy faculty of being able to couch the views of himself and those who sought his assistance in particularly lucid terms; he was, in fact, a singularly attractive and convincing speaker, so it is not remarkable that before he had been many years in Lincoln a place was found for him on the Municipal Council, and later on served an exceedingly popular term of office as Mayor of the city. He was also placed on the Commission of the Peace, and was picked out by the authorities for the important post of Visiting Justice at the County Gaol. The success with which he met in all directions at Lincoln would have satisfied most men, but Dr. Torry had won his position there at a comparatively early age, and being anxious to get still closer into touch with the scientific and political thought of the day, he moved to London in the early Seventies. The new career which he then started was naturally of a less prominent kind than that which preceded it, but nevertheless was one of success. He had already been admitted a member of the Royal College of Physicians, and before he had been long in London he joined the staff of the Metropolitan Free Hospital and of the Westminster General Dispensary. His principal work in the metropolis, however, was connected with the Margaret Street Hospital for Consumption, with the affairs of which he preserved unbroken connexion for the long period of thirty-five years. After holding office as Visiting Physician for five years he became Senior Physician, and as such remained until his retirement some two years ago on appointment as Consulting Physician. When what may be called his third career came to an end Dr. Torry was a man of advanced age, but his interest in life and in all the questions of the day—political, social, and scientific—remained undiminished. Nor did his faculties in any way fail him, and up to the time of his death, which came after a painless illness of a few hours' duration, he remained as interesting a companion as theretofore. His wife predeceased him by eleven years.

CUTHBERT TAUNTON RAIKES, B.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.

The news of the tragic death, at the age of 28 of Dr. C. T. Raikes, Resident Medical Officer to the Government Hospital, Singapore, has been received with the deepest regret by his many friends in England. His death was due to plague, contracted some three months after his arrival in Singapore whilst making a *post-mortem* examination.

Raikes was educated at Marlborough College and Trinity College, Oxford, and completed his medical

training at St. Bartholomew's Hospital. He served for several years in the yeomanry, and was a distinguished hockey player, being captain of the Oxford XI, and also playing for Wales in international matches. After holding the appointment of House-Surgeon to the Royal Berkshire Infirmary, Reading, he obtained the post which he was holding at the time of his death. He only left England for Singapore early in January of this year.

His absolute frankness and unfailing cheerfulness will live in the memory of all who now mourn the untimely death of a loyal friend and a true servant to his profession and his country.

The late Mr. Fowke.—The funeral service and interment of Mr. Francis Fowke, Secretary to the British Medical Association from 1871 to 1902, took place on the afternoon of May 22nd in the picturesque churchyard at Albrighton, near Wolverhampton, where his father and other members of the family also lie buried. Owing to the difficulty of reaching Albrighton, many old friends who would have wished to be present were prevented from attending. The service was conducted by a cousin of the deceased, the Rev. William Warner, M.A., of Christ Church, Oxford, and Examining Chaplain to the Bishop of Ely. There were gathered at the graveside Miss Fowke (sister), Mrs. Warner, Mr. George Bond, Miss Bond, and Miss Cleavely, an old servant of the family, who had been Mr. Fowke's constant and faithful attendant during his last illness. The Council of the Association was represented by Professor J. T. J. Morrison, and there were also present Professor Saundby and Dr. Langley Browne, past chairmen of Council, Mr. Guy Elliston, General Secretary of the Association, and Mr. E. A. Taylor, representing the office staff. The coffin bore the inscription:

Francis Fowke,
Born 8th October, 1839,
Died 19th May, 1908.

There were a large number of floral tributes, including one from the Chairman and Members of Council "as a mark of esteem for long and faithful service," and one from those members of the head office staff who had worked under Mr. Fowke.

The late Dr. Cullingworth.—Dr. F. R. Humphreys writes: As honorary secretary to the Midwives Bill Committee I was closely associated with Dr. Cullingworth for nine years. Numerous bills with innumerable clauses had to be drafted during that time, and it was a continual source of admiration to all of us to observe the wonderful command of English which Dr. Cullingworth possessed. The facility and clearness of his language surpassed that of any of the many who took a hand in framing the clauses. After a time, when he took up the construction of a clause we all put our pens down and talked about something else. The exact value to be attached to the words and the avoidance of doubt as to their precise meaning made his phraseology most valuable. The barrister who drafted so many of the bills, Mr. T. Almond Hind, has likewise quite recently passed away.

William Vernon, M.R.C.S., L.R.C.P.Edin., died at Bath after a long and painful illness bravely borne. In his younger days he held a commission in the army abroad. He then studied medicine, and held the post of Medical Officer to Framlingham College, during which time he was Surgeon-Captain in the Suffolk Regiment. He afterwards practised at Ditton, near Bath, and later at Weston-super-Mare. Dr. Vernon was a Knight of Grace of the Order of St. John of Jerusalem, and Deputy Commissioner, Southern and Western District, St. John Ambulance Brigade until 1903. Of commanding appearance, fearless in character, capable and thorough in his work, he was always excellent company and most hospitable. He will be greatly missed by his friends.

Dr. Theodore Duka, who died recently at Bournemouth in his 83rd year, was by birth a Hungarian. In early life he took an active part in the political and military life of his native country. In 1848 and 1849 he was personal aide-de-camp to General Arthur Görgey, commander of the 7th Army Corps in the Hungarian National Army, and at the battle of Komorn on April 26th, 1849, he received the decoration of the Order of Valour. When the Hungarian forces finally surrendered to the Russians at Villágos on August 13th, 1849, Dr. Duka became a prisoner of war. He succeeded, however, in effecting his escape, and reached London in 1850. Having decided to enter the medical profession he studied at St. George's Hospital, and in 1853 he was admitted a Member of the Royal College of Surgeons of England, of which he became a Fellow in 1866. In 1899 the University of Buda-Pesth conferred on him the honorary degree of M.D. He took the degree of M.D. at St. Andrews in 1853. In 1854 he became a medical officer of the Bengal Army, and in 1856 he was stationed at Monghyr, where he remained through the Mutiny. He retired from the service in 1877 with the military rank of lieutenant colonel, and finally settled in London. He was for some years a member of the Council of the Royal Asiatic Society, and he was a Fellow of the Hungarian Academy of Sciences of Budapest. In 1883 the Emperor-King Francis Joseph conferred upon him the Order of the Iron Crown. Dr. Duka was the author of a Life of his countryman, Alexander Csoma de Körös, the earliest student of the Tibetan language, and he promoted in this country the movement which led to the erection of a memorial at Budapest to Semelweiss, the pioneer of antiseptic midwifery, of whom he wrote a Life. He was President of the Tropical Section of the Eighth International Congress of Hygiene and Demography in 1894.

Surgeon-General William Silver Oliver, M.D., late of the Army Medical Department, died on April 27th, at Farnborough Park, at the age of 72. He was an M.D. of Halifax, Nova Scotia, and entered the service as an Assistant Surgeon September 15th, 1857, becoming Surgeon, February 3rd, 1872; Surgeon-Major, March 1st, 1873; Brigade Surgeon, August 23rd, 1882; and Honorary Deputy Surgeon-General on retirement, May 1st, 1883. His war record is as follows: Indian Mutiny, 1858—Campaign in Rohilcund: actions of Bugawalla and Nugena, relief of Moradabad, action on the Dojura, assault and capture of Bareilly, attack, bombardment, and relief of Shahjehanpore, capture of fort Bunnai, pursuit of the enemy to the left bank of the Goomtee, destruction of the fort of Mahomdee, attack on and destruction of Shahabad, action of Bungkagong. Campaign in Oude—Actions of Pursgaon and Rissoolpore, attack and capture of fort Mittowlie, and actions at Mehundee and Biswah (mentioned in dispatches; medal).

Brigade Surgeon George Sackville Sutherland, M.D., died in London on May 19th. He entered the Bengal Medical Department as Assistant Surgeon, August 4th, 1857, and became Brigade Surgeon December 7th, 1884. He served in the Crimean campaign in 1855-6 with the the Turkish contingent in Turkey, and in the Crimea after the fall of Sebastopol (Turkish medal, and 5th class of the order of the Medjidie). He was also in the Indian Mutiny campaign in 1858-9, and was present at the final capture of Lucknow and in operations in Oude (medal with clasp).

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Sigmund Vidor, Ophthalmic Surgeon to the Stephanie Children's Hospital at Buda-Pesth, aged 72; Dr. Chamberland, Sub-Director of the Pasteur Institute, well known as a collaborator of Pasteur, and author of papers on anthrax and antianthrax vaccination, drinking water and epidemic diseases and other subjects; Dr. A. A. Baer, of Berlin, Medical Superintendent of Prisons, Berlin, and author of numerous writings on the hygiene of prisons, on criminals and their punishment, on alcohol in relation to crime, etc., aged 74; Dr. J. B. Levrey, formerly Senator for the Department of the Haute-Saône; Dr. Giano Cattaneo, of Varese, a well-known Italian dermatologist; Professor Oscar Langendorff, Director of the Physiological Institute of the University of Rostock, aged 55; Dr. G. Guldberg, Professor of Anatomy in the University of Christiania, aged 54; Dr. Riéchétillo, Privatdozent in Dermatology and Syphilis in the University of Moscow; and Dr. G. Lorenzo Basetti, of Parma, for many years a prominent member of the Italian Chamber of Deputies.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE CARE OF SCHOOL CHILDREN'S EYESIGHT.

AT a recent meeting of the New York Board of Education the Association of Women Principals presented a series of recommendations for the protection of the eyes of the pupils in the public schools. These recommendations, which had been determined upon after consultation with a number of prominent specialists, were to the effect that henceforth no textbook printed on calendered paper, casting a glare, should be used in the schools; that half-tone cuts should not be allowed for the illustration of books used; that only frosted globes should be employed for electric lights; that all lights in night schools should be provided with green shades; that each pupil when studying from a book should be required to hold it at an angle of 45 degrees, and when studying or reading should be required to look up frequently from the page; that the seats in all the schools should be of a size to suit that of the pupils using them.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Barnstaple Rural District.—The population was 16 888, the birth-rate 21.3 per 1,000, and the death-rate 14.2. The infantile mortality-rate was equal to 100 per 1,000 births. Dr. Harper considers that in order to deal satisfactorily with infectious disease it is necessary to have some means of isolating cases that occur, for it is impossible to do this in the majority of the houses concerned, where in many instances there are only two bedrooms, and these are often already overcrowded. The inspection of midwives in North Devon is in the hands of the district medical officers of health, but Dr. Harper considers this duty should be entrusted to a whole-time official—preferably a well-qualified midwife, who could combine with her inspections the necessary instructions which many midwives require.

St. Annes-on-the-Sea Urban District.—The population in 1907 was 10,204, or nearly double that of ten years ago. The birth-rate was 14.1 per 1,000, the death-rate 8.8, and the infantile mortality-rate was equal to 99 per 1,000 births. The number of women at conceptive ages in St. Annes is probably small, so that the birth-rate as recorded may not be a true index of the actual birth-rate, which would be revealed by adopting the suggestion of Dr. Tatham and stating the number of births as a proportion of the number of married women between the ages of 15 and 45 years. Measles is included among the diseases which are compulsorily notifiable in St. Annes, and Dr. Booth deplores the absence of the complement of notification-isolation. He prevailed upon the Lytham and St. Annes District Councils to provide a pavilion for the reception of measles patients at the joint hospital at Moss Side, but the Fleetwood Council, who are represented on the hospital board, opposed the proposal, and it was not carried out. The reason for this opposition is not quite clear, as it was intended that only paying patients should be received in the measles pavilion.

Melton Mowbray Rural District.—The estimated population was 15,695, the birth-rate was 22 per 1,000, the death-rate 13.3 per 1,000, and the infantile mortality rate was equal to 98 per 1,000 births. The value of this report is very much lessened through the non-inclusion of the Local Government Board tables and also of a special report which Dr. Tibbles presented in June upon a serious outbreak of typhoid fever among the inhabitants of Ashfordby Hill and Valley. The outbreak began in May and lasted until November. The number of cases is not stated, but they appear to have been about 40, of which number 33 were treated in the isolation hospital. The first case was the foreman at a farm. The water supply was found to be polluted, and with one exception the remaining cases were considered to have been infected from this supply. The district council will be well advised to carry out the recommendations of their medical officer of health and adopt by-laws with respect to the cleansing of privies and ashpits, and, having adopted them, to see that they are properly carried out.

Borough of Wrexham.—The estimated population was 16,705, the birth-rate 31.7 per 1,000, the death-rate 14.4, and the infantile mortality rate was equal to 101 per 1,000 births. Dr. Williams has given a good deal of attention during the year to the houses of the working classes in the town. He divided the insanitary dwellings found after inspection into two schedules, the first containing those properties which were quite unfit for human habitation and which should be demolished, the second containing a list of houses which were capable of being made habitable. In the first schedule there were 34 houses, and 32 of these were closed voluntarily by the owners, who gave a written undertaking that they would not allow the houses in question to be occupied within a period of six months from a certain date. In the second schedule there were included 51 houses, and these are reported to be now in a proper and habitable condition. It is satisfactory to find that the disinfection of bedding and clothing by means of a hot-air apparatus is to be discontinued, and that in the future disinfection will be carried out by means of saturated steam. Disinfection of dwellings is very properly carried out by means of spraying.

Ilkley Urban District.—The estimated population was 8,500. The birth-rate was 13.3 per 1,000 and the death-rate 9.3. The infantile mortality-rate was equal to 88 per 1,000 births. The birth-rate at Ilkley has apparently been very low for many years, but if Dr. Bampton in his future reports would calculate the legitimate birth-rate as a proportion of the number of married women between the ages of 15 and 45 years it might be found that the likely birth-rate was not so very much below that of the rest of England and Wales as it now appears to be. Some of the water-closets in Ilkley are flushed automatically with tippers, and Dr. Bampton considers that there may be some connexion between these and outbreaks of diphtheria, as the upper part of the apparatus is very difficult to keep clean. The death-rate from phthisis in Ilkley in 1907 was only 0.35 per 1,000 persons living at all ages.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE ROYAL FREE HOSPITAL.

AT the eightieth annual meeting of the Court of Governors of the Royal Free Hospital, on March 13th, the report submitted and approved recorded the completion of two new operating theatres. They had long been required, the number of operations having increased tenfold since 1870, when the existing theatre was built. A new mortuary and a small chapel had been built by the Ladies' Association, and a house acquired for the officers and students of the maternity department. There was still a difference between ordinary income and ordinary expenditure, the great need of the institution being an increase of the list of annual subscribers.

THE ROYAL INFIRMARY, LIVERPOOL

IN the report presented to the annual meeting of the Royal Infirmary, reference was made to the resignation of Mr Rushton Parker, who had been twelve years assistant surgeon and eighteen years surgeon. The meetings of the conference between the various hospitals had brought the institutions nearer together. During the year the circumstances of the patients at the infirmary had been investigated by a special inquiry officer, and the fact had been established that few of the applicants for relief were of a class not entitled to the privilege of hospital treatment. While the voluntary principle had been steadfastly maintained, many gifts had been received from those who were able to contribute something towards their maintenance in the wards. Similar methods had been applied to the patients coming from without the borders of the city with satisfactory results. The annual expenditure at the infirmary was £16,208, and the ordinary income £14,034. The patients who had passed through the wards numbered 3,875, and the out-patients 20,434. The total attendances were 52,082. The Treasurer (Mr. Ralph Brocklebank) made an urgent appeal for further public support for the hospital, more especially as the maintenance fund was nearly exhausted. The hospital had a special claim as the educator of medical students. It was a large branch of the university, and the feeling between the two institutions was most harmonious. Mr. Rushton Parker was appointed consulting surgeon to the institution. Various speakers urged the undesirability of discontinuing the abattoirs in their present site near the infirmary.

ROYAL MATERNITY CHARITY OF LONDON.

WE have received the statistical report of this charity for 1907. The staff of thirty-three midwives attended 2,376 women in childbirth. Doctors were summoned to 143 cases. Three maternal deaths occurred, a mortality of 1.26 per 1,000. F. H. Ramsbotham's analysis of nearly 70,000 cases attended by this charity during the years 1820-50 shows a death-rate of 4.5 per 1,000. These figures for last year, and even Ramsbotham's of more than half a century ago, would be very satisfactory if we could unreservedly accept them. But they are obtained from the reports of midwives who have attended the patients in their own homes. Now we know that very often when a patient is thought to be in danger the wish of her friends is to have her attended by some other doctor in whom they personally have greater confidence than in the midwife or the doctor whom she calls in. When this is done the temptation is great to the midwife to save herself the fatigue of visiting by giving up attendance on the case, and the trouble of explanation by not reporting the case to her official superiors. If the patient dies, she is not a patient of the Maternity Charity. These remarks apply not only to the Royal Maternity Charity, but to all outdoor maternities. They are not an accusation of exceptional negligence, but a statement of average human nature. Only a person with a sense of duty higher than most people will voluntarily make a report which will bring about disagreeable inquiries, perhaps censure, with possibly permanent loss of confidence and credit, when all these things can be avoided by silence. We believe that the Royal Maternity Charity is managed as well as any such charity can be, but complete control and accurate reports can only be attained inside the walls of a hospital.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

E. A. asks for experience of the 7 to 9 h.p. single cylinder Darracq cars.

A CORRESPONDENT in Masulipatam, South India, where beri-beri is, he says, endemic, finds that many patients after an acute attack suffer from tingling, numbness, and burning sensations in the hands and feet, the latter being particularly troublesome; he asks for advice as to treatment.

INCOME TAX.

A CORRESPONDENT writes: Some months ago I was voted (and paid) a grant by the Local Government Board to carry out certain investigations. The grant is intended to cover all the costs of the investigation, and to include personal remuneration for the six months' work. (1) Shall I have to pay income tax on the grant? If so, upon what proportion of it, seeing that it is to include all expenses, and, as the investigation is not yet finished, I am unable to say what the expenses will amount to? (2) Do I include the grant as income in my income-tax return, and, if so, how much of it?

*** Our correspondent is liable to pay income tax on so much of the grant as represents his personal remuneration; that is, he may deduct his expenses from the total, and should include the balance in his income tax return. If he is not yet in a position to say what these expenses will amount to, owing to the investigation being incomplete, he should explain the matter to the surveyor of taxes, who will, no doubt, arrange for payment of the tax to stand over until a proper statement of the actual expenses can be rendered. It should be borne in mind that if our correspondent is carrying on a general practice he should return his income, less expenses, on the average amount received during the three years 1905, 1906, and 1907. If this is done the grant will not be returned separately, but will fall into the receipts of the year during which it was paid; and, similarly, the expenses may be charged in the year in which they are incurred. In this way the matter would right itself automatically.

ANSWERS.

V. G. T., in reply to "Nescio" (BRITISH MEDICAL JOURNAL, May 16th, p. 1211), advises the internal administration of calcium lactate.

TREATMENT OF ECZEMA.

P. M. writes: The case described by "Midland County" is probably primarily one of plethora. Reduction of the food taken seems to be indicated. Fasting for a day or two will be beneficial, and a pound of solid food should be the utmost in the twenty-four hours. Much less would be still better, and only two meals a day, with nothing between but water. Local treatment, such as Hebra's diachylon ointment, would be useful but scarcely curative. Tarry applications should be very weak if tried at all, and soap forbidden. Oatmeal or bran may be applied with soft water.

MOTOR CARS FOR MEDICAL MEN.

DUNELM writes: In reply to "Enterprise," the smallest size Stanley steam car, costing under £200, will carry two or four people up his hills. My Stanley, which cost £160, will do it with two people up, though this car is not made now, I believe. It is doubtful if a petrol car at such a price would do his work. I have little personal experience of the petrol car, but imagine it would require at least 8 to 10-h.p. Steam is not so handy as petrol. It will take anything from twenty to forty minutes to fill the boiler, light up, and get a full head of steam. Steam is useless for getting on to the road quickly, and for a single journey is not worth the bother; it is all right if you have a good day's work in front of you. For sudden calls and single journeys the petrol car scores over steam. Steam has advantages in silence, easy starting, stopping, and control, but your fuel alone, if benzine is used, will cost nearly one penny a mile. Compared with driving, motoring is not cheaper unless one has exceptionally good luck; where some of the difference comes in is through the car being used for pleasure and journeys other than those for professional work. Were the car used for the same mileage as the horse, and one had luck, and looked after the car as well as a horse has to be looked after, it probably is cheaper, and a time-saver too. Buying a second-hand car, unless you know its history exactly, might easily lead to endless expense and vexation, yet two friends of mine have travelled thousands of miles on second-hand cars in place of horses, and found it not more expensive. In their case the cars are petrol and of a very first-class make, and they have had *luck.*

DR. J. E. B. SNELL (Nottingham) writes: In answer to Dr. Gardner's query in the BRITISH MEDICAL JOURNAL of May 16th as to the advantages of motor-cars in a busy town practice, I should like to give my experience of a 9 to 10-h.p. Swift car 1907 pattern. I purchased my car a little over a year ago, and from taking delivery of it at their works as a novice I have driven it ever since myself. In more than a year's experience I have had not one single stop of any kind, not even a puncture. My expenses beyond stabling and cleaning have been nothing but petrol (25 miles to the gallon average) and oil (500 600 miles to the gallon). Accumulators have cost about a shilling a month. My car has been used every day of the year with the exception of a few Sundays. My mileage is 5,200 (on recorder). Repairs have been confined to a few brake adjustments due to normal wear. Almost the whole of this mileage has been in the town, and my stops and starts have been close and frequent. If Dr. Gardner would care to write to me, I am sure I could give him a few advantageous "tips." First and foremost, if for medical work I should advise a two-seater, and next, I think, a 2-cylinder as much more economical than the 4-cylinder, of which I have had some experience. I should also strongly advise the heaviest tyres possible.

MOTORIST (Dundee) writes: In reply to Dr. Gardner's inquiry regarding the use of a motor in a city general practice I can give him an opinion after a five years' trial. I have driven only De Dions, and have always used the smallest horse-power compatible with the hills in my district. I find my expenses run between those of a one and two-horsed carriage. I can do alone about one third more work than I did with horses, and have not to be so particular about taking my cases in a fixed round, as the time occupied in going distances is so much shorter than with horses, and it does not tire the motor. I drive myself and keep a boy for cleaning and oiling the car, and take him round with me to turn the handle in starting, and to keep children and loafers from meddling with the car in my absence. I stop the engine at every visit, and one turn of the handle usually starts it, and the boy jumps in as the car moves off. I carry a Stepney wheel which can be put on by the boy while I do a visit. I never have to soil my hands when on my rounds, and have not had a breakdown for years. My car has a hood and screen and is quite as comfortable as a victoria, and I think much healthier. I would never think of returning to horses. To a beginner, or I might say to any general practitioner, buy second-hand; buy a one-cylindered or two-cylindered car, fully equipped for town use and drive yourself, if you wish to study economy; also sell again when the repair bill begins to get heavy, and before your car is too antiquated. There will always be plenty of suitable lower power cars, second-hand, in the market, as most motorists begin with moderate horse-power, and wish in a year or so to increase their speed, especially on hills.

FLATULENT DYSPEPSIA.

P. M. writes: "W. W.'s" patient would probably find relief from diet very strict as to quantity; 12 or 14 oz. a day in two meals. If this has been tried, abstinence from meat may be prescribed, without increasing the quantity of food, or

abstinence from vegetables under the same condition. The patient will be surprised at the small amount of flatulence when she goes without breakfast and takes nothing whatever either to eat or drink before 1 p.m. But the relief after a fortnight of this regimen will be much greater. Of course absence of organic disease is presupposed.

THE CONSCIENTIOUS OBJECTOR.

DR. WISHART.—A justice of the peace is not entitled to a fee for administering the oath to a conscientious objector. The magistrate's clerk is entitled to a fee if in attendance when the declaration is made. Replying to a similar question in the House of Commons, the Home Secretary has recently made the following statement: "A fee authorized by a table of justice's clerk's fees can be demanded only when a clerk has rendered the service in respect of which the fee is authorized. I am advised that when a declaration is made before a justice in the absence of the clerk no fee should be demanded."

LETTERS, NOTES, Etc,

IN the annual report of the Council, printed in the SUPPLEMENT to the JOURNAL of last week, the name of George Brown appeared in the list of members who had died during the year. We are glad to state that this did not refer to Mr. George Brown, late member of the General Medical Council, who now resides at Callington, Cornwall.

OTIUM sends us a note of the extreme good health at the present time of the inhabitants of a midland city in which he practises. In addition to his own, he has charge at the present time of the practices (club and private) of two colleagues who are away. He estimates the number of patients at 5,800, but on one morning recently he had to pay only two visits, one of condolence to a widow and the other on a convalescent; he concludes that there was on this day not a single case of acute illness amongst nearly 6,000 patients.

A WARNING

DR. CHARLES W. BUCKLEY (1, Hardwick Mount, Buxton) asks us to state that any practitioner who may be called to attend a woman calling herself Madeline or Julia Murphy, and apparently suffering from paraplegia, would do well to communicate with him before undertaking the case.

WHITLA'S "MEDICINE."

IN the review of Sir William Whitla's *Practice and Theory of Medicine* which appeared in the BRITISH MEDICAL JOURNAL of May 23rd, there was an accidental transposition of words which makes an important difference in the sense. In the second column of p. 1236, in the seventh line from the end of the review, the words "it (the treatment) is purely quantitative and not qualitative" should read, "it is purely qualitative and not quantitative."

CONTRACT PRACTICE FEES FOR SPECIAL CASES.

DR. ROBERT TURNER (Bootle) writes: "Antisweat" has contracted to attend his patients for 4s. a head per annum, and must abide by that, whatever special cases may arise. The public know all the shortcomings of our profession, and make the most of them. I once had a club, but gave it up, with the result that I still have the best of them as private patients.

REPAIRING MOTOR TYRES.

DR. J. ROWAT (Balham High Road, S.W.), who has, he informs us, been a motorist for ten years, and during that time has tried various methods of mending covers, writes very strongly to recommend a method of vulcanizing devised by Messrs. Harvey, Frost and Co., Charing Cross Road. The method, Dr. Rowat states, is applicable both to inner tubes and covers, and is so simple that it can be learned in an hour. The vulcanizing apparatus is made in two sizes; the smaller, costing £5, can be carried on the car, but Dr. Rowat, recommends the larger one, costing £9 9s., as more generally serviceable.

THE MICROSCOPE IN WAR.

MAJOR BLACKHAM, R.A.M.C. (Devonport) writes: I have read with much interest the Chairman's address to the Swansea Division of the British Medical Association published in the BRITISH MEDICAL JOURNAL of December 21st, 1907, but, while sympathizing with Dr. Arnallt Jones's desire to popularize the study of bacteriology amongst general practitioners, I venture to join issue with his opinion as to the part of the microscope in war.

Dr. Jones says that "Major Seaman of the U.S. Army, in his report, pointed out that the Japanese medical officer was invariably found in the first screen of scouts with his microscope and chemical reagents, testing and labelling wells, so that the army following should drink no contaminated water." This might be accepted by an audience unacquainted with the conditions of military service, but I do not think that the members of the medical department of any army will agree with the M.O.H. for Aberavon that it is "a brilliant practical illustration" of "what science can do in the way of preventing disease in war."

If Dr. Jones will refer to the Parkes Memorial Prize Essay for 1904, he will find that Lieutenant-Colonel Robert Caldwell, R.A.M.C., who has had great experience, writes as follows: "It does not appear likely that the introduction of a chemical laboratory into the field is likely to be followed by any particular benefit. An incomplete analysis is valueless; it tells of danger but cannot tell of safety, and it is impossible to carry out any analysis but an incomplete one under the conditions of active service, and for this reason any such attempt should be abandoned. Water—water being naturally the main subject for analysis—might, for instance, give excellent results when examined chemically, and might at the same time be swarming with an extensive variety of disease-producing germs. These latter could not possibly be detected without recourse to appropriate bacteriological methods, and such methods could only find practical application within the walls of a properly-equipped laboratory" (*Prevention of Disease in Armies in the Field*, p. 149).

During the recent autumn manœuvres in Wiltshire the writer of the foregoing, in his capacity as Sanitary Officer of the Northern Army, took samples of water from the River Wyley both before and after it had passed through the new army water-cart. The samples reached the District Laboratory, Devonport, the day following their dispatch. I was in temporary charge of the laboratory during Colonel Caldwell's absence, and examined them for the presence of *Bacillus coli communis* according to the method recorded by Dr. Thresh in his admirable work on *Water and Water Supplies* (p. 351). The river water gave unmistakable evidence of *B. coli* in so low a dilution as 1 c.cm., whereas 20 c.cm. of the water which had passed through the service cart showed no evidence of coliform organisms. The chemical constituents of both samples were within the limit prescribed for "a good potable water."

This bears out Colonel Caldwell's opinion as expressed above, that incomplete or chemical examination of water are valueless, and show, I think, that if the Japanese medical officer was actually "with the first screen of scouts analysing water and labelling wells," his labours were sad waste of energy, and his "labels" not worth the paper they were written on.

In conclusion, I venture to predict that the microscope will perform an important part in the wars that are to come, but it will be neither "with the first line of scouts," nor in the stress of the fighting line, but in the properly-equipped laboratories which the sanitary section of the expeditionary forces of the future will establish at their base and on their lines of communication.

EPITAPHS.

WE are indebted to Dr. John Frew, of Small Heath, for the following epitaph which he received from a printer who is a patient of his. It may be new to some of our readers (though these things, somehow, are seldom new).

> Pain was his portion; physic was his food;
> Groans were his devotion; drugs did him no good.
> Christ was his physician, and knew which was the best;
> He eased him of his pains, and took his soul to rest.

The following "epitaph on a boy aged 15 years who died on October 3rd, 1827," which Dr. Duncan Lawrie of Manchester came across while going through the churchyard of the old church at Mottram, a little village not many miles from Manchester, refers to "resurrection" days. Dr. Duncan Lawrie, who has kindly sent it to us, says the stone was pointed out to him by a little boy, whose ideas were a little confused, as "the body-snatcher's grave":

> Though once beneath the ground this corse was laid,
> For use of surgeons it was thence conveyed.
> Vain was the scheme to hide the impious theft—
> The body taken, shroud and coffin left
>
> Ye wretches, who pursue this barbarous trade,
> Your carcasses in turn may be conveyed
> Like this to some unfeeling surgeon's room;
> Nor can they justly meet a better doom.

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An Address

ON

CEREBRAL INFLUENZA.

DELIVERED AT THE SPRING MEETING OF THE SHROPSHIRE BRANCH ON MAY 12TH, 1908,

BY ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,

SENIOR PHYSICIAN TO THE GENERAL HOSPITAL AND PROFESSOR OF MEDICINE IN THE UNIVERSITY OF BIRMINGHAM.

MR. PRESIDENT and GENTLEMEN,—I am grateful for the honour you have done me in giving me this opportunity of addressing you upon some subject of general professional interest. The usual drawback to such an invitation is that the recipient has to choose a subject at once worthy of the occasion, acceptable to his audience, and upon which he has something to say; for in such a preliminary hunt for a theme he may spend more time than is needed to write the address, and I can only express the hope that the choice I have made will not be without interest to you.

The recent influenza epidemic, which was at its worst in Birmingham in the middle of February, has directed my attention to cerebral influenza, as it presents such startling features that it must often give rise to serious difficulties in diagnosis and prognosis; although rare, it deserves to be better known, and I hope it will not be useless to discuss its chief clinical features and the nature of the morbid processes to which it is related.

History and Cases.

Cerebral influenza has received little notice from British writers, and we may presume that this is due to the small number of cases that have occurred in this country. A case of influenza with motor aphasia in a farmer's wife was reported in the BRITISH MEDICAL JOURNAL in 1890 by Dr. T. Dobson Poole.[1]

A woman, aged 27, was taken suddenly with shivering and frontal headache, followed by loss of speech, but there was no stupor or coma. When seen she could say "Yes." The following day she managed to say "better." There was gradual improvement and complete recovery in the course of a month. Presumably there was no paralysis.

In 1891 the late Dr. J. S. Bristowe[2] reported two fatal cases of abscess of the brain following on influenza.

In each there was an interval of some months between the attack of influenza and the brain symptoms. He included in the same paper brief notes of three other fatal cases of brain symptoms without *post-mortem* examinations, and at least two of these appear to have been examples of encephalitis or meningitis. A case of brain abscess in the right frontal lobe occurring after influenza was also recorded in the *Medical Chronicle* about the same time by Dr. R. T. Williamson[3] of Manchester. Here also there was a considerable interval between the attack of influenza and the brain symptoms, although the patient had not recovered his health.

A most admirably reported case was published by Dr. Marmaduke Prickett and Dr. F. E. Batten in the thirty-third volume of the *Clinical Society's Transactions*.[4]

The patient, a boy of 9, suffered, as did all the family, in January, 1899, from influenzal catarrh, but it was of so slight a character that no medical man was consulted. On Friday, the 19th, he went to a children's party and enjoyed himself thoroughly, but his cough was so troublesome during the night that the following day he was kept in bed, and his temperature was found to be 100° F. On Sunday he was allowed to get up, but seemed weak and tired, although in the evening he played with the other children and appeared to be in good spirits. On Monday morning he did not feel well and asked to stay at home instead of going to school; yet he played with the other children, and appeared as bright and merry as possible, and expressed himself as eager to go to school the next day. He went to bed as usual at 8 p.m., and after one or two fits of coughing fell asleep; nothing more was heard of him till Tuesday morning, when he told the French maid sent to wake him for his bath that his arm felt funny, and that he did not want his bath. The maid fetched the nurse, who, as his arm was helpless, sent for Dr. Prickett, who arrived about 9 30, and found the boy aphasic, with his right arm and leg completely paralysed, and his eyes and head turned to the left. He was conscious and understood what was said to him, but cried a little when he found he could not speak. His temperature was only just above normal, and his pulse about 90. All the other organs appeared to be healthy. He soon became more drowsy, cried out occasionally, and put his left arm to his head as if in pain, but could be easily roused, and answered questions by nodding and shaking his head. In spite of all treatment he grew rapidly worse; the coma deepened, and he began to take his food with difficulty and to pass his urine in bed. He died on Friday, three days after the onset of the paralysis. At the *post-mortem* examination the surface of the brain was pale, with marked flattening of the convolutions, especially on the left side; there was no thrombosis in any of the sinuses or in the large vessels at the base of the brain, or any embolism. The middle ears were perfectly normal. The brain was hardened in formalin for a week, when it was cut by horizontal sections; no focal lesion was found, but the vessels in the subcortical region were much injected, this condition being most marked on the left side. The ventricles were not enlarged, and the fluid in them perfectly normal. Microscopical examination of the brain showed numerous small extravasations of blood, mostly in the neighbourhood of the vessels throughout the frontal, parietal, and occipital regions. The vessels were gorged and appeared to be thrombosed; around them were numerous small cells, some of which were leucocytes, but others were smaller, and were considered to be either blood platelets or cells undergoing disintegration. The cells of the cortex were swollen and stained feebly. The cortex on the right side presented similar changes, although these were less marked. The medulla showed no haemorrhages but some increased vascularity, and the cells did not stain well. The finer branches of the middle cerebral vessels were thrombosed but their walls were perfectly healthy.

In their account of an influenza epidemic in Hertfordshire in the early part of 1905 Drs. Dunn and Gordon[5] noticed the occurrence of certain cases which resembled cerebro-spinal fever; these were marked by severe headache, pain, and stiffness in the neck and loins, vomiting, convulsions which were often terminal, and fever which was "very erratic"; in only a few cases was there retraction of the head or opisthotonos; the sphincters were relaxed in severe cases; such paralyses as were noted were accompanied by trophic changes in muscles (neuritis?); they do not mention hemiplegia, monoplegia, or aphasia. The only *post-mortem* examination was of a boy who died of meningitis. No tubercles were seen, but the description does not enable us to judge of its nature, and no bacteriological examination could be carried out "owing to *post-mortem* contamination." We are not told whether the cerebro-spinal cases were especially fatal, and in the above list of symptoms there is no reference to stupor or coma.

In a presidential address delivered to the Neurological Society of the United Kingdom on November 1st, 1906, Sir Thomas Barlow[6] directed special attention to the nervous complications of the specific fevers, and quoted many published references to such occurrences in the course of measles, small-pox, typhoid fever, and influenza, as well as in the better-known diphtheria. Some of these presented cerebral, others spinal, symptoms, and he was disposed to regard all as dependent pathologically upon a disseminated encephalo-myelitis which may follow a variable distribution and be not limited in any systemic manner.

The condition does not seem to have attracted much attention in America, although a valuable paper was read by Dr. James J. Putnam, of Boston, at the Annual Meeting of the Massachusetts Medical Society, in June, 1892.[7] He remarks upon the comparative rarity of such cases in America. He speaks of having seen one, if not two, cases of aphasia with paresis of the right hand which terminated by recovery, and of which there was no other apparent cause but influenza.

One of his cases was that of an old lady, aged 71, who, in December, was seized with a well-marked attack of influenza attended by considerable prostration, from which she recovered sufficiently to be able to be up and dressed, although she was not strong. On February 3rd she had a brief attack of unconsciousness; three days later there was twitching of the left side of the face without loss of consciousness; twenty minutes later there was another attack, and this time the left arm twitched slightly. These attacks recurred at intervals of about twenty minutes for the next thirty-six hours, and then the left side became paralysed, with loss of consciousness. In the course of a few hours she regained consciousness enough to recognize her friends, but she died at 9 o'clock the next morning, without further symptoms. The temperature before death was 103° F.

At the *post-mortem* examination the brain showed no special changes, not even marked congestion; it was soft and watery; parts were hardened and examined microscopically; these showed capillary haemorrhages, cellular infiltration of

the lymph-sheaths and the presence of round hyaline bodies like corpora amylacea.

The second case was a gentleman, aged 38, who in January, 1892, had a well-marked attack of influenza of which intense headache was a prominent symptom. He recovered and returned to his work, although the headache continued to trouble him more or less; at the end of two months he was seized suddenly with a violent fit of sneezing, during which he could neither see nor hear, but hearing quickly and completely returned and vision almost entirely. He went home, and from this time was confined to his bed with intense headache and was at times delirious. Two weeks later he had an attack of left hemiplegia and his speech was slightly affected; this soon disappeared, but the eyesight was a good deal blurred, especially for distance, and the right eye was worse than the left. When Dr. Putnam saw him there was no paralysis and the headaches were much better, but there was well-marked double optic neuritis with moderate swelling and slight retinal haemorrhages, which had not disappeared three weeks later, although in other respects the patient complained of nothing but weakness.

In France only a moderate amount of attention has been paid to the matter, although in the early Nineties there is evidence that cases with cerebro-spinal symptoms were observed in certain towns to occur side by side with cases of influenza, but were interpreted as being due to the presence of an epidemic of cerebro-spinal meningitis running concurrently.

At a meeting of the French Academy of Medicine in March, 1895, Professor Cornil[8] related three cases of "influenzal encephalopathy," all ending in recovery.

In two the affection was ushered in by intense headache, followed by sudden loss of consciousness, incomplete coma with stertor, which lasted in one for three weeks, in the other for four days, paralysis of the left side, facial paralysis, disturbance of vision, inequality of pupils, paralysis of the sphincters, with preservation of the sensory functions and tendon reflexes. In one of these cases the motor paralysis affected the right side, and was accompanied by aphasia. He said that the onset suggested acute meningitis, and he thought it probable that the meninges were inflamed, but also that the motor zones of the cerebral cortex were affected, and he pointed out that the recovery distinguishes these lesions from those of ordinary acute meningitis or meningo-encephalitis, which are almost invariably fatal, while the preservation of sensibility, the facial paralysis, the paralysis of the sphincters, and the ocular disturbances enable them to be distinguished from hysterical hemiplegia. The third patient was hysterical, and the hemiplegia was accompanied by anaesthesia; but, as there was also facial paralysis, inequality of the pupils, and aphasia, it differed essentially from a simple case of hysterical paralysis.

Later in the year (May 7th, 1895) he reported a fatal case of the same kind.

The patient was a woman 40 years of age, non-alcoholic, who on April 10th was seized with headache and general lassitude followed by fever, prostration and drowsiness, which passed into coma accompanied by stertor. On admission there was hemiplegia of the right side, including the face, with incontinence of urine and faeces. She died on April 24th, and at the *post-mortem* examination the pia mater was infiltrated with yellow opaque fluid; there was a small haemorrhagic focus in the grey matter of the right hemisphere and another in the first occipital convolution of the same side. Bacteriological examination failed to reveal the influenza bacillus. In the discussion which followed, Dr. L. Colin said that streptococcal meningitis occurred during epidemics of influenza. Professor Cornil, in his reply, said that in the case which he had described the meningitis was distinctly influenzal, and did not show any of the usual microbes of suppuration.

In 1899 Dr. J. Marty,[9] in describing a number of cases of influenza which he had seen amongst soldiers, and discussing the various complications that arose, said meningitis had been seen only in the most severe epidemics, and then always at the *beginning* and always causing the first deaths. He had collected from French medical literature the histories of 11 cases, of which 3 showed only nervous symptoms of short duration, such as stiffness of the neck, headache, and contraction of the masseter muscles. Two recovered after a passing pseudo-meningitis, and six were true meningitis with a fatal termination. In one of the last the meningitis seemed to have been caused by the lighting up again of an old inflammation of the ear. There were two *post-mortem* examinations, but in no case was any bacteriological examination made.

Influenza may be followed by an ordinary pneumococcal meningitis, as in a case published by Professor Rendu[10] of influenza without pneumonia, which terminated with symptoms of meningitis. At the *post-mortem* examination there was well-marked exudation over both hemispheres, and the pus, when cultivated on agar, showed the presence of the pneumococcus.

By far the most numerous cases seem to have occurred in Germany, and it is to German writers and to the pages of German medical periodicals that we must turn to find the fullest and most complete account of this form of influenza. Its sudden onset, severe symptoms, and high mortality impressed the popular imagination, and under the name of "Schlafsucht," or sleeping sickness, it caused great alarm as a new and mysterious disease. In May, 1890, a disease appeared in Upper Italy which was called by the people "Nona," and which is believed to have been this comatose form of influenza, but the descriptions are not sufficiently precise to make the identification certain.

Leichtenstern[11] described influenzal hemiplegia and monoplegia in his lectures on influenza delivered in the spring of 1890. He reported 8 cases, of which several recovered, and he showed that the fatal pathological condition was an acute haemorrhagic encephalitis situated generally in the cortex, but also frequently in the central ganglia, particularly in the thalamus, and he attributed these lesions to capillary emboliems due to the dissemination of the influenza germs. According to his description, the foci of inflammation may vary in size from a cherry-stone to a pigeon's egg, or by confluence they may form larger areas. On section the brain shows "flea-bite" like dots of blood due to secondary haemorrhage into soft inflammatory areas. There was occasional thrombosis, and sometimes meningitis, affecting the dura or pia mater, but purulent exudation was rarely seen. He adds: *True influenzal meningitis may occur although symptoms closely simulating it may be due solely to the effects of the toxins without any inflammatory change being present.*

A fatal case of influenzal meningitis, which had been under the care of Professor Fuerbringer, was reported by Dr. Koenigsdorf[12]:

The patient, a young woman of 21, was admitted comatose on January 4th, 1892, with a history that she had been attacked on December 31st by headache and sickness, for which she went to bed. The next day, feeling better, she got up, but had to return to bed, where she spent a restless day, and the following night had little sleep, but in the early morning she drank a cup of coffee. Later on she was found unconscious, and as she remained in this condition she was sent to the hospital. On admission she was quite comatose; her jaws were tightly contracted, the limbs rigid, and the sphincters relaxed; temperature 99·6°, pulse 60. On the following day temperature 102°, respiration 40, pulse 60; the right arm was limp and cold; the left arm made slow dragging movements. On January 8th death from heart failure; temperature 104°.

At the *post mortem* examination the membranes of the brain were congested, its substance soft; the lateral ventricles were not dilated; their walls were covered with punctiform haemorrhages, which were also scattered through the caudate nuclei and optic thalami. In the left optic thalamus there was a patch of red softening as large as a walnut. The brain, examined with the microscope, showed numerous foci of round-celled infiltration and capillary haemorrhages.

In a paper published by Nauwerck[13] in 1895, entitled Influenza and Encephalitis, he described two cases of cerebral influenza.

The first was a girl aged 14 who was attacked with vomiting, convulsions, coma, and paralysis of the left arm, and who, after a certain amount of improvement, was seized on the seventh day by fresh convulsions which were terminated by death. At the *post mortem* examination there was well-marked acute haemorrhagic encephalitis, with a patch of softening the size of a hazel nut in the upper third of the ascending parietal convolution, and another as large as a walnut in the second temporo-sphenoidal convolution. The other case was a young lady aged 19 who, after having been ailing three or four days with pains in the limbs, went to sleep on the sofa after dinner, and woke at 4 o'clock with severe pain in the back of the head. She rose with difficulty and went to her bedroom, where she fell fainting by the bed. When Professor Nauwerck saw her she was scarcely conscious; there was no fever, her pupils did not react to light, but the ophthalmoscopic signs were negative, the ears were normal, and there was albuminuria. The following night was restless, with twitching of the limbs and Cheyne-Stokes breathing; the unconsciousness became more complete, and the following day she died. Some cubic centimetres of blood-stained fluid were drawn off during life by lumbar puncture. At the *post mortem* examination the brain was congested, the ventricles dilated, the brain substance moderately moist but of good consistence; there were few puncta cruenta. In the right hemisphere of the cerebellum there was an apoplectic focus the size of a walnut, containing dark-red clot and surrounded by punctiform

haemorrhages. Although cultivations in these cases failed, he was able to demonstrate the presence of Pfeiffer's bacillus by staining with carbol-fuchsin.

This publication drew an interesting communication from Pfuhl and Walter[14] on the bacteriology of the condition. The former had already reported the discovery of the influenza bacillus in the brain in a case of this kind, but Nauwerck's results induced him to publish a series of cases in which the influenza bacillus was found. In his opinion, the failure to find the bacillus had been due to defective technique; but he admitted that the bacilli were present in relatively small numbers, requiring the use of Koch's gelatine plates and the microscope in order to identify the colonies He says that the bacilli always lie inside the blood vessels and lymph capillaries.

Dr. Hans v. Krannhals[15] of Riga published in 1895 a paper on a series of cases which had been treated at the local general hospital in 1890, in five of which he had an opportunity of making a *post-mortem* examination. He states, after the occurrence of a few cases in October, 1889, the epidemic of influenza began in the second week of November, and reached its acme during the last week of November and the first of December. After this the numbers dwindled, until by February, 1890, only a few cases were observed. In March there was a slight recrudescence and then the epidemic came to an end. During the course of the epidemic 6 cases were admitted to the hospital with the diagnosis of idiopathic meningitis, in 2 cases with a query. Of the latter, neither turned out to be meningitis, and the others were all cases of ordinary purulent meningitis, but immediately after the epidemic in March and April 6 other cases were brought in diagnosed as meningitis. They were admitted on March 19th (1), April 1st (1), on April 3rd (2), April 26th (1), and June 18th (1). One recovered, and one was taken out by the friends and could not be followed to the end. Most of them were received in a state of stupor or completely unconscious; where any history could be obtained there had been headache. In several there were convulsions.

The case that recovered was a man, aged 29, who had been ill fifteen days with fever; five days before admission he had a convulsion, followed by stupor. On admission his neck was not rigid; pulse, 93; temperature, 102.5°. The following day there were clonic spasms of the upper limbs, but after that there was improvement; four days after admission his temperature was normal; on the sixth day he was quite conscious, and on the eighth day he was discharged cured.

The first of the fatal cases was a young Jew aged 15, who was admitted with headache, tottering gait, and in a state of stupor; he gave only monosyllabic replies, and there were clonic spasms of the head. Temperature 102° F, pulse 114; no albuminuria. Four days after admission he had an attack of general convulsions, lasting four or five minutes, which was repeated every quarter of an hour for some hours, and returned every forenoon He died on the ninth day after admission. The *post-mortem* examination of this case is typical of that found in all of them. The membranes of the brain were congested and the sinuses were gorged with blood; there were no adhesions or haemorrhages; the pia mater was oedematous, with livid spots the size of a bean over the vertex; the base showed only congestion; there was no exudation or milkiness. The brain substance seemed a little softer than normal, and under the livid spots looked darker, but there was no actual softening. The fluid in the ventricles was somewhat increased and sanguinolent. The thorax and abdominal organs were normal. A microscopical examination was made in two cases, and showed the essentially haemorrhagic character of the affection and the presence of no definite inflammatory change, unless the oedema of the pia mater should be so regarded, but it had all the appearance of a passive oedema, a view which was supported by the great engorgement of the veins. At the livid spots the pia mater showed a well preserved mosaic of red corpuscles lying in the widened meshes of the pia mater; white cells were nowhere numerous; around the spots the membrane was tinged brown; the cortex showed little change; there were no foci of encephalitis, and only once was a capillary haemorrhage seen. Under the dark spots the brain substance had lost its finely granular appearance and looked lumpy, but this change was quite superficial, and scarcely penetrated the upper layer of the grey matter.

The absence of the appearances of meningitis cannot be explained by the short duration of the disease, for there is no doubt that twenty-four hours is ample for the development of well-marked inflammatory appearances in the meninges, but some years ago Klebs showed that occasionally in epidemic cerebro-spinal meningitis the naked-eye appearances were normal, although microscopically excessive cell proliferation was visible in the tissue of the arachnoid of the brain and cord.

Dr. Krannhals read this paper before the Medical Society of Riga in 1894, and on that occasion two of the physicians to the hospital were able to quote examples seen during the epidemic of 1893 4, which had fortunately recovered.

The first was a man aged 50; he was brought in by the police in a state of coma; temperature 103°; towards evening he opened his eyes, and was able to put out his tongue. He gradually improved, and was discharged at the end of a fortnight quite well.

The other was a healthy girl of 18, employed in a shop, who was suddenly seized with pain in the head, giddiness, and vomiting, followed by coma, in which she lay for ten days before the doctor was sent for. When seen the temperature was 101° F.; pulse 48 On ophthalmoscopic examination there was slight haziness of the margins of the discs, and the veins were full, dark, and tortuous. There was no paralysis. She gradually recovered, and a week after admission felt quite well. The morbid ophthalmoscopic appearances had completely disappeared when examined two months later.

Dr. A. Pfuhl[16] published in 1897 three cases of cerebral influenza which he had seen in a garrison hospital in Hanover during 1895 6, these being the only 3 cases with a brain complication occurring out of a total of 93 cases.

The first case ran a very chronic course lasting three months, and there was temporary paralysis of the right upper arm. The *post-mortem* examination showed bloody serous effusion in the ventricles and increase of the cerebro-spinal fluid, with pneumonia, and numerous infarcts in lungs, spleen, and kidneys.

In the second case there were severe cerebral symptoms following rigors, and the *post-mortem* examination showed bloody serous fluid in the lateral ventricles, with a purulent basal lepto-meningitis, which gave a pure culture of the influenza bacillus.

The third case showed a sudden onset and choleraic symptoms, but at the *post-mortem* examination the condition was much like that seen in the first case.

My experience of these cases is not large, and I have had no *post-mortem* examination, but the following cases are of some clinical interest, and made a deep impression upon my mind.

In 1900 I was asked to see a gentleman, aged 55, with Drs. E. S. and E. F. Page of Solihull. His illness began with slight cold, attributed to his sitting in his garden one early summer Sunday, and on the Monday following he stayed in bed, where he was seen by his medical attendant, who regarded the case as nothing more than a slight chill. At 3 o'clock on Tuesday morning he rose to pass water, but on getting into bed again he had a general epileptiform convulsion, and became unconscious. The doctor was fetched, and as soon as possible a dog-cart was sent for me. I saw the patient about 6 o'clock, and, having heard what had occurred, I suggested a uraemic fit, but this was open to the objection that the urine was perfectly normal. The patient's past history had been quite good, and his family was well known to me as healthy and long lived. He was married, and the father of a grown-up family of healthy sons and daughters. Owing to the prevalence of small-pox he had been vaccinated about three weeks previously, and it was suggested that this attack might in some way be due to poisons formed in connexion with the vaccination. I did not agree, but, in view of the importance of the life of the patient and the difficulty of making a diagnosis, Professor Barling saw the case, and was able to assure us that there was nothing in the appearance of the healing vaccination ulcers to explain the condition. The patient was at this time lying curled up in bed and still unconscious; his head was retracted; most of his muscles were tense; he would not speak or open his mouth, but the muscles of his face were frequently spasmodically contracted (trismus) as if he were in pain. His urine was passed in the bed. Sir Thomas Barlow was asked to meet us in consultation, and arrived about 5 o'clock in the afternoon. At that time the patient's temperature had risen to 104° F., but his condition otherwise remained unaltered. Sir Thomas Barlow agreed that the case had all the appearance of meningitis, but its relation to influenza was not then realized, and a most unfavourable prognosis was given.

I saw the case again on Wednesday morning, when the temperature was normal, but otherwise the condition remained much the same, and gave us the gravest cause for anxiety; but on Thursday the coma gradually left him, and in the afternoon I found him sitting up in bed having tea.

He had no recollection of what had happened in the interval. From that day he made a slow but uninterrupted recovery, and remains quite well.

The relation of this case to influenza depends upon the fact that there was an epidemic of influenza at the time in the neighbourhood, and that slight symptoms of catarrh had preceded the convulsion. The alarming character of his condition justified our fears, and our want of personal experience of cerebral influenza left us with little hope, for, as Professor Cornil says, true meningo-encephalitis is

almost always fatal; but the rapid and complete recovery was entirely inconsistent with the belief that there could have been any inflammatory infection of the brain, influenzal or otherwise, and indicated the effects of some morbid toxin as the only adequate explanation. When I found that there was an epidemic of influenza in the village, although ignorant of the cases that had been published abroad, I did not hesitate to accept the case as (to me) a new illustration of the protean manner in which that disease may manifest itself.

The second case (seen this year with Dr. Johnston of Bewdley) was that of a gentleman aged 60, tall, well-developed, stout and florid, of active habits, and in good health, who noticed a slight chill on Sunday, March 22nd, which he attributed to sitting in a draught. He stayed in bed the next day, but on Tuesday got up and went out. The illness was so slight that he had not sought medical advice, but took some quinine given him by his wife. On Wednesday he complained of severe facial neuralgia, for which the doctor was summoned. On his arrival he found the patient suffering from great pain radiating along all the divisions of the left fifth nerve; he prescribed ½ drachm of butyl chloral, divided into four doses, one to be taken every hour until the pain was relieved. At 6 o'clock he was sent for, as the pain was worse and the patient extremely restless. A hypodermic injection of ¼ grain morphine was given, under the influence of which, at 8 o'clock, he went to sleep and slept for five hours. He awoke about 1 a.m. and said, "Oh, this pain in my head!" (these were the last words he spoke), then slept again for about an hour, after which his condition so alarmed his wife that she sent for the doctor. When seen he did not speak, but kept moving restlessly from the bed to an easy chair and back again, throwing his limbs about, and his facial muscles were spasmodically contracted (trismus) as if from pain. He was induced to remain in bed, but it was difficult to keep the bedclothes over him, and his condition caused great alarm. A motor car was sent for me, and I arrived at 8.30 a.m. I found him lying on his left side, with his legs drawn up; his right arm was in constant movement, either to rub his head or to pull up the bedclothes or to throw them off, and he frequently rolled himself partly round in the bed. He took no notice of any one, and did not speak or answer questions by signs, but he moved his head and his eyes. His pulse was about 80, his temperature normal, and his respirations were not hurried. His eyes were directed towards the left side, but this position was not fixed, and after careful watching there did not seem to be true conjugate divergence. The left pupil was dilated, but Dr. Johnston said that he had applied a liniment containing belladonna to the left side of the face to relieve the neuralgia, and that some might have got into the eye. So far as the fundus of the left eye could be seen, the veins were full but the disc was normal. The bowels had not acted for forty-eight hours and a dose of calomel had failed to have effect. The diagnosis of cerebral influenza was made, and its gravity pointed out, but some hope was given of the possibility of recovery on account of my experience in the former case. I left at 9.30 a.m., after arranging to return in the evening, but in the course of the day Sir Thomas Barlow was asked to see the case with us, and as he would not be able to arrive until late, it was settled that we should meet then.

When we saw the patient with Sir Thomas Barlow at midnight he had changed very much for the worse. He lay on his back; his face was flushed and distinctly flattened on the left side; the muscles of the face were contracted from time to time as if from pain, but only on the right side. The dilatation of the left pupil had nearly disappeared, although it was slightly larger than the right, but both reacted to light. Respiration was noisy, about sixty to the minute, with frequent pauses and of Cheyne-Stokes type. The right arm was flexed and the patient could move it, but from time to time it was thrown into a rapid clonic spasm, which affected all the flexor muscles. The left arm was paralysed, but exhibited occasional slight twitchings; there was power to move both legs. The plantar reflexes were flexor; the knee-jerks were present; Kernig's sign was absent. On trying to elicit the abdominal reflexes a marked *tâche cérébrale* was produced. The power of swallowing was lost; both sphincters were relaxed; urine had been passed in the bed and an enema could not be retained. The heart and lungs were normal. Pulse 120, temperature 100·6° F. He had been given a dose of calomel during the day, which had not acted, and a turpentine enema returned at once. Four leeches were applied to his temples; he was given 5 grains of caffeine by hypodermic injection and an icebag was ordered to be applied to the scalp. At 2·30 a.m. his temperature was 102° F. At 6 a.m. his face was more dusky, his pulse weaker, 136, and his temperature 103.6° F. He died at 2 p.m.

Dr. Johnston tells me that this patient had suffered from illness attributed to influenza each year for the last ten years, and that in 1905 the attack was followed by right otitis media resulting in permanent deafness on that side; in 1907 it was accompanied by a severe attack of herpes zoster following the distribution of the right fifth nerve.

PATHOLOGY.

The *post-mortem* appearances described by the various writers I have quoted vary considerably; intense congestion of the membranes, with minute meningeal haemorrhages and absence of all naked-eye or microscopic evidence of inflammation (Krannhals); meningitis of hemispheres (Marty, Dunn and Gordon?); purulent basal lepto-meningitis (Pfuhl); meningitis with haemorrhagic focus in the right cerebral hemisphere (Cornil); congestion, punctiform haemorrhages and red softening in left optic thalamus (Koenigsdorf); congestion, dilated ventricles, apoplectic focus in right cerebellar hemisphere (Nauwerck); capillary haemorrhages with minute thromboses and microscopic foci of inflammation (Leichtenstern, Prickett and Batten, Putnam).

If we summarize these particulars we find that in some cases there was only congestion, in others meningitis of the vertex or base, in others again acute haemorrhagic encephalitis, and this was associated in certain instances with haemorrhage or red softening.

Bacteriological examination has revealed either no organism (Cornil), or streptococci (Colin), Pfeiffer's bacilli (Nauwerck, Pfuhl), or pneumococci (Rendu). Pfuhl's paper renders it probable that Cornil's negative result was due to the difficulty of cultivating Pfeiffer's bacillus and not to its absence; but Dr. Emery[17] has pointed out that in recent epidemics this organism has been replaced by the *Micrococcus catarrhalis* in the nasal discharge, and so this last may possibly also be a cause of brain infection. It is not improbable that the *Diplococcus intracellularis* (meningococcus of Weichselbaum) may cause some of these cases, for it makes its presence known from time to time in sporadic cases of cerebro-spinal meningitis, and there is evidence to show that the effect of the influenza poison is to rouse into activity any latent organisms and to diminish constitutional resistance to their attacks.

We have, therefore, in these cases not one but several conditions; we may recognize, first, a series of purely influenzal origin, and, secondly, one in which influenza forms merely the soil where other disease germs find the conditions favourable to their development.

True cerebral influenza may cause, first, a state of cerebral intoxication which passes off without doing serious damage; these are the cases like Cornil's first group, and my first case, ending in perfect recovery. Next we have cases of the type described by Krannhals in which the poison causes intense and fatal congestion with minute meningeal haemorrhages. Beyond these the disease passes on to inflammation of the meninges (influenzal meningitis, Pfuhl), and, lastly, we have the form of inflammation described by Struempell[18] as acute haemorrhagic encephalitis, which may be attended by haemorrhage or red softening.

In another category we have cases of streptococcal or pneumococcal meningitis occurring after influenza and other forms of focal cerebral infection which include the brain abscesses described by Bristowe and Williamson.

SYMPTOMS.

If we review the cases which have been collected in this paper, we find that the symptoms of cerebral influenza are these: Usually after a short period, ranging from one to four days, during which the patient shows signs only of catarrh—and in some cases even this history may be wanting—he is seized with intense headache, with or without vomiting, or neuralgia or an epileptic or apoplectic fit or aphasia, or there may be facial paralysis, monoplegia or hemiplegia, for the cerebral symptoms may be ushered in by any one of these symptoms. There may be a preliminary period of restlessness, with or without delirium; in others stupor or unconsciousness develops gradually or suddenly. There is usually fever, varying in amount. The muscles are often rigid; stiffness of the neck, opisthotonos, and especially contraction of the masseters and trismus, have been frequently noted; there may be twitchings of the limbs or clonic spasms of the head or extremities, disturbances of vision, inequality or irregularity of the pupils, paralysis of the sphincters, and *tâche cérébrale*. The reflexes are generally preserved, and there has been no mention of the presence of Kernig's sign. Optic neuritis is occasionally seen; albuminuria has been generally absent, but was observed once or twice; Cheyne-Stokes breathing has been noted in a few cases.

PROGNOSIS.

The prognosis should always be guarded but not hope-

syndrome as convulsions, coma, relaxed sphincters, and fever to 104° F. (my first case), nor unconsciousness, hemiplegia, aphasia, irregularity of pupils, and relaxed sphincters (Cornil), may imply death. The gravest condition appears to be complete coma, general relaxation of the limbs, rising temperature, and Cheyne-Stokes breathing. The presence of ear mischief, old or recent, of organic disease of lungs, heart, or kidneys, of arteriosclerosis, or advanced age, should be regarded as bad features; while, on the other hand, youth, a good constitution, and sound organs may afford a basis for hope, although cases have died which had all these points in their favour. The duration of the cerebral symptoms in the fatal cases has varied from two to fourteen days; but the last was exceptional, and death has generally occurred in less than a week from the onset of the cerebral symptoms. On the other hand, the cases that have recovered have usually shown definite signs of improvement in three or four days, but convalescence has been slow.

TREATMENT.

We are to a large extent powerless in the presence of the toxin of infectious processes, and can as a rule only wait and trust that the natural powers of resistance will prevail. Our hope lies in the future. The preparation of antitoxins is in its infancy, and who shall venture to predict the future? But if we can do little directly to oppose the effects of toxins, our means are even less available when such an organ as the brain becomes infected by a living pathogenic organism which causes death or grave impairment of the most essential functions by the destructive nature of the changes it produces in the delicate tissues of the very centre of life or of those powers which make existence worth possessing. When the lung or the heart is attacked, much mischief may ensue and permanent structural alteration result without causing death or even leaving behind serious impairment of function; but when the brain suffers, the consequences are so terrible that recovery may be often worse than death. If we possessed an effectual vaccine by which we could cut short the inflammatory process and induce healing, what fearful results might we see in impaired nerves or intellect, or partial paralysis of the eyes, the face, the muscles of the tongue, palate, and pharynx, which would make the patient or his friends regard the triumph of medicine as a sorry victory.

But meanwhile what can we do? If the patient can take medicine by the mouth, we should try small doses of quinine, which the late Sir William Broadbent believed to be a real prophylactic of influenza; and, if a prophylactic, it should possess some therapeutic power, too. We can feed the patient with milk, or egg beaten up, or with café au lait. If there is inability to swallow, we should try rectal feeding by small enemata of egg, milk, and a little salt, introduced slowly into the bowel through a soft rubber tube passed three or four inches into the bowel; or if, as too often happens, the sphincter is relaxed, we can inject half a pint to a pint of normal saline solution under the skin and stimulate the heart by similar injections of caffeine (5 grains) or camphorated oil. The last is much praised in France as a stimulant to the heart in collapse; the strength used is 1 in 10, and the dose 10 to 15 minims.

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AT a meeting of the Royal Sanitary Institute, to be held at the Parkes Museum on Saturday, June 13th, at 11 a.m., Professor H. R. Kenwood will introduce a discussion on the pasteurization of milk. At a meeting of the institute at Coventry on the following Saturday, June 20th, at the same hour, a discussion on some aspects of the housing problem and town planning will be opened by Dr. E. H. Snell, M.O.H., and Mr. G. E. Swindlehurst, M.Inst.C.E., City Engineer, Coventry.

A Clinical Lecture

ON

HEMIPLEGIA WITH UNILATERAL OPTIC ATROPHY.

DELIVERED AT THE MANCHESTER ROYAL INFIRMARY.

BY R. T. WILLIAMSON, M.D.LOND., F.R.C.P.,

ASSISTANT PHYSICIAN TO THE INFIRMARY.

GENTLEMEN,—I wish to describe to you four cases in which hemiplegia was associated with optic atrophy on the side opposite to the paralysis, whilst on the paralysed (hemiplegic) side the optic disc was normal. Such cases are rare, but they are of considerable interest with respect to the localization of the lesion.

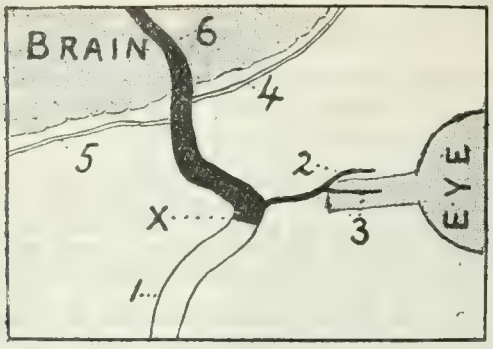
The first case, presenting this association of symptoms, which came under my observation was that of a man, aged 46 who had suddenly become hemiplegic. There had been loss of consciousness at the onset, and from the symptoms it was not quite clear whether the case was one of cerebral thrombosis or haemorrhage, but the evidence was a little in favour of the former diagnosis. When I first examined him, about a month after the onset of the hemiplegia, there was optic atrophy on the side opposite to the paralysis, that is, there was left sided hemiplegia with right sided optic atrophy. At that time I was unable to explain the association of these symptoms.

The second case was that of a boy aged 7. He had suffered from pneumonia at the age of 4. Soon after the lung affection he became unconscious suddenly, and remained unconscious for a few days. There were no convulsions. On recovering consciousness it was found that the left side was paralysed. This left-sided hemiplegia gradually diminished, the leg recovering more rapidly than the arm. The movements of the left arm, however, remained very feeble, and though in course of time he was able to walk, he dragged the left leg. At the age of 7—a few weeks before I first saw the patient—he noticed one day, on closing the left eye, that he could not see with the right. How long the right eye had been blind could not be determined. Probably the affection of the right eye commenced at the onset of the hemiplegia. When I first saw him there was partial hemiplegia on the left side, with marked right-sided optic atrophy, whilst the left optic disc was normal. All the movements of the left arm were very feeble, especially those of the hand. He was able to walk without assistance, but he dragged the left leg a little. There was slight weakness of the lower facial muscles on the left side, seen when the patient retracted the angle of the mouth in showing the teeth. There was slight athetosis in the fingers and toes on the left side. The knee-jerks were present, but there was no ankle clonus. There was no anaesthesia, and no loss of the stereognostic sense in the left hand. There was no perception of light with the right eye. The right optic disc presented the well-marked changes indicating advanced optic atrophy, evidently of very long duration, but there were no retinal changes. The left optic disc and retina were normal. The vision of the left eye was normal. The heart and lungs were normal, and the general health appeared quite good.

The hemiplegia in this case could be explained by thrombosis of the right middle cerebral artery. If the thrombus extended downwards into the right internal carotid, to the point at which the ophthalmic artery is given off, it is conceivable that thrombosis might have occurred in the central artery of the retina, and that optic atrophy may have been caused thereby; or if the thrombosis had extended from the middle cerebral into the internal carotid, and a very small portion of the clot had become detached and passed into the ophthalmic artery, embolism of the central artery of the retina might have been produced on the right side. Thrombosis of the right middle cerebral artery, with thrombosis or embolism affecting the central artery of the retina would explain both the left-sided hemiplegia and the right-sided optic atrophy.

The diagram shows the internal carotid artery (1) passing from the base of the skull to the brain; the branch marked (2) is the ophthalmic artery; (3) is the central artery of the retina; (4) is the anterior cerebral,

(5) the posterior communicating, and (6) the middle cerebral artery. Obstruction of the internal carotid at the point (x), followed by obstruction in the central artery of the retina (3), and by obstruction extending into the



middle cerebral (6), would account for cerebral softening, followed by hemiplegia on the opposite side, and blindness and optic atrophy on the side of the lesion.

The pathological examination in the third and fourth cases gives some support to this view.

The third case was that of a woman, aged 37, who had suffered from syphilis. There was paralysis of all the ocular muscles of the right side (ophthalmoplegia and ptosis), with anaesthesia in the distribution of the first branch of the right fifth cranial nerve, and blindness of the right eye due to optic atrophy. The left optic disc was normal. On the left side there was hemiplegia which had developed suddenly. The *post-mortem* examination revealed a small gumma at the base of the skull under the dura mater and just behind the sphenoidal fissure. This had caused the paralysis of the ocular muscles and anaesthesia in the distribution of the first division of the fifth nerve on the right side, by pressure on the third, fourth, sixth cranial nerves, and on the first division of the fifth just behind the sphenoidal fissure. There was also thrombosis in the *right* middle cerebral artery, and this had produced the hemiplegia on the *left* side. Probably the blindness of the *right* eye had been caused by obstruction (thrombosis or embolism) of the central artery of the retina, but unfortunately the extent of the thrombus in the internal carotid was not definitely determined at the *post-mortem* examination.

The fourth case was that of a man aged 44, who came under treatment on account of loss of the stereognostic sense in the left hand. He had suffered from pain on the right side of the head for three months previously. On examination paresis of the left side of the face was detected. The optic disc and retina were normal on the right side. Vision was normal on the right side. The vision of the left eye was greatly impaired owing to an old opacity of the lens and choroiditis, caused by an injury in childhood. There was no paresis of the left arm or leg. The stereognostic sense was lost in the left hand, and there was also loss of the sense of pressure and position in the left hand. (I have recorded in detail the symptoms of the case in the BRITISH MEDICAL JOURNAL, December 9th, 1899, p. 1600.) Twelve days after the patient came under my care he suddenly became blind in the right eye, late in the evening. Next morning, on ophthalmoscopic examination, I found the appearances characteristic of obstruction of the central artery of the retina—pale optic disc with a large white patch in the centre of the retina, in the middle of which was a cherry-red spot. In a few days the large white patch with its cherry-red spot had disappeared, but the disc remained pale and passed into the condition of optic atrophy. The vision was lost permanently in the *right* eye. Soon afterwards hemiplegia developed on the *left* side, and death occurred in a few months. In this case there was finally hemiplegia on the *left* side, with optic atrophy on the *right* side.

During the last few weeks of life the patient was in the Manchester Workhouse Infirmary, under the care of Dr. E. S. Reynolds, who very kindly allowed me the opportunity of making a pathological examination of the brain. The *post-mortem* examination was made by Dr. Sissons. I was unable to be present, but the brain was preserved for me in spirit. On examination of the brain two days later I found cortical softening in the right cerebral hemisphere, chiefly in the region of the fissure of Sylvius—in the convolutions above and below this fissure. The basal ganglia did not appear to be affected. The exact limit of the softening could not be accurately defined, as there had been slight *post-mortem* decomposition. There was no softening in the left cerebral hemisphere.

The point of chief interest was the presence of a thrombus occluding the right internal carotid at its point of division into the middle and anterior cerebral arteries. The part of the internal carotid removed with the brain—just before its division—was filled with clot, also the anterior and middle cerebral arteries and the posterior communicating artery were occluded by thrombus at the circle of Willis. From the presence of the thrombus in the internal carotid, at a point close to the origin of the ophthalmic artery, there can be little doubt that either the thrombus had extended from the internal carotid along the ophthalmic artery to the central artery of the retina or that an embolus—that is, a fragment detached from the clot in the internal carotid—had passed along into the central artery of the retina. This was no doubt the cause of the ophthalmoscopic signs—white patch in the centre of the retina, with the cherry-red spot at the macula—and the optic atrophy which were observed during life. As already mentioned, the large white patch in the centre of the retina and the cherry-red spot at the macula soon disappeared, and only the signs of atrophy of the optic disc remained.

In this case the pathological examination could leave little doubt that the optic atrophy on the *right* side, with hemiplegia on the *left* side, were due to thrombosis of the *right* internal carotid extending to the middle cerebral, and also causing occlusion of the central artery of the retina on the right side (either by thrombosis which had extended along the ophthalmic artery to the central artery of the retina, or by an embolus detached from a clot in the internal carotid which had passed along the ophthalmic artery to the central artery of the retina).

These cases are examples of a peculiar combination of symptoms—optic atrophy on one side with hemiplegia (or hemiparesis) on the opposite side. Such symptoms could be produced by an obstruction (thrombosis) of the internal carotid and middle cerebral, with occlusion of the central artery of the retina by thrombosis or embolism. In the fourth case the pathological examination, and the ophthalmoscopic appearances just after the onset of the blindness in the right eye are strongly in favour of this explanation.

These cases are of interest with respect to the diagnosis and localization of the lesion. Probably a number of similar cases have been recorded in medical literature, but I believe that this combination of symptoms and its cause are not well known to medical practitioners.

Oliver-Sharpey Lectures

ON THE

PRESENT CONDITION OF OUR KNOWLEDGE REGARDING THE FUNCTIONS OF THE SUPRARENAL CAPSULES.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON ON APRIL 7TH AND 9TH, 1908.

BY E. A. SCHÄFER, LL.D., Sc.D., F.R.S.,
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LECTURE II.

WE may now return to the results of the investigations made by Dr. Oliver and myself during the winter of 1893-4. The first point established was the *punctum saliens* of suprarenal activity—namely, that intravenous injection of the merest trace of suprarenal extract is capable of producing a striking rise of blood pressure; while with larger doses the rise may be so great as to be beyond the registering power of a mercurial manometer of ordinary length, the mercury being driven out from the open end of the manometer tube. We found this rise of blood pressure to be due to two causes—namely, (1) contraction of

arterioles (2) increased rate and energy of heart beat. We further noticed that sometimes in the early stages of action of the extract the heart, instead of being augmented and accelerated in its action, is strongly inhibited, so much so that the auricles may cease beating altogether, the circulation being maintained by the slow independent rhythm of the ventricles. When this happens two antagonistic influences are at work; the one, constriction of the arterioles, tending to raise the blood pressure; the other, cardiac inhibition, tending to lower it. The former influence is, however, always the stronger, and if both vagi be cut, or if a small dose of atropine be given, the cardiac inhibition is no longer visible, but is entirely replaced by acceleration and augmentation. This, of course, assists instead of impeding the effect of vaso-constriction, the result being that the blood pressure rises enormously. The cardiac inhibition is proved by this experiment (section of vagi or their paralysis by means of atropine) to be of central origin, and due to the excitation of the cardio-inhibitory centre in the medulla oblongata by the extract. The moment the centre is cut off by section of the vagi, the accelerator influences, which are also put in action by the drug, take on their full activity. These influences act directly upon the heart itself. According to Neujean (1904) the action is also a central one; but, if so, it is completely obscured by the central cardio-inhibitory effect, unless the vagi be first divided. The acceleration is very evident when the cord is cut and when all nervous connexions between the heart and the central nervous system are severed. It is never better exhibited than in the separated heart of the mammal fed through the coronary arteries with Ringer's solution, to which a minute amount of suprarenal extract or of its active principle has been added. It should, however, be stated that this particular form of demonstration of the fact under consideration was not possible at the time with which we are dealing since the method of perfusion of the mammalian heart through the coronary arteries, which we owe to Langendorff, was not then accessible to us.

Sometimes the inhibitory action is deferred, the accelerator influence being so strong as to eliminate it altogether for the time being. But after two or three minutes the inhibition may suddenly show itself, and prevail for some time over the accelerator effect.

The result of the action of adrenin upon the heart is well shown if the contractions of the auricles and ventricles are separately recorded. It is then seen that the active substance acts mainly, so far as the inhibition is concerned, upon the auricles, which, when the action upon the inhibitory centre is powerful, may altogether cease for a time to beat, the ventricles continuing alone with an altered, slower, and somewhat irregular rhythm. Accelerator and augmentor effects, which are precisely similar to those which are obtained by electrical excitation of the sympathetic branches proceeding to the cardiac plexuses, are, on the other hand, produced upon both auricle and ventricle, each showing a striking increase in rate and force of beat.

The effects obtained with the isolated frog ventricle fed by Ringer's solution were less striking than those got in mammals. There was only slight acceleration, but the beat, if weak, was strengthened, and if irregular, became regular; and with larger dosage the systole was prolonged, and the diastole reduced in amount, so that the heart remained almost completely contracted.

One of the first points we set ourselves to determine was the question whether the vaso constriction which is so pronounced a feature of the action of the extracts is of central or of peripheral origin. This we investigated in two ways. First, we destroyed in the frog the whole of the central nervous system, and, having suspended the animal with the toes dependent, we perfused Ringer's solution through the blood vessels by means of a cannula tied into the aorta. The amount of fluid per minute flowing through the vessels and dripping from the toes was measured, and a small amount of suprarenal extract was then added to the fluid used for perfusion. We found that the addition of little more than a trace of the extract produced so great a constriction of the arterioles that the flow of fluid nearly ceased. It was therefore clear that the constriction produced is independent of the central nervous system, and is probably of peripheral origin. Later, in the mammal, we adopted a somewhat different procedure. Having ascertained that section of the cord in the cervical region, whereby the vasomotor centre in the medulla oblongata was cut off from the subordinate spinal centres, had no effect in abolishing the action of the extract upon the blood vessels nor the raising of the blood pressure, we proceeded to try whether section of all the nerves passing to a limb would have any influence on its action upon the limb vessels. To test this we inserted both forelimbs of a dog in plethysmographs, which were constructed, like the original instrument employed by Mosso for the human arm, of glass cylinders; these communicated with recording tambours or piston recorders by rubber tubes filled with air. Under these circumstances, anything which would tend to constrict or dilate the arteries of the limb would produce a fall or rise, as the case might be, of the lever of the registering tambour. A blood-pressure curve was taken simultaneously in the same animal. To obviate the possible effects of muscular movements a small dose of curare was given, morphine being employed as an anaesthetic.

A first injection of saline extract of suprarenal produced the characteristic rise of blood pressure, but not to an excessive degree. The register of both forelimbs shows marked contraction; evidently the arterioles in both are undergoing constriction. This is not uniformly the case with the limb vessels, for they contract less readily than the vessels of the splanchnic area, and when the constriction of the latter is very marked the rise of blood pressure produced may even cause passive dilatation of the limb. The whole of the brachial plexus of the right forelimb was now cut, and the injection was repeated. The second curves under these altered conditions are so nearly identical with the first that unless they had been marked it would have been impossible to say which was the one taken before and which after section of the plexus. This experiment eliminates not only possible effects upon the centres for the blood vessels in the medulla oblongata and spinal cord, but also any effects which might be caused by stimulation of sympathetic ganglion cells for there are no known ganglia within the limbs. The inference, therefore, was obvious that the vaso-constrictor action is peripheral, and must be produced either upon the nerve fibres or upon their end mechanism, or upon the muscular tissue of the blood vessels. Certain considerations led us to conclude that the effect was probably a direct one upon the muscular fibres, and although this conjecture was not at the time supported by convincing evidence, it has since proved, as the result of experiments by others on the effect of the extract after section and degeneration of all nerve fibres, to be correct. This is a point to which I shall again have to return.

Upon the respiration we found that the gland extracts had little immediate action, causing the rhythm to become at first more rapid and the depth shallower. These effects we found to pass off as the circulatory disturbance disappeared.

In the following winter (1894–5)—Dr. Oliver being again set free from the cares of practice by the close of the Harrogate season—we resumed our joint investigation, and extended it to other animals and to suprarenal glands obtained from various sources. These included the suprarenals from two cases of advanced Addison's disease, which we found yielded no active principle at all. We determined that, although after each dose the effects are found to pass off within five or six minutes, if a saline solution containing suprarenal extract be allowed to pass slowly but continuously into a vein the physiological effects which have been described—and especially the vaso-constriction and cardiac acceleration—are maintained during the whole period of flow. This has been confirmed by Crile and also by Kretschmer (1907). We investigated the effect upon other organs of the body than those previously tried, and showed that both the spleen and kidney undergo a marked contraction under the influence of the extract—in the case of the latter organ with diminution of flow of urine. This is the more interesting because pituitary extract, which also produces well marked contraction of blood vessels and in some other respects similar physiological results to those caused by suprarenal extract, has an opposite effect upon the kidney vessels and urine, producing a dilatation of the renal arterioles and a free flow of urine.

We also attempted to determine whether the extract has any effect on other glands, and selected for this purpose the submaxillary of the dog. Having in one or two experiments, undertaken with this object, failed to obtain a flow of saliva as the result of administration of the extract, we somewhat too hastily concluded that it had no effect upon these organs. Langley, however (1901), working with the cat, found that the extract produces from all the glands a flow of saliva similar to that which is yielded by stimulation of the cervical sympathetic. Our failure to observe this furnishes a lesson of the desirability of multiplying physiological experiments, and of not restricting such observations to animals of one species. Had we been less easily satisfied with accepting our first negative results—which may have been due to an excess of the morphine which we used as an anaesthetic—we should not have missed so important an observation.

In the course of the previous investigations we had found that the extract not only produces a contraction or increase of tone in vascular and cardiac muscle, but that frogs which had received a subcutaneous dose show an increased power of contraction of the skeletal muscles on stimulation of their nerves. In the further investigation (1894–5) we extended this observation to mammalian muscle, and we further showed that this effect upon muscle lasts for some time after the effects upon the vascular system have disappeared. We therefore came to the conclusion that the active substance is probably taken up by, and remains for a time stored within, muscle, and that this may in a measure account for its disappearance from the blood. For we at the same time determined that it is not excreted by the urine, nor is it at once reabsorbed by the capsules. In any case its ultimate disappearance is probably due to a process of oxidation occurring within the tissues. We showed that such oxidation does not occur in the blood, for a portion of the extract left in contact with arterial blood for twenty-two hours was just as active as a similar portion kept in saline solution. Kretschmer (1907) nevertheless believes that the disappearance of the effect is connected with the alkalinity of the blood, for he finds that if this is diminished by the administration of acids the effect of suprarenal upon the blood pressure is prolonged. According to Miller (1907) the active substance does not disappear from the blood. He states that the blood of a rabbit which has received a dose of adrenin will cause the typical rise of blood pressure if injected into another rabbit, although the effects upon the first animal may have disappeared.

Finally we proved that the extracts of the cortex of the gland are quite inactive, the active principle being confined strictly to the medulla. The principle is, in fact, now known to be identical or, at any rate, closely associated with the chromogenic substance obtained by Vulpian, which is contained in the chromophil or chromaffin cells of Stilling and Kohn.

During this same period (1894-5) and unaware of our experiments and observations of the previous winter, which were published in the *Journal of Physiology* in the spring of 1894 (the full communication appearing in the same journal in 1895), two Polish physiologists, Dr. Szymonowicz and Professor Cybulski of Cracow, were engaged upon a similar research. Their results were published as preliminary communications to the Academy of Sciences of Cracow in February and March, 1895, and in full by Dr. Szymonowicz, in *Pflüger's Archiv* in 1896. They observed many of the same phenomena which we had described, and brought independent corroboration of many of our observations. But in some minor details and in one important point they obtained different results. They were led to conclude that the extract produces its vaso-constrictor effects, not peripherally but centrally, upon the centres in the medulla oblgata, not upon the blood vessels themselves. This was, as we have seen, obviously a mistaken conclusion, and it is difficult to understand how so experienced a physiologist as Professor Cybulski can have arrived at it. In most other points their results were corroborative of ours. They, however, referred the symptoms of Addison's disease partly to implication of sympathetic nerves and ganglia, partly to absence of the effects which, in conformity with the conclusions they had arrived at, are produced upon the nerve centres. To the Polish scientists must none the less be accorded the credit of having independently arrived at the establishment of the principle that the suprarenal glands are organs which yield an active internal secretion.

Recent Researches.

This was the condition of our knowledge of the subject in the spring of 1895. From this time onwards researches multiplied, and many other interesting facts regarding the action of the extract were determined. One of these which has come to be of practical importance in medicine, and especially in surgery, was the proof of the direct local action of the extract. This was determined by Dr. Oliver (1897), who placed a fragment of dry medulla of a suprarenal capsule upon a small artery in the mesentery of a frog which was spread out under the microscope for the observation of the circulation. As the active material dissolved and penetrated to the walls of the vessel this showed a local contraction which became eventually so marked that blood ceased to be driven through that particular artery. This suggested its applicability as a styptic, and we came in the habit of employing it to check bleeding from wounds made in the course of vivisection experiments; its application to surgical needs of this description is now universal. Especially is it employed as an adjuvant to the subcutaneous injection of cocaine and similar local anaesthetics, the action of which it assists by diminishing blood flow and absorption in the part to be anaesthetized. In epistaxis I myself early had an opportunity of verifying its styptic character. And Dr. Oliver found that a congested and inflamed conjunctiva is at once rendered pallid under its influence. Similar but independent observations were made by W. H. Bates (1896), who published in the *New York Medical Journal* the result of its use in diseases of the eye. One of the most striking facts relative to this styptic action is that, although, when given by the mouth, no evident change occurs in the blood pressure, there is very distinct evidence of vascular constriction, for bleeding from internal parts, such as the stomach, intestine, bladder, and uterus, even the bleeding of *post-partum* haemorrhage, may thereby be effectually controlled. The explanation of this which most readily presents itself is that injured vessels are more susceptible to the extract, and react to a slight excess of it in the blood more readily than do normal vessels. This is somewhat analogous to what is found after section and degeneration of the sympathetic nerve fibres to a part, in which case the reaction is also greatly intensified.

An enumeration of the various uses of the extract in clinical medicine and surgery has been given recently by J. L. Miller in the *Journal* of the American Medical Association for May, 1907. Amongst these he includes its employment as a topical application to mucous membranes, especially the nose and throat, and internally in a variety of different conditions, especially cardiac insufficiency, as in diphtheria—in which, as Elliott and Tuckett (1906) have shown, there is a deficiency of chromogen in the medulla—internal haemorrhage, bronchial asthma, and the treatment of various transudates in the body cavities. Its use is indicated in cases where there is marked vaso-dilatation and insufficiency of cardiac action. Such conditions may be produced experimentally by chloral and some other anaesthetic drugs, and are present in the final stages of asphyxia. They also occur in shock. Gottlieb found that if the heart of a rabbit is brought to a standstill by chloral it may be revived by suprarenal extract, which is superior in its action to digitalis. Crile has shown its value in surgical shock, Miles and Muhlberg in vasomotor failure from excess of ether; but in heart standstill from chloroform poisoning Dr. Herbert Scharlieb and I found it was impossible to permanently revive the cardiac muscle by adrenin. In conjunction with Dr. Herring I experienced a similar failure in asphyxia (from drowning) after both heart and respiration had ceased; although the heart may by its injection into the cardiac substance be stimulated to resume its action for a short time, the effect is not permanent. When the heart muscle is affected by disease, its value as a cardiac and vasomotor stimulant is dubious, for it may throw too great a strain upon the weakened cardiac tissue. Thus, Gottlieb found that in a rabbit poisoned by repeated doses of diphtheria toxin, intravenous injection of adrenalin, although for a very short time apparently beneficial, was soon followed by still greater collapse and death. But probably administration by the mouth or subcutaneously, having a slower effect, might be beneficial in

such cases. Kaplan and Miller both report satisfactory results from its use in bronchial asthma; it, however, only gives temporary relief, and is in no sense curative. It is not known how the beneficial effect is produced; it is possibly due to inhibition of the bronchial musculature. Barr (1903) found that the fluid of pleurisy and other serous accumulations in the body cavities did not reaccumulate after evacuation and introduction of adrenalin.

In Addison's disease the employment of suprarenal extract has been found beneficial, but not curative. This is scarcely to be wondered at when we consider that the primary cause of the disease is usually tuberculous or malignant affection of the capsules. The effect in diminishing the weakness and sense of lassitude is very marked in certain cases. In one of those reported by Langlois, in which prior to taking the extract the ergographic curve of the patient showed extreme muscular weakness and rapid fatigue, after a six weeks' course of the extract the curve became as well-marked and prolonged as that of a normal individual. In a few instances a cure has been reported, but this may occur without the use of the extract, and such cures of the disease are probably due to functional suppression of the secretions, and not to organic disease of the gland. O. Grünbaum (1907) states that suprarenal extract, although when administered by the mouth it ordinarily fails to show elevation of blood pressure, will produce this effect in cases of Addison's disease. Bossi (1907) reports great improvement in osteomalacia in pregnant women as the result of subcutaneous injections of the extract, but further experience is needed to confirm these observations.

I need, however, not further dwell upon the clinical applications of suprarenal extract, which have, moreover, recently received adequate treatment from Rolleston in his address last year before the Canadian Medical Association. This would be occupying your time most unnecessarily, seeing that there is probably no one present in this room who is not better informed upon this subject than myself. It will be more profitable if I turn to the consideration of the data which have been added to our knowledge of the physiological action of the extract since the discovery of its best-marked effects.

The most important of these additional data were those contributed by Lewandowsky (1899), who found that the intravenous injection produces dilatation of the pupil, withdrawal of the membrana nictitans, protrusion of the globe, opening of the palpebral fissure, excitation of arrectores pili, and inhibition of the bladder. Borattau (1899) showed that it causes inhibition of intestinal movements. All these results are also produced by sympathetic excitation. But that the effects are not the results of excitation of the sympathetic nerve fibres is clear from the fact, also discovered by Lewandowsky, that the results are equally well obtained after these fibres are cut and allowed to degenerate. Langley (1901-2), added to the list of sympathetic innervated parts excited by this substance the salivary and lacrymal glands, the liver, the muscular tissue of the uterus and vagina, of the vas deferens, and vesiculae seminales, the dartos and the muscular coat of the stomach; in the last named organ inhibition of the muscular movements is produced. On the other hand the sweat glands are not excited to secrete, nor the pancreas, and the relative amount of effect produced is not the same as that caused by electrical stimulation of the sympathetic nerves to the part.

Apocodeine abolishes the effects produced by sympathetic excitation and was found by Dixon to abolish those produced by adrenalin. He therefore concluded that this acts upon the endings of the sympathetic.

But, as we have seen, Lewandowsky had shown that the effects are got after section and degeneration of the sympathetic fibres. Langendorff (1900), confirming older observations by Budge and others, found that the effect of agencies which produce pupil dilatation is enhanced after removal of the inferior cervical ganglion ("paradoxical effect"). Dr. and Miss Meltzer (1903) showed that this paradoxical effect is marked in the case of suprarenal extract; that after removal of the superior cervical ganglion the effect of intravenous injection, instead of disappearing within about a minute, becomes prolonged, and that subcutaneous injection and conjunctival application, which normally are without effect, now produce marked pupil dilatation. This observation was confirmed by Elliott (1904-5), who insisted upon the fact that the excitation must be due to some substance within the muscle fibres being affected by the extract, and suggested that this substance is present at the "myoneural junction," where it is originally formed under the influence of the sympathetic fibres. By an extension of this idea we can suppose that the formation, being once started, its amount is also controlled by the sympathetic, and if this control be cut off an inordinate quantity may accumulate, thus increasing the excitability of the isolated muscle fibres. That the presence of nerve fibres is essential to the original appearance of such hypothetical excitable substance was shown by the observations of Macfie (1905), who found that the extract has no effect upon the movements of the protoplasm of amoeboid cells or cilia, nor upon the heart of the chick before the ingrowth of nerve fibres into it, although after such ingrowth the effect is most striking. Langley (1903-7) believes that the excitable substance which Elliott supposed to be confined to the myoneural junction is diffused through the protoplasm of the cell of which it has come to form an integral part. He proposes for the hypothetical material which thus reacts not only to adrenalin but in various ways to different drugs the name "receptive substance," and regards the differences of effect which he has determined in different sympathetic innervated organs as due to the relative amount of this substance in the cells.

That there is some apparatus or material developed within cells originally under the influence of sympathetic nerves, which is specially excited by adrenalin and by drugs of similar chemical character there can be no doubt, but whether it is limited to the region of the original nerve terminals or is diffused through the protoplasm is a point difficult of determination. It is not unlikely that experiments upon skeletal muscle, the excitability of which by various drugs is also affected by section of the nerves to the muscle, may throw light upon this question, which is one of great theoretical importance in connexion not only with the physiology of internal secretion, but also with the action of drugs upon the muscular and glandular systems.

Another interesting datum which has been added to our knowledge of suprarenal extract is the observation that subcutaneous injection of adrenalin, even in relatively small doses (0.5 mg. per kilog.), produces marked glycosuria in both rabbits and dogs; the effect begins within one hour, and may last after a single dose for twenty-four hours or more. This was first noticed by Blum (1901), and the subject has since been followed up by various investigators, among whom may be enumerated Zuelzer (1901), Metzgar (1902), Herter (1902), Noël Paton (1903), and Lazarus (1907). The last observer states that after prolonged treatment with adrenalin there is marked hypertrophy of the islets of Langerhans of the pancreas, as well as of the suprarenals. There is, however, so much variation in the apparent amount of the islet tissue, even in the normal pancreas, that statements of this kind must be received with caution. Herter and Richards and also Paton showed that, as with phloridzin and pancreatic diabetes, glycosuria occurs even when stored carbohydrates have been previously eliminated. There undoubtedly seem to be connecting links between the glycosuria set up by pancreatic removal and that due to the action of suprarenal extract. Herter and Wakeman (1903) found that quite small amounts (1 c.cm. of a 1 in 1,000 solution) of adrenalin applied to the pancreas provokes marked glycosuria. Intraperitoneal injection is more efficacious than subcutaneous. The amount of sugar in the blood is largely increased by the injection, while it is found to fall considerably on extirpation of the glands or ligature of the vessels. After such ligature removal of the pancreas may not produce glycosuria. Löwe (1907) found that in pancreas diabetes adrenalin readily produces pupil dilatation if dropped into the conjunctiva, whereas in the normal individual no such reaction is obtained. This observation was confirmed by Biedl and Offer (1907), and may serve as a diagnostic sign for this form of diabetes. Biedl (1898) had found that diabetes is produced by tying the thoracic duct, and even more effectually by leading it to the exterior and allowing the lymph to flow away, the amount of sugar appearing in the urine, even on a diet free from carbohydrate, being from 1 to more than 5 per

cent. Biedl and Offer find that in this form of diabetes the pupil reacts readily to adrenalin dropped on the conjunctiva. They further find that admixture with lymph or simultaneous injection of lymph from another animal prevents adrenalin diabetes. The mydriatic effect is also said by them to be prevented by admixture with lymph, which, further, may be protein-free. Lépine (1890) had already noticed that in a dog with pancreas diabetes the injection of lymph from a normal animal produces marked temporary diminution of sugar in the urine. The idea which suggests itself is that the lymph normally contains a chemical (glycolytic?) substance, derived from the islets of the pancreas, which is essential to the due maintenance of normal carbohydrate metabolism.

We have seen that the most marked and probably the most important effect of suprarenal secretion in the body is to increase the contraction and maintain the tone of the blood vessels. But the extract does not act equally upon all arteries. Its effect is perhaps greatest upon those of the splanchnic area; it is certainly less upon the arteries of the limbs, which may even be passively expanded in consequence of the great rise of pressure produced by contraction of the arterioles of the splanchnic area, this rise of pressure being assisted by the accompanying augmentation and acceleration of the heart. For the same reason the larger arteries, especially the aorta and its immediate branches, may stretch almost to rupture. Nevertheless, transverse strips of the muscular coat of the blood vessels immersed in Ringer's solution containing suprarenal extract contract strongly, as do isolated sections of the vessels connected with a manometer and immersed in suprarenal extract. Some vessels, however, show much less contraction than others. Brodie and Dixon (1906) were unable to obtain evidence of constriction of the pulmonary vessels on injection of suprarenal; it is also difficult to show any effect upon them on excitation of the sympathetic. It is true that Bradford and Dean (1894) thought they could demonstrate a slight independent effect on the pulmonary arterioles on stimulation of the cord, but the method they adopted is open to criticism. Plumier (1907) repeated Brodie and Dixon's experiment, and using stronger doses of adrenalin succeeded in getting a positive result. It is, however, clear that the action is far less than upon the systemic vessels. It has, therefore, been judged dangerous to administer adrenin—even by the mouth—in pulmonary haemorrhage, because it is supposed to raise the systemic blood pressure without constricting the pulmonary vessels, and thereby to increase the tendency to haemoptysis. But administration by the mouth does not perceptibly raise the systemic blood pressure, and nevertheless there is considerable clinical evidence that internal haemorrhages, when not too profuse nor coming from large vessels, may be brought under control by its oral administration. I have already suggested that it may have a greater effect upon injured vessels, and this may also be true for small ruptured pulmonary vessels. For my own part, I see no physiological contraindication for its use in assisting to arrest haemoptysis—when the bleeding is derived from rupture of small vessels. And certainly the bronchial vessels should be quite amenable to its action, whatever opinion may be held about the pulmonary arterioles.

On the cerebral vessels also, although various observers at first failed to obtain evidence of contraction, it has now been shown by Wiggens (1905) by the perfusion method that the extract may produce a vaso-constrictor effect, although to a less degree than with ordinary arteries. Whether it can be used beneficially in threatening cerebral haemorrhage is a question for clinical experience to decide, but, as with the analogous case of pulmonary haemorrhage, there is no physiological contraindication if administered by the mouth

There remains for consideration the coronary circulation. Are the coronary vessels constricted by suprarenal extract, or are they dilated, or is there no specific action? Nothing is definitely known regarding the innervation of these vessels. Roy and Adami (1892) thought they had some evidence that the vagi may produce vaso-constrictor and the sympathetic vaso-dilator effects on them. But they did not employ the perfusion method to determine the point, and their evidence must be regarded as inconclusive. It has, indeed, been generally held that the coronary arteries are little, if at all, controlled by vasomotors. Recently (1906) I myself endeavoured to solve this question with the aid of the perfusion method. For this purpose I collected and recorded by a specially-devised apparatus the amount of Ringer's solution passing through the coronary vessels per minute in the isolated mammalian heart, and observed the effects upon the flow of stimulating the vagus and sympathetic nerves passing to the heart. The results I obtained did not justify the inference that there exist active vasomotor fibres, although I obtained during the cardiac acceleration, which was produced by stimulation of the sympathetic, and still more during that produced by suprarenal, an increased flow of blood through the coronary vessels. This might, however, quite well be accounted for by increase in activity of the cardiac muscle, which would mechanically facilitate the flow through the coronary vessels. Langendorff (1907) has lately adopted another method for determining this question—namely, that of immersing strips of the vascular wall attached to a lever in adrenalin solution. He states that whereas strips from other arteries so tested contract when adrenalin is brought in contact with them, a strip from a coronary artery will become relaxed, and he infers from this that suprarenal extract produces inhibition and therefore vaso-dilatation. If this is so, the action is different from that produced on all other vessels. Such a result would perhaps not be surprising, seeing that a rapidly and strongly contracting heart must necessarily pass more blood through its vessels than one beating slowly and less strongly, and suprarenal extract produces rapid and strong contractions. The subject is one which requires further examination, and, in fact, has been again studied in my laboratory by the method employed by Langendorff. Although not at the present moment prepared to make a definite pronouncement upon the question in all its aspects, I can, at any rate, state that we have never yet succeeded in obtaining the dilatation of a transverse strip of coronary artery (such as is represented by Langendorff) when pure suprarenal extract or adrenin unmixed with any other drug is added to the oxygenated Ringer solution in which the strip of artery is immersed. It is, perhaps, possible that the contrary result obtained by Langendorff may have been due to the presence of some other substance than adrenin in the solution used by him.

A pathological effect which has been noticed (Josué, 1903) as the result of repeated injections of adrenin into the auricular vein of the rabbit is a degenerated condition of the wall of the larger arteries, especially of the aorta (arterio-sclerosis). This effect is not peculiar to adrenin, but is produced by other blood-pressure raising substances, such as digitalin and nicotine. The effect is seen also, according to Toropoff (1908), in the pulmonary artery. An account of these changes was given by Dr. Batty Shaw in his Goulstonian Lectures last year, so that it is unnecessary for me to dwell further upon them.

Conclusion.

All this leaves our knowledge of the action of the *cortex* of the capsules very much in the position which it occupied forty years ago—indeed, one may even say in the position it occupied in the time of Montesquieu. It is certain that we cannot as yet allocate any definite function to the cortical cells. Nevertheless, we cannot doubt that they possess a function, and an important one. Of the two parts of the gland the cortical is the most constant in the vertebrate subkingdom. It is relatively best developed in late fetal and in early extrauterine life, when growth and differentiation are proceeding rapidly; it is present during the whole of life, and there is no evidence that it undergoes any atrophic changes with age. It is impossible even to say that it is functionally related to the medulla, although its close topographical connexions with that structure in most animals—and the closer the higher we proceed in the scale of organization—seems to betoken some functional nexus. A relationship to the development of the generative organs has been suggested on the ground that in cases of precocious sexuality the suprarenal capsules—presumably the cortex—have been found hypertrophied (Wooley, 1902; Bulloch and Sequeira, 1905). A resemblance between the cells of the cortex and those of the corpus luteum of the ovary has been frequently pointed out, but this may be merely superficial. It has been recently more particularly insisted upon by

Kinlon (1906). It has also been suggested that the suprarenal cortex has antidotal properties for certain poisons, such as snake venom (Myers, 1907).

Biedl states that he has been able to remove the cortex, leaving the medulla intact, and that the operation was followed by the death of the animals; but I think the experience of most people would lead them to believe such a separation to be impossible. And, as I have already stated, Vincent did not find removal of the interrenal body in the eel—which undoubtedly represents in that animal the cortex of the mammalian organ—to be fatal.

That the cortical cells are internally secreting structures is pointed to by their epithelium-like appearance and the richness of the arterial blood supply of this part of the organ. Ciaccio (1906) has described in the cells what he regards as evidences of secretory activity, such as are met with in the cells of ordinary secreting glands. But even without direct evidence it is difficult not to believe that the cortical cells produce an internal secretion, which is either taken up by the blood or is otherwise conveyed away from the cell columns. It is open to us to suppose that these may initiate the preparation of the internal secretion (adrenin) of the medulla, or that they may prepare an enzyme which completes the formation of that substance. The experiments of Abelous, Soulié and Tougan (1905) are confirmatory of this suggestion but do not carry conviction. On the other hand, there are both anatomical and pathological reasons for believing that the internal secretion of the cortex is independent of that of the medulla and produces quite different effects in the organism.

According to Della Vida (1904), cytotoxic serums prepared from the two parts of the gland are only toxic for their respective parts. That the suprarenals are related in some way to metabolic changes in the tissues and organs there can be little doubt. This is indicated by the symptoms of Addison's disease. Some of these symptoms can be referred to the absence of medullary secretion. But others, such as the extreme wasting (when not due to general tuberculosis) and the malnutrition which is expressed in the abnormal pigmentation of the skin and mucous membrane, are not readily referred to the medulla, and are probably the result of disease of the cortex. In assuming that the cortex of the organ subserves through its internal secretion certain functions connected with metabolism, we have an analogy with what is known regarding the pituitary body. In this, again, we find an instance of a small ductless gland, partly epithelio-nervous and partly purely epithelial in structure and origin, the two parts having different functions, although bound up together into a single organ. Of the two parts the nervous part, as in the suprarenals, produces a substance or substances such as it is now customary to term "hormones," which influence the circulatory organs and certain externally secreting glands—in the case of the suprarenals it is salivary glands, in the case of the pituitary it is the kidneys which are especially stimulated to secretion. The purely epithelial part of the pituitary, on the other hand, is closely connected with the growth and nutrition of certain of the connective tissues and especially of the bones—hyperplasia of the organ being accompanied by symptoms of gigantism and acromegaly. It seems, therefore, that from analogy we have some justification for inferring that the cortex of the suprarenals may yield a hormone which influences the growth and nutrition of certain tissues and organs. One might even be permitted to suggest that the integumentary tissues and the generative organs—with the relative development of which it is manifestly correlated—are directly under its influence. But I am getting away from the subject of my lectures and substituting for what is known regarding the functions of the suprarenals what is only conjectural. The digression is fascinating, but time will not allow me to pursue it. Perhaps within the next few years a successor of mine in this lectureship will be able to put before you as much positive knowledge regarding the cortex as we now possess regarding the medulla, the function of which seemed, no more than fifteen years ago, as obscure as that of the cortex appears at present. And with the hope that this obscurity may speedily be removed, I cannot do better than terminate my discourse.

AN UNUSUAL CASE OF APPENDICITIS.*

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THE case here referred to is one that clinically shows nothing remarkable in symptoms, progress, and recovery. But the anatomical features are so unusual as to deserve notice, while they also throw light on recent pathological research.

A gentleman aged 41, on a voyage from New Brunswick to Liverpool, was seized in mid-Atlantic, about December 11th, 1907, with severe pain and tenderness in the right iliac fossa and an indurated swelling, naturally attributed by the ship's doctor to appendicitis. He was put to bed and otherwise looked after, while a message was sent by wireless telegraphy to his home in London, asking for arrangements to be made for his reception in Liverpool, and, if necessary, immediate operation at his landing on December 14th. These arrangements were made by Dr. Steeves of Liverpool, who had the patient admitted into a nursing home. The ship's doctor reported on landing the absence of immediate urgency, and it was not till five days later, on account of a temperature of 102° F., an increased swelling, with elasticity and a suspicion of abscess at the locality, that I was called in consultation with Drs. Steeves and Richards to settle the question of operation. This was felt to be imperative, and was fixed for the following day, December 20th, 1907. An incision was made over the iliac fossa, the abdominal muscles divided in the line of their fibres, and the peritoneum opened in the line of the



Photograph, about natural size, of specimen in water four months after operation, by Fred. Halliday, museum assistant. A, Blind end of appendix. B, End cut from caecum.

skin incision. No abscess was found, but the caecum showed an altogether unusual structure in the site of the appendix. This latter was removed and the bowel closed, a drainage tube put in, and sutures in the various layers. The progress of the patient was in all respects satisfactory, without fever, and all was healed in a few weeks.

Anatomy and Pathology.

On searching in the indurated mass of caecum and omentum nothing could at first be found of anything like an appendix in shape. On raising the caecum from its bed in the iliac fossa there appeared a sort of pouch at its lower end and passing behind. On further search this proved to be appendix, but totally unusual in shape and size, even when compared with the many varieties of alteration produced by disease. By dividing a peritoneal layer this pouch was found about 3½ in. long and 1½ in. wide, of the shape and size of a walnut at the blind end, narrower between that and the caecum, and again wider at the junction. On opening the pouch it was found to contain much granular grey pasty material, no faeces or pus, and to be deprived in parts of all mucous membrane, the wall being thin, and consisting in those parts of little else than peritoneum. The pouch was too bulky to clamp and tie, so it was cut off with scissors, the stump inverted, and the folded peritoneal edges sewn together doubly for safety. The opening leading to the caecum was about ⅜ in. wide, and filled with the paste above noted.

It is difficult to imagine that an appendicular pouch of this size, folded under peritoneum at the back of the caecum, without any signs of cicatricial deformity, could

* Read at a meeting of the North Wales Branch of the British Medical Association at Denbigh, April 21st, 1908.

have acquired this shape by any known pathological process. If it were not that no reference can be found to any such human variation of the appendix, in either disease or health, one would be inclined to class it among the multifarious forms in lower animals, where in a monkey, an anteater, and some birds, the appendix has this actual shape (Howard A. Kelly).

As regards the personal history of this patient, the only facts I could elicit were that he had been a large eater, and only slightly affected with constipation, if noticeably at all. From the first notice of disease to the day of operation only nine or ten days had elapsed, and he had never before been similarly affected. If this strange appendix had ever been highly charged with morbid products, there was no lack of room for their admission into the caecum by the fairly wide passage between the two; but the absence of mucous membrane over such an extent would seem to have permitted the absorption by imbibition of toxic products, accounting for the fever, pain, and inflammation.

My friend, Dr. O. T. Williams of Liverpool, has for some time past been engaged in a special study of the pathology and chemistry of appendicitis and mucous colitis, and finds the present case and specimen an apt illustration of some of his conclusions. For a detailed account of his studies I may refer to the British Medical Journal of July 27th and August 17th, 1907, and to the *Biochemical Journal*, vol. ii, No. 9; but I here add an epitome of the same, written for me by himself, with his description and criticism of my specimen:

The Etiology of Appendicitis.

The appendix, normally, as the result of age, undergoes involution, with which is a certain amount of fatty degeneration, especially in the submucosa. I have studied the nature of this change and found it to bear no comparable relation to the fat changes which the walls undergo in cases of appendicitis, where in cases even in young children the mucous membrane, and especially the submucosa, shows the formation of large quantities of calcium soaps. The latter often form a dense ring in the submucosa. They can in some sections be seen to be forming the concretion which I have shown to contain these same soaps. These soaps are again found in "intestinal sand"—in a malady which is closely allied clinically to appendicitis. The conclusion arrived at is that in these (and in certain other conditions) there is an abnormal production of these soaps. In appendicitis they so lower the vitality of the mucous membrane as to make the invasion of organisms an easy matter.

Mr. Parker's Specimen.

There is a large distended appendix consisting of two main divisions. The distal part is a large globular cavity which contained the material mentioned as having been emptied: some of it being still adherent to the sides. The proximal part shows the wall very much thickened by hypertrophied muscle, probably due to the attempts to empty the above material into the lumen of the bowel. The material examined is found to consist of calcium carbonate, fat, and calcium soaps. The probable explanation of the condition is that the calcium soaps formed in the submucosa and mucous membrane, were excreted into the lumen of the appendix, and so dilating it considerably; the large amount of hypertrophy of muscle even failing to discharge it. Later the calcium soaps still further decomposed, producing a certain amount of calcium carbonate.

The degeneration and distension has caused the disappearance of the whole of the mucous membrane.

A CASE OF COMPOUND FOLLICULAR ODONTOMA.

By JOHN WARD COUSINS, F.R.C.S., M.D Lond.,

SENIOR SURGEON OF THE ROYAL PORTSMOUTH HOSPITAL AND SOUTH HANTS EYE AND EAR INFIRMARY.

(Exhibited in the Surgical Section at the Annual Meeting, 1907.)

In the following case more than 100 denticles were removed from the lower jaw by several operations, and the treatment extended over a long period.

History.

W. B. was a well-developed and healthy boy. When 11 years of age a swelling was discovered by his parents on the right side of the mandible, and it was then regarded as only an ordinary dental trouble. It caused no pain, only a feeling of stiffness and discomfort in the mouth, especially after eating. During the next four years the tumour increased in size and rendered mastication difficult. On several occasions he was examined by medical men, and his parents were informed that the growth was probably of a dangerous character.

Condition on Admission to the Hospital.

The late Dr. Crouch of Gosport sent the patient to me in 1896. He then appeared in good health, and complained only of the increasing swelling of the jaw, which prevented him opening his mouth and greatly impeded mastication. There was considerable disfigurement of the right side of the face. The tumour involved the mandible behind the bicuspid region, and extended backwards to the angle and ramus. The mouth appeared to be half filled with a growth, and the teeth could not be separated more than ½ in. The post-nasal space was free, and deglutition was not obstructed. (See Fig. 1.)

Treatment.

An exploratory operation was at once performed. An incision was made downwards and outwards about an inch from the angle of the mouth, the thickened and vascular structures were freely divided, and a hard nodular surface exposed. By the aid of the gouge, elevator, and mallet, the outer wall was broken away and the denticles removed (shown in Fig. 2). In a few days the patient was considerably relieved, the spasm of the muscles of mastication subsided, and soft food could be taken with greater ease.

At the end of eighteen months he was readmitted into the hospital. A second operation was performed, and more denticles and small and dense bony masses (Fig. 2) were dug out of the cavity in the direction of the angle. Free haemorrhage followed, and the hole in the jaw required plugging for several days. In the course of a few weeks a superficial abscess formed, and fragments of necrosed bone came away spontaneously. The mouth was very carefully and constantly deodorized. Favourable changes again set in—the swelling of the face gradually diminished, the mouth could be more freely opened, and he was able to take food with comfort. Fig. 3 exhibits the appearance of the patient in 1899.

During the next three years gradual improvement took place, but marked disfigurement continued. The third operation was then undertaken for the purpose of improving the outline of the face by reducing the projecting and thickened surface of the maxilla. The swelling was freely exposed by an incision under the lower border of the jaw, and after elevating the periosteum several plates of bone (Fig. 2) with the prominent edges were removed with the saw.

The patient called to see me a few weeks since. He is now in sound health, and is doing a good business as a decorator. He is able to open his mouth with ease, and the teeth can be separated nearly an inch and a half. He can masticate on both sides; on the right side there is still a bony cavity, large enough to hold a small marble. The appearance of the patient in June, 1907, is shown in Fig. 4.

Structure of two of the Denticles.

I am indebted to Mr. S. G. Shattock for the following report:

The two denticles selected for microscopic examination were of flattened oval form and measured each 7 mm. in the longer diameter. The structure is alike in both. The material composing them consists of cement traversed by irregular channels, like Haversian canals. There is no trace of enamel at any part of the surface, and nowhere any dentine. The lacunae and canaliculi are very coarse and conspicuous, and the lamination of the bone very evident.

Only two small denticles were examined, and it is very probable that in some of the larger denticles traces of enamel or dentine could be discovered.

Abnormality of the Teeth.

The teeth of the patient present many irregularities, which are the results of the defective development of the maxillae during embryonic life.

The alveolar arch of the upper jaw is both small and contracted (Fig. 5, *c*, *d*). The right molars, bicuspids, and canine are in their normal position. The lateral incisor, attended by a supernumerary tooth, is seen in the centre, causing the displacement of the central incisors to the left, together with the lateral incisor and canine. The left molars are altogether absent, and the bicuspids occupy their position in the jaw.

The original position of the tumour is indicated by the cavity on the right side of the lower jaw (Fig. 5, *a*, *b*); one molar and one bicuspid have been extracted on the left. The incisors and canines are badly-formed teeth, very irregular, and crowded together on the bone. On this side the only wisdom tooth in the mouth has duly appeared, and this fact clearly indicates that the follicles of all the absent molars were arrested at a very early period of their formation.

The permanent molars do not come forth in the place of the temporary teeth, but a position is gradually prepared for them by the growth and expansion of the jaws.

The rudiments of the first permanent molar issue from the second temporary molar follicle about the fourth month of fetal life, and as soon as the formation is complete and the papilla appears within it, another follicle is developed which contains, about seven or eight months after birth, the papilla of the second permanent molar.



Fig. 1.—Patient in 1896.



Fig. 3.—Patient in 1899.



Fig. 4.—Patient in 1907.

After a long period, when the growth of the second molar is considerably advanced, similar changes occur which give rise to the follicle and papilla of the wisdom tooth. In the child the alveolar arch is small and shallow, but as development proceeds the jaw extends backwards, and in this fashion room is formed for the permanent molars. But these are very gradual changes, and during their slow advancement the follicles are securely lodged in the base of the coronoid process of the lower jaw and in the tuberosity of the upper maxilla; so that in due time, when the elongation of the bones is complete and the teeth are getting ready for eruption, their ultimate position is already prepared for their reception.

The marked abnormality of the teeth in this case is an indication of the severe distortion which occurred in the evolution of the maxillae, and this must be regarded as the essential cause in the production of the odontoma. In looking over the records of many similar cases I have been able to discover only very scanty reference to the general condition and development of the teeth.

I am indebted to Mr. H. A. E. Canning, of Southsea, for the models which exhibit the present condition of the patient's mouth, and also for the photomicrograph (Fig. 6).

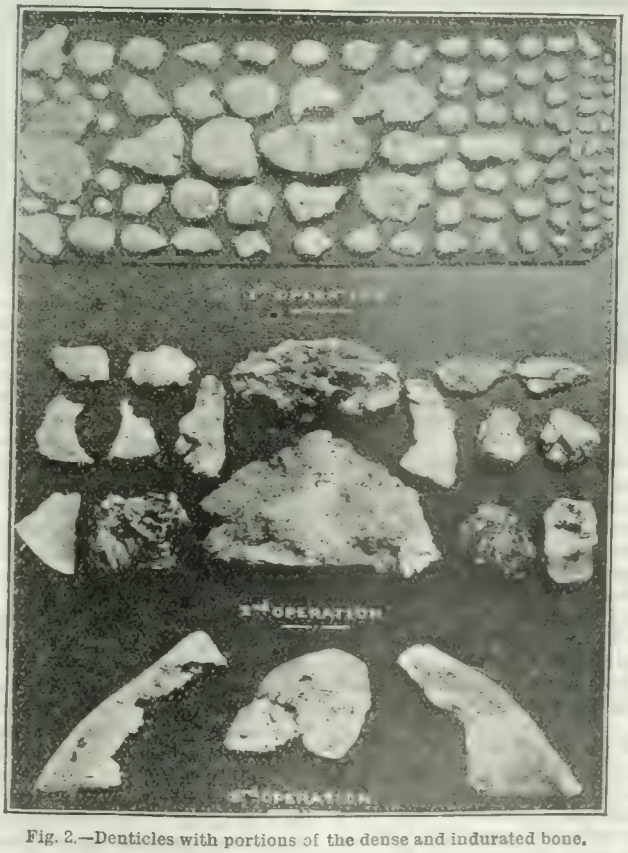


Fig. 2.—Denticles with portions of the dense and indurated bone.

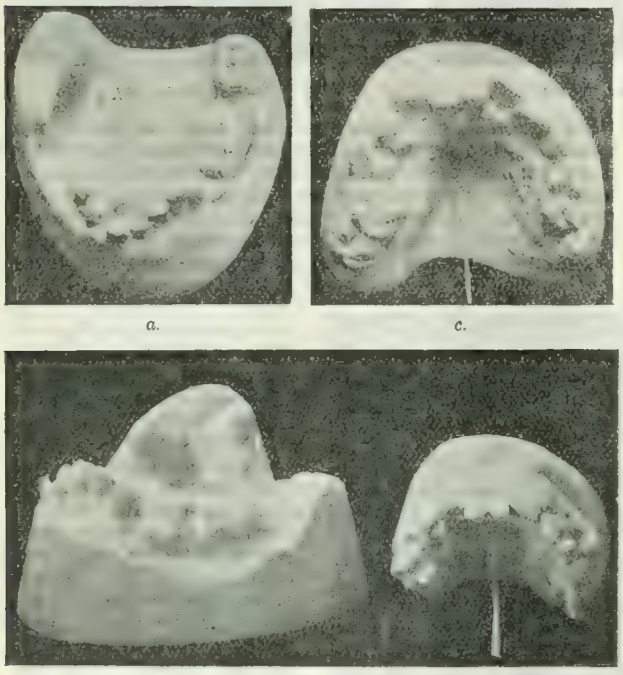
STRUCTURE OF COMPOUND FOLLICULAR ODONTOMATA.

The majority of odontomata are outgrowths from the dental germs, and their classification is based upon the part of the germ principally concerned in their formation; and this may be the papilla, the enamel organ, the follicle, or the whole germ. A compound follicular odontoma is the result of a very early modification of the whole germ of a single molar tooth, or the germs of several teeth, as in the case now under consideration. These tumours generally occur in the molar and bicuspid regions of either the upper or lower jaw. The development of any kind of odontoma in the incisor region is uncommon; but a case, however, appeared in the *British Dental Journal* of 1891, by Professor von Metnitz, which he regarded as a rare specimen of a compound follicular odontoma. Growths of this kind are seldom seen in the human subject, at the same time it is very probable that many cases formerly described as fibrous tumours and exostoses were unrecognized odontomata. Many interesting specimens have been removed from the jaws of the horse, ther, goat, and other animals, and these can be seen in the Museum of the Royal College of Surgeons, and also in the collections of other institutions. A compound follicular odontoma really consists of a hard bony mass containing a number of little nodules composed of dental tissue and bone irregularly fused together. In some cases these denticles consist of all the dental elements—enamel, dentine, and cementum, which seldom bear any resemblance to normal teeth. On section they are found to be made up of dentine, with traces of its special tubular structure and particles of opaque and ill-defined enamel blended with osteodentine. In other cases these little nodules are composed wholly of dentine or cementum.

There is remarkable variation in the number of denticles found in compound follicular odontomata. In the specimens removed from the human subject that I have had an opportunity of examining the number has never been large, excepting in a few cases in which the denticles consisted wholly of cementum without any trace of either dentine or enamel. In some specimens taken from the horse and goat, the number of denticles has amounted to three or four hundred; and although some of these irregular masses were compounds of the special tooth structures mingled with cementum, still the large majority were found to be composed wholly of the latter substance. A few years since Dr. de Roaldes, of New Orleans, removed from a lad a tumour of the upper

maxilla which contained more than fifty denticles which were proved to be made up entirely of cementum. "The specimen consisted of hypertrophic tooth capsule which ossified sporadically in places, producing a number of denticles which had originally, in all probability, been bound together by periosteum, and embedded in the fibro-vascular structure much as plums are in a pudding." Another specimen is to be seen in the museum of the Royal College of Surgeons containing five hundred irregular pieces of bony tissue which were removed by Mr. Bland-Sutton from a tumour of the antrum, which he regarded at the time of the operation to be a follicular odontoma. On microscopic examination these irregular masses were found to consist of true osseous structure.

The sacs of the permanent molars are formed before birth and their evolution within the bone slowly advances although their eruption may be delayed for many years. The process of development in all the teeth is similar, and the special structures which enter into their composition are identical in all respects—every tooth is a transformed papilla of the fetal gum, which by the swelling of the surrounding mucous tissue soon becomes enclosed in the dental sac with the cellular elements of the complete formation. The secret stages follow on in regular succession—the upper epithelial layers of the



a. *c.* *b.* *d.*

Fig. 5.—*a*, *b*, Models of lower jaw indicating the original position of the tumour; *c*, *d*, models of upper jaw exhibiting the displacement of the teeth.

papilla produce the enamel organ, the cells of the connective tissue, the odontoblasts, and from the cells on the walls of the follicle the cement comes forth just in the site of the future alveolus. Now, at any period these incipient changes may be distorted, and a hypertrophic activity of the odontoblasts and bony elements may result in a large formation of cementum sufficient to arrest the other essential structures. If, however, the process of calcification is well advanced, then the irregular outgrowth may consist of a combination of all the dental tissues. An odontoma when within the jaw and also after its eruption is in the position of the permanent teeth.

THE DIFFICULTIES OF DIAGNOSIS.

The diagnosis of a compound follicular odontoma is often surrounded with considerable difficulty. In the early stage there is nothing but the presence of a hard and painless expansion of the upper or lower jaw. When the process of eruption is advancing, a dense and irregular growth can be detected in the mouth, but it is often impossible to recognize the true character of the tumour without an exploratory operation. The age of the patient, and a careful examination into the history of the case, will bring to light important details. The fact, too, that the swelling commenced before the complete dental evolution, and the presence in the mouth of badly-developed and crowded teeth, and also the absence of one or two altogether, will supply indications in the right direction.

SURGICAL TREATMENT OF ODONTOMATA.

A few words now about treatment. When the tumour is small the exploration and enucleation in either the upper or lower jaw can be done easily through the mouth without any external excision. In all operations of this sort the surgeon must take the greatest care to avoid permanent scars and deformity.

In excising an odontoma in the lower jaw the external incision should be made below its border, and then by the elevation of the cheek and the free division of the muco-periosteum the tumour can be removed with the aid of the gouge and strong forceps.

In dealing with a large tumour of the upper maxilla involving the antrum the dissection and elevation of the cheek should be done in the way usually practised in excision of the bone. A free section must then be made parallel to the alveolar border and other sections for the displacement of the anterior surface just sufficient to secure complete separation of the hard growth from the bone. The instruments must be employed with great care to avoid any fracture of the alveolar border or palate. Large odontomata involving the whole antrum have been successfully removed by this method.

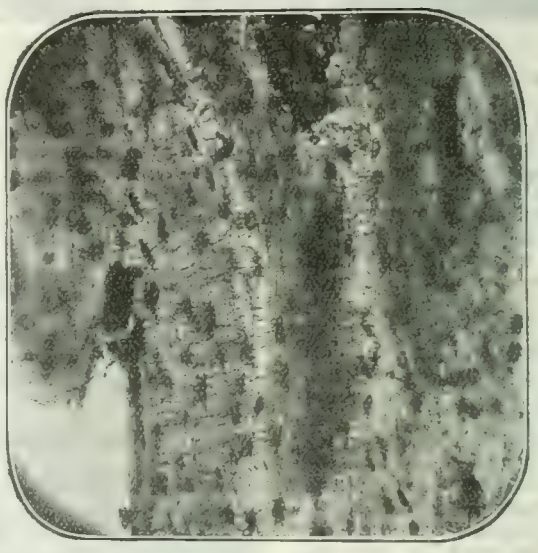


Fig. 6.—Section of a denticle showing the bony structure of the cementum. × 165.

Some cases of compound follicular odontomata remain for a long period without causing much inconvenience, but sooner or later they are sure to give rise to serious trouble. The expansion of the jaw and the presence of the dense tumour slowly excite pressure and pain, and these symptoms are followed by tonic contraction of the muscles of mastication, inflammatory changes in the soft tissues, and prolonged suppuration. Sometimes the impeded circulation and nutrition of the bone in combination with the depressed constitutional state of the patient, result in a peripheral necrosis, which greatly aggravates the distress and deformity of the patient. Under these conditions it is certainly not surprising that the distinctive indications of an odontoma are surrounded by great obscurity. A well known and very skilful surgeon once informed me that he nearly made a mistake in a case of this description, but fortunately the presence of a dental tumour became evident during the operation, and then, instead of performing excision of the mandible, he successfully removed the hard mass by enucleation, and the result was very satisfactory. Similar diagnostic difficulties have occurred to other surgeons, and I think there can be little doubt that other unrecorded cases of compound follicular odontomes have been unexpectedly discovered on the operating table.

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THREE YEARS' EXPERIENCE OF BUTLIN'S OPERATION FOR CANCER OF THE TONGUE.*

BY F. T. PAUL, CH.M., F.R.C.S.,

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IN 1898 Mr. Butlin delivered his Hunterian lecture on "What Operation can do for Cancer of the Tongue." In this lecture he called attention to the importance of removing the groups of lymphatic glands associated with the tongue in *all* cases of operable cancer of that organ. This view thoroughly appealed to me, and I at once put it into practice; but not, I regret to say, with sufficient thoroughness and regularity to test its influence on results properly. Fortunately Mr. Butlin recurred to the subject in a clinical lecture published a little over three years ago in the BRITISH MEDICAL JOURNAL. This time he laid down more definite lines on which operations for cancer of the tongue should be conducted, and supported his views with such improved statistics, that the conviction must have been brought home to all surgeons who read this lecture that he had achieved a notable advance in the surgery of the malignant tumours of this region, in which he ought to be followed by all those undertaking such operations. Since the publication of the lecture in October, 1904, I have in every case, so far as it has been possible, operated on the lines suggested, and the object of this short communication is to report the results obtained.

The operation advocated involves the removal of the primary growth, and a complete dissection of the entire anterior triangle of the neck from clavicle to jaw, clearing out the whole of its contents down to the bare surface of the great vessels and muscles. This is an extensive proceeding, and if undertaken at one time the whole of the large wound becomes infected from the mouth, rendering the operation very serious and not rarely fatal. Though there are distinct advantages in removing the tongue and its area of lymphatic distribution in one continuous mass, they are purchased at too great a risk to life, and the operation should therefore, whenever possible, be undertaken in two stages. First the primary growth is removed with a good margin of healthy tissue; then, as soon as the patient is fit for it, usually in about a fortnight, the neck dissection is carried out.

The primary tumour may be situated in almost any part of the mouth, and for the purpose of the subject under discussion no distinction should be drawn between those which commence on the tongue, and those which originate in any other part of the oral cavity. All are the same variety of cancer, follow the same course, and require the same treatment.

To judge by my own experience, cancer (epithelioma) attacks the mouth in the following situations mentioned in the order of their frequency:

1. The side of the tongue.
2. Anterior pillar of the fauces.
3. Floor of the mouth about the orifices of the salivary ducts.
4. Cheeks and lips.
5. Tip, dorsum, and epiglottis.
6. Palate, and top of pharynx.

The lip and the side of the tongue are the most favourable positions; the tip, dorsum, and cheek the next. Any of the others, if quite small, may be favourable; but growths on the fauces soon spread to the bone, and involvement of bone is one of the most hopeless complications.

It is not necessary to go into details as to the operations required for the removal of epithelioma arising in the lips or cheek. In early cases one is justified in expecting success. In neglected cases there is practically no hope of an ultimate cure, except in some chronic growths in old people. All the groups of glands become infected in lip cases, and therefore they require quite as complete secondary operations as in cancer of the tongue. When the growth is situated on the floor of the mouth or tongue the part is removed with knife or scissors in the ordinary way, though I doubt if one can really do justice to the patient by a purely intraoral operation, except when the growth is in a very early stage. Formerly I usually made Kocher's incision below the jaw, or occasionally followed Syme in splitting the jaw in the middle line, but of late, with the object of leaving the neck intact for Butlin's dissecting operation, I have, whenever it was possible, confined the primary proceeding entirely to the oral cavity. In this way undoubtedly some risk is run of cutting too near the growth, and consequently of getting a local recurrence, and any kind of recurrence in this disease is usually the beginning of the end. Laryngotomy, which adds very little if at all to the severity of the operation, is in some cases a great help, especially because it enables the anaesthetist to do his work more thoroughly and to keep out of the operator's way; but it does not very greatly facilitate a wide extirpation of the tissues beyond the tumour, and from this point of view cannot compare with the advantages of Kocher's and Syme's incisions. I am seriously considering a reversion to these methods for bad infections of the body of the tongue and floor of the mouth. There is only one operation by which we can deal satisfactorily with the fauces and neighbouring parts of the tongue and pharynx, and that is by an incision commencing at the corner of the mouth, and continued in a curve across the angle of the jaw and down the edge of the sterno-mastoid, the jaw being divided in the same line. In this operation it is imperative to remove the glands (submaxillary and carotid) at once, and the dangers are thereby increased; still, though big, it is very well borne by fairly good subjects. Convalescence is a little slow, owing to the jaw having been cut. It is, of course, necessary to wire it, and when the soft parts have been very freely removed there is always the possibility or even the probability that a slight exfoliation of bone may occur. Epithelioma of the palate is rare. Small growths are easily dealt with, but large ones need laryngotomy with plugging of the larynx. Epithelioma of the epiglottis is fortunately also rare. It is a most inconvenient situation. I believe many surgeons would attack it by a semicircular incision into the floor of the mouth under the front portion of the jaw; but I am so familiar with the route through the angle of the jaw that I prefer this latter method. It gives a very good view of the parts which have to be dealt with.

As soon as the patient has recovered from the primary operation on the tongue, lip, cheek, or palate, Butlin's operation on the neck is undertaken; that is usually after an interval of two or at most three weeks. In the fauces cases the submaxillary and carotid regions have necessarily been cleared out, together with the primary growth, while the submental glands are well removed from the infected area, therefore the "Butlin" does not apply to these cases. For the rest one has to decide whether to do a "Butlin" in all cases, and how often one should do it on both sides. The originator of the operation holds that it must be done in all cases. He supports this opinion by referring to a patient in whom glandular infection was associated with a malignant change in the tongue so early that the pathologist regarded it as precancerous, and all those who have had much experience of epithelioma know that very insignificant primary growths sometimes give rise to virulent and extensive secondary infection. Indeed, the whole of one's past experience favours the view that the glands should always be thoroughly removed. The only safe plan is to make the rule absolute. We should also be equally uncompromising in regard to dealing with both sides whenever the growth has originated near, or has subsequently approached the middle line. Of course, one has felt one's way gradually in this matter, for it has seemed hard to press a third operation on the patient, but I have come to the conclusion that it is essential. Here is a case in point:

A year ago Dr. Middlemass Hunt sent me a gentleman with epithelioma of the epiglottis. It was not extensive, and was quite satisfactorily removed, together with the neighbouring part of the tongue. The growth had involved the left side more than the right, hence I commenced the neck with a thorough operation on that side. The glands removed were microscopically examined, but no growth was detected in them, and the patient begged me to let him off the opposite neck operation. I considered the point, and seeing that the primary growth was small and that the glands on the side most likely to be infected appeared free, agreed that he might take the risk. Two months ago he was attacked with influenza, and an upper carotid gland on the right side became enlarged and painful. He then returned to me, and I made a complete clearance of the right anterior triangle. The only enlarged

* Read at the Liverpool Medical Institution.

gland was the one referred to. It was breaking down, and contained pus, but at one spot was a small patch of white, hard infiltration. This was epithelioma—clearly, I think, ancient epithelioma, because the horny cell-nests were not surrounded as usual by growing cells, but were directly in contact with connective tissue. This patch of epithelioma was, of course, in that carotid gland when I removed the epiglottis, and by failing to carry out the "Butlin" on both sides, as I ought to have done, he went away with a seed which must have been fatal if it had not been brought to light by the attack of influenza—I hope before any fresh growth had taken place.

The more experience I get the more I am convinced that we cannot be too careful in carrying out this principle of following up a cancer operation in the direction of secondary infection. Sir William Mitchell Banks a great many years ago impressed upon us the importance of clearing out the axilla in all cases of cancer of the breast. His practice has long since become general. There should be no hesitation in according an equally universal acceptance to Mr. Butlin's advice in regard to tongue cases; nor, indeed, should one have to urge the importance of safeguarding in this way cancer operations in general, especially in the case of growths like epithelioma, which are known to be markedly malignant, but with a usually limited area of secondary infection. I now make it a rule to follow up operations for cancer of the penis, scrotum, anus, head, and limbs with a properly planned attack upon the neighbouring lymphatic glands, and hope in the future to be rewarded with better success. Still, whilst recognizing the extreme importance of these radical operations for cancer, one must not allow one's judgement to be lost in routine practice; and, especially in cases of internal cancer, other factors come into play, such as the enormously increased danger to life as one increases the area of the operation on the one hand, and, on the other, the comparatively slight tendency that is shown by cylindrical-celled carcinoma towards early infection of the lymphatic glands.

The actual operation suggested by Mr. Butlin for tongue cases consists in making an incision along the whole length of the anterior border of the sterno-mastoid muscle and joining this at the level of the cricoid cartilage with another commenced at the point of the chin. The two triangular flaps thus outlined are reflected with the least amount of subcutaneous tissue, because, especially in the submental and submaxillary regions, there are some very superficially-placed lymphatic glands. The border of the sterno-mastoid muscle is then defined, and all the cellular tissue down to the muscles and great vessels is cleanly dissected up and removed. In the submental region one has to be careful not to miss glands deeply placed between the genio-hyo-glossus muscles. In the submaxillary region the entire salivary gland is taken, which permits a very clean sweep of this important tract, and in the carotid region the connective tissue and glands contained in it are removed from the clavicle to the mastoid process, particular care being taken to get all the glands from the bifurcation of the artery upwards, for it is these which are first infected. It is impossible to get the upper carotid glands without cutting the parotid salivary gland. This is unfortunate, because in so doing one cuts the cervical branch of the facial nerve, paralysing the corner of the lip, and also permits the escape of salivary secretion into the wound. However, these are minor troubles compared with the issues at stake. Although the operation seems severe, it is remarkably well borne, even by patients 70 years of age, and heals excellently. It is really much less serious than the primary operation in the mouth, and has not given me cause for anxiety in any of the cases. If there be a fault, it is not that the operation is too big, but that it is not big enough. When there are infected glands on the jugular vein it would usually be wise to extend the incisions, divide the sterno-mastoid muscle, remove the vein, and carry the dissection into the posterior triangle. The muscle may be excised or sutured as circumstances dictate.

During the three years 1905 to 1907 I have operated on 35 cases of cancer of the mouth, many of them very bad cases—I think much worse than Mr. Butlin would have to undertake, because most of my cases are derived from hospital practice, whilst all of his, I believe, are private patients who come for treatment at an earlier stage of the disease. Of these 35 cases 2 died from the operation, both of sepsis. For many years I have not lost a case from any other cause. One of the deaths was simple bad luck, for the growth was a very small one on the side of the tongue; but the patient was a very fragile anaemic woman of 60. Her mouth became very septic; cellulitis followed, and she died in four days. The other case was a big operation in an alcoholic subject involving the jaw, and I knew that he ran a considerable risk. I am very glad to say that I believe we are now combating this danger successfully. The prophylaxis was suggested to me by my colleague, Sir James Barr. He advised that in all those subjects likely to run serious risk of sepsis a dose of polyvalent serum should be given before the operation. I have now tried this in several of the worst cases, and the result appears to have been excellent. I am sure the treatment is worth an extended trial.

It is extremely difficult to classify these 35 cases in such a way as to convey a fair idea of the results obtained. If I mix cases which offered me every chance of success with those which offered me hardly any a statistical table would be useless; so I will ask you to accept my opinion as to which were favourable and which were unfavourable, and classify them in that simple way. The most favourable were growths up to an inch in diameter well situated for removal. The bad cases were mostly large growths, often badly situated. The worst involved the bone.

RESULTS OF BUTLIN'S OPERATION FOR CANCER OF THE MOUTH, 1905, 1906, AND 1907.

Total number of cases, 35—Lip, 3; cheek, 3; palate, 1 tongue, 28. Favourable cases, 11; advanced cases, 15 involving bone, 9.

Favourable Cases.—Free from recurrence, 9; died from operation, 1; no report, 1.
Advanced Cases.—Free from recurrence, 8; has recurrence, 1; died from the disease, 5; no report, 1.
Bone Cases.—Known to be free from recurrence, 0; have recurrence, 4; died from operation, 1; died from the disease, 2; no report, 2.
Totals.—Free, 17; recurred, 5; died of disease, 7; died of operation, 2; no subsequent report, 4; = 35
Duration Free (in years and months).—3 4, 3 0, 2.11, 2.11, 2.10, 2.5, 2.2, 1.10, 1.9, 1.7, 1.3, 1.2, 1.1, 1.0, 0.5, 0.4, 0.4 = 17.

Finally, the impression on my mind for the three years experience of Butlin's operation is entirely favourable, and I warmly advocate its general acceptance as a routine practice. In principle it is not of course new; the important point is the recognition of the fact that a definite plan of campaign must be followed if the enemy is to be successfully routed, and therefore, with very few exceptions, in cases of cancer of the skin, mouth, penis, scrotum, anus, labia, larynx, breast, and parotid, one should accept as a necessary part of any curative operation a properly-planned dissection for dealing with the probable track of secondary infection. In cases of cancer of the rectum, vagina, uterus, ovaries, testes, stomach, bowel, etc., one should always have the same end in view, though it may not be possible or desirable to attempt to attain it in the same way.

In regard to the primary operation on the tongue I am not quite satisfied that any but the most favourable cases can be so well dealt with through the mouth as by some incision which allows of more room, a better view, and more deliberate dissection. I am inclined to advocate for such cases a return to Kocher's and Syme's incisions, involving, of course, the clearance of the submental and submaxillary areas at the primary operation, but leaving the carotid area and what may be considered necessary in the posterior triangle for the second operation. With modern precautions a limited opening up of the neck is not very serious. My cases in this series which were so treated were the worst type of cancer of the mouth as met with in hospital patients. I never refuse to operate for cancer of the tongue if it be at all possible; hence several of these were as bad as they could be. Only one died, and I think had the prophylactic treatment with polyvalent serum been carried out in his case he would have recovered. In future I am prepared to adopt a more extensive primary operation in a larger number of cases.

THE Royal Sanitary Institute has instituted an examination for women health visitors and sick nurses. Full particulars can be obtained on application to the Secretary, Margaret Street, London, W. The first examination will be held in Dublin on June 12th and 13th.

Remarks
ON
CANCER OF THE MOUTH IN SOUTHERN INDIA, WITH AN ANALYSIS OF 209 OPERATIONS.

READ TO A MEETING OF THE BRISTOL DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

BY A. FELLS, M.B., C.M.EDIN.,
LATE SURGEON, LONDON MISSIONARY SOCIETY'S HOSPITAL, TRAVANCORE.

THERE is a general consensus of opinion that cancer is less prevalent amongst the people of India than in England, but it is difficult to arrive at any correct estimate, for vital statistics are far from complete or reliable in most parts of India. My own experience of thirteen years was gathered in the southernmost part of the peninsula, in the native state of Travancore, where practically speaking there are no vital statistics at all. It is a country of equable temperature, humid atmosphere, and luxuriant vegetation.

To try and arrive at some idea of the amount of cancer in this district I went through two years' entries in the out-patient register of the institution with which I was connected—the London Missionary Society's Hospital at Neyoor. There were 31,845 cases, and of these 390, or 1.22 per cent., were diagnosed as malignant disease, 377 being epithelial cancer and 13 sarcoma. It is difficult to make a comparison of any value between these and similar figures from an English hospital; their chief interest becomes apparent when we investigate the sites of the cancerous growths.

Leaving aside the sarcomata, of the 377 cases of epithelial cancer, 346, or 91.5 per cent., were connected with the buccal cavity, leaving only 31, or 8 5 per cent., to be distributed over the rest of the body—that is, 8 in the breast, 8 in oesophagus, stomach, or bowels, 5 in the rectum, 3 in the uterus, 2 in the penis, and 1 each in liver, thyroid, scrotum, and testicle, and 1 rodent ulcer of the face and orbit. An obvious criticism is that, whilst growths in the mouth are easy of detection, those of the viscera are more likely to escape diagnosis, and this is true of all out-patient clinics. But it will by no means explain the very great preponderance of buccal cases in these figures. Take the breast, for instance: in Travancore the *purdah* system does not prevail, so that women come to hospital freely, whilst the nature of their dress facilitates a thorough examination of the breast, yet only 8 cases of breast cancer were seen in the two years as compared with 346 situate in the mouth.

BUCCAL CANCER.

The general impression supported by these figures is that whilst cancer in most sites is certainly less common in Travancore than in England, in the buccal cavity it is more frequent. Taking again these 346 cases of buccal cancer, they reveal another interesting contrast. In England the most common types of buccal cancer are those attacking the tongue or the lips, the latter, if untreated, spreading to the angle of the mouth and thence to the cheek. In South India invasion usually follows an exactly opposite direction, the disease commencing in the hollow of the cheek, just opposite the lower molar teeth, and spreading thence on to the jaw or along the cheek to the angle of the mouth, and so to the lips. Not infrequently it passes from the cheek backwards behind the jaw into the pterygoid region. Of the 346 cases of buccal cancer, in only 7.5 per cent. was the lip primarily affected, in 9 3 per cent. the tongue, whilst in 83 2 per cent. the disease began in the mucous membrane of the cheek close to the lower jaw.

These facts are probably explained by the habits of the people. In South India practically every native, high and low, male and female, chews, using a mixture of areca-nut, betel leaf, tobacco, and slaked lime. The quid is hardly ever out of the mouth except when eating, and every native retires to rest with the quid tucked into the cheek; and the favourite site for the cancer to originate is just the spot where the quid lies.

There is one other point of interest. In most parts of South India buccal cancer does not appear to be as prevalent as on the south-west coast. This observation often puzzled me, and the only fact that seemed to offer a possible explanation, namely, one which runs counter to the present current of cancer pathology, was that whilst in other parts the plain dried tobacco leaf is used, in Travancore the shopkeeper steeps his tobacco in a thick black syrup prepared from a crude sugar, and then spreads the leaves on mats by the roadside to dry. Thus by the time the leaf is used it is a black sticky mass, full of saccharomycetes and other low forms of vegetable life.

There is a well-marked precancerous stage, during which the patient's usual complaint is that he cannot bear his curries as hot as he would like them. The mucous membrane is thickened and glossy, the epithelium readily strips, leaving a very vascular and resilient surface; sometimes it takes the form of leucoplakia. Gradually ulceration occurs, and the growth spreads in depth and extent by one of the routes already referred to. Meanwhile the patient has transferred his quid to the sound cheek, which frequently shows early or well-marked signs of inflammation as the cancer develops on the opposite side. It is practically impossible to persuade any but the most intelligent to give up the habit. Those that have been relieved of their cancer by operation are no sooner home with sound mouths than they forget all advice, and chew as persistently as ever.

OPERATIONS FOR BUCCAL CANCER.

I have records of 209 operations performed for buccal cancer.

Cheek.

In 58 cases the disease was limited to the mucous aspect of the cheek, whilst in 39 it had spread to neighbouring soft parts, so that it was necessary to remove portions of the lip or lips, of the skin of the cheek, or to make dissections behind the jaw. In all but the most limited the cheek was slit to gain free access. In 2 the jaw was fixed and the growth ran so far back into the pterygoid fossa that it could only be extirpated by first removing the corresponding half of the lower jaw. In almost all these cases the submaxillary triangle was cleared of glands and in many the submental and carotid groups also were removed. Of the 97 patients 68 were men and 29 women. Their ages varied from 20 to 67, no fewer than 6 being under 30.

It is impossible to give satisfactory information as to results, for in a country district of India the majority of cases cannot be traced. There was no mortality attaching to the operation, but, of the 97, 29 only were again seen after they had left hospital, and in 15 of these the disease had recurred, whilst 14 were free. In 11 of the 15 the disease had recurred within a year, and in 1 each after two, four, five, and six years. Of the 14 seen free from disease, 6 were seen within one year, 4 within two, 2 within three, and 1 within five years.

A very unpleasant after-result, often seen in the more extensive cases in which the disease had attacked the masseter and internal pterygoid muscles, was a considerable degree of fixation of the lower jaw. In spite of every care this frequently gave great trouble.

Lower Jaw.

In 68 patients the disease had either originated in the lower jaw or, far more frequently, had so involved it as to make removal of a lateral half of that bone necessary, and often with the bone large areas of skin or other neighbouring soft parts. In some cases the horizontal ramus was completely disintegrated. In all cases glands were removed freely; 46 of the patients were males, 22 females. In the earlier years, my only European colleague being a nurse who rendered most valuable assistance, and the native helpers being inexperienced in surgical work of this kind, I found it of the utmost value to perform a preliminary tracheotomy, to plug the throat, and give chloroform through the tube. The tracheotomy tube was sometimes removed immediately after the operation, but usually after an interval of twenty-four hours. In 44 cases a preliminary tracheotomy was done, and in none did it lead to any untoward result. In later years the presence of another European colleague and the increasing ability of the native anaesthetist rendered this step unnecessary in most cases. There was a mortality of 6 in this series of 68 cases, all the fatalities being in females. Three deaths were due to shock, the patients being in a weak state to begin with,

whilst the remaining 3 deaths were due to exhaustion on the fourth or fifth days.

Of the remaining 62 patients, 33 were not seen after they left hospital, 18 were seen with recurrence, and 11 free from disease. In 11 of the 18, disease recurred within the year. Of those seen free from disease, 2 were seen within the year, 1 after fifteen months, 1 after three years, 2 after four years, 2 after seven years, and 3 after eight years. The last 5 were all instances of the more advanced type, in which much skin and soft tissues had been removed with the jaw. One patient remained free for over seven years, and then the disease returned in the alveolar portion of the upper jaw, and that bone was excised by my successor.

Upper Jaw.

The upper jaw was only removed five times for epithelial cancer. In 2 of these the cheek was much involved, and a good deal of skin had to be taken. In 1 the disease ran back so far that the operation had to be left incomplete. There was no mortality, but 2 were seen with recurrence within six months. One remained free for nearly four years, when the disease recurred in the lower jaw, which bone was excised.

Tongue

In 18 cases (17 men, 1 woman) the tongue was primarily affected. In 6 of these the whole organ, and in 12 a lateral half, was removed through the mouth by scissors. In each case the cheek was slit to give free access, and in the earlier cases a preliminary tracheotomy was performed. There was no mortality in this series. It was most difficult to get these patients to submit to a second operation for removal of glands. Their pain and distress were relieved, the glands if enlarged were at that stage painless, and pain is the great factor that brings the Indian patient to consent to operation. Five subsequently came begging for operation, when the glandular recurrence was too extensive to allow of interference; whilst 1 from whom glands on both sides were freely removed, was seen in good health eighteen months later. The other 12 patients were not seen again.

Lips.

In 21 patients the lips were the primary seat of the disease, 5 being women. In 1 the disease was limited to the upper lip, the only case of the kind that I saw. In 7 the disease was extensive, having spread to the upper lip, demanding extensive plastic repair of the mouth. In most of these cases the submaxillary and submental glands were cleared. There was no mortality.

CONCLUSION.

From a survey of the notes of the whole series, one or two points of interest appear.

Of preliminary measures for lessening haemorrhage, the administration of calcium chloride for two or three days before the operation was apparently of distinct value; in cases in which it was given there was certainly less blood lost by oozing from the large wounds made in extensive dissections than in others where the drug was not used. In two very extensive jaw cases the external carotid was first tied when removing glands, but with disappointing results.

Reference has already been made to the value of a preliminary tracheotomy, especially when one is shorthanded for help. Certainly in no case did it cause any trouble. Probably in the moist, warm air of the tropics tracheotomy is a less dangerous proceeding than in colder climates.

The large raw surfaces left in the mouth were sometimes painted with Whitehead's varnish, sometimes with zinc chloride solution. If a large cavity was left, it was usually plugged with iodoform gauze, which was kept in position for twenty-four or forty-eight hours and not reintroduced. From the second day onwards the mouth was well sluiced out with weak antiseptic lotion. Patients were encouraged to take water by the mouth from the evening of the day of operation and liquid nourishment next morning when they were usually able to do so. The feeding was often augmented during the first day or two by normal saline solution given per rectum.

There were no subsequent lung complications in any of the cases, nor was there any serious septic trouble. This was the more surprising because in many cases the mouth from carious teeth and pyorrhoea alveolaris was in a most septic state at the time of operation.

It was impossible to do much beforehand to improve the state of the mouth, for if many preliminary measures were attempted the patient became timid and ran away. If the operation was to be done at all it had in most cases to be done as soon as possible after the patient was first seen.

There was a mortality of 6 in the whole series of 209 operations.

My experience in Southern India agreed with that of most surgeons in other parts of the country in the slight susceptibility of patients to shock. In one case of excision of the tongue, about twelve hours after operation the patient, hearing that some one was meddling with his property, got out of bed, went into the next room secured his belongings, and got back to bed without mishap. In another case, in which the whole tongue was removed with more than the average loss of blood, the patient walked off to his village some miles distant on the fourth day, without asking leave. In an extensive lower jaw excision, in which all the soft tissues of the cheek, except skin, were removed with the jaw, and a mass dissected out from the pterygoid region, the patient was found the same evening sitting up in bed drinking rice-water freely.

ON THE TREATMENT OF FRACTURE OF THE FEMUR IN THE NEWLY-BORN.

BY ROBERT JONES, F.R.C.S.E.,

SURGEON, ROYAL SOUTHERN HOSPITAL AND LIVERPOOL COUNTRY HOSPITAL FOR CHILDREN; LECTURER ON CLINICAL SURGERY, LIVERPOOL UNIVERSITY.

I HAVE treated over twenty cases of fracture of the femora which have occurred during delivery, and many cases some weeks older where malunion had resulted from one or other cause. In some of the cases which had not ended well the treatment had been conducted by very excellent surgeons, with appliances, however, which they admitted were not suitable. A newly born baby with a broken thigh requires a great deal of management, and a splint is all but useless, which is not easily and surely retained, or which does not allow the child to be moved, fed, and washed without in any way affecting the fracture. Surgical textbooks are singularly silent about this injury, and the splints recommended for older children are hopeless for small babies. The fact that surgeons experienced difficulty in dealing with this fracture was further impressed upon me by a radiograph I saw the other day, where a simple fracture had been operated upon and the fragments fixed by metal. A short time ago Dr. Robins, of Richmond, Virginia, wrote an article on this subject,[1] and described a splint which he had moulded to the body, thigh, and leg and which gave him an admirable result. The splint, however, seemed to me unnecessarily cumbersome, as it fixed the hip and did not allow of very effective traction. I venture, therefore, to describe a very simple method which I have employed in all my cases, and which completely governs the fractured ends, and allows of free movement of the hip.

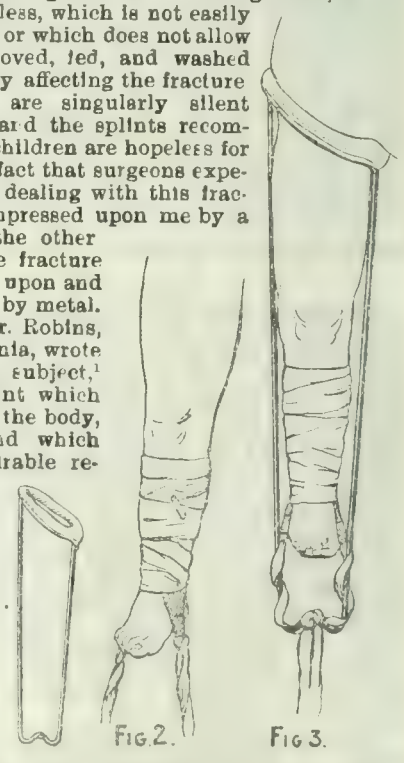


FIG 1. FIG 2. FIG 3.

Of 26 cases of delivery fracture, 18 occurred in the upper third of the femur, 16 of them being at the junction with the middle third; 7 occurred in the middle third, and 3 in the lower third. Six cases being some weeks old, I rectified the deformity by manual osteoclasis.

The treatment consisted in applying a Thomas's knee splint with extension as shown in the diagrams. Extension plasters are applied to the leg below the fracture, and the limb is passed through the ring, which encircles the thigh at the groin, and which is padded over with felt, leather, and impervious oilskin. The thigh is pulled, and the extension is maintained by the plasters which are affixed



Fig 4

to the lower end of the splint (Figs. 3, 4). A bandage is placed round the limb, and no further treatment is needed than now and again to extend the limb by pulling at the plasters. The little patient can be carried, nursed, left to play on the floor, and no displacement of fragments is possible. It can be applied easily in five minutes, whether the child struggles or not, and an anaesthetic is never needed. (Figs. 1, 2, 3, 4.)

REFERENCE.

1 Fracture in Forcible Delivery, with the Presentation of a Splint. *Surgery, Gynaecology, and Obstetrics*, February, 1908.

PLASTIC RESECTION OF THE BREAST AND ITS BEARING ON THE PRELIMINARY INCISION OF BREAST TUMOURS.*

BY C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.

TWENTY FIVE years ago Thomas removed adenomata of the breast by enucleating the tumours through the deep surface of the mammary gland, which was exposed by turning up the breast by a curved incision along the line of junction of the lower edge of the breast and the chest wall. He made no attempt to suture the cavity left by the enucleation of the tumour, and in the case of a cavity in the upper part of the breast the distance from the skin incision would render suturing most difficult. Neither is it an easy matter to obliterate a more or less spherical cavity whose walls are composed of breast tissue. Consequently, after the removal of an adenoma of any size, Thomas's operation resulted in a considerable falling in of the skin over the site of the tumour.

Collins Warren has made a happy improvement on Thomas's operation.[1] He found that an incision made along the outer edge of the breast, and where necessary prolonged along the under-surface of the anterior axillary fold, gave very complete access to the deep surface of the most remote regions of the breast and resulted in an inconspicuous scar. He does not enucleate the tumour, but excises the segment of breast in which the tumour lies and reconstructs the breast by suturing together the edges of the wedge-shaped gap.

At a recent meeting of the Plymouth Medical Society I demonstrated a patient in whom I had removed, in November, 1907, for persistent mastitis, from the upper and inner quadrant of the breast—the region which is least accessible, and which for the wearing of evening dress is most important—a wedge of breast tissue by Warren's method. The result, in spite of the formation of a retro-mammary haematoma which became infected, was really very fair. Four months after operation the breast was in its natural position, the skin over the resected area was normal, showed no depression and only a slight suspicion of flattening.

This method exposes all the deep surface of the breast and enables the surgeon to incise, on its deep surface, a tumour situated in any region of the mammary gland. If the tumour proves to be malignant, the cut surface of the tumour and adjacent breast tissue is cauterized, in order to minimize the risk of dissemination of cancer cells. A pad of gauze is packed between the breast and the greater pectoral muscle, and the breast, turned down into its natural position, is sutured to the greater pectoral muscle. A fresh set of gloves and instruments is taken, and the radical operation for cancer is performed in the usual manner. If the tumour prove to be innocent the procedure is as follows: The segment of breast tissue containing the tumour is excised. The wedge-shaped piece removed consists of the whole thickness of the breast, care being taken not to remove any of the subcutaneous fat. After ligature of every bleeding point, the contour of the breast is reconstructed by two layers of interrupted catgut sutures. The first layer, including the subcutaneous fat, but not the skin, approximates the superficial portions of the divided breast tissue. This layer produces wrinkling of the skin, which disappears when the sutures have been absorbed. The second layer approximates the sides of the deep portion of the wedge-shaped gap. The breast is then turned down into its natural position, and is attached by a third layer of sutures to the edge of the greater pectoral muscle. A fourth layer of sutures closes the connective tissue immediately beneath the skin incision, which is closed by sutures of either silk, linen thread, or silkworm gut. The breast is compressed by firm bandaging over the dressings.

Warren only employs drainage, which is made through the lowest part of the skin incision, in cases known to be infected, as in abscess. In the case referred to above Warren's advice as to omitting drainage was followed, and in spite of elaborate haemostasis by ligatures, followed by firm bandaging, a haematoma resulted.

In view of the extensive area involved in the dissection it is probably safer in every case to drain the retro-mammary tissues for twenty-four hours by a tube passed from the lowest part of the skin incision to the deep surface of the sutured area of the breast.

The skin over the lower portion of the breast in the case mentioned, its nerve supply being cut off, was rendered at first almost completely anaesthetic. Four months after operation this anaesthesia had almost disappeared.

CONCLUSIONS.

1. Every breast tumour should be incised prior to its removal. The surgeon who, in performing a radical operation for supposed malignant disease of the breast, neglects the elementary precaution of incising the tumour as a means of either confirming or disproving the diagnosis, runs the risk of finding himself in the unenviable position of having performed Halsted's or some equally extensive operation for a simple tumour such as an adenoma or abscess.

2. The exploratory incision should not be made through the skin which overlies the tumour. An incision made into the tumour through the overlying skin, in the event of the tumour proving non malignant and needing only local removal, results to a certainty in a scar and probably in a depression. This scar, or scar *plus* depression, if

* Read before the South-Western Branch of the British Medical Association on April 15th, 1908.

situated in the upper half of the breast, interferes with the wearing of a low-necked dress.

3. For exploration of, and if innocent for removal of, tumours situated in the upper hemisphere of the breast the incision and method of Collins Warren should be employed, because, in the event of the tumour proving innocent and needing simply local removal, this method prevents a disfigurement which, to a sensitive patient, is distressing and, surgically, is unnecessary.

REFERENCE.
1 *Annals of Surgery*, June, 1907.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

ON ATROPHY OF THE PROSTATE AND ON MEASURING THE LENGTH OF THE URETHRA.

I SAW two cases recently of disseminated spinal sclerosis, accompanied by prostatic atrophy, and would much like to know if neurologists have noticed this. Both patients were middle-aged men. No trace of prostate could be felt in either; in both impotency and partial urinary retention existed, and in both also a catheter drew off the urine when passed 7 in. exactly. I say "exactly" because I wish to point out the inexact means usually adopted for measuring the urethra. This passage may vary in length fully an inch in the same person according to the degree the anterior part is stretched over the instrument used, and this is important since knowledge of length accurately determined is a valuable aid in the diagnosis of prostatic alterations, and in the retention of catheters. Personally I always measure not only the anterior urethra, but the degree the penis is stretched; this entails no trouble. The length of the former deducted from the length of the catheter required to "tap" the urine shows, of course, the length of the deep urethra—the only measurement worth knowing. Finally, the proper way to drain the bladder by the urethra is not only to pass the catheter just the proper distance, but to pass it with its eye facing the trigone. Other things being equal there will be no leakage and little irritation.

JAMES MACMUNN.

LARGE THYMUS: SUDDEN DEATH.

ON the last voyage from New York to the Mediterranean with about two thousand passengers on board, I had a case which might be of interest to readers of the BRITISH MEDICAL JOURNAL. One morning at 5 o'clock I was called to attend a child in the steerage that was said to be dying. A few minutes later I found a stewardess holding the child in her arms, and the parents and others standing around weeping. The child was dead, and as nothing had been said to me the previous day regarding it, I naturally suspected that the mother had overlain it. I made inquiries and gathered the following particulars: Parents Austrian, above the average peasant intelligence, and apparently healthy. One other child died about a year previously, aged 6 months, cause unknown, but also very sudden. This second child was a male, 3 months old, born in America, and with no history of illnesses. On the previous evening it was quite well, and took its milk as usual at 8 p.m., when it was put to sleep in its baby carriage, in the same room as the parents. When the latter retired at 10 p.m. it was sleeping quietly, and was all right at 1 a.m., when the mother woke up. About 5 a.m. the father rose up and looked into the baby carriage, when he noticed the child's eyes turning up, and before I could be called there was a spasm, and immediately afterwards it lay still, death having apparently taken place at that moment. I made a *post mortem* examination and found the body to be well developed, well nourished, and quite normal in appearance. On opening the thorax I found a very large thymus gland, extending nearly the whole length of the sternum and adherent to the pericardium and to the pleura on both sides. It extended backwards to the vertebrae and seemed to occupy a large part of the thorax. The heart and lungs were healthy, but displaced by the enlarged thymus. The liver was much enlarged and the spleen enlarged. The stomach and intestines were normal. The left kidney was somewhat enlarged, and both suprarenals were enlarged. The thyroid gland was slightly larger than normal. The brain was rather soft, [illegible] effusion on the cortex. The pineal gland was [illegible]. Death was probably due to pressure on the vagus by the enlarged thymus.

Naples. DAVID D. F. MACINTYRE, M.B., Ch.B.Glasg., Surgeon, Cunard R.M.S. *Carpathia*.

ACUTE FAECAL IMPACTION IN THE RECTUM.

WITH reference to the case reported by Dr. W. M. Robson in the BRITISH MEDICAL JOURNAL of May 2nd, p. 1041, the following cases may be of interest:

CASE I.—A little shrivelled old woman was admitted to the Royal Infirmary, Liverpool, a few years ago, when I was house-physician to Dr. Richard Caton. Apart from great emaciation and apathy amounting almost to dementia, she appeared to have no special disease. Inspection of the abdomen showed visible peristalsis, and this was taken to point to chronic intestinal obstruction. The patient took very little nourishment. Examination of the rectum revealed a large rounded faecal mass, blocking the anus like a ball valve, but allowing the passage of liquid faeces to a certain extent. I removed the mass piecemeal with my fingers.

CASE II, of which I have no notes, was that of an infant in ordinary health, and from 12 to 18 months old. The procedure was similar to that in the preceding case.

CASE III, a well-built man about 24, with a mitral systolic bruit, had a slight haemoptysis, and was, therefore, kept in bed, very still, and fed upon milk. One night I was sent for because he was in pain and could not defaecate, in spite of aperient medicine and a desire to do so. I found the rectum filled with a ball of faeces like stiff clay, which the bowel was quite unable to manage or the anus to pass. I removed this as in the other cases, the operation causing considerable pain. The lump was almost as big as a fetal head, and the expulsion of the mass with assistance much resembled the act of parturition. The patient had been taking calcium chloride, and this drug was probably one of the chief causes of the condition, by forming a dry calcareous motion. In none of the cases was there excessive loss of fluid, either by diarrhoea or haemorrhage; nor was there rectal feeding, as in Dr. Robson's cases, but no doubt there was insufficient attention to the intake of water, a point to be remembered in the prevention of the condition.

Liscard. SEYMOUR W. DAVIES, M.B., Ch.B.Vict.

HYDROGEN PEROXIDE IN PUERPERAL SEPSIS.

IN view of Dr. Knyvett Gordon's paper on the treatment of puerperal fever, and Dr. Hovenden's note on the use of hydrogen peroxide in septic conditions, the following case may be of interest: I was called on the fourteenth day to see a puerperal woman who had been attended by a midwife. The pulse was 140, the temperature 104°; there was great pelvic pain and tenderness, and pus was seen oozing copiously through the os uteri. I curetted at once, then swabbed the uterine cavity thoroughly with pure lysol, and inserted a large double wick of sal alembroth gauze soaked in 1 per cent. lysol (removed next day). In a few hours there was considerable improvement. The pulse fell to 98, the temperature to 103°, and pain and tenderness almost disappeared. In two days, however, she became as bad as when first seen—or indeed worse. I again swabbed out the uterus, this time using hydrogen peroxide solution (10 vols.) and draining with sterile iodoform gauze soaked in the solution. The effect was most striking. In three hours the temperature fell from 104.2° to 100°, the pain vanished, and she looked like a different woman. When the gauze had been in the uterus for twenty four hours she had a sudden rise of temperature to 104°, and pulse to 120; but this was apparently due to the gauze ceasing to act as a drain and becoming a plug, for on its removal the temperature fell to 98° and the pulse to 80, and recovery proceeded smoothly. It should perhaps be mentioned that before each uterine manipulation an attempt was made to discourage the vaginal germs by means of mercurial douches given with sterile apparatus. Fowler's position was employed throughout. The point that seemed noteworthy in this case was the marked superiority of the hydrogen peroxide over the pure lysol, both being used under practically identical conditions in the same patient.

Newcastle-upon-Tyne. V. T. CARRUTHERS, Lieut., R.A.M.C.

REVIEWS.

DISEASES OF THE HEART.

A PROMINENT place among the volumes of Nothnagel's *Encyclopaedia of Practical Medicine* must be accorded to the latest addition to the series on the subject of *Diseases of the Heart*.[1] A portly volume, handsomely prepared, presents in an English dress the comprehensive monographs written by Professor von Jürgensen of Tübingen, Dr. L. Krehl of Greifswald, and the late Professor L. von Schroetter of Vienna. These have been edited, with additions, by Dr. GEORGE DOCK, of the University of Michigan, the authorized translation from the German being carried out under the supervision of Dr. STENGEL of the University of Pennsylvania. The preparation of so large a work must have extended over a considerable period of time, and some of the sections bear evidence of age, but the additions by the editor, clearly indicated in the text, have supplied the more modern views whenever they appeared to be lacking.

The contributions of Professor von Jürgensen deal with cardiac insufficiency, with endocarditis, and with valvular disease. The first of these he regards as entirely dependent upon the muscular activity of the heart, and not upon its nervous supply. He believes that the organ possesses a far larger reserve of muscular force than is generally conceded to it, and points out how the nutrition of the heart muscle may be impaired by prolonged demand upon this reserve. The various causes of insufficiency, whether from mechanical interference with regular action or from causes preventing the heart from receiving the amount of blood necessary for its work, are examined at considerable length and in close detail, many illustrative cases being quoted. The whole article is of the nature of a critical treatise, and may be read with interest by all who have the leisure to compare the clinical observations and speculations of the various workers, mainly in Germany, who have published their respective views of late years.

In dealing with endocarditis, von Jürgensen declares his preference for a wider view of inflammatory heart disease, holding that the term "pancarditis" should be the diagnostic expression, and that pericarditis, endocarditis, and myocarditis should be regarded only as local manifestations of a general disease. Endocarditis never occurs alone: it is always a part of a general infection, and either valvular incompetence or muscular weakness will surely accompany it. "The clinical picture of endocarditis is extremely variable," and in spite of the enormous amount of labour expended on the clinical and experimental study of the disease we are still without an acceptable explanation of many of the varieties met with. Particularly is this the case with regard to temperature. "There is no type of fever which may not occur in this disease." We can at present only study the conditions under which each variety is found and the many cases and temperature charts here cited may help to elucidate some of these problems.

Perusal of the work and of the numerous cases quoted in it will bring home to the reader the innumerable difficulties that present themselves in the way of any approach to accuracy in observation, or certainty in conclusion, when dealing with heart disease. The textbook, with its terse statement of possibilities, carries some amount of conviction with it, especially to the inexperienced reader, but a treatise such as this, recording the careful observations and deliberately formed opinions of many experienced men, reveals the fact that in every case of heart disease the variations are so great and the disturbance of other systems so complex that for all practical purposes we must still be guided by the teachings of individual experience, and that at the best our powers, both of diagnosis and treatment, are limited. Dr. Jürgensen's style of writing does not add any attraction to his work from the literary point of view. Interesting as it is, one cannot repress the feeling that all that is really known about heart diseases could be as well expressed in 80 as in 800 pages, but there is hardly a single point with respect to these morbid conditions which has not been made the subject of controversy between equally skilled observers. Hence an enormous bibliography can be cited for reference, and as in the treatment of disease the curability is in inverse proportion to the number of suggested remedies, so in medical literature would seem to be the relation between our actual knowledge and the number of works in which it is set forth.

Passing to the sections of the present work contributed by Dr. Krehl of Greifswald, we find a somewhat more practical handling of some of the same subjects, more definitely classified, and hence more easy of reference. Treatment comes in for a greater share of attention, and it may be noted that less prominence is given to the Nauheim methods than is usually the case. In the concluding section the matured thoughts of the late Professor von Schroetter on the subject of pericardial diseases find due expression and will be read with melancholy interest, as being among the last contributions of a much respected teacher.

The whole work may be described as an admirable work of reference for the student of contemporary controversy. It is too large and lacks the systematic arrangement necessary for the busy practitioner. A book for his library, but not for his consulting room.

[1] *Nothnagel's Practice: Diseases of the Heart.* By Professor Th. von Jürgensen of Tübingen Professor L. von Schroetter of Vienna, and Professor L. Krehl of Greifswald. Edited, with additions, by George Dock, M.D., University of Michigan; and translated under the editorial supervision of Alfred Stengel, M.D., of Pennsylvania University. Philadelphia and London: W. B. Saunders Company. 1908. (Roy. 8vo, pp. 1000. 21s.)

THE COMPARATIVE ANATOMY OF THE LABYRINTH.

THE second volume of Dr. GRAY'S comprehensive monograph on the *Labyrinth of Animals*[2] contains the remainder of his observations on mammals and an account of his investigations of the labyrinths of birds, reptiles, and amphibia. Like the preceding volume, it is profusely illustrated with excellent stereoscopic photographs of the beautiful casts of labyrinths obtained by the method which Dr. Gray has so carefully elaborated and so successfully employed. The number of avian, reptilian, and amphibian labyrinths which Dr. Gray has worked upon is less than was the case in the mammalian section, and his examples of reptilian and amphibian labyrinths are comparatively few, more especially because the method he employs cannot be used successfully with very small specimens; for this reason the material available is much reduced, and it is not easily obtained. In spite, however, of the comparative paucity of examples of the labyrinths of the lower forms, the results which Dr. Gray has secured are not less interesting and important than those disclosed by the more extensive observations on mammals. One of the fundamental points emphasized by the inquiry is the continual advance of the cochlea after its first evolution in the lower forms. The author lays so much stress upon this that he is inclined to take the degree of development of the cochlea as a fair indication of the extent to which a given animal has departed from the original type. Keeping this point in mind, it is interesting to note that the cochlea of ornithorhynchus is devoid of whorls, or at the most shows a slight inclination to coil; thus in outward appearance it is more reptilian than the cochlea of any other mammal examined. Dr. Gray found no very primitive cochlea amongst the marsupials he examined; even in the marsupial mole the cochlea has one and a half coils, and from the present point of view it is not more primitive than the cochlea of the hedgehog or dugong. Apparently, however, the polyprotodont marsupials have more primitive cochleae than the diprotodonts, which is a further justification for considering the former order as the more ancient. This brief notice of an important and interesting book may close with a reference to the fact that Dr Gray vigorously opposes the very frequently expressed opinion that the labyrinth of birds resembles that of reptiles. He admits that it is true that the labyrinth of birds resembles that of reptiles more than that of mammals, but he insists that typical labyrinths of birds and reptiles "are as unlike one another as it is possible for two labyrinths to be," one of the chief differences being the smallness of the vestibule in birds and its relatively great size in reptiles. The reader may not agree with all Dr. Gray's opinions, but the book is sure of a cordial welcome from all who are interested in the anatomy of the internal ear.

[2] *The Labyrinth of Animals.* By A. A. Gray, M.D., F.R.S.E. Vol. ii. London: J. and A. Churchill. 1908. (Cr. 4to, pp. 266, 48 stereoscopic photographs. 25s.)

TUBERCULOSIS.

NOT the least useful of the Oxford Medical Publications is the little book on *Diets in Tuberculosis* which has been written by Dr. BARDSWELL, Medical Superintendent of King Edward VII Sanatorium, with the assistance of Mr. J. E. CHAPMAN, Medical Superintendent of Coppin's Green Sanatorium.[3] Its object is to show how the great obstacle to sanatorium treatment—the cost—can be reduced by judicious economy in diet. A table shows the wide variation in the daily cost of the patient's food, ranging from 11.5 pence at the Royal Hospital in the City Road to 31.5 pence at the Royal National Hospital for Consumption in Ireland. As the result of experiments and observations, for which we must refer readers to the book itself, they have arranged a diet which costs 10.6 pence a day, but it is possible to provide equally nutritious food for 8.0 pence a day by substituting separated milk and margarine for whole milk and butter. They condemn the "stuffing" system originally in fashion as loading the body with superfluous fat without conferring any corresponding advantage, and they show that a meat-free diet in which milk and eggs are employed and the necessary amount of proteid is made up by the use of pulses gives most satisfactory results in early cases; but for general use they recommend a diet in which meat constitutes 70 per cent. of the proteid. The basis for a consumptive diet is the proper physiological diet for a person of the normal weight of the patient on slight muscular work—that is, 34 calories per kilogram, *plus* 30 per cent. in total calories, and 30 per cent. of proteid value; thus if the total calories of the physiological diet are 2,400, they must be raised to 3,100; and if the proteids are 120 they must be increased to 156. The authors are strongly of opinion that the proportion of proteid should be as high as 150 grams, with a considerable allowance of fat (115 grams). Readers will find in this book the exact information they require for arranging the diet of consumptive patients when treated either in institutions or in their own homes.

The collection of rules by which the consumptive undergoing "the cure" must regulate his daily life made by Dr. WARREN CROWE,[4] in his volume, *Consumption: Treatment at Home and Rules for Living*, should prove—and apparently has already proved—useful to the patient, whether at a sanatorium or at home. By means of this little book he can remind himself of what he has to do, and obtain an explanation of the reason for each rule. The rules generally are what are needed, such modifications as may be necessary in individual cases can easily be added by the doctor on the blank pages bound in at the end of the book for this purpose. The explanations are for the most part good, though here and there there is room for criticism. The patient is told (Rule XVII): "If the B temperature—that is, that taken *immediately* [the italics are ours] after exercise—is over 100.4°, rest all the afternoon," and is referred to the temperature chart of a normal man at the end of the book. On this he will see that the healthy man's temperature generally rises to nearly this height after exercise, and may rise to 101°: with the explanations furnished in this book the lay reader will have difficulty in seeing what difference there is between the chart of the healthy man and that of the consumptive. The arrangement of the letterpress would, in our opinion, be improved if the explanation of a rule were made in all cases to follow the rule to which it refers. Another edition of so useful a little book is likely soon to be called for, when the above suggestion may be considered.

Little justification is needed for devoting a treatise entirely to the consideration of the pathology, symptoms, and treatment of tuberculosis of abdominal organs. Mr. A. E. MAYLARD'S work on *Abdominal Tuberculosis*[5] will be welcomed as much for the practical knowledge of abdominal surgery, which gives special value to the sections on treatment, as for the large amount of information on the general subject which he has brought together in this volume. A special feature of the book, and one which adds to its interest, is the collection of photographs from typical specimens with which the text is freely illustrated. The museums of most of the large London hospitals have been drawn upon for specimens, and the photographs are exceedingly clear. The introductory chapter, containing general remarks on tuberculosis, loses somewhat in force from the fact that after it was written the author saw reason to modify his views as to the causation of tuberculosis in the human subject. Instead of rewriting the chapter, he has left his original statements and added a further page and a half, giving an entirely different view, and leaving the reader in a difficulty as to what he is intended to understand after all. The book deals in order with tuberculosis of the stomach, of the small and large intestine respectively, the vermiform appendix, abdominal glands, liver, spleen, pancreas, the female generative organs, and the peritoneum, each section being discussed under etiology, pathology, symptoms, and treatment. Illustrative cases, mostly from the author's personal experience, give additional interest to the descriptions of the disease under review or serve to emphasize special points of importance. The references to other authors are many, and each chapter ends with a list of writers referred to in the text. A final chapter on the general and prophylactic treatment of tuberculosis is written by Dr. Walter K. Hunter, and gives a good sketch of the serum and vaccine treatment of the disease, as well as of the general hygienic management of the patient.

With so many excellent books on the subject of consumption and its treatment we look for special characteristics which may raise a book above the common level before we prefer a writer living under conditions which are not those of our own country. The work of Dr. F. M. POTTENGER on the *Diagnosis and Treatment of Pulmonary Tuberculosis*,[6] though an excellent summary of knowledge of the subject written by one who has practical experience, does not appear to have any exceptional characteristics which will particularly recommend it to English students. The book is well printed on good paper, in clear type and with some useful illustrations and charts, and is worthy of being classed amongst the reliable textbooks on the diagnosis and treatment of pulmonary tuberculosis. One novelty is the author's description of what he terms "elastic tube percussion." In this method, instead of using a percussion hammer or finger with which to percuss, a piece of rubber tubing 4 or 5 in. long is used, the stroke being delivered directly upon the surface of the chest. We have tried this method of percussion, but without experiencing the advantages claimed by the author.

THE SPUTUM.

THE examination of the sputum for clinical purposes rarely extends beyond a general survey of the colour and appearance, with a microscopical examination for the presence of certain bacteria. Dr. DE JONG has, however, made a somewhat exhaustive histo-chemical and cytological examination of the expectoration in various diseased conditions of the respiratory organs,[7] and the results are interesting even if his methods are not likely to be adopted immediately for ordinary clinical investigation. According to the author, we must look upon the sputum not as a mere collection of detritus and dead matter, but as containing cellular elements which differ under different conditions of disease, and may, like the cellular elements in pleural and meningeal effusions, possess some definite diagnostic significance. The technique of the more thorough examination of the sputum presents certain difficulties, and the first part of the work under consideration deals with these technical difficulties and the way in which they may be obviated. Then follows a description of the cell elements found in the sputum, according to their seat of origin—pharyngeal, bronchial, and pulmonary—giving their characteristic peculiarities of structure, appearance, and staining. Blood elements are occasionally present in the expectoration,

[3] Oxford Medical Publications. *Diets in Tuberculosis: Principles and Economics.* By Noel Dean Bardswell, M.D., M.R.C.P., F.R.S.Edin., and John Chapman, M.R.C.S., L.R.C.P. London: H. Frowde, and Hodder and Stoughton. 1908. (Post 8vo, pp. 192. 6s.)

[4] *Consumption: Treatment at Home and Rules for Living.* By H. Warren Crowe, M.D. Oxon. Second edition. Bristol: J. Wright and Co., and London: Simpkin and Co. 1907. (Fcap. 8vo. pp. 36. 1s.)

[5] *Abdominal Tuberculosis.* By A. Ernest Maylard, M.B., B.S. Lond. London: J. and A. Churchill. 1908. (Roy. 8vo, pp. 376. 12s. 6d.)

[6] *The Diagnosis and Treatment of Pulmonary Tuberculosis.* By Francis M. Pottenger, A.M., M.D., Monrovia, California. London: Baillière, Tindall and Cox. 1908. (Roy 8vo, pp. 391; 42 illustrations. 15s.)

[7] *Etude Histo-Chimique et Cytologique des Crachats* [A Histo-Chemical and Cytological Study of the Sputa]. By Dr. S. Israëls de Jong. Paris: G. Steinheil. 1907. (Roy. 8vo, pp. 160.)

and we have therefore a description of the various forms of leucocytes and the changes which may be noted in them when found in the sputa. The mucus and its peculiarities are also discussed. The third part of the volume is devoted to the study of the phlegm in various diseases of the respiratory apparatus, and to the majority of readers this will prove the most interesting section. The fundamental basis of the expectoration is either mucus or, more rarely, a sero-albuminous substance identical with that forming sero-fibrinous exudates of the pleura or peritoneum. The cellular elements are derived from the blood or from the respiratory tract, and these are frequently found to have undergone some form of degenerative change. The distinctive characteristics of the phlegm in each of the more common diseases of the respiratory tract are given in detail. There is a good bibliography and some excellent coloured plates showing the microscopic appearance of stained sputum in various diseases. The author considers that the histo-chemical and cytological study of the sputum, if only because it furnishes to some extent a relatively faithful reflection of the anatomical lesion of the region affected, gives important indications in practice and forms an interesting contribution to the nosography of pulmonary affections. Certainly Dr. de Jong's researches and careful work have added to our knowledge of this subject.

ANATOMY.

In the contents of the third volume of Dr. SOBOTTA'S *Atlas and Textbook of Human Anatomy*,[8] edited by Professor J. P. MCMURRICH, are included illustrations and descriptions of the arteries, veins, lymphatics, the nervous system, the sense organs and the integument, together with an appendix which contains a few remarks upon the delimitation of the various regions of the human body and an outline sketch of the main features of its development. The text of this English edition is more extensive and complete than that which appeared in the German edition, and apparently it is a combination of the original explanations and the more extended descriptions of the German *Grundriss*, which was published separately. The author's desire to supply an atlas useful to medical students and medical practitioners is well attained, for the figures will enable students to recognize the structures displayed in their own dissections, and will serve to recall to the practitioner, who cannot easily obtain access to freshly-dissected bodies, the more important details of the various regions of the body. The views of the different regions and organs are well chosen, and, on the whole, well executed, though some are so stiff that they suggest reproductions of models or casts. Evidently great care has been taken to avoid error and to keep the relative proportions correct; yet, here and there, incorrect impressions are produced, fortunately, however, only with regard to relationships of minor importance. Both the author and translator are to be congratulated upon the results of their work, which will undoubtedly be welcomed by those for whom it is intended, for the text of the translation is concise and lucid, and the names of the structures mentioned are placed on the plates at the ends of the pointing lines of the figures; consequently reference to any individual structure is easily and readily made.

Dr. W. F. CAMPBELL'S *Textbook of Surgical Anatomy*[9] differs in no essential respects from other textbooks on surgical anatomy which have preceded it. It has no particularly outstanding features to commend it above other books on the same subject, though the material used is of course arranged and dealt with in a somewhat different manner. The author is convinced that it is impossible for any teacher to impart, or student to assimilate, all the details of anatomy, and his object has been to select those having a practical bearing and a special interest for the surgeon. There must, of course, be differences of opinion as to what is and what is not essential, and we do not think that Dr. Campbell has erred by including too much material as essential. Many of the figures used for illustration are good, but some do not represent quite correctly the average conditions met with in the human body, and in one or two places the text is not strictly accurate. A particularly striking example of the latter fault is found on page 177, where it is stated that "the thyro-hyoid bursa is a serous cavity between the thyro-hyoid membrane behind, *and the thyro-hyoid muscle in front*."

[8] *Atlas and Textbook of Human Anatomy.* By Dr. J. Sobotta. Edited by J. P. McMurrich, A.M., Ph.D. Vol. iii. Philadelphia and London: W. B. Saunders Co. 1907. (Crown 4to, pp. 250; 297 illustrations. 25s.)

[9] *A Textbook of Surgical Anatomy.* By W. F. Campbell, M.D. Philadelphia and London: W. B. Saunders and Co. (Med. 8vo, pp. 509; 325 illustrations. 21s.)

GONORRHOEA.

THE book on *Gonorrhoea: its Diagnosis and Treatment*, by Dr. F. BAUMANN, of Chicago,[10] is founded on the teaching of Oberlaender and of Kollmann, and it contains a very good and clear account of the views held by those well-known authorities on diseases of the genito-urinary organs. As it is laid down that every case of chronic gonorrhoea is a stricture, it is not to be wondered at that the treatment recommended, in addition to irrigation, consists chiefly in the careful application of a system of graduated dilatation. This is carried out by means of Kollmann's elaborate instruments, and regulated according to the pathological changes present in the urethra as revealed by the urethroscope in each case. The drugs used for irrigation in different cases are potassium permanganate, which is said to be the best oxidizing antiseptic, zinc sulphate, and silver nitrate. Nitric acid in 1 in 6,000 to 1 in 3,000 aqueous solution is also said to be a good oxidizing antiseptic. As regards the organic silver compounds, protargol and argyrol, Dr. Baumann is of opinion that their only merit is that they contain a large quantity of chemically inert silver, and that a physician who is familiar with the pathology of his cases and who is in a position to make a correct diagnosis will do better not to use these or similar preparations.

Dr. ROUCAYROL'S historical account of urethritis is made up of quotations from, and remarks on, the works of a considerable number of writers, beginning with Moses and ending with Neisser.[11] The period since Neisser's discovery of the gonococcus in 1879 is to be dealt with in another book. Stress is justly laid on the importance in historical work of precision in the matter of references; but the English authors whose writings are quoted by Dr. Roucayrol seem to be known to him only through translations, and he rather mixes up the two Hunters. We are told, too, in one place that John Hunter's treatise on the venereal disease appeared in 1750, and on another page it is referred to as having just appeared in 1790. The correct date, of course, is 1786. The book contains some pictures of ancient instruments used for the urethra, and will be of use to those who are interested in tracing the history of gonorrhoea.

BACTERIOLOGY.

DR. GEORGES ROSENTHAL has given an interesting account of the adaptation of anaërobic microbes to aërobic conditions.[12] He tells us that with several species of anaërobic bacteria he has been able to effect this transformation in various ways. One of his methods is to start the growth of the anaërobe at the bottom of a deep column of liquid medium, and thence to make a series of subcultures in tubes containing progressively diminishing depths of the column of liquid. The final result is the production of an organism which grows freely under aërobic conditions. The process of modification is divided by the author into three stages. During the first the organism preserves its specific biological, chemical, and pathogenic attributes; during the second there is a progressive loss of these characteristics, but it is possible to restore them by returning to anaërobic cultivation; when the third stage has been reached the original specific properties of the organism are definitely lost. In the case of pathogenic organisms the process of transformation is accompanied by a progressive loss of virulence; this circumstance encourages the author in the hope that his attenuated strains may be usefully employed as vaccines, and that the establishment of immunity against

[10] *Gonorrhoea: its Diagnosis and Treatment.* By F. Baumann, Ph.D., M.D. London: S. Appleton. 1908. (Demy 8vo, pp. 218, 52 illustrations. 6s.)

[11] *Considérations historiques sur la blennorragie.* Par le Dr. E. Roucayrol. Paris: G. Steinheil. 1907. (Pp. 244, 1 plate, 38 illustrations in the text.)

[12] *L'aérobication des microbes anaérobies.* Par Dr. Georges Rosenthal. Paris: Félix Alcan. 1908. (Roy. 8vo, pp. 108, 2 plates. Fr. 5.)

the original virus will result from their employment. The bacillus of tetanus is one of the organisms with which Dr. Rosenthal has been making experiments, and if his sanguine expectations prove capable of realization the result will certainly be of high therapeutic value. But his work needs independent corroboration, and we are not prepared, at present, to express any opinion as to its merits.

In his book on the pseudo-acid-fast bacilli,[13] Dr. ANDRÉ PHILIBERT divides the bacilli which resist decolorization by mineral acids into two groups. In the first he places the tubercle bacilli and the various acid-fast bacilli, found in milk, butter, grain, etc., which he regards as biologically related to the tubercle bacillus. The second group comprises the "pseudo" acid-fast bacilli which are of common occurrence in smegma, urine, and many other varieties of material which the clinical pathologist has to examine. The distinguishing feature of this second group is that the bacilli belonging to it are more rapidly decolorized by strong mineral acid and by alcohol than the bacillus of Koch. This observation can hardly be regarded as a new discovery; but the author's detailed descriptions of bacilli belonging to this second group which are encountered in the clinical laboratory serves a useful purpose.

NOTES ON BOOKS.

MR. P. TURNER'S small *Pocket Osteology*[14] consists of a series of short notes upon bones, and is intended to meet a want for a "small compact book dealing with osteology." Any average student will be able to provide himself with a more complete, correct and useful series of notes if he will endeavour to condense the descriptions of bones given in any good textbook which he may possess, and if he will revise his condensed notes with the aid of his own dissections and the specimens in the school to which he belongs.

For those who can find such *Aids to Memory* useful, that for *First Aid Students*, drawn up by Dr. L. M. FRANK CHRISTIAN,[15] may be recommended. Such aids are necessarily sketchy and disconnected, and do not appeal to all. The danger of such books in a general way is that they may be used for cramming up a subject and enabling the unfit to pass an examination. This volume will, however, hardly be used for such a purpose, since, without a previous knowledge of the subject, it would be unintelligible. It will probably be acceptable to those who, having learned first aid, wish for a small book which can be carried in the pocket from which they can rapidly refresh their memory in an emergency.

Of making nursing manuals there seems to be no end. Nor does it appear to be a difficult form of composition, as most of these volumes, if very similar to each other, are excellent. The thing to be aimed at in a nursing manual is completeness in detail, with due compression and clearness of presentation. The thing to be avoided is the inclusion of matters outside the nurse's scope. *Home Nursing and Hygiene*,[16] by FLORENCE HUPTON-WINDUST, is well up to the average in these respects, and has the advantage of being considerably shorter than most of its competitors. It is specially addressed to those who wish to know what to do in a sick-room without intending to take up nursing as a profession, but as a manual for probationers it will also be found practical and useful.

The Lungs in Health and Disease[17] is a translation of a popular German treatise, written at a time when hygienic teaching, as applied to respiration and lung disease, was novel, and comparatively few, either amongst the medical profession or the public, realized its importance. It must have been of great value in the pioneer work of educating the public, but it is now somewhat out of date; many of the statements would not pass without criticism, and much of the physiological section appears to be more popular than accurate. The chapter on breath gymnastics seems to be based on the statements of a gymnastic instructor, which are occasionally startling, as when we read that he had "acquired the faculty of inspiring air with any one of the three sections of the lungs in large part if not exclusively," and had proved that he inspires the largest quantity when breathing with the apex. The chapter on the evils of the respirator, which would have been very much to the point twenty years ago, will appeal little to the people of this country at the present day, for the majority of them will hardly know what a respirator is like. Much of the advice given is good and useful, but the reasons given for the recommendations do not always agree with our present knowledge of physiology. The book may still be useful if it is not taken as always representing the most modern teaching. So far as it is possible to judge without comparing it with the original, the actual work of translating has been well done.

[13] *Les Pseudo-Bacilles Acido-Résistants. Critique des Méthodes de Coloration du Bacille Tuberculeux.* Par Dr. André Philibert. Paris: G. Steinheil. 1908. (Roy 8vo, pp 144. Fr.4.)

[14] *The Pocket Osteology.* By P. Turner, B.Sc., M.B., M.S. Lond., F.R.C.S. London: Baillière, Tindall and Cox. 1908. (Crown 12mo, pp. 195. 3s.)

[15] *Aids to Memory for "First Aid" Students.* By L. M. Frank Christian, M.B., C.M. Edin. Stockport: Connell and Bailey. (Cr. 16mo, pp. 43. 6d.)

[16] *Home Nursing and Hygiene.* By Florence Hupton-Windust. London: A. and C. Black. 1908. (Cr 8vo, pp. 122. 1s.)

[17] *The Lungs in Health and Disease.* By Dr. P. Niemeyer. Revised by Dr. Gerster, and translated from the ninth German edition by Bertram A. Hall. London and Felling-on-Tyne: The W. Scott Publishing Co. 1908. (Pott 8vo, pp. 274. 1s.)

MEDICAL AND SURGICAL APPLIANCES.

Instantaneous X-Ray Exposures.

A MOST successful demonstration of a method of making instantaneous *x*-ray exposures of the chest was lately given before a number of medical men in the electrical department of the London Hospital. This method, which is the outcome of some experiments made by Dr. Groedel of Nauheim, has been introduced into this country by Mr. K. Schall, electrician, 75, New Cavendish Street, W. It is well-known that the possible shortness of an exposure depends upon the strength of current passed through the tube, but the objection to gaining phenomenally short exposures by the simple plan of forcing large currents through the tube is that after a few seconds of such treatment the tube becomes hot and soft. Radiographers have therefore been looking forward to some improvement in tubes, whereas it appears that they should have looked in quite another direction, and that existing apparatus gives them all that is required, for it has now been proved that a tube which becomes too hot within a minute with a current of 5 milliampères only can quite easily stand 50 milliampères for half a second. At the London Hospital four consecutive exposures of the thorax and abdomen were made upon as many patients in the course of the afternoon. A powerful primary current was employed with a 16-in. coil and an electrolytic interrupter, the mercury break being unequal to the great amount of current required. Mr. Schall has found that, in this particular case, at all events, the insulation of the 16-in. coil stood currents up to 220 volts and 90 ampères. The tube was one of heavy anticathode; and although it had something like 40 or 50 milliampères driven through it several times for the fraction of a second, it appeared at the end to be indifferent to the strain. The anticathode, whether of platinum or tantalum, has to be a solid block of metal. Water-cooled tubes are no good for this purpose. It is difficult to estimate the actual time of exposure, which was given as one-fifth of a second. In any case it was momentary. An automatic switch was used for opening and closing the current. The distance of the anticathode from the plate varied from 20 in. to 2 metres (nearly 7 ft.). With the maximum distance a slightly longer exposure, not exceeding a second, was necessary; in this case also the shadow of the heart was reproduced on the plate in almost exactly its natural size. The results generally were all that could be desired, and the detail of a thorax was more clearly rendered than in a radiograph of the same subject taken in the ordinary way with forty-five seconds' exposure. With regard to the possibilities of the method, Mr. Schall contended that successful pictures of the heart, particularly when they can be obtained without magnification at 2 metres' distance, will be as good as orthodiagraphic tracings, and that ultimately the cinematograph may be used to demonstrate the heart's action. The method has the further advantages that (1) the stoutness of a person is not of so much importance in the instantaneous as in the time exposure; and (2), although its special value will always be for radiographing those parts where organic movements interfere with the result of a time exposure, yet for immovable parts as well it is at least as good as the ordinary methods.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 1313.*)

AN appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Sir Victor Horsley, F.R.S. (continued).

Continuing his evidence, Sir Victor Horsley said he had used curare, but not much, because his lines of research had not been very much on blood-pressure experiments. It was most useful in blood-pressure experiments. Asked if he approved of it, he said, "Of course I do." Asked if he did not think it might be dangerous, used along with anaesthetics, as paralysing all power of motion without rendering the animal insensible, he said he did not think so at all, because, in the first place, taking curare alone, he believed that when they had given curare up to the point of producing paralysis of all the muscles of the body, the animal or person would be insensible to pain as well. Although all drugs had a more or less selective action upon the different functions of the body, no drug had such a selective action as to be a paralysant of motion only, and the statements about curare which had been made were exceedingly vague, because, fortunately, it had been very rare that any patient had been poisoned by the poison to the degree of paralysis of the respiratory muscles. The only good case on record was Mr. White's, and in that case the person did not know that the wound was being cut out, and that was exactly what the witness would have suspected, namely, that when curare by itself was given in such enormous doses as it was in experiments, it acted as a narcotic as well as an ordinary paralysant of voluntary muscles. The evidence so far took them that way. Of course it was never given alone; it was not allowed by the Act; it was not an anaesthetic under the Act. Consequently it was always given in association with narcotics like morphine, for instance.

White's case was one of a girl who was dusting a trophy of Indian arrows in the hall of her employer. One of these arrows fell and stuck into her arm, and then fell on to the ground. She took no notice of it, but in about a few minutes, suddenly, she felt ill, began to lose power, and by the time they called a medical man to her she was already unconscious, passing into the stage of asphyxia after paralysis of the respiratory muscles. The medical men recognized immediately what had happened, and started artificial respiration, while they sent for Mr. White, who came and immediately cut out the wound, with the brown poison that came off the arrow still adhering to the flesh. They went on with artificial respiration, and in about another hour or an hour and a half the girl began to breathe spontaneously, and then gradually recovered; and when she recovered consciousness she knew nothing of what had been done, and could not understand why she had the dressing on her arm.

Asked by the Chairman if that might have been from shock, he said, No; it must have been from some paralysing of the nervous system. In reply to Mr. Ram, he said White cut out the poison and the surrounding wound without any anaesthetics because the girl was unconscious. Asked by Dr. Gaskell if at the time the wound was cut out he thought there was a sufficient condition of asphyxia to cause unconsciousness, he said, No, because they had already been doing artificial respiration for some time, and she could not then have been in an asphyxial state. Asked what anaesthetics he had had in his own case, he said ether, chloroform, and laughing gas. He had experienced no sensation at all during an operation. Proceeding, he said the question whether morphine was an anaesthetic all depended upon the dose. Morphine given in the dose used in the laboratory was an anaesthetic of a most pronounced kind. He could establish that if it was required by an observation on a human being, because a very few years ago, at University College Hospital, a patient of his, a boy, was given an overdose of morphine by the nurse by mistake. That boy had to be roused, artificial respiration employed, and stimulated in various ways to keep him going, and painful impressions made upon him, many of which he resented, but he knew absolutely nothing about it; he was absolutely unconscious to pain, absolutely unconscious of everything for about twelve hours. In the laboratory the dogs or animals that were given morphine were generally thrown into the same state—that was to say, a poisonous dose was given. He had no personal experience of urethane. He had no doubt that it was an anaesthetic; it was only a question of dose. Asked if he considered that there were idiosyncrasies in the action of morphine, he said there might be slight differences, but he had never seen a person or an animal either who did not succumb to morphine. Asked how he would distinguish whether a man or an animal, when under an anaesthetic, was feeling pain, he said, in the first place, the movements patients ordinarily made when they were under an operation were simple reflex movements. Endeavours were made to preserve all those so far as they did not bother the operator. Anything like a purposive movement he regarded as a signal that the return to consciousness was not far off. Asked if in a brainless frog, one could get reflex action and purposive movement he said, Yes, undoubtedly. In operations on man that was his criterion; of course, it was always on the safe side. He knew perfectly well that persons, however much they might have moved, would not have felt pain, because he had asked them afterwards again and again, especially in this more modern way of leaving off chloroform. With the Vernon-Harcourt apparatus, one simply turned the tap and they breathed air for ten minutes, and so on. He had asked them again and again afterwards whether they knew anything of the operation, and they said, No. Asked if he could distinguish between a cry that was a reflex act and a cry of pain, he said he thought he could perfectly well, in an animal as well as in man. The groans of a patient during an operation, which one might often hear outside an operating theatre, were distinctly the laryngeal movements accompanying respiration. It was most definite and quite different from anything indicating a return to consciousness. In reply to further questions, he agreed that with respect to the experiments which he suggested that students should be allowed to perform for the purpose of obtaining manual skill there were two points: One was manual skill, the other was seeing the success of the operation afterwards. Asked if he would think that the first alone would be of any use if the Commission considered that the animal must be put under anaesthetics and killed before it recovered from the anaesthetic, and if he would still recommend that the students should be allowed to experiment on animals for the purpose of acquiring manual skill, he said, Yes, he thought half a loaf better than no bread; but he would prefer the whole system as carried out at the Johns Hopkins Hospital, Baltimore. On the question of manual skill, one could only speak from personal experience, and he was quite sure that the delicacy of control of dissection which was necessary in operating on a small animal like a cat or a rabbit, was an invaluable training for the coarser movements which one performed on man. Asked with respect to demonstrations to students to show the activities of the cortex of the brain were essential, what animals he would employ, he said the monkey, but one could show it all on a cat or dog. A rabbit was a very bad animal for localization experiments. He agreed that that would be yet another reason for recommending that dogs should still be under the Act. Dogs were essential in so many ways to experimentation. Asked, with reference to Certificate B, and Mr. Stephen Coleridge's objection to the words "initial operation," he said there was not the slightest ambiguity in the certificate as it was worded at present for the purpose for which it was employed; but he would like to see all the certificates abolished. Asked if, supposing the certificate was to remain there, he did not think it would raise any difficulty, he said the difficulty had never arisen. The difficulty was an imaginary one. In reply to Sir Mackenzie Chalmers, he said it would be perfectly impossible for any operator after having done the initial operation to allow the animal to recover and then stimulate by electrodes the cut nerves. In reply to Dr. Gaskell, he said that undoubtedly the Act ought only to apply to warm-

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blooded animals. He thought that was the proper separation of the animal kingdom. He had always understood that that was what was originally intended, and he had understood that in a question and answer across the floor of the House Dr. Playfair misunderstood it, not being a physiologist; he put it down, and now it stood "vertebrate." It was ridiculous for fish and so forth to be included. What he suggested was that all the facts which were detailed on the certificate application form could be, as indeed they were now, detailed on the application form for a licence. He had a draft form. He was quite satisfied that it would be enough. What was not enough, in his opinion, to give the Home Secretary complete information, was the final form that they had to furnish at the end of the year. In reply to Dr. Gaskell, who asked if he knew the little book by Sir James Thornton, *The Principal Claims on Behalf of Vivisection*, he said he knew it well; it was full of contradictions of fact. Dr. Gaskell drew his attention to a statement on page 3:

Lawson Tait says: "This is just one of the cases where vivisection has led us astray. If the carbolic ligature had never been tried on animals, where it seems to answer admirably, it would never have been tried on human patients, where it fails miserably, and has cost many lives. The fact is that the diseases of animals are so different from those of men, wounds of animals act so differently from those of humanity, that the conclusions of vivisectors are absolutely worthless. They have done far more harm than good in surgery."

Asked if there was the slightest foundation in fact, in his opinion, for the statement that the wounds in animals acted so differently from those of humanity, Sir Victor Horsley said it was absolutely contrary to fact. Asked if that was true about the carbolic ligature, he said it was not. It did not fail absolutely. They used it at the present day.

Recalled after his first appearance before the Commission, Sir Victor Horsley asked to be allowed to put in the description given by Mr. White of his case of curare poisoning in a human being, for which Dr. Gaskell had asked. The report was published in the BRITISH MEDICAL JOURNAL of March 16th, 1889. The witness wished to draw attention to the fact that with regard to the very important matter which Dr. Gaskell raised—namely, whether the patient was under the influence of curare or whether she was under the influence of the state produced by asphyxia, as a matter of fact she was still breathing; she had slow, shallowy, jerky respiration, and feeble pulse. The whole track of the wound was covered with a brown, apparently vegetable, material. It was therefore freely excised, and stimulants were freely given by the mouth. So that she not only breathed still, but she swallowed; therefore, he would have said she was only under a rather moderate dose of curare. But she was in a very dangerous state from the condition of the pulse, because curare lowered the blood pressure, and caused a very feeble pulse and ultimately death. Artificial respiration was kept up until she recovered. The final point he wanted to draw attention to was—

That Mr. White believed that the arrow had been poisoned with curare and cited (this is an abstract of his paper) the experiments upon animals made by Claude Bernard, Waterton, and Sibson, of some of which he had been a personal witness, in support of his view.

So that he recognized that it was curare poisoning from the effects of curare poisoning that he had seen in experiments on the lower animals. Sir Victor Horsley was then asked by Sir Mackenzie Chalmers as to the Crile case. In the first place, he read Dr. Crile's application to do the experiments which he did:

25th April, 1895.—To the Right Honourable Henry Matthews. —I beg to enclose a form of application for a licence to perform experiments upon the causation and the prevention of shock in surgical operations. I am the Lecturer on Surgery in the University of Worcester, Cleveland, Ohio. My engagements are naturally pressing, and I would be much obliged if you would grant me the licence asked for within a few days. I am also informed as a matter of fact that the experiments I am about to perform do not come within the Act, inasmuch as they do not involve any pain to the animal.—I have the honour to be, Sir, your obedient servant, GEORGE W. CRILE.

Accompanying that letter was the formal application in which the experiments were described as

Investigation of shock in operations performed under ether. The experiments proposed will be conducted under the licence —that is, the animals will be anaesthetized with ether and killed before recovery from same.

Sir Mackenzie Chalmers said that he wanted to ask whether the object of these experiments was to examine the effects of surgical shock—not surgical shock pure and simple, but surgical shock under anaesthetics. Sir Victor Horsley replied, Yes. Asked if the supposed object of the experiments would have been frustrated if anaesthetics had not been part of the procedure, the witness said: Certainly, because they wished in this research to imitate, as far as possible, the operations done on a human being. In reply to a further question, the witness said he did not know that after a report on Dr. Crile's application to Dr. Poore the matter was referred to the Association for the Advancement of Medicine by Research. Sir Mackenzie Chalmers thereupon read their letter, which was addressed to the Under Secretary of State, Sir Kenelm Digby:

Sir,—According to your letter of the 29th ultimo, I have laid before the Council of this Association Dr. Crile's application for leave to hold a licence under the Act 39 and 40 Vic., c. 77. I beg to return Dr. Crile's papers. The Council wish me to say that they hope this application may be granted. Dr. Crile is professor of surgery in one of the American colleges, and is therefore fully qualified to make the proposed observations with judgement and accuracy. At the Pathological Department of University College he would enjoy every aid for the success of his work, and would have Professor Victor Horsley's constant help. The Council are further of opinion that the proposed observations are calculated to give very valuable results. The occurrence of shock after surgical operations, in spite of anaesthesia and of all the precautions that can be taken to avoid it, is a danger that cannot be too carefully studied, and the Council therefore hope that leave may be granted to Dr. Crile to make these observations, which would, moreover, be wholly free from pain, as the animals would be killed while yet under the anaesthetic.

After that the licence was granted. Asked if he had seen any of the operations himself, Sir Victor Horsley said he saw about the first six or seven. In reply to further questions, he said that in his opinion the animals that underwent those operations were not suffering at all. He thought they were completely anaesthetized, and unconscious of any pain. Dr. Goodbody was the Assistant Professor of Pathological Chemistry at University College, and when the witness was not there he was present at these operations. Asked if he had discussed the matter with Dr. Goodbody, Sir Victor Horsley said he had not spoken to him since 1902, when he wrote to the *Times* in the correspondence that ensued upon the exposure of the catalogue of instruments and Mr. Coleridge's action. He remembered that he stated that, in his opinion, the animals were quite unconscious to pain. Dr. Goodbody had been a laboratory worker now for fifteen years. In reply to further questions, the witness said his physiological experiments had been carried on at University College and at the Brown Institution, of which he was Director for several years. Asked if the Home Office Inspector always had free access, he said: Yes; and he was constantly in and out. Professor Thane visited his laboratory almost every week. His department adjoined that of the witness. The visits had always been surprise visits. It was rather difficult to fix the date. Mr. Erichsen used to give him notice at the Brown Institution; that was before 1890. But he would say that for the last seventeen years, about, they had been surprise visits invariably. Asked if he had not carried on to some extent Professor Ferrier's experiments on brain surgery, he said, Yes. Those experiments were of two kinds. In one set the animal was experimented on under the licence, and was killed before recovery from the anaesthetic. Those were stimulation experiments, excitation of the surface of the brain by electric current. In order to control the results of excitation further experiments must then be performed under Certificates B and EE, in which part of the surface of the brain was destroyed and the symptoms were examined afterwards. The animal was eventually destroyed. Asked if in these operations, on recovery from the anaesthetic, the animal suffered much, the witness said, No, it suffered remarkably little. It was quite a common thing to see a monkey, for instance, from which one had removed a portion of the brain, take a banana or grape as soon as it really recovered from the operation. He did not consider that

operations on the brain were really painful operations in that sense. He was speaking now of animals. The higher brain itself was wholly insensitive, so far as he knew. There were portions at the base of the brain where sensory paths were coming in, which he was sure would be sensitive. Asked how, then, he accounted, for instance, for the intense pain of headache, he said one saw a great deal of that in cerebral tumours; that was due to pressure. The skull was a rigid box, and the fluid within it was at a certain pressure; it required, therefore, an exceedingly small increase of tension, a little more fluid injected into the skull to raise that pressure, and the moment that occurred one had a sensitive membrane—the dura mater which covered the brain—pressed. That was a very difficult thing to prove scientifically; but it certainly seemed to be so. From the fact that the headache varied in cerebral tumour directly from the tension, it seemed the most reasonable explanation of headache. The dura mater was very richly supplied with nerves. In operating one simply incised it, and turned it aside. The opening of the skull opened this rigid box, and from that moment all the intracranial tension was destroyed. In the case of ordinary headache he thought there was interior congestion and pressure. Asked if, in consequence of these brain experiments on animals, he had been enabled to perform any operations on human beings which he would not have dared to perform otherwise, he said, Certainly, upon the cerebrum, the cerebellum, and the spinal cord. The results were excellent where the cases had been diagnosed sufficiently early and with correctness. On that point he would like to draw attention to a fact which seemed to him always an exemplification of Professor Lankester's statement that scientific investigation did not add to knowledge by arithmetical progression, but by geometrical progression. The first operations upon cerebral tumour, now some twenty years ago, revealed the fact that this opening of the skull which destroyed the intracranial tension was the mode *par excellence* by which the inflammation of the optic nerves which accompanied so many diseases inside the skull could be arrested and the sight preserved, because there were not a few cases in which the patients could be recovered from a cerebral tumour, but remained blind all their lives, and this observation, which was made, one might almost say by accident, had been of the utmost benefit to humanity, because now, even in cases where the tumour could probably not be removed, what was called a decompression operation was done to save the sight. He was speaking of observations made upon patients, not of experimental observations. Attempts had previously been made to save the sight by opening the sheath of the optic nerve in the orbit, the operation of de Wecker; but the operation was not successful. They now knew the reason—that the pressure ought to have been relieved inside the skull, not outside. Asked if he had discussed with any of his patients afterwards the effects as to whether there was pain consequent upon the operation, he said, Yes, often. Like all cutting operations, they had a certain amount of pain in the cut itself—a sore pain, which, like ordinary aseptic wounds, disappeared in about forty-eight hours. A certain number of them suffered from headache due to the anaesthetic and to shock. In reply to further questions, he said it was absolutely untrue that, although they had been experimenting for a hundred years, nothing had been learned about any of the ductless glands. Asked about his own work on the thyroid gland, he said it was only one example of a great many researches now on the ductless glands which were adding to our knowledge and to our power in dealing with disease. It was an entirely new chapter in physiology, and an immensely fruitful one, because it introduced them to the true chemistry of the living body—bio-chemistry. It was only by advance in research in bio-chemistry that they could really put internal medicine on a proper scientific basis. The University of Liverpool, which was very advanced in medical matters, had founded a professorship in bio-chemistry. Asked if animals which had to be operated on were tied down for the purpose of preventing struggling or simply to keep them in position under the anaesthetic, he said they were tied down simply to keep them in position. One could not mask a purposive movement. There was a statement made by Mr. Coleridge in his evidence as to an experiment by Professor Starling about fastening down an animal on a board in connexion with the Bayliss trial. Mr. Coleridge was asked by Dr. Gaskell:

I want to know whether you do not consider, when a delicate registering apparatus is going on in the animal, which moves perfectly smoothly and gets real good curves, even although the operator says the animal is under slight anaesthesia, that does not show that the animal was not feeling pain?—Not necessarily. I have an answer to that, of Sir Victor Horsley, in the case against me on that very point, that an animal can be held tight when it does not move.

The witness said he supposed Mr. Coleridge meant it could be held tight so that it did not move. He was quoting from evidence which was given in court, but the context of that evidence ought to be given. It was witness's evidence he professed to be quoting from, but from his experience of Mr. Coleridge, and especially after what he had admitted to the Commission, he accepted nothing that he produced in the way of evidence of what he (the witness) had said unless he had the context. He would read it and then explain it to the Commission:

Mr. Rufus Isaacs: Would it be possible to perform the experiment or the demonstration which we know took place if the dog had been conscious?—Sir Victor Horsley: No, absolutely impossible, unless the dog had been fixed up with all manner of apparatus, to absolutely fix every bone. I showed the Lord Chief Justice what I meant by fixing every bone with a rod passing through the bones. Of course, it is an absurd position, you observe. It is impossible to fix every bone in an animal. And the Lord Chief Justice asked me whether it could be fixed on the board—they had the board on the witness desk—and I said, "You can fix an animal with apparatus of *that* sort (pointing to the operating board). That is the answer to that—you can so fix an animal on that board, and he pointed to it; they had it in court."

The rest of that was true, but the inference drawn from it was wholly untrue. His point was that it was conceivably possible with an apparatus to fix every bone, but as one must fix every bone to make the animal absolutely immobile, so that it could not move at all, the thing was practically impossible. Mr. Coleridge's was quite a false rendering of his evidence in the way he presented to the Commission. Asked if there was a sudden transition from pain to absolute anaesthesia, or a gradual diminution of pain as the anaesthetic was administered, he said there was a gradual diminution of sensitiveness to pain undoubtedly. The loss of consciousness was apparently sudden to the individual, but that was quite a different thing. Asked if, assuming for a moment that an animal was incompletely anaesthetized, using it in the English sense of incomplete anaesthesia, there would be diminished pain, although there would be pain, Sir Victor Horsley said, Yes, if one meant by incompletely anaesthetized that it was still conscious of pain, it would have less pain in proportion to the amount of anaesthetic which it had received. In reply to further questions, he said that in midwifery cases one wanted to avoid preventing the contraction of the uterus. If one gave a very large, profound dose of chloroform, one would interfere with the normal contractions of the uterus and the expulsion of the fetus. Asked if, taking the Act as it stood, the licence and the certificates were framed, not with reference to the scientific quality of the operation, but with reference to the pain, he said, Yes, certainly. Asked if it was not convenient, first of all, to have a licence under which an animal could be anaesthetized and killed without recovery, he said he could not see that it was convenient except as a means of informing the Home Secretary what experiments were done, and the animal was killed before recovery from the anaesthetic. His proposal embodied exactly the same facts, and it struck him as simpler. He proposed that on the application for a licence the applicant should state the different classes of experiments he was going to do. If he were only going to do experiments on animals killed before they recovered from the anaesthetic, he would simply state so, and there was an end of it. But he did not see why that application should be, in substance, different from any other application so long as the applicant stated what he was going to do. The Home Secretary must know the details of what he was going to do, and then the inspector would see that he was doing it, and he would report his experiments on a form which would put these points down in detail. On its being put to him that his proposal would merely come to this, that the certificate and licence would be on one document, he said that was the whole point.

In reply to further questions, he said he would have every application for a licence countersigned, but at the present moment they had practically to have three documents filled up, and sent and filed by six people for only one thing. One document ought to cover the whole thing. Asked by Mr. Ram, with regard to the suppression of rabies in Cheshire, if Mr. Long's muzzling order was compulsory on the whole country, he said, Yes. Asked if he attributed to the fact that it was compulsory over the whole country that rabies had been practically stamped out here in England, he said, Yes. He pointed out that the north-western district of England (Lancashire and Cheshire), was the focus of rabies, together with the metropolis; it had been stamped out by muzzling in the metropolis, and it was stamped out similarly in Lancashire, where the population, of course, was much greater than in Cheshire. As regarded Mr. Long's action, he would point out that, so far as he knew, the British Medical Association was the only public body in this country that thanked Mr. Long for getting rid of hydrophobia. Asked, with regard to allowing students to operate, if he would in any case in which a student was to be allowed to make an experiment have the animal under a lethal dose of anaesthesia, he said: Yes, certainly, if a student was going to do the experiment. Asked, secondly, if he would have it always under the supervision of some authorized and licensed person, he said: Certainly; he would make that authorized and licensed person responsible for the fact that the anaesthetic was so administered as to be efficient at the time and certain to be lethal. Only under those conditions would he allow students to experiment at all, just in the same way as any practical class of physiology was conducted now. Asked if in his opinion it would be distinctly beneficial to the human race that young students and young surgeons should be allowed to operate on animals under a lethal dose of anaesthesia for the purpose of acquiring manual dexterity, he said, Certainly. He pointed out that in respect of these brain operations that have been mentioned, the appearance of the normal brain ought to be first learnt on an animal. It was extremely difficult very often, when one had exposed a diseased portion of the brain, to tell whether it was actually diseased or not, and the differential diagnosis of the condition of that brain ought certainly to be established by experience on animals and not on man. Asked if it was the fact that by seeing the brain of a living animal, under an anaesthetic, one could learn more than from seeing the brain of a dead animal, he said, Yes, the brain had a totally different appearance, and a totally different texture. He agreed that if he only had experience of the brains of dead animals, or even dead human subjects, it would be difficult for him, in an operation on a living subject, to decide whether the brain was diseased or not. But by examination of a living brain under anaesthesia, one could differentiate between a diseased and an undiseased brain. Asked as to the knowledge of blood pressure, he said that had been obtained entirely by experiments on animals. The fact that arteries contained blood under pressure was proved by the experiments of Galen, who opened arteries really to see whether they contained air or "spirit" as was supposed at that time, and found that they contained blood under pressure. Next, the first definite observations were made by Hales upon animals; and then, from that time onwards, the whole of their real knowledge had been derived by observation on animals. Of recent years, the measurement of blood pressure was being introduced clinically, and they were now accumulating records of blood pressure in man under different diseased conditions. The knowledge of blood pressure under certain circumstances was undoubtedly of vital importance, both clinically and in operations. Asked as to inspection, he said he had never found it at all hindering to him in his work. Asked if it was thought desirable that the number of inspectors and the number of their visits should be increased, it would in any way hinder research or hinder experiments, he said, Certainly not, if the inspector was a qualified man. He did not think inspection such as it had been hitherto had been useful, but there was no objection to it. Asked why he thought it had not been useful, he said because his experience was that there was really no violation of the Act, and that these iniquitous statements which had been made respecting the indifference of experimenters to pain were absolutely untrue; consequently no inspector had ever, so far as he knew, come round on surprise visits and discovered a vivisector callously inflicting pain. The thing was ridiculous. Asked whether, if it was desirable for any reason that inspection should continue, he thought that the number of inspectors ought to be increased, he said the present number of experiments done could be quite well inspected by the present staff, and if the public—the House of Commons, for instance—thought that the inspector ought to be going round more frequently, all they had to do was to make him a whole-time officer. At the present moment he was not. No experimenter would object in the least to the visits of the inspector, provided he was a qualified man. Asked in regard to some of Crile's experiments, he agreed that it was possible the use of the words "incomplete anaesthesia" by him was really the whole cause of the trouble which had been raised with regard to his experiments. Asked if the word as he used it was not apparently a misnomer, he said, No: they constantly used the terms "incomplete anaesthesia," "light anaesthesia," "very light anaesthesia" and so on, meaning degrees of the depth to which the body was poisoned; and, unfortunately, at the present time there was actually no technical word to describe the condition of a person who was unconscious, and at the same time unconscious to pain. He had brought the question before anaesthetists, and asked them to draw up a terminology. The word "narcosis," for instance, was used by the Germans. They talked about *tiefe Narkose* and *leichte Narkose*, in the same way as here one did of deep anaesthesia and light anaesthesia; but in both cases the word, "narcosis" or "anaesthesia," they understood to mean unconsciousness to pain. Asked if the number of cases in which curare was used was comparatively small, he said: Yes, very small. He agreed that one or two indications of anaesthesia were absent when curare was used. On its being put to him that, therefore, whether the anaesthesia was perfect or not depended upon the skill of the person giving the anaesthetic, and his assurance that it was a sufficient and complete dose, he said: Yes; his observation of what was going on, with the changes, for instance, in the blood pressure. Asked if it were thought desirable, in order to allay reasonable public feeling with regard to curare, that the inspector should be present in all cases when curare was administered, that would be an impediment to research, he said: Not in the least if the convenience of the investigator was safeguarded. In reply to Sir William Collins, the witness said he thought his first licence was obtained in 1883. He had held it continuously since then. He had experimented on the rodents, on rabbits, and guinea-pigs; on carnivora, the cat, and the dog; on ungulates, on the horse, and on the donkey, and on sheep, and of higher animals, on the monkey. He probably did, on an average, about 110 or 120 experiments a year. That had been continuing over a period of twenty-four years. Asked how many of the 110 experiments he performed in a year would be witnessed by the inspector, he said certainly 10 per cent.; he should think even more. Professor Thane knew very accurately when he was likely to be doing an experiment. He had fixed days in the week which he gave up to scientific work, and Professor Thane knew those days, so that he very often came in then, and found him in the middle of an experiment. He had certainly witnessed quite ten or even fifteen experiments of his in the year. Asked if the inspector witnessed as many as 15 per cent. of the experiments performed by other experimenters throughout the country, he said he should think not. In reply to further questions, he said that, judging inspection from the popular meaning of the office of inspector, he thought it a harmless non-necessity. He thought the idea that the inspector prevented pain to animals was trifling; it was perfectly ridiculous. In reply to further questions, he said he thought certificates were unnecessary documents, and consequently gave unnecessary work in the Home Office, and to investigators who had to obtain them. Asked if he was opposed to the Act altogether, he said, No. He looked upon the Act as necessary in view of public opinion. Public opinion had decided now for thirty years that experiments on animals should be conducted by certain persons under certain restrictions, and, of course, one quite accepted.

that. Asked if from the point of view of physiology he regarded the Act as superfluous, he said, Quite. If it was meant that the Act was really an Act to prevent cruelty to animals, as it was entitled, he did object to it. He objected to any Act appearing on the Statute Book as a "cruelty to animals" Act when it referred to scientific experiments. It was an unjustifiable use of the word cruelty, and ought never to have been accepted by the Government of the day. He objected to the title of the Act *in toto*; but to the purpose of the Act—namely, that experiments should only be done in registered places, and only by persons who held a licence from the Home Secretary—he could see no objection whatever. Asked if he would agree with a physiologist who was in the witness chair some days ago, who told them that the Act was entirely opposed to the advancement of physiology, Sir Victor Horsley said, if he meant that the Act hindered the progress of physiology, he was not prepared to contest it at all, because he could give an example at the present time. There was an American physician who had come here purposely to study the surgery of the nervous system. The witness advised him to apply for a licence to do some experimental work in his laboratory, and it had taken him six weeks to obtain that licence. Now here was a man whose time was limited, and all these modern processes of investigation took endless time; the anatomical investigation of the material that one prepared in the experiments took months, and so to cut off six weeks of that man's working time he thought was unjustifiable. Sir William Collins said that in the report of 1876 it was stated:

In considering the question of legislative interference, we have found in some minds a decided prepossession against it. This appears to be connected, as in the case of Mr. Lister, with a notion that such interference implies an imputation of cruelty upon those who are engaged in those investigations—an imputation they are conscious they have not deserved.

Asked if he agreed with that, Sir Victor Horsley said: Certainly; he had already protested against the title of the Act on that very ground. It was put to him that Mr. Lister regarded any legislative interference as superfluous. In reply the witness said he did also. He thought it perfectly superfluous for the object for which it was designed. The object of the Act was to prevent the infliction of unnecessary pain. At the time when it was passed there was no infliction of unnecessary pain. In reply to a further question, he said he thought that the Act of 1876 was superfluous legislation; but if the public demanded it he did not object to it. Sir William Collins went on to say that Mr. Pembrey, in answer to Question 14,090, said:

I think we ought to be given a licence to cover all experiments. I think that the Act is entirely antagonistic to the advancement of physiology. If we were given a licence for all experiments, there would be no more cruelty. There would be a great saving of time and a great limitation of work, and there would actually be in the long run a saving. Q. What do you mean by a licence for all experiments? A. I mean without any conditions. Q. With or without anaesthesia? A. Yes, without any limitation at all, and without certificates. Q. That is to say, you are to put yourselves in the condition in this country which, I understand, physiologists are in in some parts of Germany, where there is no limit? A. I think there should be no limit—that is to say, that a recognized physiologist should be given a licence to cover all experiments. Q. Without anaesthetics? A. Without anaesthetics, or with anaesthetics without certificates.

He asked Sir Victor Horsley if that stated his view. He replied, Undoubtedly; in this way: He proposed that an applicant for a licence should state on that application exactly what he was going to do, whether he was going to do experiments with anaesthetics or without anaesthetics, although no such application had ever been made since 1876; or whether he was simply going to do inoculation experiments. In fact, he should put upon his application the details of his proposed experiments, so that the Home Secretary should know exactly what he was going to do; but the Home Secretary, being thus informed of what was going to be done, would still, of course, under the Act, have the plenary power which he possessed at the present time, of deciding whether a licence should be granted or not. Asked if the Home Secretary, in arriving at his decision, should be advised by the Association for the Advancement of Medicine by Reseach, the witness said, Certainly. He was a member of that society. The Home Secretary could not possibly he thought, be guided correctly in the administration of the Act, except by experts on the subject, who alone knew what was the probable value of the proposed experiment, and the qualifications of the investigator who was making the application. Asked if there was any one who played the part of *advocatus diaboli* in the advice obtained by the Home Secretary, he said, Not that he knew of. He took it that the Home Secretary himself was both judge and advocate in that matter. He certainly was the judge. In reply to further questions, he said he laid great stress upon the importance of vivisection for the teaching of all medical students in physiology, pathology, and pharmacology. He considered it most essential that experiments on animals should be employed in a course of anaesthetics. In reply to further questions, he agreed that in surgery he advocated that all students should be instructed by vivisection experiments, first with a view of obtaining a knowledge of technique, and, secondly, with a view of obtaining manual dexterity. He knew that the effect of witnessing experiments on living animals was not demoralizing to students. It was a sheer invention on the part of those who offered such evidence. Asked about a reference to Magendie in the report of the previous Commission, he said Magendie was in 1820—fifty years before that Commission, and in France. The English medical profession had always discountenanced anything like the giving of unnecessary pain in experimental work, and certainly at that time, as he had already stated in his evidence, demonstrations had been given at University College for some years, and there was no idea of demoralization of students, or anything of the kind. There had been, on the contrary, a great accession of interest and of educational value in the course of physiology. Asked if such a distinction was to be drawn between the practice of vivisection abroad and its practice in England, he said that formerly, no doubt, the English medical profession, as a profession, like the public, were more humane than their Continental brethren, but at the present time if one read any scientific record of experimental work, one would find that the animals were all anaesthetized. He could not say that he drew no distinction, because they knew perfectly well that the Romance nations, for instance, had not the same natural regard for animals that English people had. They did not value animal life or regard animals in the same way. That was not a question really which had ever appeared to him to have any bearing on this subject. They were concerned here with their work in the English medical schools, and it did not matter what went on on the Continent; they had nothing to do with it from a legislative point of view, and therefore it always seemed to him utterly irrelevant to the subject, so far as they were concerned as a profession. Sir William Collins put to the witness a passage from the BRITISH MEDICAL JOURNAL of November 5th, 1898, in the report of an address by Sir Frederick Treves on "Some Rudiments of Intestinal Surgery," in which he stated:

Dr. Halsted, by the way, expresses his conviction "that there should be a law compelling all surgeons to practise on animals the operations for circular suture of the intestines and for intestinal anastomosis." I hope this view will not commend itself to the legislators of this country. Many years ago I carried out on the Continent sundry operations on the intestines of dogs, but such are the differences between the human and the canine bowel, that when I came to operate upon man I found I was much hampered by new experience—that I had everything to unlearn, and that my experiments had done little but unfit me to deal with the human intestine.

Sir Victor Horsley subsequently forwarded Sir Frederick Treves's reply, which was as follows:

To the Editor of the *Times*.

Sir,—My attention has been drawn to a letter in the *Times* of April 9th, signed by Mr Trist as Secretary of the London Antivivisection Society. In this letter it is stated that I have testified as to the fallacy of vivisection.

My solitary utterance on the subject of vivisection is contained in an address delivered at Birmingham in October, 1898 (*Lancet*, November 5th, 1898). Speaking of the suturing of intestine, I said that I had found that operations upon the intestines of dogs were useless as a means of fitting the surgeon for operations upon the human bowel.

Those who are familiar with the controversial methods of the antivivisection party will not be surprised that certain of my remarks have been cunningly isolated from the context, and have been used (in advertisements, pamphlets, and speeches) to condemn all vivisection experiments as useless. The fallacy of vivisection can hardly be said to be established by the

failure of a solitary series of operations dealing with one small branch of practical surgery.

No one is more keenly aware than I am of the great benefits conferred upon suffering humanity by certain researches carried out by means of vivisection.

I am, Sir, your obedient servant,

FREDERICK TREVES.*

6, Wimpole Street, W., April 14th.

Proceeding, Sir Victor Horsley said Sir Frederick Treves could answer for himself if the Commission desired it, naturally, but he (the witness) would point out also that he did those experiments many years ago, and that was why he would not accept his experience any more than the personal experience of a man who had done experiments which were no use to him. He might suggest, with all respect to Sir Frederick Treves, that they had, many of them, done experiments which had been failures. Sir William Collins said he understood from the witness that, in his opinion, to experiment upon man was immoral. Sir Victor Horsley replied, Certainly. A modification in surgical procedure might be a trivial matter, in that it did not involve any risk to life, and that, if tried on a man first, would by many people be called an experiment. He should not object to that if there was really no risk to the individual on whom it was tried, and, of course, that had been the practice of all surgeons who had not first tried their methods on animals; it had been a common practice up to the present time. But he suggested that as a general principle, it was undoubtedly immoral. If a new idea or a new method was to be tried, it certainly ought to be tried on an animal first, because it was not only that one did not know the result until one had made the experiment, but one actually did not know that the method of performing the procedure was going to be the best. He suggested that the antivivisectionists were immoral from two points of view: in the first place, because they opposed means whereby suffering and disease might be prevented. Then, inasmuch as they held that vivisection was immoral, he said that it was immoral of them to make use of knowledge gained by vivisection. He thought that was the general public view also. He repeated that the money for a so-called antivivisection hospital in Battersea was collected on that very ground, and yet now, at the present time, evidence had been laid before the Commission by antivivisectionists—Mr. Coleridge, Dr. Stephen Smith, and others—claiming that they were justified in making use of the knowledge derived by vivisection. Asked if knowledge could only be obtained by experiments on man, there would not be a conflict between his morals and his pursuit of knowledge, he said, No. The moral question would then come in in the sacrifice of the man; and if a man was a scientific observer who chose to sacrifice himself, he should say that he was not doing an immoral act unless he caused some serious disability to himself, as some men had done. Asked as to experiments not upon the man himself, but upon other persons—involuntary experiments—he said he did not approve of them. On its being put to him that when Lady Mary Wortley Montagu introduced inoculation into this country the practice was started upon some criminals in Newgate, he said he thought that was immoral. It would be immoral to disable a human being by experiment. He agreed that the knowledge obtained from experiments on human beings would be immorally gained. What he said was that persons who held that vivisection was immoral were not entitled to use the knowledge thus gained. Asked if he would not be similarly barred from using knowledge obtained by human vivisection, he said: Certainly. Asked if some knowledge was not obtained by the experiments of Herophilus upon human beings, he said they were told so, but it was very uncertain whether he actually did vivisect human beings. It was said that he dissected alive some 600 persons. He agreed that Herophilus was charged by Tertullian, but they did not actually know what knowledge he did gain by those alleged vivisections of human beings. Asked if he did not suggest in his book *The Brain and Spinal Cord* that Herophilus by his investigations added knowledge with regard to the nervous system, he said he was alleged to have been "the first to discover the peripheral nervous system or nerves, that these latter were connected with the brain and spinal cord, and that they conveyed sensory impressions." The witness added that he quoted the passage, but he would be very sorry to vouch for its accuracy, because, as a matter of fact, the most detailed experiments on conduction were those of Galen, which he also quoted. He agreed that Galen was charged with experiments on human beings. Galen did use a good many animals for experiments. The animal apparently that he used was the pig, and in the mediaeval period they also used the pig. The results obtained by Galen from experiments were the foundation of our knowledge. The witness was asked his view as to a piece of evidence given by the late Sir James Paget before the last Royal Commission, to the following effect:

> There must be reason and moderation in the use of these experiments (that is, vivisection experiments). I can quite believe that ardent physiologists put more trust in the experiments on living animals than I should; and certainly those studying therapeutics and diseases think more of them than I should. I think more of the advantage of clinical inquiry. But I am very anxious that there should not be a general condemnation of experiments on animals, since it seems to me that there are a number of things absolutely essential for the life of man that cannot be ascertained by other means.

Sir Victor Horsley said he agreed with that. What Sir James Paget was saying there was that clinical observation was very useful, and that experiments were useful. Proceeding, the witness said he did not agree that there was any relative importance in any method of acquiring knowledge in their work. It had often been alleged, for instance, that anatomy was more important than physiology. It had been alleged by antivivisectors that experimenters had neglected anatomy for physiology, and in the same way it might be alleged, or it might be deduced from Sir James Paget's remarks, that persons like him (the witness) would neglect clinical observation for experiments in the laboratory. It was a monstrous suggestion altogether. In reply to further questions, he said it was suggested that clinical observation was better than experimenting in a laboratory. All he maintained was that such a statement was absurd from the scientific standpoint. There were some things that one could gain from clinical observation which one could not see in a laboratory, and vice versa. One must have all these avenues of work open. Sir William Collins put it to him that the President of the Royal College of Surgeons told them that he had never himself practised vivisection, and he did not advise the practice of vivisection for the purpose of acquiring manual dexterity. Sir Victor Horsley said he totally disagreed with that. He was obviously one of those who had learnt on man. He had gained his experience by operating on man. Asked if he regarded that as immoral, he said: Certainly. He thought the more moral proceeding was for a man to have learnt by experiments on animals first. In reply to the Chairman, he said that what he meant was not operating on patients but experimenting upon them. In reply to Sir William Collins, he said the use of the terms "moral" and "immoral" was relative; but what he said was that he thought it was a more moral proceeding for a man to gain that knowledge of technique, and so forth, by trying first on an animal the experiment, or by being educated by operating on an animal, before he operated on a man. Was one to gain experience on the bodies of persons that came into one's hands, or in the laboratory by experiments on animals? That was what it came to.

(To be continued.)

* This letter was published in the *Times* of April 18th, 1902.

PRESIDENT ROOSEVELT, who is nothing if not strenuous, has proposed to Congress the appropriation of £4,000 for the salaries and expenses of three commissioners and a secretary, who shall inquire into the opium evil on behalf of the United States Government. A letter from Secretary Root, accompanying the President's note, suggests that each country which has signified to the United States its willingness to make such an investigation should appoint commissioners who shall make inquiries in their own countries. He further proposes that all these commissioners should meet at Shanghai, China, on January 1st, 1909. This assembly will decide what should be done to eradicate the opium evil.

A GERMAN Medical Association has recently been established at Cairo for the promotion of good feeling and solidarity among its members. The Presidents are Drs. Becher and Engel.

LITERARY NOTES.

THE *Edinburgh Medical Journal* and the *Scottish Medical and Surgical Journal* came to an end of their separate existence with their June numbers. They have been incorporated, and will henceforth be known as the *Edinburgh Medical Journal*. This title has been jointly agreed on, partly because of the greater age of the periodical bearing that name, which dates its journalistic life from more than a century ago, and partly because "it seemed undesirable to interrupt the continuity of references in medical literature which that long-continued history implies." The combined journal will appear under the direction of the senior editors of the respective journals. Acknowledgement is made in both journals of the tact and good feeling shown by the chairman of the negotiating meetings, Mr. Joseph Bell, which, it is said, has smoothed over many difficulties. The new journal will be published by Messrs. Green, and we echo the sentiment expressed by the *Edinburgh Medical Journal:* "May the new periodical maintain and carry on the best traditions of medical journalism in Scotland, and may it be found worthy of gaining the support and goodwill of the medical profession north of the Tweed and of Scottish graduates in all parts of the Empire!"

Messrs. Longmans will publish an English translation, by Dr. Walker Hall, Professor of Pathology in University College, Bristol, of Dr. Ludwig Hopf's work, entitled, *The Human Species: its Specific Characteristics considered from the Standpoints of Comparative Anatomy, Physiology, and Pathology.* The book will be illustrated.

The June number of the *Phonographic Record of Clinical Teaching and Medical Science* contains a paper by Major Leonard Rogers on India as a field for medical research; a clinical lecture by Professor Osler on Erythraemia; a paper entitled Mind—Sound and Unsound, by Dr. F. W. Landon of Cincinnati, with abstracts and a review of recent Continental literature bearing on clinical pathology. The journal, which is edited by Dr. F. H. Spooner, is published by Sir I. Pitman and Sons, Limited.

Jules Hep, in a periodical entitled *Portez-vous bien*, which we find quoted in that serious and highly-scientific periodical, the *Archives de Parasitologie*, celebrates in a ballad the death of that fashionable disease, appendicitis. We quote the first verse and the Envoi ("*en forme d'appendice*"):

> Elle a vécu ce que vivent les roses
> La maladie au nom coquet et smart:
> Destin fatal des plus aimables choses,
> La Mode vient de la mettre au rancart.
> L'avoir encor serait retardataire;
> Les médecins, par decrets absolus,
> Ont tout changé - où donc es-tu, Molière?—
> L'appendicite ne se porte plus.

The Envoi is as follows:

> Princes de la Science, en notre épiderme
> N'introduisez plus vos scalpels goulus.
> C'est fini d'ouvrir. Oust! Messieurs, on ferme!
> L'appendicite ne se porte plus.

The thing may not be worn in Paris which sets the fashion in many things. But in this case the fashion came, we are inclined to think, from the other great Republic, that of the West, and we read in the *Medical Record* of May 9th that it is reported from Temple, Texas, that during the last two weeks of April more than fifty operations for appendicitis were performed in the town. Will the United States follow that city to which all good Americans hope to go when they die and give up "wearing" appendicitis? We wish we could say of our own country that

> L'appendicite ne se porte plus.

Even in France, though it may no longer be fashionable, it occupies a considerable place in the medical journals. So recently as on May 12th Dr. Richelot read a paper on chronic appendicitis before the Académie de Médecine.

In the *Bulletin of the Johns Hopkins Hospital* for March Dr. John C. Hemmeter gives an interesting account of that many-sided genius, Albrecht von Haller, who to us in these days of ever-narrowing specialization, looms dimly gigantic like the figure of a mastodon or deinothere of prehistoric times. He was born at Bern in 1708 and was a weakly, timid child, though extraordinarily precocious in intellect. He is himself the authority for the statement that at the age of 9 he had produced a lexicon of all the Hebrew and Greek words of the Old and New Testament, a Chaldaic grammar, and between one and two thousand biographies of distinguished persons. In regard to such feats, we confess to being in sympathy with My Uncle Toby, who, when told that Lipsius had produced a work at the age of 2, said: "They should have wiped it up and said nothing about it." Haller's precocity, however, did not prevent his becoming a really great man. At the age of 15 he went to the University of Tübingen, and two years later he migrated to Leyden to study under Boerhaave. At Leyden he took the degree of Doctor of Medicine in 1727. After travelling in England, Belgium and France, he returned to Bern in 1730 and practised his profession, continuing his researches on anatomy and physiology, and wooing the muse while making botanical expeditions. In 1736 he was offered the chair of anatomy, botany and medicine at the newly-founded University of Goettingen. He accepted it and there he worked for seventeen years, founding an anatomical museum and laboratory, a botanical garden and an obstetrical department. He returned to Bern in 1753, and passed the last twenty-four years in his native country, taking a prominent part in municipal and political life, while continuing his researches and writing poetry by way of relaxation. He died in 1777, with his finger on his own pulse, his last recorded words being "The artery no longer beats." He made many discoveries in anatomy, and he must be regarded as one of the pioneers of modern physiology. One of the most humane of men, he made experiments on living animals. His place in the history of medical science is a very high one. His name also lives in the history of German poetry; indeed, Kant the philosopher calls him "the most sublime German poet." At this time of day we distrust the man who covers a very wide field; but Haller was in fact a man of truly encyclopaedic knowledge, not a mere dustbin of useless learning, like Casaubon. Nor was he, like Herbert Spencer, merely an *a priori* reasoner *de omni scibili*, a theorizer; or, like Aristotle, a classifier and systematizer. He was all this, but he was much more. He observed and he experimented, and his research work was of the highest excellence. It may be added that in a time when free thought was deemed the badge of enlightenment he remained constant in his faith as a Christian.

In a thesis recently presented to the University of Montpellier for the degree of Doctor of Medicine, M. Robert Valensi dealt with Albucasis, one of the great figures in the history of mediaeval surgery. He was known to his countrymen as Aboul Kassem ben Abbas Ezzahraoni, and, as every one knows, he was one of the most brilliant lights of the Moorish University of Cordova in the tenth century of our era. Surgery was then in a very backward state, owing to religious prejudices which made dissection practically impossible. Albucasis was the author of thirty books on the art of medicine, which were held in great esteem by practitioners throughout the Middle Ages. Dr. Valensi deals mainly with Albucasis's treatise on surgery, which was translated successively into Latin, Hebrew, Provençal, and later into French. His study of this and other writings of Albucasis has led him to the conclusion that the characteristic feature of Arabian medicine is a total want of originality. He describes it as a faithful reflection of the ideas and doctrines which inspired it—of Hindu, and especially Greek, medicine. He says it is an abuse of language to speak of Arabian medicine, as it is almost invariably the teaching of the Greeks that is found in the writings of Arabian authors. Their sole merit, according to him, is that they preserved knowledge that would otherwise have been lost in the Dark Ages. By a minute comparison of the writings of Albucasis with those of Hippocrates, Celsus, Galen, Paulus, Aegineta, etc., he shows that the Moorish doctor borrowed everything from them. His great reputation is due, according to Dr. Valensi, to the fact that medical historians have not taken the trouble to study him at first hand. Besides, he was a man of learning at a time when surgeons in general were uneducated handicraftsmen. His works show that, although he added nothing to knowledge, he was a judicious and skilful surgeon.

From a book by Dr. G. Van Dooralaer of Malines, entitled *Apercu Historique sur la médecine et le médecins à Malines avant le XIXe Siècle*, we get some interesting glimpses of the doctors of the Low Countries in the Middle Ages. Among them is Joachim Roelants, the son of a doctor, who was born at Malines in 1496. Having taken the degree of Licentiate in Medicine at the University of Leyden, Roelants settled at Malines. On the death of his father (1525 26) young Roelants was appointed in his place physician to the city; this post he held till his death. In 1545, on the promulgation of the edict of Charles V on mendicity, Roelants, with others, was appointed superintendent of the poor. Before that he had rendered valuable services in an epidemic of sweating sickness which devastated Malines in 1529. He embodied the results of his experience in a work entitled *De novo morbo sudoris, quem Anglicum vocant, anno 1529 grassante*. This work brought him great fame; he was not only extolled by his brethren, but praised in Latin verse by Jean Second. Among his friends and admirers was no less a person than Andreas Vesalius, the begetter of modern anatomy, who dedicated to him his letter on cinchona bark which was published in 1542. So high a place did Roelants hold in his profession, that he was consulted about the health of the Governess, Margaret of Austria, who left him a substantial sum in token of her gratitude. Roelants died in 1568.

A member of the medical profession of whom little is now known is Sir John Hinton, who, in his *Memoires*, dated 1679, describes himself as "Physitian in Ordinary to His Majesties Person." He was born about 1603, and studied medicine at Leyden, where he graduated. In 1640 he appeared before the London College of Physicians, to which he presented letters from the Earl of Dorchester, testifying that he had been appointed physician to the queen. He was an ardent royalist, and on the outbreak of the civil war accompanied Charles I to York, marched with the army to Beverley, Hull, and Nottingham, and was present at the battle at Edgehill. At Oxford he was created M.D. in 1642 and was appointed physician in ordinary to Prince Charles. After the Restoration he was appointed physician in ordinary to the king and queen, and in December 1664 was admitted an honorary fellow of the Royal College of Physicians. In 1679 he presented a memorial to the king, in which he set forth that he came of "an Ancient family, which in no age hath bin tainted with any undutifulness or disloyall behaviour to the crowne." One of his brothers, he says, was killed "att the Isle of Rhee, another was miserably wounded in the late rebellion, so that hee lost the use of all his limbs; and more particularly in one long march, the soles of both his feet rotten away." As for himself the memorialist states that his "first attempt was upon the beginning of the late war, by contriveing and publickly promoteing a paper to the Long Parliament, stiled 'The Inns of Court Petition for Peace.'" for which he says he was several times examined before the House of Commons, and "haveing refused any adherence to that party and the offerrs of very considerable advantages," he was at last forced to fly from his house and family, "whereupon they immediately plundred me to the losse of above one thousand pounds, and my wife and children were left in a very bad condition." He then proceeds to give an account of his campaigns. He reminds Charles II of his services after the battle of Keinton:

> Upon which retreat your Majestie was unhappily left behind in a large field, att which time I had the honour to attend your person, and seeing the sudden and quick march of the Enemie towards you, I did with all earnestnesse, most humbly, but at last somewhat rudely, importune your Highnesse to avoid this present and apparent danger of being killed or taken prisoner, for their horse was by this time come up within half musket shott in a full body, att which your Highnesse was pleased to tell mee, You feared them not, and drawing a pistoll out of one of your holsters, and spanning itt, resolved to charge them, but I did prevaile with your Highnesse to quitt the place, and ride from them, in some hast, but one of their troopers being excellently mounted, broke his rank, and coming full careere towards your Highnesse, I received his charge, and having spent a pistoll or two on each other, I dismounted him in the closeing, but being armed cap-a-pe, I could doe noe execution upon him with my sword, att which instant, one Mr Mathewes, a Gentleman Pensioner, rides in, and with a pole-axe immediately decides the businesse, and then overtaking your Highnesse, you gott safe to the Royall Army, and without this Providence you had undoubtedly miscarried att that time, which passage is related in a booke, entituled "Miraculum Basilicon," printed in the yeare 1664.

Hinton says he was wounded at the battle of Lansdowne, but recovered again soon enough to march with the army to the siege of Gloucester. When the siege was ranged the king commanded him to go to the queen at Oxford for recruits. He escaped after the rout at Newbury, and got safe to Oxford. The narrative proceeds:

> After which the Queene being great with child and weake, haveing fitts of the mother, and a violent consumptive cough, I was commanded to waite upon her in her journey to Exeter, and I attended her Majestie there till she was delivered of the Princess Henrietta, and as a crueltie which ought not to be forgotten, being in that weake condition, she was forced within a weeke after her delivery, to goe for Cornwall, in which journey I waited upon her the greatest part of the way on foot, by the side of her Litter; from thence she went into France, and than I was commanded to returne and take care of the Princesse att Exeter, by your Highnes's spetiall orders, she having convulsion fitts; afterwards she went away well recovered, with the Lady Dalkeith and the Lord Berkeley.

He next gives an account of his adventures in London. He accompanied Charles II to The Hague. After a time he was ordered to return to London "as many other gentlemen did, being willing to serve you and your concerns in England, to the last of our lives and fortunes, rather than to eat you up in foreign parts and to become both uselesse and chargeable to you in times of such extremitie"—with general instructions for carrying on the designe which should be communicated to him. Soon after his arrival in London, however, he was put under the custody of a Serjeant at Arms and many times threatened

> "With the Tower, high courts of justice, and death, and once in a more particular manner by Oliver himself after a full hour's examination, he swore by the Liveing God, hee would wrack every veine in my heart, if I did not discover the designes against him. I told him those threats came too late, and death was no more than I looked for, when he would order itt; but by the meanes and intercession of some zealous women, my patients (who doubtlesse were more solicitous for their owne than my life), I was handled any more than as a devil among the saintes, but was alwaies kept under custody till your Majesties happy restauracion.

Hinton goes on to say that the day before Monk went to Scotland he dined with him; "and after dinner hee called once into the next roome, and after general discourse, taking a lusty glasse of wine, hee drank an health to his black boy (as he called your Majestie)" and declared that he would serve the Prince whenever he had the power. This discourse astonished Hinton, and seems to have been serviceable to Monk himself, for the physician says this assurance he had of the General's loyalty was the only cause of his preserving Monk's life many years after, by warning him of a plot against him of which he had become cognizant owing to his being sent for "about one a clock att night" to Colonel Whaley's wife, who was dangerously ill in childbed. By this hint the worthy doctor obviously means to convey that he was the indirect cause of the Restoration, for as he says, "The consequences of his (Monk's) death att that time are very plaine and obvious." He adds that he tried to raise money for His Majestie, but "could never gett a penny of itt for myself." "At the latter end of the Plague" he says he got the Duke of Albemarle out of a difficulty with his army which he daily expected to mutiny for want of pay. Hinton procured £10 500 from a kinsman of his, "a goldsmith in Lumbard Street." For this good office he reminds His Majestie that he was pleased "to make your Doctor a Knight." But he seems to have got no money, for he concludes by stating that he had spent the principal part of his days in the service of His Majestie and his Royal Father at His own expense, "by which meanes and being engaged for severall of your friends I did contract a debt of severall thousand pounds, which I have bin forced to pay out of my owne labour." With this gentle reminder and a humble request that it might please his sacred Majestie to give him some refreshment in his last days, Hinton brings his *Memoires* to an end. His fate seems to have illustrated the immortal counsel, "Put not thy trust in princes," for he died in poverty in 1682.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

XI.—PREPARATIONS FOR THE EYES.

THE proprietary articles that are advertised for the cure of diseases of the eyes are not so numerous as some other classes of nostrums. They vary a good deal in nature, but the claims made for most of them are equally comprehensive. The results of analysis of some representative preparations are here given.

SINGLETON'S EYE OINTMENT.

Prepared by Stephen Green, 210, Lambeth Road, London. Price 2s. per pot, containing about 55 grains.

The ointment is described on the outer package as "An Absolute Specific for all Eye Troubles and Diseases." On a circular enclosed in the package it is stated: "It cures Weak Sight, Inflamed Eyes, and all disorders of the Eyelids from whatever cause arising . . . Singleton's Eye Ointment requires great skill in making, and is composed of costly ingredients. One pot will cure you . . . The Ointment also cures Piles and Scorbutic Eruptions." A book dealing with the ointment is also supplied, in which it is stated that "Singleton's Eye Ointment will cure all affections of the eye."

The directions for use are as follows:

At night when going to rest anoint the eyelids very lightly indeed, and well bathe the eyes in lukewarm water on rising in the morning.

The first three or four times may occasion the disorder to appear worse, but afterwards its operation will give perfect satisfaction.

In very bad cases it is best to put a very small piece of the Ointment (not larger than a pin's head) into the corner of the eye, this will occasion a degree of pain at first, but never fails to render the cure more speedy and certain. In many forms of eye weakness the beneficial effect of Singleton's Ointment will be found to be cumulative and not immediate; it is therefore necessary to persevere with the Ointment.

Analysis showed the principal ingredient to be red mercuric oxide, of which 7.4 per cent. was present. The fatty basis contained about 4 per cent. of beeswax, and the remainder was a practically neutral and colourless substance which agreed in properties and analytical figures with a mixture of lard, Japan wax, and purified cocoanut oil. It is, of course, impossible to determine with certainty the composition of a mixture of fats, unless a large quantity is available for analysis; but the exact nature of the fatty basis is immaterial, and no indication was obtained of any other medicinal ingredient.

Estimated cost of ingredients, for 55 grains, one-ninth of a penny.

BOSTOCK'S EYE OINTMENT.

Manufactured by Page Woodcock, Limited, Lincoln Works, King Henry's Walk, London, N. Price 1s. 1½d. per pot, containing half an ounce.

This ointment is described on the label as "An invaluable remedy for every Disease to which the Eye is subject." In a circular wrapped round the pot it is called "Bostock's Botanic Eye Ointment," which

is strongly recommended as a valuable Restorative and Preserver of the Sight, removing Inflammation, Bloodshots, Scorbutic Humours, Shooting Pains, Dimness, Swelling in the Eyelids, and numerous other diseases to which the Eye is subject; it also Preserves the Sight against the injuries arising from extreme Heat and Cold.

DIRECTIONS FOR USING BOSTOCK'S BOTANIC EYE OINTMENT.—The first thing in the morning, and also on retiring to rest at night, the Eyes should be well washed with warm milk and water, after which the Ointment should be gently smeared over the Eyelids. If the Ointment causes a dimness to come over the sight, with a watery discharge, it is a certain sign of its taking proper effect. It is necessary to mention this, as some persons have expressed fears that the effect was contrary to what was intended.

Analysis showed the presence of small quantities of ammoniated mercury and an insoluble compound of lead which appeared to be the oxide; a little glycerine was present, and a bitter, light-coloured substance of the nature of an extract; this contained no alkaloid, and gave no characteristic reactions indicating the drug or plant from which it was derived; a trace of a vegetable powder was also found, the quantity being so very small that it was probably only accidental contamination of the extract; when examined microscopically it appeared to consist chiefly of the tissue of a seed, but it did not resemble the powder of any seed in ordinary medicinal use. The basis of the ointment contained soft paraffin and spermaceti and a third constituent agreeing in its characters with lard. Determination of the amounts of the respective ingredients indicated the following approximate formula:

Ammoniated mercury	...	0.83 per cent.
Lead oxide (litharge)	...	0.15 ,,
Glycerine	...	2.25 ,,
Extractive	...	3.32 ,,
Spermaceti	...	31.0 ,,
Soft paraffin	...	31.0 ,,
Lard	...	31.4 ,,

Neglecting the extractive, the estimated cost of ingredients for half an ounce is under one halfpenny.

A NEW AND MARVELLOUS REMEDY FOR THE EYES.

Sole proprietor of the remedy, A. Leggett, Elm, Wisbech. Price 2s. 9d. per packet, containing 135 grains.

The substance was enclosed in a small envelope, on which was written, "Remedy for Eyes only"; there was no printed label except the revenue stamp. In the accompanying circular it is described in the following terms:

A Cure for Cataracts, Films, White Specks, etc., without Operation. The Remedy Cures and Improves the Sight when every other remedy and human skill fails. The Remedy within Twelve Months has proved itself to have no equal for removing Cataracts, Films, White Specks, etc., and is guaranteed the greatest and most marvellous Remedy in the world for such, and for all Eye Sufferers.

Directions for use are given in another circular, as follows:

Divide the packet of powder into four parts; into an ordinary six ounce medicine bottle put one part out of the four, then fill up the bottle with pure water. Filter or strain the water before so doing, then let the Lotion stand all night after it is made, it is then ready for use. Keep the remainder of the powder in a dry place until required for use.

Shake up the bottle well before using, and in case of Blindness or very bad eyesight, for deep seated Inflammation, Cataracts, White Specks, Etc., pour some of the Lotion into an earthen cup or basin, and bathe the eyes three times a day, about two minutes at a time, and let the Lotion go well into the eyes by winking them whilst bathing them,—the Lotion will do no harm by going well into them, for good results can only be obtained in such cases by the remedy going well into the eyes. After bathing the eyes cover up the Lotion with a saucer or plate to keep dust, etc., out, until required for use again. Use a piece of linen rag for bathing the eyes.

N.B.—For Painful, Bloodshot, Weak, Dim and Misty Eyes, or Floating Black Specks, or for Eye Strain, Etc., and for Strengthening the Optic Nerve, Etc., and for Inflammation, Short Sight, Etc.—Simply bathe the eyes twice a day, morning and night, just before going to bed, about two minutes at a time, letting a little of the Lotion go into the eyes, and should the Remedy make the eyes smart too much, and too long, or make the eyes inflamed or water, etc., too much, make the Remedy a little weaker by adding a little more water to same quantity of Powder, or by not putting quite so much powder to same quantity of water.

This circular concludes:

Please Note the Remedy can only be had direct from the Proprietor himself, as no other human being in existence sells it.

The package was accompanied by a written paper signed "A. Leggett," as follows:

Please note. Since instructions have been printed I find it necessary for a slight alteration for the benefit of those suffering from Cataracts, Films, and white specks. In such cases when first commencing to use the remedy divide the packet of powder into 4 parts make one bottle out of one part and use according to instructions. After the use of first bottle divide the rest of the powder into 2 parts you will then have sufficient for 2 bottles and will therefore have remedy much stronger of which is needed in case of Cataracts, etc. And when more remedy is required always divide the packet into 3 parts sufficient to make 3 bottles and follow instructions.

(P.S.) I may say for the benefit of those suffering from Cataracts, Films, and white specks the best and quickest results have been obtained by using one bottle per week.

The packet contained a coarse pink powder, with many white particles. Analysis showed it to contain:

Basic aluminium sulphate	...	48.2 per cent.
Sodium sulphate (anhydrous)	...	18.3 ,,
Colouring matter ...	...	a trace

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL: 1904, vol. ii. p. 1585; 1906, vol. ii, pp. 27, 1645; 1907, vol. i, p. 213; vol. ii, pp. 24, 160, 209, 393, 530, 1653; 1908, vol. i, pp. 833, 942

the remainder being water. The colouring matter did not quite agree in its behaviour with any of the common pink colours, though it was very similar to acid magenta. The double sulphate of aluminium and sodium, or soda alum, contains 48.8 per cent. of aluminium sulphate and 20.3 per cent. of sodium sulphate, and the substance under examination thus practically consists of this salt, somewhat deficient in sulphuric acid.

Estimated cost of 135 grains, one-twentieth of a penny.

POMIES' ANTI-CATARACT MIXTURE.

Sold at the Ophthalmic Institution, 41, Fitzroy Square, W. Price 2s. 6d. per pot, containing 162 grains.

This is one of a series of preparations sold under the name "Pomies," including anti-cataract oil, anti-inflammation eye lotions Nos. 1 and 2, sedative collyrium, and others. The package itself was singularly free from printed matter; the directions on the label were as follows:

"Take some of the Mixture on a camelhair brush and introduce it into the eye in wiping the brush between the lids two or three times, twice a day."

Analysis showed the composition of the substance to be:

Potassium iodide	...	...	5.6 per cent.
Glycerine	...	...	56.5 ,,
Starch	...	...	6.4 ,,
Water...	...	...	31.5 ,,

Estimated cost of ingredients, for 162 grains, one-third of a penny.

XII.—PREPARATIONS FOR THE EARS.

SOME of the advertisements most frequently seen headed "Deafness cured," "Eyes and Ears," "Eye Diseases cured," etc, do not refer to nostrums obtainable in the usual way through patent medicine dealers, but the reader of the announcement is invited to write to the address given for particulars of special remedies, or an "interesting and convincing book post free," dealing with the cure of diseases without operation, etc. Application for particulars brings much printed matter recommending the advertiser's method, accompanied by a set of questions to be answered by the sufferer. If these answers are supplied and the fee which is demanded paid, medicine of some sort is sent. Such medicines lie somewhat outside the class of "secret remedies" dealt with in the present series of articles, and would come rather under the heading of prescribing at a distance. It is highly doubtful, however, whether the composition of the medicines supplied is modified according to the answers given to the questions, and the two kinds of quackery are not sharply separated. In the case of the preparations now to be described, one or two belong more nearly to the class just referred to than to that of ordinary "patent medicines."

ALFRED CROMPTON'S SPECIFIC FOR DEAFNESS.

Prepared only by William Crompton, 162 and 164, Bolton Street, Bury. Price 1s. 1½d. per bottle, containing half a fluid ounce.

The label on the outside of the package is headed:

Deafness Cured !!

and continues:

Alfred Crompton's Specific for Deafness, Noises in the Ears, etc., is decidedly the best remedy out for this most annoying complaint. A single Bottle has in most instances effected a speedy and permanent cure.

The directions are:

Warm the Specific and Shake the Bottle. Two or three drops to be dropped in the Ear, night and morning, and rub behind and under the Ear with the Specific.

Analysis of the specific showed the following composition:

Soap ...	...	...	3.6 per cent.
Glycerine	...	...	45.0 ,, ,,
Oil ...	...	...	21.7 ,, ,,
Water...	...	...	29.5 ,, ,,
Alcohol	...	...	a trace
Oil of rosemary	...	...	,,

There was a slight indication of a trace of camphor; probably this with the alcohol and oil of rosemary and part of the soap were added in the form of soap liniment. The oil gave analytical figures corresponding to a mixture of almond and colza oils in about equal proportions.

Estimated cost of ingredients, for ½ oz., one farthing.

DELLAR'S ESSENCE FOR DEAFNESS

Prepared by John Pepper and Co., Limited, Bedford Laboratory, London, S.E. Price 1s. 1½d. per bottle, containing ⅔ fl. oz.

This is described on the label as "An old-established and valuable remedy."

Directions for Use.—A small piece of wool, well moistened with the Essence, to be pushed into the cavity of the Ear every night at bedtime, and removed in the morning.

Analysis showed the composition to be:

Oil of turpentine	...	...	16 per cent.
Fixed oil	...	...	84 ,, ,,

The properties of the fixed oil and the figures which it gave on further analysis corresponded to those of almond oil.

Estimated cost of ingredients, for ⅔ oz., one halfpenny.

HERBERT CLIFTON'S TREATMENT FOR DEAFNESS.

This is brought to the notice of the public by an advertisement in the following terms:

A new cure for deafness. A Gentleman who cured himself after 14 years' suffering will send particulars of remedy free. H. Clifton, 37, Amberley House, 35 Waterloo Rd, London, S.E.

Application to the address given brought the following letter:

All letters requiring an answer must be accompanied by a stamped addressed envelope.

Herbert Clifton,
Aural Specialist.

Amberley House,
35, Waterloo Road,
London, S.E.
——, 1908.

Dear Sir,—In reply to your inquiry for particulars of my treatment of Deafness and Noises in the Head, I have pleasure in herewith enclosing my Pamphlet, together with copies of a few testimonials from sufferers who have been cured by my method.

To enable me the better to form an intelligent knowledge of your case I shall be glad if you will fill up fully and return the enclosed treatment form, and I will then be able to give you my candid opinion as to whether my system of treatment is calculated to efficiently meet the requirement and bring about the same desired satisfactory results for you as it has in hosts of others.

Awaiting the favour of an early reply,

Yours faithfully,
HERBERT CLIFTON.

P.S.—No charge whatever is made for advice, so you need not hesitate to avail yourself of the benefit of my *opinion*.

The pamphlet referred to is entitled "Deafness and Noises in the Head, with Instructions how they may be Absolutely Cured!" and is marked "40th edition." It professes to give an account of the writer's own experiences. A few extracts will suffice to give an idea of it:

Those only who have suffered from the terrible calamity of deafness can understand the misery it brings into one's life; and only those who have had occasion to seek the assistance of men who profess to cure this awful affliction can appreciate how utterly its treatment is misunderstood by the various advertising empirics who profess to cure it, whether by electrical, galvanic, or any of the other methods which are so alluringly set forth as perfectly infallible by people who never suffered themselves, who can have no sympathy, therefore, with those whom they profess to assist, and whose only object is to extract as large a sum as they possibly can from the pockets of those whom they have been able to attract to their spider's parlour. The writer, however, of the present pamphlet is in a different position. . . . As a lad I began to suffer from noises in the head, which as time went on increased to such an alarming degree that I was taken to an Aural Surgeon. . . . The usual result followed. I became worse and worse, and of course, weaker through his treatment. . . . Another doctor was consulted. . . . But the treatment failed, my affliction increased, and MY LIFE BECAME A BURDEN. . . . There seemed no hope for me. Nearly a dozen eminent surgeons had seen me, examined me, said different things about me, and indifferently treated me; but all to no purpose. . . . As a last resource I tried the various quack remedies which have allured so many to their bitter cost, and many a pound was wasted on mechanical, electric, magnetic, and other useless appliances, and upon ear-trumpets, drums, tubes, etc., with no result. . . . Then the wild, yet happy, thought flashed across me: "Why not try and cure yourself?" I pondered and pondered over the idea, and at last, rather than submit to my fate, determined to study physiology and medicine and endeavour to discover the cause of my deafness, with

the distant hope that I might alight upon the method of its cure. . . . The conclusion I came to was that what I really required was a medicine which should reach the minute muscles of the inner ear, as upon their proper action the sense of hearing almost entirely depends . . . . after a time I had succeeded in discovering a preparation which would do the required work. . . . My disease was of so long standing, that I had found it had caused the drums of my ears to become weak and shrunken . . . and I soon devised a small appliance to fit inside each ear—the appliance which I now term the "Invisible Drum Support" . . . in my gratitude to the Almighty for my merciful deliverance I vowed that I would publish to the world the method by which I had struggled out of the dark past into the brilliant light of the present.

No information is given as to the price charged for the "treatment," except that it will be found extremely moderate. Paragraphs, of the usual inspired kind, are quoted from the *Family Doctor*, *Christian Union*, *Family Churchman*, *Health*, and local newspapers of varying degrees of obscurity.

The above letter and pamphlet, etc, were followed after an interval by another letter, as follows:

Dear Friend,

Referring to your application for my Pamphlet some time back, I shall be glad to know whether you wish me to proceed further in the matter. As I have received no letter from you, I presume that you imagine the cost of treatment will be too high. I will, therefore, make you a Special Offer, that is, for the sum of 10s. (which may be paid in two monthly instalments of 5s each, if more convenient) I will forward you the full Treatment and Directions. Should you avail yourself of this offer, kindly detach the form at the bottom of this letter and return to me. The Treatment is, without doubt, the most effectual ever placed before the Public, as will be found by the numerous testimonials received.

I am daily in receipt of letters similar to those enclosed herewith, and I feel confident that, should you give the treatment a trial, you will also be able to report quite as good results.

Kindly let me know your decision as soon as possible. If you will take my advice you will not further delay.

May I draw your attention to the letters on the other side?

I am, yours faithfully,

HERBERT CLIFTON.

The "treatment form" was filled up and sent in with 10s. The questions and answers are subjoined.

Name (full).
Address.
Age. 34.
Sex. M.
Occupation. Clerk.
Married or single? Single.
How long deaf? About 18 months, gradually increasing.
Any noises in the head? No.
If so, describe them.
Are they constant?
Supposed cause of deafness? It followed a severe chill.
When did you first notice symptoms? October, '06.
What was the nature of them? Earache.
Was deafness gradual or sudden? Gradual.
Have you any discharge or inflammation of the ears? No.
Is the ear-wax dry, hard, or excessive? Dry and hard, not excessive.
What remedies have you used? Various ear-drops.
What effect had they? Little or none.
Are you affected with nasal or throat catarrh? Nasal catarrh occasionally.
Does the weather affect your hearing? No
Can you hear better in a quiet place? Slightly.
Can you hear a watch tick? Yes.
How far from right ear? About 1 inch. *From left ear?* 6 inches.
Have you ever received a severe blow on the head? No.
Is deafness hereditary? No.

As was to be expected, "my candid opinion as to whether my system of treatment is calculated to efficiently meet the requirement," was apparently in favour of treating the case, as a pair of "drum-supports" and a bottle of fluid were received, together with the following letter:

Dear Sir,

I am despatching herewith the Treatment as recommended in your case and I sincerely trust that you will derive great benefit from the use of the Remedies.

Please follow out the directions given very carefully and do not be disheartened because you find no improvement immediately, you must give the Cure a fair trial.

I shall be glad to hear from you in about three weeks' time with a general report on your case.

I am,

Yours faithfully,

HERBERT CLIFTON.

Printed directions were enclosed, the chief parts of which are as follows:

In cases where the use of the Drum Supports are recommended the following instructions should be observed:—The smallest end (that with the oval-shaped disc) goes into the ear first, and should be gently pushed until it rests against the natural drum of the ear. When in position, no pain should be felt, and they should be invisible. They should be worn every morning for at least four hours, and the ears should be thoroughly cleansed with warm water before inserting them.

. . . *In cases where a Lotion is recommended:*—A little cotton wool should be saturated with the lotion and placed into each ear, at all times, except during the time the "Supports" are being worn. The lotion must be applied 3 or 4 times a day, using clean wool each time.

In cases where a Powder is recommended:—The powder should be used the same way as ordinary snuff, a small pinch being taken between the fingers and snuffed through the nostrils three or four times a day.

In the present case no powder was sent.

The "drum-supports" consist of half-inch lengths of narrow india rubber tubing, as used for the valves of bicycle tyres, with an inner tube of "gum-elastic," the india-rubber being expanded at one end into a funnel ¼ in. long, and attached at the other end to a small oval disc of sheet india-rubber. The cost of the pair would probably not exceed 3d. The bottle was labelled "No. 1. Price 3s." and contained 1 fluid oz. of liquid; analysis showed this to have the following composition:

Glycerine	...	10 per cent. approximately.
Oil ...	...	28 " "
Ether ...	...	2 " "
Water ...	to	100

A trace (about 0.01 per cent.) of an alkaline substance was present, which appeared to be borax. The oil showed the characters of almond oil.

Estimated cost of ingredients, for 1 oz., one halfpenny.

OHRSORB COMPOUND

Supplied by M. Franckel, Albion House, 59-61, New Oxford Street, London, W.C.

The following advertisement is taken from *Cassell's Saturday Journal:*

Doctor Makes Deaf Hear.

A medical book just published describes a German doctor's wonderfully simple cure for deafness and head noises (a real home cure). A limited number of these books have been secured for readers of "Cassell's Saturday Journal," and will be sent free by post by the publisher, M. Franckel, 61, New Oxford St., London, W.C.

Application to the address given brought a booklet of sixteen pages, from which a few extracts are here given:

For years it has been known to Medical Men that the minute vessels or channels of the lymphatic system underlying the skin, covering the bone behind the ear, were intimately connected with those supplying vital nourishment to the middle and internal ear, where we find the common seat of deafness and head noises. If, then, we could medicate through the skin, this important current of lymphatic fluid, controlling the health of the essential parts of the organ of hearing, our medications could be made to flow inward to reach and to cure a disease so deeply hidden within the ear as to be otherwise regarded as incurable. It is the province of this little work to explain why the prescriptions of so many aurists have failed in years past, and to present a new chemical compound which is of the utmost value to deaf people.

Applications behind the ear are recommended in the writings of our greatest ear surgeons. Gruber, Politzer, Delstanche, Grünfeld, and numerous others have given us prescriptions of this kind, and, although their combinations of drugs have failed to produce any remarkable results, they have pointed out the remedies that would cure if combined with a substance which could penetrate the skin freely . . . Until lately we possessed no basis for our ointments, embrocations or plasters which could freely penetrate the skin. . . . Happily there is a new basis lately brought to the notice of the medical profession, which has the remarkable property of uniting with the watery secretions of the body in such a way that it (*sic*) absorbed by the skin, and taken up by the lymphatic circulation (described on page 1), together with any drugs that are combined with it in the form of an ointment . . . To this new basis has been given the name "Ohrsorb."

Quotations are then made from a Dr. Humphrey and a Dr. M. Losere, but no references are given by which they can be checked; these extracts, however, only refer to a "new preparation" and a "new treatment," without any indication that the advertised article is the one intended. A quotation is then given "From the Private Clinical Memoranda of Dr. Kupfinn, formerly Consulting Aurist to The San Augustine Hospital, Surgeon to the New York Ear

Hospital, Editor *Ear, Nose, and Throat Zeitung*, and Hon. Auris Chirurgis," in which "Ohrsorb" is referred to in a laudatory manner; this is followed by an account of some "typical cases," but it does not appear that this is part of the quotation, although it is so put that it might easily be taken to be. The pamphlet continues:

It should be clearly understood that Ohrsorb by itself is only a basis used solely for the purpose of providing the *active portion* of the Author's Absorption Treatment, and that the cure depends on the medicinal action of the drugs compounded with it in any special prescription. It is for this reason that certain particulars as to each patient's case are asked for on the enclosed coupon, namely, that the individual form of deafness, head noises, or ear trouble may be treated by an "Ohrsorb" compound specially adapted to it.

The pamphlet proceeds to give reasons for supplementing the treatment by the use of other articles, of which the following are recommended: "Ohraseptic," "Nazaseptic," "Specially Prepared Catarrh Tonic," a nasal irrigator, and a safety ear syringe. It was accompanied by a leaflet headed "Medical Report on the 'Ohrsorb' Treatment," in which many testimonials are given, but not one from a medical source or anything of the nature of a medical report; also by a "reduced price coupon," offering a 2s 9d. tube for 1s. 6d. or a 4s. 6d. tube for 3s., the applicant undertaking to use it as directed and report the result; and a list of about fifty questions to be answered in connexion with deafness, etc., and catarrh of the nose and throat, concluding with the following paragraph:

As a little return for supplying the tube of "Ohrsorb" compound at the reduced price, and for the very special attention that will be given to your case, the author will be grateful if you favour him with the names and addresses of two or three of your friends who suffer from deafness, head noises, or catarrh of the nose or throat. This is entirely confidential, and your name will not be mentioned.

In order to test the importance attached to the answers to the questions, a supply of "Ohrsorb Compound for Deafness" was sent for, without giving any particulars of the supposed case for which it was required. It was at once sent, together with a multiple-typed letter of the usual kind, as shown by the following extracts:

"I hope you will not neglect to write me about your progress with my treatment"; "of course you will appreciate that in obstinate cases Ohrsorb must be persisted with for some time before the improvement can begin to show itself."

and offering for future supplies three 4s. 6d. tubes for 10s. 6d.

The "Special Ohrsorb Compound" is supplied in collapsible tubes, and the 2s. 9d. size contained just over ½ oz. of ointment. The directions are:

As a dose take for each ear, on the finger, an inch of the "Ohrsorb" Compound in the rod-like shape as it comes from the tube. Rub this over the skin close behind the ear, and also from just beneath the ear around to the front of the throat, following the line where the neck joins the lower jaw. Continue the rubbing gently for three to five minutes, then wait ten or fifteen minutes, and finally wipe away the little greasy substance remaining. This application should be made once, twice, or three times daily, according to the severity of the case.

The ointment was dark, nearly black, in colour; it contained about 70 per cent. of vaseline, and about 4 per cent. of beeswax, a little soap, and a little saponifiable fat; it contained sulphur and ammonia in combination, and the dark constituent appeared to be of the class represented by thiol, tumenol, petrosulfol, etc., artificial compounds intended to take the place of ichthyol, and like it containing much sulphur in combination but free from its disagreeable odour. The total sulphur found in "Ohrsorb Compound" was 0.8 per cent., which corresponds to about 8 per cent. of one of these substances. An ointment made up with tumenol, soft paraffin, wax, and a little ammonia soap resembled "Ohrsorb Compound" very closely, though the correspondence was not quite complete. It was not found possible to isolate the dark constituent in a state of purity which should permit of more precise identification than is here indicated. For the detailed characterization of such a substance a large quantity would of course be essential.

THE SIXTEENTH INTERNATIONAL CONGRESS OF MEDICINE AT BUDA-PESTH, 1909.

A meeting of the National Committee for Great Britain and Ireland of the Sixteenth International Congress of Medicine was held at the rooms of the Medical Society of London on May 28th, Dr. F. W. Pavy, F.R.S., in the chair.

The National Committee was reconstituted by incorporating twenty-two new members with the former committee. It was proposed by Mr. W. H. H. Jessop, seconded by Mr. L. Eliot Creasy, and carried unanimously, that the officers of the new committee be Dr. Pavy, F.R.S., President, and Mr. D'Arcy Power and Dr. Clive Riviere, Honorary Secretaries. Letters were read from the Secretary-General of the congress stating that it would be held at Buda Pesth, August 29th to September 4th, 1909, under the patronage of the King-Emperor. It was further reported that certain changes had been made in the method of obtaining scientific communications; no members or societies had been invited directly to contribute, but all papers and discussions had been left to the initiative of individuals. Under these circumstances the National Committee felt that it was necessary to urge those who proposed to read papers to send in the titles to the General Secretary (Professor Emil Grósz, Esterhazy-uteza 7, Buda-Pesth viii) as soon as possible, because it was very desirable that the medical profession in the United Kingdom should be adequately represented at the congress. The work of the congress is divided into twenty-one sections, of which one (otology) is to be held simultaneously with the Eighth International Congress of Otology. The sections are:

Anatomy and Embryology.
Physiology.
General and Experimental Pathology.
Micro-biology (Bacteriology) and Pathological Anatomy.
Therapeutics which includes Pharmacology, Physical Therapeutics and Balneology.
Internal Medicine.
Surgery.
Obstetrics and Gynaecology.
Ophthalmology.
Diseases of Children.
Diseases of the Nervous System.
Psychiatrics.
Dermatology and Venereal Diseases.
Diseases of the Urinary Tract.
Laryngology.
Otology.
Stomatology.
Hygiene and Prophylactic Medicine.
Medical Jurisprudence.
Military and Naval Hygiene.
Tropical Diseases.

There will probably be the usual reduction in railway fares for those who attend the congress, but no details are as yet forthcoming. Should a sufficient number of members from Great Britain and Ireland signify their intention of attending, it may be possible to obtain a special through train from Boulogne to Buda Pesth. The cost of membership is twenty-five crowns (approximately one pound sterling) for each member and half that amount for members' wives and daughters. The money can be remitted by post office money order payable to Professor Dr. Elischer, Treasurer of the Congress, at the current rate of exchange.

United Hospitals Athletic Club.—The United Hospitals Athletic Club has arranged to hold its forty-second annual meeting at the Stamford Bridge Athletic Ground on Wednesday, June 17th, 1908 commencing at 2 p.m. There will be the following events: 100 yards, 220 yards, 440 yards, 880 yards, 1 mile, 3 miles, 120 yards hurdles, long jump, high jump, putting the weight, throwing the hammer, tug-of-war (for teams of eight). In each one of these there is now a challenge cup, the list having been completed by the presentation of a cup for "putting the weight" by the president, Sir William Henry Allchin, M.D., F.R.C.P., F.R.S.E. Lady Allchin has kindly consented to distribute the prizes at the close of the sports. For the fourth year in succession the London Hospital holds the challenge shield, winning last year with 88 points, St. Bartholomew's coming second. In competition for the shield, first place in each event counts 10 points, second place 3 points. It is expected that a meeting with a team from Dublin University will be held in London early in July.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

BIRMINGHAM.

AT a meeting of the City Council held on May 5th, Mr. G. H. Kenrick moved the following recommendation:

> That the proposals of the Education Committee in regard to the medical inspection of children in schools be approved,[1] and that the powers and duties of the council as a Local Education Authority under the Education (Administrative Provisions) Act, 1907, be delegated to the said committee.

It was proposed to divide the city into three districts, in each of which a properly qualified medical man would be placed, who should be responsible for the examination of the school children in his own district. He would proceed on a certain day to certain schools in his area, with a nurse and appliances, and the children to be examined and their parents would be notified in advance. A room would be specially provided, and one by one the children would be examined. It was proposed by the committee in the first year to confine attention as far as possible to the children who had entered during that year; subsequently each child would be examined three times during his school life, which was roughly reckoned at nine years. It was not thought wise to attempt remedial measures until the cases had been thoroughly investigated. The medical men who were responsible would be under the supervision of the medical officer of the committee. Dr. Pooler said the report was evidently drawn up with the idea of economizing at the expense of efficiency. So far as the medical inspection was concerned, the health department had been absolutely ignored, thus contravening the instructions of the Board of Education. He also thought that the number of officers it was proposed to appoint was inadequate, and that the salary of £250 was so low that the services of such men as the council would wish to get could not be obtained. He suggested that the report should go back to the committee for further consideration, and after some discussion this suggestion was adopted.

NORTHUMBERLAND.

At a meeting of the Northumberland County Council, held in Newcastle, on May 7th, Sir Francis D. Blake introduced the report of the Executive Committee, recommending the medical inspection of school children in the county. If, he said, the circular of the Board of Education meant what it said, it meant that instead of £84,000 they expected, they would only draw £80 000 if they did not carry out medical inspection. The object of the provision was to promote the health and physique of the nation, and where it had been tried voluntarily it had proved a great success. He did not think the whole expense would fall upon the authority. Where parents could pay they would be asked to pay. Alderman Forster took exception to the medical examination. It was optional and, so far as regarded young girls, he thought it was brutal. Sir Francis Blake said whenever there was a medical examination a nurse, or the schoolmaster's wife, or some other reputable person would be present, and he thought the dangers of medical examination were imaginary. Mr. Charles Rae said medical inspection might or might not be needful in the slums, but it was not necessary in healthy rural areas. There were 54,000 school children, and he calculated it would take all the school working hours every year for eight—not two—medical officers to conduct this inspection. The Duke of Northumberland did not agree with the dangerous doctrine that because the terms of an Act were not such as the council thought the best the council should refuse to obey it. Compulsory and free education had to be accepted, but he hoped the council would refer the recommendations back to the Education Committee on entirely different grounds from those already mentioned. Up to a few years ago, if a Government embarked on any legislation which would lead to expense it was borne by the imperial exchequer. Now Parliament was passing Acts which fall entirely upon the rates. The practical consequence was that the central authority imposed rates and not the local authority. That was the principle they had to stand against. They should say to Parliament, "We will do whatever you wish us to do. If you think medical inspection is the right thing we may hold our own opinion on it, but we will carry it out," but on one condition—that if they were compelled by Parliament to take definite action, then the major portion of the expense should fall upon the taxpayer, not upon the rates. Only so much should fall upon the rates as should secure economical management by the county council. Alderman J. R Hogg said the advice of the Duke was tantamount to telling them they should refuse to carry out the Act. After further discussion, Alderman G. B. Grey said that for the sake of economy he wanted both medical officers to be women at £160 a year, not one woman and one man at £250 a year each. His amendment was rejected. The report was adopted in its entirety.

[1] BRITISH MEDICAL JOURNAL, April 11th, p. 884.

LYNN THOMAS AND SKYRME FUND.

ELEVENTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Subscriptions May 22nd to May 29th.

Subscriber of Two Guineas.

Coombe, Russell, Exeter.

Subscribers of Two Pounds One Shilling.

Bolton Medical Society, per Douglas Gray, the amount being made up as follows:

One guinea from:

Jefferies, H., Bolton.

Five shillings from:

Dowling, F., Bolton.
Gray, Douglas, Bolton.
O'Neill, T., Bolton.
Sutherland, D. S., Bolton.

Subscribers of One Guinea.

Armit, H. W., Wembley.
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Fry, A. B., Captain, I.M.S., India.
Kirkby, Walter, Maesteg, Glam.
Pugh, J. W., Brighton.
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Shaw, H. T., Liverpool.
Teacher, J. H., Glasgow.
Twist, J. F., Bridgend.
Warr, Ernest E., London.

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Jones, Richard, Blaenau Festiniog, North Wales.

Subscribers of Half a Guinea.

Anderson, James, Seaton Delaval, R.S.O.
Levenshulme and District Medical Society, per E. Maynard Ashcroft, Manchester.
Milward, W. Courtenay, Cardiff.
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Wyllys, William, Great Yarmouth.

Subscriber of Ten Shillings.

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Condor, A. F. R., Cheltenham.
Mason, John, Windermere.

Subscribers of Half-a-Crown.

Whaite, Thomas du B., Lieutenant-Colonel, R.A.M.C., per L. D. Parsons, Honorary Secretary, Gibraltar Branch, British Medical Association

THE annual report for the year ending December 31st, 1907, of the Kelling Open-air Sanatorium, Holt, Norfolk, shows steady progress with a satisfactory financial position. The sanatorium has been open for five years, and has at the present time accommodation for 53 patients—27 men, 16 women, 8 men working and 2 working women. The sanatorium is intended for those whose means are limited, and the patients are expected to pay 30s. a week, which represents the cost of their maintenance. There are certain funds by which patients unable to pay the full cost of their maintenance may be assisted, and a special feature of the institution is that a certain number of patients are admitted as "working patients," who, by their labour, earn their maintenance and treatment. The medical report shows clearly, as do the reports of similar institutions, the importance of early treatment. Though the information for applicants for admission states in prominent type that none but early cases are taken, we find, amongst the 187 patients discharged during the year, that 11 were in such an advanced state of disease that they were sent away shortly after admission, and that only 33 per cent. of the cases were classed as suitable on admission. Tables, showing the condition of the patients on discharge and the permanence of improvement so far as is possible in the short period since the sanatorium was opened, are included in the medical report. An After-Care Committee endeavours to find suitable employment for patients when they leave the sanatorium, and to keep in touch with them after they have left. The report shows that the results of treatment are very encouraging and, considering the stage of disease on admission, very satisfactory.

MEDICAL NEWS.

THE first sanatorium for tuberculosis at Amsterdam has recently been opened.

THE President of the Board of Education has appointed Miss Janet M. Campbell, M.D., to the Medical Department of the Board.

THE Spanish Government has under consideration a scheme for the granting of pensions to the widows and children of doctors who have fallen victims to professional duty in times of epidemic.

THE annual dinner of the Association of British Postal Medical Officers will be held at the Whitehall Rooms, Hotel Métropole, London, on Tuesday, July 14th, when the chair will be taken at 7 30 p m. by Dr. G. A. Mason.

THE Hunterian Society have decided to award a silver medal annually for the best essay by a general practitioner embodying the results of original observations. Intending candidates can obtain full particulars from the Senior Honorary Secretary, Dr. Langdon Brown.

THE summer dinner of the West African medical staff will take place on Monday, June 22nd, at the Gaiety Restaurant. Any medical officers who have not yet received an intimation should communicate without delay with Dr. Prout, 78, Rodney Street, Liverpool.

THE annual dinner of the West London Post-graduate College and Past and Present Members of the West London Hospital will take place at the Trocadero Restaurant, on June 23rd, Mr. L. A. Bidwell in the chair. Further particulars can be obtained on application to Mr. Aslett Baldwin, 6, Manchester Square, the Honorary Secretary of the dinner.

DR. DAVID FERRIER, F.R.S., will deliver the annual Bolingbroke Lecture to the South-West London Medical Society on Friday, June 12th, at 9 p.m. The subject of the lecture, which will be delivered at the head quarters of the 4th Volunteer Battalion East Surrey Regiment (opposite Clapham Junction Station), is hysterical paralysis, and medical men who are not members of the society are invited to attend.

THE summer dinner of the Southern Branch of the Durham University Medical Graduates' Association was held on May 29th, at the Imperial Restaurant, London, W., when 45 members and guests were present. The President of the Association, Dr. Charles W. Chapman, occupied the chair. The toast of the University, proposed by the Rev. George Hilton, B.A., was acknowledged by Professor Sir George Hare Philipson, and that of the visitors by Mr R A. Robinson, J.P., Chairman of the London County Council, in a delightful speech. Excellent music was provided under the direction of Miss Jessica Leeson, and contributed in no small degree to the success of a very pleasant evening.

THE Incorporated Society of Medical Officers of Health has arranged a course of lectures and demonstrations on medical inspection of school children during the Whitsun week, commencing on Tuesday, June 9th. The opening meeting takes place at 3 p.m., after which Dr. James Kerr, chief medical officer of the London County Council Educational Department, will deliver an address. On Wednesday, at 11 a.m., Dr. C. J. Thomas, L.C.C. Education Department, will lecture on medical inspection; at 2 p.m. visits will be paid to schools; at 3 p.m. Dr. Shrubsall will deliver a lecture on anthropometry. On the following day, June 11th, Dr. Kerr will give a demonstration of special cases at 10.30 a.m.; at 11 30 Dr. Thomas will deal with office routine, ringworm examination, etc., to be followed by visits to schools. At 2.30 Dr. Kerr will lecture on eyes and ears, to be followed at 3.30 by Dr. H. Meredith Richards on school and home infectious diseases, and at 5 30 Dr. Hogarth will speak on school clinics. On the last day, June 12th, there will be at 10.30 a.m. a demonstration by Dr. Kerr at the London County Council Educational Offices.

THE annual report and balance sheet of the Glasgow University Club in London, presented at the meeting of the club on May 29th, contained a sympathetic reference to the loss sustained through the death of Lord Kelvin. The club has presented fifty guineas to the Glasgow University Students' Union Extension Fund. The resignation of Dr. C O Hawthorne, one of the honorary secretaries, was received with regret; he has held that office with conspicuous success for seven years, and well deserved the thanks accorded to him. Lord Lister has been made President of the club. In the evening the members dined together at the Trocadero, Piccadilly, under the chairmanship of Professor D. W. Finlay, who in proposing the toast, "The University and the Club," said that Sir William Gairdner practically introduced modern clinical teaching at Glasgow. He mentioned with pardonable pride that the club now numbered nearly four hundred members. Sir Henry Craik, M.P., proposed "The Guests," and this toast was replied to by Dr. Sidney Coupland, who said that the attempt to turn the University of London into a teaching as well as an examining body had not yet been thoroughly realized; the House of Commons would probably be asked to settle the question. Professor J. M. Thomson gave the toast of "The Chairman," which was suitably acknowledged.

THE French Medical Association known as the E.M.I.—one which makes an annual pilgrimage to places of medical interest outside France—proposes to visit England in the middle of July, and to stay in London for a week from July 12th. The chief attraction is the Franco-British Exhibition, but it is also intended to examine the working of some of the principal hospitals, including more particularly St. Bartholomew's and its new out-patient department. The staff of this hospital has arranged to give a reception in honour of the visitors, and the governors of the hospital have agreed to the delivery of an address by Professor Landouzy, in the Great Hall. Such general arrangements as are necessary to ensure the success of the visit on the scientific side are being made by Dr. Leonard Williams, Physician of the French Hospital, with the co-operation of Dr. Leonard Mark and Mr. Macleod Yearsley. It is also proposed to give a dinner which, like everything else connected with the visit, will be of entirely informal character. A good many medical men in London have already expressed their wish to be present at this dinner, but Dr. Leonard Williams and his colleagues will, of course, be glad to hear from others. It is intended to hold it at the Exhibition, and that there shall be no speeches beyond a toast to the heads of the respective Governments.

THE report of the National Sanitary Department of Cuba shows a mortality of 2,380 during January, which is equivalent to an annual death-rate of only 14.04 per 1,000. This is a peculiarly satisfactory result for a tropical island, for it compares most favourably even with the statistics of the healthiest localities in the world, and this with nearly one-third of the population coloured. The details of the report call for no special remark except with regard to the yellow fever returns. During 1907 there occurred 168 cases of this disease, and a summary of these is given. January only furnished one case and March one. May, June, and July averaged 4 cases only, but the outbreak was in full swing in August, when 46 cases were notified, and in September with 45. The numbers lessened to about half in October and November, and to 8 in December, but the year has begun unsatisfactorily, for no less than 13 cases were recorded in January. A spell of warm weather occurring in the latter end of December necessitated close vigilance to extinguish the last foci while the season remained favourable, and competent experts were appointed to act as scouts to keep close watch over the infected zones. The measures taken seem to have been attended with success, but the report shows pretty clearly that the mastering of an epidemic is no very easy matter even with a thoroughly trained organization.

AT the third Latin-American Medical Congress held at Monte Video last month Dr. Jaime Oliver read a paper on actinomycosis in Uruguay, the outcome, apparently, of a similar contribution relative to Argentina made at a previous congress by Dr. Cranwell, who had spoken of his experiences of it in Buenos Aires. The disease, it appears, was practically unknown, but Dr. Oliver, by addressing a circular to all his fellow-practitioners in Uruguay, was enabled to form a fairly conclusive idea of the actual extent of its prevalence, and states, as the result of his inquiry, that, in the human subject, the malady is extremely rare, for he could only discover three microscopically-confirmed cases in a period of ten years. It remained to be seen, however, what was the extent of its frequency in animals, and here the careful examination which is carried on in the cowhouses and abattoirs of Monte Video was of the greatest assistance. In the former, of 17,192 cows examined, 29 were affected with actinomycosis, the part diseased being the udder in 22 cases, the maxilla in 6, and the crural region in 1. Of 601,806 animals killed in the abattoirs 165 were affected, 99 in some part of the head and 66 in the mammary region. This is instructive as showing that actinomycosis is much more common in stall-kept cows than in animals living in the open, being in the proportion of 1 case in 592 cows in the former, as compared with 1 in 3,889 in the latter. In stall-kept cows the mammary form of the disease is much the most frequent, as stated above, having an average of 1 case in 781 cows; but in the slaughterhouses there was only 1 case of mammary actinomycosis in 1,880 beasts.

British Medical Journal.

SATURDAY, JUNE 6TH, 1908.

THE ANNUAL REPRESENTATIVE MEETING.

WITH the advent of June and its many suggestions of the realization of the year's hopes in orchard and field, there comes for the British Medical Association the reminder afforded by the publication of the revised text of the provisional agenda of the Annual Representative Meeting of the approaching harvest of the year's work of Divisions, Branches, Committees, and Council, which that important assembly may reap. The plant cultivated through winter months by the spade work, pruning, and stimulation of the men who freely give of their time and ability to the common causes of the profession is already of hardy growth, and we may look at it for a moment to see what fruit it may be hoped will this year be gathered from it.

As will be seen by reference to the print in the SUPPLEMENT this week, various questions affecting the constitution of the Association bulk large in the business prepared for the meeting, for it will have before it the draft Charter, Ordinances, and By-laws revised in accordance with the instructions of the Special Representative Meeting of May, 1907, together with the special report of the Council submitting the revised draft.[1] It will also have to consider certain resolutions of which notice has been given in due form, either by the Divisions or by the Council, proposing alterations in that draft.

It will be remembered that at the Representative Meeting at Oxford in 1904, when certain difficulties in the way of carrying out the full scope of the work of the Association were considered, a resolution was passed instructing the Central Council to take steps to effect such changes in the constitution of the Association as would enable it to carry out its objects more freely. When this task came to be undertaken the Council was advised by the eminent lawyer consulted that the time had come to consider whether an application should not be made for a Royal Charter. He pointed out that "the advantage of obtaining a Charter "would be very great, for not only would the Association "be free from the somewhat troublesome restrictions "of the Companies Acts, but its powers for good would "become much greater. It would be freed, for all "practical purposes, from the trammelling rules of the "courts in regard to what is and what is not *ultra vires*, "and thus, as the undertaking develops, so could the "operations be extended without the necessity for "seeking for express provision among the objects."

The Representative Meeting of 1905 adopted this suggestion, and a draft for a charter with ordinances and by-laws was submitted to the Representative Meeting held in London in July, 1906. As a result of the discussion which then took place the Charter was revised and brought before the special Representative Meeting of May, 1907. The Charter, which meanwhile had been brought before the Divisions, was then approved, subject to certain minor alterations, and again submitted to the Divisions. The Council, as will be remembered, took a referendum on certain points; but, the result of the referendum having been to confirm the resolutions, the revised draft Charter, Ordinances, and By-laws now submitted have been prepared in accordance with the resolution of the Representative Meeting, subject to certain verbal and other minor changes made under the advice of counsel, and to certain changes which the Council thought it desirable to make in accordance with the authorization of the Representative Meeting, in order to comply more fully with the wishes of the Colonial Branches in matters specially concerning them.

All through the prolonged debates on the reform of the constitution which have occupied so much time and energy during the last seven or eight years the object has been to devise a scheme under which every member of the Association should be given an opportunity of influencing its policy. This principle has been accepted as axiomatic; nobody has disputed it, and everybody has tried to find means for carrying it out. But experience—the experience of the British Medical Association and of all similar voluntary organizations and of democratic states—proves that, simple as the principle is, there is no more complex problem in practical politics than to construct a constitution in which it is completely realized. In Great Britain a representative system, practically without any check except the second chamber, has grown up; in the United States we see a representative system with a very elaborate series of checks; while in Switzerland there has been evolved a representative system with the very remarkable check of a referendum to the original electors which would appear generally to have been conservative in its operation. The object of the checks, both those devised by the framers of the American constitution and that introduced into the Swiss constitution, is to obviate the risk of the representatives arriving at a hasty decision which does not truly represent the final and considered opinion of the electorate.

Discussions in Representative Meetings and correspondence which has appeared from time to time in our columns have proved that the apprehension exists among some members of the Association that the Charter as drafted does not provide adequate safeguards against this risk, and it will be seen that suggestions to obviate it have been embodied by Divisions in resolutions which it will be the duty of the Representative Meeting to consider. One of these, numbered 13 in the agenda, has reference to a clause in the Charter itself as drafted. Fears have been expressed that the means specified in Clause 2 (2) as those which may be adopted for the furtherance of the objects of the Association, might be extended by a vote of the Representative Meeting on some particular occasion before the proposed extension had been adequately considered by the Association at large. The Cardiff Division therefore proposes that the decision of the Representative Meeting to add to the means specified shall require confirmation by another Representative Meeting, and that when so confirmed the proposal shall come before the Council, who may make a referendum. Upon this it may be observed that it will not be surprising should the Representative Meeting accept this proposed amendment, for in the first place there is no intention in any quarter to rush the Association into undertaking any work which has not received general approval after the very fullest consideration; and, in the second place, the extension of objects is a point very jealously guarded by the Companies Act, and one upon which the courts of law are disposed to take a conservative view. Another

[1] SUPPLEMENT, May 23rd, 1908.

suggestion likewise designed to ensure that the opinion of all members of the Association shall be ascertained upon any matter of first-rate importance is contained in the proposal (numbered 15 on the agenda) that the referendum whenever taken shall be by means of voting papers sent to every individual member of the Association. It has been objected that under the present system of referendum, as illustrated recently, the number of members who actually express an opinion on this final appeal is unduly limited, and the proposed change is designed to bring the power of voting to the door of every member. From the nature of the circumstances the cases in which a referendum will be taken must rarely occur, and will always involve questions of exceptional importance.

The idea underlying the institution of Divisions was that the areas should be so defined as to allow every member a reasonable opportunity of attending a meeting for the consideration of any subject in which he took an interest, consequently the main governing feature in fixing the boundaries of Divisions was locality and not population. The necessary result is that the number of members in the several Divisions varies very much, and that therefore, since each Division has one Representative, the members of a numerous Division are in this respect under-represented in the Representative Meeting. In consequence of this feeling the Liverpool Western Division proposes that any Division having more than fifty members may elect another additional Representative for every complete fifty additional members; and, again in order to encourage all members to take a part in the election of Representatives, the Cardiff Division proposes that the election shall always be by voting papers sent to each member in the Division. At present it is permissible for any Division to elect its Representative by voting papers through the post. The suggested amendment to By-law 25 would make this method of election compulsory.

The next matter which appears to be of outstanding importance is the mode of election of the Council. At present the members of the Council are elected by the Branches—that is to say, by electoral colleges differing from those which elect the Representatives. As the Council is the chief executive body in the Association there are obvious objections to this system, one being that there is no necessary organic relation between the Representative Body and the Council. The draft Charter as it stands proposes to reduce the number of members of Council, to retain the special election by Branches, but to give to the Representative Body the right to elect annually a certain proportion, about one-fifth, of the whole number. An objection to this scheme is that it introduces into the constitution and working of the Association a complication which all must feel is undesirable if it can be avoided. Another objection is that it would be conceivably possible for the whole of the members of the Council elected by the Representative Meeting to be chosen from one part of the country, or if we may use the term without any evil connotation, from one party in the Representative Meeting. This objection might, of course, be urged with even greater force against the proposal that the Representative Meeting should elect the whole of the Council. A way out of the difficulty has been suggested by the Bournemouth Division, which proposes that single-member constituencies shall be formed of one or more Branches, and that the member of the Council for the constituency shall be elected by the Representatives of the Divisions comprised in the area from among members of the Association resident within the area. This would ensure territorial representation, it would obviate the necessity of double elections of Representatives and of members of Council, and it would provide an executive elected, not, indeed, by the Representative Meeting as a whole, but by its component members. A corollary to this would be another amendment, which is, indeed, advised independently—that is to say, that all standing committees shall receive instructions from and report directly to the Council, and that instructions or references to the central executive made by the Representative Meeting, other than a committee specially appointed by it, shall be moved in the form of an instruction or a reference to the Council. There are many other points with regard to the Charter, Ordinances, and By-laws, which will be found to tend in the direction of simplifying the means for ascertaining the opinion of the Association at large.

Another matter of importance to the business of the Association is the report of the Special Finance Committee, which, together with a prefatory note dated April 28th, was published in the Supplement for May 2nd. As there seems to be some misapprehension with regard to the extent to which effect has already been given to the recommendations of the Committee by the Council, we may point out that, so far as we can judge, all matters of principle have been left to the decision of the Divisions. Among these matters are the relation which should be established between expenditure and income, the nature of the financial provision which should be made for rebuilding, the reduction of the number of members of the Central Council and of the Science Committee in the interests of economy, the paying of the profit from the annual exhibition in to the central fund of the Association, and the question of the general arrangement of the constitution and work of the central staff. The recommendations adopted have all, with one exception, been of the nature of readjustments not involving any alteration in expenditure, or readjustments tending to economy. The only exception is the appointment of an Assistant Medical Secretary, a matter upon which the Council had distinct instructions from the Representative Meeting.

In this article, which has already outgrown the intended limits, we have only touched upon some points in the agenda for the Representative Meeting which appear to be of particular consequence to members of the Association. It is hoped that what has been written may induce members to study the agenda paper carefully for themselves.

THE OLIVER-SHARPEY LECTURES.

During the last thirty years a great deal of attention has been given by the physiologists of every country to the ductless glands, and the suprarenals have received their full share of investigation in this period. Professor Schäfer, in his Oliver-Sharpey Lectures on the present condition of our knowledge regarding the functions of the suprarenal capsule, published in this and the last issue of the Journal, has given a very able summary of what is known about the functions of these glands. We use the words "what is known" advisedly. The striking facts brought to light by the investigations into the properties of extracts of the cortex and of the medulla of the suprarenals have, without doubt, been a great stimulus to further work upon the subject. But they have excited the pens and imagination of numerous physiological and medical writers still more highly, and an over-plentiful crop of speculations and hypotheses has been the result. With these Professor Schäfer does not deal; as he says, they were adequately reviewed in Dr. Rolleston's Address in Medicine

delivered at the meeting of the Canadian Medical Association last September.

Beginning with a brief account of Sharpey, and a history of the investigation of the suprarenal glands, which have been continuously under examination for the last four-and-twenty years, Professor Schäfer traces the evolution of ideas concerning their function. In 1887 Brown-Séquard, as the result of ablation experiments, was led to suppose that the glands were not essential to life, and that their chief function was to prevent the formation of some unknown toxic substance in the body. Various Italian physiologists, on the other hand, injecting large doses of extracts of the glands into the veins of other animals, came to believe that these extracts were themselves poisonous. Not until the influence of suprarenal extracts upon blood pressure came to be investigated could any decided advance be made, and this was done in 1894 by Professor Schäfer and Dr. Oliver. These authors concluded that the function of the suprarenal capsules was to provide an internal secretion.

Before entering into details regarding the physiological effects of this internal secretion, Professor Schäfer makes an interesting digression dealing with the structure and development of the suprarenals, and with their comparative anatomy. He quotes also from a curious report penned in 1716 by Montesquieu on certain prize essays "On the Use of the Suprarenal "Glands," submitted to the Bordeaux Academy of Sciences, in which the dry humour of that author points out how in those days—as indeed in these—ignorance presented no obstacle to speculations as to the functions of the suprarenal glands. Professor Schäfer then details the investigations made by himself and Dr. Oliver, between 1893 and 1895, which proved that while extracts of the suprarenal cortex were apparently physiologically inactive, those made from its medulla brought about a peripherally-produced vaso-constrictor action, and, in the frog, also an increased power of contraction of the skeletal muscles on stimulation of their nerves. It is interesting to note that during the same period two Polish investigators, Szymonowicz and Cybulski, independently came to the conclusion that the suprarenals yield an active internal secretion, although some of their results differed from those of Schäfer and Oliver, and were subsequently shown to be erroneous.

Describing next the results of more recent researches, the lecturer remarks that the use of adrenalin (or, as he would prefer to rename the active constituent of this proprietary substance, "adrenin") as a styptic dates from 1897. "One of the most striking facts relative to "this styptic action is that, although, when given by "the mouth, no evident change occurs in the blood "pressure, there is very distinct evidence of vascular "constriction, for bleeding from the internal parts, "such as the stomach, intestine, bladder, and uterus, "even the bleeding of *post-partum* haemorrhage, may "thereby be effectually controlled. The explanation of "this which most readily presents itself is that the "injured vessels are more susceptible to the extract, "and react to a slight excess of it in the blood more "readily than do normal vessels." There is no physiological contraindication to giving adrenalin by the mouth as a styptic in haemoptysis due to rupture of small pulmonary vessels, or in cerebral haemorrhage.

A second series of investigations seems to show that adrenin stimulates the sympathetic nervous system. But this stimulation is equally well obtained after the sympathetic nerve fibres have been cut and degenerated (Lewandowski); it is most probable that the extract affects some substance at the myoneural junction within the muscle fibres (Elliott, 1905), where it is originally formed under the influence of the sympathetic fibres. A quantity of work done upon yet other lines has shown that a marked but transient glycosuria can be produced in rabbits or dogs by the subcutaneous or intraperitoneal injection of adrenin, even when the stored carbohydrates have been previously eliminated from the body, and there seem to be connecting links between the glycosuria set up by removal of the pancreas and that due to the action of suprarenal extract. In 1907 Löwe observed that adrenin instilled into the conjunctiva of patients with pancreatic diabetes produces dilatation of the pupil, while in the normal individual it has no such effect. This observation has since been confirmed, and is of interest because it may perhaps serve as a diagnostic test for this form of diabetes. This mydriasis also occurs in animals with glycosuria due to ligature of the thoracic duct, but it does not follow if the adrenin before instillation be mixed with lymph, even if the lymph be protein-free; it may therefore be that the lymph normally contains a glycolytic substance, derived from the pancreatic islands of Langerhans, that is indispensable for the metabolism of carbohydrate in the body.

A fourth line of research during the last few years has yielded much information as to the effects of adrenin on the different arterial systems, and probably its most important action in the normal body is that of maintaining the vascular tone. Its effect is greatest on the arteries of the splanchnic area; on the pulmonary vessels its effect is slight, and so it is, too, on the cerebral arteries. It appears to have no action on the coronary vessels, but this question is still *sub judice*.

All these actions of suprarenal extracts depend upon substances derived from the medulla of the gland, and our knowledge of the cortex, fairly advanced on the sides of histology and comparative anatomy, remains almost negligible from a physiological point of view. "It is certain," concludes Professor Schäfer, "that we "cannot as yet allocate any definite function to the "cortical cells." Yet only fifteen years ago the functions of the suprarenal medulla were no less obscure; the lecturer's suggestive remarks at the end of his second lecture show how wide a field for investigation lies open to physiologists attacking the problem of the functions performed by the suprarenal cortex.

CALUMNIES AGAINST HOSPITALS.

IN the BRITISH MEDICAL JOURNAL of May 16th reference was made to a disgraceful slander against hospitals uttered at an "Antivivisectionist Demonstration" held at Caxton Hall on May 12th by Mr. Cunninghame Graham. According to a report of the meeting which appeared in the *Standard*, he asserted that "there are many opera-"tions conducted in the hospitals to-day, useless, cruel, "and only to be conducted"—we are not responsible for Mr. Cunninghame Graham's English—"for precisely the "same reasons that they were conducted on animals—"namely, that those who undergo them are poor and "helpless." We invited the utterer of this atrocious calumny to give some proof of his statements, but although we sent him a marked copy of the JOURNAL, he has not thought fit to accept the challenge. We never thought that he would; nor has he, so far as we have been able to discover, replied to a correspondent in the *Standard* of May 15th, who called upon him to substantiate his statements, "(1) by "naming any operation which has been performed on "any patient in a London hospital for the purpose of

"making some physiological discovery; (2) to name any "operation which could not, and would not, be performed on a rich and influential patient; (3) to do his "duty by publishing the name of any surgeon who has "performed any useless and cruel operation on any "patient, merely because the latter was poor and "helpless." Mr. Cunninghame Graham, however, like the general of whom it is written,

> He fled full soon
> On the first of June,
> And bade the rest keep fighting,

has left the field to other champions. The "rest" in this case is represented by a Mr. Patrick Gardiner, who in the *Standard* of May 19th refers to "a book "entitled *St. Bernard's*, which was published some "years ago as a protest against the experiments on "poor patients carried on in our London hospitals; "and further to another publication entitled *Dying* "*Scientifically*, which was issued owing to a similar "challenge being made as to the veracity of the "statements contained in *St. Bernard's*"

Mr. Gardiner is evidently a simple-minded person who does not know the ways of the antivivisectionists. It may interest him to learn that the works which he names are by Mr. Edward Berdoe, the editor of the *Zoophilist*, who acknowledges them as his offspring in *Who's Who* for 1908. Both *St. Bernard's* and *Dying Scientifically* were published in 1883. It would be worth the while of Mr. Gardiner and others who may have been misled by the lurid pictures of hospital practice given in these works to compare them with Mr. Berdoe's attempts to justify similar charges when fairly brought to book. If he will look at the BRITISH MEDICAL JOURNAL for the later weeks of 1892 he will find what a pitiful figure the calumniator of hospitals makes in such circumstances. Addressing a meeting of working men on November 22nd in that year, he is reported to have informed his audience that "they, their wives and children, "were subjected in our hospitals to operations "which were not performed on a lady who rode "in her carriage." Asked by us to state definitely what operations he referred to, he shuffled and finally quoted "the case of 'Catharina Serafina'" reported in the *Deutsches Archiv für klinische Medicin* of January 18th, 1882. He further cited some experiments in cancer-grafting made in Germany as justifying his remark. This is the familiar method of the antivivisection controversialist. It reminds one of the evidence for ghost stories. It is never the narrator, but his grand-aunt or his wife's grandmother who saw something. We pressed Mr. Berdoe for something in the nature of proof of the operations which he said were performed in our hospitals, and the reply is so remarkable that we give it in full. Writing in the JOURNAL of December 17th, 1892, p. 1364, the author of *St. Bernard's* said: "When I addressed my Battersea audience I used "the pronoun 'you' and also the words 'your wives and "'children' with reference to the proletariat in general, "arguing that on the working classes would have to "fall the testing of the results of experiments made in "the physiological and pathological laboratories upon "animals. As you object to my proofs of this state"ment from German hospitals, I give you the following "from sources nearer home. In the issue of the "BRITISH MEDICAL JOURNAL of December 3rd, in which "you protest against my remarks, you report a case on "page 1221, column 2, lines 9 and 10, which is a perfect "answer to your question. Would that precise operation be done on the child of a carriage-keeping "patient? Or if you refer to the *Journal of Physiology*, "vol. x, pp. 213-231, would that sort of treatment be "exactly carried out (see page 225, lines 13-16) on a "lady of fashion?" We took the trouble to look up the references thus tardily given by Mr. Berdoe in proof of his allegation that working men and their wives and children were subjected in our hospitals to operations which were not performed on any lady who rode in her carriage. And this is what we found. The first case to which reference is made is recorded in a paper by the late Sir Thomas McCall Anderson on xanthoma multiplex. The procedure is described as follows by the late Professor Joseph Coats, who made sections of the diseased parts: "Small portions of the skin, including "parts of the eruption, were excised under ether "spray." We went on to point out that this "operation"—namely, the removal of small pieces of diseased skin for diagnostic purposes was habitually practised by scientific dermatologists without regard to the social position of the patient, and we added that when the parts were first sprayed with ether the "operation" was absolutely painless. Mr. Berdoe, as a qualified medical man, must be presumed to have been aware of this elementary fact. His second instance turned out to be still more trivial. The reference is to a paper by Dr. Monckton Copeman and Mr. W. B. Winston, giving the results of observations on the bile in a case of biliary fistula in St. Thomas's Hospital. It was found among other things that in the absence of the bile the pancreatic juice was not able to complete the digestion of fats. The passage alluded to by Mr. Berdoe is as follows: "To test this matter "still further, Dr. Bristowe ordered ½ lb. of butter "to be taken with the meals in the course of the "day, but in consequence of the intense nausea and "vomiting which ensued it was not persisted in." On this we went on to say: "Setting aside the absurdity of "calling the administration of butter with the meals "an 'operation,' we would ask what there is in the "simple physiological experiment here recorded to "ruffle the sensibilities of the most hysterical anti"researcher? Has Mr. Berdoe never had to discontinue "giving cod-liver oil to a child whose stomach "rejected it? Do not 'ladies of fashion' often take "greater liberties than this with their own diges"tive organs, and with consequences even more "distressing? It would require 'considerable com"'mand of countenance,' to use a phrase of Lord "Beaconsfield's, to treat Mr. Berdoe's amazing *apologia* "seriously; but is it tolerable that a medical man "should make peculiarly odious charges against his "professional brethren before an ignorant audience on "the strength of such utterly irrelevant statements as "those which when driven to the proof he now adduces? "Mr. Berdoe has not yet attempted to name the opera"tions which he alleged to be performed upon the "wives and children of British working men, and "which are not performed on ladies who ride in their "carriages. His present futile effort in that direction "rather aggravates the seriousness of his position."

After this exposure Mr. Berdoe did not make any further attempt to justify his charges—charges, we may be allowed to say, which could only have proceeded from an overheated imagination and that "will to "believe" which is so potent a force in human thought and human deeds. "The evil that men do lives after "them," and the same thing may be said of books. *St. Bernard's* has long been dead; we do not know if it died scientifically. We have an impression that even Mr. Coleridge repudiated all knowledge of it not long ago. Yet here in this present year of grace we find its author quoted as a witness of truth!

Our hospitals need no defence at our hands. Doubtless mistakes are sometimes made, and doctors and even nurses are subject to the same infirmities of temper as ordinary mankind. Indeed, the work puts such a strain on human endurance that the only cause for wonder is that mistakes and faults of temper are not far commoner than they are. But we can scarcely imagine a meaner form of slander than that of which hospitals are often made the objects—and this even by medical practitioners, from motives into which it is needless to inquire. There is probably no institution of any kind as to the management of which the public has such guarantees as a large hospital with a medical school attached. The fierce light that beats upon a throne is scarcely brighter than that which beats on every act of a hospital physician or surgeon. There are, first, his colleagues, who may be trusted to deal faithfully with him or even to denounce him to the governing body if he does wrong. Then there are the students, the most eager and often the most captious of critics. On their judgement their teacher's future depends; it is therefore his interest as well as his duty to do his best for the patients under his care. There are, too, the nurses, who in these days are perhaps even sterner judges of a man's capacity than his pupils. Again, there are the numerous officials of the hospital. Throughout this little world everything that a man does or leaves undone is repeated, it may be with the additions which rumour usually gathers on its way as it flits about the mouths of men. Last but not least, there are the patients, and their friends who keep their eyes open for backslidings. All this offers an amount of security that makes us inclined to agree with the late Sir Henry Thompson that by far the best place to be seriously ill is in a well-appointed hospital with its ordered and efficient machinery of benevolence, and its freedom from the fussiness of friends, and what is perhaps worse, the too manifest anxiety of those of one's household which tends to shake the firmest fortitude.

SOME MORE NOSTRUMS.

ANOTHER instalment of the series of articles on the composition of secret remedies which have been appearing in the BRITISH MEDICAL JOURNAL for some time past is published to-day. An inquiry of the kind is, from the analytical point of view, tedious and often difficult; for, though the analytical chemist can easily and quickly identify the nature of inorganic salts in a mixture or powder, and estimate their amount, and is able also to recognize any alkaloids present, it is otherwise with vegetable extracts and colouring matters, for which pharmaceutical science has not yet been able in all cases to supply easily applicable and conclusive tests. Of the accuracy of the analytical data published there can be no question; the investigation has been carried out with great care by a skilled analytical chemist who has controlled his results in various ways, one being that in every doubtful case the formula obtained by analysis has been tested by making it up and comparing the appearance, taste, and physical properties of the imitative mixture with those of the secret preparation sold to the public. The articles in this series have not been confined to a mere dry statement of the results of analysis. Care has been taken to reproduce the claims and exuberant boasts of the vendors, and the contrast between them and the list of banal ingredients which follow must have struck every reader. This juxtaposition of analytical facts and advertising fancies is instructive and sometimes entertaining, the fancy is so free and the fact so simple. To take an instance from one of the secret remedies mentioned in the article published this week. "An absolute specific for all eye troubles "and diseases," which "requires great skill in making," turns out to be a very ordinary red oxide of mercury ointment, and, in spite of the fact that it is said to be "composed of costly ingredients," the actual cost of the material in a two-shilling pot is estimated at an amount smaller than any coin of the realm. Another contrast between fancy and fact which must have struck the readers of this series of articles is that between the contempt expressed by the advertiser for the knowledge of the medical profession and the sincere admiration he displays in selecting more or less old-fashioned remedies, some still very commonly used, others already discarded for better by the majority of medical men. One cure for deafness is an emulsion of oil and glycerine in water, with a little soap, probably added in the form of soap liniment; another, advertised by a person whose studies in physiology and medicine enabled him to cure himself, turns out to be a mixture or emulsion of glycerine and oil, with a little ether and perhaps a little borax in water, but the patient is also advised to use an india-rubber contrivance as a "drum support." It cannot be said that the concoctors of these mixtures and powders and ointments show any particular skill in the compounding of drugs. They appear very indifferent to taste and appearance, and perhaps count on the belief common among the poorer classes at least that the nastier a drug the more effective it is. There is at any rate the excuse for this foible that the effort to subdue the repugnance to the draught produces a glow of virtue which may perhaps have a certain stimulating effect on the mind; the patient having not only spent his money but suffered some discomfort, is anxious to justify his faith by assuming himself to be the better for the double sacrifice. It is, however, not only the poorer classes of the community who have a weakness for secret remedies and the ministration of quacks. The well-to-do and the highly-placed will often, when not very ill, take a curious pleasure in experimenting with mysterious compounds. In them it is perhaps to be traced to a hankering to break safely with orthodoxy; they scrupulously obey the law and the Church and Mrs. Grundy, but will have their fling against medicine. Usually, however, people of these classes take to some system. It used to be electricity or hypnotism or some eccentricity of diet; nowadays it is more often Christian Science. The quacks have taken advantage of this love of heterodoxy to establish direct personal relations with persons attracted by their advertisements. Some of the preparations for deafness that are described illustrate well the elaborate means adopted in some cases to induce sufferers to adopt the articles recommended, and, by asking for reports on their symptoms and progress, ostensibly to facilitate personal attention to their requirements, to extract from them some statement with regard to improvement, real or imagined, which can be separated from its context and converted into a "testimonial" to aid in obtaining fresh victims. In the articles now reported on, as in those previously dealt with, the disproportion between the price charged and the cost of the ingredients would perhaps be a useful eye-opener to the public who waste money on such things if it could be brought to their knowledge in such a way as to secure attention.

OLD AGE PENSIONS.

To some of those who have looked forward with apprehension to Mr. Asquith's Old Age Pension Bill, a perusal of the text of the measure is calculated to afford a certain measure of relief. The restrictions are so numerous that none but the poorest and most deserving

persons are likely to derive any benefit from the Act when it comes into force. A few of the salient provisions may be thus epitomized. The amount of the pension is to be 5s., the age limit 70; but if two persons entitled are living together in the same house they are to get only 3s. 9d. each. No one who is in receipt of an annual income of £26 5s. or more can receive a pension; and in estimating income for this purpose, the value of house property, or any benefit or privilege enjoyed by the person is to be taken into account. Any person in receipt of parish relief which disqualifies him from registration as a parliamentary elector; or who is able-bodied and has habitually refused to work; or who is a pauper in a workhouse or a criminal lunatic, is disqualified. Again, a conviction followed by imprisonment disqualifies a person during his sentence and for ten years thereafter. A pension cannot be assigned away or charged, and if a pensioner becomes bankrupt, the pension does not vest in his trustee in bankruptcy. The question whether a pension is to be granted is to be decided in the first place by a committee of the local authority acting on the report of an official to be known as the pension officer. If the decision of the committee is not in accord with the report of the pension officer, the matter must be referred to the central pension authority—that is, the Local Government Board. No pension is to accrue until January 1st, 1909. The conviction of a pensioner on a criminal charge involving imprisonment causes him to lose his pension.

CANCER RESEARCH AT THE MIDDLESEX HOSPITAL.

On May 28th Field-Marshal Lord Grenfell presided at the Court of Governors of the Middlesex Hospital, when the Weekly Board reported that a special committee had been established which should devote itself entirely to the promotion of the interests of the cancer research. In connexion with this object, reference was made to an urgent appeal which had recently been made in the public press for funds to meet the expenses of the current year. Of the £2 500 required for the purpose £1,000 had already been subscribed. Major-General Lord Cheylesmore, C.V.O., moved the adoption of the report, which was seconded by Mr. Pearce Gould, Senior Surgeon to the Hospital, who said that one of the last things Mr. William Hern, who had been Dental Surgeon to the Hospital for twenty-two years, did before his recent retirement was to hand over to the Treasurer the sum of £500 for the Cancer Research Fund. After referring to the re-establishment of the lying-in wards of the hospital, Mr. Pearce Gould went on to say that they might have done nothing yet as regarded cancer to equal the discoveries of Pasteur, Lister, and others in regard to infectious diseases, but what they had done in other fields could be arrived at in this only by the same methods of laborious and continued research. By this way they were assured that light would come, and that there might be as great a revolution with reference to cancer as there had been with regard to puerperal fever. Some people were apt to think that because the work of cancer research had now been carried out for some years without the key to the great problem having been found, they were engaged in a hopeless quest. He hoped the Governors of the Middlesex Hospital would never take that view. They were all eagerly longing for knowledge to enable them to combat the terrible disease; they were working strenuously for it, but there must be patience, and he trusted and believed that financial aid and direct encouragement would be continued to the men who were devoting their lives to the solution of this problem. And if that solution had not yet actually been reached, their labours had not been without beneficial result. Even in his own time the treatment of cancer had been far less satisfactory than it was to-day. When he was first a student practically nothing was known about the disease. Now a great deal was known, and in many cases effectual prevention had been accomplished, while in others distinct benefit followed modern treatment. In the quarter ending March 31st, the total number of cases in the Electrical Light Department was 2,453. In a very large number of those cases the patients were afflicted with cancer, and they came two or three times a week, and some of them month after month, and even year after year. In a considerable proportion of them most marked benefit had resulted from the treatment, and he thought it right that those who had been for some years contributing generously to the work in connexion with cancer should know that in the research laboratories and out-patient wards of the hospital great good was being done to the poor sufferers who came there for relief.

SANATORIUM AFTER-TREATMENT.

An idea recently put forward in connexion with the sanatorium treatment of consumptives has not only the charm of novelty about it but seems likely to prove valuable, even should it only germinate on very modest lines. In the lives of those officially connected with open-air sanatoriums nothing is more depressing than knowledge of the fact that patients who have improved enormously during their residence and even reached a point at which the tubercle bacillus seems to have been thoroughly overcome will, on leaving the sanatorium, return to a form of existence well calculated to undo all the benefits received therein. At present it is almost inevitable that the "cure" of consumptives shall be but temporary, for the vast majority of all patients who undergo a period of open-air treatment depend on their own exertions for their livelihood, and very often they have other persons dependent on them likewise. They cannot, therefore, devote themselves to the care of their health for an indefinite period, and so soon as is possible leave the sanatoriums to resume their former occupation. Unfortunately, too, this usually necessitates a return to homes in which the sort of airy existence absolutely essential to their continued well-being is impossible. The amount of air which they have grown to like is abhorrent to ordinary folk who have never lived in other than comparatively stuffy apartments, and the returned invalids are being constantly tempted by example to sit up late and do many other things which they had better avoid. If for every patient discharged "cured" from a sanatorium some form of life not necessitating confinement in houses could be made possible, of course it would be infinitely better for them, but usually such an arrangement is quite out of the question. The next best thing, therefore, is to secure that when away from work they shall have much more air than most people either desire or require, and live on strictly hygienic lines, and the new idea is to secure such an existence for at least a certain number of those who leave sanatoriums to recommence work in London. To this end it is proposed to take a large house in an open neighbourhood within easy reach of the city, and carry on therein a kind of boarding-house for men who have been through "a cure" and wish to continue to live in conditions as closely corresponding to those of a sanatorium as is permitted by the fact that they are working in the city for a certain number of hours every day. The originator of the idea is a lady who has had much experience with consumptives, and she intends at first to look after the hostel herself. The charges made for board and lodging will be as low as are compatible with making the establishment pay its own way when once it has been got into working order, and a small committee of practical persons has been formed

to supervise the working of the scheme. The conception has been warmly welcomed by a large number of medical men interested in tuberculosis, and certainly deserves every sort of encouragement. If such a hostel as that indicated were carried on sufficiently long to prove the practicability and value of the idea, others would probably be opened, and an important step forward would be made in the solution of the economic and therapeutic problems connected with tuberculosis.

THE EVIL EFFECTS OF SUNSHINE.

Is it be true that "devils love darkness," then, according to C. E. Woodruff (*Ophthalmology*, April, 1908), they are in advance of the medical men who advise their patients to "get into God's sunshine as much as "possible." Woodruff would have us believe that light has a most pernicious action, not only upon the lower forms of protoplasm, but also upon mankind. The ultra-violet rays have essentially the same lethal effect as Roentgen rays and those emitted by radium. All animals are protected against the sun; they hide in the day time, or are covered by hair, feathers, or pigment. Even plant cells must work in the dark under the bark, or protected by green pigment. Man also needs protection, and by the ordinary laws of selection a race becomes pigmented in direct proportion to the intensity of the light. The author sees the process going on in America, a land where the blonde type is rapidly giving place to the brunette, and asserts that it is well known that the tuberculous rapidly perish in the tropics. Knopp has stated that in the South-Eastern States of America phthisical patients only improve in the long, dark, cold winter; they make no progress in summer. If subjected to the "sunshine "treatment," the brunettes show better results than the blondes, who invariably perish if they migrate too far south. Not only is tuberculosis more prevalent among blondes, but neurasthenia also claims them as its victims. This disease is wofully prevalent in white men both in the tropics and in the snow glare of arctic regions. It is made worse in lands of perpetual sunshine, but improved in dark, cold climates. Woodruff appears to be in ignorance of the fact that there is at least one resort of consumptives which seems almost able to recall the dead to life, the South African Karoo—a land of perpetual sunshine! The author states that most migraines are due to eye-strain, the result of astigmatism. This astigmatism is due to lid pressure, and the lid pressure is accentuated by sunshine. In America a trivial error of refraction can, it seems, lead to "terrible sequelae" and to "much truancy and crime.' We are unable to accept these views. In our experience, true migraine is rarely caused by errors of refraction, nor can we believe that astigmatism, which may be due to a flattening of either the vertical or the horizontal meridians of the eye, is due to lid pressure. The idea that a pair of spectacles can make a criminal a moral man need not be discussed outside the yellow press. That exposure to direct sunshine can have under certain circumstances a pernicious effect must be admitted, but the extreme views expressed in the paper are little short of ridiculous.

ASYLUM WORKERS' ASSOCIATION.

THERE was a crowded meeting of asylum workers and their friends at the annual meeting of the Association held at 11, Chandos Street, on May 29th. Sir William J. Collins, M.D., M.P., the President, was in the chair, and amongst those present were the Bishop of Barking, Sir Ralph Knox, K.C.B., Mr. A. Goodrich, Past Chairman of the L.C.C. Asylums Committee, Drs. Savage, Robert Jones, Rutherford, M.P., Bower, Briscoe, Cole, Greenlees, Hind, Outterson Wood, Shuttleworth (Honorary Secretary), and many chaplains, stewards, matrons, attendants and nurses from asylums, both metropolitan and provincial. The annual report (with financial statement for 1907) was presented by the Honorary Secretary and its adoption moved by the President, who stated that it was a record of good work during the past year; although there had been a slight falling-off, the membership stood at 3,375, and the finances continued in a fairly satisfactory condition. There had been unusual demands upon the Homes of Rest Fund, which rendered valuable aid to members suffering from ill health or overstrain, and by supplying timely rest and change refitted them for their arduous duties. He was himself willing to contribute £5 to the funds, and he trusted others would follow his example. Referring to the efforts of the association to secure for workers in public asylums adequate and assured pensions, he remarked that if persons who had nothing to recommend them were to receive old age pensions from the State, surely those who had devoted their working life to the care of the insane had claims to pensions when broken down or worn out in the service. He adverted to the bills for the State registration of nurses, contending that well-qualified mental nurses had equal claims to recognition with those trained in hospitals. Dr. Robert Jones, Medical Superintendent of Claybury Asylum, in seconding the adoption of the report, stated that in no department of medicine was a good nurse of such incalculable value as in insanity, where the essence of treatment was that baffling and even mysterious influence of one mind upon another, for it was remarkable what power could be exercised over an insane person by a well-disciplined mind. It was essential that a high class of applicants should be obtained for asylum work, and, to secure such, good surroundings, proper leisure, adequate rest, and opportunities for mental and physical recreation must be secured. The Bishop of Barking, from personal experience in visiting the large asylums in his district, bore testimony to the devotion displayed by those in charge of the insane. Dr. Rutherford, M.P., who followed, said that he considered workers in public asylums had a clear claim to pensions as civil servants discharging duties of the utmost value to the State. Sir Ralph Knox, K.C.B., spoke of the necessity of outdoor recreation for those called on to perform the arduous and trying duties of attendance on the insane. The report having been adopted, two gold and three silver medals were distributed to two nurses and three attendants for long and meritorious nursing service in asylums. Sir William Collins was re-elected President, a long list of Vice-Presidents was approved, and an Executive Committee appointed. The proceedings closed with a cordial vote of thanks to the President and principal speakers, proposed by Dr. Pasmore and seconded by Dr. Bower. In acknowledging it, Sir William Collins referred to the invaluable services of Dr. Shuttleworth, who had acted as Honorary Secretary since 1897, and had ably conducted their monthly journal, *Asylum News*, the editorship of which he was now handing over to Dr. James Nicoll of Caterham Asylum.

PAROCHIAL MEDICAL APPOINTMENTS IN THE HIGHLANDS.

As long as there are medical appointments vacant in the Highlands and islands of Scotland there will be candidates, in spite of repeated warnings given by the Scottish Poor-law Medical Officers' Association, and also in the columns of the JOURNAL. But the tenure of these appointments is so uncertain, it is difficult to understand why young medical men will not be guided by those who have gained knowledge by bitter experience. The parish of Lochbroom in Ross-shire

is now vacant, or is likely to be soon. The present incumbent has £135 per annum, the salary now advertised in connexion with the appointment is only £120, with private practice, always an uncertain quantity in these districts. It is estimated to be worth between £50 and £60 in Lochbroom. The district is forty-two miles long and forty wide—rather bigger than the county of Midlothian; it is divided by two lochs, which makes it very difficult to work. The parish is very hilly, and throughout most of it the roads are bad; in fact in some parts of the parish there are no roads at all. The ways of getting about the district are either on foot, bicycle or boat, but to save expense the bicycle is the chief means. Ullapool is the centre from which the district is worked, one township, Coigach, is twenty-five miles distant, and to visit this means a loss to the doctor. Dundonell is another township; it is reached by a ferry a mile broad, but during stormy weather it is on many days impossible to cross. Having crossed the ferry, there is a hill to negotiate, which rises 620 ft. in one mile, the district beyond extending from thirteen to seventeen miles. This, then, is a sample of a highland parish; it is difficult to see how the incumbents of these parishes make both ends meet. Of private practice there must be very little, and probably most of the book debts are bad. The Government should step in and give a subsidy to these parishes in order to supplement the salary of the parochial medical officer, for such districts cannot raise sufficient from the rates to give a "living wage" to the medical officer. The remedy is in the hands of the profession; as long as candidates are forthcoming to compete for these appointments the desired end will be delayed.

PHOTOGRAPHS IN QUACK ADVERTISEMENTS.

We are all familiar with the photographs of patients in advertisements who are said to have been cured by some quack medicine. If we may judge from a story by Miss Mary E. Wilkins, in some parts of America it is considered an honour by some people to figure in the newspapers in this fashion. That is due to genuine ignorance. But the advertiser does not always confine himself to the limits of prosaic fact. A young woman has recently, we learn from the *Boston Medical and Surgical Journal*, got a verdict of £1,200 damages in the United States Circuit Court against a patent medicine company which, it is alleged, had obtained her photograph under false pretences, and exploited it with a forged testimonial in its public advertisements. The plaintiff, who had been a saleswoman in a large department store, testified that, in consequence, her fellow employees had ridiculed her to such an extent that her life became unbearable, and she was obliged to give up her position. All the points of her contention were proved to the satisfaction of the jury.

MEDICAL BENEVOLENT SOCIETY FOR THE EAST AND NORTH RIDINGS OF YORKSHIRE.

In the East and North Ridings of Yorkshire the need has long been felt of some society which would have for its object the relief of aged members of the profession or their widows and orphans. Though the question of the formation of such a society has been raised on many occasions, it is only recently that any definite action has been taken. Some months ago a provisional committee was formed in Hull, which, after investigating the matter, decided that the formation of a society on the lines of the West Riding Medical Charitable Society was most desirable, and the views of the whole of the medical practitioners (nearly 500 in number) in the East and North Ridings and the city of York were obtained by circular letter. The response was so satisfactory that a meeting was held at York on May 21st and the society was definitely formed. More than a hundred members have already joined, including a large number of life members. The annual subscription was fixed at 1 guinea and for life members at 10 guineas. Only members or their relatives can participate in the benefits. The first officers of the society are—President, Dr. J. Mitchell Wilson (Beverley); Vice-Presidents, Dr. Jalland (York), Dr. Godfrey (Scarborough), Mr. R. H. B. Nicholson (Hull); Dr. C. A. Lea (Hull), Dr. H. J. C. Godfrey (Bridlington); Treasurer, Dr. E. M. Hainworth (Hull), and Honorary Secretary, Dr. Edward Turton (1, Albion Street, Hull). From the support already received the future success of the society would seem to be assured.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

It has been officially announced by the Secretary of the College that a meeting of the Fellows will be held at the College in Lincoln's Inn Fields on Thursday, July 2nd, at 3 p.m., for the election of four Fellows into the Council of the College in the vacancies occasioned by the retirement in rotation of Mr. John Ward Cousins, Mr. Alfred Pearce Gould, and Mr. William Harrison Cripps, and by the resignation of Mr. Frederick Howard Marsh. Blank forms of the requisite notice from a candidate of his nomination may be obtained on application to the Secretary, and the same must be received by him duly filled up not later than on Monday, June 8th. A voting paper will be sent by post to each Fellow, whose address in the United Kingdom is registered at the College, on Friday, June 19th. In addition to Mr. Lynn Thomas, C.B., who, as announced last week, intends to offer himself at this election, we are informed that Mr. George Eastes will stand as a representative of general practitioners, and that Mr. Arbuthnot Lane, Mr. C. B. Lockwood, and Mr. W. F. Haslam (Birmingham) will also be candidates. We understand that of the members whose term of office have expired, Mr. Harrison Cripps and Mr. Pearce Gould intend to offer themselves for re-election.

General Medical Council.

NOTES.

The time of the Council during the present session has been mainly occupied in the hearing of penal cases, especially one case the proceedings in which were very much prolonged by the course taken by the defence.

The Administration of Anaesthetics.—A resolution adopted by the Medico-Legal Society and forwarded to the Council, urging the desirability of making the administration of any general anaesthetic by an unregistered person a penal offence, and adding, as a rider, that instruction in the administration of anaesthetics should be included in the requirements in regard to professional education, was considered by the Executive Committee and referred for further report to the Education Committee. It was recommended that the reply of the Council should be to the effect that (1) it would willingly support any measure which limited the administration of anaesthetics, as indeed the carrying out of any branch of medical or surgical practice, to duly qualified and registered practitioners, and (2) that as regards specific instruction in the administration of anaesthetics, the Council has already within the last year issued a recommendation to the licensing bodies that this should be included in their curricula, a recommendation adopted by certain of the bodies. It is to be hoped that something may result from these steps; with the last few years examples have not been wanting of the tendency of judges and juries to deal very leniently indeed with an unqualified

person who has met with a mishap, and it is of little use for coroners' courts to send a case for trial if acquittal is almost sure to follow. There seems no way of remedying this short of rendering the administration of anaesthetics by an unqualified person a penal offence, mishap or no mishap.

The Administration of Anaesthetics for Unregistered Dentists.—A Dublin practitioner had been found at the last session to have administered anaesthetics for unregistered dentists, but judgement upon the gravity of the offence had been postponed. The person charged, having given pledges that he would not do so again, and assurances that in the interim he had not done so, was informed that, on further consideration of the case, the Council did not hold that he had been guilty of infamous conduct in a professional respect. In another case in which a similar charge was made the circumstances were somewhat peculiar. The medical practitioner had not attended at the premises of the unregistered dentist, but the latter was proved to have sent several patients to the house of the medical man, making appointments for them and indicating the operations to be performed, namely, the extraction of teeth under gas. The extractions were performed, and no fees were paid to the medical man by the patients. The defence urged was that he was not aware that the dentist was unqualified and unregistered, that in fact no payment had been made by the dentist, and that as soon as it was discovered that he was unregistered further transactions were declined. The Council recorded its judgement that the facts had not been proved.

Dental Cases.—Two cases in which discreditable advertising falling within the terms of the Council's resolution on the subject was alleged were heard by the Dental Committee, and the facts found to have been proved The findings of the Dental Committee are, under the terms of the Act, final as to the facts, and the Council has only to pronounce its judgement according to its estimate of the gravity of the facts. In both cases the Council postponed its judgement till the next session, when the practitioners will have to appear and give evidence as to their conduct in the interval. One of the cases was peculiar, inasmuch as the person charged had at one time been possessed of a diploma (Licentiate in Dental Surgery of the Royal College of Surgeons of Edinburgh), which had been withdrawn in 1891 in consequence of his advertising. It appeared that notwithstanding this he had within the last few years printed in an advertising pamphlet undated testimonials which stated that he possessed this diploma; these testimonials had been given to him long ago in reference to an intended application for an appointment.

Examinations for the Public Services.—Returns from the Navy and the Indian Medical Services only were before the Council, and these were analysed by the Examination Committee. The numbers coming up from many of the licensing bodies were too small to admit of any inference being drawn from the results. But it seems worthy of mention that 27 of the candidates, or 36 per cent. of the whole, held the diplomas of the English Conjoint Board, and that all of them passed. There were 74 candidates holding qualifications from, as expressed in the report, 87 bodies, by which of course it was meant that at least 13 of the candidates held two qualifications, or that a smaller number held more than two apiece. The 8 candidates holding the degree of the Royal University of Ireland all passed, and it is satisfactory to note that all the 5 candidates holding Indian and Colonial qualifications passed.

The Midwives Act.—The English Branch Council, the authority constituted under the Midwives Act, has dealt with a recommendation of the Midwives Board that some distinction be made in the register of midwives between those entered upon it in virtue of having pursued their calling prior to the passing of the Act and those who entered in virtue of having passed the examination, the distinction being in the form of the addition of the words "by examination." This was agreed to, some precedent having been afforded by the procedure under the Medical Act of 1858, and under the Dentists Act, the *Registers* in these cases enabling it to be seen whether a person was registered under the term of grace or as holding a recognized qualification.

School Attendance Certificates—An important case was brought before the Council at the instance of the Education Committee of Birmingham. It appeared also that a Birmingham Bench of magistrates had adjourned the hearing of a prosecution for non-attendance of a child pending the decision of the Council upon the facts of this case. It was alleged that certificates of illness had been improperly given, and that, in particular, in one instance the patient had never been seen at all by the practitioner in whose name the certificate was signed but only by his son, an insurance agent. The facts in this particular instance were not disputed, and it was further admitted that the son had signed a large number of such certificates "per pro" his father, whom he assisted in dispensing. It was, however, denied that in respect to these numerous certificates signed by the son any irregularity more grave than the writing and signing "per pro" the father had been committed, and it was alleged that the father had in fact seen the patients, though he had not written the certificates. A number of witnesses were examined, amongst them being two of the chief school attendance officers. The Council found the charge proved, and directed the Registrar to remove the name of Mr. James Brookes from the *Register*.

The Prevention of Unqualified Practice.—A large amount of information has been placed at the disposal of the committee appointed to report on the conditions as to unqualified practice obtaining in other countries by the India Office, the Foreign Office, and the Colonial Office. The committee presented only a preliminary report indicating that considerable differences exist in the methods adopted to restrain unqualified practice; penalties are variously exacted for unqualified practice, unregistered or unlicensed practice, the illegal assumption of titles, the administration of potent drugs or poisons, and want of proper skill in either qualified or unqualified practitioners. Whilst the amount of detail given in the report is not sufficient to enable many conclusions to be drawn, the general impression left by its perusal is that medical legislation is in many countries, at all events, not very satisfactory. Attention is drawn to the fact that in Germany the practice of the healing art is left free so long as certain titles are not assumed, and so long as municipal or police recognition is not sought.

Registration of a Foreign Dentist.—A Russian subject, Rosalie Nadel, had applied for registration and had been refused. She appealed to the Privy Council under the terms of the Act, and the Privy Council asked to hear the Medical Council before deciding upon the appeal. The Dental Education Committee reported at length on the case, and advised that the Council reply that there was not evidence that her qualification was such as to provide a sufficient guarantee of adequate knowledge and skill for the practice of her profession, emphasis being laid upon the shortness of the curriculum shown, and the absence of instruction in the principles of medicine and surgery comparable with that required in this country. The Council adopted the recommendation of the committee and it was forwarded to the Privy Council.

Resolutions of the Council with regard to Professional Misconduct.—On the motion of Professor Saundby it was agreed, after a brief discussion that these resolutions should be printed in the *Medical Register* so as to be available for ready reference. On a subsequent day, however, the question was raised whether the insertion of any additional matter in the *Register*, an official publication, was strictly legal; nothing further appears upon the minutes. Want of time apparently prevented the further consideration of the subject.

The Education Committee.—An important, though not a final, report was presented by the Education Committee dealing with the later stages of the student's career, in continuance of a former report which was chiefly directed to the influence of the preliminary examinations upon the

age at which study was commenced. With this report we propose to deal more fully at a later date. In the few minutes which remained after the conclusion of the penal case which had occupied so much time it was resolved that the report should be sent to the bodies which had furnished the information, but it was not placed upon the minutes, and so is not public. The continuation of the investigation into the stages of the medical student's career and its publication will be awaited with much interest.

Reciprocity.—The necessary steps having been completed for establishing reciprocity with the Province of Quebec, and the two principal licensing bodies, namely, the University of Montreal and the University of Laval, having furnished particulars of their curriculums, the Council admitted their degrees for registration on the Colonial Register. It was further stated that the War Office is prepared to accord their graduates the same recognition as is now accorded to the degrees of Nova Scotia.

Finances of the Council.—The report of the Finance Committee was a favourable one, a surplus of income over expenditure of £1,095 being shown, which was the result of diminished expenditure, the receipts being stationary; this surplus, however, will be for the most part swallowed up by the expenses due to the increased length of the present session, which has been wholly caused by the length to which a single penal case has extended.

Other Business.—So little time remained available that a number of items upon the programme had either to be withdrawn or dealt with in a more or less perfunctory manner. The same members were re-elected upon the Executive Committee and upon the Penal Cases Committee. The Executive Committee was instructed to report on the course to be followed in the case of practitioners applying to have their names removed from the *Register*, a contingency apparently not foreseen nor provided for in the Act.

A Charge of Canvassing.—The hearing of the charge against John Papa Nicolas, part heard and adjourned from the last session, was resumed on Friday, May 29th; it occupied the whole of the sitting on that day and also on Saturday, in spite of the fact that the Council sat two hours earlier on that day and on Tuesday and Wednesday in order to get on with it, and was only concluded late on Wednesday. It will be remembered that on the last occasion, after a day had been consumed in hearing the case, the solicitor for Mr. Nicolas applied to the High Court for a rule or prohibition against the further hearing of the case, and obtained it, with the result that the case was adjourned. When the question whether this rule should be discharged came before the High Court, the Council was represented, but its counsel was not called upon, as counsel on the other side stated that he could not maintain his position. The rule was therefore discharged with costs. On the renewed hearing before the Council on Friday, the solicitor for Mr. Nicolas commenced by putting in a number of objections on such grounds as that the Council had no proper jurisdiction, that there were informalities in the proceedings, against the President occupying the chair on the ground that he must be prejudiced by the prior preliminary investigations before the Penal Cases Committee, and against the members of the Penal Committee sitting on similar grounds. These objections having been lodged and overruled, the hearing was proceeded with, an application that Dr. Atkinson should be recalled for further cross-examination having been refused on the ground that he had been cross examined and re-examined on the previous occasion, when Dr. Woods, on behalf of the London and Counties Medical Protection Society, had conducted the case. On this occasion Mr. Neilson appeared as counsel for the society, and a number of witnesses who had given affidavits in support of the charge were called and gave evidence. Amongst the witnesses was the commissioner for oaths who had sworn the affidavits, and Dr. Woods, who had on the previous occasion offered himself as a witness. These were all cross-examined, apparently with the object of showing that they were prejudiced, that they were inaccurate, and that the affidavits had been obtained under circumstances which minimized their value. Many questions were asked in cross-examination which were disallowed by the Legal Assessor, who had frequent occasion to interpose. The witnesses were for the most part either not re-examined at all or with the utmost brevity. A large number of witnesses were tendered for the defence, with the object of showing that the evidence offered on the other side was not reliable, and that, at all events, Mr. Nicolas had not canvassed them. Mr. Nicolas was put in the box, and his evidence may be summarized as a categorical contradiction of each and all of the more important witnesses on the other side and an assertion that he was, at the times referred to, in the belief that he would return as an assistant with promise of speedy partnership, and therefore would not have wished to do anything to damage the practice. He was closely and effectively cross-examined, and the re-examination did little to alter the effect of the cross examination. The solicitor for the defence and counsel for the complainants addressed the Council at considerable length, the general line taken being to attack the bona fides of the complainants and of the defence respectively. After deliberation, which lasted for some time, the Council found the charge proved, and directed the removal of the name of John Papa Nicolas from the *Register*. His solicitor applied that there might be a postponement of a month in giving effect to this sentence in order that he might make some application to the courts, the exact nature of which did not fully transpire. In connexion with this case and the production of contradictory declarations from the same persons, the Legal Assessor made a statement, pointing out the heavy responsibility which lay upon solicitors or others who obtain and furnish such declarations without full warning to those declaring them, inasmuch as it might subject such persons to the risk of their declarations being submitted to the Public Prosecutor.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Medical Referees and Certifying Surgeons.—Sir Charles Dilke asked the Secretary of State for the Home Department whether his attention had been called to the apparent inconsistency of surgeons appointed by the Home Office to official positions, as, for example, those of medical referee or certifying surgeon, holding at the same time positions in which they had to represent an interest sometimes at variance with their official functions; whether in consequence the same surgeon often had to act judicially and also to be called as a witness by a litigant in the same case; whether the certifying surgeons in the Potteries districts held appointments from the Potteries Insurance Company; whether such certifying surgeons investigated on behalf of the insurance company cases of suspected lead poisoning first diagnosed by the medical attendant of the workmen, and attended the directors' meeting to be consulted by the insurance company upon cases in their respective districts; whether a workman could only receive compensation for disablement from a scheduled disease if he first obtained a certificate, while in the event of appeal against refusal of a certificate, the certifying surgeon was often retained by the insurance company or employers to represent them in appeal; whether he would consider the possibility of providing in future appointments for a greater separation of duties; and, in the case of lead poisoning, whether he would allow the matter to be considered by the Departmental Committee. Mr. Secretary Gladstone replied on Tuesday that in the case of medical referees under the Workmen's Compensation Act, it was with few exceptions made a condition of appointment that the referee should not hold any position such as that of a works doctor or medical officer of a workmen's club, or any regular employment from an accident insurance company, which might cause him to be regarded as representing the interests of any party in cases arising under the Act. The case of certifying surgeons, who were primarily appointed for duties under

the Factory Act, stood on a somewhat different footing, and no similar condition was imposed. He had made inquiries, however, of the certifying surgeons in the Potteries district, and was informed by them that they did not hold appointments from the Potteries Insurance Company, and did not investigate on behalf of the company cases of suspected lead poisoning or attend the directors' meetings. It appeared that in pursuance of an arrangement made before the passing of the Workmen's Compensation Act, 1906, in connexion with the scheme of insurance in the special rules, the certifying surgeons had made weekly examinations of operatives who had been suspended by them under the rules, and had furnished the worker with a certificate of his condition. There had been very few appeals so far against the determination of certifying surgeons—in the first nine months 10, of which 2 only referred to lead cases—and he could not say whether the certifying surgeon had appeared before the referee or not. The certificate of the surgeon which was appealed against had, under the Secretary of State's rules, to be submitted to the referee, who was also required to consider any statements made or submitted by either party. If either party wished to submit any explanation by the certifying surgeon of the grounds for his decision, he did not think that could properly be prevented. As regards the point raised in the penultimate sentence of the question, this was already provided for, as above stated, in the case of medical referees, and as regards certifying surgeons it had not escaped consideration. It would not, however, be possible to lay down a strict rule, because in industrial districts it was often difficult to find a well qualified medical man who did not hold some appointment from employers or associations of workpeople. The question would be outside the scope of the reference to the Lead Committee, but he should be happy to inquire into any case of grievance which might have come to the notice of his right hon. friend.

The Ruchill Fever Hospital, Glasgow.—Mr. Watt, by three questions on Monday called the attention of the Secretary of Scotland to the overcrowding and mismanagement of this hospital, and asked who had been found responsible by the inquiry, whether the resident medical officers were in no way to blame, but notwithstanding a finding of the Commissioners to this effect had been dismissed. Mr. Sinclair stated that the Local Government Board's remit to their Commissioners was to "inquire and report to them upon the complaints of overcrowding and understaffing of Ruchill Fever Hospital, and on the administration and management of the hospital." The conclusions of the Commissioners would be found in their report, which had been issued as a Stationery Office paper. The main responsibility was declared to rest on the medical superintendent, but, as regards overcrowding, it was shared to some extent by the medical officer of health, and, as regards understaffing, by the matron. The report was sent to the local authority, which had now dealt with the officials responsible. The report of the Commissioners showed that on certain days there were over 800 patients in Ruchill Hospital. The majority of the patients were children, and the authorized number allowed is 440 adults. The Commissioners did not find that the resident medical officers were responsible for the irregularities that formed the subject of inquiry; they were not dismissed on account of these irregularities, but on other grounds; and he had no power to interfere with the discretion of the local authority in the matter of their dismissal.

Factory Surgeons and the Sixpenny Certificate.—Mr. Jackson asked the Secretary of State for the Home Department last week whether he had instituted any inquiry among certifying surgeons as to the extent to which large employers of labour made use of the sixpenny certificate, which was originally intended for small employers only; and, if so, whether he would state the result of such inquiry. Mr. Secretary Gladstone replied that inquiry was made last year through the certifying surgeons, whose reports showed any considerable number of examinations of children and of young persons away from the factory, as to the size of the firms by whom the children or young persons were sent. The information obtained was very incomplete, but indicated that in a considerable proportion of cases the total number of persons employed by the firm was above the limit of ten suggested by the Association of Certifying Surgeons. The question would be borne in mind in connexion with any amending factory legislation that might be proposed.

River Pollution: A New Point.—In County Tipperary there is a river called Ballybritt, and on its water, which has become seriously polluted, a number of people are dependent for their drinking supply. Mr. Reddy asked Mr. Birrell what could be done, and the Chief Secretary replied that the Local Government Board had received complaints, and the local medical officer of health had reported that a number of families were dependent for water on the river in question. It appeared that the pollution of the river arose from sheep dipping, and the Board had been advised that pollution of this character was not covered by any of the Acts under which the sanitary authority could proceed. It was, however, open to the persons concerned to take legal proceedings for their own protection. Mr. Birrell stated, in answer to a question on Monday last, that the Government could not undertake to deal with this matter immediately, but the question would receive full consideration when any further public health legislation for Ireland was being undertaken.

The Poisons and Pharmacy Bill has emerged from the Joint Committee which has been considering it, and will meet opposition in its report stage. Sir John Batty Tuke will move its rejection, on the ground that it would in effect repeal the Pharmacy Acts, and so constitute a serious danger to the public. A member of the Irish Unionist party will move to delete the clause which was inserted by the Joint Committee to include Ireland in the Bill.

The Antituberculosis Campaign in Ireland.—Mr. Birrell stated last week, in answer to a question by Mr. Devlin, that it was too soon to form an estimate of the results accruing from the measures recently taken with a view to the prevention of tuberculosis. All the sanitary authorities in the county of Cork, some of those in county Dublin, and the Belfast Corporation and Board of Guardians had already taken steps for the provision of sanatorium accommodation, and there was reason to believe that many other counties and cities were merely awaiting the promised legislation before taking similar steps. The measure to be introduced by the Government would embody the principles which were recognized to be the most effective that could be taken by local authorities for the prevention and cure of the disease.

The Report of the Belfast Health Commission.—With reference to a complaint as to the difficulty in procuring copies of this report, Mr. Birrell stated in the House that the cost of printing the report would fall on the Belfast Corporation, and the Local Government Board had suggested to it that arrangements should be made for the printing of further copies to meet the demand of the public, but up to the present the corporation had not taken any steps with that object. The Board had furnished copies out of the supply at its disposal to the public boards in Belfast who had asked for them.

The Belfast Abattoir and the Health Commission.—In answer to Mr. Devlin, who called attention to the public abattoir in Belfast being a standing menace to the health of the city, Mr. Birrell said that the Belfast Health Commission had reported unfavourably upon the situation of the abattoir and the insufficiency of its accommodation. A loan for a new abattoir was sanctioned nine years ago, but up to the present the corporation had not decided upon a site. The matter was one within the discretion of the corporation, and the Local Government Board had no power to compel it to provide a proper abattoir; but it might perhaps be anticipated that the recommendation of the Commission would induce the corporation to take action in the matter.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEDICAL OFFICER OF HEALTH FOR THE CITY OF EDINBURGH.

TWELVE applications were received for the appointment of medical officer of health for the city of Edinburgh, an office vacant by the resignation of Sir Henry Littlejohn. The salary is to be "not less than £800 per annum."

At a meeting of the Public Health Committee, held on Tuesday, June 2nd, it was agreed to send up the names of William Robertson, M.D., D.P.H.Glasg., Medical Officer of Health, Leith; A. Maxwell Williamson, M.D., B.Sc., Chief Sanitary Inspector of the City of Edinburgh; and William Wright, M.D., M.B., Ch.B.Glasg., D.P.H Camb., Senior Assistant and Deputy Medical Officer of Health, Glasgow, to the Town Council. The committee at the same time agreed to recommend that the salary should be fixed at £800.

INDIAN MEDICAL SERVICE DINNER IN EDINBURGH.

An Indian Medical Service dinner took place in the Caledonian United Service Club, Edinburgh, on May 29th. The dinner was started three years ago, and each of the three so far held has been under the chairmanship of Surgeon-General Sir Alexander Christison, Bart. (late Bengal Service). The dinner this year was most successful, twenty-six, including guests, sitting down. Representatives from the three presidencies of the Indian Empire took part in the proceedings, and the guests included Professor Chiene, C.B., and Professor Cunningham, both of whom replied to the toast of "The Scottish Universities." The Indian civil and police services were also represented. A most sociable and pleasant evening was spent, and it was a general expression of a wish that this dinner should now be looked on as an annual fixture in Edinburgh for the last Friday in May. Further particulars can be obtained from Brigade-Surgeon-Lieutenant Colonel G. G. MacLaren, M.D., I.M.S., retired, Falcon House, Blairgowrie, N.B.

SLAUGHTERHOUSE ADMINISTRATION.

The Local Government Board for Scotland has just issued a report by its medical inspector, Dr. Dittmar, on the condition prevailing in Scotland in respect of the provision of public slaughterhouses by local authorities, and as to the method of meat inspection by various local authorities, with suggestions for improvement. It is full of interesting matter, and its perusal should prove of great service to all concerned in public health administration, not only in Scotland but elsewhere. Our water supply has come in for much attention, and so has the purity of our milk supply, and it is very essential that the fitness for human food of our meat supply should occupy the attention of public health authorities.

The report is divided into two parts: One on the extent to which slaughterhouses under public control have been established in Scotland, and on the methods of meat inspection conducted in such public slaughterhouses; the other part contains suggestions for the improvement of existing conditions. Starting with the axiom that all warm-blooded animals are subject to diseases some of which are communicable to man, Dr. Dittmar follows this up by assuming that every one will agree that animals intended for human food should be examined before slaughter; and, further, that the carcass and internal organs should undergo an examination by an expert before the flesh is placed on the market as human food. It will be further admitted that a thorough system of meat inspection can only be conducted at a slaughterhouse under public control, and that the person who is to decide on the fitness for human food of any animal should be paid by and be responsible to a public authority only. It follows, therefore, that private slaughterhouses should be abolished. Hence it is satisfactory to learn from this report that this principle has been largely followed in Scotland, almost 90 per cent. of the total burgher population being provided with home-killed meat from such slaughterhouses. In the landward or country districts, however, they are practically unknown, for there are only 9, against 563 private slaughterhouses, whereas in towns there are 129 under public control. It might prove interesting to quote some figures from Dr. Dittmar's report in connexion with this matter: There are 205 burghs in Scotland, and 124 of these, or 60.48 per cent., have provided public slaughterhouses. But the proportion of the burgher population of Scotland which is served by public slaughterhouses is much higher than 60.48 per cent., as, with the exception of Aberdeen, most populous burghs have provided themselves with public slaughterhouses. In some burghs having a large population there are no slaughterhouses, either public or private, the wants of the population being supplied through the public slaughterhouses of neighbouring towns. Thus, Govan, Partick, Pollokshaws, and Renfrew, all towns of considerable size, have no slaughterhouses, either public or private, their wants being supplied by Glasgow. In addition to this, Glasgow supplies a considerable population in the country districts in its immediate neighbourhood, and it is estimated that altogether Glasgow supplies a quarter of the population of Scotland with butcher's meat. There are 717 private slaughterhouses in Scotland, of which 154 are situated in sixty-three burghs, with a population of 340 000. The remaining 563 private slaughterhouses are situated in the country districts, and serve the greater part, but not the whole, of the landward population, amounting to one and a half millions of people. In a certain proportion of landward districts, especially those in the Highlands, public slaughterhouses are uncalled for, people only killing animals for their private use.

The report then goes on to deal with the methods of meat inspection. As the object of meat inspection is to prevent injury to human health through the consumption of unsound or diseased meat, it follows that those who are entrusted with this duty should have a knowledge of the diseases of the lower animals which may be communicable to man, as well as a practical knowledge of the subject of meat inspection. The requirements of local authorities in Scotland differ in various districts. In the larger towns, such as Edinburgh and Glasgow, there is a qualified veterinary staff attached to the public slaughterhouses who devote their whole time to the duties of meat inspection. In many towns, however, a superintendent—not a qualified inspector—examines all carcasses and internal organs before removal from the slaughterhouse; if the superintendent finds anything suspicious in the organs or carcass he then calls in the sanitary inspector or the medical officer of health. In some of the smaller burghs of Scotland, however, the administration of the public slaughterhouse in respect to meat inspection is far from satisfactory. This is possibly due as much to the want of a supervising inspector as to the inadequacy of the preliminary inspection. Small burghs, not being able to pay an adequate salary to attract a competent superintendent who will devote all his time to this duty, the official in charge of the slaughterhouse has to undertake other duties to increase his income.

While cattle are generally killed in public slaughterhouses, and are thus subject to a certain measure of inspection, it would appear from the report of Dr. Dittmar that pigs destined to be cured for the production of ham and bacon are almost always killed at the place of feeding—that is, at farms, etc. The reason given by the trade for this custom is that "driven pork" does not cure well. The carcass is "dressed" at the place of slaughter, and subsequently carted to the curer's premises for further treatment. The result is that those carcasses are not examined by the public health officials, and any kind of diseased carcass may be dressed and cured and put on sale. Large numbers of pig carcasses are shipped to Scotland from Ireland, none of which have been inspected by a responsible official, and when subjected to expert scrutiny in Glasgow, some of the carcasses have been found affected with tuberculosis. The law apparently is ineffectual to stop slaughtering at farms and other unlicensed premises, and some alteration on this point seems advisable in the interests of the consumers of ham and bacon.

A notable difference as to the prevalence of tuberculosis in pigs is recorded in this report. In Glasgow, in 1906, of 45 456 pigs slaughtered 3,040, or 6 68 per cent., were found affected with tuberculosis. In Edinburgh of 6,175 slaughtered only 1, or 0.016 per cent., was affected, and in Dundee of 3,000 slaughtered only 18, or 0 60 per cent. were affected. The explanation given in Edinburgh and Dundee for this very striking difference is that pigs in the East of Scotland are fed to a very slight extent on milk or milky products, the food being mainly hotel and board-

ing house scraps, while in the West of Scotland the pigs are said to be largely "dairy fed," and to obtain the washings of milk-separators, butter-milk, etc. Dr. Dittmar points out that it is well known that many cows are tuberculous, and it is to be expected that the pig fed on milk should also be affected with this disease. Dr. Dittmar, however, is of opinion that there can be little doubt that the difference in the method of examination practised in each slaughterhouse will account to a large extent for the difference noted.

The report goes on to deal at some length with the question whether the effect of meat inspection is to diminish the use of public slaughterhouses. The conclusion drawn from an examination of a large number of statistics bearing on the point is that, while slaughtering is diminishing in public abattoirs in Scotland, this is probably due to the great increase which has taken place during recent years in foreign and colonial consignments of dead meat. As showing the growing extent of this trade, it is noted that while in 1902 only 14,700 carcasses were imported, in 1906 the number totalled 52,550. Dr. Dittmar adds that it is possible that a certain class of trader—that is, the unscrupulous trader who has an inferior animal to put on the market—will tend to avoid the public slaughterhouse, where examination of carcasses is thorough, and the consequent proportion of condemnation high.

Details are given in the report of the methods of meat inspection practised in all the public slaughterhouses in Scotland. Inspection is carried out in the large towns, such as Edinburgh, Glasgow, Dundee, and Aberdeen, under an efficient and fully qualified staff. Aberdeen is the only city of any size in Scotland which has not erected a public slaughterhouse under the control of the local authority. In place of a single sloughterhouse conveniently situated to railroads and public markets, and under effective public control, there are eight separate places situated in different parts of the city, and varying in size and suitability for their special purpose, at which the slaughtering of animals for human food is regularly carried on. As regards Edinburgh, the inspection of meat seems efficient, but the reporter states "that the examination of each carcass, etc., is more searching and carried out in greater detail in the Glasgow abattoirs than any other I have visited in Scotland"; and he adds, "It would be in the public interest were a similar detailed examination of all carcasses made in other public abattoirs in the country."

The second part of the report contains Dr. Dittmar's suggestions for the improvement of existing conditions. As these suggestions contain valuable advice a summary is given.

1. That, subject to certain exceptions, it should be made illegal to slaughter any animal intended for human food in any but a duly licensed place.

2. That the Local Government Board should be empowered to call upon burghal local authorities to provide public slaughterhouses; that, with a view to increasing the revenue of the slaughterhouse, and thereby providing funds for more efficient management, in burghs of less than 6,000 inhabitants no slaughterhouse other than public ones should be allowed within a radius of five miles of the burgh boundary; that where a slaughterhouse is provided by a landward local authority all private slaughterhouses within a defined distance of the public one should cease to exist, and that power should be given to burghal and landward local authorities to combine for the purpose of erecting a public slaughterhouse.

3. The persons licensed and paid by the local authority should be appointed in landward districts, whose duty it would be to kill animals intended to be sold for human food.

4. That meat inspectors and superintendents of slaughterhouses should possess certificates of competency in the work from a recognized examining body.

5. That recommendations for the guidance of meat inspectors in condemning carcasses might be issued, so that there might be a uniform standard over the whole country. This has been done in the case of tuberculosis, which is the most frequent cause for the condemnation of the carcasses of domestic animals.

6. That inspection by competent officers of all animals at the time and place of slaughter should be aimed at, that arrangements should be made whereby consignments of dead meat coming to town should be inspected before being put on sale, and that the Government of this country should be satisfied of the thoroughness of inspection at the time and place of slaughter before meat is exported to this country. The inspection of dead meat can under no circumstances be fully satisfactory, as the internal organs in which are found the clearest evidences of disease are absent. Examination of dead meat at a central examination station should not preclude future seizure in the course of shop inspection if this were found necessary. It is pointed out in connexion with this matter that in Scotland the person in whose premises unsound meat is seized and the original seller of the meat (or owner of the unsound or diseased animal from which the meat in question came) can be proceeded against, and on conviction fined. In other words, the responsibility for keeping or offering unsound or diseased meat for sale (whether this be of home or foreign origin) rests on the trader. In the case of home meat the original seller is also responsible. As a result of the exercise of these powers the trade in diseased and unsound meat has been checked to a considerable extent.

7. Lastly, the Board might call on every local authority to furnish them with a full report yearly of the numbers of the various classes of animals slaughtered for human food in the public abattoir, and of the number of carcasses condemned as unfit for human food. The reasons for condemnation should also be enumerated.

The report is a most complete and useful document containing 80 pages of matter, and it should prove of great assistance to local authorities who contemplate erecting public slaughterhouses; and at the same time it is to be hoped that some useful and effective action towards improving the system of meat inspection in Scotland will follow its publication. It is to be feared that meat inspection does not get that attention at the hands of public health authorities which it deserves.

GLASGOW SOUTHERN MEDICAL SOCIETY.

At a meeting of the Glasgow Southern Medical Society on May 28th Mr. Grant Andrew and Dr. J. P. Duncan were elected President and Vice-President respectively, on the nomination of the retiring President, Mr. A. E. Maylard. At the same meeting there was also passed a resolution expressing the sympathy of the society with the late resident physicians of Ruchill Hospital, and voting a sum of 5 guineas towards the legal expenses incurred by them. The answer returned by the Secretary of State for Scotland to questions in the House of Commons will be found at page 1389. It leaves the matter in a very unsatisfactory state.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE UNIVERSITIES BILL.

Trinity College.

MR. J. H. CAMPBELL, M.P. for Dublin University, writes to the papers as follows:

The opportunity for a more careful study of the provisions of the Irish Universities Bill has strengthened my apprehension as to its effect upon the future of the University of Dublin. Already the Chief Secretary has given notice of his intention to move the insertion of new clauses, authorizing the county councils to finance students in these universities, while, at the same time, further legislation of a drastic character is threatened for the compulsory expropriation of the land-owning interest in Ireland. It seems to me that the establishment and endowment of two new universities, under such auspices, and in view of past and future land legislation, must tend, in some measure at least, to deplete the area from which Dublin University has hitherto recruited her students, and that any substantial falling off in this respect may supply the occasion for renewed assaults upon her revenue and position. Under these circumstances, I feel convinced that an opportunity now exists, under more favourable conditions than ever may again arise, for securing the future of Dublin University.

Mr. Campbell goes on to say that the remedy would seem to be

the union or affiliation of Queen's College, Belfast, to Dublin University upon terms which might be difficult but not impossible to adjust. . . . The crisis requires prompt action upon the part of the authorities of the University of Dublin as well as of those interested in the future of Queen's College, Belfast.

This discovery seems to come rather late in the day. Long ago it was pointed out that the University of Dublin would suffer by the establishment of the new university, but the authorities seemed lulled by the assurance that the bill would not involve charge in the older institution. There are many who do not hold that view, and who maintain that the position of Dublin University would have been secured and national university education established on a firm and true basis by Mr. Bryce's

proposal rather than by Mr. Birrell's. But Parliament has pledged its approval of the new proposals, and it is not likely that anything will occur in committee to convert an overwhelmingly favourable majority into a rejecting one. The cards are at present held by the Catholic bishops, who with one or two exceptions have held their peace. But if they should declare themselves hostile to the bill, Mr. Birrell may withdraw it at once, because without their approval the scheme would be unworkable.

Royal College of Surgeons.

The annual meeting of the Royal College of Surgeons in Ireland was held on Saturday, May 30th, under the presidency of Sir Henry R. Swanzy.

Sir Charles Cameron, C.B., called attention to the proposals to establish a new university in Ireland, and proposed the following motion:

> That this college, while in no way desiring to interfere in the question of university education, view with alarm the consequences to the college which will be brought about by the establishment under the Irish Universities Bill, now in Parliament, of a State-endowed medical school, in connexion with the proposed new university in Dublin; for it is to be anticipated that serious damage and loss will result to the unendowed school of this college, and, therefore, to the Royal College itself, from that State-aided competition.
>
> That it is contrary, not only to justice and fair play, but also to the public interest, that this college, established by Royal Charter, and its school, which for a century and a quarter have done great and important work for the State and the country, and which, if permitted, would be competent to continue that valuable work, should be crushed.
>
> That the college approve of the steps taken by the council to bring its claim for a Government grant for its school to the notice of the Chief Secretary, and they hereby express their belief in the justice of that claim, and press it on the favourable consideration of the Government.

He said the College of Surgeons received parliamentary grants until it was in a position to maintain itself and carry on its medical teaching with its own resources. This was because, with the exceptions of a then small medical school at Trinity College, it was the only medical school in Ireland. The number of students was then very large. A new richly-endowed school in Dublin would compete unfairly with the college school, the students' fees would be less, and the means of equipment greater than the college school. The College of Surgeons, which had always been free from political or sectarian bias, was justly entitled to receive public support equal to that proposed to be given to the school of the proposed university.

Mr. J. S. McArdle, as a member of a rival school, seconded the motion. He felt that any endowment received would be deserved and would be of advantage to higher surgical education. The College had done, and would continue to do, useful work. He felt the need for State aid, as the ordinary fees of students could not adequately meet the requirements of modern medical education.

Sir Lambert Ormsby supported the resolution. The new Universities Bill must have a very disastrous effect on their medical school.

Mr. John Lentaigne, Vice-President, related the steps taken by the committee deputed by the council to take charge of the question in Parliament and elsewhere. That committee consisted of Sir Henry Swanzy, President, Sir Arthur Chance, and himself. They had drawn up a statement which they had forwarded to every member of Parliament and to the editors of the leading journals, lay and medical. In the British Medical Journal and the *Lancet* had appeared very able and sympathetic leading articles on the subject of the colleges. These they valued very highly as expressions of opinion on the part of the profession in England. The subcommittee had worked very hard, had received many promises of support and much sympathy, but so far had nothing definite from the Government to report. The committee relied on the justice of the claim and on the fairness and honesty of the British people.

The motion was passed unanimously.

The Pure Milk Campaign.

The Dairies, Cowsheds, and Milkshops Order of 1908, recently issued by the Local Government Board for Ireland, is being considered by the various urban and district councils throughout Ulster, with more or less divergence of result. At Coleraine the appointment of officers to carry out the regulations was adjourned for six months. At Clonee (Coalisland) at a public meeting resolutions were passed unanimously protesting against the order as unnecessary, involving increased taxation, and as being of such a nature that many farmers would be unable to carry out its terms. The Chairman said that 90 per cent. of the farmers of the Meenagh and Mountjoy districts would be unable to comply with the order.

Tuberculosis Exhibition in Monaghan.

On May 15th Her Excellency the Countess of Aberdeen opened the Tuberculosis Exhibition in the Town Hall at Monaghan. Lady Aberdeen gave particulars of the prevalence of the disease, and pointed out the necessity for combined action to lessen its ravages.

While in Monaghan Her Excellency visited St. Martha's Industrial School, in the hall of which was exhibited the challenge shield presented by Dr. Fagan, inspector of industrial schools, and recently won by St. Martha's School as the best equipped in Ireland. Her Excellency also visited the lace school, and in a congratulatory speech pointed out that in a few years the value of the output of Irish lace had risen from £10,000 per annum to over £60,000.

The Prevention of Cruelty to Children in Belfast.

The report presented to the annual meeting of the Belfast and District Branch of the Society for the Prevention of Cruelty to Children stated that 1,481 cases had been investigated, and revealed 4 648 children needing help and protection; 12,635 supervision visits had been paid. Court proceedings were necessary in 108 cases; 61 cases were committed to prison, 6 sent to Ennis Inebriate Reformatory, and some adjourned for better behaviour. The aggregate imprisonment amounted to twenty years. The improvement following adjournment was very small; most of the cases changed to another residence, and so were lost sight of. The average weekly income of the offenders was £1 4s. 6d., so that poverty was not the chief cause. Sir John Byers and Dr. Norman Barnett spoke strongly in favour of the good work done by the society.

Tuberculosis and the Guardians.

The Catholic chaplain of the Drogheda Union Workhouse has been telling the guardians of that Union some home truths they do not appreciate. At a meeting held in connexion with Lady Aberdeen's tuberculosis exhibition in that town, Father Curry, P.P., the chaplain of the workhouse, said he hoped some of the members of the board of guardians were present; as their chaplain he would tell no secrets, but he hoped the guardians would examine their consciences as to their treatment of tuberculosis patients. This aroused the ire of the guardians, and in no uncertain language, as is their manner, they denounced their chaplain for daring to hint that they had not done everything possible for that afflicted class. One of them said that, in the absence of something else to talk about, he turned upon the board of guardians.

They would have been wiser to let Father Curry's remarks pass, for, irritated by their abuse, he has, in a letter to a local paper, revealed the secrets fully. He says that, notwithstanding repeated remonstrances during the past six years, the guardians have refused again and again to provide separate wards for pulmonary tuberculosis, and that these patients have to be kept in the same wards as the other patients. Further, to avoid the trifling expense of providing accommodation for them, the guardians had decided to have a convalescent ward—erected at the expense of a deceased chairman of the board—converted into a ward for male tuberculosis patients, while they had relegated the females to the top of a three-story building, where only a few would be able to get up or down the long flights of stairs however much they might need outdoor treatment.

Our knowledge of the construction of Irish workhouses enables us to state that few if any of them possess wards suitable for the open-air treatment of tuberculosis or any other ailment. They were designed for gaols, not for hospitals, and such they remain, and it would cost more to convert them into hospitals than to erect new ones.

Father Curry has done a real service to the sick poor of

the Drogheda Union, and we only wish there were more chaplains like him in Irish unions, men of education with the courage of their opinions.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

MEDICAL EXAMINATION OF TRAMWAY MEN.

THE Manchester Corporation Tramways Committee has recently decided that all applicants for posts as drivers or guards must pass a medical examination before being accepted. It has been repeatedly pointed out by Board of Trade inspectors how necessary such an examination is in the case of railway drivers, and the conditions under which railway and tram drivers work are so similar in many respects that if an examination is needed for one it is for the other. Of course, the first and most important thing is that the senses of vision and hearing should be perfect, and no doubt special attention will be paid to these. Also it is quite necessary that there should be no organic disease of the heart, nothing, in fact, that would ever be likely to cause even a momentary weakness or faintness. The constant state of alertness necessary in driving, not only through the crowded streets of the city, but perhaps just as much in the less crowded roads of suburban districts, where the trams often go at the rate of fifteen to twenty miles an hour, must be a strain on the strongest constitution. One can easily realize this by sitting in the front of a tram and noticing how often on almost every journey the driver has suddenly to apply his brakes to avoid an accident. By far the most difficult part of the examination will consist in what is really rather a matter of common sense observation of the applicant's "nerve" under sudden emergencies. Presence of mind when an accident seems likely is perhaps as important as absence of organic disease, and it is far more difficult to satisfy oneself that any individual is gifted with such readiness and self control than it is to detect organic disease. It is not sufficient to certify that a man has not got organic disease of the nervous system; what is commonly known as "nerve" is quite as important, and no examination will ever be satisfactory that takes no account of this, however difficult it may be to apply tests.

INFANT MORTALITY IN LANCASHIRE.

At the Conference of the Lancashire Urban Councils held in Grange last week, Dr. J. M. Rhodes of Manchester, speaking on infant mortality, criticized in the strongest terms the neglect of sanitation in many Lancashire towns. He said that Lancashire up to this year had held the blackest record for the last sixty years and was now only second to Nottingham in its rate of infant mortality. The causes of this had existed for sixty years and still prevailed. He thought that many local authorities deserved to be arraigned for wholesale infanticide. It was the slums that made the individuals and not so much the individuals the slums, shameful housing and consequent sickness and death being the cause of much poverty. It was not an uncommon thing in the slums for kitchen and privy doors to be close together, and in hundreds of cases backyards were simply sewage beds for the germination of all kinds of bacteria. Two-roomed tenements in which from three to twelve persons were housed were far too numerous, and children brought up in such an environment had no chance of a vigorous physical and mental development. He had been astonished to find how the people themselves improved as their surroundings were improved. He further went on to suggest that the State ought to exercise some control over marriages, if physical deterioration were to be arrested. No woman ought to be considered eligible for matrimony unless she were able to pass a practical examination in household management.

Dr. Sergeant considered that industrial conditions had much to do with infant mortality. He thought that married women should be restricted from laborious work. The fall of the birth-rate was of national importance, and was a great indictment on the system of morals existing at the present time.

Mr. Postlethwaite of Swinton criticized the medical profession for what he called the boycotting of the Notification of Births Act in many districts. It was evident that this last speaker had very much taken to heart the recent struggle he had in the Swinton district, when every medical man in the district strongly opposed the adoption of the Notification of Births Act by the district council, of which Mr. Postlethwaite is clerk. Much has been said of the decrease of infant mortality in the Swinton district since the Act was adopted, and of course all the improvement has been credited to the Act. As a matter of fact, the Act is almost a dead letter in the district. Moreover, a similar improvement can be pointed to in Salford and other towns where the Act has not been adopted. The district lady visitors undoubtedly deserve the credit to a large extent, but they work just as well in Salford as in Swinton, and to attribute any improvement to the adoption of the Act is a case of the wish being father to the thought.

NEWCASTLE-UPON-TYNE.

TENEMENT HOUSES.

THE visitor to Newcastle-upon-Tyne cannot fail to be impressed with the handsome appearance of the business premises in the main streets of the town no less than with the large number of well-built suburban residences in the outskirts; but there is a third class of buildings which, though not so noticeable, affect the wellbeing of the inhabitants in no small degree. These are the tenement houses occupied by the poorer classes. The Sanitary Committee of the Newcastle Corporation has very properly recognized that in the interests of the city generally it is essential that these dwellings should be subjected to regulations, not only as regards their sanitary condition, but also with respect to the numbers of their occupants. With this end in view, by-laws have been proposed which shall supersede those adopted so long ago as 1886. The enforcement of some of the new regulations will entail an expenditure for structural alterations upon the landlords, who it is not at all surprising to find resent what they consider to be undue interference on the part of the corporation. The principal by-laws to which exception is taken are those requiring 500 cubic feet of air space per person in each sleeping room, two children under 10 years of age being reckoned as one person; that there shall be a sink with an adequate supply of water on each floor; and that where two tenants occupy the same yard, or where sanitary conveniences are used in common by two tenants, the landlord shall be held responsible for the washing of the yard and for keeping the sanitary conveniences in a clean and wholesome condition. The objection to open windows prevalent among the class of persons who usually occupy tenement dwellings is quite sufficient justification for requiring an amount of air space in sleeping rooms above that provided even in barracks where adequate ventilation is enforced. The objection to providing a water supply can only be justified on the plea of the cost entailed in its provision, for it is very certain that the cleanliness of a dwelling is in inverse proportion to the distance which water has to be carried, especially if the carriage entails the mounting of several flights of stairs. The proposal to make the landlord and not the tenants directly responsible for keeping part of the tenements clean is novel, but it is justified by the wonderful results which have followed the control of a large number of tenement dwellings in London by Miss Octavia Hill and her assistants. The Newcastle Corporation is to be commended for the action it is taking in improving the conditions of life of a large number of the inhabitants of the borough.

WALES.

TREDEGAR COUNCIL.

AT a meeting of the Tredegar District Council, held on May 26th, the Sanitary Inspector reported that the outbreak of enteric fever was now abating. The inspector was complimented upon the successful way in which he

had coped with it. The work of making the dilapidated houses in the district habitable was progressing, it was stated, but owing to the scarcity of houses there was great difficulty in closing insanitary dwellings. During the discussion which ensued a member said a good deal of fault lay with the council, which had not adopted the Housing Act. There was, he said, a great demand for houses throughout the district. No action was taken.

Sanitary Inspectors' Association.

A sessional meeting of the South Wales and Monmouthshire Centre of the National Sanitary Inspectors' Association was held at the Council Chamber, Briton Ferry, on May 30th, under the presidency of Mr David John, Chief Inspector, Pontypridd. There was a gratifying attendance of members. Mr. H. Alex. Clarke read a paper on Some Municipal Works of Briton Ferry, in which he showed that many engineering difficulties had been overcome and such excellent work carried out that the sanitary condition of the district was very good, as indicated by the low death-rate and the immunity from zymotic diseases. The council was carrying on some flourishing undertakings to the great advantage of the ratepayers. Mr. Trevor H. Hunter, clerk to the Briton Ferry Urban District Council, followed with a paper on the Duties of a Sanitary Inspector as to Taking Samples of Milk. The main object of the paper was to afford instruction as to how prosecutions for selling inferior milk should be conducted, and how probable lines of defence should be met. A vote of thanks to the readers of the papers was heartily accorded. Later the members and others were entertained to luncheon at the Royal Dock Hotel by the chairman and members and officers of the Briton Ferry Urban District Council, at which the chairman of the council, County Alderman Jenkin Hill, J.P., presided. Later the members set out for a two hours' walk to the Cefn Court reservoir and filter beds, from which the district water supply is obtained. By common consent the meeting was one of the most successful and enjoyable ever held by the association.

India.

Bombay Medical Congress.

A Medical Congress will be held under the Presidency of His Excellency the Governor of Bombay in February, 1909. Among the Vice-Presidents are the members of the Governor's Council, the Director-General of the Indian Medical Service, the Principal Medical Officer, H.M.S. Forces in India, the Surgeon-General with the Government of Bombay, the Principal Medical Officer H.M.S. Forces, Poona Division; the Senior Medical Officer of the Royal Navy in Bombay and representative native medical practitioners; the General Secretary and Editor of the *Transactions* is Lieutenant-Colonel W. E. Jennings, I.M.S. The subjects to be considered are: The etiology, prophylaxis and treatment of plague; the etiology and prophylaxis of enteric fever; the etiology and prophylaxis of relapsing fever; the etiology, pathology, and treatment of tropical diarrhoeas; the differential diagnosis of the various types of malarial fever, with suggestions as to means of prevention and exhibition of the results of past measures from available statistics; the etiology, differential diagnosis, and sequelae of the various clinical types of dysentery—their treatment and prophylaxis; the pathological conditions dependent upon the invasion of the Leishman-Donovan body, with suggestions as to treatment and prophylaxis; the part played by parasitic insects (other than fleas and mosquitos) in the dissemination of diseases peculiar to the tropics—the geographical distribution of these insects, and suggestions as to the best means of obviating their attacks; the clinical and pathological effects of the different varieties of snake venom, and results of special lines of treatment illustrated from available statistics; the etiology, pathology, prophylaxis, and treatment of beri-beri; the pathology, distribution, and bacteriology of elephantiasis and mycetoma; the prophylaxis, bacteriology, and results of special methods of treatment of leprosy; the treatment of cholera; tropical surgery; and sanitation as applied to India. There will be an exhibition of pathological and microscopical specimens; of medical, surgical, and sanitary appliances; and, during one night of the session, a series of lantern-slide demonstrations as well. The committee especially invite original contributions from prominent authorities on the subjects that have been enumerated; they are also prepared to consider the inclusion of voluntary contributions from those desirous of contributing. All medical visitors to the congress will be at liberty to join in the debates so far as the limit of time for each subject will permit. The session will extend over four days, and the subjects will be considered in six sections as follows:

Section I.—Cholera, first day; dysentery, second day; enteric fever, third day; tropical diarrhoeas, fourth day.

Section II.—Malarial fever, first day; plague, second day; Leishman-Donovan body invasion, third day; relapsing fever, fourth day.

Section III—Parasitic insects, first day; snake venom, second day; beri-beri, third day; mycetoma, elephantiasis, and leprosy fourth day.

Section IV.—Systems of disposal of sewage in India, first day; water supplies, measures necessary to ensure purity, etc., second day; disinfection, methods applicable to India houses (including methods of destroying vermin), third day; miscellaneous papers on general sanitation, fourth day.

Section V.—Ophthalmic surgery, first day; urinary calculi, second day; miscellaneous papers on tropical surgery, third day.

Section VI—Exhibition, all days; lantern slide demonstration, second night.

Canada.

[From our Special Correspondent.]

Inspection of Domestic Wells in Ottawa.

The Laboratory of the Inland Revenue Department of the Dominion of Canada has recently issued a report on the inspection of domestic wells by the chief analyst, Mr. McGill.

The wells specially reported on are those in the towns of Weston, Richmond Hill, and Oakville, Ontario. The first eight or nine pages of the report deal with the conditions of well supplies, with special reference to sewage contamination and the organic and inorganic impurities contained in such polluted water. Special reference is made to the presence of chlorides, or rather chlorine in chlorides. In many of the villages in Canada there seems to be no proper water supply, each house having a separate well, upon which it is dependent for water for domestic purposes. These wells are always a source of danger, and Mr. McGill, in his report, endeavours to set forth as concisely as possible what he considers a properly constructed well should be, giving diagrams to illustrate his meaning. One would have thought that in such an enlightened country as Canada wells sunk in the midst of thickly-populated villages would have been abolished long ago; there is great risk of contamination from sewage even when the wells are built with concrete, brick, etc., and many of the wells reported on were simply dug down in the soil until they reached surface water.

Mr. McGill makes some pertinent remarks whereby useful information regarding the safety of country wells may be obtained, which will be comparatively inexpensive and thereby practicable. He says:

In the first place we may conclude that normal ground water is a safe source of supply. Owing, however, to the fact that the soil and subsoil of one locality differs from that of another locality in nature of constituent materials, their depth, compactness, or porosity, contiguity to neighbouring heights of land or to swamp, as well as in amount of annual rainfall, we cannot expect ground water to have the same characters everywhere. What we may expect is that in a given geological and topographical area the ground water will have a certain definite character. If the soil consist largely of limestone débris, we will find bicarbonate of lime in the water; if gypsum characterize the soil of the locality, we shall find sulphate of lime in the water; if chlorides be present in the soil, then chlorides will be found in the water, and so on. In a neighbouring area, separated, say, by a ridge of granite from the first, and having a soil resulting chiefly from the weathering and disintegration of granite, we shall find a ground water much softer than the first, and having small quantities of silicates and other products of the disintegration of granite in solution. Now all the wells—and there may be hundreds of them—which are dug into this ground water will fall into a class by themselves and exhibit common characters, provided that local soakage is prevented and the water they contain be the uncontaminated ground water of

that region. How, then, will an individual well be affected in whose case sewage finds entrance? Organic matter will increase, and especially will this be true of nitrogenous organic matter; phosphates and chlorides will be increased, nitrites and nitrates may be found in it, and a bacteriological examination may reveal the presence of the colon bacillus. To determine all this, of course a full analysis is needed. What I propose to do is to confine attention to some one characteristic and to select that one which is most surely and certainly determined. This I find to be the chlorine in chlorides.

Having thus a standard, so to speak, established, he analysed the water of a large number of the wells in the towns referred to, the chlorine varying from 2 parts per million up to 370. These analyses go to prove that the wells are dug in soil which is more or less saturated with sewage; none of them seem to be protected by a backing of any kind from soakage, and consequently most of them are contaminated with sewage which has undergone no such amelioration by soil filtration as would have resulted from proper construction

CORRESPONDENCE.

COUSIN MARRIAGES.

SIR,—Through the kindness of the readers of your JOURNAL, I have received data bearing on about 1,600 marriages. I owe to Miss Ethel Elderton, of the Francis Galton Laboratory for National Eugenics, the tabling of the material with the following results:

First cousin marriages	4.69	per cent.
Second cousin marriages	1.69	,,
Third cousin marriages	0.25	,,
Other cousin marriages	1.13	,,

The latter marriages include the marriages of children of half brothers or sisters, fourth cousins, cousins removed in various degrees, and the marriage of persons who are cousins in more than one line. Such marriages, therefore, may be closer in blood than second or third cousin marriages. The total of consanguineous marriages in this material is thus 7.76 per cent., as far as the recorders have knowledge. If we consider the various generations we have the following results:

Present generation of correspondents ...	8.37	per cent.
Generation of correspondents' parents...	16.15	,,
Generation of correspondents' grandparents	3.62	,,

Now these results would compel us to believe that the tendency to cousin marriage has varied very considerably in the three generations, if our data really covers a random sample of the medical profession. I am inclined to hold, however, that a great many of my correspondents replied because they were the children of cousins or had married cousins, thus unconsciously damaging the random character of the sample. If this be so, then it follows that the 3.6 per cent. of the grandparental generation is a closer approach than the whole series to the actual amount of consanguineous matrimony in the professional classes. We tested this view by separating the data received before and after my second letter to the BRITISH MEDICAL JOURNAL, with the following result:

	Percentage of Cousin Marriages. Earlier Data.	Later Data.
Present generation ...	... 9.15	... 5.63
Parental generation ...	... 20.51	... 4.76
Grandparental generation	... 2.82	... 6.09

I think this shows that the purpose of my first appeal was to some extent misinterpreted, and that a good many replies were received because my correspondents were the children of cousins, or had married cousins. The later data, however, are not very different for the different generations, and point to an average of 5.5 cousin marriages per cent. Thus my view of the best conclusion to be drawn from the present material is that consanguineous marriages in the professional classes probably occur in less than 8 per cent. and more than 5 per cent. of cases. That I cannot put the result more definitely than this will, I think, show the great difficulty there is in settling even such an apparently simple problem as the frequency of cousin marriage.

Owing to the great kindness of Dr. A. E. Garrod, senior physician to the Great Ormond Street Hospital for Children, certain casebooks at this hospital were kindly placed at our disposal, with a view to extracting the amount of consanguineous matrimony in another class of the population. For a period of some years the question as to whether the parents of the children brought to the hospital were cousins or not was asked. Mr. D. Heron, of the Galton Laboratory, worked through the available material, and, after excluding duplicates, he found definite statements as to consanguinity in the cases of 700 pairs of parents. Among these there were 6 cases of first cousin marriages, 1 case of second cousins, 1 case of third cousins, and 1 case of first cousins once removed, or only 9 cases in 700 pairs, giving a consanguinity rate of 1.3 per cent. Now this result is of much interest, if the patients' parents can be relied upon for accurate information. It would appear to show—

1. That the diseases of children are not largely due to any consanguinity between their parents, and

2. That the population of our large towns rapidly drifts away from its relatives, so that little cousin marriage takes place compared with what is to be found in the professional classes. I am hoping shortly to test the frequency of cousin marriages among a rural population.

I regret that the above numbers are largely irregular and can give no final answer to an important problem. But I think they justify me in saying that until the percentage of cousin marriages reaches 10 or more per cent. in a selected class of the population, it would be rash to suppose that any characteristic of that class is the result of in-breeding. If cousin marriages are found to occur in 10 or more per cent. of cases among the parents of the insane or tuberculous, then I think the effect of consanguinity deserves full consideration.

I cannot conclude without most heartily thanking those members of the medical profession who have so kindly replied to my request, often with very ample material. If my data are not more conclusive it is the fault of those who have omitted to answer, not of those who have. If 400 persons would write down whether the first ten persons they meet of their acquaintance had or had not married cousins, this all-important problem could be definitely answered in ten days!—I am, etc.,

KARL PEARSON.

Biometric Laboratory, University College, London, W.C., May 29th.

A NEW VIEW OF THE NOTIFICATION OF BIRTHS ACT.

SIR,—Dr. Brennan does me the honour of asking me a "question," so I will once more trouble you with a letter, otherwise I should have been quite content to have left your readers to judge between us.

Possibly I should have another reason—gratitude for gratuitous instruction in the methods of controversy. In return, even at the risk of Dr. Brennan calling it, in one of his stock Latin phrases, an *et tu quoque*, I will suggest that the first elements of all valuable controversy are clear thinking and the correct use of words

My answer to his "question" is that it is not a question but a confusion, reminding one of the schoolboy's "if a herring and a half cost three-halfpence, at what time does the London express stop at Crewe?" His scheme does not necessarily leave the patient in the hands of her medical attendant, and mine certainly does not fail to make any provision for her, or leave her absolutely in the hands of the sanitary authority.

The question of the interests of the profession and the interests of the patient are separate matters. *and whether the medical man notifies or not, his relation to his patient is precisely the same.*

Then comes a lot of talk about "right of entry." Dr. Brennan says, "The vitally important question *in this Act* is right of entry," while, as a matter of fact there is not a single word about any such thing from the first line of the Act to the last. What *right* of entry there is exists entirely apart from this Act. It is a power conferred on sanitary and other authorities by Parliament, and is in no way touched by this Act nor by any arrangements Dr. Brennan and his friends may make.

Dr. Brennan claims he has made a bargain; but indeed, he has not, for the essential part of all bargains is a consideration on both sides. He receives no consideration in return for becoming, as he admits, for all time, a notice distributor for the sanitary authority, or whatever other title he prefers.

It is true the sanitary authority may forego the *act* of inspection when it thinks it desirable or in its interest to

do so, but the *right* remains absolutely unimpaired and may be exercised whenever the authority thinks fit, or even at its whim. It is puerile to talk of us giving the sanitary authority permission to visit our patients when we have no *locus standi* or authority whatever in the matter.

"Right of entry" is a matter between the public and Parliament. If it is wrong it is for the public to force Parliament to remove it. Our business is to take care of ourselves. The public may be relied on to take care of itself.

The worst enemies the profession has are those of its own number who are willing at all times to place on the profession any indignity in what they call the interests of the public. These men are always insisting that the interests of the public or the interests of the patient must always take precedence of the interests of the profession. For my part I agree with an old friend of mine who when asked to accept a lower fee replied, "In the interest of the public I should be most pleased to accept half a crown, but in the interests of my wife and family I am bound to demand three and six." And after all it is not in the interests of the public to treat medical men badly, for by so doing they keep the best men out of the profession and lower the standard of its value to the community.—I am, etc.,

Liverpool, June 1st. F. CHARLES LARKIN.

SIR,—We are told (BRITISH MEDICAL JOURNAL, May 30th, p. 1331) that *the* vitally important question in this Act is "*right of entry*." I had imagined that the vitally important question, from our point of view, was the gross injustice dealt out to us, both as professional men and as citizens. "Right of entry" might be vitally important if it existed, but it does not exist; it is a bogey, and would be worth no consideration in your columns but for the fact that it seems to have materialized into a "red herring," and might make some of us lose scent of the main issue. Neither the health visitor nor the sanitary authority has any "right of entry" at all; the patient (or householder) has most certainly a very definite "right of exclusion." The doctor has the right of advising his patient, and that is all. Does Dr. Brennan really mean us to understand that he and his brethren and their sanitary authority have arrogated to themselves the "right" to force the health visitor into one house or exclude her from another, irrespective of the wishes of the householder? Do the citizens of Stockport understand this and concur? He twits Mr. Larkin with waiving a "right" which Mr. Larkin has never possessed or, so far as I know, claimed. When he accepted this Act as a basis for bargaining with the sanitary authority and recommended its adoption, Dr. Brennan waived his own right, and the right of the profession, to be treated in our Legislature at least as well as other citizens, and he waived the right of our profession to keep strictly the secrets of our less fortunate patients. Now, by way of compensation, I suppose, he claims this new right of exclusion as a set-off to the non-existent "right of entry," which he apparently claims for the sanitary authority, ignoring altogether the desires of his patients and fellow citizens. Does he do all this in the interests of the public or of the profession? It is difficult to see how the interests of either are advanced by his method of procedure. If we advise our patients beforehand that the services of the visitor are neither necessary nor desirable while we are in attendance, tell them that the visitor has absolutely no "right of entry" against their inclinations, and that we will stick up for this "right of exclusion," if the visitor is stupid enough to intrude after being told she is not required, we shall be exercising our own "right" and effectually safeguarding our own and our patient's interests, unless the patient decides to neglect our advice, in which case the responsibility is no longer ours. There is no need to bargain with the sanitary authority about this nebulous "right of entry," and we shall best consult our own dignity by not bargaining at all, but sticking fast to our own right of advising our patients, and maintaining, if necessary, our patient's right to decide who shall and who shall not enter his house and minister to his household.

Now as to the really "vitally important question" in this Act. It is recognized by the profession and laity alike that Parliament or the Government has no right whatever to (1) make *us* notify without the mother's consent, or (2) make us notify (or secure notification) under a penalty without offering a *quid pro quo*. In this Act it tries to do both, and if socialism were the accepted governing principle of this country, it would perhaps be quite justified in the second instance, though not in the first. But socialism is not yet accepted here, and there is no valid reason why our profession should be the first to suffer under socialistic experiments, even with the midwives as fellow-sufferers. Those of us who are not socialists are quite justified in resenting the experiment, and showing our resentment by opposing the Act in every possible way until its defects are remedied. The fact that the Act has decided germs of good in it is no reason for condoning the evil in it. First get the evil removed, and then help to get all the possible good out of the Act. This seems to me a straightforward sensible policy, worthy of our profession, far more worthy than any weak-backed condonation of the evil by refusing to understand the obvious meaning of Clause I, 1, relying on the "mercy" of the sanitary authorities in administering it, and generally wriggling under its provisions.

We have made some mistakes; the first and worst was when we decided not to oppose the bill, on the ground that it involved a breach of professional confidence in certain cases. Because a lawyer told us that we could not be legally penalized for the breach of confidence after the bill became law, we threw aside our most powerful and most honourable weapon—the one argument which appeals very strongly to the lay mind, the humanitarian argument—and relied solely on a political argument, with the result that an astute politician managed to delude the House into the idea that all we wanted was "fees," not justice. After that certain bodies of medical men hastily recommended their sanitary authorities to adopt the Act, thus compromising the attitude of the bulk of the profession towards it. Even now some of us spend our time haggling about the best method of carrying out the provisions of the Act without injuring our dignity, pretending it does not say what it does say, or does not mean what it obviously does mean and was intended to mean—in fact, in condoning the evil in it. Shall we not pull ourselves together and unite in trying to repair our mistakes—the last first, by ceasing to haggle over unessentials and generally "wriggling"?

Let us strive for amendment of the Act, strenuously oppose any further adoption of it, and do nothing at all to give any one the impression that there is not so much harm in the Act after all. Where it is already adopted, let any one who feels it his duty to do so notify or secure notification by any method he chooses, but let there be no combined or united attempt to smooth out the Act or make it work satisfactorily. Let us impress on our lay friends the fact that we are badly treated, and not forget to point out to them that their turn may come next if the Act is allowed to stand as a precedent. When the Act is amended, and we are once more free citizens, we can begin to quarrel as to the best method of assisting the sanitary authorities in administering it, whether by filling in forms, distributing handbills, or harrying newly-made fathers with instructions. For the present we had better stick up for principles and leave details alone, except such as tend towards amendment of the Act.

Will not Mr. Larkin agree with me *in toto*? Or is he too heavily handicapped by the precipitate action of some of his neighbours a few months ago? Cannot he convert them? Surely it is worth trying.—I am, etc.,

Swinton, Manchester, May 31st J. PRICE WILLIAMS.

EPSOM COLLEGE.

SIR,—As a Governor of Epsom College I receive many distressing appeals for my votes. To these, when they come to me through friends, I reply that I put my votes at the disposal of the Selection Committee, in whose pains, judgement, and impartiality I have entire confidence. Lately, however, a sturdy canvasser, a personal friend, took the trouble to come over and shake my confidence. He agreed with me that canvassing is an evil in itself, that it tends to defeat the very objects of a charity, and sighed over the real or fancied necessity of giving a *quid pro quo* to a certain class of charitably-disposed persons. But his agreement was only an abstract one

(he is a Scotsman), for he went on to assure me that selection committees act on the principle of Providence and of the parable of the talents, and help only or chiefly those who, or their friends, help themselves by active canvassing and a good show of votes. He gave me what are considered valid reasons for this policy, which is one of stimulating and rewarding personal pains and interest in the affairs of a charity, with the ultimate object of maintaining and increasing the number of subscribers. He spoke from a long and wide experience of several charities; he is a shrewd as well as benevolent man, and though he did not change my mind, I confess he shook my confidence. This morning, however, along with my voting paper has come a notice from the Council so strongly and straightly deprecating canvassing, so clearly laying down urgency and deserving need as the only claims to selection, that my faith is again whole; I have cheerfully signed the selected list, have asked to have my address omitted in future, and, finally, am writing to my Scottish friend that, whatever other committees may be or do, the Selection Committee of Epsom College is above all suspicion of helping only those who help themselves, and repudiates the Scottish proverb of "De'il take the hindmost."—I am, etc.,

May 29th. CYMRO.

MEASLES.

SIR,—There are two points in Dr. E. Ward's interesting article on measles in the JOURNAL of May 30th which I should like to discuss.

The first is his statement that Koplik's spots occur in measles as constantly as the rash itself. I think this is probably true, and I certainly cannot understand the sceptical attitude maintained by many observers. If a case is not seen till the rash is well marked, the spots have often faded, but in every case which I have seen in the earlier stages Koplik's spots have been present. I have not seen them in any other disease.

Secondly, with reference to the connexion between diphtheria and measles, I imagine that any one who has had experience in isolation hospitals for large cities must have received a number of cases of "croup" occurring in the early stage of measles, either just before or at the time of the appearance of the rash. Some even require operative treatment. These cases are readily diagnosed if examination be made for Koplik's spots. I have never seen such an one in which the diphtheria bacillus was found, and the subsequent histories do not suggest any other disease than measles.

In the later stage of measles, however, I regard with grave suspicion any condition either of the pharynx or larynx which suggests diphtherial infection. In fact, I think very strong proof indeed must be adduced before either membrane on the fauces or palate or true laryngeal stridor occurring in the later stages of measles are considered as anything other than diphtheritic. Typical diphtheria bacilli are generally found, as it is a true secondary infection.

The respiratory obstruction caused by bronchopneumonia and profuse secretion is usually easily distinguished from that of laryngitis even in infants.

For some reason most of the textbook descriptions of measles are very deficient as regards recognition of these facts.—I am, etc.

Blackburn, May 30th. MILES B. ARNOLD.

APPENDICITIS COMPLICATED BY HEPATIC ABSCESSES.

SIR,—I was glad to see the letter of Mr. Curtis in your issue of May 30th, and will reply to his questions in order.

1. The patient had never been out of England. I had not attended him previously, so cannot speak from my own knowledge of the attack of "dysentery," but as the appearance of the appendix at the operation and the adhesions round it suggested a former attack, possibly the "dysentery" was really appendicular colic.

2. Towards the end of the case there were râles at the bases of the lungs due to cardiac failure, but no other physical signs. At the autopsy the chest was not examined, examination of the abdomen only being asked for and granted, but the diaphragm was intact, and there were no abnormal adhesions anywhere.

3. The pus was very small in amount, and was enclosed by adhesions. It was brownish, and very offensive, and its colour may have been due to a faecal concretion for the perforation was near the root of the appendix. No concretion was found. The pus near the appendix and in the liver abscesses was not examined.

4. Dealing with the rigors and sweating after operation: rigors occurred daily from April 25th to 30th; sweating daily from May 1st to 8th; rigors again on May 9th, 10th, 14th, 15th, 16th, and 17th; sweating May 18th, and all the evening on 19th; rigor June 5th. The oedema was general, and due to cardiac failure, and there was no local redness of the skin, and nothing to guide one where to tap had that proceeding been determined on; and as regards a "cutting operation" the patient had been very collapsed after the exploration on April 27th, and had steadily gone downhill since, and would not have been in a condition to stand it; in fact, the rupture of the abscess only hastened the end by two or three days. Also, the cavity which ruptured was only the size of a thrush's egg, and there were many thousands of others, mostly the size of a pin's head, scattered all through the substance of the right lobe, and having no communication with either the cavity which gave way or with each other.

So an operation could have done no good in this case, though, speaking generally, I quite agree with Mr. Curtis that one should be done where the condition of the patient allows it.

The abscess ruptured after raising the patient to drink some milk.—I am, etc.,

Nailsworth, June 1st. GEORGE P. BLETCHLY, M.B.Lond.

THE USE OF VAPOURS IN PULMONARY DISEASES.

SIR,—At the annual meeting of the South Carnarvon and Merioneth Division of our Association on May 28th, Dr. Hugh Jones expressed approval of the work that has recently been carried out by Messrs. Orme and Evans, of Wolvernampton, in the construction of a very simple, practical, and economical vapour producer, by which we can obtain antiseptic vapour for the treatment of phthisis and other maladies in a reliable form. It is highly probable that the total exclusion of vapours from the *British Pharmacopoeia* would not have occurred if the mode of obtaining them had received careful attention.

We have, in the singular fact that pure phenol when boiled with water produces steam which contains the phenol in the same proportion as we mix it with water, an agent of great value.—I am, etc,

Pwllheli, June 1st. ROBERT LEE.

THE TERRITORIAL ARMY MEDICAL CORPS IN EAST ANGLIA.

SIR,—As questions as to the progress of the Territorial Force are "in the air" just now, the results obtained by the medical branch of it in East Anglia may be of interest to your readers.

Here, under the old régime, existed four brigade bearer companies (two only of which were independent units), with an average strength of three officers and fifty men. These, with the regimental medical officers, constituted the whole medical organization.

Since April 1st, under the new order of things, a principal medical officer who is the administrative medical officer of the division has been established with his staff and office at Ipswich. The 1st and 2nd East Anglian Field Ambulances have been established and recognized officially at Ipswich and Norwich, and the Eastern Mounted Brigade Field Ambulance at Bedford, while recognition has been applied for for the 3rd East Anglian Ambulance at Leyton, in Essex. These four field ambulances provide the medical assistance for the three infantry brigades and the cavalry of the division.

It must be remembered that for a field ambulance to secure "recognition" it must have four officers and sixty-six men—that is, it must considerably exceed the full strength of the old bearer company for a start. As a matter of fact, our field ambulances will soon be a hundred strong.

A new unit, a nucleus general hospital, has come into existence at Cambridge, with its active officers and men and a staff of physicians and surgeons *à la suite*, whose services would be available for war.

Negotiations are on foot for the establishment of a sanitary corps, which will be an entirely new creation, to

supply trained men to all corps for sanitation and water duties.

The field ambulances are independent and self-contained units, and compare favourably with those of the regular army in that they are to be equipped with their own transport and have their own drivers, arrangements for the training of whom are now in progress.

Meanwhile, the allotment of medical officers to regiments for regimental duty has not been lost sight of, but is proceeding steadily.

It is not proposed to stop at this point, but, if possible, to recruit the medical units up to full establishment. For this purpose more medical officers are required, and I would appeal to the patriotism of the younger members of the profession in Norfolk, Suffolk, Essex, Bedford, and Northampton, to join the territorial branch of the R.A.M.C., either for regimental work or for service with the field units as may suit each man best. The work is very interesting, the conditions of service are not more onerous than in the volunteers, and full R.A.M.C. pay and allowances are now granted to each officer while in camp, or while training.

It may be added that a medical school of instruction will very shortly be established at Ipswich, and will visit each of the centres in rotation, so as to give officers every opportunity of taking out courses of instruction or qualifying for promotion with the least possible inconvenience or loss of time.

Full particulars will be given to any medical men who think of joining by Colonel G. S. Elliston, V.D., R.A.M.C., P.M.O., East Anglian Division, or by, yours, etc.,

E. C. Freeman, M.D.,
Major R.A.M.C., R.P., Staff Officer to P.M.O.

Anglesea House, Ipswich, May 27th.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Colchester.—The population was 40,970. The birth-rate was 24.4 per 1,000, and the death-rate 12.2. Dr. Savage speaks on several occasions of the *corrected death-rate*, when he means corrected only for residents and non-residents, and not, as is usually understood by the term, corrected for age and sex distribution. An account is given in some detail of the means which are employed in Colchester to control infectious diseases in the public elementary schools. Since 1904 there has been in use an extensive system of notification of certain diseases by the teachers, and by examination of the registers and in other ways "carriers" are sought for among those who are absent from school. Dr. Savage points out that even if an attack of an infectious illness cannot be prevented, it should be postponed to as late an age as possible. In this connexion he deprecates the attendance at school of very young children, and considers that the practice of admitting children as young as 4 years old to the Colchester schools should be put an end to. It would be of interest to know whether there is any special reason, apart from the absence during 1907 of infantile diarrhœa, for the small number of deaths among young children. The average rate in the ten preceding years was 128 per 1,000 births, and in 1907 it was only 84, although there does not appear to have been any special effort made, such as the appointment of health visitors, to bring about this very satisfactory result.

Whitby Urban District.—The statistics in this report are based upon the population of 11,748 as enumerated at the census of 1901, although the medical officer of health is of opinion that there has been a decrease in the number of inhabitants during the past few years. The birth-rate was 20 per 1,000 and the death-rate 16. The infantile mortality-rate was equal to 129 per 1,000 births. The question of lessening this high death-rate among young children is discussed by Dr. Tinley in some detail under the various headings of poverty, housing, intemperance, ignorance, illegitimacy, and milk supply. He suggests that girls while at school should have lessons in simple cooking, cleanliness, sick nursing, and in the care and feeding of children. Dr. Reginald Farrar reported to the Local Government Board during last year upon the insanitary condition of a large number of houses in Whitby, and Dr. Tinley agrees with him that some form of housing scheme should be undertaken by the sanitary authority. The difficulties connected with a proper solution of the question appear to include the very low rentals that are paid for many of the worst cottages and the impecuniosity of the owners of them.

Buckingham Rural District.—The estimated population was 7,750. The birth-rate was 23.4 per 1,000, the death-rate 14.1, and the infantile mortality-rate equal to 83 per 1,000 births. A very useful table is included in this report giving the number of cases of notifiable disease reported since the year 1890. It is not sufficiently recognized by medical officers of health how valuable these records are which extend over long periods. A similar table referring to the same period and giving the population and number of deaths from the diseases indicated would be of additional value. The need of permanent buildings for isolating cases of infectious disease was demonstrated during the year. While several patients suffering from diphtheria were being treated in the isolation tent at Poundon a severe gale nearly blew the structure down and necessitated the removal of the patients to a neighbouring mission hall. Dr. Benson very properly urges upon the sanitary authority the desirability of a stricter enforcement of the regulations under the Dairies, Cowsheds and Milkshops Orders.

Erdington Urban District.—Dr. Bostock Hill estimates the population in 1907 at 26,633 and he arrives at this number not in the more usual way by assuming that the increase in the number of inhabitants since the last census has been equal to that which prevailed in the previous decade, but by taking advantage of a private census which is made each year by the district surveyor. It is probable that in this way greater accuracy is arrived at. The birth-rate was 26.7 per 1,000, the death-rate 8.8, and the infantile mortality-rate was equal to 61 per 1,000 births. The necessity for a revision of Table I of the Local Government Board is shown in connexion with the rate of infantile mortality in Erdington. In this table the rate is given as 80 per 1,000 births, but, as Dr. Hill points out, the actual rate was 61 per 1,000—a number arrived at after deducting the deaths of children who did not belong to the district. There are no less than ten public institutions in Erdington with an aggregate population of nearly 2,000 persons, so that the number of non-residents who die in the district is perhaps larger than it is elsewhere.

NOTIFICATION CERTIFICATES SENT IN ERROR.

West Country.—The practitioner C. should at once send fresh notification certificates to E., the medical officer of health for the district in which the cases occurred, with a covering letter stating that it has only now come to his knowledge that the certificates had been sent to the wrong medical officer of health. The fees should then be asked for in the ordinary way from the council of the district in which the patients resided. The only possible reason for not paying them would be the delay in their receipt by the medical officer of health, a matter which ought to be sufficiently explained by the apparently uncertain boundary between the two districts. It is a well-recognized rule among medical officers of health that certificates and other documents which come into their hands, and which are obviously intended for another medical officer of health, should be forwarded with as little delay as possible to the proper official.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ended April 11th, 18th, 25th, and May 2nd the deaths from plague in India numbered 8,490, 5,523, 5,579, and 4,564 respectively.

The principal mortality occurred as follows: Bombay Presidency, 1,436, 1,183, 909, and 946; Bengal, 1,298, 592, 335, and 192; United Provinces, 1,978, 898, 694, and 519; Punjab, 2,665, 2,251, 3,120, and 2,348; Rajputana, 583, 331, 281, and 277; Central Provinces, 126, 52, 17, and 12; North-West Frontier Province, 126, 52, 54, and 97; Mysore, 70, 24, 78, and 35; Madras Presidency, 65, 41, 49, and 36. During the first two weeks in question the mortality in Central India was 654 and 17, and in Burma 115 and 95.

The plague figures have steadily declined during the past month, and with the advance of the hot weather the numbers may be expected to drop week by week. So far 1908 will be regarded as one of the years when plague was lightest since 1898, when the disease appeared in India.

Gold Coast.

No plague reported from the Gold Coast since April 10th, and all the ports of the Colony have been declared free from infection.

Hong Kong.

During the weeks ended May 2nd, 9th, 16th, and 23rd, the fresh cases of plague in Hong Kong numbered 39, 49, 88, and 114, and the deaths from the disease 39, 38, 65, and 95 respectively. The outbreak in Hong Kong is more severe than for several seasons, and 47 cases were reported on June 2nd.

Trinidad.

The occurrence of two suspected cases of bubonic plague, one of which has proved fatal, has been notified officially.

OBITUARY.

DEPUTY SURGEON-GENERAL H. R. L. VEALE, A.M.S.

It is with deep regret that we announce the death of this distinguished officer of the Army Medical Service, which occurred at his residence, 4, Southern Hill, Reading, on May 22nd, at the age of 76 years.

Educated at the University of Edinburgh, where he was a most distinguished student, Veale took the degree of M.D. with the greatest credit, and subsequently studied for some time in Paris. He entered the Army Medical Service in 1855, and proceeded at once to the Crimea, where he served with the 30th Regiment during the latter part of the war, including the last winter of that memorable campaign. On his return from the Crimea he was appointed Assistant-Surgeon, Royal Artillery, and proceeded to China, but left that station very shortly for India with K Battery, Royal Artillery. He was present at the relief of Lucknow, on which occasion he was severely wounded. Subsequently he was in the action which led to the defeat of Gwalior at Cawnpore (Indian Mutiny medal and clasp). In 1867 he was transferred to the Staff. He served for many years in the Bombay Presidency, during which time he devoted himself to improving the methods and establishing a uniform system of statistics relating to the health of the army in India. He was specially selected as Secretary and Statistical Officer to the Principal Medical Officer in Bombay, and served in that capacity under Surgeon-Generals A. Gordon, C.B., and Sir James Mowat, K.C.B. Much of the work connected with the medical arrangements for the Abyssinian war came under his administration, and his care and forethought as to possible contingencies was everywhere admitted.



DEPUTY SURGEON-GENERAL VEALE, A.M.S.
Photograph by] [Maull and Fox, London.

On his return from India in 1872 he attended an advanced course for medical officers at the Army Medical School at Netley, and subsequently was appointed to the charge of staff and departments, including the Hospital for Soldiers' Wives and Children at Chatham. Here his great knowledge of his profession was fully recognized, and his brother officers always when in any difficulty sought his counsel and advice, which was freely given to them. During his service there all who came in contact with him recognized his great ability and value as an able and experienced physician. He left Chatham to take up the appointment of Assistant Professor of Military Medicine at the Army Medical School, Netley; and it can truly be said that no one who has held that position has surpassed him in the way he carried out his work there. The late Surgeon-General E. G. McDowell, C.B., wrote as follows in a letter addressed to Dr. Veale: "From many of your former pupils at Netley I had heard (before we met) of the very high estimation in which you were held there, and of your kindness and tact and firmness in your dealings with others." Veale left Netley to take charge of the Base Hospital at Ismailia during the Egyptian war in 1882 (medal and bronze star) but unfortunately was invalided after some months, owing to a very severe attack of dysentery. This eventually necessitated his retirement from the service in January, 1883.

Dr Veale, however, was not permitted to lead a life of inactivity. He loved his profession, and was never so happy as when engaged in its active pursuit. In April 1884, he applied for and was appointed physician to the Essex and Colchester County Hospital, and established a good consulting practice at Colchester. His abilities were fully recognized there, and for a time he settled down in civil life. The scarcity of medical officers again found him doing medical duty at Colchester on the retired list, and in April 1886, he once again accepted an appointment under the War Office and assumed medical charge of the Royal Clothing Factory at Pimlico. This he held for five years, and then finally retired from practice altogether and went to reside at Bath.

The late Surgeon-General Sir W. A. Mackinnon, K.C.B., Director-General, Army Medical Service, 1890, wrote that

"the various testimonials received from his military and departmental superiors during the period of his career include one of a very high character from the professors of the Army Medical School, Netley, in relation to his services as Assistant Professor of Military Medicine at that institution for a period of four years, and another, published in General Orders, complimenting him for a revised Code of Medical Regulations, which he compiled for use in India. Dr. Veale was further praised for his laborious duties in connexion with the organization of the Base Hospital at Ismailia" (Egyptian Expedition, 1882).

"The above record will be sufficient to show how important and varied Dr. Veale's duties have been, both during peace and war. He has always been most distinguished for his high professional attainments and for the great zeal and ability he has displayed in the performance of all his duties during the long period of his army service; he possesses great tact, judgement, and force of character rarely to be met with."

Dr. Veale contributed many valuable papers to the Army Medical Reports and medical journals. His writings on the fevers of Malta, Gibraltar, and Cyprus show the careful and methodical arrangement of his work and the care with which he investigated all cases which came under him. His work on *Bombay Medical Code, 1870*, brought the statistics of that presidency into notice and contributed largely to the establishment of a uniform system there.

Dr. Veale was a man of energy, strong purpose, and self-reliance. He had the very highest sense of truth and honour, and never hesitated to do or to say what he considered right. He was gifted with sound common sense and his conclusions were founded on reason. He was the best, the kindest of friends. Sincere, sympathetic, and most unselfish, he was ever ready to assist by kindly counsel and advice. He had the loftiest ideals in life, and truly it may be said he lived up to them.

J. J. RIDGE, M.D.LOND., M.D. (STATE MEDICINE), B.A., B.S., B.SC., L.R.C.P., M.R.C.S.LOND.

To those who knew Dr. J. J. RIDGE, of Enfield, and who have followed his strenuous career, the announcement of his death on May 25th, after a brief illness, will come as a painful surprise. It was known to a few intimate friends that Dr. Ridge's condition was serious, but until quite recently the illness seemed to be running a favourable course, and the accounts were decidedly hopeful. A few days before his death, however, grave symptoms reappeared, and on Friday an operation was resorted to in the hope that some relief might be given. The hope was ill-founded, however, Dr. Ridge succumbing on the third day after the operation.

Dr. Ridge was a native of Gravesend, of which borough his father was twice mayor. He was born April 3rd, 1847, and was educated at the City of London School and afterwards at St Thomas's Hospital, at which he entered with a couple of scholarships in 1864. Whilst at St. Thomas's he seems to have carried on his studies in arts, science, and medicine simultaneously, taking the B.Sc. degree in 1866 with first-class honours in comparative anatomy and honours in botany, the B.A. in 1867 in the First Division with honours in animal physiology, the Double Qualification in 1868, and the Final M.B. in the First Division with

first-class honours in medicine and honours in midwifery, the B.S., first in honours, with scholarship in surgery and gold medal. The following year, at the age of 22, he took the M.D. degree. At the end of his medical curriculum Dr. Ridge was appointed House-Surgeon to the St. Thomas's Hospital, where he gained the goodwill and respect of all with whom he came in contact.

Dr. Ridge commenced practice at Clapham, but after four years migrated to Enfield, succeeding the late Dr. Godfrey. In 1881 he was appointed M.O.H. to the Enfield Rural District Council and Medical Officer to the joint board administering the Isolation Hospital to Enfield and Edmonton. He was responsible for the building and organization of the hospital; but it has been stated that the finest monument to his memory is the Enfield Cottage Hospital, founded at his suggestion by a number of public men with whom he came in contact.

Great as have been Dr. Ridge's services directly to public health, the work by which he will be longest remembered will be that he did for temperance. As a young man he took the keenest interest in Band of Hope work, and at Grafton Square Congregational Church worked along with the late Mr. Robert Rae and Mr. John Turner Rae, his son. The former also he assisted in bringing out the *Medical Temperance Journal*, a periodical that ran for some twenty years. In 1892 it gave place to the *Medical Pioneer*, Dr. Ridge taking over the editorship, and in later years its place was filled by the *Medical Temperance Review*. During the whole of that period Dr. Ridge was actively engaged in bringing under the consideration of the medical profession the disastrous effects of alcohol, especially in certain types of disease. Dr. Ridge was firmly convinced that alcohol was a most important factor in the production of disease, and from first to last had the courage of his convictions. He and Dr. James Edmunds were the original members of the staff of the Temperance Hospital, to which the first patient was admitted in October, 1873. Dr. Ridge remained on the staff for twenty-five years, and to the last took the keenest interest in it and in the welfare of the patients.

On March 20th, 1876, Sir G. Burrows presided over a meeting of medical men in the Shoreditch Town Hall at which it was suggested that a temperance society, of which only medical men should be members, should be formed. Amongst others present at this meeting were Drs. Branthwaite, Clarke, Crespi, J. Gill, Lyons, Mitchell, Poole, Scatliffe, Williams, and Ridge. At a second meeting, held in the offices of the National Temperance League, the society was formally constituted, and Dr. James Edmunds was elected first president and Dr. Ridge secretary, a position he held up to his last illness. It is of interest to note that in the second year of the existence of this society there were 38 members, whilst last year the number of members had risen to 624 and of associates to over 350. Dr. Ridge was the mainspring of this society. It will be difficult for any one to continue the work he did with such whole-hearted devotion. He was in close touch with all the medical temperance workers in this country and abroad. He was recognized as the leader in international temperance work, and when in July of last year the International Medical Temperance Association was formed at Stockholm everyone turned to Dr. Ridge as being naturally first President, and the matter was settled without a vote being taken. Dr. Ridge had looked forward with great pleasure and interest to the congress that is to be held in London next year, and his death will make a gap very difficult to fill.

Many people knew one side only of Dr. Ridge, and only those who knew him best realized what a many-sided man he was. He was Senior Deacon at Christ Church (Congregational), Enfield. An active worker in the Sunday School and Band of Hope, his sympathy with the struggling poor made him take a keen interest in all social movements for the improvement of their condition. Fond of art, a widely read man with good literary taste, his pen was often busy advocating some temperance movement, some political reform, or some religious advance. He was appealed to from all parts of the world for information and advice, appeals that often involved an enormous amount of labour, but appeals that were never neglected. Dr. Ridge, with his great power of concentration, invariably gave of his best to his patients, but when their needs were satisfied he deemed it his duty to help a far wider circle. That help was freely given, sometimes in the teeth of public opinion, but no one who knew him could for a moment doubt either his honesty or his courage, his singleness of purpose, or his love for his fellows.

To give a list of his works would be to run through the whole gamut of temperance literature, especially that part of it dealing with the medical aspect of the question. Some of his experiments have become classical and have formed the starting point of much recent work. Many of those associated with Dr. Ridge had hoped to have the benefit of his encouragement and advice for years to come. That is not to be, but his personal influence will undoubtedly be felt for long after that of men who have made a more immediate stir in the world has passed away. Some indication of the respect and esteem in which Dr. Ridge was held was given by the very large attendance at his funeral on May 30th, when the pastor of the church, the Rev. Mr. Thoms, gave a most interesting and touching account of Dr. Ridge's association with Enfield and its public life, and the Rev. Mr. Stbree, of Madagascar, paid a tribute to the personal worth of Dr. Ridge, and spoke of the affection in which he was held in the family circle. A large number of representatives of the various bodies and institutions with which Dr. Ridge had been associated joined to pay a last token of respect to their departed friend and co-worker.

DOVE M'CALMAN, M.D.,

OBAN, ARGYLLSHIRE.

By the death of Dr. M'Calman Argyllshire has lost one of its best-known medical practitioners. Born at Bonawe sixty-five years ago, Dr. M'Calman removed to Glasgow in early life; there he engaged in business on his own account, and was very successful, but, desiring to enter the medical profession, he prepared himself without relinquishing his business until he had entered on his medical career. He graduated M.B at Glasgow University in 1875, taking the degree of M.D. a few years later. He spent a year at Bonn and Vienna, afterwards acting as medical officer in an English asylum. Relinquishing this appointment, he started practice in Ballachulish, and settled in Oban about twenty years ago. He gradually built up an extensive practice. Dr. M'Calman held no public appointments, except that of medical referee under the Workmen's Compensation Act. Chiefly through his exertions the West Highland Cottage Hospital at Oban was founded, and has proved an inestimable boon to the West Highlands. He acted as Medical Superintendent until last year, when failing health led him to retire, and he was appointed Consulting Physician and Surgeon to the hospital. Dr M'Calman was a member of the British Medical Association. He was unmarried.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Appointment of Lecturer.

A. F. HERTZ, D.M., Magdalen, Assistant Physician, Guy's Hospital, has been appointed Lecturer in Materia Medica and Medical Pharmacology for the year, beginning with the first day of Easter Term, 1908.

Appointment of Examiner.

J. B. Leathes, B.M., New College, Lecturer in Physiology, St. Thomas's Hospital, has been appointed a Public Examiner in Animal Physiology, to hold office from the first day of Michaelmas Term, 1908, to the first day of Michaelmas Term, 1910.

Examinations in Materia Medica.

The examination in Materia Medica and Pharmacy has been transferred from the First to the Second Examination for the Degree of Bachelor of Medicine, and the subject will in future be entitled Materia Medica and Pharmacology.

Medical School Dinner.

The annual dinner of the past and present members of the Medical School will be held in University College on Saturday, June 20th. It is intended that this year the meeting shall take the form of a farewell dinner to Dr. Gustav Mann, who is leaving Oxford to enter on his new duties as Professor of Physiology at New Orleans, U.S.A. The Secretary of the dinner is Mr. C. F. Beevor, Magdalen College.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A MEETING of the Senate was held on May 13th.

University College Faculty Organization.

It was resolved that in place of the existing divisions of the professorial board of the University College into three college faculties, namely, the Faculty of Arts and Laws, the Faculty of Science, and the Faculty of Medical Sciences; that the membership of that professorial board be divided into five college faculties as follows: The Faculty of Arts, the Faculty of Science, the Faculty of Laws, the Faculty of Engineering, and the Faculty of Medical Sciences.

The University College Faculty of Medical Sciences will consist of the college professors of anatomy, botany, chemistry (general and organic), hygiene and public health, pathological chemistry, pharmacology, physics, physiology, and zoology, and comparative anatomy, together with Mr. E. C. C. Baly, Dr. W. M. Bayliss, Dr. G. A. Buckmaster, Mr. N. Eumorfopoulos, and Dr. R. H. Aders Plimmer.

Brown Animal Sanatory Institution.

The annual report of the Brown Animal Sanatory Institution Committee which was received, stated that the number of out-patients in the institution last year was 7,435 and in-patients 572, and that Mr. Malcolm Allan, M.R.C.V.S., had been reappointed veterinary assistant.

Amendment of Regulations at Medical Examinations.

It was resolved that in the regulations for the M.B., B.S., degrees for internal and external students the following be substituted for paragraphs (13) and (14) (Red book, September, 1907, p. 139; Blue book, p. 200):

(13) A course of demonstrations in practical midwifery.

(14) The conduct, subsequent to attendance at a course of demonstrations under (13) above, and to experience as medical clinical clerk during six months, and as surgical dresser during other six months, of at least twenty labours.*

(14A) Experience as clinical clerk in the gynaecological wards or out-patient department of a recognized hospital during three months.

and that the regulations come into force for all candidates who shall pass the intermediate examination in medicine in or after July, 1908, but that other candidates be permitted to present themselves for examination under the present regulations.

With reference to the award of gold medals at the M.D. examination for internal and external students it was resolved that the following be inserted in the regulations as a footnote to the fifth paragraph on page 152 of the Red Book, and to the fifth paragraph on page 211 of the Blue Book, September, 1907:

Candidates who have already taken the M.D. degree in one branch, and who are exempted on this account from a paper in medicine, will be at no disadvantage in respect of the award of the gold medal for the branch for which they present themselves.

King's College.

It was reported that King's College London (Transfer) Bill was read for the third time in the House of Lords on May 11th and for the first time in the House of Commons on May 12th.

The court of the Fishmongers' Company has made a donation of £1,000 towards the fund for the incorporation of the College with the University.

University College Annual Report.

The report of University College Committee for the year 1907–8 states that during last session there were 1,191 students, 467 of whom registered as internal students of the University and 171 as post-graduate and research students; 75 students of the college graduated at the University, 45 of the degrees being with honours. The fees received in all faculties of the college amounted to £20,618. The financial statements show that the Treasury grant for the session was £10,000, and that the total income exceeded the expenditure by £1,890 1s. Among the principal benefactions and donations recorded in the report was £3,000 from Dr. Ludwig Mond, and £2 000 from Dr. Aders Plimmer towards the erection of the physiology and pharmacology building. The building had already been commenced.

The following candidates have been approved at the examinations indicated:

M.B., B.S.—W. G. Attenborough, G. N. Bartlett, B. H. Barton, H. Blakeway, B.Sc., H. O. Blanford, G. A. Bosson, Rhoda H. Butler, Muriel C. Bywaters, W. H. Chesters, Hilda Clark, J. A. Clark, Winifred J. Cox, D. M. Davies, Gladys M. C Dunbar, G. S. Earl, Clara Eglington, F. P. Fisher, W. Gilliatt, Edith M. Guest, C E K. Herapath, F. G. Hitch, F. G. Hodder-Williams, H. S. Hollis, H. Holroyd, E C. Hood, H. Houwink, Rose F. Jordan, D. Judah, H. H. King, A. J Lee, E. L. M. Lobb, O. Marriott, E K. Martin, J. C. Mead, Florence M. Morris, E. E. T. Nuthall, Mary O'Brien, J. Parkinson, E W. Parry, J. J. Paterson, B.Sc., E. S. Phipson, R. B. Price, R. W. Rix, Mona D. Roberts, E. L. Sandiland, C. F. O Sankey, F. S. Scott, F. G. Sergeant, L. J. Short, T. G. S. Smith, E. W. Squire, H. Stott, A. G. Sworn, A. J. Symes, A. N. Thomas, R. E. Thomas, Margaret H. Wild, B A[illegible]

* Certificates with regard to the conduct of labours will be received from the Dean of a recognized medical school or authorized member of the staff of a recognized hospital.

B.S.—G. Hutcheson.

M.B., B.S. (*Group 1 only*).—Alicia P. Aldous, H. T. S. Aveline, R. Brown, T. W. H. Burne, Ethel A. Douglas, A. E. Evans, R. C T. Evans, B.Sc., N. K. Foster, S. F. Fouracre, H. L. Grabham, W. A. M. Jack, W. Johnson, E. J. G. Jones, Elsie M. Layman, W. P. Purdom, W. P. Walker, Sophia M. V. Witts.

M.B., B.S. (*Group 2 only*).—G. S. Candy, C. Colmer, E. N. Cook, T. Evans, H. S Furness, Gertrude Gazdar, T. J. Hallinan, G. B. Harland, F. W. Hogarth, M. H. E. R. Montesole, Mary E. Parsons, W. J. Petty, T. E. Pryce, Rachel H. Shelley, H. G. Willis, C. McM. Wilson, C. Yorke.

Honours.

The following candidates were awarded honours at the examinations:

Wm. Stephen Fenwick, B.Sc. (*a, b, d*, bracketed for the University medal), Charing Cross Hospital; Alexander Fleming (*a, b, c*, bracketed for the University medal), St. Mary's Hospital; Arthur Norman Leeming (*a*), Guy's Hospital; Edmund Garvin Mack (*b, d*), University College Hospital; Albert James Walton, B.Sc. (*b, e*), London Hospital; Chas. Henry Shorney Webb (*d, e*), Middlesex Hospital; Edwd. Musgrave Woodman (*b, d, e*), St. Bartholomew's Hospital.

a, Distinguished in medicine. *b*, Distinguished in pathology. *c*, Distinguished in forensic medicine and hygiene. *d*, Distinguished in surgery. *e*, Distinguished in midwifery and diseases of women.

UNIVERSITY OF MANCHESTER.

Pilkington Cancer Research Foundation.

THREE lectures on cancer will be delivered by Dr. C. Powell White on Wednesdays, beginning on June 17th. They will be illustrated by microscopical preparation, museum specimens, and lantern slides, projected by the epidiascope. The lectures will be given in the general theatre of the medical school at 4.30 p.m. on each day, and members of the medical profession and students of medicine are invited to attend.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Annual Report.

THE report of the Royal College of Surgeons in Ireland for the past year shows that the receipts were £4,758 6s. 6d., and the expenditure £4,749 8s., leaving a balance in bank of £8 18s. 6d. The investment account amounts to £9,469 18s. 11d., and there are various funds to provide special prizes. Fourteen Fellows, 71 licentiates, 18 diplomates in public health, and 9 licentiates in dental surgery were admitted. There are at present living 13 honorary Fellows, 464 ordinary Fellows, 2,901 licentiates, 6 honorary and 270 ordinary diplomates in public health, and 524 licentiates in dental surgery; 12 ordinary and 1 honorary Fellow, and 30 licentiates died during the year.

Election of Officers.

At a meeting of the college held on June 1st, the following were elected for the ensuing year:—President, John Lentaigne; Vice-President, Robert H. Woods; Secretary, Sir Charles A. Cameron, C.B.; Council, Sir Henry R. Swanzy, William Stoker, Sir Charles Alexander Cameron, C.B., John B. Story, Sir Charles B. Ball, Sir Thomas Myles, Sir Arthur Chance, Richard D. Purefoy, Sir Lambert H. Ormsby, Henry G. Sherlock, R. Bolton M'Causland, R. Lane-Joynt, William Taylor, Edward H. Taylor, G. Jameson Johnston, R. Charles B. Maunsell, William Ireland Wheeler, D. Edgar Flinn, and Thomas E. Gordon. Mr. J. S. McArdle and Dr. T. Donnelly lost their seats.

Mr. J. S. McArdle and Mr. J. B. Story have made known their intention to be candidates for the vice-presidency in 1910

Medico-Legal.

PROPOSED REGULATION OF MEDICAL EXPERT TESTIMONY.

NOWHERE is the proverb that doctors differ more conspicuously illustrated than in the witness box. This gave rise to much unfavourable comment in the newspapers in the Thaw case tried at New York, and at the present moment expert medical evidence is in discredit in France owing to the case of the woman popularly known as "l'ogresse," who, it is said, but for the evidence of experts would have been long before now in safe keeping out of the way of doing further mischief. We wish it to be clearly understood that we are not in any way passing judgement on the evidence in either of these cases. We only call attention to the fact that medical evidence should be placed apart from ordinary evidence and should never be open even to the suspicion of being given *ex parte*. We are glad to note, therefore, that steps are being taken to deal with the matter in the United States. The Committee of the Medical Society of the State of New York appointed to confer with a special committee of the New York State Bar Association in regard to the regulation of expert testimony, has, we learn from the *Medical Record*, prepared the following draft of a bill with the object of regulating expert medical testimony:

At any time in the pendency of any civil proceeding in any court in which any medical or surgical question is likely to be

material, the court of any justice thereof may, or at the request of either party shall, appoint from the list made up as hereinafter provided one or more persons learned in the science of medicine and surgery, and of not less than seven years' actual practice, as official experts, who shall investigate the facts of the case and give their opinion upon any such question arising in such proceedings, and make written report thereof to the court.

Upon such appointment by the court, or if the parties file an agreement designating an expert for the case, the court shall issue an order for the person so appointed or agreed upon, to be served in the manner provided by law for the service of subpoenas. As soon as may be after service thereof the expert shall make such examination of the case as in his judgement may be necessary and practicable, and shall file his report as above provided. Such report shall be filed in the case, and shall thereupon be open to the inspection of either party, and such report may be read in evidence, and such expert may be called as a witness by either party at the trial.

The New York Academy of Medicine, for New York City, and the Medical Society of the State of New York, acting for the State outside of New York City, shall, through committees appointed by these organizations, furnish to the court or courts in various counties, a list of names of members of the medical profession of good standing, and of not less than seven years' actual practice, recommended by them as competent and expert in medicine and surgery, from which list the court may select such expert or experts as in its judgement may be required

Such official expert shall be paid out of the treasury of the county a minimum fee of 50 dollars (£10) for the examination of, and report on, any case in question, 50 dollars additional for the first day's attendance in court upon the case, and 150 dollars a day thereafter while attendance is required by the court. The expert witnesses so listed may be called by any court of the State, and if called from the county of their residence the fee shall be increased to the extent of the extra expense incurred, to which shall be added a reasonable compensation for such extraordinary service and loss of time.

Either party at the trial may call other expert witnesses than those appointed or agreed upon, but at his own expense.

The question of consultation between medical witnesses has been considered by the Medico-Political Committee of the British Medical Association after reference to the Divisions. Its report was presented to the Annual Representative Meeting held at Leicester in 1905. At that meeting the principle of the consultation of medical witnesses was approved.

CAN A POOR-LAW MEDICAL OFFICER BENEFIT UNDER THE WORKMEN'S COMPENSATION ACT?

At Enniscorthy Quarter Sessions, Judge Barry, K.C., has just given an interesting decision in the case of Mrs. Ellen Murphy *v.* the Guardians of the Union to recover damages for the death of her husband, Dr. Denis Murphy, Medical Officer of the Killann Dispensary District. In October, 1907, the deceased was summoned to see a woman who was accidently shot. On his way to the patient Dr. Murphy was thrown from his trap and died next day. The call was urgent, and there was no time to get a red ticket, but no point was raised by the guardians as to that. The question was whether the deceased was a workman within the meaning of the Act. The Judge, at close of argument, said: If the intention of the Legislature is not carried out it is the fault of the drafting of the Act of Parliament. From the wording of the Act it is hard to know what was really intended. The proper way to have drawn this subsection was to have defined "workman" as any person and then it would have applied to every person, subject only to the exceptions in Section 9. But the real words that have been followed are "whether by way of manual labour, clerical work or otherwise and whether the contract is expressed or implied, is oral or in writing." That seems a bit ambiguous. Every contract must be expressed or implied, must be oral or in writing. The drafters of the Act certainly complicated matters very much by inserting, too, "clerical work or otherwise." Because the word manual work or otherwise would restrict the construction of the Section to be something which would have the same kind of service as manual labour or clerical work, but what other kind of service is there of the same sort as manual labour or clerical work? I cannot see how you can construct "otherwise" by *ejusdem generis*. There is nothing *ejusdem generis* to clerical work only clerical work, and if I am wrong I will put it in proper order to have it set right. I think the *ejusdem generis* construction, not being applicable, means "otherwise" must get a full and unrestricted meaning and therefore, subject to what might be said by the Court of Appeal, I will not take the responsibility of throwing out this application. I will reserve this point, and conditionally award the sum of £300 £100 to go to the widow and £200 to be invested for the children.

The guardians have given notice of appeal.

A CURIOUS COMPENSATION CASE.

On June 1st the Court of Appeal was called upon to consider a somewhat remarkable case arising under the Workmen's Compensation Act. It appeared that the applicant was employed at a biscuit factory. Two of his companions, for a lark, hitched the hook of a crane into his necktie, and hoisted him up. In the result he fell from a height of 50 ft., and sustained serious injuries. As our readers are aware, an accident, to be the subject of compensation, must arise "out of and in the course of" the employment. The court held that this was not an accident arising "out of" the employment. To use Lord Justice Buckley's words: "The accident had nothing to do with the employment. It was a torious, senseless act, done by a fellow workman, and on every ground of common-sense the employer was not liable."

PARTICULARS OF AN ACCOUNT.

Bombastic inquires whether, in supplying a patient with particulars of his account at his request, he is obliged to put the amount of the charge of each visit as well as the particulars of each visit.

*** It is usual to state the number of visits made and the fee charged for each, and also any other items for which a special charge has been made, and it would certainly be necessary to do so in a contested county court action.

ESTIMATE OF VALUE OF PRACTICE.

Vendor.—A correspondent asks "whether the purchase of a portion of a practice is based on the annual receipts or on the gross amount of the bills sent out during the twelve months."

*** The purchase of the whole or a part of a medical practice is always based on the gross annual receipts, usually the average gross receipts of the three years preceding the sale.

HOSPITAL AND DISPENSARY MANAGEMENT.

CONVALESCENT HOMES ASSOCIATION.

Sir William Church presided over the third annual meeting of the Convalescent Homes Association on May 28th. The annual report of the Executive Committee stated that during the past year no new enterprise had resulted from the establishment of the Convalescent Homes Association. In 1906, in answer to an appeal from the Convalescent Homes Association, three homes responded by opening beds for surgical convalescents in special wards provided with skilled nursing, facilities for dressing of wounds, and surgical advice. The Metropolitan Convalescent Institution provided 20 beds, 10 for males and 10 for females. From their inauguration in June, 1906, to the end of 1907, 311 patients in all had been received. During 1907 the number of patients treated was 207. No fewer than 87 of those patients were convalescents from major operations. Mrs. Gladstone's Convalescent Home had opened a new surgical ward of 9 beds for males. During the year 1907, 30 cases had been received and treated. With the exception of one unsuitable patient suffering from malignant disease, who died shortly after admission, all the cases left the home either cured or much improved. In the latter category were several cases of discharging sinuses, that under any circumstances required a prolonged period of treatment for their relief. The Baroness de Hirsch's Convalescent Home for Jewish Patients opened 6 beds, 3 for men and 3 for women. During 1907, 30 patients were received; 19 came from the London Hospital. During the year 1907 two homes had dropped out, the London Hospital Home and the Victoria Home, Margate. Two new homes had joined the association, Miss Somers' Home at Bushey and the Convalescent and Training Home, Painswick. The Convalescent Homes Association still maintained its object in acting as a centre for inquiry and as an intermediary between hospitals and convalescent homes. Attempts had been made during the past year to increase the usefulness of the association by freely advertising that "information on all matters relating to convalescent homes and to the vacancies existing in them can be obtained at the offices of the association." Up to the present neither the hospitals nor the public had made much use of the association's central office for obtaining accommodation for convalescent patients.

Dr. S. H. Habershon pointed out that the association had justified its existence, and suggested that application should be made to the King Edward Fund for assistance.

A resolution, proposed by Captain Acland, chairman of the Banstead Surgical Home, and duly seconded, inviting the executive committee to take steps as soon as was thought desirable to approach the King Edward Fund with the object of obtaining grants, was put to the meeting and carried.

Mr. H. H. Clutton emphasized the importance of finding out whether the cases sent to these convalescent homes were treated in the best manner.

The Chairman, in reply to an inquiry asking why the association had not received more applications, said that the demand was not perhaps so great as had been represented when it was proposed to build special hospitals for these cases. Further, patients in hospitals were generally badly off, and could not pay the money required at most of the convalescent homes.

The meeting concluded with the customary votes of thanks.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
1631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ **We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.**

H. S. desires to hear of a home for inebriates in Devonshire.

"SOUTHAMPTON" writes: I have a patient who has been discharged from the navy, on account of mental insufficiency I imagine. He is unfit for continuous employment except under immediate personal supervision. Are there any institutions, apart from asylums, where he could be received without fee? He is physically strong.

TUBERCLE BACILLI IN BUTTER.

J. P. W. asks whether the tubercle bacillus is ever present in fresh butter or cream, and how it is affected by (1) the centrifugal cream separator; (2) exposure to such heat as is required to clot cream as used in Devonshire; (3) the souring of milk preparatory to hand skimming, as in some parts of Ireland.

*** Living tubercle bacilli have frequently been found in butter. If bacilli are suspended in milk, some of them are liable to be carried into the layer of cream produced by centrifugalization. Tubercle bacilli in milk are killed by exposure to a heat of 60° C. for twenty minutes. So far as we are aware, no scientific inquiry has been undertaken concerning the vitality of the tubercle bacillus, if present, in Devonshire and Irish dairies.

INCOME-TAX.

HARDUP writes: In making a return for income-tax, are the wages and board of the housekeeper to a bachelor an allowable outgoing when deducting expenses?

*** They are not! Only expenses necessarily occurred in earning the profits of a profession are allowable. Housekeeper's wages, etc., paid by a bachelor are on the same footing as the household expenses of a married man, that is, they are private and not professional expenses, and so are not allowable.

H.E.C. writes: In your issue of May 2nd, you state in answer to a correspondent that an indoor assistant is not bound to pay income-tax on the value of his board and lodging. Does this apply to an outdoor assistant whose principal pays the rent of his house? The outdoor assistant is no more able to turn this benefit into money than is the indoor assistant his board and lodging.

*** If the outdoor assistant can prove to the satisfaction of the income-tax commissioners that he is unable to turn the benefit referred to into money he will not be liable to pay income-tax on it. The question is one that must depend almost wholly upon the facts of the particular case. If, for instance, the assistant were obliged, as a condition of his appointment, to live in a particular house, the rent of which his principal agreed to pay, he probably could not turn the benefit into money. If, on the other hand, the principal undertook to pay the rent of any house (up to a fixed sum) within a certain area which the assistant chose to take, the Commissioners would probably insist on charging tax on the benefit, for, by changing his residence, and subletting the house first taken, the benefit would be "turned into money." The distinction is a fine one, but is supported by judicial decisions. It is held that in equity income-tax ought to be charged in both cases, for both board and lodging and a house rent free are tangible benefits, given in lieu of the payment of a higher salary.

THE PROCESS OF PATENTING.

R. N. asks: (1) How he can protect an idea; (2) how he can patent an invention; (3) what is likely to be the cost of the process.

*** (1) The law of England does not afford any means of protecting an idea. (2) The inventor must draw up a petition to the Crown and deposit it at the office of the Commissioners of Patents for Inventions, together with an instrument known as the "Provisional Specification," describing the nature of the invention. If this "Provisional Specification" is approved by the law officer, a certain amount of protection is at once granted to the inventor, and at a later period he will be entitled to a patent on furnishing a further instrument known as the "Complete Specification," and after certain other legal requirements have been fulfilled. (3) Our correspondent must consult a patent agent to learn this with any accuracy. Generally speaking, it may be stated that the cost of involved in obtaining the "Provisional Specification" is not great, but before a complete patent is granted very considerable expense may be incurred.

ANSWERS.

SAINT.—The Saintour Prize, which is of the value of £160, is awarded every two years to the author of the best work, manuscript or printed, on any branch of medical science. In the case of the François Joseph Audiffred Prize (the interest on £960 at 3 per cent) it is expressly stated that persons of any nationality or any profession may compete. The prize will be awarded for the discovery of a radical cure or preventive of tuberculosis recognized as such by the Academy. Application for further information as to all the prizes awarded by the Académie de Médecine, Paris, should be addressed to the Secrétaire Perpétuel.

THE D.P.H. EXAMINATIONS AT CAMBRIDGE.

T. S. D.—The following books will be found useful for the second part of the D.P.H.Camb. examination: Notter and Firth's *Theory and Practice of Hygiene* (London: J. and A. Churchill 1908 21s.); or Whitelegge and Newman's *Hygiene and Public Health* (London: Cassell and Co., 7s. 6d.); or Parkes and Kenwood's *Hygiene and Public Health* (London: H. K. Lewis, 1907, 10s 6d.); Reid's *Practical Sanitation* (London: Charles Griffin and Co., 6s.); Hime's *Practical Guide to the Public Health Acts* (London: Baillière, Tindall and Cox, 15s.); Newsholme's *Elements of Vital Statistics* (London: Swan Sonnenschein, 7s. 6d.); Kenwood and Savage's *Public Health Laboratory Work* (London: H. K. Lewis, 10s. net); Herbert Jones's *Guide to Examinations in Sanitary Science* (London: Baillière, Tindall and Cox, 2s. 6d.)

ASTHMA.

DR. P. MARTYN O'DWYER (Zeitoun, Ca'ro) writes: "J. R. P.'s" inquiry (JOURNAL, May 16th, page 1211) about asthma in Cape Colony can scarcely be answered to any purpose in a few lines, but my experience may be of some use to him. I have known cases of asthma do remarkably well in the region of Beaufort West (C.C.), while they suffered considerably in Capetown, and could not live in England even during a short holiday without very considerable distress. The climatic conditions of the Cape are most varied and variable; there are probably many places on the high veldt where some if not most asthmatics would find relief more or less complete and permanent, at least while they continued to live in an environment whose essential qualities were somewhat similar; but the personal factor has a most important bearing on such cases—I had almost said the most important; at any rate, it is extremely difficult to anticipate the possible effects of a place on an individual case. Not until the patient has lived there can we say that it is suitable for his case. Apart from the very important personal factor, the climatic and other conditions of this place would seem to be most favourable for such patients; its desert climate is one of the best in Egypt, and living is cheap and comfortable, which latter essential the patient cannot always command in South Africa.

LETTERS, NOTES, ETC.

WHEN commenting (May 16th, p. 1179) on a book by Dr. Dan McKenzie sent to us for review, we observed that the contents of the manual, bearing on the cover an abbreviated but somewhat comprehensive title of *Diseases of the Throat, Nose, and Ear*, were more correctly described on the title page itself as a guide to diagnosis, and further that the book did not include the pathology or the treatment of those diseases. We have received a letter from Dr. Dan McKenzie in which he expresses his "hearty support" of our comment and explains that he was not responsible for "the description of the book stamped upon its cover"—*Diseases of the Throat, Nose, and Ear.*

THE MICROSCOPE IN WAR.

DR J. ARNALLT JONES (Aberavon) writes: My attention has been drawn to the observations of Major Blackham, R.A.M.C., in the BRITISH MEDICAL JOURNAL of May 30th, p. 1340, on that portion of my presidential address to the Swansea Division, British Medical Association, which dealt with the successful efforts in preventive medicine of the Japanese medical staff in the Russo-Japanese war published in the JOURNAL of December 21st, 1907; and whilst we welcome such kindly criticism coming from an eminent military hygienist, yet I see nothing to recant. Before publishing a lengthy address in the JOURNAL, the Editor has to reject all but the essentials to economize space; otherwise it would have been shown that the remarks were not mine but taken from a report of an American military surgeon who had been attached to the Japanese army in Manchuria, which is recorded in the twentieth chapter of Sir Frederick Treves's instructive work, *The Other Side of the Lantern*. In speaking of the Japanese army doctors, he adds: "Nothing was too small to escape their vigilance nor too tedious to weary their patience, and everywhere in the field—with the scouts, or in the base hospitals at home—the one prevailing idea was the prevention of disease," and these are the words of an eye-witness. The extract from the report does not show the details as to how they arrive at their conclusions before labelling wells as fit or unfit for the troops, but it may be readily believed that they found a way to examine well waters bacteriologically as they overcame other difficulties. The comments of my great master, Sir Frederick Treves, in the same chapter are worthy of repetition here: "In the Boer war 13,250 soldiers died of disease. It may be safe to conclude that the greater proportion of these deaths were due to preventable disease. It is a little distressing to reflect how many lives might have been saved if the method of the Japanese medical service had been adopted by the British army." It was by reducing preventable disease almost to the vanishing point, when the vastness of the forces employed are considered, that the Japanese gave us a brilliant practical illustration of what science can do in the way of preventing disease in war.

OXYGEN INHALATIONS.

DR. D. W. SAMWAYS (Clyst St. George, Devon) writes: On returning lately from the Riviera I had occasion to visit a relative very ill at a well-known health resort in the South of England. Oxygen had been ordered for inhalation, and was, I found, given direct from the cylinder. This appeared to be the habit, as bags could not be procured in the town, and the chemists told me they were never supplied or required. A patient therefore receives the ice-cold oxygen which has hissed from a terrifying cylinder near his bed. On the Riviera the oxygen is first passed into bags, which alone are brought near the bed, after they have remained in the room long enough to warm up. Personally, I, in addition, pass the oxygen from the bag through a spiral metal tube surrounded by hot water, so that only *warmed* gas is supplied. I do not see how the method adopted in the South of England can under any pretext be justified. It is surely known that gas becomes cold on expanding; ice can even by seen forming on the metal connexions as the gas escapes. Is this ice-cold oxygen fit for a patient who has no spare vitality to expend on warming it up, and whose lungs are probably peculiarly susceptible to cold? The method may save trouble, and the expense of perishable rubber bags: but I do not wonder that the advent of oxygen is associated in people's minds with a sentence of death, if the results are what one would theoretically expect from blasts of icy cold gas given to a patient accustomed to a well-warmed atmosphere.

A METHOD OF PRODUCING DIAPHORESIS.

DR. A. C. BALFOUR (Aviemore, Inverness-shire) writes: With reference to the account of hyperpyrexia in pneumonia published in the JOURNAL of May 23rd, I may state that the following treatment is useful for reducing temperature and for promoting profuse diaphoresis without collapse. Take about half a drachm of creosote *B.P.* on a swab of cotton-wool, rub it into the axillæ of the patient, and cover him well with the blankets. In from twenty minutes to half an hour he will break into profuse perspiration, and the temperature will drop to normal or thereabout. I have used this method for several years in pneumonia, malaria, and acute nephritis, dropsy being rapidly banished. I have never seen any irritation produced on the skin by the creosote.

THE MECHANICS OF GOLF.

A MEDICAL golf player, who has devoted much attention to the mechanics of the subject, has designed some new clubs, known as the Aaba clubs, in which certain disadvantages attaching to ordinary drivers and brassies have been overcome. Everyone will remember that if half-a-dozen clubs of ordinary but ostensibly identical make are handled one after the other there is a distinct difference in the feel of each of them, and this is due to the more or less promiscuous fashion in which the wooden clubs are weighted. As a rule the fitting used for this purpose is placed more or less towards one side of the club head, and hence the centre of gravity of the club and shaft are not identical in position, and irregular leverage action is inevitable from the beginning and increases and varies during the swing of the club. The accruing mechanical disadvantages are sufficiently easily overcome, perhaps, by a man on his day and in good form, but it is otherwise when his wrist muscles begin to tire. Delicate action of the wrist muscles is essential in any case at the moment of impact between the ball and the head of the club, and is much more difficult to secure and maintain throughout a day's play when in addition the irregular leverage described has likewise to be overcome. The extra strain then leads to slicing, pulling, and general inaccuracy in striking, with the result that the player, without knowing quite why, finds himself discarding for the time being wooden clubs and picking up the more accurately balanced, though heavier, iron clubs. Hence considerations based on mechanics, anatomy, and the physiology of fatigue have induced our correspondent to have made for him what he has called the Aaba clubs; their peculiarity is that in any club, whatever its external appearance may be, the filling used to weight the head is so placed that each half of the head is of exactly the same weight as the other, even though the two sides may greatly differ in shape and size. Hence the centre of gravity in these clubs precisely corresponds with that of the shaft, and the leverage is normal and regular. They can be obtained from Messrs. A. G. Spalding Bros., 29, Haymarket, and 55, Fetter Lane.

THE WORK OF SPECIAL DEPARTMENTS IN OUR HOSPITALS.

MR. F. FAULDER WHITE (London, W.) writes: The work of my special department has already considerably increased since medical inspection of children has been enforced. It would be interesting to know whether this is the case elsewhere. It is doubtful whether it was wise of the Board of Education to suggest to local authorities that the voluntary associations (that is, hospitals) should be utilized for the gratuitous treatment of the diseases discovered by their paid inspectors. There must be a limit of efficiency in every department; I feel that mine has been reached, and when facilities for treating special diseases, such as those of the ear, are scanty, which is true of most London hospitals, there is some danger of the system breaking down. One of our leading surgeons, not a specialist, has recently expressed his opinion on this important point. He says: "The treatment of the special departments in London hospitals, so far as the provision of beds is concerned, amounts to a scandal and is very much against the interests of the patients."

THE BROWN DOG

WE take the following from the *Daily News* of May 28th:

> At Battersea Borough Council last night Mr. C. Runeckles asked the Chairman what steps had been taken to amend the inscription on the Brown Dog Memorial.
>
> Mr. Rogers: None.
>
> Mr. Rimes: Let sleeping dogs lie.
>
> Mr. Haythornthwaite: It's the inscription which lies. (Laughter.)

We are glad that the enlightened councillors of Battersea have come to see the absurdity of their precious work of art, and that even the *Daily News* appears to see the joke. Battersea now deserves a wider reputation, which may rival that of Brazil, "where the nuts come from," as the place where antivivisectionist "stewards" come from.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

A Post-graduate Lecture ON THORACIC ANEURYSM.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

BY DAVID DRUMMOND, M.A., M.D., D.C.L.,

SENIOR PHYSICIAN, ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE; JOINT LECTURER ON PRINCIPLES AND PRACTICE OF MEDICINE, UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

THROUGHOUT the country it is recognized that certain diseases are more prevalent in some parts than others, and in some instances this is so pronounced that special districts may be said to be the home of certain diseases. In this sense there can be no doubt that the district of Tyneside (including neighbouring seaports), of which Newcastle may be said to be the centre, is linked with thoracic aneurysm. So numerous are our cases that it is not uncommon to find five or six examples in the wards of the Newcastle Royal Victoria Infirmary at the same time. It is remarkable, however, that this applies only to aneurysm affecting the thoracic aorta, for those of the abdominal aorta are rare, whilst surgical aneurysms in the shape of axillary, brachial, popliteal, etc., are distinctly uncommon in the district.

ETIOLOGY.

The reasons for this afford an interesting subject of inquiry, but time and the scope of the present lecture will not admit of more than this passing reference.

It has often been maintained that strain from heavy and laborious occupations is the chief factor in the causation of thoracic aneurysm, and so general is the professional opinion that aortic strain is the predominating factor in the causation of aneurysm, that when the fact of this prevalence in the Newcastle district is mentioned to medical friends from a distance, it naturally invites the inquiry: "Does not the nature of your industries supply the explanation?" That this is not all is certain; and that it may be true only to a very limited extent can be shown from our own cases. A careful examination of upwards of 300 examples has convinced me that this view is incorrect. For instance, out of a group of 145 cases in which the point was specially noted, 64 only had been engaged in heavy employment; in 81, including 14 women, the action of strain could be eliminated.

The question of the relation between syphilis and aneurysm has exercised the minds of clinical observers for many years, but apparently without resulting in a definite conclusion beyond the general impression that they are closely connected. It is a question that for obvious reasons cannot be settled by statistics, though they are naturally helpful. My own inquiry in this direction shows a history of syphilis in 102 out of 145 cases. In my opinion aneurysm of the thoracic aorta is undoubtedly a syphilitic disease, though aortic strain from hard work where the tissues are already degenerated by alcoholic excesses must certainly predispose. I may say in passing that in more than 40 per cent. a strong alcoholic history has been obtained.

ANATOMY AND PHYSIOLOGY.

The aorta arises from the left ventricle about ¼ in. behind the sternum, at a point about the level of the lower border of the third costal cartilage, somewhat to the left of the midsternal line. Thence it passes upwards, forwards and to the right to the level of the upper border of the second right costal cartilage, from which point it passes backwards diagonally towards the left, rising still further until it reaches a point about 1 in. below the upper border of the sternum. It eventually touches the left side of the lower border of the fourth dorsal vertebra, whence it descends. At its origin it is about 1⅛ in. in diameter, expanding some 2 in. further on into the great aortic sinus, and contracting again just beyond the left subclavian artery into the so-called isthmus, and once more expanding into the spindle. At the junction between these last two parts there is a point, sometimes termed "the angle," which is a very common seat of disease. Anatomists divide the vessel into the ascending, transverse, and descending portions; but it has been my custom to speak of the ascending, ascending-transverse, transverse, transverse-descending, and descending, and there are clinical reasons for this further subdivision. I must content myself with a very brief statement of the relations of the arch, though I cannot insist too strongly upon their importance from the point of view of the diagnosis of aortic aneurysm.

The ascending arch has at its root immediately in front the right auricular appendix and the pulmonary artery, whilst behind and to the left is the left auricle, and these structures envelop it for nearly ¾ in., whilst the pericardium covers it for rather more than 2 in., reaching up to a point close to the innominate artery. Behind the ascending arch is the right branch of the pulmonary artery and the right bronchus, and to its right the superior vena cava, while the right lung and pleura practically surround the vessel in front, to right and behind. The important relations of the transverse arch are: in front, the lungs, pleura, and sternum; above, the left innominate vein and the vessels that spring from the aorta; behind, the deep cardiac plexus and trachea at its bifurcation, the oesophagus, and thoracic duct; beneath, the left bronchus, superficial cardiac plexus, and pulmonary artery; whilst the vagus and phrenic nerves pass in front, towards the left side, and the recurrent laryngeal winds round beneath and behind the vessel opposite the left subclavian. The descending arch is related to the oesophagus and vertebral column.

The nervous supply of the arch has not, unfortunately, been well worked out by anatomists, and though a point of the greatest importance in connexion with the symptoms and diagnosis of aneurysm, it is not possible to make more than a brief problematical statement in respect to it. Anatomists tell us that the aorta receives sympathetic fibres from the cardiac plexuses, and suggest that the chief supply is from the superficial cardiac plexus, a point of importance when the distribution of the pain in connexion with thoracic aneurysm is considered. The cardiac plexuses are two in number, the deep and the superficial, the former receiving branches from the right superior cervical ganglion and the middle and inferior ganglia on both sides, whilst the superficial cardiac plexus, though in communication with the deep, is derived chiefly from the left superior cervical ganglion. In addition to the sympathetic nerves that pass from these plexuses to the aorta, the vessel below the arch is surrounded by an aortic plexus which is formed by branches from the upper thoracic ganglia, and communications from the posterior pulmonary plexus and cardiac plexus. On the other hand, it must not be forgotten that the cervical and thoracic ganglia are intimately connected with the spinal nerves; thus irritation arising in the aortic wall may be reflected peripherally to the distribution of spinal nerves in chest, shoulders, arms, back of head, neck, etc. We thus account for the patient's complaint of pain in aneurysm. Clinically, one is tempted to connect definite parts of the aortic arch with certain sympathetic levels having definite spinal connexions, and it may yet be proved that such connexions exist, but anatomists have so far failed to establish them. This point, however, I shall hope to make clear when dealing with the symptom of pain. The dilator pupillae is supplied by the sympathetic fibres, which take their origin from the cells of the superior cervical ganglion. The white rami fibres associated with these leave the spinal cord by the motor roots of the first two or three thoracic nerves, and ascend the sympathetic trunk to the superior cervical ganglion without interruption.

VARIETIES OF ANEURYSM.

I hoped to be able to deal with the morbid anatomy and pathology of aneurysm, but fear I must confine myself to a brief statement dealing with the varieties of aneurysm and the portion of the vessel affected. For this purpose a group of 225 cases, verified by *post-mortem* examination, has been selected. Of these, 179 were sacculated, 39 fusiform, and 7 dissecting, a statement which perhaps may be said to under-estimate the true relative proportion of fusiform to sacculated.

The 179 sacculated aneurysms were distributed as follows over the various parts of the arch: 60 in the ascending, 13 ascending-transverse, 57 transverse, 19 transverse-descending, and 30 descending; or, to make the statement in conformity with the usual division of the

arch into three parts—namely, ascending, transverse, and descending—73 belonged to the first, 76 to the second, and 30 to the third; and, taking into consideration the difficulty there is in determining the exact position of the sac when arising from the beginning or end of the transverse portion, it would seem fair to assume that in much the larger proportion of cases the disease occurs in the transverse section.

Selecting a group of 159 cases in which the cause of death was determined—in 63 the sac ruptured; in 27 the fatal termination was due to valvular disease; 20 deaths were ascribed to pressure on trachea with broncho-pneumonia and cardiac failure; a similar condition of lung arising from pressure on left bronchus accounted for 7; while 6 succumbed immediately (within a few hours) to asphyxia from pressure on the trachea. In 28 cases of fusiform aneurysm, 14 died from valvular disease, 8 from pressure on trachea and bronchus with consecutive pulmonary disease, 3 ruptured, 2 died from kidney disease, and 1 from pressure on the superior vena cava and heart failure. When considering the statistics from the point of view of rupture, it will be seen that the trachea and pericardium are the most vulnerable structures, whilst rupture into the left pleura, left bronchus, and superior vena cava and oesophagus are of comparatively frequent occurrence.

Just a word about the pathological conditions that lead up to and accompany the development of the sac. Experience has taught us that these changes are rarely simple and uncomplicated; it is, for example, quite uncommon to meet with a sac springing from an otherwise healthy aorta; on the contrary, the aorta is, as a rule, extensively affected by, let us suppose, the ruthless ravages of syphilis, which cannot be neglected as a symptom-producing factor. Again, there may be more sacs than one, or one portion of the aorta may be dilated (fusiform), whilst another is the seat of a sacculated aneurysm, or the case may be complicated by valvular disease. All these points have their significance, and add to the difficulties of the diagnostic problem. Thus the earlier symptoms may be those of specific arteritis, and, indeed, not infrequently this condition dominates the clinical picture throughout.

Age.

The usual age at which thoracic aneurysm develops seems to be from 35 to 50. Occasionally it has been met with in advanced life, but these cases are very rarely sacculated. Taking a series of 300 for comparison, the oldest case of sacculated aneurysm was 67 and the youngest 21. In the period of fifteen years named there were 180 cases, of which 128 were under 45, whilst 72 occurred between 40 and 45. A very few cases of this disease have been recorded in children, due apparently either to ulcerative endocarditis or some developmental defect. It is interesting to note that fusiform dilatation is also a disease of the middle period of life, though it is apt to develop later than sacculated aneurysm. For example, nearly two-thirds of the cases were between the ages of 45 and 55; or to institute a comparison, the period of greatest frequency in the case of fusiform aneurysm is the quinquennial of 50 to 55, as against that of 40 to 45 in sacculated. It must not, however, be supposed that fusiform aneurysm does not occur in younger patients, as a fair proportion of cases were between 35 and 40, but none were under 30. As is well known, aneurysm is rare in women; authorities, as might be expected, differ as to the relative frequency, but my own observations tend to show that it occurs about eight times as frequently in the male as in the female sex and that fusiform aneurysm is specially rare in the latter.

Signs and Symptoms.

The chief physical signs and symptoms of thoracic aneurysm and their order of relative frequency may be said to be as follows: Pain; cough, dyspnoea; pulsating tumour; alteration in second aortic sound; inequality of pupils; inequality of pulses; dysphagia; hoarseness, with paralysis of recurrent laryngeal; tracheal tug; tracheal whiff; murmurs.

A striking characteristic of aneurysmal pain is the fact that it is nearly always complained of at night. The patient may go to bed comfortable and free from symptoms, to awake with his customary pain in the chest, shoulder, or arm, as the case may be, for the relief of which he usually alters his position, sitting up, lying on his other side, or possibly walking about the room. Or the pain may come on after lying for some time awake in one position. So frequently, indeed, is the pain nocturnal, that the statement by the patient that he is worse at night should always suggest the possibility of an aneurysm. In many cases there are two distinct types of pain—one anginal, worse through the day, aggravated by exertion, and relieved by resting; the other, the true aneurysmal pain, most pronounced at night, and relieved by change of posture. The former, anginal, is often referred to both arms; the latter very rarely.

It is important, in considering the symptom of pain in aneurysm, to recollect the nervous supply to the arch and its connexion with the spinal nerves forming the brachial plexus, etc. The arch, as we have seen, is supplied by sympathetic fibres, which come from the cervical ganglia, and which in turn communicate with the spinal nerves.

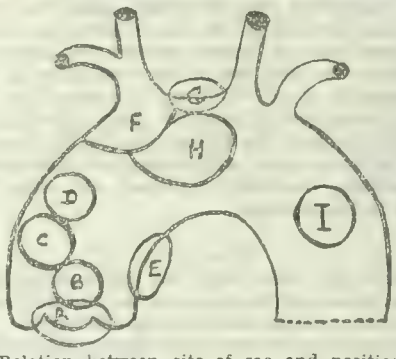


Fig. 1.—Relation between site of sac and position of pain (anterior view). A, No pain. B, Precordial. C, In front, third and fourth ribs, later between shoulders, occasionally down right arm, usually to right of sternum. D, Towards centre of sternum, second and third ribs; passes to shoulders, either right or left. E, Middle of chest, in front, either side sternum, and either arm. F, Occiput and back of neck and shoulders, right or left, more often left; also right or left arm, chiefly left. G, Back of head. H, Upper part sternum, second and third ribs, most frequently passes to left shoulder and down left arm. I, Left shoulder and chest, second costal cartilage. Not down arm.

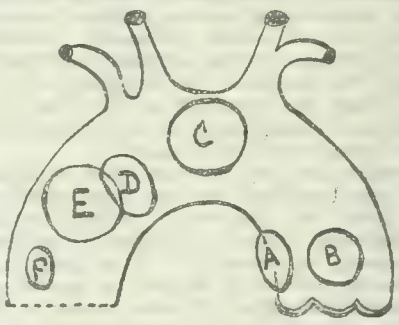


Fig. 2.—Relation between site of sac and position of pain (posterior view). A, Middle of chest, right arm, and right shoulder. B, Right shoulder, later right arm. C, Begins in front of chest, to pass later to shoulders and arms; often throat. D, Shoulders, chiefly left, or in front of chest to left of sternum, soon to pass to shoulder. E, Often no pain. F, Left of sternum, fourth and fifth ribs, left shoulder, and back.

To explain the distribution of the pain it may be assumed that irritation passing from the arch along sympathetic fibres is referred to the sensory distribution of the corresponding spinal nerves, the intercosto-humeral, for example, or the small occipital, or great auricular, or supraclavicular. The common belief, therefore, that pain in aortic aneurysm is the result of direct pressure upon spinal nerves is no longer tenable, and we are forced to conclude that the sympathetic nerves conduct sensations affecting the cutaneous area in nervous correspondence with the affected part of the aorta.

A careful study of the area in which pain is first felt in a large number of cases of aortic aneurysm, verified by *post-mortem* examination, has led me to the conclusion that the position of the sac may frequently be diagnosed from the distribution of the pain.

Pain would seem to be a prominent feature of aneurysm in about 90 per cent. of the cases, but it must not be forgotten that there are one or two aneurysmal sites in which pain is a rare feature—namely, the sinus of Valsalva and the posterior part of the descending transverse arch (see Figs. 1 and 2).

An aneurysmal sac springing from the lower part of the front of the ascending arch produces pain referred to the precordium, generally about the right parasternal line, on a level with the third or fourth costal cartilage. Later it is referred to the right shoulder, and may, as time advances, descend the arm, though this is not constantly the case. When the sac is located on the right side of the ascending arch, the pain is usually felt in the upper part of the right side of the chest, second or third costal cartilages, with a tendency to pass early towards the right shoulder blade and down the right arm. The higher the position on the arch, the higher, as a rule, is the pain located by the patient; but soon, even when the sac springs from the front of the arch, as the upper limit of the pericardial attachment is approached, the pain tends to be referred towards the left shoulder instead of the right. A sac originating from the left side of the ascending arch commonly produces pain referred to the base of the heart and down the left arm, though in some cases it passes towards the right, affecting the right shoulder and right upper extremity.

It is interesting to note that the more the sac approaches the posterior part of the inside of the ascending arch the greater is the tendency for the pain to pass towards the right. Sacs that take their origin from the neighbourhood of the root of the innominate artery are very often associated with pain in the back of the neck and occiput (small occipital), and the same may be said of the upper part of the arch close to the left side of the innominate.* Aneurysms springing from the front of the ascending transverse on a level with the innominate root, but below it, usually cause pain on the front of the chest on a level with the second or third ribs towards the right or left side of sternum, or it may be in the middle (sternal branches from the descending cervical nerves), but the further to the left we go, even before the transverse proper is reached, we note a tendency for the pain to pass more to the left than to the right, and often to affect the left arm (left great cardiac nerve to superficial cardiac plexus); but it is a striking fact that sacs originating beyond the left subclavian artery do not produce pain in the arms at all. Here the symptom is generally referred to the left shoulder and left side of chest about the second costal cartilage. We may, therefore, conclude that aneurysms having their origin about the spindle—a frequent site—produce pain first in the left shoulder and later on the left side of the sternum, though this order may be reversed. Aneurysms arising from the posterior part of the ascending arch cause pain in the right shoulder (acromion branches). When from back of transverse, the shoulders and throat (transverse cervical nerve) are often affected, and it is a strange fact that posterior aneurysms tend to affect the right shoulder more frequently than the left, whilst the reverse is the case with sacs springing from the corresponding positions in the front of the arch. Several cases were met with in which even large sacs arising from the back of the descending transverse produced little or no pain, and this at times, curiously enough, notwithstanding considerable erosion of the vertebrae. When the sac takes origin from the back of the descending arch below the spindle, pain is generally referred to the left side of chest, about the fourth and fifth ribs outside the costal margin, and to the left shoulder and back.

Cough is often present for some time before any other symptoms manifest themselves. It is usually loud, ineffectual, and paroxysmal, and, in the absence of other signs of aneurysm, is often ascribed to bronchitis. Later on, it assumes a ringing, metallic character, and still later, the husky "leopard growl" which is so characteristic of pressure on the trachea.

Cough is not a necessary symptom of aneurysm, as in some cases, where the sac springs from the front of the ascending arch, there is little or no cough, while it is rarely present in cases arising from the arch below the descending transverse portion. In cases of aneurysm of the back of the ascending arch cough may be one of the earliest symptoms, and, when the right bronchus is compressed, is usually accompanied by shortness of breath. When the sac arises from the front of the transverse arch the cough comes on later, as also does the dyspnoea, while if it spring from back and press on the trachea, it will cause a paroxysmal cough of a peculiarly loud explosive character early in the disease. An aneurysm from the ascending transverse arch, particularly from the posterior-inferior side, by interfering with the left bronchus will also produce early and troublesome cough. Cough is present in about 60 per cent. of the cases of aneurysm, as is also dyspnoea, which is closely associated with it.

The cough in the earlier stages is commonly ineffectual and attended by but scanty expectoration. Patients are wont to remark that it begins quite suddenly, lasts a few minutes, and is without expectoration at first, with an interval of a day or two between paroxysms. By degrees catarrh increases and clear or frothy mucus may be brought up; later, when the trachea or bronchi are seriously obstructed, muco-pus, sometimes in large quantities, is expectorated, when bronchiectasis suggests itself. It is important to note that in many cases, in which the tubes are dilated as the result of pressure, the expectoration remains free from fetor. As the obstruction increases the expectoration diminishes, and may indeed only reveal itself by the peculiar liquid rattling sound, the result of the patient's incessant effort to relieve himself.

Pulsating tumour, though a very frequent physical sign, is not always easy to distinguish, and must be sought for most carefully. At times it can only be detected when firm pressure is made over the chest at the end of a forced expiration, nor is it always an easy matter to distinguish between the cardiac impulse and an aneurysm.

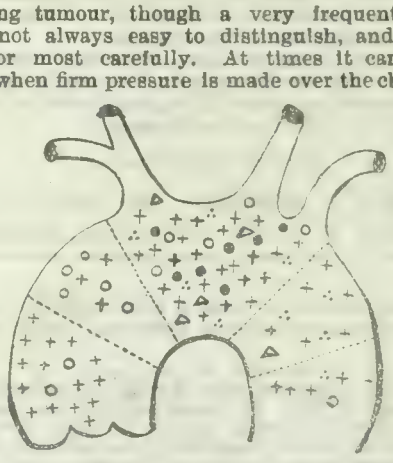


Fig. 3.—+, equal 53; o, right dilated, 13; Δ, left dilated, 5; ●, right contracted, 7; ∴, left contracted, 9.

The stethoscope is not a great help in the diagnosis of aneurysm, except in so far as it enables us to discover the peculiar alteration in the second aortic sound, which, when present, is highly suggestive. This physical sign is variously described as booming, accentuated, and drum-like. It is loud and voluminous, and is often best heard away from the aortic valves, practically over the sac at the point where it approaches nearest the chest wall, especially in cases in which the contents are fluid. Rarely a bruit independent of valve lesion is audible in the sac.

The pupils are frequently altered in thoracic aneurysm. In 87 cases in which the point was noted they were affected in 34 and equal in 53; in 13 the right was dilated, in 9 the left contracted, in 7 the right contracted, and in 5 the left was dilated. A careful examination of these cases with a view to establishing a connexion between pupil changes and site of sac made it clear that there was none, as sacs arising from every part of the arch were associated with equal pupils. Inequality was most frequent in cases of sac arising from the transverse portion, and chiefly towards the right side, where the right pupil was more commonly affected. As a rule, there was no alteration in cases confined to the ascending part, and rarely also in cases of descending aneurysm. On the left side of the arch the left pupil was the one more frequently affected.

Inequality of Pulses.—In some cases considerable skill is required to detect this sign, and when in doubt it is well to direct the patient to inspire deeply, and then slowly to expire to the fullest extent, whilst the observation is being made, for, as a rule, the movements of the

*To account for the pain in neck and occiput it is important to recollect that the heart is developed in the neighbourhood of the first four cervical segments and only descends into the chest in the course of development, the aorta necessarily making the same change.

chest in respiration affect considerably the size of the smaller radial pulse. Indeed, a deep inspiration will often abolish the inequality, and a forced expiration will exaggerate it—a phenomenon that is to be explained by the fact that in the majority of cases the inequality is the result of compression of the artery by the sac rather than internal narrowing of the lumen of the vessel, which pressure is relieved by the expansion of the chest. Not only may the pulse be reduced in size, but it is often delayed.

The dysphagia resulting from pressure of a sac from the descending transverse portion of the arch upon the oesophagus seldom amounts to serious obstruction, and may affect both fluids and solids, but more frequently the latter. The symptom varies much from week to week, and not infrequently passes off altogether. The patient, as a rule, points to the lower end of the sternum as the fancied site of obstruction.

Paralysis of the vocal cords is not always attended by hoarseness, therefore a searching laryngoscopical examination should be made in every case. The abductors are first affected, and later the adductors, which only become paralysed after considerable pressure on the recurrent; and abductor paralysis does not always produce change in the voice.

Tracheal tug is detected by gently grasping and attempting to elevate the cricoid cartilage, when a jerk can be felt synchronous with the cardiac systole.

Tracheal whiff may be heard either in the trachea or in the mouth; it is usually systolic, but may be double, and is loudest when the patient is expiring slowly after a deep inspiration with the mouth wide open.

PRIMARY SARCOMA OF THE LUNG.

BY SYDNEY W. CURL, M.D.CANTAB., M.R.C.P.LOND.,
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PRIMARY sarcoma of the lung is admittedly a rare disease, and the following example is therefore, I think, worthy of record.

HISTORY OF THE CASE.

The patient, a shepherd, aged 43 years, was admitted to hospital on May 2nd, 1907. He was in his usual good health until early in March, 1907, when he says he suffered from a bad "cold." About the first week of April he first noticed that his face commenced to swell, and about the same time he began to suffer from shortness of breath. Towards the end of April both legs became swollen. The dyspnoea gradually increased, and for a fortnight before he was admitted to hospital he had been unable to lie down in bed at night owing to the great difficulty in breathing which occurred when he assumed a reclining position. The only other complaints made by the patient were those of pain in the right side of the chest, and of "wind."

Previous History.

His previous health had always been excellent; he had had no venereal disease, and had not drunk immoderately. He is a married man with eight children, all of whom are in good health, as is also his wife.

Condition on Admission.

He is a powerfully-built man. There is considerable distress in breathing, but there is no stridor, and the voice is natural. The temperature on admission was 99·4° F., the respirations were 22, and the pulse-rate 123 to the minute. Both radial pulses were equal; there was no irregularity nor inequality of the beats, and there was no appreciable arterial thickening. The appetite was bad, the tongue slightly coated, and flatulence was troublesome; the bowels acted daily. There was very little cough, and only a small amount of mucous expectoration.

The face and neck were swollen, the eyelids puffy, and there were numerous enlarged venules on the nose and cheeks. The skin of the face, neck, and lobes of the ears was markedly cyanotic in hue. The pupils were equal, and reacted normally. There was no difficulty in swallowing. The lips and tongue were distinctly cyanosed. The lower part of the neck appeared markedly full, the external jugular veins were considerably distended, and there were a few enlarged subcutaneous veins to be seen coursing over the upper part of the chest, back and front. Tracheal tugging was not obtained. The superficial veins of both arms were very prominent, the hands congested, and the nails dusky. Slight pitting could be obtained over the front and back of chest and over the lumbar regions. Both legs, from the feet upwards, were markedly oedematous, as were also the penis and scrotum.

There was no abnormal bulging or pulsation to be seen or felt anywhere over the chest walls. Chest expansion was poor. Vocal fremitus was increased over the upper part of the right lung in front. Above the right clavicle and below it as far as the fourth rib in front, and from the apex of the right lung behind to a point just below the spine of the scapula, the percussion note was almost quite dull, as it was also in the upper part of the right axilla. Over these dull areas the breath sounds, which were very feeble, possessed a distant bronchial character, and bronchophony and pectoriloquy were to be heard over these parts. Elsewhere the pulmonary regions appeared healthy.

The heart's apex beat could not be located, but the first sound was to be heard best in the normal position. The cardiac dullness was not increased in extent, the heart sounds were clear and free from murmurs, whilst the second sound appeared distinctly accented over the dull area of the right lung.

A large tributary of the internal mammary vein was seen coursing from the region of the navel towards the xiphoid cartilage. The anterior abdominal wall was somewhat oedematous, the liver and spleen could not be felt, and there was no evidence of ascites. Urine was passed with difficulty, owing to oedema of the prepuce; it was of normal appearance, and contained neither albumen nor sugar.

In the right axilla were a few enlarged and tender glands, the largest being about the size of a filbert. No other enlarged glands were to be felt.

Owing to the distressed state of the patient an *x*-ray examination of the chest was not attempted.

Diagnosis.

A diagnosis of probably malignant growth involving the right lung was made.

Progress of the Case

On the first night after admission the patient was allowed to sit by the bedside, as the reclining posture was unbearable to him. At the side of the bed, with his elbows resting on the edge and with his body well forward, he used to sit night and day, and in this position get whatever snatches of sleep he could. After a few days even this position became intolerable, and he then took to lying on the bed, resting on elbows and knees. During the last few days of his life he assumed the genupectoral position on the bed, and held his head over the edge considerably below the level of the rest of his body.

As the disease progressed, the venous distension of the upper parts of the body gradually increased, and the oedema of these parts became extreme. The face and neck became enormously swollen, the eyelids became completely closed from the oedema and the conjunctivae extremely injected and chemotic. The legs, abdomen, and scrotum became very oedematous; urine was passed in very small quantities, and before death occurred the whole surface of the body became markedly dropsical.

Frequent attacks of extreme difficulty in breathing occurred from time to time; these were somewhat relieved by inhalations of oxygen, but most relief, although only very fleeting, was obtained from venesection, which was several times carried out.

During the last few days of the patient's life transient attacks of delirium occurred from time to time, unconsciousness gradually developed, and death took place on May 12th.

The temperature chart of the patient showed a slight irregular fever.

Post mortem Examination.

The upper parts of the body were cyanotic, and there was generalized surface oedema. The veins of the neck were enormously dilated and contained dark fluid blood. There were no enlarged glands to be found in the neck.

The right lung was completely adherent to the chest wall, and, with the exception of a small piece at its base, was occupied by a firm whitish growth, mottled with grey in parts, and in which were seen a few small haemorrhagic foci. From the lung the growth had extended forwards into the anterior mediastinum and had partly eroded the overlying ribs. The structures at the root of the right lung were compressed and invaded by the growth, which had also extended to the posterior mediastinum and had eroded parts of the bodies of the adjacent vertebrae on both sides. The glands at the bifurcation of the trachea were of a deep black colour and were invaded by extensions of the growth from the lung.

The left pleural cavity contained some clear serous fluid and the lung was oedematous; there were no secondary growths in these parts.

The pericardium contained several ounces of dark fluid blood, and its parietal layer was speckled with small seed-like secondary growths. The heart was collapsed, and on the surfaces of both auricles and ventricles were to be seen numerous nodules of secondary growth, varying in size from a pea to a cherry, a few, however, being flat and covering a larger area. At the base of the heart the large arterial and venous trunks were completely obscured by disseminated secondary nodules, which had rendered these parts very stiff and rigid.

The peritoneal cavity contained a considerable amount of flaky serous fluid. The liver, spleen, and kidneys were greatly engorged with blood and the stomach and intestines greatly distended with gas; there were, however, no secondary growths to be seen anywhere in the abdomen.

The enlarged glands in the right axilla were infiltrated with new growth.

Microscopical examination of sections from the lung tumour and from the nodules on the heart wall showed the typical structure of a small round-celled sarcoma, into parts of which abundant blood extravasation had occurred.

The diagnosis of this case during life lay between a new growth involving the lung and an aneurysm of the ascending aortic arch pressing upon the right bronchus and causing collapse of the lung.

In favour of new growth were the marked pressure effects, not only on the superior but also on the inferior vena cava. An aneurysm causing obstruction in both these vessels would need to be very large, and would almost certainly have given signs of its presence in the form of pulsation on the chest wall; further, the high grade of venous distension and cyanosis exhibited by the patient was far greater than one would expect from aneurysmal pressure. Assistance in excluding aneurysm was given by the absence of any history of syphilis or of injury to the chest wall. In fact, with the exception of the accented second sound over the dull right lung, signs and symptoms pointed to new growth. The accented second sound was probably more apparent than real, and I believe was the result of increased sound conduction through the solid lung. As confirmatory evidence in favour of new growth, one found enlarged and tender glands in the right axilla.

The history of the case and the progressive increase in the signs of venous obstruction were sufficient to exclude the diagnosis of a localized empyema.

Interesting features in the case were the entire absence of blood spitting, the extremely rapid course of the disease (about ten weeks from the time the first symptoms were noticed), and the postural changes assumed by the patient during the progress of his disease—postures which were those most likely to counteract, as far as possible, the constricting effect of the growth on the large venous trunks at the base of the heart.

The only other case of primary sarcoma of the lung which has been reported in recent years appears to be that described by Dr. Langmead. In this case the patient was a child 5 years of age in whom signs of empyema appeared, the growth itself being entirely unsuspected.[1]

For the notes of this case I am indebted to Dr. Russell Square, my house-physician, whose unremitting care the patient received.

REFERENCE.

[1] *Reports of the Society for the Study of Disease in Children.* Vol. vi, 1906, p. 242.

MYALGIA.

BY JOHN R. KEITH, M.D.ABERD.,

DRIFFIELD.

I USE this term here in a restricted sense—namely, pain in the muscles caused by strain.

One has frequently to treat patients suffering from this condition, and yet the subject is one about which little at the present time is written from which help can be obtained. Several years ago I had the happiness to fall in with a book, now long out of print—Dr. Thomas Inman's *On Myalgia*—which gives an exhaustive account of the subject. I take this opportunity of saying how much I owe to the perusal of this book, for without its assistance the true nature of many cases which have come under my notice must have passed unrecognized by me.

It may be easily mistaken for other affections—for example, rheumatism, acute inflammatory maladies, and diseases of visceral organs. The pain may be of the most acute character, and suggest the presence of some grave internal lesion.

A few weeks ago I was called to attend a young woman who had been suddenly seized with severe abdominal pain. The appearance of the abdomen was the same as that found in cases of visceral rupture, there being present great rigidity with tenderness. A previous history of overstrain of the abdominal muscles which had occurred not long before the onset of the attack indicated the true nature of the condition.

When the muscles affected are those in the right iliac region, appendicular colic may be closely simulated by the pain, tenderness, and rigidity which are present.

Many instances of what is supposed to be rheumatism are in reality painful muscles due to strain. Thus, myalgia of the trapezius at its attachment to the occiput is liable to be mistaken for rheumatism of the scalp, of the same muscle at its scapular insertion for omodynia, of the intercostals or serratus magnus for pleurodynia, and so on. When the pectorals in females are affected the mamma may be swollen and tender. When females complain of pain in the lower part of the abdomen careful attention should be given in order to discover its exact locality, as in many cases it will be found to have its seat at the attachment of one or both recti to the pubes. Such patients through modesty assert that the seat of pain is in the hypogastrium.

DIAGNOSIS.

In severe attacks of myalgia resembling acute inflammatory conditions, the previous history, the normal temperature, and the pulse, which in the great majority of cases is little accelerated, will generally indicate the true character of the disease. In more chronic cases the position of the pain and tenderness, which in these instances is generally at the origin and insertion of the muscles, the beneficial effects of rest—the pain being always less in the morning and increasing during the day—with careful inquiry into the general health, habits, and occupation of the patient, will enable a diagnosis to be made. When one is consulted by the overworked mother of a large family who complains of a swollen and tender mamma, or by a grocer's assistant with painful rhomboids, it may be very helpful in forming a correct opinion to learn that the former is in the habit of ending her arduous day's labours with a three hours' sewing, or that the latter felt the pain develop shortly after lifting some unusually heavy boxes.

It is important to bear in mind that in the first of these groups—those resembling acute inflammatory maladies—the pain may suddenly make its appearance some time after the exciting cause has ceased to be in action.

TREATMENT.

The most essential point is to place the painful muscle or muscles in the most restful position possible. In severe abdominal cases rest in bed, with morphine hypodermically or anodyne fomentations, is requisite. In less acute forms the patient may be able to continue his usual avocation if he is provided with a stout abdominal belt. All lowering measures should be avoided. In pectoral myalgia the arm on the same side as the painful muscle should be kept in a sling. When the serratus magnus or intercostals are affected, three or more strips of stout adhesive plaster, applied as in fractured ribs, give great relief. When the trapezius is involved at its origin with the occiput, the use of a high-backed chair is of great benefit. For the gastrocnemii in ambulatory patients nothing answers so well as Wharton Hood's method of strapping the leg, described in his *Treatment of Injuries by Friction and Movement.*

In weakly patients investigation must be made as to any existing cause of debility, such as anaemia, menorrhagia, leucorrhoea, oral sepsis, etc., and specific treatment with general tonics prescribed.

I am glad to see that a protest has been raised against the neglect of so instructive an author as Dr. Inman by Dr. H. Cameron Gillies in his *Theory and Practice of Counter-irritation*, where he says:

> If first class men produce first-class work only to lie buried in dusty heaps of tomes in out-of-the way corners of our museums, it is no wonder that medical progress has been so slow and uncertain. Dr. Inman is one whose contributions to the literature of practical medicine should not be allowed to lie forgotten and unknown.

Myalgia is, as a rule, found in two classes of patients—the robust, who have undergone unusually hard exertion, and the debilitated, in whom the condition has supervened during the course of their ordinary work.

A CLINIC of women's diseases, officered by medical women, has recently been opened in Berlin. The medical staff consists of Dr. Franziska and Dr. Agnes Hacker.

UNDER the will of the late Mrs. Alice Need, of Bishops Stortford, the following institutions benefit to the extent of the sums placed against their names: The Cancer Hospital, Brompton, £500; Earlswood Asylum for Idiots, £1,600; the Royal Hospital for Incurables, Putney, and the National Hospital for the Paralysed and Epileptic, £200 each; and the Free Home for the Dying, £100.

THE DANGERS AND EVIL EFFECTS OF INFANT BINDERS.*

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IT is interesting to note that those primitive methods of enveloping the infant's body in countless bands, swathes, and swaddling clothes which history reveals to us in the early writings, still continue, though in a varied fashion, even at the present time. It is not unusual to find three or even five separate binders firmly applied around abdomen and chest. The abdominal binder—of varying size—is often recommended to be of sufficient width to extend from the axilla to the hips. It is generally regarded as a necessary covering, for warmth and support; but warmth can be as well supplied by loose clothing, whilst support is not needed.

I am ready to admit that the abdominal binder may be a safeguard against rough handling, but this obviously is not a proper claim. The only possible justification, in my opinion, for the use of the abdominal band is its protection to the ligatured cord during the first two or three weeks of life, but it is not necessary even for this purpose.

The thoracic binder or chest binder, commonly termed the "swade," is applied around the chest close under the axilla by a number of turns, frequently over some undergarment. It happens often that after a few months the swade is discarded in favour of stays of various materials, shapes, and sizes. In addition to these two binders, one or more extra bands are frequently superadded. Finally, one must not overlook the similar constricting effect of long tapes or strings attached to garments and generally firmly tied round the chest or abdomen.

As the result of frequent and repeated examinations of the infant, both in private but more especially in hospital practice, I have been deeply impressed with the vast amount of harm and suffering caused by the discomfort, and the constriction or compression of either abdomen, thorax, or both, by any form of binding. Among the well-to-do, where intelligent supervision can be obtained, one may be fortunate enough to meet with a competent nurse or mother, who will appreciate the danger of compression and avoid it. It more often happens that even the trained nurse—or midwife—while desirous of avoiding undue pressure, yet fails to realize the small degree of force necessary seriously to constrict the abdomen and resilient chest walls.

But apart from such probabilities we have to consider the vast majority of the less experienced and ignorant, with whom there is a widespread and deeply rooted belief that binders are chiefly intended to serve as a support. As the result of this misconception they are fixed either tightly or with a degree of firmness sufficient to cause various injurious effects and conditions, which are, I believe, frequently overlooked or unrecognized.

The nature and extent of the injury or condition which may thus result from constriction and increased intra-abdominal and intrathoracic pressure will depend on:

1. The degree of constricting or binding force.
2. The extent of surface covered.
3. The time worn.
4. The health and power of resistance of the infant.

Having thus briefly touched upon the important technical and other points of interest, I will proceed to describe the various effects and conditions which may result from binder compression.

1. *Discomfort.*—In the first place the discomfort alone, even in cases where the binders are not very tightly fixed, may be such as to cause much restlessness, frequent crying, loss of sleep, which if long continued will obviously affect the health of the child. It is astonishing how often even the intelligent nurse or mother will overlook this small matter, and be puzzled to account for such irregularities in a healthy and strong child. When the constricting effect of binders is at all severe, the infant presents outward typical signs which may be at once recognized. The facial expression, a somewhat livid hue, dilated temporal veins especially noticeable when the child cries, restlessness, clenched fists—these and other points readily give the clue.

2. *Vomiting.*—This frequently results from undue constriction, especially when both thorax and abdomen have been covered either by one wide abdominal binder or two or more separate ones. This compression prevents probably that natural distension of the abdomen which regularly occurs after a good feed. The effect being often enhanced by some flatulent distension, the vomiting is obviously more of the nature of a regurgitation. I see many cases of this kind in which the nurse or mother, not recognizing the cause of the vomiting, assumes that it is the result of some stomach trouble, and proceeds to administer drugs, reduce the quantity or weaken the milk, or probably change the food to something unsuitable. The last state will then become worse than the first, and eventually the child may sink to a condition of serious debility and marasmus.

3. *Inguinal and Umbilical Hernia.*—Inguinal hernia is obviously most likely to result from an increase in both the intra-abdominal and intra-thoracic pressures from the tight application of either one wide binder, such as the abdominal or thoracic, or two or more separate binders enclosing both abdomen and thorax, the whole pressure of the abdominal contents being thus thrown on the inguinal region. It is reasonable to assume, however, that even where only one narrow abdominal or thoracic binder has been applied fairly tightly, the tendencies will be in the same direction. The extra strain caused by such influences as the difficulty of micturition from phimosis, the vigorous cries of the infant, or persistent cough, such as whooping-cough, must not be overlooked. As to the type of hernia which may be thus caused, I am conscious that there will be some divergence of opinion. It is a significant fact, according to my experience, that the so-called congenital inguinal hernia of infants rarely appears before the third week, generally later. I am inclined to the view that in the majority of cases an inguinal hernia in infants is acquired, either by the bowel being forced, with varying degrees of rapidity, through a narrow, partially-closed, though patent, processus vaginalis testis, or probably, in the case of older infants, the bowel is forced into a partially obliterated processus vaginalis. As to umbilical hernia, much the same mechanical conditions apply; but I would point out that, although the abdominal binder is often applied with the intention partly of preventing a hernia, it generally happens that it slips upwards, uncovering the umbilicus, and thereby tending to produce the very evil which it was intended to prevent.

4. *Prolapsus Ani.*—I should mention also the causation of haemorrhoidal distension of veins, and even prolapsus ani—as the result of long-continued binding—in older infants.

5. *Thoracic Deformities.*—The thoracic binder, or swathe, when applied tightly and firmly and continuously, may arrest the growth and development of the chest considerably. Amongst the poorer classes, where extreme cases are so often seen, it may be often observed that the whole chest is uniformly contracted with corresponding protrusion of lower margin of thorax and the whole of abdomen. Happily, such a contracted chest may subsequently expand to normal proportions, but long-continued pressure may produce a permanent deformity.

6. *Thoracic Constriction in Pulmonary Diseases.*—I will now call attention to what is obviously an iniquitous and yet a common practice: I refer to the constriction of the chest, or chest and abdomen, by binders in cases of pulmonary disease. Cases of this kind frequently present themselves in the out patient room, where, for instance, a child some months old may be brought suffering from pneumonia with two or three binders fixed round the chest and abdomen, hampering respiratory movements, impeding free entry of air and oxygenation, and obviously hurrying the case to a fatal issue.

7. *Cerebral Circulation.*—I believe, too, that in cases of severe constriction the cerebral circulation may be so disturbed as to give rise to convulsive seizures and probably more severe consequences.

8. *Overlying.*—Associated with this disturbing effect of binder constriction on the circulation and respiration there is a matter which has seemed to me worthy of serious consideration—I refer to the asphyxia which is the cause of death in cases of overlying. There is no question that amongst the very poor it is quite a common, if not a usual custom, to put the child to bed with its binders on, and one may conclude that, as a rule, they will be fixed on fairly

* Read before the Nottingham Medico-Chirurgical Society, April 15th, 1908.

tightly; the dangers of asphyxia will be greatly increased by such a constricting effect, and there are good grounds for believing that they take an important share in bringing about the fatal result. I would commend this point for consideration and further evidence.

This concludes my list, though it must not be taken to comprise all the conditions which may result from binding. I venture to hope, however, sufficient evidence has been given to justify a strong condemnation of the common custom.

THE INK POLYGRAPH.

By J. MACKENZIE, M.D.,
LONDON, W.

I EXHIBITED at the meeting of the Medical Section of the British Medical Association in Toronto in 1906 a method of recording the movements of the circulation by means of an ink polygraph. I have not hitherto published a description of this method as there has been some difficulty in getting the instrument made, and the maker until lately has not been able to meet the demand for the instrument.

A long experience in taking graphic records of the movements of the circulation impressed me with the fact that there were many features in these movements which it was impossible to investigate satisfactorily by the methods in vogue. Changes in the heart's contraction that occurred at infrequent intervals, or in great variety, were apt to be overlooked, while the relationship of the respiration has never been satisfactorily worked out. There was a necessity, therefore, to devise a method by which tracings could be taken over a period of time of considerable duration. I conceived the idea that if a roll of paper could be unwound and levers could be made to inscribe the movements in ink, the end I had in view would be achieved.

I had considerable difficulties to overcome, but found a skilled helper in Mr. Shaw, who not only comprehended and appreciated my ideas, but constructed an instrument that carried them out. The case, A, in the accompanying figure contains the clockwork for the roller which unwinds the roll of paper, D, and also the separate clockwork which moves the time-marking pen; B, B are the two tambours, and F, F their levers, one of which is represented raised, while the pen of the other is resting on the paper. The writing pens are narrow, grooved wires, one end fixed to the bottom of a small cistern at the free extremity of the lever. The other end of the grooved wire is adjusted barely to touch the paper. The ink is put into the tiny cistern, and it flows along the grooves to the pen-point by capillary attraction. If the pens are kept clean and the ink is free from dust, they serve their purpose most admirably and are ever ready for use.

As the radial pulse is the most serviceable of standards, a special method is employed to record it. A splint, C, somewhat like that belonging to a Jacquet sphygmograph, is fastened to the wrist in such a manner that the pad of the steel spring falls on the radial artery and is pressed down by an eccentric wheel, 18, until a suitable movement is transmitted to the spring by the artery; then the broad tambour, C, is fitted on to the splint so that the knob, 12, falls on the moving spring. This wrist tambour is connected to the tambour, B, by india-rubber tubing, 22, 22, and the movements of the radial pulse are recorded by the lever, F. The shallow cup (receiver), E, is placed on the pulsation which it is desired to record, and the movement is conveyed to the lever, F, of the other tambour. In this way simultaneous with the radial pulse a record can be obtained of the apex-beat, carotid, jugular, or other pulses.

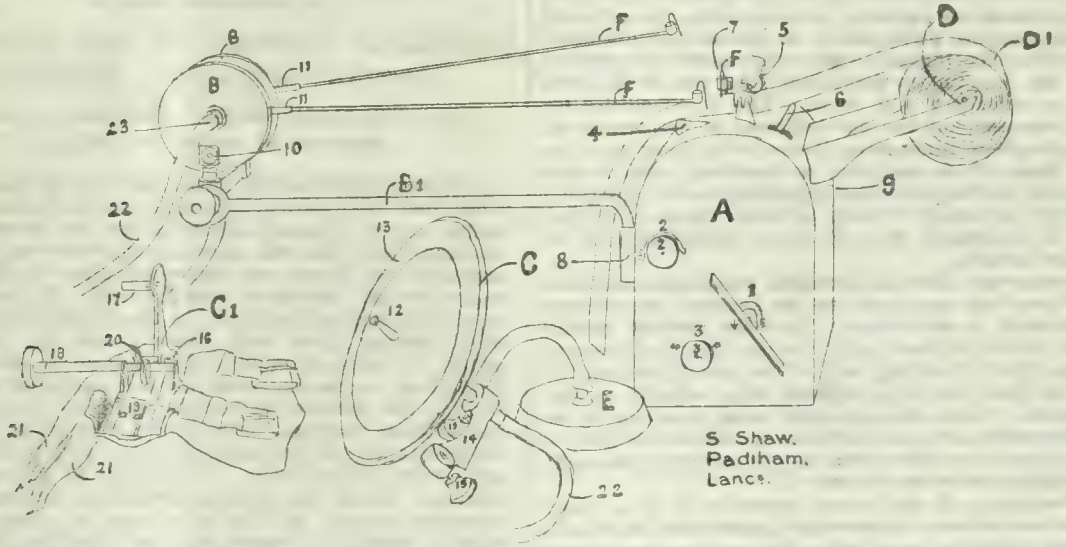
To record the respiratory movements a bag can be substituted for the receiver, E.

By turning the screw, 3, the rate at which the paper passes can be quickened or slowed at will. This is of the greatest use, for it often happens that in quickly succeeding events a wider interval may be required, whereas in recording respiratory movements a slow rate is best. As the time-marker registers one-fifth of a second and is driven by a separate clockwork, the rate of the recorded movements can always be ascertained with absolute accuracy.

It has been suggested that another tambour should be added to record three movements, and I have tried this, but I have practically discarded it, as, though it might be of use occasionally, it would complicate the apparatus unnecessarily. When making observations single-handed the two tambours are quite sufficient to occupy attention. With a little practice this apparatus can be used with the greatest facility. In the course of a few minutes the different movements can be recorded with the patient sitting up or in the recumbent position.

When the tambour is strapped to the wrist to take the radial pulse, one hand is always free to start the machine and to replenish the ink or regulate the rate, the other hand holding the receiver over the movement to be recorded.

The instrument is made by Mr. S. Shaw, instrument maker, Padiham, Lancashire.



UNDER the will of the late Mr. Richard Henry Wood, of Sidmouth, and formerly of Rugby, the West of England Eye Infirmary, the Devon and Exeter Hospital, and the Hospital of St. Cross, Rugby, each receives a sum of £1,000.

A BOOKLET can now be obtained from the agencies of the Royal Mail Steam Packet Company giving an interesting account of South America from a tourist's point of view. It includes a list of possible trips and of the expenses out and home. It appears to be readily feasible to visit Vigo, Lisbon, Madeira, Pernambuco, Bahia, and Rio de Janeiro in five weeks at an expense of £53. A visit to Santos and Buenos Aires takes somewhat longer. From both Buenos Aires and Rio de Janeiro inland expeditions can be made, the passenger re-embarking at a fresh port.

A PLEA FOR THE HABITUAL PERFORMANCE OF AUTOPSIES IN GENERAL PRACTICE.*

BY J. TREGELLES FOX, M.R.C.S., ETC.,
LEEDS.

[AFTER forecasting the ideal of scientific efficiency, professional co-operation, and public enlightenment which, *inter alia*, should render autopsies a matter of course, the subject was discussed as follows from the general practitioner's point of view:]

The great majority of us must surely often feel that as members of the scientific profession of medicine we at present often do let slip, from one cause or another, valuable and perhaps unique opportunities of adding to the knowledge of important facts upon which our science and art is built up. How frequently the practical difficulties—the sentimental opposition of the patients' relations, or our own lack of time, energy, or technical skill—condone us in abstaining from a task probably thankless and unpaid for! But let the general practitioners as a class realize that unless we march forward in efficiency, with the progress of knowledge we are doomed to practical extinction. Between the consultants and specialists on the one hand, and the prescribing druggist and amateur quack on the other, there will soon be little scope for us unless we maintain our position by thorough work, up to date of advancing science, and not a whit behind the best intelligence of an enlightened public, on whose patronage we subsist. I do not go so far as to say that the frequent performance of *post-mortem* examinations will at once ingratiate us in the minds of a grateful public, but I maintain that in the long run all that promotes our efficiency will do so. The new facilities for clinical research, and the special forms of new treatment may be helps—or hindrances if the public have learnt to expect them of us, and find us wanting. And in like manner the utilization of our opportunities for observing the morbid anatomy of many common diseases and the results of treatment, will be better appreciated by an intelligent public.

Some may say: There is abundant pathological material in our hospitals, and such as the general practitioner could furnish is not missed. In reply I would merely instance three diseases which he has the most frequent opportunity of observing, and of the morbid anatomy of which he could supply specimens very valuable to the pathologist. Others will no doubt occur to us, for do we not frequently note in textbooks a lamentable lack of trustworthy data of the actual lesions and their causes in studying the commoner diseases?

1. *Hemiplegia*.—If the injured brains in all these cases could be handed over to the skilled neurologist after death—whether occurring soon after the vascular breakdown, as in most hospital cases that reach the *post-mortem* room, or after months or years—together with notes of the symptoms, how much useful knowledge might be collected anent the localization of function, and the processes of repair in the brain! At the same time the examination of the vessels, hearts, kidneys, livers, etc., that served these brains might shed light on prophylaxis against these terrible accidents.

2. *Cancer*.—Who knows but such specimens as the rank and file of us could contribute might materially hasten the solution of this problem?

3. *Tuberculosis*.—Even the general public, so apathetic in most medical matters, are now roused to take part in the battle against this other great scourge. Might not light be thrown upon the relative success or failure of various systems of treatment if there were more general and accurate record of *quiescent*, *cured*, and *latent* tuberculous lesions in various organs—for instance, where death takes place from other causes and, perhaps, no suspicion of tubercle was felt. I hope I have proved the desirability of progress in the direction spoken of; the practical point is "ways and means." What methods can be set on foot, for instance, by our Association, to forward this work? I venture to suggest:

(*a*) A recommendation might be adopted and sent down to all our rank and file commending the practice.

(*b*) A grant of money might be made to provide some payment for the making of autopsies, and reporting records of the same under certain conditions. This might be more effective than the mere expression of a pious opinion.

(*c*) An organization for the collation of records and promotion of the work might be set on foot, something like that for the collective investigation of disease, perhaps.

(*d*) Co-operation and division of labour should be secured as far as possible. The help of specialists—pathologists, histologists and bacteriologists, should be enlisted. In urban centres a number of practitioners and hospital men might arrange to divide the chief fields of pathology between them. Thus, A might be observing the lesions of the alimentary canal, B. of the brain, C. cancer, etc.

Backed by such an organization, it should be possible for individual practitioners to secure many very valuable specimens of morbid anatomy and many useful pathological observations, and also to get them utilized by our scientific leaders instead of lying buried in their case records. The disagreeable duty would not be so hopeless to undertake, with prospect of practical fruit, and of some sort of a fee; whilst it would no longer cause any unpleasantness with the patient's relations to suggest it when the onus was shared by the whole profession; and I think we should not so frequently meet with a blank refusal, for we know that when the coroner orders an autopsy little is heard of the objection of the friends, and no animus attaches to the doctor who performs the duty.

* Abridged from a paper read at the annual meeting of the Yorkshire Branch of the British Medical Association at Bradford, 1908.

TRAUMATIC RUPTURE OF THE LARGE INTESTINE: OPERATION: RECOVERY.

BY WILLIAM HENRY BATTLE, F.R.C.S.,
SURGEON TO ST. THOMAS'S HOSPITAL, ETC.

TRAUMATIC rupture of the large intestine is such a rare injury that there were only 5 cases recorded in the surgical reports of St. Thomas's Hospital for the twenty years which preceded the date on which the following case was admitted. Of these, two recovered after operation, in both of which the lesion was found on the right side, once in the caecum, and once in the ascending colon, the bowel having given way directly into the peritoneal cavity. In a case of rupture of the transverse colon due to the kick of a horse, operation was not successful in saving life, for the patient died from collapse. Two patients died without operation from septic peritonitis; in these the lesions were in the sigmoid flexure and in the transverse colon respectively. Altogether 30 patients were admitted during the period mentioned, suffering from traumatic rupture of the intestines; of these, 5 died without operation, 6 recovered after operation, whilst in some others success was almost attained, life being considerably prolonged. The situation of the lesion was as follows: Duodenum 4, jejunum 10, ileum 11, large intestine 5.

A. L., a married woman, aged 33, was admitted on July 14th, 1907, at 12.15 a.m., having been run over by a horsed omnibus shortly before. It was stated that a wheel had passed over the abdomen at the level of the lower ribs, having struck the left side first.

Condition on Admission.

She was in a collapsed state with a feeble pulse, and complained of abdominal pain on the left side, where there was considerable tenderness. The urine was normal, and did not contain blood. She had not vomited. During the night she rallied from the condition of extreme shock, but complained greatly of pain, and vomited once. At 10 a.m. much of the shock had passed off, and the patient was lying somewhat propped up in bed, with quickened respiration (32) and pulse (100). She was complaining of pain on the left side of the abdomen, over the lower ribs, and the abdomen did not move well on respiration. There was rigidity, especially marked on the left side, with extensive tenderness towards the pelvis from the site of injury, following the line of the descending colon. She complained of some thirst. Urine had been passed but nothing had come from the bowel. Temperature 98.6°.

The diagnosis of rupture of the large bowel with a commencing inflammation along the course of the descending colon was made, and operation performed as speedily as possible.

Operation.

A longitudinal incision was made through the outer part of the rectus sheath on the left side, and the peritoneum

opened. At the first inspection there was little visible beyond a scratched appearance of the peritoneum over the situation of the splenic flexure. A bruised condition of the descending colon below this was apparent, but it was not extensive, and no abrasion or tear of the peritoneum was visible over it, nor was there any alteration in the consistency of the part. Some emphysema could be felt, however, in the descending mesocolon, and before this it had been found that a mounted sponge when passed into the splenic region, became soaked with dark fluid which was of small quantity but of a distinctly faecal odour. Gentle compression of the descending colon with the fingers whilst they were moved upwards forced some bubbles of gas and a little faecal fluid through the minute lacerations which had previously been noted. There was no doubt that a rupture of the gut behind the peritoneum was present with a communication directly into the peritoneum through these lacerations. A second incision was made backwards through the abdominal wall at a right angle to the primary cut just below the ribs, and further incision of the peritoneum to the outer side of the flexure gave access to a space containing soft faeces, which had escaped from a hole in the bowel the size of a penny at or below the splenic flexure of the colon: the space containing the extravasated faecal matter extended upwards into the retroperitoneal tissue behind the spleen and could hardly be cleansed, for the faecal matter was ground into the cellular tissue. The opening in the bowel was closed with interrupted silk sutures which did not enter the lumen, the torn edges being inverted. The peritoneum which, had been packed off during the treatment of the bowel, was now cleansed, and some ounces of blood-stained offensive fluid removed from the pelvis. The wound was partly closed, the peritoneum being sutured off from the parts affected by the injury, a tube was passed into the splenic region, a plug placed over the sutured portion of bowel and brought out at the posterior extremity of the transverse incision. The operation was well borne.

After-History.

On the third day the evening temperature rose to 101.2°, and there was a thin discharge from the wound of a faecal smell and of a brown colour.

As the temperature was still above normal—100° to 101°—and the discharge offensive, an injection of anticoli serum 25 c.cm. was given into the axilla on the 23rd.

On the 25th the stitches were removed, and the anterior part of the wound dressed with collodion and gauze. There was a definite faecal discharge. The amount of pus in proportion to the faecal matter appeared to have increased, and although the result of the serum injection had apparently lowered the temperature for a day still by the evening of the 26th it had reached 101.5°, and 25 c.cm. of polyvalent serum was given. Apparently as a result of this the temperature fell to 98.8°, rising to 100° on the following evening, when the dose was repeated. The temperature after this became normal, gradually falling, whilst the patient improved considerably in her general health, and the wound cleaned in a remarkable manner. On August 19th there was no longer any faecal discharge from the wound, which had quite closed on August 31st.

She left the hospital well on September 6th.

The chief symptoms on which the diagnosis of a rupture of the large intestine following injury are based are, as a rule, the same as those which accompany a similar injury to the small intestine. It is true that emphysema of the abdominal wall is occasionally met with both in rupture of the large bowel and in rupture of some parts of the duodenum. This, however, is not a symptom on which any reliance can be placed, and arises mostly when the rupture is behind the peritoneum and not into the cavity of the peritoneum. In more than one instance the mesentery of the colon has been felt at the operation to contain some gas; but our object should be to operate before this can be dispersed in the cellular tissue or felt outside. The excessive tenderness along the line of the descending colon was regarded as an important sign, and from the description of the operation there can be no doubt that it was an indication of the irritating character and passage of the fluid which was removed from the pelvis. The principle of the operation had to be somewhat changed from the usual one, for we could not depend on primary union of the contused wound in the muscular wall of the bowel, and therefore it was necessary to provide as far as possible that the faecal matter should escape externally if the stitches gave even to a limited extent. The effect of the antitoxins is worthy of attention.

THE Swedish National League against Tuberculosis raised £12,500 during the year 1905-6 by the sale of badges of benevolence.

THE late Mr. Francis Abel Smith, of Ashby-de-la-Zouch, whose will has now been proved, left £1,000 to the Nottingham General Hospital.

PERFORATED GASTRIC ULCER: OPERATION: RECOVERY.

BY R. MANWARING-WHITE, M.D.,

NORTHWICH.

THE following case appears worthy of record, since it presents several points of interest with regard to diagnosis and the treatment adopted:

History.

A woman, aged 40, unmarried, had for some years suffered occasionally from indigestion, but had never shown symptoms suggestive of gastric ulcer.

On September 16th, 1907, she complained of slight indigestion, which passed off. On September 21st, at 8 p.m., she had supper, consisting of meat and potato pie; at 1.30 a.m. she complained of acute abdominal pain situated around the umbilicus. When seen at 6 a.m. she was still in acute pain, referred to the umbilicus and the left iliac fossa; there was slight pain on palpation in the epigastrium, but it was more severe in the left iliac region. The liver dullness was present, and the left iliac fossa appeared less resonant than the rest of the abdomen. With combined auscultation and percussion the stomach appeared normal. She appeared to be decidedly ill, and the facies suggested acute abdominal trouble. She was given liq. morph. hydrochl., ♏ x, every three hours, and was seen again at 6 p.m. Evidence of general peritonitis was then present, and there was considerable more resistance in the right iliac fossa than in other regions of the abdomen; that region was also dull on percussion.

Operation.

At 8.30 p.m., under chloroform, the abdomen was opened by a mesial incision, with its centre at the umbilicus. There was a quantity of serum present, which escaped on opening the peritoneum; the appendix, tubes, and ovaries were all normal. The incision was extended upwards; large flakes of lymph were present over the stomach, and a perforated gastric ulcer was discovered. The ulcer was situated at the cardiac end of the stomach on the anterior surface of the lesser curvature; it extended up to the commencement of the oesophagus and was about 2½ in. in diameter, the perforation being about the size of a pea. The parts were carefully swabbed and attempts were made to close the ulcer, but each time the sutures tore through. Looping up the healthy stomach over the ulcer or excision seemed to be impossible on account of its large size, in consequence the great omentum was folded up and stitched rather inadequately over the ulcer. A large drainage tube was inserted and the abdominal wall hastily sutured owing to threatened collapse of the patient.

Progress.

Olive oil, a pint, followed later by a turpentine enema were given each day by the rectum, with no result, until September 25th, when the bowels moved well. From that date nutrient enemas were given every six hours. On October 1st she was allowed one teaspoonful of water by the mouth. On October 4th she had meat juice by the mouth, and the quantity was gradually increased. On October 10th she was taking beef tea, ℥ij, every six hours, and on October 16th she was given milk, ℥ij, with barley water, ℥ij, every four hours, and Benger's food; from then onwards the food was gradually increased until on November 14th she commenced ordinary diet; the wound had then quite healed.

The case presents the following interesting features:

1. *The movable dullness on percussion* noted at one time in the left iliac fossa, and at another time in the right iliac fossa, making the diagnosis difficult, but Sargeant has called attention to this point in cases of perforation of the stomach.

2. *The size and situation of the ulcer.*—According to Osler the largest ulcer recorded is that reported by Peabody, which measured 19 by 10 cm.

3. *Closure of the perforation.*—The imitation of nature in closing the perforation by means of an omental graft has been previously recorded by H. S. Clogg in the BRITISH MEDICAL JOURNAL, 1905, and in cases similar to the above seems to be the most rational method.

4. *After-treatment.*—During the first week, when no food was given by the mouth, the patient exhibited the greatest endurance, and at the end of that time she stated that if food was injurious to her she could manage quite well without it for a few days.

THE TREATMENT OF FRACTURES.

BY H. TYRRELL GRAY, M.A., M.C.CANTAB,
RESIDENT MEDICAL SUPERINTENDENT, CHILDREN'S HOSPITAL, GREAT ORMOND STREET, LONDON.

IN connexion with recent discussions on this subject, may I be permitted to state briefly the results of a considerable hospital experience of some of the commoner varieties of this class of injury, treated both by conservative and operative measures?

Attempts at reduction have habitually been made under general anaesthesia at the earliest moment possible.

In the femur, fractures of the shaft have been transverse, short oblique, or torsion (spiral) fractures. The result, by extension, etc., has been nearer perfection the more the fracture approached the transverse; in the latter the displacement is seldom marked, and the result consequently perfect in some of them. In the second class I have been astonished at the difficulty and frequent impossibility of reducing (and more so of maintaining reduction of) the longitudinal displacement by extension; this did not surprise me, however, after experiencing the extreme difficulties of doing so by open operation combined with extension in many cases with apparently little shortening; as a consequence a useful, though not perfect, limb with a varying amount of shortening has usually resulted. The large majority of these fractures have been in children.

With spiral fractures my own experiences and those of others have led me to the conclusion that never, by other than operative measures, can the fragments be placed or maintained in even approximately good position. Persistence in conservative methods has here usually led to shortening of about 1 in., often more, eversion, deformity, and pain in varying degrees for as long as I have been able to watch the patients (over several months) involving frequently in the poor the necessity for seeking a less active occupation. In one or two cases the patient has perhaps been able to hobble with a stick or crutch at the end of three or four months, and these distressing failures are not an uncommon sight in hospital practice, and possibly frequent in infirmaries. We have only to contrast a confident expectation, warranted by experience, of a perfect restoration of function with no shortening at all in ten weeks at the outside by operative measures; I will only mention a case of a spiral fracture with nearly 3 in. shortening after extension, who, after operation, was running upstairs under seven weeks later with no limp.

Little need be said about conservative treatment in Pott's fracture, for the deplorable stiffness, deformity, and inability to resume active life, which result at least for several months, if not permanently, in so many cases, have led most surgeons to consider operation the method of choice in these injuries. In fractures of the bones of the leg, if transverse, lateral displacement can sometimes be reduced by manipulation; rarely is this so with spiral fractures, especially if shortening be at all marked. To summarize, convalescence in cases operated on has taken about half the time in fractures of the femur, and in fractures of tibia and fibula about two thirds the time necessary for an inferior functional result in those treated conservatively; while aching, pain, and stiffness marked features in the convalescence of the latter class of case, is conspicuously absent throughout the whole treatment in cases operated on.

Among fractures of the humerus I need only mention the rotatory, angular, and longitudinal displacements, delayed union, and paralysis due to interference with the functions of the brachial plexus and musculo-spiral nerve, which sometimes have resulted from conservative treatment (not necessarily from neglect of treatment), and compare their imperfect or delayed functional recovery and painful convalescence, extending into months or years, with the moral certainty of complete functional recovery in six to eight weeks when operated on at once. Secondary operations, necessitated by some of the above failures, have demonstrated clearly to me the greatly increased difficulties involved in addition to a further retarded period of convalescence. The prevention of these failures is always vastly preferable to the cure. Finally, in separation of the lower epiphysis of the humerus, forcible flexion has certainly succeeded in a few cases, and those not the worst; but, with these few exceptions, the only results which could justify our taking a pride in the patients have been attained by levering the lower fragment into position, without violence, through a posterior incision, apposition being maintained by full flexion. By this method less renewed haemorrhage and swelling is caused, and the subsequent joint movements, taking all cases, is infinitely better.

In conclusion, the risks of operation are summed up in sepsis only. I have never seen suppuration result from operative interference in fractures, while as to the disadvantages of leaving plates, screws, wires, etc., in the bone, I have come across no single instance in which any subsequent trouble has at any time necessitated the subsequent removal of them. Such an operation, if necessary, would, in any case, be the simplest procedure.

THE SCIENCE COMMITTEE
OF THE
British Medical Association.

REPORT CV.

AN INVESTIGATION ON THE REGENERATION OF NERVES WITH REGARD TO SURGICAL TREATMENT OF CERTAIN PARALYSES.

BY BASIL KILVINGTON, M.S., M.D.MELB.
(From the Physiological Laboratory, Melbourne University.)

PART IV.*

IN this article the results of some experiments on the different methods of bridging over an interval between the central and peripheral ends of a nerve will be given. To this procedure the terms "nerve gapping" and "nerve bridging" have been appropriately given. The subject has received a good deal of attention, and has been occasionally practised in human surgery. I am not aware that any systematic experiments have been performed, and I do not know that any one method is used by surgeons in preference to others. The clinical experience of any single individual is too limited for any opinion to be given on the matter. Gluck[1] was one of the first to successfully perform nerve bridging. He placed a piece of a mouse's sciatic into a gap in the sciatic of a guinea-pig. Phillipeaux and Vulpian[2] successfully planted a piece of the lingual nerve of a dog into the hypoglossal. Ballance and Purves Stewart[3] performed nerve gapping in several cases, but Sherren has rightly objected to their conclusions on the ground of the short interval filled in. The nerve length used by them was never more than ½ inch. Albert[4] appears to have been first to perform nerve bridging in the human subject. He used a piece of nerve from an amputated leg, and the result was not a success. Mayo Robson[5] was the first to obtain a good result. He excised a neuroma from the median, and into the 2½-in. gap so formed he inserted a piece of the posterior tibial from an amputated leg. The various methods of gapping have been divided by Merzbacher[6] into three groups:

I. Auto-transplantation, where a nerve from the same animal is used.
II. Homo-transplantation, where a nerve from another animal of the same species is used.
III. Hetero-transplantation, where a piece of nerve from an animal of another species is used.

This classification is not quite complete as it stands, as it does not include the use of tissue other than nerves, such as strands of catgut. It can be made complete, however, by dividing each group into transplantation with nervous and non-nervous tissue. Sherren[7] has analysed the cases reported so far of nerve bridging. Naturally very few instances of auto-transplantation have been performed, and only two are recorded. One of these was reported too early for any recovery to have taken place, and in the other, in which a 3-in. gap in the musculo-spiral was filled in by a strand of radial, a perfect recovery followed. In the homo-transplantation group six instances are known in which pieces of nerve from amputated

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legs were made use of. Only one of these was a success, but from various reasons—suppuration, the patient passing out of sight—four of the others do not admit of any conclusions being drawn. The sixth case, where 2½ in. of median was filled in by a piece of median from an amputated leg, was a failure seventeen months after.

Twenty-two cases of hetero-transplantation are known, and of these 16 are suitably reported for analysis. Out of these, 6 may be described as a success. Thus, of the auto-transplantation 100 per cent., of the homo-transplantation 50 per cent., and of the hetero-transplantation 37 per cent. were successful. It is to be noted that nerve tissue was invariably used to form the bridge, and it is unnecessary to draw attention to the fact that no great weight can be placed on the conclusions drawn from the few cases of the first and second group. The opinion formed on them is decidedly in favour of using a human nerve preferably from the same subject.

The interval to be bridged over doubtless plays an important part in the recovery of function. Sherren states that an interval of 3 in. has been successfully reunited. It is probable that the age of the animal would have an influence, and other factors, such as the particular nerve bridged over, the health of the animal, time allowed to elapse, etc. would have to be considered. It is certain that the results obtained from nerve suture are better in children than in adults. I have not attempted to solve the problem; in fact, the longest interval I have ever excised is a little over 2 in. Indeed, it does not seem capable of being accurately decided on for man, because it is very questionable if we can apply the result obtained on a certain nerve in a dog to a different or even a corresponding nerve of a human being. Before commencing any experiments on this question, it is necessary to find out an interval across which nerve regeneration cannot take place without aid. Münzer and Fischer[3] investigated this question recently. They excised a piece of the sciatic nerve ⅔ in. long in puppies. The raw central and peripheral ends were fixed in position to the biceps muscle by stitches, to prevent the interval being increased by retraction of the nerves. After a time the nerves were tested electrically and examined microscopically. In 4 out of 11 cases there was absolute sensory and motor paralysis. In 3 a very feeble recovery occurred, and in 4, or about 40 per cent. of the cases, complete regeneration took place.

Forsmann's[6] experiments seem inconclusive on this account, as he only excised 7 mm. of nerve. His opinion, based on microscopic examination, is that auto-transplantation and homo-transplantation are preferable to hetero-transplantation. In the last case it did not seem to matter whether the nerve from an animal of another species was used, or non-absorbable material such as cotton thread. In my own experiments I usually excised a piece just over 1 in. in length, and very occasionally only ⅔ in. In all the cases of nerve anastomosis previously reported, I examined both microscopically and by dissection for fibres growing across the gap of ⅔ in. to 1 in. with only negative results. Recently, however, I excised about ⅔ in. of the internal popliteal, where it is in the sciatic trunk, leaving the external popliteal intact. The sheath of the sciatic nerve thus held the cut ends of the internal popliteal and prevented any retraction. On examining and stimulating after an interval of 134 days, it was found a strand had formed across the gap. This was thinner than the internal popliteal itself, but the faradic current showed that the regeneration across the gap was fairly good, though not at all perfect. On the other side of the same animal an interval of 1½ in. in the internal popliteal was bridged over with catgut, and the result was almost perfect. This case is unique in my experience, and seems to show that exceptionally power of regeneration across an interval is very vigorous. In the vast majority of cases I believe no nerve fibre can regenerate across an interval of ⅔ in. without some assistance in the form of a nerve bridge. I have endeavoured to avoid any possible error creeping in from such an exceptional case, by performing a series of experiments in each group, and working out the percentage of recoveries and failures.

HETERO-TRANSPLANTATION.

Under this are two subdivisions according as (*a*) nervous or (*b*) non-nervous tissue used.

Non-nervous Tissue.

As an example of non-nervous tissue, catgut which is absorbable was taken, as likely to prove as efficient as any.

Experiment 1.—A piece of nerve, ⅔ in. in length, was excised from the left internal popliteal, the interval being bridged over with four strands of catgut. After 134 days the condition was as follows: The central end of the internal popliteal ended in a bulb which tapered off into the bridge. This was thin and ribbon like, and much darker in colour than healthy nerve. It was slightly adherent to the adjacent external popliteal and also to the surrounding tissues, especially where the nerve joined the bridge at either end. No bulb was seen where the bridge joined the distal nerve. The nerve distal to the bridge gave a sensory response even when the internal popliteal central to the bridge was cut through. This must have been through "wound fibres." With regard to movement, electric stimulation of the internal popliteal distal to the bridge needed to be stronger than on the normal external popliteal to elicit a response. When applied to the internal popliteal central to the bridge it had to be much stronger still. Some of the results of stimulating distal internal popliteal then was partly due to "wound fibres." Result poor.

Experiment 2.—One and a half inches of the right internal popliteal were excised and the gap bridged over by four strands of catgut. After 134 days the bridge was found to be thinner and darker than the rest of the nerve, but not very adherent to the surrounding tissue. Stimulation of the internal popliteal central to the bridge showed the result practically perfect, as the minimum of current causing a contraction by the healthy external popliteal also did so with the internal popliteal. Result perfect.

Experiment 3.—One inch of internal popliteal on the left side was excised, and the gap bridged by four strands of catgut. After 130 days the bridge was a ribbon-like strand, adherent all its length to the hamstring muscles. Electric stimulation applied central to the bridge resulted in vigorous muscular contraction, though not with the minimum current effective on external popliteal. Result fairly good.

Experiment 4.—One inch of internal popliteal was excised in the right hind limb, and the gap bridged over with four strands of catgut. After 129 days the bridge was found adherent to the surrounding tissues in its whole extent. Stimulation of internal popliteal central to the bridge gave vigorous muscular response, but the minimum effective current in healthy external popliteal had no effect. Result fairly good.

In all the four cases, the catgut bridge, which varied from ⅔ in. to 1½ in., was of considerable use. The response to electrical stimulation was in one case perfect, in two fairly good, and in the other poor. A characteristic of this group was poor definition of the bridge from the surrounding tissues, as dissection of its whole length was generally necessary to free it.

Under hetero-transplantation also is to be included cases where a gap in the nerve of one species is filled in by means of some living tissue (not nervous) taken directly from an animal of another species. This is of no practical importance, and I have performed no experiments bearing on it. If any tissue of the lower animals were used for a human subject nervous tissue would certainly be employed. It is not possible to say, however, that a piece of nerve would be of more service than a strip of fibrous or muscle tissue without trying it on several animals.

With Nerves.

In two cases a piece of a sciatic nerve of a rabbit was used to bridge an interval in the ulnar of a dog. The ulnar nerve was exposed, and then a rabbit was killed by dislocating its neck. It was rapidly skinned and the sciatic nerve taken out, and at once sutured in position. In both cases the wounds healed perfectly.

Experiment 5.—One and a half inches were excised on the right side. After 86 days the following conditions were found:—The central end of the ulnar ended in a bulb, which was continuous with a firm nerve cord—the bridge. This joined with the distal part of the nerve, which was flabby though well defined. The bridge was a fairly distinct structure, more so than that resulting from catgut, but it had not the shiny appearance of a healthy nerve, and some dissection was necessary to isolate it. Stimulation of the ulnar distal to the bridge caused the feeble movement of the toes and paw, and a sensory response. Stimulation of the central end above the graft caused very feeble movement of the paw and toes, which was barely noticeable. Evidently most of the regenerated fibres in the distal end of the ulnar were "wound fibres"—that is, fibres which have grown in at the cut surfaces from small nerves which have been divided in the surrounding tissues. Result very poor.

Experiment 6.—One inch of the ulnar was bridged over by rabbit's sciatic. After 143 days the result was very slightly better, but still very unsatisfactory. However, it had played a small part in aiding regeneration. The naked-eye appearance

was very similar to the last case, and the bridge was not shiny or so well defined as the normal nerve. Result poor.

Experiments 7 and 8.—In these a piece of cat's nerve was used to bridge across a gap of 1 in. in a dog's internal popliteal. The same care was taken to ensure the nerve being alive at the time it was transferred as in the last experiment. The results were taken at the end of 130 days, and were fairly satisfactory as regards electrical stimulation. Though some little dissection had to be done to free it, the bridge was a very definite and mostly smooth structure. The intact external popliteal was slightly adherent to but not incorporated with it. Results fairly good.

In these experiments with nerves, the length of the bridge was 1 to 1½ in.; the electrical results were very poor in one, poor in another, and fairly good in the other two.

The bridge was a fairly definite structure, and not very adherent to surrounding tissues. It compared very favourably in this respect with catgut.

HOMO-TRANSPLANTATION.

With Nerve.

In this series I have four cases where a nerve from one dog was used to fill up a gap in that of another dog.

Experiments 9, 10, 11, and 12 were carried out on two dogs. About 1 in. of the ulnar nerve was excised on each side. The removed lengths of nerve from one dog were sutured into the gap made in the ulnar nerve of the other, and vice versa. The dogs were operated upon at the same time, and the excised nerves were at once transferred from one animal to the other. Healing of the wounds occurred by first intention. In Experiment 9 the following results were found after 115 days. On the right side the transplanted piece of nerve was flabby and not firm to the touch, but was quite distinct from, and not adherent to, the surrounding structures. At the upper end of the bridge there was a distinct bulb, and at the lower end a very small one, where the bridge joined with the central and distal end of the animal's own ulnar. The whole nerve trunk was isolated, and stimulation of the ulnar central to the bridge gave vigorous flexion of the paw. The result was very fair when compared with the adjacent and untouched median. On the left side (Experiment 10) the transplanted piece was very flabby and almost ribbon like. It was adherent to the surrounding tissues, especially the veins, though it was quite different from the irregular scar-like strand seen after the use of catgut. Like the right side, there was a large upper and a small lower bulb. Stimulation applied to the transplanted piece gave no muscular response whatever. Stimulation of the distal end of the animal's own ulnar gave rather feeble ulnar flexion of the paw, evidently due to wound fibres growing in at the lower place of suture, and not to any fibre growing down the graft. In the other dog (Experiments 11 and 12) 134 days were allowed to elapse before stimulating. On both sides the conditions found were very similar. The transplanted grafts were easily recognizable and were adherent to the branches of the basilic vein, which had to be divided to isolate them. The grafts were well-defined strands, though they had not the shiny appearance of the normal nerve. Electrical stimulation was on each side compared with the intact median; the minimum strength of current causing contraction by the median also did so when applied to the ulnar distal to the bridge. A slightly stronger current was necessary if applied central to the bridge. The explanation of this is in wound fibres growing down the distal end of the ulnar.

In the four experiments performed the bridge measured 1 in. in each case. The response to faradism was good in three cases and an absolute failure in one. The bridge itself had not the firm feel of healthy nerve, and was at times fixed to other tissues, but not to the same extent as in the case of catgut.

With Other Tissue.

The bridging of an interval in the nerve by a piece of tissue other than the nerve from an animal of the same species is not of practical importance, and I have not any experiments to show its efficiency. In the human subject homo-transplantation has always been done with a piece of nerve from an amputated limb. It is not likely any other tissue would be used.

AUTO-TRANSPLANTATION.

In the auto-transplantation bridge, the distinction between the nervous and non-nervous tissue of the bridge is important. My experiments seem to show that a certain amount of success is to be expected from bridging with a piece of non-nervous tissue.

With Non-nervous Tissue.

I have performed six experiments on auto-transplantation with non-nervous tissue.

In Experiments 13 and 14, 1 in. of the internal popliteal was removed on both sides of the dog, and the gap filled in with a well-defined piece of fascia taken from the popliteal space of the same side. The wounds healed well, and stimulation was tried after 118 days. On both sides the result was much the same, the right being a little the better. The animal walked moderately well, though the foot tended to be flexed at the hock. A definite bulb was present at the extremity of the central end of the internal popliteal. This was followed by a well-defined graft, only slightly blended with the surrounding tissues. The adjacent external popliteal was easily separable from it. Stimulation of the internal popliteal distal to the bridge resulted in movement and sensory manifestations. Stimulation of the internal popliteal central to the bridge with a weak current resulted in vigorous muscular contraction. The result was not obtained with the minimum efficient stimulus for a healthy nerve. Result fairly good.

Experiment 15.—On the right side 2 in. of the internal popliteal were excised and the gap filled in by a thick strand of muscle taken from the biceps of that side. After 134 days it was found that the bridge had effected no useful result. The bridge had contracted adhesions all the way down, and its muscle nature was apparent to the naked eye. Stimulation central to the bridge resulted in contraction of the graft itself but caused no movement in the foot. Result failure.

Experiment 16.—On the right side 1 in. of the internal popliteal was excised and a gap bridged over with a piece of fascia, fat, and muscle from the popliteal region. After 130 days the bridge was thin, ribbon-like, and adherent to the hamstring muscles. Stimulation of the internal popliteal applied central to the bridge resulted in vigorous muscular contraction. The minimum effective stimulus applied to a healthy nerve was not sufficient to produce any response in the bridged internal popliteal. Result fairly good.

Experiment 17.—On the left side 1½ in. of the internal popliteal were excised and the gap filled in with fat, muscle, and a thin strip of biceps. After 129 days the bridge was a thick mass very adherent to surrounding tissue, but still retaining some muscle tissue, as it contracted by stimulating the internal popliteal. Stimulation of the internal popliteal central to the graft gave a vigorous contraction, but it was less sensitive than on the opposite side, where catgut had been used, and much less sensitive than the untouched external popliteal. Result fair.

Experiment 18.—An inch and a half of internal popliteal were excised and the gap filled in by a strand taken from the biceps. After 126 days the bridge was thin, of reddish colour, and adherent to the surrounding tissues. Stimulation applied to the internal popliteal central to the graft gave a vigorous contraction, but it was much less sensitive than the healthy external popliteal. No contraction of the bridge itself occurred, the muscle tissue having apparently disappeared. Result fair.

In the six experiments made the length of the bridge varied from 1 to 2 in. In three cases where the length of the graft was 1 in., the response to electrical stimulation was fairly good. In two, where the interval was 1½ in., the result was less sensitive and could only be called fair. In the case where 2 in. were bridged over by this means, the result was an absolute failure. In nearly every instance the bridge was not defined from the surrounding tissues, and at times the muscle tissue persisted.

By Another Nerve from the Same Animal.

This is a very important group, as the experiments on it have an important surgical bearing. It is possible to cut a nerve in two places and suture the intervening piece, which practically becomes a nerve bridge, in position with successful result. I have performed this successfully in at least five instances in connexion with another research. The sciatic nerve was cut just below the sciatic notch, and again in the upper part of the popliteal space. The intervening piece, which measured about 2 in., was not lifted out of its bed, and was at once stitched in position by single chromicized catgut sutures. After between 80 and 100 days complete recovery of sensation and motion had occurred.

It is also possible to remove a piece of a nerve and suture it in the reverse position, so that its central end is joined with the peripheral end of the nerve, and vice versa, with success. Bethe[10] reports this as having been done, though at the time of my experiment I was unaware of it. I have only performed this once, in a case where ¾ in. of the ulnar nerve was excised and sutured in the orientated position. After 116 days there was very good sensory and motor recovery.

The cases where the piece of one nerve has been transferred to the gap in another have been of two kinds. The nerve which has been bridged over has always been a mixed one, while the nerve graft has been taken in some cases from a mixed, and in other instances from a purely afferent, trunk.

Experiments 20 and 21.—Three-quarters of an inch of the ulnar nerve was excised on the right side, and the piece put in the median of the left side. The piece of median excised from the left was used as a gap for the ulnar on the right side. After 130 days the condition was as follows: On the right side the bridge inserted in the ulnar was rather thicker than the rest of the nerve. Some little difficulty was experienced in separating it from the basilic vein and its branches, though not so much as in the homo-transplantations. It was not adherent to the median nerve. Stimulation of the ulnar central to the graft produced contraction of the muscles with as weak a current as was efficient in the intact median. Result perfect. On the left side the same anatomical condition was present, but the stimulation result was not quite as sensitive as on the right side. Result good.

In three cases a gap of 1 in. in a mixed nerve was bridged over by strands of a purely efferent trunk—the radial. The double strand was used in two because the combined size about equalled that of the nerve trunk to be bridged over.

Experiment 22.—Two strands of radial were used to bridge over an interval of 1 in. in the median. After 103 days the nerve bridge was about the same thickness as the median itself, and was hardly adherent to the surrounding tissues at all. It was smooth and polished like a healthy nerve, but the two strands could not be distinguished by the naked eye. Compared with the adjacent uninjured ulnar the result was perfect.

Experiments 23 and 24.—On the right side 1 in. of the posterior interosseous was bridged over by the same length of radial from that side. On the left side 1 in. of the ulnar was bridged by two lengths of radial from that side. After 136 days the naked eye appearance was very similar to the former case, and the electrical response was perfect.

Experiment 25.—In the left hind leg 2 in. of internal popliteal were excised, and the gap filled in by the same length of internal popliteal from the right side. After 134 days the bridge was very like a healthy nerve, being firm, glistening, and non-adherent to surrounding tissue. A very weak current applied to the internal popliteal central to the graft resulted in a vigorous flexion of the toes and contraction of the calf muscles. Compared with the normal external popliteal, however, the minimal current was not effective. Result good.

Experiment 26.—On the right leg 1½ in. of internal popliteal were excised and the gap filled in by a piece of the opposite internal popliteal placed in the reverse (orientated) position. After 126 days the bridge was very like healthy nerve, being shiny, round, firm, and non-adherent to the surrounding tissue. The minimum of electric stimulation for a healthy nerve caused movement when applied to the internal popliteal central to the graft. Result perfect. On the opposite side 1½ in. were bridged over by a piece of the animal's own muscle. The sensitiveness to electrical stimulation was very much superior on the side where the nerve had been used as a bridge. During life the animal was made to walk on the hind legs, and there could be no doubt that functionally the nerve bridge gave the much more satisfactory result.

SUMMARY.

Seven of these experiments were done; the length of the bridge varied from ¾ in. to 2 in. In five out of these the response to electrical stimulation was perfect, and in the remaining two nearly so. It did not seem to make any difference whether the corresponding nerve from the opposite side was used, or whether the nerve bridge was sutured in the reversed position, or even if a purely afferent nerve was used to bridge over a mixed one. The appearance of the nerve bridge was very like that of a healthy nerve except that it was not so firm to the touch. It was shiny, and not at all incorporated with any of the adjacent tissues, being a definite and separate structure.

CONCLUSIONS FROM THESE EXPERIMENTS.

I have rejected all cases where suppuration occurred, and these are not included in this paper. The outstanding feature is the immeasurable superiority of the nerve from the same animal in bridging over a nerve defect. The tests applied were (*a*) function of the muscles, (*b*) sensitiveness to faradic stimulation applied directly to the nerve above the bridge, (*c*) distinctness of the bridge from the neighbouring tissues, (*d*) microscopical appearance.

(*a*) It is not easy to compare differences in muscular power in animals, but as far as this could be done it was in favour of the cases of nerve auto-transplantation. In two dogs a similar length of the corresponding internal popliteal was excised in the hind legs. On one side nerve, and on the other tissue, auto-transplantation was employed. By watching the animals jumping and getting them to walk on their hind legs a good comparison could be made. This was markedly in favour of the nerve bridge.

(*b*) The test of electrical stimulation requires no comment.

(*c*) The distinctness of the bridge from other tissues is of importance. Where the bridge blends more or less completely with the adjacent structure many of the nerve fibres will wander out of it and not reach the distal end of the nerve at all. If there be the least scar tissue—as is often the case—in the operation area, it will surround and blend with the adherent nerve bridge, and the effect will be disastrous. On the other hand, where the bridge is a distinct structure, there is not much opportunity for the down-growing nerve fibres to wander astray. Catgut seems to give the least defined bridge. The surprisingly good electrical results in my cases with catgut are probably explained by the absence of any scar tissue. A few cuts with a sharp knife opens up an intermuscular space with scarcely any injury to the neighbouring structures. The nerve is then exposed, a length excised, and catgut sutures passed through both cut ends, leaving a length of the catgut between them as a bridge. The resulting scar tissue is insignificant. When the retractors are taken out the muscles fall together, obliterating the space. Such a favourable condition is not found in most cases where nerve bridging is necessary in surgery.

(*d*) I hope to furnish a description of the microscopic examinations of the bridges in another paper. From the small number already examined, it seems that in nerve auto-transplantation the bridge has the structure of the normal nerve. Fibres are arranged in large groups in funiculi, and there is a definite fibrous sheath binding them all together. In all the other cases the nerve fibres are arranged in groups of about half a dozen, scattered all through the bridge, apparently lying in the lymph spaces between the tissue element of the bridge itself. These statements are at present based on the examination of only four specimens.

With every test, then, nerve auto-transplantation comes first. It is not easy to allot the second place, however. With a nerve defect in a previously uninjured area, such as would be present after the removal of a small nerve tumour, catgut would be fairly efficient. If more or less scar tissue were present, as would be the case after loss of part of the nerve from injury, a bridge of nerve from an amputated leg, or failing that a nerve from a dog (which is firmer than that of most animals), would be the better. If nerve tissue be used there is more chance of a definite and separate structure resulting.

It is merely necessary to mention the nerve-flap operation described by Létiévant[11] for bridging over a gap. It was apparently suggested by a similar method of treating a tendon defect. It comes under the head of nerve auto-transplantation and would probably be of some service, though from its nature the result could only be very imperfect. It should scarcely ever be necessary.

It should be mentioned that nothing like the successful results obtained in my experiments would be found where the nerve defect is of some standing. The proportion of cases where nerve-bridging is a primary operation is surprising. Out of 20 cases in the human subject reported by Peterson,[12] 8 were done at once; 2 others were performed two and four days after the injury, and a third one at eleven weeks. The first 2 of these are practically primary operations, so that it is only in 50 per cent. of the cases that secondary nerve suture with bridging is to be performed.

NERVE BRIDGING IN SURGERY.

These experiments confirm the conclusion reached by Sherren from an analysis of the few reported cases of nerve bridging in man. Curiously enough a bridge from a purely afferent nerve trunk seems to form just as efficient a connexion as a mixed one for the regeneration of motor fibres. This seems to justify the conclusion that though sensory and motor nerve fibres differ in their size and function, these depend more on their central and peripheral connexions than upon their structural difference. Nerves play the part of telegraph wires between different stations, and it is the connexions they form which decides the use they are to be put to. A piece of isolated nerve can have its position reversed without any ill-effect.

At first sight nerve auto-transplantation appears only of academic interest. It would seem foolish to sacrifice a healthy nerve for the sake of an injured one. This has, however, been done on one occasion. Dean[13] bridged over an interval in the musculo-spiral nerve by a piece from

the radial; but, of course, here the radial being a branch was useless unless the musculo-spiral were conducting. There is one purely afferent nerve in the body that I think could be sacrificed for the chance of improving a more important, especially a motor, trunk. The one I refer to is the internal saphenous of the leg. Practically no disability would be caused by its division. A narrow area of anaesthesia along the inner side of the leg and foot would result, but this would diminish and doubtless disappear in time owing to the overlapping of adjacent sensory areas. A long length of it is available, and one or more thicknesses could be used. For instance, a gap in the ulnar would require at least three widths of internal saphenous stitched side by side. The sciatic would need many more, and probably the width of the bridge would be insufficient unless both internal saphena were utilized. The experiments in auto-transplantation suggest that some unessential nerve like this should be extensively used in bridging.

It is only in very extensive nerve injuries, such as total lesions of the brachial plexus, that other methods would have to be considered. In Erb's brachial (obstetrical) paralysis the nerve trunks can usually be brought into apposition after excising the scar of the original tear, that is, when it is extra-vertebral. In the adult form, such as not uncommonly occurs after dislocation of the shoulder, the cords of the brachial plexus for a considerable distance are reduced to firm fibrous non-conducting bars adherent to the surrounding structures. The internal saphenous would be quite inadequate to fill such an extensive gap. Probably the median of the paralysed arm could be made use of. If it be excised from just below where the interosseous trunk is given off, to the wrist, a comparatively unimportant part is lost. Beyond paralysis of the thenar muscles very little ultimate disability is caused by loss of this part of the median. It is only necessary to call attention to the hopelessness of total brachial paralysis, and the fact that many sufferers have submitted to amputation of the limb, to justify a dangerous and difficult operation. My only case of nerve bridging in the human subject was of this nature. A boy of 17 had total paralysis of the arm owing to a tree falling on his shoulder nine weeks previously. The clavicle was evidently pushed violently back, squeezing the plexus against the first rib. At the operation a scar involving about 1 in. in length of the whole plexus was removed. It was necessary to divide the clavicle to do this, and the bone was afterwards wired. With the arms well abducted the upper and middle trunks of the plexus could be brought into apposition, but a gap of about ½ in. separated the lower trunk. Just previously to this I had had several successful cases of tissue auto-transplantation, and I used a piece of the boy's sterno-mastoid to span the interval. There is no recovery yet, after four months, but this can hardly be expected. This case exemplifies the fact that the duration of nerve defects can be diminished in many cases by placing the limb in a position to relax the particular nerve. It should be kept like this for about four weeks till nerve union has occurred.

In secondary nerve bridging the fact that the bulb on the proximal end of the nerve has to be removed adds to the nerve interval. A bulbous swelling constantly appears on the divided proximal ends within a month after the injury. It consists of fine tortuous nerve fibres lying among fibrous tissue. When it has been in existence any time it is probable that no efficient regeneration will occur from these fibres, and it must be totally removed. This is another argument, if any were needed, for primary operations.

The Time for Performing Nerve Bridging.

It is in about 50 per cent. of cases only that secondary nerve bridging is necessary. In subjects where a length of nerve has been destroyed by an injury or by a burn it will usually be impossible to perform primary nerve bridging. The lacerated and often dirt-ingrained tissues do not heal readily, and it is inadvisable to try any nerve operation while suppuration is going on. The earliest time at which anything can be done will be when the granulating area has healed. It is usually stated that after about two years it is hopeless to expect any motor recovery in a divided nerve. At the end of this time the muscle fibres, or the nerve cells, have degenerated beyond redemption. There appear to be certain factors that sometimes prevent this result, especially the growth of wound fibre from the damaged tissues into the distal end of the divided nerve. This was well exemplified in a case of Erb's[14] palsy under my care. The boy was 6 years of age, and a definite lesion of the fifth and sixth nerve of the brachial plexus was found. He had never had the least use of his dorsal-scapular muscles. At the time of operating it was seen that a large scar mass shut off the suprascapular nerve from the central end of the plexus. Stimulation of this nerve beyond the scar resulted in feeble outward rotation at the shoulder-joint, though centrally to the scar it produced no effect. I have recently had a case in a girl of 13 showing exactly the same condition. That wound fibres can prevent a certain amount of muscular atrophy was also shown conclusively in one of my dogs. One inch of the ulnar nerve was excised and filled in by two strands of radial from the same side. Mild sepsis resulted from the operation. After 103 days electrical stimulation of the ulnar above the bridge resulted in no contraction of the muscles, while if applied below the graft it caused feeble muscular movement. The nerve graft itself consisted of dense scar tissue. In this the only source of the nerve fibres growing down the distal part of the ulnar was from nerve twigs to the tissues divided at the operation. A most conclusive proof of the presence of wound fibres preventing total degeneration of the nerve and muscle was seen in another dog. In this case the central end of the radial was sutured to the distal end of the posterior interosseus. A large piece of the central posterior interosseus and distal radial nerves were excised.

After 82 days, stimulation of the central end of the radial gave no motor response, while when applied to the interosseous joined to it fairly vigorous extension of the paw resulted. As there are no motor fibres in the radial, and the central end of the interosseous had effected no connexion with its distal end (as proved by stimulation) there was no other source of the motor fibres. Instances like these lead me to believe that we can assign no time limit beyond which the regeneration of the motor fibres is impossible. Doubtless in many, perhaps in the majority of cases, the wound fibres which so to speak keep up the nutrition of a divided nerve are too few to be of any real service. But it is impossible to tell which are the cases which can be benefited unless the study of the electrical reactions may in future be found to do so.

Probably, too, there will be more wound fibres where fairly extensive damage has been done to the tissues near the nerve trunk. In nerve lesions where the sheath has not been damaged, such as is seen in infantile paralysis, wound fibres can play no part. These considerations seem to justify attempting secondary nerve suture, and also nerve bridging for an almost indefinite time after the injury.

The length of nerve which can be bridged over successfully seems uncertain. When the interval appears to be too great the paralysed nerve should either be fixed in a notch of a neighbouring trunk or a flap of the healthy nerve separated for a short distance and then attached to the affected trunk, if anatomical conditions permit of this being done.[15] If there is any doubt as to which method should be used, it is open to attempt nerve bridging, and if this be a failure, to try nerve anastomosis later on. It must be admitted that the time wasted by an unsuccessful nerve bridging would make subsequent nerve anastomosis less satisfactory.

Finally a word might be said as to the inadvisability of performing nerve bridging in the midst of old scar tissue. I have seen two cases where it was attempted to bridge over the median by nerve hetero-transplantation after an extensive laceration of the forearm destroying part of the nerve. The results were an absolute failure. To open up a region and insert a nerve graft in the relentless grip of scar tissue is to court failure. The only way in these conditions is to free the central and peripheral end of the nerve and carry them to an adjacent intermuscular space where scar tissue is absent, and then perform bridging or anastomosis. Such an alteration of the position of the nerve will almost certainly increase the distance to be bridged over, but this is unavoidable.

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REPORT CVI.

INVESTIGATION OF THE BUNDLE OF HIS IN RABBITS' EXCISED HEARTS PERFUSED WITH LOCKE'S FLUID.*

BY L. N. HESKETH BIGGS, M.D.EDIN.

ONCE the rabbit's heart has settled down to its work after excision—say in three-quarters of an hour to an hour—it is remarkable how much cutting about it will stand without marked disturbance. On several occasions all the right side of the heart was removed; on another both ventricles were removed, leaving only the septum; and on yet another the septum and the right side of the heart were cut away, leaving the left ventricle hanging by a strip about 5 mm. wide; and still in all these cases the tissues continued giving very good contractions, considering how little fluid could possibly have reached them after such extensive section of vessels.

Cutting any of the ultimate branches of the A–V bundle makes no discernible difference. I have divided both the descending and the anterior divisions of the left branch of the A–V bundle, as it emerges through the interventricular septum, but noticed absolutely no change at all except a distinct, though temporary, lengthening of the As–Vs interval. Similarly I cut through the left division before it branches (so far as is as yet known), but obtained no result, though I cut almost through the entire thickness of the septum. I also tried dividing the right division, first of all in its ramifications and then closer and closer to its origin, but all was of no avail, the ventricles continuing to respond to the auricular impulses undisturbed.

In one experiment I carefully separated the right from the left ventricle, and placed a pin with lever attached in the tip of each ventricle, and tried to block one side without the other, but found that the most careful sections of the left and right branches separately produced no block of its half, and, as in every other experiment, finally one snip with the scissors penetrating the entire thickness of the septum blocked both ventricles simultaneously.

This seems to entirely contradict the usual view that the fibres of the A–V bundle do not fuse with those of the septum in its upper part, but continue enclosed in a sheath a long way down the septum, uniting only in the lower third, as otherwise it would have been possible, by dividing all the main branches, to produce the same effect as by section of the A–V bundle itself, either before it reaches the pars membranacea septi or just before its division into right and left. This I never found it possible to do; for, unless the bundle was divided just as high up as one could go without injuring the cusp of the aortic valve—that is to say, just about its division—one might cut the whole septum across and cut it out, and yet get only a very partial heart-block.

A few of the hearts used had abnormally-developed membranous part of the septum, and in these the A–V bundle seemed to pursue an abnormal course or to divide prematurely, or else its anatomical relations are masked; for division at the spot usually successful produces no heart-block, and it is not till the division is performed high up on the interauricular septum, while the fibres of the bundle are in the auricular cavity, that heart block is established. Great care has to be exercised in doing this, as frequently the aortic valves begin to leak seriously, and thus render the experiment almost useless. One may even in such a case carefully dissect away as far as one is able every scrap of muscular tissue from the pars membranacea and the root of the aorta and yet get only a very partial condition of heart-block. I have one heart preserved in alcohol in which this was done, and yet a block was not produced.

It seems as though there were some other path of conduction which can only be divided by an incision at or before the bifurcation of the A–V bundle.

I found further that so long as a minute part of the A–V bundle was left undivided, although section appeared at first to have produced complete block, yet recovery would almost invariably take place to normal rhythm. This might take a considerable time, as though the amount of stimulus that could pass through the small uninjured part of the bundle was insufficient to stimulate the ventricles to contract until their inherent rhythmicity had increased to such a degree that the stimulus plus their increased irritability became effectual. I do not believe that this was in any way to be attributed to an injurious compression of the fibres of the A–V bundle still uncut during the attempted section.

I was unable to find that any part of the A–V bundle supplied any definite part of either ventricle. In one or two experiments it did seem as though one ventricle was more affected than the other, and on one or two occasions as though part of a ventricle was not contracting properly, but it was practically impossible to be certain of the point, and different onlookers of experience gave quite different opinions as to the result obtained.

Thus I infer that so long as a small part of the thickness of the A–V bundle is still intact every part of the ventricles will respond to the auricular stimuli, and that this may be due to the extreme reticulation of the fibres and their tendency to fuse with one another, so that every bundle of muscle fibres may be said to have a universal distribution. Moreover, apart from actual compression, such as Erlanger used, any part of the A–V bundle uncut and uninjured is capable of performing almost the entire function of the whole bundle, and the whole bundle must be cut across or damaged by compression for even a partial state of heart-block to remain for any length of time. For sometimes in these experiments cut after cut was carefully given to the bundle without any sign of heart-block except a lengthening, usually only temporary, of the As–Vs interval, till finally a touch with the edge of a knife, which could not have cut more than a small fraction of a millimetre, has produced total heart-block. Probably the left and right branches of the A–V bundle are not confined in their distribution to their own side of the heart, but supply both ventricles, for it looks as though auricular impulses were always capable, when one of the two primary branches was divided, of reaching both ventricles simultaneously through, presumably, the other uninjured branch.

The details of the procedure adopted for dividing the A–V bundle do not seem to call for mention, except to state that an incision of 2 mm. was ample to produce block in a rabbit's heart. The incision was made at the upper edge of the muscular part of the septum, and ran slightly downwards and backwards. The anterior end of the incision should reach to the line drawn down the centre of the aorta as the heart hangs from the cannula.

As a rule the first cut at the A–V bundle would appear to have produced complete block, with total cessation of the ventricles for a period varying from several seconds to many minutes, but often after a period of independence of the ventricles, auricular extrasystoles would appear in response to the ventricular contractions, and then a gradual recovery take place through 4–1, 3–1, and 2–1 rhythms to the normal, but with a slightly lengthened As–Vs interval, at any rate for a time. A small further cut would then produce dissociation, sometimes absolute and sometimes with auricular extrasystoles following ventricular contractions, but with no vestige of conduction in the normal direction. In these latter cases the Vs–As interval was usually about half the normal As–Vs interval, but varied from half to the same length as the As–Vs interval.

The normal As–Vs interval averages about $\frac{1}{7}$ of the cardiac cycle, or between $\frac{1}{5}$ and $\frac{1}{10}$ of a second. Incising the ventricles generally produced a temporary shortening of the interval, as one would expect as the result of the

* A short extract from the latter half of an M.D. thesis, submitted in April, 1907, which was awarded a gold medal, and towards the experimental expenses of which a grant was made by the British Medical Association.

stimulation, sometimes up to $\frac{1}{10}$ of the cycle, and section of the auricles produced still greater shortening. Incomplete section of the bundle invariably causes a lengthening of the As–Vs interval for a time, though recovery usually takes places nearly to normal. When section is very nearly complete, the interval may be as long as $\frac{1}{4}$ of the cycle for a considerable period of time before recovery sets in. When the section is very slight the effect is very transient. This rapid recovery made it a difficult matter to at all thoroughly study the different stages of heart-block owing to their shortness.

With a 2–1 rhythm the rate of conduction from auricle to ventricle was generally normal, except at the commencement of the stage, when the As–Vs interval is always longer. When a 2–1 rhythm has just passed back to the normal the interval lengthens to about $\frac{1}{5}$ of the cycle or even $\frac{1}{4}$, showing that when the ventricles are responding to every stimulus either the conduction is slower or a longer latent period occurs than when only every second stimulus is effective. Within a minute or two of the commencement of normal rhythm the interval again is practically normal. At the commencement of any state of heart-block the As–Vs interval is long and gradually shortens almost to the normal. A lower state of heart-block then develops with a long interval, which again shortens to nearly normal, and this gives place to a still lower state of block or normal rhythm, also with a long interval to start with, which shortens again up to nearly the normal.

Usually when the A–V bundle was cut right through, after a few tumultuous contractions caused by the mechanical stimulation, the ventricles would be still for from about eight auricular cycles up to several minutes, when one or two small contractions might occur, after which on many occasions no further systole was recorded for a quarter of an hour—sometimes more, sometimes less. The ventricles then gradually quickened to their own independent rate of about $\frac{1}{2}$ to $\frac{1}{3}$ the auricular rate. At first one ventricular contraction may occur as seldom as every two minutes or more, soon quickening to one to every 8 or 10 auricular systoles, then 1 to 4, or less, as the case may be. The normal ratio of auricle to ventricle in total heart-block is between 3½ and 4 to 1. On one occasion, when the A–V bundle was completely divided at the first cut, no ventricular systole occurred for an hour and a quarter. In three experiments the ventricles remained relaxed and did not contract spontaneously again, though they continued to respond readily to mechanical or electrical stimulation, while the auricles continued vigorously at their normal rate. This was very unusual and difficult of explanation, unless it be that a still longer time was required for the establishment of the inherent rhythm of the ventricles than was given, though more than an hour was allowed, and in none of these three cases was the block produced at the first cut, so that half an hour should have been more than enough.

In some experiments, after the A–V had been divided and the ventricles had resumed their own independent rhythm, a reverse conduction developed with an auricular extrasystole following nearly every second ventricular contraction, but with no sign of any ventricular response to the auricular impulses. The auricular rate was 78 per minute and the ventricular 36, so that this was not a true 2–1 rhythm, and the relative sequence of the auricles and the ventricles was constantly varying. Any ventricular systole that did not occur in the auricular refractory period caused an auricular extrasystole. The ratio of the As–Vs interval to the normal interauricular interval has a distinct relationship to the difference in the lengths of the auricular extrasystole and the normal auricular cycle following, and also to the ratio of the long pause of the auricular extrasystole to the normal interauricular interval. Thus, we find that when $\frac{As-Vs}{As-A's}$ (taking As-A's as the normal interauricular period) is 0.25 or less, the difference in the height of the beats is 1 mm. or less; and the $\frac{A''s-A'''s}{As-A's}$ (taking A''s–A'''s as representing the long auricular extrasystole) is less than 0.1.

Further, that when $\frac{As-Vs}{As-A's}$ is 0.76 or more, the difference is again 1 mm. or less in height; and that again the $\frac{A''s-A'''s}{As-A's}$ is less than 0.1. The maximum difference in the heights of the beats occurs when the $\frac{As-Vs}{As-A's}$ is about 0.4 or ranging from 0.35 to 0.45. Either above or below this there is a rapid fall in the difference between the heights of the beats, which at its maximum is 4.5 mm. The same holds true of the $\frac{A''s-A'''s}{As-A's}$, which reaches a maximum of 0.2 when $\frac{As-Vs}{As-A's}$ equals 0.427, and is 0.15 when $\frac{As-Vs}{As-A's}$ equals 0.388, 0.18 at 0.455, and 0.16 when the $\frac{As-Vs}{As-A's}$ is 0.531. Above and below this proportion the ratio is less than 0.15, and diminishes gradually towards either extreme. There is not a regular ratio between the As–Vs and the Vs–As intervals, though roughly it may be stated that the shorter the As–Vs interval the longer will be the time elapsing before the auricle responds to the ventricular contraction, and the longer the As–Vs the more quickly the auricles will respond to the ventricles. Absolute compensation was not present, but the extrasystole added to the preceding normal auricular systole was about one-third of the cycle shorter than the sum of two normal periods.

Division of all but half of the left ventricle still failed to check entirely this reversed conduction.

Now these were states of complete and lasting heart-block, and yet there was reversed conduction always occurring when the ventricular systole did not fall in the auricular refractory phase. This does not agree with the results obtained by Fredericq and Hering[1]—that when block is complete, with independence of the ventricles, spontaneous extrasystoles do not pass from ventricle to auricle; nor with those of Erlanger[2]—that when heart-block is complete or partial a ventricular extrasystole will never cause an auricular contraction.

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An Address

ON THE

PRESENT POSITION OF THE ASSOCIATION THE NEED OF FURTHER LOCAL ORGANIZATION.

Delivered at the Annual Meeting of the Birmingham Branch of the British Medical Association.

By F. MARSH, Ch.M., F.R.C.S., Etc.,

Consulting Surgeon to the Queen's Hospital, Birmingham, etc.; President of the Branch.

[After thanking the members for his election, and referring to the custom of delivering an address on a subject of general interest from a medical, historical, or political point of view, the President said:]

It must be evident to all who take an interest in the work of the Association that its present position is a critical one, and that much depends on the steps taken during the next few months.

The position of the Branch, as a Branch, is also a critical one. By the constitution of 1901 it was shorn of some of its power, and if the new Charter is obtained in its present form it will lose the important and influential place it has hitherto held in the government of the Association.

The present position is one of gradual evolution. The Association was originally constituted as a purely scientific one, and naturally so. Intercommunication on subjects of medical and scientific interest was then the chief need. There were few medical publications; few, if any, medical societies; comparatively few hospitals. The conditions of practice were different. Competition was less severe; patent remedies were few; the day of compressed tablets had not arrived; advertising had not become a fine art; quackery was, perhaps, not quite so rampant.

As a rule, the medical attendant was the trusted friend and adviser of the family. There were thus few if any conditions calling for combination and redress. This state of things has gradually changed to practically complete reversal.

The splendid development of the JOURNAL of the Association, the almost overwhelming number of medical publications—the majority designed to keep the practitioner up to date—now render scientific meetings almost superfluous. The busy practitioner knows that any paper worth hearing is sure to be published, and can be read and digested when opportunity offers. There is little inducement to give up part of a day to listen to papers that may be of no special interest to him. The relatively small attendance at Branch meetings seems to show that already this is the case.

The strain and stress of practice has gradually increased. Certain sources of income to the practitioner have disappeared owing to the many preventive hygienic measures for improvement of public health and the establishment of isolation hospitals for infectious diseases.

Competition has become keener: (1) *Legitimately*, by the increase in the ratio of members of the profession to the population, emphasized in England after the Medical Act of 1858 by the advent of numerous Scottish and Irish graduates; by the tendency of the population to flock to the large towns at the expense of the smaller market towns and villages, thus bringing medical men into closer proximity and competition; and more recently, by the facility for doing distant work by motor car, thus creating competition in purely country districts. (2) *Illegitimately*, by the multiplication of hospitals and special hospitals with large and ever-increasing out-patient departments, by semi-charitable dispensaries under lay control, by contract practice and exploitation of the profession by laymen and societies, and by practically unchecked practice by a host of advertising quacks.

The attitude of patients in the large towns has also in most cases slowly changed in the direction of commercialism and not infrequently of distrust. An independent opinion is often sought, and, as stated by the Council of the London and Counties Medical Protection Society in their current annual report,

> Apparently, also, there is an increased tendency in recent years for people to claim compensation from their medical and dental advisers whenever the results of treatment (perhaps the most skilful and careful) are not as satisfactory as could be wished.

The result of these changes has been that many medical men have keenly felt the general reduction of fees with no corresponding diminution of expenses, and not a few have had to struggle to obtain a bare living. This struggle for existence is still going on if the statement made in the JOURNAL a few months ago is correct—that the average income of the profession is about £200 a year.

A remedy was naturally sought, and that which seemed to offer the best, if not the only, prospect of success was a union of the profession, with the object of promoting a better understanding between individual members and of defence against outside and illegitimate competition.

Many of the sufferers and their sympathizers were members of the British Medical Association, and as this was the only medical society possessing any general organization, efforts were made to induce the Council to develop the Association in this direction. The Council was, however, composed of the more fortunate and more conservative members of the profession, and was not in sympathy with these views. It probably did not realize the straits which many less fortunate members were in. An attitude of "passive resistance" was adopted, and for some length of time nothing was done beyond influencing public opinion on medical subjects coming before Parliament. Nevertheless, indirectly, through the General Medical Council, the agitation resulted in:

The abolition of the unqualified assistant.

The extension of the medical curriculum to five years.

The suppression of the lay exploiter, the canvasser for medical clubs and societies, and the *injudicious* advertiser.

The Medical Defence Union, the London and Counties Protection Society, and other local unions were inaugurated and were well supported by the profession—good evidence of the need felt for combination.

Meanwhile the agitation in the Association still went on and centred round the question of medical defence. A resolution approving the principle of this being undertaken by the Association was brought forward at annual meetings, and was finally carried at a special meeting in this city, and reaffirmed at subsequent annual meetings. The Council of the Association after lengthy consideration reported: That the Memorandum of Association did not give them the necessary power to undertake the work, and that they were not able to formulate a workable and satisfactory scheme. The question now resolved itself into a struggle for supremacy between the "scientific" and the "trades-union" sections, and resulted in a partial victory for the latter. A committee was appointed to amend the constitution in the desired direction, and their recommendations were carried at the annual meeting in 1901.

The Association was placed on a more democratic basis, and the Council was to a great extent subordinated to an annual meeting of Representatives elected by the newly-formed Divisions. This has been productive of a spirit of antagonism between the Council and the Representative Meeting, an antagonism which bids fair to be intensified if the new Charter is obtained in its present form—a most undesirable result.

It has been pointed out by critics of the new policy that since the reconstitution nothing in the way of reform has been achieved commensurate with the expenditure incurred, and that it is expected the expenditure of the Association will soon exceed its income. If this be so it is a strong argument against a continuance of the present dual and antagonistic system of government. The Finance Inquiry Committee has, however, reported that:

> Taking a full review of the financial position of the Association the Committee [it] is of the opinion that in the condition of affairs in 1905 there was no ground for "anxiety," and that the prospect for the future is satisfactory.

It would appear that the majority of the members of the Association now wish it to become a "trades union" rather than a scientific society. This question should be definitely settled before the new Charter is obtained—preferably by a postal referendum to each individual member. The need for a postal referendum is shown by the attendance of less than 10 per cent. of the members at the Divisional meetings for the recent referendum.

The principle of the policy to be adopted being definitely settled, the question of government should be then carefully considered, and the best possible system adopted for the carrying out of that policy. A small committee of good business members should be appointed to go thoroughly into the matter and draft a detailed scheme for submission to the Branches and Divisions for approval.

The governing council should be as small as is consistent with the number of committees to be appointed, allowing for co-option; should be representative of all interests, and elected by one method, and not as proposed by the new Charter by two methods by the one electorate—an absurd procedure calculated to create friction and cripple the power of the Association.

It could be elected either by the Representative Meeting, or by Divisions grouped for the purpose, or by the Branch Councils composed of Divisional Representatives. By either of the last two methods a thoroughly representative Council could be elected, whereas election by a Representative Meeting *might* possibly result in a Council representing a small clique or minority, without regard to local interests, which would be almost as disastrous as the dual method.

The members should be elected for a period of not less than three years; one-third should retire annually, but should be eligible for re-election. The majority of the Council would thus always have a knowledge of the work of the Association and would be capable of guiding it through the difficult times ahead with a prospect of success.

The annual report and financial statement should be referred to the Branch Councils and Divisions for consideration and approval prior to their final adoption by the Council of the Association, and any emendations or suggestions should be conveyed to the Council by the Representatives.

The Elective Council being supreme, the meeting of Representatives would not be needed. It has been an

improvement on the previous annual meetings, but it is far too large and unwieldy for practical purposes. It is not possible for a body of some 200 members appointed annually, and meeting for a few days once or occasionally twice a year, to review effectively the whole work and finances of the Association, and decide and control its policy

The report and accounts might be submitted to a Representative or an annual meeting of members for discussion and criticism only, though this is hardly necessary or desirable, and could answer no good purpose.

Assuming that medical politics and ethics are to be the essential work of the Association, it becomes a question if it would not be better to separate this section of the work from the scientific part. The Branches or newly-formed scientific sections might undertake the latter, leaving the Divisions and Branch Councils to deal with what would be the chief work of the Association.

If the attendance at scientific meetings were too small to justify the expenditure upon them, it might even become advisable to discontinue them, and abandon this work to purely medical societies, of which in large centres there is now no lack.

The annual meeting, if continued, would as hitherto be devoted entirely to scientific purposes and social functions.

The Association, to become an effective union, must include practically every member of the profession. If any important section remains outside, it will to that extent be deprived of power. The inclusion of the leaders of the profession, most of whom are in consulting practice, and who can and do largely influence public opinion on questions affecting the profession, is as important as the inclusion of those members who from the force of circumstances are most prone to contravene ethical rules, and therefore to keep outside an organization to enforce them. The policy must therefore be framed on broad lines, and interfere as little with the individual as is consistent with the fulfilment of its aims.

The possibility of organization achieving the aims hoped for by the change of policy has been questioned by some. It must, I think, be admitted even by the opponents of the change that even with imperfect organization and divided government work distinctly of benefit has been accomplished.

The conditions of contract practice have in many districts been improved; applications have been prevented for posts vacated in protest against improper management or unremunerative pay, and for posts created by clubs and societies in opposition to their former medical officers who have demanded reform or more equitable rates of payment.

The formation of public medical services controlled by the profession, in the place of lay-controlled dispensaries and similar societies, has been rendered easier.

A scale of fees has in some instances been arranged for assistance to midwives under the Act of 1902, for medical inspection of school children, and for medical examination for life insurance.

A wholesome influence has been exerted on the ethics of the profession through the Central and local Ethical Committees.

The question of hospital reform has been kept prominently before the public, who are now taking an intelligent interest in the question, and of whom an important section now see the need for reform.

With better local organization much more could be accomplished in each of these directions.

The question of medical defence is still unsolved. There seems to be no valid reason why this should not be undertaken by the Association. With a much greater number of members it would be more powerful than the smaller societies, which might be absorbed, and should be more economically managed. The difficulties of detail would soon be overcome by a skilled accountant and organizer.

The difficulty of dealing with unqualified practice—the greatest evil of all—is great, and has been ably and fully dealt with by Dr. Saundby in a paper on the Amendment of the Medical Act in the *Birmingham Medical Review* for February last. The conclusion he arrives at is that it would be premature, and probably involve the risk of repeal of some useful provisions of the present Act, to appeal to the present Parliament. He inclines to the view that education of public opinion is perhaps the best safeguard. It probably would be if it could be accomplished, but the task of getting it to a dependable level would, I fear, be herculean. My experience is that quacks are not unpopular, and quack remedies are very extensively used by that section of the public who are supposed to be educated enough to discriminate. It is astounding what a lack of common sense there is on this point.

With regard to legislation, it is pretty certain that not only would it be premature but it would be unwise and useless to attempt to amend the Medical Act until the profession—? through the Association—is so organized that it can exert political pressure in every constituency in the United Kingdom. Then and only then will there be a prospect of amendments being obtained acceptable and just to the profession.

The need for legislation against unqualified practice is great and increasing. Each year sees new and bolder developments on the part of bloodless surgeons, bone-setters, cancer curers, herbalists, electric and vibratory professors, and others too numerous to mention.

In other countries, notably America and Germany, the condition is even more serious. In America, the hotbed of "'paths" and "'arians," the profession is even desirous to admit the "osteopathic" group, some 5,000 in number, into their ranks to endeavour in some measure to control them, but it seems probable that the net will be spread in vain. These same osteopaths are establishing themselves in large cities in this country, and are already boasting that ere long they will get a charter by the influence of numerous patrons who write "M.P." after their names.

In Germany a proposal has recently been made to register unqualified practitioners and surround them with restrictions to try and check the unfair competition which now so extensively prevails.

In France the profession are beginning to organize by uniting and forming powerful medical syndicates, and by creating a medical group in the Parliament and Senate have succeeded in influencing national legislation in directions desired by the profession—notably in the "freedom of choice" for patients receiving medical relief at the public expense—a system which apparently prevails to a much greater extent than in this country.

In some countries it is true that stringent legislation has failed to remedy the grievances of the profession, but that is possibly due to a want of organization—to absence of machinery for getting the law enforced. There are not many individuals who are disposed to act as prosecutors; it is an invidious position, and the easier course of *laissez faire* is preferred. Therefore, thorough organization should be a preliminary to legislation, and should be vigorously undertaken by the Association.

If the recommendations made in the most admirable report issued by the Special Finance Inquiry Committee are carried out, there will be little to be desired in the central organization, especially if this Committee were continued as a permanent "Finance" Committee.

A great change, however, will have to be made in local organization; what has done admirably for scientific work will not do for political and union work. This latter cannot be efficiently done by Branch Councils and Divisions officered by honorary secretaries who are constantly changing, and who cannot, except in rare instances, give the time, even if they have the capacity, for the work. I am bound, too, to say that the method of election, in our own Branch at all events, is not one calculated always to secure the most capable officers.

Each Branch Council should become a counterpart on a small scale of the Council of the Association. It should be composed of elected Representatives of groups of Divisions, who should hold office for not less than three years. A chairman and vice-chairman of the Council should be appointed to hold office also for a similar period.

Five committees would probably be needed, to which the Branch Council would have limited power of co-option.

1. *An Organization Committee*, of which honorary secretaries of Divisions should be members, to endeavour systematically by personal canvass to get every medical man in the Branch area, especially the recently qualified, to join the Association; and to deal with questions of organization, and scale of fees for clubs, contract, insurance, and ordinary practice in Divisional areas.

2. *A Political Committee*, to organize and employ political pressure in the direction indicated by the Political Committee of the Council of the Association in each constituency in its area; and to support the candidature of members of the Association—not necessarily nominees—in local government and parliamentary elections.

3. *An Ethical Committee*, to deal with ethical matters as at present.

4. *A Finance Committee*, of which chairmen of Divisions should be members, to exercise control over the expenditure.

5. *A Scientific Committee*, to organize the scientific section or sections of the Branch.

When medical defence is undertaken by the Branch a Medical Defence Committee will become necessary.

The secretary to the Branch Councils should be a permanent and salaried one. He would attend all meetings of the Branch Council and Committees, and the Divisional meetings in the Branch area, and be responsible for the work of the Branch under instructions from the Council. He would collect subscriptions in his area, and relieve the London office of as much departmental work as possible. The work of medical defence (when undertaken) would form part of his duties, and indeed could not well be managed without such an official. At first, at all events, the work of more than one Branch might be done by him, which would lessen the chief objection to the suggestion—that of cost. The dates of meetings could be so arranged to render this quite feasible, or a beginning might be made in large centres and the system extended as the funds of the Association permitted.

The additional expense could be met partly by economies that might be effected; by a uniformity of method in Branch management; by having the bulk of the printing done by the Association; by the auditing of Branch accounts by an Association auditor: and by payment of Branch expenses by the Association instead of by capitation allowances. The funds accumulated by the Branches might be utilized to meet the extra expense during the first few years. Even if an increase in subscriptions were found to be necessary, as must be the case when medical defence is undertaken, I do not think members would object if they found they really had an efficient and effective organization ready and able to protect their honour and interests.

Finally, I would point out the need for members to "wake up" and take a part in the work of the Association, and not leave it in the hands of a few earnest workers and a few enthusiasts. The attendance at Branch and Division meetings, even when important questions are raised, is not creditable, and shows a lamentable lack of interest on the part of the large majority. The small amount of time and income involved should be willingly given, even from a selfish point of view, as the sacrifice is partly made for oneself, as a unit of the profession it is hoped to benefit and improve.

No organization, however perfect, will long succeed if this apathy continues; it must be abandoned, if the Association is to be and continue a strong and united body, able to uphold its claim to represent the views of all sections of the profession.

To sum up—at this juncture, before the Charter is applied for—the policy of the Association should be definitely settled by postal referendum. A method of government should then be formulated to carry out this policy in the most effective way. If the policy is to be a "trades union" one, decentralization and better local organization are essential for success.

THE late Dr. C. J. Cullingworth has left estate valued at £28,089.

A SMOKING concert in connexion with the Medical Corps of the New Territorial Force was held in Canterbury on May 27th, the occasion being a distribution of prizes to the non-commissioned officers and men of the 2nd Home Counties Field Ambulance, and to men of the South Eastern and Chatham Railway who have distinguished themselves in first-aid work. Major Hensley, who presided, gave a hopeful account of the future of the new scheme so far as medical work and Kent are concerned. The corps under his command is already 108 strong, including eight officers, and the detachments at Ashford and Whitstable are making progress.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

VAGINAL HAEMORRHAGE AND MILKY SECRETION FROM MAMMAE IN AN INFANT.

THE simultaneous occurrence of bloodless labour in the mother and of haemorrhagic vaginal discharge and milky secretion from both mammae in the infant perhaps justifies a short note. Of course, no connexion between the two is suggested. Labour set in in the mother at 2 p.m., and terminated at 10·30 p.m. A quarter of an hour after the placenta came away, the membranes intact, of a glistering pearly colour. Neither before nor after birth, nor after expulsion of the placenta, was there any bleeding. Some hours after the lochia appeared and continued in amount and character in conformity with ordinary experience, the patient making a perfect recovery. It was her second child, a female, and weighed 6½ lbs. Her first confinement was of the normal type. As regards the infant, a discharge of blood and mucus came from the vagina on the third day and lasted until the seventh. On the twelfth day the mammae became hard, swollen, and tender, and the skin over both had an erythematous blush. From both a milky secretion exuded, and continued for three weeks. The left enlarged first, preceding the right by twenty-four hours. The excretion was aided morning and evening by gentle pressure and massage, and the tumefaction subdued without trouble. The child was not upset by it in any way.

Dunblane. THOMAS W. DEWAR, M.D., F.R.C.P.E.

BALANO-POSTHITIS AND GLYCOSURIA.

THE irritating effect of saccharine urine on the mucous membrane is of course well known, and is met with most frequently in women, because the conformation of the parts favours the retention of drops of urine among the folds of the vulva. But irritation also occurs in men, especially when the prepuce is long and worn habitually forward. In such cases the resulting balano-posthitis is sometimes acute, and causes a considerable amount of discomfort. The characteristic features of this form of balano-posthitis are a pronounced crimson or purple-red colour of the mucous membrane and a tendency to phimosis and cracking of the preputial margin. This peculiar colour of the mucous membrane was pointed out in France many years ago, and it produces a striking and angry appearance which, so far as I know, is not seen in balano-posthitis from other causes, and which should always suggest examination of the urine. It is important to recognize this form of balano-posthitis, because it may be the only thing that leads the patient to seek medical advice, and because it seems, when well marked, to be diagnostic. Sometimes, too, slight bleeding occurs. For example, I was recently consulted by a man aged 55 solely because, for no reason that he knew of, he had lately noticed bloody stains on his shirt. He complained of nothing else, and said his general health was excellent. On examination there was partial phimosis, accompanied by the peculiar colour of the mucous surface already mentioned, and a tendency to bleed on the slightest provocation. His urine was loaded with sugar. All men with glycosuria should be very careful as regards cleanliness, and they should also, if possible, wear the prepuce behind the corona, so as to keep it clear of the urine. If this is impracticable the prepuce should be drawn away from the meatus during urination, and the last drops mopped up with wool or lint. When balano-posthitis and phimosis are already present, the preputial sac should be syringed out with boric lotion at least twice a day, and a scrap of boric lint or wool kept within the preputial orifice, and changed after each act of urination. If the wool sticks so as to cause bleeding on removal, a little boric ointment should be used as well. Under this treatment the local trouble in the case just mentioned soon got well, although the sugar persisted.

ARTHUR COOPER,
Consulting Surgeon, Westminster General Dispensary.

PYELONEPHRITIS IN PREGNANCY.

THE remarks on some cases of pyelonephritis occurring in pregnancy in Dr. French's paper published in the JOURNAL of May 2nd have induced me to ask you to kindly publish the following case, which appears to belong to the same class, but offers interest in the mildness of the type as compared with Dr. French's cases. A nulliparous girl aged 19 came to me on June 1st, 1907, complaining of dysuria and increased frequency of micturition. She had married ten weeks previously, after which there had been amenorrhoea for two months followed by a rather heavier period than usual, and it was just after this period that the urinary trouble commenced. The temperature was 99·9°, pulse 100, and the left kidney, which could just be felt, was slightly tender. Vaginal examination disclosed no appearance of pregnancy, but there was marked tenderness on pressing forwards on the bladder. The urine (obtained by catheter) was acid and showed pus cells on microscopical examination; epithelium cells and crystals could not be found, nor tubercle bacilli, though looked for many times. The patient went to bed, and had milk diet and a course of urotropine. The condition remained about the same for the following two months. There was never enough pus to form a naked-eye deposit, but the cells were always revealed by the microscope. On making a vaginal examination towards the end of July (that is, two months later) the uterus was found enlarged and anteverted and the signs of pregnancy well established. The tenderness over the left kidney was still present, but that over the bladder was no longer found. At the fourth month of pregnancy all the urinary symptoms had abated, and in February, 1908, the patient was delivered of a normal infant in a perfectly natural way, and is now in perfect health.

Moseley, Birmingham. OLIVE ELGOOD, M.S., M.B. Lond.

DISLOCATION AT THE ANKLE.

J. D., aged 55, a man of over 15 st., was standing with several others upon a wooden platform some 8 ft. from the ground. The platform suddenly collapsed, and while still in the standing position he fell to the ground among the débris of the platform. His left foot was jammed between two boards and the other men fell upon him. When I examined him shortly afterwards I found the following unusual, if not unique, injury. The foot was dislocated backwards and inverted at an angle of 45 degrees. The astragalus was dislocated forwards, and formed a projection under the skin. It was also rotated forwards upon its own axis, so that the upper or articular surface looked forwards and upwards. There was no fracture of either malleolus. Under an anaesthetic, with the knee fully flexed, I was able with great difficulty, and after using considerable force, exerted upon the foot downwards, forwards, and outwards, while pressing firmly with both thumbs upon the displaced astragalus, to replace the bones.

Except for a good deal of swelling in and around the ankle joint there is now no deformity. That such a displacement could have happened without fracture of either malleolus is certainly surprising.

Nuneaton. E. N. NASON.

RIGOR MORTIS IN THE STILLBORN.

ON March 2nd, 1908, I was asked to attend a patient who was expecting to be confined. I found her in labour, but she said the pains were very weak, and she was afraid that, although she had had them for three days, she had not made much progress. The os was fairly well dilated, and the cervix was quite soft. I ruptured the membranes, and shortly after the pains became quite strong, and one hour after my arrival she gave birth to a well developed female child. As it did not cry nor make any movements, I introduced my finger into its mouth, and was at once struck by the difficulty of doing so, the muscles of the jaw being firmly contracted. After repeated slappings there was no response, and on further examination the child was found to be quite dead. The arms and legs were flexed, and resisted the slight attempt to straighten them which I made; the muscles of the back, neck, and abdomen were flaccid, and the eyes were quite dull.

Thornaby-on-Tees. A. TABLETON, M.B.

A CASE OF ABDOMINAL ANEURYSM.

ON October 6th, 1906, J. S., an iron planer, aged 38, was sent to the Oldham Infirmary for treatment by Dr. Martland, one of the staff. The patient complained of pains in the back, which had persisted off and on for over eighteen months. He had had occasional attacks of nausea, and nine months before admission he noticed a swelling just below the ribs in front. He had had malaria and syphilis when a soldier in India. On examination a pulsating tumour as large as a fetal head was seen in the epigastric and umbilical regions. On palpation it was felt to be very hard and nodular, but the pulsation was very marked. There was great doubt as to whether the pulsation was expansile or not. The tumour did not move with respiration, and no bruit was heard.

A provisional diagnosis of aneurysm of the abdominal aorta was made, but owing to absence of bruit and expansile pulsation, and the hard nodular character of the tumour, considerable doubt remained as to its accuracy. With complete rest in bed and large doses of potassium iodide the swelling decreased slightly, and the patient gained 9 lb. in six weeks. On November 23rd an exploratory laparotomy was undertaken, when the provisional diagnosis was proved to have been correct. The wound healed well by first intention, but the tumour gradually increased in size, and the pulsation became more marked. He complained of numbness in the left thigh and left iliac region. He became very weak, and died suddenly on December 22nd.

Autopsy.—The cicatrix of the operation wound was found adherent to a large tumour which projected forward between the liver and the stomach, the latter forming a U-shaped loop round it. The tumour occupied fully one-third of the abdominal cavity. One or two minute perforations were present on the anterior aspect of the tumour, and the abdomen contained 4 pints of blood. The sheath of the left psoas muscle was filled with clot, showing that the aneurysm had been leaking in this direction for some time. The sac was filled with laminated clot which was extremely hard. The bodies of the eleventh and twelfth dorsal and first and second lumbar vertebrae on the left side were much eroded, almost, if not quite, into the spinal canal, while the cartilaginous discs remained intact. The specimen, being rather a remarkable one, was dissected out, with all its relations to the surrounding parts kept as complete as possible. The affected vertebrae were also removed. The whole was sent to the University Museum at Edinburgh. The aneurysm had arisen in the usual site at or near the origin of the coeliac axis, but it seemed a hopeless task to trace the branches of this axis, as the relations were so disturbed.

The case is of interest from the large size of the aneurysm, and from its hard nodular character, absence of bruit, and expansile pulsation, all of which favoured a diagnosis of new growth in front of the aorta. The rapid growth following laparotomy is also noteworthy.

I am indebted to Dr. Martland for permission to publish this case.

Warrington. J. S. MARSON, M.B., Ch.B.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SOMERSET HOSPITAL, CAPETOWN.

TWO CASES OF OBSCURE AORTIC ANEURYSMS.

(Reported by A. MARIUS WILSON, M.D.Durh., Visiting Physician.)

THE following cases of aneurysm of the aorta both present points of interest beyond the obscurity by which their diagnosis was surrounded. The first patient, aged 23, a European cabdriver, was admitted on Sep-

tember 5th, 1906, complaining of pain in the left chest and slight cough. No physical signs could be discovered. He was kept in bed for a few days, improved considerably, and was discharged—apparently quite well—on September 14th.

Readmission.—On October 6th he was readmitted complaining in a similar manner, but the cough was worse, and the pain in the left side of his chest was more severe. Repeated examinations revealed no physical signs. Pleural friction was searched for carefully but could not be heard. The pain was not in any way influenced by food.

Progress.—October 16th. He complained of a slight sore throat and had slight haemoptysis (about 1 oz.). No physical signs were made out. October 18th, 6.30 a.m. The patient suddenly collapsed with symptoms of severe internal haemorrhage, but there was nothing definite to point out the bleeding spot. He complained of pain in the left side of the chest. His condition was very bad; pulse could not be felt at wrist. 10 a.m. Condition better: blood-stained mucus hawked up. 6 p.m. Sudden collapse similar to the morning attack; passed about 1 pint black blood clots per rectum; very restless; complained of nausea but did not vomit.

Result.—October 19th. Similar attack; brought up about a pint of light coloured blood, which seemed rather to flow out of his mouth than to be vomited. From this he did not recover.

Post-mortem Examination.—A small aneurysm, about the size of a hen's egg, was found on the posterior part of the descending arch of the aorta. The sac was adherent to the vertebral column on the left side and communicated with the oesophagus by a small opening, partially occluded with blood clot. The stomach and intestines were full of blood clot, the stomach being much distended and so moulded over the clot as to prevent its being vomited. The aorta was slightly atheromatous, and there were scars (probably syphilitic) on the penis.

The second patient was a coloured labourer, aged 50 born in the West Indies, who was sent in as a case of pleurisy on October 10th, 1907. He had had an old empyema on the left side. On admission he gave a six months' history, complaining first of pain in the left side of lower chest posteriorly, followed by pain at the same level anteriorly a few weeks later. There was no shortness of breath, no haemoptysis, and no cough. About three weeks before admission he spat up a little blood, began to get short of breath, and the pain became most severe in the region of the right lobe of the liver. On admission he was suffering from dyspnoea, especially when lying on his right side. There was no oedema.

State on Examination.—Stony dullness was found over the left chest from apex to base; vocal fremitus and resonance much diminished. The breath sounds were indistinct and masked, but were of a harsh vesicular character; no moist sounds; no egophony. Circulatory: Pulse 100, regular, low tension, no dicrotism, synchronous, and equal on the two sides. The pupils were equal. Apex beat: Fifth space just internal to left parasternal line. The heart dullness was obscured by lung dullness, and the sounds were very indistinct. Liver enlarged downwards, especially on right side, to three finger-breadths below the costal margin; tender and painful; no lumps or ridges to be made out. Urine contained phosphates, and the nervous system was normal.

Treatment and Result.—Needles were introduced into the left base in several places, but no fluid was found. Lung felt dense and hard, and did not appear to move on respiration. On October 12th the house-physician was called hurriedly to see the patient, and found him covered with bright arterial blood and dead. Ether, brandy, and strychnine injected hypodermically were of no avail. The haemorrhage came on suddenly, the patient gave a little cry, and blood simply poured out of his mouth.

Post-mortem Examination.—Heart atrophied, especially left ventricle. Much atheroma of aorta, which is adherent to left lung and trachea. Aortic cusps atheromatous, and the commencement of aorta is almost calcified. The transverse part of the arch is occupied by a huge aneurysm which has been weeping into the left lung. This lung is one mass of blood clot from apex to base, and has a large communication with the outer wall of the trachea, which is much eroded. There are slight signs of old pleurisy in region of old empyema wound. There was no haemorrhage between chest wall and lung. Right lung normal. Passive congestion of liver, spleen, and kidneys.

REMARKS.—In Case I, when bleeding started, the symptoms pointed to a duodenal ulcer, the age being against a leaking aneurysm. In Case II, at one time a growth was suspected. For some time past I have always kept the idea of aneurysm in mind in every obscure chest case. For the notes in Case I I am indebted to Dr. C. A. W. Pope and to Dr. H. B. Morris in Case II.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNAECOLOGICAL SECTION.

AT a meeting on May 14th, Dr. HERBERT SPENCER, President, in the Chair, Dr. R. H. PARAMORE read a paper on the *Supports of the female pelvis viscera*, in which he contended that these could not be discovered by anatomical research alone; it was necessary to investigate conjointly the actual living processes. Professor PATERSON (Liverpool) thought the structures comprising the pelvic floor formed the chief factors in supporting the viscera—the symphysis pubis, triangular ligaments and compressor urethrae, perineal body, levatores ani and external sphincters, and the ano-coccygeal body. Any laceration or weakening of these structures would predispose to prolapse of the superimposed viscera. Mr. ARTHUR KEITH said that his investigations led him to infer that prolapse, partial or complete, of the pelvic viscera was primarily prevented by the action of the musculature of the pelvic floor. Dr. W. E. FOTHERGILL (Manchester) thought it was obvious that the pelvic viscera were normally supported by the connective tissue intervening between them and the sides of the pelvis, and the important portion of this connective tissue was that forming the perivascular sheaths. Dr. HASTINGS TWEEDY (Dublin) said that the author had furnished them with anatomical data which clearly showed that strong ligaments crossed the lateral fornices and formed, in Dr. Ovenden's words, "easily defined and striking objects"; that they were of themselves capable of supporting the uterus in a normal position; that when they were severed the cervix sagged downward, and this in spite of the fact that all the other uterine ligaments were uninjured. There was convincing proof that these ligaments, when acting normally, kept the cervix tucked upwards and backwards, and when performing this function they were subjected to no greater strain than those which affected other similar structures. Dr. BRIGGS (Liverpool) held that restoration of the levatores ani and their fasciae by extensive buried sutures in, under, and around the vaginal walls without the removal of any tissues, was still to remain the main aim of the surgeon. The operative treatment of prolapsus uteri rested upon the restoration of the muscular and fascial strata. Dr. ALEXANDER MACPHAIL (Glasgow) said it appeared to him that in the course of the discussion a tendency had been shown wrongfully to assign a supporting function to one set of structures to the exclusion of others. The via media of attributing this both to the "suspensory fascia" and to the "pelvic diaphragm" was the only sound course from the anatomical point of view. Dr. MACNAUGHTON-JONES still believed that there was a combination of forces at work in the pelvis in resisting any downward pressure on the uterus and maintaining it in its normal relation to the other viscera. The chief of these, no doubt, were the pelvic fascia and the levator ani. Dr. W. S. A. GRIFFITH thought the levator ani was an auxiliary means for the support of the pelvic organs. It was put into action to resist special strains, while the general pelvic fascia which formed a continuous sheet varying in density in certain positions was the chief support against ordinary conditions of pressure. Dr. INGLIS PARSONS thought that the chief factor in supporting the uterus was the connective tissue with elastic and muscular fibres passing from the uterus in various directions to the walls of the pelvis, first described by Savage; that the pelvic floor also helped indirectly to keep up the uterus by preventing prolapse of the vagina; that intra-abdominal pressure did not keep up the uterus, but was the chief factor in causing prolapse. The PRESIDENT said the truth appeared to be that the supports of the uterus were of a composite character, including atmospheric pressure, muscles, ligaments, and fascia. Some confusion, he thought, arose from speaking of the uterus as being supported by intra-abdominal pressure; it was rather extra-abdominal or atmospheric pressure, the retentive power of the abdomen of Matthews Duncan.

ODONTOLOGICAL SECTION.

AT a meeting on May 25th, Mr. J. HOWARD MUMMERY, President, in the chair, Mr. J. G. TURNER said that, clinically, fully 50 per cent. of pyorrhoea cases were

furthest advanced in the molar region—that is, it had commenced in that part. The general age of onset—early adult life—was a point rather against Mr. Goadby's milk-borne theory, since raw milk was at that age drunk but little. The affected teeth were fragile, so that in the extraction of pyorrhoeal teeth fractured apices were especially common. Mr. STANLEY P. MUMMERY, in a paper on heredity and dental disease, stated his belief that dental caries owed its origin as well as increasing prevalence to hereditary factors. Disease in general was to be regarded as an undesirable variation from the normal, and as such was kept in check by the law of the survival of the fittest, and consequent elimination of the unfit, including those susceptible to disease. In this way a race was gradually rendered immune to a particular disease to which it might become exposed. Among civilized races, however, this selective action of Nature was prevented by modern science from exerting any influence on certain diseases, such as insanity and dental caries. Owing to the soft, easily-digested food of modern diets the full set of teeth was not necessary for its mastication; hence defective and carious teeth did not affect the individual to the extent of preventing him from having large families, as would be the case with savage men living on hard food needing thorough mastication. Thus, by the absence of the action of natural selection and the consequent breeding among the unfit, the number of susceptible individuals rapidly increased, until now nearly every child was born of susceptible parents. The main cause of the modern increase of dental caries was, therefore, the increasing susceptibility in the teeth themselves, which was the result of the absence of the action of natural selection in weeding out the more susceptible individuals.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Dr. JAMES RITCHIE, President, in the Chair.

Wednesday, June 3rd, 1908.

THE ELECTRICAL TREATMENT OF ANEURYSM.

DR. DAWSON TURNER gave a demonstration of the results of passing electrical currents through blood serum outside the body. The strength of current was the same in all cases, but the poles employed were of different metals. With platinum needles a large quantity of hydrogen gas was produced at the negative pole, a small quantity of oxygen at the positive pole. There was an almost complete absence of coagulation round the latter. Similar results were obtained when the needles were made of silver, iron, nickel, and gold. When copper and lead needles were introduced some coagulation did occur at the positive pole, but the coagulum did not tend in either case to adhere firmly to the positive pole. Round the positive pole, when formed of a zinc needle, a large and firm coagulum developed, which did not tend to dissipate, and was composed of an albuminate of zinc. Summing up the results, he concluded that in the electrical treatment of aneurysms any good effect obtained was due not to coagulation of the blood serum round the metal needle or wire, but to the irritation set up by the introduction of a foreign body. The best results would be obtained by introducing a coil of zinc wire into the sac, and passing a current through it. Mr. CAIRD thought any benefit resulting from electrical treatment was usually due merely to mechanical irritation of the sac wall. Dr. GOODALL feared that the stream of blood flowing past any coagulum formed would wash it away, and set up emboli. If Dr. Dawson Turner tried experiments with fresh blood of which the coagulability had been lessened by the addition of saline solution, the results might prove illuminating.

CHRONIC NASAL OEDEMA.

Dr. J. S. FRASER recorded the results of an examination of seventy specimens of normal, engorged, slightly oedematous, and markedly oedematous middle and inferior turbinals. A lantern demonstration was given showing the turbinals in all the above-mentioned conditions. The cause of the oedema was stated to be due to severe or frequent attacks of nasal catarrh. Chronic engorgement of the blood vessels and blood spaces was the first pathological change noted. This was followed by some oedema, which commenced in both turbinals just under the basement membrane, and gradually pushed the glands and blood spaces inwards towards the bony core of the turbinals. Clinically the condition was known as early polypoid degeneration of the middle turbinal and hypertrophy of the inferior turbinal. In the former as the oedema increased nasal polypi were formed, and in the latter extreme oedematous infiltration might result, the condition then becoming known as "cauliflower hypertrophy." Bone disease was never noted in cases in which the inferior turbinal was affected, and in the middle turbinal only in advanced cases associated with sinus suppuration. Nasal polypi were associated with accessory sinus suppuration in about 50 per cent. of cases. Purulent nasal discharge, together with polypi, indicated sinus suppuration. When the discharge was watery no sinus suppuration existed. Dr. LOGAN TURNER believed that nasal polypi were merely inflammatory conditions of the mucous membrane. This inflammatory process was most probably due to a microbic invasion of the lymphatic vessels, causing them to become blocked. Dr. HUNTER thought that the oedema of the turbinals might be of a protective nature. The PRESIDENT could not quite understand why nasal catarrh was so common and polypi comparatively rare.

REVIEWS.

TREATMENT OF GASTRIC DISEASES.

THE book on diseases of the stomach[1] by Dr. PRON of Algiers is mainly characterized by the desire to emphasize the importance of the part played by the nervous system in this department of pathology, a desire which leads him at times into exaggerations and departures from the true clinical picture he desires to describe. He devotes a considerable amount of space to directions how to examine the patient, and gives a series of questions to be answered. There can be no doubt of the importance of these questions, but the order in which they are given is capable of improvement, as they seem to have been set down without any consideration of their relation to one another. We are glad to see that he regards the quantitative estimation of hydrochloric acid as fallacious, but we cannot agree with him in his general disparagement of the whole method of stomach chemistry, which has taught us much and which must be valued by every one who desires to study stomach diseases, although no doubt it may often be dispensed with in practice in the examination of particular cases. He does not seem to grasp the principle upon which Ewald's test breakfast is given, and he employs neither distension with air or CO_2 nor the search for stasis in the routine examination of the stomach. In consequence of this he is unable to distinguish between simple and obstructive dilatation of the stomach, and makes the grave mistake of believing that visible peristaltic waves occur in the former condition. In his account of the etiology of dyspepsia he minimizes the importance of such factors as errors of diet, abuse of alcohol, defective mastication, and attacks of infectious disease, while to a corresponding degree, he exaggerates the influence of the nervous system, and we cannot agree with his dictum that "the common foundation of all forms of dyspepsia is the nervous system." On the other hand he magnifies the frequency and importance of fermentations in the stomach, which occur but rarely, nor can we suppose that the oxygen, nitrogen, and CO_2 found in this organ are anything else than atmospheric air which has been swallowed; nor can we agree with his description of the symptoms of ulcer of the stomach, when he says that it always follows a long period of stomach trouble, and that the anaemia is only consecutive to the development of the ulcer and that pain is always present. The best part of the book is the series of essays it contains on such general questions as the relations of the stomach to neurasthenia, to obesity, and to diseases in various other organs; they show a considerable acquaintance with the literature of the subject and are thoughtful and suggestive. Dr. Pron is an old pupil of the late Professor Leven, and is loyally desirous of witnessing to the truth of doctrines taught by his former chief.

[1] *Traité Clinique des Maladies de l'Estomac.* Par le Dr. Lucien Pron (d'Alger). Paris: J. Rousset. 1908. (Med. 8vo, pp. 415; Fr. 12.)

The account of the abdomen given by Drs. CAUTRU and BOURCART in the second volume of their treatise on the massage of the abdominal viscera[2] deals particularly with the stomach and intestine from the point of view of the applicability of massage. In the first volume, which appeared in 1904, they discussed the subject of movable kidney, and dealt in detail with all the anatomical points which threw any light on clinical phenomena and on treatment. In the present volume they deal in a similar manner with the stomach and intestine, giving in a clear and succinct manner a general survey of the anatomy and physiology of the abdominal part of the alimentary canal, after which they proceed to discuss various forms of dyspepsia and their causation. In the following chapter they give directions, illustrated by numerous figures, concerning the general technique of massage of the abdomen, and this is followed by directions for special manipulations to be adopted in particular cases. Constipation, diarrhoea, and ptoses are all brought under consideration, and in association with ptoses the authors draw attention to the different opinions of Glénard, Vincent, and Sigand upon the causative factors of these conditions. The authors themselves think the causes of abdominal ptoses are numerous, and they appear to believe that the symptoms are due to an interference with a hypothetical part of the nervous system which controls abdominal equilibrium. An interesting chapter is devoted to vibratory manual massage in cases of appendicitis, and it may be stated finally that the book is well worth the careful consideration of all who have to treat abnormal abdominal conditions.

DISEASES OF THE PANCREAS.

THE twentieth fasciculus of the *Nouveau Traité de Médecine et de Thérapeutique* is made up of Professor PAUL CARNOT'S admirable chapters on diseases of the salivary glands and of the pancreas.[3] The interest in the former group lies chiefly in connexion with the parotid gland, but the subject is not of great importance. We may note in passing that in mentioning the modifications of secretion of the salivary glands the author omits any reference to the "dry mouth" described by Mr. Jonathan Hutchinson. During recent years our knowledge of diseases of the pancreas has increased so rapidly, and the literature of the subject scattered through periodicals has become so large, that a compendious account which does justice to this mass of material is most welcome. Professor Carnot has fulfilled his task very thoroughly, but it is to be regretted that he has supplied neither bibliography nor index. The absence of the latter may be due to the method of publication, as a complete index for the whole work will doubtless be printed when it is completed, but it would have been more convenient to have given one to each fasciculus, which would thereby have gained additional practical value. One of the little known subjects dealt with by Professor Carnot is the metastatic pancreatitis of mumps which in some epidemics has been common (20 out of 26 cases, Cuche), but the best description is given by Simonin, of the military hospital at Val de Grace, who observed ten cases in the course of four years, or a percentage of 1.55. This complication is generally benign, its symptoms being epigastric pain increased on pressure, nausea, vomiting, local swelling, sometimes diarrhoea, more rarely constipation, and slight fever; there is never any glycosuria. In a fatal case reported by Lemoine and Lepasset, to these symptoms were added jaundice and hæmatemesis. At the necropsy the liver was found congested, the spleen much enlarged, a swollen lymphatic gland compressed the common duct, the pancreas was of normal size, but congested, oedematous, and of greyish-red colour. Simonin attributed the pain and vomiting to the pressure of the swollen pancreas upon the solar plexus. A description of the structure and function of the pancreas in health and disease occupies a considerable but not undue amount of space, and the author devotes much care to a detailed statement of the various methods of determining the activity of the gland by the examination of the faeces and urine and the special tests devised by Ewald, Cammidge, and Volhardt. With regard to the value of Cammidge's reaction, which is described very fully, he expresses no opinion, as the procedure "has hardly been tried except in England." He gives some additional facts respecting the early history of pancreatic diabetes, noting cases of diabetes with diseased pancreas as having been published by Cawley (1788), Chopart (1821), and Bright (1833), but unfortunately he gives no references. He regards the islands of Langerhans as permanent structures, omitting all reference to Dale's work, but he is reticent as to their relation to diabetes, and recognizes fully the difficulty of the theory of suppression of an internal secretion as the cause of diabetes, even in those cases in which wasting of the pancreas is present. His descriptions include all the known diseases of the pancreas, and contain probably as much information about them as can be found in any published work; his writing is clear, and the text is illustrated by a considerable number of figures; moreover, treatment is discussed from both the medical and surgical standpoints, the mode of procedure in the latter case being described in detail.

[2] *Le Ventre. II, L'Estomac et L'Intestin.* Par Drs. F. Cautru et M. Bourcart. Geneva: Kündig; and Paris: F. Alcan. 1908. (Royal 8vo, pp. 336; 81 diagrams and figs.)

[3] *Nouveau Traité de Médecine et de Thérapeutique.* Publié sous le direction de A. Gilbert et L. Thoinot. XX. Maladies des Glandes Salivaires et du Pancreas. Par Paul Carnot. Paris: J. B. Baillière et Fils. 1908. (Sup. roy. 8vo, pp. 342; figs. 60. Fr.7.)

HANDBOOKS OF MEDICINE.

THERE can be no doubt of the importance and value of the handbook of general pathology edited by Professors KREHL and MARCHAND,[4] with the assistance of such eminent collaborators as Askanazy of Geneva, Baumgarten of Tübingen, C. Fraenkel of Halle, O. Minkowski of Greifswald, and many other of the most eminent persons in Germany in this department of study. The first volume is devoted to general etiology, and the first part deals in general terms with such causes of disease as may be classified under the heads of mechanical, thermal, light, electricity, blood pressure, chemical poisons, and living organisms. The second part discusses the internal causes of disease, including such subjects as inherited and acquired predisposition, immunity, natural and acquired, and the whole series of protective substances by which morbid poisons are antagonized. These last chapters necessarily include a discussion of serum therapeutics, opsonins and serum diagnosis, to name only a few matters of great practical importance. The amount of space, something less than six hundred pages, is inadequate to the proper discussion of these questions. The various chapters give a very excellent outline, and each is supplied with a copious bibliography, but the text is hardly satisfying to the reader who wishes to get full information upon any of the subjects treated, although no doubt he may turn to the original sources of information indicated to him if he is so fortunate as to have access to a large library. As an example of this inadequacy we may refer to the first chapter, on mechanical causes of disease, which have recently assumed so much importance owing to the adoption in most European countries of the principle of compensation to workmen for injuries received during employment. Yet the whole of this important subject is dismissed in twenty-five pages. This is all the more to be regretted as the author, Professor Henke, is disposed to take a sceptical view of the relation of injuries to such conditions as hypertrophies, tumours, and other growths. The chapter, indeed, affords little that could help a medical man confronted by any of the many problems which the administration of the Workmen's Compensation Acts brings before the profession. There is an interesting table on page 190 giving the average number of red blood corpuscles to be found in the inhabitants of various places at different heights above sea level. Professor v. Baumgarten, who writes on predisposition, seems sceptical about the influence of race; he over-estimates the immunity of the white race to sleeping sickness, which probably depends more upon the habit of wearing clothes than upon anything else. In connexion with diabetes he says nothing about the comparative immunity of the negro or the Chinaman, and carps at the asserted liability of the Jews, thinking the facts so far adduced to fall short of complete proof, and omits to mention the predisposition of the

[4] *Handbuch der allgemeinen Pathologie* (Handbook of General Pathology). Herausgegeben von L. Krehl und F. Marchand. Erster Band. Allgemeine Aetiologie. Leipzig: S. Hirzel. 1908. (Sup. roy. 8vo, pp. 612. M.18.)

Maltese, Cingalese, and Hindoos. It is probably on account of the want of space that the text contains so few illustrative cases, but the result is to make the book terribly dry reading, a defect that does not lessen its undoubted utility strictly as a work of reference.

The second edition of Dr. T. K. MONRO'S *Manual of Medicine*,[5] which has reached us in a somewhat belated fashion, has undergone a thorough revision from beginning to end, and has been anew brought into line with the latest recognized teaching of the time. A considerable amount of new matter has been introduced, so that the new edition is somewhat larger than its predecessor, which was reviewed in the BRITISH MEDICAL JOURNAL of September 26th, 1903, p. 736. Among the smaller textbooks of general medicine, the work, as is well known, is unusually comprehensive; this, together with its conciseness, its clearness of statement, its soundness of view, and its universally modern teaching, makes it one of the best books of its class in English. If the old proverb of "Well begun is half done" may be applied to the book study of medicine, the student who has mastered this may be considered to have more than half finished his study of systematic treatises on general medicine. He might, indeed, safely pass from it to the study of systems, monographs, and individual papers.

Dr. F. H. BARTLETT has translated and Dr. N. B. POTTER has edited the translation of the fourth German edition of the *Treatment of Internal Diseases*, by Dr. NORBERT ORTNER[6] of the University of Vienna. The reason assigned for making the translation into English is that the work has achieved a considerable degree of popularity in Germany. It will hardly appeal in the same degree, it is to be anticipated, to British medical men, for the reason that it is largely a collection of empirical methods of treatment, attaching a large number of physical and medicinal remedies to each group of cases, but not giving the principles on which an individual case should be treated by different methods and substances, varying it may be from day to day. The following quotation also will indicate one of the grounds on which an unqualified approval of the book must be withheld. In the section on the treatment of exophthalmic goitre, and under the heading "Sodium Phosphate," Dr Potter, as it is to be presumed, writes: "From his own experience the author (that is, Dr. Ortner) recommends dilute sulphuric acid (10 drops three times a day after meals) for the vasomotor disturbance so often occurring in exophthalmic goitre. Quinine sometimes seems to have a similar (*sic*) effect. Both are nerve tonics." The style of the work is, on the whole, rather slovenly; for example, in one formal prescription both Latin and English equivalents are used. The matter of the work is in places highly controversial, even such small points as the recommendation of the treatment of uraemic vomiting by cerium oxalate and of uraemic diarrhoea by acetate of lead and opium seem sufficient evidence of this. It, however, contains reference to all or most of the best therapeutic methods, and if read in a highly eclectic spirit might afford valuable suggestions in the treatment of obstinate cases.

We do not know that there is anything in English which exactly corresponds to the *Klinische Semiotik* of Drs. PICK and HECHT.[7] It is an imposing volume, dealing, as its name implies, with symptoms which are briefly described, and followed by suggestions for treatment. There is no index, but the matter is arranged under the following headings: (1) General symptoms, (2) disturbances of the heart function, (3) respiratory affections, (4) pain in the chest, (5) cough, (6) expectoration, (7) vomiting, (8) disturbances of nutrition, (9) examination of stomach contents, (10) diarrhoea, (11) pain in the abdomen, (12) examination of faeces, (13) haemorrhage, (14) examination of the blood, (15) dropsy, (16) examination of urine, (17) severe general infections, (18) autointoxications, (19) nervous irritation and paralysis, (20) headaches, (21) loss of consciousness, (22) sleeplessness, (23) vertigo, (24) bladder affections. Under each of these headings there is a larger or smaller number of subheadings, but it is by no means easy to find what one wants, and a good alphabetical index would to an English mind seem essential. The intention of the authors is to deal mainly with dangerous symptoms and their treatment, and it is apparently meant to be a handy book of reference for practitioners. Judged from this standpoint, for reasons already given it is not so convenient as such a book should be, and when we study its contents we do not feel better satisfied with it. The description of symptoms is better than the account of their treatment, which is always sketchy and often defective. The method employed is probably one in which it is almost impossible to include everything; for example, under "pain in the chest" the authors only include pains due to diseases of the thoracic organs; probably the most common cause of pain in the chest is stomach disturbance, and it may also be due to gall stones; yet these highly important conditions are not discussed under this heading. Under "difficulty of taking nourishment" (p. 398) we are unable to find any reference to spasmodic oesophageal stricture, although it may be found elsewhere (p. 810) under "nervous irritation, etc." We may give a few examples of the treatment recommended and of what appear to us to be omissions. The authors deprecate tapping in ascites for cirrhosis of the liver, which they say should only be resorted to in severe conditions (*nur im dringenden Bedarfefalle*); they say paracentesis in pleurisy should only be employed when the heart is displaced (p. 268); in the treatment of heart disease no mention is made of depressor drugs; the only treatment for uraemia suggested is diuretin in very small doses; the only treatment for neurasthenia is a Weir Mitchell course; they profess themselves unable to indicate the grounds for surgical interference in dilatation of the stomach, although they suggest that it would be justifiable where there was great loss of weight and the total quantity of urine was reduced below half a litre! The book contains a good and full bibliography.

TEXTBOOKS OF LARYNGOLOGY AND RHINOLOGY

MR. HAROLD BARWELL'S *Diseases of the Larynx*[8] will supply a want that has been felt for a handy volume on the subject. In the space of some 250 pages the author furnishes a very clear and succinct account of his subject, more especially perhaps from the surgical point of view. The more frequent and important conditions, such as inflammations, tubercle, syphilis, are treated with comparative fullness, and the note of personal experience is dominant throughout. In spite of its briefness the book is remarkably complete, and includes chapters on laryngeal complications of general diseases and on foreign bodies and injuries, including cut-throat. The illustrations are numerous; there are 12 plates comprising 45 figures, illustrative of normal and morbid appearances in the larynx. These were drawn by the author. The subjects have been selected with excellent judgement, and the execution reflects great credit upon his artistic skill. In addition to the plates there are a number of figures in the text. Of these the first three are somewhat rough diagrams, and Fig 2 would be improved by having the outline of the laryngeal image drawn upon the mirror. The book is admirably got up in every respect and a convenient size for the pocket.

The editors of the Oxford Medical Manuals have devoted a separate volume to *Diseases of the Nose*,[9] a course fully justified by the increasing demand for instruction in rhinology. Mr. Waggett tells us in the opening chapter that the book has been written *currente calamo*. Of this there is evidence. By the side of the well-filled pages of its sister volume on the ear a certain thinness is apparent. The practical points that are made cause regret that the author did not avail himself of the space placed at his disposal by the editors, who evidently desired that the nose should receive in this series that

[5] *Manual of Medicine*. By T. K. Monro, M.A., M.D. Second edition. University Series. London: Baillière, Tindall, and Cox. 1906. (Demy 8vo, pp. 921; 39 illustrations. 15s.)

[6] *Treatment of Internal Diseases*. By Dr. N. Ortner. Edited by N. B. Potter, M.D. Translated by F. H. Bartlett, M.D. Philadelphia and London: J. P. Lippincott Co. 1908. (Royal 8vo, pp. 672. 21s.)

[7] *Klinische Semiotik*. [Clinical Symptoms.] Von Dr. Alois Pick und Dr. Adolf Hecht. Wien und Leipzig: Alfred Hölder. 1908. (Suproy. 8vo, pp. 1012. M.21.)

[8] The Oxford Medical Publications. *Diseases of the Larynx*. By Harold Barwell, F.R.C.S., Surgeon Diseases of the Throat, St. George's Hospital; Laryngologist Mount Vernon Hospital. London: Henry Frowde, and Hodder and Stoughton. 1907. (Cr. 8vo, pp. 278. 5s.)

[9] Oxford Medical Publications. *Diseases of the Nose*. By Ernest B. Waggett, M.A., M.B., B.C.Cantab. London: Henry Frowde (Oxford University Press), and Hodder and Stoughton. 1907. (Cr. 8vo, pp. 294. 5s.)

prominence which it was always intended by Nature it should enjoy. Speaking generally about small books on special subjects, owing to their ever-increasing number the labourer's task is beginning to weigh less heavily on the compiler than on the reviewer who is desirous of finding excuses for their publication; moreover, the purchasing power of medical students to whom such books of transient value appeal has its limitations. The author in his preface tells us that "these pages are intended to be read, as they were written, rapidly from cover to cover." Herein, perhaps, lies the utility of the volume. It can usefully be read by students immediately before commencing a first course of clinical instruction in rhinology. It gives a general survey of the cases met with in the daily clinical work of a special hospital and of the treatment. To this purpose the style of the book lends itself. Throughout it is conversational, if not colloquial, at times didactic, and in places, perhaps, almost too "improving" for the more advanced reader. "The figures, the majority of them from Nature, were drawn," the author tells us, "expressly to explain the text." In spite of the rather ample legends which the author has inserted below them "in the hope that they may help the reader to a familiarity with the features he is likely to meet with in practice," matters would have been made clearer had the author availed himself of photography and the more modern methods of illustrating textbooks.

More than a quarter of a century has passed by since Sir Morell Mackenzie's work—the Kaaba of all students of laryngology—was translated into German. Since then we have become indebted to our German colleagues for many excellent textbooks on diseases of the throat and nose, and not the least amongst these must be numbered that by Dr. ALFRED BRUCK, entitled *Die Krankheiten der Nase und Mundhöhle sowie des Rachens und des Kehlkopfes.*[10] The general arrangement of the book is into four sections, dealing respectively with diseases of the nose and its accessory sinuses, diseases of the buccal cavity, diseases of the pharynx, and diseases of the larynx and trachea. Each of these sections is divided into a general and a special part; the general part enters into the anatomy, the physiology, the methods of examination, and the general therapy and prophylaxis; whilst the special part describes the particular diseases and their special treatment. Dr. Bruck has written the book for practitioners and students. In gauging the requirements of his readers he has displayed an exemplary sense of proportion which, unfortunately, is not always innate in the writer of a text book. The practitioner does not wish to learn how to do the work of the specialist, but he wishes to know when the work of the specialist should be done and what are the consequences when it is left undone. For instance, taking a commonplace example, he does not wish to know in how many different ways the bulge may be taken out of the nasal septum, or the accessory sinuses of the nose radically treated—operations far too technical to be treated of usefully, either to the practitioner or to the specialist, within the compass of a textbook covering a subject that has become a very large special department of medicine. Accordingly, whilst the indications for more severe measures receive due consideration, the operations themselves for the correction of deformities of the nasal septum and the radical treatment of suppurative disease in the accessory sinuses of the nose are disposed of in Dr. Bruck's book in a few pages, and the space thereby acquired has been used to the greatest advantage for the discussion of the diagnosis and treatment of conditions which come within the scope of the daily work of the practitioner. Without wishing in any way to detract from the praise we have given and are desirous of giving to the book, we think it would have been enhanced in value had the author gone further afield and been more cosmopolitan in the authorities cited and the principles of treatment laid down. In the chapter dealing with the treatment of malignant disease of the larynx, Dr. Bruck arrives at the following indication for intralaryngeal operation: "Für umschriebene Initialfälle von innerlichem Kehlkopfkrebs, sofern der Patient die Kehlkopfspaltung verweigert"—a conclusion which we think would not meet with general acceptance in this country. It cannot be too clearly laid down to the patient as well as to the student that an intralaryngeal operation for cancer of the larynx cannot in the light of present knowledge be regarded as remedial. There are many who hold that an intralaryngeal operation should not be undertaken even for the removal of a portion of the growth for microscopic diagnosis unless the patient has previously consented to an external operation for the removal of the disease in the event of the microscopist pronouncing it to be malignant. The work of Butlin has established thyrotomy as the operation *par excellence* in the treatment of early and circumscribed cases of carcinoma of the larynx. The book is compact, well printed, and well illustrated. Those of the illustrations inserted to demonstrate the method of performing some of the minor operations, such as Fig. 47, are considerably enhanced in value by the introduction into the picture of the operator's hand and by printing in two colours the different positions of the hand and the instrument in successive stages of the operation.

[10] *Die Krankheiten der Nase und Mundhöhle sowie des Rachens und des Kehlkopfes.* Von Dr. Alfred Bruck (Berlin). Berlin and Wien: Urban and Schwarzenberg. 1907. (Roy 8vo, pp. 479, 217 illustrations. M 12).

A CHRONOLOGY OF MEDICAL HISTORY.

DR. JAMES YOUNG'S *Chronology of Medical History*,[11] which is published by Edward Everard of Bristol, is a very handy book of reference. It includes the dates of notable events in the history of medicine, the foundation of universities and colleges, famous pestilences, such as the "Black Death," discoveries, etc.; as well as brief biographic sketches of famous practitioners of the healing art, from Sekhet'enaneh, chief physician to the Pharaoh Sahura of the Fifth Dynasty (B.C. 3500), to Spencer Wells and Rudolf Virchow. It is a pity that the booklet is disfigured by a number of misprints. For instance, Vesalius studied at the University of Louvain, not Lourain, and the title of his great work is not De Humain corporis fabrica, nor are the plates in William Cowper's *Anatomia Corporis Humani* quite correctly described as "and *Vivum Delineatis.*" We cannot believe that Richard Bright ever lectured on "Matûra Medica." Sir Humphrey Davy (whose name should be accurately known at Bristol) did not spell his name so; William Jenner was not a "volumnious" writer; the name of Dubois-Raymond is unknown to physiologists; "Schwaun" and "Davaines" are equally unknown in the history of biology; and "Trosseau of Tours" may have been "famous as a clinical teacher," but we rather fancy he is an amalgamation of Trousseau of Paris and Bretonneau of Tours. All these mis-spellings, with the exception of "Trousseau," are repeated in the index. Van Swieten is not the name "of the founder of the so-called old Vienna school." And who was "Latum," whose name is bracketed with that of "Schwaun" as having "made the discovery that the yeast plant is a living organism"? We have looked in vain for a number of names which should find a place in such a book. Thus, to take the first that occur to us: Fracastorius, to whom we owe the word "syphilis"; Pierre Franco, who placed lithotomy on something like a scientific basis, Van Helmont, Ricord, Johannes Müller, Broca, Ludwig Lisfranc, Stokes of Dublin, Charcot, Hewson, Everard Home, Sir William Wilde, Helmholtz, Goodsir, Lettsom, Thomas Beddoes, whose name is associated with Bristol; Cheyne, Huxham, Bretonneau, Sir Henry Thompson, Sharpey, Hey, Morton, the discoverer of ether anæsthesia; O. W. Holmes, Semmelweis, are all conspicuous by their absence.

Other errors are not wanting. Thus we are told that about 400 A.D. "we first find a class of citizens termed the *pharmacobists* (*sic*), to whom was delegated the duty of preparing drugs ordered by physicians." It is true the *pharmacopolae* mentioned by Horace, the *seplasarii* and the Greek παντοπῶλαι were largely what we should call "counter prescribers" and vendors of nostrums, but it may be presumed that they dispensed the prescriptions of physicians if the occasion arose. At any rate one would like to hear more of the "pharmacobists." Mark Akenside was not a "Scottish poet and physician," inasmuch as he was born at Newcastle-upon-Tyne and practised in London. In regard to Philippe Pinel, even the authority of Mr. Berdoe does not convince us that "his claims to our gratitude rests (*sic*) on the fact that he was among the first to introduce the humane

[11] *A Chronology of Medical History.* By James Young, M.D. Bristol: Edward Everard.

treatment of the insane." As was shown by Dr. Bevan Lewis, the real pioneer in this direction was a Spanish monk, Juan Gilberto Joffre, who built the first asylum for the insane at Valencia in 1409. Similar asylums were erected at Saragossa, Seville, Toledo, and Valladolid. Pinel himself, in his *Traité Médico-Philosophique sur l'Aliénation Mentale*, speaks with high approval of the Saragossa institution founded in 1425, where he says the treatment of lunatics was at once so humane and so intelligent that nothing was more common than cure of the disease.

Again, vaccination was made compulsory in England, not in 1827, but in 1853. The first reference to female physicians is found long before "1050 (*circa*)"; *medicae* are mentioned in old Roman inscriptions, by Pliny and Galen, and some Greek women, notably Agnodice, practised physic. Robert Koch is credited with "researches on the *Bacillus anthracis*" in 1876, but no mention is made of his discovery of the tubercle bacillus. We have not sought for these errors and omissions, but have simply noted them in turning over the pages. We took up Dr. Young's book in no carping spirit; but a work of such a character is nothing if not accurate. Such a summary of medical history would doubtless be useful, and it is in the hope that it will soon appear in an amended edition that we have called attention to the slips and omissions which we have mentioned.

NOTES ON BOOKS.

The Care of the Baby[1] is scarcely an adequate title for Dr. CROZER GRIFFITH'S excellent book, which is really a treatise on the management of children from birth to puberty. Dr. Griffith takes a wide view of his subject, and the connexion between the physical, mental, and moral development of the growing child is clearly brought out and shown to be a vital relation, and no mere matter of theory. This effect is produced not by verbose exposition but by careful analysis of practical details. The book covers a very wide subject, which is treated in the most thorough manner, so that there is necessarily a good deal of matter in it, but no space is wasted, and the index has evidently been compiled with the utmost care. We particularly commend the plan of enumerating in the first chapter the characteristics of a healthy baby, and the comparison with this, in a later chapter, of the characteristics of a baby in sickness. The latter passages show clinical observation of a high order, and present a list of danger signals which should be of the utmost value to mothers and nurses. The appendices on diet and simple remedies are very valuable. The present is the fourth edition published in America in a very short time, and the book deserves to be widely known in this country. It is a masterpiece of enlightened common sense, and on the whole the best manual for mothers we have seen.

In countries like Italy, where military service is obligatory for all those who are not legally exempt, a book such as the *Manuale di Medicina Legale Militare*, by Dr. TROMBETTA,[2] is likely to be of much use. The first 150 pages are concerned with the various difficulties met with in recruiting, the cases where exemption is claimed, and the legitimate grounds for such exemption. The next 100 pages deal with latent and masked disease as seen in the conscript. Another section of about the same length deals with malingering in its multiform phases—for example, ocular, aural, skin affections, contractures and similar defects of movement, epilepsy, mental disorders. There is a further section of some 30 or 40 pages dealing with the regulations more or less peculiar to the Italian army in reference to medicine. Whilst this volume is of special interest to those who practise in Italy, it also contains much information which may be of value to those who have to solve similar problems in other countries. The section concerned with simulation of disease gives full details of the various tests which may be used to detect and expose such simulation.

[1] *The Care of the Baby.* By J. P. Crozer Griffith, M.D. Fourth edition. Philadelphia and London: W. B. Saunders and Co. 1907. (Post 8vo, pp. 436. 6s. 6d.)

[2] *Manuale di Medicina Legale Militare.* Manuali Hoepli. Per E. Trombetta. Milan: M. Hoepli. 1903. (Pott 8vo. pp. 446; L.4)

THE Continental Tyre and Rubber Company announce that automobilists who require information in connexion with touring on the Continent may obtain assistance on application to their Continental Touring Bureau, 146, Avenue Malakoff, Paris.

MEDICINAL AND DIETETIC PREPARATIONS.

A Formaldehyde Combination.

AMONG the qualities to be considered in estimating the value of an antiseptic for surgical use the property of not irritating the skin or corroding instruments is of much importance. The preparation which has been introduced into this country under the name Septoforma (supplied by Union, Limited, Edinburgh) does not irritate the skin even when applied without dilution, and, being alkaline in reaction and free from such salts as sublimate, would tend to prevent corrosion of instruments rather than to cause it. It is a clear liquid, miscible with water without forming an emulsion, and of a sufficiently soapy nature to be used if desired for washing the hands; it is described as composed of the condensation products of formaldehyde, with bodies of the terpen-naphthalin and phenol groups, dissolved in alcoholic linseed-oil soap. In a series of tests carried out by the Rideal-Walker method we found that a 4 per cent. aqueous solution of septoforma destroyed *B. typhosus* in twelve and a half minutes, but not in ten minutes; in the control test the same culture was destroyed by 1 per cent. phenol solution in seven and a half minutes. While not a powerful germicide, in solutions of suitable strength (1 to 3 per cent.) it should prove useful. It has a faint, not unpleasant odour. A solid soap containing 15 per cent. of septoforma is also prepared, and has, we are informed, been used with satisfactory results, especially in gynaecology.

Giesshübler Water.

We have received from Messrs. Ingram and Royle (26, Upper Thames Street, London, E.C.) samples of the water bottled at the Giesshübl Spring, near Carlsbad. This is a carbonated alkaline water, the amount of carbonic acid being insufficient to cause strong effervescence but giving the water a very pleasant sparkling character. The chief constituent of the water, is sodium bicarbonate. The results of our analysis confirm the statements supplied as to its composition, showing 11.9 parts of sodium bicarbonate in 10,000 parts of the water, with smaller quantities of bicarbonates of potassium, calcium, and magnesium, and chloride and sulphate of potassium; traces of alumina, lithia, strontium, manganese, iron, and silica are also present. This water constitutes a very agreeable drink, either alone or for mixing with milk, wines, etc., and is evidently suitable for employment in all cases where a mildly alkaline beverage is desired.

MEDICAL AND SURGICAL APPLIANCES.

Ligature Forceps.

DR. SCHOEMAKER of the Hague Hospital has designed a forceps which carries a ligature, fitted to it before use. The loop of the ligature is caught in a notch on one of the jaws of the forceps, and the ends are clipped in slots in the handle of the same blade. After catching the artery the ends of the ligature are released, and the loop slips over the nose of the forceps as it is tightened. This is a useful instrument for applying ligatures in difficult situations, and if a number are armed with ligatures before an operation a certain amount of time is also saved. The agents in this country are Messrs. Allen and Hanburys, 48, Wigmore Street, W.

The Lithotomy Position.

An appliance for obtaining the lithotomy position, which has been made to the specification of Dr. Alexander Duke, of Gloucester Terrace, Hyde Park, by the Medical Supply Association, of Gray's Inn Road, differs in some material degree from the ordinary Clover's crutch. The band which passes behind the shoulders is of india-rubber, and it is attached at each extremity to leg-bands in a fashion which is considered to ensure equality in the pull on the shoulders; the crossbar from which the Clover apparatus takes its name is dispensed with, and the patient is not fixed in any way to the operating table or couch, all of which Dr. Duke considers points of advantage. The appliance is light and portable.

Instantaneous X-Ray Exposures.

In our notice of the demonstration of instantaneous *x*-ray exposures carried out recently at the London Hospital by Mr. K. Schall (p. 1364) it was stated that the anticathode of the tube, whether of platinum or tantalum, had to be a solid block of metal. Mr. Schall informs us that the solid blocks are only coated with platinum or tantalum and invariably consist of copper or nickel. Solid blocks of platinum cannot be used on account of the price.

LITERARY NOTES.

We are informed that the King, who has always shown a keen interest in the housing conditions of the people, has graciously accepted a beautifully bound copy of Councillor J. S. Nettlefold's book on *Practical Housing*, published by the Garden City Press. A second edition of the book, which explains the methods of Site Planning, Co-partnership, Tenants' Societies, will shortly appear.

We are informed that a third edition of Sir Thomas P. Whittaker's handbook entitled *The Licensing Bill: Some Facts and Arguments in Support*, making the 110th thousand, has just been issued by the Temperance Legislation League, Parliament Mansions, Victoria Street, S.W. Among other subjects treated of are: "The Present Position and how it Arose"; "The Trade and the Public"; "The Financial Phase"; "Why Brewery Shares have Fallen"; "Death Duties," etc. The book is published at sixpence, but will be supplied in quantities for gratuitous circulation at greatly reduced rates.

It is well known that hydrophobia used to be treated by dipping the patient naked in the sea a certain number of times. It is said that the Greek poet Euripides was so treated by Egyptian priests. The following anecdote, which is quoted by the *Tribune Médicale* from Pierre d'Estoile's *Registre-Journal de Henri Quatre*, shows how people dealt with sufferers from hydrophobia in the seventeenth century:

> A page of M. de Nevers, an only son of a noble family, having been bitten by a mad dog at the same time as the curé of Issy, and as was said by the same dog, instead of going to the sea, which is held to be the sovereign remedy, went to the shrine of St. Hubert, and having there made a novena, developed the disease, and died of it at Tintoise on Saturday, the 28th of this month (August, 1606). Being in the throes of hydrophobia, just as they were about to dispatch him with a harquebus shot in the head, he passed peacefully away with a good knowledge of God and repenting of his sins.

They seem to have had no misgivings in those days about the right to put the patient out of his pain in hopeless cases. In hydrophobia, however, it was more common, at least in this country, to suffocate them with pillows than to shoot them. The method of treatment by sea baths is thus described by a doctor who had witnessed its application. He says:

> I have seen the ceremony. The patient in his shirt is placed on his knees on the shore close to the sea, when a wave comes in two strong and robust men push down his head and make the wave pass all over his body. This is repeated nine times, then he is dried and dressed and fancies himself safe.

In 1671 some of the ladies of the Court of Louis XIV, who had been bitten by a small dog, went to Dieppe to undergo the treatment. Long before that Ambroise Paré had expressed his disbelief in the efficacy of the sea baths, and in the eighteenth century people appear to have begun to lose faith in the treatment. Many failures are recorded, among which may be mentioned the case of an English lord, who died in spite of the treatment. "This," says the narrator quaintly, "proves that there is no remedy for the imagination, and that the cure is wrought less by the sea than by the belief that it will cure." Many, no doubt, were cured of an imaginary disease by the bath treatment; but, alas! even the most thoroughgoing faith, combined with the Buisson baths, will not cure genuine hydrophobia.

Probably the general opinion among English readers of Chateaubriand is that he was a second-rate Byron, whose literary attitude was a pose. He is often said to have been the inspirer of the revival of the Christian spirit in France after the Revolution; but, though he may have had faith, his morals, according to the testimony of those who knew him, left much to be desired. That he was a man of brilliant literary gifts is, however, undeniable, and this is enough to make Lombroso and his disciple, Max Nordau, place him among the mentally degenerate. Considering that in that group are Descartes, Newton, Pascal, Bossuet, Voltaire, Napoleon, Goethe, Victor Hugo, Mozart, Richard Wagner, and, in short, practically every man of genius, the inclusion of Chateaubriand is to be regarded as complimentary rather than otherwise. Professor E. Masoin of Louvain has recently written a book on Chateaubriand, in which his constitution and character, mental and physical, are freely discussed. He shows that Chateaubriand's melancholy was nothing more than a pose; he was, in fact, foreseen by the creator of Prince Arthur in *King John*, who says:

> I remember, when I was in France,
> Young gentlemen would be as sad as night
> Only for wantonness.

This pose Chateaubriand as a writer kept up through a long life, but he did not allow it to interfere with the pleasures of society, with the carriage and decorative "get up" of a dandy of the first water, after the fashion of his day, and with love-making limited only by his physical vigour, as to which there appears to be some doubt. This edifying question is gravely considered by Dr. Masoin. We confess we take little interest in Chateaubriand as a writer, and still less as a man. But Professor Masoin has made an important contribution to scientific literature by his exposure of the methods of Lombroso and his school. He says, very truly, that they often base their conclusions on doubtful facts and apocryphal anecdotes; that whether their facts are true or not, their deductions therefrom are often quite illogical; that, speaking of their conclusions, they attach importance to slight faults of character or flaws of constitution, leaving out of account the really vital facts; and that they mingle in one wide group of degenerates all sorts and conditions of men, some of the highest order of intellect, and persons scarcely or not at all above the average; people with a single flaw, slight or it may be doubtful, and others in whom the marks of degeneracy and actual madness are writ large. We are glad to have the view we have so often expressed—that "criminal anthropology" as put forward by Lombroso is to a large extent a fond thing vainly invented—confirmed by Dr. Masoin.

In the *University of Pennsylvania Medical Bulletin* for January last, Dr. Morris Jastrow, Professor of Semitic Languages in the University of Pennsylvania, gives an interesting account of the notions and superstitions as to the liver among ancient peoples. Divination, he says, held a large place in all religions of antiquity. Knowledge as to future events was sought for in dreams, in events—such as the birth of monstrosities—and especially in the movements of the heavenly bodies. But signs and omens were also looked for in the entrails of animals offered for sacrifice. In this anatomical divination the liver was regarded as of special importance. The custom of divining by means of the liver of an animal specially set aside for the purpose, says Professor Jastrow, belongs to the primitive stage of religion, as is shown by its occurrence among the native population of Borneo, Burma, Uganda, and elsewhere. The custom was a part of the worship practised among the Babylonians and Etruscans as well as among the Greeks and Romans, while traces of the theory are, according to our author, found among the Hebrews and Arabs as well as in India and China. Among the Romans other organs, such as the heart and lungs, were examined besides the liver, but this was at a later period. Pliny says that the first time the heart was examined by the Roman soothsayers was about 274 B.C. But as Bouché-Leclercq says, the liver was "the organ of revelation *par excellence*." The theory on which this note was founded is thus set forth by Professor Jastrow:

> The liver was in early days universally regarded as the central vital organ in the animal, the seat of all forms of mental and emotional activity, or, in other words, as the seat of the soul. We have been accustomed to think that the heart was among ancient nations looked upon as the seat of the soul; but while this is true for Greece, Rome, and India, as well as for the Hebrews, at a certain stage of culture, even in these civilizations, there was an earlier in which that distinction was accorded to the liver. A trace of this earlier view is to be found in the use of the word for liver in Greek (*hépar*), which is applied in Greek poetry as the word "heart" is in prose. So when a person is mortally wounded he is spoken of as "struck in the liver." The punishment of Prometheus, whose liver is gnawed by a vulture, also rests on this primitive view. The liver is singled out because it is the seat of life. In Hebrew poetry, likewise, the word for liver (*kabed*) is used synonymously for the word for the soul (*nefesh*), and even as late as the days of Mohammed the story is told that on an occasion of great sorrow the prophet wept all night "as though his liver would crack," where we would say, "as though his heart would break."

This position accorded to the liver in antiquity must not, says Professor Jastrow, be confounded with the current popular notion that the liver is the source of the lower emotions, such as jealousy, and ill-humours and timidity. This view represents a degradation of the liver.

from the high position it once occupied as the seat of the intellect and of all the emotions, including the higher ones, such as love and courage. Divination led in Babylonia and Assyria to an anatomical study of the liver. As early at least as 3000 B.C. the sheep's liver was carefully studied, special attention being paid to the lobes and the markings on their surfaces, the gall bladder, and the portal vein. The Babylonian priests prepared clay models of the sheep's liver as models for instruction of aspirants to the priesthood in the temple schools. A clay model of this kind now in the British Museum belonged to the temple school of Marduk in the city of Babylon in the time of Hammarah (about 2000 B.C.). Professor Jastrow gives a picture of this model as well as of a bronze one found near Piacenza in 1877, which is believed to have been used in Etruscan divination in the third century before the Christian era. When medicine began to cut itself loose from the priesthood the liver was dethroned from its supremacy by the heart. That organ was believed to be the seat of the intellect as well as of the emotions. Traces of this are found in such words as *recordari* and to learn *by heart*. The heart, and afterwards the lungs, were added to the liver as *hiera* or *exta*, examined for soothsaying purposes. The removal of the liver from its place of honour as the seat of the soul led gradually to the crumbling of the rite and to its abuse as a means of deception. In time the whole thing became such a fraud that, as we learn from Cicero, it was said by Cato that he could not understand how one soothsayer could look another in the face without laughing. As science progressed the brain was recognized as the centre of life and the seat of the soul. Aristotle clung to the belief that the heart was the seat of the intellect and emotions, and Plato tried to clear up the confusion by suggesting that man has two souls, one immortal and divine, having its seat in the brain, the other mortal, which he places in the breast, with the seat of the lower emotions, such as jealousy, anger, the passions and appetites below the diaphragm, and the seat of the higher emotions, such as courage, above the diaphragm. By the time the supremacy of the brain came to be fully recognized, divination had so far crumbled away that it was not included among the organs to be examined by soothsayers. Professor Jastrow, however, looks upon phrenology as a modified form of divination. He is also inclined to see in chiromancy a link uniting the present to the ancient practice of divination through the liver of the sacrificial animal, since (he says) "the reading of the lines of the hand appears to be merely the transfer to a more accessible part of the body the interpretations of the liver or markings on the liver."

From an abstract of an article by M. Letulle, which appears in the *Chronique Médicale*, we learn that the late Professor Cornil, besides being a painter in water colours, was a collector of engravings, etchings, pictures, and old books. In addition to a number of medical works, including many folio volumes of anatomy with coloured plates, several coloured by hand, the distinguished pathologist's library contained a number of *incunabula* and rare editions. Among these are mentioned *Arbolayre contenant la qualitez et virtus proprietez des herbes, arbres, gömes*, etc., with numerous woodcuts, printed about 1840. *L'Entretenement de la vie*, by Jehan Gourot (sixteenth century); *L'Entretenement de Santé*, Lyons: J. Saugrain, 1599; *L'Anatomie des Plantins (vivae imagines partum corporis humani)* with steel plates by Valverde, 1572; the Protestant Bible of Geneva (1567) in a contemporary binding adorned with medallions; *Le Théâtre des Bons Engins*, printed by Janot, in 1540; and others. Professor Cornil was particularly proud of three manuscripts, two Spanish and one Arabic. The two former belong to the sixteenth century and consist of the rules of religious communities. They are adorned with miniature paintings of religious subjects, and are beautifully bound with silver clasps and edge coverings. The Arabic manuscript is a copy of the Koran, taken from the Smala of Abd-el-Kaber; it is bound in camel hide. The collection also includes a number of fine illustrated books of more modern date, often containing original water-colours of great value. The Professor was fond of rare and beautiful bindings, the paintings on which were often done by himself or his daughter.

The *Red Magazine* is a new periodical, the subtitle of which, "Stories for All," indicates its nature and scope. It is published by the proprietors, 23-29, Bouverie Street, E.C. The editors have done their best to provide "stories for all," for the magazine contains some nineteen tales, in every sort of style and on every kind of subject. Naturally, their merits vary greatly. The list of contributors contains the names of Frankfort Moore, Winifred Graham, Leonard Merrick, and other authors whose names are well known to readers of magazines. There are two series of stories beginning in this month's issue—one by Jacques Futrelle, "My Lady of Mystery," and the other, "Mulberry Wharf," by H. B. Marriott Watson. The former is a tale of diplomatic life in Washington, with a beautiful and mysterious lady suspected of stealing money from one of the foreign Legations, and the usual jumble of ambassadors, diplomatists, secret service agents, and impossible State secrets as a background. The other purports to be a narrative of the adventures of a broken-down man about town, who gets mixed up with a secret society, is dogged by assassins, and finally saved by the usual beautiful Italian of fiction, who gets stabbed in his place. Of the other stories, "The Wish Bone," by J. Sackville Martin, is one of the best, and "The Light," by T. W. Hanshew, a pretty story of two men on a lighthouse far out at sea, runs it very close. "The Entertainment at the Home," by Della Thompson Lutes, a sketch of two famous young musicians who give an entertainment to some invalid old women, and find the latter prefer "Hiawatha" and cake walks to "Jerusalem" and the "Holy City," which they had come prepared to play, is told with grace and feeling, and Leonard Merrick's "Pardon, you are Mademoiselle Girard," is both original and amusing. Altogether the new magazine shows promise of adding to the gaiety of nations, but we may venture to express a hope that the standard will improve, since there is a notice in the introduction to the magazine saying that the editors will not rely solely on well-known authors, but wish the *Red Magazine* to be "a ready channel for *new writers* as well—men and women of excellent literary attainments who have hitherto met with but scant success." The print and get up of the *Red Magazine* are both good, and it will probably be welcomed by a large number of those persons who prefer any sort of fiction to none at all.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

(Continued from page 1424.)

OTHER preparations examined by Dr. F. Zernik, and described by him in the *Deut. med. Woch.*, are as follows:

Eston, *Subeston*, and *Formeston* are three preparations which a Berlin chemical firm has introduced. They are said to be slightly soluble aluminium $\frac{2}{3}$ acetate, aluminium $\frac{1}{3}$ acetate, and basic aluminium formiate-acetate respectively. These preparations were introduced as substitutes for lenicet. The analysis, however, disclosed that all the preparations contained about 11 per cent. of aluminium sulphate, suggesting that this strongly basic substance was the material from which the preparations were made, contrary to the statements of the manufacturers. The value of such a preparation must depend on its being but slightly soluble, so that the astringent action is only gradually applied. The sulphate is freely soluble. The manufacturers plead that the sample which Zernik tested was a sample to which some sulphate had been added; but since other samples have also been found to contain sulphate, and since there could be no reason for adding it, he does not see his way to accept this explanation.

Filodentol is an Italian remedy for toothache. A little of the fluid is to be sucked up into the nostril, and the pain is said to cease forthwith. A small bottle containing 5 grams of a red-coloured weak solution of ethereal oils (peppermint and cinnamon) costs 1s.

Dr. Keller's Nerve and Blood Strengthening Herbal Tea.—This preparation is not unskilfully mixed. It is put up in seven packets, and costs 2s. 7d. The contents of one packet has to be brewed in three cups of water and drunk each day. In obstinate cases the use of the tea is to be continued until the condition is cured. It con-

sists of 10 parts of valerian root, 8 parts of potassium bromide crystals, 5 parts of cinchona bark, 4 parts of the mature fruit of papaver, and 1 part each of liquorice root, senna leaves, and peppermint leaves.

Pheun Skin Paste is accredited with marvellous properties. When applied to the skin it not only removes all the dirt but it kills all the bacteria, even when situated in the deeper layers. For all forms of skin diseases it is recommended as a cure. Zernik states that for such a wonderful remedy the price of 1s. for a 25-gram tube could not be considered excessive; but, alas! his analysis did not support the prognostic utterances of the advertisers. It contains 31 per cent. of soft paraffin, 5 per cent. of water, 2 per cent. of soap, and 10 per cent. of a dry substance yielding slimy material.

Fluinol is supposed to be a fluid coniferous preparation with fluorescence. The fluorescence caused peroxidation of water, and in this way the action of the medicaments is increased (!). The fluid really contains 0.7 per cent. of fluorescein, 6 to 7 per cent. of a weakly ammoniacal alcoholic solution of ethereal pine oils (ol. pini pumil. and ol. pini sylvest.). A bottle containing 150 c.cm., which is said to be sufficient for ten baths, costs 2s. 6d., but the sample sent to the medical profession contains 70 c.cm., which is stated on the label to be for two baths.

Dr. B. Assmann's Whooping Cough Remedy is a patent preparation, which the preparer (a medical man) states to be so complicated that it is only made by himself, and cannot be obtained elsewhere. The packet contains forty powders, twenty of which are marked No. 1, and twenty No. 2. The chemical analysis showed that each powder, weighing 2 grams, consists of lactose. No other constituent was detected.

The Giant Oxie Company (London) advertise the *Oxie* preparations extensively in Germany. These preparations are said in the prospectus to be composed of valuable medicaments, which are little poisonous. They cure nervous and cardiac diseases, and exercise a beneficial influence on the digestion and on the blood. The price for four boxes of nerve nutrient, three bottles of pills, and three electric porous plasters is 25s. The two first-named were examined. The *Oxie tablet* pills were small coated tablets, weighing 0.08 gram each, and contained podophyllin, capsicum, and sodium carbonate. Two pills are to be given at night-time on going to bed. On the following day the use of the nutrient is to be begun, five tablets being the prescribed daily dose. These are octahedral tablets, weighing on an average 1.3 grams. They were found to contain cane sugar, milk sugar, and Indian-corn starch, coloured with eosin. They contained also an indifferent bitter, and traces of the oils of sassafras and gaultherium. An official warning has been issued against these preparations.

G. Pohl's Family Tea "Excellentod" ("death to bacilli") is advertised as a miraculous preparation which cures all diseases of the respiratory tract. In the prospectus the word "phthisis" is misspelt. One packet costs 1s., and consists of 85 grams of galeopsidis herb, a herb which is now quite obsolete but which is found in "Lieber's tea for consumption," which used to have an extended sale.

Pohl's Health and Rheumatism Tea is advertised as being of use when all the dearer and newer remedies fail, and as "removing the pain of rheumatism and gout immediately, reducing the greatest swelling and rendering the joint pliable again." The tea consists of one part of the flowers and two parts of the leaves of sambucus, a herb which used to be employed as a diaphoretic and diuretic.

Pohl's "Hercules" Nutrient and Strength Dessert is advertised to improve the form and figure within a short time, to strengthen muscles, to do the stomach good, etc. The preparation is a disc or biscuit-shaped cake, covered with chocolate, weighing 10 grams each. The only difference between the preparation and ordinary biscuit is that bean flour is used. One packet consists of forty-five biscuits and costs 4s., and the whole treatment should consist in taking nine such packets. Zernik makes it very clear what he thinks of this sort of thing.

The *True Hungarian Juniper Extract* (prepared by a Berlin firm), advertised with great effect in the daily press as a cure for all sorts of diseases, proved to be inspissated juice of juniper and to contain, among other traces, a small quantity of copper, the presence of which is attributed to want of care in the preparation.

Nova et Vetera.

SANITATION IN MEDIAEVAL EXETER.

THE Town Clerk of Exeter, Mr. H. Lloyd Parry, is, we were informed last summer, promoting the formation of a society for the study of the ancient documents of that city, of which many of our readers must have very pleasant memories. During the Annual Meeting of the British Medical Association held there last year he courteously called our attention to some old sanitary enactments made in the reigns of Elizabeth and James I. He was obliging enough to give us some extracts from the City Council Minute Book (1560 to 1581 A.D.) which may be of interest. Under the date "XVI° die Junii, Anno Elizabethae Reginae etc. XV" there is an entry headed "Slaughter" to the following effect:

And farther yt ys agreed that ev^ry Wither [i.e. Butcher] shal be warned that thei shall not at any tyme before the feaste of St. Michaell Tharcangell next ensuinge kill or suffer to be killed w^thin this Cittie any mann [manner] of Beefe Mutton Veale Hogge or Lambe upon peine that ev^ry one so offendinge shall forfeite for every such offence, viz for every Beefe iiis iiijd and for calfe Hogge or mutton XIId And in defaite of paymente to be comitted to warde there to remaine ntill he have satisfied the said forfeture.

Then, under the head "Pygges to be Removed," there is the ordinance:

And farther that ev^ry inhitante of the Cittie shall remove his and ther Pigys oute of the Compas of the Cittie before the XXIIth daye of June nexte, And that no inhitante after the said XXIIth daye shall keepe w^thin the Cittie any Hogge Pigge or Swyne at any tyme before the afforesaide Feaste of St. Michaell tharcangell upon peyne that ev^ry inhabitante offendinge shall forfett and pay for ev^ry offens of ev^ry daye iiis. iiijd, viz. for ev^ry Pigge and imprsonmente of his or her bodye untyll the same forfeture be paid.

This (says Mr. Parry) is indexed as "noe pigges to bee kept here in the sum̃er tyme," and he explains that the object of the preceding minute is to prevent slaughtering within the city in summer time.

It is well known that James I was moved by "the vile use (or other abuse) of taking Tobacco in his Kingdom" to deliver himself of a *Counterblaste to Tobacco*, in which he denounced "this filthie noveltie" with the intensity of a theologian condemning a heretical opinion. The manner of the royal author may be gathered from the concluding passage of his tract, which runs as follows:

In your abuse thereof sinning against God, harming yourselves both in person and goods, and raking also thereby the markes and notes of vanitie upon you: by the custome thereof making your selves to be wondered at by all forraine civil Nations, and by all strangers that come among you, to be scorned and contemned. A custome lothsome to the eye, hatefull to the Nose, harmful to the braine, dangerous to the Lungs, and in the blacke stinking fume thereof, neerest resembling the horrible Stigian smoke of the pit that is bottom lesse.

It is perhaps less well known that in respect to tobacco, Charles the First followed in the footsteps of his father. How he fulminated against it is shown by the following extract from a Book of Ancient Letters preserved among the Exeter Records, A.D. 1628–1639:

"After hearty comendscons. Whereas his Matie to prevent the excesse of the use of Tobacco, and to get an order to those that regrate and sell or utter it by Retayle who observe noe reasonable rates or prices nor take care that it be wholsom for mens bodyes that shall use it hath of late caused us so to direct Lres to the Justices of Peace of the severall Counties of the Realme, and to the *Sherifs* Officers of the Cittyes and some of the Townes w^thin the same requiring them to certifie in what places it might be fitt to suffer ye Retayling of Tobacco and how many to be licensed in each of those places to use that Trade. And amongst others to yo^u the officers of ye Citty of Exeter did make Certiff^e accordingly. Theise are to let yo^u knowe that it is his Ma^tie^s pleasure that the p'sons whose names are contained in the Schedule have inclosed signed by the Clarke of the Counsell (p'sons recomended to us by yo^u the officers of the sd Citty) are p'mitted to sell or deliver Tobacco by Retayle, of whose names yo^u shall give publique notice in your sd Citty straighitely chargeing yo^u and every of yo^u, y^t yo^u suffer not any tobacco after the feast of Candlemas next to be sould or delivered by Retayle w^thin your jurisdiccon, but by ye p'sons menconed in the sd Schedule, & by such other p'sons as by his Matie on that behalfe shal be from time to time appointed.

And soe we bid yo^u hartilie farewell ffrom Whitehall the last of August 1633.

Your loveing friends"

Here follow the signatures of members of the Privy Council: W. CANT. (Wm. Laud); THO. COVENTRYE(S.; PORTLAND; J. S. MANCHESTER; WIMBLEDON; BELLIES; DORSET; FRA. COTTINTON; J. COKE; FRAN. WINDEBANK.

It is curious that about the same time the police of Paris issued a regulation, dated March 30th, 1635, forbidding all persons to sell tobacco, except to apothecaries and on the prescription of a physician, under penalty of a fine of 80 livres parisis. This regulation was not long ago exhumed from the records of the city of Paris by M. Eugène Grecourt, and was published in the *Chronique Médicale*. The "enthusiasm of humanity" at the present day has a tendency to manifest itself in forms distasteful to the "average sensual man." There are persons who would forbid the sale, not only of alcohol, but of tobacco, if they had the power. It is quite within the bounds of possibility that the next twenty-five years may see some attempts at such "freak" legislation, but it is certain that human nature will have to undergo vast changes before any laws of the kind are obeyed by the mass of mankind.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

KESTEVEN.

AT the quarterly meeting of the Kesteven County Council, held at Sleaford on May 13th, Alderman Stapleton, Chairman of the Finance Committee, on presenting the annual financial statement, remarked that the proposed medical examination of the 16,000 school children would prove a serious item in the future, and he contended that it was grossly unfair to place this additional outlay upon the ratepayers, holding that the cost ought to be defrayed out of the Imperial Exchequer.

LEAMINGTON.

At a meeting of the Leamington Town Council held on May 11th, the Education Committee presented a scheme for the medical inspection of school children. It provided that all children admitted to infant schools since January 1st, and all those leaving school on reaching the age of 14 after August 1st, should be medically examined at the provident dispensary, at a fee of 1s. 6d. a child. The scheme was criticized by Dr. Hicks, who said the appointments ought to have been advertised. He added that it would be impossible to get the work done as it should be done at such a figure. Alderman Thursfield also criticized the committee's proposals, and said the business had been done in a hole-and-corner manner. Mr. Holloway, chairman of the committee, said all had been done in accordance with the usual routine of the council. The scheme was experimental, and would be put in operation for about nine months. If it did not work satisfactorily it could be altered. An amendment to refer the scheme back to the committee was defeated by a large majority, and the report was agreed to.

MERTHYR.

A meeting of the Merthyr Education Authority was held on May 13th, Mr. Enoch Morrell presiding. In relation to the question of the medical inspection of school children, Mr. R. G. Price, on behalf of the head teachers of the various schools, sent a communication suggesting that the authority should issue, through the schools, a circular to parents explaining the new departure of the Board of Education, and asking their co-operation and sympathy; that a school nurse and health visitor be appointed to accompany the medical officer to the schools; and that where there was no suitable room in a school in which medical inspection could be properly carried out without interfering with the routine work of the school a suitable room near the school should be secured for the purpose. The second suggestion was referred to the medical officer, and the others were approved.

WARRINGTON.

At the monthly meeting of the Warrington Education Committee held on May 18th, the question of the appointment of a medical inspector for school children was again raised by Mr. A. J. Jolley, who moved that no scheme for the medical inspection of school children could be approved by the committee which provided for any portion of such inspection being performed by an officer resident at the Infectious Diseases Hospital, or whose duties included or involved daily visits to the hospital, as proposed by the council at their last meeting. Mr. Jolley described the proposal as a cheap and iniquitous one. Dr. Joseph defended the action of the Health Committee, and said the objections to its proposal were purely sentimental. After a long discussion the motion was carried by 16 votes to 9.

TYNEMOUTH.

At the monthly meeting of the Tynemouth Rural District Council, held on May 14th, at North Shields, the following resolution was carried:—

> The members of this council view with extreme disfavour the proposal of the County Education Committee with regard to the medical examination of school children. They consider such a system would entail a large and useless expenditure of ratepayers' money; they think it would be distasteful to very many of the parents, and they are moreover of opinion that, if Parliament makes such an Order, the funds to pay for the working of it should be provided out of the Imperial Exchequer, and not out of local rates. They hope that the county council will not adopt the proposal, and suggest that a strong protest should be sent to Parliament against such a method of legislating.

YORK.

A special meeting of the Education Committee of the York Corporation was held on May 20th at the Education Offices to receive a report of a joint conference between the Education Committee and the Health Committee on the medical inspection of school children. The Chairman stated that the subcommittees of the Education Committee and the Health Committee had met in accordance with the instruction of the City Council to frame a joint recommendation to the Council, and, after considering as to what was being done in other towns, and the report of the medical officer of health, had arrived at the following decision:

> That a whole time assistant medical inspector be appointed at a salary of £200; that two nurses, in addition to the one now engaged by the Health Committee, be appointed at salaries of £75 each, and that their salaries and duties be equalized between the Health and Education Committees; that the salary of the medical officer of health be increased by the sum of £50 per annum.

The Chairman moved that the resolutions of the joint meeting be approved. Councillor Inglis said £150 was an adequate sum for a young man undertaking the work of assistant medical inspector. This was the sum that the town of Blackburn was paying. The motion was carried. The Chairman next moved:

> That with the exception of half of the salaries of the three nurses and the additional salary to the medical officer of health the expenses of carrying out Clause 13 (1) (b) of the Education (Administrative Provisions) Act, 1907, be charged to the Education Committee, that the work in connexion therewith be controlled by the committee, and carried on under the superintendence of the medical officer of health.

The motion was carried. Dr. Smith said that in connexion with the London County Council schools a series of demonstrations and lectures on the medical inspection of school children had been arranged to take place in London shortly.

NORTH RIDING OF YORKSHIRE.

At a meeting on May 26th it was recommended that Miss Catharine L. Boyd, M.B., B.Ch., D.P.H., should be appointed to carry out the medical inspection of children under the direction of the county medical officer of health, and to undertake such duties in connexion with school medical work in the county area as the medical officer of health might direct, at a salary of £250, with travelling expenses. The appointment, it was recommended, should be for one year, from July 1st, 1908, and thereafter for such a period as the committee might decide.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 1370.*)

AN appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Sir Victor Horsley, F.R.S. (concluded).

Continuing his evidence, Sir Victor Horsley said that by a reflex action he meant an automatic action, which might be, and usually was, an unconscious response to a stimulus. Asked if reflex action was ever conscious, he said that depended upon the sense in which one used the term. A perfectly conscious being might execute a reflex action. For instance, if somebody suddenly stuck a pin into his hand he would certainly draw his hand back, and he would be perfectly conscious; but there would be nothing purposive in that act—it was purely reflex. In his opinion, a purposive act was a conscious act. A sneeze was purely reflex. He was conscious when he sneezed. One must not introduce the connotation of consciousness in the discussion of reflex action, because the latter only meant that the response in the nervous system was executed within an extremely short period as contrasted with a response which involved the higher centres, and therefore took a longer time to execute. But if one introduced the question of consciousness or unconsciousness, then one must add a great deal of analysis of higher functions, especially in regard to this question of anaesthesia. Asked if a frog deprived of its cerebral hemispheres was capable of purposive acts, he said it was capable of the most complex reflex acts which might be regarded by an ordinary observer as purposive, but to argue from that to purposive acts such as were performed by warm-blooded animals, with an intact nervous system and fully conscious, was quite another thing. Those acts of a brainless frog were not conscious acts; in his opinion there was no connotation of consciousness unless one had an activity of the highest centres present. The cortex of the human brain was undoubtedly necessary for the purpose of consciousness. In reply to further questions, he said that, so far as he knew, there never had been a cutting operation performed on animals without anaesthetics in the United Kingdom during the administration of the Act. He was not aware of any application ever having been made to the Home Office for a cutting operation to be performed without anaesthetics. He did not know what Dr. Thane in his evidence was alluding to except inoculations. He was sure, at least from his own personal knowledge, that he was not alluding to a cutting operation performed without anaesthetics. What he referred to in his *précis* was a statement which he had made again and again in the public press, and which had never been challenged, that no cutting operation on an animal had ever been performed in this country without anaesthetics under the administration of the Act. The antivivisection party had repeatedly alleged—in fact, it was their whole stock-in-trade—that cutting operations were done in this country on animals without anaesthetics. It was part of their business to show that; and, as he had stated, under the Act it was impossible, because no application had ever been made to the Home Secretary to perform such operations. Asked about the experiments of Dr. Crile, the witness said the conclusion at which Dr. Crile arrived was that there were changes in the blood pressure of a marked character—changes which they ought to contend against in operations on man. On its being put to him that among those experiments was one of cutting out both cerebral hemispheres, and his being asked if there was an analogue to that on a human being, Sir Victor Horsley said, No; he did not say that all the experiments of Dr. Crile exactly reproduced what was done on a human being. If one wished to analyse any physiological function one must introduce into the experiment various operative procedures to exclude the functions of different parts, which was not necessarily a part of the procedure of an operation on a human being. Asked about tearing out the brachial plexus, he said that was to imitate a well-known fly-wheel accident not uncommon in factories. Asked as to crushing the foot before the corneal reflex was abolished, the witness said that tarsectomy reproduced the crushing of the bones of the feet. He should say that a railway accident also correctly represented the experiment they described. As to crushing the testes and other parts, that was a most important question, because castration had frequently been followed by fatal shock. Asked about pouring boiling water on to the intestines, he said he quoted the injection of scalding steam into wounds of the liver. Asked if the temperature at which that steam touched the liver would be the same as that of boiling water applied to the intestine, he said, Practically. One got the nozzle of the injector close to the liver; the whole object of the procedure was to produce instant coagulation at a scalding temperature. The jet of steam was produced by a boiler under pressure. Asked if he thought that the temperature applied to the organ by that means would be that of 212° Fahrenheit, he said, No, not absolutely, but practically the same thing. One must produce a scalding effect, and the question was whether it would produce special shock. In reply to further questions, he said that to his mind, as he had said about the use of the word "terrible" or "disagreeable," and so forth, if an animal was anaesthetized all those expressions were absurd. If the animal were not anaesthetized it would be quite another question. He agreed that if Dr. Crile's experiments had not been performed under anaesthetics they might be described as outrageous, because they were armed with anaesthetics, and it would have been the infliction of terrible pain—well, wickedly. The whole idea was to investigate conditions of shock as they arose in operations on the human being, and no one would dream of applying such procedures to a human being in a conscious and sensitive state. In reply to further questions, he said he knew of the experiments which Dr. Watson performed in America of dropping dogs from a height. He could not at the moment call to mind whether they revealed any new conditions. Asked if they were justifiable, he said, Certainly. He could not say whether they were performed under anaesthetics, but he should say that the mere dropping of an anaesthetized dog from a height in order to obtain concussion of the spinal cord would be a very useful experiment, if it were followed up by an anatomical investigation of the spinal cord, and he could see no objection to it whatever, if the dog was anaesthetized. Asked if those experiments were severely condemned by the BRITISH MEDICAL JOURNAL, he said, Quite possibly, if the dogs were not anaesthetized. Asked, with regard to the thyroid and myxoedema, whether clinical investigation had prior to his own experiments suggested a close relationship between the diseases and defects of the thyroid gland and the cretinoid condition of a human being, he said, No. Sir William Gull, in speaking of those patients as cretinoid, had no pathological investigation of the case before him. The only pathological investigation that was made at all was Dr. Ord's. The word "cretinoid" was used by Sir William Gull simply from the appearance of the patients, but he had no idea whatever that it had anything to do with the thyroid gland. Dr. Ord's case was the first case in which the thyroid gland was shown to be degenerated as well as other organs in the body. All the clinical work was subsequent to Schiff's experiments in 1859. The witness's were not the first experiments on the subject. He agreed that before 1885 Hirsch had pointed out that goitre and cretinism were a pair of diseased types closely related in their pathology and etiology, and that Hilton Fagge had contributed some cases on sporadic cretinism occurring in England as long ago as 1871. Asked if Hilton Fagge had not pointed out there that there was no thyroid gland to be detected, he said he did not remember that, but of course the connexion between sporadic cretinism and goitre had been pointed out a great many years before that. Asked if he remembered Curling's work in 1850, in which he published two cases of absence of the thyroid body connected with defective cerebral development, where he showed that there was not

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

the slightest trace of the thyroid body in those cretins, he said, No, but it was quite possible. Many cretins, on the contrary, had a very large thyroid. Asked if Fagge had not suggested that the presence of goitre was protective against cretinism, he said he dared say, but the clinical knowledge on the whole subject was in a complete fog. Asked if through the fog there was not emerging a notion that cretinism was combined with absence of the thyroid gland, he said, No; he did not think so at all, because many cretins had enlarged thyroids. Asked if Curling himself in 1850 did not call attention to the fact that cretinism was combined with absence of the thyroid gland, he said he did not know. He did not know who did the first transplanting of a sheep's thyroid into the human subject. In reply to further questions, he said he was on a Departmental Commission that inquired into tuberculosis in animals. Of course he accepted the view that the tubercle bacillus was the cause of tuberculosis. Sir William Collins then asked about his minority report of one on that commission, as follows:

Tuberculosis is notorious, even among the laity, as a disease which is transmitted from parent to offspring. This is a fact with which cattle breeders are specially familiar, and which finds strong expression in the evidence attached to this report. Further, this generally-received truth has been completely confirmed by the results of scientific investigation, as is also duly set forth in this report.

That was to say (continued Sir William Collins) that the result of scientific investigation, prior to the report of that Departmental Committee, led to the conclusion that tuberculosis was hereditarily transmissible? Sir Victor Horsley replied, Yes; that was because Baumgarten had found the bacillus in the ovum in a rabbit, and Johns in a newborn calf. Of course, if that occurred, clearly one could say that that individual, if the embryo developed, in spite of the bacillus, would be an instance of hereditary transmission. Asked if the hereditary transmission of tuberculosis was accepted by pathologists to-day, he said not in man, so far as he knew. As to animals, he did not know. But the question then before the Departmental Committee was the question whether certain infected prize bulls communicated the disease, and the evidence before the committee was to the effect that they did. On its being put to him that he suggested that there should be legislation to prevent breeding from those tuberculous animals, he said his minority report went a great deal further than that. The reason why he was in a minority of one was because he proposed the extirpation of the disease by stamping out and by compensation of the owners, but none of his fellow-committeemen would report in favour of compensating the owners. He agreed that there was also the point of legislation with regard to preventing breeding, but that was only a side issue compared with the enormous question of compensation. Sir William Collins then asked in regard to the evidence given by Sir William Fergusson before the last Royal Commission. In their report that Commission said:

Sir William Fergusson thinks that experiments which involve suffering are carried to a greater extent than they need be, and that there is continued and useless repetition. His own opinion is much less favourable to these experiments than it was when he was young, because he had much less grasp of the subject at that time. The more mature judgement of his later years has led him to say to himself that he would not perform some of the operations now that he performed in his earlier years. He thinks if the public really knew what was actually going on in this country at this time they would expect an interference on the part of the Crown and Parliament.

Sir Victor Horsley said he was perfectly well aware of that statement of Sir William Fergusson. He always thought that it was a most unwarrantable statement for any man to make—from his knowledge, at any rate, of what went on in a medical school. He did not know to what Sir William Fergusson was referring in the matter of detail, and he was not sure that the Commission pressed him on that point at all. The operations in his early days of which he spoke were performed before anaesthetics were used. Sir William Fergusson was a student in Edinburgh, he supposed, about 1830, and the description of his time, and the share that he took in resurrecting bodies, and so on, was what was called a romantic story. He could not see any romance in that kind of thing, but he saw a great deal of romance in that answer of his, so far as medical school work was concerned in 1876. He did not believe there was an atom of truth in his innuendo that the physiological medical schools of this kingdom were committing cruelties by unnecessary experiments on animals. In reply to further questions, he said the actual use of chloroform as an anaesthetic agent was discovered by Simpson inhaling it himself and giving it to his friends. In reply to Sir William Church, he said it was a total misconception that the essential feature of Listerism was the use of the spray. Asked if he remembered in what sort of cases Lord Lister first made use of his antiseptic treatment, he said he thought it was in regard to compound fractures, in which his carbolic putty was used in order to exclude organisms. To protect the wound and make it into practically the same condition as if the skin had not been broken, he covered it over with this antiseptic putty. The spray was not used at all in those days. Asked if he would leave cold-blooded animals entirely outside the Act, he said, Yes, practically it came to this, that the frog, which was a cold-blooded animal, was used enormously in teaching physiology, yet everything could be shown on a frog after its decapitation. He thought that it was unnecessary to anaesthetize fish. He was not at all sure that they suffered pain. There was no pain without consciousness; consciousness in man was undoubtedly associated only with the complete function of the cerebral cortex. As one descended the animal kingdom, one at last arrived at the fish, which had no cerebral cortex at all. He did not, therefore, regard fish as possessing either consciousness in any way analogous to what they called consciousness or sensitiveness to pain. The snake had a very thin semblance of a cortex. He did not believe that the invertebrate kingdom were at all conscious of pain. If one applied a powerful stimulus to an invertebrate, it shrunk up undoubtedly by a reflex or defensive act, but he did not think that that act was accompanied by any pain—certainly nothing in the least degree approaching what they had any idea of. Asked if he would not apply an Act of Parliament dealing with cruelty to animals to cold-blooded animals and invertebrate animals, so that, for instance, if some boys were found torturing a frog they ought not to be punished, he said he did not agree to that. That point had already been frequently discussed in connexion with the moral right of wild animals; he meant as regarded the statutes. He did not think that point really bore upon his position at all. He was referring now to legislation affecting the performance of an experiment for the sake of gaining knowledge. Asked if he agreed with Professor Langley that it would be better to have a separate certificate for cold-blooded animals, like fish, frogs, etc., he said he could not see the advantage of it, because there again there was the question of the certificates, and he might point out once more that his proposed amendment of the Act would provide the Home Secretary with absolute knowledge of whether it was going to be done on a warm-blooded animal or a cold-blooded animal, and, if belonging to either class, which animal. All those details would be furnished to the Home Secretary, and consequently there was no reason to construct a special certificate for cold-blooded animals; it would be unnecessary. One must draw the line somewhere for the purposes of a statute, and therefore he thought the best line would be between the warm-blooded animals and the cold-blooded animals. In reply to the Chairman, he said anaesthetics were sometimes administered to animals through a tracheal tube, and for that purpose it was necessary first to perform the operation of tracheotomy. Asked if in those cases the animals were anaesthetized when they opened the throat, he said, Yes, of course.

Further Evidence of the Hon. Stephen Coleridge.

The following is an abstract of the evidence given by the Hon. Stephen Coleridge when recalled, as far as it relates to the evidence of Sir Victor Horsley. An abstract of Mr. Coleridge's evidence in reply to that of Professor Gotch was given in the BRITISH MEDICAL JOURNAL of May 9th, 1908. Mr. Coleridge said he wished to deal with the accusations of a personal nature made against him as a man and a gentleman. The Chairman pointed out that if Sir Victor Horsley had made a statement of fact relating to the witness personally which was untrue, or which required explanation, confining it to the matter of fact, they might think him entitled to give it, but it must be confined to that. He added that Mr. Coleridge had

himself given evidence for three days, and in the course of that evidence he had felt it his duty to attack a good many people. The witness said he never said a word against Sir Victor Horsley. He went on to say that he had been accused by Sir Victor Horsley of "deception," "constructive misstatement" (Q. 15,728), "gross misrepresentation" (Q. 15,905), and "dishonesty" (Q. 16,052), while his methods of controversy, it was insinuated, were ungentlemanly (Q. 15,729, 16,011), and had been subjected to "exposure" (Q. 15,978). Those involved the question of the witness's bona fides about the publication of the catalogue of instruments for vivisection, upon which he wished to defend himself; they involved a statement that he made a false statement to the Commission about the meeting at the Mansion House for the purpose of instituting a Pasteur Institute in England. Sir Victor Horsley was wrong in his facts. Mr. Coleridge said his society had never said a word against muzzling; on the contrary, he had always regarded the muzzle as the opposite treatment to Pasteurism, and had supported it. He supported Mr. Long in his muzzling order. It was absolutely false that they got up meetings against muzzling. Sir Victor Horsley had mistaken his society for the Canine Defence League. He did not attribute anything more than that. Speaking about the catalogue which he said was referred to in the evidence of Sir Victor Horsley at Question 15,729, he said Sir Victor had stated that 50,000 copies had been sent out, and then he said:

It was corrected, as I said before, in 1902, and Mr. Coleridge stated to this Commission, at question 10,559, that where he was shown anything which was wrong he liked to correct it. I may say, in parenthesis, that he has never corrected anything which he has been shown repeatedly was incorrect, nor has he ever apologized.

Mr. Coleridge's comment on that was that it was perfectly true that a Dr. Grünbaum, of Liverpool, wrote to him, and said that certain items in the translation of the catalogue were, in his opinion, incorrect, but he said that they were not of any very great moment. The witness, therefore, sent his letter on to the gentleman who translated the catalogue for him, and asked him what his view of it was. The translator wrote back that he did not agree with Dr. Grünbaum's suggested corrections, and as the person who translated it for him was appointed by the librarian of the British Museum, at the witness's request, he presumed that he was an impartial man. He had never even seen him, and he did not see why he should correct his catalogue at the instance of a licensed vivisector, but he printed his letter and published it. The witness said he did what any gentleman ought to have done, and left undone nothing that a gentleman ought to have done. The next point was that he stated in one of his opening statements that he prevented a public meeting being held at the Mansion House for founding a Pasteur Institute. With regard to that Sir Victor Horsley, at Question 15,594, said:

In the first place, Mr. Coleridge informs the Commission that that meeting was prevented by his society from taking place. It is not so. The meeting took place at the Mansion House.

And so forth. Then he said it was not called for the purpose of establishing a Pasteur Institute in England, but for other purposes. Therefore, Sir Victor Horsley gave him the lie there. His position was this. It was originally intended to be a public meeting, and the witness and his friends were determined that if it was to be a public meeting they would take care that the opposition was properly represented. Accordingly, he went himself to the Lord Mayor, and told him that if it was a public meeting the Lord Chief Justice of England and Cardinal Manning proposed to speak in opposition to the resolutions whatever they were, upon which the Lord Mayor said it was not a public meeting; it was a private one, and the witness said:

Very well, if it is a private meeting the Lord Chief Justice and Cardinal Manning can have no part or lot in it. You can have as many private persons as you like, and pass any resolutions that you like, and there will be no opposition from anybody.

From that moment it was changed from a public meeting to a private meeting. He could prove this by the *Daily News* of July 1st, p. 7, which was perfectly impartial. The Chairman said he was glad to hear of a paper that was impartial upon such questions. He should hardly have classed the *Daily News* as such. The witness said it was only an advertisement of the meeting, and it was twenty years ago, and they were not antivivisectionists then. Asked if it was advertised as a private meeting, he said, Yes. Asked to read the advertisement, he said this appeared in the *Times*:

The Lord Mayor's Secretary, replying to a letter from G. Candy and Co. (I think that should be G. Candy, Q.C.), informs him that at the meeting which is called at the Mansion House on Monday next to discuss the subject of the prevention of hydrophobia no one will be admitted who has not received an invitation.

That proved that it was a ticket meeting. The Chairman said in that sense he saw what the witness meant; he thought it was not a private meeting. He agreed that the Lord Mayor would particularly dislike presiding over a meeting at which there were likely to be signs of disturbances. Therefore, said the Chairman, nobody would be admitted without a ticket. The witness replied that was exactly the history of it. It was turned from a public meeting into a private one, and his statement was that he stopped a public meeting being held. In reply to Mr. Ram, he agreed that Sir Victor Horsley thought that there had been a public meeting. In reply to further questions, he quite agreed that when the meeting did assemble they had made up their minds not to push a Pasteur Institute for England, and no such proposal was placed before the meeting. The Chairman said that was not quite what Sir Victor Horsley said. Mr. Coleridge had said:

"The intention was to hold a meeting the object of which was to start a fund," and so forth; and Sir Victor Horsley said, "The object was not as he states it; it was not called for the purpose of establishing a Pasteur Institute in England; it was called," and then he quotes, "for the purpose of hearing statements from Sir James Paget and other representatives of scientific and medical opinion with regard to the recent increase of rabies in this country, and as to the efficiency of the treatment discovered by M. Pasteur for the prevention of hydrophobia."

Surely, said the Chairman, it was a very small point whichever way one considered it. The witness said that the original intention, until the antivivisection party intervened, was to have a public meeting to promote a Pasteur Institute for England, and by their intervention it was changed into a private meeting, with a perfectly harmless resolution, saying that M. Pasteur was a wonderful man, and they would like to subscribe and give him a testimonial, to all of which they had not the slightest objection. Then Sir Victor Horsley said they opposed the muzzle. He said at question 15,597:

Immediately this point of universal muzzling was raised the antivivisection party, Mr. Coleridge's society in particular, entered upon a virulent campaign against us.

The witness said he had mistaken them altogether for the Canine Defence League. His society had never opposed the muzzle. Asked if it had never put forward the view that rabies was not a disease, he said they were against Pasteurism; they regarded the muzzle as an excellent antidote to Pasteurism, and they thought they had proved it to be successful. It had kept both Pasteurism and rabies out of the country. They were entirely in favour of universal muzzling. It had nothing to do with any cruelty, and was an admirable method of stamping out an abominable disease. The next point was what Sir Victor Horsley said about the Antivivisection Hospital, at Question 15,592:

I have placed upon my *précis* a very brief reference to the Antivivisection Hospital, because the money for that hospital was originally collected many years ago, by Mr. Coleridge's society in part, on the idea that medical practice could be conducted without any reference to vivisection.

There was nothing unkind in that. Mr. Coleridge merely wanted to point out that it was true from February 7th to October 6th only in the year 1897, and on October 6th he proposed the following resolution with success to the council of his society:

That, inasmuch as the object of this society is to maintain a constant fight against existing vivisection, and not to erect institutions from which the practice shall be excluded, the council declares that its committees should not actively participate in the project of founding and maintaining an antivivisection hospital.

So that really almost as soon as he had any authority with the society at all he passed this resolution, saying that they would have nothing to do with the promotion of an antivivisection hospital; therefore it was a little

unfair to put it upon them in that way—not that he did not feel an extremely friendly interest in the Anti-vivisection Hospital, but he did not think that it was a proper thing for his society to have it actively participating in it. The Chairman pointed out that Sir Victor Horsley only said that they did in part collect the money. The witness replied, Yes, for a few months only. The Chairman said it was hardly worth while making that correction. Then at Question 15,733 Sir Victor Horsley said:

The Home Office had not given me, to use Mr. Coleridge's words, unrestricted leave to do experiments when I liked, where I liked, and what I liked.

The witness said he had never used those words in his life, or anything like them. On its being put to him that he did say that Sir Victor Horsley was allowed powers which he ought not to have been allowed, Mr. Coleridge said he only quoted what he found in the yearly report, and he found that Sir Victor Horsley had permission to vivisect where he chose. He also deduced that he could not be inspected under the Act in an unregistered place. He thought that statement was absolutely correct. Sir Mackenzie Chalmers asked if he accepted Sir Victor Horsley's account of what the restrictions were now that he had read it. Mr. Coleridge said, Yes; the restrictions put upon his licence to vivisect where he liked had nothing to do with the point. His point was that he was allowed to vivisect where he could not be inspected. He did not say that what was done was illegal. He objected to what was done because it placed Sir Victor Horsley outside the possibility of inspection. He still said that what he said was perfectly true—namely, that he could vivisect where he chose, and that he could not be inspected. And what he said was perfectly true about Sir Victor Horsley's leave being withdrawn from him just at a time which synchronized with the appointment of that Commission. The Chairman said he thought his suggestion was that Sir Victor Horsley was receiving an extraordinary favour, and that the Home Office was going outside its duties, if not its powers, in doing what it did. Mr. Coleridge replied that he protested against it, and had protested two years before in vain, but the appointment of that Royal Commission synchronized with the withdrawal of that permission. The Chairman said that, although he did not think the witness did use the very words which Sir Victor Horsley put into his mouth, his evidence did very much alter the complexion of the matter as stated by the witness. Mr. Coleridge said he did not see that. He stood to every word that he said, and he had said nothing which was not carried out by the published document from the Home Office. He did not attack Sir Victor Horsley. He attacked the Home Office for giving him permission. Proceeding, Mr. Coleridge said there was what he considered an extremely offensive answer at Question 16,011 with regard to Sir Victor Horsley's evidence at the trial of Bayliss *v.* Coleridge:

Your lordship asked him, "Was it your evidence he was quoting from?"—that is, I was quoting from—and Sir Victor Horsley says, "It is my evidence he professes to be quoting from, but from my experience of Mr. Coleridge, and especially after what he has admitted to this Commission, I accept nothing that he produces in the way of evidence of what I have said unless I have the context. . . . Mr. Coleridge's was quite a false rendering of my evidence in the way he presented it to the Commission." I have brought the evidence here to present it to the Commission, that they may see for themselves that I was absolutely right. I should like first of all to know what he means when he says, "especially after what he has admitted to this Commission." What have I admitted derogatory to my accuracy or to my honour to this Commission, I want to know? I think it is a most offensive phrase. Now as to the question itself. This is the question and answer: "Question 834 (Mr. Rufus Isaacs:) Would it be possible to perform the experiment or the demonstration which we know took place if the dog had been conscious?—No, absolutely impossible unless the dog had been fixed up with all manner of apparatus to absolutely fix every bone. You can fix an animal with apparatus of that sort" (pointing to the operating board).

That was the evidence the witness quoted verbatim, and he really failed to see what he meant. If Sir Victor Horsley did not like the evidence he could not help that. Asked if he was reading the shorthand notes of the trial, he said, Yes. The Chairman said Sir Victor Horsley went on to say:

I showed the Lord Chief Justice what I meant by fixing every bone with a rod passing through the bones. Of course it is an absurd position, you observe. It is impossible to fix every bone in an animal.

Mr. Coleridge said there was no report of that demonstration to the Lord Chief Justice in this report. Continuing, the Chairman quoted Sir Victor Horsley:

I said, "You can fix an animal with apparatus of that sort (pointing to the operating board). That is the answer to that—you can fix an animal on that board, and he pointed to it; they had it in court."

Mr. Coleridge said that was right. The Chairman went on:

Are not those words, "You can so fix an animal," what he says that he said, following on?—"You can so fix an animal with apparatus of that sort (pointing to the operating board)"—That is in the report.

19,928. Does he go on to say, "That is the answer to that"?—No, those are my words.

19,929 Then the inverted commas are put wrong?—Yes, that is what I said to you.

19,930. Then it is a mistake in inverted commas being put here as if those words were also part of his evidence?—Yes, that is what I said. That is all I have to say about that. I fail to see any justification for that kind of language.

Coming next to Dr. Crile's experiments and the letters to the surgeons, Question 15,712, the question was:

"He says, 'We are told in the control experiments, as well as in this, the dog was not under full anaesthesia.' Do you know by whom he is told?" and Sir Victor Horsley says, "No, that is Mr. Coleridge."

Mr. Coleridge said it was not, it was Dr. Crile. He would read it out of the book:

In the control experiments, as well as in this, the dog was not under full anaesthesia. In the former the animal struggled on application of the flame; after the injection of cocaine he did not. There was apparently blocking of the sensory impulses from the paw.

In the big book it was at pages 118 and 119 in "Surgical Shock." Sir Victor Horsley attributed to him what was found in the book. The next point was at Question 15,728—that was the most important thing of all:

In 1899 Mr. Coleridge attacked Dr. Crile at the Home Office, and, after he had been fully informed by the Home Office as to the meaning of this term "complete anaesthesia," he then wrote to several surgeons and asked them a question about incomplete anaesthesia, and he informed this Commission that he wrote exactly in the terms in which the Home Office had written to him. As a matter of fact, he did not write exactly in the terms of the letter of the Home Office, because he omitted the all-important sentence which defined this term "incomplete anaesthesia." And the result was that he deceived these surgeons into thinking that it was suggested that operations were done upon human beings in hospitals without adequate narcosis.

Mr. Coleridge said if they could follow him he could show them exactly how wrong he was about this. The letter received from the Home Office had these words:

But short of this is the condition termed by Dr. Crile "incomplete anaesthesia," in which the creature is quite insensible to pain, although the corneal and other reflexes can still be obtained.

That statement was a statement given to him by the Home Office as a statement given to them by their advisers, and it contained in it the whole question at issue between him and the Home Office. It stated that the condition of the corneal and other reflexes being obtained was a condition of insensibility to pain. That was the crux that he wished to ascertain; therefore, when he wrote to the surgeons he naturally did not tell them that the Home Office thought that it was a condition of insensibility to pain, but he asked them what their opinion was about the condition of a human being when corneal and other reflexes could still be obtained; and it was in answer to that question that they wrote him those letters. The suggestion that he deceived them was wholly false. He asked them practically whether they agreed with the Home Office in saying that that was a condition in which pain was absent, and their answers were tantamount to saying that they disagreed with the Home Office. The only alternative to his mind was that, if it was suggested that his letter deceived the doctors, it must be suggested that he tricked them into telling the truth, which they would not have told if he had not tricked them, which he thought was a strange thing to suggest about the heads of a great profession. He did not make the suggestion. He thought their answers were perfectly true when they told him

that they did not commence operations upon patients in hospitals until the corneal and other reflexes were abolished; and that was what they told him, and there was no deceiving in the matter at all. His motive in asking the question, and their motive in making the reply, had no bearing whatever upon the question. Their answer to the question was either a true answer or an untrue answer. He maintained that it was a true answer, and the allegation of deceit against him was wholly unfounded. He did not think he need say any more, except this:

At Question 15,588 Sir Victor Horsley says: "Mr. Coleridge's society, to take that alone, have collected from the public £86,000, and have not added one item of knowledge to us for the relief of suffering or the prevention of disease."

They were not a society for the collection of knowledge; they did not spend their money in that way. He said, in conclusion, that if, as the result of this Commission, inspectors were appointed who would look without protest on live dogs struggling while they were burnt with flames, the certain result would be that he for one, and, he believed, all the humane people of this country, would unite utterly to abolish what they regarded as an abominable wickedness. Mr. Ram said what was put against him was this:

Mr. Coleridge attacked Dr. Crile at the Home Office, and, after he had been fully informed by the Home Office as to the meaning of this term "incomplete anaesthesia," he then wrote to several surgeons and asked them a question about incomplete anaesthesia, and he informed this Commission that he wrote exactly in the terms in which the Home Office had written to him. As a matter of fact, he did not write exactly in the terms of the letter of the Home Office, because he omitted the all-important sentence which defined this term "incomplete anaesthesia."

The question Mr. Ram wanted to ask was if he received a letter from the Home Office in which there was a sentence defining the term "incomplete anaesthesia." The witness said, Yes, he did.

One of the last of these reflex movements to disappear is the blinking of the eyelids when the surface of the eyeball is touched, then called the "corneal" or "conjunctival reflex." But short of this is the condition termed by Dr. Crile "incomplete anaesthesia," in which the creature is quite insensible to pain, although the corneal and other reflexes can still be obtained.

Asked if in writing to the surgeons he omitted any sentence of that letter, he said, Yes; he left out that sentence that that was a condition in which they were insensible to pain. He did not call that a definition. On Mr. Ram saying that the allegation that he omitted a sentence of that letter, which sentence defined the term "incomplete anaesthesia," was correct, the witness said, No, he did not say so. He did not consider that that was part of the definition. That was an assertion that an animal, when its corneal and other reflexes were not abolished, was insensible to pain. He did not agree to that assertion, and he wrote to the surgeons for the purpose of ascertaining whether it was true or false. He admitted that the sentence omitted was one which Sir Victor Horsley considered did define the term "incomplete anaesthesia." He admitted also that that sentence, which he said defined the term "incomplete anaesthesia," did appear in the letter of the Home Office, but was not quoted by him in the letter which he sent on to the surgeons. Those words were left out because they were the issue between them. He never said in the letter to the surgeons that he was quoting the whole of the letter from the Home Office. He asked them one definite point: Did they perform operations on patients when the conjunctival reflex was still obtainable? Mr. Ram said there was only one last matter he wished to mention. The witness had sent him a letter, dated October 24th, in reference to his qualification of the word "pain" in his previous evidence. In reply Mr. Ram wrote to him and said that he would take care that that letter should come before the Commission, and that his correction should appear. The witness said that was so. The letter was then read as follows:

Dear Mr. Ram,—On reading over my evidence and considering it with due care, I cannot but feel that it would be unwise to qualify the word "pain" with any adjectives in my bill. I write to you to say this because under examination by you, at Questions 11265, 11266, and 11267 I said I would agree to add the word "serious." This, I think, was a somewhat hasty concession. The addition of the word "serious" or "severe" before the word "pain" would, I sincerely fear, lead to the legal permission of pain to an amount I could never think morally justifiable.—Very faithfully yours, STEPHEN COLERIDGE.

Note.—Mr. Coleridge subsequently requested the Commission to allow the following extract from an article by Mr. Edwin Wooton in the *Dublin Journal of Medical Science for 1885* (vol. 80, p. 290) to be added here, as he had intended to call the attention of the Commission to it while dealing with the question of the attitude of some vivisectors. The extract is as follows:

I, some time since, began the study of experimental phenomena in the brute world in relation with tuberculosis and other major diseases, and have continued it until the time of writing. It is a pursuit full of difficulties—legal, social, and scientific. The investigator is hampered by absurd anti-vivisection laws, to evade and defy which is his simple duty; and he is annoyed by the sentimentalism of weak-minded neighbours or acquaintances who may become aware that he is engaged in research, and who regard him as a nineteenth century "six hundred three score and six."

(To be continued.)

LYNN THOMAS AND SKYRME FUND.

TWELFTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Subscriptions May 29th to June 5th.

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MEDICAL NEWS.

THE Harben Lectures before the Royal Institute of Public Health will be given by Professor George H. F. Nuttall, F.R.S., in the theatre of the institute, Russell Square, on Wednesdays, June 10th, 17th, and 24th, at 5 p.m. Further particulars will be found in the advertisement columns.

THE annual general meeting of the Medical Officers of Schools Association will be held at 11, Chandos Street, on Wednesday, June 17th, at 3 30 o'clock. Mr. John Hayward will open a discussion on the recent memorandum passed by the Board of Education to Local Education Authorities *re* the medical inspection of elementary schools.

IT is doubtful whether many medical men have sufficient leisure to pursue the apiarian cult, but the happy few may be interested to learn that a large gathering of well-known bee-keepers is expected at the Franco-British Exhibition on June 25th. It has been organized by the British Bee-Keepers' Association, and will be attended by representatives from the Colonies and the Continent. Lord Avebury will preside.

THE exhibition connected with the International First-Aid Congress was opened at Frankfort-on-Main on June 6th. At that time 900 members from different parts of the world, including China and Japan, had entered their names. The representatives of Great Britain include Mr. H. Cunningham, of the Home Office: Sir Francis Oppenheimer, British Consul-General, representing the British Government: and Lieutenant-Colonel Macpherson, of the Royal Army Medical Corps, representing the War Office.

IT has been arranged to hold the Triennial Dinner of the Old Epsomian Club at Epsom College, on Tuesday, July 7th. The cricket match against Surrey Club and Ground will be in progress. The Head Master and Mrs. Smith Pearce will entertain the club at tea, about 4.30: the Council will entertain it at dinner at 7 p.m. Owing to the accommodation, the number of those dining must be limited to 50. All members intending to dine must send notice before Thursday, June 25th, to Mr. Edred M. Corner, Hon. Secretary.

A MEETING took place at 20, Hanover Square, on Thursday, June 4th, to discuss the proposed dinner to the French medical men who are expected in England in July. Dr. Theodore Williams occupied the chair. It was decided that a dinner should be given at the Exhibition on Thursday, July 16th, to 150 of the French visitors. The subscription was fixed at a sum of not less than two guineas to defray the expenses of the subscriber's own dinner and that of a French guest. The following executive committee was elected: Drs. Ogilvie, Leonard Williams, Leonard Mark, and Dundas Grant (Treasurer), and Mr. Macleod Yearsley. Gentlemen who wish to take this opportunity of showing hospitality are requested to communicate with a member of this committee without delay, as the banqueting accommodation at the Exhibition is limited to 300. As the visitors include some ladies, it was decided that a limited number of English ladies should likewise be admissible to the dinner.

ON June 2nd Dr. J. C. T. Nash gave a farewell luncheon at the Palace Hotel, Southend, to the members of the South Essex Division of the British Medical Association. Among those who accepted the invitation were: Dr. Grosvenor Hinks, J.P., Chairman of the Division; Dr. W. Cardy Bluck, Honorary Secretary for the Division; Drs. Allott, Bridger, Cleveland-Smith, J P., Day, Forsyth, Grayson (M.O.H. Rochford District Council), Hodgson, Silva Jones, John Hopkins, L. Gordon Hopkins, Leigh, Maxwell, Morgan, Norman, Poole, Pooler, Raper (M.O.H. Shoebury) Sellors, Smellie, Tombleson, Watson (M.O.H. Leigh) Whitcombe-Brown, and Weakley. Dr. Hinks proposed the health of Dr Nash in a felicitous speech. Dr. Nash, in reply, referred to the success of the Association in the district and paid a tribute to the work of the Chairman, Dr. Hinks, and the Honorary Secretary, Dr. Bluck. Apologies for non-attendance were received from Sir James Crichton-Browne and Dr. Thresh, County Medical Officer of Health for Essex. Dr. Nash proposed the "South Essex Division," for which Dr. Bluck responded. Subsequently Dr. Nash toasted Dr. Pugh, the new Medical Officer of Health. On the evening of the same day Dr. Nash entertained the staff of the Public Health Department to dinner at the Palace Hotel.

PROBABLY few capitals have increased lately so much as Rome, and the British Consul, Mr. Morgan, in his recently issued report to the Foreign Office, points out that the troubles with which the city has lately been contending are due more to the needs of its rapidly enlarging population than to any monetary crisis. The house accommodation for the lower middle and labouring classes is utterly inadequate, while articles of food are exorbitant in price and the supplies insufficient. The sanitary condition of the city, however, continues to improve, and the death-rate compares very favourably with other Italian towns. Thus, while Naples shows a death-rate of 25, and Venice of 28 per mille, Rome has only 21 2, which in a crowded city of some 700,000, speaks well for the work of the sanitary authorities. Malaria no longer occurs in the city, the few cases recorded in the hospitals being imported from the country. The energetic measures employed in the Campagna for the stamping out of the disease have been fully described in these columns, and the stringent laws in connexion with them will find ample justification when the Agro Romano is once more at the height of agricultural prosperity. The most unsatisfactory feature of the report is the record of increasing emigration. The population of Italy appears to be shifting to the New World at the rate of 750,000 per annum, and of these the district of Rome supplied 18,000. Rome more than ever depends upon the foreign visitor nowadays.

THE third International Congress on the Care of the Insane will be held at Vienna this year from October 7th to 11th. Professor Obersteiner is the President of the Organizing Committee; the General Secretary is Professor Alexander, Pilcz, xiii/12, Vienna. In the list of the "International Propaganda Committee" we fail to find any representatives of England or Ireland, but Scotland is represented by Dr. W. W. Ireland, of Musselburgh; Dr. J. H. Macdonald, of the Govan District Asylum, Hawkhead, Paisley; and Dr. Alexander Urquhart, of Perth. Other countries seem to be taking a more active interest in the congress, Portugal, for instance, being represented by a committee of twelve. Austria-Hungary, Belgium, France, Italy, Germany, and Brazil each have large committees. The United States, however, seems not to have one. The programme includes a general report on the existing provision for the care of the insane in different countries, by Dr. Bresler, of Lublinitz, with special reports on the lunatic asylums of Hamburg, by Dr. Buchholz; on the provision for criminal and dangerous lunatics at Amsterdam, by Dr. J. Deventer; on the care of the insane in Portugal, by Drs. M. Lemos and J. Mattos of Oporto; on the best type of provision for the care of lunatics in hot countries, by Dr. J. Moreira of Rio de Janeiro; on the finances of lunatic asylums of Lower Austria, by Dr. Starlinger of Mauer-Oehling; and on the provision for criminals who become insane in prison, by Dr. Rixen of Breslau. Other subjects on the programme are the medical treatment of lunatics; progress in the technical part of establishments for the insane; lunacy administration; the care of lunatics and insurance; lunacy legislation in different countries; the provision for the care of idiots, epileptics, and degenerates, and for lunatics in armies. A report of the International Committee by Dr. Frank of Zurich, recommending the foundation of an international institute with the view of studying and preventing the causes of mental disease, will be discussed. Arrangements are being made for a number of excursions and other festivities in connexion with the congress.

SOCIETY FOR THE DESTRUCTION OF VERMIN.—The Society for the Destruction of Vermin was formed in January, 1908, to organize a national movement for the extermination of vermin noxious to man. Among the vermin included within the scope of the Society's operations are rats, mice, sparrows, ticks, fleas, mosquitos, and flies. Owing to the proof that the rat is the main agent in diffusing plague action is being taken against this animal in various countries, as, for example, in Denmark, where a special law has been enacted with the view of destroying these rodents. The fly, also, is receiving attention. In New York a special committee has just handed in its report giving some very valuable suggestions as to the best way of dealing with the fly question. In this country reports have been drawn up by the Public Health Committee of the London County Council and the Liverpool School of Tropical Medicine. A Scientific Committee is in process of formation for the purpose of collecting and sifting information. The following gentlemen have already agreed to act on this Committee: Sir Patrick Manson, K.C.M.G., M.D., F.R.S.; F. M. Sandwith, M.D., F.R.C.P.; Frank E. Beddard, F.R.S.; R. T. Pocock, F.Z.S.; E. E. Austen, F.Z.S.; James Cantlie, M.A., M.B.; Sir T. Lauder Brunton, M.D., F.R.S.; Carl Prausnitz, M.D.; Louis W. Sambon, M.D., F.Z.S.; W. P. Pycraft, A.L.S., F.Z.S.; Professor John Chiene, C.B., M.D., F.R.S.E.; F. V. Theobald, M.A.; Professor H. E. Annett, M.D., D.P.H.; Professor F. Hobday, F.R.C.V.S., F.R.S.E.; Robert Newstead, A.L.S., F.E.S.; A. E. Shipley, M.A.; C. J. S. Thompson, F.R.S.M.; A. V. Sewell, M.R.C.V.S.; Kenneth Goadby, D.P.H., M.R.C.S.

British Medical Journal.

SATURDAY, JUNE 13TH, 1908.

THE CORONER AS INQUISITOR.

THE ways of the Coroner for Westminster and South-West London, like those of the Heathen Chinee, are peculiar. Mr. Troutbeck seems to think that his official mission is to be a Grand Inquisitor of medicine and surgery. He holds inquests in a manner that is all his own, deliberately setting aside the medical practitioner whose evidence would be most valuable for the elucidation of the matter which is the object of his "quest," and getting his information from a *fidus Achates*, who, from the circumstances in which he makes his investigation, can only report on the state of things which he finds after death, without first-hand knowledge of the causes which led to its occurrence. This being the case, it is not surprising that the verdicts given by juries under the direction of Mr. Troutbeck are not seldom founded on erroneous data. It is all very well for a coroner to pose as a *malleus medicorum* and to win cheap applause from low-class newspapers, but his primary duty in the discharge of his office is to elicit the truth and thus supply a safeguard to the public against possible crime. Mr. Troutbeck's attitude of open hostility to the medical profession is directly inimical to the interests of the public. Not only does he hold inquests in a manner that is calculated to defeat rather than to promote the ends of justice, but he insists on holding them in cases where no legal inquiry is necessary, thus causing needless expenditure of public money. He makes no secret of the fact that he wishes to extend the jurisdiction of his office to a degree that is not justified either by the law or by zeal for the protection of the public. In regard to the law, a glance at the Coroners Act of 1887 is sufficient to show that the powers of a coroner are strictly limited. In Section 3 of that measure it is provided that an inquest shall be held where a coroner is informed: (1) That the dead body of a person is lying within his jurisdiction: and (2) that there is reasonable cause to suspect that (*a*) such person has died a violent or unnatural death; or (*b*) has died a sudden death, of which the cause is unknown; or (*c*) that such person has died in prison or in such place or under such circumstances as to require an inquest in pursuance of any Act. This Act leaves the question whether an inquest shall be held largely in the hands of the medical profession. Have they broken faith with the public to such an extent as to deserve the strictures which Mr. Troutbeck thinks fit to pass upon them? So far from this being the case, it seems to us that in granting a certificate which avoids a wholly unnecessary inquest the medical practitioner obeys the precepts laid down by Mr. Justice Stephen in 1884. In summing up a case to a jury, the learned judge said: "The coroner has not an absolute right to "hold inquests in every case in which he chooses to do so. "It would be intolerable if he had power to intrude "without adequate cause upon the privacy of a family "in distress, and to interfere with their arrangements "for a funeral. Nothing can justify such interference "except a reasonable suspicion that there may have "been something peculiar in the death, that it may "have been due to other causes than common illness." We may remind our readers that a former coroner for Middlesex was censured by Lord Cross, when Home Secretary, for insisting on holding inquests on Sir Charles Lyell and Mr. William Acton, whose deaths, though sudden, were perfectly natural. At that time coroners claimed the right to sit on any case of sudden death under the Act of Edward I, repealed by the existing Act. Mr. Justice Stephen's ruling is still good law. It has not been modified in any way by the Act of 1887.

Mr. Troutbeck, as is well known, is a law unto himself in the matter of inquests. He thinks that sufficient inquiry is not made as to deaths at the present time, and holds that it must rest with the coroners to decide on the facts of each individual case whether a public inquiry is necessary. Amongst a number of reforms suggested by him in an address delivered to the Medico-Legal Society in June, 1906, he proposed that a certain number of medical investigators should be appointed to whom every death should be notified. They should take the place of the present registrar of deaths, and it should be their duty to ask such questions as they thought proper of the friends. If there were any circumstances of a nature to suggest doubt, it should be their duty to report the case to the coroner forthwith. Mr. Troutbeck, however, forgets the trifling fact that this proposition has not yet been acted on, and that his action is still governed by the Coroners Act.

It may be remembered that his method of conducting inquests and his attitude towards the medical profession were in 1903[1] brought under the notice of Lord Halsbury, then Lord Chancellor, by a Committee representing the British Medical Association, the South-West London Medical Society, the Medical Defence Union, and the London and Counties Medical Protection Society. A number of cases showing the unsatisfactory nature of inquests held by Mr. Troutbeck were then cited; but, though the Lord Chancellor replied that his impression was not in favour of the coroner's practice, he did not see his way to remove Mr. Troutbeck from his office. The present Lord Chancellor seems to consider himself powerless to deal with a coroner who is obstinate in his opinions, and whose interpretation of the law may be erroneous. Hence the coroner has gone on his way unchecked. Encouraged by this, and sighing, like Alexander, for new worlds to conquer, he has now gone outside his province as laid down by the law, and has virtually announced his intention of holding what are inquisitions rather than inquests in the legal sense on all cases of death after operation. He took the first step in his new campaign last week by holding an inquest on a case of cerebellar tumour in which Sir Victor Horsley had operated at the Bolingbroke Hospital. A report of the case will be found in our medico-legal column. It was one in which there could be no doubt whatever as to the cause of death; there was nothing in the least degree suspicious in the circumstances; the patient would certainly have died after a short period of life, growing ever more and more wretched, and the operation was performed by a surgeon of world-wide reputation. On this case Mr. Troutbeck, stretching the powers given to him by the Coroners Act to breaking point, chose to hold an inquest, thus arrogating to himself and to a chance collection of small tradesmen, the right of pronouncing judgement on highly technical

[1] See SUPPLEMENT to the BRITISH MEDICAL JOURNAL, July 16th, 1904, p. 52 et seq.

matters as to which neither he nor they can have the knowledge requisite for a correct decision. As Sir Victor Horsley pointed out in the letter to the *Times* which is reproduced at p. 1460, the reason assigned by Mr. Troutbeck "would apply to the case "of any patient who died after receiving surgical or "medical treatment from a registered practitioner, "because it might always be contended that the giving "of some drug or adoption of some surgical procedure "was an 'unnatural' event." Mr. Troutbeck complains that deaths after operations are not brought to the notice of coroners. The prejudiced spirit in which he holds his inquisitions is shown in the following sentence from a letter published in the *Times* of June 10th: "So long as registrars are instructed to register deaths "due to operation as natural, so long will those deaths "remain without inquiry. The objection to publicity "shown by Sir Victor Horsley is significant. Why "should it exist? Is it because some operations would "never be undertaken at all if there was a possi- "bility of the surgeon having to publicly explain why "he operated and why his patients died." Again, the coroner says: "The power of dealing with other people's "lives by means of surgical operations should not be "allowed to continue uncontrolled and without some "provision being made in the interests of the public. "The people have a right to know the full cause of "death in those cases where their relatives have had "the misfortune to die after an operation."

A man exercising judicial functions who allows himself to speak in this way would seem to any man of common sense unfit for the position which he holds. But "the law allows it"—as it allows a coroner to censure a doctor in his absence, and to receive as evidence statements from a so-called expert which to a pathologist are not only untrue but absurd. For a convincing proof of this we need go no further than Mr. Troutbeck's letter to the *Times*, where he "gives "away" his pathologist in a manner that would be laughable if the matter were not so serious. Mr. Troutbeck speaks of the need of some provision being made for the interests of the public. Does he seriously think that it is to the interest of any one stricken with an illness which must inevitably prove fatal unless relief can be given by surgical art that an attempt to relieve him should be prevented by the probability of a public inquiry being made into all the circumstances if the attempt should be unsuccessful? Such an inquiry might also be painful to the feelings of the patient's friends, and it is easy to conceive of circumstances in which matters involving the reputation of a family would be dragged into the light of day, merely to please the whim of an inquisitive coroner. Another point seriously affecting the public interest is that no surgeon will perform an operation which may offer the sufferer the only chance of life, if failure makes him liable to have judgement passed on his skill by an absolutely incompetent tribunal. We maintain that if, in otherwise desperate cases, only two or three lives are snatched from death, or a few persons are saved from suffering, that alone fully justifies operations in which the patient, or those who have the right to act for him, deliberately elects to take his chance. In the very case in question, the unfortunate lady's medical attendant, who, in accordance with Mr. Troutbeck's practice, was not called as a witness, has stated, in a letter to the *Times* which we are unfortunately unable to publish this week, that when it was his painful duty to acquaint her with the fact that blindness would supervene, she said she would submit to anything rather than loss of her sight. But that is just the kind of case in which surgeons will refuse to interfere if they are to be haled before the squalid bar of Mr. Troutbeck. It is true the verdict of an ignorant jury, misdirected by a coroner who knows nothing of medical science, is a matter of little moment to a surgeon of reputation, but it may do an infinity of harm by preventing people whose life is threatened by deadly disease from having recourse to the only possible means of relief. The thing has become a scandal, and we once more call the attention of the Lord Chancellor to the manner in which a petty official exceeds his province and abuses his position to insult and paralyse the efforts of a profession which exists for the public good, and whose self-sacrificing labours have already done so much to prolong life and relieve suffering.

THE HEALTH OF NATIONS.

To any one who can look back over fifty years the growth of public medicine is one of the most remarkable features of the nineteenth century. The prevention of disease, which was a rudimentary branch of knowledge in the early part of the century, became before its end a recognized science, on which great nations could confer for common ends. The twentieth century will, we firmly believe, in spite of a recent failure in regard to sleeping sickness, see the great Powers of the world uniting to fight the common enemy disease, and spending, we trust, some of the treasure now lavished on armaments in the more beneficent work of preventing epidemics and mitigating human suffering. This is pretty certain to come about, not from any moral growth among statesmen, but, as Dr. Paul Faivre[1] has recently suggested, because the modern facilities of transit have so changed commercial relations that trade is bound in its own interests to bring the nations together in the common function of preventing the carrying of disease by men or merchandise from one port to another. Out of this motive has grown the international prophylaxis, of which Dr. Faivre treats in his book. Defence against imported maladies was at first the particular business of each separate country, to be carried out according to its own knowledge and ideas. This was a cumbrous, variable, and ineffective method, and common action for a common object against a common foe has naturally superseded it as the scientific plan.

The credit of issuing invitations to the first International Health Conference belongs to France. The meeting was held at Paris, and consisted of the Powers whose shores touched, or whose interests were connected with, the Mediterranean. It considered the prevention of cholera, plague, and yellow fever. This was in 1851, and the list of the Powers represented—namely, Austria-Hungary, the two Sicilies, Spain, the Papal States, France, Great Britain, Greece, Portugal, Russia, Sardinia, Tuscany, and Turkey—is a vivid reminder of the political changes since that time. The deliberations of the conference resulted in a convention and regulations for all the ports of the Mediterranean and Black Sea; but unfortunately only three Powers accepted it, and two of these only for a time. But, in spite of this want of success, as Faivre says, this conference created the idea of international action for public health, of which it was the first example.

A second conference was held in Paris in 1859; but the Italian war broke out, and the time was out of joint for such useful work as national sanitation. In 1866 cholera, which has so often been the potent stimulus of health work, gave the French Government, always true to the idea of international co-operation, a fresh chance, and a conference of seventeen of the chief

[1] *Prophylaxie internationale et nationale.* Par le Dr. Paul Faivre. Paris: J. B. Bailliere et Fils. 1908.

Powers was held at Constantinople. It sat for eight months, and formulated rules for the prevention of cholera and its spread from the East. The sound principle was laid down that precautionary measures, in view of a possible epidemic, are much less disturbing to trade than the disturbance which follows an invasion of cholera. The adoption of the measures devised at this conference were fruitful of good results as regards India and the Red Sea and Mediterranean.

In 1874 a conference was held at Vienna at the suggestion of Russia; its object was to revise the work done at Constantinople and, if possible, to establish "a Permanent International Sanitary Commission." This great idea unfortunately was not adopted; the time was not ripe. The gathering of the delegates of the twenty-one States represented, however, started the movement for the abolition of quarantine. It was too much, perhaps, to expect all to agree to so novel an idea, but the northern Powers did, and the conference placed "medical inspection" on a level with "quarantine" as a method of combating an epidemic.

In 1881 a conference was held at Washington which consisted almost wholly of diplomatists, and was directed to the organization of a system of international notification as regards cholera and yellow fever. It suggested two valuable ideas: First, a system of international warning and information of the occurrence of epidemic maladies, and, secondly, a common system of health papers for all ships and ports.

Four years passed, and then a conference was held at Rome, on the invitation of the Italian Government, which consisted of sanitary experts called together to make uniform the sanitary measures of different countries and render them more effective, and at the same time less prejudicial to commerce. Its greatest work was to make practically an end of quarantine and to substitute for it isolation and medical inspection. It is true that all the Powers did not agree to these new methods, but the conquering idea had been promulgated, and henceforward mediaeval methods were doomed.

In 1892 a conference was held mainly in connexion with sanitary measures on the Suez Canal and Egypt, but it extended its survey and is memorable as producing the first Convention which was agreed to by all the Powers concerned. This really began the era of Sanitary Conventions. The two following years saw assembled at Dresden and Paris smaller conferences dealing with more restricted objects, but each resulting in a convention accepted by the Powers.

In 1896 the plague at Bombay stirred the sanitary conscience of the nations, and a conference was held the following year at Venice, which revised and improved the regulations for preventing the spread of plague and other diseases from the East. It soon became apparent that the conventions thus made in 1892, 1893, 1894, and 1897 were in need of some general consideration and codification, and for this purpose, in 1903, at the suggestion of the Italian Government, a conference of twenty-four States was held at Paris. This was the last great international conference held on the general aspects of public health, and it did excellent work in connexion with plague, cholera, and yellow fever, and the uniform methods by which the different countries could prevent their spread. It also reaffirmed the proposal of 1874 that there should be created "an inter-"national office of health," and that it should be situated at Paris. The terms of convention based on the proceedings of this conference were ratified by the Great Powers in 1907, but the International Office of Health has not yet been started. All the questions treated in these many deliberations are dealt with at length by Dr. Faivre, and they form a most instructive history of the gradual growth of international sanitation. Every port medical officer will find in the pages of his book valuable information, and surgeons in the mercantile marine will gain useful guidance as regards the principles on which ships and merchandise are treated.

In the second part of the same book there are admirable chapters on national, as contrasted with international, prophylaxis, and a very elaborate description is given of the French system of coast protection. There is a map at page 169 showing the elaborate manner in which the whole French littoral is divided into districts, with one head controlling centre at the principal port and health agencies of greater or less power at others. In connexion with the Health of Ports there is an informing section on the destruction of rats, or, as Dr. Faivre has it, "deratisa-"tion." He describes various apparatus for the purpose, and tells how at Marseilles, a port from its connexion with the East especially liable to the introduction of plague, a special department is at work for the bacteriological study of all rats killed in ships or in the docks, and is a regular part of the routine work of the port. There is much more in the book which we cannot touch on in the space at our command. It is all well and carefully done, and will repay study on the part of those interested in the practical hygiene of ports, as well as those who study the broader subject of the health of nations. Both sets of readers may draw the moral—that if great States guided by distinguished statesmen are so slow in following the teachings of science, we must not be too impatient with the sanitary authorities of provincial Britain.

THE SOCIALIZATION OF MEDICINE.

MEDICINE has, as was inevitable, come within the purview of those Laputan philosophers whose sole idea of social reform is, in every sphere of activity, to replace individual effort by the State. The medical profession is to be organized on Socialist lines; the doctor is to be a State official. As Dr. F. Lawson Dodd, one of the apostles of the new gospel, plainly puts it, "Competition "leads to an unhappy development of collective bargain-"ing, whereby the club doctor, in return for a regular "practice, obtains a sweated wage, which has been "calculated at an average of 10.60d. per attendance." The remedy, we are told, is a co-ordinated State medical service. "Only sixteen out of sixty-two counties have "medical officers employed for their whole time. "Many boroughs and districts have only part-time "officers employed at inadequate salaries. In view of the "growing recognition of the importance of preventive "medicine, no effort should be spared to extend their "work and to improve the conditions of those engaged in "it. It is on this line that progress must be made. With "this Local Government Service will be incorporated "the medical side of Poor Law, as soon as the guardians "are abolished. Already, as Mrs. Webb has shown, the "two services overlap. In the future the community "will demand that the resources of medical science "should be at the disposal not only of the millionaire "at one end and the pauper at the other, but of all. "This can be achieved by having public State hospitals, "and every medical man attached to the hospital of his "district." We quote from the *Fabian News* of June, 1907, to show that this easy way of making glorious summer of the winter of our discontent has already been put forward in good set terms. It is, if we may believe

whispers that for some time past have been making themselves more and more plainly heard, the essence of the recommendations to be submitted by the Royal Poor Law Commission when that collection of what Napoleon would have called *idéologues* can agree on a report.

If this be the case, we venture to say that the egg on which the Commission has been sitting so long is already addled. In the first place, the medical profession would not consent to be turned into a mere branch of the Civil Service. In the second place, even on the impossible assumption that it allowed itself to be beguiled into such a course, the remedy would be useless. Professional organization is most necessary; but, following Johnson's famous advice and clearing our minds of cant, let us recognize that the organization must be self-protective—that is to say, in plain terms, it must be, in the first place at least, for the benefit of the profession. All the collectivist schemes that have come under our notice leave out one trifling but none the less essential factor. No allowance is made in them for the free play of human nature. If a man possessed of exceptional skill in the art of healing chooses to sell that skill at his own price, people, whether collectivists or individualists, who have need of his help and can pay his price, will go to him. It is just as impossible to reduce all men to a dead level of knowledge or skill as to make them equal in stature and in strength. And the man who can do something better than other people will inevitably do more work and get more for his work than those of less ability. Even in the socialistic dispensation of the future, as sketched out by M. Anatole France in his novel *Sur la Pierre Blanche*, the fatal admission is made that "our surgeons, our medical "women, our chemists, know well how to profit by "their work and their discoveries so as to increase "their enjoyment to a disproportionate extent. They "insist on having assigned to them airships of sixty-"horse power, palaces, gardens, and immense parks.' "These people," he goes on to say, "are for the most "part very eager to seize the good things of life, and "lead a more splendid and fuller existence than the "middle classes of the old era." This passage shows that M. France, unlike most Socialists, recognizes the fundamental facts of human nature; it is strange, therefore, that he does not appear to see that the admission knocks the bottom out of the whole scheme.

A still more fatal objection to socialism in medicine is that it would stop all progress. If there is no motive for exertion, "who would fardels bear, to grunt and "sweat" in earning a livelihood for himself and a provision for his family? Again, it may safely be assumed that socialism would not do away with the insolence of office or the oppressor's wrong. Many of our readers know what it is to serve the State and the municipality. From time to time examples of the tyranny of persons in authority are recorded in the Journal. Corporations will stoop to acts of meanness of which individuals would be ashamed to be found guilty. Let us give an example of the fate that would often be the portion of a doctor under a socialistic régime. We take it from the *Progrès Médical* of May 16th. A doctor appointed to inspect infant schools in a certain department one day received a letter from the Subprefect, requesting him to examine the sanitary conditions of slaughterhouses and send in a detailed report of the results of his examination. He ventured to point out that this was rather outside his functions, and asked what fee would be paid for the work. The official reply was that there were no funds provided for such a payment. In these circumstances the doctor not unnaturally declined to undertake the task. Soon afterwards he received an intimation from the Prefect that he was relieved of his appointment. Our contemporary calls the attention of M. Clemenceau to this high-handed piece of tyranny; but whether this particular act of injustice is rectified or not, the doctor will always be a marked man in the registers of officialdom for the independence which he showed.

On the whole we are strongly of opinion that although socialism as applied to medicine might save some of the weaker vessels from shipwreck, it would not tend to raise the status of the profession, and it would not make for the good of the community. It is beginning to be realized that the progress of hygiene is attended with the disadvantage of burdening the community with an increasing number of useless lives, and tending in some measure to sap the strength of the race by lowering the standard of vitality and of bodily, mental, and moral power in those by whom it is propagated. The socialization of medicine would, in our opinion, have a similar effect on the knowledge and skill which go to the practice of the healing art. It may be added that socialism, so far from stamping out quackery, would probably lead to its increase.

INSURANCE FOR MEDICAL MEN.

When the Workmen's Compensation Act came into force in July of last year we took the opportunity of calling attention to the peculiar risks liable to arise in respect of accidents not only to domestic servants, but in the case of all those even remotely engaged in the conduct of a practice. With a view to securing for medical men the most favourable terms of insurance, a committee was formed, called the Medical Insurance Committee. This committee, after the fullest inquiry, entered into arrangements with the Guardian Assurance Company, for the purpose of covering these risks and for the issue of all kinds of insurance policies for life, personal accident, fire and burglary. This committee is able to offer special terms to insurers, and, as we anticipated, many of the profession have taken advantage of the scheme. Although barely twelve months have elapsed since the Medical Insurance Committee commenced the agency, several claims for death and disablement have been made and settled. The nature of the claims goes to prove how necessary it is for prudent men to safeguard themselves against all personal liability. A doctor's groom in cutting chaff got his fingers badly mangled, septic poisoning supervened, and death followed. The man leaving a widow and children, under the Act these had to be compensated in a sum of £187. In another case a servant fell and sustained a compound dislocation of the left ankle, which ultimately necessitated amputation below the knee. Here, had the doctor not been insured, he would have been personally liable under the Act for the payment of 8s. 10d. weekly so long as the disablement lasted. Claims have also arisen in the case of assistants and others engaged in the work of a practice. These instances are recited to show how peculiarly medical men are liable under the Workmen's Compensation Act, and after an experience of twelve months we feel convinced that it is most unwise on the part of any man to neglect to protect himself against these risks. To those who have not yet insured we would refer them to page 9 of the advertisements. There will be found a form which may be filled up and forwarded to Mr. Guy Elliston, Secretary of the Medical Insurance Committee, 6, Catherine Street, Strand, W.C., who will be pleased to furnish full particulars.

WORKMEN'S COMPENSATION INSURANCE.

As more than a year has elapsed since the Workmen's Compensation Act, 1906, came into force, it is probable that many of the insurance policies taken out in 1907 have expired or are on the point of running out. We take this opportunity of warning our readers of the danger of allowing them to lapse. There have, indeed, been but few cases in the courts during the last twelve months, but the number of reported decisions is no guide to the number of accidents in respect of which compensation has been claimed and paid. In bona-fide cases the insurance company pays the bill, and that is an end of the matter: but although the courts have not been asked to construe the Act on many occasions, the trend of the decision has certainly been to extend the scope of the employer's liability. Take, for instance, the question of liability for accidents happening to "casual" workmen. The master, according to the Act, is not liable for an accident to a casual, unless employed in his trade or business. Casual employment is not defined, but it has been held that a charwoman and a window cleaner attending at regular intervals are not casually employed. Another point has been brought out during the past year. It is that where a servant who has many masters is injured compensation is payable on the basis of all the wages earned. So a charwoman might have 2s. 6d. a week from one employer, but her total wages might be £1. In case of injury resulting in total incapacity, one unfortunate employer might have to pay her 10s. a week for life! To avoid any such risk it is surely worth while to pay a few shillings each year.

WELSH MEDICAL DINNER.

THE Fifth Welsh Medical Dinner was held at the Criterion Restaurant on Friday, May 29th. Mr. Edmund Owen was in the chair, and about a hundred were present, including representatives from Bath, Bristol, Harrogate, Birmingham, Sheffield, Blackpool, Manchester and Liverpool. Sir John Williams was unable to be present owing to a meeting of the Committee of the Library of Wales at Aberystwith; Sir Richard Douglas Powell and Mr. Henry Morris were absent owing to duties in connexion with their respective offices as Presidents of the Royal Colleges. Sir Isambard Owen was prevented from attending by an interesting event in his family; and the Chancellor of the Exchequer, Mr. Lloyd George, wrote expressing his regret at his inability to be present owing to the fact that he was presiding at a Congress of Churches. The festivity was a great success and showed the interest which many practitioners take in such medical gatherings. After the customary loyal toasts, "The Medical "Profession and the Medical Faculty of the University "of Wales" was proposed by the Chairman. He dwelt upon the development of the Medical Faculty of the University of Wales and on the representatives of the various Regulating Bodies—the Royal College of Physicians of London, the Royal College of Surgeons of London, the Council of the British Medical Association, the London University, and others—who have been selected. Last year Sir Isambard Owen had outlined the very high degree of medical training which would be required. Every student would be obliged to take a Science degree before proceeding to the Medical Degree of the University of Wales. The toast was responded to by Dr. A. Emrys Jones and Mr. Lynn Thomas, C.B. The toast of "The Guests" was proposed by Dr. D. C. Lloyd Owen, J.P., and responded to by Mr. Ambrose. That of "The Chairman" was proposed by Mr. John H. Morgan, C.V.O.; Mr. Owen replied in his usual happy manner. A gratifying feature of the dinner was the good professional feeling which pervaded the assembly. A charming musical entertainment was provided by well-known Welsh artists. The following officers were elected for the ensuing year: President, Dr. D. C. Lloyd Owen, of Birmingham; Treasurer, Dr. D. L. Thomas, Medical Officer of Health for Stepney; Honorary Secretary, Dr. J. Howell Evans, of London.

UNITED STATES ARMY MEDICAL SERVICE.

A MEASURE providing for the reorganization of the medical department of the United States army has been passed by Congress and signed by President Roosevelt. The medical department is to consist of a medical corps and a medical reserve corps, with a hospital corps, a nurse corps, and dental surgeons. The number of medical officers is increased. The medical corps will consist of 1 surgeon-general, with the rank of brigadier-general, who shall be chief of the medical department, 14 colonels, 24 lieutenant-colonels, 105 majors, and 300 captains or first lieutenants, who shall have the rank, pay, and allowances of officers of corresponding grades in the cavalry arm of the service. Assistant surgeons general are to be recommissioned, with the rank of colonel, as colonels: deputy surgeons-general, with the rank of lieutenant-colonel, as lieutenant-colonels; surgeons, with the rank of major, as majors; assistant surgeons, with three years' service, as captains; and assistant surgeons, with the rank of first lieutenant, with less than three years' service as such, as first lieutenants. Hereafter first lieutenants will be promoted to the grade of captain after three years' service in the medical corps. No person will receive an appointment as first lieutenant in the medical corps unless he has been examined and approved by an army medical board consisting of not less than three officers of the medical corps designated by the Secretary of War. No officer of the medical corps below the rank of lieutenant-colonel will be promoted until he has successfully passed an examination before an army medical board consisting of not less than three officers of the medical corps to be designated by the Secretary of War. For the purpose of securing a reserve corps of medical officers available for military service, the President of the United States is authorized to issue commissions as first lieutenants therein to such graduates of reputable schools of medicine, citizens of the United States, as shall from time to time, upon examination to be prescribed by the Secretary of War, be found physically, mentally, and morally qualified to hold such commissions, the persons so commissioned to constitute and be known as the Medical Reserve Corps. The commissions so given will confer upon the holders all the authority, rights, and privileges of commissioned officers of the like grade in the medical corps of the United States army, except promotions, but only when called into active duty, and during the period of such active duty. In emergencies the Secretary of War may order officers of the Medical Reserve Corps to active duty in the service of the United States in such numbers as the public interests may require, and may relieve them from such duty when their services are no longer necessary. Officers of the Medical Reserve Corps when called upon active duty in the service of the United States will be subject to the laws, regulations, and orders for the government of the regular army, and during the period of such service will be entitled to the pay and allowances of first lieutenants of the medical corps, with increase for length of service, but not to retirement pay nor to pension except for physical disability incurred while on active duty. In time of war medical officers of volunteers may be appointed in such numbers and with such rank and pay as may be provided by law. Another bill before Congress providing for an increase in the pay of officers, including medical officers, is expected to become law during the present session of Congress.

MEDICAL "PUFFS."

OUR attention has been called to the fact that in recording under the above title in our issue of April 4th, 1908, page 828, an instance in which a medical man, under the thin guise of a so-called scientific paper, had published an advertisement of a proprietary article, there was some want of clearness in describing the position of the two proprietary articles named. While we are not in a position to pass any judgement on the value of "hygiama" as a nutrient preparation, we must in justice state that the writer of the paper dealing with "visvit" is solely responsible for the misdeed on which we commented. His paper was practically a copy of another written by a respected member of the profession some years ago on "hygiama," the only difference of importance being the substitution of the word "visvit" for the word "hygiama." Since we reported the facts, some further notice of the publication has appeared in the *Berliner klinische Wochenschrift*, but in spite of the attempts on the part of the writer of the incriminated article to clear himself, on the part of the proprietors of "visvit" to disclaim any knowledge of the matter, and on the part of the *Heilkunde* to shift the responsibility to other shoulders, no satisfactory explanation has been forthcoming as to how the paper on "visvit" came to be published, and it remains obvious that the insertion of any paper of the kind must be damaging to all concerned.

THE DECAY OF HOMOEOPATHY.

AT the annual meeting of the British Homoeopathic Association, which was held on May 29th, the Honorary Secretary, Mr. Charles Stewart, read the annual report, which (according to the *Times*) stated that a substantial sum had been left by a lady with the object of founding a medical school where homoeopathy might be taught. The association and the Homoeopathic Hospital having joined forces in taking common action, it was to be hoped that they would continue to work together. The necessary accommodation for a medical school was now provided by the association in its new home at Chalmers House. For the complete equipment of the research laboratory £150 was required, as well as £250 per annum for maintenance. Because of the separation that had existed among the homoeopathic institutions of this country, the national progress of homoeopathy had been slow. Union and co-operation alone could make it what it should be—a national interest. They intended to labour to bring about the establishment of a British college for homoeopathy where professional post-graduate education would be permanently provided for, and to aid in every way the establishment of new dispensaries on a sound basis, as the easiest practicable new departure in homoeopathic service to the State. They were planning the necessary aid, moral and material, for the erection of cottage hospitals in towns wherever an association branch was started to see to the maintenance. Their work in original research would be carried on without vivisection. The chairman, Sir George Wyatt Truscott, said he had strong faith in the future of homoeopathy, because the members of the old schools were getting very dissatisfied. Sir George did not, as far as we can gather from the report, specify what the "old schools" were getting dissatisfied with, but we showed not very long ago that the homoeopaths themselves are dissatisfied with the condition of their sect—and not without cause. The dissatisfaction still exists, as is shown by a statement made in the *British Homoeopathic Review* for April that homoeopathy is out of fashion with the upper classes. In the May number the statement is repeated, and the question is asked: "May there not "be a tendency to hide our light under a bushel, and to "shrink from proclaiming with no uncertain voice the "faith that is in us? If a determined attempt to do this, "in season and out of season, were more generally made, "the tide of fashion would soon flow in our favour, "and homoeopathy would become a subject of general "interest. The dread, also, of consulting a homoeo-"path, because he is 'unfashionable,' would be "lessened for the timid, who at present shrink from "such independence of action. People are willing to "be cured by homoeopathy in secret, but ashamed to "let the fact be known. We are acquainted with some "intelligent persons of title in high life who are "interested to discuss homoeopathy, recount cures "effected by it, are largely believers in it, and some "even have a case of homoeopathic remedies which they "use, but in spite of all this they will not see or "consult a physician known to be a homoeopath." This admission is, to use Carlyle's phrase, "significant "of much," for it is the so-called upper classes that are the main supporters of all such systems of healing, such as homoeopathy and Christian Science, in which the imagination plays a large part. Such weeds thrive best in a rich soil.

MEDICAL EVIDENCE AND LEGAL INSOLENCE.

WE take the following account of a suggestive incident which took place in a London law court from the *Standard* of June 2nd: "During the hearing of a claim "for compensation at Shoreditch a doctor from the "Ophthalmic Hospital was called upon to give evidence "on behalf of the applicant. 'I have been called "'here with scant courtesy,' he said to Judge Bray. "'I have prepared a statement, and suppose I am "'here to answer questions. If you wish me "'to give expert evidence I must ask for a fee.' "'Stand down, sir,' said counsel for the applicant, "sharply. 'Scant courtesy! I think your attitude is "'scandalous. The complaints continually made about "'hospital doctors by poor people appear to be well "'grounded.' The doctor promptly folded his papers "and left the court, his honour allowing the incident "to pass without comment." His honour probably thought the matter no business of his. But what are we to say of the counsel for the applicant? Does he wish the public to suppose that he is a pure philanthropist who does good by stealth and blushes to find it fame? The doctor acted quite rightly, and, if any one's attitude was scandalous, it was that of the counsel who, having doubtless secured his own fee, tried to browbeat a member of another profession for refusing to give value without a consideration. As for the statement that "the complaints continually made "about hospital doctors by poor people appear to be well "grounded," we can only characterize it as a piece of gratuitous insolence. The least important objection to it is that it is untrue, and such a charge comes with a peculiarly ill grace from a member of a fraternity which, to say the least, has not the reputation of working for nothing. Such a statement could only have been made either in disregard of the truth or in ignorance. Whichever may have been the case in the present instance, we think it nothing less than outrageous that any counsel should be privileged to make in a public court statements which are absolutely false, and which reflect seriously on a body of men who, if they chose, like lawyers, to make a trade of their knowledge, would put the community to far worse inconvenience than it would suffer from the loss of all the counsel "learned in the law" who struggle in the small courts for custom.

THE "PROBABLE ERROR" OF A MEAN.

ALTHOUGH we do not generally discuss papers dealing with the purely technical side of statistical methods, it is perhaps desirable to call attention to a memoir by "Student," in the current number of *Biometrika*, on the

"Probable Error" of a Mean.[1] The problem was to determine the frequency distributions of the standard deviations of small samples drawn from a large population, and further to determine the distribution of the means of such samples expressed in terms of the standard deviations. The distribution of the whole population was assumed to be normal, but even with this simplification, the distributions of standard deviations and means were definitely "skew" for small samples. The theoretical curves were tested against actual values obtained by experiment, and found to agree well. Tables were then prepared by means of which it can be judged whether a series of experiments, however short, will allow of a definite conclusion being drawn, and consequently whether it is necessary to carry the investigation further. The value of such tables to the experimental worker is obvious, but it must be remembered that they can only, in strictness, be applied to cases in which the frequency distribution of the whole "population" of experiments is normal. Thus Greenwood has recently pointed out[2] that the distribution of phagocytic bacteria as seen in counts made for opsonic determinations are markedly skew, so that the distribution of the means yielded by small samples of such populations cannot be assumed, without further investigation, to agree with the formulae deduced by "Student." The whole investigation is an amusing illustration of the refined analysis and intellectual delicacy necessary for the interpretation of statistical material. A paper like this may instructively be compared with the farrago of nonsense submitted to the Royal Commission on Vivisection by Mr. Stephen Smith, and dignified by the title of "statistical evidence." The statistical exploits of Mr. Stephen Coleridge are, of course, such well-known contributions to the gaiety of nations that they do not stand in need of special mention.

ANAESTHESIA IN AMERICA.

WE are hearing a good deal about the danger of anaesthetics here at present, but we were under the impression that our American brethren, who mostly use ether, give thanks to God that they are not even as the benighted Britisher, who sticks to chloroform. From a debate which took place at the Philadelphia County Medical Society not long ago, however, it would appear that even in American hospitals things are not exactly as they might be in regard to anaesthetics. According to a report which appeared in the *New York Medical Journal*, Dr. John B. Roberts said there were no powerful drugs given so carelessly and recklessly and by such incompetent hands as general anaesthetics. While some American hospitals, particularly the smaller ones and those of a semiprivate character, had experts to give the anaesthetic, it was not, he thought, the common practice in American hospitals. Many operators seemed more interested in the mechanical details of the operation itself than in studying the availability of different anaesthetic agents prior to the operation, and watching the progress of the anaesthesia during its course. A great deal too much ether or chloroform was often given, and general anaesthesia was frequently resorted to when it was unnecessary. He held that the administration should stop long enough before the end of the operation to allow the patient to show evidence of return to consciousness at about the time the dressing was completed. While improvement in technique and asepsis had lessened the dangers of operative surgery, the same progress had not been made in care and discrimination in the use of anaesthetics. Inexperienced administrators and carelessness in giving the powerful drugs used for the purpose, he thought, were causes of death oftener than was perhaps appreciated. Fatal issues were probably not infrequently attributed to shock when they really were the results of the improper use of ether or chloroform. The damage was often one showing no marked symptoms at the time of the operation, but developed later from the poisonous influence of the anaesthetic upon the organism. The solution of the difficulty was to encourage the development of anaesthetic specialists and the insistence upon instruction in medical schools and hospitals of the new resident physicians. A considerable number of young men would devote themselves to the speciality if assured of a proper fee, which the patient should pay in addition to the fee given the operator. One-tenth the amount paid to the surgeon for the actual operation was suggested as a suitable fee for the anaesthetist. Dr. Theodore A. Erck said he knew of but one hospital in Philadelphia that employed a salaried anaesthetist, and the results were most satisfactory. Dr. Hare referred to the diminished danger in the present administration of ether or chloroform by the drop method, and thought the chief danger lay in what might be called the secondary stage, the period following etherization.

[1] *Biometrika*, vol. vi., p. 1 et seq.
[2] *Practitioner*, vol. lxxx, p. 641 et seq.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

THE number of candidates for election on the Council now amounts to eight, making the list complete, as no more applications can be received. Mr. Pearce Gould of the Middlesex Hospital and Mr. W. Harrison Cripps of St. Bartholomew's seek re-election. Taking the new candidates in order of seniority, Mr. George Eastes (Fellow, December, 1868; Member, January, 1864) is by thirteen years senior to the next, Mr. Bilton Pollard of University College Hospital (Fellow, June, 1881; Member, November, 1879). Mr. Eastes presents himself as representing general practitioners, who, we think, should certainly have a spokesman on the Council. Two candidates, Mr. Lockwood (St. Bartholomew's) and Mr. W. F. Haslam (Birmingham), took the Fellowship on December 8th, 1881. The former had been admitted a member in April, 1878, the latter a month later; Mr. Arbuthnot Lane of Guy's Hospital (Fellow, June, 1882; Member, November, 1877), comes next, whilst the junior Fellow, Mr. Lynn Thomas, C.B., of Cardiff, received the diploma of Fellowship in December, 1892; he had qualified in May, 1886. The professional merits of the candidates are well known to our readers; the two who seek re-election and three of the new candidates are distinguished surgeons in London schools. Wales, never represented before on the Council, sends up a worthy representative in Mr. Lynn Thomas, C.B., J.P., who bears a titular distinction and was senior surgeon to the Welsh Military Hospital in the South African war. Mr. Haslam, surgeon to the Birmingham General Hospital, is already connected with the College, being on the Court of Examiners. As there are twice as many candidates as there are vacancies, the contest is likely to be keen. A complete analytical list of the Council as it is constituted at the present date will be found in the JOURNAL of May 23rd, p. 1274.

THE PREVENTION OF EPIDEMIC DISEASE IN PRUSSIA.

WITH the development of bacteriology, the progress of epidemiology has proceeded by leaps and bounds, and each year places on the laboratory worker a greater strain and a more onerous responsibility; but not only the scientist has to keep abreast of the times, but the Legislature also has a task to fulfil, which, if left undone, endangers the health and life of citizens. Prussia has always regarded scientific work as a sound foundation on which new hygienic measures should be based. At first sight it would appear that the discovery of a causal bacterium of a disease would lead the diagnosis of that

disease to be made wherever it occurred, or if the bacterium could not be readily detected or obtained from the body of such person then some of the bacteriological methods, such as an agglutinating test, would soon banish faulty diagnoses. But the general practitioner, with his time fully occupied, and with no opportunity for practice in bacteriological methods or leisure to become acquainted with the more recent methods of technique, cannot undertake such work. Even the medical officer of health cannot be expected to remain an expert bacteriologist. It, therefore, becomes necessary that bacteriological diagnosis should be made at such institutions specially equipped for the purpose, and the way in which these can best be utilized must be learned from experience of years. Martin Kirchner has recently described[1] the development of the utilization of bacteriology in Germany. Towards the end of the "Eighties" Koch thought it would be possible to educate medical men in bacteriology in such a way that every one would be his own bacteriologist. The advantage which this would carry with it is obvious. But experience has shown that the idea is impracticable. In the cholera epidemics of 1892 to 1894, it soon became evident that the work had to be done by the Institute for infectious diseases and by the "Kaiserlicher Gesundheitsamt," and the loss of time and the great pressure entailed by these two institutions showed that Prussia would have to seek for more efficient means to carry out this task. Accordingly institutes were found in the centres of epidemics, and this scheme has developed steadily up to the present day. The real pioneer of the movement was Surgeon-General von Coler, who realized that in warfare bacilli might prove more formidable than bullets. Hygienic chemical laboratories were established and military surgeons were trained in bacteriology. The new legislation of 1900 and 1905 did not take this view in regard to the civil population, and, instead of making the State liable for the cost of such laboratories, placed the pecuniary and organizing responsibility on the local authorities. The State only introduced regulations with regard to what is known in Germany as "police" measures. This appears to Kirchner to be inconsistent, as he considers the State directly responsible for the establishment of a sufficient number of institutes to render the detection of infectious diseases easy in every part of the Empire. After describing the original plans drawn up for Prussia, he passes on to the interesting experiment of requiring the "Kreisaertze" (medical officers of health) to conduct bacteriological diagnosis work. The State allocated a sum of £3,750 for the equipment of the laboratories; but the plan failed, for obvious reasons. It was found that the cost of establishing laboratories in this way would be too great, and the work of the medical officers of health would be made impossible by the addition of this new duty. It was then determined to retain a few of these laboratories and to fit them out in such a manner that they might be able to serve comparatively large districts. In this new scheme the Prussian State has 10 medical examining offices and 7 medical examining "places," which are under "Medizinalverwaltung" (corresponding to a Board of Health), the various scientific institutes (numbering 11) the typhoid-examining establishments (5 in number), a hygienic laboratory in Gelsenkirschen, and a number of municipal laboratories. It is proposed that Berlin should be divided into four areas, each with one institute. The suburbs would be worked from the corresponding municipal hospitals. All these examining institutes would be regarded as public, and every medical man, whether private practitioner or public officer, would have the right of having a bacteriological diagnosis made for him free of charge. The State pays a sum of close on £7,500 yearly toward the cost of maintenance of the medical examining establishments, while the other governmental institutes derive a sum of £3,000 per annum from the local rates. The cost of the upkeep of the other institutes which are not "governmental" cannot yet be estimated, but must be considerably higher than those mentioned. The organization has provided for the free sending and returning of apparatus necessary for the diagnosis. Every chemist will keep these boxes, with swabs, pipettes, etc., for the various diseases, ready for use, and will supply to any medical man what is required. The post will carry the box, after the sample is taken, to the corresponding institute. A form is enclosed for certain clinical particulars, which the medical man has to fill up. Kirchner gives some further details of the organization and of the projects in connexion with it, and expresses the hope that by this means the recognition of all infectious illnesses will be rendered more easy and more complete than heretofore.

[1] *Berl. klin. Woch.*, February 17th, 1908.

APPENDICITIS AND OBSTINATE CONSTIPATION.

A STUDY of the comparative anatomy and morphology of the appendix would not suggest a herbivorous diet as panacea for the ills of that rudimentary and recalcitrant organ. On quite other grounds is it that Dr. Georg Hünerfauth of Homburg[1] recommends vegetarianism as a preventive of appendicitis. He attaches great weight to Lucas-Championnière's observations as to the heavy incidence of the disease among those peoples or particular communities whose dietaries include a heavy proportion of flesh food, but he interprets the sequence indirectly. He considers that the residue of a diet rich in animal proteid affords a better medium for pathological organisms than that of the vegetable regimen, and he believes the flesh food responsible for the determining factor, obstinate constipation. Dr. Hünerfauth quotes with hearty approval the opinions expressed by Dr. Tyson[2] in the BRITISH MEDICAL JOURNAL as to the necessity for preventive rather than curative measures, and agrees with him in recommending attention to the hygiene of the mouth, the regulation of the bowels; this to include not only aperients of the ordinary class, but a routine "spring-cleaning" of the intestinal tract by a course of waters and baths, and use of the "natural" method in defaecation, that is, supporting the abdominal muscles by pressure of the thighs—and, finally, an eclectic dietary. Without denying the important part played by constipation in determining an attack of appendicitis, it is nevertheless noteworthy that women, who, in civilized communities are so often constipated, do not suffer nearly so often as men from the disease. It is only fair to say that Dr. Hünerfauth is not riding a hobby: he even admits the futility of advice to adopt vegetarianism, in the face of domestic difficulties with the culinary department, of social demands and of personal ridicule, and he thinks comparatively few people brought up on a mixed diet are likely to find themselves kept in perfect condition without meat. His point is that adoption of an exclusively vegetable diet for a time, combined with suitable physical and hygienic measures, will re-establish the habit of regular and adequate daily evacuation of the bowels; that accomplished, it is open to the individual to resume the consumption of meat or not, as he finds it suits him. Aperient waters in the home Dr. Hünerfauth thinks useful, but he reserves the necessity for a regulation "cure" at a watering place for those obstinate cases in which perfunctory physical methods are futile and drastic purgatives only the motive power in a vicious circle.

[1] Die Appendizitisfrage und die Obstipation, von Dr. med. Georg Hünerfauth, *Therapeut. Rundschau*, 1908, p. 68.
[2] BRITISH MEDICAL JOURNAL, 1907, vol. ii, p. 1142, October 21st.

THE Prince of Wales, Grand President, and the Princess of Wales, Lady Grand President, of the League of Mercy—for the support of hospitals, etc.—will hold a reception at Marlborough House on Wednesday, June 24th, at 4 p.m.

THE Cavendish Lecture of the West London Medico-Chirurgical Society will be delivered at Kensington Town Hall by Sir William Whitla, M.D., on Friday, June 26th, at 81.5 p.m. The lecturer has chosen as his subject the etiology of phthisis. A conversazione will follow.

WE regret to announce the death of Deputy-Inspector-General of the Army (retired) Andrew Maclean, father of Kaid Maclean, which occurred on June 10th, at the age of 96. Surgeon-General Maclean took his degree at Edinburgh in 1833.

A MEETING of the Society for the Study of Inebriety will be held in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday, June 16th, 1908, at 4 p.m., when Mr. Robert J. Parr, Director of the National Society for the Prevention of Cruelty to Children, will open a discussion on "Alcoholism and Cruelty to Children." Each member and associate is at liberty to introduce a visitor.

THE King has been pleased, on the recommendation of the Secretary for Scotland, to appoint Dr. Samson Gemmell, Professor of Clinical Medicine in the University of Glasgow, to the Chair of Practice of Medicine in that University, vacated by the death of Sir Thomas McCall Anderson. Mr. Francis Mitchell Caird has been appointed Regius Professor of Clinical Surgery in the room of the late Professor Thomas Annandale.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Accidents in Factories.—Before the Whitsuntide recess there was an interesting debate on the remarkable increase in fatal and non-fatal accidents under the Factory and Workshops Act. Mr. Glover, who introduced the subject, referred to the increase of accidents and commented on the inadequacy of the present staff of factory inspectors to supervise the 255,000 factories and workshops coming under the Act. Mr. Seddon criticized the method of appointing inspectors and the nature of the examination. The Home Secretary defended the system of nomination and examination. After the initial examination, which was in general knowledge, the best men were appointed as probationer inspectors for two years to obtain practical experience in factory law and work and in sanitary science, and after a final examination were made full inspectors. He thought the system a good one and he paid a high compliment to the work of the inspectorate. As regards the accidents there was no doubt that the effect of the Workmen's Compensation Act was to produce a return of a larger number of accidents. This inflation of accidents was found both after the Acts of 1898 and 1906. It was only natural, but the serious part of it was as to how far the employers and workmen became rather more careless through the knowledge of insurance on the one hand and of compensation on the other. No amount of supervision by factory inspectors could check that. Factory inspectors could do, and had done, a great deal in insisting upon the fencing of machinery; but there came a point when their power failed. The figures for accidents had disturbed him last year. They were disturbing him more this year. All reported accidents in the decennial period 1899 1908 showed an increase of 116 per cent., and in the two years 1905 7 of 23.5 per cent. What disturbed him, too, was that the increase was specially serious in some trades. The non-fatal accidents in the two years 1905 7, for instance, showed an increase of 44.75 per cent. in the textile trades, which were supposed to be comparatively safe, and 46.07 per cent. among metal founders, while among the engineers the increase was 35 per cent, and among the workers with power-driven machinery 30 59 per cent. Fatal accidents were a more reliable guide, because they were not subject to the circumstances he had named, the fluctuations of trade, and so on. They showed an increase during the ten years 1899-1908 from 727 to 1,179, or 62 per cent., and the increase during the two years 1905-7 was 10.9 per cent. It was interesting to note that the increase in fatal accidents had been comparatively steady, but not considerable in amount. In 1898 the ratio per 1,000 factory workers of fatal accidents was 0.143, and last year it had risen to 0.193. Having regard to the increased efforts made to prevent accidents, this steady increase was very disappointing. Considering the precautions taken, there ought to have been an actual diminution in the number of accidents, but there had been an extraordinary increase in the number of non-fatal and a steady increase in the number of fatal accidents. He challenged inquiry into the work of the Factory Department of the Home Office, and, as regards the disquiet caused by the increase of accidents, he would gladly consent to appoint either a Departmental or a Select Committee. This offer was accepted, and the matter then dropped.

Cancer Research.—The Prime Minister stated last week, in answer to Captain Faber, that he was not, as at present advised, disposed to promise the assistance of this country to an international association for the promotion of cancer research. The Imperial Cancer Research Fund, which was supported by the Government, was doing all it could in the encouragement of individual intercourse and exchange of material between investigators of different countries.

Experiments on Living Animals.—The return of the number of experiments on living animals in the year 1907 under licenses was ordered to be printed by the House on Thursday in last week. Mr. Gladstone stated it ought to be ready for distribution soon after the recess. This would be a little later than the date of publication last year, but somewhat earlier than in 1906. There had been no avoidable delay. Difficulties were always liable to arise in the collection of a number of separate returns.

The University of Durham Bill, which has been just printed, was down for second reading on June 11th. It is introduced by Mr. Hills and backed by Sir W. Anson, Sir D. Brynmor Jones, and Mr. Hudson. In order to reconstitute the university, it proposes to appoint a statutory commission of eight, to hold office till 1909, or if continued by the King, till 1911. Their powers are to make statutes regulating the constitution of the university, and the powers and duties of its authorities and constituent bodies, and the disposition of its property in accordance with a scheme scheduled as an appendix of the bill. Provision is made for the affiliation to the university of the Sunderland Technical College. A council of the Durham colleges is to be set up to carry on the University College, and Bishop Hatfield's Hall as residential colleges. The Newcastle division of the university is to consist of the University College of Medicine, and Armstrong College, Newcastle.

The Course of Business.—The shortness of the recess at Whitsuntide was necessitated by the mass of Government business to be disposed of before the House can rise for its summer holiday. It is hoped that the end of July will see the Commons free for some weeks, with an autumn session to begin late in October. To realize this programme there will have to be strenuous work from now till July 31st. The first Friday after Whitsuntide will be occupied by the Home Secretary's Prevention of Crime Bill, and the following Monday and Tuesday will be devoted to the Old Age Pensions Bill, while the Coal Mines (Eight Hours) Bill may be taken on Wednesday, the 17th. The two Fridays, June 26th and July 3rd, will be occupied by private members' bills which have passed the committee stage.

Scotland.

[From our Special Correspondents.]

Edinburgh Harveian Festival.

The 126th Harveian Festival was held in the Hall of the Royal College of Physicians of Edinburgh, on Friday the 5th day of June, at 6.45 p.m., when the President, Dr. Clouston, delivered the Harveian oration on "Blood and Mind." He proposed to limit his remarks to the relationship of the heart, the blood vessels, the circulation, and the blood itself to the working of that portion of the brain cortex which subserved the function of mind. The highest level of the human brain cortex constituted the apex of the great pyramid of evolution, the base of which in biology consisted of the swarming millions of unicellular life. The blood was the common denominator of every organ, but to mind and consciousness its relationship was so absolute and instantaneous that it was more immediately essential to it than to any bodily function whatever. Very marked advances had also been made, and were every year being made, in regard to the blood current, its constituents, and even its chemistry. But when we passed further to the questions of how the brain cell selected its proper material from the blood, what that material was, how it was transformed into nerve plasm, what that nerve plasm really was, how the oxygen from the red corpuscles stimulated and vivified the cell action, how anabolism went on, and by what means katabolism was set up, we were still largely in the dark in regard to those vital chemical problems. The nature of nerve energy still eluded our seeking. The exact connexion between vital action in the brain cell and consciousness was, as Herbert Spencer said, "unthinkable." Yet this "unthinkable" connexion surely existed, and was absolute and inseparable. No one had been able to point out where reflex nervous action ended, and mental action of the lowest kind began, yet it seemed certain that they ran into each other, and that their essential quality as forces in Nature must be nearly allied. The links in the chain were blood, cortical cell action, consciousness. The mutual relationship of the mind and the circulation was a general fact that could not fail to have been observed from the time that men began to think about such matters.

The existence of the complete protection of the skull cap implied that the brain and its circulation *needed* such an envelope. The lymph in the cellular interspaces, with their free communications with the spinal canal, had the power to a large extent of counteracting the effects of the closed skull on the pressure of the atmosphere as it affected the cranial circulation. The circle of Willis was a special arrangement for the regulation of the intracranial circulation. The enormous blood supply to the grey matter, as compared with the white matter, and, indeed, as compared with any other tissue in the body except such blood glands as the thyroid and the spleen, demonstrated the supreme importance of the cortex in the organism. One-fifth of the blood stream of the body, it was calculated, passed into the cranium, and five times as much blood was supplied to the cortex as compared with the white matter. Hill's book on the cerebral circulation contained striking testimony to the peculiarities of the blood supply to the brain. Dr. Clouston had always believed that during the normal working of the mental centres, and in their abnormal working during acute conditions of mental disease, there were expansions and contractions going on in the brain cortex. The well-demonstrated fact that the whole cerebral cortex was anaemic and somewhat shrunken during sleep seemed a proof that such physical changes occurred.

The drainage system of the brain was also *sui generis*. Round every cell and capillary, along every arteriole, were channels for the immediate and complete removal of the chemical results of cell metabolism. The elaborate system of hollow spaces which existed in the brain and alongside of the spinal cord, all communicating with each other when the brain was in a normal condition, and all evidently providing compensatory fluid to take the place of brain shrinkages and anaemias, as well as to leave room for brain engorgements and expansions, were a special feature of the relationship between the circulation and the nerve action of the brain, not found in any of the other organs. The whole function of these spaces seemed to pertain rather to the physics of the brain than to its vital changes; but those special mechanical arrangements were, no doubt, essential to the normal working of the mind. It had now been demonstrated that the innervation of the smaller arterioles and the capillaries of the brain cortex was very abundant. The fact that the brain capillaries could enlarge and contract could scarcely be doubted by any one who had observed the condition of the brain *post mortem*, particularly in the insane, in cases of acute mania, certain cases of general paralysis, and the status epilepticus. The relation of the cortical capillaries to diseased action in the cells which they supplied was an intimate and essential one. Of course the vessel was mainly the servant of the cell, and not its master. The best illustration of this essential connexion between the diseased capillary and the diseased cell was to be found in general paralysis. During intense and sustained mental action the capillaries of the cortex were fuller and the heat of that part of the brain was greater. These two conditions might occur in limited areas. Deprivation of oxygen from heart or lung disease affected markedly the mental working of the brain cortex. The mental effects of the rarefied air in high altitudes had been noticed by all mountain climbers.

The effects of certain poisons when introduced through the blood into the protoplasm of the nerve cell were often most strikingly shown by their mental action. Although alcohol and all the other neurotic poisons varied in special effects according to the individual brain constitution, yet there was a series of general symptoms common to every poison. This certainly applied to ether, cocaine, nitrous oxide, chloroform, cannabis indica, opium, belladonna, and paraldehyde.

Dr. Rutherford McPhail, in 1884, found that in acute types of mental disease, in dements, and in general paralysis, the blood was deficient in haemoglobin, and in the number of red and white corpuscles. In the patients who improved in mind their blood also improved during their asylum residence, and when fully recovered it attained the normal standard. He also found that certain tonics, notably iron, quinine, and strychnine, had a marked effect in improving the quality of the blood.

All the great clinicians in psychiatry had directed attention to the condition of the blood in mental disease, and had connected abnormal conditions of the blood with the mental disturbances, but Dr. John Macpherson was the first to extend and define our views as to the great part which toxins and autointoxication played in the etiology of certain insanities. Batty Tuke, Ford Robertson, and Bruce had demonstrated the existence of vascular abnormalities and blood changes in many forms of insanity. The remarkable work of Lewis Bruce in his *Clinical Studies in Psychiatry*, and his more recent Morison Lecture, left no doubt in the mind of any thoughtful person that we were on the eve of still more important and definite discoveries as to the relationship of blood and mind. It was now agreed that the symptoms of mental confusion, vivid hallucinations, and delirium were in most cases due to the toxic effect of certain of the blood constituents on the brain cortex. Most were convinced that the gross changes in the blood vessels and brain cells to be found in syphilitic insanity, alcoholic insanity, general paralysis, and many forms of senile insanity were due to bacterial and toxic irritation carried to the brain cell through the blood. One of the most striking relationships between mental disease and blood changes with vascular disorder was seen in a case of stupor of the anergic type, the so-called primary dementia or the katatonic type of dementia praecox of Kraepelin, and the katatonia of Bruce. The vascular pressure was lowered in these cases. The capillaries had so lost their tone that the extremities were congested, blue, oedematous, and cold. Bruce said that in the early stages there was a persistent hyperleucocytosis. The "high-pulsed" melancholia was another interesting type. Here there was a pulse-rate of over 100, with increased vascular tension. It seemed certain that in many cases where a mere potentiality towards disease existed in the brain cortex this might be developed into an actuality by the irritative or depressive influence of abnormal blood circulating among the cells. The latest theory of epilepsy by Dr. John Turner, while it was founded on many carefully-tested facts, was that it was

due to "cortical irritation resulting from obstruction to the blood supply by intravascular clots." If epilepsy was so caused, the unconsciousness which accompanied the fit and occurred so frequently in *petit mal* without motor convulsion must also be so caused.

The morbid changes in the fluid part of the blood, in the haemoglobin, in the red cells, and in the various leucocytes which had been demonstrated to exist in the brain in such diseases as chlorosis, pernicious anaemia, leukaemia, Addison's disease, pancreatic disease, acromegaly, bone marrow disease, and neurasthenia, and in the infective fevers, were all accompanied by distinctive changes in mentalization, though in the standard works on those subjects extraordinarily little attention had been paid to these psychic symptoms. Yet in all of them the feeling of organic well being, that supreme test of health, was always lowered, the passions and most of the instincts were lowered in their exercise, the power of reasoning being so affected, especially in diseases like pernicious anaemia, that the patients were apt to be morbidly suspicious. Hallucinations were notoriously present in many of them, as well as mental confusion and inability for wonted work. In myxoedema and Graves's disease the mental disturbance often constituted insanity. Certain states of mind connected themselves with many ordinary bodily diseases. The irritability of the dyspeptic, the morbid suspicion and unsociability of certain consumptives, the misery and depression of the gouty during a fit, the lethargy of the man (saturated with malaria) newly arrived from the tropics, all showed the connexion between blood, blood vessels and mind. Then there was the morbid fear and the loss of courage in the man with cardiac disease. Climacteric melancholia often meant diseased vessels. On the other hand, the normally energizing mental cell had a marked effect on the quality of the blood and on the tone of the capillaries and arterioles for good. There could be little doubt that general mental activity was stimulated by certain constituents of the blood, while it was retarded by the existence of others. The consensus of opinion among brain workers tended towards the view that light animal foods, such as fish, milk, eggs, and fruits, were the diets on which they could do their best work.

Probably in time we should become skilful enough in the selection of our food to administer what would excite intellect or emotion or will power as we pleased.

The latest investigations seemed to show that it was not in its directly stimulating effects on the nerve protoplasm that alcohol acted, but its secondary effects in liberating subtle fluids from the nerve plasm which first stimulated and then paralysed both the nerve cell and its capillary. Tea stimulated without any paralysing or reactive effects, as the recent investigations of Kraepelin and McDougall had shown.

The brilliant neurological work of recent years had mostly tended towards a purely neural physiology and pathology, but it would seem that this requires to be supplemented by more exact observations into humoral physiology and pathology, looking to the important part which the blood, the heart, and the vascular system played in nervous and mental functions. Dr. Clouston believed that, as the result of improved methods of examination of the blood, our prophylaxis, diagnosis, and treatment of mental disorders would be greatly helped in no long time.

Dr. John Playfair proposed, and Dr. Macfie seconded, a vote of thanks to the Orator. Dinner followed. Covers were laid for nearly sixty Harveians, including many country Fellows. The toast of "The King" was given from the chair, as was "The Immortal Memory"; "The Imperial Forces," given by the Vice-President (Dr. W. A. Finlay), was responded to by Lieutenant-Colonel Douglas, V.D., R.A.M.C.; "The Church," by Professor John Chiene, C.B., and replied to by the Rev. Dr. Fisher; "The President," by Dr. Dow. The Vice-President nominated as his successor Dr. Strachan of Dollar. *Floreat res Medica* closed a pleasant evening.

THE REGIUS PROFESSORSHIP OF CLINICAL SURGERY, EDINBURGH.

The King has been pleased, on the recommendation of the Secretary for Scotland, to approve the appointment of Mr. Francis Mitchell Caird, M.B., C.M., F.R.C.S.E., Surgeon to the Royal Infirmary of Edinburgh, Lecturer in Clinical Surgery in the Royal Infirmary, Lecturer in Surgery in the Extra-academical School of Edinburgh, as Regius Professor of Clinical Surgery in the University of Edinburgh, in place of the late Professor Thomas Annandale. Mr. Caird, who graduated in 1877, was a dresser and clinical clerk under Lister while he was still Professor of Clinical Surgery in the University of Edinburgh. He studied anatomy and pathology in the University of Strassburg under von Recklinghausen and Joessel. He has made many important contributions to surgical literature. He is perhaps the most competent operator in Edinburgh in cases of abdominal surgery, and he has a high reputation in dealing with cancer and tubercle of the alimentary tract.

SIR HENRY LITTLEJOHN.

The following letter has been sent to Sir Henry Littlejohn by the Local Government Board for Scotland:

Local Government Board,
Edinburgh, June 5th, 1908.

SIR,—I have now communicated to the Board your letter of the 25th ultimo, intimating your resignation of Medical Officer under the Public Health (Scotland) Act, in consequence of advancing years, and I am directed to inform you that it is with the deepest regret that the Board agree to accept your resignation.

It is but a few weeks ago since the Board had occasion to refer to your distinguished services as Medical Officer of Health for the City of Edinburgh. They wish now to acknowledge, however briefly, their appreciation of your services as an official of the Board. It is thirty-five years since you were appointed to the office which you are now demitting, but even that long period does not sum up the years of your connexion with this Board, and there are none now living connected with this department who can recall your early investigations as a Commissioner, so far back as 1859, for example, when the country was visited by Asiatic cholera. The appreciation of your services as a Commissioner from time to time led the Board in 1873 to attach you permanently to their staff. The value of this unique record of half a century's strenuous work cannot well be over-estimated.

In conclusion, the Board wish to express the hope that you may long be spared to enjoy the rest to which you are so justly entitled.

By instruction of the Local Government Board, I am sending a copy of this letter to the Secretary for Scotland for his information.—I am, Sir, your obedient servant,

(Signed) A. MURRAY,
for Secretary.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.

The annual general meeting of members of the club will take place in the Caledonian Station Hotel, Edinburgh, on Friday, June 26th, at 6.30 p.m., when the secretary's and treasurer's reports will be presented.

The fourteenth annual dinner will be held at 7 p.m. Sir Thomas Chavasse, president of the club, will occupy the chair.

Members intending to be present must send their names to the honorary treasurer, Dr. Macrae Taylor, 12, Melville Street, Edinburgh, on or before June 22nd.

THE EXCHEQUER SCALE OF FEES PAYABLE TO MEDICAL MEN.

For some time back much dissatisfaction has been felt amongst medical men in Scotland as to the inadequacy of the fees paid by the Crown Office for attendance at Circuit Courts and Sheriff Court trials, as well as for the payment made by the Crown for medical reports. At a meeting of the medical men resident in Inverness and neighbourhood it was unanimously resolved to adhere to the terms of the following resolution:

> That the fees payable by the Crown Office to medical men for attending to give evidence at circuit or sheriff courts are quite inadequate; they consider that a fee of at least two guineas per diem should be the minimum rate of remuneration, and that they will decline to give expert evidence except at these terms. When the court is held out of Inverness, a sum of at least one guinea per diem to be allowed for travelling expenses. With reference to cases requiring a medical report to the Crown authorities it was resolved that the scale of remuneration should be one guinea within a radius of two miles and two guineas beyond that distance along with travelling expenses.

A copy of this resolution was forwarded to the Procurator-Fiscal for the County, the Sheriff, and the Crown Office.

Mr. Wm. Anderson, the Procurator-Fiscal for the County, brought the matter before the annual meeting of Procurators-Fiscal at Edinburgh on April 25th. He moved a resolution:

> That a representation be made by this society to Exchequer with the view of having the present table of fees of professional witnesses attending criminal trials and medical men attending Procurator-Fiscal cases in and out of town altered with the view of increasing such fees, the present scale of remuneration for such witnesses being quite inadequate.

The general feeling of the meeting seemed to be that while the fees at present allowed by Exchequer to medical men were certainly not large, they were in many cases, where only short reports were required or a limited attendance at court necessary, sufficiently adequate, but that there were cases such as those referred to by Mr. Anderson where unquestionably a more liberal allowance should be given, and that it would be desirable if in such cases the Procurator-Fiscal had some discretion as to paying an increased fee, subject to reasonable limitations.

The Chairman (Dr. Barty) suggested that he and the secretary might take an early opportunity of conferring with Exchequer on the point, and the meeting approved of this course.

This is another example of the fashion in which medical men by being unanimous may bring pressure to bear on the Crown authorities and get the fees increased.

The New Professor of Medicine at Glasgow.

The official intimation that Professor Samson Gemmell has been appointed to the Regius Chair of Medicine has given much satisfaction. There was at one period a prospect that the chair might go to an outsider, but latterly the field of applicants had been practically narrowed down to local candidates. From the first it was recognized that, if Professor Gemmell desired the chair, he was the candidate with the strongest claim. We understand that Dr. Gemmell was by no means anxious to undertake the systematic teaching as his inclinations have lain much more towards clinical tuition. Recent graduates only know Dr. Gemmell as a clinical teacher, but an older generation look back with pleasure to the time when Dr. Gemmell proved that he was not only a great clinical teacher, but also a most interesting and successful systematic lecturer. His career at Anderson's Medical School is not yet forgotten and we can confidently expect that at Gilmorehill he will prove a worthy successor to Gairdner and McCall Anderson.

The vacant clinical chair is in the gift of the University Court and the interest now centres in their choice.

Inverness District Asylum Appointment.

At a meeting of the Inverness Board of Lunacy held on the 5th instant, Dr. T. C. MacKenzie, at present Senior Assistant at the Royal Asylum, Aberdeen, was appointed Medical Superintendent in place of Dr. Campbell, recently appointed to Larbert Asylum.

Ireland.

[From our Special Correspondents.]

The New Universities Bill.

In the House of Commons on Thursday, June 4th, the Attorney-General for Ireland mentioned that the Commissioners selected to carry out the provisions of the new Universities Bill were for Belfast:

The President of Queen's College, Belfast.
His Honour Judge Shaw.
Professor Symington.
Professor Dill.

In addition he hoped to secure the services of two gentlemen of great academic authority, experienced in university matters in Great Britain, and possibly a seventh person would be nominated. For the new Dublin University the Commissioners were:

The Presidents of the three Colleges.
The Most Rev. Dr. Walsh, Archbishop of Dublin.
The Lord Chief Baron.
Sir John Rhys.
Dr. Henry Jackson, Regius Professor of Greek in the University of Cambridge.
The hon. member for Galway (Mr. Gwynn).

The Title of the New Dublin University.

There is some doubt as to the title by which the new University in Dublin will be known. The last suggestion is that the title should be the University of St. Augustine.

Irish Poor-Law Red Tape.

We have asserted before now that the Irish Poor Law is so out of date that it would fall to pieces only for the miles of red tape with which it is held together, and a curious instance of the fact comes from the county Tipperary.

On last Good Friday a man was shot at a place named Cloncannon, nine miles distant from the workhouse of the Nenagh Union and twelve from that of Roscrea. The dispensary doctor was summoned, and sent a messenger to the master of the Nenagh workhouse for the ambulance, stating that the man had met with a serious accident, though he knew the man had been shot, for it is not good taste in Ireland to call these "accidents" murder, or make too much fuss over them.

The messenger reached the Nenagh workhouse late at night, and the master went to the contractor who horses the ambulance, but he, being in bed, and having only one horse, which had already been out that day, refused to go, and the master then sent a note saying he could not send it that night but would send it in the morning if he got a wire that it was then required.

He got a wire in the morning to send it, but in the meantime he had discovered that Cloncannon was in the Roscrea Union, and he wired back that he could not send it for that reason. The strange thing about the business is that neither the dispensary doctor nor the man who issued the ticket to him were aware of the fact till they got the master's wire. It is part of the topsy-turveydom of the Irish Poor-law system that a dispensary doctor not infrequently has half his district in one union and the other half in an adjoining one, so that he has to serve two sets of masters.

After much delay the man was removed to the Roscrea Union workhouse, where he appears to have died of gangrene, and an inquest was held, and then the Local Government Board sent down an inspector to hold an inquiry and discover a scapegoat for the faults of their own system.

The master in his defence stated that when the contractor for the horsing of the ambulance refused to go he could get no one else, for car owners are not willing to give their horses for that purpose, and that when he found Cloncannon was not in the Nenagh Union he dare not send it lest the auditor should surcharge him with the cost, which the auditor most certainly would have done. But for obvious reasons he omited to urge another and more cogent plea, and that is the abuse he would have got from the guardians had he knowingly saddled the rates with a patient from another union. And yet we shall be surprised if the master of Nenagh is not found guilty and called upon to resign after the manner of the Irish Local Government Board when an official carries out its rules strictly. In fact, if an Irish Poor-law official carries out the letter of the regulation he is wrong, and if he disregards them he is wrong should anything go amiss, being in addition in the unhappy position of the man who has to serve two masters whose views on most subjects are diametrically opposite.

Annual Meeting of the British Dental Association at Belfast.

The annual meeting of this association was held from June 5th to the 9th in the Queen's College. Mr. J. J. Andrew, Belfast, is the president for the year, and a large committee of the local leading dentists were most energetic in making the meeting a most successful one. On the evening of the 5th June a public address was given by the retiring president, Mr. Leonard Matheson, London, in the City Technical Institute, on the subject: "The Teeth of the People; a National Asset." Sir James Henderson, D.L., chairman of the Library and Technical Committee, occupied the chair, and there was a large and representative audience. The lecturer referred to the function of

the teeth in the animal economy, the failure of the teeth to fulfil that function, and how that failure might be combated and overcome. He drew attention to the number of recruits for the Army and Navy that were annually rejected, and to the calculation that about 90 per cent. of the children of the present day had decayed teeth; the effect of this condition on the physique of the population was undoubted. Preventive treatment of tooth trouble began with the mother while pregnant, and lasted through the life of the offspring. The vigorous mastication necessary for certain kinds of food was good for the teeth. He advocated a deepened sense of parental responsibility in teaching and training children in the care of their teeth, legislative enactments to ensure an increased supply of educated dentists, and the adoption of measures so that the poor could obtain their services, and the provision of dental inspectors for elementary schools.

The general meeting was held on June 6th in the Currie Buildings, Queen's College, when the President of the College, Rev. Dr. Hamilton, gave a hearty welcome to the association. Mr. Andrew took as the subject of his inaugural address the questions of the amelioration of children's teeth, the necessity of a School Children's Inspection Act for Ireland, and the importance of the physical condition of children.

Mr. Sims Wallace, in Section A (President, Mr. J. C. Oliver), read a paper on Diet in Infancy and Childhood. He insisted on the importance for the development of the teeth of the mother nursing her child, and the necessity of teaching and training the child in thorough mastication, and not to bolt its food.

Mr. Edward Wallis read a paper on the Necessity of Dental Clinics in Connexion with Elementary Schools, and Mr. Layton on Experience of Dental Inspection and Treatment in the Kettering Elementary Schools. If children in urban and rural schools gave 2s. per head per annum, it would provide a sufficient sum for a well-managed and well manned clinic.

In Section B, under the presidency of Mr. Andrew, papers were read and demonstrations given by Mr. Charles M. Cunningham, L.D.S., D.D.S., A Case of Pyorrhœa Alveolaris treated under Ether; Mr. W. S. Haughton, M.D., X Rays in Dental Practice; Mr Booth Pearsall, F.R.C.S., Porcelain Tooth Form and its Defects, and Improvements in Impression Trays; Mr. A. Maurice, L.D.S., The Administration of Anæsthetics.

A paper was also read by Mr. William Guy, F.R.C.S., L.R.C.P., L.D.S., on Proposed Amendments of the Dentists Act, and the proceedings were adjourned until Monday morning.

The annual dinner was held on the same evening in the Grand Central Hotel, when 75 members and guests, including a large number of medical men, sat down. Numerous toasts were proposed and responded to.

On Monday, June 8th, a demonstration was given by Dr. Symington, Professor of Anatomy, and Dr. Rankin on the development of the teeth, illustrated by specimens and radiographs. A paper was also read on empyema of the maxillary antrum by Mr. J. A. Craig, F.R.C.S.

The dissecting room of the college was changed into a museum, in which specimens of teeth of all animals and of man in all degrees of development and in all pathological conditions were on view. Professor Symington's and Dr. Rankin's radiograph negatives of developing teeth, taken by dividing the jaws and photographing one side, were the chief centre of interest. In the Exhibition Hall adjoining a splendid trade exhibit was largely visited.

HEALTH OF BELFAST.

At the monthly meeting of the city council, on June 1st, the superintendent medical officer of health reported that the death-rate for the previous month had been 20.7. The general condition of the health of the city had shown a decided improvement as compared with the past few months. Five cases of typhus and 12 of cerebro-spinal fever had been notified. Dr. Symmers, professor of bacteriology of the college, had been experimentally examining the milk for the last three months, and had not found any trace of tuberculosis in the samples. In cases of double tenancy in houses, the King's Bench had decided that each case must be decided on its own merits as to whether a nuisance existed or otherwise.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WEST YORKSHIRE.

THE SUPERSESSION OF THE CERTIFYING FACTORY SURGEON.

It appears to be not improbable that, if certifying factory surgeons do not take very immediate steps in defence of their interests, a great part of their duties and emoluments may be taken from them. The elementary Education Subcommittee of the Bradford Corporation has received a letter from Sir R. L. Morant, of the Board of Education, in connexion with the medical inspection of half-timers, and it was resolved that the medical superintendent be instructed to make an examination of all children just before they start half-time work. It was also decided to make representation to the Board of Education as to the desirability of making this examination the only one on which a child's fitness or otherwise for work under the Factory and Workshops Act should be determined. It was also agreed that the subject should be introduced at the next meeting of the Association of Education Committees, with the view to medical superintendents of Education Committees being appointed certifying surgeons under the Factory Acts.

THE OPEN-AIR SCHOOL.

A step in the right direction in connexion with the tuition of delicate children has been taken by the Elementary Education Subcommittee of the Bradford Corporation. It has been decided to forward to the Board of Education particulars of a scheme for an open-air school for the Bradford district. Boys and girls are to be selected individually by the medical superintendent, and sent to the school for as long a time as he considers desirable. A permanent staff of two women certificated teachers and a matron are to be appointed, and the children will be conveyed by special tramcar. Three meals a day are to be provided at the school, which is to be open from May 1st to September 30th in each year. There is no doubt that the physical improvement which will take place in these children will be the means of also improving their intellectual capacity.

THE METHODS OF ICE-CREAM VENDORS.

A curious sidelight on the methods by which the public health (especially of young people) may be affected was shown by the prosecution of two Italian ice-cream makers in the Bradford City Court on May 28th. The prosecution was undertaken by the corporation in the interests of public health. When an inspector visited the premises where the ice-cream was manufactured he found two pails filled with so-called cream—really composed of milk, sugar, and corn flour, with some colouring matter. The custom was to boil this down until it was the thickness of cream. In front of the fire he saw a pillow and a piece of blanket, both of which showed showed traces of human excreta, apparently from a child. The place was very dirty and there was a very sickly smell. He found seven more pails full of the "cream" in the cellar with what appeared to be mice droppings on their contents. On the top of one pail was a lively wood louse. On a former occasion the inspector found a bug on the "cream" in a vessel. Dr. Evans (medical officer of health), in giving evidence, stated that "cream," left under such conditions and in such a way, might seriously affect children. These people had been advised and warned, but nothing could be done with them but to bring them to court and have them fined. It is really a matter for congratulation that the medical officer of health has taken these matters in hand. Any one who knows of the enormous consumption of this so-called ice cream by the children of the poorer classes in the West Riding can see the dangers to which they are subjected.

MANCHESTER.

HOSPITAL FUNDS.

It would seem that almost every hospital, general or special, throughout the whole district of Manchester and Salford is short of funds, expects to be short, even thinks that its work ought always to be ahead of its means, and

If by any chance a hospital should have a surplus on its year's working, that fact seems to be taken as a proof that the hospital should be extended. It is a fact that the aggregate deficit of income of all the hospitals has been something like £10,000 a year for some years past. The Royal Infirmary has made an appeal for at least £100,000, towards which about £56,000 has been already subscribed. In addition it requires an increase in annual income of about £12,000. The Salford Royal Hospital appeals for £70,000, towards which £35,000 has recently been raised. The St. Mary's Hospitals appeal for £30,000, and at least £4,000 a year additional subscriptions. The Eye Hospital, the Ear Hospital, and the Dental Hospital are also issuing appeals, and somehow, from somewhere or other, the money seems to be steadily coming in. It is said that within the past few months something like £120,000 has been subscribed, and at least as much again is asked for. Last year the Hospital Saturday Fund amounted to £4,200, and the Hospital Sunday Fund to £3,300, both amounts being insignificant compared to the totals obtained from other sources. Those who know say it is high time to limit hospital extensions in the district. We shall soon be over-hospitalized, if we are not now. If only deserving cases were treated, and if Manchester were not made the dumping-ground for bad cases from every part of Lancashire, Cheshire, and West Yorkshire, there would be ample accommodation for all the wants of the district for many years to come when the extensions now in progress are completed; and common sense should dictate that the present hospitals should be first put on a sound financial basis before further extensions are made.

PURIFICATION OF RIVERS.

At a meeting of the Mersey and Irwell Joint Committee held on June 2nd a report was presented on the work carried out during the last two years. It appears that the district under control of the committee has a population of over 2,500,000, and during the two years 32 local authorities had made alterations or additions to their works, while 14 others had carried out important extensions in their sewerage systems in order to intercept various districts not already connected to their sewage works, and this had very considerably lessened the pollution of the rivers. In the case of Manchester and Salford extensions are at present in progress. Manchester has commenced the construction of 27 acres of filtering beds, which are estimated to cost about £80,000. Salford has also been proceeding with its scheme for washing the roughing filters. Salford has only a comparatively small filtration area of about eight acres, and it is not certain that this will be enough to deal with a daily dry-weather flow of about 10,000,000 gallons, which after storms may be increased to 30,000,000 gallons, after the sewage has been first precipitated and rough-filtered. In the whole district there is a total area for artificial filtration of about 180 acres, which is about 21 acres more than two years ago. It appears that the system of percolation is most favoured in the extensions being made, but as the effluents from this class of bed always contain much suspended matter, it will probably be found necessary to insist on final sedimentation or some other efficient process before the effluent is allowed to pass into the streams. During the two years over 5,200 inspections have been made at sewage works, and of 1,032 samples taken, 378 were classed as good, 344 as fair, 117 as unsatisfactory, and 192 as bad. Most of the samples were, of course, taken from works known to be inefficient, and thus the result throughout the whole district is not so bad as these figures would show. It was reported that four samples of effluent from the sewage works of Manchester and Salford were condemned as bad or unsatisfactory, and it was decided to communicate with the authorities concerned.

There can be no doubt that the rivers have been slowly improving of late years, as is shown by the increasing vegetable growth on their banks and the increase in the use of river water by works for manufacturing purposes. Nevertheless, there still remains much to be done. The abominable odour of the Ship Canal when the water has been stirred up by a passing vessel still remains, and though perhaps it would be difficult to prove that any special disease is caused by it, the effect on the general health cannot but be bad.

PENSIONS FOR NURSES.

At a meeting in Manchester last week of the Queen Victoria Jubilee Nursing Association, the subject of pensions for nurses was discussed. The subject had been discussed at a meeting held last January, but nothing could then be decided. The Chairman (Councillor West of Newton Heath) said that the proposal made in London that the maximum should be £10 per year was altogether inadequate. In the discussion the opinion seemed to be fairly general that there was little hope of anything satisfactory being accomplished unless they could secure the help of some influential person to lead them as Lord Roberts had led the movement to support the Crimean veterans. The growing tendency of nurses frequently to remove from one district to another made it extremely difficult for the various associations to arrange pensions for their own nurses. In the end a resolution was passed asking the London institute to draw up a definite scheme for providing pensions on a higher scale than that previously named.

LIVERPOOL.

ST. PAUL'S EYE AND EAR HOSPITAL.—PREVENTION OF BLINDNESS.

AT the annual meeting of the St. Paul's Eye and Ear Hospital it was announced that, in accordance with the recommendation of the British Medical Association, an almoner had been appointed, who would check, it was hoped, any abuse of the charity by patients able to pay for medical treatment, and who by their presence in hospital tended to oust the really deserving poor and deprive medical men of their due. A special effort, it was stated, is being made at the hospital to deal with ophthalmia in newborn infants. Advantage has been taken of the Notification of Births Act to enlist the help of the municipal health authorities.

Arrangements have been made to admit the mother and the infant to the hospital, and a small ward in the hospital has been turned into a nursery by the addition of cots, and if necessary the child is detained while the health authorities are asked to send an ambulance to bring in the mother. By this scheme it is hoped that the cases will come under treatment while they are curable, and not, as now too often happens, when the eyes are already destroyed. Dr. Nimmo Walker, in explaining the advantages of the scheme, said that during the past year 59 cases of ophthalmia in children under 12 months had been brought to the hospital. Of these, 19 had suffered permanent damage to one or both eyes, and 8 must be classed as blind. He believed that if they had been taken into hospital and treated at the beginning of the attack almost all those eyes would have been saved. He had recently been struck with the magnificence of the Blind School at Newcastle. The public seemed to be unwilling to give anything to prevent blindness, but when people had gone blind nothing was considered too good for them. The Royal Commission on Blindness estimated that every blind person cost the State £50 a year. On this basis the eight in his list who had lost their sight meant an annual loss of £400; that equalled the interest on a sum which, if they had it, would enable them to start building a hospital where they could make proper provision for all these cases. Just as, 100 years ago, Liverpool was the first town in Great Britain to build a blind school, so now it was the first city in Great Britain to make an organized effort to cope with this preventable blindness, and it rested with her citizens to see that this effort succeeded.

PORT SANITARY MEDICAL OFFICER'S ANNUAL REPORT.

Dr. Hope, in his annual report as medical officer to the port, draws attention to the magnitude of Liverpool as a commercial centre, basing his comparison on the Board of Trade returns for 1906. In that year the imports and exports amounted to £297,000,000, as compared with £315,000,000 for London. The next largest port is Hull, with a total of only £61,000,000. The number of passengers passing to and from countries out of Europe during the past year totalled over half a million. Dr. Hope states that the danger of plague is a real one, and that the disease may appear quite unexpectedly, and that, once firmly established in a city, it would be an exceedingly difficult matter to

eradicate it. Several cases of a suspicious nature were removed from ships to hospital on arrival in Liverpool, but in no case was the suspicion of plague confirmed. During the year 3,169 rats were caught and examined. Three cases of beri-beri were landed during the year. Owing to the presence of epidemic cerebro-spinal meningitis in New York, Belfast, and Glasgow, special attention was given to vessels arriving from these ports and inquiries made. Two cases were landed—one was removed from a Belfast steamer, and died in hospital; the other was a steward who arrived on an Atlantic passenger vessel. The diagnosis in the latter case was at first uncertain, and he was removed to hospital, where he died. Death was certified as due to epidemic cerebro-spinal meningitis. Fourteen cases of anthrax came under the notice of the authorities: 9 were dock labourers, 2 wool warehousemen, whilst 3 worked in a hair factory.

SAMARITAN HOSPITAL FOR WOMEN.

The committee of the Samaritan Hospital for Women has for some time found the work of the hospital outgrowing the accommodation provided, more especially in the in-patient department. During 1907, 231 in-patients were treated, and of these 220 required some operation; in 26 the abdominal cavity was opened. As only 11 beds are at present available, it will be seen that the work could only be done with the most careful management. An effort was made to raise sufficient money to clear the hospital of debt, to add to the number of beds, and to improve the out-patient department. In response to a special appeal to the public made by Lord Stanley, the President, and by the Committee, £1,632 was raised, Mr. W. P. Hartley giving £425; Mr. and Mrs. Charles Cain, who for some years have been warm supporters of the institution, gave £281; Mr. and Mrs. W. E. Cain gave £275, and Mrs. and Miss Holt and Mr. Austin Taylor, M.P., gave each £100. A portion of this money is to be used to provide a new ward for five patients, and an operating room with an anaesthetizing room in series. A new consulting room and two dressing rooms are to be added for out-patient use.

ROYAL INFIRMARY NEW OUT-PATIENT DEPARTMENT.

The committee of the Royal Infirmary announce that they have received the sum of £10,000 from the executors of the late Mr. E. R. Bickersteth, to be allocated for the construction of the new out-patient department.

UNIVERSITY OF LIVERPOOL CHAIR OF THERAPEUTICS.

After the resignation of the Chair of Therapeutics and Materia Medica by Dr. William Carter, which occurred last autumn, the Medical Faculty took into consideration the whole question of teaching in these and allied subjects. As a result it has been decided to separate the two subjects of therapeutics and materia medica. The latter will in future be combined with pharmacy, and will be taught by a pharmaceutical chemist specially appointed by the university. Mr. P. H. Marsden, F.C.S., the present lecturer on pharmacy and dispenser at the Royal Infirmary, will undertake the teaching in these combined subjects. Students will take out the course in their second summer session. The subject of therapeutics will be taught by a professor who is to be a physician practising clinical medicine, who will deliver a course of lectures in the summer session. Students will attend this course during their fourth year, and the subject will form part of the final examination for the M.B. degree. Arrangements have been also made for students to attend a course of pharmacology in their third summer session.

India.

LISTERISM IN INDIA.

IN a paper reprinted from the *Caledonian Medical Journal* for April, Colonel Kenneth Macleod gives a striking review of the improvement in the results of surgical operations in the Calcutta Medical College Hospital. His own experience there extended over two periods of service—April, 1874, to June, 1878, and April, 1879, to April, 1892. There are, he says, ample data for a comparison between three periods in the history of the hospital: (1) A pre-antiseptic period (down to 1870); (2) a transition period (1871-85), when antiseptic methods were being introduced; (3) an aseptic period (1886 onwards), when these were better understood and more intelligently and carefully carried out. The hospital, which was opened in 1852, is situated in one of the most crowded quarters of the native town, which at that time was in a deplorably insanitary condition. The patients were mostly of feeble physique, often ill-nourished, their constitutions being frequently impaired by disease and unhealthy habits of life.

Cases of compound fracture were mostly admitted with putrid sloughing sores and bare protruding bones; of strangulated hernia with gangrenous intestine and general prostration; and of stricture of the urethra with extravasation or diffuse perineal suppuration and septic poisoning. In these circumstances it is not surprising that the mortality of the hospital was soon found to be alarmingly high, and that the results of surgical operations were calamitous and disheartening. The surgeons recognized that the excessive mortality was due to septic infection contracted before or after admission to the hospital, but the management of the wound with a view to averting or destroying septic infection did not seem to enter into their thoughts. The Government spent a great deal of money in clearing and cleaning the surroundings, introducing good drainage and conservancy in and around the hospital, and reducing the number of inmates. A new eye infirmary and a maternity hospital were erected; outside patients were treated in a new building outside the hospital block; and arrangements were made for segregating septic and infectious cases. These changes, together with a crude employment of antiseptics in dressing wounds, resulted in some abatement of mortality, but the death-rates continued very high. Meantime some of Lister's pupils entered the Indian Medical Service and endeavoured to introduce his practice into Indian hospitals. Among them was Surgeon E Lawrie, who was resident-surgeon in the hospital in 1874-1875. He had been Syme's house-surgeon when Listerism was adopted in his wards, and he sought to import Listerian proceedings into the Calcutta Hospital, but encountered insuperable difficulties. In 1874 1875 Colonel Macleod acted as surgeon in the hospital. The mortality of his amputations was 54.5 per cent., "an improvement, certainly, on previous results, but still very disappointing." In 1876 he took a long furlough, and attended Lister's clinic in Edinburgh. He convinced himself that Lister's principles were true, and when he was reappointed to the Medical College Hospital in April, 1879, and for the next thirteen years, he strove to imitate Lister's methods as carefully as circumstances would permit, but it was not easy to carry out the system perfectly. He gives a table of all the important operations performed during the years 1879–83 and 1886–90. In the second quinquennium there was a very marked abatement of mortality following operations as a whole, the description and proportion of these being very similar in both periods. The decrease of mortality in amputations was considerably greater than in the total, amounting to 22.7 against 66.6 per cent. The general sanitary condition of the hospital remained much the same during these years, and the improved mortality can only, according to Colonel Macleod, be attributed to progressive success in antiseptic management, and the obtaining in a progressively larger proportion of cases of aseptic repair. In some other operations the diminution of mortality was equally remarkable. The death-rate of operations for scrotal elephantiasis, some of them very formidable and complicated, fell to 3.4 per cent., the last 30 cases of the series ending in recovery. Cases of herniotomy, urethrotomy, and removal of malignant tumours, which accounted for nearly half the total mortality, were, owing to delay in applying for relief, often in a desperate or almost hopeless condition. Statistics of operations for hernia in Calcutta, Bengal, the United Provinces, the Punjab, and Bombay for the year 1886, however, show 335 cases with 13 deaths, or 3.9 per cent., the Calcutta hospitals returning 104 operations, with 1 death. Colonel Macleod goes on to say:

> Looking to the cases of mortality, the records of 1879–1883 indicate in 118 deaths—33 from shock or exhaustion (4.1 per cent of operations), 27 from septic diseases (3.4 per cent.), 5 from gangrene, and 15 from tetanus; while those of 1886-1890 show, in 85 deaths, 31 from shock and exhaustion (2.9 per cent.); 17 from septic causes (1.6 per cent.), 1 from gangrene, and 8 from tetanus. Twelve of the 17 septic cases were

admitted already suffering from septic poisoning. The reduction of cases of post-operation tetanus was a striking result of aseptic practice; the cases which did occur were associated with septic wounds. Tetanus is a very common disease in Calcutta among both men and horses.

In conclusion, Colonel Macleod says that to Lord Lister is due the entire credit of the saving of suffering and life which has taken place in India in consequence of the application of his principles in practice.

CORRESPONDENCE.

CEREBRAL INFLUENZA.

SIR,—I was much interested in reading Professor Saundby's address on cerebral influenza. It recalled to me a patient I attended in 1890. She was a middle-aged woman, who, suffering from the usual symptoms of influenza, developed meningitis, became comatose in a few days, and died. That is the only case I have seen, but it is quite possible that a good many people may have died from influenzal meningitis during the first epidemic. We were all overworked at the time, and possibly such cases may not have been reported.

In regard to the effect of quinine in influenza, there is no doubt, I think, that it is prophylactic; but if the symptoms have developed, quinine even in large doses may fail to abort the attack. I had a patient last year who of her own accord took 27 grains of quinine within twenty-four hours when she felt an attack coming on. Next day I found she had a temperature of 102°, with the other symptoms of influenza. In the later stages quinine will cut short the attack. The salicylate of saloquinine (= rheumatin), or a combination of the hydrobromate of quinine with acetyl salicylic acid (= aspirin), in cachet are, I think, the best remedies. Three grains of the bihydrobromate of quinine dissolved in water may be given hypodermically, both the solution and the syringe having been first sterilized.—I am, etc.,

June 8th. A. M.

"THE STUDY OF TWINS AND DOUBLES."

SIR,—Will you kindly allow me once again to appeal to your readers for additional information on the above subject which the consideration of my present evidence has rendered advisable?

My object is to determine the greater or lesser importance of the constitutional factor in disease, and, while still relying mainly on data derived from information respecting twins and doubles, I wish to draw upon all subsidiary sources, so as to obtain as complete an outline of the subject as is possible.

I have now evidence, though I should be glad of more, on the following points:

(*a*) Similar particular diseases and definite constitutional conditions in true twins, like and unlike, in respect to melancholia, bronchopneumonia, chorea, splenic anaemia, diabetes, hernia, influenza, quinsy and tonsillitis, conjunctivitis, bronchitis, convulsions, thrush, typhoid fever, scarlet fever, measles, cyclical vomiting, pulmonary tuberculosis, peritonitis, caries of similar teeth.

From the literature of the subject, instances of suicidal insanity, exalted delusions, melancholia, mania, idiocy, imbecility, congenital deformities, conjunctivitis, and most of the commoner specific fevers.

(*b*) Cumulative evidence of several similar diseases contracted nearly or quite simultaneously, sometimes in twins not living together.

Confirmatory evidence from literature of the subject.

(*c*) Cumulative evidence in triplets.

(*d*) Reference to insanity in triplets.

(*e*) Other characteristics shared in common in twins and triplets.

Confirmatory evidence from literature of the subject.

(*f*) Twins not of the same sex—much less similarity, but not unlikeness of constitution.

(*g*) "Doubles," two cases of particular diseases—diabetes, tetanus.

(*h*) "Doubles," one case of cumulative evidence.

(*i*) Dissimilar diseases in twins, one doubtful case.

For help in collecting these instances together, I wish specially to thank Drs. D. Biddle, C. and H. Campbell, S. Davies, R. Glass, Goring, R. Hutchison, A. D. Lewis, H. Maudsley, George Murray, H. Rayner, W. J. Rutherford, W. C. Sullivan, F. W. Twort, Urquhart, and others of Great Britain. Drs. M. J. Conlin, C. Hedger, H. Lyons, Hunt, J. Ratcliffe, Milton Sturges, J. M. Trigg and H. Yoder of America, and Dr. H. Rugg of Australia, for useful suggestions and valuable particulars kindly given, and all others who replied to my inquiries. I am also much indebted to the various medical journals which kindly afforded me space for my inquiries.

Further data required.

1. *Similar Diseases in:*

(*a*) Twins and triplets of the same sex.
Like twins and triplets, instances of one disease; or, if possible, of several diseases.
Unlike twins and triplets, instances of one disease; or, if possible, of several diseases.

(*b*) Twins and triplets not of the same sex.
Like twins and triplets, instances of one disease; or, if possible, of several diseases.
Unlike twins and triplets; instances of one disease; or, if possible, of several diseases.

(*c*) "Doubles" same sex, preferably adults.
Instances of one disease, or, if possible, of several diseases.

(*d*) Husband and wife.
Like, the likeness consisting in similar eye colour, similar complexion, similar height characteristics, allowance being made for the fact that women are about 4 in. to 5 in. shorter than men.
Unlike in above particulars.

(*e*) Parents and children.
Like. Unlike.

(*f*) Brothers and sisters.
Like. Unlike.

2. *Dissimilar Diseases in:*

(*a*), (*b*), (*c*), (*d*), (*e*), (*f*), as above.

I should be glad, as the evidence is often difficult to interpret rightly, to have as many particulars in each case as possible.

I cannot find satisfactory evidence for the statement that true uniovular twins are always of the same sex, if any of your readers could supply me with references to detailed series of observations on this point I should be still further obliged.—I am, etc.,

J. LIONEL TAYLER.

8, Adys Lawn, Willesden Green, N.W., June 8th.

MEDICAL AND DENTAL QUACKERY.

SIR,—I have been interested in reading the two letters on medical quackery in recent issues of the BRITISH MEDICAL JOURNAL. I live in a Lancashire manufacturing town, and if quackery is seen anywhere I think we can claim to have dental quackery in these parts to perfection. Only this morning, on perusing a weekly newspaper, I find on the front page the advertisements of no fewer than six dental quacks. It would not be difficult to prove that the unqualified men are making more money than the qualified ones. Quackery is rampant and unblushing in industrial districts. Distribution of pamphlets setting forth a special method of painless extraction, often coupling the name of a qualified man with whom the quack may have had some early training, railway and car fares paid to intending patients, and systematic touting from door to door; these are a few of the devices to catch the people. The unfortunate part is they do catch them. Now, the qualified man is hedged about with restrictions; doing this, that, or the other is unprofessional, and should he be caught competing with the quacks by adopting in ever so small a degree their methods, he is liable to be required to pay a visit to the General Medical Council. But what is the position? Most of us are dependent upon our practices for a livelihood. This being so one cannot view with equanimity this unrestricted, unqualified competition going on at our very doors. The result is that more than one qualified man is compelled to cease trying to educate the public in professional methods, and if he does not in some measure try to meet the quacks on their own ground, he is at least forced into admitting that he is being badly hit. Now this is an important point. The big wigs of the profession can afford to ignore this competition, and will probably elevate their eyebrows when they know how much there is of it; yet in manufacturing districts where this quackery

is so ill qualified men are sometimes compelled to adopt practices which their better nature rebels against in order to get a living. This is a most unfortunate and demoralizing result. The pity of it all is that the licensing bodies, whilst being most exacting in their demands, give no protection in practice. Probably we shall never get a solution until practice for gain is prohibited by law, as it is in the legal profession in cases of unqualified persons. In the meantime what can be done?

I plead for more sympathy from our representatives at the head of affairs. It ought to be easier to approach those whom we elect and to discuss with them these matters. Our associations are far too easy-going. These bodies consist for the most part of gentlemen in lucrative practices, who know nothing of the struggles of the common or garden practitioner. The consequence is that any number of academic discussions take place, papers of undoubted scientific merit are read, but commonplace topics of how to help the ordinary practitioner, how to protect him in practice and assist him in earning a living commensurate with the time and energy he has expended in obtaining his qualification, are avoided as being beneath notice. Both the medical and dental professions will have to assert themselves. Take two recent events as affecting medical men. First the fees for vaccination are cut down. What sympathy has been shown to medical men by boards of guardians throughout the country? The new order has been hailed with satisfaction by many guardians as a means of hitting the medical man. Secondly, the Notification of Births Act has undoubtedly caught us napping. I mention these to show that everything points to the medical and dental professions being half asleep to their own interests. The British working man has demonstrated the value of combination, and only by united effort on the part of all qualified men will the goal be reached.—I am, etc.,

June 6th. M.R.C.S., L.D.S.

HEREDITY IN PHTHISIS.

SIR,—The part played by heredity in phthisis is still an unsettled question, and as this is of importance from both medical and public standpoints, I hope you will find space for the following, which will perhaps bring figures from other observers. I do not remember having seen the two classes compared before.

An analysis of 539 consecutive patients' family histories supports the belief that heredity need not be considered more in tuberculosis than in other bacterial diseases, such as pneumonia, and that environment is a more important predisposing cause, in which case continued improvement in environment, with rational education as to how to maintain a sane mind in a healthy body, will stamp out the disease rapidly.

The fact that children of tuberculous parents get consumption has led to the belief that consumption is due to heredity; but it is to be remembered that they will have shared the same dwelling, the same milk supply, and the same general food supply; and also that in a house where one or more persons (parents or not) are scattering tubercle bacilli, children living in the same house may be more exposed to infection than children in other houses. Our notes show two classes: Class I. where parents and children are affected; Class II, where two or more brothers and sisters are affected, and yet no evidence can be obtained that either parent has suffered from the disease. In this second class the question of heredity cannot be included, so, if in a comparatively large number of consumptives the figures for these two classes are nearly the same, this would be strong evidence in favour of environment as the chief cause. We find in our 539 cases 83 in Class I and 75 in Class II, although in both classes there are examples where the interval between the dates of disease is so very long that it is difficult to suppose any connexion whatever. These figures are very close.

In Class II (as in Class I) brothers and sisters will share the same dwelling, the same milk supply, and the same general food supply for a considerable part of their lives, and if one person is affected with consumption and scatters the tubercle bacilli in the house, the risk of being affected may be greater to the others than if they lived elsewhere. So that in both classes there are similar points to be considered, and one seems justified in thinking that environment is the predisposing cause and that heredity may be disregarded.—I am, etc.,

T. H. J. E. HUGHES, M.R.C.S.Eng., L.R.C.P.Lond.

Meathop, Grange-over-Sands, June 2nd.

THE INHERITANCE OF THE INSANE DIATHESIS.

SIR,—In the leading article bearing the above title in the JOURNAL of May 2nd, I am glad to find some confirmation of an opinion I formed last year. While attending the medical out-patient department of the West London Hospital, I made inquiries into the family history of a considerable number of the patients whom I saw there. I found so many cases in which two or more of the following defects existed in the family, namely, alcoholism, insanity, tuberculosis, acute rheumatism, chorea, nervousness—that I was forced to the conclusion that what was inherited in these families was, not a tendency to insanity, rheumatism, or tubercle, but an instability, both mental and physical, which displayed itself in different ways in the various members of the family; and that in each individual there was some factor at work which determined the form in which the inherited instability became manifest. I have not my notes of these cases with me, but I think that practically all of these patients exhibited some of the well-known anatomical stigmata of degeneracy.

Many of the patients were children, suffering from one or other of the neurotic manifestations of degeneracy. In their case the determining factor was, without doubt, what is called in England education, a process which can only result in the development of the inherited weakness, and eventually in the evolution of the drunkard, the lunatic, the socialist, and the unemployable. A further conclusion to which I was driven was that school inspectors or others, instead of being authorized to demand a medical certificate of unfitness to attend school in the case of absentees, should be absolutely forbidden to allow a child to enter school without a certificate of fitness to do so. The recently instituted medical inspection of school children is a step in the right direction, but there is room for much improvement in details. I notice that it is almost universally required that the medical inspector should have a diploma in public health. For this particular work a knowledge of public health is nearly as valuable as would be a knowledge of gynaecology. By all means let the medical officer of health do his share in seeing that the school buildings and surroundings are sanitary; but the medical inspector of the children should have had a different training, and the best training I know is to be found in the medical out-patient department of a large hospital.—I am, etc.

Murree, India, May 13th. G. M. C. SMITH.

NATURAL AND ACQUIRED IMMUNITY.

SIR,—In the BRITISH MEDICAL JOURNAL for February 15th, in an article by Mr. Gunn on the prevention of tuberculosis, there is a statement that:

> In tuberculosis certain strains (of cows) possess this specific inborn and therefore transmissible immunity, and even in the most unfavourable hygienic conditions escape infection from what is almost a universal disease. As time goes on this selective death-rate affects the characters of the race.

In the same number of the JOURNAL there is contained in an extract from the forty-eighth report by the Director-General of the Army Medical Service this statement under enteric fever:

> Instead of the slow and expensive process of protection by natural infection, we should employ the more rapid and safer process of artificial protection which now seems available.

Any medical man of experience, more especially among native and pure-bred races, must have noticed that some are possessed of what may be termed "a specific inborn and therefore transmissible immunity." I have elsewhere drawn attention to the absence of typhoid fever on a large scale among the Chinese, the suggestion in their case having been that they were a tea-drinking race, and, as a rule, did not imbibe water unboiled. It was also shown that the incidence of enteric fever among the Egyptian troops was not high. But perhaps the most remarkable illustration we have of natural immunity is to be found among the Jews, who as a race are known to suffer less from tuberculosis, cancer, and, might I add, alcoholism,

than any other race which has settled in Europe. Of course it may be claimed that the observation of the hygienic laws as laid down by Moses may account for this. Thus there may be some connexion between the comparatively low incidence of cancer and the fact that the meat of the Jews has most of the blood extracted before it is eaten.

Every one is familiar also with the spectacle of the oldest inhabitant of a rural sanitary authority being able to assert that he and his fathers have drunk with impunity certain water from a river or a well which has been condemned.

Although, on the other hand, not able to furnish actual statistics, I pointed out at the conclusion of the South African war that the oversea Colonial troops, more especially the New Zealanders, seemed especially prone to such diseases as German measles, and readily succumbed to enteric fever. Since then I have been told that the young New Zealander seems to contract enteric fever readily on the Western Australian goldfields—more readily than those reared in the country. I think, therefore, that much might be elicited by a study of disease as it affects different races and peoples, as well as the geographical distribution of disease. Certainly an anthropometric survey of the British Empire, with additional data relating to average blood counts, would be interesting.

With regard to acquired immunity by artificial protection. As one who remained immune during the South African campaign after antityphoid inoculation, and had occasion to realize the difference in the statistics of those inoculated and those not inoculated, I certainly think that, should there be another campaign, all troops between the ages of 18 and 30 should be protected by vaccine inoculation. At the same time it would be well to encourage personal hygiene in the soldier by giving more facilities for bathing in barracks, the issue of toothbrushes, tooth powder, a more hygienic cellular, such as aërtex, underclothing, with more frequent opportunities for changing shirts so as to prevent the wholesale breeding of lice as was common in South Africa, and the encouragement of the boiling of water by the issue on service of double the quantity of tea in the ration as well as the general use by each four men of the ubiquitous "billy" for boiling tea, with which those Imperial troops became familiar when camped alongside the Australian Bushmen and the Maorilanders. When our men, the Sixth N.Z.M.R., asked for extra tea instead of the lime juice ration, although specifying the benefits from a hygienic point of view of filling the water bottles with cold tea instead of water from the regimental water barrel or any creek, irrespective of whether it contained a dead mule, a Kaffir, or a horse, at that time I was told we must stick to the regulation allowance. Thus, among a body of men who had not the opportunity of acquiring immunity other than by the contraction of the disease, so simple an expedient was not taken advantage of as boiling the water to make tea. I may state that Lieutenant-Colonel Porter, R.A.M.C., the S.M.O. of General Plumer's column, was favourable to this suggestion at the time, and I understand that the present Director General of the Army has embodied it in the general instructions issued for the prevention of disease in the field.

There are many other simple expedients which would prevent disease, such as the instruction of recruits in the prevention of venereal disease. Of course I am aware that, like the ostrich, which is alleged to bury its head in the sand—although I have never seen or met anyone who ever saw it do so—the British people do not recognize the fact that venereal disease is rampant, not only in the army but even in our large centres. Those who doubt it should look at the queue which forms in Dean Street before the doors of the London Lock Hospital. It would surely be better to recognize the frailty of mankind, and allow the provision of suitable precautions against infection.

Best of all, the encouragement of manly sports and plenty of recreation, as well as temperance on similar common-sense lines to those which are making the A.B. of His Majesty's navy practically a total abstainer, would do much to build up an acquired immunity against debauchery at least with its attendant ills of syphilis, scabies, and sorrow, the best word which occurs to me to make them all end with an "s." It would be as well, also, in a future campaign to recognize the possibility of venereal disease in the field, and at least include some medicaments suitable for the treatment thereof in the "monkey box"—that is, if it is intended to retain the last impedimentum of the Army medical armamentarium, an anachronism which has survived since the Crimea.—I am, etc.,

J. S. Purdy, M.D., C.M.Aberd., D.P.H.Camb.

Auckland, New Zealand.

MEMORY.

Sir,—There is a great deal in Dr. MacDermott's letter (British Medical Journal, May 30th) that I do not understand, perhaps owing, as he says, to "an opposition arising in the rational expression of ideas generally"; but, as far as I can understand it, it seems to be beside the mark. I never engage in controversies about priority in the enunciation of doctrines. Such controversies are very unedifying, and seldom convince even the few who are sufficiently interested to follow them. I am quite content with an occasional private acknowledgement and apology for inadvertence. The protest that I made in your columns on May 2nd was against the national habit or fashion of self-abasement, which leads us to accord a flattering reception to that doctrine, when enunciated by a German, which was ignored when brought forward years before by one of our own countrymen. I daresay that Professor Hering anticipated both Professor Ziehen and myself. All honour to him. But if he confined the general function of memory to *organized* matter, he anticipated a part only of my general doctrine, which extends structural memory to the whole material universe. I am not concerned, however, with the question of priority. My protest is against the uncritical enthusiasm with which we are apt to receive every psychological or psychiatric doctrine that is made in Germany, or Italy, or America, in comparison with the stolid frigidity of our reception of doctrines equally important—perhaps the very same—enunciated on this side of the Channel. Candidates for university degrees have been found intimately familiar with the writings of second and third-rate Continental and American authorities, and ignorant even of the names of first-rate authorities of their native country. It is a queer exaggeration of national modesty, and makes one wonder what our Scottish brethren would think of it.—I am, etc.,

London, W., June 3rd. Chas. Mercier.

A NEW VIEW OF THE NOTIFICATION OF BIRTHS ACT.

Sir,—"Clear thinking and the correct use of words." I thank thee, Mr. Larkin, for teaching me that word! But Mr. Larkin fares ill in my hands when I subject him to this ordeal of judgement by "correct use of words." To call professional men of equal integrity with his own "unpaid touts"; to speak of letter-cards as "handbills"; to dub medical men who use such cards "amateur bill-distributors" and "notice distributors" are all alike choice examples of "clear thinking and correct use of words"! Again, to say that a question is not a question because he ridicules it and calls it a "confusion" is a further brilliant effort in the sacred cause of "clear thinking and correct use of words." In the Journal, May 23rd, p. 1261, we read this Delphian utterance: "When will we become alive to the fact that Parliament but strings together sequences of words and the real law is made by the interpretation put on them by custom and the courts?" That sentence I accept as "clear thinking."

But I am fairly entitled to ask *which* Mr. Larkin I am to encounter in controversial joust this week—the Mr. Larkin of June 6th, who says that an Act of Parliament is the alpha and omega of the matter, that it is puerile to make arrangements with a sanitary authority because it has an Act at its back, which Act permits it to exercise its authority "even at its whim"—or the Mr. Larkin of May 23rd who declares "that the real law is made by the interpretation put on sequences of words by custom and the courts"? As a typical sample of Mr. Larkin's "clear thinking" I would point out that he has utterly confused the issue between us by not "clearly thinking out" this

essential difference between *legal* right and the right acquired by *custom*. I asked Mr. Larkin, "Is the sanitary authority to have right of entry to all or any of our cases at its absolute discretion?" I did not say, or mean to say, *legal* right conferred by Act of Parliament, but right of entry *conferred by us* if we stand by and take no hand in the working of the Act, and make no attempt to control or direct the exercise of legal right possessed by the authority. Either the medical man must decide when his patients are to be visited by the authority, or the authority must decide for itself. This is "clear thinking." And I cordially agree with the Mr. Larkin of May 23rd that the "real law" will be whichever "custom" is adopted, Acts of Parliament notwithstanding. A medical man's rights and duties in respect of his patient depend, in my concept of my profession, upon something more noble and sacred in origin than an Act of Parliament. If no Act of Parliament empowers us to safeguard the interests of our patients by warding off possible intrusion or interference, we must use our "clear thinking" to devise a means of obtaining that power. This is vital to our professional existence. "Clear thinking" makes it our professional right and duty to our patients to insist that no authority shall exercise its legal right to their detriment. If legal rights bestowed by Act of Parliament be our profession's whole duty to our patients, then was Dr. Bagley wrong, and his profession (Mr. Larkin included) should not have supported him! Dr. Bagley should have stood by with folded arms and let his patient be taken from him to hospital by an officious policeman, and he should have quoted the "clear thinking" of Mr. Larkin: "Right of entry is a matter between the public and Parliament. If it is wrong, it is for the public to force Parliament to remove it. Our business is to take care of ourselves. The public may be relied on to take care of itself."

By parity of reasoning, if Mr. Larkin found a parturient patient a day after confinement subjected to official inquisition at the hands of a hyperzealous lady visitor warm on the scent of "copy" for statistics, he should say to his patient, "I cannot interfere," or, in his own words, "The interests of the profession and the interests of the patient are separate matters. Our business is to take care of ourselves. The public may be relied on to take care of itself." Such "clear thinking" will hardly commend itself to practical men in general practice! Or why the deputation of medical men who lately waited upon the sanitary authority of Manchester and complained of interference with their patients under the Notification of Infectious Disease Act? Their "clear thinking" did not lead them to the conclusion that "the public may be relied on to take care of itself"!

I wrote, "That practical men in general practice looked upon right of entry as the vitally important question in this Act." I did not say in the *wording* of the Act, but in the *working* of it, as it affects us every day, remembering Mr. Larkin's own sage words: "The real law is made by the interpretation put on them (sequences of words) by custom and the courts." Practical men care not at all what words are *in* an Act; the vitally important thing is what comes *out* of it.

Mr. Larkin's "clear thinking and correct use of words" leads him into the dilemma of having to assert that black is *not* black. My only possible answer is to reaffirm that black *is* black, that the Stockport and Newcastle schemes *do* leave the patient in the hands of her medical attendant. He says, "my scheme certainly does not fail to make any provision for her, or leave her absolutely in the hands of the sanitary authority." And to *prove* his statement he writes, "Right of entry is a matter between the public and Parliament. . . . Our business is to take care of ourselves. The public (parturient women included) may be relied on to take care of itself." I regard this as Mr. Larkin's *chef d'œuvre* in "clear thinking and the correct use of words"! In my "clear thinking" the following are enemies of our profession: Men who place upon it the "indignity" of being told by infant life preservation committees that they have not used "clear thinking" enough to distinguish "attendance" from "medical attendance" (vide BRITISH MEDICAL JOURNAL, May 9th, p. 1144); men who as secretaries of medical societies write to lay papers (vide *Manchester Guardian*) and endeavour to constitute the general public arbitrators between medical men and local authorities—a suicidal policy; men who, when a great movement in the interests of infant life is agitating the country, counsel a policy of *laissez faire*, thinly-veiled hostility or pin pricks as best for a noble profession. *Noblesse oblige!*

My "clear thinking" demarcates those as true to the honourable traditions of their profession who are eager to be in the van of the army of progress and not amongst its skulking camp followers; who do not haggle over a paltry fee for a *non-professional* act; who desire to co-operate loyally as medical men and citizens with sanitary authorities in the interests of the nation, and, regarding such authorities as common-sense and honourable men, endeavour to elucidate with them a practical scheme for the benefit of infant life and the comfort and wellbeing of parturient women, and by such action, far from putting "indignity" upon their profession, only add to its status in the eyes of the thinking man in the street, the law-maker, and the philanthropist.

That is my personal idea of "clear thinking" for my profession. This is the last word I shall write on the matter. I fervently hope that the last word of the medical profession and of our Association will not be that of Mr. Larkin: "The interests of the profession and the interests of the patient are separate matters. Right of entry is a matter between the public and Parliament. If it is wrong, it is for the public to force Parliament to remove it. Our business is to take care of ourselves. The public may be relied on to take care of itself."—I am, etc.,

Stockport, June 8th. J. M. BRENNAN.

INQUESTS AND OPERATIONS.

SIR,—I see in to-day's paper the account of an inquest held by Mr. Coroner Troutbeck upon a case which died after operation for cerebellar tumour. I trust some notice will be taken of this unwarrantable abuse of the coroner's office. If such inquests are to become common, no surgeon will undertake dangerous operations lest he may be dragged before Mr. Troutbeck. To be logical, that gentleman must order an inquest upon every operation that ends fatally. If he does not, the reason why he should single out Sir Victor Horsley as an object for insult becomes particularly patent. Naturally such a course as that taken by Mr. Troutbeck will very largely increase his fees.

The case is, further, another strong argument for the appointment of medical coroners only. Operations for disease situated in the cerebellar region have the special danger of sudden cardiac collapse—a fact which would be appreciated by a medical coroner, but which would be unknown (possibly not understandable) to Mr. Troutbeck. —I am, etc.,

London, W., June 4th. MACLEOD YEARSLEY, F.R.C.S.

"CALUMNIES AGAINST HOSPITALS."

SIR,—In reply to your criticism of an address I gave in November, 1892, I ask you to be good enough to permit me to say that the scientific dermatologists who advise from time to time on the treatment of my private patients suffering from xanthoma multiplex never excise pieces of skin from the neck or other parts of the body to differentiate the malady from the soft xanthoma of the eyelids, in the manner described, for example, by Unna. Such procedures are reserved for clinics, I believe, where the objections to the operation would not be so great. I am aware of the "elementary fact" that the actual "operation" under ether spray is *sometimes* painless; but I am also aware that there is often consequent pain which rich private patients would object to, and the dermatologists who are kind enough to see such patients for me never remove chunks of skin from such cases, notwithstanding the clinical and histological interest of such a proceeding. You ask me if I have never had to discontinue giving cod-liver oil to a child. Very rarely; but I never make my patients swallow, say, half a pint of cod-liver oil every day.

Dr. Bristowe's case of biliary fistula was treated—as I understand the account in the *Journal of Physiology*, to which you refer—by the administration of half a pound of butter a day, because certain experimenters had a theory about it, and they said: "The theory is capable of experimental proof. We had a number of monkeys in the laboratory, one of which died, and a *post mortem* was held." Two other monkeys underwent experiments, and

it is indisputable that the enormous doses of butter were administered as part of a physiological experiment on the digestion of fats. I have yet to be introduced to the private patients who would consent to collaborate with three monkeys in any such research as this, and I venture to suggest that Dr. Bristowe was too much influenced in his treatment of this particular case by the presence of the researchers occupied in their experiments upon monkeys in too close proximity to the hospital wards. The patient was dying, and we are told that the butter caused intense nausea and vomiting, and that the observations "were interrupted by the death of the patient."

I am always suspicious of medical cases which are reported in the *Journal of Physiology* where the physician is associated with the vivisector and his animal victim, and, with all respect to you, Sir, I submit that I have a perfect right to say so.—I am, etc.,

EDWARD BERDOE, M.R.C.S., L.R.C.P.Ed.

London, E., June 8th.

*** Mr. Berdoe once more evades the charge he has to answer. He said that "working men, their wives and children were subjected in our hospitals to operations which were not performed on a lady who rode in her carriage." When challenged to produce some proof of this outrageous statement, he referred to the two cases of which details were given in our leader of last week. In the letter we now publish he does not even attempt to justify the main charge which he brought against his own profession. It is evident that he brought it quite recklessly, since, after more than fifteen years' incubation, he produces a defence which we can only describe as childish. He has a perfect right to think as he likes of vivisectors, but he has no right to describe such things as he cites as "operations" that would not be done on a lady who rides in her carriage. If the dermatologists whom he consults have never had occasion to clear up a doubtful case by microscopic examination, we can only congratulate him on the simple character of the cases of skin diseases with which he has to deal in his practice. We may remind him that an "operation" of a similar dreadful kind was performed, without any anaesthetic at all, on the late Emperor Frederick of Germany, when a piece of growth was removed from his larynx for examination. The writer himself bears on his arm a scar left after excision of what Mr. Berdoe might have described as a "chunk" of skin when some grafts were wanted for a large wound, but it never occurred to him at the time or since to complain that an unnecessary "operation" had been performed upon him. The author of *St. Bernard's* has again proved that he makes charges which he cannot substantiate.

Medico-Legal.

INQUESTS AND OPERATIONS.

WE take the following report of an inquest held by Mr. John Troutbeck on June 3rd from the *Times* of June 4th. The inquiry was held at Battersea into the death of a patient named Gertrude Helen Muirhead, of Sisters Avenue, Clapham Common, who died in Bolingbroke Hospital after an operation for the removal of a tumour from the brain. Sir Victor Horsley, who performed the operation, was called as a witness. He said the case was such an ordinary one that he could not understand why an inquest was held. The coroner said that, owing to the advance of surgery, operations were much more frequent than they used to be. Clearly they were to some extent a cause of the deaths that resulted, and they came within the Coroners Act of 1887, which made inquests imperative in such cases. Sir Victor Horsley rejoined that if that were the case 10,000 inquests would have to be held every year. In his remarks to the jury the coroner said it was the opinion of all coroners that if death were accelerated by an operation the case was brought within the third section of the Coroners Act, which provided that an inquest must be held when death was due to causes either unnatural or violent. A death that had been accelerated by an operation could not possibly be said to be a natural death. He knew that a considerable proportion of deaths which undoubtedly were in great part due to surgical operations were never reported to the coroner. They were certified, and owing to our system of certification the certificates were accepted. The registrars did not forward them to the coroners, as he thought they should do, because they were not fully aware of the obligations of the Act of Parliament. He was convinced that the result was that throughout the country we were in a complete state of ignorance as to what proportion of deaths were accelerated by surgical operations. It was a serious matter, and one for which a legal remedy was undoubtedly required. On inquiry he learned that from the Bolingbroke Hospital alone fourteen such deaths had occurred this year, and the registrar stated that during the same period of time there had in thirty other cases been operations in connexion with the last illness. Whether or not those operations accelerated death one could not tell, but a very serious condition of things stood revealed. He did not intend to let the matter stand. He regarded it as extremely important from the public point of view, and in these matters the coroner represented the public, on whose behalf such cases ought to be inquired into. They could leave these questions to no profession whatever, however honoured or however skilled. In the case before the court the coroner directed that a verdict of "accidental death" would be a proper one if the jury were satisfied that the operation was justifiable and that all due care had been taken. Such a verdict was returned.

The following letter in reference to this case from Sir Victor Horsley appeared in the *Times* of June 6th:

Sir,—Under the above heading you publish to-day an admirable report of an inquest conducted by Mr. Troutbeck, the coroner for South-West London, on the body of a patient who had been operated upon by me at the Bolingbroke Hospital, and died three days later.

The case was a perfectly simple one, in which no manner of doubt existed as to the cause of death, and for which a certificate had been duly given to the registrar—namely, heart failure due to pressure which had been previously exerted on the nervous system by a cerebellar tumour. Nevertheless, not only did Mr. Troutbeck hold an inquest, and hold it in his special way, but also in his address to the jury put forward a claim for his Court, and for coroners' jurisdiction in general, which, if universally carried into effect, would put an end to the practice of medicine as well as surgery, besides involving the ratepayers in an enormous cost in coroners' fees and in other expenses.

The first point is the fact of Mr. Troutbeck holding an inquest at all in the present instance. The reason he assigned would apply to the case of any patient who died after receiving surgical or medical treatment from a registered practitioner, because it might always be contended that the giving of some drug or adoption of some surgical procedure was an "unnatural" event.

According to Mr. Troutbeck, it would be the duty of a coroner to summon a jury to assist him in finding whether the death in every case terminating fatally in his district had been "accelerated" by the action of the medical practitioner in charge of the patient.

I leave for the present the point whether Mr. Troutbeck's Court is competent to perform this vast and highly technical work.

As a matter of fact, this actual question of Mr. Troutbeck's qualification for the judicial position he desires to assume is closely involved in another issue, namely, his own peculiar methods of holding inquests.

In the present instance (following a system which he has evolved for himself) he abstained from calling before the jury the medical practitioner who was actually in charge of the case, who had treated the patient for many years, and who was in attendance upon her throughout her illness and at her death.

This system of Mr. Troutbeck's is no new thing, and has led for years to a widespread miscarriage of justice and consequent danger to the public. As Chairman of the Representative Meeting of the British Medical Association, with other representatives of medical societies, I was charged with the duty of furnishing in May and July, 1903, to the late Lord Chancellor, by deputation and by printed documents, the tabulated records of a series of inquests held by Mr. Troutbeck, in which it was shown that, owing to his having withheld from the juries the evidence of the medical men in attendance on the cases, the juries were misdirected, and wrong verdicts were returned and registered.

For full details of these cases see the BRITISH MEDICAL JOURNAL, July 16th, 1904, SUPPLEMENT, p. 55.

I may, however, quote from them a typical instance of the danger to the public caused by this procedure of Mr. Troutbeck in conducting inquests.

A child died of measles, as observed by the medical man who saw the child immediately on its death. Mr. Troutbeck did not call the doctor, but some days later, when, of course, all traces of the rash had disappeared, had a *post-mortem* performed by Dr. Freyberger, who knew nothing otherwise of the case, and who suggested blood poisoning as a cause of death. As this was the only medical evidence taken by the coroner, an erroneous verdict was naturally returned by the misdirected jury.

Although in the opinion of the British Medical Association, as representing the medical profession, such miscarriages of justice in Mr. Troutbeck's Court are of the utmost gravity and public danger, nothing has yet been done by the Government. The only answer so far received by the Association from the Lord Chancellor is to the effect that the law affords no safeguards against such misuse of his powers by a coroner.

Lord Halsbury's exact words in his letter of July 29th, 1904, were that "though his lordship's present impression is not in favour of the coroner's practice, his lordship does not as yet see that there is such a case as would found the exercise of the

only jurisdiction which he possesses—namely, to remove a coroner for misconduct in his office."

That Mr. Troutbeck should now contemplate an extension of his practice is indeed disquieting.

There remains the third point, his contention that a coroner's Court is technically qualified to decide whether any person who dies, having received medical care, was or was not treated in the best possible manner.

Considering that neither the coroner nor his inquiry officer nor the jury are possessed of medical expert knowledge, this new claim by Mr. Troutbeck of judicial omniscience must appear to every reasonable man to be preposterous.

May I say, in conclusion, that the responsibilities which every operating surgeon has to bear at the present day are heavy enough? If to these is to be added the prospect that in every case which terminates in death the propriety of his technical methods will be publicly adjudicated upon by incompetent persons, his position will be an intolerable one.

I am, yours faithfully,

VICTOR HORSLEY.

Cavendish Square, W., June 4th.

The *Times* of June 9th also published the following letter:

Sir,—The step taken by Mr Coroner Troutbeck in holding an inquest on the body of a lady who died after an operation is one of great importance to the public as well as to the medical profession. There are three points to which I should like to direct attention.

First, Mr. Troutbeck stands alone among coroners in his practice and in his inexplicable animus toward the medical profession. That he considers medical men incompetent and untrustworthy is proved not only by his words, but by his deeds. The comptroller of the London County Council reported that between May, 1903, and February, 1905, Mr. Troutbeck found it necessary to call in a special pathologist, Dr. Freyberger, 816 times in place of the local or hospital medical attendant. During the same period the other seven coroners in London had between them 46 cases requiring special pathological knowledge. On most, if not all, of those 816 occasions public money was wasted; in not a few an erroneous verdict was arrived at from want of accurate clinical information.

Secondly, Mr Troutbeck has devised a new method of annoying—for it cannot do more—the medical profession; but it is the public who will feel this new departure most severely. They will be not a little disturbed to find that a new and disgusting horror has been forced upon those unfortunate persons who have to undergo serious surgical operations. It is hard enough at any time to have to explain or to hear the dangers that must be faced; now—in South-West London only, be it noted—it will be the unpleasant duty of the operating surgeon to point out that, in the event of death following the operation, a *post-mortem* examination at the public mortuary and a subsequent public inquiry will take place; such a communication is not likely to lessen the mental anxiety with which a patient contemplates an operation.

Thirdly, lest any of your readers should imagine that Mr. Troutbeck has any ground for his assertion of the authority of the Coroners Act, 1887, it may be well to quote its actual words:

"Where a coroner is informed that the dead body of a person is lying within his jurisdiction, and there is reasonable cause to suspect that such person has died either a violent or an unnatural death, or has died a sudden death of which the cause is unknown, etc., the coroner is directed to hold an inquest."

Although no definition of unnatural death is given, it is not left to Mr. Troutbeck to define. Under the Registration Act, 1874, a medical man has to certify the cause of death of those whom he has attended in their last illness; it is there implied that a death from disease under treatment *secundum artem* is not *contra naturam*. Without such a safeguard—repeated in the Medical Act—medical practice would be impossible.

In the absence of a reasonable cause of suspicion against Sir Victor Horsley's skill and good faith, this peculiar inquest held by Mr. Troutbeck can only be attributed to his specific animus against the medical profession. Year by year hundreds of death certificates have been registered in Mr. Troutbeck's district in which an operation has been set down among the "causes of death." Yet till he could attack Sir Victor Horsley, who took part in the agitation against him some years ago, Mr. Troutbeck let them pass.—I am, yours faithfully,

DONALD F. SHEARER, F.R.C.S.,
Joint Hon. Secretary, South-West London Medical
Putney, June 7th. Society.

*** Letters from Mr. Troutbeck and Dr. M. G. Biggs, published in the *Times* of June 10th, will appear in our next issue.

WORKMEN'S COMPENSATION CASES.

Malone v. Cayzer Irwine Company.—This case, which was recently heard at the Sheriff Court at Glasgow, raised a question as to whether, in certain curious circumstances, death could be said to have resulted from an injury. A workman who had lost the sight of his left eye, met with an accident involving the loss of sight of his remaining eye. He thereafter became insane and committed suicide. In an action under the Workmen's Compensation Act, 1897, at the instance of his widow, against his former employers, it was alleged that death was due to an accident arising out of and in the course of the employment. The court held that the cause was too remote, the Lord President observing: The claimant will have to do something more than say that there was a possibility of death arising from such an injury in such a way—she must show that it was in fact the result of the injury.

PARTNERSHIP DISPUTE.

ANNOYED writes: A. and D. are partners; D. gives his resignation, which A accepts, and pays D. out. D., instead of clearing out, introduces a stranger to A.'s patients. The agreement between A. and D. stipulates that when the partnership ceases the retiring partner must not practise within fifteen miles. D. still goes with the stranger to a patient. What is your advice?

*** Everything turns upon the construction of the deed of partnership. If D. is doing that which he is forbidden to do by the deed he can be restrained, and will he held responsible for any damages caused by his wrongful acts. A. had better seek legal advice and assistance.

PARTNERSHIP RECEIPTS.

TERRITORIAL FORCES writes that A., B., and C. are partners in a practice, and each is a surgeon to "Territorials." Each has to examine a certain number of recruits, and takes a week-end to visit his station to do so. Should the fees earned for this work be added to the partnership receipts? Agreement says all fees earned must be divided.

*** Such fees should be added to the other partnership receipts.

PRINCIPALS AND ASSISTANTS.

M. X. inquires whether, in the case of a qualified assistant being engaged to manage a branch surgery, the principal ought to supply him with a pocket-case of instruments and hypodermic syringe, or whether he is expected to use his own. Also whether, when the salary is paid monthly, it should be reckoned by a calendar or lunar month.

*** It is the principal's duty to supply the assistant with all instruments required to carry on the practice. Salaries are always reckoned by the calendar month, when paid monthly.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

OPPOSITION BY A LOCUMTENENT.

A. J. W. B. writes: I have been settled in practice here for two years now, having purchased this practice two years ago. During that time I have had occasion to be away several times owing to the illness of a near friend. On two of these occasions I employed the same locumtenent, and also on the occasion of my honeymoon trip (two weeks' duration) a year ago. This doctor was well treated in my house in my absence, and well paid for his services. He has now set up in practice for himself in opposition to me. His only introduction to the district and people here was as my locumtenent, and it appears to me that he is taking an unfair advantage of my enforced absence and of my trusting him with my practice among people to whom I myself was almost a newcomer. Until his arrival there was no other resident doctor in this village. Knowing the circumstances of the case, the doctors from the neighbouring villages have called on me to express their condemnation of the trick which has been played upon me. They also suggest that I should take some action in the matter. Would you kindly advise me as to what I should do in the circumstances?

*** This case illustrates the desirability of insisting on a bond from a locumtenent. Such conduct as his is undoubtedly unfair, but we fear the locumtenent is acting within his legal right, and any action can only be by our medical organization. The matter should be referred to the local Ethical Committee.

PROFESSIONAL SECRECY.

G. W. G. writes: I had a man brought to me with a broken leg who was obviously the worse for drink and I have since been interviewed by the agent of an insurance company who wants to know whether I consider the man to have been drunk. I have so far refused to give information, as I regarded such knowledge as I had obtained as a professional secret. Shall I continue to refuse information until the matter gets into court, when I presume I may give such information as is asked of me?

*** Our correspondent has acted rightly in refusing information and should continue to refuse even in the witness

box; there he should appeal to the judge, who will not direct him to answer any question unless he considers it necessary in the interests of justice.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE

The following degrees were conferred on May 28th:

M.D.: H. M. Davies, Trin.; W. Morley Fletcher, Trin.; J. S. Pearson, Trin.; E. D. Macnamara, Pet.; F. H. Edgeworth, Gonv. and Cai.; A. H. Style, Emm.
M.B., B.C.: F. W. W. Griffin, King's.
M.B.: J. McIntyre, King's; L. H. L. Mackenzie, Trin.
B.C.: A. Wilkin, King's; P. H. Smith, Pemb.; E. G. Wheat, Christ's; A. J. May, Sid. Suss.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ST. PANCRAS SCHOOL FOR MOTHERS.

The first annual meeting of the St. Pancras Mothers' and Infants' Society will be held at the Town Hall, Pancras Road, N.W., on Monday, June 15th, at 3 p.m., to render an account of the first year's work of the School for Mothers and Babies' Welcome. The report states that the St. Pancras School for Mothers was first projected at a representative meeting held on May 1st, 1907. Dr. Howard Barrett took the chair. An account by Mrs. W. E. Gordon was read of the Chelsea dinners for nursing mothers, and the School for mothers at Ghent was described by the Hon. Mrs. Bertrand Russell. It was decided to organize and carry out a scheme comprising features of both institutions for the benefit of mothers and infants of the Somers Town district of East St. Pancras, and to invite inhabitants of the neighbourhood and other friends to subscribe. For several years past it has been the aim of Dr. Sykes, the St. Pancras medical officer of health, to encourage the natural feeding of infants, as against any system which should make bottle-feeding appear more easy or more desirable. With the help of devoted lady health visitors a great deal has been done in this direction, and the infant mortality during the summer months has been gradually reduced in St. Pancras. This experience has sufficiently proved that the encouragement of the natural feeding of infants is the thing most worth working for, and the St. Pancras scheme aims at promoting this in various ways, whilst endeavouring also to cover a wider field.

The school was opened as an experiment on July 1st, 1907, at a conference over which Lord Robert Cecil, K.C., M.P., presided. Sir Thomas Barlow, Bart., Dr. Paramore, Mrs. Scharlieb, M.D., and others spoke to various resolutions bearing on the prevention of infantile mortality. Suitable premises were taken at 6 and 7, Chalton Street, Euston Road, N.W., consisting of a large, well-lighted ground floor and basement. "Mothers' and Babies' Welcome" was painted up across the building. The work of the "Welcome" is divided into the following departments: (1) Infant consultations, (2) dinners for nursing mothers, (3) classes, (4) provident maternity club, (5) home visiting, (6) fathers' evening conferences.

The honorary medical officer attends on two afternoons a week to examine babies and their mothers, and to give advice on their feeding, clothing, and general management. The babies are weighed periodically, and careful record is kept of their condition. Mothers who come regularly join the club and pay 1d. a fortnight. Non-nursing mothers are also encouraged to join, and are instructed how to proceed. They are assisted, as circumstances and experience dictate, in procuring pure milk, in the mode of feeding, in periodical weighing etc. Cases of illness are referred to doctors, dispensaries, or hospitals.

Two hundred and eighteen babies under 12 months of age have been brought to the consultations in the ten months to which the report refers; an opinion has been given also on several who were over age. Of the whole 218, 119 attended only once or twice, 10 of them being referred at once for further medical advice; others lived too far away or moved out of the district.

Three children are known to be dead; one died in the country; the other two, twins, were never strong, and they died of marasmus. Three pairs of twins and two of a set of triplets have been brought. Only one pair was in good condition; the mother had been a children's nurse. Seventy-two of the babies born before March 31st, 1907, have now passed out of the consultation department as being over age. Only a few were lost sight of before attaining their first birthday. In 62 cases the mother attended with her first child.

There is no doubt that the children whose mothers have come to dinner regularly and attended classes have benefited all round. With the special design of promoting natural feeding of infants, dinners for underfed nursing and expectant mothers are regularly provided on the premises. A mother, for the sum of 1½d., can obtain a good meal, day by day, for from two or three months before the birth of her child to as long as nine months afterwards, provided she is herself nourishing the child, so that two persons are fed at the expense of one. The dinners are also utilized as object-lessons in the economic provision and preparation of nourishing food.

The lady superintendent reports that 1,933 dinners have been provided from June 25th, 1907, to March 31st, 1908, at an average cost (for actual food) of not quite 2½d per head for the entire period (the cost per head is now under 2¼d.). Where possible the mother has herself contributed 1½d. of this; in other cases the women have been sent and paid for by private individuals or charitable associations; the remainder have been provided free by this society in cases which close investigation has proved to be deserving as well as needy.

The educational side of the work of the School for Mothers has, it is held, been attended by most gratifying results. The cookery class, where practical teaching of simple nourishing dishes is given, is a very valuable feature, and the newly started cutting-out class is much appreciated.

A provident maternity club has been started, which expectant mothers are urged to join in good time. They lay by money under four headings: (1) Doctor or midwife; (2) baby-clothes; (3) extra help during confinement; (4) extra nourishment. The committee has hitherto added a penny to every shilling laid by. It is proposed in future to give an increasing bonus of a half-penny for each completed month of joining before childbirth so as to encourage early enlistment. These mothers are entitled to attend the classes and demonstrations.

The lady superintendent follows up special cases where teaching is badly needed by visiting the homes and giving the mothers practical lessons on baby's bath, feeding, etc. Fathers are often seen on these occasions. Cases of unemployment are investigated, and, as far as possible, helped by recommendation to labour agencies, or by the actual finding of situations.

For the purpose of stimulating fathers to think out the best mode of securing the health and welfare of their wives and babes, and the comfort of their families and homes, informal addresses are given and discussed on certain evenings during the winter session.

When the School for Mothers was first opened, a rough reckoning was made that it would cost £300 a year. In the balance sheet, which covers a period of ten months only, it will be seen that £269 had been spent. Deducting expenses such as the purchase of weighing machines, oil-cloth, furniture, and some house repairs, which are not an annual cost, it may fairly be said that the estimate was above the mark.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INCORPORATION OF THE BRITISH RED CROSS SOCIETY.

The *London Gazette* of June 5th announces that a petition has been presented to the King in Council for the grant of a charter of incorporation of the British Red Cross Society. The application has been referred to a committee, and notice has been given that all petitions for and against such grant should be sent to the Privy Council Office before July 6th.

SERVICE ON THE WEST COAST OF AFRICA.

The Army Orders for June contain a Royal Warrant entitled "Service on the West Coast of Africa." It expresses the royal will and pleasure "that when tours of duty on the West Coast of Africa have been terminated in the interests of Our service earlier than the normal period of twelve months (*i*) Any period actually served on the West Coast shall reckon double towards voluntary retirement or retired pay in the case of an officer. (*ii*) Leave, pay, and lodging allowance shall be granted in due proportion to the scale now laid down for twelve months' service." The warrant sets out in detail the particulars in which the Royal Warrant of August 30th, 1907, is to be amended in regard to the pay, appointment, promotion, and non-effective pay of the army on the West Coast of Africa.

INDIAN MEDICAL SERVICE.

Accident to Lieutenant-Colonel Shore.

A telegram from Secunderabad, dated May 18th, says: An unfortunate accident has happened to Lieutenant-Colonel R. Shore, Indian Medical Service, who only recently took up his new appointment as Residency Surgeon at Hyderabad, resulting in the loss of one eye. It appears that Colonel Shore, who is short-sighted, was assisting at an operation in which some stitching was involved, when he got his eye affected by the prick of a needle. The needle penetrated the interior chambers of his eye, carrying with it a virulent poison. An operation became necessary, and Lieutenant-Colonel Shore is getting on fairly well.

OBITUARY.

PRIOR PURVIS, M.D.Lond.,

BLACKHEATH.

We regret to announce the death of Dr. Prior Purvis, of Blackheath, the *doyen* of the University of London, in his 96th year.

In May, 1907, he began to suffer from retention of urine, due to an enlarged prostate, and as at his age an operation was deemed inadvisable, the obstruction gradually increased. A fortnight before his death he had severe prostatic haemorrhage, which lasted two or three days, and, although this was controlled, it left him so enfeebled that he sank and died on May 29th.

Dr. Prior Purvis was born at Greenwich on October 31st, 1812, and was educated at "Stocker's," at the time a well-known school in Poplar. At the age of 15 years he was apprenticed to Mr. Cornwall, a surgeon in large practice at Fairford, Gloucestershire, and he was very fond of telling tales of those days, and how the country labourers would come in crowds, spring and fall, to be "blooded," and at those times the surgery would resemble a shambles. He was one of those who believed in the change in type of disease, as he was sure that then bleeding did good, whereas he was equally convinced that now it would do nothing but harm. He was also one of those who thought that it was a pity to have given up apprenticeship, and he used to say that formerly the medical student learnt his profession before he came to London, but now he entered the hospitals entirely ignorant, as a rule, of professional work.



Photograph by] DR. PRIOR PURVIS. *[Wayland.*

In London he studied at the Borough Schools (combined Guy's and St. Thomas's), and in due course took his L.S.A. in 1834 and M.R.C.S. in 1835; in 1839 he passed the M.B. at the newly established University of London, and proceeded to the M.D. in 1842, being amongst the first batch who presented themselves for that degree. He was always very proud of his M.D.Lond., although he acknowledged that they were let through very easily, and modestly declared that he had no business to have passed.

He settled in his native town of Greenwich, afterwards removing to Blackheath, and soon obtained a large practice. He took an active part in public work, to which he devoted a considerable portion of his time, being a member of the old vestry, where he was foremost in supporting and promoting new projects, such as the establishment of baths and washhouses under the Baths and Washhouses Act. He was one of the founders of the Mechanics' Institute, afterwards called the Greenwich Society for the Acquisition and Diffusion of Useful Knowledge, delivering some of the earlier lectures himself; he was made acting trustee and treasurer from the first, a position he retained until the affairs of the "Lecture Hall" (as it was then called) were wound up, and the building sold to the Borough Council in 1900 to become the "Borough Hall."

He was also one of the founders, and for many years chairman of the Industrial Permanent Benefit Building Society, Greenwich holding this position at his death. He was, besides, one of the original governors of the Roan Schools and a Commissioner of Taxes for the Blackheath Division.

A Liberal in politics, and of a somewhat combative nature, he threw himself into all the great political questions of the day, notably that of the admission of the Jews into Parliament. He strongly supported Alderman (afterwards Sir David) Salomons in his parliamentary candidature, and for years was chairman of his parliamentary committee. The same liberal bent of mind caused him strongly to support the admission of women into the ranks of the medical profession, and several of the present medical women have frequently expressed their gratitude to him for his efficient help in their early struggles.

Dr. Purvis took a leading part in the establishment of the West Kent Medico-Chirurgical Society, being its Treasurer from its initiation in 1856, till increasing years and infirmity caused him to resign in 1897. On his resignation the members presented him with a very handsome china clock and pair of vases. Two years before his resignation an oration in his honour was instituted, to be delivered annually at the meeting in December by some distinguished member of the profession, to be called the "Purvis Oration." Since then the orators have been Mr. Arthur Durham, Dr. John Curnow, Professor Sims Woodhead, Dr. A. E. Sansom, Sir Victor Horsley, Dr. Vivian Poore, Dr. J. F. Goodhart, Mr. Anthony Bowlby, Dr. J. Rose Bradford, Mr. J. Bland-Sutton, Mr. Jonathan Hutchinson, Mr. A. W. Mayo Robson, and Dr. Risien Russell. He was also a Vice-President of the Medical Defence Union.

Dr. Prior Purvis was married in 1840 and celebrated his diamond wedding in 1900. His wife predeceased him, dying in July, 1907. They had ten children, seven of whom survive (two sons and five daughters). The eldest son, John Prior Purvis, has been his partner in the practice for forty years. His other son, Frank Prior Purvis, is Professor of Naval Architecture and Marine Engineering at the University of Tokio, Japan. There are twenty-four grandchildren and nine great-grandchildren surviving.

The funeral took place at Nunhead Cemetery on Wednesday, June 3rd, and was attended by numerous relatives and friends and representatives from all the various bodies with which he had been connected.

SURGEON-GENERAL SIR JAMES ARTHUR HANBURY, K.C.B., M.B., died at Bournemouth on June 2nd, aged 76. He entered the Army Medical Service as Assistant Surgeon, September 30th, 1853; became Surgeon, February 20th, 1863; Surgeon-Major, March 1st, 1873; Brigade Surgeon, November 27th, 1879; Deputy-Surgeon-General, May 5th, 1881; and Surgeon-Major-General, June 14th, 1887. He retired from the service, January 13th, 1892. During the Afghan war of 1878-80 he served with the Bazar Valley expedition, and was present in the march from Kabul to the relief of Kandahar and in the battle on September 1st (mentioned in dispatches, medal with clasp, bronze decoration, and nominated a Companion of the Bath). He was Principal Medical Officer during the Egyptian war of 1882, being present at the battle of Tel-el-Kebir (twice mentioned in dispatches, medal with clasp, and Khedive's bronze star). He was granted the Second Class of the Order of the Medjidie and made K.C.B. He has been Principal Medical Officer at the Horse Guards and at Gibraltar, and Surgeon-General of the Forces in Madras. He was granted the reward for distinguished service in 1905. Sir James was the son of Mr Samuel Hanbury, a stockbroker in the City of London, and his mother was Frances, daughter of the Rev. William Sewell, of Headley, Surrey. Sir James Hanbury married in 1876 Hannah Emily, daughter of Mr. James Anderson of Coxlodge Hall, Northumberland.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

RADNOR would like to know if any reader can tell him the best way to obtain a month's holiday on board an Atlantic liner as surgeon. He is in practice in a country district and would exchange work. In what papers would it be advisable to advertise?

ANSWERS.

GREASY SKIN.

SAPONIS.—These cases vary so much in different patients, according to age, complexion, other local and general conditions, etc., that it is quite impossible to advise without fuller knowledge of the case.

FLEAS.

DR. J. S. PURDY (Auckland, N Z) writes, in reply to "Restless Night" (BRITISH MEDICAL JOURNAL, February 15th, p. 423): To get rid of fleas from a house, swab all floors and woodwork with kerosene. Pasterine, a by-product in the destructive distillation of petroleum, is strongly recommended by Dr. Turner, Executive Health Officer, Bombay. In Auckland experiments carried out on a large scale have demonstrated that petroleum prevents insects becoming pests.

COLONIAL MEDICAL STUDENTS.

P. A. H.—Every university and every licensing body has its own rules for dealing with the cases of people who desire to proceed to *ad eundem* degrees, these being subject to the general regulations of the General Medical Council when the degree to be conferred is a registrable qualification. The variations are still greater when the point in question is what exemptions should be granted to a candidate for a degree or a licence who has not obtained a registrable qualification in the country to which he belongs. Such a person is merely a medical student who, having commenced his career at one medical centre and having passed certain examinations thereat, is desirous of completing his education and obtaining his degree or licence in Great Britain or Ireland. Every such case must be treated on its own merits, and the only fashion in which our correspondent can obtain a satisfactory solution to his problem is to address a letter to the registrar of the Medical Faculty of each of the universities whose degrees would suit him and give a definite account of his career. He should state what examinations in general education he has passed, when he commenced his medical studies, how he has been occupied since that date year by year, what examinations he has passed, at what dates, and what were the subjects at each of the examinations.

LETTERS, NOTES, Etc.

A DISCLAIMER

DR. DUDLEY W. BUXTON (London) writes: A friend of mine, who is a dentist, has drawn my attention to a pamphlet entitled "The Contemplated Medical Anaesthetists Bill"; it is signed by Mr. Robert Marston. In this it is implied that I am to give a demonstration concerned with chloroform for a stake of £5 a side! It appears a grotesque assumption that I should lend myself to such a proceeding, but as the pamphlet has been scattered broadcast, I am compelled to say that my name has been used without my permission, and I have no intention of countenancing any demonstration of the kind.

DOSAGE OF TETANUS ANTITOXIN.

TREATMENT observes that from time to time fatal cases of tetanus are recorded where antitoxin was used, but in such small doses that it could not possibly have proved curative. He asks us to urge the importance of employing large doses.

When used as a prophylactic, tetanus antitoxin seems to be of value, and its employment for this purpose ought to be resorted to more frequently in cases where it is feared tetanus may develop. But in cases such as those to which our correspondent alludes, where the clinical symptoms have already established themselves, the curative value of even very large doses of antitoxin is doubtful. The treatment is on its trial, and is employed by many persons who do not hesitate to use the maximum dosage compatible with safety. When the efficacy of the treatment has been established on a broader basis, we hope to recur to the subject.

THE MEDICAL GOLFING SOCIETY.

THE Medical Golfing Society will hold its tournament for 1908 on June 18th at the Guildford Golf Club by kind permission of that club. Intending competitors should send the annual subscription of 4s. (which includes entrance to the tournament) to L. Eliot Creasy, Honorary Treasurer Medical Golfing Society, 51, New Cavendish Street, London, W., and must notify their entry, stating lowest handicap, on or before Tuesday, June 16th, to Dr. Theo. Hyslop, Honorary General Secretary, Bethlem Royal Hospital, London, S.E. The following are the particulars of the competition: Eighteen holes match play *v.* Bogey, under handicap. Class I. Handicaps 12 and under. Class II. Handicaps over 12. No previous play allowed on the day. A first and second prize, and a prize for the best last 9 holes *v.* Bogey, will be given in each class. Members of the Guildford Golf Club deduct 2 from their handicap. The "Henry Morris" Challenge Cup will be awarded for the best score against Bogey under handicap, and the winner will also receive the Medical Golfing Society Gold Medal. A foursome sweepstake will be arranged in the afternoon.

THE CAIRO SCHOOL OF MEDICINE LIBRARY.

WITH reference to a short article entitled "English Hospital Work in Egypt," which appeared in the JOURNAL of May 16th, 1908, we are requested to state that the remark therein made that the library of the School of Medicine is "not very well supplied with recent medical or scientific works" is not quite accurate. We are informed that the library contains about 7,000 volumes, and is kept steadily up to date by the addition of works in English, French, German, and other languages. The appeal for additional literature made in the article was therefore, we are assured, unnecessary.

MEDICAL WOMEN AND THE SUFFRAGE.

A MEDICAL WOMAN writes: A considerable number of medical women have arranged to take part in the forthcoming demonstration in favour of women's suffrage on June 13th. Others, while owning to an equally ardent desire for the franchise, think it inadvisable to join in any demonstration of a more public character than that involved in occupying a seat during the second part of the proceedings in the Albert Hall. The women doctors who are joining in the procession to the Albert Hall have decided to take this means of expressing their desires, after mature consideration. The occasion has afforded them the opportunity for giving collective, orderly, and public expression of their claims. Due advice was taken as to the propriety of joining the demonstration, as members of the medical profession, but no objections were raised. It was decided to go in academic dress, in order to give gravity and dignity to the corporate public appearance of the medical women.

MEDICAL MEN AND INSURANCE COMPANIES.

WE have more than once alluded to the trick played upon medical practitioners by the agents of insurance companies who offer them an appointment as medical examiners for the district on condition of their taking out a substantial policy of life insurance, and having thus obtained their commission transfer themselves and their cases to another practitioner, upon whom they perform the same operation. As life insurance is not a bad thing, and with few exceptions British insurance companies are perfectly safe, no great harm results, but a correspondent draws our attention to a circular letter he has received from a company which, combining the businesses of the risks of fire and burglary with those of workmen's compensation and life insurance, offers our correspondent one of two appointments as medical representative of the company for the town and district in which he lives, on condition that he will take up ten preference shares of £5 each, of which £1 per share is to be paid on application and £2 per share on allotment. We are inclined to regard this as an ingenious method of selling shares which are otherwise not in great demand, and should advise those who receive this offer not to part with their money unless satisfied on other grounds that the company is a safe investment.

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BRITISH MEDICAL JOURNAL.

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LONDON: SATURDAY, JUNE 20TH, 1908.

An Address

ON

NINE HUNDRED CASES OF TUBERCULOUS DISEASE OF THE HIP,

TREATED AT THE ALEXANDRA HOSPITAL, WITH A MORTALITY OF LESS THAN 4 PER CENT.

DELIVERED TO THE NOTTINGHAM MEDICAL SOCIETY.

BY

ANTHONY A. BOWLBY, C.M.G., F.R.C.S.,

SURGEON TO THE HOUSEHOLD OF H.M. THE KING; SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, AND TO THE ALEXANDRA HOSPITAL FOR CHILDREN WITH HIP DISEASE.

GENTLEMEN,—I propose to speak to you to-day upon my own experience in the treatment of hip disease in children under 12 years of age at the Alexandra Hospital.

The Alexandra Hospital was founded in February, 1867, with the object of treating tuberculous disease of the hip without operation other than the opening of abscesses, that is to say, by rest and by extension, and by good nursing and food, and it was stipulated that the length of time that the children were to remain in the hospital was to be in no way limited. The only ways in which limitations were imposed were in cases of children who were considered to be incurable, or who had had excisions of the hip done or had extensive spinal caries, for all these complications were originally a bar to admission.

EARLY STATISTICS.

I have been connected with the hospital for twenty-one years, and before I was connected with it there had been an inquiry instituted by the Clinical Society of London, in the year 1879, as to the relative advantages of treatment of hip disease by rest and other associated measures on the one hand, and by operation, notably by excision, on the other. The report of this committee was published in the fourteenth volume of the *Transactions of the Clinical Society* (1881). That report has been constantly alluded to by all writers on the subject ever since, and you will find reference to it in most books on surgery, and in all books which deal specially with hip disease. I will give very briefly and without entering into detail, the actual figures which were the subject of this report. It was found that in the Alexandra Hospital from the year 1867 to 1879 there were altogether 401 patients. Of these, 17 were removed from the hospital to be operated upon, and therefore we may put them aside. As a matter of fact, 9 of the 17 who were operated upon died. That leaves a total of 384 cases treated in the hospital without operation. Of these 384 children, 100 died, a mortality of 26 per cent. They died of these conditions: tuberculous meningitis, 23: extension of local disease and visceral complications, such as amyloid disease, tuberculous disease of the lung, and so on, 66; intercurrent disease, that is to say, other diseases which were not directly connected with the hip disease, 11; making the total 100. The patients, for comparison, who had been treated by excision, were patients whose cases had been placed before the Clinical Society by Mr. Croft, who at that time was one of the surgeons at St. Thomas's Hospital, and the total mortality of his cases was 40 per cent.

Since that time there has been one very great change in the practice of surgery. This report, as I have said, was dated 1881, and it only dealt with cases up to the end of 1879. It was just about that time that the antiseptic principles of treatment were generally adopted, and consequently since that time the patients who have been treated, not only in the Alexandra Hospital, but everywhere else, have had the advantage of antiseptic surgery. If you look at any books which have been published recently, or papers which have been written of recent years upon the results of excision of the hip for tuberculous disease, you will find that nothing like the number of patients now die who were reported to have died after excision at the time that the committee issued its report. As I have already said, the mortality of the cases investigated was 40 per cent. of those treated by excision; whereas, at the present time, there are many surgeons who have published reports of their own practice showing that the mortality after excision had been reduced, at any rate, as low as 15 per cent. But you may look in vain for any statistics which deal with large numbers, later than those of the Alexandra Hospital in 1879, referring to children treated, not by excision, but merely by rest and extension and general hygienic measures. And although the improvements in the results of such treatment have been even more marked, as I shall show you, than they have been in cases were excision has been practised, there are few, if any, available recent statistics which can guide you as to what is the probable mortality in cases of hip disease treated by modern methods, though without excision.

During the time I have been connected with the Alexandra Hospital, there have been under my care 900 patients, and of these only 33 have died, which gives a mortality of less than 4 per cent. The causes of death in these children have been as follows:—Meningitis, 12; local disease with visceral complications, 20; intercurrent disease, 1. It will be seen, therefore, whereas between the years 1867 and 1879 there were 384 cases treated with a mortality of 26 per cent., in my own practice there have been treated since 1885 900 cases with a mortality of less than 4 per cent.

THE HOSPITAL AND CONVALESCENT PROVISIONS.

In order that you should be in a position to appreciate what is done, and under what conditions these patients are treated, I will tell you briefly about the hospital, and the circumstances under which the children are treated.

In the first place, until the year 1899—that is to say, in all the earlier period which my figures cover—the children were treated in old houses, which could not be considered to be in any way suited for a hospital. But since 1899, when the new building was opened by the Queen, after whom the hospital is named, the children have been placed under much more favourable conditions as

far as their immediate surroundings are concerned than in the earlier years with which my figures deal. At first there was a convalescent home at Bournemouth, but about fifteen years ago a convalescent home was established on the Cotswold Hills at Painswick in its place, and since then there have always been ten children treated there. The total number of beds in the hospital in London has been 60. In the last four years, in addition to the 10 beds on the Cotswolds, there have been 20 beds in a convalescent home built by Mr. Wood at Claudon, near Guildford, and we thus have now one bed in the country for every two beds in town.

The Patients.

All the patients who have applied for admission under me have been admitted when there were vacant beds, and, whilst the worst cases have always been taken in, 266 out of the 900 have been treated in their own homes in London, being visited there by nurses, and brought to see me from time to time. In many cases the treatment has been continued throughout in this way, but all children who have developed abscesses have been admitted to the wards, as have also all patients who were not doing well at home. It should be added that many of the patients were children who had already benefited from treatment at other hospitals. In former years, as I have already said, there was a rule against admitting cases which were incurable, but since I have had to do with the hospital I have not refused admission to any case, because at the present time, even after twenty-one years' experience, I confess I do not think any cases are incurable, however bad the children are. So also the old rule requiring that children should be discharged if they proved to be incurable has again become a dead letter, because, personally, I fail to recognize that any case should be placed in that category. The only exception has been that two children were discharged to homes for incurables on account of extensive disease of the spine, and in these the hip disease had practically come to an end.

Treatment, Complications, and Condition on Discharge.

During those twenty-one years of which I speak I have not treated any patient at all, either at the Alexandra or in St. Bartholomew's Hospital, or in private, by excision of the hip joint, so that all patients with hip disease who have come under my care have been treated by rest and extension and what may be called general hygienic measures. When I first took over the work at the Alexandra Hospital there were amongst the patients already in when I was appointed three small children who were very ill, and whose condition seemed to me then to preclude any possibility of recovery without amputation at the hip. Two of the three recovered after amputation, and one died. Since then I have not performed amputation in any case.

Now as to the conditions on discharge of the children who recovered. No child has been discharged from the Alexandra Hospital unless all the active disease appeared to me to be quite at an end, and all the children have been made to walk on crutches for at least a year after it was no longer necessary to confine them to bed. I soon found that one of the chief troubles was that when the child had improved and got over the acute stage of the disease, and there was no longer pain, if he were allowed to walk too soon he was very liable to have a return of the pain and other symptoms. So I gradually came to make a rule for myself that no child should walk on the bad leg for at least a year after he was well enough to be up and going about on crutches. These children, therefore, have been kept walking with crutches and with a high boot or patten on the sound foot, so that they could carry the affected limb clear of the ground, and thus avoid using it until it had had time to recover completely from the tubercle. For the same reason, no child has been discharged who has had to wear a splint. A Thomas's splint is a very useful appliance in a certain number of cases where for some reason you cannot keep the patient lying down, but I am quite clear that a Thomas's splint never takes the place efficiently of complete rest in the recumbent position and the application of extension. But if a child can be kept at rest lying down for a sufficient time, Thomas's splint seems to me to be never needed at all, because if a child is thought to need a Thomas's splint it ought not to be got up. So none of these children have been treated with this splint, although, as I have said, it is a good substitute for rest, when rest cannot be obtained.

Next, with regard to keeping these children under observation. All those who were resident in London have been kept under observation by special nurses who have visited them in their own homes and by myself, and often for many years after their discharge, and children from the country have been seen at longer intervals. If, as sometimes happens, there has been any appearance of relapse, if there has been a return of pain or a residual abscess, they have been readmitted, so that, as far as I know, almost all the children who may be considered to have recovered have not only genuinely recovered from the disease, but have been left clear of any obvious active tuberculous affection of the hip. I will say more presently about the ultimate conditions of the limb after the disease.

Of the patients who have been in about 40 have had both hips affected, a condition which, of course, makes it exceedingly difficult to treat these patients satisfactorily, because, if both hips are affected, it is evident that you cannot get the child up nearly as soon as if it had one sound limb on which to walk with the aid of crutches; and I suppose it must be accepted that if a child has two tuberculous hips, it must not only indicate that it has double disease, but it also indicates that it is a child who is peculiarly susceptible to tubercle. In addition to the children with affection of both hips, a good many patients have had spinal caries. Others of them have had diseases of other large joints, such as the knee or the shoulder. Rarely children have had several joints affected at one time. I had a small boy in hospital who had disease of one hip, one knee, one ankle, one elbow, and one shoulder. Yet, in spite of this multiplicity of joint affections, that patient ultimately made a very good recovery as far as his general health was concerned, although, of course, more or less crippled by reason of the involvement of so many joints in the disease. It is, however, quite clear that in cases of hip disease it is far more common to have the second hip involved than for any other joint or joints to be attacked.

Tuberculous phthisis has hardly been met with, perhaps half a dozen cases in all. Another curious thing is that so few of these children have had tuberculous disease of the glands of the neck. Although there have been 634 children in the hospital in the period I have mentioned, it has happened that not one of them has required to have an operation done for the removal of glands in the neck. Perhaps not more than ten at the outside have suffered from lymphatic or glandular abscess of the neck. It is a curious fact—which I only state as a fact without laying any very great stress on it—that in children who have such a definite tuberculous affection as hip disease the tuberculous changes seem to expend themselves upon the osseous tissues rather than upon the glands of the neck. Many patients when admitted had already been suffering from tuberculous disease of the hip for several years; some of them had one, and some many open sinuses; a few of them had already well-marked amyloid disease; and, as indicating the importance of the length of time that has elapsed before a child is brought under proper conditions for treatment, I would point out that, of the 33 who died, 16 had suffered for more than a year from hip disease before they applied for admission. Some of these had suffered from it for several years, so that when they were admitted it was no longer a question of treating hip disease in an early stage, but rather a question of treating a child whose hip had been to a great extent destroyed, and who had already suffered very much from sepsis or amyloid disease.

When I came to get out the figures I have given you, by the assistance of the Matron, Miss Fitch, and of the Secretary, Mr. Stanley Smith, I was surprised myself to find what an enormous proportion of these children had recovered, and, although I was conscious that the conditions are now very much better and the results altogether more satisfactory than they used to be, still I was not prepared to find that over 96 per cent. of tuberculous children, taken from the poorer classes, many of them ill-nourished and ill-clothed, who often had had the disease in progress for a very long time, had recovered. If you ask what is the reason for such satisfactory results

I would say that the main object has always been to treat the child first and the disease second; and the next reason is antiseptic surgery. Those two conditions, of course, go hand in hand.

The Importance of Treating the Patient.

It does not do to suppose for a moment that a child who has tuberculous disease of the hip has that tuberculous lesion only. If you were to make *post-mortem* examinations of children with tuberculous disease of the hip you would find that the vast majority of them had tuberculous disease elsewhere also. It is, indeed, probable that most cases of bone tubercle in children are due to infection of bone from some tuberculous focus in another part of the body; so these children may have their hips infected from tuberculous mesenteric glands, or tuberculous bronchial glands, or from tubercle in the lungs. Consequently, even if you knew you could remove the whole of the tuberculous disease in the hip, it would not be right to suppose that you had then restored the patient to complete health. The expectation and the probability is that there still is tubercle elsewhere. Under these conditions it is evident that you must try to treat the child himself, and not merely the hip disease, for you cannot remove by operation all the tubercle in different parts of the body, even if you knew that it was there. This makes out a strong case for directing the chief efforts towards the treatment of the child. There is no doubt in my own mind that tubercle in a great many cases is destroyed by the unaided efforts of the patient. Many of the children whom I treated were no doubt originally naturally resistant to the disease. On the other hand, a great majority of the patients were inherently tuberculous, and inherited a tuberculous tendency—that is to say, they had tissues which offered very little resistance to the tubercle bacillus. But if you can get those children into something like the condition of health enjoyed by children who are comparatively immune by means of good feeding and favourable surroundings and open-air treatment, they also may cure their tubercle in just the same way as children who are naturally more immune will cure it without a great deal of help from us. Consequently, I think the first thing that is necessary is to have a robust belief in the possibility of the patient being able to cure the tubercle that is in him if you will only give him sufficient help. And I think you must have in mind that they have not only to cure the tubercle which is evident in the hip, but that there is in all probability some tubercle elsewhere to be cured also, which cannot be got at by the surgeon at all.

The Value of Antiseptics.

The next point is, that in the treatment of any local abscesses you should be exceedingly careful that antiseptic surgery has its fullest possible scope. There has been in years past a very great tendency to say "This patient has already got an abscess, why should we trouble about antiseptics?" "You are going to make an incision into a part which already contains pus, why trouble further about keeping micro-organisms out?" I am afraid there is a certain amount of that belief still prevalent; but, as a matter of fact, if there is one condition more than another which absolutely necessitates the most strict antiseptic precautions, it is these conditions of tuberculous disease. Think of it for a moment. Here is a patient who has a collection of fluid inside his body. That fluid is largely blood serum and pus. It is maintained at a temperature of about 100° F. Can you imagine any more favourable nidus for the growth of most of the pyogenic organisms? Is it not very much the same material which you would use if you were cultivating bacteria in the pathological laboratory? But there is something more than that. If you expose healthy cut tissues to the attack of pyogenic organisms, in a large number of the cases, unless the organisms are very virulent and present in undue numbers, the healthy tissues are quite capable of repelling that attack and casting them off and destroying them. But in the tuberculous patient there is a good deal of tissue which is very lowly organized, and which is to a certain extent devitalized; in it a large number of cells are undergoing fatty degeneration. It is a part in which blood vessels are notably deficient, because tubercle destroys large numbers of small blood vessels. Therefore this tissue possesses very little resisting power, and if it be exposed to attacks of micro-organisms, it is very likely to succumb because it can offer very little resistance to their action. If pyogenic organisms obtain an entrance to a place where there is tuberculous disease, they have an infinitely greater opportunity of destroying the tissues than in healthy people. Can you wonder, then, that it is absolutely necessary to use the most strict antiseptic precautions in cases where there is tuberculous suppuration? And not only does tubercle predispose the tissues to this successful invasion, but the pyogenic organisms, in their turn, damage the tissues and allow them to be more easily invaded by the tubercle. A tissue which is being destroyed by a process of acute suppuration, of course, offers very little resistance to any other micro-organisms, and consequently to the tubercle bacillus. So once you have a mixed infection—that is to say, both tubercle on the one hand and pyogenic micro-organisms on the other—there is a vicious circle established. Tubercle favours the growth of pyogenic micro-organisms, and those organisms in their turn attack the tissues and render them more susceptible to tubercle. There can be no question about it that the advent of sepsis to a part which has hitherto been the seat of tubercle only immediately results in the absorption of septic material and in fever. It is because of these circumstances that antiseptics have become of such paramount importance in the treatment of tuberculous disease. At the Alexandra Hospital the high mortality-rate I have mentioned—26 per cent. of all the cases dying—was due largely to the advent of sepsis. In the same way, in the cases of excision the mortality of 40 per cent. was largely due to sepsis. The improvement, both in the results of excision and in the results when the children are treated without operation, is largely due to antiseptic surgery.

Treatment, Local and General.

Let me now state, in very general terms and briefly, the line of treatment which was adopted in the case of these 900 children at the Alexandra Hospital. There is nothing unusual or peculiar about it, for we have acted on those lines so well advocated for many years by Mr. Howard Marsh. First, there is absolute rest in the recumbent posture. This absolute rest means that the child must not even be allowed to sit up at all, because sitting up causes movement at the hip-joint. The joints involved are kept absolutely quiet and, if necessary, splints used to ensure this at first. Extension is applied in the long axis of the limb in the position in which that limb lies most easily. In many cases when a child is put to bed the joint may be kept flexed, in other cases it may be slightly adducted, and in other cases it may be abducted. But at first extension is applied in the axis of the displaced limb. As the muscles allow the limb to come into a better position the leg is got to lie flat on the bed, the object of this being to put the limb into the best position for subsequent progression, supposing that, as will happen in many cases, the joint is stiff ultimately. The amount of weight to be applied to the limb to effect extension is small. Very few children require more than 2 lb., and they are often comfortable with only 1 lb. A few cases have required 3 or 4 lb. I do not think any child under 12 years of age will require more than 4 lb. weight for the purposes of extension, and that only for a short time. Next as to the abscesses. I have mentioned the importance of antiseptics, and beyond that I should say that in the opening of abscesses there is nothing very special that is required. It has been suggested at different times that different antiseptic materials should be introduced into the abscess cavities and perhaps left there. For instance, iodoform emulsion was used for this purpose for a long time by many surgeons. I have used it myself, but I did not see any particular gain from it. Some surgeons have advocated the use of sulphur. I have also tried that, and again I did not see any benefit. So that my object in opening such an abscess is to open it aseptically, and, having cleared out the contents most completely and very gently, to see that it is adequately drained for, at any rate, a few days. In many cases the drainage tube can be taken from the cavity within a week or two. I think there is too much tendency to make numerous incisions. I am convinced of this, that in many cases where an abscess is already opened,

you should be very careful about deciding upon the advisability of making counter openings unless the abscess tracks to another place very near to the skin. If you make an incision into a deep-seated tuberculous abscess, and if in order to reach it you have to pass across several planes of cellular tissue, you necessarily introduce tubercle into these hitherto unaffected cellular planes, and when the pus drains through it will not only come out by your drainage tube, but it will infect different areas of tissue which are now exposed to it by your incision. So one result of opening a deep-seated abscess through several intermuscular spaces is that there may be an infection of each of those planes with tubercle, and there may be in consequence a wide extension of tubercle through the thigh and buttock. That is what often happens, either with or without incisions, and in a certain number of cases pus makes its way amongst the cellular tissue planes, and infects a great many of them before an opening is ever made. If it has not done so, it is very advisable that in operating you should avoid this complication. It is not always that you can avoid it, but you can always avoid making unnecessary incisions, and it is not always advisable to make the incision for an abscess in the most dependent part, for if you sacrifice everything to doing this it may result in making the patient worse by opening up a large area of hitherto uninfected cellular tissue.

As to the general treatment of these children, I have told you that they are placed under favourable conditions for getting well. That really means good food, careful nursing, very great care in the dressing of wounds, a certain amount of iron and cod-liver oil (especially in the winter), and sending them away to the country convalescent homes and treating them as much as possible in the open air. At present, and for some years past, there has been a great improvement in the treatment of patients with tuberculous phthisis by sending them to sanatoriums, where they can practically live in the open air. I do not think a sufficient amount of attention has been paid to the treatment of surgical cases of tubercle by exactly the same means, for whatever amount of improvement there may be in people who have tuberculous phthisis, I can assure you that there is a much larger improvement in patients with localized tuberculous lesions situated in a part of the body which is much more easily cured than the lungs. Consequently, three or four years ago we had two large balconies built at the Alexandra Hospital, and a large number of the worst of these children are kept night and day in these open balconies, with immense improvement in their condition. When they are sent into the country the same thing is done as much as possible, and many of them are kept out night and day. I have no doubt that this line of treatment has been responsible for bringing about very much benefit.

There is one other treatment, which is much more recent even than the open-air treatment for tubercle, and that is treatment by tuberculin, the so-called new tuberculin, to distinguish it from the tuberculin of Koch of some years ago. I may say, in passing, that I did not at that time adopt the treatment by Koch's tuberculin, because, from what I was able to find out before trying it, it appeared that it was very liable to cause illness in the patient and sometimes much pain. Consequently in these children whose figures I am placing before you it was never tried. But in the children we have had to deal with lately I think I have seen quite a definite improvement, in some of them at least, by the treatment with the new tuberculin, and regard it as a very useful remedy.

RESULTS.

I will say only very few words about the results of treatment. You may remark, "You tell us that out of 900 children with hip disease all but 33 recovered, but what was the condition of their limbs? Does recovery mean that they were able to walk perfectly well?" I think it must be evident at once that the extent or degree of completeness of recovery must be largely dependent upon the age at which the disease attacks the patient and upon the length of time it has been going on before treatment is commenced. Of course, if you have to do with a child the head of whose bone has already been largely destroyed, you cannot restore to it a normal limb. Still more is that true if you have to deal with a child whose bone has not only been destroyed, but the truncated upper end of whose femur has been displaced on to the dorsum ilii. You cannot alter that. If you have to deal with a child who has already one or two inches of shortening, you cannot restore the limb to its natural length. So, of course, it must be evident that in proportion as the parts have been destroyed by disease, the child must permanently suffer. On the other hand, it must be appreciated that in a very large number of cases where the hip disease is diagnosed sufficiently early; in which the disease is mainly inside the bone and has not yet spread into the joint itself; where there are no acute arthritic symptoms and the child only complains of slight aching and is noticed to limp; and when an *x*-ray photograph shows a caseous area inside the head of the bone surrounded still by some healthy bone, then the possibilities of complete recovery are very definite. I have myself the acquaintance of various people who are now fully grown up and healthy and strong, in whom one leg is as good as its fellow, and in whom, nevertheless, tuberculous disease attacked at one time in childhood the head of the femur.

The other thing which is of great importance is that the earlier the child is attacked by the disease the more likely it is to have some permanent lameness. In very small children of 1 or 2 years of age the whole head of the bone is, of course, only a tiny thing, and if the growing bone in the epiphysis of the head is attacked by tubercle, only a very moderate quantity of bone needs to be destroyed before the whole head of the bone is spoilt. My own observations tend to show not only that small children are much more likely to be lame, even when they are treated early, but that the disease is much more fatal in small children. Of the 33 children whom I mentioned to you as having died of this disease, no less than 24 of them had been attacked by the disease before they were 6 years of age. That implies that more than two-thirds of the whole of the children—all of them being under the age of 12—were children who were attacked in the first half of that age-period. So I think that the prognosis must be worse in proportion as the disease attacks the child very early in life.

As far as recovery is concerned, if the case is taken early, and especially if the patient is at the age of 7 or 8 years, or older, in a large proportion the child recovers with a thoroughly useful limb. This would be true of the great majority of the cases I am dealing with. I admit that there are only too many patients who recover with a limb which always causes a bad limp. In many this is due to the fact that while the disease has damaged the joint so as to prevent free movement, it has unfortunately not caused complete ankylosis. I say "unfortunately" because with firm ankylosis in a good position the patient walks very well. But in the cases I allude to the fibrous union is liable gradually to yield under the weight of the patient, and the limb becomes gradually adducted and flexed. There is little to be done for these children to enable them to walk well. If the upper end of the femur is displaced on to the ilium, as it often is, then the lameness is still more marked. Another cause of bad lameness is the arrest of growth of the whole limb which sometimes follows hip disease. In most cases this arrest is chiefly evident in the femur, and is always worst when very young children are attacked by the disease. But in the most extreme cases there is also arrest of growth in the tibia and fibula as well as in the femur, and I have seen the leg as well as the thigh shorter than its fellow by as much as an inch. This shortening is quite independent of the mode of treatment adopted, and also, as far as I have seen, of the severity of the attack. In the next place, and still with regard to the condition of the children after recovery, I would allude to the presence of sinuses or open wounds in children who have been discharged from hospital. It has been my practice to keep all patients until the wounds were soundly healed, and there have been very few exceptions to this rule. Indeed, I do not suppose that as many as 3 or 4 per cent. of all my patients in the Alexandra Hospital had unhealed wounds when they were discharged, and even these were very trifling. In many cases not brought under treatment sufficiently early, the patient recovers with a limb which is much flexed and adducted. This is not a serious complication if the joint ultimately becomes firmly ankylosed, as few operations are more satisfactory than an osteotomy

of the shaft of the femur. I have performed this operation in some fifty or sixty patients, with uniformly good results, and I look upon it as being always satisfactory so long as it is not done too soon after the tuberculous process has ceased.

Excision.

Now let me say a few words on the subject of the treatment of hip disease by excision. I have said that I have not performed the operation of excision in any child who has been under my care, and my practice is based upon the conclusion that the removal by operation of the head of the femur is practically never required for the cure of the patient. If reference be made to the report of the Clinical Society it will be found that it recommends operation under certain conditions, which may be briefly summarized thus:

1. Necrosis and separation of the head.
2. Firm sequestra in the bones.
3. Extensive caries.
4. Intra-pelvic abscess.
5. Persistent suppuration.
6. Dislocation on to the dorsum.

I would say of these, in the first place, that I have never seen a case of separation of the necrosed head. I am sure its occurrence is very rare, and even if it does occur, the removal of the sequestrum cannot well be called excision of the hip. In the second place, I am sure that small cancellous sequestra are either disintegrated in the process of suppuration, or else they easily separate from the soft bone, and make their own way out, or are removed from the sinuses. Extensive caries in itself is no bar to recovery, and I have found the whole head and neck bare and rough in patients who have afterwards done very well. Neither intrapelvic abscesses nor persistent suppuration are usefully treated by excision, for they can be recovered from better without it. And lastly, if the truncated upper end of the femur is dislocated, this, instead of being a hindrance to recovery, is often a material aid to repair, as the ulcerating bone surfaces are no longer kept in contact. Extensive necrosis of the pelvic bones is very rare in children, but though I think it is the most fatal of all the conditions of disease, unfortunately it is not remediable by the operation of excision. I conclude, therefore, that excision of the head of the bone is never required in the treatment of tuberculous disease of the hip, and I consider that I am justified in drawing this conclusion by the results I have seen without this operation.

But on mere operation grounds, also, I think excision can be shown to be unsound. In the first place, "excision of the hip joint" is practically never performed. The "joint" is formed by the innominate bone and the femur, but in so-called "excision" the only bone removed is the head of the femur. There is no possibility of sawing off the acetabulum, and at best it is only scraped. The joint, then, is not excised, but only one of the two bones forming the joint. The operation, therefore, is incomplete, and this is further evidenced by the fact that in a very large number of cases of excision the disease is not all removed, and the tuberculous process still continues. It is, in my opinion, an unscientific and inefficient operation, and its incompleteness is evident, for not only is the diseased bone not all removed, but in suppurating cases infected muscle and cellular tissue are all left behind. Compare such an operation with excision of the knee. It is analogous to removing the head of the tibia and leaving the condyles of the femur behind, whereas, as a matter of fact, in the knee in suitable cases the whole of the disease in bones and synovial membrane may very well be eradicated at the time of operation. Excision of the knee, after early childhood, is good, both theoretically and practically, because it is a complete operation, and gives a strong and useful limb; and while I think that excision of the hip is bad and should be given up as a routine method, I think that excision of the knee for tubercle is not often enough performed. The last objection I have to the excision of the hip is that, even when the disease has come to an end in cases that have recovered, the resulting limb cannot be compared for one moment in usefulness to the condition found on the average in those children in whom excision has not been performed. Not only is this the opinion expressed in the report of the Clinical Society, but I have myself seen a great number of children operated upon by more recent methods with flail-like or contracted and shortened limbs, quite unable to bear the weight of the body.

But it may be said that if excision be performed in early cases the duration of the treatment can be shortened, for the disease can be completely removed in, at any rate, a certain percentage of the patients; and I admit that if the tubercle is still limited to the inside of the femoral head, this contention is true. But my objections to such an operation are twofold. In the first place, in order to get clear of all tubercle and to avoid infecting the tissues around, much more bone must be removed than is already diseased, or than would be ultimately destroyed by the disease itself in the long run. And in the second place, I am certain that if the children on whom these early excisions are performed were treated by rest and other general measures, there are very few of them who would not recover with an unusually good and useful limb. They are just the very cases which need excision least of all. If, on the other hand, the disease has extended beyond the head of the bone, and there is diffuse suppuration in the soft tissues, then the mere removal of the femoral head leaves much of the tubercle in the soft tissues and in the acetabulum. In addition to both these objections, it must still be remembered—a point on which I insisted in an earlier part of this address—that there is often other tubercle elsewhere, and that the child still needs treatment for this as well as for the hip.

Conclusion.

I will say but little in conclusion. I make no claim to treat tuberculous disease of the hip in a different way to that adopted by most other surgeons, and I put no new remedies before you: but I have for more than twenty years had large numbers of children under my care, and I have found that they are more capable of curing themselves of this disease than is, I believe, generally known. I began with no preconceived theories, and I have drawn no hurried conclusions; I have rather watched and waited and allowed the conclusions to force themselves upon me. Great patience is required on the part of parents, surgeons, and nurses, and in many cases where children are very ill and there is extensive suppuration it is not at first easy to believe that the conditions admit of recovery; but I claim that the cases I have put before you prove conclusively this at least—that hip disease is curable without excision in the vast majority of cases, if only the patient can be placed under favourable conditions.

Unfortunately, it must be admitted that the hospital accommodation in Great Britain is not at present adequate for the treatment of a sufficient number of these cases. Patients cannot ordinarily be kept in hospital for a sufficiently prolonged stay, but, as far as those who are not really poor are concerned, there is no material difficulty in carrying out the measures that I have indicated.

It seems to me that whilst there is no lack of generosity on the part of the public who support so many charities, in connexion with children's hospitals in particular it is liable to be somewhat misdirected. Considering the frequency of tubercle, I am sure that far more hospitals are required in Great Britain of the type of the Alexandra Hospital, hospitals where children can be kept for an indefinite length of time, and with suitable convalescent homes where treatment may be continued after discharge. The tuberculous lesions of children are, unfortunately, not limited to the hip, and most of what I have said about the treatment of tuberculous hip disease would be equally true if applied to spinal caries or disease of other bones. I would therefore urge that when considering the advisability of building or enlarging hospitals for children, the possibility of supplying such hospitals and convalescent homes as I have advocated should be more considered than it has been in the past. Whatever need there may be for sanatoriums for the treatment of patients with phthisis, I am convinced that there is at least as great a need for similar sanatoriums for the treatment of tuberculous children. In proportion as these can be supplied, the need of hospitals for children in large towns will be to a great extent lessened.

Remarks
ON THE
FUNCTIONS OF AN OUT-PATIENT DEPARTMENT.

MADE AT THE OPENING OF THE NEW OUT-PATIENT DEPARTMENT, CARDIFF INFIRMARY, MAY 20TH, 1908,

BY WILLIAM OSLER, M.D., F.R.S.,
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FOR many years I have haunted the out-patient departments of the general hospitals with which I have been connected, having a special interest in them from the standpoint of a teacher. I can truly say that I have rarely seen one more satisfactorily equipped than this, which I have had the honour to open. That an out patient department is simply for the relief of the poor—the common idea—is to take an altogether too narrow view of its functions, and upon these the occasion suggests a few remarks. Of course, the first and most important is the relief of the poor. I shall make no attempt to answer the burning question, "Who is the poor man?"—but there are certainly three classes of cases which should be allowed to apply for relief. In the first place the accident, the sudden illness on the street, the emergency case of whatever kind should have here first aid. Then there are the very poor. I do not refer to those who are actually receiving outdoor relief, and for whom other provision is made, but I mean the people who are earning from 21s. to 25s. a week, and who have no possible margin for the payment of special medical attendance. Here, of course, comes in the very serious question of interference with the work of the general practitioner. Far be it from me to suggest anything that would be detrimental to the private interests of a group of men to whom we all owe a debt of the deepest gratitude. The highest place in heaven will be none too good for some of these men, who for years live lives of Christ-like self denial and whose tender and sympathetic care of the sick poor is beyond all praise. But I would like to urge these hard-worked practitioners to regard the out-patient departments as their privileged consulting rooms, to which they could refer cases for treatment. Every busy practitioner among the poor of this city would be greatly benefited by a close affiliation with this hospital. But we have to recognize the existence of a strong feeling that institutions of this kind are serious rivals. A large number of industrious capable men practise for very small fees among the class of patients of which I am speaking, but I maintain that the club and general dispensary doctor should find his best friends in the hospital staff—the men to whom he could refer his special cases, and who would be only too willing to give him counsel and assistance when in difficulties. After all, our first duty is to the patient, for whose good it is that the relations between the local practitioners and the hospitals be one of mutual support and assistance.

Then there is a third group for whom institutions of this kind may be of additional help—I mean the occasional poor. A majority of us, perhaps, come in this class. I mean particularly the families with £3, £4, or £5 a week. All goes well with them in days of health, and in the cases of ordinary illness the doctor's bills are cheerfully paid. In fact, these are the people from whom the profession as a whole gets the great bulk of its income. But what are they to do when serious accidents happen or when a child has appendicitis, or the mother of the family requires a serious operation. It is only right that they should have skilled help, but they are quite unable to meet even the most reasonable fees for a surgical operation, to say nothing of the long bill for nurses. To them the general hospital may quite legitimately minister. Here again I know that this may open the door to abuse, but not if the cases are looked into with care, and the man to consult is the family doctor, who, fortunately, is, as a rule, the friend as well, and always willing that the best should be done for his patient. I have noticed the greatest reluctance on the part of this class to take advantage of the hospital treatment, and have sometimes had difficulty in persuading people to take advantage of the special operative skill for which they could not possibly afford the necessary fees.

The question comes up whether it is not right for the hospital to charge so much a week to those who can pay. It has always seemed to me a radical defect of the English hospital system that, as a rule, no provision is made for pay patients. Not only should the class of which I have just been speaking, the clerks and others with moderate incomes, be allowed to use the general hospital on special occasions and pay what they could for services, but it would be an immense boon to extend the privilges of the hospital to the well-to do classes by the establishment of pay wards. One sometimes sees the anomaly of the very persons who support the hospitals receiving medical and surgical treatment under circumstances not to be compared with the poor. The pay wards could be made a source of profit to the hospital, and they would everywhere prove a great boon to the profession.

In acting as the training school for the younger members of the profession the out-patient department fulfils its second great function. There are several points to which I would like to call attention. I am glad to see that there is here provided plenty of space for the staff, but I think it is the experience everywhere that the men on duty are overworked. They see too many patients, and in consequence the cases cannot be properly studied. The head of each department should have a group of assistants, some official, others voluntary, who would share the work. As one who has had a long hospital experience, may I just mention one essential virtue for the members of the out patient staff to cultivate—namely, punctuality. It is not, of course, always possible, but it is remarkable how greatly it facilitates the work of an institution when men put in an appearance at the stroke of the hour. The clinical notes taken in the out-patient departments are, as a rule, very meagre; and, indeed it is often impossible that they should be anything else when one man has to dispatch a group of forty or fifty patients in two or three hours. With a sufficient staff there is no reason why just as careful notes should not be taken in these rooms as in the wards; and let me remind the younger physicians in the audience that some of the most brilliant reputations in the profession in this country have been built up on the solid foundation of notes taken in out-patient departments. Sir William Gowers will tell you that from this source his reputation was derived. Byrom Bramwell of Edinburgh wrote at least two of his important books and his large *Clinical Atlas* on out-patient experience. It depends upon how you utilize it. With a medical school to develop, let me urge you to make ample provision for your medical students in the out-patient department, where they see the patients in their native state, so to speak, before they have been scoured and cleansed by the nurses in the ward.

I did not expect to find the department that we open to-day perfect in every respect, and I fail to see any provision made for a clinical laboratory. If advantage is to be taken of the help of science, hospital authorities must make better provision both in the wards and in the out-patient department for the study of disease. The out patient clinical laboratory should have a paid assistant, who would be in attendance during the hours of service. He, too, could have as voluntary assistants two or three of the younger men. They should have a special room for the study of blood and of sputum, a chemical room for the examination of urine and other secretions, and a third room for microscopes, sphygmographs, blood pressure, and other pieces of necessary apparatus. Some of you may think this is a superfluous thing in dealing with ordinary diseases of the poor. Not at all! If the men are not encouraged to do work of this kind when young, and if they are not provided with the necessary apparatus, they very quickly get out of touch with medical progress, and lapse into a conservatism which is fatal to the progress of a hospital or of a school.

In one way you citizens of Cardiff will be repaid for the time and trouble and money spent in providing these well-equipped departments. To any one of you at any moment, or, what is more important, to one of your near and dear ones, the calamity of a serious illness may come. One of you may have a little boy of 6 or 8 with a severe rheumatic endocarditis. How comforting it will be for you to feel that he is in the hands of a man who has had long experience with just such cases, who has been able,

perhaps, to follow up in this very room during a period of years scores of cases of a similar nature! He has been a sensible fellow, has not only kept his notes, but has studied them. He has collated his experience, and he can give you advice what to do with that little boy that repays you a thousandfold for any trouble or any expense you may have had in connexion with the hospital. Or take another case—your little girl has a sudden attack with abdominal pain. You know that with one of the surgeons of this hospital she is in the hands of a man who has had long experience in just such cases, who has studied them accurately, who knows the possibilities, and who has the necessary judgement to determine if an operation is necessary, and, if it is, the technique to carry it out. In the benefit of the accumulated experience of a group of physicians and surgeons the public who subscribe to the hospitals are repaid a thousandfold.

And, lastly, may I refer to one important point, as this city aspires to be the medical centre? The hospital should become part of the university system. After all, it is a great laboratory in which we collect for rectification the experiments which Nature makes upon us. The study of disease is just as much a part of university work as is the study of mathematics, and a close affiliation of the two institutions is the best guarantee of that combination of science with practice which it is the right of people at the present day to demand.

THE FUTURE OF THE VOLUNTARY HOSPITAL AND ITS RELATION TO A REFORMED POOR-LAW MEDICAL SERVICE.

By LAURISTON E. SHAW, M.D., F.R.C.P.,
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ALL those who are interested in the future welfare of voluntary hospitals must await with some anxiety the recommendations on medical matters which will be made by the Royal Commission on the Poor Law. That drastic changes will be proposed seems inevitable. There is a growing feeling that the present arrangements of the Poor Law are unduly harsh to those who are poor because they are sick. The great danger of making pauperism a popular profession has been so constantly present to the minds of legislators that in all departments of Poor-law work a certain measure of sternness has been maintained which has necessarily pressed hardly on those who are meritorious though unfortunate. When the misfortune which leads the applicant to seek Poor-law relief is ill health a sympathetic public rightly insists that the greatest consideration shall be shown him. Political disfranchisement which follows Poor-law assistance in other cases is not entailed on those who obtain merely medical relief. Nevertheless, the charitable public are so distressed that the sick should have to apply for this assistance through the ordinary Poor-law channels and should suffer the moral taint, though not the legal disabilities of pauperism, that they actively compete by means of their voluntary charities with the free medical assistance offered by the State to all those unable to pay for it. It is regarded as almost intolerable that a sick person who is not already an official pauper should be compelled to call in the services of the Poor-law medical officer. This feeling, which is so largely responsible for the magnificent voluntary medical charities in Great Britain, is likely to guide the Poor Law Commission in recommending that the taint of pauperism shall be removed altogether from State medical assistance. It thus, indeed, seems possible that the strong sympathy with the sick which is now keeping up our voluntary medical charities, may, by forcing beneficent changes in our Poor-law medical service, set up a competitive system which will ultimately destroy the medical charities themselves. This is, perhaps, a perfectly logical evolutionary step, and something very like it may be seen in full activity at the moment in connexion with public elementary education. The process of replacing charity schools by publicly provided institutions appears to be a painful one, and to cause a serious disturbance in the friendly relations of many admirable persons. It is well, therefore, that those interested should look ahead and take all reasonable precautions to avoid similar disturbance and strife in perfecting the arrangements for the medical relief of the sick poor. In this article it is proposed to point out a way in which the good work at present done by voluntary medical charity can be established on such a firm basis of co-operation with the work done by the Poor-law medical service, that no improvement of this service can put it in dangerous competition with charity, or render voluntary effort unnecessary.

At present it must be admitted that no clear line can be drawn between the spheres of activity of voluntary charity and the Poor-law medical service. An Englishman finds it very difficult to explain to a foreigner the factors which determine whether a poor patient in any large town should find his way into the general hospital or the Poor-law infirmary. At either end of the scale the cases are clear. The casual labourer on the borderland of starvation, frequently in sight of the workhouse, will in any chronic illness certainly become an inmate of the Poor-law infirmary. On the other hand, a clerk in good, regular employment but with no margin for emergencies, will naturally be a suitable case for the voluntary hospital when a surgical operation becomes suddenly necessary. But between these two typical cases there are innumerable instances in which the question as to which institution shall receive the patient is decided by the merest chance. In certain acute illnesses even the workhouse habitué may find himself in the hospital, whilst the clerk, after a few months' chronic or incurable illness, may be transferred to the Poor-law infirmary.

It is this want of definition in the respective spheres of work of the two institutions which should make those who are interested in the maintenance of voluntary hospitals recognize that the future of these institutions will be seriously endangered when any serious step is taken to extend and perfect the system of State or rate supported infirmaries. At present the chief dividing line, vague as it is, is an economic and not a medical one. Some have endeavoured to make a distinction between temporary and permanent economic stress in connexion with ill health and have thought that charity should deal only with those who, when restored to health, will again become capable of maintaining themselves. The philanthropist finds it hard to accept the position that the permanence of an undeserved affliction should place the sufferer in a less favoured class than his more temporarily indisposed colleague, and under existing conditions there is no general agreement as to the test of admission to the voluntary hospital. But as soon as the so-called taint of pauperism is removed from the public hospital supported by the State—and there can be little doubt that this is the ultimate goal of those interested in Poor-law reform—it becomes possible to employ a far easier and more satisfactory means of differentiating between cases suitable for admission to the two institutions. The economic distinction may be abandoned and a medical basis frankly accepted. The severity, difficult, or complicated character of the patient's illness should be the sole determining factors in his eligibility for admission to or retention within the hospital supported by charitable funds. The State should provide in its hospital or infirmary for the efficient treatment in all ordinary illnesses of those poor patients who are unable to pay for it, while the philanthropic public, assisted by the medical profession as at present, should provide in their voluntary hospitals more elaborate specialized treatment for such exceptional and difficult cases as are medically recognized to require it.

Thus the State infirmary and the charitable hospital would work side by side, each with its own recognized and defined sphere of action. Transference from one to the other would not be hampered by sentimental or financial considerations. Each could be developed to the highest pitch of efficiency in its own special line of work. The hospital would be the consultative institution to a group of infirmaries. The highest resources of general practice would be developed in the infirmaries, and the highest resources of specialism in the hospitals. No doubt the infirmaries would constantly be aspiring towards the efficiency of the hospitals, but the hospitals would as surely be moving forward to higher flights of specialism. The essence of the proposal is the frank recognition by the charitable public of the fact that the State can

be trusted to provide on satisfactory terms ordinary medical treatment in all ordinary illnesses for those who cannot afford to pay for it, and that the public out of their charity will provide for the same class of patient the more costly and elaborate investigation and treatment which may be necessary in special circumstances. This differentiation of the work proper for the State and for charity is no fancy distinction drawn for the purpose of maintaining the voluntary institution against the powerful competition of the State. It is a division of work that flows naturally from the development of specialism in medicine. It would be desirable even if the infirmaries and the hospitals were both entirely supported by the State. This division can be seen in its complete development in the arrangements of private medical practice amongst the wealthiest classes of the population in all civilized countries. In ordinary illnesses the wealthiest citizen is treated by a general practitioner, and when serious emergencies arise the services of consultants or specialists are called in in addition. In fact, whatever may be the future of the Poor-law medical service, and however the present workhouse infirmaries may be altered or developed, there is a growing recognition of the fact that our voluntary hospitals should become consultative institutions. To use them as we do now, as direct competitors with the Poor-law medical service, with provident dispensaries and clubs, and with the private practice of general practitioners, is to hamper the work of the hospital and to prevent the efficient development of the institutions with which it competes. Even should no reform in the Poor-law medical service take place, this changed attitude of the hospitals to other medical agencies is urgently needed in the interests of all parties concerned. It will be doubly needed when the expected reforms are achieved, for unless the voluntary hospital becomes a consultative institution there will be no sufficient reason for its existence as an independent establishment, and it must ultimately fail to obtain sufficient support from the charitable public who will be providing precisely similar institutions by their enforced contributions to the rates and taxes.

It is, perhaps, desirable here that a few words should be said as to the practicability of using the hospital as, so to speak, a special ward of the infirmary. Is it possible for cases admitted to the infirmary, and found to be on medical grounds suitable for the hospital, to be transferred to the other institution, and vice versa? There are only two difficulties to be overcome—the physical one of transit and the administrative one of the selection of suitable cases. The development of the mechanical art of transit by means of motor traction and lifts is fast reducing to a minimum the cases which are too ill to move. It is a daily experience for wealthy patients, whilst seriously ill, to be transferred by ambulance to nursing homes, in order that complicated operations may be performed under suitable conditions. Some objections would no doubt at first be raised by active and keen superintendents of Poor-law infirmaries to the removal of what they might call their more interesting cases. But no individual considerations of this sort could for a moment be allowed to stand in the way of the general good, nor would any real difficulty be found in persuading a public-spirited body of servants to carry out loyally the wishes of the community. There are at the present time numerous cases in the infirmaries which would benefit by the more thorough investigation and active treatment which could be alone obtained in a hospital staffed by specialists, and aided by their students and clinical assistants. On the other hand, there are many cases in the hospital which could be quite as efficiently treated and nursed in the wards of an infirmary. The inmates of both institutions would profit by an efficient method of classification and transference on a purely medical basis.

Hitherto we have considered the relations of the two institutions only so far as in-patients are concerned. The out-patient problem is even more insistent, but fortunately can be dealt with on almost identical lines. In our great cities, and especially in the metropolis, the vast out-patient departments of the voluntary hospitals, with their ever-open doors offering gratuitous treatment to all comers, are a standing obstacle to any efficient reform of the home treatment of the sick poor. No organization of provident dispensaries or public medical service, no system of mutual insurance for medical attendance, no scheme based on thrift supplemented by State aid, can hope successfully to compete with the open hand and high prestige of the great voluntary hospitals. But these great institutions, while preventing the proper development of other agencies, are quite unable efficiently to fill their places. They cannot carry their services to within reasonable distance of every patient's door, nor can they follow the patient to his home when too ill to attend at the out-patient department, and not ill enough or suitably ill for admission to the wards. By their competition they demoralize and stifle institutions manned by general practitioners, which with the proper co-operation of the hospitals would be able to provide all that is required by the sick poor in the most populous and least wealthy districts. A first and necessary step in all schemes for improving the conditions of medical treatment of the poor is the restriction of hospital out-patient departments to consultative work.

No case should be admitted to the out-patient department which is not already under medical care and has been found to require more elaborate investigation or more specialized treatment. Thus in the out-patient department would be recognized the same principle that has already been suggested with regard to the in-patients. The hospital throughout would be organized on the basis that it was expected to deal only with difficult and special cases. The consultants and specialists which it attracted to its staff and the students which they in their turn attracted to their teaching departments would be provided with material worthy of their efforts. Highly specialized instruments would not be spoilt by being used for common purposes. The science and art of medicine would be profiting by well-organized specialization, medical knowledge would be promoted, medical education directed in proper channels.

The development of the hospital out-patient department as the poor man's consultative institution is no mere idealism. In some suburban hospitals the method has already been thoroughly organized, and is working well. A vicious circle, which can only be broken by concerted action, alone stands in the way of its general adoption. Most hospital authorities object that they cannot make their out-patient departments purely consultative because there are not enough properly organized institutions to carry out the ordinary treatment of the patients it would be necessary for them to refer elsewhere. They point to the dearth of provident dispensaries and to the inefficiency and unpopularity of the outdoor Poor-law medical service as reasons for their undertaking themselves the wholesale treatment of trivial ailments. As a matter of fact it is almost entirely due to the unrestrained competition of the hospitals that the Poor-law medical service has been so long allowed to remain in its unsatisfactory condition and that the provident dispensary organization is unable to make headway. It is, therefore, most opportune, when a serious attempt is likely to be made to place the outdoor medical service at present carried on by the Poor Law upon an entirely new footing that the hospitals should carefully consider the wisdom of greatly restricting their out-patient work and co-ordinating it with the remodelled public service. It has often been urged that the sympathy and support of the public would be alienated if the hospitals were unable to point to the hundreds of thousands of sick poor who yearly receive medical aid in their out-patient departments. But it is doubtful whether this indiscriminate charity with its inevitable overcrowding, delays, and abuses of many sorts, is so popular with the thinking public as some hospital managers suppose. While some defend the present system on the ground of its power of attracting subscriptions from the public, others assert that a host of out-patients is necessary in the interest of medical education. From a considerable experience as a teacher of medicine in out-patient departments, I am confident that such an assertion is unwarranted by the facts. Selection and discrimination of patients is essential to efficient clinical teaching, and no more successful method of selection can be devised than by making the out-patient department a consultative institution for poor patients in private practice, in provident dispensaries, or in public medical services.

The lines of reform which should be followed in recasting the outdoor medical service of the Poor Law cannot be here entered upon, further than to hint that

a Government subsidy to a reformed provident dispensary system would appear to form a sound basis for further developments. However this may be, a necessary feature in any perfect scheme is the provision for some means of securing consultative advice and specialized treatment in exceptional cases. The out-patient department of the voluntary hospital as an existing agency would appear to be well fitted for such work. A little consideration will, however, show that the out-patient department cannot properly fulfil the two-fold part of competition and co-operation with the publicly-provided service. In the interests of a satisfactory development of both systems, it is urgently to be desired that the charitable public should cease to compete with general practitioners and with the State in providing ordinary treatment for ordinary illnesses, and should restrict its activity to providing special services for difficult and complicated cases. The public can hardly be expected to see the advantage of this proposal unless it is clearly pointed out to them by the profession, and I therefore venture to submit these few points in favour of it for the consideration of my medical colleagues.

GENERAL HOSPITALS AND THE PROVIDENT SYSTEM.

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AMONG the many questions that have occupied the attention of hospital experts for the last twenty years there is not one that has proved so difficult to solve as the establishment of satisfactory relations between out-patient departments and provident dispensaries. Congresses and committees have discussed the subject over and over again, and have generally agreed that the unrestricted access to hospital out-patient departments is wrong in principle and that some sort of amalgamation with provident dispensaries should be established. It has further been agreed that the average out-patient can afford a few pence towards the cost of his medicine or his dressings, and one or two hospitals have enforced such a contribution, but the authorities of most hospitals are averse to any system of payment.

Many methods have been tried, excellent in theory but wholly unworkable in practice, and among these may be classed the system of referring patients who can afford to pay, to the local dispensaries. Such a plan has been repeatedly suggested, but it has equally often been demonstrated that the best powers of persuasion, even of the modern lady almoner, are exercised in vain. The patient will not pay a fee to a dispensary if he can get treatment at a hospital for nothing.

These plain facts are perfectly well recognized and have been before the authorities of hospitals and dispensaries for a generation, but no really workable plan has yet been found.

Until some substantial advantage can be offered to the average out-patient to induce him to join a provident dispensary he is not likely to join one.

The idea of utilizing the provident dispensaries as feeders to the out-patient departments of hospitals does not seem to have been entertained by any of the numerous committees that have tried to deal with the subject. One and all appear to have recommended reference from the hospital to the dispensary, in spite of the accumulated evidence of its futility. The time would appear to be ripe for the discussion of the opposite aspect of the question.

The idea of receiving payment has been shown to be repugnant to the managers of most hospitals, but there can be no such repugnance in the case of the provident dispensary. Hospital managers admit that the bulk of their out-patients are recruited from the same classes as those of the dispensaries, and, being willing to send their patients who can afford to pay a little to these institutions, why should they not in turn receive patients from them? By offering substantial advantages to patients so received they might gradually make it worth the while of the moderately poor in their district to join the dispensary as the surest way of obtaining satisfactory attention at the hospital. It is well known that at most of the large general hospitals the greater number of applicants for out-door relief are not seen by the honorary medical staff at all. A limited number of selected cases are seen by them, but the remainder are examined and treated only by the junior staff. They receive a supply of physic or dressing to last a week, and are not seen again.

If, now, this work of selection and treatment were done by the officers of a provident dispensary affiliated to the hospital, the supply of cases to the out-patient staff would be unaffected, while the larger crowd of less urgent cases would receive more continuous treatment, together with the certainty that their case could be referred for consultation with the hospital staff if occasion should require it. The work of the out-patient department, as such, would not be interfered with, but the provident dispensary would become the portal to it, instead of the "open door" as at present.

Such a plan could only be introduced very gradually, and at first it would obviously need some special inducement to persuade the out-patient, who had been in the habit of obtaining his medicine for nothing, to become a subscriber to the provident dispensary. Such an inducement might take the form of priority of attention over the non-subscriber, shorter periods of waiting, etc., until the system had become established as the customary means of entry to the out-patient department.

A subscription at the rate of one penny a week, paid in health as well as in sickness, has generally been considered sufficient, but difficulties of collection of such small sums must be considerable, and it would probably be advisable to permit compounding for longer intervals.

Objection might be raised that such a method of selection by the officers of the dispensary would tend to lessen the value of their appointments to the junior officers of the hospital, who would otherwise undertake such duty. This, however, could be met by a rearrangement of the duties of the junior officers.

So radical a change as the introduction of a provident dispensary as a part of a general hospital would, at first sight, seem too revolutionary to put before well-established boards of management whose proceedings are for the most part regulated by tradition and precedent. But without going far afield the essentials of the system which is here suggested may be found to be in actual working, although under different names. The system of registration on payment of a fee entitling the subscriber to a definite period of treatment was established many years ago at the Queen's Hospital in Birmingham, while the method of selection of out-patients by an officer (actual or potential) of a local dispensary has been found to work quite smoothly in North London.

The scheme of amalgamation here suggested would thus involve, in the first instance, the establishment of a provident branch as a part of the out-patient department of every large general hospital. Poor persons, undertaking to pay a registration fee or weekly subscription throughout the year, to be entitled to priority of treatment and special privileges with respect to admission to the hospital when necessary. Only the serious or acute cases to be admitted free. The dispensary branch to be officered by local practitioners, where possible, appointed by and responsible to the hospital committee. The junior out-patient staff of the hospital to assist in the work of selection of cases to be passed on to the honorary officers of the hospital and in the treatment of the remainder. The specially-appointed officers of the dispensary to have full responsibility for the work done in their department, with or without such assistance.

The practical influence of the system of priority, aided by the persuasive powers of the almoner, might be trusted in a short time to bring about the transference of the great bulk of the out-patient applicants to the dispensary branch, and so it would become the recognized portal of entry to the hospital.

To sum up the advantages to be gained by such a transference, the patients would secure adequate investigation, as at present, but they would no longer be open to the suspicion of abusing the benefits of the charity, since they would materially contribute towards their cost, while at the same time they would secure continuity of treatment with a right of appeal to the hospital if dissatisfied. The local knowledge of the officers of the dispensary and the trained experience of the almoner should suffice to check any attempted imposition.

To the dispensary staff the association with the hospital would, doubtless, be of professional advantage, while the status of the honorary staff would in no wise suffer.

To the managers of the hospital such a scheme would bring some material relief, as the dispensary branch of the out-patient department would become self-supporting as far as its working expenses were concerned.

It being on all hands agreed that closer association, if not actual amalgamation, between hospitals and provident dispensaries is the "consummation devoutly to be wished," it follows that efforts should be made in new directions, such as this, to achieve a result that has, so far, proved unattainable.

Such association will not be brought about so long as the hospitals regard the dispensaries merely as places to which they can refer unsatisfactory cases. Until more generous views prevail, and until the hospitals agree to combine with the dispensaries as branches of themselves, it is probable that the wished-for consummation will be indefinitely deferred.

HOME HOSPITALS FOR THE MIDDLE CLASSES.

By GUTHRIE RANKIN, M.D., F.R.C.P.,
LONDON.

One of the most difficult problems which at the present day confronts the sociological reformer is the adequate provision for all classes of the community of efficient treatment during serious and continued sickness, or in emergencies whether of accident or of disease requiring immediate surgical operation. It will be admitted by all who are conversant with the present position of affairs that the time is ripe for some readjustment of our present resources, and for some modification of our existing hospital system. At such an epoch it may not be inopportune to consider the desirability of providing special facilities for dealing with the sick population of the large middle classes on such conditions as will preserve to them their sense of independence, and at the same time bring within their reach the best that science and art has to offer for the restoration of health and the saving of life.

The charity which has established, and now maintains, the countless hospitals scattered throughout the length and breadth of the land is regarded as one of the most striking and admirable characteristics of our national life. The science and art of medicine and surgery have developed so rapidly, while contemporaneously the popularity of hospital treatment has increased so remarkably among the poor, that the most ambitious dreams of those who saw the infancy of the voluntary hospital movement could never have imagined the important part it would come to play in the life of the nation. Unfortunately, the greatness of the success is threatening to mar further progress, and this for two principal reasons: First, because our hospitals have begun to eat into the revenues of general practitioners of medicine by entering into competition with them, chiefly through their enormous and insufficiently restricted out patient departments; and, secondly, because the field of charity upon which they depend for their revenues has become gradually restricted to a comparatively small section of the public. Every hospital secretary will confirm the statement that the great body of the middle and working classes does comparatively little in the way of financial support, and that but for the splendid beneficence of a few among the wealthy the work which these hospitals are carrying on would be seriously curtailed, and would, in fact, have largely to be abandoned. The profession of medicine contributes ungrudgingly the gratuitous services of a large band of devoted and arduous workers. This fact is imperfectly appreciated by those who denounce the voluntary system, and who contend that equity would be better served by putting the hospitals on the rates. From some points of view, so it would. But as an initial difficulty the State would have to face the suitable remuneration of physicians, surgeons, and specialists, without whom the work of curing disease and alleviating pain could not continue.

It is needless to speculate on what scale the reward of professional services might be contemplated, but if the inadequate recompense which is doled out to the medical officers of the Poor Law—who are overworked and handicapped by vexatious red-tape restrictions—may be taken as a criterion of what the State might regard as sufficient for the medical service of hospitals generally, it is certain that the personnel of every staff would become entirely changed. To retain as paid servants of the State those who are now the honorary servants of the hospitals would involve an expenditure which no ratepayer could contemplate with equanimity.

And yet any other arrangement would be inimical to the best interests of those for whom hospitals are provided. From another standpoint the financial problem would be a weighty one, because immediately hospitals were rate-supported they would come under the compulsion of providing accommodation for an untold number of inmates. The working of the State-paid system in Continental countries enables us to realize how, in times of prevalent sickness, the hospitals are literally besieged by a multitude of men, women, and children who claim admission as a right; and how the authorities are driven to all sorts of undesirable expedients to cope with the exigencies of every recurring visitation of disease that raises the general sick rate above its average level.

Those who practise medicine and surgery among the poor have a real and substantial grievance at the present time, and are justified in looking to the future with apprehension. Beset on one side by this increasing out-patient room competition, they are no less seriously handicapped on the other by the rapid growth of provident dispensaries, medical clubs, and other co-operative movements among the working classes, all of which have for their object to obtain medical attendance and drugs at the lowest possible rates—rates which are, in many cases, so absurdly inadequate that the men who fix and approve them would cry out against having manual labour assessed on any such starvation basis. It is not going too far to say that no more serious system of sweating exists than that which has become established in this class of medical work. It is constantly asked: If this is true, why do doctors submit to the thraldom of such a tyranny? The obvious answer is that they are driven to it by dire necessity. Medical education is more prolonged and expensive than it has ever hitherto been; the ranks of the profession are overcrowded; the enterprise of chemists is bringing within the command of the public remedies which previously could only be obtained through the prescriptions of qualified medical men; and the blatant and unrestricted pretensions of advertising quacks are appealing more than ever to the credulity of an increasing number of people whose feeble and unstable nerves clamour with unwearying insistence for narcotics, stimulants, sedatives, and, in short, a cheap and quick cure for every imaginable ailment. The doctor, like other men, must live, and therefore he has been compelled by the force of circumstances which are too strong for him to accept the means necessary to his existence often on terms which every self-respecting man resents as unfair and unjustifiable.

If ever the State is driven to take over the hospitals of the country, the main reason will be the abuse of their privileges by a class for whom they were never intended. Hospitals are in debt, it is said, because they are too freely used by the public. Those who are moderately wealthy and who have heretofore regarded it as their duty to help hospitals, and through them to assist their poorer neighbours, have naturally little sympathy with the levelling process which Socialism preaches, and can hardly be blamed for withdrawing their support from institutions founded to relieve the poor and needy, and never meant to become asylums for those able to make payment, even if inadequate payment, for medicine and medical attendance. Though the abuses which have crept in demand redress, the voluntarily supported hospitals are still admirably adapted for their original purpose. In them the truly necessitous have the best conceivable provision for their relief in times of sickness and distress. Without money and without price they can command the highest skill in every department concerned with the cure and prevention of disease. Those who are wealthy and can afford to pay for the succour that the highest scientific skill can give to ailing humanity are similarly able, either in their private dwellings or in nursing homes, to call to their assistance every aid to

mitigate the miseries of illness, and to ensure the best chance for rapid and complete cure, or, where that is impossible, for securing the alleviation of the sufferings of a sick bed or the anguish of death.

But between these two classes of society there is a third class, which constitutes the bulk of our population, for whom there is little or no provision. The middle classes, apart from the poor and necessitous, are, strictly speaking, ineligible for hospital treatment. For such persons to accept gratuitous assistance in an institution supported by the voluntary contributions of the benevolent is to throw themselves on the charity of their neighbours and to rob themselves of that independence which many dearly cherish. On the other hand, to summon to their aid the most skilful exponents of medicine and surgery is, for financial reasons, always difficult and often impossible. How many useful lives are annually sacrificed to this inequitable condition of affairs it is impossible to estimate; and it is equally beyond the scope of inquiry to ascertain how great is the multitude of families to whom a serious illness means years of subsequent impoverishment, or the heavy burden and bitter humiliation of indebtedness to friends or relatives. Human nature is common to us all, and the natural desire to avoid suffering ourselves and to spare those near and dear to us from the pains and penalties of disease is an instinct which burns with equal intensity in the breast of every good citizen irrespective of intellectual accomplishments or of financial resources. The poor and the rich have equally the power of satisfying this instinct after the best and most approved methods, whereas the great middle classes, who constitute the backbone of the nation's strength, are in too many instances left to perish, unless in their extremity they allow themselves to be driven to the alternatives of charity on the one hand or of poverty and debt on the other. For the minor ailments of every-day life they are, doubtless, as well off as their neighbours; they can afford to pay the moderate fees of the physicians and surgeons who practise in their midst, and to provide the small luxuries and invalid requirements of short and simple illnesses. But when the crisis arrives, as it must at some time or other in every family, when an acute, dangerous, and protracted disease demands special nursing, expert opinions, expensive delicacies, and the hundred and one necessities of a modern sick-room; or when a life depends upon the chances which only a major surgical operation can afford; there are no opportunities whereby, consistently with the preservation of their self-respect, they can command, as both their poorer and richer neighbours can, the skilful and most up-to-date methods of treatment and nursing.

Surely this is an inconsistency which constitutes a blot upon our social economy and a drain upon our national vitality. Comparatively little is heard about it because those who suffer belong, for the most part, to a class who submit rather than complain.

Attempts have been made by one or two large hospitals to meet this want by setting aside a certain number of beds for the reception of paying patients on moderate terms. Some authorities on hospital questions strongly urge an extension of this plan, but so far as it has been tried the measure of success attained has apparently not been such as to encourage boards of governors in giving a ready consent. There are many difficulties, from the point of view of the hospitals, of their medical and surgical staffs, and of their subscribers, as well as from that of the patients themselves, to hinder the harmonious working and hearty acceptance of any scheme whereby, with one administration, charity and paying patients are treated under the same roof. Such a system, to be workable, would involve a complete reconstitution of the present organization if it were extended to a scale at all adequate to the requirements of the situation. It will never be easy to make an institution founded on charity popular with those who consider themselves above any form of eleemosynary assistance; or to convince the poor, who are the legitimate recipients of charitable relief, that their interests are not jeopardized by the admission of patients of whom it might be suspected, because of their payments, that they received preferential treatment.

Another solution of the difficulty has been tried by the foundation of a home which is popularly spoken of as a pay hospital, and which has successfully filled a corner of the gap. Patients are only admitted on payment of certain fees, which cover nursing, food, and accommodation. They are treated by the physician or surgeon of their choice. This is excellent so far as it goes, but it is only a nursing home on a large scale. There is no resident staff of qualified men, no laboratories, and no special facilities for any form of treatment other than that pertaining to surgical operations. The accommodation, moreover, is limited, and the fees, though comparatively moderate, are still beyond the reach of a large section of the middle class population. Interest on capital, rent, taxes, and other establishment expenses would appear to make it impossible for the house to pay its way on lower terms.

Within recent times the widespread scourge of tuberculosis has prompted the establishment of many sanatoriums where patients of slender means are treated according to modern methods, at a cost which is not prohibitive. Notably the King's Sanatorium at Midhurst, and the London Open-Air Sanatorium at Pinewood, are movements in the direction of providing institutions where the middle classes may pay the cost of their maintenance and treatment. His Majesty and the generous philanthropists to whom the country is indebted for the foundation of these institutions, have shown a shrewd appreciation of the requirements of the day. It is true that these sanatoriums are concerned with the treatment of only one disease, but it is the most prevalent and costly in life to which humanity is subject, and in attempting to combat it in this practical way an example is afforded of how it might be possible to provide for all varieties of accident and sickness among those who are not too poor to pay something and yet are not rich enough to cope comfortably with the expenses of a long and serious illness. Why should institutions for paying patients not be established and maintained on hospital, as distinguished from nursing home, lines, in every city and town throughout the kingdom? Might not an experiment at least be worth making, by the foundation of one such establishment in London? Others would rapidly follow elsewhere if the pioneer hospital proved attractive. Were the requisite capital for building and equipment provided, the income, with moderate success, ought to prove sufficient to ensure financial prosperity.

A hospital founded on such a plan would require somewhat different treatment architecturally from the ordinary hospital, because it would be called upon to provide accommodation in accordance with a varying scale of costs. A certain proportion of the available space might be devoted to wards, where patients would be taken at the lowest rates; the rest being reserved for rooms and small suites which would be let at varying prices according to size and situation. The building should contain operation theatres, laboratories, and all conveniences for the most approved methods of treatment in every department of medicine and surgery except that concerned with infectious diseases. The administration need not differ essentially from that at present in vogue in voluntary hospitals; it might be entrusted to a medical superintendent and matron, under whom the usual staff of sisters, nurses, house-physicians, and house-surgeons would be employed. The government might be invested in a board, partly composed of lay and partly of medical members. Patients would receive all the advantages of constant supervision, of disciplined management, and of thorough investigation, both at the bedside and in the laboratory. This latter point is of special importance because laboratory researches are becoming more and more essential to accurate diagnosis. They are always troublesome and often expensive, so that frequently in private practice they are either imperfectly done or altogether omitted. The patients would be attended by their own medical advisers, and the arrangement as to fees would be a matter between patient and doctor with which the institution would not concern itself. Were it possible to establish a sliding scale of medical and surgical fees which all doctors would recognize as adequate for those who became inmates of such a hospital, the convenience and advantage to the public would be great. But, short of attaining an end so difficult of accomplishment, the members of the profession might be trusted to concede to their clients terms which would be in fair proportion to their circumstances and to the class of accommodation in the hospital which they found themselves able to afford. The staff of the hospital would carry out the instructions

of the doctors in attendance, under the supervision of the medical superintendent.

Calculated on the basis of the present cost of hospital beds, it would be easy to show how, even with such a liberal allowance for maintenance as £130 a bed, a hospital of, say, 100 beds, let at weekly rates varying from 2 to 8 guineas—and with 70 out of the 100 beds reserved for 2 and 3 guinea cases—could be made to pay its way, provided the beds were kept fairly well occupied, and provided it started with a free foundation. Its success would depend upon its popularity with the public and with the medical profession, but it would rapidly commend itself to both if it were judiciously managed and wisely administered. No scheme could pay its way on anything like the terms here suggested if it had to face the capital expenditure required for site, building, and equipment; but if this were provided and the experimental institution proved successful, there would be no lack of money to extend the principle. There would be no necessity for multiplying the initial cost, so far as that would apply to laboratory investigations, major surgical operations, and expensive methods of medical treatment in special varieties of disease. The original institution in every city might be a centre around which would cluster a system of smaller homes arranged on the cottage hospital plan, to serve the requirements of a certain area of population. These could be affiliated with the parent hospital under a system of organization whereby one set of laboratories would do the work of both the main institution and its subsidiaries, and one surgical equipment would suffice for major operations, minor surgery and emergencies only being treated in the district homes.

Successful paying hospitals would ensure to pious founders the certainty of conferring an untold blessing upon a large section of their fellow-creatures. Such a humanitarian and patriotic benefaction would, moreover, materially lighten present hospital difficulties, and would provide homes for the cure of disease which would not compete unfairly with existing vested interests, but would bring within the reach of every one the easiest and cheapest means by which the disabilities and difficulties of illness might be most skilfully combated, and the health of the sufferer most speedily re-established.

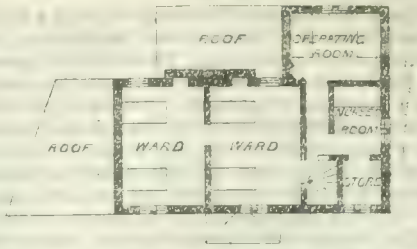
If the public health, upon which our national existence depends, is to be maintained and preserved from decadence, its interests must be safeguarded by practical measures which shall embrace all classes of the community. Our charitable hospitals only partially fulfil this requirement, and are now doing so at the cost of a growing abuse of their privileges, which will demand sooner or later—and sooner rather than later—active measures for their correction. To burden the rates with their upkeep would be a national calamity, but it is one not unlikely to happen if relief is not afforded to the demands now made upon them by the establishment of some system or other whereby the impecunious but not poverty-stricken can, when sick, be treated adequately, and on terms that come within the scope of their financial resources.

NOTES ON THE CONSTRUCTION OF COTTAGE HOSPITALS.

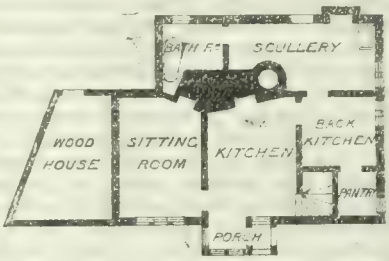
By H. PERCY ADAMS, F.R.I.B.A., F.R.San.I.

Nearly fifty years ago the first cottage hospital was established in this country at Cranleigh, by the late Dr. Albert Napper. A Surrey cottage of ordinary type, belonging to the then Vicar of Cranleigh, Archdeacon Sapt, was assigned by him and converted into a hospital at the very moderate expense of £50. The new departure excited a good deal of interest, various books and pamphlets were published on the matter, and public attention was directed to the subject by articles in the *Builder*, a leading architectural newspaper, which foretold the extension and success of the movement in rural districts. The benefits which a country district derives from a well-managed cottage hospital are indisputable. It provides the medical practitioners in the locality with a place to which they can send cases for operation, or serious medical cases requiring special treatment and supervision not to be obtained in the homes of the poorer classes.

This is the main benefit, but two others may be mentioned: First, the fact that the existence of cottage hospitals gives the country practitioner an opportunity of



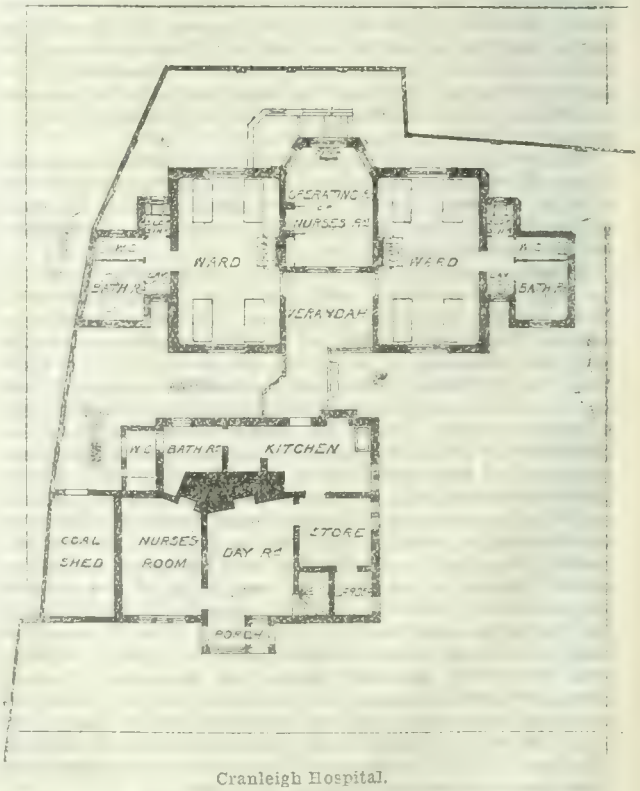
— FIRST FLOOR PLAN —



— GROUND FLOOR PLAN —

Cranleigh Hospital.

operating in cases that would otherwise often be sent long distances to the county or town hospital, which has the result of raising his professional status and increasing his



Cranleigh Hospital.

knowledge and experience, thus benefiting not only the poorer patients, but the wealthier as well. Another advantage is that good nursing is established in the district for the benefit of all.

The first cottage hospitals were nearly all converted cottages, such as Cranleigh, of which we give a plan in its original state, but the modern cottage hospital is generally a building erected for the purpose and fitted much on the lines of a larger hospital. Roughly, they are of two types: (*a*) In the one the wards and the administrative offices are contained in one block; (*b*) in the other they are in two separate blocks. The first plan seems most suitable for quite small hospitals, say, up to six beds, and the second for anything up to, say, fifteen beds; beyond this we are approaching the size of a general hospital.

Perhaps one of the most complete cottage hospitals in England at the present day is that erected five years ago by the Duke of Bedford at Woburn. It is magnificently situated on an elevated site outside the village of Woburn, the beautiful wooded country sloping away from it towards the south and west. From the village of Woburn, Husborne-Crawley, Ridgmount, Eversholt, Milton Bryant, Potsgrove and Battlesden, Little Brickhill, Hockliffe, Tebworth, Wavendon, Salford, Toddington, Tingrith, Steppingley, and Lidlington, the local practitioners can recommend patients for admission to the hospital, and can continue to attend them there, preference being given to those patients least able to afford good nursing in their own homes. A matron and two staff nurses are always in residence.



Woburn Cottage Hospital: Elevation.

The building is of two stories, but the accommodation for patients is all on the ground floor. It was designed by the architect from sketches prepared by Her Grace the Duchess of Bedford on a symmetrical plan; the male ward for five beds and a single-bed ward are to the right of the entrance, and similar accommodation for females to the left; between the wards are the matron's room, the staff dining-room, a dispensary, a day-room, all having a beautiful outlook over Woburn Park. The sanitary arrangements for each sex are on the north side of the building; they are well disconnected from the wards, and consist of bathroom, watercloset, and sink for emptying and cleansing bedpans, and cupboards for patients' clothes, etc. The nurses' duty room is central for all the wards, and is fitted with a sink, plate-rack, a dresser, and a small range.

The operating room is also on the north side, and is fitted on the most approved antiseptic lines, with pedal action lavatory and sink, glass shelves for the glass jars of antiseptics, glass instrument cupboards, electric sterilizer, and adjustable electric light over the table; the entire room is white, so that it can at once be seen that everything is spotlessly clean; the floor is of white terrazzo and the walls and ceiling of white tiles; the room is perfectly lighted, with a top and due north side light. The room is lofty, the upper part projecting into the upper story.

Aërially disconnected by a cross-ventilated lobby, having an arrangement of doors that can be shut across the corridor in fine weather, are the kitchen and offices, all one floor high, the floors of red tiles, the walls white distemper, and all the woodwork and fittings painted apple-green; the larder is lined throughout with white tiles, and has white marble shelves.

In the basement under the kitchen block, and with access for the engineer from outside, are the rooms for the oil engine and electric plant, accumulators, the heating apparatus, and coal cellars: the electricity for lighting purposes and for pumping water from a spring over a mile away is made on the spot, the pump being set in motion by pressing a button at the hospital. The heating of the whole building is by low-pressure hot-water radiators, supplemented by open fireplaces. On the upper floor of the central part of the building are the bedrooms and bathroom for matron, nurses, and servants; these rooms are daintily furnished with rose-pattern chintz curtains, chair covers, and quilts, white walls, and green fittings.

The wards are all floored with teak, and the walls have a tiled dado of pale green, with a deeper-coloured band above, the upper part of the walls and the ceiling, as well as the woodwork and fittings, being finished with white enamel; the chimney-pieces are of tiles and perfectly flush with the walls, any effect being obtained by colour rather than by raised surfaces; there are practically no corners, everything being rounded and all mouldings omitted. Attached to each of the wards is a small sun-room, filled with plants and palms.

There is an entirely separate isolation hospital for one patient, with nurses' sitting-room and bedroom, and also a servants' bedroom; this block forms, in fact, a cottage hospital in miniature, and on the ground floor of this building is the ambulance shed.

Completely hidden away by shrubberies is the mortuary, decorated so that it may be used as a view room by the friends of deceased patients.

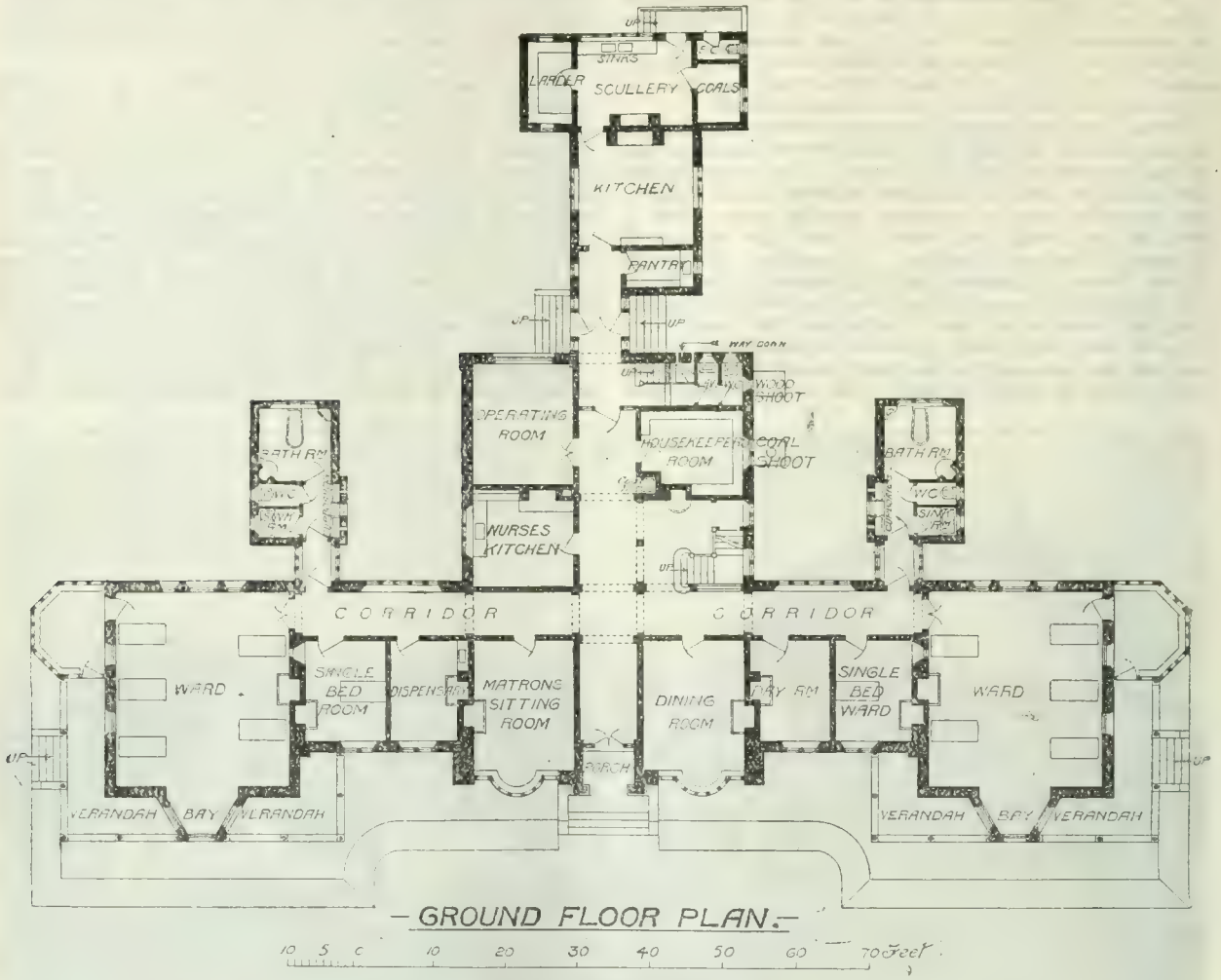
There is an ample kitchen garden for the use of the hospital, and a fine tennis lawn for the staff.

As *Country Life* said some years ago, model farms are features of most large estates, but it would be well if model hospitals were established up and down the land by those who are able to build and support such institutions.

In such hospitals as that at Woburn, where efficiency has been the keynote, almost regardless of cost, the designing and carrying out of the work is a comparatively simple matter, but it may be of interest to state

a few leading principles which should be followed where economy is important.

The site should be carefully selected, with sunny cheerful aspect, sheltered from prevailing winds, and have a sandy or gravelly soil; a clay subsoil should if possible

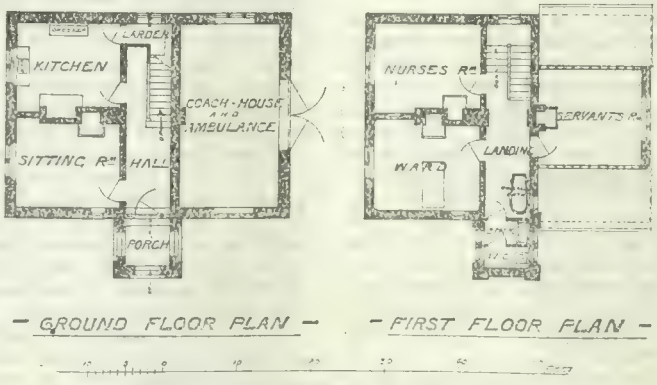


Woburn Cottage Hospital.

designed building of good proportions and refined detail costs no more in materials and labour than the veriest eyesore that will be an everlasting blot on the landscape.

As a general rule the shorter the length of corridors and passages the more economical the plan. The wards

be avoided. It would be advantageous to consult the architect before a site is definitely decided, as the cost and success of the building depend largely upon it. With regard to the plan and construction, all buildings, if properly designed, must vary enormously according to the nature of the site; there can be no fixed rules for any particular sized building, and what would be appropriate for one site may be quite out of place on another; the buildings should be specially designed to fit the site and its various levels, and not the site levelled up to fit the building. An interesting example of a twelve-bed cottage hospital being designed to suit an irregular site is now about to be erected at Southport; all the levels have been taken into consideration in the planning, and thus necessarily cheapening the cost by very considerable saving of expense in the foundations.



Woburn Cottage Hospital: Isolation Block.

Local materials should be used as far as possible, and the exterior of the building designed to harmonize with its surroundings. In some districts brick, in others stone and even concrete for the walling may be found most economical; it should be remembered that to erect a well

for patients should be, as far as possible, separate from the administrative part of the building; an operating room is a necessity, and should have a good north light; in some German hospitals the large tiled bath-rooms are used as supplementary operating rooms, and it seems an idea worth imitating by utilizing the bath-room in this manner in small cottage hospitals; it is certainly preferable to using, as is sometimes done, the committee room or matron's sitting-room for this purpose. There should be wards for each sex and a minimum cubic area of 1 000 ft. per bed and 5 ft. space between the beds; the wards should be cross-ventilated with windows on opposite sides of the room, preferably with double hung sashes having a 'fall in" or hopper window above fitted with glass sides; this arrangement prevents a direct draught on to the patient. Additional ventilation should be provided by building extract flues in the chimney stack and having only an iron plate between them and the smoke flues; the heat from the latter will induce an upward draught, the vent from the ward being at the ceiling level. For small cottage hos-

pitals open fireplaces are usually sufficient; slow combustion grates are best, with fresh-air inlets at the back of the stove where the air can be slightly warmed before delivery into the room. Additional inlet ventilators may be placed in the external walls, and should be constructed of glazed pipes and have hinged gratings for access to the flues for cleaning. All cupboards should, where possible, be ventilated with a small window or ventilator. A good substitute for the very expensive bedpan sinks in common use is a swivel tap fixed over a watercloset, and made, like a gas bracket, to shut against the wall; it is inexpensive, and answers the purpose for washing out bedpans. A nurses' sitting room is an essential, and should have a good outlook. A good inexpensive floor can be made for the ground floor by sticking ordinary plain-coloured linoleum upon the concrete and then wax-polishing it; the concrete must be very dry before this is done. There should be no mouldings and as few projections as possible. For a cottage hospital nothing looks better than whitewashed walls and apple-green paint or stain, and this decoration is cheap and sanitary. It is more economical to treat the internal woodwork with stain and varnish than paint. The drainage should, if possible, be taken to a sewer; earth closets are very sanitary for small buildings, but there is the difficulty of cleaning bedpans. If there is sufficient land available a small septic tank system can be used with advantage.

As to the question of cost, it should be clearly understood that it must also vary according to the site and the neighbourhood in which it is situated, and upon the details and furnishing of the building. It is an utter fallacy to talk, as so many people do, of the cost of hospitals at so much per bed; it is far more reliable to compare the cost by the relative price per cubic foot of the building; about 7d. a foot cube is the lowest price at the present time at which a really good cottage hospital could be built, and this would probably work out at about £250 a bed for a six or eight bed hospital.

The present Cranleigh Cottage Hospital, of which we give the ground plan, is interesting, as it shows how a small cottage hospital may be extended. The former hospital is now used for administration purposes, and a new building is connected to it by a short corridor, and contains two wards, each 23 ft. by 14 ft., and holding four beds; the nurses' room is between the wards, and can be used as an operation room. The total cost of this new block was about £1 800. The staff consists of a resident nurse who acts also as housekeeper, and one servant. The lady honorary secretary exercises some sort of general supervision. The patients pay from 3s. 6d. to 10s. a week according to their means; if a serious operation is necessary, then an extra nurse is engaged from a London nursing home, and the cost defrayed from the general funds. For the loan of the plan and the above information we are indebted to Dr. Napper, medical officer to the hospital and son of the original founder.

A NOTE ON SEPARATE OPERATING ROOMS AND THEIR MANAGEMENT.

By GEORGE G. HAMILTON, F.R.C.S.,
SURGEON, LIVERPOOL ROYAL INFIRMARY.

WHEN the Royal Infirmary, Liverpool, was erected, some fifteen years ago, our surgical authorities were still in favour of large operating theatres, a gallery to seat onlookers being provided. Each of the three surgeons had two operation days a week.

It was at that time thought desirable to have also a small theatre where minor operations and emergencies could be dealt with, and to provide a separate theatre for the gynaecologist.

Almost immediately after this date aseptic surgery made great strides, and it was found necessary to have smooth walls and floors, no furniture that could collect dust, and so on. Then followed the time when much money was spent in elaborate operation rooms, some costing as much as £10 000.

By general consent in Liverpool the plan of having one theatre for each surgeon, assistant surgeon, and staff of dressers was admitted to be the ideal, and six years ago the large theatre was roofed over and converted into an *x*-ray room, two moderate-sized operating theatres being erected on the top of this structure.

Two years later the small theatre was enlarged, and a top and side light were arranged for, so that now each surgeon has fifty beds, with a theatre close at hand, in which he, his assistant surgeon, and dressers work.

There is a nurse for each theatre. One, having the title of "Sister," is responsible for the instruments generally, but each nurse is responsible for the proper working of her theatre, and the sterilization of all dressings for the 50 beds connected with that theatre. In the case of the gynaecologist, the Sister of his ward has also charge of his adjoining operating theatre.

Each theatre has an anaesthetic room attached, and there are four anaesthetists to the hospital. The house-physician on duty gives the anaesthetic in emergency cases.

The theatre ambulance arrangements are very simple, and one porter only is on duty at a common lift, the patient being brought on a wheel ambulance the same height as the operating table by the Sister of the ward and a dresser. We have a very useful contrivance for lifting the patient, which consists of four flat hand grips fixed to a square made of webbing which is placed under the patient's hips. One assistant reaches over the table and catches two of the handles, while a second assistant holds the other two, and the patient is half lifted and half slid from the ambulance on to the table.

The walls of the two new theatres consist of a dado of alabaster and a smooth surface of ripolin paint above; but where the sterilizers are in the theatre, as ours are, there is no doubt that tiles are the best. Tiles can be fitted so closely now that practically they are one continuous surface; and, after all, a sheet of glass, if one runs one's finger over it, can be shown to hold plenty of dust. The floors are of papyrolith, which has not been found to be so good as either terrazza or "torgament"—the latter an asbestos material, its chief advantage being that it is free from glare. The terrazzo can be continued, as at the new Liverpool Infirmary for Children, without angle from the floor into the dado. The doors are of hard wood varnished, and both theatres have their light from the top as well as the side. In my theatre the floor has been continued into two raised steps, with the narrowest possible railing and a separate entrance for students, who, notwithstanding the railing, are close to the operator. The doors here are of sheet aluminium on wood, and help to give more light in the darker part of the theatre.

An important point in the electric illumination of these theatres is that the lights are on swing arms. This does away with a constant source of dust immediately over the operator during day operations. Each light is on a separate fuse and switch, so that the theatre can never be in total darkness unless the main fuse goes. An acetylene lamp is provided for such a rare contingency. A wet mat and a dry mat for cleansing the boots are placed at the entrance, and provision has recently been made to prevent the entrance of flies by means of gauze frames.

Sterilization is carried out in the theatres, and the disadvantage of heat and moisture are got over by sterilizing all dressings on the days on which there are no operations. A cold jacket at the top of the sterilizer has been suggested to prevent too much moisture entering the theatre, and condensing on the roof and walls.

Almost all our surgeons wear gloves, and septic cases are taken last. We have been unable to trace any evil results from these septic cases, which are isolated in a separate room at the end of each ward. Several of the surgeons change entirely into white ducks and a flannel shirt before operating, and the heat of the theatres is rather an advantage to the patient, especially in cases of abdominal section. Some wear masks and some do not. I understand from a friend, who has returned from a recent visit to most of the important German hospitals, that masks have been given up, and that about half of the surgeons now operate without gloves.

The university laboratories adjoin the theatres, and the pathologist and assistant pathologist, who are in telephonic communication with the theatres, make constant cultures from dressings, gowns, towels, ligatures, water, etc. They also cut rapid microscopic sections of fresh growths, and in six minutes an opinion of much value can be obtained.

Post-mortem examinations are made after operation

hours, and since the establishment of a low temperature room, the bodies are in a much less septic condition.

In conclusion, I would say that our desire should be to teach the student by a good object lesson the simplest way of safely carrying out an aseptic operation, and that this is best done in a small theatre with the students close by.

If the number of spectators is large, then they must be separated into different theatres; in fact in America, large classes of any kind are being done away with altogether.

THE PROMOTION OF UNIFORMITY IN THE REGISTRATION OF DISEASES IN HOSPITALS.*

By R. F. TOBIN,

SURGEON, ST. VINCENT'S HOSPITAL, DUBLIN.

Some months ago the Board of Superintendence of Dublin Hospitals receiving Government grants, of which I am secretary, decided that it would be well to amend the form on which the hospitals send in a classified annual return of patients admitted, and I was directed to look into the matter.

There was certainly necessity for the change, for the old form was quite obsolete—the classification being alphabetical, with the inclusive term "abscess" holding first place on the list.

I shall not delay you by mentioning those with whom I have corresponded—Science does not recognize nationalities, and the list is therefore a long one—but I shall take this opportunity to thank all on that list for their letters and suggestions.

Any one carrying out such an inquiry will be struck first with the excellence of the *Nomenclature of Diseases* of the Royal College of Physicians—how far it is in advance of all other classifications, and most with the fact that the profession generally knows very little about it. My own ignorance of it was the first thing that was brought home to me, and then came the consolation of finding how widespread was my shortcoming. My feelings towards the book are now those of a converted collier towards temperance. The care bestowed on its compilation, the eminence of the men who have worked at it, the difficulties as regards classification that have been overcome, the education that lies in an intimate acquaintance with it, are ever before me.

The means I suggest for promoting uniformity in the registration of diseases in hospital is very simple. It consists in putting in every admission and discharge book, alongside the column for the names of diseases, a column for the numbers given to these diseases in the *Nomenclature*, and in using, when the annual returns are being prepared, these numbers as a means of classification and of bringing together the various diseases in their proper order.

This simple means of classification is in use in preparing the returns of the Army Medical Service, and it is found to work well. The numbers identify the words, and the necessity for looking out the number leads one to using the proper word. It means the banishment of such terms as "struma," "scrofula," etc. And here let me remark that since my conversion it has been a wonder to me why the Registrar-General has not given us a space for these numbers in the certificates of deaths and asked us to fill them in.

The addition of the number in each entry of a disease in the Admission and Discharge Book in place of giving increased trouble has, as is always the case with what tends to order, a quite different result. In a very short time one comes to know the numbers of all the principal diseases, and so the initial trouble disappears while this advantage is permanent—that from

* A paper read before the Section of State Medicine, Royal Academy of Medicine, Ireland, May 1st, 1908.

A Classified Annual Return of the Diseases of Patients *Treated in Hospital during the year ended 31st March, 19* .

The following entries are made with a view to illustration.

No. in *Nomenclature.*	Disease.	No. Treated.	No. Died.	Class.	Totals of Each Class Treated.	Totals of Each Class Died.	Remarks.
13	Enteric fever	6	1				
38	Scarlet fever	4	2				
44	Tuberculosis, lung	20	2				
44	Tuberculosis, knee-joint	3	—	Infective	38	5	
44	Tuberculosis, abscess tibia	1	—				
44	Tuberculosis, lupus	2	—				
50	Alcoholism	4	1				
59	Plumbism	2	—	Intoxicants	6	1	
79	Lipoma, circumscribed: back	4	—				
79	Papilloma, villous, vesical	1	—	New growths non-malignant			
80	Sarcoma, spindle-celled, femur	2	1				
80	Sarcoma, spindle-celled, testicle	1	—				
80	Carcinoma, scirrhous, breast	4	1	New growths malignant	10	2	
80	Carcinoma, epithelioma: lip	3	—				
171	Keratitis	5	—				
193	Congestion, optic disc	7	—	The eye	18	—	
204	Lenticular cataract, complete, senile	6	—				
1,025	Burn, forearm and hand, skin	1	—				
1,041	Wound, common carotid, partial division	1	1				
1,089	Wound of scalp, with injury periosteum	1	1				
1,096	Concussion of brain	1	—	Injuries	12	2	
1,145	Fracture, ribs	2	—				
1,205	Fracture, radius, Colles's	4	—				
1,233	Dislocation, femur	2	—				

an admission and discharge book so filled up any clerk can make out a classified return of diseases: Infective diseases, malignant diseases, diseases of the various systems that are not either infective or malignant, are compelled to fall into proper order, and a bracket to define the sections is all that is necessary to complete the return. The first page of the form furnished to the hospitals under the superintendence of the Dublin Hospital Board is reproduced, as it furnishes an illustration of how the system works. On it the number of infective cases, of malignant cases, of injuries, etc., are seen at once.

I would asks representatives of hospitals to give this system their consideration, and if they approve of it to try and introduce it into the institutions with which they are connected. I have said it is in use in the Army Medical Service, and it may be in more general employment than I am aware of; it is for its universal adoption that I plead. Why should not each disease carry a like number in every land?

THE DENTAL NEEDS OF THE POOR OF LONDON,

WITH SPECIAL REFERENCE TO SCHOOL CHILDREN AND THE EDUCATION (ADMINISTRATIVE PROVISIONS) ACT, 1907.

By J. G. TURNER, F.R.C.S., L.R.C.P., L.D.S.,

DENTAL SURGEON, ST THOMAS'S HOSPITAL; SURGEON AND LECTURER ON DENTAL SURGERY, ROYAL DENTAL HOSPITAL OF LONDON.

For this inquiry the poor of London may be taken to mean all who are unable to pay £2 for an upper or lower denture (or £4 for both upper and lower), 2s. 6d. for a filling or scaling, and 1s. for extraction without anaesthesia. To arrive at an idea of their number and needs we may proceed somewhat on the lines of the quantity surveyor, who estimates the cost, say, of a new county council palace, and finds his original figures doubled before the building is complete, only with far less certainty of data and greater liability of underestimation.

In accord with the scope of this inquiry, the poor may be divided into those of 14 years of age and under, of whom about 900,000 are school children, and adults, or those over 14. The number of these latter is not easy to estimate; from a study of the housing figures for 1900 in Mr. Charles Booth's *Life and Labour of the People of London*, and of the very poor in "General" Booth's *In Darkest England*, it may be taken that 1,000 000 adult "poor" is well within the limit, especially having regard to the fact that many whose occupation entails a show of "respectability" must be included in our "poor." We may, then, try to take out the needs of 1,000,000 adult poor. Any dentist conversant with hospital or dispensary practice knows that the "perfect set" is remarkable only for its rarity; the imperfect, and badly so, is the rule; imperfect referring not only to carious teeth, but to pyorrhoea alveolaris, tartar, discharging sinuses, and all that is included under "oral sepsis," leaving a mouth offensively foul, and often practically uncleansable. Allowing that each of these 1 000 000 has five teeth fit for and needing filling (this is probably an underestimate) and that each filling takes half an hour to do, we have 2 500 000 hours' work. Allowing that each requires two sittings of half an hour each for scaling and treatment of pyorrhoea (many will require more), we have 1,000,000 hours' work. Allowing that each has five teeth needing extraction (again an underestimate) and allowing three minutes for each extraction, we have 250,000 hours' work. Allowing that a quarter of these 1,000,000 requires a denture in the upper or lower (including a double set as an upper or a lower to each of two people), and allowing two hours' personal attention to the patient for each denture, we have 500,000 hours' work. Thus we have:

Fillings	2 500 000
Pyorrhoea and scalings, etc.	1 000,000
Dentures	500,000
Extractions	250 000
	4 250,000 hours' work.

Allowing that a dentist can work five eight-hour days per week for fifty weeks=2,000 hours a year, we need 2,125 dentists working whole time, leaving out of account the mechanical assistants. Allow 10s 6d per hour for the dentist's time=£2,125,000; deduct £500,000 for dentures and £62,500 for gas, at 6d per anaesthesia, on which items no profit except time is allowed to the dentist=£1,562 500, and one-third of this for working expenses=£1,041,667 for 2,125 dentists=£490 per year per whole time dentist. £2,125,000 would be capital expenditure, that is, the cost of the first year's work, but entirely apart from equipment of surgery; current expenditure, that is, for "repairs" to these 1,000,000, and attention to the 90,000 school children annually becoming adult, might be estimated at a quarter of this sum—£506,000: 531 dentists. Indeed, the carpenter would shed many a bitter tear at the labour! and there are not enough dentists for the work; nor would any governing body entertain half such a proposition.

We may also take out the quantities from a physiological aspect, measuring the needs by the disease potential. To estimate the actual number of days lost through dental trouble is impossible, nor can we get any clear idea of the amount of sickness from this cause till a more general recognition of the clinical signs of oral sepsis leads to its due and more frequent incrimination. We can only schedule the possibilities. Want of masticatory power, the most popularly recognized, is the least of all the evils of bad teeth. The whole range of gastric complaints, from simple indigestion to incurable dilatation; catarrhs of the biliary and pancreatic ducts and their sequelae; blood diseases, from chlorosis to malignant endocarditis; new growths, from a granuloma to a cancer; and the whole category of septic diseases, may be traced to a foul mouth as the source of evil; every general disease must be unfavourably influenced, and tubercle may be specially mentioned; a mother may poison or starve her babe, suckling or unborn; the mouth may act as a carrier of the germs of epidemic diseases. Measured either quantitatively or qualitatively, the dental needs of the adult poor of London are overwhelming.

To meet these needs there are in London County, beyond the three special dental hospitals (the Royal Dental Hospital, the National Dental Hospital, and the dental department of Guy's Hospital), some ninety hospitals and dispensaries to which dentists are attached. A circular letter was sent to each inquiring as to the number of dental surgeons and clinical assistants working in connexion with the institution, and their days and hours of attendance; the existence of a separate dental department always available for dental use; the number of new cases per working day; the use of anaesthetics; kind of work done—whether extractions only or also fillings; whether, in view of the new Act, it were possible to expand the dental department. Replies were received from 69 of these (some I have been unable to thank and take this opportunity of doing so), and from them a fair conclusion as to the provision there exists in London to deal with the dental needs of the poor, and as to the use it is put to, may be drawn.

Answers received from 69 institutions may be summarized thus (since there are 90 institutions employing dentists, about one third must be added to these figures to get true numbers):

Eighty-one dentists are employed at 69 institutions; 7 clinical assistants at 4 institutions, one having 3 and one 2 clinical assistants; 13 attend patients at home; 12 attend as required; 56 attend at the institution, averaging 73 attendances per week, with an average of 13 new patients a day (hours of attendance 9 a.m. or 2 p.m., except one case of 5 p.m.); 5 have special dental departments used for no other purpose, and 15 can expand in view of the Act; all use anaesthetics; 25 do filling work, 10 at home, but the total number of fillings is only a few hundreds; 22 of the institutions are dispensaries.

The total number of new patients attended at 40 institutions giving returns under this head is 42,523 per annum. These patients include adults and children. To get at the total we may practically double this number =85,000, and to arrive at adults deduct a quarter=64,000 new adult patients seen per annum.

Returns from the special dental hospitals show that probably another 48 000 patients are seen per annum at these institutions, of whom about one-sixth are children =40,000 adults. Total 104,000 adults per annum—one-third at the special dental hospitals and two thirds at the general—or about one-tenth of those needing attention.

The actual work done for these patients is chiefly extractions At the special dental hospitals some 800 are annually fitted with dentures, and another 200 may be added as being done at general hospitals—1,000 in all; on a similar basis probably 10,000 are attended for fillings, scalings, and pyorrhoea—a mere nothing compared with the needs.

If the needs are overwhelming, they are as certainly unrecognized—ignored indeed by the sufferers themselves, as those who live in poverty ignore the squalor of their surroundings, scarcely realizing the hope of better things, and fearful even of the change that could ameliorate their lot.

The problem now becomes how to induce a fuller expression of the true needs, and what means should or need be taken to meet any increase of patients.

The elements of repression are fear, lack of time, ignorance often of the very existence of means of relief. Fear can partly be met by increased use of anaesthetics, but must always remain a potent factor among the ignorant.

Lack of time may be met by opening the dental department during the evening, following the example of some of the special hospitals.

Ignorance can only be met by education, and this is a task which is more often left to the advertiser, who sucks thereout no small advantage. In France every notice-board was lately placarded with bills calling attention to the disastrous results of the use of absinthe; and in so important a matter as dental disease we might well follow this example. Let there be selected from the list of diseases due to teeth those most calculated to appeal to the public—cancer, tubercle, indigestion and anaemia, and all the list of symptoms beloved of the patent-medicine man—neuralgia, headache, backache, listlessness and melancholia, inability for work, loss of appetite; let mothers be warned of the danger to their offspring; let prevention and cure be attractively set out; and let the whole be worked into a popular brochure, lurid if need be, and with special emphasis on the fact that foul teeth are worse than none at all, and given to each hospital patient and placarded on every official notice-board. The churches and the social organizations with their mothers' meetings, working men's clubs, and general facilities for close personal contact could confidently be invited to assist; and the large provident societies might in self-defence spread a knowledge of the evils of bad teeth among their members.

But teachers must look to themselves in the matter. No single part of the body has such far-reaching capacity for ill, and yet a man who can minutely describe the scaphoid bone of the carpus is generally unable to tell the number of his teeth. A short course of dental surgery should be made compulsory by the examining bodies, and when that is so the teacher's initial difficulty of interesting a man in a subject which is not in the curriculum will be gone, and the little more that mean so much will be added to the practitioner's useful knowledge.

What steps should be taken to meet a fuller expression of the needs? The returns made work out at an average of 13 new patients each attendance day at institutions other than the special dental hospitals. This means that except at these special hospitals which are already working at full pressure on a special *clientèle* of their own creating, educated by force of example and having time at disposal and at the London Hospital where the patients are largely aliens, the work done might without inconvenience be doubled.

The figures above quoted show there are 107 dentists and 9 clinical assistants, and those working at the special dental hospitals, attending the expressed needs of one-tenth of those actually needing attention per annum and capable of attending one-fifth. A quarter of the *actual* needs may be taken as representing the *current* needs which should be provided for yearly; 531 whole-time dentists or clinical assistants are wanted to deal with these current needs, assuming that fillings and dentures are part of their work. These numbers are beyond the benevolent capacity of all the dentists of London together, or the accommodation and funds of charities. There may be seven institutions having special dental departments used for no other purpose, and twenty capable of expansion (see figures given above); the rest lack both accommodation and funds. Indeed, both the charitable public and hospital managers need educating as to the importance of dental troubles. There is no romance in a dental surgery, no patient suffering of the poor in clean hospital linen; only panic-stricken, unwashen humanity fighting the hand that would help it, and utterly forgetful of gratitude. A dental department is for the many, and is comparatively cheap; but it is unlovely. Finsen light, *x* ray, physical exercise departments, etc., are for the few and are costly; but they have an element of romance and are not filled with refractory patients, and hence are well fitted to be the pet children of philanthropy and to catch the eye of a managing committee. A bed costs £100 a year, and serves the needs of 12 patients; for this sum a dental department could deal with as many hundreds, and even prevent their need of the bed. It is time, indeed, to revise our ideas of relative values. In every scheme of hospital building and management a self contained dental department, ready for use at all times, should be a primary necessity. The department should be open in the evening, as well as morning or afternoon as at present is general, and under the charge of an honorary dental surgeon (if necessary, one might be appointed for each day of the week), under whose direction paid clinical assistants might work at scaling, fillings, and dentures—the more arduous part of the work which take the "blood and bones" of the dentist—as well as extractions; though, if only extractions were done, it is to be remembered that nine tenths of the battle lie in rendering the mouth aseptic—in extractions. More extended provision would need to be made for the use of "gas," and a large amount of work would be thrown on the almoner's office to decide as to fitness for free fillings or assisted dentures. It has just been surmised that the needed 531 dentists and clinical assistants are beyond the charitable capacity of the dentists of London. This does not mean there are none to do the work—it means that a large number of young men who might be classed as clinical assistants would gladly accept a small payment, and may fairly expect it. There need be no false pride in accepting such a post—a pathologist is none the less valuable for being paid; money is the obstacle, and will be till the supreme importance of "clean teeth in all our cities" is recognized.

Outside the hospitals a certain amount is being done to induce the poor to self-help in dental matters, but such a body as the Hearts of Oak finds dental aid the exception; Oddfellows and Foresters are at present content to work in this direction through the Hospital Saturday or Sunday Funds, and these in their turn lay under contribution the special dental hospitals, or make a working agreement with a registered dentist. The Metropolitan Provident Medical Association, with nine dispensaries and nine dentists seeing patients at their own surgeries, guarantees the cost of dentures at £2 apiece, working in conjunction with specially appointed dentists; the St. John's Wood and Portland Town Dispensary pays 1s. 6d. out of each 2s 6d. fee for fillings; and a few other dispensaries work on a part-payment system. The total number so helped is impossible of estimation; last year the Hospital Sunday Fund assisted 1,012 dental cases, and the special hospitals supplied about 800 dentures; perhaps 2 000 dentures are supplied free, or partly free, per annum, and a few hundreds are induced to pay a small fee for fillings.

The system of part-payment might be greatly extended, or a scheme adopted analogous to the workgirls' feather clubs, by which each member gets a return for just what she puts in, but at cheaper rates for quantity. These very girls might learn that the beauty of their smile depends more on health and pretty teeth than on a feather; but dentists should by no means let themselves be saddled with clubs on the lines of the present medical clubs, or they will as surely find the beneficiaries assuming the position of taskmasters.

Shortly summarized, we want:

Education as to the evils of bad teeth and as to the means of prevention.

To increase the *personnel* and accommodation of existing dental departments of hospitals and dispensaries.

To persuade the poor to self-help, while arranging that they shall get the greatest benefit for their outlay.

SCHOOL CHILDREN.

So far we have considered only the adult poor, and with no very hopeful outlook. But here we find a far more cheerful prospect. There is still time to prevent, and children are teachable and amenable to discipline. At the earliest school age—5 years—no permanent teeth are yet cut, and though the temporary teeth be practically destroyed by caries, cleanliness will preserve the permanent. For practical purposes no disease of the human body has a simpler etiology or more obvious prophylaxis—dirt, cleanliness! In these facts lies the hope for the 90,000 new scholars annually joining the London County Council elementary schools at the age of 5. They may be cleansed, taught cleanliness, and inspected to enforce it.

The Brighton report on the teeth of over 7,000 school children gives 76 per cent. as having carious temporary and permanent teeth at the rate of 2·12 per child; the British Dental Association report gives 86 per cent.; German statistics 98 per cent.; and one report from Northamptonshire 100 per cent. The number of carious temporary or permanent teeth increases with age at the rate, roughly, of 1 per child per annum, causing an overlap at the time of the change of the teeth, when the number of carious teeth is higher than immediately before or after. The Brighton estimate begins with children of 7; allowing, then, a rebate for the two years from 5 to 7, we may take 2 per child as an average of decay on joining at 5. In the report, 10 per cent. of these are classed as fit for and needing filling—that is, among 90.000 children there are $\frac{18}{10}\frac{000}{000}$=18,000 teeth needing filling.

Experience of work done at the Cambridge school dental clinic gives an average of three fillings per hour; 18 000 fillings at 3 per hour=6 000 hours' work=3 whole-time dentists at 2,000 hours per annum. (The difference between a 3 per hour average and a 2 per hour average adopted in the estimate for adults is accounted for by the fact that we are here thinking only of simple fillings.) Of the remaining 162,000 carious teeth, 10 per cent. again need immediate extraction as causing evident sepsis (this estimate is taken from Mr. C. E Wallis's experience at the Feltham schools)=16 200; at 2 per child, and allowing 3 minutes for attention to each child=405 hours' work=one-fourth of a whole-time dentist.

Doubling these numbers to get the work done in six months—dental caries is rapid in young teeth, and six months suffices for the complete destruction of a tooth—there are wanted 6½ whole-time dentists to attend to in six months the reasonably urgent needs of 90.000 children of 5 years of age annually joining the London County Council schools, leaving the other half of the year to be carried on to the next account—six monthly inspection, and attention to urgent cases among the general body of the children.

The Education (Administrative Provisions) Act, 1907, imposes on the local authority the duty of inspection, leaving treatment permissive. As just explained, on account of the rapidity of dental caries, inspection with a view to treatment to be of any use must be frequent, six-monthly. Any other dental inspection is mere waste of time; voluntary labour has shown us the alarming proportions of the evil and of its results (incidentally it may be noted that probably most starving children starve on account of bad teeth). Useful inspection can only be carried out by the dentist who treats the children, and any scheme providing for less than biannual inspection fails in its object. We must then estimate the time needed for dental inspection of 900,000 school children, the approximate number of London County Council elementary school children. In such an inspection all that need be noted is "clean" or "unclean," teeth to be extracted, teeth to be filled, "urgent." Using cards of the form suggested below, already filled in with the particulars of the patient, and denominating the permanent teeth from the central incisor to the third molar by the numerals 1 to 8, and the temporary teeth from the central incisor to the second molar by the letters *a* to *e*, and having the use of a writer. it will be found possible to inspect two children per minute.

This may not be an ideal dental inspection, but it is quite sufficient for our purpose; 900 000 children twice a year at half a minute each = 15,000 hours' work = 7½ whole-time dentists.

Suggested form of card:

Name ..... Age.....

Address..... School.....

Fill

R. L.

Extract

R. L.

Clean. Unclean. Urgent.

Erase or retain clean, unclean, urgent, as required. Use the numerals 1 to 8 to denote the permanent teeth and the letters *a* to *e* to denote the temporary.

On the basis of one-fourth, a whole time dentist to attend to the urgent extractions of 90 000 children, and allowing 900 000 school children, we shall need ¼×9=2¼ whole-time dentists to deal with the urgent extractions of the remainder.

Allowing a total of 16 whole-time dentists, we have so far allocated 2¼ whole time

7½ "

6½ half-time=3¼ "

13 "

leaving 3 whole time dentists who could fill 18 000 teeth or extract the less urgent teeth of another 120 000 children.

Two smaller points are worth noting in this estimate: Anaesthesia has not been asked for, in sharp contrast to the importance attributed to it in the "adult" estimate, and it may be considered under the mark.

In practice both in Germany (at Strassburg) and in this country anaesthesia has been found unnecessary; and, as a matter of fact, the softness of young bones allows extractions to be done far nearer painlessly in children than is generally believed.

As to under-estimation, time has been allowed both for inspection and extraction; in practice it might be possible to extract at the time of inspection—moreover three minutes per child is an estimate which could well be reduced by efficient nursing attendance, etc. A much larger saving of time would be effected by filling only permanent teeth. Four-tenths of the teeth classed as fit for and needing filling in the Brighton report were temporary teeth, and the need for their preservation is far less pressing than is the preservation of the permanent teeth. If instead of 16 whole time dentists 64 quarter-time dentists are employed, the operators will be far fresher and fit for quick work than if occupied by the same routine day in, day out. Lastly, with education in prevention, the work should be a decreasing quantity.

Teachers and the nurses employed at the school clinics should work in conjunction with the dentists by means of simple and oft repeated lessons on mouth hygiene, and by supervision of actual use of the tooth-brush. Every child on joining might be given a tooth-brush, and it might be made compulsory on the parents to provide two new brushes a year for each child. Teaching and supervision of the use of the brush might be made the duty of a special nurse attached to each school.

The cost of equipment and maintenance of such a service would not be great—in comparison with the possibilities for good, no other scheme of expenditure comes near.

Sixteen dental surgeries at £100 = £1,600, would be the capital expenditure (this sum includes a share in a lease or freehold which would need to be acquired for a general school clinic); 64 quarter-time dentists at £120 a year each = £7,680; upkeep and nurse, per annum £100 = £1,630; tooth-brushes for 90,000 children, at 4d. each = £1,500: that is, for a capital expenditure of £1,600 and a current expenditure of £10,780, or a rate of $\frac{1}{10}$d. (¼d. rate = £40,000 to £45,000), a far-reaching system of dental aid and prevention could be established for London County children.

Where is this dental service to be conducted? The only answer to this question seems to be—at special school clinics. There are many obvious and considerable advantages. The children would still be under school control, and the morale of a well-conducted school would be of great assistance to a dentist; it would be possible to check and control the child's attendance without calling on the parent to accompany it each time; attendance at a school clinic could be recorded so as to count as an attendance to the teacher; inspection and treatment would be carried out by the same man. The charity-supported institutions—hospitals and dispensaries—are the only other direction in which we can look.

The figures given above show that perhaps 18 of these can enlarge the dental service in view of the Act, and of these only 1 is a children's hospital. The special dental hospitals attend about 8 000 children a year for about 3 500 fillings and about 12 000 extractions, and perhaps 25 000 are seen by the general (including children's) hospitals for extractions only. But we want 18 000 fillings done and 81,000 children seen for extractions, showing a difference obviously beyond the expansile powers of 18 institutions Moreover, all the resources of general charities will be needed for the adult poor if any awakening is achieved. There is a further objection that an institution already heavily rated will not be likely to increase its accommodation (and rateable value) to relieve the rates of the rest of the district; or to accept payment which might lead to a chance of outside control of its affairs.

Whence is the money to come? From the parents, from charitable endowments, from the State, or from the rates? Unfortunately, experience, both in Germany at Ulm s/D. and in this country at Kettering, has shown that parents will not pay even the modest fees asked at a school dental clinic. The matter is too urgent to await philanthropy. Though much might be said for a State, or a State-aided, scheme, Parliament appears to find it more expedient to pay the bread bill of the aged than to equip the young for the service of the State. The rates alone remain. We have noted that the rate would be but $\frac{1}{16}$d. for London County; prevention is much less costly than cure, and in a few years the decrease in sickness of dental origin may reasonably be expected to lead to a substantial decrease in poor rates, and to set free for more useful purposes a large amount of charity now used up in the attempt to rehabilitate the wrecks of humanity.

THE ADMINISTRATION OF OPERATING THEATRES IN HOSPITALS.

SEPARATE OPERATING THEATRES

IN another column (p. 1479) an interesting note by Mr. George Hamilton is printed, giving an account of the system of separate operating rooms for each surgeon which was introduced into the Liverpool Royal Infirmary. The same system is in force in London at Guy's Hospital, the London Hospital, and St. Thomas's Hospital. Each surgeon has a separate operating theatre, which is used also by the assistant surgeon corresponding with him.

The London Hospital affords a good example of this system, and the accompanying plan indicates how six operating theatres are placed on one floor, with an anaesthetizing room for each operating theatre and one general sterilizing department.

ANAESTHETIZATION AND TRANSPORT OF PATIENTS.

In the large general hospitals of London the patients are anaesthetized for operation by one of the hospital anaesthetists, and this is carried out in a room adjoining the operating theatre. The patient is accompanied to the anaesthetic room by the Sister of his ward, and she remains with him until his return to the ward. At all the hospitals great care is taken that the patient is well protected against chill before leaving the operating theatre, hot water bottles and blankets being provided for the purpose. At Charing Cross a special cradle is placed over the stretcher, and by means of hot-water bottles the patient breathes warm air till he returns to his bed. In order to avoid any possible chance of the transit of the patient being delayed in the corridor, care is taken that he is not taken from the theatre until the lift is open and ready. At Westminster Hospital there is an ingenious arrangement close to the operating theatre by means of which the blankets for the patient are warmed. At St. Bartholomew's Hospital the patient after operation may be transported across the quadrangle, so in addition to blankets and hot-water bottles there is a supply of waterproofs handy. There is no evidence that any harm has occurred to patients in consequence of this transportation across the quadrangle, but this method of conveying the patient back to his ward will not be required when the new buildings at St. Bartholomew's are finished, as the operating theatres will then be in proximity to the wards.

STERILIZATION.

The sterilization of instruments and apparatus, speaking generally, is in the large general hospitals in London entrusted to a theatre Sister who is responsible for the equipment and cleanliness of the theatre and the sterilizing room adjoining in which the process of sterilization is carried on. At the Middlesex Hospital a certain amount of sterilization is carried on in the theatre itself, but this is due to want of space and not by reason of choice. At St. Mary's Hospital the sterilization is carried out in an apartment in the basement under the care of an official known as the "Surgery Bedell." At the London Hospital the instruments for each operating theatre are sterilized by a theatre attendant, who must be a qualified chemist, and is in charge of the operating theatre. The instruments are sterilized in the theatre itself, but there is a well-equipped sterilizing department on the same floor as the theatres, which is in charge of a special officer, who is under the direction of the superintendent of the theatre department, who also has control of the male attendants in charge of the theatres. In each theatre a book is kept in which every operation is entered, the time it occurs, and the name of every one taking part in it; full details are also recorded of the material used at the operation. In the event of suppuration occurring a court of inquiry is held, and by means of this organization all concerned are able to offer the fullest explanations. The bacteriologist of the hospital tests at irregular intervals the materials used at these operations.

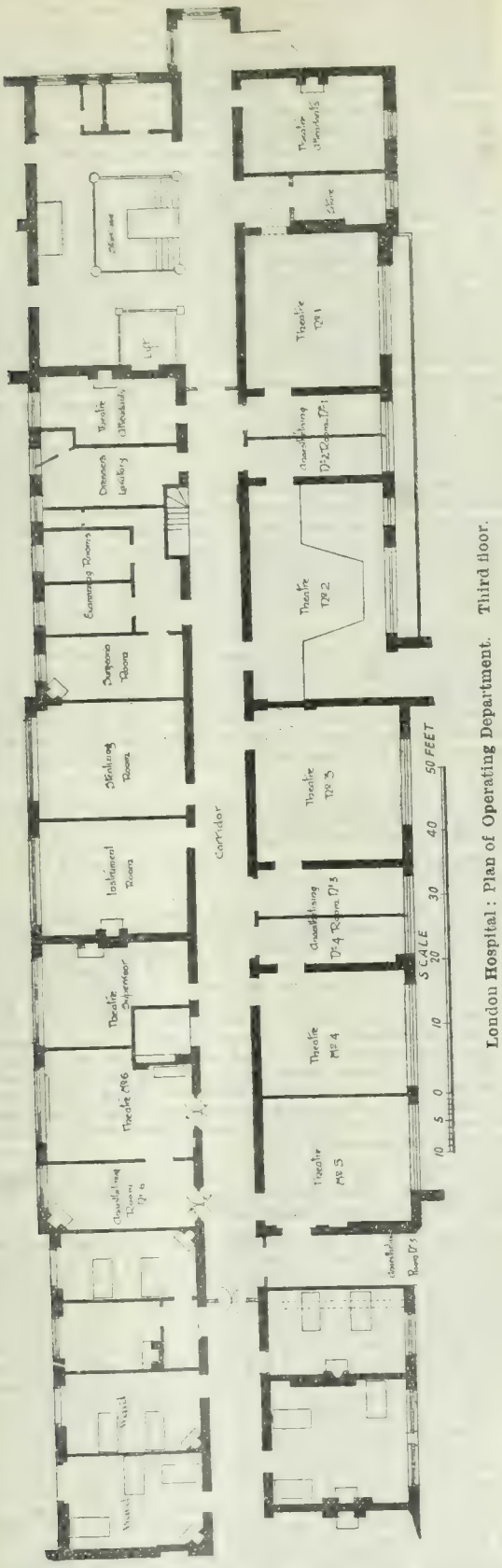
SPECTATORS.

The admission of spectators to operations in the large London hospitals is at present under the consideration of some of the hospital authorities, and the question whether spectators should not wear overalls and special foot-gear is being discussed. At Charing Cross spectators are admitted to a gallery of marble, and between them and the operating table there is a glass screen fixed. At University College Hospital spectators are railed off, and there is a thick linen shield rising to the height of the rail. At St. Bartholomew's Hospital spectators are placed on side stands, and the advisability of screening them off from the operator is now occupying attention. At St. George's visitors are accommodated with raised platforms provided with steps. At St. Mary's Hospital there is a specially raised dais for spectators, and at the London Hospital movable platforms are in use. At Guy's Hospital the custom in some of the operating theatres is to require visitors to wear overalls and caps, and this precaution is also observed at the London Hospital.

The use of sterilized overalls is demanded in all the London hospitals in the case of those assisting at an operation, and at some hospitals any one on the floor of the theatre must wear an overall.

Gloves for operations are worn in all the London operating theatres in septic cases. At Westminster, University College, and St. Bartholomew's the teaching is that it is possible to cleanse the skin of those who operate thoroughly enough to safeguard the patient in aseptic cases. At University College one of the leading surgeons requires dressings in the ward and in the out-patient department to be done with gloves so as to preserve the skin of those assisting him from any chance of infection and in that manner he insures, as far as possible, surgically clean hands for his work in the operating theatre. At St. Bartholomew's it is not unusual in an aseptic case to see the surgeon without gloves while those assisting him wear gloves. At St George's Hospital the use of gloves is general for all connected with an operation. At Middlesex Hospital gloves are worn by some of the surgeons systematically, others wear them occasionally, and, speaking generally, every one assisting wears gloves. At St Mary's Hospital gloves are used for septic cases but not at all

operations. At Guy's gloves are used for operations and are also worn by Sisters and nurses present in the theatre. At the London Hospital gloves are worn, and a special



London Hospital: Plan of Operating Department. Third floor.

point is made of having an indiarubber band fastening the gloves at the wrist.

The custom of wearing caps has become very common in the operating theatres of the London hospitals. At Charing Cross dressers are required to wear caps, and there are special hoods for the hair for use by the Sisters and nurses. At St. Bartholomew's, when a cap is worn by one of the surgeons it is in the shape of a turban. At St. George's the surgeons sometimes wear caps, and the Sisters have coverings for the hair. At Guy's Hospital the use of caps is very general, in some theatres the spectators being required to wear them. At the London Hospital the only people in the operating theatre not wearing caps designed to cover the hair are the visitors, the Sisters, and the nurses.

The plan of employing mouth-guards is not followed in all the operating theatres in London. At Charing Cross we understand that mouth-guards are not compulsory, unless the individual concerned has a cold or cough, when the mouth-guard used covers the nostrils as well as the mouth. At St. George's Hospital mouth-guards are sometimes worn, and they are used by some surgeons at Middlesex. This is also true of St. Mary's Hospital, and the same applies to the London Hospital, where the type of guard used covers the mouth and nostrils, and is fastened to the cap behind; the guards are made of gauze and it is considered at the London that when mouth-guards are necessary it is unsafe to leave the nostrils without protection. At Guy's Hospital, in certain cases, mouth-guards are worn by those present at operations, and here the mouth-guard employed leaves the nostrils free.

The method of covering the arm with sterilized special sleeves cannot be said to be usual at operations in the London hospitals. At Guy's Hospital they are worn in special cases, and their use is particularly required by all concerned in any important operative treatment of fractures.

Special foot gear for those engaged at operations may be said to be gaining favour in London. At Charing Cross Hospital those on the floor of the theatre wear what are called "rubbers"; these are a kind of golosh covering the heels and the soles, and are made of black rubber. At University College Hospital rubber boots are used. At Guy's Hospital foot-gear at present is not insisted upon, but the advisability of this practice is being considered by the responsible authorities at that institution. At the London Hospital rubber boots are worn, and some of the boots in use reach up to the knees. The boots are made of black rubber, and are disinfected with carbolic. At St. Bartholomew's Hospital some of the foot-gear used is made of brown holland and sterilized. The idea seems to be that rubber boots are not comfortable, and are not so easy to keep clean as brown holland. It may be said that these sterilized foot-coverings of brown holland are sometimes worn by the Sisters and nurses at St. Bartholomew's.

Sanatorium for Children threatened with Consumption.—A meeting was held at the Mansion House on February 19th in aid of a proposal to establish a sanatorium for children in connexion with the Children's Home and Orphanage, Bonner Road. The Lord Mayor presided, and was supported by the Lady Mayoress, Alderman and Sheriff Burnett, Sheriff Wakefield, Sir Douglas Powell, Sir Thomas Barlow, and others. Dr. Gregory, principal of the institution, explained that the proposed institution was not a sanatorium for consumptive children, but a home for delicate children belonging to their own community. About 25 per cent. of the boys and girls who came to their orphanage had tuberculous inheritance. The sum of 10,000 guineas was needed, towards which 4,400 guineas had been promised. Sir R. Douglas Powell urged the claim of the institution to generous support. It had for forty years been doing good work, and had now charge of 2,000 children. In these days of diminishing birth-rate it was more than ever necessary to be careful of the children who were born, and the proposed sanatorium was one of the means by which the children who started life's race heavily handicapped might be made fit to take their place in the struggle with some hope of success. Sir Thomas Barlow pointed out the differences between tuberculosis in children as compared with its effects in adults. Care at the outset might eradicate the tuberculosis and save the children from subsequent deformity. Similar institutions to that proposed had accomplished much in Germany, and such open-air homes were much wanted in this country. The proposed sanatorium would, he believed, transform poor delicate children into healthy men and women. A collection for the fund was made at the close of the meeting.

THE EVOLUTION OF THE HOSPITAL.

The evolution of the hospital is a large subject, of which only the merest outline can be given here. The origin of hospitals as places of treatment for the sick poor is obscure. "Hospitals" are frequently mentioned by old writers, but it is by no means always easy to determine whether in a given case these institutions were poor-houses, places of rest for pilgrims, asylums for the aged, or refuges for the sick. It has often been said that hospitals did not exist before the Christian era. In his classic work, *English Sanitary Institutions*, Sir John Simon says (p. 47):

"In various great centres of population Christian philanthropy soon showed itself in the establishment of standing asylums and houses of hospitality of different sorts for persons, old and young, who might need them: *hospices* (in the narrow sense of the term) as places of refuge for strangers and outcasts, almshouses for the helpless poor, homes for orphans and foundlings, and reformatories for women who had gone wrong; and, not least among such establishments, hospitals for the sick and wounded, hitherto not precedented in the world, except to some extent in Buddhist India, and in extremely small degree in pre-Christian Greece and Rome, began to appear as Christian institutions. Thus, about the year 370 there was founded at Caesarea by its then bishop, Basil, an immense institution of miscellaneous charity, including a hospital for the sick; and some thirty years later, at Constantinople, a hospital was one of the many beneficences which the poor of the city owed to the brief and stormy archiepiscopate of Chrysostom. In minor communities endeavours of the same sort, though of course on a smaller scale, seem to have been general."

Elsewhere (page 63) the same writer says: "As in that, so in various other respects, the debt of modern times to the mediaeval Religious Orders is far more than a mere sentiment of sympathy with the populations which received good at their hands. To say nothing of the obligations which scholars of all sorts acknowledge to the Benedictine and Mendicant Orders in respect of the stores of learning which they transmitted and increased, or of new lights of knowledge and wisdom which came from them—to say nothing of those presages of scientific spirit which dawned among them, as, for instance, in the mind of Roger Bacon, there are senses, purely medical, in which the philanthropy of the Middle Ages has been a continuing good to mankind. The hospital system of modern Europe is raised upon that mediaeval foundation. A large proportion of the noblest hospitals in Europe, giving help year after year to annual millions of the poor, exist by uninterrupted descent from monastic charities; two signal instances in our own metropolis are St. Thomas's Hospital, which is the continuation of a monastic charity of the thirteenth century, and St. Bartholomew's Hospital, which is of even earlier monastic origin; and the cases which have not been of direct descent have been cases of obedience to example. Not least, too, in the medical profession, which counts technical skill to be only half of its fitting equipment, and which purports to owe heart, as well as brain and hand, to the service of even the least of mankind, we may reverently feel that, in those humane aspects, we inherit true light and leading from the ages which in science were darker than our own, and that Francis of Assisi, considered in his relation to the suffering poor, is almost one of the Fathers of Medicine."

Prechristian Sick Asylums.

There can be no doubt, however, that long before the Christian era there were hospitals in Mexico and in India, and also that there were temples which were shrines, but at the same time places for the reception and treatment of the sick in Greece and Rome. Prescott, in his *History of the Conquest of Mexico*,[1] says (p. 23) that hospitals were established in the principal cities of that country for the cure of the sick and the permanent refuge of the disabled soldier. These hospitals had attached to them surgeons "who were so far better than those in Europe," says a malicious old chronicler, "that they did not protract the cure in order to increase the pay." Again Prescott says (p. 147) that the Emperor Montezuma established a hospital or retreat for invalid soldiers in the city of Colhuacan.

In India in the third century B.C. edicts of Asoka, the great Buddhist Emperor of Hindustan, were carved on rocks and pillars throughout his kingdom. Some of these, says Dr. Thomas A. Wise in his *Review of the History of Medicine*,[2] "relate to the establishment of a system of medical administration throughout the dominions of the supreme sovereign of India, and they included man and beast. . . . The sick and wounded were to be particularly attended to by the erection of medical houses or hospitals and dépôts of medicine for the sick of man and animals." According to Dr. Wise, these are the first hospitals on record. They were provided with all sorts of instruments and medicines, and skilful physicians were appointed to treat the inmates at the expense of the State. To South Behara, we are told, people repaired from all the provinces. Each place had a medicine house, more particularly in the South of India. Dr. Wise says (p. 392) that physicians instructed in ancient Hindu medicine examined and treated the complaints of patients, and suitable medicines were administered to them. "Nothing was omitted that could contribute to soothe and gratify them and to cure their diseases. At the same time the utmost liberty was given them, so that they could leave the hospital whenever they desired Buddha Das . . . built asylums for the crippled, the deformed, and the destitute. His son, Upatisso, built hospitals for cripples, for pregnant women, and for the blind and diseased, and Dhatusema built hospitals for cripples and for the sick." According to the same authority (p. 394), the ancient Buddhist hospitals were probably commenced even before the time of Asoka, and were most probably the original form of these establishments enforced by a strong religious sentiment which was extended to the preservation of animal life in all its forms. Withington[3] states that Buddhist pilgrims from China in the fifth and seventh centuries speak of houses of mercy for the sick which they found in various parts of India. It is related in the Maharansa, or Cingalese chronicle, that when King Duttha Gamani was on his deathbed, B.C. 161, he ordered the record of his deeds to be read to him, in which it was said:

> I have daily maintained at eighteen different places hospitals provided with suitable diet, and medicines prepared by medical practitioners for the infirm.

Coming to a later period it is recorded of King Buddhadusa (A.D. 341) that:

> Out of benevolence entertained towards the inhabitants of the island, the sovereign provided hospitals, and appointed medical practitioners thereto for all villages. Having composed a work containing the substance of all medical science, he circulated it among the physicians of the island for their future guidance. He ordained that there should be a physician for every ten villages. He set aside twenty royal villages for the maintenance of these physicians, and appointed medical practitioners to attend on elephants, on horses, and on the army. On the main roads he built asylums in various parts for the reception of the lame and blind. This man of great compassion was wont to carry his case of surgical instruments in the folds of his loin cloth, and to afford relief to every afflicted person he met.

Withington says the most important of the Cingalese hospitals was that founded by Parakkama the Great (1164–1189), of whom it is related:

> And this ruler of men built, further, a large hall that could contain many hundreds of sick persons, and provided it with all things needful, as stated underneath. To every sick person he allowed a male and female servant, that they might minister to him by day and night, and furnish him with the physic that was necessary and with divers kinds of food. And many storehouses also did he build therein, filled with grain and with all things useful for medicine. And he also made provision for the maintenance of wise and learned physicians, who were versed in all knowledge and skilled in searching out the hidden nature of diseases. And it was his custom, on the four Uposatha days of every month, to visit that hall together with his ministers. And being endued with a heart full of kindness he would look at the sick with an eye of pity, and being eminent in wisdom and skilled in the art of healing, he would call before him the physicians that were employed there, and inquire fully of the manner of their treatment. And if so be that the treatment they pursued was wrong, the king, who was the best of teachers, would point out wherein they had erred, and would make clear to them the course they should have pursued according to science, and to some sick persons he would give physic with his own hands. Likewise also he

[1] Edited by John Foster Kirk. Published by Swan, Sonnenschein, and Co., London, 1843.

[2] London, 1867.

[3] *Medical History from the Earliest Times.*

would inquire of the health of those that were sick, and to such as were cured he would order raiment to be given. Thus did this merciful king, free from disease himself, cure the sick of their divers disorders from year to year. But there yet remains another marvel to relate, the like of which had neither been seen or heard of before. A certain raven that was afflicted with a canker on his face, and was in great pain, entered the king's hospital, and, as if bound by the spell of the king's great love for suffering creatures, quitted it not, but remained there as if its wings were broken, cawing very piteously. Thereupon the physicians, when they found out what his disease was, took him in by the king's command and treated him, and after he was healed the king caused him to be carried round the city on the back of an elephant, and then set him free. Verily kindness such as this, even when shown unto beasts, is exceeding great. Who hath seen such a thing, and where or when hath it been heard of before!

The origin of the Greek hospitals is well described by Dyer in his *Study of the Gods in Greece at Certain Sanctuaries Recently Excavated*[4] At page 229 he says:

The chief inheritors of the almost scientific and wholly unmiraculous surgery and surgical skill of the Homeric age were professional doctors. . . . These men, often in the employ of the State, made possible and kept in successful operation large public establishments which really deserved the name of hospitals. This must be insisted upon, because there is a growing danger of calling by the name of hospitals institutions which, in spite of certain resemblances to hospitals, have a very different character—the Temple of Aesculapius. A severance, gradually indeed, but very early, took place between secular and Aesculapian healing. It is not easy to recognize this fact, because anciently there never was in any field, least of all in the field of medicine, the modern antagonism between science and religion. . . . In spite of the severance above mentioned, the doctors kept in touch with the worship of Aesculapius, and the priests in his temples did not scorn such secular knowledge as they could gain from lay practitioners.

Again, he says (p. 234 et seq.):

From the less positive and more superstitious aspect of medicine as known in early legends, Homeric and others, nothing perhaps would have come without the help of the Thessalian deification of Aesculapius. When the Thessalian cult of the god of healing came into contact with the conceptions of medicine embodied in the *Iliad*, it apparently exercised little or no influence upon the positive, but absorbed into itself the vague and the miraculous. All the wondering terror with which Chiron's skill, Circe's sorcery, and Medea's knowledge of simples had been regarded was soon garnered into the treasure houses of Aesculapius. His temples became centres of miracles as well as places for the practical study of medicine. Of course there was this latter side to the worship of Aesculapius, or else Hippocrates would not have spoken as he did, and in later days Galen would not have had such close commerce with the priests of Aesculapius. Indeed, superstitious as the worship of Aesculapius was, the most irrefutable proof that it was neither wholly nor intolerably so is the more than toleration of it by the most admirable of Greek and Roman medicine.

Mr. Dyer goes on to say:

"The priests of Aesculapius . . . supplemented the notion that an unsound mind can be cured through the body by another to which they attached every importance—that is, that the sound mind can and should completely control the sound body. The prescriptions of Aesculapius were sometimes given to the purified and expectant sufferer in dreams Often Aesculapius himself appeared in a dream and touched the sick; sometimes a messenger came, a voice, as it were, through the gateways of sleep, would tell what herb or what treatment was necessary. Sometimes healing came from the nocturnal touch of serpents or of dogs sent by the god to his suppliants" Those sufferers who wished to dream an inspired dream had to be in a condition of passivity, "such as doctors sometimes impose upon those who suffer from nervous prostration. Not in a moment of excitement, but during the calm hours of unstirred sleep came these divine dreams. . . . The patient had to conform to the law of purification prescribed in the temple, and then to lie down within the temple itself or a porch near by, and within the precinct This process of lying down in the temple for the purpose of dreaming gets itself called by a Latin name which means literally, sleeping in, and we hear much of the practice of Incubation in the ancient temples of Aesculapius. Men of pious minds resorted to it in order to hatch out dreams whereby knowledge of needful remedies came to them. Surgery, of all things, ought to have been the exclusive province of the secular practitioners, and yet inscriptions found at Epidaurus within the precinct of Aesculapius show that operations were sometimes performed by the servants of the god, and under his inspiration, though, to be sure, the particular cases there described would appear to have been most unsurgically dealt with. Certain features characterized any and every precinct of Aesculapius in the days when his worship was finally organized. First a small temple for the god himself to dwell in was required. . . . In this modest building was the statue of the god, and there were hung or disposed in some satisfactory way the smaller and more valuable votive offerings made to him by grateful convalescents. The one thing needful was room for long and commodious porches with the right exposure. In these the wards of Aesculapius were housed There and in the temple too they slept, awaiting visits of healing from the inspired dreams. This feature is more clearly made out in the precinct at Epidaurus than in the Athenian sanctuary, though both of them certainly were amply provided with such accommodation for patients. . . . Both at Athens and at Epidaurus the god could, for the purpose of visitation by night, emerge from his temple and immediately find his expectant suppliants sleeping in the porch close by. The Rotunda or Tholos of the younger Polycletus had a downward exit in the middle of its tessellated floor. Here was a labyrinth, the windings of which are still traceable. Some think that the harmless snakes sacred to Aesculapius had quarters here, and issued thence to play their part in healing visions. But this is pure conjecture, as is also the suggestion that the Tholos was built around a well or a spring whose healing waters have wholly disappeared. The suppliants had to have faith, and such faith as would make them pure. To be healed by the god it was needful to be pleasing in his eyes, otherwise he failed to appear. Here was a religious idea capable of many abuses, but useful and right for controlling the self-indulgent who stood between themselves and health. An especial oracle from the god could not intervene at every meal prescribing each disobedient patient's meat and drink. For this duty as well as for an example some one especially accredited by the favour of the god and qualified by the rigour of his own life was needed. Such a divinely chosen guide for the weak and erring was young Appollonius of Tyana, during his monastic seclusion in the temple of Aesculapius at Aegae."

It has been computed that there were at one time more than eighty temples of Aesculapius in Greece. Several States and cities had more than one. Epidaurus, the birthplace of Aesculapius, was the most famous of them. Their site was chosen for the purity of the air. Outside the precincts was a house for the dying and one for lying-in women, for the acts both of entrance into life and departure from it were held to pollute the temple. An interesting description of a visit to one of these temples by an invalid in search of health will be found in Walter Pater's *Marius the Epicurean*.

So great was the fame of Epidaurus, that after the great plague in Rome in B.C. 292 ambassadors were sent thither to bring the statue of Aesculapius to Rome. As Augustus J. C. Hare[5] tells the story, "as their vessel sailed up the Tiber, a serpent, which had lain concealed during the voyage, glided from it, and landed among the reeds on this spot—an omen hailed by the people under the belief that Aesculapius himself had thus selected it. In consequence of this story the form of a ship was given to this end of the island, and its poop may still be seen below the end of the convent garden, with the bust of Aesculapius sculptured in travertine upon it in high relief. The ship did not appear (except in flood) to be floating in the water, but was raised on a platform above it. The remains which exist are not of sufficient size to bear out the assertion often made that the whole island was enclosed in the travertine form of a ship, of which the north-western end formed the prow and the small obelisk the mast"

The island was fashioned into the shape of a ship (Fig. 1); later an obelisk was erected by way of a mast. Looking at it from the Ponte Rotto the shape is readily discerned. From that side is seen sculptured on the wall which represents the ship of Aesculapius an image of the god with a snake twisted around his staff. The statue of Aesculapius, found in the Farnese Gardens, is considered to be the one that stood on the island in the Tiber. Ampère says that one day when he was visiting the place, the sacristan of St. Bartholomew's Church referred in conversation to the time of Aesculapius, when Jupiter reigned, a phrase which shows how strong a hold the tradition kept on the minds of the Romans.

EARLY CHRISTIAN HOSPITALS.

Although the sick were doubtless visited by charitable persons at their dwellings, and there seems to have been a kind of dispensary system in the later days of the Republic and the early days of the Roman Empire, it is not till the fourth century that we hear of the foundation of hospitals intended for the reception of the sick.

About 330 A.D the Emperor Constantine built the first hospital at Byzantium for the relief of patients of both sexes and all ages. These were cared for in separate

[4] London, 1891.

[5] *Walks in Rome*, vol. ii, pp. 259-260.

establishments. In 350 the Hospital of St. John of Jerusalem was built at the expense of Emperor Justinian. In 357 the Emperor Gallus assigned the famous groves of Daphne, near Antioch, which were sacred to Apollo, for the purposes of a Christian hospital. The Emperor Valens made a noble gift of land in the neighbourhood of Caesarea to Saint Basil for the benefit of the sick poor. There a huge institution was erected, which St. Gregory Nazianzen thought worthy to be reckoned among the wonders of the world. Thirty years after St. Basil's foundation another hospital was established at Constantinople by St. John Chrysostom. At the head of it were two priests, under whom were doctors, with assistants and servants of various degrees. The first hospitals in Rome were founded by Paula and Fabiola. The use of the Greek word *nosocomium* seems to show that there was no institution of the kind in Latin countries till a considerable time after hospitals had been in existence in Constantinople and elsewhere in the East. It must be remembered, however, that there was in the Roman Empire, as in some parts of Greece, a regularly-organized public medical service. We find the duties of the doctors laid down in the Edicts of Justinian. There were *Xenodochia* for strangers; *Brephotrophia* for foundlings; *Ptochotrophia* for the poor. What most directly concerns us, there were *nosocomia* for the sick. These were all under the management of the clergy. But there were lay assistants styled *parobolani*, who in time became so numerous and troublesome that they were disbanded. The clergy in charge of hospitals necessarily gained some rudimentary knowledge of the principles of the healing art. In this way they came into competition with the regular physicians. Many of the higher clergy became distinguished in medicine. One of the earliest, Nemesius, Bishop of Emesa, was a contemporary and friend of Basil and Gregory Nazianzen. He was the author of a book, *De Natura Hominis*, which was long popular in the medical schools. Many ecclesiastical dignitaries of the Middle Ages were physicians as well as priests.

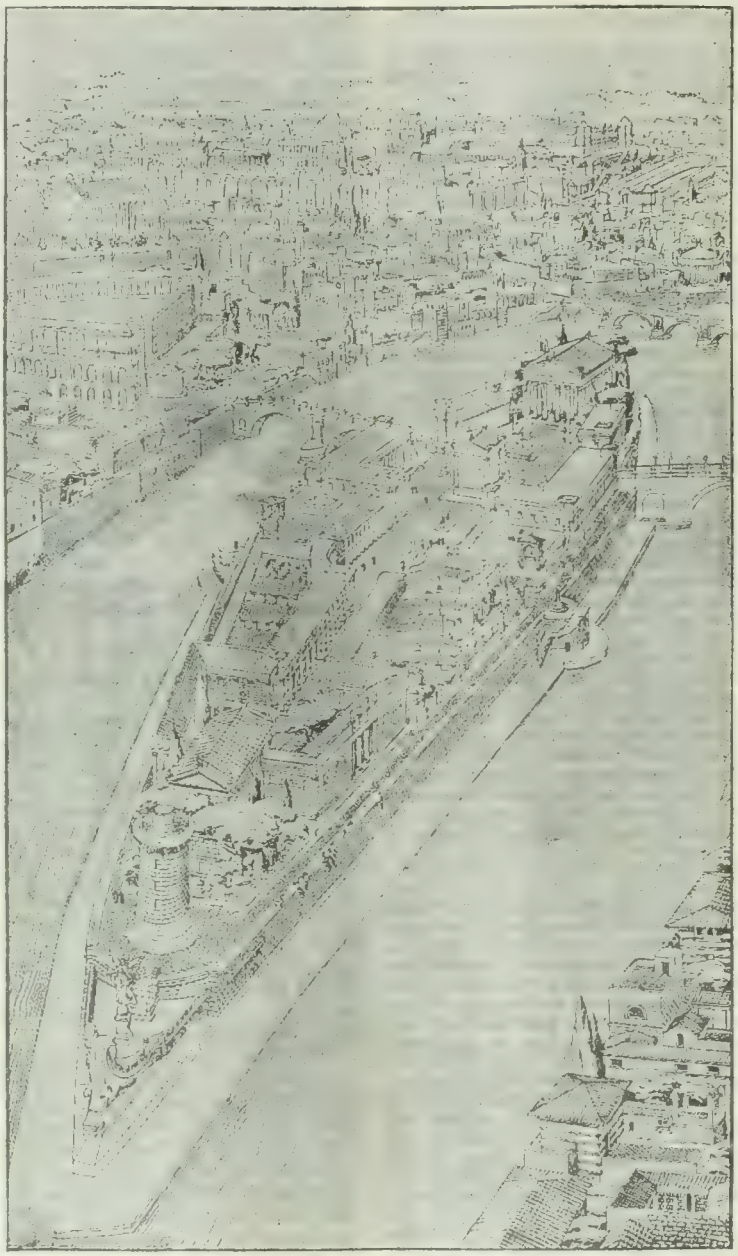


Fig. 1.—Temple of Aesculapius on the Insula Tiberina. As reconstructed by M. René Patouillard (*La Musée*, Juillet-Aout, 1904).

MOSLEM HOSPITALS.

While hospitals were being founded throughout the Christian world, similar institutions were established by the Arabs. The first was founded in 707 by Caliph Welid. Another was established in 840. In 918, according to Withington,[6] from whom the information here given on this subject is derived, one was established at Bagdad. It had an endowment equal to £300 a month, and Sinan was head physician, but he got no pay, and himself subscribed £100 towards another hospital founded in the same year by the Caliph Moktadir. In 925 Vizier Chakan built another hospital in the same city, and in 977 the Emir Adad-Adaula inaugurated the largest of Bagdad hospitals, which had a staff of twenty-four medical officers, among whom were Tsabet ben Sinan and a member of the family of Bachtishua. All these were probably on the model of the Nestorian hospital at Gondisapor, which had existed since the fifth century, and is last heard of about the year 869, when its superintendent, Sabur ben Sahel, published the first known *Pharmacopoeia*, which was adopted throughout the Eastern Caliphate. When the Jewish tourist, Benjamin of Tudela, visited Bagdad about 1160, he found there sixty medical institutions, "all well provided from the king's stores with spices and other necessaries, and every patient who claims assistance is fed at the king's expense until his cure is completed."

But the most famous and interesting of Moslem hospitals were those of Damascus and Cairo. About the year 1160 the Emir Mureddin, the Light and Defender of the Faith, having reconquered Edessa and driven back the crusading hosts of Louis VII and Conrad III, founded as an appropriate thank-offering to the god of battles a great hospital at Damascus. The hospital was conducted with lavish liberality nearly three centuries later. Ahmed ben Toulun, the first independent ruler of Egypt, founded, we are told, a hospital there in 874, at a cost of about £30,000. It comprised a department for insane patients.

The greatest of Moslem institutions for the sick was the Mansuri hospital at Cairo. Al-Malek al-Mansur Gilavan before he became Sultan was campaigning in Syria against the Greeks, 1276, when he was seized with an attack of colic. Being relieved by medicines from the hospital founded by the "Defender of the Faith" at Damascus, he vowed that he would one day build a yet nobler institution. Soon after he ascended the throne this vow was fulfilled. The hospital was completed in May, 1284. It was endowed with an income of about £25,000, and contained four great courts, each with a fountain in the centre, wards for each separate disease, a lecture room, and a department for attending patients at their own

[6] Op. cit.

homes. Musicians and story-tellers were provided for the amusement and benefit of those troubled with sleeplessness, and the convalescent patient received at his departure five pieces of gold—about fifty shillings—that he might not be obliged to return to work immediately. It is said that at one time there were as many as fifty hospitals at Cordova, but this is probably an exaggeration.

HOSPITALS IN MEDIAEVAL CHRISTENDOM.

In the Middle Ages monks seem to have founded the earliest hospitals. The good work found an ardent supporter in the famous scholar Alcuin, who influenced Charlemagne in its promotion. Bishops were encouraged to found hospitals in their dioceses, always in close proximity to the cathedrals. All the hospitals were under the jurisdiction of ecclesiastics. In 1312 the Council of Vienne forbade that the charge of a hospital, unless it was expressly so ordered in the original foundation, should be conferred *titulo beneficii* on any secular clerk. It directed that they should be under the management of men of good character, who should make periodical reports to the ordinaries or their delegates. This may be taken to mark the beginning of the lay administration of hospitals.

As the hospitals of the Middle Ages were largely religious foundations, the provision for the spiritual wants of the patients was often perhaps more complete than that for the body. But as Miss Speakman[7] says: "The mediaeval man was not so contemptuous of the body as is sometimes believed, and genuine if rough attempts at merely corporal comfort were made." A regular medical and surgical service did not as a rule exist in hospitals before the sixteenth century. But the statutes are full of provisions as to beds and bedclothes, which were to be of the most suitable size for the comfort of the patient. It was particularly emphasized that the coverings had to be clean. It is to be feared from subsequent records that this excellent provision was disregarded.



Fig. 2.—A ward in the Hôtel-Dieu, Paris, in the sixteenth century.
(*From Nicaise's "Pierre Franco."*)

As a type of the mediaeval hospital we may take the Hôtel-Dieu of Paris, which is said to have been founded by St. Landry, Bishop of Paris, about 660, and was enlarged in the thirteenth century by St. Louis. The attendance on the patients was rendered by men and women vowed to a religious life, and it was under the management of the Chapter of Notre Dame.

In 1327, by decree of Charles IV, two surgeons were appointed to visit the sick in the hospital daily; they were paid twelve *deniers parisis* for their services At certain times they had to see the poor who could not be admitted to the hospital. A midwife was attached to the staff in 1378. We hear of a physician-in-chief and a surgeon in 1428. In addition to these there were *garçons chirurgiens* or *compaynons*, who lived in the hospital and performed the duties of house-surgeons. Ambroise Paré served in this capacity for three or four years. Mr. Stephen Paget tells us that Paré[8] "had the charge of patients, the privilege of making dissections and *post-mortem* examinations, the chance of teaching the students. In one winter he operated on four cases of loss of the nose from frostbite; he saw the terrors of the plague, the whole practice, out-patient and in-patient, of the hospital. He loved the work and looked back on it with pride." Paré's departure from the Hôtel-Dieu was followed "by a regular riot of the students within its walls; as though he had done good work under a bad set of rules."

Of the comfort of the patients we may judge from the fact that one bed was generally occupied by several patients (Fig. 2). It is only fair to say, however, that this state of things was common in the Middle Ages among university students and other persons who lived under the same roof.

As time went on, however, increasing complaint was made of overcrowding. In 1690 we hear of five or six adults, or nine or ten children, lying in a single bed, "which causes the death of many." In 1776 it is stated that there were about 1,000 beds in the hospital placed so close together as to make attendance on the patients difficult, whilst the air was so foul that many walked about barefoot to freshen themselves. In 1778 representations were made that dead bodies were sometimes left in the wards for one or more days in the winter. Baths were introduced for the first time in 1779. In 1786 the well-known surgeon Petit urged the necessity of rebuilding the hospital outside Paris; then, he said, "one would no longer see six unhappy patients heaped in a bed annoying and frightening each other, infecting each other, one throwing himself about and shrieking when the others have need of repose. One would no longer see a dying patient confess himself beside five others who hear every word he says; another receive the last Sacrament on a mattress where a patient in the agony of death voids his excrements with his last breath, or a patient who cannot retain the effect of a purgative or an emetic; or the same bed where there is a madman who in his frenzy forms a deplorable contrast with the priest who recites the prayers for the dead." The change, it is said, was strongly resisted by the Sisters who acted as nurses in the hospital, and they had their way.

In another memoir it is said that such was the unhealthiness of the site of the hospital that wounds healed with difficulty at the Hôtel-Dieu, that the least dangerous became mortal, that the operation of trephining was so constantly fatal, that when ordered it was regarded as a sentence of death.

This is confirmed by John Bell,[9] who says that in the Hôtel-Dieu hospital gangrene raged without intermission for two hundred years, "till of late under the new Government of France the hospital has been reformed." He cites an ancient French author as saying that a young surgeon who is bred in the Hôtel-Dieu may learn the various forms of incisions, operations, and the manner of dressing wounds; "but the way of curing wounds he cannot learn. Every patient he takes in hand (do what he will) must die of gangrene."

Another old Paris hospital was the Charité, founded by Marie de Medicis in 1613. It was served by the Brothers

[7] Mediaeval Hospitals. *Dublin Review*, October, 1903.
[8] *Ambroise Paré and His Times.*
[9] *Principles of Surgery*, 1801, vol. ii, p. 108.

of Charity or Brothers of St. John of God, who would appear to have done the medical as well as the administrative work. For in 1724 they were expressly forbidden to exercise the art of surgery or to have any operation performed in their hospital. In 1760, however, the King issued an order allowing the Brothers to operate as formerly, but only in case of necessity. But it appears that the Brothers had never obeyed the rule against operating. In 1760 the hospital had 200 beds; each patient had a bed to himself, and the wards were large and spacious. The mortality was lower than that at other hospitals.

In England the earliest distinct record of a hospital is connected with the name of Archbishop Lanfranc, who about 1070 built wooden tenements outside the west gate of Canterbury for the reception of persons suffering from the king's evil. The Priory and Hospital of St. Bartholomew's were founded by Prior Rahere in 1102. St. Thomas's Hospital by the Prior of Bermondsey in 1213, and the Priory and Hospital of Bedlam in 1247. These three institutions passed into the hands of King Henry VIII at the time of the Reformation, and from that date became lay institutions.

As a type of the mediaeval hospital in England we may take St. Bartholomew's. Dr. Norman Moore, in his Fitzpatrick lectures, recently published in book form under the title of *Medicine in the British Isles*, quotes the following passage from the Close Rolls of Edward III (March 5th, 1341), which shows that sick persons were treated in St. Bartholomew's Hospital at that time.

Ad omnes pauperes infirmos ad idem hospitale confluentes quousque de infirmitatibus suis convaluerint ac mulieres pregnantes quousque de puerperio surrexerint, necnon ad omnes pueros de eisdem mulieribus genitos usque septennium, si dicte mulieres infra hospitale predictum decesserint.

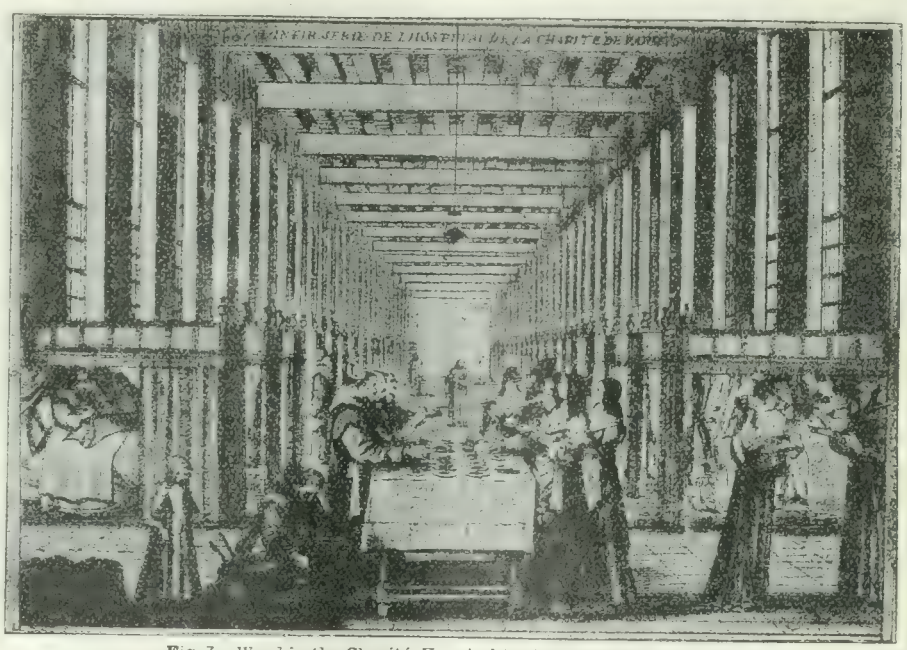


Fig. 3.—Ward in the Charité Hospital in the eighteenth century.
(*From "L'Aesculape," by de Lavarenne and Jayle.*)

The last part of this extract from the Close Rolls, says Dr. Moore, shows that in the Middle Ages the benefits of the revenues of a hospital were not always restricted to the sustenance and treatment of patients, but were sometimes extended to the support of orphans whose mothers had not survived their birth. This, he points out, was naturally done *caritatis intuitu*, as the old charters say, just as, equally at the prompting of charity, we add museums and other means of increasing knowledge, and so relieve not only the patients of the one hospital, but sick men all over the world, in ages to come as well as in the present time.

Dr. Moore thinks that John Mirfield, who was a physician and afterwards entered the convent of St. Bartholomew in the fourteenth century, knew something of the patients in the hospital; he says this seems certain from some passages in his works.

Of the state of things at the beginning of the new dispensation we get an idea from the rules made in the middle of the sixteenth century for the government of the royal hospitals in London. The first of these, entitled *The Ordre of S Bartholomewes in West Smythfield in London*, bears date 1552 and was issued by the Corporation of London. A somewhat later copy of rules is in the library of Professor Osler at Oxford, and bears the following title: *The Order of the Hospitalls of K Henry the VIII*th *and K Edward the VI*th*, viz., St. Bartholomew's, Christ's, Bridewell, St Thomas's*, by the Maior, Cominaltie, and Citizens of London, Governors of the Possessions, Revenues and Goods of the sayd Hospitalls, 1557.

The book contains "The Charges of the Officers of the House," that is to say the rules for the conduct of his business by each officer. The following is quoted from the clerk's charge:

Item. Yow shall kepe an *Yerely-booke* for *Collections*, *Legacies*, and *Benevolences*, *Boxe monye*, and all other Receipts and Payments for the yeare, beginnge alwaies . . . day of September and ending the . . . of the same Month the next yeare following. Which Booke shall serue as well to accompt with every Parishe seuerally; As also for the *Legacies* and other accompts before mentioned.

Item. You shall kepe XIII *Moneth-Books.* Every Booke shall contain all your receipts and Paiments receued and paid in euery Moneth; and they shall passe under these titles in Payments (that is to say) *Boord-Wages* paid weekely to the Matron, and Nurses; *Necessaries* for the Householde, *Pencioners* paid in this Howse, with euery of their names recited; and the seuerall Pencions, with a just Accompt what is euery weeke due to any of them: And also the like for children abrode at Nurse. Which Books are extant to be seene and daily had in use. And at euery Quarters end the *Fees* and *wages of Officers:* as be also entred into iiii of their Books, such as shalbe incident to the *Cause*, accordinge to the time of the yeare.

And the substance of all the said XIII Books, aswell Paiments as Receipts, yow shall beare ouer into the former *Collection booke* immediately upon. To the intent, that at thend of the yeare, the same booke maye containe aswell your Receipts and Paiments in all respects, as also the Thresorers. Wherein togethers shalbe the whole accompt of the Thresorer for the yeare perfectly set down. Which you shall engrosse and write faire into a Booke, entituled *The Thresorers Accompts.* And besides the same make for him a treue and just priuate *Coppie* thereof verbatim, which he shall haue under the Auditors hands, in his own tuition, for his discharge in that behalfe.

And you shall not faile to have the said iii Books (to wit) the yearly *Collection-book*, The *Thresorers accomple-booke* and the *Thresorers privat Coppie-booke* all made in a readines in convenient time, for the Audite; and, thereupon geue notice to the Thresorer, what tyme yow be redy; to th' intent that the Auditors may be warned to Audite the same; and that it be within the time limited.

A publication entitled *Orders and Ordinances for the better government of the Hospital of Bartholomew the less* (1580), by an anonymous pamphleteer, contains a good deal of interesting information about this hospital. In the preface the writer says that Henry VIII erected a hospital in West Smithfield for the sick of the City of London to the number of 100. He endowed it with a yearly income of 500 marks on the condition that the citizens of London should add another 500 marks a year. But this revenue was found to be quite inadequate to keep up the hospital, which therefore fell into great decay, some of the buildings being "rotten ruinous," and the whole establishment so poor

that it was found finally to contain only "so much of household implements and stuffe, towards the succouring of this hundred poor, as suffized 3 or 4 persons, yea, barely so much, if but necessary cleanliness were regarded, so farre had the godly meaning of the gracious king been abused in those days." This state of affairs, says the author, excited very little attention, but the Citizens of London "moved with the duty of their enterprise and godly regard" gave £1,000 over their yearly donation of 500 marks to restore the hospital. But when it was rebuilt and all ready to receive patients and keep them properly, "certain busie bodies more ready how to espy occasion how to blame others, than skilful how to redress things blameworthy indeed" raised such a storm of abuse against the hospital as actually got to the ears of the clergy, who "took upon them to give speed and authority to the thing, each after his manner."

During the five years which had elapsed since the rebuilding of the hospital and the writing of this pamphlet the writer says that "there have been healed of the Pocks, Fistulaes, filthy Blains and Sores, to the number of 800 . . . Besides eight score and twelve, that have there forsaken this life, in their intolerable miseries and griefes, which else might have dyed, and stunck in the eyes and noses of the city."

The hospital had 12 governors—4 of which were aldermen—appointed by the Lord Mayor. Among the officers of the hospital whose duty it was to look after the sick was the Hospitaler. Besides his spiritual duties towards the patients, this official had to keep an account of all provisions and hand them over to the cook, as much at a time as was required. He had to see, together with two doctors, every patient seeking admittance, and the doctors had to tell him if the patient's disease was curable or not; he had to keep a list of the patients who entered and were discharged; also every patient handed his money and belongings on his entrance to the Hospitaler, who took care of them during his residence, and returned them on his discharge with the following passport:

To all Mayors, Bailiffes, Constables, etc., Know ye that A. B. Taylour born in the town of S. T. in the County of Northampton, being cured of his disease in the Hospitall of St. Bartholomew's in West Smithfield in London, and from thence delivered the 13 day of August, in the Sixt year of the Reign, etc., hath charge by us A. B. C. the Governors of the same to repair within —— days next ensuing the date hereof, to his said place of nativity or to Westhandfield the place of his last abode, there to exhibite this present Passeport to the head officer or officers, in either of the places appointed, that they may take further order for his demeanour.

The nursing was done by "Sisters," at whose head was a Matron. Her duty was to receive the sick from the Hospitaler, and bestow them "in such convenient places within this house as you shall think fit"; to have entire charge of Sisters and patients, both moral and physical. Special regard was to be paid "to the good ordering and keeping of all the Sheets, Coverlets, Blankets, Beds, and other implements committed to your charge, that now do or hereafter shall appertain unto the poor." She is advised to make all complaints to "one or two of the Governours of this house, and to none other person, nor no further to meddle therein."

The Sisters were kept under strict discipline, being forbidden to associate with any one outside the hospital, unless with the Matron's leave; and they had, as far as possible, to "avoid and shun the conversation and company of all men." Their spare time was occupied in spinning; they were not allowed out of the women's ward after 7 in winter and 9 in summer at night, except with the Matron's leave, in case of death, or great illness. Besides the actual nursing, their duties in the wards comprised the making of the beds, keeping the wards clean and in order, and washing the patients' clothes.

There was also attached to the hospital "a Visitour of Newgate," who visited and administered spiritual consolation to the prisoners; he also had to make peace between them and those they had offended, but without taking bribes; and he also had to persuade the prisoners to tell him the names and whereabouts of such criminals as were still free.

The following tables show the salaries and household expenses:

Salaries.	£	s.	d.
Hospitaler	10	0	0
Three surgeons...	60	0	0
Matron's board, at 18d. per week	3	18	0
Matron's livery...	0	13	4
Twelve Sisters' board wages, at 16d. the week each	10	12	0
Sisters' liveries...	6	0	0
Cook, for meat, drink, and wages... ...	6	0	0
Porter	6	0	0

Household Expenses.			
For the dyets of 100 persons at 2d. per person each day	350	6	8
For sixty-eight loads of coal	54	8	0
For wood, yearly	24	0	0
For candles, yearly	5	0	0
For yeerly reparations of the Hospital and Tenements	40	0	0

Of the state of the hospital in the seventeenth century we learn a good deal from Mr. D'Arcy Power in his life of William Harvey,[19] who was appointed physician to the hospital in 1609. He quotes the following from the records of the hospital:

This day (15th of October, 1633) Dr. Harvey, physician to this hospital, presented to this court [of Governors] certain articles for the good and benefit of the poor of this house, which the governors have taken into their considerations, and do allow and order them to be put in practice. And all defaults in the not performance of any of the said articles to be corrected and amended by the Governors as they in their discretions shall think fit and convenient.

Forasmuch as the poor of this house are increased to a greater number than formerly have been, to the great charge of this hospital, and to the greater labour and more necessary attendance of a physician And being much more also than [it] is conceived one physician may conveniently perform.

And forasmuch as Dr. Harvey, the now physician to this hospital, is also chosen physician to his Majesty, and [is] thereby tied to daily service and attendance on his Majesty,

It hath been thought fit and so ordered, that there shall be for this present occasion two physicians for this hospital. And that Dr. Andrewes, physician in reversion, be now admitted to be also an immediate physician to this hospital. And to have the salary or yearly fee of £33 6s. 8d. for his pains henceforth during the pleasure of this court.

And this court, for the long service of the said Dr. Harvey to this hospital, and in consideration that he is physician to his Majesty, do give and allow him leave and liberty to dispose of himself and time, and to visit the poor no oftener than he in his discretion shall think fit.

And it is ordered that Mr Treasurer shall also pay unto the said Dr. Andrewes the sum of £20 for his pains taken in visiting and prescribing for the poor of this house for this year last past by the direction and at the request of the governors of this house.

Also at the suit of the apothecary (for the considerations abovesaid) it is thought fit and so granted, that £10 be yearly added to his salary from Michaelmas last past for and towards the maintenance of a journeyman to be daily present in the apothecary's shop in this hospital to help him in the dispatch of his business during the pleasure of this court.

Likewise, at the motion of Dr Harvey, it is granted that Mr. Treasurer shall pay unto Dr. Smith, who was the deputy of Dr. Harvey and by him appointed in his absence to visit the poor of this hospital, the sum of £10 in gratuity from this court, and he is thereupon intreated in respect the hospital hath now two physicians, that he do not henceforth trouble himself any more to visit or prescribe to the poor of this hospital.

On the same day (October 15th, 1633), Dr. Harvey, physician to this hospital, presented to this court certain orders or articles by him thought fit to be observed and put in practice, namely:—

1. That none be taken into the Hospital but such as be curable, or but a certain number of such as are incurable.

Allowed.

2 That those that shall be taken in for a certain time be discharged at that time by the Hospitaller, unless they obtain a longer time. And to be discharged at the end of that time also.

In use.

3. That all such are certified by the doctor incurable and scandalous or infectious shall be put out of the said house or be sent to an outhouse, and in case of sudden inconvenience this to be done by the Doctor or Apothecary.

Allowed.

4. That none be taken into any outhouse on the charge of this Hospital, but such as are sent from hence.

Allowed.

5. That no chirurgion, to save himself labour, take in or present any for the doctor; otherwise the charge of the Apothecary's shop will be so great, and the success so little, as it will be scandalous to the house.

Allowed.

[19] "Masters of Medicine" Series.

6. That none lurk here for relief only or for slight causes.
Allowed.
7. That if any refuse to take their physic, they may be discharged by the doctor or apothecary or punished by some order.
Allowed.
8 That the chirurgions, in all difficult cases or where inward physic may be necessary, shall consult with the Doctor, at the times he sitteth once in the week, and then the Master [that is, the surgeon] himself shall relate to the Doctor what he conceiveth the cure and what he hath done therein. And in a decent and orderly manner proceed by the Doctor's directions for the good of the poor and credit of the house.
Agreed unto
9 That no Chirurgion or his man do trepan the head, pierce the body, dismember [amputate] or do any great operation on the body of any but with the approbation and by the direction of the Doctor (when conveniently it may be had) and the Chirurgions shall think it needful to require.
Agreed unto.
10. That no Chirurgion or his man practice by giving inward physic to the poor without the approbation of the Doctor.
Agreed unto.
11. That no chirurgion be suffered to perform the cures in this house by his boy or servant without his own oversight or care
Allowed.
12. That every Chirurgion shall show and declare unto the Doctor whensoever he shall in the presence of the patient require him, what he findeth and what he useth to every external malady, that so the Doctor being informed may better with judgment order his prescriptions.
The Chirurgions protest against this
13. That every Chirurgion shall follow the direction of the Doctor in outward operations for inward causes for the recovery of every patient under their several cures, and to this end shall once in the week attend the Doctor, at the set hour he sitteth to give directions for the poor.
Agreed by the Chirurgions.
14 That the Apothecary, Matron and Sisters do attend the Doctor when he sitteth to give directions and prescriptions, that they may fully conceive his directions and what is to be done.
Allowed.
15. That the Matron and Sisters shall signify and complain to the Doctor, or Apothecary in the Doctor's absence, if any poor lurk in the house and come not before the Doctor when he sitteth or taketh not his physic, but cast it away and abuse it.
Allowed.
16. That the Apothecary keep secret and do not disclose what the Doctor prescribeth nor the prescriptions he useth, but to such as in the Doctor's absence may supply his place and that with the Doctor's approbation.
Allowed.

In the eighteenth century there was a great movement for the building of hospitals, no fewer than 12 having been founded in London between 1719 and 1747, 25 in the provinces and in Scotland between 1710 and 1797, and 11 in Ireland between 1726 and 1797.

During the last century the increase continued, 7 general and many special having been founded in London alone.

A description of the condition of a number of hospitals in various parts of Europe in the eighteenth century is given by John Howard, the famous philanthropist, in his *Account of the Principal Lazarettos in Europe* (1789). He gives a comparatively favourable report of the hospitals of Italy and Spain. Of the nursing in the Malta Hospital he speaks in terms of strong condemnation, calling the nurses "the most dirty, ragged, unfeeling, and inhuman persons" he ever saw. In the Greek hospitals at Constantinople he found the sick lying on the floors in a neglected condition. The Turkish hospitals were no better, and "the surgeon seemed to be either extremely stupid or intoxicated with opium." Our own hospitals were not much better. Howard describes the Hospital for Incurables at Dublin as "both outside and inside dirty." The rooms were offensive; there were no rules and no diet table. Of the infirmary at Maryborough for Queen's County, Ireland, he says, page 86 et seq.:

The floor of the room below was dirt, and the walls were black and filthy; it had in it three patients. In two of the rooms above there were thirteen beds and fifteen patients. In a room called the tower, two patients, and a little dirty hay on the floor on which they said the nurse lay. This room was very dirty, the ceiling covered with cobwebs, and in several places open to the sky. Here I saw one naked, pale object, who was under the necessity of tearing his shirt for bandages for his fractured thigh. No sheets in the house, . . . and the blankets were very dirty. No vault; no water. . . . The surgery was a closet about 10 feet by 6; the furniture consisted of ten vials, some of them without corks, of a little salve stuck on a board, some tow, and pieces of torn paper scattered on the floor.

Of the North Infirmary in Cork he notes:

Not a window open in the house.

In London things were just as bad. Of the London Hospital Howard says:

Medical and chirurgical patients are together. . . . In a dirty room in a cellar there is a cold and a hot bath, which seem to be seldom used.

Of St. Thomas's:

There were no waterclosets.

Of the Westminster Hospital:

A sum is paid every year for the destruction of bugs and blankets. A very sickly boy had not his clothes taken off for a fortnight. Two lay in the bathing tub. . . . The felons in the gaol were better accommodated as to cleanliness and bedding, and their cells were less offensive.

Of the Norfolk and Norwich Hospital he says:

I would mention the impropriety . . . of the perservation of the urine as a perquisite of the nurses.

That the provision of a sum of money for the destruction of bugs in the Westminster Hospital was not superfluous may be gathered from the following passage from Samuel Sharp's *Letters from Italy in the Years 1765-1766*. Writing from Florence, Sharp, who was Surgeon to Guy's, says:

am much pleased with the contrivance used in the great hospital here to avoid bugs; it is no other than a plain bedstead of iron made so simple that there is not a crevice where a bug can conceal itself. I remember there have been attempts of this kind made in England, but they have proved ineffectual because they fastened ticking to the frame with oilet holes and cording, which afforded some harbour to these animals. In this hospital they only lay across the frame about four or five boards, a little longer than the width of the frame and about a foot broad, upon which they lay the bedding; these are movable, and if necessary may be brushed when the bed is made, as easily, and in as short a time, as a man brushes his hat. In the hospitals at London, bugs are frequently a greater evil to the patient than the malady for which he seeks an hospital; and could I have interest enough with the governors to bring about an imitation of this frame, I should be exceedingly rejoiced in the comfort it will afford to so many thousands of miserable wretches that are tormented sometimes even to death by these nauseous vermin.

If our hospitals at the present day are by no means perfect it may at least be said that they are vastly improved as compared with those inspected in the eighteenth century by John Howard. Truth, however, compels us to say that we have seen the "nauseous vermin" spoken of by Sharp in a London hospital of the first rank no longer than thirty years ago. Such things are now, it is to be hoped, as much unknown in hospitals as the gangrene and pyaemia that used to devastate the wards of such institutions and seemed at the time to justify the denunciations of Simpson and others, whose experience led them to believe that "hospitalism" was inseparable from large aggregations of patients. The humanitarian sentiment has also become developed, and publicity provides safeguards more trustworthy even than philanthropy. The abuses of old days could scarcely exist in the fierce light that now beats upon all public institutions in the newspapers.

CANCER HOSPITAL, LONDON.—From the report presented to the fifty-seventh annual meeting of this hospital it appears that during the year 1907 there were 804 new in-patients, the average number of beds occupied being 92. In the out-patient department 1 580 new cases were treated, and the total number of attendances was 15 809. The drainage of the hospital had been overhauled, involving an expenditure of £500. A further increase in the amount of work done in the pathological and research department had taken place, and pathological investigations are being carried out with a view to throwing light on the causation, spread, and prevention of the disease. The new museum has been completed, and since January, 1907, 125 new specimens have been mounted.

THE Great Northern Central Hospital, the London Hospital, the Royal Hospital for Diseases of the Chest, the Brompton Cancer Hospital, the Royal Hospital for Incurables, Putney, the Metropolitan Hospital, the Royal Ophthalmic Hospital, each receives a sum of £100 under the will of the late Mr. John Rogers, of Islington.

HOSPITAL MANAGERS AND HOSPITAL SUBSCRIBERS.

A SERIES OF FOUR ARTICLES.

PART I.

THE BUSINESS OF HOSPITAL MAINTENANCE.

SOME three years ago a series of articles was published in this JOURNAL dealing with hospital expenditure, the points of view from which it should be regarded, the considerations which surrounded it, and the means by which it might be controlled. Among other things it was shown that the maintenance of hospitals, though initially a voluntary enterprise, had evolved into an indispensable kind of business in which there were three partners each possessing rights, namely, the patients for whose benefit the hospitals exist, the medical profession which supplies the skill by which those patients are treated, and, finally, those who—at present voluntarily—furnish the funds which render it possible for the other two partners to play their parts.

THE RIGHTS OF THE SENIOR PARTNER.

After briefly considering the rights of the two junior partners—the patients and the medical profession—the rights of the senior, or philanthropic partner, were considered in detail. It was shown: (1) That he has a right to demand that the money which he supplies shall be expended to the best advantage, or, in other words, that the management of hospitals shall be free from extravagance, efficiency being placed first, but the need for economy never being overlooked; (2) that there were sundry fashions by which greater economy than was usual could be more often obtained; but (3) that in existing circumstances it was exceedingly difficult, and often impossible, for the supporter of any hospital to ascertain for himself whether the institution in which he was interested and to which he was supplying funds was conducted economically or extravagantly.

Next it was shown that this fact had been already so far recognized that an attempt had long since been made to ensure for hospital subscribers the possession of data by which they could gauge with some accuracy the efficiency of the administration of the institution in which each happened to be interested. The data in question were figures which at a glance would reveal to the subscriber all the main items of the expenditure, and enable him to test its propriety by comparing these figures with those shown by other hospitals doing similar work and by the same institution in previous years. Such data, it had been claimed, would result from a system advocated, if not initiated, by Sir Henry Burdett, under the title of the Uniform System of Accounts for Hospitals and Charities. This system had been widely adopted, was looked upon as perfect, and was constantly being made the basis of comparison between one hospital and another. The results in some cases were, however, of a surprising character, and in view of this circumstance the system was, at the instance of this JOURNAL, submitted to thorough examination with a view of ascertaining how far it really did meet the needs of the hospital subscriber or senior partner, and whether the claims constantly made for it were really justified. The conclusion reached was that, while the introduction of the system was a step, perhaps, in the right direction, it was in its details so faulty that any comparisons or deductions based upon it must be necessarily misleading. Hence the net conclusion drawn was that the last state of the senior partner was really worse than the first, since he was being led to depend blindly on a broken reed.

Some months after the publication of these articles King Edward's Hospital Fund took up the question raised by them, and, in conjunction with the Metropolitan Hospital Sunday Fund and the Metropolitan Hospital Saturday Fund, began to study the matter for itself. To this end a member of a well-known firm of chartered accountants was asked to study the question of hospital accounts, and the report prepared by him was handed to a specially appointed committee of hospital secretaries for consideration. The net result was a publication by the three funds of a revised system in which the most material of the objections we had raised to the older system were adequately met. Its adoption was, of course, only incumbent on hospitals which sought the assistance of any of the three funds in question, but in view of the immense importance of the questions involved, it seemed likely that all up to-date hospitals elsewhere would take advantage of the work done by these three funds and adopt the new forms of account for the benefit of their subscribers.

On this presumption it was resolved after waiting about a year to see how matters stood, and hence early last winter a circular letter containing a general inquiry on the subject was addressed by this JOURNAL to the secretaries of all hospitals outside London in Great Britain and Ireland having 100 beds and upwards.

These circular letters in nearly all instances received due acknowledgement, and we take this opportunity of expressing our thanks to those who responded. At the same time we state briefly the conclusions which the answers justify, and these may be regarded as curious when it is remembered that the writers are practically the managers of all the leading hospitals in England, Scotland, and Wales, and Ireland, outside London. It is, in short, clear that (1) there are large numbers of institutions which have still not grasped the importance of presenting their subscribers with rapidly comprehensible accounts; that (2) there are many who are quite unaware that the old "uniform system" is in any way open to criticism; that (3) there are others who take such narrow interest in the general subject which forms the occupation of their lives as to have been unaware that its central point of their work has been submitted to searching inquiry by three bodies of great public prominence; and (4) others who, though aware of the inquiry and its results, do not appreciate the fact that it has any bearing on their own duties.

THE SENIOR PARTNER'S DIFFICULTIES.

This being the case, it seems right and desirable to bring up the whole question again in these columns, for to secure the rights of the senior partner or hospital subscriber and economy in hospital administration is, for more than one reason, of essential importance to all medical men.

In the first place, it is extravagant administration which drives hospital authorities to expedients for money-raising which are directly harmful to the pockets of the medical men in their neighbourhood and elsewhere. In the second place, medical men are frequently themselves members of governing bodies, and thus indirectly responsible to subscribers; thirdly, they are still more often contributors to hospitals themselves; and, finally, they are frequently consulted by their patients and others as to the institutions which best deserve support; and these, it need scarcely be said, are those which are laudable alike from a scientific and financial standpoint. It may be said, therefore, that all medical men owe it to themselves to take an interest in the financial administration of medical charities. This being the case, they are bound to endeavour to secure that the accounts of the hospitals in which they are directly or indirectly interested are not only accurately kept, but published in such form that what we have called the senior partner may gain from the statements submitted to him some real acquaintance with the manner in which the business is conducted. The published accounts should enable him to identify any class of expenditure which is unduly high, and call for explanation, and this is impossible unless some form of account specially adapted to that end is in use.

It is true, of course, that the business of hospital maintenance is in most respects on all fours with all other forms of commercial activity entailing the buying and distribution of goods, but in one respect it is entirely peculiar. So far as direct observation is concerned, the expenditure of any institution such as a hospital must always remain more or less of a mystery not only to the general public, but even to many persons well versed in the general requirements of scientific medicine and surgery. In any given case no one but the person in charge can say what are its precise needs or whether the amounts of money which are being expended on it in time and labour

and other directions are excessive or the reverse. Hence, while it is singularly easy for an individual to enter a hospital and say that this or that is extravagant, it is equally easy, as a rule, for some one else to prove that the reverse is the case; and for corresponding reasons it is not possible, as in the case of ordinary businesses, for a person skilled in accounts and well acquainted with the general nature of the enterprise in question to tell whether the business is well or ill-managed by examining ordinary account books.

The opinion, in short, of no individual on the financial administration of a hospital is of any value if it is based merely on inspection of the institution itself, or on an examination of account books, such as are kept by ordinary business firms. The efficiency of the financial administration of a hospital can only be gauged by an exact comparison between the work done and the expenditure involved, and even then little light will be thrown on the matter unless the figures thus obtained can be compared with precisely corresponding figures relating either to the work of the same institution in previous years or to identical work done elsewhere. Succinctly stated, this is equivalent to saying that averages, and not isolated figures, are the only reliable gauge of hospital expenditure, and that the units of comparison must be practically identical.

THE SENIOR PARTNER'S REQUIREMENTS.

In view of these considerations it is obvious that the hospital subscriber has a right to expect something more from those who undertake the spending of his money than an audited balance sheet and cash account. He has a right to claim proof that the hospital income has not only been honestly spent, but wisely spent, or, in other words, that the data indicated in the last paragraph shall be furnished him by each annual statement placed in his hands. Hence the next point to consider is the form which this statement should take. So far as main principles are concerned, there is no difficulty in deciding this question. Comparison between the gross totals of money spent and of work done is of little value, so the statement should certainly be one in which, after all items have been analysed, the resulting figures are classified under separate headings. The number of headings should be limited, for accounts in which items are analysed and classified *ad infinitum* are so difficult to follow as to be not much more really informing than those in which merely gross totals are stated or which leave subscribers to glean results for themselves from incoherent masses of figures regarding quantities and prices. Obviously, too, the headings chosen should be such as relate to items which are main factors in the expenditure and income of every medical charity, whatever its precise work may be. With such an account before him, supplemented by statistics drawn up on corresponding lines with regard to the work done, the subscriber has a real means of gauging more or less accurately the efficiency of the administration of the institution in which he is interested, and the wisdom with which his money is spent.

REVISED SYSTEM.

As has been indicated, an attempt to meet these requirements was made as long ago as 1893, and was subjected to what proved to be destructive criticism in these columns early in 1905, the sequence being that a fresh form, likewise intended to fulfil the needs in question, and based upon its predecessor, is now at the service of all and sundry. It should not be maintained that it is an absolutely perfect form of account, but as it gets rid of many of the errors of the earlier system, and closes many of the doors for misunderstanding and false conclusions which that system left ajar, it is far less open to criticism. Even if not entirely beyond it, it is certainly the best existing system, and as perfect a one as anybody at present is likely to devise, seeing that its weaknesses are comparatively few, and that those responsible for its creation are as competent and experienced a body of men as could possibly be got together for the purpose.

There are strong grounds, therefore, for urging its adoption on all institutions. In this place it need only be described in such broad detail as will enable our readers to appreciate its principles and the advantages it offers to subscribers. Those who undertake to prepare their accounts in the way indicated should of course consult the original report, which can be obtained from Mr. George Barber, Printer, 23, Furnival Street, Holborn. Price 1s.

The first point to note about the system advocated is that it is not a system of account keeping, but of account showing; this is a distinction of which the importance will appear later on. It is simply a method of digesting the general expenditure and income of a hospital so as to bring the main points into relief and to enable the figures shown to be dealt with easily. In private life probably most men, even if they do not keep regular accounts, estimate from time to time how much of their income goes in certain directions—on the upkeep of the household, on personal expenses, horses and carriages, and the like—with a view—if they have to consider ways and means closely—to finding out whether too much money is going out in any one direction, and they do the same thing with regard to their income, estimating how much of it comes from practice, how much from investments, salaries, and the like. The "revised system" is simply the same practice applied accurately and methodically to hospital maintenance.

It first determines what should be regarded as ordinary expenditure and ordinary income, and, conversely, as extraordinary income and expenditure, and then subdivides these into sundry main headings. As ordinary income are regarded annual subscriptions, donations, receipts from hospital collecting funds, receipts from places of worship, from collections amongst workmen, from entertainments, and invested property, while legacies and moneys received for capital purposes are treated as extraordinary income. As ordinary expenditure are classed the general expenses entailed by providing for the needs of patients such as are common to every institution. The extraordinary expenses are those which not all hospitals have to meet, or at all events have not to meet every year. The ordinary expenditure is divided primarily into the expense of maintenance of patients and the expenses of administration, and these main and subheadings are again subdivided as shown in the tables on page 1508.

The factors of these headings and subheadings can be crystallized out from account books of any nature, provided they are correctly kept and provided the sources of income and expenditure are recorded in sufficient detail. Moreover, the analysis need not necessarily be performed until the end of the year. In practice, however, it is much easier to analyse the accounts as the expenditure is incurred, distributing, when tradesmen's and other accounts are received, the several items which they contain under their proper headings in a book kept for that purpose.

It is exceedingly easy, too, to arrange this book in such fashion that the expenditure under any heading can be seen at a glance at any time. It is obvious that in this distribution of items doubt may sometimes arise as to the heading under which any given item of expenditure should be placed, and to avoid this the system includes a kind of vocabulary in which are inserted all items of hospital expenditure as to the classification of which any doubt can possibly arise, against them being added the title of the heading to which they belong and the number of the subheading. When the amounts shown against the analysed headings and subheadings are added up the total will, of course, equal the gross total on either side of the ordinary credit and debit accounts kept by those responsible for the administration of the hospital, when the necessary allowance has been made for any capital expenditure and receipts entered therein.

Furthermore, as nothing is inserted in the analysis except expenditure and income relating to the year under consideration, every year's work stands on its own legs, and the subscriber can see at a glance not only the way in which the money has been expended, but whether the income of the hospital for the year has been exceeded or otherwise. Finally, it should be mentioned that annexed to the system, if not an intrinsic part of it, are certain rules as to the way in which the status of patients is to be determined, and a number of forms are based upon them, these being so arranged as to allow of the work which the patients represent to be readily compared with the expenditure involved, or with the work done by other hospitals. As this part of hospital administration, however, forms the subject of another article elsewhere in

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING DECEMBER 31, 19 .

Dr. **Cr.**

INCOME.	£ s. d.	£ s. d.	£ s. d.
A. ORDINARY.			
I. ANNUAL SUBSCRIPTIONS (see p.)			
II. DONATIONS (see p.)			
Boxes (see p.)			
III. KING EDWARD'S HOSPITAL FUND FOR LONDON			
IV. HOSPITAL SUNDAY FUND			
V. HOSPITAL SATURDAY FUND			
VI. CONGREGATIONAL COLLECTIONS (apart from Hospital Sunday Fund)			
VII. WORKMEN'S COLLECTIONS (apart from Hospital Saturday Fund) ..			
VIII. ENTERTAINMENTS			
IX. INVESTED PROPERTY.			
Dividends			
Rents			
Income tax returned			
Interest on deposit or current account			
X. NURSING INSTITUTION.			
Private nurses			
Nurses and probationers' fees ...			
XI. PATIENTS' PAYMENTS.			
In-patients			
Out-patients			
XII. OTHER RECEIPTS			
Total ordinary income ...			
B. EXTRAORDINARY.			
I. LEGACIES			
The executors of			
II. FESTIVALS, BAZAARS, ETC. For new buildings or equipment, or the extinction of debt incurred for such purposes... ...			
Total extraordinary income ...			
Total income			
Balance, being excess of total expenditure over total income for the year ...			
		£	

EXPENDITURE.	£ s. d.	£ s. d.	£ s. d.
A. MAINTENANCE.			
I. PROVISIONS.			
1. Meat			
2. Fish, poultry, etc.			
3. Butter, bacon, etc.			
4. Eggs			
5. Milk			
6. Bread, flour, etc....			
7. Grocery			
8. Vegetables and fruit			
9. Malt liquors			
10. Aerated water and ice			
II. SURGERY AND DISPENSARY.			
1. Drugs, chemicals, disinfectants, etc.			
2. Dressings, bandages, etc.			
3 Instruments and appliances ..			
4. Wines and spirits			
5. Sundries			
III. DOMESTIC.			
1. Renewal and repair of furniture ...			
2. Renewal and repair of bedding and linen			
3. Renewal and repair of hardware, crockery, brushes, etc.			
4. Washing done off hospital premises			
5. Cleaning and chandlery			
6. Water			
7. Fuel and lighting—			
(a) Coal			
(b) Gas			
(c) Electric current			
(d) Oil, wood, etc.			
8. Uniforms (nurses', porters', etc.) ...			
9. Sundries			
IV. ESTABLISHMENT.			
1. Insurance			
2. Renewals and repairs			
3. Annual cleaning			
4. Garden			
V. SALARIES, WAGES, ETC.			
1. Medical			
2. Dispensing			
3. Nursing			
4. Other officers			
5. Mechanics, etc.			
6. Porters			
7. Domestic servants			
8. Scrubbers			
9. Pensions			
VI. MISCELLANEOUS.			
1. Printing and stationery			
2. Postages			
3. Advertisements			
4. Sundries			
Total cost of maintenance ...			
B. ADMINISTRATION.			
I. MANAGEMENT.			
1. Official salaries			
2. Pensions			
3. Official printing and stationery ...			
4. Official postage and telegrams ...			
5 Official advertisements			
6. Law charges			
7 Auditors' fee			
8. Sundries			
II. FINANCE.			
1. Appeals			
2. Commission			
3. Festivals, bazaars, etc.			
Total cost of administration ...			
Total cost of maintenance and administration			
C. RENT, RATES, AND TAXES.			
I. RENT			
II. RATES AND TAXES			
Total rent, rates, and taxes ...			
Total ordinary expenditure ...			
D. EXTRAORDINARY EXPENDITURE.			
I. INTEREST			
II. CONTRIBUTIONS TO OTHER INSTITUTIONS			
III. FESTIVALS, BAZAARS, ETC., for new buildings or equipment or the extinction of debt incurred for such purposes			
Total extraordinary expenses...			
Total expenditure			
Balance, being excess of total income over total expenditure for the year			
			£

this issue, no further reference to it need be made in this place.

TECHNICAL DETAILS.

The foregoing account will suffice for general readers, but for the benefit of those who have an intimate acquaintance with the old system, and who may wish to have some further particulars of the new one before obtaining the original report and studying it for themselves, some technical details of the differences between the old and the revised system may be added. The new income and expenditure account is not an analysis of all the cash transactions during the year, and nothing referring to previous years is either credited or debited therein. Income from estates and the like is debited with expenses of management before the net income is credited to the year. All repairs are counted as ordinary expenditure, and structural improvements are passed to the balance sheet. Interest on loans is treated, not as a part of managerial expenses, but as extraordinary expenditure. Rents, rates and taxes, are taken out of "maintenance" and treated as an item independent both of maintenance and administration. Washing is only included in the account as such when done off the premises; otherwise the expenditure involved is accounted for under salaries and wages, and other headings. There are other differences in the form of the account, but these instances suffice to show how far the alterations are material. Since, however, the headings used are for the most part the same in both systems, it might appear at first sight as if the analysed accounts of a hospital could be transformed from the old to the new form merely by a redistribution of such items as have been mentioned, and by excluding any sums payment of which was involved by work at an earlier period, and by including any expenses which had been incurred in the year, whether actually defrayed or otherwise. This transformation could certainly be effected, but the result would not be an accurate representation of the accounts according to the new system, because the index of classification attached to the new system is not identical with the old.

A rough examination shows that there are thirty or more variations between the two. Thus, allowances in lieu of beer are classified, not under provisions, but under salaries and wages. The builder's charges classified in the old index as extraordinary expenditure, are in the new placed under establishment charges. Essences of meat and the like are credited to the dispensary and not to provisions; mineral waters are classified as provisions, instead of under surgery and dispensary expenditure; and subscriptions to other institutions are treated as extraordinary expenditure and not debited to Maintenance, sub head Miscellaneous. Besides minor alterations of this character, however, items of expenditure which are common to many departments of a hospital are broken up in the new classification and distributed to the departments to which in each case they actually belong. Furthermore, there are a great many new entries dealing with items of expenditure which at the present time every hospital classifies according to its own lights, and possibly as a rule in very different fashion to its neighbour. Nevertheless, in spite of all these differences, it would doubtless be possible for any secretary who is keeping his accounts with the books of the old system to prepare from them (after studying the report mentioned) an analysis conforming to the rules of the new system. If such an analysis were carried on for a year side by side with the older form, the result would certainly be interesting and probably lead to most secretaries preferring the new system to the old, for it is in many respects much more favourable to institutions which are being well administered and have nothing to conceal. The form of the income and expenditure account will be gathered from the table on page 1495.

PART II.

SPADE WORK.

The mere fact that a good system has been put at the disposition of all and sundry will not be sufficient to secure its adoption by institutions independent of the three funds which have created it. This is abundantly clear, for, as has already been mentioned, one result of the letter circulated by this JOURNAL last October was to show that a large proportion of hospital secretaries were still quite unaware that the question of hospital accounts had ever been the subject of a serious investigation by the three metropolitan funds. Furthermore, from what passed at the recent United Kingdom Hospitals Conference, it is obvious that, even among professed experts, there must be many to whom the whole subject is practically unknown territory at the present time. This being the case, it is certain that the hospital subscriber who is anxious to see the system introduced at the institution in which he is interested will have to be more or less active in his advocacy. If once he can interest the secretary of the institution and one or two leading members of the managing body and induce them to study and understand the system, it is fairly certain the battle will be won. Meantime, however, he may have many objections to meet, and those who raise them are not unlikely to be persons who esteem their knowledge of the subject perfect, or who are too satisfied with their own methods to be very ready to consider any other. It is well, therefore, that the subscriber should know in advance what sort of objections he is likely to meet. Naturally they will vary enormously in nearly every instance, but experience shows that they will belong to one or other of the following classes:

Financial Purists and Others.

There are many able secretaries and treasurers who, rightly, consider that institutions which control large sums of money should have their accounts kept in fashions sanctified by the usage of the ordinary commercial world, and would object forthwith to any plan whose special name promises to entail a departure from them. Such fears, however, are baseless, for, as already stated, the system is not one of account-keeping, but of account-showing. It may be worked in conjunction with the book-keeping by double entry, which is esteemed alike by ordinary business men and the authorities of leading hospitals, or in conjunction with any other book-keeping system which may be in vogue at the institution and is considered to be an efficient one. The only necessary addition is a book in which the various items of expenditure are kept duly analysed.

Similar reluctance, but due to different causes, may be found among managers of small institutions, who are likely to fear that adoption of the new system will involve them in the purchase of an expensive series of books. The answer in this case is the same as in the former instance; the only additional book necessary is an analysis book, and this can be constructed by any intelligent secretary for himself as soon as he sees the headings under which he has to classify his expenditure. This information, together with samples of the forms and the vocabulary, which serves as a guide to the distribution of items, he can acquire by purchasing for a shilling the report of the three funds published by Mr. George Barber, as mentioned on page 1494.

Stress is laid on these objections because they are identical with one which, in a considerable measure, served to retard the adoption of the earlier system. That system was not only commonly described as if it were a complete method of keeping accounts, but in addition the publication which explained and advocated it contained constant references to the hospital account books published by a certain firm, and left the impression that the system of account-showing in question was impossible without the help of such books. It was even hinted that any secretary who presented his subscribers with similarly analysed statements, but did not keep books arranged as the system described, was guilty of idleness, incapacity, or want of a sense of responsibility. Such an imputation never ought to have been made, and in any case has no sort of application whatever to the revised system which has been brought out purely *pro bono publico*.

Exceptional Institutions.

There are some managers who will pooh-pooh the value alike of comparative statements and of analyses. An objection to comparative statements is a suspicious thing in itself, and indicates a fear that the hospital in question might fare badly if its accounts were made comparable with those of other places. As for analyses, their value is scarcely open to dispute, but this subject is dealt with at length elsewhere (see page 1498).

On the other hand, there are many secretaries who, while quite ready to admit the general advantages of analyses and all hospitals publishing their accounts on some uniform plan, are anxious to show that their hospitals should be regarded as exceptions. They will say that forms drawn up by the metropolitan funds may be valuable for London, but cannot apply to their hospital, as it receives no benefit from these Funds, or that there are special circumstances about the hospital which make a statement of accounts in that particular form impossible, or that its work is so peculiar that it cannot be justly represented on the forms entailed, and that it should be quite sufficient if they give subscribers analysed statements of their own. All such objections should be steadily overruled. The fact that the system is the work of the metropolitan hospital funds in nowise limits its application; it is simply due to the circumstance that these funds are able to command the assistance of persons whose services could not be secured elsewhere, and the plan which they have instituted for the use of their own *clientèle* can be adopted by any institution, small or great. The hospitals which receive assistance from these funds are so numerous and heterogeneous in character that any form which is applicable to all of them must be equally applicable to any voluntary medical charity elsewhere, whatever its special work and wherever it is situated. Every hospital can use the forms, and if it considers any further information or qualifying statements are necessary, it can give them in the footnotes. As for the propriety of permitting any given institution to use a form of its own, of course 90 per cent. of all hospital members are capable of inventing a perfectly intelligible one for themselves, but this should not be allowed by subscribers, for no hospital in our days can be regarded as an independent institution. It is simply a branch of the great business of hospital maintenance which is carried on throughout the length and breadth of the land, so that it is of extreme importance that all accounts issued should be comparable one with the other. And this can only be the case if the same forms are everywhere adopted.

Users of the Old System.

Next there are those who are already using the older system, and, noting that the headings are practically the same, may see no need to abandon the one for the other. They will not think so if they examine the two in the light of the statements which are made about the old system in the series of articles published in the JOURNAL in 1905. Here it need merely be mentioned that a system of accounts on which comparisons between different hospitals are likely to be based should be one which leaves as few openings as possible for one hospital, intentionally or otherwise, to take advantage of another by misrepresenting its results, and that in the old system there was more than one such door as well as more than one way in which its own subscribers could be likewise deceived.

There is one point in the new system over which a certain number of secretaries accustomed to the older form are likely to groan. This is the restriction placed on the use of the term "extraordinary expenditure." An examination of a number of accounts kept ostensibly on the old system shows that any expenditure which it is not convenient to show elsewhere is often relegated to the extraordinary expenditure account, and managers who are slack about keeping their institutions in good working order habitually pass into these columns any large expenditure for repairs which they are eventually forced to undertake, or any accumulations of bills for repairs payment of which it is not desired to show under ordinary expenditure. This is a very convenient plan for such institutions, but very unfair to others, because it enables those which are the less well managed to minimize in appearance their real ordinary expenditure. The extraordinary expenditure, also, now no longer includes outlay on new buildings and structural improvements or equipment, only the expense of festivals and bazaars undertaken to raise money for such purposes or to extinguish accumulated debts being admitted to this column. This, of course, is quite correct, as expenditure of this character is capital expenditure, and should be shown not in a revenue return—such as an annual income and expenditure account—but in the balance sheet. No secretary with a competent knowledge of the principles of account-keeping will be able to deny that this is a fact, but, nevertheless, secretaries of a certain type will be found to object to exclusion of these items. These are men who still believe that the only way to open purse strings in favour of their hospital is to show that it is labouring under a constantly increasing load or debt; hence they desire to avoid ever displaying a balance of income of any sort over expenditure, and this, fortunately, is sometimes not easy unless capital as well as current expenditure is included. It is doubtful whether there is much ground nowadays for the belief on which the practice of including capital expenditure in revenue accounts is founded, but however this may be, if it is desired to show that there has been a heavy expenditure beyond that which forms part of the revenue account, it is perfectly easy to make a note to this effect at the bottom of the account, and to mention the items for their identification later on if need be.

All these changes tell, of course, in favour of the subscriber by making it easier for him to acquire a knowledge of what is being done with his money, and they also tell in favour of the institution which is habitually well managed. In addition, there is one point in the new system which should appeal at once to all boards and secretaries who are endeavouring to lessen expenses and desire to get the credit due to them for the results they obtain. Since in the new system every year's work stands entirely by itself, those who are responsible for the work done during that period are not handicapped by the failure of their predecessors. For instance, ordinary expenditure is not augmented by the interest paid on loans obtained to cover the accumulated debts of the past, nor are the accounts for the current year swelled by having to pass into it sums which have been paid to tradespeople and the like for the outstanding accounts of previous periods.

CONCLUSION.

Finally, the hospital subscriber may possibly come across two types of hospital manager, both of which are anachronisms. The one is the manager who thinks that the subscriber should be quite satisfied by trusting his money to him, and being told at the end of the year that such and such an amount of money is still required to meet the debts incurred. The other is a person who recognizes fully the right of the subscriber to have a full account placed before him, and meets it in conscientious and painstaking but most unhappy fashion—namely, by placing before his subscriber statements of account in which every ounce of butter or sugar is carefully displayed, and there is no attempt at classification or analysis whatever. For neither of these classes of hospital managers is there any longer room. Competition in the hospital world is becoming acute, and while there is still plenty of money for medical charities, there are likewise plenty of candidates for it, and those who have money to give are beginning to examine closely the relative claims of different institutions. A subscriber, therefore, even if he himself is quite ready to trust blindly to the managers of the hospital in which he is interested, should nevertheless insist that its accounts are presented to the world in such form as to be attractive to those who have business instincts, and desire to know what is likely to become of their money. Any business like person is at least likely to wish to know how much of his money goes towards supporting patients and how much to supporting a more or less numerous crowd of officials, and for him, too, the other ways in which the expenditure and income are analysed will likewise have their value.

In short, in our day it is scarcely open to dispute that (1) every hospital which hopes for support is bound to present subscribers with comprehensible statements of income and expenditure, (2) that in such statements the various items should be classified, and (3) that the headings and the various factors of each should be the same in all institutions, in order that the expenditure of one may be checked by the expenditure of another. What that form should be may be open to dispute, but, seeing that the old uniform system of accounts has already been widely adopted, and that the revised system of accounts here advocated may be regarded as merely a second and improved edition of it, it is fairly certain that so large a number of hospitals will eventually decide to use it that it will become the standard system of account. Hence the sooner all hospitals alike take steps to adopt it, the better for themselves and their fellows.

PART III.

THE VALUE OF ANALYSIS.

It will be seen that the whole basis of the system described and advocated is a kind of dissection, a series of statistical abstracts of expenditure and income which, for sake of brevity, has been termed an "analysis of accounts." It is perhaps desirable to discuss the value of such treatment of accounts, because the subject is probably novel to some readers; and there may be many others who, though aware of the general advantages of analysing accounts of any kind, are not alive to the desirability of making an analysis every year.

A millionaire or other individual whose income must invariably suffice for all his needs has, it may be admitted, no particular occasion to keep accounts at all; still less is it essential that he should worry himself when the year is over in finding out in what particular ways he has spent his money. In qualified fashion the same may be said of any institution, charitable or otherwise, the income of which always fully meets the work which it desires to perform. If, for instance, an institution is so amply endowed that it never has any difficulty in fulfilling the objects for which it was founded, there is no particular reason why it should dissect up and classify expenditure, provided its responsible authorities are fully satisfied that they get full value for their money, and provided, too, that they will never have to satisfy outsiders to the same effect, or to prove to any one but themselves that the fund which they have administered has been wisely and justly expended.

There are, however, few persons or institutions in this happy position, and both in the commercial and philanthropic worlds competition is now so acute that if the managers of any enterprise, whether public or private, wish to make a good showing at the end of the year, they must usually practise strict economy throughout it, and unless they know precisely whence their income comes and where it goes, real economy is impossible; it may even be said to be inconceivable, for the word "economy," strictly speaking, means, not parsimony or the cutting down of expenditure to the lowest possible point, but the regulation of an establishment. In other words, it means efficient administration, and it may be laid down as an axiom that no administration can be efficient if those who are responsible for it do not know exactly what is being done under their authority. Such knowledge is less readily secured in regard to hospital maintenance than to most forms of business enterprise, so special means of obtaining it are often desirable.

Commercial Enterprises.

There is, however, nothing essentially new in the idea of dissecting or analysing accounts; it really dates back to the dawn of commercial enterprise, and to the day upon which the first balance sheet ever drawn up was completed. In the commercial world accounts have been analysed for centuries, for the balance sheets and statements of profit and loss familiar to all who are shareholders in any company, and to any one who has ever learnt book-keeping, are nothing but statistical abstracts of income and expenditure, or analyses of accounts, compiled in a fashion which accountants consider the briefest for bringing out the main results obtained—namely, whether the business has been conducted at a profit or at a loss, and whether it is solvent or otherwise. Such statements of account, as prepared or approved by auditors, were likewise in use by hospital authorities in quite early times, and the form of account introduced by Sir Henry Burdett, and which in a revised form has been advocated above, only intentionally differs from them in the fact that the items of expenditure are classified in a fashion deemed more likely to be illuminating to those hospital subscribers and managers whose duty or desire it is to know exactly what is being done.

But even in an analysed form of account, as distinct from the ordinary statements prescribed by chartered accountants, there is nothing entirely peculiar to the hospital world. For though it is true that such forms are not in habitual use in commercial houses, they are very commonly made out when any firm or company finds that profits are growing smaller, and when neither the managers' own knowledge nor the ordinary account books suffice to prove conclusively where the leakage is occurring. If the head of the firm is worth his salt he does not then merely sit down and groan over the fact that the trading account shows a very narrow margin on the right side, or that assets are beginning to make a poor show when compared with liabilities, but sets to work to overhaul the whole machinery, classifies all items more or less minutely, and endeavours to discover where the greatest falling off in the one or increase in the other exists.

Obviously this is the only way in which he can find an effective remedy, for it is futile for him to say that because things are going badly expenditure must be cut down blindly and all round. If he does this he may certainly reduce his expenses but possibly in a somewhat fatal way. Thus his general cutting down may include reduced expenditure just in those directions in which not less but more outlay is desirable, either because the expenditure in question is absolutely essential to existence or because it is an expenditure which is bringing in a proper return.

The Special Need of Hospitals.

All these considerations apply with equal force to the question of hospital maintenance, which must be regarded and treated as a form of business enterprise; but in this case an annual, and not merely occasional, analysis of accounts is desirable. The head of an ordinary firm is conversant with every single detail of its business to an extent not possible in the case of managers of hospitals. For the most part whatever money is spent is spent on his direct authority, and as he has commonly undergone a training in every one of its departments, it is seldom that he is unable to tell forthwith why profits are falling, or in what directions greater economy is possible. The position of managers of a hospital is different—the sources of daily small expense which make up the gross annual expenditure are never under their direct control; and, while most hospitals are chronically in the position of a firm whose trading account shows the barest margin on the right side, there is in every hospital a constant tendency for expenses not only to increase, but to increase beyond what is absolutely necessary. Special means, therefore, should be taken to check this tendency, for in default it will inevitably grow.

For even if an exceptional secretary had the same kind of complete and detailed knowledge of the work being done as that possessed by a manager of an ordinary firm, no hospital secretary is so lightly worked in his own department that he could keep an eye on every single division of the hospital and on every ward, and judge for himself straight off whether more or less money was being spent that was right; nor would the energies of a visiting member of a house committee be any more fruitful. The chief outcome would be a good deal of friction, and so far from materially checking extravagance, they could not by such means even prove to themselves, and still less to any one else, that extravagance really existed.

In short, in default of some means of proving that expenditure was increasing not generally and inevitably, but in certain directions and probably superfluously, the hospital secretary or visiting member of the committee would be equally helpless even if he had the whole board at his back, for if the latter brought a general allegation of extravagance to the notice of the spending departments, or, in other words, to that of the responsible and subordinate professional and domestic staff, the pot might claim that it was clean and shining and the kettle take the same view of its own appearance. Both might be black, or one or the other irreproachable, but in either case the result would be the same, namely, that no real improvement would be ensured.

Thus every hospital board is bound in the interests of its work to exact from its secretary not only that he shall keep a faithful account of all items of income and expenditure, but that he shall classify them under their main headings, in order that if any question arises as to whether expenses in any particular department are going up or going down, or whether they are more or less than they might be, some sort of material for testing the point may exist. Furthermore, it is desirable that the classification should be in some conventional form, maintained unchanged from year to year; and if this form is one which is common to every institution of the same character, additional advantages will accrue. Not only

is a board which has such analysed accounts to hand much better able to satisfy subscribers that the work of the hospital is being properly conducted, but it is also in a position of much greater strength when dealing with its executive officers, since it may often be able to convince them forthwith, and by specific examples, that they can help to lessen expenses. Thus, in a classified account it can be shown how much has been spent on stimulants or any other forms of "medical comfort" in the current year, and how much was being spent on a corresponding number of patients at a previous period; and if any material increase is shown the staff can properly be asked whether there is in the nature of the cases treated any reason or justification for the increase. If, again, it can be shown that the expenditure on electric lighting has been 20 per cent. greater in the expired year than it was in the previous period, it may on due inquiry be shown that the fault lies with a new matron who has not impressed upon her nurses the propriety of turning out lights which are not absolutely required. Similarly, a classified summary of income may show rapid decline in the receipts under one or more headings, and indicate the need for special effort on the part of the secretariat in certain directions.

It is, however, superfluous to multiply examples of this character, for it must be obvious that if the managers of a hospital or the subscribers have before them statements in which the items of expenditure and income are duly classified, and if at the same time the amount of work covered by the expenditure is accurately shown, they will be better able to detect in what direction, if any, greater economy is possible; especially if similar statements are in existence for a certain number of years, and there are the results of other hospitals to serve as an additional standard.

Special Expenses.

Even if considerable increase is shown under any heading, it does not, of course, necessarily follow that any of it can be avoided, or that there has been extravagance, but at all events attention to the point will have been directed, and the questions raised can be settled, if need be, by further inquiry.

What form such further inquiry should take it is not the purpose of this article to discuss, but as an illustration of the general value of an analysis of accounts such as is here advocated, attention may be drawn to the way in which certain hospitals have profited by the light which these analyses throw on their expenditure. Thus, for instance, the National Hospital in Queen Square some few years ago came to the conclusion that its domestic expenditure might prove on examination to be more than it need be, and appointed a committee to inquire into the subject. The result was an economy of over £1,000 on the single item of provisions. It took the same view with regard to its dispensary expenditure, and appointed a medical committee to deal with it, the outcome being an immediate saving of £200. This instance is the more worth quoting because the committee which dealt with the domestic expenditure was composed almost entirely of ladies who brought to their task merely common sense and a good practical knowledge of housekeeping, and because none of the alterations in the household management by which they effected the saving mentioned entailed, in the opinion of the medical staff, any lessening whatever of the efficiency of the institution. Such facts as these discount a belief that there is anything mysterious about hospital expenditure or in the means which should be taken to control it.

Finally, attention must be directed to one sort of account analysis, which, in some respects, is the most important of all. This is a separation of the expenditure on in-patients from the expenditure on out-patients. Hitherto efforts to effect such a division with any accuracy have rarely been made; and where the question has been raised at all, it has been answered in a way which is obviously unsound and even absurd—that is, by stating a purely hypothetical sum as the cost of each out-patient, multiplying it by an almost equally hypothetical number, deducting the total from the gross expenditure of the hospital, and calling the balance the net cost of the in-patient work. Those who drew up the revised system of accounts, to which attention is drawn in the first article of this series, urge that this very prevalent but essentially misleading method of determining a most important point should be abandoned, and that the expense of out-patient departments should be ascertained as precisely as possible, and not be merely estimated by the roughest kind of rule of thumb. They recognize that the task may at first be a little difficult, but state that it can be done, and indicate that until it is done no hospital can really know what its in-patient work is costing, or talk with any assurance of its cost per bed, or create for itself any standards by which the propriety of the expenditure in any direction may be gauged. Such condemnation is the more impressive when it is remembered that those responsible for the report in which this precise division or analysis of the expenditure into two main classes is recommended are all secretaries of hospitals with large out-patient departments, and therefore men on whom any alteration would impose at least as much trouble as on the secretary of any hospital in the three kingdoms.

Hence it may safely be concluded that the alteration is not one which should be deemed outside the powers of any institution. Moreover, it is likely that if not too much in the way of a precise estimate is at first attempted, the managers of hospitals little by little will find out that they can complete the task quite easily, and hence be able to provide information which is not less accurate than that which at one time seemed, perhaps, not less difficult to supply—namely, an answer to a question on a point which always interests subscribers: how much of their money goes to maintain patients and how much is absorbed by the administration—that is, by items of expense which have only an indirect connexion with the relief of suffering?

There must be few hospitals nowadays which cannot supply information on that point, and to go a step further and analyse the expenditure so as to show how much is spent on out-patients, is a task equally worth performing, for every factor which tends to confuse issues and to blind the managers of hospitals and their subscribers to what is being done should be removed. It is even possible that many hospitals, if they really knew exactly what their out-patients cost them, would be disposed to lessen their ambitions in this direction, and concentrate their efforts on what is everywhere admitted to be the primary object of hospitals—the maintenance and treatment of temporarily bedridden persons.

PART IV.

ENERGY AND OUTPUT.

In the very last of the few papers which the late Sir William Broadbent ever published—one written on what proved to be his deathbed—is a remark confirmatory of the observation that persons who exhibit great capacity for dealing with figures do not habitually show talent of corresponding degree in other directions; on the other hand, cases have been noted, we believe, by many alienists in which individuals greatly below the average in brain power conserve marked ability for making calculations. Possibly, therefore, the fact that an immense number of intelligent people have a great dislike for statistics and calculations of any character may be taken as a proof that the average man remains a fairly healthy and normal individual in spite of so much that is said, and perhaps truly said, as to degeneration of the race in almost all civilized countries.

Other things being equal, figures relating to money might on general grounds be considered likely to be most attractive, and there possibly may be persons in whom *amor nummi* is so highly developed that even mere statements as to moneys received and moneys spent may have a certain amount of attraction for them, quite irrespective of whence the money has come and where it has gone. The average person, however, finds literature of this sort entirely uninteresting and distasteful, and unless a definite duty is laid upon him he will refuse to study series of figures or tables of statistics, whether they relate to expenditure of moneys or any other subject.

Thus the average reader of a scientific paper inclines to skip the tables of statistics which they may contain, and to accept without examination the statements made in the text as to what the tables show. Much the same may be said even in connexion with commercial enterprises. The average shareholder in a company, provided that he has a reasonable amount of confidence in its directorate and that the literary part of the report points to satisfactory results, takes very little interest in the statements

of income and expenditure which are laid before him, and as a rule is quite prepared to take them as read; moreover, even the work to which they relate and the energy which they represent usually interest him but slightly, for all that concerns him is the net outcome of the year's trading or enterprise, and that net outcome is so much of the balance of income over expenditure as the previous transactions of the firm will permit its directors to pay out, less whatever amount the income-tax authorities may order to be impounded.

Nor is the general attitude of the subscriber to a hospital essentially different. As has been truly said, hospital maintenance may be regarded as a form of business enterprise, and for an individual who as a subscriber to its funds is, so to speak, a shareholder in any hospital, mere statements of income and expenditure have no more living interest than in any other connexion. In short, *quâ* philanthropist not less than *quâ* speculative shareholder, what interests an average specimen of intelligent humanity are not the figures put before him, but the net result of the work to which they relate.

But in the case of the hospital shareholder the net outcome is less easy to ascertain, and he cannot afford, like the ordinary shareholder, altogether to disregard the nature of the work which the accounts cover. His dividend and the work done are, indeed, in some degree one and the same thing, for the work done is the alleviation of suffering, and for him the net outcome is the dividend which he vicariously receives through those whose successful treatment he has, so far as may be, ensured.

In one way he is better off than the ordinary shareholder, because the exact balance between energy and output is of comparative indifference to him, since the very nature of the work done ensures him a dividend from the beginning. Provided he has any reason to believe that any one single individual has had his sufferings in any way relieved during the year, he can regard himself as having a dividend for that year already in his pocket. But at that point his superiority ends and his satisfaction must cease; for if, as he certainly should, he desires to ascertain not only that he has received a dividend, but that it is a good dividend, he must take more trouble in the matter than an ordinary shareholder in a company.

The latter has only to look at the report of income and expenditure or the profit and loss account presented him, and can tell instantly what percentage on the capital involved the balance shown represents, and, therefore, the dividend resulting from the transactions recorded. It may be a high percentage or a low one, but in any case he knows precisely what it is, and no flowery statement on the part of the directors of his company can deceive him on the point.

It is far otherwise with the hospital shareholder, for should the compiler of an annual report be gifted with a nice taste in adjectives and a ready pen, the net outcome of the year's proceedings may be presented to subscribers in a fashion which would deceive the very elect, inducing the subscriber to believe that the work had been carried on not only with a beneficent object but in a fashion every way admirable, when all the while the administration had been most inefficient, and the true dividend one with which the shareholder would rightly be dissatisfied were he aware of it. Hence every hospital shareholder is bound not only in his own interest, but still more in that of the class which he desires to benefit, to take care that those who spend his money on his behalf shall supply him with some means of gauging the accuracy of the general statements which they make in the body of any report submitted by them to the hospital shareholder.

Nor should the subscriber allow himself to be satisfied in this connexion merely by a reference to the tables contained in the report from the medical officers of the hospital, such as is commonly annexed by managers to their own business report. It is true that from such tables the subscriber can gather how many patients have been admitted, how many have died, how many have been discharged "cured," and how many discharged "relieved," and the number and nature of the operations performed; but the amount of the hospital shareholder's dividend cannot by that means be directly ascertained, nor can even the benefits conferred upon the patients in question really be thus assessed. The statement "relieved" is in itself very vague, and even in the case of those described—and no doubt quite reasonably described—as cured, no one can say for how long they are cured, nor what amount of unqualified benefit that cure in many cases really represents.

Considerations such as these should not, however, lead the hospital shareholder to conclude that his position is hopeless, and that any attempt to assess his dividend in benefits vicariously received must necessarily fail. On the contrary, the task is perfectly easy. Even though he rightly conclude that a proportion of the persons whom he has desired to assist have benefited only in a very minor degree, he may conclude with equal certainty that the aggregated benefit received by all the patients treated in the hospital in which he is interested is very large indeed. Hence if he takes care to see that the managers of his hospital put him into a position to gauge whether his money has been made to meet the needs of an adequate number of persons, he can determine the amount of his dividend for himself. Neither of these points presents any difficulty, provided the managers show him in their annual report what has been the average weekly expenditure on each patient. Given this figure, the shareholder can compare it with that which subscribers to other hospitals have obtained, and can tell them with a considerable degree of accuracy whether his own dividend is good, bad, or indifferent.

The only precaution he must take is that the institution or institutions with which he makes the comparison are of the same general character, and treat the same kind of patients as his own, and that the calculations of the cost per bed have been made on identical lines.

What is a Patient?

Seeing, therefore, that the relative cost per bed is, when all is said and done, the only safe criterion for the subscriber, and that the term "cost per bed" is really merely a brief way of expressing the expenditure on a patient for each week of his treatment, it follows that the first point to be determined is, What is a patient? This at first sight seems an exceedingly easy question to answer, and so in truth it is; yet differences in the interpretation of this word have been up to the present fruitful causes of inaccurate and unfair comparisons between the efficiency of one institution and another.

Moreover, added to any natural difficulties which may exist in the use of the word in statistical connexions, there has been a certain elasticity of conscience in the matter. The public is, unfortunately, not very discriminating in its support of hospitals, and as it has shown a disposition to believe that if Hospital A declares that it treats 1,000 patients a year it is better entitled to support, and to more support, than Hospital B, which only claims 950, there are many institutions which by one device and another unblushingly exaggerate the number of patients which they treat. The time has come when a stop should be put to this, and when hospital subscribers should insist upon the term "patient" being carefully defined for statistical purposes, or rather upon the correct authoritative and accepted definition being closely adhered to by the managers of any hospital in which they are interested. For only when this is done can they gauge its progress and the efficiency of its management from year to year.

Fortunately such a definition is ready to hand in connexion with the system of hospital accounts described at an earlier page. According to that system, which is the outcome, it should be noted, of the work, not of mere theorists, but of a committee formed of practical men daily engaged in hospital administration, there are only two kinds of hospital patients—in-patients and out-patients.

Of these two, the former includes any person who is recorded in a book kept for that purpose as having been in the hospital (as an occupant of a bed in one of its wards) at a fixed hour of the day, and this hour, when fixed, must not be changed during the year covered by any statistics in connexion with it. When the number of patients so recorded is eventually added up and divided by the number of days in the year, the result will give the average number of patients resident daily in the hospital throughout the year.

An out-patient, on the other hand, is a person not resident in the hospital but attending for some ailment, for

however long or short a period, between the first day of the year and the last.

It will be observed that that attractive but misleading term "casualty patient"—the use of which often leads to the actual number of patients treated at a hospital being duplicated—is excluded. Any person who attends in the surgery or casualty department of a hospital should for statistical purposes be regarded either as an in-patient or as an out-patient. If such a patient is admitted to the wards he should be counted only when the daily in-patient count for the day takes place; while if he is treated and sent home he should be counted as an out-patient. It is also considered desirable that each hospital shall adopt some system of enumerating the attendances of out-patients, so that statistics shall be available not only as to the number of different persons treated, but as the number of occasions on which assistance is afforded to each of them.

These definitions are simple, and compliance with their terms should not for the most part present any difficulty, thought it may not always be easy to secure that patients who attend at long intervals shall never appear twice in one year in the statistical records. Nevertheless, if the point is borne in mind and honest endeavour is made to meet it, the general mass of hospital statistics may so far be purified as to make it exceedingly rare for any single individual to figure in the annual returns as anything from one to a dozen patients.

At present there are some institutions at which a patient whose chronic ill health brings him to hospital at fairly frequent intervals for different phases of his illness is entered as a new patient almost as often as the leading character of his symptoms varies. There are many, too, at which a single visit from a patient results in the addition of at least two, and sometimes three, items to the record of patients treated. Thus, a patient may first appear as a casualty patient, and, if sent to the out-patient department, figures there again, and, finally, when sent to the wards from that department as being a fit case for admission, figures once more when the night state is made out. All this is, for the most part, merely the outcome of faulty administration, but it is a kind of fault which some institutions are not too desirous to avoid, and which counts so unfairly against carefully-managed hospitals that it should be discountenanced by all interested in hospital maintenance as a whole.

Estimates of Output.

When an account of the number of in-patients and out-patients is thus kept as faithfully and carefully as may be, the resulting figures can be used as a basis for various statistical purposes. The one essential calculation is, as has already been indicated, that which shows the cost per bed or the cost of each patient's treatment per week. But there are other statistics which are useful either as affording a short cut to a correct answer to the question of the cost per bed, or because, in certain circumstances, they may serve to throw additional light upon the general efficiency of the hospital in its performance of the special kind of work which it undertakes, whatever that may be. The number of beds in daily occupation, for example, can easily be ascertained by taking the figures showing the total number of in-patients in the hospital day by day throughout the year and dividing it by the number of days in that year, and it has an immediate value. Thus, by further subdivisions and like calculations, it can be ascertained whether there are any great variations at different periods above and below what is shown to be the general average for the year. This is a point not without importance, for when there is regularity in the calls made upon the hospital it is easier to secure economy than when work is sometimes slack and becomes at other times suddenly and almost overwhelmingly great.

Another calculation which can be usefully made on the basis stated is the average duration of each patient's treatment. This, apart from any other value of the calculation, is a particularly useful thing to know when attempts are made, as is sometimes foolishly the case, to compare the financial efficiency of two hospitals by comparing the average amount spent on each patient in the two hospitals. Thus, if the average cost of each patient in Hospital A is £30, and in Hospital B is only 30s., it might at first look as if Hospital B were infinitely better managed than Hospital A, whereas the reverse may really be the case. Hospital A may cater for patients suffering from long enduring complaints, the average duration of whose treatment is necessarily fourteen or fifteen weeks, while Hospital B admits a majority of patients suffering from certain diseases which rarely require more than a few days' in-patient treatment, so that naturally the average duration of their stay, and consequently the average cost of each patient, is very small. As a general rule, indeed, there is very little utility in knowing the average cost of each patient at any institution, though it is a figure which many institutions are very fond of quoting, and it should be repeated that if expenditure in relation to patients is a criterion of efficiency of administration—and this it is to a very useful extent—the figure to be ascertained is that which has already been indicated, namely, the cost per bed per week. The average duration of treatment has, however, a further financial interest. Thus, when a hospital is large and the average duration of treatment is very short, it naturally means that patients come and go very quickly; similarly when the average duration of treatment is very long, it follows that the patients change but slowly.

The effect of these factors on expenditure is to some extent a moot point. There are those who argue that when in any given hospital the number of beds habitually occupied remains unchanged, the greater the number of individuals by whom they are consecutively occupied the greater the relative expense. That rapid changes in the occupation of a ward means more wear and tear on all concerned in its management, and possibly somewhat increased expenditure on bed linen, is probably true; but, on the whole, those are probably right who argue that the longer a patient remains in—that is to say, the greater the average duration of treatment—the more expensive he becomes not only actually but relatively. A patient who comes in for a day or two only is often kept from first to last on some inexpensive form of diet, while the long remaining patient has generally to be put on extras and coaxed in various small ways to tempt him to eat at all.

Another connexion in which the average duration of treatment is of interest is with respect not to finances but to the actual treatment. Thus, if of two hospitals doing precisely the same kind of work, and in towns of corresponding character, the average duration of treatment is found year after year to be much longer at the one than at the other, the fact may suggest that there is room for inquiry as to the cause, but only for inquiry and not for prompt conclusion. The one hospital may have an excellent convalescent hospital to which the surgeons and physicians feel they can safely send their patients at a much earlier date than they would allow them to leave had they to discharge their patients as in the case of surgeons at the other hospital, straight from the hospital to their own homes. On the other hand, the difference in the duration of treatment in the two hospitals may point to a positive defect. Thus, Hospital A may be understaffed in its nursing department and its nurses habitually overworked; or the home in which they live may be badly managed and they themselves underfed, so that the services they render the patient are habitually less efficient than those of the nurses at Hospital B, where the nurses are not overworked, are properly fed, are insured a good night's rest, plenty of time off duty for outdoor exercise and other relaxations, and habitually arrive in the wards and at their patients' bedsides cheerful and thoroughly fit.

So, too, again the difference may prove on investigation to be due to defective arrangements with regard to the ventilation and the like. Thus at Hospital A the rapid recovery of patients may be facilitated by broad balconies on which the patients' beds can be placed and their occupants allowed to enjoy the air and sunlight, while at Hospital B the windows may be so arranged that it is difficult even to open them without a violent draught, and the patients from beginning to end of their treatment remain in a stuffy atmosphere with nothing more exhilarating to gaze at than a blank wall and a pale face on the opposite side of the ward.

Again, it may be found that at Hospital A the surgeons and physicians are armed with every modern appliance for the efficient treatment of disease, well-constructed operating theatres, an ample supply of the best instruments, clinical laboratories, and perfectly trained staffs of

nurses, while at Hospital B everything in this direction is behind the times.

All these, however, are for the most part points with which the average shareholder need not too greatly concern himself, but they should be borne in mind by him if he is called upon to take a part in the administration of the hospital as a member of the managing committee, while in any case, if he happens to note that the average duration of treatment is less at his hospital than at some other with which he is acquainted and which he believes to be of the same character and has to do the same sort of work, he can regard the brevity with pride. For the purpose, however, of satisfying himself as to the sufficiency of his dividend, the average hospital shareholder need only ascertain the average cost per bed, and how this is to be done is the next point to be considered.

Finding the Dividend.

The term "cost per bed" can apply to in-patient work only, whereas most hospitals do both in-patient and out-patient work. If, therefore, a figure could be obtained which would cover the whole work of any hospital and yet be as precise and exact as that of the cost per bed, it would, no doubt, be a preferable standard by which to gauge the financial efficiency of these institutions. It would be quite possible, of course, to lump all the work of a hospital together and find out what was the average expenditure on each individual treated irrespective of his status as a patient, but the result would be entirely unsatisfactory. The units of calculation would vary so enormously that no figure would result which would be truly comparable with that obtained with reference to the work of the institution in previous years or to like figures obtained by other hospitals.

Some hospitals have exceedingly large out-patient departments in comparison to the number of their beds, and others the contrary. Moreover, in every hospital the relative proportion of the work done in these two departments varies, sometimes very greatly, in different years; and, finally, since there is a great difference between the cost of an out-patient department and the cost of in-patient work, any figure derived from an admixture of the two classes of work in unknown and varying proportions must inevitably be entirely misleading.

The want of a standard calculation embracing the whole of the hospital work need not be regretted, for a calculation relating to the in-patient work only, and representing the expenditure at the cost per bed, will meet all needs if carried out on right lines. The factors dealt with are practically identical in every year, and the resulting figure is a truly comparable unit. Moreover, when the nature of the two classes of work is considered, it will be obvious from the financial point of view that the difficulty of securing efficient administration in connexion with in-patient departments is infinitely the greater. Hence, if the figure relating to this work is found to be satisfactory, it may safely be concluded that the financial administration of the out-patient department is equally satisfactory; and that, if more is spent on out-patients than is desirable or right, it is not because the administration is inefficient from a financial point of view, but because the doors of the out-patient department are opened too wide and persons admitted to its benefit who ought to be excluded.

It may be said that, as a matter of fact, up to the present no one knows with accuracy what the cost of an out-patient is, or, rather, what in a general way it may be expected to be. When some estimate of this amount has in the past been attempted it has been customary, as indicated at page 1499, to put down an entirely hypothetical sum, and by multiplying that hypothetical sum to calculate the total cost of the out-patient department. This is, of course, an absurd system, and on the basis of it a hospital which had a very large out patient department and very few beds might conceivably show that the cost per bed was rather less than nothing.

Fortunately, however, those who brought into existence the revised plan of hospital accounts saw the absurdity of such a loose system, and arranged for the complete separation of expenditure on in-patients and out-patients. No doubt if such a separation were suggested by a subscriber at many hospitals the managing body would be inclined to throw up its hands and say, "Quite impossible," but that this is far from being the case will be seen on reference to pages 1511 and 1512. A great many institutions, in short, and those of a very mixed character, have managed to effect the separation as soon as requested to do so; and there can be little doubt that all institutions which essay the same task honestly will find that they are able to perform it, though they may not be able to effect the separation quite accurately in the first year. It is most desirable that they should do so, because until the separation has been effected the expenditure of neither one department nor the other can be accurately stated. Hence the hospital shareholder who desires to know what his dividend really is must press for this reform.

Certain Deductions.

In any case, before the cost per head is determined, the sum considered to represent the total cost of the out-patient department must be deducted, whether found by guesswork or by precise calculation, from the gross cost of the hospital. But neither in the case of the in-patient department nor of the out-patient work is every penny which happens to have been paid on behalf of the hospital during the year to be taken into consideration. A classified statement of all items of hospital expenditure will be found in a table on page , which, with its fellow—the classified statement of items of hospital income—is intended to be used as a profit and loss account for the fiscal year, and not as an account of actual cash payments and receipts. Not all the items in it, however, should be included in the calculation of the cost per bed.

The items of expenditure to be considered in this connexion are only those which are under the direct control of the managers for the year in question; which are an intrinsic part of the maintenance and administration of patients under all circumstances; and which, therefore, are common to all hospitals, wherever situated. These items will be found in detail on the pages mentioned, but the main headings may be here quoted:

Provisions (food and the like).
Surgery and dispensary (instruments and medicines, etc.).
Domestic (fuel and lighting; repairs, washing, etc.).
Establishment charges (fire insurances, etc.).
Salaries and wages.
Miscellaneous expenses (postage and stationery, etc.).
Management and finance (salaries of secretary, clerks, and others).

Any one who has such an account before him, as well as statistics as to the number of patients treated, such as have been discussed on page 1501, can easily work out for himself the figure representing the cost per bed. But, of course, no hospital shareholder should be expected to take this trouble for himself. It should be laid before him by the managers in their annual report, so that the shareholder may see at a glance what his dividend is and be able to compare it forthwith, if he pleases, with the dividend similarly declared at any other hospital in which he may be interested, or with which he may be acquainted.

In ninety-nine cases out of a hundred this cost per bed stated as a single unit without reference to items is everything about which the hospital shareholder need worry himself, but that figure he should insist upon receiving. In fact, any person who at the present day is not supplied with a figure of that sort by the authorities of the hospital to which he is invited to subscribe, and who, being supplied with it, does not find that it compares well with that of other institutions, and cannot obtain a thoroughly satisfying explanation, would do well to consider the advisability of keeping his money in his pocket as far as that institution is concerned. Moreover, now that a system of account-keeping which really insures truly comparable calculations of the cost per bed is at the disposition of all and sundry, he should press that system on the notice of the managing body of any hospital in which he is interested, and if, after a year or two, he finds that the institution is not calculating its cost per bed on this or on some other very widely-adopted and authoritative plan, he may safely conclude that the failure to do so is not to his advantage, however plausible the reason put forward for a contrary course may sound. In other words, not only will he be unable to judge what his dividend as a hospital shareholder is, but he will have good grounds for assuming that if it could be discovered the dividend would be found to be a bad one.

STATISTICAL TABLES.

FINANCIAL STATISTICS FOR A YEAR, COMPARED WITH THOSE OF THE PREVIOUS YEAR.

I. IN-PATIENTS.

(a) Number of Beds and In-patients.

	Numbers in 19 .	Numbers in 19 .
1. Number of beds available for use		
2. Average number of patients resident daily throughout the year as counted and recorded daily		
3. Number of in-patients in the hospital at beginning of year		
4. Number of in-patients admitted during year		
5. Number of in-patients in the hospital at the end of the year...		
6. Average number of days each patient was resident		

(b) Annual Expenditure on In-patients apart from that on Out-patients: Average Cost of each In-patient: and Average Cost of each In-patient per week.

	Expenditure on In-patients in 19 .			Average Cost of each In-patient in 19 .			Expenditure on In-patients in 19 .			Average Cost of each In-patient in 19 .		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
MAINTENANCE :—												
7. Provisions { Should any resident officers or servants not be victualled, or any article of food for patients not be supplied, a note should here be made of the fact.												
8. Surgery and Dispensary												
9. Domestic												
10. Establishment												
11. Salaries, wages, etc.												
12. Miscellaneous expenses												
ADMINISTRATION :—												
13. Management												
14. Finance												
Totals												
Average total cost of each in-patient per week...												

II. OUT-PATIENTS.

(a) Numbers.

	Numbers in 1906.	Numbers in 1907.
1. Total number of new out-patients		
2. Total number of out-patient attendances		
(A) Number of patients on books at the beginning of the year, if ascertainable		
(B) Number of casualty patients included in No. 1 above		
(C) Number of casualty attendances included in No. 2 above		
(D) Number of maternity patients included in No. 1 above, attended at home		
(E) Number of maternity patients included in No. 1 above, attended at the hospital ...		

(b) Annual Expenditure and Average Cost of each Out-patient and of each Out-patient Attendance.

	Expenditure in 1906.			Average Cost per Out-patient		Expenditure in 1907.			Average Cost per Out-patient	
	£	s.	d.	s.	d.	£	s.	d.	s.	d.
MAINTENANCE :—										
3. Surgery and dispensary										
4. Domestic										
5. Establishment										
6. Salaries and wages (including Board of Officials, if any)... ...										
7. Miscellaneous										
ADMINISTRATION :—										
8. Management and finance										
Totals										
Average cost per attendance										

Finally, as the hospital shareholder may like to know how the cost per bed is commonly calculated, a brief statement of the shortest cut to that figure may well conclude this article.

The total sum spent on the items which have been quoted above is divided by the total number of in-patients treated during the year; and the result—which represents the average cost of each in-patient—is again divided by the figure which represents the average number of days each patient was resident. The final quotient—which represents the average cost of a patient for a single day—is then multiplied by seven to show the cost per bed per week. Exactly the same method will show the weekly cost per patient on any of the items which enter into the general calculation of the cost per bed, and it is one of the good features of the revised system of hospital accounts that the cost of all these items and the necessary figures regarding duration of stay and the like are all very clearly displayed, so that any further subcalculations such as those in question can be made if desired. To the ordinary hospital shareholder, however, they are superfluous, though sometimes he may deem it well to break up the cost per bed into two figures, one relating to maintenance and the other to outlay which is only indirectly entailed by the purpose for which he has given his money to the institution, such as the payment of the secretary who acts as the executive officer on the managing body. But it may be stated at once that though the administration of hospitals in these islands is not always efficient, it is habitually so faithful and honest that the subcalculation in question, though sometimes of interest, is very rarely of essential importance. Hence any hospital shareholder who is supplied by the managers of the institution in which he is interested with a single figure representing the cost per bed, may take that figure as his dividend, and, provided that the accounts of the hospital are prepared for publication according to the rules of the revised system of hospital accounts, he may decide for himself forthwith whether that dividend is satisfactory or the reverse by comparing it with that received by subscribers to other institutions of the same character which publish their accounts in the same form. It is better still that the factors entering into the calculation of the cost per bed should be shown likewise. The form which the declaration of dividend should then take is shown in the tables on p. 1503, which with the rules as to drawing them up will be found *in extenso* in the report published for the three metropolitan hospital funds at the address already given.

THE

INCOMINGS AND OUTGOINGS

OF

HOSPITALS IN LONDON.

In the following pages will be found an account, in tabular form, of the income, expenditure, and work during the year 1907 of nearly all the important voluntary hospitals in London, whatever their special purpose. In each table the institutions will be found, not in alphabetical order, but roughly classified according to the work which they do. First come the large general hospitals with medical schools attached, and then the general hospitals without medical schools; afterwards follow in succession institutions which cater especially for children; for women and children; for lying-in women; for those suffering from nervous disorders; and from diseases of special regions, such as the eye, the rectum, the bladder, the chest, the throat, nose, and ear. The lists end with a few hospitals which devote themselves to conditions systemic in origin, but accompanied by marked local manifestations, malignant growths, skin troubles, disorders of the heart, and physical malformations. The order followed has, in short, been unconsciously of a pathological character.

The tables have rather a formidable appearance, but are worth study for more than one reason. We are accustomed to tabulation of hospital statistics in annual and other books of reference, but these invariably deal with expenditures at comparatively remote periods, and thus lack living interest. The tables which are now published cover, however, the most recent completed period of hospital work, namely, the year 1907, and convey the gist of accounts which have only lately been completed. In several instances, indeed, the reports of the hospitals to which the tables relate have not yet been published, and it is only owing to the courtesy of many secretaries, and others concerned, in forwarding advance proofs of their reports, and giving assistance in other ways, that it has been possible to complete this review of the financial position of London hospitals at so early a date. To the statistics, moreover, of the London hospitals for last year quite a special interest attaches, since for the first time their accounts, though kept in different ways, have all been prepared for publication on precisely the same general system, namely, that described in some earlier articles in this issue. Hence they form a convenient object-lesson in the working of that system, and as an illustration of what has been said in connexion with it. One or two published reports show that the secretaries of the hospitals concerned have not interpreted the rules laid down for their guidance correctly, but it is equally clear that no such difficulty has been commonly experienced. Moreover, the readiness with which the system lends itself to the clear demonstration of the essential points of hospital upkeep is proved by the fact that a number of secretaries, besides showing their expenditure for 1907 in the desired form, have cast the expenditure of one or two previous years into the same shape for the benefit of their subscribers.

It is by no means, however, to be concluded that the annual reports of all hospitals in London are now exact counterparts. This is by no means the case. Apart from the written matter there is a certain element of individuality in each of the accounts, and this fact has transformed what would otherwise have been a most fatiguing and monotonous piece of work into quite an attractive study of human character in the guise of figures.

The skeletons of the accounts are in each case the same, but the minds of those who have clothed them obviously differ as greatly as the hands of Esau and Jacob. Indeed, perhaps only a person who has examined carefully the printed reports of these sixty or seventy hospitals one after the other can readily conceive the different appearance which accounts relating to precisely the same items, and constructed on the same essential principles, may be made to assume. Individuality betrays itself so clearly in the treatment of certain points, and in such minor details as the choice of paper and type, that it seems almost possible to picture the character of the compiler of the statement. Anything of the nature of pathos in a business account is difficult to conceive; but even this exists in the devices adopted by some of the secretaries to conceal, so far as the form of account permits, what they obviously consider may prove a very damning fact, namely, that in one way or another they have managed to emerge from the year with a balance in hand. Such attempts, however, are a mistake; they may deceive a few, they will mislead no one who examines the accounts with care; in some cases, moreover, the devices used are of doubtful honesty, and might well annoy philanthropists of the latter-day persuasion, namely, persons who combine philanthropic desires with a good deal of business instinct.

The statistical tables, five in number, each concern a different aspect of hospital enterprise; their contents are, therefore, dealt with in each case separately, and the reader can read all or any of the reviews as he is disposed. The tables practically explain themselves, so little more is said about them in the text than is necessary to explain and emphasize their main points. The aspects in question are as follows: The sources of income of London hospitals, the main items of expenditure; that criterion of good administration—the cost per bed per week; the expense of out-patient departments; and the present position of the London hospitals as revealed by the balance between their incomings and outgoings at the end of the year 1907.

St. Bartholomew's Hospital figures in some of these tables, and next year will probably appear in all, for its present administration being as up-to-date as its new out-patient department, it has adopted the revised account system, though not a beneficiary of any of the funds.

THE INCOME OF LONDON HOSPITALS.

THE tables on pages 1506 and 1507 relate to sixty-nine hospitals in London, and it will be gathered from them that most of these institutions receive their income from at least fourteen different sources. Such income is classed in the tables as ordinary or extraordinary, the former term including every sort of receipt on which hospitals as a body depend for their ordinary upkeep; it is income from sources which, with a few exceptions, every hospital may reasonably regard as likely to prove fruitful year after year. The items combined in Column P, headed "Extraordinary Income," might more properly, perhaps, have been termed "total extraordinary receipts," since no hospital can count with certainty upon legacies falling to its lot year after year, nor upon individuals giving it money for specific purposes—such as the endowment of beds; nor should regard as income the outcome of special appeals to cover capital expenditure—such as new buildings. Indeed, looking down Columns M and P, in which the ordinary and extraordinary incomes are totalled, it will be noted that a good many institutions received last year nothing beyond ordinary income, and that others, on the contrary, were fortunate enough to receive amounts vastly exceeding their ordinary income.

When Column A, the first of the table, is compared with those which follow, it will be noted that in most cases the amount received from annual subscriptions is small as compared with the total, and inquiry shows that nearly all institutions last year suffered diminution in the list of annual subscribers. Even when—as was commonly the case—the shrinkage was made up in other directions, the fact remains regrettable, because in the conduct of any business entailing large outgoings a sum of twenty shillings, if its receipt can be counted on in advance, is more valuable than a donation of twenty-five shillings which cannot, so to speak, be expected until it is actually received.

The column headed "Congregation Collections" covers a very small item as compared with the sums which in earlier days were collected in this fashion for the benefit of individual hospitals. These now tend in London to find their way into the coffers of the Metropolitan Hospital Sunday Fund. The column headed "Workmen's Collections" covers a comparatively new item, which figures in the accounts of only a minority of the institutions. This is perhaps due to the varying opportunities which institutions have for getting into touch with large bodies of working men, and perhaps also to the equally varying energies of managing bodies.

The column showing income from investments includes also interest on moneys lying at the bank, returned income tax and the like, and will be noted to vary very greatly at different hospitals, and to bear as a whole no definite relation to the total receipts. Some institutions which have comparatively large income from invested property will be noted to be much poorer in reality than others which, under Column I, are credited with little or nothing—for example, compare at one extreme St. Bartholomew's and the London, and at the other West Ham and Bolingbroke.

Column J, headed "Nursing Institutions," is also of interest; the figures recorded relate to sums which are profits derived either from training nurses or from supplying them to the public. In several instances the sums are large, and the column, as a whole, throws some light on the desire evinced by certain institutions to keep the control of the nursing world in their own hands.

On the whole, however, the chief interest attaches to Column K, and to most people it will be a revelation to find that as many as forty-five out of these sixty-nine hospitals received payment from patients. It will be observed, too, that in several instances the income from this source constitutes a very large proportion of the total receipts—sometimes a great deal over 50 per cent. The largeness of the amounts is most noticeable in the case of the smaller special hospitals. As to the morality of these payments, it must suffice to say at present that in a good many instances the payments are legitimate, inasmuch as they are derived from openly carried on in-patient wards; but the bulk of the money is undoubtedly made up by moneys which out-patients in one guise or another are forced to offer in exchange for treatment.

Column N explains itself; but as to Column O it should be stated that the term used as a heading covers a variety of receipts, that is to say, not only the result of festival collections for special purposes, such as building improvements, but in many instances sums earmarked by their donors, and therefore, not available for purposes of ordinary hospital maintenance.

THE EXPENDITURE OF LONDON HOSPITALS.

THE tables displayed on pages 1508 and 1509 relate to the same London hospitals during the year ending December 31st, 1907, and separate the expenditure of these institutions into two main divisions, which are totalled in Columns M and Q under the headings "Total Ordinary Expenditure" and "Total Extraordinary Expenditure." The first of the two main divisions is divided again into the expenses of the maintenance of patients, the expenses of administration, and rent, rates and taxes. "Maintenance" will be found to include several columns, and the specific items covered by their various headings will be found on reference to page 1491. Most of the headings of the columns explain themselves, but the reason of the position and meaning of one or two may not be very clear. The heading of Column I covers commissions paid to collectors and the cost of appeals for funds for ordinary maintenance. Of the other columns that headed "Interest" is placed among the "Extraordinary" columns because it covers charges to which, fortunately, by no means all hospitals are subject; it of course relates to payments to banks and individuals on account of borrowed moneys. Another of these columns, headed by the letter O, usually covers sums paid for the upkeep of convalescent homes and to convalescent homes which receive patients from the institution in question. Finally the heading "Festivals, Bazaars, etc." usually applies to the expenses of such enterprises when undertaken in the hope of raising funds for new buildings and the like, but has sometimes been made to cover other expenditure which is rightly to be regarded as extraordinary, though not as capital, expenditure.

In looking through this table the main point to keep in mind is that none of the sums entered relates to any but the expenditure entailed at the hospitals in question by the work done during the year; it does not cover payments liability to which was incurred at an earlier period, and the expenditure is entered whether actually defrayed or otherwise. Moreover, in accordance with the rules of the revised system, any outlay on new buildings and the like is excluded from the table, such outlay being capital expenditure and, therefore, carried to the balance sheet. The table, accordingly, is an exact account of the expenditure entailed by keeping open the hospitals during the year in question, and includes, with the exception of interest, no item of outlay for which those in charge of the institutions during the year were not directly responsible. If this table were compared with one of the same general character relating to an earlier period at the same institutions, the main difference found would probably be as follows: the expenditure on salaries and wages would be found apparently increased, since sundry items are broken up in the modern account into their component parts. Thus washing, for instance, is accounted for partly under domestic expenditure in the way of material, and partly as labour under the items of salaries and wages. The division, "Total Ordinary Expenditure," would often be found to have decreased owing to interest on accumulated debts being no longer treated as an inevitable feature of hospital enterprise but as "extraordinary expenditure." On the other hand, the total extraordinary expenditure would at some hospitals be found to have diminished in amount, since the old system made it possible for the managers of institutions to treat as extraordinary expenditure any large amount expended during the year on ordinary household repairs, and thus reduce the apparent annual cost of the upkeep of each bed.

Such points apart, the column which should attract attention is Column L, headed "Rates and Taxes." It will be found on adding it up that these hospitals in the aggregate pay to the public authorities considerably more than £26,000. This is a notable fact, and one all the more worthy of attention when it is remembered that by no means all the hospitals in London are included in this table; moreover, it will be seen that the amounts absorbed

The Ordinary and Extraordinary Income of Certain Metropolitan Hospitals for the Year 1907.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Name of Hospital.	Annual Subscriptions.	Donations.	King Edward's Hospital Fund for London.	Hospital Sunday Fund.	Hospital Saturday Fund.	Congregation Collections.	Workmen's Collections.	Entertainments.	Invested Property.	Nursing Institution.	Patients' Payments.	Other Receipts.	Total Ordinary Income.	Legacies.	Festivals, Bazaars, etc.	Total Extraordinary Income.	GRAND TOTAL.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
ST. BARTHOLOMEW'S	0	236	0	0	0	0	0	0	68,139	600	0	1,804	70,679	1,025	0	1,025	71,704
CHARING CROSS	2,786	5,637	3,000	1,496	351	4	12	0	2,545	0	13	1,812	17,655	12,829	1,000	13,829	31,484
GUY'S	3,791	4,324	5,000	1,625	299	6	188	62	40,445	1,337	5,583	150	62,820	31,464	1,086	32,550	95,370
THE LONDON	14,826	12 830	10,000	6,500	1,162	5	346	0	22,935	7,723	2,202	3,112	81,628	19,956	0	19,956	101,584
KING'S COLLEGE	2,053	2,902	1,000	1,457	366	23	0	0	2,898	63	37	2,546	13 346	6,855	0	6,855	20,200
MIDDLESEX	2,811	6,822	3,000	2,757	453	0	0	0	5,251	0	0	585	21 680	9,532	0	9,532	31,212
ROYAL FREE	1,445	2,078	2,000	1,370	308	0	0	205	1,370	72	0	191	9,039	9,134	3,744	12,878	21,917
ST. GEORGE'S	4 677	3,131	2 000	2 275	496	0	54	0	12,860	0	0	100	26,631	63,576	0	63,576	93,606
ST. MARY'S	4,710	3,820	3,500	2 946	405	54	12	0	1,872	60	163	108	17,299	8,609	290	8,899	.
ST. THOMAS'S	775	697	0	0	180	0	95	0	57,076	1,182	494	182	60,681	12,660	3,000	15,660	76,341
UNIVERSITY COLLEGE	2,161	3 233	3,000	2,167	417	0	0	2	3,478	150	59	48	14,715	17,480	362	17,842	32,556
WESTMINSTER	1,450	10,503	3,000	1,625	328	0	0	126	3 328	0	0	19	20,379	6,759	300	9,759	30,138
WEST LONDON	2,339	1,974	3 000	1,224	272	32	535	81	599	110	0	79	10,247	4,700		4 700	14,947
GREAT NORTHERN...	1,905	5,701	1 200	1,260	299	73	0	0	1,256	0	825	2,179	14,697	4,674	0	4,674	19,371
METROPOLITAN	1,066	5,649	2,500	1,226	301	7	0	0	587	162	0	0	11,500	8,527	0	8,527	20,027
PRINCE OF WALES'S	1,219	1,935	2,500	639	417	92	0	301	69	0	0	563	7,736	952	0	452	8,688
POPLAR	3,180	2,937	0	574	215	0	275	0	1,800	14	231	89	9,316	1,233	28	1,261	10,577
THE SEAMEN'S	4,154	4,032	2,500	1,636	331	0	232	192	3,642	46	865	164	18,783	1,340	930	2,270	20,123
WEST HAM	1,162	2,581	500	594	160	126	287	225	369	0	0	22	6,026	0	0	0	6,026
BOLINGBROKE	701	1,254	500	295	0	30	20	184	135	0	814	59	3,940	25	2,620	2,645	6,425
THE TEMPERANCE...	1.247	1,509	1,600	785	199	3	12	2	1,956	173	300	16	6,854	350	265	615	7.469
HAMPSTEAD	980	602	0	314	103	34	0	44	89	4	473	11	2,664	50	36	86	2.750
THE GERMAN	1,663	4,199	200	661	213	0	0	57	3,276	0	636	132	10,977	1,178	0	0	12,156
THE FRENCH	1 665	3,422	200	393	134	0	0	0	157	0	0	0	5,873	2,159	0	2,159	8,032
THE ITALIAN	425	645	500	217	118	86	0	936	361	0	0	0	3,210	0	0	0	3,210
GREAT ORMOND STREET	3,388	1,717	1,775	1,083	281	90	40	164	5 237	365	120	63	14,317	7,810	0	7,810	22,127
THE EVELINA...	801	694	250	271	129	78	0	30	3,725	145	92	31	6,176	4,895	1,000	1,645	11,072
PADDINGTON GREEN	1,162	707	750	352	124	210	0	41	367	6	372	19	4,110	7,384	1,265	8,649	12,754
THE BELGRAVE	452	419	1,500	227	122	3	0	765	66	49	0	425	3,996	500	0	500	4,496
THE ALEXANDRA	2,325	477	500	444	210	0	0	0	411	0	503	0	4,871	0	100	100	4,971
THE QUEEN'S, HACKNEY	2,565	4,509	1,000	964	247	33	0	92	288	0	656	5	10,339	497	2,725	3,222	13,561

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VICTORIA	2,915	1,647	1,000	747	198	89	498	86	329	247	159	2	7,927	4,860	1,495	6,355	14,283
ROYAL WATERLOO...	1,653	1,634	955	195	125	31	0	20	735	34	221	136	5,639	250	34	250	5,889
GROSVENOR	753	200	250	195	85	0	0	48	160	0	741	23	2,455	180	0	1,680	4,135
THE CHELSEA FOR WOMEN	1,551	965	500	341	133	0	0	0	78	30	775	4	4,376	1,883	0	1,883	6,259
THE NEW	1,058	2,092	750	347	132	8	0	77	348	68	1,673	295	6,937	220	0	220	7,158
SAMARITAN FREE	1,309	1,046	750	471	152	0	0	200	436	0	0	75	4,189	274	831	1,105	5,295
THE SOHO FOR WOMEN...	1,349	973	1,000	498	149	0	0	100	315	0	1,102	262	6,749	494	0	494	6,243
GENERAL LYING-IN	867	469	250	86	54	0	0	0	953	2,803	0	6	5,162	0	0	0	5,162
CITY LYING-IN	316	570	250	200	47	1	0	0	1,723	2,146	19	22	5,294	0	0	0	5,294
QUEEN CHARLOTTE'S	2,689	238	500	558	160	4	0	238	863	0	0	28	5,248	530	0	530	5,778
BRITISH LYING-IN	318	174	350	89	50	0	0	0	396	510	99	838	2,828	0	0	0	2,828
THE NATIONAL, Queen Square	1,476	3,718	2,000	1,116	279	8	0	0	1,540	8	2,820	109	13,074	7,129	0	7,129	20,203
WEST END NERVOUS	2,834	1,381	250	326	186	0	0	0	2	0	377	87	6,444	2,371	0	2,371	7,814
MAIDA VALE PARALYSIS	355	623	500	179	88	0	0	0	94	0	723	0	2,568	482	0	482	3,050
ROYAL EYE, Southwark	652	276	600	303	105	0	0	112	378	0	443	131	3,001	2,519	300	2,819	5,820
MOORFIELDS EYE	1,823	3,160	2,500	1,192	279	19	0	0	1,018	0	0	84	10,074	6,993	0	6,993	17,067
WESTMINSTER OPHTHALMIC	746	920	0	162	80	0	0	0	990	0	0	81	2,981	1,351	0	1,351	4,332
WESTERN OPHTHALMIC...	169	253	150	108	39	0	0	15	150	0	286	26	1,197	2 090	100	2,090	3,387
CENTRAL OPHTHALMIC...	374	1,219	100	173	62	0	0	0	0	0	0	4	1,932	2,500	0	2,500	4,432
THE GORDON FISTULA	189	321	25	43	33	0	0	115	0	0	1,177	35	1,938	0	168	168	2,106
ST. PETER'S	844	12	50	114	80	0	0	0	374	0	2,314	29	3,818	460	0	460	4,278
ST. MARK'S FISTULA	713	569	100	276	122	0	0	0	667	0	482	815	3,818	874	0	874	4,692
BROMPTON CONSUMPTION	7,172	1,281	2,500	3,012	430	118	0	0	2,403	0	0	119	17,035	19,291	2,959	22,250	39,285
MOUNT VERNON	3,091	9,443	1,000	1,284	584	31	0	0	337	0	0	90	15 889	275	0	275	16,164
THE CITY CHEST	3,363	3,177	2,500	810	621	0	0	0	224	0	0	3	10 628	5,691	0	5,691	16,319
THE ROYAL CHEST...	2,112	1,312	0	569	200	0	0	0	226	0	0	26	4,580	3,075	0	3,075	7,655
GOLDEN SQUARE THROAT	420	557	0	16	0	0	0	0	47	0	3,956	45	5 041	500	0	500	5,541
THE CENTRAL THROAT	337	259	0	47	272	0	0	0	33	0	2,202	130	3,279	2,280	0	2,280	5,559
THE ROYAL EAR	152	311	0	43	147	0	0	154	70	0	886	0	1,764	0	0	0	1,764
LONDON THROAT	137	113	0	27	103	0	0	0	381	0	1,179	29	1,590	0	0	0	1,590
THE METROPOLITAN EAR	134	93	0	0	251	0	0	9	0	0	596	0	1,084	0	0	0	1,084
BROMPTON CANCER	2,064	1,163	0	0	189	0	0	0	5,197	0	0	140	8,755	14,588	0	14,588	23 342
MIDDLESEX CANCER CHARITY	924	1,193	0	292	104	0	0	400	1,998	0	0	6	5,321	4,450	0	4,450	9,771
ST. JOHN'S SKIN	963	434	100	54	213	0	0	0	40	0	2,098	62	3,966	1,391	1,686	3,077	7,042
BLACKFRIARS SKIN	151	22	0	0	126	0	0	0	232	0	692	7	1,230	0	21	21	1 251
LONDON SKIN...	87	117	0	0	35	0	0	0	5	0	945	0	1,189	0	0	0	1,189
NATIONAL ORTHOPAEDIC	914	832	2,250	119	106	0	0	0	1,990	0	915	0	7,226	1,300	0	1,300	8,560
NATIONAL HEART	843	217	0	184	204	0	0	0	100	0	686	29	2,273	1,505	0	1,505	3.779

The Ordinary and Extraordinary Expenditure of Certain Metropolitan Hospitals for the Year 1907.

Name of Hospital.	A Provisions.	B Surgery and Dispensary.	C Domestic.	D Establishment.	E Salaries, Wages, etc.	F Miscellaneous.	G Total Maintenance.	H Management.	I Finance.	J Total Maintenance and Administration.	K Rent.	L Rates and Taxes	M Total Ordinary Expenditure.	N Interest.	O Contributions to Other Institutions.	P Festivals, Bazaars, etc.	Q Total Extraordinary Expenditure.	R GRAND TOTAL	S Notes.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	
ST. BARTHOLOMEW'S	13,517	8,356	13,372	5,283	26,961	783	68,343	2,756	0	71,099	0	2,422	73,521	141	3,101	0	3,243	76,769	The expenditure on the country Branch of St. Bartholomew's at Swanley is not included in the ordinary expenditure.
CHARING CROSS	3,744	1,921	4,657	1,070	4,496	513	16,402	762	654	17,818	0	591	18,409	3,130	10	0	3,140	21,549	
GUY'S	13,024	7,715	10,125	3,348	23,499	1,012	58,722	2,203	1,118	62,043	385	2,526	64,955	0	0	0	0	64,955	
LONDON	23,108	12,589	15,271	4,100	37,702	1,715	94,784	2,693	1,373	98,855	173	1,498	100,505	1,131	155	0	1,286	101,791	At the London, patients supply their own tea, sugar, and butter.
KING'S COLLEGE	5,100	2,291	4,857	1,054	5,570	326	19,201	698	274	20,173	0	475	20,653	167	407	0	651	21,303	
MIDDLESEX	6,896	2,913	5,932	1,055	10,093	665	26,459	1,301	947	28,706	887	913	30,507	151	2,226	0	2,439	32,946	The expenditure of the Middlesex Hospital in its Convalescent Home at Clacton-on-Sea is shown in the extraordinary expenditure, but the Middlesex Cancer Charity is treated as a separate institution in its own place.
ROYAL FREE	4,507	2,109	3,301	334	4,644	205	15,099	741	129	15,970	0	137	16,107	0	197	0	197	16,314	
ST. GEORGE'S	8,885	4,548	8,451	2,438	13,649	720	38,741	1,928	141	41,742	0	932	42,674	0	0	0	353	43,027	
ST. MARY'S	6,015	3,586	3,454	1,967	8,623	306	25,950	1,146	625	27,721	24	503	28,251	22	10	0	32	28,284	
ST. THOMAS'S	11,281	6,137	15,357	6,478	20,293	578	60,127	1,673	58	61,858	105	2,974	64,937	194	0	0	194	65,131	
UNIVERSITY COLLEGE ...	6,021	3,436	6,741	1,972	7,637	695	26,562	1,112	322	27,993	0	531	28,527	0	0	0	41	28,567	
WESTMINSTER	5,133	2,366	3,913	911	5,577	331	18,285	861	213	19,363	50	375	19,788	158	10	0	167	19,956	
WEST LONDON	3,076	2,200	3,181	227	3,335	189	12,208	525	336	13,270	135	320	13,725	224	10	25	259	13,984	
GREAT NORTHERN CENTRAL	3,631	2,031	3,510	1,346	4,605	326	15,449	853	580	17,282	94	333	17,709	359	10	0	369	18,127	
METROPOLITAN	3,256	1,827	2,611	353	3,308	256	11,611	1,056	980	13,647	228	176	14,052	350	251	0	601	14,653	
PRINCE OF WALES'S	1,630	1,264	1,224	196	1,920	135	6,369	405	240	7,014	2	76	7,092	314	10	225	582	7,680	
POPLAR	2,305	924	1,230	804	2,847	115	8,226	761	237	9,223	0	33	9,256	0	0	13	13	9,269	
SEAMEN'S	5,059	2,463	381	3,603	5,329	464	19,201	1,316	1,013	21,529	305	199	22,033	66	0	0	66	22,099	
WEST HAM	1,514	1,014	1,216	84	1,280	72	5,181	398	298	5,876	0	29	5,905	10	0	0	10	5,915	
BOLINGBROKE	1,076	417	920	151	956	45	3,535	116	4	3,715	78	39	3,832	120	0	0	120	3,952	
THE TEMPERANCE	2,504	892	1,980	471	2,971	152	8,930	594	92	19,232	0	230	9,845	350	0	0	350	10,460	
HAMPSTEAD...	1,444	442	1,020	53	1,159	77	4,195	447	90	4,503	0	153	4,891	92	10	57	229	5,120	
THE GERMAN	3,627	2,355	1,256	628	2,125	146	10,037	546	374	10,957	0	180	11,137	145	587	0	732	11,869	
THE FRENCH	1,209	386	756	294	1,069	208	3,922	270	287	4,479	0	349	4,828	0	133	0	133	4,961	
THE ITALIAN	1,016	252	535	95	355	62	2,345	169	45	2,559	16	217	2,791	0	3	0	3	2,791	
GREAT ORMOND STREET ...	3,847	2,432	4,620	376	6,533	596	18,303	774	423	19,500	100	797	20,388	0	1,774	0	1,774	22,171	
THE EVELINA...	850	737	1,111	670	2,180	186	5,735	318	232	6,285	0	285	6,570	8	110	0	158	6,728	
PADDINGTON GREEN	643	720	848	211	1,111	120	3,662	363	174	4,200	35	141	4,377	5	535	4	544	4,947	
THE BELGRAVE	684	557	1,163	181	799	99	3,483	406	42	3,931	142	97	4,170	383	0	0	383	4,554	The ordinary expenditure of the Alexandra Hospital for Children includes its country branches.
THE ALEXANDRA	1,339	350	1,231	391	968	98	4,377	767	134	5,077	35	285	5,313	0	0	0	0	5,313	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
THE QUEEN'S	1,937	900	1,999	453	3,851	252	9,393	801	416	10,609	5	301	10,915	32	0	0	32	10,948	
THE VICTORIA	1,408	948	2,204	326	3,101	206	7,193	649	97	7,839	0	250	2,090	0	597	0	597	8,687	
ROYAL WATERLOO	637	755	888	228	1,195	108	3,810	974	126	4,909	98	198	5,203	37	0	271	303	5,512	
THE GROSVENOR...	706	385	592	178	578	69	2,508	186	0	2,693	200	66	2,959	7	0	0	7	2,967	
CHELSEA FOR WOMEN ...	1,157	702	1,239	767	1,070	142	4,678	468	189	5,336	83	130	5,539	95	0	0	95	5,634	
THE NEW	1,898	661	1,681	466	1,330	91	6,326	407	34	6,768	261	92	7,121	0	0	0	0	7,121	
SAMARITAN FREE	894	731	947	407	1,050	90	4,129	379	171	4,679	0	145	4,824	47	0	169	217	5,040	
SOHO FOR WOMEN	1,330	731	1,382	246	1,430	95	5,215	450	112	5,777	0	93	5,870	179	0	214	393	6,263	
THE GENERAL LYING-IN ...	1,519	310	1,3 7	39	1,454	0	4,698	562	0	5,260	241	79	5,580	0	0	0	0	5,580	
CITY LYING-IN	968	139	879	338	1,642	73	4,040	443	101	4,584	212	214	5,011	1,254	0	75	1,329	6,340	
QUEEN CHARLOTTE'S	1,395	609	1,644	267	1,689	164	5,767	386	178	6,331	0	120	6,452	0	0	0	0	6,452	
THE BRITISH LYING-IN ...	967	120	735	277	739	76	2,914	194	81	3,188	0	179	3,368	18	0	0	18	3,395	
THE NATIONAL, Queen Square	3,346	1,818	2,822	450	3,958	168	12,561	1,161	558	14,279	115	747	15,142	52	247	0	299	15,441	
WEST END NERVOUS	1,326	874	1,078	404	1,391	161	5,203	575	420	6,199	733	303	7,235	148	0	0	148	7,382	
MAIDA VALE PARALYSIS ...	957	311	638	300	652	70	2,928	304	119	3,351	157	94	3,602	0	0	440	440	4,042	
ROYAL EYE, Southwark ...	805	499	713	302	935	84	3,339	200	0	3,540	251	212	4,003	0	0	0	0	4,003	
MOORFIELDS EYE	2,364	1,272	1,859	962	2,870	209	9,595	805	361	10,762	1,210	745	12,717	2	10	0	12	12,729	The enormous rent paid by Moorfields is the ground rent on the new site on which it built its new building a few years ago.
WEST INSTER OPHTHALMIC	522	320	421	178	489	91	2,020	231	73	2,354	0	102	2,457	0	0	0	0	2,457	
WESTERN OPHTHALMIC ...	298	132	173	73	250	55	959	168	38	1,175	0	86	1,890	399	0	61	460	1,721	
CENTRAL OPHTHALMIC ...	447	202	431	90	410	51	1,630	207	34	1,871	40	42	1,953	0	0	0	0	1,953	
THE GORDON FISTULA ...	533	137	372	214	319	43	1,648	197	43	1 888	90	81	2,059	242	0	0	242	2,301	
ST. PETER'S	811	1,193	866	142	999	72	4,088	393	54	4,536	0	153	4,683	30	0	0	30	4,718	
ST. MARK'S FISTULA	923	475	1 025	181	872	111	3,587	239	396	4,222	0	201	4,426	4	0	0	4	4,430	
BROMPTON CONSUMPTION ...	10,762	1,652	5,351	1,525	8,663	528	28,481	1,725	684	30,890	0	1,570	32,460	7	10	427	444	32 904	The ordinary expenditure of the Brompton Consumption and Mount Vernon Hospital includes the upkeep of their country or sanatorium branches.
MOUNT VERNON	4,355	736	3,089	1,845	3,066	232	13,326	1,070	679	15,075	0	941	16,017	95	0	0	95	16,112	
THE CITY CHEST	3,198	1,238	1,771	1,197	2,902	374	10,679	1,271	1,228	13,179	0	220	13,399	0	0	0	0	13 399	
ROYAL CHEST	1,694	818	1,184	114	1,662	111	5,482	407	169	6 057	0	236	6,293	3	0	0	3	6 297	
GOLDEN SQUARE THROAT ...	835	794	852	297	1,281	145	4,204	311	168	4,683	30	107	4,819	0	0	0	0	5,541	
THE CENTRAL THROAT ..	435	778	573	215	728	49	2,777	419	8	3,213	150	85	3,448	0	0	0	0	3,448	
ROYAL EAR	403	281	286	85	330	44	1,430	103	24	1,561	0	54	1,615	254	0	0	254	1 870	
THE LONDON THROAT... ..	219	176	198	14	375	20	1,001	151	7	1,160	260	32	1,452	0	0	0	0	1,452	
METROPOLITAN EAR	213	141	149	14	170	53	740	87	1	828	140	29	997	0	0	0	0	997	
BROMPTON CANCER	2,968	1,723	3,293	684	2,709	407	11,985	1,191	529	13,705	0	364	14,069	0	1,417	0	1,417	15,486	
MIDDLESEX CANCER	937	425	1,034	57	719	1,027	4,198	137	428	4,763	177	97	5,037	32	0	0	32	5 069	
ST. JOHN'S SKIN	783	553	499	299	817	119	2,670	652	239	3,561	800	233	4,594	510	0	307	817	6,412	
BLACKFRIARS SKIN ...	0	424	63	14	143	0	634	355	63	1,052	160	54	1,266	—	—	—	—	1,266	
NATIONAL ORTHOPAEDIC ...	1,226	497	679	132	893	136	3,568	697	60	4,326	2,720	102	7,148	0	0	122	122	7,270	
NATIONAL HEART	693	65	440	35	460	27	2,255	349	10	2,624	229	62	2,916	0	0	0	0	2,916	

by rates and taxes at several individual institutions run into thousands. The column, in short, forms an excellent appendix to the article on page 1515, where the question of the position of hospitals as rate-paying institutions is considered in detail.

As for Columns N, O, and P, which make up the total shown in Column Q, these are placed among extraordinary expenditure, because the items covered by them are not necessarily common to all institutions. In nearly all the instances, however, in which extraordinary expenditure at all is shown in this table the outlay in question is almost entirely of a permanent character. For instance, the indebtedness indicated by an entry in the interest column is often so great in proportion to the general income of the institution that it cannot be expected to be wiped out for years to come. Nor again can the convalescent homes, which account for most of the ordinary expenses in other cases, be closed without great detriment to the efficiency and utility of the institutions concerned. In short, in individual cases the sums entered as extraordinary expenditure may usually be regarded for most practical purposes as a permanent charge. Nevertheless, it is not only necessary to keep them apart in order that the table may confirm with the rules of the revised system, but of practical utility, since it is thus possible to compare the "ordinary" outlay of the hospital fairly with that of others, and use it as a basis for obtaining the "cost per bed," a critical figure the value of which is discussed on pages 1502 and 1503. Finally, it should be mentioned that the total indebtedness of any of the institutions mentioned may usually be determined with approximate accuracy by taking the interest as at the rate of 4 per cent. and calculating the capital which at this rate the interest paid represents. This will not, of course, however, always give the true figure, more especially because at some hospitals whatever debit balance exists is covered by temporary loans drawing no interest, or is represented by unpaid debts on which no interest is at present being charged.

In conclusion it may be stated that one or two institutions which were originally intended to appear in this table have been dropped out because, in publishing accounts of their expenditure, they employ a form of statement which fails to convey any real information to subscribers whatever. Their names need not be mentioned on this occasion.

COST PER BED.

In discussing the relative efficiency of hospital administration it has long been common to quote the annual cost of the treatment of a patient as a kind of standard of comparison. This, however, has been a very misleading figure, owing to the very different factors which in each case have entered into the estimate of the cost. Nevertheless, as is demonstrated on page 1502, it is a fact that when the cost per bed is based upon accounts drawn up in accordance with the rules of the revised system, and when in other respects it is properly calculated, it may be regarded as a safe and efficient criterion, subject to certain provisos. This is the case in respect of all the statements as to the cost per bed per week in the present instance. The table, therefore, which begins on this page and ends on the following, is of much interest, as it shows the cost per bed at all the leading hospitals in London, and supplies information on such essential points as the average number of patients usually present in the hospital, and the average length of time for which each patient is under treatment. Naturally, the latter varies very greatly according to the nature of the work done, so in looking at the table the remarks made on page 1504 as to the sequence in which the names of the hospitals follow should be borne in mind.

When, as in the case of the general hospitals, the nature of the work done is ostensibly the same, it will commonly be found that any differences in the duration of the treatment can be explained by the different proportion of medical and surgical beds, for medical cases, as a rule, last a much longer time than surgical cases. Several hospitals, moreover, have arrangements which render superfluous the admission of patients for small operations, so that they have a far lower proportion than others of cases which come in one day and leave the next; and the average duration of treatment is thus materially increased. In this way hospitals whose arrangements are very com-

The "Cost per Bed per Week"

Name of Institution.	Average Number of Beds Occupied	Average Stay of Each Patient.	Weekly Cost of Maintenance.	Weekly Cost of Administration.	Total Cost per Bed per Week.
			£ s. d.	s. d.	£ s. d.
ST. BARTHOLOMEW'S	575	27	1 18 9	3 7	2 2 4
CHARING CROSS	140	23	1 18 9	3 7	2 2 4
GUY'S	516	23	1 18 10	2 5	2 1 3
THE LONDON	782	21	1 16 7	1 7	1 18 2
KING'S COLLEGE	189	27	1 15 7	1 11	1 17 6
MIDDLESEX	270	27	1 12 1	3 0	1 15 1
ROYAL FREE...	138	25	1 11 2	1 10	1 13 0
ST. GEORGE'S	319	26	2 3 2	2 4	2 5 6
ST. MARY'S	257	24	1 12 6	2 4	1 14 10
ST. THOMAS'S...	480	26	2 1 11	1 5	2 3 4
UNIVERSITY COLLEGE	244	27	1 12 4	1 9	1 14 1
WESTMINSTER	180	27	1 13 10	2 1	1 15 11
WEST LONDON	144	23	1 5 11	2 1	1 8 0
GREAT NORTHERN	148	25	1 15 0	4 4	1 19 4
METROPOLITAN	106	21	1 11 6	5 7	1 17 1
PRINCE OF WALES'S	81	22	1 3 9	2 8	1 6 5
POPLAR	78	21	1 13 11	4 2	1 18 1
SEAMEN'S	247	38	1 3 1	3 5	1 6 6
WEST HAM	48	33	1 8 10	3 2	1 12 0
BOLINGBROKE	30	17	1 18 8	1 5	2 0 1
THE TEMPERANCE	87	24	1 13 6	1 7	1 15 1
HAMPSTEAD	46	25	1 12 11	4 3	1 17
THE GERMAN	116	28	1 6 4	3 0	1 9 4
THE FRENCH...	52	22	1 5 3	4 1	1 9 4
THE ITALIAN...	47	20	0 15 9	1 1	0 16 10
GREAT ORMOND STREET ...	182	22	1 12 3	2 2	1 14 5
THE EVELINA	54	23	1 11 2	2 6	1 13 8
PADDINGTON GREEN	35	19	1 6 9	3 10	1 10 7
THE BELGRAVE	28	17	1 19 7	4 8	2 4 3
THE ALEXANDRA	94	336	0 19 4	3 9	1 3 1
THE QUEEN'S	123	30	1 2 6	3 0	1 5 6
VICTORIA	82	26	1 5 11	2 8	1 8 7
ROYAL WATERLOO	39	31	1 6 1	4 10	1 10 11
GROSVENOR	32	29	1 6 0	1 8	1 7 8
CHELSEA FOR WOMEN	44	22	1 16 10	5 1	2 1 11
THE NEW	64	26	1 19 1	2 8	2 1 8
SAMARITAN FREE	44	24	1 12 3	3 2	1 15 5
SOHO FOR WOMEN	58	23	1 9 6	3 6	1 13 0
GENERAL LYING-IN	28	14	1 17 0	4 6	2 1 6
CITY LYING-IN	27	15	1 7 11	5 10	1 13 9
QUEEN CHARLOTTE'S	63	14	1 8 7	3 5	1 12 0
BRITISH LYING-IN	22	13	2 4 1	3 2	2 7 3
THE NATIONAL, Queen Square	148	62	1 7 8	4 0	1 11 8
WEST END NERVOUS	64	83	1 6 6	5 7	1 12 1
MAIDA VALE PARALYSIS ...	36	76	1 8 1	4 6	1 12 7
ROYAL EYE, Southwark	29	17	1 1 3	0 8	1 1 11
MOORFIELDS...	107	18	1 3 8	2 6	1 6 4
WESTMINSTER OPHTHALMIC .	28	13	0 18 11	1 7	1 0 6
WESTERN OPHTHALMIC ...	12	12	1 0 2	3 2	1 3 4
CENTRAL OPHTHALMIC ...	11	16	1 4 9	2 0	1 6 10
THE GORDON FISTULA	20	23	1 10 4	4 1	1 14 5

The "Cost per Bed per Week" (continued).

Name of Institution.	Average Number of Beds Occupied.	Average Stay of Each Patient.	Weekly Cost of Maintenance.	Weekly Cost of Administration.	Total Cost per Bed per Week.
			£ s. d.	s. d.	£ s. d.
ST. PETER'S	30	20	1 13 6	2 8	1 17 2
ST. MARK'S FISTULA	41	28	1 10 8	6 1	1 16 9
BROMPTON CONSUMPTION ...	419	106	1 3 8	1 4	1 5 1
MOUNT VERNON	192	51	1 4 7	3 5	1 8 0
THE CITY CHEST	120	46	1 7 5	6 7	1 14 0
THE ROYAL CHEST	59	30	1 8 9	3 1	1 11 10
GOLDEN SQUARE THROAT ...	27	14	1 16 2	3 4	1 19 6
THE CENTRAL THROAT ...	18	12	1 11 7	2 7	1 14 2
THE ROYAL EAR	16	13	1 6 1	1 4	1 7 5
LONDON THROAT	9	7	1 7 1	3 6	1 10 7
THE METROPOLITAN EAR ...	8	7	1 5 6	2 4	1 7 11
BROMPTON CANCER	92	38	2 13 10	7 7	3 1 5
MIDDLESEX CANCER	45	76	1 16 1	4 10	2 1
ST. JOHN'S SKIN	40	35	1 10 1	8 8	1 18 9
BLACKFRIARS SKIN	0	0	—	—	—
LONDON SKIN	0	0	—	—	—
NATIONAL HEART...	26	60	1 5 2	5 10	1 11 0

plete, or on whose accommodation there is such constant call that they cannot admit any but serious cases, often figure by comparison badly when durations of treatment are considered. Duration of treatment, however, is never a point which should ordinarily be considered, and it is doubtful whether it has any bearing whatever on the question of the weekly cost of maintenance, except so far as it may serve to show that the work done at any two institutions corresponds in character. A full review of other considerations relating to the duration of treatment will be found in the article on Energy and Output.

The table also shows not only the total cost per bed per week, but the way in which this is made up by the two factors—maintenance and administration. This is a point of essential interest, and all the more so because under the revised system the items which enter into the calculation are, in a general way, exactly the same. That is to say, the accuracy of the comparisons is not disturbed by sums such as rent, rates and taxes, and interest on accumulated debts being taken into consideration, nor by payments made on account of previous years. On glancing down the table it will be noted that there are several decidedly curious points in it; thus, it is perfectly easy to understand that there should be great variation in the total cost per bed, but no quite satisfactory reason at first sight suggests itself as to why the weekly cost of maintenance should vary so greatly as will be seen to be the case. On a little examination, however, a possible clue is revealed in the fact that, in a general way, there is considerable correspondence in the weekly cost of maintenance at hospitals of different classes. Thus, there is hardly a shilling difference between the expenditure on maintenance at the three hospitals devoted to nervous diseases. A complete solution of the question would probably be obtained by any one who, on the basis of the number of beds occupied and the average stay, worked out the weekly cost per bed on the classes of expenditure which are shown by the table on page 1508 to make up the total cost of maintenance.

For instance, while the expenditure per bed per week on the item of provisions might be found to be much the same at all hospitals, that on "surgery and dispensary" would probably be found to vary greatly according to the work done by the hospital. Similar "domestic charges," which include the expense of fuel and lighting, would usually be found proportionately higher in large institutions, with a great number of corridors and passages to keep warmed and lighted. Differences would also be found in the salary item, this including payment of pensions, a fortuitous amount which some hospitals, especially the smaller ones, are lucky enough to avoid almost entirely. Meanwhile attention may be directed to the remarkably low figures shown in this and other tables by the Italian Hospital. Its patients are very far from being all Italians, or even persons of any foreign nationality.

Considerable interest attaches to the column showing the amount spent on administration, and the ratio which this bears in each case to the expense of maintenance can easily be seen. It will be noted that the gross amounts vary very considerably, and that in a general way the figures support the view that £1 given to a large hospital goes further than £1 given to a small one, or, in other words, that large institutions are relatively less expensive than small ones, because a secretarial staff which suffices for the needs of an institution with fifty beds will suffice equally well for one with a hundred and fifty. The table, therefore, goes to prove the wisdom of the policy adopted by the King's Fund in trying to bring about an amalgamation between small institutions devoted to the treatment of special diseases. One point not brought out by this table should also be mentioned—namely, that whatever may be the sins and shortcomings of the managing committees of London hospitals, they do not err on the side of undue generosity towards their employees. At a great many hospitals, and more particularly the smaller ones, it is obvious from the detailed accounts that the salary paid to the secretary must be so small that it is difficult to understand how the services of men capable of performing duties such as are thrown upon a hospital secretary can be obtained at the figure.

THE COST OF OUT-PATIENT WORK.

THE table which begins on the first column of the opposite page is of particular interest, since it is the first of the sort which has ever been published. Hitherto all estimates of the cost of out-patient work have been made by multiplying some purely hypothetical sum, such as half a crown or two shillings, by a variously calculated number of out-patients. In this table, on the contrary, all the figures contained are the result of an exact calculation by the institution concerned—first of the cost of its out-patient department and then of the outlay on each patient treated. Moreover, at each institution steps have been taken to ensure that no person is reckoned as a new out-patient more than once in the year. An out-patient, it should be remembered, connotes, according to the revised system, any person who is treated by or at the hospital, but is not admitted to its wards. The table will be found to be divided into four columns, one giving the number of out-patients, a second the average outlay thrown upon the institution by each attendance of an out-patient, a third the average cost of each out-patient for his whole treatment, and the fourth the total cost to the hospital of its out-patient department irrespective of the number of patients.

The estimate of the cost of the department is made up of proportionate amounts of those general expenses of the hospital which come in the table on page 1491, under the headings "Surgery and Dispensary," "Salaries and Wages," "Establishment," "Domestic," and "Management and Finance." On adding up the last column of the present table and dividing the result by the total number of out-patients, the average cost of each out-patient at a London hospital irrespective of the length of his treatment will be found to be about 1s. 10d. Similarly by adding up the figures in the second column and dividing them by the number of institutions, the mean outlay at the same hospitals on an out-patient at each visit will be found to be sevenpence. In any such calculation, however, certain hospitals should be excluded. These are St. Bartholomew's, whose magnificent new out-patient department was only completed late in 1907, and which has not yet effected a separation between in-patient and out-patient expenditure; the Alexandra Hospital for Hip Diseases, which has only a few out-patients whose progress is supervised by nurses of the hospital in their own homes; the four lying-in hospitals, whose out-patients are mainly represented by women confined by midwives of these institutions in their own homes. The Blackfriars

Cost of Out patient Work.

Name of Hospital.	Number of Out-patients.	Average Cost of Each Visit.	Average Cost of Each Patient.	Total Cost of the Out patient Department.
		s. d.	s. d.	
ST. BARTHOLOMEW'S...	122 111	—	—	—
CHARING CROSS...	21,647	0 8	2 6	£2,674
GUY'S...	131,138	0 4	1 0	£6,754
THE LONDON	228,279	0 8	1 9	£19,921
KING'S COLLEGE	16,378	0 11	2 8	£2,206
MIDDLESEX	47,587	0 7	1 8	£4,021
ROYAL FREE	36,240	0 9	2 4	£4,125
ST. GEORGE'S	43,989	0 6	1 3	£2,747
ST. MARY'S...	48,677	0 8	1 9	£4,275
ST. THOMAS'S	81,578	0 8	1 10	£7,571
UNIVERSITY COLLEGE	50,978	0 11	2 4	£5,955
WESTMINSTER	21,175	0 8	2 5	£2,552
WEST LONDON	34,652	0 5	1 7	£2,706
GREAT NORTHERN	27,363	0 7	1 7	£2,031
METROPOLITAN...	37,740	0 10	1 10	£3,475
PRINCE OF WALES'S...	27,202	0 5	1 4	£1,746
POPLAR	47,042	0 5	0 7	£1,451
SEAMEN'S	27,188	0 7	2 0	£2,719
WEST HAM...	27,380	0 5	1 4	£4,011
BOLINGBROKE	7,453	0 6	1 7	£598
THE TEMPERANCE	27,538	0 6	1 4	£1,804
HAMPSTEAD	4,714	0 5	1 0	£231
THE GERMAN	26,564	0 7	1 8	£2,188
THE FRENCH	5,532	0 8	1 10	£496
THE ITALIAN	12,679	0 3	0 9	£505
GREAT ORMOND STREET	22,658	0 6	1 9	£2,901
THE EVELINA	13,587	0 10	2 3	£1,550
PADDINGTON GREEN	18,751	0 6	1 5	£1,382
THE BELGRAVE	12,638	0 6	1 6	£932
THE ALEXANDRA	97	0 10	11 10	£55
THE QUEEN'S	26,525	0 7	1 10	£2,428
VICTORIA	17,638	0 6	1 10	£1,714
ROYAL WATERLOO	7,679	0 11	4 6	£1,731
GROSVENOR	4,012	0 6	2 0	£401
CHELSEA FOR WOMEN	3,350	1 1	3 1	£517
THE NEW	7,621	0 5	2 0	£755
SAMARITAN FREE	4,501	0 10	2 10	£637
SOHO FOR WOMEN	3,700	1 0	4 3	£231
GENERAL LYING-IN	1,989	—	8 5	£810
CITY LYING-IN	2,772	1 0	10 0	£1,397
QUEEN CHARLOTTE'S	1,998	1 1	11 0	£1,098
BRITISH LYING-IN	928	0 9½	7 11	£365
THE NATIONAL, Queen Square ...	7,060	0 11	6 1	£2,147
WEST END NERVOUS	2,059	0 10	8 8	£892
MAIDA VALE NERVOUS	930	0 9	5 11	£288
ROYAL EYE, Southwark	27,517	0 6	1 3	£1,744
MOORFIELDS	49,776	0 6	1 3	£3,222
WESTMINSTER OPHTHALMIC ...	11,565	0 5	1 6	£345
WESTERN OPHTHALMIC	11,040	0 4	0 9	£408
CENTRAL OPHTHALMIC	12,803	0 5	0 11	£610
THE GORDON FISTULA	888	0 6	2 11	£133

The Cost of Out-patient Work.

Name of Hospital.	Number of Out-patients.	Average Cost of Each Visit.	Average Cost of Each Patient.	Total Cost of the Out-patient Department.
		s. d	s. d.	
ST. PETER'S	3,569	0 9	8 2	£1,460
ST. MARK'S FISTULA	1,641	1 1	4 0	£328
BROMPTON CONSUMPTION ...	6,588	1 1	8 0	£2,634
MOUNT VERNON	3,002	1 1	5 10	£874
THE CITY CHEST	9,493	0 9	5 0	£2,397
THE ROYAL CHEST	6,502	0 11	3 9	£1,233
GOLDEN SQUARE THROAT	10,980	0 8	2 11	£1,589
THE CENTRAL THROAT	9,993	0 8	3 3	£1,604
THE ROYAL EAR	3,034	0 9	3 3	£498
LONDON THROAT	3,645	0 6	2 [illegible]	£450
THE METROPOLITAN EAR	2,135	0 8	2 11	£266
BROMPTON CANCER	1,580	0 8	7 0	£560
ST. JOHN'S SKIN	7,190	0 11	4 8	£1,691
BLACKFRIARS SKIN	7,589	1 5	3 2	£1,266
LONDON SKIN	2,585	1 4	7 10	£1,014
NATIONAL ORTHOPAEDIC	3,037	0 8	2 1	£327
NATIONAL HEART	1,943	0 7	6 8	£665

Skin Hospital, whose wards have been closed during rebuilding, and the London Skin Hospital, which, owing to lack of funds, has also closed its wards, should likewise, perhaps, be excluded, since the causes stated naturally exaggerate the expenditure on out-patient work.

The figures placed against each of the other hospitals represent a fairly normal state of affairs, and it will be noticed that there are great variations both in the cost per visit and in the total cost of each patient, the highest and lowest figures in the first case being 4d. and 1s. 1d. At the large general hospitals there is less correspondence in the figures than might have been expected, but in some of the special classes of hospitals the correspondence between the figures is often very close. It will be seen that all the figures for all the nerve hospitals are high both as regards the cost of each visit and the cost of each patient. The explanation as regards the latter point is comparatively simple; the patients attend for long periods, and receive also a large supply of medicine, often of a rather expensive character, to last them between their visits. The converse is seen at the Poplar Accident Hospital, where the out-patient list is constituted for the most part by casualty cases who do not often attend more than once. By taking the figures throughout the table the general character of the out-patient work in each case can be roughly gauged by dividing the cost of each visit into the cost of each patient, for this will indicate the average number of times each patient has attended for treatment. Similarly, if it is desired to know the total number of attendances at the institution, this can be ascertained with approximate accuracy by dividing the average cost of each patient into the total cost of the out-patient department, the quotient being the total number of attendances. The estimate will be not perfectly correct, because in stating the cost of each patient in this table decimals of a penny have been excluded, and the figures raised or lowered to the nearest unit on ordinary statistical principles.

As this is the first year that most of the hospitals have attempted to make a precise financial division between their in-patient and out-patient work, it would be better not to take this table on a basis for final conclusions, but merely to regard it as offering a strong assurance that in the course of a few years quite an accurate standard for expense of out-patient departments may be established for hospitals of different classes.

THE FUTURE OF LONDON HOSPITALS.

THE table headed "Hospital Deficits and Balances," which occupies page 1514 and part of page 1515, is of different character to any of those which have preceded it, and demands special consideration. It might very well have been called "the hospital road to ruin," or "the road to rate-supported institutions." The institutions entered in it are placed in the same order as in the other tables, but in this case is inserted the number of beds available at each of them. This, for those who are not familiar with all the institutions mentioned, will serve as a clue in gauging their comparative size and in some degree their comparative importance.

The object of this table is to bring into relief an aspect of the general question of hospital enterprise on which little light is thrown by any of the preceding tables, and which possibly is even obscured by them. This aspect is all the more important, because a rough examination of the reports of a great number of provincial hospitals shows that the tale told by the table here published could be told not only of London hospitals but of hospitals throughout the kingdom. Among the various columns in the table one shows the gross receipts of each institution and another its net expenditure. The figures in the latter include only items such as properly can be passed into a revenue account or into an income and expenditure return drawn up in accordance with the rules of the revised system of accounts; hence expenditure on new buildings or on the extinction of old debt is not included in it. The column, therefore, in each case represents merely the actual necessary expenditure of the institution for its maintenance during the year 1907.

On the other hand, the first column in question, headed "Gross Receipts," includes in nearly all instances every pound received by the hospital, whatever the purpose for which it was collected or given. Hence in a large majority of cases these gross receipts include sums not legally available for ordinary expenditure, having been earmarked by their donors as to be invested for the maintenance of beds, or having been collected to pay for new buildings or for the extinction of old debt. Furthermore, in the majority of cases these gross receipts include legacies, and it has long been an axiom that legacies should not be regarded as income, but as capital.

For these reasons a third column becomes of particular importance, and is headed "Net Income." In this is entered the income of each institution from sources such as those to which, by general consent, all hospitals may rightly look for their revenue year by year. It is this column, therefore, which represents in each case the true income of the institution, and not the column headed "Gross Receipts."

In view of this essential and important difference between true income and gross receipts the table ends with two other columns, one of which shows the apparent position of the hospitals and the other their real position. The apparent position is that in which the hospitals are left when a comparison is made between their gross receipts for the year 1907 and their net expenditure for the same period; and their real position is that which is revealed when their true or net income is compared with their net expenditure during the same period.

Glancing down these two columns, which are subdivided in each case into surplus and deficit, it will be noted that in a majority of cases they differ very materially. Many hospitals last year were fortunate in the number and amount of legacies they received, and owing to this circumstance they figure in the column headed "Apparent Position" as having in many cases large balances to their credit. When, however, the column headed "Real Position" is examined it will be seen that the great majority of these apparently fortunate institutions had no real surplus, but a deficit, for their net expenditure greatly exceeded their true income.

In addition, it will be noted that at many important institutions even the apparent position is bad, a deficit being shown, and the real position only differs from it in being worse—a greater deficit being entered. Numerically the position is that whereas 50 hospitals out of 67 ended the year with an apparent balance of receipts over expenditure and 17 with an apparent deficit, the real position is just the reverse, the number who ended the year with a balance in hand being only 14, while the number which ended with a deficit was 53.

Nor is the importance of this fact lessened by the amounts of the deficits, for if the figures in the columns headed "Real Position" are totalled it will be found that in round numbers the savings of the fourteen hospitals in the surplus column only amount together to about £5 000, while the deficits of the 53 hospitals in the deficit column total to little short of £190,000.

In considering the import of this figure and the aspect of hospital maintenance which it reveals, it is to be borne in mind that the 68 hospitals comprised in the table are not the only hospitals in London, although they are the best known and the most important, and that, as has already been indicated, the position elsewhere in the country is not materially different. What can be the end of things if 53 hospitals in London alone exceed their income annually by such a vast amount? It is true, of course, that their actual indebtedness is not increasing by exactly the amount of the sums entered as real deficit, since a proportion of the indebted institutions have been able partly to stem the tide by using up legacies. But this is a practice which, though common, has long been held to be wrong even in connexion with hospitals, and of course in any other relation of life it would be regarded as the height of folly to treat as income fortuitous sums received under the wills of deceased persons.

Furthermore, the proportion of institutions which have exceeded not only their real income but have spent more than the whole of their gross receipts is not small; thus we find that even such an institution as St. Bartholomew's Hospital, which, greatly to its disadvantage, has been credited with being enormously rich, has an apparent deficit of some £5,000 and a real deficit of considerably more than that sum, while it seems probable that next year, when increased expense thrown upon it by its new out-patient department has had time to tell, the deficit will be even greater. Among other hospitals which have spent the whole of their gross receipts, and something over, are such important institutions as St. Mary's, the Seamen's Hospital Society, the Temperance, the City Lying-in, and the Hospital for Paralysis and Epilepsy in Maida Vale. Nor, it is to be remembered, in the case of those institutions whose gross receipts compared with their net expenditure show a considerable balance, are such balances really always available for the extinction of ordinary debt. Many of them have recently undertaken large building operations or are about to do so.

Another point of interest in the column headed "Real Position" is the ratio that the deficit bears to the ordinary annual income of institutions. In many cases the proportion is strikingly large. Thus, the London Hospital has exceeded its ordinary income by 25 per cent.; the Middlesex has exceeded its ordinary income by nearly 50 per cent.; St. George's by about 66 per cent.; the Royal Free by about 80 per cent.; University College by about 95 per cent.; and the same kind of remark might be made of many other important institutions, such as King's College, the Consumption Hospital, Brompton, and the Cancer Hospital in the same neighbourhood.

It can hardly be disputed that these facts are full of the gravest omen for the future. It is not as if last year were one of an exceptional character, for, though most hospitals had to complain of a certain falling-off in the amount of the annual subscriptions, this shrinkage was generally made up in other ways, and most hospitals received in 1907 quite as much in the way of true income as usual. The fact is that it has become a custom to manage hospitals in a fashion which in no other business relation would be permitted. Hospital managers seem to think it meritorious habitually to exceed their incomes. They make a definite trade of poverty, to such an extent that quite a large proportion of those which ever succeed in spending less than they have received take the greatest possible pains to conceal this fact from their subscribers in their published returns. Nor does the fact that they are habitually in debt year after year seem to many of them any reason for refraining from indulgence in ambitious building schemes and in enlarging their accommodation, thus increasing the calls made on their finances for maintenance purposes. [Indeed, there are several important institutions at the present moment which have sunk in buildings

The Deficits and Balances of London Hospitals.

Name of Hospital.	Nominal Number of Beds.	Gross Receipts.	Net Income.	Net Expenditure.	Apparent Position.		Real Position.	
					Surplus.	Deficit.	Surplus.	Deficit.
		£	£	£	£	£	£	£
ST. BARTHOLOMEW'S	670	71,704	70,679	76,769	0	5,065	0	6,090
CHARING CROSS	150	31,484	17,655	21,549	9,935	0	0	3,894
GUY'S	608	95,370	62,820	64,955	30,415	0	0	2,135
THE LONDON	914	101,584	81,628	101,791	0	207	0	20,163
KING'S COLLEGE	224	20,200	13,346	21,303	0	1,103	0	7,957
MIDDLESEX	297	31,212	21,680	32,946	0	1,734	0	11,266
ROYAL FREE	165	21,917	9,039	16,314	5,603	0	0	7,275
ST. GEORGE'S	350	89,606	26,031	43,027	46,579	0	0	16,996
ST. MARY'S	281	26,238	17,399	28,284	0	2,046	0	10,885
ST. THOMAS'S	561	76,341	60,681	65,131	11,210	0	0	4,450
UNIVERSITY COLLEGE	179	32,556	14,715	28,567	3,989	0	0	13,852
WESTMINSTER	213	30,138	20,379	19,956	10,182	0	423	0
WEST LONDON	160	14,947	10,247	13,984	963	0	6	3,737
GREAT NORTHERN	167	19,371	14,697	18,127	1,244	0	0	3,430
METROPOLITAN	113	20,027	11,500	14,653	5,374	0	0	3,153
PRINCE OF WALES'S	100	8,688	7,736	7,680	1,008	0	56	0
POPLAR	103	10,577	9,316	9,269	1,308	0	47	0
SEAMEN'S	300	20,123	18,783	22,099	0	1,976	0	3,316
WEST HAM	60	6,026	6,026	5,915	111	0	111	0
BOLINGBROKE	32	6,425	3,940	3,952	2,473	0	0	12
THE TEMPERANCE	100	7,469	6,854	10,460	0	2,991	0	3,606
HAMPSTEAD	60	2,759	2,664	5,120	0	2,370	0	2,456
THE GERMAN	130	12,156	10,977	11,869	287	0	0	892
THE FRENCH	70	8,032	5,873	4,961	3,071	0	912	0
THE ITALIAN	50	3,210	3,210	2,794	416	0	416	0
GREAT ORMOND STREET	360	22,127	14,317	22,171	0	44	0	7,854
THE EVELINA	76	11,072	6,176	6,727	4,545	0	0	551
PADDINGTON GREEN	46	12,754	4,110	4,947	7,807	0	0	837
THE BELGRAVE	38	4,493	3,996	4,554	0	58	0	558
THE ALEXANDRA	100	4,871	4,871	4,701	170	0	170	0
THE QUEEN'S	110	13,561	10,339	12,111	1,450	0	0	1,772
VICTORIA	101	14,283	7,927	8,687	5,596	0	0	760
ROYAL WATERLOO	46	5,888	5,639	5,512	376	0	127	0
GROSVENOR	36	4,135	2,455	2,967	1,168	0	0	512
CHELSEA FOR WOMEN	50	6,259	4,376	5,634	625	0	0	1,258
THE NEW	60	7,158	6,938	7,121	37	0	0	183
SAMARITAN FREE	51	5,295	4,189	5,040	256	0	0	851
SOHO FOR WOMEN	60	6,243	5,749	6,263	0	20	0	514
GENERAL LYING-IN	35	5,162	5,162	5,680	0	518	0	518
CITY LYING-IN	60	5,294	5,294	6,340	0	1,046	0	1,046
QUEEN CHARLOTTE'S	69	5,778	5,248	6,452	0	674	0	1,204
BRITISH LYING-IN	22	2,828	2,828	3,385	0	557	0	557
THE NATIONAL, Queen Square ...	160	20,203	13,074	15,441	4,762	0	0	2,367
WEST END NERVOUS	70	7,814	5,444	7,382	432	0	0	1,938
MAIDA VALE PARALYSIS	40	3,050	2,568	4,042	0	992	0	1,474
ROYAL EYE, Southwark	42	5,820	3,001	4,003	1,817	0	0	1,002
MOORFIELDS	138	17,067	10,074	12,729	4,338	0	0	2,655
WESTMINSTER OPHTHALMIC ...	40	4,332	2,981	2,457	1,875	0	524	0
WESTERN OPHTHALMIC	16	3,387	1,197	1,721	1,666	0	0	524
CENTRAL OPHTHALMIC	26	4,432	1,932	1,953	2,479	0	0	21
THE GORDON FISTULA	26	2,106	1,938	2,301	0	195	0	363
ST. PETER'S	32	4,278	3,818	4,718	448	0	0	900
ST. MARK'S FISTULA	48	4,692	3,818	4,430	262	0	0	612

The Deficits and Balances of London Hospitals (continued).

Name of Hospital.	Nominal Number of Beds.	Gross Receipts.	Net Income.	Net Expenditure.	Apparent Position.		Real Position.	
					Surplus.	Deficit.	Surplus.	Deficit.
		£	£	£	£	£	£	£
BROMPTON CONSUMPTION ...	446	39,285	17,035	32,904	6,381	0	0	15,869
MOUNT VERNON	220	16,164	15,889	16,112	52	0	0	223
THE CITY CHEST	176	16,319	10,628	13,399	2,920	0	0	2,771
THE ROYAL CHEST	80	7,655	4,580	6,297	1,358	0	0	1,917
GOLDEN SQUARE THROAT ...	31	5,541	5,041	4,819	722	0	222	0
THE CENTRAL THROAT	24	5,559	3,279	3,448	2,111	0	0	169
THE ROYAL EAR	20	1,764	1,764	1,370	0	106	0	106
LONDON THROAT	14	1,590	1,590	1,452	138	0	138	0
THE METROPOLITAN EAR ...	13	1,084	1,084	997	87	0	87	0
BROMPTON CANCER	110	23,342	8,765	15,486	7,856	0	0	6,731
MIDDLESEX CANCER	45	9,771	5,321	5,069	4,702	0	252	0
ST. JOHN'S SKIN	40	7,042	3,966	6,412	900	0	0	2,446
BLACKFRIARS SKIN	10	1,251	1,230	1,266	0	15	0	36
LONDON SKIN	8	1,189	1,189	1,014	175	0	175	0
NATIONAL ORTHOPAEDIC ...	87	8,650	7,226	7 270	1 280	0	0	44
NATIONAL HEART	26	3,923	2,273	2,916	1,007	0	0	643

huge sums which for all practical purposes are at present wasted. The new wards remain closed because the hospital's credit for all but inevitable needs is exhausted, and their managers, rash as they are, do not dare to admit patients to these wards.]

The leading and most successful exponent of this method of hospital administration is the London Hospital, which, thanks to the energy and qualities of the officials whom it is at present fortunate enough to possess, is able to carry it out with comparative success. But it is a dangerous game, which obviously cannot be played with anything like the same freedom by other institutions; and even the London Hospital, which in the last ten years or so has added to its liabilities by increase of its beds and multiplying its departments, is not unlikely to find itself in extreme difficulties should its present managers give place in a year or two's time to others less capable of conducting affairs on the present principles.

The net result, therefore, is not only that nearly all hospitals are spending every penny they receive from every source, and for whatever purpose intended, and exceedingly few are adding anything to their invested capital, but the aggregate annual deficit is constantly increasing. It looks, therefore, as if within a measurable number of years a large proportion of the hospitals in the metropolis, and indeed of those throughout the kingdom, will find themselves in the most serious difficulties, being burdened with a hopeless load of debt. In that case the State will certainly step in, and rate supported institutions will take the place of voluntary hospitals. The present position of the London hospitals and the future before them is all the more regrettable because it has not been brought about by any tightening of the public purse strings; on the contrary, the sums received last year, by way of ordinary and extraordinary income, special donations, legacies, and the like, by many institutions were exceedingly large, and, as was shown by Sir Henry Burdett recently, the flow of money towards the hospitals during the past ten years has in no sense slackened.

The exact sums that each institution received in the way of extraordinary income last year will be found on reference to page 1506, but even the table at present under consideration reveals to a considerable extent what large sums the London hospitals have received. Thus, the gross receipts of many hospitals exceeded their net expenditure by very large sums; at Guy's, for instance, by £30,000, and at St. George's by £46,000, and other institutions in proportion. It is in this direction that salvation lies. If all the London hospitals with a deficit on their year's working reduced forthwith their annual expenditure to the sum which they may fairly expect to receive in the way of ordinary income, the surplusage of gross receipts would in most cases and in a few years' time render them comparatively independent.

Such a step would no doubt mean that none of them could indulge in further luxuries in the way of new buildings, and in most cases a greater or fewer number of beds would have to be closed for the time being. This would in many ways be regrettable, but the net outcome would make the step thoroughly justifiable, for each hospital would end its period of restricted work free of debt and with an assured income from investments behind it. This is all the more desirable, because even of the sources of income on which hospitals may rightly depend for their annual maintenance many are of the most fortuitous description, and the probability is that in the early future the income from them will be much less than has hitherto been the case.

HOSPITALS AND TAXATION.

A WIDESPREAD belief exists in this country that hospitals are exempt from taxation. The origin of this belief is probably to be traced to the natural feeling that charitable institutions ought not to be taxed; and this sentiment, coupled with the knowledge that some exemptions are in fact enjoyed by charities, has resulted in a good deal of misapprehension as to the true position of hospitals and similar institutions in relation to the revenue. In this article it is proposed, after some preliminary general observations, to deal separately with the different taxes that directly or indirectly affect hospitals, and to consider the extent of the exemptions from each tax enjoyed by these institutions.

PRELIMINARY OBSERVATIONS.

In order to obtain a clear view of the question to be examined, it is necessary to refer briefly to equitable considerations as well as to the strictly legal position. The claims of a hospital on grounds of equity to exemption from taxation are the claims of all charities. It is asserted that the property and revenues of charities, being devoted to the relief of the poor, or other philanthropic purposes, and producing no profit to individuals, except those who are themselves the objects of charity, their funds, which are too often insufficient to meet legitimate calls upon them, should not be depleted by the exactions of the tax-gatherer. Or, to put the matter more briefly, public institutions which benefit the community generally should be freed from public burdens. On the other hand, the arguments for taxing hospitals are not without weight. These arguments were stated with great force by Mr. Gladstone, in 1863, when he was proposing to charge with

income tax the revenues derived by charities from their endowments. Mr. John Morley, in his *Life of Gladstone*, summarized the position thus:

What is their exemption but the equivalent of a gift to them from the general taxpayer? He has to make good the sum that ought in reason and in equity to have been paid by them, as by other people, to the Government that protects them. Why should this burden be compulsorily cast upon him? What is the quality of an endowment for a charitable purpose that constitutes a valid claim for such a boon?

This side of the question may be referred to here in a little more detail, because it helps to explain why hospitals are subjected to certain taxes. In principle the argument that the general taxpayer has to make good the amount of any relief allowed to charities applies both to imperial and to local taxation, but the effect of the exemption is much more apparent in the case of the latter than in that of the former. Take as an illustration the case of a small country parish containing a large mansion, two or three farms, and a few cottages, and suppose that the owner of the mansion decided to turn it into a hospital and to hand it over to a charitable trust. The parochial expenses would still have to be met by the inhabitants of the parish, so that the exemption of this one large building from local rates might not improbably increase the burden of other property in the same rating area by 50 per cent. or more. The same result might follow from the exemption of any large property from land tax, because, although this impost is a national and not merely a local tax, the annual sum payable by each parish is fixed, and has to be made up by an equal rate on all taxable property situate within the parish. The exemption of any single building or class of building from a national tax, such as the income tax, would not be felt to the same extent, because the loss of revenue would be spread over the whole body of taxpayers, and the increase in the burden of any individual would generally be inappreciable.

Leaving this question of the arguments for and against the taxation of hospitals, we come to the existing state of the law on the subject. In dealing with this it is desirable to start with an unobscured appreciation of the methods usually followed by the parliamentary draftsman in preparing the clauses of a taxing bill. The charge is laid on all classes of property alike, whatever their character may be, and irrespective of the purposes for which they are used; and is then limited, as far as is deemed expedient, by specific exemptions of particular properties or classes of property. It follows that neither the fact that revenues have to be applied only to charitable purposes, nor the fact that property is occupied by a charitable institution, confers any title to relief from taxation, unless there is in the Act imposing the tax, or in some subsequent enactment, a specific exemption for charities. Speaking broadly, it may be said that hospitals are in general liable to be charged with local rates in common with other property, but are specifically exempted from imperial direct taxes.

PARTICULAR TAXES AFFECTING HOSPITALS.

The principal taxes affecting hospitals are:

(*a*) Income tax;
(*b*) Inhabited house duty;
(*c*) Land tax;
(*d*) Customs and excise duties, and establishment licences;
(*e*) Stamp duties;
(*f*) Local rates and dues.

Hospitals and Income Tax.

Under the Income Tax Acts hospitals enjoy a special and extended exemption, considerably wider than that applicable to charities generally. The "public buildings, offices, and premises" belonging to a hospital, and not occupied by any individual officer personally liable to the tax, are relieved from income tax, Schedule A. An allowance is also made for "the repairs of any hospital . . . and of the gardens, walks, and grounds for the sustenance and recreation of the hospitallers . . . repaired and maintained by the funds of such hospital," but this clause is of little practical value and is, in fact, almost inoperative. The buildings occupied by charitable institutions other than hospitals, public schools, almshouses, and certain literary and scientific institutions, are not exempt from income tax.

The income of hospitals from endowments is relieved from taxation under an exemption applicable to all charities alike. This exemption extends to rents and profits of lands, and to annual interest and dividends, so far as they are applied to charitable purposes. Owing to the system of collecting the tax in force in this country, under which income is charged at its source, as far as possible, without regard to the circumstances of the persons ultimately entitled to it, a considerable proportion of the total revenues of hospitals from endowments is taxed in the first instance, but repayment is made on application to the authorities at Somerset House.

Notwithstanding the comprehensive exemptions enumerated above, a hospital may, in certain circumstances, be chargeable with tax on income received. This would happen in any case in which a trade or business of any kind could be said to be carried on, the profit being taxable even though applicable solely to charitable purposes. The leading case on the subject is The Trustees of Psalms and Hymns *v.* Whitwell, in which it was held that profits derived from the sale of a hymn-book, and distributed under a trust deed among widows and orphans of missionaries, were chargeable with income tax. "I think," said Mr. Justice Stephen, in delivering judgement in this case, "that the intention of the Legislature was to exempt the income of charitable bodies from the income tax; but I do not think they have done it." It is not often that a hospital for the sick would come within the scope of this charge; but a liability would in strictness arise from the sale at a profit of, for example, goods made by the inmates of asylums for the blind, cripples, etc. The income-tax authorities, however, have sometimes shown that they possess a blind eye in such cases.

The general exemptions from income tax for hospitals being as extensive as they are, the only question that has come prominently before the courts in connexion with their liability is that of the meaning to be given to the word "hospital" for the purposes of the tax. In the case of Needham *v.* Bowers it was held that a lunatic asylum founded by charitable donations but supported by receipts from patients, some of whom paid more and others less than the cost of their maintenance, was not exempt as a hospital, Mr. Justice Charles stating that "the language in the Income Tax Act must be restricted to hospitals supported wholly or in part by charity . . . and does not extend to a hospital which is self-supporting." On the other hand, the Nottingham Lunatic Hospital, which was founded by charitable donations and substantially supported by funds derived from charitable sources, was held to be exempt, although the receipts in a particular year from patients and sales of farm produce were in excess of the expenses. In this case Baron Pollock stated that the exemption is intended to apply to "any institution that is practically of the character of a hospital, being of an eleemosynary character." In a more recent case, The Mary Clark Home *v.* Anderson, Mr. Justice Channell, in an interesting judgement, traced the meaning of the word "hospital." He pointed to an ancient meaning signifying "little more than a resting-place, or, at any rate, a guests' place." In the time of Lord Coke, "it clearly included institutions for the relief or alleviation of mere poverty, and certainly of the aged." "At the present time, the word 'hospital' in all ordinary parlance . . . is used solely in reference to an institution for the relief of the sick, either for physical ailments or physical injuries."

Hospitals and the Inhabited House Duty.

The duty on inhabited houses was first imposed in 1778, and the Act contained an exemption for "any hospital or house provided for the reception and relief of poor persons." This phrase, in the slightly altered form, "any hospital, charity school, or house provided for the reception or relief of poor persons," was adopted in the Act of 1851, under which the tax is now levied. An unrepealed, but practically obsolete section of the House Tax Act, 1803, requires managers of hospitals claiming exemption from the tax to give notice to the assessor, presumably with the object of enabling that officer to inquire into the claim annually before it is allowed. Mr. Justice Channell has expressed the opinion that the income tax and the house-tax exemptions for hospitals are identical. The cases quoted above may therefore be taken as applicable to both taxes, as far as they go, and have in fact been so treated. The extent of the exemption of the buildings of a hospital was raised in the case

of Jepson *v.* Gribble, where it was held that a detached house within the boundary of a lunatic asylum, provided for the use of the resident medical superintendent, was included in the exemption from house tax of the asylum itself. The same view was taken in a later case.

Hospitals and Land Tax.

The land tax was made annual and perpetual in 1798, and in its present form dates from that year. It is an unequal and little-understood tax, producing a small and diminishing revenue, and probably doomed before long to be swept out of existence by a reforming Government. It has two peculiarities: (1) A power of redemption is given to the taxpayer, and (2) the amount of revenue to be raised annually was settled in 1798, and divided among the parishes of Great Britain according to their relative wealth and importance at that time. Since 1798 the annual quota payable by each parish has been a fixed sum. As towns like Liverpool and Manchester were in 1798 little more than villages, while Norfolk and Suffolk were rich agricultural counties, the unfairness of continuing to the present time the apportionment then made can easily be imagined.

The Act of 1798 exempts from land tax the sites of all hospitals, or any buildings within the walls or limits thereof. The same Act also contains special exemptions for "any houses or lands which, on or before the 25th March, 1693, belonged . . . to Christ's Hospital, St. Bartholomew's, Bridewell, St. Thomas's, and Bethlehem Hospitals . . . and any other hospital or almshouse . . . for . . . any rents or revenues which on or before the 25th March, 1693, were payable to the said hospitals." Thus all lands, rents, and revenues belonging to a hospital which were assessed in 1692 remain liable to assessment, but lands, etc., which were not then assessed were made exempt. These provisions are quaint, and at first sight a little bewildering, but the explanation is historical. The references to 1692 and 1693 are due to the fact that the Acts of those years placed the land tax on something approaching a modern basis.

With regard to the meaning of the word "hospital" for land-tax purposes, Baron Channell stated in Lord Colchester *v.* Kewney that the word must be taken in a popular sense. "We understand rather an institution for the relief of the sick or aged, than for the maintenance or education of children." It was decided in this case that the exemption in the Land Tax Acts does not apply to the sites of hospitals which have become such since 1798. This decision was explained in Cox *v.* Rabbits, where it was laid down that the exemption is an exemption of the land itself, and remains unaffected by the removal of the hospital to another site. In other words, specific lands which belonged to hospitals in the year 1798 were exempted, but other lands which subsequently became the sites of hospitals did not thereby come within the scope of the exemption. The principle underlying these decisions is to be found in an appreciation of the system of fixed quotas of tax payable by each parish. If lands became the site of a hospital after 1798, and were thereupon relieved from tax, the charge upon the rest of the parish would have to be increased to make good the deficiency. This was held not to have been the intention of the Legislature.

Customs and Excise Duties, and Miscellaneous Charges.

There are no special exemptions under these heads in favour of hospitals, these (with unimportant exceptions) being liable to pay the duties in the same circumstances as individuals. Customs and excise duties are a form of indirect taxation, and are paid by consumers as part of the price of the article taxed, frequently without their knowing, or at any rate realizing, that a duty is being paid at all. Establishment licences include licences for carriages, male servants, and armorial bearings, all of which may affect hospitals in certain circumstances. The liability is not doubtful and has seldom been contested. The question was, however, brought into prominence recently in connexion with a prosecution of the South Devon and East Cornwall Hospital for keeping a male servant without a licence. In this case the hospital authorities were held liable to take out a licence for a hospital porter, it being pointed out that there was no exemption by law in favour of charitable institutions. The position as regards stamp duties is much the same. If the officials of a hospital have occasion to execute an instrument requiring a stamp, they are liable to pay the appropriate duty. An exception is made in the case of receipts for subscriptions and donations to hospitals, it being the practice of the Inland Revenue Department to allow these documents to be given unstamped.

Local Rates.

The taxes already dealt with have one feature in common—they are one and all taxes imposed by the Imperial Government for national purposes. Local rates, on the other hand, are imposed by parochial authorities in order to meet local expenses, and the Imperial Government, while retaining certain powers of control and audit, exercised mainly through the Local Government Board, takes no direct part in their collection and administration. Questions of law may, of course, be brought before the courts in the usual way.

The exemptions from liability to local rates extend to Crown property, churches and chapels, certain literary societies, Sunday and ragged schools, etc., and from this list it might be supposed that an exemption would be found to exist for charitable institutions. Indeed, prior to 1865 it was generally thought that charities were not rateable, the Courts having decided in 1760 that St. Luke's Hospital was exempt. This case was quoted as a leading case on the subject for more than a century, but was definitely overruled in 1865 by the House of Lords. The question then directly in dispute was the liability of the Liverpool docks to be rated, exemption being claimed on the broad ground that property occupied and held for the public, from which no individual could benefit, except as the object of charity, was exempt. The exemption of hospitals in the St. Luke's case was based on the same ground, the contention being that a hospital must be regarded not only as a charity, but as a public charity; that there is no beneficial occupier except the public, and consequently no person liable to be rated in respect of the institution. In the Liverpool cases (for there were two of them) the House of Lords made an exhaustive examination of the legal aspects of the question, and decided almost unanimously that the title to exemption could not be maintained. Their lordships held that there was no exemption from rating on account of the public nature of the interest, and that the trustees, or other governing body of a public institution or corporation, must be considered as taxable on its behalf, as the legal occupiers of its property. The liability of a hospital to be rated to the relief of the poor was directly in issue ten years later, when the question was definitely settled in favour of the taxing authorities, St. Thomas's Hospital being held to be rateable.

Having established a legal right to rate hospitals, however, many local authorities have exercised their powers in a forbearing manner. The actual amount payable in respect of any particular rateable subject depends on its annual value, and rating authorities have been content to rate hospitals and similar institutions on sums considerably below their full values. The result is that while the legal liability to pay rates is maintained, these institutions are frequently treated in a generous manner as compared with other buildings in the same area when the valuations are fixed, a settlement which may, perhaps, be considered to do substantial justice to all parties concerned.

CONCLUDING REMARKS.

A person studying for the first time the position of hospitals and charities in relation to the revenue would probably regard the state of the law as paradoxical. It certainly cannot be defended on strictly logical grounds, and the history of the subject must be looked to for an explanation. Different taxes have been separately imposed at long intervals of time, and considerations that have been looked upon as weighty at one time have been treated as unimportant or ignored altogether at another. In some cases the intention of the Legislature to grant an exemption has not been carried out in the Act which is supposed to embody its wishes; in others an exemption originally conferred remains, but in a different form from that which it took at first. In hard cases the practice is in general more lenient than the strict law. The result is a mixture of liability and exemption based on no single principle, but commanding a fair measure of acceptance as a reasonable compromise between opposing theories of taxation.

GERMAN HOSPITALS AND HOSPITAL ADMINISTRATION.

PART I.

A COMPARISON.

IN recent years a great deal has been said in this country, and especially in the metropolis, about the abuse of hospitals. Not only has the vexed out-patients question been a source of serious difficulty and irritation, but the whole question of the existence of hospitals has been the subject of discussion. Among the more pregnant issues at stake may be mentioned the questions as to who is entitled to utilize hospitals, as to what the subscribers are paying for and how much they are paying for it, and as to how far the hospital surgeon or physician is entitled to benefit personally from his post. It is clear from the modern history of our great metropolitan hospitals that the position would be much improved if a concise idea were formulated as to how an ideal hospital should be instituted and maintained. If those in authority in the hospitals, as well as those who assist to maintain them, would consider the essentials of these institutions, reforms might be introduced which would lead to a sounder financial system and more efficient working than has hitherto been attained. In this issue we have endeavoured to give them some material likely to be helpful towards this end.

In matters of this kind it is ever well to look around and inquire how our neighbours have solved problems which in all civilized countries are essentially the same, and to attempt to learn lessons from the experience and foresight of other countries, where some of the difficulties which beset our institutions have been overcome. In casting a glance over the conditions of hospitals in other countries, it will be found that certain of these difficulties have been solved more successfully in Germany than in any other country. Whether the solutions reached in Germany justify the adoption of similar methods in this country is therefore a matter worthy of careful consideration. It is for this reason that it seems desirable to give an account of the principles of hospital provision and administration, and the general arrangements for medical relief obtaining in Germany.

Regarded in the abstract, hospitals may be defined as places where the poorer section of society receives skilled medical and surgical treatment, where the sick are housed, nursed, and fed, and where the chief advances in medical sciences are first introduced.

The patient in a hospital may contribute nothing, or he may pay a sum within his means, but one which cannot be regarded as in any sense a real payment for what he receives. If he receives all the advantages for nothing, it cannot be easy to close the doors of the hospital to the man who can afford to pay elsewhere for an equivalent. In this way one of the chief difficulties arises where the hospitals are purely charitable institutions in the strict sense.

Another aspect of the hospitals which must be taken into account is the relation of the hospital patient to the student, for one of the great functions of hospitals as institutions is to advance the science and art of medicine through their association with the teaching of students. Provided that the susceptibility of the patients is considered, and that the teachers and pupils are actuated by humane feelings, the price asked from the patient for the advantages of hospital treatment is not a big one, and few are found who do not readily accept this as a necessary part of the hospital régime. Those who still object to being "dressed" or "clerked" by students must therefore seek treatment elsewhere.

But in this country fresh difficulties are encountered as soon as the suggestion is made that the patient should go for treatment elsewhere than to a hospital. The rich, naturally, can obtain all they require; but the man belonging to the great middle class with a strictly limited income often feels the pangs of want when serious illness overtakes him. The doctrine usually accepted is that the poorer classes are properly entitled to enjoy hospital benefits; but if the out-patient departments render them aid for minor ills, while the wards receive them in case of severe illness, the incentives to thrift and providence disappear, and the whole race becomes demoralized and pauperized. Turn the matter this way or that, the solution is always the same: As long as the man earning a small wage does not avail himself of the friendly societies or other form of insuring clubs, so long must the tendency be towards pauperization. The crux of the hospital question is therefore to be sought in the want of a consistent co-ordination between the insuring societies and the hospitals, together with a mistaken idea of the nature of true charity.

In attempting to draw comparisons between the hospitals of Germany and of England, it is necessary to point out that the determining factors in the methods of management, administration and working of hospitals are not identical in the two countries; ample allowance must be made for these fundamental differences. Historically, the evolution of the hospital question in Germany has been largely influenced by the fact that up to a few years ago the country was not rich, and that charitable support extended to the poorer classes has continued to be meagre. On the other hand, the State has realized that while it must be prepared to extend its monetary and other support to the necessitous poor, it would have little difficulty in legislating for the self-support of the mass of the working classes, since the population has not been deeply imbued with the idea of personal freedom. In other words, the German citizen is accustomed to being compelled to do many things, and does not attach any high value to freedom, if this freedom is unaccompanied by a sufficient supply of daily bread. A certain amount of grumbling and growling because each member of the poorer classes—and of the richer classes too—has to make some sacrifices for the State is no doubt to be heard, but on the whole the intelligent German recognizes the utility of these State provisions and accepts them as the best solutions of the difficulties.

Hospitals in Germany are for the most part not charitable institutions. That is to say, the hospitals are maintained partly by funds derived from what the patient pays or what is paid for him by the societies in which he has to insure, and partly by money furnished by the State, municipality, and Poor Law. A few, it is true, have been founded as charitable institutions, but even in these free treatment is not given if it can be avoided. In order that a clear idea of the various hospitals may be gained it will be more convenient to deal with each class separately, to describe the nature of each class of institution, what their functions are, and how they are administrated.

STATE-AIDED HOSPITALS—UNIVERSITY CLINICS.

Attached to each university one or more hospitals are to be found. These hospitals contain departments for everything pertaining to the science and practice of medicine. Wards for medicine, surgery, gynaecology, obstetrics, nervous diseases (including psychiatric disorders, see p. 1534), and all the other special departments; the out-patient departments belonging to each "clinic," operating and demonstrating theatres for teaching purposes, in each department; clinics for infectious diseases, well isolated and under special regulations with regard to the admission of students; *post-mortem* rooms, special pathological departments, bacteriological laboratories, biological laboratories, and a full equipment for the practice and instruction of the theoretical side of the sciences; and, lastly, the administrative departments, etc.

The functions of the university hospitals are to provide opportunities for students to learn how to become efficient doctors and to offer the patients the best forms of treatment of which the present state of medicine admits. In order to fulfil these functions to the best advantage of all concerned, it has been found necessary so to administer the hospitals that the wards and out-patient departments always have a sufficient number of cases suitable for hospital treatment, that the clinical and laboratory arrangements are adequate for all purposes, and that the surroundings and household arrangements are attractive, and the cost to the patients low. That this is achieved there is no doubt.

For the purpose of illustration it may be as well to limit the remarks to the Charité, a large hospital connected with the University of Berlin. This hospital accommodates 1,330 patients in its wards, excluding infants. In the course of the year some 15,000 persons are admitted to the various departments, while about 2,500 infants are



Fig. 1.—Rudolf Virchow-Krankenhaus : Plan.

born in the lying-in ward. Every patient must either himself pay for his maintenance in the hospital, or he must be paid for by his insurance society or by the municipality. The city of Berlin claims free treatment for some of the patients who would otherwise be thrown on its purse; this claim covers the cost of keep and treatment for 100,000 days a year. Apart from this, a few free beds are reserved for patients whom the surgeons and physicians desire to keep for a long period under observation, in spite of the fact that nothing more can be done for them, and that consequently no body or society is willing to continue to pay. Most of these patients are suffering from rare diseases, and are so impressed by the interest attaching to their special maladies that they are

glad and willing to stay. All the rest of the beds are paid for.

The ordinary fee is M. 2.50 a day. Persons wishing to have special comforts pay either M. 9.00 (Class I), or M. 6.00 (Class II) a day. Any person accompanying a patient is charged M. 6.00 a head a day. The charge for special comforts for insane patients and those suffering from nervous diseases in Class I is M. 10.00.

In addition to the payments made by or for the patients, the sources from which the yearly expenditure is met are the State contribution, the income derived from invested property, and the receipts from the sale of waste products, and other minor sources. In 1905 the amount required from the State to keep the Charité up was M 740,496.46, or about £37,000, out of a total of £86,116.

The hospital consists of ten clinics, ten policlinics or out-patient departments, one branch clinic, and one pathological institute. Under the same medical management as the I and II medical clinics, but on a separate site, are the infectious diseases wards and the tuberculosis section. In connexion with the out-patient department for skin and venereal diseases is an institute for light treatment. In each department there are always assistants on duty for the examination of applicants for admission. Any person who is found after examination to be medically suitable for admission, no matter what his social position may be, is admitted; but when a person can afford to pay for it, the assistant attempts to induce him to enter into the I or II Class. Applicants suffering from complaints considered not to justify admission, and those who can be equally well looked after in a private nursing home, are refused, though first aid is always rendered. The number of persons refused admission varies between 3,000 and 7,200 a year. An ordinary patient, that is to say, a patient in Class III, is required to pay M.2 50 a day, or failing means to do this, to refer the hospital authorities to the club or insuring society responsible for such payment. When no funds are available for the purpose, the municipality is called upon to pay, and it is for it to find out whether the patient should be paid for out of the rates or by some other means; this point will be discussed when the subject of the Poor-law administration is dealt with. The police, the municipality, the clubs and insuring societies, the State (including the military and naval authorities) and certain charitable societies can claim admission for patients, provided that the medical condition justifies it.



Fig. 2.—Rudolf Virchow-Krankenhaus. One of the buildings in the Central Walk.

MUNICIPAL HOSPITALS.

Unlike the university hospitals, the municipal hospitals only recognize one class of patient. The payment required for each patient is M.2 50 a day. No further charges are made. The administrative department has nothing whatever to do with the question of means or no means. If the case is found to be suitable for hospital treatment, the patient is admitted, and the municipality has to pay and recover the amount where provision has been made for illness. An obviously well-to-do person would be asked, no doubt, when applying for admission, if he or she could not afford to go to a private clinic or to a hospital where first or second class patients are accepted, but actual experience has shown that few persons apply for admission who should go elsewhere. It is considered that persons belonging to the large middle class, with incomes which leave only a small margin after all necessities have been paid for, are justified in entering a municipal hospital and paying M.2 50 a day.

The Rudolf Virchow Hospital may be selected as an example of a municipal hospital, and at the same time it may well serve to illustrate the German ideal of what a hospital should be. Some university professors and certain other critics have found fault with some of the arrangements and with the cost of the erection of the institution. Professor König, who is justly proud of having been a prime mover in the construction of the surgical clinic of the Charité, considers that the villa or pavilion system is a great mistake as far as surgery is concerned, especially with regard to the transport of patients to and from the operating theatres. But the disadvantage is largely, if not wholly, overcome by connecting corridors, and the gain in light, air, and aesthetic symmetry, and the possibility of complete isolation more than counterbalance any objection on this score. It appears to the visitor that the German idea of a municipal hospital is to make a beautiful garden and to place picturesque villa-like buildings in it. It is, therefore, not surprising that patients in the Rudolf Virchow Hospital frequently find the place so bright, picturesque, and comfortable that they are loth to leave it when recovery has taken place.

The municipality is responsible for the cost of upkeep of this as of the six other Berlin municipal hospitals, but it receives contributions for water, heating, and lighting from some of the officials, a contribution from the Prussian State for the upkeep of the infectious institute—in this instance the Royal Institute for Infectious diseases, Koch's Institute—certain payments for burial and other small items; the balance is found by the municipality. In issuing annual accounts the municipality deducts the amounts recovered from the patients, clubs, and other sources, and the balance is shown as its actual contribution for the upkeep of the hospital. This subject will be considered in detail in a subsequent paragraph.

The Rudolf Virchow Hospital was built by L. Hoffmann and opened as a memorial of the great pathologist in 1906. It stands in grounds covering an area of some 37¼ acres, and consists of sixty-two separate buildings. The disposition of the several parts is shown in the general ground plan reproduced at p. 1519. The sum expended on the hospital was M.19 000,000, or about £930,000. It possesses 2 000 beds, so that the cost of erection works out at about £465 a bed. This sum cannot be considered too high if the class of hospital, the completeness of each department, and the excellence of the equipment is taken into consideration. Many hospitals in this country have cost more per bed and have less to show for the money. The general arrangements offer many striking characteristics. About two-thirds of the whole area is laid out as gardens, walks, and park; the hospital has its own waterworks, and the water tower is a conspicuous object from many points of view. It possesses also a central heating and electric lighting installation, a large and excellently

arranged central kitchen, where every article of food for the patients and for the staff is cooked; a laundry with clothes store, work-shops, and complete disinfecting apparatus. The administrative block is separate, and contains exceptionally good offices; in close connexion with it are the houses and rooms of the "directors," the senior gynaecologist and obstetrician, the assistants (house-surgeons and physicians), and the "voluntary" assistants with positions and duties akin to those of clinical assistants. In every second villa one of the assistants is housed, so that at all times each department has a qualified man at hand. The quarters of the work-people employed in each special administrative department—in the laundry, for instance—are situated in the building of that department. There is a special nurses' department well adapted to its purpose, and perfectly kept.



Fig. 3.—A Ward.

The directors are three in number, a managing director and two medical directors. The managing director is Geh. Reg.-Rat Dr. Ohlmüller, a medical man with very extensive municipal, administrative, and hospital experience. He is also well known as an expert hygienist. He is responsible for the whole of the administrative working of the institution, while the board of three is responsible for the good management of the hospital as a medical institute. Professor Hermes and Geh. Med.-Rat Professor Goldscheider fill the two posts. They both take part in the clinical work of the hospital. The physicians and surgeons of the various departments, with the exception of the obstetrician, do not live on the premises. Each is practically responsible for his own department. In their absence the assistants assume the responsibility. In the same way, the head engineer is master of his little world, just as the matron is supreme as far as the conduct of her nurses is concerned.

The hospital is divided into a medical department, a surgical department, a gynaecological and obstetric department, a department for skin and venereal disease (the only department not constructed on the villa or pavilion system), one for infectious diseases, an ophthalmic, a throat, nose, and ear department, and a bacteriological, chemical, and pathological institute, which is quite separate from the Royal Institute for Infectious Diseases. There is a small department for insane patients, which is the least well equipped of the whole hospital. The medical wards are bright, light, and well ventilated. Outside each is a broad verandah (Fig. 4), where the patients can bask in the sunshine either in their own beds or on deck chairs and lounges. Much thought has been expended on the construction of the surgical wards, so that asepsis shall be almost a necessity, while at the same time comfort and cheery surroundings shall not be wanting. The operating theatres are perfect in every detail, from the smooth white walls to the electric illumination above the glass roof and the windows, which have no clumsy and dangerous rods and levers for opening and closing. Such theatres, however, may be seen elsewhere, although wherever they are met with they must command admiration.



Fig. 4.—Rudolf Virchow-Krankenhaus. Verandah connected to the ward.

More novel in its simple and excellent construction is the maternity department. The tiled walls and floors, the scrupulous neatness and cleanliness of the equipment, the picturesque, homely, and yet simple appearance of the wards, the neat little cots fixed to the foot of each bed, and the cheery, pleasant faces of the Sisters and nurses, all combine to make up a most charming picture. Nothing more complete could be conceived than the care with which each detail has been carried out in the labour wards, which are connected with the lying-in wards, and also in the bathrooms, waterclosets, and offices connected with the department. In short, this department may be described as absolutely perfect. The other departments are also excellent, and a special feature worthy of notice is the ample and comfortable arrangements of the day-rooms, an arrangement which the municipal authorities admired, and which have been copied from the day-room arrangements in the fever hospitals of the Metropolitan Asylums Board.

Mention must be made of the bath-house. Centralization appears to have been constantly kept in view in planning the hospital, and here again a central department for the whole institution is found. But in comfort—perhaps even luxury—it would be hard to beat. There is a large apartment, divided in the centre by small rooms with various forms of baths and lounges for massage, etc., and surrounded at the sides by dressing rooms. It is decorated in true Roman style, with dark coloured tiles up the walls and pillars and arches. There are sand baths, salt baths, steam baths, and arrangements for various forms of medicated baths, and also a most elaborate plunge bath (Fig. 6). The baths for the household are kept in good order, and a system of doling out bath tickets for at least one weekly bath for each person employed in the hospital permits of the detection of any person who prefers warmth to cleanliness. The tickets are given up as each person takes his or her bath, and are returned to the managing director's office.

A spacious and elegant mechano therapeutic institute (so-called "Zander" institute) also deserves mention.

Lastly, the fact that this large municipal hospital, which deals with every kind of disease, accident and injury, has no out-patient department, must be recorded as a very remarkable fact indeed.

The department for infectious diseases occupies a special position in a corner of the grounds, near the Koch Institute. It contains 138 beds, grouped in wards, as shown in the accompanying plan. The pavilion on the south side is called the "quarantine station," corresponding to what would be called in England isolation wards. It contains 22 beds, each in a separate room; all the rooms have a southern aspect. There is a small bacteriological laboratory for making cultures and other examinations necessary for diagnosis. The medical officer's rooms and the nurses' quarters are at either end of the pavilion. The north pavilion, containing 28 beds, is reserved for diphtheria, and in this part there are either 1 or 2 beds in each room. The rest of the pavilions are arranged on a common plan, and contain 22 beds each. There are 2 wards with 5 beds each, 2 with 3 beds, 1 with 2 beds, and 4 with 1 bed each. Corresponding to the ward with 2 beds is an

operating room for each pavilion. Two large rooms are set aside as day rooms; there are 2 bathrooms and the necessary disinfecting and administrative offices. Each ward has a verandah and a separate garden. The eastern block receives cases of whooping-cough in one half and erysipelas (women and children) in the other. The north-eastern block is for scarlatina; the western pavilion, reserved mainly for enteric fever, has separate rooms also for the less common diseases (small-pox, cholera, plague, cerebro-spinal meningitis, etc.). The north-western pavilion is reserved half for measles and half for erysipelas in males. The heating, lighting, ventilating, and communication (telephone, etc.) arrangements of this department are the same as for the rest of the hospital. Besides the six pavilions, there is a special *post-mortem* building with a bathroom for the house-physician, and another for the attendants, disinfecting rooms, sitting-rooms, two autopsy rooms, rooms for microscopic work, rooms for preparing museum specimens, etc. This department is designed to serve the hospital department of the Royal Institute for Infectious Diseases (Koch's Institute) and for this reason its administration differs from that of the rest of the hospital. The institute contains no beds, and only undertakes the preventive treatment of rabies by Pasteur's method, for out-patients. All the other patients that would otherwise come under its care are referred to the infectious department which has just been described. The Prussian State pays for 2,000 days' treatment at the rate of M.3 00, while the charge for extra diet for fever patients is borne by the institute.



Fig. 5.—Rudolf Virchow-Krankenhaus. Central walk, looking towards the Administration Block.

Plunge Bath.



Cold Water Bath. Sand Bath.

Fig. 6.—Rudolf Virchow-Krankenhaus, Badehaus.

Quasi-municipal Hospitals.

A certain number of hospitals in Germany are partly supported by the municipality and partly by the State or by some other means. As an example of the hospitals aided both by the State and by the municipality may be instanced the hospitals in Cologne. An academy for practical medicine was founded in this town in 1904 and some five municipal hospitals, as well as a bacteriological institute and a midwives' training school, were absorbed into the scheme. Emphasis must be laid on the fact that no university or academic institution for the training of students in medicine in Germany is ever without its complete installation of scientific laboratories, and in all the newer buildings the laboratories are for the most part to be found in each department. The administration of these mixed hospitals is very similar to that of the purely municipal hospitals, but inasmuch as the directors have to serve two masters, it is not surprising to learn that those who have experience of the smooth working of hospitals consider that the mixed method is not conducive to good results.

A further form of what may be termed "quasi-municipal" hospitals is to be found in those hospitals and asylums which have been founded by private funds and are partly or wholly maintained out of public moneys. The disadvantage noted in the case of the Cologne hospitals does not apply here. As an example of this kind of institution we may take the Kaiserin Augusta Victoria Haus, an infants' hospital and institute for the diminution of infantile mortality. It was founded in 1906, at the instigation of Her Majesty the Empress, by means of charitable subscriptions amounting to about £100,000. It is situated in Charlottenburg, a west-end suburb of Berlin. The administration is under the direct supervision of the municipality, and the cost of maintenance is met partly by the municipality, partly by contributions made by or for the persons whose infants are taken care of, but chiefly by the State. It costs about M.100,000 annually to maintain.

HOSPITALS OF RELIGIOUS BODIES.

The various religious communities in Germany have established hospitals which are independent of any State aid. These hospitals are usually officered by persons belonging to the religious order of the hospital, but patients of all denominations are admitted into them. The most important are (1) the Evangelical, (2) the Catholic, and (3) the Jewish hospitals. In the majority of cases the cost of erection and equipment is borne by voluntary contributions, while the cost of upkeep is covered by the interest of any invested money derived from donations or legacies, the payments of patients, and the payments by the clubs, etc., for the patients. There are three classes, and the usual charges made in Berlin are M. 7.00, M. 5.00, and M. 3.00 for the I, II, and III class respectively. Cases brought in by the police may be charged to the municipality. These hospitals must be administered to the satisfaction of the law officials.



Fig. 7.—Plan showing relative position of R. Virchow Hospital and Koch's Institute.

PRIVATE HOSPITALS.

The ethics of the profession in Germany do not forbid any medical man from having his own private hospital, and a large number of physicians as well as surgeons take advantage of this permission. All these private hospitals are, however, subjected to certain restrictions by the police authorities. Regarded in a practical light, the private hospitals occupy a place somewhere between home hospitals and nursing homes. The private hospitals may be financed by persons outside the profession and attended by private medical men; they may be financed from outside and attended by any medical man, or they may be financed by the surgeon or physician in attendance. There are three classes. Patients in the first class pay from M. 15 to M. 20 a day, but this fee does not cover special nursing. In a few cases, especially luxurious hospitals claim a first-class fee of M. 25 a day. Patients in the second class are usually put into one room with one or two other patients, and pay from M. 8 to M. 10 a day. The third-class patients are placed in long wards, and pay from M. 3 to M. 4. Clubs take advantage of some of these hospitals, naturally using the third class. The medical or surgical treatment is either charged for, at rates varying with the class, by the medical men attending the hospital, or is given gratuitously.



Fig. 8.—The Royal Institute for Infectious Diseases (Koch's Institute). View from the North Side.

INFIRMARIES FOR THE DECREPIT, INFIRM, OR INCURABLE.

Besides the hospitals, the municipality supports real Infirmaries where decrepit and infirm persons are taken care of. These persons are usually suffering from chronic incurable diseases, and do not require any special medical treatment. As no active treatment is carried out in these places, there is no need for a medical staff. The nursing, too, is of a very different order to that in the municipal hospitals.

There are no "fever" hospitals, in the sense of the Metropolitan Asylums Board hospitals; but, as has already been mentioned, each hospital, be it a State-aided or a municipal institution, contains a separate department for the admission of fever patients.

ASYLUMS.

Apart from the hospitals named, a large number of other institutions exist, including asylums for the insane, for the blind, deaf and dumb, for waifs and strays, sanatoriums for the treatment of consumption and of nervous diseases, etc. Since these institutions, however, scarcely affect the question of hospital management and administration, it appears to be unnecessary to enter into the details of their arrangements in this place.

PART II.

WORKMEN'S INSURANCE.

In Germany the whole of the administration of hospitals differs from that in England on account of certain primary principles affecting the population. Every person, with one or two exceptions, with an income of under M. 2,000 a year is compelled to insure against illness and against invalidity, while workmen following certain trades are further compelled to insure against accident. Sickness insurance is carried out through public clubs (Krankenkassen) or private clubs. The old age and invalidity insurance is effected by the State Insurance Society (Reichs-Versicherungsamt). The accident insurance is effected by the works' club (Berufsgenossenschaften). In the twenty-seven years since sickness and accident insurance has become compulsory, the number of persons affected has gradually increased, and at present about 20 per cent. of the total population has to insure against sickness and over 30 per cent. against accident. Invalidity insurance was introduced in 1892, and at present 23 per cent. of the population comes under its operation. Taking the sick insurance first, the fact that about 12,000,000 persons belong to some form of sick club out of a total population of close on 60,000,000—that is, one-fifth of the population—means that the hospitals have a safe source of revenue in respect of a large proportion of their patients. While it is impossible to enumerate all those persons who are included and all those who are excluded from the insurance order within the space of a few lines, the Act is found, roughly, to determine as follows:

All persons belonging to the following trades, etc., provided that their income does not exceed M.2,000 a year, are compelled to insure against sickness: Mining industry, transport of persons and goods, dockyard and building trades, trades of other descriptions, clerks in offices, etc., factories, and the like.

The Act is adoptive locally for the following trades and persons: Piece workmen, workmen employed by the local authorities, home-workers, agricultural workmen, and officials and persons belonging to the families of workers who assist in the carrying out of the trade or manufacture without contracted employment, etc.

Voluntary insurance can be carried out by domestic servants and a few others.

Excluded from the order are apprentices and assistants to dispensing chemists, soldiers, persons employed in State or Governmental works (provided that their wages continue during illness; otherwise these come under the locally optional order), and sailors, who receive assistance by law in case of illness.

But in order to render it possible to compel all persons affected by the operation of the law to subscribe, it is necessary to have an adequate control, and this control is to be found in the compulsory police notification of address, occupation, and income. Every person in the German Empire, save those who are on a short visit of under one week, must be reported to the local police authority, and the necessary particulars are recorded. Change of address has to be notified, and all particulars bearing on the social condition of the individual. In this way the local authority has a knowledge of the whereabouts and income of each citizen and inhabitant, and can thus find out if the weekly premium is paid or not. The premiums are distributed among close on 23 000 clubs, and vary between 1 per cent. and 4 per cent. on the daily wage of the workman. The workman has to pay two-thirds and the employer one-third. The law has fixed a minimum to which every club must attain in respect of insurance against illness. This minimum consists of (1) free medical treatment, medicines and appliances for treatment, such as spectacles, trusses, etc., for twenty-six weeks from the beginning of the illness, or, instead of this, free treatment in a hospital for the same period; and (2), from the third day of illness, sick pay equal to half the usual wages. The clubs, further, have to pay a sum equal to twenty full days' wages in case of death and in case of childbirth to support the mother for six weeks. A person may, however, insure under the same conditions for twice these amounts, and thus cover a full year's treatment, etc. On account of the extremely complicated conditions obtaining with regard to the Poor Law, it has hitherto not been possible to determine how far this compulsory insurance against sickness has influenced the number of persons receiving assistance from the Poor-law department. It appears, however, that in Berlin in the year 1906–7 four-elevenths of the total number of patients admitted into the municipal hospitals were charged to the rates, while the clubs sought admission for 374 persons in the other hospitals, the police brought some 533 persons, various societies obtained admission for 333 further patients, 10,227 applied for admission on their own responsibility, and the Poor-law department claimed treatment in these hospitals for 3,512 persons. The total population of Berlin has increased from 1,233 823 in 1884 to 2 064 677 in 1906, while the number of paupers receiving monetary relief has increased from 15,522 to 33,528, and those receiving other forms of relief from 1,959 to 4,924. In spite of these figures, there is reason to believe that, from the point of view of the pecuniary advantage derived by the patients, the compulsory sick insurance has worked well.

Accident insurance is compulsory, independently of wage, for all workmen in certain trades and for all subordinate officials with a salary of less than M.3,000 a year if they are employed in risky trades, or if they are employed to do work outside their usual trades. Voluntary accident insurance is rendered attractive to persons who do not come under the order. The insurance is effected by the works' clubs, which are liable to pay compensation in case of injury or death arising out of an accident to the insured while employed, provided that the accident is not due to his own carelessness. The compensation for injury begins at the end of the thirteenth week (up to which time the sick insurance covers the expenses of the patient) and includes free medical treatment and appliances, as well as full or partial pay. The full pay is equivalent to two-thirds of the yearly earnings. In fatal cases the compensation is equal to one-fifteenth of the yearly earnings, but is never less than M.50, and annuities may be granted to widows and children under 15 years of age and also to parents, grandparents, or grandchildren, in the event of their being left unprovided for and in want. These annuities vary between 20 per cent. and 60 per cent. of the yearly earnings of the insured. In 1906 the amount paid out in compensation under the Accident Insurance Act was M.142,900,086 50, or approximately £7,000,000. Over 19 million persons are insured in this way. The effect of this insurance on the working classes is very marked, and sudden death of the bread-winner through the effects of an accident rarely involves his family in any great hardship.

Lastly, there is the invalidity and old age insurance. Every person of over 16 years of age having an income of under M 2,000 a year and a few others come under the compulsory order in this respect, while those who earn between M 2,000 and M.3,000, as well as certain small employers of labour and others, may voluntarily take advantage of the insurance. The object is to provide an annuity for old age or premature invalidity, but under certain circumstances this insurance is allowed to lapse, and special payments are then made. Thus, if a person becomes incapable of working on account of an accident, and is therefore in receipt of his accident compensation, his invalidity pension is not paid, and he receives back at least 200 of his weekly premiums. The same return is made to females who marry before they are able to claim their pensions or to the relatives of diseased insured persons who die before they have received their pension. Invalidity means incapability of working for a living for at least one-half of a year, but payment is only made to persons who have been insured for at least 200 weeks. Old age pensions are paid to any insured person after the completion of the 70th year, independent of his capability or incapability of working. Such persons must have been insured for at least 1,200 weeks. The State contributes M. 50 per annum towards each pension, and further pays the premiums during the time the man is on conscription; the State pays also the expenses of the State insurance society. The insured and his employer each pay half the premiums. These vary in accordance with the earnings, and are divided into five classes. Class I (up to M. 350 wages) pay 14 pf. weekly, Class II (up to M. 550) 20 pf., Class III (up to M. 850) 24 pf., Class IV (up to M. 1,150) 30 pf., and Class V (over M. 1,150) 36 pf. weekly. These payments are carried out by purchasing stamps and affixing them to a specially allotted space on the so-called "receipt card." The old age pensions paid are as follows: To Class I, M.110.40 yearly; to Class II. M.140.40; to Class III, M.170.40; to Class IV, M.200.40; and to Class V, M.230.40. The invalidity annuities vary according to the length of insurance; the minimum is M.116.40 for Class I and the maximum M 150 for Class V. During the fifteen years for which this insurance has been in existence the sum of M.1 162 169 923 has been paid; of this, M.166,000,000 was paid in 1908. Close on 14,000,000 persons participate in the insurance.

STATE AID AND MUNICIPAL CONTRIBUTIONS TO HOSPITALS.

The brief sketch of the insurance system given above will show that part of the financial requirements of the German hospitals are met by the payments made by the various insurance societies, including the clubs. This, however, is not sufficient to keep the hospitals going. The actual cost to the hospital for support and medical treatment appears to be about M.1.00[1] a patient a day. In the Charité it was M. 0.99 in 1905, while in the Moabit municipal hospital it was M. 1.36 in the same year. Apart from this cost, there are expenses in connexion with the administrative and household departments which have to be met. It is therefore necessary that either the State or the municipality should make contributions to the hospitals, and each, as has already been shown, is prepared to discharge its duty toward the German citizen.

With regard to State contributions, it must be understood that inasmuch as the universities are State-aided institutions, the hospitals and clinics at which students are taught have a right to claim contributions through the

[1] This is exclusive of administrative expenses.

university. The fact that the State appoints to these hospitals army and navy surgeons for the purpose of post-graduate practice, etc., is a further ground for claiming a contribution from the State. The importance of the smooth working of these hospitals, not only as places where the needy sick are treated, but also as places where the rising medical generation is trained, being recognized, the State pays for their upkeep.

The municipality regards hospitals from a totally different point of view. The large mass of the poorer population has to be attended during sickness; but while it is considered necessary to give each patient the best treatment in the best surroundings, it is considered just as necessary to avoid pauperization and to carry out the treatment at the smallest possible cost to the rates. The cost to the municipality of its hospitals, as will be shown later on, is comparatively small considering the extent of work carried out, but the Poor-law administration is not satisfied that even this cost should be altogether an out-of-pocket expense, and therefore follows the patients up after their discharge, and whenever a reasonable chance of success offers itself, an attempt is made to collect money spent on the hospital treatment from the past patients or their relatives. In this way considerable sums of money are recovered, but in no case does any hardship, it is maintained, arise out of this. When the person is receiving a pension or is earning a small wage, only a small weekly subscription is required, and the amount left for the person is always above the sum judged to be the minimum required for his or her personal and household necessities.

The fact that the State and the Poor Law are prepared to aid the chief hospitals to such an extent that the deficits of each year are met places the German hospitals on a far firmer footing than the English voluntary hospitals. From the point of view of social economy, there can be no doubt that the Poor Law is far less heavily taxed if it is prepared to support its own hospitals and to subscribe to the university hospitals, and then to attempt to collect the whole or part of the sums expended on individuals, than if the poor are served by chance and may fall on the rates at any moment. The plan of requiring every patient either to pay a daily sum or to be paid for, either by the clubs, the works' clubs, the insuring societies, or by the Poor Law (the latter being in the nature of a loan, which must be repaid if the person wishes to reacquire his civil rights), is, without doubt, beneficial to the poorer classes, inasmuch as it lessens pauperization, encourages thrift, compels each man, woman, and child to recognize that the capability of working implies the necessity of providing for sickness, and gives each person, by means of the various classes, the opportunity of receiving skilled hospital treatment without interfering with the rights of private general practitioners.

Turning to the question of abuse, it is remarkable that in the university hospitals, though no kind of inquiry is made, there is yet reason to believe that little abuse occurs in the in-patient departments. Each person appears to find himself in his proper place. Perhaps the notification is responsible for this. The Poor-law authorities, however, cannot accept the position quite so quietly, and when any person is dealt with in a hospital and charged to the municipal rates, inquiries are made through the local Poor Commission (bodies analogous to our boards of guardians, but with this difference, that the chairman, though not paid, practically does the work of the relieving officer). When the circumstances of the patient prove to be too good to warrant his admission as a free patient, payments are enforced. The method is so certain that the Poor-law administration finds by experience that it is quite a rare occurrence for a person to refuse to pay when he or she can afford to do so. Since the large mass of persons are insured against sickness, and this insurance carries with it medical treatment for twenty-six weeks, the number of persons falling into the category of necessitous persons is limited.

A difficult point arises in the case of a person who has not received any outdoor relief or other form of Poor-law assistance, and is admitted into hospital at the expense of the municipality. Should such a person be deprived of his civil rights? At the present time he is, but a certain proportion of the population consider this an unnecessary hardship. This matter has been discussed and written about, and it is quite possible that within a short time some amendment of the law to remove this disability will be made.

It must be pointed out here that the municipality does not limit itself to the upkeep of hospitals in dealing with its sick poor. The Poor-law medical officers serve the poor in much the same manner as they do in this country, and a vast amount of work is carried out through their instrumentality. The municipality does not extend the treatment of paupers outside hospitals more than can be helped, and for this reason no specialized treatment is provided. The sick poor are given general medical treatment and medicines, but no specialists' fees are paid.

PART III.

PROVISION FOR MEDICAL ATTENDANCE.

In England, when a person is overtaken by illness, the State does not trouble its head about how and where he will find medical attendance, provided that the person does not claim the assistance of the Poor Law, either by applying for admission into a Poor-law infirmary or by asking for the services of the Poor-law medical officer. If such a person has a small income, and especially if he has not troubled to join any club or friendly society, he has the choice of two courses open to him, and as far as the welfare of the population, including the patient himself and also the medical practitioner, is concerned, it does not make any very material difference which way he chooses. The two courses are either to call in a private medical practitioner and get into debt for the treatment, or to apply for charitable treatment at a hospital. In both cases the patient pays nothing, in both he refuses to consider that he has been pauperized, and yet it must be admitted that in both cases his conduct is little deserving of respect. Of course, there are many persons who contrive by means of personal sacrifice to pay their doctor out of very small means, but even this is unsatisfactory, when it is remembered that a little foresight would suffice to give the medical practitioner his due.

When a person with a moderate income becomes ill and has to undergo a serious operation, if this is carried out in private the fees and other expenses may lead to serious financial straits for a number of years. Many surgeons no doubt are willing to operate for small fees, or even without charging the patient what is termed a fee at all; but even under the most propitious circumstances the patient, after paying for his nursing in the nursing home and the nominal fees for the surgeon, assistant, and anaesthetist, finds that his purse has become uncomfortably light. Every one with any experience must know of cases of tradespeople in a small way and others with small earnings who have been suddenly faced with the necessity of paying a sum of at least £50 for an operation for appendicitis. Where is such a person to get the money from? There is no arrangement in this country by which a poor or a moderately well-to-do man can secure medical treatment for all emergencies at a sum which lies reasonably within his means.

The foresight of the German compulsory insurance laws, and the simple expedient of dividing private and public hospitals into classes, sweeps away all the difficulties at once.

It has been shown that every one who is dependent on himself in case of sickness, and whose regular earnings do not exceed M.2,000 per annum, must insure against illness. The expense attending illness falls then on the shoulders of the clubs. Domestic servants and others who are boarded, and whose wages continue during illness, are not included in the general compulsory scheme, but are strongly advised to participate voluntarily. Experience shows that the employers frequently pay for the treatment of servants in hospitals or by private practitioners when the servants are not in a club. But even if this should fail, the servant may be able to pay either at the time or during the course of the subsequent years for medical treatment.

Casual labourers, persons who are classed under the term of "vagrants," beggars, and drunkards are very difficult to cater for. The first named cannot come under the compulsory insurance order, because his earnings are not steady enough. The others have no earnings, and are therefore excluded. Then there are persons who, from past illness, misfortune, or improvidence fall out of work, and cease after a short time to be members of clubs.

These two sources furnish a number of uninsured persons for whom some provision must be made. The German law is ready for even this emergency. Through its municipal departments, and especially through the Poor law administration, work is found and even made for such persons, and if they refuse to accept it or give it up after a short trial, the authorities attempt to bring further pressure to bear to effect a reform. Should the person prove beyond redemption, he is classed as a vagabond, and the Poor Law only extends its assistance in case of great urgency. The others are again rendered insurable. Should illness overtake a man before such provision can be made for him, then the municipality pays for him, and when he has recovered work is procured for him, and he is asked to regain his civil rights by paying back in small instalments what has been expended.

When a man with a somewhat larger income than would bring him under the insurance order is taken ill, he goes to the private practitioner and pays a fee for each visit. This fee in Berlin for the small man is from M.2 00 to M.3 00 for a visit in the patient's home, and M.1.50 for a consultation in the doctor's house. The patient, however, has to pay the chemist for medicines, the average charge for a bottle of medicine being M 1.00. That the fees mentioned lie within the means of the class of person under discussion is admitted on all sides, and the question might be considered settled were it not for the out-patient departments, which exist and are abused in Germany as elsewhere. This subject will be discussed separately. When surgical interference or special treatment necessitating admission into a hospital or nursing home is required, this class of patient considers whether he can afford to be admitted into Class II or whether he will have to be satisfied with Class III. In any case he will be able to choose a hospital, be it private or public, where the charges are within his means, including the fees, if any, charged by the surgeon or physician. While he will no doubt have to draw from his savings it is only on rare occasions that anything approaching financial ruin will result from the illness. In this way each grade of society is provided for, as far as illness is concerned.

It must, however, not be assumed that the system works quite so ideally as would appear from a theoretical consideration. The chief defects met with in actual practice are to be found in the rate of remuneration paid by the clubs to the private practitioners and in the out-patient departments.

The Clubs or Krankenkassen.

On May 11th and 12th this year the fourth congress of the German Krankenkassen took place in Berlin, and discussed a great number of points with regard to the insurance law and to the rules of administration and construction of clubs. It is a curious fact that, although the clubs are recognized as institutions for the proper working of the insurance Acts, the Secretary of State, von Bethmann Hollweg, the Minister of Commerce, the President of the Reichstag, as well as the leaders of several political sections of the House, declined the invitation to attend the congress on the ground that, as the suggestions for reform had not yet been placed before the various departments, the presence of the representatives might lead to a false interpretation. The municipality sent a representative in the person of Dr. Meier, one of the town councillors, and the statistical office of Berlin was represented by Dr. Silbergleit. This refusal to be represented is undoubtedly to some extent due to disputes which arise from time to time between the managers of the clubs and the medical profession, and also between the managers and the Government departments. The clubs are naturally anxious to extend their sphere of activity as far as possible, and one of the suggestions recently made is to include all persons with an income not exceeding M 3,000 a year in the insurance law. It has been pointed out that, if this were the case in Saxony, only 4.7 per cent. of the total population would remain as private patients. This destruction of medical private practice is regarded as a most dangerous procedure, not only for the profession itself, but also for the population, as it would have the result of lowering the standard of medical practice and thus indirectly affect the whole population.

The clubs further attempt to resist the inclusion of all medical men of the district. This so called "free choice" has, after much opposition, been introduced in a number of towns and districts, and the working of the clubs under these conditions has proved that the introduction of this regulation is advantageous both to the members and to the profession. In the towns in which this has been carried through, severe and prolonged struggles between the clubs and the medical men have taken place, and the medical men have only won the battle where they had a powerful organization to work for them, in the form of a nearly universal medical society. An example of this was seen in Leipzig. Jena, Marburg, Erlangen, Münster, and Heidelberg have adopted this method of allowing the club patients to choose their own doctor.

A further difficulty with regard to the clubs, as far as the private practitioner is concerned, is the question of the fees allowed. That this affects the question of hospital administration indirectly is shown by the fact that while the patients pay to insure against illness, and the clubs and insuring societies pay a reasonable sum to hospitals but not to private practitioners, the private practitioner is justified in regarding hospitals as competitors; where this is the case a serious defect must be held to exist.

The clubs are not generous in Germany, in spite of the splendid chances of "doing the thing properly." In some towns, notably Berlin, Bonn, Erlangen, Greifswald, Marburg, etc., no fee at all is paid to the academic club doctor for attending university students. In Breslau the doctor gets £10 a year for slaving for these clubs. In Königsberg he is paid at the rate of 10 to 15 pfennigs for each attendance on students. The ordinary sick clubs, of which there are about 23 000 in Germany, pay fees which vary, but are all low. Nevertheless, it must be worth while, either directly or indirectly, to hold the post of club doctor, since these posts are usually sought after, and frequently serve as a good basis for a livelihood.

In order to extend their membership, some clubs are prepared to offer more advantageous terms than others. As has been pointed out, the minimum requirements are fixed by law, and the attractions which these clubs hold out are in the form of increased benefits.

While it is difficult to compare the Krankenkassen with English clubs, some idea of the comparative working may be obtained by placing the conditions side by side. As an example, a German workman earning M.20 a week may be taken. He will be required to pay 40 pfennigs (about 5d.) a week, while his employer has to pay 20 pfennigs. For this he receives free medical attendance for twenty-six weeks, free medicine and appliances for treatment, and M.10 a week during the period of incapacity, while in case of death the relatives receive M 400. In the case of childbirth the insured receives support for six weeks. In England, the friendly societies charge more and give less. For example, the Foresters, which may be taken as one of the better-class societies, offers for 6½d. to 11d. per week (as well as an entrance fee of from 2s 6d. to 5s.) from 6s. to 20s. a week benefit during sickness for six months, half that amount for the next six months, and a quarter for the rest of the illness, beside free medical attendance and medicine. In case of death the compensation given varies between £12 and £24. The Oddfellows offers similar advantages. One marked disadvantage to the patient is that the English friendly societies require that a period of twelve months shall have elapsed between the time of joining and that of being able to claim the benefits, while the German Krankenkassen are not allowed to have any such rule. This interval, which is called the "Carenzzeit" (this means period of fasting), is specially forbidden in the Act.

It is, however, a matter of considerable importance that the friendly societies have developed as they have in this country, and failing any legislation with respect to compulsory insurance, their further development and prosperity must be energetically encouraged. The chief friendly societies doubtless feel that the hospitals have hitherto placed every obstacle in the way of their advancement and of the more extensive exercise of providential insurance. The same may be said of the provident dispensaries, but inasmuch as these have a far narrower field of operation and a more restricted end in view, it

would seem better to bring about an understanding between the former and the hospitals.

PART IV.

THE OUT-PATIENT QUESTION.

Mention has been made of the out-patient difficulty existing in Germany. In order not to complicate the matter more than is absolutely necessary, it may be well to consider the conditions affecting Berlin and to compare them with the conditions which affect London. It has been estimated that in London over 50 per cent. of the total population takes advantage of the out-patient departments, and thus gets medical and surgical attendance for minor complaints for nothing.

This estimate may be exaggerated, but actual figures show that in 1904 15 per cent. of the London population were treated in the out-patient departments of the eleven great metropolitan hospitals alone. To this must be added the number of out patients dealt with in the other general and special hospitals, so that it seems probable that the percentage of the population which receives gratuitous out-patient treatment in London cannot be much under the figure estimated. The numbers recorded for 1901 are considerably smaller than the numbers recorded for later years. An example of this is afforded by the London Hospital, which, according to the Hon. Sydney Holland, deals with a quarter of a million persons in its out-patient departments at present, while the figures given in Burdett's *Hospitals and Charities* put the number for 1901 at 169 020.

In Berlin, with its population of a little over two million persons (in 1906 it was 2 064,677), some 250,000, that is, about 12 per cent. are treated in the recognized out-patient departments or policlinics. Any person who applies for treatment and who is found to be medically suitable, save an applicant obviously in a social position above the classes for which such policlinics are intended, is accepted and treated in the various policlinics of the Charité. These persons, however, are given a card, on which it is stated that free medical treatment will be given to the patient under the distinct understanding that, save in case of emergency, the patient cannot afford to obtain medical attendance in any other way. A charge for medicines, bandages, etc., of 25 pfennigs a week is made. The patient has to bring the card each time with him or her.

The number of persons using any one of the policlinics in the Charité, with the exception of the policlinic for skin and venereal diseases, does not exceed 4 000 in the year, and in some the number is considerably less. The hospital authorities are of opinion that the numbers could not be materially lessened without limiting the utility of the policlinics. The persons dealt with in the skin and venereal diseases policlinic are increasing in number, some 7 209 fresh patients being attended in 1905 6, while only 6,013 were attended in 1903 4. About half of this number were suffering from skin diseases and the rest from venereal diseases. It has been pointed out that the number of university and academic students treated was less than in previous years, as such persons must now belong to their special clubs, and, therefore, consult their club doctors.

The surgical policlinic in Ziegelstrasse, belonging to the university, must be regarded as standing in a less favourable light in this respect than those situated in the Charité. During von Bergmann's lifetime the numbers attending varied between 21,000 and 23 000. Since January, 1907, however, a reform has been introduced which will be described below.

The municipal hospitals have policlinics in the majority of cases, the Rudolf Virchow and the Moabit Hospitals forming an exception. Some of the religious hospitals possess very large departments of this type, and are severely criticized. The Jewish Hospital, the Bethanien Hospital, and others, offer great attractions to large numbers of patients. No almoner is employed, and practically no control beyond asking the patients whether they can pay elsewhere is practised.

Apart from the policlinics in the university, municipal, and religious hospitals, there are private policlinics. This will no doubt be regarded as an infringement of professional ethics by the English reader, but it must be pointed out that not very long ago the gratuitous ambulatory treatment of the poorer classes of patients used to be a recognized and appreciated method of exercising charity in this country, and no one would have thought of taking exception to such a practice. In Germany a medical man may open a policlinic for the treatment of patients, just as in this country a medical man may dispense medicines and charge ordinary patients for them, a proceeding which is not allowed in Germany. However, some of these policlinics are not so harmless as might appear at first sight, and are in reality nothing more or less than traps to make a practice.

They were never intended to serve the cause either of charity or of the convenience of patients who honestly cannot afford to pay. The private policlinics which are most largely used are established by surgeons and physicians of repute, especially by those who have made a reputation in some speciality, in order (1) to give those poor persons who cannot consult the surgeon or physician at a public policlinic an opportunity of being treated by him; and (2) in order to enable the said surgeon or physician to collect data for research or for teaching, which might otherwise be difficult to obtain.

REFORMS.

As might be supposed, the general practitioners are by no means disposed to allow this extensive polyclinic practice to continue without making some effort to check it. The various medical societies of Berlin and its suburbs have joined together for the purpose of dealing with some of the medico-political and medico-ethical subjects affecting the profession, and have formed a standing committee of fifteen members. This committee deliberated on the out-patient difficulty, and some two years ago formulated a plan by which it was thought that some improvement might be wrought. It first attempted to deal with von Bergmann's policlinic. It was pointed out to him that the increase in the size of the department was to be regarded as a great tax on the State, which had to pay for this wholesale treatment, and that a fair proportion of the patients were unsuitable for out patient treatment. The late Exz Ilenz von Bergmann was prepared to accept the suggested reform which this committee laid before him. It provided for medical attendance for every person at his or her first visit to the policlinic. The continuation of medical attendance, however, was only to be allowed when the case was of scientific interest or was suitable for teaching purposes, or when the patients were necessitous and had no right to claim treatment elsewhere and were in need of free medical attendance. It was proposed that the surgeon in charge of the policlinic should judge whether the patients came under the category of those who could be kept as out patients, while all those who were refused further treatment were to have their cards marked to this effect. This, as has been mentioned above, came into force on January 1st, 1907, and when Geh. Rat Prof. Bier took the post offered to him after von Bergmann's death he expressed his willingness to continue the experiment. Both the committee and Professor Bier himself agree that it has worked well. During the interim there appears to have been some difficulty in keeping up the improvement, but it is now in working order. Although the regulations are not always very rigidly enforced, about 29 per cent. of the patients are refused further treatment.

In order to prevent patients who have been referred for outside treatment from again applying to the policlinic, the committee requested specialists belonging to the clubs and in private practice to take up the treatment and to take into consideration the position of the patients. The Poor law medical officers were also enlisted in the struggle.

The committee hope to be able to influence the other university policlinics in a similar manner, but they are aware that special conditions apply in some of these which must influence the extent of the reduction. It would be useless to attempt to battle against the policlinic treatment of venereal disease in Berlin, while it would be unwise, from the point of view of hygiene and epidemiology, to try to hinder the numbers of tuberculous subjects from receiving treatment and instruction as to how to safeguard others. If obstacles were placed in the way of these patients, there would always be a risk that they might dispense with medical treatment altogether, and thus become a greater danger to the public than ever.

Again, the committee realize that for the useful conduct of a policlinic in a university hospital a considerable number of patients must attend, so that the teachers may be able to select groups of cases for the purposes of demonstration. Even as these departments are at present conducted the overcrowding is not marked, and each patient in the polyclinics of the Charité can be adequately examined and treated; the average time at disposal for each patient works out at between three and four minutes, which compares well with the London out-patient departments, where not infrequently the average time for each patient is less than one minute. It is, therefore, the aim of the committee to limit, but not to sweep away, the university policlinics.

The committee has been wise in one respect. It has worked energetically, and has been successful in preventing the outbreak of anything approaching a conflict between the general practitioners and consultants or specialists. That this must have been a difficult matter is clear when the existence of the private polyclinics is taken into consideration.

Private policlinics may be divided into two classes: (1) the policlinics belonging to those engaged in teaching, and (2) those which belong to medical men without a professorship or any reason for having such an institution, save that of private gain. The committee does not hesitate in saying that these latter must be cleared off the face of the city. It considers that the time has come when it can no longer be considered ethically correct to run a policlinic for the purpose of making a practice or of boasting of treating so many cases of this or that disease. Such cheap reputations are not valuable, and the sooner they disappear the better for the good repute of the profession in Berlin.

The position of the private polyclinic of a professor or other teacher, however is considered to be different. Its existence might be useful to the holder as a means of quiet advertising, but this would be exceptional (at least so it is thought). On the other hand, the committee believes that, provided private policlinics are kept within reasonable bounds, they should not be objected to, because they are essential for the work of certain professors and teachers. At first sight it seems difficult to regard these policlinics in a favourable light, especially as the advertisement which such an institution carries with it is by no means small. The general practitioner in this country has come to regard his consulting or specializing colleague as a more fortunate practitioner who should be rigidly controlled, lest he should reap a harvest disproportionate to his position. But it is deemed wiser to separate the offices of the professor of medicine, surgery, and the other branches of medical science as a teacher from those as a practitioner, and there can be no doubt that it is much to the advantage of the profession as a whole if every facility is put in the way of adequate and efficient teaching. The German notion is that students should be encouraged to investigate medical matters scientifically at an early date in their career, and much more value is placed on the capability of originality of thought in students and freshly-qualified medical men than is the case in England. No teacher can advance original research unless he is in the habit of carrying out scientific investigations himself. It is from this standpoint that the utility of the private policlinics is viewed in Germany both by the specialists and by the general practitioner, and if this line of argument is understood there will be no difficulty in grasping the position taken up by the profession.

Policlinics at Municipal and Private Hospitals.

The same limitations as are proposed for the university policlinics are proposed for the policlinics in connexion with the municipal and private hospitals. As in these hospitals no teaching is carried out, the only excuse for the existence of the departments is the humanitarian. The difficulty of excluding those persons who are capable of paying for treatment outside is very great, although possibly not insurmountable. It must, however, be pointed out that the hospitals themselves do not find it of any use to encourage the patients to use the out-patient departments, and they are only kept open because it is felt that persons who are really too poor to pay, and who are not ill enough to claim admission in the wards, should receive ambulatory treatment. It is economical occasionally to keep patients under observation from time to time in these departments, and the Krankenkassen and other insuring societies find that they serve a good and cheap purpose. Since the hospitals are not dependent on charitable contributions, the advertisement that this or that hospital treated so many thousands in the out-patient department last year can serve no purpose at all. The numbers are only published for their scientific interest and in the returns of the departments. Curiously enough, in the general statements of yearly accounts, no mention is made of the number of out-patients nor is any attempt made to estimate the cost of keeping up these departments. The expenses incurred, as will be shown in a subsequent paragraph, for dressings, medicaments, chemicals, etc., are included in the expenses of the department of which the policlinic is a subsection. This practice appears to be continued because at present it is not easy to avoid, for in many cases, perhaps in the majority, the out-patient department serves the in-patient department considerably. Examples of this are to be found in the surgical policlinic, which possesses its light treatment department, which is also used for the wards; in the special policlinics, where in-patients from other clinics are not infrequently sent for special examination or treatment, etc. It is only when the policlinics are situated in a separate building and are under a separate administration that the actual cost of supporting a policlinic is realized to its full extent.

Summary.

Leaving the question of the private policlinics as one which can scarcely apply to English conditions of practice, the whole question may be placed in a nutshell by considering the university policlinics first and then the policlinics belonging to non-teaching hospitals. Provided that the scheme of reform which has been started with such success in the surgical policlinic in the Ziegelstrasse is applied to the rest of the university policlinics, it may be said that the functions of treating the necessitous sick and of teaching students in the complaints of everyday practice are carried out with a reasonable degree of efficiency, and that these institutions are a benefit to the poor and to the State, and do no harm to the private practitioner. It can scarcely be said that from ten to fifteen new patients and some forty to fifty old patients is too large a daily attendance for the purposes of a teaching out-patient department. Some persons have to be kept waiting for an hour or more at times if it is found necessary to perform a small operation or to have massage and the like carried out, but on the whole the patients receive proper attention, and due regard to their medical or surgical condition is given.

The London Hospital boasts of its 250 000 out-patients per annum, a figure which is identical with the number of the out-patients in all the hospitals of Berlin. Each department is a real beehive, and it is really a marvel how every patient gets any attention at all, judging from the crowds which accumulate at the hour when the surgeons or physicians are prepared to see the patients. The principle of aggregating the patients together at 9 in the morning and selecting with difficulty the cases which are required for the special out-patient classes, and then keeping the patients waiting about until half past 1, a practice which is followed at some of the metropolitan hospitals, cannot be considered satisfactory from the point of view of the patients' comfort, scientific treatment, or good teaching. The defects of the English out-patient departments are too numerous and too well known to need to be dealt with in this place, and it is therefore permissible to draw the conclusion that the German university departments have, without the aid of an almoner or of any special form of inquisition, but with the strong aid of a logically conceived insurance system, built up their departments in a far more satisfactory way.

The function of the German policlinics where no teaching is carried out is said to be twofold—the humanitarian duty of treating those who cannot afford to pay elsewhere and who have no claim on free treatment outside, and the scientific object of following up cases which have once come under the notice of the surgeons or physicians. There is no doubt that the number attending these departments is larger than the social condition of the population justifies, but it may reasonably be argued that it is better to be a little too lenient than too strict in this

respect, so that persons who are really necessitous are not refused treatment. Reform is needed and is being introduced, and there is justification for the hope that the move of the committee of fifteen will effect all the necessary changes. At all events, if these policlinics are compared with the out patient departments in London not really used for teaching purposes, the verdict must again be given in favour of the German method.

CLUBS AND POLICLINICS.

The Krankenkassen patients bring their cards with them when applying for policlinic treatment, and the administration claims the 25 pfennigs for the medicines, etc. In this respect there is cause to complain that free treatment creeps into the scheme, which should be clearly self-supporting. The Krankenkassen have no reason to object to this arrangement, since they save expense thereby. The hospitals do not feel justified in altering the regulations or in making exceptions for club patients; therefore this defect in the working of the system remains. If compulsory sick insurance were introduced in England, and if the hospitals were taken over by the State and charges made for treatment, it would be logical and wise to introduce a fixed fee for out-patient treatment, and let the clubs, the municipality, or Poor Law pay the fee, just as these bodies pay the fees in Germany for in-patients.

It must again be remarked that the possibility of a hospital with 2 000 beds in a city of over two million inhabitants being freed from the trammels of an out-patient department is a very significant fact. The Rudolf Virchow Hospital has thus been kept free, and, so far, no difficulty arising out of the exclusion has been felt. The future development of the German municipal hospitals in this direction will show whether this movement can be widely extended, and it is possible that a part of the solution of the out patient difficulty may be found in the exclusion of these departments from certain municipal or similar hospitals.

PART V.

OFFICERS AND STAFF.

The management of the German hospitals is usually invested in directors, one of whom is the superintendent of administration, or Verwaltungs-Direktor, and the other the medical superintendent, or Aerztlicher-Direktor. Each of these officers is supreme in his office, and the whole responsibility of the proper working of the hospital rests with the one or the other.

University Hospitals.

In the Charité, which has been taken as the example of a university hospital, the superintendent of administration is Geheimer Regierungsrat Pütter, whose extensive knowledge and experience of hospital management and administration fit him admirably for his responsible post, and to whose courtesy we are greatly indebted for much information utilized in the course of this report. All matters affecting the general administration, the proper working of the domestic departments, the control of supplies and of the staffs of each department, and the like, come under his direct supervision. Generalarzt Dr. Scheibe, who has made a considerable reputation as a hygienist, is the medical superintendent. He has the supervision of the general management of the clinics and policlinics, and of all matters which are directly medical. In matters of general administration the two directors confer together, but when anything goes wrong each is directly responsible to the university. Each has a house in the grounds of the hospital; the arrangements of these houses are described as good, and gas and electric light is supplied. The office work is divided into two or three subsections, and an official is placed in authority in each section. The arrangements in the various domestic departments are somewhat similar to those existing in the Rudolf Virchow Hospital, and, in order to avoid repetition, will be described in the latter hospital in a subsequent paragraph.

The medical department of the hospital is, as has been stated, officially under Dr Scheibe's control, but in actual practice the various clinics and policlinics are under the direct supervision and control of the head of each department. This head is called the director of the clinic, and as such receives a small honorarium, which varies from M 600 to M 1,200 (about £30 to £60). The directors of the clinics are at the same time university professors, while other professors are also employed in the various departments. In their capacity of professors, that is to say, for the work of teaching these gentlemen receive a salary from the university which varies from M.4 000 to M.7 000 (£200 to £350). The directors of the clinics and the professors do not live on the premises. The assistants or house-surgeons and physicians are mostly quartered in the hospital, and receive salaries of about M.1 350, from which amount M 600 is deducted for their rooms.

The nurses, Sisters, and matron, as well as the dispensers and others occupied in the medical portion of the hospital receive free board and residence and salaries in proportion to those mentioned above. The hospital is a parish in itself, and possesses three Protestant clergymen, one of whom is a curate, and one Catholic priest. The clergy, the organist, and the verger are salaried officials.

The officials receive a dietary, which varies according to the position held. The three classes or "tables" are similar to those of the municipal hospitals, and will be described under the latter heading. Suffice it to mention that the third class diet is practically identical with the full dietary of the M 2 50 patients. There are 81 members of the nursing staff, and connected with the so-called "Sisterhood" there is a midwives' training school in which some 40 pupils are trained every six months.

Municipal Hospitals.

In the municipal hospitals the conditions vary within very narrow limits. It will, therefore, be sufficient to deal with those obtaining in the Rudolf Virchow Hospital, and, in view of the proposal to conduct the new psychiatric hospital in London—which will owe its existence to the munificence of Dr. Maudsley—as a municipal hospital, it is proposed to deal with the arrangements in some detail.

The directors are three in number—one Verwaltungs-Direktor, Geheimer Regierungsrat Dr Ohlmüller, and two medical superintendents, one for the medical and one for the surgical side, Professor Dr. Hermes and Geheimer Medizinalrat Professor Dr. Goldscheider. The responsibility which attaches to each of these directors is limited to his own department, but in matters of general arrangement the three consult together, and when any reform is being introduced this board consults with the Municipal Committee. Each director is responsible to this Deputation. In order that mistakes, irregularities, and defects in management or administration may be prevented, a system of personal responsibility has been introduced, by means of which the fault can be readily traced. The Committee does not deal directly with any other persons than the directors, the directors of the clinics, the chief medical officers, and the surgeons or physicians in charge. In practice, if a complaint is made or some irregularity is detected, the municipality through its Committee calls upon the director concerned to render an account of the affair. If the matter be one of administration, the Verwaltungs Direktor would be called upon, if it had to do with the conduct in the wards either the surgical or medical superintendent. The matter having come to the notice of the director concerned, he immediately calls for the official at the head of the department in which the occurrence has taken place. This official is directly responsible to the director above him, and if he knows nothing of it, he will inquire of the next in authority until the fault is traced, but this tracing of the actual fault does not clear those placed in authority from the responsibility, and therefore the control kept is sharp, and is strengthened by definite regulations. The control is exercised partly through personal supervision and partly through written reports showing what each department has done during the course of each day.

In order that the subordinate officials may not suffer hardships, there is a committee representing the lower grade of nurses, those engaged in the capacity of domestic servants, including ward maids, and those engaged in the laundry, kitchen, butchery, stores, disinfection, and lighting houses, and other working departments. This committee is elected by the persons whom it represents, and consists of six members, of whom at least one must be a female, one must represent the domestic servants, two the

nursing staff and two the occasional workers. The Director chooses a chairman from the elected members, and may instruct any person whom he considers competent to attend the meetings and to give advice. Three members form a quorum. Any complaint, wish, or suggestion which is agreed on by the committee is set down in writing by the secretary, and is then submitted to the Directorate, but these statements must be of a general nature, and must not appertain to one individual only. The committee is called together by the chairman, but, if the directors consider it advisable for the members to deliberate on any special point, it is summoned to meet for this purpose.

Beside the three directors there is an office secretary, or Bureau Vorsteher. He is a lawyer, and renders the Verwaltungs Direktor considerable assistance. The clerks complete this department. The technical departments include the machinery house, the disinfection station, the kitchen, the stores, the porters' department, the butchery, the laundry, the needlework room, and the house and ward servants. In each of these departments there is one person in the responsible position, and in the chief departments this person is called the Leiter, or manager.

The medical officials are, of course, numerous. First, there are the directors of the clinics, who, with the exception of the obstetrician, Professor Dr. Koblanck, live outside. These directors are allowed to have private consulting practices, and receive salaries of from M.3 000 to M 5 000. There are eight in all. The prosector or pathologist, Professor Dr. v. Hansemann, has a salary commencing at M 5,000, and rising to M 6 000 by increments of M.500 each five years. The superintendent of the bacteriological department and the superintendent of the chemical department each receive a salary of M 3,000 The manager of the light department (*x* rays and Finsen) gets M.4,000 while the manager of the mechanical institute and bath-house is paid M.3 200. A dentist receives an honorarium of M 1 000. There are at present thirty assistants who receive free quarters and board, as well as heating, light, service, medical attendance, and medicines, and a salary beginning at M 1,200 and rising to M 1,500 Six Voluntär-ärzte or clinical assistants are at present employed, but the number can be increased up to the number of paid assistants. These clinical assistants receive either free board and lodging, or M.600 in lieu thereof.

The directors of the clinics and the managers or superintendents of the various departments are responsible to the medical or surgical director for the proper conduct of their respective departments. Practically they are supreme, and can manage without being interfered with as they please, provided that they adhere to the regulations affecting the general disposal of such departments, and are not unreasonable. In their absence, the assistants act in their stead, and take over the responsibility temporarily. Each officer can instruct a subordinate officer to carry out any work which comes within the scope of his or her duties. As subordinate staff to the medical department are the dispensers (again one in command), and the various porters and laboratory, bath, and other assistants.

The nursing staff consists of a matron, 32 staff Sisters, 161 Sisters and probationers, 50 pupil nurses, 1 head midwife, 2 ordinary midwives, 18 Wärterinnen (a post midway between a nurse and a ward-maid), 2 wet nurses, 4 head male attendants, and 58 male attendants, making a total of 279, exclusive of the pupils. The matron is supreme in a general way as far as the conduct of her nurses is concerned, but the medical officer in charge of a ward can order a Sister or nurse to carry out any of the duties of Sister or nurse which concern a patient. In England, likewise, the house-surgeon has nominally the same discretionary power, but it is the custom for a Sister of a ward to take general nursing directions from the house-physician or house surgeon and determine on the details herself, and this secures her the authority in nursing matters. In the German hospital this is not so, probably because the training is undoubtedly less good than it is in this country. It is more common for a Sister to be ordered about in a German hospital than it is in an English one. Complaints against a nurse or Sister, if they affect the personal conduct of the nurse, are made to the matron, but if the complaint has regard to professional conduct the matter is referred to the director. A nurse can be discharged by the direction, but the sanction of the Committee of the municipality has to be obtained either at the time or later. The matron receives a salary of from M 1,200 to M.1,800 a year and free board, etc. The staff Sisters are paid M 600 to M 780 and free board, etc.; the Sisters or nurses begin with a salary of M 420, and rise to M 600, while the probationers are given M 30 as pocket money during their six months' probation. Pupils receive M 10 a month at first, and later M 15 a month.

The diets for the officers and staff vary according to position. Table I is the prescribed diet for the assistants and the dispensers. It consists of a first light breakfast, a second breakfast with meat, midday dinner of the usual type, with which on Sundays and holidays a half-bottle of wine is supplied, coffee in the afternoon and supper. The Sisters and other staff officials holding responsible posts have the Table II diet, which is like Table I, but a little less full. It is appetizing, and those who partake of it are quite satisfied with it. The Table III is the full diet of the patients and the diet of the rest of the domestic and working staff. This diet, too, is adequate as far as quantity and quality are concerned, and only differs from the other tables in that the quantities are somewhat smaller and the articles of diet less expensive. The patients may further be placed on half-diet, which corresponds, as far as the number of meals is concerned, to the full diet, but which is limited to a light meal midday and only soup for supper, while the rest is practically left to medical choice. The third form is practically a milk diet, and is adapted to fever patients. The diet tables contain long lists of articles of diet showing the quantities allowed for each table and form. In prescribing for patients the assistant has the choice of one portion of this or that article of diet. When extras are ordered, the rule to be observed is so to arrange that the average for each patient does not work out at over 21 pfennigs a day.

The head cook receives each day at noon the diet cards of each ward for the following day, on which the number of patients on the first, second, and third form or on special diets is recorded, and the extras are also detailed. These particulars are entered into a book, and these entries, with the entries of the diets of the officials and members of the staff, are tabulated and entered on printed forms. A form is then filled out, stating what provisions are required for the day, and both the forms and the book are sent to the office. From there, after having been passed, the provision form is sent to the stores, and as the supplies are dealt out the storekeeper fills into his books the amounts and returns his book to the office, in order that it may be compared with the order form for provisions and the cook's book. Any food not used must be sent back to the kitchen, and the receipt of each article must be entered in the proper form and either used if still good or noted if no longer fit for use. In this way no waste can occur, each person gets enough, and abuse and fraud in the kitchen department are practically excluded.

The laundry is controlled in a similar manner, and the store of new linen, etc., can be shown at any moment. When the soiled linen, etc., comes down the number of pieces and their nature is entered. These entries must tally with the entries on the ward forms. From the book the total daily washing is made up, and in another form the number of pieces, according to the number of patients, is recorded. If an article is much worn, it is nominally the duty of the director to inspect it and to determine what shall be done with it. As a rule, however, the head of the laundry places these articles aside, and when the director comes round she tells him what there is there, and shows him the list, suggesting that this might be mended, that can be utilized for making floor-washing cloths, etc., and the third group might without extravagance be thrown away, or, rather, sold as rags The articles thus discarded have to be replaced out of the store, and this again entails at least a double entry in the book and forms.

The same sort of control is kept on the supplies. The contracts are placed with certain firms by the Deputation of the municipality, which consists of responsible municipal officials. The quantities ordered have to be received and accounted for in the department to which they are destined to go. Short weight would be detected on distribution if it were not detected on arrival, and under

no circumstances could shortage pass for any considerable time unperceived.

It not infrequently happens that a member of the Socialist party learns from a patient or his relatives that a certain thing has occurred in a municipal hospital, and he forthwith asks a question in the Reichstag about it The system of control described above allows the directors to be able to supply the Minister to whom the question is addressed with exact information on the matter, and a reply is given in accordance with the facts as elicited by the director's inquiries. Were it not for this method many such questions in the "House" might lead to considerable difficulties, inasmuch as any ill-founded accusation, unless it can be immediately and completely refuted, must necessarily give the busybody a chance of picking holes in the methods of administration and causing discontent. As it is, every one employed in the Rudolf Virchow Hospital appears to hold a very high opinion of the value of his work in assisting to render the hospital a model institution.

The treatment of the subordinate staff is considerate in every particular, and the most hypercritical Socialist who inquires into the working must be satisfied that neither undue sweating nor unjust treatment can occur. Among the benefits which the employees receive may be mentioned the Christmas presents, which, distributed to some 626 persons, cost the municipality some M.12,520 during the current year.

Every member of the staff, from the directors to the domestic or technical servant, acts under definite regulations, which are issued either by the municipality and bear the signature of the chief magistrate, or, if applying only to one special hospital, are issued by the direction. Each official receives a copy of the regulations applying to his or her special office and is required to adhere strictly to them. The rules providing for a proper relation between the directors and medical officers give the necessary details of the work of each and apply to all the municipal hospitals, as do the conditions of service applying to the assistant medical officers and the clinical assistants. The matrons of municipal hospitals also have a common pamphlet containing the regulations applying to this office. The municipality also issue the conditions of training of nurses and of their engagement in hospitals On the other hand the Virchow Hospital issues its own "house directions" for the conduct of nurses and of the subordinate nursing staff, as well as for the domestic and technical servants. Lastly, the municipality issues regulations with regard to the limitations of teaching or demonstration in their hospitals. All these regulations are carefully planned and are sufficiently complete for practical working.

On being elected to the office of assistant medical officer the successful candidate is required to sign a paper setting out the terms of appointment and of dismissal or termination of appointment. He receives at the same time his regulations.

Mention must be made of the fact that a lady is employed in the hospital for the purpose of instructing sick children, who would otherwise fall too far behind their *confrères* in the schools in the case of prolonged illness This lady receives a salary according to the number of hours during which she is occupied in the hospital, the sum expended last year being M 470. Only one clergyman is employed, who receives M 1,200 per annum.

General Considerations.

The system of administering the German State and municipal hospitals, and also within certain limitations the other hospitals, has been shown to depend on methods which have developed out of difficulties, and in theory, at least, it is as complete, as consecutive, and as logical a system as human device can propound. The hospitals are regarded as a part of the machinery for taking care of the population, and while the care of the sick poor must form an important part in any scheme for looking after the race, the rights of individuals, and especially the rights of classes must not be ignored By the identification system which is applied to the whole population, including rich and poor alike, compulsory insurance against sickness, accident, and invalidity and old age is rendered possible and workable. For all the persons who come under the compulsory rule, the provision for treatment during sickness or accident is provided, both in hospitals and outside, by the club doctor, works' doctor, or in some form of institution. Provision for those who would fall into the insurance scheme but for the fact that they have no regular income is made through the Poor Law, save when the municipal authorities find that the person is a wanton vagabond and refuses work when this is offered to him, which work he is capable of performing. This class must always prove the most difficult to deal with, and the fact that the German Poor Law only extends a helping hand when forced to by urgent circumstances must be considered as just, since such an individual is more often than not an expense to his country by having to be kept in prison, and the pangs of hunger with nowhere to turn for assistance may form a wholesome deterrent. Provision is also made for those who lie outside the insurance rule by accommodation in private and public hospitals at low rates, and by the readiness of the medical profession to extend treatment to such a person in accordance with his means.

Uniformity of business methods in the management of hospitals and the introduction of payment for hospital treatment help to place these institutions on a sound financial basis which no accident can overthrow, and at the same time steers clear of the possibility that the exercise of charity can pauperize. The last remnant of free medical treatment still remains in the out-patient departments, but even this, as has been shown, is being attacked at its root, and the ultimate development of the universal insurance system will certainly be that no person who is not directly without the means to pay will be attended to for nothing.

The position in Germany of the medical man is, perhaps, less advanced than that of the patient. Miserable pittances in the the place of reasonable remuneration for attendance to club patients are frequently offered, and at times this leads to a somewhat strained relation between the club doctor and the club patient. In another respect the position of the medical man in Germany much resembles the position in England. Societies, works, hospitals, and other bodies not infrequently sweat the medical man in such a way, not only in respect to remuneration but also with regard to the conditions of service, of dismissal, and of general management of the societies, etc., that the need has been felt for some form to protect against such treatment. In this way, the necessity of the publication of a warning notice applying to appointments of all kinds, including clubs, ship-surgeons' posts, hospitals, etc., made itself felt in the early part of 1906, and following upon the appearance of the warning notice in the JOURNAL and *Lancet*, the *Berliner klinische Wochenschrift* began publishing such a list, which has grown considerably in the course of the two years of its existence.

It may be asked, with reason, How can these considerations affect the English hospitals? If it can be shown that the present system of serving the sick in hospitals and of administering the hospitals is unsatisfactory, there can be no doubt that many lessons can be drawn from the German experience, and a wide revolution in the hospital world might be effective in removing these disadvantages.

The fact that the hospitals in England are dependent on charitable contributions must of a necessity render it difficult for any one hospital to keep out of debt and up to the times. In order to get enough money methods have to be resorted to which are neither dignified nor deserving of admiration. The letter system is now generally condemned as a transparent method of filling the coffers by means of false principles; the keeping up of large out patient departments as an advertisement for subscriptions is essentially a bad method; begging at street corners and in the highways and byways is unworthy of charity and of the donors; and worst of all is the practice of building or repairing and carrying out innovations without having any funds, and leaving it to chance that sufficient funds will turn up from somewhere before the hospital has to close its wards. The history of the metropolitan hospitals teaches that, whether through improvidence or by extravagance, or by wanton, unbusiness like methods, or by ill-luck, scarcely a hospital has a sufficient income to carry out the work which it undertakes to perform.

The activity of the three great funds can only have a temporary effect on the prolonged existence of hospitals as purely charitable institutions. Would it, therefore,

not be a safer, wiser, and more business-like course to apply to the State to have the hospitals taken over by the State or by the municipalities? Charitable contributions need not cease, and, indeed, would always be welcomed by any Government to lighten the burden of the support of hospitals. But before such a step were introduced it becomes necessary to consider the position of the hospitals with respect to the patients. To give any and every person medical treatment and board, independent of whether the patient can afford to pay for treatment elsewhere, is admitted by all to be wrong, and the introduction of the almoner system shows that the hospital authorities realize the objections to this. Admitting this, it must surely be a natural consequence that persons who can afford to insure against sickness in the friendly societies, provident dispensaries, or other forms of sick clubs should be persuaded to do so. In Germany the persuasion is forcible, but effective. In England, in spite of all endeavours, a large proportion of the persons who should insure do not do so. The hospitals might use the opportunities which lie well within their reach to persuade their out patients to join some reputable society, but, rather than supporting this, they have hitherto shown themselves to be more or less callous. During the last three years the out-patients at St. Thomas's Hospital have been presented with a small pamphlet, entitled "How to Provide against Sickness, Old Age, and Death." This pamphlet in well-chosen words gives the reasons why a person of the class usually attending out-patient departments should become a member of a friendly society, and also why it is advantageous to join at as early an age as possible. Next, it gives some plain and simple indications of use in selecting a society, and then proceeds to gives some brief particulars of some of the best known friendly societies, but while the statement is made that no particular institution can be authoritatively recommended other than the Post Office Savings Bank, those mentioned are believed to be of good repute, etc. Such a pamphlet fulfils a want, and does it in a most propitious manner. The patients have a weary wait before them in the great waiting-rooms of the hospital out-patient departments, and the Englishman's desire of something to read will secure a perusal of such a document. It would undoubtedly be better if the hospitals distributed to each of the patients such a pamphlet, from the lines of which the working man could cull information, which, when digested, must be wholesome. He would learn that by coming to the hospital and by being treated for nothing he was receiving alms, and that the method of shaking himself free from the trammels of charity and of maintaining his dignity is found in providing for sickness when in health. The pamphlet might follow the model of the little booklet mentioned above by giving brief details of a number of well-known friendly societies, provident dispensaries, and sick clubs, and leave it to the reader to select the kind of insurance which appears to him to suit his circumstances best. Such a method is certainly a step in the right direction, and much praise is due to those responsible for the publication of the pamphlet. But it is extremely doubtful whether even the combined efforts of hospital authorities, and those interested in the real well-being of the working classes, will ever effect anything like a general use of insurance. Failing a general voluntary insurance, there remains nothing but the compulsary system.

Allowing that no one who can afford to pay for treatment elsewhere, and no one who can afford to insure should avail themselves of free hospital treatment, and considering that the Poor Law makes some provision for the necessitous poor, it becomes as clear as daylight that the hospitals would have to adopt the system of demanding payment for each patient, as is done in Germany, so that the abuse, of which so much is heard, is excluded.

The effect of such an innovation would be that the State or municipality, whichever would support the hospital, would, out of the funds it supplies or out of the funds which are given voluntarily to the hospitals, not only pay for the balance of maintenance and treatment which would remain uncovered by the contribution by or for the patient, but also would pay for those persons who were only temporarily necessitous during illness and who, consequently, might be spared the odium of being chargeable to the Poor Law.

Such ideas arise when a comparison of the German and English systems of hospital administration is drawn, and it would certainly prove beneficial if, to overcome some of the difficulties which still affect the English hospitals, reforms on the lines indicated by the experience of German statesmen and hospital administrators were introduced.

PART VI.

BUSINESS ARRANGEMENTS OF GERMAN HOSPITALS.

One of the most important points in the administration of a hospital is the cost of each patient to the authorities. This cost may be presented, as is shown in another column of the present issue, in various ways, and may be so buried in the annual financial statement that only a Sherlock Holmes is capable of finding the sum out. The method of keeping accounts and of preparing the annual balance sheet should be uniform, if these accounts are to be of comparative use. It might be thought that a State-aided institution would not have the same interest as a voluntarily-supported hospital in showing a balance sheet which compares favourably with those of other hospitals; but such is certainly not the case in Germany, where every nerve is strained to be able to show that each patient has cost the university, State, or municipality a low figure, while the sustenance supplied is of good quality. The system of keeping the accounts in the German hospitals only varies in small details, and, as a rule, when a new method is suggested, it is tried in one department of one hospital, and if found satisfactory is then rapidly adopted by all the others. Each department is required to keep its own books, and from these the central office compiles the general hospital account books. Naturally ordinary well-tried business methods are employed.

In order to show how the annual balance sheets are submitted, the examples of the Charité and Rudolf Virchow Hospitals will again be considered. The capital account is usually not published with the annual statements, since the deductions written off for depreciation, etc., are fixed by law and cannot be varied, while the amount represented by the value of invested property and stock is held to have no influence on the income and expenditure account, provided that nothing is realized. This account is therefore kept and submitted to the auditors and to the university or municipal management, but not to the public.

In the Charité balance sheet the income is shown under various headings, and remarks are appended to each item needing explanation. First, there is the rent paid for leased property; next, the interest derived from investments, etc. The third item is the amount paid for the treatment of patients in the hospital. This is analysed in the note attached according to the amount paid per diem and to the total number of days thus paid for; the 100 000 days' free treatment given to the municipality is added, so that the sum total of the days' treatment is shown. The fourth item is the contribution from the State. Under Item 5 are the contributions made by the municipality, the amount paid for participating in the meals supplied by the hospital (by officials), the amount paid for the keep of the midwifery pupils, and pupil nurses, which expenses are borne by the training schools, and a number of other small items. For the year 1905 the total income from all those sources was M 1,756 783.15.

The expenditure is shown in two parts, the first dealing with the expenses of administration, and the second with that of the treatment of patients. In the first, the salaries of the directors and office staff, the wages of the subordinate officials, etc., and the office and library expenses head the list. Next there is the cost of board for those employed, and for the patients. This is divided into the cost of actual meals, and the sums given in lieu of board. A note shows how many persons partook of each of the three "tables." The following items show the amounts spent on body and household linen and clothing, furniture, heating, lighting, cleaning, repairs to buildings, upkeep of machinery, garden and horses, etc., rates, telephone rent, contribution to the fire brigade, and "various." The fifteenth item deals with the expenses in connexion with spiritual aid (salaries of clergymen, etc., and other items). Further, there are the expenses in connexion with burial, interest on mortgages, etc., the sums spent for the support of retired servants and of necessitous patients, the cost of treatment of officials

during sickness, and the cost of dressings, etc., for the same, and the enforced contributions to the three forms of insurance of servants. These items cost the sum of M.1,361,000.47, which works out at M.3 09 per patient per diem.

The second part shows the salaries of the medical officers and dispensers, the wages of the nursing staff and assistants in the various departments, and the contributions to the nursing training school. The cost for medicines and mineral waters are massed together, as are instruments and dressings for the actual treatment of patients and the apparatus and instruments for scientific purposes. The sum expended on the amusement and on supplying occupation for the patients finishes the expenditure. The total of the second part is M 437,423 46, which works out at 99 pfennigs per head per diem. These two parts are added together, showing the total expenditure to be M 1,798,423 93, which is equal to a cost of M.4 08 per patient per diem, or M.4 00 if the amounts received from sources which affect the administration alone, such as the sale of waste, the return of duty paid on spirits, the contributions from the training schools, etc. are deducted.

A separate statement shows the balance of expenditure over income, which for the year 1905 was M 41,640 78, and to this had to be added the deficit on the year 1904, making a total deficit of M.81,435 11. A second separate account shows the contribution from the first medical clinic for the investigation of cancer. The pathological institute is supported entirely by the university, and the accounts are therefore not included in the accounts of the hospital. During the year 1905, the hospital Am Urban spent M.3 61 per patient per diem; Gitschiner Strasse Hospital spent only M 3 48; Moabit spent M 3 86; Friedrichshain spent M 3.78 and the Children's Hospital spent M 4.57, as compared with the M 4.00 spent by the Charité.

In the annual income and expenditure account issued by the Rudolf Virchow-Krankenhaus, the amounts credited or debited in the years 1906–1907 and the estimated amounts for 1908 are shown side by side. The income is divided into four headings: (1) Income derived from property; (2) Income derived from treatment and board; (3) Income derived from burials, and (4) "Various." Under each of these headings the various items are given, but not in great detail, since the direction submits the detailed accounts of each department to the Deputation of the municipality, and when these are passed the massed amounts are entered in the general balance sheets. The total income for 1907 was M 718 595. The income derived from the treatment and board included the contribution from the town of M 700,000, and the contributions from the State for the treatment of the patients of the Royal Institute for Infectious Diseases, as well as the cost of extras, which the Institute has to pay. The actual cost of keeping and treating the patients is not given as income. The expenditure is divided into 8 headings. These are as follows: (1) Office and house administration. This includes salaries and wages, Christmas presents, and office expenses. (2) Spiritual and educational expenses. (3) Treatment of patients. This includes salaries, which are given in detail, medicines and necessities for the dispensary, serums and antitoxins, instruments, etc., for diagnosis, treatment and nursing of patients, cost of the pathological department, *x*-ray and hydrotherapeutic departments, and the cost of so-called ambulatory treatment (that is, the treatment of patients after discharge in special cases, and of casualties to whom first aid is rendered), and, lastly, medical journals (M.1,000) (4) Board, clothing, storage, and cleaning (5) Domestic necessities, including chimney-sweeping, carting away of soot, snow, etc., water, electric light, and gas for cooking, coal for the machinery, and other details. (6) Premiums, etc., including fire insurance, payment to the municipality for drainage and the cost of conducting the surface water into the canal. (7) The expenses of burial; and (8) Various, including the repayment of sums paid in excess by patients, support of certain persons under certain conditions, as provided for by the municipal Deputation, etc. These expenses come to M 1,419,972 The final statement made is a somewhat surprising one, since it leaves the balance of expenditure over income at M.701 377, while an estimated balance of expenditure over income for 1908 is given at M.1,235,291. On inquiry, however, the matter is readily cleared up. The municipality collects the annual balance sheets from all the municipal hospitals and pays the deficits. It is therefore necessary, in order to ascertain what each patient has cost per diem, to refer to the general account submitted by the administrative department of the chief magistrate of Berlin.

This general annual account of the municipal hospitals is a much more concise and less detailed statement than that of the individual hospitals; but it gives at a glance what the real position of the finances is. The items of income are first given, and then those of expenditure, a column being reserved for each of the six hospitals. The totals appear at the bottom of the detailed accounts and show the deficit for the year. Since the whole of the income represents the returns and sums realized by the sale of waste and rent paid by certain officials whose salaries do not carry with them free residence, it is thought fair to regard the excess of expenditure over income as the sum representing the cost of keeping the patients. No contributions from the State or municipality are included in this statement of income. Taking the year 1906, it is shown that at the Moabit Hospital the patients cost M 3 81 per head per diem. To the sum expended the interest on the site and buildings and on the property (furniture, etc., and apparatus), as valued by a special committee appointed for the purpose, calculated at 3½ per cent., is added, which brings the cost per patient per diem up to M 4.76 at the same hospital. Next the amounts received in payment for treatment and board and also for burial from the patients, the insuring societies, or from the executors of deceased patients, is deducted from the total, and the balance represents the cost to the municipality for the upkeep of the hospital. This was M.3.18 per patient per diem in 1906.

The Poor-law Department finds it impossible to pursue these accounts further, although a certain proportion of the last-named sum is recovered from patients, since this recovery is almost always spread over a considerable time, and it would be too confusing to have to keep on correcting old balance-sheets as the money is regained. This recovery is, therefore, shown in the general account of the poor department, and no longer appears under the head of Hospital Income.

The writer gratefully acknowledges the able assistance given him in the composition of this article by Dr. W. Ohlmüller.

H. W. ARMIT.

PARIS HOSPITALS.

THE physicians and surgeons to the Paris hospitals are not paid anything for their services to the hospitals by the Assistance Publique, but they receive an *indemnité de déplacement*—practically a travelling or cab allowance—amounting in the case of the hospitals centrally situated, for example, the Hôtel-Dieu, the Pitié, and the Charité, to 125 francs a month (£60 a year), and in that of those further from the centre, such as the Trousseau, Tenon, and Bichat, to 250 francs a month (£120 a year). The conditions under which patients are admitted to the public hospitals in Paris may be briefly stated as follows: Paris is divided into a number of hospital districts; persons desiring hospital treatment go to the hospital of the district in which they live, with the exception that they may go to special hospitals for special diseases—for example, St. Louis for the skin, Salpêtrière for nervous diseases, etc. They go first to the out-patient department, where their names and addresses are taken; and if they live in the hospital district they are allowed to pass on to be examined by the doctor, and if he judges necessary they are admitted to the wards. A visitor from the hospital then goes to the address each patient has given and makes inquiries as to rent, method of living, means of existence, etc., and if it is found that the patient is capable of paying 5 francs a day he is then moved to one of the paying rooms, and the Assistance Publique recovers the money from the patient at the end of the illness. The charge of 5 francs per day is the maximum asked, and includes any medical or surgical treatment, dressings, etc. Any person brought into hospital as result of accident, whatever be his social position, or hospital district, or nationality, is immediately admitted, and no questions are asked.

NEUROLOGICAL AND PSYCHIATRICAL CLINICS IN GERMANY.

IT is one of the commonplaces of the newspapers and popular reviews of the day in this country that the number of persons housed in asylums is increasing out of all proportion to the increase of the population. Part of this apparent increase is due to the drafting into asylums of harmless old people, the subjects of senile dementia more or less pronounced, who were formerly kept in workhouses or allowed to remain with relatives or friends willing to look after them in return perhaps for a small weekly payment disguised under the name of out-door relief.

It is very possible, if not indeed highly probable, that one result of Mr. Asquith's Old-Age Pensions will be a considerable diminution in the apparent rate of increase of pauper lunacy. It is true that a lunatic will not be entitled to a pension, but the partition between the obtuse slow-moving mind of the physically debilitated old man or woman and the senile dementia which can be held to warrant removal to an asylum is often so thin as only to be seen when looked for in a certain light. At present there is a great temptation to get rid of an aged relative to the workhouse, and for the guardians to move the patient on to the asylum, as was explained in a short article referring to London published in the JOURNAL on May 23rd (p. 1249). An old-age pension, even though no more than 5s. a week, will powerfully reinforce the kindly personal feeling and sentiments of family honour which have always tended to make a large number, probably the majority of the poorer classes, prefer to keep aged relatives, regarded by them as perhaps no more than a little silly, under their personal care.

However this may be, there is a growing belief among medical men of experience in such matters, to which these columns have borne frequent testimony, that another and far more serious cause for the increase in the number of the insane is to be traced to the defective means at present provided in this country for the treatment of patients in the earliest stages of mental disorder, and when they are not insane or at any rate not certifiably insane, and when they are far more likely to recover completely if properly treated than at the later stage when the legal frontier has been overpassed. The absence of such provision has the further advantage that the facilities existing in this country for the clinical study of these early stages and for the instruction of students in the recognition of their symptoms, are altogether inadequate. A striking proof of how the necessity for providing better opportunities for clinical study, teaching, and research has impressed itself on the mind of one peculiarly well able to judge of the needs of this country is afforded by the munificent gift of Dr. Henry Maudsley to London.

It is well known to those who have given attention to the subject that the question has been looked at from a different point of view in Germany, where university psychiatric clinics have long existed, and have gradually been very greatly developed until we find so magnificent an instrument for teaching research and cure as that recently established in Munich under the direction of Professor Kraepelin.

The more logical and politic course followed in Germany is to be attributed to the operation of several causes, of which two only need be mentioned here. The first is that the universities have fully recognized their responsibility to encourage the scientific study of the causes, prevention, and treatment of mental diseases. The second may be found in the fact that German lunacy law differs essentially from that of England. There are differences in procedure in the various German States, but it may be stated generally that at the outset there is a difference between English and German law, in that in Germany the necessity for institutional treatment and the official declaration as to any individual being dangerous to himself or to the public, as given in a lunacy certificate (*Entmündigung*), have nothing to do with each other.[1] A patient certified as insane need not be confined in an asylum, nor need an inmate of an institution in which insane people are treated be certified—that is, certification becomes compulsory only when an otherwise unjustifiable (*nicht Gerechtfertigten*) limitation of the personal freedom through sequestration in an asylum is necessary. Notwithstanding this, there are many institutions in Germany which receive only certified insane or persons who must be certified immediately on reception.

With regard to the reception of patients into university clinics in Germany, the Director has the power to admit patients without certificate, without any other medical man's subsequent visit to the patient, and without special proof of urgency. Naturally, and in accordance with the above statement of the legal situation in Prussia, voluntary boarders are admitted to the clinic. The majority of patients at the Charité clinic in Berlin, however, are, we are informed, brought to the institution by relatives or by the patient's own medical man, and are at once notified to the Attorney-General (*Staatsanwalt*), who certifies them as insane. The same procedure is adopted in the case of voluntary boarders who are found to require certification during their residence in the clinic.

This notification to a higher authority, and not only in university clinics, has been described by legal writers as in some German states merely a bureaucratic form, adding nothing to the security of the individual against unjust detention in an asylum, but it undoubtedly facilitates the early and proper treatment of cases of incipient insanity and not only often averts the stigma of certification, but does much to further the scientific study of insanity.

The following is a short description of two German psychiatric clinics, illustrating two types of these institutions—the one, that at the Charité Berlin, forms a part of a linked neurological and psychiatric clinic, itself a department of a large general hospital; the other, the Royal Psychiatric Clinic of Munich, an independent institution under the general control of the university.

THE CHARITÉ, BERLIN.

Historical.

The beginning of this renowned hospital, university school, and training school for military surgeons reaches back to the year 1710, when at the cost of Frederick I of Prussia it was founded as a hospital for plague, with which Berlin was at that time threatened. The plague, however, did not reach Berlin, and the hospital was therefore reconstituted as a hostel for mendicants and hospital for the garrison. As the garrison made only slight use of it, in 1725 it was converted into a Royal Poor Hospital with one part for the garrison. Even at that time the surgeon Habermas used it for the instruction of military surgeons. In 1727 it was formally opened, under the name of the Charité, "as a public work of Christian love, benevolence, and charity," and from that date its scope has progressively widened under the patronage and support of successive kings of Prussia.

In 1785 a new building, now known as the Old Charité, was founded. In 1798, with the burning of the Asylum for the Insane in Krausen Street, the Charité began to admit the subjects of mental disorders. Berlin University was founded in 1810, and a separate department of the Charité was devoted to clinical instruction, the list of teachers including such names as Rust, Hufeland, v. Frerichs, Traube, v. Bardeleben, v. Graefe, Rudolph Virchow, Griesinger, Westphal, and König. Here Robert Koch worked and von Behring discovered his diphtheria antitoxin.

In the nineteenth century the administration of the hospital passed from the hands of the Royal Poor Administrators to the Royal Government and then to the Police Presidency, and has since undergone many changes.

In 1831-4 what was, and is still, known as the New Charité, an independent building in its own grounds, was erected for the insane, syphilitic, and invalid prisoners, and by 1883 the Old Charité only received patients with nervous diseases, and eye diseases, and children.

Extensions and alterations of the structure became urgent, as about this time nearly 1,800 patients were often in the hospital with beds for scarcely 1,300. These alterations, on so extensive a scale that the whole collection of buildings forms practically a new establishment, were commenced shortly after 9 380 000 marks had been voted for the purpose in 1897. The Charité then took its present form. There remained uncharged only the Isolation Hospital, the New Charité, the Old Charité church, and the laundry, the following new or remodelled structures being erected: The first and second medical

[1] *Handbuch der Gerichtlichen Psychiatrie.* Edited by Professor Hoche. 1901. Berlin: August Hirschwald. Sec. 4. Minist. Order. 29-xi. 1899. (P. 248.)

clinics with 180 beds each; the surgical clinic and its annex with 160 and 70 beds; the midwifery and gynaecological clinic with 143 beds; the psychiatrical and neurological clinics with 200 beds; the children's clinic with 100 beds; the clinic for syphilis and skin disease with 151 beds; the eye clinic with 30 beds; the ear clinic with 17, and the nose and throat clinic with 18 beds, and also the pathological institute, the administrative bureau, the chapel, and the central kitchen and machine rooms; the whole buildings occupying some 14 hectares (roughly 5½ acres) of land.

Administration.

The direction of the Charité is in the hands of a board, the Königlichen Charité Direction, composed at present of Surgeon General Dr. Scheibe (Army Medical Corps) as medical director and Privy Councillor Patter as managing director. This board is under the immediate direction of the Ministry for Ecclesiastical, Educational, and Medical Affairs. The whole establishment is divided into thirteen departments—not including the Pathological Institute and Museum—each of which serves as a university clinic; each has its own medical director and medical and lay staff. In addition to the Pathological Institute, the Maternity Hospital for Berlin and the Nurses' School stand in immediate connexion with the Charité.

Psychiatrical and Neurological Clinics.

Both of these clinics are under Professor Ziehen as medical director, who is assisted in the psychiatrical clinic by one staff surgeon, or *Stabsarzt* (Army Medical Corps), three civilian medical officers, five assistant medical officers, and a total subordinate staff of fifty-nine, including one sister and fifty attendants and nurses. In the neurological clinic the medical staff, under Professor Ziehen, consists of one staff surgeon, two civilian medical officers, and two assistant medical officers, with a nursing staff of fourteen. The number of beds in the psychiatrical clinic is 153, and in the neurological clinic 56, and it will therefore be noted that the proportion of attendants and nurses to patients in the psychiatrical clinic is 1 to 2.6, and in the neurological clinic 1 to 4. The male patients are attended to by male nurses or attendants, and the female patients by female nurses. It may further be mentioned here that the medical directors of the clinics and their staff confine themselves to purely medical and scientific work, and that all matters such as the appointment and discharge of nurses, etc., come under the direct control of the general directorate.



The Neurological Clinic.

Structure.

The psychiatrical and neurological clinics, with the villas, form practically a single department, lying at the west side of the Charité buildings. The buildings fall into three divisions: (*a*) The neurological clinic and class-rooms, laboratories, auditorium, etc.; (*b*) the patients' department of the psychiatrical clinic; and (*c*) the villas.

(*a*) *The Neurological Clinic.*

This is an imposing edifice, facing south-east, composed of a projecting central building extended on each side into west (male) and east (female) wings. The central building contains on the ground floor a porter's hall, residential rooms for two assistant medical officers, and a spacious central hall. On the ground floor of the female wing are rooms for the director of the clinic, the laboratory, consisting of three large laboratories for twenty-two workers, two separate laboratories for the two senior assistant medical officers, a room for the laboratory servant, a common room, library, kitchen, and at the extreme east the quarters of the inspector.

On the ground floor of the west wing there are nineteen rooms, besides porter's room, closets, etc. This wing at the west end opens on to the main road of the Charité, and is the entrance for both male and female patients to this clinic. The nineteen rooms consist of male and female waiting rooms, rooms for electrotherapy for male and female patients, a room for urinary analysis, numerous rooms for the examination of patients, and, where the wing joins the central block, a residence for an assistant medical officer. On both sides there is underneath the ground floor a basement floor. Here lie, on the east wing, bacteriological, chemical, and physiological laboratories, a common room, closets, cellars for the inspector, and also dwelling rooms for a married machinist, house servants, etc. Similarly, under the central block, are quarters for the porter and other servants and the mortuary. In the basement of the west wing is the bath-house, with waiting-rooms, dressing-rooms, hot-air baths, sand baths, douches, sitz baths, etc. Here also there is a dwelling for the attendant.

On the first floor in the middle block there is the clinical lecture room with numbered places for 185 students, with a wardrobe, chart room, and rooms for two female servants. On this floor also is the psychological laboratory connected by a corridor. On the first floor in the east wing there is the hospital for the female patients of the neurological clinic. This comprises an observation ward with 12 beds, another with 10 beds, 3 rooms with 2 beds in each, rooms for two nurses, a workroom for the charge nurse, kitchen, closets, etc. The first floor on the west side is similarly arranged for male patients. The attic floors are arranged on both sides for nurses, ward maids, and servants, and in the middle block residential rooms for an assistant medical officer and one voluntary internal assistant, besides photographic rooms.

(*b*) *The Psychiatrical Clinic.*

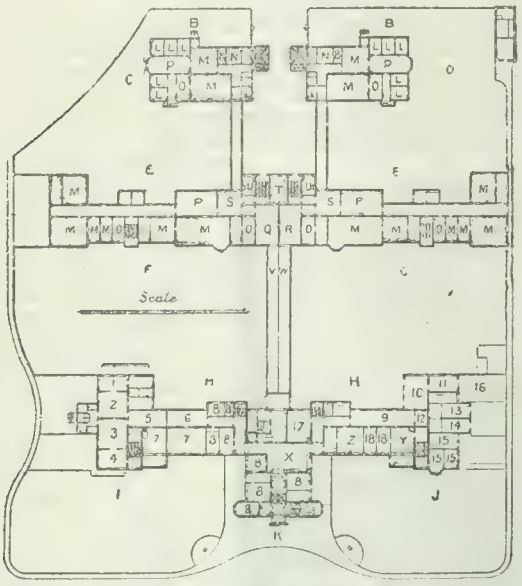
Like the nerve clinic, this consists of a middle block and two wings, male and female, extending parallel to the nerve clinic, the ground floors of the central blocks of the two structures being connected by a covered but not completely enclosed corridor. The psychiatrical clinic consists also of basement, ground floor, first floor, and attic floor. On the ground floor of the middle block are waiting-rooms for male and female patients, the office of the inspector, male and female reception and bathrooms, and service rooms for the kitchens, etc. Beside the ordinary bathrooms there is on each side a room for the prolonged bath or *dauerbad* with two baths in each. This *Dauerbad*, in which the patients are kept day and night for days and sometimes weeks, is a prominent feature of modern German asylums, and is said to give extremely good results in cases which had formerly to be kept in seclusion in padded cells.

The ground floors of the two wings are similar in structure and comprise on each side an ante-room, a large day room, one ward with 12 beds one with 9 beds, two with 5 beds, two smaller rooms with 2 beds in each, a room for the examination of patients, a room for night nurses or attendants, a bathroom, and the usual sanitary offices. These rooms are disposed on either side of a central corridor which cuts at right angles a terminal corridor on each wing. On the first floor the rooms are arranged in similar fashion, a music-room replacing the day-room of the ground floor on the female side, and a billiard-room on the male side; and in the middle block two examination rooms, a waiting-room for patients, and a room for

hospital sisters. On the second or attic floor there are in the middle block residential chambers for four assistant medical officers, and in the wings bedrooms for nurses and attendants day-rooms for the nursing staff, etc. On the basement floor a corridor runs down the middle of the whole building, and off this are residential rooms for nurses, ward and house maids, work rooms for patients (bookbinding and carpentry), a mortuary, disinfecting chambers, etc.

(a) The Villas.

The two villas for males and females respectively are, as will be seen from the ground plan, separate buildings, having each its own garden. Each is connected by a separate roofed-in corridor on the ground floor with the psychiatrical clinic. They are single-story buildings, identical in construction and furnishing, and are specially designed for the treatment of restless and agitated patients. Each contains a medical officer's room, two rooms for attendants, and for the patients, one ward with five beds, one ward with ten beds, bathrooms, and five



Ground plan of the Neurological and Psychiatrical Clinics.

B. The villas (male and female). C. Garden for restless male patients. D. Garden for restless female patients. E. Psychiatrical clinic (male and female wings). F. Garden for male patients of the psychiatrical clinic. G. Garden for female patients of the psychiatrical clinic. H. Neurological clinic (male and female wings). I. Garden for male patients of the neurological clinic. J. Garden for female patients of the neurological clinic. K. Main entrance. L. Isolation cells. M. Association wards. N. Nurses' and attendants' rooms. O. Bathrooms. P. Day-rooms. Q. Male waiting-room. R. Female waiting-room. S, S. Anterooms. T. Inspector's office. U. Dressing rooms. X. Central hall. Y. Library. Z. Director's room. 1, 4. Rooms for electro-therapy and examination of male and female patients respectively. 2, 3. Waiting-rooms for male and female patients respectively. 5, 6, 7, 7. Rooms for examination of patients. 8, 8. Residential rooms and offices of assistant medical officers. 9. Microscopical laboratory for students. 10. Research laboratory. 11. Assistant medical officers' room. 12. Dark chamber. 13, 14, 15, 15, 16. Kitchen, rooms, etc., of inspector. 17. Room for collection. 18, 18. Assistant medical officers' laboratories.

isolation cells. Particular care has been given to the construction of these cells. Angles and corners are rounded off, the flooring is of oaken blocks set in asphalte, the windows have thick unbreakable glass framed in iron and opening with a specially constructed catch, the sun-blinds or jalousies are locked with a key, and the artificial light is set in the wall over the door, which latter is pierced by an inspection hole—the whole cell closely resembling the patients' cells at the English State Asylum at Parkhurst.

The Patients.

An examination of the statistical information supplied by Professor Ziehen for the annual report[2] for the year ending March 31st, 1906, of the Government Director, Dr. Scheibe, will perhaps best convey a general idea of the clinical material of the psychiatrical clinic (reference to the neurological clinic is omitted).

On March 31st, 1905, there were in the clinic 149 patients. During the year 1,753 cases were freshly admitted to the clinic and 216 transferred from other clinics to the psychiatrical clinic, making in all 2,117 persons (readmissions during the year are not counted as admissions) treated at this clinic during the year. Of the 1,753 new or first admissions to the clinic 611 were cases of simple mental disorder, 235 cases of paralytic psychoses (G.P.I.), 77 cases of alcoholism and 122 of alcoholic delirium, 138 cases of epilepsy, 14 of alcoholic epilepsy, 7 of hystero-epilepsy and 80 of hysteria, 58 of neurasthenia, 69 cases of imbecility or idiocy, and 50 of dementia. There were also 38 cases of cerebral syphilis and 17 of brain tumour, with many other psycho-neuroses in small numbers, and 111 cases of other non-nervous diseases. The victims of drug habits were represented by 10 cases of morphinism. The range of clinical material at this clinic is thus very great, and all cases are of course admitted for temporary treatment only.

During the year 716 were discharged as recovered giving a recovery-rate on the admissions, exclusive of transfers, of 40 per cent.; 67 were transferred, 1,072 discharged as not recovered, and 115 died, giving a percentage death rate on the total numbers treated of 5.4.

Scale of Charges.

By a regulation of 1835 the insane poor belonging to Berlin may be admitted at any time to the Charité free of cost. With the exception of these cases, and also of others belonging to Berlin, in whom the admitting medical officer certifies it to be impossible to refuse admission, or of cases received from magistrates, poor unions, or police, there are the following scale of charges for treatment and board in the psychiatrical clinic. These are for the first class, including a private room and table, 10 marks a day; for ordinary patients belonging to Berlin, 3 marks a day, reduced to 2.50 marks a day in specially interesting cases made use of for clinical purposes; and for ordinary patients not belonging to Berlin, 4 marks a day.

THE ROYAL PSYCHIATRIC CLINIC OF MUNICH.

As is well known Professor Kraepelin, long associated with Heidelberg, took over some years ago the directorship of the Munich psychiatric clinic. It was opened for the reception of patients early in November, 1904, and the first annual report[3] has recently been issued.

Staff.

This consists of the Director, Professor Kraepelin; the Principal Medical Officer or *Oberarzt*, Dr. Gaupp; the Conductor of the Polyclinic, Professor Gudden, with four staff assistant medical officers and three internal and five external voluntary medical officers, a medical officer appointed by the Minister of War, and a pathologist. In addition to the usual clerical and lay officials there are 19 male attendants, 20 sisters, and 7 ward maids, and over the household management a matron assisted by 5 sisters and 6 maids. The proportion of attendants and nurses to patients is 1 to 2.

Administration.

The clinic is divided into four departments—male and female reception and male and female observation departments. There is a medical officer at the head of each department, and each medical officer is assisted by a colleague in the work of recording the family history and conducting the physical and mental examination of each patient. Similarly the conductor of the polyclinic is assisted by another colleague. Some months in each year are set apart by the assistant medical officers for purely scientific investigation. A great deal of scientific work has already been done by the staff, to which this report bears eloquent witness. There are also clinical and chemical laboratories where excellent work has already been done, and in many other directions by means of demonstrations and meetings scientific endeavour is stimulated and encouraged.

The Sisters act on both male and female sides, and Professor Kraepelin comments most favourably on the influence of the Sisters on male patients. Another point on which he lays stress is continuous rest in bed, this form of treatment being applied to three-quarters of the whole patients, the patients so treated remaining in bed either in the wards or, during fine weather, in the open

[2] Charite-Annalen, xxxi, Jahrg. Statistik (1 April, 1905, bis 31 März, 1906).

[3] *Jahresbericht über die Königliche Psychiatrische Klinik in München* für 1904 und 1905. Munich: J. H. Lehmann. 1907. (Pp. 126.)

air. Lastly, when bed treatment ceases to be of service, great use is made of wet packs and the continuous bath or *Dauerbad*. This *Dauerbad* is a prominent feature of modern asylums in Germany. "Das Dauerbad," says Dr. Hoppe,[4] in an exceedingly interesting description of a modern Prussian asylum, "bildet den besten Ersatz der früheren Tobzelle" [the prolonged bath forms the best substitute for the old padded cell], an opinion with which Professor Kraepelin would agree, although the maintenance of a proper temperature continuously for weeks requires constant care, as was unluckily proved at this clinic in 1905, when a female general paralytic, who afterwards succumbed, was severely scalded.

The Patients.

Turning to the cases under treatment, we see that 1,600 patients were admitted in 1905. There were 223 cases of dementia praecox, 119 of general paralysis, 284 cases of alcoholism or of alcoholic psychoses, 171 cases of epilepsy, and 104 of hysteria. The other cases were examples of less frequent forms of mental disorder. Munich shares with other large German cities a high proportion of alcoholic psychoses, but the extraordinary number admitted to this clinic is probably due to the fact that in Munich the police, in order to avoid mistakes, have the power to take helplessly drunk and incapable or disorderly persons to the psychiatric clinic instead of, as formerly, to the police cells. Another interesting fact is that of the 171 epileptic admissions no less than 128 were males, pointing clearly, Professor Kraepelin says, to the causal connexion of alcohol and epilepsy.

The significance of the great numbers of alcoholic admissions from the economic standpoint is discussed in this report by Dr. Lichtenberg, one of the voluntary external medical officers. From this we see that no less than 39·4 per cent. of the admissions were more or less directly due to alcohol. One-third of these were brought to the clinic by the police helplessly drunk or disorderly. The great majority of these alcoholic cases belonged to the third or lowest class of patients, and cost the institution 17 315 marks, or 17·3 per cent. of the total maintenance of the patients, although 252 of the total 628 alcoholic admissions remained only one day in the clinic. It is therefore very evident that psychiatric clinics which replace in certain cases the police cells should be in part State-supported. Of the total alcoholic cases, there remained 13 in the clinic at the end of the year, 10 had died, 85 had been assigned to asylums, 23 to other institutions, 4 to prison, and 386 had been restored to freedom.[5]

The Psychiatric Policlinic.

The policlinic has five rooms, elaborately fitted with every possible requirement, and a large auditorium, and during the year under consideration lectures and demonstrations lasting two hours were given six days a week, illustrated by 466 patients suffering from various forms of nervous and mental diseases.

In addition to the description of the working of the clinic, the report contains no less than twenty brief but valuable reports, clinical and pathological, based upon the material furnished by the clinic and independently communicated by thirteen members of the medical staff. The opening paper is by Professor Kraepelin on "Alcoholic Insanities,"[6] and the remainder cover a wide range, and afford in themselves abundant evidence of the great therapeutic and didactic value of psychiatric clinics.

Courses of lectures are delivered by Professor Kraepelin, by Professor Gudden of the Policlinic, by the *Oberarzt*, Dr. Gaupp, and by the Pathologist, Dr. Alzheimer. The work in the laboratory for psychological experiment is conducted by Professor Kraepelin and Dr. Gaupp, and that in the anatomical laboratory by Dr. Alzheimer. In addition to still other courses of instruction, Professors Kraepelin and Gudden and Dr. Gaupp give lectures to army medical officers.

[4] H. Hoppe. *Ein Gang durch eine moderne Irrenenstalt.* 1906. Carl Marhold. Halle a. S. Price M.1·60.

[5] The apparent discrepancy between the 628 cases of Lichtenberg and the 284 as returned by Kraepelin is due to the fact that the former includes all cases in which alcohol was assigned as cause of admission, whether precocious dementia, manic-depressive insanity, epilepsy, etc., or not

[6] For extended report on Alcoholic Insanities, by Professor Kraepelin, see the *Münch. med. Woch.* 1906. S. 737. Or the separate publication, *Der Alkoholismus in München.* By Kraepelin, Vocke, and Lichtenberg. Lehmann. Munich. Price 60 pf.

A NOTE ON THE CONSTRUCTION OF CHILDREN'S HOSPITALS.

THE NEW CHILDREN'S HOSPITAL AT VIENNA.

THE special difficulty which constantly besets those responsible for the administration of hospitals for children is the ever-present risk of the introduction into wards of some one of the acute specific infectious diseases. In general hospitals for adults the risk, though it it exists, is from the practical point of view very much less serious, because the majority of adult patients have acquired immunity to such diseases as measles, scarlet fever, and whooping-cough.

There is also the very considerable risk that in the rooms in which the patients wait for examination before admission, and in the out-patient and casualty departments, many opportunities for the dissemination of infection may occur. Constant vigilance on the part of every member of the medical staff is a necessity, and the intelligent co-operation of the nurses is most essential, but it is desirable also that in the planning of a children's hospital, and in working out a scheme for its administration, this risk of infection should constantly be kept in mind.

A new children's hospital is now being erected in Vienna, and Professor Escherich has recently described the structural methods designed for preventing the spread of infection.[1] He, indeed, admits that the ideal condition for a children's hospital would be a separate room and nurse for each patient, but as this is obviously unattainable, certain new methods have been followed in the construction of the Vienna hospital which he believes will, if combined with strict discipline among the nurses, diminish to a minimum the risks of a patient acquiring a worse disease in hospital than that for which he was admitted.

To prevent patients waiting in a crowd at the entrance to the hospital and spreading their diseases among each other, they have to enter by a serpentine gangway in Indian file. A good number of patients can be accommodated therein, and they are thus kept separated to a large extent. As the patients emerge from this passage they report themselves at the porter's lodge opposite; here any infectious cases, or those suspected of being such, are at once removed either to the infectious pavilions or to the observation department, whilst non infectious cases are directed to the general out-patient waiting room.

The observation department comprises a set of examination cells for out-patients, and an observation ward to which cases are admitted and kept separate from one another.

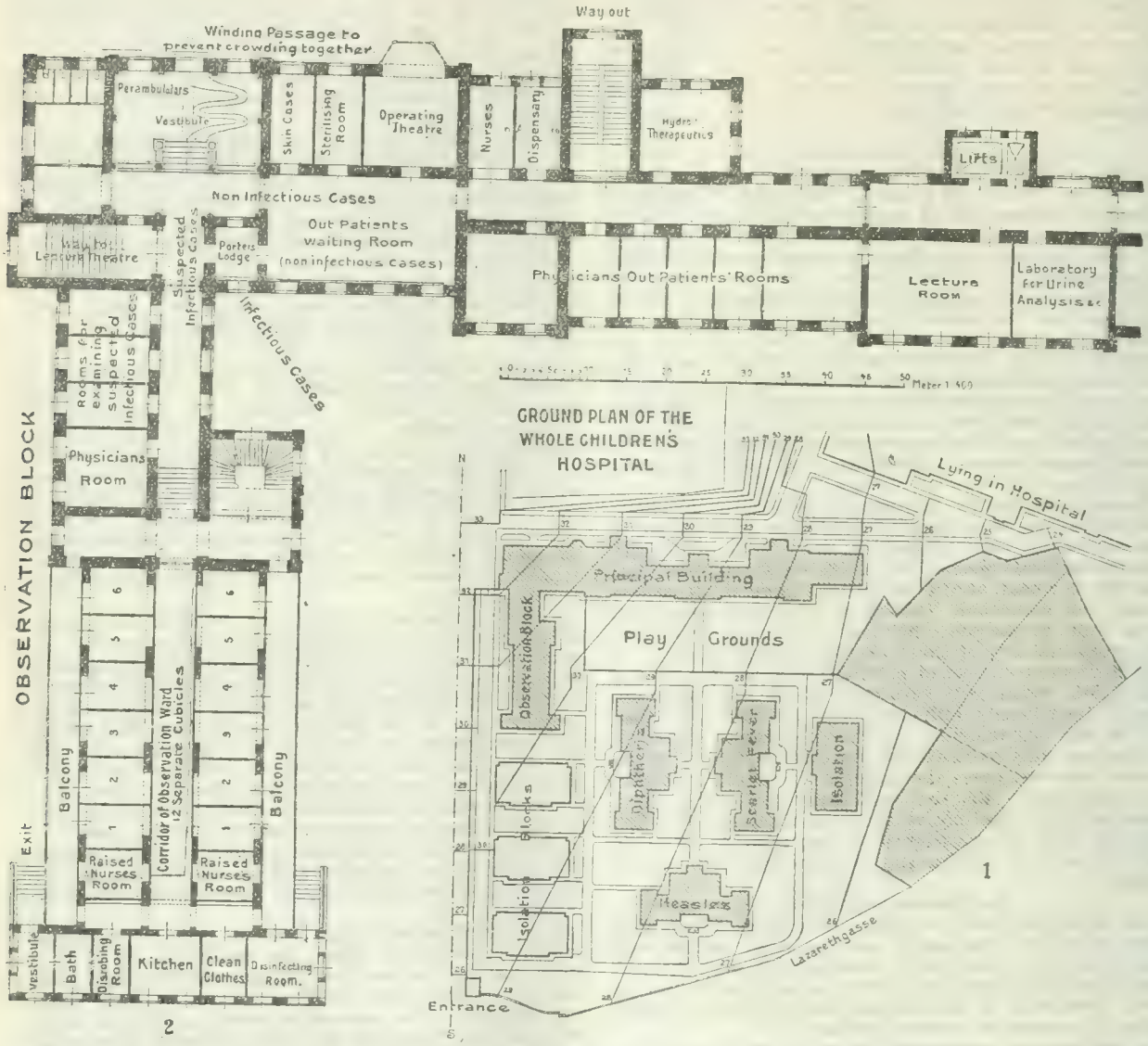
The examination cells, four in number, resemble cubicles; suspected cases are examined there by a physician, each patient going to a separate cubicle, which can be flushed with sublimate solution both before and after use. The observation ward consists of twelve cells built of glass and iron, with separate heating and ventilation for each. These cells or cubicles are arranged in two rows of six, separated by a corridor. In this corridor patients' friends and clinical classes can see the patients without running the risk of taking or carrying infection, as the cells only open on the outside balcony, and do not communicate directly with the central corridor. At the end of each row is a nurse's room built at a higher level, so that a nurse can sit in her room and see all that is going on in the cubicles through their glass roofs.

The in-patient department for general cases is three stories high, and contains sixty beds. In the general wards children are grouped and located as far as possible according to age; there being an infants' ward, and wards for younger and older children. Separate small wards are reserved for severe and acute cases, for septic or skin diseases, and for tuberculosis. These methods of distributing the patients obviously tend to prevent reinfection whilst in hospital. If a case of infectious disease occurs in a general ward the patient is sent to the fever block, and all the others are turned out and taken to a change ward kept empty for such an event. Here they stay until their own ward has been thoroughly disinfected and prepared for their return.

In the infectious department there are four pavilions—

[1] *Jahrbuch für Kinderheilkunde*, 1907.

for scarlet fever, diphtheria, measles, and the other exanthemata respectively. It stands in the same grounds as the general hospital—an arrangement open to criticism as it must favour the spread of infection. In each ward arrangements are made to prevent patients reinfecting each other—for example, to prevent a virulent case



reinfecting a mild one of the same complaint, or one with secondary infections transmitting these to uncomplicated cases. It was the neglect of precautions against these risks, together with ignorance of antiseptic principles, that accounted for the fearful mortality which occurred in foundling institutions fifty years ago, and which, at Prague, amounted to 100 per cent. in one year.

There is a partition between each pair of beds, which stand in the spaces between the side windows of the ward. Each patient is, therefore, separated from his neighbour either by the partition or by the draught from the window. At the end of the ward are three cubicles, built in the same way as those in the observation department. Here are accommodated cases of virulent infection, cases with complications, or those who are moribund, so that they cannot endanger the milder cases present.

Besides the wards there is an out-patient department, a lecture theatre, operating room, professors' rooms and laboratories, pay wards, and nursing quarters.

THE MANCHESTER ROYAL INFIRMARY.

MUCH disappointment has been felt in Manchester medical circles at the announcement that His Majesty the King will not be able to visit the city to open the new infirmary. It is still hoped, however, that some member of the Royal Family will be able to perform the opening ceremony. Now that the scaffolding has been removed from the front of the new building in Oxford Road, it is evident that it would be difficult to find a more magnificent group of hospital buildings in the kingdom. Compared with the plain business-like front of the neighbouring eye hospital the new infirmary appears quite ornate, and the architects—Mr. E. T. Hall, of London and Mr. J. Brooke, of Manchester—are certainly to be congratulated on their design. The contractors have apparently done all in their power to ensure that the contract time for completion (July 31st) shall not be exceeded in respect of any part essential to the working of the infirmary. The heating apparatus has been in continuous use through the winter, so that internal work has been proceeded with without check and without detriment from weather fluctuations. This free use of artificial heat has not only expedited the progress, but has ensured that the hospital shall be thoroughly dry when occupation begins, and it is expected that only a very short time after Messrs. Arnold and Son have completed their contract will be required for furnishing and equipment for patients. The amount of work done during the year 1907 may be gauged by its value, amounting to £180,000, while the number of men engaged on the work averaged 740. The straightening up of the grounds and the formation of walks was commenced some time ago, and it is now possible to form a good idea of

what the whole place will be like when completed. It will be seen from the view of the front elevation facing Whitworth Park, which we give, that from Oxford Road three blocks are prominent The central block, with clock tower, contains in front a spacious entrance hall with two large board rooms and committee rooms; also medical officers' dining room and complete set of offices. Behind these are the chapel the stores department and the dining rooms for nurses and for servants. The block on the left as one faces the building contains on the ground floor male and female common rooms and cloak-rooms, while the first floor has a spacious reading room, library and various classrooms for teaching purposes. The block on the right is the Staff Home, with sitting rooms in front facing Whitworth Park, large recreation room and classrooms, and behind nurses' and probationers' rooms.

The various wards of the hospital are all behind and not seen in the illustration. It is not intended, however, at present to give any further description of the building. That can better be done at a future date when everything is completed.

Financial.—The financial position is at present far from satisfactory. The capital expenditure on the new infirmary and the central branch, including interest on bank overdrafts may be taken to be approximately £525 000 The purchase price of the existing infirmary on the sale to the Manchester City Corporation was £400 000, leaving a deficit of about £125,000 It follows that unless the invested funds of the charity are to be substantially diminished, a strenuous effort will have to be made to meet the deficit. In face of the fact that the annual expenditure needed to maintain the new establishment at its full working strength will be much greater than at present, it would be fatal to encroach on the invested funds. Up to the present about £58,000 has been received towards the deficit on capital account, leaving as least as much again to be raised to enable the invested funds to be retained intact. The minimum estimate of the annual expenditure at the new infirmary itself is £30,000. To this must be added an annual deficit of £2,500 at the Barnes Convalescent Hospital and £2,000 for the central branch, making a total annual expenditure of £34,500. To meet this the income may be taken at £27,500, but this includes an estimated receipt of £5 000 on account of legacies and special donations, so that, as a matter of fact, only about £22,500 can be reckoned on as a certainty. The annual deficit is thus from £7,000 to £12 000, according to the amount of legacies and special donations received. Of the reliable income of £22,500, only £8,465 is attributable to voluntary subscriptions from the charitable—namely, annual subscriptions, £7,150; donations under £100. £390; Hospital Saturday and Sunday Funds and other collections, £925. The board suggests that an annual subscription list of £7,150 is not an adequate contribution for a district of the population and wealth of that to which the infirmary extends its benefits. Strenuous efforts are accordingly being made to increase the annual list of subscriptions and donations, and special appeals are being made not only to the public generally, but to the various warehouses and works where large numbers of workpeople are employed. There can, of course, be no objection to such appeals, and it is to be hoped that a ready response will be given. There is only one danger to be guarded against, for there is a tendency on the part of many proprietors of works to think that if they contribute five or ten guineas per year they are entitled to have all their workpeople treated freely at the infirmary throughout any illness. The continuous treatment of industrial accidents by hospitals is a form of hospital abuse which seems to be growing in many towns, and when a hospital is in urgent need of funds it will need a firm determination to refuse treatment of any patient recommended by a subscriber.

In the estimate of the annual expenditure £2,000 is allowed for the annual upkeep of a central branch. The question of a central branch in the city has been a difficulty ever since the idea of removing the infirmary from its present position in Piccadilly to the outskirts was suggested. As long as twenty-five years ago the proposal to remove the hospital from the centre of the city was rejected on account of the inconvenience which would have been caused to a large number of out-patients. An alternative suggestion to establish a branch hospital on the Stanley Grove estate was negatived because of the difficulties and expenses of a dual establishment. A third proposal to rebuild on the Piccadilly site received considerable support, though there were great objections on the score of the noise and smoke and overcrowded condition of the neighbourhood. It would also have been necessary, if a hospital sufficiently large for the needs of the district were to be built on the Piccadilly site, to encroach on the open area that at present forms such a useful breathing-space for the city. Further, the value of the land in Piccadilly was so great that it was evident that by selling it a capital sum could be obtained almost sufficient to build a much finer hospital on a cheaper site in the suburbs A splendid opportunity occurred when the Victoria University obtained from the Whitworth Trustees the Stanley Grove estate on the express stipulation that it must be used for hospital purposes. The university, however, decided that it could not undertake the financial responsibility of building and equipping a new hospital, and after considerable negotiation an arrangement was made between the infirmary and the university by which the infirmary was able to use part of the Stanley Grove estate for its new building, certain university professors being in return placed *ex officio* on the infirmary staff. Thus it will happen that the Professor of Medicine at the university will have under his care from thirty to forty beds at the new infirmary.

The greatest objection to this proposal was on the ground of the inconvenience that would be caused to out-patients in having to go a distance of something like a mile and a half from the city. Moreover, it left the centre of the city unprovided with any place nearer than the Ancoats Hospital for the treatment of cases of accident and sudden illness, and it was only on a sort of vague under-



Manchester Royal Infirmary.

standing that some arrangement would be made to supply this want that many trustees waived their objections to the removal to Stanley Grove. That such an understanding existed there can be no doubt, and though possibly it never took any very definite form and might be difficult to prove, it is felt by every one that some sort of provision for accidents in the city ought to be made. A subcommittee of the infirmary board was accordingly appointed to work out this question, and presented its report last November. The report set forth three schemes for the erection and maintenance of an establishment for the purposes of a central branch. The schemes involved a capital outlay varying from £24,800 to £22,500, and an annual expenditure from £2 780 to £2,190. After considering this report the medical board were unanimously of opinion that it was not desirable to proceed with the establishment of a central branch involving any large capital expenditure until the public requirements in that respect had been tested by actual experience after removal to the new infirmary. While concurring in this opinion, the infirmary board authorized the subcommittee to obtain options of purchase of land for a site and to submit plans for a central branch to be kept open from 9 a.m. to 6 30 p.m. The subcommittee did accordingly obtain options of several sites, none of which, however, was entirely suitable in position, and in January last it reported that in view of this fact, and in consideration of the expressed opinion of the medical board, the committee had placed itself in communication with the Lord Mayor of Manchester and the Infirmary Site Committee of the corporation, in order to obtain the temporary use of the existing out-patient department and dispensary. The committee was met in the most generous manner by the corporation, which was willing to grant the use of that part of the old infirmary for twelve months certain after the new infirmary was occupied, and thereafter, subject to six months' notice, at a nominal rent. The infirmary board confirmed this action of the subcommittee, considering that the existing out-patient department was in an excellent situation, and could be conveniently and economically utilized for all the purposes of a central branch. It is, of course, evident that this arrangement, while excellent in every way for the time being, cannot be permanent, as the corporation will undoubtedly want to use the whole site for other purposes—such as an art gallery or public library. Meantime, the main part of the old building may be pulled down without interfering with the out-patient buildings, and before this has to be given up again there will have been time to gain the necessary experience as to the public requirements. It has been definitely decided that no beds shall be provided at this central branch, first aid only being rendered in cases of accident and sudden illness, and the patients then being sent either home or to the new infirmary. Neither is it considered necessary to provide a mortuary at the central branch.

Opinions on the question of providing or not providing beds at the central receiving house have veered first in one direction, then in another. On the one hand, if beds were provided, it would be necessary to have a separate staff of nurses and doctors, which really means the establishment of an entirely new small hospital in the city without the advantages of the new infirmary, either to the patients or the medical students. On the other hand, if beds are not provided, cases of accident or sudden illness will first be taken to the receiving house, removed from the ambulance for examination, and then have to undergo a second journey to the new infirmary, which, after perhaps a painful dressing, in serious cases would be far worse than if the first journey in the ambulance had been a few minutes longer. The committee appointed in 1904 to consider the question sent in two reports, one, signed by five members, being in favour of not providing beds, and the second, signed by three members, advocating the provision of not over 24 beds. The board in 1904 decided against providing beds, and this has been again confirmed recently when the corporation granted the temporary use of the old out-patient department.

It is very doubtful whether this will prove a success. The number of patients treated at the infirmary during 1907 was as follows:

In-patients	5 293
Out-patients (dispensary)	25 249
,, (accident room)... ...	18 390
Home patients	1,691

Of these, probably all the 18,390 accident-room cases, about 1,500 of the in-patients, and several thousand of the dispensary cases would have to be treated at least once on their first attendance at the receiving house, so that provision for between 25,000 and 30,000 attendances per year at the receiving house would have to be made. This means a very considerable establishment if a receiving house is provided at all. But there is a strong feeling in many quarters that the infirmary board ought not to be saddled at all with the responsibility of providing for the wants of the centre of the city, and it has been suggested that the difficulties would best be met by the provision of some sort of municipal ambulance system, doing away altogether with any necessity for any central receiving house. In respect to ambulance conveyance, Manchester's condition is most lamentable. To demand that the corporation should provide an efficient ambulance system by no means involves a demand for the municipalization of hospitals. It is simply a demand that the city council should make some provision for first aid and transport of cases of accident and sudden illness occurring in the city; neither does it involve any disparagement of the existing police ambulance, which works well within the limits of its equipment. But far more than this is needed. It has been suggested that several motor or horse ambulances should be provided by the corporation and stationed at suitable centres, connected by telephone with every part of the district. The police should then be empowered to summon the nearest available medical practitioner to the site of the accident to render first aid, and meantime the ambulance should, if necessary, be summoned by telephone. By the time that efficient first aid had been rendered the ambulance would have arrived to convey the patient either to his own home for further treatment by his own family attendant or to the nearest hospital, whether that be the new infirmary or any other hospital. This would obviate any necessity for a double journey such as will often be necessary if a central receiving house without beds be established. It would also take full advantage of the large amount of medical and surgical skill and appliances scattered throughout the district, and would be more efficient as well as more economical than the establishment of any receiving house, either with or without beds. For the present, however, it has been decided to try the experiment of using the existing out-patient department as a central receiving house without beds, but as soon as the corporation requires the land the whole question of either obtaining another suitable site for a central branch or else of establishing an efficient ambulance system will again be raised.

SOME EDINBURGH INSTITUTIONS.

THE chief hospitals in Edinburgh are the Royal Infirmary and the Sick Children's Hospital. There is also the Victoria Hospital for Consumption and various special hospitals. In respect of these hospitals the position of Edinburgh is much the same as that of important cities in Great Britain, but it possesses in addition two small general hospitals of comparatively recent origin presenting certain peculiarities which appear to make it opportune to give a brief description of their constitution.

CHALMERS HOSPITAL.

Chalmers Hospital, Edinburgh, was founded and partly endowed in 1853 by the bequest of Mr. Chalmers, plumber, Edinburgh (1773-1836), for behoof of the "sick and hurt." The hospital is under the management of a board of directors appointed by the Faculty of Advocates, of which the Dean and Vice-Dean are *ex officio* members. Sufficient funds not being available after the purchase of the ground, the building of the hospital, and other necessary expenses, to endow the whole of the hospital, it was resolved by the directors to divide the four wards into free and paying departments, two of each. This was done with the purpose of utilizing the two wards which could not be wholly maintained by the bequest, and were made available for those patients who could contribute to the funds as

paying boarders. Formerly each patient in the private wards paid 3s. 6d. a day, and this has been increased within recent years to the present rate of 7s. 6d. per day.

The sum covers the cost of board, residence, and dressings. The increase was made necessary by the fact that the previous charges involved a loss. There is no charge for medical or surgical attendance, as the class of patients who enter the free wards are almost without exception poor people who have little or nothing to pay with. Those who enter the so-called private wards are of a better class, who can afford to pay 7s. 6d. a day, but who could not meet the expenses of a private home, where, in addition to 2 to 4 guineas a week for board, they have to pay the surgeon's fees.

The class of patients who attend the out-patient department are poor, similar to those who attend the public dispensaries, and they are all seen gratuitously and the necessary dressings given. The better-class out-patients who throng the Royal Infirmary out-patient departments and misuse them do not go to Chalmers Hospital, because the physicians and surgeons there do not hold clinics, there being no students, and they have no chance of seeing any one except the residents and nurses.

The hospital does not appeal to the charitable public, but does not refuse donations from any one who is interested in its work. As already said, there are four wards, two of which are public or free wards and two private or paying board wards. One ward in each department is devoted to males, the other to females, and each ward is occupied by medical and surgical cases. Two years ago, when the hospital was reorganized, a fully-equipped and up-to-date operating theatre with side room was added, and an out-patient department with waiting-room erected in the grounds outside the hospital. The two public wards each contain 13 beds and the two private wards 9 beds each, making a total of 44 beds. The number of patients treated during 1907 was: In the public wards 386, and in the private wards 222, whereof 386 were surgical cases and 242 medical—a total of 608. The number of operations was 339. The number of out-door patients was 3,535, of which surgical cases totalled 3,075 and medical 460; there were also operations under general anaesthesia, in the out-patient department 156, and dressings 16,373. The staff consists of a surgeon and assistant surgeon, a physician, and two residents, in addition to a matron and 17 assistants. All the arrangements of the hospital are carried out as perfectly as can be, and are very much appreciated by members of the profession who take advantage of them. There is certainly no complaint of misuse in the in-patient or out-patient departments.

CHURCH OF SCOTLAND DEACONESS HOSPITAL.

The Church of Scotland Deaconess Hospital (Lady Grisell Baillie Memorial) was founded in 1894. According to the thirteenth annual report (1907) the accommodation for patients consists of 26 beds, with 2 cots for children, in addition to 2 "open-air" beds, thus making 30 beds in all. The number of patients admitted to the hospital during the past twelve months was 364, while the average daily number under treatment was 24. The number of cases treated since the opening of the hospital on October 11th, 1894, has been 4,290. The surgical operations performed during the year numbered 268, and the rate of mortality per cent. of the total number of patients under treatment was 4.3. Patients are admitted on presentation of a card from the physician or surgeon. Persons suffering from any ailment which is not of an infectious nature shall be eligible for admission to the hospital, a preference being given, as far as practicable, to patients recommended by any congregation or number of individuals who support a special bed or beds, or have provided an endowment therefor. The number of cases visited by the district nurses during 1907 was 544, and the number of visits paid 4,032. Of these, 103 were maternity cases, which were attended in their own homes. The average daily number of visits paid has been from 12 to 15. The surgical out-patients who receive attention and dressings at the hospital numbered 570, and the attendance 5,731. The total sum received or available for upkeep during the year, including a small balance brought forward from 1906, and income from investments representing the capital reserve fund, has amounted, as shown in the statement of accounts annexed, to £1,806 4s. 11d. The total expenditure chargeable against income (including a sum of £64 14s. 9d. expended in painting and cleaning) has amounted to £1,752 1s. 7d., thus leaving a balance in hand at the close of the year of £54 3s. 4d. The expenditure on administration and upkeep, after deducting the estimated cost of the district nursing work, is equivalent to an average outlay of £55 per bed, which represents the same ratio of expenditure as last year. The average period of residence of each patient in the hospital has during the past year been twenty-one days, and the average annual cost is equivalent to £4 16s. per patient. While the annual sum of £40 has hitherto been accepted by the board for the support of a special bed, the average cost of maintenance has now risen, as shown above, to £55 per bed. The board has therefore been under the necessity of raising the contribution required for the upkeep of a special bed in future to the sum of £50 per annum. The board aims at having ultimately at least twenty beds so kept up in future. The question of proceeding meantime with the extension of the hospital has been considered, and of applying for that purpose a portion of the amount which has already been raised or promised towards the general extension and church building scheme of the Committee on Christian Life and Work, but it was deemed prudent not to begin any building operations until a considerably larger proportion of the full sum of £10,000 which, it has been estimated, will be required to carry out the scheme in its entirety (including the purchase of the necessary sites), had been raised. In the meantime it was decided to enlarge and improve the hospital by the addition of a "children's ward," to contain 10 cots; and plans and estimates have been prepared with a view to carrying this out as soon as a suitable opportunity occurs. It has long been felt that, apart from other considerations, a children's ward would be an important and valuable addition to the equipment of the hospital for the special purposes of training for which it was primarily erected. It is estimated that the total cost of this extension will amount to about £2,000, as it will also involve the acquisition of an adjoining property and the provision of separate and additional accommodation for the nursing staff. It is calculated also that this partial extension will represent an addition to the annual cost of upkeep of from £300 to £350 per annum, but, having regard to the object in view, the board does not doubt that this further sum will readily be provided by generous friends of the Church.

A CLINICAL MATERNITY HOSPITAL.

THE new Maternity and Women's Hospital in Glasgow has been designed with a special view to its utilization for the practical instruction of students in obstetrics as well as in gynaecology. It is its use as an obstetric clinic that is particularly interesting at the present time, in view of the more stringent requirements recently laid down by the General Medical Council.

The situation, general appearance, and arrangement of the new hospital are well shown in the drawing of the elevation here reproduced (Fig. 1). The new buildings have been erected to the west of the old Maternity Hospital at the junction of Montrose Street and Rotten Row, on a site measuring, roughly, 250 ft. by 207 ft. From Rotten Row the ground slopes very rapidly to the south, so that the site presented considerable architectural difficulties. The building is arranged along the sides of a quadrilateral with frontages to Rotten Row, Montrose Street, and Ure Place.

The main entrance is in Rotten Row, and gives access to the ground floor. The fall of the ground has permitted the construction of two flats in the Ure Place block below this level. In them, on the basement floor, is placed the kitchen, laundry, store for patients' clothes, sleeping accommodation for maids, and a room for the district midwives and nurses. On the sub-basement floor there is a museum, incubator room, laboratory, two waiting-rooms for students, and nurses' quarters. The mortuary, chapel, and *post mortem* room are situated in a special detached building.

The main building in Rotten Row opens upon the ground floor proper. The entrance forms a covered carriage way with a screen, which prevents patients being observed from the public road. Special attention has been

paid to the admission department. The patient is received in a waiting room, where the history is ascertained. She then passes into an adjoining room for preliminary examination. If an undesirable condition is detected, she is sent directly into the isolation block. Otherwise she crosses a corridor into an undressing-room, and thence she goes to a bathroom, which leads into the examination room proper. She is then passed into the general hospital. The bath in the bathroom is of special type. It consists of a sloping grooved slab with a slightly raised rim. The water is sprayed on the patient by means of a flexible rose spray. This arrangement is intended to minimize the risk of infecting the vagina, which might occur if the patient were immersed in an ordinary bath. There are five wards on this floor, accommodating 31 patients.



Fig. 1.—Glasgow Maternity Hospital. Isolation Block.

The students' entrance to the lecture theatre, seated for ninety students, is also on this level. On the next, the first floor, over the main entrance are the quarters for the matron and the resident doctors. In the general hospital, at the Montrose Street end, are two labour wards, containing four and two beds respectively, separated by a common robing room and sterilizing room. These labour rooms have terrazzo flooring, and are on the lines of an operating theatre, so that they can be washed down and kept aseptic. Adjoining them are special waiting-rooms for the Sisters on duty and for officiating students. On this floor the ward accommodation gives thirty-one beds. On the floor above this there are eight wards giving thirty-eight beds and a special bathing-room for infants. On the next, the third floor, is the operating theatre, accommodating sixty students. Opening off the theatre are anaesthetizing, sterilizing, and dressing-rooms, and a separate robing room.

The isolation block forms the north-east end of the frontage to Rotten Row. It occupies the first, second, and third floors, and accommodates sixteen patients on the first two floors. On the top floor there is a special operating theatre and bedrooms for nurses. This isolation block is completely separated from the general hospital. The linen used in it is also separately dealt with.

Besides the equipment of the hospital for poorer women in Glasgow and the West of Scotland, the advantages of such an institution for the training of students, nurses, and pupil-midwives have not been overlooked.

The university authorities have been able to comply with the recommendation of the General Medical Council by enjoining attendance at the Maternity Hospital during three months, after having attended the midwifery course of six months, before attending outdoor cases even under supervision.

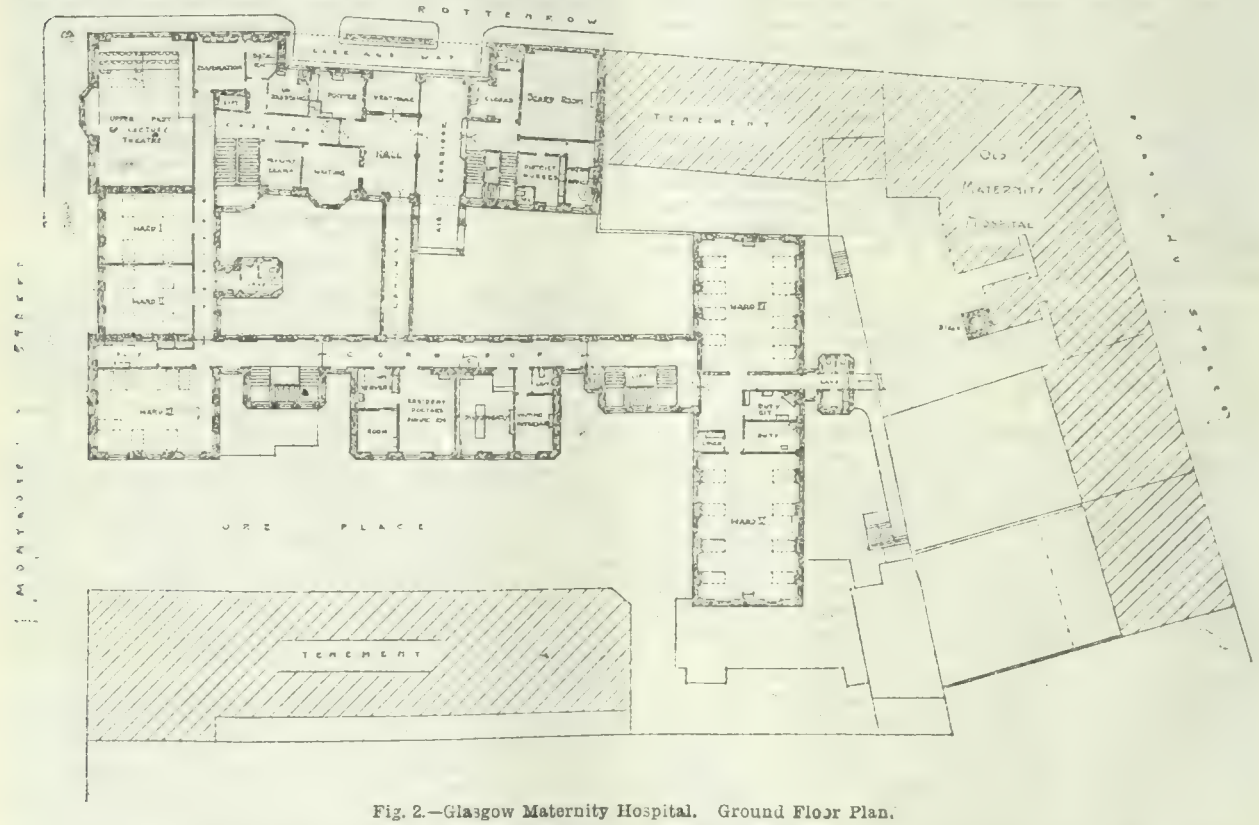


Fig. 2.—Glasgow Maternity Hospital. Ground Floor Plan.

The Professor of Midwifery with three other obstetricians have been appointed, the latter holding office for a period of ten years. There are also four assistants. Two obstetricians and two assistants take duty during alternate three months. Residing in the hospital are three house-surgeons, the senior receiving, through the kindness of a graduate of the university, an honorarium of £50 a year.

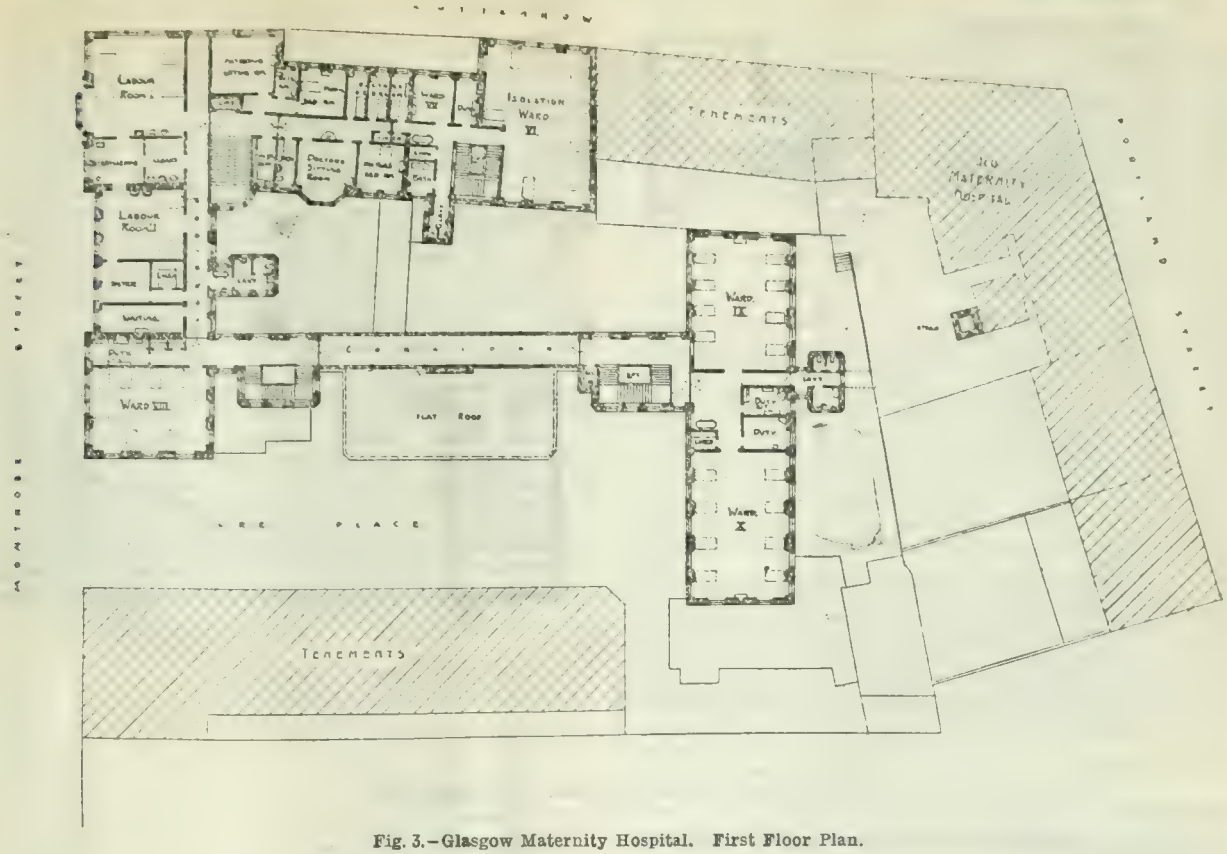


Fig. 3.—Glasgow Maternity Hospital. First Floor Plan.



Fig. 4.—Glasgow Maternity Hospital. Second Floor Plan.

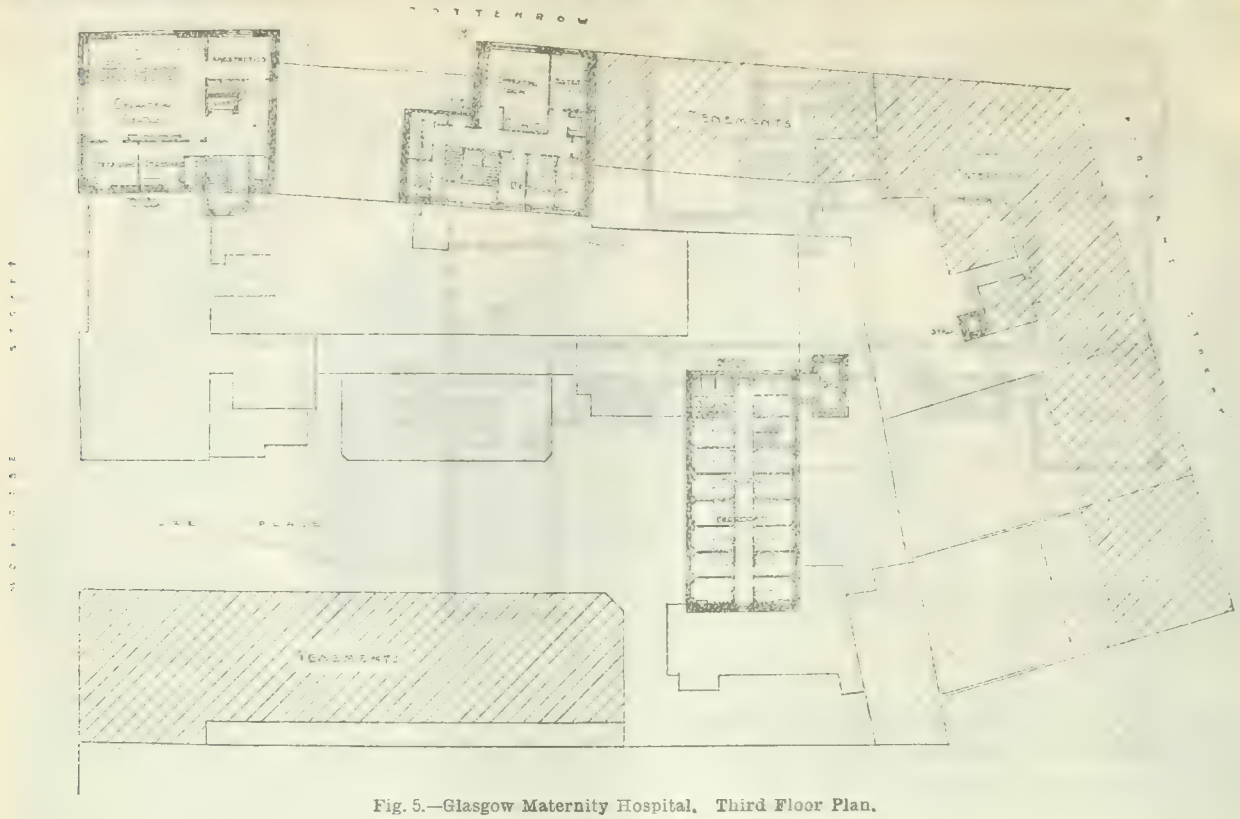


Fig. 5.—Glasgow Maternity Hospital. Third Floor Plan.

There is a students' residence, conducted under the rules stated below:

Name	The Students' Residence, Ure Place.
Charges	Each Student shall pay a Booking-Fee of 10s. 6d. (which will be returned on his leaving the Hospital) when entering his name for accommodation in the Residence; and should he not occupy his room within 24 hours of fixed date of entry, his room will be declared vacant, and entry money forfeited. The Charge for Residence (payable in advance) shall be £1 7s. 6d. per week or part of week.
Hospital Entry	Students shall enter and leave the Hospital by the Front Door only.
Meals	Breakfast, 8 a.m. Dinner, 1 p.m. Tea, 7 p.m. Supper (light), from 9 p.m. Strict punctuality is required, emergencies excepted.
Head	The Senior Resident Student for the time being shall act as Head of the House.
Complaints, etc.	Any suggestions or complaints should be made in writing to the Head of the House, who shall consider the same, and, if necessary, report to the House Superintendent of the Hospital.
Latchkeys ...	Each Resident will be provided with a Latchkey, which must be returned to the House Superintendent on leaving the Residence.
Inquiries ...	All inquiries to be made, and all Fees paid, to the House Superintendent of the Hospital.

These Rules are subject to revision from time to time by the Directors.

The Directors confidently rely on the co-operation of the Residents in the maintenance of order in the Residence.

The practice of the hospital is open to graduates, who may enter at any time at a fixed fee.

To give an idea of the class of cases dealt with, the following is a list of cases dealt with during May since the new hospital was opened:

Number of cases	118
Normal cases	65
Abnormal cases	53
The latter comprised:	
Contracted pelvis	17
Eclampsia	7
Malpresentations	3
Placenta praevia	2
Accidental haemorrhage	4
Post-partum haemorrhage	1
Abortion	8
Delayed second stage	7
Completely retained chorion	2
Chorea gravidarum	1
Cardiac disease	2
Breech with perineum torn before admission and delivery	1
The following operations were performed:—	
Caesarean section	1
Abdominal section for ovarian cyst ...	1
Pubiotomy	1
Forceps	14
Podalic version	4
Induction of labour	2
Craniotomy	2
Decapitation	1
Accouchement forcé	1
Curetting	1
Repair of perineum	1
Amputation and repair of cervix	1

The nursing staff consists of the

Matron.
Assistant matron.
Four Sisters.
Eight staff nurses.
Two district nurses.
Fifty pupil-midwives.

The course of instruction, which includes lectures by the chief physicians, extends over three months for nurses who have already had three years' general training, and over four months for untrained women.

Certificates are granted after a written and oral examination, and in the case of a nurse failing to pass, she must take another month's training in the hospital before she is allowed to enter again for examination.

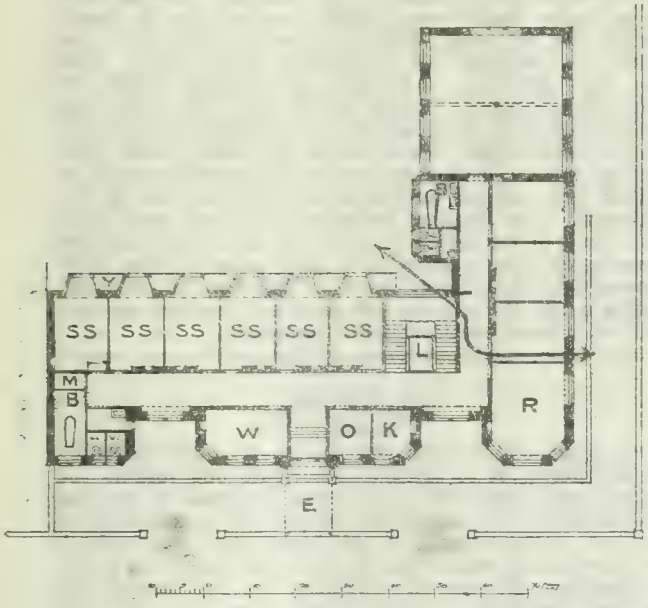
The general servants of the hospital number twenty-six.

There is a male House Superintendent.

The old hospital wards immediately adjoining have been set apart for gynaecology, and will soon be ready for occupation.

THE McALPINE NURSING HOME, GLASGOW.

Nowadays the necessity for nursing homes is universally recognized. They are found in all large towns and have revolutionized the surgical treatment of private patients. The surgeon is no longer handicapped by the disadvantages of unsuitable surroundings. In the home he has at his disposal a room specially arranged for operative work, which ensures him a good light, a suitable table, a sterilizer, and, in fact, all the advantages which he is accustomed to find in the operating theatre of a general hospital. The further fact that a patient's removal to a home frees the rest of the family from the restraint which is entailed in a household by the presence of a person acutely ill has caused a great demand for nursing homes, which have, indeed, sprung up like mushrooms. In almost every case the home is merely an old building, more or less suitable, which has been adapted to the requirements of a nursing home. The result is never absolutely satisfactory, and it is obvious that it is merely a matter of time before special buildings are constructed for private nursing. In this country it has hardly yet reached this stage. It will, therefore, be interesting to give some account of the McAlpine Nursing Home in Glasgow, the opening of which was briefly mentioned by our correspondent a few weeks ago.



Plan of one of the floors of the new building. The portion of the building above the double arrow has not yet been undertaken. SS, Rooms for single patients. R, Room for two patients. K, Kitchen. B, Bathroom W, Board room. O, Business room. L, Lift. E, Entrance. Y, Balcony. M, Linen.

The building, situated at the junction of Thistle Street and Hill Street, has been specially designed and constructed for the purposes of a nursing home. To this end Dr. D. J. Mackintosh, M.V.O., Medical Superintendent of the Western Infirmary, was associated with the architects, Messrs. Baird and Thomson, as a consulting expert.

The home is four stories in height, and runs east and west, with its front to Hill Street. To the back the ground slopes rapidly, so that the southern exposure is quite clear. The site is immediately to the north of the old McAlpine Home. The main entrance to the new buildings is from Hill Street. It gives access to a hall which opens into a corridor running parallel to Hill Street for the whole length of the building. To the front, facing Hill Street, is a board room (W), adapted also for interviewing friends, etc., and also a business room (O). Six bedrooms for patients (SS) are situated at the back, and they have a southern exposure. On the upper stories the general arrangement is the same—a long corridor running the whole length of the building, with the patients' bedrooms facing the back, while the administrative rooms are to the street front. By this arrangement the patients obtain quiet and a southern exposure. There are thus twenty-four single rooms altogether. In addition, in the north-west corner of each of the lower three floors, there is a larger room (R) capable of holding two beds, with windows to the north and west. On the top floor the corresponding space is occupied by the operating theatre, which is arranged and fitted on modern lines with terrazzo flooring, white tiled walls, etc. On each floor there is a small pantry and kitchen (K) and lavatory accommodation. A special feature of the bathroom (B) is a bath fixed on a pivot so that it can be swung from the wall to allow of the patient being washed from either side. In addition, on each floor there is a movable bath which can be wheeled into a bedroom.

A special feature of the design is the construction of a small balcony off each bedroom facing south. As may be seen from the plan, the rooms are so designed that the window space is in the form of a projecting bow. The space between the two neighbouring windows is utilized to form a balcony. Access is gained by a glass door which forms one side of the bow, the other side is bricked up. In this way each room has a balcony which is private and not overlooked. The balcony is sufficiently large to accommodate an easy chair. Thus a convalescent patient can sit outside and his room can be thoroughly aired.

The furnishing of the bedrooms is simple but comfortable. The wardrobes are fitted with a looking-glass on the inside of the door, so that the patients are not able to see themselves until the time has come when they may be cheered and not deppressed by their own appearance. In some of the floors neighbouring rooms have a communicating door so that if necessary they can be used *en suite* if a special sitting-room is required.

To facilitate rest cures a few of the rooms are fitted with double doors to exclude disturbing noise.

The whole building is heated by hot-water radiators on the Reck principle, while the bedrooms have in addition open fireplaces. The building is fireproof, the floors being on the Turner McLellan and the dividing partitions on the Fram plate systems. The flooring is pitch pine, and all corners are rounded off. The building is lighted throughout by electricity, and the elevator is worked by electricity.

The old nursing home is connected by a covered gangway, and it is proposed to convert this building into accommodation for nurses, and also to form in it two large wards for six patients each, so that they may be received at a lower charge. It is proposed at a future day, if the money is forthcoming, to construct larger wards of this description as an addition to the new building.

The terms vary from £4 4s. for a private room to £2 2s. for the rooms with several beds. In the former case an extra fee of £1 1s. is charged for the use of the operating theatre, and dressings and medicines are not provided. For patients at the £2 2s. scale no extra charge is made for the theatre, and dressings and medicine are included.

ROTUNDA HOSPITAL, DUBLIN.

Arrangements for Students.

The Rotunda Hospital staff has always endeavoured to make instruction in midwifery one of the most important objects of the charity, and the enlargement of the hospital, which took place in 1896 during the mastership of Sir William Smyly, and was largely due to his untiring exertions, has placed thirty-six beds at the disposal of the master for illustrating to the students gynaecological technique also. The hospital is in a very flourishing condition, and there is no lack of material to help the students gain a sound knowledge of these important branches of medicine. Last year over 4,000 women were delivered, and the present year bids fair to be a record. The fact that it does not require elaborately expensive surroundings to make labour practically safe is frequently brought under the students' observation. The labour couches are probably over a hundred years old, made of wood, and on these all maternity operations, short of Caesarean section, are performed, and the students can see that a successful pubiotomy can be done with the resources available in an ordinary private house. The master attaches considerable importance to demonstrating how efficient a simple technique can be made. The

students fall into two classes: (*a*) Unqualified men residing in Dublin, who, for the Irish qualifications, are required to take a six months' course at a maternity hospital. These attend on two nights weekly, each being free to choose his own nights. They are on duty from 9 p.m. to 9 a.m., and deliver, in rotation, all patients, both intern and extern, who are confined between these hours. Every student has to conduct two labours, under supervision, in the hospital before he is allowed to take any case on the district. They do not go to bed, but, when not engaged at a case, wait in the night room reading, projecting works of art (!) on the walls, sleeping in their clothes on couches provided for the purpose, or playing billiards and cards. A midnight supper is provided for them. A register of their attendances and conductions is strictly kept, and full information is chronicled concerning their visits to the patients and the condition of the latter. They are encouraged to attend the morning clinics in the hospital, and are treated in all respects similarly to the resident students. They are allowed to reside in the hospital for one month out of their six, going in this case on day duty, and are then very useful in carrying on the district work when, as sometimes happens, the majority of the resident students are very senior men who do not care to undergo the rigours and discomforts of slum midwifery practice. (*b*) Men residing in the hospital. The majority of these are specially interested in gynaecology and midwifery. They come from all parts of the world, and are, as a rule, fully qualified doctors. When the English and Scottish medical schools are closed during the vacations there are also found, as residents, a number of young unqualified gentlemen who come over to obtain the number of maternity cases required by their curriculum, and they usually find no difficulty in getting within a month all the conductions they want. The intern students may stay for periods varying from one to six months. They are on midwifery duty four days and gynaecological duty five days weekly. They attend the clinics and make diagnoses, examining maternity and gynaecological cases, these latter being particularly useful to them, as the patients here, unlike those across the Irish Sea, do not object to being bimanually examined in the lithotomy position when its superiority is clearly pointed out to them. The resident students see all operations, assist at most of the vaginal ones, and, if entered for periods of three months or more, are allowed to perform, under supervision, a certain number of operations—for example, application of forceps, curetting, and the more common cervical, vaginal, and perineal operations. No one student, however, can expect to get many of these, as the numbers attending make it impossible, and the delay in the work of the hospital, arising from the giving away of cases, causes dissatisfaction to the onlookers. Students have the free use of the laboratory for purposes of pathological investigations, under the direction of the Pathologist, Dr. Rowlette. In addition, a practical class in gynaecological pathology is held twice weekly. During a six months' course the opportunities of gaining a first-rate practical knowledge of midwifery and that complete coolness and self-confidence so essential in a good accoucheur must have proved of inestimable value to many. A lady student, during the past half-year, was able to get out 430 cases, and a gentleman in the same time attended 643 cases, of which he personally conducted 160—surely a good foundation for future successful practice. Since the latest addition to the hospital buildings, eighteen months ago, there is accommodation for six lady students. The arrangements for their catering and comfort are in the hands of the lady superintendent. They have separate bedrooms and a comfortable sitting-room which is also used during the day by the Dublin lady students. The latter attend the morning clinics, and twice a week stay on all day till they have personally delivered 20 patients. The staff consists of the master, two assistant masters, and two extern maternity assistants. These all reside in the hospital. They must have registrable qualifications. The master gives an hour's lecture every morning, Saturdays excepted, on obstetrical subjects, after which he examines, lectures on, and treats patients who are brought into the surgery from the gynaecological wards. Three students, in rotation, also examine each of these cases. Major operations are performed twice weekly in the large theatre, while the smaller ones are performed in the surgery on the other three working days. The line of treatment to be adopted in any difficult obstetric case is decided by the master, who generally deputes the assistant on duty to carry it out, all the students in the hospital being called to witness it. The assistant masters are appointed for three years, and need to have previously held the post of extern assistant. Each sees out-patients, a good proportion of whom suffer from the diseases peculiar to women, on three mornings weekly, and they alternate with each other every month between the gynaecological and maternity departments. They keep a careful record of every case delivered in the house, and from this the annual report and statistics are made up. They assist at all major and most of the minor operations, treat all morbid puerperal cases and most of the abnormal labours. They carry on the work and have the entire responsibility during the master's absence. Each takes a special class in gynaecology, and lectures the nurses during half the term of his appointment. With the master, they once a month examine students for the hospital L.M. certificate (not registrable) and nurses for their qualifying certificates. The extern maternity assistants must have been students of the hospital for at least half a year. Each is appointed, by examination, for a period of six months. The appointment being made every three months, one is always senior by so much to the other. During his first term he attends all sapraemic and septic cases on the district, and acts as clinical clerk in the gynaecological wards, while for the remaining half of his time he is called to all serious or complicated labour cases in the district, which he either treats himself or supervises the student in charge while doing so. These two officials are also the anaesthetists to the hospital. The nominal supervision of their work is in the hands of the assistant master on maternity duty, but practically they have a free hand when dealing with patients in their own homes. They are the only paid officials, but the master and assistant masters are permitted private practice outside the hospital.

REVIEWS.

THE object of this work, *The Law of Hospitals*,[1] according to the preface, is to bring together into one volume the many legal questions which affect all kinds of medical institutions. The author has adopted an arrangement of subject matter which is at once novel in a legal textbook and eminently satisfactory to those who require to use it. Discarding the use of chapters, he has placed the various headings in alphabetical order. In his first few pages he deals with "Accounts," while "Voluntary Hospitals" are dealt with at the end of the book. As a result of what must have been immense labour, he has contrived to collect a vast amount of information which cannot fail to be of great value to lawyers, hospital authorities, and the medical profession. Under the title "Death in Hospital" he treats of death certificates and the registration of deaths, inquests, *post-mortem* examinations, dissection, burial, and cremation. Here one may find the material parts of any Act of Parliament relating to the matters in hand, illustrated by brief notes of all the important cases. The article entitled "Infectious Disease Hospitals" is of great value. Mr. Murray sets out the text of the Isolation Hospitals Acts, 1893 and 1901, with explanatory notes. Under the title "Meetings," members of hospital committees and the governors of such institutions will find much practical information as to the conduct and powers of the meetings at which business is to be transacted. The article on "Negligence" is admirable. Owing to the paucity of English cases relating to the liability of hospital authorities, the author has drawn upon the reports of cases decided in Ireland and America, and the fact that his researches have been pursued so as to bring his work up to date is proved by the cases of Evans *v* L'verpool

[1] *The Law of Hospitals, Infirmaries, Dispensaries, and other Kindred Institutions, whether Voluntary or Rate-supported.* By Arthur Turnour Murray, of Lincoln's Inn, Barrister-at-Law. London: John Murray. 1908. (Med. 8vo, pp. 396. 10s. 6d.)

(1906), 1 K.B., 160, and Tozeland *v.* West Ham Union (1907), 1 K.B., 920, being noted in their proper places. Nor has he omitted to warn those who are responsible for hospital management of their liabilities under the Workmen's Compensation Act, 1906, that measure being dealt with under the heading "Insurance." Under "Operations" the surgeon will find a number of hints as to the precautions he should take as to consent, etc., before he undertakes an operation. In this place we find an interesting passage from the summing up of Mr. Justice Hawkins in the case of Beatty *v.* Cullingworth. In that case, it will be remembered, the defendant was sued for malpractice on the ground that when the plaintiff was under an anaesthetic he removed both ovaries, whereas the patient's consent had only been obtained to the removal of one. The defendant's answer—which was held to be good in law—was that the further removal was necessary. We might observe that in a case recently decided in America, a doctor was mulcted in very heavy damages in similar circumstances. To conclude our notice of the subject matter, we would commend the article on "Poor-law Infirmaries" to medical officers of health and others who are concerned with the management of workhouses. The work is provided with an excellent index.

MEDICAL NEWS.

A MOVEMENT is on foot for the establishment of a number of free dental clinics for the benefit of the children of the public schools in New York.

PROFESSOR GRASSI, whose name is well known in the scientific world in connexion with research on malaria and other subjects, has been created a Senator of the kingdom of Italy.

THE annual meeting of the Proportional Representation Society will be held, by kind permission of Lord and Lady Avebury, at 6, St. James's Square, S.W., on June 24th, at 5 p.m.

A BRAZILIAN psychiatrical, neurological, and medico-legal society has recently been formed. Meetings are to be held monthly at Rio de Janeiro at the National Hospital for the Insane. Professor J. Moreira is the president.

DR. EUGÈNE BOTKINE, Physician-in-Ordinary to His Imperial Majesty the Emperor of Russia, has been nominated an Honorary Commander of the Royal Victorian Order by King Edward on the occasion of His Majesty's visit to Russia.

THE prize distribution to the students and probationers at the London Hospital Medical College will take place at 3.30 p.m., on Friday, July 10th, and at 4 p.m. on the same afternoon the Earl of Crewe will unveil the statue of Her Majesty Queen Alexandra at the hospital.

WE are requested to state that the Director of the Sleeping Sickness Bureau, the Royal Society, Burlington House, London, W., will be glad to receive reports of any papers dealing with sleeping sickness, trypanosomiasis, and cognate subjects, and any information relating to the work of the Bureau.

THE first meeting of the Socialist Medical Society will be held at Buckingham Street, Strand, on Thursday, June 25th, at 4.30 p.m. There will be a dinner at the Hotel de Dieppe, 40, Old Compton Street, Soho, at 7.30 in the evening of the same day. Applications should be made to Dr. M. D. Eder, 2, Charlotte Street, Fitzroy Square, W.

A DINNER is to be given at the Gaiety Restaurant on Saturday, July 27th, in honour of Miss Isla Stewart, who on that date will have completed twenty-one years' work as Matron of St. Bartholomew's Hospital. She is also President of the Matron's Council of Great Britain and Ireland, and in that connexion likewise has done a good deal of useful public work. The chair will be taken by Mrs. Bedford Fenwick, a Vice-President of that society. The dinner secretary is Mrs. Spencer, 35, Brook Street, Grosvenor Square.

IN the section of the Franco-British Exhibition known as the Irish Village, a place has been found in the Village Hall for a reproduction on a small scale of the Tuberculosis Exhibition which has been, and still is, touring Ireland. To this exhibition frequent references were made in these columns in the early part of this year, when the active crusade in Ireland then recently started was being described, and readers on this side of the Channel can now practically see it for themselves.

UNDER the will of the late Mr. Charles Edwin Layton, of Regent's Park, the following institutions benefit to the extent of the sums placed against their names: King's College, £6,000; King's College Hospital, £2,000; Charing Cross Hospital, £5,000; the National Hospital for Consumption, Ventnor, £2,000; the Seaford Convalescent Hospital, £500; the Princess Alice Memorial Hospital, £500; and the Metropolitan Hospital Sunday Fund, £1,000. The will also directs that the residue of the estate shall be divided in equal shares between the building fund of St. Bartholomew's Hospital, the Stationers' Company, and the Church Pastoral Aid Society. The extent to which St. Bartholomew's Hospital will benefit seems to be about £10,000.

THE annual meeting of the Society for Training Teachers of the Deaf on the Pure Oral System was held at 20, Devonshire Place, W., on May 27th. Major Skinner, L.C.C., presided, and in his opening remarks referred to the excellent results obtained by the oral method in the training of the deaf children at the London Council deaf centres, enabling them to converse with their fellows, understand what was said to them (even to "seeing a joke"), and ultimately to take their place amongst ordinary citizens. He thought that as education for the deaf was now compulsory by law, it was the duty of the State to provide funds for the training of well-qualified teachers on the pure oral system, and for this admirable facilities existed at the Society's training college at Ealing. Mr. B. St. John Ackers (Chairman of Committee) pointed out that the demand for qualified teachers was greater than the supply, and that although the society assisted financially, as far as it could, needy but competent candidates for training, Government aid would be welcomed, as the expenses of a course of training were necessarily considerable. With a view to economy of working, the two branches at Ealing had been concentrated into one establishment at Eaton Rise, where Miss Hewett had succeeded Mrs Kinsey as lady superintendent. Mr. Sibley Haycock, Director of the Fitzroy Square College, spoke of the cordial relations existing between the two associations, and of the satisfaction felt that students from each should receive certificates from a common examining body. Miss Hewett subsequently described the methods pursued in the oral teaching of deaf children, and pointed out how much benefit might be derived by those who had lost their hearing in adult life by even a short course of lessons. Mr. Yearsley and Dr. Shuttleworth also addressed the meeting, the latter remarking on the good results he had seen from articulation lessons by oral teachers in the training of mentally defective children, such lessons tending to develop intelligence as well as speech. The balance sheet showed, by a considerable excess of expenditure over income, the urgent need of increased support to maintain the efficiency of the training college and practising school.

CENTRAL MIDWIVES BOARD.—The *London Gazette* of June 16th contained the following, dated June 6th: "Whereas the Central Midwives Board have submitted to the Privy Council an addition to Rule E. 26 of the Rules of the Board framed in pursuance of Section 3 of the Midwives Act, 1902; and whereas it is provided by the said Act that Rules so framed shall be valid only if approved by the Privy Council; now, therefore, their Lordships having taken into consideration the said addition to Rule E. 26, together with a representation of the General Medical Council with respect thereto, are pleased to approve the said addition as set forth in the Schedule hereunto annexed." The Schedule referred to in the foregoing Order is as follows: Addition to Rule E. 26.—"Provided that a midwife whose name has been admitted to the roll in virtue of having passed the examination of the Central Midwives Board, or in virtue of a qualification under Section 2 of the Midwives Act, 1902, acquired by passing an examination in midwifery, may add the words 'by examination' after the words 'certified midwife.'"

KASHMIR MISSION HOSPITAL.—A pamphlet which has reached us gives some interesting details with regard to the medical missionary work carried on in Kashmir by an earnest band of emissaries of the Church Missionary Society. It contains a number of illustrations which are attractive in themselves, and of curious excellence when compared with the printing of the text. The booklet is composed of several articles in which the first person singular often appears, but no signatures are attached, nor is there any clear indication of the place at which the hospital described is situated. The pamphlet, therefore, is less illuminating than it might be. It would appear that in Kashmir Mohammedanism is making great strides at the expense of the religion of Buddha, and it may be gathered that in the opinion of the writers one main difference between the East and the West is that the former thinks much of creeds and little of conduct, and the latter vice versa.

THE ANNUAL MEETING, SHEFFIELD.

In the "Supplement" published with this issue will be found a list of hotels and lodgings at Sheffield, and a form to fill up intimating intention of being present at the Annual Meeting. It is particularly requested that members will notify as soon as possible, when railway vouchers for the reduced fares will be sent.

British Medical Journal.

SATURDAY, JUNE 20TH, 1908.

HOSPITALS AND THE GENERAL PUBLIC.

THE present issue will appeal to a very wide circle of readers, and its bulk is correspondingly great. This is due to the special nature of its contents, and these again are the outcome of a wish expressed by the Hospitals Committee of the British Medical Association that an issue of the JOURNAL in June should be devoted to a consideration of hospital questions. Since the number of these is legion, a certain amount of selection has been inevitable, but the ground covered by this issue is so broad that some one or other of its contents must be found interesting by every one, not excepting those in whose thoughts hospital questions in general usually play no part.

The general character of the subjects treated may be gathered from a glance at the index page, and those conversant with hospital questions will doubtless note that some receive no mention. This is intentional. Of the many problems brought into being alike by that common quality of all mankind, liability to poverty, old age, disease, and injury, and by the maintenance of voluntary hospitals, a considerable number have been so long under discussion that opinions about them are fully formed. As these opinions are often of the most antagonistic character, further discussion of them is better left to that body whose special objects include the pruning away of side issues, the reconciliation of conflicting views, and the establishment of a safe *via media* in the interest of all concerned—namely, the Hospitals Conference, for the creation of which the committee already mentioned was largely instrumental, and which last met in May this year.

On this occasion all such time-worn questions have as far possible been avoided, as being no longer susceptible of useful discussion in public. Hence the articles in this issue, both signed and unsigned, will be found to deal for the most part with aspects of the general subject of hospitals which are either comparatively new, or into which fresh factors have been introduced by recent socio-political developments, or which, though old in themselves, seem to require more searching consideration by the general public.

A further object aimed at in the present number has been to avoid the discussion of matters which are not of common interest both to the public and to the medical profession. Every aspect of hospital administration and maintenance may, of course, be said to be of equal importance to the one as to the other, but some are of a technical nature, and should be left for discussion and decision by medical men alone more often and more entirely than is sometimes the case. Accordingly, purely professional topics have not been dealt with in this issue, and all the questions discussed are as readily comprehensible by lay people as by medical men; moreover, in the settlement of many of the points raised the public, as in practically every other connexion, must eventually exercise the preponderating influence.

It is true that the first article is, in a measure, of a technical nature, since in it Mr. Bowlby deals with the results obtained in 900 cases of hip disease; nevertheless, it is not out of place in the series, because, apart from the magnificent results which it shows can nowadays be obtained in the treatment of a complaint which at one time was looked upon as almost hopeless, it demonstrates the value of a kind of hospital enterprise in the further development of which the public must play its part, namely, the treatment of cases of surgical tuberculosis partly in town and partly in urban institutions.

In the next article Professor Osler, with the weight of his vast experience on the American Continent behind him, will be found to emphasize the fact that the true function of out-patient departments includes playing the part of consultant to any general practitioner who, when dealing with his poorer patients, requires a second opinion. Alongside this may be placed an article in which Dr. Clifford Beale advocates a scheme which, though not novel in itself, has failed hitherto to receive at the hands of those directly concerned a quarter of the consideration which it deserves. It aims at creating a definite partnership between voluntary hospitals and provident dispensaries, the latter forming the chief gate to the out-patient departments of hospitals and membership of provident dispensaries conferring definite advantages on applicants for hospital treatment, whether in the wards or otherwise.

Preceding this article is one of a totally different character, and full of suggestive thought. In this Dr. Lauriston Shaw, in anticipation of a reformed Poor-law system, considers what its effect on voluntary hospitals may be. He shows that, even should the long-delayed report of the Royal Poor-law Commission bring into existence a form of Poor-law medical relief totally different from that which at present exists, and also tend to facilitate the institution of Poor-law infirmaries of a vastly-improved kind, this should not, and probably will not, mean the extinction of voluntary hospitals The two would work side by side, the voluntary hospitals providing advanced and highly differentiated or specialized forms of treatment such as no State institution could provide, and the patients being admitted to, and transferred from, one or the other as their initial disease and its progress rendered desirable.

Equally anticipatory and even of more immediate interest is an article in which Dr. Guthrie Rankin urges that at present the great middle class of the population in these islands is unable to reap to the full all the advantages of modern advances in medicine and surgery. To enable it to do so, he considers a special kind of institution necessary, one that should differ on the one hand from nursing homes, and on the other from ordinary hospitals. The latter these new institutions would resemble, inasmuch as their initial capital expenditure would be mainly provided by philanthropy; but, once started, a sufficient income for their annual upkeep would be furnished by each patient paying fees from 2 guineas upwards, according to the accommodation desired, and acquitting also any fees charged for attendance by the physician or surgeon

of his choice. Similarly, they would be provided with the clinical laboratories and the resident medical staffs to which so much of the efficiency of ordinary hospitals is due, and which are lacking in nursing homes.

Among the other signed articles will be found interesting treatment of several further subjects of living importance. Included is the result of an elaborate inquiry by Mr. J. G. Turner into the dental needs of the poor of London, among whom for the purpose of this inquiry he classes any one unable to pay one shilling for the extraction of a tooth without gas, half a crown for a stopping, or two pounds for the making and proper adjustment of a complete set of lower or upper teeth. In view of the recently-enacted Education Act and its requirements he pays special attention to the needs of children of school age and considers how far they can conceivably be met.

In other articles Mr. Hamilton deals with certain points in the arrangements for operations which form such a heavy item in hospital construction and upkeep, while Mr. Tobin advocates a method of securing that diseases shall be called by the same names wherever the patients are treated. Finally, Mr. Percy Adams, a distinguished hospital architect, describes the first cottage hospital ever erected, and shows how the desiderata of modern science can be best and most economically met in modern buildings intended for the same purpose.

The whole of these signed articles are well worth study, because, in spite of the fact that on none of the questions raised is any one entitled to speak *ex cathedrâ* —inasmuch as at present the verdict of no individual can be final—the writer is in each case a man whose considered view on a problem such as that with which he deals must necessarily carry weight among his professional comrades, and tend to influence greatly the formation of opinion by the public at large.

The remainder of the issue is made up of editorial matter, most of which is of at least equal interest to any of the articles preceding it. Its compilation has entailed much more labour on the part of those concerned than is apparent on the surface, and the treatment of each subject is either satisfactorily complete in itself or such as to facilitate further investigation of the same point and suggest the lines which it might usefully follow. In some respects, indeed, these articles demand even more careful study than any of the others, for they concern matters on which the general public can at once and effectively bring its influence to bear, whereas in many of the other problems considered some factors are still missing. They deal, in short, with hospitals as they are both at home and abroad, special attention being paid to that aspect which in every business connexion of life wise people put first and foremost—the question of pounds, shillings, and pence.

Furthermore, by way of throwing on the subject the illumination so often afforded by the history of any question the editorial matter commences with a review of the evolution of hospitals. It is a vast subject on which, as in the case of the general history of medicine, much more study and research are required before our knowledge of it can be regarded as in any way complete and assured; but the present article throws a clear light on its leading points and gives the principal well-authenticated facts as succinctly as their number and complexity permit.

Some of the other articles have the advantage of dealing with subjects which are distinctly topical at the present moment. Thus, the article on Hospitals in Germany conveys so much information on the contributory pension scheme of that country in relation to hospital upkeep that it cannot fail to be interesting to those whose thoughts are at present turned towards pension schemes in this country.

This article is an outcome of the visit of a Special Commissioner of this JOURNAL to Germany, and gives a very clear conception of the hospital system in that country. Even if its imitation on this side of the Channel were really desirable it would obviously be impossible, unless the Government imposed the same system of compulsory insurance on the whole of the working class in this country. The facts as stated provide, however, food for reflection, and the same may be said of the expressions of opinion to be found here and there in the article, and which are, of course, personal to the writer.

At a time, too, when recognition is beginning to be accorded to the desirability of making provision for the treatment of persons showing early mental disease, much on the same lines as in the case of ordinary sufferers, much interest attaches to the description of the provision for like purpose in some parts of the Continent. The same may be said of the descriptive reference to the Children's Hospital at Vienna.

The articles, however, to which it is desired to draw the greatest attention of all are those headed respectively "Hospital Managers and Hospital Subscribers" and "The Incomings and Outgoings of Hospitals in London.' Each of these deals with matters which require immediate attention on the part of the general public, and in default of it the present position, which is decidedly unhappy, will remain unchanged. The first article, or rather series of articles, is an attempt to bring home to the supporters of hospitals the fact that in the interest of these institutions they should regard them from a business point of view, and examine the accounts presented to them with the same care as that which they devote to the study of reports by boards of directors of ordinary commercial enterprises.

It is shown, too, that if subscribers wish, it is just as easy for them to obtain a clear declaration of the dividend received by them or due to them on the sum which they have invested in medical charity as on a similar sum invested in a co-operative store, a hotel company, or a South African gold mine. It is to the neglect of the public in this connexion that a part of the present difficulties of hospitals is indirectly due, and considering that the chief supporters of hospitals are not only business men, but successful business men, it is remarkable that so many of them have hitherto rested content with the sort of annual reports which a large number, if not the majority, of the managers of hospitals throughout the kingdom at present place in the hands of their subscribers.

The other article is also of special interest, since for the first time the financial position of the London hospitals is reviewed on the basis of the revised system of accounts wisely introduced by the three metropolitan hospital funds some eighteen months ago. This series, moreover, concludes with an article in which the future of all the more important hospitals in London is considered from a financial standpoint. The outlook for them is shown to be distinctly threatening, and this, too, is a position for which subscribers are largely responsible, and which is not likely to improve unless the general body of hospital supporters show a distinct change of front. Hitherto the public has shown itself disposed to extend the greatest meed of generosity towards institutions habitually conducting their affairs on lines which in any other business connexion would be regarded as almost criminally speculative. It has opened its purse most widely to the institutions which never attempt to keep within their probable income. It has also allowed itself to be cheated into a

belief that hospitals which (by opening the doors of their out patient departments and of their wards to all and sundry, as well as by other ways) manage to bring up the total number of their patients higher than that of their neighbours, are necessarily the more deserving and the better managed.

In addition, it has encouraged extensions and building schemes which, though perhaps desirable enough in themselves, would quite as often not be undertaken if those directly responsible were not spurred on by an almost reckless desire to vie with their fellows. The present Prime Minister is receiving a measure of admiration—tempered in some quarters by some distrust—for his hardihood in launching a scheme involving expenditure which he has not yet demonstrated can be met; but in such a connexion he is the merest tiro compared with the authors of many of the building schemes of the last decade, more especially those in connexion with the smaller institutions. Doubtless their motives have been of the best, but charity, if it covers a multitude of sins, covers an equal number of follies. Take no thought for to morrow may be an excellent doctrine in itself, but that it can be applied with singular unhappiness to hospital matters is proved by the fact that in London alone there are quite a number of recently-constructed hospital wards for the opening and maintenance of which funds are not likely to be forthcoming any time within the next twenty years.

Finally, the public is far too indiscriminating in its answer to appeals, and it would be greatly to the interest of hospital enterprise in general if editors of lay newspapers habitually refused space for letters and appeals until they had found out privately from some such unbiassed authority as King Edward's Hospital Fund for London that the institutions in question were really deserving of support. There is more than one medical charity in London, not to speak of the provinces, which might be allowed to die with great advantage, and but for the fact that the public deems that any appeal made in the name of a hospital must *ipso facto* be meritorious they would have long since ceased to exist.

In short, on all the points thus indicated there must be a complete and early change of practice if the voluntary hospitals of this country are to continue to exist. Their halcyon days have already passed, for, as will be seen on reference to the article mentioned, the financial position of many of them is very unsatisfactory, and present political developments seem likely to restrict rather than extend their habitual sources of income.

THE ANNUAL MEETING AT SHEFFIELD.

In accordance with the usual custom, the railway companies of the United Kingdom have agreed to grant to members attending the annual meeting at Sheffield return tickets on payment at the time of booking of a single fare and a quarter. The reduced rates will be available from July 23rd to August 4th, both dates inclusive. To secure this concession each passenger must produce at the time of booking a special voucher, which will be forwarded to all those members who notify their intention of being present at the Sheffield meeting, or may be had on application to the General Secretary, at the office of the Association, 6, Catherine Street, Strand, London. In order to facilitate the work of the local organizers of the meeting, it is particularly requested that those who intend to be present will notify the fact as early as possible on the form published in the centre of the SUPPLEMENT of this week. On the same form will be found a list of hotels and lodging houses, with a scale of charges. In addition to the hotels and lodgings arranged in Sheffield, accommodation can be had at Grindleford, Bamford, Edale, Rotherham, Retford, Chesterfield, Worksop, and Buxton. Good railway facilities exist for reaching all these places from Sheffield, and tickets will be issued at reduced rates. In the case of Buxton, provided a sufficient number of members decide to stay there, special trains will be run daily, enabling members to reach Sheffield about 9 and 10 o'clock in the morning, while a return train is timed to leave Sheffield at 10.30 in the evening.

THE GENERAL MEDICAL COUNCIL AND MEDICAL CERTIFICATES.

IT is well known that one of the difficulties complained of by the General Medical Council in the exercise of its disciplinary powers is that it has only one offence and one penalty for that offence. The only misconduct with which the General Medical Council can deal is that which is deemed by it to be infamous conduct in a professional respect, and the only punishment it can award is removal from the *Medical Register*. The Council endeavours to meet this difficulty in certain cases by suspending judgement after finding the facts proved and calling upon the offender to come up at the following session of the Council to receive judgement, on the understanding that provided his conduct in the interval is good nothing further will be heard of the charge. In Germany the Courts of Honour possess the power of censure and of inflicting fines, but there is no punishment equivalent to that of removal from the *Register*; that could be done only by depriving the practitioner of his diploma, because in German law the practice of medicine is free and is not restricted to those who have passed the State examinations in medicine. In most other Continental countries where the practice of medicine is prohibited to all but duly qualified persons the punishment of suspension from practice is unknown even for the gravest civil, social, or professional offences; but in France, by the law of November 30th, 1892, power was given to the courts to suspend temporarily or absolutely prohibit from the practice of his profession any physician, *officier de santé*, dentist, or midwife, convicted of crimes or punished under certain articles of the Penal Code. Although this law has been in existence for more than fifteen years it has not been enforced until recently. The case which has led to this new departure was that of a doctor who had attended a workman whom he had enabled to commit a fraud upon the insurance fund of the factory in which he worked by giving him false certificates. The court condemned the workman to six months' imprisonment and a fine of 25 francs, and the doctor to six months' imprisonment, a fine of 500 francs, and suspension from the practice of his profession for the period of five years. So strong does this penalty appear in the eyes of our foreign brethren, that the editor of the *Semaine Médicale*, in commenting on it, while disclaiming any wish to excuse the conduct of the doctor, describes the punishment as excessive, especially in regard to the long period of suspension, and quotes two other cases in which doctors who had given false certificates were rendered liable to civil actions for damages and were not proceeded against under the Penal Code. Our contemporary's complaint seems to be that the police intervened in one case and not in the others, and that there was consequently some failure of impartial justice. It will be remembered that at the recent meeting of the General Medical Council a medical practitioner was removed from the *Register* for the grave offence of allowing an unqualified person—namely, his son—to sign certificates to be used for the purpose of excusing children who were absent from school. The General Medical Council marked its appreciation of the gravity of the offence by removing the delinquent's name from

the *Register*. It is necessary that all medical practitioners should realize the full responsibility that they undertake when they sign medical certificates, a matter about which it is to be feared that there is in some quarters considerable laxity. This is partly due to the large number of certificates which medical men are asked to sign, and it is a question for consideration whether it would not be better for clubs, school authorities, and other bodies to require fewer medical certificates, so as to give these documents a higher value than they at present possess. It is quite a common practice for clubs to insist on a weekly certificate, and it is equally common to give such patients a supply of weekly certificates dated in advance. To refuse to do this is to compel the patient to come back each week to get his club note, and, as it is perfectly certain that he will not be able to work and can be supplied with medicine to last for two or three weeks, even the most rigid stickler for propriety finds himself falling in with a bad custom for which the clubs themselves are mainly to blame. So, too, school authorities would be well advised to take the parent's word in most cases as sufficient proof of the child's illness, and to require a medical certificate only where grounds existed for doubt as to the bona fides of the parent. It is not good for the children or for the public health that young children suffering from catarrh should be sent to school, where they are exposed, in a very susceptible condition, to many kinds of infection. There is good ground for believing that in this way diphtheria is spread. Children of tender age ought not to be forced to school when they are ill, and, if it must be that educational requirements and the public health come here into sharp collision, there can be no doubt which should be made to yield.

THE CORONER AS INQUISITOR.

THE exceptional demands on our space make it impossible to deal fully with the further developments of the controversy which has arisen as to an inquest held by Mr. Troutbeck on a case of cerebellar tumour operated upon by Sir Victor Horsley, on which we commented in the BRITISH MEDICAL JOURNAL of June 13th. For the present we need only say that the reply of Mr. Troutbeck to Sir Victor Horsley's letter to the *Times*, which was reproduced in the JOURNAL (p. 1460) does not seem to us to help his case. He says that Sir Victor Horsley's evidence at the inquest was incomplete, inasmuch as "another cerebellar tumour, "the size of a chestnut, was found at the *post-mortem* examination, the existence of which he "had not suspected, and which was not found or "removed at the operation." To this Sir Victor Horsley replies in the *Times* of June 12th that "nothing, "on the contrary, was more complete, for (1) the clinical "symptoms; (2) the non-expanded depression of the brain "substance found at the *post-mortem;* and (3) the con-"dition of the heart, together present an absolute "concordance in establishing the causation of the "characteristically sudden death of a cerebellar case." Sir Victor Horsley goes on to point out that Mr. Troutbeck is in error in stating that it was stated in evidence by him that the patient would undoubtedly have lived four or five months if the operation had not been done. Sir Victor Horsley states that what he said was that such sudden death was characteristic of cerebellar cases, that it might have occurred at any time, and that, though no operation had been performed, the patient *might* have survived for four or five months, she would during that period have been totally blind, vomiting, racked with headache and helplessly bedridden. Sir Victor Horsley told the jury that the term "life" was hardly applicable to such a state of things, and most people will agree with him. He further gives a direct denial to the statement made by Mr. Troutbeck, on the faith of the evidence given by his pathologist, Dr. Freyberger, that there was another cerebellar tumour. The specimen was shown to Sir Victor Horsley, who told Dr. Freyberger that what he took to be tumour was false capsule, purposely left behind at the operation. Later, on cutting open the supposed tumour, Sir Victor Horsley found that it consisted of blood clot and the capsule. He explains for the benefit of non-technical readers that the "false capsule" is a condensation by the pressure of the tumour of the delicate membranes of the brain, intimately connected with the nerves and blood vessels in the neighbourhood, and that he has found by experience that the safest procedure in a long-standing case is to scrape out the substance of the tumour from within the false capsule. In a successful case the whole thing, blood clot, capsule, and all, shrinks into a thin scar. Sir Victor quotes a letter from the patient's brother, Mr. George A. Muirhead, in reference to Mr. Troutbeck's statement at the inquest that it had been reported to him that but for the operation his sister would have been alive now. Mr. Muirhead says he cannot understand who the informant can have been, and he expresses the opinion that his interference was "a piece of unadulterated impudence." He adds that it also struck him that Dr. M. G. Biggs, who for so many years was his sister's medical attendant and was actually present at her death, ought to have been summoned to attend. Dr. Biggs, who has attended the family for nearly thirty years, also states that the operation was decided on only after frequent consultations with masters in their own departments, and that the patient and her friends were made aware of the real state of affairs, and gave their full consent to what was done. The lady was never a hospital patient; she was in the Bolingbroke Hospital as a paying patient. She remained under the care of Dr. Biggs to the last, yet the coroner did not think fit to communicate with Dr. Biggs on the subject. In the *Times* of June 13th, while judiciously leaving alone the crushing statements as to the pathological evidence made by Sir Victor Horsley, Mr. Troutbeck says that the information as to the death of the patient was given to him by the Registrar of Deaths, and that Dr. Biggs's name as the medical attendant was not mentioned to him till he reached the court. This may account for the omission to call the family doctor on this particular occasion, but it does not alter the fact that he systematically ignores the ordinary medical attendant; that this is his habitual attitude towards the medical profession is shown by the large body of evidence on the subject submitted by the British Medical Association and other bodies. The case has naturally excited great interest among the public, and the *Times*, in a leader published on June 12th, described the state of things as "intolerable, and justly "intolerable, to the whole medical profession." In the face of the strong view expressed by the leading organ of public opinion it seems to us that the only course open to Mr. Troutbeck is that suggested to a French statesman—*se soumettre ou se démettre.*

OPHTHALMOLOGY AT OXFORD.

MR. DOYNE'S summer courses of ophthalmology at Oxford have achieved considerable popularity among practitioners as well as students. The fifth course has been arranged from July 6th to 18th. The main idea of the course is to demonstrate—on actual patients as far as possible—the whole range of ophthalmology, in order to make the reading of a textbook more profitable than can be the case when relying merely on pictures. The first part will be mainly devoted to demonstrating the practical examination of eye patients, the use of the ophthalmoscope, and the work of refraction. During the second part the work will be more specialized. Altogether some 500 cases will be avail-

able for demonstration. The lecturers and demonstrators are Mr. Doyne (Reader in Ophthalmology to the University), Professor Osler, Mr. P. Adams, Dr. Moorsom-Wood, Mr. Ormond, Mr. Sydney Stephenson, Mr. Norman Maclehose, Mr. Arnold Lawson, Dr. James Taylor, and the hospital staff. The fee for the course is £5 5s. Gentlemen attending it will be provided with board and residence at Keble College at the rate of 7s. 6d. a day during the second week, but during the first week lodgings must be secured. For further particulars apply to Mr. Robert W. Doyne, M.A., Margaret Ogilvie's Reader in Ophthalmology in the University of Oxford, 30, Cavendish Square, London, W.

CONGRESS OF OPHTHALMIC SURGEONS.

A Congress of Ophthalmic Surgeons will be held at Oxford on July 16th and 17th, at the end of the post-graduate course, as in previous years. It is particularly desired that this meeting shall not in any way interfere with that of the British Medical Association at Sheffield, and arrangements have accordingly been made for addresses and demonstrations that shall be preparatory for the papers and discussions there. Sir Almroth Wright, F.R.S., will give an address on vaccine therapy, and Mr. A. P. Parker will give anatomical demonstrations of the accessory sinuses on a series of dissections, and Dr. Burch, F.R.S., Dr. Edridge-Green, and others, will demonstrate the various theories of colour vision. The following programme has already been arranged: Demonstration of the Calmette reaction, and further observation of blood coagulation, by Mr. P. H. Adams; some points in the bacteriology of the eye, by Dr. Bryan; demonstrations of colour theories, by Dr. Burch, F.R.S., Dr. Edridge-Green, and others; a demonstration of retinal disease with massive exudation, by Mr. G. Coats; Noah's Ark test types, by Dr. Beale Collins; an address on congenital cataract, by Mr. Treacher Collins; an address by Professor Gotch, F.R.S.; demonstration of some steps in the evolution of the ciliary body and the suspensory ligament, by Mr. Gradon; an address on the surgical treatment of optical neuritis and atrophy, by Sir Victor Horsley, F.R.S.; demonstrations of dissections of the accessory nasal sinuses, by Mr. A. P. Parker; demonstrations of points in connexion with glaucoma, by Mr. Priestley Smith; a series of microscopical specimens to illustrate certain points in the histology of the fetal eye, by Mr. Stephenson; a reconstruction model of the eye of a human embryo, 13 mm. in length, by Professor A. Thomson; an address on vaccine therapy, by Sir A. Wright, F.R.S. In addition to these there will be a very large number of interesting clinical cases at the Eye Hospital. Surgeons who desire to attend will be accommodated with board and residence in Keble College at the rate of 8s. 6d. per day. They will meet at dinner on Wednesday, July 15th, and the meeting will close after breakfast on Saturday, July 18th. A launch will leave Folly Bridge at 10 on Saturday, July 18th, to go down the river to Reading. Those who desire to make the trip must take tickets (price 7s. 6d.) beforehand. Communications on the subject of the Congress should be made to Mr. R. W. Doyne, Reader in Ophthalmology, University of Oxford, or at 30, Cavendish Square, London, W.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

The annual meeting of this association will be held at the Town Hall, Hull, on Wednesday, July 15th, at 3 p.m. Members will be welcomed by His Worship the Mayor (Mr. H. J. Feldman, J.P.), who has kindly invited them to take afternoon tea with him after the meeting. Surgeon-General Evatt, C.B., President of the association, will be in the chair, and after the usual business the following papers will be read: The Poor-law Medical Service, with special reference to the grievances of district medical officers, by Major Greenwood, M.D., LL.B., Barrister-at-Law, D.M.O., and Public Vaccinator, St. Leonard, Shoreditch; Guardians of the Poor and Medical Relief, by A. T. Brand, M.D., C.M., Medical Officer, Driffield Union Workhouse. A general discussion will follow. The annual dinner of the association will take place on the same day, at 6 p.m., at the Station Hotel, Hull. The President will be in the chair, and will be supported by the Mayor of Hull and other members of the City Corporation. As this is the first annual meeting held in the provinces, it is specially requested that members will do their best to be present and give their support to this innovation. All Poor-law medical officers will be heartily welcome, and those wishing to attend are desired to communicate with the Honorary Secretary, Dr. M. Greenwood, care of Dr. Holder, J.P., Somerstown House, Holderness Road, Hull. Dinner tickets, exclusive of wine, 6s.

We may remind readers that the Research Defence Society holds its inaugural meeting at the house of the Royal Society of Medicine this day (Friday, June 19th) at 5 p.m. The Earl of Cromer, President of the Society, will take the chair and will deliver an address. The other speakers will be Lord Robert Cecil, Sir Thomas Barlow, Mr. Walter Long, Dr. C. J. Martin, and Mr. Butlin.

Another meeting will be held in the house of the Royal Society of Medicine, when the chair will be taken by one of the Vice-Presidents of the Research Defence Society. An address will be delivered by Professor Starling, F.R.S., on "Experiments on Animals." After the address an hour will be allowed for debate, in which four speakers will take part, each being allowed a quarter of an hour. Two speakers will represent the Research Defence Society; the remainder of the time will be divided between two representatives of the leading antivivisection societies. We understand that the British Union for the Abolition of Vivisection will be represented by Dr. Hadwen. At the end of the debate Professor Starling will reply. No vote will be taken. Admission will be by ticket; half the number of tickets available will be allotted, on application, to opponents of the Research Defence Society. Application should be made to the Honorary Secretary of the Research Defence Society, Mr. Stephen Paget, 70, Harley Street, W.

Professor Raymond, Senior Physician to the Salpêtrière Hospital, Paris, will lecture on Monday, June 22nd, in the large library of the Royal College of Physicians, at 5 p.m., on Les Maladies Familiales (sénescence physiologique prématurée localisée à certains systèmes organiques). Members of the profession and students will be admitted on presentation of their cards. Dr. Raymond is to receive the honorary degree of D.Sc. at the Encaenia on Wednesday next at the University of Oxford.

We are asked to state that on the occasion of his visit to England at the end of this month, Dr. Raymond, Professor of Neurology in the University of Paris, will give a demonstration on some selected nervous cases in the Physiological Theatre of Guy's Hospital Medical School on Friday, June 26th, at 11 a.m. The attendance of qualified practitioners who may be interested is cordially invited.

The Tenth Annual Conference of the American Hospital Association will be held this year at Toronto on September 22nd, 23rd, 24th, and 25th. The programme will cover the varied interests of hospitals,

large and small: and besides the papers, which will be presented by members of the association and by the several subdivisions of the Committee on Hospital Progress, there will be addresses and papers by guests who have been invited to participate in the conference.

WE regret to announce the death of Dr. Thomas Garrett Horder at the age of 65. He would in due course have been Chairman of the Cardiff Division this year, but failing health prevented his accepting the office. Dr. Horder was a member of the Hospitals Committee of the British Medical Association, and always displayed a keen interest in questions of medical charity. He was a member of the Council of the Medical Defence Union. Dr. Horder, who had been a student of the London Hospital, was admitted a Member of the Royal College of Surgeons in 1866. We regret also to announce the death of Dr. Edwin Rickards, of Birmingham, at the age of 67. We hope to publish obituary notices in a later issue.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Board of Agriculture was under criticism the whole of the sitting on Thursday in last week, and came in for some plain speaking with regard to the administration of the Small Holdings Act. The legislation of last year has evoked an enormous number of applications for land, but several county members urged the necessity of greater activity on the part of the Board if the expectations of the labourers were to be properly met. Dr. Cooper raised the question of the meat supply of the country, and strongly criticized the policy which continues to prohibit the importation of cattle from countries free from disease. He argued that unless the prohibitory order was removed, consumers in this country would suffer severely by the supply getting into the hands of the Meat Trust. No outbreak of cattle disease had been traced to Deptford or Birkenhead Markets, and there was no valid reason why Norway, Sweden, and Denmark should not be allowed to send cattle to this country. Not only was the price of meat likely to be raised for the poor, but industries dependent on the hides of cattle were being seriously injured. Dr. Rutherford also took part in the debate on the question of the poor wages paid to the Kew gardeners. Sir E. Strachey, in replying for the Board of Agriculture, controverted to some extent the arguments used by these two speakers, and the House adjourned without any vote being taken.

The Prevention of Crime Bill, which occupied the whole of Friday's sitting last week, was given in the end a second reading by 133 to 11 votes. The bill consists of two parts, of which the first deals with young offenders, and seeks by the application of the Borstal system to reclaim young criminals and turn them into useful citizens. A court, when the bill is passed, will be able to impose an alternative sentence, and the Home Office will be able to send the offender to a Borstal reformatory, where he can work out his discharge in six months, and afterwards be supervised and kept right by some voluntary society. If contumacious he may be sent back to prison to serve out his original sentence. The sentence of the judge will in this way be tempered in suitable cases by psychological treatment, and, as in the United States, good results may be expected to follow. The second part of the bill deals with habitual criminals, and sets up for them "the indeterminate sentence." After a third conviction a man sworn to be a habitual criminal may be put under restraint for life. While there is much evidence in favour of action of this kind for breaking up schools of crime, much apprehension was expressed in the course of the debate at the dangerously large powers given to the executive. Mr. Gladstone warmly defended his proposals, and quoted very interesting statistics supporting his views for dealing with hardened criminals.

The Administration of Anaesthetics.—Sir William Collins asked the Secretary of State for the Home Department whether he proposed to take any action or to introduce any legislation with a view to secure that anaesthetics should not be administered except by persons who had been duly instructed in their administration and use. Mr. Secretary Gladstone replied that he was making inquiries into the question of the administration of anaesthetics, as he had mentioned in answer to previous questions, but he was not in a position to make any further statement at the present time.

Nut Butter as Margarine.—Mr. Jowett asked the honourable member for South Somerset, as representing the President of the Board of Agriculture, whether he was aware that the branding of pure nut butter, which contained no animal fat, with the word "margarine," as required by the board, was calculated to diminish its sale; and whether the board would approve some other description which would be less likely to cause misunderstanding. Sir Edward Strachey answered that the expression "margarine" was defined by the Butter and Margarine Act, 1907, as meaning "any article of food, whether mixed with butter or not, which resembled butter and was not milk-blended butter." If the article referred to came within that definition, the Acts required its marking with the word "margarine," and the board had no authority to sanction the use of any other description for it.

The Drainage of Cairo.—Dr. Rutherford and Mr. John Robertson asked questions on this subject on Tuesday last, and Sir Edward Grey said that the only information with respect to the new scheme of which His Majesty's Government were in possession was contained in a note dated July, 1907, in which the Egyptian Government asked the consent of the Powers to the increase of taxation necessary for putting the plans into execution. All the Powers had assented to the proposals of the Egyptian Government, and the scheme would be put into execution without delay.

The Old Age Pensions Bill occupied the whole of Monday and Tuesday's sittings, and was productive of a very interesting debate. The Chancellor of Exchequer, in moving the second reading, described the bill as a first step, as experimental and incomplete. He foreshadowed changes of an important kind in the scheme, and said it must be considered in relation to coming changes in the Poor Law. He indicated his inclination to adopt a sliding scale for the pension, and also pointed out the slight character of the Poor-law disqualification, which was a disappearing element. He also abandoned the character test, and called it an industrial test. He defended mildly the lessened grant to two old people living together, and spoke against a contributory or any universal scheme. Mr. Chaplin followed in a critical speech, pointing out the opposing attitude of friendly societies, and then Mr. Harold Cox moved his amendment in favour of a contributory scheme. After this had been seconded, the Labour Party, by the mouth of Mr. O'Grady, criticized the measure, and demanded a lower age limit and the removal of the disqualifications in the bill. Sir Walter Foster followed, and said he thought the Government had acted wisely in adopting a discriminatory scheme; he mentioned that he supported the bill with a certain parental fondness, as it followed very closely his bill of 1892. He pointed out amendments that ought to be made as regards a sliding scale, the disqualification for Poor law relief, and more especially he objected to a local committee to adjudicate pensions. The decision should not be after inquisition, but should be as nearly as possible automatic, and, after the New Zealand plan, by a judge in open court. He concluded by urging the Government to associate with this scheme a contributory scheme, so as to lessen the vast burden that would otherwise fall on the exchequer in the new generation. The debate, after a speech by Mr. Haldane in favour of the Danish plan, which, he held, supported the Government proposals, was brought to an end by Mr. Long, who resumed a very instructive speech on Tuesday. Mr. Burt, the veteran leader of Labour representatives, argued in favour of the bill and against a contributory scheme. The discussion was brought to a close by speeches from Mr. Balfour and the Prime

Minister. Mr. Balfour devoted his remarks mainly to general objections to the details of the Government bill, but did not oppose the principle involved. Indeed, he did not vote against the second reading or for the amendment. Mr. Asquith summed up the position of the Government and defended the bill in a short and masterly speech. Mr. Cox's amendment in favour of a contributory scheme was then rejected by the record majority of 417 to 29. The bill was afterwards read a second time without a division and referred to a Committee of the whole House.

Unqualified Assistants in Dockyard Surgeries. — Mr. Bramsdon asked the First Lord of the Admiralty whether unqualified men are employed in the surgeries in the royal Home dockyards who saw and attended to injuries without the supervision of the surgeons; if so, what was the official position of these men as borne in the Admiralty books; how many were there in the Home dockyards, specifying each dockyard separately; and was it proposed to make any alteration by which in every case of injury the surgeons should at least personally inspect and examine the patient at the time such injuries were attended to. Mr. M'Kenna replied that there were no unqualified men employed in the surgeries in the royal Home dockyards who saw and attended to injuries without the supervision of the surgeon. The surgery attendants were fully qualified to give first aid, and did their work in the same manner as the sick-berth staff on board ship or nurses in a civil hospital, under the immediate supervision of the medical officers, who alone were responsible. The numbers at each dockyard were as follows: Portsmouth, one surgery attendant and one assistant, both established, and one hired assistant; Devonport, two attendants and one assistant, all established; Chatham, one attendant and two assistants, all established; Sheerness, one surgery attendant, established; Pembroke Dock, one attendant and one assistant, both established, and one hired assistant; Haulbowline, one assistant surgery attendant, established. No alteration in the present system was considered necessary.

The Imperial Cancer Fund.—Questioned by Mr. Lee as to what was meant by the statement that this fund was supported by the Government, the Prime Minister stated on Tuesday that when he said that this fund was supported by the Government, what he meant was that the Government accorded it practical assistance in the collection and transmission of information and specimens and in defraying the incidental expenses connected with this work. It was not directly financed out of public funds, and he doubted—though the question was one rather for the Chancellor of the Exchequer than for him—whether it would be possible to give it the exceptional favour of a grant from the Exchequer.

The Infant Life Protection (No. 2) Bill was read a second time late on Monday night on the undertaking of Lord Robert Cecil that he would insert an amendment making it perfectly clear that no further liability should be thrown by it on members of the medical profession. Dr. Cooper pressed for this course, and the amendment has since been put upon the paper. It runs: "No offence shall be committed under this Act if a medical man destroys a child during birth for the purpose of saving the life of the mother."

The University of Durham Bill was read a second time late on Tuesday night and committed to a Standing Committee

The late Mr. John Charles Walker, of Ingleton, Yorkshire, and Morton House, Nottinghamshire, left £1 000 each to the Royal Infirmary and the Ear Hospital, Manchester, and the Salford Royal Infirmary, and £200 each to the Cottage Hospitals at Lytham, Retford, and Whitby.

The late Mr. Asher John Hucklesby, a straw plait manufacturer of Luton, whose will has now been proved, left £2 000 to the Bute Hospital, Luton, for the endowment of two beds in his name; £1,000 to the Children's Sick and Convalescent Home; £500 to the Brompton Consumption Hospital, and a similar amount for a nursing fund for the benefit of the sick poor in the neighbourhood of Luton.

Scotland.

[From our Special Correspondents.]

Sir Henry Littlejohn's Successor.

At a meeting of the Town Council of the City of Edinburgh on Tuesday, June 16th, A. Maxwell Williamson, M.D., B.Sc., Chief Sanitary Inspector for Edinburgh, was appointed Medical Officer of Health in succession to Sir Henry Littlejohn.

The Medical Education of Women at the University of Edinburgh.

At a meeting of the Court of the University of Edinburgh on Monday, June 15th, the subject of the university medical education of women was the most important item on the agenda. The Scottish Association for the Medical Education of Women has lost by sale or otherwise its class-rooms in what is known as Minto House, and it now makes proposals to the University Court for the future provision for the medical education of women. A conference between representatives of the University Court and the Association for the Medical Education of Women has been held. The association was unable either to suggest premises for the carrying on of its work, or to show how, in the event of mixed classes of students in the university being agreed upon, the necessary expense for providing the extra accommodation required would be met. The University Court is not likely to make any move till what it considers a feasible scheme has been put before them, so that matters stand pretty much in the same position as they did before the conference.

Royal Society of Edinburgh.

At a meeting of the Royal Society of Edinburgh on Monday, July 15th, Professor D. Noël Paton gave a communication On the Effects of Chloroform on the Metabolism. The investigation was concerned with a study of the records of late chloroform poisoning. Professor Paton had, in 1893, carefully studied the toxic effects of chloroform on the liver cells, and in the present research the injury to the liver was deduced from the changes in the character of the waste matter elaborated by the liver and excreted by the kidneys. A series of experiments on the administration of chloroform to dogs by the respiratory passages, by the stomach, and hypodermically, were reported. The result showed that when exhibited by the respiratory passages chloroform simply increased the disintegration of protein in the body and stimulated the activity of the liver; whereas when given by the mouth and hypodermically it acted as a poison, decreasing the activity of the organ. The question of how this difference was to be explained was considered, and in another paper, by Miss Dorothy Lindsay, it was shown that chloroform given by the lungs was rapidly taken up and rapidly eliminated, whereas when given by the stomach and hypodermically it was slowly taken up, slowly eliminated, and got fixed in the liver in larger amounts.

England and Wales.

[From our Special Correspondents.]

MANCHESTER.

Memorial to the late Dr. Dreschfeld.

In response to the appeal for subscriptions to found a memorial to the late Dr. Dreschfeld, a sufficient sum has been received for the establishment of an entrance scholarship in the Medical School of the University of Manchester, to be called the Dreschfeld Memorial Scholarship, and for the painting of a portrait in oils. The portrait is now on view at the Manchester Corporation Art Gallery, and the artist, Mr. George Harcourt, has succeeded wonderfully well in his task of working entirely from photographs, having produced an excellent and happy likeness of Dr. Dreschfeld, and a very fine work of art altogether. The fund will be closed now and if there are any members of the profession who wish to contribute to it they should send their subscriptions to the secretary, Dr. Brockbank, Albert Square, Manchester, at once.

CORRESPONDENCE.

MEMORIAL TO THE LATE PROFESSOR ANNANDALE.

SIR,—A reference to the memorial to the late Professor Annandale was forwarded to you for publication in April and appeared in the JOURNAL of April 25th, page 1020. In response to the appeal made for the necessary funds a sum of £231 15s. has already been subscribed.

The committee entrusted to carry out the scheme aim at raising a sum of not less than £400. There remains, therefore, a sum of £168 5s. still to be found.

As it is impossible to communicate directly with all the numerous friends and former pupils of the late Professor Annandale, perhaps you will kindly publish this letter in your columns.

Subscriptions may be forwarded to me at 13, Rutland Square, Edinburgh. The subscription list will close on July 31st.—I am, etc., H. M. D. WATSON,

Secretary and Treasurer to the Committee.

SECRET REMEDIES.

SIR,—I have read with much interest the articles which have appeared recently in the BRITISH MEDICAL JOURNAL exposing the composition of various proprietary and quack nostrums, and showing how the public is exploited in health and pocket by greedy and unscrupulous advertisers.

It seems a pity that these articles are not more widely read and circulated, and thus made a means of opening people's eyes to the way they are made to suffer in their tenderest organ—the pocket—by having to pay extortionate prices for cheap and nasty drugs.

I suggest that such public exposure is the duty of the profession, and now through your enterprise the means are available. No other profession would have submitted tamely and so long to an abuse closely affecting its interests, and we ought to insist on the passing of a law rendering it obligatory to publish the composition of the remedy on the wrapper containing it. Such a law prevails, I believe, in Norway and other countries.

When this is done we shall cease to be scandalized by reading of the will of some notorious quacksalver being proved at so many hundreds of thousands of pounds.

Surely Parliament and the press have only to be sufficiently enlightened on the subject to put a stop to a grave public scandal.—I am, etc.,

London, W., June 14th. CHARLES LLOYD TUCKEY, M.D.

*** Owing to the great pressure on our space this week we are compelled to hold over a number of other letters and communications of various kinds.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

GUY'S HOSPITAL.

THE Right Hon. Lord Rothschild, G.C.V.O., will distribute the prizes to the successful students at Guy's Hospital on Wednesday, July 8th next. The usual garden party will be given in the grounds.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

A MEETING of the council of the University College of South Wales and Monmouthshire was held on June 3rd, the Earl of Plymouth presiding. Representatives were appointed to attend a joint conference of representatives of the local education authorities and of the university and normal colleges of South Wales and Monmouthshire to make arrangements for hospitality on the occasion of the return visits of Canadian and American teachers to the United Kingdom. Mr. D. G. Taylor, M.A., was reappointed occasional lecturer in pure mathematics for the next session, and Mr. S. W. Price lecturer in mining. It was resolved to complete the part of the new buildings which contains the research laboratory by putting on the top storey, which will be utilized for the mining department. It was further resolved to request the Cardiff corporation to grant permission for the statue of the late Lord Aberdare, which is now in Howard Gardens, to be placed on the site of the new college in Cathays Park. The council placed on record its deep sense of gratitude to the memory of three benefactors of the college: Mrs. Annie Falton, Miss Caroline Williams, and Mr. Thomas Webb. A cordial vote of thanks was also given to Professor Claude Thompson for his valuable gift of books to the college library.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examinations indicated:

D.P.H. *(Part I)*.—G. E. Nesbitt, T. O. Graham, R. G. S. Gregg, W. K. Galwey.

D.P.H. *(Part II)*.—G. E. Nesbitt, J. A. Pringle, W. R. Galwey, T. O. Graham.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FIRST FELLOWSHIP.—K. Moinuddeen, Miss M. M. S. Coghlan, M. Drummond, G. J. Fraser, H. M. E. H. M'Adoo, J. M'Mullin, H. H. Montgomery, Miss P. M. Powell, W. Prendiville, A. Stokes, W. A. Swan.

FINAL FELLOWSHIP.—A. L. Fuller, S. R. Godkin, Captain I.M.S., A. Greene, M. R. J. Hayes.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INCREASE OF HONORARY SURGEONS TO THE VICEROY OF INDIA.

THE Viceroy of India has been pleased to increase the number of honorary surgeons on his staff by two officers, to be selected from the Royal Army Medical Corps for distinguished service in the field. To fill these two appointments his Excellency has appointed the following officers to be honorary surgeons on his personal staff: Lieutenant-Colonel G. E. HALE, D.S.O., commanding the station hospital at Murree, and Major C. DALTON, who is now stationed at Rawal Pindi.

SURGEON, TERRITORIAL FORCES.

"PAX" need not lay out much money, especially if he is careful in the purchase of uniform. There will be a small subscription to his corps fund for the prize list (usually 1 or 2 guineas a year), and if he has to go by train to head quarters he travels at half return rates. As regards:—(*a*) Uniform: £20 is allowed by regulations for purchase of uniform; £10 may be had on joining, and the balance on obtaining the proficiency certificate within two years. This amount will purchase all required, except mess kit. (*b*) Duration of service: May resign on giving official notice to commanding officer at any time. Commissioned as lieutenant, promoted after three years' service to captain, after fifteen years to major, and twenty years to lieutenant-colonel. (*c*) *R.A.M.C. Manual* (latest edition) gives all the ambulance drill required, and the work in first aid, bandaging, etc. Company drill will be found in Infantry Drill, 1906, and the King's Regulations should be read in parts. Under the territorial scheme schools of instruction are to be formed, and the Principal Medical Officer of the division will attach him to one of these for a course of instruction. There are also private schools for instruction and the regimental schools at Aldershot. Pay and allowances are given if attending the regimental schools. (*d*) Time required: Usually one hour's drill once a week at head quarters. Battalion parades once a month, on Saturdays, usually 5 p.m. to 9 p.m. Camp for eight days compulsory or fourteen days optional. (*e*) Pay of rank and allowances for tent, mess, and furniture paid while in camp for not less than eight days. Camps usually held in August, some at Easter or Whitsun. Pay given when doing duty with regular troops.

PUBLIC HEALTH.

NOTIFICATION OF BIRTHS ACT.

ON June 1st the Inverness Town Council discussed the finding of the Public Health Committee on the subject of the Notification of Births Act, which the council refused to adopt at a special meeting held some weeks ago. The Public Health Committee recommended that the Act be adopted, in view of the large percentage of infantile mortality in the town. After a long discussion the council resolved to inform the Local Government Board that it does not desire to adopt the Act in the meantime.

NOTIFICATION OF INFECTIOUS DISEASES.

H. E. B. should intimate to the medical officer of health that he will expect to be paid the customary fee, and he should send an account in the usual way to the clerk to the sanitary authority. If the clerk agrees with the medical officer of health that the fee should not be paid, he (the clerk) should be invited to address a communication on the subject to the Local Government Board. The Board has already sent the following letter to correspondents who have made similar inquiries: "The Infectious Disease (Notification) Act, 1889, requires that 'every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health for the district a certificate' stating certain particulars of the case; the Board are advised that if more than one medical practitioner is attending on or called in to visit the patient, each practitioner is bound to send a certificate, and is entitled to the prescribed fee."

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

C. H. J. asks where he can obtain a list of exercises suitable for cases of rheumatoid arthritis.

Dr. George H. R. Dabbs (London) writes: Having seen a striking result from the use of antidiphtheritic serum in pertussis, and not wishing to generalize on one apparent cure, I am induced to ask through your columns if any practitioners have any similar experience of this treatment (first mentioned, I think, by Cerioli and V. Gilbert).

H. C. J. has a psoriasis patient, aged 28, female, 5 ft. 8½ in., weight 160 lb. Distinct rheumatic history from age of 14. Psoriasis developed at 18, and has been more or less continuous ever since. At times the whole body is affected. The remedies externally used have been bichloride, resorcin, chrysarobin, green soap, tar, etc. Internally: aspirin, thyroids, iron, and arsenic, liq. arsenicalis have been given. The latter is the only medication that seems to have any effect. The patient never ate meat till 22 years old. She tried dieting without avail. The trouble is worse in spring. Our correspondent would be glad of suggestions.

Outdoor Maternity Charities.

Dr. Arthur Crook (Norwich) writes: Will you allow me through your columns to obtain information as to whether medical officers to these charities *in the provinces* are usually honorary or paid? I am sorry to occupy your space with this appeal to such of your readers as may hold these appointments for replies, but there is no publication giving the information that I am aware of.

Wart on the Scalp.

F. H. D. G. asks for an effectual mode of treatment of warts about the scalp, and inquires if they are at all common in this situation. A patient of his, aged 23, has several of them; some are the size of a pea, and at times a number of smaller warts spring up at the upper part of the forehead. They have been cut off several times, and caustics applied, but they recur after a time. They cause great inconvenience, and the patient is afraid that they may spread on to the forehead. There had never been any warts on any other part of the body. The patient's hair is a little coarse and he wears it long.

LETTERS, NOTES, Etc.

Sodium Salicylate in Puerperal Fever.

L. Coetzee, M.B. (Additional District Surgeon, Jamestown, Cape Colony), writes: I was very interested in Dr. A. K. Gordon's paper on the treatment of puerperal fever, in the Journal of April 25th. I have given sodium salicylate, in gr. v doses, every three hours in several very bad cases, and found it always quite successful, without any further treatment. The patient usually recovers within twenty-four hours. I would strongly advise medical men to give it a trial.

Schlangenbad in Taunus.

We are informed that on the occasion of his sojourn at Wiesbaden the German Emperor twice visited the Schlangenbad health resort. Schlangenbad is a favourite health resort, and its reputation is steadily growing, not only in Germany, but in other countries, from which visitors are attracted in increasing numbers year by year. Apart from the therapeutic properties of the waters, the remarkable beauty of the surrounding scenery, the accessibility of interesting places, and the arrangements made by the municipality for the entertainment of visitors are sufficient to justify the reputation of Schlangenbad in Taunus.

The D.P.H. Examinations at Cambridge.

Dr. H. Kerr, D.P.H. (Newcastle-upon-Tyne) writes: In answer to the inquiry regarding suitable textbooks for the D.P.H., might I recommend the following? I used, or tried, most of those mentioned in your issue of June 6th, p. 1403, but discarded them in favour of these, which I found to be most readable and useful for a man who required simplicity above all things in his books, as well as completeness: *Public Health and Preventive Medicine* (Lewis and Balfour), for general theory; *Sanitary Law and Practice*, by Robertson and Porter, for law—the only really complete and readable book on the subject I could find; and *Hygiene*, by Walter C. C. Pake, for all laboratory work.

Tyre Punctures.

The device known as "the Stepney spare motor wheel" has attained sufficient popularity both in England and on the Continent to be worth the attention of medical men who have substituted automobiles for horse-driven vehicles in their practice. In the case of a medical man a bad puncture may sometimes mean something more serious than the delay of an hour or two, and nothing in the way of detachable wheels hitherto introduced for the purpose of facilitating its rapid repair has proved very satisfactory. The Stepney wheel is by way of being a radical cure, since once it is recognized that the tyre has really collapsed all investigation of its causes, or of the possibility of repairing the puncture rapidly, are set aside, and the Stepney wheel is placed in position forthwith. This substitution takes a very few minutes, and there is plenty of evidence that, once in place, the wheel cannot come off, so that the rest of the drive is as safe as it was before. The wheel is manufactured in Wales; but a showroom has recently been opened at 168, Great Portland Street, and there the wheel can be thoroughly examined.

The Work of Special Departments in our Hospitals.

Dr. Griffith C. Wilkin (Paignton) writes: In the Journal of June 6th, p. 1404, Mr. T. Faulder White draws attention to the fact that the work of his special department has considerably increased since the medical inspection of school children has been brought in. Further on he says: "It is doubtful whether it was wise of the Board of Education to suggest to the local authorities that the voluntary associations (that is, hospitals) should be utilized for the gratuitous treatment of the diseases discovered by their paid inspectors." I fail to see where the doubt comes in!

But Mr. Faulder White is evidently that very fortunate man who has only, up to the present, had to deal with that extremely rare specimen of the human race, the honest and liberal man. I think London will quickly disillusionize him.

But surely the hospitals can deal with the matter themselves, if the doctors who examine for the Board have lost their self-respect.

Post-Mortem Caesarean Section and Ecclesiastical Law.

Dr. Fitzjames Molony (Porlock, Somerset) writes: The following surgical directions appear in *Burns's Ecclesiastical Law*, published 1781, under "Childbirth":

"Edmund.—If a woman dies in childbirth and this shall well appear, she shall be cut open, if it be believed that the child is living, but let them take care that the woman's mouth be kept open." Then follows the note: "That is, with a piece of wood, or key, or any other thing, so that the air may enter, that the child be not suffocated for want of respiration.—*Lind.* 307."

The directions as to this form of Caesarean section were evidently given by St. Edmund of Abingdon, Archbishop of Canterbury in the reign of Henry the Third. His works were "collected and adorned with the learned gloss of William Lindwood, Bishop of St. Davids, in the reign of Henry the Fifth. The note is evidently written by the latter bishop. The belief prevailed in the Middle Ages that the fetus breathed through the mother's mouth, but it is odd that the directions should be seriously given in a book published as recently as 1781.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

Remarks
ON
SOME POINTS IN THE HISTORY OF ANTISEPTIC SURGERY.

BY LORD LISTER, F.R.S.

THE following unfinished letter to Sir Hector Cameron was written early in 1908, before the delivery of his Lectures on the Evolution of Wound Treatment, but never sent to him. I have been assured that it would have sufficient interest for some readers to warrant its publication.

MY DEAR CAMERON,

It seems superfluous for me to write anything to you with reference to your coming lectures. But perhaps in what I shall say, there may be here and there points which may interest you.

In treating surgical cases antiseptically I always endeavoured to avoid the direct action of the antiseptic substance upon the tissues, so far as was consistent in the existing state of knowledge with attaining the essential object of preventing the development of injurious microbes in the part concerned.

In compound fracture, to which, in 1865, I first put in practice the antiseptic principle, I applied undiluted carbolic acid freely to the injured part, in order to destroy the septic microbes already present in it; regarding the caustic action which I knew must occur, as a matter of small moment compared with the tremendous evil which it was sought to avoid. But when this had once been done, no further direct action of the antiseptic upon the tissues occurred. The carbolic acid formed with the blood a dense chemical compound which, together with some layers of lint steeped in the acid, produced a crust that adhered firmly to the wound and the adjacent part of the skin. This crust was left in place till all danger was over, its surface being painted from time to time with the acid, to guard against the penetration of septic change into its substance. Meanwhile in the undisturbed wound the beautiful result occurred that the material of the crust within it, and the portions of tissue which had been destroyed by the caustic, were replaced by living tissue formed at their expense.

That dead tissue, when protected from external influences, was so disposed of, was a most important truth new to pathology: and it afterwards suggested the idea of the catgut ligature.

I do not remember whether you saw the case that led me to apply the antiseptic principle to abscess. The patient was a woman above the middle period of life with lumbar abscess. Taught by the disastrous results that sooner or later followed the evacuation of such abscesses, whether by valvular opening or by cannula and trocar, I left the case undisturbed; till one day, on looking at it, I found that nothing but epidermis seemed to intervene between the pus and the external world, so that if left for another day, it would in all probability burst.

I therefore resolved to open it and apply a dressing which should imitate, as much as circumstances permitted, that which we used in compound fractures. The pus which escaped on incision was as thick as any I ever saw. Mixing some of it with undiluted carbolic acid, I applied some layers of lint soaked with the mixture to the wound and surrounding skin and covered them with a piece of thin block tin moulded to proper shape, such as we used for covering the crust in compound fracture. This metal covering, which prevented loss of carbolic acid by evaporation and soaking into surrounding dressings, was fixed by strapping, and a folded towel was bandaged over it to absorb discharge.

Next day, on changing the dressing, I was greatly astonished to see nothing escape from the incision except a drop or two of clear serum. What was now to be done? I had no longer any pus to mix with the carbolic acid. But it occurred to me that I might make a satisfactory crust by mixing carbolic acid with glazier's putty. Accordingly I sent to the dispensary for some whiting and boiled linseed oil, and making a solution of one part of carbolic acid in four of the oil, rubbed it up with whiting in a mortar, thus making a carbolic putty. This I spread on a piece of block tin and applied it as I had done the first dressing. There never was any further discharge of pus; the serous oozing diminished rapidly, and before long healing was complete.

In that case, as there was no spinal curvature, I could not be sure that the abscess was connected with the vertebrae. But similar results afterwards followed the same treatment where discharge of bone showed that such connexion existed and also in suppuration of the hip-joint, whether attended with shortening of the limb or not, scrupulous care being taken to keep the affected part completely at rest. The time required for final closing of the sinus was, however, generally much longer than in the first case.

Precisely the same beautiful result, so entirely novel and so full of deep interest both for pathology and practice, was seen when acute abscesses were treated in the same way; the only difference being that in the acute cases the serous oozing which followed evacuation of the pus came much more rapidly to a conclusion.

In order to ensure freedom of escape for the serum, a narrow strip of lint soaked with a solution of carbolic acid in four parts of olive oil was inserted in the incision. But the antiseptic substance was never from first to last applied to the cavity of the abscess, as such treatment could only have been productive of needless irritation.

I continued to use a strip of lint as a drain for about five years with perfectly satisfactory results. But in 1871 having opened a very deeply-seated acute abscess in the axilla, I found to my surprise, on changing the dressing next day, that the withdrawal of the lint was followed by escape of thick pus like the original contents.

It occurred to me that in that deep and narrow incision, the lint, instead of serving as a drain, might have acted like a plug, and so reproduced the conditions present before evacuation. Taking a piece of the india-rubber tubing of a Richardson's spray producer that I had used for local anaesthesia at the operation, I cut holes in it and attached knotted silk threads to one end, so improvising a drainage tube. This I put to steep for the night in a strong watery solution of carbolic acid, and introduced it in place of the lint on changing the dressing next morning. The withdrawal of the lint had been followed by discharge of thick pus as before; but next morning I was rejoiced to find nothing escape unless it were a drop or so of clear serum. This rapidly diminished, and within a week of the opening of the abscess I was able to take leave of my patient, the discharge from the abscess cavity having entirely ceased.

After that case I used drainage tubes as a rule in the treatment of abscess. But it is well to remember that if such a tube should not be at hand, a narrow strip of lint, sterilized of course with some trustworthy antiseptic solution, will in almost every case answer the purpose equally well.

The crude carbolic acid which, under the name of German creasote, was supplied to me by my colleague Dr. Anderson, Professor of Chemistry in the University of Glasgow, was a brown liquid which had been adulterated with water, and this lay on the top as a clear layer, destitute of any flavour of carbolic acid. This led me in my first paper on compound fracture to speak of carbolic acid as absolutely insoluble in water. But when it was afterwards produced in a comparatively pure condition in colourless crystals, it proved to be capable of being taken up by water, though twenty parts were required for the purpose. The watery solution, however, though weak numerically, showed itself to be exceedingly potent as an antiseptic. Having applied it to a foul sore in the palm of the hand, I found, on changing the dressing next day, that all putrefactive odour had disappeared.

This enabled me to use carbolic acid for washing wounds after operations and so to extend the application of the antiseptic principle to surgery in general. In the state of knowledge at that early period it seemed imperative to apply a powerful germicide to the wound before closing it. To use undiluted carbolic acid for operation wounds, as I had done in compound fracture, was out of the question; and carbolic oil, though I did indeed try it, was ill adapted for the purpose. But the watery solution could be satisfactorily used not only for washing the wound, but also for purifying the surrounding skin, the hands of the operator and the instruments.

The entire absence of carbolic acid in the layer of water on the "German creasote" with which I made my first attempts with compound fractures indicates that there

were present in the crude product substances for which the acid had incomparably greater attraction than it had for water. When purified from these substances, it is indeed soluble in water, but only in small amount; and being so feebly held by water, it is free, when in watery solution, to act upon other matters for which it has stronger attraction. Thus was explained the remarkable germicidal energy of a lotion containing only a twentieth part of carbolic acid, as illustrated by the foul sore in the hand before referred to.

With linseed oil, on the other hand, the acid could be mixed in any proportion, and being firmly held by the oil, it was mild in action, though present in the large proportion of 1 to 4, as used in the carbolic putty. The 1 to 4 carbolic oil is bland when applied to the tip of the tongue, whereas the 1 to 20 watery solution is intolerably pungent.

The acid in the watery solution, while potent in action when applied, is soon dissipated, whereas it is slow in leaving the oil. Hence the watery solution, powerful but transient in operation, was admirably adapted for application to a cut surface as a detergent, while the carbolic putty, bland in action and serving long as a store of the antiseptic, could be used with good effect not only for abscesses, but also as an external dressing for operation wounds; and for that purpose I long employed it. The putty was used in a layer spread on calico, freely overlapping the skin around the wound, and covered with a folded cloth to absorb the serum that flowed from beneath its edges. Although this mode of dressing gave place in time to others which were more convenient, the change effected under its use at that early period was of the most striking character: healing without suppuration, pain or fever, instead of being the rare exception, became the rule, and operations were safely performed which had previously been utterly prohibited on account of the danger that attended them; while pyaemia and hospital gangrene, which had before been disastrously rife, were banished from my wards.

Epidermis is a substance for which carbolic acid has special attraction; and this, coupled with the facility with which the acid blends with oily matters, renders it peculiarly fitted for purifying the skin about the seat of operation and the surgeon's hands. Another property which aids its action as a detergent, is its great penetrating power, not limited by the products of its chemical action upon organic substances.

I used the 1 to 20 watery solution for rendering the patient's skin and the hands of myself and my assistants aseptic throughout the forty years during which I practised on the antiseptic principle, and I never had any reason to doubt its efficacy. No long time is required for its action. In my private practice the purification of the skin was as a rule not begun till I entered the patient's room to perform the operation. The part concerned was then thoroughly washed with the 1 to 20 carbolic solution, and was kept covered with lint soaked with the same lotion while the instruments were being attended to and the anaesthetic administered; the whole process occupying only about a quarter of an hour. Yet experience showed that this brief period was sufficient.

It may perhaps be argued that under the carbolic putty or any other dressing containing carbolic acid, that volatile agent was perpetually acting on the skin and may have made up for deficiencies in the original purification. But during several years before I gave up practice, the dressings did not owe their virtues to any volatile antiseptic.

I may mention in illustration one of my latest operations. The patient was a lady advanced in years, with a large ventral hernia below the umbilicus. It was producing serious symptoms; and attempts to reduce it having failed, her condition had become exceedingly grave. I only began to disinfect the skin when she was already partly under the influence of the anaesthetic. The umbilicus contained some drops of opaque liquid of a highly offensive character. I cleansed its folds carefully with the 1 to 20 carbolic solution and washed the skin over and around the sac with the same lotion. The sac was opened by a median incision, the upper end of which extended to the umbilicus. Into further details of the operation I need not enter. On changing the dressing (of cyanide gauze) it appeared that, in her frail condition, the margins of the skin at the upper end of the incision had lost their vitality over an extent of about ½ in. in length and $\frac{1}{16}$ in. in breadth at each side. I afterwards left the dressing unchanged for several days, when I found that the sloughs, the upper ends of which encroached on the umbilicus, so foul before the operation, had been replaced by new living tissue, and complete cicatrization had occurred without the formation of a particle of pus.

I cannot but think it a happy circumstance that the substance which I employed first in endeavouring to apply the antiseptic principle should have been so admirably adapted for detergent purposes. And it has grieved me to learn that many surgeons have been led to substitute needlessly protracted and complicated measures for means so simple and efficient.*

As an instance of trouble misapplied in this matter, may be mentioned preliminary washing with soap and water. If carbolic acid is the disinfectant used, such washing is not only wholly unnecessary, but is, I believe, positively injurious; as it must tend to check the penetration of the germicide into the substance of the epidermis, by saturating it with water for which carbolic acid has so little affinity. That this practice is superfluous is, I venture to think, proved by my experience, as I never in any case adopted it.

The incomparably greater attraction of carbolic acid for epidermis than for water was strikingly illustrated by an experiment not hitherto published.

Here my letter was broken off, in consequence of other engagements. But I afterwards wrote to Sir Hector Cameron what I had intended to say on this subject and he was good enough to incorporate my remarks in his second lecture (see British Medical Journal, April 6th, 1907, p. 799).

CYSTIC TUMOUR OF THE SUPRARENAL BODY SUCCESSFULLY REMOVED BY OPERATION,

WITH NOTES ON CASES PREVIOUSLY PUBLISHED.†

By ALBAN H. G. DORAN, F.R.C.S.,

SENIOR SURGEON, SAMARITAN FREE HOSPITAL.

Introductory Remarks.

Many observations have recently been published about the pathology, diagnosis, and treatment of tumours of the suprarenal body and of new growths developing in other organs from "rests," as they are termed, of adrenal tissue. An instance of the latter type of tumour was reported by myself last year.‡ In the autumn of 1906 I removed a kidney subject to "hypernephroma," the patient surviving the operation for three months, but there were secondary adrenal deposits, one appearing as a vaginal polypus. Eleven months later I removed a tumour situated in the left lumbar region. It proved to be a cyst of the suprarenal body itself, unilocular and full of a bloody fluid. Henschen would rank it as a *struma suprarenalis cystica haemorrhagica*. I will now relate my case and afterwards make some mention of previously reported instances of cystic tumour of the suprarenal body large enough to be of clinical and surgical interest.

The Case.

C. L., aged 62, was admitted into my wards in the Samaritan Free Hospital on October 1st, 1907, on account of an abdominal swelling and pain.

She had been married for thirty years, and had borne nine children, the last confinement occurring eighteen years before admission. There had been no abortions. All the patient's labours were normal except the last, when the forceps was applied. She had never suffered from any puerperal complication, but enteroptosis developed during the later pregnancies.

In 1897 she was laid up with influenza, which left her very weak and liable to bronchitis; at the same time she suffered from frequent attacks of pain after food and vomiting. The influenza troubled her again several times; on the last occasion, which was in 1904, she became deaf in the left ear.

History of the Present Illness.—The dyspeptic attacks, which had never ceased entirely, became severe last summer

* The fear sometimes expressed of poisonous effects from carbolic acid, as used in antiseptic surgery, is, so far as my experience goes, entirely groundless.

† Read at a meeting of the Surgical Section of the Royal Society of Medicine, June 16th, 1908.

‡ Malignant Vaginal Polypus, secondary to an Adrenal Tumour of the Kidneys. *Trans. Obst. Soc.*, vol. xlix, 1907, p. 182, and *Journ. of Obst. and Gyn. of Brit. Emp.*, vol. xi (June, 1907), p. 449.

and to them were added sharp abdominal pains, which were at their worst during the night, and were referred to a lump in the left side. She was under the care of Dr. Alexander Davidson of Cornwall Road.

Condition on Admission.—The patient was fairly well nourished. The abdominal walls were thin and, below the umbilicus, extremely lax, forming a flaccid swelling tympanitic on percussion. There was no evidence of separation of the recti.

A firm, oval body, freely movable, occupied the left loin. When the patient lay in bed it retreated for the greater part under the ribs, its lower portion rotating upwards into the epigastrium. It could be pushed downwards and inwards to the extent of over 5 in., until its lower pole lay below the level of the umbilicus. When held downwards there was always more or less resonance on percussing its anterior surface.

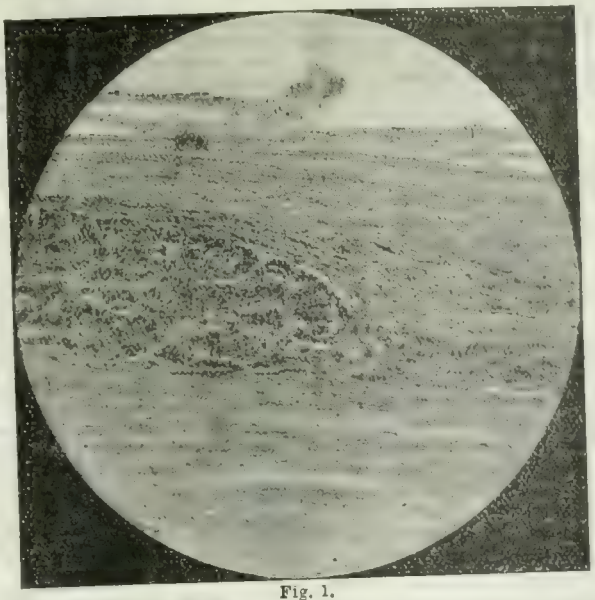


Fig. 1.

The right kidney could not be felt. The urine was repeatedly examined. There was no history of haematuria and I never found any trace of blood, but there was always a little, rather dense, mucous deposit. The secretion was scanty, under 25 oz. in twenty-four hours, and the specific gravity low as a rule, ranging from 1008 to 1022.

On October 7th I made a cystoscopic examination of the bladder with the kind assistance of Mr. Malcolm. The mucous membrane was pale, the right ureteric orifice normal, whilst slightly turbid urine was seen issuing from the orifice of the left ureter. These appearances are worth recording as they naturally led me to suspect that the left kidney was the seat of the tumour—which was not the case.

The tongue was clean, the appetite good, and the bowels regular. The pulse was 72, small and regular. The maximum temperature during the first week after admission was 98·8°.

The uterus had undergone senile changes; the menopause was complete by 45. No part of the tumour in the left loin could be pushed down to the level of the pelvic brim.

The nature of the tumour was somewhat obscure; but altogether it appeared to be renal.

The Operation.

On October 15th, 1907, I removed the tumour, assisted by Dr. William Griffith, Mr. Morley administering the anaesthetic. The patient was placed in the horizontal position. A vertical incision was made through the left rectus muscle near its outer border, beginning about 2 in. below the costal cartilages and extending 4 in. downwards. I passed my hand into the peritoneal cavity as far as the right loin; the right kidney was in its normal position and was not enlarged. The splenic flexure of the colon lay in front of the lower part of the tumour, which was drawn downwards and exposed by an incision made through the peritoneum on the outer side of the descending colon.

The tumour lay in a capsule made up of connective tissue, whence it was easily enucleated in front, outside and behind, without any subsequent oozing. There were several large vessels running into the tumour internally and from above. The tumour now proved to be a thick-walled cyst; the left kidney lay entirely behind and mostly below it. The tail of the pancreas, which I could feel, did not touch the tumour. I secured the vessels with No. 4 China twist close to the cyst wall, and fixed on a Doyen's clamp in two places, as the tumour was heavy and threatened to tear itself away from its connexions. On dividing the vessels and surrounding connective tissue, it was set free, and the tissue included in the two clamps was carefully tied. By the above manœuvres no large vessels were endangered by the application of clamps and ligatures to parts not thoroughly exposed, and no oozing occurred.

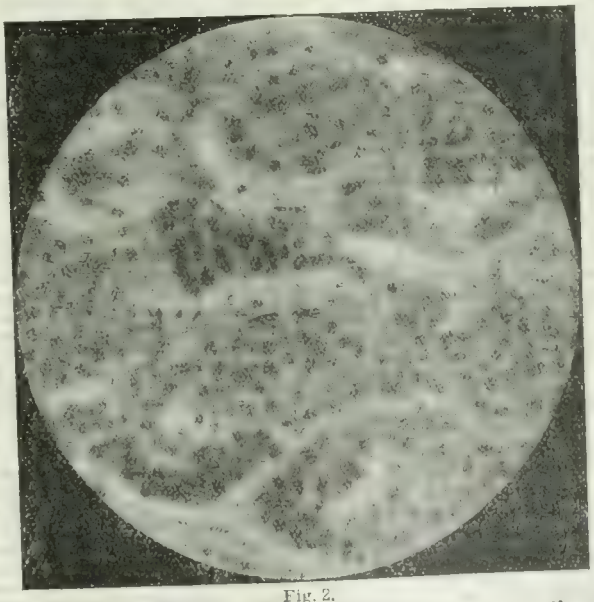


Fig. 2.

I pushed up the kidney and sutured the cut edges of the peritoneum with continuous catgut, uniting the muscle and integument with interrupted silkworm-gut sutures. The patient was troubled with cough, and suppuration of the lower end of the wound occurred, but there was no evidence of any effusion or suppuration in the deeper structures whence the tumour had been removed.

On November 21st the left kidney could plainly be defined. It was not enlarged, and was quite free from tenderness. It lay almost entirely below the level of the last rib, and could be pushed for about 1 in. upwards. The urine was clear, pale yellow, and slightly turbid, with a little mucous deposit containing renal cells but no casts. The specific gravity was 1010, and there was no albumen. The daily secretion was rather scanty.

Dr. Davidson has kept the patient under observation since her discharge from hospital. She suffered badly from cough in the winter months, which caused fresh trouble with the cutaneous part of the abdominal cicatrix. By the middle of February the cough had subsided, and the patient's general condition was satisfactory.

I once more saw the patient at the hospital on March 12th, 1908, five months after the operation. She was in very good condition, the abdominal cicatrix was strong, and the left kidney had almost regained its normal position; the lower end could be readily defined below the last rib.

Description of the Tumour.

Before the tumour was taken to the College of Surgeons, it was accidentally dropped on to the floor of the operating theatre, so that it burst, and its contents, which consisted of about ½ pint of bloody fluid mixed with broken-down tissue, were lost. When fresh, the surface of the tumour was of a deep purple-bronze colour. At the College it was put into a formalin solution, which became deeply blood-stained, and was repeatedly changed. Three months after the operation it was placed in a glycerine solution, which soon assumed a pale red tint. Mr. Shattock removed a piece of the cyst wall at the line of rupture, and prepared sections for the microscope.

Naked-eye Appearances.—The tumour had shrunk considerably after rupture, but its walls were from the first distinctly rigid, so that it became smaller without absolutely collapsing. When I examined it three months and a fortnight after its removal, its vertical measurement was 4 in., the horizontal 4½ in., and the antero-posterior 3 in. It had lost its purplish tint, and assumed the dull reddish-brown colour of a cricket-ball. The surface was fairly smooth, except where some tracts of condensed connective tissue were adherent to it. The walls were from ⅛ to ¼ in. thick, and of tough consistence. The cut surface was dull reddish-brown, as though uniformly stained with blood, being of precisely the same tint as the outer surface of the tumour. No fibrous or muscular structure could be detected, even by the aid of a hand lens, nor were any yellow spots, calcified patches, minute cysts, or lacunae exposed by the section; I could not even detect a blood vessel. The inner wall was rough from deposits of old clot on its surface. At one or two points the clot was very pale, but there were no yellow patches or tuberosities. The cyst cavity was absolutely single, not a trace of even a rudimentary septum could be found on the inner wall. Thus, to the naked eye, the cut surface of the cyst wall did not show the appearances characteristic of a blood cyst of the suprarenal body. There was, in fact, no macroscopic indication of adrenal tissue; yet, by the aid of the microscope, such tissue was readily distinguished.

Microscopic Appearances.—On February 14th I examined

with Mr. Shattock some sections of the cyst wall which he had prepared for the microscope.

The cyst wall proved to be much less homogeneous than we suspected. There was a stroma of fibrous tissue without any plain muscle. Some large veins were detected, but there was no indication of angiomatous or of lymphomatous tissue. A nodule of adrenal tissue was seen imbedded in the stroma towards the outer surface of the wall, whilst deeper in the cyst wall lay a plexus of cells of the adrenal-tissue type arranged in a highly atypical manner (Figs. 1 and 2). There was no epithelial lining to the inner wall of the cyst, but a distinct layer of homogeneous tissue, apparently old coagulum, was observed. Under this tissue was another layer of fibres somewhat denser than in the deeper part of the cell wall. This appearance did not, in Mr. Shattock's opinion, favour the view that the tumour was originally a solid cancer of the suprarenal body, and that the interior had broken down.

Cystic Tumours of the Suprarenal Body.

I will now make some mention of cases of this kind of tumour already published. By "cystic tumours" I mean cysts or new growths of more than purely pathological interest, mostly blood cysts, more rarely lymphomas or adenomas, which are true new growths. Several cases which I will relate have already been collected by Henschen and by Terrier and Lecène, but I have made some corrections after reference to the original reports, and added other cases. The first and second are interesting, because they were originally published in days long past by able observers who had not the resources of modern science at their disposal. I will therefore relate them at some length. A briefer abstract of each of the remaining cases will be sufficient, as they are recorded by surgeons and pathologists quite recently in publications to be found in most medical libraries.

Case I (Greiselius).

The original report of this case, headed "Ren Succentauriatus monstrosus cum Ulcere," is to be found in a work published in Leipzig in 1670, entitled *Miscellanea Curiosa Medico-Physica Academiae naturae curiosorum, sive Ephemeridum Medico-Physicarum Germanicarum*, etc., Observatio lvi, p 152 (Rayer misquotes the page). A copy of this work is preserved in the Library of the Royal College of Surgeons of England.

Greiselius of Vienna seems to have been a good anatomist and evidently conducted the *post-mortem* examination of this case with much care.

Contemporary French and German writers presently to be quoted seem justified in admitting this case as a genuine instance of the new growth under consideration. There can be little doubt that the tumour had developed in the suprarenal body, and it was, as in several recent cases, filled with bloody fluid.

Nobilis quidam 45 annorum temperamenti sanguineo-biliosi, post diuturnam colicam, eamq; contumacissimam, generosissimaq; remedia respuentem mortuus, à me apertus fuit, ubi Intestini Coli exteriorem tunicam absumtam, et quasi sphacelatam inveni, ex illâ nempe parte quâ Reni sinistro adjacebat. *Ren* vero *sinister* tantus erat, ut figuram Lienis destruxerit, qui multis tunicis et membranis involutus erat, quibus resectis Ren verus in debita figura et situ inventus fuit: *Ren* vero *succentauriatus tantus* erat, ut totam illam quasi regionem a Diaphragmate (quod una cum Liene ex illa parte elevaverat altius) usq; ad musculum Psoas deorsum occupaverit. In hoc Rene succentauriato erat ulcus, ita quidem apertum, ut integro pugno transitus pateret. Materia ex hoc ulcere rupto effluxa, erat Aqua rubra ac si bolo armeno tincta fuisset ad libras xii quasi, intus vero adhuc haerens erat densa et glutinosa valdè, fuligineq; redolebat ad instar carbonum terrae cum summâ nausea et horrore. Haec massa sine materia jam dum effluxa, et particula abrupta ponderabat liber (*sic*) 2. uncias iii. Notandum penes est, quod Nobili huic jam dum filii eodem putatitio Colico morbo mortui fuerint.—[*D. Greisel. comm. Viennae Dn D. Jung.*]

Thus this patient, "a certain nobleman," aged 45, died after daily attacks of colic, which troublesome symptom his lordship neglected, rejecting with great contempt the very best remedies. Colicky pains have been noted in several recent cases; the history of colic in the patient's family is of little value. The report of the necropsy is clear; the left suprarenal body was converted into a big tumour which filled the left side of the abdomen, pushing up the diaphragm and the spleen, and extending downwards to the psoas. In its wall was an *ulcus*, evidently a rupture, big enough to admit the fist; 12 lb. of red fluid and over 2 lb. of fetid clot had mostly escaped into the peritoneal cavity. The left kidney was distinct from the tumour.

Traumatism seems highly probable in this case.

Case II (Rayer).

This case has often been quoted, for it was published by a distinguished French physician over seventy years ago, and the tumour is figured in his (Rayer's) fine atlas illustrating his *Traité des Maladies de Reins*. Plate 54 and Plate 55, Fig. 3. The surgeon inspecting Plate 54 will note how closely the tumour was associated with several inches of the vena cava. The history of injury and pain was very clear.

A woman aged 75 was admitted into the Charité, Paris, for violent pains in the region of the right kidney. Since 2 years of age she had been lame in the right leg. Within the five years previous to admission she had fallen five times on the right side, without any immediate ill-effects. Five years before admission she suffered from an attack of agonizing pains in the right loin, running down to the pelvis, so that uterine disease was suspected.† It is not stated whether this attack occurred before or after the first fall. A few milder seizures of the same kind followed, and another as bad as the first came on three months before admission. There was vomiting, which persisted and became very obstinate, and the pain extended to the right thigh. A tumour was observed about a month before the patient came under Dr. Rayer's care, and the lower extremities became oedematous.

The patient's skin was of a greenish yellow tint. There was a large tumour in the right flank, hard in its upper part, where it seemed continuous with the liver and fluctuating below. There was no tenderness on pressure. The patient died in hospital, long before the days of renal surgery.

The tumour weighed 4 lb.; it pushed up the liver and descended into the right iliac fossa. It contained 1½ lb. (*une livre et demie*, not *litre*, as in some second-hand reports) of black liquid blood. The kidney, greatly flattened and altered in shape, was found entire and adherent to the posterior aspect of the tumour; the renal tissue and ureter were normal. The left suprarenal body showed no sign of disease, the corresponding kidney was the seat of chronic inflammatory changes.

The above account is from Rayer's "Recherches anatomico-pathologiques sur les capsules surrénales (Capsulae atrabiliarae)," *L'Expérience*, vol. I (November 10th, 1837), p. 17.

Case III (Chiari).

A man "over 60 years of age,"* and very corpulent, died of heart disease. The place of the right suprarenal capsule was occupied by a spherical cyst nearly 6 in. in diameter. It contained old coagulum, its walls were thin and included circumscribed collections of the cortical tissue of the suprarenal body; no elements indicating a neoplasm could be found in the cyst, which was separated from the kidney by loose connective tissue. The left suprarenal body showed no signs of any change save senile degeneration. There was no bronzing of the skin, and the existence of the tumour had never been suspected during life.

Case IV (Routier).

Woman, 35. Three years, epigastric pain and vomiting. Six months, tumour observed in left hypochondrium, extending from under ribs down to iliac fossa, dull on percussion, fluctuating at one point. Operation: Median incision. Retro-peritoneal tumour discovered holding 1,600 grams of brown fluid. Relations not definable, deep adhesions, drainage, cyst wall tense, its sutures tore away; fatal peritonitis. Cyst found replacing suprarenal body, villous-like growths on inner wall composed of adrenal tissue.

Case V (Pawlik).

Woman, 40. Two years, fall from a ladder followed by abdominal swelling. Spherical, tense, elastic, fluctuating tumour, descending colon in front. Operation: Incision to left of umbilicus. Cyst containing 17 pints of bloody fluid enucleated excepting a small piece left on a kind of pedicle close to vertebrae. Kidney seen on inner side of lower pole of the cyst. Recovery. A small piece of unaltered suprarenal capsule ran on to cyst wall. The tumour was defined as a large haemorrhagic cyst of the left suprarenal capsule. Its wall included islets of adrenal tissue.

Case VI (Triepcke and Bier‡).

Woman, 69. Tumour size of adult head right side of abdomen. Incision along outer edge of rectus; cyst tapped, 3½ pints of turbid fluid with coagula; drainage of cyst cavity, which was first scraped with the curette; death soon after operation from "shock." The cyst, which proved after death to be easily enucleable, occupied place of right suprarenal body; kidney pushed downwards into iliac fossa. In cyst wall adrenal elements associated with microcystic degeneration.

Case VII (Oberndorfer).

Man, 34. No symptoms, death from intestinal obstruction. Round tumour, size of small apple, replaced greater part of left suprarenal body, the unaltered part capping the tumour, a thin-walled cyst, which contained clear, pale yellow fluid;

*Misprinted "68" in some second-hand reports.

†"Six" in the original report, misprinted "dix" in Terrier and Lecène's monograph.

‡Triepcke, *Ueber Blutcysten in Nebennierenstraumen*. I have not been able to procure or see a copy of this thesis; the above is quoted from Henschen, and Terrier and Lecène.

lymphangiectasis* of remainder of suprarenal body; right suprarenal body normal.

CASE VIII (Marchetti).

Woman, 50. Died in hospital of purulent peritonitis; uncertain origin, but not connected with tumour, which was tense, elastic, fluctuating, and situated in region of right kidney. Autopsy: Cyst, bilobed, remains of right suprarenal body ran into its wall above; vertical diameter of cyst 4½ in., contents thick, pale yellow fluid; a complete fibrous septum internally. Cyst adhered to vena cava. Adrenal tissue in cyst wall and septum. Compensatory hypertrophy left suprarenal body.

CASE IX (Henschen).

Woman, 41. Twenty years pleurisy, from then attacks of pain in left hypochondrium, with vomiting. Three years, puerperal thrombosis. During attack of acute rheumatism, big, tense, smooth tumour discovered extending from left hypochondrium to loin, and pushing ribs outwards. Operation (Krönlein): Left pleura tapped, much chocolate-coloured fluid; oblique incision under border of ribs to loin, tapping of cyst, chocolate-coloured fluid as in pleural cavity; complete enucleation; adhesions to diaphragm and tail of pancreas, inferior mesenteric vein damaged and ligatured. Left kidney lay internal to cyst. Gauze drainage. Death fifth day, from severe thoracic complications. Tumour a unilocular cyst; on inner wall opaque yellow deposits consisting of adrenal tissue.

CASE X (Terrier and Lecène).

Woman, 52. Four years constipation and attacks of pain in umbilical region, mostly to *right*. Oval, smooth, distinctly fluctuating tumour, size of ostrich's egg, in *left* loin. Operation (Terrier): Median incision above umbilicus. Peritoneum external to descending colon incised; enucleation of tumour easy; only half of it removed, being taken for a pancreatic cyst; base drained. Left kidney found to be distinct from cyst. Contents of cyst, lemon coloured fluid. Walls thin, contained suprarenal tissue. *Right* parotiditis fifth day; recovery; no fistula in cicatrix.

CASE XI (Bosanquet).

Woman, 56. In hospital for carcinoma of stomach. Freely movable, firm, rounded tumour below left costal cartilages, not tender on pressure. Fatal haemorrhage from malignant ulcer (spheroidal-celled carcinoma ventriculi). Tumour an almost spherical cyst, over 3 in. in diameter, in front of left kidney, descending colon on its outer side. "The left suprarenal body was attached to the upper and back part of the tumour and looked normal." Author defines tumour as "cystic adenoma *of* the adrenal" [I will return to this interesting point further on.] Cyst wall thick and fibrous, lined with cells of the adrenal type; contents a semi-fluid, turbid, orange jelly, evidently mucoid degeneration of the adrenal tissue. Right suprarenal body bore small white nodule, an adenomatous growth showing fatty or early mucoid degeneration.

CASE XII (McCosh).

Woman, 45. Three years dull pain radiating from left loin. Severe attacks of lancinating pain. Slight bronzing of skin. Smooth, globular, elastic, fluctuating tumour in left side of abdomen, pushing out ribs; colon on its inner side. Operation: Oblique incision, complete enucleation of universally adherent cyst, attached to aorta and bodies of lumbar vertebrae; contents, 9 pints of dirty yellow fluid. Left kidney much displaced downwards. Forcipressure and drainage, recovery; bronzing of skin disappeared. Wall of cyst thick, containing distinct adrenal tissue.

CASE XIII (Author, related above).

DOUBTFUL CASE (Lockwood).

Woman, 20. Two years, painless swelling, slow growth. Freely movable tumour size of ostrich's egg, hard, tense, in left hypochondrium, reaching downwards to level of umbilicus; colon defined to its outer side. Operation: Incision outside left rectus, easy enucleation after incision through descending mesocolon; end of duodenum adhered to inner side of tumour. Ureter lay behind tumour. "Recovery" (private correspondence). Thick-walled cyst, fibrous tissue, inflammatory changes; "no glandular structure of any kind could be discovered." Contents, altered blood clot.

Remarks on Lockwood's Case.—Considered from a clinical and surgical standpoint, this cyst reminds us of several of the blood cysts in the above series. In outward appearance it closely resembles the tumour which I removed and which is preserved in the Museum of the College of Surgeons, and it also seems very like that described and figured by Henschen. I may refer the pathologist and surgeon to Mr. Lockwood's specimen, which is to be found in the Museum of St. Bartholomew's Hospital, Pathological Series, No. 3,372*a*. The thick wall, bloodstained as in my case, and the single cavity containing "a chocolate-coloured semi-fluid mass," are features very distinct in the "haemorrhagic suprarenal cyst." Lockwood himself, referring to the researches of Weldon, Janosik and Rolleston, implies that his cyst might have originated in the suprarenal body, which organ is probably developed from, and is certainly down to a late period of intra-uterine life continuous with, the front part of the Wolffian body. I cannot help suspecting that there may be, in the walls of Lockwood's cyst, some adrenal tissue which has been overlooked. The pathologist, doubtful about the homologies of Lockwood's important case, should study that surgeon's original report in conjunction with Henschen's well known monograph.

Mr. Lockwood informs me that about a year ago he removed a similar tumour which adhered to the *lower* end of the right kidney. The same authority describes in the report above quoted a case of *multilocular retroperitoneal cyst* removed by Mr. Bowlby, who tells me that the patient was free from recurrence nine years after the operation. It resembles a case of a similar cyst presented by Dr. Bantock to the Museum of the College of Surgeons (Path. Series, 303*a*). The splenic flexure and descending colon lay on its surface. The patient is living, twenty-two years after the operation for its removal. Mr. Shattock has kindly examined sections from the wall of Bantock's multilocular cyst, but cannot find any adrenal elements. This case and Bowlby's are even more doubtful as to their nature than Lockwood's, as far as origin from the suprarenal body is concerned.†

SUMMARY.

Surgical Pathology.—The blood cyst is not a true new growth; it owes its origin to haemorrhages into the medullary substance of the suprarenal capsule. There was a history of injury in Rayer's and in Pawlik's cases, which was very probably the cause of haemorrhage in either one or both; perhaps some pathological change within the organ contributed to the development of the blood cyst. Such changes, on which it is not necessary to dwell, are probably the sole cause in the majority of cases. The operator, should he recognize the true character of the tumour during the operation, need not search for any extension of disease in its vicinity, and when he can make sure that it is a blood cyst he need not fear recurrence.

It is certain that adenoma, lymphoma, and other new growths seldom convert the suprarenal body into a cystic tumour of interest to the surgeon. Henschen gives in his monograph a good synopsis of the pathology of these cysts, of which there is in the above series one instance of lymphangioma (Oberndorfer) and one of cystic adenoma. Marchetti's bilocular cyst and Terrier and Lecène's big cyst might have owed their origin to old haemorrhages, as pale yellow fluid is often seen in very old blood cysts elsewhere.

Those who are interested in the genesis of cysts of the suprarenal body will find much valuable information in the writings of H. D. Rolleston, Ogle, Raymond Crawfurd, and Charlewood Turner. The latter writer reports an instance where there were also cysts in the cerebellum, liver, and kidney; the adrenal tumour was, I must add, of the size of a fist, but the patient died of the cerebellar disease, and the primary seat of cyst formation was not clear. One point very much to our purpose was clear—the cyst in the suprarenal body was certainly not due to haemorrhage.

Lastly, I may turn the reader's attention to a preparation which is to be seen in the Museum of the College of Surgeons (Path. Series, 3517), taken from a woman aged 55, who died after ovariotomy. It shows "a suprarenal capsule in section, with a large, rounded mass in its substance. The remainder of the capsule is distended into a cyst. The enlargement is due to a hypertrophy of the cell columns of the suprarenal capsule with fatty degeneration of the contained cells." I may add that this report was made by Dr. Goodhart. The preparation may, I think, explain how, in a case of cystic disease of the suprarenal body, the greater part of that organ may be found on the cyst wall, as in the tumour, included in the above series, described by Bosanquet.

Symptoms and Diagnosis.—The number of cases of cystic tumour of the suprarenal body remains small, yet the

* Bossard reports a case of lymphangioma cysticum of the right suprarenal body discovered at an autopsy on a woman, aged 25. See Henschen.

† I have recently published a clinical report of these two cases, with notes on Monprofit's account of the removal of a Wolffian cyst (Cases of Multilocular Retroperitoneal Cysts in Women, *Journ. of Obstet. and Gyn. of Brit. Empire*, vol. xiii, 1908, p. 257).

above records show that it gives rise to fairly definite symptoms. I have already noted that a history of *injury* has been obtained in more than one case. *Pain* appears to be the rule; it usually assumes the characters of dyspepsia or fits of colic, and leads to the discovery of a tumour. In my own case it was very definite, and the above abstracts show that distinct pain was specified in those reported by Greiselius, Rayer, Routier, Henschen, Terrier and Lecène, and McCosh, making in all seven, to which we may safely add as an eighth Bosanquet's case, where, as the original report explains, this subjective symptom seemed mainly, though not entirely, due to coincident malignant disease. The *tumour* in this respect differs from a simple hydronephrosis, although attacks of renal colic may be associated with the latter. Fluctuation seems far less marked than in hydronephrosis, nor does the cyst descend so readily, as the suprarenal body is more firmly supported than the kidney or, we must add, the spleen. In my own case the cyst was, I admit, freely movable, but it always slipped up again when drawn down, and did not naturally lie well below the ribs under the abdominal wall, after the fashion of renal and splenic tumours of its own size. The cystoscope may aid in diagnosis, as will be seen in the original report of Pawlik's case. The descending colon is usually anterior to the cyst, but this point is not always accurately indicated. Other symptoms seem far less marked, whilst one, so familiar in association with another disease of the suprarenal body, deserves special notice.

Bronzing of the Skin.—This well-known symptom of Addison's disease was only observed in McCosh's patient. It was slight, yet distinct, and disappeared soon after the operation. McCosh's experience seems to be unique. Henschen, who wrote before the case was published, declares that this "classical symptom" is always wanting (*immer fehlte*) in cases of benign cystic suprarenal tumours, and is absent "almost without exception" in patients subject to other tumours of the same organ. I may add that in my own case of malignant vaginal polypus secondary to an adrenal tumour of the kidney there was distinct bronzing of the skin during the patient's last days three months after the operation. The left suprarenal body was found to be free from new growths or any other visible morbid condition. The state of its fellow remains uncertain; it was not found at the autopsy. I mention this case because it shows that cutaneous bronzing, which Dr. W. T. Evans informs me was much more distinct in this instance than my own report would lead the reader to believe, may be present in a subject where one suprarenal body is healthy and where there is no evidence of Addison's disease. None of the cystic tumours described in this communication were bilateral.

Surgical Treatment: Results of Recorded Operations.—Without doubt, the right treatment for a cyst of this kind is removal by operation. It should be enucleated from the kind of capsule of connective tissue in which it lies. The suprarenal body is normally kept in its place by fascia which separates it from the capsule of the kidney, and holds it well up, far back in the loin. Hence the suprarenal body does not descend with the kidney when the latter becomes movable. When the suprarenal body, on the other hand, becomes converted into a heavy cystic tumour, it descends along the outer border or anterior surface of the kidney, stretching its supporting connective tissue, which forms a capsule. The operation essentially consists in the enucleation of the cyst from this capsule.

Diagnosis is difficult; if the cyst be taken for a renal tumour and exposed through a lumbar incision, enucleation might be effected with ease and safety, but in some of the above cases that incision would have proved very unsatisfactory. Therefore the cyst is far more safely dealt with if exposed by a vertical incision through the outer margin of the rectus, as Mayo Robson recommends in operations on solid tumours of the suprarenal body. It allows of efficient exploration, and the above series of operative and *post mortem* experiences teach us that in dealing with a tumour of this kind exploration should be very efficient, seeing that the cyst may adhere to the vena cava, aorta, or pancreas.

Incision and Drainage.—Experience teaches us that this incomplete procedure is unsatisfactory. The cut edges of the cyst have been fixed to the edges of the abdominal wound ("marsupialization"), unfortunately the cyst walls, though thick, are not tough like those of the more familiar pelvic and renal cysts. In Routier's case the sutures cut through the tissues, so that the cyst retracted and some of its contents escaped into the peritoneal cavity, with fatal results. In Triepcke and Bier's case, it was found after death that enucleation would have been easy. Terrier encountered no difficulty when he enucleated the anterior portion of his cyst, but suspecting that it was pancreatic he refrained from completing the process and "marsupialized" the base. The patient recovered, but convalescence was retarded by inflammation of one parotid.

Complete Removal by Enucleation should always be undertaken if possible; it may be attended with dangerous complications. I have related how Krönlein, in the case reported by Henschen, bravely completed a very difficult operation; but the patient was the subject of pulmonary disease of very long standing, with fatty degeneration of the heart and sclerosis of the coronary arteries, so that the fatal result was not surprising. McCosh's tumour was attached internally to the wall of the aorta. When the connective tissue capsule was incised to allow of enucleation very large vessels were divided, some lay so deeply that they could not be ligatured; three long artery forceps were applied to them and left on for a time. We are not informed how long after the operation the forceps were removed. The patient recovered. The dangerous proximity of the aorta in McCosh's case reminds us of the observations of Rayer and Marchetti on subjects in the *post-mortem* room. Both these writers publish drawings of their cysts, which were in the right suprarenal body; they were closely connected with the vena cava.

Pawlik had to deal with a kind of pedicle which ran inwards towards the lumbar vertebrae. It was not secured without much difficulty, and when it was divided after ligature a piece of cyst wall as big as a shilling remained on its proximal portion, which receded so far that the operator feared to draw it down in order to excise the fragment. The patient recovered. The after-history of this case and of Terrier and Lecène's—where still more of the cyst wall was left behind—would be of interest.

In my own case enucleation was unattended by any difficulty; I was careful to apply the pressure forceps to all large vessels within sight, avoiding the dangerous practice of pinching tissues in the dark. The surgeon operating on a tumour in the lumbar region is liable to assume that it is renal, and this assumption may induce him to fix a clamp forceps on a part of the aorta, vena cava, pancreas, or intestine, when he is under the impression that he is simply securing the renal vessels. Lockwood found no difficulty in enucleating his cyst of doubtful origin, although the small intestine adhered to its wall.

In conclusion, I may observe that the pressure-forceps, that invaluable invention of Koeberlé generalized by Spencer Wells, must be the sheet-anchor of the surgeon engaged in enucleating a cyst of the suprarenal capsule.

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ADDENDUM.

[Since I prepared this report the patient came once more under the care of Dr. Davidson for attacks of vomiting, which were successfully cured by the end of April by

small doses of ipecacuanha, and the constipation and distension associated with the vomiting also subsided. On April 27th I examined the patient. I found that the left kidney was tender to touch, and all of it, except the upper pole, lay below the level of the last rib. There was no tumour nor hardening in the left loin, abdomen, or pelvic cavity. The enteroptosis had rather increased. Dr. Davidson saw the patient at the end of May, in very good health.]

TWO CASES OF LATERAL SINUS THROMBOSIS.

By EDWARD HARRISON, M.A., M.D., F.R.C.S.,
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CASES of lateral sinus thrombosis are not yet so common but that instruction may be obtained by the narration of isolated cases. The two following have recently been under treatment, and show the need for early operation. The first case, which was the most eventful, recovered, while the second, no less instructive from the surgical point of view, died.

CASE I.

E. F., aged 12, was admitted into the Hull Royal Infirmary on September 14th, 1906.

History.

For three weeks before admission he had suffered from an aural discharge and earache, and for a week had been vomiting. Some glycerine had been instilled into the ear, and the discharge had ceased. This history was, however, only obtained some days after admission, and was of no use in forming an early diagnosis.

Condition on Admission.

The boy was obviously ill: he complained of headache and pain in the right knee, which was slightly swollen. He only vomited once after admission, and this consisted of food he had just taken. His temperature was only 99°, but on the evening of the day of his admission it rose to 103°, and on the following day to 104°. Some tenderness over the mastoid was then elicited, his intellect was quite clear, but he had a grey opaque complexion, and was evidently very ill.

First Operation.

On the third day after admission the mastoid was opened, and a little sanious fluid evacuated, and on the following morning he appeared to be relieved, but the same evening his temperature again went up to 102°, and the discharge from the mastoid became purulent. The fluid in the right knee-joint was absorbed.

Second Operation.

His temperature gradually fell till, on September 22nd, it was normal; but his condition was far from satisfactory, so a complete mastoidectomy was performed. The temperature fell for a day or two, but only to rise again, and he became slightly jaundiced and complained of pain over the sterno-mastoid, which made one suspicious of sinus thrombosis.

Third Operation.

This suspicion was intensified during the next few days, as, with a slightly raised temperature he had sudden exacerbations to 104°, and, on September 26th, to nearly 105°. These were, however, unaccompanied by rigors, so that I was reluctant to open what might prove to be a normal sinus in the close proximity to the discharging mastoid. The mastoid was accordingly again scraped and a quantity of foul grey pus removed.

Fourth Operation.

On the following day he had a rise of temperature to 104°, this time accompanied by a rigor. There was now no doubt that the sinus was affected, so this was opened and found to contain foul pus. This was temporarily plugged and the jugular vein cut down on, and as this contained fluid blood it was divided between two ligatures, and the wound in the neck closed and sealed to prevent infection from the wound above. The opening in the sinus was then enlarged and the cavity scraped out till blood flowed freely. A plug of gauze was inserted, which easily stopped the bleeding.

Operation on Knee.

The next day his condition was much improved, but this was not maintained, and in a few days his temperature rose again as before. It was then found that he had effusion in the left knee, so on October 2nd this was opened and drained. The fluid was opaque but scarcely purulent, and a culture from it showed streptococcic infection.

After-history.

He now rapidly improved in his general condition, he took his food well and gained flesh, though his temperature still remained above the normal.

On October 22nd the drain was removed from the knee and he was put on the balcony for open-air treatment. On October 25th Dr. Eve was good enough to give him an injection of streptococci, after which his temperature fell somewhat, but no marvellous effect was produced.

His condition now gradually improved, so that on November 15th he had a normal temperature, and the wounds in the knee and mastoid were healed. The ligaments of the joint were very lax, and I anticipated that he would require some further surgical treatment for the knee, but he was sent to the convalescent home and then discharged. He was shown at a meeting of the East York Branch of the Association in January, 1908, when the movements of the joint were quite perfect, and he walked without any limp.

CASE II.

P. M. N., a male aged 34, was admitted on November 23rd, 1907, with a diagnosis of mastoid disease. I saw him shortly after his admission; he had a temperature of 100.4°, no pain, tenderness, or swelling over the mastoid, and no aural discharge. He was very deaf.

History.

The history was very indefinite; he seemed, however, to have had a chronic aural discharge which had recently ceased. On the following evening his temperature rose to 103.4°, and was about the same the next morning. He now developed decided tenderness along the course of the internal jugular vein, and there was some swelling. The mastoid region was not tender even on deep pressure, and he had no rigor. Lateral sinus thrombosis was diagnosed, and he was taken to the theatre.

Operation.

An incision was made over the jugular, and the margin of the sterno-mastoid sought for. This was so inflamed that an incision was made through the muscle. An enlarged gland was removed, and a search made for the vein. This was found to be represented by a thick solid cord. The facial vein was seen running into this, and was greatly distended: it was ligatured and divided. The incision was then prolonged nearly to the clavicle and the jugular vein traced downwards, when the lower third of it was found to contain fluid blood. An aneurysm needle was passed carefully under it, and the vein divided between two ligatures. The descendens noni was seen, but not the vagus. The vein was then dissected up to the angle of the jaw, the superior thyroid, and other branches, which were greatly distended, being tied and divided.

The lower half of the wound was then sutured, the incision prolonged upwards behind the ear, and the mastoid region laid bare. An opening made with a burr in the lateral sinus showed this to contain clot of a friable character. The hole in the bone was enlarged so as freely to expose the sinus, the contents of which were scraped out until fluid blood flowed. A small plug was then placed to control the bleeding, and the jugular vein opened and scraped out up to the base of the skull, when I could wash out the sinus and vein thoroughly. The vein was cut off as near the opening of the jugular foramen as possible.

The mastoid antrum was then explored and found to contain grumous material, which was scraped and washed out. While doing this it was noticed that there was pulsation in the fluid in the antrum, which suggested a perforation into the cranial cavity. Gauze plugs were placed in the openings in the bone, and one at the upper part of the wound in the neck, which was then closed. Rather over 2 in. of the jugular vein was excised.

The operation, owing to the matting of the tissues around the vein making the dissection difficult, was tedious, lasting an hour and a half, and there was much trouble with the small congested veins. The bone, too, was very hard and thick.

Progress of the Case.

On November 30th the temperature had again risen, and pus was found in the neck; the wound was opened up and the sinus again scraped. Sutures were not again inserted, but the upper part of the incision left freely open; efficient drainage was thus assured.

For the next twelve days he had a temperature of pyaemic character, but no rigors, and his condition was otherwise good. He took food well, and was given quinine in full doses, purgatives, and rectal injections of saline.

On December 15th the temperature had become subnormal, and the wound looked clean and healthy, but there was still some pulsation in the mastoid antrum. The temperature remained subnormal for six days, when the pulsation in the mastoid had ceased, the wound was granulating, and his general condition seemed satisfactory. He was, however, rather apathetic, which might have been accounted for by his deafness, but I was disposed to suspect cerebral abscess. He, however, declined any further operation, and as the part looked now so well I did not feel inclined to press the matter.

During the next ten days the temperature regained the normal, and he was up and about the ward, and took an interest in his surroundings, so that I came to regard him as safely convalescent.

To my dismay, on January 2nd, 1908, he had a sudden rise of temperature accompanied by vomiting. This was repeated on the next day, and on January 4th he died suddenly.

Post mortem Examination.

The sudden tragic end led me to expect to find a cerebral abscess ruptured into the ventricle, but all that was revealed was meningitis.

Remarks.

Ballance says that when the following group of symptoms are present together septic thrombosis is certainly present:

1. A history of purulent aural discharge for a year or more.
2. Sudden onset of the illness, with headache, vomiting, rigor, and pain in the affected ear.
3. An oscillating temperature.
4. Vomiting, repeated day by day.
5. A second, third, or more rigors.
6. Local tenderness and oedema over the mastoid or in the course of the jugular vein.
7. Stiffness of the muscles of the back or side of the neck.
8. Optic neuritis.

Schlatter further says that jaundice is a frequent symptom, and that the liver and spleen are always enlarged.

There can be little doubt that if all the above symptoms were present in one case, a surgeon who had never seen a patient suffering from sinus thrombosis would have no difficulty in diagnosing it, but what chance could he expect to have of a successful result on having recourse to operation? In order to save the life of the patient it is essential that the operation should be done as early as possible; if one waits day after day to observe repeated rigors and vomitings time is allowed for general pyaemia to be established. Practically, however, the diagnosis is not as easy as it would seem by the reading of textbooks, as the cases are commonly preceded and accompanied by mastoid disease, and may be complicated, too, by the coexistence of meningitis or cerebral abscess, so that the overlapping of symptoms makes diagnosis often a difficult matter.

In the second of the above-mentioned cases a diagnosis was easily made, although there had been no rigor or vomiting; the deafness and the history of an aural discharge, together with the sudden rise of temperature and development of tenderness and oedema in the neck, rendered it imperative that the sinus should be opened, especially, too, as the mastoid had not been operated on.

In the first case, I should have been better advised if I had explored the sinus first, as the boy on admission had fluid in one knee-joint, and although he had no great rise in temperature he looked very ill; and when the mastoid was first opened only a little sanious fluid was obtained. Later on I was disinclined to open his sinus, having an infected mastoid cavity so near to it, until I felt sure of the existence of the sinus thrombosis; so that by waiting until the child had a rigor valuable time was lost. Fortunately for the patient, the delay did not cost him his life, but there is no doubt that it greatly prolonged his illness.

In the second case, I regretted cutting off the 2 in. of the jugular vein, as it would have been better to have left this hanging out of the upper part of the wound so that it could discharge into an isolated dressing; in this way infection of the long wound in the neck might have been prevented, and the reopening of it rendered unnecessary. Indeed, in another case I should feel disposed, even if the blood were fluid in the vein in the neck, to divide the jugular fairly low down, and then bring it out into the dressing, and in order to keep it patent to insert a rubber tube into it. In this way the jugular fossa would be more efficiently drained. Mr. Ballance (*Lancet*, 1904) says that removal of the vein is better than ligature, but, however high up it may be tied, there will be a little pocket left to hold pus, which will not be so easily drained through the sinus as it would if there were an open vein left through which the sinus could be irrigated.

Although this patient unfortunately died, the case must be regarded as successful so far as the treatment of the sinus infection was concerned. The death was due to meningitis.

The Fifth Pan-American Medical Congress will take place in Guatemala, C.A., this year from August 5th to 8th.

Under the will of the late Mr. Edward Aston, of Wilmslow Park, Cheshire, the "Cancer Hospital Pavilion" at Manchester receives a bequest of £1,000, a similar sum going to the Northern Counties Hospital for Incurables at Mauldeth.

THE ETIOLOGY AND TREATMENT OF ECZEMA.

By LEIGHTON KESTEVEN, M.R.C.S.Eng.,
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Observation goes to prove that eczema is a pure neuropathia, and that to regard it solely as a local affection is a grave misconception calculated to lead to serious error in treatment. The theory that eczema was the direct result of specific dyscrasia, or "blood humours," has long since been relegated to the limbo of obscurity, on the very self-evident fact that specific types of eczematous eruption do not accompany specific dyscrasia. The character of the eruption is unvaried by its supposed origin.

But that certain pathological states are frequently the indirect factors in the causation of eczematous attacks may be accepted without cavil on the evidence of the multiform eczemata we meet accompanying or following such states. The origin, however, of such eczemata is to be attributed to neurotic action.

The very nature of the affection itself—an exudative dermatitis due to capillary engorgement—indicates clearly vasomotor disturbance due to some morbific influence on the sympathetic centres of the nervous system.

The processes of secretion and nutrition being so largely controlled by the sympathetic, it is only rational to turn to it in the course of investigation into the source of this troublesome affection as the probable fountain head, when we are met with multifarious instances of reflex neuroses conditional on its inhibitory influence. The eruption of urticaria is generally consequent on disturbance of the digestive functions. Urticaria is practically the equivalent of the initial stage of eczema, and not infrequently develops into it. Herpes zoster appears only on the track of an angry nerve, and disappears synchronously with the concomitant neuralgia. Herpes is a frequent companion of certain catarrhal affections, and the intolerable pruritus which so often is associated with icterus, albuminuria, amenorrhoea, and other functional disturbances, can only be of sympathetic origin.

In the same way eczema is a common concurrent of many functional and nervous derangements. So often, indeed, is it associated with gout as to tempt one to formulate "gouty eczema" as a specific type; but that it certainly is not, but the indirect outcome of the intense disturbance of the nervous system, not of the direct toxic action of the gout. Sometimes it is the precursor, sometimes the follower, of the gouty attack.

Uterine disorders bring often with them in their train the added misery of eczematous eruptions, and there are many women who are never pregnant without this affliction. Indeed, there are some who (quoting Hebra) "during several pregnancies were attacked by eczema of the hands always at the same period, so that in the later ones they could be more certain of having conceived, from the appearance of this disease than from the cessation of the menses or the movement of the child." Disordered menstruation even will often bring on eczema of undoubtedly neurotic character.

In mental cases—especially imbecility—eczema is most prevalent.

It would be easy to enumerate instances in plenty in proof of the inhibitory influence of the sympathetic system of nerves. Hebra himself in a half-hearted sort of way ("to prevent misunderstanding," and treating the question as one "that must be left for the solution of professed physiologists"), after dealing with all sides of it, says:

> Every case of this disease is not the result of local irritation, but may be caused by affections of the rest of the body. Even in these instances, however, the disturbance of cutaneous circulation may be explained by the *consensus nervorum*, just as well as by the assumption hitherto current of the presence of some morbid product in the blood.

Even where local irritation is the exciting cause of the attack it still remains a neurosis. External toxic applications, friction, heat, and cold, and the turgescence of varicosity are only the irritants of the peripheral filaments of the sensory nerves which set the eczema going.

Eczema may thus be divided into two classes for purposes of treatment: (1) That from within, acting through the sympathetic chain of the functional system, may be denoted the ganglionic or idiopathic form, and

(2) that arising from external or local irritation, the peripheral or traumatic.

This classification indicates the line which the treatment should follow with success. Though there is no drug or set of drugs whose action can be called specific in a complaint with manifestations so diverse as in this, there are a select few we can use with confidence to obtain the necessary control over the neural disturbance, either directly or indirectly, be the exciting cause what it may.

Thus, if a storm of gout has upset the sympathetic nerves, with the result of an eczematous eruption, the usual treatment for gout must be adopted, plus a direct nerve sedative. In this instance potassium iodide and acetanilid act well; but colchicum should be avoided, as it dilates the capillaries and tends to increase the exudation, whilst it often has a distinctly irritative effect upon the skin.

In eczema of an asthenic type, from anaemia, the indication is the liberal administration of iron with such nerve tonics as strychnine and quinine, to brace up the vasomotors. If alcohol is the irritant, abstinence, with the bromides and atropine, will bring speedy alleviation, the latter because of its peculiar control over the capillaries and power of checking perspiration. It must be given in small doses, however, as increased amounts paralyse the termination of the secretory nerves and relax the capillaries. Dyspepsia, so frequently the exciting cause, calls for careful dieting, attention to the bowels, and correction of the alimentary disturbance, plus such nerve sedative as the bromides, in sufficient doses to arrest the gastric nerve irritation.

The eczema that accompanies uterine trouble disappears, as a rule, with its removal, just as the eczema of pregnancy terminates with the parturition; but a nerve sedative is essential to its immediate relief, and chloral and belladonna are the best here.

As in the above so in all others, of whatever nature, whilst carefully devoting attention to the exciting cause, the necessary nerve sedatives must form the one chief element in the treatment.

Local applications must be resorted to in addition, and of the thousand and one which have at different times been lauded, there are two or three only which are of assured and permanent benefit. Analgesic action is the desideratum to meet the peripheral irritation. Nothing can compare, for the immediate and permanent relief which it confers, with carbolic acid if properly utilized, but as it has hitherto been applied in almost futile style, its real practical value has not been realized. In almost every treatise on the subject, while it has been highly recommended as a relief to the distressing pruritus, the strength in which it has been prescribed has rendered it useless as a curative agent. Now, carbolic acid, as demonstrated long ago by Dr. Bill, is a most powerful local anaesthetic if used in sufficient strength, and the anaesthesia which it produces is persistent for a longer period than any other. The burning sensation it causes at first soon passes off, leaving a painless surface. The pure (liquid) carbolic applied to a red inflamed eczema gives sharp but short punishment and leaves the part practically dead, and this dries rapidly, forming a scab under which the previously raw surface heals quickly; the scab on falling off leaves the surface clean and sound. This is heroic treatment, and must be applied to only limited areas at one sitting; the pain of the application can be obviated by cocaine if the subject is sensitive, and before the effect of the cocaine has passed off the part will be anaesthetized by the carbolic. For small patches, such as appear on the hands, feet, scalp and ears, it is particularly serviceable. For general use in all eczematous eruptions at every stage the 1 in 11 solution should be used, and though it certainly smarts for a time, it gives immediate relief to the symptoms and rapidly checks and arrests the progress of the eruption.

Tincture of iodine also smarts somewhat, but gives great relief to the itching and burning, and lessens the infiltration. The two together make a happy combination —℥j of tinct. iodi to ℥ix of the 1 in 11 carbolic solution for a lotion, to be kept applied on lint under oiled silk. In the intertrigo which so commonly occurs between the toes and extends into the tough skin of the feet, a bath of this for the feet, frequently repeated, gives wonderful relief. Starch poultice makes a good vehicle for the application of this lotion, and is useful on tender surfaces, such as the face and neck, painted on.

Suprarenal extract is a good application previous to the carbolic, owing to its power of reducing the turgescence and exudation, thus leaving the surface fit for its action; whilst, applied in the very beginning of the initial erythematous stage, it will often entirely arrest it. Adrenalin is undoubtedly the best form of this substance.

Greasy applications should only be applied in the dry desquamative stage. Used in the moist stages, they only aggravate the trouble by retaining the acrid irritating exudation. This exudation should be constantly washed away with pure cold water, which should be poured very gently over the part, and all friction avoided. Soap, whether medicated or otherwise, should be religiously avoided. Suprarenal added to the water greatly increases the relief it gives.

These remarks are based on observations extending over the last fifteen years, during which I have met with very considerable success in following out my deductions on the neurotic character of eczema, and I commend the treatment as worthy of trial.

DIVING AND CAISSON DISEASE.

A SUMMARY OF RECENT INVESTIGATIONS.

BY SURGEON N. HOWARD MUMMERY, M.R.C.S., R.N.

[Communicated by the DIRECTOR GENERAL, R.N.]

As I believe that the recent and most important researches into the most interesting subject of diving have not been published in any form in the medical press which circulates amongst members of the medical profession in general, I may, I hope, be pardoned for attempting to enumerate them in brief form, and point out that the work done at the Lister Institute by Dr. Haldane, Dr. Boycott, and Lieutenant Damant, on behalf of the Special Committee appointed by the Admiralty, has completely revolutionized both the procedure of diving and the treatment of those morbid conditions which are met with among divers, and attributable to that occupation. In H.M. navy diving operations are continually being carried out for instruction, for periodical exercise, and for all kinds of practical work, though seldom at greater depths than 17 fathoms, and usually at much less. Medical officers of the navy are at times called upon to treat cases of so-called caisson disease, and a knowledge of the principles and practice of diving, and also of the best way to deal with any symptoms which may arise, is essential to them. Until quite recently, if anything went wrong with a diver he was at once brought to the surface, and was on no account permitted to go down again on that occasion. Now, on the other hand, should a diver come up suffering from the effects of too great a depth, too long a stay below, or too rapid an ascent, he is invariably sent down again, kept there for a certain time, and thereby cured.

When a man is subject to the normal atmospheric pressure of 15 lb. to the square inch, his tissues are saturated with nitrogen at that pressure. Suppose, now, that this man goes down in a diving dress to a depth of 28 fathoms; he will then be subject to the pressure at that depth—namely, 75 lb. plus the atmospheric pressure of 15 lb., making a total of 90 lb. The tissues, which were previously saturated with nitrogen at a pressure of 15 lb., will now have to become saturated at the new pressure of 90 lb., or six times as much as before. The blood will therefore take up nitrogen from the inspired air until that point is reached. This change that takes place in the amount of nitrogen in the tissues is called the "process of saturation," and there are three chief factors in its causation—"atmospheric pressure," or the normal one of 15 lb.; "positive pressure," or pressure in excess of atmospheric pressure; and "absolute pressure," or the total pressure at the time being plus atmospheric pressure. Therefore absolute pressure equals positive pressure plus 15 lb. The process of saturation takes place as follows: The arterial blood in the lungs takes up nitrogen from the inspired air, supplied by the pump, and conveys it to tissues, returning in the venous state to the lungs devoid of nitrogen and again absorbing it. The tissues, being only saturated with nitrogen at atmospheric,

pressure, must naturally absorb more nitrogen from the blood passing through them which is saturated at a much higher pressure (90 lb. at 28 fathoms, as compared with 15 lb. at the surface). This process goes on until the tissues can absorb no more nitrogen, when, they containing the same amount as the blood, the body is said to be saturated fully at that pressure. Rate of saturation in man: Remembering that the volume of blood in man is nearly 5 per cent. of the volume of the body, and that the whole of this blood passes through the lungs once in one minute when the man is at rest, it is correct to suppose that the rate of saturation will be much as follows:

In a quarter of an hour saturation will be halfway.
In half an hour saturation will be three-quarters of the way.
In three-quarters of an hour saturation will be seven-eighths of the way.
In one hour saturation will be fifteen-sixteenths of the way, or complete.

Thus, after a diver has been working at 12 fathoms for one hour (that is under a pressure of 32 lb.) he would be saturated to 30 lb. As, however, owing to their difference in blood supply, some tissues will become saturated in man much quicker than others, it is obvious that saturation will be unequal, and in consequence, in actual practice, the human body is not fully saturated even after three hours' exposure to pressure. This process of saturation is known as "compression"; "decompression," or the reverse process, consists in bringing the diver up again to atmospheric pressure, and thus lowering the degree of saturation of his tissues to the normal amount at atmospheric pressure. This latter process is by far the more important, and on its proper management depends the chief responsibility for the health and comfort of the diver; the only other precaution, in a healthy man, being that he should not remain down too long, the rapidity with which he descends being of little importance—in fact, usually the quicker the better. The difficulty with regard to decompression that the investigators had to deal with was to bring the man back to atmospheric pressure as quickly as possible, without at any time allowing the amount of nitrogen dissolved in his blood to dangerously exceed the amount which corresponds to full saturation at the pressure to which the man is at that time exposed. If the pressure at which he was working were suddenly lowered to atmospheric pressure, the excess nitrogen would begin to diffuse out at once, and would, were it possible, escape again in the same time that it went in, the process getting slower and slower as the saturation of the body gradually approached that of the normal atmospheric pressure. This, however, cannot take place without the formation of bubbles in the blood and tissues, due to the liberation of excess nitrogen, which by forming emboli and causing blocking of vessels in various parts of the body would lead to grave or fatal results. A limit must therefore be placed on the speed with which decompression can be carried out. Dr. Haldane gives the following as a fundamental maxim: "The absolute air pressure on a man can always be reduced to half the absolute pressure at which his tissues are saturated at the time without risk of bubble formation." The correct way, then, to decompress a man is to reduce the air pressure on him by half at a time, giving him sufficient pause at each stage of reduction for his body to give off nitrogen until the amount left is only enough to produce saturation equivalent to the pressure to which he then is subjected. The pressure is thus reduced half at a time until he reaches the surface, and once again is subject only to normal atmospheric pressure, but, and this is most important, the nearer the diver approaches to the surface the longer the time allowed for his getting rid of the excess nitrogen must be.

From this it is evident that, in the case of a man who, diving, has been subjected to a pressure of, say, 75 lb., the process of decompression would occupy hours and the whole system be impracticable. To meet this difficulty, however, divers are not allowed to get fully saturated at high pressures, and the time limits are so arranged that the man diving starts to ascend saturated at a much lower pressure than that at which he has been working, and the process of decompression is graduated accordingly. In ascending it is important that the diver should come up between each "stage" as rapidly as possible and remain at each stage long enough—the longer the better in reason—and if he has been working at any appreciable depth he should exercise his muscles, especially those he has been using at his work, whilst waiting before the next stage of the ascent.

As any symptoms of caisson disease that may arise are due almost entirely to the time that the diver remains down, and not so much to the depth that he has gone down, it is important that the descent should be as rapid as possible. The only difficulty he meets with on going down is due to trouble with his ears, which difficulty is usually overcome by swallowing, and thus equalizing the pressure between the mouth and the tympanum by opening up the Eustachian tube. Another difficulty, which exists now only in theory—though it used to exist in practice—is that of keeping the pressure of air inside the diving dress equal to the pressure outside it. In theory this equalization of pressure is much mentioned and great stress is laid on its importance. It can, however, be easily understood that, were a diver's dress blown out with air at a sufficient pressure to attain that object at any depth below a few fathoms, he would be unable to move his limbs in any but the most restricted degree, and would be thereby prevented from doing the work that he went down to do. In diving at the lesser pressures in the navy it is common to employ partial inflation; but experienced divers and those working at greater depths use another means of avoiding injury from pressure. A strong wicker frame covered with felt, and shaped convexly to stand away from the body, is worn round the trunk under the dress, and thus keeps the pressure outside the latter from exercising any undue force on the thorax and abdomen. This frame also has an extension which protects the testicles and guards them from injury. Round the limbs the dress fits tightly and allows the diver free movement.

A single cylinder of a diving pump has a capacity of one tenth of a cubic foot. Ten revolutions of the pump should therefore produce 1 cubic foot of air. The diver at all depths will require 1.5 cubic feet of air every minute for respiration in comfort; it should, however, be remembered that in practice some divers are more comfortable with more or less than that amount, and that two divers down at the same depth and being supplied by the same pump may require different amounts. If the pressure (absolute) were counteracted by the method of dress inflation, instead of by the wicker frame, it would be obvious that the amount of air required for that purpose would vary accordingly as the depth varied. To guard against injury to divers it is most important that all parts of the diving "gear" should be in good working order, and that no possibility of air escape exists, as, in cases where divers suffer distress and show symptoms of fainting, such symptoms are almost invariably due to an insufficient air supply, caused by the pumps not being worked fast enough, air leaking past the pistons, or, as has lately been found to happen, air escaping at the junction of the pipe with the pump owing to the nut securing the former working loose. Should decompression take place too rapidly and slight bubble formation occur in the tissues, it takes considerable time for them to completely disappear from the system, and this should be borne in mind before allowing a diver who has been exposed to pressure, though apparently well, to go under pressure again until some long interval has elapsed. The length of this interval must depend upon the depth and the time that he has been down, but as a rough rule it may be taken that a diver who has been down in 15 fathoms for one hour should remain on the surface for three hours, and one who has been down in 25 fathoms or more for a quarter of an hour or less should not again go down on the same day.

The time a diver is "down" is counted as from the moment he leaves the surface to the beginning of the ascent. The time he may remain down is, of course, influenced by the depth that he has gone down and by the nature of the work that he is doing there, to a less degree. In any depth not above 7 fathoms there is, in reason, practically no limit to that time. The time taken over the ascent, in stages, is determined by the depth and the time spent at that depth, as the longer the diver is down the slower must he ascend, because the longer the time spent below the greater will the saturation with nitrogen have become, up to the full amount of saturation at the pressure to which he has been exposed. If working at 10 fathoms, he will have been subjected to a pressure of 26½ lb.; he

should be down not over three and a half hours at the most (counting from the time he left the surface), and should take thirty-two minutes to ascend. At a depth of 34 fathoms he should not be down over twelve minutes, and will still require thirty-two minutes for the ascent. The times necessary for various depths are all laid down with great accuracy in the instructions issued by the investigators.

Symptoms of Caisson Disease.

Mild symptoms of discomfort met with on the man first commencing the descent are really due, as stated, to the initial difficulty of equalizing the pressure at each end of the Eustachian tube, and consist of noises in the ears, a "bursting feeling" in the head, and pain in the frontal region and eyes. Swallowing usually relieves these symptoms speedily, but many divers find that they persist until the feet touch the bottom, when they are at once relieved. "Bends"—this name is applied to pains, more or less severe, which a diver experiences in his joints and muscles after working at the greater depths or for long periods below, and they are usually felt in those joints and muscles which he has been using at his work. They are, as a rule, prevented by the diver exercising his muscles, specially those he has used most, whilst waiting at the stages of his ascent. These pains come on most frequently after the diver has been up half an hour or more, and last a variable time. Sometimes they are very severe.

Dyspnœa, faintings, and syncope, if mild, and only noticed temporarily or on coming up, may be due to insufficient air supply caused by a defective pump, or to the diver not having learnt to control his valve properly. If severe, they are almost certainly due to his having come up too quickly, and in consequence to the formation of nitrogen bubbles in the circulation, tissues, and organs of the body.

Death.—Certainly due to embolism and blocking of cerebral or pulmonary vessels by the bubbles of nitrogen set free in the circulation by the too rapid decompression.

Paralysis.—This is not at all an uncommon symptom, and may be either unilateral or bilateral, and, again, may be merely transient or permanent. It nearly always affects the lower limbs.

Nausea and vomiting usually occurs directly the diver has come to the surface and has had the helmet removed. Generally seen in men who have had a heavy meal just previous to descent, or are not in good condition; also occurs quite often in novices after their first dip.

Bladder troubles, such as pain and retention of urine, may occur subsequent to diving, and urinary incontinence has been known to occur whilst the diver has been down, owing to pressure on the abdomen. Pain in the testicles is also sometimes complained of, and would follow deep diving where those organs have not been adequately protected.

Subcutaneous Hæmorrhage.—I have seen one case of this accompanied by subconjunctival ecchymosis.

Prophylaxis.—All divers should be examined medically before being allowed to undertake such duties, especially with a view to ascertaining their chest capacity and the absence of any cardiac weakness or arterial disease. This examination is always most carefully carried out in the navy. The following subjects are unfit to become divers:

Those addicted to alcohol in any but the mildest degree.
Those who are heavy cigarette smokers.
Those with any tendency to pulmonary tuberculosis.
Those who have had syphilis.
Those who have any ear disease, especially otorrhœa.
Those who are ruptured, and men who have adenoids, suffer from rheumatism, or have any tendency to arterial disease or varicose veins.

After any specific febrile disease, especially pneumonia, it is wise to forbid diving for some months, and then only after careful examination of the heart and lungs. I would draw special attention to syphilis; it is a disease which is widespread throughout the navy, though, owing to improved methods of treatment, more careful observation of syphilitics, and the declining virulence of the disease, much less so than it was a few years ago. These men are never safe as divers, and it is highly probable that diving may bring on those syphilitic arterial changes which lead to such grave late lesions of the disease. Most careful inquiry should be made to exclude all such candidates from diving classes. Men with urethral stricture and those subject to attacks of retention of urine are also obviously unsuitable.

Treatment.

The treatment of "bends," as already mentioned, is mainly a question of prophylaxis, and should that not prevent their occurrence, resort must be had to massage and friction to ease the pains; the use of morphine is undesirable and seldom necessary. For the more serious symptoms of dyspnœa, fainting and syncope, the correct treatment—on the supposition that these symptoms are due to too rapid decompression—is to recompress the man. Send him down again at once to the last "stage" he halted at before coming to the surface, or if the case be very severe, pointing to the nitrogen saturation being that equivalent to a greater pressure than that of twice the pressure at the last stage, send him down further still, and then, after allowing plenty of time, decompress him very slowly. Even should the diver come up "black in the face" from cyanosis, he must have the helmet put on again and go down instantly.

For the paralysis little can be done, and, as mentioned, it is generally transient. Should it persist, it should be treated in the usual way by massage and electricity.

Apparent Death.—In cases of apparent death, where it would appear to be quite useless to recompress, artificial respiration and the other usual means of restoring animation should, of course, be resorted to, but it would seem likely that artificial respiration could only be employed with any real measure of success if done by another diver below the surface at half the depth the man had been working at, and this, though difficult, should not necessarily be impossible.

A FEW CASES OF COMPRESSED-AIR ILLNESS, WITH REMARKS.

By C. GRAHAM GRANT, L.R.C.P. and S.Edin.,
M.O. Rotherhithe Tunnel Works.

Our present knowledge of compressed-air illness is so imperfect that I feel bound to report to the profession upon my experience as Medical Officer to the Rotherhithe Tunnel Works, however incomplete my investigations may have been.

There was at the works a large cylinder with compressed-air pipes laid on, which was called "the Medical Lock," and kept always ready for use; into this the affected worker was introduced, and rapidly recompressed to the amount of the pressure then existing in the tunnel. This process occupied about two minutes, and the air was then allowed to leak out; the lock was apparently airtight, but it got out somehow in about three-quarters of an hour. Ergotin was then injected and the patient sent home to bed, where morphine, massage, and electricity were exhibited as required. This was the traditional treatment, and there seemed to be no reason to alter it, although one or two men complained that the recompression made them worse, and many asserted that recompression in the tunnel itself was superior in its action to the medical lock.

Bearing in mind Snell's view that faulty ventilation was the principal factor, and Hill's opinion that too rapid decompression was chiefly to blame—I trust I quote these competent observers correctly—I directed my attention in considering causation first to these points. Samples of the air were taken once a month, and varied in the amount of CO_2 from 0·054 per cent. to 1·36 per cent. The County Council allowed the contractors a minimum of 0·08, but the men blocked the ventilators with their jackets to stop the draught, and this amount was seldom maintained. There were no closets or urinals, and the workers passed their excreta where they happened to be working, which did not improve the sanitary conditions. Earth closets were supplied at my request and were regularly used for a time, but the men fell back on their old habits as soon as the foreman relaxed his supervision; matters improved, however, as the cubic space increased.

As far as the initial compression was concerned the effect seemed to be merely one of aural discomfort, and as long as the Eustachian tubes opened to Valsalva's method of inflation, the rapidity with which the process was conducted was apparently of little moment. It must in this

connexion be noted that, going through the lock, as I generally did alone, it was easy for me to regulate the taps to meet my own comfort; but when thirty men went through together it is probable that the tympanic membranes in some of them were considerably stretched.

In the matter of decompression there was no discomfort at all, and therefore, as far as the men could understand, there was no reason why this process should be prolonged, especially as they were packed like herrings—sometimes thirty-two men in a space of 470 cubic feet. It only required one devil-may-care man to get in charge of the tap, turn it on to its full capacity, and bring them all through at a dangerous rate. I have been decompressed myself—a foreman at the tap—at the rate of one and three-quarter minutes for 15 lb., and this in face of my instruction that the decompression rate of one minute for every 5 lb. should be enforced. As a matter of fact, the conditions in the lock were so unpleasant—a confined space, no seats, a dense vapour, and overcrowding—that every minute seemed like five. To reduce the number of men entering the lock from thirty-two to sixteen was a matter of no small difficulty, and caused some friction. Further, one of the principal officials informed me "he thought that decompression should be conducted as quickly as it could be done." This opinion he was, of course, unable to support by any convincing reason, but no doubt the expression of such a view would largely influence the workmen if he opened his mind to them as freely as he did to me.

For this, that, and the other reason, decompression was conducted at too rapid a rate if our present knowledge of the subject is correct—a danger that can only in practice be avoided by providing larger, more numerous, and more comfortable locks, these being fitted with taps carefully timed. Taps might even be made to conduct the graduated stage decompression recommended by Haldane, but the great practical difficulty is found in the workman himself.

I select a few of the more interesting cases, in the hope that, even with all their imperfections, the notes may be of some value to those studying the subject.

Case I.

A. F., aged 36, entered the tunnel—then under a pressure of about 16 lb.—at 6 a.m., worked as usual till 2.30 p.m., and came out. He had left the lock about ten minutes when he was seized with acute pain in the abdomen, knees, and ankles. He re-entered the tunnel, and immediately felt quite well; he asserted that he "instinctively felt" that such a relief would be obtained. He walked about for an hour, and, believing himself to be all right, he passed through the lock again. On his way home the pains returned, causing him to retrace his steps for recompression, which this time relieved the abdominal pain, but left the pains in the knees and ankles unmitigated. At this stage he was examined, ergotin was injected, and he was placed in the medical lock under a pressure of 16 lb. The pains had subsided into numbness, the pulse was 60 and compressible, the temperature normal, the tongue clean, and the signs in joints negative; the superficial veins in the legs were somewhat congested, and there was impaired sensation to pin-pricks. The recompression was maintained for half an hour, and slowly reduced. The sensation he then declared to be normal, but the legs were still numb. As he lived close at hand he started, between two of his mates, to walk home, refusing the aid of a cab or other conveyance. He dragged his right foot, eventually catching it behind the left heel, and would have fallen if unsupported.

Seen at his home next morning, his pulse was 60 and the temperature normal. The paresis of the legs was more marked in the right, the superficial veins were still congested, the right leg was markedly dragged, sensation to pin-pricks was normal, but heat sensation was diminished; the knee-jerks were exaggerated, especially in the right leg: the heart sounds were normal; there were no signs of syphilis or other constitutional disease.

He was confined to his home for ten days, and then got about with the aid of sticks, but with great difficulty. his right leg still dragging. As massage and faradism failed to improve this state of affairs, he was admitted to the Hospital for Epilepsy and Paralysis on December 21st, 1906, three months from the date of his attack. He left the institution on December 24th at his own request, and refused to go back. When examined on June 1st, 1907, he was still obliged to use a stick; there was some wasting of the thigh muscles generally in the right leg and the limb was still dragged to some extent.

I give this case as one to my mind typical of compressed-air illness, and it was at the same time the most serious of those that came under my notice.

Case II.

G. S., aged 45, on July 16th, 1907, on rising from bed at 4.30 a.m. experienced a slight pain in his left hip. He went to work, and seemed worse on passing through the lock into the tunnel; by 8 a.m. he was in so much discomfort that he went home. As there was no improvement during the day, he returned to the works, and was placed in the medical lock under a pressure of 16 lb., which was allowed to leak out. This was repeated several times, with complete relief, but the pains returned on the way home.

The knee-jerks were slightly exaggerated and the left leg dragged; there were no other signs. Pain was a marked symptom, and was not referred in this case to the knee, the usual seat, but to the hip and ankle. He was incapacitated for a fortnight, and then resumed work. He had worked in compressed air for many years at both high and low pressures, and never previously felt any ill effects. He was warned not to return to the compressed air, but he did so and remained well.

Case III.

E. T. W., aged 36, on August 2nd, 1907, left the tunnel in his usual health, but was seized with pain in his back and legs before he reached home. He passed a sleepless night. Beyond exaggerated knee-jerks and ankle clonus his signs were negative, but, his pains persisting, he was sent into the local infirmary and was treated there and by me for over two months. On October 14th he re-entered the compressed air in defiance of warning, and was similarly attacked on October 16th. The relapse lasted a month, and, while the signs and symptoms were identical, it was greatly relieved by electricity, which had no apparent effect on his initial seizure.

Case IV.

E. B., aged 34, on May 22nd, 1907, was seized on his return from work with severe pains in the legs, back, shoulders, and elbows. His signs and symptoms were similar to those of the cases already cited, and he dragged his right leg for some ten days. This case was singular in the respect that he had pain above the waist.

Cases in which pain in the legs lasted a few days were of daily occurrence, and were called by the workers "an attack of the bends"; they were entirely subjective in character, and one attack did not seem to predispose to another. A few cases of pain in the testicles came under my notice, but beyond the physical distress they showed nothing worth recording.

Conducting the medical charge of this great engineering work in conjunction, as I did, with many other duties, I fear the opportunities for studying compressed-air illness were much neglected, and it may be long before as large an area is again enclosed. In a confined space the elements which go to make up this interesting and curious condition are not to be found. There were many fewer cases of compressed-air illness in the Rotherhithe Tunnel than in the Blackwall, and I certainly think our efforts to produce a better sanitation and a longer period of decompression met with a measure of success.

Since writing the above I have enjoyed the pleasure and instruction of reading the able lecture by Dr. Greenwood, reproduced in the columns of the British Medical Journal, and I much regret that I, being ignorant of the fact that he was conducting these experiments, took no steps to bring his theory and my opportunity for practice into line. I was uniformly decompressed at an average rate of four minutes for 16 lb. scores of times, and the heads of the contracting firm were treated in the same way every day. Further, I have good reason to suspect that at the end of the shift the men turned the "muck tap," and came out in a time that might be best stated in seconds. If Dr. Greenwood's views are correct, it is quite clear that in future operations in compressed air, medical arrangements should be made which the men not only may not, but cannot, infringe.

THE MENTALLY DEFECTIVE IN PRISON.

By JNO. MILSON RHODES, M.D., J.P.,
VISITING JUSTICE OF H.M. PRISON, MANCHESTER.

The inside of our English prisons is to the vast majority of the people a *terra incognita*. Nevertheless prisons and the prisoners have not received in the past the consideration that their importance demands, and it is very satisfactory to see that a commission of thoroughly competent gentlemen has been appointed to inquire into the treatment of certain classes of cases, and I venture to say that when the public realize the large percentage of mental

defectives that are in our prisons they will insist on the law being altered "to make the punishment fit the crime" to a greater extent than it does at present. The object of our prisons is not, or, at any rate, ought not to be, simply the punishment of crime, but also the prevention of crime; the treatment should not only inflict retribution, but also deterrence and reform, and the latter should be of fully as great importance as the former, if not more so.

In dealing with the various classes of breakers of the law, those who, as Dr. Mercier well says in his work,[1] "have done wrong in the pursuit of gratification for themselves by the intentional injury of others" must be firmly dealt with; but before inflicting punishment we must, as far as we can, realize the amount of intention there was in the mind of the offender at the time and how far he was responsible at the time. Only a few years ago a justice assured me that there were no feeble-minded in gaol. When the report of the Royal Commission on the Feeble-minded is published next month not only the public but some justices of the peace will learn something. That there are a large number of the mentally defective in our prisons is absolutely certain, and it is also certain that their real mental condition was not diagnosed at the time of their committal.

This is not only my own opinion; at the International Congress at Amsterdam last year Dr. Morel, of the Mons Asylum, said:[2]

Un très grand nombre de criminels, surtout des criminels récidivistes, présentent des symptômes multiples de l'insuffisance mentale. Certains magistrats considèrent certains de ces symptômes, par exemples le récidivisme, l'alcoolisme, etc., comme de circonstances aggravantes, alors que le psychiatre y voit des circonstances atténuantes au point de vue pénale, aggravantes au point de vue de la protection de la société et du délinquant.

No doubt the magistrate, like the medical officer of the prison, has to be on his guard against malingerers of all kinds; but when you find that in the last report, out of a total of 241 criminal lunatics, no less than 162 were certified as such "after conviction," it is very questionable if the law is the embodiment of everything that is excellent. Dr. Donkin, the prison commissioner, speaking at a conference at Birmingham last November, made the very serious assertion:[3]

The bald statement may be accepted that the weak-minded amount to between 10 and 15 per cent. of the total number of persons committed to prison; the true maximum is probably even higher than this.

In another place in the same paper he says:

Owing to their inherited incapacities and to certain surroundings, a large number of mental defectives tend to become criminals, and a considerable proportion, even 20 per cent., of so-called criminals or law-breakers are demonstrably mentally defective.

The whole of the prison commissioners are evidently of opinion that far-reaching reform is required, for in their report for 1905-6 they very plainly state that:

The steady decrease in the rate which has been going on for some years is very satisfactory, but when it is pointed out that of the 129 cases of insanity certificated in the prisons 73 were found to be mentally unsound on reception and 27 more exhibited symptoms of insanity within a month of reception, it will be seen there is much need for reform in the matter of committing persons to prisons who are actually insane or who are on the borderland. Many of those who were in prison for some time before symptoms of actual insanity were observed were either described as of weak, unstable, or impaired mental condition on reception or were known to have been previously insane.

In addition to those certified insane 354 were reported as more or less unfit for the ordinary penal discipline owing to mental deficiency, and were treated under the regulations of the feeble-minded. Several of the feeble-minded were received more than once in the year, and the records of many of these prisoners indicated the desirability of dealing with them in other ways than sending them to prison.

These are strong expressions, but in my opinion are thoroughly justified and deserving the most careful consideration not only by visiting justices but by every magisterial bench in the country.

Dr. Branthwaite,[4] Home Office Inspector under the Inebriates Act, is very much of the same opinion. Since the Act dealing with inebriates was passed in 1898, 2,277 have been sent to colonies under that Act. Dr. Branthwaite divides them as follows:

	Numbers.
1. Insane	51
2. Very defective	315
3. Defective	1,060
4. Average mental capacity	851
Total	2,277

Out of the 2,277 cases, 1,375—about 63 per cent.—are either totally irresponsible for their drunkenness and drunken offences or are only partially responsible for their unfortunate condition, with its resulting evils.

That leaves out of account the 51 cases decidedly insane. My own experience of prisoners corroborates Drs Donkin, Branthwaite, and Morel's view, and a prison governor with very large experience told me that he believed that almost all the prisoners who violate the prison regulations are feeble-minded. It must be borne in mind that these grave charges against our prison system are brought not by cranks and faddists, but by experienced and responsible alienists, who are the very last people to make unfounded statements. How serious the charge against the present state of the law is, if the charges are true, is shown by the fact that 183,773 persons were imprisoned in 1906.

That my estimate of 10 per cent. feeble-minded was too low I freely admit. Mr. Henry Wolfer of Minnesota said, at a meeting of the heads of State institutions, that—

On the borderland of lunacy lie the criminal population,

and added—

That no more vexed problem comes before the medical psychologist than to determine where badness ends and madness begins. He stated that out of a prison at Stillwater of six hundred and seventy-five prisoners there were sixty-eight who were actually insane at the time of conviction or immediately thereafter, and one hundred and twenty-two who were degenerate incorrigibles, who ought to be set apart as a class by themselves and treated as such, and that one-fourth and possibly one-third of all adult convicts found in State prisons are similarly afflicted.

If Mr. Wolfer is right (he has had thirty years' experience) there must be many in our prisons who should not be there, for with a prison population of 20,377 on March 31st, 1906, only 955 criminal lunatics were in the criminal county and district asylums of England and Wales. That not all the cases were suffering from temporary insanity is proved by the fact that out of 203 cases of discharged criminal lunatics 112 were "ordered by justice to remain in asylum."

Any one who will carefully study the judicial statistics of England and Wales must acknowledge that if we have succeeded in penalizing the delinquent we have to a large extent failed both as to deterrence and reform, the two objects which should be the chief aim of punishment. Of 182,645 convicted prisoners in 1906 no less than 107,408 had previous convictions against them; of these—

7,458	had been	convicted	four times.
5,612	,,	,,	five times.
17,093	,,	,,	six to ten times.
12,592	,,	,,	eleven to twenty times.
10,700	,,	,,	above twenty times.

A system that has failed in 59 per cent. certainly cannot be called a success; the offender has been made a convicted criminal, but he has evidently in all these cases gone out of prison as much at heart a criminal as he came in.

When you find a recidivist who has stolen a small article of the same description thirty times, surely that man must be to some extent *non compos mentis* to do such an idiotic act.

It is to be feared that we look upon the criminal as much responsible as the average man in the street. He is not so. The following figures prove that, whatever his education may have been morally—if he had any—he had little intellectually:

Prisoners neither able to read or write ...	29,288
Prisoners able to [read or read and write imperfectly	144,566
Prisoners able to read and write well ...	8,857
Prisoners of superior education ...	405
Prisoners' education not ascertained ...	667

The figures show that out of 183,000 prisoners no less than 173,000 had little or no education. If the sectarian educationalists who are quarrelling "while Rome burns" would only consider the serious importance of these figures, they would see the necessity there is of impressing

upon the young mind the importance of that old doctrine "Thou shalt not"

Want of education is a powerful cause of mental degeneration; the total neglect of training to appreciate anything approaching intellectual enjoyment is one of the causes of so many seeking the lowest forms of sensual enjoyment, with all the mental and moral demoralization associated therewith. Ignorance, idleness, and inebriety are the milestones that mark the victim's progress on the road to ruin that ends in the asylum, the workhouse, or the prison, with such disastrous results, not only to the unfit, but to the unfortunate ratepayers, who have to bear both the injury done by the prisoners and also the cost of their keep, to say nothing of the loss to the State of their labour.

Now, what do we hope to gain by an alteration of the system?

1. A better classification of prisoners. The thoroughly vicious criminal must be taught by experience that the way of transgressors against the law is hard; but for the weak-minded, the ignorant, the misled, we want a very different system of classification than we have or can have under the present system. For the weak-minded our prison system is too hard.

2. Our present system of providing for prisoners is very expensive. For the dangerous criminal we must provide prisons where the offender can be confined in safety; but for the less serious offences, such as drunkenness, petty larceny, etc., the State farm would be far more useful and remedial.

3. Attached to each prison should be an expert alienist, as in Belgium. I remember with horror that some years ago a chronic epileptic was hanged for murder.

4. An alteration of the law as regards the habitual drunkard. As the law stands at present on the statute book, many of the inmates of our inebriate reformatories are hopeless dipsomaniacs before they arrive. If the ratepayers are to receive a proper return for their money, we must repeal the law as to convictions and have the offenders detained under an enactment on the lines of that in force in Massachusetts.

5. It is a debatable question what percentage of the commissioners should be ex-army officers; there should certainly be more medical ones.

6. That any system will abolish crime I do not believe, but at the present time I am afraid our existing system of doing things is on the how not to do it system, and I say without hesitation that I am very glad the Commission has been appointed.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

CEREBRAL INFLUENZA.

I HAVE read with much interest Professor Saundby's address on cerebral influenza in the BRITISH MEDICAL JOURNAL of June 6th, 1908, and as he points out that the cases are rare, and in consequence liable to give rise to serious difficulties in diagnosis, I think it may be of use to record briefly the notes of a case that came under my care in January last. The patient was a girl aged 23, and was admitted to the Royal City of Dublin Hospital on January 26th, during the height of the influenza epidemic of this year. On admission she was in a state of deep coma, and was indeed sent in as a case of probable cerebral abscess, on account of a slight discharge which was stated to be coming from the left ear. The only history obtainable was that she had suffered from some slight gastric disturbance about six weeks previously; from this she had completely recovered, and remained in good health until four days prior to admission to hospital. She then began to complain of general weakness, inability to stand or walk, and of violent pains in the head, and vomited once or twice. These symptoms increased, and on the day before admission she became delirious, failed to recognize those around her, and talked incoherently. Her temperature at this time was said to be somewhat raised. On examination the patient was found to be in a state of complete unconsciousness. The pupils were dilated, but reacted to light, and the optic discs were normal. The membrana tympani on both sides was normal, and no aural discharge could be detected. The jaws were tightly clenched, the tongue foul and coated, throat normal. The neck was rigid and slightly retracted; the anterior cervical glands somewhat enlarged; heart and lungs normal; abdominal organs normal; well-marked rectus reflex. The sphincters were relaxed, but a catheter specimen of urine showed a slight cloud of albumen without casts. No other abnormal constituents were present. The legs were somewhat rigid, with well-marked knee reflexes and slight ankle clonus. Neither Kernig's sign nor Babinski's sign was present. The temperature was 101° F.; pulse 104, and very feeble; respirations, 30 to the minute. A blood examination revealed nothing abnormal, the white cell count being only 7,500 per c.mm., with 76 per cent. of granular cells. Some fluid removed by lumbar puncture was quite clear; no bacteria were found either in smear preparations or on culture in serum tubes. A Widal test proved negative, as did also Calmette's ophthalmo-reaction. The patient remained in the above-described condition for four days, and then the temperature sank to normal, and the coma became less profound, so that she could be slightly roused. On the sixth day she made some attempts to speak, and was able to swallow fluids, and from that on recovery was steady but slow. Up till her discharge from hospital, four and a half weeks after admission, she continued to suffer somewhat from aphasia, finding difficulty apparently in selecting the right words to express herself, and often applying wrong terms to familiar objects. A fortnight later, however, after a stay in the convalescent home, this symptom had disappeared, and she was in every way in perfect health. As will be seen from a reference to Professor Saundby's paper, this case corresponds closely with some of those that he describes and therefore requires no further comment. On admission no diagnosis was made (except that the patient was suffering from a profound toxaemia of the nervous system), and it was only by a process of exclusion that the diagnosis of cerebral influenza was arrived at. No drug treatment was ordered, as there was no indication for any special chemical or serum therapy; icebags were applied to the head; nutrient enemata were given at first, and careful watching and nursing were observed.

T. GILLMAN MOORHEAD, M.D., F.R.C.P.I.,
Physician, Royal City of Dublin Hospital.

MRS. J., aged 40, a healthy woman, the mother of three healthy children, the wife of a farmer, had for three or four days previous to the attack complained of headache and chilliness. On April 25th of this year she rose early, and, beyond a headache, was feeling fairly well. She went to feed her chickens, when suddenly she felt faint, and just managed to reach the house, when she had a "fit." The family sent for me, and on my arrival, about three hours later, I found her in bed in a condition resembling that of a person recovering from an epileptic fit. She complained of severe headache, persistent vomiting; temperature normal, pulse 65. I was informed that she had had two fits, one on reaching the house, and another an hour later; during the fits she was unconscious, foamed at the mouth, and was convulsed. A mixture of bromide of potash and phenazone and a dose of calomel were prescribed, cold was applied to the head, and strict rest and quiet were enjoined. The following day she appeared better; the vomiting had ceased, the headache was not so severe, and she seemed more alive to her surroundings; she spoke distinctly and readily. She complained of considerable intolerance to light, in the left eye especially. On the third day temperature 101° F., pulse 85; the headache during the night was intense, and she seemed to be suffering greatly with her head. I gave a tabloid of ½ grain of morphine with $\frac{1}{120}$ atrop. sulph.; this was followed by some relief, and she slept for two or three hours Photophobia still marked. On the morning of the fourth day the headache was not so severe; she was more cheerful; temperature a little lower. The pain returned with intensity in the evening and was again relieved by morphine. The fifth day, the patient had slept after the

morphine, but on waking in the early hours had excruciating pains in the head. The pain was frontal and more intense on the left side; the left pupil was dilated and did not react to light; the vision of the left eye was blurred so that she could not count fingers. She now appeared to be very ill but was quite conscious. A blister was applied behind the ear and the bromide mixture was continued as well as an occasional dose of morphine and atropine. Sixth day, the headache continued and the persons in attendance observed twitching of the face and the right arm. There was distinct paresis of the right arm and leg, and she seemed to take little notice of anything, only speaking when asked questions. Seventh day, patient much the same; tongue thickly furred; breath very heavy; she was very drowsy and could hardly be got to take any nourishment. Eighth day, patient in a semi-conscious condition, paralysis of right arm and leg complete; left pupil widely dilated and fixed; right pupil reacts sluggishly to light; urine passed involuntarily. Ninth day, patient more deeply comatose, stertorous breathing dry brown tongue, rapid pulse and temperature 103·4° F. Tenth day, she died early in the morning. The family history was very good; her brothers and sisters are all healthy people. She was herself a healthy woman; I have been the family attendant for about thirteen years and never had occasion to attend her except during her confinements, which were always normal. The pelvic organs were healthy; she had not menstruated for two years before this attack. The heart was healthy; she had no middle-ear disease. The urine was free from albumen and sugar. Influenza was prevalent at the time in the district.

Holyhead. T. W. CLAY, L.R.C.P., L.R.C.S. Edin.

THE publication in the JOURNAL of June 6th of Professor Saundby's address reminded me of two cases which I at the time considered to be influenzal. I came to this diagnosis as it was the only way I could explain the cases. I am sorry the notes are fragmentary. If they have any value it lies in the fact that they were made at the time. They were made for my own satisfaction and guidance, without thought of publication.

CASE I.

R., aged 25, milk dealer, was driving home after finishing his round, about 7 p.m. on Sunday, April 29th, 1906, when he suddenly handed the reins to his boy and leaned against the side of the cart. On arriving home he staggered into the house and lay down without saying a word.

I saw him that evening at 8.30. He was lying in a semi-comatose condition; pupils slightly dilated, fixed. Respiration 24, pulse 60. Temperature normal, sweating. He had a severe rigor while I was examining him. He could only be roused with difficulty, and in answer to repeated questions he said he had headache and pain in the left shoulder. There was a slight systolic murmur to be heard over the apex.

April 30th, 11 a.m. Pulse 80, respiration 20. Temperature 99°. No urine had been passed during the night. No action of the bowels. He lay quiet mostly all night. *Tache cérébrale* well marked. Kernig's sign present. Urine was drawn off and was found free from albumen and sugar. There was tenderness on pressure over sides of neck and side of head, especially behind the left mastoid.

May 1st. Temperature normal, pulse 72, jerky all over. The passing of a catheter threw him into a convulsive condition. The least touch seemed sufficient to cause these seizures. Lumbar puncture was performed. No fluid came away, so that it is doubtful if the needle entered the canal.

May 2nd. Pulse 88, respiration 22, temperature 98.4°.

May 4th. Improved; more conscious; has less pain. He is taking more food, and during the night passed urine for the first time.

From this time he quickly improved, was visited on May 27th for the last time; and he is now, and has been since, in good health.

REMARKS.—The "jerky" condition noted on May 1st was very curious. It partook partly of the nature of an epileptic seizure, partly that of a rigor. The least touch anywhere was sufficient to bring on a seizure.

The patient was seen on several occasions by my partner, Dr. Sinclair, and his condition was so grave that we gave a hopeless prognosis.

CASE II.

S. W., aged 23, labourer on the "slag bank" (steel works). I was called to see this man at 11 p.m. on July 2nd, 1906. I found him propped up in a chair. Skin was moist and clammy. Breathing shallow, face pale, pulse slow and weak. He was irritable when spoken to. Pupils reacted to light sluggishly, were equal, and slightly dilated. Face muscles twitched and teeth were clenched; was able to swallow. I was told he had been picked up in the back street unconscious. When found he was breathing stertorously, and twitching arms and legs.

History.—Three years before was injured about head and face, chiefly about the face, by a wagon crushing him. He was in hospital for a few days. Two years before he was picked up unconscious in the back yard, and I attended him for influenza for a fortnight afterwards. No history of "fits." Has always been healthy.

July 3rd, 12 noon. Has been restless and "rough" all night, but has not spoken. There is difficulty in getting him to swallow. Pulse 96, full, soft, and regular; temperature 101° F. Reduplication of first sound of heart, breathing easy, profuse sweating about head and face. Face flushed, eyes closed. He resists any attempt to separate the eyelids, and there is obviously photophobia. Pupils react slowly to light. *Tache cérébrale* well marked. Kernig's sign well marked. Knee reflexes could not be obtained. Plantar reflex well marked. Has been boring his head into the bed all night. When lying quiet he draws the muscles of the forehead as if in pain, and groans occasionally. Pressure over the back of the head and down both sides of neck causes pain, as evidenced by the distress of the patient and his resistance. Evening: Temperature 102°, pulse 96, respirations 24, urine specific gravity 1030. No sugar, no albumen, phosphates.

July 4th, 12 noon. Temperature 101·8°, pulse 72, respirations 24; unconscious. Evening: Temperature 100.6°, pulse 72, respirations 24. Enema given with good result, and the patient was much better afterwards.

July 5th. He was given calomel gr. vj and jalapin gr. j. In the morning he answered his brother rationally, and when I called he was sufficiently conscious to answer questions.

July 6th. Found him reading the newspaper.

July 7th. Downstairs without permission. Temperature 98°, pulse 84. Headache.

Note on August 8th.—Steadily improved from above date. Going to work on August 13th.

REMARKS.—I have not given a list of the various drugs given, as I do not think it necessary to do so.

Barrow-in-Furness. JOHN LIVINGSTON, F.R.C.S.Edin.

FAECAL IMPACTION.

ON December 23rd, 1907, I was called to see a lady aged 36 years on account of diarrhoea and cardiac palpitation. She informed me that, although never very strong, she never had suffered from any serious illness, but was occasionally troubled with indigestion. Her bowels were always regular, and she never required an aperient.

State on Examination.—Upon examination I found the condition of her organs as follows: *Lungs* normal. *Heart* in an irritable condition; pulse 120, but apex beat in the normal position, and no sign of disease. *Urine*—specific gravity, 1022; no albumen, sugar, or casts. *Temperature* normal. The *abdomen* was distended, and tympanitic all over. There was no epigastric tenderness or pain in the right iliac fossa.

Treatment and Progress.—I sent her to bed and ordered albumen water. On the morning of the 24th I learned that the patient had passed a very restless night and had vomited six times. I examined the vomitus and found it consisted of yellow bile. I again examined her abdomen and discovered tenderness down the site of the descending colon. I then examined the rectum, but digital examination revealed its emptiness. Three enemata were administered, but not retained. I then gave her an aloetic pill to stimulate her colon. On the 25th I found the pill had not acted, and the patient had been vomiting all night. Upon examining the abdomen I felt a soft, pultaceous mass in the region of the sigmoid. It was now perfectly clear that the patient had a faecal accumulation in her colon. Another digital examination of the rectum was made, but nothing was discovered. On the 26th the patient remarked, "I have an attack of piles and can feel something in the bowel, but I cannot get rid of it." I found a large, hard scybalous mass in the rectum, which I broke up with the handle of a teaspoon.

Result.—I then administered a pint of warm water per rectum. Further relief speedily followed. The patient rapidly convalesced.

REMARKS.—The explanation of this case in the light of subsequent events is easy. In the first place, the diarrhoea from which this patient suffered was a spurious diarrhoea—a catarrh of the colon set up by the irritation of the scybalous mass. The heart was excitable for two reasons: (1) On account of the abdominal distension; (2) from irritation of the sympathetic nerves largely represented in the colon. The pain down the left side was evidently due to catarrh of the descending colon. The haemorrhoids were due to pressure of the loaded sigmoid upon the pelvic veins interfering with the return of blood from the haemorrhoidal veins, which possess no valves. Two further points I should like to mention:

(1) The foolishness of putting indiscriminately all abdominal cases upon milk: (2) the desirability of making a diagnosis before we attempt any therapeutic measures. Had we in this case, as a matter of routine, put this patient on a milk diet, the symptoms would have been aggravated; and had we empirically given an acid and opium mixture to check the diarrhoea, so-called, we should have still further aggravated the patient's condition.

Bedford. S. J. ROSS, M.D.Vict.

REPORTS OF SOCIETIES.

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

AT a meeting on June 16th, Mr. WARRINGTON HAWARD, President, in the chair, Mr. W. G. SPENCER read a paper on the reduction of an old *Subcoracoid dislocation* of the humerus by excavating the glenoid cavity through a posterior intermuscular incision. Having turned back a skin flap, the deltoid and latissimus dorsi were held aside, a part of the infraspinatus detached with a raspatory, the teres minor retracted, and the glenoid cavity thus exposed. It was found possible to remove a considerable piece of bone and a mass of thickened capsule without injury to either the triceps or biceps, and into the cavity thus formed the head of the humerus was placed by Kocher's manipulation. The wound healed by first intention, and the functional result obtained was very satisfactory. The operation was performed three and a half months after the date of the injury; the patient was a man aged 53. The advantages claimed for the posterior route were: (1) The very limited division of muscles; (2) no artery of any size was divided; (3) no cavity was left and no drainage required. The CHAIRMAN considered the operation a decided advance in the treatment of the condition. Mr. RUSHTON PARKER pointed out that the degree of disability varied considerably in these cases, but considered Mr. Spencer's result extremely good. Mr. T. H. KELLOCK described a case in which he had operated in a similar fashion through an anterior incision, and suggested the use of a combined anterior and posterior incision. Mr. RUSHTON PARKER, in a paper on a case of severe compound fracture of the humerus, recommended slinging the forearm to the neck, thus flexing the elbow. In this position deformity was very slight, and fixation could easily be secured by the use of flexible metal splints. He also read a paper on two cases of ununited fracture treated by open operation and implantation of chips of callus between the fragments.

EDINBURGH OBSTETRICAL SOCIETY.

Professor STEPHENSON, President, in the Chair.

Wednesday, June 10th, 1908.

EARLY TUBAL GESTATION.

MR. H. WADE and Dr. B. P. WATSON described a specimen obtained *post mortem* from the body of an unmarried woman aged 30 years, who died within twelve hours of the onset of acute abdominal symptoms. The abdomen and pelvis were full of blood, the source of which was a minute perforation in a small almond-shaped swelling which was found on the isthmus of the right Fallopian tube. The affected tube was cut in serial sections, 1,971 in all, and these were carefully examined. The uterus contained a decidual lining, and in the mucous membrane of the tube a distinct decidual formation was present. The ovum was growing in the muscular wall of the tube, and in this situation cells were present which were identical with decidual cells, but formed no membrane. At the periphery of the ovum the lumen of the tube was still intact; nearer to the centre it was no longer visible owing to the destruction of the wall. Rupture had occurred about the centre of the sac, probably through muscular action on a tube which contained a good deal of blood from erosion of a blood vessel in the wall by hypoblastic tissue. The wall at this point was specially thin and hence easily torn. The authors thought that the decidual cell formation and deposit of fibrin in the tissues acted as a sort of barrier against hypoblastic invasion. Where those processes were absent or present only in small degree the ovum penetrated deeply and rapidly; the first invasion was made by isolated trophoblastic cells, the way for which was prepared by loosening and oedema of the maternal tissues. Dr. FORDYCE could not understand why all the uterine cavity should be lined by decidual tissue if its function was merely that of a barrier. Dr. BARBOUR was very much struck by the minute size of the opening which resulted in the death of the patient. This case emphasized the importance of operation in all cases of extrauterine pregnancy. Dr. HAULTAIN pointed out that the desquamation of the epithelium at the uterine site of the tubal pregnancy confirmed Lawson Tait's theory as to the cause of extrauterine pregnancy. The persistent haemorrhage might be due to the trophoblast which prevented coagulation of the blood. Operation should be employed even when the patient was moribund, as he had seen such cases rescued from death. Dr. HAIG FERGUSON believed that in cases where pregnancy occurred in the isthmus of the Fallopian tube rupture was due to erosion and not to distension. At the fimbriated extremity rupture was due chiefly to the latter cause.

SPECIMENS.

The following were among the specimens shown:—Sir A. R. SIMPSON: A Japanese pelvimeter with an attachment for estimating the angle of pelvic inclination. Dr. HAIG FERGUSON: (1) Double uterus and vagina, one being larger than the other. (2) A uterus containing more than 90 submucous fibroids. (3) A fibroid tumour removed from the uterus; during an attack of whooping-cough it had become impacted in the pelvis and caused retention of urine.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Mr. R. MARCUS GUNN, F.R.C.S., President, in the Chair.

Thursday, June 11th, 1908.

EXHIBITS.

MR. PRIESTLEY SMITH showed a small instrument, consisting of a series of lenses arranged in a frame, for use with the shadow test. The feature of the apparatus was the close packing of the lenses, about sixteen of them being contained in a linear foot, and it enabled very rapid examinations to be made. Mr. LESLIE PATON showed a case with connective tissue in front of the optic disc. Dr. EDRIDGE-GREEN exhibited an improved lantern for testing colour perception. There was an arrangement consisting of three slides in a vertical column, each slide being fitted with variously-coloured glasses, which could be brought opposite an aperture with an iris diaphragm. Mr. J. H. TOMLINSON showed a Nernst lamp projecting lantern. Mr. SYDNEY STEPHENSON showed a patient with a curious congenital anomaly of the iris. Mr. G. W. ROLL showed a patient with sky-blue sclerotics, and Mr G. W. Roll one with double papillitis. Mr. HUDSON showed a case of Thiersch grafting. Mr. G. COATS showed a case of exudation in the retina.

CONTAGIOUS CONJUNCTIVITIS.

Mr. P. E. H. ADAMS gave an account of an epidemic of contagious conjunctivitis. It occurred in the spring, in a small school of 37 boys, 21 of whom were attacked. The eldest boy affected was 14, the youngest nearly 10. All the smears taken, except one, showed numerous Gram-positive diplococci. Most of them were typically flame-shaped pneumococci with capsules, though a few of them were rounder in shape, and in some the capsules were not evident. This agreed with the description given by Schmidt[1] of smears taken from cases of pneumococcal conjunctivitis. On blood agar the colonies were typical slow-growing pneumococci, and there was no growth on agar. Only 3 of the cases were at all acute, most of them being subacute or quite mild; 4 cases of relapse were reported. The condition found on examination was fairly constant—general congestion of the lower palpebral conjunctiva, with slight injection of the ocular conjunctiva, and in the acute cases a thin line of muco-pus in the folds of the conjunctiva of the lower lid. The upper lid showed slight enlargement of follicles at the angles, and a row of minute follicles along the everted edge. The whole epidemic lasted about five weeks, and spread in spite of isolation. It agreed in almost every respect with pre-

[1] *Archiv. of Ophth.*, xxxvii, No. 2.

viously reported outbreaks, the chief difference being the generally mild nature of the cases.

HEREDITARY EYE DISEASE.

Mr. NETTLESHIP read notes on some cases of hereditary eye disease. Case 1 was that of a husband and wife who had senile cataract at an advanced age, and both were operated on with success. They had 10 children, and 7 had cataract in various degrees, 2 of these having had them "matured" and operated upon at a much earlier age than in their parents. There were also slight lenticular changes in the grandchildren of the original couple. The second family showed the occurrence of "Coppock" or discoid cataract, and lamellar cataracts of various sizes, and likewise of retinitis pigmentosa. Among about 250 persons the author had been able to trace belonging to the same family, 32 with cataract and 15 with retinitis pigmentosa. The sex incidence and mode of descent was shown to be different for the cataract and retinal disease respectively. The third case was that of a family containing colour-blind individuals. The author had examined all the available members; and of 33 males 14 were found to be colour-blind, and of 36 females only 1 was affected and she slightly. There were 40 others in the pedigree who were either dead or inaccessible.

PARENCHYMATOUS XEROSIS.

Lieutenant-Colonel H. HERBERT, in a note on secondary (parenchymatous) xerosis, drew attention to the part played by pannus in the development of xerosis after trachoma, and pointed out that old pannus rendered the corneal surface insensitive. Hence with both corneas covered with pannus, the blinking movements of the lids tended to be imperfect, and thus led to exposure of the globe. This appeared to be an important factor in the dryness which followed, for in such cases xerosis of the cornea and conjunctiva was often very marked when the cicatricial degeneration of the conjunctiva was much less advanced than in other old trachomatous cases in which the eyes remained moist and the corneas clear. The exposure of the cornea rendered it more opaque and insensitive, so that the blinking movements might amount to only very infrequent and slight twitches of the lids. Similarly inactive lids were seen in India in a few cases of severe primary (epithelial) xerosis. In these cases the exposed cornea became not only opaque, but pigmented, like the degenerate conjunctiva. Here the primarily defective reflex action of the lids seemed to be attributable to malnutrition only. Another factor in the production of cicatricial xerosis was the reduced transudation of fluid from the palpebral conjunctiva. If the upper lid were everted in any case of ordinary acute conjunctivitis, a free flow of watery fluid was readily demonstrable from the exposed conjunctiva. But a similar flow was not obtainable from a cirrhosed or cicatricial conjunctiva, however much inflammation might be present. The same author also read a paper on lower corneal plaques. These, he said, were slightly raised, feebly vascular, grey patches with rough surfaces, close to the lower margin of the cornea. Their opacity varied with their thickness. They were often of curious shapes, and were mostly multiple and binocular. They were not very uncommon in India, and appeared to be due to slightly defective closure of the lids, together with more or less chronic conjunctivitis, trachomatous or otherwise.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on June 11th, Sir HERBERT ELLIS, President, in the chair, Lieutenant-Colonel H. E. DEANE read a paper entitled, A Plea for a More Detailed Study of the Soldier's Heart, and distributed copies of the series of respiratory-pulse curves on which the paper was based. These had been obtained from soldiers, professional gymnasts, acrobats, and dancers, and in the paper were carefully analysed, attention being given to the phenomena of pulsus paradoxus, extrasystoles, and the results of strain. A diagram—taken by means of an orthoradiographic machine—of the heart of a soldier who was holding his breath was exhibited, and showed a marked diminution of all the diameters of the heart. With reference to disordered action of the heart in soldiers, it was asked whether it was quite certain that the equipment had nothing to do with the subject. Investigation as to the circumstances under which the men broke down, a graphic record of the cardiac conditions, and a detailed examination of men after marching or after a field-day were advocated. In the discussion which followed, it was generally agreed that too much significance had hitherto been attached to the occurrence of extrasystoles, and it was stated that candidates for life insurance had been rejected or charged extra premiums, and men invalided from the services unnecessarily on their account. An example was given of a man being found doing heavy work as a luggage porter a few years after he had been invalided for such a cause from the Marines. Seamen of the Royal Navy were not found to be specially subject to heart trouble, but the Marines, whose conditions of life were similar to those of the soldier, suffered. It was stated that in soldiers it was not uncommon to find *post mortem* a certain amount of general hypertrophy of the heart. In his reply Lieutenant-Colonel Deane suggested that the clothing and the hustling to which the soldier was subjected were elements in the causation of the disordered heart action so common in the army.

REVIEWS.

GOUT.

THE small book by Dr. ALFRED W. SIKES on the *Principles and Treatment of Gout*[1] attempts to "indicate the methods by which we can improve gouty conditions, and the reasons for adopting these measures." The ground covered allows of a short account of the etiology as a preface to the more detailed consideration of the general treatment of the disease, and the special treatment of articular gout, and of the tissue changes consequent upon the changed metabolism of the organs of the body. With regard to etiology, it is interesting to find the admixture of different sorts of alcoholic drinks, popularly recognized as the quickest way of getting drunk, considered by Dr. Sikes to play a part in the production of gout rather than the excess in one sort. Over-feeding, over-drinking at meal times, deficient assimilation, deficient exercise, are also indicated as predisposing factors. Under the heading of general treatment, the discussion of the metabolism of proteins, carbohydrates, fats, vegetables, fruits, alcohol, tea, coffee, and cocoa, permits of the introduction of many useful hints which the practitioner will appreciate, and a section on drugs upholds the value of colchicum and the comparative uselessness of other medicaments. Dr. Sikes includes an account of the action—or inaction—of mineral waters and spa treatments. We must confess to some disappointment that the author deals with this part of his subject in such general terms. The good results attained in England and on the Continent by investigations into the protein and purin metabolism in individual cases certainly warrant a mention, and even a strong recommendation of the method of treatment based on a knowledge of the exact metabolic capacities of the patient. It is not an unknown occurrence that patients themselves make demand for such investigations. It is surely time that those who write books should recognize the value afforded by chemical pathology in their everyday work. The second part of the work, which deals with irregular gout, is by far the best, and the physician may gain many practical hints from its perusal. Articular gout is also considered in detail.

Dr. H. LABBÉ, as the head of the laboratory of the Paris Faculty of Medicine, is eminently qualified to give an adequate account of the chemical relations of the uric acid diathesis. The first chapter of his little book, *La Diathèse Urique*,[2] tells very clearly the story of those modern researches by which uric acid has been shown to be derived from the purin bases, and that its allies are such substances as xanthin and hypoxanthin, caffeine and theobromine; he gives in detail the methods of Folin and Haycraft for estimating accurately the quantity of purin and uric acid in the urine. His second chapter deals with uric acid and metabolism. So long as uric acid was supposed to be the result of an imperfect oxidation of

[1] *The Principles of the Treatment of Gout.* By Alfred W. Sikes, M.D., D.Sc.Lond. London: Ballantyne and Co., Limited. 1907. (Cr. 8vo, pp. 117.)

[2] *Les Actualités Médicales: La Diathèse Urique.* Par Henri Labbé. Paris: J. B. Baillière et Fils. 1908. (Cr. 8vo, pp. 96; Fr. 1.50.)

which urea was the complete end-product, it was regarded as an indication of impaired metabolism; but this theory no longer holds the field and it is now known that while part of the proteids are destined to form urea, others, the nucleins, form purins and uric acid. Although the controversy is hardly ended, still the weight of evidence tends to prove that there is no endogenous formation of uric acid and that it is entirely derived from the diet. No doubt uric acid is excreted on a purin-free diet, but this is explained by the assumption that a reserve of uric acid is always retained in the body. How uric acid exists in the blood is still a problem; the theory of Sir William Roberts that it exists in the form of quadriurates has not been confirmed, and indeed Fischer contends that there are no such compounds. According to modern views, uric acid is kept in solution by its combination with thymic acid, but seductive as the theory appears, deficiency of thymic acid is not the cause of gout; it is more probable that a certain amount of the uric acid ingested is normally destroyed in the body, but in gout this process is by some means hindered. The last two chapters contain a description of the means by which uric acid poisoning may be prevented by diet and by drugs; a useful table is given of the purin content of most ordinary articles of food, and those which should be eliminated from the diet of uric acid patients are specially pointed out, these being meat, leguminous vegetables, tea, coffee, cocoa, and beer. Of drugs he considers sodium salicylate one of the best; Fauvel's researches, if admitted, would deal a fatal blow to the reputation of Vichy water, as, according to them, sodium carbonate and bicarbonate are rather harmful than helpful in the elimination of uric acid; but Dr. Labbé thinks the question is still open; no recent researches seem to have been made on lithia; but quinic acid and its compounds are spoken of as if doubt had not been thrown upon their value as uric acid solvents; he mentions with approval piperazine, lysidine, and urotropine, but on chemical grounds is impressed with the value of thymic acid, better known under the trade name of solarol, and still the subject of clinical investigation.

LATENT SYMPTOMS OF THYROID DERANGEMENT.

In their studies on the physiology and pathology of the thyroid body and the hypophysis[3] Drs. LÉOPOLD-LÉVI and HENRI DE ROTHSCHILD have put together numerous articles which they have recently contributed to various French scientific journals. The main purpose of the work is to show that in addition to myxoedema, cretinism, and exophthalmic goitre, which are generally recognized as being associated with a pathological condition of the thyroid gland, many morbid states are attributable to a disturbance in the function of this organ. These may be recognized by paying careful attention to minor clinical indications, and the diagnosis will be confirmed by the beneficial results which follow the administration of thyroid extract. The starting point of the authors' researches was the discovery that certain cases of rheumatism which obstinately resisted other methods of treatment responded in a remarkable degree to thyroid administration. Encouraged by these results, they became on the alert to find other morbid conditions of obscure origin which were associated with symptoms known to be of common occurrence in cases undoubtedly due to a pathological condition of the thyroid gland. Under the category of "minor signs of thyroid insufficiency" they group the following symptoms: Transitory oedema, falling out of the hair, disturbances of heat regulation manifested in the various forms of hypothermia, constipation, fatigue, anorexia, headache, pains in the muscles and joints, somnolence, obesity, retardation of physical and mental development, and premature senility. The total list of affections which they claim to have cured by dosage with thyroid extract is too long to recapitulate, but we note that it includes migraine, chronic urticaria, neurasthenia, constipation, and various neuroses. It must be understood that the writers do not attempt this treatment indiscriminately for all classes of cases; they limit it to those in which, in addition to the prominent feature of the ailment, there are symptoms which they regard as pointing to thyroid disturbance. They classify these derangements under three main categories, which they term hypothyroidism, hyperthyroidism, and dysthyroidism, and to these they add a list of more complex disturbances—for example, "thyro ovarian, thyro-hypophyso-ovarian," etc—where the thyroid disturbance is associated with irregularity of function on the part of some other organ yielding an internal secretion. Myxoedema and Graves's disease are taken respectively as the prototypes of thyroid insufficiency and hyperthyroidism, whilst dysthyroidism, or thyroid instability, appears to be due to a curious mixture of conditions pointing on the one hand to hypothyroidism and on the other hand to hyperthyroidism. The authors do not confine the use of thyroid extract to cases in which the natural thyroid secretion is supposed to be defective in amount; they also employ it in cases exhibiting nervous symptoms of the "hyperthyroidistic" type—that is, analogous to those found in Graves's disease. It seems rather curious that one and the same substance should produce precisely opposite effects, or, as the authors put it, that "the thyroid body may produce that which it causes to disappear, and vice versa." They explain this apparent discrepancy on the ground that thyroid extract possesses "regulative" properties:

> In this respect the thyroid body is comparable to sodium sulphate. In the ordinary dose this drug is a purgative; but when used in minute doses it may put a stop to diarrhoea. It has a regulative action on the intestine. Thyroid extract, according to the dosage employed, is equally capable of counteracting different conditions of the thyroid gland.

Perhaps the writers are sometimes carried away by their enthusiasm. Their observations need independent corroboration, and some of their theories are at present in the realms of speculation rather than in the more prosaic region of exact science. But they make no pretence of having said the final word on the subject, and they are never disagreeably dogmatic. Regarded as a tentative and suggestive clinical study, their observations are most interesting, and the authors are to be congratulated upon their enterprise.

CANCER.

THE small work on *Cancer: Relief of Pain and Possible Cure*,[4] by Drs. SKENE KEITH and GEORGE E. KEITH, is an interesting, if not a very satisfying, addition to the abundant literature of the therapeutics of malignant disease. The authors, who have had much experience of this subject, and devoted much time to its conscientious study from an almost exclusively practical standpoint, do not come forward with another new and infallible "cure" of cancer, but simply describe a method of treatment which they believe is capable of affording much relief. In an introductory chapter containing many new and suggestive remarks on the clinical history and the treatment of the disease full details are given of the nature and the proper application of this method. This, although it consists merely in the subcutaneous injection, not of a single new agent, but of a mixture of arsenic, iodopin, and cinnamate of sodium—agents that have already been tried in simple form and found wanting—has in the authors' practice given such striking results in regard to relief of pain, to arrest and retrogression of cancerous tumours, and to marked improvement of the general condition, as to justify their hope that it may in some cases be a possible cure. There can be no doubt that the results of this treatment, which are given in full and good clinical records, deserve careful consideration. Many readers, however, may be disposed to attribute much of this improvement to the rest of the patient and the attention paid to diet, on which much stress is laid in the introductory chapter. With the exception of some two or three remarkable instances of recovery, such as occur to every surgeon who has had long experience of cancer, almost all the cases here recorded end with the sadly monotonous mention of recurrence and death.

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[3] *Études sur la Physio-pathologie du Corps Thyroïde et de l'Hypophyse.* Par Drs. Léopold-Lévi et Henri de Rothschild. Paris: Octave Doin. 1908. (Roy. 8vo, pp. 436; four figures in the text and nine plates. Fr. 3.)

[4] *Cancer: Relief of Pain and Possible Cure.* By Skene Keith, M.B., F.R.C.S.Edin., and George E. Keith, M.B., C.M. (London: Adam and Charles Black. 1908. (Cr. 8vo, pp. 166. 2s. 6d.)

In a little book on the prophylaxis, etiology, and treatment of cancer,[5] Dr. SOBRE-CASAS gives an immense amount of information relating to all branches of this important subject, gathered from a study of modern literature on the disease, and also from a personal investigation of the institutions, both clinical and pathological, recently organized in different countries with the object of overcoming this scourge. The information, however, is much compressed, and the book, it must be confessed, is likely to be regarded as a dry digest showing much conscientious labour on the part of the author but very little in the way of judicious criticism or practical comment. Indeed, it is too full of facts to be very easy reading, and not quite precise enough to serve as a useful book of reference. The author, though he believes that cancer is rapidly increasing in frequency, is optimistic as to the results of modern research. Like the author of *The Control of a Scourge*, he insists on the importance of early diagnosis and prompt operative treatment, and also, as an essential aid to these means, of an education of the general public on the early signs of the more common forms of malignant disease. Surgical treatment alone, he holds, is capable at the present time of effecting real service, and abundant statistical proof is given of the great progress made by modern methods in diminishing the risks and improving the remote results of operations for cancer.

GYNAECOLOGY.

AMONGST the more important of the contributions to the *Transactions of the American Gynaecological Society*[6] is a paper by Dr. EDWARD REYNOLDS on primary and secondary Caesarean section, and several articles on a subject very popular in the United States—namely, the treatment of the abdominal incision—forming a symposium on the method of closing the wound. The remarks of experts well known in lands which lie east of the Atlantic will be read, or at least certainly should be read, in this country with interest. Unfortunately for the junior, or for the general operator who desires to gain experience in abdominal surgery, the discussion, as is always the case, is not of much use to the inexperienced. The speakers, as usual, all defend their own system on logical grounds; hence opposite methods are shown to have equally good results. The student may conclude that methods matter little—a grave error when rupture of the wound from too early removal of the sutures, etc., as well as other complications, are taken into account. In these discussions the student must never forget that the speakers are authorities, or are men who have had experience of long series of operations. It is only others who also have had such experience that can form anything like a just estimate of the value of the opinions of advocates of interrupted sutures. They will ask for more than general arguments from these authoritative advocates of various methods of applying sutures. They will ask for statistics of the conditions of wounds five or ten years after abdominal section; but they will not get them, for it is almost impossible, especially in Anglo-Saxon countries, to follow up the histories of a long series of hospital and private cases. The prejudices of the expert are proverbial. A well-known American gynaecologist protested in the course of this discussion against through-and-through stitches because they act as drains from the skin to the peritoneal cavity. In reality the peritoneal layers of the wound unite very rapidly and prevent any draining of the kind signified, as was seen in the early days of Samaritan Hospital practice, when there was still much peritoneal infection, due, however, to evident causes other than drainage through suture tracks. In conclusion, we will turn the attention of our readers to an article by Dr. Edebohls on exploration and decapsulation of the kidney before completing the removal for any reason of its fellow. "No nephrectomy," he declares, "should be completed without examination and decapsulation of the remaining kidney."

[5] *Le Cancer, Prophylaxie, Etiologie, Traitement* [Cancer, its Prophylaxis, Etiology, and Treatment]. By Dr. C. Sobre Casas, Medical Officer to the Rawson Hospital, Buenos Aires. Paris: G. Steinheil. 1908. (Med. 8vo, pp. 224. Fr 3·50.)

[6] *Transactions of the American Gynaecological Society*, vol. xxxii. for the year 1907. Philadelphia: W. J. Dornan. (Medium 8vo, pp. 612.)

In a notice of an earlier edition of *Conservative Gynaecology and Electro-Therapeutics*[7] the opinion was expressed that Dr. BETTON MASSEY really understood electricity as well as gynaecology. On that fact rests the true value of his treatise, and no doubt the same fact gives the reason why it has reached a fifth edition. Rightly or wrongly, leading authorities will hardly accept the author's advocacy of the electric treatment of fibroids, nor do we think that his tables of 110 consecutive cases will convince the doubter. Still, all who study this book will feel that if electricity is to be employed in cases of fibroid disease, Dr. Massey teaches us its correct application. As before, however, the sceptic will still find Dr. Massey's tables much too irregular in respect to after histories to be of any service. In many other forms of disease of the female genital tract electricity has its undoubted uses, and, as we have said before, it is probably safer than certain plastic procedures of somewhat hypothetical merit very popular at present. Dr. Massey has taken especial pains, when preparing this new issue of his work, to make clear his views and practice in respect to the treatment of cancer by cataphoric sterilization. He devotes separate chapters to mammary, uterine, and rectal carcinoma, which are by no means likely to gain many converts from surgery, but deserve consideration. Dr. Massey, we must remark in conclusion, understands the rare art of editing his own book as well as he knows how to handle batteries and electrodes, for there are rather fewer pages in the present than in the fourth edition.

HERMAPHRODITISM.

To all who are interested in human androgyni Herr FRANZ LUDWIG VON NEUGEBAUER'S book on hermaphroditism in human beings[8] will prove very welcome, for in it are to be found all the data necessary for a thorough comprehension of what is at present known about the subject. The main part of the book consists of an excellently illustrated record of authenticated cases displaying the chief primary and secondary sexual characters of human hermaphrodites. In addition a section is devoted to a very complete account of the present knowledge of the development of the genital organs, and in the remainder of the text the author discusses the question of true and false hermaphroditism in the widest sense. The chapters devoted to the consideration of the secondary sexual characters, mental as well as bodily, is particularly interesting and suggestive, and it is quite obvious that if transformations of the various secondary sexual characters are to be taken as indications of a more or less complete condition of hermaphroditism the percentage of cases will rise considerably. As to the question of the cause of the development of the secondary sexual characters the author is not able to give an answer, but he points out that all the more recently and carefully acquired knowledge goes to prove that such characters are not dependent upon the nature of the genital glands.

HERNIA.

THE treatise on herniae by Professors JABOULAY and PATEL[9] is a very comprehensive account of abdominal herniae. In the opening chapters the predisposing and exciting causes are considered. The questions of weakened parieties and increased intra abdominal pressure are fairly discussed, the result being that the authors appear inclined to endorse the statement of Brouardel that "in the great majority of cases hernia is not an accident but an infirmity due to congenital malformation," presumably a preformed sac, but, like so many of the other supporters of the saccular theory, the authors produce no very convincing evidence in its support. The section devoted to causes is followed by a description of the general methods of treatment, which is an excellent summary of

[7] *Conservative Gynaecology and Electro-Therapeutics: A Practical Treatise on the Diseases of Women and their Treatment by Electricity.* By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, Philadelphia etc. Fifth revised edition. Philadelphia: F. Davis Company. 1906. (Demy 8vo, pp. 467; 157 plates and illustrations in text. 4 dols.)

[8] *Hermaphroditismus beim Menschen.* Von F. L. von Neugebauer. Leipzig: Dr. Werner Klinkhardt. 1908. (Imp. 8vo, pp. 756; 348 figs. M. 40.)

[9] *Hernies.* Par M. Jaboulay et Maurice Patel. Tome xxv. Nouveau Traité de Chirurgie. Paris: J. B. Baillière et Fils. 1908. (Sup. roy. 8vo, pp. 427; 128 figs.; 8 francs.)

general knowledge. The succeeding section is a valuable contribution to the study of the complications of hernia and their treatment, and the remainder of the volume contains excellent accounts of the anatomy, symptomatology, and treatment of all the various herniae which have been met with, excluding only those directly due to wounds, post operation eventration, retroperitoneal herniae, and internal herniae; the two last-named groups are omitted because, in the opinion of the authors, they are in reality malformations and not herniae in the proper sense of the word. As a whole, the volume is an admirable contribution to surgical literature. The material is well arranged, the illustrations are numerous and useful, the descriptions are crisp and interesting, an immense amount of information being condensed into a comparatively short space without any sacrifice of necessary detail. The book will undoubtedly recommend itself both to students and practitioners.

Mr. MURRAY'S small monograph on *Hernia, its Cause and Treatment*,[10] is in part a repetition of the paper on The Saccular Treatment of Hernia, which he read at the Exeter meeting of the British Medical Association, and partly an amplification of that paper. It is mainly repetition so far as it deals with the causes of hernia, but the chapters on treatment and geographical distribution deal with subjects not considered in the paper mentioned. Mr. Murray pins his faith to the saccular theory of hernia, according to which every hernia of the gut passes into a preformed peritoneal sac—that is, into a sac formed not by the pressure of the abdominal contents, but in some other as yet unexplained manner. In agreement with the other supporters of the saccular theory, Mr. Murray argues that, because the sac of an oblique inguinal hernia is usually or perhaps always congenital, and because in some 23 per cent. of a number of bodies examined peritoneal diverticula were found in the inguinal, femoral, and umbilical regions, therefore, in all probability, all inguinal, femoral, and umbilical herniae not due to traumatism enter preformed peritoneal sacs. Nothing is said about the other less common forms of hernia, but presumably if the saccular theory holds good for three groups it should hold good for all. No embryological evidence is put forward in support of the saccular theory, and, bearing in mind the development of the body cavity and the hind limbs, it is difficult to imagine any cause which would tend to pull peritoneal diverticula into the femoral region, where apparently they are quite common. Much might be urged against the saccular theory, but, whilst the basis on which it rests is so weak, its opponents can afford to wait till further evidence is produced in its support before they seriously consider their own position. In the sections devoted to treatment Mr. Murray deals with inguinal, femoral, and umbilical hernia, and also with herniae in the linea alba. The details of the various operations are clearly stated, and the means of securing complete removal of the sac, which Mr. Murray looks upon as more essential than the strengthening of the abdominal wall, are fully described.

The contribution which Professors ENDERLEN and GASSER make to our knowledge of the anatomy of herniae[11] consists of 72 stereoscopic photographs, accompanied by explanatory diagrams and short descriptions. They have not attempted to produce an elaborate treatise on the various forms of hernia, but have set forth in a most graphic, instructive and interesting manner the results of their own and others' dissections of various herniae and the parts concerned in the formation of herniae, and the result is an album of photographs with remarks and explanations. The photographs are most exquisite examples of reproduction, and their effect is enhanced by the utilization of colours with skill and great effect. They may be examined with a suitable stereoscope as they lie *in situ*, or they may be removed from their compartments with the greatest ease and placed in an ordinary stereoscope. The first six are devoted to the demonstration of the various stages of the descent of the testicle, four to the anatomy of the inguinal region, thirteen to the various forms of inguinal hernia, twelve to the anatomy of femoral hernia and the region in which it occurs, six to obturator hernia and its surroundings, three to lumbar hernia, one to gluteal hernia, four to multiple hernia, five to diaphragmatic hernia, and eighteen to internal herniae and the peritoneal fossae with which they are associated. The photographs are of the greatest interest, not only on account of their beauty and the skill with which they have been made, but also because they represent so truly conditions and relations which are of the greatest importance both to anatomists and surgeons. They should prove of inestimable assistance to students and operators.

[10] *Hernia, its Cause and Treatment.* By R. W. Murray, F.R.C.S. London: J. and A. Churchill. 1908. (Med. 8vo, pp. 108, 27 figs. 4s. 6d.)

[11] *Stereoskopbilder zur Lehre von den Hernien.* Von Prof. E. Enderlen und Prof. E. Gasser. Published by Gustav Fischer, Jena, 1906. (Demy 4to, pp. 76, with 72 photographs. M. 28.)

MEDICAL JURISPRUDENCE AND PUBLIC HEALTH.

UNTIL we had read this *Manual of Medical Jurisprudence, Toxicology, and Public Health*[12] we were unaware what a tremendous lot of information could be packed into a few pages, but Dr. ROBERTSON is evidently a past master at the art of condensation, and our only objection to the book is that it gives one a severe attack of mental indigestion from the plethora of facts without any ferment of principles by which the facts may be digested and absorbed. The opening page dealing with the duties of the procurator-fiscal will be apt to make an Englishman very jealous of Scotland, if he realizes how brilliantly that functionary shines besides his English representative, the coroner. The pages that follow contain all the medico-legal points that are useful to students, and one of the pleasantest characters of the book is that a great many of these points are illustrated by interesting examples, though the reports are, of course, much condensed. The chapter on life assurance is a feature we have not seen previously in a work on medical jurisprudence; we scarcely think its introduction adds much of value to the book, for it is not a subject in which students are examined, and certainly the medical officers of life insurance offices will not use this book. Section II on toxicology contains, we think, quite sufficient for all purposes short of those of the expert, and is admirably lucid and to the point, though we would like to see treatment a little more fully dealt with. Section III, on public health, is the most extraordinary example of condensation we have ever seen; nothing, from ventilation, life tables, mortality-rates, etc., up to diet tables, has been omitted, and yet the whole section occupies only just 200 pages of quarto size. It is notorious that youth can stand a diet that would give age violent cause for regret, and as Dr. Robertson avows that the book is written for youth, any further criticism is disarmed; and, indeed, we have none to offer, for everything is in the book, while the style of print and get-up are so good that reading it is very easy, even if one does not remember all one reads; doubtless Dr. Robertson's pupils will use it as a notebook, and a very valuable one too.

[12] *Manual of Medical Jurisprudence, Toxicology, and Public Health.* By W. G. Aitchison Robertson, M.D., D.Sc. London: Simpkin, Marshall and Co. 1908. (Cr. 8vo, pp. 572. 8s.)

NOTES ON BOOKS.

NOT the least useful part of the work of the Charity Organization Society is its publication of the *Annual Charities Register and Digest*,[13] of which the edition for 1908 has just made its appearance. As a work of reference to charitable institutions of any kind it is at least on a par with any of its fellows, while it fulfils other requirements in addition. The introductory matter describes in the clearest fashion the whole organization of modern society for the relief of sickness or physical and mental suffering and of poverty and its various outcomes. This introduction deals mainly with machinery which has been at work for a long time, and hence with methods of combating the difficulties arising in civilized communities such as have become classical by lapse of time. The comprehensive consideration of the whole subject, therefore, is well completed by a series of articles dealing with new ideas which are finding shape in connexion with social progress. These are for the most part by well-known writers and review a multiplicity of points, such as the control of the inebriate, friendly societies, skilled employment and apprenticeship, the garden city movement, and the like. The book should be on the table of every man whose financial or other aid in a philanthropic connexion is liable to be sought by any one.

[13] *The Annual Charities Register and Digest.* Seventeenth edition. London: Longmans, Green and Co. 1908.

MEDICINAL AND DIETETIC PREPARATIONS.

Humanized Milk.

THE large majority of infants' foods on the market, excellent as many of them are, are not suited for use in the earliest months of life, while those which are expressly prepared to give a food similar to breast milk require more or less preparation. A humanized milk requiring no preparation should therefore find a field of usefulness. A sterilized milk put up in hermetically-closed pint bottles, is now supplied by the Hygienic Dairy Society, Limited (Salisbury, Wilts), and we have examined samples submitted by them. Each of the bottles contained a small layer of curd and fat, which did not mix with the rest of the milk on shaking up; neglecting this small amount, the remainder showed the following composition on analysis:

Fat	...	...	4.06 per cent.
Proteid	...	...	2 35 ,,
Lactose	...	...	5.23 ,,
Ash	...	...	0 52 ,,
Preservatives	...	...	Absent.
Reaction	...	...	Faintly alkaline.

Thus approximating very closely to the composition of human milk. As in the case of the latter, treatment with acid precipitated the casein in a finely-divided form soluble in excess of acid, instead of in the insoluble clots obtained from ordinary cow's milk.

Elixir of Glycerophosphates and Formates.

We have received from Mr. Thomas Stephenson (137, George Street, Edinburgh) a sample of the elixir of glycerophosphates and formates which he prepares. This is an elegant and palatable preparation containing alkaline formates and free formic acid together with mineral glycerophosphates, all of which were proved to be present by appropriate tests; the menstruum is free from sugar. The elixir is also prepared with the addition of strychnine $\frac{1}{30}$ grain in each fluid drachm.

Radium Emanation Bath Salt.

The discovery of radium emanations in many of the mineral springs having a reputation for their curative properties as baths has led to the hypothesis that the emanations may play an important part in the therapeutic action of such waters, and trials that have been made with artificial baths containing radium emanation appear to support that view. Messrs. Meister, Lucius and Brüning (51, St. Mary Axe, London, E.C.) have now placed on the market a salt for preparing such baths, to which they have given the name "Emanosal"; it is put up in tablets each of which is sufficient for one bath of 44 gallons. The tablets are stated to contain a constant quantity of radium emanations in a permanent form, but it is not stated in what way this permanence is obtained; examination showed the tablets to consist principally of sodium carbonate. The baths are recommended in chronic rheumatic and gouty complaints, and for persistent arthritis and neuralgia.

WEST LONDON HOSPITAL AND COLLEGE.—Mr. L. A. Bidwell presided on June 23rd over the eleventh annual dinner of the West London Hospital and Post-graduate College held at the Trocadero Restaurant. The toast of "The Imperial Forces" was proposed by Dr. H. J. Davis. In replying, the Director-General of the Medical Department of the Navy, Inspector-General James Porter, spoke in grateful terms of the debt the naval service owed to the West London Medical School for the great work it had been doing, and was now doing, for medical officers of the navy. During the last six years 200 naval medical officers had passed through the West London Medical School. Surgeon-General Sir A. Keogh, Director-General Army Medical Service, who also responded, said that his department had devoted itself to the prevention of disease, and if there was wastage in war it would not be possible to lay the blame on the medical profession. He looked upon the West London Hospital as the most progressive institution in London. It was of enormous advantage to medical men to be able to follow the work in the hospital, because there were no unqualified medical students. The toast of "The West London Hospital and Post-graduate College" was proposed by Mr. Bidwell, who described the progress made by the Post-Graduate College. Mr. G. F. Marshall replied for the hospital, and Lieutenant Colonel Woolbert, I.M.S., for the Post-Graduate College. Dr. E. A. Saunders proposed "The Visitors," which was acknowledged by Sir Roper Parkington; and after the health of "The Chairman" had been given by Mr. Aslett Baldwin the proceedings terminated.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(*Continued from p. 1499.*)

AN appendix to the fourth report of the Royal Commission on Vivisection, dated December, 1907, was issued about the middle of March.* It contains minutes of the evidence taken during the months of October, November, and December.

Evidence of Lieutenant-Colonel Lawrie, M.B., I.M.S.

Colonel Lawrie said there were certain points that he wished to bring before the Commission. The first was that anaesthesia and vivisection were, or ought to be, inseparably allied, and until the administration of chloroform was established on a uniformly sound basis the question of vivisection could not be set at rest. Until chloroform was given in the way that had been proved to be correct, vivisection could not be carried on without pain; the present position of chloroform led to its administration in the wrong manner, and that led to the administration of other anaesthetics which were thought to be better than chloroform. What he meant was that vivisection ought not to be practised unless it was invariably done under anaesthesia. On its being pointed out to him that that was the law, he said the anaesthetic was now given through a tracheal tube, which necessitated a painful operation before anaesthesia was commenced. It was pointed out that, on the contrary, the animal was anaesthetized before the wound was made. The witness replied that in experiments he had seen the operation of tracheotomy was done first without anaesthetics. That was in Edinburgh, in Professor Rutherford's laboratory, in 1890. There was no necessity for that that he knew of. He understood that that was the way that anaesthetics were usually given in physiological laboratories. Dr. Wilson said it would be a violation of the Act. Sir Mackenzie Chalmers said that certainly an offence was committed if that was done. The witness said he had seen it done. Asked by Sir Mackenzie Chalmers if he had ever seen it done in any other laboratory except by Professor Rutherford in 1890, he said he had seen it done without any chloroform at all. He did not see it done, but he knew it was done (*sic*). Asked by Mr. Ram where, he said he would rather not say where if he was not obliged. It was done in 1894 in England. Asked by Dr. Gaskell what was done, he said cross circulation experiments. The whole dissection was performed without chloroform. It was performed with a small dose of morphine. The animals were dogs. He did not call morphine an anaesthetic, unless it was given in a poisonous dose. Asked by Sir William Church if he denied the fact that there was such a thing as heart failure in chloroform, he said that from the direct action of chloroform he did. Chloroform had no direct action on the heart. He agreed that chloroform lowered the blood pressure. It was the first effect of chloroform. The blood pressure was lowered by narcosis of the vasomotor centre of the brain. That rather eased the work of the heart. Nothing else whatever happened to the heart until the respiration stopped. Asked about cases in which respiration was impeded, he said that when respiration stopped then the heart ran down and failed, because its nutrition was cut off. The contraction of the heart was not interfered with a bit. It did not become dilated. Asked as to the following statements in his *précis*—that the Hyderabad Commission on Chloroform proved that the uncomplicated action of chloroform, which might be called its normal action, was to cause (1) the normal fall of the blood pressure, with (2) unconsciousness, (3) then anaesthesia, (4) then stoppage of the respiration, (5) then failure and stoppage of the heart, and (6) then death—whether that was not agreed to by all anaesthetists, he said they did not teach it. They taught that it had a direct action on the heart. As regards another statement in his *précis*—that, owing to the rejection by physiologists of the results of the work of the Hyderabad Commission on Chloroform, vivisection experiments had been brought into disrepute in Great Britain,

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

he said it was because they were not done painlessly, as, he took it, they ought to be. Vivisection experiments were not done painlessly. Asked by Mr. Ram if that was his opinion, or his knowledge from facts, he said it was from what he had seen himself. Asked by Sir W. Church if he inferred from what he had seen that when an animal was kept under an anaesthetic with a tube in its trachea the initial operation was never done under anaesthesia, the witness said he did not say it was never done, but that he knew from his own observation that it was done without an anaesthetic. He could not say that it was always done from his own observation, but he understood, of course, that it was done constantly in that way. Asked by Mr. Tomkinson how the animal was restrained in the case that he saw, he said it was fastened down on what was called the rabbit board. He did not think it made any particular noise. It was tied up and muzzled. Asked by Sir Mackenzie Chalmers if he knew that it had no anaesthetic of any sort, he said, Yes, he saw it done without any anaesthetic of any sort many times. He was quite sure that nothing was given to the animal beforehand. On its being put to him by Sir William Church that he agreed with other anaesthetists that death occurred in one of two ways—either from failure of respiration or from failure of the heart, he said, No, only in one way—from failure of respiration, and that led to failure of the heart. The heart must fail if the respiration stopped. Asked with regard to a statement that he had seen a physiologist perform prolonged vivisection experiments on dogs under a 10-drop dose of morphine solution, this dose being equal to $\frac{1}{12}$ grain of solid morphine, if they had no other anaesthetic of any sort, he said he believed not until the observations began on the action of chloroform. Asked by Sir William Collins if those dogs were insensitive to pain when they had the morphine only, he said they could not have been. Asked by Dr. Gaskell why not, he said it was quite impossible that a 10-drop dose of morphine could make a dog insensible to pain. Asked what was the usual dose given to man, he said as a sedative to lull certain kinds of pain, 30 to 60 drops; $\frac{1}{12}$ grain was much too small a dose. He had never seen it given in that dose to relieve pain. Asked if $\frac{1}{4}$ grain was not sufficient in renal colic to stop pain, he said morphine had no effect whatever on renal colic. He had had experience of it himself. In reply to Sir William Collins, he said it would not make a man insensitive to a cutting operation; it would have no effect on the sensibility in any dose short of a poisonous dose, if one took renal colic as an example. Asked when insensibility to pain came in in the case of a lethal dose, he said when the animal was narcotized. Asked by Dr. Gaskell if it was a mistake for the medical profession to suppose that morphine was a good thing to stop pain, he said it did not have much effect if there was much pain. It did lull pain in a big dose. He could tell this from his own experience about renal colic and morphine. He passed a kidney stone soon after coming home from India, and he was in such fearful pain that he had to send for a medical man. He sent for a great surgeon whose name everybody knew, who gave morphine, but it had absolutely no effect. In about twenty minutes he proposed to give him another dose. The witness said he was very much afraid of morphine, as it appeared to increase the collapse, but not at all afraid of chloroform. The surgeon then gave him chloroform for five and a half hours, until the stone passed. But the morphine had no effect whatsoever, and it was given in a full dose. Sir William Church said:

I think we have had a great deal of evidence that it requires a large dose of morphine to affect a dog. I think page 4 of your *précis* is chiefly what I might call matter which does not concern us: it is chiefly a scientific question. Then on page 5 you say that in the vivisection experiments which have been conducted by physiologists for the last fifteen or more years, either to uphold the heart theory of chloroform or for scientific purposes, the anaesthetic has been pumped into the lungs with a motor through a tracheal tube; and that the meaning of this is: (*a*) That no physiological experiments on the action of chloroform during this period possess any true scientific value; and (*b*) that, owing to the anomalous position of anaesthetics, all vivisection experiments have been accompanied by unnecessary pain. Would you please explain a little what you mean there?

The witness said the essential point in giving chloroform was never under any circumstances to interfere with natural respiration, but if one gave chloroform through a tracheal tube one must interfere with the natural respiration, and vitiate the experiment so far as the action of the chloroform was concerned. In reply to a further question, he said it was a matter of ordinary common sense that, if one pumped the chloroform in through the trachea, it must interfere with the natural breathing. He agreed that it produced anaesthesia, and it produced other effects as well, caused by interference with the natural respiration. The animal did not suffer any pain. Asked if he knew of any physiologists of repute who took the view that if air charged with chloroform was administered through the trachea to a dog it interfered with the correctness of their experiment, he said he could not tell what other people thought about it. He could only tell them his own view of it. Asked if he could tell of anybody else's views that coincided with his, he said everybody's view must coincide with his. It was actual fact; it was not a matter of opinion. If one pumped air into the trachea, it must interfere with natural respiration. Asked by Sir William Church if he was aware that chloroform was given through the trachea in a considerable number of operations on man, he said he was not. He had never seen it given in that way. It might have to be done as a very, very rare and exceptional thing. Asked if he really meant the Commission to infer that the teaching of the administration of anaesthetics was seeing the physiological experiments in the laboratory, he said they ought to be taught the right way of giving chloroform in those experiments, which ought to be utilized for that purpose. It was just as important as showing them other physiological effects. Asked what proportion of the experiments done in physiological laboratories were done by this method of having the trachea opened and a tube inserted, he said he could not tell them. He understood that it was the usual way; but of course the Commission could find out quite easily whether it was or not. Asked if he had not made any inquiries before he made this statement, he said it was from what he had seen, and from the manner in which all the experiments on chloroform had been described, that he said chloroform was always given in that way through the tracheal tube. He meant in cases of prolonged demonstrations before students. Asked by Dr. Gaskell if he imagined the usual way to be pumping the air and chloroform, he said, Yes. That was described as having been done in the Bayliss trial, and it was done in Embley's experiments. Dr. Wilson said that was counteracted by artificial respiration, was it not? Dr. Gaskell said it would be necessary for artificial respiration—not natural respiration. The witness said it did both. Sir William Church said:

Then you go on to state that to make sure of painless vivisection two things appear to be necessary: First, that it should be made illegal to give chloroform to animals in any other way than by the mouth, on the principles which have been proved to be sound by the Hyderabad Commission. That is what you would recommend to this Commission?

The witness said he thought that certainly ought to be done in order to put a stop to giving chloroform in this way. In reply to further questions, he said the conclusions of the Hyderabad Commission had been absolutely ignored. Asked if it would not be putting a considerable difficulty in the way of experimentation if animals could only be kept under anaesthesia by what he called the natural way, he said he did not think it would at all. Asked if in what he called the natural way there was any method by which one could actually measure the quantity of chloroform that the animal received, he said there was not. Proceeding, he said it had been said that the chloroform had been measured, but no one could possibly measure the amount that was respired—the amount that was taken in by the patient. Asked if he was acquainted with Mr. Vernon Harcourt's method of measuring chloroform, he said, Yes. He had not seen it done. It was very reliable in this way, that it diluted the chloroform; but it could not measure the amount that the patient took in. In reply to further questions, he said that the General Medical Council should have the power to treat the infliction of unnecessary pain by experimenters on animals as a disgraceful act, in order to put a stop to unnecessary pain in vivisection. On its being put to him that the General Medical Council only

had power over the medical profession, he said, Exactly. On its being further put to him that he would leave the physiologists, who appeared to be in his mind the chief offenders, untouched, he said he took it they were part of the medical profession. The Chairman said, Not necessarily, unless they have a medical degree. Sir William Church said:

You say that chloroform given on the principles advocated by the Hyderabad Commission is a totally different anaesthetic from chloroform given on the heart principle; and you say that the former is always safe, the latter never. That is your own opinion?

The witness replied that it was proved by statistics, and anybody could be taught to give chloroform safely on the Hyderabad principle, while no one could on the heart theory. He thought that the giving of chloroform to dogs would be a most valuable method of instruction in the use of anaesthetics for medical students. Asked if he would advocate the use of chloroform by others than those holding a medical diploma, he said he would advocate the use of chloroform by nurses and by hospital orderlies, and by medical students under proper supervision. He went on to say that a special class of specialist was called into being by the experiments of 1864, and those of 1879 which followed. Asked if it was quite the case that chloroform was given by students in Edinburgh for more than twenty years in the middle of the last century in all surgical operations without a death, he said it was absolutely true so far as the clinical wards were concerned. At that time he believed that in that period there might have been a death—there was a death, but it was not in Syme's wards. He was talking now of the wards of the professor of clinical surgery during that period. He admitted that there were no accidents in his ward. Simpson had a fatal case. In reply to further questions, he said there were no inquests in Scotland. There was an inquiry by the Procurator Fiscal. He knew of no death in the whole of the infirmary during that time (1847–1870), except one rather doubtful one. That applied especially to Syme's wards. The chloroform in those days was invariably given by students. During the whole time that he was in India in charge of many different hospitals the chloroform was given by students in precisely the same way, and there was one death. In reply to further questions, he said that chloroform could be given with perfect safety so long as the regular respiration was maintained. One had no business to allow the respiration to become embarrassed at all under chloroform. If the respiration were embarrassed one must take away the chloroform and stop the administration until the respiration was regular again. Asked if there was any danger of pain supervening when one stopped giving the chloroform, he said, Not a bit; one only stopped it for the temporary embarrassment. He began to give anaesthetics as clinical clerk in Edinburgh in 1865, and had made them a special study ever since then. He published some statistics in 1901 for ten years. That included 17,000 cases, and he had not got the record for previous years, because he was moved about in India. He could not quite tell how many, but the number was enormous. It was put to him by Sir William Collins that they had often been told that chloroform was discovered by experiments on man, and not on animals. The witness said, Yes; but its present position depended on laboratory experiments. Asked if it was discovered by experiments on man, he said he believed so. Syme's method of administration was satisfactory in his day. Asked if Syme deprecated experiments on animals, he said he could not say anything about that. On its being put to him that the suggestion that chloroform killed by action on the heart was erroneous, he said the Hyderabad Commission had proved it. The Cambridge experiments were a failure; they were allowed to be wrongly performed. The chloroform had access to the brain when it was supposed to be having access to the heart alone. Asked if it was thought as the result of those experiments that chloroform acted upon the heart, he said, Yes, it was allowed. That was a wrong principle, from their point of view. Asked if the vitiation of those Cambridge experiments was admitted, he said it was admitted by Dr. Gaskell himself. Dr. Gaskell said, "Oh, no." The witness said, "I have your letter." Dr. Gaskell said the vitiation of the experiments was not admitted by him. Sir William Collins asked if the witness was referring to the letter on page 17 of his book on chloroform; he said, Yes. Dr. Gaskell said, "You may read it if you like." In reply to further questions, the witness said that all the teaching at present in the textbooks was that chloroform affected the heart, but he had seen many of the best anaesthetists in London give chloroform, and he had never seen any of them watch the pulse. The point was that the laboratory experiments were supposed to afford scientific proof that chloroform affected the heart. Their experiments proved where those scientific experiments were mistaken. The Hyderabad Commission experiments traversed those experiments, and they showed where the mistake arose in the physiologist's experiments. All their own experiments were done by chloroform administered in the ordinary way by inhalation. All the laboratory experiments on which the theory was based—that chloroform affected the heart—were performed, so far as he knew, with chloroform given through a tracheal tube. The results were opposed to observations they made when chloroform was given by the mouth. In reply to Sir Mackenzie Chalmers, he said the Hyderabad Commission experimented with animals. Asked if he agreed that animal experimentation was necessary for the purpose of determining the action of chloroform and other substances, he said it was necessary then to refute other experiments by laboratory experiments. There was no other way of refuting them. Asked if he agreed that animal experimentation generally was necessary for advance in medical science and in physiology and in pharmacology, he said, Yes. Medical science had received enormous benefit in the past, but it would receive the greatest benefit of all if the Hyderabad experiments were not ignored. Asked if, apart from these tracheotomies that he saw in Professor Rutherford's laboratory, he had any knowledge of any painful experiments being performed without anaesthetics in England, he said he had seen two sets of experiments. In one set of experiments nothing was done, and in the other set of experiments—the cross-circulation experiments—morphine was given. Asked if, apart from that, he knew anything about the ordinary practice in laboratories in England, he said, No, except what he heard at the Bayliss trial. On its being put to him that it did not appear at that trial that tracheotomy was performed before the animal was anaesthetized, he said he did not remember that anything was said about it. In reply to further questions, he said he had absolutely no doubt that in whatever way chloroform was administered it was an absolute anaesthetic, absolutely freeing the animal from pain. From the time of unconsciousness there could be no pain. His point was that it was improper and wrong to perform tracheotomy before the chloroform was administered. Asked if tracheotomy was a very painful operation, he said he should think it was a very painful operation. Asked if it was not done on children without anaesthetics, he said, Not always. Asked if he could give anaesthetics to a child with diphtheria, he said, Yes, one could give a small dose, but a child, as a rule, by the time it got to the stage where tracheotomy was required was almost unconscious. It would practically not need an anaesthetic, or, at any rate, only just enough to divert its attention from the incision. Asked whether when chloroform was administered there was a sudden passage from feeling pain to insensibility, or a gradual diminution of pain, he said supposing that one was giving chloroform, one could keep on asking the patient questions, and suddenly the patient would stop answering, and had become unconscious. Asked if he thought unconsciousness to pain went before or after the general consciousness, he said it went after. If chloroform was administered not in a sufficient quantity to produce unconsciousness, the pain would not be nearly so acute, but the patient would remember it. As chloroform was administered there was a progressive diminution of sensibility to pain. Diminution of sensibility preceded unconsciousness, and directly unconsciousness supervened there could be no pain; from that moment the patient would never remember anything one did afterwards. He would not feel it at all. But pain might be diminished before that stage was reached. Asked if he had performed other vivisection experiments besides those with reference to chloroform, he said, No, except with ether. His whole study had been the action of anaesthetics, and of course he taught students in India to operate by vivisection. The student learnt how to become accustomed to do

operations on living tissues and also how to give chloroform at the same time. Asked if he attached great importance to students doing operations on living animals before they practised on living human beings, he said it was of tremendous importance in India, because it was the only chance that a student ever had of doing an operation at all. In England a man went through successive stages in hospitals of every kind. He might be house-surgeon and hold all sorts of appointments, and become assistant surgeon and then surgeon to a hospital. But these men in India were frequently sent straight out from the schools into a district of which they had complete charge, hospital and all. Asked if there was any difficulty with the native population in regard to teaching students on animals, he said there was no feeling whatever as long as one did not give the animals pain. He had never had any protests. The Pasteur Institute had been established since he left India. Asked if he could tell them anything about the feeling of the natives with regard to that, he said he thought the natives would place the most implicit confidence in it, from what he knew of them. He had often discussed with natives in India the question of animal experimentation. Their objection was to the causing of anything like unnecessary pain. As regards vivisection generally, he agreed to this extent, that it was not only lawful to experiment on animals, under anaesthesia, but that it was lawful to allow the animal to recover for the purpose of watching the effects of the operation. Asked if he thought it necessary to inoculate animals for the purpose of watching the progress and spread of the disease, he said he could not give an opinion of any value about that, but he should think it was. Asked if, supposing an animal was to have a hypodermic injection, it was not more humane to use the hypodermic needle without an anaesthetic than to give the animal an anaesthetic, he said he did not see how it could be, although he should think it was unnecessary to give an anaesthetic. One could give an anaesthetic in the box without the animal being upset by it or terrorized. He did not think the administration of anaesthetics to animals caused any discomfort or apprehension whatever, unless one fastened them down or held them down. Asked how they did it in India, he said they put them into a box with a glass cover, and directly the animal fell down on the floor of the box it was taken out and put on the table. The animal did not mind it or make any objection to this. He used in India dogs, monkeys, rabbits, and cats. In reply to Mr. Ram, he said it was admitted on all hands that chloroform rightly administered was a safe and sure anaesthetic, and absolutely freed the animal from pain, but everybody did not agree that it was a safe anaesthetic at present. Asked about a statement in his *précis* that chloroform given on the theory that it might cause death by heart failure, sometimes suddenly, was the most dangerous of all anaesthetics, he said it was because it was likely to cause a certain percentage of deaths. On its being put to him that it would not matter to the animal under operation whether the chloroform caused death or did not, because in neither case would it feel, he said that was so. In reply to further questions, he said his point was that all vivisection experiments could be performed painlessly if chloroform was given in the right way. His evidence bore upon the method of administering chloroform in two ways, as regards the animal and as regards the student. On its being put to him that if an animal to which chloroform was given through the trachea was previously properly anaesthetized, his theory might be invalidated, but the animal did not suffer any more, he said, No, if the tracheotomy was done under anaesthesia. He agreed that, if what he said was contrary to the very words of the Act, the Act wanted no amendment in that respect. Asked if he was aware when he saw it that it was contrary to the Act, he said he was told so afterwards. He did not know it at the time. He learnt it immediately afterwards, but did not report the case to any one as being an illegal act. Asked by Dr. Gaskell for the name of any person who had been in the habit of administering anaesthetics, or had studied the action of chloroform who believed that chloroform had no effect upon the heart, except himself, the witness named Surgeon-General Bamford. He understood that all Syme's pupils had the same view as he had, but he could not speak for anybody else. Dr. Gaskell said he meant professional anaesthetizers and that kind of person, or people engaged in the investigation of anaesthetics in physiological laboratories. The witness said he could not give any name in physiological laboratories, but he could give the names of many surgeons and practitioners. They had been accustomed to doing operations, and had studied it, he should think, very closely. Asked by Mr. Tomkinson about the tracheotomy he had seen performed upon a rabbit without anaesthetics, whether flaying the skin with scissors would not be exceedingly painful, he said he thought so—frightfully painful. There could be no comparison whatever between the pain caused by a mere incision in the skin of a child's flesh with that inflicted upon that rabbit. That was done in several cases, and in no case was an anaesthetic administered before the tracheotomy. Asked what was the supposed advantage of introducing the chloroform in that manner instead of through the mouth and nose, he said he could not imagine any advantage whatever. It was a wholly unnecessary operation, and it taught the students a wrong way of administration. It would never be so administered to a human patient except in exceptional operations round the mouth or jaws which would interfere with natural breathing. In reply to further questions, he said he thought one might do a great deal more to a man stupefied by alcohol without his feeling it, than to a man under the influence of a medicinal dose of morphine. They did a great many experiments with morphine in the Hyderabad Commission, and their conclusion was that dogs were very indifferent to the action of morphine, so that if one wanted to produce any effect upon them at all one had to give an enormous dose. He had no experience of the action of curare. Asked if he held any strong view as to the necessity or the advantage or the propriety of administering curare in company with other anaesthetics, he said he could not see what was to be gained by it. Asked by Dr. Wilson if these morphine experiments were carried out at Hyderabad on dogs to render them, or to attempt to render them, completely insensible to pain, he said they carried them out really to see whether they deepened the chloroform anaesthesia or not. He had never used morphine as an anaesthetic, but it had no effect in deepening anaesthesia. Asked if he could give an idea of the dose that would prove fatal to an ordinary sized dog, he said he should think one would have to give it at least 5 or 10 grains. The dose would vary very considerably, according to the idiosyncrasy of the animal, and possibly the breed of the animal. One could not be guided by the body-weight. Asked if he experimented with any other narcotics besides morphine, he said they experimented with various drugs administered in order to ascertain whether they had any effect in modifying the action of chloroform, such as atropine, morphine, nicotine, and so on. Morphine would not abolish the pain of cutting unless one poisoned the animal with it. Asked, supposing that an animal got what was called a lethal dose, how long it would live under an operation, he said he could not say. It might live some hours. It would be completely insensible to pain all the time if it were comatose. In reply to other questions, he said he had seen a great deal of plague. He was Plague Commissioner for Hyderabad for five years. Asked if he believed in Haffkine's prophylactic, he said that at the time he saw it used it was always putrid. He could not say he had followed the literature of the subject very closely since.

(To be continued.)

EXPERIMENTS ON LIVING ANIMALS.

THE "Return showing the number of experiments on living animals during the year 1907, under licences granted under the Act 39 and 40 Vict., cap. 77," was issued last week.*

ENGLAND AND SCOTLAND.

Professor Thane's report contains the names of all "registered places." Seven new places were registered for the performance of experiments, and two places were

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removed from the register during the year. All licensees were restricted to the registered place or places specified on their licences, with the exception of those who were permitted to perform inoculation experiments in places other than a "registered place," with the object of studying outbreaks of disease occurring in remote districts or under circumstances which render it impracticable to perform the experiment in a "registered place." In one instance permission was granted for a limited period to perform inoculation experiments in a place that was not registered, on condition that the place should be open to inspection, and it was inspected while the experiments were in progress. The names of all those persons who held licenses during 1907 are contained in special tables. The total number of licensees was 423. Reports are furnished by (or, in a few exceptional cases, on behalf of) these licensees in the form required by the Secretary of State. The reports show that 118 licensees performed no experiments. These numbers include 26 licensees whose licences expired on February 28th, 1907, and of whom 23 returned no experiments in 1907. Tables are given showing (1) That licences and certificates have been granted and allowed only upon the recommendation of persons of high scientific standing; (2) that the licensees are persons who, by their training and education, are fitted to undertake experimental work and to profit by it; (3) that all experimental work has been conducted in suitable places. Another table shows the number and the nature of experiments returned by each licensee, specifying whether these experiments were done under the licence alone or under any special certificate. The table is divided into two parts, A and B, for the purpose of separating experiments which were performed without anaesthetics from experiments in which anaesthetics were used.

The total number of experiments included in this Table IV (A) was 2,580. Of these there were performed:

Under Licence alone	... ...	1 214
,, Certificate C	... ...	167
,, Certificate B	... ...	983
,, Certificate B+EE	... ...	215
,, Certificate B+F	... ...	1

Table IV (B) is devoted entirely to inoculations, hypodermic injections, and some few other proceedings performed without anaesthetics. It includes 70,794 experiments, whereof there were performed:

Under Certificate A	... ...	70,137
,, Certificate A+E	... ...	462
,, Certificate A+F	... ...	195

The total number of experiments was 73,374, being 27,301 more than in 1906; the increase in the number of experiments included in Table IV (B) was 27,507, while those in Table IV (A) showed a decrease of 206.

All experiments involving a serious operation are given in Table IV (A). The larger part of the experiments included in this table—namely, all performed under licence alone, and under Certificate C—1,381 in number, come under the provision of the Act that the animal must be kept under an anaesthetic during the whole of the experiments, and must, if the pain is likely to continue after the effect of the anaesthetic has ceased or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic.

In the experiments performed under Certificate B, or B linked with EE. or F, 1,199 in number, the initial operations were performed under anaesthetics, from the influence of which the animals are allowed to recover. The operations are required to be performed antiseptically, so that the healing of the wounds shall, as far as possible, take place without pain. If the antiseptic precautions fail, and suppuration occurs, the animal is required to be killed. It is generally essential for the success of these experiments that the wounds should heal cleanly, and the surrounding parts remain in a healthy condition. After the healing of the wounds the animals are not necessarily, or even generally, in pain, since experiments involving the removal of important organs, including portions of the brain, may be performed without giving rise to pain after the recovery from the operation; and after the section of a part of the nervous system, the resulting degenerative changes are painless.

In the event of a subsequent operation being necessary in an experiment performed under Certificate B, or B linked with EE or with F, a condition is attached to the licence requiring all operative procedures to be carried out under anaesthetics of sufficient power to prevent the animal feeling pain; and no observations or stimulations of a character to cause pain are allowed to be made without the animals being anaesthetized.

In no case was a cutting operation more severe than a superficial venesection allowed to be performed without anaesthetics.

The experiments included in Table IV (B), 70,794 in number, were all performed without anaesthetics. They were mostly inoculations, but a few were feeding experiments, or the administration of various substances by the mouth or by inhalation, or the abstraction of a minute quantity of blood for examination. In no instance was a certificate dispensing with the use of anaesthetics allowed for an experiment involving a serious operation. Inoculations into deep parts, involving a preliminary incision in order to expose the part into which the inoculation was to be made, were required to be performed under anaesthetics, and were therefore placed in Table IV (A).

The operative procedures in experiments performed under Certificate A, without anaesthetics, were only such as were attended by no considerable, if appreciable, pain. The certificate was, in fact, not required to cover these proceedings, but to allow of the subsequent course of the experiment. The experiment lasted during the whole time from the administration of the drug, or injection, until the animal recovered from the effects, if any, or died, or was killed, a period possibly extending over several days, or even weeks. The substance administered might give rise to poisoning, or set up a condition of disease, either of which might lead to a fatal termination. To administer to an animal such a poison as diphtheria toxin, for example, or to induce such a disease as tuberculosis, although it might not be accompanied by acute suffering, was held to be a proceeding "calculated to give pain," and therefore experiments of the kind referred to come within the scope of the Act 39 and 40 Vict., cap. 77. The Act provides that, unless a special certificate be obtained, the animal must be kept under an anaesthetic during the whole of the experiment; and it was to allow the animal to be kept without an anaesthetic during the time required for the development of the results of the administration that Certificate A was given and allowed in these cases.

It must not, says Professor Thane, be assumed that the animal is in pain during the whole of this time. In cases of prolonged action of an injected substance, even when ending fatally, the animal is generally apparently well, and takes its food as usual, until a short time before death. The state of illness may last only a very few hours, and in some cases it is not observed at all. In a very large number of the experiments included in Table IV (B), the results were negative, and the animals suffered no inconvenience whatever from the inoculation. These experiments were therefore entirely painless.

In the event of pain ensuing as the result of an inoculation, a condition attached to the licence requires that the animal should be killed under anaesthetics as soon as the main result of the experiment had been attained.

The increase in the number of experiments in Table IV (B), 1907, when compared with that of 1906, namely, 27,507, was mainly due to the experiments performed in the course of cancer investigations. The total number of experiments performed for this purpose at three institutions during 1907 was 45,032, being 243 in Table IV (A), and 44,789 in Table IV (B). The latter were almost entirely inoculations into mice.

A large number of experiments, almost wholly simple inoculations and similar proceedings contained in Table IV (B), were performed either on behalf of official bodies, with a view to the preservation of the public health, or directly for the diagnosis and treatment of disease. Several county councils and municipal corporations have, it is pointed out, their own laboratories in which bacteriological investigations are carried on, including the necessary tests on living animals; and many others have arrangements by which similar observations are made on their behalf in the laboratories of universities, colleges, and other institutions. A sewage farm is registered as a place in which experiments on living animals may be performed in order that the character of

the effluent may be tested by its effects on the health of fish. The Board of Agriculture has two laboratories which are registered for the performance of experiments having for their object the detection and study of the diseases of animals In other places experiments were made on behalf of the Home Office, the War Office, the Local Government Board, the Board of Agriculture and Fisheries, the Metropolitan Asylums Board, the Royal Commission on Sewage Disposal, the Royal Commission on Tuberculosis, and the Sleeping Sickness Committee of the Royal Society. Fifty-one licences returned over 8 000 experiments performed for Government Departments, County Councils, Municipal Corporations or other Public Health Authorities; 2 825 experiments were performed by two licensees for the Royal Commission on Tuberculosis, and twelve licensees performed nearly 4,600 experiments for the preparation and testing of antitoxic serums and vaccines and for the testing and standardizing of drugs. During the year the usual inspections of registered places were made by Professor Thane and Sir James Russell. They saw numerous animals under experiment, both of those coming into Table IV (A) and of those coming into Table IV (B); they everywhere found the animals suitably lodged and well cared for, and the licensees attentive to the requirements of the Act, as well as to the conditions appended to their licences by the Secretary of State. The irregularities which occurred during the year were not of a serious character, and all arose from misunderstanding or inadvertence with respect to the extent or application of certificates. They were as follows:

One licensee performed three inoculation experiments in excess of the number for which the certificate had been given.

In two instances the licensee performed experiments on animals (not cats or dogs) other than those for which the certificate had been given.

Two licensees holding certificates given for inoculations made use of other procedures, in one case feeding, in the other exposure to noxious vapours, which were not indicated in their certificates.

One licensee holding Certificate A, which dispenses entirely with the use of anaesthetics, performed inoculations on anaesthetized animals. For this the licensee should have obtained Certificate B, which is necessary when an animal under experiment is to be allowed to recover from the anaesthetic which has been administered.

By direction of the Secretary of State an appropriate caution was addressed to each of these licensees.

IRELAND.

Sir W. Thornley Stoker, Inspector for Ireland, states that nine registered places were in existence. Fourteen licences were in force in the year; of these one lapsed, five expired but were extended, and three were new licences.

The certificates in existence or allowed were:

A	to 10	licensees
B	,, 10	,,
C	,, 3	,,
E	,, 3	,,
EE	,, 3	,,
F	,, 1	licensee

Of these, nine were new certificates, namely, six of A and one each of B, E, and EE. Two certificates (A and B) lapsed.

The experiments performed were 158 in number: 4 being under licence alone, and 154 under certificates. Ten licensees performed experiments. Fourteen licensees held thirty certificates, of whom ten performed experiments, namely:

Under Certificate	A	... 133
,, ,,	B	... 10
,, ,,	C	... 11

The animals experimented on were:

Mice	... 57
Guinea-pigs	... 50
Rabbits	... 45
Dogs	... 3
Goats...	... 2
Cat	... 1

The experiments were physiological, pathological, and in two instances therapeutical. Eleven were for the purpose of demonstrations of the phenomena of circulation, respiration, cardiac control, and secretion. The rest were inoculations for diagnosis, the study of tubercle, typhoid fever, cholera, streptococcal infections, effects of *x* rays, identifications of blood stains, the treatment of goitre, injection by a trypanosome found in blood of bats to study the possibility of infection. Studies were made of gastric movements, of the functions of the pancreas, and of kidney secretion. No abuses of the Act or irregularities in its application were found in Ireland during the year, and Sir Thornley Stoker expresses the opinion that all work done was sincere, well intentioned, and in conformity with the conditions imposed on the various licensees.

LYNN THOMAS AND SKYRME FUND.

THIRTEENTH LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Subscriptions from June 6th to June 12th.

Subscribers of Five Guineas.

Cardiff Medical Society, per F. W. S. Davies.
Sheffield Division, British Medical Association, Members, per A. W. Forrest.

Subscribers of Three Pounds Fifteen Shillings.

Dumbarton and Argyll Division, British Medical Association, per J. Ewing Hunter.

Subscribers of Three Pounds Five Shillings and Sixpence.

North Suffolk Division, British Medical Association, per Wilson Tyson, the subscribers being:

Drs. Bailey, W. L. Bell, W. Berry, H. M. Evans, H. P. Helsham, D. H. Hutchinson, James, A. Marshall, W. A. Shann, B. Smith, J. P. Smith, Wilson Tyson, H. B. Walker.

Subscriber of Two Guineas.

W. Ll. Rhys, Aberdare.

Subscribers of One and a Half Guineas.

Cleveland Division, British Medical Association, per W. S. Dickie. The subscribers are:

One Guinea from:

Donaldson, James, Middlesbrough.

Half a Guinea from:

Stonehouse, H., Middlesbrough.

Subscribers of One Pound Six Shillings.

Walthamstow Division, British Medical Association, per A. P. Eldred. The subscribers are:

Half a Guinea from:

Eldred, A. Pottinger, Walthamstow; Fowler, Trevor, Epping.

Five Shillings from:

Douglas, K. Walthamstow.

Subscriber of One Guinea.

Richards, H. Meredith, Croydon.

Subscribers of Half a Guinea.

Davies, L. G., Histon, Cambridge.
Watson, Charles R., Tunbridge Wells.

Subscriber of Ten Shillings.

Pratt, Eldon, Henfield, Sussex.

Subscriber of Seven Shillings.

Ollenbach, D. S., Arnvankad, Nilgiri Hills, India.

Subscribers of Five Shillings.

Aitken, Charles J. Hill, Barkley West, Cape Colony.
Stewart, W., Leith.
Anon. (Warrington Infirmary).

Subscriber of Half a Crown.

Glasgow Southern Division, British Medical Association, per John Stewart (additional subscription).

FOURTEENTH LIST OF SUBSCRIPTIONS.

Subscriptions from June 13th to June 19th.

Subscriber of Two Guineas.

Mackenzie, Sir Stephen, Dorking.

Subscribers of Two Pounds.

Burnley Division, British Medical Association, per James Gardner.

Subscribers of One Guinea.

Davies, D. Arthur, Swansea.
Macan, J. J., Cheam, Surrey.
Myles, John, Dolgelly.
Simpson, J. Herbert, Rugby.

Subscribers of Half a Guinea.

Allan, James, Leeds.
Blair, G. Macmillan, London.
Savery, Frank, Ealing.

Subscriber of Ten Shillings.

Bethell, Alfred, Lambourn, Berks.

Subscribers of Five Shillings.

Browning, H. A., Surgeon, R.N.
Joberns, W., Wolverhampton.

Subscriber of Half a Crown.

Smith, C., Leeds.

RESEARCH DEFENCE SOCIETY.

THE inaugural meeting of the Research Defence Society was held at the house of the Royal Society of Medicine, Hanover Square, on June 19th, under the chairmanship of Lord CROMER, President of the Society. There was a large and representative attendance, including a number of ladies.

REPORT OF COMMITTEE.

The report of the committee, read by Mr. STEPHEN PAGET (Honorary Secretary), stated that the society now numbered 1,290 members, of whom 123 were ladies. By subscriptions and donations the Society had received, up to June 15th, the sum of £394 7s. 10d., including the following donations: Sir Dyce Duckworth, £5; Lord Farrer, £5; Mr. H. H. Johnstone, £5; Dr. Wickham Legg, £5; Dr. Charles Myers, 5 guineas; the Hon. Sydney Holland, 5 guineas; Mr. Marlborough Pryor, £10; Lord Justice Fletcher Moulton, £10; and Mrs. Roget, £50. The society had also received the sum of £78, being the balance of the fund originally subscribed for expenses in connexion with the Royal Commission. The Physiological Society had promised to contribute toward the work of the society the sum of £100. The expenditure, including literature, printing, postage, and all secretarial expenses, had been £155 7s. 8d., leaving a balance in hand of £317 0s. 2d.

The committee had already issued a first series of pamphlets and leaflets; these included a short account of all experiments on animals made in Great Britain during 1906, a short account of the chief facts as to the administration of the Act, a pamphlet by Dr. Courtauld on the value of antitoxin in the treatment of diphtheria, and a reprint of Professor Osler's evidence before the Royal Commission on the relation of experiments on animals to the prevention of malaria and yellow fever. The committee hoped to issue a second series of pamphlets and leaflets in the early autumn.

The committee, by the kindness of Messrs. Macmillan, had published a monograph by Colonel David Bruce on the extinction of Malta fever and a reprint of Lord Justice Fletcher Moulton's evidence before the Royal Commission. These two publications could be procured of all booksellers.

A complete set of the society's literature had been sent to each member.

Dr. F. M. Sandwith had succeeded Mr. Pattison as Honorary Treasurer of the society. Mr. W. E. Hempson had been appointed Honorary Solicitor, and Messrs. Barton and Mayhew had been appointed Honorary Accountants. Miss Grace White had acted as Secretary of the society since the beginning of its work. The committee had decided that the Society ought to be incorporated under the Companies Liabilities Act. A memorandum of association, articles of association, and by-laws would be carefully considered, and would be submitted by the committee in due course to a general meeting of the society. In conclusion, the report stated that applications for membership had been received not only from all parts of the United Kingdom, but from America, Canada, India, and Egypt. There was reason to believe that the example of the society would be followed in America, and that an American Society would act in association with it.

PRESIDENT'S ADDRESS.

Lord CROMER, in moving the adoption of the report, said the society owed a deep debt of gratitude to Mr. Stephen Paget for his perseverance in organizing the society. He proceeded to say: When I was invited to become the President of the Research Defence Society I experienced a feeling of some surprise. Most of my life has been passed in endeavouring to steer a straight course through the bewildering shoals and quicksands of Oriental administration and diplomacy. Work of this sort, though it may, perhaps, under a somewhat strained interpretation of the word, be designated as an art, can scarcely be said to rise to the dignity of a science. I suggested, therefore, that the choice of a president of higher scientific attainments than myself would be preferable. I was then informed that the absence of scientific knowledge, which I regarded as a disqualification, was, in the eyes of the promoters of this society, my principal merit. On reflection I understood that this view was not quite so paradoxical as might at first sight appear. The men of science wished to show that they had the support of those who could lay no claim to special scientific knowledge. The humane men who are constantly accused of wanton cruelty to animals wished to show that they enjoyed the sympathy of those who had taken an active part in the prevention of that cruelty. From the latter point of view I could, I am proud to say, lay claim to some qualification, for no part of my Egyptian work interested me more than the long and, I may add, fairly successful campaign against cruelty to animals in that country which was undertaken by the society of which I was for many years President. Gentlemen, I do not merely hold that there is nothing inconsistent between an absolute detestation of wanton cruelty to animals and approval of experiments on living creatures having for their object the relief of suffering to both human beings and dumb animals. I go further than this: I maintain that the one attitude is the necessary consequence and corollary of the other, and that if the necessity of the experiments may, as I hold, be justified by any good and sufficient reasons, their execution should be, so far as is possible, watched and controlled by a body of men who would shrink with horror from anything indicating indifference or callousness to the wanton infliction of pain. If I thought that the charge of indifference or callousness could be justified, the case would be very different. I do not hesitate to say that the Research Defence Society would then have to look out for another President. It is because I am convinced that the charge cannot be justified that I am here.

What are the main grounds on which vivisection can be defended? They are twofold. In the first place, it has to be shown that experiments on living animals have already produced invaluable results, and may produce results still more invaluable. In the second place, it has to be shown that the experiments are conducted in such a manner as to minimize, if not altogether to obviate, suffering of any kind.

I hold that both of these propositions can be proved up to the hilt.

There are, I am aware, a certain number of persons who think that it is not under any circumstances justifiable to destroy animal life. With those who hold this extreme view we must, I fear, agree to differ. The full application of their theory would, as it appears to me, carry us to some very strange and practically impossible conclusions. I will not attempt to argue this point. I need only say that the civilized world in general is not prepared to accept this view.

But with the others who do not go to these lengths the case is different. Of these I should like to say that I respect their motives, and, although I am not always able to accept the accuracy of their facts or to concur in their conclusions, I fully sympathize with the objects which they have in view. It is on this account that I will not reply in any unfriendly spirit to the somewhat numerous communications, many of them couched in somewhat violent and unreasonable language, that I have recently received on this subject.

Now, first, as to the utility of vivisection, I must, of course, leave the detailed examination of this question to those possessed of special knowledge, but it requires no special knowledge to be convinced that wellnigh every advance in medical science since Harvey discovered the circulation has been, directly or indirectly, the result of experiments on living animals. Let me give one or two instances.

One of the greatest discoveries of modern times is that the transmission of malaria is effected by mosquitos. In the words of a very eminent authority, this discovery "is going to make the tropics habitable." I have myself seen enough to enable me to judge of the enormous value of this discovery. Fever has almost entirely disappeared from the town of Ismailia on the Suez Canal, which was at one time becoming wellnigh uninhabitable owing to the prevalence of this disease. It will, I know, be said that this discovery was not due to vivisection, but listen to what so high an authority as Professor Osler, the Regius Professor of Medicine at Oxford, says on this point. He was asked by the Royal Commission now sitting whether the discovery would have been made had it not been for previous experiments on animals. "Never," was the reply; "the men who made these investigations spent

their lives in laboratories, and their whole work has been based on experimentation on animals."

Malta fever, as to which I need not give the details, is another case in point. Experiments on monkeys led to the discovery of the cause of the disease. As to the actual saving of life, the advantages which have been obtained by vivisection can be proved to demonstration. Take the case of diphtheria, which has given rise to much discussion. The figures, if they are fairly used, are conclusive. The percentage of fatal cases in the Metropolitan Asylums Board Hospitals has sunk from 28 in the period which preceded the introduction of the antitoxin treatment to 2.8. Similar facts might be adduced as regards rabies. Need I dwell on the argument that no cure for cancer has yet been discovered? Scarcely. I am not aware that it was ever held to be a reproach to Sir Charles Wheatstone, the father of modern telegraphy, that he failed to anticipate the discovery of Marconi. It is safe to predict that if ever a cure for cancer is found the discovery will be due not to observation, but to the experimental method.

I now turn to the other branch of the question—I mean the methods adopted in conducting the experiments.

Several causes have contributed to lead to much misapprehension in this subject. In the first place, some isolated case is often taken and presented to the public with a variety of harrowing and revolting details. As regards these isolated cases, I have to observe that, in the first place, the facts have to be accepted with the utmost reserve. On examination they very frequently turn out to be either greatly exaggerated, if not wholly imaginary. In the second place, it is an old and well recognized maxim that hard cases make bad law. Of course I fully recognize that if even in a single case wanton cruelty could be shown, the subject is one which calls for careful inquiry, with a view, if possible, to preventing the occurrence of any such event in the future. But I must demur to the conclusion that a few exceptional and, perhaps, accidental cases are sufficient to condemn a whole system, which, as I have already stated, can be proved to be productive of the utmost good to the human race and to animals in general.

Then, a very large number of these cases which are constantly presented to the public appear, so far as I can understand, to have occurred in a somewhat remote past, and I daresay that in the past some real cases of cruelty may be cited. But we now have to deal, not with the history of vivisection, but with the operation of the system since the Act of 1876 was passed.

Then, a good deal of misapprehension exists as to the extent to which vivisection is carried on. According to the last figures I have seen, which come down to the end of the year 1907, about 73,000 experiments were made in that year. But of these, no less than 96½ per cent. were inoculations, hypodermic injections, and so on—that is to say, they did not involve operations of any kind, and, in a large majority of cases, were altogether painless. In the remainder, of 3½ per cent. the operation was always carried on under anaesthetics. The testimony of Dr. Thane, the Government Inspector, is conclusive on this latter point. In his evidence before the Royal Commission he said that animals were always effectively anaesthetized. I should like also to draw attention to the evidence of Professor Starling, who is not only an eminent scientist, but also, I believe—though I have not the pleasure of his personal acquaintance—a man noted for his extreme sensitiveness as regards the infliction of pain to animals. Speaking before the Royal Commission, he said: "Though I have been engaged in the experimental pursuit of physiology for the last seventeen years, on no occasion have I ever seen pain inflicted in any experiment on a dog or cat, or, I might add, a rabbit, in a physiological laboratory in this country, and my testimony would be borne out by that of any one engaged in experimental work in this country."

It would be easy to dilate at greater length upon this subject, but I think I have said enough. Broadly speaking, I maintain that the small amount of pain and suffering caused by experiments on living animals is a price which may justifiably be paid for the enormous amount of pain and suffering which is prevented or relieved. Before many months are over, I trust Lord Selby's Commission will have reported. The composition of that Commission must of necessity carry great weight with all of us. I cannot, of course, anticipate what the Commissioners will say. Whatever they may report, they will give all of us who are interested in this subject an opportunity of revising our opinions by the light of the very careful inquiry which they have conducted. They may show that further restrictions are required in the interests of humanity, or, on the other hand, they may show that some relaxation of restriction is necessary in the interests of science. In the meanwhile, I may conclude by saying that I esteem it a privilege to be the President of this society, and to be thus associated with a number of very distinguished and humane men, who, in the interests of science and in their persistent endeavours to relieve the sufferings of humanity, have exposed themselves to a great deal of very unjust obloquy.

Sir THOMAS BARLOW, Bart., K.C.V.O., moved:

> That the Research Defence Society be, and is hereby constituted, to make generally known the facts about experiments on animals in this country, and the regulations under which they are conducted, the immense importance of such experiments to the welfare of mankind, and the great saving of human life and health which is already due to them.

He said that as a practising member of the medical profession he was thankful for the opportunity of not only joining the society, but of associating himself with their experimental brethren, and to say that they were all of the same faith in the matter. The society was determined to go right down in the open with the facts relating to experiments on animals, and were resolved to let the British public know the amount of work that was being done in that respect, and their bearing on practical medicine and surgery. Many of the most important methods of treatment had come, so to speak, by flukes; the study of medicine had been empirical. There were other influences that had come into the history of medicine, the influence of various things upon disease, and these encumbrances had been removed by the study of the human body as a natural history object, especially in the dead subject, and by the study of the various courses of disease. The study of the natural history of fevers led men to the conclusion that they were brought about by the entrance of something from without, that that something must have grown and multiplied, that it must have been communicable at certain stages to other persons, and that when it had exhausted itself there was a certain degree of protection conferred upon the individual. That was an important conclusion to arrive at in the study of fever. The real way of progress was the gradual addition of knowledge step by step. Among the achievements of Mr. Chamberlain when Colonial Secretary was the efforts he made towards tackling the great problem of tropical diseases, and the interest he took in the foundation of the tropical schools of medicine in London and Liverpool. Mr. Chamberlain had also helped in every way the expeditions sent out to establish the true position of malaria, and he brought about a fund largely supplied by the tropical colonies for the further advancement of the study of tropical diseases. One of the results of the consolidation of the improvements of knowledge and investigation had been to encourage those who took service in tropical lands.

Lord ROBERT CECIL, in seconding the resolution, said he desired to ask their opponents what was the fundamental basis of the opposition to their cause. It was stated by practically every one that for adequate cause it was lawful to take the life of animals for the benefit of man, but he understood that it was contended by the opposition that pain must not be inflicted on animals for the benefit of human beings. If that was the contention on which the opposition was based, not only must all sport be instantly condemned, but even the riding and driving of horses, or the beating of disobedient dogs. How could they also defend the Zoological Gardens, which were generally regarded as a typically harmless institution, where wild animals whose whole existence and happiness depended on their freedom were imprisoned for life? If, on the other hand, it could be stated that for adequate cause you might inflict pain on animals, then he asked what could be better than theirs? He considered it right to treat animals with kindness, but if by treating animals with kindness they treated human beings with unkindness they were guilty of grave dereliction; animals had not

the same rights as human beings. Humanity was well enough, but he would say to their opponents that, like charity, humanity should begin at home.

The resolution was then put to the meeting and carried unanimously.

FORMATION OF BRANCH SOCIETIES.

Mr. WALTER LONG proposed the following resolution:

> It shall be among the objects of the society to establish branch societies, and to take steps as the committee may from time to time think advisable in the interests of science.

He said it was his business during fourteen or fifteen years of his official work to be in two departments which were brought into very close relation with the work in which the society was connected, and, though he had much cause to regret many things, he was proud of the little he was able to do in either of those two departments of the State in the great cause of science, and the great cause, which was their cause, of lessening suffering and the prolongation of human life. The Government would never have embarked on that great enterprise of stamping out rabies had it not been justified by the knowledge of scientific experts on whose advice it was able to rely; they had a very anxious five years; the knowledge, which was backed up by the splendid services of the officials of the department, enabled them not only to commence but to go on, and in the end to win. The credit of the undertaking was due to those who had from time to time conducted experiments, and had been able not only to deal with so many diseases, but they had been able to provide a remedy for the disease which in its sufferings was one of the most horrible. He took the opportunity, seeing so many of the female sex present, to make an appeal to them; they had cleared out of the country a disease which inflicted an enormous amount of human suffering, and it could only be reintroduced by the negligence of people who, for personal and selfish reasons, chose to break the law and bring into the country animals exposed to infection; to remember that it was not sufficient alone to make the discovery; it was not sufficient alone to supply the knowledge when obtained; it was not sufficient also to secure muzzling by firm administration; if their work was to be complete it was necessary to use all the influence they possessed to prevent people undoing by one foolish act the work which had been accomplished after many years' patient and anxious labour.

Dr. C. J. MARTIN, F.R.S., in seconding the resolution, pointed out that in the Home Office return of the vivisections performed during the last year forty odd thousands were inoculations of mice with cancer. These cancer researches might perhaps be brought home to the public when it was pointed out that from the Registrar-General's returns for 1905-6 the probability of any man over 35 dying of cancer was 1 to 11, and of any woman 1 to 8. It was now rather more than five years since the study of cancer was taken up from the experimental point of view, and although a cure for cancer had not yet been obtained, and it might be many years before the problem was solved, the results of the researches by the experimental method in all the civilized countries of Europe and America led to a vastly clearer conception of the essential nature of the process than was ever possessed before.

The resolution having been put to the meeting was carried unanimously.

VOTE OF THANKS.

Mr. H. T. BUTLIN proposed, and Mr. SYDNEY HOLLAND seconded, a vote of thanks to the Chairman, who said a few suitable words in response.

THE association known as the Sussex Medical Benevolent Society has extended the area of its operations so as to include Hampshire, and has varied its name accordingly. Each county is to have its own honorary secretary, and the conditions of membership can be learned on application to either of them. The Sussex secretary is Dr. L. A. Parry, 33, Church Road, Hove, and the Hampshire secretary is Dr. A. Barford, 30, Grove Road, Southsea.

THE Bureau for Colonials, 75, Chancery Lane, has recently issued a pamphlet, price 3d., which is intended to serve as a brief guide to London for Colonials, and as the information is all well put and to the point it is likely to be found useful. Its author is Mr. Staines Manders.

CORONERS AND OPERATIONS.

OWING to the large encroachment on our space made this week by the Index, we are unable to deal fully with the later developments of the situation created by Mr. Troutbeck's inquest on a case of cerebellar tumour operated on by Sir Victor Horsley. Our readers are, however, in possession of the main facts. The only additional points we need mention at present are the fact that a letter from the President of the British Medical Association appeared in the *Times* of June 19th. In that letter Dr. Davy recalls the facts that in May, 1903, the Association, in conjunction with other medical societies, brought to the notice of the Earl of Halsbury, then Lord Chancellor, by memorandum and deputation, the procedure of Mr. Troutbeck in conducting inquests. The documents containing the representations so made were referred by the Lord Chancellor to Mr. Troutbeck, who replied in a letter which was transmitted by the Lord Chancellor for the consideration of the Association. In Dr. Davy's letter it is pointed out that the Association, taking note particularly of Mr. Troutbeck's denials of the statements made as to his practices, submitted to the Lord Chancellor on July 27th, 1903, a detailed statement, including particulars of cases showing the coroner's methods.

In that memorandum it was shown that Mr. Troutbeck in a number of cases—

1. Had withheld from the jury the evidence of the practitioner who had been in attendance on the deceased (5 cases up to July, 1903).
2. Had withheld from the jury in cases of sudden death the evidence of the medical practitioner who was first summoned to attend the deceased (14 cases up to July, 1903).
3. Had restricted the medical evidence to the *post-mortem* findings, and had directed the jury thereupon (22 cases up to July, 1903).
4. Had persistently employed a general practitioner under the misleading title of "special pathologist," whose evidence was (in cases quoted in detail to the Lord Chancellor) contrary to the facts of common medical knowledge.

(Out of 108 *post-mortem* examinations made at the Battersea mortuary under Mr. Troutbeck's instructions for purposes of inquests between November 22nd, 1902, and June, 1903, Dr. Freyberger was so employed in 58 cases.)

5. Had not summoned to an inquest the medical practitioner who had attended the deceased, but nevertheless severely censured him in his absence. In this case Mr. Troutbeck represented to the jury that the practitioner had given wrong advice, although the said practitioner had given no such advice.

The Association, Dr. Davy proceeds, observes that Mr. Troutbeck still denies the accuracy of the statements as to his suppression of clinical evidence, and that he remarks that in a letter to the Lord Chancellor of September, 1903, he refuted many of the statements as to his practices upon this subject. The Association has been left in ignorance until now of the existence of such a letter. Presumably, therefore, the Lord Chancellor did not consider that it contained matter calling for transmission to the Association. It is contended that these repeated denials by Mr. Troutbeck of facts which are matters of common knowledge in the medical profession indicate the necessity of such thorough inquiry into the whole subject as the Association has, up to the present, unsuccessfully sought, but which it now proposes to make renewed efforts to obtain. It is added that if such redress cannot be obtained, the question will arise whether, in the public interest, machinery should not be created for exercising a more effective supervision over the procedure of coroners than at present exists.

In dealing with the matter, the *Law Times* of June 20th says:

> The law as to the holding of inquests is clear, and is to be found in the first section of the Coroners Act, 1887, which provides that where a coroner is informed that the dead body of a person is lying within his jurisdiction and there is reasonable cause to suspect that such person has died either a violent or an unnatural death, or has died a sudden death of which the cause is unknown, or that such person has died in prison or in such place or under such circumstances as to require an inquest in pursuance of any Act, the coroner is to hold an inquest. It is also provided by Section 21 that where it appears to the coroner that the deceased was attended at his death or during his last illness by any legally qualified medical practitioner, the coroner may summon such practitioner as a witness; but, if it appears that the deceased was not so attended, he may summon any legally qualified medical practitioner in actual practice near where the death happened to give evidence how, in his

opinion, the deceased came by his death. Further, the coroner can direct such medical witness to make a *post-mortem* examination of the body of the deceased, with or without an analysis, though where a person states upon oath before the coroner that in his belief the death was caused wholly or in part by the improper or negligent treatment of a medical practitioner, such practitioner is not to assist at such *post-mortem* examination. These sections clearly show what is the jurisdiction of the coroner, and it is difficult to see what were the reasons for Mr. Troutbeck holding an inquest in such a case, and, at any rate, why inquiries were not made to ascertain and summon at such inquest, if held, the deceased lady's regular medical attendant, who attended her both before the operation and up to the time of her death. To our mind, owing to the fact that no such statement on oath as mentioned above was suggested to have been made, this gentleman was clearly the medical witness who ought to have been summoned, and who should have conducted, or at any rate assisted at, the *post-mortem* examination, if such examination was necessary. At the inquest Mr. Troutbeck is reported to have said that, owing to the advance of surgery, operations were much more frequent than they used to be, and that clearly they were, to some extent, a cause of the deaths that resulted, and they came within the Coroners Act, 1887, which made inquests imperative in such cases. This coroner no doubt may hold this opinion, but it is one with which we differ, and one that has not been followed by other coroners, for if Mr. Troutbeck's contention is correct—and it is clearly only on this basis that he can defend himself in holding an inquest in this case—death after an operation must come under the words "a violent or an unnatural death," which, if they extend to surgical operations, would also cover deaths after all medical treatment. This, carried out to its logical conclusion, would give power to coroners to summon a jury to inquire into every case of death after medical or surgical treatment to see if death was due to natural causes, or that the death was an unnatural one owing to the medical or surgical treatment—a tribunal which is certainly not fit to perform such a function.

After referring to the correspondence on the subject between Sir Victor Horsley and Mr. Troutbeck, our legal contemporary proceeds:

Such, then, is the history of this matter, which shows that, if the law requires coroners to hold inquests where death supervenes after surgical operations, that law should be amended, for the coroner's court is certainly not the place to inquire into the skilfulness or otherwise of surgical operations. Many people have serious doubts as to how far the coroner's court at the present time fulfils any useful purpose. Owing to its constitution, to there being no parties before the court, to the summoning and examination of witnesses being left to the coroner, and in many other respects, it is certainly not the best tribunal for getting at the bottom of matters. In cases where criminality exists the magistrate's court is better for the preliminary inquiry; and, although in bygone days the coroner's court was of much dignity and importance and fulfilled many other duties which are now in abeyance, very little good is brought about nowadays by the coroner's inquest for the purpose of fixing any responsibility. We do not dispute for a moment that coroners have a difficult duty to perform, and that that duty is generally carried out with diligence and tact; but if it is attempted by them to extend their jurisdiction by the exercise of the discretion which is given them in a direction which can only be described as unnecessary and objectionable, it is high time that those in authority should interfere in the matter to prevent the pain which must be so caused to the relatives of the deceased, and the waste of public money and the time of the jurors and witnesses summoned.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

BORACIC ACID IN CREAM.

ON June 1st the judges of the King's Bench Division decided, in effect, that cream must not be sold to the public if it contains boracic acid. In a case which came before them on appeal from the North London Sessions, it appeared that cream had been sold containing 21.91 grains of this drug to the pound. The jars in which it was sold had upon them the following label: "Rich cream. This cream contains a small percentage of boron preservative to retard sourness. Perfectly delicious." Evidence had been called before the magistrates to show that cream containing this proportion of boracic acid was unwholesome for children and invalids. Consequently it was held that such a sale was "to the prejudice of the purchaser," and that there should be a conviction. The judges have upheld the conviction, pointing out that even if cream of this kind is sold with a notice that it is "not to be used by children or invalids," there would be no defence to a charge under the Act. This decision is not well calculated to simplify a branch of the law of public health which is at present in a state of confusion; for it appears to be directly contrary to the principle laid down in another case tried a few years ago. There the plaintiff sought to recover damages for breach of warranty, on the ground that butter containing boracic acid was not "pure butter." The county court judge found that there was a breach of warranty, but the divisional court ordered a new trial. Mr. Justice Bigham said: "If the decision of the judge is to be upheld in this case, it seems to me that the mere introduction of a little salt would render the defendants liable. I cannot believe the parties ever intended that the butter to be supplied should be in the simple state that it left the churn, for the purchaser expected that some preservative would be added so that it should keep good while exposed for sale in her shop . . . I think he went wrong in refusing to take into consideration evidence that this expression 'pure butter' had a meaning as used between the plaintiff and the defendants in trade apart from its natural meaning."

MEDICAL ATTENDANCE ON PAUPER PATIENTS.

COMUS writes: A. is called by the son to see his mother and is told that the parish doctor B. has been attending. A. is told that B. has been asked to retire.

A week later B. writes to A. asking whose case it is, as he has heard that A. is in attendance, and that as he (the latter) has had no notice from the relieving officer not to call again, he considers himself still in charge of the case.

Comus asks: Has B. any right to act in this way? Can B. complain that A. has contravened medical etiquette?

*** We fail to see that any Poor-law medical officer can be regarded as being in any way at fault if he declines to give up the medical care of any patient he may have been directed to attend in his official capacity, and this by written order of relieving officer, simply because a relative of the patient (who may have no responsibility whatever) requests him to do so. By complying with any such request he might seriously endanger his own official position; his responsibility when he has once taken charge of his patient is great, and from this necessary responsibility he can be relieved only by some further instructions received from the relieving officer, or from the board of guardians.

The question seems to us to be hardly one of medical etiquette at all; it bears more the aspect of a legal point.

AN INTERREGNUM.

R. W. writes: Our recently-appointed medical officer of health has been informed by the clerk that he is not responsible for the health of the district until his appointment is sanctioned by the Local Government Board, and has no official position, and must not sign papers. Diphtheria has broken out!

*** It is usual for the Local Government Board to sanction the appointment of a medical officer of health from the date of the appointment by the electing authority. His salary will commence on that date, and he will be able to act as medical officer of health, even though the sanction of the Board has not been actually received by the authority. If any doubt is felt on the point, direct application to the Board, with an explanation of the reason for prompt action, would doubtless produce the desired approval.

THE DUTIES OF PUBLIC VACCINATORS.

AEQUANIMITAS asks for observations on the following point: B., a deputy public vaccinator, is in the habit of calling upon parents to offer vaccination when their babies have attained the age of only 6 or 7 weeks. C., another practitioner residing in the neighbourhood, on whose patients B. had called as above stated, has complained to the guardians about B. in this matter. Was C. justified in so complaining?

*** B. has no right whatever to call on parents who have not requested him to do so until after the child has attained the age of 4 months and 1 week. C. was quite justified in complaining to the guardians, though, as an act of courtesy, he might have sought an explanation from B. before doing so.

Lieutenant John Catto, Indian Medical Service, died at Assam on May 7 h, at the age of 29. He joined the department as Lieutenant, September 1st, 1905.

A Society of Psychiatry has recently been founded in Paris. It held its first meeting on June 18th. The Honorary President is Dr. Motet; the President, Dr. Joffroy; the Vice-President, Dr. Séglas; the General Secretary, Dr. Deny; the Treasurer, Dr. Voisin; the Secretary, Dr. Maillard.

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LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

THE annual general meeting of the London and Counties Medical Protection Society was held at 31, Craven Street, Strand, on June 11th, with Dr. G. A. HERON, Treasurer and Chairman of the Council, in the chair.

The annual report of the council contained some interesting figures under the heading of "Financial Statement," calling the attention of the members of the society to the progressive improvement in their financial affairs. Taking the society's investments at cost price, the total amount standing to their credit on December 31st, 1906, was £3,172 1s.; and, there being no outstanding liabilities against the society as on that date, except an amount of £12 10s. on account of certain subscriptions paid in advance, that sum represented a clear surplus of £3 159 11s. Estimated on a similar basis, the amount standing to the credit of the society on December 31st, 1907, was £3,953 10s. 4d., less an outstanding liability at the end of the year amounting to £264 5s. 8d., together with £8 12s 6d. paid in advance on account of annual subscriptions. The society's surplus on this latter date amounted, therefore, to £3,680 12s. 2d., showing an increase of £521 1s. 2d. during the twelve months. Under the heading of "Coroners' Inquests" the council reported that a member who had been refused his fee for giving evidence at an inquest on a woman who committed suicide and was brought into the workhouse, had asked advice. The member was medical officer to the workhouse, and the fee was refused under the provisions of the Coroners Act applying to the medical officers of hospitals, etc. The member was advised that the coroner was acting in accordance with a common interpretation of the law, unfair as it was, and that he had no remedy. This interpretation of the law was, however, not acted upon by several important public bodies, and the matter had been recently under the notice of the London County Council, that body apparently taking the view that the medical officer of a workhouse infirmary is entitled to a fee for giving evidence at an inquest on an inmate. A member complained of a leaflet issued by a ratepayers' association appealing for assistance in the "purification of Poor-law administration," and going on to attack the payment of fees to Poor law medical officers for giving evidence at inquests. The leaflet said that the Poor-law Control Committee of the London County Council had informed the authors that they were of opinion that the fees in question, though legally payable, were open to objection and that action should be taken with a view to discontinuing them, and that they (the Poor-law Control Committee) suggested that the law should be amended so as to make it clear that Poor law medical officers, in common with the medical officers of county and other lunatic asylums, or of public hospitals, etc., should not be entitled to the fees in question. The member was advised to ignore the apparent insinuation that there was anything wrong in the payment of Poor-law medical officers for giving evidence at inquests, and to rest assured that this society would not only resist with all its power any attempt to add to the extorting of compulsory unpaid services from medical practitioners, but would take any opportunity to end the thrusting of unpaid work upon medical practitioners. Under the heading of "Defamation of Character," the report stated that a member was accused of having seduced a young lady who had been staying in his house as a visitor. The accuser was written to, and at once withdrew the charge. As a simple withdrawal of the charge of seduction was considered insufficient, a statement signed by both the young lady and her brother, who made the accusation, was insisted upon and obtained. They expressed regret that such charges had been made, withdrew them, and said there was no foundation for any charge whatever either of seduction or of any indecent or improper conduct of any kind on the part of the doctor.

The CHAIRMAN, in moving the adoption of the annual report and balance sheet, referred to the fact that the surplus of £521 1s 2d. added to the funds of the society at the end of the year must be regarded as satisfactory in view of the fact that the expenditure for 1907 was the heaviest yet incurred by the society in any one year. It was also satisfactory to be able to point out that this unusually heavy expenditure was more than covered by the annual subscriptions alone, and that all entrance fees and donations were carried over, as in every previous year, to the reserve fund. The necessary liability to heavy annual fluctuations in their expenditure was well illustrated by the cost of litigation in 1906 and in 1907. In 1906 the society succeeded in recovering 63 per cent. of their expenditure on litigation from the other side. In 1907 the proportion of expenditure thus recovered amounted only to 7 per cent. He particularly wished to point out that the statement in the report that their society was the only one of its kind which paid the whole personal cost entailed by the successful or unsuccessful defence of its members was incorrect. The mistake arose in consequence of a misstatement in the medical papers of the facts concerning the case of Southern *v.* Lynn Thomas and Skyrme. The statement was incorrect in regard to the word "only," because the Medical Defence Union paid costs of actions in which the union was concerned in exactly the same manner as their society did. The council had decided not to proceed at present with the scheme for insuring members against the costs and damages awarded against them in cases in which the society had borne the whole cost of the members' defence, because only about one-third of the members had troubled to record their votes, although, of those who did vote, about four fifths wished the insurance to be effected.

The resolution was seconded by Mr E. C. BENSLEY, and, after being put to the vote, was carried unanimously.

A resolution, proposed by Dr. FORBES WINSLOW and seconded by Dr. DICKINSON, recommending the council to consider the raising of the annual subscription from 10s. to £1, was carried by 10 votes to 1.

The meeting concluded with the transaction of formal business.

LITERARY NOTES.

THE official report of the Fourteenth International Congress of Hygiene and Demography held at Berlin in 1907 has now been completed. The *Transactions* occupy four volumes. The last two volumes will be sent to the members of the Congress in the course of the present month. The report is published by August Hirschwald, of Berlin, and may be bought at the booksellers for the price of M. 50. The volumes are also to be had singly at the following prices: Volume i, 6 marks; volume ii, 14 marks; volume iii, Part I, 10 marks; volume iii, Part II, 10 marks; volume iv, 10 marks.

A new edition of Dr. Hackworth Stuart's pamphlet on the medical inspection of public elementary school children under the Education (Administrative Provisions) Act, 1907, has just been issued in response to the demand for the work. A notice of the pamphlet appeared in our issue of February 15th, 1908. It is published by H. K. Lewis under the title of *The Doctor in the Schools.*

In a thesis presented to the University of Paris in August, 1907, Dr. G. R. Siguret gives an interesting account of the foundation of hospitals for children in Paris. In 877, Charles the Bald recommended the administrators to give special attention to orphans and the sick. In the twelfth and thirteenth centuries, Gautier Cornu, Canon of Noyon, and some others insisted that sick children should be treated with special care as "the masters of the house." But it appears that they were often not kept long enough to derive much benefit from the treatment. The hospital was enlarged by St. Louis, but in a few years we have a picture which shows how insufficient the accommodation was for the number of applicants for admission:

Attendentes multitudinem pauperum infirmorum, orphanorum, viduarum et mulierum pregnanctium singulis diebus, de undique mundi partibus ad domum Dei Parisiensem confluentium.

From 120 to 150 children were admitted every year. That some attempt was made to separate the patients into classes according to their disease and their age, appears from the following passage in Petrus Saulnier's work, *De capite Sacri ordinis spiritus*, where he says:

Secernuntur tertio aegroti prout posiulat diversitas malorum quibus efflictantur; quibus enim est necessaria chirurgi manus, quibus aura tepidior et altior quies, his aula minor attribuitur ut et pueris.

But this state of things did not last long. The usual course of events was as follows: The gates of the hospital

were opened at 6 in the morning, and patients were received from that time till nightfall. A child on admission was cursorily examined by a sister, and forthwith placed in a ward; whether it was a ward for men or for women, or a midwifery ward, was a matter of accident. It was often difficult to find a bed, and when one was found, it usually contained three children at the foot, and two at the upper end. Sometimes nine, ten, or even twelve children suffering from different diseases occupied one bed. Boys and girls were placed together stark naked. If there was no room among the children, the unfortunate little one was placed beside an adult afflicted, it might be, with horrible sores, or even mad. Naturally, the mortality was very high. The moral results of this promiscuity were as bad as the physical. About the middle of the fourteenth century the misery of the people was so great that famine drove vast numbers from every part of France to the capital, and the Hôtel-Dieu had to refuse admission to children, who in consequence often died in the streets. This led some charitable persons to conceive the idea of founding a hospital for homeless children. It was called the Hôpital du Saint Esprit, and was founded in 1363 under the auspices of King John the Second. It was particularly intended for convalescents and for children suffering from ringworm and other contagious diseases. Each child had a bed to itself, and the patients were well looked after. But, owing to lack of funds, the Hôtel-Dieu continued to be the refuge for most sick children. In 1410 a proposal was made to enlarge the Hôtel-Dieu for this purpose, but want of money again proved an obstacle, and during the plague of 1434 we read of thirteen children in one bed. Louis the Twelfth wished to remedy this state of things, but died before he could carry his intention into effect. Under Francis the First the average number of patients in the hospital was from 1,200 to 1,500, and there were only 303 beds. Jean de Briçonnet, Comptroller of Accounts, made an attempt to reform the hospital arrangements for children. In 1505 the Parlement appointed a committee to inquire into the state of the Hôtel-Dieu. Briçonnet proposed that each hospital in Paris should be assigned for a distinct category of patients. His idea was to improve the accommodation for children. This benevolent design failed. In 1531 another committee was appointed, when the evidence given by "Soeur Helaine la Petite Prieure" and other sisters of the Hôtel-Dieu, led to the foundation of the Hôpital des Enfants-Rouges. This seems to have been the first time foundlings and orphans were separated from sick children. At the beginning of the seventeenth century, it was decided that children suffering from infectious fevers should be discharged from the Hôtel-Dieu as soon as they were convalescent. Nevertheless, the system of admitting abandoned children and placing them among those suffering from contagious disease continued. In 1606 Henry the Fourth projected a general reform of the hospitals. His intention, however, was never fulfilled owing to the epidemic of plague which devastated Paris in 1606-07. Louis the Thirteenth appointed a committee for the reform of hospitals, and some improvement in the lot of sick children was the result; among other things those that were to be cut for stone were admitted to the Charité, which was founded in 1613. The foundation of the Pitié and other institutions relieved the overcrowding of the Hôtel-Dieu, and made it possible to separate sick from healthy children. In 1788, however, there were still 450 to 600 children among 3,148 patients in the Hôtel-Dieu, and the state of things was not much better in other hospitals. In 1802 the Hôpital des Enfants Malades was founded, and although much yet remained to be done, from that time dates a new era in the provision for sick children in Paris.

We find the following story of Trousseau in *Le Scalpel* of June 21st. The famous clinician was himself a victim of gout, and had tried every remedy which he prescribed to his patients, but without much benefit. Once, when holiday making in Switzerland, he heard some one at a *table d'hôte* sing the praises of a local physician who was said to be particularly successful in his treatment of gout. Trousseau thought it might be worth while trying the efficacy of this comparatively unknown *confrère's* treatment. He therefore went to him as an ordinary patient, and found so many others there that he had to wait a considerable time. "So much the better," thought Trousseau; "this seems to show that he really deserves his fame." When admitted to the oracle, he was duly examined and was promised an unfailing cure. In the meantime Trousseau was thinking that he ought to be generous in his payment to one who was to render him the double service of curing his ailment and teaching him something he did not know; so he placed a double fee on the Swiss doctor's table. As soon as he got out of the room he hastened to look at the precious prescription, and found that he was ordered colchicum, with an occasional dose of *vin de Trousseau!* We can only dimly imagine what the great physician's thoughts were on the occasion.

Mr. Cuthbert E. A. Clayton, Librarian to the Manchester Medical Library, has reprinted in an enlarged form a useful article which appeared in our columns on August 11th, 1906. The pamphlet, which is entitled *Lists of Medical References and their Compilation*, is published by Messrs. Sherratt and Hughes, of Chandos Street, London. We commend the study of it to all who write on medical subjects, for nothing entails greater waste of time and loss of temper than imperfect or inaccurate references. It has been our fate at one time or another to trace some of these. In one instance, that of a case which had been handed down as a tradition from one writer to another for more than half a century, we found, when we succeeded in tracking it to its original source, that in its passage through several generations of writers it had become so altered in every detail as to be unrecognizable. One might have applied to it the epigram written on Ménage's amazing derivation from *equus* of "Alfana," the name of the charger (if we remember aright) of one of Charlemagne's Paladins:

> Alfana vient d'*equus* sans doute
> Mais il faut avouer aussi
> Qu'il a bien changé en route.

In another case, after infinite labour, we discovered that a man had somehow, in the course of a series of borrowed quotations, become transformed into a museum. Speaking of periodical articles, Mr. Clayton says complete references must be given to all authors quoted. In the case of monographs and encyclopaedic articles, he says the principal literature in English, French, and German should be given, whether quoted or not. References to other languages should be only to those of men of exceptional importance—such as Banti, Celli, Pawlow, Ramon y Cajal. We do not altogether agree with this; the fullest references should be given to all literature bearing on the subject, provided they are first hand. One of the curses of medical as of other kinds of literature, is the habit of taking references from any and every source—we suppose on Molière's principle—*Je prends mon bien où je le trouve.* All writers should bear in mind the advice of the dying scholar, "Verify your references." If they did this they would escape the experience of an author quoted by Mr. Clayton: "I have had some very unpleasant surprises when engaged in verifying the references of others." For further details of the system of reference which he recommends, Mr. Clayton's pamphlet should be consulted. It will well repay perusal.

THE North India School of Medicine, which started work some fourteen years ago, is an association which has for its object the training of native female converts to Christianity for work as medical missionaries in India, and to this end helps them to obtain Government diplomas in medicine, surgery, and obstetrics. It also desires to train nurses, compounders, and midwives. It has a small hospital at Ludhiana, and held its annual meeting on May 27th at the Holborn Restaurant. Among the speakers was Colonel T. H. Hendley, formerly Inspector-General of Civil Hospitals in Bengal, who expressed an opinion to the effect that, as English and Eurasian female doctors were comparatively expensive, it was desirable to promote the medical education of native women for medical mission work, choosing, more particularly, widows, since, by Indian codes, they could never remarry and thus be lost to the work. Information about the association can be obtained from the Secretary, 19, College Road, Bromley, Kent.

A GENERAL meeting of the School Dentists' Society took place at the rooms of the Incorporated Society of Medical Officers of Health, London, W.C., on June 22nd. The President, Mr. Sidney Spokes, M.R.C.S., L.D.S.Eng., took the chair, and a paper was read by Mr. Bryan J. J. Wood, L.D.S.Eng., entitled "An Experiment in a School Dental Clinic and its Lessons." A discussion ensued.

MEDICAL NEWS.

THE annual prize giving at the London (Royal Free Hospital) School of Medicine for Women will take place on Thursday, July 2nd, at 4 p.m.; Lady Groves will present the awards.

THE late Dr. Theodore Duka, of Bournemouth, an obituary notice of whom appeared in the BRITISH MEDICAL JOURNAL of May 30th, 1908, left estate valued at £22,705 gross, and £22,680 net.

WILLIAM ROBERT SMITH, M.D., V.D., Brigade Surgeon-Lieutenant-Colonel (Honorary Surgeon-Colonel), 3rd London Volunteer Infantry Brigade, has been appointed Deputy-Lieutenant of the County of London, dated June 18th.

THE annual meeting of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis will be held on July 3rd, at 3.30 p.m., at Caxton Hall, Westminster, S.W., when the Countess of Aberdeen will give an account of the tuberculosis exhibition she organized first in Dublin and then in other towns in Ireland.

THE dinner to the French visitors (*Voyage d'Etudes Médicales*) will be held at the Hotel Cecil on Thursday, July 16th, and not as previously announced. Subscriptions (not less than £2 2s.) should be sent to the Treasurer, Dr. Dundas Grant, 18, Cavendish Square, at the earliest possible date.

THE Brussels Medical Graduates' Association is to hold its annual dinner this year on July 7th, at the Garden Club, in the grounds of the Franco-British Exhibition, at 7 for 7.30. The speeches are to be few and brief, and on this occasion members are invited to bring ladies. Application for tickets should be addressed to the Honorary Secretary, Dr. Arthur Haydon, Henrietta Street, Cavendish Square, W.

DR. W. J. HOWARTH, who has been medical officer of health to the county borough of Derby for the past ten years, is leaving to take up the appointment of medical officer of health to the county council of Kent, and on Wednesday, June 24th, a meeting of the medical practitioners of the town was held at the house of the Chairman of the Sanitary Committee (Dr. Laurie) to bid him farewell and to make him a presentation. The speeches referred in very cordial terms to the excellent work Dr. Howarth had done during his years of office, and to the happy relationship that had always existed between him and his medical brethren.

AT a recent meeting of the Royal Meteorological Society Mr. B. F. E. Keeling described Egypt as having no "weather." On the other hand Abyssinia had weather, and it was on the conditions prevailing in that country that the whole prosperity of Egypt depended. If the summer rainfall in Abyssinia was good the Nile flood in Egypt was proportionately satisfactory. The early spring showers in Abyssinia were of equal importance. In Abyssinia there was no meteorological service, so in view of the importance of some preknowledge of the probable state of the Nile, steps had recently been taken by means of balloons and kites to obtain observations on the upper air over Egypt. This method of investigation had not been carried on sufficiently long to determine its value, but it was intended to continue and develop the work.

THE annual report of the Registrar-General of Jamaica for the year ending March 31st, 1907, is based on an estimated population of 830,261 persons. The birth-rate was 38.1, as against 38.8 in the preceding year, 65.2 per cent. of the births being illegitimate. The general death-rate was 26.6 per 1,000, a higher figure than any recorded during the previous ten years. About 81 per cent. of the deaths were registered without medical certification of their cause. Infant mortality is nowhere shown as such, but may be gathered from one table to be very high, standing at 143 per 1,000 births for legitimate and at 226 for illegitimate children. The standard of education in the island appears to be low, since in 43 per cent. of the marriages registered during the year the signature of either the bride or bridegroom took the form of a mark. Two deaths occurred amongst the medical practitioners of the island, and there were 4 new arrivals, the medical register at the end of the year containing 141 names.

THE Medical Golfing Society held its annual tournament on June 18th at Guildford, by kind permission of the Guildford Golf Club. In Class I (handicaps 12 and under) in the 18 holes match play *v.* Bogey, H. Tilley and D. Findlay tied with 2 up. In Class II (handicaps over 12), F. J. Smith was first with 4 up, and G. W. Dawson was second with 2 up. The scores for the best last 9 holes *v.* Bogey in the first class were H. Tilley 2 up, and D. Findlay, J. A. Willett, K. W. Goadby, and C. J. Marsh 1 up. In the second class the prize for the best last 9 holes *v.* Bogey was won by W. C. Bluck with 1 up. The Henry Morris Challenge Cup, awarded for the best score against Bogey under handicap, the winner also receiving the Medical Golfing Society gold medal, went to F. J. Smith for the second time with 4 up. The foursome sweepstake resulted in a tie between J. H. Drysdale and C. M. Hinds Howell and Clifford Price and J. H. Whitaker, who returned scores of all square *v.* Bogey.

MEDICAL MAGISTRATE.—Dr. J. H. Dudgeon, of Workington, has been placed on the Commission of the Peace for the County of Cumberland.

ROYAL PORTSMOUTH HOSPITAL.—At a meeting of the governors of this hospital held on the 19th instant, a formal resolution authorizing the sale of funded property to the amount of £4,000 to meet the cost of a new out-patient department was about to be moved, when the gratifying announcement was made that a donor, who wished to remain anonymous, would defray the entire cost of the new building. This splendid gift should stimulate all classes in Portsmouth and the neighbourhood to maintain the hospital in the highest efficiency, and to promote its widest service.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—An extraordinary general meeting of the Incorporated Society of Medical Officers of Health was held, under the chairmanship of the President, Dr. George Reid, M.O.H., Staffordshire, at the offices of the Society, London, W.C., on June 19th. Resolutions were passed unanimously by which the membership of the Society will be limited in future to two classes—namely, Fellows and Associates. It was also agreed that the Fellowship of the Society shall be open to the following: Medical officers of health, acting or retired, whether in the British Isles and dependencies or elsewhere; medical officers (sanitary) of the navy and army (at home or abroad); all registered medical practitioners holding a diploma in sanitary science, public health, or State medicine under Section 21 of the Medical Act, 1886; all medical inspectors of the Local Government Boards or other Government departments of England and Wales, Scotland, and Ireland; and medical officers appointed by education authorities. The confirmatory meeting will be held in the Law Courts at Cardiff on July 17th.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

AT the annual meeting of the Royal London Ophthalmic Hospital on February 25th the report submitted was from a financial point of view of an unfavourable character. The annual subscription list shows a diminution for the first time for many years; legacies of £4,000 have had to be treated as ordinary income, and twenty beds still remain closed for want of funds. The year's income included over £1,000 received from the patients.

CHARING CROSS HOSPITAL.

THE report submitted and approved at the eighty-seventh annual meeting of Charing Cross Hospital on March 4th showed a great improvement in the financial position of this institution. About half the unsecured liabilities of the institution have been extinguished, and ordinary income last year fell short of expenditure by less than £1,000. A hope was expressed that all would agree upon steadfast adherence to the policy of strict economy adopted during the past year until the financial position of the hospital had again become thoroughly sound. The audience was also reminded that the income which the institution at present derives from the loan of certain of its wards to the Royal National Orthopaedic Hospital must be expected to come to an end before long, and will then have to be replaced in some other fashion.

THE CHILDREN'S HOSPITAL, BIRMINGHAM.

THE report presented to the annual meeting of the Birmingham and Midland Children's Hospital showed that 14,849 patients had been treated during 1907. Of these, 976 were in-patients, 13,402 were out-patients, and 471 casualties. The number of operations performed was 2,549, which is an increase of over 500 on the previous year. The mortality of in-patients was 14·34 per cent., the average for the last seven years having been 11·59. In explanation of the high rate for 1907 it was pointed out that the hospital does not at present provide nearly enough beds in proportion to the number of out-patients, so that only the most urgent cases can be treated in the wards. The year's working resulted in a deficiency of £277 as compared with £68 for the preceding year. The urgent necessity for the erection of a new hospital was referred to both in the annual report of the Committee of Management and in that of the Medical Board. A freehold site of over two and a half acres has been obtained in the Ladywood Road, and the erection of a new hospital will be proceeded with as soon as the necessary funds can be obtained.

British Medical Journal.

SATURDAY, JUNE 27th, 1908.

CRIME AND CRIMINALS.

For some thinkers the most notable achievement of the earlier decades of the nineteenth century is neither the repeal of the Corn Laws nor the reform of the franchise, but the change which then began to be evident in the existing system of treating lunatics, and is now complete. Similarly, a hundred years hence the leading evidence of progress in the first quarter of the present century may be the alteration which now seems imminent in methods of dealing with crime and criminals.

Changes of thought on the subject have been long in progress; they may even be regarded as having first taken practical shape some forty years ago, when the first Industrial Schools Act was introduced. Since then the evolution, if slow, has been steady, many measures tending towards more scientific treatment of crime by lessening the output of one or other of its many sources having come into existence. There has, in short, been a continual tendency towards fuller recognition of a direct causative connexion between crime and unfavourable physical environment, between criminals and defective mental development or function. The time now seems ripe for a sweeping change in the same direction, one form which this is destined to take having been indicated this session in the House of Commons, when Mr. Herbert Gladstone referred to an intention on the part of the Government to bring about a plan of sentencing prisoners of a certain class to indeterminate, not fixed, periods of detention. That project is no doubt in a measure founded on facts such as those disclosed by Dr. Milson Rhodes in an article in this issue on the mentally defective in prison, and those facts are of further interest, since on them Dr. Rhodes and similar thinkers seem disposed to base a still more radical alteration.

Few can be unaware that among the prison population are many individuals exhibiting clear evidence of mental abnormality, but many will be surprised at the strength of the evidence which Dr. Milson Rhodes brings forward in support of his plea for change of system. They will be impressed, too, by the fact that of those whom he quotes as recognizing with him the vast extent to which the treatment of breaches of the criminal law is complicated by the existence of mental defect in the offenders, few are any more open than he is himself to suspicion of undue sentimentalism. The whole subject is, however, encompassed by so many practical difficulties, is so exposed to the introduction of abstruse philosophical side-issues, and lends itself so readily to the formation of ill-balanced views, that every proposition put forward should be subjected to close and considered criticism.

There are still those who take the old view, "An eye "for an eye, and a tooth for a tooth," and deem that the protection of the community from criminals is inseparable from the rigorous punishment of all crime. There are those at the other extreme who are disposed to regard practically any and every breach of the criminal law as in itself sufficient evidence of defective mentality. They are content that the term "crime" should be preserved to serve the needs of lawyers, but criminals they would abolish by regarding them as lunatics—as persons who are offenders against the law, since they have broken its enactments, but whom the community should not subject to penalty but treat with tenderness as persons irresponsible for their acts.

It is in deciding between thinkers of these two extreme classes that the medical profession will have to play a part, because there is no other section of society which contains a greater proportion of level-headed thinkers, or so many who have equal experience of the follies, weaknesses, and physical and mental shortcomings of all classes of modern society. Moreover, an early and earnest consideration of the question is the more incumbent on the medical profession, because the new movement is in some degree its own offspring, and because, if ever the time comes when the mere commission of a crime is in itself deemed to call for an examination of the mental state of the prisoner there will be a great addition to the general sum of the duties thrown upon medical men as a class.

Probably the most extreme advocates of the principle of an eye for an eye will be prepared to admit that in every penal sentence the real object in view is not retribution but the protection of the community; hence the most practical way of regarding matters is to consider what is the best means of attaining that end. Should society be protected by shutting up convicted offenders against the criminal law for a definite number of days, trusting that the criminal's experience of prison life will deter him from committing a like or any other offence again—or, as a subvariety of the same method, by detaining him for as long a period as is considered necessary to effect a transformation in his attitude towards the law—or, on the other hand, should all persons who have exposed themselves to criminal penalties on more than one or two occasions be treated as mental invalids?

That the present system serves in each individual case to protect society for a longer or shorter period is true, but the statistics brought forward by Dr. Rhodes prove not less clearly that it is only partially effective, since the same criminals figure over and over again in the returns. Obviously, therefore, society has so far not thoroughly achieved its end, but at the same time has not exhausted the whole possibilities of the situation. Hence the least sentimental person, even one who feels no tenderness either towards criminals or the mentally deficient, may reasonably be asked to consider what may be the result of a system which puts criminals as a class on a par with the inhabitants of ordinary asylums, of schools for the defective, of imbecile sections of workhouses, and of homes for the inebriates. Before, however, the average man will be prepared to admit that this would be a reasonable and safe policy to practise, those who are advocating it would have to be prepared to meet the following objection.

The annual returns of the Commissioners of Lunacy and other like documents show clearly that an enormous number of persons are annually admitted to asylums who at a previous period have been discharged as cured from some other institution; hence it is plain that at the present time our knowledge of mental conditions is not such as to enable it to be stated when an individual who has ever shown evidence of mental abnormality, such as to justify his certification as a lunatic, can really be regarded as permanently cured. This being the case, what is to be done with the person who, having been detained for mental treatment after conviction of a crime, exhibits after a certain period no evidence of mental abnormality whatever?

THE INFLUENCE OF METAPHYSICAL THOUGHT ON MEDICINE.

WONDER, Plato makes Socrates say, lies at the bottom of all philosophy; that is, any occurrence which by its strangeness is distinguished from phenomena of an everyday order, awakens the desire to place it according to its component elements in already existing mental categories—to find that sameness in difference, the one in the many, which is the aim of philosophy. The more limited our knowledge the greater is the tendency to refer the strange to the realm of the supernatural, and the greater the sum of knowledge at any period the easier is it to fit new facts into the scheme of things existing in the mind. The truly stupendous achievements of modern science have so greatly increased positive knowledge that the possibility of the superhuman (or the as yet unknown) is in practice excluded from the field of mental operations, and we are in consequence prone to forget that the more habitually we think of the concrete as the real and only real, so much the more do our mental operations become stereotyped, and consequently so much the greater is the danger of becoming blind to the great mysteries lying under our very nose.

Medicine, for many reasons, has been much less afflicted than some of her sister arts and sciences with that dogmatic cocksureness which—all oblivious of the mutually contradictory nature of the assumptions which underlie such important and, within limits, valid explanations as the atomic theory, for instance, or the undulatory theory of light—stamped much of the scientific teaching of the middle and end of the nineteenth century. The medical man, bound by his calling to be not only a craftsman but a biologist, something of a chemist, a psychologist, and a metaphysician, found, and, as a rule, still finds it, impossible to square the explanations of one order of events with those of another, or even at times to reconcile the facts of his own experience with his scientific beliefs. The consequence of this has been that whilst the medical man, with his wider outlook, has been saved from intellectual arrogance or a pragmatical assumption of the offices of other departments of thought, he has had to accept with a resigned cheerfulness his inability either to formulate or to accept any single and all-embracing explanation of the seemingly heterogeneous facts, mental and physical, presented to his consciousness—that is, he has had to carry, so to speak, his faith in one pocket and his facts in another.

With, however, the breaking down of crudely materialistic views, partly as the result of the mutual approach and interaction between metaphysical speculation and inductive science, and more particularly under the influence of recent discoveries concerning the constitution of matter, our horizon has become immensely widened; continent is becoming joined to continent; even what seemed a cloud hung high in heaven is seen to be a mountain-top, and we seem at last within measurable range of attaining to the desire of Faust:

> Dass Ich erkenne was die Welt
> Im Innersten zusammenhält
> Schau'alle Wirkungskraft und Samen
> Und thu' nicht mehr in Worten kramen.

Although the chasm between vital and non-vital matter has not yet been experimentally bridged over, yet, if the statements of modern physicists may be relied upon, the assumption of an unbroken continuity between the minutest corpuscle of inorganic matter and the sublimest conception of genius is, perhaps, not, as might as first sight appear, a hazardous leap into the dark, but a necessary sequence. For, first, from the humblest monad up to man there is an orderly development of biological functions, and at no point in the series is it possible to say, "Here is mind" and "Here "mind ceases to be"; and, secondly, the endowment of inorganic particles with the elements or potentialities of mind—if no hiatus exist between the living and the non-living—appears to be unavoidable; and, after all, if what are called atoms are ethereal knots, the theatres of immense activities, force centres whirling with unimaginable velocities, and in no way corresponding to what appeals to our senses as matter which thus becomes the merely temporal expression of ultimate Force, then what is this Force which, when built into the body and mind of man, can feel, reason, and will?

Matter has, in fact, become so dematerialized by modern physicists that, accepting a single basis for all bodily and mental phenomena, there would appear to be little difference, when pushed to their last strongholds between monistic idealism and monistic materialism in its later refinements, thus affording another illustration of the old saying that extremes meet. In a very different sense from that which it was penned we may say that we "evermore Come out "by that same Door where in we went," for whichever single explanation of the world phenomena we accept, we find, it would appear, at either end of the scale of existence, organic and inorganic, universal mind.

The growth of such metaphysical conceptions has a certain bearing on contemporary opinion on the origin of disease, for, if it be accepted that mind and body are but different aspects of the same single reality and not two equally real series of events of entirely different orders, it must be admitted, unless the existence of mind be denied altogether, that any influence exerted upon the whole, of whatever kind, bodily or mental, must find both bodily and mental expression.

There is, of course, nothing new in this. But in practical medicine, whilst it will be admitted generally that what are called mental diseases are bodily diseases, the converse, that bodily diseases are mental diseases, will not be so readily conceded. We are all aware that mental toil too prolonged and arduous produces physiological effects, that the emotions have their somatic accompaniments, and that a powerful and painful emotional shock may be followed by a psychosis terminating in dementia with demonstrable brain changes. We are in the habit of saying that in those cases we have to deal throughout with a bodily series of events, and that in cases of insanity following emotional shock the supposed mental causes were incidents in and not the *causae finales* of the disorder, which must be traced back to original though latent structural defects, acquired or inherited, collected under the sufficiently vague terms of disposition and predisposition. It may be said, *Morbus nascitur et fit.*

But what constitutes the disposition? What forms the predisposition? Dr. R. Sleeswijk, of Bloemendaal, Holland, in a paper on the bearing of psychological thought on medicine,[1] read at the International Congress for Psychiatry, Neurology, etc., at Amsterdam last September, has attempted to explain the genesis of the disposition, and thus to lay a groundwork for a theory of the internal factors of disease. Dr. Sleeswijk is the author of two books on the conflict of the animal organism with vegetable

[1] *Ueber die Bedeutung des psychologischen Denkens in der Medizin.* By Dr. R. Sleeswijk. Bussum: J. A. Sleeswijk. 1908.

cells,[2] and on the nature and action of the forces liberated in nature,[3] which we have not read, though we are told that they have been reviewed with approval by men of the standing of Professor Rosenbach of Berlin and Professor Benedikt of Vienna. In these works he endeavours to reduce biological phenomena to a physical basis and to explain the origin of disease in harmony with the theory of ions, whilst at the same time calling in question the exclusive application of the dictum, *Omnis cellula e cellula*, to morbid processes. In the preface to his most recent pamphlet he says: "It is my deepest conviction that the study of mental life, of the ideal "world of man, is of primordial importance for the "understanding of the genesis of disease in the widest "sense of the term." The rational ground on which his conviction rests is to be found in the conformity of both bodily and mental events to the same laws. The law of causality in the mental world he dismisses in a few lines, as he considers its recognition in the mental sphere equally with the physical too obvious to require prolonged discussion, and the objection often urged against the subsumption of bodily and mental phenomena under one category—namely, the simplicity of anatomical structures as compared with the wealth of the numberless and for-ever-changing fine movements of mental life—he meets by seeking to demonstrate that the physical is as complex as the mental. Maintaining that medical thought is too much under the dominance of cellular pathology, and following Professor Rosenbach of Berlin, in his belief that gross "stabile" tissue alterations are preceded by functional alterations, Dr. Sleeswijk goes on to urge that such terms as "altered polarity," altered "nervous principle," abnormal working of "vital force," etc., explain nothing. He assumes that the molecules forming living tissues and those forming non-living matter are governed by the same laws—or, as we should put it, that the same laws may be deduced from the observation of both—and the principal steps in his argument are as follows: Matter of all kinds retains impressions made upon it for variable lengths of time—instanced, for example, in non-living matter by remanet magnetism, the reenforced katalytic action of platino-colloids after the action of certain poisons, and the influence of past use on the activity of electrodes. If this be so in these relatively simple bodies, he proceeds, much more must it be so in the more complex chemical bodies composing a living body.[4] A definite relation of cause and effect can only exist when there is a close qualitative connexion between the cause and that which afterwards renders the effect—that is, qualitative and not intensive differentia of energy have alone to be considered. This qualitative connexion not only permits of the retention and storage of impressions of whatever kind in a cell or parts of a cell, but also of their attaining to a certain condition of tension and thus to a certain independence of function, notwithstanding the most intimate contact of the cell with others. As, however, the form, structure, and function of such cells attain a certain standard and are constant for definite times, the organic whole composed of these cells must maintain a variable equilibrium, with maximal and minimal tensions, between which lies health. Any influence exerted upon the whole individual from outside must encounter an inconceivably great sum of stored-up impressions which form the disposition and almost entirely decide the result. According to the author, therefore, any influence, any bodily or mental impression made upon the whole—qualitative connexion between stimulus and stimulated being assumed—leaves its mark and becomes a permanent accretion to the personality, thus contributing to the disposition and deciding the results of fresh stimulation. Further, inasmuch as any fresh impression necessarily introduces a molecular adjustment or added molecular tension, the equilibrium of the organic whole must thereby be affected, and with this organic whole the contained germ plasm, the predisposition being thus determined. In this Dr. Sleeswijk is only following Hering and others who have maintained the identity of memory with inheritance or racial memory. The conclusion naturally drawn from his analysis, outlined above, is that not only should the mental reactions of any individual patient offer important data for a judgement on the bodily manifestations of disease, but that by suitable alterations in the mental environment, through the laying down of new mental impressions, diseases of both body and mind may be influenced and even made to retrogress.

We have treated this paper of Dr. Sleeswijk's out of all proportion to its length, partly because it illustrates an increasing trend of opinion, and more perhaps because of its attempt to give a rational explanation of the fact which purely psychological study is every day making clearer, namely, that a powerful mental and emotional impression is not a transitory event, but is indelible, indeed, indestructible; that though it may appear forgotten or even pass beyond the power of voluntary recall, it may yet be revived with all its original wealth of detail in dreams and hypnosis, and may even be demonstrated by psycho-analytic methods to grow and form new and directive associations in the subconscious world, as it were underground. As Maudsley has said, nothing is truly forgotten. To admit this, however, is quite another matter from accepting Dr. Sleeswijk's physical explanation of mentality. His argument is open to criticism at many points, but we must be content to state the obvious fact that theories are necessarily limited by knowledge of fact, which is a constantly-growing body, that what is a justifiable deduction to-day may not be so to-morrow, and that we therefore never have a *Weltaufklärung*, but only a working hypothesis. A dogma is a good thing to have, but just as often a good thing to let go.

[3] *Ueber die Art und Wirkung der auslösenden Kräfte in der Natur.* Wiesbaden: J. F. Bergmann. 1906.

[3] *Der Kampf des tierischen Organismus mit der pflanzlichen Zelle.* Leipzig: K. F. Koehler. 1902.

[4] To avoid any misunderstanding we may state here that Dr. Sleeswijk, in attributing memory to all matter, makes no claim to priority, but regards this as a mere extension of the widely-known theories of Ewald Hering, who regarded memory as a universal function of organized matter, a view broached by others long before Hering.

RESEARCH DEFENCE SOCIETY.

The promoters of the Research Defence Society have good reason to be satisfied with the success of the inaugural meeting held on Friday, June 19th, a full report of which appears elsewhere. The work of the society was begun at a private meeting held on January 27th of this year, at which seven persons were present. The society now has some thirteen hundred members, of whom 123 are ladies, and the membership is increasing daily. Lord Cromer's Presidential Address was delivered in a tone of conviction which made it very impressive. Sir Thomas Barlow laid stress on the determination of the society to lay before the public the whole facts of experimentation on animals and its results, which had been so persistently misrepresented and distorted. He showed how knowledge had

grown not by sudden leaps, but by slow and often halting steps. We may put the same thought in another way: Knowledge, in fact, like Nature, *non facit saltum*. It may be added that we never know whither the steps may lead. A scientific explorer starts out on a quest which may lead him to some utterly unforeseen end; hence it would be a grievous mistake, and, in the case of physiological and pathological research, a crime against the human race, to block his way. Lord Robert Cecil made a most effective speech, concluding with the remark that although animals should be treated with kindness and humanity was a good thing, it should, like charity, begin at home. Mr. Walter Long referred to the work of stamping out rabies in this country in which he took so prominent a part, and he made the statement, which we hope will be noted by the opponents of research, that the Government would never have embarked on that enterprise had it not been justified by the knowledge of scientific experts on whose advice it was able to rely. He made an appeal to the ladies present, which we hope will be taken to heart by those of the fair sex who are sometimes apt thoughtlessly to put the comfort of their canine pets before the good of human beings, and by disregard of the law run the terrible risk of reintroducing a disease which causes such suffering to mankind.

Dr. C. J. Martin made a good point when, in referring to the forty odd thousand of inoculations of mice with cancer, reported in the Home Office return of the vivisections performed during the last year, he said the value of these researches might be brought home to the public mind when it was pointed out that from the Registrar-General's return for 1905-6, the probability of any man over 35 dying of cancer was 1 to 11 and that of any woman 1 to 8.

Mr. Butlin, dealing with the allegation so often made, that experimenters became callous, said he had known a large number of such men, among them Lord Lister, Sir James Paget, and Sir John Burdon-Sanderson, and he stated emphatically that not one of them could be accused of the least cruelty. We agree with him that it was a very happy thought of Mr. Paget and his colleagues to found the society. For many years the medical profession has had to fight the battle alone, and it was high time that it obtained support from outside. It was fortunate for the society that a man like Lord Cromer, so distinguished as an administrator and a statesman, and also so decidedly level-headed, was persuaded to accept the office of president.

One of the things that most forcibly struck us in looking at the men on the platform and at the audience generally, was the number of people remarkable for achievement in many different lines of public life and intellectual activity, who had come to aid in the furtherance of the movement. On their faces were stamped not only intellectual power and practical experience, but sanity of judgement. This was in striking contrast with the various shades and degrees of fanaticism which are always so conspicuous at antivivisection meetings. Another remarkable point was the moral earnestness and the zeal for the welfare of humanity displayed by the speakers. Altogether this first meeting of the Research Defence Society, alike in the tone of the speakers and the representative character of those present, was one of the happiest augury for the success of its future work. We appeal to the whole profession, and to the public whose interest is so largely concerned in its success, to give it active support.

AN OLD MAID WITH A SPYGLASS.

IN a famous passage Macaulay says there is no spectacle so ridiculous as the British public in one of its periodical fits of morality. Once in six or seven years, he says, our virtue becomes outrageous. "We cannot "suffer the laws of religion and decency to be violated. "We must make a stand against vice." The *Evening Standard and St. James's Gazette* seems to be trying to work up the public to one of these periodical paroxysms. For a week or more it has been holding up its hands in horror at certain statues with which the new buildings of the British Medical Association are decorated. It has interviewed all sorts and conditions of men, including the inevitable Father Bernard Vaughan, without some platitude from whom no public discussion is now complete. We cannot congratulate our esteemed contemporary on the success of its appearance in the part of Mrs. Grundy. The only effect of the efforts which we will assume it is making merely in the cause of decency, is to excite wrong ideas as to matters absolutely harmless in themselves. Swift well said that "a nice "man is a man of nasty ideas." In this sense the *Evening Standard and St. James's Gazette* has shown itself "nice" to a degree that can only be called morbid. It complains of the nudity of certain statues. Now, there is a great difference between half-veiled nakedness and simple nudity. The short skirts of a ballet girl are more suggestive than the chaste nudity of a Greek statue. As for the statues to which the attention of the National Vigilance Association has been called, we confess we can see absolutely no indecency about them. If there is any indecency it is in the mind of the spectator, not in the work of art itself. If this sort of prudery is carried to its logical conclusion any one visiting a gallery of pictures or sculpture will have to get a certificate of virtue from his pastor. These places are as open to the public as the Strand, and there, as Byron says of the well-known edition of the classics prepared *ad usum Delphini* by scholars of the Society of which Father Bernard Vaughan is an ornament, any one whose mind hankers after that sort of delectation is able to glut his desire without being denounced in the newspaper. As Byron says:

> For there we have them all "at one fell swoop,"
> Instead of being scatter'd through the pages;
> They stand forth marshall'd in a handsome troop,
> To meet the ingenious youth of future ages,
> Till some less rigid editor shall stoop
> To call them back into their separate cages,
> Instead of standing staring altogether,
> Like garden gods—and not so decent either.

Works of art which might excite the moral wrath of the *Evening Standard and St. James's Gazette* are found in many churches. In some letters by the late J. K. Huysmans, published in the *Figaro* of May 23rd, is a complaint of an equally foolish act of prudery perpetrated by the priests of the Cathedral of Chartres. He says that among the wonderful pieces of sculpture to be found therein there is one representing the Circumcision, and he says, with natural indignation: *Par pudeur (!!!) il [le clergé] a collé un morceau de papier sur le ventre de Jesus.* That is Mrs. Grundy all over. She calls attention to what would otherwise have passed unregarded. Of the thousands of people who go up and down the Strand every day, not half a dozen would have noticed the statues had not the *Evening Standard and St. James's Gazette* pointed the finger of outraged virtue at the details of them. It is significant that its crusade has found little support from the rest of the press, and we welcome the powerful help of the *Times*, which in a leader confesses its surprise "to find any portion of the "London press assuming the moral attitude of the "Pope, who ordered the Vatican Venus and some "of her marble sisters to wear tin petticoats."

We think it right to note that the suggestion of the *Evening Standard and St. James's Gazette* that one at least of the statues which are as yet unrevealed to the public eye is of a still more objectionable character, is simply untrue. The statue representing Maternity, which we suppose to be the one meant, is in fact more draped than any of the others. The other female figures may for ought we know be "pre-"Pheidian," as the Oxford Slade Professor of Fine Art says; for our part we should rather call them "pre-"Adamite." They suggest the "woman wailing for her "demon lover" of the old legend, but there is nothing about them to lead any rightly-constituted human being into temptation. We leave the discussion of the statues from an artistic point of view to those competent to judge of such matters, but it is worthy of note that the artists who have so far spoken have expressed a favourable opinion of them. We have already referred to the letter from the Slade Professor of Art at Oxford; other artists have expressed similar view in the *Times*. We may mention further that letters warmly praising the statues and strongly deprecating any interference with them have been received from Mr. Sidney Colvin, Mr. Martin Conway, late Slade Professor of Art at Cambridge, Mr. D. S. MacColl, Keeper of the National Gallery, Mr. F. W. Pomeroy, A.R.A., and others. We are glad to be able to state that after full consideration the Building Committee has decided to recommend the Council to leave the statues as they are. We venture to think that the whole outcry against them is nothing more than a cleverly-engineered journalistic "scoop." The attitude of the *Evening Standard and St. James's Gazette* reminds us of an old picture in *Punch* of an elderly virgin in seaside lodgings complaining of men bathing in front of her window. When it is pointed out to her that they are a mile or more off, she says, "Yes, but then one can see with a spyglass!"

THE PROPORTIONAL REPRESENTATION SOCIETY.

THE completion of another year of activity in the life of a man or a collection of men aiming at a definite goal is always a matter of satisfaction, and when activity can be associated with progress, the satisfaction increases considerably. It is with pleasure that we note that in the report for the year 1907, which was presented to the annual meeting of members of the Proportional Representation Society on June 24th, this little society of workers is extending, and the fruits of its work are becoming evident in many of the countries of the world. The readers of the JOURNAL will find that some practical experience of the system of the single transfer vote is being gained in the Metropolitan Counties Branch, and will, therefore, be in a position to understand in how far the aim of the society to reproduce the opinions of the electors in their true proportions is capable of being carried out. It will further be realized that since Lord Courtenay's bill, the Municipal Representation Bill, has passed through its second reading in the Upper Chamber, has been considered by a Select Committee of that House, the report of which Committee has appeared in a Blue Book, and has already been accepted after certain amendments as recommended by the Select Committee, and now awaits the consideration of the House of Commons, the system must claim the serious consideration of politicians in this country, even if its adoption is not yet an assured fact. The bill provides for authority being given to the municipal councils to adopt the system, and the amendments deal with the conditions under which the bill may be adopted. In the successive numbers of the society's journal, *Representation*, this bill has been briefly discussed and explained, and the view expressed by a single dissentient voice in the House of Lords has also been given and met. The support of many prominent peers of the realm has strengthened the position of the bill, and it is a significant fact that as the single transfer vote admits of the adequate representation of all parties and the possibility of minority parties being heard, it should have met with such a favourable reception in the permanent Chamber. By its means the municipalities will become truly democratic, and if this change is effected, the next logical step would be to apply the system to parliamentary elections. Indirectly the House of Lords may thus be the means of making the House of Commons a still more democratic chamber. In other countries progress has also been made—notably, the introduction of the system in Finland, in Wurtemberg, and in Sweden and in Denmark, for municipal elections has given much satisfaction. The Tasmanian Parliament has sanctioned proportional representation, and the Act will come into use next year in the State elections, and in 1910 in the Commonwealth elections. In Holland, France, Saxony, Berne, and in the State of Oregon the matter has also been advanced. These facts, coupled together with the fact that the system may find general acceptance in the British Medical Association, are of sufficient importance to claim a little attention of the members of the Association. At this occasion of the annual meeting of the society, we would therefore wish it "many happy returns of the day."

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE UNIVERSITIES BILL.

THE Prime Minister having been approached on the subject consented to receive a deputation consisting of the following members of Parliament, who desired to represent to him the claims of the Royal College of Surgeons in Ireland to a grant from Government to help to maintain the medical school of the college, which will be placed at a serious disadvantage by the State-aided competition about to be set up by the new medical school in connexion with the new university in Dublin: Right Hon. Sir Edward Carson, Right Hon. James H. Campbell, Mr. S. H. Butcher, Sir William Collins, Mr. Cecil Harmsworth, Dr. Hazel, Sir Joseph Leese, K.C., Right Hon. Walter Long, Mr. Ramsay MacDonald, Sir Philip Magnus, Mr. J. C. O'Donnell, Mr. R. W. Perks, Mr. H. H. Raphael, Mr. Duncan Schwann, Sir Albert Spicer, Bart., Sir John Batty Tuke and Sir George White. Mr. Asquith received the deputation at the House of Commons on June 16th. Sir Edward Carson introduced the members, who were accompanied by the President of the College, Mr. John Lentaigne, the Vice-President, Mr. R. H Woods, and the ex-President, Sir Henry Swanzy. The President stated the grounds upon which the Council of the College rests its claim. Mr. Butcher, Sir William Collins, Sir John Batty Tuke, Sir Albert Spicer, Sir Edward Carson, the Vice-President, and Sir Henry Swanzy also spoke. Mr. Asquith replied in friendly and sympathetic terms, and promised to give the matter the fullest consideration. The President of the College afterwards thanked the Prime Minister on behalf of the deputation, which then withdrew.

FRIENDLY SOCIETIES AND THEIR MEDICAL OFFICERS.

THE Whitsuntide meetings of the friendly societies have, in one instance at least, been fruitful of results which are of interest to the medical profession. At the meeting of the Twentieth Century Equitable Friendly Society, it was resolved that the duty of appointing medical officers should vest in the executive council, that is to say, the central governing body. Each lodge will in future have the right of nominating a medical

officer but not the right of appointing or removing. The reason for this change was explained by the general secretary. He said that at present the medical officers were not free agents, and that a refusal to grant a certificate jeopardized the position of the medical officer. According to the *Manchester Guardian* (June 15th) he made the startling announcement, based upon the report of a medical practitioner who had examined the certificates in the society's chief office, that "the society "is paying between £4,000 and £5,000 per annum more "for sick pay than it ought to pay." He said that the only remedy was to give the members local option so far as recommendations for appointments were concerned, but restricting their power to give a medical officer three months' notice because a member had failed to obtain a certificate to which he was not entitled. After considerable discussion the resolution, with small amendments, was agreed to. It is obvious that the new method of selection and appointment would present certain very distinct advantages from the point of view of the medical profession, since it will give the medical officer greater fixity of tenure and greater freedom of action.

WHAT IS CASUAL EMPLOYMENT?

THE question whether a person is or is not engaged in casual employment within the meaning of the Workmen's Compensation Act has recently assumed considerable importance. Attempts have been made to fix employers with liability for accidents to charwomen and other persons whose occupation certainly appears to be casual; and although there are as yet no authoritative decisions on the point, enough has been said to make it necessary for employers carefully to consider their position. Let us glance at the definition of workman which is to be found in S. 13 of the Act. Broadly speaking, the phrase includes every one "who has "entered into or works under a contract of service or "apprenticeship with an employer." It does not, however, include (*inter alios*) "any person whose . . . "employment is of a casual nature, and who is "employed otherwise than for the purposes of the "employer's trade or business." What, then, is employment of a casual nature? One county court judge has recently held that a man employed to clean windows from time to time at regular intervals is not casually employed, and is entitled to compensation when injured; and we believe that a charwoman has been placed in the same category. On the other hand, Judge Howland Roberts had a case before him last week in which a jobbing gardener sought compensation from a gentleman in whose garden he had sustained injury by reason of a fall from a ladder. He held that there was no liability on the ground that the employment, if any, was casual, but he also held that there was, in fact, no contract of service. The question whether there is really a "contract of service" is an important element which must not be lost sight of. In the case before Judge Roberts it appeared that the applicant had acted as jobbing gardener for some eight years. No definite salary or wages were agreed upon; and the applicant, who sometimes employed men under him, used to send in his bill from time to time, charging apparently what he liked for each particular item of work. In these circumstances the judge held that some of the important elements of a contract of service being absent, he could not fix the employer with responsibility. The question whether there is a contract of service must be considered side by side with that of casual employment. Take the case of a doctor who sometimes employs a chemist to compound for him. Is the chemist entitled to compensation if he sustain an injury? Clearly the employment, if any, is casual; and applying the test used by Judge Roberts, there would really be no contract of service in the ordinary sense. At the same time, having regard to the doubtful nature of the point, and to the fact that the courts are inclined to give the workman the benefit of the doubt, it is clearly prudent to insure any one who may possibly be able to make a claim. This is the more necessary having regard to the magnitude of the liability. Thus, compensation is based upon the amount which the workman earns altogether, not merely on the amount which he earns in the service of the particular employer. A window cleaner might have 2s. 6d. a week from one employer, but he might earn £2 a week altogether. To avoid the possibility of a claim of £1 a week during incapacity the payment of a premium of 2s. 6d. a year would not be a great extravagance.

CORRELATION OF THE OVARIAN AND UTERINE FUNCTIONS.

THE removal of the ovaries is a serious operation in any case, whilst the amputation of the uterus is in some respects even graver. The surgeon is often obliged to remove these organs for well-known reasons. What are the physiological effects, independently of local and general lesions caused by ligatures, infection, and so forth? We know it is incorrect to ascribe all ill-effects to such lesions, or in the language of the modern surgeon, to trace all post-operative troubles to "imperfect asepsis." On the other hand, the surgeon is quite right in suspecting that those who speak o sequelae as "purely physiological," may be explaining away constitutional effects not physiological in any sense, but the more or less evident result of pelvic lesions following the operation. It is necessary to turn to physiological research and to scrutinize the effects of the removal of the normal ovaries, of the normal uterus, and of normal ovaries and uterus together. We may study with profit a recent memoir by Drs. E. S. Carmichael and F. H. A. Marshall,[1] as well as an article on the effects on one ovary of removal of its fellow, by the same authors.[2] These observers experimented on rodents, chiefly rabbits. They removed the ovaries from immature, gravid, and non-gravid rabbits. They also performed "subtotal" and total hysterectomy without removal of the ovaries. They came to the following conclusions: (1) The removal of the ovaries in young animals (rodents) prevents the development of the uterus and Fallopian tubes, which remain in an infantile condition. The subsequent growth and general nutrition of the animals seem to be unaffected. (2) The removal of the ovaries in adult animals (rodents) leads to fibrous degeneration of the uterus and tubes, most marked in the mucous membrane. The animals' subsequent health and nutrition remain good. These observations, the authors add, support for the most part the evidence obtained clinically in the human subject after surgical operation. (3) The removal of the uterus in a young animal has no influence in preventing the further development of the ovaries. These are capable of ovulating and forming corpora lutea after adult life has been reached. (4) The removal of the uterus in an adult animal does not give rise to any degenerative change in the ovaries if the vascular connexions of the latter remain intact. The authors add that these latter observations do not support the contentions of those surgeons who advocate subtotal hysterectomy, believing that the functional activity of the ovary is in some way dependent on the presence of the uterus. The authors are referring to the clinical investigations of Zweifel, Abel and Doran, and to the physiological researches of

[1] The Correlation of the Ovarian and Uterine Functions, *Proc. Roy. Soc.*, B. vol. lxxix, 1907, p. 387.
[2] On the Occurrence of Compensatory Hypertrophy in the Ovary *Journ. of Physiology*, February 28th, 1908.

Mr. Bond, of Leicester, published in the Journal of July 21st, 1906, p. 121. The clinical researches showed that, judging from after-histories followed up for several years, the conservative treatment of the ovaries is beneficial, and that it is most thoroughly so when, in subtotal hysterectomy, some of the endometrium is left behind: in other words, it is advisable to amputate the uterus a little above the os internum. The advocates of panhysterectomy think otherwise, but more statistical evidence, with careful analysis of every case in every series is demanded before the question can be settled. In respect to experiments on rodents, the investigators do not make one point clear: Is there the same difference between the cervical and corporeal mucosa in rodents as in the human species? The sources of fallacy in all investigations of this kind are very subtle. As for the old operation—oöphorectomy for fibroid—the results were utterly misleading. In reality, ovarian tissue was left behind in a large proportion of the cases, nevertheless good results sometimes followed these imperfect amputation of the ovaries. Lastly, the development of a fibroid growth may in itself imply some unknown physiological change which has up to the present been left out of account. We want yet more clinical and physiological light, but in the meantime we must be grateful to Drs. Carmichael and Marshall for their important monographs.

THE COMPULSORY NOTIFICATION OF ANTHRAX.

The evidence given at an inquest recently held by Dr. F. J. Waldo as to the death of a nursemaid showed that the cause was anthrax. Dr. B. E. A. Batt, House Physician to St. Bartholomew's Hospital, stated that the *Bacillus anthracis* was unmistakably present in the blood of the girl, and, in reply to a question from the coroner, he said that she might have eaten meat from an animal infected with the disease. This opinion was endorsed by Dr. T. H. Legge, one of H.M. Medical Inspectors of Factories, who added that last year there was a case of a domestic servant who contracted the disease while preparing meat for dinner. There does not appear from the published report of the inquest to have been any inquiry made as to whether the latter had been engaged in cutting up or otherwise handling raw meat. This is to be regretted, because it is very generally recognized that anthrax is rarely communicable to human beings by the ingestion of cooked meat. Ostertag states very definitely that the meat of anthracic animals ordinarily produces no injurious consequences after being eaten, and points out that it has been repeatedly shown that in cases of emergency slaughter of anthracic animals, the consumers, sometimes numbering hundreds, remain well, while the butchers who injure themselves during the slaughter become affected with anthrax. The desirability of including anthrax among the diseases compulsorily notifiable under the provisions of the Infectious Disease (Notification) Act was incidentally referred to by Dr. Waldo, and the jury added to their verdict a rider that the disease should be so included. Cases of anthrax among animals, which come to the notice of the police acting for the Board of Agriculture and Fisheries, are already notified to the district medical officer of health, and it would appear to be only proper that the same official should have immediate information respecting the disease when it attacks human beings. This aspect of the question will no doubt be considered at the Congress of the Royal Sanitary Institute at Cardiff in July next, when Dr. F. W. Eurich, of the Anthrax Investigation Board of Bradford, will open a discussion before the conference of medical officers of health upon the administrative control of anthrax.

THE CAUSE AND PREVENTION OF PLAGUE.

Captain W. Glen Lisbon, I.M.S., Acting Director, Bombay Bacteriological Laboratory, Parel, Bombay, in a lecture delivered before the Bombay Sanitary Association on December 11th, 1907, took as his subject the cause and prevention of the spread of plague in India. The material is largely culled from the reports of the Plague Research Commission on which the author served, but couched, as it is, in plain terms, it should do much to popularize the findings of the commission with the laity and members of scientific societies who are not experts in bacteriology. The disease was described as essentially a rat disease, and the species of rats found in India, their habitats, and the structure of the buildings conducive to their presence were discussed, the bacillus of the disease, the fleas and the transference of the germ from the sick to the healthy by them were described, and the measures which could be taken for the prevention of the disease, including rat destruction, evacuation, inoculation, and measures of temporary utility were considered. In the course of his remarks, Captain Liston pointed out that *Mus decumanus*, the sewar rat, was much less numerous in the island of Bombay than *Mus rattus*, the house rat, there being probably three of the former to seven of the latter. *Mus rattus* was common in England in the early period when plague prevailed there, and has sometimes been called the old English black rat. In England and other European countries it has been displaced by *Mus decumanus*, the sewer rat, said to have been imported from Norway, and hence sometimes called the Norwegian rat. The appearance and spread of the Norwegian rat in England and other European countries was coincident with the disappearance of plague from them, and it has now been shown that it is *Mus rattus* which is the most important plague-spreading rat in India. The printed report of the lecture containing excellent drawings and photographs bringing out the salient points forms a pamphlet which the Indian Government would do well to distribute throughout India, for there is nothing so convincing to the ordinary individual as a clearly written text with pictures illustrating the leading facts.

ANTERIOR RETROPERITONEAL HERNIA.

Reduction *en bloc* of an inguinal hernia is a very well-known complication. We also hear of a "properitoneal" hernia" where the sac is double with a common opening, one part of the sac lying in the usual position in the inguinal canal, whilst the other lies between the peritoneum and the muscular layers of the abdominal wall. Imperfect reduction, strangulated intestine being left in the more abnormally placed portion of the double sac, has been known to occur. Experience has shown that a yet more puzzling form of hernia may develop near an inguinal sac. Dr. Albert Fromme[1] of Bonn relates a case of strangulation of intestine in a narrow-necked sac developed on the left side of the bladder, the patient, a man 59 years of age, having been subject since the age of ten to a left inguinal hernia. There was also hernia in the right groin, more recently developed. The seat of strangulation was not easily definable. Two concentric coils of distended intestine lay in the hypogastrium. The right inguinal canal was empty, but when the patient strained some gut entered it and was afterwards reduced without difficulty. There was both a direct and indirect hernial sac on the left side, yet both were empty. The peritoneal cavity was laid open through an incision in the middle line above the pubes. Some serum escaped, and the peritoneum was found somewhat hyperaemic. The obstruction did not lie in the

[1] Ueber einen Fall von Hernia retroperitonealis anterior sinistra incarcerata, *Deut. Zeit. f. Chir.*, March, 1908, p. 365.

inguinal, femoral, or, as was found later on, in the obturator regions. The obstructed intestine entered into a tight ring, entirely peritoneal, immediately behind the symphysis and somewhat to the left of the middle line. The ring was incised and 4 in. of small intestine were drawn out with perfect ease, peristalsis being restored immediately after their extraction. The sac proved to be a big pouch of peritoneum behind the symphysis and horizontal ramus of the left os pubis, reaching down to the obturator foramen. It had no connexion of any kind with the inguinal sacs nor with the peritoneum around the obturator foramen, which was not involved. The sac was carefully dissected away, it lay between the lateral and median true ligaments of the bladder. The patient made a good recovery. Fromme refers to previous observations on this remarkable type of hernia. Rokitansky described, nearly seventy years ago, certain abnormal pockets of peritoneum in the neighbourhood of the bladder with wide or narrow necks, which might possibly be the cause of strangulation. Aschoff, Kaufmann, and Brentano reported cases where hernia into these pouches was actually discovered, all occurring about eleven years ago. The surgeon will do well to bear in mind this type of internal hernia, and to remember that it may develop in a subject with a distinct and entirely separate hernia in the inguinal canal.

FAMILY CARE OF THE INSANE IN HUNGARY.

THE method of treating insane persons in families arose from a religious superstition. A certain church had a reputation for curing lunatics, and these flocked thither in such numbers that they were necessarily lodged in the houses of the families in the neighbourhood; 19.2 per cent. of these patients recovered completely. Fabinyi[1] shows how this method of dealing with lunatics has been imitated in many countries, and describes in detail its success in Hungary, where it has been established in Dicsöszentmárton for two years. The patients are placed in a strange family, one, two, or three in each. The foster-family is chosen so as to suit as far as possible the patient's individuality and trade. The patients are allowed freedom to go about under suitable oversight. Even acute cases are sometimes thus boarded out. A nurse pays a weekly visit; the directing physician visits twice during the first month, and then monthly. Once a month the patients are weighed. One kroner per day is paid for each patient, with a slight addition for a dirty or difficult patient, and a premium is given at the end of the year to promote ambition to receive patients. This includes the keep of the patient, but clothes and tobacco are supplied from the central institution. The total cost per patient works out at 1.10 to 1.15 kroner per day. The number of patients thus treated is now increasing rapidly; while 274 are boarded out, 54 only are in the central institution, many of these having previously been repeatedly tried in families and found unsuitable. Some are unable to be boarded out because the work done in the locality is unsuitable for them. Results show improvement in the general condition and in conduct, and the patients become much more sociable. As regards the kind of cases, 9 forensic cases, including even a murderer, an incendiary, and one who had brought himself under the action of the law for sexual abuses, have been without great difficulty boarded out. The majority of cases, however, are those of consecutive dementia, 60 per cent.; next come idiots and imbeciles, 13 per cent. The patients are mostly contented. Fifty-eight cases out of 81 were taken into the central institution last year for various reasons—for example, illness, excitement, or in order to change the treatment. Last year there were nine escapes or attempts to escape, seven from families, two from the central; in the first half of this year, six from families, one from the central. One suicide occurred. These were the only accidents among 320 cases. The care that is, in many cases, bestowed upon these patients by the families is characterized by an unexpected amount of love and patience. Two hundred and twenty-eight families now receive patients, and 120 are waiting to be put on the list. The money paid for this care goes to the help of citizens instead of to the upkeep of an institution.

[1] *Pester Mediz.-Chirurg. Presse*, April 5th and 12th, 1908.

FOREIGN BODIES RETAINED IN THE HEART.

FRENCH writers have recently published interesting records of injuries to the heart not followed by immediate death. Loison's essay on wounds of the pericardium and heart, published in the *Revue de Chirurgie*, remains the standard monograph for reference, but last year M. René Benard reported a case in which a rusty nail was found after death in the walls of the heart.[1] The patient was a woman, aged 57, admitted into the Hôtel Dieu, Paris, on June 19th last, under Le Dentu, for a large irreducible umbilical hernia. Surgical treatment was considered inadvisable, and she was placed in a medical ward because the condition of the thoracic organs was very unsatisfactory. The patient coughed up thick, tenacious bloody mucus, the pulse was rapid, and the heart-sounds muffled, especially the first near the apex, but no murmur could be defined. There was dullness, changing in its area whilst the patient was under observation, at the bases of the lungs. Early in the morning on July 4th the patient was found dead in her bed; she had called the night nurse an hour before, requiring the bed-pan, but since then had lain quite tranquil, and had never spoken or cried out. At the autopsy the umbilical hernial sac was found to contain nearly 10 ft. of small intestine, the caecum, appendix, and ascending colon, and a bulky omentum. There was a large infarct in the base of the left lung. In the heart, some atheromatous patches were discovered on the mitral valve and beginning of the aorta. On further examination, a foreign body was found in the muscular wall of the heart. There was no puncture, nor any patch of pericarditis or endocarditis in connexion with that body. It was a nail, very rusty, and with its head worn away, evidently through long oxidation in the myocardium. In length it measured 60 mm., or about $2\frac{2}{3}$ in., and was embedded in the wall of the right auricle, the auriculo-ventricular septum, which was abnormally thick, and for nearly an inch in the wall of the right ventricle. The point was lodged in a columna carnea immediately under the posterior segment of the tricuspid valve. This nail had certainly been tolerated for a long while; most probably the pulmonary infarct was in some relation to it, as in Laugier's case of a tuberculous man who died of arterial embolism; coagula were found in the left ventricle, developed around a hair-pin. M. Benard, excluding cases like Tuffier's, in which a ball was removed from the left auricle, has collected 87 cases of foreign bodies in the myocardium, including his own. Death is not always rapid; in a case in which the foreign body was a splinter the patient survived for 47 days. Another patient bore a needle in the left ventricle for nine months; another lived for a year with a blackthorn spine in the myocardium; and one patient lived for six years with a needle in the right ventricle. In the cases recorded by M. Benard, Laugier,

[1] Considérations sur les corps étrangers du cœur, à propos d'un clou trouvé dans le ventricule droit, *Bull. et Mém. de la Soc. Anat. de de Paris*, July, 1907.

Rénon, and Tixier the foreign body had certainly rested for a very long period in the heart. Trélat removed a needle, by operation, five days after it had entered the heart. As to shot which have remained more or less passive in the heart there is an instance on record of a negro who died sixty-seven days after a gunshot wound, and buckshot was found in the right chambers. Loison collected cases in which shot had remained inert for periods up to two years. One patient carried a piece of iron in the heart for thirteen months. A gardener, when in good health, was seized with dyspnoea and died in hospital within twelve hours. An ivory toothpick 1½ in. long was found in the heart. In several other cases sudden death occurred, but it does not appear to be the rule, and in many others death seemed unconnected with the foreign body. One question remains, How do needles get into the heart when it is clear that they have not been pushed in through the surface of the thorax? Needles have frequently been found lying passive in the hearts of cattle and horses. They were probably swallowed with the food, and Benard quotes writers who believe that in the human subject also the needles enter the patient's body through the oesophagus, but no cicatrix nor any abnormal tissue between that canal and the heart was detected in any of the remarkable instances collected by Benard.

THE LATE MR. FRANCIS FOWKE.

UNDER the will of Mr Francis Fowke, General Secretary of the British Medical Association for over thirty years, a sum of £500 is bequeathed to the Office Staff Superannuation Fund of the Association. He also left £1,500 to the Wolverhampton and South Staffordshire Hospital, £1,000 to the Birmingham General Hospital, and £500 to Epsom College.

COLONEL WILLIAM C. GORGAS, of the Medical Corps of the United States Army, was elected President of the American Medical Association at the recent annual meeting of that body. Colonel Gorgas was born in 1854, and his name is associated with some of the brilliant results in sanitation that have been achieved in recent years.

ON July 1st Sir Henry Pitman, M.D.Cantab., formerly Physician to St. George's Hospital and for many years Registrar of the Royal College of Physicians of London, will complete his 100th year. Sir Henry, who lives in retirement at Enfield, is, it is announced, to be presented with a piece of plate by some friends on the anniversary of his birth. We are sure the profession will join with us in expressing the heartiest congratulations and best wishes on that interesting occasion.

THE triennial dinner of the South African Civil Surgeons will take place on Friday, July 24th, at 7.45 p.m., at the Imperial Restaurant, Regent Street. The Right Hon. R B. Haldane, M.P., Secretary of State for War, has kindly consented to be present, and the chair will be taken by Mr. Anthony A. Bowlby, C.M.G. Reply cards have been sent to those whose addresses are available, and it is hoped that those who wish to attend will reply as soon as possible. Old South African civil surgeons to whom notices have not been sent, and who would like to be present, are requested to communicate with C. G. Watson, Esq., 44, Welbeck Street, W. The price of the dinner will be 10s. 6d., exclusive of wine.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Public Health (Markets in Rural Districts) Bill was before the House of Commons on Friday in last week. The Bill gives to rural district councils powers to provide suitable sanitary markets with the consent of the Local Government Board. In the discussion attempts were made to amend the bill in the direction of requiring the consent of the local ratepayers and owners, but the Committee rejected the amendment by a large majority, and, after one application of the closure, the bill passed without amendment, and was read a third time by a majority of 133.

Tuberculosis Prevention (Ireland) Bill.—The text of this bill was issued late last week, and is backed by Mr. Birrell and the Attorney-General for Ireland. The bill provides for the compulsory notification by medical practitioners of cases of tuberculosis, and any doctor failing in this respect will be liable on summary conviction to a penalty not exceeding 40s. The fee for notification of a case in an infirmary, hospital, or workhouse will be 1s., but 2s. 6d. if the case occurs elsewhere. A county council may provide hospitals and dispensaries for the treatment of the inhabitants of their county suffering from tuberculosis, and two or more county councils may combine in providing a common hospital or dispensary. Other clauses relate to the raising of expenses and the recovery of the cost of maintenance of patients. The bill also sets forth that a person shall not suffer any disqualification or any loss of franchise or other right of privilege by reason of his being admitted into and maintained in any hospital provided under the bill. The sanitary provisions in the third part of the bill provide for the delivering of lectures and the distribution of literature relating to tuberculosis. A county council is also empowered to appoint a bacteriologist for their county for the examination of meat, milk or milk products, and pathological material. Powers are also given to take samples of milk and milk products for examination, and to destroy cows affected with tuberculosis of the udder.

Medical Officers of Health in the Highlands.—Mr. Weir asked the Secretary for Scotland if he would state how many medical officers of health had been appointed in the Highland crofting counties during the last five years; and how many of them possessed a diploma in sanitary science, public health, or State medicine, as required under Section 54 of the Local Government (Scotland) Act, 1889. Mr. Sinclair replied that in the Highland crofting counties there had been appointed during the last five years medical officers of health for three counties, six districts of counties, and four parishes or portions of districts. All possessed the statutory diploma except four, and two of these had been appointed on condition that they obtained it.

Insanitary Conditions at Lisburn.—In answer to Mr. Devlin, who called attention to the report of the Local Government Board inspector with regard to the insanitary condition of the dairies, cowsheds, and milkshops in the Lisburn urban district, the objectionable position and unsatisfactory condition of the slaughter yards, the want of a public abattoir, and the lack of any provision for the inspection of the meat and milk supply of the district, Mr. Birrell answered that the report of the Local Government Board's inspector contained references to the matters mentioned. The Board had urged the council to appoint an expert inspector, such as a veterinary surgeon, to supervise the meat and milk supplies of the urban district.

The M.O.H. for Hertfordshire.—Mr. Cooper asked the President of the Local Government Board whether the County Council of Hertfordshire, in reappointing its medical officer of health, had added to his duties the appointment of inspecting the children in the elementary schools in the county; whether he could state the number of children to be inspected; whether the medical officer was required to reside in the county and devote the

whole of his time to the duties of his office: whether this medical officer's office had been fixed at Guy's Hospital, London; whether any grants and travelling expenses had been made to maintain this office; whether this position was convenient to the parents of the children and people of Hertfordshire; whether any sanction of his department had had to be obtained: and, if so, would he state the reasons why he had sanctioned the selection of an office a considerable distance from the county. Mr. John Burns replied that he understood that the county council had appointed their county medical officer to act as chief school medical officer under the Education Acts, and that he was required to devote the whole of his time to the duties of these two offices. A sum of £200 per annum appeared to be allowed for the provision of a clerk and suitable furnished offices. He was also allowed the necessary travelling expenses and disbursements for stationery, and £20 for the provision of a typewriter. Hitherto the office of the medical officer seemed to have been at Guy's Hospital, but he did not know whether the arrangement had been continued. No sanction on his part was required to the appointment which had been made or to the selection of an office, and he had no information on the points mentioned in the question other than those with which he had dealt above. He might say, however, that when appointing a chief school medical officer the county council also appointed a number of district medical officers of health and other medical practitioners to act as school medical officers for the sanitary districts in their area.

The Public Health (Sewers and Drains) Bill, which was introduced on May 26th by Mr. Vivian, and supported by Lord Robert Cecil, Mr. Walters, Mr. Fenwick, Mr. Bowles, Mr. Waterlow, Sir William Bull, and Viscount Morpeth has just been issued. It is an attempt to remedy the confusion which exists as to what is a sewer and what is a drain. Decisions in the law courts have failed to settle the matter, and this little bill proposes to do it in two operative clauses. The first deals with and defines the single private drain for combined drainage of houses, and the second clause defines the application of Section 25 of the Public Health Act 1875 to private drains used for combined drainage.

The Miners Eight Hours Bill occupied the whole sitting on Monday, and was finally left undisposed of and the second-reading division postponed for two or three weeks. Mr. Gladstone, in moving the second reading, made an interesting speech, and devoted a considerable share of his remarks to the health questions involved. The danger in the mine stood first of all trades excepting the sea. They were often told that the danger to railway servants was very great, and so it was to certain classes. The percentage of accidents in the case of railway servants was 7.77 per 1,000. In the case of miners it was 12.82 per 1,000, and last year there were 1,099 fatal accidents below ground and 5,149 non-fatal accidents. Nobody, at any rate, would deny that the miners' trade was a dangerous trade. He passed to the question of health. The leader of the Opposition, speaking incidentally on this matter, had mentioned to the House that the occupation of the coal miner was a healthy one, but he thought the views of the committee as regards health were not conclusive. It was only an incidental part of the report, and the committee contented themselves practically with taking the mortality bill. In passing he noted that already the Workmen's Compensation Act schedule contained three special industrial diseases from which miners suffered. It was true that the mortality figures between the ages of 25 and 65 were slightly below the average of all occupied males above ground; but let them look at the figures for the young men and the old. Taking the age from 15 to 25, the death-rate per 1,000 for all occupied males above ground was 3.41; for miners it was 3.83. From 15 to 20 the mortality for occupied males above ground was 2.44, and for miners 3.20. Over 65 the average mortality above ground was 88.39; for miners it was 139.82. It was obvious that the work told upon the men, and they suffered for it in their old age. The mortality figures were no real test. The miners were picked men. They did not send weak boys to mines, and a process of weeding went on among the young men, so that when they got to the age of 25 they had left a picked lot of men, the strongest in the district. He asked the House to remember that these miners became, through accident or illness, physically weak. They left the mine and got occupation in other directions above ground. Then, when they died, their deaths were credited to those occupations, and the miners were credited with specially good health. He would give just one illustration of what he meant. He was asked the other day for the mortality figures of the Metropolitan Police. He did not attach any importance to them, and did not think they carried any weight. The death-rate between 25 and 35 was 1.73 per 1,000; between 35 and 45 it was 1.6; and between 45 and 65 it was 0.63. Those figures were perfectly valueless, because they had to have efficient men physically in the police force. If they ceased to be efficient they had to retire on pension or be discharged. They could not test the health of a miner's life any more than that of a policeman's by mere mortality returns. The general tendency in foreign countries was to impose limitations on hours of labour.

The Territorial Forces and Vaccination.—Mr. Haldane informed Sir William Collins that there were no regulations enforcing the vaccination of the officers and men of the Territorial Forces.

The Death-rate on the Rand.—Mr. Wedgwood asked the Under-Secretary of State for the Colonies whether in 1907 the mortality from disease among natives recruited for the Rand from those parts of Africa north of latitude 22 deg. S. was 69.7 per 1,000 per annum; whether among those from British Central Africa alone the mortality was 73.8 per cent., and that consequently the recruiting of natives from British Central Africa had been stopped by the Colonial Office; whether in February, 1908, the mortality among the natives from Portuguese territory north of 22 deg. S. was at the rate of 74.9 per 1,000 per annum; and whether he would take steps to prevent the recruiting of those natives also in future. Colonel Seely said that the figures given in the first part of the question were correct, but the recruiting of natives from British Central Africa had been stopped by the Secretary of State because of the high death-rate prevailing among them, in spite of the fact that they were being largely employed on a form of surface work. It was, therefore, apprehended that, if employed in labour underground as was proposed, the death rate would be greatly increased, and as His Majesty's Government were directly responsible for the affairs of the British Central Africa Protectorate, they had felt obliged to refuse to accede to recruitment for underground labour only. The mortality among Portuguese natives for February, 1908, appeared to be 72 per 1,000, slightly lower than the figure given. The existence of a death-rate of about 70 per 1,000 could not be regarded otherwise than as a subject for anxiety and watchfulness, but he felt confident that the Transvaal Government, who were now directly responsible for the recruiting of these natives, were alive to the importance of the subject. He would remind the hon. member that, high as these figures were, it was at least satisfactory to know that the average death-rate for all natives employed in the mines in the Transvaal had been reduced to considerably less than half what it was in 1903.

The Weekly Rest Day Bill was brought forward in the House of Lords on Tuesday by Lord Hill, who said the measure was promoted by the National Hygienic League. Its object was to secure that every workman should have twenty-four hours' rest on Sunday in each week, and where Sunday labour was necessary a Sunday's rest every fortnight and another twenty-four hours' rest during the intervening period. He argued on health grounds for some such legislation. After a short debate, in which Lord Beauchamp, the Archbishop of Canterbury, and Lord Lansdowne took part, the bill was withdrawn.

The Old Age Pensions Bill was discussed under the guillotine rule on Tuesday and Wednesday, and several important changes were made, the chief of which related to the adoption of a sliding scale whereby the income limit will be raised to 10s., and 1s. deducted from the pension for every 1s. of income above 8s. a week. The bill will be further discussed on the first three days of next week.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER.

AMENDMENT OF THE CORONERS ACT.

IT would seem that the present Government needs a good deal of convincing that the Coroners Act at present in force is in many points unsatisfactory. The way in which juries are summoned, the absence of any payment for their loss of time, the doubtful necessity of always compelling them to view the body, and the perfunctory way in which, if necessary at all, it is done, are subjects which certainly need consideration and revision. But from the point of view of medical men there is still greater need of amendment of the Act. The Manchester Medical Guild has recently been considering the question, and has addressed a letter to the Local Government Board, which was later forwarded to the Home Office, setting forth some points in which an alteration of the present law is demanded. This action was first suggested by the recent circular of the Lancashire County Council, stating that in future only one guinea per inquest would be paid to medical men attending to give evidence, even though the inquest might last several days. This would seem to be in strict accordance with the Coroners Act, though in the past a guinea per day has actually been paid. The Medical Guild, however, remembered that in the case of the Midwives Act, though no provision was made by that Act for payment of any fee to medical men summoned by midwives, yet it was found possible to pay such fees under two other Acts of Parliament. Accordingly, the Guild put the question, Is it possible for the county council to pay one guinea per day for attendance at inquests, under any other Act besides the Coroners Act? If so, there was no necessity for the county council to alter its practice of past years. At the same time it is certainly advisable not to leave it to the discretion of the county council, but so to amend the Coroners Act itself as to make such payment compulsory.

Again, the Guild letter drew the attention of the Home Office to the practice of coroners' juries—a practice which some coroners seem to encourage—of adding to their verdicts riders which often make serious reflections on medical men, and are calculated to do them injury in their profession, in spite of the fact that, in adding such riders, the juries are acting beyond their duties. This fact is brought out in an appendix to the report of the Medico-Political Committee published in the SUPPLEMENT to the JOURNAL of last week, which contains replies of the Solicitor of the Association to questions submitted by the South Manchester Division. It is not at all certain that a medical man could not obtain redress if he could prove that he had been injured in his profession by such an extra-judicial rider.

Another point to which the Guild drew attention in its letter was the practice of some coroners of obtaining from medical men information which often prevented the need for inquests, and it was suggested that some fee should be paid for such information. Of course it is well known that a medical man is not bound to give any information except when summoned to appear in court, but in actual practice an attempt is often made by the coroner's officer, with the connivance of the coroner himself, to obtain such information under a sort of veiled threat that, unless it is given, the medical man must take the odium of causing an inquest which his information might possibly render unnecessary. The Guild suggests that for information given by a medical man which prevents the need for an inquest, a fee of half a guinea should be paid, provided, of course, that the medical man was justified in not giving an ordinary death certificate.

The letter of the Guild drawing attention to these facts was sent to the Local Government Board which evidently thought it of sufficient importance to be forwarded to the Home Office, and a few days later the following reply was received from the Home Office addressed to Dr. Taylor, the Honorary Secretary of the Guild:

Whitehall, May 28th, 1908.

Sir,

In reply to your letter of the 20th instant, which has been forwarded to this department, with reference to the fees payable to medical witnesses at inquests, I am directed by the Secretary of State to say that he contemplates the appointment of a committee to consider whether the law relating to coroners' inquests requires amendment, and, if so, in what respects. If the Committee is appointed, your letter will be put before it.—I am, Sir,

Your obedient servant,

W. P. BYRNE.

It is evident from this communication that the Government is ready and willing to receive any information as to the working of the Coroners Act, and only needs strengthening in its proposal to appoint a committee of inquiry. The Secretary of the Salford Division will be glad to learn of any facts bearing on the subject, especially details of cases occurring in Lancashire, which may show the need for amendment of the law. Communications may be addressed to 299, Eccles New Road, Salford.

BRANCH SURGERIES AT CHEMISTS' SHOPS.

The propriety of having branch surgeries in connexion with chemists' shops has recently been raised in Manchester, and inquiry by the Salford Division has elicited the fact that the Central Ethical Committee has given the following advice in cases that have been before it: (1) "That medical practitioners should not put brass plates on premises of which they are not in effective occupation. (2) That there is no objection to a medical practice and a chemist's business being carried on in entirely separate parts of one house provided that one is not used to advertise the other." These opinions would seem to cover the ground fairly well so far as practice in towns is concerned. The Medical Guild has gone further, and passed the following resolution:

> That, in the opinion of the Guild, it is a breach of medical ethics for a practitioner to conduct practice in connexion with a chemist's shop, either by having consulting rooms or call office or a name plate at a chemist's shop.

This resolution has been forwarded to every member of the Guild. It is, of course, only intended to apply to Manchester and Salford and the neighbourhood, there being no idea of laying down a rule for universal application. But it was felt that with the best intentions in the world any connexion of a medical man with a chemist's shop could hardly fail to result in the chemist advertising the medical man.

BIRMINGHAM.

PROVINCIAL MEETING OF THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

THE provincial meeting of the Society for the Study of Disease in Children was held this year in Birmingham on Saturday, June 20th. The medical men in Birmingham and the district were invited to meet the members of the society, and about 140 attended at the demonstration of cases and specimens which was held in the out-patient hall of the General Hospital at 2.15 o'clock. The guests were received by Sir Thomas Chavasse and Dr. George Carpenter, the Chairman of the Council of the Society. The cases which were shown were of considerable interest and numbered about 60. A tea-party was given at the General Hospital during the afternoon. At 4.30 o'clock a meeting for the purpose of reading papers was held in the out-patient hall of the Children's Hospital, Steelhouse Lane, and at it Dr. George Carpenter presided. Papers were read by Mr. Sydney Stephenson, Dr. Kauffmann, Dr. Walter Jordan, Dr. Stanley, Mr. Leedham-Green, Dr. Potts, and Mr. Frank Barnes. In the evening a most successful dinner took place at the Grand Hotel, with Sir James Sawyer in the chair.

A CONFERENCE ON THE MILK SUPPLY.

A conference on the milk supply, which was organized by the Midland Branch of the Incorporated Institute of Hygiene, was continued at Birmingham last week, Dr. A. H. Carter being in the chair. The first resolution, "That the veterinary inspection of all milch cows, and the elimination of all diseased cows, with compensation to the farmer under certain circumstances, is desirable," was carried unanimously after some discussion. The second resolution—"That regulations should be applied uniformly throughout the whole country in regard to the ventilation, cleanliness, etc., of cowsheds, as well as the cleanliness of the

operations necessary for the collection and distribution of milk,"—was also carried. The third resolution was carried after a long debate, as a considerable party in the meeting wished to fix the cooling point at 50°. The resolution was passed as follows: "That all milk intended for sale not sold locally and within three or four hours of being drawn from the cow should be cooled down to as near 40° F. as possible and placed in locked churns; and that railway companies be compelled to retain it at a low temperature until delivery." The following resolutions were also agreed to: (1) "That all premises used for producing, cooling and churning, and for the sale of milk, should be registered, and every cowkeeper or milk dealer be licensed, registrations and licences to be renewed annually and withdrawn for persistent breach of regulations." (2) "That the sale of milk from a cow known to be diseased, as well as the sale of milk known to be infected, should be made an indictable offence."

BIRMINGHAM UNIVERSITY.

Mr. Frank Marsh, F.R.C.S., who has been connected with the teaching staff of the Queen's College, Mason College, and the University for more than twenty years, has been compelled to resign the lectureship of general surgery for dental students on account of the pressure of private work. Dr. J. E. H. Sawyer has been appointed examiner for the Russell Memorial Prize for this year. Dr. James Miller, lecturer in pathology and bacteriology, has been appointed to represent the University at the International Congress on Tuberculosis, to be held at Washington in September and October next.

The undergraduates of the Medical Faculty of the University of Birmingham broke the monotony of term on June 4th in somewhat useful fashion. Nothing helps to drive facts home in the minds of students more than practical demonstrations, and these are of special value in connexion with comparatively dry subjects, such as pharmacology and materia medica. Probably all the students, therefore, gained something from the visit which Dr. Coole Kneale arranged they should make to the manufacturing department of a large business house in Birmingham, Messrs. Philip Harris and Co. The firm took a great deal of trouble to make the visit interesting and instructive, so that the students had an excellent opportunity of examining good specimens of materia medica, and of seeing for themselves how the crude drugs which they will afterwards have to prescribe are converted into tinctures, pills, and powders. Visits of the same kind to the premises of manufacturers of drugs might be arranged with advantage in connexion with all medical schools, and be paid even by men who are already in practice, for much of the present unsatisfactory condition of the art of prescribing is due to lack of adequate practical knowledge not only of dispensing but of modern pharmaceutical methods.

WEST YORKSHIRE.

FUNDS FOR THE LEEDS UNIVERSITY.

THE subscriptions to the Leeds University funds have hitherto not come up to expectation nor to the amounts subscribed for the other Northern universities. Lord Ripon, the University Chancellor, has recently made an appeal for further donations. We are glad to see that Mr. J. Roberts, of Bradford, has given £1 000 to the fund on condition that £15,000 is raised in that city. Bradford has, so far, not done its fair share in supporting the university, and we trust the necessary amount to ensure Mr. Roberts's donation will soon be forthcoming.

HUDDERSFIELD GUARDIANS AND THE ASYLUMS COMMITTEE.

The Huddersfield Guardians have recently addressed a letter of remonstrance to the West Riding Asylums Committee on the inadequacy of the provision for imbecile girls. The question has been under discussion for nearly two years, and although the Asylums Committee is making provision for thirty additional boys, it is not proposing to alter the conditions under which the girls are housed. The guardians consider that it is most undesirable for the girls to spend all their waking hours, other than those spent in school, with adults. They do not desire the provision of a separate institution for the girls, but consider that a ward or wards might be set aside for them in the Storthe's Hall Asylum. This appears to be a reasonable request, and we should imagine that the committee will eventually see fit to accede to it.

HEALTH AND EDUCATION.

At the Conference of the National Association of Head Teachers, held at Halifax on June 11th, Dr. Crowley, Medical Officer of the Bradford Education Authority, read an interesting paper on "The Child as Unit." He strongly maintained that the effects of heredity had been overestimated, and that the physical deterioration so prevalent was due chiefly to bad environment and want of sufficient food and sleep. In mentally deficient children heredity played a preponderating part. Attention to the food, clothing, and cleanliness of the child were a necessary corollary of compulsory education. The education authority would have to make provision for the treatment of many of the more specific physical defects. Nowhere was it more imperative to take the child as a unit than in the infants' school. The infant should be treated as such, and the whole curriculum should be based on the known physiological laws of child development. The dull or backward child had been much neglected. Such children should be taught in classes not exceeding 15 in number. Defective sight and defective hearing, especially the latter if associated with adenoids, had a marked influence on the mental condition. The open-air school would be a great boon to these children. Dr. Crowley made a strong attack on the half-time system, and described it as a standing disgrace to the Northern communities. It was economically unsound, and a serious injustice to the child.

THE LATE DR DUNLOP OF BRADFORD.

Bradford has suffered a great loss recently through the death of Dr. Dunlop. He had been a well-known figure in local medical and social circles for over forty years and was highly respected. He was a bluff, but genial, Scotsman, always brimming over with cheerfulness. A great golfer and curler, he was always associated with his country's national pastimes. He took a constant and happy interest in the local medical societies. It is not long since he attended a meeting of the Bradford Division of the British Medical Association, in which he took an active part. It is pleasant to think that his son, Dr. J. B. Dunlop, has recently been nominated for the position of Honorary Secretary to the Division, and will, no doubt, be elected at the annual meeting.

CARLISLE.

THE CUMBERLAND INFIRMARY.

AT the annual meeting of the English Division of the Border Counties Branch recently held at Carlisle plans of the proposed extensions and improvements at the Cumberland Infirmary were submitted by Mr. J. J. Burnet, A.R.S.A., the architect of the Western Infirmary, Glasgow. Dr. Barnes introduced Mr. Burnet, who stated that the chief weakness of the present buildings of the Cumberland Infirmary was the inefficient accommodation for the technical and domestic service, and while the plans proposed an addition to the curative department, a large proportion of the expenditure would necessarily go to the service wards, so that the infirmary could be more economically worked.

The plans for the reconstruction provide for the erection of a new west pavilion, containing on the ground floor a male surgical ward of 12 beds, and on the first floor a children's ward of 24 beds, each with the necessary ward kitchens, bathrooms, and sanitary conveniences. Airing balconies were provided at the west end of both wards, and the flat roof of the pavilion, to be reached from an elevation to occupy the centre of the present west staircase, was arranged for use by the children as a roof garden, where, under the supervision of the nurse, they might have the advantage of open-air treatment without mingling with other patients. The kitchen and its offices were to be removed from the basement of the central or administration block, and a new kitchen with extended and additional offices was to be constructed immediately to the north and above the ground level, where it would be more conveniently situated.

A new nurses' home, three stories high, is to be erected to the north and against the new kitchen buildings. It will afford accommodation on the upper stories for

40 nurses in single rooms, with all necessary bath, lavatory, and other sanitary fittings, their dining room, drawing room, library or writing room, and cloak rooms occupying the ground floor. The home is sufficiently detached from the hospital to ensure the necessary quiet for the nurses' bedrooms and to prevent the free use of their sitting rooms being a source of annoyance to the patients.

The present out-patient department, on the ground floor of the present nurses' home, is improved and enlarged, providing better facilities for the treatment of casualties. New ophthalmic and *x*-ray departments are added. With little alteration, the floors above are so arranged as to provide two isolation wards, and better accommodation is provided for the domestic servants, who are at present inconveniently housed in the basement of the administrative block. The laundry is to be remodelled, enlarged modern steam-driven plant taking the place of the existing fittings. The heating and hot-water services are to be reorganized throughout the building, and the whole institution fitted with electric light.

The buildings are externally of the simplest design, offering no competition with the existing main façade, the handsome stone portico of which will remain the central and important feature of the design. Beyond the erection of a new gateway giving carriage access to the portico, the strictest economy has been observed throughout. The main consideration in working out the plans has been the fitness of each department for its purpose and an internal finish (in the new portions of the structure), which will facilitate cleansing and reduce the inconvenience and cost of repeated painting. If the committee is enabled to carry out the plans exhibited, the extended hospital will afford accommodation for 128 adult patients and 28 children, as against 94 adult patients and 8 children at present; and, what is of vital importance—that increased numbers of patients will not only be attended by the medical and surgical officers under immensely improved conditions, but the cost of the improved service will be relatively smaller per bed. In planning the service departments—kitchen, laundry, and boiler-house—allowance has been made for possible future extension, and the steam and kitchen plant now required will not occupy the full space allotted to it in these departments, so that, should further extension be necessary, the present nurses' home, on which little money is now proposed to be spent, could be removed and ward accommodation for 40 beds erected without other expenditure on the service departments than additional plant.

A vote of thanks to the architect was passed. Dr. Barnes, in supporting it, mentioned that he had visited some twenty hospitals of the kind with a view to considering what would be the best plan on which to proceed in regard to the infirmary enlargement, and he had no hesitation in stating that if Mr. Burnet's scheme was carried out they would have a thoroughly well equipped modern hospital of which the country might be proud. As regards the money required, they had something like £20 000 available, and he rose mainly for the purpose of asking the medical men present who came from various parts of the county to bring the scheme under the consideration of their rich patients, with a view to getting their help. He should like it to be also brought before their poorer patients. Collectors were now engaged in collecting small sums. One collector had obtained £10 in a Westmorland parish from one hundred and forty-five different people. Another sum of five guineas had been collected by a former patient in Cockermouth in one hundred and twelve different contributions. If they could help him to get a collector in any district in which they resided, he should be obliged, because there was much to be done in the way of getting contributions from small subscribers. They hoped on the first day of the bazaar to have the foundation stone laid, and they hoped that some royal personage would be present. Those who collected sums of five guineas and upwards would probably be asked to present purses on that occasion. It had been a strenuous effort on the part of many of them, but they had so far been successful beyond their wildest anticipations. The appeal had resulted in obtaining £14 500; they had £7 000 in legacies, and with what they were getting from the collectors and would raise from the bazaar there was a reasonable prospect that Mr. Burnet's scheme would be carried out, and very speedily.

WALES.

National Museum of Wales.

Sir Alfred Thomas M.P., presided at a meeting of the Council of the National Museum of Wales, held at the City Hall, Cardiff, on June 12th. The report of the Organization Committee was submitted, and this stated that the museum should contain five sections, each under the charge of a keeper, namely, (1) of industries, (2) geology and mineralogy, (3) zoology and botany, (4) antiquity and history, (5) art. The director should be the keeper of one of the sections and have charge of the library. The museum should be provided with a working library of current works bearing on the above-named sections. After setting forth the details of the museum buildings, the report stated that it was contemplated that a capital expenditure of not less than £75 000 in building must be faced to secure the accommodation required in the immediate future, and another £10 000 for furnishing. The annual sum required for maintenance was £9 300, made up of £4,500 for salaries and wages, and the remainder for repairs, purchase of specimens, and materials. The aggregate sum required for the initial capital cost was therefore estimated at £85 000 To meet the initial capital cost, the sums available were: Cardiff Corporation, £7 500; public subscriptions (estimated), £22,500; proposed Treasury grant, £20 000 The amount available, therefore, fell short by £35 000 of the amount required. No other funds were available either for capital cost or annual expenditure. Cardiff's offer was considered by the corporation of the city to be a most liberal one, and its increase would be practically impossible. The committee's recommendations were that the Treasury should be asked to increase the proposed grant towards the capital cost by £35,000, making a total from national funds of not less than £55,000, and to make an annual grant for the maintenance of the institution of £9,000; that a deputation should be appointed to wait on the Treasury *re* the above; that the Government be asked to pass an Act of Parliament empowering the Cardiff Corporation to transfer to the museum the contents of the (Cardiff) Welsh Museum, and to levy a halfpenny rate for the benefit of the National Museum in lieu of the existing rate, under the Museums and Gymnasiums Act, 1891; that the Cardiff City Council be asked to convey four acres in Cathays Park to the National Museum authority for the purposes of the museum and library; that a director be appointed forthwith; that an application be made to the Treasury for an immediate grant of £1 000 per annum to cover the salary of the director and preliminary expenses; and that the Cardiff City Council be requested to place a room at the City Hall at the disposal of the museum authorities to carry on the work until the erection of its own buildings. Professor Trow submitted that zoology and botany should form two distinct sections. After some discussion the proposal of Professor Trow was agreed to, also the suggestion of Mr. Goscombe John that in the matter of salary the art section should be raised to a similar status as other departments. The result was that the estimate of salaries was increased from £4,450 to £5,000, and as the Lord Mayor of Cardiff thought the amount for repairs was insufficient this was altered, making the total annual maintenance required £10,500 as against £9,300. The report was received, and practically all the recommendations of the Organization Committee were agreed to, but in the matter of the appointment of director, the committee was asked to draw up conditions and submit them to the council. It was decided that the deputation to the Treasury should consist of the whole of the members of the court of governors, and the arrangements were left in the hands of Sir Alfred Thomas, M.P., Colonel Sir Ivor Herbert, and Mr. William Jones, M.P.

Ireland.

[From our Special Correspondents.]

Royal College of Surgeons.

There is now a third candidate in the field for the vice-presidency of the college in 1910—namely Dr. R. D. Purefoy. The other candidates are Mr. J. S. McArdle and Mr. J. B. Story.

IRISH MEDICAL ASSOCIATION.

The sixty-ninth annual general meeting of the Irish Medical Association was held in the Royal College of Surgeons, Dublin, on June 10th, when Mr. J. S. McArdle presided.

The annual report stated that 13 members had died, 18 resigned, and the membership numbered 726. A deputation from the council waited upon the Local Government Board in reference to fees payable under the Labourers Act, 1906. In reply, the board pointed out that the Act would be more extensive in its operation than the earlier Acts, and consequently a larger sum in fees would be obtained. For this reason it could not see its way to increase the fee formerly sanctioned. The Workmen's Compensation Act, 1906, came into force on July 1st. It included within its scope a large number of employees, who will, on various grounds, find it necessary to requisition the services of the medical practitioner, who, it must be remembered, could not be compelled to give his services or issue certificates gratuitously. The council, in the public press, advised medical men not to give certificates until payment had been made or guaranteed. It was clear that the duties of certifying surgeons would be increased under the Workmen's Compensation Act, 1906, and the Home Secretary, with the Treasury, had recently formulated rules dealing with their powers and duties. The law agent's opinion was obtained in connexion therewith, and a deputation waited on the Local Government Board, pointing out the hardship of the rule compelling dispensary medical officers to hold the position of certifying surgeon. The Order of the Local Government Board of May 13th, 1902, disqualifying medical men from acting on public boards was considered by the council, and it would remind the members that this matter was dealt with in 1899, in which year, on January 17th, the Local Government Board issued a Sealed Order debarring any paid officer engaged in the administration of poor relief from acting as a county councillor. The association obtained the opinion of senior counsel, who advised as follows: "The question of the validity of the Order of the Local Government Board depends upon the extent of their powers. The approval of the Lord Lieutenant does not make a bad Order good. I think, on the whole, that the Order imposes a collateral disability on the medical officers as individuals, and does not define or regulate their duties as medical officers. When it was desired to impose such a disability it was done by Statute. I think, therefore, the Order is *ultra vires*. However, as it purports to be made under the statutory powers of the Commissioners by Section 114 of the 1st and 2nd Vic., cap. 56, every Order made under the powers of the Act is good until quashed on *certiorari*." This Order of 1899 was cancelled by the Local Government Board in 1902, when the present Order was issued. There was no valid reason why a medical man, who did not hold any paid office under a public board, should be disqualified from acting on it. The audited accounts for 1907 were submitted, and the council was pleased to state that the balance of law costs for the years 1905 and 1906, amounting to £297 17s. 2d., which with £10 18s. 5d., cost of taxation, making £308 15s. 7d., had now been paid. The law costs for the year 1907 amounted to £35 11s. 11d. The income received, with the balance in hand at close of last account, amounted to £782 2s. 5d., and the payments to £730 6s. 3d., leaving a balance of £51 16s. 2d. The arrear account at the end of 1907 stood as follows: 54 members owed two years' subscription, 104 members owed one year's subscription, and 1 member owed 10s. 6d., making a total of £223 2s. 6d.

On the motion of Dr. Macnamara, seconded by Dr. Powell, it was resolved:

> That the law, as it at present stands, preventing medical officers of workhouses from receiving fees for *post-mortem* examinations or evidence given at inquests, is unjust to the workhouse medical men, and that this question be referred to the council, with a view to a change in the law.

In reference to the payment for medical certificates in cases under the Workmen's Compensation Act, the Chairman suggested that they could refuse to examine a case without obtaining a guarantee of payment.

The ballot for officers having closed, the following were declared elected:

President: Sir William J. Smyly, M.D., Dublin. Vice-Presidents: Ulster—Dr. Leonard Kidd; Munster—No nomination; Leinster—W. Kidd; Connaught—No nomination. Honorary Secretary: Dr. T. Donnelly. Honorary Treasurer: Sir William J. Thompson. County Councillors: Antrim—Dr. Stanley B. Coates; Armagh—Dr. James Taylor; Cavan—Dr. Caldwell, J.P.; Clare—Dr. W. J. O'Sullivan; Cork—Dr. Henry Corby; Donegal—Dr. Warnock; Down—Dr. Olpherts; Dublin—Dr. M. Strahan; Fermanagh—Dr. James F. St. J. Annesley; Galway—Dr. R. J. Kinkead; Kerry—Dr. A. A. Hargrave; Kildare—No nomination; Kilkenny—Dr. P. J. Murphy; King's Co.—Dr. G. A. Moorhead; Leitrim—No nomination; Limerick—Dr. P. J. Macnamara; Londonderry—Dr. J. Tate Creery; Longford—Dr. J. M. S. Kenny; Louth—Dr. W. Bradley; Mayo—No nomination; Meath—Dr. J. F. Fagan; Monaghan—Dr. J. T. Elliott; Queen's Co.—Dr. Thomas Higgins; Roscommon—Dr. F. G. O'Donohoe; Sligo—Dr. E. K. Frazer; Tipperary—Dr. T. Hennessy; Tyrone—Dr. Hugh Harris; Waterford—No nomination; Westmeath—Dr. J. Dillon Kelly, J.P.; Wexford—Dr. W. W. Murphy; Wicklow—Dr. Edward Lyons. General Councillors: Dr. S. Agnew, Lurgan; Dr. A. H. Benson, Dublin; Dr. J. W. Boyce, Blackrock, co. Dublin; Dr. Robert Browne, co. Dublin; Sir Charles Cameron, Dublin; Dr. James Craig, Dublin; Dr. J. M. Day, Dublin; Dr. J. O'C. Delahoyde, Dublin; Dr. J. Knox Denham, Dublin; Dr. F. Conway Dwyer, Dublin; Dr. E. P. Eustace; Dr. F. C. FitzGerald; Dr. W. Fottrell, Dublin; Dr. Alec. Fraser, Dublin; Dr. Garret Hickey, co. Wexford; Dr. A. J. Horne, Dublin; Mr. J. S. McArdle, Dublin; Dr. H. H. MacDonnell, Dundalk; Dr. F. P. MacLoughlin, co. Down; Dr. W. C. Minchin, Dublin; Dr. T. H. Moorhead, co. Cavan; Dr. J. O'Donoghue, co. Dublin; Dr. Caleb J. Powell, Dublin; Dr. J. D. Ryan, co. Wicklow; Dr. A. Sandford, Cork; Dr. W. J. Shee, co. Waterford; Dr. H. W. Smartt, co. Down; Dr. A. B. Stephenson, co. Wexford; Dr. W. Taylor, Dublin; Dr. S. M. Thompson, Dublin; Dr. H. Warnock, co. Tyrone; Dr. W. I. de C. Wheeler, Dublin.

Sir William Smyly, having taken the chair, delivered an address. In this he referred to the great advances which had been made in midwifery under the more modern methods. In 1846 the maternal mortality in Vienna was 11 per cent. In 1848, the first complete year in which the attendants were compelled to wash their hands in chlorinated lime, it fell to 1·2 per cent. There were 459 deaths in the former year and 45 in the latter. When he was a student at the Rotunda twenty-five years later he was taught nothing of this discovery, and had never heard of Semmelweiss. It was not until the old generation had died out and another taken its place that antiseptic midwifery was securely installed and systematically taught. Recently the General Medical Council had made a very important and, he hoped, successful, attempt to make the teaching of midwifery and gynaecology more practical. The recommendation that all students should be required to attend a lying-in hospital and to be subject to practical clinical examination, was deserving of the general support of the profession. Referring to the Midwives Act, he said it was a good one, and its extension to Ireland would be a great benefit. Whether they regarded it as a good or a bad measure, the exclusion of Ireland from its scope was detrimental to our great training schools. But if they adopted the same attitude towards the bill for the registration of trained nurses as they had done towards the Midwives Bill they would find their nurses excluded from practice in England as soon as it became law.

On the motion of Dr. Donnelly (for Dr. Corby), seconded by Dr. Dillon Kelly, it was resolved:

> That any bill purporting to treat with the prevention of tuberculosis, in order to be successful, must treat justly the interests of Poor-law medical officers, without whose co-operation no legislative effort in this direction can fulfil the object for which it is introduced.

Moved by Dr. Caleb Powell, seconded by Dr. Stritch, and adopted:

> That it is most advisable to make arrangements with one or two members of Parliament to represent the Irish Medical Association during the next session, as it is very probable that legislation gravely affecting the medical profession, and more especially those members of the profession in the Poor-law service, will be introduced into Parliament.

That a committee be formed with a view to making arrangements as to the best means to carry this resolution into effect, and that the council be empowered to act on the recommendation of this committee.

Proposed by Dr. C. Powell, seconded by Dr. Donnelly, and adopted:

That in view of the very grave hardships imposed by some boards of guardians on medical officers, by refusing superannuation after years of hard service, we urge on the Government the advisability of taking such steps as would make superannuation compulsory in the interest of justice and fair play, and that a special committee be appointed to deal with the matter, if thought advisable.

In the evening the members dined together, Sir W. Smyly in the chair.

Mr. J. S. McArdle, in proposing "The Press," referred to the University Bill, and said if it passed the College of Surgeons would have a rival against which it would be hardly possible to compete. The college deserved State support. When States were endowing schools and laboratories, and making palaces fit for kings out of universities, what could the poor colleges with only the fees obtainable from the farmer boys of Ireland do?

Other toasts were proposed or responded to by Mr. T. Harrington, M.P., Sir Charles Cameron, C.B., Dr. F. Kidd, Sir Arthur Chance, the Provost of Trinity College, and the President.

Royal Medical Benevolent Fund.

At the annual meeting of the Royal Medical Benevolent Fund Society of Ireland on June 10th, Mr. John Lentaigne, President of the Royal College of Surgeons, was in the chair. The report stated that 84 grants were made during the year, amounting to £1,127. Dividends on stock amounted to £785 0s. 1d., an increase of £96 17s. 10d. on the previous year. Under the will of the late Rev. W. Faussett, the society benefited to the extent of £1,500; subscriptions were £351 11s. 3d.

On the motion of Dr. Mackesy (Waterford), seconded by Dr. Warnock (Donegal), the report was adopted.

A vote of thanks to the subscribers was passed on the motion of Mr. W. Taylor, seconded by Dr. Macnamara.

Dr. Moloney proposed that contributors, or the families of contributors, shall alone be eligible for grants from the society. Dr. Ninian Falkiner formally seconded the motion, which, after discussion, was withdrawn.

The President, in responding to a vote of thanks, said if the University Bill passed in its present form the Royal College of Surgeons must be ruined. It was most unwise and cruel of any legislature to destroy a valuable medical institution by erecting another, the future of which no man could tell.

The Nursing Order in Ireland.

We commented in the Journal of June 13th upon the serious position the master of the Nenagh Union found himself in with regard to sending the ambulance for a patient in another union. A somewhat similar case crops up this week.

In 1901 the Local Government Board issued a nursing order which, as we stated at the time, may be regarded as admirable. That order gave the medical officer entire control of his own department and made the head nurse his sole deputy.

We have frequently protested against the retention of lunatics in workhouses, but we hold that where such persons are retained in a separate department they should be under the control of the medical officer and his staff; this, we think, is only common sense.

In the Sligo Union, to save a few pounds, as usual, we suppose, while the male lunatics were retained in the part of the infirmary set apart for that class in the original designs, the females were relegated to an apartment in the body of the house. This situation had, we understand, existed for some years until Mr. Lynch, a Local Government inspector, going his rounds, took it into his head that because these lunatics were housed in the body of the house the matron of the workhouse should have charge of them, though the master had nothing to do with the males housed in the infirmary. He ordered the matron to take charge of the female lunatics, which she declined to do, on the grounds that under the nursing order referred to they were in the medical officer's department and should be supervised by his deputy, the head nurse—a nun in this case.

To our surprise, the Local Government Board have driven a coach and four through their own nursing order and backed up their inspector who had got himself into a tight corner.

Reading between the lines, we should say the state of affairs was this. There has been a new medical officer recently appointed. The inspector going round asks who is in charge of the female lunatics. The head nurse, though she has to enter their names on her books every week, says that she is not because they are not housed in the infirmary. The matron says that according to a special minute of the board of guardians and the nursing order she is not, and the medical officer, being new to the business, does not know who should be responsible, so the inspector decides that, legally or illegally, the head nurse must be relieved of the charge of certain patients on her books, and the Local Government Board insists that this subversive arrangement must be carried out.

Of course, if the medical officer could see where the thin end of the wedge was threatening his authority, he would order the head nurse to do her duty, and she would be bound to obey, for it would be a lawful order on his part, and therefore within his discretion, in spite of the inspector or the board of guardians.

The order of the Local Government Board that the matron should take charge of the female lunatics, and that the medical officer should remove the bedridden and dirty cases to the infirmary, places him in a very awkward position. He has no control over the matron and no right to give her any order; while, if he removes bedridden and dirty lunatics to the infirmary, he renders his wards unfit for the treatment of other patients; and we warn him that, no matter what he does, the Local Government Board will hold him responsible for the care of every patient, lunatic or sane, upon his books, and, if anything goes amiss, another judge-and-jury inspector may come down to try him for his living, whose views upon the nursing order may be diametrically opposed to those of Mr. Lynch, and then—woe betide him—he will probably be dismissed, like the late medical officer of the Drogheda Union, with whose views as to the proper management of dirty bedridden lunatics the authorities did not agree.

It is most unpleasant to have to refer to these matters, but, while admitting the difficulties of the Local Government Board, we cannot, in the interests of the sick poor, overlook any tampering with the nursing order, which has been of such inestimable advantage to them, enabling the medical officer to stand between his patients and ignorant and unsympathetic guardians.

The nursing order has, fortunately, all the force of an Act of Parliament, and we would advise the new medical officer of the Sligo Union to make himself thoroughly familiar with its very definite and stringent provisions if he wants to avoid trouble.

A Bill for the Prevention of Tuberculosis in Ireland.

The Bill for the Prevention of Tuberculosis in Ireland has been printed. A shorter and more apt title would be the "Go-as-you-please Bill," for with one exception it is a permissive bill from start to finish, and we know too well from previous experience the fate of permissive sanitary legislation in Ireland to have any doubts as to its effects on the prevalent tuberculosis.

The first clause in this bill is the only compulsory one, and it will not entail much expense. It provides for the notification of every case of tuberculosis, pulmonary or otherwise, by the practitioner in attendance, under a penalty of 40s. There will be an elaborate form provided by the Local Government Board, and we know how much red tape they can incorporate in a form to be filled up by the doctor, for which, if the case occurs in a hospital or sanatorium, he will be allowed 1s., and if outside half a crown: and, *mirabile dictu*, if the dispensary doctor reports to himself as medical officer of health, he will still be entitled to the half-crown if he takes the trouble to claim it; we have no doubt he will earn it, for the county council adopting the Act is to appoint a bacteriologist, and of course sputum will have to be sent to him more than once in properly sterilized vessels, and the forms mentioned will have to be filled. It does not seem to have occurred to the framers of the bill that many Irish practitioners, even dispensary doctors, are capable of doing the

work themselves, and are in the habit of doing it, but would get no fee for it.

It is remarkably Irish that while this bill makes the notification of tuberculosis, a disease only slightly contagious, compulsory, the notification of zymotic disease is permissive and has been adopted in few Irish unions.

The bill provides for the erection of sanatoriums and tuberculosis dispensaries and the appointment of a superintendent medical officer for each county that adopts it, and the provision of drugs and appliances for the treatment of the disease, provided it can all be done at an expense not exceeding one penny in the pound on the rates. Unless we are greatly mistaken that penny in the pound is the death knell of the bill. If it was a bill calculated to provide comfortable berths for the friends and relations of county councillors it might be a different matter, but this bill provides no such berths except that of the medical superintendent, and it would probably take half the penny in the pound to pay a competent man a suitable salary.

It is a curious comment upon the relative value of man and beast in Ireland—and, it may be added, no great credit to Irish members of Parliament—that while nearly all the Acts dealing with the infectious diseases of animals, even to the recent Cowsheds and Dairies Order, are compulsory, there is not, so far as we are aware, a single Act dealing with zymotic disease in man that must be complied with.

There is little doubt the bill will pass; why should it not? It attacks no vested interest. It hurts no person, not even *B. tuberculosis*, except the doctors, and Irish doctors at that who have no friends, and it will satisfy those enthusiasts who are trying most zealously to stop the tide with pitchforks.

It is perhaps needless to say that nothing is said in the bill about any remuneration except the half-crown above referred to, for those who in such counties as may adopt it will have most of the work to do—that is, the dispensary doctors. Even if the bill were generally adopted, which is scarcely to be expected, without the loyal cooperation of these men it would fail utterly. What is the use of notification unless it is followed up by the proper treatment of the infected and the houses they live in? and who is to carry out that treatment if not the dispensary doctor—the medical officer of health?

If the dispensary doctors were offered a reward for every case of tuberculosis discovered and cured, there is every reason to believe there would soon be a marked decline in the death-rate from that disease, but, with the recollection before them of the sort of reward they have got for their exertions in stamping out zymotic disease, we doubt if they will take much interest in this new straw for their already overladen backs.

As an example of how not to do it we commend this bill to the notice of all sanitary reformers. Indeed, if Mr. Birrell and his advisers could frame nothing better, he might as well have let it alone.

Needless to say, the bill applies only to that part of the United Kingdom called Ireland, and perhaps it is considered good enough for it.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE CAMPAIGN AGAINST TUBERCULOSIS.

THE annual meeting of the Royal Victoria Hospital for Consumption, Edinburgh, which took place on June 18th in the beautiful new dining hall of the hospital, was the occasion of some interesting speaking regarding the campaign against tuberculosis. Lord Dunedin, in moving the adoption of the report, referred to the Royal Victoria Dispensary as the centre of antituberculosis operations. The value of the dispensary as a source of information and guidance in relation to consumption could hardly be overestimated. Since its foundation 17,696 individual patients had been received. Many had remained under supervision for years, either at the dispensary or at their own homes. During the year the doctor had paid 1,839 visits to patients at their own homes, and the nurse 2,575 visits. The members of the Samaritan Committee had also visited the more distressing cases. At the laboratory of the dispensary the diagnosis of tuberculosis had been confirmed in 349 cases. The past twelve months corresponded almost exactly with the first year of compulsory notification of consumption in the city of Edinburgh, which commenced on March 1st, 1907. It was highly significant that of all the cases notified during this first year almost exactly 50 per cent. had been notified by the Victoria Dispensary. The dispensary attracted consumptive patients of the poorer classes at all stages of disease. Many of them would otherwise not have consulted, or would have sought advice under conditions where the diagnosis was less readily determined. The Victoria Dispensary was thus a most valuable instrument towards notification. In like manner, 67 notifications of consumption had been made to the Leith authorities. The dispensary also served an important function as a great "clearing house." It sifted and grouped the various types of consumption, and placed them under suitable treatment or surveillance. Thus, some patients were continued as visiting patients at the dispensary. Others, too ill to attend the dispensary, were attended at their own homes by a qualified doctor and nurse, and, it might be, by a member of the Samaritan Committee. Early cases were transferred to the Royal Victoria Hospital with a view to cure. Advanced and dying cases were recommended to the City Hospital, where 50 beds were set apart for the segregation of such patients. A certain number of patients were passed on to other institutions which might be able to afford relief in the particular case. The function of the dispensary did not stop there. In almost every case a domiciliary visit was paid by the doctor or nurse, and detailed information was obtained regarding the patient's home environment and circumstances. The records of the dispensary contained remarkable evidence as to the distribution and ramifications of tuberculosis within the city. They showed, for example, that in certain tenements every floor and almost every dwelling had had a case of consumption. In not a few instances consumption had appeared in several families successively occupying one such dwelling. Similarly, in certain smaller streets, there had occurred more cases of tuberculosis than there were houses. This seemed especially common in streets of the cul-de-sac type. In connexion with domiciliary visitation, particular attention was paid to other members of the family. Members of the household were, if possible, submitted to examination either at the dispensary or at home, and one of the most striking facts of the work was the number of consumptive patients thus discovered. Thus, from the fact of one case visiting the dispensary, as many as fifteen patients related to the initial patient had come under the direction of the dispensary. The system of domiciliary visitation had emphasized the significance of change of residence on the part of the consumptive patient as a factor in the spread of consumption. It had been ascertained that no fewer than 41 per cent. of 1,000 consecutive patients had "flitted" once or several times during the two preceding years, thus multiplying infected areas. The recent extensions to the hospital were then considered, more particularly the two new pavilions, the new dining-hall, and administrative buildings. After citing the satisfactory results of treatment within the hospital, Lord Dunedin passed to the subject of the working colony for convalescent patients. That was a part of the work to which the committee was now especially devoting its energies, and on behalf of which a special appeal was made to the public. It was a mistake to suppose that a consumptive patient could do nothing else but endeavour to get well. Not only could he do certain light occupations, but as a matter of fact the very doing of these things was part of the curative treatment. The statistics of the hospital showed what a really scientific stage the question of physical treatment had already reached at the hospital. Of course, what each patient could do had to be carefully considered. What exercise or work each patient had to do was determined by the history of the patient and the stage of the disease. Work was carefully selected and graded to suit the capacity and, to some extent, the taste of the individual patient. The amount of work was prescribed just like drug treatment. Patients began at the simpler grades, and were gradually advanced, according to their physical state. The amount was increased or diminished as temperature-chart, pulse-rate, and other indications suggested. The experiment had been eminently suc-

cessful. Of the patients, numbering some 80 in all, a certain proportion, including a joiner, engineer, bath attendant, laboratory assistant, and two gardeners, worked the entire day. Other patients worked from two to four hours daily. As illustration of the various degrees of work might be cited gardening of all kinds, from the gathering of leaves and light rubbish up to such heavy effort as digging, wheeling full wheelbarrow, etc. There were many other departments of activity. The results had been gratifying. The patients thus engaged were physically and mentally bettered. This was satisfactory so long as patients remained at the hospital. A difficulty presented itself when the time came for their discharge. In certain cases return to former occupations was excluded, as implying almost certain return of illness. It was especially for such patients that the Working Colony in more extended fashion was required. From experience at the hospital the committee had determined that there should be a colony, and, in the opinion of those who had thought out the scheme, the colony might be made almost, if not entirely, self-supporting.

Professor Crum Brown emphasized the point that everyone might do something for the hospital. Both because of the benefit to the individual and to the community, it was worthy of support.

The Vice-President of the Local Government Board (Mr. Patten MacDougall, C B) paid an eloquent tribute to the great work which the hospital had effected. He reiterated what a colleague on the Board had already said, that the collective scheme of operations undertaken and carried through by the Royal Victoria Hospital had been adopted by the Local Government Board for Scotland as a national system for the administration of the campaign against tuberculosis in Scotland. It had been his privilege on many occasions to accompany to the hospital visitors from all parts of the country who were anxious to see how the system worked, and many places were already following the lead they had thus received.

Further testimony to the work of the hospital was borne by the Vice-President of the Royal College of Physicians, the Moderator of the Church of Scotland, and the Hon. Lord Salveson.

EDINBURGH UNIVERSITY AND THE MEDICAL EDUCATION OF WOMEN.

As briefly indicated last week, a conference took place recently between representatives of the executive of the Scottish Association for the Medical Education of Women and the University Court. After this conference the University Court on June 15th adopted the following resolution:

> The University Court having considered the report of the committee appointed to confer with a committee of the Association for the Medical Education of Women, and the scheme tendered by the association as a basis for consultation with the court in the letter of their President received in February last, feel it to be their duty under existing circumstances not to accept the said scheme on the following among other grounds:
>
> First, that, in the opinion of the University Court, there is no sufficient evidence the association has, since it intimated to the court the fact of its being deprived of the accommodation at Minto House, made any serious attempt, in conjunction with its staff of teachers, to continue the present system of teaching.
>
> Second, that if the university were intended under the said scheme to provide separate accommodation for the medical education of women, it does not possess, and sees no definite prospect of acquiring, resources for providing the same; and, if this were not the intention, the court does not see its way to approve of mixed classes in the Faculty of Medicine.

Sir Alexander Christison, the President of the Association, has addressed the following letter to the Secretary of the University Court, reviewing the whole situation:

Edinburgh, 19th June, 1908.

The Rev. Professor M. C. Taylor, D.D.,
Secretary, University Court,
The University, Edinburgh.

Dear Sir,

On behalf of the Court of the Scottish Association for the Medical Education of Women, I beg to acknowledge your letter of the 17th inst., enclosing copy of resolution come to by the University Court on Monday, 15th inst.

The Court of the Association regret to learn that the University Court have concluded in the sense indicated.

The University of Edinburgh announced its willingness in 1892 to admit women to graduation in medicine. In the absence of provision by the University itself for the teaching of women, the Scottish Association for the Medical Education of Women undertook the responsible and onerous duty of providing a complete Curriculum in Medicine to meet the existing requirements of the University. The Medical College for Women was recognized by the University for the purpose of graduation, and has been maintained by the Association during sixteen years.

With the development of scientific medicine and the increasing demand for special practical training in various departments, the difficulty of teaching women up to graduation requirements outside the University class-rooms and laboratories has steadily grown.

On this account, the Court of the Association learned with much interest 18 months ago that the Senatus Academicus had made a recommendation to the University Court that women medical students should be admitted to the three earlier scientific classes within the University. This was not carried into effect.

When the head-quarters of the Medical College for Women were lost by the sale of Minto House, the Court of the Association felt it to be their duty to bring the whole question of the provision for the medical education of women before the University. They pointed out especially the need which existed for increased facilities in relation to the three earlier subjects, and those of Anatomy and Physiology. They believed this was a duty which they owed, not only to the students whose interests the Association served, but to the University of Edinburgh whose claim has always been that it looked jealously to the training of its graduates, and was not merely an examining centre.

In order to make the matter as practical as possible, the Association went the length of formulating two alternative schemes, by either of which it seemed that the more urgent difficulties might be met.

The Association indicated their desire to co-operate with the University authorities in every possible way towards the solution of the question. They accordingly proposed that a conference might take place. This was declined by the University Court on what appeared to the Court of the Association very insufficient grounds.

The Court of the Association again approached the University and reiterated their view, enforced as it had now become by the serious result of the Second Professional Examination at the University of Edinburgh, in which, out of 25 women candidates who presented themselves in Physiology, 24 failed.

After a delay of several months, the president of the Scottish Association received a telegram, asking him to arrange for representatives to meet in conference a Committee of the University Court two days later.

This was effected. To the disappointment of the representatives of the Association the proposed conference proved one-sided. The members of the University Court Committee asked questions, but would not consider questions raised by the other side. The representatives of the Association felt throughout that the attitude of the University Committee was merely critical. There was no indication of a desire to face the facts.

This impression is borne out by the letter and resolution, the receipt of which I have just acknowledged. It is the more disappointing because, in addition to submitting the two alternative schemes, the representatives of the Court of the Association pledged the Association to take a chief part in raising such funds as might be necessary for carrying into effect either scheme.

The Court of the Association deplore the resolution.

They have drawn the attention of the University authorities to a most serious inadequacy in the University arrangements and a grave injustice to women students, whose claim to University privileges is admitted. The Association must leave responsibility in the matter to the University.

I am, yours faithfully,
A. CHRISTISON.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND DURING MAY.

The Registrar-General for Scotland reports that in eight of the principal towns of Scotland during the month of May 17 deaths were due to cerebro-spinal meningitis, or 11 fewer than in April, and 126 fewer than in May, 1907. The number of deaths is smaller than the corresponding number for any month since October, 1906. Of these 17 deaths, 13 were in Glasgow, 2 in Edinburgh, and 1 each in Dundee and Leith.

Brigade-Surgeon Thomas Butler Power O'Brien, late of the Army Medical Service, died at Kensington on May 19th, aged 76. He joined the department as Assistant Surgeon, September 29th, 1855; was made Surgeon, August 4th, 1870; Surgeon-Major, March 1st, 1873; and Honorary Brigade-Surgeon on retirement, June 2nd, 1886. He served in medical charge of the expeditionary force against the hostile Indians of Yucatan in 1858, and with the troops engaged in the suppression of disturbances throughout the northern districts of British Honduras in that year.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following appointments have been made:

Representative on the General Medical Council.—Sir Clifford Allbutt, M.D., K.C.B.

Professor of Biology.—W. Bateson, M.A., St. John's College.

University Lecturer in Physiology.—Dr. H. K. Anderson, Gonv. and Caius College.

Examiners in Medicine.—Dr. Bradbury, Dr. Osler, Dr. Rose Bradford, Dr. Newton Pitt.

Examiners in Surgery.—Mr. Kellock, Mr. Stanley Boyd, Mr. L. A. Dunn, Mr. Raymond Johnson.

Examiners in Midwifery.—Dr. Rivers Pollock, Dr. Spencer.

Professor Adami, of Christ College, has been appointed to represent the University at the Tuberculosis Congress in Washington.

The following degrees were conferred on June 11th:

M.D.—G. A. Coulby, Trin.; A. H. Fardon, Christ's.

M.B., B.C.—L. B. Cane, King's; A. L. H. Smith, Gonv. and Cai.; H. T. Ashby, Emm.

M.B.—E. D. Anderson, Pemb.; A. W. L. Drake, Pemb.; W. I. Cumberlidge, Christ's.

UNIVERSITY OF LONDON.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

THE Bishop of London will present the awards for the sessions 1907-8 on Monday, June 29th, at 3 p.m.

UNIVERSITY COLLEGE.

The assembly of the Faculties of University College, Gower Street, will take place next Thursday at 3 p.m., the proceedings including the presentation of the report of the work of the session and the announcement of the results of the University, scholarship, and class examinations. An address will be delivered by the Right Hon. Sir Edward Fry, F.R.S., a Fellow of the College.

UNIVERSITY OF GLASGOW.

CHAIR OF CLINICAL MEDICINE.

IT is announced that the University Court will proceed to make an appointment to the above chair on July 9th or on an early date thereafter. Any information may be had from the Secretary, University Court, at the University.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT an extraordinary comitia held at the College on Thursday, June 18th, the President, Sir R. Douglas Powell, in the Chair, it was announced that Dr. A. E. Russell had been appointed Goulstonian Lecturer; Dr. Norman Moore, Lumleian Lecturer; Sir Thomas Clifford Allbutt, FitzPatrick Lecturer; and Dr. Sherrington, Oliver-Sharpey Lecturer for the year 1909, and Dr. Gamgee, Croonian Lecturer for the year 1910.

The remaining business was declared *secreta collegii*.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT a meeting of the College on June 23rd, the vacancy in the office of President created by the death of the late Dr. C. E. Underhill was filled by the appointment of the Vice-President, Dr. John Playfair, for the remainder of the current academic year.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of Council on June 18th, the Fellowship was conferred on the following gentlemen:

J. J. Irwin, Capt., I.M.S., A. M. H. Gray, G. S. Hett, C. A. Moore, H. Kischbieth, H. Irving, J. G. Gibb, M. L. Hine, C. M. Page, R. Davies-Colley, D. W. Roy, S. W. Daw, A. Kinder, H. A. R. E. Unwin, C. H. S. Frankau, G. E. Wilson, G. C. E. Simpson, W. W. Holtzmann, A. R. Short.

Messrs. F. J. F. Barrington, G. P. Mills, and C. H. Smith, who were also approved at the recent Final Examination, will be admitted as soon as they have attained the statutory age of 25 years.

Election of Examiners.

The following were elected for the ensuing year:

Elementary Biology: (1) Hill, James P.; (2) Shore, Thomas William. *Anatomy:* (1) Greene, Wm. Hy. Clayton; (2) Robinson, Arthur; (3) Wright, William. *Physiology:* (1) Abrahams, Bertram Louis; (2) Leathes, John Beresford. *For the Fellowship.—Anatomy:* (1) Eccles, Wm. McAdam; (2) Parsons, Frederick Gymer; (3) Thomson, Arthur; (4) Young, Alfred Harry. *Physiology:* (1) Brodie, Thomas Gregor; (2) Buckmaster, George Alfred; (3) Myers-Ward, Charles Frederick; (4) Thompson, William Henry. *Midwifery:* (1) Playfair, Hugh James Moore; (2) Pollock, William Rivers; (3) Targett, James Henry; (4) Tate, Walter William Hunt. *Public Health:* Part I. Spitta, Harold Robert Dacre; Part II. Bulstrode, Herbert Timbrell.

Excavations in the Nile Valley

A letter was read of the 27th ultimo addressed to the President by the Director-General of the Survey Department of the Egyptian Government, asking that facilities may be given to Dr. Elliot Smith and Dr. Wood Jones, of the Cairo Medical School, to carry out in the museum of the College an examination of a collection of material found in the course of excavations in the Nile Valley, and representing the varied races of people who inhabited Nubia in ancient times, together with their pathology and the results of their surgery, and stating that the Egyptian Government will offer to the museum of the College the collection of the material which is sent over for the purpose of this comparative study.

The President stated that he had informed the Director-General of the Egyptian Survey Department that facilities would be given to Dr. Elliot Smith and Dr. Wood Jones to carry out their investigations, and that he felt sure the Council would gladly accept the handsome offer of the Egyptian Government.

Imperial Cancer Research Fund.

The President reported that he had undertaken to place a room in the College at the disposal of the authorities of the Imperial Cancer Research Fund for their annual meeting on July 14th.

Conjoint Examinations with London University.

A committee was appointed to combine with any committee which might be appointed by the Royal College of Physicians to consider and draft a scheme which, if approved by the Colleges, should be submitted to the Senate of the University of London, with the object of establishing a system of conjoint examinations for the degrees of M.B. and B.S. and the diplomas of L.R.C.P.Lond. and M.R.C.S.Eng.

Election of Council.

A meeting of Fellows will be held at the College on Thursday, July 2nd, for the election of four Fellows into the Council in the vacancies occasioned by the retirement in rotation of Mr. John Ward Cousins, Mr. Alfred Pearce Gould, and Mr. William Harrison Cripps (of whom Mr. Cousins does not offer himself for re-election), and by the resignation of Mr. Frederick Howard Marsh.

CORRESPONDENCE.

THE SOCIALIZATION OF MEDICINE.

SIR,—Your spirited leader on the above subject is, despite the uncompromising hostility of its tone, a remarkable testimony to the fact that collectivism has invaded the arena of "practical politics." That your conclusions accurately represent those of the vast majority of your readers there can be little doubt; and that, of course, in a great official journal, is only natural and right; although some of us may sometimes regret your liability to the dramatic illusion that all who hold other than the orthodox view, on this or any subject, are justly to be stigmatized as rogues and fools. It has happened more than once in lay (and medical) history that the view of a contemned minority has triumphantly prevailed. In the interest of a doubtless considerable minority of members of our Association, who incline to what, in all friendliness, I shall describe as more generous and enlightened views, may I, a member of not a few years' standing, point out some of the more obvious fallacies and crudities of your (that is, the conventional) view?

You assume, without the shadow of justification, as regards probability, that the socialization of medicine must either be completely rejected or carried out, in defiance of the true logic of expediency, to the limit imposed by the false logic of fanaticism. That the provision of free medical attendance for all who need it, and *care to avail themselves of it*, necessarily involves the suppression of all private practice. We are all at the present moment entitled to have our children taught, and well taught upon the whole, by the public authority; but how many of us—I speak of the professional and upper middle classes—are availing ourselves of the privilege? Rightly or wrongly, we prefer, almost to a man (to say nothing of the women), to pay pretty dearly for the sort of teaching and companionship that we *prefer* for our sons and daughters. Eton, Harrow, Rugby, Wellington, Clifton, Epsom, and the rest, continue serenely to carry on their work, as if the right to free education had never been heard of. Does any one imagine that, if a State medical service were established to-morrow, there would be any desire to interfere with the rights of men (not a few, I dare warrant) who should elect to remain outside, and practise "on their own"? Or the rights of those who, in place of availing themselves of the attendance placed at their free disposal by the State, preferred to pay large fees to such outside practitioners? There are numbers of people who might be described as professional invalids, who spend their lives going from one health resort, and one consulting room, to another. These harmless lunatics are a source of inexhaustible revenue to the highflyers of the present professional régime, but would receive short shrift at the hands of men who, by receipt of a State salary, had been placed in a truer and more independent relation to their clientèle. But nobody would dream of objecting to their continuing to indulge their valetudinarian proclivities at their own expense.

Your discovery of the impossibility of reducing all men to "a dead level of knowledge or skill" does not seem to have much point in view of the extreme improbability that, if a State medical service were organized, all the appointments held under it would be of the same importance and of equal remuneration. Naturally, the best men would be likely upon the whole to get the more responsible and best-paid posts; and, if some anomalies and injustices occurred, will it be seriously contended that none such occur at present?

Nor do I see any force in the objection that the socialization of medicine would stop all progress by removing the motive for hard work. The Public Health Service—a thoroughly socialistic institution, against the efficiency and devotion of which we hear little or nothing said—is a conclusive answer to this argument.

Depend upon it, the real question at issue is not, whether the profession wants to be socialized, but whether the community at large wants this and means to have it. In the latter case we shall certainly have to accept it sooner or later, and may as well reconcile ourselves to our fate betimes, and try to make up our minds in what precise form it can best be carried out without serious prejudice to established interests.

The principal danger, from our point of view, is, in my opinion, not, as you seem to think, that the standing of the profession would be lowered, but that its weaklings would be driven to the wall. For the State, sentimental as it can be on occasion, will hardly undertake to subsidize our incompetents; and moreover, the socialization of the profession, by the economy of labour it would effect, and by the discouragement of *malades imaginaires*, would render the services of a good many of us superfluous.

It is absurd in these days to ask of a man whether he is or is not a socialist. Every one who approves of our Post Office Department, of our Public Health Service, who advocates public abattoirs, inspection and feeding of school children, old-age pensions, free open-air schools, is to that extent socialistic. What we have to decide is exactly how much socialization is desirable, exactly of what kind, and how it can best and with least social friction be introduced. And these problems, on account of their great complexity and incalculable importance, must be approached not in the spirit of blind prejudice masquerading as easy omniscience, but with the courage, patience, and impartiality proper to any scientific investigation. So approached, it may prove that in economics truth lies nearer the socialist than the individualist extreme—at any rate, the weight of authority seems to incline that way. One does not wish that medical men should become propagandists—they should be *above* party considerations—but it is a pity that we are as a body so blind to the signs of the times. Our future position in the State must, for good or for evil, depend largely upon the correctness of our present estimate of the great changes that are so rapidly approaching, and our success not merely in preadapting ourselves to the new conditions, but in *guiding and shaping* these to a desirable consummation.—I am, etc.,

Bath, June 16th. C. J. Whitby, M.D.

Sir,—Will you allow a few words of comment on a leading article in the British Medical Journal of June 13th? It seems to me that that article does not take sufficiently into consideration the fact that from time immemorial the profession has been necessarily socialized, if hitherto somewhat one-sidedly. We have always given to the community freely according to our abilities, even though we have not always received according to our needs. In our country, and during the last century particularly, the whole humanitarian advance has been largely a devotion of our progressive knowledge to the service of the State and of individuals, and this progress has not been stopped by its partial recognition in a material sense by the State. The community, both as organized and as individuals, have taken all they wanted from us for nothing, or for as little as we could be squeezed or cajoled into accepting, but it is being educated more and more into the knowledge that its welfare and progress are increasingly dependent on our assistance and our advance.

The establishment of the Poor-law Medical Service and the insane hospitals for the succour, at the general expense, of individuals unable to pay for help, and the Factory and Public Health Acts to collectively regulate and improve the conditions of health and efficiency of all members of the community, have already so far admitted and constituted the socialism of the profession. We have now only to recognize the fact to continue to lead the way, rather than reluctantly to follow, in the further extension of the service we can offer for the use and benefit of all. Let our organization exist and increase for self-protection and the benefit of the profession, each and every member of it, and let it do so far more effectively than it does at present; but let us also remember that the profession exists for the benefit of the public, and not the reverse. The greatest disservice that could be done for the profession would be to place it in antagonism, if that were possible, to the advance of the fully democratized State.

The democracy, in fact, with some jealousy of our increasing influence, and a justifiable fear of surrendering too much of its liberty into the hands of any body of experts, however public-spirited, sees more clearly day by day that its welfare and interests, individually and collectively, from before birth until after death, must be more and more dependent upon us. It is our place to see that these services shall be recognized, formulated, co-ordinated, and suitably remunerated.

The community now needs for its welfare progress and efficiency; advice, and, where possible, regulation in the selection of its parents and the care of the unborn citizen and its mother. It needs at the parturition the care of the skilled obstetrician; it needs the continued examination and care of the child in its training for the elimination of defects and the recognition and education of its abilities; it needs advice in the choice of a suitable sphere for the exercise of these abilities when ready for social service. It needs constant attention during the individual life, to the results of faulty heredity, misadventure, and disease, to alleviate suffering, and to restore efficiency with the least delay. It needs advice as to fitness for work of all kinds on behalf of the worker and the public and as to the conditions of temporary or permanent provision in case of unfitness. It needs the numerous services already denominated public health, and much else, including a co-ordinating authority.

But how are the majority of citizens to obtain these services? The millionaire can, and sometimes does, pay for some of them; the remainder are paid for him by the overwhelmed ratepayer of a poor parish, who bears the burden of both. The pauper receives some of them partly at the same cost and partly at the cost of the profession, which receives a minimum wage or nothing at all. The artizan, whose combination and providence have been partially successful in securing his own interests, obtains some of these necessary services by exploiting in the most practical capitalistic manner and sentiment our own want of combination and proceeds to sweat us *secundum artem*.

But even these sections of the people do not benefit as they might and should, and what of the remainder? Are they individually able to pay a skilled general medical attendant, various operating specialists and consulting physicians, expert anaesthetists, and a dozen or more special pathologists, all of whom are or may be necessary to proper efficient treatment? And if not, are these skilled public servants to continue to do the greater part of their work, as at present, for nothing and pay their own expenses, while the greater part of the community is obliged to do without them to its detriment?

It is clear that an adequate solution of these problems will involve an extension of the Poor-law and public-health provisions with possibly a transfer of some or all of the charges from local to national funds. It is alike our duty and our interest as a profession to help on this movement instead of resisting it, and this is so in spite of the objections and difficulties which stand in the way, some of them real, some only apparent, and all to be overcome.

These considerations are not "a new gospel," but are increasingly pressing upon us all, and urged by an increasing number of ourselves. For the last twenty years at least our Journal has, perhaps, not been once issued without proof of the reality of the changing conditions under which we work, and the necessity of action to adapt ourselves to them, as members of the profession, apart from our convictions and sympathies as citizens. The feeling of this necessity underlay much that was said and done in the work of re-organizing our Association, a change which is still awaiting its due effect in the

strength which comes of better knowledge and fuller sympathy.

I will conclude with a constructive suggestion that, while we and the public are being further educated in these matters, the profession in each locality might co-operate to provide professional help at moderate but remunerative charges for benefit societies, and for the vast number of folk who cannot pay £100 fees and £10 a week for nursing. It would, I think, be found that there is no reason, financial or professional, why such an institution should not be as efficient as the existing public hospitals, provided by the charity of the profession and the public for all applicants sufficiently fortunate or importunate.—I am, etc.,

Eastbourne, June 14th. A. D. WILLIAMS.

SIR,—Many would be interested in your article in the issue of June 13th, on the Socialization of Medicine. It seems to me that the whole subject is one which might well be discussed at greater length in your pages.

While none but extremists would desire a full-blown socialistic scheme of medical organization to be suddenly thrust upon us, I think all who are in any way awake to the signs of the times will agree that a gradual extension to the principle of control by the community over the individual is pretty well bound, in the coming years, to increasingly affect our profession as well as other departments of public life.

Already, of course, a large number of medical men are, and have for long been, municipal or State officials; such are members of the naval or army medical services, medical officers of health, etc. In view of the excellent work done (*individually* as well as collectively) by many of the members of these services, surely the commonly-invoked argument about "discouragement of initiative" cannot be considered the last word in the consideration of all such schemes.

As regards general practice, one does not so easily see how Dr. Lawson Dodd proposes to adapt his panacea to this department of our calling, but I am at any rate sure that many who, like myself, are disgusted with the altogether chaotic condition of affairs existing at the present time—at least from the general practitioner's point of view—will welcome the discussion of any proposal which holds out hopes of substituting cosmos for this chaos.

To make a practical suggestion: Will some one let us have information as to the practical working of such a scheme as Dr. Dodd hints at? Such is now, I understand, in force in some parts of the Continent.—I am, etc.,

June 16th. A. J. B.

SIR,—It would be unfair to request space to deal in detail with the objections you raise to Dr. Lawson Dodd's suggestions. Will you allow me, however, to point out that some of the statements made in your article of June 13th are controverted in the same issue? On page 1444 it is suggested that it is a fundamental axiom of medical human nature for a man to seek the utmost payment for his services: "If a man, possessed of exceptional skill in the art of healing, chooses to sell that skill at his own price," . . . etc. You suggest that socialists contradict human nature if they assert that doctors do not so choose. On page 1446 you consider it outrageous that "any counsel should be privileged to make in a public court statements which are absolutely false . . . and which reflect seriously on a body of men who, if they chose, like lawyers, to make a trade of their knowledge, would put the community to far more inconvenience," etc.

Socialists, like myself, would scarcely regard either statement as adequately representing the complex motives that guide medical men in their daily action; we do not believe that "human nature" is to be summed up in any brief formulae, but we believe that the cessation of inter-competition, for a daily living, between medical men would still leave sufficient scope for the display of individual talent and skill.

Your article suggests that socialization of medicine will retard the progress of medicine; this view is not at all in keeping with the tenor of your article on page 1447—"The Prevention of Epidemic Disease in Prussia."

May I remark that your attitude assumes that this is a perfect world for doctors, and that in private practice none suffers from the tyranny of the employer? I venture to think that the general practitioner knows better where the shoe pinches.—I am, etc.,

M. D. EDER,

London, W., June 13th. Hon. Sec. Socialist Medical Society.

*** Dr. Eder appears to us to miss our point. A doctor must of course live by his profession, and the passage quoted by him is an *argumentum ad hominem* against the lawyer who implied that medical practitioners cared only for fees. In reply to our other correspondents we venture to point out that it is freely admitted that both the State and the municipality have need of the services of doctors, and that need must necessarily increase as civilization advances. What we deprecate is the placing of the practice of the whole art of healing on a socialistic basis. Socialism, in the full sense of the term, is nothing if not a system of glorified Bumbledom applied to every sphere of activity. It seems to us that this would make not for progress but rather for the survival of the professionally unfit. The main object of Bumble, like that of the clubs, is to sweat the doctor. There is scarcely anything that the State undertakes to do that would not be more efficiently done by private enterprise. It is to the public interest that every man should put forth the full power that is in him. We repeat that it is not in human nature that men, as they are now constituted, should do this without any incentive of personal advantage. As things are, why does not medicine, which offers a career of incomparably greater interest and beneficence than the law, attract so many of the men of the highest intellectual power as the law? Simply because the law offers more and bigger prizes. We do not think that the remedy for the grievances of the medical profession lies in the dead level of dullness, which is all that Socialism, if pushed to its fullest extent, has to offer. There is a significant warning in the famous words addressed to Lavoisier by an apostle of "liberty, fraternity, and equality": *La République n'a pas besoin de savants.* It may be said that all doctors are not *savants.* Nevertheless, their existence as a class depends on science, and their usefulness to the community depends on the advancement of science and on the respect that is their due as possessors of special knowledge—facts which are perhaps forgotten by advocates of the socialization of medicine.

THE POSSIBILITY OF THE PRESENCE OF MALTA FEVER AMONG ENGLISH GOATS.

SIR,—In reference to the annotation in the BRITISH MEDICAL JOURNAL for May 30th, p. 1303, on the use of goat's milk, we would suggest that it is not altogether safe to assume that Malta fever infection is not present among the ordinary goats of this country. In 1907 we had the curiosity to test the serum reaction in twenty-two goats which were being used for experiments on caisson disease at the Lister Institute. Of these, sixteen gave no reaction with *M. melitensis* at a dilution of 1 in 20, three gave some reaction at 1 in 20, while the other three animals gave complete agglutination up to 1 in 200. Cultures from the blood of these three goats during life were negative, as were cultures from their organs when they eventually came to autopsy. This does not, however, necessarily exclude *M. melitensis* infection, for it is not always easy to recover the organism from goats which are known to have been infected some time before the examination is made (see Mediterranean Fever Commission Reports, Part vi, p. 38). The exact history of our animals could not be ascertained, but there was practically no doubt that they had never been out of England and Wales.

These results are, of course, by no means conclusive, but they suggest that the matter is worth following up before the use of goat's milk becomes more common.—We are, etc.,

A. E. BOYCOTT,
G. C. C. DAMANT.

Department of Pathology, Guy's Hospital, S.E., June 10th.

CEREBRAL INFLUENZA.

SIR,—After reading Professor Saundby's interesting address on cerebral influenza, I venture to mention a puzzling case which occurred in my practice last spring.

During the epidemic of influenza here in February the patient, a woman of 42, was taken ill on Thursday with shivering and pain in the head and limbs. I saw her on Friday morning. Temperature, 101°; pain in head and

limbs, but chiefly at *back* of head (this I found common in that epidemic). Heart and lungs normal. I diagnosed influenza. She was the second case in that house, and a third occurred later, neither exhibiting any head symptoms. On Saturday she was better. Temperature, 99°; pains in limbs gone, still slight headache. Said she felt much better, and she wanted to get up, but was refused. On Sunday still improving.

On Monday I was telephoned for at 7 a.m., because "her breathing was bad." I went at once, and found her comatose, with loud, stertorous breathing, unequal pupils, and flaccid limbs on left side. She never regained consciousness, and the temperature went up till death, which occurred in about six hours.

I may add that patient was all right at 6 a.m., when some food was taken to her.—I am, etc.,

Leeds, June 9th. MARY E. PHILLIPS.

SIR,—In connexion with Professor Saundby's address on this interesting complication of influenza, I should like to draw his attention through your JOURNAL to a case of "Meningitis Probably Influenzal in Origin," I published in the *Lancet* of July 13th, 1901, in which many of the symptoms he mentions were present and in which the diagnosis was not easy, though verified by *post-mortem* examination subsequently.

The patient was a soldier of fine physique who was admitted to the Military Hospital at Dover in June, 1900. He suffered intense frontal headache, during which aphasia and right hemiplegia developed, death ensuing in four weeks from the beginning of the attack, after a period of coma.—I am etc.,

New Barnet, Herts, June 12th. ARTHUR F. PERIGAL, M.D.

PRIMARY SARCOMA OF LUNG.

SIR,—In connexion with the interesting report by Dr. Curl, in your issue of the 13th inst., of a case of primary sarcoma of the lung, I would add that a case in all respects similar in its history and progress occurred in a private of the Royal Marine Light Infantry, aged 32, who was admitted into the Naval Hospital at Hong Kong in 1892.

On admission the patient complained of pain in the right chest with marked dyspnoea, and in the absence of any signs of venous obstruction or aneurysm a pleural effusion was diagnosed but negatived by repeated aspiration. The case subsequently rapidly progressed, with well marked signs of venous obstruction, to a fatal issue, in a space of a little over two months, and at the autopsy a well-marked sarcoma, including the whole of the right lung, with secondary gland deposits, was found.

I have seen two other specimens of primary sarcoma of lung, namely, one shown by Dr. Parsloe at a Plymouth Medical Society meeting in 1905, and another shown by Dr. Leon at a meeting of the Southern Branch of the British Medical Association at Portsmouth during the current year.—I am, etc.,

W. EAMES, Fleet Surgeon, R.N.

H.M.S. *Vernon*, Portsmouth, June 15th.

NATURAL AND ACQUIRED IMMUNITY.

SIR,—Not the least interesting of the various aspects of his subject discussed by Dr. Purdy is the suggestion that "an anthropometric survey of the British Empire be carried out, with additional data relating to average blood counts" (BRITISH MEDICAL JOURNAL, June 13th.) Dr. Purdy might have added, "and data referring to comparative[1] examinations of urine."

Information of the latter kind seems never to be considered necessary, even presumably in works on comparative pathology.

Dr. Woods Hutchinson remarks in *Studies in Human and Comparative Pathology* (p. 191): "The chapter upon diseases of the kidney is confessedly one of the most unsatisfactory in veterinary pathology. This is due chiefly to the small use yet made of analyses of the urine as a routine procedure in veterinary practice."

Some time ago, while discussing the value of the physiological gastric juice of the pig in the treatment of dyspepsia, I asked one of the chemists concerned with this preparation what was the condition of the animals furnishing the product, as judged by the composition of the urine. He confessed that he had not heard of such an examination having been made. But he recognized the use of the remark, especially when I pointed out to him the following passage in the book I have just quoted: "The trace of albumen normal in the human urine is often present in larger quantity in the herbivora, especially in hard-worked horses; and in the ox and sheep traces of sugar are normally present." He not only recognized the value of the suggestion, but promised to provide me with the results of an investigation of the kind.

This was in part the result in question: Two specimens of *urine de porc* (hog's urine) were examined. Both gave a high comparative percentage of chlorine, and, perhaps in keeping with this character, albumen was present as "notable traces" in both cases, and glycose as "traces" in one.

I had also referred to Preyer's assertion in *Elements of General Physiology* that cystinuria is physiological in the pig, with the request that it should be controlled. Professor Preyer's observation was not confirmed.—I am, etc.,

Nice, June 15th. A. W. GILCHRIST, M.D.

SEASICKNESS: A PERSONAL EXPERIENCE.

SIR,—I am a keen yachtsman, but a bad sailor. In the past I have tried various "cures" for seasickness with but little success.

At Whitsun I was on a yacht with ten amateurs, seven of whom had never or seldom been seasick. Of the remaining three, C. M. had travelled and yachted a good deal, and, although not certain of himself, is a fair sailor; F. L. is less good; and A. T. is ill whenever the weather is at all bad. Joining the yacht in the Colne River at Brightlingsea on Whit-Friday, A. T. took a dose of 5 grains of chloretone in the evening and another similar dose before starting on the Saturday. We had a nasty punch against a head wind and choppy sea to Harwich; C. M., and especially F. L., were very ill, while A. T. never turned a hair. On Sunday we sailed to Deal, A. T. having dosed himself as before; F. L. felt very ill, was prevailed upon to take a dose, and remained all day without being or feeling ill, though without being able to take his meals below while we were sailing; C. M., who refused a dose, was quite upset. On the two following days, when we sailed to Boulogne and Dieppe, the sea was calm.

An experiment confined to three persons cannot be considered conclusive, but the fact that the worst sailor was quite well, having taken the drug regularly, while another was saved from seasickness and nausea when he was feeling quite ill, and the best sailor of the three took no dose and was quite upset, seems worthy of mention. The one person on board who was most astonished at the effect of the "pills" was the sailing master of the *Gwynfa*, who well knew A. T.'s capabilities. Chloretone is said to be very volatile, and should be prescribed in gelatine capsules; if it is prescribed in cachets, the patient is liable to get none of the drug.—I am, etc.,

London, W., June 15th. ATWOOD THORNE.

THE OLDEST HOSPITAL FOR SICK CHILDREN IN THE UNITED KINGDOM.

SIR,—To prevent misconception such as has occasionally arisen in the past, and which might arise again in the future, from the recent letter to the papers from the Secretary of the Royal Waterloo Hospital, may I ask you to state that the first hospital for sick children to be established in this country was the Hospital for Sick Children, Great Ormond Street?

The treatment which the Royal Waterloo Hospital afforded before 1852, the year of the foundation of the Great Ormond Street Hospital, and for many years after that date was dispensary treatment only.

How great was the need of a children's hospital at that time may be gathered from the fact that in January, 1842, out of 2,365 persons in all the London hospitals, only 26 were children under the age of 10; while of 50,000 persons dying annually in the metropolis, 21,000 were children under that age.—I am, etc.,

London, W.C., June 9th. STEWART JOHNSON, Secretary.

[1] Using "comparative" in the sense of the modern method of describing the twenty-four hours urine in terms of an ideal standard secretion.

THE LATE SURGEON-GENERAL HANBURY.

SIR,—In your obituary notice of Surgeon-General Sir James Hanbury, K.C.B., last week, you state that he "was the son of Mr. Samuel Hanbury, a stockbroker in the City of London, and his mother was Frances, daughter of the Rev. W. Sewell, of Headley, Surrey."

This is not correct. Sir James was an Irishman. His father was Samuel Hanbury, Esq., of Somerstoun House, Laracor, co. Meath, and his mother was Louisa, daughter of the Rev. Charles Ingham, Rector of Kilmessan, co. Meath. He was a remarkable man, and as he was an Irishman and a Meath man I think the country and county ought to have the credit of his origin. I am his nephew.—I am, etc.,

S. SMARTT,
Vicar of Newry.

Newry, June 15th.

*** The statement referred to was made on the authority of a correspondent in the *Times* who claimed to be acquainted with the facts. We regret the inaccuracy.

THE NEW MANCHESTER INFIRMARY.

SIR,—In your excellent account of the New Infirmary there is a marked inaccuracy which needs correction. Referring to the difficulty which exists owing to the removal some two miles distant from the centre of the city, you say: "Moreover, it left the centre of the city unprovided with any place nearer than the Ancoats Hospital for the treatment of accidents and sudden illness." I would call attention to the fact that the Salford Royal Hospital is only about two-thirds of a mile from the centre of the city (St. Ann's Square), whereas the Ancoats Hospital is considerably over a mile away. The removal of the infirmary to a site so far away has largely necessitated the raising of the number of beds at the Salford Royal Hospital from 135 to 200, and this is now being accomplished.

Ancoats Hospital has, I believe, 114 beds, so that in a short time the centre of the city, from different sides, will be provided with 314 beds to meet the difficulty which otherwise would undoubtedly exist.—I am, etc.,

ANDREW BOUTFLOWER.

Manchester, June 23rd.

"CALUMNIES AGAINST HOSPITALS"

WE have received a further communication from Mr. Berdoe on this subject which we think it unnecessary to publish. He tries to prove his case by quoting "an eminent medical man" who is said to have written in a newspaper in 1883; by John Hunter's experiments on a man and woman and a child in St. George's Hospital; and by something said in a contemporary in 1899 about Neisser's experiments. He characteristically omits all mention of the fact that both in Hunter's and in Neisser's cases the experiments were not "operations" but inoculations; that John Hunter inoculated himself, and that, whatever may be thought of Neisser's experiments, they were not made in one of "our hospitals" to which Mr. Berdoe referred. John Hunter often experimented on himself, and it was he who said: "I go no further in theory than I would perform in practice, if patients being acquainted with the consequences of the disease would submit to or rather desire the operation; nor do I go further than I now think I would have performed on myself were I in the same situation. Not that I would have it supposed that I would recommend this at large; I would have no one perform an operation that he is not clear about the propriety of himself." It is only fair to add that Mr. Berdoe, after his fifteen years of silence does at last deal with "operations" done in hospitals in this country. These are cases of gastrostomy and hysterectomy reported in the medical journals of twenty years ago. The mortality was said to be large, and this was true. Mr. Berdoe goes on to say: "If operations on the abdominal organs are so successful now that private patients readily submit to them, it is to the *corpora vilia* the debt is due, but I do not believe that the poor, the ignorant, and the helpless should be for ever 'clinical material' [here one seems to hear the voice of Mr. Berdoe's Director, the Hon. Stephen Coleridge] for the rich and powerful." If Mr. Berdoe will wipe away "the tear of sensibility" which blurs his mental vision, he will see that this is mere cant. It is surely inevitable that operations should be perfected in hospitals, for it is there that the occasions most often arise of trying new procedures. Moreover, it must be remembered, that the newer operations are naturally done by hospital surgeons who have not reached the period in their career when private patients flock to them. As for the large fatality of the early gastrostomies, this was due to the fact that they were done as a last desperate hope when the patient, doomed to certain death without operation, was almost moribund. If Mr. Berdoe had his way, no experimental operations on animals would be allowed; consequently, the poor and the rich alike would be deprived of the benefit of operations which he himself admits to be successful. As he gives a wide extension to the term "operation," may we remind him that the late Queen Victoria submitted to be chloroformed in two of her confinements by Dr. John Snow at a time when the process was held to be highly dangerous by many members of the medical profession? The case could be paralleled if it were worth while by instances of real surgical operations. The first ovariotomy was performed on a private patient by Ephraim McDowell in 1809, and one of the early operations in this country was done by a surgeon on his own sister. Mr. Berdoe says he can substantiate every word he has spoken or written on the subject. All we can say is that he has not yet done so.

[1] BRITISH MEDICAL JOURNAL, June 20th, 1908.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

NURSING SERVICE FOR TERRITORIAL HOSPITALS.

THE Army Council has decided to establish an Advisory Council in connexion with the formation of a nursing service for the general hospitals of the Territorial Force. The Council will frame rules for the admission of nurses into the service, and make such recommendations as may seem necessary for the administration of the service and for the appointments of matrons, sisters, and nurses thereto. The Queen has graciously consented to become President of the nursing service. The Advisory Council is constituted as follows: Chairman, Surgeon-General Sir Alfred Keogh, K.C.B., K.H.P., Director-General Army Medical Service; members, the Duchess of Montrose (vice president), the Countess of Derby, the Countess of Jersey, the Lady Grenfell, the Lady Helen Munro-Ferguson, Miss Haldane, Miss Cox-Davies, Matron Royal Free Hospital; Miss Hamilton, Matron St. Thomas's Hospital; Miss Hughes, Queen's Jubilee Institute; Miss McCall Anderson, Matron St. George's Hospital; Miss Ray, Matron King's College Hospital; Miss Vernet, Middlesex Hospital; and Miss Sidney Browne, R.R.C., late Matron-in-chief Q.A.I.M.N.S. (secretary).

THE INDIAN MEDICAL SERVICE.

THE annual dinner of past and present members of the Indian Medical Service took place at the Gaiety Restaurant on June 18th, Surgeon-General Branfoot being in the chair.

The other officers present were:

Surgeon-Generals.—G. Bainbridge, W. R. Brown, C.I.E., J. Cleghorn, C.S.I., A. Eteson, J. P. Greany, G. Hay, L. D. Spencer, and P. W. Sutherland.

Colonels.—S. H. Browne, C.I.E., C. W. Carr-Calthrop, W. E. Cates, D. E. Hughes, C. H. Joubert de la Ferté, W. G. King, C.I.E., M. D. Moriarty, W. O'Hara, P. A. Weir, T. J. H. Wilkins, and W. A. S. Wynne.

Lieutenant Colonels.—C. Adams, R. Boustead, E. H. Brown, Sir R. H. Charles, K.C.V.O., W. Coates, R. Davis, H. P. Dimmock, A. Duncan, T. E. Dysor, W. H. W. Elliott, L. G. Fischer, P. J. Freyer, W. Gray, B. B. Grayfoot, H. M. V. Harington, P. Hehir, H. Hendley, R. K. Holmes, E. R. Johnson, Sir A. Leihbridge, K.C.S.I., A. W. D. Leahy, S. Little, J. Lloyd-Jones, C. G. W. Lowdell, D. P. MacDonald, F. P. Maynard, J. Moorhead, T. Pope, K. Prasad, J. Reid, F. C. Reeves, T. G. Scardon, G. S. Thomson, W. H. Thornhill, F. J. Tuohy, G. Waters, W. R. Woolbert, and F. W. Wright.

Majors.—A. R. S. Anderson, H. S. Caldwell, A. Gwyther, P. B. Haig, J. G. Hulbert, J. Jackson, C. H. James, E. A. R. Newman, F. R. Ozzard, W. J. Prideaux, and H. Smith.

Captains.—W. R. Battye, H. M. Brown, J. K. Fleming, R. B. B. Foster, R. W. Knox, J. M. D. Megaw, W. O'S. Murphy, A. E. H. Pinch, J. N. Walker, E. L. Ward, and J. J. Urwin.

There were also present as guests Viscount Morley, Principal Secretary of State for India; Sir R. Douglas Powell, President of the Royal College of Physicians; Sir Thomas Barlow, Sir William Church, Lieutenant-General Sir O'Moore Creagh, V.C.; Colonel C. Wardrop, Commandant of the Royal Army Medical College; Mr. Austin Low, and the Editors of the *Lancet* and the BRITISH MEDICAL JOURNAL.

THE GENERAL HOSPITALS OF THE TERRITORIAL FORCE.

C. asks: Are medical officers of the Territorial Force appointed "*à la suite*" of the general hospital required to provide themselves with uniform?

*** We understand that though appointments have been made to the general hospitals of the Territorial Force, the questions of commissions and uniform are still under consideration.

Medico-Legal.

UNCERTIFIED DEATH AT WEMBLEY.

Our attention has been called by Dr. Goddard, the Medical Officer of Health for the Wembley Urban District, to a case of unregistered death in the district, which appeared to him, as the health officer, to necessitate inquiry. In his annual report he says: "Among the list there is a note of one death at Kenton of a youth, only 26, from, it is stated, 'extensive ulceration of the mouth and cheeks with general debility,' and in brackets is the word 'uncertified.' What does this mean? Does it really signify that, in this twentieth century, this young man died unattended and no inquest was held, and only the symptoms recorded, possibly by a layman? As there is no mention of a definite disease nor medical attendant, would it not be more satisfactory to inquire of the Registrar-General if he can furnish particulars of this case? 'Extensive ulceration of the mouth and cheeks with general debility' is quite insufficient as an actual cause of death. Was it a case of corrosive poisoning or of starvation, or what?"

On application to the Registrar-General, a reply was received to the effect that the deceased man had been an out-patient at a London hospital, and that a local medical practitioner had been called in at a later date, but did not arrive until after death had taken place. The registrar reported the case to the coroner, who, however, saw no necessity for holding an inquest.

Without any actual knowledge of the facts which were placed before the coroner, it would perhaps be saying too much to state that an inquest ought to have been held. But from the point of view of the protection of the public, it would appear to us that in such a case it would be safer in the interest of the public to hold an inquiry, so that those living in the district might feel that no death can take place without adequate investigation of the circumstances which led to the death. On the face of it, here is a man who has been attended by a house-surgeon at a large out-patient department; he becomes worse, and before any medical man has realized that he is dangerously ill he dies. The evidence of the house-surgeon no doubt would throw some light on the condition from which the man was suffering, and the clinical history, as detailed by the man's friends, might even clear up all the mystery which attaches to his death. But why is the cause of death not entered more fully in the list? These returns, which pass through the hands of the medical officer of health, should at all events be records of actual causes of death, and not merely entries of prominent symptoms. The public has a right to demand this; and while it must remain in the discretion of the coroner whether an inquest is to be held or not the public certainly has the right to demand of the authorities a reasonable explanation of the death which is consistent with modern science.

WORKMEN'S COMPENSATION ACT.

Newnham *v.* Gill.

Having taken a month to consider the various points, His Honour Judge Shortt gave his verdict in a peculiar compensation case which was brought to a conclusion at Rochester County Court on June 18th. Five medical practitioners gave evidence, and in addition to this Dr. C. White of Rochester assisted the judge as medical assessor. The case was that in which Mrs. Newnham, of 158, Dale Street, Chatham, widow, applied on behalf of herself and infant children in respect of the death of her husband, who died, she alleged, while in and due to the employ of Messrs. Gill and Sons, shipbuilders, of Rochester.

The evidence given was to the effect that deceased had been employed by Messrs. Gill for thirty-six years, and his special work—he was a carpenter—was in connexion with cabins of vessels. At the end of September last he was put on the erection of a fence at Messrs. Gill's wharf, the fence being made of railway sleepers up-ended. Early one morning he suddenly dropped his maul, with the exclamation: "Good God, mate, I've never had a pain like this before!" He died a few days later.

Dr. H. W. Smith, of Chatham, called for the applicant, said he treated Newnham at first for what he thought to be some gastric disturbance. The next day he died, and, with the widow's consent, he conducted a *post-mortem* examination. In conjunction with Dr. C. C. Lord, of New Brompton, he found that quite 2 ft. of the small intestine had become strangulated under a small band of the mesentery. He was of the opinion that a violent strain would cause it, and the evidence as to Newnham's work at Messrs. Gill and Son's wharf was quite consistent with a strain causing the strangulation.

Dr. C. C. Lord gave similar evidence, and in cross-examination did not think the obstruction had been caused by anything Newnham had eaten.

Dr. A. S. Morley, of London, was called for the respondents. In his opinion Newnham's condition could not have been caused by a strain. He had seen the report of the *post-mortem* examination.

Dr. A. E. Edlin, of London, gave similar evidence, as did Dr. J. Holroyde, consulting surgeon to St. Bartholomew's Hospital, Rochester, and Medical Officer of Health of Chatham. Dr. Holroyde's opinion was that death was due to strangulation, caused by a band which was there on account of pre-existing peritonitis, or the man might have been born with it. Cross-examined, he said a violent effort was more likely to cause an external rupture than an internal one.

His Honour said that Newnham died beyond all doubt of strangulation of the bowels. "The law", His Honour said, "casts upon the applicant the onus of proving beyond reasonable doubt that the disease from which her husband died was caused by his employment. Having regard to the evidence in the case, and especially the contradictory opinions of various medical witnesses, I am unable to hold that she has discharged that onus. The award must therefore be in favour of the respondents, with costs."

THE FURTHER HISTORY OF AN "AMERICAN SPECIALIST."

The man Bertram Mortimer, of whom some account was given in our issue for May 2nd in connexion with a charge of obtaining money under false pretences as an American specialist, has again recently figured in the law courts. On this occasion he was a prisoner making application to the judges of the new Criminal Appeal Court for permission to bring fresh evidence in relation to a charge of stealing. He also claimed that his recent conviction on the charge should be set aside on the ground of misdirection of the jury by the judge, and that in any case the sentence awarded was too high. From what passed in the Appeal Court it appears that he was convicted of stealing a Gladstone bag from Victoria Station, the said bag having been accidentally placed in his possession by the clerk in charge of the cloak room, and the jury came to the conclusion that he intended to steal it. The result was that the judge sentenced him to fifteen months' hard labour, but afterwards reduced this penalty to fifteen months in the second division. Earlier questions having been decided against the prisoner, the propriety of the sentence was discussed. The court finally held that the sentence should not have been reduced, and changed it again to one of fifteen months' hard labour. The Chief Justice said that, having regard to the nature of the previous charges against the prisoner, the fact that the more serious offence was committed in 1897, and the bigamy charge in 1899, was not sufficient reason for reducing the sentence in the present case to a comparatively lenient one. Mr. Justice Phillimore said: "I know all about the man, because he was tried before me at Wells. I also know the story of the serious offence of which he was committed before Mr. Justice Hawkins. I also remember the disgraceful defence he set up before me at Wells."

Since the above lines were written the prisoner has received a further penalty of four years' penal servitude at Exeter Assizes, on a charge of obtaining money by fraud from various persons whom he professed to cure of different ailments. The accused pleaded guilty, and after his conviction said that he wished £13 which he had in the bank to be divided amongst the people whom he had defrauded.

NURSING HOME CHARGES.

A. H., a correspondent, writes that a patient of his was taken ill away from home, and went to a local doctor. He was ordered to a nursing home, and there a specialist was called in, who performed three operations, charging for them a fee of £27 6s. The doctor first called in also attended the patient at the nursing home, and in addition to his bill has made a charge of 15 guineas for the operations. Is such a charge justifiable?

*** If the practitioner assisted the specialist in the operations, he is entitled to make a special charge for the operations, but taking into consideration the charge made by the operator, and the fact that the means of the patient are very inconsiderable, the extra amount claimed appears to be excessive.

LOCUMTENENT AND HOUSE PHYSICIAN.

A correspondent writes that he was offered 5 guineas for acting as locumtenent to the house-physician of a London hospital. He accepted by telephone, but the same evening received a wire to say his services would not be required, as the house-physician could not leave town. A little later the latter wrote him that he was able to go, but had found a deputy to act for him without payment. Our correspondent states that he has demanded £5 to recoup him for the inconvenience and loss he has been put to, owing to the engagement being cancelled, and he wishes to know whether he should put the matter into a solicitor's hands if payment is refused.

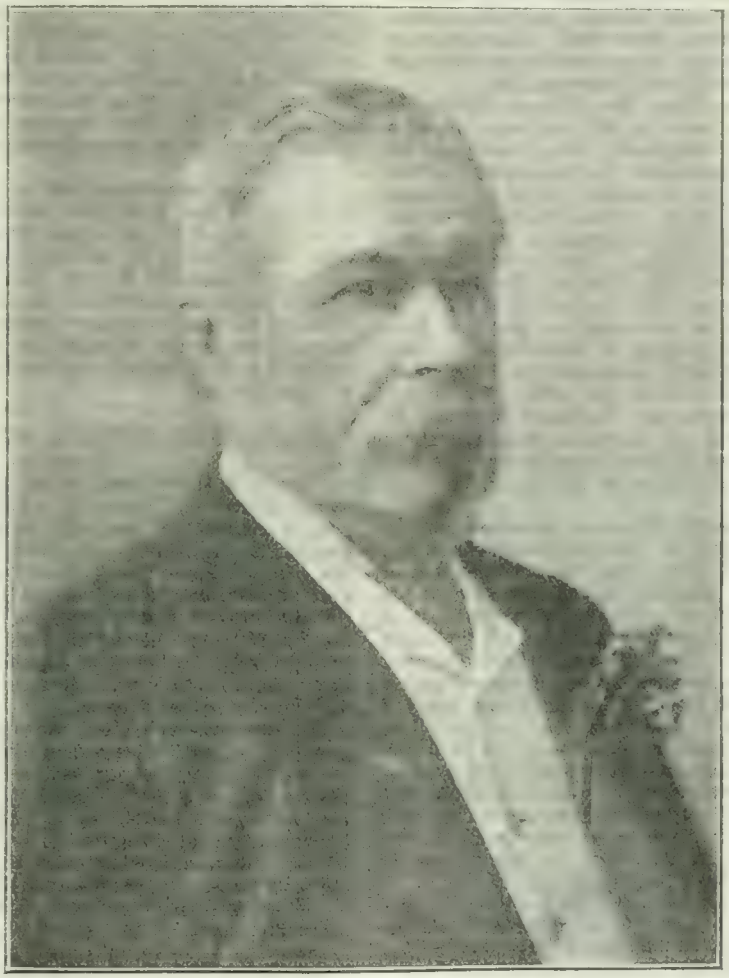
*** Our correspondent would be ill-advised to take any legal proceedings. Even if a legal contract were proved, it is doubtful whether under the circumstances any damages would be recovered in the county court. The claim, too, from a professional point of view is open to considerable objection. It is hardly in accordance with professional comity for a doctor to press such a contract as this strictly against a professional brother.

OBITUARY.

EDWIN RICKARDS, M.A.OXON., M.B., F.R.C.P.LOND., F.R.C.S.ENG.,

PHYSICIAN, GENERAL HOSPITAL, BIRMINGHAM.

We regret to record the death of Dr. Edwin Rickards, Consulting Physician to the General Hospital, Birmingham, which occurred at Ellerslie, Edgbaston, on June 11th, after a short illness. He was the youngest son of the Rev. T. A. Rickards, Vicar of Cosby, Leicestershire, having been born in 1841, and was educated at St. John's College, Oxford, where he took his degree with honours in 1865. He studied medicine at University College Hospital, becoming in due course House-Surgeon under Mr. John Marshall, and in 1870 was appointed Resident Pathologist to the General Hospital at Birmingham. This was the beginning of a period of active service, which lasted until June, 1904, when he retired from the office of Honorary Physician, and the Governors elected him to be an Honorary Consulting Physician. After filling the office of Pathologist, he became for a short time Resident Medical Officer, and was appointed Physician in 1874; he therefore filled the latter office for the long term of thirty years, and was the last physician appointed before the creation of the assistant staff appointments. On his retirement he was presented with a testimonial, including an illuminated address subscribed for by members of the board and the staff of the hospital and by other Governors, while an etched portrait drawn by Mr. H. Macbeth-Raeburn was presented to the hospital, and a replica given to Mrs. Rickards. Dr. Rickards was one of the Consulting Physicians to the Birmingham General Dispensary from 1883 to 1903, and was Honorary Physician to the General Institution for the Blind. He took part only for a short time as a systematic lecturer in the Medical School, but he was a painstaking and conscientious clinical teacher, and always popular with the students. He showed great interest in the work of the new university; when the Pathological Department was first started he gave a substantial sum of money to build and equip the first pathological laboratory, and for some years before his death occupied a seat upon the University Council.



Photograph by] EDWIN RICKARDS, M.A.OXON. [*H. J. Whitlock, Birmingham.*

He played a useful part in filling various offices in connexion with local medical societies, being at one time Secretary, afterwards for many years Treasurer, and ultimately President of the Birmingham and Midland Counties Branch, President of the Midland Medical Society, President of the Medical Institute, and President of the Birmingham Medical Benevolent Society. He was a Justice of the Peace for the County of Warwick.

Dr. Rickards married late in life the daughter of the late Mr. John Archer, F.R.C.S., of Birmingham, and much sympathy is felt with her in her sorrow; there are no children of the marriage.

The death of Dr. Rickards has occurred very shortly after that of Mr. Fowke. They were contemporary residents in the General Hospital between 1870 and 1872, and were of about the same age. When Mr. Fowke was ill Dr. Rickards was a constant inquirer about his progress, and at that time showed no signs of so soon following him to the grave.

Dr. Rickards was only a rare contributor of papers to medical periodicals, but when the occasion occurred he was the master of a good style, and his presidential addresses were always well written. Two of his contributions deserve to be remembered, as they were, if not unique, at least exceedingly rare; one of these was an account of complete calcification of the pericardium, and the other of complete fatty transformation of a kidney in the pelvis of which a calculus was lodged.

He was an exceedingly hospitable man, and popular with a large circle of friends in the profession and outside it, by whom he will be greatly missed.

Although he took little part in the debates at the medical societies, and was often a silent listener, he could on occasion show that he was neither an unmindful nor an inattentive observer of the progress of medical science, and that he had pondered with profit on passing events. In 1893, when President of the local Branch, he chose for the subject of his address the Treatment of Infectious Diseases by Vaccine, and showed in it an appreciation of the possibilities then latent in this method and a deep and wide acquaintance with the hopes and aspirations of those pathologists who then stood as pioneers of progress. It must be remembered that at this time the profession was suffering from a reaction, and many were disposed to discredit the possibility of the cure of diseases by substances derived from bacterial cultures in consequence of the disappointments experienced by the failure of Koch's tuberculin to fulfil the exaggerated promises entertained respecting it. He wrote on this occasion: "The apparent failure of any one method of dealing with a particular infectious disease by a vaccine through imperfection of detail must not shake our confidence in bacteriological science generally. I am free to admit that we are far from home in this matter, but I believe the road is right, and if ever we are to have a definite treatment for the infectious diseases it will be in the direction of vaccines, germicides, or antitoxins, and in respect to these we must look for light from the laboratory." In the concluding sentences he appealed for State help in order to allow of bacteriology undertaking those important national investigations which, as he rightly said, become every day of more pressing necessity. As we have seen, when he had the opportunity he showed that he was in earnest in this expression of opinion by aiding substantially in the

building of the first adequately equipped bacteriological laboratory established in Birmingham.

The funeral, which took place on June 15th in the churchyard at Northfield Parish Church, was attended by a very large number of members of the medical profession and by many personal friends who wished to render him this last tribute of affection and esteem.

THOMAS GARRETT HORDER, M.R.C.S., L.R.C.P.,

CARDIFF.

IT is with sincere regret we have to announce the death of Dr. T. Garrett Horder, M.R.C.S.Eng. and L.R.C.P.Edin., which took place at his residence in Cardiff, at the age of 64 years. Dr. Horder had been suffering from heart trouble for several years past, and in the spring and summer of 1906 was so seriously ill that no hopes of his recovery were entertained. He rallied, however, and from December, 1906, to February, 1907, he continued his ordinary work and took a lively interest in all medical and public affairs. The strain, however, proved too great, and he finally passed away on June 15th. His sufferings were borne with that strong determination and strength of will which characterized him all through life.

He was the son of the late Mr. William Horder of Salisbury, where he was born in 1843, and was one of a large family of sons and daughters. At an early age he left home to reside with his uncle, Dr. Garrett of London, by whom he was educated at a private school at Tisbury, and afterwards at the City of London School, where he distinguished himself as a Shakespearian scholar, and obtained several prizes (1858). Leaving the City of London School, he entered the London Hospital as a medical student, and received the diploma of M.R.C.S. in 1866. During this time he also acted as assistant to a local practitioner, thus gaining a knowledge of dispensing, etc. He afterwards proceeded to Edinburgh, where he became L.R.C.P.Edin. in 1873. For many years he was House-Surgeon and Honorary Secretary to the National Sanatorium at Bournemouth, and there gained a deep knowledge of chest complaints. He was actively associated with Dr. Snow of that town, who still survives.

After leaving Bournemouth, he acted for some time in the capacity of locumtenent in Lancashire and elsewhere. He came to Cardiff about 1876, where he held the post of Public Vaccinator, and practised up to the time of his death. The arduous work in connexion with the post of Public Vaccinator, under the new Act of 1906, no doubt helped to hasten his end. In 1898 he started the Hospital Reform Association, of which he became Secretary and in which he took the deepest interest. Although ever ready to help the poor, he was still desirous to see that hospitals and medical charities should not be abused, but that they should be restricted to those who really stood in need of them—namely, the necessitous poor—and advised that the question should be closely looked into by medical men and lay. His advice and help were ever ready in the matter. He also held strong views on the subject of the defence and etiquette of the profession.

He was for some time a member of the Cardiff Infirmary Management Committee and Joint Secretary of the Ethical Section of the British Medical Association and was on the Council of the Medical Defence Union.

Being a keen politician, he took an active part in matters both political and municipal. For many years he was a member of the Cardiff School Board, where he was always welcomed for his valuable advice and experience. He contested the town on several occasions, and, although rejected, he rendered great assistance in the interest of the town. Being ever a lover of children his work on their behalf will not readily be forgotten; he helped to secure them many benefits, such as open spaces, etc., his special care being the waifs and strays. He was a man of strong character, and his straightforwardness in all matters medical or political (without thought of himself) must cause him to be long remembered. He married, in July, 1888, Miss Anna Despard, third daughter of Lieutenant-Colonel Despard, of Lacca Manor, Mountrath, Ireland, and of Hampstead, London. Besides his widow, he leaves a son to mourn his loss.

Dr. H. A. LATIMER (Swansea) writes: To those who have been associated with the late Dr. T. Garrett Horder in the progressive work he did for the general welfare of our profession, the sad news of his death, at a comparatively early age, must have come with a sense of personal loss. I, who had enjoyed his friendship for some years past, feel that it would not be right to allow any obituary notice of him in the pages of the BRITISH MEDICAL JOURNAL to pass without adding some personal comments of my own upon this self-denying work which he did. His name, appended as it was to frequent letters which he wrote to the JOURNAL on subjects of medical politics, must be a familiar one; for he wrote frequently, and to the point, on the various questions which engaged our attention from time to time. In the South Wales and Monmouthshire Branch, as in the Medico-Political Committee of the Association, he was ever an energetic and useful member, bringing with him to the consideration of the matters transacted there a vigorous, progressive mind, with a well-balanced judgement. The same may be said of his action on the Medical Defence Union, where for some years he served as a committee-man. Of late ill-health had compelled him to restrict this work of which I have been speaking, but his interest in what was going on was as keen as ever, and his removal from among us is to be sincerely deplored, if on this account alone, by those who knew him in no other capacity than as a worker for the advancement of the general welfare of our profession and its members.

Dr. Horder was essentially a vigorously minded man. In debate he was lucid and incisive. Being accustomed to speak in public, he spoke with clearness and with a voice which could be followed without strain upon the part of his hearers. For the rest, he was a good, reliable friend. Recognizing to the full all these qualities, I am thankful to be allowed the privilege of contributing this sincere expression of regard to the memory of one who deserves well of those in whose interests he spent much time and labour.

JOHN NEWTON, M.R.C.S., L.S.A.,

LIVERPOOL.

ON May 17th there passed away, at the ripe age of 88, one whose figure was familiar in professional circles in Liverpool a generation ago, and whose name will long be cherished in literary and artistic circles in that city. Mr. John Newton was a native of Nottinghamshire, studied medicine at University College, London, obtained the gold medal of the Society of Apothecaries, and qualified in 1847. He began his long career in Liverpool by being appointed Resident Apothecary, as the term was in those days, to the Royal Infirmary, and Surgeon to the old asylum in Ashton Street.

Mr. Newton was a noted raconteur and a most versatile personality, both in his accomplishments and his interests. He was at one time an active member of the Medical Institution, of which he was a Vice-President, and for the last four years had been an honorary member. He was particularly interested in the microscopical section. He was President of the Literary and Philosophical Society, of the Biological Society, and of the Microscopical Society. To show the variety of the interests that engaged his attention, some of the titles of his papers read at the Literary and Philosophical Society may be mentioned. Such were: Recent Discoveries as to the Origin and History of the Human Race; The Senses and their Relation to each other; An Inquiry into the Language Spoken by Our Lord; The Mystery of Life; The Four Georges and Their Time.

As Vice-President of the Art Club he was largely instrumental in forming and cataloguing the Loan Collection of Ancient and Modern Bookbindings, exhibited in November, 1882, and he was the main contributor to the Exhibition of English Caricatures in 1881. He was a diligent and judicious collector, especially of books and old prints, and has left behind him valuable collections, his library containing many works of great rarity.

For some years he had withdrawn from practice, and lived at 2, Prince's Gate West, where his death took place.

Mr. Newton married more than fifty years ago his second cousin, the grand-daughter of Mr. John Newton, of Liverpool. He leaves three children, a daughter married to the Rev. W. C. Hudson, and two sons, of whom one is in practice in Liverpool as a dental surgeon.

BERTRAM ABRAHAMS, M.B., F.R.C.P.,

ASSISTANT PHYSICIAN, WESTMINSTER HOSPITAL.

It is with great regret that we have to announce the death at the early age of 38 of Dr. Bertram Abrahams, senior assistant physician to Westminster Hospital.

For many years Dr. Abrahams had not enjoyed robust health, owing to an affection of the kidneys, but he had just returned from a month's holiday in Greece, apparently more vigorous than usual, and his death, after little more than a fortnight's illness, will be a great shock to his numerous friends.

Bertram Abrahams was the son of Mr. L. B. Abrahams, till recently head master of the Jews' Free School, and was born in London in 1870. He was educated at the City of London School, where he gave early promise of great ability. Entering University College he took the B.Sc. with honours at the University of London, and qualified M.R.C.S., L.R.C.P., in 1894; in 1895 passed the final M.B. of the University of London with honours in medicine and forensic medicine. In 1904 he was elected a Fellow of the Royal College of Physicians. In addition to being Assistant Physician to Westminster Hospital he was Joint Lecturer on Medicine and Subdean of the Medical School. He was Examiner in Physiology to the Conjoint Board, and was recently appointed Medical Inspector of Schools by the London County Council. In 1907 he delivered the Arris and Gale lecture at the Royal College of Surgeons.

Dr. Abrahams took a great interest in the children of the poor of his community, and was very anxious to foster a taste for athletics among the boys. In this way he became one of the founders, if not the originator of the Jewish Lads' Brigade, and for many years never failed to attend the summer camp at Deal, where he acted as principal medical officer.

Of an unselfish and sympathetic nature, he was always ready to help others, and any research with a view to solving some difficult medical problem was sure to enlist his eager sympathy and valuable assistance; unfortunately in this way he often added much to the work which was already more than his delicate constitution could bear. For several winters he practised in Egypt, and had been advised to live altogether in that country. It is to be regretted that the desire for more work, and especially for teaching, which always had a great attraction for him, induced him to brave the rigours of the English climate.

He was a frequent contributor to this JOURNAL, and was also the author of articles on diseases of the pharynx and oesophagus, on myalgia, and on myositis ossificans in Allchin's *Manual of Medicine*. In addition he wrote a book on the principles of pathology, and edited a German-English Dictionary of medical terms, a work which involved enormous labour.

Dr. Abrahams had no son, but leaves a widow and an only daughter.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL ANSWERS TO NEWSPAPER CORRESPONDENTS.

WE have received a cutting from the *Birmingham Daily Mail* of Tuesday, June 16th, containing the following advertisement:

> "Write to Medico if you are ill, and he will give you advice free of charge.—Particulars in the *Birmingham Weekly Post*."

We take this to mean that the *Birmingham Weekly Post* has a column for medical advice, and that this is an advertisement of the newspaper which maintains this column as an inducement to subscribers. Our correspondent goes on to say that the answers are furnished by a well-known general practitioner and that it is, in his opinion, "unprofessional" conduct. The matter is well worthy of consideration by the Central Ethical Committee, as we do not know that any formal pronouncement has ever been made upon the point; it is, however, generally recognized that medical advice cannot be given satisfactorily without seeing the patient, but how far it may be possible to lay down a definite rule is a question that needs careful consideration.

PATIENT'S RIGHT TO CONSULTANT'S OPINION.

MIDDLE EAST writes: A. treated a child for some time, and diagnosed chronic malaria. During A.'s absence B. attended the child and agreed with A. Shortly afterwards a relative took the child for change of air, and she was seen and examined by C., who knows A. well, and B. by reputation. He was told that the child had been attended by A. and B., but he diagnosed tuberculous disease of the upper lobe of the left lung, told the relative so, and furnished her with a diagram on which he shaded in black the area said to be affected, and gave her a piece of paper on which he stated which of the symptoms were probably due to the lung condition, and that he had found tubercle bacilli in the sputum. On her return the child's relatives naturally blamed A. and B., but a very careful examination by three physicians confirmed their diagnosis. Was C. justified in giving this diagram and open note to the child's relative? Knowing that both A. and B. had attended the child, would it not have been more in accordance with professional etiquette had he enclosed the diagram and note in an envelope and given it to the relative to hand to either A. or B. on her return?

*** Anyone consulting a practitioner either for himself, or for a person under his care, has a right to know the opinion that the practitioner has formed of the case, and would not feel satisfied unless he got it. At the same time we do not approve of the patient being given a diagram. C. might quite well have enclosed it with a note to A. or B.

CHARGES TO AN EDUCATIONAL AUTHORITY.

FERRY.—We think two guineas would be a fair and reasonable charge to make for attending at the school, reducing and setting the fracture and applying splints, but the fact that our correspondent has small prospect of obtaining any further remuneration from the patient for his after-treatment of the case must not, in our opinion, be taken into consideration in fixing the charge to be made to the educational authority.

INTERFERENCE WITH OTHER MEN'S PATIENTS.

EXPERIENCE complains that a neighbouring practitioner who with his consent had seen his patient in his absence, continues to visit the house "as a friend," although he has not been allowed to see the patient again. He wishes to know what course he should pursue; whether he should write a letter of protest to the offending practitioner or bring it before the Branch of the British Medical Association?

*** The practitioner in question shows want of tact and discretion in continuing to call, but as the parents of the patient are loyal to our correspondent it would be best to take no notice.

CHARGES FOR MEDICAL CLUB.

QUERY asks (1) what would be a reasonable charge for members of a medical club in a purely agricultural district where the wages average about 13s. a week. At present the payments are: Men, 5s. per annum; women, 2s.; and 2d. for each child. (2) Is it unprofessional to employ a collector to go about to collect subscriptions on commission? (3) Is it right for a public vaccinator to charge the guardians with the cost of vaccinating private patients?

*** (1) The present rate is too low. The women ought to pay as much as the men. It would be reasonable, too, if more were paid for attendance on the children; 2d. per annum per child could not possibly be remunerative. (2) The employment of a collector, especially where he is paid by commission, is nearly always objectionable. In some cases it may be necessary, and then the greatest care must be taken that the collector does not canvass the patients of other doctors and "tout" for his employer. (3) A public vaccinator is required to vaccinate any person in his district who applies to him, and his duty obliges him to call on all whose names are sent him by the vaccination officer, and offer to vaccinate if desired. He must often, therefore, be required to vaccinate "private patients," and is entitled to charge the usual fees for so doing.

PROFESSIONAL SECRECY.

D. P. H. writes: A reformed woman is under my care for syphilitic disease of the nose. She is now a communicant at the parish church. I put the case to her very carefully and suggested she should either herself make some special arrangement with the vicar or allow me to do so. She promised not to communicate and for a time kept her promise, but now breaks it.

*** While sympathizing with our correspondent's difficulty we think he must hold to the rule that he cannot violate professional secrecy without permission from his patient, but he may, of course, try the effect of further remonstrance.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PSYCHOLOGY would be glad to know what books are most suitable to read for the M.D.Lond. in psychological medicine.

ANSWERS.

A. G. W.—Sabouraud's pastilles consist of platino-cyanide of barium. It is *very* important to employ the Paris (French) make, and *not* the German ones, as accidents (due to over-exposure apparently) have occurred with the latter. Radiguet, 15, Boulevard des Filles de Calvaire, Paris, supply the pastilles in a book with the specimen tint.

FERRY.—Approximately the ointment appears to be a juniper-tar preparation, with some wax and lard, the wax being used to give it a soft and agreeable consistency. There is no doubt it is a *tar* preparation, but the exact kind is not known. The tar nature is readily detected by the smell.

WART ON THE SCALP.

DR. J. S. BOLTON (Nottingham) writes, in reply to "F. H. D. G." (BRITISH MEDICAL JOURNAL, June 20th, p. 1556): Dr. Lewis Jones, in his book, *Medical Electricity*, recommends electrolysis with magnesium ions. I have found *x* rays an excellent remedy.

R. M. writes: The inquirer is advised to apply, or have applied, to each wart for a few seconds the effleuve from a high-frequency apparatus by means of a metal-point electrode. The success of the method will probably prove a very pleasant surprise to both himself and his patient.

DR. WALDO (Bristol) advises "F. H. D. G." to apply a solution of magnesium sulphate on the positive pole of a continuous current battery (as suggested by Lewis Jones). This electrode should be made of magnesium and covered with two or three layers of lint, and then soaked in the solution. The negative electrode might be thoroughly wetted with water and applied to the nape. The proceeding is very simple and should last ten minutes, and may be repeated in a week's time if necessary. He uses four cells of a small dry galvanic battery, hired from Ferris and Co. The patient should feel some slight burning sensation. Or a satisfactory way is to touch each wart very carefully with glacial acetic acid a few times. The scalp and forehead are favourite sites for warts.

W. EAMES (Fleet Surgeon, R.N.) writes: In reply to "F. H. D. G.'s" inquiry as to an effectual mode of treatment of warts about the scalp, I would suggest the administration of lactate of calcium v to vij grains t.d.s., or the better-known commodity, "lime water," ʒj in half a pint of milk once daily, either of which may possibly prove effectual as remedies.

INCOME TAX.

SENEX asks for a list of all deductions allowed for income-tax purposes. He also desires to know the rate of depreciation of motor car which he may claim as an expense.

*** To enumerate all the deductions that may be allowable would carry us altogether beyond the limits of an answer to a correspondent. The principal items that a medical practitioner may claim were given in the BRITISH MEDICAL JOURNAL for August 24th, 1907, article "Income-tax Deductions." The general rule is that all expenses necessarily incurred in earning the profits of the practice are allowable, provided that they are not of such a character as to come under the head of capital outlay. The cost of books is, strictly speaking, not allowable, the expense being in a sense part of the cost of the practitioner's education, and, therefore, capital outlay. The cost of instruments may be claimed if incurred to replace others worn out. Additional instruments would probably be regarded as chargeable to capital account. In strictness depreciation of a motor car is not allowable at all when used for the purposes of a medical practice. If depreciation is not allowed, however, the cost of replacing a worn-out car may be claimed when the expense is incurred. If our correspondent has had to replace a worn-out car which cost £300, he may claim as an expense £300 less any sums already allowed to him for depreciation of this particular car, and less the present value of the old car. If the car is used for private as well as for professional purposes he can claim only a reasonable proportion of the cost. The rate of depreciation to be allowed, where the allowance is made in that way, is entirely a question for the local commissioners of taxes to determine.

LETTERS, NOTES, Etc.

AT the forty-third general meeting of the Liebig Extract of Meat Company it was stated that since last year the acreage of the ground owned and rented by the company in the neighbourhood of the River Plate had been raised to one and a quarter million acres, and that the ranching operations were being extended to South-West Africa.

THE H. A. BRIDGMAN FUND.

WITH reference to the appeal published in our columns of January 25th, 1908, for the assistance of Mr. H. A. Bridgman, Dr. P. Murison, Honorary Secretary of the Natal Branch, forwards the following list of subscriptions to the fund:

	£	s.	d.
Dr. A. McKenzie, Durban	1	1	0
Dr. S. Aubrey, Durban ...	0	10	0
Dr. Dumat, Durban ...	0	10	0
Dr. Rouillard, Durban ...	0	10	0
Dr. Peverley, Durban ...	0	10	0
Dr. Sakir, Durban	0	10	0
Dr. Pearson, Durban ...	0	10	0
Dr. Howden, Durban ...	0	10	0
Dr. Burnand, Durban ...	0	10	0
Dr. S. G. Campbell, Durban	0	10	0
Dr. Birtwell, Durban ...	0	10	0
Dr. Bonnar, Durban ...	0	10	0
Dr. T. Castillo, Durban ...	0	10	0
Dr. P Murison, Durban...	0	10	0
Dr. Hyslop, Pietermaritzburg	0	10	0
Dr. C. Watt, Pietermaritzburg	0	10	0
Dr. C. Ward, Pietermaritzburg	0	10	0
Dr. E. Hill, Pietermaritzburg	0	19	0
Dr. De Groot, Pietermaritzburg ...	0	10	0
Dr. Flook, Nkandhla ...	1	1	0
Dr. Knight, Ngutu ...	0	10	0
Dr. Colquhoun, Dannhauser	0	10	6
Dr. Clements, Umsinga ...	0	10	0
Dr. Memeyer, Utrecht ...	0	11	0
Dr. Dodd, Ixopo ...	0	10	0
Dr. G. Cumming, Escourt	0	10	0
Dr. Livingstone, Bulwer	0	10	0
Dr. Wildish, Ngotshe ...	0	10	6
Dr. R. W. Middleton, Weenen	0	10	0
Dr. C. H. Herbert, New Hanover	0	13	3
Dr. Turner, Howick ...	0	10	0
Dr. Freer, Camperdown ...	0	10	0
Dr. Hangen, Port Shepstone...	0	10	0
Dr. J. F Elliott, Verulam	0	10	6
Dr. Astbury, Pondoland	0	10	0
Dr. Heron, Pinetown ...	0	10	0
	£19	7	9
Exchange on cheques, draft, etc.	0	6	6
Cheque forwarded	19	1	3

FRANCO-BRITISH EXHIBITION.

A SECTION of the Franco-British Exhibition which should not be missed is that known as the Science Section. It will be found on the left hand of the Wood Lane entrance. Its existence is due primarily to Sir Norman Lockyer, who, when asked to join the Executive Committee, stipulated for a new departure in the way of a display of objects dealing with all forms of scientific research, and including historical apparatus which has aided in the advancement of scientific knowledge. The idea was accepted, and a committee, which contains forty-seven of the best known names in various branches of science, was appointed to see the scheme carried through. This committee divided its work among a number of subcommittees, each placed in charge of a special subject or subjects and empowered to take any steps it thought fit to secure its illustration. Moreover, the Executive Committee of the exhibition, once it had adopted the idea, treated the Science Committee generously, erecting a special building for its use and voting £1,000 towards the expense of tables, transport, and insurance. The result is a series of some fifteen displays, not all, perhaps, of equal merit, but forming together a scientific exhibition of great interest. The following are the branches of science illustrated: Mathematical science, visible and invisible radiations, heat, magnetism and electricity, chemistry, metallography, mineralogy and crystallography, biology, anthropology, geography and geodesy, geology, oceanography, meteorology, and astronomy. In addition, the National Physical Laboratory has a display all to itself. In the subsection devoted to biology will be found an exhibit of the Liverpool School of Tropical Medicine, in which sleeping sickness, nagana, malaria, yellow fever, elephantiasis, myasis, plague, and African tick fever are all illustrated. The London School of Tropical Medicine has also sent an exhibit, while some specimens of historical and other interest have been supplied by the Royal College of Surgeons. This Science Section will be found worth prolonged study and prove particularly interesting to those who, during the last few years, have not had an opportunity of being present at any of the conversaziones of the Royal Society.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

1. Diseases of the Heart.

HUCHARD (*Journ. des Prat.*, August 24th, 1907) points out many mistakes which are made during the clinical investigation of and the treatment of patients suffering from diseases of the heart. He points out that far too much importance is attributed to physical signs and too little to functional troubles; valvular diseases are studied according to their anatomical situation, instead of according to their endocardial or arterial origin; the "central" heart is studied and the "peripheral" heart, as represented by the vascular system, is almost entirely neglected. Other errors are the non-recognition of the factor of alimentary intoxication as an important cause of the dyspnoea of heart disease; the failure to distinguish the various forms of angina and an ignorance of the clinical characters of aneurysmal neuralgia. Dyspnoea occurring in patients with heart disease is frequently considered to be uraemic in nature, whilst really being due to an alimentary intoxication, as is proved by the fact that suppression of meat and the institution of a milk diet will cause a disappearance of the dyspnoea, whilst a return to a meat diet will cause this symptom to return. The author has never known a systole to result directly from emphysema or asthma, as is generally stated in textbooks. He states that a systole only occurs in emphysematous asthmatical patients when they have developed arterio-sclerosis. Patients from 45 to 60 years of age sometimes become "asthmatical" (?). Most of these "late asthmas" are really the result of arterio-sclerosis or are due to alimentary intoxication. The author points out that as true asthma can be modified very considerably by alimentary régime, it is necessary in treating a patient with this disease not only to prescribe iodide of potassium, but also to enforce a carefully-regulated dietetic régime. He denies that affections of the digestive tube can ever of themselves give rise to dilatation of the right side of the heart and to asystole, as has been stated by Potain. The so-called "cardiac" epilepsy does not exist; the association of heart disease and epilepsy in the same patient is accidental only. Reduplication of the second sound of the heart, which is said to occur physiologically in connexion with the respiratory movements, is, according to the author, always pathological. Functional insufficiency of the aortic or mitral valves may really occur, although doubted by some, but only when there exists some defect in the myocardium. The most important factor which separates coronary angina from other forms, is that in the former there is an ischaemia of the myocardium; this is proved by the fact that patients suffering from true angina pectoris die generally from syncope. The so-called gouty, diabetic and tabetic anginas do not depend directly on the several constitutional states, and do not yield to treatment adopted for those conditions; the terms are therefore misleading. With regard to the disputed point as to the danger attached to women suffering from mitral stenosis who marry, the author considers that these patients may be allowed to marry, to become pregnant, and to suckle their children. An exaggerated tortuosity and increased tension of the walls of the temporal artery does not by any means indicate commencing or existing arterio-sclerosis, as is commonly supposed. Death from aneurysm is by many considered to be usually from rupture of the sac; in his researches on the cause of death in aortic aneurysm, however, the author finds this mode of termination far from common. Death may occur slowly, from asystole with compression of the auricles; from inanition due to pressure on the oesophagus; from pulmonary tuberculosis, favoured by pressure on the pulmonary artery and vagus nerves, and from a form of arterial cachexia; suddenly, from haemorrhage and syncope; from angina pectoris; from laryngeal spasm; from compression of the air passages; from rupture of the sac into the lungs, bronchi, or trachea, pericardium, pleura, or spinal canal, or by embolism, etc. Another cause of sudden death in aortic aneurysm is a subacute anaemia. In heart disease pleural effusion occurs especially on the right side, due chiefly to the fact that pulmonary embolism is most frequent on the right side, and to the fact that a perihepatitis may extend upwards into the corresponding pleura; this effusion is latent, without inflammatory reaction, and almost always without dyspnoea, and, unless carefully watched for, may be entirely missed.

2. The Millard-Gubler Syndrome.

G. PIERACCINI (*Riv. Crit. di Clin. Med.*, Florence, 1907, p. 509) describes a case of the Millard-Gubler syndrome, which consists in a crossed paralysis, of the face on one side and of the body on the other. The patient, a previously healthy stoker of 63, who had never had syphilis, first noted involuntary irregular movements of his right leg on August 3rd; these increased till on August 7th he had to give up work. On the 11th he was admitted to the hospital with right hemichorea; the eyes, pupils, face, tongue, and palate were normal, and there was no dysphagia, dysarthria, or dyspnoea. All the muscles of the right side of the body, from the sterno-mastoid downwards, were twitching and jerking in the most varied, irregular, and inco-ordinate manner, often very violently. The patient could stand upright and never fell; he walked about much, fairly well, and found that the choreic movements worried him less when he walked. The movements ceased entirely during sleep; there was no spasm and no loss of muscular power. Sensation and the special senses were unaltered, as were the mental faculties; some redness and excoriations, the effect of the choreic movements, were seen on the right side. The movements became even more violent a few days later, producing articular noises audible at a distance. About the end of August the right sterno-clavicular articulation was found to be dislocated. Slight fever and insomnia were noted, but no evidence of visceral disease could be found. On the 25th, the power of closing the left eye was impaired, and two days later complete paralysis of the left facial nerve, of the peripheral type, was observed; the other cranial nerves were examined carefully and were found to be normal. The general condition of the patient grew worse: early in September high fever and scanty expectoration (free from tubercle bacilli) appeared, with signs of involvement of the left lung. The right-sided clonic movements grew less and finally disappeared, while the patient died on September 17th, after a long period of coma. At the autopsy confluent miliary tuberculosis of the left lung was observed, and a tuberculous nodule, the size of a pea, was found in the medulla between the left-hand lower edge of the pons above and the upper extremities of the left anterior pyramid and left olive below, pressing externally on the origin of the left facial nerve. The meninges of the rest of the brain were examined carefully, but no further tuberculous deposit could be discovered. Pieraccini points out that the chief interest of this case lies in the fact that the single and definite medullary lesion described above was able to produce a typical and protracted hemichorea. It also confirms the view of Kahler and of Pick, that chorea may be set up by irritation of the pyramidal fibres at any point in their course.

3. Syphilitic Hepatitis.

G. BRECCIA (*Riv. Crit. di Clin. Med.*, Florence, 1907, pp. 665, 692) has collected from the pathological literature nine forms of hepatic syphilis, which he briefly descusses. Some of these are associated with fever, and he adds 5 cases of his own in which he diagnosed febrile syphilitic hepatitis. He notes that the fever may be either continuous, intermittent, remittent or irregular, and is generally of short duration only. He concludes that syphilis should be thought of in patients presenting several of the following signs and symptoms: Enlarged liver, with or without splenomegaly; gastro-intestinal disturbances, anaemia without leucaemia or leucocytosis, jaundice, enlarged lymphatic glands, osteocopic pains, general and progressive debility, intermittent or remittent fever. Of course a history of syphilitic infection or congenital syphilis is very suggestive in such cases. In one of his cases that died the spleen was enlarged and very fibrous; while the liver was much enlarged, smooth, hard, and showed marked parenchymatous degeneration with but little increase in the fibrous tissue. Numerous references to the literature are given.

4. Certain Eye Symptoms in Epileptics.

BEATOS (*Il Morgagni*, Oct., 1907) discusses the Cl. Bernard-Horner symptom in epilepsy. This is characterized by

pupillary myosis with conjunctival injection, narrowing of the palpebral fissure, and apparent diminution in the size of the globe of the eye. A study of the condition showed that in many cases it was more apparent than real, and was associated with paretic signs in the other eye. The author found that in many epileptics there existed a lessened functional activity in one palpebral orbicularis, as shown by an inability to close the one eye alone; sometimes there was also a greater fullness in the palpebral fissure on the same side. Usually this was associated with evidence of diminished functional activity in the corresponding half of the body (exceptionally the paretic condition was "crossed"). In either case there was a close correspondence with what one sees in undoubted cerebral lesions (hemiplegia). Pupillary asymmetry is fairly common in epileptics; generally the pupil is larger on the side of least functional activity. The increased size of the pupil and of the palpebral fissure in one eye is sometimes associated with the Cl. Bernard-Horner triad of symptoms in the other eye. The ocular phenomena shared by the other tend to co-ordinate epilepsy with cases presenting cerebral changes.

SURGERY.

5. The Treatment of Tuberculous Coxitis.

In a clinical lecture, A. Hoffa (*Deut. med. Woch.*, Nos. 10 and 11, 1907) compares the surgical and conservative treatment of tuberculous hip-joint disease, and gives his opinion as to the methods of carrying out the latter, and the indications for the former. Speaking broadly, he says that tuberculous coxitis in childhood should at first be treated conservatively, while when the disease attacks persons over 20 years of age, resection should be performed. The hip joint of children has a marked tendency to heal up spontaneously, as can be recognized in cases of country people who have got over severe hip disease in childhood without any medical treatment. In adult life, on the other hand, the disease offers a bad prognosis, and it is generally found that the hip joint is not the only tuberculous focus in the body. In childhood the majority of the cases can be cured—that is, the disease can be arrested and the focus encapsuled, or the whole focus can be removed. In quoting the various results obtained in different clinics, he lays greatest stress on the statistics of the Tuebingen clinic, where 321 cases were treated. Of these 55.7 per cent. were cured; 76 per cent. of the cases without suppuration were cured, while only 41 per cent. of the suppurating cases did well; 40 per cent. of the patients died. The fatal cases consist of 22.5 per cent. of the non-suppurating and 52.0 per cent. of the suppurating cases. While suppuration is thus shown to be a bad prognostic sign, he does not regard the presence of an abscess as an indication for operation. As long as one is not tempted to open subcutaneous abscesses by large incisions, one can hope to cure the suppurating cases. Cold tuberculous abscesses, unlike acute abscesses, should not be incised; this always leads to the formation of a fistula, and, the door being open for septic infection, renders the prognosis much worse. Neither does he regard the presence of a simple localized focus in the bone as an indication for operation. When one watches such a focus by Roentgen rays, one frequently sees that the disease is not spreading, and after a while it commences to become encapsuled. Only when there is a distinct spreading of the focus should one perform resection. In carrying out a conservative treatment, he says that when the coxitis is treated early, when the *x* rays show that the process is limited to the synovial membrane, one may aim at obtaining a movable joint, and one will mostly be successful. When, however, the joint is partly or wholly undergoing a destructive process, and whenever there is an abscess in the joint, no attempt may be made to obtain a movable joint; one should then do all one can to get ankylosis. The ankylosis should be obtained in a position of slight abduction and extension. Shortening cannot be altogether avoided when the articular surfaces of the bones have been destroyed. The actual treatment consists in attending to the child's general health in the first place and treating him locally in the second place. There is no doubt that hygienic measures are of the utmost importance in the treatment, and light, air, good nursing, and good feeding each claim a place. Seaside, woodland, or mountain air all have their advantages. Cod-liver oil, Scott's emulsion, arsenic, and iodide of potassium all do good. When the parents of the children are syphilitic a soap inunction course can be highly recommended. Lastly, he states that he has obtained excellent results in recent times by employing Marmorek's antituberculous serum per rectum. Turning to the question of local treatment, he finds that the three cardinal points which require attention are absolute fixation of the joint, slight but distinct distraction of the articular surfaces, and, thirdly, removing all pressure in the joint as long as the inflammation is acute. The first point in the treatment—that is, rendering the joint immobile—is only possible when combined with the second condition. Muscular spasm causes the articular surfaces to rub against each other, and the least movement causes pain, which in the long run causes the patient to lose flesh and strength. Slight tension on the joint acts antispasmodically. The best method of fixing and extending the joint is by means of plaster-of-paris. This, however, must be applied correctly if it is to be of any service. To do this the surgeon requires considerable skill. It is often necessary to correct contractures (adduction and flexion) before applying the plaster bandage. Various methods have been devised for applying the primary extension, most of which are reliable. He thinks that the apparatus devised by his old assistant Zander, which he always employs, possesses all the advantages of the older apparatus. He describes in great detail, illustrating the various points by diagrams, the correct method of applying the plaster bandage. This should grasp the pelvis, thigh, and leg, and especially be moulded to the tuber ischii and crests of the ilium. A glance at the diagrams will assist the reader to understand the special technical points. When plaster-of-paris is not used, special orthopaedic apparatus can be employed. These, too, require to be exactly adapted to the patient, and must be replaced by new ones after the lapse of a certain time, as the little patient will have grown out of the first one, and a badly fitting apparatus no longer serves its purpose. He prefers Hessin's and Dollinger's apparatus, especially the former. After the patient has worn the bandage or apparatus for about three years, it will be necessary to be very careful how he begins to use the limb. As long as there is the least muscular tension on applying cautious slight abduction, the bandage or apparatus may not be removed. When the parts are quite painless, he first allows the foot to be set free of the restraint. After about three months he applies an apparatus which allows of movements of the knee. The child is allowed to get about without a stick for another three months, and then this apparatus is replaced by a protective splint for the hip-joint, made of celluloid. At this time he believes that salt baths do much good. The transitional treatment often lasts for a year or longer. Abscesses he treats by puncture and removal of the pus and by injection of iodoform glycerine. This must at times be repeated. He finds it much the best plan to leave fistulae alone. Scraping and other operative procedures generally make them worse. Marmorek's serum has given him good results in many cases. He considers that the results obtained by conservative treatment are better than those obtained by resection from the point of view of function. However, resection has its distinct indications, and when it has to be carried out all the diseased tissue must be removed. He warns the reader against violent reduction of pathological dislocations, and contractures after the healing of the hip disease, as this often leads to a flaring up of the tuberculosis in the form of miliary tuberculosis, or even of the old local trouble.

6. Treatment of Fractured Patella.

Sacchi (*Arch. di Ortoped.*, An. 24, f. 1), with the view of expediting recovery in fractured patella, advises the following procedure. An incision is made longitudinally above the upper fragment so as to expose the junction of the quadriceps tendon with the patella, and a similar longitudinal incision is made over the lower fragment exposing the junction of the patellar ligament. A strong curved needle armed with about a yard of stout carefully sterilized silk is then passed through the upper incision behind the patella and out at the lower incision and the two fragments brought into apposition by this strong silk loop. The ends of the loop are finally fastened above the upper fragment and the two incisions sewn up. The limb is then bandaged and kept on an inclined plane. At the end of eight or ten days the sutures are removed and the patient is told to get about with crutches, and after a week massage and passive movements are practised. The operation is based on the experience of tendon resections in other parts, for example, tendo Achillis. It is the too prolonged rest in the ordinary treatment, with the associated disease of the quadriceps tendon, which, in the author's opinion, accounts for many of the discomforts and inconveniences following the usual treatment of fractured patella. By

uniting the severed tendon in the way he suggests, it is able to function much earlier, and by so doing helps in the absorption of blood and other extravasations following the injury. The silk suture does not give rise to the troubles which sometimes follow metallic sutures and does not interfere with the movements of the joint, as the internal part of the suture lays in the intercondyloid space where there is plenty of room for it and the external section is safely buried under the skin.

OBSTETRICS.

7. Pregnancy and Double Uterus.

CEALIC (*Monatssch. f. Geb. u. Gyn.*, October, 1907) states that within seven years 6 cases of labour at term where the uterus was double took place in the Bucharest Lying-in Institute. In all the six, however, the cervix was single; diagnosis by palpation was easy. The muscular coat of the cornua is usually defective in parts, and thus rarely contracts thoroughly; hence lingering labour, retained placenta, and *post-partum* haemorrhages are frequent. Axler (ibid.) admits that duplicity is often overlooked in parous women, and not discovered until after labour or death. Uterus bicornis and the less complete types of duplicity are the commonest malformations. Provided that the ovum can enter a uterine cavity, gestation to term may occur in any form of duplicity. Faulty presentations of the fetus are, however, frequent. When sepsis occurs it is usually due to infection of the cornu which is not the seat of the pregnancy.

8. Cyst of Hymen and Pregnancy.

KUNTZSCH (*Zentralbl. f. Gynäk.*, No. 45, 1907) reports a case of dyspareunia from vaginismus and a tumour obstructing the vulval cleft. The patient was 31 years of age and barren, but had only been married for two years. The periods were scanty and had recently appeared at intervals of about six weeks, previously the interval was not longer than a month. Coitus was very painful and had never been complete. Yet after an operation had been performed it was found that she was actually pregnant when it was undertaken. The pelvis was narrow, the vulval cleft lay abnormally backwards; there was a fissure at the attachment of the hymen. The border of the hymen was intact and its orifice occluded by a valve-like structure. The hymen was excised, and the resisting structure proved to be a cyst of the size of a plum; its anterior wall was the hymen itself; behind and above it involved the vagina. The uterus was examined after the removal of the cyst; the sound passed 3 in. into the cavity, and there was free mobility. The period had not been seen for six weeks. On the twelfth day after the operation the patient aborted, expelling an ovum of the size of a walnut, which contained a fetus 5 millimetres in length. The introitus was no longer sensitive.

GYNAECOLOGY.

9. Thrombosis and Embolism after Gynaecological Operations.

ZURHELLE (*Zentralbl. f. Gynäk.*, No. 43, 1907) recently reported the experience of the Gynaecological Clinic at Bonn. As elsewhere, the largest percentage of post-operative thromboses followed operations on myoma (2.75 per cent. at Bonn), the heart's action, etc., being often impaired before the operation by chronic anaemia, abuse of ergot, and mischievous expectant methods of treatment. Next to hysterectomy for fibroid and myomectomy, operations on malignant tumours where cachexia or ascites were present were the most frequently followed by thrombosis. The complications might be associated with other operations, such as oöphorectomy and fixation of the misplaced uterus, but not for any special reason. The general causes of thrombosis, rarely found singly, were sepsis, cardiac disease, chill during the operation, damage to blood vessels, circulatory disturbance from the anaesthetic, and post-operative influences such as disturbance to the circulation from tight bandages, tympanitic distension, and prolonged rest on the back. Zurhelle found that women of the upper classes were much more liable than the poor to post-operative thrombosis. In the discussion on Zurhelle's report there was much difference of opinion as to how long the patient should be kept in bed. Fritsch, like Witzel, and several Americans, as well as Krönig and Zurhelle, believed that there was less chance of thrombosis and embolism if the patient were made to get up on the third or fourth day. Tuszkay and Leopold were of the opposite opinion. Fritsch pointed out the dangers of chill during aseptic preliminary measures, and during abdominal sections where very long parietal incisions were made. Weak subjects also required free injections of fluid by enema or subcutaneously. Lastly, in order to diminish the risks of thrombosis, weakly women should be subjected to careful preliminary dieting whenever their case was not urgent. Strophanthus and subcutaneous saline infusions were of service.

10. Fetus Included in a Fibroma.

AT the July meeting of the Medical and Surgical Society of Bordeaux (*Gaz. Hebd. des Sci. Méd.*, October 20th, 1907), Courtin showed a uterus jus removed by him, presenting the condition of general fibroma with the inclusion of a fetus. The operation was subtotal hysterectomy, and the tumour, cut open from before backwards, was found to contain the remains of the cervical canal abutting on a small cavity, in which was an embryo about 5 weeks old. Fibrous tissue had taken the place of the normal parenchyma of the uterus, which was nowhere to be seen on the surface of the section. The patient, who was 37 years old, had had a child at the age of 19, with no abnormality about the birth, and had menstruated regularly until about a year before the operation, when, after the menses had been eight days overdue, she noticed an enlargement of the abdomen, and immediately afterwards was attacked with severe metrorrhagia, which had continued, more or less, until her admission into Courtin's clinic.

THERAPEUTICS.

11. Treatment of Leukaemia by X Rays.

U. DE LUCA (*Il Policlin.*, April, 1907) describes fully 8 cases of leukaemia treated by *x* rays, giving records of numerous blood counts and a history of the patients for a year or more after treatment came to an end. In all cases a tube of medium hardness was used, and the ordinary dose of the rays administered at one sitting was two of Holzknecht's units. The rays were usually directed to the enlarged spleen; occasionally also to the sternum and the ends of the long bones. In 2 cases the symptoms disappeared, the spleen and blood became normal, and the patients were under observation for some time without relapse. A man of 35 had suffered for a year from increasing debility, and for six months from pains in the bones. At the beginning of treatment his spleen extended beyond the umbilicus. His red corpuscle count was 5,000,000, white corpuscles 368,000, haemoglobin 89 per cent. He had some nucleated red corpuscles. There was slight albuminuria. Treatment was carried out daily for sixty-four days, then for a month every two or three days, and, after being omitted for two months, was applied at first twice and then once a week for another eight months. Fourteen blood counts are given, showing steady improvement, so that fifteen weeks after the beginning of treatment the spleen only reached the costal margin, the albumen had disappeared, the white corpuscles were 7,000, red corpuscles 6,700,000, haemoglobin 105 per cent. The strength was restored and no sign of disease remained. This condition lasted up to the last examination, a year after the establishment of apparent health. Another patient, aged 34, began to suffer from enlargement and displacement of the spleen and from general debility, which increased gradually for two years and eight months. Treatment was then applied over the spleen, sternum, knees, elbows, wrists, and ankles. For the first month it was carried out daily, then every two days, and then more rarely until the expiration of seven and a half months. Numerous blood counts show during that time a gradual improvement, the white corpuscles falling from 169,000 to 12,000, the red rising from 4,170,000 to 7,000,000, and the haemoglobin from 82 per cent. to 120 per cent. The spleen, which had occupied all the left side of the abdomen and part of the right side, returned to its normal size and position. The patient felt well and returned to hard work. During the next year he twice returned in apparent good health and underwent a short prophylactic course of *x*-ray treatment. Other cases were not equally satisfactory. One showed no improvement of any kind, but got steadily worse and died. Another, after long treatment, recovered his strength and returned to work with his spleen diminished in size, but still large, and leucocyte count 60,000. His subsequent history is unknown. The four other patients, after great improvement, and in some cases apparent cure and return to work, relapsed once or oftener, and finally died, in spite of treat-

ment. Other more recent cases are briefly referred to. In one patient leukaemia was succeeded by fatal pernicious anaemia. The author does not yet claim any of his cases as final cures, but considers that the *x* rays are capable of effecting an improvement beyond anything seen from other methods of treatment, and may, perhaps, ultimately prove to have cured some of the patients. He believes that the rays produce in the system bodies which counteract the leukaemic process, but that these bodies themselves give rise to antibodies which in some cases neutralize the favourable results of treatment and lead to a relapse. In this connexion he refers to his own work on the action of the blood serum of animals treated by *x* rays on animals suffering from an experimental leucocytosis.

12. Treatment of Gonorrhoeal Arthritis by Vaccines.

Cole and Meakins (*Johns Hopkins Hosp. Bull.*, June-July, 1907) report in some detail 15 cases of gonorrhoeal arthritis which they studied throughout the entire course of the disease with a view to testing the value of treatment by vaccines and the control of their administration by means of the opsonic index. Of these, 11 were males, and in all the diagnosis was quite definite from the clinical course, the association of a genital infection, or the isolation of the gonococcus. The strains of gonococcus used in estimating the opsonic index were derived from two sources: a knee-joint in severe gonorrhoeal arthritis with effusion and a case of gonorrhoeal periostitis. Although the indices obtained with each of them in the same case were practically identical, it may be advisable where possible to use the organism isolated from the case under treatment. Blood agar was found to be the most satisfactory for isolation and continued cultivation, and the age of the culture should be between sixteen to twenty hours and not over twenty-four hours, since in older cultures numerous involution forms were present. The most suitable strength of the emulsion was found to be such that in normal serum an average of six to ten cocci per leucocyte is taken up. It appeared to make no distinct difference in the clinical results or in the effects upon the opsonic index whether the patient was vaccinated with a vaccine made from his or her own organism or whether a different vaccine was used. The strength of each vaccine was usually 600 millions to 1 c.cm. If the opsonic index was found to be below normal, an initial dose of 300 million gonococci was given, and subsequent vaccinations gradually increased up to 1,000 million at a dose. No ill effects resulted, but a slight local reaction, consisting of pain, tenderness, and redness at the site of injection, occurred twelve to twenty-four hours after the first dose. The change in the opsonic index varied in each case, but as a rule a sudden ascent, with gradual descent, followed the reaction. The number of vaccinations in individual cases varied from one to eight, according to the severity and chronicity, the intervals, which were controlled by the opsonic index, being generally from seven to ten days. While recovery may be complete under other forms of treatment, it was noted that in some cases progress was slow until vaccination was commenced, and vaccine treatment appeared to be of distinct value in the few cases observed. Although in this series other forms of treatment were omitted as far as possible, in order that the vaccine alone might be tested, there is no contraindication to its use in conjunction with any other suitable treatment. Considering that at present there are almost certain inaccuracies in opsonic technique, and that the evidence as to the rôle of opsonins in immunity is insufficient, it hardly seems advisable to persist in the estimation of the opsonic index for the control of vaccine administration. Apparently the danger of cumulative negative phases is not a real one, and we are justified in treating cases of gonorrhoeal arthritis by means of vaccine in doses of 500 to 1,000 million gonococci, administered every seven to ten days.

13. Immunization Against the Pneumococcus.

Nicolle (*Ann. de l'Inst. Pasteur*, August, 1907) states that the bacteriolytic power which the filtrates of cultures of *Bacillus subtilis* exhibit towards the pneumococcus enables us to approach the problem of antipneumococcic vaccination in a new way. He mixes equal parts of a *subtilis* filtrate and a twenty-four hours' culture of the pneumococcus grown in peptone water with the addition of sugar. The tube containing the mixture is sealed, shaken up, and placed at a temperature of 40° C. The cultures, which are very abundant, generally become clear in a few hours, and on the following day are almost always found to be sterile when injected into animals in doses of from 20 to 40 c.cm. Exceptionally, some bacterial elements may have escaped bacteriolysis, and in consequence the rabbits will die sooner or later. But this accident may be avoided by filtering the pneumococcic solution, or, better still, by adding at the commencement of the experiment one drop of chloroform to every 10 c.cm. of the mixture. Nicolle's "pneumococcic solution," thus obtained, easily protects rabbits of from 2 to 2½ kilograms against the subcutaneous injection of 10 c.cm. of an ascitic bouillon culture of the pneumococcus—a dose which is fatal to the controls in twenty-four hours. With very rare exceptions 20 c.cm. of the protecting liquid is found to be a sufficient dose, but if one wishes to be absolutely certain of success the dose may be pushed to as much as 40 c.cm., the vaccine being perfectly free from injurious properties. The animal's resistance begins to manifest itself after the end of the third day and progressively increases on the succeeding days, from the fourth to the tenth. The immunity begins to decline about the third month. Side by side with the preceding method Nicolle made observations on the immunizing effect of equal doses of cultures heated to 58° C. for half an hour. He found that under these conditions the refractory state did not commence until after the sixth day, and was not fully established until after the eighth. Another disadvantage was that the cultures killed by heat were found to be toxic. Inoculation with the "pneumococcic solution" is therefore preferable, both because it is absolutely harmless and because it induces immunity more rapidly.

14. Action of Thiosinamin and Fibrolysin on Cicatrices.

Leonardo (*Il Policlin.*, An. 14, f. 7, 8, and 10, 1907) says that thiosinamin is absolutely innocuous both in animals and in man, even in fairly high doses (10 to 15 cg. per injection). It is best given hypodermically, in children in a 5 per cent. solution in glycerine and water (5 cg. for the dose), and in adults in the form of fibrolysin (which contains 15 per cent. of thiosinamin). From experiments on dogs it does not appear that the drug has any direct influence on scar tissue, but by inducing leucocytosis it may modify the processes of filtration and diffusion about the scar. Possibly some chemical action may occur in the scar as the effect of thiosinamin, but no histological changes can be observed, nor has the drug any bactericidal or antiseptic power. The leucocytosis is marked (almost double what it was before injection), with a prevalence of neutrophile cells. Since the effects of thiosinamin are chiefly due to the leucocytosis induced, the use of nucleinic acid (which causes marked leucocytosis) is suggested, but the dose of this latter drug is so large and the injections so painful that practically thiosinamin serves the purpose better.

PATHOLOGY.

15. The Granuloma Trichophyticum of Majocchi.

In 1883 Majocchi described the cutaneous lesions produced by infection with trichophyton. A further case is detailed by V. Chirivino (*Giorn. Internaz. d. Sci. Med.*, Naples, 1907, p. 433). The patient, a robust carpenter of 57, had had an eruption on the extensor surface of the lower fifth of the forearm for over three years. The patch was hairless, dark red in colour, composed of flattened nodules grouped together and separated by deep and sinuous interspaces. It was diagnosed as a gyrate syphilide, but showed no improvement after a five-months' course of mercury and iodide. The patient also applied linseed poultices to it. After this the more recent spreading edge of the patch reached to the flexor surface; here it took the form of flat, slightly-reddened soft nodules, covered with smooth, non-desquamating skin. It was observed that the man's finger nails were thickened, uneven, opaque, friable, yellowish-white in colour, and striated; onychomycosis trichophytica was diagnosed, and the eruption on the forearm was recognized to be trichophytic. Scrapings from the nails showed mycelium and spores; a biopsy was performed on the eruption, and the skin here showed considerable infiltration with round cells, proliferation of the connective tissue, epithelial cells, dilated blood vessels and lymphatics, and in their neighbourhood masses of trichophyton spores but no mycelium. The author also grew a white trichophyton colouring the culture-medium yellow from the skin. The patient disappeared for a year and came back nearly free from the granulomas, but with a tense atrophic scar in their place; spores were still to be found in the tissue. Chirivino thinks it is impossible to say whether such granulomas are due to a single variety of the trichophyton or not.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

16. Functional Diseases of the Heart.

THE heart, says Huchard (*Jour. des Prat.*, July 27th, 1907), possesses a vascular and a nervous control. The vascular control is formed by the elasticity and contractility of the arteries, and when vaso-constriction occurs a state of increased tension is produced, accompanied sometimes by palpitations. The nervous control is the pneumogastric nerve; when this is injured or compressed there results tachycardia. A young man was seen by the author, who had tachycardia without apparent cause with increased tension. The cause was eventually found to be tuberculous bronchial glands. In 1780 Lalouette mentioned a tachycardia due to disease of the mediastinal glands. Tachycardia sometimes brings on a nervous asystole and sudden death. In alcoholic subjects one sees three forms of tachycardia—transient, paroxysmal, or continuous—which may be mistaken for heart disease. The author thinks that many cases of tachycardia occurring during the course of an acute infective disease are wrongly attributed to a myocarditis. Tachycardia is often seen in typhoid fever or influenza, or perhaps a slight degree of arrhythmia, some intermittency, or a faint first sound. These conditions are most often due to an alteration in the heart's innervation, as is frequently proved by pathological examinations. In 1890 and 1892 the author demonstrated that the influenzal poison has its action on the heart by means of the bulb and especially the pneumogastric nerve. Towards the end of an atrophic cirrhosis Murchison has observed and called attention to a "weakened circulation," tachycardia, "flutterings," and a very much increased blood pressure. These effects were all considered due to a hepato-toxaemia. But Boerhaave ligatured the portal vein in an animal, and found a considerable lowering of the blood pressure result, with tachycardia and arrhythmia. At the same time the animal showed signs of profound anaemia due to a blocking of a large quantity of blood in the portal system. And this is what takes place in pylephlebitis, in atrophic cirrhosis, and in any disease which causes compression of the portal vein. Intermittent heart beat is rarely due to organic heart disease. Two important symptoms are often caused by cardiac intermittency: a mental agony at the moment of the cessation of the beats, then a palpitation due to one or more forcible beats following immediately on the intermittency. Syncope and loss of consciousness, too—except only in Stokes-Adams disease—are never symptomatic of a real organic heart disease. Precordial pains are of various kinds, and are caused by distension of the heart, by a condition of cardioptosis due to rapid and severe wasting, to cardiac neuralgia or neuritis, to true angina pectoris, or angina of coronary origin. The author believes that true angina—that which almost constantly ends in death—is due to alterations in the coronary arteries. The author has established four clinical rules by which false angina can be with certainty differentiated from true or coronary angina. The first rule is that every angina caused by exertion is a true coronary angina. The second rule says, when the patient has attacks of angina brought on by exertion, and also spontaneous attacks at night, the first rule holds good, the angina is true or coronary. Heberden has observed that the nocturnal angina is remarkable for its intensity and its long duration. According to the third rule, every angina pectoris which is produced spontaneously without any causative exertion is a false angina: and according to the fourth rule, thoracic pains caused by pressure over the intercostal spaces are not anginal. Neurasthenia is characterized by the existence of painful spots, called by Blacq topalgia. When these spots are located in the cardiac region they are often, but wrongly, considered to be anginal. They can be cured by localized faradization, and give rise to the so-called cures of angina pectoris by electricity. There is a kind of pulsatile neurasthenia, characterized by painful pulsations felt in the head and all over the body which prevent the subject from sleeping and cause great pain. It is due entirely to an affection of the great sympathetic, and though frequently very hard to cure, sometimes disappears spontaneously. The extracardiac souffles are nothing but respiratory sounds rhythmicated by the heart. They have clinical characteristics which permit of their being easily recognized. The question of functional cardiopathies is of interest, not only scientifically, but also from the military-medical point of view, and in connexion with life assurance. The following history shows the importance of the subject. A young man consulted the author on account of attacks of pain in the cardiac region, which had lasted several months. His disease had previously been diagnosed as coronary angina pectoris. The author told him he was not suffering from true angina, but the patient went home and shot himself, thinking he had true angina. In the treatment of functional cardiopathies hygiene is very important, as also is diet. Digitalis should not be given, or only very rarely, while few cardiac medicines are of benefit, and the iodides have been much abused.

17. The Ophthalmo-reaction to Tuberculin.

L. MEILLE (*Rassegna di Terapia*, Turin, 1907, p. 385) reports the results he has obtained with the new method of diagnosing infection with the *B. tuberculosis* introduced by Calmette. A drop of a sterile watery solution containing 1 per cent. of tuberculin (obtained by precipitation with 95 per cent. alcohol) is instilled into one of the patient's eyes. If the patient is suffering from tuberculosis, in three to five hours the palpebral conjunctiva becomes much congested and oedematous; the lacrymal caruncle swells, is injected, and becomes covered with a light fibrinous exudate. Six hours after the instillation the fibrinous secretion increases, collecting at the inner canthus and in the conjunctival sac in the form of filaments. The reaction is at its maximum six to ten hours after the instillation; a little smarting may be felt, but no pain. The signs of congestion pass away in eighteen to twenty-four hours. In healthy persons, free from tuberculosis, the most that is seen after the instillation is a slight redness, passing away after one and a half to three hours, without any fibrinous secretion or lacrymation. Meille has tested 18 patients, 11 of them known to be suffering from tuberculosis; 9 of these gave a marked ophthalmo-reaction; while the other 2 (who were being treated with large doses—3 to 5 mg.—of tuberculin given subcutaneously) gave no reaction. The other 7 cases, all free from any tuberculous infection as far as could be seen, gave no ophthalmo-reaction. Meille recommends this method of diagnosis strongly as being simple, trustworthy, and harmless.

18. Chronic Intestinal Autointoxication.

FORCHHEIMER (*Amer. Journ. of Med. Sci.*, July, 1907) examined by ordinary clinical methods 77 cases which presented symptoms of intestinal autointoxication. Of these, 66 showed Rigg's disease of the mouth, and 54 gave evidence of stomach symptoms. Constipation was present in 44 of the cases, and in all except 4 of the whole number some portion of the colon was found on examination by percussion and palpation to be filled with faecal matter, the most frequent site being the sigmoid flexure and descending colon. In cases where there was retention of an old faecal mass, autointoxication did not result directly from its presence, but from the resulting condition of the bowel. As a rule, when such faecal masses have been removed no thickening of the intestines can be discovered and their accumulation may be attributed to a condition of atony, but the presence of thickening is due to an organic process causing changes in the bowel wall. Examination of the urine showed an increase of indican in 68 cases, and its presence can reasonably be looked upon as an index to the amount of putrefaction taking place in the colon. Of the 44 constipated cases 39 presented an increase in indican, and in all cases where there were alternate diarrhoea and constipation the indican was increased both during the period of diarrhoea and of constipation. Polyuria, either persisting or alternating with periods of oliguria, was frequently complained of, and this may be attributed to nervous processes. In 61 of the cases nervous symptoms, including migraines, headaches, neuralgias, and vertigo, were present, and there appeared to be a connexion between the condition and cardio-vascular neuroses. Locomotor symptoms, gouty joints, and muscular symptoms were common, and 22 patients had skin lesions. From a chemical point of view chronic intestinal auto-intoxication is due mainly to the intestinal changes in albumen and nuclein, the result of the activity of enzymes or bacteria. As an outcome of pancreatic digestion the enzymes produce albumoses from

albumen, and xanthin bases and uric acid from nuclein, while the bacteria act upon the albumen in the form of pancreatic putridity and the bacterial processes which take place in the colon, resulting in the formation of phenol and indol. Since the processes due to enzymes are of short duration these are completed in the small intestine, but the putrefactive changes due to bacterial action take place in the lower part of the ileum and colon, where large quantities of bacteria are found, and where the comparative lack of motion affords plenty of time for their action upon albuminous substances. The amount of toxic bodies found depends upon the nature of the food, the time it remains in the colon, and the character of the intestinal processes; but, while the character of the food limits the quantity and quality of changes, more or less putridity will always be found as the result of normal metabolism.

SURGERY.

19. Appendicectomy.

Le Bec (*Sem. Méd.*, May 8th, 1907) has devised a method of appendicectomy which, he states, prevents the development of a ventral hernia at the seat of the abdominal incision. This operation is only for those cases in which the abdominal wound can be closed without drainage—namely, for those cases in which pus formation is absent, and in which the signs of acute inflammation have entirely subsided. His method is as follows: The skin incision is made at the external border of the right rectus muscle and parallel to it. The incision begins 1 cm. below a line joining the anterior superior iliac spines, and extends upwards for about 5 cm., or further if necessary. The subcutaneous tissue and the aponeurosis of the external oblique muscle are incised in the same way. On retracting, the sheath of the right rectus is seen; this is incised along the border of the muscle at the place where the aponeurosis of the transversalis is inserted. Cut through the posterior layer of the rectus sheath and the transversalis fascia and make a small opening in the peritoneum, which is then exposed to view; seize the edges of the cut peritoneum with pressure forceps and prolong the incision in it upwards and downwards. Find the appendix, separate any adhesions, and bring the appendix into the wound. Tie the meso-appendix with one or more ligatures. Incise the peritoneal covering and a small layer of the muscular coat of the appendix about 2 cm. from its base, separate these parts from above downwards towards the cæcum so as to form a cuff, and seize its borders with three pressure forceps. Tie the appendix as low down as possible with catgut, divide the appendix with the thermo-cautery, and cauterize its central cut end. Turn back over the divided stump the collar of peritoneum and tie it circularly with catgut. Close the peritoneum with a continuous catgut suture. Place two pressure forceps on the edge of the transversalis muscle, and pare with scissors the aponeurosis of the internal oblique so as to expose its muscle fibres. Now take a long piece of thick catgut; pass it under the transversalis parallel to the axis of the wound, in such a way that the middle of the ligature shall be under the muscle about 2 cm. from its free border and its ends come through the muscle, one at each end of the wound. Pass the ends of the ligature under the rectus and draw them through this muscle and its aponeurosis at each end of the wound; draw the two ends of the ligature together and tie firmly. By this method the transversalis is drawn strongly inwards and placed beneath the rectus muscle, to which it forms firm adhesions and a very strong cicatrix results. The aponeuroses above this muscular cushion are united by catgut and a deep suture, traversing the muscular cushion and skin, is passed about the middle of the wound and the edges of the skin drawn together by means of Michel's hooks.

20. Ligature of the Subclavian Artery.

Reidel (*Zentralbl. f. Chir.*, No. 32, 1907), in a short paper on supraclavicular ligature of the subclavian by means of an incision in the direction of the large nerves and of the artery, expresses the opinion that some of the "seat of election" methods of exposing large arteries, such as are taught in classes of operative surgery, and still favoured by examiners and candidates, do not meet the conditions of modern surgical practice. For instance, the usual method of exposing the external iliac artery by division of the internal oblique and transversalis muscles is likely to be followed by hernia, while, as the author has found in actual practice, this vessel may be readily reached and tied by one of the simpler and less extensive incisions made in appendicectomy. Ligature of the third part of the subclavian by the transverse incision above the clavicle necessitates introduction of the surgeon's finger into the wound for the purpose of feeling the scalene tubercle, and of distinguishing the flat and pulsating vessel from the rounded nerve, and thus tends to favour the risk of wound infection. In this operation the author would make an incision from the transverse process of the fifth cervical vertebra to the middle of the clavicle. After division of the skin and platysma it will be found necessary to ligature and divide numerous veins that are exposed to view, and also the transversalis colli artery. Any enlarged lymph glands found in the wound should be removed. The three cords of the brachial plexus having been followed from above downwards in the interspace between the anterior and middle scaleni, the artery will be reached, which, though deeply situated, may in a good light be readily cleared of sheath and ligatured. This method, the author states, has been found by his students of operative surgery easier and less prolonged than that of the transverse incision. In the only instance of ligature of the subclavian artery in his own practice he met with considerable difficulty in exposing the artery by the usual method, which, he believes, would have been prevented by making the excision proposed in this paper.

21. Examination of the Eye after an Ocular Traumatism.

De Lantsheere, Oculist to the Belgian State Railways (*Recueil d'Ophthal.*, September, 1907), points out the necessity of thoroughly examining the eye after an accident. This is especially important in the case of an employee who may claim compensation under the various Compensation Acts. The case is generally not seen at once by a specialist, and the general practitioner should, so far as he can, make a systematic examination at the time of the accident and make accurate notes. If this be not done, lesions already present at the time of the accident may be referred to the accident. For example, a corneal nebula which was visible immediately after the accident may later on be regarded as the result of an abrasion. The examination of the eye should determine the lesions due to the accident and abnormalities present before the accident. The eye must be examined with a lens by oblique illumination, fluorescein must be instilled, and the fundus should, if possible, be examined with the ophthalmoscope. The visual acuity must be ascertained with the test types. The lids must be examined to exclude chronic inflammation and deformities. Dacryocystitis and atresia of the lacrymal duct must be excluded or detected. The conjunctiva may show trachoma, chronic inflammation, or pterygium. The cornea may be affected with pannus, interstitial keratitis, nebulae, leucomata, adherent or otherwise. The anterior chamber should be examined to determine its depth and the presence or absence of hyphaema or hypopyon. The iris may be inflamed, there may be synechiae, the pupil may be occluded. The sclerotic may show cicatrices or there may be scleritis or episcleritis. The size and movements of the pupils must be noted. The vitreous may be hazy or may contain floating opacities. Any opacities in the lens and their position must be recorded. The choroid must be examined for choroiditis and for rupture. The retina may show inflammation, detachment, haemorrhages, or ruptures. The optic nerve may be atrophic or there may be optic neuritis. The globe must be examined for wounds and for prolapse of the iris or vitreous. The visual field must be taken. Notes must be made of the ocular movements, and of the presence or absence of squints. The refraction should be worked out. The presence of pericorneal injection, photophobia, blepharospasm and pain should be noted. De Lantsheere quotes Fuchs, who says: "It is absolutely impossible to give an opinion upon a case of ocular traumatism unless the facts of the case have been carefully determined."

OBSTETRICS.

22. Delivery of the Placenta.

Rudaux (*La Clin.*, December 13th, 1907) discusses the final stage of parturition and its treatment. After the expulsion of the fetus the uterus is found to be firmly contracted and its level is practically that of the umbilicus; a few minutes later the fundus, still remaining well contracted, rises to a height of 3 or 4 centimetres above this level, indicating that the placenta has passed from the upper to the lower segment, and that the latter has expanded to

accommodate it. During the period of waiting the writer recommends that a hot vaginal douche be given, that any unnecessary length of cord be removed, and a warm pad applied to the vulva; the condition of the pulse should also be noted at intervals. Twenty to thirty minutes later the fundus will be below the level of the umbilicus, and the placenta will therefore have passed from the lower uterine segment into the vagina. The right hand grasps the cord, while the left is placed on the abdomen, and with a combined movement of expression and traction delivery is effected. At the end the movements must be greatly modified to avoid tearing the membranes or placental tissue, which may thus be left behind. The expulsion of the placenta is often followed by a rapid and vigorous contraction of the uterus, which is liable to retain part of the membranes; they should therefore be gently twisted, and withdrawn with much care. It is advisable to wash the patient with soap and water previous to giving a hot antiseptic douche and applying fresh pads and linen; during the first hour the condition of the pulse and the size of the uterus should be noted at intervals. A very careful examination of the placenta and membranes is then made, and the weight of the placenta is noted, as it bears a distinct relation to the weight of the child. The risk of febrile disturbances or haemorrhage is so great when there is retention of a cotyledon or of a portion of the membranes that there should be no delay in removing such material from the uterine cavity either with the finger or by curetting.

GYNAECOLOGY.

23. Caesarean Section for Hydatids of Pelvis.

KÜSTNER (*Zentralbl. f. Gynäk.*, No. 44, 1907) operated on a patient aged 36 who had passed through five normal labours, the last being four years since. A few months after that labour von Mikulicz operated for a large hydatid of the liver. The patient when she consulted Küstner was in the eighth month of pregnancy. There had been severe pains in the right iliac region, increasing steadily. The child was living, and its head could be defined above the inlet. A fixed, very tuberous mass of the size of a fist occupied the pelvic cavity. In the thirty-fifth week Caesarean section was performed, the cicatrix of the first operation wound lay to the right of the epigastrium and gave no trouble. The placenta lay on the anterior wall. The child was 17½ in. long, and weighed 5½ lb.; it died shortly after birth from intracranial haemorrhage. The uterus was amputated to allow of safer and more thorough removal of the tumour, which was a multilocular hydatid cyst. Its precise nature was decided by the microscope during the operation. It was not evident whether it was intraperitoneal or subserous, but it occupied Douglas's space, and burrowed so deeply downwards that the vagina was opened during its extraction. A big deep cavity lined with broken-down tissue was left after the successful removal of the cyst, and sutures could be applied to close it after the uterus had been amputated. No echinococci were found in the peritoneal cavity or abdominal organs. The patient recovered. Küstner finds that about fifty cases of labour have been reported. Hydatid disease is far rarer where he performed this operation—in Breslau—than it was not very long ago.

24. Hydrops Tubae Profluens: Papilloma of Both Tubes.

DANEL (*Journ. des Sciences Méd. de Lille*, August 10th, 1907) observed this condition in a unipara, aged 49, who had not been pregnant for twenty-nine years, and had never aborted. The periods until her illness were quite regular, and there was no evidence of any kind of pelvic disease until one year before she came under observation. Then pains were felt in the left side of the abdomen, persistent, but varying in severity. They were worst during the periods, which became irregular, whilst the show lasted for five or six days, without any clots being passed. For six months before she sought relief this patient was troubled with very free watery discharge. Sometimes over a litre, or a pint and three-quarters, came away within twenty-four hours. A firm tumour was detected in the hypogastrium, reaching half way to the umbilicus. It was continuous with the cervix, and was diagnosed as a soft fibroid or cancer of the body of the uterus. Abdominal section was performed, and the tumour was found to consist of both Fallopian tubes, making up a mass of the size of an orange. They were removed, and part of the left ovary could not be taken away, as it adhered strongly to the pelvic wall. The dilated tubes were filled with papillomatous masses, which did not show any signs of malignancy. Duret could not feel certain whether the growth was from the first a neoplasm or originally a product of inflammation. Eleven months after the operation the abdomen became distended with ascitic fluid, and malignant masses were found in the pelvic and abdominal cavity and in the parietes.

THERAPEUTICS.

25. Neuendorf Treatment of Rheumatoid Arthritis.

AXEL WINCKLER (*Zeit. für phys. und diat. Therap.*, March, 1907) deals with the history, the causes, the symptoms, and treatment of arthritis deformans. This disease, which has been in existence amongst men from the earliest times, has only comparatively recently been differentiated from gout. It has received many names, amongst others, those of primary asthenic gout, polyarthritis deformans, rheumatoid arthritis, arthritis sicca, arthritis nodosa, arthritis deformans, rheumatic gout, rheumatismus nodosus, progressive joint rheumatism, partial chronic rheumatism, and polypanarthritis. The name of deforming chronic joint rheumatism is that of which the author approves, on the ground that this name dissociates the disease from gout and that it shows it as an end stage of ordinary chronic rheumatism. The disease, like other forms of chronic rheumatism, tends to attack those who live in damp cold houses, especially houses which are old, without cellars, and not protected from the ground damp. After entering into the theories of causation, the symptoms and methods of diagnosis, the author goes on to discuss the treatment. He has found the ordinary antirheumatic remedies, as well as potassium iodide and arsenic, useless: cod-liver oil administered for months at a time he has found to be of service. Treatment by electricity or Bier's method is no more satisfactory than that by drugs, but there remains the treatment by mud or peat baths, which is, in the author's opinion, the only treatment which is of visible and substantial service. The mud baths as they are given at Neuendorf cannot give absolute recovery from the disease, but they can give rise to considerable improvement, and in some cases the progress of the illness is absolutely stayed; equally favourable reports are given by Weiss of Pistyan and by Lavielle of Dax. The method of action of these baths has not as yet been fully investigated, but it may be supposed that the moist heat tends to diminish pain and inflammation, while the pressure exercised upon the body on all sides helps to the resorption of inflammatory swellings and exudates. Lavielle, who gives the baths at a very high temperature, explains the action as that of a revulsivum. Winckler, although in most cases he is an advocate of lukewarm baths rather than of hot ones, in cases of rheumatoid arthritis orders mud baths at temperatures of from 39° to 42° C. The bath should be of dense consistency or of medium density, except for very old and weakly patients with arteriosclerosis; for these the bath should be of thin consistency, or sulphur baths may be substituted. The cold douche which is ordered at Dax, where baths of a higher temperature are administered, can be dispensed with at Neuendorf, but the patient is wrapped up and encouraged to sweat after the bath, and finally a cold shower bath may be given in order to bring back the condition of the vascular system quickly to the normal. A bath lasts for from fifteen to twenty or occasionally to twenty-five minutes, and the after-sweating is limited to fifteen minutes. The baths are given on each of two or three consecutive days, according to the strength of the patient, and then follows a rest day. Twenty baths make up a course, and the author advises that the patient should make a second visit to Neuendorf rather than undergo more than twenty baths in one season. Exercise of the joints is a material part of the cure, and the best results are obtained with patients who are willing to carry out the movements in spite of pain. An increase in the severity of the pains during the course of baths is rather a sign of the effectiveness of the treatment than otherwise. These reaction pains sometimes disappear after a couple of rest days, but in exceptional cases they continue throughout the whole course. The baths act upon the organism as a whole. The first favourable sign may be the appearance of sweating, and the skin becomes moderately damp; the appetite and digestion improve, the joint movements become smoother and more easy, the sleep improves. The following are the results as shown by statistics: For 17 per cent. of the cases no improvement could be produced, either because the disease was in its very latest stage or because the time of treatment was cut short. In 23 per cent. there was moderate improvement, the pains were less severe, the joints were somewhat freer, and the general condition improved.

In 39 per cent. of the cases there was great improvement, and at the end of the treatment there was good movement of the joints, the pains had disappeared, and the general condition was very good. In 21 per cent. there was a striking improvement, and the bony deformities were the only sign of the disease left after the end of the cure. Results such as these may well be looked on as a triumph of balneotherapy.

26. Sodium Anilin-arsenate in Syphilis.

Encouraged by the success which has followed the hypodermic injection of anilin-arsenate of soda in several patients suffering from syphilitic cutaneous eruptions, Hallopeau (*Gaz. Méd. de Paris*, June 15th, 1907) has submitted to this treatment patients suffering from syphilitic manifestations, and who have come under his direct observation either as hospital or as private patients. He uses a 10 per cent. solution of anilin-arsenate of soda, and he injects into the gluteal region; the amount injected varies from 0.75 to 0.5 cg. These injections are carried out three times a week, and the total number of injections for each patient has varied from five to nine. As a general rule he has endeavoured to obtain patients who are not undergoing mercurial treatment, and his total number of cases treated in this way is 72. As a result of his observations the author finds that the action of this drug injected into the patient is most striking in cases of syphilitic roseola, papular syphilide, and tertiary ulcerations; under this method of treatment exostoses have disappeared, as have also the pains. In one patient suffering from a malignant type of syphilis rapid cure of the ulcerating lesions was brought about by this method of treatment after mercurial medication had failed. Secondary syphilides which have ulcerated have sometimes been rebellious to this method of treatment, but the majority of these ultimately react well. Vegetating condylomata prove resistant to this form of medication, and lingual leucoplakia is entirely uninfluenced by it. So far, over 120 cases of syphilis have been reported in which injections of sodium anilin-arsenate have been given, and the results have proved beyond all doubt the powerful action of this drug on all the direct manifestations of the *Spirochaeta pallida*. Signs of intolerance of the drug sometimes show themselves, and if treatment be continued in spite of these, the case may terminate fatally. Most often, however, signs of intolerance are benign and of short duration, but occasionally they are of great severity; abdominal pain of great intensity may appear, nausea, vomiting, diarrhoea, coldness of the extremities, and strangury may occur; sometimes cutaneous eruptions, erythematous or papular, or petechial in form, may appear. Anilin-arsenate of soda undergoes spontaneous changes. After about a fortnight it tends to undergo dissociation, and may give rise to very poisonous by-products; it is therefore very necessary that the freshly-prepared drug only should be used. Similar changes occur in its composition if the drug be heated to 100° C. for a time. Further, the author, in his treatment of cases, obtained the drug from two different sources, and found it to differ markedly as regards its toxicity according to the source from which it was obtained, and similar differences have been shown to exist in its therapeutic properties, these varying according to the source from which the drug was obtained. In giving these injections one ought also to take into consideration the height and stoutness of the patient. As a rule, the bigger the patient the less likely is he to show signs of intolerance. Children and old people bear the drug badly. To the albuminuric and to patients suffering from heart affections this form of treatment should be administered with great care. The series of injections should not be prolonged. The drug accumulates in the system, and signs of intolerance may suddenly appear after a series of injections. The author treats the various cutaneous manifestations of syphilis (such as the chancre) locally, as well as giving injections, and for this purpose covers them with a pad of wool soaked into a solution of anilin-arsenate of soda, 1 per cent., or applies an ointment of the same strength, but he is unable to say yet whether such a local treatment has had much effect. In cases of gummata or of localized tertiary ulceration he advises an injection of the drug in its immediate neighbourhood. The author considers that one series of injections of anilin-arsenate of soda is quite insufficient for the treatment of a case of syphilis, and Salmon gives a second series of injections a fortnight after the first. How many of the injections should be carried out it is at present impossible to decide. Further, the author thinks that medication with mercury and iodide of potassium should be carried out, as well as the injection of atoxyl (anilin-arsenate of soda).

PATHOLOGY.

27. Diplococcaemia.

V. Fragàle (*Il Policlin.*, May, 1907) briefly discusses the different opinions that have been held as to the presence of diplococci in the blood of patients suffering from pneumonia, and describes the results obtained by himself from the very careful examination of 50 cases. He bled his patients by means of leeches, cut off the heads of the leeches, and squeezed the blood from their bodies, centrifuged the blood for half an hour, and stained the sediment with methyl-blue or gentian-violet, after removing the excess of haemoglobin with a weak solution of acetic acid. To test the virulence of the diplococci blood was taken from the median vein, and at once injected into a rabbit, or blood serum was injected after a brief centrifugalization. When the rabbit showed signs of infection the diplococcus was sought for in its blood, and broth cultures were made. Another method employed was to aspirate a few drops of blood from a vein, and make broth cultures. These were injected into rabbits from which the diplococci were afterwards isolated, and their virulence estimated by the length of time elapsing between injection and the death or severe illness of the rabbit. The urine was examined at the same time. Cultures from the urine and injections of urine gave unsatisfactory results, and the method ultimately adopted was to collect the urine as aseptically as possible, centrifugalize it, and stain the sediment. Whenever diplococci were found in the urine, there was albuminuria, but the albuminuria was in no way proportional either to the number or to the virulence of the diplococci. Nor was there any connexion between the number and virulence of the germs and the extent of the pulmonary inflammation. Cases involving a great volume of lung and ending in death were associated sometimes with the presence of only few and apparently not very virulent organisms in the blood. There were also cases with very slight physical signs of disease in the lung, accompanied by very numerous and very virulent diplococci in the blood, the cases ending in cure. But usually with virulent organisms, even in small number, in the blood the prognosis is bad, and with numerous virulent organisms very bad. The diplococci were found in the blood in 41 out of the 50 cases examined. Just before death there was a constant increase in the number and virulence of the circulating organisms. Diplococci were found in the urine in 27 of the 50 cases, usually in small numbers and in the later days of the disease. These 27 cases include 5 of the 9 in which diplococci were never found in the blood. Diplococci were never found in the urine in fatal cases, nor in those cases in which they were found in the blood many days after the crisis. For periods of from nine to forty-five days after the cessation of pyrexia germs of low virulence and often degenerate in form could be recovered from the blood. In some cases, after cultivation on broth, these germs recovered their virulence and their lanceolate and capsulated appearance. In the great majority of all cases diplococci were found in the blood for a few days at least after the fever ceased. In three cases a second attack of pyrexia began, whilst numerous virulent diplococci were still present in the blood. Two of these cases were fatal, and at the autopsy no fresh pulmonary lesions were discovered. Fragàle states that in old people and in alcoholic, malarial, and cachectic subjects, and in those already suffering from other diseases the diplococci multiply rapidly and enormously and develop very great virulence. Most of the cases are reported shortly, but a fuller account is given of some. One patient had virulent diplococci in his blood eighteen hours after the initial rigor. Diplococci were still present twenty-five days after the crisis, but were less virulent, and in form resembling the pseudo-gonococcus. In this case no diplococci were at any time found in the urine. Another patient complained of high fever, lasting for two days, and preceded by intense shivering and a severe pain at the right base of the thorax. There was dyspnoea with cyanosis. The expectoration was stained with blood and contained a few very virulent diplococci. Physical examination showed no signs of pneumonia. On the third day of the disease a few virulent diplococci were found in the blood. On the fifth day diplococci were found in the urine, and from that time onwards the number of germs in the urine gradually increased, while the number in the blood diminished. The temperature became normal on the seventh day, but diplococci were present in the urine up to the twelfth day, and in very small numbers in the blood up to the twenty-fifth day.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

28. Pathological Diagnosis of Diseases of Liver and Spleen during Life.

SCHUPFER (*Sem. Méd.*, May 15th, 1907) has designed a needle which he uses for puncturing liver or spleen, and through which can be withdrawn sufficient of the tissue punctured to enable one to make an exact histo-pathological investigation of diseases affecting these organs. The needle he employs is about 8 cm. long, and possesses an internal diameter of about 1½ mm.; near the point of the needle the internal diameter is slightly greater. In puncturing the liver the needle should be thrust deeply into the organ at the upper border of absolute liver dullness, the liver at the same time being immobilized by pressure with the hands. To the needle is attached a syringe of a capacity of 10 c.cm. When a small portion of the organ has been aspirated the needle is withdrawn and its end plunged into a solution of normal saline, which is drawn also into the syringe; this prevents coagulation of the blood in the fragment of tissue withdrawn. The small fragment of tissue withdrawn into the syringe is then laid on a glass slab and placed in the fixing solution, the fragment itself being kept in a straight line; by this means lengthy sections of the tissue can be obtained. The author finds that in cases of ascites it is difficult to obtain from the liver by puncture sufficiently long fragments of liver tissue, but that if the ascitic fluid be first withdrawn the difficulty disappears. He has never found that puncture of the liver has given rise to an escape of blood into the peritoneum; indeed, in those cases in which puncture was carried out a few days before death, not even the seat of puncture of the organ could be detected. In puncturing the spleen the same methods should be adopted. This organ, however, should never be punctured when in a state of acute congestive swelling, nor the liver in acute yellow atrophy, where puncture might be followed by haemorrhage. Further, in haemophilics, in hydatid cyst, or abscess of the liver or spleen, puncture should not be practised. By this method of puncture the author has on several occasions detected secondary growths in the liver at a period when they were not to be detected by other means of investigation. Puncture can help in distinguishing thrombosis of the portal vein from cirrhosis, and in differentiating hypertrophic cirrhosis and secondary biliary cirrhosis. Syphilis of the liver can by this method be distinguished from new growths. The author has found this method of puncture of value in detecting the state of the liver in chronic alcoholics, in patients suffering from Banti's disease, and in abdominal growths where the presence or absence of secondary liver deposits is unknown.

29. Aphasia, Sensory and Motor.

CHAUFFARD gives a description of cases of both sensory and motor aphasia (*Journ. des Prat.*, February 23rd, 1907). What is indispensable to the production of an aphasia is a change in the region of Wernicke—that is, the zone of the angular gyrus and the first temporal convolution. Further, in motor aphasia there is often seen a lesion of the lenticular zone, usually of its external part. This latter can be alone affected (pure anarthria of Marie). In such a case the prognosis is good, and the patient can be again taught to speak. The patient suffering from sensory aphasia is able to see clearly but cannot read—word blindness; he can hear but cannot understand spoken words—word deafness. He is 68 years old; has no signs of hemiplegia. At most there is a slight tremor of the upper limbs, especially the right. Sensibility is slightly diminished on the right side; his intelligence is badly affected. He hears his name but does not understand the meaning of the words spoken. He replies illogically, incompletely, frequently uses one word for another—paraphasia, or utters a series of incoherent syllables. He cannot tell the name of an object, but when he does speak—and these cases are often verbose—he articulates well, and utters, or rather allows to flow out, words utterly meaningless but well formed. There is no attempt to express his thoughts. That is the difference between the subjects of sensory and motor aphasia. The subject of sensory aphasia does not think, and for this reason, that thought is impossible without language inspired from the mind. One thinks one's words, said Bonald, before speaking one's thoughts. The subjects of sensory aphasia do not think their words, consequently they do not find the need of expressing their thought. Their words do not answer to the outward expression of any mental conception. The patient in question had also lost his power of recalling musical sounds; he could not recognize popular airs. In the subjects of motor aphasia the memory of musical sounds is preserved, and these subjects can frequently sing without hesitation though they cannot talk. The patient's writing is halting and badly formed; he can scarcely write his name; he cannot do the simplest calculation—the addition, for instance, of a few simple figures. He cannot read, but he has retained the image of cards, and this is so with most subjects of aphasia. The author once set a subject of sensory and a subject of motor aphasia to play a game of écarté. The motor aphasic became impatient over the game, the sensory aphasic remained perfectly indifferent. Sensory aphasics may be mistaken for the subjects of mental confusion. The difficulty can be cleared up by asking the patient to read or to name a certain object. The prognosis is bad. An autopsy on the patient revealed softening of the angular gyrus, and also of the first and part of the second temporal convolution, with a farther area of softening at the anterior end of the internal capsule. The subject of motor aphasia recently under care of the author was a man of 54, fat and high coloured. In March, 1906, he had a right-sided hemiplegia with loss of speech. His condition remained unchanged for ten months; he can neither write nor read, but knows the hours of the clock, can play cards, understands what is said to him, and all that is not either written or printed matter. He takes an interest in what is going on around him, but always seems angry with himself when he cannot express his thoughts. He has no sensory troubles but is subject to epileptiform fits, which make the prognosis bad, for during them his arterial tension is increased, and he may at any time have a further haemorrhage.

30. Malta Fever.

GALBI (*Rif. Med.*, September 28th, 1907) says that after the *Micrococcus melitensis* has penetrated within the organism it slowly loses its virulence but this may be increased by special and temporary conditions of the body, whether generated from within or from without. The agglutinins induced by its presence have only a slightly defensive power as far as man is concerned. The micrococcus acts by threatening the life of the red corpuscle within the haemopoietic organs, exciting the intrasplenic and intrahepatic phagocytic power. The failure of polinucleosis points to an inhibition of the phagocyte reaction of the leucocytes. All the morbid influence of the germ is directed to the neuro-muscular system—hence the headache, the myasthenia, the relatively (to the temperature) rapid pulse, the intestinal paresis, the muscular atrophy, the neuralgia, and neuritis which characterize the malady.

SURGERY.

31. Indirect Excitation of Typical Tenderness at McBurney's Point.

ROYSING (*Zentralbl. für Chir.*, No. 43) states that in cases of acute inflammation of the caecum and appendix firm pressure on the left inguinal region over the sigmoid flexure will invariably excite pain on the right side over McBurney's point. By this procedure the tension of the middle portion of the colon is increased, and the gaseous contents are driven into the caecum and the appendix. As the passage of the accumulated gas from the large into the small intestine is prevented or much impeded by the ileo-caecal valve, the walls of the caecum and appendix become over-distended and, if inflamed, respond to the stimulus by pain. The author tried this diagnostic method for the first time in 1904, when on the same day there came under his notice two cases which presented precisely similar symptoms, and in which on account of the very large and tense swelling in the caecal region in both patients, he refrained from applying direct pressure at McBurney's point. Pressure over the sigmoid flexure was at once

followed by pain over the appendix in the first case, but failed to do so in the second. In the former laparotomy revealed appendicular peritonitis, while in the latter the swelling was found to be due to a large retroperitoneal abscess, the colon and appendix being quite free from disease. The author has since used this test in over 100 cases, and reports that it has fully confirmed his anticipations of its being a delicate, safe, and valuable aid to diagnosis. It promises to prove useful in two ways. As a means of differential diagnosis it will serve to distinguish acute and chronic appendicitis from other affections—renal lesions, ureteral calculus, ureteritis, salpingitis, for instance, which may in common with appendicular inflammation give rise to a painful swelling on the right side of the abdomen. The author holds that it is only in cases of disease of the caecum and appendix that pressure over the left iliac fossa can cause pain on the opposite side. In the second place direct palpation, which is sometimes dangerous and intolerable to the patient and often fails on account of muscular contraction, may be regarded as unnecessary in acute cases in which the typical pain at McBurney's point may be quickly and safely excited by the simple method of compressing the healthy sigmoid flexure.

32. Post-operative Acetonuria.

LONGO (*Rif. Med.*, September 15th, 1907) has examined the urine in 103 cases with a view to the presence of acetone after operation. He believes that a physiological acetonuria exists, and in his 103 cases 7 per cent. showed acetonuria before operation, although in other respects they might be considered normal individuals. Acetonuria was much more often seen after ether narcosis (19 out of 20 cases) than after chloroform (51 out of 57), and in each case it was most marked the nearer the examination was made after the operation. In the 7 cases operated upon under local anaesthesia (cocaine) acetonuria followed the operation in every case. In 15 cases of traumatism or operation without anaesthesia acetonuria was noticed in 7, and in 3 cases of simple chloroform narcosis without operation acetonuria followed every time. The test for acetone used by the author was that described by Lieben. Apparently post-operative acetonuria is an almost constant phenomenon, but temporary; the low diet after an operation seems to prolong it a little, but it does not appear to be due to fasting, although this condition and early years act as predisposing causes. The essential elements in post-operative acetonuria are the narcosis and the trauma. In the author's experience the post-operative course is not influenced by the presence of acetonuria, which he holds is due to a functional alteration of the central nervous system.

33. Surgical Treatment of Embolism of the Pulmonary Artery.

AT a recent congress of German physicists and medical practitioners, Trendelenburg (*Zentralb. für Chir.*, No. 44, 1907) pointed out that in cases of embolism of the pulmonary artery death does not always occur suddenly, but may be postponed for about a quarter of an hour or longer after the first onset of the attack. The clot, whether floating loosely in the pulmonary artery or the right ventricle, or fixed at the bifurcation of the artery, will often allow a sufficient flow of blood to maintain life for a short time. It occurred to this surgeon that it might be possible to remove the clot by direct intervention, and after full study of this surgical problem, and a series of dissections on the human body, and of experiments on animals, he devised an operation the details of which are described at length in his paper. In this operation the heart, after having been exposed by the elevation of a large osteoplastic flap made on the left side of the sternum, is drawn forwards, and then through a slit made in the coats of the conus arteriosus the clot is sucked out by a specially-constructed pump. The operation seems to be one that would, even under the most favourable conditions, be an exceptionally severe and formidable one, as it necessitates, in addition to the usual risks of urgency surgery, free exposure of the left pleural cavity, much manipulation of the heart, and profuse haemorrhage. A case is reported in which Trendelenburg practised this method on a woman aged 63, but without success, as the pericardium was adherent to the heart, and during the efforts to abolish the adhesions and to draw the heart forwards, death resulted from excessive haemorrhage. The author, in concluding his paper, suggests that the many successful instances of cardiac suture in cases of wound of the heart encourage and justify further attempts to apply surgical treatment to embolism of the pulmonary artery in man.

34. Motor Boat Fractures.

DE FOREST (*Ann. of Surg.*, July, 1907) directs attention to injuries that have been received by those who use motor boats. These injuries are caused by the sudden and violent impact of the handle of the heavy balance-wheel, when after some delay and a hitch in its working the machinery starts suddenly and with great rapidity. The handle escapes from the man's hand, and before he has time to get out of the way he is struck by it, usually on the hand. The author gives instances of injuries thus produced, which are varied in their situation and character, but consist for the most part of fractures of the bones of the fingers, wrist, and forearm. Fractures of the phalanges are not common. The metacarpal bones seem to be fractured most frequently, and sprains and even an actual fracture of the carpus are not rare. When the force of the blow is expended directly on the forearm or leg the injury may be more severe, and compound fractures are not uncommon in these localities. The fact that the initial velocity of the flying handle is much greater than that of the human body in case of a fall, or of that of falling timbers, stones, and the ordinary causes of fracture in everyday life, has, it is pointed out, a marked effect upon the lines of fracture, and causes them to resemble those produced by large-calibre projectiles without the penetrating effects. The fracture, as a rule, occurs at the point of actual impact, and is rarely transmitted to the weaker parts of the bone. So localized, indeed, is the injury that fragments of bone may be broken off or such small bones as those of the carpus may be individually broken.

OBSTETRICS.

35. Death of the Fetus.

LEPAGE (*La Clin.*, November 29th, 1907) reports the case of a woman who, having had two healthy children, developed during her third pregnancy albuminuria with constitutional disturbance, and gave birth to a dead fetus in the eighth month. Her previous pregnancies had been quite normal, and he suggests that the albuminuria may have been due to the bad hygienic conditions under which the patient lived. Another case reported aborted in the third month, the placenta showing that development had been arrested for some time. Should death occur during the first few weeks the fetus will undergo dissolution, the embryo consists so largely of water that it dissolves in the amniotic fluid; if expulsion occurs a few days after death, some fetal remains may be found; but if some weeks later, the ovum will probably be quite clear. At the age of 2 to 4 months the fetus, should it succumb, is liable to mummification, the amniotic fluid is reabsorbed, and the fetus dries up. In the later months maceration may occur, accompanied by desquamation of the skin and discoloration of the liquor amnii; the final change is putrefaction, which can only occur when the dead fetus is in contact with the air, and which is a complication of labour not of pregnancy. Dealing with the causation of the death of the fetus during pregnancy, the writer ascribes it to (1) an infection transmitted through the maternal blood stream; (2) an infection transmitted through the germ; (3) an alteration occurring in the circulation of the fetus. He notes as the most important cause, syphilis; as occasional causes, tuberculosis and chronic intoxications, such as alcohol, lead, or albuminuria. Uterine maladies are of great importance, endometritis or fibromata being responsible for many deaths. Fatalities are due also to fetal malformations, to errors of circulation, to knots and twists in the cord, amniotic bands, and abnormal placental insertions. Clinically, after the death of the embryo, the symptoms of pregnancy gradually disappear; diagnosis, however, is difficult. The expulsion of the dead fetus may occur soon or not till term. The practitioner is advised to adopt a waiting policy; having warned the parents, he should watch the patient, and await the natural expulsion of the ovum. A careful examination of the expelled fetus may indicate the cause of death and be of assistance in determining treatment should the patient become pregnant again. In doubtful cases an antisyphilitic treatment is recommended.

36. Vaginal Caesarean Section.

BAR (*Journ. des Prat.*, November 30th, 1907) describes the operation which Dührssen has called by this name. It consists in replacing the multiple incisions of the uterine cervix by determined incisions, by means of which an opening is obtained large enough for the extraction of the

fetus. When the fetus is expelled, the incisions in the uterine cervix are sutured or hysterectomy is performed. Dührssen advises vaginal Caesarean section in all cases in which dilatation of the uterine cervix is impossible (cancer, tumour, stenosis), in cases in which it is necessary to bring the labour to a quick end, even though the cervix is not yet fully dilated, and when, the mother being on the point of death, it is desired to deliver a living child, though the cervix is still undilated. The operation is conducted, according to Dührssen, on the following lines: The rectum and bladder are emptied and the vagina disinfected. A subcutaneous injection of ergotine is given. Any resistance on the part of the perineum is overcome by a deep incision starting from the right side of the vaginal orifice and running towards the right side of the anus. Having exposed the cervix by means of a large flap, the vaginal portion is fixed with two bullet-extracting forceps, and later with two loops of thread. Then an incision is made into the posterior lip of the cervix in the middle line, reaching the length of the vaginal cul-de-sac and extending 4 cm. on to the vaginal wall. Through this incision the finger can strip off the peritoneum from the posterior aspect of the cervix. If it is found necessary, a transverse incision may be made in the posterior vaginal cul-de-sac. The anterior lip is next incised in the middle line, and the bladder is dissected off. It will be found that all these proceedings are immensely facilitated by the pulling down of the cervix. The anterior and posterior walls of the lower segment are also bared. With scissors the median incisions in the cervix are prolonged on to these walls for about 6 cm. It is now possible to get the hand into the uterus, to rupture the membranes, to find the feet, and to draw out the fetus, seizing it by the feet. The delivery over, the cervix is pulled down by the threads passed through the sides, and either the incisions are sutured or hysterectomy is performed. Dührssen publishes results from this operation, which give a mortality of 10.6 per cent. on 47 cases, though the state of the woman when operated on was often very serious. The risks are haemorrhage from extension of the incisions at the moment of the passage of the child, rupture of the peritoneum, and cicatrices which make future accouchements dangerous.

GYNAECOLOGY.

37. Acute Symptoms from Torsion of a Dilated Tube.

STRATZ (*Zentralbl. f. Gynäk.*, No. 46, 1907) reports that a woman, aged 36, was seized with violent pains in the right side when lifting furniture during a house-move. The period had just commenced, and the show became profuse. The patient had been three times pregnant, the third pregnancy ended twelve years before the accident. About a month later the patient was examined: a little haemorrhage persisted; the pain was located below the ileo-caecal region. An elastic, tender tumour was to be felt in the right fornix, and the uterus was slightly enlarged. The tumour, after ten days' rest, was found undiminished in size, nor had the symptoms altered. An operation was therefore performed, tumour of the tube or ectopic gestation being suspected. The right appendages were found to be twisted on their long axis, forming a livid purple tumour, strongly adherent to adjacent structures; it had rolled forwards over the right round ligament, and lay in front of the bladder. The separation of the tumour from adhesions proved difficult; its walls ruptured just as it was nearly free, and thick, yellow, odourless pus, mixed with a few clots, escaped. The patient recovered. The tumour consisted of the right ovary, much enlarged, and a cyst, which was the dilated right Fallopian tube, with signs of old salpingitis. The clots mixed with the purulent contents represented haematosalpinx secondary to axial rotation of a pyosalpinx.

38. Phlebitis following Abdominal Operations.

PFAFF (*Amer. Journ. Obstet.*, November, 1907) considered, in reporting on this subject at a medical association, that many cases were simply extensive aseptic blood clots, without any true inflammation. An abnormal plasticity of the blood must be present in order that thrombosis might be the result of surgical traumatism. The clot generally received a mild form of infection, introduced into the wound at the time of the operation, and in turn an invasion of the vein wall resulted. Getting up the patient early after operation undoubtedly reduced the liability to thrombosis, so largely due to stagnation. As an abnormally high degree of plasticity of the blood was essential in developing the disorder, the blood ought to be tested by some recognized standard in every case. Should the test prove the condition of the blood to be dangerously plastic, operative measures should be postponed until the blood was brought to a normal condition. Ill, of Newark, New Jersey, observed, in discussing Pfaff's opinion and experience, that after immunity from phlebitis in his operative practice for several years, he had 8 cases in different places, and could not account for the complication in any instance. Joseph Price of Philadelphia felt actually pained to hear about patients being made to get up early after operations; in fact, he stigmatized the practice as a criminal assault.

THERAPEUTICS.

39. Treatment of Bronchitis and Bronchopneumonia in Children.

MARFAN (*Journ. Méd. de Brux.*, May 2nd, 1907) advises as a prophylactic method of treatment the instillation once daily into each nostril of 5 or 6 drops of a solution of oil of sweet almonds, 40 grams, containing 0.4 gram of menthol, and every now and again inserting into each nostril some ointment consisting of 0.3 gram of resorcin and 3 grams of boric acid in 30 grams of vaselin. This treatment is instituted with a view of promoting antisepsis of the nasal fossae and naso-pharynx. To disinfect the mouth the author advises swabbing with a pledget of wool soaked in 1 per cent. solution of resorcin once or twice daily, and if stomatitis exists the mouth should be cleansed once or twice daily with boiled water. Where cases of bronchitis or bronchopneumonia already exist in a hospital these should be isolated to prevent spread of infection to other patients. When bronchitis of the larger tubes is present treatment should aim at rendering the bronchial tubes antiseptic, facilitating expectoration and calming the cough. Confinement to bed in a room with a warm equable temperature should be instituted, the chest should be rubbed twice daily with turpentine liniment, and inhalations of vaporized creosote, tincture of benzoin, and essence of turpentine employed. When the bronchitis is of a more severe character, mustard poultices should be applied to the chest. If the bronchitis be intense, with sonorous and mucous râles, vomiting may be induced by the administration of ipecacuanha in suitable form every few minutes until effective. Should diarrhoea appear, all medicine should be withheld and the diet consist of boiled water only for six hours; small doses of calomel may also be given. If capillary bronchitis supervenes mustard poultices should be frequently applied to the chest, and diffusible stimulants (ether and acetate of ammonia) should be prescribed, and in certain cases a mustard bath or a cold bath may be employed two or three times daily.

40. Santyl in Gonorrhoea.

KANITZ (*Therap. Monats.*, October, 1907) points out that the sole test of a cure in gonorrhoea is the disappearance of gonococci from the discharge. Unfortunately most disinfectants can only act upon those gonococci which are present in the superficial layers of the mucous membrane. They, however, cause slight irritation, which results in cocci being brought to the surface, till eventually all are destroyed. The results of local antiseptic treatment are so very satisfactory that the older, so-called symptomatic, treatment has been neglected. It is undoubtedly true that the balsams have some action in diminishing the amount and purulence of the febrile discharge and in ameliorating pain. They, however, never *cure* the disease. Clinical experience and experiment agree in demonstrating that the balsams do not even hinder the development of gonococci, far less kill them. They may even exert a harmful influence in gonorrhoea in that by lessening local inflammation they hinder the process by which gonococci are brought to the surface and so into contact with the local antiseptic. At the clinic at the University of Kolozsvár the routine treatment of gonorrhoea consists of local injection of protargol, commencing with ¼ per cent. and increasing the strength in proportion to the tolerance shown. The urethra is irrigated with a warm solution of permanganate, 1 in 10,000 to 1 in 3,000. A simple acute gonorrhoea is generally cured by this method in from four to six weeks. Occasionally a balsam oil is given internally, but generally not. A new preparation, santyl, has recently been brought out, and has been highly recommended for the treatment of gonorrhoea by Kaufmann, Bottstein, Sklareh, Sachs,

Lilienthal, and others. It is the salicylic ester of sandalwood oil, a bright yellow oil with a slight aromatic smell. It can be obtained in capsules containing 0.40 gram or in bottles. It is almost tasteless, and does not make the breath smell of sandal oil. Kanitz has tried santyl on 45 patients. He finds that it has no irritating action upon the digestive organs or the kidneys. In the intestine it splits up into sandal-wood oil and salicylic acid. It was found to exert an energetic action in lessening pain and diminishing secretion, and it proved useful where chordee and painful micturition were prominent symptoms. Nevertheless, when it took the place of local injections a disproportionately large number of gonococci were found in the diminished discharge. It was only when local treatment was added to the santyl treatment that the gonococci began to disappear. There is no evidence that santyl even inhibits the multiplication of gonococci; it has no bactericidal action whatever. Three cases of anterior urethritis developed posterior urethritis under santyl. Santyl is especially useful in posterior urethritis, and when the gonorrhoea is complicated by epididymitis and prostatitis. It is also useful when local inflammation prevents injections being administered. Santyl was never given in chronic gonorrhoea; in such cases there are deep-seated infiltrations of the mucous and submucous membranes, and such cases are best treated with astringents, gentle cauterization, and by instrumental means. Kanitz sums up as follows: "We possess in santyl a drug which exerts a very favourable action upon urethritis. It diminishes the discharge and relieves many painful symptoms. It has the advantage over the old balsams in being tasteless and in not irritating the stomach or the kidneys. It has no gonococcocidal power, and is no more able to cure acute gonorrhoea, when unaided by local treatment, than the older sandal oil preparations." Kanitz combats the view that early injections if properly carried out by the surgeon himself lead to complications such as prostatitis, cystitis, and epididymitis; on the contrary, if early local disinfection be properly carried out, posterior urethritis can almost always be avoided.

41. The Action of Chloral Hydrate on the Blood.

CHIRONE (*Rif. Med.*, August 17th, 1907) has carried out a series of experiments on this subject. In the first series he took 1 c.cm. of blood from a rabbit's ear, and added to this 1 c.cm. of an aqueous solution of chloral of varying strengths. He found that the chloral acted immediately on the red corpuscles in proportion to the strength of the solution. The corpuscles first became poorer, then globose, and finally complete haemolysis took place. When given by the mouth the drug caused an initial increase of red corpuscles, then diminution, and finally (in twenty-four hours) a return to the normal, or even an increase. The leucocytes were always increased. The haemoglobin index was reduced, but quickly returned in acute poisoning, and more slowly after chronic intoxication. The isotonic coefficient suffered no appreciable change. Chemiotaxis after chloral was clearly negative. *In vitro* hinders the disoxidation of the oxyhaemoglobin, and changes it into methaemoglobin, especially when the temperature is raised. Chloral lowers the specific gravity of the blood *in toto*. This action of chloral on the blood helps to explain its influence on temperature and on tissue change.

42. Magnesium Salts in Epilepsy.

GALCATESSA (*Gazz. degli Osped.*, July 21st, 1907), recalling the beneficial effects of calcium chloride in convulsive attacks, has carried out some experiments on 6 cases of essential epilepsy with salts of magnesium. The salts selected were the sulphate and the chloride given hypodermically. The doses of the sulphate was 1 c.cm. of a 1 in 5 solution and a corresponding dose of 1 in 2 solution of the chloride. The best results were obtained in a bad case of nocturnal epilepsy—the patient had never been known to go two successive nights without an attack, under treatment he had an interval of nine days without a fit. On the whole the treatment was beneficial. Syphilitics, those with new growths or traumatisms did not, as one might expect, derive any benefit. Probably the salts act partly by improving the condition of the serum, partly as disintoxicating agents, and partly by a direct action of the ions on the nervous elements.

43. X-ray Treatment of Bright's Disease.

PESCARLO AND QUADRONE (*Rif. Med.*, September 15th, 1907) report a case of well-marked Bright's disease in a woman aged 42, which after resisting all ordinary methods of treatment improved very markedly under *x*-ray treatment. The rays were applied from eight to ten minutes at a distance of 25 to 30 cm., either over both lumbar regions or over one side only. During the two months sixteen applications were made, and although the skin of the back was markedly oedematous, no cutaneous lesions developed. Before treatment the patient weighed 83.6 kilog., passed only 200 to 400 c.cm. of turbid, faintly acid urine, specific gravity 1022 to 1018, containing 14 to 16 per cent. albumen, 17 per cent. urea, many cylinders, renal cells, white corpuscles, and 0.76 per cent. chlorides; the cryoscopic index was −0.65 to 0.70. After the sixteenth application the body weight was 67.70 kilog.; urine 800 to 1,500 c.cm., specific gravity 1010 to 1014, urea 9 per cent., albumen 4 per cent., no casts or other pathological elements in the sediment, chlorides 0.52 per cent., and cryoscopic index −0.5. During the *x*-ray treatment there was profuse diarrhoea. Before treatment the patient had been dropsical for ten months.

PATHOLOGY.

44. The Error of a Haemocytometer.

IF in determining the number of erythrocytes with an ordinary Thoma-Zeiss haemocytometer different values are obtained in two observations, we must, before attaching any importance to the difference, examine certain sources of error. One of these, the actual experimental error, depending to some extent on personal factors, is not capable of precise evaluation, but another, the statistical error, can be calculated, as is shown by Student (*Biometrika*, vol. v, part iii, pp. 351-360). Since, in using the haemocytometer, only a small sample of the total corpuscles is counted, we must determine how far such a sample is a fair measure of the whole "population" of erythrocytes; in other words, we require to know its "probable error." The author of the paper referred to shows that with a haemocytometer in which the volume over each square is $\frac{1}{4000}$ mm., the probable error of the mean (m) is:

$$40{,}000 \times 0.67449 \times \sqrt{\frac{m}{\mathrm{M}}}$$

in terms of 1 c.mm. of blood, where M is the number of unit areas counted. If now the liquid be diluted to q times its bulk, so that we have $\frac{m}{q}$ corpuscles on the average per square, the error becomes:

$$40{,}000 \times 0.67449 \times q\sqrt{\frac{m}{q} \times \frac{1}{\mathrm{M}}}$$

so that to get as accurate a result as before we must count q M squares. Hence, "the same accuracy is obtained by counting the same number of particles whatever the dilution, or, to look at it from a slightly different point of view, whatever be the size of the unit of area adopted. Hence, the most accurate way is to dilute the solution to the point at which the particles may be counted most rapidly, and to count as many as time permits." It follows from the above that if, in two samples, means m_1 and m_2 are obtained, we cannot regard the difference $m_1 - m_2$ as significant, unless it be two or three times as large as:

$$0.67449\sqrt{\frac{m_1 \times m_2}{\mathrm{M}}}$$

The use of these formulae can best be shown by an arithmetical example. Suppose the blood to have been diluted 1 in 100 times, and the average for 16 squares is 13. then the probable error of the mean number in 1 c.mm. of undiluted blood (5,200,000) is:

$$\pm\, 40{,}000 \times 0.67449 \times 100 \times \sqrt{\frac{13}{16 \times 100}} = 243{,}189.$$

So that we should conclude that the real number of corpuscles in the subject lies between 4,470,433 and 5,929,567 per c.mm. Again, if in two counts (1) we obtained average values of 13 and 15 respectively, the probable error of the difference (2) is ± 0.892, so that we cannot regard the two samples as significantly different. It is doubtful whether a careful worker would be likely to attribute any importance to variations falling within these limits, even without a criterion of the type described, but this does not lessen the value of the investigation. Those who are in the habit of using a haemocytometer for clinical purposes would do well to record the probable errors of their counts as calculated from these formulae.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

45. Syphilis of the Heart.

HUCHARD AND FIESSINGER (*Journ. des Prat.*, September 21st, 1907) describe four syndromes which cardiac syphilis may present: Cardio-asystolic, cardio-renal, bradycardial, and sudden death without any previous signs. The cardio-asystolic syndrome is usually seen in a patient who has suffered from syphilis in the past. He consults the doctor on account of progressive dyspnoea and oedema of the ankles. His extremities are cyanosed. The pulse is small, fast, of increased tension, and sometimes irregular. The apex is moved downwards and outwards, the impulse is increased; the jugular veins are dilated, and the liver is increased in size. There is nothing in the heart that points to any valvular lesion, and, for want of a better, the diagnosis is frequently made—dilatation due to interstitial nephritis. Sometimes the dyspnoea is extreme, and Rosenfeld has called it syphilitic asthma. The cardio-renal syndrome starts with the dyspnoea. Slight oedema of the ankles in the evenings appears. The pulse is of high tension, there is tachycardia, and sometimes *bruit de galop*. The urine contains albumen. In this case the diagnosis is generally interstitial nephritis. The bradycardial syndrome is caused by gummata situated in the auricular septum, encroaching upon the auriculo-ventricular bundle of His. Englemann and Tamara have demonstrated that a lesion implicating this bundle will cause heart-block. The last syndrome is the apoplectic. The gumma has, perhaps, caused no symptoms, but suddenly the patient drops dead after an effort. Gummatous myocarditis of the left vetricle is recognized by emptiness of the arteries and venous stasis. It is distinguished from rheumatic heart trouble by the rarity of accompanying general anasarca. If the lesion is on the right side dyspnoea is the predominating symptom. There is then quickened respiration with regular rhythm, while in some cases the cardiac beat is irregular and feeble. Generally, syphilitic lesions of the heart remain long undiscovered, and either end in sudden death, or are discovered after death, the patient having succumbed to some other disease. Sometimes, however, cardiac syphilis is apparent during life. For instance, a man, aged 35, has had syphilis, which was badly treated. He soon after has symptoms which draw attention to his heart—dyspnoea on exertion, oedema of the ankles at evening. He has never had articular rheumatism. Dull sounds are heard over the heart, sometimes arrhythmic, with no valvular murmur. The right auricle is dilated, and also the jugular veins. Such lesions can be improved by appropriate treatment, and sometimes cured, but attention must always be directed to the kidneys, which are very liable to become sclerosed. When the lesions are purely cardiac, mercurial treatment must be instituted. When the lesions are cardio-renal, rest, milk diet without chlorides, and theobromine, must be the régime.

46. Cardiac Degeneration apart from Valvular Disease.

BABCOCK (*Amer. Journ. of Med. Sci.*, May, 1907) divides cases of myocardial degeneration into two clinical groups: (1) Those in which diagnosis is easy, and (2) those in which diagnosis is by exclusion or inference. In Group 1 a diagnosis of chronic myocarditis is warranted when symptoms of cardiac incompetence, dilatation, or hypertrophy with dilatation develop in a patient past middle life with evidence of arterial sclerosis, the presence of angina pectoris or cardiac asthma affording further proof. Cases in Group 2 present no distinctive cardiac symptom, and much depends upon an accurate determination of deep-seated cardiac dullness, and this, together with a loud and ringing aortic second sound, points conclusively to ventricular hypertrophy, which if found after middle age warrants the inference of degeneration. In an individual past 40 with marked arterial hypertension, especially if associated with a corpulent abdomen, it is justifiable to conclude that the myocardium is overtaxed. In Group 1 the main indication for treatment is rest, which in mild cases may be obtained by residence in one room or on one floor, but in severe cases entails absolute rest in bed. The duration of such rest must depend upon the exigencies of each individual case, but absolute rest in bed for a long time is not so beneficial to a degenerated heart as it is to one presenting valvular mischief. If, therefore, the cardiac muscle will not permit of voluntary exercise after a short period of complete rest, massage and resistance exercises may be of use. Resistance exercises and Nauheim baths are especially valuable, provided they are not deferred until cardiac incompetence has become advanced. Among drugs, vasodilators may be necessary, and should always be given when digitalis is being administered in cases showing hypertension with myocardial incompetence. Theoretically, strophanthus should prove most reliable, but no one cardiac tonic is equally suitable to all cases. Some aperient water containing sulphates of sodium and magnesium is indicated when the portal system is engorged, and this should be administered daily rather than allow either straining at stool or portal stasis to occur; $\frac{1}{10}$ to $\frac{1}{8}$ grain of morphine hypodermically at bedtime acts as a heart stimulant, and wards off dyspnoea, and, if given daily, has a positive tonic effect. It is rarely necessary to give more than $\frac{1}{4}$ grain, and this should be followed in the morning by a cathartic containing sodium; $\frac{1}{12}$ to $\frac{1}{8}$ grain of heroin has afforded marked relief to attacks of nocturnal dyspnoea. In Group 2, since there is as yet no loss of cardiac sufficiency, treatment must be directed towards its preservation rather than restoration. The patient must be warned of the danger attached to activities involving heart strain, and of the importance of guarding against overfeeding, lack of exercise, and strenuous business life tending to the development of high blood pressure. Breathing exercises, arm, leg, and abdominal movements, systematically carried out under supervision, are of great value, and the younger the patient, with a greater chance of a still elastic aorta, the more vigorous may be the daily exercises. Change of habits and hygienic living are the keynotes of the treatment. With high pulse tension and abdominal corpulence cathartics are necessary, and an occasional brisk purge with calomel and a saline is useful. In this connexion also a course of laxative waters at Carlsbad or elsewhere may prove beneficial. Vasodilators are only indicated in cases presenting such an excess of arterial tension that it is merely a question of a short time before the heart muscle must yield to the strain.

47. The Reflexes in Acute Infections.

LIVIERATO (*Gazz. degli Osped.*, August 25th, 1907) has studied the superficial and deep reflexes in certain acute infectious diseases. The type reflexes chosen were the patellar and the hypogastric. In all the diseases examined distinct alterations in the reflexes could be made out—sometimes in the superficial and sometimes in the deep, often in both. These changes are transitory and of toxic origin. There is no strict parallelism in behaviour between the two reflexes; indeed there is often an antagonism, a real dissociation, which, as far as it goes, one more indication to show the different origin of the two reflexes. The diseases examined were typhoid (46 cases), and here in the majority of cases there was a diminution in the cutaneous reflex and an exaggeration of the tendon reflex; in pneumonia (42 cases) there was a similar difference between the reflexes, but in the reverse way, the tendon reflexes being diminished and the superficial increased. In erysipelas (22 cases) the superficial reflexes were slightly diminished and the deep usually normal. In influenza (52 cases) the deep reflexes were usually sluggish and the superficial either normal or sometimes slightly exaggerated. In acute rheumatism (19 cases) there was exaggeration of the deep and diminution of the superficial reflexes; for obvious reasons it was not easy to test the tendon reflexes in many cases of acute rheumatism. In measles (11 cases) the cases were too few to feel sure as to what the rule is, but there was generally some want of correspondence between the reflexes, sometimes in one direction, sometimes in the opposite. The most marked dissociation occurred in pneumonia and in typhoid.

SURGERY.

48. Congenital Dilatation of the Colon.

TUFFIER (*Bull. et Mém. de la Société de Chir. de Paris*, No. 34, 1907) reports a case of a congenital condition of the large intestine known by the titles of idiopathic dilatation

of the colon, megacolon, and Hirschsprung's disease. The patient was a female aged 20 years, who came under the author's care with a swelling of the size of the fetal head in the lower part of the abdomen, the steady growth of which during a period of seven years had been associated with dyspeptic troubles and obstinate constipation, gradually increasing in severity, and ultimately causing much disturbance of the general health, with debility and emaciation. The physical characters of the growth and the evidence afforded by rectal and vaginal examination favoured the diagnosis of an ovarian dermoid cyst, but, on exposure of the abdominal contents by infra-umbilical laparotomy, the abnormal condition was found to be due to excessive distension of the descending colon, the mesenteric vessels of which were much enlarged. The enormous loop, which is well shown in copies of photographs taken during the operation, was opened, and a large stercoral calculus, weighing over 3 lb. avoirdupois, was removed. The patient was much relieved by this operation, but after an interval of one month again came to the author, complaining of abdominal tenderness and occasional colicky attacks. At a second operation the descending colon was again found distended, but quite free from any obstructing body. Entero-anastomosis was now established between the healthy part of the colon above the swelling and the upper part of the rectum the distended loop being imperfectly excluded by constricting by means of sutures its proximal and distal ends. The patient when seen again six months from the date of the second operation was quite free from any abdominal trouble, and in good general health. The author gives the results of a study of 88 recorded cases of this affection, and for purposes of reference supplies at the end of his paper a very full bibliography. In dealing with the pathology of the affection which is the subject of this paper the author states that it consists in enormous distension of a part or of the whole of the colon, the walls of the affected intestine being thickened, tough, and of a pale colour, and the mucous membrane hypertrophied and ecchymosed. The presence of a stercoral secretion as a complication of the affection is relatively rare, as it was noted in only 6 of the collected cases. Except in one very doubtful instance, there is a constant absence in all the records of any mention of a definite obstacle to the passage of faeces. In 61 of the 88 cases the patients had passed the age of 19 years; 21 patients were in the first year of life; and one was a fetus of 7 months. Notwithstanding the occurrence of the affection in subjects of middle, and, indeed, of advanced age, the author agrees with those observers who regard it as a congenital hypertrophic lesion, and classifies it together with those forms of hypertrophy of limbs, and of macrodactyly, the mode of genesis of which is still unknown. In cases of megacolon attention is nearly always attracted by intestinal troubles, the usual symptoms being in order of frequency: abdominal distension (78 cases); constipation (77 cases); tympanism (31 cases); diarrhoea (27 cases); abdominal or rectal tumour (10 cases). A large proportion of the infantile subjects of the disease die, it is stated, at any early stage, the cause of death being chronic obstruction and stercoraemia or acute obstruction. Those who have attained adult age may live for a very long time in spite of the persistent constipation, the stercoraemia which must be caused by so much faecal retention being evidently well tolerated. In these cases, however, indicanuria is, it is pointed out, a frequent symptom. In discussing the diagnosis of this form of intestinal distension Tuffier holds that any attempt to determine the seat, volume, and extent of the swelling by injections of bismuth, followed by radiography, would be dangerous and useless by reason of the enormous quantity of fluid required, and of the abundance of solid matter in the distended colon. In cases of this disease medical treatment consisting in the administration of high enemata and of purgatives, especially castor oil, should always be tried at first, and be continued for some time. Such treatment, except in very urgent cases, should not be neglected, for, if carried out properly and regularly, it may enable the patient to live for many years. In considering the indications for surgical intervention and the most suitable methods of operative treatment, it is necessary to distinguish between acute cases in which it is the surgeon's duty to ward off imminent death, and chronic cases in which he acts with the object not so much of saving life and giving immediate relief as of effecting a cure by suppressing the intestinal distension. In urgent cases, in which prompt intervention is demanded for the relief of acute obstruction or intense stercoral intoxication, colostomy, notwithstanding its high mortality under such circumstances, is especially indicated. This, however, is regarded by the author as simply a palliative operation, for, although the regular discharge of matter from the intestine permitted by the artificial anus may lead to atrophy of the distended colon, experience has shown that a satisfactory cure is not likely to be obtained except by some more radical measure. In chronic or passive cases and under conditions favourable to operative treatment colectomy or ablation of the dilated portion of colon and lateral anastomosis of the healthy portions of intestine above and below the swelling, together with exclusion of the affected loop, are, in the opinion of the author, the two best methods of operative treatment. It has been found, however, that even in the most successful case neither of these operations is capable of affording a complete cure, as each is likely to be followed by a weakness of the intestine necessitating medical treatment in order to prevent faecal accumulation and to guard the patient against the ill effects of stercoraemia.

49. Transverse Incision of the Kidney in Nephrolithotomy.

MARWEDEL (*Zentralbl. für Chir.*, No. 30, 1907) refers to two cases of nephrolithotomy by the usual longitudinal incision of the kidney, in which profuse primary haemorrhage necessitated nephrectomy. A case under his own care, in which he had much difficulty in controlling the haemorrhage from the longitudinal incision, led the author to carry out in actual practice Hermann's suggestion based on experimental research that a transverse incision made midway between the upper and the lower pole of the kidney would present several advantages over the ordinary method of reaching a renal calculus. Five cases are here reported in which the author extracted calculi through a transverse incision, and found, contrary to his anticipations, that the operation was thus much facilitated and the extent of bleeding reduced. The wound in the kidney, in this method, is deepened until a calyx is exposed, the wall of which is then incised so as to allow the introduction of the operator's finger and free exploration of the pelvis. By making a small transverse incision it is easier to expose a calyx, and the surgeon runs less risk of losing his way in the fat surrounding the hilum of the kidney. In concluding his paper he states that he has been convinced by his personal experience that the transverse incision of the kidney can be confidently recommended in all uncomplicated cases of renal calculus in which the urine is acid and there is but slight infection of the renal pelvis. On the other hand, in cases of suppuration of the renal parenchyma, and if there be indications of a tuberculous or very large abscess, the longitudinal incision will, of course, be practised, as this alone would permit sufficient exposure and removal of the scattered purulent foci.

50. Radical Cure of Femoral Hernia.

G. MONZARDO (*Il Morgagni*, July, 1907) recommends that all cases of femoral hernia should be operated on, and records 32 cases of his own, 10 of them strangulated, all healing by first intention, and only one relapsing. His paper is especially occupied with one of his cases, in which, soon after operation for inguinal hernia, a femoral hernia developed and increased in size until at the time when he operated it was of a diameter of 20 cm. Unlike most large femoral hernias it was entirely reducible, and contained only small intestine without omentum. The sac was ligatured and cut off, and the aperture through which the hernia had escaped was closed by five stitches, uniting the Fallopian arch to a musculo-aponeurotic flap raised from the adjacent part of the pectineus muscle and its fascia. The immediate result of the operation was good, but the hernia recurred later, and Monzardo believes that no operation yet invented is to be relied on for the certain cure of a large femoral hernia. The method employed in this case has since been followed by another surgeon, who has claimed priority. The author considers operation for inguinal hernia an important cause of femoral hernia.

OBSTETRICS.

51. Abdominal Pains during Pregnancy.

RUDAUX (*La Clin.*, November 22nd, 1907) directs attention to the number of diseases which may supervene during pregnancy, and which are ushered in by pain occurring at the same spot in the abdomen. The complaints which occur most frequently in pregnant women are, in their order of frequency, pyelonephritis, which is situated ten times out of twelve on the right side, appendicitis, biliary colic, renal colic, cholecystitis, and torsion of an ovarian

pedicle. Pyelonephritis is characterized by pain in the lumbar region radiating downwards and inwards, and into the groin. If the pregnancy is an early one it is possible to palpate the renal region; pressure will cause acute pain, and the pelvic portion of the ureters will be painful and tender when examined by the vagina, such examination may even excite pain in the opposite kidney. The urine for the twenty-four hours should be collected; micturition may be frequent, the urine is often fetid, and contains pus or blood, thus confirming the diagnosis. When the pain is appendicular, there may or may not be a history of previous attacks. The pain is sudden in onset and acute, it is not always located in the right iliac fossa, but may be spread over the right side and lower part of the abdomen. Palpation reveals tenderness and resistance near or over MacBurney's point, unless the accompanying peritonitis is generalized. The presence of rigors, quick pulse, high temperature, and vomiting are diagnostic. In biliary colic the pain is paroxysmal, it occurs two or three hours after food, it is situated in the right hypochondrium, radiating to the shoulder or the umbilicus, it is very acute. Food and bile are vomited, and the pain is localized at the point at which the right rectus muscle intersects the tenth rib. Cholecystitis is rarely met with till the later months of pregnancy; its onset is sudden, the pain being experienced in the right hypochondrium and right side of the abdomen; it is often accompanied by rigors, fever, and nausea. Palpation is very difficult, but when the contraction of the muscles is overcome, a large oval, irregular-shaped tumour, continuous with the liver, may be distinguished. Renal colic has characteristic pain in the lumbar region, passing into the external genitals, and the urine is scanty and muddy. When intestinal obstruction supervenes—a relatively rare event in the pregnant woman—the pain is accompanied by vomiting, the abdomen is distended, and there is no passage of flatus or faeces. The general symptoms are well marked, the pulse being rapid, and the temperature low. Torsion of the pedicle of an ovarian cyst is more common on the right than on the left side; the pain is acute enough to cause syncope, there is dyspnoea, vomiting, a rapid pulse, constipation, and meteorism. The presence of two tumours is sometimes detected on palpation. In the earlier days of pregnancy pain may be the sign of the rupture of an extrauterine conception, in which case it is associated with syncope and signs of internal haemorrhage. The premature detachment of an abnormally inserted placenta will give rise to sharp pain in the abdomen. The greater number of these affections may manifest themselves for the first time, or may recur at the time of delivery, and must be distinguished from accidents occurring during labour, especially from rupture of the uterus. Should they arise after parturition, it is necessary to distinguish them from puerperal infection and the symptoms it causes.

GYNAECOLOGY.

52. Exercise and Rest in Obstetrics and Gynaecology.

KROENIG points out that in order to maintain a maximum degree of functional activity of the organs of our bodies, it is necessary to give them a proper measure of rest and exercise. This applies not only to the conditions of health, but also to disease conditions, and he exemplifies the modern treatment of heart disease in support of this contention (*Deut. med. Woch.*, September 19th, 1907). He therefore inquires into the conditions met with in pregnancy and lying-in from this point of view. Pregnancy requires an increased production of highly complex organic substances in the mother's circulation; it requires an extra amount of muscular activity and additional function of the mammary glands for the nutrition of the child after it is born. The fact that English women have easier and quicker births than German women, he believes, is due not only to the less frequent contraction of the pelvis, but also to the fact that English women are better prepared for the strain of pregnancy and parturition by taking part in all sorts of sport. With regard to mental exercise during pregnancy, he considers that experience has given us an index that all taxing of the nervous system may be harmful. Shocks and mental impressions are known to check the flow of milk from the mother's breasts. For this and similar reasons he advises that women during pregnancy, puerperal state, and lactation should desist from undertaking severe mental tasks. But bodily exercise is a different thing. Very violent work, and especially heavy straining, no doubt does play a certain part in bringing on premature labour, but he does not think that this will be the case unless other circumstances assist. In any case, the risk appears to be greatest during the third and fourth month, when the changes in the lower uterine segment tend to render the pregnancy less stable than during the other months. He therefore advises women to indulge in cycling, mountain climbing, and other forms of muscular exercise during pregnancy, save when, during the third or fourth months, there are signs of threatening abortion. Turning to the puerperal stage, he points out that the habit of keeping a woman in bed for from ten to twenty days is based on the belief that the uterus and vagina tend to prolapse, the involution does not proceed as quickly, the danger of thrombus and embolus is greater, and the occurrence of pelvic troubles more frequent, when they get up early. Since he has used injections of morphine and scopolamine to lessen or remove the pain of childbirth (he has now an experience of about 1,500 cases) he has allowed a certain number of his patients to get up from eight to ten hours *post partum*. Among 250 private patients, 70 per cent. have got up during the first day. In all, 417 of his patients got up on the first, second, or third day. Of these, only 7 per cent. had a single rise of temperature over 100.4° F., as against 14.5 per cent. of those who got up on the sixth day or later. He did not lose a single patient from any cause; he did not experience a single case of thrombus or embolus (as against 3.4 per cent. in those who got up after the eleventh day); while he found that his patients who got up before the end of the third day were better able to nurse their babies, and the involution proceeded quite as fast and completely as when they stayed in bed. The fact that the morphine and scopolamine prevented them from feeling exhausted after the labour permitted him to ask the women to get up during the first day, and in most cases they were quite ready to do so. The gain by avoiding an accumulation of lochia in the vagina and of faeces in the rectum is a great one. He claims that by letting patients get up early one increases the appetite, keeps the bodily strength up to a high level, and keeps the spirits up, and thus indirectly raises their resistance against infection. He makes them carry out gymnastic exercises, which are calculated to strengthen the abdominal and pelvic muscles, and in this way all inclination towards prolapse is removed. These exercises consist in bending the body down and raising it again and in working the gluteal and adductor muscles. With regard to the frequency of pelvic disturbances, he is of opinion that the psychical factor plays a great part in their occurrence. A married woman is only too ready to localize all her aches and pains in her genital sphere, and the best treatment against this is to distract her mind from these organs. This can be better carried out if one allows her to get up early and forget all about her uterus than by allowing her to be an invalid for a fortnight and think about her womanhood all the time. Turning to gynaecology, Kroenig argues on the same sort of basis. He has found it possible, since he has replaced inhalation anaesthesia by lumbar anaesthesia, to let his laparotomy patients get up early. Among some 300 operations, including myotomies, total extirpation of the cancerous uterus, appendicitis operations, etc., all the patients got up on or before the fifth day, while in the last 100 operations 71 got up on the first day. With the exception of one patient, who died after the removal of a carcinomatous uterus (she was suffering also from syphilitic endocarditis), he did not lose a single patient from the operations. Not one case of sepsis occurred, nor did he see any cases of femoral vein thrombosis or of embolus. He deals with the advantages of this procedure at some length.

THERAPEUTICS.

53. Treatment of Endocarditic and Valvular Heart Disease.

HUCHARD (*Journ. des Prat.*, October 19th, 1907) quotes the two laws of Bouillaud, that in general acute articular rheumatism with fever, endocarditis or endopericarditis is the rule, and that in acute articular rheumatism, slight and afebrile, the cardiac complications are not the rule. To these laws he adds another, that in acute articular rheumatism, partial or general, the frequence of cardiac complications depends upon the age of the patient, being at its maximum in children; that rheumatism in children may be complicated by pericarditis, endocarditis, and even by myocarditis. He exhorts the medical man to be always suspicious of "growing pains," and never to be satisfied by an examination of the patient unaccompanied by auscultation of the heart. Sodium salicylate will cut short many

impending cardiac complications. The drug must be, however, regularly administered, and at the height of the fever the patient must be made to take this medicine by night as well as by day. Non-observance of this rule may permit the development of a cardiac lesion during the night, which could otherwise have been avoided; and the patients are so often sleepless that there is no hardship entailed in giving them their medicine by night as well as by day. The treatment by salicylates must be continued a day or two after the subsidence of the articular symptoms, but in diminished doses. In general a rheumatic cardiac lesion develops in four stages, which the author calls ensystole, hypersystole, hyposystole, and asystole. The first stage, ensystole, is the latent period of adaptation; the stage of hypersystole is nothing more than a stage of natural compensation, by means of cardiac hypertrophy. The author describes the various symptoms of all the stages, and then proceeds to detail the line of treatment he adopts when the stage of asystole has been reached. Some cases, such as those due to strain in patients slightly affected with increased arterial tension, will not need any drug, but will recover completely with rest. The asystole, with dilated heart, due to arterial disease, to fatty heart, to certain valvular lesions with cardiac thrombosis, will be benefited by a bleeding. When an asystole has resisted simple diuretic and hygienic measures, digitalis must be called in. The patient must be kept at rest, and his diet must be of milk. On the second or third day a purgative is given, 60 cg. of calomel and of resin of scammony, or 15 to 20 grams of compound tincture of jalap. Sulphate of soda is useful, too, as it acts also as a diuretic. The day after the purgative has been administered, 1 mg. of Nativelle's crystallized digitalin should be given in one dose. This should be followed on the next day by an increase in the force of the heart beat, and increased diuresis with absorption of the oedema. The dose of digitalis should be repeated ten days later, and this dose will be given with a view to bracing up the heart now that the oedema and the congestive symptoms have been removed. No other drug, such as strophanthus or spartein, should be given during the course of digitalis. Sometimes it will be found that digitalis has no effect. This is not due, as used to be thought, to some change in the myocardium, but to stoppages in the circulation, in the heart, and at the periphery. Stoppage in the heart is often due to an almost irremediable dilatation of the heart with or without thrombosis. Under these circumstances a bleeding will have good results. Stoppage in the limbs is due to the enormous distension of the limbs by oedema. Scarification of the limbs will often reduce this. Visceral stoppage is due to such causes as a congested liver, a pleural effusion, or renal insufficiency in interstitial nephritis. Medical men, the author thinks, are inclined to be too timid, both as regards the size of the dose and the length of the administration of digitalis. There is a great difference between the various preparations of digitalis. The author considers crystallized digitalin to be the best, both on account of its invariability in chemical composition and in therapeutic action.

54. Wormseed Oil.

H. Bruening (*Deut. med. Woch.*, March 14th, 1907) records his clinical experience of the American wormseed oil. This remedy (also known as *Oleum chenepodii anthelmintici*) is used as an anthelmintic for ascarides. Up to the present time he has been able to watch its action in 20 cases. The ages of the patients varied between 3 and 13 years, and in nearly every case the children were brought to the hospital on account of other independent disorders. The presence of worms was discovered by microscopical examination of the faeces, in which the eggs of the parasites were found. At first he gave the oil in a 5 per cent. emulsion, but recently he has preferred to give the pure oil in drops, the children receiving from 8 to 15 drops, according to age, three times in sugar water. Following the dose he gave castor oil or some other purgative in suitable doses, and repeated this if the action does not take place. The efficacy of the treatment depends on the purging within a reasonable time, since the oil does not kill the ascarides, but only narcotizes them. The remedy acts as an irritant to the intestinal wall if left in the canal too long. He has not experienced any serious unpleasant side-effects of the treatment, and generally found that the children took the oil well. Apart from the wormseed oil, an ethereal oil having the formula of $C_{10}H_{16}O_2$, which has been isolated from the wormseed oil, and which has the same appearance as the mother oil. It also possesses anthelmintic properties. He tried this extracted oil in 6 cases, and obtained equally good results as those obtained with the mother oil. The two oils are therefore valuable as remedies for ascarides.

55. Treatment of the Tabetic Eye.

Scrini (*Journ. des Prat.*, March 23rd, 1907), after referring briefly to the many ocular signs that may occur in tabes dorsalis, passes on to the most suitable methods of treatment to be adopted in such cases. He insists on the necessity of the patient living a hygienic life; a tonic regimen should be instituted; excess of every kind should be avoided, and tobacco and alcohol should be interdicted. As regards drug treatment, the author advises a mercurial course, and this, he thinks, is best carried out by hypodermic injections of soluble salts of mercury. Either the benzoate of mercury in a 1 per cent. solution or the biniodide in washed and sterilized olive oil (a 0.4 per cent. solution) may be employed; in the former case 1 c.cm. is injected every other day for fifteen occasions, and in the latter the same amount is injected every day for thirty times. To prevent pain arising from the injections it is necessary to use an iridium-pointed platinum needle, to inject deeply into the muscles of the thigh, to inject slowly, and after injection to massage the seat of injection gently with a pad of cotton-wool. Under the influence of these injections the patient's general condition improves and he gains in weight. The author points out the necessity of attending to any dental imperfections in the patient before beginning a mercurial course, and emphasizes the importance of keeping the mouth clean during such treatment. In addition to mercurial medication the patient should be treated by a course of galvanism: the current, very small at first, may be gradually increased up to 6 milliampères and then gradually diminished. The positive pole should be placed on the forehead above the affected eye and the negative behind the angle of the jaw; these applications should be carried out daily, and should last about ten minutes. About three weeks after the mercurial and electrical treatments have terminated one may give the patient strychnine, either by the mouth or by subcutaneous injection; this medication is carried out for about three weeks. After another three weeks' rest, the glycerophosphates or lecithin may be prescribed, together with an iron tonic. Smoked or tinted glasses should be worn unless there be diplopia, in which case the affected eye should be protected by an opaque glass. The author considers that the above is a summary of the main lines of treatment to be instituted for the tabetic eye, but that the treatment must vary according to the case. Such treatment should be renewed three times a year for the first two years, and twice yearly afterwards.

PATHOLOGY.

56. The Serum of Animals deprived of their Suprarenals as an Antitoxin to Adrenalin.

Arguing from the fact that patients with Basedow's disease, in which an excess of thyroid secretion reaches the circulation, have often been benefited by the administration of the serum of thyroidectomized animals, G. Ciuffo (*Arch. per le Sci. Med.*, Turin, 1907, xxxi, p. 99) concluded that the serum of animals deprived of their suprarenals would probably protect sound animals against the toxic effects of suprarenal extracts. Employing the extract of the whole suprarenals, he failed to get any marked toxic effect, and accordingly used Takamine's 1 in 1,000 solution of hydrochlorate of adrenalin, the lethal dose of which he found to be 0.25 to 0.30 c.cm. per kilo in rabbits. Removal of the suprarenals in rabbits, if complete, causes death within a few days; if a small piece of suprarenal be left behind, the animal is none the worse for the operation. The serum was obtained by bleeding the animal some hours—eighteen to thirty—after removal of its suprarenals, when the toxic symptoms due to the removal were at their height; the dose of this serum injected intravenously into the sound animals was from 10 to 15 c.cm. per kilo. The experiments were performed by taking two series of rabbits as like one another as possible, and injecting into those of one series a sublethal dose of adrenalin, into those of the other first the antiadrenalin serum and then the same dose of adrenalin as was given to the rabbits of the first series. Ciuffo found that the rabbits of the first series suffered from prostration, loss of weight, loss of appetite, glycosuria, lowering of the temperature, accelerated respirations, and diminution in the number of the red cells. Those of the second series remained practically unaffected by the injection; hence the serum undoubtedly contained an adrenalin antitoxin.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

57. **Infant Mortality.**

Henrotin (*Journ. Méd. de Brux.*, October 31st, 1907) seeks to find out the weak points in the existing measures adopted for the supply of sound milk to infants. Gastro-enteritis, he says, is the determining cause in a large majority of infantile deaths; but, in addition, there are other secondary causes of a social nature—namely, the ignorance and immorality of the mothers, the intemperance of the child's parents and grandparents, the almost universal dirtiness of the homes, and the steady decrease in the number of mothers who suckle their children. To furnish good milk, properly sterilized and administered in amounts properly regulated, is undoubtedly a step in the right direction, but it is not everything. The institutions in Brussels, as at present constituted, also give sound advice to the mothers, but this advice too often remains unheeded, or, at any rate, is not adopted, owing to the ignorance of the mothers, or more often owing to their inability to follow out the instructions. Nothing, says the author, or next to nothing, will be achieved until there is a moral regeneration of the working classes, until wages are raised, until the elementary principles of hygiene are widely taught and applied, the unhealthy parts of the towns destroyed, and a fierce fight is waged against tuberculosis, syphilis, and drink; and, in addition to all this, the mothers must be taught the necessity and importance of suckling their children. There are in Brussels four "Gouttes de Lait," and in the suburbs there are eight. Children up to 6 or 8 weeks old are received in these institutions. Children older than this, or ill, are not admitted, but the number of infants that can be accommodated in these institutions is very small. The author suggests that nurses should be trained and should visit the homes of the poor mothers, and should there carry out the instructions of the doctor who has seen the infants at the institutions. By this means the doctor would be certain that the milk which he has ordered was being properly administered and that all his other instructions were being rigorously enforced. By this means and by the help of properly ventilated and clean crèches, under the direct superintendence of nurses, at which the mothers can leave their children during the daytime, some diminution in the mortality of infants can be achieved.

58. **Arterial Pressure in Phthisis.**

P. Battistessa (*Gazz. Med. Ital.*, March 7th and 9th, 1907) discusses the effect of pulmonary tuberculosis on the blood pressure, the possibility of using blood pressure for prognosis, and the existence of any connexion between blood pressure and haemoptysis. The widest differences of opinion have existed, some finding the pressure always lowered, others finding it abnormally high in the great majority of cases examined. Reynaud considers the blood pressure of as much diagnostic value as the injection of tuberculin. Teissier and others rely on increase of pressure as a favourable prognostic sign. Adopting Riva-Rocci's standards of normal pressure at different ages, Battistessa found that out of his 30 cases, the pressure was low in 15, normal in 10, high 5. In all the low pressure cases there was more or less wasting. In 2 cases of phthisis gradually deteriorating, numerous examinations of the blood pressure gave a descending curve exactly similar to that furnished by 2 cases of gastric carcinoma under treatment at the same time. The low pressure cases were also complicated by other diseases—influenza, pneumonia, malaria. Uncomplicated cases responded well to cardiokinetic remedies, thus showing that the condition was not one of true toxic hypokinesis. In most of the cases with normal pressure, the state of nutrition was good. In all but one of the cases with high pressure, the author attributes it to an infective arteritis not due to tuberculosis. He therefore concludes that tuberculosis causes no constant change of any sort in the arterial tension. Any other opinion, so far as it rests on clinical observation, needs to be corrected by a careful examination of all the circumstances of each case, and evidence based on experiments with animals is set aside, because the conditions are not reasonably similar to those obtaining in phthisis. Naumann's statistics show that haemoptysis is usually an early symptom of phthisis and is accompanied for the most part by high tension. Battistessa offers no complete theory to account for the facts of haemoptysis, but attributes it in many cases to dietetic and medicinal causes, and considers it less likely to occur in the later stages of the disease when there is considerable wasting.

59. **Primary Infantile Atrophy.**

Thompson (*Amer. Journ. of Med. Sciences*, October, 1907), while emphasizing the fact of the constant finding of atrophy of the thymus gland in infantile atrophy, especially calls attention to the condition of the parathyroid glandules. From an examination in 12 cases these show either marked degeneration of the epithelial cells or, what is more common, a marked increase in the connective tissue stroma, replacing some of the parenchyma of the gland. These changes are similar in nature to those constantly present in the thymus and other ductless glands in infantile atrophy. Of 20 cases of marasmus in which the thymus was examined a notable atrophy was found, the differentiation between the cortex and the medulla being lost, and a marked increase of connective tissue being present. Notes of a case are given in which, in addition to changes in the thymus, extreme atrophy was found in the thyroid, parathyroids, and medullary suprarenals. The child lived twelve months, the immediate cause of death being bronchopneumonia. Partly from the fact that the child lived so long, the signs of atrophy in the above structures were so extreme as to attract attention macroscopically. With regard to the supposed association existing between cases showing tetanic symptoms and degenerations or destructions of parathyroid tissue, investigations give negative findings, and any such association remains unproved. The further study of these bodies should throw some new light on their function, especially in conditions of impaired nutrition.

SURGERY.

60. **Haemorrhagic Ulcerations of the Bladder.**

Albarran (*Journ. des Praticiens*, August 3rd, 1907) considers that spontaneous vesical haemorrhage does not always imply a tumour; it may indicate simple ulceration. A man aged 40, who had haematuria a year ago, recently entered hospital because the haemorrhage reappeared without obvious cause. He had a temperature of 39° C.; his bladder was filled with blood. He had a simple ulceration behind the trigone, with several patches of ulceration scattered about the bladder. The larger patches were excised, and the edges of the wounds sutured, while the smaller patches were cauterized. The patient made a good recovery. Several cases have been treated by the author with cauterization, and cured. Sometimes the lesion is very minute and difficult to find. These vesical ulcerations are analogous to gastric ulceration with haemorrhage. For these the primary lesion is necrotic, and progresses to a round ulcer. Gastric ulcer is caused by internal or external intoxications or by the toxi-infections; these vesical ulcerations are due to toxi-infective causes. In the bladder simple ulceration may first be indicated by a haemorrhage, without any accompanying cystitis. A deep ulceration can perforate the wall of the vessel, as in the stomach. Sometimes tuberculosis is the cause of vesical ulceration, and small ulcerations near the trigone are seen as well as the diffuse tuberculous cystitis. The patients simply complain of polyuria. It is the urine coming from the kidney that infects the bladder. Trophic ulceration of the bladder may follow on medullary or cerebral diseases. Vesical ulceration may also be due to influenza, typhoid fever, enlarged prostate, or injury. Cystoscopic examination will be an essential part of the treatment. The toxi-infection must be treated and haemostatics must in some cases be administered. The author advises cauterization for small discrete ulcerations; if the ulceration is large, excision and suturing of the edges of the wound.

61. **Osteitis Deformans.**

Guaciero (*Archiv. di Ortoped.*, An. 24, f. 3, 1907) describes in considerable detail a case of osteitis deformans (Paget) in a woman aged 55, affecting one bone only—namely, the tibia. As the pain and inconvenience of the enlarging

limb became more and more troublesome, and no relief was obtained, the leg was amputated above the knee, so that the author had good opportunities of examining the affected bone. Two radiograms are given at different dates, one taken during life (some months before amputation), and the other two years later, during which time the tibia had been kept in Müller's fluid. The chief changes noted were a diffuse alteration throughout the whole extent of the bone; various degrees of density and transparency distributed irregularly in different parts of the bone; irregularity of the line of demarcation between the cortical parts of the bone and the medullary canal (in the later radiogram this line was quite obliterated in parts); the new tissue formed in the process of repair was distributed in irregular masses along the convex side of the curvature. The author has no new light to throw on the pathogenesis of the disease. Amongst the various names under which it is classified, the author suggests fibrous megalo-osteomyelitis as the most suitable. Where, as in his case, the disease is confined to one bone, amputation may be necessary, and may possibly check the onset of the disease in other bones.

62. The Treatment of Fractures.

Desquin (*Journ. Méd. de Brux.*, August 15th, 1907), reviewing the treatment of fractures, considers that the physical, material, and anatomical considerations have too often blinded the practitioner to the physiological and biological indications which should be his guide in the treatment of fractures. He enters a plea for the employment of the more rational measures—massage and movement. In 1889 Lucas-Championnière devoted much attention to this subject, and gave as his opinion that massage should be employed in every case in which it was practicable. In 1895 massage was advocated to the exclusion of movement. In 1897 movement was given the preference. In 1900 Lucas-Championnière wrote: "For more than twenty years I have effected in the treatment of fractures a decided change, whose fundamental condition is methodical movement, with or without massage. The early application of movement to a broken limb forms the basis of this method, and seems to differentiate it entirely from any method previously advised by me." The author does not wish the idea to become established that the doctor who does not constantly manipulate a fracture is negligent. When confronted with a fractured limb the medical man should have one idea in his mind, and one only—that is, to restore to the limb all its function. A good skiagraph, if it can be easily obtained, is useful but by no means essential, and the author thinks that the postponement of treatment for this purpose has often done harm. The limb should regain its muscular force, its suppleness, and its normal state of painlessness. The first essentials, then, are to prevent deformities, to guard against ugly callosities, to maintain the movement of the joints, to make the muscles work, and to prevent anything that may cause pains in the future—namely, rigidity, adhesions, or bony atrophy. The muscles must quickly recover their condition of functioning and their vitality, and the joints must be left free to act. For this reason apparatus must be discarded. Apparatus only fulfil one condition—that of preventing deformities of the limb; they can never be made to leave the joints and muscles free. To obtain the best results the cure must be quick. To sum up: movement should be the chief aim of the surgeon in the treatment of a fracture. Massage will be most useful in the treatment of an old fracture, where, owing to wrong treatment in the beginning, rigidity and atrophy have occurred.

OBSTETRICS.

63. Childbirth and Double Uterus.

Milligan (*Amer. Journ. of Obstet.*, August, 1907) reports a case of twin pregnancy in a woman aged 28. Labour came on at the seventh month, as the result of a septic condition with which the existing malformation had no connexion. On the day after the delivery of the twins the fundus could be felt to be double. On the tenth day the patient died of sepsis. The uterus was of the bicornis unicollis type, the cervix was deeply lacerated and no cervical septum could be felt. The duplicity of the body reached down to the internal os. In a second case, which ended well, the patient, aged 24, was herself malformed. The palate was high and vaulted, the fingers and toes irregularly developed, and there was a marked dorsi-lumbar spinal curve. The vagina was divided into two parts by a fleshy septum; there was a distinct cervix at the upper end of each, and on recto-abdominal examination and the use of the sound two distinct bodies could also be defined. After this examination the patient married and soon became pregnant, the child developed in the left uterus, there was no disturbance during gestation except occasional nausea and a trace of albumen in the urine. At term a male infant was delivered normally thirteen and a half hours after the beginning of labour. The vaginal septum arrested the head as it descended over the perineum and was therefore cut. The child was reared. Nearly two years after the labour a piece of the vaginal septum was found hanging outside between the labia, and was cut away.

64. Hydramnion: Is Abdominal Puncture Justifiable?

Nijhoff (*Zentralbl. f. Gynäk.*, No. 46, 1907), in relating an instance in his own experience before a medical society, turned attention to several questions which were afterwards discussed. In his case of hydramnion it was situated in the upper ovum in a twin pregnancy. He tapped the upper sac by simple puncture, without making an incision through the parietes. Scarpa and Petrus Camper had recommended puncture of an hydramnion in the eighteenth century, and in the nineteenth Schatz had spoken approvingly of the practice. Nijhoff limits puncture to twin pregnancies where the dropsical amnion cannot be reached from the vagina. With aseptic precautions puncture is not dangerous, and there is little if any fear of haemorrhage, as the minute track made by the needle closes rapidly. In the discussion, Oidtmann stated that he had punctured the dropsical amnion in a simple pregnancy where the patient was extremely weak, so that she could not very well bear being placed in the lithotomy position and subjected to a vaginal operation. In reply to Meurer, who asked how Nijhoff felt sure that the lower ovum in his case was not dropsical, the reply was that a hard and not freely-movable mass, part of a fetal body, was definable below the hydramnion. Ribbius deprecated puncture without incision, but Nijhoff considered that the surgeons' theory about incision being less dangerous than puncture was, as far as regards hydramnion, not proven. Incision no doubt allowed the operator to control haemorrhage, but the risk of that complication was trifling.

GYNAECOLOGY.

65. Sloughing of Bladder: Retroflexed Gravid Uterus: Anus Vestibularis.

Orthmann (*Zentralbl. f. Gynäk.*, No. 49, 1907) observed these complications in a woman aged 18. The last period occurred at the end of January; two months later pains in the region of the bladder set in. By the beginning of May voluntary micturition became impossible, and incontinence of urine was observed; the latter symptom soon caused great distress, as the urine, which constantly dribbled away, was very fetid; it was smoky, and held pieces of broken-down tissue as well as clots. Orthmann examined the patient in the middle of the fourth month. The uterus was clearly definable; it was retroflexed and incarcerated. The bladder was distended to an extreme degree, yet its walls were much thickened. The uterus was carefully reduced; although the patient's temperature was high at the time the pregnancy was uninterrupted, and the patient was going on favourably, in the sixth month, when the case was reported. The bladder was at first washed out with a 2 per cent. boracic acid lotion, and urotropin, with uva ursi, was given internally. The patient was soon restored to comfort; the urine became almost clear. There was congenital anus vestibularis, but no details of that condition are given in the report.

66. Haematocolpos.

De Salm (*La Clin.*, November 8th, 1907) considers that haematocolpos is a rare affection, that it does not occur unless a distinct part of the vagina is present, with healthy uterus, tubes, and ovaries capable of performing their natural functions. It is caused by a malformation of the vaginal canal or of the external genital organs. The error of formation is never very great, as it would then promote atrophy of the internal genitals, especially of the ovaries, and menstruation would not occur. The obstruction is commonly due to an imperforate hymen, or to a band obstructing the vagina, or even to constriction or stenosis of the vaginal canal. The origin of the latter is generally due to an inflammatory or specific ulceration of the vagina,

or a chronic vaginitis. Cicatricial constriction has followed injuries received during labour, or an attack of small-pox or typhoid fever. It may also be due to cancer obstructing the vagina. Haematocolpos first manifests itself by attacks of pain, which occur at regular periods, the patient being quite comfortable in the intervals, a hypogastric tumour appears and there is usually some nervous disturbance which may amount to neurasthenia. The pain is described as uterine colic, and may be accompanied by rectal or vesical tenesmus and discomfort about the vulva. There is a general constitutional disturbance. Accessory haemorrhages are noted, such as epistaxis, haemorrhoids, or haematemesis. Mental troubles terminating in melancholia or mania may complicate the situation. When haematocolpos is thought of, it is not difficult to diagnose, it must be distinguished from haematosalpinx, where the uterus lies between two well-defined swellings, and pregnancy and an ovarian cyst. Treatment is mainly surgical, an imperforate hymen is divided by a vertical, transverse or crucial incision, the accumulated fluid is evacuated and vaginal douches are given. When the obstruction is caused by the absence of the lower part of the vagina colpoplasty is required. The results are good.

THERAPEUTICS.

67. Sanatorium Treatment of Phthisis.

J. Tillmann (*Zentralb. für die gesamte Therap.*, March, 1907) shows the importance of a judicious selection of cases of phthisis for treatment at popular sanatoriums, and discusses the different facts which have to be considered in the decision as to the suitability of each case. A detailed physical examination must in each case be first undertaken, and as the physical signs of the disease are very slow to yield to treatment, the physical condition should be, as a rule, well within the limits of Turban's first stage; cases on the border line between the first and second stages, in which there are widespread râles, are not, as a rule, suitable. Leaving out of account the "initial" cases, and considering the question from the standpoint merely of the physical signs, the following are the conditions suitable for the public sanatorium treatment: (1) Catarrhal affection of one apex; (2) infiltration of one apex with or without an accompanying catarrh; (3) changes at one apex, as in the first or second group, accompanied by abnormal health sounds on the other side; (4) infiltration of a greater or less area in an upper lobe or on the right side in the middle lobe, with or without catarrh. If there are signs of consolidation on both sides, they should not on either side spread beyond the clavicle or the spine of the scapula. Cases of catarrh of a lower lobe with or without consolidation should only exceptionally be admitted, both because basal tuberculosis often resists hygienic treatment, and because the diagnosis of phthisis in such cases is not easy to make. There are certain exceptions to the rule that only cases in the first stage should be admitted, and even in the third stage a case may be a suitable one if the general condition of the patient be exceptionally good, if the temperature has been normal for some time, the pulse good and the pulse-rate normal, the disease not only at a standstill but showing improvement, and the conditions at the home such that treatment can be continued after leaving the sanatorium; such cases are, however, obviously not often met with. The author remonstrates against the filling of the sanatoriums with doubtful cases and even with initial cases which would probably recover without the treatment, and suggests that such cases should be kept under a preliminary observation at tuberculosis hospitals until either the diagnosis be established or until time has shown whether any initial case is progressing towards recovery or otherwise; skilled observation is a necessary part of such preliminary treatment lest the cases should be allowed to go too far. In addition to the physical signs, certain other considerations are of the utmost importance. Thus persons with a chronic rise of temperature are not suitable for sanatoriums, both because fever denotes spread of the disease with a doubtful prognosis, and because the admission of such patients, who for the most part must be confined to bed, would largely increase the expenses of the sanatoriums. Serious complications, either tuberculous or non-tuberculous, shut off a patient from admission, and the general rule is that all the other organs of any patient who is admitted should be intact; slight forms of bone or joint tuberculosis in combination with slight changes in the lung do not form a contra-indication. Patients suffering from diabetes, haemophilia, mental disease, or recent syphilis, should not be admitted; Turban and Kampf consider the presence of chronic gonorrhoea lessens the benefit likely to be derived from hygienic treatment, and Turban says the same of neurasthenia; pregnancy forms an absolute bar to admission. Patients who have suffered repeatedly from haemoptysis should be admitted only after a prolonged preliminary observation. Tachycardia alters the prognosis materially for the worse, and must therefore be considered as bearing upon the question of admission. The relation of the general condition to the length of duration of the disease is of importance, and sanatorium treatment is of great help in aiding the resisting power of the organism, when the resisting power has been shown to be naturally high by the presence of a good general condition, and perhaps of a slight grade of the lung condition, even after the tuberculous disease has been present for some considerable time. Put briefly the chief considerations may be said to be, the local condition and the general condition taken in connexion with the temperature and the duration of the disease.

68. Atoxyl Treatment of Disturbances of the Optic Nerve of Syphilitic Origin.

On the basis of his experience in the treatment of syphilitic affections of the optic nerve and of the central nervous system causing blindness, O. Waterman (*Berl. klin. Woch.*, September 2nd, 1907) comes to the conclusion that atoxyl has not proved itself of benefit. He warns against the exhibition of this preparation in cerebral syphilis and in tabetic optic atrophy, in both of which conditions it is capable of diminishing the sight either by the formation of a central scotoma or by its general action. He has further experienced a sudden attack of intestinal catarrh and jaundice which he believes was due to the atoxyl, while in another case he met with the onset of a peculiar nervous disturbance which disappeared as soon as the atoxyl was left off. He found that most of the patients treated with atoxyl complained of pains in the arms and legs and general weakness and loss of appetite.

69. Roentgen Rays in the Treatment of Tuberculous Peritonitis.

Allavier and Rovere (*Rif. Med.*, April 20th, 1907) report two cases of tuberculous peritonitis occurring in children aged 6 and 7 years respectively. In neither case did the treatment seem to do any good. The patients had 15 and 8 applications of about ten minutes' duration, with intervals of two or three days. The rays were confined to the abdomen, the rest of the body being protected. A tube of medium size was used at a distance of 15 cm. from the body. The children bore the application well, and, save for slight pigmentation in one case, no cutaneous lesions were observed. The temperature remained unaffected by the treatment. In the blood there was a slight diminution in the polynuclear neutrophiles, an increase in the lymphocytes, a disappearance of the polynuclear eosinophiles, and slight oscillations in the number of large mononuclear cells. In the first case the rays seemed to cause a rapid and permanent disappearance of the ascites, which had hitherto resisted paracentesis and ordinary medical treatment. In the second case the nodules and tuberculous masses did not disappear; in both cases the general condition slowly got worse.

70. High-Frequency Currents for Constipation.

Fleig and Frenkel (*Gazette Méd. de Paris*, October 15th, 1907), during the course of treating haemorrhoids, fissures, and anal fistula with high-frequency currents, have discovered that constipation is cured quickly and harmlessly by the same method. They treated twenty cases of constipation in this way, with amelioration in every case. The application was made with a unipolar connexion, 110 volts, the electrode being either cylindrical or conical, according to the tolerance of the patient. The intensity of the current was gradually increased and diminished during each sitting, lasting from five to eighteen minutes, and varying in number from eight to fifteen. In three cases of muco-membranous colitis the current was applied by means of one electrode on the abdomen and the other in the rectum, with the result that two cases were completely cured and the third very materially improved, the number of sittings being respectively eight, sixteen, and twenty. The great advantages of the treatment appear to be the rapid improvement of the general condition, and the absence of any sensation of pain during the sittings.

71. Extension and its Therapeutic Use.

Konindjy (*Prog. Méd.*, October 19th, 1907) says extension is the easiest method of suspension. The two other forms of suspension are hanging and elongation, well known to all. The author's paper is illustrated with figures showing

the method of extension by means of the inclined plane and the chair. With the inclined plane the traction is produced by the weight of the patient's body. The angle of inclination is obtained by cogs on the back of the inclined plane, the first cog producing an angle of 15° with the horizontal, and each succeeding cog producing a further inclination of 5° of a right angle. The nature of the case under treatment determines the degree of inclination. With the chair, the patient's pelvis is fixed by a strap, and a chin strap, similar to that used in the inclined plane, is applied. The traction is produced by weights attached to the other extremity of a cord fixed to the chin strap: 15 kilograms is the weight with which a start is made; this is in time increased to 45 or 50 kilograms. Suspension has been shown by several authorities to have a real physiological action, and Motchautkovsky has produced in one of his first cases a lengthening of the vertebral column of 3 to 5 cm. The spinal cord undergoes a lengthening with suspension and elongation; this lengthening occurs chiefly above the tenth pair of nerve roots, with a maximum at the level of the first lumbar root. The elongation of the spinal cord is larger behind than in front. Althaus has attributed to extension of the spinal column a breaking-down of chronic meningitic adhesions, with consequent favourable results. Extension has an action on the general circulation, too. Ossankoff has found, as the result of extension, an increase in the pulsations and a decrease in the tension of the arteries. Jules Gaston has published a paper in which he shows that the increase in the pulsations is directly proportionate with the size of the angle formed by the inclined plane with the extension table. Extension has been used, the author says, with success in almost every form of nervous disease. The symptoms which are most benefited by extension are the following: Inco-ordination, vesical and rectal troubles, ocular troubles, Romberg's sign, impotence, insomnia, hyperaesthesia, anaesthesia, and lightning pains—though the relief of the last symptom, the lightning pains, is only temporary. Neurasthenia is often much benefited by extension; this improvement is, however, partly, if not wholly, due to suggestion.

PATHOLOGY.

72. Neuronophagy.

Marinesco (*La Semaine Méd.*, March 27th, 1907) attributes to Metchnikoff the credit of having first introduced into scientific language the word "phagocyte." All staining methods, he says, demonstrate the presence around some kinds of nerve cells of nuclei varying in shape and number, in different pathological conditions. These cells have been called by Ramón y Cajal "satellite cells," and they normally accompany nerve cells. They are found around nerve cells of medium size, and their number may be considerable apart from any pathological change. They surround the nerve cells of the intermediary grey matter between the anterior and posterior horns of the external geniculate nucleus, of the pulvinar, and of the pyramids. They are very rarely seen around the cells of Purkinje, the cells of Betz, the cells of the cranial nuclei, or the large cells of the bulbar reticular matter. In the normal state the satellite cells appear to consist entirely of a nucleus without any protoplasm or nucleolus. The nucleus contains a plexus of chromatin filled with granules. The satellite cells are very active, and constantly change under physical influences, chemical or infective, acting upon the nervous system. After simple section of a peripheral nerve there is a slight reaction of the interstitial neuroglia cells around certain atrophied nerve cells. After more violent injury, such as rupture and tearing of a nerve, there is, in addition to the hypertrophy and hyperplasia of the interstitial neuroglia cells, an increase in the number of the satellite cells. They may be situated at a distance from the nerve cell protoplasm, or they may be closely applied to it, compressing and excavating it. Finally, the atrophied nerve cells disappear, and nothing is seen but the satellite cells, but one cannot see by Marchi's method of staining any cell débris within the satellite cells. Some light is thrown on this so-called neuronophagy by the study of inflammatory lesions of the central nervous system. Inflammation of the nervous system, as of other organs, is accompanied by considerable vascular reaction; but, besides, there is always a retrogressive change in the nerve cells, and a progressive change in the neuroglia cells. For instance, in meningo-encephalitis and general paralysis there is nearly always a large increase in the number of the satellite cells. But in all cases there is much discrepancy in the number of satellite cells surrounding individual nerve cells. Suppurative meningo-encephalitis gives rise to vascular reaction and multiplication of the satellite cells. Near the abscess, or even at a little distance from it, there is proliferation of these cells, and they have various shapes. All these satellite cells compress the nerve cytoplasm, and in their own protoplasm can be seen sometimes violet granules. When the compression is excessive, the nerve cells become disintegrated. In rabies the inflammatory lesions include all the central nervous system and the peripheral ganglia; leucocytes have been described entering the interior of the nerve cells. Some authors think this accumulation of round cells to be a phagocytic phenomenon. A large number of polynuclear leucocytes sometimes are seen on the surface of and even in the interior of spinal ganglion cells in rabies. But there is no evidence to show that in rabies the nerve cells are destroyed by phagocytosis. Manouélian has thought that the presence of pigment in the interior of satellite cells around spinal ganglion cells is an irrefutable proof of neuronophagy. But the author shows that pigment is found in the satellite cells in most diverse pathological conditions, and Cerlotti has shown that satellite cells can take up granules of China ink. High temperature will cause an increase in the number of satellite cells, as the author has proved by experiments on animals. Local irritation will also cause multiplication of the satellite cells and degeneration of the nerve cells. Any factor capable of causing any change whatever in the normal nutritive equilibrium of the nerve cell reacts also on the satellite cells. These enjoy a large degree of sensibility to the various thermic, toxic, or infective agents. The satellite cells of the spinal ganglia show a much higher resistance to absence of oxygen than do the nerve cells. For while ligature of the abdominal aorta will kill the nerve cells, the neuroglia cells can live and even multiply. The same cause holds good for rabies, in which the nerve cells retrogress, while the satellite cells by their multiplication give rise to the rabic nodules. The satellite cells multiply in the direction of least resistance; so, as they cannot make a way for themselves through the surrounding tissue, which is very resistant, and composed of neuroglia fibrils and nerve fibres, they grow round the nerve cell. If the cause which brought about the multiplication of the satellite cells disappears, they soon resume their normal numbers and conditions. The real object of these satellite cells is to fill up, with the aid of their fibres, the spaces which are caused by the disappearance of nerve cells. It is, in fact, a cicatrizing rôle that they play. The nerve and neuroglia cells develop *pari passu*, and there is normally, as it were, a kind of nutritive equilibrium existing between them. This continues until a foreign factor, toxic or infective, comes and changes the equilibrium. Then are seen the phases of reaction which have been described. Some authors persist in giving to the phenomenon of the penetration of the satellite cells into the nerve cells the name of neuronophagy. The author thinks this wrong. Examples of neuronophagy following the injection of lycopodium powder into the anterior spinal artery, cauterization of the brain, and transplantation of nerve ganglia, tend to prove that neuronophagy only works to the detriment of profoundly altered or dead nerve cells. And for this reason the author would substitute for neuronophagy the term "necrophagy."

73. The Source of Tuberculous Infection.

Calmette (*L'Echo Médical du Nord*, October 20th, 1907) summarizes the modern view as to the respective frequency of pulmonary and intestinal tuberculous infection. Allowing that experiments on animals have seemed to prove that fewer bacilli are necessary to produce infection by inhalation than by ingestion, he proceeds to show that the circumstances under which the experiments are conducted are not such as obtain naturally in the case of human beings, who are very seldom exposed for so long a time to such a concentrated stream of infected air. He cites a negative proof of his assertion by referring to medical practitioners, and especially to laryngologists, who are constantly exposed to risks from coughing and expectorating patients, and yet do not suffer in a preponderating degree from tuberculosis. Calmette believes that infection in man takes place much more frequently from human beings than from other animals; and that, while it may occasionally occur by way of the air passages, it is much more frequent, especially in early life, by the intestinal route, when the bacilli are finely divided, as in the milk of tuberculous cows, and when the ingestion of this poisonous matter has been repeated over and over again during a long period of time.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

74. Present-day Ideas about Tuberculosis.

Arthaud (*Prog. Méd.*, August 3rd, 1907) remarks that to-day no one believes that heredity is the only cause of tuberculosis. The discovery of Koch's tuberculin has raised a hope that a cure may be found. The author, however, thinks that heredity plays a very considerable part in the causation of tuberculosis. Practice shows to the attentive and impartial observer that in the subjects hereditarily tainted the disease loses its power, the tuberculosis is less severe, slower to develop, and, in consequence, at once more insidious and more persistent. Daily practice and observation show clearly that both the germ and the necessary predisposition may be hereditary. The theory of contagion was based upon the facts that cohabitation with a tuberculous subject is dangerous, and that to live in a house just vacated by a tuberculous subject is a nearly certain risk of inoculation. Nocard has made similar observations with animals. The author does not consider ingestion a very frequent means of acquiring tuberculosis. Cohabitation with and succession to the dwelling of a tuberculous subject he considers the most general causes, though he does not agree with those who consider contagion the only source of tuberculosis. Cleanliness and individual or collective hygiene are the essentials of all prophylactic measures. Turning to the pathological anatomy of the disease, the author thinks that too often in practice tuberculosis and emphysema are not differentiated. Emphysema is characterized by atrophy of all the elements of the lung. As a secondary effect the alveoli and lobules are dilated, resembling the sclerosis of interstitial pneumonia and of a fibrosing tuberculosis. Many practitioners on seeing a narrow, cylindrical chest at once diagnose emphysema, without considering that it is quite impossible to have within so constricted a chest lungs showing real emphysematous lesions. The first essential in the fight against tuberculosis is to diagnose it early; and here the medical man is met at the outset by a great difficulty—the ignorance of the public. Diagnosis must be made by auscultation and percussion; to the laboratory and experimenting must be left merely the clearing up of details. The proper teaching of percussion and auscultation is most important, but is, the author thinks, much neglected nowadays. The practical consequence is seen in the published statistics. Morbid anatomy shows a mortality for children between 3 and 15 years of age of 50 to 68 per cent.; while in the schools of Paris there are said to be only 20 per cent. of these children suffering from tuberculosis. This difference, the author thinks, is due to insufficient methods of examination. If, as is the case with most practitioners, a diagnosis of tuberculosis is only made in the presence of râles, infantile tuberculosis will become a rarity. With adults the same divergence in the figures occurs. The author believes that a perfected scheme of percussion is much more effective than even radiography in diagnosing tuberculous lesions in the lungs, while percussion is a very simple method, and radiography relatively difficult and complicated.

75. Family Periodic Paralysis.

Massolongo (*Rif. Med.*, September 21st, 1907) reports two typical cases of this comparatively rare disease (including his own cases; about 85 cases are all that have been hitherto recorded). As a rule, there is no marked neuropathic heredity in the families where these cases occur; the disease is limited to members of the same family (brothers and sisters)—for example, in Taylor's 53 cases, 35 came from three families. The author's two cases were brothers. If a member of a given family escapes the disease, his or her offspring escape also. There is no particular sex distribution; nearly all the cases are young adolescents (10 to 20 years). Amongst many doubtful predisposing causes, muscular repose seems the most important; nearly all the attacks begin during sleep and during rest, and on awakening the patient finds himself paralysed. If the attack occurs during the daytime, it is sometimes preceded by a sense of fatigue, weakness, and tired feelings, but it is a question whether these sensations are not really the initial symptoms of the paralysis rather than prodromata. Usually the lower limbs are first attacked, and after that the upper limbs, trunk, and neck. The face is never affected. Recovery takes place in the inverse order of the onset. Sensibility and consciousness are maintained. There is no sphincter paralysis; the tendon reflexes are abolished, and there is complete loss of electric excitability. The paralysis lasts from two to forty-eight hours, and is usually of a constant duration in the same case. The frequency varies from a quotidian type up to an interval of two, three, or six years. There are no convulsions and no sensation disturbance. Recovery is the rule, and treatment seems to have little effect either in prevention or cure. Of the three theories offered in explanation of this rare disease—(1) autointoxication, (2) inhibition, (3) evolutionary muscular disorder—the author seems to lean most favourably towards the last named.

76. Cardiac Fever.

Pinzani (*Clin. Mod.*, An. xiii, N. 29) found that out of 46 cases of uncompensated valvular disease fever was present in 38, and could not be accounted for by the presence of any complication (cases with complications being excluded). Normal temperature in uncompensated valvular disease is an exception; there is usually some fever, although it may be slight. The pyrexia may arise suddenly in connexion with an attack of cardiac asthma, or may be more chronic in type; in this case the fever is of a daily intermittent type, normal in the morning and going up a degree or more at night; defervescence takes place slowly. This cardiac fever is much more common in mitral lesions (24 out of 26), and may fail entirely in aortic disease (14 out of 20). As to its pathogenesis, it may be in part due to toxaemia (including the absorption of fluid containing many leucocytes which are known to cause fever), to increased muscular work in the heart, or more probably to endocarditis. Indeed the irregular character of the temperature, the sweats, the rigors, etc., resemble more nearly the chart of acute ulcerative endocarditis which is an exaggeration of what is seen in the ordinary cardiac fever of which the author writes. The presence of fever in an aortic case is rather in favour of the presence of an endocarditis, and is, therefore, a help in diagnosing the nature of the aortic disease, for in the aortic disease due to syphilis, atheroma, and of purely arterial origin, the temperature is very seldom raised, so that in addition to the other clinical signs which serve to differentiate these two classes of aortic disease (Corrigan's and Hodgson's disease) the presence or absence of fever may be of use. A similar process of reasoning is offered by the author to differentiate the cases of cardiac asthma which are accompanied by fever and those where it is absent.

SURGERY.

77. Appendicectomy by Transverse Incision.

Chaput (*Bull. et Mém. de la Soc. de Chir. de Paris*, January 1st, 1907), in a report on 3 cases of appendicectomy communicated by Duval, directs attention to a new form of external incision which he described for the first time in the summer of 1905. This incision, which is acknowledged to be a variant of that known as McBurney's, starts from the antero-superior iliac spine, and is carried inwards in a horizontal direction to the external margin of the rectus muscle, and, if it be found necessary, still nearer the middle line. It presents, Chaput holds, several decided advantages over other procedures. At the level of the spine of the ilium the fibres of the internal oblique and transversalis muscles are, it is stated, absolutely horizontal. There is consequently no need for so long a cutaneous incision as that in McBurney's method, which is carried across the muscular interstices. Moreover, the fibres of the two muscles being parallel, more exposure is afforded than by a separation of intercrossing fibres. In the horizontal incision there is no sacrifice of any of the nerves supplying the rectus muscle, and therefore much less risk of subsequent weakness of the abdominal wall. Eventration, which occurs so often after some methods of appendicectomy, is less likely to occur if the dissection of the muscles be made between and not through their fibres. If it be necessary to drain the wound, there is much less risk of eventration after the horizontal than after other incisions. Chaput asserts

that his operation affords much more room than that of McBurney, and also that, if necessary, the wound can be readily extended in the direction of the middle line.

78. Subacute Perforation of the Stomach.

Moynihan (*Annals of Surgery*, No. 2, 1907) reports 15 cases of subacute perforation of the stomach on which he has operated. This affection, the author states, is not infrequent, and has received less attention than it merits. It is defined as sudden rupture of a gastric ulcer of the chronic type. It differs from acute perforation in the clinical fact that by one agency or another there is a definite localization of the fluids escaping from the stomach, and in many instances a narrow circumscription of the peritoneal response to their invasion. The circumstances under which this limitation is affected are: (1) An empty condition of the stomach at the time of the rupture, which is often of a more or less traumatic origin; (2) plugging of the opening in the stomach with a tag of omentum; (3) the opening may be sealed over by layers of plastic lymph; (4) adhesion of the stomach, usually to the anterior abdominal wall, the under surface of the liver, or the pancreas, at the base of the ulcer. In every particular save that of intensity the symptoms are the same in subacute as in acute perforation. If no operation is practised at the time, there are three directions which affairs may take. Either a perigastric abscess may form, or a secondary rupture may occur, or, what the author believes is of most common occurrence, the gastric adhesions become firmer, the acute inflammatory conditions subside, and the patient lives on for years. The chief difficulty of diagnosis arises in discriminating a subacute perforation near the pylorus from a condition of cholecystitis. There can be no hesitation, the author insists, in advising instant operation if the patient is seen at the time of the onset of perforation. In cases seen in the early stage he has hitherto cleared the ulcer of adhesions, infolded and united by suture its margins, and fixed a flap of omentum over the lines of stitches. In some cases, however, more especially those in which the pyloric portion of the stomach is involved, he would be disposed to favour Sand's method of treatment, in which gastro-enterostomy is performed and the ulcer with its secure barrier is, if possible, left untouched. In other cases, however, in those, for example, in which the ulcer is situated on the anterior wall of the body of the organ and a wide area is covered by lymph and is adherent, it is thought that exposure and suture of the perforation, followed or not by gastro-enterostomy, would be the best course to adopt.

79. X-Ray Treatment of Malignant Tumours.

The Twentieth French Congress of Surgery, held at Paris October 7th to 12th (*Sem. Méd.*, October 9th, 1907), discussed exhaustively the subject of the *x*-ray treatment of malignant tumours. Whilst some of the members were very sceptical as to any good results being obtained from the Roentgen rays, the majority had found them to be very beneficial in the case of superficial malignant disease, rodent ulcer, lupus, and the like. With regard to solid and deep-seated tumours the consensus of opinion was in favour of surgical interference first and afterwards *x*-ray treatment to prevent, or, at least, retard, recurrence. It was also advocated in cases where the tumour was inoperable, and when operation was refused. In applying the rays to deep-seated parts a hard tube, at a considerable distance from the part to be acted upon, was recommended, that being considered the most certain method of preventing the absorption of the rays by the superficial tissues. When the centre of the tumour has broken down, which sometimes happens before the peripherae are affected, the skin covering that part must be protected from the rays, while they are directed to the circumference. Dermatitis from the rays was dwelt upon as a frequent occurrence, to be guarded against as much as possible, since the products therefrom were liable to be taken up by the lymphatics, and cause metastases in the glands. With only one or two exceptions the meeting was unanimous as regards the value of the *x* rays as a palliative, even when a positively curative effect was denied.

80. A Method of Using the Tongue for Supplying a Defect of the Cheek.

Bartlett (*Ann. of Surg.*, April, 1907) reports that recently, in the removal of a large ulcer from the face, he has overcome the difficulty of closing the extensive gap in the cheek, after having sacrificed all the mucous membrane between the upper and lower alveolar processes on the same side. A deep horizontal incision was made into the side of the tongue practically separating half of the organ into two flaps, one above the other. The edge of the upper flap was sutured by catgut to the fringe of the mucous membrane which adhered to the upper maxilla, and the edge of the lower flap was united in like manner close to the inferior maxilla. The separation of these tongue flaps exposed a raw muscular surface forming an excellent base on which the superficial tissues of the cheek could be implanted. By undermining the skin above and below the external defect the author had no trouble in bringing the edges together. The patient had no teeth on the affected side. One month after the operation he expressed himself as much satisfied with the result of the operation. The scar was soft and yielding; there was no difficulty in moving the lower jaw; and there was not any impairment of talking, or of mastication or of swallowing. The tongue, though firmly fixed in its new position, was still capable of going through a wide range of movement.

OBSTETRICS.

81. The Treatment of Placenta Praevia.

Zweifel (*Muench. med. Woch.*, November 26th, 1907) realizes that version of the child and bringing down a leg, but without delivering, is the best method of stopping the haemorrhage of placenta praevia, and at the same time preserving asepsis. The method of combined version, according to Braxton Hicks, helps one out of a difficulty when the os uteri is not dilated. Immediate delivery of the child undoubtedly improves the chances of the child, but as it is frequently associated with cervical tears, it increases the danger to the mother. He deals with the whole question on the basis of the experience obtained at the Leipzig University Women's Clinic during the eight years 1899 to 1906. Among 11,757 births there were 178 cases of placenta praevia. Thirteen of the mothers died, which gives a mortality of 7.8 per cent. Of these, 3 died of puerperal fever and 10 of haemorrhage. He considers this sufficiently serious to call for an earnest attempt to improve the treatment, although there is no doubt that it compares well with the mortality obtained before the present method of treatment was introduced, which reached as high as 40 per cent. The 3 patients who died of fever had been examined or plugged by practitioners or midwives outside. It is well known that persons who have lost a considerable quantity of blood are more susceptible to infection and offer less resistance to the action of the infective agent than ordinary persons. He deals in detail with the cases which died of bleeding. The quantity of blood which a woman can afford to lose is discussed. One woman recovered smoothly after a loss of 2,200 c.cm. of blood, 4 recovered after losing 1,500 c.cm., and so on. But when a patient is admitted without a radial pulse and dies after losing from 100 to 200 c.cm. of blood, he says that it is obvious that a very large haemorrhage has taken place before admission. In many cases the patient appears to have lost nearly a chamberful of blood—that is, between 1 and 2 litres). On sending for her doctor, she is ordered rest, and is told to send again if the haemorrhage recurs. This he condemns very energetically. If a large haemorrhage takes place, and there is the slightest ground for suspecting placenta praevia, means must at once be taken to prevent a recurrence of the bleeding. This can be done by plugging the vagina. The best and safest plug is the india-rubber bag dilator (Braun's). It has been stated that such a dilator does not keep. Zweifel, however, finds that it can be prevented from cracking or getting hard by keeping in oil or glycerine. It is taken out of the oil, rapidly sterilized by boiling for a few minutes, and is then quite ready for use, even if years old. Should, however, no bag be handy, one may plug with sterile wool or gauze, but this must be sterile. He considers that once a sterile packet has been opened it may no longer be used for this purpose. Failing perfectly aseptic wool, he advises boiling up the wool in water containing common salt (two teaspoonfuls to the litre), and a teaspoonful of acetic acid (or a tablespoonful of vinegar), so that the wool becomes styptic and aseptic. He shows by reciting the history of a case how a properly carried out plugging effectually stops the haemorrhage, and places the patient's life in safety. The plugging must be kept *in situ* for a considerable time—in the quoted case it was kept up for three weeks. Turning to the question of the child, he finds that, on the whole, the chances are not good. In a number of cases the child is born prematurely in the process of saving the mother's life. The first principle is therefore to plug after every serious haemorrhage, and to keep the plugging up for some time unless the labour sets

in. When labour is beginning and the patient bleeds, if one can carry it out, the best method of stopping it is to puncture the membranes. But this cannot always be effected. One should then perform version, using Braxton Hicks's method of combined version when the os is only partly dilated. Extraction should not be carried out at once; but inasmuch as it is the head of the child which causes tears in the cervix, the body may be brought through the os, and then one should wait until the muscular grasp around the child's neck relaxes. This may at times cost the child its life, but it will be found to save the mother from undue risk. The finger may be passed through the cervix so as to allow air to enter the uterus, and thus to allow the child to breathe, or a catheter may be passed into the child's mouth. In this way one may avoid asphyxia of the child. When the placenta is centrally placed, one should first attempt to reach the child for the purpose of turning by passing two fingers outside the placenta between it and the symphysis, as this does less harm to the child. If this fails one may pierce the placenta, but in this way one sacrifices the life of the child in practically every case. Lastly, he states that he does not believe that either abdominal or vaginal Caesarean section can be utilized with advantage to the mother in placenta praevia, and he is confident that these operations would not have saved any of his patients had it been resorted to.

GYNAECOLOGY.

82. Typhoid Infection of Ovarian Cysts.

Taylor (*Journ. Obst. and Gynaec. of the Brit. Empire*, November, 1907) writes that the *B. coli communis* and the pyogenetic cocci are the most frequent micro-organisms to infect, and produce suppuration in, ovarian cysts. Infection with the *B. typhosus* must necessarily be of rare occurrence, since it connotes the occurrence of enteric fever in a patient already possessing an ovarian cyst. He reports a case from which a large cyst was removed, containing two and a half pints of purulent fluid: a bacillus was obtained in pure culture from this pus eight months after the patient had had an attack of typhoid fever. The bacillus was definitely proved to be the *Bacillus typhosus*, and the agglutinating power of the patient's serum with typhoid bacilli proved that the illness from which she had suffered in the previous year had really been typhoid fever. The bacillus isolated from the cyst contents had almost lost its vitality; it was not pathogenic to guinea-pigs, was feebly motile, and grew slowly at first. It is probable that if the cyst had been allowed to remain unoperated on for some time longer, its contents would have become sterile from the death of the bacilli. Twelve cases of infection by this bacillus have been recorded. The difficulty of diagnosing typhoid fever from clinical signs and symptoms alone is well known. Suppurating ovarian cysts have simulated typhoid fever so closely as to be diagnosed and treated as cases of this disease, until the discovery of a tumour made the diagnosis clear. In typhoid fever the blood examination would reveal a leucopenia, the urine would give a diazo-reaction, and the patient's serum a positive Widal reaction. In suppurative ovarian cystitis there would be a leucocytosis, a negative diazo-reaction with the urine, and a negative Widal's reaction with the patient's serum. In the absence of bowel adhesions, the bacilli must be carried to the cysts by the blood stream; it has now been definitely established that the *B. typhosus* is present in the blood in every case of typhoid fever. From the bacteriological standpoint three varieties of post-typhoidal infection occur: (1) A mixed infection where both pyogenetic cocci and *B. typhosus* are present; (2) a secondary infection caused by the invasion of pyogenetic cocci into an organ whose resisting power has been lessened as the result of typhoid fever; (3) a pure infection by the *B. typhosus* alone. The case reported is a typical example of the last variety.

83. Echinococcus in Broad Ligament.

Horn (*Monats. f. Geb. u. Gynäk.*, December, 1907) observed this condition in a girl aged 20. She consulted him on account of profuse menstruation with severe pain in the left side of the pelvis. On examination a tumour of the size of a fist could be detected; it was not freely movable, and was diagnosed as a cyst of the left ovary. On opening the abdomen a tumour was found closely adherent to the intestine and omentum. On setting the adhesions free an echinococcus cyst was exposed; it came out like the kernel of a nut out of its shell. The greater part of the omentum was resected, and the abdominal wound closed without drainage. Recovery was rapid.

THERAPEUTICS.

84. Novocain.

Paul Reynier (*Rev. Thérap. Méd. Chir.*, November, 1907) has tested novocain both in the laboratory and clinically and finds it to be the most satisfactory of the substitutes for cocaine. He is of opinion that the success of stovaine will be of short duration. Its use in medullary anaesthesia has been followed by serious and even fatal accidents, while, after subcutaneous injections, not only has its vaso-motor action given rise to an inconvenient amount of haemorrhage, but also a too strong solution has caused a local reaction which in some cases has gone on to gangrene. A satisfactory local anaesthetic, as defined by Braun, must have the following properties: (1) Relatively to its anaesthetic power it must be less toxic than cocaine. (2) It must be non-irritating, must not cause hyperaemia, nor any tissue lesion, and must be easily absorbed—solutions which are strongly acid or alkaline are excluded as being injurious to the tissues. (3) The substance must be easily soluble, and the solution stable and capable of easy sterilization. (4) It must not when used in combination with adrenalin or suprarenin alter their vasoconstrictor properties. The author has found that novocain fulfils all these requirements. It is soluble in its own weight of water; solutions are neutral, can be boiled without decomposition, and are thus capable of easy sterilization. Novocain appears to be less toxic than any of the earlier local anaesthetics and to cause no local inconvenience even, according to Biberfeld, when used in very concentrated solutions. To test the toxicity of novocain, Reynier experimented on rabbits, using 10 per cent. solutions. Doses, as large as 30 cg. of novocain per kilog. of weight of the animal, were injected without giving rise to any symptoms. An injection into another rabbit of 40 cg. per kilog. caused convulsions, and the animal fell down paralysed in all four legs, while the respiration became chiefly diaphragmatic in character. Recovery was complete in an hour and a half after the injection. Even more symptoms were caused in another case by an injection of only 12 cg. of stovaine per kilog., and recovery was not complete after three and three-quarter hours. An injection of 73 cg. per kilog. caused death after twenty-eight minutes; but in another case, when a few drops of adrenalin had been added to the solution, recovery followed an injection of 75 cg. per kilog. From these experiments the fatal dose seems to be, as Heincke and Loeven also state, about 73 cg. per kilog., and the dose at which symptoms of intoxication are liable to appear to be about 30 cg. per kilog., although Heincke and Loeven showed slight symptoms with a dose of 25 cg. This compares most favourably with cocaine, for which the author found symptoms of intoxication to appear with a dose of 0·05 cg. per kilog., and with stovaine, for which the corresponding dose is 8 to 10 cg. per kilog. Moreover, the toxicity of novocain is diminished by the addition of suprarenin, a fact which Heincke and Loeven demonstrated, and which the experiments described above support. The author undertook further experiments to show that, unlike cocaine, novocain had no effect on the heart, the result in fatal cases being due to respiratory paralysis. During the last five months the author has performed 32 operations under novocain, including operations upon cases of tuberculous ganglion, sebaceous cysts, lipoma, hydrocele, erectile tumour, fissure of the anus, adenoma of heart, hernia, foreign bodies in the hand. A suppurating ganglion of the arm was painlessly removed under an injection of 8 cg., and a lipoma of the shoulder with 6 cg.; the largest dose used was of 15 cg. for an inguinal hernia; the operation lasted fifteen minutes, and the anaesthesia lasted until the last stitch had been inserted. The experiments on animals show that in these cases larger doses, up to 30 or 40 cg., could have been used without danger if they had been required. The addition of adrenalin increases the anaesthetic power of novocain. In 2 cases in which novocain was used alone, one of inguinal hernia, the other of Alexander's operation, the skin incision was painless, but the anaesthesia of the deeper tissues was incomplete and novocain had to be reapplied to the wound. In all cases an interval of five or six minutes should be allowed between the injection and the beginning of the operation. From these cases it appears that novocain with adrenalin possesses an anaesthetic power almost equal to that of cocaine, and greater than that of cocaine on doubling the dose, which can be done with safety. As applied to mucous surfaces, however, the anaesthetic power of novocain is less than that of cocaine. The author also reviews the literature of the subject, and shows that for spinal anaesthesia, in urology and in dentistry,

the general opinion as to novocain is a very favourable one. For eye work cocaine is more satisfactory. The author recommends novocain as worthy of further trial. He finds that with relatively small doses, which can be further diminished by the addition of suprarenin, and which can be increased without danger, an absolute anaesthesia can be obtained with a security not possible with cocaine or stovaine, for either of which the dose cannot be increased without fear; the anaesthesia under novocain is of long duration, and there is a minimum of danger, thanks to the ease with which the solutions can be sterilized and the absence of the phenomena of irritation.

85. A Polyvalent Bactericidal Serum.

DEUTSCHMANN (*Beit. z. Augenheilkunde*, 69 Heft, August, 1907) has obtained a serum from rabbits which he fed for eight days upon a diet containing dried sterilized yeast. The serum has been found by him to be very active in cutting short all infective processes. He himself has used it for hypopyon ulcer, sympathetic cyclitis, serous iritis, and many other eye diseases, with very encouraging results. Deneke of Hamburg has tried it in 24 cases of acute croupous pneumonia. In half of them the temperature fell at once; in some cases there was a crisis with critical sweat on the fourth day; in one the crisis was on the second day. The serum has cut short attacks of tonsillitis, and a severe case of puerperal sepsis recovered after injections of yeast serum. The serum is not a specific, but is polyvalent. It is not bactericidal, does not agglutinate yeast cells, staphylococci, streptococci, pneumococci, or tubercle bacilli. It does not alter the opsonic index; it does not act as an antitoxin, but Deutschmann thinks that it nourishes and stimulates the cells which produce antibodies. Experiments have shown that it is capable of inhibiting inflammation caused by introducing septic material into the anterior chamber. The serum acts best in cases of pneumococcal infection.

86. Treatment by Ions.

GIOVINE (*Rif. Med.*, November 2nd, 1907), after explaining the *modus operandi* and the scientific basis of ion treatment, records 3 cases treated by chlorine and iodine ions respectively. The first case was that of a man, aged 31, with obstinate gonorrhoeal arteritis of the knee which resisted all treatment. Fifteen applications were made in all. The knee was covered with wool soaked in a 2 per cent. solution of KI, and the negative electrode applied to the part for 40 to 60 minutes. The current varied from 15 to 55 m.a. The positive pole was applied to the upper part of the thigh. From the very first application an improvement was noticed in the limb, the ankylosis and stiffness lessened. The knee was reduced from 36 to 32 cm. in circumference, and the difference in length between the two limbs brought down from 3 to 1 cm. only. Eventually the lameness almost disappeared and the movements of the joint were in great part recovered. The second case was one of tabetic arthropathy of the knee joint. There the chlorine ion treatment was first tried (using a 2 per cent. solution of $NaCl_3$), but after three applications the joint was obviously much worse; as soon as it had returned to its previous condition the iodine ion was substituted, and the results were excellent. The fluid was quickly absorbed, and the joint soon became almost normal in shape and size. The third case was one of sclerodactylia; here thirty iodine applications were given and forty chlorine in the course of five months. Usually there was an interval of three days between each application. In this case the chlorine ion gave the best result. Before treatment the patient could not feel her hands and had much pain and sense of tension in the fingers, whereas after treatment she regained to a large extent the use of her hands and fingers, and was able to sew.

PATHOLOGY.

87. New Growths.

WESTENHOEFFER (*Berl. klin. Woch.*, May 13th, 1907) considers that, in spite of all the organized work which has been done during the past few years on the pathology of malignant disease, the nature of new growths has not yet been satisfactorily explained. It appears that the problem will not derive its solution from histological and morphological investigations. One must therefore turn to experimental and biological methods for help, and it behoves one at present to be extremely careful in drawing conclusions from such methods, since our knowledge of this form of investigation is much limited. In describing a hypothesis which he has evolved from manifold considerations, he points out that the experimental proof is not yet complete. The characteristic feature of all true tumours (blastomata) is their independence or autonomy in relation to the organism. Although they are derived from the cells of the organism, they stand in a sort of opposition to the latter, and either do not render any assistance to the body or even harm it. The cells of the growths are therefore to be regarded as parasites, living at the cost of the organism, and yet doing nothing in return. This parasitism is most marked in malignant growths, but is also present in benign tumours. There is no real fundamental difference between the various forms of growths, and this becomes more marked when one remembers how often tumours which are regarded as benign become malignant. Cancer cells have been regarded as parasites, but usually as foreign structures, and not as parasites in the sense in which Westenhoeffer regards them. There is, he says, no more convincing proof of the parasitic nature of these cells than is to be found in the limitless growth which destroys everything with which it comes in contact, and in the way in which it forms metastases. Theoretically, one need only presuppose a single cell, which can multiply without end. The stroma is only of importance in that it supplies the growth with blood vessels. When a cancerous growth encroaches on a cavity, it fills the space out without forming stroma. He next inquires into the reason of the change in the characteristics of the cells. Hansemann has termed this change "anaplasia," Beneke has called it "kataplasia," but neither of the authors have offered any explanation as to why the change takes place. Ehrlich has shown what the potential growth power of a cancerous tumour can be, and, when expressed in figures, no one can actually form any conception of the magnitude. The cell has lost its specific properties, it has become much more simple, and has taken on a lower, more vegetative, form of life. It has been suggested on numerous occasions that the cells are really embryological cells; but even if the embryonic cells are capable of growing more rapidly than cancer cells, they always preserve their physiological characters, and never assume this destructive power of tumour cells. We know, however, that man, the most highly organized creature, originally took his origin from a single cell. We can observe the persistence of atavistic cell forms in certain conditions, but it appears to be quite impossible for the organism, as a whole, to return to its original primitive form. Nevertheless, there is no reason to doubt that single cells may, under the influence of certain conditions, especially when such cells have already acquired a more or less independent life, return to the type of original cells—that is, become atavistic cell forms. The author therefore would suggest that the nature of all true tumours lay in the fact that the cells have lost their differentiation and relationship to the organism and have returned again to the conditions of the original cells. Under these conditions the cell becomes parasitic to the organism. In order to gain support for this theory, he has attempted to show that carcinoma substance acts on all forms of albumen, including animal and vegetable albumen, and not heterolytically on human albumen alone. In three cases he showed that there was a distinct action toward vegetable albumen, and also toward the albumen of fishes. Tested biologically by the method of deflection of complement, the serum of a rabbit treated with carcinoma material exerted an influence on the juice of crushed carcinoma, on dissolved vegetable albumen, and on human albumen. Normal rabbit's serum did not influence the same fluids. In this way he finds that the chemical and biological results stand in favour of his theory. However, when he carried out a chemical control experiment, it seemed as if the whole matter would have to be refused, since it appeared that normal liver tissue was also capable of digesting vegetable albumen. He soon found that the difference between normal liver tissue and carcinoma tissue was that the former could only digest itself and also foreign vegetable albumen, while the latter could digest both these and also the albumen of the tissue of its own organism. The experiments in this direction are still in progress, and the theory must stand or fall by the further results. The changes in the cells can only take place slowly. The determining cause of the onset of a growth varies according to the individualities of different persons, but it may be assumed that some people, and particularly old people, respond to slight stimuli with local reactions in the tissues, while others, especially young persons, react more generally. The individual differences are well exemplified by the spontaneous curative processes which have occasionally been observed in malignant tumours, and by the fact that many growths take years to develop.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

88. The Scarlet-Fever Heart (Myocarditis Scarlatinosa).

Pospischill (*Wien. klin. Woch.*, September 12th, 1907) states that at the onset of scarlet fever—often before the appearance of the eruption—certain characteristic cardiac symptoms are frequently present. These are quite distinct from those due to the implication of the endocardium, such as occasionally occurs in the later stages. There may be a loud blowing murmur, with its maximum intensity either at the apex or pulmonary area, accentuation of the second pulmonary sound, arrhythmia, and slight outward displacement of the apex beat. But the most characteristic, and frequently the only, symptoms are reduplication of the first sound and a peculiar rough, scraping, or scratching murmur, resembling, when well marked, that of pericardial friction. The latter is usually audible all over the sternum, including the tricuspid area. The area of greatest intensity is most frequently at the base, at the level of the third left costal cartilage, and the murmur may be limited to this position. Not infrequently the second sound is also reduplicated. These cardiac symptoms usually disappear in a few days, but may recur during convalescence if there are pyrexial complications, such as rheumatism, adenitis, or nephritis. If they have not been present at the onset of scarlet fever they are seldom observed during sequelae. They are evidently more often due to myocarditis than pericarditis, as they do not influence the prognosis, and are not accompanied by effusion. In 3 cases in which these cardiac symptoms had been observed the pericardium and endocardium were found *post mortem* to be normal in 2; in the third case there was fibrino-purulent pericarditis. These symptoms of myocarditis are peculiar to certain epidemics. At one time they may be found in the majority of cases, at another they may be regularly absent. Their presence is of great diagnostic value. Thus a boy was languid, pale, and anaemic. There were no other abnormalities except slight cardiac irregularity, and the characteristic reduplication of the first sound. The diagnosis of scarlet fever was justified by subsequent typical desquamation. In the varicella wards a number of children, though apyrexial, became restless, and were obviously ill. Scarlet fever was diagnosed, because the first sound of the heart at the base was reduplicated and of a scraping character. There was no eruption or other sign, but the correctness of the diagnosis was shown by the occurrence of desquamation. This was followed by an outbreak in the ward of typical scarlet fever. The great diagnostic value of the cardiac symptoms of scarlet fever has not previously been recognized.

89. Pupillary Inequality in Diseases of the Lung.

Widely varying estimates have been made of the frequency with which the pupils are found unequal in diseases of the lungs and pleura. R. Massolongo (*Il Policlin.*, March, 1907) considers that there has been a good deal of confusion as to which is the abnormal pupil. Inequality exists in about 30 per cent. of all pleuro-pulmonary cases taken together. It is most frequent in tuberculosis and acute pneumonia (40 per cent.), less frequent in pleural effusion (25 per cent.), acute bronchitis (20 per cent.), emphysema (12 per cent.), and chronic bronchitis (10 per cent.). Sometimes mydriasis passes from one eye to the other, sometimes it affects both eyes at once. Where the pulmonary disease is unilateral there appears to be no special tendency for the pupillary abnormality to affect the same side. The pupillary symptoms throw no light on the origin, nature, or course of the pulmonary disease. In phthisis they seem usually to be connected with widespread disease, in other ailments their frequency is greatest in the most acute cases, especially those with continuous fever. The author does not accept the mechanical theory, which would explain these cases as the result of direct irritation or stimulation of the sympathetic iris-dilating nerve fibres. This theory could not explain all cases. The frequent daily variations and the fact that in pleural effusion thoracocentesis makes no difference to the pupillary symptoms are opposed to this theory. The absence of other sympathetic symptoms is also against it. A more possible theory is that which sees in mydriasis a reflex result of visceral irritation. But Massolongo considers that the most probable explanation of the phenomenon is that it is toxic in origin, a part of the organic reaction to the microbic toxins. In support of this theory he has examined the pupils in many cases of toxic diseases not affecting the lungs (enteric, measles, scarlatina, influenza, malaria, erysipelas, diphtheria, etc.), and finds that in them also a fugitive mydriasis, commonly unilateral but sometimes variable and sometimes bilateral, is to be observed as frequently as amongst cases of pleuro-pulmonary disease. He considers that the toxins act on an iris-dilating centre in the bulb. Massolongo calls attention to the reasonable deduction from his theory, that the disappearance of the phenomenon ought to be a point of good prognosis showing diminished toxin formation, but in fact he has found it impossible to connect it with the onset of convalescence. He compares his observations with those of Signorelli, who has described a pupillary inequality due to splenic congestion, and found especially in patients suffering from enteric and malaria. As regards at least two infective diseases, therefore, Signorelli's observations confirm the author's views. Signorelli finds mydriasis much more commonly on the left side. Massolongo is satisfied that amongst his own cases there has been no such marked preference for the left side.

90. Artificial Pneumothorax and the Opsonic Index.

Pigger (*Beit. zur Klin. der Tuber.*, 1907, Heft 4) gives an account of five cases treated at the Schatzalp Sanatorium, Davos, by the production of an artificial pneumothorax. The notable improvement remarked in cases of lung tuberculosis after the occurrence of pneumothorax suggested this method of treatment. An outline of the methods employed by various authors is given—that of Brauer, which the author thinks most satisfactory—in detail. Brauer makes an incision, under local anaesthesia, through skin and external muscular fascia, draws aside the muscle fibres, and pierces the pleura, thus revealed to sight, with the cannula, obliquely. Nitrogen is the gas generally introduced into the pleural cavity, the object being to compress the lung and thus enable it to remain quiet. All authors are agreed that, as a result, fever disappears, as also expectoration, and elastic fibres and tubercle bacilli are no longer demonstrable. The pulse diminishes very often in frequency; the general condition is also favourably influenced. Specially good results have been observed in haemorrhagic cases. A few accidents have resulted, which may be avoided in future, especially by the use of Brauer's method, such as air-embolism, aspiration pneumonia of the healthy lung, haemoptysis through injury to a large lung vessel, etc. The subjective and objective effects of the shifting of the mediastinum are trivial in comparison with that produced by a tuberculous pneumothorax. Pigger gives a detailed account of the 5 cases observed by him; he also took the opsonic index before and after the production of the pneumothorax. His results are charted together with the temperature. These charts show in general that the opsonic content of the blood is on the whole raised by the artificial pneumothorax. A distinct positive phase was seen after the nitrogen injection and after each increased repetition of this. When complete compression of the lung was obtained and no tuberculous complication arose the opsonic index, after an initial variation, remained permanently above normal. This corresponded to the healing observed afterwards. The compression of the lung appears to localize the infection and prevent it from entering the general circulation. The author considers that this treatment should be given a trial, not only in severe one-sided cases of phthisis, but also in slighter cases, where long-continued general and specific treatment shows no visible result. A permanently lowered or variable opsonic index would strengthen the indication. It must only be used in cases of one-sided phthisis, or where the other lung is only slightly and also not actively affected.

SURGERY.

91. The Clinical Significance of McBurney's Point.

At a meeting of the New York Academy of Medicine (Section of Surgery), held on December 6th, 1907 (*Med. Rec.*, January 25th, 1908), Arnold Sturmdorf read a paper on this subject. He said that, regarding this, Dr.

McBurney wrote as follows: "The exact locality of the greatest sensitiveness to pressure has seemed to me to be usually one of importance. Whatever may be the position of the healthy appendix as found in the deadhouse—and I am well aware that its position when uninflamed varies greatly—I have found in all my operations that it lay either thickened, shortened, or adherent very close to its attachment to the caecum. This, of course, must in the early stages of the disease determine the seat of greatest pain on pressure, and I believe that in every case the seat of the greatest pain, determined by the pressure of one finger, has been exactly between 1½ in. and 2 in. from the anterior superior spinous process to the umbilicus. This may appear to be an affectation of accuracy, but as far as my experience goes the observation is correct." Antedating the adoption of present-day methods, the introduction of McBurney's point marked an epoch and a phase in the evolution of their mastery over appendicitis: nevertheless, it had proved an equally potent factor in leading to error and fruitless mutilation. McBurney's point, vested with pathognomonic dignity for almost two decades, must be relegated to the humble rank of a possible contributory diagnostic factor. While it was true to-day, as it was twenty years ago, that a typical McBurney's point might be present in a typical appendicitis, it was equally true that appendicitis might exist in the absence of a McBurney's point, and, most important, a typical McBurney's point might be present in the absence of appendical involvement. Much information of an empirical nature, gleaned from the observation of Ross, MacKenzie, Head, and others, on the distribution and character of the pain in visceral disease, had not found general clinical utilization. Ross contended that in visceral disturbances pain or tenderness radiated along the distribution of the somatic nerves springing from that segment of the cord which supplied the sympathetic fibres to the affected area. MacKenzie and Head defined certain areas which correspond to the cutaneous termination of the pain fibres springing from the cord segment involved by the disturbed viscus. These investigators had established one clinical fact—that any given point of pain might be either the direct expression of a contiguous disturbance or the transmitted manifestation of a distant lesion. In other words, an existing McBurney's point might represent the direct pain of a disturbance within its own area, or the reflected pain focus of a distant lesion. Head insisted upon the gentlest possible tactile exploration of the cutaneous surface, eliciting superficial areas of pain only; while McBurney's method, the direct pressure of one finger, of necessity elicited both superficial and deep-seated pain points at the same time. Therefore it followed that there were two McBurney's points—one superficial, the other deep. The superficial pain point presented all the characteristics of Head's so-called "referred pain points," indicating a disturbance beyond the limits of their own area; while the deep or direct pain point, when present, would be found to indicate a local disturbance within its immediate vicinity. Robert T. Morris said that for the most part McBurney's point served them. They did get a definite tenderness at that point in acute infections. It was also true that tenderness at McBurney's point might be reflected from the right side of the abdomen, but not from the right pelvis—a point that, so far as he knew, was not made by authors. If there was an inflammation of the appendix they had a hyperaesthesia over the border of the right lumbar plexus, but not of the left one. If there was an inflammation of the right oviduct both lumbar plexuses were hyperaesthetic together, and not singly, so far as his observations went. Samuel Lloyd said that he believed McBurney's point did much harm, and he himself placed absolutely no dependence upon it.

92. Plastic Resection of Mammary Gland.

WARREN (*Ann. of Surg.*, June 1907) describes an operation he has performed on eighty-five occasions, which is designed, in cases of benign tumours of the mammary gland, to take the place of those exploratory incisions which are often inadequate for the purpose, or are so situated as to leave a scar in a part of the integument frequently exposed to view. In his early operations the author began with an incision devised by Gaillard Thomas, which is made in the fold produced by the fall of the breast upon the thorax, and encircles the lower half of the breast. He has changed this line for one coinciding with the edge of the outer hemisphere, as this incision gives freer access to the upper and outer hemispheres of the gland, which constitute more frequently the seat of new growths than the inner quadrants. By prolonging the incision slightly along the anterior axillary border the breast can be thrown over towards the sternum, and the inmost regions of the gland be thus freely exposed. The incision, it is stated, should be carried down to the outer edge of the pectoralis major, and the dissection be continued between the deep layer of the superficial pectoral fascia which covers the posterior surface of the gland and the deep pectoral fascia which invests the pectoral muscle. The loose connective tissue between the two layers of fascia enables the dissection to be carried readily between the gland and the muscle, and the operator can now manipulate the breast so as to expose the whole of its posterior surface. The gland tissue, though covered by fascia, is readily recognized beneath this, as are also any cysts or tumours that may be present. After exposure of the growth by incision of the fascia, the segment of the gland containing the tumour should now be removed by two radiating incisions, which, meeting at the centre of the gland, include a V-shaped portion of its tissue. The knife should make a clean cut through the gland tissue down to the loose fat lying in front of the gland, but the adipose layer should not be removed, as its presence is important in preventing a subsequent depression of the skin. No attempt should be made to dissect out the tumour, whether it be solid or cystic, as such attempt would cause considerable laceration of the surrounding structures. In the case of a single solid tumour the V-shaped wound should be carefully approximated with a double row of sutures, one adjusting the anterior edges of the gap, the other its posterior lips. The full thickness of the gland at each side will thus be approximated, and no gap will be left to produce a depression on the surface of the breast. If cysts be present it will be necessary to explore the gland by a series of radiating incisions varying in number from three or four to eight. In this way most of the smaller cysts are laid open, and afterwards permanently disappear. Cysts the size of a pea can be snipped out with scissors. In case an operation has been performed for the purpose of settling a doubtful diagnosis, the breast, the author asserts, may be sliced almost as freely as a brain at an autopsy, provided the radiating method is adopted, without danger of interfering with its vitality. It is usually unnecessary to close these incisions by sutures, as the raw surfaces drop together naturally when the organ is replaced in contact with the temporal muscle. In his concluding remarks the author states that the advantages of this operation are the slight risk and discomfort to the patient, who may be assured that it can be performed without a prolonged convalescence and without disfigurement of any kind. It has proved a satisfactory substitute for the disfiguring exploratory incision on the anterior surface of the breast, for the uncertainty of puncture, and for the mutilation of amputation.

OBSTETRICS.

93. Bloodless Labour.

GALLE (*Zentralbl. f. Gynäk.*, No. 47, 1907), practising in Silesia, was requested to attend a butcher's wife in labour in a distant village. The placenta was retained, and the midwife was puzzled by the total absence of any bleeding in the course of the labour. The patient, aged 33, had only once been pregnant before, having given birth spontaneously to a healthy boy twelve years previously. She was of small stature and emaciated, although living in easy circumstances. Galle arrived at the patient's home at 1 p.m. Labour had commenced at 4 a.m., and a healthy female child had been spontaneously expelled at 8.30 a.m. Not a drop of blood had escaped from the vagina, and there was none about the vulva when Galle introduced the catheter, for he detected great distension of the bladder. After all the urine had been drawn off, the uterus was found to lie backwards, behind the intestines, deflected to the right. The fundus nearly reached the liver. Galle pressed on the fundus and brought the uterus, with some difficulty, into its normal position. No fluid blood nor clots came away. The placenta was expelled twenty minutes after pressure had been exerted on the uterus. There was no blood amongst the torn membranes, and two small firm coagula detected on the raw surface of the placenta itself represented the sum total of haemorrhage in this labour. About a drachm trickled away shortly after the expulsion of the placenta. The rest of the puerperium was uncomplicated, and the child was reared. According to Ahlfeld, the ratio of bloodless to ordinary labours is 5 in 6,600.

94. Intrauterine Treatment of Puerperal Infections.

DR SALM (*La Clin.*, December 6th, 1907) says that sepsis is liable to originate in lacerations of the parturient canal,

and is favoured by the presence of débris and clots in the uterus. Clots are always present in the uterus, their number being often very great when there has been haemorrhage during delivery. Endometritis is the usual cause of retention of membranes, and may be due to local or constitutional causes. When puerperal infection is localized, intrauterine treatment is essential; when the infection is generalized or septicaemic, such treatment is accessory, but should not be omitted. Among antiseptic reagents, he considers corrosive sublimate the most useful, also oxygenated water and lysol, while iodoform and hyperborate of sodium are valuable. All septic products and débris must be thoroughly evacuated, and wounds dressed with iodoform, and serotherapeutic treatment instituted. After abortion the danger of sepsis is greatest and calls for vigorous treatment; curettage is often necessary. Drainage, quinine, ice, and ergotine are useful adjuvants to the local treatment.

95. Intrauterine Fracture of Cranium.

Elias (*Nederland. Tijschr. van Geneesek.*, ii. 1906, No. 7, and *Monats. f. Geb. u. Gyn.*, November, 1907) relates that a pregnant woman, four weeks before term, fell from a second-floor room, striking the right buttock. On the next day labour came on, and the child, which it appeared was evidently alive immediately before the accident, was delivered dead. The base of the skull was not injured, but two fissures were found in the right parietal and one on the left side of the frontal bone, with an indentation. Punctiform haemorrhages were detected in the cerebrum.

GYNAECOLOGY.

98. Glycosuria and Abdominal Tumours.

Evelt (*Monats. f. Geb. u. Gyn.*, December, 1907) was consulted about a woman, aged 41, subject for a year to abdominal pains and dyspnœa. The period was perfectly regular, but a tumour had developed and a physician fancied that he could define a fetal head with clear ballotement. Dysuria set in, attempts at micturition causing spasmodic pains. Evelt found that the breasts, vulva, and cervix uteri showed none of the signs of pregnancy. The body of the uterus appeared to be the seat of a fibromyoma. There was a tense tumour posterior to the uterus and another, much larger, anteriorly; it was the latter which had been taken for a fetal head, and Evelt admitted that appearances were deceptive, and added that the patient herself believed that she was in the eighth month of pregnancy. On examining the urine it was found to contain albumen and also much sugar. All the usual tests for glucose were carefully conducted. The tumours certainly caused great inconvenience on account of their united bulk. There appeared to be none of the symptoms of diabetes besides the presence of much sugar in the urine. Evelt performed supravaginal hysterectomy, taking away a large cystic tumour of the left ovary and a smaller tumour of the right ovary together with the fibroid uterus. There were no complications during convalescence. One year after the operation the patient was in good health, and the urine was entirely free from sugar or albumen. It appeared that those abnormal compounds had both vanished from the urine directly after the operation, in spite of unrestricted diet. Evelt believed that the glycosuria was due to pressure of the tumours on the pancreatic ducts. He refers to a case of glycosuria which was found to be caused by calculi in Worsung's duct.

97. The Role of the Gonococcus in Disease.

Taylor (*Amer. Journ. Obstet.*, January, 1908) has written a very complete essay on this subject, adding a copious table of references. He dwells on some of the complications of gonorrhoea said to be rare, though their origin must sometimes be overlooked, as in the case of certain cutaneous affections. He concludes that the accumulated knowledge, of which he has made a summary, shows that the gonococcus is one of the most formidable microbes met with in pathology, and takes a high place with those of syphilis and tuberculosis. Taylor notes how it attacks the human urethra, and there gives rise to both a catarrhal and hyperplastic inflammation, from which may follow chronic urethritis and a tendency to stricture; it invades the testes and their appendages by contiguity of tissue, threatening sterility. Although as a rule limited in its effects to the subepithelial connective-tissue layer, it in some cases invades the venous and lymphatic radicles of the genitals in both sexes, and produces local and general disturbances. By this extension the whole organism may be more or less seriously attacked, and much suffering and disability may result. The gonococcus then becomes a true factor of septicaemia, and serious, and even mortal, illness may ensue; rheumatic complications, as has long been known, are the most frequent complications of that type. Generalized systematic infection is most commonly observed when by extension (usually from the joints) the heart in part or in whole is attacked, then severe, and perhaps mortal, illness may be produced. Nevertheless, such is the antitoxic power inherent in the blood serum that in very many cases the gonococcus is destroyed, even when vital parts are attacked. By reason of its toxins, or perhaps of the microbe itself, more or less structural change is produced in the cerebro-spinal system, which may be local or more or less generalized. Gonococcic invasion of the pleura is not uncommon, and various forms of phlebitis may thus result. The spleen, it has been shown, may be attacked, but a liver complication of this kind has not been recorded. A large range of cutaneous and mucous membrane lesions have their origin in the gonococcus, appearing as ulcers, abscesses and follicular inflammations, and erythematous and keratoxic exanthemata. Bone lesions of mild and severe forms are more or less remotely dependent on the virulent potentialities of the gonococcus. Taylor then summarizes the ravages of the microbe in the entire genito-urinary tract as high as the kidneys. The question as to whether an inhibitory serum may be produced to kill or neutralize the virulent agent remains unsettled. The gonococcus may lie latent in tissues, crypts, and follicles, and may at any time become potential. It may also lead to mixed infection and prepare the soil for other dangerous microbes. In short, it is capable of producing the most far-reaching infections to which the human race is liable.

THERAPEUTICS.

98. Vibration Massage.

Kurt Witthauer (*Therap. Monat.*, February, 1907) describes the different conditions in which, during an experience of more than three years' duration, he has found vibration massage a useful treatment. The greater part of the article is given up to a discussion of gynaecological cases. A year ago the author published an article on the treatment of retroflexions, and he now reaffirms his conclusion that an uncomplicated mobile retroflexion causes no symptoms and needs no treatment; in cases where there is no disease of the uterus or its appendages the symptoms are not due to the retroflexion itself, but to parametritic or perimetritic bands, and the symptoms disappear under treatment by vibration massage, even though the uterus remains in its abnormal position. Cases especially suitable for treatment are those of parametritis posterior atrophicans, in which dysmenorrhoea is the prominent symptom. On examination of these cases it is often found that the genitalia are normal, that there is no malposition of the uterus, no stenosis or catarrh, and the dysmenorrhoea may be considered of nervous origin. If, however, pressure be applied on all sides of the vestibule, especially forward, the patient will suddenly complain of pain, and if the finger be then passed to the posterior wall of the vagina there will often be found one or more bands or a shortening of the whole vaginal wall. Such cases may be treated by vibration massage, even in young people, without any danger of causing sexual excitement. Two examples are given. In one, the patient, a girl of 18, had for about three years suffered from severe cramp-like pains in the abdomen at her menstrual periods, which occurred at intervals of from six to eight weeks. For a year she had been treated for endometritis, and the treatment had caused a vaginal discharge from which she suffered to disappear, but had not affected the pain on menstruation. The uterus was small, normally situated, and there was slight endometritis; in the posterior vaginal wall two bands, which were tender on pressure, could be felt, and the whole wall was shortened and unyielding. After the vibration massage had been applied on twelve occasions, the next four menstrual periods were without pain, and the patient had no further symptoms; a year later she was still quite well. The author calls special attention to another set of cases in which he believes the sympathetic nervous system is involved, and which he describes as cases of sympathicismus. The patients complain of pain in the abdomen, in the iliac regions, in the neighbourhood of the umbilicus, and over the stomach; sometimes also of pain in the chest, on both sides of the sternum, and in the throat. Often there are also symptoms of disordered digestion, as well as heart and general nervous symptoms. On vaginal examination

there will be found in a large percentage of the cases signs of parametritis atrophicans, with or without retroflexion, painful bands, or shortening of the vaginal wall. On a bimanual examination, higher in the pelvis, the neighbourhood of the plexus hypogastricus, or solaris, usually of one side, is very tender on pressure. On palpating the abdomen there is often a painful spot below the stomach usually to the left of the mid line—the spot corresponding to the ganglion coeliacum. Not infrequently there are tender points also near to the spinal column and over the intercostal nerves. In these cases disease of the intestine, stomach or kidneys must first be excluded, and neurasthenical and hysterical symptoms must be noted, because the presence of hysteria necessitates a less favourable prognosis. For treatment, Hoencke has already recommended massage along the sympathetic. The author recommends vibration massage first of the vaginal wall and then, if this is not enough by itself, of the abdominal wall over the nerves from below upwards. Spirit compresses over the abdomen are also applied at night, and if necessary galvanism is combined with the massage. Notes of cases are given, and show exceptionally good results. Apart from gynaecological cases, the author has found vibration massage to be effective in cases of colitis membranacea. In one case in which the symptoms were of nine months' duration, and the patient in spite of treatment by a doctor had become miserably ill, thin, anaemic, and nervous, treatment by vibration massage combined with other measures caused complete recovery in five weeks' time. Vibration massage is also recommended for chronic constipation in young people and for muscular affections, especially recent ones, whether of rheumatic or traumatic origin.

99. Hexamethylentetramine and its Salts.

P. BERGELL (*Deut. med. Wock.*, January 10th, 1907) says that, in spite of the importance of hexamethylentetramine, little is known of its chemical constitution and of its behaviour in the organism. In order to follow this subject out more exactly, he deals with (1) a method of preparing it from urine; (2) a method of determining it as a double salt with mercuric perchloride; and (3) the proof that while the substance appears in the urine, about 50 per cent. of the quantity taken in is oxidized in the organism. (1) The preparation of hexamethylentetramine from urine is as follows: 500 c.cm. of urine is rendered just alkaline with ammonia, and is then concentrated to a syrupy consistence *in vacuo* at a temperature of from 50° to 60° C. The residue is mixed well with about 50 grams of dehydrated sodium sulphate, and then dried sharply *in vacuo* over sulphuric acid. Lastly, it is boiled out several times with chloroform. After getting rid of the chloroform the residue is extracted in absolute alcohol, and the hexamethylentetramine is precipitated from the solution by passing gaseous hydrochloric acid through. The method can be employed as a quantitative method. (2) Determination in urine. To 50 c.cm. of normal urine 1 gram of hexamethylentetramine is added, and the solution is acidified with acetic acid. The substance is then precipitated out of solution with 130 c.cm. of a 10 per cent. solution of perchloride of mercury. This is allowed to stand for twenty-four hours at room temperature. The precipitate is removed by filtration, and well washed with a weak solution of the perchloride of mercury acidified with acetic acid; it is then transferred into a Kjeldahl flask. After destroying the organic matter the fluid is brought up to 500 c.cm., and of this 100 c.cm. is used for N determination. The determination, carried out in this way accounted for 93.3 per cent. of the hexamethylentetramine. Feeding a dog with 6 grams of this substance he only recovered—that is, determined—2 grams in the urine. Hexamethylentetramine as an organic base forms salts and double salts with acids. It can behave as a monavalent and divalent base. A solution of hexamethylentetramine and sodium acetate in the molecular proportion of 1 to 2, after concentrating *in vacuo*, behaves differently to solutions containing 1 molecule of the base and 1, 1½, 2½, etc., molecules of the acetate. It can be shown that in the former case a double salt has been formed. These salts can be obtained in a chemically pure condition, and are suitable for therapeutical purposes. They are known by the name of "cystopurin." Hexamethylentetramine is soluble in water at 15° C. in proportions of 1 to 1, while in warm water it is less soluble. Sodium acetate is soluble in water at 15° C. in proportions of 100 parts of water to 33 parts of salt, while the same quantity of warm water dissolves 200 parts of salt. Cystopurin, in spite of its sodium acetate content, behaves differently; 1 part of water at 15° C. dissolves 0.9 parts of salt, while 1.5 parts of hot water dissolves 1 part of salt. The chemical formula would be $(CH_2)6N_4.2CH_3COONa+6H_2O$. Cystopurin can be prepared from formalin, ammonia, and sodium acetate. The author says that any one who takes the trouble to compare the chemical and bacteriological properties and also the dosage of the three substances, formalin, formaldehyde derivatives, and hexamethylentetramine, will realize that the action of the latter cannot depend on the splitting off of formaldehyde.

PATHOLOGY.

100. Pathological Anatomy of Epilepsy.

G. SALA (*Riv. sperim. d. Freniatria*, October, 1906), after giving a review of the numerous statements made as to the morbid anatomy of the brain in epilepsy, gives an account of what he has found in 11 cases of death from that disease. In every case he observed marked changes in the blood vessels, neuroglia, and nerve cells of the cortex; these changes were most marked in the worst cases of the disease, and involved the frontal and occipital as well as the Rolandic areas. The cornu ammonis showed an excess of neuroglia, particularly in a case of epilepsy combined with idiocy. The blood vessels were dilated; the circumvascular lymphatic sheaths were infiltrated with white cells; small scattered extravasations of blood were seen, and in the older cases the vessel walls were sclerosed. There was no excess of plasma cells round the vessels as there is in progressive paralysis. The neuroglia was increased, particularly just beneath the pia mater; the fibrous processes of the neuroglia cells were enlarged and increased in number, and some of these cells were very large monster cells. In a case of epilepsy associated with idiocy, karyokinetic figures were seen in some of the neuroglia cells. The nerve cells themselves exhibited very various changes, due no doubt to the repeated circulatory disturbances to which the brains of epileptics are exposed. Sala believes that none of these changes are distinctive of epilepsy, for he has observed similar appearances in the nerve cells of the brains of normal old persons. Much attention has been given to the very large nerve cells found in the cortices of epileptics; Sala holds that they are merely enlarged pyramidal cells and devoid of any particular signification or importance. In two of his cases he found evidence of chronic leptomeningitis, directly associated with a great increase of the underlying neuroglia. He is of the opinion that all these changes in the brains of epileptics are due to their convulsive attacks. None characterize epilepsy: all may be found in amentia, senile dementia, progressive paralysis, etc.

101. Experimental Gastric Ulcer produced with Diphtheria Toxin.

NUMEROUS attempts have been made to elucidate the etiology of gastric ulcer by animal experiment, but hitherto it has been found extremely difficult to produce the small round true "peptic" ulcer. Certainly no simple method giving fairly constant results has yet been described. Rosenau and Anderson, however, assert (*Bulletin No. 32*, Hygien. Lab. U.S. Pub. Health and Mar. Hosp. Serv., Washington, 1906) that it occurs with remarkable frequency in guinea-pigs subcutaneously injected in the usual way with diphtheria toxin. Of 2,882 guinea-pigs in which the condition of the stomach was noted *post mortem*, the lesion occurred in no less than 66 per cent. It was produced by all the toxins tested—about 25—by toxin-antitoxin mixtures, and also by the bacilli, and in animals from different sources. The lesion consists of a sharply-defined area of congestion, haemorrhage, or ulceration, situated at or near the pyloric extremity. Sometimes it extends into the duodenum, and in a few cases the duodenum was found congested while the stomach remained normal. The first stage consists chiefly of a congestion near the pylorus, best seen in animals dying within twenty-four hours from an overwhelming dose of toxin. In animals dying later—for example, on the second, third, or fourth day—are found haemorrhages into the mucosa, with destruction of tissue which may extend as far as the muscularis. Perforation was never observed, and in animals which lived for three weeks or more evidence was seen that healing had occurred. The subject requires and deserves more detailed consideration than the authors give it. The photomicrographs reproduced, excellent as some of them are, do not enable us to reconstruct the sequence of histological change with the necessary fullness and precision, and little assistance is given in the very scanty letterpress.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

102. Diagnosis of Tubercle.

A study of the newer methods of diagnosing tuberculosis by means of animal experiment has been carried out by G. Joannovics and G. Kapsammer (*Berl. klin. Woch.*, November 11th, 1907). The ordinary means require the lapse of several weeks before the results of an inoculation into a guinea-pig can be accurately determined. Bloch published, during the course of last year, the details of a method of determining by animal experiment whether a material is tuberculous or not within a short time with absolute certainty. The introduction of the tuberculin test has shortened the time required for animal-testing experiments, since one can inoculate a guinea-pig with the suspicious material intraperitoneally and after five weeks carry out a subcutaneous tuberculin injection. This time cannot be shortened, since it has been found that guinea-pigs frequently do not respond to the injection of even large doses of tuberculin during the very early stages of a tuberculosis. Bloch found that one could induce a local predisposition by mechanical means. He pinched the inguinal lymphatic glands and then injected into the neighbouring skin the sediment of urine containing a very few tubercle bacilli. After from nine to ten days the inguinal glands show considerable swelling, and smear preparations as well as sections show numerous tubercle bacilli. In order to form an idea of the value of other methods the authors first determined how far Bloch's method could be relied on. Starting with the omentum of a guinea-pig infected with a known culture of tubercle bacilli, they ground this up mechanically and made varying dilutions, after getting rid of coarse particles of tissue. The emulsions which they prepared showed one bacillus in 6, 12, 24, 48, 96, 192, and 384 microscopic fields. The last-named dilution was thus of an order that an attempt to find the bacilli under the microscope must necessarily fail. The cultural experiments also prove negative with this dilution; 0.5 c.cm. of each of the diluted emulsions was injected under the skin of the thigh after bruising the inguinal glands. The weaker dilution did not give rise to a visible enlargement of the inguinal glands. However, on examining the glands under the microscope they found that in all 7 cases the histological changes were quite typical. The degree of the changes varied in proportion to the strength of the emulsion. Not every gland in each case was affected, but in each case some of the glands showed the changes and also tubercle bacilli. Following the cases further (the glands were removed on the tenth day) they were able to see a progressive tuberculosis in each animal. They thus found that Bloch's method enables one to diagnose doubtful cases of tuberculosis by animal experiment within fourteen days. They describe briefly the methods they adopted in fixing and staining the glands and bacilli. They next turned their attention to Pirquet's method. They tested this method on 20 guinea-pigs which had been rendered tuberculous, and also on 4 healthy guinea-pigs. The same animals were subjected to the ophthalmo-reaction, which Wolff-Eisner and later Chantemesse, have introduced. The tuberculous animals did not yield results which could be distinguished from the healthy animals with Pirquet's test, while 2 out of 19 tuberculous animals reacted slightly to the introduction of tuberculin into the eye, the remainder being unaffected save one, which, curiously enough, showed a reddening of the ear (not eye). Further, they introduced pure, undiluted tuberculin into the eyes of 22 tuberculous guinea-pigs without producing any effect. It thus appears that Pirquet's skin reaction with tuberculin, Wolff-Eisner's ophthalmo-reaction with tuberculin, and Chantemesse's ophthalmo-reaction with tuberculin precipitated by alcohol, are useless for guinea-pigs. This has already been found, and the results of the experiments do not in any way clash with the claims which Calmette has made for the ophthalmo-reaction in human tuberculosis.

103. Rickets and Syphilis.

That rickets can be the effect of hereditary syphilis, says Marfan (*Sem. Méd.*, October 2nd, 1907), has long been recognized. But the authorities who have held this opinion have not considered hereditary syphilis as the only cause of rickets; they have contented themselves with the knowledge that hereditary syphilis can produce certain bony deformities. Parrot was the first to enunciate the theory that rickets is due entirely to hereditary syphilis. He observed in the fetus of the newborn child a disease which doveloped in three stages: The stage of hard osteophytes, characterized by the growth at the ends of the diaphyses of long bones of a very porous bony layer; this stage occurs during the end of intrauterine and the beginning of extrauterine life. The stage of gelatinous alteration and of semi-hard osteophytes, which occurs during the first two months of the first year of life (extra-uterine), and is characterized by the substitution of a soft, gelatinous substance for the medulla and the bony layers of the spongy tissue, and by degrees of the compact tissue; the stage of sponge-like tissue and of soft osteophytes, which occurs towards the end of the first year of life, and is indistinguishable from rickets. Parrot maintains that this last stage—true rickets—is merely the consequence of the first two stages, which are essentially syphilitic. He also states that the recognized signs of hereditary syphilis are found in 90 per cent. of rickety infants. The author considers that the sponge-like tissue and the soft osteophytes are the lesions of true rickets and not syphilitic: he also thinks that Parrot has overestimated the percentage of syphilities among rachitic children. Other arguments, too, are the fact that infants have been known to become rachitic before their parents have become syphilitic, that in the hot countries in which syphilis is very widespread rickets is very rare. Parrot attempted to produce rickets in animals, and from his failure to do so has argued that rickets is an entirely human disease, as also, he thought, was syphilis. It is now known that rickets has occurred in animals which have remained refractory to syphilitic inoculations. The author, however, while discrediting the theory that hereditary syphilis is the one and only cause of rickets, is of opinion that syphilis does take some part in the causation of rickets, for rickets is often seen in the subjects of hereditary syphilis. He agrees broadly with Fournier that hereditary syphilis, like all hereditary or acquired taints, predisposes to rickets, but is not in itself sufficient to cause that disease; but goes somewhat farther, and says that on occasions syphilis can cause rickets. Hereditary syphilis, then, can cause two distinct sets of bony lesions—the proper specific lesions and the non-specific changes, the parasyphilitic manifestations of a rickety nature. These two distinct species of lesions may occur separately or together. Syphilitic rickets is distinguished by four characteristics: its early appearance, at birth or within the first few months of life; the predominance of cranial lesions; an accompanying severe anaemia, due to the appearance of the disorder at a time when the system is busy making blood; chronic splenic enlargement, which, though found in non-syphilitic rickets, is much more constant in the syphilitic variety.

104. The Ophthalmo-tuberculin Reaction.

Paul Eisen (*Beiträge zur Klinik der Tuberkulose*, 1907, Heft 4) has tried the reaction in 82 cases. His method was as follows: The same eye was always used, and instillation was made every other day. At first ½ per cent. sterile tuberculin solution was used mixed with 3 per cent. boric acid solution, its sterility being further attested by its negative result in the eyes of healthy subjects. The result was looked for after six, twelve, twenty-four, and forty-eight hours. Then a 1 per cent. solution was tried, then 2 per cent., and finally, if necessary, 4 per cent. The solution was freshly prepared each week. Forty-five of the cases were the subjects of phthisis, of which 19 were in Stage I (Turban), 10 in Stage II, and 16 in Stage III. All Stage I cases, in which the diagnosis was doubtful, were confirmed by tuberculin injection. Positive reaction was obtained in 66 per cent.—namely, 78.9 per cent. of the cases in Stage I, 70 per cent. in Stage II, and 50 per cent. in Stage III. This diminution of the number of positive results with the increased stage of the disease corresponds to the results obtained by tuberculin injection, and shows the ophthalmo-reaction to be a specific tuberculous reaction. In one negative case a rise of temperature was noticed only after the first instillation. Nine cases examined were suffering from pleurisy, this being the sole symptom, no joint affections being present. Of these, 4 gave a positive reaction—that is, 44 4 per cent.

Here again 1 negative case showed a rise in temperature, only after the first instillation. Of 17 cases suffering from various diseases, but, so far as could be ascertained, non-tuberculous, 31.1 per cent. gave a positive reaction. Finally, 11 healthy subjects were tested. Of these none gave a positive reaction, either objectively or subjectively. The redness and swelling of the positive reaction, as well as the mostly quite trivial subjective troubles, always disappeared in one to two days. In only 1 case they lasted six days and then disappeared, leaving the eye quite normal. Two cases which had had conjunctivitis in childhood required special treatment. These cases led the author subsequently to inquire for any former conjunctivitis before applying the test. On the whole, the ophthalmo-reaction, in not a few cases, fails to reach the same degree of exactitude obtained by subcutaneous injections of tuberculin. The results in cases of pleurisy are particularly disappointing, as in these cases the subcutaneous injection of tuberculin is to be avoided. The author, nevertheless, holds that it may become an important addition to the means of diagnosis, when, by further trials, the method of using tuberculin has been regulated as regards dose, etc., and further knowledge of contraindications has been gained.—F. Köhler (*Deut. med. Woch.*, 1907, No. 50, p. 2082) has tested 175 lung cases with old tuberculous solutions of 1 per cent., 2 per cent., and 4 per cent.; of the cases 169 were certainly clinically tuberculous, 5 were doubtful, and 1 was not tuberculous. Of the first group, 83 (51 per cent.) reacted to 1 per cent., 66 (41 per cent.) to 2 per cent. after 1 per cent. had failed, and 13 (8 per cent.) reacted to 4 per cent. after the weaker solutions had failed; 8 of the certainly tuberculous (4.7 per cent.) gave no reaction. Of the 5 doubtful cases 2 reacted to 1 per cent. and 3 to 2 per cent. solutions. The clinically non-tuberculous case reacted to 4 per cent. solution.—Schenek and Seifert (*Munch. med. Woch.*, No. 47) found 50 per cent. of their non-tuberculous cases react. Much larger figures of the action on non-tuberculous cases are badly wanted. The technique is simple; the solutions are made with 3 per cent. boric acid lotion, and sterilized pipettes must always be used. The reaction occurs in from eight to thirty-two hours in the form of intense redness of the palpebral conjunctiva and the caruncle.

SURGERY.

105. Modern Asepsis in Abdominal Operations.

Walter Hannes (*Die Heilkunde*, November, 1907) point out that in the last few years the ideal aimed a in the modern aseptic management of operations has changed. Whereas in the early years of antiseptics it was considered sufficient if we could shut out those micro-organisms actually dangerous to life—liable to give rise to fatal septicaemia, our aim now was to exclude all germs whatsoever, so that wounds should heal quickly, painlessly, and without pus formation. The investigations of Brunner, Schenk, Lichtenstein, and his own have shown that this ideal goal is not in practice attainable. Nevertheless, he contends that every effort should be made and every measure utilized which can help towards that goal, so that the crevices in our antiseptic armour through which germs gain admission should be made as small as possible. We can completely sterilize the instruments, sponges, sutures, and other apparatus or material which comes in contact with the field of operation. The sterilization of the hands of the operator and the skin of the patient is not nearly so easy to secure. In the case of the operator's hands, this is done with comparative ease and certainty by the use of sterilized india-rubber gloves; but this is not so in the case of the skin of the field of operation. In 1901 Küstner, at the Giesner Gynaecological Congress, proposed, in the case of laparotomy, to shut out the skin from the operation field, by suturing to the connective tissue a sheet of sterilized india-rubber after the skin incision had been made. He recognized, however, that the expedient only partially fulfilled its purpose. The same must be said of Doederlein's "gaudanin," a fluid, sterile, rubber solution, which, when painted on the skin, dries almost at once, and leaves a thick sterile coating on the skin. Although not an absolute preventive of germ infection, it is a distinct advance upon former methods. The following are the antiseptic measures he employs in a case of laparotomy as a result of his accumulated experience: Everything which is to come in contact with the patient to be operated upon—sponges, brushes, dressings, etc.—are sterilized in a stream of high-pressure steam. The instrument trays and other glass apparatus are sterilized by dry heat in an oven. The instruments are boiled for twenty minutes in a 2 per cent. solution of soda. Sutures are treated in the usual way, according to their material. The cleansing of the patient for operation is done in two stages. On the day before the operation he receives two warm baths, with plenty of soap and scrubbing. A dressing steeped in 2 per cent. formalin solution is then applied to the abdomen. This is removed during the first stage of narcosis, when everything is ready for the commencement of the operation. Then follows a second thorough washing by the rubber-gloved surgeon with warm lysol solution, brush, and ammonia-soda soap. While the patient is being removed from the preparation table to the operating table, the abdomen is covered with a sterile towel, soaked in lysol solution. The patient being arranged on the operating table, this towel is removed, and the skin dried with alcohol and freed from fatty matters with ether. Then the whole field of the operation is painted over with tincture of iodine. This having dried, the Doederlein "gaudanin" rubber solution is painted over, and lastly, a thin layer of sterile powdered talc is strewn over the dried surface. In the majority of cases this shuts out from the operation area all germs but those mostly harmless ones which may exist in the deeper layers of the skin at the site of the incision. Next as to the preparation of the operator. More or less after the well-tried method of Fürbringer, are the hands and arms thoroughly cleansed with warm water, soap, lysol solution, alcohol, and brush; and after being dried with a sterile towel, a pair of sterile rubber gloves, talc powdered, are put on. The head is completely covered with a sterile linen cap, and so also is mouth, nose, and beard. A long linen coat, sterile of course, with long sleeves, is assumed, and over the sleeve a rubber cuff is drawn, as recommended by Küstner. The junction between the glove and cuff below, and the cuff and linen sleeve above, is covered by rubber bands about 3 cm. broad. Small holes, made accidentally in the gloves during the operation, may be neglected as of no practical importance. Experiment has shown that during the ordinary duration of an operation such small holes give exit to no germs. They may be afterwards patched, somewhat after the fashion of a bicycle tyre, and the cost of new gloves thus avoided. In the whole of this procedure only two antiseptic solutions are employed—that is, a 2 per cent. solution of lysol for dipping the gloved hands in during the operation, and a 3 per cent. carbolic solution in which the instruments lie. The use of normal saline solution, as it was found in a very short time to contain many bacteria. The cleansing of the peritoneum is done with dry aseptic towelettes and cotton swabs. The effect of the careful application of the above methods is shown by the result of 35 consecutive cases of Caesarean section, all that occurred during a period of six and a half years. Among these there was not a single case of infection or suppuration.

108. Prevention of Death during Anaesthesia.

Robert Reyburn (*Med. Record*, January 18th, 1908) believes that deaths from anaesthesia are due to the neglect of certain precautions. He says that death by ether is either speedy, resulting from the too concentrated ether vapour inhaled, or delayed, when it results from nephritis due to prolonged inhalation. The cone used should be of the simplest and the anaesthetist a trained one, not a student. When death results from acute nephritis it is due to the large amount of ether absorbed by the blood in the renal artery, one of the largest branches of the aorta. Death may result from too great absorption of ether into the lungs, producing bronchial irritation and pneumonia. A third late form of death results from acute fatty degeneration of the liver. Sudden death is believed by the author to be from the column of venous blood filling the jugular and innominate veins, and this pressing upon the auricle and preventing it from opening. The first treatment, then, is the inversion of the patient so as by gravity to open the auricle. The ether should be given drop by drop. The operation should be as short as possible. A faradic battery should always be ready to stimulate respiration, and artificial respiration in the prone position should be at once performed.

OBSTETRICS.

107. The Treatment of Hyperemesis of Pregnancy.

So much difference of opinion exists with regard to the pathology of excessive vomiting of pregnant women that difficulties must be met with in formulating a rational

form of treatment. H. W. Freund (*Deut. med. Woch.*, October 3rd, 1907) calls the condition "uncontrollable vomiting." If this were caused by toxins which are derived from the periphery of the ovum, it would be impossible to cure the condition by psychical means. It is, however, well known that in some cases the vomiting can be stopped by suggestive treatment. If the condition were really a symptom of hysteria, it would be difficult to explain why certain gynaecological manipulations, such as replacing a retroflected uterus, could do good. These sorts of arguments can be raised against every theory which has been built up to explain the hyperemesis. The older authors scarcely dealt with this complication of pregnancy at all, while at the present day every year brings a large number of articles on the subject. If one defines the condition as excessive vomiting, as a form of vomiting produced by some bodily or mental affection which leads to a disturbance of nutrition, one can gain a better survey of the condition by considering the various factors which assist in calling it forth and the types of individuals in whom it occurs. Increase of reflex irritability is supposed to be due to toxins from the chorionic villi, the periphery of the placenta, or the intestinal canal gaining an entrance into the circulation. But it is certain that all pregnant women have such toxins circulating in their blood. It is, therefore, necessary for a woman to be predisposed in some way before she will be attacked by hyperemesis gravidarum. He deals with some of the changes found in predisposed women. Congenital or acquired abnormalities in position and shape of the stomach are frequently met with; chlorosis and anaemia play, in the author's opinion, a much more important rôle than is usually accepted; while febrile and cachectic conditions must also be regarded as etiological factors. Next he comes to the nervous or hysterical temperament. Every one knows how frequent eructations, vomiting, dyspepsia, and gastric cramp are in nervous persons. When a woman of this type is affected with a misplaced or misshapen stomach or with anaemia, etc., one will find that she forms a likely subject for hyperemesis. But there are other local and general conditions which take a part. Of these he mentions affections of the nasopharynx as a common and well-marked example. It therefore appears that in treating this condition one must not neglect prophylactic measures. As soon as one realized that a predisposed woman becomes pregnant, one should commence the prophylactic treatment. This should be psychical at first. Those who come in contact with the patient must be influenced to follow directions. It is especially necessary to avoid any reference to the so-called accompaniments of pregnancy. Where this cannot be carried out with sufficient intelligent interest, the patient should be placed under the exclusive control of a good nurse, who will have authority to carry out the doctor's orders without any interference. Frequent visits on the part of the medical attendant are often necessary. Thorough examination of the patient, and particularly of the genital apparatus, is necessary, and whenever this is possible, any abnormality or disturbance should be treated promptly. However, it is not often possible to carry out a prophylactic treatment, although this so frequently leads to complete success, since the patients usually apply for assistance after the vomiting has set in. In this case, one must first inquire carefully into the anamnesis, etc. A thorough examination will reveal defects and disturbances which can be influenced by treatment. In the anaemic forms one can rarely obtain satisfactory results unless the patient is kept in bed. A tight abdominal binder acts by driving a better supply of blood to the head and by quieting the excessive movements of the intestines. Subcutaneous injections of salt solution may do good in some cases, in others very warm rectal injections of salt solution or of cammilla tea, to which some red wine may be added, often secures sleep. The application of hot alcohol to the epigastrium also acts in the same way. Keeping the patient warm by means of the hot-air apparatus and the application of electric currents to the gastric region may be used with good results. Cacodylate of sodium can be given subcutaneously or per rectum. With regard to the diet, special attention must be paid to details. He deals with this subject separately. The treatment of the purely gastric form depends largely on the actual cause. Gastric carcinoma may be the cause, and here neither artificial interruption of the pregnancy nor any gastric operations can save the patient. Enteroptosis is best treated by rectal irrigation, possibly combined with purgation and intestinal antisepsis. He further deals with the treatment of a few other forms, and then turns to the dietetic-psychical treatment. As a rule, isolation of the patient is required. During the first twenty-four hours, and at times for the first forty-eight hours, the patient is kept absolutely quiet in bed, and no food of any sort is given. Not a drop of fluid, no medicine, no ice may be given. Rectal enemata are at times necessary to maintain the strength, and the salt solution injections relieve the thirst. Opium, bromides, or chloral hydrate may be added to the enemata, and warm baths at night-time may also be found useful. After the first period one begins to give food. This should be exclusively milk at first. Up to 3 litres of warm or cold milk a day suffices, the drinks being given every three hours. Next, albumin water, Nestlé's food, gruel, etc., may be allowed. Champagne must be rigidly forbidden, as it often does much harm. From this one passed gradually on to ordinary diet. The changes must be carried out with circumspection and care, and the mental or suggestive element of the treatment must not be forgotten for a moment. Freund then passes on to the treatment of those cases which resist this form of treatment. He claims that one should still endeavour to avoid interrupting the pregnancy. He instances cases in which this was successful by employing tricks. Even a sham operation may be justified, and will certainly lead to success. Only as a very last resort, when all other means have failed, and the patient is showing signs of sinking, may abortion be induced.

GYNAECOLOGY.

108. **Gauze Retained in Abdominal Cavity.**

Boldt (*Amer. Journ. Obstet.*, 1908) operated on a woman who had undergone abdominal section for salpingitis a few months previously. A fistulous track had developed in the abdominal wound which constantly discharged pus. A tumour of the size of an orange developed on the right of the median line. The sinus ran downwards into the pelvis; behind the uterus and to the right was a cystic mass about 2 inches in diameter. On the left side the appendages had been removed, and there were numerous nodules of inflammatory exudation. The abdominal cavity was opened once more, and the cystic mass was removed; it appeared to be a gelatinous material of inflammatory origin, and the intestines had adhered to it, as did the remaining ovary, which had become cystic, the middle of the corresponding Fallopian tube had been resected. Much more intestine had to be separated from deep adhesions, then the cavity which contained the pus that issued from the fistula was laid open. A long piece of gauze roll was extracted; the pus was very offensive. The cavity was mopped out with a 1 in 500 solution of bichloride of mercury, and then with water; lastly, a drainage tube was passed into Douglas's pouch through an opening in the vagina. The operation was difficult on account of the difficulty in defining the relations of the organs which had been previously subjected to operation, and also owing to the multitude of adhesions. The operation had been performed on the day that the above was reported.

109. **Ovarian Hernia.**

De Snoo (*Zentralbl. f. Gynäk.*, No. 46, 1907) reports that in the course of ten years in the Surgical Clinic at Utrecht 1 case of ovarian hernia was noted in 160 operations on women for femoral hernia; and 2 in 117 operations on women for inguinal hernia. Of the 2, the patient was 2 years of age in the first. The second occurred in a girl aged 13. There was a left inguinal sac containing an ovary in a state of cystic degeneration, and a Fallopian tube with a blind abdominal extremity, probably from secondary changes. A coil of small intestine, easily replaceable, lay in the sac. The pelvic organs were carefully explored, but no abnormality of the genito-urinary tract could be detected. Both these cases of ovarian inguinal hernia recovered.

THERAPEUTICS.

110. **Treatment of Arterial Cardiopathies.**

Huchard (*Journ. des Prat.*, September 28th, 1907) says that in order to be able to treat these disorders, they must be understood clinically. Cardio-sclerosis, he says, like arterio-sclerosis, is the effect of increased blood pressure, which itself has been caused by an intoxication. This intoxication must be combated. During arteric-sclerosis all the viscera and systems are liable to fatigue; hence the

organs must be rested. Renal insufficiency is an early symptom, and in consequence the kidneys must be tended to early in the disease. Owing to the liability to cardiac dilatation and angina, precautions against these accidents must be taken. Cardiac arrhythmia is frequent; and a generalized sclerosis of arteries and organs is a not uncommon accompaniment of cardio-sclerosis. The clinical evolution of these cardiopathies must also be kept in mind, namely, the first arterial stage, presclerosis; the second cardio-arterial stage; the third mitro-arterial stage; and the ultimate cardiac dilatation. Presclerosis was known many years ago, and was called "a plethora of blood." The author, reasoning from his clinical observations, affirms that heightened arterial tension often gives rise to vascular lesions, and is not always the result of these lesions. The theory of the stage of presclerosis is of great importance, clinically and therapeutically, for during this stage of presclerosis the condition is curable, whereas well-established arterio-sclerosis, with real lesions, is incurable. Presclerosis is divided into three stages—intoxication, renal insufficiency together with hepatic insufficiency, and arterial hypertension. And to these two causes, namely, the hepatic and renal insufficiency, must the treatment at first be directed. The rôle of the intoxication in the causation of arterio-sclerosis and of the arterial cardiopathies is essential. This intoxication is of alimentary origin and is vaso-constrictor in nature. The retention of the toxin in the system is favoured by the renal impermeability, the early and constant accompaniment of all the arterial cardiopathies. And so, again, it becomes evident that the rational line of treatment consists not in combating directly the increased arterial tension, but in fighting against the intoxication and the renal insufficiency. Clinical observation shows that from the very commencement of the first stage of the arterial cardiopathies and throughout their whole course, the dyspnoea is the chief symptom. That this dyspnoea is of alimentary origin is proved by the fact that the substitution of a lacto-vegetarian or an exclusively milk diet will often in twenty-four hours cause the dyspnoea to disappear. Whereas the dyspnoea is not at all improved by opium, digitalis, the iodides, or any other drugs. Insomnia is a common accompaniment to the dyspnoea, but is cured with the dyspnoea. The treatment of presclerosis must be directed against the intoxication, the renal impermeability, and the high arterial tension. The intoxication is successfully treated by means of the diet. The renal impermeability will yield to a diuretic treatment consisting of the lacto-vegetarian diet and pure theobromine in cachets, 40 to 50 cg. every morning with a glass of Evian-Cachat or Vittel water. The heightened tension is treated, in addition to the foregoing measures, by blood-letting, massage, and gymnastic exercises. A douche of water at 33° or 37° F., lasting three to eight minutes, is good, or alternate hot and cold douches. This treatment stimulates the peripheral circulation. High-frequency currents have been much used recently. The author concludes, against presclerosis and arterio-sclerosis, there is not a medicament, but a whole régime; and one single remedy, whatever its power, cannot at the same time lower the arterial tension, combat the toxic symptoms which follow each ingestion of the poison, overcome the renal impermeability, and cause the lesions scattered all over the organism to retrogress and disappear. In a later issue (*Journ. des Prat.*, October 5th, 1907), Huchard treats the second or cardio-arterial, phase; the object is still to treat the cause of the increased arterial tension by means of a lacto-vegetarian diet with diminished intake of chlorides. The drugs trinitrine, tetranitrol, and sodium nitrite are also now required. During the first twenty days of a month, any one of these drugs may be given; then, during ten days 10 or 20 cg. of the iodide of sodium or potassium three times a day, and every morning 50 cg. of theobromine in a cachet with a glass of Evian or Vittel water. These drugs must be withheld when failure of the heart is appearing, with oedema and diminished diuresis. Then Nativelle's crystallized digitalin in very small doses is indicated, and this may be given for ten to twenty days each month. The third phase is the mitro-arterial, in which the cavities of the heart become dilated, and frequently, too, the orifices. The treatment of this phase consists in an exclusively milk diet, the use of theobromine, and of digitalin. It is now that the patients often rebel against the milk diet, affirming that it is enfeebling. They must, the author continues, be made to understand that it is not of enfeeblement that they will die, but of poisoning if they take any other food. They must, he adds, submit or succumb, and history teaches that they always submit. The milk may be taken hot or cold, sweetened or not sweetened, with a little tea or cocoa, or coffee, or tincture of anise, orange water, vanilla, cherry water, or saltz water. The author describes in detail the various means by which he overcomes the various forms of dyspepsia which the milk causes, and the diarrhoea which is sometimes set up by it. The theobromine must be continued for a long time, the dose varying from one to four cachets per day, each cachet containing 50 cg. of theobromine. During this phase asystolic symptoms must be treated by Nativelle's digitalin in large doses. The fourth phase is characterized by great cardiac dilatation and great increase of the oedema; the digitalis and theobromine seem to lose their efficacy, and the diuretics are useless. Now the patient must be bled freely. The milk and liquids must be diminished. Fiessinger has thus described the lines of treatment now to be adopted: On the first day 1 litre of water with ½ litre of milk and an injection of 20 to 25 cg. of caffein. This treatment is to be continued for three days. After this 1,200 to 1,500 grams of fluid in the day will be found to increase the diuresis considerably, and the other bad symptoms will decrease in severity. The imminent danger being averted, the amount of food must now be diminished, as the requirements of a sedentary patient are less than those of a healthy, active man. When a patient is suffering from arterio-sclerosis and diabetes, it is sometimes found that the milk diet increases the amount of sugar in the urine. In such a case it will be found that potatoes in fairly large quantities may be substituted for some of the milk with advantage. In every case of this kind, the author says, the arterio-sclerosis must be treated in preference to the diabetes. Cardiac adiposis—a not infrequent accompaniment of arterio-sclerosis—should be treated by starving. And this form of treatment has the additional advantage of teaching the patient that a state of health results from perfect equilibrium between the receipts and expenses of the organism. The diminished diet will suffice to bring about an improvement in these cases without the help of any drugs; and the patient will usually become habituated to it without discomfort. Besides, anginal symptoms will often disappear after a short course of restricted diet. The diet suggested by the author in these cases contains some meat, which is liable to increase the arterio-sclerotic symptoms; this tendency, however, can be decreased by resorting for one day every now and then to an exclusively milk diet. A bandage round the chest, with massage of the chest wall and the precordial region, will help to prevent cardioptosis. Arterio-sclerosis is sometimes complicated by portal hypertension and stasis, giving rise to symptoms of anaemia, increased blood pressure, and toxaemia. Abdominal massage is the only treatment which improves such a condition. When arterio-sclerosis is complicated by angina pectoris, rest and a lacto-vegetarian diet must be insisted upon; 30 to 50 cg. of theobromine in a cachet with a glass of Evian water must be taken every morning; during three-quarters of the month 2 to 5 milligrams of tetranitrol must be taken three to six times a day, and for the actual attacks nitrite of amyl inhalations must be given. Ten days in each month 15 cg. of potassium or sodium iodide in a pill should be given, and exercise immediately after a meal forbidden. All exertion must be prevented, constipation treated, and the patient must not smoke.

PATHOLOGY.

111. Bier's Hyperaemia of Stasis.

Tarantini (*Il Policlin.*, October, 1907) has carried out certain experiments on guinea-pigs with reference to the above subject. He produced hyperaemia by Bier's method in the hind limbs and then injected subcutaneously aqueous solutions of China ink, and found that above the ligature the lymphatic glands were not pigmented. In non-ligatured limbs pigmentation could always be detected in the glands (even ten minutes after injection) even at a considerable distance. Some of the pigment stays *in situ*, the rest being carried off to the glands. If hyperaemia of stasis is produced foreign bodies cannot so easily enter the blood or lymphatic circulation. The ligature need not be on long to produce this effect; half an hour before and after injection suffices. In the first stage the hyperaemia acts chiefly as a mechanical obstacle, but in the second stage the minute foreign bodies are retained *in situ* by means of phagocytosis and connective tissue new formation, which increase the normal means of defence of the organism against invasion.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

112. Rickets in Relation to Arched Palate and Adenoids.

Marfan (*Sem. Méd.*, September 18th, 1907) deals at some length with this question. When, he says, Meyer first recognized adenoid growths in the naso-pharynx, the special facies which they cause was soon described—the open mouth, the visible front teeth, the arched palate, with the crowded and overlapping teeth, and the small nose. Objections have now been raised to this theory. For instance, it is not uncommon to see a patient with large adenoid growths but a normal palate; the author has seen 4 such cases. Secondly, out of 47 cases, whose ages ranged from 15 years upwards, who all had arched palates, 12 were entirely free from adenoid growths; some of these 12 had very marked arching of the palate; among the 47 cases, 7 had adenoid growths alone, 4 had isolated enlarged palatine glands, in 28 the two conditions were combined, and in 8 cases there was no growth at all. Lastly—and, as the author considers, convincingly—removal of the adenoid growths and of the palatine glands made no appreciable difference in the shape of the palate. These operations were, however, in many cases very beneficial; they improved nasal respiration, they frequently removed foci of chronic infection, causes of repeated acute glandular inflammation — palatine, pharyngeal, or cervical—of bronchitis and otitis. From these facts the author draws his conclusion that arched palate is not the effect of retronasal obstruction due to hypertrophy of the pharyngeal lymphoid tissues. Nevertheless has put forward a theory that the arched palate is the normal shape of the palate in dolichocephalics. But he allows that certain pathological conditions, especially syphilis, can exaggerate the deformity. Against this theory the author argues that rachitic children nearly all have arched palates, and rachitic children are mostly brachycephalic. Of 47 children with arched palates, 1 only was dolichocephalic, 6 were mesocephalic, and 40 were brachycephalic or nearly so. Again, out of 47 young patients with arched palates, 37 had skeletal deformities which left no possible doubt of the pre-existence of rickets. In the remaining 10 cases there were signs which rendered the pre-existence of rickets probable—late and irregular dentition and general backwardness. Congenital rickets is a rare condition. Usually rickets begins to show between the 6th and 12th month. After 4 years the disease is usually arrested. Some of the deformities disappear while others remain. The period of arrest continues nearly until puberty, when the disease may become active again, and remain so until ossification is finished. The author has had under observation 100 children. He has never found an arched palate before the sixth month. One case developed an arched palate in the seventh month; the child was slightly rachitic, having two teeth and large adenoid growths. Two cases of 10 months had arching of the palate; from 13 to 16 months he has found 2 cases; but not until 2 years of age has any child shown marked arching of the palate, and he considers that the arching does not progress after the fourth year. There is, then, some resemblance between the ages at which rachitic symptoms and arching of the palate have their greatest development. The author has never seen the process of palatal arching, when once it has commenced, retrogress. He remarks that it is very rare to find an arched palate in old people who have lost their teeth, and asks whether this is because children who have arched palates do not live to be old, or is due to the loss of the teeth and the atrophy of the alveolar borders. Heredity has been advanced by some authorities as the chief cause of palatal arching. The author thinks that heredity plays a part in the production of this condition only so far as heredity may determine the part of the body which rickets is going to attack. The fact that arched palate and adenoid growths so frequently go together the author considers a coincidence, but a coincidence which can to an extent be explained by the fact that patients with arched palates mostly have also narrowing of the nasal fossae and posterior nares, which are easily obstructed by adenoid growths. All rickety children, the author says, have not adenoid growths; but nearly all children who have adenoid growths are rickety. He examined 100 rickety children, and found adenoids in 73; arched palate he found in 44 of these 73; 65 of the 100 had enlarged palatine glands. Glandular hypertrophy in young children is the result, as a rule, of some general cause acting slowly and progressively, not of repeated local acute irritation. And when one considers that this hypertrophy coincides almost always with rickets, there seems, the author thinks, good cause to attribute to the same origin both the bony deformities and the hypertrophy of the pharyngeal lymphoid tissues; and this origin is the superactivity of the bone medulla and of all haematopoietic organs in the body, the result of defensive reaction against chronic infections and intoxications.

113. The Expectation of Life of Syphilitics.

Bruns attacks the problem of the ultimate fate of syphilitics with diffidence, realizing, as he does, that in no other disease is there more doubt with regard to prognosis (*Berl. klin. Woch.*, September 9th, 1907). With regard to early abortive treatment, one has not obtained sufficient evidence to make definite statements at present. Neither the direct find of spirochaetes nor the sero-diagnostic method have as yet been able to illuminate this point satisfactorily. He therefore accepts that, even when energetically treated, every person who has been infected with syphilis remains infected for from two to three years. It is important to inquire into the question of how many syphilitics who have passed through the stage of secondary manifestations get tertiary symptoms. This question has been answered by various authors in various ways. One says that 6.8 per cent. and another 45 per cent. get late symptoms. The mistake made in most of these replies is to be found in the method of forming the statistics. The author attacks the problem by inquiring (1) what the fate of persons is who were treated previously for syphilis, and (2) what the life-insurance policies can report on this point. In order to determine how far syphilis has played a part in the death of the infected persons, he states that there can be no doubt that at all events the large majority of cases of general paralysis and of tabes dorsalis are syphilitic in nature; that diseases of the circulatory organs are frequently of syphilitic origin, especially aneurysm and aortitis; and, thirdly, that gummatous affections of the brain, myocardium, and other vital organs occasionally cause death. After examining the literature in considerable detail, he finds that Kleinschmidt, who dealt with over 2,500 persons, places the percentage of deaths from syphilis at 6.2, and Blascko at 6 per cent. Runeberg's figures, he has reason to show, are too high—namely, 11 per cent. (or 15 per cent., including some probable but not certain cases). Weber and Bramwell's figures of English statistics fix the rate at 3.6 per cent. and 1.5 per cent. This he considers extraordinarily low. He therefore prefers to keep to the German statistics, and selects three which he considers reliable. The percentage of persons who have been infected and who die of their syphilis is thus given at from 15 per cent. to between 30 and 40 per cent. The higher figures may be criticized by taking exception at the inclusion of all cases of general paralysis, tabes, and aortic aneurysm. The lowest figure (given by Mathes) may be criticized on the ground that the material was taken from a countryside where there was a very high phthisis death-rate. This includes 43 deaths from phthisis among 160 syphilitics. He therefore considers that it is fairly safe to state that the middle value corresponds to actual fact, and that every fourth to fifth person who has been infected with syphilis dies of this disease. The Scandinavian statistics agree closely to this find. It must, however, be pointed out that the frequency of death from syphilis undoubtedly is influenced by other noxes, and it is impossible to estimate how many of the cases terminated fatally on account of syphilis complicated with other conditions. The author instances nervousness, anaemia, and especially alcoholism, among the noxes. Another very important factor which plays a part in the death-rate is that of treatment. Some observers believe that specific treatment during the primary and secondary stages of syphilis does not alter the risks of late symptoms, and there can be no doubt that in many cases which have been treated energetically general paralysis or cerebral syphilis does occur later. Under these circumstances, he raises the question whether the treatment should be intermittent or only adopted as long as symptoms are present. In spite of several attempts to

answer this question, he finds that at present no sufficiently exact information has been collected to justify a definite deduction. An extensive collection of cases which have been followed for twenty years and more, conducted by a number of medical men, would be able to illuminate this and other allied questions. He instances the conditions which would lead to satisfactory results if followed up closely.

SURGERY.

114. Adrenalin in Spinal Analgesia.

H. R. DUNCAN (*Intercol. Med. Jour. Austral.*, November, 1907) reports 6 consecutive cases in which stovaine was used to produce spinal analgesia. In Case I the patient had severe valvular disease; an interspinous injection was made of 7 c.cm. of a 1 per cent. solution of stovaine in sterilized water. The hips were elevated at an angle of 35 degrees; in four minutes there was complaint of want of air, and a minute later respiration ceased altogether. It only recommenced after administration of oxygen and performance of artificial respiration for thirty-five minutes uninterruptedly. There were no evil after-effects, but the lower limbs were never analgesic; while between the navel and the third cervical vertebra there was complete anaesthesia. About the same date Duncan heard of two exactly corresponding cases in other Australian hospitals. In Case II the body was not raised; the injection used was 6 c.cm. of a 1 per cent. solution of stovaine in normal saline, together with ½ c.cm. of 1 in 1,000 solution of adrenalin chloride. In Case III a corresponding injection was made, the body being raised to an angle of 15 degrees for two minutes. Both cases went off well. In Case IV the same solution and the same elevation were used. Nothing untoward happened until a loop of bowel was pulled down; the pulse then failed and respiration ceased, no sign of life but a faint conjunctival reflex remaining. An injection of strychnine did no good, but the patient eventually recovered after two injections of adrenalin solution, to the second of which was added some ergot. In Case V the same failure of heart and respiration occurred, and ergot given alone proved useless. The patient, however, recovered after an injection of 4 minims of a 1 per 1,000 adrenalin solution. In Case VI injection had to be made between the first and second lumbar vertebrae, entry to the spinal canal between the second and third being impossible. The cerebro-spinal fluid withdrawn was blood-stained and the body was not elevated. After eight minutes ether had to be given, the analgesia being imperfect. Duncan suggests that Case I shows the danger of raising the pelvis too high and for too long a time; that the alarming symptoms in Cases IV and V were due to exhaustion of the vasomotor centres, for which the stovaine was partly responsible, and that subcutaneous injections of adrenalin, the value of which has been denied, is of great utility; it saved Cases IV and V. Case VI confirms the observation that under the circumstances narrated, analgesia is likely to be incomplete. His final conclusion is that stovaine does not obviate shock.

115. The Radical Cure of Hernia.

ERNEST V. HÜCKL (*Pester Med.-Chir. Presse*, December 15th, 1907) always gives the preference in certain cases of hernia to Kocher's method of radical cure. He modifies it, however, in two particulars. V. Hückl's skin incision is the same as Kocher's, with the exception that it is shorter, being only 2 to 4 c.cm. in length, according to the size of the hernia, and never extending outwards as far as the internal opening of the inguinal canal. The advantages claimed for this modification are: (1) That the skin over the inner opening of the canal is intact and without a scar—that is, just at the point where the intra-abdominal pressure comes most strongly into action; (2) that the shorter incision saves time both in making and in suturing. Again, Kocher draws the closed sac behind the fascia of the external oblique muscle and fixes it so as to cover the front of the now closed inguinal canal. V. Hückl does the same thing, but the sac is drawn behind fascia and intact skin to a point near the anterior iliac spine, where the skin is pierced and the sac drawn through and fixed by one or two sutures. The protruding part, if any, is resected and the skin wound closed with a single stitch. The cases operated on by v. Hückl in this way numbered 32. Thirty of these were reducible, 2 were incarcerated. The ages of the patients varied from 2 to 55. In the 30 reducible cases the incision healed in fourteen days, in the incarcerated cases in fifteen days. In one case, where the sac necrosed, healing required thirty days. The author attributes the death of the sac to the fact that, although the sac wall was extremely thick, he used the usual cross suture and not a purse-string suture. The cases have been under observation four years, but there has been no relapse. No patient has worn a truss, and, almost without exception, the patients were hard-working people. The operation was performed 14 times under chloroform, 17 times under anaesthesia by infiltration (Schleich), and once under complete analgesia through subarachnoid injection of stovaine. Only 2 cases of incarcerated hernia were operated upon after this method, because these cases are nearly always brought for operation at so late a stage that the circumstances indicate some other method.

116. Osteoma of the Elbow.

OSTEOMA following an injury of the elbow, says Toussaint (*L'Echo Méd.*, November 3rd, 1907), usually occurs in adults. This complication is often found in soldiers. The author quotes the case of an artilleryman who had one year previously dislocated his elbow backwards. The dislocation was finally reduced under chloroform, several attempts without the anaesthetic having failed. The limb was kept in a splint for three weeks, and then passive movements were applied, together with massage. Radiography showed that in front of the external humeral condyle and the trochlea there was a soft mass of ossifying lamellae, forming an osteoma encircling the joint. It showed also two bony layers—one, superficial, situated in the brachialis anticus, the other, deep, in connexion with the anterior surface of the humerus. Clinically the latter only could be detected. There was no nervous or circulatory disturbance in the limb, and no muscular atrophy. Flexion is limited to a right angle, and extension to 135°; no lateral movement is possible, but pronation and supination of the forearm are unimpaired. The author divides adherent osteomata into two classes, those that are attached to bone and those attached to the capsule of a joint. The author considers that the osteoma in the mass of the brachialis anticus muscle was due to haemorrhage following injury to the muscle. This muscle, according to Charcot, is always the first structure to be ruptured in dislocation of the elbow. Cornil has reported that the bony tissue of an osteoma grows at the expense of the connective tissue, and not of the muscular fibres. And this accounts for the relatively slow growth of an osteoma in a muscle compared with that of a periosteal osteoma. The author concludes from his observations that in a muscular adult the manipulations necessary for the reduction of a backward dislocation of the elbow are sometimes the cause of mixed osteomata, that is, osteomata affecting periosteum, capsule, and muscle. Radiography shows that these bony growths are the real causes of the diminished movement in the joint. The patient will do well to submit to a general anaesthetic for the reduction of the dislocation. Surgical intervention aggravates the situation.

OBSTETRICS.

117. The Induction of Labour.

BOTH from the scientific and the ethical point of view a pregnancy should only be interrupted when the lives of the mother or the fetus or both are endangered by its continuation. W. Hannes (*Muench. med. Woch.*, October 1st, 1907) dismisses the reasons for inducing premature labour in the interests of the fetus by stating that only when one has cause to believe that the fetus will die toward the end of the pregnancy is one justified in making an attempt to save its life by bringing it prematurely into the world. This must naturally not be performed before the end of the twenty-eighth week. But whether the interruption of pregnancy be undertaken in the interest of the mother or of the child, it must always be carried out in such a way as to produce no harm to either. The work of Keilmann, Knueppfer, Weidenbaum, and Jung has shown that the rhythmical contraction of the uterine muscular wall is produced by stimulation of the ganglion cells, massed together at both sides and behind the lower part of the cervix. It therefore is certain that all the methods of inducing the uterus to expel its contents, be they dependent on the uncertain action of drugs or on various manipulations, must be less satisfactory than the simple method of dilating the cervix by means of a rubber bag. He considers that the insertion of Braun's colpeurynter, folded up into a cigar shape, by means of a suitable pair of forceps into the upper cervical segment, the

withdrawal of the forceps and the dilating of the bag with a sterile or slightly antiseptic fluid is a very satisfactory way of bringing about the labour. The pressure of the bag leads to the reflex attempts on the part of the uterine muscle to its expulsion, so that the uterine contractions are produced physiologically, and the delivery of the bag is not due to its weight or other artificial means. After the bag has been expelled the physiological conditions exist which cause the continuation of the labour. The author is convinced, on the basis of twelve years' experience with this method, that it is unnecessary to puncture the membranes, even when contracted pelvis exists and the alteration of position of the uterine contents is produced by the expulsion of the bag. He calls attention to the fact that the whole parturition is completed on an average in twenty-two hours when the bag is employed, while when puncture of the membranes is carried out the labour lasts for from seventy to eighty hours. The dangers for the mother and for the child are greater when the membranes are no longer intact, even if in certain well-managed obstetric clinics good results have been obtained by the latter method. He contends that the bag-dilatation method has not produced any material injury to the mother in any case in his clinic in which it has been employed, and he is therefore convinced of its harmlessness. He formulates the rule that the labour should be artificially induced but not artificially completed; that once the pains have been produced a spontaneous continuation must be awaited. He therefore concludes that the bag method must be considered as the best of all the known methods. But one comes across cases at times, usually near the full time, when the termination of the pregnancy must be carried out much more rapidly than the bag can do it. The two methods of performing *accouchement forcé* from which one must choose are anterior hysterectomy and Bossi's dilatation. The former was introduced by Duehrssen and perfected by Bumm, and must be considered the more scientific and better method. Bossi's dilator and its modifications are far too prone to cause severe injury to the maternal parts to be a safe procedure. By the operative method it is possible to deliver the child within a few minutes, even if the genital passage is still completely closed. Naturally he presupposes that the operator possesses the necessary skill and experience.

GYNAECOLOGY.

118. The Treatment of Uterine Cancer.

A. Martin dealt with the subject of the treatment of uterine carcinoma in a clinical lecture, and paid especial attention to the palliative means which do good in inoperable disease (*Deut. med. Woch.*, January 16th, 1908). It is now thirty years since Freund introduced the effective cure of uterine carcinoma by total extirpation of the organ. In spite of greatly-improved technique and extended scope the results have not proved satisfactory. The operability used to be about 30 per cent., while now between 80 and 92 per cent. of all the patients can be operated on. The primary mortality has sunk from 50 per cent. to 20 per cent. or even less (Wertheim puts it at 8·7 per cent.). The ultimate results also have improved, since thirty years ago only 10 per cent. of the operated patients were alive and well after five years, while now over 20 per cent. remain free from recurrence during the five years. The cause of the small number of absolute cures is to be found in the difficulty of diagnosing cases early. The microscope is in many instances the only certain means of diagnosis. Frequently no sign or symptom is present for a long time which could lead the patient to suspect that there was anything seriously the matter with her, and when at last the patient does consult the medical practitioner, her condition is found to be past any operative help. He discusses this point of the subject in considerable detail. In examining a suspicious case it is necessary to investigate the condition of all the pelvic tissues, including the lymphatic apparatus, the bladder, the rectum, and the peritoneum. He then turns his attention to the supposed connexion with tuberculosis and syphilis. While the suggestion that carcinoma often followed spontaneous cure of tuberculosis can now be proved to be without foundation, it can equally be proved that the supposition that syphilitics never get carcinoma is untrue. It has been stated that cases which have to be treated by gynaecological operations rarely get carcinoma later. Although Martin has met with cases in which this was contradicted, he acknowledges that it is very rare. The influence of pregnancy on cancer has long since been recognized to be a pernicious one. With regard to prognosis, Martin states that while untreated carcinoma uteri must be regarded as hopeless, a few cases have been recorded in which either arrest or spontaneous cure has apparently taken place. He has seen such a case himself. Next he deals with the radical operative method of treatment. He describes the very extensive operation which he carries out without going into minute details with regard to technical difficulties, etc. Unfortunately a number of cases which the gynaecologist sees for the first time are quite inoperable. The duty of the medical practitioner is then to remove the local symptoms, to raise the powers of resistance, and to improve the general condition. That it is his duty to cheat the patient about her condition is, in his opinion, certain, and by so doing, one not infrequently renders the months or even years during which the patient still lives bearable. With regard to alcohol, he points out that while it may be useful in some respects, it can do harm in others. Locally the doctor must attempt to diminish many distressing symptoms. Gellhorn has recently recommended acetone to remove the objectionable odour, and to stop bleeding and discharge. Pyoktannin and methylene blue have also been recommended, but these means have not met with general approval. Pinkus has attempted to destroy the new growth by injecting trypsin into cervical carcinomata after excochleation and cauterization, and at times after total extirpation. He did not obtain satisfactory results. When this subject was discussed at a meeting of the Obstetrical Society of Berlin, it was pointed out that the experience of trypsin was by no means encouraging. A final opinion as to the value of Roentgen rays in this condition has not yet been arrived at. It is therefore necessary to remove the carcinomatous granulations and to cauterize the zone of infiltration. He removes raised edges and fungating pieces with the scissors, while firm masses are scraped out with the sharp spoon, or at times with the knife. It is sometimes necessary to utilize metal ligature for masses of tissue to control haemorrhage. The cauterization is best carried out with the actual cautery (including Paquelin's or the electric cautery). He discusses the treatment of recurrences also in detail. Haemorrhage is the usual sign of a recurrence after operation. The implication of lymphatic glands is usually heralded by pain. When recurrences can be seen early, complete removal can at times be carried out, and the results at times are satisfactory. If the patient refuses to submit to a second operation, or if the cases are seen too late, one has to treat symptoms. Haemorrhage may be dealt with by applying astringents, such as the perchloride of iron, hot or cold douches, etc. Profuse discharge and the accompanying evil odour may be dealt with by douching with solutions of carbolic acid, corrosive sublimate, permanganate of potassium, or a 1 in 1,000 solution of thymol, to which peroxide of hydrogen is added. Pain has to be met by applying narcotics, while the feeding of the patients and the general management require very careful attention. In summing up, he states that all uterine operations for cancer must be performed through the abdomen. Inoperable cancer is best treated by excochleation and cauterization.

THERAPEUTICS.

119. Carbonic Acid in Heart Disease.

A. Selig (*Zentralbl. f. die gesamt. Therap.*, September, 1907) describes the effect of a course of carbonic acid baths at Franzenbad upon a case of mitral stenosis with myocarditis. The patient was a woman 34 years of age, who for about ten months had complained of symptoms referable to the heart. At the beginning of the illness she had improved under treatment, but the symptoms had returned and the condition had become worse. In two months before coming to Franzenbad she had been treated at the Schrötter clinic and had improved sufficiently to undertake the journey to Franzenbad from Vienna. She still complained of fatigue on walking, swelling of the legs, especially of the left leg after walking, severe palpitation and slight shortness of breath. When examined the heart was found to be increased in all dimensions. The dullness extended on the right a fingerbreadth beyond the sternum and on the left a fingerbreadth beyond the mammary line; the apex beat was in the sixth space. The Roentgen rays showed an increase of the right heart out of proportion to that of the left. The irregularity of the heart's action was very striking, and only 56 pulse beats at the wrist could be counted for 63 heart beats. At the

apex a weak systolic and a distinct and more prolonged presystolic murmur could be heard. At the base of the heart there was a soft systolic murmur and a murmur accompanying the accentuated second sound. The pulse was strikingly small, of low tension, unequal, arrhythmic, sometimes disappearing; a sphygmographic pulse tracing could not be taken because of the feebleness of the impulse. The liver was found to reach three fingerbreadths below the border of the ribs. The malleolar region of both feet was swollen and slightly oedematous, the left being more so than the right. The amount of urine passed in twenty-four hours was 930 c.cm., specific gravity 1.02, and traces of albumen present. The patient was ordered a systematic course of carbonic acid baths, all hygienic and dietetic measures needed were taken, and all drug treatment omitted. The baths were given daily with intervals of a day at first after three days, and later after two or three days. The whole series of carbonic acid baths available at Franzenbad from the weakest to the most powerful were gone through on the forty-three days of treatment. In order to increase the driving power of the heart a methodical gymnasium treatment, consisting of a course of passive movements, breathing exercises, vibration massage applied over the vertebral column, and later over the heart, *tapôtement*, and friction massage, was carried out. That the gymnasium treatment was effective was shown on the fifth day, when after the exercises it was found possible to get a pulse-curve tracing, although it had not been possible to do so after the bath and before the carrying out of the exercises. Figures are given to show the effect of the baths upon the pulse, blood pressure, and respirations. There was an increasing rise in the driving capacity of the heart, with better filling and increased tension of the pulse; the arrhythmia remained, although it became less marked. As essentially due to the cure may be considered a gradual disappearance of the disproportion between the number of heart-beats and of pulse-beats, this being especially noticeable immediately after the baths, and also an improvement both in the time and quality of the pulse. There was a great diminution in the size of the heart, especially of the right half, during the cure. At the end of it the absolute heart dullness reached only from the mid-sternal line on the right to one fingerbreadth beyond the mammary line on the left. The heart murmurs became stronger and clearer as the heart's action strengthened. The oedema of the legs disappeared. The amount of urine increased until 1,550 c.cm. was passed per diem; a trace of albumen was still, however, present. Throughout the treatment the patient felt extremely well, and she was not obliged on any day either to be confined to bed or to omit the bath. The author claims that the Franzenbad carbonic acid baths are an effectual treatment for cases of heart disease, and that for long periods of time the use of the baths can render patients independent of drug treatment.

120. Spirosal.

SPIROSAL is a mono-glycolic acid ester of salicylic acid and has been introduced as a substitute for salicylic acid for the treatment of rheumatism. E. Gardemin (*Deut. med. Woch.*, December 5th, 1907) has tried it in over 70 cases and is very satisfied with its therapeutic action. It is a colourless and odourless fluid, and is readily soluble in alcohol, ether, and chloroform, but not very soluble in water. In olive oil it is soluble to the extent of 1 part in 15 parts. It is absorbed from the unbroken skin without irritating the surface. He applied it by painting the skin covering the affected joints once a day and then covering the place with oiled paper and a flannel bandage. It relieves pain in a short time, and when large areas are painted with it, salicylic acid can be detected in the urine after about one and a half hours. In chronic rheumatism and in muscular rheumatism he preferred to use equal parts of spirosal and alcohol, and obtained good results. Disturbances on the part of the stomach were not seen, while only in 2 cases was there any reddening of the skin accompanied with pain. He states that he has found this preparation better than mesotan. In all he treated 39 cases of acute and 36 cases of chronic rheumatism. Of these 31 acute cases were cured and 8 improved, while of the chronic cases 24 were cured and 12 patients were discharged improved. He mentions that in 40 out of the 75 patients no other form of treatment was employed. The others were given other drugs such as salicylates, aspirin, novaspirin. He appends some histories of cases. He finds that in cases with severe and long standing pain the combination of spirosal and small doses of aspirin or novaspirin often is very useful. The latter is especially to be recommended for patients whose gastric functions are not in good condition.

121. Guaiacol Preparations in Anaemia.

F. PROSKAUER (*Berl. klin. Woch.*, August 26th, 1907) says that our inexact knowledge with regard to the so-called constitutional diseases forces us to adopt empirical means in their treatment. The fact that a diminution of the iron content in the blood is a prominent symptom in anaemic affections leads us to treat them with iron. How this acts no one can say. It is therefore necessary to pay attention to that inexplicable alteration of the normal conditions of the organic functions which we speak of as predisposition. Experience has taught that in tuberculosis the altered conditions of the body habit can be influenced by certain drugs, among which creosote may be mentioned. There is no doubt that this drug does not attack the tubercle bacillus, but acts by increasing the body resistance against noxious effects. Sahli and Penzoldt were the first to suggest the substitution of guaiacol for creosote, and one of the most useful of the guaiacol preparations which have been introduced is the sulpho-guaiacolate of potassium, better known as sorisin. More recently this preparation has been modified to fulfil the wants of a treatment of anaemia by combining the potassium salt with a compound of sulpho-guaiacol and iron. The potassium and iron salts are mixed in equal parts and dissolved in the compound syrup of orange. It is thus known as *iron sorisin*, while, when 15 drops of Fowler's arsenic solution is added to each 130 grams of the solution, the preparation is known as *sorisin-ferrarsenate*. Proskauer has employed both these sorisin preparations in various forms of anaemia, and reports on the results which he obtained. Using the arsenic compound, he found that in cases of simple chlorosis the body weight and haemoglobin percentage of the blood steadily improved under the drug. In primary anaemia also he obtained good results. In pernicious anaemia he obtained an increase in the haemoglobin from 52 per cent. to 75 per cent., while the number of red cells increased from 1,856,000 to 2,640,000 in about three and a half weeks in one case, but in a second no improvement could be noticed. He states that the simple iron sorisin was also of use in milder cases. The patients liked the taste of the preparations, and his results, he says, justify him in recommending both iron sorisin and sorisin-ferrarsenate in the various forms of anaemia.

PATHOLOGY.

122. The Effect of Antiseptics on Phagocytosis.

WILFRED H. MANWARING AND HAROLD O. RUH (*Journ. Exper. Med.*, September, 1907) have studied the influence upon phagocytic action which is exercised by some of the antiseptics commonly employed in surgery and medicine. Freshly drawn, defibrinated human blood and a suspension of streptococci in normal saline solution were added to a solution of the antiseptic of known strength; the tube containing the mixture was immediately immersed in a thermostatic water bulb at 37.5° C., and, fifteen, thirty, and sixty minutes later, smears were made from the material. These films were stained by Wright's method, and the number of bacteria in sixty polymorphonuclear leucocytes was counted in each film. Based on these observations, the following results were obtained: Carbolic acid, when added in increasing amounts, causes from the first a decrease in phagocytic power; phagocytosis diminishes by one third when the concentration reaches $\frac{2}{3}$ per cent., by seven-eighths when it reaches $\frac{1}{8}$ per cent., and ceases completely at $\frac{1}{2}$ per cent. Mercuric chloride, in concentrations less than $\frac{1}{150}$ per cent., causes a transient stimulation of phagocytosis, followed by a depression. In larger amounts it causes a permanent depression from the first; and phagocytosis appears to cease completely soon after the concentration reaches $\frac{1}{75}$ per cent. Boric acid, in concentrations less than $1\frac{1}{2}$ per cent., causes a transient stimulation, followed by a depression. As the concentration increases above $1\frac{1}{2}$ per cent. there is a rapid fall in phagocytic power, with apparently a complete cessation of this power soon after the concentration reaches 2 per cent. Quinine hydrochloride, added in increasing amounts, causes a stimulation, the maximum phagocytosis being reached with a concentration of $\frac{1}{200}$ per cent. A further increase in the drug causes a decrease in this stimulation, phagocytosis being reduced to normal as soon as the concentration reaches $\frac{1}{150}$ per cent. In larger amounts quinine causes a depression, and phagocytosis apparently ceases soon after the concentration reaches $\frac{1}{75}$ per cent. The authors have not determined whether the observed stimulation is permanent or is followed by a depression.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

123. **Pirquet's Cutaneous Reaction.**

Pirquet's new cutaneous reaction with tuberculin depends on the introduction of small quantities of tuberculin into a scarification of the skin. After from twenty-four to forty-eight hours a local reaction, beginning as an oedematous redness and developing into a papule, appears, and when this heals some pigmentation is left. V. Bandler and K. Kreibich (*Deut. med. Woch.*, October 3rd, 1907) have applied the test to adults and elder children. Their cases included cases of lupus and other tuberculous skin affections (26 cases), and cases of non-tuberculous skin diseases (psoriasis, etc.), as well as cases of syphilis and gonorrhoea (37 cases). They followed Pirquet's directions with regard to technique, with the one exception that they used undiluted old tuberculin for the adults. Two or three drops were applied to the cleaned skin of the arm or back, and introduced by scratching or slight boring with an ordinary vaccination lancet. Pirquet considered that the reaction is not diagnostic of tuberculosis in adults, on account of the influence which old healed tuberculous processes has on the organism. Of the 37 control cases, 15 failed to give any reaction at the first attempt, and of these 2 gave very slight indistinct reactions on the second attempt. Of the remaining 22, reactions varying from uncertain slight reddening to well-marked papules were met with, 12 showing distinct reactions. Two cases of lupus erythematodes and 2 cases of syphilis, affecting individuals whose apices of the lungs showed suspicious signs, gave reactions. Turning to the 26 cases of tuberculous skin affections, 22 gave very well-marked violent reactions, while 4 cases of severe miliary tuberculosis of the mucous membranes did not react at all. The 4 patients were cachectic, showed affections of the lungs in an advanced stage, and had high fever. Two of them died shortly after, and at the *post-mortem* examination extensive tuberculosis of the lungs, glands, and liver was found. The 22 cases included 21 of lupus and 1 of tuberculosis verrucosa cutis. In all these cases the reaction appeared early, mostly in twenty-four hours, and a considerable amount of infiltration was seen. The authors state that it was not difficult to distinguish a great difference in the strength of the reaction in the cases of cutaneous tuberculosis and in cases of tuberculosis of the internal organs. They discuss the importance of amount of tuberculin used for the reaction. In a case of internal tuberculosis and erythema induratum (Bazin) a papule of 10 mm. appeared after the first scarification, one of 15 mm. and some swelling followed the second scarification, while an injection of tuberculin (1 mg.) gave rise to a general reaction and very marked swelling, etc., of the two sites of scarification, although the patches of erythema remained unchanged. Hypersensibility of the skin to tuberculin was met with in a case of lichen scrophulosorum. Lichen syphiliticus also gave a violent reaction, so that Pirquet's method cannot be used as a method of diagnosis between the two conditions.

124. **Circulatory Disturbances in Phlebitis of the Lower Limb.**

Chauffard (*Journ. des Prat*, October 12th, 1907) reports two cases. In the first case the patient was 26; he had an attack of pleurisy, December 7th, which was ushered in with rigors, fatigue, and great exhaustion, accompanied by lumbar pains. Ten days afterwards he was pale, depressed, aching, and his temperature was 38·7°. He felt pain on palpation over the right kidney; his urine was dirty coloured, contained 1 gram of albumen, granular casts, and numerous red blood cells. Fine subcrepitant râles were heard at both bases. On December 20th there was pain in the left side, but the râles were coarser. Pain in the calf came on, which extended quickly all along the leg; the leg was oedematous, being white and bluish in patches. The leg was retained semiflexed. A venous clot, as thick as a thumb, appeared in the popliteal space. In a fortnight the oedema had diminished, the clot rapidly became thinner, and could not be felt on palpation. In the second case, which ended fatally, a diagnosis of arterio-phlebitis was made. The patient, a man aged 51, was alcoholic, and had pleuro-pneumonia of the left lung. When a litre of sero-fibrinous fluid, rich in polynuclear cells, was withdrawn, fine subcrepitant râles could be heard. The sputum contained many pneumococci, but no tubercle bacilli. Ten days later he complained of severe pain in the right leg, which became oedematous and blue. Fomentations were applied. The other leg became oedematous and blue. The general health failed, the pulse rose to 135 to 140 beats per minute, the feet became cold and slate-coloured, and the thigh became covered with violet-coloured patches. The femoral artery was with difficulty felt, and the patient died of heart failure. On autopsy were found a caseated tuberculous focus at the left apex, great congestion of both bases, a large liver, the femoral veins filled with a large thrombus. The femoral artery was flattened, but there was no arteritis.

125. **Primary Cancer of the Liver with Cerebral Metastases.**

C. Giachetti (*Ric. di Pat. nerv. e mentale*, Florence, 1907, xii, p. 149) records the case of a man of 60, who suffered from epigastric pains and digestive disturbances for several months, which were relieved for a time by treatment. Then the gastric troubles returned, accompanied by headache, and a few months later psychical symptoms made their appearance. Physical examination revealed little of importance; the patient had lost his memory, was facile, suffered from hallucinations, and refused his food. The diagnosis was not plain: dementia paralytica was suggested; the man could recognize his friends, but was in a state of great mental confusion, and soon died comatose. At the autopsy the liver weighed 2½ kilograms and contained a large smooth light-coloured neoplasm at the posterior part of its convexity, fibrous and tough under the knife. A few smaller nodules of new growth were scattered about the liver, which was otherwise normal in appearance. The other viscera were normal; no gastric or intestinal tumour could be found. The brain and cerebellum on section showed numerous small rounded cancerous deposits throughout their substance. The hepatic tumour consisted of an abundant and vascular connective-tissue stroma, with tubes or loculi full of cylindrical or rounded epithelial cells, some of which showed evidences of degeneration. No distinct zone of transition from hepatic cell to tumour cell could be found, and Giachetti leaves the origin of the neoplasm uncertain. The brain contained countless microscopic secondary deposits in addition to those seen by the naked eye; the deposits were formed of cells similar to those seen in carcinoma of the liver—they were large, rounded, rich in protoplasm, irregularly grouped together. Softening and granular degeneration, or the formation of cystic spaces, could be observed in the centres of these nodules, which were vascular, and in many places exhibited invasion of the vessel walls by new growth. Little evidence of inflammatory or neuroglial reaction was seen in the vicinity of these deposits.

SURGERY.

126. **Resection of Colon.**

Jacques Boselius (*Zentralbl. f. die gesamte Therapie*, January, 1908) gives a summary of the history of colon resection, and shows how the adoption of the extraperitoneal method and of the three-step method has lessened the mortality of the operation. For instance, in the Breslau Hospital, of 28 cases operated upon extraperitoneally, only 4 died, whereas formerly, when the intraperitoneal method was used, the mortality was 50 per cent. Similarly, Kümmel reduced his mortality from 50 per cent. to 0 per cent. (3 cases). In 14 cases Hochenegg had only 1 death. When performing the operation in one step, Schloffer lost 4 out of 8 cases, whereas when using the three step method, namely (1) colostomy, (2) resection and suture, (3) closing of the colostomy wound, he lost none of 8 cases. The author considers, however, that the numbers are as yet too few to speak positively, and, on the other hand, the protracted treatment and the added dangers of a triple operation are great disadvantages. Boselius gives six conclusions which he appears to think are generally accepted: (1) That a primary resection should not be undertaken if tympanites be

present. (2) When the right part of the colon, that is, the caecum, ascending colon, right flexure, is to be resected, primary resection may be made and the ileum connected by lateral anastomosis with the transverse colon. (3) In resection of the left part of the colon, that is, the left flexure, descending colon, sigmoid flexure, primary resection should not be made, but the operation should be performed extraperitoneally, or in three steps. (4) In resection of the transverse colon this may be made in one step. (5) In resection of the lower part of the colon bordering on the rectum, a previous colostomy is to be recommended. (6) As a rule, lateral anastomosis is most advantageous, but it will depend on the circumstances of each case whether that or end-anastomosis be chosen. The author's own experience leads him to consider that the new methods are not really necessary, although his cases are as yet too few to adequately support this view. Of 14 cases operated upon by him for tumour of the bowel, 3 died. One of the deaths was from pneumonia fourteen days later, and section showed perfect healing. Of the 11 successful cases, primary resection was made in 9, colostomy being used in the other two cases on account of tympanites in the one, and after the resection, which had been very difficult and was doubtfully trustworthy, in the other. Four of the cases remained free from relapse for five and more years, 3 for less than three years, and 4 have since died from recurrence.

127. **Post-operative Parotitis.**

LEGUEU (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 33, 1907) discusses the etiology of post-operative swelling of the parotid, a complication which, though often benign, is sometimes rapidly fatal, and, therefore, always causes anxiety on the part of the surgeon. The author, who has seen many cases of this affection, and endeavoured by a study of its conditions to prevent it in the future, gives the results of laboratory researches made at his suggestions by Verliac and Morel. These researches have, it is stated, confirmed the view that this variety of parotitis always originates in the ducts, and show that the inflammation does not involve the lobules of the gland, and that cultures cannot be obtained with the blood of affected subjects, which would be the case if the inflammation were of central origin. The author, rejecting the views of a pathological relation between the parotid gland and the pelvic organs, and of any nervous influence, has been led by clinical and experimental observations to the conclusion that arrest of the parotid secretion is one of the chief factors of post-operative parotitis. This factor, he argues, is common to most operations. In the first place there is the influence of chloroform which stops the flow of saliva. The usual abstinence from solid food results in an arrest of mastication, which is the starting point of parotid secretion. To these supposed causes the author adds what is called dehydration of the patient due to the scanty diet, to purgatives, and, it may be, excessive bleeding at or after the operation. The parotid gland, when its secretion is thus arrested, offers diminished resistance to microbic infection, starting in the mouth, which has been irritated by the anaesthetic or by tongue forceps, or set up by some acute general affection that has necessitated the operation. In the treatment, and also in the prevention, of post-operative parotitis, the surgeon, the author holds, should have recourse to disinfection of the mouth and massage of the swollen gland, and, in addition, supply fluids freely to the patient, insist on frequent mastication, and allow as early as possible a diet of solid food.

128. **X-Ray Carcinoma.**

PORTER (*Ann. Surg.*, November, 1907) publishes a case of multiple carcinomata following chronic *x*-ray dermatitis in a young man. After very obstinate dermatitis and ulceration of the hands and digits had lasted over six years, epithelial cancer was first demonstrated on the tips of the ring fingers. Undoubted malignant degeneration was subsequently found in eight other areas, so that there was, the author points out, a development of ten distinct epitheliomatous growths in one case in the course of five years. From October, 1902, to June, 1905, a dozen operations were performed for the partial removal of fingers, and the excision of keratotic areas and patches of chronic ulceration. A pathological report made by Dr. White on different specimens taken from time to time from the hands of this patient showed, from the malignant condition, all grades of what may be termed precancerous changes down to simple ulceration or benign keratosis. The author holds that the slowly-increasing list of undoubted instances of *x*-ray carcinoma in the United States and other countries makes it imperative that the attention of dermatologists and surgeons should be thoroughly aroused to the great danger of all persistent *x*-ray ulcerations. Abstracts are given of 10 collected cases of this disease, of which 5 proved fatal. The author thinks that the prognosis of *x*-ray cancer is not so bad as this high percentage of mortality would seem to indicate, as there is a great likelihood, he thinks, that all fatal cases have been published, while no record has been made of a much larger number of patients who, after excisions or minor amputations, have as yet shown no evidence of recurrence.

OBSTETRICS.

129. **Rupture of the Perineum.**

IT was formerly thought that, since parturition is a physiological process, it must be unattended by any damage to the mother naturally. The deduction was made that injuries to, and death of, the mother must be due to faulty interference. A lay person named von Ludwig wrote a few years ago in favour of the knee-elbow position for labour, claiming that this was the normal position, that the pains were less when this position was taken, and that the risk of injury must be smaller. The position was given a fair chance in Germany, and the result was that it was found to be less advantageous than the dorsal position in every respect. F. Ahlfeld (*Deut. med. Woch.*, December 19th, 1907) deals in considerable detail with this subject of the prevention of rupture of the perineum as exemplifying a common injury to the mother in childbed. It is a fact that skilful and careful management of parturition has not been able to reduce the percentage of ruptured perineum in primiparae below 25 per cent. In Marburg, among some 5,000 women confined in hospital, 87 per cent. of the primiparae got either a slight mucous membrane tear or a real ruptured perineum, or it was found necessary to incise the perineum. These figures were controlled by carefully inspecting every woman before she was discharged from hospital. For practical purposes it is necessary to divide ruptured perineum into three degrees. The first includes those cases in which the mucous membrane and skin alone are torn, while the fasciae and muscular layers are uninjured; the second includes those cases in which the tear involves the constrictor ani but not the sphincter; while the third includes tears which involve the sphincter and even open the bowel. Among 790 cases of ruptured perineum in his clinic, 569 were of the first degree, 213 of the second, and only 8 of the third. Elderly primiparae, as well as very small women and very young girls, appear to be especially prone to this injury. In order to prevent its occurrence, it is necessary to consider the manner in which it takes place. The genitals of every healthy, well-built young woman become remarkably capable of stretching toward the end of pregnancy. It is well known that the period of the emergence of the fetal head in primiparae usually lasts for two hours. Nature, therefore, seems to point to the necessity of a slow emergence, and it is most often that a tactical error is made in shortening this period. The patient is only too willing to bear down heavily so as to shorten the pain, and the midwife does what she can to manually stretch the vulvar opening to shorten the suffering of the patient. The medical man, too, is prone to apply forceps when the head remains for a time at the perineum. Then again a very large head may be the cause of the rupture. Or it may pass through the orifice in an unfavourable position. If a hand or an instrument is introduced as well as the head into the genital canal, the stretching becomes still greater, and Ahlfeld believes that the male hand is often responsible for the rupture. In order to prevent a rupture, therefore, it is necessary not only to support the perineum from outside but also to avoid the production of all those conditions which facilitate the tearing of the soft parts. With regard to the position in which the mother is delivered, he considers that the one which is most comfortable both to the mother and to the obstetrician is the best. He prefers the dorsal position to the left lateral, after having given the latter an extended trial. Then comes the question of a manual support of the perineum. He thinks that inexperienced persons apply the support much too soon. It is only necessary to carry it out when the head does not recede between the pains in primiparae, while in multiparae when the os is fully dilated and the patient is bearing down strongly, it is wise to protect the perineum as soon as it begins to be protruded. The most important preventive measure is patience. One should allow the perineum plenty of time to become stretched, and when the patient is bearing down strongly, one should attempt to interrupt this during the pains. Partial anaesthesia is

often useful at this stage. The perineum can be supported by placing a flannel dipped in alcohol over the anal region and by holding this in place with the hand in such a way that the ball of the thumb presses on the perineum and prevents the head from being precipitously carried through the vulvar aperture. The other hand should assist the rotation, assist in gently pressing the labia over the half-born head and measuring the degree of tension, so that as soon as this becomes excessive means may be taken to relieve it. Although he does not consider that the shoulders will tear the perineum on being born, he realizes that a small tear may be enlarged by their passage. One should therefore be careful, in delivering the shoulders, not to increase the tension unnecessarily. When the tension is great one can relieve it by incising the perineum laterally. The head can then be delivered between the pains either by the rectal or the post-perineum method. The incision is carried out by means of sharp scissors, and should be made in the direction of the tuber ischii to the extent of from 2 to 3 cm. The lateral incision is made through transverse fibres, so that there is no tendency of it being extended by tearing when the head progresses. The rectal method of delivery is carried out by passing two fingers of the hand protecting the perineum into the rectum and hooking them over the forehead, on which traction can be applied. There is no risk of injuring the intestinal wall if this be carried out properly. The post-perineal method is similar, the hand working from the post-perineal region instead of from within the rectum. The author deals further with the treatment of rupture. Suture should be applied at once after the delivery. Formerly he used to carry it out before the birth of the placenta, but inasmuch as it is sometimes necessary to remove a placenta manually it is perhaps better to postpone it until after completion of the birth. It is advisable to have everything ready for suture of a ruptured perineum before this takes place, including sutures, sterilized instruments, etc. In this way one can go much more calmly and satisfactorily to work. He speaks of the methods of carrying the suture out according to the degree and of the after-treatment.

GYNAECOLOGY.

130. Tuberculosis of Cervix: Can it be Primary?

PEHAM (*Zentralbl. f. Gynäk.*, No. 7, 1908) related a case at a recent meeting of the Obstetrical Society of Vienna, which gave rise to a discussion as to whether, save in exceptional instances, tuberculous disease is ever primary in the female genital tract. Peham's patient was 30 years of age; she applied for relief at hospital on account of bleeding after coitus. Her parents were healthy, one sister died of some lung disease, she herself had never suffered from any malady except measles and diphtheria in childhood, but the catamenia were not established until she was 20, since then they had been regular. The patient had never been pregnant. Peham found no evidence of disease of the thoracic organs, bladder, vagina or (trusting to palpation) of the ovaries or Fallopian tubes. The cervix was conical; on its anterior lip lay a deep semilunar ulcer with rather thickened edges bearing nodular excrescences of irregular size and shape. The ulcer was scraped, and the scrapings showed all the signs of tuberculous disease. Peham exhibited the patient, and asked whether removal of the entire uterus and appendages was not advisable. Fabricius, in discussion, related three cases of tuberculosis of the portio in his experience, which he held to be primary. A sickly girl introduced a hairpin into the rectum; it perforated the vagina and the portio vaginalis of the cervix. A true tuberculous ulcer developed on the punctured spot in the cervix. The second patient was a very corpulent lady in good circumstances. She was suspected to be suffering from cancer. The cervix was scraped, but proved so hard that no tissue could be detached by the sharp spoon. A piece was therefore excised, and was found to be the seat of tuberculosis. The entire uterus was removed. Nine months later the patient became subject to bad headaches, and died of tuberculous meningitis. The third patient was also a stout woman, suffering from an ulcer on the portio, which, as in the last case, was very hard, although some of its substance could be scraped away. The ulcer proved to be tuberculous; the body of the uterus was bulky, from metritis. Total hysterectomy was performed. The after-history of this case could not be obtained. Schauta expressed great doubt about the possibility of determining that tuberculosis of the cervix or other part of the female organs was primary in the great majority of cases. It was always possible that a focus of tubercle lay latent in the lungs or in the retroperitoneal or mesenteric glands. He even doubted whether operation was advisable should the tuberculous disease of any part of the genital tract be absolutely primary, for he suspected that it would be better to treat the patient by dieting and change of climate, as though she had pulmonary phthisis. Peham was inclined to doubt that in Fabricius's second case, where the patient ultimately died of meningitis, the cervix was the primary seat of tubercle. There had been no autopsy, by which alone could the question have been proved. He considered that Schauta's conservative treatment of tuberculosis of the genital tract could only be practised on well-to-do patients, for in hospital and Poor-law practice it was impossible. Fabricius maintained that the disease was primary in his second case. He admitted that there was no *post-mortem* examination, but there was no family history of tubercle, the patient was robust, the ulcer on the cervix looked exactly like the similar case which Peham had brought before them, and the inflammation of the membranes of the brain which proved fatal seemed clearly secondary.

THERAPEUTICS.

131. The Prophylaxis of Vomiting after Anaesthetics.

H. FREUND (*Wien. klin. Woch.*, November 14th, 1907) was led to employ cocaine as a preventive of vomiting after anaesthesia by the experiments of Kast and Melzer, which show that the normal gastro-intestinal canal is not analgesic, and, if inflamed, may be extremely tender. A small hypodermic or intramuscular injection of cocaine completely abolishes the sensibility of the intestine, whether normal or diseased. Lennander, Bier, and other surgeons who are accustomed to operate under infiltration anaesthesia, claim that the abdominal viscera are entirely insensitive, but their conclusions are based on the fact that the local injection of cocaine in the abdominal parietes acts, as regards the abdominal viscera, as a general anaesthetic. Vomiting after general anaesthesia is either of central or reflex origin. The former is due to irritation of the vomiting centre in the medulla oblongata, and usually occurs during the administration or some hours after return of consciousness. The latter—which is by far the commoner—depends partly on irritation of the gastric mucosa by saliva saturated with chloroform or ether, and partly on the fact that the anaesthetic is excreted by the gastric mucous membrane. This reflex vomiting usually occurs as soon as consciousness is regained, and is more amenable to treatment than the central variety. For if the gastro-intestinal canal is rendered completely anaesthetic by the injection of cocaine, reflex irritability is necessarily abolished. The following is the procedure advocated by the author: Half an hour before the administration of the anaesthetic a hypodermic injection of 0.01 gram (about ⅙ grain) of morphine and 0.0003 gram (about $\frac{1}{200}$ grain) of scopolamine is given. In women the doses are slightly less. The anaesthetic used is Billroth's mixture (chloroform 3, ether 1, alcohol 1 parts, by weight), except in cases of heart disease, when ether alone should be employed. Before completion of the operation, 0.025 gram (about ⅓ grain), or, in women, 0.02 gram of cocaine should be injected hypodermically, or, if rapidity of action is desirable, intramuscularly. The pulse becomes slower and fuller, and the blood pressure apparently rises. On regaining consciousness these patients were usually quieter and more comfortable than those who had received no cocaine. Vomiting occurred in only 12 per cent. of the cases, though before the introduction of the cocaine method it occurred in a third. Deducting cases in which the vomiting was evidently due to other causes—for example, peritonitis, lead colic, etc.—the percentage was reduced to 9.4. In half of these the vomiting did not occur until some hours after return of consciousness, when the effect of the cocaine had worn off. In some of the remainder the patients had secretly eaten a hearty meal. In one the vomiting was obviously due to cocaine poisoning, a full dose having been inadvertently given to an anaemic girl. In the cases of late vomiting, the internal administration of cocaine or alypin was tried, but the results were not encouraging.

132. Cephaldol.

HUGO EINHORN (*Zentralbl. für die gesamte Therap.*, February, 1907) recommends cephaldol, the antipyretic, antineuralgic, and antihydrotic effects of which he has seen

tested in hospital practice for a period of several months. Cephaldol is a yellowish-white powder with a somewhat bitter taste; it is almost insoluble in water, but easily soluble in alcohol. It is a reaction product resulting from the action of citric acid and salicylic acid upon phenetidene with neutralization of the excess of free acids. Cephaldol is best given in the form of cachets. The dose varies from 1 to 5 grams daily. In the author's experience one dose of from ½ to 1 gram usually resulted in a fall of temperature of about 1° to 1½° C., but in a few cases, especially in cases of erysipelas, a fall from high temperature to normal or even to subnormal might follow such a dose. The fall of temperature usually occurred within about an hour's time, and was sometimes accompanied by much sweating; the sweating was most noticeable in phthisical patients, and frequently was almost absent in patients with erysipelas, even when the fall of temperature was exceptionally great. It was not found possible to cause a permanent reduction of fever by a single dose of cephaldol, and the course adopted was either to give small doses of from 0.25 to 0.5 gram at hourly or two-hourly intervals until the dose of 4 grams for the day was reached, or to give one large dose of about 1 gram, and to follow it up by repeated small doses when the temperature began to rise again. By either of these methods a reduction of fever could be obtained for as long as the drug was being administered and until the temperature had once more become normal, without further need of an antipyretic agent. The antipyretic action and a resulting improvement of general condition was especially noticed in cases of erysipelas. In none of the cases did cephaldol appear to have any harmful effect, either temporary or permanent, upon the circulation, but the pulse tended rather to become fuller and stronger; even in cases with degeneration of the heart muscle and marked weakness of the heart complicating an acute fever, cephaldol could be safely given in large doses. Cephaldol was also without any irritating effect upon the kidneys, nor did it disturb the psychical condition. A few patients complained of unpleasant gastric sensations after taking cephaldol, and in isolated cases vomiting occurred, but the complaints were usually made after the first or second doses, and later doses were not accompanied by any discomfort. In no case was there any complaint of intestinal symptoms after taking the drug. The antihydrotic action of cephaldol was well seen in a series of cases of phthisis with night sweats. The patients took a dose of 1 gram at night; sweating soon followed and quickly disappeared, leaving the patient with a sense of pleasant coolness which was not interrupted by the ordinary night sweating; in all but 3 out of 15 cases a striking improvement was seen. As an antineuralgic cephaldol was of no service in acute rheumatism, but did good in chronic rheumatism. It was specially useful in certain nervous diseases; thus, in a case of syringomyelia with very strong neuralgic pains, the pains were completely lost under repeated doses of 0.5 gram of cephaldol, returned when the use of the powder was discontinued, and disappeared again when it was once more resumed. In the neuralgic and shooting pains of tabes cephaldol had a noticeably good action, even in one case in which almost all the other antineuralgic remedies had been previously tried without result. For a nervous headache cephaldol acted as well as the other customary remedies; upon headaches the result of brain tumour or meningitis it had no action. Notes of 9 cases which demonstrate the action of cephaldol are given. The author finds that cephaldol is an antipyretic of prompt action and excellent result in certain acute and chronic diseases accompanied by fever. The indication for its use as an antineuralgic agent is the presence of any purely neuralgic or neuritic symptoms; the action is less prompt in acute, but better in chronic, articular affections. He confirms Fritsch's opinion on the value of cephaldol as an antihydrotic agent.

133. The Action of Watery Extract of the Hypophysis.

Many contradictory views have been advanced as to the action of doses of hypophysis extract. A. Trerotoli (*Riv. Crit. di Clin. Med.*, Florence, 1907, pp. 512, 528) reviews these, and gives an account of his own work on the subject. Using a watery extract of the posterior lobe of the pituitary (that is, the part derived from the central nervous system) on 12 cases of cardiac or renal disease, and 2 cases with heart and kidneys intact, Trerotoli finds that injection of the extract sterilized at 100° C. produces an increase in the size of the pulse-wave; this increase is most marked in cases with considerable hypertrophy of the left ventricle. The pulse becomes slower also, and, if irregular, also more regular. The blood pressure is increased by amounts up to 20 mm. Hg, the rise being greatest fifteen or twenty minutes after the injection, and lasting for an hour or more. No unpleasant symptoms, either local or general, have been observed. Following Silvestrini (1905), Trerotoli recommends the use of pituitary extract clinically, as a cardiac tonic.

PATHOLOGY.

134. Preventive Inoculations against Infection by Streptococci and Pneumococci.

R. Chiarolanza (*Il Policlinico*, June, 1907) describes researches into the preventive action of antistreptococcic and antipneumococcic serums, with reference especially to peritoneal infections. The importance of the research depends on the well-known frequency of such infections in man, and the especially fatal nature of pneumococcal peritonitis. The author collects much evidence as to the two debatable points—whether streptococci are of one species only, or of more than one; and whether streptococci, pathogenic for animals, are so also for man. His experiments were made with serums supplied some by Aronson and some by Tavel. Aronson maintains that all streptococci are alike, and immunization against one is immunization against all. Tavel prepares his serum exclusively by means of streptococci of human origin. The animals experimented on were rabbits. The serum was injected, and at once or after twenty-four hours the peritoneum was opened and the culture of streptococci placed in the peritoneal cavity. A control rabbit was employed in each case, and similarly treated in every respect except that no serum was employed. The infecting streptococcus was from a case of human septicæmia, and one ten-millionth of a cubic centimetre of the preparation used was the minimum lethal dose for a rabbit of average size. Experiments on 42 rabbits are recorded, and the details supplied show that neither serum exercised any beneficial influence, the minimum lethal dose proving invariably fatal in spite of treatment, and the animals injected frequently dying before the controls. The author considers that these results absolutely contradict Aronson's theory of the unity of species of streptococci. They have been submitted to Tavel, who expresses no dissatisfaction with them, and expects no good effect from the injection of his serum into rabbits. He only considers it useful in man, and he states that the clinical effects of its use are uniformly good. Chiarolanza's experiments agree substantially with Summerfeld's as to the inefficacy of Tavel's serum, but Summerfeld obtained better results with Aronson's serum. A second research was made into the effect of heterogeneous non-specific serum as an antidote to injection by streptococci. With small doses of only slightly virulent streptococci the non-specific serum appeared to do some good, but with considerable doses of more virulent streptococci the non-specific serum (Pane's antipneumococcic serum was the one employed) did no good, and in large doses appeared to hasten the fatal result. Thirty of these experiments are recorded. Pane's antipneumococcic serum was also used in a series of 24 observations on rabbits infected with a virulent preparation of pneumococci. The twelve rabbits treated with serum all survived, while the controls all died. In one case an immunized rabbit survived the injection of ten thousand times the minimum fatal dose. The same results were obtained whether the serum was injected 24 hours before, or just before or just after infection.

135. Staphylococcal Cystitis and Infection of the Kidneys.

M. Donati (*Arch. per le Sci. Med.*, Turin, 1907, p. 203) has studied in rabbits and dogs the conditions under which a chronic staphylococcal infection of the mucous and submucous coats of the bladder is likely to pass up the ureters to the kidneys. He finds that the infection does not ascend to the kidney unless there is some abnormal obstruction to the flow of urine down the ureter. Such obstruction could be set up by forming a kink in the ureter, by ligaturing it to the psoas muscle, and causing more or less hydronephrosis. If the obstruction was complete, however, or if a segment of the ureter was excised, the kidney did not become infected; ligature or stenosis of the renal vein did not cause the corresponding kidney to become infected from the cystitis. The cystitis in each case was set up by the introduction of virulent agar cultures of *Staphylococcus pyogenes aureus*, contained in a small capped tube of celloidin, into the bladder. The simple introduction of the microbe into the bladder does not suffice to cause cystitis, the urine becoming sterile again five or six days after such an introduction.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

136. Idiopathic Dilatation of the Oesophagus.

C. A. EWALD draws a lesson from a case of idiopathic spindle-shaped dilatation of the oesophagus, which he was able to diagnose during life (*Deut. med. Woch.*, June 27th, 1907). The patient was a male, aged 30 years, who first consulted Ewald three years previously. Six years ago he suffered from a peculiar form of eructation, which was not accompanied with any noticeable odour, and which was independent of taking food. In the autumn of 1903, he was seized with sudden incapability of swallowing any food. At each attempt violent retching set in, ending in the vomiting of the food. He was troubled considerably at this time by collections of tenacious mucus in the oesophagus, which he succeeded in dissolving in seltzer water. On one occasion he vomited a bright red piece of tissue, which a doctor diagnosed as a portion of an oesophageal ulcer. Since then he at times felt well, and at times was incapable of swallowing anything. He often vomited food which he had eaten many days previously, while food which he had taken recently was not returned. The reasons which Ewald found against the condition being due to carcinoma of the oesophagus or ulcer leading to a stricture were as follows: The patient's age spoke against cancer. There was no enlargement of lymphatic glands, and no blood had ever been detected either in the gastric contents or in the faeces. The stomach tube passed without difficulty as far as the cardiac end of the stomach, and either passed through this or was stopped in this situation. Lastly, the history of six years' suffering, beginning with nervous eructations, was of diagnostic importance. The diagnosis had to be made between idiopathic spindle-shaped ectasia and diverticulum. Rumpel's test decided in favour of the former. He carried out the test as follows: A hollow tube was passed into the supposed diverticulum, while a second was passed into the stomach. If a diverticulum had been present, the water, which was introduced through the first tube, would only be regained through the second after this had been withdrawn from the stomach and passed into the diverticulum. He was able to regain all the fluid out of the stomach. A tube perforated in the distal 25 cm. was passed into the stomach. A second ordinary tube was passed into the sac. Through the second some coloured fluid was poured in. One minute after this no more coloured fluid could be withdrawn from the sac, but coloured fluid could be regained from the stomach through an ordinary tube passed into the organ. It was therefore quite clear that the sac in the oesophagus was a simple dilatation, and not a diverticulum. Everything in connexion with the case spoke against the existence of an organic stenosis, and in favour of a smooth transition between the dilated part and the healthy part of the oesophagus. Examined by the oesophagoscope, the gullet did not appear to be stenosed, but the picture was not very clear. Lastly, Ewald gave the patient 200 c.cm. of potato bismuth emulsion, and illuminated his oesophagus by means of *x* rays. The shadow was not clear enough to determine with certainty whether the gullet was equally dilated, but, as the other signs were undoubted, the diagnosis was made without hesitation. The patient was fed partly by means of nutrient enemata, but this had to be desisted from later. He was then fed by stomach tube alone. In spite of strengthening food, the patient lost weight and strength, and died on March 24th, 1907. On *post-mortem* examination the oesophagus was found to be enormously dilated throughout its whole length, but no stricture was present. The diagnosis was therefore confirmed. Ewald adds a few words on the etiology of this and similar cases.

137. Tetanoid Conditions in Childhood and Haemorrhage in the Parathyroid Glands.

YANASE (*Wien. klin. Woch.*, September 26th, 1907) includes under the term "tetanoid" all conditions in which the peripheral nerves are hypersensitive to galvanism ("spasmophilia"). The nervous system is hyperexcitable, and there is a tendency to convulsions and muscular twitchings. Von Pirquet distinguishes two groups—one in which the anodal opening contraction occurs with a current of less than 5 milliampères, and another in which the cathodal opening contraction requires less than 5 milliampères. There are four parathyroid glands, which normally lie in pairs, each of which is situated on the posterior surface of the lateral lobes of the thyroid gland. Structurally they differ entirely from the thyroid gland, and are composed of epithelial columns embedded in a stroma, which in children is exceedingly delicate and scanty. The most frequent morbid process to which they are liable is haemorrhage into their substance. In 89 cases in which there had been hypersensitiveness to galvanism the writer found parathyroid haemorrhage *post mortem* in 33 (37 per cent.). Such haemorrhage is most common shortly after, or possibly in the course of, parturition. In the first two weeks *post partum* the parenchyma is found to be more or less extensively ploughed up by extravasated blood. Later the extravasation becomes encapsuled in a characteristic manner, so that cystic spaces containing blood are formed. These are then invaded by phagocytes, which carry away and deposit pigment in the neighbouring connective tissue. The cysts slowly contract, and within a year have usually disappeared without the formation of cicatrices. The presence of pigment containing iron may, however, render the diagnosis of past haemorrhage possible for some time longer. The oldest child in which such traces were found was aged 5 years. Parathyroid haemorrhage sometimes occurs in older children—the writer has found recent haemorrhage in a child aged 12 and, exceptionally, even in adults. Its etiology and significance is then unknown. There is considerable evidence connecting the infantile form with spasmophilia. Thus, 50 children who were in hospital for various complaints and who eventually died were examined as to their sensitiveness to galvanism. In 13 cases in which it was normal the parathyroid glands were found to be normal. And in every case in which parathyroid haemorrhage was found there had been during life either galvanic hypersensitiveness—20 cases with anodal and 13 with cathodal—or convulsive symptoms. In 18 of the 50 children, although galvanic hypersensitiveness had been present the parathyroid glands were normal; but these 18 were all more than 1 year old, and therefore of an age at which all traces of haemorrhage may have disappeared. In all the children under 1 year old with galvanic hypersensitiveness parathyroid haemorrhage was found. The function of the parathyroid glands is assumed by Erdheim to be the neutralization of some toxic product of metabolism, which has a special affinity for the nervous system. Total extirpation of the glands is followed, both in man and animals, by typical tetany. In parathyroid haemorrhage their function is usually not entirely suppressed, and every gradation between simple galvanic hypersensitiveness and tetany may thus result. Probably an abnormal production of the tetany toxin also usually occurs in tetany, as this disease may develop in a marked form without total destruction of the parathyroid glands.

138. Tracheoscopy and Bronchoscopy.

MAX SENATOR (*Berl. Klin.*, December, 1907, No. 234) describes the various methods and apparatus that are nowadays best adapted to the inspection of the trachea and bronchus. He thinks that such inspection may be of profit to the medical man on many occasions besides those in which the lodgement of a foreign body in the windpipe urgently demands inspection before removal is attempted. The apparatus commonly consists of a tube of from 5 to 17 in. in length, passed cautiously down into the trachea or the bronchi after extensive cocainization (or in some cases after the administration of a general anaesthetic); a mirror and head lamp are employed to throw light down the tube. Its use enables the observer to view any part of the mucous membrane of the trachea or of the larger bronchi. The tube is from ½ in. to ¾ in. in diameter; the details of its employment have been mainly worked out by Killian of Freiburg i. B.

139. Diagnostic and Prognostic Value of Glycogen in the Sputa.

MOSCATI (*Rif. Med.*, January 29th, 1907) finds that glycogen in considerable quantities is always present in tuberculous sputa. It is most marked in the later stages of the disease

and in rapidly destructive types. The glycogen found in tuberculous expectoration is of the hepatic type. Other destructive diseases of the lung (that is, abscess, bronchiectasis) may show glycogen in the sputa, but never so constantly or to the same extent as in the case of phthisis, and the glycogen is of a slightly different type. No glycogen was ever found in the expectoration of simple catarrhal bronchitis, nor in those cases of slow broncho-pneumonic type which suggest phthisis but do not give any of the tuberculous reactions. Lobar pneumonia is sometimes associated with glycogen in the sputa, but its presence is uncertain and inconstant. The amount of glycogen excreted in tuberculous sputa is too large to be derived from the pus and seems to suggest a hyperproduction within the pulmonary tissue.

SURGERY.

140. **Appendicitis in Children.**

Riedel considers that the last word has been said with regard to the treatment of appendicitis in adults, since it has been freely recognized that early operation is to be carried out in every case (*Münch. med. Woch.*, November 26th, 1907). If the patients are operated on within the first six to twelve hours there is practically no danger at all. He realizes that there are exceptional cases in which perforation of the appendix takes place without any warning (he has experienced this four times), but these rare cases do not alter his opinion with regard to the overwhelming majority. But, with regard to children, much less concord of opinion is met with. He first casts a glance over his experiences and those of others. Since he has had charge of the surgical clinic in Jena—that is, since 1881—he has operated on every case as soon as it was admitted. There were 1,532 patients in all. Three died of the effects of the operation. His total mortality for the whole period is 8.6 per cent.; but if he divides the period up, he finds that in the first seventeen years it was 18.5 per cent., in the following four years it was 15 per cent., in the next three years 7.3 per cent., and in the last twenty-one months (dealing with 541 cases) it was 5.3 per cent. The large proportion of the deaths in this last-named period were in children. While only 2.9 per cent. adults died during this period, he lost 13 per cent. of the children. The causes for this are: (1) the parents are either careless in recognizing illness early or are unwilling to allow the surgeon to operate at first; (2) the diagnosis is more difficult in children than in adults; (3) appendicitis is more dangerous in children than it is in adults; and (4) small children and infants are very susceptible toward infections from the appendix. The first cause is the most important. One so often hears parents explain a pain in the abdomen and fever in a child by assuming that he or she has "upset his or her stomach" by eating fruit or other indigestible foods. But no indigestion is accompanied by fever. Poverty, too, may cause a mother to avoid sending for the doctor for a simple pain in the belly. The diagnosis may be difficult in quite small children, but in older children it is not so. One must distinguish between the pain of appendicitis and the abdominal pain which at times accompanies central pneumonia, follicular tonsillitis, etc. Worms must also be excluded. Where enteric fever or scarlatina is prevalent, one must be careful not to overlook true cases of appendicitis in children. It is often not possible to make an exact anatomical diagnosis, but this is not of great importance, since the operation, when undertaken early, is free from risk. The author deals with the pathological condition of the appendices in his operation cases. Faecal concretions undergoing decomposition and appendicitis granulosa are the most common causes of suppurative appendicitis. Foreign bodies are only responsible for a few cases. Strictures cause the condition frequently in adults, but rarely in children. He discusses the source of infection which gives rise to the suppuration, and calls especial attention to infection from the female genital organs even in very young children. After considering his cases minutely, he finds that neglected cases of decomposing faecal concretions are responsible for a large proportion of the deaths among children. Children can tolerate suppurative processes as well as adults, and since they do not run the risk of hypostatic pneumonia the chances which early operation offers them are just as good as, if not better than, those which early operation offers adults. He believes that if parents and general practitioners would only realize the importance of early operation in children as well as in adults, and accordingly send the cases to the surgeon within the first twelve hours, the results would alter materially. He has been able to reduce his adult mortality to 2.9 per cent., and it ought to be possible to obtain a still lower mortality in children.

141. **Hydatid Cyst of the Humerus.**

Cranwell (*Rev. d'Orthop.*, No. 6, 1907) reports two cases of hydatid cysts of the humerus. The subject of one case was a female, aged 36, and the subject of the other a male, aged 21. Hydatid cysts, it is stated, are rarely met with in bones, and in 4 only of 970 cases of hydatid disease observed in the Argentine Republic was any part of the skeleton affected. By this, together with other and larger tables of cases, it is shown that of the few bones in which the disease has been observed, the humerus is the one most frequently affected. With the exception of this bone, and of the femur, tibia and fibula, the long bones are very rarely, if ever, attacked. The author states that he has been led by his experience to the conclusion that hydatid cysts of bone usually present the unilocular form. The evolution of the growth, except in cases of acute infection, is slow and painless, and in most instances the first indication of the bone affection is a spontaneous fracture, this lesion being characterized by freedom from pain, failure to obtain crepitus, absence of ecchymosis, and non-union. Failing any indications of malignant disease, syphilis, osteomyelitis, or tabes, it is possible to establish a correct diagnosis by exclusion. In suspected cases doubt as to the nature of the disease may be removed by radiography, which in hydatic cysts of bone affords a characteristic picture. The treatment should consist in trephining the affected bone and extracting the whole of the cyst. As it is often found difficult to remove, even by energetic scraping, all the vesicles, the surgeon, after doing his best in this respect, should inject into the cavity a solution of formol and allow this to remain there for a few minutes.

OBSTETRICS.

142. **Artificial Interruption of Pregnancy.**

W. Bokelmann attempts to fix the indications for the artificial interruption of pregnancy in diseases of the internal organs and of the brain (Reprint from *Sammlung zw. Abh. aus d. Gebiet d. Frauenheilk. u. Geburtshilfe*, vol. vii, No. 6, 1907). He discusses the temptations of the obstetricians to procure abortion in order to satisfy their patients. Many women give most trivial reasons for wishing to get rid of their unborn babies. He says that not infrequently it is not shame or fear, but some motive, such as the desire to preserve a good figure, or the inconvenience of having a baby, etc., which induces them to seek the forbidden relief. When some women are told that the act of procuring abortion is criminal, they appear to be surprised and say that they have not thought of it in that light. The author compares the effect produced on the public mind by the commission of murder on a living person and the infinitely more frequent destruction of an unborn life. In the first case, one is not easy until the murderer has been caught and punished, while in the latter case no one troubles himself particularly about the matter. It is impossible to estimate the frequency of this class of murder, but it may be assumed that it is very frequent, since it is known that a large number of persons earn their living by its means. Bokelmann regards the cause of this indifference towards a serious crime to be that those who are responsible for the ethics of society realize that it does not affect themselves. Apart from those medical practitioners who systematically induce abortion for their patients and who sooner or later get into the clutches of the law, Bokelmann finds that a large number of highly respected practitioners show considerable indifference for fetal life, in that they are very lax in the indications for the destruction of such life. The indications for the induction of abortion in recent times have been extended by some in a very wide manner. The opinion has been put forward that one has no right to sacrifice the life of the fetus to save the mother, since both lives are of equal value. However, it has long been recognized that when the mother's life is in danger, the fetus must be sacrificed, and the author realizes that it would be inconsistent to object to this, as, if the mother dies, the fetus must necessarily die also, save in those cases in which it is already viable. In determining whether any disease should be regarded as an indication for abortion, physicians appear to take a more lenient view than obstetricians, probably because they are inclined to regard pregnancy as a pathological rather than a physio-

logical condition. With regard to pulmonary consumption, he analyses the question from the point of view of whether the interruption of the pregnancy is capable of either curing or inhibiting the course of the tuberculous affection, and comes to the conclusion that the evidence does not justify one in inducing abortion, save in exceptional cases. He puts the case similarly with regard to diabetes, while in a few instances in leukaemia, pernicious anaemia, and similar conditions one is justified in interrupting the pregnancy. Hyperemesis gravidarum is a condition which often is accepted as an indication, but he considers that the practitioner should in nearly every case refuse to accept this as an indication. He does not deny that in rare cases the mother may die if left undelivered; more frequently, however, if one adopts a strict method of treatment, the vomiting ceases rapidly. With regard to cardiac diseases, he says that the induction is indicated only when compensation is disturbed in the early stages of pregnancy, and also when there is a distinct history in previous gestations that the heart, later on in pregnancy, gets into severe difficulties from which the patient recovers slowly. He deals with renal diseases in a similar way. Turning to diseases of the nervous system, he does not regard the insanity of pregnancy as an indication for inducing abortion. With regard to various forms of insanity, he thinks that if it could be shown that children begotten while the mother is insane are more likely to be mentally affected than children born of the same parents at another period, the induction of abortion would be justifiable in the interest of the child as well as of the parent.

GYNAECOLOGY.

143. **Operative Treatment of Backward Displacements of the Uterus.**

J. W. Taylor (*Journ. of Obst. and Gyn. of the Brit. Emp.*, December, 1907), after an experience of the different operative measures for the treatment of backward displacements of the uterus, strongly recommends, in a majority of cases, the operation of shortening the round ligaments as opposed to those of vaginal or ventral fixation, or of ventral suspension of the uterus. The following are the dangers which have led him in most cases to abandon the abdominal operations for fixation or suspension: (1) The real danger to life; (2) the fact that suture of the uterus to the abdominal wall has in some cases been followed by persistent dragging pain or uneasiness, and that the operation has finally resulted in the formation of an artificial ligamentary or muscular band such as not only to allow of secondary displacements, but also to be the apparent cause of the occasional production of an intestinal "kink" and of interference with intestinal peristalsis. (3) The danger of interference with the cause of subsequent pregnancies, an interference observed in many cases. In carrying out the operation of shortening the round ligaments the author first makes a full examination under anaesthesia of the uterus and appendages, in order to determine with as much certainty as possible that the case is one of displacement only and is not complicated by any intraperitoneal disease, especially by any kind of adhesion, conditions which would, in his opinion, contraindicate the operation; some prolapse of one or both ovaries, even with a little enlargement, is not, however, a contraindication. The next step is to dilate and curette the uterus and to place it in a position of complete anteversion with a well-fitting pessary to support it. The further steps of the operation are described in some detail. The initial incision is a small one, only of about 1 in. in length, and is just above and parallel to Poupart's ligament, with the spine of the pubis at its lower point. The author attaches importance to the identification of the round ligament while still *in situ*, and his own method is to grasp with dissecting forceps the whole of the contents of the canal, with the exception of a small nerve which is usually visible under the small incision over the middle of the canal, to hold the contents upwards and inwards, and to search the lower and under side of the tissues; the round ligament is found "undermost and lowest." When the round ligament has been identified, the rest of the canal contents is dropped, traction made on to the ligament to throw it into relief, the fascial attachments separated, and 3 in. or 4 in. of the ligament pulled out until the fold of peritoneum near its uterine attachment is visible. As a part of the operation Taylor always closes the ring by stitches which take up also the round ligament until within a few lines of the spine of the pubis; the excess of round ligament is then returned into the remains of the hole in the aponeurosis and the ring is closed over it as close to the pubes as possible. The further sutures employed are also described. The author has tabulated his results for 85 cases. There was no mortality among the whole number of cases. In about 15 or 16 cases, chiefly those operated upon at the homes of the respective patients, there was some slight suppuration; in the other cases healing by first intention was obtained. There was not in any of the 85 cases any untoward complication or result of the operation. All except six of the cases were followed up, with the result that in 3 cases only was there any indication of relapse, and in these cases also, when last examined, the uterus was in good position. In 14 cases 19 pregnancies have followed without difficulty. There were 10 cases of early miscarriage, 1 of pregnancy which proved to be a case of twins with hydramnios, 1 case in which the child died at birth, and 2 cases which are included in the 3 mentioned above, in which partial relapse occurred after confinement. All of the 14 patients had been completely or relatively sterile before operation. Two of the 85 cases subsequently developed appendicitis, and another case subsequently had a tubal pregnancy. The favourable results obtained are to be in part ascribed to a careful selection of suitable cases. The cases chiefly chosen were those of displacement in single or early married life, where there was no hope of pregnancy temporarily to correct it, and where the symptoms were constant, and were the cause of serious complaint. If possible, the author prefers to first assure himself by pessary treatment that most of the symptoms are greatly relieved by replacement, and, further, by removal of the pessary after a few months, to find whether the symptoms return with a return of the misplacement. Where backward displacement occurs as a result of intra-abdominal disease, the round ligament operation is absolutely contraindicated.

THERAPEUTICS.

144. **Treatment of Pulmonary Tuberculosis.**

P. Hilbert (*Deut. med. Wock.*, December 12th, 1907) discusses a number of more or less recent modes of treatment. It is by no means easy to determine the value of any form of treatment in this disease, since it is a daily experience that pulmonary phthisis runs the most varied of courses. Even with regard to the sanatorium treatment, while experienced physicians claim to obtain excellent results, others (among whom Cornet may be mentioned) deny the beneficial influence. The author first discusses the hygienic dietetic treatment, as introduced by Brehmer and extended by Dettweiler. It may be admitted that this method is utilized at the present date as a basis for all the more or less specific remedies. Of the latter tuberculin stands first. Old tuberculin, which is a glycerine extract of a pure culture of tubercle bacilli, T.R., which is more complete extract of the bacilli, and new tuberculin, which is a bacillary emulsion, are all used. From the point of view of diagnosis, the majority of observers consider the tuberculins as necessary, and if properly handled not dangerous. With regard to the therapeutic uses, the failure which followed the introduction has now been redeemed by the careful work of Goetsch, Petruschky, Sprengler, and others. The indications now required are that the cases should be mild ones with but little if any fever, that only very minute doses (fractions of a milligram) should be injected at first and the dose should be gradually increased, due caution being taken by controlling the temperature every three hours or more frequently, and, lastly, that no more than two injections be given in one week. Provided that no hypersensitiveness toward the material is shown, one should aim at increasing the dose up to 0.1 gram of old or 10 mg. of new tuberculin. With this form of medication various clinicians have obtained remarkably good results; the best results were probably obtained by Moeller in the Belzig Sanatorium, where he got 36·3 per cent. of cures by the combination of hygienic, dietetic, and tuberculin treatment, while 75 per cent. of the patients in the first stage of disease were cured. The author regards these results as stimulating for further observations. Aufrecht claims to have obtained good results in reducing fever and improving the general condition by injecting from ¼ to 1 decimilligram of tuberculin. His own experience has been made exclusively with old tuberculin. He was able to obtain a gain in weight in 99 patients averaging 7·5 lb., as against 5.7 lb. in 44 patients treated without tuberculin (some with hetol), and this he regards as an objective argument in favour of tuberculin. Next he comes to a

number of other specific tuberculins and serum preparations. The idea of giving tuberculin in coated pills, and at the same time neutralizing the acid of the gastric juice with sodium bicarbonate, the rectal application of tuberculin and the spray form of application receive brief notice, but the author does not indulge in any criticism of these methods. Denys's tuberculin is practically the same as Koch's, but it is not evaporated down by heat. It is well spoken of in Belgium. Beraneck's tuberculin is supposed to consist of the various endotoxins of the tubercle bacillus, and is put up in fifteen different strengths. Sahli has obtained good results with it. Of tulase and tulaselactin, all that is known is what Collin has recently reported. Klebs introduced a specific under the name of "tuberculocidin," and, according to a few authors, beneficial results have been obtained by its use. It has, however, to be handled with extreme care, since a very violent reaction may follow its use. Tuberculo-albumin of Thamm is recommended by some, but the author has not been able to convince himself of its therapeutic value. Turning to passive immunization, Maragliano introduced a serum gained by injecting horses with bacillary bodies and toxins. It possesses a high agglutinating value, and is said to be rich in bactericidal substances. Maragliano's own results with the serum were very promising. The results obtained with it in Germany are contradictory. Marmorek also produced a serum, which he gained by injecting the toxin of cultures of young forms of bacilli. A number of favourable reports on the action of this serum have been published. Some observers, however, have not been able to assure themselves that it has a curative effect on tuberculous processes. The author next deals with non-specific remedies which have been suggested from the treatment of tuberculosis of the lungs. Landerer's hetol treatment (cinnamylate of sodium) is supposed to act by increasing the number of polynuclear leucocytes in the blood. The leucocytes form a sort of wall around the tuberculous affection, and thus cut off the connexion with the body. A large number of authors speak highly of this preparation, but while the author of the present paper has not observed any deleterious action, he has not been able to convince himself of a beneficial one. The various creosote preparations which have been introduced have gained a great reputation for phthisis. These preparations are not supposed to exercise any specific action on the disease, but they act beneficially by increasing the appetite and quieting the cough and lessening the sputum. Among those in favour to-day, he mentions creosotal, sulphosot, pneumin, guaiacol, thiocol, duotol, geosot, pulmoform and histosan. Styracol is a combination of cinnamylic acid and guaiacol, while guatannin has a similar composition, as well as containing tannin. Hilbert does not indicate which of the many preparations he prefers. Next, he speaks of the inhalation methods. Bulling recommends the spraying of a solution of phenyl-propiolate of sodium, but no others have been able so far to confirm the results which he obtained. The production of an artificial pneumothorax has recently been advised for one-sided affection. The results published so far have been satisfactory. Various means of inducing an artificial hyperaemia of the lungs have also been introduced recently, but the future must yet prove what the value of these methods really is. In conclusion he deals briefly with the treatment of some symptoms of phthisis.

145. The Influence of Metals on the Gastric Mucosa.

It has been shown that the introduction of an aqueous suspension of carbonate of calcium into the stomach produces an intense and long-lasting secretion. The explanation of this fact offered is that the finely-divided marble sinks to the lower parts of the organ and adheres to the mucous surface. Gradually the marble is acted on by the gastric hydrochloric acid, and carbonic acid gas is evolved, which, as is well known, exercises a strong stimulation to the secreting glands. The employment of metals such as iron, magnesium, aluminium, instead of marble, leads to the same result, and, according to A. Bickel (*Berl. klin. Woch.*, August 19th, 1907) this is due to the liberation of hydrogen in a nascent condition. Metals which do not liberate hydrogen in dilute hydrochloric acid do not exert any stimulation of the secretion of the stomach. This observer experimented with escalin, an aluminium-containing substance. The metal exists in this substance in a state of very fine division. When escalin is spread over the gastric mucous membrane it adheres to this at first, but later the gas bubbles lift the metallic particles from the surface and some of the particles are simply washed off by the increased flow of secretion. The secretion contains both hydrochloric acid and pepsin, and can therefore be regarded as normal gastric juice. Further, he shows that escalin induces considerable decomposition of the gastric contents, producing free gas. It therefore appears that escalin does not fulfil the requirements which are aimed at in a substitution for bismuth in the treatment of gastric ulcer. Its stimulating properties on the gastric mucous membrane are particularly against its use for this purpose. In determining whether escalin is a haemostatic remedy, he applied it to bleeding surfaces not only in the stomach in animals, but also to the liver and spleen, and found that the bleeding did not stop any sooner than when nothing was applied to the bleeding surfaces. The blood simply carried off the light aluminium. Although he does not feel justified in drawing conclusions from these few experiments, he is of opinion that it is extremely risky to state that any drug arrests gastric haemorrhage without having watched the effects in an extremely large number of cases. It is well known that haematemesis is a very uncertain condition, and because a few cases do well after a certain drug has been tried, it by no means follows that the drug has stopped the haemorrhage. He is therefore compelled to come to the conclusion that there is no evidence at present that escalin is useful in gastric bleeding.

PATHOLOGY.

146. Changes Produced in the Kidneys by Roentgen Irradiation.

Warthin (*Amer. Journ. of Med. Sci.*, May, 1907) experimentally investigated the results of Roentgen irradiation of the kidneys, being led thereto by the remarkable changes discovered in them from two cases of leukaemia that had been treated by *x* rays. In the first the greater part of the renal structure was destroyed by extensive deposits of lime salts, which filled up the tubules and replaced the epithelium. The remaining portions of the parenchyma were atrophic and showed cloudy swelling and fatty degeneration, while the intertubular connective tissue was increased and there were localized inflammatory changes in the cortex. The blood vessels showed a condition of chronic passive congestion. A similar condition, though less advanced, was noted in the second case, but in 25 cases of leukaemia untreated by *x* rays no such deposit of lime salts occurred, although a more or less parenchymatous degeneration was found. This latter may be regarded as in direct proportion to the number of degenerating white cells seen in the blood, spleen, bone marrow and lymph nodes of a given case, while the more severe renal changes occurring in the two irradiated cases appear to be the result of some poison arising from the excessive destruction of white cells by the *x* rays. Forty experiments were conducted of percutaneous exposures upon animals varying in size from mice to hares, from which it was found that *x*-ray exposures of small animals for half an hour to an hour produce at once slight nuclear changes in the renal epithelium characterized by swelling, vacuolation, clumping of the chromatin, and some loss of staining power. Recovery from this primary injury quickly takes place, but in six or twelve hours a secondary kidney change results characterized by albuminuria and cloudy swelling. This second condition appears to be in direct proportion to the degree of lymphoid destruction. Continuous exposures for five hours or more are fatal to small animals from paresis and coma within ten days, the progressive development of the symptoms being suggestive of an intoxication, and agreeing in character with those of poisonings due to the products of protein destruction. It would seem that the destruction of great numbers of leucocytes, such as occurs in Roentgen-ray treatment of leukaemia, may be dangerous to the organism either in its action upon the central nervous system or upon the kidneys. It is hardly likely that an occasional irradiation could cause serious damage to the kidneys, but in cases of prolonged or repeated treatment of the lymph nodes and spleen the possibility of renal injury must be borne in mind, and in cases of pre-existing nephritis a dangerous exacerbation might be excited. Probably *x* rays cause disturbance of the chromatin of all cells, the lymphoid cells and epithelial cells of the testis being the most susceptible, while the renal cells are more resistant. Cells capable of rapid proliferation or renewal are especially susceptible to the action of the rays.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

147. **Arterial Tension in Chronic Phthisis.**

MARFAN (*Rev. de Méd*, November 10th, 1907) pointed out in 1891 that the arterial tension is almost always lowered in pulmonary tuberculosis. In the present paper he records the results of his investigations on this subject of arterial tension in chronic phthisis. His investigations were carried out on adult patients whom he has been able to examine at intervals for considerable periods of time, and in all the cases the diagnosis was made sure of either from the physical signs or symptoms, or by examination of the expectoration for tubercle bacilli. Amongst the conclusions which the author draws as a result of his observations are the following: In chronic pulmonary tuberculosis an arterial pressure habitually normal or above normal is of favourable omen as far as the prognosis of the tuberculosis itself goes. In pulmonary tuberculosis, should the arterial pressure, at first low, rise and remain at a normal height or above normal, the prognosis is favourable. If the arterial pressure, at first normal, becomes low during the progress of the disease and remains so, the prognosis is unfavourable. In pulmonary tuberculosis an habitually low arterial pressure is a sign of bad omen. To this statement, however, there are some exceptions. As regards the cases of chronic phthisis in which haemoptysis at the onset is a marked feature, the author concludes that when in these cases the arterial pressure is habitually normal or above normal, the prognosis is favourable. When haemoptysis is accompanied by low arterial pressure the prognosis is grave, and generally these cases belong to that form called "galloping consumption." To this latter rule there are, however, exceptions. Certain tuberculous patients are of an "arthritic" constitution: they suffer from piles, eczema, migraine, asthma, or calculus, and in these patients the seats of lung disease become readily sclerosed. These patients, when young, have a normal arterial pressure, and when they have passed maturity they have a high blood pressure, and often exhibit signs of arterio-sclerosis. If in these subjects one finds that the arterial pressure tends to fall below the normal, there is reason to fear a fatal termination from the tuberculous process. On the other hand, so long as the arterial pressure remains elevated in these patients, it is almost certain that the tuberculous disease of the lung is in a quiescent state; the patient may die as a result of his arterio-sclerosis but not from his tuberculosis. In cases of diabetic patients who develop pulmonary tuberculosis the author finds that the arterial pressure (previously high) almost always becomes low, as one might expect from the progressive and fatal termination which pulmonary tuberculosis in these patients almost always pursues. If, however, in a case of diabetes complicated by pulmonary tuberculosis the arterial pressure remains above normal or at its normal height, or if after having become low it again rises, the tuberculous disease has become quiescent (a very rare event). The author describes a good example illustrating these latter facts. The author considers that estimation of the arterial pressure in cases of pulmonary tuberculosis gives valuable aids in forming a prognosis; aids which are at least equal to those afforded by examination of the pulse-rate and the temperature chart. He further shows that the prognosis of a case is not necessarily bad when tachycardia is persistent, and that more valuable aid in prognosis may be obtained from an estimation of the arterial pressure than from mere dependence upon the frequency of the pulse. Summarized, the following represent the views of the author: In pulmonary tuberculosis the arterial pressure is generally lowered. When one finds it normal or above normal, one may foresee a favourable termination; to this rule there are few exceptions, and one may say that the estimation of the arterial pressure is one of the surest means of recognizing the curable forms of pulmonary phthisis. A lowering of pressure is in most cases an unfavourable sign, but by no means always, as a low arterial pressure does not exclude the possibility of amelioration or even of a "cure" in the clinical sense of the word.

148. **Haemorrhagic Infarction of Small Intestine.**

INFARCTION of the intestine is relatively rare; usually it results from embolism of the vessel supplying the affected part of gut, less commonly from venous thrombosis, and least commonly of all is due to anaemia resulting from atheroma and arterio-sclerosis of the supplying vessel. As an example of the last cause Parmentier and Chabrol (*Archives des Maladies de l'Appareil Digestif*, February, 1908) quote the following case: The patient, a man of 58, was found writhing in pain. His face was pale and covered with sweat; his nose was pinched; the eyes sunken and lips slightly cyanosed; the extremities were cold. The pulse was thready and very frequent. Respiration was short, there was frequent vomiting, and abdominal pains were intense. Great thirst was present. The vomit consisted of greenish bile-stained mucus and water. The abdomen was distended and the whole abdominal wall was held tense and there was extreme hyperaesthesia of the skin of the abdomen, especially on the right side. The abdomen was tympanitic on percussion and the liver dullness was greatly diminished in extent. The temperature was 38·5° R. and urine had not been passed for some time. The history the patient gave was as follows: He had suffered from three attacks of lead colic, the last attack being three years ago. He had drunk freely of alcohol for some time past, and on the day of his attack of abdominal symptoms (previously described) he had been heavily drinking, and was about midday suddenly seized with violent abdominal pain, which was not relieved by some rum which he was given to drink, nor by a rectal injection. Lead colic, poisoning, and intestinal obstruction were excluded from the diagnosis, leaving acute peritonitis and haemorrhagic infarction of the gut; the former was excluded by the absence of leucocytosis and of increase in the fibrin of the blood. The patient died about half an hour after being seen by the authors of this paper. On *post-mortem* examination, the stomach and intestines were distended with gas, the peritoneum contained no free fluid nor was it inflamed. The sigmoid loop of colon was of a blackish-violet colour and firm in consistence; its contents were a blackish pulp which was adherent to the inner surface of the gut, which showed, however, no sign of ulceration. The mesocolon was injected with blood and ecchymotic and hard. Between its two layers could be felt several firm cords, some of which were found to be enlarged veins filled with blood clot, whilst the others were arteries, which on section showed thickened walls and greatly narrowed lumina. At the part of the inferior mesenteric artery where the vessel supplying the sigmoid was given off there was found a calcified plate, which greatly obstructed the lumen of this vessel. In several parts of the sigmoid arteries the walls were so thickened that the lumina were almost occluded. With the exception of there being a certain degree of cirrhosis of the liver, no other important changes in the organs were found. Microscopical examination of the arteries of the sigmoid loop showed the following changes: there was great thickening of their walls, each coat being thickened, the elastic fibres were diminished in number, but no degenerative changes were found (except where definite atheroma was found microscopically). Some of the arteries had their walls retracted, and contained very little blood; others, particularly the smaller branches, were obliterated by thrombi. The sigmoid veins had their walls somewhat thickened, and the larger ones were completely thrombosed. Sections of the wall of the sigmoid showed that the mucous membrane was devoid of epithelial covering; the glands of Lieberkühn were separated from one another by excess of interstitial tissue; some of the glands had disappeared and others were partly destroyed. In parts of the mucous membrane were seen small nodules of inflammatory foci. The muscularis mucosa was infiltrated with leucocytes, as was also the submucosa. The muscular coat of the sigmoid appeared to be quite normal, but the arteries of this coat were sclerotic and the veins thrombosed. The mesocolon showed numerous areas of blood extravasation, thrombosed veins, sclerosed arteries, and areas of inflammatory foci.

149. **Chemical Composition of the Lungs.**

ALBERT ROBIN deals at length with this subject (*Bull. Mensuel de la Soc. d'Etudes Scient. sur la Tuberculose*, February, 1907). The coefficient of demineralization—that is, the proportion in the urine between the total and inorganic residues—increases in the pretuberculous period, grows still higher in the first stages of a tuberculous infection, and then falls progressively in the following

stages of the disease, without ever falling below the normal to any great extent. Another plan is that of measuring the amounts of inorganic matter in the ingesta and excreta. Neither of these methods seemed satisfactory, and Robin conceived that the best and most accurate way was to make a chemical analysis of all the organs in phthisis and in health. He did this, taking the organs of two men who had died from accidents as his healthy organs, and the organs of five phthisical subjects who had had the disease for eighty-two days, twenty months, thirty months, eight years, and ten years respectively. In the phthisical subjects he took for analysis pieces of the worst parts of the most affected lung, and also of the least affected parts of the sounder lung. The healthy lung gave 80.095 per cent. of water, and 19.905 per cent. total residue, the latter being made up of 93.951 per cent. organic and 6.049 per cent. inorganic matter. These figures agree very tolerably with those of Wolkmann, Bischoff, and others. But in the amounts of the constituent parts of the inorganic residue Robin does not agree with other observers, except for iron, magnesium, and sodium. Robin found in the healthy lung 0.233 per cent. of iron, 1.198 per cent. of chlorine, 1.358 per cent. of phosphoric acid, 0.132 per cent. of calcium, 0.076 per cent. of magnesium, 0.741 per cent. of potassium, 1.213 per cent. of sodium. The organic residue is made up as follows: 12.196 per cent. of nitrogen, 73.909 per cent. of nitrogenous matters. In the tuberculous lungs the percentage of water is larger than in the healthy lung by 8.41. A curious fact is that the least affected parts of the least affected lung of the phthisical subjects contain 8.13 per cent. more solids than the healthy lung. This may be due, the author suggests, to a functional superactivity or to a defensive action. The more rapid the progress of the disease, the more the water diminishes and the solids increase in the best parts of the phthisical lung, as the following figures show:

Acute form, 72.800 per cent. water, 27.200 per cent. total residue.
Rapid form, 77.966 per cent. water, 22.134 per cent. total residue.
Chronic form, 85.369 per cent. water, 14.631 per cent. total residue.

In the chronic form of the disease the difference between the total residue of the tuberculous lung and that of the healthy lung is very small, and the total residue in the best parts of the least affected lung of the phthisical subject is much smaller than that in a healthy lung. So the function of defence of the healthy parts of a phthisical subject's lungs diminishes with the duration of the disease. The organic matters in the tuberculous lung are less than in the healthy lung by 33.83 per cent.; they are greater in the best parts of the least affected lung of the phthisical subject than in the healthy lung by 7.45 per cent. The tuberculous lung loses relatively almost as much mineral as organic matter. The best parts of the least affected lung contain 18.51 per cent. more mineral matter than healthy lung; but this excess of mineral matter disappears when the disease is of long duration. The tuberculous lung contains 31.91 per cent. more nitrogenous matter soluble in alcohol than the healthy lung, and this nitrogen is probably indicative of the destructive processes going on in the lung. The ternary matters of the lungs consist of the fatty bodies, glycogen, the undefined reducing substances, the organic acids, and perhaps cellulose. They show a diminution in tuberculous lung of 33.70 per cent. when compared with healthy lung; and the least affected parts of the phthisical lung contain more than the healthy lung, except in the chronic form of the disease.

Tuberculous lung has 34.37 per cent. less total residue than the healthy lung.
Tuberculous lung has 33.83 per cent. less organic residue than the healthy lung.
Tuberculous lung has 34.38 per cent. less inorganic residue than the healthy lung.
Tuberculous lung has 33.89 per cent. less nitrogenous organic matter than the healthy lung.
Tuberculous lung has 33.70 per cent. less organic ternary matter than the healthy lung.
The least affected part of the phthisical lung has 8.13 per cent. more total residue than the healthy lung.
The least affected part of the phthisical lung has 7.45 per cent. more organic residue than the healthy lung.
The least affected part of the phthisical lung has 18.51 per cent. more inorganic residue than the healthy lung.
The least affected part of the phthisical lung has 8.90 per cent. more nitrogenous organic matter than the healthy lung.
The least affected part of the phthisical lung has 2.15 per cent. more organic ternary matter than the healthy lung.

So, while the affected regions of lung turn to water and their active constituents diminish, the still healthy regions accumulate nitrogenous and ternary matters as well as minerals. At the moment of infection with tubercle the healthy parts of the lung charge themselves with organic matters, and especially with inorganic matters, and when these parts are attacked they lose almost equally their organic and inorganic matters, the latter slightly faster than the former. This double change, more evident in the case of the mineral matters, seems to attribute to them a defensive or conservative rôle. The tuberculous lung tends to retain a small percentage of its iron, but loses its silica, without the possibility of retaining it, while there is a slight increase in the amounts of calcium, phosphoric acid, magnesium, and potassium. The untouched parts of tuberculous lungs become surcharged with minerals, except sodium and chlorine, but when the disease is of long duration these reserves become exhausted. Robin thinks this phenomenon to be a defensive process, and suggests that the processes of calcification and fibrosis, the only natural means the organism has of combating tuberculosis, should be assisted by every possible means. For this purpose he considers the carbonates of calcium and magnesium should be given, together with adjuvant bodies, such as the ternary matters and fluorides in small quantities, and some agent, such as arsenic and its preparations, which have the property of slowing down the dissimilation of those matters which enter into the constitution of the tissues. The tetrasilicate of soda is also suggested as useful. Robin reserves iron for the pretuberculous stage, and gives it in very small doses, but in cases of established phthisis he gives foods that are rich in iron.

SURGERY.

150. **Surgery of the Pituitary Body.**

Von Eiselsberg and von Frankl-Hochwart (*Wien. med. Woch.*, September 21st, 1907) operated on a tumour of the pituitary body by the nasal method. The patient was a man, aged 20, who had suffered from paroxysmal headaches and vomiting since April, 1899. On August 15th, 1901, when aged 14, he was seen by Fröhlich, von Frankl-Hochwart's assistant. The mother stated that since March, 1899, the boy had rapidly increased in weight, and that since January, 1901, had noticed failure of vision on the left side. Since July, 1901, the headaches had become worse, and vision on the right side had become affected. There was atrophy of the left optic disc. The right retina was normal. There was amaurosis on the left side, and on the right V. = $\frac{2}{5}$. Glasses did not improve vision. There was also right temporal hemianopsia. Shortly afterwards slight optic neuritis on the right side was found. No other nervous symptoms were present. Since the onset of cerebral symptoms there had been a rapid increase of weight, and at 14 the patient weighed 119 lb. There was general obesity, and the penis, though normally developed, was so embedded in fat as to resemble a clitoris. There was also a large adipose deposit about the mammae. The testes were small, and there was scarcely any pubic or axillary hair. Under thyroid extract the headaches and vision improved; the latter, in January, 1903, was found to be normal. The obesity persisted, and sexual desire was entirely absent. Since September, 1905, the general condition had again deteriorated, and about the end of January, 1907, hemianopsia reappeared. A radiograph showed that the body of the sphenoid bone and the sella turcica, with the exception of the anterior clinoid processes, were destroyed. On June 15th, 1907, there was atrophy of the temporal half of the right optic disc and complete atrophy of the left. Fingers could be counted at 2½ metres with the right eye. The left eye was amaurotic. There was right temporal hemianopsia. The weight was 143¾ lb. As long ago as October, 1901, Fröhlich diagnosed a tumour of the hypophysis in this case, and insisted that in all cases in which symptoms of a tumour at the base of the brain in the neighbourhood of the pituitary body were combined with certain trophic symptoms, such as thick, dry, scaly skin resembling that of myxœdema, and the rapid development of obesity, the tumour was probably situated in the hypophysis itself, even though there were no signs of acromegaly. Operative treatment of these tumours gave discouraging results until recently Schloffer removed a large adenoma through the nose. The patient survived seventy-five days. As the headaches became intolerable and vision was rapidly

failing von Eiselsberg, on June 21st, 1907, made an incision round the root of the nose and turned the whole over as a flap to the right. The septum was divided and the upper turbinate bone was removed. The frontal sinus was then exposed and its anterior wall was chiselled away. The vomer was removed piece by piece, and the periosteum was elevated up to the anterior wall of the sphenoidal sinus, which was cautiously opened with the chisel. A white membrane of the size of a hazel-nut was thus exposed. The membrane was incised and several tablespoonfuls of a liquid resembling old blood escaped. A sharp spoon was found to enter a cavity, evidently of a cystic nature. The walls of the cyst collapsed, and the wound pulsated visibly. As much of the cyst wall was removed as could be without injury to the carotid arteries, and the optic chiasma and the cavity was plugged with isoform gauze. The nose was finally replaced and sutured in position. The microscopic structure of the cyst wall suggested the probability that a carcinoma was present. Twelve days after the operation the wound had almost healed. Owing to the removal of the anterior wall of the frontal sinus, considerable depression of the glabella remained. The operation was so far successful that the headaches almost entirely ceased, and vision improved, the temporal half of the field of vision increasing considerably. On September 8th, 1907, the patient had had no serious symptoms since August 31st, when he had had an attack of headache and vomiting. He had gained nearly 2½ lb. in weight in six weeks. Though the left eye was almost completely amaurotic, the left pupil slightly reacted to light.

151. **Treatment of Ankylosis.**

WEGLOWSKI (*Annals of Surgery*, No. 17, 1907) has attempted to overcome the difficulty of restoring the free movements of a joint affected with ankylosis, and to do more in such cases than to rest content with placing the stiff limb in the best possible position. Recent attempts to restore to a greater or less extent the function of the joint by interposing between the articular ends of the bones connective tissue, fat, and muscle, and also foreign material such as celluloid and gold-leaf, although they have met with some favour, have failed, the author thinks, to give results that are lasting. As the ends of bones forming a joint are normally covered by hyaline cartilage, and as the freedom of the articular movements depends exclusively on the presence of this smooth tissue, it is suggested by the author that the transplantation of cartilage from other parts of the body in cases in which an important joint has been deprived of this constituent may be regarded as a logical and promising procedure. It has been proved by experiment that detached portions of hyaline cartilage, including perichondrium, will retain their vitality for years when moved from one part of the body to another. A case is reported of firm osseous ankylosis of the elbow, in which the author, after having divided the uniting callus by a Gigli saw and removed all superfluous bone from the ends of the humerus and the radius and ulna, inserted into the gap two layers of cartilage dissected away from the costal cartilages of the sixth and seventh ribs. Each layer corresponded in dimensions to the length and breadth of the costal cartilage from which it was taken, and was about ½ cm. in thickness. After an interval of a month the patient, it is stated, was able to extend the forearm readily over a range of from sixty to seventy degrees, and the movements of pronation and supination were quite normal. Another case is referred to in which, after a similar operation on an ankylosed elbow practised by Professor Diakonow of Moscow, death occurred from pleuro-pneumonia five weeks later. *Post-mortem* examination of the new joint showed that the transplanted sheets of cartilage had retained their vitality and were closely united to the ends of the bones, each of which presented a smooth, even, and glistening surface.

OBSTETRICS.

152. **Treatment of Contracted Pelvis.**

OLSHAUSEN believes that obstetrics can only be learned in a labour ward or in a lying-in establishment; it cannot be acquired either in private practice or in the out-patient room (*Berl. klin. Woch.*, January 6th, 1908). While he discusses the treatment and management of contracted pelvis in a clinical lecture, he points out that the student must gain his technical knowledge at the bedside. It is wrong to suppose that the measurement of the conjugata vera is the vital point in contracted pelvis. First he speaks of the shape of the pelvis. In rickets the pelvis has several well-marked characteristics. The transverse diameter of the true pelvis is narrowed, the outlet is increased in size, and the sacrum is only slightly curved. Apart from this, other signs of rickets can be sought for and found. It is by no means easy to determine whether the transverse diameter at the inlet is contracted or not. Complicated instruments have been devised, but as a rule one must rely on the estimate which one makes from a digital examination. Generally contracted pelves are even more difficult to diagnose exactly than rachitic or flattened pelves. He discusses several points in connexion with this last-named form, and points out that the conjugata vera is rarely less than 8 cm. (that is, about 3 in.). After the obstetrician has determined as far as possible the shape and size of the pelvis, he must estimate the size of the fetal head and also the degree of hardness. With considerable practice, it is possible to determine the size and shape of the head through the abdominal wall, but in many cases even the most experienced will fail. He believes that it is extremely seldom that one can make out the exact shape of the fetal head, in spite of the fact that so much depends on it. One frequently can only determine the relative size of the head and of the pelvis when the labour has advanced. When the os has dilated and the head is lying over the inlet, one can form a good idea of the relative size of the head. Next he turns to the mechanisms of labour with contracted pelvis. In flattened pelves the head usually lies transversely at the inlet, the forehead being lower than the rest, and the anterior portion of the parietal bone presenting. In generally contracted pelves the occiput generally lies in the cavity of the inlet, and the sagittal suture tends to correspond with the antero-posterior diameter. Other presentations are also met with. When the posterior portion of the parietal bone presents in high degrees of flattened pelvis, one has every reason to anticipate great difficulties. After having detailed several varieties of the fetal position in the various forms of contracted pelvis, and the means which Nature adopts to attempt to get over the difficulties, he turns to the treatment. With regard to weak pains, he regrets that we possess very few drugs which can be given to strengthen them. Ergot may only be given when the head is at the floor of the pelvis. Quinine in doses of 0.3 gram (that is, 4½ grains) every one or two hours at times does good. Warm baths are said to improve the uterine action, but he does not consider that the action is at all strong, and he doubts whether it is advisable to give a bath after the os is dilated and the membranes have ruptured. At times one may improve matters by placing the patient in a more favourable position. The operative treatment consists in one of the following: Forceps, prophylactic version, perforation, Caesarean section, and division of the pelvis. He considers that the forceps should only be used in contracted pelvis cases with care and premeditation. The forceps will not correct a faulty position of the fetal head; they will deliver only by brute force. If one decides to put the forceps on when the head has not yet engaged at the inlet, one must exercise great care, and the trial must be a short one. If after from six to eight tractions no progress has been made, the forceps should be taken off and perforation should be performed. Next he comes to version. There is no doubt that the after-coming head will enter the pelvis in a more favourable position than the presenting head. But one must not forget that the after-coming head has far less time to mould itself, and that the gain of obtaining a favourable diameter is largely counterbalanced by the want of adaption of the head to the shape of the pelvis through which it has to pass. For this reason far fewer living children are born after version than after the presenting head. Prophylactic version may be carried out when the degree of contraction is moderate. Good chances of success are only present when the os is fully dilated and the membranes are still unruptured. While the author does not consider version as a good method for the fetus, he realizes that it saves the maternal parts from excessive pressure. Perforation and craniclasia are indicated when the fetus is already dead, but he considers that it should only very rarely be performed on a living child. He dismisses Caesarean section in a few words, since he has so frequently in other places written on this operation. The mortality has, thanks to the work of Saenger and others, been reduced to from 4 to 5 per cent. Porro's operation need not be considered any longer. He briefly describes the method he follows in performing this operation. With regard to pubiotomy (hebotomy) or symphysiotomy and their modifications, he points out that the technique of these pelvis-dividing operations has not yet been perfected. The chief dangers are haemorrhage, fistulae, and tears into the lateral or anterior vaginal wall, with suppuration and general infection following. The

indications for these operations have not yet been definitely settled, and while he thinks that we are not likely to be able to avoid the dangers accompanying these operations, he feels inclined to believe that pubiotomy will continue to be recognised as a standard obstetrical operation. The technique and indications must be fixed by those in charge of lying-in institutes.

GYNAECOLOGY.

153. **Tuberculosis of the Cervix Uteri.**

Deletrez (*Ann. Gyn. et Obst.*, January, 1908) has operated upon an interesting case of tuberculosis of the cervix. The patient was 21 years of age, she had never menstruated, but had suffered from abundant leucorrhoea since the age of 14. For two months her general health had been unsatisfactory, there had been an increase in the leucorrhoea, but no haemorrhage and no pain. A vaginal hysterectomy was performed, and six months later the patient was in excellent health. A microscopical examination showed an inflammatory infiltration of uterine tissues with typical epithelioid and giant cells. Small necrotic patches were discovered, but no bacilli were found. Tubercle of the uterus is very rare, and its limitation to the cervix is unusual. Cases have been reported occurring in early childhood, but it is most frequently met with during the period of sexual activity. It attacks multiparae as well as nulliparae. Gaertner has demonstrated the presence of Koch's bacillus in the seminal fluid; it is doubtful whether infection is transmitted in this way, it is more probably due to bad hygienic conditions. Traumatism has been suggested as a source of infection, and the use of pessaries or vaginal manipulations. According to Brouha, in 1892 medical literature only recorded three cases of primary infection of the cervix, ascending to the uterus. Tuberculosis of the genitalia is generally secondary or descending, and is a complication of intestinal, pulmonary, or peritoneal tuberculous affections. Clinically it is possible to confuse tuberculosis of the cervix with ordinary metritis, accompanied by an ectropion and erosions of the cervical mucous membrane; it must also be distinguished from a syphilitic chancre and cancer of the cervix. The diagnosis should be confirmed by a microscopical examination and a careful search for Koch's bacillus. A number of cases are reported of cancer of the uterus associated with tuberculosis of other organs, and Azasz quotes a case of tuberculosis of the fundus and cancer of the cervix in the same uterus. The patient had pulmonary phthisis, and the infection had probably spread from the lungs by the vascular system. Hysterectomy, either vaginal or abdominal, according to the condition of the appendages, constitutes the best treatment for uterine tubercle, except where other organs show signs of active disease. When the lesion is small and localized, amputation of the cervix, or even curettage followed by local applications, will suffice to arrest the affection.

THERAPEUTICS.

154. **Acetone in Inoperable Carcinoma.**

In describing a method of treating the fetid odour of advanced ulcerating uterine cancers, G. Gellhorn (of St. Louis, Mo., U.S.A.) points out that, although a very large number of suggestions with regard to a curative treatment of this disease have been made, radical operative procedures remain the only sources of cure (*Muench. med. Woch.*, December 17th, 1907). He states that the trypsin treatment, which was introduced with such great enthusiasm in England, has not fulfilled its promises. Both he and other observers have only met with failures. X rays also have proved incapable of curing inoperable carcinoma. Among the many other vaunted specifics, he merely mentions chelidonium majus, which Winter introduced in 1897; cancroin of Adamkiewicz, the use of thyroid gland, the injection of alcohol, acetic acid, perchloride of mercury, snake toxin, turpentine, methylene blue, and formalin. All these and many others have been introduced with promises which were never fulfilled. One has therefore to rely on scraping out inoperable uterine carcinomata and subsequent cauterization with the actual cautery or with chloride of zinc. Lomer has suggested scraping the ulcers out every one or two months, but it will be difficult to obtain the consent of the patient or the relatives for such a frequent operative interference. In considering the condition of the poor women who are found to be suffering from carcinoma which no operation can remove, Gellhorn considers that the fetid odour is one of the most distressing symptoms, which not only affects the patient but also influences those with her, including other patients in hospital wards, nurses, and also the patient's friends at home. Following out a theoretical consideration with respect to acetone, he finds that this substance is a dimethyl ketone, which has a peculiar effect on tissue. If one places a piece of fresh tissue into acetone, it immediately shrivels up, and within one half-hour is too hard to cut by any microtome. He therefore conceived the idea that if applied to the ulcerating surface of a uterine cancer, it would harden the secreting part and limit the secretion and with it the odour. He has carried this idea out in practice, and noticed that not only were the secretion and odour stopped, but that the tendency to haemorrhage was also markedly lessened. He applied the acetone by the following method: The ulcerating surface of the carcinoma was first thoroughly scraped out, the wound was well dried, and after a tubular speculum was applied from one to two tablespoonfuls of pure acetone was poured on to the wound. The patient was kept with her pelvis raised during the procedure. After from fifteen to thirty minutes the wound was plugged with a narrow strip of gauze; this soaks up all the acetone in excess. The speculum was then removed, and lastly the vagina and vulva were well washed with sterile water. He appends the history of one of his patients in whom the acetone worked exceedingly well. He appears to think that the active growth was arrested, at all events in those situations in which the acetone came into direct contact. He, however, states most distinctly that acetone can only be a palliative remedy, and as such he recommends it to the notice of others.

PATHOLOGY.

155. **The Genesis of Cystic Disease of the Liver.**

G. Conforti (*Lo Sperimentale*, 1906, lx. 705) had the opportunity to examine the cystic liver and kidneys of a woman dying suddenly at 52. The kidneys were of twice the normal size, and were converted almost entirely into a collection of rounded cysts. The liver was of normal size and shape; the capsule of the left lobe was much thickened, while that of the right lobe was not. On section, the right lobe was seen to be congested, and a few small cysts were found in its portal spaces. The left lobe, however, was converted into a mass of cysts varying from ½ to 4 cm. in diameter, with a connective-tissue wall ¼ to 3 mm. thick and with gelatinous opalescent contents (after fixing in alcohol). Between these cysts were strands of fibrous tissue, islands of liver substance, and dilated ducts filled with bile. The excess of fibrous tissue was almost confined to the cystic part of the liver. Under the microscope the right lobe, which contained but few cysts, showed evidences of venous congestion, and round the bile ducts in most of the portal spaces an excess of fibrous tissue could be seen; the ducts were but little dilated. In most of the portal spaces a new formation of bile ducts could be seen, in the form of solid cylinders or tubules of epithelial cells, some of which penetrated into the hepatic acini. At the limits of the cystic portion of the liver these newly-formed bile ducts were more developed, and were invested with young connective tissue sheaths, which also penetrated into the hepatic lobules. Small masses of connective tissue rich in vessels and cells could also be found isolated in the middle of some of the hepatic lobules. The cysts in the left lobe were mostly lined with cubical or flattened epithelium, and had fibrous walls. The bile ducts were generally dilated and surrounded by an excess of fibrous tissue; the epithelial lining had been shed from the most distended of these ducts. In all the portal spaces the new formation of bile ducts was proceeding actively, these epithelial tubules and their connective-tissue sheaths passing deeply into the neighbouring hepatic lobules. These lobules were much congested and rich in fibrous tissue. In the most cystic parts of all there were a few atrophic liver cells surrounded by much fibrous tissue and by cysts, by thrombosed vessels, and by vessels showing chronic inflammatory changes. After discussing the various views that have been held as to the origin of the newly-formed bile ducts and the importance of the connective-tissue proliferation, Conforti comes to the conclusion that the cysts are derived from the newly-formed bile passages, which become surrounded and stenosed by the proliferation of new connective tissue around them. He holds that a very mild and chronic irritation and consequent proliferation of the connective tissue round the bile ducts is the *primum movens* in the production of cystic disease of the liver.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

156. **Pyelonephritis in Puerperium.**

Jeannin (*Prog. Méd.*, January 25th, 1908) reports four examples of this complication of the puerperal state. The onset, he says, varies from thirty-six hours to four or five days after the delivery. Sometimes the pyelonephritis appears during the pregnancy, but remains quiescent and only becomes aggravated after labour. Sometimes there is very little, if any, fever. On other occasions the trouble is ushered in with violent rigors and a sudden rise of temperature. However the illness comes on it always runs a uniform course, being divided into two stages, the presuppurative and the suppurative. The presuppurative stage is occupied by that space of time which the *Bacillus coli* takes to become virulent. This is the stage of general symptoms, high temperature, quick pulse, rigors, and headache. Constipation is often very obstinate at this time. The urine during this stage is not very characteristic, though there is usually some albumen present. This stage has a variable duration; in the author's cases it did not exceed three or four days, though sometimes it is more than a week. The suppurative stage commences at the moment when the infection, at first general, has fixed upon the urinary system. Clinically it is the period of local symptoms, troubles of micturition, vesical pain, and polyuria. The urine has a sediment, which consists of pus. The general symptoms now decline in severity, and the patient feels not unwell. During this stage there will be apparent relapses, when the patient is suffering again from all the signs of a general infection. These are due to a collection of pus in the pelvis, and when this collection is voided, the general symptoms quickly disappear. There will be pain on palpation over the kidneys, and especially over the right kidney, which is much more frequently affected than the left organ. The suppurative stage remains of the same intensity for about a week, and then, as the uterus, diminishing in size, ceases to compress the ureter, the pyuria diminishes and the fever subsides. It is not, however, until five or six weeks have passed that all the symptoms have disappeared completely. The disease ends nearly always in a cure, but there is great liability of a recurrence of the trouble at the next pregnancy.

157. **Intractable Vomiting of Infants.**

Variot (*La Clin.*, December 20th, 1907) considers the vomiting of infants of great importance, and points out that it is often overlooked until emaciation occurs. He reports the case of a child of 2 months which suffered in this way, and which was not relieved by any treatment. The diagnosis lay between congenital stenosis of the pylorus and intestinal spasm. After an administration of charcoal very little of it was passed, and it was decided to operate for the former condition. No increase or thickening was detected either at the time of the operation or at the subsequent necropsy. At an autopsy on a similar case he had previously found the stomach contracted and only equal in size to that of a newly-born infant. It was also much hypertrophied. This was either a case of malformation of the stomach or of spasm of the stomach. Dufour reports a fatal case in which multiple invaginations of the small intestine were discovered after death. Some cases of apparently intractable vomiting yield to citrate of soda and some to a change of milk; those due to malformations are really intractable and are influenced by no medical treatment.

158. **Dangers of the Ophthalmo-Reaction.**

Brunetière (*Gaz. Hebd. des Sci. Méd.*, December 29th, 1907) quotes a case in which the ophthalmo reaction was practised with a $\frac{1}{500}$ solution of tuberculin. The eye was previously quite free from any tuberculous lesion. After a good reaction and at the end of six weeks signs of phlyctenular keratitis developed. At the same time as this keratitis, and on the same side of the neck, an acute abscess occurred in the cervical glands, which was undoubtedly of bacillary origin. The question arises, Are these accidents due to the tuberculin or are they merely coincidence? Comby has said that to practise the ophthalmo-reaction, not only one, but both eyes must be quite sound; if one eye is diseased, there is a risk, after the reaction, of the sound eye taking on the complaint of the other eye. Truc and Maillet on the other hand state that they have performed the ophthalmo-reaction on eyes affected with a variety of lesions, and have never observed any aggravation of these lesions follow the instillation of tuberculin, whether into the sound or diseased eye. Ocular lesions consequent upon the reaction are rare, and are slow to develop. De Lapersonne quotes the case of a woman, in whom corneal complications survived two months, and iridocyclic complications three months after the instillation. The author finds himself unable to attribute to any particular cause the complications which supervened in the case he relates. But he recalls that phlyctenular keratitis is very liable to relapses in a patient predisposed to the disease. The suppurating gland he regards as in no way the direct result of the instillation of tuberculin. The future alone, he thinks, can decide the question of the dangers likely to follow the employment of the ophthalmo-reaction.

SURGERY.

159. **The Surgical Treatment of Syphilitic Necrosis of the Cranial Vault.**

Forgue and Roger (*Archives Provinciales de Chirurgie*, No. 11, 1907) publish three cases of diffuse syphilitic necrosis of the cranial vault treated by very extensive craniotomy. In one of these cases almost the whole of the vault was removed in two successive operations. A careful study of this subject has led the authors to the conclusion that osteo-syphiloma of the cranium is too often subjected solely to medical treatment, and that as a rule craniectomy is delayed too long and is too much restricted. It is held that to wait for limitation and looseness of the dead bone entails loss of time, and, moreover, favours deterioration of the general condition, and leaves the patient exposed to the dangers of intracranial complications. The authors advocate early intervention, not only against formed sequestra but also against sequestra in course of formation, on which medical treatment has no influence and which must undergo a tardy elimination. Their operative treatment is not restricted to the bone that is actually necrosed, but in cases in which specific treatment is of no avail consists in extensive craniectomy carried as far as modern technique will permit, and applied to the whole of the osseous zone that is infiltrated by the lesions of gummatous osteitis. The authors state that they do not think of decrying the value of medical treatment, or to restrict its use. They simply regard surgical treatment as a complementary action which will often be found necessary, and which will do service when it suppresses in good time portions of bone that have undergone morbid change and are medically incurable. Specific medical treatment, it is admitted, is most important as a means of controlling osteo-syphiloma, of curing gummatous lesions still amenable to mercury, of relieving or preventing subjacent pachymeningitis, and of preserving the portions of the cranial bones that are still healthy. The indications and the results of craniectomy are discussed in relation to each of the different forms and stages of gummatous osteitis, these being (1) ulceration of scalp with exposure of bare bone, (2) multiple foci of necrosis in a single zone of diseased bone, (3) diffuse necrosing osteitis, (4) cranial osteo-syphilis complicated by cerebral disturbance. In describing the technique of craniectomy in cases of gummatous osteitis the authors insist on the importance of free exposure of the diseased bone. They prefer a large U-shaped incision in the frontal region, and an H-shaped incision in the parietal and occipito parietal regions. The sequestrum having been removed by an elevator passed through a trephine opening, the surrounding eburnated bone is cut away by strong forceps. It is held advisable to remove the whole thickness of the bone even though the sequestrum involve only the outer table. In cases of pachymeningitis, and also when the patient presents signs of cerebral disturbance, the authors trust to craniectomy and subsequent medical treatment to remove the intracranial mischief. If the soft parts be much ulcerated the flaps are not brought over the large gap in the cranial vault, but are left to regain their former position by cicatricial contraction.

160. **Operative Treatment of Embolism of Pulmonary Artery.**

IN the *Zentralbl. f. Chir.*, No. 4, 1908, Trendelenburg publishes a second contribution on the surgical treatment of embolism of the pulmonary artery (an abstract of the first appeared in the EPITOME of January 18th, para. 33), and describes an operation which he has been led by the results of further research on animals and on the human cadaver to regard as one relatively simpler and less formidable than that previously described. This improved method, he points out, does not necessitate forcible manipulation and incision of the heart. Below the clavicle on the left side a tongue-shaped flap about 4 in. in length is taken from the soft parts of the wall of the chest; the base of this flap being over the left margin of the sternum, while its upper margin corresponds with the lower margin of the first rib, and its lower margin with the upper margin of the third rib. The second rib is then divided at a distance of about 3 in. from its sternal attachment, and turned upwards and inwards, together with the flap, over the front of the sternum. The pericardium, now exposed in the opened pleural cavity, is taken up by two forceps and incised, care being taken to avoid, and to cut in front of, the phrenic nerve. The incision in the pericardium is now extended upwards and backwards until the whole of the upper half of the cavity has been opened, the lower half remaining closed with the heart untouched. The margins of the incision being attached to the lips of the external wound by small clamps or by sutures, the pulmonary artery and the ascending aorta are freely exposed. A sharply-bent sound, provided at one end with a handle and at the other end with an olive-shaped head, and of the length and thickness of a catheter of medium size, is then carefully passed along the outer side of the pulmonary artery into the pericardial sac, and then across the transverse sinus of the pericardium, behind both pulmonary artery and aorta, until its head projects at the outer margin of the sternum. The transverse sinus, it is stated, will readily permit the passage of the operator's finger, which, if it be necessary, can be used to guide the sound. The pulmonary artery, together with the aorta, having been drawn forwards towards the surface of the chest, and kept under control by the pressure of the sound, the former vessel is stripped of its enveloping layers of pericardium and fat by means of forceps, so that a considerable extent of its outer coat is freely exposed along the level of the valves. The operator, while compressing with a finger of his left hand the lower part of the vessel, makes a small longitudinal incision through the exposed distal portion of its wall, and then, on introducing a small pair of forceps, endeavours to catch and remove the clot. This having been effected, the wound in the pulmonary artery is securely compressed by a special clamp, and after the compressing finger and the long bent sound have been removed, and the vessel has regained its natural position, the opening is permanently closed by silk sutures without any loss of blood. The clamp is then removed, and the operation completed by closure of the wound in the pericardium, and replacing of the external flap. The author states that he has performed this operation on a calf, and thus removed with complete success an artificial embolus 6 in. in length, which, after introduction into the jugular vein, had been carried into the left branch of the pulmonary artery.

OBSTETRICS.

161. **A Method of Shortening Normal Labour.**

T. LANDAU describes a method which he has employed for the purpose of shortening normal labours (*Berl. klin. Woch.*, January 6th, 1908). He only applies the method when the pains are regular and strong and the head lies in the pelvis. He passes one or two fingers, or even more, into the cervical canal, and manually dilates the os, pressing the lips of the same over the progressing fetal head. This is carried out without anaesthesia. The attempts must be limited to the period of the pains, and the head must be fixed sufficiently to ensure that the manipulations do not force it back. He considers that gloves should always be worn for its performance, and that before the fingers are inserted, the external genitals should be disinfected. The manipulations usually induce powerful contractions on the part of the uterus, and thus within a short time the rigidity of the os passes away without any damage ensuing to the mother. He realizes that the method is not new, but he states that it is not mentioned in any textbook at the present day. He does not believe that it is dangerous, provided that one is particular with regard to asepsis. The stretching must be carried out without any undue force, so that no risk of tearing the parts is present. His method differs from the manual dilatation for combined version in that the latter is undertaken for pathological conditions such as eclampsia, placenta praevia, etc., while the former aims at shortening the normal labour. He publishes the details of the method because he feels that at the present day the tendency to make incisions in all situations and under all sorts of conditions has gone much too far, and he is therefore anxious to stem this inclination. Further, he speaks openly against the attempt to render the labour painless by various, by no means harmless, medicaments —for example, morphine-scopolamine—instead of attempting to shorten the time during which the parturient woman has to suffer pain.

GYNAECOLOGY.

162. **Poisoning Due to a Twisted Parovarian Cyst.**

PAUCOT AND VANVERTS (*Le Nord Méd.*, January 15th, 1908) have recently seen a woman, aged 45, who was taken with violent and sudden pain in the abdomen on November 9th. Quite regular for many years, her periods had recently been very irregular. For three weeks she suffered from intermittent diarrhoea. The day that she was seen by the authors she had violent abdominal pain, quickly becoming generalized, and vomited frequently. Examination revealed a tumour in the right side of the abdomen. The uterus was not freely movable. In the right lateral vaginal cul-de-sac was found a fluctuating mass, which moved with the abdominal tumour. The patient was given an injection of morphine, and had a good night. Next day the tumour was more easily defined. The same evening the patient's temperature rose slightly, and her pulse, which had been normal, rose to 104. At the operation, which was performed the next day, the peritoneum was found to be healthy. A cyst was found with black walls, and a pedicle which had become twisted. The cyst was removed, as also were two other smaller ones. The day after the operation the patient's pulse was rather irregular, and two days after it became very irregular, missing every third or fourth beat. Her temperature remained slightly raised. On the third day the temperature had risen to 39·5°, and the pulse was 120. There was no abdominal pain and no distension. There was slight yellowing of the conjunctivae. Calomel was given in small doses. The patient gradually recovered, and in three weeks was getting up. The authors consider that the fever after the operation was due to an intoxication, not to an infection, and to have been due to absorption of gangrenous tissues in the stump of the pedicle. They conclude that, had the operation been delayed longer, the patient would have run great danger from a continuance of the intoxication.

163. **Fibromata of the Abdominal Wall.**

LECÈNE AND DELMARE (*Prog. Méd.*, January 18th, 1908) consider that fibromata of the abdominal wall are somewhat rare, and have not received sufficient study. Guinard has written that they are, in the majority of cases, fibromata of the round ligament. This, the authors say, is an entirely wrong conclusion. Several authorities have written that these tumours are well defined, and often encapsulated, but can easily be shelled from their capsule. The authors, having recently examined three fibromata removed from the abdominal wall, have in every instance found that the tissue of the tumours becomes at their periphery mixed with the muscular tissue of the abdominal wall. The first of these fibromata was quite small, situated in the transversalis muscle. In front it was easily separated from the muscle tissue, but behind it was continuous with the fibres and the aponeurosis of the transversalis muscle. The peritoneum had also become adherent to the growth. The second tumour also was in part firmly adherent to the muscle in which it was growing. The third tumour was large, and occupied the region of the iliac fossa. This tumour was for the most part easily separable from the surrounding tissues; but behind it was attached by a sort of pedicle composed of a bundle of muscular fibres. Sections of these tumours showed that they were pure fibromata. The most interesting sections were those taken through the periphery of the tumours, showing the mingling of the fibres of the tumours with the muscle fibres, and the gradual destruction of the latter by the tissues of the new growth. Those sections give an explanation of the frequent recurrences which take place after the removal of a fibroma

from the abdominal wall. One conclusion arrived at by the authors is that these tumours should only be shelled out when they come away quite easily; when the tumour is attached to the muscle firmly, it must be removed by free incision of the surrounding muscle tissue. By this means only can recurrence be prevented.

THERAPEUTICS.

164. Treatment of Inflammations and Suppurations by Cupping.

SCHULTZE (*Prog. Méd.*, January 11th, 1908) gives some details of treatment by cupping. The hyperaemia, he says, which is produced by cupping is at first active, and so differs from that due to the elastic bandage, but later on this hyperaemia becomes passive. The effect of cupping is more circumscribed than that produced with the elastic bandage. Cupping, even when badly done, is not at all dangerous. It will be found useful for the treatment of incipient whitlows, furuncles, anthrax, bubos, abscesses, post-operation fistulae, septic wounds, and mastitis. Asepsis must be rigorous. The author gives illustrations of cupping apparatus for use in various parts of the body. The cupping should be applied for three-quarters of an hour per day. The apparatus is applied for five minutes, then removed for three minutes, and so on until five or six applications have been made. This hyperaemic treatment of inflammations and suppuration, effected by the elastic bandage and by cupping, was evolved from experiments by Professor Klapp in Bier's clinic. At first the results were not good because the applications were too long, and much pain was caused to the patients. The chief advantages of this hyperaemic treatment are: (1) it is much less painful than treatment by operation; (2) the length of the illness is shortened; (3) by it large operations, with serious constitutional after-effects, are dispensed with.

165. Neuroprin in Epilepsy and Neurasthenia.

TREVISANELLO (*Gazz. degli Osped.*, August 25th, 1907), under the direction of Professor Maragliano, has tried the effect of neuroprin in certain neuroses. The drug in question is an extract of nervous substance, and, according to certain experiments carried out by Sciallero, it has the power of rendering mortal doses of strychnine non-fatal when injected into guinea-pigs which had previously been given neuroprin. The author gives brief details of 16 cases, and refers to 6 others. Of these 22 cases, 9 were epilepsy and 13 neurasthenia. Distinct benefit was derived from the treatment in all except 2 cases (neurasthenia of a depressive type). The usual dose was four teaspoonfuls per diem. The best results were obtained in epilepsy and in neurasthenia of the hyperexcitable type. In neurasthenia of the hypochondriacal type better results seem to be obtained with cephalopin, or with cephalopin in combination with neuroprin. The author compares neuroprin to digitalis; what the one drug is to the cardio-vascular system, that the other is to the nervous system—namely, a true tonic. Cephalopin affects the nutrition of the nervous system and acts as an antineurotoxic agent.

166. The Disinfection of the Hands.

M. GRASMANN has experimented with certain methods of disinfecting the hands for surgical purposes, utilizing the latest and most reliable methods of standardization (*Muench. med. Woch.*, Nos. 43 and 44, 1907). First he used Schumberg's alcohol-ether-nitric acid method, which is simple, rapidly applied, and does not irritate the skin. The disinfecting power, however, is considerably smaller than that of the other methods tested. A marked reduction of the number of micro-organisms on the hands was seen, but the number remaining after the disinfection was still large. A modification of Furbringer's soap-spirit-sublamine method yields satisfactory results as far as the disinfecting power is concerned, but it takes a long time to carry out and is clumsy. The diminution in the number of micro-organisms, comparing the number before the disinfection with the number after, was 99 per cent. in two series. The skin was much affected by the long scrubbing with the nailbrush. Engel's sublamine method also gave excellent disinfecting results. The skin, however, did not tolerate the method well, and in some cases eczema followed the free use of sublamine. Heusner's iodine-benzine method gave a diminution of micro-organisms which must be considered satisfactory. In 9 cases it was 97 per cent., in 3 it was 98 per cent., and in 11 it was 99 per cent., while once absolute sterility of the hands was attained. The skin tolerated the chemical action well, and did not become rough or affected. It is true that the dissolving of the fat off the skin compelled the experimenters to supply artificial grease. The method consists in using a 0.1 per cent. solution of iodine in benzine. The hands are brushed in this solution for five minutes without any previous washing in water. After this, the hands must be rinsed in fresh iodine-benzine solution. The hands are then well rubbed with a 0.2 per cent. dilution of iodine in vaseline. There is, however, one serious drawback to this method. This is the inflammable nature of the solvent. For this reason Grasmann sought to find a substitute for the benzine. This he found in a substance called benzoform. This is really carbon tetrachloride. It is neither explosive nor inflammable, and is just as good a solvent for fats as benzine. The results obtained with benzoform (the other conditions being the same as with Heusner's method) were equally good as the original method. Lastly, he tried iodine-benzine-paraffin oil mixture, but the results were distinctly unsatisfactory. He therefore feels justified in recommending the iodine-benzoform method of disinfecting the hands, which he states is a good method for disinfection, does not irritate the skin, is simple, rapidly carried out, and not dangerous.

167. The Site for the Injection of Mercury.

MILIAN (*Prog. Méd.*, February 1st, 1908) considers that the buttock is the best region for the injection of mercury. It possesses the greatest thickness of muscle. The lumbar region, also, may be chosen. Jullien recommends the scapular region, especially for a chancre of the breast. There is much discussion as to the best point in the buttocks for the injection. Two theories prevail: one, that the injection should not be made on any part on which a patient sits; another, that the neighbourhood of vessels and nerves should be avoided. Barthélemy recommends the middle or outer third of a horizontal line running from the antero-superior iliac spine to the upper end of the intergluteal fold, corresponding almost exactly with the outer edge of the gluteus maximus. Gaillot thinks the point should be at the intersection of two lines, one of which runs horizontally two fingerbreadths above the great trochanter, the other running vertically and separating the inner from the middle third of the buttock. Smirnoff would give the injection a fingerbreadth behind the upper part of the great trochanter. Fournier only excepts the lower third and the central region of the buttock. Dopter and Tanton consider that an injection should not be given in the course of the sciatic nerve, nor yet within a space of 3 cm. either side of it. The author himself thinks that an injection may safely be given anywhere over the gluteus medius, that is anywhere in the region of the buttock above and outside a line running obliquely from the postero-superior spine to the top of the great trochanter.

PATHOLOGY.

168. Experimental Hepatic Syphilis.

MILHIT (*Sem. Méd*, September 25th, 1907), in dealing with this question, says that, in order to understand the sections of monkeys' livers inoculated with syphilis, one must keep in mind the hepatic syphilitic lesions of the fetus and the newborn child. In the fetus the first change consists in an intense capillary congestion with leucocytic stasis and very slight diapedesis. At a later stage of the affection there is a regular collection of small, round, migratory cells in the parenchyma, especially round the portal canals. In the newborn child strands of fibrous tissue are diffused among the cells. The portal spaces are thickened, and around them are seen what Gubler has called miliary syphilomata, that is, a number of nuclei mixed up with partially disintegrated liver cells. By these, when they have increased in size, is formed that type which is called nodular gummatous hepatitis. This type is also found in the adult as the result of acquired syphilis. Gummata are usually found around the portal canal. They are formed of a mass of homogeneous matter, round which is seen a layer of small migratory cells with highly-stained nuclei and some giant cells. This gumma is isolated by a sheath of compact fibrillar connective tissue. Recent researches have proved the presence, almost constant, of the *Spirochaeta pallida* in syphilitic livers of the fetus and the newborn, both in the portal vein and in the tissues around the portal canal. But it has been shown to be absent in all tertiary lesions. The preparations of syphilitic livers were made from animals inoculated by Roux and Metchnikoff; they were prepared with silver nitrate, and then with silver nitrate and pyridine. The *Spirochaeta pallida* was never found, though some of the animals had had specific

lesions. At the autopsy on the first inoculated monkey, which died seventy-nine days after the appearance of the chancre, Roux and Metchnikoff found the spleen visibly hypertrophied and hard, weighing 40 grams; it was deep red and had a large number of distinct Malpighian bodies. The liver weighed 275 grams, was pale and yellowish. On the surface were several nodules. The autopsies on the other animals merely mentioned a pale and slightly enlarged liver. So, the author concludes, there is no real macroscopic sign that the disease conveyed to the monkeys was syphilis. The only appreciable lesion of the hepatic cells is a fatty degeneration, which cannot be syphilitic, because it was found best marked in the normal monkeys used as controls. In the capsule there were seen small, young, connective-tissue fibrils arranged at the edge of the liver tissue, marking the commencement of a sclerosis. Around the portal spaces and the sublobular veins is seen an early sclerosis, rich in fibrils and nuclei. This sclerosis starts around the lymphatics. The second lesion consists in small nodules disseminated in the parenchyma in the portal spaces, where they are quite large. They are composed of a large number of embryonic cells crowded together. From some of these nodules cells are dispersed into the portal canals, and finally into the parenchyma. Kupffer's cells, too, have undergone a change. They are multiplied, and in places are arranged end-on. The biliary canals were normal, showing no angio-cholitis. The portal veins were slightly dilated, and their endothelium in places was desquamated. The capillaries were somewhat congested and dilated. There was marked periarteritis and endarteritis, progressing in some cases to complete obliteration of a vessel. This is a lesion which favours the specific origin of the disease in the livers. The lymphatic vessels were dilated and filled with amorphous non-staining substance, and were surrounded with small nodules and embryonic cells. This, again, the author considers an argument in favour of syphilis, for Lancereaux has shown that syphilis picks out the whole lymphatic system, and it is a well-known clinical fact how quickly this system reacts to a syphilitic infection. In conclusion, the author considers that these four lesions — the sclerosis, the nodules, the dilatation with sclerosis of the lymphatic vessels, and the arteritis—make up a histological picture of specific disease.

169. Distribution of Arsenic in Organs following Acute Poisoning.

LESCOEUR (*Le Nord Méd.*, September 1st, 1907) quotes the following case. A woman, who was being treated by an empiric for a cancerous tumour of the breast, died with symptoms of poisoning. It was suspected that arsenic was the cause of death, and an examination of her tissues was performed. Working with 100 grams of each of the following parts of the body, there were found in that quantity of the mammary gland more than 3 mg. of arsenic; in the small intestine about 1 mg.; in the blood about 1 mg.; in the lungs and heart about $\frac{1}{10}$ mg.; in the liver $\frac{1}{10}$ mg; in the stomach $\frac{1}{10}$ mg; in the brain merely a trace. It is seen that arsenic was found everywhere, but unequally distributed. It is not surprising that the mammary gland was found to contain the largest quantity of arsenic, for the treatment had consisted in making incisions round the cancerous tumour and introducing into them the "cure." The absorption by the cellular tissue around the gland accounted for the relatively large amount of poison in the blood. The presence of arsenic in relatively small quantities in the heart, the lungs, the stomach, and in very small quantities in the brain, seems well to accord with the elective affinities of these different organs for arsenic. It is somewhat surprising, on the other hand, not to find more arsenic in the liver, for this organ is reputed to retain and accumulate this poison. Perhaps the liver only reacts thus in cases of poison introduced into the intestinal tract, and is unable to attract the poisons thrown directly into the circulation. The large amount of arsenic found in the intestine is worthy of remark, especially when compared with the small amount found in the stomach. The author considers that it is the production of sulphuretted hydrogen in the intestines which causes the arsenic to be precipitated and accumulated in that part of the organism. In fine, maximum amounts of arsenic in the stomach and liver seem to have a positive significance as regards the absorption of the poison through the gastro-intestinal tracts; but an excess of it in the intestine can have an opposite interpretation when the arsenic is introduced by a different route. The substance seems to collect in the blood—at least, when the introduction of it is sudden and during the first moments of the intoxication. The substance used in this case was the sulphide of arsenic. The mineral orpiment, which is found in nature, is a very inactive principle, almost inert; it passes through the intestinal tube almost without being dissolved. It figures in a very large number of formulae in the old *Pharmacopoeix*. The artificial orpiment, which is now commercially produced, contains a quantity of arsenious acid. It must be treated with water, or, better, with hydrochloric acid, to get a solution which gives an abundant yellow precipitate with sulphuretted hydrogen. It is a violent poison.

170. Antidotism and Antagonism.

ROCH (*Sem. Méd.*, April 10th, 1907) discusses this question. Antidote must probably mean that which is given against, and antagonist that which fights against. Some authors say that an antidote is the drug that counteracts a poison, an antagonist is the drug or the poison which acts upon the same organ or the same part of the organ as another poison, but in an exactly opposed manner. The antidote is here defined by its result, which is to save life in spite of poisoning, the antagonist by its physiological action. The one is an empirical, the other a scientific, term. Gubler says that the remedies that neutralize chemically are according to usually accepted language the real antipoisons; those that neutralize by acting in the organism itself should retain the name of antidotes. Morat has written: "Antidotes of a poison are all those substances which by physiological, chemical, or any other means diminish the harmful effect produced by the poison." According to other authors the antidote combats the poison or the drug; the antagonist combats the action of the poison on the drug by an inverse action; antidotism is between the substances; antagonism between their actions. Rabuteau wrote: "Two agents are truly antagonistic when they produce on the same organ and on the same anatomical elements contrary effects." Varigny maintained that antidotism consisted in the direct hindrance of a poison from producing its action; antagonism in the combating of this action when it is being, or has been, developed. The case of permanganate of potassium and morphine is one of antidotism, for in the stomach the permanganate destroys the morphine by oxidizing it. The antitoxin of antitetanic serum is the antidote to the tetanus toxin. But chloral, which acts favourably in tetanus by diminishing the medullary excitability, is an antagonist. Three classes of antidotes must be admitted —chemical, mechanical, and physiological. By physiological antidotes are implied those drugs that hasten the elimination of a poison. Mechanical antidotes are liquids which dilute the poison, powders, and mucilages which protect the tissues in cases of poisoning by caustics. Antidotism takes place nearly always in the digestive tract, and mostly in the stomach. There are many recognized varieties of antagonism. The two chief varieties are complete and partial antagonism; there are also direct and indirect antagonism. The action of chloral in diminishing the excitability of the medullary cells caused by strychnine is cited as an example of direct or real antagonism. As an example of indirect antagonism, the action of curare, which hinders strychnine convulsions—not like chloral by paralysing the medulla, but by cutting the communication between nerve and muscle — is well known. Distinction must be made between reciprocal or bilateral and unilateral antagonism. In the first case the action of A. modifies the action of B., and vice versa. In the second case the action of A. modifies that of B., but the converse does not hold good. Therapeutic antagonism comes into play in Dover's powder, where the opium puts a certain amount of restraint on the emetic action of the ipecacuanha. Rossbach thinks that reciprocal antagonism does not exist. "The paralysant action," he says, "of a poison on a limited part of an organ is destroyed by the excitant action of another poison acting on the same part. When two poisons, the one paralysant, the other excitant, act either simultaneously or in succession, the organ does not preserve its physiological equilibrium, but it is paralysed and becomes inexcitable." It is well known how easily one can with atropine dispel the symptoms of alkaloidal poisoning; but the symptoms of atropine poisoning cannot be removed by other alkaloids. The antagonism here is unilateral; but under favourable experimental conditions some investigators have shown that the salivary secretions in an atropinized animal can be re-established. Prévost did it with muscarine in large doses, Luchsinger and Langley with pilocarpine. Clinically the preference must be given to antidotes rather than antagonists, just as that treatment should be chosen which acts on the cause of the disease in preference to one that merely acts on the symptoms.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

171. Exophthalmos with Empyema of Antrum in Newly-born Infant.

A. Beauvois discusses this subject in the *Recueil d'Ophtalmologie*, February, 1908. He describes a case of his own, and collects those recorded in the literature of the subject. An acute maxillary sinusitis is a rare condition in the infant; in fact, Lermoyez states that it does not occur, giving as a reason the more or less complete absence of the antrum itself at this period of development. The exact condition of the antrum of Highmore at birth seems to be a subject upon which there is much diversity of opinion. Sappey states that it begins to appear at the third or fourth month of fetal life. Bourgeois finds that not only is there a definite sinus at birth, but it is distinctly marked off at the seventh month of gestation. Sieur and Jacob find that the maxillary antrum and the ethmoid cells are the only sinuses found in the newly-born child. By far the best account, however, is furnished by Weissmann and Fiocre. They state that the antrum at term can be easily distinguished. It is situated just above the alveolus of the first premolar and a little below the infraorbital groove. It has a prismatic, triangular shape, and even at this stage has three walls, an inferior or dental, an orbital, and a nasal. The orbital wall is thin and transparent. At term the sinus has a length of from 7 to 8 mm., an average height of 4 mm., and a breadth of about 2 mm. at the centre. At the age of 3 weeks the corresponding dimensions are 10, 5, and 4 mm., and at 6 weeks about 11, 6, and 4. These anatomical considerations enable us to understand how the antrum, even in the newborn, can be the seat of an inflammatory process spreading from the nasal cavity. It is not always that an empyema of the antrum in an infant is followed by a congested condition, or a phlegmon of the orbital tissues, but the anatomical boundaries between the sinus and the orbit are so tenuous that such an association is by no means unusual, as the cases cited in the article show. Beauvois was called to see an infant, aged 15 days, who had pronounced proptosis, which came on the evening before. The child was in other respects normal, took the breast, and slept well. The eye was pushed forwards and upwards, but its movements were normal. There was slight redness and tumefaction of the skin of the lower lid and of the infraorbital region. The conjunctiva was slightly injected. The exophthalmos was not diminished by pressure. A perfunctory examination of the fundus, the nose, and the mouth revealed nothing unusual. The displacement of the eye appeared suddenly, being noticed by the nurse when she washed the baby in the morning. The confinement, at full term, was a very ordinary one. On the fifth day some pus appeared in the nostril on the affected side; it had no smell, but was thick and abundant. A rhinologist, M. Bruder, decided that the child was suffering from a maxillary sinusitis. He recommended a spray of menthol solution. Ten days later the eye had returned to its normal position, and the child rapidly got well. A squint, however, was present a month after the first onset. The pus contained pneumococci and other organisms. In some of the recorded cases operative measures became necessary; the antrum was opened in one, in another pus was evacuated from the orbit. But in general the simplest treatment suffices to cure the disease; boracic lotion as a nasal wash, menthol spray and fomentations have all been used successfully.

172. Percussion of the Apices of the Lungs.

The examination of the apices of the lungs by percussion receives much less attention than the examination by auscultation and by Rontgen rays. Goldscheider (*Berl. klin. Woch.*, October 7th and 14th, 1907) speaks in favour of utilizing percussion properly, by means of which he claims that exact data can be obtained. He first discusses the methods of determining the limits of the apices by percussion according to various authors and the results obtained, and then passes on to his own method. He finds that it is a mistake to imagine that the apex of the lung corresponds to the supraclavicular fossa. He divides the apex into three parts: First, that part which extends above the first rib and which fills the aperture of the chest; secondly, the part which lies behind the first rib; and, thirdly, the part which lies below the first rib and above and behind the collar bone. His assistant, Dr. Kroner, inflated the lungs of corpses moderately and then dissected the neck parts, from which dissections he was able to make drawings of the limits of the normal lung. He appends one of these drawings. The inner margin of the apex is very close to the middle line, while the outer edge of the sterno-mastoid muscle corresponds almost exactly to the inner margin of the first rib above the clavicle. The height of the apex is found about the level where the two insertions of the sterno-mastoid divides. Individual variations are met with, and not infrequently the apex is completely covered by the sterno-mastoid muscle and the scalenus anticus. It thus becomes necessary to examine between the heads of the sterno-mastoid. This situation can be determined by palpation. First one feels for the neck of the first rib by dipping the pad of the index finger between the two insertions of the sterno-mastoid carefully backwards and a little downwards. At the level of the neck of the first rib a resistance is felt. This is the tubercle of the rib. The medial edge of the rib and the inner border of the scalenus anticus are next felt for. With these landmarks one can proceed to percuss. The patient should be seated, or, if in bed, the head should be thrown slightly backwards, with the neck protruding. The pad of the middle or index finger is then placed carefully between the insertions of the muscle and pressed firmly on to where the top of the apex normally is situated. Percussion is carried out in a sagittal and slightly downward direction. It must be extremely soft. Heavy percussion will only give the note corresponding to the muscles and bones, etc., while very light percussion reveals the resonance of the lung. Instead of using the finger, one can use a glass rod with a bulbous end, on which one percusses with the finger of the right hand. The upper level of the apex is determined in this way. The resonance of the rest of the apex is then made out, which is best done with the glass rod. Next one percusses the first rib itself. The shoulders are raised somewhat, and the finger of the left hand bent at right angles as the ungual phalangeal joint is placed on the rib. Starting from the tubercle, one works towards the inner part until the neck is reached. In order to get at the part of the first intercostal space which is covered by the clavicle, one raises the shoulders *ad maximum* and presses them somewhat backwards. Next the practitioner proceeds to percuss out the lung margins in the axilla, and then passes to the back. He leaves the suprascapular fossa quite alone, and percusses as high as the spine. The outline of the limits of the lung can be made out in this situation by means of light percussion with exactitude. The author gives a number of detailed instructions for which we must refer the reader to the original paper. He claims that his method reveals more than any other method, and shows that the limits, etc., as determined by the method were confirmed by *x* rays and by his clinical experience. He emphasizes the importance of percussing the whole apex and not only the limits, in order to detect early changes, which can so easily be overlooked.

173. Cytological Examination as a Help to a Doubtful Ophthalmo-Reaction.

Lafon and Lautier (*Gaz. Hebd. des Sci. Méd.*, December 22nd, 1907) consider that there are many cases of very slight ophthalmo-reaction whose significance must remain doubtful. They have employed cytological examination of the conjunctival secretion in these cases. The normal secretion contains very few cells—a few epithelial cells, and here and there a polynuclear leucocyte. In cases of negative reaction there is no change in the number or character of the cellular elements. But when the reaction is positive, even feebly so, there is a marked increase in the number of the polynuclear leucocytes in the secretion. The leucocytes appear an hour or two after the clinical manifestation of the reaction. Some authorities have attributed the doubtful conditions under discussion to frequent touching of the eye, whether by the patient himself or the observer. The author thinks that irritation caused thus would not cause an increase in the number of polynuclear leucocytes. Some people, too, have attributed these conditions to the glycerine with which the tuberculin-test liquid of the Paris Pasteur Institute is made up. But the instillation of $\frac{1}{5}$ glycerine into normal and tuberculous eyes does not cause any change in the conjunctiva or in its

secretion. Certain people, the subjects of slight chronic conjunctival infections, have in their conjunctival secretion a considerable number of polynuclear leucocytes, without showing any reddening of the conjunctiva, or any lacrymation or any muco-purulent discharge. But these chronic infections of the conjunctiva are nearly always bilateral. The technique employed by the authors is very simple: the lower lid is pulled down, the end of a Pasteur pipette is applied to the cul-de-sac; the secretion is drawn up and placed on a slide, is dried, fixed and stained, and examined with an oil-immersion lens.

SURGERY.

174. Warm and Cold Applications in Infections of the Peritoneum.

DANIELSEN (*Zentralbl. für Chir.*, No. 5, 1908) opposes the statement made by Gelinsky in a previous number of the *Zentralblatt*, that by reason of its capacity of stimulating absorption and peristalsis, and probably also of preventing infection, heat is indicated for local application in the treatment of acute infective diseases of the abdomen. Though acknowledged to be beneficial under certain conditions, heat used indiscriminately in cases of this kind would, it is held, tend to do harm rather than good. It is well known, Danielsen states, that the application of increased heat to the peritoneal cavity by means of hot compresses and hot air causes dilatation of the blood vessels and intense hyperaemia, and also accelerates the activity of the circulation of lymph. This increased circulation in both the blood vessels and the lymphatics favours, as has been proved by experiment, active absorption by these vessels of crystalloid and colloid substances, and also of bacteria. On the other hand, it has also been proved that this active absorption may be checked by the application of cold. By these experimental results it is shown that cold and heat are two useful agencies in the therapeutics of acute abdominal disease, as by the former absorption can be controlled if dangerous, and by the latter it can be favoured if such course be of advantage to the patient. The external application of heat, the author holds, is indicated only in those cases of peritonitis in which the infection presents a mild form. Here, he states, it would be right to set up active hyperaemia and to stimulate absorption. In cases of intense and grave infection, on the other hand, he would endeavour to hinder absorption of the virulent infective material by the application of ice to the surface of the abdomen. There are no precise scientific means of determining the degree and extent of the infection; but in clinical work a fair idea may, it is stated, be gained from observations of the tongue and pulse, and of the general condition of the patient.

175. The Opening of Tonsillar Abscesses.

IN 1893 Ruault described a method of opening peritonsillar abscesses from the supratonsillar fossa, and in 1896 Killian recommended a somewhat similar method. Neither of these methods appears to have gained many friends, and in a few instances have led to very conflicting reports. A. Meyer (*Berl. klin. Woch.*, October 14th, 1907) has employed a method which is almost identical with Ruault's, without being aware of this origin of the procedure, in over 100 cases during the last three years, and speaks of it in terms of high satisfaction. He points out that the tonsil lies in a space enclosed in front and behind by the pillars of the fauces, and limited above and below by the triangular fold and by the semilunar margin. The supratonsillar fossa lies between the triangular fold, the arch of the palate, and the upper pole of the tonsil. The mucous membrane in this situation possesses from two to four diverticula which lead to that portion of the tonsil which lies behind the soft palate, and which correspond to tonsillar crypts. The greater part of the tonsil is covered by a fibrous capsule, and lies on the constrictor pharyngis, but the crypts of the supratonsillar fossa pass completely through the muscle. For this reason peritonsillar abscesses usually develop from acute or chronic inflammatory processes of the crypts. A careful study of the anatomical relations shows that the line of least resistance must be toward the fossa—and, in fact, the most common situation for the abscesses to burst is here. Anticipating the spontaneous cure by therapeutic means, Meyer considered that the abscesses should be opened from the fossa. The head is held straight and the tongue is depressed. A Schmidt's tonsil opener with its front portion measuring about 1¼ cm. bent at right angles is introduced into the fossa, is pressed through the thin covering membrane, and the point is then pressed upwards and outwards until it enters the abscess. One then makes a rapid, firm movement, withdrawing the instrument and enlarging the opening in so doing. He claims that it is easy to hit off the pus every time, provided that one does not enter in the space between the pillar of the fauces and the tonsil. The instrument, which is in reality a blunt hook, is much more suited for finding its way into the abscess than a scalpel, and he believes that in a number of cases in which he succeeded in opening small abscesses without difficulty he would have failed to have found the pus with a lancet. In this way one can open the abscesses earlier, and thus shorten the process of healing. Besides, he finds that some patients refuse the doctor permission to use a knife, but do not oppose the use of a blunt instrument which looks like a probe, although he owns that it causes just as much pain as the sharp-edged tool. He recommends this method to all practitioners.

176. Malignant Tumours of Spermatic Cord.

TÉDENAT AND MARTIN (*Arch. Gén. de Chir.*, No. 2, 1908) publish an original case of a large malignant growth of the spermatic cord, and add to this abstracts of twenty-four collected records of this rare affection. Malignant disease of the cord they find is nearly always of the connective-tissue type, the tumour being in some cases a pure sarcoma presenting round, fusiform, or giant cells, but more frequently a mixed growth, in which, as in malignant growths of the parotid, the sarcomatous elements are associated with those of fat and cartilage. In some cases a sudden evolution of malignant characters has been preceded by a slow growth of the tumour, which clinical fact indicates, the authors suggest, malignant degeneration of a benign growth, usually a lipoma. Epithelial growths of the spermatic cord are very rare, and, when they do occur, have probably originated in embryonic débris of the Wolffian body. The scrotal portion of the cord is much more frequently attacked by a malignant growth than the inguinal or retro-inguinal segments. The tumour may involve only the intrafunicular connective tissue, or it may grow from the duct or one of the vessels. Again, the common fibrous envelope or the loose perifunicular connective tissue may be the starting point of the disease, and then the growth is rather a scrotal than a funicular one. The tumour in some cases is small, and in others it may acquire enormous dimensions. In the operative treatment of funicular tumours the authors hold that even when the growth can be readily enucleated, the testes, and as much as possible of the affected cord, should be removed. Although the primary results of surgical intervention are excellent, the prognosis in regard to recurrence is held to be doubtful.

OBSTETRICS.

177. Delivery in Special Cases.

RUDAUX (*La Clin.*, Jan. 24th, 1908) discusses the technique to be followed under certain special circumstances. As a rule rupture of the membranes does not occur until labour has begun; occasionally it occurs a few days before delivery. In such a case, after the expulsion of the fetus a very abundant antiseptic intrauterine douche should be given; the surface of the uterus is still covered by the placenta and membranes, so that it is the cavity of the ovum which is cleansed, and a second douche is given after the delivery is complete. As a prophylactic measure many practitioners give at the same time a subcutaneous injection of antistreptococcic serum. Intrauterine lavage ought to be preceded by a vaginal douche, as the cannula is liable to carry bacteria from the vagina into the uterine cavity, where an open wound is ready to become infected. The same treatment is required when the fetus has died and had time to macerate, and also after breech presentations when delivery has been difficult and green amniotic fluid has been observed. It is also advised when it has been necessary to introduce the hand into the uterus or to perform embryotomy. Fetal putrefaction is a special indication for intraovular and intrauterine lavage as well as for antistreptococcic injections. In twin pregnancies a double ligature is placed on the cord of the fetus which is delivered first; half an hour after the second delivery the placenta is expressed. In abortion and premature labour the technique is similar to that followed in delivery at term, but in abortion it is usual to wait rather longer unless there are complications or unless it is a criminal abortion. In a molar pregnancy no traction is exercised,

and the precaution is adopted of allowing the placenta to be delivered spontaneously. After expulsion it is wise to introduce the hand into the uterus to make certain that no vesicles remain attached to the uterine wall, and that the muscle of the uterus has not been invaded by the degenerated chorionic villi.

GYNAECOLOGY.

178. **Cystitis in Women.**

Ellice McDonald (*Med. Record*, February 22nd, 1908) sums up the modern treatment of cystitis in women, and gives histories of 45 cases treated at the Vanderbilt Clinic. Cystoscopic examination is of the greatest value, and is almost painless. Catheterization of both ureters is a necessity to diagnosticate kidney lesions. Inflammation of the bladder is markedly affected by the condition of the genital organs, congestion extending to the neck of the bladder. Regurgitation of urine into the pelvis of the kidney will cause pyonephrosis and pyelitis. Pregnancy and operations on the genital organs are also factors in the production of bladder troubles. Blood in the urine is not always accompanied by tuberculosis, but may result from a simple ulcer of the bladder wall or varicose veins of the bladder. The treatment of these cases consisted of rest and the application by irrigation of four solutions: antiseptic quinine solution, cleansing bicarbonate of sodium solution, peroxide of hydrogen and silver solutions compound, and jelly of Irish moss to allay irritation. Soothing drugs internally are also of value.

179. **Fatal Streptococcic Infection from Fibroid Uterus.**

Siredey and Lemaire (*Comptes rendus de la Soc. d'Obstét. de Gynéc. et de Pediat.*, December, 1907) reported a case where a patient with fibroid uterus died after typhoid symptoms had developed. Her age was not stated; she had borne four children, three had died of bronchitis. She had been a widow for fifteen years. She was admitted into hospital on May 30th last, suffering for a week from high fever. On May 20th the period appeared, on the 22nd she quarrelled with her son, who kicked her in the abdomen; the period at once ceased and abdominal pains set in. On admission, the uterus was found much enlarged and the temperature 104.5° with a bad pulse and dry tongue. The typhoid bacillus could not be found. The patient died on the fourth day. There was no sign of peritonitis, the intestines were not even congested. In the uterine wall lay an interstitial fibromyoma of the size of two fists. It was not necrotic, but little abscesses were detected in the uterine muscle around it, and also under the serous coat of the uterus. Histological evidence of streptococcic infection was found in the uterine wall, the spleen, liver and kidneys. There was much discussion when this report was read. Siredey declared that the Fallopian tubes showed no sign of disease, nor was there any morbid change in the endometrium; but he admitted that neither of these structures was examined histologically. Pinard held that Siredey was right in ranking the case as pure streptococcic infection arising in a fibroma. Pozzi thought that traumatism was evident. The kick contused the uterine tumour which might have been slightly infected already, anyhow the streptococcus was probably present in the uterus at the time of the injury which determined the general infection.

THERAPEUTICS.

180. **Treatment of Neuralgia by Injection.**

In recounting his experience with the injection treatment of neuralgia, E. Schlesinger (*Deut. med. Woch.*, February 6th, 1908) considers that with the exception of those rare cases in which syphilis or malaria are the causal factors of the neuralgia, one is forced to employ symptomatic treatment, since the actual nature of neuralgia is not known. Schleich first pointed out that the injection of certain solutions in the neighbourhood of affected nerves removed the pain. Various modifications have been suggested since this time (1899). At first cocaine was a necessary constituent of the solutions. As time went on, the solutions used became weaker, and still later it was realized that the effect was not due to pharmacodynamic action but to mechanical effects. One therefore tried the effect of injecting large quantities of isotonic salt solution. Acting on the suggestion made by Oelsner, Schlesinger attempted to combine the mechanical with the thermic effect, and therefore employed saline solution which had been cooled down to below 0°C. It has been shown that even extreme degrees of cold do not impair the vitality of nerve tissue. He carried out his injections by first producing a wheal by injecting some of his cold solution into the skin through a very fine needle, then he inserted a needle of not too coarse calibre, about 8 cm. in length, deep into the tissues, injecting a little solution as the needle proceeded. He does not aim at injecting the solution into the nerve sheath, as he realizes that even in the most skilled hands this can only be attained by accident. It might even be harmful, if one succeeded, especially in mixed nerves like the sciatic, where the motor fibres would be attacked as well as the sensory. He is therefore satisfied to inject the fluid in the neighbourhood of the nerve trunk. In all he has treated 42 cases of sciatica by this method. In these cases a cure was obtained in all but 4 by a single injection. He dealt with 5 acute cases. Three of these required more than one injection. In one of them, two injections only removed the pain for a few days. The other four were permanently cured. Of the chronic cases he mentions two in which the sciatica developed in the course of diabetes, and both of these were cured without any harm being done by the cold fluid. In other forms of neuralgia he obtained good results. These included supraorbital, trigeminal, and intercostal neuralgias. He has also had satisfactory results from the injections in girdle pain in tabes and also in gastric crises. He, however, only touches on the last named cases, and does not wish it to be thought that he claims this method to be a "cure all."

181. **A Specific Serum for Scarlatina.**

W. Pulawski, of Radziejow, has used Bujwids's antiscarlatinal serum since 1904 in every case of scarlet fever. He has divided his cases into three groups—(1) hopeless, (2) severe, and (3) moderate and mild; and he reports on the results obtained in the *Deut. med. Woch.* of January 30th, 1908. Forty-eight patients, belonging to the groups 1 and 2, were treated in the "ordinary way," and 69 by serum. Of these, 20 of the first class died, representing a mortality of 41 6 per cent.; while 10—that is, 14.5 per cent.—of the second class died. The serum was injected on the second day in 17 cases, on the third day in 26 cases, while the number of those injected on subsequent days was smaller. The quantity of serum injected was mostly either 10 or 20 c.cm., while in a few cases 30, 40, or 60 c.cm. were given. Albuminuria was seen in 7 per cent. of the cases, and only in fatal cases. He considers that the serum is absolutely harmless, and that by its means he obtained more than three times as good results as he obtained by other means. He considers that the serum not only lessened the severity of the symptoms, but also shortened the course of illness. He also believes that complications and sequelae are prevented by the serum. In the severe and also moderate and mild cases he noted that the convalescence was more rapid than usual.

182. **Thephorin.**

Thephorin is a double salt of sodium theobromate and sodium formate, and is the analogue of diuretin, which contains salicylic acid instead of the formic acid. L. Cohn has tested its efficacy in practice (*Deut. med. Woch.*, August 29th, 1907). It contains 62.5 per cent. theobromine and 23 5 per cent. sodium formate. The animal experiments which Maas carried out with this drug showed that the lethal dose for guinea-pigs varied between 0 8 and 0.9 gram pro kilogram body weight, so that it may be regarded as being about as non-poisonous as diuretin; that small doses stimulate slightly, while large doses produce paralytic effects; that it depresses the blood pressure and increases the pulse frequency; that it increases diuresis very markedly in normal animals; that it appears to be beneficial for animals with toxic nephritis and œdema; that the therapeutic dose is considerably lower than the lethal dose; that it is unwise to give large doses, as the therapeutic effect is diminished when the dose is raised beyond certain limits; and, lastly, that the coagulability of the blood is lessened by the introduction of the drug. In testing the action of thephorin, the author found that the best method of giving it was in tablet form, and he further found that 0.5 gram given twice a day was a satisfactory dose. On the whole the drug was well taken. In two cases nausea and vomiting followed the exhibition, but this was removed by giving it after food. In a few cases it was taken daily for periods up to three weeks. When the tablets were given four times a day, headache followed, but this did not appear after two tablets. First he quotes a case in which the drug was given for diminished

quantity of urine in mitral disease (regurgitation) associated with chronic bronchitis and oedema of the legs and ascites. The quantity of urine increased up to 1,900 c.cm. after taking 10 c.cm. of digalen, while when thephorin was given it increased to 3,800 c.cm. This is not so great an increase as one sees after giving theocin, but the effect appeared to last longer. In a second case, in which ascites and oedema were the most striking symptoms, diuretin combined with digitalis was given; the quantity of urine was increased to 2,600 c.cm., but the oedema and ascites were but little influenced. As soon as the quantity again diminished, theocin and digitalis were given, and the quantity again increased to 2,600 c.cm. The oedema diminished, but the ascites remained as before. Then he tried thephorin with digitalis, and the diuresis reached 4,100 c.cm., while the oedema and ascites gradually diminished. A second exhibition of the same combination led to the almost complete removal of the dropsy. In the third case reported, the condition from which the patient was suffering was myocarditis associated with nephritis which at the time was not revealed by albumen in the urine. In this case the urine increased to 2,400 c.cm. under the influence of diuretin, and remained free from albumen. After the quantity had become again reduced, thephorin was given, and the quantity only increased to 750 c.cm., while albuminuria followed. The urine further showed casts, red blood cells, and epithelium. It thus appears that the thephorin caused the latent nephritis to flare up again. In summing up his experience, he states that in suitable cases, thephorin possesses a lasting action in increasing diuresis, and can be recommended.

183. **Tetanus Successfully Treated with Cholesterin.**

ALMAGIÀ AND MENDES (*Rif. Med.*, June 15th, 1907), on the strength of certain experiments which showed that cholesterin had the power of lessening the toxic power of tetanus poison, have tried the effect of cholesterin injections in two cases of traumatic tetanus which fell under their care. Both cases were due to gunshot wounds of the hand. In the first case the usual remedies had been tried, including injections of antitetanic serum (Tissoni), but no relief had been gained. On December 6th 15 centigrams of cholesterin dissolved in 10 c.cm. of water were injected in the arm, and the local wound was bathed in the same solution. Next day the patient was worse and the opisthotonos more marked, so 30 centigrams of cholesterin were injected. On the third or fourth day the condition was almost stationary, and a cutaneous maculated eruption appeared. The dose of cholesterin was increased to 1 to 1.50 grams per diem. On the fifth day of treatment improvement was noticed, and ten days later all trace of tetanus had disappeared. In all, 13 to 15 grams of cholesterin were administered. In the second case no drug treatment was used except the cholesterin injections (17 grams were given in all) and warm baths; in this case also improvement was first noticed after about the fourth day of treatment. In the first case the usual sedatives—for example, morphine, bromides, etc.—were given in addition. The cure in each case was more rapid and the disease more acute than could be explained on the view that they were chronic cases which had got better in spite of treatment; on the contrary, they believe the cholesterin really brought about the cure, and they publish the cases with a view to a further trial, so that larger experience may show what real value it has.

PATHOLOGY.

184. **Cancerous Grafts.**

TUFFIER (*Journ. des Praticiens*, August 18th, 1907) describes a graft as the implantation of a branch of one plant on a fresh surface of another plant. But for the graft to grow it is necessary that the two plants should be of very similar kinds. The evolution of cancer in man may be likened to a succession of grafts of the neoplastic cells. The author proposes to study the subject under the following heads: Grafts made on the tissues of the cancerous subject, grafts made on the tissues of another member of the same species, grafts made on the tissues of a member of a different species (experimental grafts), and operation grafts. Cases in which a graft has taken place on an organ close to that primarily affected are very frequent. Such a case would be the affection of one lip following on cancerous affection of the other; likewise the two labia of the vulva become thus affected. In such a way, too, does the tongue affect the cheek. In other cases the infecting growth is further removed from the secondary infections, as in the case of a cancer of the upper digestive tract, where the mucous membrane of the stomach became infected, possibly through cells from the primary growth dropping into the stomach. Reinke and Podak, having tapped effusions due to cancer of the peritoneum or pleura, have noticed the growth of neoplasms along the course of the needle. Some authors have succeeded and others failed in grafting cancer from one part of a patient to another. Transmission to another subject is not rare. Lusitanus knew of a mother who infected her three sons; Bierchen recounts the case of a workman who sucked his wife's cancerous breast and got cancer of his palate. Contagion can be due to sexual intercourse. Surgeons to cancer hospitals have frequently become themselves infected. Petersen considers that prolonged contact is essential for a cancerous graft. Langenbeck injected some fresh cancerous juice into the femoral artery of a dog, and obtained some growths in the lungs. Pétroff has only been able to obtain a graft with closely allied animals: a cancer from a mouse will not grow upon a rat, and only with difficulty upon a mouse of another kind; but after several successive grafts the virulence of the cells increases, from which fact it is concluded that cancers are composed of cells adapted peculiarly to the organism of the species from which they are taken. The juice of tumours cannot produce a tumour, but only the cells themselves can, so it is a case of grafting and not of inoculation. Ehrlich believes that the transplantation of the cells is not alone enough to cause a new growth, but that the receiving tissues must also be reduced in vitality. The author asks the question, How do operative grafts—that is, recurrences—grow? There are three explanations given: the reproduction *in situ* of a tumour which has been completely removed, the growth of a remnant of an incompletely removed tumour; a graft made into a distant part during the operation. The first explanation may at once be put out of court. Numerous examples prove the possibility of the other two. Neoplastic cells lost in the abdominal cavity during an operation for hysterectomy will give rise to multiple abdominal tumours, while if the operation was not radical, or when one leaves some infected glands, these cells will not be able to develop. The cells composing these tumours, which are the results of operative grafts, will reproduce the primitive type; that is, there is a specificity of cancerous tissues. It is, then, the duty of the surgeon to take every possible precaution against grafts and recurrences.

185. **The Vermiform Appendix.**

TOUZÉ (*Prog. Méd.*, July 20th, 1907) has seen 3 cases (women aged 30, 32, and 35 respectively) in which the vermiform appendix was reduced to a cordlike structure, 2 to 3 mm. in diameter, completely fibrosed and quite solid throughout. These cases he classes as fibriform appendices. In the cases of partial absence or subtotal atrophy of the appendix the organ is represented by a cuplike vestige, smooth, regularly rounded, and 1 cm. in height. This condition has been found also in a monkey of a lower order, which was at first thought to be without an appendix at all. The author has found three men whose appendices were totally absent. In these cases the mesoappendix as well as the ileo-caecal folds were entirely absent. In one of these cases the antero-external and antero-internal longitudinal bands (which were the only ones properly seen) started not from the root of the absent organ nor from the point of insertion of the ileum into the caecum, but from the ascending colon, from which they originated imperceptibly. These three kinds of malformation form the links of a continuous chain. There can be no doubt about the atrophic and retrogressive signification of the first group of cases. The atrophy in those cases could not be due to senile sclerosis, like certain vaginal shrinkings, because the cases were quite young. It is possible that the other cases represent further stages in the process of involution. Longuet admits in their case an early arrest of development. The appendix, then, has not had to retrogress; it has never been developed; it has stopped in its growth. The last cases will allow of further explanation of this important point. The cases quoted have all been taken from living subjects in the course of laparotomies. None of the patients had ever had the least indication of appendicitis. No alteration, no inflammatory or congenital adhesions at this spot were seen in the peritoneum. It is, then, a question, not of a pathological process, not of amputation of a diseased appendix after an attack of appendicitis, but of a non-accidental disposition, of a mode of growth possible and not exceptional in man.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

186. Small Haemorrhages from the Digestive Tube and Weber's Reaction.

Cade and Bourret (*Lyon Méd.*, January 5th, 1908) have examined the faeces in a series of cases in which some lesion of the alimentary tube was known or suspected to be present by means of Weber's method. A small piece about the size of an almond was taken from the centre of the faecal mass and triturated with glacial acetic acid; sulphuric ether was added, and, after standing, was decanted and mixed with tincture of guaiacum and a few drops of oxygenated water. Any blue coloration was taken to denote the presence of blood; a pale green was considered as a negative result. The gums were examined in each case and the possibility of posterior epistaxis was tested. The method was found to be of great value in the diagnosis of new growth of the stomach. The test was applied in 18 cases of cancer of the stomach, in 10 of which the diagnosis was confirmed either by operation or by necropsy. In 6 of these cases repeated examinations of the stools gave negative results. Among the other 4, one was a case in which no tumour was palpable. In 7 of the 8 unverified cases the reaction was constantly positive. It was remarkable that the reaction was negative in some of the more advanced cases, and positive in the earlier ones. In cases of simple ulcer of the stomach the reaction was rarely found to be positive except after an unmistakable haemorrhage. In one case in which the patient was a man of 30 years of age, the reaction was uniformly positive, but the fact that there was also evidence of pyloric obstruction and that hydrochloric acid was absent after a test breakfast made the diagnosis of malignant ulcer probable.

187. Pyloric Stenosis in the Tuberculous.

D. Romani (*Il Morgagni*, June, 1907) recalls the three cases in which Patella originally described a non-tuberculous process of pyloritis and fibrous peripyloritis causing pyloric stenosis in persons with obsolescent tuberculous lesions in the lungs and pleura. Since these observations were published in 1901 no exactly similar cases have been recorded, though other authors have described cases in which tuberculous glands or growths have caused pyloric obstruction. Romani now adds two more cases of Patella's disease which have come under his own observation. The first patient was a woman of 37 who began in 1903 to have a feeling of weight after eating, then slight epigastric pain from one to two hours after meals. Later she took to vomiting, which relieved her when digestion and pain were at their highest point. Her right apex was normal, but at the left apex the surface was depressed, inspiration was roughened, and expiration blowing both in the subspinous and supraspinous fossae. There were no râles. The abdomen showed a well-marked periumbilical prominence. Palpation caused epigastric pain and evident peristaltic undulations. The stomach was much increased in size, stretching from the fourth left intercostal space to below the umbilicus. The patient was anaemic; no blood pigment was ever found in the vomit or faeces. Leube's test meal showed decided stagnation of the gastric contents. After medicinal treatment failed a posterior gastro-enterostomy was performed. The pylorus was found thickened but free from adhesions. The immediate result of the operation was very good, but a few weeks later the patient suffered from pleural effusion with some ascites. After another three months in hospital she went out again in improved condition and without any symptoms referable to the organs of digestion. The second patient was a man of 36 who suffered for nine years from pains radiating from the epigastrium. He was somewhat relieved by treatment and diet, but not cured. At the left apex he had some dullness and increased resistance to percussion in the subclavicular and supraspinous fossae. He suffered from ascites, from diarrhoea, and from anaemia. The stomach extended from the level of the fourth rib to below the umbilicus. In this case also a posterior gastro-enterostomy was performed, with the best results immediate and remote. He was seen a year after operation stout and well. Romani gives also an abstract of Patella's cases, two cured by operation and one in which operation was refused and the after-history is unknown. In all such cases diagnosis must be to some extent based on exclusion, and Romani discusses at length the reasons for holding that his cases did not suffer from cancer, ulcer, cicatricial contraction, pylorospasm, primary fibrous hypertrophy of the pylorus, or any of the different forms of external pressure to which the pylorus is exposed. Microscopic examination showed the absence of tuberculous disease of the pylorus in one of Patella's cases, but was not possible in the two cases now reported. The appearance was that of a chronic inflammatory process.

Oesophageal Spasm.

Reggianini (*Rif. Med.*, February 10th, 1908) records two cases of oesophageal spasm in old people (70 and 80 respectively), and says that in his experience it is not such an uncommon event in old people. As the textbooks teach, it is commoner in mid-life, and in the female sex from their greater susceptibility to hysteria and other functional nerve disorders. Of the three chief types of spasm—symptomatic, reflex, and idiopathic—only the two last are represented in infancy. Intestinal irritation (from worms) is perhaps the commonest cause of reflex spasm in children. The idiopathic form is generally due to some pathological neuropathic inheritance In mid-life any of the neuroses may be a cause; certain drugs which cause a dryness of the fauces—for example, belladonna—may excite spasm; poisons like rabies, new growths, and aneurysms acting by reflex irritation and not by direct pressure. In the old, arterio-sclerosis, especially when the aorta is much affected, may set up spasm. The author takes the view that usually the spasm is not started by an inhibition of the bulbar centres of control, but by peripheral stimulation of the intrinsic nerves of the oesophagus. The diagnosis is not always easy, and the prognosis naturally varies with the cause and nature of the underlying malady. In the idiopathic and reflex varieties it is almost always good, but even in these forms the spasm may last a considerable time. In treatment one may give antispasmodics (camphor, bromides, valerianates, etc.) per rectum or hypodermically; electricity—faradic and galvanic—the positive pole in the oesophagus close to the stenosis, and the negative pole on the spine or on the sternum, the passage of large-sized sounds or of Schreiber's special sound with a dilatable rubber end-piece, which can be enlarged by syringing 10 to 30 c.cm. of water into it. Not infrequently sounding sets up so much spasm that it becomes impossible.

SURGERY.

189. Prostatectomy.

Boeckel (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 4, 1908) has devised a new method of removing the prostate, by which the diseased gland is freely exposed both to sight and palpation by temporary mobilization of the ano-rectal segment of the lower bowel. This method, the idea of which was first suggested to the author in the course of operations for the removal of the cancerous rectum, has been practised by him with success on the living subject, and is advocated as a safe and, under certain conditions, a preferable way of attacking the prostate in cases of simple hypertrophy, of malignant disease, and of abscess. The external incision is carried in a straight line from the base of the coccyx to the posterior margin of the anus, and then encircles this opening. The subcutaneous cellular tissue having been incised, and the recto-urethral muscle cut through, the rectum can be readily detached by the finger from the surrounding structures as far as the prostate. The detached ano-rectal portion of intestine, measuring from 7 to 9 cm. in length, is then drawn backwards to the upper portion of the external wound. After division of the prostatic capsule, the lateral lobes can be readily enucleated by the finger. In cases of hypertrophy of the median lobe it is necessary to remove the whole gland, together with the corresponding portion of the urethra, the divided segments of this canal being subsequently brought together by sutures. The ano-rectal stump is finally replaced, and the external wound is sutured around a strip of gauze placed in the recto-urethral triangle for drainage.

190. **Pyloroplasty in Newborn Child.**

CHAMPETIER DE RIBES, GUNION AND FREDET (*Comptes rendus de la Soc. d'Obstet., de Gynéc. et de Pédiat. de Paris*, January, 1908) note that hypertrophic stenosis of the pylorus appears to be well known in England, Germany, the United States, and Denmark, whilst Sarvonat of Lyons made out three years ago that it was rare among infants in the Latin nations. Forthwith French doctors scrutinized carefully cases of gastro-enteritis in the newborn, with the result that during last autumn no less than three instances of this form of stenosis of the pylorus have been reported in Paris alone. Champetier de Ribes adds a fourth report. An infant, a male, as in the majority of these cases, was born at term on October 24th last. It was a first child, the parents had been married seven years and the father was subject to chronic dyspepsia. It was well nourished, meconium was discharged for twelve days, then the stools became slimy and gradually greener and greener. The infant was put on cow's milk and later on ass's milk without benefit, then the cardinal symptoms of pyloric obstruction appeared. On November 23rd Pierre Fredet performed pyloroplasty. As usual, after complete relief from the symptoms of obstruction, they recurred about the third day with high temperature, no doubt from swelling of the sutured tissues. By the seventh day steady improvement was reported, although for a few days attacks of pain set in about three-quarters of an hour after "suckling." The breast did not agree with the infant, so that it was fed on humanized or mixed milk. By January 13th, 1908, the patient was in very good condition.

191. **Methods of Illumination in Military Surgery.**

SECHEYRON (*Arch. Prov. de Chir.*, No. 1, 1908) describes the different methods that have hitherto been used for obtaining light in the course of a campaign, for the purposes of finding and relieving the wounded at night. Oil lamps and candles are, it is pointed out, quite inadequate. Petrol also is of little service and, moreover, is dangerous. Mineral oil lamps are difficult to manage and need much attention. For a supply of illuminating gas a bulky generating plant is required, and the incandescent method, the only one likely to be of service, would depend upon expensive and fragile material. The author holds that electric lighting would need too bulky an apparatus, and be wanting in mobility, but these objections might surely be overcome by the use of accumulators and small lamps. The best agent, he concludes, is acetylene, from which can be obtained a bright and mobile light capable of resisting both wind and rain. He describes the different methods of generating and using the light to be derived from this illuminating agent, and directs attention to the special merits of an apparatus devised by himself, which is called the Lynx. Further research, it is added, should be directed to the use of acetylene dissolved in acetone, and to the designing of a simple, light, and mobile lamp. At the present time the Lynx, he maintains, meets many of those requirements, and especially the military conditions of mobility and strength of material.

OBSTETRICS.

192. **Ovarian Tumour complicating Pregnancy and Labour.**

LOBENSTINE (*Bull. Lying-in Hosp., City New York*, September, 1907) reports a number of cases of ovarian tumour complicating the parturient process. Realizing how likely such tumours are to give rise to trouble during pregnancy, and how likely they are, if neglected, to cause difficulties during labour, it is unwise to postpone the operation until acute symptoms make it urgent. The maternity mortality is between 20 and 30 per cent, in cases not operated on, as against 2 and 3 per cent. in those operated on. Operative interference is advisable as soon as possible after the diagnosis has been established. Fetal mortality is not greater than when a conservative line of treatment is followed. By waiting until the later months of pregnancy the technique is increased in difficulty owing to the greater size of the uterus. When operative treatment has been withheld, and the patient reaches term with such a tumour, no treatment is required after the onset of labour, unless the tumour descends into the pelvis. When this occurs, an attempt should be made to push it up into the false pelvis, great gentleness being exercised in the manipulation. If this is unsuccessful and the child is alive, a vaginal ovariotomy with subsequent delivery per vaginam, or a Caesarean section with ovariotomy, must be performed. If the child is dead and the dystocia is not too great, craniotomy and extraction is the course to adopt. The alternative is a vaginal or abdominal ovariotomy, and then a craniotomy. The tumour should not be punctured, but if the cyst is ruptured during delivery the abdomen should be opened at once. The tumour is liable to cause trouble during the puerperium; if it becomes infected it may promote peritonitis or set up a general infection. In the early days of the puerperium the chances of axial rotation are very great, owing to the lax and atonic condition of the abdominal wall and viscera. It follows, therefore, that early operation is the best treatment whenever possible, even if no serious symptoms indicate intervention.

193. **Complete Dilatation of the Cervix.**

HARRAR (*Bull. Lying-in Hosp., City New York*, September, 1907) insists upon the full dilatation of the cervix, so that the os may be entirely obliterated and may not complicate delivery after version. The hand is not always large enough for the clenched fist to effect complete dilatation of the cervical os when drawn through it, and in most cases the two-handed method of Edgar is impracticable, owing to the narrowness of the vulvar orifice combined with a long vagina, or a high cervix which cannot be partially drawn down. In relaxed vagina with low position of the cervix complete dilatation may readily be effected with the two-handed method. He suggests that when the clenched hand is not large enough its volume may be increased by holding a small cestus in the fist. A simple object which can be readily sterilized, and which fulfils the purpose, is the porcelain nest-egg sold in the shops. After effecting as full a dilatation as possible by the usual manual method the cestus may be pushed ahead of the dilating hand with the finger-tips. When the hand is within the uterus it is grasped in the fist, and the fist thus enlarged is slowly withdrawn. This completes the dilatation which an operator with a larger hand might accomplish unassisted.

GYNAECOLOGY.

194. **Vaginal Tumour Secondary to Hypernephroma of Kidney.**

FREUND (*Zentralbl. f. Gyn.*, No. 9, 1908) reported, before a meeting of the Obstetrical Society of Leipzig last November, a second case of an adrenal tumour of the vagina secondary to a hypernephroma of the kidney. An abstract of the first case, reported by Doran in the *Journ. of Obst. and Gyn. of the Brit. Emp.*, June, 1907, and in the *Trans. Obst. Soc. Lond.*, vol. xlix, will be found in the EPITOME, vol. ii, 1907, No. 118. In Freund's case the patient was a woman, aged 56, who had borne sixteen children. A year and a half before she came under observation her left kidney was removed; it was the seat of a characteristic "hypernephroma." For six months the patient had been subject to free uterine haemorrhages. A swelling of the size of a cherry was detected on the vaginal mucous membrane anteriorly, to the left and near the urethra. It was removed, and proved to be a metastatic malignant heterotypal hypernephroma. The renal tumour was also exhibited by Freund. The secondary vaginal growth was very vascular, as is usually observed in metastatic adrenal deposits. On the fourteenth day after its removal there was severe haemorrhage from the operation wound, and it was found necessary to introduce fresh sutures in order to stop the bleeding. The metrorrhagia in this case was a symptom worth bearing in mind in cases where the patient has been subject to a tumour of the kidney. Veit noted, in discussion, that in any case of solid vaginal tumour it was very necessary to make sure whether it was primary or otherwise.

195. **Absence of Vagina and Uterus.**

BRETTAUER (*Amer. Journ. Obstet.*, December, 1907) records two cases, in the first of which he met with an unexpected complication, whilst the second proved more amenable to treatment. The first patient was 23 years of age, subject to attacks of epistaxis and headache which occurred regularly every three weeks; the period had never been seen. The breasts were well developed, the abdominal walls fat, and the general health was good. The patient had been married for nearly two years, and attempts at coitus had always been painful and never attended with orgasm. The vulva was normal, the vagina clearly absent, and the urethra dilated. A movable mass lay in

the pelvis and could easily be pushed above the brim without causing pain. Brettauer performed a plastic operation, making an artificial vagina. Three months later, as the patient was desirous of having a menstrual flow, and as Brettauer suspected that the pelvic mass was a haematometra, he operated through an abdominal incision, intending to cut into the cervix and then to establish, if possible, a communication between the uterine cavity and the artificial vagina. The bladder was wounded at the beginning of this second operation by a preliminary incision made through the artificial vagina in order to reach and fix the lower pole of the pelvic mass. When the peritoneal cavity was laid open, the mass proved to be a single kidney with two ureters proceeding from its lower pole and there was no kidney in either loin. The round ligaments and Fallopian tubes were merged in the peritoneum of the iliac fossa, where lay, on each side an ovary of somewhat above the normal size. Only the right tube possessed a lumen. The patient recovered from the exploratory operation. On cystoscopic examination only the right ureteric orifice could be detected. The urine issued from it very freely. The second patient was 27; three of her brothers were insane, but she had six sisters, all of whom had borne children. When 17 years of age she married and coitus was found impossible; she had never menstruated. A surgeon in Kieff made a large flap of skin from off the labium majus on each side and inverted it. Brettauer examined the parts ten years after the operation; marital relations, it appeared, had been quite satisfactory. The external organs were normal, excepting that there was a flat, soft scar close to each labium majus. The vagina was about 3 in. long, allowing the introduction of two fingers. It was partly lined by mucous membrane and partly by skin covered with hair. The ovaries could apparently be defined on recto-abdominal palpation, but there was no trace of a uterus. Oastler, discussing this case, referred to another in which a mass of hair was found growing into the orifice of the artificial vagina.

THERAPEUTICS.

196. **Haematopan.**

W. N. Clemm deals with a new blood-forming preparation, called "haematopan" (*Berl. klin. Woch.*, August 19th, 1907). He calls attention to the disadvantages which have been attributed to such preparations as haematogen and perdynamin. The chief of these disadvantages is said to be that they contain less than one-third of their weight of conserved haemoglobin. The rest consists of alcohol, glycerine, etc., for which one has no need, and which should not cost as much as is charged for the preparation. The second disadvantage is to be found in the statement published by Koning that 1 gram of haematogen contains from 36,000 to 700,000,000 bacteria. Lastly, Clemm considers that these preparations are all built up in a one-sided fashion. He therefore considers that the introduction of a preparation gained by evaporating equal parts of malt and blood *in vacuo* is a great advantage. This preparation is called "haematopan" (the name suggesting that it is half vegetable and half animal). It is supposed to contain animal blood iron, albumen, blood salts, sugar of malt, lecithin, etc., all in the most assimilable form. The haemoglobin and serum albumen is said to pass into an easily soluble combination with the sugar, the albumen being transformed into saccharates. Clemm speaks at some length of the advantages of including carbohydrates in a nutrient preparation. He also deals with the necessity of stimulating the appetite of the body cells under various conditions. He considers haematopan to be capable of being employed for feeding up the cells. This property he ascribes to its lecithin content. The method of its preparation and the results of a complete analysis are given. Clemm states that patients take haematopan well, either in solution in water or dry. The taste is pleasant. Without giving details of the cases in which he has used haematopan (save one case briefly recounted), he comes to the conclusion that it is a perfectly satisfactory blood iron "renovating" medicament, that it is one of the best nutrient preparations, and that it is to be recommended in disturbances of the metabolism of the nervous system.

197. **Further Experiences of Tuberculin.**

O. Amrein (*Beiträge zur Klinik der Tuberkulose*, 1907, Heft 4) gives the results of his trial of Béraneck's tuberculin from July, 1906, to Spring, 1907, and compares these with those obtained by him with Denys's and Koch's old tuberculins. Béraneck's tuberculin is prepared ready diluted according to a very clear scale; this makes it a very convenient preparation. It was used only in cases in which a long course of climato-physical treatment had failed to produce any improvement, or had ceased to do so. There were 39 cases in all, 2 of which were of bony or periosteal tuberculosis, and the rest tuberculosis of the lungs. Of these latter 37, 4 were febrile, even after months of rest in bed (37.4–6° max.). Of the 33 afebrile cases, 11 were in Stage I (Turban), 14 in Stage II, and 8 in Stage III. The initial dose used was extremely weak. The weakest Béraneck solution, A 32, was diluted ten or one hundred fold, and of this only $\frac{1}{5}$ c.cm. was given. This was increased only very gradually, in 8 cases (2 in Stage II, 6 in Stage III) up to Solution D, in 21 cases (mostly Stage I, 8 in Stage II, 2 in Stage III) up to Solution H, 1 to 1½ c.cm. of which was being given at the end of six to nine months. In cases which had been previously treated by Koch's tuberculin, the increase of dose was more rapid. In 4 excitable nervous patients in Stage II treatment was periodic, being intermitted every few weeks by an interval of some weeks. In no afebrile case was there any febrile reaction; and if the temperature, although always below 37°, yet rose higher than usual, this was taken as an indication not to increase the dose. In the 4 febrile patients, the maximum of a two-hourly temperature taken a week before the tuberculin treatment, during which no apyretic was used, was taken as the limit which must not be passed as a result of the tuberculin treatment. As regards results, Amrein found that the general condition was but little affected, but in no case was any harm done. In some appetite decreased slightly; in one an increase both in appetite and in weight was distinctly due to the treatment. Pulse frequency was unaffected. Three of the 4 febrile cases lost their fever; 1 in four weeks, 1 in three months, and 1 in four months after a nine months' course of tuberculin, so that in the last case, even when taking moderate walks, the temperature did not rise above 37.1°. The fourth febrile case was complicated with abdominal tuberculosis, and the injections (solution A 32, diluted 100 fold, $\frac{1}{5}$ to $\frac{3}{5}$ c.cm.) regularly caused such acute abdominal pain that they were discontinued after the fourth trial. In 5 cases of haemorrhage the results were inconclusive, but did not point to any remedial effect. Of the cases in which tubercle bacilli had been demonstrated, 6 lost these, and 20 retained them. A case of tuberculous spondylitis greatly improved. Various cases in different stages of lung tuberculosis showed either a complete disappearance of small râles (2 cases in Stage I), or a drying up or lessening in quantity and intensity of these, or softer, better breath sounds. Amrein considers that Béraneck's is a very good tuberculin, less toxic than either Denys's or Koch's, and is the best preparation in febrile cases, and in those in which the local or general condition indicates great caution. It may also be useful as a preparatory course before giving Koch's old tuberculin. It takes, however, much longer to produce its results, and the author has not found in a single case such distinct improvement as he has noted when using Koch's and Denys's tuberculins. The results are tabulated of the treatment of 11 cases with Denys's tuberculin and 10 with Koch's old tuberculin, since the autumn of 1905. In these the pulse was increased in frequency. Tubercle bacilli disappeared in 15 cases out of 20. In 4 cases the expectoration became looser, and there was a more rapid and distinct improvement in the physical signs, particularly a lessening and drying up of râles, than with Béraneck's preparation. With these two preparations it is also generally possible to avoid any reaction by very cautious doses for example, according to Goetsch's method, and even in cases where a rise of temperature to 37.4–5° occurred, a marked increase of improvement was almost always noted. The author thinks that much more depends on the method of administering the tuberculin than on the particular preparation employed. On the whole, the author prefers Koch's old tuberculin. He finds the treatment by tuberculin injection a valuable aid to climatic and hygienic treatment, and also that it often gives a new impulse to improvement when this has come to a standstill.

198. **Light and Air Baths.**

Max Herz (*Therap. Monats.*, January, 1907) claims that the treatment of diseases of the respiratory organs by means of the light and air bath surpasses in many respects that by hydrotherapeutic measures. An increase of the resisting power of the organism is the most important aid to the prevention of the diseases predisposed to by cold; in the majority of cases it will be found that patients have been chilled not by having been wet through, but by having been exposed to rapid variations of temperature,

especially variations from hot to cold, and the most useful hardening is that against changes of temperature rather than against the effects of water. By means of the light-air bath the patient becomes accustomed to changes of temperature and to exposure to currents of air at different temperatures. The air bath is a useful prophylactic treatment of respiratory diseases because of its action in furthering ventilation of the lungs. Rubner has shown how exposure to currents of either cold or warm air increases to a varying extent, in some cases even by as much as 50 per cent., the depth of the breathing. In many diseases of the respiratory tract hydrotherapy is useful in that it induces copious sweating; the currents of light and air in the air bath lead to a greater loss of fluid than any other treatment, and do it without any injury to the heart or any unpleasant side-effects; a hot air current will deprive the body of an enormous quantity of fluid without being followed by any of the unpleasantness of sweating. By the newer apparatus a hot air douche can be applied locally. The cool air current can be given daily to reduce the temperature in cases of phthisis.

PATHOLOGY.

199. Congenital Cardio-vascular Lesions due to Hereditary Syphilis.

Landouzy (*Bull. de l'Acad. de Méd.*, May 28th, 1907) thinks that in many cases of stenosis (with or without malformation of the aorta and the pulmonary artery) attributed to syphilis there is merely the probability, not a certainty, of syphilis. Sometimes syphilis has been suspected in the parentage of the patient; sometimes the cardiac lesion has not been verified by autopsy and histo-pathological examination. Lancereaux has said that cardiac teratology is merely cardiac pathology during intrauterine life. Sometimes the diagnosis between syphilis and tubercle is very uncertain. Such a case was that of a child, born of a father who was an inveterate alcoholic and tuberculous and of a mother who appeared like her husband to be free from syphilis, who had multiple congenital malformations and was regarded as a hereditary syphilitic. Rendu in 1898 showed before the Academy, as a case of mitral stenosis of hereditary syphilitic origin, a woman, aged 19, unmarried, of small stature, having a natiform skull, a broad pug nose, an arched palate, a pigeon breast, lumbar scoliosis and a large heart with a purring murmur and reduplicated second sound. Nothing was known of her father; her mother had had miscarriages. There are really very few absolutely certain cases of cardio-vascular lesions of a hereditary syphilitic origin in which a histo-pathological examination has helped to complete the clinical observation. The author related the following case: A woman brought a child of 2½ months to the hospital. The child was covered with a typical secondary eruption and was in a very precarious state. The mother was 27 years of age and looked healthy. She had at the mento-labial ridge in the middle line a round cicatrix, white and slightly depressed. She had had it for three years. It had been painful. She had had some laryngitis but no eruption and no alopecia. She had only had one pregnancy, two years after the appearance of the above lesion; this pregnancy went to term and a girl was born, who seemed at the time of her birth quite natural and healthy. During the third month of life an eruption broke out, covering the face, the body, and the limbs successively. In the groins and the axillae enlarged glands could be felt which rolled under the finger. The spleen and liver showed signs of slight enlargement. Respiration was rapid and very superficial; there were no abnormal sounds to be heard and no dull areas. The heart sounds were very dull, but there was no murmur. The child did not vomit, but there was slight diarrhoea. Mercurial inunction was started, and the mother was given Gibert's syrup. The child died a week after entering the hospital. The lungs, on autopsy, showed some bronchopneumonia. The pleurae were normal. Stomach and intestines almost empty. The liver weighed 115 grams, and had scattered throughout its substance fatty-looking, yellowish spots; it was congested. There was no sclerosis of the liver; the blood and biliary vessels were normal. The spleen appeared normal and weighed 7 grams 50 mg. The kidneys, still lobulated, were congested. Glomeruli everywhere normal. The medullary part of the suprarenal glands was very sclerosed. Schaudinn's spirochaete was found in the skin and in the suprarenal glands. The heart weighed 35 grams. The right heart was considerably hypertrophied. The apex was entirely formed by the right ventricle. The calibre of the aorta was much less than that of the pulmonary artery. All the grooves of the heart were nearly empty of fat. On opening the heart, it was seen that the interauricular septum was very incomplete. It was perforated by an oval opening, whose long axis was antero-posterior, 16 mm. long and 9 mm. broad. Its edges were irregular; it was bounded above by the lower edge of the interauricular septum, which was membranous throughout. Below the orifice was bounded by the upper edge of the interventricular septum capped by a valve constituted by the coalescence of the two approximate flaps of the mitral and tricuspid valves. The interauricular septum was thus reduced to a sort of crescent with concavity downwards. In its middle part, 4 mm. above the chief opening, was a second opening, very small and triangular. The cavity of the left heart was very small. The mitral valve was composed of two flaps, the external of which was the larger. The inner flap was inserted into the angle formed by the interventricular septum and the posterior wall of the left ventricle. The endocardium covering the interventricular septum was slightly thickened, whitish, and dulled. The sigmoid valves were normal. The walls of the cavities of the right heart were much thicker than those on the left side. The tricuspid valve had only two flaps. The infundibulum of the pulmonary artery was very well developed. The pulmonary orifice was normal, and was furnished with three valve flaps, which were quite normal. The ductus arteriosus was obliterated. Histologically examined, the edge of the intra-auricular hiatus showed a thickening of the subendocardial connective tissue. Practically, the only thing revealed by the autopsy was the cardiac lesion. The absence of any murmur and of any cyanosis during life did not point to a vascular lesion. The whitish colouring of the endocardium covering the interventricular septum and the mitral valve showed a certain amount of fetal endocarditis. Besides the gross cardio-vascular lesions, other things, too, point to hereditary syphilis—the congestion of the cortical and medullary strata of the suprarenal glands, the infiltration in the substance between the cortex and medulla of the kidneys; and, lastly, the presence of the spirochaete of Schaudinn in the skin and in the suprarenal glands. If the lesions in the kidneys and suprarenal glands show a process of evolution, the cardiac lesion seems like the work of a process of arrest which has stopped at a definite hypertrophy of the aorta and of the auriculo-ventricular valve. As regards a prognosis, one must recognize the irreparability of a failure in the formation of the heart's septa; the progress of a gummatous endo-myocarditic sclerosis must be kept in view; and one must not forget the kidney and the suprarenal gland called upon to resist functionally and organically the presence of spirochaetes. Who can tell whether the perverted suprarenal secretion, had the child lived, would not have been productive of one of those cases of diminished or increased tension which the sphygmomanometer shows from time to time, the cause of which is yet unknown to us?

200. The Influence of Reaction upon Opsonins.

Hideyo Noguchi (*Journ. of Exper. Med.*, July, 1907) finds that opsonins reveal their maximum action in a medium of neutral reaction. No opsonization takes place in a serum which contains alkali equivalent to more than 1.6 c.cm. of a $\frac{1}{10}$ N solution, or acid equivalent to more than 0.5 c.cm. of this concentration per 1 c.cm. of serum. "The opsonic index obtained in the native serums is not the expression of the action of the whole content of opsonins, but only so much as the degree of optimum of the reaction permits to come into action. Estimation of the opsonic power should, therefore, be made in a medium of neutral reaction and in diluted serum." The opsonic power of all serums is increased by diminishing their natural alkalinity. The activity of opsonins which has been suspended by an unfavourable reaction is immediately restored as soon as the reaction is brought back to the neutral point, unless the acid or alkali employed approaches the strength of 1 N; at this point the alteration becomes permanent. Treatment of a serum with alcohol robs it of its opsonic power. The opsonic power of serum remains unaltered upon desiccation at 23° C. In the dry state opsonins may be preserved for two years. Temperatures of from 100° to 150° C. do not destroy opsonins of the dried serum. Complements of serum are also stable in the dry state, and may be preserved for several months. Dry heat of 135° C. reduces but does not destroy the complementary power of the dried serum. The opsonins and complements of the dried serum regain their original thermolability when they are dissolved in a proper amount of water. Noguchi attaches importance to the fact that in their sensitiveness to reaction and in their resistance, in the dry state, to high temperatures opsonins exhibit properties which are characteristic of the ferments.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

201. [Periodic Nervous Disorders.

H. Oppenheim (*Neurolog. Centralbl.*, 1908, 27, p. 7) has collected a number of cases in which various nervous disorders exhibited regularly alternating periods of improvement and remission, and discusses the etiology of this alternation. He remarks that periodic or cyclic insanity, periodic paralyses, epileptic attacks, or hemicrania often exhibit periodic recurrence. He gives details of a man who had for twenty years had attacks of malaise, sleeplessness, some headache, a furred tongue, and an unpleasant taste in the mouth every five or six days, being quite well in the intervals; the bowels always acted regularly. This patient had proved incurable. Another patient was treated in 1883 for headache, fainting fits, vomiting, tinnitus, and cramps, in hospital; she always exhibited Argyll-Robertson pupils, left hemiparesis and hemianaesthesia, and on her "good" days was active, cheerful, and felt well; but every alternate day was a "bad" day, when she lay in bed groaning and complaining of occipital headache, pains in the left side, faintness, vomiting, and the anaesthesia spread to the right side of the body. Cerebral syphilis + hysteria was diagnosed; fifteen years later the only organic sign of disease left was the Argyll-Robertson pupil. In three or four cases of amaurosis from optic atrophy, Oppenheim has found that the patients had a sensation of a dark shadow before their eyes on one day, a sensation of a light before their eyes on the next, in regular alternation. He has had under his observation a man of 50 with cerebro-spinal syphilis—headache, vomiting, diplopia, right hemiparesis, and trouble in micturition—who was successfully treated by mercury, till the only remaining signs were Argyll-Robertson pupil and a slight spastic paraparesis. For eight years this patient has almost regularly had alternate "good" and "bad" days, feeling very well on the former, but on the latter complaining of violent headache and backache, depression, thirst, anorexia, and constipation, from which he recovers in an hour. Another patient—a woman of 48, with a syphilitic husband—had a left hemianopia and hemiplegia at 32. At 48 she exhibits a left hemianopia, hemiataxy, and hemianaesthesia of a cerebral character, with a slight hemiparesis and Babinski's sign; for three and a half years she has had alternate "good" and "bad" days. Between 3 and 5 a.m. on the "bad" days she wakes up with severe pains in the left side of the abdomen and left thigh, which spread over the whole left side of the body, and she feels weak, miserable, depressed, has no appetite, and cannot sleep. All treatment has proved a failure, and Oppenheim found that she was not benefited by suggestion. He thinks that these periodic attacks occur in patients with focal lesions in the brain, but cannot explain them further. A discussion of his paper is given on a later page (loc. cit., p. 47), but the various speakers were not able to throw any further light on the phenomena he recorded.

202. Ophthalmic Migraine.

J. H. Fisher, in the *Ophthalmic Review* for February, 1907, and C. E. Finley and J. S. Wyler, in the *Archives of Ophthalmology* for January, 1908, contribute articles and cases referring to this disease. Fisher calls the disease "transient ophthalmoplegia externa." Finley speaks of "recurrent palsy of the third nerve," and Wyler describes a case of "fleeting paralysis of some ocular muscles," but all the examples may be brought under the category of "ophthalmic migraine." Similar cases have been collected by Holmes Spicer and Ormerod in the *Transactions of the Ophthalmological Society*, vol. xvi, under the title of "recurrent paralysis of ocular nerves." Finlay gives a very complete bibliography at the end of his paper, containing over a hundred references. The course of the disease can be divided into four stages. *First stage:* Patient suffers from periodic attacks of hemicrania which almost invariably affect the same side, accompanied by vomiting and malaise. There is generally no visual aura. *Second stage:* At this period the attacks of pain cease suddenly and are succeeded by paralysis of the ocular muscles, generally those innervated by the third nerve. Between the attacks the paralysis completely disappears. *Third stage:* The attacks are similar to those of the second stage, but the paralysis does not completely disappear. A certain degree of paresis remains in one or more of the affected muscles. This paresis becomes more and more marked, till in the *Fourth stage*, the paralysis becomes permanent, the pain alone recurring at intervals. The diagnosis is made easier by the periodicity of the symptoms and by the absence of all general nervous symptoms. The disease is commonest among young adults, but cases have been observed in infancy and old age. The majority of the patients belong to the working classes. The etiology of the disease is obscure. It has been associated with syphilis, with hysteria, with rheumatism, and with alcoholism, but the immense majority of the cases are healthy robust adults without demonstrable pathological antecedents. The lesion is not in the nucleus of the third nerve, nor in its intracrural portion. It must be in the basilar portion of the oculo-motor nerve, where it is intimately related to the bony bed of the middle cerebral fossa. There are many theories to account for the disease, but the only four cases which have been dissected *post mortem* have shown lesions of the third nerve. These were—Case I: Plastic exudation round the trunk of the nerve. Case II: Grey granulations containing tubercle bacilli around the nerve trunk. Case III: Fibrochondroma of the nerve. Case IV: Fibroma of the dura of the whole nerve. The prognosis is good as regards the individual attacks, but unfavourable as regards the final result, for, as we have seen, a permanent paralysis often remains. The recorded cases do not by any means all present the typical symptom complex described, and there is a great probability that they are not all examples of the same disease. Until more is known about their nature they are perhaps most conveniently grouped under some such general term as "ophthalmic migraine."

203. Incipient Tuberculosis.

Albert Abrams (*Med. Rec.*, February 22nd, 1908) describes certain methods for the diagnosis of tuberculosis in its incipiency. Lung cavitation is not necessarily a bad sign. In health the lungs are resonant in inspiration, dull in forced expiration. In emphysema the percussion note is the same in both phases of respiration. In tuberculosis pulmonary vesicular emphysema exists in the incipient and predisposed state. Another important sign is an extension of the lung borders downward. Unchanged percussion resonance, hyperresonance, and prolonged expiration indicate deficient expiratory force, and constitute the first signs of the pretuberculous stage. Pulmonary anaemia characterized by atelectatic zones in the lungs is an important sign. This form of anaemia is not benefited by iron. Vibrosuppression, that is, elimination of vibration by pressure on the sternum, aids in obtaining proper percussion signs in the lungs. The author describes the tracheal traction test and the use of the tuning-fork in testing conductivity of the lung substance.

SURGERY.

204 McBurney's Point.

In the *Centralbl. f. Chir.*, No. 7, Professor Lanz, of Amsterdam, questions the adequacy of McBurney's point as a guide to the appendix, and describes a method which he has been led by experimental and clinical research to advocate as more reliable. In performing lateral laparotomy, which, he states, is most frequently indicated in cases of appendicitis, he has for some time past been in the habit of making the external incision in the curved line running across the front of the abdomen between the two superior iliac spines. Having found that by this incision in the intraspinal line the appendix can be rendered more readily accessible than by the usual oblique incision carried through McBurney's point, he directed special attention to the localization of this structure. On making twenty *post-mortem* dissections on the human subject, Schröder, working under the directions of the author, found that the situation of the attached portion of the appendix is much more constant than has hitherto been generally supposed. These observations show that McBurney's point has no relation to the situation of this part of the appendix, and that it corresponds to the inner

margin of the ascending colon about ½ in. above the attachment of the process. In one case only, and that a pathological one of excessive ascites, was McBurney's point found to be directly over the base of the appendix. The author holds that the base of the appendix corresponds to the point marking the junction of the right and middle thirds of the intraspinal line, and that this is the best place for palpation in cases of suspected appendicitis. Although McBurney's point has undoubted diagnostic importance by reason of its being a very tender spot in cases of appendicitis, there is a risk of overrating its utility in this respect. Tenderness at this point may, the author points out, persist after removal of the appendix. Moreover, palpation at the point may do harm in cases of appendicitis, and also set up an attack of inflammation in a healthy appendix.

205. **Experimental Surgery of the Lungs.**

ROBINSON (*Ann. of Surg.*, February, 1908) points out that the recent somewhat promising wave of advance in pulmonary surgery is along the line of artificial inflation of the lungs by means either of negative pressure applied to the outer surface of the lung, or positive pressure to its inner aërating surface. An analysis is given of the results obtained from the application of a new positive pressure apparatus in thirty laboratory experiments. The records of these experiments, the author states, show a lower death-rate in operative research on the lungs and pleura than has hitherto been reported. From this practical test of the suitability of the positive pressure method of inflation for intrathoracic surgical procedures, he is convinced that, at least for experimental laboratory work, an apparatus such as he has devised entirely obviates the necessity of the negative pressure cabinet. In the experiments described in this paper not a single death could be attributed to the use of positive pressure, nor could any bad symptoms after operation be ascribed to the use of this method. His experiments, the author submits, afford reason for encouragement that for partial lobe excision, for exploratory operations, and for removal of foreign bodies, we have a reliable method which is not attended by the inconveniences and expense of a negative pressure cabinet. It has not been proved, though stated, that interlobular abscesses and other localized inflammatory conditions of the pleural cavity may not be approached through regions uninvolved, brought to the external wound, and walled-off and drained, as in intra-abdominal operations.

206. **Diaphragmatic Hernia.**

CRANWELL, of Buenos Aires (*Rev. de Chir.*, No. 1, 1908), discusses the diagnosis and treatment of the chronic form of diaphragmatic hernia, and puts on record an interesting case successfully dealt with by operation. This rare lesion should, it is held, be treated by surgical intervention, as it not only causes serious disturbance, but is also liable to frequent strangulation. The diagnosis of the lesion, the author points out, is almost always possible, if the surgeon be cognizant of both its subjective and its physical symptoms; if regard be paid to a history of injury; if, in doubtful cases, radioscopy be employed; and if, above all, the possibility of a diaphragmatic hernia be considered. The transpleural method, it is held, is certainly the best in performing the operation for radical cure. The subject of the case reported in this paper was a man aged 24, who, after the speedy and favourable healing of a penetrating wound of the back of the thorax on the left side, suffered from persistent "shooting" pains in the left hypochondrium, and was conscious during deep inspiration of a peculiar noise on the left side of the chest which he compared with the sound of boiling water. The patient when first seen by the author, about twenty-one months after the date of the injury, though in good general health, suffered much from persistent pain in the lower part of the left side of the chest, which became more severe on deep inspiration. The seat of the wound was indicated by a small scar in the eighth intercostal space on the left side in the anterior axillary line. On percussion the author found on the left side of the thorax a broad zone of tympanism continuous below with the clear sound over the abdomen and reaching upwards in front of the chest as far as the fifth rib. The heart was pushed over towards the right side. On radioscopic examination an obscure transverse band, 3 cm. in breadth and 10 cm. in length, could be seen in the lower part of the thorax on the left side. A large flap having been dissected upwards on the outer surface of the thorax, the left pleural cavity was opened by resection of portions, each 12 cm. in length, of the eighth and ninth ribs. The upper surface of the diaphragm was covered by omentum, which enveloped a prolapsed portion of colon. After resection of the omental mass and reposition of the intestine into the abdomen, the hand could be passed into this cavity through a rounded opening in the anterior muscular portion of the diaphragm. There was no hernial sac, and the peritoneal and pleural serous membranes were continuous at the margins of the diaphragmatic rent. The continuity of the diaphragm was then restored by bringing together the margins of the rent by silk sutures. The patient made a speedy recovery from this operation, by which he was completely relieved from the painful results of the old injury. In an exhaustive review of the etiology and symptoms of diaphragmatic hernia the author points out that while in cases in which this lesion is caused by severe contusion of the abdomen the stomach is immediately prolapsed into the chest, in the more frequent instances in which the diaphragm is traversed by some cutting instrument a portion of omentum passes through the rent and serves as a guide to the transverse colon, the prolapse of which is favoured and gradually increased by the movements of respiration. When with an antecedent history of a penetrating wound of the lower part of the thorax the patient suffers from digestive disturbances and presents a zone of tympanism at the base of the left lung—a zone which increases on deep inspiration and is sometimes associated with an inferior zone of dullness varying with the position of the body—when auscultation demonstrates that in this tympanic zone the vesicular murmur is replaced by an intestinal bruit, and, in addition, when the heart is displaced towards the right side, the diagnosis of diaphragmatic hernia becomes a very probable one. In doubtful cases some help, it is stated, may be afforded by radioscopy and gaseous insufflation of the intestinal canal. In the operative treatment of this lesion resection of the thoracic wall and exposure of the upper surface of the diaphragm is preferred to laparotomy, as it affords a better access to the hernia and is less difficult. Moreover, it is a safer method, as in 56 cases in which the chest had been opened the mortality was 9 6 per cent., while in operations in which the hernia had been reached by the abdomen it was 50 per cent.

OBSTETRICS.

207. **Placenta Praevia.**

A PROPER understanding of the pathology of placenta praevia can only, according to R. Freund (*Deut. med. Woch.*, January 23rd, 1908), be obtained if one fully grasps the anatomy and physiology of the lower uterine segment. He details the anatomical division of the uterus into the body, the cervix, and the part lying between these two. He renders the anatomical conditions in the virgin, in pregnancy, in parturition, and in the puerperal condition clear by means of diagrams. The lower limit of the lower uterine segment is marked by the transition of the uterine into the cervical mucosa. The upper limit is marked by the transition of the uterine muscle and the muscle of the canal through which the fetus has to pass. The lower uterine segment forms its own decidua in pregnancy. The establishment of placenta praevia has been explained in various ways. It has been suggested that the covering of the internal os by villous tissue is due (1) to the primary alteration of the mucous membrane at this situation to form a basis for the settling of the ovum, or (2) to proliferation of villi around the cervical canal, or (3) to the adhesion of the so-called reflex placenta or to a combination of the last two factors. Freund considers that the two last-named suggestions are more probable than the first. The bleeding in placenta praevia appears to take place from the tearing of the decidua which covers the placental site, which results from the opening of the intervillous spaces. After examining the conditions found in specimens of complete uteri with placenta praevia (one specimen has been gained in the clinic in Halle, from a young woman who died undelivered immediately after admission), he finds that the terms "marginal placenta praevia," "central placenta praevia," and "total placenta praevia" are justifiable, but he agrees with Aschoff that a new term, "placenta praevia cervicalis," is useful, since it describes a condition which actually exists. Having disposed of these theoretical considerations, he turns to the question of treatment. During the last four years (1904 to 1907 inclusive) 69 cases were dealt with. Of these, 12 were delivered outside; 7 cases terminated fatally, that is, 10 1 per cent.; 22 of the patients had fever, of these 1 was suffering from advanced phthisis, while the other 21 showed signs of genital infection; 71 children

were born. One of the patients died undelivered, while twins occurred three times; 53.5 per cent. of the children were born alive, and 49.3 per cent. were alive when the mother left the hospital. Of the dead children, 4 were premature dead fetuses, so that the actual mortality of this condition for the children may be taken at 40.8 per cent. In 8 cases spontaneous delivery followed rupture of the membranes. Dilatation by the bag followed by spontaneous delivery occurred in a further 8 cases. Dilatation and version was adopted in 15 cases, and Braxton Hicks's version was performed thirty-two times. The results for the child in the last class were very bad, 69.7 per cent. being born dead. From his experience he advises complete rest and clinical watching when the haemorrhage is moderate. Plugging should not be carried out. Only when the cervix is closed and the bleeding severe should one employ plugging. This should be carried out with moist sterile gauze by Fritsch's method, and should be kept up for a few hours only. When the haemorrhage is severe and the cervix dilated one should rupture the membranes and wait, but when the bag of membranes cannot be easily reached the cervix should be dilated with Champetier de Ribes's bag. As soon as the os is fully dilated, one can either wait for a spontaneous delivery or perform version, according to the position of the fetus, the type of pains, and the presence or absence of bleeding. After four hours, provided that Champetier de Ribes's bag has not done its work, or when one is dealing with premature unviable children, one should turn according to Braxton Hicks, and wait for the delivery. Of the two operative methods of dealing with this condition, he dismisses as unsuitable abdominal Caesarean section, and finds that anterior hysterotomy (vaginal Caesarean section) should be chosen.

GYNAECOLOGY.

208. **Female Genital Tuberculosis.**

A. Martin complains that the benefits of the sanatoriums are denied the poor sufferers from female genital tuberculosis (*Berl. klin. Woch.*, January 20th, 1908). He examines the various sides of this disease critically, in order to gain an insight into the direction in which improvements can be made. There is no doubt that genital tuberculosis can occur as a primary disease. It is, however, not frequently primary. Most commonly is the disease secondary to an intestinal-peritoneal tuberculosis or to a haematogenous infection. The genital affection, as a secondary condition, however, is often so prominent that one has to turn one's therapeutic endeavours almost entirely toward it as a local lesion. With regard to the frequency of genital tuberculosis, exact information is not available at present. In the opinion of many careful observers it is extremely common, Jung ascribing 24·6 per cent. of the chronic affections of the uterine appendages to this disease. It occurs chiefly in the second and third decades of life. In nearly 55 per cent. of the cases it does not affect menstruation. Pain may be present or may be totally absent, while an evil-smelling blood-stained discharge is often noted. The patients look ill and feel ill as a rule. The subjective symptoms are so varying and little characterized that one cannot even point to one symptom which would raise a suspicion of genital tuberculosis. Objectively, infantilism is said to be an important etiological factor. Advanced disease excludes the possibility of pregnancy, but one at times sees cases of tuberculosis of the placenta, and at times the onset of the disease takes place in connexion with a pregnancy. The diagnosis is very difficult at times. Subcutaneous injections of tuberculin sometimes fail to illuminate the true state of affairs, since some advanced cases do not react, while in other cases a reaction is due to tuberculosis elsewhere. Notwithstanding this, Martin finds this method of considerable use. He thinks that the ophthalmo-reaction to tuberculin may prove of use, but at present he is not prepared to express an opinion as to its diagnostic value. The clinical diagnosis can practically only be made by removing a small piece of tissue and examining it. Even at the operations the changes are not absolutely characteristic, and the microscope is required to confirm the diagnosis, or else an animal inoculation; 66 per cent. of his cases were localized in the appendages, while the affection of the cervix is rare, and that of the vaginal mucous membrane still rarer. He states that cases which have been proved to be certainly tuberculous have spontaneously healed. The prognosis, nevertheless, is always a very serious one, since cure depends on a large number of factors. Naturally the chances are best in very early disease. With regard to treatment, he says that the diseased tissue, if situated in the vulva, vagina, or endometrium, should be excised and the defect closed by suture. The endometrium should be energetically scraped and the wound cauterized, preferably with perchloride of iron. Salpingitis, sactosalpinx, and cöphoritis tuberculosa are often only suspected at the operation. The peritoneum is frequently involved in these cases. In the majority of cases he operates vaginally, but when he cannot be certain as to the limit of the affection he prefers the abdominal operation. When the disease is bilateral, he removes all the tissue which appears to exclude spontaneous recovery. It is not necessary to operate radically for this condition, since the organism can help itself in many cases; and, further, because one cannot possibly get at all the diseased parts. He gives the results which he has obtained in 53 patients. Three cases of laparotomy died of acute septic peritonitis (2 cases) and a large abscess in the right kidney. Five others succumbed to their tuberculosis of the lungs. In 85 per cent. the primary recovery was satisfactory. The patients could be discharged in fairly good condition, and were subjected to a planned after-treatment. With regard to the ultimate results, he has details of 27 cases. Sixteen of these are recorded as cured, the duration of the cure being tabulated as one year, two years, four years, and longer. Two died of tuberculosis during the first year, and one died of an independent disease, 6 were considerably improved, and 2 are entered as not cured. He considers that he is justified by his experience to advise in the treatment of genital tuberculosis intensive general treatment, and local treatment of severely diseased parts, the situations which appear to be capable of spontaneous cure being left untouched.

209. **Retrodeviation of Uterus.**

C. F. Kivlin (*Med. Record*, March 14th, 1908), after going over the familiar anatomy and symptoms of uterine retrodisplacements, advocates for the correction of these deformities a combined Alexander operation and shortening of the sacro-uterine ligaments. The round ligament is a guiding rather than a supporting ligament, and to this fact is due the failure of the Alexander operation to support the organ. The author opens the abdomen in the median line, draws the uterus forward, and thus puts the sacro-uterine ligaments on the stretch. The sutures are then introduced on each side so as to double the sacro-uterine ligaments on themselves. They are tied at the same time on the opposite side by the surgeon and assistant, and the abdomen is closed.

THERAPEUTICS.

210. **Strumpf's Argilla Treatment in Diarrhoea.**

In 1906 Strumpf described a method of treating wounds which he based on the consideration of the fact that corpses which are buried in clay resist the action of decomposition and putrefaction for a very long time. He employed argilla—that is, finely-powdered ordinary white clay—as a dressing for wounds, especially for ulcerating processes. The beneficial effect of the dressing has been confirmed by several authors. J. Goerner (*Muench. med. Woch.*, November 2nd, 1907) states that Strumpf's idea was based on Hans Buchner's experiments, and that the latter suggested that the action depended on an inhibitory process against the growth of bacteria, which he ascribed to the desiccating power of clay. Strumpf, however, soon was able to show that wet clay acted just as well as dry powder, and, therefore, overthrew this theory. The inhibitory process was, therefore, thought to be a direct one. It was found that two factors were remarkable. First, argilla is absolutely insoluble in water, and secondly it consists of microscopically small particles. It was then suggested that the bacteria find it impossible to live in the surroundings of the argilla on account of the inorganic nature of the particles. Strumpf then attempted to apply argilla for the treatment of decomposing processes in the digestive canal and obtained excellent results. Goerner followed Strumpf's directions and tested this treatment for diarrhoea and meteorism. The argilla is stirred up with a little water and drunk while in suspension; 200 grams of argilla can be mixed with ½ litre of water. In acute gastro-enteritis,

including severe cases of fish poisoning the treatment was highly successful. In most cases it was only necessary to give one drink in order to stop the diarrhoea. In a few cases two doses were required. The vomiting also ceased at once. In mild acute gastric catarrhs he was successful in 27 cases out of 30. In gastro-intestinal catarrh 9 infants were treated in this way. The results were good in early cases (5), while it failed where there was cachexia and long-standing symptoms. Infants were given from 10 grams to 25 grams, while older children received 50 grams. In the older children the effect was as satisfactory as in adults. It must, however, be emphasized that no addition may be made to the argilla, neither in the form of milk nor of sugar. Highly unpleasant results may follow if this direction be neglected. In influenza with diarrhoea, argilla also yielded excellent results as far as the diarrhoea was concerned. In some cases in which vomiting and tenesmus existed he found that the injection of 100 grams into the rectum stopped the diarrhoea rapidly. In intestinal tuberculosis he was also able to stop the diarrhoea without being able to influence the disease. The advantage of this treatment as against opium or astringents is that no constipation, no loss of appetite, and no meteorism is produced. The same applies to its employment in amyloid disease of the intestine and enteric fever. He also found argilla useful in removing meteorism. He therefore comes to the conclusion that Strumpf's argilla treatment is absolutely harmless, and is reliable in stopping diarrhoea in all forms of pathological conditions, but especially in acute gastro-intestinal catarrhs.

211. High Altitude in the Treatment of Basedow's Disease.

STILLER (*Medizin. Klinik.*, 1 März, 1908), on the urgent entreaty of his patient's husband to suggest some treatment in an apparently hopeless case, advised, as a desperate resource, that he should take her to a high altitude. They went to Schmeck, in the Carpathians, 1,000 metres high. On her return, the patient was, though grown grey, thin and fresh, without dropsy and cured of the disease. She lived for fifteen years longer and died of another disease. This success encouraged Stiller to try the same treatment in other cases, and he had in every case a like satisfactory result. Eulenberg expressed a doubt as to whether Basedow's disease was ever cured; his opinion was based on the observation of 800 cases. Stiller, in his incomparably fewer cases, has seen, as a consequence of living in a high altitude, quite a number of definite cures, and he has rarely failed to obtain significant improvement. The stay in the mountains should be for several months, and should be repeated for several years in order to establish the good result. The author is uncertain in what way the air acts. He has the impression that this treatment is better adapted for dropsical patients than for long-standing cases with compensation. Stiller considers that, in recent cases, operation should certainly be replaced by residence in high altitudes. He throws out a query if perhaps cardiac diseases of other types, in an uncompensated stage, may not perhaps be benefited by a high altitude, instead of, as has always been supposed, made worse.

212. Bacterial Inoculation in the Treatment of Localized Infections.

VON EBERTS AND HILL (*Amer. Journ Med. Sci.*, July, 1907) give notes of 14 cases of localized infections treated by bacterial inoculation selected from a series of 50 cases studied by them. These in particular are reported at length as affording the most brilliant results from the point of view of time required to effect a cure, and as being representative of different infections and of varying clinical types of the same infection. They include cases of tuberculous ulceration of the bladder, lupus vulgaris, tuberculous arthritis, tuberculous adenitis, carbuncle, suppurative periostitis, abscess, acne indurata, gonorrhoeal polyarthritis, and epidemic cerebro-spinal meningitis. Their observations confirm Wright's statement that an individual suffering from a localized infection has a low opsonic index to that particular infection, and they found low indices in afebrile tuberculous lesions, furunculosis, and in acne during the early stages. With superficial lesions exposed to view—for example, acne, lupus, etc.—the first effect noted was a rapid subsidence of inflammation, thus explaining the early diminution of pain in such deep-seated lesions as bladder ulceration, arthritis, and meningitis. Without minimizing the value of the opsonic index as a guide to dosage, the feelings of the patient may often be relied upon, and success in the majority of instances results from the employment of minute doses ($\frac{1}{15000}$ mg.) at long intervals, and gradually increasing (to $\frac{1}{500}$ mg)., provided that such increases are not attended by constitutional symptoms. An accumulation in the direction of a positive phase is not to be looked for in treating tuberculous cases or staphylococcic infections, the best that can be hoped for being a maximum in the direction of a positive phase and a minimum in the direction of a negative phase. In gonorrhoea and epidemic cerebro-spinal meningitis, however, high indices may be produced, and from the striking effects of inoculation in the former, and the analogy that exists between them, possibly bacterial inoculation may prove most effective in meningococcal infections. The technique of preparation, standardizing, diluting, and lysolizing bacterial vaccines is fully described, and serums are collected and controls taken at the same hour each day. Washed corpuscles are always prepared immediately before use, and, in counting, the content of one hundred cells is determined, and in the case of tubercle slides are prepared from two control serums, the average being taken as normal.

213. The Treatment of Anthrax.

SCHWAB (*Medizin. Klinik.*, February 23rd, 1908), on the strength of 8 cases of anthrax cured without operative interference, concludes that the energetic operative measures advocated by such high authorities are nevertheless unnecessary. The cases reported by him were treated by sublimate fomentations or other simple measures, and in one case by antianthrax serum. Deep incisions into the affected part seem to him likely to do damage by opening up new paths for general infection. The serumtherapy should be used in every case, especially with the Italian preparation, which is noted as giving the best results. Should untoward results occur, the author considers these must be due to the quality of the serum.

PATHOLOGY.

214. The Toxicity of Glanders Bacilli.

CANTACUZÈNE AND RIEGLER (*Ann. de l'Inst. Pasteur*, March, 1907) have investigated the toxicity of dead glanders bacilli for the guinea-pig. When they used bacilli killed by means of alcohol they found that an intraperitoneal injection of 40 mg. would kill a guinea-pig weighing 500 grams in one or two days; a dose of 25 mg. brought about a slowly progressive cachexia and death at the end of from two to three weeks; 5 to 10 mg. caused a slight disturbance in the animal's health, followed by recovery. When the bacilli were introduced directly into the stomach by means of the oesophageal sound, much higher doses were requisite in order to produce marked effects; 150 mg. were required for the production of rapid death, whilst 50 mg. were sufficient in many instances, but not always, to bring about a cachexia slowly becoming fatal; smaller doses were followed by recovery, after a short period of illness. When bacilli were employed which had been killed by heat at 60° C., the toxicity was found to be about double that of the bacilli killed by alcohol; intraperitoneal injections of 20 mg. rapidly produced death; and doses of from 10 to 15 mg. proved fatal by causing a condition of slowly progressive cachexia. But this difference in degree of toxicity was less noticeable in the case of bacilli introduced into the stomach. Comparing the disease produced by the two methods of infection, the authors find that the general symptoms were the same. The following are some of the manifestations of the disease to which they call attention: Initial lowering of temperature, emaciation, degeneration of the renal epithelium and the cardiac muscle, acute necrosis of the polynuclear leucocytes which have englobed bacilli, caseation of the glanders nodules, and hypertrophy of the lymphoid tissues. The destruction of the dead glanders bacilli was extremely rapid. The protoplasm of the phagocytes caused them to lose in a very few hours their property of fixing the basic aniline dyes, and though they persisted for some time in the form of eosinophile granules, they became completely invisible at the end of from one to two days. The penetration of the dead glanders bacilli through the intestinal walls takes place chiefly in the region of the ileum and the caecum; passing through the subepithelial phagocytic filter without interference on the part of the leucocytes, many of the bacilli get into the lymph stream intact and thus reach the blood vessels; there they are arrested in the spleen and the capillaries of the lungs, where their destruction is finally accomplished in the interior of the macrophages.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

215. The Diagnosis of Gastric Ulcer.

Writing on the subject of the diagnosis of gastric ulcer, M. Boenniger (*Berl. klin. Woch.*, February 24th, 1908) considers that the most important symptom is pain. Typically it appears from half an hour to three-quarters of an hour after a meal, but in other cases this is not so. When the stomach is empty no pain is experienced, and this is attributed to the absence of an acid fluid. Pain should therefore be produced if one introduced a dilute solution of hydrochloric acid into the stomach. The normal stomach does not respond to this fluid with pain, and as far as his experience goes no other gastric disease save gastric ulcer does so. In the case of ulcerating carcinomata of this organ mild pains may be occasioned by the acid. He introduces the acid (1/5 normal HCl) by means of the stomach tube, and for this reason the method cannot be applied in cases of haematemesis. He proceeds as follows: The stomach tube is introduced during fasting in the morning. If no contents are regained after light pressing, he pours about 100 grams of water in. No pain is usually induced by this. After making some shaking movements the fluid is allowed to return, and this is examined for acidity, blood, albumen, epithelium, and mucus. He regards this examination as of great importance. The next step is to introduce from 100 to 200 c.cm. of 1/5 normal hydrochloric acid. In patients suffering from gastric ulcer smart pain is produced at once, but this can be immediately removed by giving milk. If no pain is experienced, one kneads the gastric region carefully and moves the position of the patient. This procedure is necessary to ensure that every part of the gastric mucous membrane is bathed with the acid fluid. Should no pain result, one can, in his opinion, be practically certain that no ulcer exists. The conditions for the test are an empty stomach and no exaggerated acidity of the gastric juice. It is unnecessary to apply the test to patients who do not complain of pain at all, since, if no pain is produced during the process of digestion, none will be produced by the introduction of another acid fluid. The method can further be used as an index of the progress of the healing. The pain diminishes parallel with the healing of the ulcer, and when this is complete the pain is no longer produced. Another valuable means of differential diagnosis is examination by Roentgen rays. While he considers that this procedure cannot reveal an ulcer even when coated with bismuth, it yields valuable information with regard to the position of the organ. He has found that gastroptosis is common and that the pylorus does not always correspond to the epigastric region. By the help of the *x* rays one can determine whether the tender spot corresponds with the pylorus or with the stomach at all. In this way one is at times able to exclude all possibility of a suspected gastric ulcer. In conclusion he deals briefly with the treatment. Rational treatment aims at placing the least possible amount of strain with the greatest possible amount of nutritive value on the organ and in applying a fluid diet which will produce little acid but which will combine with the acid to a considerable extent. Senator's plan to treat gastric ulcer with cream which has a caloric value of 270 is an excellent one. The fat diminishes the acid production and the acid combining power of raw cream is considerable. The cream remains for a considerable time in the stomach, but this he regards rather as an advantage than a disadvantage. He also finds giving bismuth in doses of 10 grams during fasting useful, and does not believe that the possibilities of toxic action are real dangers.

216. Lavage of Stomach as a Treatment for Constipation.

For many years past it has been well known that washing out the stomach or emptying the stomach of its contents by the use of the stomach tube has a marked effect in overcoming obstinate constipation, and as a good example of this beneficial effect Lebeaupin (*Archives des Maladies de l'Appareil Digestif et de la Nutrition*, February, 1903) quotes the following case: The patient was a woman, 32 years of age, a neurasthenic, who had suffered for four years from stomach trouble and constipation, for which no hitherto employed treatment had been of any avail. Her bowels used to act once every three or four days, the stools being hard and scybalous; defaecation was painful, and traces of blood were at times present in the stools. The constipation gradually became worse, and she was ultimately compelled to use rectal enemata to enable her bowels to act. When seen by the author of this paper on July 20th, 1907, she admitted that she used rectal injections of oil every two or three days together with the taking of laxatives by the mouth in order to obtain an action of the bowels. The patient's stools were formed of small firm masses which caused her great pain in passing; no false membranes or mucus were present in the stools, but the patient suffered from bleeding internal piles. Digestion was bad, there were complaints of epigastric pain, acid eructations, and pyrosis, flushes of heat after eating, and sleepiness. Appetite was very bad, and the patient had lost a considerable amount of weight. On examination of the abdomen slight splashing was to be detected over the stomach area, but there was no evidence of gastric dilatation and no tenderness in the epigastrium; there was slight ptosis of the liver, the abdomen felt hard and retracted, and the outlines of caecum and colon were easily traced; there was no tenderness in the abdomen. On July 23rd the stomach (fasting) was washed out with cold Vichy water, and eight hours later a motion consisting at first of scybala and then of softer matter was passed. On July 26th (no motion having been passed after the one excited by the lavage) "dry" lavage was practised—that is to say, the stomach tube was passed, but the stomach itself was not washed out—an abundant and softer motion very soon followed. On the evening of the 27th, after taking two podophyllin pills, a painful action of the bowels was obtained. On the 29th "dry" lubage was again carried out, and an action of the bowels again obtained. This operation was therefore practised every two days until August 10th, then every three days until the 25th, when the patient left the town where the author was practising. Following this treatment the stomach pains disappeared, and the patient felt very much better generally, and on later inquiry the author found that the patient's constipation had very much lessened, the bowels acting almost every day, and, with the aid of a slight evening laxative, a free action of the bowels could be obtained. Her digestion had greatly improved, and her appetite had returned. The author, in commenting on this case, is inclined to the view that the mode of action of lavage of the stomach and of "dry" tubage in overcoming constipation is mechanical, the passage of the tube exciting motor activity of the stomach and intestines.

217. Purulent Cerebro-spinal Meningitis caused by the Typhoid Bacillus.

Henry and Rosenberger (*Amer. Journ. Med. Sci.*, February, 1908) give notes of an unusual case of purulent cerebro-spinal meningitis caused by typhoid bacilli, yet without presenting the customary intestinal lesions of typhoid fever. The patient, a well-nourished negro aged 34, was admitted to hospital in an unconscious state, with the head slightly retracted and the eyes drawn upwards and to the left. The pupils were small, but did not react to light, and there was a muco-purulent discharge from the conjunctivae. The arms were flexed and stiff, and the spine was rigid and slightly concave. Kernig's sign was present. Six days prior to admission the illness began with headache, dizziness, vomiting, pains in the legs, and severe pain in the back of the head. He became delirious on the third day. Lumbar puncture, twice performed, drew off about 25 c.cm. of a turbid fluid, which deposited a heavy purulent sediment on standing. Death occurred on the ninth day of the illness, and a bacillus morphologically and tinctorially identical with the typhoid bacillus was isolated from the blood and the spinal fluid, and from spreads and inoculations from the pus upon the brain, and it was present also in sections of the cord and cerebellum. Beyond very slight enlargement of the mesenteric gland, and of Peyer's patches—a condition easily accounted for by the acute catarrhal enteritis which was present—the autopsy showed no typical typhoid lesions. The meningitis appears to have been a primary lesion due to the typhoid bacillus, the intestines escaping ordinary lesions which might have been expected from typhoid fever of nine days' duration. The history was very carefully reviewed in view of the possibility that the patient

might have had typhoid fever at a recent date, but it seemed clear that the illness was one of only nine days' duration from the first.

SURGERY.

218. The Serum Diagnosis of Syphilis.

Lesser (*Med. Klin.*, March 1st, 1908) finds that gummata of the internal organs are diagnosed practically only when they are situated in the central nervous system. In sections, scars and induration are the more frequently found, these being not merely remains of an old syphilitic process, since the microscope shows the process to be progressive. Syphilitic induration of the testis was found in 4.5 per cent. of all adults over 17 years of age, the disease having been scarcely ever diagnosed in life, since its course is painless and without symptoms. The author's figures suggest that these indurations are found mostly in cases over 30 years of age, that is, many years after the primary infection. In sections of all cases over 25, syphilis is demonstrable in 9 per cent., and in most of these there have been no clinical signs of the lesions found. Estimating the number of syphilitics among the poorer classes in Berlin as 20 per cent., it follows that about 50 per cent. of these develop late lesions, showing that the idea that the period of latency following on the secondary symptoms mostly indicated cure, and only rarely was followed by other syphilitic manifestations, is an error. Wassermann's reaction was found to be positive in 52 per cent. of cases of syphilis with no clinical signs, that is, in about the same percentage as in cases shown *post mortem* to have had late lesions without clinical signs. In all probability, therefore, a positive serum reaction indicates that the virus is still active. This does not necessarily imply that a syphilitic process is in course. Since a negative reaction is sometimes obtained when a syphilitic process is actually present, it cannot be relied on to indicate the absence of syphilis. The author considers tabes and paralysis as quaternary symptoms of syphilis, separated from the tertiary by their late appearance, and by their sluggish, if any, reaction to mercury and iodine. In 96 autopsies of tabetic patients 28 per cent. showed syphilitic lesions. In 18 out of 20 cases of paralysis a positive serum reaction was obtained. In one case of the author's the reaction became negative after energetic treatment with mercury. The author concludes: (1) That in the majority of syphilitics, syphilitic processes are present in later years, mostly without clinical signs; (2) everything points to the fact that a positive Wassermann's reaction shows an existing syphilitic process in the organism, but that a negative reaction does not contraindicate syphilis; (3) that tabes and paralysis belong to a distinct stage of syphilis, which may be termed quaternary; and (4) that a course of mercurial treatment seems to cause a negative serum reaction, but as to whether this treatment prevents a later positive reaction and late specific lesions is not yet certain.

219. Primary Epithelioma of the Gall Bladder.

Michaux (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 37, 1907) adds to the scanty records of cancer of the gall bladder a remarkable instance of this affection. The patient, a woman aged 49, came under the author's care with a rapidly-growing tumour which occupied a large portion of the abdominal cavity, and extended to the pubes. The malignancy of this swelling was suggested by extreme emaciation and well-marked cachexia, but there were no clear indications of the precise local origin. There had not been much pain during the development of the growth, and the patient was quite free from both digestive and urinary troubles. The author made a provisional diagnosis of vegetating epithelioma of the right ovary. Median laparotomy performed below the umbilicus revealed a hard nodulated tumour of the size of an adult's head, attached to and involving part of the lower margin of the right hepatic lobe. This was removed, together with a small triangular portion of the liver, and on microscopical examination was found to contain a cavity representing the gall bladder. The resected portion of liver measured from 7 to 8 cm. in length, and its base, which corresponded to the margin of the lobe, from 5 to 6 cm. The margins of the hepatic wound were brought together by three deep sutures of catgut. The primary post-operative results were satisfactory, as the wound healed rapidly and the patient had recovered at the end of the fourth week. At the end of the sixth month, however, she was again losing flesh, and presented decided signs of recurrence of the disease and forebodings of a speedy death. In some comments on this case the author points out that in respect to sex as one of the etiological factors in cancer of the gall bladder, the subject of this case conformed to the rule that a very large proportion of those affected by this disease are females. An exceptional feature in this case was the absence of biliary lithiasis. The growth was unusually large—the largest on record, the author believes—and its limits extended far beyond the right hypochondrium. The size of the growth and its extension far beyond the region of the liver, together with the absence of jaundice and ascites, rendered the diagnosis very difficult and, indeed, impossible, and before opening the abdomen the author expected to find a cancerous growth of the ovary. Notwithstanding the statement of Auvray and Terrier that the maximum duration of freedom from recurrence of the disease after operation in cases of this kind is eight weeks, the author thinks that surgical intervention is justifiable, and that if practised early and on small growths it promises to give better results.

220. Dupuytren's Contraction.

Aievoli (*Archiv. di Ortoped.*, An. 24, N. 5–6) publishes a detailed study of the various theories which have been propounded with regard to the above disease. He thinks that many of the cases of so-called Dupuytren's contraction described in association with syringomyelia were not typical cases of that disease; and whilst recognizing that the nervous lesions when present may play a causal part, he believes that too much stress nowadays is laid on this side of the question. For him the typical cases of Dupuytren's contraction, as described by the great French surgeon, are primarily of local traumatic origin, and on this view surgical interference is more hopeful and more decidedly indicated. He points out that the syringomyelia may itself be of peripheral origin, starting from some nerve injury (toxic or traumatic). In his own cases (7 in number) there was no opportunity of examining the anatomical state of the spinal cord. There is also a discussion as to the anatomy and physiology of the palmar aponeurosis, showing how the facts bear on the pathogenesis of the disease from the traumatic point of view. The author, of course, does not deny that the nervous system, if diseased, may play a causal part, but all along he pleads for a local traumatic lesion as the usual starting point. It is true that a definite traumatism cannot always be definitely detected, but small, unnoticed injuries may be suspected in these cases.

OBSTETRICS.

221. Cancer of the Cervix and Pregnancy.

Darvilliers (*La Clin.*, December 27th, 1907) points out that when cancer is present in the uterus it is usually aggravated by the occurrence of pregnancy, the youth of the patient and the changes which occur in the tissues both tending to favour its propagation. The increase in the periuterine lymphatic circulation promotes the rapid spread of the disease. Galabin has reported a case in which the cancer began at the fifth month and had become inoperable by term. Other observers assert that cancers which develop together with pregnancy progress much more rapidly than those which have existed beforehand; 33 per cent. of these cases abort, the direct cause for which is generally endometritis. Pestalozza found that labour was often delayed owing to the destruction of peripheral nerve endings and their action in producing labour. Nearly 50 per cent. of the infants are stillborn, otherwise they are as healthy as the offspring of healthy mothers. The effect of labour upon a cancerous cervix has its risks, as the diseased tissue is only distended with difficulty, and there is a danger of fissures or lacerations resulting, often accompanied by haemorrhages which may prove fatal. Delivery is slower than is usual; it is common to find uterine inertia retarding matters, due probably to the weak state of the mother, to albuminuria, or to the degeneracy of the muscle fibre. Death is liable to supervene from shock or from septicaemia following rupture or severe lacerations. It is rare to find the tumour obstructing the genital canal. Secondary deposits have been found in all the viscera, but not in the placenta or chorion or amnion. The question of surgical intervention has been much discussed, as it entails the sacrifice of the child in most cases. Pregnancy should not be a contraindication for operation when the fetus is less than 6 months, and when the chances of success are fair it

is unwise to defer operation, as the disease makes such rapid progress. It is desirable to remove the uterus and its appendages freely, with as much of the pelvic cellular tissue as possible and any glands which one is able to define. At term, operation may be undertaken to avoid the dangers of labour for both the mother and child. Caesarean section followed by hysterectomy is without doubt the measure to adopt, unless the exhausted condition of the patient should render it impossible.

222. **Indications for Premature Rupture of the Membranes.**

Rudaux (*La Clin.*, January 3rd, 1908) considers that rupture of the membranes before the onset of labour is an accident of pregnancy, but under certain circumstances the practitioner must rupture them as a therapeutic measure. Such treatment is most urgently called for when the placenta is situated on the lower segment of the uterus, and when the patient has either serious or repeated haemorrhages in consequence. In such a case, if the pulse is small and has a continuous rate of more than 100 per minute, the usual antiseptic precautions must be taken, and it must be ascertained that there is no transverse presentation present which requires to be manipulated; the membranes must then be ruptured freely. The high pulse-rate may be associated with attacks of fainting, with blanching, or with giddiness and noises in the ears. The same treatment is required during pregnancy if a premature detachment of a normally placed placenta occurs; the symptoms are a rapid alteration in the general health, great hardness of the uterus, accompanied by shock, and a high pulse-rate. In rapidly increasing hydramnios it is necessary to evacuate the uterus during pregnancy, thus terminating the pregnancy. Such intervention is indicated when the size and tension of the uterus impedes respiration and circulation, as is shown by the presence of dyspnoea and asphyxial complications; when the general condition shows a loss of weight and appetite, sleeplessness, fever, etc. At the same time the amount of urine secreted in twenty-four hours is less than a pint, there are abdominal and costal pains which prevent rest and sleep.

GYNAECOLOGY.

223 **Radiumtherapy for Metrorrhagia and Dysmenorrhoea.**

Fraenkel (*Sem. Méd.*, February 26th, 1908), having observed that the application of the Roentgen rays, even on parts at a distance from the genital organs, caused retardation and diminution of the menses, has conceived the idea of employing radiotherapy in the treatment of menorrhagia, metrorrhagia, and dysmenorrhoea. He has treated 14 patients of this sort, and has found decided improvement after ten or twelve sittings, even sometimes after five or six. The pains have disappeared, the haemorrhage has decidedly diminished, and the effect has lasted until the third period after cessation of the treatment. Five patients suffering from leucorrhoea were cured, and the only inconveniences complained of were a little vesical tenesmus, which most of the patients experienced, and some headache and nausea, which affected two of them. The treatment should be begun during the first half of the month, and only two or three sittings are necessary during the second half. In favourable cases, two, three, or four sittings a month will subsequently be found sufficient, but care must be taken to locate the applications in such a way as to avoid the sterilizing effect of the Roentgen rays upon the ovaries.

224. **Inoperable Uterine Cancer.**

Brouha (*Le Scalpel*, February 23rd, 1908) describes two forms of treatment for those cases of uterine cancer which cannot be removed by the knife, and at the same time can cause so much suffering from haemorrhage, discharge, and fetor, even when pain can be kept under by morphine and other narcotics. Professor Fraipont of Liége employed for this purpose chloride of zinc paste. After removing carefully the soft proliferations from the cervix, the resulting cavity and the vagina are packed with iodoform gauze. In forty-eight hours this is replaced by a tampon of zinc paste, covered with a layer of gauze, fitted into the excavation, and removed after another forty-eight hours, when the whole vagina is carefully packed with iodoform gauze. The chloride of zinc destroys the uterine tissue to a depth of from ⅛ to ¼ in., and causes the formation of an eschar, which separates in about a week. If the surface left after the separation be dressed regularly with iodoform gauze, the formation of putrid fungosities is considerably retarded. These are, however, bound to appear again after a longer or shorter interval, and gynaecologists are always endeavouring to find some treatment which will prevent it. Gellhorn has found acetone to be an improvement on previous methods of treatment, although even with it frequent repetitions are necessary. After removing the vegetations with a curette, the surface, carefully dried, is bathed in pure acetone through a cylindrical speculum, the patient being in the Trendelenburg position. The acetone is left in contact for fifteen to twenty minutes, after which the excess of acetone is soaked up by a strip of gauze, the speculum is removed, and the vagina and vulva are irrigated with sterilized water. The gauze is taken away after twenty-four hours, and the patient leaves her bed on the second or third day. This is repeated after the fifth day, and once a month or every two months afterwards, if its full advantage is to be obtained. The formerly fungating surface is covered with a whitish coating exuding neither discharge nor fetor, and Gellhorn strongly recommends this treatment on account of its simplicity and safety.

THERAPEUTICS.

225. **Treatment of Tabes.**

B. Buxbaum (*Zentr. für die Ges. Therap.*, July, 1907) shows that, in spite of a great advance in our knowledge of the causes and nature of tabes, there has been no corresponding advance in the methods of treatment available. As late as 1905 Erb has stated that the prognosis of tabes has not greatly improved, and in another pronouncement the same author finds that we have not succeeded in discovering any method of treatment which is certain in its results. Under these circumstances Buxbaum deplores the neglect of hydrotherapy in the treatment of tabes, and claims that a judicious combination of hydrotherapy and of Fraenkel's exercises is a treatment which, if not certain in its results, does yet materially improve the lot of the sufferer from tabes. According to Winternitz, the use of lukewarm water not only causes irritation of the peripheral sensory nerve endings, with innervation impulses to the centre, but also, by increasing vasomotor activity, causes change in the nutritional conditions in the central organ; and as in all but the very first stages of most diseases of the spinal cord there is a condition of anaemia leading to increase of connective tissue, fatty degeneration, and atrophy, the cardinal indication for treatment—viz., the removal of the local anaemia—is followed when hydrotherapeutic measures are employed. Buxbaum is of opinion that cases should not as a rule be divided into those with sensory and visceral lesions to be treated by hydrotherapy, and those with motor lesions to be treated by Fraenkel's ataxia method, but that as the two sets of symptoms are found in combination or one following on another, so the two methods of treatment should be used in combination. Three cases illustrative of the results obtained are described. The first is that of a workman 42 years of age who had suffered for about three years from pains and weakness in the lower limbs, which had gradually increased until he could only get about with difficulty. At this stage, after seeing a doctor, the patient had begun a course of exercises, and had carried them out with great persistence but without adequate supervision, with the result that he got visibly worse, and was soon altogether lamed. The patient had also suffered for about nine months from a feeling of coldness of the legs, the sensation being most noticeable when he had pains in the legs, and more recently he had suffered also from dribbling of urine at nights. Buxbaum had in this instance to deal with a somewhat severe case of tabes in which at the outset treatment by exercises was clearly contraindicated by the history. Daily half baths were ordered at a temperature of from 24 to 22° R., together with rest in bed after the bath; during the bath water was poured over the legs and powerful friction employed. Under this treatment the patient's general condition improved, as did also the circulation in the periphery, and after ten days exercises of the gentlest description, carried out under the most rigid supervision, could be begun. When the patient left, after two and a half months' treatment, he was able to walk unsupported, the pains, the paraesthesia and feelings of coldness of the legs had been absent for a long time, there was no more sign of the bladder trouble, and in addition to and as a result of all this the patient's whole aspect had altered for the better. The patient wrote after an interval of four months, during which he had continued the daily half baths at home, to say that he still felt as well as on the day he returned. Another case described is that of a

man, 60 years of age, who eighteen years before had come to the polyclinic in an advanced stage of the disease with lancinating pains, dribbing of urine, and difficulty in walking which was of the greatest inconvenience to him in his work. For eighteen years this man was one of the most faithful frequenters of the hydropathic department of the clinic and for years received daily a half bath preceded by douching of the lower limbs; later on he took the bath only when there was an increase in one or other of the symptoms of the disease. The patient's walking power increased so that he was able to continue his work, the dribbling of urine and the pains ceased although there were at times relapses. The improvement in some of the more severe symptoms and the arrest of the process must be ascribed to the treatment. In the third case no history of syphilis could be obtained, and there was in addition to tabes advanced arteriosclerosis with attacks of cardiac pain. A combination of hydropathic and drug treatment was employed, with considerable success at the time, but the patient was unfortunately lost sight of and no after-history can be obtained.

226. **Therapeutic Use of Rhodagen.**

Fedeli (*La Clin. Med.*, December, 1907) briefly records 11 cases of Basedow's disease successfully treated with rhodagen. The drug in question is a dried extract, prepared from the milk of goats whose thyroid has been removed. The dose varies from ½ to 2 grams. Amongst the effects noted were improvement in the general condition, and particularly in the blood state. The author believes that the anaemia frequently seen in Basedow's disease is as much a symptom and effect of the underlying cause as is, for example, the tremor, and due ultimately to the toxaemia induced by the hyperthyroidism. And since rhodagen is supposed to neutralize this toxin, it is not surprising that it should improve the condition of the blood, and act more effectually in this respect than iron or arsenic. Again, in every case the palpitation was reduced, and the same was true for the sweating. The symptom which persisted longest and seemed least affected by the treatment was the exophthalmos. Of many theories advanced to explain the exophthalmos, the author accepts that which couples it with an oedema or actual hypertrophy (in chronic cases) of the peribulbar and retrobulbar connective tissue. Such an oedema might be induced by irritation of the sympathetic due to the action of the toxin (of hyperthyroidism) on the bulbar centre. Improvement may generally be noted after fifteen to twenty days of treatment.

227. **Poisoning with Maretin.**

The antipyretic maretin which has been recommended for reducing the temperature in phthisis and other conditions has been stated to be free from toxic effects. In this way it was supposed to differ from other aniline derivatives (maretin is carbamic acid meta-tolyl-hydrazide). Several authors especially pointed out that it was free from unpleasant or dangerous side-effects. F. Port (*Deut. med. Woch.*, August 29th, 1907) finds that Kroenig, Benfey and Steinhauer are the only authors who have reported on the toxic effects of the drug. As he has experienced a severe case of maretin poisoning, he considers it important to publish his observations. He prefaces his remarks by praising the antipyretic action of the preparation. His patient was a male aged 22 years, who had marked kyphoscoliosis of the dorsal spine, numerous old operation scars probably of tuberculous origin, signs of infiltration of the upper lobe of the right and lower lobe of the left lung, and some pleural friction. There was no sputum, so that the diagnosis could not be confirmed by the finding of bacilli; 0.5 gram of maretin was given twice a day for nine days on account of fever after pyramidon had failed. The antipyretic action was prompt. After a few days a marked degree of anaemia was noticed. The complexion became yellowish, and the patient looked very ill. There was a tendency to vomiting. Dyspnoea then appeared, and a little later cyanosis. After about a fortnight the condition began to improve. The blood counts revealed a progressive anaemia during the first ten days, the lowest counts being 1,184,000 red cells per c.cm. blood, while the leucocytes numbered 12,600 and the haemoglobin value sank to 40 per cent. Nucleated red cells, poikilocytes, polychromatophiles, megaloblasts and normoblasts were seen at the different stages. The urine showed no blood, but urobilin, urobilinogen were present. The improvement followed the treatment with oxygen and arsenic. The patient was discharged after three and a half weeks during convalescence. The author therefore warns against giving maretin even in small doses for prolonged periods. In his case toxic symptoms followed 0.5 gram given twice a day for nine days; in other cases reported the symptoms followed 0.25 gram given twice a day for sixteen days, while the same dose given twice or three times daily for from seven to fifty-seven days also produced severe symptoms.

228. **The Instillation of Fibrolysin in the Conjunctival Sac.**

Windmüller (*Med. Klin.*, March 1st, 1908) has tried the instillation of fibrolysin—a compound of thiosinamine and sodium salicylate—in various eye affections since June, 1907. He found the most noteworthy results in cases of corneal opacity, whether of an inflammatory or non-inflammatory kind. He begins only when all inflammatory signs have disappeared, and instils dionine immediately before the fibrolysin, in order to increase the absorptive power of the eyeball. He uses the drops once to three times daily, and increases the strength of the dionine solution gradually from 2 per cent. to 10 per cent. The instillation causes pricking pain, which, however, soon passes off on rapid blinking of the eyelids. The result is a disappearance, or, in severe cases, a lessening of the opacity, and, in some cases, a corresponding improvement in the visual acuity. Fibrolysin must be used while fresh.

PATHOLOGY.

229. **The Blood in Typhoid Fever.**

Coleman and Buxton (*Amer. Journ. of Med. Sci.*, June, 1907) have made bacteriological examinations of the blood in 123 cases of typhoid fever, and analyse 1,602 cases reported. The method they recommend is to take ox-bile 90 c.cm., glycerine 10 c.cm., and peptone 2 grams. This mixture is distributed into small flasks, 20 c.cm. in each, and sterilized. Three of these flasks are used for each examination, about 3 c.cm. of blood being run into each. The flasks are incubated, and the next morning streaks from each are made over the surface of a litmus-lactose-agar plate. If germs are present a growth may be observed in five or six hours. If the growth does not redden the medium, and is found to be a bacillus resembling the typhoid organism, it is tested for the Widal reaction with immune serum. By this method it is possible to determine if the case be typhoid fever or not within twenty-four hours after drawing the blood. Of 1,602 cases reported, 75 per cent. gave a positive result. The examinations were made at all stages and by various methods. Of 224 examinations in the first week, 200 (89 per cent.) were positive. Widal has reported the earliest positive result, which was on the second day of the disease. During the second week, of 484 examinations, 353 (73 per cent.) were positive; in the third week, of 268, 178 (60 per cent.) were positive; in the fourth week, of 103, 39 (38 per cent.) were positive; and after the fourth week, of 58 examinations, exclusive of relapses, 15 (26 per cent.) were positive. Several observers have recovered the bacillus from the blood in approximately 100 per cent. of cases. They compel the conclusion that the typhoid bacillus is present in the blood in every case of typhoid fever, and that failure to recover it is due to error of technique. The diminishing percentages of the later weeks of the disease points to diminishing numbers of bacilli, whose presence imperfect methods have failed to reveal. The bacilli seem to disappear about the time the temperature falls. Typhoid fever can no longer be regarded simply as an infection of the body with typhoid bacilli. The bacilli may be present in the body and actively growing, yet the patient may not have typhoid fever. It has been shown that the bacillus may live and multiply in the intestine of healthy persons. The patient is infested and a menace to others, but is not infected. Cases of biliary infection and cystitis are recorded without any history of typhoid fever. To produce typhoid fever it seems necessary that the bacillus must not only be present in the body and growing, but that it should be in a situation whence it has free access to the blood. The bacillaemia does not constitute a true septicaemia, but represents an overflow of bacilli from the lymphopoietic organs. In the earlier stages the bacillus invades the blood in greatest number. Later, as the disease is approaching a favourable termination, the diminution of bacilli is simply an index of less active development in the lymphatics and spleen. The bacillus is found equally in the blood, but not with the same persistence, in the mild as in the severe cases.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

230. **Gastric Digestion.**

THE physiology of gastric digestion has in recent years been successfully investigated by Pawlow and other physiologists, but much remains yet to be learned of the various processes. O. Cohnheim reports in the *Muench. med. Woch.* of December 24th, 1907, some results which he obtained in continuing his observations on dogs in whom he produced a duodenal fistula. He had previously, in working with Tobler, found that it was necessary to inject downwards into the duodenum hydrochloric acid or gastric digestion products, in order to stimulate the stomach correctly to do its work. First he describes his observations on normal digestion. A dog received 50 grams of meat cut up in coarse pieces. After from two to three minutes, secretion of pancreatic juice and bile was seen. The fistula was placed immediately opposite the openings of the bile duct and upper pancreatic duct. From the fistula a yellow alkaline secretion issued. This secretion lasted for from ten or fifteen minutes, but before the period ended, the gastric contents were passed out through the fistula. This could be recognized immediately, for apart from possessing an acid reaction and being of a different colour, the contents were squirted out by the powerful pyloric muscle. At first these emissions were irregular and varied in size. After about fifteen minutes they became regular and the stomach continued for a considerable time to shoot out a fraction of its contents every fifteen to twenty seconds. The quantity at each emission, when the food taken in was as described, was about 1 c.cm. After from forty to fifty minutes, if no acid was injected into the duodenum, slimy portions of undigested meat appeared. This is not a normal condition. It was found necessary to introduce an acid fluid into the duodenum, and the fluid which has been expelled from the stomach during this period of digestion, which can be collected at a previous experiment, corresponds most nearly to the normal conditions. If one injects acid alone, one obtains in reply pancreatic secretion, but the injection of gastric contents, that is, the products of digestion, is followed by a secretion of bile as well. The effect of injecting the fluid was to close the pyloric muscle, but the closure only lasted for a short time, so that one had to keep on injecting at short intervals. When this was carried out, only small quantities of undigested or partly digested meat were passed through the pylorus, and in the end over 90 per cent. of the meat was completely peptonized. At the end of one and a half hours the emissions became less and irregular, and the last remnants appeared after a considerable time. As the process was drawing to a close, pancreatic juice and bile were again mixed with the gastric products, and the resultant was an alkaline secretion containing quantities of mucus. The last named was probably derived from the antrum of the pylorus. Saliva was also found in the fluid passed at the end of the process. When meat was minced up finely, instead of about 90 per cent. of the nitrogen being dissolved, only about 60 per cent. was dissolved. The amount of nitrogen absorbed from the stomach, after taken in minced meat, was between 0 and 4 per cent., while after the meat was swallowed in cubes it was 17 per cent. It thus appears that finely-divided food requires less work of the stomach, and therefore more from the intestines, than coarsely-cut food. The author next turned his attention to bread digestion. At first a large quantity of pancreatic juice was secreted, and then considerable quantities of bile. He is not sure whether this is due to the stimulation of albumoses or to some other cause. This secretion continued, so that the collected fluid, as contrasted with meat digestion, was alkaline. Bread was not so completely digested in the stomach as meat. The quantity of secretion put out in bread digestion was large, 21 grams of bread giving rise to a flow of 230 grams of secretion. This contains two and a half times as much nitrogen as the bread itself, and for this reason the author found it impossible at present to measure the quantity of absorption. With meat digestion products free hydrochloric acid is always absent, while in bread digestion products it is present. When water or other fluid was given during the period when the stomach was still full, the fluid ran past the digesting material and flowed out through the pylorus almost unaltered at once. Cohnheim further describes the effect of some disturbances of digestion, including the effect of a stimulus, such as a full bladder, on the process. He noticed in one experiment that for some reason, not at first clear to him, no fluid issued from the stomach. On letting the dog loose, he immediately urinated, and it was then seen that the gastric function proceeded normally. He is of opinion that certain pathological processes may well be studied by means of the duodenal fistula method.

231. **Chantemesse's Ophthalmo-reaction in the Diagnosis of Typhoid.**

BRAGA (*Rif. Med.*, February 17th, 1908), following on the lines of Calmette's reaction in tubercle, has been experimenting with Chantemesse's test in typhoid. In 5 cases of undoubted typhoid (confirmed by positive Widal reaction) the Chantemesse test caused marked conjunctival injection, lacrymation, and in some cases oedema of the lower lid, lasting forty-five days. In 25 non-typhoid cases (mostly febrile subjects) the test caused slight injection, which never lasted more than twenty-four hours, and usually disappeared between six and twelve hours after instillation. In a second series the toxin was prepared in a somewhat different manner (resembling the so-called endotoxin of Besredka), and with this toxin all the typhoids (14) reacted positively, but to a less degree than with the Chantemesse toxins, whilst the non-typhoids only showed a slight hyperaemia, always limited to the palpebral conjunctiva, no lacrymation, no exudation, and hardly any pain. In a third series, where the toxin prepared after the second method was subjected to 70° C. for three hours, the results were similar, but the reaction in typhoids much weaker, whilst the non-typhoids gave no reaction at all. Up to the present no attempts have been made to see whether by this test one can distinguish between typhoid and the paratyphoid infections. From the diagnostic point of view, it seems as if the weakened toxin used in the third series would be of more value, inasmuch as it gives no reaction in the non-typhoid cases.

232. **Acute Glandular Fever.**

JONES (*Amer. Journ. of Med. Sci.*, March, 1908), from investigation of acute glandular fever as a common malady, claims for it a place among the acute infectious fevers. The disease is characterized by fever, slight faucial injection, and swelling and tenderness of the cervical glands, especially of those behind the sterno-mastoid muscles. The fever is of short duration, but the glandular swellings may persist for two or three weeks, and convalescence is uninterrupted by complications. After an incubation period of from five to seven days, the onset is usually sudden, with headache, abdominal pains, vomiting, anorexia, etc., and on the second to the fifth day the enlarged glands appear, varying in size from a pea to a pigeon's egg, tender, but without any superficial redness. The disease occurs endemically and sporadically, especially among children. In 2 cases reported the diagnosis was originally considered to be enteric fever, and the disease presents many of the characteristics of influenza, and is thought by some to be an aberrant form, but the highly contagious nature of influenza and pandemic invasions are absent. The author regards acute glandular fever as a very common disease, frequently unrecognized, and often mistaken for aberrant forms of typhoid or influenza, and he urges its recognition more prominently among the acute infectious diseases.

SURGERY.

233. **Serum-diagnosis of Syphilis.**

A. WASSERMANN (*Berl. klin. Woch.*, December 16th, 1907) discusses the present situation with regard to the serum-diagnosis of syphilis. In co-operation with Neisser and Bruck he described a method of applying Bordet-Gengou's method of complement fixation for practical purposes. The opinions which have been expressed with regard to the value of this new means of diagnosis have not been unanimous. Among those who have expressed themselves as opposed to the new teaching, Weil and Braun are especially to be mentioned. These authors consider that the method cannot be employed as a diagnostic means.

Wassermann states that he cannot find sufficient basis in their arguments to enter into a detailed contradiction of their assertions, and claims that a practical point such as the one under discussion can never be settled by polemic. Turning to his researches, he states that they found that the serum of syphilitic monkeys gave a specific reaction with extracts of undoubted syphilitic organs. Neisser and Bruck continued the work on human beings in Breslau, while he continued the research with others in Berlin. He found that the cerebro-spinal fluid, gained by lumbar puncture, of cases of general paralysis of the insane, gave the reaction in 80 per cent. Others have been able to confirm this. It thus became necessary to test the reaction in a number of cases, including clinically uncertain cases, and to investigate those cases in which the reaction was positive. This was done by Citron, who not only observed the course of the cases when the patients were treated by antisyphilitic remedies, but also studied the pathological changes whenever any of the patients died. It appears that 156 non-syphilitics were tested, and all gave negative reactions; 108 patients suffering from syphilis, or suspected to be suffering from this disease, were also tested. Of these, 80 (that is, 74 per cent.) reacted. Further, 79 of the patients suffering from general paralysis and tabes dorsalis reacted. To-day Wassermann can collect the details of about 1,000 patients who have been subjected to the test, and claims that the results are as favourable as he anticipated. In searching among the records of the published cases, he finds that in every case in which the method of applying the test has been accurately followed out the diagnostic value is most apparent. With regard to the true interpretation of the reaction, he claims that considerable difference of opinion may exist without causing the practical value of the reaction to become lessened. Some authors have questioned the specificity of the antigen and of the antibody. (The reader will remember that the reaction was first described as being an instance of deflection of the complement of the haemolytic series—that is, normal complement, specific immune substance, obtained by the introduction of the blood cells of one animal into an animal of another species, and the blood cells used in the immunizing. Bordet and Gengou found that when an antigen—that is, a true toxin which is capable of combining chemically with a part of the protoplasm of the cells, and which when introduced into the living body tends to call forth the production of antibodies—and the corresponding antibody is added to the immune substance, the complement which is added after is no longer capable of entering into combination with the immune body, and therefore no haemolysis or solution of the blood cells takes place.) With regard to the specificity of the antibody, he points out that in all the tests to which the reaction has been put normal serum did not give the reaction, while the serum of syphilitics gave it in a very large percentage of all cases. Next he turns his attention to the supposed antigen. In the test he uses extracts of the livers of congenital syphilitic infants. The livers are supposed to contain the syphilitic virus. When an alcoholic extract of syphilitic livers is prepared, it is found that only the substances which are soluble in alcohol are utilizable for the reaction. This appears to indicate that since other organs yield the same result the active substance is of a lipoid nature. It was therefore of interest to ascertain how lecithin behaved. Lecithin gives a similar reaction. The subject has been followed still further, with the result that Wassermann champions the idea that the extract of liver depends on this lipoidal substance for the accomplishment of the reaction. In concluding, he emphasizes his opinion that the sero-reaction is a valuable reliable method of diagnosis of syphilis. In the *Berl. klin. Woch.* (December 27th, 1907) Wassermann supplements and strengthens his arguments on this subject, and G. Meier deals with the experiments and tests he has carried out. While the latter realizes that the reaction can only be carried out by an experienced laboratory worker, he claims that the reaction is specific for syphilis and is of diagnostic value.

234. The Question of the Sensibility of the Abdominal Organs.

HALM (*Zentralbl. für Chir.*, No. 11, 1908) supports the view held by Lennander that the abdominal organs in man are not sensitive in regard to pain, pressure, warmth, and cold; and that the pain associated with disease of one or more of these structures is due to irritation of the parietal peritoneum. On the other hand, Kast and Meltzer have been led by the results of laboratory research to the conclusions that the abdominal viscera are really sensitive under both normal and pathological conditions, and that the insensibility noted in surgical work and in the operation room is caused by the general action of injected cocaine. The author of this paper, though not questioning the correctness of these experiments on animals, still supports Lennander's view of the insensibility of the abdominal organs in the human subject. A case is referred to in which, after the use of a few drops of Billroth's mixture for suppressing pain during the incision of the skin, the stomach, intestine, liver and gall bladder were found to be quite insensible to both instrumental and digital contact during a prolonged gastro-enterostomy on an intelligent man aged 40. The slightest traction on the stomach or intestine, and pressure on the parietal peritoneum at once caused severe pain. This instance, together with others derived from prolonged surgical investigation, have convinced the author that the abdominal organs in man are insensitive to mechanical and also to thermal irritation, and are not susceptible to pain.

235. Muscle Anastomosis in the Removal of Mammary Cancer.

DAWBARN (*Ann. of Surg.*, No. 3, 1908), in the course of a paper on the technique of breast cancer removals, describes a method which, it is stated, facilitates flexion and adduction after resection of the pectoral muscles. After both these muscles have been removed the patient, it is pointed out, has no other means than the action of the anterior fibres of the deltoid for the advancement and adduction of the arm. If the point of origin of this part of the deltoid be considered, it becomes obvious that if this portion of the muscle sprang from the inner rather than the outer half of the clavicle, its power to produce such motion would be greatly increased. Bearing this in mind, the author has for several years past adopted a plan of muscle-anastomosis. This consists in detachment at its origin of an inch or more of the anterior fibres of the deltoid, the muscle being split in a direction parallel to its long axis for a distance not very long but sufficient to permit the detached portion to be sutured to a stump of corresponding width of the adjacent pectoralis major. This resource is contraindicated if the cancer has extended to the muscles involved in such contemplated anastomosis, but this seldom occurs. The stump of the pectoralis major may be left an inch long in order to permit the ready application of muscle to muscle. On the other hand, the deltoid is to be dissected up to a level as close as possible to the clavicle. The upper cut margin of the deltoid is sutured to the stump of the pectoral muscle by three catgut sutures. As a rule, it is easy to avoid injury to the cephalic vein, the deltoid slip being fashioned so as to cross obliquely in front of this vessel. So far as the author has been able to determine, the portion of the deltoid entering into the anastomosis is not deprived of its innervation, nor does it undergo atrophy. It should not, however, be split down over a longer extent than is necessary.

OBSTETRICS.

236. Treatment of Face Presentations.

RUDAUX (*La Clin.*, April 3rd, 1908) considers that in face presentation the practitioner must learn how to wait, as much harm is done by interfering with Nature. These presentations, which do not include brow presentations, are diagnosed by palpation and vaginal examination. If the contractions allow it, the depression of the neck may be felt between the smooth surface of the back and the round hard head. The examination per vaginam permits the face and features to be distinguished and the position made out. The chin can seldom be definitely recognized, but its position is indicated by the nose, which does not become oedematous, and of which the nostrils are always distinct, and point towards the chin. If these orifices point to the right the presentation is a right one; if at the same time they are directed towards the sacro-iliac symphysis the presentation is to the right and posterior. Face presentations occur once in every 250 labours. The author advises that no attempt be made to change the presentation into a vertex, but that the face presentation be accepted both before and after the head is engaged. The course of labour is slow; very few vaginal examinations should be made, but it is well to auscultate often, so as to recognize early any signs of distress on the part of the fetus. When the chin is not directly under the symphysis the movement of flexion should be retarded, and great care should be taken of the perineum at the time of expulsion. When the head is not engaged in the brim of the pelvis and the membranes are unruptured,

internal version can be performed. If the membranes have been ruptured for a long time and there is marked contraction of the pelvis, only symphysiotomy or Gigli's operation will save the child. When, however, the head is engaged the forceps must be applied, but there are cases where the chin rotates backwards and there is so much impaction that the forceps cannot be put on; if the child is to be extracted alive the pelvis must be enlarged. If the child is dead or its life is hopelessly compromised, the use of the basiotribe is indicated. In applying the forceps special care must be exercised, and a finger should be passed into the mouth to ascertain whether extension of the head is complete, or to complete it by pressure on the roof of the mouth. Delivery is not possible unless the chin lies under or near the symphysis pubis. It is, therefore, necessary to assist rotation to complete itself before exercising traction downwards. After the chin has been brought out from under the pubic arch, it is time to promote flexion of the head by raising the handles of the forceps. This must be done gently, because the forceps only hold the head by its parietal eminences and the grip is easily displaced. The usual precautions against perineal lacerations must be adopted.

237. **Prolonged First Stage in Primiparae.**

DAS (*Journ. Obstet. and Gyn.*, March, 1908) reports two cases of primiparae in which the first stage of labour was unduly prolonged until he ruptured the membranes, after which rapid progress was made. In both cases the membranes were unusually tough and hard, and the forewaters were scanty, the membranes did not bulge, but became tense with the occurrence of the pains. In the first case, before the rupture the os admitted three fingers with difficulty, it was fully dilated three hours later. In the second it took the os sixteen hours to dilate to two fingers' breadth, and less than an hour for the remainder of the first stage and the whole of the second stage to be accomplished. The writer has encountered many cases of a similar kind, always in primiparae. In some of his earlier cases, thinking the delay to be due to adhesion of the membranes, he tried detachment of the membranes from the lower uterine segment. This, however had no effect until he ruptured the membranes, which were not doing their work. On a close examination of the secundines the placenta is found to have a low insertion, and this condition is apparently the chief factor in causing the delay by not allowing the lower uterine segment to retract past the membranes, which are applied closely over the fetal head. When the following conditions are present, rupturing the membranes will expedite labour: Prolonged first stage, presenting head low in the pelvis, primipara, os soft, dilatable, and generally thin, very little forewaters, membranes tough and not bulging through during the pains. Textbooks do not call sufficient attention to this point; on the other hand, the teaching that the membranes should be preserved as long as possible contributes towards longer delay and more suffering. These are the cases where premature rupture of the membranes will help dilatation and expedite labour.

GYNAECOLOGY.

238. **Pyosalpinx Emptying into Uterine Cavity.**

CADENAT (*Bull. et Mém. de la Soc. Anat. de Paris*, July, 1907) reports a case of a salpingitis discharging into the uterus through the ostium uterinum, the specimen being exhibited before a society. It threw light on the disputed question of the ordinary course of a pyosalpinx, or collection of pus in the tubal canal closed or unclosed. The specimen consisted of a fibroid uterus removed with the left tube. The fibromyoma occupied the wall of the uterus in its right and anterior portion. On opening the uterine cavity greenish pus was seen at the site of the uterine orifice of the canal of the left tube. The tube was pressed and more pus issued from the orifice. No pus had escaped before the operation, and Cadenat took pains to note that in this specimen the uterine orifice of the tubal canal was so wide as to be visible to the naked eye. Cadenat admits that little trust can be placed in cases of reported emptying of the Fallopian tube based on purely clinical evidence. Jayle relates a case which showed up a fallacy. A woman underwent curetting for uterine discharge. A swelling of the appendages was definable when the curette was applied. The usual gauze plug was applied; when it was removed pus escaped, and the swelling was found to be smaller. Abdominal section was performed, and nothing could be detected save serous peritonitis traced to purely ovarian lesions. Hence Cadenat remains sceptical about the discharge of pus in purulent salpingitis and pyosalpinx into the uterine cavity; it is apparently a most exceptional condition. In Jayle's case the diminution of the pelvic swelling did not represent the emptying of a dilated and obstructed Fallopian tube; it was the subsidence of inflammatory engorgement in the ovary brought about by rest after the application of the curette.

239. **Tetanus in Gynaecology.**

HOWARD TAYLOR (*Amer. Journ. Obstet.*, April, 1908) performed supravaginal hysterectomy on a negress, aged 20, for a fibromyoma which was about 5 in. in diameter. The operation was simple and convalescence uncomplicated. The patient was discharged on the sixteenth day. On the forty-second day she noticed some pain in the jaw, and felt difficulty in opening her mouth. Tonic contractions of the muscles, especially in the back, followed, and the patient entered another hospital on the forty-third day. The disease became very acute, and she died on the forty-ninth day after the hysterectomy. The abdominal cicatrix and the pelvic organs around the seat of operation showed no signs of infection. The tetanus bacillus was not found in the brain, spinal cord, or elsewhere. Taylor states that there has never been a case of tetanus in the gynaecological wards of the Roosevelt Hospital, where he operated on the case in question, nor any in the surgical wards save such as were admitted with the disease already developed or as suffered from it after admission, but as the clear result of a definite injury. He suspects, however, that infection occurred at the time of operation in his case. Perhaps the catgut must bear the blame; germs may have existed in the inner parts of one piece and have been liberated after its disintegration. Much doubt was expressed on this point in a discussion on Taylor's case. The plain catgut employed by Taylor had been sterilized in alcohol and ether holding tartaric acid and bichloride of mercury in solution, the chromic catgut had been sterilized by repeated boiling in alcohol. Boldt remarked that he had lost by tetanus one case of hysterectomy for fibroid and one ovariotomy (a large colloid cystoma); in both instances the complication developed on the twelfth day. No cultures were made in the first case; in the second it was clear that the catgut was not to blame, as it was very carefully examined. Jewett reported a case where tetanus followed within a few days a plastic operation; Martin published almost at the same time an example of tetanus after an extensive plastic gynaecological operation; the catgut was suspected, but sutures from the same lot were being used at the same time on several other cases with no ill results. Mice inoculated with the uterine and vaginal secretion developed tetanus within twelve hours. Brown spoke about a singular epidemic of tetanus or tetany in one of the services of a woman's hospital. Four cases occurred, each developing during the second or third week after operation; three recovered completely after running a certain course, the fourth ran the same course and the tetanic symptoms subsided, but some days later death from pulmonary embolism occurred. This outbreak took place twelve years ago, and no more cases of tetanus have been noted in the same hospital. Brettauer considered that it was a mistake to be so ready to blame the catgut; infection may come from other sources. He described a case of criminal abortion where the patient was afterwards sent into hospital with a temperature up to 105°; the curette was used, and it fell to normal. On the tenth day, when she seemed quite well, tetanus set in and proved fatal within four days. Jarman spoke of a case of tetanus where the patient in the next bed suffered from a kind of sympathetic stiffness of the jaws which did not develop any further. None of the speakers could find any special cause of tetanus in gynaecological practice.

THERAPEUTICS.

240. **Mother's and Cow's Milk for Infants.**

IN an article on infant feeding, F. Hueppe (*Deut. med. Wock.*, September 26th, 1907) begins by stating that the infant mortality in Germany stands at 23.5 per cent., the so-called better classes yielding a mortality of 8 9 per cent., the middle classes 17.3 per cent., and the working classes 30.5 per cent. The proportion between the breast-fed and artificially-fed infants in the large hospitals is as 3 to 7, while the mortality among the latter is fifteen times that of the former. The mortality among the infants is lowest in mother-fed infants, slightly higher in wet-nurse-fed infants, much higher in infants fed on animal milk, and

highest of all in infants fed on animal milk and foods. The death-rate is higher among illegitimate than among legitimate infants. He says that it can readily be understood why the foods cause such an increase in the death-rate, since the infant's organism cannot deal with constituents other than those of milk. With regard to the differences between mother's milk and cow's milk, the matter is not easily settled. As far as chemical differences are concerned, these are so slight that they can be removed by the addition of water and sugar. One difficulty which had to be overcome was that of excluding micro-organisms which produced changes in the milk, and the methods of Soxhlet and of Pasteur appear to have solved these. The former depends on the careful heating to boiling of small quantities of milk at a time. The milk thus sterilized is kept from being reinfected in the bottles in which it was sterilized. Hueppe, however, considers that simple sterilization does not necessarily include the destruction of resistant spores, and points out further that these bacteria can spoil the milk by their peptonizing action on milk albumen and casein. Next he deals with the substances which are destroyed by boiling milk. These substances act as ferments, and may be bactericidal or antitoxic. They must therefore be regarded as protective substances for the infant. He therefore raises the question whether it is a matter of importance if these substances in milk of an animal of a different species are destroyed or not, and how far feeding with this milk differs from feeding with the milk of the mother. He claims in the first place to have proved that boiled mother's milk is less beneficial than unboiled mother's milk, while it is still better than either boiled or unboiled cow's milk. He points out that all the food which human beings take in is altered from dead material into living substance by the action of the specific activity of the various tissues. Dead albumen, no matter what its origin is, is worked up by the organism into an active, specific albumen. In fetal life, however, the organism can only deal with genuine albumen, which is derived from the mother. Shortly after the birth a serum-like, haematogenous fluid called colostrum is supplied to the infant from the mother's breast. Ordinary milk develops a few days later. This appears to be adapted to the needs of the infantile digestive organs. It has been shown that albumen of the same species and also of a different species can be digested within a few days after birth. Cow's milk contains more albumen than mother's milk, and this form of albumen is more difficult for the infant to digest. More residue is left, and it generally requires some time before a full assimilation of foreign albumen can be carried out. There can be no doubt that children who are brought up on mother's milk or wet nurse's milk are stronger and more resistant than artificially-fed children. He quotes figures to prove this. After discussing the question of women nursing their babies, he returns to the question of boiled against unboiled cow's milk as a substitute. That careful preparation of cow's milk can reduce infantile mortality is shown by the figures obtained by various societies for feeding infants. It is of importance that the milk which is sterilized should contain as few micro-organisms before as possible. This enables one to apply the heat, which up to the present is the only available method of sterilizing, for a very short time. When infants are fed with milk sterilized in such a way, he claims that the results are better than when fed with unboiled milk. He denies that it has been proved that boiled milk is answerable for the appearance of Barlow's disease. He considers, on the other hand, that modern investigation has shown that the introduction of foreign albumen may give rise to exanthemata, haemorrhages, jaundice, etc., but when the milk has been boiled, the substances which could produce these symptoms have been destroyed. After dealing with several side-issues in detail, he comes to the conclusion that although we recognize that natural feeding is the ideal method, the fact that social conditions are tending to increase artificial feeding compels us to do all we can to improve the methods of artificial feeding. He regards the use of boiled cow's milk, if the heat is properly applied, as the best substitute for mother's milk.

241. Saiodine in the Treatment of Syphilis.

Benassi (*Gazz. degli Osped.*, March 1st, 1908) has been testing the value of saiodine in the treatment of secondary and tertiary syphilitic lesions. It was tried in about 50 cases, but it was only possible to watch the effect for any length of time in 22 cases (8 tertiary and 14 secondary). The drug is a compound of iodine (26 per cent.) and calcium (4.1 per cent.), and has the formula $(C_{22}H_{12}O_2I)_2Ca$. It is an absolutely odourless and tasteless powder, and insoluble in water. The usual dose is 1 grain, given in a cachet. The author found saiodine a good substitute for potassium iodide and the alkaline iodides. It acts quite as well, and in some cases even better, than iodide of potassium, and can be tolerated in larger doses; no iodism was observed even in patients suffering from gastric disorder and under large doses. It may be used where one usually prescribes the iodide. It is best tolerated when given at or just after a meal.

PATHOLOGY.

242. Secondary Epithelioma of the Brain.

Klippel and Renaud (*Rev. de Méd.*, January 10th, 1907) quote the case of a woman, aged 45, who had come under their notice, and was found at the autopsy to be suffering from secondary epithelioma of the brain, the primary growth having been in the breast, and having been removed by operation two years before the patient again came under observation. Her only symptoms were persistent and severe headache, slight ptosis, and high cerebro-spinal pressure, but she suddenly became comatose and died. *Post mortem*, multiple tumours were found scattered about the brain. Each was irregularly rounded, the size of a walnut, or somewhat smaller and slate-coloured, with some spots of black pigmentation. There was no distinct line of demarcation between brain tissue and growth, and all the tumours were histologically identical. Under the low power of the microscope, the tumours are seen to be composed of a stroma, in whose meshes run blood vessels. The stroma enclosed collections of epithelial cells. These cells were round or polygonal; their nuclei, round or oval, took the ordinary stains well, and their protoplasm stained a clear rose colour with eosin. The cell masses gave the impression of glandular tubes whose walls are formed of several layers of cells, but no lumen and no lining membrane could be discovered. In places the stroma is entirely formed of thick fibrous tissue. The disproportion between the connective and epithelial tissues was striking. In other places the bundles of stroma are fine and fibrillar, composed of loose tissue. Under the high power the stroma is seen to differ in different places, displaying all the intermediate stages from young tissue rich in cells to well-developed fibrous tissue. Only at a distance of several centimetres from the growth can normal brain tissue be recognized. The nerve cells are seen in all stages of degeneration, until they finally disappear completely. The small nerve cells and the neuroglia cells retain their form and vitality longer. The blood vessels remain intact, but they contain an unusually large number of mononuclear leucocytes. Some capillaries, more numerous near the tumour, have an enlarged lumen filled with small round cells, and near the tumour certain capillaries show an epithelial nodule in their lumen. These latter show that the tumour has grown partly by an embolic process. At the very edge of an epithelial growth the cerebral tissue which is left sends between the epithelial tubes prolongations, which become invisibly continuous with the tissues of the stroma of the tumour. At these places the brain tissue appears as a slightly fibrillar substance, in which are found granular bodies, cell débris, nerve fibres, and round cells; some other cells, too, are found, which are about the size of a mononuclear leucocyte. Their nucleus stains readily and deeply, and their protoplasm stains with eosin a dark red. The authors consider these to be connective tissue cells in a state of transition. The epithelial foci have grown by replacing gradually the brain tissue. In the cases of secondary growths in liver or muscle, the connective tissue of the organ forms the stroma of the new growth. Ziegler says that pure epitheliomata have no stroma. As there is no connective tissue in the brain, the authors discuss the source of the stroma of the growths under consideration. They propose four likely sources—the nerve or neuroglia elements, the epithelial cells, the walls of the blood vessels, and the blood itself. The first three sources may be rejected as unlikely, and the authors think that the blood is the source of the stroma of the growths, and that the stroma is formed from the blood in a manner analogous to the organizing of a thrombus. The tumours described appear to the authors very like embryonic glands, in which the cells never become properly differentiated. The analogy is carried further if one believes, with the authors, that the epithelial elements form a soluble secretion, which impregnates the tissues of the organism and produces the many functional troubles which accompany cancer.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

243. Paratyphoid and Paratyphoid Infections.

From an analysis of the work of Netter and Ribadeau-Dumas, of Chevrel, Sacquépée, Bensaude and Rivet and Leclercq, the following are the main facts known of these infections (*Gaz. Méd. Belge*, August 8th, 1907). Paratyphoid was first recognized as a distinct clinical entity in 1896. Paratyphoid bacilli are distinguished from colon bacilli by the following characters: they do not ferment lactose, or, at least, to a very slight extent, and no indol reaction is produced; they are more motile, and possess from eight to twelve cilia each. From typhoid bacilli they differ inasmuch as they give rise to fermentation of certain hydrocarbons, such as glucose, maltose, dextrose, etc. Schotmuller and Kayser distinguish two principal varieties of paratyphoid bacilli. First, the paratyphoid A. of Brion and Kaiser, these are much more closely related to the typhoid bacilli than are the next. Secondly, the paratyphoid B. of Conradi-Drigalsky. Both these types are more nearly related to the typhoid bacilli than to the bacilli of Escherich, or to the colon bacilli. Gaertner's bacillus, which is now included in the class of paratyphoid bacilli, was discovered a long time before the paratyphoid bacilli A. and B. were. To complete the list of paratyphoid organisms one may add the bacillus of psittacosis. In the diagnosis of paratyphoid infections the serum test is had recourse to, and according to the particular organism which is agglutinated by the patient's serum, so one concludes that the infection is due to this particular organism. There are, however, certain difficulties in this serum test, as some serums agglutinate several forms of the bacilli at once, but by certain methods of procedure this difficulty can be overcome. Netter found that in 37 patients suffering from a "typhoid" condition, 29 were the result of infection with paratyphoid bacilli; the organism of this group most frequently found being paratyphoid A. This was found in 22 cases, then the bacillus of Gaertner, and, lastly, paratyphoid B. The etiology of paratyphoid infections resembles very much that of typhoid fever. Water is the chief source of infection, and overwork and fatigue play a secondary rôle in the etiology. Infected meat and oysters are also said to be channels of infection. The influence of season seems more marked in the paratyphoid infections than in typhoid fever itself. Nine-tenths of the cases occur from April to October. Young adults from 15 to 25 years of age are particularly susceptible to infection. Climatic influences play no important part in paratyphoid. When due to Gaertner's bacillus paratyphoid presents a most varied symptomatology, and mistakes in diagnosis are therefore, as might be imagined, very frequent, and the oscillations of temperature frequently simulate more or less closely intermittent fever. The prognosis of these infections is good; death rarely occurs; intestinal haemorrhages and perforations do not occur, and of about 450 cases the mortality was only 1.8 per cent. From typhoid fever it is often quite impossible to distinguish paratyphoid infection, except by the serum reaction. Leclercq, however, states that a more sudden onset, an irregular temperature curve, and a more rapid progress are in favour of paratyphoid infection. Further, at the onset of paratyphoid the predominating symptoms are abdominal (intense pains all over the abdomen); prostration occurs earlier, and the tongue (instead of being dry and brown, as in typhoid fever) is generally moist and simply coated. None of the symptoms, however, of paratyphoid are pathognomonic, and an exact diagnosis can only be arrived at by the serum test. Treatment is the same as that for infectious states generally. Netter has pointed out the good effects following the administration of collargol. For prophylaxis the same measures are to be carried out as in the case of typhoid fever.

244. Hypertrophic Cirrhosis of the Liver of Uricaemic Origin.

Baccelli (*Gazz. degli Osped.*, February 23rd, 1908) describes a form of hypertrophic cirrhosis of the liver which he says is due to uric acid. In this type of enlargement the liver is enlarged, very hard, but regular in form, the edge uniformly resistant and rounded; no irregularities, depressions, or elevations can be felt on the surface. On deep inspiration, when a larger surface of the liver can be felt, it is found to offer a somewhat lower degree of resistance. The left lobe of the liver passes the median line, is hard, and not reduced in volume or in extension. There is no jaundice, ascites, nor any increase in the size of the abdominal veins, whether portal or caval. Beyond a feeling of weight over the right hypochondrium there is no actual pain. The liver may reach down to the iliac crest when the patient is in the erect position. The haemorrhoidal veins become somewhat turgid. The edge of the liver in this type of cirrhosis is never sharp, but rounded. Whenever there is any unwonted influx of blood into such a liver sharp pain may disturb the usual serenity of the disease. Other manifestations of the uric acid diathesis are likely to be present, for example, skin irritations, pharnyngitis, bronchial catarrhs, etc. The author specially mentions a follicular inflammation in the pylorus, set up by too acid chyme. The author believes that uric acid is produced and accumulated in large quantities in the liver, and that just as uric acid sets up irritation in other parts so it may do in the liver also. The pretibial oedema which is associated with organic heart disease may be due to a mild periostitis excited by uric acid deposits. Perimalleolar oedema, especially on the left side, is more suspicious of heart trouble. In treatment one should aim at changing the uric acid into the more soluable urea, hence inhalations of oxygen, sterilized milk containing iodide of potassium (1 gram ad ½ litre), certain thermo-mineral waters (Chiancino, Val de Nievole) are advised.

245. Collateral Effects of Mental Exertion.

A. Graziani (*Archives Italiennes de Biologie*, vol. xlviii, p. 250) has made some interesting experiments on the influence of mental exertion upon auditory, visual, and tactile sensibility. On certain days of the week he and two of his colleagues each had to deliver a lecture on subjects demanding an equal amount of mental concentration. The lectures were delivered at the same time and were of the same length; they commenced at the termination of the luncheon interval, and were preceded by two hours' abstinence from all forms of mental exertion. The sense organs of the three lecturers were tested immediately before the lectures, immediately after, and again after the interval of an hour's rest. Similar results were obtained with all three persons. There was an augmentation of the auditory sense immediately after the period of mental exertion; but this increase was only of short duration, and at the end of the hour's repose the sense of hearing was found to be slightly less acute than when tested before the commencement of the lecture. Thus, the average distance at which one of the experimental subjects could hear the tick of a watch was 2.67 metres before lecturing, 3.16 at the end of the lectures, and 2.24 an hour subsequently. Visual sensibility exhibited a corresponding rise and fall, the average distance at which a test object could be read by the same person being 1.40 metres before lecturing, 1.52 at the end of the lectures, and 1.30 an hour subsequently. When the tactile sensibility was tested, differences were observed; areas of the face showed an increased sensitiveness after lecturing, but no augmentation was found over regions of the hand. Observations were also made on the muscular strength, as tested by the dynamometer; these showed that muscular vigour had diminished after lecturing, but returned to the normal in the course of an hour. The author explains the increased activity of the sense organs after a period of mental exertion as due partly to increased vascularity and partly to psycho-physical stimulation of the nerve centres. The latter cause alone cannot be regarded as the complete explanation, since tactile sensibility of the hand was not increased; there was, however, an increased sensitiveness of the face, this being accounted for by the general hyperaemia of the regions supplied by the carotid arteries.

SURGERY.

246. Operation (Cardiolysis) in Mediastino-Pericardial Adhesions.

K. Urban (*Wien. med. Woch.*, February 22nd, 1908) considers that the more or less extensive agglutination of the pericardial layers, which is the usual result of pericarditis, has but little effect on the circulation. This is proved by the frequency with which this condition is found *post*

mortem without having given rise to symptoms during life. But when the inflammation spreads from the pericardium to the neighbouring parts, such as the parietal and mediastinal pleura, the consequences are serious. The result is indurative mediastino-pericarditis, with more or less extensive adhesion of the heart to the thoracic wall anteriorly, the diaphragm inferiorly, and the great vessels and vertebral column posteriorly. At each systole the thoracic wall anterior to the heart is forcibly retracted, and at each diastole propelled forwards. The extra work thrown on the heart at first is met by hypertrophy, but sooner or later the cardiac muscle degenerates, and all the symptoms of uncompensated heart disease follow. Nothing but symptomatic treatment was possible until Brauer, in 1902, proposed to free the heart from its adhesions by operation (cardiolysis). A soft pliable covering for the heart is substituted for the comparatively unyielding thoracic wall by excision of ribs. The operation has hitherto been performed in 11 cases (including the writer's) with uniformly encouraging results. Most surgeons have removed the costal periosteum, portions of the sternum, and even the intercostal muscles with the ribs. If after subperiosteal resection of the ribs the space between the heart and the posterior layer of the costal periosteum is found filled with a thick mass of cicatricial tissue the periosteum may be removed with the fibrous tissue. But if, as in the writer's case, no thick adhesions are found it is impossible to remove the posterior layer of the periosteum without wounding the pleura. As this is a serious complication, resection in this event should be entirely subperiosteal, especially as the probability of any extensive regeneration of ribs is remote. A stone mason, aged 22, was admitted to hospital on August 19th, 1907. Six years previously he had had rheumatic fever and had since had dyspnoea and cardiac palpitation. He was cyanosed. At both apices there was dullness and harsh respiration. There were systolic precordial retraction, especially at the apex, and diastolic collapse of the jugular veins. The cardiac dullness was increased and the apex beat was in the sixth interspace three finger-breadths outside the nipple line. The second pulmonary sound was reduplicated, and there was a loud systolic apical murmur. The pulse was 80, and irregular. The abdomen was prominent, and there were oedema of the abdominal walls, sacral region, legs, and feet: ascites, and enlargement of the liver and spleen. The urine was scanty, but otherwise normal. No improvement was obtained with rest, caffeine, and diuretics. On September 26th a curved incision, with the convexity to the right, was made from the sternal insertion of the cartilage of the left fourth rib to the intersection of the nipple line and the sixth left rib. Nearly 1 in. of the cartilages of the fourth, fifth, and sixth ribs, and 2 in. of the corresponding ribs were resected subperiosteally. The cardiac action was remarkably tumultuous and irregular, but when the sixth rib was removed the heart suddenly recoiled, evidently as the result of division of adhesions, and at once assumed a more forcible and regular rhythm. As there were no thick cicatricial masses, the object of the operation was attained and the wound was closed. The gap in the bony thorax was of the size of the palm of a hand. The pulse at first remained irregular and frequent, but on the third day, under digitalis, it fell to 76, and became regular. The patient was discharged on October 31st, when he felt well and could rapidly ascend stairs. The soft parts over the heart were retracted at each systole, but the bony thorax did not participate in these movements. The reduplication of the pulmonary second sound had disappeared, though the systolic murmur persisted. The diastolic collapse of the jugulars was scarcely indicated. The oedema and ascites had entirely disappeared. More recently, though the auscultatory signs were unaltered, percussion showed a marked diminution in the cardiac dullness. The apex beat was in the fifth space, two finger-breadths outside the nipple line. The *x* rays showed that the long diameter of the heart was 2 cm. and the oblique 3 cm. less than before the operation. Such complete disappearance of all congestive symptoms could have been obtained by no other treatment. The prognosis was rendered somewhat uncertain by the presence of bilateral infiltration of the apices, though no tubercle bacilli were found. The results of cardiolysis appear to be permanent. Thus in Brauer's case a man who was operated on in 1902 was, when seen in 1906, able to perform the arduous duties of foreman in a motor factory, in spite of being a heavy beer-drinker.

247. **Uretero-Vesical Neostomy.**

Paul Lutaud (*Arch. Gén. de Méd.*, July-September, 1907), in describing Ricard's new method of uretero-vesical neostomy in the treatment of uretero-vaginal and uretero-cervical fistulae, has published an exhaustive consideration of the operation of fixing the ureter to an artificial opening in the bladder, with its late results. His article of 104 pages is divided into five parts, comprising: (1) The treatment of fistula of the ureter before uretero-vesical neostomy. (2) The experimental phase of the operation. (3) Various methods: (*a*) With sutures; (*b*) with anastomotic buttons; (*c*) Ricard's. (4) Indications, namely: (*a*) In uretero-vaginal fistulae—details of 48 cases given; (*b*) in uretero-cervical fistulae—11 cases; (*c*) in surgical wounds of the ureter—20 cases; (*d*) after intentional resection of the ureter in cancer operations—19 cases; (*e*) in some other conditions. (5) Late results. Ricard's method is given in detail, and it is illustrated by several clear diagrams. There are five steps in the operation—namely, (1) Median laparotomy, and search for ureter after incision of preureteral peritoneum. (2) Liberation of ureter, its section, and turning up of its mucous membrane. The ureter is divided just above the fistula, or a little higher, if it is seen to be easy to connect it with the bladder. The vesical end is disregarded. The mucous membrane is turned up like a coat sleeve, and it is then fixed to the adventitia by two firm catgut sutures. (3) Opening of the bladder and passage of about 2 cm. of the ureter into this. No sound or forceps is passed into the bladder, which is opened with a bistoury for about 2 cm., the mucous opening only being just big enough to admit the ureter. The turned-up end of the ureter is thus free in the vesical cavity, like the clapper of a bell. (4) Circular interrupted vesico-ureteral sutures of catgut. These take all the coats of the bladder and ureter except the mucous membrane. Another circle of sutures is placed about 1 to 1½ cm. higher up the ureter. (5) Fixation of the bladder to the pelvic peritoneum, at such a point near enough to the rows of sutures as shall bring the bladder in front of the ureter and relax the latter. This is done with one thick catgut suture. Drainage by indiarubber tube. The points in favour of Ricard's method are as follows: It is rapid; once the ureter is freed, the operation lasts only a few minutes. No special instrument is required. It is applicable to all cases, whether secondary to preceding operations, or due to ureteral wounds, or even when divided in the course of extirpation of a cancerous uterus. The turning up of the mucous membrane ensures the immediate permeability of the ureter. The length of ureter introduced into the bladder prevents a possible stenosis through retraction of the duct. The fixation of the bladder to the peritoneum prevents dragging on the sutures. The non-passage of sound or catheter into bladder or ureter obviates any so-called infection or irritability. Of Ricard's two cases, in one permeability was perfect at the end of six months; at a year it was absent; later the ureter was found not to function constantly. In the other case the result was excellent at the end of six months. The author concludes by saying that uretero-vesical neostomy is quite a benign operation; that it assures the cure of ureteral fistulae; that in wounds of the ureter it is the intervention of choice; that in cases of advanced uterine cancer, however, it is to be rejected. The functional results, at a distance, are doubtful in the immense majority of cases, a state of things that can only be explained by a secondary lesion of the walls of the duct, by stenosis from connective tissue, or by slight ureteritis, for, in the majority of cases, these patients are well, and nothing attracts attention either on the side of the kidney or on that of the bladder. Lutaud considers that uretero-vesical neostomy is certainly the only treatment applicable to uretero-uterine fistulae, and that nephrectomy or ligature of the ureter should only be practised when this has failed.

OBSTETRICS.

248. **Separation of the Cord: Sequelae.**

Budaux (*La Clin.*, February 23th, 1908) discusses the complications and accidents which may occur after the ligation and separation of the umbilical cord. Haemorrhages take place soon after birth, and are commonly due to insufficiently tight ligation, to rupture or tears in the cord, or to respiratory trouble. Secondary haemorrhage supervenes when the cord separates. Local infection has become comparatively rare since the introduction of antiseptic methods; one of the most serious is moist gangrene of the cord, which may begin before the cord becomes detached, and which will delay its separation. Generally it involves the whole remaining portion of the cord, there is no desiccation, softening occurs, and there is a fetid odour and

discharge. A general infection can hardly be avoided, and the infected umbilicus may cause phlebitis, arteritis, or septicaemia. After the cord has separated, a small granuloma may be left, which is the source of a purulent secretion or a blood-stained discharge: it often lies very deep in the folds, and the only indication of its presence is the sanious fetid fluid and irritation of the margins of the umbilicus. The umbilical wound becomes infected with the ordinary bacteria of suppuration—staphylococcus, streptococcus, and the colon bacillus—any of which will cause a more or less severe local inflammation. When erysipelas occurs, it spreads very rapidly, and the constitutional disturbance, with vomiting, loss of appetite, diarrhoea, and fever, are acute. Recovery is rare. Tetanus neonatorum is another fatal complication, and urinary or faecal fistulae resulting from a patent Meckel's diverticulum require to be mentioned. The treatment is entirely prophylactic, calling for careful aseptic measures when the cord is ligatured and severed. Before being dressed the cord and neighbouring parts should be washed with alcohol and perchloride of mercury, then dried, and a pad of aseptic cotton-wool should be applied. These measures should be repeated daily, and an antiseptic dusting powder should be used as soon as the cord shows signs of separating; baths are only permissible after the cicatrix has completely healed. When haemorrhages occur the ligature requires attention, and an application of a solution of adrenalin to the end of the cord is often helpful. In cases of gangrene the cord should be enveloped in a thick compress saturated with alcohol, a pad of cotton-wool being placed over the abdomen and round the umbilicus to prevent it from coming into contact with the skin. Granulomata are cauterized with nitrate of silver, this method being preferable to removing them. In serious cases of general infection constitutional treatment must be vigorous, and should include such remedies as heat, lavage, alcohol, and subcutaneous injections of serums.

249. **Fibroma Molluscum of Pregnancy.**

DE LEE (*Surg., Gynec., and Obstet.*, February, 1908) reports an instance of this condition. The patient noticed in the seventh month that little warty excrescences were developing on her neck and shoulders; one of considerable size appeared on the right hand. These warts fell off before labour, excepting that which grew on the hand. That wart continued to grow, and finally became infected and had to be removed. In another case under De Lee's care a large wart appeared on the forehead, and dropped off two or three weeks after labour without treatment. His experience did not support Brickner's teaching that these warts do not disappear until four or five months after delivery. That writer, De Lee observed, first described this condition in the *American Journal of Obstetrics* for February, 1906, giving to it the name "fibroma molluscum gravidarum." There was some discussion when De Lee exhibited the wart removed from the hand. Its histology was disputed; it was very vascular, and not marked by a great proliferation of fibrous tissue as in typical fibroma molluscum. No doubt many different forms of cutaneous growths might appear during pregnancy. It was interesting, however, to find that the warts described by De Lee dropped off before or after the termination of pregnancy.

GYNAECOLOGY.

250. **Causes of Common Gynaecological Ailments.**

FOTHERGILL (*Journ. Obst. and Gyn.*, March, 1903) finds that the commonest gynaecological conditions are those which cause patients to complain of one or more symptoms, such as menorrhagia, metrorrhagia, leucorrhoea, backache, pelvic pain, pains in the ovarian regions or down the legs or under the heart. They reveal no definite physical signs, or show perhaps that the uterus is soft and large, unduly firm, small and hard, or large and hard. The organ may be found in a position of retroversion, or its axis may be bent backwards in retroflexion, or it may be anteverted or anteflexed. We have no accurate knowledge of the causation of these conditions. For many years they were attributed extensively to "displacement." This theory has, however, been supplanted to a considerable extent by the "infection theory," which supplies a new and attractive explanation for almost every condition in the range of minor gynaecology. The pessary has been superseded by the antiseptic douches and plug. Nevertheless, we constantly see patients with menorrhagia, leucorrhoea, backache, ovarian pain, etc., and with alteration in the size and consistence of the uterus, whose condition is not to be explained by the infective any more than by the mechanical hypothesis. Some of these cases are young girls, others young women, whose troubles date from marriage or a period of ill-health. In most of them there is nothing to suggest a source of infection, and cases in which parturition and abortion have been the starting point are equally free from any indication of infection. The uterus and appendages have a complicated life-history. The increase in muscular and vascular tissue relative to the uterine connective tissue doubtless begins some years before, and continues for some years after menstruation is established. During childhood the uterus contains about half as much muscle as it does connective tissue; during adolescence there is a relative increase of muscle. This relative overgrowth of muscle is accompanied by an increase in the vascular supply. Should the growth of the uterine blood vessels outpace for a time the growth of the muscle, hyperaemia is the result. Failure of the muscle to grow with the vessels is probably the true pathology of menorrhagia at and soon after puberty. Softening and enlargement of the organ follows if the muscle does not regain its ascendancy; if the condition persists long enough fibrosis supervenes as a result of prolonged venous congestion. The retrogressive tissue changes of the menopause demand consideration. Haemorrhage near the menopause may indicate either that the natural muscular atrophy is in advance of the natural arterial degeneration or that pathological changes are present. Pain is caused by anomalies in the function of ovulation, and the blood escaping from a ruptured Graafian follicle may set up a very mild peritonitis and produce adhesions. Varicosity of the veins or venous congestion leading to sclerosis of the ovary are painful also. The changes in the tissues and in the musculo-vascular relations of the tissues during parturition and involution are enormous, and have wider and more far-reaching consequences than the usual writings on subinvolution and superinvolution give one to suppose. General diseases are often the causes which disturb the nervous control and vascular supply of these organs. Degeneration of the uterine muscle occurs in many cases of anaemia associated with amenorrhoea, while all causes of backward pressure can aggravate or even originate pelvic congestion so as to produce symptoms and tissue changes. A serious problem is the real relationship between retroversion and uterine disease. When the fundus is bent over and falls into Douglas's pouch the uterine vessels are acutely twisted, and the congestion thus produced appears able, when co-operating with other factors, to produce softening and enlargement of the uterus, followed by retroflexion and changes in the cervix and ultimately by fibrosis. This point still calls for further investigation, but this restatement may perhaps prove to contain enough truth to justify the direct treatment of retroversion in certain cases.

THERAPEUTICS.

251. **Specific Immunity and X-Ray Therapeutics.**

CRANE (*Amer. Journ. Med. Sci.*, March, 1908), in considering the therapeutic properties of *x* rays in certain diseases, quotes four cases in support of the view that this property is due to some power which the rays possess to stimulate the production of opsonins in general in the body fluids. In the first case, one of acne, cultures from the pustules showed the *Staphylococcus pyogenes albus*, to which germ the opsonic index was found to be low before treatment. This rapidly rose for the first three days following an *x*-ray exposure of fifteen minutes at a distance of 6 in. A second treatment was given on the fifth day in response to a slight fall in the opsonic index, with the result that the index rose again during the next four days and the face became cured, the action of the *x* rays having caused a specific immunity to the staphylococcus. On the tenth day, in response to an opsonic fall, a third treatment was given, but there was no acne to treat and the opsonic index declined to a normal constant. The second case was one of lupus of the face in which there was a rise of the opsonic index after each treatment until the fourth, when a negative phase set in until the seventh, during which the ulcer remained stationary but rapidly shrank in size as a rise again occurred. The third case, one of lupus of the nose, was given seven *x*-ray treatments, each of the first four being followed by a rapid rise in the index, at the end of which time, twenty-two days from the beginning, the patch had healed and the index gradually began to decline in spite of successive treatments. The rapidity of cure in this case appeared to be due to the

careful timing of the treatments so that each was given just as the positive phase began to decline. The fourth case, one of tuberculous cervical glands, showed a steady rise in the tubercule-opsonic index until the glands had disappeared. In all the cases the *x* rays ceased to raise the index when the infectious agent was eliminated, and the index was raised only for the germs present in the lesion, so that the rays do not appear to stimulate the production of opsonins for bacteria in general, but only for those in living tissues brought directly under their influence. Although these data are limited, they point to the conclusion that *x*-ray treatments to be effectual require a degree of intensity sufficient to set free in the tissues what is equivalent to an autogenous vaccination, and the duration of the exposure and the extent of tissue exposed must be regulated so as to induce either a small negative phase or none at all. The repetition of exposures must be governed by the duration of the negative and positive phases, and in diseases of which the causative agent is unknown we must be governed by analogy with those cases in which opsonic estimations can be made. It is unnecessary to expose the whole area of disease, and exposures should not be repeated oftener than twice a week, and probably usually less frequently, in order to get maximum results, and to avoid prolonged or incurable negative phases. It is important to measure the *x*-ray dosage, but as yet this is impossible with any precision. The advantages of *x*-ray treatments over opsonic therapeutics are considerable, seeing that the immunizing substance set free under their influence is autogenous, and is formed from the actual microbic strain which is producing the disease. Many of the difficulties and mistakes incident to bacteriological diagnosis are eliminated, and the treatment is applicable to cases in which the actual cause is as yet undetermined.

252. **Graves's Disease and its Treatment.**

THOMSON (*Amer. Journ. Med. Sciences*, March, 1908), after discussing the numerous theories that have been advanced with reference to Graves's disease, bases his views as to its pathology and treatment upon therapeutics, and urges that proper medical treatment furnishes the best chance of recovery, even in the severe cases. Rest from muscular exercise and avoidance of all fatigue must be enjoined. As to diet, butcher's meat, oysters, and lobsters must be forbidden. Poultry, quail, partridges, light fish may be taken sparingly, but not at night, and one egg a day for breakfast may be allowed. The standard article is fermented milk—for example, kumyss, or peptonized—but raw milk is indigestible in the quantities required for treatment, and if ever it has to be taken it should be half diluted with Vichy or lime-water. Next to living on milk, the patient should be a vegetarian, but beans, peas, and asparagus, and largely spinach, must be forbidden, as also oatmeal. Fruits, with the exception of uncooked apples and strawberries, are useful. Of medicinal treatment 30 grains of phosphate of sodium may be given at the beginning of each meal and a blue pill, or other mercurial laxative, twice a week as a matter of routine. For months at a time intestinal antiseptics should be given—for example, sodium salicylate and sodium benzoate, of each 10 grains, an hour after each meal, with a capsule at bedtime containing 3 grains of naphthalene and 6 grains of sodium benzoate. Later these may be changed for a capsule containing 5 grains of phenol, bismuth, and ammonium benzoate, of which two should be taken an hour after meals. No promise of a permanent cure should be given even after several years of apparent cure, as patients have remained well for seven years and then relapsed. The analogy is drawn between this disease and diabetes, pointing to similar relations to the nitrogenous elements of food that are seen in diabetes for the starchy elements. In each of the cases that relapsed after a long interval there had been a return to a meat diet, and here, as in many diabetics returning to starchy food, a return to strict dietary was not always as effective as in the first instance.

253. **The Treatment of Whooping-cough.**

W. R. SCHOTTIN (*Med. Klin.*, February 16th, 1908), after experimenting on himself by sleeping for three nights in a room in which bromine vapour was evolved, tried the effect of this vapour on children suffering from whooping-cough. Since the spring of 1892 Schottin has exposed these patients to the vapour of bromine for two or three hours, morning and evening, and also allows them to sleep in it. Under this treatment the attacks lessen in frequency and violence by about one-half in five to eight days, and after three or four weeks disappear entirely, without relapse. As it is not always easy to procure bromine vapour, especially in small places, and as it is also a dangerous drug in the hands of the general public, a substance has been prepared, called bromotussin, the vapour given off from which lessens the cough in three, or in some cases two, days. Schottin has been unable to collect accurate statistics as to its effect on the number of attacks. Notes of three cases are given, one complicated with bronchitis, and one with pneumonia. Cure resulted in two to five weeks. The author finds the treatment of whooping-cough now as satisfactory as it formerly was troublesome.

PATHOLOGY.

254. **Giant Cells in Medulla of Bones.**

C. TOMMASI (*Lo Sperim.*, Florence, July, 1906) has examined histologically the bone marrow of numerous rabbits, cats, dogs, fowls, frogs, bats, and their embryos, with particular reference to the origin and function of certain of the giant cells there found. In reviewing the literature of the subject, he points out that giant cells of at least two kinds have been described in bone marrow. The cells of one variety were found by Robin (1849), and named "myeloplaxes" by him; they were renamed "osteoclasts" by Kölliker, and Tommasi does not further consider these. A second kind of giant cells was described somewhat vaguely by a number of earlier authors; these cells were called "megacaryocytes" by Howell (1890), "haematoblasts" by Fcà and Salvioli (1881), and were believed by these and other writers to be concerned with the new formation of red blood corpuscles; they possess a nucleolated or budding nucleus and granular or hyaline protoplasm. Other authors have described several varieties of giant cells conforming more or less closely to this type. Denys (1889) believed them to be phagocytes, and this view has been upheld by several later writers. Tommasi gives details of the methods he has employed and the observations he has made. He is led to conclude that megacaryocytes are rounded cells 30-45 μ in diameter, with protoplasm variably granular and staining with variable readiness; their nucleus is single and vesicular, often complex in structure and staining reactions; they occur in all parts of the bone marrow—the redder the marrow the greater the number of megacaryocytes in it; they are more numerous in the young or the pregnant animal than in the adult, and are intimately connected with the supporting tissue of the medulla; they are probably phagocytic in function, in health as in disease, and are derived from the stellate cells of the connective tissue. They are most numerous in the bat during its hibernation.

255. **The Origin of Precipitins.**

CANTACUZÈNE (*Ann. de l'Inst. Pasteur*, January, 1908) has investigated the sites of precipitin formation in the rabbit, using unheated horse serum as the antigen. These experiments have been controlled by observations on the capacity of the rabbit to yield non-specific precipitins. The author finds that in the normal organism of the rabbit there exists a small quantity of precipitin for the blood of other animals. In order to cause the elaboration of this precipitin in larger quantity, it is only necessary to inoculate some general stimulant to the precipitin-forming organs; first amongst these organs is the spleen, then come the lymphatic glands, and lastly the bone marrow; the actual cells from which the precipitin is derived are the leucocytes, probably the mononuclear variety. The precipitin so produced makes its appearance in a few hours, and presents no specific characters. On the other hand, when the animal is injected with an antigen such as horse-serum the precipitin formed is specific in character; its incubation period is longer, and the quantity secreted is infinitely greater. This specific precipitin has the same origin as the non-specific; it appears primarily in the lymphoid organs, particularly the spleen, and is demonstrable in these situations several days before it makes its appearance in the blood. But its elaboration in these organs is not continued for long, and by the time that the blood has become active the precipitin-forming organs have almost ceased to yield any antibody. "The abundance of mononuclear cells in exudates containing precipitin, the presence of precipitin in the organs rich in macrophages (spleen and lymph glands), the enormously increased production of mononuclears which one finds in these same organs after an injection of serum, the excess of mononuclears in the blood—all these facts argue in favour of the hypothesis that it is the mononuclear variety of leucocyte on which devolves the task of elaborating antibody."

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

256 **Polyuria**

GAUJOUX (*Arch. Gén. de Méd.*, December, 1907) divides polyurias into the symptomatic and the so-called essential—that is, those cases in which the pathology of the polyuria is unknown. Symptomatic polyurias may be either transitory or lasting; as examples of the former kind one may mention the polyuria occurring in a "nervous" person as result of cold or emotion. Excess of liquids, administration of diuretics, crises in disease (pneumonia, jaundice, etc.), and epileptic or hysterical attacks, may all give rise to a transitory polyuria. Symptomatic polyuria of a lasting nature may be divided into the following forms. First, those in which the urine contains sugar; in this group are included cases of true diabetes, and those in which, although sugar is excreted in the urine, true diabetes does not exist. In the majority of cases of this form of polyuria the excessive secretion of urine is a secondary result of the glycosuria—that is to say, the patient drinks large quantities of water (and consequently passes an excessive quantity of urine) in order to eliminate the excess of sugar in the blood. In true diabetes the polyuria increases in the early stages, remains stationary or diminishes when suitable treatment has been adopted, and in the later stages diminishes or even subsides altogether. In most cases of true diabetes the polyuria varies directly with the amount of sugar excreted; to this rule, however, there are some exceptions. Secondly, those in which the urine contains albumen. Interstitial nephritis is the typical example of this form. In this disease the urine is pale, clear, slightly acid, low in specific gravity, and contains less urea than normal urine, and from 2 to 6 litres of urine are excreted daily. At the terminal stages of the disease, however, the polyuria diminishes, but the urine contains an excess of extractives. Except in cases of interstitial nephritis polyuria is rarely combined with albuminuria. In so-called physiological albuminuria polyuria is exceptional, and, when occurring, slight. A pretuberculous polyuria is sometimes found to occur as an initial symptom in pulmonary tuberculosis, and the urine may contain traces of blood and albumen. In waxy disease of the kidney the polyuria which occurs is always slight. Polyuria and albuminuria may follow or occur during an attack of cerebral haemorrhage, after head injuries, in general paralysis, disseminated sclerosis, tuberculous meningitis, and hydrocephalus. Thirdly, those in which the urine contains pus; in these the hypersecretion of urine is generally due to suppuration in the secretory or excretory organs. Fourthly, so-called insipid polyurias—that is, those forms of polyuria in which no abnormal constituents are present in the urine; this variety the author again subdivides up into the azoturic, the phosphatic, the oxaluric, and the inosituric, according as the urine contains excess of nitrogenous material, of phosphates, of oxalates, or inosit; this subdivision the authors admit is an unsatisfactory one. In cases of insipid polyuria the abrupt onset of the condition suggests some affection of the nervous system as a cause, and clinical evidence strongly supports this view. In many cases areas of haemorrhage or of softening may be found in Claude Bernard's diabetic centre, and there may be tumours pressing on this part. Puncturing or cutting parts of the nervous system some distance from Bernard's diabetic centre may, however, cause polyuria, as has been shown by Schiff, who experimentally produced polyuria by cutting the medulla, the bulb, or the peduncles of the cerebellum. Clinically, one finds polyuria sometimes occurring after cerebral haemorrhage, and in many other nervous diseases. Contusion of the brain may produce polyuria, and in neuritis and neuralgia (especially sciatic) it may occur. Reflexly, polyuria may arise as a result of irritation of the stomach, intestines, pancreas, bladder, and prostate, and from retention of urine. In certain cases of insanity (melancholia, etc.) polyuria has been noted to occur. So-called essential or idiopathic polyurias, the author considers, are those cases of polyuria which cannot be brought into the classification previously described. Most often several members of the family are affected, and the disease or symptom can be traced through several preceding generations. The trouble generally appears soon after birth, or within the first few years of life, and lasts an indefinite time without having any bad effect on the general health. Polyuria results from the passage of a larger quantity of blood at a higher pressure than normal through the glomerular tuft, and on this assumption the means of production of the different forms of simple polyuria can be readily understood; whilst increased blood pressure in the glomerular tuft will explain the mechanism of all the so-called insipid polyurias and the albuminuric and pyuric polyurias.

257. **Kernig's Sign.**

SALMONI (*Gazz. degli Osped.*, February 16th, 1908) has made a study of the above sign in 9 cases of Pott's disease and in 3 of vertebral rheumatism. In 6 of these cases Kernig's sign was present. From a study of these cases and from the literature of the subject the author concludes that Kernig's sign has little or no diagnostic value *qua* meningitis. In the positive cases there was marked rigidity of the spinal column, with painful irradiation beyond the vertebral column itself. As is well known, Kernig's sign is by no means a constant phenomenon in meningitis, and if present usually appears late in the disease, when there has been some spreading of the disease to the spinal cord. In the face of all the facts it cannot be true to say that Kernig's sign is always associated with some lesion of the central nervous system; if this were so, why should the sign only show itself in the lower limbs and never in the upper? The spinal symptoms in caries of the spine are more often due to spread of infection up or down the spinal medulla than to mechanical pressure. In spinal affections the commonest symptom is rigidity of the spinal column, and because of this rigidity, in the change from the supine to the sitting position and in the attempts to flex the trunk, the compensatory rotation forwards of the pelvis is not possible and the ischium is still further displaced, putting the flexor muscles of the thigh, whose elasticity is already weakened by tuberculous or rheumatic toxaemia, more on the stretch and making it easy to develop Kernig's sign. It is in some such way as this that the author supposes the sign in question was produced in his cases.

258. **Pirquet's Tuberculin Reaction.**

PIRQUET's tuberculin reaction, which the introducer believes to be specific for tuberculosis and much more convenient and less dangerous than the ordinary tuberculin test, depends on the appearance of a flat red papule of varying size forming from 24 to 48 hours after a cutaneous injection of diluted old tuberculin. Engel and Bauer (*Berl. klin. Woch.*, September 16th, 1907) raise the question whether this skin reaction really only takes place when tuberculosis is present. If the reaction is to be of practical use, it must indicate clearly in those difficult cases where tuberculosis is suspected but cannot be proved to be present; but if it should occasionally give a positive result in cases which turn out later not to be tuberculosis, this would prevent the reaction from being of great value. The best way of gauging the reliability is by following the cases to the *post-mortem* table. Pirquet stated that all his negative cases which died were found *post mortem* to be free from tuberculosis. In one case which had given a positive reaction, no specific changes were found, but inasmuch as this was a case of so-called "status lymphaticus," Pirquet deduces that this condition has an intimate relationship to tuberculosis. The authors have tested the reaction in a large number of children (over 300), adhering closely to Pirquet's directions. Among 48 infants, 6 gave a definite positive reaction. One of these infants died, and no trace of tuberculosis was found at the *post-mortem* examination. The status lymphaticus could also be excluded; 4 others of the 6 infants did not show any clinical signs of tuberculosis, were carefully reared under circumstances which would make tuberculosis in the infant very unlikely, and neither gave the skin reaction at all at a later date, nor did they give a positive reaction to subcutaneous injection of tuberculin. Binswanger has shown that infantile tuberculosis always reacts to test subcutaneous injections. The last infant reacted to the injections with a typical rise of temperature. Further, they tested the reaction in 280 older children, mostly inmates of the municipal children's home in Dusseldorf. Most of the children were over 6 years of age, and were attending school. A number of them were known to be tuberculous, and all of them gave positive skin reactions.

Of the rest the number of positive reactions could easily have represented the number of tuberculous individuals, since the children were waifs and strays from the lowest quarters, in whom tuberculosis was extremely likely to occur. Further, the reaction showed itself in increasing frequency the older the children were. This led the authors to conclude that there appeared to be a close connexion between the skin reaction and tuberculosis, at all events in children beyond the age of infancy. They, however, do not think that a positive reaction necessarily indicates tuberculosis, especially in infancy. As far as its diagnostic importance is concerned, they do not consider that it can take the place of the subcutaneous tuberculin injection, although it may be valuable in determining the frequency of tuberculosis in a given district. The failure in infants is to be deplored, since here the diagnosis is most frequently difficult or almost impossible.

SURGERY.

259. **Prostatectomy.**

Haberern (*Pester Mediz.-Chirurg. Presse*, March 8th, 1908) has operated on 17 cases of enlarged prostate, two in stage 2, the rest in stage 3. He had two deaths, one in a case with arterio-sclerosis, from gangrene setting in in the wound eight days after operation by a perineal incision; and one, three months after operation, from a curious ulceration of the suprapubic wound. Haberern considers that operation is contraindicated in extreme weakness, diffuse bronchitis, or severe arterio-sclerosis. In one case, however, of great weakness, operation proved very satisfactory, and it was successful also in some cases with arterio-sclerosis. A relaxed bladder is no contraindication, since in four cases voluntary urination in a strong stream was obtained after operation. Kidney insufficiency negatives the surgical interference. The author considers that orientation by means of the cystoscope should never be neglected. He finds the suprapubic method the more advantageous, although he had no case of permanent fistula when using the perineal incision. With a vesical incision bleeding can be more readily stopped by irrigation with water as hot as possible—the most reliable method; the bladder can be completely closed, thus allowing the patient to get out of bed sooner; and it is also more suitable in the case of very fat people. Haberern uses a cross incision into the bladder. He does not agree with Kümmel that a difficult removal suggests carcinoma. The patient should be warned of the possibility of a disturbance of the sexual function; this occurred in one patient. No stricture developed in any of the author's cases. Every case was narcotized with ether, and no bad result ensued. The post-operative mental condition was a much improved one, the patients being more cheerful and never suicidal, as in two cases of Rumpel's.

260. **The Abdominal Position in Operations on the Chest.**

Elsberg, of New York (*Zentralbl. f. Chir.*, No. 10, 1908) points out that the methods of Sauerbruch and Brauer for preventing pneumothorax in intrathoracic operations, though denoting a remarkable advance in this direction, have each the disadvantage of requiring a costly and complicated apparatus. Attempts have been made to prevent the entrance of air into the pleural cavity by artificially establishing adhesions between the two layers of the pleura, but such practice, it is held, is uncertain in its results. Most surgeons now content themselves by opening the chest slowly and carefully, and by at once dragging a portion of the exposed lung into the external wound, in order to close completely the opening in the thoracic wall. The author has found that in the dog the severity of the symptoms caused by acute pneumothorax may be much relieved by placing the animal in the abdominal position. The author states that he has obtained excellent results from placing his patients in this position in operations for empyema and bronchiectasis, and in transpleural incision of hepatic and subphrenic abscesses. In the last-mentioned class of cases, when the patient lies on the belly, there is very little cardiac and respiratory disturbance, notwithstanding the size of the external opening, and in dealing with an empyema there is much less coughing during the discharge of the purulent fluid. These views have recently been confirmed by the French surgeon Depage, who recommends that in all operations in which the pleura is opened the patient should be placed in the abdominal position.

261. **Acute Circumscribed Oedema of the Periosteum.**

Max Herz (*Zentralbl. f. inn. Med.*, March 21st, 1908) describes under the name "angio-neurotic pseudo-periostitis" a form of acute circumscribed oedema, which, but for its evanescent character and tendency to relapse, closely simulates periostitis. The bones affected in the writer's cases were invariably constituents of the thorax, and the patients without exception were the subjects of some cardiac neurosis. The swellings always occurred in the area in which the subjective cardiac symptoms were most pronounced, and usually during an acute exacerbation. The affection has not previously been described, but is not uncommon. Case I.—A neurotic woman, aged 26, had attacks of cardiac pain and palpitation with dyspnoea. There was no organic disease. When the writer saw her there was a tender, hard, doughy swelling at the sternal end of the left fifth rib. During a cardiac attack this swelling was said to be the seat of the most severe pain. A year previously it had been mistaken by a well-known surgeon for costal caries, mainly because there had been fatal cases of tuberculosis in the family. An operation was refused on the ground that the swelling occasionally disappeared completely. Though four years have since elapsed no operation has been required. Case II.—A woman, aged 42, had attacks of cardiac palpitation, dyspnoea, and precordial oppression of such severity that she had kept her bed for months. Some years before the writer saw her aneurysm of the aorta was diagnosed, and iodides had been taken uninterruptedly. The heart was normal, and the diagnosis of aneurysm at first appeared inexplicable. But when an examination was made during a cardiac attack a tumour was found of the size of an apple. This was situated to the right of the sternum over the second and third ribs and intervening space, and was tender and apparently exceedingly painful. The heart was acting tumultuously, and the violent pulsations were communicated to the tumour. The swelling rapidly subsided under hot fomentations, and the cardiac neurosis was finally cured by suggestion. There had been no relapse three years later. Case III.—A woman, aged 45, had advanced exophthalmic goître, with severe anginal attacks. The pain was localized, not in the heart itself, but in the upper part of the sternum, which was said to swell during each attack. When the writer saw her the pulse was irregular and uncountable. The entire sternal region was swollen, tender, and of a hard, doughy consistence. The surface temperature of the swelling was considerably higher than that of the surrounding skin. Leiter's tubes, through which hot water circulated, were applied, and the pain was relieved. Case IV.—A male morphinomaniac, aged 43, had attacks of paroxysmal tachycardia in which the sternum became swollen exactly as in the previous case. The only treatment required for these periosteal swellings is the application of heat.

OBSTETRICS.

262. **Treatment of the Umbilical Cord.**

In introducing the subject of the division of the umbilical cord and the subsequent treatment of the stump, F. Ahlfeld states that formerly one would not have considered it worth while delivering a clinical lecture on such a simple procedure (*Deut. med. Woch.*, February 6th, 1908). It was never thought that it was possible that a child could die as a result of errors in the management of the cord. In a book published about 100 years ago, Ziermann stated that most of the "earthly" as well as "supernatural" ills which befell mankind were due to a premature division of the child from its mother. This book was written on the basis of the doctrine of animal magnetism. Inquiring into the question of the time at which the umbilical cord should be divided, Ahlfeld considers that it really does not matter, since the placenta usually is detached from its uterine connexion as the fetus is born, and therefore no further interchange between the maternal and fetal circulation can take place. The idea that the child should have the benefit of the reserve blood, which is still contained in the placenta at the moment of birth, may be admitted, and he therefore comes to the conclusion that the cord should be divided a few minutes after birth, provided that the child cries well. When there is a suspicious discharge from the maternal genitals, the child should not be allowed to remain between the mother's thighs, but should be removed at once. In cases of apparently dead fetus, one should not await the cry, but should remove the child as soon as possible and apply artificial respiration away from the bed. It is a mistake to wait for the cord to cease

pulsating, as this may continue for a very long time, and the mere fact of pulsation does not indicate a gain in blood to the child. Next he questions the site where the cord should be ligatured. He considers it advisable always to apply a double ligature. He thinks that one should divide the cord close to the child, but, inasmuch as he advises a second ligature and at times a third, he advises that the cord should be sufficiently long to admit of this. He ties the cord about 4 in. from the child, and divides it close to the ligature temporarily. The material should be tape, about ½ cm. wide, which should be kept in cresol soap solution. This renders it slippery enough to allow one to tie it tightly. The scissors, too, must be thoroughly disinfected, and should be blunt-pointed. They are to be held in the palm of the hand to prevent the child suddenly thrusting its hands in the way as the cord is being cut through. After a short time the first ligature may become loose on account of evaporation of the gelatinous material. After about an hour and a half the cord should be examined and religatured and dressed. Since infection through the divided umbilical cord or the umbilicus can be highly dangerous, he proceeds in the following manner, in order to safeguard against such an infection: The cord is retied and divided as close as can conveniently be done to the body as soon as the child has been bathed. The hands must be well disinfected beforehand. Then he washes the stump and the surrounding skin with spirits of wine and covers the stump up with aseptic wool. This is held in place by means of a linen bandage. The child is not again bathed until the stump has separated and the parts are healed. The old method of daily dressing in highly doubtful linen is not safe. The bandage or even some of the wool can be replaced with clean material if either gets soiled, but the wool adhering to the umbilicus must not be removed. If by any chance the lower part of the dressing gets loose, it is necessary again to disinfect with spirit. In the majority of children treated in this way the cord is cast off on the eighth day. It does not harm the child in any way that the separation takes a little longer by this method than by the older methods. Nor does the child suffer at all by being deprived of its daily bath during the first week of life. He shows that the results obtained by the method are extremely satisfactory, and recommends it as a safe means of preventing umbilical infection.

GYNAECOLOGY.

263. **Congenital Stenosis of the Vagina.**

DARTIGUES AND CARAVAN (*La Clin.*, March, 1908) have treated a case of almost complete stenosis of the vagina complicated by the symptoms of haematocolpos and pyocolpos. The patient consulted them for sterility and severe pains during her last periods. She was 37 years of age, her menstrual periods had been regular since their onset at 15 years, she always had some pain, and a very small flow, lasting two days only. On the last two occasions before consultation she suffered acute abdominal pain passing down the thighs, which was relieved when her doctor made a vaginal examination. On each occasion the examination was followed by a flow of blood, which was normal in appearance. The patient had never had any vaginal trouble or any douches or local applications. On examination it was found that about 7 cm. from the vulva the vagina became narrow and cone-shaped, the tissues were soft and non-indurated, but firm pressure on the apex of the cone was painful. There was a small opening through which a probe, rather less than 1 mm. in diameter, could be passed up for a further 2 cm. As the patient had an objection to allowing an operation, it was decided to try gradual dilatation of the stricture. An extremely small-sized tent was passed through the orifice; owing to the way in which it swelled above the constriction its removal proved difficult and painful. There was an escape of blood and pus after the removal of the first two or three tents. A series of tents, of gradually increasing sizes, were inserted, and as dilatation advanced, groups of them tied together were used, with the final result that the constriction was almost completely obliterated. The patient was discharged from the hospital after thirty-six days. There was then only a very slight circular fold indicating the situation of the stricture, and the fornices could be easily examined. The cervix was normal and could be reached without difficulty. Two years later she had had no return of the trouble; her periods had been regular and painless, but she had not had any children. In such cases there is either complete or partial retention of the menses, with pain and constitutional disturbance, or a history of difficulty in connexion or of sterility. It is considered advisable to try dilatation before proceeding to operative treatment. The method of excision should be used only for acquired strictures of cicatricial origin, in which the whole thickness of the vaginal wall is involved. Congenital cases demand simple incision; the use of the cautery is not recommended, as the wounds heal very slowly. When stenosis is recognized in a pregnant patient early intervention is liable to cause abortion, and it is wiser to wait until labour has begun before taking active measures. After labour has begun the patient cannot be left, as the stricture may be ruptured and cause serious haemorrhage; it may also delay labour and call for prompt division. Many practitioners use curved scissors for this purpose. Occasionally it is necessary to incise more than one stricture.

264. **Omental Cyst Removed per Vaginam.**

HOLLEMANN (*Zentralbl. f. Gynäk.*, No. 9, 1908) was consulted by a girl aged 19 for pains in the left side of the abdomen gradually growing worse. She was well nourished and healthy and the periods were regular; the pains had lasted for about two years and a half, and were independent of the catamenia. A firm, elastic, and very tender tumour could be defined to the left of the uterus; it was not very movable. The pain caused when it was touched resembled, the patient declared, the pains from which she had suffered for over two years, and the left ovary could not be felt. The tumour was therefore diagnosed as a small ovarian cyst adherent to the pelvic wall, and a vaginal operation was performed. When Douglas's pouch was opened the tumour was seen to be a dark-coloured cyst. Some adhesions were separated, but as it was too big to be extracted entire through the pelvis it was punctured and a brown, thick fluid escaped. Then the flaccid cyst was with ease drawn down to the vulval orifice. Its pedicle was found to be the omentum and no other structure besides omentum. Ligature of the pedicle was easily effected and the omentum reduced; lastly the vaginal wall was closed, but a gauze drain was inserted into the middle of the wound and withdrawn four days later. Four years later the patient was in good health. Hollemann adds references to cases previously published.

THERAPEUTICS.

265. **A New Iron-Arsenic-Phosphorus Compound.**

THE fate of arsenic in the animal body has not yet been definitely determined. E. Salkowski states that various investigators have failed to recover more than a fraction of the arsenic introduced into the body (*Berl. klin. Woch.*, January 27th, 1908). The suggestion that it is excreted in a form which escapes detection can scarcely be accepted, since the analyses are carried out after the organic matter has been destroyed with chlorate of potassium and hydrochloric acid. The author considers that it is more likely that arsenic, since it possesses great similarity to phosphorus, is deposited in the organism in a compound analogous to the phosphorus containing nucleo-proteids. It is even possible that the arsenic may replace the phosphorus in this combination. He therefore sought an arsenic and phosphorus organic compound, which might be of considerable therapeutic use. In experimenting with paranucleinic acid found in the digestion of caseine, he was able to obtain a compound which contains arsenic in loose combination, as well as phosphorus and iron. Thirty grams of purest caseine is digested with 2 litres of digestion hydrochloric acid and 5 grams of lactic acid free pepsin for forty-eight hours at 39° or 40° C. A small quantity of paranuclein is removed by filtration, and the filtrate, after exact neutralization with sodium carbonate, is evaporated, the calcium phosphate which separates out is filtered off, and 4 to 5 grams of arsenious acid is added, and the whole evaporated to a syrupy consistence. The substance is then precipitated with alcohol, and washed in alcohol and ether until all traces of uncombined arsenious acid is got rid of. A 2 per cent. solution of the precipitated substance in water is added to a 5 per cent. solution of ferric ammonium sulphate, and the precipitate which forms is collected freed from water and from chlorine. This precipitate is found to contain arsenic, phosphorus, and iron in combination. He describes some of the chemical characters of this compound, and after giving the result of the elementary analysis, he gives the reasons for not considering it to be a mixture of arseniate of iron and paranucleinate of iron. He is not able yet to state its chemical constitution. It is readily absorbed from the rabbit's stomach in alkaline solution, and the urine then contains arsenic during the first twenty-four hours, while

the quantity increases during the second day. He has not yet determined its exact toxicity, but his first impression that it produced less toxic symptoms than its arsenic content would suggest appears to be doubtful. Therapeutic tests are being carried out. The substance goes under the name of *arsenogen*. A mixture of this with triferrin (paranucleinate of iron), known as *arsen-triferrol*, has been tested by Mosse, who reports that it was well tolerated and that it improved the general condition in suitable cases after continued exhibition.

266. **Styptol.**

C. Lockyer (*Zentralbl. für die gesamte Therap.*, December, 1907) describes his experience of styptol in cases of uterine haemorrhage and of spasmodic dysmenorrhoea. Styptol, or cotarnin phthalate, is a yellow crystalline powder, readily soluble in water and feebly alkaline in reaction. Its melting point is 113° C. It is claimed that styptol is both haemostatic and sedative in action, and that it has not the disadvantages of the well-known uterine haemostatics, in that it neither causes painful contraction of the uterine muscle nor any general rise of blood pressure. According to Vieth, who has studied the physiological action of the drug, styptol checks uterine haemorrhage by a purely local action, and also that after absorption it has the peculiarity of causing constriction of the urogenital vessels only by means, it is said, of stimulation of their local vasomotor plexuses. Handfield Jones appears to doubt the sedative action of styptol, but Mohr, after a series of experiments, speaks of a marked action in this respect, and shows also that the uterus is rendered less sensitive to stimulation by styptol. The toxicity of styptol is very low—below that of ergot. Lockyer gives a summary of 30 cases in which he has made use of styptol. Of 9 cases of dysmenorrhoea, 7 were relieved of menstrual and ovarian pain; 2 were unrelieved, 1 being a case of infantile uterus, the other of membranous dysmenorrhoea. Of 6 cases of fibroid growth and 1 of ovarian cyst, 5 were relieved; 1 of the remaining cases proved to be a case of fibroid undergoing sarcomatous change, while the other case was complicated by a severe heart lesion. Eight cases of diseased appendages were all treated with success by styptol, and the author is of opinion that these cases are sufficient to show that styptol tends to check the secondary menorrhagia in the earlier and milder forms of tubal and ovarian inflammation. Seven cases of uterine enlargement (subinvolution, metritis, endometritis) were all successfully treated, and it is especially for cases of this character that the author recommends and has himself employed styptol. He has also found it useful in the menorrhagia of young girls, where no abnormality can be detected, and in cases of threatened abortion in the early months. There appears to be a possibility of danger of the formation of a "styptol habit."

267. **Abortive Treatment of Urethral Blenorrhoea.**

Regenspurger (*Med. Klin.*, February 23rd, 1908) has succeeded in shortening the duration of this affection from the average of six weeks to eight to twenty days in 78 out of 150 cases (52 per cent.) treated by him, and had only 13 complications. He attributed this excellent result to the use in every case of novargan injections, beside the internal drug treatment. Only such cases were chosen for this treatment as fulfilled the following conditions: (1) Duration of disease not longer than eight days; (2) each case must be a pure acute anterior blenorrhoea, without complications, not a fresh attack supervening on chronic disease; (3) very acute cases, with irritation of the sphincter and such like, are not adapted for the abortive treatment; (4) the patients must observe strictly the usual lines of behaviour in such cases. Novargan was chosen in preference to protargol on account of its higher percentage of silver, and consequent greater antiseptic action, and because it is less irritating. Regenspurger used three different strengths of novargan solution—5 per cent., 10 per cent., and 15 per cent.—in a 10 per cent. glycerine solution, and in very sensitive patients he added 5 gr. of antipyrin to the solution. The anterior urethra was washed out, after urination, with distilled water, and then 8 to 12 c.cm. of 5 per cent. novargan solution was injected, and, by means of a clamp, retained in the urethra for five to fifteen minutes. For the next two hours urination was avoided. After twenty-four hours the injection was repeated, using 10 per cent. novargan solution if no irritation was present, and so on daily, increasing or decreasing the strength of the solution according to the amount of irritation caused. The novargan solution acts much better if freshly prepared, and it should be protected from light by preserving it in a dark glass bottle. Novargan is suitable not only for abortive treatment, but in weaker, 2 to 3 per cent., solutions may be used for the methodical treatment of blenorrhoea urethrae. In cases where the catarrhal appearances were very marked Regenspurger used alternately an astringent, or a 0.2 per cent. lapis injection.

268. **Potassium Iodide in Incipient Cataract.**

V. Pflugk (*Med. Klin.*, February 16th, 1908) has followed up the work of Badal, who in 1901 published his account of the treatment of commencing cataracts with potassium iodide. In 1904 he used eye-baths and drops of a solution of the salt, but soon became convinced that the drug introduced by subconjunctival injections was far more effective. These injections, he found, had the effect of hindering the proliferation of the capsule epithelium during the development of opacities, and his experiments on 205 animals of different kinds gave, in all essential particulars, a similar result. In 55 cases of cataract treated by the author, great improvement occurred in 53 per cent., improvement in 33 per cent., 14 per cent. remained stationary, and none became worse. In almost every case subconjunctival injections of 1 per cent. potassium iodide solution were used. V. Pflugk rejected the 5 per cent. and 2½ per cent. solutions used by Badal and others, because they caused emptying of Tenon's capsule, and almost unbearable pain. He has been able to eliminate the pain following the injection by the use of acoin oil, supplied by the firm v. Heyden. Every week he gives two or three injections of a half to one Pravaz syringe. The author considers that while this treatment is especially suitable for cases in which one eye has been lost or operation for any reason is undesirable, it ought also to be tried in every case of commencing cataract before operation is resorted to. If the progress of the cataract is not checked by eye-baths and drops, injections should be used. Von Pflugk does not believe that a single case of uncomplicated subcapsular incipient cataract, treated at the beginning, will withstand the action of potassium iodide; but, on the other hand, capsular cataracts are only slightly affected, and nuclear cataracts not at all. The discovery of this method of dealing with cataract is a godsend, for, even in experienced hands, operation carries with it many disappointments and much inconvenience. The author hopes that other oculists will try the method.

PATHOLOGY.

269. **The Resolution of Pleuritic Exudates.**

Eugene L. Opie (*Journ. of Exper. Med.*, July, 1907) has conducted experiments with the object of determining the part played by enzymes in the resolution of a fibrinous exudate. When turpentine is injected into the pleural cavity of the dog there is abundant exudation of coagulable fluid and the serous surfaces are covered by a layer of fibrin. The accumulation of fluid reaches its maximum at the end of three days and then gradually subsides, so that at the end of six days the fluid has generally disappeared. During the early stage of inflammation, fibrinous exudate, freed from the serum by washing in salt solution, undergoes digestion when suspended in either an alkaline or an acid medium. At the end of five days, when fluid is disappearing from the pleural cavity, digestion fails to occur in an alkaline medium but takes place with much activity in the presence of acid. During the first stage of the inflammatory reaction, when fluid is abundant, and the fibrin which is present digests in alkali, thus indicating the presence of leucoprotease, polynuclear leucocytes are very numerous in the meshes of the fibrin. In the second stage the exuded fibrin contains only one enzyme, digesting in the presence of acid. At this time polynuclear leucocytes have disappeared, and only mononuclear cells are embedded in the fibrin. Products of proteolytic digestion, namely, peptone and albumose, are absent in the exuded fluid during the first day or two days of inflammation, but are present after three days, and are found in less quantity at a later period. The exudate remains alkaline throughout the period of inflammation, but its alkalinity is less than that of the blood, and diminishes slightly with the progress of inflammation. Since the acids which *in vitro* favour the action of the enzyme present in the second stage do not occur in the body, the author suggests that carbon dioxide may be the activating agent. He finds that if carbon dioxide is passed through normal salt solution in which strips of such fibrin are suspended, digestion is greatly hastened. The normal inhibition exerted by blood serum upon the enzyme is overcome by carbon dioxide, and in the presence of a small quantity of blood serum carbon dioxide causes greater enzymotic activity than in the presence of salt solution alone.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

270. **The Urine of Diabetics.**

MÁTRAI (*Pester Mediz.-Chirurg. Presse*, March 29th, 1908) estimates the severity of a case of diabetes, not by the absolute amount of sugar in the urine, but by the amount relative to the quantity of carbohydrates ingested. It must be borne in mind that different kinds of carbohydrates are differently tolerated; for example, grape sugar is borne least well, then comes milk sugar, galactose, cane sugar, and, finally, the most easily tolerated sugar, levulose. The carbohydrates formed from albumen are easily borne, probably because they are formed slowly and in small quantities; in the same way carbohydrates are more easily tolerated if given in small quantities frequently than in larger amounts less often. Tolerance is found by discovering how much bread containing 60 per cent. of starch a patient is able to take without the appearance of sugar in the urine. More or less bread is given, according to the result, until the limit is discovered. Complete abstinence from carbohydrates enables the body to rest from the glycolytic function, which latter thereupon gradually regains strength and the tolerance for carbohydrates rises. Notes of two cases are given, in one of which tolerance rose from *nil* to 400 grams in two years, and in the other from 50 grams to 160 grams in two months. With another patient, who had long neglected advice, tolerance could only be raised to 70 grams. Mátrai considers that a patient should never take more carbohydrates than his tolerance limit allows. He does not agree that patients can pass ½ per cent. to 1½ per cent. of sugar in the urine daily without bad effects. The worst complications—for example, cataract, fundus affections, obstinate neuralgia, gangrene—occur almost exclusively in patients who have for years had a little sugar in the urine. He compares such cases to those with chronic lead or alcohol poisoning, who may for years show no serious trouble only to suddenly develop serious mischief.

271. **The Dangers of Calmette's Reaction.**

KALT (*Recueil d'Ophtalmologie*, October, 1907), at a meeting of the Paris Ophthalmological Society, showed a case in which he had used Calmette's tuberculin as a test for tuberculosis of the eye with very unfortunate results. When first seen the right eye showed slight nebulae, extensive synechiae and no red reflex. The inflammation had quieted down, there was no injection, and the whole condition had existed several years. By the aid of this eye he was able to get about. The vision of the left eye had become bad four months ago. In addition to old iritis there was a focus of scleritis, and the tension was + 1. The glaucoma was treated by sclerotomy, and the scleritis by the actual cautery and by subconjunctival injections of cyanide of mercury. Three months later the left eye was somewhat better, the right remained as when first seen. Some 1 per cent. tuberculin solution obtained from the Pasteur Institute was instilled into the right eye. The next day there was some injection of the eye. Five days later a small patch of scleritis, which was quiescent and of no importance, began to spread till it occupied half the globe, and the upper half of the cornea was infiltrated. The iris became very muddy and there was intense pericorneal injection. The condition resulted in extensive sclerosis of the cornea. Kalt pointed out that the eye had been quiescent for months, and the disease seemed to light up as soon as the serum was instilled. Knapp, A. (*Arch. of Ophthalm.*, March, 1908) records a case where typical tuberculous interstitial keratitis followed the use of Calmette's serum. The patient had a superficial keratitis in the right eye of two months' duration. Of 8 siblings, 5 had died—one aged 4 days, twins at 2 days, one of meningitis at 10 months, one miscarriage; 3 living healthy children. The patient had no enlarged glands, no diseased bones or joints. The right cornea presents a broken-down, superficial infiltration; photophobia marked; a chronic ulcer formed on the lid margin. One drop of 1 per cent. tuberculin solution was instilled into the left healthy eye. Six hours later the lids were red and swollen and the child was in great pain. There was severe general reaction, the temperature rising to 100 4°. Ten days later corneal infiltrations appeared. They were arranged in three groups near the temporal margin, consisting of discrete masses, with new-formed blood vessels. These coalesced, forming patches 2 mm. in diameter. This typical tuberculous process in the cornea came on in a healthy eye after the use of tuberculin solution. Napier, A. (*Glasgow Med. Journ.*, January, 1908) brings forward two more cases which appear to show that, even when Calmette's serum is followed by no reaction, it may bring about a change of local conditions which causes the eye to respond sharply to the introduction of a small dose of tuberculin into the general circulation. Case I. A man aged 50 had a drop of sterile solution of tuberculin instilled into the right eye on October 21st, 1907. This was followed by no reaction. On October 26th $\frac{1}{10}$ mg. of new tuberculin T.R. was injected; no reaction, local or general. October 29th, 1 mg. new tuberculin; no reaction. November 2nd, 5 mg. new tuberculin injected; next day—thirteen days after the instillation of Calmette's serum—there was an acute reaction in this eye, and in this eye alone. The second case is a very similar one. Many other examples are now on record in which the effects of Calmette's serum have been by no means harmless, and great care should be exercised in its use when tuberculous disease of the eye is suspected.

272. **Banti's Disease.**

SCHUPFER (*Gazz. degli Osped.*, January 19th, 1908) records the case of a man whose spleen was removed three years ago for Banti's disease (splenomegalia with cirrhosis of the spine). The patient is now in good health, and the liver, which at the time of operation was considerably enlarged, is now much reduced in size, although still a good deal larger than normal. The fact that the hepatic disease was checked by the splenectomy is an argument in favour of the theory that the spleen has a good deal to do with the genesis of Banti's disease, and that the cirrhosis seen in these cases is distinct from the ordinary hepatic cirrhosis of Laënnec. Both lobes of the liver were affected in this case. On examination of the blood hyperglobulia was found in association with cyanosis. The hyperglobulia was probably due to a diminution in the number of blood corpuscles destroyed. These changes in the blood three years after splenectomy, the persistence of epigastric pain, and the general debility, seem to show that the organs have not quite recovered their full functional activity as yet.

SURGERY.

273. **Angiomatous Indurations in Muscles.**

A. VON KHANTZ, jun. (*Wien. klin. Woch.*, January 16th, 1908) reports two cases of angiomatous induration of muscles which was first detected after an injury, and possibly had not previously existed. Case I. A girl aged 15 was seen on October 3rd, 1906. Until two years previously she had been quite well. While performing some gymnastic exercises she experienced a sudden pain in the right calf. Swelling and prominence of the veins followed, and she was supposed to have ruptured some muscular fibres. Under rest and an evaporating lotion the pain subsided, but a swelling remained. The pain occasionally returned severely. She was treated for more than a year with fomentations, massage, and electricity, and in August, 1906, attended the hospital out-patient department. The only abnormality then found was moderate tenderness of the inner head of the right gastrocnemius. The sole treatment which gave relief was the pressure of a firm bandage. In the following October the writer found no difference in the circumference of the calves, but the inner head of the right gastrocnemius was, during standing, harder than the external. A varix or haemocavernoma of the gastrocnemius was suspected, and on October 8th a longitudinal incision 5 in. long was made over the muscle. After division of the fascia a moderately hard tumour of the size of a pigeon's egg was plainly felt. On section it proved to be composed of greyish-white tissue into which several large veins—some thrombosed—could be traced. The tumour sent processes between the muscular bundles, but did not destroy them. The muscle and fascia were sutured with catgut and the skin was brought together with silk. The patient w as

discharged cured on October 22nd, and six months later was completely normal. The tumour consisted of connective and adipose tissue, in which were numerous wide, branching venous spaces, rendered peculiarly irregular by the organization of parietally situated thrombi. Case II A man, aged 21, was seen on December 14th, 1906. Two years previously he fell and struck his right thigh against a manure fork. There was no external wound, but the thigh was swollen, and he was unable to walk for some months. Since then he had suffered from frequent attacks of pain in the thigh. In the lower third of the right thigh was a hard tumour of the size of a walnut, which appeared to be situated in the vastus internus, and was movable over the femur. It was doubtfully compressible. There was no difference in the circumference of the thighs. Traumatic induration of the muscle was diagnosed, and, as no improvement was obtained by massage, etc., on January 22nd, 1907, an incision 5 in. long was made over the swelling. After division of the muscles a greyish fibrous tumour was exposed. It was situated chiefly in the vastus internus, but also involved the vastus externus and rectus. Before removal of the tumour it was necessary to ligature several dilated veins connected with it. The man was discharged cured on February 10th. The tumour consisted of hard fibrous tissue traversed by numerous blood vessels. These included thick-walled arteries, often collected in groups; thin-walled veins with wide lumina; and large, irregular blood spaces, evidently formed by the coalescence of two or more veins owing to the breaking down of the thin partition between them. These spaces were typical of haemocavernomata. In both these cases the first lesion was possibly a haematoma, which later became partially organized. In the first the tumour was rather a vascularized fibrous induration than a true angioma; in the second it was a typical cavernous angioma, which was invading and destroying the striped muscular tissue, many of the fibres of which were atrophied. The second tumour was possibly present before the injury, and was merely stimulated to a more rapid growth. It was of interest that in the first case no definite tumour could be felt externally. Angiomata which primarily develop in muscular tissue and do not invade it from the subcutaneous cellular tissue are rare. When the growth is typically angiomatous it is usually congenital, though it may give rise to no symptoms until between the ages of 5 and 20. Traumatism has seldom been alleged or suspected as a cause. The muscles of the lower limbs are most often affected; then, in order, the muscles of the upper limbs and the trunk. If growth is rapid there is usually considerable pain, especially in the legs. This is due to the occurrence of thrombosis, which may also mask one of the most characteristic features of angiomata—namely, compressibility—and render the diagnosis extremely difficult. The growths seldom possess a definite capsule, but send processes between the muscular tissue. They present all gradations between capillary, arterial, venous, and cavernous angiomata, and usually contain foci of round-celled infiltration and proliferation of smooth muscular tissue. The only treatment is excision.

274. Restoration of Cranial Defects by Metallic Prothesis.

Rouvillois (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 7, 1908) has recently put on record a case of old injury to the head, in which, with the help of Deloir an expert dentist, he effectually closed a large osseous defect in the right temporal region, by a gold plate which was fixed by hooks inserted into holes drilled on the surface of the surrounding bone. The injury, caused by a kick from a horse, had not resulted in any symptoms of cerebral degeneration, but the patient was prevented from doing service as a cavalry officer by reason of exposure to the risks of injury of a portion of the surface of the brain which protruded through the opening in the cranial vault and was covered only by scar tissue. In the course of a long and difficult operation the adhesions were removed, the herniated portion of brain was reduced, and the metallic plate inserted into the gap in the bone. The plate was finally covered by a flap of sound scalp provided with hair, which was marked out above the seat of operation and brought downwards into the wound. The results of the operation were satisfactory, and, after an interval of a few weeks, the patient was able to resume his duty, and could take frequent and prolonged horse exercise without discomfort or fatigue. In a report on this case communicated to the Société de Chirurgie, Morestin points out that many and varied efforts have been made to close cranial defects by autoplastic and heteroplastic operations, and also by the insertion of portions of inert material, such as glass, celluloid, or some malleable metal. Experience has shown, however, that these attempts at prothesis do not always succeed, and, moreover, are, as a rule, quite unnecessary. A great number of subjects, it is stated, live under very tolerable conditions with a cranium that is more or less incomplete. Morestin refers to cases observed by himself which have convinced him that there is very much exaggeration in regard to the evils attending the neglect of cranial defects. When serious nervous disturbances are met with in such cases they are usually due, he points out, to some cerebral lesion produced at the time of the injury. Not only may an opening in the cranial vault be regarded as free in most instances from serious danger, but also any attempt to close such defect should, under certain circumstances—as, for instance, after operations for epilepsy and intracranial tumours—be held to be imprudent. In cases of cranial defect in young children any attempt at prothesis should be postponed, as the opening is likely to be closed, or much reduced in size by ossification and by the enlargement of the skull. The indications, therefore, for intervention with a prothetic aim are almost exclusively restricted to cases in which a protruded portion of brain is attached to a superficial scar and those in which the defect causes prominent and marked disfigurement. After a discussion of the most suitable means and agents for closing the defect, Morestin sums up his views in the following conclusions: (1) The repair of breaches in the cranial vault, though probably a little neglected, meets with some indications, which, however, should be kept within narrow limits; (2) for this restoration firm metallic plates are preferable to transplantations of decalcified bone, or of living or dead bone; the use is recommended of some malleable metal that is not very costly, or of celluloid, as with the choice of one of these the surgeon can work independently of an expert mechanician and thus adapt himself more suitably to the needs of ordinary practice. In the course of the report it is stated that no reliance can be placed on decalcified bone, which, after it has been implanted, very quickly becomes absorbed. The transplantation of living bone, whether from some animal or from the patient, fails to give any durable result, for if not eliminated soon after the operation it gradually disappears, retaining but precarious connexion with the surrounding parts, and its nutrition always being imperfect.

OBSTETRICS.

275 Treatment of the Third Stage of Labour.

F. von Winckel in a clinical lecture deals with the management of the period of expulsion of the placenta, basing his remarks on an experience in obstetrics extending over fifty years (*Dsut. med. Woch.*, January 9th, 1908). After some preliminary remarks on the introduction of Credé's method of expression, and the effect which this had on midwifery practice twenty-four years ago, he briefly describes the physiological course of the third stage of labour. The expulsive power, the contraction of the vaginal canal, and the supplemental work done by the abdominal muscles are well known. In 76 per cent. of all cases the placenta is expelled in the manner described by Schultze—that is, it is inverted into the membranes by a more or less extensive haematoma placed retroplacentally. Duncan's method occurs in from 15 to 20 per cent. In this case the placenta is detached at its lower edge first, so that the uterine surface is first seen. The Schultze method is the more favourable. Schatz explains the mechanism of Schultze's method as follows: The peristalsis of the uterus turns the upper third of the placenta first into the uterine cavity, then the middle third, and, lastly, the lower third. The presence of the buttocks in the lower portion of the genital canal prevents extensive contractions in the lower part of the uterus, and thus produces a sort of resistance peristalsis which acts entirely on the upper parts. The same author considers that the frequency of the method described by Duncan in some clinics is explained by the fact that as soon as the fetal head is born, many assistants and midwives deliver the body without waiting for Nature to complete her work. In this way the resistance peristalsis is prevented, and the placenta is not inverted into the cavity of the uterus. The author considers that only in about 3 or 4 per cent. of all cases is the natural expulsive power insufficient to complete the third stage absolutely without assistance. The question which he then asks himself is, How long does the spontaneous expulsion of the placenta take? and, arising out of this, Are there any disadvantages for the mother connected with such a process? Various observers have answered the first question in various ways; for example, Campe allows eight

hours for spontaneous expulsion. His own experience is given for a series of 968 cases. In 569 it was completed within half an hour, in 262 within one hour, and in 137 within two hours. In other words, the third stage of labour is completed spontaneously within one hour in 86 per cent of all cases. The suggestion made, that a placenta left in the uterus for over twelve hours after the birth of the child decomposes, is incorrect, since he has met with a case of a perfectly fresh placenta being delivered thirteen hours after the child. He states that in his clinic an expectant management of the third stage is rigidly carried out, and the results show that his morbidity and mortality is not higher than that of other clinics. Between the years 1900 and 1904, 8,097 women were delivered in his clinic, and 14·86 per cent. of them had some fever. This compares favourably with most European clinics. Among the number he lost 0.14 per cent. from infection within the clinic. This, too, is an average percentage. He gives the comparative figures of other clinics. He therefore claims that the expectant treatment is not less favourable than the active treatment either with respect to morbidity or mortality. An objection to this method has been raised that no lying-in institution can afford the time to teach students and midwives if the spontaneous expulsion is waited for. Against this argument von Winckel urges that it is much more important to teach normal processes in midwifery than operative measures. He considers that it is the duty of the obstetric teacher to preach limitation of interference to his pupils. He insists that in practice the expectant method is not to be objected to on the score of loss of time, since, as he has shown in the large majority of cases, the third period is completed within one hour. He is convinced that less blood is lost than when the placenta is expressed. The management which he employs is briefly as follows: As soon as the child is completely born the patient is slowly turned on her back, a hand lying on the fundus of the uterus to make sure that the organ is contracted. The vulva is then cleaned, and a flat china vessel is introduced beneath the nates. The umbilical cord is tied close to the genitals, and the free end lies in the vessel. The hand then is removed from the abdomen, the patient is told to draw up her knees, and she is covered up. She is told that the placenta will be delivered in a few minutes, after a few pains, and that she must say if she feels any blood coming away. She is allowed to bear down when she feels something pressing on the vulva. Every ten minutes one sees how much blood has been lost, and feels if the uterus is still contracted. As soon as the after-birth is expelled, this is carefully examined, especially for any defects at the uterine surface, and also the membranes. When the uterus has been much distended he gives ergot internally or hypodermically at the beginning of the third stage. If, after two hours, the placenta has not been born (this took place in about 3.7 per cent. of his cases) he employs expression, either by Credé's method or by Schroeder's. Should the placenta not follow carefully carried out expression, and if the patient has lost more than 230 grams of blood, he puts her under an anaesthetic, and then applies expression again. This mostly leads to success. Only when this fails, and the loss has reached 500 grams, does he have recourse to manual separation and delivery. This procedure is one of the most dangerous of the obstetric operations, and therefore the greatest caution with regard to asepsis, etc., must be employed. It is very rarely necessary.

GYNAECOLOGY.

276. **Intestinal Obstruction from Calcified Fibroids.**

MORESTIN (*Bull. et Mém. de la Soc. Anat. de Paris*, July, 1907) operated last summer on a woman, aged 63, subject for two years to chronic constipation. In May, 1907, several attacks of obstruction occurred, relieved by purgatives and enemata; the pain was severe and referred to the right of the hypogastrium. At length all the symptoms of complete obstruction developed. There were two very hard masses in Douglas's pouch, but the seat of obstruction in the bowel could not be accurately defined. The caecum being greatly distended it was opened and great masses of solid faeces with much flatus came away. After the patient was completely relieved the pelvis was explored and it then became evident that its cavity was blocked with hard fibroids. As the patient was very anxious to have the artificial anus in the caecum closed, Morestin operated again sixteen days after he had relieved the obstruction. He found several calcified fibroids in the pelvis; one as big as an orange arose from the lower part of the back of the uterus and compressed the rectum which was also encumbered with numerous bands of adhesion; these were divided. The uterus with its fibroids were removed by subtotal hysterectomy, the artificial anus, however, was not closed. Anuria set in on the second day, with great contraction of the pupils, and the patient died on the fourth day. No necropsy was permitted. Morestin believed that the kidneys had been damaged by the pressure of the fibroids on the ureters.

277. **Cystic Degeneration of the Cervix.**

PHILLIPS (*Journ. Obst. and Gyn.*, March, 1908) reports a case of degeneration of the cervix which occurred in a healthy woman who had had one confinement and been treated for ulceration of the womb, but who had had no pelvic trouble for fifteen years except slight leucorrhoea. Menstruation had been absent for six months before she came for advice; she complained of pain in the right iliac region, and had some haemorrhage after a vaginal examination had been made. The uterus and cervix were normal except for a small mass of soft mucous polypi protruding from the external os. There was no erosion and no Nabothian follicle. After the cervix had been dilated and curetted to remove the polypi, a smooth, rounded nodule the size of a cherry could be felt projecting anteriorly into the canal at the level of the internal os. When the mucous membrane over the nodule was incised there was a slight escape of blood and the swelling disappeared. As the nature of the swelling was uncertain, it was considered wise to remove the uterus by the vaginal route. The cervix was found to be increased in bulk, owing to the presence of a number of cystic spaces in its walls. Some of the cavities measured 13 mm. and 12 mm., and they contained a colourless, jelly-like material. The lining of the cervical canal was smooth, and did not suggest malignant disease. A microscopical examination showed the condition to be one of fibrosis of the supravaginal cervix, leading presumably to closure of some of the ducts with consequent distension of the glands. It seems doubtful whether such fibrosis represents the last stage of a chronic cervicitis or is simply an atrophic process. Diffused dilatation of the cervical glands is unusual; such cysts generally occur in localized portions of lacerated cervices. As regards treatment, supravaginal amputation of the cervix would possibly have obtained as good a result as the hysterectomy, and at a smaller risk. The diseased cervix must be considered as the cause of the pain. The patient has had no further discomfort.

THERAPEUTICS.

278. **The Treatment of Pruritus.**

IN dealing with the treatment of pruritus, Kromayer (*Deut. med. Woch.*, January 9th, 1908) limits himself to those cases in which itching is the most prominent and frequently the first symptom. He does not include itching which follows urticaria, eczema, etc. The etiology of pure pruritus is in many cases obscure. One knows that the primary itching leads to scratching, and this in its turn leads to profound changes, mostly of an eczematous or lichenous nature. Up to the present the treatment has been absolutely symptomatic. It consisted in relieving the itching by applying tar or its derivatives, or such preparations as menthol, bromocoll, etc. The oil of sandal wood, in from 10 to 50 per cent. ointment acts extremely well. The more the itching can be relieved, the better will be the chance of effecting a complete cure. But in the majority of cases, this form of treatment fails. Kromayer states that in the early stages one finds serous vesicles in the cutis. If one applies 15 per cent. caustic potash solution to a prurigino us skin, when no scratches are present, one will see varying numbers of transparent spots of about the size of a pin's head, looking like sago grains. These spots become raised above the level of the skin when the parts are washed with water. The potash appears to act on these vesicles electively, and destroys them. This he utilized in treatment. One thorough cauterization with potash should destroy all the vesicles completely, without producing too deep cauterization of the normal skin or of the affected area. As soon as the normal epidermis shows a grey transparent discoloration, one must interrupt the cauterization by washing freely with water.

This may be at the end of four or five seconds in tender skins, while less sensitive skins stand it for about one minute. It is necessary to judge the time during which the treatment may be applied carefully. The caustic must not be applied to fresh eczematous or inflamed areas, to secreting surfaces, to excoriations or scratched places, or to mucous membranes. It is therefore necessary first to cure all the acute inflammatory or other gross lesions by symptomatic treatment. The treatment is very little painful, and this pain soon disappears when the water is applied. In any case, the patients prefer the slight pain to the intolerable itching. The author illustrates the treatment by some cases. Next he describes the effect of Roentgen rays on pruritus. Previous to the formation of the vesicles one can demonstrate other histological changes. Among these are hyperaemia, transudation, oedema, proliferation of connective tissue cells, etc. The caustic potash treatment only attacks the vesicles, and does not remove the tendency of their formation. For this reason there is a possibility of recurrence after a successful treatment with caustic. The preliminary changes, however, can be dealt with by Roentgen rays. For curative effect it is necessary to give large doses, although small doses of the rays suffice to remove the itching. In pruritus ani, too, Roentgen rays give excellent results with proper dosage. For this form the potash treatment is excluded. A combined treatment with both methods usually will lead to permanent cures. Kromayer supplements his remarks with some results obtained in this way.

279. **Cystopurin.**

O. E. Loose (*Deut. med. Woch.*, January 10th, 1907) believes that he has been able to prove the direct activity of cystopurin in vesical disorders and in gonorrhoea. He gave it in two 1-gram tablets three times a day, and says that when dissolved in water it was practically tasteless. Not a single one of the forty-five patients treated with cystopurin complained of any ill-effect on the stomach, although several were suffering from chronic gastric affections. In several cases the motions of the bowels were increased in frequency. The quantity of urine was increased but pain in the kidneys and burning in the neighbourhood of the bladder was not met with. Even from 10 to 20 grams a day continued for a week did not irritate the kidneys. Albumen and casts were not found. In two cases of recent infection of the bladder and in six of old-standing infection he was able to follow out the action of the new medicament. In all the cases a surprisingly rapid improvement and removal of symptoms was attained. This was more marked in the chronic cases, because all other drugs and methods of treatment had failed to act previously. All the cases were subjected to microscopic, cystoscopic, and bacteriological examination. In a case of a paralytic bladder with calculi, which was complicated with a long-standing chronic gonorrhoea, the influence of the cystopurin on the gonococci was evidenced by a peculiar change in their behaviour. Gonococci are to be found partly in the form of a covering on the large epithelial cells and partly free in the secretion up to the thirteenth or fourteenth day after infection—that is, about the third to fourth day of discharge. Later than this they destroy the epithelial covering and insinuate themselves into the deeper layers until practically all the cocci are intracellularly placed. In the case in question, Loose saw groups of diplococci lying free in the secretion, and on investigation found that these cocci were gonococci. On discontinuing the use of bladder disinfectants, and continuing the cystopurin alone, he found numerous extracellular and as well as some intracellular gonococci. It is just possible that the extracellular cocci might have been derived from the secretion of the prostate, but he is inclined to ascribe the appearance as being due to the action of cystopurin. In order to settle this point he experimented on cases of fresh gonorrhoea which were not treated by any other means. In these cases, too, he was able to keep a large proportion of the gonococci extracellularly placed. In these cases he found that the number of cocci was not diminished, nor was the power of culture in any way influenced. He then treated cases with injections of potassium permanganate, and also of albargin, as well as the cystopurin, and while the potassium permanganate did not appear to have any influence on the gonococci, the albargin produced a curious change. The patients were first given injections of varying strength solutions of cystopurin, which decreased the amount of discharge. Then they were given 6 grams of cystopurin internally each day, and the urethra was irrigated with 0.1 per cent. albargin four times a day for three or five minutes. The gonococci rapidly diminished in number, and soon disappeared from the secretion. On injecting cystopurin again many extracellular and intracellular gonococci appeared in the thin discharge. It therefore seemed worth while to test the action on chronic forms of gonorrhoea. He has gained the impression as if the treatment shortened the duration of these cases, and as if the reaction of the urethra became less marked, but he admits that the observations have not yet been extended over a sufficiently long period to admit of a definite opinion. When cystopurin is given internally and the local treatment is undertaken with albargin or protargol alone, the former increases the number of lymphocytes, and it is just the lymphocytes which are able to destroy the gonococci. He considers it likely that cystopurin may prove useful in the prophylaxis of gonorrhoea as well as in the treatment.

280. **Endovenous Injections of Collargol in Gonococcal Rheumatism.**

Ricci (*Il Policlinico*, An. 15, f. 2, 1908) records good results from the above treatment in the following cases: (1) A woman, aged 23, after normal parturition fifteen months since, suffered from various ill-defined febrile attacks. On admission (October 26th, 1905) she was found to be suffering from gonorrhoeal uretero-cystitis and after suitable treatment (lavage with permanganate, urotropine and milk diet) soon improved. In November she developed endocarditis of rather severe type, and as this did not improve under salicylic and cardio-tonic treatment an endovenous injection of 4 c.cm. of 1 per cent. solution of collargol was given on November 24th. On November 26th the dyspnoea and cyanosis and vomiting were better, and a second injection was given. This improvement continued so that on December 1st the fever had quite disappeared and the general condition was much better. A fifth injection of 3 cg. was given on this day. On December 3rd a sixth and last injection was given, and on January 28th, 1906, the patient left the hospital. There was then a mitral murmur and no cystitis. In March, 1906, she returned for a slight attack of cystitis and the apex beat was then in the fifth space and mid-clavicular line; cardiac dullness normal, slight systolic murmur, reduplicated second pulmonary sound and regular action. (2) A woman, aged 19, suffered from gonorrhoeal rheumatism which did not yield at all to salicylic treatment (effusion in right knee) but after four injections of 1 per cent. collargol and local application of collargol ointment, recovered completely. (3) Woman, aged 37, with gonorrhoeal rheumatism of the elbow, which disappeared in twenty days after six injections of collargol. In both cases local douching was at the same time carried out. The author is convinced that in each case the cure was due to the collargol. There is a bibliography of fifty references dealing with this drug.

PATHOLOGY.

281. **Primary Cancer of the Liver.**

R. Lovaglio (*Giorn. Internaz. d. Sci. Med.*, Naples, 1907, p. 884) describes a cancer occurring in the liver of a thin jaundiced man dying with ascites (four pints) and a small right pleural effusion. The liver was greenish-brown, slightly granular, and smaller than normal; a few soft grayish secondary nodules the size of peas were seen on the left lobe, while on section of the right lobe a central dirty white mass the size of an orange was found. It was trabecular, the bundles of connective passing out into the surrounding liver tissue, and the edge of the tumour was ill-defined. The gall bladder was normal, as was the intestine. The stomach showed chronic mucous gastritis, the pancreas slight chronic interstitial pancreatitis. The other organs were found to be practically normal. Microscopically the tumour consisted of a network of connective tissue rich in fibroblasts, with numerous lymph spaces, and here and there infiltrated with small round cells, surrounding numerous bile passages. Every stage of transition could be seen between a normal bile duct on the one hand, and an alveolus crowded with polymorphous cancer cells on the other, according as the endothelium of the ducts had proliferated freely or not at all. Many of the endothelial cells showed atypical mitoses and various degenerative nuclear changes; some had several nuclei. The liver itself presented the picture of an ordinary lobular cirrhosis (? unilobular). Towards the margin of the neoplasm the hepatic lobules were crushed and atrophied, and invaded by connective tissue and tubes or cylinders formed by proliferation of the bile ducts. Discussing the literature of cancer of the liver, Lovaglio concludes that in most cases it originates in the bile ducts, and that the cirrhosis of the liver is secondary to the cancerous growth.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

282. **Gastromyxorrhoea.**

IN the normal state the mucous membrane of the stomach reacts to stimulation by secreting a more or less considerable quantity of mucus, and just as in certain diseased states the secretion of gastric juice, which normally is intermittent, may become continual (Reichmann's disease), so in certain conditions the mucous secretion of the stomach may be produced when there is no digestive stimulant present to excite and when the stomach is empty. It is known, however, that the normal fasting stomach may contain a certain quantity of mucus, and according to the author of this paper the term "gastromyxorrhoea" should only be applied to cases in which the fasting stomach contains over 25 c.cm. of mucous secretion (Cheinisse, *Semaine Médicale*, June 5th, 1907). Like Reichmann's disease, gastromyxorrhoea may be either intermittent or continual. In the intermittent form the hypersecretion of gastric mucus occurs at irregular intervals, and the attacks are ushered in by prodromal symptoms (headache, loss of appetite, nausea, etc.), or more commonly the attack comes on in the morning or when the patient awakes, the predominant symptom being violent vomiting which is rebellious to all treatment. The vomited matters at first consist of considerable quantities of a viscid liquid, to which later is added bile and duodenal juice, but never any food débris. Pains in the region of the stomach are usually slight and may be absent. During the attack the stomach is intolerant of any liquid or solid food. Considerable prostration may be induced by the vomiting, and the abdomen may become retracted, the pulse small, the tongue dry, and the amount of urine secreted diminished. The attack may pass off within a day or may last for as long as twelve days. As a rule, the attack ceases abruptly. In the intervals between the attacks the patients feel perfectly well, and examination of the stomach contents after a meal generally shows a normal acidity, and very little mucus. The continuous form of hypersecretion of mucus appears to be much more common. The symptoms of this form are indefinite, and the clinical picture is dominated by the signs of the primary disease. According to Kuttner, continual gastromyxorrhoea is found most commonly in chronic gastric catarrh, and in neuroses of the stomach which are accompanied by a diminution or absence of hydrochloric acid secretion. Whether or no there is any pathological substratum underlying this disturbance of the secretion of gastric mucus is at present unknown. Intermittent gastromyxorrhoea, according to Kuttner, arises from very variable conditions. It is, he states, found most frequently in nervous and easily excitable patients. He found it also in two cases caused by rhinitis with excessive secretion of nasal mucus. That one should, however, be careful in concluding that intermittent gastromyxorrhoea is of nervous origin is exemplified by two cases quoted by Pevzner, in which characteristic hypersecretion of mucus occurred: in one of these patients the attacks were found to be due to acute alcoholic excess, and in the other to the swallowing of matches. In the diagnosis of this condition it is important to assure oneself that the mucus withdrawn from the stomach is really of gastric origin, and does not come from the nose, the mouth, pharynx, oesophagus, or bronchi. To be of value the extraction of the stomach contents should not be carried out until several hours after all liquid and solid foods have been taken, and this is best done in the early morning; in those cases where there is gastric stasis, it is a good plan to wash out the stomach the evening before. In continuous gastromyxorrhoea treatment for the underlying disease should be carried out. In the intermittent form the stomach should be washed out as soon as possible after the onset has occurred. Hypodermic injections of morphine and atropine sometimes succeed in allaying the symptoms. Where signs of cardiac weakness are present, and there is great collapse, injections of normal saline solution may be necessary. In the intervals between the attacks suitable treatment for the underlying morbid state of the patient should be carried out.

283. **Quantitative Estimation of Pepsin.**

J. WITTE writes on his experiments in controlling Jakoby and Solms's quantitative estimation of pepsin (*Berl. klin. Woch.*, October 21st, 1907). This method consists in the clearing of a mixture of ricin and hydrochloric acid when pepsin solution is added to it. The test is carried out by dissolving 0.5 gram of ordinary ricin in 50 c.cm. of a 5 per cent. solution of sodium chloride. The solution is slightly opalescent. One takes 2 c.cm. of it in each of a number of test tubes and adds 0.5 c.cm. of $\frac{1}{5}$ normal hydrochloric acid to each. This addition causes a distinct milky clouding. One then adds 1 c.cm. of a dilution of filtered gastric juice, gained by means of an Ewald's test breakfast. The dilutions are arranged in such a way that in one tube 1 in 100 is added, while in another weaker dilutions are added until 1 in 10,000 is reached when there is hyperacidity, while when there is subacidity or anacidity one uses from 1 in 10 to 1 in 100. In all other cases from 1 in 100 to 1 in 1,000 suffices. The author gives directions for an easy method of obtaining suitable dilutions in each case. He realizes that every test for pepsin must be regarded as relative, since as long as we do not know more about the ferment, no absolute results can be gained. The test was compared with Hammerschlag's and Mett's methods, which are the most frequently used at present. Solms introduced a method of comparing the results by speaking of pepsin units. 100 units means that 1 c.cm. of a dilution of 1 in 100 of pepsin (1 c.cm.) clears the ricin mixture in three hours at incubation temperature. He found that the normal gastric juice has exactly 100 pepsin units, corresponding to a total acidity of from 40 to 60. He found varying units for the various gastric conditions. The results which Witte obtained in 50 patients are: (1) The normal gastric juice contains from 100 to 200. (2) No strict parallelism exists in normal stomachs between the pepsin and the acid. (3) The highest value under normal conditions obtained was nearly 500 units associated with a relatively low acidity (20 = free HCl and 41 = total acidity). (4) The lowest value was 20 units in a case of perigastritis, fairly low acidity. (5) In hyperacidity the peptic activity is usually raised, that is, the unit value is raised. (6) No inhibitory action is met with when the pepsin action is considerably raised. (7) The highest value was met with in association with a mild degree of hyperacidity. (8) Subacid gastric juices are almost always of low pepsin value. (9) Only in one case was the pepsin unit absent, while in all others a trace of pepsin was found even when there was complete anacidity. On the whole he finds that the results gained by this method correspond with those gained by Mett's method, but a few exceptions were seen. These require some further examination. The author deals with a number of other points in connexion with the pepsin content of the gastric juice and its indications.

284. **Conjunctival Reaction as a Test for Tuberculosis.**

GEBHARDT (*Pester-Medizin.-Chir. Presse*, March 15th, 1908) has tested the conjunctival reaction in 198 cases. He used tuberculin in a 3 per cent. solution of boric acid, and limited his cases to those in which no inflammation was present in the eyes, and in which the lacrymal duct was perfectly healthy. Reaction occurred in four to thirty-two hours, first showing itself by itching, then by redness, and finally by swelling. It lasted for twenty-four hours to some days, and disappeared without treatment. In no case did the inflammation extend to the eyeball or become purulent. In 64 cases of definite tuberculosis, surgical and medical, he obtained a positive result in 58 per cent. In 16 cases of suspicious tuberculosis he obtained a positive reaction in 50 6 per cent. In 118 cases of other diseases he obtained a positive reaction in 18 6 per cent. In cases of pulmonary tuberculosis in the first stage (10 cases), a positive result occurred in 80 per cent., in the second stage (13 cases) 100 per cent. In more advanced stages the large amount of toxin in the organism produces immunity, as has also been shown to occur in animals. The results of eleven observers of 360 cases of suspicious tuberculosis are averaged, showing a positive reaction in 50 3 per cent. (varying from 30.7 per cent. to 81.0 per cent), and also of eleven observers of 670 cases in which tuberculosis was not suspected, showing a positive reaction in 15.2 per cent. (varying from 1.1 per cent. to 60.0 per cent.). Five observers are quoted who, in cases which had given a positive reaction in life, on section found no tuberculous lesion. The author concludes:—(1) That in severe cases where tuberculosis is certain no reaction is obtained because the organism, impregnated with toxin, is immune.

(2) A positive reaction may be produced by other toxins than the tuberculous, so that it cannot be looked upon as specific.

SURGERY.

285. Early Diagnosis of Cancer of the Stomach.

H. Elsner (*Berliner Klinik*, January, 1908) discusses the early diagnosis of gastric carcinoma from the point of view of obtaining a larger number of patients for early radical operation. Hitherto only a small percentage of cases have been seen early enough for a radical operation to be possible. Mikulicz found that 30 per cent. of his operation cases were cured, but it must be remembered that the operative results of cancer of other parts of the body are materially better than this. For practical purposes Elsner finds it necessary to deal with cancer of the pylorus separately from that of the fundus. The subjective symptoms of the former generally set in early, and are due to stagnation of the gastric contents. They are: marked pressure in the gastric region, chiefly occurring soon after taking food, no pain, but nausea and belching of wind. Later, vomiting is associated with them. Since but little fluid can be absorbed when the stenosis is advanced, distressing thirst sets in, and the quantity of urine secreted daily diminishes to 600 or even 500 c.cm. Wasting also takes place at this epoch. The vomit has the characters of coffee grounds. Objective symptoms are a tumour to be felt in the middle line or to the right of it, which does not move with respiration, but which can be passively moved. At times the liver covers the tumour, so that it cannot be felt. The test of the functional activity of the stomach shows that at first there is merely stagnation. The contents tend to separate into three layers. The characters vary according to whether HCl is present or not. The acid usually disappears early, but in some cases both HCl and pepsin are found during the whole course of illness. When it is present, the contents possess a fermenting odour, and contain sarcina and yeast cells; at times the smell of sulphuretted hydrogen is present. When HCl is absent, the smell is acid, but this is due to volatile fatty acids, especially butyric acid. Lactic acid is found in a certain number of cases. The author illustrates the diagnostic importance of the subjective and objective symptoms and signs by means of cases. Turning to the early diagnosis of this form of the disease, he points out that three symptoms have to be depended on. The first is "stiffening" of the stomach. This means that on inspection a circumscribed protrusion is seen, in which the shape is constantly changing and peristalsis from left to right is evident. This symptom is frequently present before any tumour can be palpated and before there are signs of stagnation. The second symptom is the presence of microscopical residues of food in the fasting stomach. A test supper is given, and next morning the contents of the stomach are examined. When no macroscopical contents are present, but only a little turbid fluid, one examines this under the microscope and looks for starch granules, muscle fibres, and yeast cells. The third symptom is occult haemorrhages. The stools contain traces of blood, which can only be demonstrated chemically. The gualacum test reveals the smallest traces. Turning to the diagnosis of fundus carcinoma, the subjective symptoms set in much later than in pyloric cancer. Pressure in the gastric region is usually independent of taking food. Nausea and belching are common but vomiting is rare. Objectively one finds a tumour, situated either in the middle line or to the left, below the ensiform cartilage. The tumour is movable with respiration and is fixable in expiration. The functional examination reveals achylia, no marked stagnation, absence of HCl and of pepsin. The early diagnosis practically means a differential diagnosis between benign and malignant achylia. The three symptoms in favour of the latter are occult haemorrhages in the faeces, presence of albuminous fluid in the stomach, and the detection of amoebae and tumour cells in the contents. The second point is investigated by Salomon's method. It depends on the serous exudation from the ulcerating surfaces. The microscopical detection of cancer elements and of amoebae is highly important, and when positive is conclusive. By paying attention to these signs and symptoms he hopes that more cases can be sent to the surgeon sufficiently early to render an operation with chance of success possible.

286. Nervous Troubles in Cases of Appendicitis.

Stoicesco and Daniel (*Bull. et Mém. de la Soc. de Chir. de Bucarest*, No. 3, 1907) publish a case of aphasia and hemiplegia of the right side occurring in the course of an attack of appendicitis, and give the results of study and analysis of 16 recorded cases in which appendicular inflammation was complicated by some form of nervous disturbance. These complications are, it is stated, very variable in extent and character, and may affect either the central or peripheral parts of the nervous system, and present cerebral, meningeal, bulbar, or peripheral troubles, or hystero-nervous manifestations. Some of these disturbances are of infective origin, and occur at the full height of the appendicular attack, the toxins, owing to the absorbent capacity of the axis cylinders, being diffused by way of the nerves. Others, also of an infective origin, occur only after a surgical intervention, and in these cases it is very probable that the operation has opened up a multitude of blood and lymph channels, and thus caused a diffusion of the toxic infection. The mechanism of the appendicitic nerve complications may, it is pointed out, be reduced to these three causes: (*a*) appendicular intoxication, (*b*) diffused infection, and (*c*) hysteria. The statistics collected by the authors indicate that nervous complications of acute appendicitis are, as a rule, of serious import, as death results in about 41 per cent. of such cases. As would be expected, the fatal instances are those in which the nerve centres have been attacked. In peripheral nervous troubles of a hysterical nature recovery generally results. Study of their collected records has convinced the authors of the importance from a therapeutical point of view of operating when possible on an appendix that is quiescent. They hold that, unless prompt intervention is urgently indicated by the local symptoms and the general condition of the patient, endeavour should be made in those cases in which the appendicitis is complicated by nerve troubles, to abstain for a time from operation, and thus to assist the organism in its efforts to prevent a general toxic infection.

287. Narcosis Before Operations.

Strauch (*Med. Klin.*, March 8th, 1908) gives veronal, 1 gram, to every adult patient the night before an operation. One hour before operation he gives an injection of morphine, 0.015 to 0.02 gram, and at the same time a rectal injection of alcohol (cognac, red wine, with tea; females 50 grams, males 75 grams of each) combined with 5 to 10 minims of tincture of opium and a pinch of salt. The veronal gives the patient good sleep during the night previous to operation, instead of the night so frequently restless from anxiety. It has no depressing effect on the heart. It also tends to lessen the undesirable side action of morphine. By these means the patient is frequently fast asleep at the time when the anaesthetic is begun. The patient is brought to the theatre in bed so as not to awaken him. Ether is employed, administered in drops on an Esmarch's mask covered with a single fold of lint or six to eight folds of gauze. Generally in about five to ten minutes peaceful deep narcosis ensues. If this is not sufficiently deep, a few drops of chloroform are given, and then ether again employed. There is no excitation stage, even in the worst drinker. The result is not so good if veronal is omitted. There is no cessation of respiration; no sudden collapse, such as one has to fear with chloroform. There is no large collection of mucus in the throat, as with ether as usually given, and there is much less collapse than after chloroform; even in deep sleep the patients do not appear so stupefied, but as though in natural sleep, and they may even answer to their names while still feeling no pain. The veronal causes further sleep until the afternoon or evening. Vomiting occurs occasionally, but much less often than with chloroform—as a rule it is absent—and in the afternoon or evening after awakening the patient is able to take nourishment.

288. Operative Treatment of Subdeltoid Bursitis.

Baer (*Johns Hopkins Hosp. Bulletin*, June-July, 1907) recommends the complete excision of the subdeltoid bursa as the most satisfactory means of dealing with those cases of chronic bursitis in which limitation of movement and pain render the condition most difficult to treat. That an inflamed subdeltoid bursa prohibits the full motion of the head of the humerus in the glenoid cavity is anatomically demonstrable, since the coraco-acromial ligament prevents the swollen bursa from passing beneath it, thus limiting abduction more than ten to fifteen degrees. Notes of four cases are given in which the condition was treated by removal of the bursa *in toto*, and an otherwise long and tedious course of treatment by passive movements and massage thus reduced to a period of a fortnight or three weeks. A small incision is made parallel to the long axis of the humerus, midway between the coracoid and acromial processes. The fibres of the

deltoid are separated to expose the bursa, which is then dissected out and removed in its entirety, together with any adhesions that may have formed. This is easy if the walls of the bursa are thickened, but care must be taken if the walls are thin. After excision the arm should be moved in all directions, and the wound in the deltoid and skin closed. The arm should be bandaged to the side for a week, when all dressings can be removed and the arm entirely freed and used. By such a method there is no fear of damage from rupturing adhesions or vessels, and the patient is saved a long and painful course of treatment.

OBSTETRICS.

289. Successful Operation for Tubal Gestation at Term.

POTOCKI (*Comptes rendus de la Soc. d'Obstét. de Gynéc. et de Pédiatr. de Paris*, January, 1908) describes at full length, with comments and drawings, a case where he operated on a primipara, aged 23, at term, removing a living child with the placenta and sac entire. The uterus and opposite appendages were saved, and the patient afterwards became pregnant again, and bore a child delivered living at term. He dwells on certain features of the case of general interest. (1) The patient was a primipara, and there was not the least reason to suspect that the affected Fallopian tube, nor any other part of the genital tract, had been inflamed. (2) Contrary to the rule in tubal gestation, there was no loss of blood or expulsion of uterine decidua, or attacks of pain until the fourth month. (3) The abdominal distension at term was so irregular that ectopic gestation in a thin sac was suspected before the operation; the sac was very thin, and the position of the placenta recognized easily by souffle and thrill. Potocki determined to operate before spurious labour pains came on. (4) The operator intended to remove the fetus alone, and fix the walls of the sac to the abdominal incision ("marsupialization"). But violent haemorrhage occurred when he handled the edge of the placenta in order to determine its relations. He clamped the broad ligament close to the uterus internally to the sac, and also the ovarian vessels outside it. Then all haemorrhage ceased, and the sac was removed with facility. (5) As the sac was fairly pedunculated, the uterus and opposite appendages were not sacrificed. The operation was performed on September 16th, 1903, and the patient was safely delivered of a living child, now thriving, on September 23rd, 1905. (6) The child developed in the tubal sac was reared, but has proved to be a microcephalic idiot, subject for over a year from the age of 6 months to epileptiform attacks which passed off. At the age of 2 she could not talk, and knew nobody, not even her nurse. Dentition was retarded, but normal in other respects. The cause of the microcephaly was not determined; the head so lay in the sac as to be quite free from any kind of pressure, and the sac held plenty of liquor amnii protecting the head from external injury, nor was there any taint in the parents. Lastly, no instruments were necessary. (7) Potocki admits that the intact sac at term is quite exceptional in tubal gestation. Stranger still, it was the isthmus that lodged the cornu in his case. As a rule, a sac in the isthmus ruptures very early. The sac dilated very gradually in this instance, and, if rupture occurred, the ovum itself checked haemorrhage by pressing on the edges of the laceration. Potocki grants that, had the sac in his patient not preserved the characters and relations of the tubal sac in the earlier months of pregnancy, the operation would have proved far more dangerous. But when the placenta is attached over a broad area, difficult to define anatomically, haemostasis by clamping of the uterine and ovarian arteries is still the first step to be taken by the operator.

290. Milk Secretion and Congestion Hyperaemia.

RUDOLF TH. JASCHKE (*Med. Klin.*, February 23rd, 1908) states that in the years 1904–7, during which he has paid particular attention to the natural feeding of infants, the number of those thus fed has risen 20 per cent., while that of those artificially fed has decreased by one-third. In August, 1907, 97.22 per cent. of his babies were naturally fed, with practically no dyspepsia. Not only is other milk an alimentary poison, but its use does away with the free hydrochloric acid in the stomach, which alone exercises a bactericidal action. By means of a systematic treatment of the breasts by congestion hyperaemia, Jaschke has been successful in inducing lactation in women who formerly were unable to feed their infants. For the proof of its efficacy only those women were chosen who had previously been unable to suckle. Notes are given of four cases in which the congestion hyperaemia induced or increased the flow of milk, thus avoiding the necessity for even partial artificial feeding. The children gained weight steadily. The author thinks that excellent results will be obtained when the suction treatment is applied to all cases where the flow is delayed, sluggish, or insufficient. The treatment also improves those nipples which are difficult to hold, and in one case of depressed nipples these were completely cured. It is also a prophylactic against mastitis, the author having had no single case during the whole time he has used this treatment. Improved lactation follows as a result of the increased supply of nourishment in the congested area. Since an increase in the lymph stream has been shown to occur after the cessation of the congestion, it is advisable to apply the suction-bell two or three hours before the infant is to be next put to the breast. The first application should not be longer than fifteen minutes, but afterwards it may be left on for up to twenty-five or thirty minutes, according to the severity of the case. It may be continued until the milk spurts out in several fine streams. The treatment should be used not more than three times a day. The author hopes that others will make trial of the method.

GYNAECOLOGY.

291. The Origin of Primary Cancer of Fallopian Tube.

KEHRER (*Monats. f. Geb. u. Gyn.*, March, 1908) analyses a case of this rare condition which, in his opinion, does not support the theory that tubal cancer originates in tubes altered by inflammatory changes. His patient was 57 years of age, had once been pregnant, had never suffered from any pelvic disease, and had ceased to menstruate at the age of 48. She was very corpulent. For a few months she had been subject to hypogastric pains, followed by free and sometimes blood-stained discharge. There was, behind the uterus, a tumour of the size of a fist, and a smaller mass to its left. The patient was watched, and as a fortnight later the right tumour had distinctly increased in size, Kehrer operated. The tumour adhered firmly to adjacent structures, and metastatic deposits were discovered on the top of the bladder, surface of the uterus, transverse colon, and right parametrium. The abdominal cavity was carefully searched for a primary seat of cancer, but nothing more was found. The uterus was extirpated with its appendages entire, the cancerous mass dissected as much as possible out of the right parametrium, and the right ureter cleared for some part of its course from malignant growth, but it was found impossible to clear away all the metastatic deposits, even in the pelvis alone. The left Fallopian tube was obstructed and twisted, but free from new growth. The right tube formed a retort-shaped, thin-walled cyst, filled towards its abdominal end with papillary-alveolar cancer, but at some points it was purely papillary cancer, and in the metastatic deposits the latter and simpler type prevailed. The opposite (left) ovary was converted into a cancerous mass. Kehrer had no doubt that the right Fallopian tube was the primary seat of disease. After convalescence an attack of pleurisy occurred; the pleura (right) was tapped, and blood-stained fluid came away, then ascites developed. Death occurred a little over three months after the operation; big masses had formed in the pelvis, with general emaciation. Unfortunately an autopsy was forbidden. Kehrer noted the rapid growth of the tumour whilst the case was under his own observation, and the absence, at the same time, of any febrile symptom. He denied that tubal cancer invariably followed some form of salpingitis, but noted, as others have done, that inflammatory changes frequently followed the development of primary cancer in the tube. Salpingitis might precede cancer, but he could not believe that it in such cases was the cause of the malignant disease, which began as a cancerous papillary growth, and when advanced assumed the alveolar type. Early operation, with removal of the entire uterus with the appendages, could alone give any prospect of permanent relief.

THERAPEUTICS.

292. The Pyocyanase Treatment of Diphtheria.

THE introduction of antitoxin in the treatment of diphtheria has to a certain extent caused physicians to neglect the local treatment of the throat, and at present it is usual

for one merely to keep the parts locally clean by means of mild antiseptic solutions. R. Mühsam (*Deut. med. Woch.*, February 6th, 1908) has experimented with the pyocyanase local treatment, and speaks well of the results obtained with it. Pyocyanase is an enzyme gained from cultures of *B. pyocyaneus*. It has a powerful bacteriolytic action. Emmerich and Löw found that pyocyanase exerted this action, not only on the pyocyaneus bacilli, but also on diphtheria, cholera, typhosus, and other bacilli, as well as on streptococci, staphylococci, and gonococci. First the author, working with Weil, found that the addition of from ½ c.cm. to 2 c.cm. of the solution to diphtheria cultures (5 c.cm. in bouillon) killed the bacilli, while the control tubes showed normal growth. When the pyocyanase was introduced at the same time as the bouillon was inoculated with diphtheria bacilli no growth took place. He further found that one drop of the solution added to 5 c.cm. of a twenty-four hours culture of diphtheria bacilli in bouillon only exerted an inhibitory influence on the growth, as shown by making subcultures on agar. Larger quantities of the solution killed the bacilli. He controlled these results with animal experiment with consistent results. In treating his cases of diphtheria with pyocyanase he used about 2 c.cm. of the solution (which was found to be quite sterile), and applied this, warmed to 40° C., by means of a spray with a special mouthpiece. The tongue has to be held down with a spatula, so that the sprayed fluid reaches the tonsil and uvula. This was done three times a day, or more often. He discusses the mortality of diphtheria since the introduction of antitoxin with the view of being able to compare the results obtained. During the latter part of 1907 it appears that the epidemic of diphtheria in Berlin has been a severe one, and has yielded a mortality of 17 per cent. Seventy-nine cases treated with serum alone gave a mortality of 16 per cent., while 23 treated with pyocyanase, either with or without serum, gave a mortality of 17 per cent. He realizes that the numbers are too small to be of much value. All the cases treated with pyocyanase alone recovered. After discussing the type of cases dealt with, he states that the chief difference between the cases treated locally in this way and those treated only by serum was that in the latter case the membrane is usually cast off in pieces and even in one piece, while after pyocyanase the membrane appears to dissolve from the edges and to be transformed into a succulent, glasern thin veil, which covers the tonsils for a few days before disappearing. The fetor ex ore is rapidly removed. In concluding, he owns that it is difficult to decide whether a medicament which is used with diphtheria antitoxin has any curative value, and considers that many hundred cases will have to be observed before a conclusion of this kind can be arrived at. He believes that it assists in removing the membrane and in improving the general condition, and states that the experience made with this solution justifies one in recommending its use, together with antitoxic serum, in the treatment of diphtheria.

293. Hypodermic Injections of Oxygen in Sciatica.

Sicuriani (*Gazz. degli Osped.*, March 29th, 1908) has obtained good results in the treatment of sciatica and allied diseases with hypodermic injections of oxygen. He treated 13 cases of sciatica, 2 of multiple chronic arthralgia, 1 neuralgia of the right crural and the neurasthenic rachialgia. The 11 cases of simple primary sciatica, of varying duration (one to twelve months) and all completely disabled, were cured in periods varying from fifteen days to one month and after six to ten applications. About 300 c.cm. of oxygen were injected at a time and on alternate days. There was no doubt as to the evident analgesic effect of the treatment. In compression or symptomatic sciatica it does little or no good, so that a purely mechanical explanation of its therapeutic properties will not suffice. More probably it acts by its biochemical effects on tissue change. The necessary apparatus is simple, easy of appreciation and not costly—in all these respects contrasting favourably with *x*-ray treatment.

294. Treatment of Experimental Infection with Trypanosoma Gambiense.

Mesnil and Nicolle (*Ann. de l'Inst. Pasteur*, December 25th, 1907) announce further results on this subject. In 1906 they inoculated a series of monkeys with *Trypanosoma gambiense* and then tested the curative effects of atoxyl and the benzidine dye Ph. (Afridol violet). At the end of that year they issued a provisional report on the beneficial influence of these remedies, reserving their final opinion until the animals had been kept under observation for a longer period. They are now (December, 1907) able to announce without hesitation or qualification that definite cures have been effected. Twelve monkeys were submitted to infection with a virus which killed the control animals in from twenty to fifty-four days, and have been completely cured. Six of them were treated with atoxyl alone, four with atoxyl and Ph. alternately, and two with Ph. which was employed alone to begin with, but was supplemented as the termination of the treatment by one or two doses of atoxyl. None of these animals after the establishment of a cure exhibited any after-effects attributable either to the infection or to the therapeutic treatment; their general condition after the disappearance of the parasites was identical with that of normal animals kept as controls, and many of them gained considerably in weight.

PATHOLOGY.

295. The Agglutination Reaction for Malta Fever.

P. Stefanelli (*Riv. crit. di. Clin. Med.*, Florence, 1907, No. 31) has made a number of experiments upon rabbits with different samples of the *Micrococcus melitensis*. The virulence of this organism for rabbits is low, but can be augmented by the method of passage, employing subdural inoculation. Graver symptoms (collapse, fever, loss of appetite) are caused by intravenous or intraperitoneal injection than by subcutaneous inoculation. Stefanelli found that the serum of rabbits infected with the micrococcus acquired the power of agglutinating it at the end of a week, and might still retain the power six months later. Different samples of the microbe showed different degrees of agglutinability; he lays stress on the importance of using quite young cultures in looking for the agglutinating reaction. Stefanelli has also examined the blood of numerous patients for the agglutinating reaction. A positive reaction was obtained at dilutions of from 1 to 30 to 1 to 150 in a number of cases of Malta fever in which the micrococcus could not be grown from the blood; in 2 cases where it was thus grown the agglutination took place at dilutions of 1 to 250 and 1 to 500. Out of 10 patients with pneumococcal pneumonia 1 gave serum agglutinating the micrococcus at a dilution as high as 1 to 10. One patient out of 3 with staphylococcaemia gave serum agglutinating the micrococcus at a dilution of 1 to 20. One out of 15 cases definitely diagnosed as typhoid fever gave serum agglutinating at a dilution of 1 to 15 or 20; and the same result was obtained with the serum of 2 cases of advanced pulmonary tuberculosis out of 30 cases examined. The micrococcus was not agglutinated by the serums obtained from 5 cases of malarial fever, or 35 patients with various organic diseases. Stefanelli is led to believe that any patient whose serum agglutinates the micrococcus at dilutions of 1 to 30 or more exhibits the specific reaction for infection with the *Micrococcus melitensis*.

296. Histology of Experimental Glanders.

Charles W. Duval and Percival G. White (*Journ. of Exper. Med.*, July, 1907) have conducted experiments on rabbits and guinea-pigs with the object of determining whether the histological changes in experimental glanders vary directly with the virulence of the organism employed. The methods of inoculation were subcutaneous, intravenous, intraperitoneal, intraorbital, and corneal. The same strain of *Bacillus mallei* was used throughout the work, which extended over a period of two years. The animals were injected with varying amounts of a highly virulent culture, of a moderately virulent culture, of an attenuated culture, and of a culture killed by heat. The authors found that the lesions produced differed widely in their histological features according to the degree of virulence of the inoculated bacilli. The highly virulent cultures caused primary necrosis and disintegration of the tissue, followed by invasion of the injured area by polymorphonuclear leucocytes. The bacilli of moderate virulence gave rise to a primary lesion of an acute inflammatory nature, in which the cells showed no evidence of necrosis or disintegration. The attenuated bacilli produced primary tissue proliferation with the formation of epithelioid and giant cells. Every grade of lesion was observable between the acute exudative and the chronic proliferative, depending upon the toxicity of the cultures. Whether exudative or proliferative, the lesions were focal in character. The authors think that the giant cell of glanders undoubtedly originates from the endothelial cell of the blood and lymph channels, and is formed not by cell fusion but by division of the nucleus of the endothelial cell. They find that the proliferative lesions resulting from the inoculation of bacilli of low virulence are analogous to the lesions found in tuberculosis.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

297. Essential Paroxysmal Tachycardia.

DEGANELLO (*Il Policlin.*, An. 15, F. 2, 1908) records a case of this disease occurring in an epileptic, aged 48, and, from a study of this and other cases, concludes as follows: One of the chief characteristics of essential tachycardia is the sudden numerical doubling, or even quadrupling, of the pulse beats during the attack. A certain analogy exists between this doubling and the increased pulse beat obtained by stimulation of the frog's heart by heat or electricity. The condition seems closely associated with an increase in the excitability and conductivity of the heart muscle, brought about by a physio-chemical change in its cellular protoplasm, or by a change in the metabolic processes going on in the myocardial cells. External stimuli acting on a heart whose cells are already prepared as indicated above may set up an attack. These stimuli may be chemical—for example, belladonna, carbolic acid, nicotine, alcohol, various infective toxins, toxins developed in gastric disorders, etc.; or mechanical—for example, the increased intracardiac pressure following excessive muscular work, for example, forced marching. Over-stimulation of the accelerans or paralysis of the vagus may induce changes in the myocardial cells which also favour tachycardia. Probably there are intermediate forms linking up those cases of tachycardia which are associated with some anatomical lesion with the pure essential tachycardia where no such lesion has hitherto been discovered. Broadly speaking, two chief groups may be separated—(1) those due to disorders of extracardiac nerves—brain, bulb, spinal medulla, vagus, and accelerans nerve; and (2) those due to disorder in the cardiac ganglia. The author gives a short bibliography of twenty-six references. The patient was much relieved by endovenous injections of strophanthin ½ to 1 mg. per diem.

298. The Ophthalmo-reaction to Tuberculin.

F. FRANKE (*Deut. med. Woch.*, November 28th, 1907) has employed the ophthalmo-reaction test in 24 cases of diseases of the eye. Six of his patients were suffering from distinct tuberculous lesions of the eye, and all of them gave positive reactions. Fourteen of the patients gave a negative reaction, 6 of whom were suffering from syphilitic affections, 3 from episcleritis, 3 from serous iritis, and 1 each from retinitis and glaucoma. The remaining 4 patients reacted to the instillation. These cases included a fresh retinitis, a parenchymatous inflammation of the cornea, and 2 recovered cases of injury. In none of these four was there any sign of tuberculosis of the lungs or other organs. The author has further obtained a colleague who tested the reaction in 12 medical cases. Of these, 10 were suffering from affections of the respiratory organs; 3 gave a negative, and 9 a positive, result. In one case a marked positive reaction was obtained in a girl who was suffering from weakness, headache, etc., but in whom no signs of a tuberculosis could be elicited. In spite of these results, Franke states that the test did not fail him in a single case, while it was of great diagnostic value in doubtful cases. He does not state in what way he confirmed the diagnosis. He suggests adding thymol or a small quantity of boracic acid to the solution to render it capable of being kept. F. Koehler (*Deut. med. Woch*, December 12th, 1907) also deals with the reaction. He has used old tuberculin and instead of keeping to a 1 per cent. solution, he used a 1 per cent., 2 per cent., and 4 per cent. solution. His cases numbered 175, of whom 169 were clinically certain cases of tuberculosis, 5 were doubtful cases, and 1 was certainly not tuberculous. Of the undoubted tuberculous patients, 51 per cent. reacted to a 1 per cent. solution, 41 per cent. reacted to a 2 per cent. after the 1 per cent. solution had failed, while 8 per cent. reacted to the 4 per cent. solution after the weaker solutions had yielded negative results; 4.7 per cent. gave negative results. Of the 5 doubtful cases, 2 reacted to the 1 per cent. solution and 3 to the 2 per cent. solution. The case that was certainly not tuberculous reacted to a 4 per cent. solution. From this he deduces that 95 per cent. of the tuberculosis cases (!) reacted, and considers that further observations are required to determine whether the reaction takes place with non-tuberculous cases or not. He calls attention to the statement of Cohn that typhoid fever patients frequently give a positive reaction. Schenck and Seiffert deal with their experience in the *Muench. med. Woch.* of November 12th, 1907. They tabulate their cases into groups of clinical tuberculosis and doubtful cases, and also of cases in which tuberculosis could be excluded. They also used 1, 2 and 4 per cent. solutions of old tuberculin. Of 28 undoubted cases of tuberculosis, 22 gave the reaction with 1 per cent., 4 with 2 per cent., and 1 with 4 per cent. solution. Of the 20 doubtful cases, 6 gave the reaction with 1 per cent., 6 with 2 per cent., and 3 with 4 per cent. solutions, while 5 did not react. Of the non-tuberculous cases, 26 out of 52 gave a positive reaction. They conclude that the ophthalmo-reaction has doubtless a great importance, and that it will soon be utilized as a means of early diagnosis of tuberculosis. It is simple and free from danger, and can therefore be recommended to general use without hesitation. When dealing with the results obtained in their third class, they point out that 12 of the 15 cases reacted only when the 4 per cent. solution was used. They are otherwise unable to explain the frequency of the positive reaction among these patients. It does not appear to them to detract from the value of the method as a means of early diagnosis.

299. Laryngeal Complications of Typhoid Fever.

RIESER (*Amer. Journ. of Med. Sciences*, February, 1908) reports two cases of typhoid fever in which the larynx became involved, and he considers that such a pathological condition is very much more frequent than is clinically diagnosed. From a consideration of previously reported cases, among causative factors are to be considered the friction and irritation of the physiological acts of phonation and swallowing and the pathological act of coughing operating on a surface which is part of an organism suffering from a general typhoid toxaemia, the mucous membrane being in a state of catarrhal inflammation, with swollen surface epithelium. Thermic influences—for example, sudden draughts and the primary invasion of lymphoid tissues by the Eberth bacillus—may so act, while in one of the cases reported the submucous infiltration of the arytenoepiglottic folds was due to a direct extension of the pharyngeal involvement in a double parotitis. The dorsal decubitus, by its weakening effect upon the natural resistance of the mucous membrane to the entry of organisms, may play a part in the etiology of the condition. Laryngeal inflammation may occur at any time between the first and tenth weeks, and its onset is generally insidious and unobserved. If it arise during or before the fastigium, while the patient is delirious or apathetic, extreme dyspnœa and suffocative spasm may be the first intimation of its occurrence. Usually, however, it occurs insidiously, when convalescence is well established, the earliest symptoms in order of frequency being hoarseness, voice change, aphonia, inspiratory stridor, dyspnœa, laryngeal cough, and dysphagia. Any of these may be overlooked or attributed to post-typhoid asthenia, until suddenly an acute oedema of the glottis sets in. The slightest hoarseness, change of voice, or laryngeal pain should necessitate a laryngoscopic examination, and if laryngeal inflammation be present the patient should be kept under constant observation, with everything ready for immediate tracheotomy if needed. Pending this necessity, steaming the larynx, ice to suck, or spraying with a 2 per cent. solution of cocaine, or a 1 in 1,000 solution of adrenalin chloride may be tried. Tracheotomy should be performed as soon as stenosis is positively established. In one of the cases reported so sudden was the onset of complete stenosis that laryngotomy was performed by one of the house staff with an ordinary pocket knife, as the condition suddenly became too urgent to risk delay in sending to the operating room for instruments.

SURGERY.

300. Wound of Epigastric Artery in Paracentesis: Death.

PUNCTURE with the trocar midway between the umbilicus and the anterior superior spine of the ilium is not unattended with danger. Trzebicky, Boidin, and Lian have reported instances where the deep epigastric artery has

been wounded, and Dr. Petit has observed a fatal instance of this accident. Lian and others have written papers demonstrating how the blood vessel in question often lies close to the seat of election for puncture. Pierre Merle reports a second fatal case in Petit's clinic. (Perforation de l'artère épigastrique au cours d'une paracentèse abdominale : mort. *Bull. et Mém. de la Soc. Anat. de Paris*, July, 1907, p. 522. This article includes references to the works of the writers quoted above.) The patient was a fat man of very intemperate habits; he was suffering when admitted into hospital from cirrhosis of the liver with ascites. Paracentesis was performed at 11 o'clock one morning last summer, the trocar being entered between the umbilicus and the iliac spine; after death the puncture was found to lie nearer to the latter than to the navel, but the fat walls had collapsed. Twenty pints of lemon-coloured fluid came away through the cannula, half an hour being allowed for its escape. A small drop of blood ran out on to the skin when the instrument was withdrawn, but the patient seemed perfectly well. Two hours later he felt a little indisposed, and complained of pain in the left iliac region. Half an hour afterwards he asked for water and turned very pale, dying within a few minutes. At the autopsy several pints of blood escaped from the abdominal cavity, and a big clot was found in the left iliac fossa. There was also a big haematoma, stud-shaped, the deeper part being subserous, the more superficial subcutaneous, and they communicated along the track of the puncture. The trocar had wounded the deep epigastric artery itself, not one of its branches. As the integuments were loaded with fat the subcutaneous part of the haematoma was not detected before the parietes had been opened up at the autopsy. Lian has suggested that paracentesis should be made at the junction of the outer and middle third of the space between the iliac spine and the umbilicus.

301. **Fracture of Great Trochanter.**

Armstrong (*Ann. of Surg.*, August, 1907) publishes a case of isolated fracture of the great trochanter on the right side in a man aged 33 years, who had been struck on the thigh, just behind the process, by a falling bag of flour, weighing 140 lb. The radiograph showed a separation of the great trochanter from the femur at its outer part, the inner part apparently remaining attached by periosteum and fibrous tissue. The injured limb, slightly flexed at the hip and knee, was widely abducted, and, together with the pelvis, fixed in a plaster-of-Paris spica bandage. The patient, when last seen, about five months after the date of the injury, could walk well and without any perceptible limp. This fracture, the author states, is a very rare one. It has generally been the result of direct violence applied outside and behind the trochanter, or of a fall on the hip. One case has been recorded of fracture from muscular contraction, and another of spontaneous fracture in a subject of mollities ossium. The degree of displacement of the fragment varies and depends upon whether the epiphysis, together with the periosteum and fibrous tissue, has been completely torn away from the diaphysis or not. When there is no marked displacement of the fragment and the seat of injury is much swollen, the condition is apt to be mistaken for a severe contusion. When the fragment is completely torn away from the femur, it may be drawn upward and backward as much as 6 cm. from its normal position. Crepitus may sometimes be obtained by pushing the fragment downwards while the leg is well abducted. The prognosis depends to some extent upon the degree of detachment of the fragment. If this be completely separated, it is likely that a pseudo-arthrosis will be formed; but if it be retained by partly divided periosteum and fibrous tissue, bony union may take place. In the latter condition a perfect functional result may be obtained by rest in bed and immobilization of the limb in the position of abduction. In regard to the treatment of cases in which the trochanter has been completely detached, the author suggests that modern technique renders it safe to replace and retain the fragment by sutures passed either through the bone or through its tendinous attachments, or by holding it in its place by a peg. Traumatic separation of the epiphysis of the great trochanter in subjects under the age of 18 occurs more frequently than fracture does in adults.

302 **Spina Bifida.**

Buccheri (*Archiv. di Ortoped.*, An. 25, F. 1, 1908) since 1901 has treated 21 cases of spina bifida, and operated 19 times. In each a radical closure of the opening was attempted. The ages varied from 2 days to 3 years, the majority being under 40 days. The females preponderated over the males (12 to 9). Two of the cases were pure meningoceles, 18 myelo-cystoceles, and 1 myelo meningocele. *Caeteris paribus*, the author recommends operation in every case of spina bifida, and the earlier the better; the chief contra-indication is the possibility or onset of acute hydrocephalus or the coexistence of other grave deformities. Ulceration of the tumour is not a contraindication (4 of the author's cases were ulcerated, yet 3 of these were cured). Of the author's 21 cases (19 operations), only 3 died as a more or less direct result of the operation (1 from bronchopneumonia, sixteen days after operation; 1, aged 5 days, from meningitis three days after; and 1, aged 3 years, from shock fifteen days after). The mean duration of treatment was ten days, and 11 of the cases healed by first intention. The patients remained well as far as they were seen in later years. The results of treatment by injection are not better than these.

OBSTETRICS.

303. **Extrauterine Pregnancy.**

Orthmann discusses the question whether tubal pregnancies in the early months should be operated on vaginally or abdominally (*Deut. med. Woch.*, January 30th, 1908). First he approaches the question of operative versus expectant treatment. He has little doubt that every one will agree with him that after interruption of the tubal pregnancy one should operate at once. A few French obstetricians appear to take a different view of this, but as a rule one may say that this indication holds good in all clinics. When the diagnosis of intact pregnancy in the early months can be made, a question of employing an expectant attitude may be considered. It is, however, rare to get the patients in this condition; among 100 operations he has met with this only five times. After rupture of the sac operation is required when a haematocele forms, and especially if this increases. When no haematocele is detectable, some observers consider that one should await developments. It is, however, extremely difficult to be sure that the pregnancy has come to a standstill after either abortion or rupture. He cites a case in illustration. In order to form definite opinions of the best method of procedure he analyses the statistics of various clinics and compares his own. In a table he shows the results gained in eight clinics by abdominal operation and by various vaginal operations; 423 out of 532 patients were operated on through the abdominal wall, and 29 died. Only 3 of the vaginal operation cases ended fatally. The next table deals with 17 clinics. The comparative result of expectant and operative treatment is shown: 1,176 were subjected to abdominal operations, with 95 deaths; 134 were subjected to vaginal coeliotomy, with 7 deaths; while 770 were treated expectantly, with 5 deaths. It thus appears that the total mortality of operated cases is 7 per cent., the mortality of abdominal coeliotomy is 8 per cent., that of vaginal coeliotomy is 5 per cent., that of vaginal incision 3 per cent., and that of total extirpation 8 per cent. The claims made for abdominal operation as against vaginal are: First, the operations are technically easier. This he considers is no reason for choosing this method, since technical difficulties can be overcome by experience. In his own cases he was only compelled to give up the vaginal method and complete the operation from the abdomen once out of fifty-seven times. This case was one of a large tumour, the tubal pregnancy being still intact, and at the end of the third month. Secondly, the abdominal method is said to give a better survey of the field of operation. In reply to this, he finds that he has always been able to obtain a sufficiently good command over the parts in anterior vaginal coeliotomy. Thirdly, it is claimed that haemorrhage can be more readily dealt with through the abdomen, but this is not the author's experience. He says that the vaginal method admits of a very rapid access to the tube, and, further, that shock action is absent in these operations, while, as is freely recognized, it is profound in most abdominal operations. It is just as easy to deal with other affections of the uterus and appendages by the vaginal method as by the abdominal, and in several cases he dealt with coexisting affections of other organs while operating on the tubal pregnancy. A great advantage is the absence of hernia after recovery. His own cases number 228. Of these, 128 were treated expectantly without a death, 100 were operated on, 38 operations were performed through the abdominal wall, and 5 patients died. He performed anterior colpo-coeliotomy 57 times, and lost one patient; in 4 cases he incised the vagina, and in another single case he removed the whole uterus. Neither of these patients died. He is therefore an ardent supporter of the anterior vaginal operation, and claims

that up to the end of the third month one obtains very good results from it. He further states that the ultimate condition of the vaginally-operated patients is better than that of the abdominal operation patients. One does the patient less harm by operating through the vagina, and at the same time one can help the patient just as quickly and surely by this method as by the abdominal method.

304. **Pregnancy Complicated by Uterine Fibroma.**

HARDOUIN (*Arch. Gén. de Chir*, No. 6, 1907) publishes the case of a woman affected with a fibroma of the uterus, who in the fourth month of pregnancy presented grave symptoms, necessitating immediate intervention. From a study based on this report, of the whole question of the course to be pursued in cases of pregnancy complicated with uterine fibroma, the following conclusions are drawn: In cases in which there are not any alarming symptoms, there is no necessity, as a rule, for intervention. In a large majority of the instances of this complication pregnancy reaches its normal term without presenting any serious incident. If, however, there be reason to believe that the fibroma from its situation is likely to cause serious difficulties in delivery, myomectomy should be performed. In the presence of alarming symptoms caused by retention of the fetus, the nature of the indicated intervention would depend on several factors. If the fetus be not viable three courses have to be considered: Abortion, abdominal hysterectomy, myomectomy. The first of these, it is stated, is rejected as being more dangerous than any possible radical operation. Hysterectomy, in the author's opinion, should also be rejected, for though an easy, rapid, and fairly safe operation, it sacrifices the fetus and suppresses the functional capacity of the mother. Myomectomy, though a more complicated procedure than hysterectomy, is regarded as the method of election in cases of both pedunculated and sessile fibromata. This, it is stated, has given excellent results in regard to both mother and infant. Abortion after this operation may result from the operative traumatism, but in most instances is due to peritoneal infection. If in cases in which the fetus is at or near its term indications for intervention occur, abdominal hysterectomy should be performed. If during labour it be found that the passage of the fetus is effectually prevented by the tumour and this cannot be pushed upwards and out of the way, Caesarean section should be practised. This in most cases, however, will be found the first stage of a supravaginal hysterectomy.

GYNAECOLOGY.

305. **Death after Atmokausis.**

CRAMER (*Monatsschr. f. Geb. u. Gyn.*, March, 1908) dwells on Pfannenstiel's warning as to the possibility of infection during the separation of the sloughs caused by vaporization of the uterus. Cramer himself treated a woman aged 44 for menorrhagia by atmokausis, and sent her home on the twelfth day. A week later he was informed that she felt very ill, and was troubled with fetid discharge. She was readmitted into hospital with severe metritis and bilateral parametritis, and was laid up for five weeks. Permanent amenorrhoea followed, and the patient several years after the operation remained in good health. Cramer relates a fatal case in his practice, but the patient was a woman aged 31, the subject of advanced phthisis. For a second time he induced abortion, and after recovery uterine haemorrhages set in. He used the curette, and vaporized the uterus (110° to 113° C.) for one minute. The temperature rose on the second day, and a severe rigor occurred on the seventh. On applying the speculum fetid slough was seen issuing from the os externum. The slough was removed and the uterine cavity painted with tincture of iodine. More rigors followed, and on the eighth day abdominal section was performed. The appendages, much inflamed, were removed; the uterus was so firmly fixed that its upper part only could be amputated; its walls were very friable from partial sloughing, and its cavity full of greasy fetid slough. A thrombus could be felt in a vein on the left side of the pelvis, and the connective tissue along the ovarian vessels was deeply infiltrated. The cervical canal was patulous and easily drained with gauze. The patient died on the seventh day. The condition of the lungs was found to be as expected: the right lung was full of cavities. The condition of the abdominal cavity was significant, the peritoneum was pale and shiny throughout, free in fact both from tuberculous and recent acute peritonitis, whilst the lumbar and other glands connected with the pelvic lymphatic system were suppurating and the lymphatic vessels were dilated and the surrounding tissues very oedematous. In fact, although the patient was in very bad health from phthisis, the fatal result was clearly due to sepsis from sloughs in the uterus caused by atmokausis, and not from the direct disturbance of a tuberculous focus in the uterus or a jacent peritoneum by the instruments used for vaporization or by the superheated steam itself. Cramer dwells on the great importance of careful and long after-treatment. The sloughs do not always separate quickly, and the patient is never out of danger until they have come away.

THERAPEUTICS.

306. **Tuberculin in Renal Tuberculosis.**

HAVING been impressed with the curative value of tuberculin by being able to watch the effect in his own case, O. Pielicke has employed it in renal tuberculosis as frequently as his practice would permit, and reports the results obtained (*Berl. klin. Woch.*, January 20th, 1908). In his own case, in 1893, he was seized with a severe attack of pulmonary phthisis. The cough was severe and the night sweats, fever and sputum, containing numerous tubercle bacilli, pointed to a bad attack. He was first sent into the country and fed up on milk, but no improvement in the pulmonary catarrh could be noticed. He was then sent to Sprengler in Davos, who, as is known, is an old pupil of Koch. During the five months at Davos he was treated with tuberculin, with the result that the fever ceased, the bacilli disappeared from the sputum, and he felt well again. Since then, that is, during the fourteen years, he has lived in Berlin, but has never had any symptoms pointing to any pulmonary mischief. Turning to the kidney patients, he says that one used to regard tuberculosis of the kidney as a necessarily progressive hopeless condition. The prognosis which one used to give extended to not more than three years, but in recent time one has been inclined to extend this to five years. He has, however, had a patient in whom a double renal tuberculosis has remained in the same condition for seven years. In another case, a young man of 20 years was treated for gonorrhoea, and when the infection had cleared up a clouding of the urine was noted which could not be influenced. Uric acid crystals were found from time to time, and an occasional attack of renal colic, which improved under uricedin treatment gave rise to a diagnosis of renal calculi. Six months later he consulted another medical man, who diagnosed renal tuberculosis, and on re-examining the patient this diagnosis was confirmed. On August 9th, 1907, he commenced a tuberculin course and increased the dose from $\frac{1}{10}$ mg. to 2 mg. of old tuberculin. In this case the renal tuberculosis had been present for some seven years without affecting the patient's general health much, and although the author says that he is not proud of the case, the mistake in diagnosis is probably responsible for his seven years' comfort. The possibility of a chronic course in renal tuberculosis, he thinks, is thus proved, and he is inclined to ascribe much importance to this in cases of double disease, where one can remove the more advanced disease, and leave the less affected organ for the body to deal with. The increased circulation through the one organ can have a curative effect. He now describes a case of tuberculosis of the right kidney in a woman aged 40 years, whose left kidney could not be proved to be intact. She was treated with tuberculin, and improved generally and locally during the four months occupied with the treatment. The intention to extirpate the right kidney was given up when he found that she was steadfastly improving, and two years later she was found to be in excellent condition, with perfectly clear urine and no visible signs of disease to be detected by the cystoscope. A prolonged search for tubercle bacilli revealed four single bacilli. She will be again treated with tuberculin to ensure a complete cure. He has proved that tuberculosis of the bladder is also a good field for tuberculin treatment, and advises this for both bladder and renal affection.

307. **Fibrolysin in the Treatment of Contracted Scars.**

IN 1892 Hebra introduced a substance which he called thiosinamine for the treatment of lupus. This substance is chemically allyl-sulpho-urea. It was found that it exercised a peculiar action on scar tissue in causing it to swell, stretch, and become soft. It soon became evident that the injection of such a drug would be of use in the treatment of contracted scars. Cognat introduced a combination of thiosinamine and ethyl iodide under the name of thiodine. This preparation possessed disadvantages in having a disagreeable smell and in being little stable.

The objections raised against thiosinamine were that it is but little soluble in water; that injections are painful when it is dissolved in alcohol; and that it is inactive when taken internally. A new preparation has more or less recently been introduced under the name of fibrolysin, which is a chemical combination of thiosinamine and sodium salicylate. It is freely soluble in hot or cold water, but the solution undergoes oxidation when kept in the presence of air and light. It has therefore been put up in sealed phials, in which the solution seems to be indefinitely stable. Each phial contains 2.3 c.cm. of a solution of 1.5 grams of fibrolysin in 8.5 grams of water. Each thus corresponds to 0.2 gram of thiosinamine. F. Mendel (*Berl. Klinik*, October, 1907) deals at some length with the theoretical and practical aspect of this preparation. He shows that fibrolysin is non-toxic in therapeutic doses. After intravenous injection, the substance is split up into its constituents and a garlic-like odour is noted in the expired air. Intramuscular injection is to be preferred to subcutaneous injection and at times even to intravenous injection. It is painless, is active and easy to carry out. The allyl odour is noticeable after the injections, but since this is but of short duration and is an indication of the rapid splitting up of the compound, it must be regarded as a sign of the activity of the preparation. After discussing the selective action on scar tissue which has been determined by careful microscopical observation, he turns to the method of application and the dosage. Intravenous application must be carried out with scrupulous aseptic precautions. The corpuscles are not damaged in the least degree by the drug. The fluid should never be injected before a column of blood has entered the syringe when the piston is withdrawn, so that one is certain that the needle is inside the lumen of the vein. For adults 0.2 gram of thiosinamine—that is, 2.3 c.cm. of fibrolysin—is injected as a dose. Children require less, but seldom less than half this dose. The injections should be repeated every one, two, or three days, according to the severity of the case. The maximum number of injections which the author has employed was 50. Individual susceptibility towards the drug is met with at times. The symptoms produced in these cases are headache, sleepiness, and feeling of malaise. Fever also has been met with. He speaks of the results which he obtained with fibrolysin, and states that they are satisfactory provided one does not expect the scars to stretch unless active dilatation can be applied—for example, it will be useless in pyloric stenosis unless the muscular wall is still in good condition. Becker also praises the action of fibrolysin (*Deut. med. Woch.*, October 24th, 1907). He obtained excellent results in Dupuytren's contraction and in the after-treatment of injuries. Stiff joints only respond to the treatment to a certain extent, and the complete mobilization of the joint must not be expected if inflammatory conditions have taken place. H. Lang (*Deut. med. Woch.*, November 28th, 1907) speaks of the good results which he has obtained in urethral stricture with fibrolysin. He reports on two cases which he has been able to follow closely. In one case a traumatic stricture of fifty-three years' standing was softened and dilated by its means, and in both cases no tendency to recontract has yet shown itself. The cures had lasted for seventeen weeks in the first case and fourteen weeks in the second, so that, although he does not wish to speak of permanent cures, it looks as if the strictures will not reform, at all events rapidly.

308. Hydrinden Sulphite of Sodium as Solvent for Kresol.

A. KRAUS has followed up the question of utilizing kresol as a disinfectant in practice by experimenting according to the method devised by Paul and Kroenig. The objects of his work are to show the value of certain solvents of kresol. Kresol itself is but little soluble in water, and solutions made do not exceed 2 per cent. In order to use kresol in stronger concentrations, various mixtures with oil and resinous soaps have been prepared. Kresol soap solution of the German *Pharmacopoeia*, bacillol, lysol, phenolin, and many others are mentioned as examples of combinations of raw kresol and oil soaps; while izal, kresolin, urpin, etc., are mentioned as examples of combinations of raw kresol and resinous soaps (*Arbeit. a. d. Kaiserl. Gesundheitsamt* Band xxvi, Heft 2, 1907). On treating raw kresol with sulphuric acid a certain amount of sulphurous acid is formed, which serves as a solvent for the non-sulphurized kresol. Apart from these solvents, certain salts have been suggested to dissolve the kresol. The salts of phenol and naphthol, the sulphites of benzol, the sulphites of naphthalin and of anthracin, and also the phen-anthro sulphites, have been recommended, and lately hydrinden sulphite of sodium has been suggested as a suitable solvent. Kraus discusses the chemistry of hydrinden sulphite of sodium in order to render his experiments more clear. Solutions of this salt have no special disinfectant action, nor does the addition of the salt increase the disinfectant qualities of raw kresol. The comparative experiments with raw kresol, kresol soap solution, kresol sulphuric acid, and solutions of kresol in hydrinden sulphite of sodium, show that kresol sulphuric acid is by far the most active towards anthrax spores. Raw kresol in 2 per cent. solution killed nearly all the spores in twenty-eight days, while the number of colonies which developed within the same time with the same concentration of kresol dissolved in the solution of hydrinden sulphite of sodium was somewhat larger. Ten per cent. solutions of kresol in hydrinden sulphite of sodium acted much better than 10 per cent. kresol soap solution, or than 25 per cent. kresol sulfon solution. The same type of results was obtained when working with staphylococci. With the latter, 0.5 per cent. kresol, either as raw kresol, or as kresol soap or in solution in the hydrinden sulphite solution, killed all the staphylococci within thirty minutes, while 0.94 per cent. carbolic acid solution yielded twelve colonies for each five garnets (on which the cocci were collected) after thirty minutes. It therefore appears that the value of hydrinden sulphite of sodium solution as a solvent for kresol depends on the fact that by its means more concentrated solutions of kresol can be obtained than in water. The solutions prepared in this way have an advantage over kresol soap solution besides being somewhat more active, in that no distinct clouding is produced with calcium or magnesium containing fluids. Kresol sulphuric acid solutions are considerably more active than either of the two preparations mentioned. Hydrinden sulphite of sodium is relatively non-toxic. The toxicity of raw kresol and of the three isomers of kresol is not affected by the addition of that concentration of hydrinden sulphite of sodium required to prepare the solutions. The author further describes a method of estimating the kresol content of solutions quantitatively with sufficient accuracy for practical purposes.

PATHOLOGY.

309. Repair after Tenotomy.

R. MINERVINI (*Giorn. Internat. de Sci. Med.*, Naples, 1907, p. 673) has studied the processes by which the cut tendo Achillis is repaired in dogs. The operations were performed under $CHCl_3$, with aseptic precautions; the dogs were killed after the lapse of various periods (3 to 180 days), when the processes of repair were studied microscopically. Minervini finds that more or less haemorrhage takes place after the tenotomy, the blood clotting, and being rapidly replaced by actively-growing vascular connective tissue. If the two ends of the cut tendon are widely separated, most of the repair is done by proliferation of the cells in the tendon sheath, and the final result is unsatisfactory; this, however, can be avoided by joining together the widely-separated ends by another piece of tendinous tissue. If the ends of the cut tendon lie close to one another most of the repair is effected by growth of the tendon cells, and only a little by the sheath; the central end of the tendon shows greater reparative activity than the peripheral end. The most active of the cells here are the fixed connective-tissue cells—that is to say, the endothelial cells lining the minute lymphatic channels and blood vessels between the tendinous fibres; the tendon cells take a later and less active share in the processes of repair. The new fibrous bundles are formed directly by transformation of these proliferating cells, and not from either intercellular material or secretions of the cells. Evidence of traumatic degeneration followed by absorption can be seen in the cells and tendon bundles actually injured by the tenotomy; the blood effused into the tendon sheath between the cut ends is under all circumstances a positive impediment to sound and rapid healing. When the process of cicatrization described above is complete the newly-formed scar tissue slowly develops into tendon, provided that the functions of the muscle attached to the cut tendon are not lost. This tendonization is effected as follows: The fibrous bundles gradually rearrange themselves into parallel, slightly-undulating cords, the meshes of the capillary reticulum elongate lengthwise, and the tissue hardens into an appearance closely resembling that of normal tendon. The fibrous adhesions between the scar tissue and the sheath grow thinner, weaker, and longer, often fatty; but they do not entirely disappear. The academic question, "Can tendon be regenerated?" may be answered in the negative.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

310. **Haemolytic Jaundice.**

CHAUFFARD (*Sem. Méd.* No. 5, 1908) says that in modern classification jaundice is divided into two forms, one from retention of bile and the other from haemolysis, but the latter, although resting on a number of experimental proofs, was, until lately, destitute of any clinical basis, while the work of Vaquez and Ribierre showed that in jaundice the blood corpuscules possess a double defence in that they are larger and show an abnormal power of resisting haemolysis when mixed with salt solution. But about a year ago Professor Chauffard was able to show that some cases of congenital jaundice present the opposite condition, in fact, that their globular fragility is so great that it is necessary to commence with a sodium chloride solution of 0.90 per cent., as haemolysis commenced at 76, was distinct at 66, and completed at 42, so that the red corpuscles would be destroyed by normal saline solution of 7 per mille. (See Ribierre, *Thèse de Paris*, 1903, referred to in the BRITISH MEDICAL JOURNAL, 1907, vol. i, p. 1167.) Further, these cases show microcythaemia ranging from 5.89 μ to 7.44 μ as against the normal average of 7.6 μ. A few months later Widal and his pupils confirmed these facts, and proved that the breaking up of the blood depended upon the fragility of the corpuscle as the serum and plasma were normal, and further, that there were several varieties of haemolytic jaundice, differing in their origin and in their clinical aspects, but having the one common bond of corpuscular fragility. A further step was made by Flessinger, who has shown that in examining preparations of blood serum, dried but not fixed and stained with Pappenheim's reagent, many of the red cells are granular; these granular cells are larger than normal red corpuscles, the average being 3.18 μ, while the other red cells were only 6.3 μ. Such granular cells are absent in normal blood, while in these cases there may be as many as 15 or 18 per cent. present. They were able to show that these granular cells may be made to appear in the blood of a rabbit by the injection of the serum of an eel, and they were found not only in the blood but also in the bone marrow, which was red and inflamed. A similar condition has recently been seen by Tixier in the bone marrow of a young girl aged 12, who presented haemolytic jaundice some hours before her death. They regard the appearance in the marrow as an indication of a medullary reaction compensating for the waste of corpuscles caused by haemolysis, as they may be seen in the blood of dogs and rabbits after repeated bleedings; but, on the other hand, Grawitz considers that they represent a stage in the degeneration of the red cells. The part played in these cases by the spleen is obscure; but it is generally enlarged, and in an autopsy performed by Vaquez and Giroux intense active congestion was found localized in the neighbourhood of Billroth's bands. This is regarded by Vaquez as proving hyperactivity of the spleen corresponding to that of the bone marrow. In these cases of haemolytic jaundice there is no obstruction to the bile. The faeces are not decolorized; there is neither pruritus nor bradycardia; the serum is more or less strongly coloured, and contains bilirubin. The urine is loaded with urobilin, but Gmelin's reaction is negative. The liver is little, if at all, enlarged, and its surface when palpable is not hard; on the other hand, the spleen is large, projects beyond the ribs, and can be easily felt; its vertical diameter in the axillary line is frequently as much as 15 cm., and in some of the cases of congenital jaundice of adults the size attained is as great as in any form of splenic enlargement. The hepatic cells are generally normal in function and structure; there is no tendency to cirrhosis, but the formation of a large amount of pigment may cause thickening of the bile with painful attacks resembling hepatic colic. The appearance presented by these patients is rather pale than jaundiced, so that they look like grave cases of anaemia with slight jaundice of the skin and conjunctivae. Many of them are not ill, as the destruction of the blood corpuscules is compensated for by a corresponding regeneration. There is, however, a form which has been described by Widal and Abrami, in which the anaemia is greater, the destruction of blood cells more complete and associated with imperfect regeneration, so that the number of erythrocytes may fall to 850,000 with a large percentage of nucleated forms; these symptoms are accompanied by fever debility, extreme prostration, and the disease presents the aspect of pernicious leteric anaemia. Attacks of this kind recur from time to time, and interfere seriously with the patient's health. Widal says that by a singular anomaly the corpuscles do not show fragility except when deplasmated; but Chauffard opines that this is not constantly so, as he relates the case of a patient who for four months suffered from time to time from serious asthenic and cachectic attacks with stomach disturbance and urobilinuria, haemoglobin 40 per cent., red cells 1,200,000, leucocytes 7,000, nucleated reds 5 to 10 per 100 leucocytes, granular red cells from 15 to 20 per cent.; yet haemolysis commenced at 56, and was well marked at 48. The procedure of deplasmating the red cells could not be employed. He thinks that it is possible that in the past some of these cases may have been taken for pernicious anaemia with jaundice, but Hayem's chronic splenomegalic jaundice described in 1898 should be included in the class of haemolytic jaundice. Of his five cases two have been recently seen again: in one Vaquez and Giroux proved the presence of corpuscular fragility and of microcythaemia, and in the other the corpuscles began to break up at 66, and the process was complete at 47, but, unfortunately, no observations were made on the diameter of the corpuscles or the presence of granular cells. Yet the class does not include all that has been described as family cholaemia by Gilbert, or all the cases of congenital jaundice in adults, in some of which, undoubtedly, the globular resistance is quite normal. The globular resistance should always be determined, but it is easier to recognize the cases by looking for granular red cells, which can be done in a few minutes; if they are present to the extent of 15 to 20 per cent. the diagnosis is certain. It is all the more important to recognize these cases as they stand surgical interference badly. Treatment, unfortunately, has so far proved ineffectual, neither chloride of calcium, nor hypodermic injection of arsenite of potash, nor bone marrow has been of service. In a communication to the Société Médecine des Hôpitaux à propos of Professor Chauffard's lecture, Hayem protests against the suggestion that his cases should be described as "haemolytic jaundice." He objects to the conclusion that because the blood breaks up in a test tube it does so within the blood vessels, and he points out that where haemolysis occurs during life it does not give rise to jaundice, or to the presence of bile pigment in the blood serum. No doubt in haemoglobinuria there is yellowish coloration of the skin, but it is a special pigmentation, and not that of true jaundice, and so far as is known, in all cases where haemolysis occurs during life the haemoglobin liberated does not give rise to bilirubin. In the chlorosis of young girls, in pernicious anaemia, and in the anaemia of cancer patients there is a destruction of blood which takes place and remains within the organs, but the blood is not charged with pigment, the serum remains pale or decolorized whether the destruction of red cells is rapid or slow. According to Widal, Chauffard, and Vaquez, it is the spleen which plays the most important part in these cases of so-called haemolytic jaundice, but this hypothesis rests upon no well-established foundation. The alleged fragility of the red cells is often only observed in corpuscles which have been deprived of their plasma, that is to say, when under artificial conditions, so that we may doubt whether any part is played by this globular fragility during life in the causation of these cases of jaundice. In Hayem's opinion the cases of chronic splenomegalic jaundice described by him are in reality to be explained as manifestations of hereditary syphilis.

311. **Arterio-sclerosis.**

THAYER AND FABYAN (*Amer. Journ. of Med. Sci*, December, 1907) conducted studies on arterio-sclerosis, especially of the radial artery, in a series of consecutive cases which had been previously under clinical observation. For the sake of comparison portions of the aorta immediately above the valves and above the origin of the mesenteric artery and portions of the mesenteric vessel were examined. During the first decade an elastic muscular thickening of the intima appears, which with growth and increased blood pressure becomes strengthened by the separation of one or more fresh strands of elastica from the inner surface of the fenestrated membrane, together with the appearance

of a few connective tissue cells and longitudinal muscle fibres, while in the media and adventitia a gradual hypertrophy and hyperplasia occurs. After full growth the intima becomes slightly thicker from the development of more elastic tissue and smooth muscle fibres, accompanied by an increase in depth of the muscular media. During the third and fourth decades, especially among individuals subjected to heavy physical strain, areas of distinct connective-tissue thickening appear in the intima, the regular elastic strands being replaced by finer, more irregular fibrils, with the development of a delicate layer of connective tissue on the outer side of the elastica and between the muscle fibres of the media. By the fifth decade the vessel wall tends to stretch and becomes supported by a further development of firm connective tissue in the intima and throughout the media, and finally local areas of coagulation necrosis with calcification occur most markedly in the deep layers of the connective-tissue thickenings of the intima and media, and these may go on to actual bone formation. In the great majority of cases, after twenty years of age the radial artery was palpable, this depending apparently on the general thickening of the coats, and especially upon the changes in the intima which are progressive throughout life. In the mesenteric arteries calcification is less frequent than in the radials, and in some cases plaques were seen with fatty softening of the deeper layers of the intima and superficial proliferation, a condition never seen in the radials. On the whole, however, an undue thickening of the radial intima is accompanied by analogous changes in the mesenteric artery and aorta. In old age a thickened radial artery represents conditions which may be considered normal, but at an earlier age an undue thickening points either to exceptional strain or inherent weakness resulting in a progressive connective-tissue sclerosis of the intima and media.

312. Premenstrual Fever and Latent Tuberculosis.

P. Galli (*Gazz. degli Osped. Clin.*, Milan, 1907, No. 120) discusses the frequency with which menstruation is ushered in by a more or less severe attack of fever, and concludes that such fever, in the absence of any signs of disease, is often associated with latent tuberculosis. Riebold (1906) observed premenstrual fever in 33 out of 70 tuberculous patients; and Galli gives details of 5 cases observed by himself in which there was habitually a fairly severe attack of fever for a few days before menstruation, ceasing when the flow began. No localizing signs could be found in these cases, but weariness, anorexia, headache, and pains in the joints were complained of; and this occurred often, but not always, before menstruation. In many of these patients a family or personal history suggesting tuberculosis can be obtained. Galli concludes that these febrile attacks may be taken as definite pretuberculous signs if they cannot be otherwise explained.

SURGERY.

313. Fibroma of the Tongue.

Chavannaz and Sabrazes (*Province Méd.*, Oct. 12th, 1907) report six cases of this affection. They find that all ages are liable to it and that the etiology is unsatisfactory. Fibromata develop both in the muscular tissue and on the surface of the tongue. They are hard and soft, and are frequently combined, as mixed tumours, with myomata, lipomata, and, occasionally, with sarcomata. They are very vascular and take on a polypoid form, and tend to destroy the epithelium. The papillae are enlarged, the mucous membrane is softened and readily abraded, which results in inflammatory trouble. If pediculated these tumours are generally situated in the anterior portion of the buccal cavity; they are small and localized; they are variable in consistency, and not sensitive. The interstitial fibroma is round or oval, circumscribed, movable, and covered with a thin mucous membrane; later it is eroded and ulcerated on the surface, and may attain the size of an egg. When the tumour is large it impedes speech and mastication; but it is rarely painful, unless ulcerated, in which case salivation is increased. The polypoid form must be distinguished from the pediculated sarcoma, from syphilitic glossitis, and bleeding tuberculous nodules. The first develops rapidly, is lobulated, bleeds spontaneously, and the mouth is fetid. At the insertion of the tumour a hard, firm mass is felt, which is very diagnostic. Glossitis is flat and distinguished by its superficial situation and raised plaques. It is more difficult to distinguish between the simple fibroma and the compound form; the fibroma is always neatly rounded off and restricted. Cysts and abscesses present no difficulty, do not lead to confusion, and gummata, though they may feel like deeply-placed fibromata, are distinguished by their development and response to treatment. Epithelioma is too typical and too often seen to present any difficulty. The prognosis is favourable for small simple fibromata; the mixed form is sometimes more apt to cause complications. Polypoid fibromata are easily removed under the influence of cocaine, either with the scissors or the thermo-cautery; the latter process is commendable in such a vascular part of the body. Mastication should not be permitted for some hours after the operation; irrigation of the mouth with mild antiseptics should be instituted and persisted in till healing has been completed. Sessile tumours are so often large and deeply situated that enucleation is more difficult; the muscles may be sutured together afterwards to hasten cicatrization. Stuparich, when removing one of the larger mixed tumours, advised, as a preliminary, that the lingual artery be tied and a tracheotomy performed. It is only in extensive growths in the posterior part of the tongue that such precautions can be advantageous.

314. Roentgen-Ray Treatment of Hypertrophied Prostate.

Hunter (*Amer. Journ. of Med. Sciences*, January, 1908) records a case of a man, aged 80, with enlarged prostate, who, since the commencement of symptoms three months previously, had gradually become worse until he was able to pass only about ½ oz. of urine at a time, there being marked phosphaturia and about 60 c.cm. of residual urine. Between May 2nd and May 27th he was given three exposures to the Roentgen rays, and for a month afterwards he had complete comfort, at the end of which time the symptoms returned much aggravated. From July 6th to August 25th he had six more exposures, at the termination of which he was symptomatically well. Examination per rectum showed the prostate to be only moderately enlarged and the testicles were markedly atrophied. The urine was clear and sweet, and the residual urine was reduced to 15 c.cm. No unpleasant results were recorded in spite of long sittings, a very old and well-seasoned tube being employed. A current of 2 ampères at 110 volts was used, the patient being in a lateral position with the parts surrounding the perineum protected by lead foil. An 18 in. coil with mercury interrupter, two layers of the primary being connected in series, was employed, and in very old men the scrotum should be exposed in order to obtain a similar good effect to that sometimes attending a castration, and thus hasten the cure. Irradiation of the prostate through a rectal speculum is to be strongly condemned on account of the slight resistance offered by the mucous membrane to the rays and its being more susceptible to inflammation than the skin. Better results can probably be obtained in hypertrophy of the first and second degrees than in cases where there has been much sclerosis. Except in the case of the oldest and hardest prostates, which must be removed surgically, the treatment by exposure to Roentgen rays appears to be most effective.

315. The Spinal Eye.

J. Dunn (*Archives of Ophthalmology*, May, 1907) records three cases in which he thinks certain ocular disturbances were due to pressure upon, or stretching of, the cervico-dorsal sympathetic. The signs, which were common to the three patients, were those associated with sympathetic irritation: an abnormally shallow anterior chamber; a contracted, but not a "pin-point," pupil; and a convex iris. The inner border of the iris did not correspond with the pupillary edge, but was just beyond the sphincter. The lens was nearer to the cornea than usual. The commisural fissure was not altered, and there was no conjunctival injection. The first case was found to have a slight spinal curvature, and for years had suffered from pain under the shoulder blade. The second case had a high degree of lateral curvature, with the same pain under the shoulder blade. Both patients were unaware of the spinal condition. The third case had consulted several able ophthalmologists before she came under Dunn's notice. As soon as he had examined the eye he looked at the spine, but found nothing abnormal. The symptoms of accommodation spasm were only relieved by atropine; as soon as its effect wore off headache and asthenopia returned, and were not relieved by appropriate spectacles. Some months later an *x*-ray picture showed "some thickening inside the canal." The subjective and objective conditions were the result of chronic disturbance of the sympathetic. The last case obtained great relief from wearing a "steel jacket."

OBSTETRICS.

316. **Treatment of Premature Infants.**

CORDIER (*Le Scalpel*, March 29th, 1908) has succeeded in establishing a course of procedure for the treatment of premature infants, which he says has resulted in raising the percentage of survivals very materially. In the Paris Maternity Hospital, where it has been employed, the death-rate has diminished from 66 per cent. to 36; and during the five years after its introduction, 30 per cent. of the infants born at six months have lived, as against none of the same age during the previous five years. The special treatment adopted consists in a suitable incubator and artificial feeding. A portable incubator is employed for cases born outside the hospital, and every precaution is observed as to cleanliness, asepsis, and the entrance of pure, warmed air, undue dryness being prevented by a small vessel of water placed near the air entrance. The babies are washed once a day, and dressed in sterilized clothes, and it is not found that any ill effects result from the change of atmosphere necessitated by dressing and feeding. Nourishment is given either through the nose or by the mouth by means of a tube. In the first case, a suitable vessel with a small spout pours the warm milk slowly and gradually into one nostril, so that it reaches the stomach partly by the action of gravitation, and partly by the reflex contraction of the œsophageal muscles. If it returns in any considerable quantity, either by the other nostril or through the mouth, a sound is passed down the gullet and the milk pumped directly into the stomach. It is necessary to remove the infants from the incubator as soon as they are able to live in ordinary air.

317. **Fatal Knot in Umbilical Cord.**

OUI (*L'Echo Médical du Nord*, November 17th, 1907) exhibited to the Medical Society of the Department of the North a tightly-drawn knot in an umbilical cord, which had caused the death of the fetus. A 3-para, who expected her confinement about August 30th, felt the fetal movements cease on that date, and on the following day the fetal heart could not be heard by auscultation. At the same time, a perceptible diminution in the quantity of the liquor amnii was made out, and all seemed to point to the death of the fetus. Labour came on on September 7th, lasting 4½ hours, without any incident of mark, but the child, whose head presented, had the cord round the neck and round each foot, whilst the part of the cord between these encircling bands contained a very tight knot. Knots in the cord are not infrequent, but they do not cause death unless the cord is abnormally short, either actually, or, as in this case, secondarily and accidentally.

GYNAECOLOGY.

318. **Primary Vaginal Cancer in Girl of 20.**

GRAY WARD (*Amer. Journ. Obstet.*, May, 1908) observed this condition in a woman, aged 20, married four years, but never pregnant. She was a strongly-built country-woman, somewhat pallid; she had never suffered from any previous illness, but her husband was of poor physique and of tuberculous type. She had been subject for five months to vaginal discharge and dyspareunia. Recently the discharge had become fetid, and there was pain on defaecation. She had lost 20 lb. since the beginning of the discharge. The external genitals were healthy and of the multiparous type. The posterior vaginal wall was destroyed by a wide rectangular area of ulceration extending to the lateral limits of the vagina; the edges were sharply defined and considerably infiltrated, and the base, which mainly consisted of the rectal wall, was covered with fetid, sloughy tissue. The inguinal glands were not involved, and the deep pelvic glands could not be felt. The uterus and appendages showed no sign of disease; some endometrium, however, was removed with the curette, and portions of the base and edges of the ulcer were excised. The scrapings from the uterus showed no sign of any disease, whilst sections of the edge and base of the vaginal ulcer showed the characters of primary infiltrating epithelioma. The case was inoperable. Radium treatment was tried, but without effect, and when the patient was last seen the rectum was found perforated by the cancerous ulcer. Ward stated that only two cases of primary cancer of the vagina had been noted in women under 20: one patient was 17, the other 14. The alleged instances of this disease in infancy were more than doubtful, as sarcoma was well known to occur in children. Vineberg reported a case very similar to Ward's, as the patient was about 20 years old; there was vaginal discharge, destructive ulceration of the wall of the vagina, and loss of weight. He lost sight of the case. In a discussion on Ward's case great scepticism was expressed as to the value of radium, ultra-violet rays, *x* rays, trypsin, and amylopsin, in the treatment of cancer of the genitals or elsewhere.

319. **Irrigation and Drainage in Endometritis.**

AUGUSTIN H. GOELET (*Med. Record*, April 25th, 1908) classifies endometritis clinically as catarrhal, septic, and senile. Each form, except the senile, can be acute or chronic. Gonorrhoeal endometritis should be classified apart on account of its severity and the different treatment required. The fundamental principle of treatment of any form of endometritis is drainage of the uterine cavity and of the submucous glands. All secretion may be removed by irrigations accompanied by galvanic dilatation. The applications should be made daily in the recumbent posture at first, later triweekly. Strong caustics should not be applied to the uterus. Curetting may be necessary as an aid to treatment, but it is not a cure by itself. Displacements should be remedied by tampons and a well-fitting pessary.

THERAPEUTICS.

320. **Marmorek's Serum and New Tuberculin.**

BEING uncertain whether the specific treatment of tuberculosis should be an active or a passive immunizing, Max Elsaesser (*Deut. med. Woch.*, December 19th, 1907) determined to obtain information by employing both methods side by side. He has had experience for some time past of the treatment with new tuberculin, and has been impressed with the beneficial results obtained by it. Treatment by means of new tuberculin (bacillary emulsion) is a type of active immunization. He therefore applied to Marmorek, who placed a liberal supply of his serum at the author's disposal, in order to permit him to utilize the latter as a means of producing passive immunization. The serum was applied either by subcutaneous injection in doses of 5 c.cm. or by rectal injection in doses of 5, 10, 15, and 20 c.cm. The former method had to be discontinued on account of the painful swellings and redness of the sites of injections and of the joint affections. Rectal injections, on the other hand, were well tolerated. Twenty-five patients were treated with Marmorek's serum, of whom 13 received new tuberculin as well. Brief clinical summaries are given of each case. Of the 13 cases treated by the combination of both methods, no improvement at all could be discerned in 8. In 5 of these 8 the temperature was not influenced at all. In 2 cases tuberculin caused a fall of temperature, and in 3 Marmorek's serum did the same, but the tuberculous process was not checked at all. Some improvement was obtained in 5 cases in which tuberculin had been used as well as the serum, but in no case in which the serum was used alone was such an improvement observed. He is not inclined to ascribe the improvement even in part to the action of Marmorek's serum in the 5 cases. The serum appeared to have a beneficial influence on the fever in 1 case especially, and this he believes was due to its antistreptococcus content. The patient died soon after of his progressive tuberculosis. In response to Marmorek's request, he tried the serum in an advanced case of pulmonary tuberculosis, but failed to influence the course of disease in the slightest degree. Marmorek's serum was held responsible for increased fever in 4 cases, and the occurrence of haemoptysis in 5 cases after the serum was applied was regarded as highly suspicious. Since his results were not favourable with regard to Marmorek's serum, he got Heuck, the director of the surgical section, to try it in some cases of surgical tuberculosis. In 2 cases an improvement was seen, but the surgeons were very doubtful whether this was due to the serum or to the other forms of treatment, while in 5 other cases absolutely no beneficial influence was exercised. He therefore concludes that Marmorek's serum has not proved itself capable of influencing tuberculosis in human subjects for the better. His experiences of the active immunizing with new tuberculin, on the other hand, have been very promising. Among his patients treated with this preparation alone, he has 56 whom he has been able to follow for one year and more since the termination of the treatment. These he divides into classes according to the stage of disease.

Twenty-one patients were in the first stage of phthisis; 11 were cured, and have remained well; in 8 others the disease was arrested, and these patients have no symptoms, and are able to work as before. In 2 the treatment was not completed, and they were sent to sanatoriums; 33 patients were in the second stage of phthisis. Arrest of disease and return of the capability of working was attained in 20 cases, 1 had to be sent into a sanatorium and a second into a hospital, 2 interrupted the treatment of their own account, 6 were only slightly improved or soon had relapses, and in 3 no improvement at all was seen. No improvement followed the treatment of two patients in the third stage. In summing up, he finds that the treatment of pulmonary tuberculosis in the first stage by new tuberculin offers exceptionally good chances for complete cure. He is further of opinion that tuberculosis of glands and bone should also be treated in this manner.

321. Atoxyl Treatment of Pellagra.

V. Babes and A. Vaselin (*Berl. klin. Woch.*, September 23rd, 1907) publish their second communication on the atoxyl treatment of cases of pellagra. The subsequent histories of 12 cases, which were dealt with in the first article, are given. Of these, 7 left the hospital after periods varying from eight to thirty days completely and permanently cured. In one case a recurrence in the form of a marked erythema occurred after twenty-one days. The rest of the cases were severe ones, and the result of the treatment was satisfactory, although when severe nervous complications were present actual cure was not seen. The authors give clinical details of a number of fresh cases. The first group consists of 9 cases of early disease in young persons. Here again complete recovery took place in uncomplicated cases, but the complication with malaria, epilepsy, and mental disturbance prevented this from being complete. The complicated cases are dealt with in the third group. Large doses were given in two further cases in young persons, for severe and complicated cases, with fairly satisfactory results. They then deal with the same grouping in persons of middle life, including 25 cases; and, lastly, with cases in late life, including 14 cases. In all, including the cases reported on in the first communication, they have experience of atoxyl in 62 cases of pellagra. Acute cases, especially in young subjects, undoubtedly recover by the instrumentation of the treatment, since in each case no inclination toward improvement could be seen during the period of watching prior to treating with atoxyl, and during the first one or two days after. A large number of untreated cases served as controls, and in these no tendency to improvement took place. Two or three doses of 10 cg. given with intervals of from five to seven days frequently sufficed to completely remove the symptoms. On the whole, they found that larger doses did not force the recovery, and in many cases 20 cg. appeared to be less efficacious for children than 10 or 7 cg. All symptoms seemed to be equally influenced by the drug. The obstinate diarrhoea mostly disappeared in a single day: the pain and sensation of burning disappeared quickly, the erythema paled, the cracks healed, and the scabs became thrown off within a few days. The œdema rarely took more than a few days to disappear, the appetite rapidly improved, and the weight began to increase early, and often was from 6 to 12 lb. more at the end of the treatment that at the beginning. In most cases there is tachycardia; and this, too, was frequently improved. In a like manner the nervous weakness, the headache, and the giddiness gave way to the treatment, and the confused mental condition at times cleared up wonderfully. Rapid recovery is most marked in children. In middle age the acute cases do nearly as well as in young subjects, although some cases seemed to be refractory toward the drug. Some cases which showed marked mental disturbances and complications improved or even recovered in response to the treatment, but as a rule no improvement could be detected. In old people, although recovery began rapidly in many of the cases, it generally took a considerable time to become anything like complete. When the cure had lasted for one month, it was found to be permanent. In summing up the cases they found that 35 of the cases (out of 65) were permanently cured, 24 were much improved, and only 6 were uninfluenced. Comparing these results with cases not treated with atoxyl, they found that over half are scarcely influenced by any form of treatment, and the other half are improved or even cured after months of treatment. They are continuing their researches, and propose to report at a later date on further results.

PATHOLOGY.

322. Osteomalacia and Rickets.

B. Morpurgo (*Archiv. p. d. Sci. Med.*, Turin, 1907, 31, p. 1) gives a detailed summary of all the researches he has made into this subject since 1898, when an epidemic of osteomalacia broke out among his previously healthy white rats. About the end of 1899 he found that a diplococcus in the medulla of the bones was probably the cause of this outbreak. He inoculated in all 193 rats each with 1 c.cm. of broth culture of this diplococcus subcutaneously; 105 of these developed osteomalacia, 64 were unaffected, and the result in 24 cases was indefinite. The spinal column and bones showed characteristic deformities, both to the naked eye and under the microscope in the successful cases. Out of a further series of 107 very young rats inoculated, 82 showed well-marked skeletal defects. Morpurgo notes that the diminishing virulence of the bacterial cultures used in the different series of his experiments no doubt explains the fact that he always had a higher percentage of successful results at the beginning than at the end of a series. Other bacteria besides the diplococcus were found in certain instances (for example, *B. coli*, streptococci, or staphylococci), probably as accidental or agonal contaminations of the cultures. He was also the first to point out that the diplococcus produces osteomalacia in adult rats, but in young rats produces typical rickets; whether the microbe be taken from a rachitic young rat or an osteomalacic older rat is indifferent, as it is whether the rickets or osteomalacia be spontaneously occurring in the first instance or artificially produced. The diplococcus has a major diameter of 1.2 μ, is not capsulated, and tends to form chains. On agar it forms a thin grey delicate sheet, or small round colonies; little growth may appear for several days when it is cultivated directly from the body. Gelatine is slowly liquefied; milk is slowly coagulated; broth is slowly acidified, indol is not formed, nor are nitrites. The diplococcus retains the stain in Gram's method. But these cultural and morphological properties are not absolutely constant. Injected into animals it does not produce any acute inflammation, even in large doses, but leads to the development of rickets or osteomalacia. Morpurgo has failed to produce any such bony changes by injections of two varieties of streptococci, of five varieties of staphylococci, or of certain other microbes that more or less resembled his diplococcus. He shows, too, that the richness or poverty of the food and drink in Ca salts does not affect the results of these inoculations. The macroscopical and microscopical changes seen in the bones of the infected rats are described at great length; in the adult, bony deformities, softening and fibrosis of the bones, halisteresis, and a pronounced tendency to spontaneous fracture are seen: in the young rat, the bones show similar changes in form and structure, and in addition alterations in the endochondral ossification at the epiphyses that are just those seen in human rickets. The same morbid process underlies the two conditions: it is not an inflammation; it is probably not due to infection of the central nervous system (Dräseke, 1906); but it does depend upon a disturbance of the metabolism of the calcium—and probably of the iron also—due to changes in the osteoblasts in osteomalacia or in the cartilaginous protoblasts in rickets.

323. Morphology of the B. Diphtheriae and its Virulence.

A. Montefusco (*Giorn. internaz. d. Sci. Med.*, Naples, 1908, xxx. p. 16) describes how far the virulence of cultures of *B. diphtheriae* can be judged by the shape of the bacilli themselves. Apart from the involution forms, these bacilli grow in three distinct morphological varieties—the long form, the short form, and the medium form, which is always described as the typical variety; the short form has been described as almost non-virulent. Montefusco finds that all three forms are about equally virulent to the guinea-pig; that there is no connexion between the clinical gravity of a case of diphtheria and the virulence of the bacillus cultivated from it; that the morphological shape of the bacillus gives no help in the prognosis of a case of diphtheria: and that the gravity of the diphtheritic infection can be estimated by the extent to which diplococci and streptococci are associated with the *B. diphtheriae* cultivated from any given case. This is because they are the cause of the bronchopneumonia or septicaemia that so often cause death in patients with diphtheria.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

324. The Desmoid and the Connective Tissue Tests.

SAHLI founded his desmoid reaction on the basis of A. Schmidt's discovery that raw connective tissue is only digested by the gastric juice. This reaction is carried out by getting the patient to swallow a small rubber bag, containing methylene blue, the neck of which is tied up with raw catgut; if the gastric juice is normal the catgut is dissolved and the blue appears within 20 hours. This test was introduced to overcome the necessity of passing the stomach tube. J. Lewinski (*Muench. med. Woch.*, February 26th, 1907), considers that it is difficult to test the value of the reaction by comparing the results with those of the Ewald's test breakfast, since the conditions of the two tests are so intrinsically different. A. Schmidt has devised another test, which is capable of controlling Sahli's test. The Schmidt test consists in giving 125 grams of chopped meat, which represents the raw connective tissue. A healthy stomach is capable of digesting all the connective tissue. When the stomach does not functionate normally, some of the connective tissue passes into the intestine undigested, and thence into the faeces. Here it can readily be recognized when the faeces are rubbed down in a mortar with a little water. Lewinski considers that if the desmoid reaction is sound, it must give results which agree with the connective tissue test. For the purpose of determining whether this is so or not, he tested 32 patients by both means, and found that contradictory results were obtained in 15 of them. In a table he first gives the details of the 17 patients in whom both tests led to similar results. The diagnoses included several gastric as well as other diseases. The second part of the table deals with the cases in which divergent results were obtained. In 7 the methylene blue bag had opened in the stomach, or elsewhere, but evidence of the failure to digest the connective tissue was given by considerable quantities of connective tissue appearing in the faeces. These results raise the question whether catgut can be considered as a fair sample of raw connective tissue. Catgut is derived from the muscular coats of goat's or sheep's intestines. The muscular tube is cut up into long strips, cleaned both mechanically and also in 15 per cent. potassium hydrate solution for 5 days. The strips are then twisted into bundles, bleached in the vapour of sulphurous oxide, dried, polished with chalk or pumice, and well rubbed in oil. In the first place, it seems that the original material has not the structure of connective tissue, and, secondly, the preparation is extremely likely to influence its digestibility. Test tube experiments show that the desmoid bag opened in gastric fluids which were deficient in pepsin, provided that the deficiency of hydrochloric acid was made good. No digestion of connective tissue took place under similar conditions. Lewinski further brings forward results obtained *in vitro*, which show that the desmoid bag is opened at times under the influence of the intestinal secretions. Next he deals with those cases in which no blue appeared in the urine, and good digestion of connective tissue took place. In one case the unopened bag was found in the faeces, which contained no connective tissue. In conclusion, he considers that Sahli has done medicine a service in applying Schmidt's discovery to practical use, but that the desmoid bag is not a satisfactory way of carrying this out. He prefers the simple method of examining the stools, and whilst this test cannot replace the examination of the gastric secretions as gained by trial breakfasts, no examination is complete without employing the connective tissue test as well.

325. Leukaemia and Tuberculosis.

GUYOT (*Gazz. degli Osped.*, September 1st, 1907) discusses those comparatively rare cases of leukaemia which become complicated with tuberculosis. Altogether he is able to refer to 17 cases, and in addition reports one observed by himself. Of the cases of leukaemia, 75 per cent. were of the myelogenic type and the rest either lymphatic or mixed. When tuberculosis occurs in the acute form (miliary) there is generally a marked diminution in the leucocytes, but inasmuch as similar regressive changes are to be seen in leukaemia when the disease is complicated by other acute infectious illnesses, such changes persisting as long as the superadded disease exists, the question arises whether tubercle exercises any specific influence on leukaemia; and an answer may be found in those cases of leukaemia where the tuberculous disease is chronic in type and not acute, and where, consequently, the patient lives long enough for the effects to be observed. Now in these chronic cases the regressive changes persist, and a sclerosing process goes on in the spleen similar to the fibrous changes which go on elsewhere in the course of a healed tuberculous lesion. On these grounds the author believes that tubercle when complicating leukaemia does exercise a restraining and regressive influence on the leukaemic process, and that in chronic cases this influence is of a specific nature. As a corollary to this view, tuberculin has been injected as a curative agent in some cases of leukaemia, but the results hitherto have been disappointing. The question as to the causative relation between tubercle and leukaemia is also discussed; it is more or less a vicious circle, and a frequent history is this—namely, early tubercle which heals, leukaemia later, and finally a fresh explosion of tubercle.

326. Acute Aortic Insufficiency of Traumatic Origin.

THE number of cases of aortic regurgitation due to traumatism, which have been verified by the autopsy, are rarer than is generally believed, so that Deganello's case is interesting (*Rif. Med.*, March 30th, 1908). The patient was a healthy man, aged 35, a carman, of good constitution, a drinker and smoker, but had not suffered from syphilis and had no history of any previous cardiac symptoms. On November 15th, 1906, he got his chest crushed between a pillar and the wheel of his cart. Although immediately after he was able to go on with his work, he found the next day that he was unable to do any heavy work without shortness of breath, and this unfortunate state of things continued and gradually got worse, so that he died of heart failure in April, 1907. A month after the accident there were evident signs of failing compensation (orthopnoea, cyanosis, pulmonary stasis, etc.), marked hypertrophy of the left ventricle, and a loud, musical, diastolic aortic murmur. At the autopsy the two anterior cusps of the aortic valve were torn away from their insertion for a certain distance. The whole heart was dilated, especially in the left ventricle, which was also hypertrophied. There were no other endocardial, pericardial, or aortic lesions, and the other viscera were healthy. The author then reviews our knowledge about this class of accident. They have been divided into two main groups: (1) Where the cause of the rupture proceeds from outside—blows, falls, etc.; (2) where the rupture is due to excessive muscular effort, independent of any external trauma. Statistics show that the second group is more common than the first, and in both groups the left side of the heart (in 38 cases collected by Barié 19 affected the aortic valves, 16 the mitral, and 3 the tricuspid). Men, between 20 and 40, are more affected than women. In both the ectogenic and endogenic ruptures the trauma probably acts not directly but by increasing the blood pressure. The symptoms vary with the gravity of the lesion. Usually there is severe pain in the precordium, the epigastrium, or between the shoulders; palpitation, dyspnoea, and signs of valvular disease speedily follow. No very sure diagnosis as to the particular variety of injury in the valve can be made from the character (musical or otherwise) of the murmur. The prognosis is bad, although the possibility of a healed laceration cannot be excluded.

327. The Differential Leucocyte Count in Acute Appendicitis.

NOEHREN (*Ann. of Surg.*, February, 1908) gives the following conclusions at the end of a paper based on 72 cases of appendicitis and its sequelae, in which an examination of the blood was made just previous to operation: (1) Blood examination in cases of acute appendicitis is of great value in determining the severity of the condition, and influencing the decision whether or not an immediate operation should be performed; (2) the degree of leucocytosis formerly considered as an important diagnostic aid is too variable to be of any practical value; (3) the relative disproportion between the percentage of polynuclears and the degree of leucocytosis is reliable in a majority of cases, but the number of exceptions is so great

that its practical value in indicating immediate operation becomes very small; (4) the estimation of the percentage of polynuclears alone is more reliable than either of the preceding methods, and therefore, together with the fact that it is the one most easily made, is the method to be recommended; (5) a polynuclear percentage of 90 or more indicates a severe process, a percentage below 78 means a "safe" or mild process, while a percentage between these two extremes indicates the one condition or the other, according as it approaches the highest or lowest limit.

SURGERY.

328. The Functional Action of the Anastomotic Opening after Gastro-enterostomy.

Guibé, in the first number of the new *Journal de Chirurgie* issued on April 16th, discusses the question whether after gastro-enterostomy in cases in which the pylorus remains permeable, the gastric opening has any functional action. In the first place he expresses disapproval of a wide application of this operation, and regards as a manifest exaggeration the statement made by Monprofit that gastric affections are almost always fit objects of surgical treatment. It is shown, he points out, by rapidly accumulating evidence that in cases of painful or obstinate dyspepsia without any sign of pyloric affection, gastro-enterostomy generally gives indifferent or negative results, while on the other hand in cases of contraction or spasm of the pylorus this operation is likely to result in a cure, or, at least, in decided improvement. Experiments on animals and clinical observations on man seem, according to the author, to be in entire agreement in proving that when the pylorus is permeable the stomach has an almost invincible tendency to discharge its contents through its orifice without utilizing the abnormal communication with the intestine. Nothing passes by the new opening; all flows through the pylorus. On the other hand, clinical experience proves that gastro-enterostomy affords considerable relief in a good number of cases, and, indeed, often effects a cure in patients whose pylorus is anatomically permeable. These two conclusions, it is suggested, are not incompatible. In many of these cases the troubles seem to be due to spasm of the pylorus, and, as has been pointed out by Guinard's simple incision of the gastric wall, suffices to suppress this spasmodic condition, and thus enables the stomach to empty itself. Whether it be effected by the pylorus or by the anastomotic opening, perfect drainage occurs after the operation. This is all that the surgeon requires, and gastro-enterostomy may therefore be regarded as a perfectly legitimate procedure.

329. The Use of Almatein in Surgery.

Venus (*Zentralblatt für Chirurgie*, No. 17, 1908) states that an extensive trial of almatein in surgical practice has convinced him that this is an excellent application to open wounds and ulcers. Almatein, first described by Lepetit of Milan as a dyeing agent, produced by the action of formaldehyde on haematoxylin, and used as a substitute for logwood decoction, is a fine scarlet powder without smell or taste, which is readily soluble in glycerine and in alkaline solutions. The author has applied this agent unmixed and in the form of powder to both fresh and infected wounds, and to boils, whitlows, abscesses, suppurating glands, ulcers of the legs, and to acute weeping eczema. He reports that it possesses all the advantages of iodoform and, moreover, is quite free from smell. In 500 cases in which it was used by the author no signs were observed either of local inflammatory irritation or of general poisoning. It has remarkable efficacy in cleansing the surface of an infected wound, and of promoting healthy granulation. In control experiments on the subjects of multiple unclean and infected wounds it was often found that the open surfaces treated by almatein put on a healthy aspect, and granulated sooner than those treated by iodoform or xeroform. The best results of the use of almatein were observed in the treatment of burns. In fresh lesions of this kind when the vesicles have been opened with aseptic precautions, and as much as possible of the burnt skin removed, the author covers the raw surface with a thick layer of the red powder, and protects the injured region by a dry dressing, the whole being allowed to remain for a few days. At the first change of dressing the good effects of the almatein will be demonstrated by separation of the remaining portions of destroyed skin, and by a growing layer of epidermis along the margin of the open surface. Suppuration soon ceases and the wound is speedily covered by scar tissue. The author in his concluding remarks strongly recommends the use of almatein in the treatment of open wounds and ulcers, and asserts that while possessing all the good qualities of iodoform, it is preferable to this powder in being inodorous and free from any toxic properties.

330. The Surgery of Non-Parasitic Splenic Cysts.

Eircher (*Deutsche Zeitschr. f. Chirurgie*, March, 1908) publishes four tables of 33 cases of non parasitic cysts of the spleen treated by operation. The first table includes 6, where puncture or opening by caustics was practised—all between 1863 and 1891. Two died, and further analysis is of little use, as the treatment is antiquated. The second table includes 8 cases, treated by incision and drainage, usually with fixation of the walls of the cyst to the wound. One case died. Four cases were treated by resection of the cyst, making the third table. Three recovered, whilst in 1 the portion of the spleen left behind caused fatal ileus. The fourth and final table includes 15 complete splenectomies. All appear to have recovered. Péan, who operated as long ago as 1867, is the first in the fourth table; the tumour, however, had been diagnosed as an ovarian cyst. This patient was living twelve years later. He was followed by Crédé (1883), Knowsley Thornton (1886), and Spencer Wells (1889). Among the latest cases of splenectomy for cystic disease are those of Heinricius (1904), and, last of all, Arndt (1906) described by Hedinger, where the cyst developed, in a girl, two years after a wound of the organ.

331. Carcinoma and Tuberculosis of the Mamma.

A. Fricke (*Beiträge zur Klinik der Tuberkulose*, 1907, Heft 4) adds one more case of combined tuberculosis and carcinoma of the breast to the six which he has found in the literature. He gives a brief account of each of these six cases, and mentions that cases have also been seen by two further observers, although they have not been described. His own case was a woman of 56 years, who had had a tumour of the left breast for nine months, during the last six of which it had been ulcerated. There was no history of personal tuberculosis or of inflammation of or injury to the breast. The father had died of tuberculosis and the husband was also, apparently, tuberculous. There was no family history of carcinoma. There was a large distinctly cancerous growth in the left breast. Microscopic examination of a portion excised for this purpose showed both carcinoma and tubercle. Typical miliary tubercles were scattered about in the midst of the carcinomatous tissue; all were young except one, which had caseated in the centre. No tubercle bacilli could be found, in spite of careful search. In some places the carcinomatous tissue was drawn to one side and pressed flat by the tuberculous material. In this case, therefore, there had been a secondary implantation of tubercle on the cancerous stroma, probably by way of the ulcerated surface, and it was not carcinoma arising in soil excited thereto by tuberculous irritation. The husband may have been the source of the tuberculous infection. A coloured plate illustrates the microscopical appearances.

OBSTETRICS.

332. Pre-natal Ulcer of Scalp.

Rivière (*Gaz. hebd. des Sci. Méd.*, December 15th, 1907) showed to the Bordeaux Medical and Chirurgical Society an infant, 3 weeks old, born in his wards of the Maternity Hospital at Pellagrin, in whom an ulcer of the scalp was observed immediately after birth. Although the delivery had been instrumental, the position of the ulcer, on the edge of the occipital bone, and exactly in the middle line, precluded the idea of its having been caused by the forceps, and it was equally impossible that a lesion could have been produced by digital examination. The ulcerated spot was about the size of a shilling, in shape something like the ace of hearts, reddish in colour, and bleeding easily. Although its appearance was suggestive of syphilis, there was no such history, nor any further symptoms in either mother or child, and its rapid healing, in about 48 hours, pointed to some other explanation. Rivière suggested an arrest of development, an opinion shared by his colleagues in the Society, but the interest of the case was felt to lie in the fact that a lesion serious enough to suggest such an

origin as syphilis should continue unhealed in an aseptic environment like the liquor amnii, and should disappear entirely in three or four days with the simple treatment of exposure to the air.

GYNAECOLOGY.

333. **Retroperitoneal Lipoma.**

R. PROUST AND A. TRÈVES (*Revue de Gynéc. et de Chirurg. Abdom.*, January-February, 1908) publish a very complete monograph on this type of tumour. They have collected 89 cases, including one under their own observation, and not omitting the American series recently prepared by Reynolds and Wadsworth. The authors classify these tumours under three groups—parietal (14 cases), circumrenal (38), and mesenteric (37). Their own case was parietal and chiefly of importance because it occupied the right iliac region, so that, whilst none of the hollow or solid viscera were endangered, the fatty mass encircled the anterior crural nerve, so that some of its branches were damaged. The patient was a woman, aged 32, subject for about eight months to a swelling on the right side of the abdomen, very prominent over the groin; a prolongation could be detected passing down under Poupart's ligament along the outer side of the femoral vessels. This prolongation was tender on pressure, and the patient declared that she felt occasional pain radiating along the front of the thigh. At the operation the tumour was seen to be a fatty growth directly it was exposed by an incision dividing the obliques and transversalis muscles. It was readily detached from the parietal peritoneum, and, posteriorly, the iliacus muscle was laid bare in the process of enucleation. Some adhesions below formed a kind of pedicle, which was ligatured and divided. In checking haemorrhage a pressure-forceps was applied deeply down in the inguinal region and immediately the quadriceps contracted with violence. Then it was found that some branches of the anterior crural nerve ran in the substance of a piece of the capsule of the tumour which was left behind. The tumour, a typical lipoma, weighed about a pound and a half. The patient a year after the operation was free from recurrence, but there was a certain amount of atrophy of the anterior muscles of the thigh.

THERAPEUTICS.

334. **Modern Treatment of Nephritis.**

ROVIGHI (*Rif. Med.*, April 27th, 1908) in a clinical lecture on the above subject says we should aim at (1) removing everything likely to irritate the kidneys; (2) reduce, as far as possible, the congestion; (3) control the uraemic symptoms due to toxic products. With regard to the first object, there is nothing better than a milk diet. Experiments based on the effect of a milk diet on albuminuria are not entirely conclusive; as it is not safe to rely on one symptom only, the progress of a case of nephritis cannot be safely estimated merely on one symptom. Milk has strong antifermentative powers, it lessens the toxicity of the urine, is a good diuretic, has a sedative action on the nervous system and lowers blood pressure. An absolute milk diet may be enjoined for fifteen to forty-five days. It should be given in small quantities at frequent intervals, and may be rendered palatable by adding sugar, aniseed, chocolate, limewater, etc. If an absolute milk diet cannot be borne, a mixed diet may be given excluding foods likely to give rise to large quantities of extractives. The vegetable albuminoids are useful in this respect. Eggs, unless it is found they increase the albumen, may be allowed, the white being excluded if necessary. A moderate amount of exercise (all acute cases being excluded) is beneficial. A warm climate is also indicated. To relieve congestion, bleeding, sudorifics, saline injections, and in bad cases decortication are recommended. The author does not believe much in the drug treatment of albuminia *per se*; milk is the best treatment. The reduction or complete absence of salt in the diet has a strong influence in reducing oedema. Curiously enough, a diminution of chlorides in the diet corresponds with an increased elimination of chlorides in the urine. Possibly this may be explained by the fact that an excess of chlorides in the blood irritates the vasal endothelium. When renal insufficiency exists the best remedy is digitalis in the form of fresh infusion or as a definite preparation like digalen. The milder saline aperients are also useful. Chloral and bromide are suggested in acute uraemic convulsions. The author is evidently somewhat chary of using opiates in these cases, but speaks hopefully of surgical interference in the shape of decortication.

335. **Tulase in Ophthalmic Practice.**

R. COLLIN (*Muench. med. Woch.*, September 3rd, 1907) spent several weeks with von Behring in Marburg, where he was able to carry out some experimental work with the preparation which von Behring has called *tulase*. Collin gives the history of the movement in some detail. The following is a brief summary of what he says: For many years von Behring has been studying tuberculosis experimentally, and in 1901 he discovered that cattle could be rendered immune to tuberculosis. Young calves were chosen for the purpose, and living human tubercle bacilli were injected intravenously. This he called bovo-vaccination. He applied the method to practice, and claimed that it was a harmless, inexpensive, and certain means of stamping out *Perlsucht*. The difficulty of applying the method to human beings lay in the fact that one would not care to inject living bacilli which would be capable of multiplying into the human organism. He thereupon found that he could abstract a substance from the tubercle bacillus by first freeing the bacilli from the constituents which are soluble in water, then from those which are soluble in 10 per cent. saline solution, and, lastly, from those soluble in alcohol and ether. The residue, which he called "restbacillus," he emulsified and changed into an amorphous mass. This mass he called T.C., and with it he was able to immunize cattle and rabbits against tuberculosis. However, this T.C. was difficult and tedious to prepare. He then proceeded in a different way. First, he filtered a bouillon culture of tubercle bacilli and rubbed the bacilli to a paste with chloral hydrate. This paste was allowed to stand for weeks, when it separated into a clear fluid (V-tulase) and a wax-like residue (C-tulase). The latter was worked up into a fine emulsion (tulaselaktin). With it cows and rabbits could be rendered immune to tuberculosis, not only by intravenous application, but also by giving it subcutaneously and by the mouth. Tulaselaktin was further found to cure localized tuberculous lesions in the named animals, provided that their general condition was fairly satisfactory. This led von Behring to have the preparation tried on human beings. It was found that it was quite harmless and that it exercised a beneficial effect on localized tuberculous lesions in man. It was doubtful whether it did any good in progressive phthisis. He further found that animals which were treated with tulaselaktin formed certain antibodies. These antibodies are to be found in the blood and tissue fluids, and are produced by the dissolving of the fat substance of the tubercle bacilli, which process renders the bacilli suitable for digestion and disintegration. They act also by neutralizing the tubercle toxin. Immunizing horses to a high degree with tulaselaktin, von Behring was able to prepare the antibody in large quantities. He called it *antitulase*. Thus tulaselaktin had active immunizing properties, while antitulase possessed passive immunizing properties. The clinical tests to which Collin put the two preparations were limited to 25 patients in von Michel's ophthalmic clinic in Berlin. Twelve were treated with tulaselaktin and 13 with antitulase, while in 6 cases both preparations were used; 280 injections were carried out in all. In one case an abscess formed from the accidental inclusion of *Staphylococcus aureus*, and in the remainder the injections did not cause any disadvantage to the patient, save some tenderness. Tulaselaktin was given in doses beginning with $\frac{1}{100}$ mg. and working up to 8 mg. in ten days by doubling the dose daily, while antitulase was given in larger doses, commencing with 0.1 gram and working up to 2 grams. With tulaselaktin a general reaction is aimed at. This was well tolerated, and Collin emphasizes that even during the reaction the patients felt a subjective improvement. The local reaction was also well marked. The curative effect of the two preparations is claimed on the ground that although spontaneous improvement and healing can take place, the constancy and promptness of the improvement forced him to ascribe this to the treatment. Conjunctival affections, he says, are not affected by the tulase preparations. Without giving details of his cases, and without claiming actual cures, Collin states that the preparations exercise a specific influence on localized tuberculous processes of the eye, and that the treatment neither harms the affected eye nor the whole organism. He therefore pleads for a wide trial of the tulase preparation in localized tuberculous processes.

PATHOLOGY.

336. **The Living Spirochaeta Pallida.**

ALTHOUGH much has been written on the subject of spirochaetes of syphilis, but few of the communications deal with observations made on the living micro-organisms. This is partly due to the small refraction power to light of this delicate structure. E. Eitner regards it as a happy circumstance that the introduction of the dark-field illumination microscope renders it possible to see the *Spirochaeta pallida* in its living condition, and reports on his studies in this direction (*Muench. med. Woch.*, April 16th, 1907). The method of preparing material for examination by the dark-field illumination is described as follows: Either the fluid is diluted with physiological salt solution, or, if the material be solid, it is teased out and suspended drops of saline solution, and the larger portions are then fished out again. The solution for dilution should be first boiled and filtered before use. When such a fluid suspension is examined, one cannot overlook the spirochaetes, even if there are but a few present. The characters of the spirochaetes when seen in this way are much better marked than in stained preparations with the ordinary illumination. One recognizes the slender form, the large number of narrow, sudden, and regular windings, and the peculiar movement. First of all, he mentions that in such suspensions one comes across a large number of forms of spirochaetes other than the *pallida*. He does not think that the term *refringens*, which Schaudinn introduced, is applicable, unless one assumes that this is merely a generic name, and not the name of a definite species. The most important type of these is the spirochaete found in numbers in cases of erosive balanitis. When seen by means of the dark-field illumination, this spirochaete appears pale yellow to deep orange-red, as compared with the delicate white of the *pallida*. The body is fatter, the windings are longer and flatter, and it is much more energetic than the *pallida*. It moves rapidly in jerks backwards and forwards, frequently crossing the whole field with one impetus. At times it moves with a wave-like progression either like the movements of a snake or those of a caterpillar. The wave-like movement, which does not cause the spirochaete to move in its entirety, is seen in this form, as in the *pallida*. Besides, one sees screw-like movements, by which the body progresses by means of a rotation on its long axis. The *pallida*, on the other hand, moves in three ways: (1) Rotation around the long axis; (2) by bending its body, and (3) by jerks backwards and forwards. It seems, however, that the *pallida* do not move widely or energetically, and when a *pallida* spirochaete is seen crossing the field, it is always being carried in the current of the fluid medium. Next he describes the *S. dentium*, which are very like the *pallida*. The colour, the windings, and the movements are almost identical, but they are generally considerably shorter. The measurements are given at from 5μ to 8μ, and the number of windings at from 6 to 16. Most of the spirochaetes show marked changes in form when dying. The *pallida* and the *dentium* show least change. Only when the *pallida* is killed by some chemical substance does one notice much alteration in the *pallida*. It has been stated that in certain conditions which are not syphilitic, forms indistinguishable from the *pallida* have been observed. The author was able to observe one of these types (derived from an ulcerating carcinoma of the penis). In order to see if he could distinguish the two forms he mixed the suspensions together, and even when he adopted a ruse of staining the fluids and portions of tissue with methylene blue or fuchsin, he was scarcely able to make out any difference. However, this only applies to the living spirochaetes. The carcinoma spirochaetes stretch out and take on irregular forms when dying, while the *pallida* remain in their original form. The author also discusses many other observations which he has made on the *Spirochaeta pallida* by means of the dark-field illumination, for which, however, we must refer the reader to the original paper.

337. **Leucoprotease and Antileucoprotease of Mammals and of Birds.**

OPIE AND BARKER (*Journ. of Exper. Med.*, March, 1907), having previously shown that proteolysis in an alkaline, or approximately neutral, medium caused by a suspension of cells from an inflammatory exudate is prevented by the addition of small quantities of serum, have devised further experiments to determine whether the power to resist the action of the leucoprotease of the polynuclear leucocytes is common to all proteids of the blood serum or whether this antibody is directly associated with a particular constituent of the serum. They have therefore separated the globulins and albumen of blood serum by the method of Freund and Joachim, and have allowed dried and powdered leucocytes (leucoprotease) to act at 37° C. for five days upon coagulated proteid in the presence of the various fractions of the serum which they had isolated. They find that the inhibiting action of the blood serum upon the enzyme of the polynuclear leucocytes, leucoprotease, is exerted by the albumen fraction of the serum. The albumen fraction contains no proteolytic enzymes. The globulin fraction of the serum contains no antienzyme for leucoprotease, but contains, on the contrary, an enzyme which digests proteids in a neutral or alkaline medium. This enzyme resembles leucoprotease, which is present in the polynuclear leucocytes of an inflammatory exudate, and in the bone marrow from which these cells are derived, and is no doubt identical with the similar enzyme occurring in smaller quantity in the spleen. This enzyme, which is present in the blood serum, is held in check by its antienzyme, but the latter is in such excess that the serum as a whole is capable of checking the action of leucoprotease when added in considerable quantity. The serum of birds (pigeon and hen) completely fails to inhibit mammalian leucoprotease (of dog). The polynuclear leucocytes, the bone marrow, and the spleen of the hen do not contain an enzyme resembling leucoprotease of mammals. The absence of antienzyme in the serum is associated with absence o a corresponding enzyme in the leucocytes.

338. **Chemical Pathology of the Liver.**

IN the September issue of the *Journ. of Exper. Med.*, Holmes C. Jackson and Richard M. Pearce publish a series of five articles on the chemical changes associated with experimental necrosis of the liver. This condition may be readily produced in the dog by the intravenous or intraperitoneal injection of haemagglutinative and haemolytic immune serums. The authors state that the lesions are frequently great in distribution, and resemble in a general way those of eclampsia; diffuse lesions may also be produced which, with the associated repair, are more or less similar to certain stages of acute yellow atrophy. It was therefore thought that some light might be thrown on these conditions in the human subject by a chemical study of the lesion experimentally produced in dogs. They find that in the less marked forms of necrosis the dog's liver is characterized by a storing up of nitrogen in the persisting liver cells, while in the diffuse form the total nitrogen content is but slightly above the normal, the latter fact being explained by the great diminution in persisting liver substance, which limits the power of nitrogen accumulation. In all forms of necrosis there occurs an absolute increase of nitrogen precipitable by phosphotungstic acid (hexon bases), but the percentage increase, in relation to total nitrogen, diminishes in the focal forms, where the products of autolysis may be readily carried off by the blood stream, and greatly increases in the diffuse form with large areas in which the circulation is seriously impaired. In both focal and diffuse necroses of the liver due to haemotoxic serum there occurs an increased elimination of total nitrogen with a correspondingly augmented output of urea. The ammonia excretion becomes slightly diminished at first, but subsequently rises somewhat above the normal. On the other hand, in diffuse degeneration with no necrosis only a slightly increased output of total nitrogen is evident. A rearrangement of the urea-ammonia proportion occurs, the ammonia excretion being augmented while the urea elimination is correspondingly diminished. There is thus, under the latter condition, "merely a disturbance of the urea-forming function of the cell, without the appearance in the urine of products of autolysis." The investigation of nuclein metabolism in experimental necrosis of the dog's liver has shown that the increased excretion of uric acid, purin bases, and inorganic phosphorus pentoxide is the result of the hydrolysis of nuclear material occurring during the autolysis of the necrotic tissue. The changes which occur in the fat content of the liver of dogs receiving haemotoxic serum bear no relation to the degree of necrosis produced by this serum. An increase in water content of the tissue seldom occurs, and when present is due to the nitrogenous autolysis rather than to the deposition of fat. The appearance of fat in the liver cell is not associated with a decomposition of the proteid component of the compound fats, but is rather due to a simple splitting off of the fatty radical. This is shown by the slight variations occurring in the percentage nitrogen of the fat-free substance.

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MEDICAL BILLS IN PARLIAMENT

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ANNUAL MEETING, SHEFFIELD, 1908.

THE seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July, 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University, and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

The following are the general arrangements for the meeting, so far as they are as yet complete

President: HENRY DAVY, M.D., F.R.C.P Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

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The Address in Medicine will be delivered by JAMES KINGSTON FOWLER, M.D., F.R.C.P.

The Address in Surgery will be delivered by RUTHERFOORD JOHN PYE-SMITH, F R.C S.

The Popular Lecture will be delivered by EDMUND OWEN, LL.D., F.R.C.S.

THE SECTIONS.

The scientific business of the meeting will be conducted in sixteen Sections which will meet on Wednesday, July 29 h, Thursday, July 30th, and Friday, July 31st.

The President, Vice Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes. Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following is a list of the Sections, with the names of the officers. The subjects selected for discussion in the various Sections will be published as soon as the arrangements of the committee of reference are completed.

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PROVISIONAL TIME TABLE.

FRIDAY, JULY 24TH *

2 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

SATURDAY, JULY 25TH.*

9.30 a.m.—Representative Meeting.

MONDAY, JULY 27TH.

9.30 a.m.—Representative Meeting.

TUESDAY, JULY 28TH.

9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
8.30 p.m.—President's Address.

* It is left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council to decide if the business to come before the Representatives will necessitate a meeting on the Friday.

WEDNESDAY, JULY 29TH.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Medicine.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception.

THURSDAY, JULY 30TH.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Surgery.
7.30 p.m.—Annual Dinner.

FRIDAY JULY 31ST.
10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.

SATURDAY, AUGUST 1ST.
Excursions.

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SINCLAIR WHITE, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—
W. T. D. MART M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.
R. W. I. SMITH, M.D., C.M.,
Don House, Brightside, Sheffield.
A. C. TURNER, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GLASGOW AND WEST OF SCOTLAND BRANCH.

Notification of Births Act, 1907.—Under the auspices of the Branch a meeting of the profession in Glasgow was held in the Faculty Hall on Tuesday, December 10th, 1907, for the purpose of considering what action the profession should take in view of the Corporation having adopted the Act. There was a very large attendance, and in the absence of the President of the Branch, Dr. LINDSAY STEVEN was asked to take the chair. Dr. HAMILTON read the notice calling the meeting, and made a short statement with reference to what had already been done in connexion with the Act by the Branch Council and a Joint Committee composed of representatives of all the medical societies of the city, and he laid before the meeting a statement which had been prepared by a sub committee, which he hoped would be acceptable to the meeting. After discussion Dr. OLIPHANT moved:

> That this meeting do take action in the matter of approaching the Corporation of Glasgow in reference to the Notification of Births Act.

This motion was seconded by Dr. CORRIE, and carried unanimously. Dr. OLIPHANT further moved the adoption of the prepared statement read by Dr HAMILTON. This motion was seconded by Dr. MUIR. Dr. WISHART KERR moved as an amendment:

> That it be remitted to a Committee to consider if the Notification of Births Act can be repealed, otherwise what amendments on the Act are possible and practicable.

Dr. MORTON seconded the amendment. After a discussion, the amendment was withdrawn, and the motion was carried unanimously. On the motion of Dr. HAMILTON, the following Committee was appointed as a deputation to approach the Corporation, namely, Dr. Nicol, Professor Stockman, Drs. Oliphant, Borland, Lindsay Steven, F. K. Monro, Service, W. L. Muir, Grant Aldrew and Hamilton. This was unanimously agreed to. It was also agreed that a copy of the report should be sent to the newspapers after it was submitted to the Corporation.

Deputation to Health Committee.—Consequent on this meeting, the appointed deputation met the Health Committee of the Town Council on December 24th, 1907, and presented the following memorial for their consideration, namely:

REPRESENTATION OF THE MEDICAL PROFESSION OF GLASGOW WITH RESPECT TO THE NOTIFICATION OF BIRTHS ACT, 1907.

At a meeting of the members of the medical profession in the City of Glasgow, held in the Faculty Hall, on December 10th, 1907, it was resolved to appoint a deputation to lay the following representation before the Corporation of the City:

The medical profession of the City has already, through a deputation, when the Omnibus Bill was under consideration last spring, assured the Corporation of its entire sympathy with the object of the Bill, namely, the reduction of the infantile mortality amongst the poorer and less-informed classes of the community; but the profession is of opinion that the means by which this object is sought to be attained in the Notification Act in the form in which it has emerged from Parliament, are clumsy, and in certain respects of a highly objectionable character.

The provisions of the Act involve in many instances an unnecessary invasion of the privacy of the homes of the citizens, and they place the family doctor in the position of a spy and informer in relation to his patients. Under the oath which has been imposed upon members of the medical profession from time immemorial, every medical man on his entrance into the profession declares that he will not knowingly or intentionally do anything to the hurt or prejudice of persons committing themselves or committed to his care and direction, "for any consideration, or from any motive whatever," or divulge any secret committed to his charge. This obligation is one of the most honourable and most honoured traditions of the profession. It is an obligation imposed upon the profession in every civilized country in the world. It is an *ethical* obligation of higher validity than the Notification of Births Act.

When the Notification of Births Bill was before Parliament the medical profession urged the Government to drop the clause imposing upon medical men the invidious obligation of reporting to the Local Authority the occurrence of all births to which they may be called in. They pointed out that the cases with which the Bill was intended to deal were not, for the most part, attended by medical men. This fact has been illustrated in recent reports by the Medical Officer to the Corporation, in which he has shown that in the Cowcaddens district of the City, for instance, in which the infantile mortality is deplorably high, there was no medical man in attendance in 78 per cent. of the births investigated.

It was urged as against the obligations of the medical oath that the public weal is the supreme law. That observation is irrelevant in this connexion. It may be necessary to the public weal that there should be early notification of births under certain circumstances, but it is not necessary to that end that medical men should be made public informers.

The requirements of the Act, if pressed indiscriminately, will in certain instances involve consequences of the most distressing character. There will be cases, not, unfortunately, very uncommon, in which young girls in respectable families would come within the purview of the Act, under circumstances of shame and anguish. It may be taken for granted that members of the medical profession, in such cases, may not be deterred by any fear of the imposition of penalties from fulfilling the obligations of the medical oath.

It was urged in Parliament that the obligation sought to be imposed upon medical men had a precedent in the case of the Notification of Infectious Diseases. There is no analogy. In the matter of infectious disease *an expert opinion* is required, such as only a medical man can give. In the matter of Notification of Births all that is in question is the intimation of *a fact*—which can be given as well by a non-medical person as by a medical man.

In consequence of such representations in Parliament the Bill was blocked, and the block was only removed on the understanding that the compulsory notification by the medical man should be dropped. The profession was out-manœuvred on that occasion, and the Bill was passed as it stands.

It is the present intention of the medical profession to bring the matter before Parliament in the ensuing session, with a view to securing the withdrawal of the objectionable and unnecessary clause.

Having regard to the assurance which was given to the deputation which waited upon the Parliamentary Bills Committee when the Omnibus Bill was under consideration—that the obligation upon medical men to notify births would be dropped, and to the loyal support afforded by the profession to the further progress of the Bill, the medical profession of the City entertain the confident belief that the Corporation will act with discrimination in the administration of the Act. The profession propose, in the case of each birth in connexion with which they are called in to place in the hands of the father, or other responsible person, a simple form of notification, with directions for its transmission to the medical officer of health. They respectfully invite the Corporation without adopting any resolution on the subject, to accept such notification as falling within the scope of the exemption clause of the Act, which provides that no person shall be liable to a penalty if he has reasonable grounds to believe that notice has been duly given by some other person.

The medical profession of the City desire, further, respect-

fully to suggest that a matter of such delicacy as the intimation of a birth should be communicated, not upon an open postcard, but under cover.

Signed on behalf of the meeting,

John Lindsay Steven, *Chairman.*
Ralph Stockman.
E H Lawrence Oliphant.
Thos K. Monro.
R. M'C Service.
Hugh H Borland.
W. L. Muir
J. Grant Andrew.
James Hamilton.

December, 1907.

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
Jan. 2nd, 1908. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD

Metropolitan Counties Branch: Tottenham Division —The next general meeting of the Tottenham Division will be held at the rooms of the Hornsey Conservative Association (opposite Finsbury Park Station) on Friday, January 10th at 9 15 p.m. Agenda:—(1) Address by Dr. Wilfrid Harris on headaches; (2) revision of the divisional rules; (3) adoption of rules in regard to ethical cases; (4) annual report of Divisional Honorary Secretary and Treasurer.—H. F. Staunton, M.D., Honorary Secretary and Treasurer, 88, High Road, Wood Green, N.

Midland Branch —Arrangements are being made for a meeting of the Branch Council (Midland) to be held at the Royal Infirmary, Derby, on Thursday afternoon, January 23rd.

South-Eastern Branch: Guildford Division.—A special meeting of this Division will be held on Wednesday, January 8th, at the Lion Hotel Guildford, at 4.30 p.m Agenda: (1) Notification of Births Act: To consider whether any steps should be taken by the Division to protest against the adoption of this Act locally. (2) Medical Inspection of School Children (see Supplement to Journal, December 21st, 1907). (3) Any other business. As the above-mentioned matters are of special importance to all medical men, and of some urgency owing to the fact that local authorities are now being required to consider them, it is hoped that as many members as possible will endeavour to attend this meeting.—E. J. Smyth, Honorary Secretary, Maythorne, Guildford.

West Somerset Branch —A special meeting of the Branch will be held at the Taunton and Somerset Hospital on Tuesday, January 7th, at 3 30 p.m., when Dr. G W. Harvey Bird, the President, will take the chair, to consider the new Act of Parliament which provides for the medical inspection of school children, and which in many ways affects the interests of medical practitioners, and raises a number of questions which it is desirable that the members of the Branch should discuss with a view to common action. The report of the Medico-Political Committee of the Association on this subject will be found in the Supplement to the British Medical Journal of December 21st, 1907 It is particularly hoped that until after this meeting no medical men in West Somerset will accept any post which may be offered them in connexion with this Act. Notification of Births Act: Dr Macdonald will move the following resolution: "That this Branch protests against the adoption of the Notification of Births Act in its present form." Tea will be provided after the meeting.—W. B. Winckworth, Honorary Secretary.

THE PUBLIC HEALTH ACTS AMENDMENT ACT, 1907.

The Local Government Board in England and Wales has issued the following circular letter to Councils of Municipal Boroughs and Urban and Rural Districts:

Local Government Board,
Whitehall, S.W.,
December 23rd, 1907.

Sir,

I am directed by the Local Government Board to communicate with the Council on the subject of the Public Health Acts Amendment Act, 1907 (7 Edw. 7, c. 53), which comes into force on the 1st day of January next.

The object of the Act is to enable Sanitary Authorities outside London to obtain when requisite, and without incurring the trouble and expense involved in promoting Bills for local Acts, various additional powers which are based upon provisions in local Acts passed in recent Sessions of Parliament.

The Act, which is to be construed as one with the Public Health Acts, is divided into ten Parts. The first, which contains enactments of a general character necessary for giving effect to the rest of the measure, extends to the whole of England and Wales exclusive of the Administrative County of London. The other Parts, or any sections in them, only extend to the district of any local authority to which all or any of them are applied by an Order of the Board, or, as regards Parts VII., VIII., and IX., or any sections of those Parts, by an Order of the Secretary of State.

By "Local Authority" in the Act and in this Circular is meant an Urban Sanitary Authority, an Urban District Council or a Rural District Council. Consequently any Part or section of the Act may be applied to any borough outside London, or to any other urban district, or to the district of any Rural District Council. Moreover, in the case of a rural district, any Part or section may be applied to any contributory place in the district.

Parts II. to X of the Act relate to Streets and Buildings (Part II.), Sanitary Provisions (Part III.) Infectious Diseases (Part IV.), Common Lodging Houses (Part V.), Recreation Grounds (Part VI.), Police (Part VII.) Fire Brigade (Part VIII.), Sky Signs (Part IX.), and Miscellaneous Provisions (Part X.).

Parts VII., VIII. and IX. do not come within the jurisdiction of the Board. As already mentioned, these Parts or any sections of them can only be put in force by an Order of the Secretary of State, and any correspondence in relation to them should be addressed to the Home Office and not to the Board.

In what follows, references to Parts of the Act are not intended to include references to Parts VII., VIII., and IX.

The Board do not think it necessary in this circular to give in detail the effect of the provisions in the several Parts of the Act. The general object of them will be gathered from the headings of the Parts. The Board's present purpose is to draw attention more particularly to those provisions of the Act which prescribe the procedure for applying enactments in it to any particular locality, and which are contained in Section 3.

Under that section the Board are empowered, upon the application of a Local Authority, by Order to be published in such manner as the Board direct, to declare any Part or any section of the Act to be in force in the district of the Authority, or where they are a Rural District Council in any contributory place in their district, and also to declare any enactments in any local Act which appear to the Board to contain provisions similar to or inconsistent with any such Part or section to be no longer in force in that district or contributory place (section 3 (1)).

In considering whether application should be made to have any Part or section of the Act put in force, the Local Authority should have regard to the circumstances and needs of the locality. They should cause any local Act in force in their district to be carefully examined in order to ascertain whether it contains any provision bearing on the subject-matter of any Part or section of the present Act which they desire to have put in force.

The Board will be ready to give attention to applications under the Act, but they think that such applications should not be made unless the Local Authority are satisfied that the powers sought are really needed.

It is necessary that the Local Authority should two weeks at least before applying to the Board for an Order, give notice of their intention to make the application by advertising the same once at least in one or more of the newspapers circulating in their district in each of two successive weeks, and no Order is to be made until proof of the advertisement has been given to the satisfaction of the Board, and until at least one month has elapsed after the date of such advertisement (Section 3 (2)).

The application, which should not be made until after the expiration of two weeks from the date of the second week's advertisement, should be by resolution of the Local Authority asking the Board to put in force any specified Part or section of the Act which the Local Authority desire to have applied to their district, and in the case of a Rural District Council should state whether the application relates to the whole district, or to specified contributory places in it. A copy of the resolution, certified by the Clerk, should be forwarded to the Board, and at the same time they should be furnished with a Statutory Declaration to be made by the Clerk, verifying the fact of the issue of the necessary advertisements, and having copies of the newspapers in which the advertisements were published annexed to it as exhibits.

The Board think that it will be found convenient if before a Local Authority publish any advertisement or make any formal application for an Order under Section 3 they forward to the Board drafts of the proposed advertisement and resolution. These should be accompanied by a statement setting out as regards each Part or each section of the Act to which the proposal relates the grounds upon which it is made. A list of any local Acts in force in the district and of any Provisional Orders altering such Acts should also be supplied, and if any of them contain provisions bearing on the subject matter of any Part or section included in the proposed application, a copy of the local Act or Order should be forwarded, and a reference should be given to the provisions in it which are in question. If there is no local Act in force, this should be stated. This procedure will enable the Board to consider the proposal before any advertisement is issued, and, if necessary, to make suggestions for its amendment.

The Board's Order may specify conditions subject to which any Part or any section of the Act is to be in force in the district, and where, in the opinion of the Board, the circumstances so require, the Order may, in relation to that district declare any Part or any section of the Act to be in force subject to such necessary adaptations as are specified in it. A statement of the effect of each Order specifying conditions or adaptations that may thus be made is to be published in the *London Gazette* as well as in any other manner directed by the Board (Section 3 (3)).

The Board will, when making any Order under the provisions of the Act, give all necessary directions as to the manner of its publication.

The Board desire to take this opportunity of calling attention shortly to various other provisions contained in Part I. of the Act, which, as already explained, is of general application.

Section 2 (4) provides that any bylaws made under any enactment for which any provisions of the Act are substituted shall remain in force as if the bylaws had been made under the corresponding provisions of the present Act.

Section 4 provides for the expenses incurred or payable by local authorities in the execution of the Act. It directs that all such expenses not otherwise provided for may be charged and defrayed, in the case of an Urban Sanitary Authority or Urban District Council, as part of the expenses incurred by them in the execution of the Public Health Acts, and that, in the case of a Rural District Council, they shall, subject to any power of the Board under any Act to order the contrary, be charged and defrayed as a part of their general expenses under those Acts.

Section 5 empowers the Board to direct any inquiries to be held by their Inspectors which they deem necessary in regard to the exercise of any powers conferred upon them under the Act, and makes the necessary provisions on the subject.

Section 6 provides that offences under the Act or under any bylaw made under its powers or under the powers of the Public Health Act, 1875, or any enactment amending or extending that Act, may be prosecuted, and penalties, forfeitures, costs, and expenses recovered, in like manner and subject to the same provisions as offences which may be prosecuted, and penalties, forfeitures, costs, and expenses which may be recovered, in a summary manner under the Public Health Acts.

Subsection (1) of Section 7 gives a power of appeal in certain cases to a Court of Quarter Sessions. It applies where any person is aggrieved (*a*) by any order, judgement, determination, or requirement of a local authority under the Act; (*b*) by the withholding of any order, certificate, licence, consent, or approval which may be made, granted, or given by a local authority under the Act; or (*c*) by any conviction or order of a court of summary jurisdiction under any provision of the Act. Subsection (2), however, provides that where a person deems himself aggrieved by the decision of the authority in any case in which, under the present Act, they are empowered to recover in a summary manner any expenses incurred by them, or to declare the expenses to be private improvement expenses, Section 268 of the Public Health Act, 1875, shall apply. The power of appeal given by Subsection (1) of Section 7 of the present Act will not apply in any such case whether arising under that Act or under the Public Health Act, but cases in which an appeal to a court of summary jurisdiction in relation to any requirement of the local authority, or to any expenses as above mentioned, is expressly authorized by the present Act, are excepted from the operation of Subsection (2).

Section 9 makes applicable to bylaws made by a local authority under the present Act the provisions with respect to bylaws contained in Sections 182 to 186 of the Public Health Act, 1875, and any enactment amended or extended by those sections.

Section 13 defines several of the expressions used in the Act, and provides that other expressions to which a special meaning is assigned by the Public Health Act, 1875 shall have the same meaning in the present Act as they have in that Act.

This circular will be placed on sale, so that copies may shortly be obtained from Messrs. Wyman and Sons, Limited, Fetter Lane, E.C., either directly or through any bookseller.

I am, Sir,
Your obedient Servant,
S. B. PROVIS,
Secretary.

The Town Clerk, *or*
The Clerk to the Urban District Council, *or*
The Clerk to the Rural District Council

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on December 19th, with Dr. F. H. CHAMPNEYS in the chair.

The Coombe Lying-in Hospital.

The CHAIRMAN made a statement in regard to a report from two of the Manchester examiners as to the insufficient training of a candidate at the October examination held in Manchester, and said that resolutions had been duly passed by the Board to the effect that, in consequence of irregularities, the name of the Coombe Lying-in Hospital, Dublin, be removed from the list of recognized training schools, and that the facts and documents relating to the case be reported to the General Medical Council and to the Privy Council.

Training of Midwives.

A letter was received from the Clerk of the Privy Council transmitting a copy of a letter from the Local Government Board, enclosing a letter from the Executive Committee of the Rural Midwives' Association, in regard to the question of the training of midwives, and the possibility of the grant of State aid towards the cost of such training. The letter was referred to the Standing Committee.

The Roll of Midwives.

On the motion of Dr. STANLEY B. ATKINSON, the following resolutions were adopted:

That in the case of a midwife struck off the Roll upon consideration of depositions taken at a coroner's inquisition, the Coroner be informed of the result.

That upon application being made for the restoration of the name of a midwife to the Roll, the local supervising authority under which she practised be notified of the fact at once

Letters were considered from Mr. W. Schröder, Deputy Coroner for Central London, and Honorary Secretary of the Coroners' Society, asking the Board to furnish the coroners of England and Wales with an annual copy of the Midwives Roll, or in the alternative that the local supervising authorities of England and Wales should furnish copies of the local Rolls. The Board decided to refer the matter to the Privy Council.

The Term "Infectious Disease."

Letters were considered from Dr. G. F. Sydenham, of Dulverton, asking the Board to define the term "Infectious Disease," and the Board decided that Dr. Sydenham be referred to the rules as regards the necessity for disinfection, and to the local supervising authority as regards the method and cost of the same.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Deputy Inspector-General W. E. Breton, M.D., is promoted to be Inspector-General of Hospitals and Fleets, December 31st, 1907. He was appointed Surgeon, September 3rd, 1875; Staff Surgeon, September 30th, 1886; Fleet Surgeon, February 24th, 1895; and Deputy Inspector-General, August 12th, 1902. He has no war record.

Fleet-Surgeon F. J. Lilly is promoted to be Deputy Inspector-General of Hospitals and Fleets, December 31st, 1907. His previous commissions are dated—Surgeon, February 11th, 1884; Staff Surgeon, February 11th, 1886; Fleet Surgeon, October 21st, 1896. Whilst Surgeon of the *Rifleman* he was in the Yonnie expedition, 1887; as Surgeon of the *Blanche*, he accompanied an escort of twenty-five men to Witu, in July, 1893, to take over the district from the I.B.E.A. Company, and to confer with a turbulent chief, Fumo Omari; in August, 1893, was medical officer in charge of Naval Brigade and of Zanzibar and Soudanese troops to punish the above chief, who was the terror of the surrounding country. He was present at engagements at Pumwani on August 7th and at Jongeni on August 15th (mentioned in dispatches, medal with clasp). Staff Surgeon of *Forte* during the war in South Africa, 1899, April, 1900; landed with force from Cape squadron, for defence of Durban; served in blockading squadron off Delagoa Bay; was in medical charge of Naval Brigade attached to Natal Field Force, and was present with the Ladysmith Relief Column at the battles of Colenso, Spion Kop, Vaal Krantz, Haartes Hill, Pieter's Hill, and Elandslaaghte (mentioned in dispatches; promoted to Fleet Surgeon, October, 1900, for services in the war). Fleet Surgeon of flagship *Doris* in Gambia punitive expedition in January, 1901 (medal with clasp). Was in charge of base hospital at Tendeba, River Gambia, and afterwards assisted with the military sick and wounded in the Colonial Hospital, Bathurst (mentioned in dispatches, medal with two clasps).

Inspector-General J. C. B. Maclean, M.B., M.A., has been placed on the retired list at his own request, December 31st, 1907. He entered the service as Surgeon, March 30th, 1872; became Staff Surgeon, July 11th, 1882; Fleet Surgeon, December 23rd, 1890; Deputy Inspector-General, April 5th, 1893, and Inspector-General, December 5th, 1901. As Surgeon of the *Alexandra* he was present at the bombardment of the Alexandria Forts in 1882 (for which he was promoted) and during the Egyptian war, receiving a medal with clasp and the Khedive's bronze star.

Fleet Surgeon W. G. Scott, M.B., has been placed on the retired list at his own request, December 28th, 1907. He was appointed Surgeon, August 17th, 1887, and promoted to be Fleet Surgeon, August 17th, 1895.

The following appointments have been made at the Admiralty: Henry F. Liewicz, Fleet Surgeon, to the *President*, additional, for three months' course at the London and the West London Hospitals, January 1st; Malcolm Cameron, M.B., Staff Surgeon, to the *Indefatigable*, additional, January 7th, and on recommissioning, uncated; John N. Robertson, M.B., Surgeon to the *President*, additional, for three months' course at West London Hospital, December 16th, 1907; Edwin Polliott, Staff Surgeon, to the *Hindustan*, January 7th; Edward B. Town end, Fleet Surgeon, to the *Victory*, January 1st; John Menarry, M.D., Fleet Surgeon, to the *Terrible*, January 1st.

B. Connolly, civil practitioner, has been appointed Surgeon and Agent for Morris Castle.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel H. G. Mathias, D.S.O., has been appointed Secretary to the Principal Medical Officer, India, vice Captain E. B. Knox, M.D., from October 21st 1907.

Lieutenant-Colonel W. J. Macnamara, M.D., late of the Royal Army Medical Corps, has been appointed Recruiting Medical Officer at Dublin, vice Lieutenant-Colonel J. Latchford, retired pay.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major R. B. Graham to be Surgeon-Lieutenant-Colonel, December 17th, 1907.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel A. W. Alcock, C.I.E., M.B., Bengal, is permitted to retire from the service, from December 29th, 1907. He was appointed Surgeon, October 1st, 1885; Surgeon-Major, October 1st, 1897; and Lieutenant-Colonel, October 1st, 1905. He has no war record in the Army Lists.

The retirement is also announced of Lieutenant-Colonel H. Herbert, Bombay Establishment, dated October 2nd, 1907. His commissions bear date—Surgeon, March 31st, 1887; Major, March 31st, 1899; and Lieutenant-Colonel, March 31st, 1907. He was present in the operations of the Zaila Field Force in 1890.

Captain S. R. Douglas also has retired from the service, from September 15th, 1907. He joined as Surgeon-Lieutenant, January 28th, 1898; was made Captain, January 20th, 1901; and was placed on half-pay, September 15th, 1905.

Captain H. A. Kiddle, I.M.S., and Captain W. H. Odlum, R.A.M.C., are permitted to exchange.

VOLUNTEER RIFLES

Surgeon-Lieutenant H. Dodgson, 3rd (Cumberland) Volunteer Battalion the Border Regiment, to be Surgeon-Captain, October 31st, 1907.

John A. Swindale to be Surgeon-Lieutenant in the 1st Volunteer Battalion the Hampshire Regiment, November 19th, 1907.

Surgeon-Lieutenant R. P. Thomas, M.D., 1st Volunteer Battalion the Northamptonshire Regiment, to be Surgeon-Captain, November 21st, 1907.

ROYAL ARMY MEDICAL CORPS (VOLS.).

Lieutenant-Colonel and Honorary Colonel F. L. Stephenson, C.B., M.B., retired (lately Commanding), is appointed to the Honorary Colonelcy of the Woolwich Companies, Eastern Command, vice Surgeon-Lieutenant-Colonel W. Collingridge, M.D., retired (late Militia Medical Staff Corps), who vacates that appointment, October 16th, 1907.

Lieutenant W. McG. Young, M.D., Leeds Companies, Northern Command, to be Captain, November 7th, 1907.

Cecil W. Butt to be Lieutenant in the Manchester Companies, Western Command, November 19th, 1907.

Lieutenant H. W. Prichard, Manchester Companies, to be Captain, November 22nd, 1907.

Creighton H. Lindsay, M.D., to be Lieutenant in the Manchester Companies, November 25th, 1907.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns including London, 8,437 births and 5,160 deaths were registered during the week ending December 21st, 1907. The annual rate of mortality in these towns, which had been 16·0 and 16·1 in the two preceding weeks, further rose to 16·8 in the week under notice. The rates in the several towns ranged from 6·0 in Bournemouth, 8·0 in East Ham, 8·7 in Handsworth (Staffs.), 9·3 in Hornsey, 9·9 in Great Yarmouth, and 10·2 in Middlesbrough, to 21·7 in Oldham, 22·5 in Swansea, 24·1 in Sunderland, 24·2 in Rotherham, 25·6 in Bootle, 25·7 in Tynemouth, 26·0 in Merthyr Tydfil, and 28·9 in Preston. In London the rate of mortality was equal to 16·3 per 1,000, while among the seventy-five other large towns the rate averaged 17·0 per 1,000. The principal infectious diseases caused a death-rate of 1·3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1·0 per 1,000, while among the other towns the highest death-rates from these diseases were 2·8 in Willesden, 2·9 in Ipswich, 3·1 in Aston Manor and in Salford, 3·8 in Tynemouth, 4·8 in Rhondda, 5·1 in Barrow-in-Furness, and 6·2 in Bootle. Measles caused a death-rate of 1·7 in Gateshead, 1·8 in Salford, 1·9 in Leeds, 2·1 in Willesden, 3·6 in Rhondda, 3·8 in Tynemouth, and 5·1 in Barrow-in-Furness; scarlet fever of 1·0 in Burnley; diphtheria of 1·0 in Hull, and 1·6 in Hanley and in Bootle; whooping-cough of 1·1 in Northampton, 1·2 in Rochdale, 1·3 in Sunderland, 1·4 in Ipswich and in King's Norton, 2·5 in Aston Manor, and 4·7 in Bootle; and diarrhœa of 1·4 in Merthyr Tydfil. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal cases of small pox was registered during the week. The number of scarlet-fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital which had been 5,676, 5,581, and 5,352 at the end of the three preceding weeks, had further declined to 5,035 on December 21st, 1907; 447 new cases were admitted during the week, against 623, 554, and 560 in the three preceding weeks.

During the week ending Saturday last, December 28th, 1907, 5,840 births and 4,527 deaths were registered in seventy-six of the largest English towns. The annual rate of mortality in these towns decreased to 14·7 per 1,000, having been 16·0, 16·1 and 16·8 in the three preceding weeks. The lowest death-rates in the seventy-six towns last week were 6·9 in Kings Norton, 7·0 in Hastings, 7·4 in Southampton, 7·6 in East Ham, 8·0 in Willesden, and 8·1 in Hornsey and in Tottenham; the highest rates were 20·0 in Salford, 20·4 in Newcastle-on-Tyne, 20·7 in Stockton-on-Tees, 22·8 in Rhondda, 23·5 in Wigan, 25·6 in Ipswich and 27·4 in South Shields. In London the death-rate was 14·5 per 1,000, while it averaged 14·8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·2 per 1,000; in London the death-rate from these diseases was 0·9 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·0 in West Bromwich, 3·1 in Bootle, 3·2 in Swansea, 3·3 in Sunderland, 3·6 in Rhondda, 3·9 in Burton-on-Trent, 4·8 in Tynemouth, and 9·3 in Ipswich. Measles caused a death-rate of 1·6 in Bootle, 1·7 in Barrow-in-Furness and in Leeds, 2·7 in Swansea, 2·9 in Burton-on-Trent, 3·3 in Tynemouth, and 7·2 in Ipswich; scarlet fever of 1·1 in Walsall, 2·1 in Newport (Mon.), and 2·3 in West Bromwich; diphtheria of 1·3 in Norwich; whooping-cough of 1·1 in Northampton, 1·3 in Devonport, in Aston Manor, in Sunderland, and in Newcastle-on-Tyne, 1·4 in Ipswich, and 1·6 in Hanley and in Bootle; and "fever" of 1·1 in Northampton. The mortality from diarrhœa showed no marked excess in any of the large towns, and no death from small pox was registered during the week. There were 4,999 scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, against 5,581, 5,352, and 5,035 at the end of the three preceding weeks; 353 new cases were admitted during the week, against 554, 560, and 447 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday, December 21st, 1907, 864 births and 724 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19·3, 20·6, and 20·0 per 1,000 in the three preceding weeks, rose again to 20·8 per 1,000 in the week under notice, and was 4·0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13·7 in Aberdeen and 18·0 in Edinburgh, to 27·4 in Leith and 30·5 in Dundee. The death-rate from the principal infectious diseases

averaged 3.3 per 1,000, the highest rates being recorded in Greenock and Perth. The 338 deaths registered in Glasgow included 5 which were referred to measles, 11 to whooping-cough, 8 to diarrhœa, 3 to diphtheria, 3 to cerebro-spinal meningitis, and 2 to enteric fever. Four fatal cases of whooping-cough were recorded in Edinburgh; 10 of measles and 4 of diarrhœa in Dundee; 4 of whooping-cough in Aberdeen; 3 of diphtheria and 2 of cerebro-spinal meningitis in Paisley; 2 of diphtheria in Leith; 5 of measles and 2 of whooping-cough in Greenock; and 3 of whooping-cough in Perth.

In eight of the principal Scottish towns 864 births and 632 deaths were registered during the week ending Saturday last December 28th, 1907. The annual rate of mortality in these towns, which had been 20.6, 20.0, and 20.8 per 1,000 in the three preceding weeks, declined last week to 18.2 per 1,000, but was 3.5 per 1,000 above the mean rate in the seventy-six large English towns during the same week. The lowest death-rates in the Scottish towns were 12.5 in Leith and 13.2 in Aberdeen; the highest rates were 24.2 in Greenock and 25.4 in Perth. The death-rate from the principal infectious diseases averaged 3.1 per 1,000 in these eight towns, the highest rates from these diseases being recorded in Greenock and Perth. The 317 deaths recorded in Glasgow included 38 which were referred to measles, 3 to scarlet fever, 4 to diphtheria, 6 to whooping-cough, 3 to cerebro-spinal meningitis, and 5 to diarrhœa. Three fatal cases of whooping-cough and 2 of diarrhœa were recorded in Edinburgh: 8 of measles, 3 of whooping-cough, and 2 of diarrhœa in Dundee; 2 of measles and 4 of diarrhœa in Aberdeen; 2 of diarrhœa in Paisley; 3 of whooping-cough in Leith; 4 of measles and 2 of whooping-cough in Greenock; and 6 of whooping-cough in Perth.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, December 21st, 1907, 483 births and 430 deaths were registered in six of the principal Irish towns, as against 463 births and 425 deaths in the preceding period. The annual death-rate in these towns, which had been 20.5, 22.8, and 22.2 per 1,000 in the three preceding weeks, fell to 21.3 per 1,000 in the week under notice, this figure being 4.5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 9.7 in Waterford and 17.2 in Londonderry to 25.0 in Dublin and 32.8 in Limerick. The zymotic death-rate in the same six Irish towns averaged 0.7 per 1,000, or 1.8 per 1,000 lower than during the preceding period, the highest figure, 3.1—being recorded in Belfast, while Cork, Londonderry, Limerick, and Waterford registered no deaths under this heading at all.

During the week ending Saturday, December 28th, 1907, 328 births and 362 deaths were registered in six of the principal Irish towns, as against 483 births and 430 deaths in the preceding period. The annual death-rate in these towns, which had been 22.8, 22.2, and 21.3 per 1,000 in the three preceding weeks, fell to 17.9 per 1,000 in the week under notice, this figure being 3.2 per 1,000 higher than the mean annual rate in the seventy-six English towns for the corresponding period. The figures ranged from 7.4 in Limerick and 10.9 in Londonderry to 23.9 in Belfast and 25.3 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.4 per 1,000, or 0.7 per 1,000 higher than during the preceding period, the highest figure—3.0—being recorded in Belfast, while Cork and Londonderry registered no deaths under this heading at all. The deaths in Belfast of this class were principally due to measles.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BURSLEM EDUCATION COMMITTEE.—Lady doctor. Salary at the rate of £50 per annum, rising to £200.

CARDIFF INFIRMARY.—(1) Medical Officer in charge of Electrical Department. Salary, £150 per annum. (2) House-Physician. Honorarium, £30 for six months.

CHARING CROSS HOSPITAL. Assistant Physician.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Senior House-Surgeon. Salary £120 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

DUNDEE ROYAL INFIRMARY.—Investigator to work in the Caird Cancer Pavilion of the Hospital.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Second Medical Officer to the Casualty Department. Salary at the rate of £40 per annum. (2) Medical Officer for Electrical Department.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £ 2 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House-Physicians. Honorarium, £25 for six months.

HOSPITAL FOR WOMEN, Soho.—Eight Clinical Assistants for Out-patient Department.

LEEDS PUBLIC DISPENSARY.—(1) Honorary Pathologist. (2) Five Honorary Dental Surgeons. (3) Four Honorary Assistant Dental Surgeons.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Salary, £120 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Resident Medical Officer. Salary, £250 per annum.

LONDON LOCK HOSPITAL.—House Surgeon to the Male Hospital, Soho. Salary, £80 per annum.

MANCHESTER EAR HOSPITAL.—(1) Assistant Anæsthetist. (2) Pathologist.

MANCHESTER HOSPITAL FOR CONSUMPTION.—Assistant Medical Officer for the New Crossley Sanatorium. Salary, £100 per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Physician to Out-patients.

NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum, increasing to £60.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Assistant Physician.

ST. GEORGE'S UNION INFIRMARY, Fulham Road, S.W.—Second Assistant Medical Officer. Remuneration, £120 per annum.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Junior Demonstrator of Physiology. Salary at the rate of £100 per annum.

SHEFFIELD UNIVERSITY.—Demonstrator in Anatomy. Salary, £150 per annum.

SWANSEA COUNTY BOROUGH.—Medical Officer of Health. Salary, £ 00 per annum.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C. Resident Medical Officer.

WARRINGTON UNION WORKHOUSE.—Resident Medical Officer. Salary, £150 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Out-patients' Physician.

WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary, £140 per annum, rising to £160.

WREXHAM INFIRMARY.—Resident Medical Officer. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces a vacancy at Dronfield, co. Derby.

APPOINTMENTS.

ATTENBOROUGH, Wilfrid E., M.R.C.S., L.R.C.P., House-Physician to Addenbrooke's Hospital, Cambridge.

BUSH, W. H., L.S.A., District Medical Officer of the Pocklington Union.

COX, W. J., M.B., Ch.B.Vict., Senior Resident Medical Officer to the Crumpsall Workhouse, Manchester.

DAVIS, C. Noel, M.B., B.S.Lond., D.P.H.Camb., Assistant M.O.H. to the Shanghai Municipal Council.

DIMOCK, Horace, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., House-Surgeon to Addenbrooke's Hospital, Cambridge.

FAIRER, J. A., M.B., Ch.B.Vict., Second Resident Assistant Medical Officer to the Crumpsall Workhouse, Manchester.

HELLIER, John Benjamin, M.D.Lond., Professor of Obstetrics in the University of Leeds, vice C. J. Wright, resigned.

HAILSTONE, J. E., B.A.Cantab., M.R.C.S., L.R.C.P., Assistant House-Surgeon to Addenbrooke's Hospital, Cambridge.

HOURIGAN, W. P., L.R.C.P.Edin., L.R.C.S.I., Certifying Factory Surgeon for the Freshford District, co. Kilkenny.

MACLURE, W. J., M.B., Ch.B.Glas., Certifying Factory Surgeon for the Conisborough District, co. York.

MCDONALD, G. R., L.R.C.P. and S.I., District Medical Officer of the Tiverton Union.

O'GRADY, F. R., L.R.C.P. and S.I., Certifying Factory Surgeon for the Swineford District, co. Mayo.

QUENNELL, A., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Billericay Union.

SINCLAIR, H. W., M.B., Resident Medical Officer of the Workhouse and Children's Homes of the Middlesbrough Union.

SPRIGGS, N. L., M.D.Lond., F.R.C.S., Certifying Factory Surgeon for the Shrewsbury District, co. Salop.

SANDILANDS, J. E., M.D.Camb., M.R.C.S.Eng., Certifying Factory Surgeon for the Winchester District, co. Hants.

VISE, I. N. B., L.R.C.P., M.R.C.S.Eng., Medical Officer of Health, Borough of Chard.

WALKER, G. F. C., M.B., B.S.Vict., Medical Officer of Health, Haverfordwest Rural District.

WHITEHEAD, Francis Henry, L.R.C.P.Lond., M.R.C.S.Eng., Medical Officer to the Post Office at Battersea.

YOUNG, Meredith, M.D., D.P.H., Medical Officer of Health for the Borough of St. Marylebone.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BOLTON.—On December 21st, 1907, at the County Asylum, Rainhill, the wife of Joseph Shaw Bolton, M.D., M.R.C.P., of a daughter.

LUCKHAM.—On December 28th, 1907, at 47, Winchester Street, Salisbury, the wife of L. S. Luckham, of a daughter.

MARRIAGES.

DONALDSON—OWEN.—At Maenofferen Chapel, Blaenau Ffestiniog, North Wales, on December 25th, 1907, by the Rev. David Jones, Robert Donaldson, M.A., M.B., Ch.B.Edin., Waterloo, Liverpool, eldest son of James Donaldson, Ash House, Corstorphine, to Annie, second daughter of John Owen, Bryngoleu, Blaenau-Ffestiniog.

LEICESTER—DOBSON.—On December 3rd, 1907, at S. Paul's Cathedral, Calcutta, by the Rev. Walter K. Firminger, B.D., Chaplain of St. Stephen's, Kidderpore, assisted by the Rev. Horace Cogan, D.D., Cathedral Chaplain, Captain J. C. Boldich Leicester, M.D., B.S., B.Sc., M.R.C.P.Lond., F.R.C.S.Eng., I.M.S., eldest son of the late Rev. John Augustus Leicester, to Queenie, daughter of Lieutenant-Colonel Edwin Dobson, I.M.S.

DEATHS.

DIXON.—On Tuesday, December 24th, 1907, at Oxford Road, Burnley, after a short illness, Dr. Henry Alcock Dixon, aged 53.

LOGAN.—On December 21st, 1907, in London, William Archibald Logan, M.B., F.R.C.S., of Wellington, N.Z., son of James K. Logan, Wellington, New Zealand.

WATSON.—At 16 Charlotte Square, Edinburgh, on December 21st, 1907, Sir Patrick Heron Watson, D.L., M.D., LL.D., F.R.C.S.E. and L., Honorary Surgeon to the King in Scotland, in his 76th year.

DIARY FOR THE WEEK.

THURSDAY.

North-East London Clinical Society, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Address by Dr. Robert Hutchison: Modern Theories of Diet in their Relation to Practice.

Royal Society of Medicine:
Obstetrical and Gynaecological Section, 20, Hanover Square, W., 7.45 p.m. Papers:—Mr. J. Bland Sutton: On Carcinoma of the Ovary from a Clinical Standpoint. Drs. Carver and Fairbairn: On Haemorrhage into the Pons Varolii as a Cause of Eclampsia. Various specimens will also be shown.

United Services Medical Society, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Paper:—Major M. P. C. Holt, D.S.O., R.A.M.C.: The Advisability of Operation for Recurrence of Hernia in the Services.

FRIDAY.

Royal Society of Medicine:
Clinical Section, 20, Hanover Square, W., 8.30 p.m.—Exhibition of cases. Paper:—Dr. Sidney Phillips: A Case of Fatal Illness in a Child, with *Post-mortem* Appearances of the "Status Lymphaticus."

POST-GRADUATE COURSES AND LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follow: Tuesday, The Diagnosis and Treatment of Inflammation of the Fallopian Tubes; Wednesday, Psychasthenia; Thursday, Some Special Methods of Administering Chloroform and their Relative Advantages.

Mount Vernon Hospital Out-patient Department, Fitzroy Square, W.—Thursday, 5 p.m., Angina Pectoris.

BOOKS, ETC., RECEIVED.

Paris: J. Rousset:
Traité Pratique d'Hypnotisme et de Suggestion Thérapeutiques. Procédés d'Hypnotisation simples, rapides, inoffensifs. Par M. G. Bonnet. Deuxième édition. 1907. Fr. 3.50.

Traité Clinique des Maladies de l'Estomac. Par le Dr. L. Pron. 1908. M. 12.

University of Bombay. The Calendar for the Year 1907-1908. Vols. i and ii (Examination Papers of 1906-1907). Bombay: The University. 1907. Vol. i, Rs. 1 8-0; vol. ii, R. 1.

The Commoner Diseases of the Eye. By C. A. Wood, M.D., C.M., D.C.L., and T. A. Woodruff, M.D., C.M., L.R.C.P. Third edition. Chicago: W. T. Keener and Co. 1907. $2.50.

Traitement de la Tuberculose par la Paratoxine basé sur l'Action Antitoxique du Foie. Par E. Gérard and G. Lemoine. Paris: Vigot Frères. 1907. F. 1.50.

München: J. F. Lehmann. 1908:
Drei Jahre Gallensteinchirurgie. Von Professor Dr. H. Kehr, Dr. Siebold, and Oberarzt Dr. Neuling. M. 14.

Schema des Rumpfes. Von Priv. Dr. W. Hildebrandt. Taschenausgabe. M. 1.20.

Die Entwicklungsgeschichte des Talentes und Genies. Von Dr. A. Reibmayr. Erster Band. M. 10.

The Doctor in the Schools. By H. Stuart, M.D. Lond., F.R.C.S.E., D.P.H. Cantab. London: H. K. Lewis. 1908. 1s.

Reflections on Plague and the Methods of Checking It. By P. M. Kanga, B.A., LL.B. Bombay: Education Society's Press. 1907.

The Sanitary Record Year Book and Diary, 1908. London: The Sanitary Publishing Co. 2s. 6d.

Herbert Fry's Royal Guide to the London Charities. Edited by J. Lane. Forty-fourth edition. London: Chatto and Windus. 1908. 1s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
3 FRIDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
4 SATURDAY...	
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	London: Public Health Committee, 3.15 p.m. West Somerset Branch, Special Meeting, Taunton and Somerset Hospital, 3.30 p.m.
8 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. Guildford Division, *South-Eastern Branch*, Special Meeting, Lion Hotel, Guildford, 4.30 p.m.
9 THURSDAY...	London: Hospitals Committee, 2.30 p.m. London: Metropolitan Counties Branch Council, 5 p.m. Hampstead Division, *Metropolitan Counties Branch*.
10 FRIDAY ...	London: Central Ethical Committee, 11.15 a.m. London: Premises Committee, 2.15 p.m. Tottenham Division, *Metropolitan Counties Branch*, Rooms of the Hornsey Conservative Association (opposite Finsbury Park Station), 9.15 p.m.
11 SATURDAY...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	London: Organization Committee, 11 a.m.
15 WEDNESDAY	Cardiff Division, *South Wales and Monmouthshire Branch*, Cardiff.

Date.	Meetings to be Held.
JANUARY *(Continued).*	
16 THURSDAY...	
17 FRIDAY ...	
18 SATURDAY...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	London: Journal and Finance Committee, 2.30 p.m.
23 THURSDAY...	Midland Branch, Branch Council, Royal Infirmary, Derby. Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
24 FRIDAY ...	
25 SATURDAY...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	City Division, *Metropolitan Counties Branch*, Business Meeting, Great Eastern Hotel, 4 p.m.
29 WEDNESDAY	Central Council, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Bath and Bristol Branch, Bristol.
30 THURSDAY...	
31 FRIDAY ...	
FEBRUARY.	
1 SATURDAY...	
2 Sunday ...	
3 MONDAY ...	
4 TUESDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 11TH, 1908.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

BATH AND BRISTOL BRANCH:

BATH DIVISION.

The Notification of Births Act.—At a special meeting of the Bath Division of the British Medical Association, held on November 19th, 1907, at the Royal United Hospital, the following resolution was passed:

That the Bath Division of the British Medical Association, while fully recognizing the advantages and importance of an early notification of birth, is of opinion that such notification is a domestic, or social, but not a medical duty. The Division most emphatically objects to the duty of notification being compulsorily thrust upon the medical profession, and the fact that there is to be a penalty for its non-performance (without any payment for its fulfilment), renders it all the more objectionable.

The Act is also most repugnant to the profession because it violates the honourable rule of secrecy between patient and doctor which has existed since the days of Hippocrates, and it is therefore hoped that it will not be adopted in Bath.

Addendum.—If this Act is not adopted in Bath we feel that the local profession will use their best endeavours to assist the Corporation to obtain early notification of births by any means short of accepting personal responsibility.

Medical Inspection of School Children.—On the same occasion the following resolution was proposed and duly adopted:

That this meeting of the Bath Division of the British Medical Association hopes that the Education Authority of Bath will not formulate a scheme to be submitted to the Board of Education for carrying out the Education (Administrative Provisions) Act, 1907, without submitting it to this Division of the British Medical Association.

TROWBRIDGE DIVISION.

A COMBINED meeting of members of the Trowbridge Division with members of the Bath and Salisbury Divisions residing in Wiltshire was held in the Town Hall, Trowbridge, on Saturday, January 4th. There were sixteen members present. Dr. W. INGRAM KEIR was in the chair.

Medical Inspection of School Children.—The meeting was summoned specially to consider the question of Medical Inspection of School Children. It was moved by Dr. KEMPE, seconded by Dr. STRATON, and carried unanimously:

That the treatment of disease and the inspection of the homes of the children be no part of the duties of the medical inspector.

It was moved by Dr. FLEMMING and seconded by Dr. FERGUSON:

That inspection should be carried out wherever possible by general practitioners.

An amendment was moved by Dr. LOCKET and seconded by Dr. H. P. TAYLER:

That the appointment of whole-time inspectors is advisable.

The amendment was lost by six votes to seven, and the original motion then carried by eight votes to six. It was moved by Dr. KEMPE, and seconded by Dr. STRATON:

That local medical officers of health ought to be asked to organize the work among the practitioners in their district.

This was carried by eight votes to three. It was moved by Dr. KEMPE, and seconded by Dr. H. P. TAYLER:

That fair remuneration would be at the rate of 2s. 6d. for each child examined; and for distances over 3 miles 1s. per mile.

This was carried unanimously. A discussion arose upon an advertisement which appeared in the JOURNAL for January 4th for a whole-time medical woman inspector of schools at a salary of £150 per annum, and it was unanimously agreed that this was considered an improper advertisement to appear in the BRITISH MEDICAL JOURNAL, in view of the fact that a Committee of the Council of the Association had decided that £50 per annum was to be considered a proper remuneration for one school session per week. DRS. STRATON and FLEMMING, members of the

Council of the Association, were asked to convey this view to the Journal Committee and to the Council of the Association.

BORDER COUNTIES BRANCH:

ENGLISH DIVISION.

THE first ordinary meeting of this Division was held at the Cottage Hospital, Maryport, on Friday, December 13th, 1907, at 3.15 p.m. Dr. GRAHAM, of Carlisle, was in the chair.

Apologies for Non-attendance.—Apologies for absence were received from nine members.

Confirmation of Minutes.—The minutes of the inaugural meeting of the Division held in Carlisle on Friday, June 21st, 1907, and also of the special meeting held in Carlisle on Wednesday, October 16th, 1907, were read and signed as correct.

Divisional Ethical Committee.—A report was received from the Executive Committee, intimating that it had appointed Dr. Barnes, of Carlisle, and Dr. Mitchell, of Cockermouth, members of the Divisional Ethical Committee. This was confirmed.

Ethical Rules.—A report was also received that the Ethical Rules, with Rule Z, which were adopted by the Division at the special meeting held on October 16th, 1907, had been approved of by the Council of the Association, and were now rules of the Division.

Case of Alleged Unprofessional Conduct.—The Executive Committee were authorized to investigate a case of alleged unprofessional conduct, and report.

Ambulance Classes as Opportunities for Erecting the Best Bulwark against Quackery.—Dr. HARRISON MITCHELL (Cockermouth) delivered an address on this subject which will be published.

Ambulance Lectures.—Dr. PENNY (Cockermouth) moved the following resolution, which was seconded by Dr. SEDGWICK:

> That the members of this Division of the Border Counties Branch of the British Medical Association do not give lectures on ambulance under the Technical Committee of the County Council at a less fee than five guineas for the usual course of five lectures as required by the St. John Ambulance Association.

Dr. PROUD (Maryport) moved the following amendment, which was seconded by Dr. DUDGEON, and, being carried, will come before the next meeting of the Division:

> That no member of this Division of the Border Counties Branch of the British Medical Association shall give lectures on ambulance at the request of the Technical Committee of the Council at a less fee than one guinea per lecture, each lecture to be not more than two hours.

Rupture of Urethra.—Dr. CRERAR read a short paper on traumatic rupture of the urethra, and illustrated his remarks by a case in a boy of 14 years, where there was complete separation of the ruptured ends to the extent of ¾ to 1 in. He drew attention (1) to the value of using a head of fluid in passing a catheter in such cases; (2) to the imperative necessity of performing perineal section in all suspected cases of urethral rupture; (3) to the sound surgical practicability and value of freely dissecting up the urethral tube to obtain apposition of the ruptured ends, with consequent improvement of the outlook as to the inevitable stricture.

Remittent Fever.—Dr. Burnett of Keswick read notes on a case of regularly remittent fever lasting over ten weeks, and occurring in a patient who had recently suffered from dysentery and malaria. There were marked leucocytosis and some enlargement of the liver. Abscess of this organ was suspected, but never discovered, hepatitis appearing to be the only cause for the rise of temperature. The case illustrated very strikingly the effect of 30-grain doses of ipecacuanha, given on five nights consecutively, in reducing the temperature to normal and causing a corresponding general improvement. The patient eventually made a good convalescence

Meningitis Treated by Lumbar Drainage.—Dr. JAMES CLARK read a very interesting and lucid paper on some cases of meningitis treated by lumbar drainage. After some preliminary remarks on the justification for and methods of lumbar puncture and drainage, Dr. Clark dealt with the various types of meningitis illustrated by cases of the following infections: Streptococcal, staphylococcal, pneumococcal, epidemic cerebro-spinal, posterior basic, and tuberculous. He concluded from a study of his cases: (1) That lumbar puncture is a safe method of treatment in meningeal infections; (2) that, given a primary meningitis in its earlier stage, before blood infection sets in, one may hope for complete recovery under this line of treatment; (3) that in secondary meningitis, when the primary focus can be efficiently dealt with, one may hope for the same result; (4) that even in the more advanced cases with complications, one can procure greater alleviation of the symptoms by spinal drainage than by any other line of treatment.

Specimens.—Dr. PROUD, of Maryport, showed a specimen of a prostate which he had enucleated, and the HONORARY SECRETARY the following:—(1) Two urinary stones: No. 1, a uric acid stone removed from the urethra of a boy, aged 4, on July 27th, 1907. On July 29th suprapubic cystotomy was performed, and a polypus ligatured with catgut. The suprapubic opening never completely closed. On December 10th (134 days after), the sinus was opened up and the second, a phosphatic, stone removed. (2) Columnar-celled carcinoma of the descending colon from a man, aged 57, who was admitted to the Cumberland Infirmary with complete obstruction on July 23rd, 1907. The mass was brought out of the abdomen and fixed to the abdominal wall, and removed four days later. (3) Epithelioma of the vaginal wall from a woman aged about 50 years; early recurrence. (4) Prepatellar bursa, removed by local anaesthesia from a man aged 67. (5) Thyroid cyst from a girl aged 17.

Votes of Thanks.—Most hearty votes of thanks were accorded to the readers of papers, the Infirmary Committee for kindly allowing the meeting to be held in the Cottage Hospital, and to the Matron for providing tea.

Nineteen members were present, eight of whom dined together afterwards.

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting of this Branch was held on December 19th, 1907, at the Cheltenham General Hospital, Dr. WAYLAND ANCRUM in the chair, and twenty-nine members present.

Case.—Dr. KIRKLAND and Dr. DENT showed an interesting case for diagnosis, peripheral neuritis or tabes being suggested.

Intestinal Obstruction.—Mr. BUCKELL, in opening his paper on Some Cases of Intestinal Obstruction, said he was bringing the cases forward partly because they illustrated many of the varieties of intestinal obstruction, and partly because he felt that the blame for the failures rested in great measure with themselves. He then described cases of obstruction due to: (1) A cord binding small intestine down to the spine; (2) volvulus. In this case the caecum and ascending colon were attached in the middle line by a long mesocolon, and the colon took a curve downwards before rising again to the under surface of the spleen. The duodenum did not cross the spine, but was suspended to the under surface of the right lobe of the liver by a fold of peritoneum. (3) Reduction *en masse* of an inguinal hernia. (4) Spasmodic contraction of gut, following a kick in the abdomen, associated with injury to kidney. (5) Intussusception in an infant, which was apparently reduced by manipulation under an anaesthetic and introduction of water per rectum, returning in three hours' time and feeling like a floating kidney. (6) Gall stone, forming ball-and-socket valve in sigmoid, with deep ulceration and adhesions to uterus. (7) Adhesions due to old appendix abscess. (8) Strangulated gut in fossa in neighbourhood of appendix. (9) Adhesions due to old appendix abscess in pelvis, malignant growth in sigmoid, with malignant deposits in liver, lungs, and glands of neck. Mr. Buckell then drew attention to the importance of the time element, giving statistics of cases in the Cheltenham General Hospital for the last fifteen years, showing that the recoveries were all in cases operated on early. He urged that a diagnosis should be arrived at and course of action decided upon before thinking of morphine. In doubtful cases the dangers of abdominal exploration were not to be compared with dangers of letting the case alone. Young children and elderly people stood operation well. In closing he entered a plea for early operation in cases of chronic obstruction, with a view to removing the disease. The paper was discussed by the PRESIDENT, Mr. DYKES BOWER, Mr CARDEW, Dr. PRUEN, Mr. HOWELL; and Mr. BUCKELL replied

Dinner.—At the dinner after the meeting, Dr. BOND of Gloucester presented as a supplement to the menu two cheese dishes, to enable those interested to test the resources which cheese offers as a substitute for meat.

EAST ANGLIAN BRANCH:

WEST NORFOLK DIVISION.

A MEETING of this Division was held at the West Norfolk and Lynn Hospital on December 19th, 1907, Dr. STEELE in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were confirmed.

Paper.—A paper on the Therapeutic Uses of Alcohol was read by the CHAIRMAN, and an interesting discussion followed.

Medical Inspection of School Children.—Consideration of the subject of the medical inspection of school children was deferred till definite action be taken by the county council, when it was resolved a special meeting should be called to discuss the matter.

Notification of Births Act.—The Notification of Births Act was discussed and a resolution unanimously adopted:

That this Division objects to the adoption of this Act, as it seeks to compel medical practitioners to violate professional confidence.

It was further resolved that the Secretary be asked to write to the local authorities concerned, placing this view of the matter before them and requesting them not to adopt the Act.

LANCASHIRE AND CHESHIRE BRANCH:

LIVERPOOL AND BIRKENHEAD COMBINED DIVISIONS.

A MEETING of the combined Divisions was held at the Liverpool Medical Institution on Friday, December 27th, 1907, at 4 p.m. Present, Sir JAMES BARR in the chair, and sixty-two members.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Notification of Births Act.—The letter concerning the Notification of Births Act sent by the Honorary Secretary to the Lord Mayor of Liverpool and to the Mayor of Bootle on December 3rd, 1907, was read, and also the replies received from the Lord Mayor of Liverpool, the Mayor of Bootle, and the Town Clerk of Liverpool. The meeting expressed its satisfaction with these replies.

Medical Inspection of School Children.—The CHAIRMAN then invited discussion on the medical inspection of school children, on the Memorandum of the Board of Education (SUPPLEMENT, BRITISH MEDICAL JOURNAL, November 30th, 1907), and on the Report of the Medico-Political Committee of the British Medical Association (SUPPLEMENT, BRITISH MEDICAL JOURNAL, December 21st, 1907) Dr. BREWER opened the discussion, in which the following took part: Sir JAMES BARR, DRS. BARENDT, BENNETT, E. T. DAVIES, A. E. DAVIS GIVEN, GRIMSDALE, GROSSMANN, GULLAN, HARCOURT, HARVEY, HEANEY, HOPE, LARKIN, LOGAN, MATTHEWS MOFFAT, NEVINS, STANSFIELD, and WARRINGTON. It was resolved by a large majority:

That in the opinion of this meeting the medical inspection of schools as required by the Memorandum of the Board of Education should as far as possible be carried out by part-time medical officers drawn from the general body of medical practitioners.

The Report of the Medico-Political Committee of the British Medical Association was then considered as far as the recommendations were concerned, and it was resolved *nem. con.* to adopt the recommendation of the Medico-Political Committee:

That the school medical officer be paid at the rate of £50 per annum for an attendance of one-half school day per week, half a school day being defined to be two hours.

The "General Regulations," as modified by the Medico-Political Committee, together with the Schedule, were then proposed and carried. The Secretary was instructed to communicate the results of the meeting to the Health Committees and education authorities in the area of the combined Divisions.

NORTH MANCHESTER DIVISION.

Supper and Concert.—On Thursday, December 19th, 1907, a supper and smoking concert was held at the Grand Hotel, Manchester, under the auspices of the North Manchester Division. Invitations had been issued to members of the Division and medical men practising in the Division area, and 40 were able to be present. Amongst the guests were Dr. Gibson, the Coroner; Dr. Helme, President of the Lancashire and Cheshire Branch; Dr. Garstang, of Altrincham, and many others. After the toast of "The King," proposed by the CHAIRMAN (Dr. Hargreaves), had been honoured in the usual way, a most attractive programme was enjoyed, to which Drs. Davie, Jackson, and Wardman contributed excellent songs; and Mr. Beswick, one of the guests, gave some good stories and a musical parody which was much appreciated. Mr. Lingard also provided some excellent songs and sketches which had a "go" in them which went remarkably well and kept all cheerful. Among the various toasts of the evening, Dr. LEE, Vice-Chairman of the Division, in proposing that of "The Manchester Corporation," mentioned some "home truths" which Dr. SKINNER, who replied, hoped would eventually find their proper destination in some recently instituted "waste-paper baskets." Dr. Skinner also alluded to the Early Notification of Births Act, and while carefully disguising the valuable part he himself played in securing the postponement of the adoption of this measure, pointed out how extremely useful medical members of the Council could be in explaining this and similar measures to other members. The toast of "The Guests" was proposed by Dr. BROADBENT in a felicitous and somewhat lengthy speech in which he took the opportunity of alluding to his favourite subjects of architecture, speaking of the palatial buildings in London Road as the coroner's court and its accessories; history—ancient history—as to the origin of a coroner's court, and modern, including the Manchester Medical Cricket Club; and Association organization, offering under the latter a very useful suggestion to the guests to lose no more valuable time in becoming members of the British Medical Association, a suggestion which it is to be hoped will bear good fruit immediately. Dr. GIBSON, the Coroner, in replying, stated his well known attitude of working in harmony with the profession to the best of his ability; saying he considered his office as a supplement to the profession, inasmuch as his work began where theirs left off—a saying which, strangely enough, was hardly as comforting as its sounded. Dr. GARSTANG, Secretary of the Altrincham Division, in his reply, mentioned his conversion to belief in the assistance of social meetings to organization; and Dr. HENSHAW, Secretary of the Manchester Medical Cricket Club, also responded briefly. Dr. WARDMAN proposed "The Kindred Societies," to which Drs. HAMILL and MARSHALL replied, showing the good work that is being done in Manchester in the direction of medical union. Dr. WALKER proposed "The Press" in a warmly eulogistic speech, suggesting that from its advertisement columns it seemed prepared to offer a cure for even more than "all the ills that flesh is heir to," and that the varying hues of the local press might almost keep a dyeworks supplied. Mr. BESWICK replied in a very humorous speech, in which he mentioned the one tint of newspaper which had been omitted; and the example chosen suggests a possibly (?) useful inquiry into the relation, if any, between mental and physical colour. The SECRETARY OF THE DIVISION, in replying to the toast of his health, very naturally emphasized the previously mentioned importance of every medical man joining the British Medical Association. A cordial vote of thanks to the Chairman, Dr. Hargreaves, brought a memorable evening to a fitting close.

METROPOLITAN COUNTIES BRANCH:

WATFORD AND HARROW DIVISION.

A SPECIAL meeting was held at Watford on December 20th, 1907, to consider the Notification of Births Act, Mr. F. C. FISHER in the chair.

The HONORARY SECRETARY read the Act and after an interesting discussion the following resolution was proposed by Dr. EDWARDS, seconded by Dr. BLUETT, and carried *nem. con.*:

1. That this Division, whilst anxious to help in every way in the reduction of infantile mortality, and therefore cordially approving the objects of the Notification of Births Act, considers that these objects can be best obtained by placing the duty of notification on the parents alone, since the cases most particularly intended to be covered by the Bill are not as a rule attended by medical men.

The meeting also protests against the imposition on the medical profession of a duty—to be rendered for the benefit

of the community—without any remuneration, and with a penalty for its non-fulfilment.

2. That the foregoing resolution be forwarded to the District Councils in the Division, and to the County Council, with a request that they take no action in the matter until an attempt has been made to get the Act amended.

A letter enclosing these resolutions was sent to the Councils with the accompanying remarks:—In asking your Council to accede to the request in the second of these resolutions we are adopting the only constitutional method left open to us, and we are of opinion that no harm will be done by postponing for a few months the consideration of the matter. The number of deaths in your district from errors of diet and faulty hygiene is not great, and even if the Bill were adopted now your Council has no "health visitors" to carry out its intentions in looking after the children when the births are notified. At Harrow and Gateshead the respective councils have decided, after hearing the views of the medical men in their district, *not* to adopt the Bill. The opposition of the medical profession is very great and universal, resolutions against it having already been passed at North Manchester, Monmouthshire, Gateshead, Bury and Rochdale, Blackpool, Liverpool, Salford, Tottenham, Warrington, Canterbury and Faversham, while meetings with the same object have been called in many other Divisions. We shall be glad to arrange for a representative of the profession to attend the meeting if your Council when the matter is considered if you will kindly let Dr. Bontor (Berkhamsted) know the time and place of the meeting.—Yours very truly,

(Signed) FRED. C. FISHER,
Chairman of the Division;
(Signed) SIDNEY A. BONTOR,
Honorary Secretary of the Division.

It was then proposed and carried unanimously:

That in the event of the County Council consenting to receive a deputation on the subject, the following be elected to represent the Division—Drs. Fisher, Edwards, and Bontor.

NORTH OF ENGLAND BRANCH:
DURHAM COMMITTEE.

THE fourteenth meeting of this Committee was held at the offices of the Secretaries, Messrs. Graham, Shepherd, and Sons, 32, John Street, Sunderland, on Friday, December 13th, 1907. Dr. JEPSON (Durham) was in the chair, and the following were present: Drs. Smurthwaite (Newcastle-on-Tyne), Galloway (Low Fell), Jaques (Washington), E. H. Davis (West Hartlepool), Ingram-Johnson (South Moor), Morrison (West Hartlepool), Smith (Whickham), and W. H. Davis (Low Fell), and Messrs. A. T. and R. A. Shepherd (Secretaries).

Confirmation of Minutes.—The minutes of the meeting held on October 3rd, 1907, were read and confirmed.

Apologies for Non-attendance.—Letters regretting inability to attend were read from Drs. Cox (Gateshead), and Hubbersty (Sunderland).

Congratulations to Coroner Graham.—Resolved, on the motion of Dr. JEPSON, seconded by Dr. GALLOWAY:

That the hearty congratulations of this Committee be sent to Coroner Graham (the founder of the old County of Durham Medical Union) on the occasion of his recent marriage.

Ethical Procedure.—In reference to Minute 8 of the last meeting the SECRETARIES reported that copies of the resolutions passed had been duly sent to the various Divisions, but they (the Secretaries) were at present in communication with the Medical Secretary of the Association on the subject of altering the Rules of Divisions.

Medical Certificates for School Children.—The SECRETARIES read a letter that had been received by Dr. Jaques from the Houghton-le Spring District of the Durham County Education Committee inviting him to attend a meeting of the Washington and Usworth Attendance Committee for the purpose of discussing the question of medical certificates for school children with a view to some arrangement that might be mutually advantageous. Dr. JAQUES reported that together with some of his colleagues he had attended the meeting, but beyond discussing the matter generally the Attendance Committee did not suggest payment of any fee to the doctors for giving certificates, and they (the doctors) had intimated that they would have to report the matter to their Association and obtain their decision as to the course to be adopted. A discussion then took place as to what was done in other parts of the country, and ultimately it was resolved, on the motion of Dr. JEPSON, seconded by Dr. E. H. DAVIS:

That the Divisions be recommended to advise their members not to give certificates in respect of the attendance of school children to the local education authority without payment of some fee which should be mutually agreed upon between the respective Divisions and local education authorities.

Notification of Births Act, 1907.—The Notification of Births Act, 1907, was then considered, and after considerable discussion it was resolved, on the motion of Dr. SMURTHWAITE, seconded by Dr. JAQUES:

That this meeting of the Durham Committee, whilst approving of the objects of the said Act, and wishful to aid in every possible way in the reduction of infantile mortality, desires to strongly protest against the imposition on the members of the medical profession of a duty to notify births under penalty for non-compliance—first, on the ground that in some cases a breach of professional confidence might be involved; secondly, that the proposed method of notifying on a postcard was objectionable; and thirdly, because there was no arrangement for the payment of a fee to the medical man for a service rendered for the sake of the community.

It was further resolved:

That copies of the above resolution be forwarded to each Secretary of Division, with a recommendation (if approved by his Division) for him to forward to the Public Health Committee of his District, and also to the Public Health Committee of the Durham County Council.

SOUTH-EASTERN BRANCH:
HASTINGS DIVISION.

A MEETING of the Hastings Division was held on Thursday, November 28th, 1907, at the Eversfield Hotel, St. Leonard's-on-Sea. Mr. E. R. MANSELL was in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Paper.—Dr. C. M. HOWELL, read an excellent paper on "Some Points about Epilepsy," and several members spoke upon the subject.

The Charter.—Dr. BATTERHAM proposed and Mr. FARRANT FRY seconded:

That a special meeting be held on Thursday, December 12th, to consider the reports with regard to the proposed Royal Charter.

This was carried unanimously. Twelve members attended the meeting.

Dinner.—Dinner was served at 7.45 p.m. Eleven members attended.

Special Meeting.

A special meeting of the Hastings Division was held in the Eversfield Hotel on Thursday, December 12th, at 8.30 p.m. Mr. E. R. MANSELL was in the chair. Eight members attended the meeting.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

The Referendum.—The referendum report and minority report were read, and each minute was separately discussed. The minutes of the Special Representative Meeting, namely, Minutes 123, 283 287, 293, 298, 299, 303, 328, 330, 342, and 346 were approved. Mr. F. W. S. CULHANE proposed, and Dr. G. V. HEWLAND seconded, the following resolution, which was carried:

That the Council be asked to arrange for a smoking room billiard room and a card room in the new building of the Association for use of the members. It is suggested that the billiard room and the card room will be self-supporting.

SOUTH MIDLAND BRANCH:
NORTHAMPTONSHIRE DIVISION.

A MEETING of the Division was held in the Board room of the General Hospital, Northampton, on Tuesday, December 17th, 1907, under the chairmanship of Mr. G. H. PERCIVAL. Twenty four members were present, namely, Drs. Greenfield, Baxter, Kennish, Darley, Sedgwick, Arthur, Harries Jones, A. A. Hope, Odgers, Buszard, Jacobs, C. E. Evans, Maguire, Terry, Churchhouse, Clarke, O'Rafferty, McCrindle, Robson, Bull, Wickham, Digby White, Percival, and Hichens.

Confirmation of Minutes.—The minutes were read and confirmed.

Notification of Births Act.—The Notification of Births Act was then discussed. Dr. HICHENS read a letter from Mr. C. E. Paget, the Medical Officer of Health for the County, in which he stated that he had reported favourably on the Act to the County Council as a means of reducing infantile mortality, and had advised its adoption where there were health visitors to visit the mothers of newborn infants. He had, therefore, recommended its consideration for adoption by urban district councils, but not by the county as a whole Dr. Hichens also reported a conversation he had had with Dr. McCrindle, the Medical Officer of Health for the town, in which the latter stated that, by his advice, the Town Council had not adopted the Act, since it had been drawn up in a manner unfair to the medical profession. Dr. CLARKE, Medical Officer of Health for Wellingborough, advocated the adoption of the Act as a means of decreasing infantile mortality, and proposed as a motion:

That it would be very advantageous if the Notification of Births Act could be generally adopted, especially in large districts.

The motion, however, found no seconder. Dr. BUSZARD said that, be the object of the Bill what it may, justice required that the State should pay those whom it forced to do work for it, and that, as the Government had passed the Bill in an improper manner and with improper clauses, the medical profession should hold aloof from the matter. He moved:

That the papers in connexion with the matter should be laid on the table, and that no action should be taken.

This was seconded by Dr. MAGUIRE and carried: Ayes 14, Noes 0; present 24.

South Northamptonshire Nursing Club.—Dr. JACOBS and Dr. O'RAFFERTY reported on the South Northamptonshire Nursing Club. Their report was entirely favourable. There had been no friction, and the Committee seemed to feel that their presence on it had been of value and help to it. Two nurses had been dismissed, one for insubordination and misconduct and the other for incapacity. Dr. MAGUIRE proposed the re-election of Dr. Jacobs and Dr. O'Rafferty to the Committee for the ensuing year, and said their presence on the Committee had been of great advantage to the medical profession. Dr. JACOBS declined to serve again, and Dr. O'Rafferty and Dr. Darley were elected as representatives on the motion of Dr. CHURCHHOUSE, seconded by Dr. TERRY.

Paper.—Dr. GREENFIELD then read a paper on the treatment of fractures by rubbing and early movement. He pointed out some of the untoward occurrences in the use of lengthy splinting, and went on to show how these might be avoided by posture; he advocated the flexed position, rubbing, which should be begun from the first, and passive movements, often as early as the third day. He gave details of the treatment of some cases, and claimed for this method more comfort for the patient, a much greater degree of movements on the removal of splints, and a quicker time for the recovery of the full use of the limb. He afterwards gave a demonstration of the methods he employs.

Medical Certificates for School Children.—Dr. BULL brought up the question of giving certificates to school children, and wished to know if it was the opinion of the Division that they should in no case be given except when paid for by the education authority. Dr. MAGUIRE thought they should be given if paid for by the parent. Dr. ROBSON related his experiences as regards hospital cases. Dr. CHURCHHOUSE said his practice was to give them only when the parent had been summoned. This caused the maximum trouble and expense to the education authority, and would soon check the summonses. On the motion of Mr. PERCIVAL, seconded by Dr. HICHENS, it was agreed that Dr. Churchhouse's plan should be adopted until the Branch had the opportunity of reconsidering the matter.

Clinical Cases.—Dr. HICHENS then showed two clinical cases, one being a case of pulmonary actinomycosis in a youth of 22. The disease was present in a comparatively early stage at the bases of both lungs, and was accompanied by anomalous bowel symptoms. Specimens were shown of mycelium, clubs, and fresh sputum. The other case was one of heart disease accompanied by prolonged remittent pyrexia or hectic fever over many months. There were double aortic murmurs and a mitral systolic murmur. The point of interest about the case was whether it were really one of ulcerative endocarditis or no. Under observation for the last ten months, the cardiac murmurs had not appreciably altered, although there had certainly been infarcts in the spleen and kidneys. Mr. PERCIVAL showed a specimen of tumour of the bowel of a peculiar nature.

The meeting then adjourned.

SOUTH-WESTERN BRANCH.

Medical Inspection of School Children Act.—Under the auspices of the South-Western Branch of the British Medical Association, meetings of all medical men practising in Cornwall and Devon were held at Plymouth on January 1st, and at Exeter on January 3rd, 1908. The following is a summary of the opinions expressed at these meetings:

1. That the inspection should be under the supervision of the medical officers of health, who should collate the reports and act as advisatory officers to their education authorities.
2. (*a*) Plymouth: That in rural districts the work of inspection should be open to all practitioners.
   (*b*) Exeter: That in rural districts the Poor-law medical officers should be the inspecting officers.
3. That in urban districts the inspections be carried out by certain medical practitioners appointed for that purpose.
4. That the examination of each child should take an average of from fifteen to twenty minutes, *provided proper arrangements were made so as to cause no delay to the examiner*, and that an examination of the urine should be included.
5. That the recommendation of the Medico-Political Committee of the British Medical Association (SUPPLEMENT, December 21st, 1907, p. 241) be adopted as a minimum; and that the Committee be asked to take into consideration the question of mileage.
6. That the foregoing be forwarded to all education authorities in Devon and Cornwall.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
Jan. 2nd, 1908. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of the Branch Council will be held at the Medical Institution, Liverpool, on Wednesday, February 12th, at 4 30 p.m.—F. CHARLES LARKIN, 54, Rodney Street, Liverpool, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting of the members of this Division will be held on January 16th, at the Co-operative Offices, Ellesmere Street, at 8 30 p.m.: Leigh Friendly Equitable Society.—J. SACKVILLE MARTIN, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next general meeting of this Division will be held on Friday, January 24th, at 4 p.m., in the Lambeth Infirmary, Brook Street, S.E. Agenda: (1) The minutes of the last meeting. (2) The resignation of Dr. W. H. B Stoddart from the South London Hospitals Committee. (3) The appointment of a representative of the Division upon the South London Hospitals Committee The representative proposed by the Committee of the Division is Dr W. Alexander Atkinson. It is open to any member to propose any other representative; such proposal, duly seconded, should be sent in writing to the Honorary Secretary not later than January 20th. (4) Consideration of the Notification of Births Act regulations. (5) A paper by H. L. Eason, M.D., M S.(Lond.), upon the Differential Diagnosis and Treatment of the Commoner Inflammations of the Eye. (6) Other business, if necessary. By kind permission of the Medical Superintendent, the wards of the Lambeth Infirmary may be seen after the meeting, and cases in them will be shown. A Committee meeting will be held at 3.30 p.m.—HERBERT FRENCH, Honorary Secretary, 26, St. Thomas Street, S.E.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.—The next general meeting of the Tottenham Division will be held at the rooms of the Hornsey Conservative Association (opposite Finsbury Park Station) on Friday, January 10th, at 9.15 p.m. Agenda:—(1) Address by Dr. Wilfrid Harris on headaches; (2) revision of the divisional rules; (3) adoption of rules in regard to ethical cases; (4) annual report of Divisional Honorary Secretary and Treasurer.—H. F. STAUNTON, M.D., Honorary Secretary and Treasurer, 88, High Road, Wood Green, N.

MIDLAND BRANCH.—Arrangements are being made for a meeting of the Branch Council (Midland) to be held at the Royal Infirmary, Derby, on Thursday afternoon, January 23rd.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: CARDIFF DIVISION.—The next meeting of this Division will be held on Wednesday, January 15th, at 3.30 p.m. The following is the agenda for the meeting: (1) Minutes of last ordinary and special meetings. (2) Short report on subject of medical inspection of school children. (3) Question of sending a deputation to Cardiff Board of Guardians on the matter of the circular sent by the Local Government Board with reference to payment of medical men called in by midwives in accordance with Rule 18 (See SUPPLEMENT, December 7th, 1907.) (4) W. B. Crawford Treasure: Notes on a case of Acute Systemic Gonorrhoeal Infection. (5) E. J. MacLean: Paper on Internal Secretion of the Ovary. (6) Cornelius Griffiths: Notes on Spinal Anaesthesia.—CYRIL LEWIS, Honorary Secretary.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,608 births and 5,254 deaths were registered during the week ending Saturday last, January 4th. The annual rate of mortality in these towns, which had been 16 1, 16.8, and 14.7 per 1,000 in the three preceding weeks, rose again last week to 16.9 per 1,000. The rates in the several towns ranged from 6.1 in Handsworth (Staffs), 8 7 in Walthamstow, 9.0 in Hornsey, 9.1 in Tottenham, 9 4 in West Hartlepool, and 9.8 in East Ham, to 23.5 in Sunderland, 24 0 in Swansea, 24.2 in Wallasey, 24.3 in Rhondda, 24.8 in Preston, and 26.4 in Newport (Mon.). In London the rate of mortality was 16 6 per 1,000, while among the seventy-five other large towns it averaged 17 0 per 1,000. The death-rate from the principal infectious diseases averaged 1 3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.2 per 1,000, while among the seventy-five other large towns the rates from these diseases ranged upwards to 3 0 in West Bromwich and in York. 3 1 in Salford, 3.4 in Merthyr Tydfil, 3 9 in Rhondda, and 5.7 in Tynemouth. Measles caused a death-rate of 1.3 in Preston, 1.5 in Hanley, 1.6 in Rhondda, 1.7 in Salford, 2.0 in Stockton-on Tees, 2 8 in Ipswich, 3.0 in York, and 5 7 in Tynemouth; scarlet fever of 1.5 in Wallasey; whooping-cough of 1 2 in Wigan, 1 4 in Newport (Mon.) and in Merthyr Tydfil, and 1.5 in Smethwick; "fever" of 1 2 in Rhondda and 1.4 in Merthyr Tydfil; and diarrhoea of 1 5 in West Bromwich. The mortality from diphtheria was not excessive in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of last week was 4,684, against 5,352, 5,035, and 4,999 at the end of the three preceding weeks; 440 new cases were admitted during the week, against 500, 447, and 353 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 4th, 953 births and 725 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20 0, 20 8, and 18.2 per 1 000 in the three preceding weeks, rose again last week to 20.6 per 1,000, and was 3 7 per 1,000 above the mean rate during the same period in the seventy-six large English towns Among these Scottish towns the death-rate ranged from 17 3 in Aberdeen and 17 7 in Edinburgh to 24 8 in Dundee and 30 5 in Greenock. The death-rate from the principal infectious diseases in these towns averaged 3 6 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 339 deaths registered in Glasgow included 47 which were referred to measles, 5 to scarlet fever, 5 to diphtheria, 10 to whooping-cough, 4 to cerebro-spinal meningitis, and 6 to diarrhoea. Two fatal cases of whooping-cough and 3 of diarrhoea were recorded in Edinburgh; 3 of measles, 4 of whooping-cough, and 5 of diarrhoea in Dundee; 6 of measles in Aberdeen; 2 of measles and 3 of diphtheria in Paisley; 3 of whooping-cough in Leith; 6 of measles in Greenock; and 3 of whooping-cough in Perth.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 4th, 757 births and 472 deaths were registered in six of the principal Irish towns, as against 328 births and 3:2 deaths in the preceding period The annual death-rate in these towns, which had been 22.2, 21 3, and 17 9 per 1,000 in the three preceding weeks, rose to 22.6 per 1,000 in the week under notice, this figure being 5.5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17.8 in Limerick and 18 2 in Londonderry to 25.5 in Dublin and 28.0 in Belfast. The zymotic death-rate in the same six Irish towns averaged 1.1 per 1,000, or 0.3 per 1 000 lower than during the preceding period, the highest figure—3 7—being recorded in Belfast, while Cork, Londonderry, and Limerick registered no deaths under this heading at all. The principal causes of death were measles in the zymotic list, and diseases of the respiratory system among general diseases. It will be noted that there was a remarkable rise in the birth-rate.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—FREDERICK J. LILLY, Deputy Inspector-General, to Plymouth Hospital, January 2nd; JOHN MOORE, M.D., Fleet Surgeon, to the *Indus*, January 2nd; GEORGE H. FOOTT, M.D., Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, January 7th; JOHN C. DURSTON, Staff Surgeon, to the *Blenheim*, January 4th.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN J. M'D. M'CARTHY, M.B., from Pembroke Dock, has been appointed Specialist Sanitary Officer in the Western Command, from December 28th, 1907.

Captain H. H. KIDDLE, from the Indian Medical Service, to be Captain, vice W. H. Odlum, who exchanges, December 18th, 1907.

Lieutenant A. S. ARTHUR, M.B., to be Captain, October 7th, 1907. He was appointed Lieutenant, January 30th, 1904, after having served for two years as a Civil Surgeon.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-MAJOR W. C. JAMES, M.D., to be Surgeon-Lieutenant-Colonel December 10th, 1907.

Surgeon Captain A. D. DUCAT, M.B., to be Surgeon-Major, December 25th, 1907.

INDIAN MEDICAL SERVICE.

MAJOR W. S. P. RICKETTS, M.B., is appointed Deputy Sanitary Commissioner, Sind Registration District.

Major R. HEARD, M.B., Joint Civil Surgeon, Simla, is appointed to the medical charge of Army Head Quarters and Establishments, remaining at Simla during the winter, from November 2nd, 1907.

Brigade Surgeon-Lieutenant-Colonel D. D. CUNNINGHAM, C.I.E., M.B., retired pay, Honorary Physician to the King, is granted the honorary rank of Colonel, December 4th, 1907.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT F. E. LITTLE, Royal 1st Devon, resigns his commission, December 6th, 1907.

VOLUNTEER RIFLES.

SUPERNUMERARY-SURGEON-CAPTAIN A. P. NUTTALL, M.D., 1st Volunteer Battalion the Lancashire Fusiliers, to be Surgeon-Major, remaining supernumerary, November 29th, 1907.

Surgeon-Major J. H. HACKING, 5th Volunteer Battalion the Cheshire Regiment, is granted the honorary rank of Surgeon-Lieutenant-Colonel, December 7th, 1907.

Surgeon-Captain J. S. M'KENDRICK, M.B., 4th Volunteer Battalion the Cameronians (Scottish Rifles), resigns his commission, November 2nd, 1907.

Supernumerary-Surgeon-Lieutenant-Colonel D. LENNOX, M.D., 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders), is granted the honorary rank of Surgeon-Colonel, December 5th, 1907.

Surgeon-Captain J. S. Y. ROGERS, M.B., 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders), to be Surgeon-Major, December 5th, 1907.

Surgeon-Captain T. W. PARRY, M.D., 3rd (City of London) Volunteer Rifle Corps, resigns his commission, December 3rd, 1907.

Surgeon-Major H. D. BROOK, 20th Middlesex (Artists') Volunteer Rifle Corps, is granted the honorary rank of Surgeon-Lieutenant-Colonel, December 3rd, 1907.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANT W. D. FORSYTH, M.B., 1st Berwickshire, resigns his commission, November 26th, 1907.

Surgeon-Lieutenant W. G. PORTER, 1st Midlothian, resigns his commission, November 26th, 1907. He is appointed Second Lieutenant in the same regiment from the same date.

Surgeon-Lieutenant-Colonel A. T. WEAR, M.D., 1st Newcastle-on-Tyne, resigns his commission, retaining his rank and uniform, November 7th, 1907.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR; CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BIRMINGHAM; GENERAL HOSPITAL.—(1) House-Surgeon: appointment for six months; eligible for re-election; salary, £50. (2) Two Surgical Casualty Officers, non-resident; salary, £50 per annum each

BRECON AND RADNOR JOINT COUNTIES' ASYLUM, Talgarth.—Assistant Medical Officer. Salary, £170 per annum

BURY INFIRMARY.—Junior House-Surgeon. Salary £80, increasing to £90 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Senior House-Surgeon. Salary, £120 per annum.

DERBYSHIRE ROYAL INFIRMARY.—Assistant House-Surgeon. Salary at the rate of £60 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

DUNDEE ROYAL INFIRMARY.—Investigator to work in the Caird Cancer Pavilion of the Hospital.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £52 per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Pathologist and Curator. Salary, £100 per annum.

HOSPITAL FOR SICK CHIBDREN, Great Ormond Street, W.C.—Clinical Clerks.

HOSPITAL FOR WOMEN, Soho.—Eight Clinical Assistants for Out-patient Department.

HULL: ROYAL INFIRMARY.—Two Casualty House-Surgeons. Salary at the rate of £60 per annum for six months and £80 for twelve months.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Resident Medical Officer. Salary, £250 per annum.

MAIDSTONE: KENT COUNTY ASYLUM.—Male Fourth Assistant Medical Officer. Salary, £175 per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Physician to Out-patients.

NORTHAMPTON: BERRYWOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum increasing to £200.

NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum, increasing to £60.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Assistant Physician.

SOMERSET COUNTY COUNCIL, Weston-super-Mare.—Chief Medical Inspector of Schools. Salary, £500 per annum.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £100 per annum.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Salary, £80 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Senior Resident Medical Officer. Salary, £105 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Out-patients' Physician.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Rathfriland, co. Down, and Strathmiglo, co. Fife.

APPOINTMENTS.

ANKLESARIA, Hirjee Nowroji, F.R.C.S.Edin., L.R.C.P.E., L.F.P.S.G., L.M and S., Honorary Surgeon to the Jamset Jeebhoy Hospital, Bombay.

AUSTIN, E. C., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Lutterworth Union.

BADCOCK, E. R., M.R.C.S., L.R.C.P.Lond., Surgeon to General Post Office, Wandsworth Subdistrict.

BYRNE, P. Kevin, B.A., M.D., M.R.C.P.Lond., Assistant Physician to the London Temperance Hospital.

CREEAR, C., M.B., C.M.Edin., Medical Officer of Health for the Holme Cultram Urban District.

CRONYN, G. R., L.R.C.P.and S.I., District and Workhouse Medical Officer of the Maidenhead Union.

DAY, W. F. L., M.B., B.C.Cantab., District Medical Officer of the Epping Union.

ELSWORTH, T. G., M.D.Edin., District Medical Officer of the Ledbury Union.

GRAY, A. Montague H., M.D., B.S., M.R.C.P., Obstetric Registrar to University College Hospital.

HAWES, Ivon, M.B., B.S.Durh., Medical Officer of the Wick District of the Chipping Sodbury Union.

HOSFORD, J. Stroud, F.R.C.S.Edin., Assistant Ophthalmic Surgeon to the London Temperance Hospital.

HUNTER, William, M.D.Edin., F.R.C.P.Lond., Physician to the Charing Cross Hospital, vice Montague Murray, M.D., F.R.C.P. Lond., deceased.

JEWESBURY, Reginald C., M.A., M.B., B.Ch.Oxon., M.R.C.P.Lond., Physician to Out-patients at the Victoria Hospital for Children, Chelsea.

NOBBS, Athelstane, M.D.Edin., Surgeon to General Post Office, Putney Subdistrict.

O'NEILL, J., L.R.C.P.and S.Edin., District Medical Officer of the Leeds Union.

WHITEHEAD, F. H., M.R.C.S., L.R.C.P.Lond., Surgeon to General Post Office, Battersea Subdistrict.

WOOD, G. E. Cartwright, M.D., B.Sc.Edin., Bacteriologist to the Metropolitan Asylums Board's establishment at Belmont.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers:—Dr. A. C. Inman: The Opsonic Index in Tuberculous Patients engaged in Physical Exercise. Dr. M. S. Paterson: Graduated Labour in Pulmonary Tuberculosis.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
SURGICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Paper:—Mr. H. L. Barnard: Some Surgical Aspects of Subphrenic Abscess.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, Cavendish Square, W., 4 p.m.—Discussion on the Teaching of Hygiene and Temperance in Schools and Colleges; to be opened by Mr. W. N. Edwards, F.C.S.

FRIDAY.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30 p.m.—Dr. G. C. Low: The Unequal Distribution of Filariasis in the Tropics. Dr. Carnegie Brown: Biographical sketch, Professor Fritz Schaudinn.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m., Medical.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Importance of the Care of the Teeth in Childhood.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follow: Monday, Some Internal Derangements of the Knee-joint; Tuesday, The Diagnosis and Treatment of Acute Abdominal Conditions originating in the Genital Organs; Wednesday, Functional Disease and its Treatment; Thursday, Some Points in connexion with Therapeutic Inoculation.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Thursday, 5 p.m., Demonstration of Cases of Chest Disease in the Wards.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Arterial Supply to the Human Brain, with Demonstrations of Injected Specimens; Friday, 3.30 p.m., Hemiplegia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for this week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4.30 p.m., Lecture—Dropsy, its Significance and Treatment. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Selected Skin Cases. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, at 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m., Diseases of Skin. Wednesday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological: Monday and Thursday, Medical; at 5 p.m., Monday, Clinical; Tuesday, Filariasis: Wednesday, Practical Medicine: Thursday, Practical Surgery; Friday, the Prescribing of Spectacles.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BENTLEY.—On December 27th, 1907, at Haworth, Mitcham, the wife of Harold Bentley, B.A.Camb., M.R.C.S., L.R.C.P., of a daughter.

FLEMMING.—On January 7th, at 34, Alma Road, Clifton, Bristol, the wife of A. L. Flemming, L.R.C.P., M.R.C.S., of a daughter.

WILLIAMSON.—At Larnaca, Cyprus, on the 22nd ult., to Dr. and Mrs. Geo. A. Williamson, a son.

WOLFE.—On December 14th, 1907, at Paarl, Cape of Good Hope, the wife of Robert Inglewood Wolfe, J.P., District Surgeon, of a son.

DEATHS.

FRASER.—On New Year's Day, at Western Lodge, Romford, Helen Alves Fraser, eldest daughter of James A. Fraser, in her 23rd year.

PHILLIPS.—On December 27th, 1907, at Cairo, Egypt, Gwyneth Helen Powell Phillips, the only child of Dr. and Mrs. Llewellyn Phillips, aged 2 years and 4 months.

BOOKS, ETC., RECEIVED.

Thirty-third Annual Edition of the Classified Directory of the Metropolitan Charities for 1908. Edited by W. F. Howe. London: Longmans, Green and Co. 1908. 1s.

Christian Sanity. By A. T. Schofield, M.D. London: Marshall Brothers, Limited. 3s. 6d.

London: H. K. Lewis:

Studies in Blood Pressure: Physiological and Clinical. By G. Oliver, M.D., F.R.C.P. Second edition. 1908. 4s.

An Essay upon Disease, its Cause and Prevention. By G. E. Richmond, M.D., B.Sc., B.S., B.A., D.P.H. 1907. 2s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
10 FRIDAY ...	LONDON: Central Ethical Committee, 11.15 a.m. LONDON: Premises Committee, 2.15 p.m. TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Rooms of the Hornsey Conservative Association (opposite Finsbury Park Station), 9.15 p.m.
11 SATURDAY...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	LONDON: Organization Committee 11 a.m.
15 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Cardiff, 3.30 p.m.
16 THURSDAY...	LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, 8.30 p.m.
17 FRIDAY ...	
18 SATURDAY...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	LONDON: Journal and Finance Committee, 2.30 p.m.
23 THURSDAY...	MIDLAND BRANCH, Branch Council, Royal Infirmary, Derby. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
24 FRIDAY ...	LAMBETH DIVISION, *Metropolitan Counties Branch*, General Meeting, Lambeth Infirmary, Brook Street, S.E., 4 p.m.; Committee Meeting, 3.30 p.m.
25 SATURDAY...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, Business Meeting, Great Eastern Hotel, 4 p.m.
29 WEDNESDAY	CENTRAL COUNCIL, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. BATH AND BRISTOL BRANCH, Bristol.
30 THURSDAY...	
31 FRIDAY ...	
FEBRUARY.	
1 SATURDAY...	
2 Sunday ...	
3 MONDAY ...	
4 TUESDAY ...	
5 WEDNESDAY	
6 THURSDAY...	
7 FRIDAY ...	TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Muswell Hill, 4.30 p.m.
8 SATURDAY...	
9 Sunday ...	
10 MONDAY ...	
11 TUESDAY ...	
12 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Meeting of Branch Council, Medical Institution, Liverpool, 4 p.m.
13 THURSDAY...	HAMPSTEAD DIVISION. *Metropolitan Counties Branch*, Business Meeting. LONDON: Metropolitan Counties Branch Council, 5 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

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LONDON: SATURDAY, JANUARY 18TH, 1908.

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AMBULANCE CLASSES AS OPPORTUNITIES FOR ERECTING THE BEST BULWARK AGAINST QUACKERY.*

By HARRISON MITCHELL, M.D.,
Cockermouth.

WHEN our energetic secretary asked me a fortnight ago to produce a paper here to day, he kindly suggested as possible subjects "Ambulance, clubs or the like." Had it been a strictly medical, surgical, or scientific subject that was wanted I scarcely could have complied. But I could not think it inappropriate in these days of an increasingly wider sphere of work for our Association in its Representative, Branch and Divisional Meetings, and in the world. that subjects outside the science and practice of medicine and surgery should sometimes be taken, and therefore I suggested to him that I should lay before you a few leading remarks on ambulance classes as opportunities for erecting the best bulwark against quackery; and if by so doing I should elicit a discussion on this question of how to deal with quackery, which we seem doomed always to have with us, and in acute form. too, I shall not, I think, have wasted either your time or my own. As I look back on my term of professional life, now a pretty ong one, I see that this question of quackery within and without our ranks has exercised my mind a good deal, and not seldom my tongue and my pen. But that were nothing had it not tried my virtue also. Then I have been an ambulance lecturer, if not from the beginning of my medical career, certainly from before the beginning of the time when it was an accepted and accredited undertaking in these parts, either by the profession or the public. Indeed, I begin to be a little proud now that I have been a pioneer in this good work. Yet, gentlemen, I have chosen my title to-day deliberately, and it is not amubulance work specifically I am to speak about—that were very jejune to you—but how the classes may be used as opportunities—openings for even a higher form of teaching, I take it, than the bare details of first aid, as officially understood and laid down, demand. I make no secret of my love of the work because of collateral lessons that may be inculcated as one goes along, more far reaching and important in their effects, I always hope, than any mere teaching of rules how you are to treat instantly this or that accident or sudden illness—rules which, alas! have a horrid habit of flying out at the window when the occasion for using them comes in at the door. I must confess I am apt to suggest that possibly my lessons may better serve the purpose of impressing my pupils with how much better it is often for them to do nothing in this or that case and contingency than to run the not unlikely risk of making bad worse. But I do enjoy imparting some sound knowledge of physiology (as bearing on, or rather underlying, life and practice in our sense), in spite of the injunction of the St. John authorities not to spend too much time over it; especially now, when, instead of the mere ten hours we were expected to devote to a course by them, by our county councils, we are required to give at least twice that time to one; and I was so convinced of the necessity of a knowledge of physiology as a preliminary to any kind of useful instruction in first aid when, now twenty-four years ago, I was invited to give such instruction, that I determined on a course of physiology, lasting over two winters, in the first instance, which was opened by a public lecture on "Physiology as an Essential of a Sound General Education." It is singular now to see, on a reperusal of the same, in it the seeds of all my after-thought on the subject. And I had forgotten, too, how large a part the cure for quackery by such and such scientific teaching being included in our everybody's and our everyday education entered into the subject matter of that lecture, till I brought it into the light again. From the first, then, I felt, as I do still, that it is in this direction we must look for the means of defending our charges as ourselves against the corruption and destruction attendant on the ignorant, at least, if not the vicious practice of the methods of the charlatan; for we shall have to discriminate between the "blind leaders of the blind" and those who out of pure selfishness lead others astray in this matter. Well, then, there seem to be three chief ways in which it is possible we might mitigate the evils every honest man, lay or medical, so sincerely deplores: (1) By free competition in medicine; (2) by rigorous repressive measures; and (3) by higher or ampler education, both primary and secondary—aye, thirdly, if there is such a thing. And perhaps to my three headings I ought to add a fourth, namely, by combination or combinations of two or three of the others in wise proportions.

1. *Free Competition in Medicine.*—This has had its serious advocates as the "panacea of, in the sense of *against* panaceas," as we might term anything that is quoted as a complete cure for quackery. In a singular little essay by Dr. John Brown, in his charming *Horae Subsecivae*, he propounds and defends it. He builds upon quotations from Adam Smith to Dr. Cullen, and from "Coventry Dick," whoever he might be. The first says:

> That doctors are sometimes fools as well as other people is not, in the present time (1774) one of those profound secrets which is known only to the learned; it very seldom happens that a man trusts his health to another merely because that

* An address delivered at a meeting of the English Division of the Border Counties Branch, December 15th, 1907.

other is an M.D. The person so trusted has almost always either some knowledge, or some craft, which would procure him nearly the same trust, though he was not decorated with any such title.

The other urges:

Lawyers, soldiers, tax-gatherers, policemen, are appendages of the State, and some account should be taken of them by the civil power. The clergy are officers of the Church, and if the Church is a divine institution, they should have her licence. Doctors are the ministers of physical humanity at large, and should, for a thousand good reasons, be left under the jurisdiction of the leviathanic man whom they serve, yet under this condition that they shall be answerable to the civil power for bodily injuries culpably inflicted upon any of its subjects.

Adam Smith asserts "that human nature may be allowed safely, and with advantage, to choose its own doctor, as it does its own wife or tailor"; that "a degree can pretend to give security for nothing but the science of the graduate, and even for that it can but give very slender security. For his good sense and discretion, qualities not discoverable by an academical examination, it can give no security at all," and he seems to ascribe to mercenary motives that love of licences and monopolies prevalent at our old English Universities as contrasted with our old Edinburgh (I should have said Scottish Universities, but he singled out Edinburgh) University, and says,

The great success of quackery in England has been altogether owing to the real quackery of the regular profession. Our regular physicians in Scotland have little quackery, and no quack, accordingly, has ever made his fortune among us.

One wonders with what truth, taking the nineteenth century into the estimate. If the author of *Rab and his Friends* is to be understood as writing seriously, he seems to agree with all this, and discounts what he deems Dr. Cullen's half-hearted defence as a whole and unsound argument in particular, "that mankind can judge of its carpenter but not of its doctor," because, "in the one case, life is at stake, and not in the other," saying *truly*, "a floor may fall in and kill dozens, from bad joinery, as well as a man die from *malapraxis*." Yet surely this is to beg the question, for are not very many people *not* fit to choose their joiner or policeman, to say nothing of their own wife?—and the cases are not parallel either, and sensible men in our profession do not object to the public choosing at their own risk their own doctor from the regular and properly qualified ranks of the profession, but from amongst uneducated and untrained and inexperienced outsiders; and the public themselves are not such fools generally as to choose their architect or joiner from amongst men who have not at least served their time to these skilled mechanical callings. Then, as to what Dick says about lawyers and the like and the clergy, and their duties to the State and the Church making a difference in their cases: surely on any large and serious view of our vocation—and I, for one, am thankful that we now are every day "taking ourselves more seriously"—surely so are we more and more bound to safeguard ourselves for the sake of those whose servants we are, "humanity"—humanity, which is much more than merely "physical," as Dick does and we do not take it, and which is a category much larger than, and of course includes, both the Church and the State. Surely we need to be licensed and protected *for humanity's sake!* Dr. John Brown goes on:

Give the principle of free competition its full swing, and by so doing be assured we would lose some of our worst quacks; but we would not lose our Alisons, our Symes, our Christisons . . . our Lathams, Brights, and so on; and we would, we are persuaded, have more of the rough-and-readies (country doctors, he indicates); and if from the corporate bodies, who are trying to live after they are dead, the ancient cry of compensation rises up wild and shrill, give the Belisarii their pence, and let them be contemptible and content.

Really this is all very funny "a hundred years after," when one considers the set of the tide, which cannot be said to be in the direction of less but more protection, not only of doctors, but nurses, and midwives, and chemists and druggists, and sanitary inspectors and plumbers, and many more. Is not the complaint rather that this is so nominal and inadequate after all? While to turn to doctors, again, is it not true what Dr. Cullen said, *passim*, of preventing unskilled or uneducated persons engaging in the practice of medicine, "it is very obvious that neither in this nor in most other countries are effectual measures adopted for the purpose"? Which brings us to:

2. *Rigorous Repressive Measures.*—Dr. John Brown evidently acknowledges that there are "quacks *and* quacks," for he speaks of "our *worst* quacks," and would fain persuade himself and us that we would get rid of them most surely by "no interference, under the name of qualification or licence, with free trade in medical knowledge and skill." And yet, speaking "in one of the earliest missionary stations in Edinburgh," he reports himself as saying, doubtless all-heartedly, addressing "working men and women," for whom he cared so much:

One person I would earnestly warn you against, and that is the quack doctor. If the real doctor is a sort of god of healing—or, rather, our God's cobbler for the body—the quack is the devil for the body—or, rather, the devil's servant against the body. And, like his father, he is a great liar and cheat. He offers you what he cannot give. Whenever you see a medicine that cures everything, be sure it cures nothing; and remember it may kill. The devil promised our Saviour all the kingdoms of the world if he would fall down and worship him. Now, this was a lie; he could not give him any such thing. Neither can the quack give you his kingdoms of health, even though you worship him as he best likes by paying him for his trash. He is dangerous and dear, and often deadly. Have nothing to do with him.

This is the real "Rab" speaking; the other was the academical expatiating! And well might he warn his uneducated hearers, and the uneducated are by no means only the working classes up to this day, where a knowledge of how to take care of themselves is concerned. The English, I believe, are accredited as being of all peoples the most ignorant of their own bodies. And "We see still," as Bacon says, "the weakness and credulity of men is such, as they will often prefer a mountebank or witch before a learned physician." But may we not debit something also to "the extraordinary caprice which always pervades the English character," as remarked by Wellington, and which is hit off so well by a writer in the Journal when he says, "It is impossible to disguise the fact that there are people who will rather do anything than consult a doctor. Persons of this class would remark with a sneer that the profession must needs oppose those who are spoiling the market, and continue to believe in quacks who spend thousands a year in advertisements." And such people will as surely *oppose* us, when we ask for "a thing that no trade or profession has yet obtained in free trade England—that is, the assistance of other trades and professions in the protection of what it is considered should be obtainable in the cheapest market; and it is inconceivable that it ever will be obtained unless it can be shown to be for the public good."[1]

I but embellish and endorse opinions expressed in our Journal, which reminds me to say that I have found references to the number of quite thirty in this year's Journal to quackery, which, while it quite justifies, renders almost unnecessary this paper of mine with reference to it. From Mr. Edmund Owen, now President of our Council, in the first number of the year, to a leader-writer in its last issue, the air is full of it. Throughout the British Empire and in the United States, the Legislatures, our profession, and the people are waking up to its monstrous prevalence and prejudice of the good estates, physical and moral, of mankind. Other nationalities are in advance of us in their laws against it, but I am afraid these are too often dead-letter laws. Our Association is alive to the necessity of the immense deal that is to be done, but hardly knows which way to turn. It behoves every member of it to make up his mind how he would deal with "every boastful pretender to medical skill"; with "every man who, though he have all the medical skill in the world, yet pretends to cure people by remedies which he knows have no efficacy at all"; with "any man who holds himself out as competent to effect a cure in every case, or to cure his patient of any and every disorder by means of drugs and without personal examination, and seeks to prey upon the gullible members of the community, and so writes himself down as an impostor";[2] because, while the law as at present constituted will not protect such, it will not actively prosecute them. Shall we go on, and never cease agitating, till the Public

[1] J. Tertius Clarke, Batu Gajah, Perak, F.M.S., in British Medical Journal, July 20th, 1907.

[2] British Medical Journal, Dakhyl *v.* Labouchere, November 16th, 1907, p. 1453.

Prosecutor understands it to be his duty to proceed against all he can catch at this game? That is the question! There is a doubting, delicate shrinking, almost commendable, because almost conscientious on the part of very many—let us hope it is not that "conscience makes cowards of us all"—in facing this question. But it has to be faced; and I think that if we will only keep our minds fixed on doing what is for the public good, we shall answer it in the affirmative, without respect of persons. Please take notice that I do not say that we are to be the prosecutors; at any rate with respect to those who are outside our own ranks. As "interested parties" we should only seem to do it maliciously or for mercenary objects. Not but that it would only be "the pot calling the kettle black" were it true, for "vested interests" must meet us at every turn. First or last, the "Government stamp" itself must be attacked; and it is just this, or through this, the Legislatures of Canada and Australasia, and, I believe, New Zealand, insisting on pre-analyses and printing contents on it, are now attacking the evil. (We, as doubtless you know, are now publishing analyses in the JOURNAL.) Shall Governments that protect from adulterated butter and whisky not be called upon to protect their subjects from poisonous nostrums? Their defence for not doing this last can only be that these are not necessities of life: neither is alcohol, for that matter. My notion may be a crude one, but it has always seemed strange to me that Government should take our money for our registration, if not our licence to practise, and yet not give us protection. It does not deal so with its licensed victuallers. It may be that then a duty must be put on all dangerous drugs as on drink now; but, at any rate, let us be logical, and have either free competition or honest protection all round.

To return to opposing vested interests, think of the newspapers—lay and, alas! religious—that advertise. Think of the American companies who have their branches and vile procurers in England,[3] prostituting religion itself in its most sacred tenets to their purposes, and besieging the homes of the clergy themselves with their lying pamphlets. One writer enumerates ten kinds of ophthalmic charlatans alone as infesting the States of America.[4] And as to the large fortunes acquired by patent medicine vendors, the estate of Senator G. T. Fulford, the proprietor of Williams's Pink Pills, has been sworn at £1,311,000 (I myself was told by one hard-working servant-maid that she had just spent £7 for Little Pink Pills, and confessed that they had done her no good); while the estates of two persons connected with Bile Beans ran up to £67,000 and £31,000 respectively. A further instance is supplied by the estate of a Mr. L. Brown, managing director of the Mother Siegel Syrup Company. His assets in the United Kingdom alone were nearly £30,000.[5] Holloway built and endowed a College—shall we say to ease his conscience?—spending an immense sum of money on it; "and well he might; he got it cheap and nasty," said a Cambridge Don to me once. And what about the prophets and priestesses of this cult, the Dowies and the Eddys, whose cases and careers puzzle humanity? For one of the wickedest forms of quackery, and its vile methods of insinuating its wares amongst weak and erring women, I recommend you to read in the very last JOURNAL the leader on "Emmenagogues in the Newspapers"; and the article published in the same issue dealing with the composition of certain of these nostrums, and then say if any measures can be too severe to be taken against such a trade. And yet I have said nothing of male dupes in the same line, nor of the "infant mortality" caused by the cursed collusion between weakness and wickedness in our land. Mr. Henry Sewill seems to have constituted himself protagonist in the "war against quackery" in our JOURNAL, and writes very forcibly. He would fain lead a crusade against it, and we cannot wonder at it! At the least he would have a commission sit on it. Take note of him! He pertinently instances how the lawyers manage to suppress the bogus men of the law, and asks, why not we of medicine?

3. *Higher or Ampler Education.*—My crusade should be very different to Mr. Henry Sewill's, and attacking the opposite partner in the transaction—that is, by the liberal yet special education of the general body of the people, the laity, in matters relating to their marvellous mental and physical constitution, and then leaving them to find out whom they should trust, as then, perhaps properly, certainly not till then, they would be able to do. "Educate, educate, educate!" should be inscribed on my banners, perhaps even "Initiate, initiate, initiate!" I am not one who should be afraid to do this. We should have to pay our price for doing it—are we not already, with our ambulance and health lectures, with our hygienic and sanitary instruction and legislation, with our inspectional and preventive measures, and in a hundred other ways, but which are by no means perfect and complete? Our instruction wants to be more intimate, more confidential, more cordial as between those who really have a common interest in its going home. As an example of what I mean might with mutual advantage be more common than I am afraid it is between doctor and patient, take the following letter of Sir Andrew Clark's in a not uncommon kind of case, we know, and yet exactly such as the charlatan would have taken advantage of in quite an opposite way; whereas I think such high moral teaching as Sir Andrew's might very well be extended to the people in masses in appropriate circumstances, such as I hope to illustrate as I proceed. The patient referred to was examined by Sir Andrew, gratuitously too, at the request of an honorary secretary of the Charity Organization Society. "In the midst of absorbing occupation," says the recorder of the incident, "he found time to describe the results of his examination and to generalize therefrom, thus:

"Dear ——,—There are two things about all patients which help us to discover their maladies—what is found by the physician, and what is felt by the patient. What is felt helps us very little; what is found for the most part settles our judgement. What is felt by Mr. —— amounts to a great deal. Various disturbances of digestion, weakness, inaptitude for work, recurring faintnesses, malaise, and the feeling of getting worse and worse. What I found amounts to very little. . . . Every organ that I can reach is free from obvious structural disease; and as the patient has suffered for years in this way and nothing has come of it, it is reasonable to say that there is no structural disease. Mr. ——, therefore, is ailing, and perhaps suffering, but not in the ordinary sense ill; furthermore, I think that he is introspective, morbidly nervous, and occupied with himself. He cannot at present be made well; but he may reach his best by a simple, regular diet, by self-effacement (dying to live), by light, regular daily occupation, by the resolution to give a deaf ear to his trying sensations, and by a determined fighting and struggling to lose himself in outward things. . . . To do nothing would be to go backwards and downwards. True, he may suffer if he works; nevertheless, it is best to work. Hundreds suffer to work. I have always suffered to work; but work keeps me where I am; I have to wrestle with it, but thus my antagonist becomes my best helper.—Yours sincerely, ANDREW CLARK."

The recorder further remarks: "Comment on the above few sentences would seem out of place. Readers capable of profiting by them will, I believe, agree that words more characteristic or more valuable were never written. Truly, he being dead, yet speaketh." *Speaketh!* But what is more disappointing and defeating as between doctor and patient than the impossibility of finding a common term between them, owing to their complete incomprehensibility to each other through unequal education? Edification, often; for it is not always the terminology I would indicate as failing them, but their training, in the one case highly moral, say, in the other highly scientific, has been so one-sided and so different, that they cannot possibly understand and appreciate one another. And although it may be sometimes a heartbreaking task to try to remedy this state of things, it is not always so; and at least one may endeavour to point out the direction in which we should go, are going, I trust, and from which we cannot now turn back. And I am pleased to be supported in my contention by such a writer as Dr. Goodhart, in an address on Some of the Limitations of Medicine, in 1895, where he says:

I am constantly told that I must give some name to a doubtful case. I object altogether to give names to diseases that have not declared themselves; and I think that the friends of the sick, and the sick themselves where possible, ought to be educated on all possible occasions up to the understanding that there are diseases that no drugs can cure; that there are diseases that get well without drugs; that there constantly crop up sets of symptoms that admit of several different interpretations, and that hesitation and doubt may be as sure a measure of knowledge as decision. I think, too, that the time has come when, unintelligent as the layman seems to be

[3] Ibid., January 26th, 1907, p. 236.
[4] Ibid., April 13th, 1907, p. 892.
[5] Ibid., February 2nd, 1907, p. 268.

in matters pertaining to his health, a resolute effort should be made to induce people to think for themselves.

And then, after some somewhat bitter animadversions on the utter crudeness of notion many patients display as to what it is appropriate they should ask their doctor about at all, Dr. Goodhart goes on:

For if the public will ask our advice about details (of what they should and should not eat and drink, and the like) upon which, if they only thought for a moment, they would see that they themselves must of necessity be far better judges than any stranger to their habits can be, what hope is there that they will ever be able to consider with you those weightier matters of the law, those subtle aberrations of functions, those insidious early changes that constitute the beginnings of disease? Yet unless they are in some measure able to follow these with their medical advisers, how can they possess their souls in patience—how can they ever be far off the patent medicine or the quack? And from these, in that future we shall not see, but which will yet surely come, may medicine be emancipated.

John Foster, at the early part of last century, in his classical Essay on the Evils of Popular Ignorance, headed "My people are destroyed for lack of knowledge" (Hosea), says, in describing the "spacious time of great Elizabeth" even, "with its Cecils and Walsinghams and Shakspeares and Spencers and Sidneys and Raleighs, and many other powerful thinkers and actors to render it the proudest age of our national glory," that "while these and a few more were exulting in such elevation and free excursiveness of mental existence, the prostrate crowd were grovelling through life, as through obscure narrow passages, to their graves." "Another age," he says, "denominated *golden*, was illustrated by the talents of Addison, Pope, Swift—furnished, too, with its philosophers, statesmen, and heroes; and had a class, still *only a class*, in contact on the one side with great thinkers and moralists, but very slightly in communication with the generality of the people on the other"; till, using a remarkable and in that case just pathological simile, he says:

The national body, regarded in its intellectual character, had an inspirited and vigorous superior part, as constituted of these men of eminent talents and attainments, and this small class of persons in a measure assimilated to them in thinking and taste; but it was in a condition resembling that of a human frame in which—through an injury in the spinal marrow—some of the most important functions of vitality have terminated at some precise limit downward, leaving the inferior extremities devoid of sensation and the power of action.

And, perhaps, a century later, we are just beginning to emerge from a like state of things in regard to the relation existing between the advanced knowledge and practice of our own profession and the power of the general body of the people to appreciate and appropriate the benefits that might very well accrue to them from us. This is not "a great gulf fixed," though, and may and must be bridged by us. Of course, these things do not constitute all the difference and difficulty, for it is only human that sufferers should leave no stone unturned to get rid of their diseases and disablements and go elsewhere when we give out in our efforts for their relief, which we are apt to do with many minor ailments and some serious ones too soon—for them at least. And "you cannot alter human nature," say some. Not by coercion, certainly, or high-handedness perhaps; if at all, by patiently convincing their understanding and getting their confidence. But the plague with so many is that they go first to the quack and last to the qualified. That was a fine answer of Paget's to the patient who replied to his remonstrances in such circumstances, "But, you see, doctor, a drowning man will catch at a straw." "None but a fool will let go a plank to do it though." I have been in the habit of saying that the special facilities for getting at the people, of the ministers of religion, and of medical men should be combined for us, and then we would get on. I mean the opportunity the pulpit gives of enunciating doctrines or laying down principles, with the opportunities we have of getting to close quarters with individuals and cases on our daily rounds amongst them. But classes are to be preferred to lectures for purposes of edification. Lectures and classes might be combined, as in the university extension system, and, indeed, in our ambulance work. And why should our medical colleges not send out men, as Oxford and Cambridge do, to ground people in sound knowledge of biology, physiology, epidemiology, semeiology, and the like—sound knowledge as far as it went and with discretion; dwelling especially on their relations to the preservation of health and the procuring of help towards a return to it? The movements now going forward for the teaching of physiology, hygiene, and temperance in our elementary schools, the "schools for mothers," etc., are to the point. But let us consider here and now "ambulance classes as opportunities of erecting the best bulwark against quackery." Take the course of ambulance as usually laid down. First, you are expected to say something of the practical need for instruction how to render first aid. Quite right, but this is not what we are to consider. Next comes a sketch of the general anatomy and physiology of the human body: "A massacre of the innocents," measuring time for it by minutes. But still you have perfectly virgin soil for your seeds of truth generally, and though you may not implant much accurate knowledge you may a desire for more in some few, and the pupils are young and free. With Marshall's diagrams and a dissected rabbit and a sheep's heart, you erect a framework you are to fill in with wonders as you take the organic systems again seriatim at the openings of sections as the course proceeds.

1. *Wounds and Haemorrhage.*—The wound first in time, but the other in its demand for attention. Here the circulatory system, so simple, and the knowledge of it taken so much as a matter of course, but taking centuries to discover—completely. What a lesson of patience with God and men may be drawn from it! The heart, with its wonderful valvular arrangements, the check and counter-check of these on one another at one time and by one contraction of muscular fibre differently set to secure them, by acting in different directions. And no harm if in passing you make your young men and women a little more able to understand what is meant when we speak of valvular incompetency and compensation. But it is when we come to the blood vessels, their structure, and how they behave themselves in their effort at the arrest of haemorrhage, that one gets one's chance of driving home the conviction that left alone in a great many cases, here and elsewhere, Nature can do so much for our salvation. Wonder, reverence, even awe, on the one hand, and confidence, not misplaced, on the other, in the wonderful provision made for our safety, may be instilled into open minds here at the very outset of our journey. And then the marvel of the process of the healing of a wound, when we come to it; which of us can do justice to it? The professor, the poet, and the divine in one were necessary for the valiant enterprise. Paget in his *Pathological Anatomy*, perhaps has come nearest to doing it. And of course you need not, you cannot, avoid telling the wonders of asepticism for which we waited three centuries more after the discovery of the circulation of the blood. And "how great a matter a little fire kindleth" may be illustrated by what mischief may spread from the smallest wound, from the smallest particle of infection getting into it, illustrated by the case of tetanus, say; and what warning given against neglecting the last breaks of continuity of skin or mucous membrane, or allowing this or the other ignorant novice to meddle with them. And when we come next to treat of fractures (2) we may well say something of the building of a bone and how fractures are united; but here the pertinent and practical lesson as to where we should go with our poor broken bones, and why we should let no one meddle with them, not even over-wise first-aiders, to say nothing of bonesetters, so called, who have not got—well what, if we do not get amongst the very best-equipped members of the medical (of course including, if not specifying, surgical) profession, we cannot get anywhere—this lesson, I say, comes out surely unsolicited, undisguised, indeed it cannot be disguised as we go along with our section. I sometimes refer to the bonesetter and warn against him specifically (but I also tell that the regular have had to learn something from him), though, as I say, who can hear how easily a simple may be made into a compound fracture and what that portends, or how critical a matter it is to treat one compound from the first, and yet goes to any ignoramus with it—well, deserves what he gets. And the man in the street and the law seem to think so too for the present, for the way the unqualified man is allowed to go scot-free when a poor fellow-creature literally rots while he lives and lies in the stocks and the

stinks such men condemn them to is something portentous. But then there have been two to the bargain! There are among the best of bonesetters who know the cases they must not meddle with and reject them at once; but others cannot withstand the temptation to try these, and then the temptation to hold on to them, knowing their false and isolated position to the last minute; with what results we know. Is it not a rare opportunity ambulance classes give at least to take the very best way possible to prevent such blunders—almost crimes? I myself have known of at least three cases which justify the picture I have above drawn as occurring in the hands of bonesetters; but, to refer to Paget again—"The patients who are cured (by quacks in general; bonesetters in particular) never cease to boast of their wisdom in acting contrary to authorized advice. They who are damaged are ashamed of themselves and hold their tongues"—or I might have heard of a few more. And if you can prevent an otherwise excellent district nurse from undertaking alone a case of deep or extensive burn, by warning her of contingencies of prolonged ulceration, disfiguring and maiming contraction, or even death from shock—what? And how much can be made of "shock" as a nail on which to hang invaluable warnings against mischievous drugging—with what? With that most commonly misused of all drugs, alcohol, just because everybody has it, and everybody thinks he knows how potent for good it is, but never how potent for ill, especially in accidents or sudden illnesses, and therefore everybody flies to it at once in these cases. I am in the habit of saying how pure "shock" is perhaps the only condition that justifies this line of action, and then how tentatively it should be followed. I find that I am countenanced in this teaching in that recent book, *Alcohol and the Human Body* (Horsley and Sturge)—which I wish every responsible person, lay or medical, would read carefully from cover to cover—where it says:

> The introduction by Lord Lister of his inestimable boon to humanity, antiseptic surgery, swept away, with the septic diseases—blood-poisonings, gangrenes, etc.—any necessity for the treatment of operation cases with alcohol (how good, how typical a thing of what everybody ought to know!). In fact, the only surgical condition in which alcohol is still thought by some to be of use is "shock," and even in this respect it is now giving place to other and more scientifically administered measures.

Therefore, not till respiration is restored, or swallowing, or the stomach is quiet, or till bleeding is arrested, and not then if reaction on its occurrence has not been provided against, should alcohol be given; and not at all in alcoholic poisoning or poisoning from opium, or in apoplexy, or epilepsy, or sunstroke, and so on, is sound first aid teaching. And there is the most commonly misunderstood effect of alcohol on body temperature to correct. And when you have been treating of poisons throughout a lecture and a lesson, you are asked, "Is chlorodyne a poison?"—which is vaunted in every newspaper and journal, every day, in contending advertisements for favour, as a drug to be had and used anyhow—and you are able to tell the inquirer and the class that it "contains opium, and prussic acid, and chloroform, and cannabis indica, and no one knows how many more poisons," what warning has been given! Again, you can get in a word, and it need not be edgeways, against the secret seductiveness of sedatives—the most stealthily and most surprisingly deadly chloral and the rest—and perhaps save someone from a thraldom almost worse than death itself. But have I not said enough to prove my point that these now otherwise quite accredited classes — by-the-bye, the first International First Aid and Life-Saving Congress is to be held on the Continent in the coming spring—are as deserving of credit, because of the instruction that may be incidentally thrown in, as valuable as that for the giving of which they were originally formed? I feel that if, one way and another at these classes, one can inspire a due respect for the marvellous, delicate, and nicely adjusted mechanism of our most complex structure and constitution of body and mind, and yet such an admiration of the most wonderful way it goes on working and recovering itself so often when knocked out of work, without any help from outside at all—I feel, I say, that I have begun to build up a bulwark against quackery of all kinds, such as could not be built in almost any other way. It has been well said that "quackery can only flourish on a soil of ignorance; light will kill it, as it does many other noxious things." Yet there are some, both in and out of our profession, who are afraid to let in the light. An outsider, a lady, this winter "could not think of sending her daughter to my class, where diagrams were being exhibited to show her what was in her inside"; and a medical teacher some ten years ago had the hardihood to ascribe the "evil of self-doctoring to the spread of education"—forgetting, surely, that often-repeated insinuation, that no one ever troubles to resent, that there is no one fights so shy of doing this as the doctor himself; though there is, perhaps, a may-be dangerous half truth in what the teacher said, because men must be hurting themselves, as children with their pocket-knives, with any new instrument, for hand or mind, given them, before they can become adepts at their use, and timid, short sighted people, noticing this, may be meanwhile hindered from persevering in the right way.

Finally, we are not limited to either of these processes, the educative or repressive; as for the freedom of competition in medicine, it will never come, nor ought it, till the others have done their perfect work—so long as we do *process*. Forward we must go by these means, singly or combined—step by step, side by side, hand in hand—or we shall fail of our great ultimate end, which is *missionary*. I am not forgetting that we must build on a sufficient monetary basis—material foundation—for our existence meanwhile, but let it, as foundations ought, be as much as possible out of sight and mind, the fair and effective superstructure the thing seen and known of all men. The missioners themselves should be as foundations, sound and inconspicuous as possible, so they be not mere men of straw in and to the world. High ideals portend some sacrifices. Those who would be strictly correct amongst us must "scorn delights and live laborious days." "Plain living and high thinking" must for ever go together. Dr. William Ewart, in an inaugural address entitled, *Res Medica, Res Publica* delivered at St. George's Hospital only the other day (and I commend his thesis to your careful study—and it takes some!), says, "We are in the throes of a double crisis, an economical and a professional," and I believe it; and how long it will last, and how we will come through and out of it, it is hard to say. But if I would say anything as a senior to juniors at any time, but especially at this time, it is, Keep in small room! If there be anything I am thankful for in looking back on my own domestic and business ways, it is that on two distinct occasions I have resisted the temptation to launch out—I mean in the way of large and imposing premises not really helpful in one's work—and I would now be glad to go into yet smaller room, if I only knew how. My experience is, that one's means of living are not one whit more certain, as derived purely from one's professional work, the further one goes; the vicissitudes of general practice are perennial. And one temptation unconquered opens the door to others—*worse!* And pray do not think this is impertinent to my subject to-day. If quackery in the acknowledging and acknowledged quack is bad, in the accredited and protected practitioner it is doubly so. Trading on the good character a man has acquired with his fellows so as to harm them is infinitely worse than doing it when these have little or no excuse if they have not their eyes open to the danger of it. It behoves us, then, not to bring ourselves into temptation. You will understand how this is done when a man is beguiled for any reason into living pretentiously. It might seem to be a question, indeed, if it were wise even to pretend to a "degree," as the story of the man may well show who found out he got on a great deal better without a doorplate than with one. Many public bodies, in particular, nowadays show little respect for collegiate qualifications, scientific or social. Education and character are the great separators and approximators at once—levellers (and it is hard to tell at any time which way the scale will turn); but let us on our part see to it that they level-up, these great masters of classification among men—raising ourselves, we must bring others up with us, if only that they may rightly appreciate us, and give us our due place and power for good to them. Of one thing I am quite certain: the quality of the work done by the medical profession has improved immensely in my time, and is daily improving if only from the means and

appliances necessary for doing good work, *par excellence*, perhaps, the human aids, *handmaids*, having improved also, and chiefly through the unselfish efforts of the members of it themselves. Let us still be contending and content. I will close by drawing on another introductory address, this time of Mr. (so long ago!) and now Sir Victor Horsley, a high-souled leader of men, bearing testimony to another high-souled leader, the late Mr. Marcus Beck, "owing to his contempt for the arts which are the stepping-stones to what is called 'success' little known outside the circle of his personal acquaintance during his life," whose favourite quotation, as a guide in our life's work, Sir Victor commended to his hearers, as I to you, as I would take it to myself, was:

> Bold when sure,
> Cautious in danger,
> Kind to the sick.
> Friendly with fellow-workers,
> Constant in duty,
> Not greedy of gain.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL]

SOUTH-EASTERN BRANCH:

GUILDFORD DIVISION.

A SPECIAL meeting of this Division was held at the Lion Hotel, Guildford, on Wednesday, January 8th, at 4.30 p.m. Dr. ANDERSON MORSHEAD, Chairman of the Division, presided and nine other members were present.

Notification of Births Act.—The following resolution was carried *nem. con.* (one member not voting):

> That this meeting of the Guildford Division of the British Medical Association, while expressing general approval of the objects of the Notification of Births Act, formally objects to its adoption in this district in its present form and until it is amended, on the ground that by it medical practitioners are bound to notify births under penalty, and without remuneration.

The Honorary Secretary was requested to send copies of this resolution to the various local authorities throughout the Division.

Medical Inspection of School Children.—The report of the Medico-Political Committee on this subject was considered and approved, and the suggestion as to the scale of remuneration for the work endorsed. The meeting then adjourned.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
General Secretary.

Jan. 2nd, 1908.

DIVISIONS AND BRANCHES.

NOTICE OF CHANGE OF BOUNDARIES.

THE following change has been made in accordance with the Regulations of the Association, and takes effect from the date of publication of this notice:

> That Thames Ditton be transferred from the Maidenhead Division of the Oxford and Reading Branch to the Richmond Division of the Metropolitan Counties Branch.

BRANCH AND DIVISION MEETINGS TO BE HELD

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of the Branch Council will be held at the Medical Institution, Liverpool, on Wednesday, February 12th, at 4.30 p.m.—F. CHARLES LARKIN, 54, Rodney Street, Liverpool, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL (NORTHERN) DIVISION.—A meeting of the members of this Division will be held at the Medical Institution, 114, Mount Pleasant, on Wednesday, January 22nd, at 4 p.m. Agenda: To consider and adopt the Division Annual Report for 1907 to the Branch Council. Report of Representative to Annual Representative Meeting. Report of Representative to Branch Council. Report on the Medical Inspection of School Children (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, December 21st, 1907). Any other business.—A. W. GERMAN, Honorary Secretary of the Division.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next general meeting of this Division will be held on Friday, January 24th, at 4 p.m., in the Lambeth Infirmary, Brook Street, S.E. Agenda: (1) The minutes of the last meeting. (2) The resignation of Dr. W. H. B. Stoddart from the South London Hospitals Committee. (3) The appointment of a representative of the Division upon the South London Hospitals Committee. The representative proposed by the Committee of the Division is Dr. W. Alexander Atkinson. It is open to any member to propose any other representative; such proposal, duly seconded, should be sent in writing to the Honorary Secretary not later than January 20th. (4) Consideration of the Notification of Births Act regulations. (5) A paper by H. L. Eason, M.D., M.S.(Lond.), upon the Differential Diagnosis and Treatment of the Commoner Inflammations of the Eye. (6) Other business, if necessary. By kind permission of the Medical Superintendent, the wards of the Lambeth Infirmary may be seen after the meeting, and cases in them will be shown. A Committee meeting will be held at 3.30 p.m.—HERBERT FRENCH, Honorary Secretary, 26, St. Thomas Street, S.E.

MIDLAND BRANCH.—Arrangements are being made for a meeting of the Branch Council (Midland) to be held at the Royal Infirmary, Derby, on Thursday afternoon, January 23rd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,105 births and 6,018 deaths were registered during the week ending Saturday last, January 11th. The annual rate of mortality in these towns, which had been 14.7 and 16.9 per 1,000 in the two preceding weeks, further rose last week to 19.3 per 1,000. The rates in the several towns ranged from 10.1 in Hornsey, 11.4 in Wallasey and in West Hartlepool, 11.5 in Hastings and in Reading, and 11.6 in Grimsby, to 25.0 in Newcastle-on-Tyne, 25.2 in Oldham, 27.0 in Salford, 27.7 in Merthyr Tydfil, 29.3 in Swansea, 31.6 in Liverpool, and 32.5 in Rhondda. In London the rate of mortality was 18.5 per 1,000, while it averaged 19.6 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.2 per 1,000, while among the seventy-five other large towns the death-rates from these diseases ranged upwards to 3.5 in Ipswich, 3.6 in York, 3.7 in Aston Manor and in Salford, 3.8 in Wallasey, 4.6 in Willesden, 4.7 in Merthyr Tydfil, 5.9 in Stockton-on-Tees, and 7.4 in Rhondda. Measles caused a death-rate of 2.7 in Swansea, 2.8 in Ipswich, 2.9 in Stockton-on-Tees, 3.6 in York, 4.6 in Willesden, and 5.5 in Rhondda; diphtheria of 1.1 in Salford; whooping-cough of 2.0 in Rhondda and in Merthyr Tydfil, 2.3 in Bootle, and 3.7 in Aston Manor; "fever" of 1.6 in Rotherham; and diarrhœa of 1.3 in Reading, 1.4 in Merthyr Tydfil, and 1.5 in Middlesbrough. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 5,035, 4,999, and 4,684 at the end of the three preceding weeks, had further declined to 4,431 at the end of last week; 469 new cases were admitted during the week, against 447, 353, and 440 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 11th, 1,051 births and 855 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20.8, 18.2, and 20.6 per 1,000 in the three preceding weeks, further rose last week to 24.3 per 1,000, and was 5.0 per 1,000 above the mean rate during the same week in the seventy-six large English towns. Among these Scottish towns the death rates ranged from 15.2 in Aberdeen and 18.6 in Edinburgh to 29.0 in Glasgow and 32.6 in Perth. The death-rate from the principal infectious diseases averaged 4.1 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 477 deaths registered in Glasgow included 74 which were referred to measles, 3 to scarlet fever, 2 to diphtheria, 10 to whooping-cough, 2 to enteric fever, 2 to cerebro-spinal meningitis, and 7 to diarrhœa. Four fatal cases of whooping-cough and 2 of diarrhœa were recorded in Edinburgh; 3 of diarrhœa in Aberdeen; 3 of measles and 4 of diphtheria in Paisley; 4 of whooping-cough in Leith; 4 of measles, 2 of cerebro-spinal meningitis, and 2 of diarrhœa in Greenock; and 4 of whooping-cough in Perth.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 11th, 490 births and 476 deaths were registered in six of the principal Irish towns, as against 757 births and 472 deaths in the preceding period. The

annual death-rate in these towns, which had been 21.3, 17 9, and 22.6 per 1,000 in the three preceding weeks, rose to 23 9 per 1,000 in the week under notice, this figure being 4.6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. These figures ranged from 19 2 in Cork and 19.5 in Londonderry to 27 3 in Waterford and 28.0 in Belfast. The zymotic death-rate in the same six Irish towns averaged 1 6 per 1,000, or 0 5 per 1,000 higher than during the preceding period, the highest figure—3.8—being recorded in Belfast, while Cork and Limerick registered no deaths under this heading at all. The principal causes of death in this class of disease were measles and whooping-cough.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON E. D. TWIGG, F.R.C.S.Ire., has been placed on the retired list at his own request, with the rank of Deputy Inspector-General, January 6th. He was appointed Surgeon, September 30th, 1876; Staff Surgeon, September 30th, 1888; and Fleet Surgeon, September 27th, 1893.

The following appointments have been made at the Admiralty: WILLIAM R. CENTER, M.B., Staff Surgeon, to the *Vivid*, additional, January 8th, to be lent to the *Skirmisher* undated; HAROLD J. CHATER, Staff Surgeon, to the *Cormorant*, additional, for Ascension Hospital, January 15th; PAUL H. M. STAR, Staff Surgeon, for the *Forte*, January 15th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT W. H. GILLATT, M.B., is seconded for service with the Egyptian Army, December 27th, 1907.

Colonel D. WARDROP, M.B., from Administrative Medical Officer, Eastern Command, has been appointed Commandant and Director of Studies, Royal Army Medical College, vice Colonel H. E. R. James.

The office of the Administrative Medical Officer, Tidworth District, has been removed from Evelyn House, Wilton Road, Salisbury, to Delhi Barracks, Tidworth. Correspondence is to be addressed accordingly.

Lieutenant-Colonel W. DICK, M.B., from Edinburgh, has been posted to Woolwich as Administrative Medical Officer, and to the charge of the Royal Herbert Hospital.

INDIAN MEDICAL SERVICE.

MAJOR C. E. WILLIAMS, M.B. (Bengal), Health Officer of Rangoon, is appointed Sanitary Commissioner, Burmah.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-MAJOR R. B. GRAHAM, F.R.C.S.Edin., 1st Fifeshire, to be Surgeon-Lieutenant-Colonel, December 17th, 1907.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-LIEUTENANT M. P. M. COLLIER, M.S., East London (Tower Hamlets), to be Surgeon-Captain, November 16th, 1907.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT J. FORBES, 4th or City of London Bearer Company, to be Captain, November 28th, 1907.

Major DE B. BIRCH, M.D., Leeds Companies, Northern Command, to be Lieutenant-Colonel, December 18th, 1907.

Major J. S. RIDDELL, M.V.O., M.B., Aberdeen Companies, Scottish Command, to be Lieutenant-Colonel, December 18th, 1907.

Surgeon-Captain W. M. STEINTHAL, from the 3rd Volunteer Battalion the Lancashire Fusiliers, to be Captain, Manchester Companies, Western Command, December 5th, 1907.

WILLIAM R. DOUGLAS, to be Surgeon-Lieutenant in the Manchester Companies, Western Command, December 12th, 1907.

Major G. W. SIDEBOTHAM, Cheshire Bearer Company, to be Lieutenant-Colonel, December 4th, 1907.

ARTHUR T. FALWASSER, to be Lieutenant in the Maidstone Companies, Eastern Command, December 7th, 1907.

VOLUNTEER RIFLES.

WILLIAM C. MACAULAY, M.B., to be Surgeon-Lieutenant in the 15th Middlesex (Customs and Docks) Volunteer Rifle Corps, December 13th, 1907.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BIRMINGHAM CITY.—Lady Medical Officer. Salary, £200 per annum.

BRECON AND RADNOR JOINT COUNTIES' ASYLUM, Talgarth.—Assistant Medical Officer. Salary, £170 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Second House-Surgeon. Salary, £60 per annum.

CAMBRIDGESHIRE, etc., ASYLUM, Fulbourn.—Second Assistant Medical Officer (male). Salary, £120 per annum, increasing to £150.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Physician. Salary, £80 per annum.

EDINBURGH: ROYAL EDINBURGH ASYLUM FOR THE INSANE.—Physician Superintendent.

LEEDS TUBERCULOSIS ASSOCIATION.—Resident Medical Officer for the Sanatorium at Gateforth. Salary at the rate of £100 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Resident Medical Officer. Salary, £250 per annum.

MAIDSTONE: KENT COUNTY ASYLUM.—Male Fourth Assistant Medical Officer. Salary, £175 per annum.

MARGARET STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, W.—Honorary Physician.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead, N.W.—Junior Resident Medical Officer. Honorarium, £50 per annum.

MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Junior Assistant Medical Officer. Salary, £100 per annum, increasing to £150.

NORTHAMPTON: BERRYWOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum increasing to £200.

PUBLIC DISPENSARY, Drury Lane, W.C.—Physician.

ST. PANCRAS PARISH.—Female Junior Assistant Medical Superintendent of the Infirmary and Junior Assistant Medical Officer of the Workhouse. Salary, £80 per annum.

SOMERSET COUNTY COUNCIL, Weston-super-Mare.—Chief Medical Inspector of Schools. Salary, £500 per annum.

STAFFORDSHIRE EDUCATION COMMITTEE.—Senior School Medical Officer. Salary, £300 per annum, rising to £400.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Salary, £80 per annum.

VENTNOR: ROYAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Assistant Resident Medical Officers. Salary, £100 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Senior Resident Medical Officer. Salary, £105 per annum.

WARRINGTON UNION WORKHOUSE.—(1) Medical Officer, non-resident; (2) Assistant Resident Medical Officer. Salary, £100 each.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Out-patients' Physician.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at Hayle, co. Cornwall.

APPOINTMENTS.

FRASER, Miss S. Louise, M.B., B.S.Lond., Honorary Medical Officer to the York Dispensary.

FREND, E. C., M.R.C.S., L.R.C.P., District Medical Officer of the Cuckfield Union.

HENRY, F. J., M.B., Resident Medical Superintendent of the Highfield Infirmary, Liverpool.

HOLLAND, E. T., M.R.C.S., L.R.C.P.Lond., First Resident Assistant Medical Officer, Chelsea Parish Infirmary and Workhouse.

HUDSON, Bernard, M.D. Camb., M.R.C.P., Pathologist and Registrar to the East London Hospital for Children, Shadwell, E.

HUTCHINSON, J. R., M.B., Ch.B. Vict., D.P.H. Vict., Assistant Medical Officer of Health for Manchester.

JAMES, W. M., M.R.C.S., L.R.C.P., Medical Officer of the St. Woolos District of the Newport Union.

KELLY, Robert Ernest, M.D., F.R.C.S., Honorary Assistant Surgeon to the Liverpool Royal Infirmary.

LAPAGE, C. P., M.D., Medical Registrar to the Manchester Royal Infirmary.

MITCHELL, C. R. P., M.B., Ch.B.Edin., Medical Officer of Health for the Malvern Urban District.

MOULD, R. J., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Children's Homes for the Parish of Camberwell.

PEARCE, J. L., M.B., B.S., District Medical Officer of the Braintree Union.

PRICE, Miss Florence, M.B., Ch.B.Edin., Bacteriologist to the Swansea General Hospital.

RENTON, John W., M.B., Ch.B., Anaesthetist to the Incorporated Glasgow Dental Hospital.

STERRY, J., M.R.C.S., L.R.C.P., District Medical Officer of the Sevenoaks Union.

STUART, Miss E. G., M.B., Ch.B.Edin., Resident Assistant Medical Officer at the Hospital and Children's Homes of the Sheffield Union.

WATSON, G. H., M.R.C.S., L.R.C.P., Junior Resident Assistant Medical Officer of the Shoreditch Parish Infirmary.

WIGHTMAN, J. P., M.R.C.S., L.R.C.P., Honorary Medical Officer to the York Dispensary.

WOOD, W. T., L.R.C.P. and S.Edin., District Medical Officer of the Worksop Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

LAST.—On January 12th, at Bletsoe, Littlehampton, the wife of Cecil E. Last, M.R.C.S., L.R.C.P.Lond., of a daughter.

LEGGE.—On December 7th, 1907, at 24, Foregate Street, Worcester, the wife of S. C. Legge, M.R.C.S., L.R.C.P., of a daughter.

DEATHS.

BAINBRIDGE.—On January 11th, at Clevedon, Somersetshire, aged 89, Frederick Bainbridge, M.R.C.S., son of the late G. C. Bainbridge, of Gattonside House, Roxburghshire.

BEST.—At Cheltenham, on January 11th, Frederic Arthur Best, M.R.C.S., L.S.A.Lond., aged 69 years. No flowers, by request.

DRUITT.—On January 7th, at Mentone, Victoria, Australia, Lionel Druitt, M.D., youngest son of the late Robert Druitt, M.D., F.R.C.P., F.R.C.S., aged 53 years.

TURNER.—At 6, Eton Terrace, Edinburgh, on January 8th, Agnes Logan, wife of Sir William Turner, K.C.B., Principal of the University.

DIARY FOR THE WEEK.

TUESDAY.

Chelsea Clinical Society, at the Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Paper;—Dr. F. J. McCann: Symptoms and Diagnosis of Cancer of the Body of the Womb. Specimens of Uterine Diseases: The President and Dr. J. Mansell Moullin.

Royal Society of Medicine:
Pathological Section, 20, Hanover Square, W., 8.30 p.m.—Papers:—Dr. W. G. Meek: Tuberculous Endocarditis. Mr. S. G. Shattock and Mr W. H. Battle: Diffuse Osteoma of Femur following Fracture. Mr. Cecil W. Rowntree: Malignant Disease of the Rectum in a Boy aged 10. Dr Hector Colwell: The Effects of Calculi (chiefly vesical) upon a Photographic Plate in the Dark. Card Specimens:—Mr. Walter G. Spencer: Chimney-sweep Carcinoma.

FRIDAY.

Royal Society of Medicine:
Epidemiological Section, 20, Hanover Square, W., 8.30 p.m.—Papers:—Drs. E. W. Goodall and H. E. Corbin: Rubella.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital, W.C.—Thursday, 4 p.m., Surgical

Great Northern Central Hospital, Holloway Road, N. Friday, 3.30 p.m.: Residual Symptoms after Cerebro-spinal Fever.

Hospital for Diseases of the Skin, Stamford Street, S.E.—Tuesday, 4 p.m., General Cutaneous Histopathology; Friday, 4 p.m., Anatomy of the Morbid Skin: Method of Examination. Clinical Pathology.

London School of Clinical Medicine.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 2.15 p.m.: Sciatica. Thursday, 3.15 p.m.: The *X* Rays in relation to the Diagnosis of Appendicitis, etc.

Mount Vernon Hospital for Consumption, Out-patient Department, Fitzroy Square, W.—Thursday, 5 p.m., Pneumococcal Infection.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m., Disseminated Sclerosis; Friday, 3.30 p.m., Surgery of the Nervous System.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4.30 p.m., Lecture—Dropsy, its Significance and Treatment. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Selected Skin Cases. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

West London Post-Graduate College, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, at 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m., Diseases of Skin. Wednesday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological; Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday, Clinical; Tuesday, Middle-ear Suppuration; Wednesday, Sterility in the Male; Thursday, Practical Surgery; Friday, Dental Conditions and General Health.

BOOKS, Etc., RECEIVED.

Leipzig: W. Engelmann. 1907:

Dr. W. Hausmann's 20 Stereoskopen-Bilder zur Prüfung auf binoculares Sehen und zu Uebungen für Schielende. Mit einführenden Bemerkungen von Dr. med. A. Bielschowsky. Zweite Auflage. M 2.

Mechanismus und Vitalismus in der Biologie des neunzehnten Jahrhunderts. Von Dr. K. Braeunig. M 2.40.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	London: Journal and Finance Committee, 2.30 p.m. Liverpool (Northern) Division, *Lancashire and Cheshire Branch*, Medical Institution, 114, Mount Pleasant, 4 p.m.
23 THURSDAY...	Midland Branch, Branch Council, Royal Infirmary, Derby. Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
24 FRIDAY ...	Lambeth Division, *Metropolitan Counties Branch*, General Meeting, Lambeth Infirmary, Brook Street, S.E., 4 p.m.; Committee Meeting, 3.30 p.m.
25 SATURDAY...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	City Division, *Metropolitan Counties Branch*, Business Meeting, Great Eastern Hotel, 4 p.m.
29 WEDNESDAY	Central Council, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. London: Premises Subcommittee, 11.30 a.m. Bath and Bristol Branch, Bristol.
30 THURSDAY...	
31 FRIDAY ...	

Date.	Meetings to be Held.
FEBRUARY.	
1 SATURDAY...	
2 Sunday ...	
3 MONDAY ...	
4 TUESDAY ...	
5 WEDNESDAY	
6 THURSDAY...	
7 FRIDAY ...	London: Standing Ethical Subcommittee, 2 p.m. Tottenham Division, *Metropolitan Counties Branch*, Muswell Hill, 4.30 p.m.
8 SATURDAY...	
9 Sunday ...	
10 MONDAY ...	
11 TUESDAY ...	
12 WEDNESDAY	Lancashire and Cheshire Branch, Meeting of Branch Council, Medical Institution, Liverpool, 4.30 p.m.
13 THURSDAY...	Hampstead Division. *Metropolitan Counties Branch*, Business Meeting. London: Metropolitan Counties Branch Council, 5 p.m.
14 FRIDAY ...	
15 SATURDAY...	
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	
19 WEDNESDAY	South Wales and Monmouthshire Branch, Cardiff.
20 THURSDAY...	City Division, *Metropolitan Counties Branch*, Metropolitan Hospital, 4 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 25TH, 1908.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH:
MANCHESTER (CENTRAL) DIVISION.

Referendum.—At a meeting of this Division, the points raised *re* the Referendum were all negatived, and the following resolutions were carried unanimously:

1. The Manchester (Central) Division consider that the Referendum to Divisions used is of no value, and recommends that matters should be directly referred to the individual members of the Association, who shall record their opinions by means of voting papers.
2. This Division is also of opinion that the Referendum should apply not only to resolutions but to any decision of the Representative Meeting.
3. That this Division endorses the action of the Combined Committee for Manchester and Salford in opposing the adoption of the Notification of Births Act for this district.

METROPOLITAN COUNTIES BRANCH.
MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE following Memorandum on the Medical Inspection of School Children under the Education (Administrative Provisions) Act, 1907, has been drawn up by the Council of the Metropolitan Counties Branch for submission to its Divisions.

The Education (Administrative Provisions) Act was passed in July, 1907, and came into force on January 1st, 1908.

The Board of Education issued, on November 23rd, 1907, a Memorandum to Local Education Authorities (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, November 30th, 1907).

ABSTRACT OF MEMORANDUM OF THE BOARD OF EDUCATION.

1. The *Board of Education* considered their duties to be:
   (*a*) To advise and supervise Local Education Authorities.
   (*b*) To sanction schemes prepared by the Local Education Authorities.
   (*c*) To collect returns from Local Education Authorities and report on the same to Parliament.
2. It is desired by the Board of Education that the Medical Inspection should be—
   (*a*) The first step towards the improvement of the physical state of the nation.
   (*b*) That it should embrace all school children, whether healthy or not.
   (*c*) That its object should be the decrease of inefficiency and poverty in after-life.
   (*d*) That the administrative machinery should be the outcome of real organic growth rather than of any hastily imposed system.
3. The *Local Authority* for carrying out the Act will be in County areas the County Council, and in County Boroughs the Town Councils.

For most of the Divisions of the Metropolitan Counties Branch the Local Authority is the London County Council.

4. The *duties* of the Local Authority are:
   (*a*) To provide for the actual school inspection of the children under the direct supervision of their Medical Officer of Health.
   (*b*) To use and not supplant the existing local medical and sanitary machinery;
   (*c*) To appoint additional medical assistance in the form of Inspectors;
   (*d*) To follow up School Inspection by Home Inspection, not only of the children, but of their parents and their general surroundings; and
   (*e*) To provide for the organic relationship of the school authority with all authorities and voluntary institutions that have to do with the numerous branches of what may be termed Public Health.
5. The *Subsidiary Officers* to the Medical Officer of Health of the Local Authority can be either—
   (*a*) Local Medical Officers of Health; or
   (*b*) Private practitioners.*
6. The *Medical Inspectors* can be either—
   (*a*) Local Medical Officers of Health;
   (*b*) Poor Law Medical Officers; or
   (*c*) Private Practitioners.*
   (*d*) Skilled specialists can be appointed when required.

* Women are suggested as being in many cases specially suitable, and may be part-time officers.

7. *Those preferred* by the Board of Education as subsidiary officers and as medical inspectors are those—
   (*a*) Versed in State medicine;
   (*b*) Holding a diploma in public health;
   (*c*) Experienced in hygiene;
   (*d*) Having made a thorough study of disease in children.
8. *The Medical Inspectors* are to be assisted in their duties by—
   (*a*) The Teacher, as "the mother" in the school;
   (*b*) The School Nurse;
   (*c*) The Health Visitor; and where possible
   (*d*) The School Managers; and
   (*e*) The Parents or Guardian.
9. The School Nurse or Visitor is to assist in—
   (*a*) Visiting children at their homes;
   (*b*) Instructing the parents; and

(*c*) Seeing that the Medical Inspectors' directions are carried out.

10. *The Character and Degree of Medical Inspection.*

(*a*) Each child to be examined at regular intervals in its school life. The minimum being: On entry; at 7 years of age; and at 10 years of age. A fourth inspection before leaving school is recommended;

(*b*) The buildings to be inspected at regular intervals;

(*c*) Elaboration of some system to prevent the spread of infectious diseases;

(*d*) The Home Life to be systematically supervised;

(*e*) The broad simple necessities of a healthy life to be primarily considered—for example:

(1) Clean bodies and heads;

(2) Obvious physical defects to be relieved or remedied;

(3) Clean, well ventilated, well lighted, and not overcrowded rooms;

(4) Physical culture;

(*f*) To furnish an Annual Report which shall include records of examinations, diagnoses, visits to schools made, and also a systematic comparison with standard and other local schools.

11. *The Procedure at an Inspection.*

(*a*) Time—during school hours; subject to the convenience of the Teachers.

(*b*) To be present:—Medical Inspector, Teacher, and one or both Parents, whenever possible.

(*c*) Family History to be asked of Parents.

(*d*) Diagnosis to be

(1) Expressed clearly to Parents and

(2) Entered in register.

Application of Act.

12. For *1908*, the inspection of those newly admitted and of those leaving School will be enforced. For *1909*, in addition, the inspection of all children of seven years of age will be required. *In subsequent years* full examination on the minimum scale (see 10 (*a*)) will be enforced.

13. *The ultimate aim of the Act* is to formulate schemes for diminishing the prevalence of disease in children;

(*a*) In the first instance this can be done by supervising or carrying out some methods of treating minor ailments, by providing baths, and other hygienic measures, by modifications of school curriculum to suit the physical capacity of the children, and especially by steps taken to prevent rather than cure diseases;

(*b*) Later it could be arrived at by forming school surgeries or clinics such as exist on the Continent.

Action of the British Medical Association.

14. *The Central Council of the Association* has, after considering the memorandum of which the above is an abstract, recommended to the Board of Education:

(*a*) That the Medical Inspectors be NOT the Medical Officers of Health.

(*b*) That the Medical Inspectors be part-time Officers.

(*c*) That the Medical Inspectors do not treat children nor visit their homes.

(*d*) That the Medical Inspectors be paid at the rate of £50 per annum for an attendance of one-half a school day (two hours) per week during the school terms. [The fee for specialists has not been suggested.]

(*e*) That the Inspection be held on the school premises or at provided centres.

15. The *Metropolitan Branch Council* has passed the following resolution:

> That the Divisions of the Metropolitan Counties Branch be requested to authorize the Branch Council to act on behalf of the whole area of the Branch in negotiations with the London County Council and other Councils concerned, in regard to the Medical Inspection of School Children.

In order to be able to carry out the wishes of the members of your Division as suggested in the above resolution, the Branch Council would be glad to have, *by February 15th next at latest*, the views of the Division on the following points:

Questions.

A. Do you approve of the Branch Council acting for all Divisions within the area of the London County Council? (see paragraph 15).

B. How do you consider the duty of home inspection imposed by paragraph 4 (*d*) can be best carried out so as not to interfere with the usual family medical attendant?

C. What scale of fees should be asked for if this duty is to be undertaken by medical practitioners?

D. Do you approve the suggestion 5 (*a*) or 5 (*b*)? If 5 (*b*) is approved how do you propose that the selection should be made?

E Do you approve the suggestion 6 (*a*), 6 (*b*), or 6 (*c*)? If 6 (*b*) or 6 (*c*) is approved do you consider it undesirable that the Medical Inspector should practise in the area in which he inspects?

F. Do you consider that any of the qualifications mentioned in paragraph 7 are essential, (*a*) for Subsidiary Officers, and (*b*) for Medical Inspectors, and if so, which?

G. Do you approve of paragraph 9? If not, how do you suggest the duties should be performed?

H. How do you suggest paragraph 10 (*d*) should be carried out?

I. Do you approve of paragraph 11 (*d*)? If not, how do you suggest the benefit of the diagnosis can be secured for the child?

J. Do you approve of the formation of school surgeries or school clinics as suggested in paragraph 13 (*b*)? If so, how should they be officered?

K. Meanwhile, how do you suggest that the possible abuse of hospitals, in connexion with this Act, can be prevented?

L. Do you approve of the recommendation of the Central Council as mentioned in paragraph 14 and its subsections? At what salary do you consider specialists should be engaged?

M. Do you consider that the ordinary Medical Inspector could be competent to adequately deal with every item included in the schedule of examination appearing in the British Medical Journal, December 21st, 1907? If not, how do you suggest the special diseases should be dealt with?

N. Do you consider that the ordinary and special Medical Inspectors should have security of tenure, or be appointed only for a fixed period with possibility of re-election?

O. If able to make any further suggestions would you be so good as to do so, explaining them fully.

Kindly send your reply not later than February 15th *next* to Atwood Thorne, 148, Harley Street, W.

Hampstead Division.

A meeting of this Division was held on Thursday, January 9th, at 8.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Pidcock in the chair.

Confirmation of Minutes.—The minutes of the meeting of November 14th, 1907, were taken as read.

Annual Report to Branch.—The Honorary Secretary then read the annual report to the Branch, which had been approved by the Committee of the Division on December 30th, 1907. Mr. Armit asked for the names of the members who had resigned. *The Financial Report* was approved subject to the auditors finding it to be correct. Two auditors, Mr. Humphreys and Mr. Cunnington, were then formally appointed. The total expenditure for 1907 was £59 3s. 2d. The ordinary expenditure, £21 10s. 8½d. Extraordinary expenditure: (*a*) Contract practice, £3; (*b*) provident dispensary question, £9 10s. 7d.; (*c*) Hampstead Hospital question, £19 5s. 7d.; total, £31 16s 2d. There had been a deficit of £4 17s. 5½d. for 1906 to pay off. The Branch had provided £4 17s. 5½d. to meet the deficit for 1906, £24 4s. 6½d. for ordinary expenses, and £30 1s. 2d. for extraordinary expenses. There remained a balance for 1908 of 18s. 10d. The annual report also contained an abstract of the work done with regard to the Hampstead Hospital and other matters of local interest. The annual report to the Branch was then adopted.

Hampstead General Hospital.—Arising out of this the Honorary Secretary stated that he had been that day at a meeting of the Branch Council, when a report written by him had been presented on the

Hampstead Hospital question. It was somewhat fuller, and the wording was not quite the same as in the official report to the Branch just adopted by the Division. The Branch Council had refused to receive the Honorary Secretary's report on the ground that it had not been before the Division. He asked, therefore, which report should be sent to the Branch. It was resolved, after hearing the report as given on the agenda of the Branch Council meeting of January 9th, that the report as given in the annual report to the Branch should be the official report from the Division on the Hampstead Hospital question.

Lantern Demonstration.—A most interesting demonstration was then given by Dr. E. W. GOODALL on the rashes of some infectious diseases and eruptions simulating them, illustrated with a very fine collection of lantern slides from photographs of cases of small-pox, chicken-pox, etc. A discussion followed, in which Drs. OPPENHEIMER, ARMIT, SHARMAN, HUMPHREYS, and PIDCOCK took part. A hearty vote of thanks was passed to Dr. Goodall.

Territorial Army.—Mr. HUMPHREYS proposed, Mr. CUNNINGTON seconded:

> That the Divisional Committee be invited to consider the scheme for the organization of the medical department of the territorial army, as proposed by Major-General Sir Alfred Keogh, and to report to the Division at as early a date as possible as to the manner in which the local medical profession can best assist the movement.

Mr. ARMIT thought it would be premature to deal with the matter till it had been taken up by the Association. Mr. HUMPHREYS then, with the approval of the meeting, withdrew his resolution.

STRATFORD DIVISION.

A MEETING of the Stratford Division was held at the Alexandra Hotel on January 16th, Dr. SPURRELL presiding.

Minutes.—The minutes of the previous meeting were read and approved.

Address.—Dr. JAMES GALLOWAY, of Charing Cross Hospital, gave an address on Visible Manifestations of Visceral Disease, which will be published. He was accorded a hearty vote of thanks for his address.

Medical Inspection of School Children.—The report of the Medico-Political Committee on the medical inspection of school children was brought before the meeting, and on the motion of Dr. HAY it was resolved to call a special meeting of the Division on January 30th to discuss the matter.

SOUTH-EASTERN BRANCH:

BRIGHTON DIVISION.

A MEETING of this Division was held on November 27th, 1907.

Medical Law Reform and Quackery.—A paper read by Mr. H. SEWILL at the Reigate Division on May 3rd, 1907, on the subject of medical law reform and quackery, was duly considered. A resolution identical in character to that passed at the Reigate meeting was proposed and carried unanimously.

Notification of Births Act.—A meeting of the Executive Committee was held on December 12th, 1907, to consider the Early Notification of Births Act, 1907. The following resolution was passed:

> That whilst expressing no opinion adverse to the advantage of the early notification of births, this meeting is of opinion that the duty of making such notification in the interests of the general public should not be demanded without the payment of a fee.

SOUTH-WESTERN BRANCH:

EXETER DIVISION.

A MEETING of this Division was held at the Royal Devon and Exeter Hospital, on Friday, January 3rd, at 3.15 p.m.

Confirmation of Minutes.—The minutes of the last meeting were read and signed by the Chairman.

Notification of Births Act.—The Notification of Births Act (1907) was considered, and the following resolution, protesting against its adoption by the Exeter City Council, was proposed by Dr. RUSSELL COOMBE, and seconded by Dr. PICKARD:

> That this meeting regards the adoption of the Notification of Births Act by the Exeter Council as unfortunate, and that a deputation of the medical profession be appointed to approach the Council with a view to rescinding such adoption, and to protest against the manner in which this matter has been hurried through without any consultation with the medical profession.

Drs. BELL, PEREIRA, and MARK FARRANT spoke against the Act, and it was resolved that a deputation consisting of Drs. Davy, Gordon, Domville, Pickard, Mark Farrant, and Mr. John Miller, should approach the City Council. Mr. ROPER then read a circular issued to the medical profession by the Chief Constable on December 10th, 1907, giving details as to the finding of a newly-born female child abandoned on a piece of waste ground and asking if any member of the medical profession would give information as to the case. Mr. ROPER discussed the circular at considerable length and proposed the following resolution, which was seconded by Dr. BELL and supported by Dr. PICKARD:

> That this meeting of the Exeter Division of the British Medical Association is of opinion that to give the information asked for in the circular recently issued by the Chief Constable of Exeter to the members of the profession would constitute a grave breach of the confidential relations which should exist between medical men and their patients.

A copy of this was sent to the Chief Constable.

DEPUTATION TO THE CITY COUNCIL.

A deputation of Exeter medical men, consisting of Dr. Davy, Dr. Gordon, Messrs. E. J. Domville, Miller, Pickard, Russell Coombe, and M. Farrant, waited on the Exeter City Council last evening in connexion with the Notification of Births Act, 1907. The following report is taken from the *Devon and Exeter Gazette* of January 10th:

The TOWN CLERK read a communication from the Local Government Board consenting to the adoption of the Act, and fixing January 13th as the date when the Council's resolution of adoption should come into operation.

Dr. DAVY said the members of the medical profession disliked the Act extremely, because it violated one of the cardinal principles of the profession—that of preserving secrecy. The medical profession had always treated what a patient told them as an absolute secret; a trust which they could not violate. The Act stated that they were to break through this professional secrecy, which they considered one of their most honourable traditions. They recognized that there was an enormous number of deaths among children which could be, and which ought to be, prevented, and they were willing to do whatever possible to assist the Legislature in helping to bring about a very desirable result. In any case it was possible to do that with something like decency. According to the Act, they had to notify the Authority on a stamped post-card, which was open to anybody to read. People had a right to assume that medical men were as confidential as a priest or a lawyer. The Act created a grave injustice. He thought the County and Town Councils should protest against such requirements being forced upon the medical profession. Although he did not attend cases of births he had the greatest objection to the Act as it stood, and unless much care was taken in applying it the public would very soon find that it was the most impracticable Act and most disgracefully drawn up.

Mr. E. J. DOMVILLE said he endorsed the whole of the remarks of Dr. Davy in regard to professional secrecy. He thought there would be a positive danger if the notifications of births were allowed to lie about in offices as did the notifications of diseases in the sanitary inspector's office. Cases should be notified by the right persons. Provided a father was in the house at the time of a birth it was his duty to notify, and if he was not, the duty fell upon other persons present. He thought the medical profession would fulfil their duty if they intimated to the persons concerned the responsibility that fell upon them.

Dr. GORDON said the medical profession were anxious that the Act should be carried out if the proper persons were instructed to notify. They objected to one portion of the Act, and that was the clause which referred to the medical profession. The duties laid down in the Act upon the medical profession were exceedingly unfair and undesirable from a public point of view. If they were going to interfere with medical secrecy they would do a very dangerous thing in the public interest. The medical

profession had no objection to the Act, provided that the parents had to notify a birth, and not the doctor.

Mr. Pickard said he entirely endorsed the views of Dr. Gordon. They were keen and anxious to help the children of the city. In the past the medical men had done their best to preach the doctrines laid down in the Act. If the Act was administered in the manner they desired, it would be carried out efficiently, and would not require medical men to give up professional secrets.

Mr. Russell Coombe assured the Council that the medical men would do their utmost to assist in carrying out the Act in a manner respectful to themselves and their profession.

The Mayor said the Council would carefully consider the remarks made by the medical gentlemen.

Mr. Campion said, having regard to the high standing of the medical profession, he knew that they would give the Council every possible assistance in carrying out the Act. He felt sure it would be the desire of the Council to meet their views as far as they possibly could in order that they might not violate professional secrecy. He gave notice that at the next meeting of the Council he would move that the Sanitary Committee be instructed to consider whether any modification could be made in the Act with a view to meeting the wishes of the medical gentlemen.

Dr. Davy having thanked the Council for the manner in which they had received the deputation, the next business was proceeded with.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

Jan. 2nd, 1908.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Lancashire and Cheshire Branch.—A meeting of the Branch Council will be held at the Medical Institution, Liverpool, on Wednesday, February 12th, at 4 30 p.m.—F. Charles Larkin, 54, Rodney Street, Liverpool, Honorary Secretary.

Metropolitan Counties Branch: City Division. — A general meeting will be held on Tuesday, January 28th, at the Great Eastern Hotel, Liverpool Street, at 4 p.m. Agenda: (1) Minutes. (2) Letters. (3) Annual Divisional Report to Branch. (4) The Chairman will move a vote of thanks to Dr. King Warry for his hospitality at the meeting at the Hackney Town Hall. (5) Dr. Greenwood will move, "That the Honorary Secretary be instructed to send to the Corporation of the City of London, and the Borough Councils of Hackney, Shoreditch, and Bethnal Green, the resolutions *re* the Early Notification of Births Act, passed at the last meeting of the City Division." Also "That a deputation be now appointed by this Division to attend any meeting of the local authorities within its area, willing to receive the same, to explain more fully its views in the matter, when the adoption of the Early Notification of Births Act is being considered." (6) The Honorary Secretary will move, "That the local authority be requested, if they adopt the Act, to let the notification be made in a letter-card instead of by an unsealed letter." A meeting of the Executive Committee will be held at 3 45, immediately before the above general meeting, to receive and pass the Annual Divisional Report to the Branch Council.—C. R. Salisbury, Honorary Secretary.

Metropolitan Counties Branch: Tottenham Division. —The next meeting of this Division will be held at the Athenæum, Muswell Hill (near the station), on Thursday, February 6th (not the 7th, as previously announced) at 4.30 p.m. Agenda:—Dr. Robert Hutchison: On Chronic Diarrhœa and Its Treatment. Dr. Fuller will open a discussion on The General Practitioner.—H. F. Staunton, Honorary Secretary, 88, High Road, Wood Green, N.

South Midland Branch: Northamptonshire Division.—A special meeting to consider the question of the medical inspection of school children will be held in the Board Room of the General Hospital, Northampton, on January 28th next, at 2 30 p.m. If any other business is brought forward between now and then it will be dealt with at the same time. Luncheon will be provided beforehand at Franklin's Restaurant, Guildhall Row, at 1.30. The Secretary will be obliged if those wishing to attend the luncheon will notify him at least two days beforehand.—P. S. Hichens, Honorary Secretary.

South Western Branch.—A meeting of the Branch Council will be held at the Imperial Hotel, Barnstaple, on Wednesday, January 29th, at 12.30 p.m.—Russell Coombe, Honorary Secretary.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: George D. Walsh, Surgeon, to the *Amphitrite*, January 14th, and to the *Monmouth*, on recommissioning, undated; William H. Pope, Staff Surgeon, to the *Philomel*, on commissioning, February 1st; Harold P. Jones, Staff Surgeon, to the *Topaze*, February 1st; Murray P. Jones, Staff Surgeon, to the *Attentive*, February 1st; Ernest S. Tuck, Staff Surgeon, to the *Foresight*, on recommissioning, February 1st; Charles C. Macmillan, M.B., D.S.O., Staff Surgeon, to Malta Hospital, January 21st; Richard F. Clark, Staff Surgeon, to the *Victory*, January 21st; Gerald M. Eastment, Surgeon, to the *Wildfire*, February 1st; Charles J. O'Connell, Surgeon, to the *Magnificent*, February 1st; Samuel W. Vasey, Fleet Surgeon, to the *Vivid*, additional, for Devonport Dockyard, January 30th.

J. Kirkwood, M.B., civil practitioner, has been appointed Surgeon and Agent at Helmsdale, January 16th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. C. Haslett, M.D., is placed on temporary half pay on account of ill health, January 28th. His commissions bear date: Surgeon, February 4th, 1882; Surgeon-Major, February 4th, 1894; Lieutenant-Colonel, February 4th, 1902.

Lieutenant C. Cassidy, from the Seconded List, to be Lieutenant, January 1st.

Surgeon-General W. L. Gubbins, C.B., M.V.O., M.B., Principal Medical Officer, H.M.'s Forces in India, has arrived in England on short leave.

Lieutenant-Colenel C. C. Reilly has been appointed Surgeon at the Royal Military College, Sandhurst, vice Lieutenant-Colonel J. Maher, from December 8th.

INDIAN MEDICAL SERVICE.

Major W. S. P. Ricketts, M.B., is appointed Deputy Sanitary Commissioner, Sind Registration District.

Major H. F. Cleveland is appointed Secretary to the Principal Medical Officer, H.M.'s Forces in India, from November 10th, 1907.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during December, 1907:

		FROM	TO
Lieut.-Col.	H. G. Hathaway	Poona	Devonport.
,,	W. B. Thomson	Portsmouth	India.
,,	W. Turner	Ferozepore	York
,,	S. G. Allen	Ambala	London Dist.
,,	J. S. Green, M.B.	—	Dublin.
,,	J. H. Daly	Malta	Crete.
Major	W. L. Gray, M.B.	Plymouth	Winchester.
,,	H. P. Johnson	Devonport	S. Africa.
,,	G. J. Buchanan, M.B.	Glasgow	India.
,,	J. F. M. Kelly, M.B.	Kilworth	Cork.
,,	R. C. Lewis	Chaubuttia	Devonport.
Captain	R. S. H. Fuhr, D.S.O.	Murree	,,
,,	J. E. Hodgson	Ranikhet	Southern Com.
,,	W. A. Woodside	Halifax	York.
,,	S. G. Butler	Aldershot	S. Africa.
,,	L. F. F. Winslow	Gibraltar	Devonport.
,,	J. W. Langstaff	Pembroke Dk.	W. Africa.
,,	P. S. O'Reilly	Bulford	Portsmouth.
,,	W. Bennett, M.B.	Templemore	Cork.
,,	G. Baillie, M.B.	Galway	Dublin.
,,	W. S. Crosthwait	Thayetmyo	South'n Comd.
,,	J. B. Cautley	Woolwich	India.
,,	W. M. B. Sparkes	Portsmouth	Winchester.
,,	H. Rogers, M.B.	Multan	Dublin.
,,	G. F. Rugg	Mill Hill	Colchester.
Lieutenant	R. J. C. Thompson	Pretoria	India.
,,	E. G. R. Lithgow	,,	,,
,,	V. G. Johnson	Guildford	Woolwich.
,,	C. R. M. Morris, M.B.	Queenstown	India.
,,	R. E. U. Newman, M.B.	,,	,,
,,	E. M. W. Paine	Bulford	,,
,,	D. De C. O'Grady	Dublin	,,
,,	W. H. Forsyth, M.B.	Aldershot	S. Africa.
,,	W. Mitchell, M.B.	Strensall	York.
,,	B. Johnson	Buttevant	Queenstown.
,,	O. C. P. Cooke	Devonport	Taunton.
,,	D. Coutts, M.B.	Bulford	Tidworth.
,,	J. A. Bennett, M.B.	Winchester	Reading
,,	H. L. Howell	Woolwich	Shorncliffe.
,,	W. F. M. Loughnan	Sandown	Portsmouth.
,,	O. R. McEwen	Warrington	Bury.
,,	J. H. Gurley	Dover	Chichester.
,,	H. W. Farebrother	Fleetwood	Ashton.

Major H. V. Dillon, retired pay, has been placed in medical charge of troops at Trowbridge.



Sheffield University, from Weston Park.

SEVENTY-SIXTH ANNUAL MEETING

OF THE

British Medical Association,

AT SHEFFIELD, JULY, 1908.

THE latest addition to the universities of the United Kingdom—the University of Sheffield—began its career under the most favourable auspices on July 12th, 1905, when it was opened in person by His Majesty King Edward VII, accompanied by his gracious Consort.

To trace the movement for the advancement of higher education in Sheffield, of which the granting of a University Charter was the crowning event, we must go back to the year 1879, when Firth College, founded by the late Mr. Mark Firth of Sheffield, was opened by H.R.H. Prince Leopold.

FIRTH COLLEGE.

The original aim of the College was to carry out on a more efficient and extended scale the work which had been begun some years earlier by the University Extension Lectures and Classes. The scope of its work was rapidly extended, and it soon became the nucleus from which the present Faculties of Arts and Pure Science in the University have developed. The three Presidents of Firth College during the eighteen years of its existence were Mr. Mark Firth, the generous founder; the Rev. Samuel Earnshaw, M.A., a native of Sheffield and Senior Wrangler at Cambridge in his day, and Dr. H. Clifton Sorby, F.R.S., whose original scientific work has gained for him a world-wide reputation, and whose devotion to the cause of education in Sheffield has been most conspicuous. Another name which is linked with the history of Firth College during the greater part of its existence, and with the higher education movement, is that of the present Professor of Physics in the University, Dr. W. M. Hicks, F.R.S. His connexion with Sheffield began in 1883, when he was appointed Principal of Firth College, a position he filled also when it became University College, and on the foundation of the University he was honoured by being appointed its first Vice-Chancellor. The family of the founder of Firth College furnished a distinguished member of its staff in the person of Mr. Charles Harding Firth, now Regius Professor of Modern History in the University of Oxford.

THE SHEFFIELD TECHNICAL SCHOOL.

This institution was first opened as a branch of Firth College in 1884, and a year later acquired the Royal Grammar School buildings in St. George's Square, where, after great additions and reconstruction, it has now become the Faculty of Applied Science of Sheffield University. For a time, from 1889 to 1897, the Technical School was carried on as a separate institution under the Chairmanship of Sir Frederick Thorpe Mappin, Bart., M.P., now one of the Pro Chancellors of the University; a most liberal benefactor and supporter both of the School and of University College.

THE MEDICAL SCHOOL.

The early history of this institution and its foundation in 1828 have been dealt with in a previous article.[1] Transferred from its original building in Surrey Street to a new site in Leopold Street, opposite to Firth College, in 1888, it had been partially affiliated to the latter college. In 1896 Mrs. Arthur Jackson founded the "Arthur Jackson" Chair of Anatomy in memory of her husband, who for many years was Secretary to the School and a Lecturer on Surgery, and who had worked strenuously for the closer

[1] BRITISH MEDICAL JOURNAL, December 7th, 1907, p. 1689.



Firth Hall (interior).

union between the College and the School, the fulfilment of which he did not live to see. The Favell Laboratory of Physiology was also established in 1897 in memory of the late Mr. W. F. Favell, a former President of the Medical School and a Lecturer on Surgery; and a Bacteriological Laboratory owed its origin to the generosity of another lecturer in the School who preferred to figure in the matter as "A Sheffield Citizen."

In the Diamond Jubilee year, 1897, an important step was taken in the fusion of these three institutions, Firth College, the Technical School, and the Medical School, into one college, incorporated by Royal Charter as the *University College of Sheffield*. His Grace the Duke of Norfolk became the President, and the first Vice Presidents were Sir Frederick Mappin, Bart., Sir Henry Stephenson, whose munificent gifts both to Firth College and University College entitled him to be regarded as a second founder of those institutions, Dr. H. Clifton Sorby, F.R.S., President of Firth College, and Dr. W. Dyson, Chairman of the Council of the Medical School.

In 1902 the disruption of the Victoria University occurred, the three constituent colleges of Manchester, Liverpool, and Leeds all seeking to become separate Universities. Leeds refused to be associated with Sheffield in a scheme for the foundation of a Yorkshire University and was granted a charter as the Leeds University. Sheffield then put forward her claim to be recognized as a separate university, and in 1905 a charter for the establishment of a university in Sheffield was granted. For the purpose of matriculation only Sheffield was associated with the Universities of Manchester, Liverpool, and Leeds, in order to maintain a uniform standard of entrance examination.

The University of Sheffield.

The Governing Body

The University is governed by a Council, Senate, and Court of Governors. The Council consists of the Chancellor, His Grace the Duke of Norfolk, E.M., K.G.; the Pro Chancellors, Sir F. T. Mappin, Bart., and Alderman George Franklin; the Vice-Chancellor, Sir Charles Eliot, K.C.M.G., C.B., M.A., LL.D.; the Treasurer, Councillor H. K. Stephenson, J.P.; the Deans of the four Faculties of Arts, Pure Science, Medicine, and Applied Science; and nominees of various bodies. The Senate consists of the Vice-Chancellor, the Registrar (Mr. W. M. Gibbons), the entire Professorial Staff, the Librarian of the University, and the Principal of the Training College. The Court of Governors is a much more numerous body, comprising representatives from a large number of institutions, societies, and other bodies.

The University Buildings.

The University buildings, erected from the designs of Mr. E. M. Gibbs, F.R.I.B.A., of the firm of Messrs Gibbs and Flockton, architects, of Sheffield, occupy a commanding situation on a hill overlooking the city. To the west and north they abut on Weston Park, one of the public parks of Sheffield. The whole length of the west wing is open to the park, the level of which is a story higher than the ground level on the inner or quadrangle side of the buildings. The buildings are in the Tudor style of architecture, of red brick, and form three sides of a quadrangle, the fourth side being reserved for future extensions. A lofty square tower with an octagonal turret is a striking feature of the south and principal frontage, and octagonal turrets appear above the roof at the other two corners of the building. The south façade, fronting the roadway in Western Bank, is mainly a two-story building, in the centre of which is the principal entrance, surmounted by the University arms sculptured in stone. Above are the large Tudor windows of the beautiful University Hall, named the Firth Hall in memory of the late Mr. Mark Firth, the founder of Firth College. The Hall, which is capable of accommodating about 800 persons, is lighted by eighteen windows. It is partly panelled in oak, and has an open-work oak roof, supported by arches and mouldings of the Tudor period. In the same block are the administrative offices, Council Room, common rooms, and in the

basement the refectories. The Council Room and the Professors' common room are both panelled in oak. The beautiful sixteenth century plaster work of the ceilings in the latter room and in the Vice-Chancellor's apartment came from an old house formerly existing in the neighbourhood of Sheffield, and were the gift of the Duke of Norfolk. The buildings adjoining Weston Park and forming the west side of the quadrangle are devoted to the Faculties of Arts and Pure Science; those on the north side to the Faculty of Medicine. The Faculty of Applied Science is accommodated in the buildings, formerly the Technical School, in St. George's Square, some five minutes' walk from the rest of the University. The Library, towards the erection of which a Sheffield gentleman, Mr. Edgar Allen, has contributed £10,000 is now in course of erection at the south-west corner of the University buildings, adjoining the entrance to Weston Park. It will be a detached octagonal building of two stories, and will provide accommodation for 114 000 volumes.

The west and north wings of the University buildings, which on one side face the park, are four stories in height, with an additional two stories in the large tower and rooms in the other turrets. A corridor extends the whole length of the three lower floors in the west wing, but on the top floor the Chemical Elementary Laboratory in the centre of the wing is interposed. In the north wing, where the Faculty of Medicine is located, there is no corridor, the various rooms communicating directly.



Council Chamber.

The Faculty of Arts.

This Faculty, with which for the present the department of Law is associated, occupies the greater part of the three lower floors of the southern half of the west wing. Economics and Commerce are located on the lower ground floor below the park level, the rooms facing into the quadrangle; English, French, and Law on the floor above. Mathematics, Classics, History, and German occupy the class rooms on the third story. Six of these eight departments are presided over by professors. The lecture rooms are furnished after the same general pattern, and there are two large lecture rooms with seating accommodation for 120 students.

The Faculty of Pure Science.

The Physical Laboratories are self-contained on the three lower floors of the northern half of the west wing, connected by a spiral staircase and apparatus lift. The rooms are arranged on either side of the central corridor, except those on the lower ground floor, which, owing to their being below the ground level on the park side, are confined to the quadrangle front. Accommodation is provided for all the various departments of Physics, with the exception of Electrical Engineering, which is housed in the Applied Science buildings in St. George's Square. On the lower ground floor are battery and dynamo rooms, the workshop, and a constant temperature room with double walls and ceiling. The upper ground floor, on the park level, contains a large balance room for ordinary students and a room, with north outlook, used for magnetic measurements. This room contains a standard clock, presented to the University by Pembroke College, Cambridge, which is connected, for rating purposes, by an underground wire with the standard transit instrument in the park. Next to this room is a large laboratory for elementary students, and beyond two smaller laboratories, one for general electrical work and one for advanced work. Across the corridor are an ice closet, a photometric room, a room for blowpipe and furnace work, an apparatus room, and a laboratory for heat measurements. The first floor (third story) contains two lecture rooms, with a large preparation and research room between them, and private rooms for the professor and demonstrator. There are also rooms for special work in light, and for spectroscopic work. There is a photography room, with two dark rooms attached, a small room for sensitive balances and standards, and another one specially fitted for work in chemical physics.

The Chemical Department occupies most of the top floor in the west wing, over the Physical Laboratories. There are two lecture theatres, two general laboratories partly lighted from the roof, one for elementary students and the other for advanced students. There are special rooms for gas and water analysis, a research laboratory for post-graduate work, a dark room for photography, store rooms, and a professor's room. An additional laboratory for physical chemistry is now being fitted up in what has hitherto been the botanical laboratory, the latter having been moved into the north wing. A special system of ventilation has been adopted for these laboratories, by which the air undergoes a complete change four times in the hour.

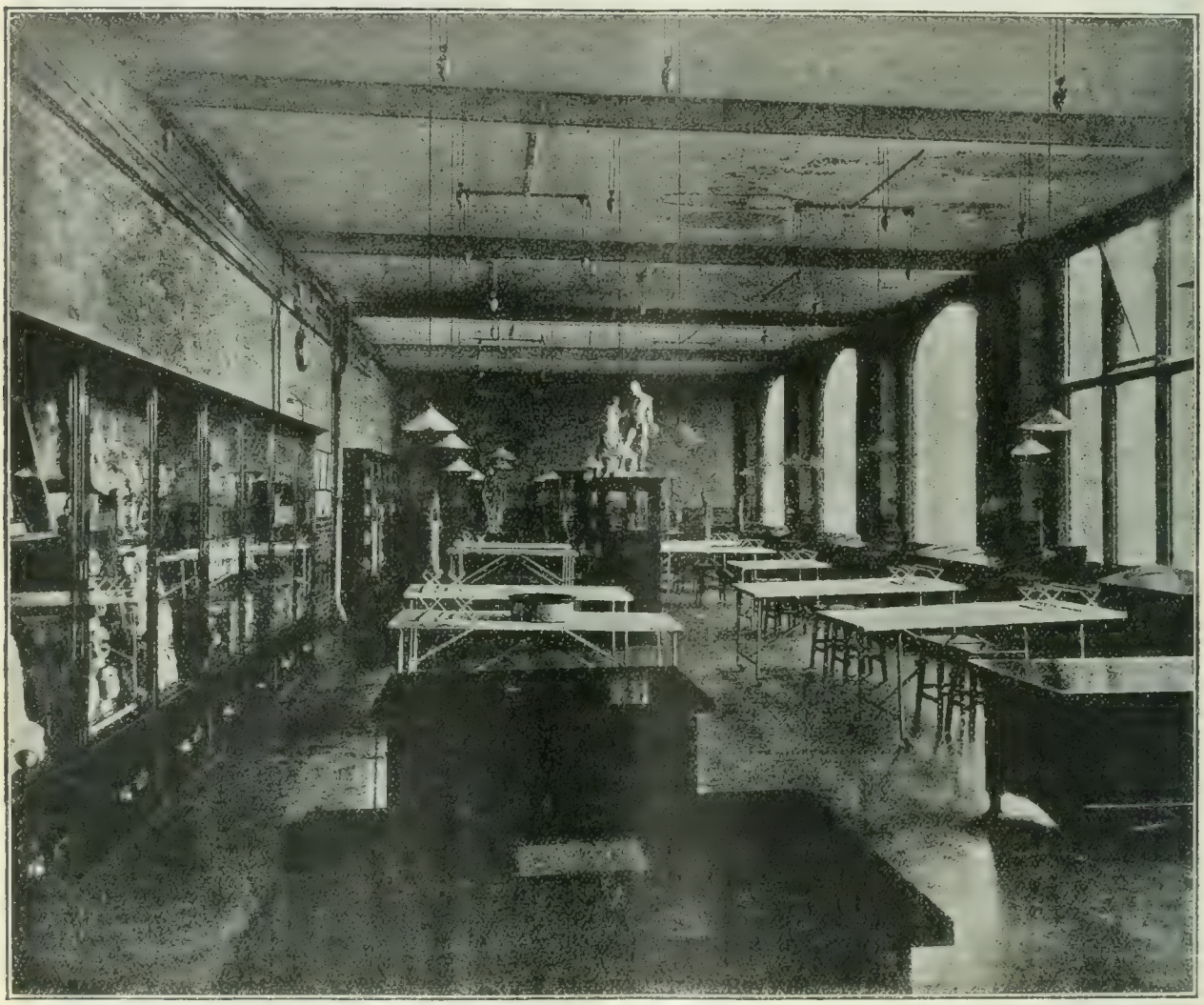
The Biological Department, which includes zoology and botany, adjoins the Chemical Department, occupying the south extremity of the top floor of the west wing and the upper floors of the great tower. There are two lecture rooms, the larger accommodating eighty students. The general laboratory affords accommodation for thirty students. There is a Zoological Laboratory for advanced students, besides Zoological and Botanical Research laboratories. In connexion with the latter is a greenhouse. The museum of this department, in the tower, is lighted from the roof, and has a gallery round it, which is at present used for botanical specimens. There are also private rooms for the professor and lecturer, and a dark room for photography. It is proposed to place fresh water aquaria in the corridor, which has skylights and is otherwise well adapted for this purpose.

The Faculty of Medicine.

Almost the whole of the wing on the north side of the quadrangle is occupied by the Faculty of Medicine. On the lower ground floor is the library of the Sheffield Medico-Chirurgical Society, the Museum of Public Health, and a room allotted to the newly constituted Department of Architecture. On the upper ground floor lecture rooms are provided for the professors of medicine and surgery, and the Museum of Materia Medica and the Botanical Laboratory are also on this floor, the rest of the floor being taken up by the Anatomical Department.

The Anatomical Department has a reception and storage

room on the lower ground floor. Above, the dissecting room has a floor of polished oak parqueterie, and contains, in addition to the ordinary fittings, three large wall cases and a tank encased in wood and surmounted at each end by statues of the male and female figure. There is a lift to convey subjects from the reception room beneath to the Preparation Room, adjoining the Dissecting Room, which is lined with white glazed bricks. There is also, on the same floor, opening out of the Dissecting Room, a lecture theatre, an anatomical museum, several research laboratories, and private rooms for the professors and demonstrators. A feature of all the rooms on the north side of the medical wing is the large plate-glass windows, 10 ft. by 5 ft. 7 in. In the anatomical department, the dissecting room, preparation room, and research laboratories are lighted by these windows. Besides the necessary microscopes and stereoscopes provided, there is also a set of the laboratories in the medical wing. The large "motor," belting, and shafts, supplying power to the laboratory, are all of Sheffield manufacture. The system of overhead ropes and pulleys is an adaptation of that introduced into the Physiological Laboratory of the Leeds University. In the general laboratory there are galvanometers for muscle-nerve demonstrations and for temperature. In course of construction there is a large calorimeter built after the pattern of the calorimeter of Benedict, the Director of the "Nutrition Laboratory" of Boston, U.S.A. One of the rooms opening out of the large laboratory, intended for research, is fitted with blinds in such a manner that it can at any time be converted into a dark room for experiments, photographing the spectrum, recording the movements of galvanometers, micrographing by the ultra-violet light, or photographing the movements of the capillary electrometer recording nervous impulses. The Chemico-



Anatomical Laboratory.

most modern anthropological instruments and requisites for students who desire to work in modern developments of anatomy There is an osteological collection for students' use, a series of models and preparations illustrative of developmental, morphological, and topographical study, and a collection of crania of European, African, Indian, Bornean, Australian, and American races.

The Physiological Department, occupying the whole of the floor above the Anatomical Department, possesses very ample accommodation. The rooms throughout the north wing communicate directly with one another, without any intermediate corridor as in the west wing. The laboratory for histology and experimental work is 70 ft. by 25 ft. Here the tables are all movable, instead of the usual bench with fixed sinks and pipes. The sinks—with supply of water, gas, and electricity—are sunk beneath the floor level, and covered by trap doors when not in use. This arrangement exists in many of the other Physiological Laboratory is very well equipped. One corner of this laboratory, forming a small alcove, contains drying ovens, a still, evaporating pans, and sand baths supplied with steam. The balance rooms are exceptionally well supplied with instruments of great delicacy —balances capable of weighing anything from 25 kilo. to 1 mg. The Lecture Theatre communicates with the Experimental Laboratory on the one hand, and with the Chemico Physiological Laboratory on the other, so that it is convenient for demonstration purposes in connexion with either laboratory. There is a large space behind the lecturer's table, which can, when required, be shut off by a movable "blackboard" screen to form a store room and preparation room. Here the more delicate apparatus required for experimental work is kept. At the extreme east end of the wing, beyond the Lecture Theatre, is the Physiological Research Room, which is lighted by the large windows previously described in connexion with the

Anatomical Department, both on the north and east side. From these windows the view of the city and the hills beyond, with the prospect of Weston Park and its miniature lake in the immediate foreground, is, under suitable atmospheric conditions, very striking.

The Research Room is fitted with shafting for recording work, and contains a great variety of instruments for various purposes, many of them of very great delicacy and precision. In addition to the larger rooms already described, there are other dark rooms for photography and the spectroscope, and storerooms on the same floor, and on the lower ground floor, level with the quadrangle, is a photographic recording room and a Saltan galvanometer, which records in a dark room partitioned off for the purpose. In the roof of the building, above the Pathological Department, is placed the animal room and the workshop. In convenience and equipment the Physiological laboratories of the University of Sheffield are equal to any in the United Kingdom, and the Government Inspector, after his visit in July, 1907, reported that "there are few, if any, physiological laboratories so well provided with the appliances needed for research."

The Pathological Department occupies the whole of the top floor of the medical wing. The large Pathological Laboratory is entered from the staircase at the west end of the wing. To the left on entering are the Professor's Room and his Private Laboratory. There is also a book-case containing a small library of textbooks for the use of students near the entrance, and drawers containing collections of microscope slides for their use also. The benches in the laboratory are fixed, but there are movable tanks on wheels divided into compartments for the different sets of organs. The sinks, with supply of water, gas, and electricity, are sunk below the floor level as in the Physiological Department. Both hot and cold water and steam are laid on all over the laboratories. Black screens stretched upon rollers are available for diagram drawing, etc. Beyond the Pathological Laboratory is a large Bacteriology class-room, which contains hot-air sterilizers, hot-air incubators for blood serum, blood-temperature incubators, and an autoclave for high-pressure sterilizing. In the centre of the department is an incubating room, heated by steam radiators, specially constructed so that it can be kept at a constant temperature. Beyond, at the east end of the wing, are two bacteriological laboratories where the bacteriological work in connexion with the Health Department of the City Council is done, and a research room containing a Sartorius balance of great delicacy. There are also in this department a large lecture theatre, lecturer's room, and a spacious museum, with both a top light and a south light, and a gallery round it. In the museum is a presentation case of over 2,000 surgical instruments of the latest type for the instruction of students. In a recess on the staircase is a centrifuge for milk work. On the lower ground floor there are two animal rooms for this department.



Bacteriological Laboratory.

The Faculty of Applied Science.

The buildings of this Faculty are in St. George's Square, within a few minutes' walk of the University buildings. The Faculty is divided into three departments—Engineering, Metallurgy, and Mining.

The Engineering Department.—The main laboratory contains a plant which can be used both by mechanical and electrical engineering students. In this laboratory provision is made for thorough training in the practical study of the leading types of prime movers, including steam, gas, and oil engines, air compressors, and hydraulic machinery. A very complete electrical equipment demonstrates the application of electricity to lighting, traction, and power transmission. Other parts of the building contain all such appliances and machinery as are required for the training of mechanical, civil, and electrical engineers.

The Department of Metallurgy, as becomes the city where the chief national metallurgical industry is carried on, is, so far as iron and steel are concerned, quite unique. The laboratories are divided into two sections, the scientific and the practical. There are nine scientific laboratories, four of which are chemical assay laboratories, accommodating 102 students at a time. The mechanical laboratory is provided with a 50-ton static testing machine of the straight lever type, with two centres. Tensile, compressive, transverse, and tortional stresses can be registered on this machine in either 3-ton or 12-ton moments. There is also an alternating stress-testing machine, working up to nearly 800 alternations per minute. The micrographical laboratory contains a battery of six 4-inch polishing blocks, run electrically; and nine microscopes, including the latest Zeiss photomicrographic installation, illuminated by a powerful Nernst lamp. The pyrometer installation includes a central station Le Chatelier pyrometer, a portable photometric dial pyrometer, two optical pyrometers, and a modified air pyrometer. There is a photographic laboratory, and a geological laboratory, containing a set of petrological microscopes, and rock section cutting and polishing appliances. The practical laboratories are two in number; there is also a crucible steel house, in which the coke-smelting process is employed; also apparatus for the manufacture of white crucibles, and a reverberatory furfurnace for annealing steel. The chief practical laboratory contains a 2-ton Siemens furnace, a 1-ton Bessemer converter, and a gas-melting plant for six full-sized crucibles. It also contains a hydrocarbon annealing muffle, a half-ton pneumatic hammer, and a 40 in. cupola for cast iron. The whole of the motive power is electrical, including a 4 ton travelling crane, commanding the foundry; there is also a 20 foot-tons falling weight apparatus. Students are thus enabled to experiment on a manufacturing scale, and to examine scientifically the metals they have made, using chemical, mechanical physical, and microscopic methods. Among recent additions to this department must be mentioned the two molten salt-hardening baths worked by gas on the Brayshaw system, one maintained at 740° C., the other at 900° C., presented by the Sheffield Society of Engineers and Metallurgists. A barium chloride high-speed steel-hardening furnace, the bath being maintained electrically at a temperature of 1,300° C., has also been presented by the Sheffield Town Trustees: to which they have added a complete lathe and a drill apparatus for testing the hardened steels, at a total cost of £3,000. It is now under consideration to complete the appliances for steel making by erecting an electric induction steel-melting furnace, in which the steel is melted without

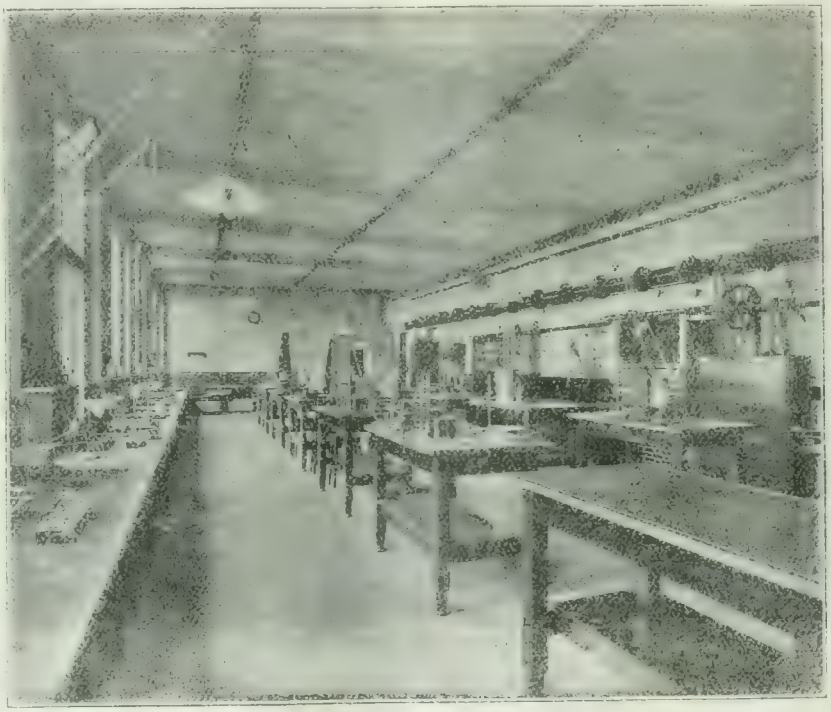
any direct connexion with the source of energy, purely by an induced current of 30,000 ampères.

The Mining Department is provided with lecture rooms for instruction in mining subjects; and there is a small chemical laboratory for practical work in the applications of chemistry to mining. This laboratory is equipped with apparatus for the proximate and ultimate analysis of solid, liquid, and gaseous fuels, and their calorific values; for the analysis of tar, benzol, and ammonia products, the testing of flame caps, etc. The department is also equipped with the necessary appliances for teaching mine-surveying, and possesses a useful mining library. Much of the work of the department is, however, done at a distance from Sheffield. In addition to the classes given at the College, it has a centre at Derby, gives lectures in Mining, Mining Chemistry, and other subjects connected with mining, in the different mining centres of the West Riding and Derbyshire, and inspects, examines, and supervises classes in these districts and beyond.

Scholarships and Prizes

are awarded under various conditions to students of the University in the several Faculties.

In the *Medical Faculty* there is an Entrance Scholarship, by examination, of the value of £116; not in money but in free courses of lectures and of hospital practice as included in the Composition Fee. There are also two special medical scholarships partially defraying the cost of lectures, etc., in lieu of money; one of the value of £100, open to women only, offered by "A Sheffield Citizen"; and one of £50, open to either sex, from the medical staffs of the Royal Infirmary and Royal Hospital. The Kaye Scholarship, consisting of the interest on £900, in money, is awarded annually to the student, a native of Sheffield, who is placed first in an examination in Anatomy and Physiology; on condition of his completing his curriculum, or at least three-fourths of it, in the Faculty of Medicine. There is a gold medal awarded annually in Clinical Medicine and Surgery, and a bronze medal awarded to the student who has gained the first place in the examination for the full course in each year in the Faculty of Medicine.



Physiological Laboratory.

In the *Faculties of Arts or Pure Science* there are two entrance scholarships: The Firth Scholarship of £30 per annum for three years, and the Corporation Scholarship of £25 per annum for three years. The Earnshaw Scholarship, by examination in Mathematics or Classics, or both, is of the annual value of £50 in money, tenable for three years at any university in the United Kingdom. The Sheffield Town Trustees Scholarships for boys and girls under 19 years of age, resident or educated in Sheffield, are all tenable at the University for three years; two for boys only of £50 per annum each, one for girls only of £50 per annum, and two for either boys or girls of £60 per annum each. There are also the Town Trustees Fellowship of £75 for one year, the Mechanics Institute Scholarship of £50 for one year, and the Frederick Clifford Scholarship of £50 per annum for two years. These three scholarships are intended for Sheffield graduates to enable them to prosecute special research work in one of the departments of the University.

In the *Faculty of Applied Science* there are technical scholarships and free studentships, special premiums, medals, and book prizes, and the William Cooke Scholarship for mining students. The Law Society also awards studentships and prizes. Scholarships in Arts, Pure Science, and Medicine are offered by the Sheffield Education Committee, and evening studentships in Arts and Pure Science.

University Societies.

There are Biological, Chemical, Physical, and Engineering and Metallurgical Societies for the students interested in these special branches of science; a Literary Society which admits outside members by special election; a Dramatic Reading Society; and a Clinical and Pathological Society composed of past and present students of the Faculty of Medicine and members of the teaching staff. There is also a Students' Representative Council, elected annually by all the students of the University, the President of which is a member of the Court of Governors of the University, thus forming a recognized medium of communication between the students and the University authorities. *Floreanus* is the title of a journal, partly edited by students, which is published at the close of each term.

The University buildings in Western Bank are admirably arranged for their purpose. The general disposition of the various faculties is excellent, and in matters of detail great forethought and care have been exercised. In the matter of equipment the laboratories are very fully provided, and the most recent devices for the purpose of demonstration to students are employed. In short, no trouble or expense has been spared to afford students at the Sheffield University the fullest opportunity for acquiring an "up-to-date" scientific education. We have before quoted the opinion of the Government inspector that the equipment of the Physiological Laboratories is equal to that of any in the United Kingdom, and the Metallurgical Department of the Faculty of Applied Science in St. George's Square is by common consent the most complete of its kind in the country. If the University of Sheffield fails to attract students, the blame cannot be laid upon the shoulders of those responsible for the buildings and their equipment. There is a great and pressing need for further endowment to attract and retain the best teachers. Frequent changes are undesirable, and it will be a reflection upon the citizens of Sheffield, and the inhabitants of the surrounding towns who largely participate in the advantages derived from a local university, if men of special promise are attracted elsewhere by the temptation of better salaries. It must be borne in mind that the object of a modern university is not limited to affording young men and young women opportunities for higher education or special training for some profession or other means of earning a livelihood. A very important object is the encouragement of original research; and for this purpose increased endowment is necessary. At present the University depends very largely upon State aid and rate aid, and this must in the

future be influenced considerably by the measure of success attained in the attraction of students and the evidence thus afforded that the University is fulfilling the primary object for which the public were urged to give it their support. Its reputation and power of attraction must depend ultimately on the ability of its teaching staff, and to secure and retain the services of the best teachers further contributions towards the endowment fund of the University will be needed. The modern type of university, of which Sheffield affords the latest example, should appeal to all classes; for it is essentially technical and practical in its aims, and must contribute in the long run to greater efficiency and enterprise in many different directions.

GENERAL ARRANGEMENTS.

THE seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July, 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University, and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

The following are the general arrangements for the meeting, so far as they are as yet complete:

President: HENRY DAVY, M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

President-elect: SIMEON SNELL, F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

Past-President: RICHARD ANDREWS REEVE, B.A., M.D., LL.D., Dean of the Medical Faculty of the University of Toronto.

Chairman of Representative Meetings: JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

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The Address in Medicine will be delivered by JAMES KINGSTON FOWLER, M.D., F.R.C.P.

The Address in Surgery will be delivered by RUTHERFOORD JOHN PYE-SMITH, F.R.C.S.

The Popular Lecture on "Dust and Disease," will be delivered by EDMUND OWEN, LL.D., F.R.C.S.

THE SECTIONS.

The scientific business of the meeting will be conducted in sixteen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes. Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following is a list of the Sections, with the names of the officers. The subjects selected for discussion in the various Sections will be published as soon as the arrangements of the committee of reference are completed.

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Honorary Secretaries: Surgeon-Captain Sidney Fredk. Barber, H.V.B., 11, St. Barnabas Road, Highfield, Sheffield; Surgeon-Captain Alan Charles Turner, W.R.R.E.V., 287, Glossop Road, Sheffield; and a Representative from the Royal Navy.

PROVISIONAL TIME TABLE.

Friday, July 24th.*
2 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

Saturday, July 25th.*
9.30 a.m.—Representative Meeting.

Monday, July 27th.
9.30 a.m.—Representative Meeting.

Tuesday, July 28th.
9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon.—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
8.30 p.m.—President's Address.

Wednesday, July 29th.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Medicine.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception.

Thursday, July 30th.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Surgery.
7.30 p.m.—Annual Dinner.

Friday, July 31st.
10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.

Saturday, August 1st.
Excursions.

* It is left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council to decide if the business to come before the Representatives will necessitate a meeting on the Friday.

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Sinclair White, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—

W. T. D. Mart, M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.

R. W. James Smith, M.D., C.M., M.R.C.S., L.R.C.P.,
Don House, Brightside, Sheffield.

A. C. Turner, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on January 16th, with Dr. F. H. CHAMPNEYS in the chair.

The Coombe Hospital, Dublin.

A deputation from the Guardians and Directors of the Coombe Hospital, consisting of Dr. M. J. Gibson, the Master, a member of the Board of the Hospital, and the Honorary Secretary, attended on January 9th, and presented a memorial praying the Board to rescind its resolution of December 19th, 1907, removing the name of the Coombe Hospital from the list of recognized training schools. The memorial was supported by letters from the Very Rev. Canon Scally, P.P., the Rev. J. D. Smylie, and Sir Charles A Cameron, Medical Officer of Health for the City of Dublin, and by a statutory declaration made by the Registrar of the Coombe Hospital as to the circumstances under which the Board of the Hospital first learned of the correspondence between the Secretary, the late Master, and the Registrar on December 30th, 1907. The members of the deputation spoke in support of the memorial, and Dr. M. J. Gibson made application in due form for approval as a teacher. Having fully considered all the evidence and arguments submitted to them by the deputation, the Board took no action on the memorial, but approved Dr. Gibson as a teacher.

Letters were considered from the late Master of the Coombe Hospital, Dublin, and from Messrs. D. and T. Fitzgerald, his solicitors, asking the Board to reconsider its decision not to accept any certificate signed by him in future, and the following decision was agreed to:

That the Board declines to reconsider its decision.

A letter was considered from the Registrar of the General Medical Council asking whether it was the intention of the Board to take proceedings under Section 12 of the Midwives Act in regard to the irregularity in signing certificates in the case referred to in the SUPPLEMENT of January 4th, p. 5, and it was decided that the General Medical Council be informed that the Board does not contemplate taking proceedings.

Advertising by Midwives.

A letter was considered from Dr. W. Arnold Evans (M.O H. Bradford) as to advertising by midwives, and it was decided that Dr. Evans be informed that the Board has no power to prohibit advertising by midwives.

A Midwife's Substitute.

A letter was considered from a midwife approved by the Board for the purpose of signing Forms III and IV, inquiring whether her substitute, being a certified midwife, may supervise cases on her behalf during her absence on a holiday. The Board decided that under the circumstances stated the substitute may supervise the cases, but that the duty and responsibility of signing the certificates remain with the midwife approved by the Board. In case of such substitute acting in this manner it shall be notified on the Schedule at the time of signing.

The Board then adjourned.

Training of Midwives in Poor-law Institutions.

The following letter has been addressed to the Lord President of the Privy Council by the Central Midwives Board:

CENTRAL MIDWIVES BOARD.
Caxton House,
Westminster,
London, S W.
December 23rd, 1907.

Sir,—I am directed to advert to your letter of the 25th November, and to submit, for the information of the Lord President, certain facts and figures in relation to the training of midwives in Poor-law Institutions.

The public utterances of those who have advocated the transference of the responsibility for the training of midwives in Workhouses, or Workhouse Infirmaries, from the Central Midwives Board to the Local Government Board appear to indicate an imperfect knowledge of the facts in connexion with the action of the Board in dealing with applications for approval from Poor-law Institutions, and considerable misapprehension as to its causes and results.

A conspicuous instance of this occurred at the very meeting of the Association of Poor-law Unions at which the resolution referred to in your letter of the 25th ult. was passed. Miss E. S. Kerrison, one of the Guardians of West Ham, stated that "They had excellent wards, and many applications for training could be entertained if they were allowed to do so." "They had the wards and the women, but not the authority." This statement passed unchallenged at the meeting, and no doubt had its influence on the passing of the resolution. The real fact was, as pointed out by the Medical Officer of the Union, in a letter to the *Poor-law Officers' Journal* of December 7th, that the West Ham Workhouse had been recognized by the Board as a Training School for more than two years.

An analysis of the list of approved Training Schools as it stands at present, differentiating between Poor-law and Non-Poor-law Institutions, shows the following result:

	Poor Law.	Non-Poor Law.
London	6	12
England (except London) ...	13	21
Wales	1	1
Total	20	34

In addition to these, the Medical Officers of the following Poor-law Institutions have been recognized as teachers of Midwifery, thus enabling the training of midwives to be carried on under precisely the same conditions as if the Institution itself had been approved as a Training School:

Blackburn.	Portsmouth.
Blandford.	Prescot.
Brentford.	Preston.
Burton-on-Trent.	Reading.
Christchurch.	Rotherham.
Epsom.	Southampton.
Halifax.	Swansea.
Hastings.	Walsall.
Kingston-on-Thames.	Wolverhampton.
Llanelly.	Woodstock.
Merthyr Tydfil.	Worcester.
Newbury.	

During the year 1907, the 20 approved Poor-law Institutions and the 23 recognized Poor-law teachers have sent up 139 candidates to the Board's Examinations. The 34 Non-Poor-law Institutions and the 64 teachers have sent up 1,626.

A scrutiny of the list of candidates shows that of the Poor-law Institutions 1, and of the Poor-law teachers 7, have never sent up a single candidate for Examination. In these cases the Board concludes that either the material for training midwives does not exist, or that the facilities already accorded by the Board have not been fully utilized.

Since January 1st, 1907, fifteen Poor-law Institutions have applied to the Board to be approved as Training Schools. Of these applications three have been granted, ten refused, and consideration of the other two is still pending.

A list of the applications refused, with the number of deliveries per annum in each Institution, is as follows:

Name of Institution.	Deliveries per Annum.
Ashton-under-Lyne Union Hospital	23
Auckland Union Infirmary	[illegible]
Dewsbury Union Workhouse Infirmary	20
Gateshead Union Hospital	34
Kingston Union Infirmary	63*
Lincoln Workhouse	18
North Bierley Union Infirmary (Bradford)	16
Sculcoates Workhouse Infirmary (Hull)	37
Stepping Hill Poor-law Hospital (Stockport)	39
Wycombe Union Infirmary	10
	268

* Medical Officer recognized as Teacher.

It appears to the Board to be undesirable to accord the name of Training School to an Institution which cannot within the rules train more than two pupils per annum.

In such cases where there is evidence of an effective possibility of adequate training, the policy of the Board has been to recognize the Medical Officer as teacher, a course which in no way limits the opportunity of the guardians for the purpose of training.

I am to add, that while the Board is deeply conscious of the necessity of according due facilities for the training of midwives where adequate guarantee exists for compliance with the Rules, it is very doubtful whether Poor-law Institutions are authorized to undertake the training of any pupils other than their own probationers.

If the Board had granted all the applications for approval as Training Schools made during the current year by Poor-law Institutions, the above list shows that the maximum addition to the number of candidates at the Examinations would have been thirteen, trained under conditions inferior to the standard which the Board has endeavoured to maintain.

I am further to submit that, in view of these facts, there is no ground for the suggestion that the policy of the Board has operated to limit the effective employment of methods and material at present available for the training of midwives.

In conclusion I am to state that, in the opinion of the Board, a division of authority such as is contemplated by the resolution of the Association of Poor-law Institutions in England and Wales would be prejudicial alike to the due training of midwives and to the public interest.

I am, sir,
Your obedient servant,
G. W. DUNCAN,
Secretary.

To the Clerk of the Council,
Privy Council Office,
Whitehall, S.W.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING THE FOURTH QUARTER OF 1907.

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London based upon the Registrar-General's returns for the fourth, or autumn, quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the several boroughs, and are obtained by distributing the deaths occurring in institutions among the boroughs in which the deceased persons had previously resided. The 28,933 births registered in London during the three months under notice were equal to an annual rate of 24.4 per 1,000 of the population, estimated at 4,758,218 persons in the middle of 1907; in the corresponding quarters of the three preceding years the rates were 27.2, 26.1, and 25.5 per 1,000 respectively, the average rate for the fourth quarter of the ten years 1897-1906 being 27.6 per 1,000. The lowest birth-rates last quarter were 10.9 in the City of London, 12.9 in Hampstead, 15.4 in the City of Westminster, 17.4 in Chelsea, 17.8 in Kensington, and 18.6 in Stoke Newington; the highest rates were 30.1 in Poplar, 30.7 in Shoreditch, 31.1 in Stepney, 31.7 in Bermondsey, and 33.6 in Finsbury.

The 16,996 deaths of London residents registered last quarter were equal to an annual rate of 14.3 per 1,000, against 16.4, 16.2, and 15.4 in the corresponding period of the three preceding years; in the fourth quarters of the ten preceding years the rate averaged 17.3 per 1,000. The death-rates last quarter ranged from 8.2 in Hampstead, 11.5 in Stoke Newington, 11.8 in Lewisham, and 12.3 in Wandsworth, in Greenwich and in Woolwich, to 17.3 in Southwark, 17.4 in the City of London, 17.5 in Bethnal Green and in Poplar, 18.1 in Bermondsey, 18.4 in Finsbury, and 20.0 in Shoreditch.

During the quarter under notice 1,613 deaths were referred to the principal infectious diseases; of these 279 resulted from measles, 231 from scarlet fever, 240 from diphtheria, 213 from whooping-cough, 66 from enteric fever, 1 from ill-defined pyrexia, 583 from diarrhoea, and not any from small-pox or from typhus. These 1,613 deaths were equal to an annual rate of 1.36 per 1,000, which was 0.29 per 1,000 below the average rate in the corresponding periods of the ten years 1897-1906. The lowest death-rates last quarter from these principal infectious diseases were 0.21 in Hampstead, 0.68 in Lewisham, 0.72 in the City of Westminster, 0.82 in Kensington, 0.92 in Camberwell, 0.96 in Stoke Newington, 0.97 in Lambeth, and 0.98 in Wandsworth; while the highest rates were 1.76 in Bethnal Green, 1.78 in Finsbury, 2.18 in the City of London, 2.56 in Shoreditch, 2.57 in Stepney, and 2.71 in Poplar. Measles showed the greatest proportional mortality in Hammersmith, Chelsea, Holborn, Shoreditch, and Poplar; scarlet fever in Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey; diphtheria in Fulham, Hackney, the City of London, Stepney, and Poplar; whooping-cough in Fulham, Chelsea, the City of London, Stepney, Poplar, and Woolwich; "fever" in Chelsea, Stoke Newington, Hackney, the City of London, Bethnal Green, and Poplar; and diarrhoea in Finsbury, Shoreditch, Stepney, Poplar, Southwark, and Bermondsey.

During the last three months of 1907 the deaths from phthisis in London numbered 1,592, being equal to an annual rate of 1.34 per 1,000, against 1.79, 1.66, and 1.59 in the fourth quarters of the ten preceding years. The mortality from this disease last quarter was proportionally lowest in Hampstead, Poplar, Battersea, Wandsworth, Greenwich, and Lewisham; and highest in Holborn, Finsbury, the City of London, Bethnal Green, Southwark, and Bermondsey.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 131 per 1,000, against 128, 130, and 122 in the corresponding quarters of the three preceding years; in the fourth quarters of the ten years 1897-1906 the rate averaged 143 per 1,000. The lowest rates of infant mortality last quarter were recorded in the City of Westminster, St. Marylebone, Hampstead, Holborn, Lambeth, and Wandsworth, and the highest rates in Hammersmith, Islington, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Battersea.

HEALTH OF ENGLISH TOWNS

IN seventy-six of the largest English towns, including London, 9,139 births and 6,227 deaths were registered during the week ending Saturday last, January 18th. The annual rate of mortality in these towns, which had been 14.7, 16.9, and 19.3 per 1,000 in the three preceding weeks, further rose to 20.0 per 1,000 last week. The rates in the several towns ranged from 9.1 in East Ham, 10.7 in Hornsey and in Walthamstow, 11.6 in Tottenham, and 11.7 in Barrow-in-Furness, to 27.6 in Hanley, 28.1 in Brighton, 29.3 in Oldham, 30.7 in Warrington, 32.2 in Liverpool, and 33.6 in Bootle. In London the rate of mortality was 19.8 per 1,000, against a mean rate of 20.1 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 3.8 in Reading and in Wallasey, 3.9 in Salford, 4.1 in South Shields, 5.4 in Merthyr Tydfil, 5.9 in Warrington, and 6.6 in Tynemouth. Measles caused a death-rate of 2.1 in Swansea, 2.3 in Willesden and in Rhondda, 3.0 in Wallasey, and 6.6 in Tynemouth; scarlet fever of 1.0 in Middlesbrough; diphtheria of 1.5 in Salford; whooping-cough of 1.9 in Reading and in Aston Manor, 2.7 in South Shields, 3.4 in Merthyr Tydfil, and 3.7 in Warrington; and diarrhoea of 1.5 in West Bromwich and 2.0 in Stockton-on-Tees. The mortality from "fever" showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,999, 4,684, and 4,481 at the end of the three preceding weeks

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1907.

BOROUGHS.	Estimated Population in the Middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhoea.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
COUNTY OF LONDON	4,758,218	28,938	16,996	24.4	14.3	1.36	1,613	—	279	231	240	213	—	66	1	583	1,592	131
Paddington	149,909	714	500	19.1	13.4	1.28	48	—	15	1	6	6	—	2	—	20	43	129
Kensington	181,842	806	588	17.8	13.0	0.82	37	—	8	3	10	3	—	—	—	16	47	123
Hammersmith	122,337	684	420	22.4	13.8	1.35	41	—	19	6	4	2	—	2	—	8	39	146
Fulham	166,749	1,059	523	25.5	12.6	1.61	67	—	8	6	12	12	—	3	—	27	46	129
Chelsea	74,857	324	267	17.4	14.3	1.55	29	—	9	2	1	6	—	2	—	9	24	139
City of Westminster	172,219	660	534	15.4	12.4	0.72	31	—	6	3	2	1	—	3	—	16	55	112
St. Marylebone	127,718	929	449	29.2	14.1	1.04	33	—	8	6	4	8	—	—	—	7	36	72
Hampstead	91,137	292	187	12.9	8.2	0.21	5	—	1	1	1	—	—	—	—	2	13	68
St. Pancras	236,753	1,333	868	22.6	14.7	1.21	71	—	16	8	14	8	—	3	—	23	41	125
Islington	347,017	2,002	1,276	23.1	14.7	1.27	110	—	27	6	12	5	—	5	1	43	133	145
Stoke Newington	53,613	248	154	18.6	11.5	0.96	13	—	2	3	3	1	—	2	—	2	16	125
Hackney	232,993	1,319	762	22.7	13.1	1.53	89	—	10	16	25	2	—	7	—	30	60	124
Holborn	65,134	399	215	29.0	15.6	1.09	15	—	6	—	1	2	—	1	—	5	29	90
Finsbury	96,732	811	444	33.6	18.4	1.78	43	—	10	8	4	3	—	—	—	18	57	127
City of London	20,310	55	83	10.9	17.4	2.18	11	—	—	1	2	4	—	1	—	1	12	127
Shoreditch	115,662	886	577	30.7	20.0	2.56	74	—	28	8	4	3	—	3	—	28	51	137
Bethnal Green	130,831	953	570	29.2	17.5	1.76	58	—	7	13	5	6	—	6	—	21	65	173
Stepney	308,923	2,394	1,274	31.1	16.5	2.57	198	—	31	43	36	31	—	4	—	66	106	145
Poplar	171,086	1,286	748	30.1	17.5	2.71	116	—	20	26	13	17	—	7	—	33	41	155
Southwark	209,781	1,363	905	26.8	17.3	1.51	79	—	10	10	12	8	—	4	—	35	106	166
Bermondsey	128,263	1,015	579	31.7	18.1	1.50	48	—	4	10	8	3	—	1	—	22	62	136
Lambeth	318,638	2,092	1,136	26.3	14.3	0.97	77	—	8	17	10	12	—	—	—	30	122	111
Battersea	181,736	1,068	611	23.6	13.5	1.36	62	—	16	3	11	12	—	—	—	20	64	151
Wandsworth	281,419	1,654	866	23.6	12.3	0.98	69	—	6	9	8	15	—	4	—	27	69	106
Camberwell	277,059	1,598	844	23.1	12.9	0.92	63	—	2	10	11	8	—	4	—	23	90	130
Deptford	116,510	784	387	27.0	13.3	1.60	28	—	—	3	2	8	—	3	—	14	36	114
Greenwich	107,222	604	328	22.6	12.3	1.11	36	—	2	2	5	5	—	2	—	14	25	116
Lewisham	152,532	823	447	21.7	11.8	0.68	26	—	2	2	3	8	—	—	—	11	37	116
Woolwich	129,336	790	398	24.5	12.3	1.28	41	—	—	5	4	15	—	1	—	13	37	152

had further declined to 4,325 at the end of last week: 469 new cases were admitted during the week, against 555, 440, and 469 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 18th, 924 births and 857 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.2, 20.6, and 24.3 per 1,000 in the three preceding weeks, was again 24.3 per 1,000 last week, and was 4.3 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 16.1 in Aberdeen and 17.3 in Paisley to 28.3 in Leith and 29.3 in Glasgow. The death-rate from the principal infectious diseases averaged 4.5 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 482 deaths registered in Glasgow included 73 which were referred to measles, 3 to scarlet fever, 17 to whooping-cough, 2 to enteric fever, 8 to cerebro-spinal meningitis, and 8 to diarrhœa. Two fatal cases of measles, 2 of scarlet fever, and 4 of whooping-cough were recorded in Edinburgh; 6 of measles, 2 of diphtheria, 2 of whooping-cough, and 3 of diarrhœa in Dundee; 2 of measles in Aberdeen and in Paisley; 5 of whooping-cough in Leith; and 7 of measles in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 18th, 568 births and 521 deaths were registered in six of the principal Irish towns, as against 480 births and 476 deaths in the preceding period. The annual death-rate in these towns, which had been 17.9, 22.6, and 23.9 per 1,000 in the three preceding weeks, rose to 24.9 per 1,000 in the week under notice, this figure being 4.9 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 13.4 in Londonderry and 19.6 in Waterford to 31.2 in Dublin and 35.9 in Limerick. The zymotic death-rate in the same six Irish towns averaged 2.1 per 1,000, or 0.5 per 1,000 lower than during the preceding period, the highest figure—6.1—being recorded in Londonderry, while Limerick and Waterford registered no deaths under this heading at all. The principal causes of death in this class of disease were measles and whooping-cough.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Surgeon. Honorarium at the rate of £20 per annum.

BIRMINGHAM CITY.—Lady Medical Officer. Salary, £200 per annum.

BLACKBURN COUNTY BOROUGH.—Assistant to the Medical Officer of Health. Salary, £150 per annum.

BOLINGBROKE HOSPITAL, Wandsworth Common.—Surgeon.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Second House-Surgeon. Salary, £60 per annum.

BRISTOL: UNIVERSITY COLLEGE.—Demonstrator of Physiology.

BURY AND DISTRICT JOINT HOSPITAL BOARD.—Assistant Medical Officer. Salary at the rate of £50 per annum.

CAMBRIDGESHIRE, etc., ASYLUM, Fulbourn.—Second Assistant Medical Officer (male). Salary, £120 per annum, increasing to £150.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Two Physicians for in-patients.

CROYDON BOROUGH.—Female Assistant to the Medical Officer of Health. Salary, £250 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer. Salary at the rate of £80 per annum.

HULL: ROYAL INFIRMARY.—House-Physician in Charge. Salary, £105 per annum.

LEEDS TUBERCULOSIS ASSOCIATION.—Resident Medical Officer for the Sanatorium at Gateforth. Salary at the rate of £100 per annum.

LURGAN UNION.—Resident Medical Officer for the Workhouse and Fever Hospital. Salary, £80 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead, N.W.—Junior Resident Medical Officer. Honorarium, £50 per annum.

MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Junior Assistant Medical Officer. Salary, £100 per annum, increasing to £150.

NORTHAMPTON COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician.

ST. PANCRAS AND NORTHERN DISPENSARY, Euston Road, N.W.—Honorary Physician.

SALFORD FEVER HOSPITAL.—Assistant Medical Officer at Ladywell Sanatorium. Salary, £150 per annum.

SAMARITAN FREE HOSPITAL, Marylebone Road, N.W.—Honorary Medical and Surgical Registrar.

SEAMEN'S HOSPITAL SOCIETY.—Surgeon at the Branch Hospital, Royal Victoria and Albert Docks, E.

SOMERSET COUNTY COUNCIL, Weston-super-Mare.—Chief Medical Inspector of Schools. Salary, £500 per annum.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SUDAN UNITED MISSION.—Medical Missionaries to Northern Nigeria.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Surgeon.

APPOINTMENTS.

BELILIOS, D. A., M.R.C.S., L.R.C.P., D.P.H., Medical Officer of Health, Merton Urban District.

BROWNE, C. R., M.D.Dub., Certifying Factory Surgeon for the Falmouth District, co. Cornwall.

GIRVAN, Hugh, M.D.Glas., Certifying Factory Surgeon for the Maybole District, co. Ayr.

HARKER, T. H., M.D.Lond., Certifying Factory Surgeon for the Harwich District, co. Essex.

HARRISON, Jas. McKean, M.B., B.Ch.R.U.I., Medical Officer of Health for the Ledbury Urban District.

MANIFOLD, J. A., M.B., Ch.B., House-Surgeon to Edinburgh Royal Maternity and Simpson Memorial Hospital.

MILLIGAN, H. P., M.D., House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

SHIRWELL, Edgar W., M.R.C.S., L.R.C.P., Resident Medical Officer of the Royal Albert Hospital, Devonport.

STOKES, Kenneth H., M.R.C.S., L.R.C.P., House Surgeon, North-Eastern Hospital for Children, Hackney Road.

WARD, J. S., L.S.A., Resident Assistant Medical Officer, Sheffield Union Hospital.

WRIGHT, William Henry, M.D.Durh., Barrister-at-Law, L.R.C.P., M.R.C.S.Eng., L.S.A.Lond., reappointed M.O.H., Urban District Council, Alvaston, Derby.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—The following appointments have been made:

Clinical Assistants: C. M. Anderson, M.D.Edin., Major Hulbert, I.M.S., M.A., M.B., B.A.Cantab.; W. F. Manners, B.A.Camb., M.R.C.S.Eng.; Frederick Stuart, M.B., B.S.Durh., M.R.C.S.Lond.; W. A. Sugden, L.S.A.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

JOHNS.—On January 11th, at 30, Leeds Road, Harrogate, the wife of F. A. Johns, M.B.Lond., M.R.C.S., L.R.C.P., of a daughter.

DEATHS.

GALE.—On Sunday, January 19th, John Dakeyne Gale, of 20, St. George's Road, S.W., Senior Partner in the firm of Gale and Company, 15, Bouverie Street, Fleet Street, E.C.

PIRIE.—At 20, Bon Accord Square, Aberdeen, on January 16th, suddenly, Margaret, beloved wife of W. R. Pirie, M.B.

SIMPSON.—On January 16th, suddenly, at Sandy Bank, Sidmouth, James Tracy Simpson, M.D. (Major R.A.M.C. Militia), late of Farnborough, Hants, in his 47th year.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers:—Mr. C. B. Lockwood: The Use of Chemicals in Aseptic Surgery. Dr. Samuel West: The Nervous Complications of Acute Pneumonia.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION, 20, Hanover Square, W., 8.0 p.m.—Demonstration of Recent Additions to the Museum by the Curator. Papers:—Mr. W. W. James: A Case of Extensive Necrosis of the Mandible. Mr. J. F. Colyer: Treatment of Children from a Dental Aspect.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION, 20, Hanover Square, W., 5.0 p.m.—Dr. Campbell Thomson: Demonstration of Use of Kinematograph in Illustration of Disease. Dr. A. F. Hertz: Pathology and Treatment of Constipation, illustrated by lantern slides.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION, Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m. Papers:—Professor W. E. Dixon: Arterio-sclerosis and its Causation. Professor A. R. Cushny: Nutmeg Poisoning.

WEDNESDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 5.30 p.m.—Business: Minutes; Nomination and Election of Candidates: adjourned discussion on Blood Pressure in Spa Practice.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

NEUROLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Discussion on Tics. Cases will be in attendance at 8 p.m.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—8 p.m., Card Cases. 8.30 p.m., Papers:—Mr. S. Snell: (*a*) Carcinoma of Orbit: (*b*) Coloboma of Iris in each Eye, occurring in five generations. Mr. S. Mayou: Microphthalmia, Resembling Glioma, with Lenticonus and Hypertrophy of the Ciliary Body. Mr. L. Paton: Optic Neuritis in Cerebral Tumours. Dr. A. J. G. Barker: A Case of Suppurative Tenonitis.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Treatment of Infectious Skin Diseases; 4 p.m., Medical Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Friday, 3.30 p.m., Cancer of the Womb.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Urticaria, Urticaria Pigmentosa, Lichen Urticatus, Prurigo; Friday, 4 p.m., The Erythemata.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 4.0 p.m., Mouth Breathing. Tuesday, 3.15 p.m., On Movable Kidney. Friday, 2.15 p.m., Diabetes.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follow: Monday, The Differential Diagnosis between Injuries of the Spinal Cord and those of Peripheral Nerves. Tuesday, Mucous Colitis. Wednesday, Some Intestinal Intoxications. Thursday, The Bogey of Albuminuria.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Out-patient Department, Fitzroy Square, W.—Thursday, 5 p.m. Lecture Demonstration: Cases of Aneurysm of the Thoracic Aorta.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cranial Nerve Paralysis; Friday, 3.30 p.m., Myopathies.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4.30 p.m., Selected Medical Cases. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Cases of Aneurysm of the Aorta (at the Mount Vernon Hospital, Out patient Department, 7, Fitzroy Square, W.); Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations and *X* Rays. Monday and Thursday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of Skin. Wednesday, 10 a.m., Diseases of Children. Wednesday and Saturday, 2 p.m., Diseases of Eye; 2.30 p.m., Diseases of Women. Lectures: At 12 noon, Monday, Pathological Demonstration; Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday, Clinical; Tuesday, The Relation of Insanity to Allied Neuroses; Wednesday, Practical Medicine; Thursday, Clinical; Friday, Anaesthetics.

BOOKS, ETC., RECEIVED.

London: J. and A. Churchill. 1907:

Guy's Hospital Reports. Edited by F. J. Steward, M.S., and H. French, M.D. Vol. lxi, being vol. xlvi of third series.

Year-book of Pharmacy; with the Transactions of the British Pharmaceutical Conference at Forty-fourth Annual Meeting at Manchester, July, 1907. Year-book edited by J. O. Braithwaite. Transactions by E. S. Peck, M.A., and E. White, B.Sc., F.I.C.

Bibliography of Anthropology and Folk-lore, 1906 containing works published within the British Empire. Compiled by N. W. Thomas, M.A., F.R.A.I. First annual issue. London: Royal Anthropological Institute; and D. Nutt. 1907. 2s.

The Medical Cyclopaedia. By Dr. M. A. Hakim Khan, M.B. Patiala: Rajinder Press. 1907. Rs.11 8.

The Scourge of Plague. By M. M. Bos. Lucknow: Anglo-Oriental Press. 1907. 2 annas.

Die zytologische Untersuchungsmethode, ihre Entwicklung und ihre klinische Verwertung an den Ergüssen seröser Höhlen. Von Dr. H. Königer. Jena: G. Fischer. 1908. M.3.

The Edinburgh Medical Journal. Edited by A. Thomson, M.D., F.R.C.S.Ed., and H. Littlejohn, M.B., F.R.C.S.Ed. New Series. Vol. xxii.

London: J. and A. Churchill. 1908:

The Theory and Practice of Hygiene (Notter and Firth). Revised by R. H. Firth. Third edition. 21s.

A Manual of Prescribing. By C. R. Marshall, M.D. 5s.

Sweet Peas and their Cultivation for Home and Exhibition. By C. H. Curtis, F.R.H.S. London: W. H. and L. Collingridge. 1s.

Garden Life Pictorial Guide to Gardening. By the Editor of *Garden Life*. London: The Cable Printing and Publishing Company, Limited. 1s.

A Woman's War: A Novel. By W. Deeping. London and New York: Harper Bros. 1907. 6s.

London: Rebman, Limited. 1908:

Guide to Diagnosis in Diseases of the Throat, Nose, and Ear. By D. McKenzie, M.D., C.M. 5s.

A Manual of Orthopedic Surgery. By A. Thorndike, M.D. 1907. 10s 6d.

Hernia: Its Etiology, Symptoms, and Treatment. By W. McA. Eccles, M.S., F.R.C.S. Third edition. London: Baillière, Tindall, and Cox. 1908. 7s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
	JANUARY.
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, General Meeting, Great Eastern Hotel, Liverpool Street, 4 p.m.; Executive Committee, 3.45 p.m. NORTHAMPTONSHIRE DIVISION, Special Meeting, Board Room, General Hospital, Northampton, 2.30 p.m.; Luncheon, Frank in's Restaurant, Guildhall Road, 1.30 p.m.
29 WEDNESDAY	LONDON: Premises Subcommittee, 11.30 a.m. CENTRAL COUNCIL, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. BATH AND BRISTOL BRANCH, Bristol. SOUTH-WESTERN BRANCH, Meeting of Branch Council, Imperial Hotel, Barnstaple, 12.30 p.m.
30 THURSDAY...	
31 FRIDAY ...	
	FEBRUARY.
1 SATURDAY ...	
2 Sunday ...	
3 MONDAY ...	
4 TUESDAY ...	
5 WEDNESDAY	

Date.	Meetings to be Held.
	FEBRUARY *(Continued).*
6 THURSDAY...	TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Athenaeum, Muswell Hill (near the station), 4.30 p.m.
7 FRIDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
8 SATURDAY...	
9 Sunday ...	
10 MONDAY ...	
11 TUESDAY ...	
12 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Meeting of Branch Council, Medical Institution, Liverpool, 4.30 p.m.
13 THURSDAY...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Business Meeting. LONDON: Metropolitan Counties Branch Council, 5 p.m.
14 FRIDAY ...	
15 SATURDAY ...	
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	
19 WEDNESDAY	SOUTH WALES AND MONMOUTHSHIRE BRANCH, Cardiff.
20 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Metropolitan Hospital, 4 p.m.
21 FRIDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 1ST, 1908.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

HONG KONG AND CHINA BRANCH.

THE annual meeting was held at the Board Room of the Government Sanitary Department on Thursday, November 28th, 1907, at 9 p.m. In the absence of the President, Dr. CLARKE took the chair. There was a fair attendance of members.

Confirmation of Minutes.—The minutes of the meeting of April 22nd, 1907, were read and confirmed.

The Referendum.—The VICE PRESIDENT (Dr. Clarke) then read the minutes of the Representative Meeting contained in the Council's Referendum *re* the Royal Charter. Dr. STEDMAN spoke in favour of the meeting voting for the Council, as he considered they were more in touch with the working of the Association. Each minute was voted on separately, and all the votes recorded were in favour of the views of the Council of the Association.

Election of Officers.—The meeting then proceeded to elect the following officers for the ensuing session, 1907-8:—*President*, Dr. G. M. Harston (Hong Kong); *Vice-President*, Dr. W. V. M. Koch (Hong Kong); *Honorary Secretary and Treasurer*, Dr. J. Herbert Sanders (Matilda Hospital, Hong Kong); *Council*, Hon. Dr. J. M. Atkinson, Dr. G. P. Jordan, Dr. O. Stedman, Staff Surgeon Gilmore, R.N., Captain Rankin, R.A.M.C.

Vote of Thanks.—The meeting closed with a hearty vote of thanks to Dr. Sanders.

Dinner.—A Branch dinner was held on Thursday, January 9th.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.

A GENERAL meeting of the Tottenham Division was held at Finsbury Park on Friday, January 10th, at 9.15 p.m., Dr. FULLER presiding.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Honorary Secretary's Report.—The report of the Honorary Secretary was received and the accounts for the year 1907 passed.

Divisional Rules.—Discussion on the Divisional Rules, postponed from a previous meeting, was resumed, and the Rules confirmed, with the following exceptions:

Rule 8. The last sentence in this rule to be deleted.

Rule 9. The last sentence to be deleted.

Rule 11. Ordinary meetings to be held at least four times a year; seven days' clear notice to be given.

Rule 12. Requisition to be signed by not less than 6 members.

The "draft model rules of a Division to regulate the procedure thereof in ethical matters" were adopted, with the following exception: omit all words following the word *case*.

Education Act, 1907.—Dr. BRACKENBURY, Chairman of the Hornsey Education Committee, in opening a discussion on the Education (Administrative Provisions) Act, said that two acts of Parliament were passed last year, both of which were admirable in intention, but of which the wording might give rise to the most objectionable results: one was the Notification of Births Act, the other the Act under consideration. With regard to the latter, one clause particularly concerned the medical profession, namely, that making it the duty of local authorities to provide for the medical inspection of school children and giving power to attend to their health. It was astounding that after twelve months available for discussion this clause should have been approved by the Commons and the Lords without dissent from any party, for the results might prove absolutely revolutionary. What was to prevent a local authority under the Act from picking out a number of tuberculous children and sending them to Madeira, or appointing a medical officer to treat all school children at their homes, and paying for this out of the Education Bill? As usual the medical profession cried out too late; even the British Medical Association did not notice the danger, but the Act was passed, and they had to consider the situation as it was now. However, that part of the clause dealing with *treatment* of school children was not obligatory and local authorities might or might not act upon it. The medical profession might still try to prevent treatment at public expense being given by town councils when medical practitioners and charitable agencies already supplied every need; but in many places the pressure, perfectly genuine in character, would be too great to be resisted. Medical inspection would take place, the parents would be notified of any defects found. Some would get them attended to, others would not; it would be reported to the educational authorities again and again that there was a greater or less proportion of children not attended to. The parents would pay no attention, and in the end the town council would say: "Let us exercise our powers and undertake treatment." Perhaps the first thing done would be to provide spectacles, and, if this, why not operations for adenoids—why not anything? The education authority had now to undertake the medical inspection of school children, and to this the profession could have no objection, but would welcome it as a step in the right direction, and see that it was efficiently done. Every child should be inspected three times in the course of a school career of about nine years—say at the ages of 5, 9, and 13. The Educational Board said that parents should be invited to be present at the medical inspection, which must take place during school hours. There a legal point arose, for a parent might say, "You

shall not inspect my child; if you do I will prosecute you for assault," and the Act gave no power in such a case for the educational authority to insist on inspection. The supreme officer having charge of this work should be the medical officer of health. Here the profession and the Board of Education should find themselves in agreement. As it is, the medical officer of health had to see that school premises were sanitary and had to deal with infectious diseases, and it would be inexpedient to set up a duplicate authority. It did not follow that medical inspection should be done by the medical officer of health himself, but he must be the responsible officer. Should the duty be performed by the medical officer of health with, if necessary, professional assistants at his disposal for this and every other branch of his public health work, or by a special officer appointed to deal with medical inspection work only? It was largely a question of personality. The more intimate the connexion between the school work and the public health work the better. In some places the medical officer of health might be a person whom it was impossible to entrust with such duties, but if he had the necessary personal qualifications this difficulty disappeared. Another method would be to pick out certain schools, and entrust their inspection to certain medical men practising in the district. There was an objection to this plan in large urban districts which had much less force in scattered rural localities. In the former places, Dr. Jones, as school officer, could examine and even visit at their homes the patients of Dr. Smith, and it was objectionable that an urban district council should have the power of saying that it preferred Dr. A. or B. to Dr. Y. or Z, all medical practitioners of good standing. Therefore this course was surely ruled out in large towns. He objected strongly, in this respect, to the resolutions passed by some of the Divisions, even in large places like Liverpool. With regard to visitation at the homes of the children by the school medical officer as such, or even by a school nurse, this is obviously *treatment*, even if there is nothing more than advice given, and it at once raises all the difficulties and objections already alluded to in connexion with treatment in general. But pains should be taken to make more clear the position of the British Medical Association and the profession in this matter. The Board of Education was quite right in desiring a close co-operation between the parent and the teacher—the school influence and the home influence—in promoting the child's wellbeing. If, as a result of medical inspection in school, defects were found which were obviously the results of bad or insanitary conditions at home, they must, if possible, be dealt with. The medical inspection would result in the attention of the medical officer of health being drawn to such homes, and he and his staff had power under the Public Health Acts to enter such homes; and so, in this and other ways, they could exert a legitimate influence, but it ought to be made clear that a school medical officer should have no power to go to a house to tender advice or other treatment, and possibly to interfere with the proper functions of the family medical adviser. The discussion was continued by Drs. Fuller, Grant, Bryce, Wilson, Fogarty, and Hutt, and the following resolutions, proposed by Dr. Grant and seconded by Dr. Wilson, passed unanimously:

1. That this meeting is of opinion that medical inspectors should not carry on private practice while holding the appointment of school medical officer.
2. That the local education authorities should make no arrangements for the specific medical treatment of the individual.

Vote of Thanks.—A vote of thanks was passed to Dr. Brackenbury for his explanation of the Act.

QUEENSLAND BRANCH.

The annual meeting of the Queensland Branch was held in Brisbane on Friday, December 6th, 1907.

Presidential Address.—Dr. Love, President of the Branch, delivered his address.

Election of Officers.—The following officers were elected for 1908: *President*, Dr. J. Lockhart Gibson; *Vice-Presidents*, Drs. G. L'Estrange and Love; *Treasurer*, Dr. Carvosso; *Auditors*, Drs. Eleanor Bourne and Edith Ure; *Council*, Drs. J. Espie Dods, J. Cameron, Kerr Scott, and Halford; *Honorary Secretary*, Dr. A. B. Brockway.

ULSTER BRANCH.

The winter meeting of this Branch was held in the Medical Institute, Belfast, on Thursday, January 23rd, at 11.30, the President, Dr. Warnock (Donegal), in the chair. About 130 members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Report of Council.—The report of Council was read by the Honorary Secretary, Dr. Cecil Shaw. It stated that the following new members had been elected: Dr. Robert Allison (Coleraine), Dr. Howard English (Lurgan), Captain Howley, R.A.M.C. (Belfast), Dr. William Hill (Belfast), Captain Hunt, R.A.M.C. (Belfast), Dr. Kirkhope (Belfast), Dr. W. J. Leighton (Belfast), Dr. T. J. Leonard (Mater Hospital, Belfast), Dr. John MacIlwaine (Belfast), Dr. John O'Dogherty (Belfast), Dr. Christopher Sheahan (Mater Hospital, Belfast).

Hospital Abuse.—The Council have arranged to hold a conjoint meeting with the Ulster Medical Society to consider the question of hospital abuse. Due notice will be given when the date is arranged. The spring meeting of the Branch will be held in Derry probably on Saturday, May 2nd.

Apology for Non-attendance.—An apology for absence from Dr. Thomas McLaughlin (Derry) was read.

YORKSHIRE BRANCH:

Bradford Division.

An ordinary general meeting of this Division was held at the Great Northern Victoria Hotel, Bradford, on Tuesday, January 14th, at 8.30 p.m. In the unavoidable absence of Dr. Campbell, Chairman, Dr. Berry (Keighley) presided, and twenty-eight other gentlemen were also present.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

Report and Financial Statement.—The report and financial statement of the Division to the Branch Council for the year ending December 31st, 1907, was adopted on the proposition of Dr. Robinson, seconded by Dr. A. E. Walker.

Notification of Births Act.—Dr. Metcalfe (Honorary Secretary) drew attention to the Notification of Births Act, 1907, which had been adopted by the Bradford City Council, in spite of the objections and protestations of the Division to the clauses affecting medical men which it contained. A letter card for notification purposes had been sent by the medical officer of health to the medical men in the city, actually asking for more detailed information than the Act required. Drs. Walker and Horrocks also took strong exception to the information required. Dr. Metcalfe then proposed that the medical officer of health should be asked to withdraw his letter-card and send out another one to the medical men to the following effect:

——— gives notice that a child was born at ——— on ———, and Dr. ——— is in attendance.

Dr. Metcalfe suggested that the medical man should simply hand this card to the father of the child, or to any other person present at the birth, with a request that he or she should fill it up and post it to the medical officer of health. When the name of a doctor was mentioned as being in attendance, the medical officer of health would understand that no inspectress or lady visitor was expected to visit the case. This method would remove all difficulty in places where the Act had actually been adopted by the local authorities. The medical officer of health would fulfil his duty by sending his letter-cards to the medical men, who would, however, take no part whatever in the notification themselves. This would relieve the doctors of a most unpleasant duty. On the proposition of Dr. Oliver, seconded by Dr. Veale, this suggestion was unanimously adopted. Dr. Evans (M.O.H.), who was present, accepted the suggestion made in the resolution, and promised to issue new letter-cards in place of the present ones.

North Bierley Union.—The report of the Executive Committee on the action taken in support of the public vaccinators of the North Bierley Union in their dispute with the guardians was submitted by the Honorary Secretary. This report showed that on an appeal to nearly eighty members of the medical profession in the Union area to support the thirteen public vaccinators in their conten-

tion for reasonable fees only two applicants had applied. One of these had afterwards withdrawn, so that only one man could be found in the whole district willing to undersell his fellow-practitioners. Wherever the guardians had advertised for applicants the Division had inserted advertisements asking medical men, before offering themselves for any appointment, to communicate with the Honorary Secretary of the Division. Dr. HORROCKS proposed, and Dr. MOFFAT (Keighley) seconded:

That the report be approved.

This was carried *nem. con.* Dr. ROBINSON, J.P., wished, on behalf of the public vaccinators, to heartily thank the Division for the energetic way in which it had acted on their behalf. They could not possibly have taken the firm stand they had done without the valuable Divisional help which they had received. Dr. W. WILLSON proposed and Dr. OLIVER seconded:

That in future all business meetings of the Division should be held at the Great Northern Victoria Hotel. It was easier to obtain a good attendance of men at the hotel than at the Eye and Ear Hospital.

This was carried *nem. con.*

Medical Inspection of School Children.—Dr. CROWLEY brought before the meeting the Memorandum on the Medical Inspection of School Children recently issued by the Board of Education. He referred to the far-reaching character of the memorandum, and of what vital importance its provisions were to all members of the medical profession. He pointed out that the work required to be done was far more than was generally supposed, and was by no means limited, even as regards inspection, to the periodic inspections upon which stress was more especially laid; in this connexion he referred to that part of the memorandum dealing with the question of what the annual report of the local education authority to the Board of Education should contain. He then referred to an examination of some 350 children he had made, based on the requirements of the memorandum, and gave it as his opinion that about ten children could be reasonably examined in an hour, or twenty-five in a school session of two and a half hours. He showed that in a city like Bradford of 200,000 to 300,000 inhabitants this would mean, approximately, the employment of two whole-time men or women doing nothing else morning and afternoon; even then no re-examinations would have been provided for, nor any of the work at present falling under the heading of school hygiene. He considered it impossible for whole-time men to be employed at no other work than this monotonous inspection, and hence in most places it would be necessary to employ part time general practitioners. In places where it was possible, where, that is, there was enough variety of work to warrant it, either in connexion with other work falling under the heading of school hygiene or in connexion with treatment of unsatisfactory conditions found, he was of opinion that, if for no other reason, full-time men would be employed on account of the cost of any other arrangement. He pointed out that the rate of pay suggested by the British Medical Association meant that the local education authority would be asked to pay £500 a year for four hours a day for five days in the week; this would be equivalent to paying a full-time assistant at least £650 a year, or very nearly double what would ordinarily be paid to such an assistant, who would be expected to be a junior man only. Moreover, the great convenience of full-time men over part time men from the point of view of the education authority would greatly influence them. He next pointed out how great was the stress laid in the memorandum on "treatment," showed how wasted was much of the inspection to-day, and how badly the inspection and treatment needed linking up. He expressed the opinion that the difficult questions raised in the relation of the education authority to private practitioners and existing institutions could only be satisfactorily dealt with as the principle was acknowledged of payment of the medical man for his work wherever and whenever done. He was of opinion that negotiations would have to be entered into between the local education authority and the governors of existing voluntary institutions, more particularly in regard to such institutions as eye and ear and children's hospitals where these existed. He thought that refraction work, at any rate, was probably better undertaken directly by the education authority.

Appointment of Committee.—Dr. HORROCKS proposed a cordial vote of thanks to Dr. Crowley for his interesting address. He thought the subject such an extensive one and of so much importance that a special committee should be appointed to discuss the whole question and report to the Division. Dr. VEALE seconded. The resolution was unanimously adopted. The following gentlemen were then nominated and approved of as members of the Committee: Drs. and Messrs. Campbell, Rabagliati, Bronner, Horrocks, Mossop, Mitchell, Oliver, Robinson, W. Willson, Stewart, and Metcalfe (Convener). The meeting then terminated.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The annual winter meeting will be held in the Royal Infirmary on Friday, February 21st. Members of the different Scottish Branches are cordially invited. The clinical meeting will take place at 4 o'clock. Dinner in the Royal British Hotel, Princes Street, at 6 30 p.m. (morning dress).—A. LOGAN TURNER, M.D., and FRANCIS D. BOYD, M.D., Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at 5 p.m. on Thursday, February 20th, at the Brooklands Hotel, Sale, when, in addition to the usual business, a paper will be read on puerperal fever by Dr. Knyvett Gordon, Resident Medical Superintendent of the Monsall Hospital, Manchester. Dinner will follow at 7 p.m. for those who give notice to the Honorary Secretary beforehand.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of the Branch Council will be held at the Medical Institution, Liverpool, on Wednesday, February 12th, at 4.30 p.m.—F. CHARLES LARKIN, 54, Rodney Street, Liverpool, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of this Division will be held on Tuesday, February 11th (not February 13th, as in programme). Chief agenda: (1) Hampstead Hospital Question: Report and discussion on Warning Notice. (2) Medical inspection of school children.—R. A. YELD, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—A meeting of the Division will be held on Thursday, February 6th, at 5 p.m., at the Town Hall, Kensington, W. Agenda: Minutes of the last meeting. Election of Chairman (Dr. A. J. Rice Oxley has been nominated by the Committee). Paper by Mr. G. L. Eastes on certain infections of the urinary tract, with special reference to tubercle, gonococcus, and *Bacillus coli communis*. The Town Hall is opposite High Street, Kensington, Station.—CHARLES BUTTAR, Honorary Secretary, Kensington Gardens Square, W.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Division will be held on Thursday, February 27th, at 4 p.m., in the Court Room at Guy's Hospital. A paper will be read by A. E. Boycott, M.D., upon the intestinal parasites of man; illustrated cases and pathological specimens will be exhibited by members of the staff of Guy's Hospital.—HERBERT FRENCH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—Notice of next meeting: A meeting will be held at the Great Northern Central Hospital, Holloway Road, N., at 4 o'clock on Tuesday, February 4th. Dr. W. Wynn Westcott, J.P., will preside. The Chairman will open a discussion on sudden deaths; Dr. Buckell will move a resolution; and the Memorandum from the Metropolitan Branch Council concerning the medical inspection of school children will be considered in detail.—W. GRIFFITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.—The next meeting of this Division will be held at the Athenaeum, Muswell Hill (near the station), on Thursday, February 6th (not the 7th, as previously announced) at 4.30 p.m. Agenda:—Dr. Robert Hutchison: On Chronic Diarrhoea and Its Treatment. Dr. Fuller will open a discussion on The General Practitioner.—H. F. STAUNTON, Honorary Secretary, 88, High Road, Wood Green, N.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—*Alteration of Date of Meeting*.—The date of meeting of this Branch, of which a preliminary notice has been sent to members, is altered to take place from February 13th to February 20th. Members will oblige by taking note of this alteration.—C. S. MORRISON, Honorary Secretary.

Vital Statistics.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

THE Annual Report of the Registrar-General on the vital statistics of England and Wales in 1906 has just been published. Provisional numbers of marriages, births, and deaths, with their distribution in counties and their proportion to population, were included in the Annual Summary published in May last. These numbers, however, were tabulated from the returns made by the local registrars, while in the volume now under notice the detailed statistics are compiled directly from the registers at the General Register Office, and are subject to a more elaborate analysis, especially as regards causes of death, than was possible in the earlier publication. A special feature of the present Report is the introduction, for the first time, of diagrams to illustrate the more important tables. Appended to the Report, also, is a valuable and interesting abstract of the legal preliminaries to marriage in the several parts of the British Empire.

MARRIAGE-RATE.

The number of marriages registered in England and Wales in 1906 was 270,038, equal to a rate of 15 6 persons married per 1,000 of the population, estimated at 34,547 016 persons in the middle of the year, or 0 2 per 1 000 below the average rate in the ten years 1896–1905. Calculated on a standard population excluding children and married persons, the marriage-rate during the past thirty years, although fluctuating, has shown a decided tendency to decline, the rate for 1906 being lower than that for 1876–1880 by 11 5 per cent.

BIRTH-RATE.

The births registered in England and Wales during the year under notice numbered 935 081, and were in the proportion of 27.1 per 1,000 of the total population During the past thirty years the birth-rate has decreased almost uninterruptedly. The birth-rate in 1898 was the lowest recorded up to that date; and in each succeeding year a further continuous decline has taken place. The ratio of births to 1,000 of the female population at ages 15-45 years has fallen by nearly 30 per cent. since the quinquennium 1876–1880, the decline in the rate of legitimate births being 25 per cent., while for illegitimate births the rate in 1906 was nearly 44 per cent. lower than the average annual rate in 1876–1880. The counties having the lowest legitimate birth-rates in the year under notice were Northamptonshire, Sussex, Cornwall, Devonshire, the West Riding of Yorkshire, and Kent; the highest rates were recorded in Northumberland, Glamorganshire, the North Riding of Yorkshire, Durham, Carmarthenshire, and Monmouthshire. The average annual rate of legitimate births to 1,000 married women aged 15–45 years in England and Wales for the three years 1900–02 was 235 5, being lower than the rate in every other European country except France.

DEATH-RATE.

The number of deaths registered in England and Wales during 1906 was 531 221, corresponding to a rate of 15.4 per 1,000 of the population; this rate is 0 2 per 1 000 higher than that in the previous year—which is the lowest on record—but is 1 4 per 1,000 below the average rate in the ten years 1896-1905. After correction for differences of sex and age constitution of their respective populations, the death-rates in counties ranged from 11 3 in Northamptonshire, 11.6 in Buckinghamshire and in Somersetshire, 11 8 in Oxfordshire, and 11 9 in Berkshire and in Herefordshire, to 16 8 in the North Riding of Yorkshire, 17.0 in the West Riding, 17 3 in Glamorganshire, 17 6 in Northumberland, 18.2 in Durham, and 19 4 in Lancashire. The proportion of deaths among children under 1 year of age to registered births was equal to 132 per 1,000, against an average rate of 147 in the ten preceding years. Among registration counties, the lowest rates of infant mortality in the quinquennium 1901–5 were 91 in Wiltshire, 92 in Herefordshire and in Dorsetshire. 95 in Somersetshire, 98 in Buckinghamshire, and 99 in Oxfordshire; the highest rates were 151 in Northumberland and in Staffordshire, 152 in the West Riding of Yorkshire and in Warwickshire, 153 in Nottinghamshire, 158 in Glamorganshire and in Durham, and 161 in Lancashire. The death-rate at all ages among males was 16.4 per 1,000, and among females 14.4 per 1,000, both of these rates being below the respective averages for the ten years 1896 1905. Compared with the rates in the quinquennium 1876 80, the male death-rate decreased by 18.6 per cent. and the female rate by 19 8 per cent., the greatest saving of life among both sexes being at ages from 5 to 35 years.

CAUSES OF DEATH.

Among the more important causes of death, cancer, diabetes, and diarrhœa accounted for a higher rate of mortality in 1906 than in the preceding decennium; while from tuberculosis, the common infectious diseases of childhood (except diarrhœa), enteric fever, premature birth, bronchitis, meningitis, and convulsions, the mortality was in each case below the decennial average.

The death rate from influenza was 183 per million of the population, against an average rate of 289 per million in the seventeen years ending 1906. Pneumonia was fatal in 1,210 persons per million living, the rate among males being 1 416 per million against 1,019 among females. The death-rate from phthisis was 1 356 per million among males and 957 per million among females, both of these rates being about 5 per cent. lower than the quinquennial averages; in rural counties the disparity between the male and female rates is much less marked than in the urban counties. The deaths of 1,341 males and of 940 females were directly ascribed to alcoholism, the mortality from this cause being considerably below the average for recent years. From cancer the mortality in the year under notice was the highest on record, the 31,668 deaths referred to this disease being 2,882 in excess of the corrected average for the previous ten years. Among males the cancer death-rate was 792 per million, and among females 1,032 per million. The organs most frequently affected by the disease are the stomach, liver, and intestines, which together account for more than half the cancer mortality in men; among women these organs contribute two fifths of the fatal cases, while a further two-fifths are due to affections of the generative and mammary organs.

The causes of death in 50,529 cases were too indefinitely returned to admit of their proper classification. In some of these indefinite cases inquiries were addressed to the certifying practitioners, and in the course of the year 4,103 replies to such inquiries were furnished. This system of inquiry enabled many deaths that would otherwise have remained in the indefinite class to be transferred to definite headings. For example, the tables include 603 deaths from malignant disease, 567 from tuberculous diseases, 138 from appendicitis, 111 from puerperal septic diseases, and 106 from gastric ulcer that were certified in some indefinite manner.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1907.

IN the accompanying table will be found summarized the vital statistics for seventy-six of the largest English towns, based upon the Registrar-General's weekly returns for the fourth quarter of 1907 The 101,729 births registered in these towns during the quarter under notice were equal to an annual rate of 25 5 per 1,000 of the population, estimated at 16,024,458 in the middle of last year; in the corresponding quarters of the three preceding years the rates had been 28 1, 26 6, and 26 5 per 1,000 respectively. In London the birth-rate last quarter was equal to 24.4 per 1 000, while among the seventy-five other large towns it averaged 25.9 per 1,000 and ranged from 15 2 in Bournemouth, 15 4 in Hastings, 15.5 in Hornsey, 16 2 in Halifax, 18.1 in Bradford and 19.1 in Brighton, to 31 7 in St. Helens 32 2 in Sunderland, 32.6 in Bootle 33 8 in Merthyr Tydfil, and 34.8 in Rhondda.

The 61,458 deaths registered in these towns during last quarter were equal to an annual rate of 15.4 per 1 000 against 17 5, 15 8, and 16.2 per 1,000 in the fourth quarters of the three preceding years The rate of mortality in London was 14 3 per 1,000; in the seventy-five other large towns it averaged 15.8, and ranged from 9 5 in Hornsey, 10 1 in East Ham and in Bournemouth, 10 6 in King's Norton, 11.1 in Leyton, 11 2 in Hastings, and 11 3 in Croydon and in Handsworth (Staff.) to 19.4 in Bootle and in Oldham, 19 8 in Stockton-on-Tees, 20 1 in Preston and in Rhondda, 20.7 in Liverpool and in Wigan, and 23.6 in Merthyr Tydfil.

The 61,458 deaths from all causes included 6,699 which were referred to the principal infectious diseases: of these, 1 077 resulted from measles, 583 from scarlet fever, 801 from diphtheria, 990 from whooping-cough, 341 from "fever" (principally enteric), and 2,407 from diarrhœa. These 6 699 deaths corresponded to an annual rate of 1.65 per 1,000, the death rates from the same diseases during the fourth quarters of the three preceding years being 1 57, 1 27, and 1.72 per 1,000 respectively. In London the rate of mortality last quarter from the principal infectious diseases was 1.26 per 1,000, while it averaged 1.81 in the seventy-five other large towns, and ranged from 0.34 in Hornsey, 0.35 in Bournemouth, 0.42 in King's Norton, 0.46 in Huddersfield, 0 48 in Wallasey, and 0.49 in West Hartlepool to 2.88 in Ipswich, 3.05 in Bootle, 3.15 in York, 3 26 in Barrow-in-Furness, 5.47 in Burton-on-Trent, 3 50 in Rhondda, and 4.70 in Merthyr Tydfil.

The 1 077 deaths from measles was equal to an annual rate of 0.27 per 1,000; in London the death-rate from this disease was 0.24 per 1,000,

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the Fourth Quarter of 1907.

Towns.	Estimated Population middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Infectious Diseases.										
76 Towns	16,024,458	101,729	61,458	25.5	15.4	1.68	6,699	—	1,077	583	801	990	331	2,917	154	0.8
75 Provincial Towns	11,266,240	72,791	44,462	25.9	15.8	1.81	5,086	—	798	352	561	777	264	2,334	163	1.1
London	4,758,218	28,938	16,996	24.4	14.3	1.36	1,613	—	279	231	240	213	67	583	131	0.1
Croydon	154,342	887	436	23.0	11.3	0.83	32	—	1	2	12	3	—	14	86	—
Willesden	149,192	942	452	25.3	12.2	1.62	60	—	24	12	7	—	1	16	124	0.7
Hornsey	89,816	348	212	15.5	9.5	0.34	8	—	1	1	3	—	1	2	83	—
Tottenham	122,793	858	398	28.3	13.0	0.72	22	—	—	4	3	2	—	13	119	—
West Ham	308,284	2,132	1,107	27.7	14.4	2.09	160	—	5	22	22	23	4	84	147	0.1
East Ham	136,421	906	344	26.6	10.1	1.86	63	—	5	7	19	5	1	26	113	—
Leyton	122,040	727	338	23.9	11.1	1.22	37	—	—	3	17	1	—	16	105	0.3
Walthamstow	126,397	922	360	29.3	11.4	1.55	49	—	1	8	7	1	—	32	110	—
Hastings	67,477	259	188	15.4	11.2	0.54	[illegible]	—	—	1	2	5	—	1	77	—
Brighton	129,023	613	434	19.1	13.5	1.06	34	—	1	—	5	2	—	26	122	—
Portsmouth	208,291	1,338	751	25.8	14.5	1.40	73	—	—	1	25	3	9	35	138	1.2
Bournemouth	69,246	262	176	15.2	10.1	0.35	6	—	—	1	—	—	1	4	69	—
Southampton	119,745	632	387	21.2	13.0	1.44	43	—	6	—	5	10	1	21	141	—
Reading	80,311	456	241	22.8	12.0	1.10	22	—	6	—	11	2	—	4	86	2.6
Northampton	95,070	481	301	20.3	12.7	1.29	31	—	1	2	2	9	2	16	159	1.7
Ipswich	72,825	417	290	23.0	16.0	2.58	52	—	29	—	1	15	1	6	96	—
Great Yarmouth	52,879	320	194	24.3	14.7	1.53	20	—	—	1	1	5	1	12	147	—
Norwich	119,191	729	406	24.5	13.7	1.82	54	—	—	—	15	11	2	26	132	0.7
Plymouth	120,063	602	376	20.1	12.6	1.07	32	—	1	—	2	1	2	26	115	—
Devonport	79,359	549	244	27.5	12.2	1.15	23	—	—	—	5	5	1	12	100	—
Bristol	367,979	2,127	1,175	23.2	12.8	1.29	118	—	22	4	17	9	4	64	114	0.1
Hanley	67,174	520	294	31.0	17.6	2.57	43	—	4	—	5	5	6	23	173	1.0
Burton-on-Trent	53,425	295	184	22.1	13.8	3.47	46	—	33	4	3	2	1	3	139	2.2
Wolverhampton	102,016	632	410	24.7	16.0	1.88	48	—	4	12	8	1	1	22	150	0.2
Walsall	96,171	653	360	27.2	16.3	2.89	55	—	2	9	1	6	1	36	190	—
Handsworth	65,929	371	186	24.6	11.3	0.79	13	—	—	1	1	7	—	4	121	0.6
West Bromwich	69,123	488	299	28.3	17.4	2.74	47	—	13	17	2	1	2	12	199	2.3
Birmingham	553,155	3,671	2,237	26.6	16.2	1.68	231	—	7	39	23	52	11	99	184	5.1
King's Norton	75,600	434	199	23.0	10.6	0.42	8	—	—	4	—	4	—	—	129	2.5
Smethwick	66,467	465	217	28.1	13.1	1.08	18	—	1	5	3	3	1	5	140	1.8
Aston Manor	83,266	510	268	24.6	12.9	1.59	33	—	1	1	4	14	1	12	173	0.4
Coventry	77,626	593	325	30.6	16.8	1.86	36	—	10	1	4	—	1	20	145	2.6
Leicester	236,124	1,235	758	21.0	12.9	0.89	52	—	1	4	2	8	1	26	176	1.1
Grimsby	70,574	514	257	29.2	14.6	1.59	28	—	—	—	3	1	6	18	175	1.2
Nottingham	257,489	1,717	1,065	26.7	16.6	2.19	140	—	1	—	8	23	21	87	184	0.5
Derby	125,774	789	426	25.2	13.6	1.11	35	—	1	—	10	1	7	16	129	—
Stockport	100,986	608	449	24.1	17.8	2.27	57	—	1	7	5	5	6	33	212	—
Birkenhead	118,553	900	354	30.4	12.0	1.05	31	—	—	2	7	3	3	16	87	1.7
Wallasey	66,707	398	217	23.9	13.0	0.48	8	—	—	—	1	2	—	5	121	1.8
Liverpool	746,144	5,502	3,853	29.6	20.7	2.59	482	—	50	28	26	109	19	258	195	2.3
Bootle	67,114	546	324	32.6	19.4	3.05	51	—	5	2	5	23	2	14	154	1.5
St. Helens	92,476	731	387	31.7	16.8	1.03	24	—	—	4	1	7	1	11	185	3.9
Wigan	88,606	681	458	30.8	20.7	2.05	45	—	1	2	1	7	7	27	201	—
Warrington	70,269	545	287	31.1	16.4	2.12	37	—	—	3	4	8	1	21	187	4.9
Bolton	182,917	1,077	731	23.6	16.3	1.74	79	—	—	10	6	13	9	41	181	0.8
Bury	58,901	340	223	23.1	15.2	1.37	20	—	2	—	5	4	2	7	174	2.2
Manchester	643,148	4,316	2,890	26.9	18.3	2.16	347	—	54	20	38	45	13	177	190	0.8
Salford	236,670	1,646	1,024	27.9	17.4	2.57	152	—	35	23	23	14	6	51	176	0.5
Oldham	141,730	896	686	25.4	19.4	1.84	65	—	1	6	6	17	2	33	177	—
Rochdale	87,999	487	365	22.2	16.6	1.00	22	—	—	2	8	9	1	8	164	1.4
Burnley	103,947	704	477	27.2	18.4	2.58	67	—	4	3	5	6	2	42	213	1.3
Blackburn	134,980	779	554	23.2	16.5	1.11	37	—	5	3	2	[illegible]	4	18	189	0.7
Preston	117,093	744	586	25.5	20.1	2.42	71	—	14	1	3	7	8	38	203	2.8
Barrow-in-Furness	61,635	399	220	26.0	14.3	3.26	50	—	35	—	4	3	—	8	173	0.5
Huddersfield	84,814	540	376	22.8	15.9	0.46	11	—	—	2	—	2	—	7	131	0.5
Halifax	110,138	445	407	16.2	14.8	0.99	27	—	4	—	8	4	1	10	151	0.7
Bradford	290,323	1,310	1,068	18.1	14.8	1.11	81	—	14	5	18	11	9	24	160	0.5
Leeds	470,268	2,673	1,918	22.8	16.4	2.05	241	—	84	14	18	25	12	88	181	0.1
Sheffield	455,553	3,311	1,974	29.2	17.4	2.59	256	—	8	15	14	40	13	206	179	1.7
Rotherham	62,412	454	261	29.2	16.8	2.31	36	—	—	—	2	5	3	26	185	2.3
York	84,730	473	397	22.4	18.8	3.15	67	—	21	—	6	2	6	32	233	—
Hull	266,762	1,868	992	28.1	14.9	1.24	81	—	1	3	17	17	4	39	133	1.0
Middlesbrough	101,783	789	456	31.1	18.0	1.69	43	—	1	—	10	1	4	27	195	0.7
Stockton-on-Tees	52,909	362	261	27.4	19.8	1.59	21	—	7	—	4	1	3	6	169	0.8
West Hartlepool	75,473	445	264	23.6	14.0	0.49	[illegible]	—	—	2	—	2	[illegible]	5	169	0.4
Sunderland	156,029	1,253	723	32.2	18.6	1.80	70	—	8	5	4	21	5	27	167	1.8
South Shields	113,460	743	489	26.3	17.3	1.84	52	—	17	—	8	17	1	9	152	5.1
Gateshead	125,783	850	496	27.1	15.8	1.59	50	—	11	1	5	16	5	12	166	4.0
Newcastle-on-Tyne	272,969	1,882	1,134	27.7	17.4	2.38	162	—	67	4	14	58	1	18	161	0.3
Tynemouth	54,688	417	219	30.6	16.1	2.12	29	—	19	1	2	4	1	2	134	2.3
Newport (Mon.)	75,585	577	274	30.6	14.5	2.07	39	—	3	5	4	4	2	21	144	0.7
Cardiff	187,620	1,179	745	25.2	15.9	2.15	100	—	47	4	[illegible]	7	3	33	194	—
Rhondda	130,400	1,131	655	34.8	20.1	3.50	114	—	39	1	6	5	9	54	224	0.9
Merthyr Tydfil	76,085	642	447	33.8	23.6	4.70	89	—	46	2	4	6	[illegible]	26	210	0.9
Swansea	97,324	745	443	30.7	18.3	1.73	42	—	14	1	3	2	[illegible]	22	187	0.5

while it averaged 0·28 in the seventy-five other large towns, and was highest in Ipswich, Burton-on-Trent, Barrow-in-Furness, Tynemouth, Cardiff, Rhondda, and Merthyr Tydfil. The 583 fatal cases of scarlet fever corresponded to an annual rate of 0·15 per 1,000; in London the rate was 0·19 per 1,000, while among the seventy-five large provincial towns it averaged 0·13, the greatest proportional mortality being recorded in Willesden, Wolverhampton, Walsall, West Bromwich, Salford, and Burnley. The 801 deaths from diphtheria were at the rate of 0·20 per 1,000 annually; in London, also, this disease caused a death-rate of 0·20 per 1,000; among the seventy-five towns the rates were highest in East Ham, Leyton, Portsmouth, Reading, Norwich, Salford, and Middlesbrough. The 990 fatal cases of whooping-cough were equal to an annual rate of 0·25 per 1,000; in London the rate was 0·18 per 1,000, while it averaged 0·28 in the seventy-five other large towns, among which this disease was proportionately most fatal in Ipswich, Aston Manor, Liverpool, Bootle, Sunderland, South Shields, and Newcastle-on-Tyne. The 331 deaths referred to different forms of "fever" corresponded to a rate of 0·08 per 1,000, in London the "fever" death-rate was 0·06 per 1,000, or 0·03 per 1,000 less than the average rate in the seventy-five other large towns; among these towns the greatest proportional mortality from "fever" was recorded in Hanley, Grimsby, Nottingham, Wigan, Preston, York, Rhondda, and Merthyr Tydfil. The 2,917 fatal cases of diarrhoea was equal to an annual rate of 0·73 per 1,000; in London the rate was 0·49 per 1,000, while it averaged 0·83 in the seventy-five other large towns, among which the highest rates were recorded in Walsall, Burnley, Sheffield, Rotherham, York, and Rhondda.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 154 per 1,000 last quarter, against 147, 134, and 138 in the fourth quarters of the three preceding years. In London the rate of infant mortality was 131 per 1,000 in the quarter under notice, while it averaged 163 in the seventy-five other large towns, and ranged from 69 in Bournemouth, 77 in Hastings, 83 in Hornsey, 86 in Reading, 87 in Birkenhead, and 96 in Croydon and in Ipswich, to 201 in Wigan, 203 in Preston, 210 in Merthyr Tydfil, 212 in Stockport, 213 in Burnley, 233 in York, and 234 in Rhondda.

The causes of 518, or 0·8 per cent., of the deaths registered in the seventy-six towns last quarter were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Tottenham, East Ham, Walthamstow, Brighton, Southampton, Plymouth, Derby, Oldham, Cardiff, and in ten other smaller towns; the highest proportions of uncertified deaths were 3·1 in Birmingham, 3·9 in St. Helens, 4·0 in Gateshead, 4·9 in Warrington, and 5·1 in South Shields.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,558 births and 5,749 deaths were registered during the week ending Saturday last, January 25th. The annual rate of mortality in these towns, which had been 16·9, 19·3, and 20·0 per 1,000 in the three preceding weeks, declined again last week to 18·5 per 1,000. The rates in the several towns ranged from 7·3 in Hornsey, 9·8 in East Ham, 9·9 in Smethwick, 10·7 in Walthamstow, and 10·8 in Leyton and in Great Yarmouth to 24·3 in Manchester and in Preston, 25·1 in Rhondda, 26·0 in Plymouth, 28·3 in Swansea, 30·6 in Bootle, and 34·3 in Liverpool. In London the rate of mortality was 18·0 per 1,000, while it averaged 18·7 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1·1 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2·6 in Liverpool, 2·7 in Preston and in South Shields, 2·8 in Ipswich and in Gateshead, 3·0 in Willesden, 3·1 in Salford, and 3·7 in Aston Manor. Measles caused a death-rate of 1·2 in Leeds, 1·3 in Southampton and in Preston, 1·4 in Ipswich, 1·7 in Salford, and 2·6 in Willesden; diphtheria of 1·2 in Gateshead; whooping-cough of 1·1 in Walsall and in Swansea, 1·3 in Reading, in West Hartlepool and in Sunderland, 1·4 in Liverpool, 1·5 in Handsworth (Staffs), 1·7 in Newcastle-on-Tyne, 2·2 in Warrington, and 3·7 in Aston Manor; and diarrhoea of 1·1 in Oldham. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,684, 4,481, and 4,325 at the end of the three preceding weeks, had further declined to 4,044 at the end of last week; 380 new cases were admitted during the week, against 469 in each of the two preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, January 25th, 871 births and 782 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 24·3 per 1,000 in the two preceding weeks, declined to 22·2 per 1,000 last week, but was 3·7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The death-rates in these Scottish towns ranged from 17·7 in Edinburgh and 17·9 in Aberdeen to 25·4 in Glasgow and 26·7 in Perth. The death-rate from the principal infectious diseases averaged 4·0 per 1,000 in these towns, the highest rates being recorded in Glasgow and Perth. The 418 deaths registered in Glasgow included 70 which were referred to measles, 2 to scarlet fever, 4 to diphtheria, 7 to whooping-cough, 5 to enteric fever, and 11 to diarrhoea. Two fatal cases of whooping-cough, 2 of cerebro-spinal meningitis, and 2 of diarrhoea were recorded in Edinburgh; 2 of diphtheria in Dundee; 3 of measles and 2 of whooping-cough in Aberdeen; 4 of measles in Paisley; 7 of whooping-cough and 2 of diarrhoea in Leith; 4 of measles in Greenock; and 4 of whooping-cough in Perth.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Joseph C. Wood, Fleet Surgeon, and Ernest F. Ellis, Surgeon, to the *Argyll*, on recommissioning, February 4th; Edward T. Burton, Staff Surgeon, to the *Goliath*, January 21st; Samuel H. Woods, M.D., Staff Surgeon, to the *Sapphire* for the *Sapphire II*, February 4th; Godfrey Taylor, M.B., Staff Surgeon, to the *Egeria*, additional, January 14th, and on recommissioning, undated; Arthur R. Schofield, M.B., Surgeon, to the *Victory*, January 21st; Guy L. Buckeridge, Surgeon, to Portland Hospital, January 21st; Thomas D. Liddle, M.B., Surgeon, to the *New Zealand*, January 20th; Hugh B. German, Surgeon, to the *Terrible*, February 4th; James J. Walsh, M.B., Fleet Surgeon, and James C. Bringan, M.B., Surgeon, to the *Bacchante* on recommissioning, February 18th; Charles Strickland, Fleet Surgeon, and Douglas D. Turner, Surgeon, to the *Cochrane*, on recommissioning, February 18th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant A. C. Vidal is placed temporarily on the Half-pay List, on account of ill-health, January 12th. He joined the corps as Lieutenant, July 31st, 1905.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel S. J. Thomson, C.I.E. (Bengal), is permitted to retire from the service, from January 17th. He was appointed Surgeon October 1st, 1877, and became Surgeon-Lieutenant, October 1st, 1897. He was in the Afghan war in 1880, receiving a medal, and in the South African war, 1902, he was Director of Burgher Camp, Transvaal, and received the Queen's medal with two clasps.

Major R. C. Macwatt, M.B. (Bengal), Residency Surgeon, Jodhpore, Rajpootana, has been awarded the Kaisar-i-Hind medal of the 1st class for Public Service in India.

Major H. Burden (Bengal), Agency Surgeon, 2nd class, is posted as Residency Surgeon and ex-officio Assistant Resident in Nepaul.

Captain W. G. Richards (Madras) is appointed Personal Assistant to the Surgeon-General with the Government of Madras and Medical Inspector of Factories, from November 9th, 1907.

IMPERIAL YEOMANRY.

Surgeon-Captain R. L. Moorhead, M.B., Royal East Kent (the Duke of Connaught's Own), resigns his commission, December 27th, 1907.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon-Captain J. D. Farquharson, M.B., 1st Newcastle-on-Tyne, to be Surgeon-Major, December 25th, 1907.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Major and Honorary Lieutenant-Colonel J. J. de Z. Marshall, commanding East Surrey Bearer Company, has been promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer, East Surrey Volunteer Infantry Brigade, November 27th, 1907. Lieutenant-Colonel Marshall continues to command the East Surrey Bearer Company.

VOLUNTEER RIFLES.

Surgeon-Captain S. J. J. Kirby, 2nd Volunteer Battalion the Norfolk Regiment, to be Surgeon-Major, December 4th, 1907.

Surgeon-Lieutenant J. A. Swindale, 1st Volunteer Battalion the Hampshire Regiment, is borne as supernumerary whilst doing duty with the Bearer Company of the Hampshire Volunteer Infantry Brigade, November 19th, 1907.

Surgeon-Captains J. H. A. Laing, M.B., and J. Pirie, M.B., the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), are promoted to be Surgeon-Majors, the former from October 28th, 1907, the latter from October 29th, 1907.

Henry Smurthwaite, M.D. (late Captain), to be Surgeon-Lieutenant, in the 3rd Volunteer Battalion the Northumberland Fusiliers, November 1st, 1907.

Supernumerary Surgeon-Major J. M. Harper, 1st Volunteer Battalion the Prince Albert's Somersetshire Light Infantry (Brigade-Surgeon Lieutenant-Colonel, Senior Medical Officer, Cornwall and Somerset Volunteer Infantry Brigade), to be Surgeon-Lieutenant-Colonel, remaining supernumerary, December 21st, 1907.

Arthur L. B. Green (late Lieutenant) to be Surgeon-Lieutenant to the 1st Herefordshire Volunteer Rifle Corps, December 16th, 1907.

Surgeon-Captain and Honorary Surgeon-Major R. C. M. Pooley (late 1st Volunteer Battalion the Duke of Cornwall's Light Infantry), from the Retired List, to be Surgeon-Captain, 5th Middlesex (West Middlesex), with the honorary rank of Surgeon-Major, January 1st.

COLONIAL MEDICAL SERVICE.

The following appointments have been made to the West African Medical Staff:

Name.	Colony.
J. C. Murphy, L.R.C.S., L.R.C.P.Irel.	Sierra Leone.
F. E. Bissell, L.R.C.S., L.R.C.P.Edin.	Northern Nigeria.
G. Beatty, M.B., Ch.M.Edin., L.D.S.	Southern Nigeria.
W. R. Larbalestier, M.R.C.S.Eng., L.R.C.P. Lond.	Southern Nigeria.
W. S. Snell, L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glas.	Southern Nigeria.
T. L. Craig, M.B., Ch.B.Glas.	Southern Nigeria.
J. Boyd, M.B., Ch.M.Glas.	Southern Nigeria.

Promotion.

J. A. Pickels, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer in Southern Nigeria, is promoted to be Senior Medical Officer, vice J. D. Small, invalided.

Retirements.

G. T. Whyte, F.R.C.S., L.R.C.P.Irel., D.P.H., Medical Officer in Northern Nigeria, resigns his appointment, with effect from October 4th, 1907.

P. Phillips, M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer in Southern Nigeria, is invalided from the service, with effect from November 7th, 1907.

W. Fletcher, M.B., Ch.M.Edin., D.S.O., Medical Officer in Southern Nigeria, retires on pension from November 15th, 1907.

J. D. Small, L.R.C.S.Edin., L.S.A.Lond., Senior Medical Officer in Southern Nigeria, retires on pension from December 12th, 1907.

T. C. Caldwell, M.B., Ch.B., D.P.H.Edin., Medical Officer in Southern Nigeria, is invalided from the service, with effect from December 24th, 1907.

D. H. R. Waldron, M.B., Ch.M.Edin., Senior Medical Officer in the Gold Coast, retires on pension from February 18th, 1908.

C. R. Chichester, M.B., L.R.C.S., L.R.C.P.Irel., D.P.H., Senior Medical Officer in Northern Nigeria, retires on pension from March 28th, 1908.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BLACKBURN COUNTY BOROUGH.—Assistant to the Medical Officer of Health. Salary, £150 per annum.

BOLINGBROKE HOSPITAL, Wandsworth Common.—Surgeon.

BOOTLE BOROUGH.—Resident Medical Officer for Hospital for Infectious Diseases. Salary, £100 per annum.

BRIGHTON COUNTY BOROUGH.—Medical Officer of Health.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary, £80 per annum, increasing to £100 per annum on re-election.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer; (2) Resident Junior House-Surgeon; (3) Resident Casualty Officer. Salary, for (1) £75 per annum, and for (2) and (3) at the rate of £50 per annum.

BURY AND DISTRICT JOINT HOSPITAL BOARD.—Resident Assistant Medical Officer. Salary at the rate of £100 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Two Physicians for in-patients.

CROYDON BOROUGH.—Female Assistant to the Medical Officer of Health. Salary, £250 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer. Salary at the rate of £60 per annum.

EALING COTTAGE HOSPITAL.—Two Vacancies on the Hospital Staff.

GREAT YARMOUTH COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary, £200 per annum.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, S.W.—Honorary Registrar.

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital. Salary, £100 per annum.

LURGAN UNION. Resident Medical Officer for the Workhouse and Fever Hospital. Salary, £80 per annum.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon. Salary, £160 per annum.

OXFORD: RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—Junior House-Surgeon. Salary at the rate of £40 per annum.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C. — House-Surgeon. Stipend at the rate of £60 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician.

SEAMEN'S HOSPITAL SOCIETY.—Surgeon at the Branch Hospital, Royal Victoria and Albert Docks, E.

SOMERSET COUNTY COUNCIL, Weston-super-Mare.—Chief Medical Inspector of Schools. Salary, £500 per annum.

CERTIFYING FACTORY SURGEONS. — The Chief Inspector of Factories announces vacancies at Strangford, co. Down; Rathmore, co. Kerry; and Leeds, co. Yorks.

APPOINTMENTS.

BARBER, R. A., M.D., M.Ch., R.U.I., Certifying Factory Surgeon for the Dronfield District, co. Derby.

CHRISTAL, H., M.B., B.S.Durh., District Medical Officer of the Hartismere Union.

COOPER, A. J. Sisson, L.R.C.S. and L.R.C.P.I., Medical Officer and Public Vaccinator for the Fontmell District of the Shaftesbury Union.

DRAKE, W., M.R.C.S., L.R.C.P., District Medical Officer of the Tendring Union.

DYKES, D. G., M.B., Ch.B.Glas., District Medical Officer of the Martley Union.

EDINGTON, G. H., M.D., F.F.P.S., Assistant to the Professor of Clinical Surgery in the University of Glasgow, vice Alfred A. Young, M.A., M.B., resigned.

FRIEND, Gerald Edward, M.R.C.S., L.R.C.P.Lond., Superintendent and Resident Medical Officer to St. George's Hospital.

KENNEDY, Neil, M.B., B.S.Aberd., Medical Superintendent of the High Peak Isolation Hospital, Chinley.

MACMILLAN, Evan, M.B., Ch.B Edin., Certifying Factory Surgeon for the Strathmiglo District, co. Fife.

MAYNARD, Edwin, F.R.C.S., L.R.C.P., D.P.H., Senior House-Surgeon to Bristol General Hospital.

PHILLIPS, Hugh R., M.D Edin., Physician to Margaret Street Hospital for Diseases of the Chest.

PRICE, E. H., L.S.A., Resident Assistant Medical Officer, Cardiff Union Workhouse.

TELLING, W. H. Maxwell, M.D., B.S.Lond., M.R.C.P.Lond., Honorary Physician to the Cookridge Hospital, near Leeds.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—First Lettsomian Lecture, 1908, On Tuberculosis of the Kidney, by Mr. Charters J. Symonds, M.S.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, Lister Institute, Chelsea Gardens, S.W., 8.30 p.m. — Communications:— Miss Harlette Chick: The Reaction Velocity of Disinfection. Dr. F. G. Bushnell: Cases of (1) So-called Leukanaemia; (2) Lymphocytic Leukaemia, with Malignant Lymphomata; (3) Sarcoma of Cervical Glands. Dr. J. Henderson Smith: The Absorption of Serum from the Tissues. Dr. F. A. Bainbridge: The Relation of Bacilli of the Paratyphoid Group. Dr. J. A. Arkwright: On Non-virulent Diphtheria Bacilli. Dr. J. C. G. Ledingham: Experiments in Phagocytosis. Dr. J. B. Leathes: (1) Note on a Case of Chylous Ascites; (2) Metabolism in Fever. Dr. E. J. Young: The Action of Arsenates on the Fermentation of Glucose by Yeast-juice (with demonstration). Demonstrations:—Dr. G. F. Petrie: *Treponema pallidum* in the Living State. Dr. A. White Robertson: The Lesions following Injection of Dysentery Toxin. Dr. R. D. Keith (Singapore): Specimens of Amoebic Dysentery. Specimens: Professor E. A. Minchin: Trypanosomes and Trypanoplasmas from Fishes. Messrs. A. C. Stevenson and J. D. Thompson: Leucocytozoon in Blood of Wild Rat (*M. decumanus*).

WEDNESDAY.

LIFE ASSURANCE MEDICAL OFFICERS' ASSOCIATION, 20, Hanover Square, W., 8 p.m.—Council Meeting. 8.30 p.m., Dr. Glover Lyons, Presidential Address.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Agenda: Clinical Cases. Election of Members.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith.—Pathological Meeting. Specimens shown at 8 p.m.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

LARYNGOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m. Dr. Watson Williams: Microscopic Sections illustrating the Pathogenesis of Some Forms of Nasal Polypi. Dr. Parkes Weber: A Case of Multiple Hereditary Developmental Angeiomata (Telangiectasis) of the Skin and Mucous Membranes associated with Recurring Haemorrhages. Sir Felix Semon (for Dr. Sidney Phillips): A Case of Multiple Telangiectases. Dr. James Donelan: A Specimen of Tumour of Thyroid with Larynx and Oesophagus, with Microscopic Sections from a case shown at the previous meeting. Dr. St Clair Thomson: (1) A Case of Specific Pachydermia Laryngis; (2) A Radiograph to show how the Orbito-ethmoidal, as well as the Frontal, can be defined before Operation. Mr. Harold Barwell, A Case of Necrosis of the Arytaenoid Cartilage. Mr Chichele Nourse: (1) A Case of Sarcoma of the Nose after Operation; (2) A Case of Epithelioma of the Tongue and Fauces after Operation, showing Recurrence in Pharynx. Dr. Jobson Horne; A Series of Specimens from Cases of Sarcoma, and from Cases simulating Sarcoma in the Respiratory Tracts.

SOCIETY OF ANAESTHETISTS, 20, Hanover Square, W., 8.30 p.m., Adjourned discussion on Status Lymphaticus.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Board Room, Miller Hospital, Greenwich, 8.45 p.m.—Dr. H. F. Taylor will read a paper on Uterine Haemorrhages.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Skin Diseases due to Streptococci and Staphylococci; 4 p.m., Gynaecological Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Clinical Demonstrations, Monday, Tuesday, Wednesday, and Thursday, 2.30 p.m.; Friday, 3.30 p.m., Clinical Lecture, Diagnosis and Treatment of Hemiplegia.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Wednesday, 4 p.m., Congenital Heart Disease.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Herpes Phlyctenoides, Herpes Zoster; Friday, 4 p.m., Pemphigus, Dermatitis Herpetiformis, Epidermolysis Bullosa Hereditaria.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 3.15 p.m., The Treatment of Syphilis. Wednesday, 2.15 p.m., Intrathoracic Growths. Friday, 3.15 p.m., Acute Perforative Peritonitis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follow: Monday, The Diagnosis and Treatment of Malignant Disease of the Prostate. Tuesday, Mental Disorders of Adolescence. Wednesday, Malignant Cutaneous Tumours. Thursday, The Present Position of Arthrodesis and Tendon Transplantation.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Out-patient Department, Fitzroy Square, W.—Thursday, 5 p.m., Lecture: The Blood Corpuscles in Diseases of the Heart and Lungs, and during Treatment at High Altitudes.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C. — Tuesday, 3.30 p.m., Degenerative Diseases of the Spinal Cord; Friday, 3.30 p.m., Epilepsy.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4.30 p.m., Demonstration: Recent Cases from the *Post-mortem* Department. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations. Medical and Surgical Out-patient, *X* Ray: 3 p.m., Medical In-patient; Friday, 10 a.m., Surgical Out-patient: 2.30 p.m. Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

West London Post-Graduate College, West London Hospital, Hammersmith Road W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also on Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological. Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday, Cases of Eye Disease; Tuesday, Clinical; Wednesday, Practical Medicine; Thursday, Clinical; Friday, Cases of Skin Diseases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Barber.—On January 24th, at 45, Friar Gate, Derby, the wife of Dr. Hugh Barber, of a daughter.

Biss.—On January 24th, 1908, at 75, Prince of Wales Mansions, S.W., to Dr. and Mrs. Hubert Biss, a son.

Harries-Jones.—The wife of E. Harries-Jones, M.B., M.R.C.S., Northampton, of a daughter.

Hunt.—On January 27th, at 3, Goldsmid Road, Brighton, the wife of Ernest Rivaz Hunt, M.A., M.D.Cantab., of a daughter.

DEATHS.

Stevenson.—On January 17th, at Sandhurst Lodge, Streatham, S.W., Lady Stevenson, wife of Sir Thomas Stevenson, M.D., aged 68.

White.—On January 28th, at East Circus Street, Nottingham, Charles Haydon White, M.R.C.S., dearly-loved husband of Ethel Handley White, aged 54 years.

BOOKS, Etc., RECEIVED.

Handbuch der orthopädischen Technik. Bearbeitet von San.-Rat. Dr. A. Schanz. Jena: G. Fischer. 1908. M.18.

Merck's 1907 Index (third edition). An Encyclopaedia for the Chemist, Pharmacist, and Physician. New York: Merck and Co. 3s. 6d.

Marlborough's Self-taught Series, No. 12: Egyptian. By Captain C. A. Thimm. Third edition. London: E. Marlborough and Co. 1907. 2s. 6d.

Barr's Seed Guide. 1908. London: Barr and Sons.

Oxford Medical Publications. Rotunda Practical Midwifery. By E. H. Tweedy, M.D., F.R.C.P.I. and G. T. Wrench, M.D. London: H. Frowde, and Hodder and Stoughton. 1908. 16s.

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Fasciculus XXVII. Diseases of Ovary, Fallopian Tube, Uterus, etc. London: The New Sydenham Society (H. K. Lewis). 1907. 1 guinea.

Considérations Historiques sur la Blennorrhagie. Par le Dr. E. Roucayrol. Paris: G. Steinheil. 1907.

Alimentation et Hygiène des Enfants. Par le Dr. J. Comby. Troisième édition. Paris: J. Rueff. 1908. Fr.6.

Etudes sur la Physio-pathologie du Corps Thyroïde et de l'Hypophyse. Par les Drs. Léopold-Lévi et H. de Rothschild. Paris: O. Doin. 1908. Fr.8.

Tests and Studies of the Ocular Muscles. By E. E. Maddox, M.D., F.R.C.S.Ed. Second edition. Philadelphia: The Keystone Publishing Company. 1907. 6s. 3d.

International Clinics: A Quarterly. Edited by W. T. Longcope, M.D., Vol. iv. Seventeenth series, 1907. Philadelphia and London: J. B. Lippincott Company. 1907.

Lessons in Hygienic Physiology. By W. M. Coleman, A.B. London and New York: The Macmillan Company. 1907. 3s.

Town Planning in Theory and Practice. A Report of the Conference arranged by the Garden City Association, October 25th, 1907. London: The Garden City Association. 1s.

The Pyonex: Its Theory and Practice. By W. H. Rule, M.R.C.S., L.R.C.P. London: J. Bale, Sons, and Danielsson, Ltd. 1907. 12s. 6d.

Formulaire Synthétique de Médecine. Par le Dr. L. Pron. Paris: J. Rousset. 1908. Fr.6.

A Pocket Book for Physicians and Pharmacists. Edited by H. W. Gadd. Bristol and Exeter: Evans, Gadd, and Co., Ltd. 1908. 1s.

The Ritual of Temperance and Bodily Cleanliness. By Dr. H. C. Pattin, M.A., D.P.H. Norwich: Goose and Son; and London: Simpkin, Marshall, and Co. 1s.

The Bar of Isis, or the Law of the Mother. By F. Swiney. London: The Open Road Publishing Co. 1907. 6d.

L'Aérobisation des Microbes Anaérobies. Par G. Rosenthal. Paris: F. Alcan. 1908. Fr.5.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
1 SATURDAY ...	
2 Sunday ...	
3 MONDAY ...	
4 TUESDAY ...	St. Pancras and Islington Division, *Metropolitan Counties Branch*, Great Northern Central Hospital, Holloway Road, N., 4 p.m.
5 WEDNESDAY	
6 THURSDAY...	Kensington Division, *Metropolitan Counties Branch*, Town Hall, Kensington, W., 5 p.m. Tottenham Division, *Metropolitan Counties Branch*, Athenaeum, Muswell Hill (near the station), 4.30 p.m.
7 FRIDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
8 SATURDAY...	
9 Sunday ...	
10 MONDAY ...	
11 TUESDAY ...	Hampstead Division, *Metropolitan Counties Branch*, Business Meeting (not February 13th as previously announced).
12 WEDNESDAY	Lancashire and Cheshire Branch, Meeting of Branch Council, Medical Institution, Liverpool, 4.30 p.m.
13 THURSDAY...	London: Metropolitan Counties Branch Council, 5 p.m.
14 FRIDAY ...	
15 SATURDAY...	

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	
19 WEDNESDAY	South Wales and Monmouthshire Branch, Cardiff.
20 THURSDAY...	Altrincham Division, *Lancashire and Cheshire Branch*, General Meeting, Brooklands Hotel, Sale, 5 p.m. City Division, *Metropolitan Counties Branch*, Metropolitan Hospital, 4 p.m. Worcestershire and Herefordshire Branch. (Not February 13th as previously announced.)
21 FRIDAY ...	Edinburgh Branch, Annual Meeting, Royal Infirmary, 4 p.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.
22 SATURDAY...	
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	
26 WEDNESDAY.	Bath and Bristol Branch, Bath.
27 THURSDAY...	Lambeth Division, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, 4 p.m.
28 FRIDAY ...	
29 SATURDAY...	

Printed and Published by the British Medical Association at their Office, No. 6, Catherine Street, Strand, in the Parish of St. Paul, Covent Garden, in the County of Middlesex.

:DICAL IN...

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 8TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research.

Applications for sums to be granted should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing:

(*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached.

(*b*) A general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers.

(*c*) And references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council provided the whole term of office shall not exceed three years.

The Scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

ERNEST HART MEMORIAL SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council provided the whole term of office shall not exceed three years. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Forms of application for Scholarships and Grants can be had on application to the General Secretary.

GUY ELLISTON, *General Secretary.*

6, Catherine Street, Strand,

February, 1908.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

SCHEDULE OF MEDICAL INSPECTION ISSUED BY THE BOARD OF EDUCATION.

The following Circular* to Local Education Authorities, transmitting a Schedule of Medical Inspection, was issued by the Board of Education on January 23rd, 1908:

Education (Administrative Provisions) Act, 1907, Section 13.

Sir,

1. The accompanying Schedule has been drawn up in response to requests which the Board of Education have received for further and more definite guidance as regards the details of the work of medical inspection than was given in the Memorandum (Circular 576) which was issued by the Board on 22nd November, 1907. The Board have, indeed, been pressed by many Local Education Authorities to issue a complete set of Forms for use in carrying out the work directly or incidentally involved in the performance of these new duties. Any Forms which experience of the working of the Act may show to be necessary or desirable will be issued in due course, but for the present the Board think it expedient to leave considerable latitude, subject to the considerations hereinafter set out, in regard to the particular Forms or Schedules to be used in different cases or circumstances.

2. The chief difficulties to be considered are administrative rather than educational or scientific. There is comparatively little dispute as to the end in view, or as to the means which, from the technical standpoint of medical science and practice, should be adopted for its complete attainment.

But the existing resources of Local Education Authorities are (for practical purposes, at all events) not unlimited, the feelings and prejudices of parents have to be considered, and a new element has to be introduced into school life and organization with the least possible disturbance and inconvenience. Moreover, in this case two departments of local public administration are brought for the first time into organic connexion—those of public health and of public education.

3. The Board are fully aware of these difficulties, and in preparing their Memorandum and Regulations it was necessary for them to consider what system would best reconcile the theoretical and practical considerations, and overcome the divergence between the ultimate end and the end immediately attainable, or between the methods which are scientifically desirable and those which can be applied in existing circumstances at the initiation of the work under the Act.

4. In the accompanying Schedule the Board indicate the particulars, attention to which they regard as constituting the *minimum* of efficient medical inspection, and they consider that at least these particulars should be included in any other Schedule which the Local Education Authority may authorize for use in their Schools. It deliberately excludes many points of anthropometric or statistical interest which are worthy of attention, and which it is hoped may receive attention in suitable districts. Nor does it profess to lay down the lines of a clinical study or of a scientifically complete medical examination. It is intended to indicate the methods which, in the Board's opinion, should be followed and the particulars which should be attended to for the purpose of determining the fitness of the individual child for school life, to guide the Authority in adapting education to the peculiarities or abnormalities of the child, and to prepare the way for measures for the amelioration of defects in the child or its environment.

A more elaborate and complete form could readily be devised, but the Board's knowledge of the circumstances in which the work is to be done leads them to believe that greater elaboration would in the majority of cases defeat its own end.

5. If this Schedule is properly used, few cases of serious physical weakness or defect will escape detection. Where the ordinary inspection shows the need of further and more searching medical examination a supplementary blank form should be used in which particular defects or diseases should be fully recorded. It may facilitate inspection if the Schedule is printed on cards* (8″ by 5″ or 10″ by 6″). The Notes are included in the attached form for the convenience of the School Medical Officer, and should not be reprinted on the cards. Of course it is not necessary that negative findings on all the points mentioned in the Notes should be recorded.

It will be noticed that a space is reserved in the Schedule for "General Observations"; this may conveniently be used to record a general summary of the condition of the child, and any information which may be available as to the home environment, or other conditions affecting its health.

It is considered that the inspection of each child should not occupy on the average more than a few minutes, and that the child need only, as a rule, have its clothes loosened or be partially undressed. Time may be saved in the actual inspection by the Medical Officer if the entries in some of the spaces are filled in by the school authorities before his visit. The four columns in the Schedule are designed for the four inspections required during school life.

With regard to items 17 to 24 of the Schedule, while it is necessary that all indications of diseased or unsound conditions should be thoroughly investigated, needless medical examination of healthy children should, for obvious reasons, be avoided.

6. Where children are found to belong to that class of "defectives" for whose education special provision is or ought to be made under the Statutes relating to such children, such cases should be made the subject of a special report to the Local Education Authority.

7. *All entries of the results of inspection in each individual case must be regarded as confidential.*

I have the honour to be,

Sir,

Your obedient servant,

Robert L. Morant,

To

The Local Education Authority.

Filing Cards.

The Board has caused the Schedule of Medical Inspection to be printed on cards of two sizes, one measuring 8 in. by 5, the other 10¼ in. by 6; in both instances the entries in the Schedule from 1 to 24 are printed on the back of the card. A third supplementary form, for use in exceptional cases, printed on a card of the same size as the larger of the above two, has also been prepared; it contains on the front spaces for entries of the name, date of birth, and address of the child, the name of the school, notes of personal history and family medical history; on the back are spaces for notes on present condition and directions to parents or teacher, with a place for the medical officer's initials and the date.

* Circular 582. London: Printed for His Majesty's Stationery Office, by Eyre and Spottiswoode; and to be purchased, either directly or through any bookseller, from Wyman and Sons, Limited, Fetter Lane, E.C.; or Oliver and Boyd, Tweeddale Court, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. Price 1d.; copies can be obtained from Eyre and Spottiswoode, East Harding Street, London, E.C., for 1½d. post free.

* Specimen cards accompanied the copy which we owe to the courtesy of the Board, but will not be supplied with the copies of this Circular which are placed on sale.

SCHEDULE OF MEDICAL INSPECTION.

I.—Name _____ Date of Birth[1] _____

Address _____ School _____

II.—Personal History

(*a*) Previous Illnesses of Child (before admission).

Measles.	Whooping-cough.	Chicken-pox.	Scarlet Fever.	Diphtheria.	Other Illnesses.[2]

(*b*) Family Medical History (if exceptional).[3]

	I.	II.	III.	IV.
1. Date of Inspection				
2. Standard and Regularity of Attendance[4] ...				
3. Age of Child[5]				
4. Clothing and footgear[6]				
[III. *General Conditions.*]				
5. Height[7]				
6. Weight[8]				
7. Nutrition[9]				
8. Cleanliness and condition of skin[10] ...				
Head				
Body				
[IV.—*Special Conditions.*]				
9. Teeth[11]				
10. Nose and throat[12]				
Tonsils				
Adenoids				
Submax. and cervical glands ...				
11. External eye disease[13]				

	I.	II.	III.	IV.
12. Vision[14]				
R.				
L.				
13. Ear disease[15]				
14. Hearing[16]				
15. Speech[17]				
16. Mental condition[18]				
[V.—*Disease or Deformity.*[19]]				
17. Heart and circulation[20]				
18. Lungs[21]				
19. Nervous system[22]				
20. Tuberculosis[23]				
21. Rickets[24]				
22. Deformities, Spinal Disease, etc.[25] ...				
23. Infectious or contagious disease[26] ...				
24. Other disease or defect[27]				
Medical Officer's initials				

General observations.

Directions to Parent or Teacher.

NOTES FOR INSPECTING OFFICER.

Reference No. of Note.

1. Date of birth to be stated exactly, date of month and year.
2. "Other illnesses" should include any other serious disorder which must be taken into account as affecting, directly or indirectly, the health of the child in after-life, *e.g.*, rheumatism, tuberculosis, congenital syphilis, small-pox, enteric fever, meningitis, fits, mumps, etc. The effects of these, if still traceable, should be recorded.
3. State if any cases of, or deaths from, phthisis, etc., in family.
4. Note backwardness.
5. Age to be stated in years and months, thus, 5_{1}^{1}.
6. Insufficiency, need of repair, and uncleanliness should be recorded (good, average, bad).
7. Without boots, standing erect with feet together, and the weight thrown on heels and not on toes or outside of feet.
8. Without boots, otherwise ordinary indoor clothes.
   Height and weight may be recorded in English measures if preferred. In annual report, however, the final averages should be recorded in both English and metric measures.
9. General nutrition as distinct from muscular development or physique as such. State whether good, normal, below normal, or bad. Under-nourishment is the point to determine. Appearance of skin and hair, expression, and redness or pallor of mucous membrane are among the indications.
10. Cleanliness may be stated generally as clean, somewhat dirty, dirty. It must be judged for head and body separately. The skin of the body should be examined for cleanliness, vermin, etc.; and the hair for scurf, nits, vermin, or sores. At the same time ringworm and other skin diseases should be looked for.
11. General condition and cleanliness of temporary and permanent teeth, and amount of decay. Exceptional features, such as Hutchinsonian teeth, should be noted. Oral sepsis.
12. The presence or absence of obstruction in the naso-pharynx is the chief point to note. Observation should include mouth-breathing; inflammation, enlargement, or suppuration of tonsils; probable or obvious presence of adenoids, polypi; specific or other nasal discharge, catarrh, malformation (palate), etc.

Reference No. of Note.

13. Including blepharitis, conjunctivitis, diseases of cornea and lens, muscular defects (squints, nystagmus, twitchings), etc.
14. To be tested by Snellen's Test Types at 20 feet distance (= 6 metres). Result to be recorded in the usual way, *e.g.*, normal V. = $\frac{6}{6}$. Examination of each eye (R. and L.) should, as a rule, be undertaken separately. If the V. be worse than $\frac{6}{9}$, or if there be signs of eye strain or headache, fuller examination should be made subsequently. *Omit vision testing of children under 6 years of age.*
15. Including suppuration, obstruction, etc.
16. If hearing be abnormal or such as interferes with class work, subsequent examination of each ear should be undertaken separately. *Apply tests only in general way in case of children under 6 years of age.*
17. Including defects of articulation, lisping, stammering, etc.
18. Including attention, response, signs of overstrain, etc.
    The general intelligence may be recorded under the following heads:—(*a*) Bright, fair, dull, backward; (*b*) mentally defective; (*c*) imbecile. *Omit testing mental capacity of children under 6 years of age.*
19. Under the following headings should be inserted particulars of diseased conditions actually present or signs of incipient disease. The extent of this part of the inspection will largely depend upon the findings under previous headings.
20. Include heart sounds, position of apex beat, anaemia, etc., in case of anything abnormal, or requiring modification of school conditions or exercises.
21. Including physical and clinical signs and symptoms.
22. Including chorea, epilepsy, paralyses, and nervous strains and disorders.
23. Glandular, osseous, pulmonary, or other forms.
24. State particular form, especially in younger children.
25. Including defects and deformities of head, trunk, limbs. Spinal curvature, bone disease, deformed chest, shortened limbs, etc.
26. Including any present infectious, parasitical, or contagious disease, or any sequelae existing. At each inspection the occurrence of any such diseases since last inspection should be noted.
27. Any weakness, defect, or disease not included above (*e.g.*, ruptures) specially unfitting child for ordinary school life or physical drill, or requiring either exemption from special branches of instruction, or particular supervision.

MATTERS REFERRED TO DIVISIONS.

MEDICO-POLITICAL COMMITTEE.

REPORT TO DIVISIONS.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

(Supplementary Report.)

In the Memorandum addressed on behalf of the Association to the Board of Education on December 16th, 1907, and included in the report which was published in the British Medical Journal on December 21st, 1907, it was stated that, with regard to the question of whether the supervision of the work of examining children should be carried out by medical officers of health or by medical officers specially appointed for the purpose, the Association was not in a position at present to come to any final conclusion. Since the issue of that report the Medico-Political Committee has received communications indicating the desire of the Divisions that some suggestions should be formulated by the Committee for their consideration upon this matter, and the present Memorandum is issued in compliance with this desire.

The principal question for consideration in connexion with the appointment of medical officers to supervise the work of medical inspection of school children is as to whether this office should, or should not, be held by the same person as the office of medical officer of health for the corresponding district. The important consideration in favour of the office being so combined in one person is the obvious desirability of the administrative co ordination of all departments of the State service which are concerned with health. On the other hand, regard must be had to the existing conditions—namely, the absence of such co-ordination in those Central Departments of Government to which the medical officer of health and the officer controlling the medical inspection of school children must respectively report, the necessity in the public interest of not interfering with the efficiency of the exceedingly important work of which medical officers of health have up to the present been in charge, and the necessity that the medical inspection of school children shall not be performed, as it might be by an officer already overburdened with other work, in a perfunctory manner, but with proper regard for the vital importance to the nation of the conservation of the health of children.

In addition to these considerations of general application, regard must also be had to local difficulties, such as the fact that in some districts the administrative areas of the Local Education Authority and the Local Sanitary Authority do not correspond.

Having had regard to all the considerations stated, the Committee suggests as follows:

That in all large towns of 100,000 population and upwards, there should be a supervisory medical officer who should be a whole time education officer and distinct from the medical officer of health of the town.

That in boroughs of less than 100 000 population, which are declared by Section 1 of the Education Act, 1902. to be Local Education Authorities for the purposes of Part III of that Act, a part-time medical officer should be appointed for education purposes, subject to definition of the time to be given to the duties of his office.

That the education officer to County Education Authorities should be a whole-time education officer.

That in the case of rural and urban district authorities the duties of education officer should be dealt with by a part-time medical man appointed according to the local circumstances.

The Divisions are requested to consider the suggestions above stated, and to favour the Medico-Political Committee with their views thereon by March 9th if possible.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

LANCASHIRE AND CHESHIRE BRANCH:

Wigan Division.

A special general meeting, to which were invited all non-members in the Division area, the members of the neighbouring Divisions of Leigh, Preston and St. Helens, and the chairmen of the Health and Education Committees of the County Borough Council, was held on January 30th at the Royal Hotel. The meeting was well attended and fairly representative of the various areas concerned.

Notification of Births Act.—In reference to the Births Notification Act, 1907, the following resolution, copies of which it was decided to send to the various authorities concerned, was adopted unanimously:

That this meeting of the Wigan Division of the British Medical Association desires to bring before the notice of the various health committees in the Division area the injustice done to the medical profession in imposing on them a public duty without remuneration and at the same time subjecting its members to a money penalty in case of non-compliance.

Means were also considered by which the Act might be complied with and yet the confidential relations between doctor and patient be unimpaired, and it was thought that this would be attained if the doctor in attendance at or just after a birth handed to the father or other relative present one of the cards provided by the health authority with directions that he or she was to fill it in and post it within thirty-six hours.

Medical Inspection of School Children.—The members then passed on to consider the medical inspection of school children and the means by which the profession could work with the health and education authorities best to secure the efficient carrying out of the provisions of the memorandum with economy and with due regard to the interests and dignity of the profession. Most of the members contributed to the discussion, and, after an illuminating speech by Dr. Buchan, who described his experience of the working of medical inspection of schools in St. Helens and the conclusions he had come to in consequence, the following resolution was proposed by Dr. Rees, and carried without dissent:

That in the County Borough of Wigan the medical inspection of school children should be carried out by a whole-time medical officer of the Health Committee, who might also be the Medical Officer of Health for the time being, but should in no case be engaged in private medical practice.

In regard to the urban and rural districts in the area and abutting on the borough, it was considered that it would be impossible at present to apply such a rule on the grounds of expense, but that if contiguous country areas could agree to be grouped together and share the expense and the services of such a whole-time officer, it should be feasible.

METROPOLITAN COUNTIES BRANCH:

City Division.

A general meeting of the Division was held at the Great Eastern Hotel, Liverpool Street, E.C., on Tuesday, January 28th, at 4 p.m. Dr. Southcombe (Chairman) presided, and 13 members were present.

Confirmation of Minutes.—The minutes of the previous general meeting of November 28th, 1907, were read, confirmed, and signed by the Chairman.

Medical Inspection of School Children.—Letters were read from the Medical Secretary and from the Secretary to the Branch Council (Dr. Atwood Thorne) *re* the medical inspection of school children, the latter asking for a reply before February 15th. It was resolved:

That owing to the importance of the subject, a special meeting of the Executive Committee be held on February 5th to go into the matter thoroughly, and report later to a general meeting of the Division.

Annual Divisional Report.—The annual Divisional report to the Branch Council, which had been previously passed by the Executive Committee, was then read and accepted.

The membership on December 16th, 1907, was stated as 158, with 1 associate. The balance in hand on December 31st was £2 6s. 7d. The Division held 10 meetings during the year. At two of these scientific matters were discussed; at eight medico-political, ethical, or kindred questions were debated. The average attendance of members at meetings was 14.5. The Executive Committee held 6 meetings, the average attendance being 8. The members dined together on one occasion.

Vote of Thanks.—A vote of thanks was passed to Dr. King Warry for his hospitality at the meeting held at the Hackney Town Hall on November 28th, 1907.

Notification of Births Act.—Dr. M. GREENWOOD moved:

That the Honorary Secretary be instructed to send to the Corporation of the City of London, and the Borough Councils of Hackney, Shoreditch, and Bethnal Green, the resolutions *re* the Early Notification of Births Act passed at the last meeting of the City Division.

Dr. Greenwood also moved:

That a deputation be appointed by this Division to attend any meeting of the local authorities within its area willing to receive the same, to explain more fully its views in the matter, when the adoption of the Early Notification of Births Act is being considered.

Dr. J. BYNOE seconded these resolutions, but on being put to the meeting they were lost by one vote, 5 voting for them and 6 against. The meeting then terminated.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The annual winter meeting will be held in the Royal Infirmary on Friday, February 21st. Members of the different Scottish Branches are cordially invited. The clinical meeting will take place at 4 o'clock. Dinner in the Royal British Hotel, Princes Street, at 6.30 p.m. (morning dress).—A. LOGAN TURNER, M.D., and FRANCIS D. BOYD, M.D., Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at 5 p.m. on Thursday, February 20th, at the Brooklands Hotel, Sale, when, in addition to the usual business, a paper will be read on puerperal fever by Dr. Knyvett Gordon, Resident Medical Superintendent of the Monsall Hospital, Manchester. Dinner will follow at 7 p.m. for those who give notice to the Honorary Secretary beforehand.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting of the members of the Division will be held at the Co-operative Rooms, Ellesmere Street, on Thursday, February 20th, at 8.30 p.m.—J. SACKVILLE MARTIN, M.D., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of the Branch Council will be held at the Medical Institution, Liverpool, on Wednesday, February 12th, at 4.30 p.m.—F. CHARLES LARKIN, 54, Rodney Street, Liverpool, Honorary Secretary.

LEINSTER BRANCH.—The annual meeting of the Branch will be held in the Royal College of Physicians, Kildare Street, Dublin, on Saturday, February 29th, at 4.30 p.m.—ARTHUR H. WHITE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—The next meeting of the Division will be held on Tuesday, February 11th, at 8.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W. (Room No. 11). Dr. Pidcock in the chair. Agenda: (1) Minutes of last meeting. (2) Correspondence. (3) Questions. (4) Report of the Joint Hampstead Hospital Committee of the Division. (5) Resolution of the Executive Committee: "That the Hampstead Hospital question be referred to the Divisional Committee, with full powers to act on behalf of the Division." (6) Medical Inspection of School Children. Consideration of a report to be submitted by a special Subcommittee appointed for the purpose (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL of January 25th, 1908, and December 21st, 1907). (7) Resolution by Dr. Humphreys: "That an Organizing Secretary should be appointed for the purpose of increasing the attendance at meetings and the membership of the Division." (8) Any other business.—R. A. YELD and H. W. ARMIT, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Division will be held on Thursday, February 27th, at 4 p.m., in the Court Room at Guy's Hospital. A paper will be read by A. E. Boycott, M.D., upon the intestinal parasites of man; illustrated cases and pathological specimens will be exhibited by members of the staff of Guy's Hospital.—HERBERT FRENCH Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The next ordinary meeting of the Division will be held on Thursday, February 20th, at 5 p.m., at St. James's Vestry Hall, Piccadilly (First Floor). Special business: The question of medical inspection of school children. R. H. Jocelyn Swan, M.S., F.R.C.S., will read a paper on Some Points in the Diagnosis of Urinary Diseases, illustrated by models.—HARVEY HILLIARD, Honorary Secretary.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—A meeting of the Division will be held at the Leicester Infirmary on Wednesday, February 12th, at 4.15 p.m. Agenda: Minutes of previous meeting. Paper by R. Pratt, M.D., M.R.C.P., on Treatment of Ionic Cataphoresis, with some experiments. Any other business.—WILFRED E. GIBBONS, Honorary Secretary, Leicester.

STAFFORDSHIRE BRANCH.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 27th. The President will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper—Dr. Ernest Mackenzie: The Midwives Act in reference to 1910. (5) Paper—Dr. Geoghegan: Notes of a Case of Lichen Ruber Planus and Pellosis Rheumatica. (6) Exhibition of pathological specimens, etc. Dinner at 7.15 p.m.; charge 5s. Gentlemen wishing to be present at the dinner are requested to intimate their intention not later than Monday, February 24th, to G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—*Alteration of Date of Meeting.*—The date of meeting of this Branch, of which a preliminary notice has been sent to members, is altered to take place from February 13th to February 20th. Members will oblige by taking note of this alteration.—C. S. MORRISON, Honorary Secretary.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal epidemic diseases during the fourth or autumn quarter of last year. The fluctuations of each disease and its relative fatality, compared with that in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—No fatal case of small-pox was registered in London last year, and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals during the fourth quarter of the year.

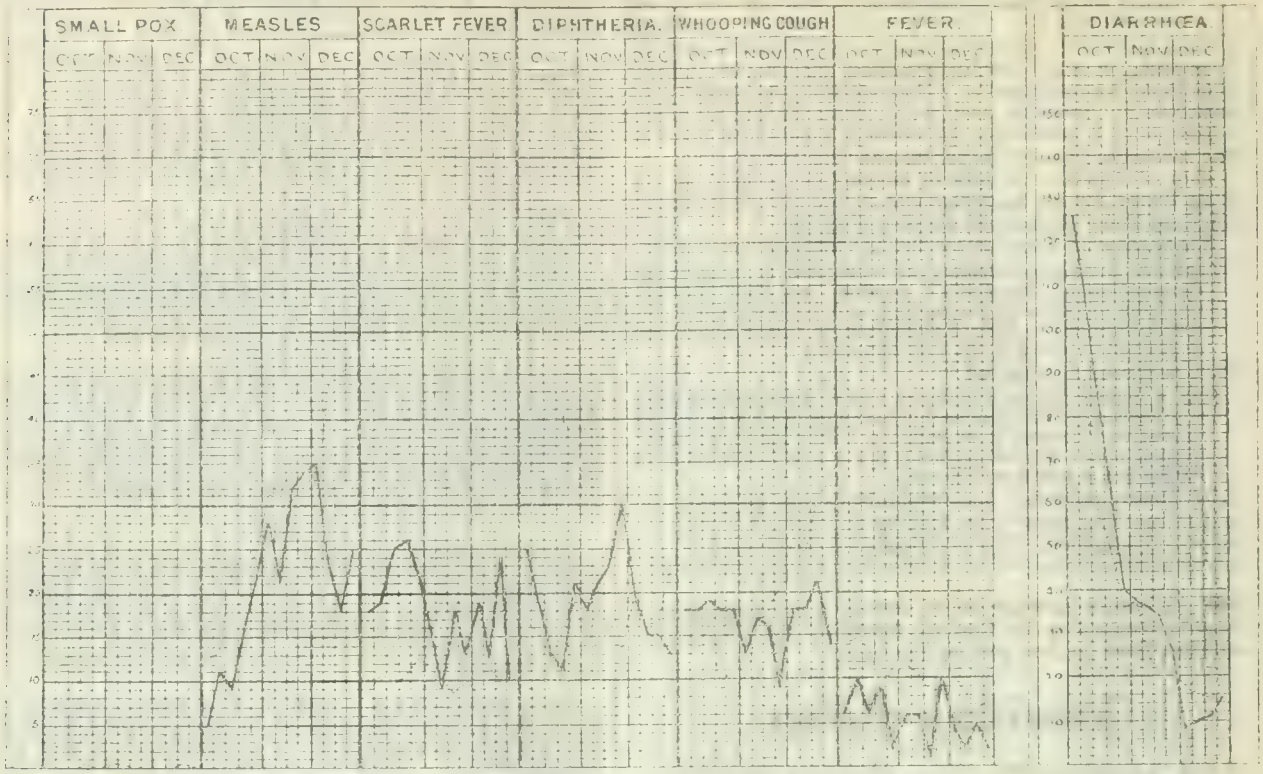
Measles.—The deaths from measles, which had been 465, 661, and 405 in the three preceding quarters, further declined last quarter to 279, and were 120 below the corrected average number in the corresponding period of the five preceding years. Among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Chelsea, Holborn, Shoreditch, and Poplar.

Scarlet Fever.—The fatal cases of this disease, which had been 104, 141, and 168 in the three preceding quarters, further rose to 232 in the three months under notice, and were 99 in excess of the corrected average number. This disease showed the highest proportional mortality last quarter in Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey. The number of scarlet fever cases in the Metropolitan Asylums Hospitals, which had been 2,614, 2,975, and 4,293 at the end of the three preceding quarters, had further risen to 4,956 at the end of last quarter: 8,205 new cases were admitted during the quarter, against 4,033, 4,726, and 6,989 in the three preceding quarters.

Diphtheria.—The deaths referred to diphtheria in London, which had been 229, 159, and 163 in the three preceding quarters, further rose to 244 last quarter, and exceeded by 88 the corrected average number in the corresponding period of the five preceding years. Among the various boroughs this disease was proportionally most fatal in Fulham, Hackney, the City of London, Stepney, and Poplar. The number of diphtheria patients in the Metropolitan Asylums Hospitals, which had been 1,012, 806, and 964 at the end of the three preceding quarters, had further risen to 1,168 at the end of the last quarter; 2,327 cases were admitted during the quarter, against 1,665, 1,507, and 1,804 in the three preceding quarters.

Whooping-Cough.—The fatal cases of this disease, which had been 576, 677, and 470 in the three preceding quarters, further declined last quarter to 217, and were 24 below the corrected average number in the fourth quarters of the five preceding years. The greatest proportiona

Deaths from Epidemic Diseases in London during the Fourth Quarter of 1907.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the five preceding years, 1902-6.

mortality from this disease occurred in Fulham, Chelsea, the City of London, Stepney, Poplar, and Woolwich.

"*Fever*."—Under this heading are included deaths from typhus, from enteric fever, and from ill-defined pyrexia. The deaths referred to these different forms of "fever," which had been 60, 36, and 42 in the three preceding quarters, rose again last quarter to 69, but were little more than half the corrected average number. One death was attributed to ill-defined pyrexia during the quarter, but not any to typhus. Among the various boroughs "fever" was proportionally most fatal in Chelsea, Stoke Newington, Hackney, the City of London, Bethnal Green, and Poplar. The Metropolitan Asylums Hospitals contained 119 enteric fever patients at the end of last quarter, against 93, 57, and 99 at the end of the three preceding quarters; 245 new cases were admitted during the quarter, against 186, 148, and 191 in the three preceding quarters.

Diarrhœa.—The 596 deaths from diarrhœa in London last quarter were 90 in excess of the corrected average number for the corresponding period of the five preceding years. This disease showed the highest proportion of fatality in Finsbury, Shoreditch, Stepney, Poplar, Southwark and Bermondsey.

In conclusion, it may be stated that the 1,637 deaths in London referred to these principal infectious diseases during the quarter ending December last were slightly in excess of the corrected average number for the five preceding fourth quarters. The lowest death-rates from these diseases last quarter were recorded in Kensington, the City of Westminster, Hampstead, Stoke Newington, Lambeth, Wandsworth, Camberwell, and Lewisham; and the highest rates in Finsbury, the City of London, Shoreditch, Bethnal Green, Stepney, and Poplar.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,781 births and 5,680 deaths were registered during the week ending Saturday last, February 1st. The annual rate of mortality in these towns, which had been 19 3, 20 0, and 18.5 per 1,000 in the three preceding weeks, further declined last week to 18.2 per 1,000. The rates in the several towns ranged from 7.3 in Hornsey, 7 6 in Smethwick, 8 7 in Northampton, 9.7 in Burton-on-Trent, 9.8 in East Ham, and 9 9 in King's Norton, to 24.7 in West Bromwich and in Bury, 24.8 in Preston, 25 2 in Rochdale, 26.1 in Hanley, 26.4 in Newport (Mon.), 26.7 in Liverpool, 27.7 in Merthyr Tydfil, and 29.3 in Warrington. In London the rate of mortality was 17.2 per 1,000, while it averaged 18.7 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1 4 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1 3 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2 6 in Devonport and in Bury, 2 7 in Liverpool, in South Shields and in Swansea, 3 1 in Aston Manor, in Bootle and in Bolton, and 7 3 in Warrington. Measles caused a death-rate of 1.1 in Swansea, 1 3 in Southampton, 1.7 in Barrow-in-Furness, 1.8 in York, and 2 0 in Willesden; scarlet fever of 1.1 in St. Helens, and 1 5 in Warrington; diphtheria of 1 8 in Bury and 1.9 in Reading; whooping-cough of 1 7 in Sunderland, 1.9 in Devonport, 2 3 in Bootle and in South Shields, 2 5 in Aston Manor and in Bolton, and 5 1 in Warrington; and diarrhœa of 1.1 in Walsall. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,481, 4,325 and 4 044 at the end of the three preceding weeks, had further decreased to 3,913 at the end of last week; 405 new cases were admitted during the week, against 469, 469, and 380 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, February 1st, 882 births and 785 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 24 3 and 22.2 per 1,000 in the two preceding weeks, was 22.3 per 1,000 last week, and was 4 1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 17 6 in Dundee and 17 9 in Aberdeen to 23 9 in Glasgow and 25.4 in Greenock. The death-rate from the principal infectious diseases in these towns averaged 3.5 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 394 deaths registered in Glasgow included 54 which were referred to measles, 5 to scarlet fever, 2 to diphtheria, 12 to whooping-cough, 3 to cerebro-spinal meningitis, and 7 to diarrhœa. Three fatal cases of measles, 3 of whooping-cough, and 3 of cerebro-spinal meningitis were recorded in Edinburgh; 2 of diphtheria in Dundee; 3 of measles in Aberdeen; 6 of whooping-cough in Leith; 2 of measles and 3 of whooping-cough in Greenock; and 2 of whooping-cough in Perth.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 25th, 476 births and 605 deaths were registered in six of the principal Irish towns, as against 568 births and 521 deaths in the preceding period. The annual death-rate in these towns, which had been 22 6, 23 9, and 24 9 per 1,000 in the three preceding weeks, fell to 24 1 per 1,000 in the week under notice, this figure being 5 6 per 1 000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 23.4 in Waterford and 25.1 in Belfast to 29 5 in Dublin, 30 1 in Cork, and 30.4 in Londonderry. The zymotic death-rate in the same six Irish towns averaged 2.2 per 1,000, or 0.1 per 1,000 more than during the preceding period, the highest figures, 5.7 and 3 6, being recorded in Belfast and Londonderry respectively, while Cork registered no deaths under this heading. The principal causes of death in this class of disease were measles and whooping-cough.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Surgeon J. H. Lightfoot is promoted to be Staff Surgeon, from May 15th, 1907. He was appointed Surgeon, May 15th, 1899.

The following appointments have been made at the Admiralty:—Charles M. Beadnell, Fleet Surgeon, to the *King Alfred*, January 28th; John D. Hughes, Fleet Surgeon, to the *Donegal*, January 28th; Henry B. Hall, M.B., Staff Surgeon, to the *Europa*, on recommissioning, February 4th; John C. Rowan, M.B., Staff Surgeon, to the *Sapphire*, additional, for the *Tyne*, January 27th; William R. Center, M.B., Staff Surgeon, to the *President*, additional, for three months' course at West London Hospital, February 3rd; Frederick F. Mahon, Staff Surgeon, to the *Dido*, on recommissioning, February 19th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel G. Coutts, M.B., retires on retired pay, February 5th. His commissions are thus dated: Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; Lieutenant-Colonel, February 5th, 1902. He served with the Chitral Relief Force in 1895, was mentioned in dispatches, and received a medal with clasp. He was also in the South African war in 1899-1901, being present in the advance on Kimberley, including the action at Magersfontein, and in

operations in the Transvaal, in the Orange River Colony (including actions at Lindley, Bethlehem, and Wittebergen), and again in the Transvaal, receiving the Queen's medal with three clasps.

Major K. M. CAMERON, M.B., who is serving in India, has been appointed Staff Surgeon at Army Head Quarters, India, from December 20th, 1907.

The following officers, serving in India, are appointed specialists in the undermentioned subjects, from the dates specified—Dermatology: Captain R. R. LEWIS, 9th (Secunderabad) Division, December 1st; Major J. W. JENNINGS, D.S.O., 8th (Burmah) Division, December 8th. Advanced Operative Surgery: Major H. N. DUNN, M.B., 3rd (Lahore) Division, December 20th; Captain L. HUMPHRY, from the date of his arrival at Poona.

The following officers, serving in India, are reappointed specialists as specified, from June 8th—Ophthalmology: Major T. W. GIBBARD, M.B., 3rd (Lahore) Division; Major F. KIDDLE, M.B., 5th (Mhow) Division; Major T. MCDERMOTT, M.B., 8th (Lucknow) Division. Otology: Captain J. G. BERNE, 6th (Poona) Division. Midwifery and Diseases of Women and Children: Major G. T. K. MAURICE, 7th (Meerut) Division.

Lieutenant-Colonel A. E. TATE, returning from India, has been appointed Deputy Assistant-Director-General of the Army Medical Service at the War Office.

INDIAN MEDICAL SERVICE.

COLONEL W. G. H. HENDERSON, Bombay, Principal Medical Officer, Aden Brigade, is directed to proceed to Mhow, to take up the appointment of Principal Medical Officer, 5th (Mhow) Division. Lieutenant-Colonel J. FALLON, R.A.M.C., now serving at Multan, will officiate as Principal Medical Officer, Aden Brigade.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ACTON EDUCATION COMMITTEE.—Lady Medical Inspector of Schools. Commencing salary, £200 per annum.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BIRKENHEAD: BOROUGH HOSPITAL.—Senior and Junior Resident House-Surgeons; males. Salaries, £100 and £80 per annum respectively and fees.

BRIGHTON COUNTY BOROUGH.—Medical Officer of Health. Salary, £600 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician. Salary, £70 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary, £80 per annum, increasing to £100 per annum on re-election.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer; (2) Resident Junior House-Surgeon; (3) Resident Casualty Officer. Salary, for (1) £75 per annum, and for (2) and (3) at the rate of £50 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160 per annum, increasing to £180.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Physician. Salary, £80 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £60 per annum.

ISLE OF MAN LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £120 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

LINDSEY COUNTY COUNCIL, Lincolnshire.—County Medical Officer of Health and Chief Medical Inspector of School Children. Salary, £400 per annum, rising to £500.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) Medical Registrar. (2) Surgical Registrar. (3) Pathologist and Bacteriologist. (4) Anaesthetist. (5) Radiographer. Honorarium for (1) and (2) 40 guineas per annum, (3) 50 guineas, (4) 20 guineas, and (5) 10 guineas.

MAIDSTONE: KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer; male. Salary, £175 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Resident Anaesthetist. Salary at the rate of £40 per annum.

MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Junior Assistant Medical Officer. Salary, £100 per annum, increasing to £160.

NORWICH: NORFOLK COUNTY COUNCIL.—Medical Officer of Health. Salary, £500 per annum, rising to £600.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer (Male). Salary, £150 per annum.

NOTTINGHAMSHIRE EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

ST. PETER'S HOSPITAL FOR STONE, etc., Henrietta Street, W.C.—Junior House-Surgeon. Salary at the rate of £50 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Kingston, co. Surrey, and Penrith, co. Cumberland.

APPOINTMENTS.

BAILEY, T. Ridley, M.D.Edin., Medical Officer to the Bilston Education Committee.

BIRD, W. E. F., M.R.C.S., L.R.C.P.Lond., Medical Officer to the York Post Office.

CHARLES, Herbert, M.R.C.S., L.R.C.P., Anaesthetist to the Paddington Green Children's Hospital.

GLENNY, Elliott T., M.B., B.S.Lond., Medical Officer to the Bristol Dispensary.

GREGOR, A., M.D.Aberd., Medical Officer of Health for the Borough of Falmouth.

HARDWICKE, E. C. V., M.B., Ch.B.Edin., Second Resident Assistant to the Medical Superintendent of the Paddington Parish Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EDWARDS.—On February 2nd, at Granville House, Bridport, the wife of Charles Edwards, M.R.C.S., of a son, stillborn.

GOMES.—On Monday, January 27th, at 5, Upper Woburn Place, London, the wife of Sidney Gerald Gomes, F.R.C.S.E., of a daughter.

WEBB.—On Tuesday, January 28th, at 221, Bloomsbury Street, Birmingham, to Dr. and Mrs. S. G. Webb, a son.

YOUNG.—On January 25th, at Applecross, Ross-shire, the wife of W. B. Young, M.B., C.M., of a son.

MARRIAGE.

TAYLOR—ROBARTS.—On January 30th, at St. John the Baptist Church, Fladbury, Stuart Hopcraft Stanley Taylor, B.A.Cantab., M.B., Ch.B.Edin., of Lacock, Wilts, to Hilda Mary Fanny, third surviving daughter of the late Arthur Frederick Robarts and Fanny Robarts, of Craycombe, Pershore, Worcestershire.

DEATHS.

BROCKLEHURST.—On January 11th, at Lytchett Minster, Dorset, Thomas Howard Brocklehurst, M.R.C.S.Eng., L.S.A.Lond., aged 64 years, of leucocythaemia.

CORCORAN.—On January 31st, at 25, Victoria Street, Loughborough, Rose Edith, wife of Thomas Corcoran, surgeon, aged 39.

HUMBLE.—On January 15th, at his residence, Corfe Castle, William Edward Humble, M.D., aged 87. Interred, Corfe Castle Cemetery, January 18th.

KENNEDY.—On January 27th, at Loughton, David Lithgow Kennedy, M.B., M.Ch.Dub., who had been for many years in the Government Medical Service of British Guiana.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical evening. Cases will be exhibited by Mr. Gordon Watson, Dr. Essex Wynter, Dr. M. Dockrell, Dr. R. Hutchison, Dr. W. H. Willcox, Dr. de Havilland Hall, Dr. Morison, Dr. Cecil Wall, and others.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Mr. S. G. Shattock, F.R.C.S.: Ovarian Teratomata.

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.15 p.m.—(1) Narration of Cases and Exhibits of Medico-Legal Interest: (2) An Analysis of 74 Cases of Sudden Death while Under the Influence of an Anaesthetic, by L. Freyberger, M.D., J.P.

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Paper: Mr. A. H. Tubby, Coxa Valga.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Dr. J. W. H. Eyre: The Importance (Surgically) of the Pyogenetic Activities of the *Diplococcus pneumoniae*.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 p.m.—Paper by Mr. Maynard Smith, F.R.C.S., The Diagnosis and Treatment of Abdominal Injuries; paper by Dr. Carmalt-Jones, The Treatment of Bronchial Asthma by Inoculation with a Bacterial Vaccine.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Clinical evening, 8 p.m.—Mr. L. Paton: A Case of Detachment of Retina Cured by Operation. Mr. J. S. Hosford: (1) Hyaline Degeneration of the Vitreous; (2) Buphthalmia, with Malformation of the Iris. Dr. F. W. Edridge-Green: A Lantern Demonstration on some Primary Facts of Colour Perception. Mr. J. H. Fisher: (1) A Case of Microphthalmia; (2) A Case of Birth Injury of Eye, etc. 9 p.m.: Discussion of the Cases.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—Agenda: Specimens—The President, Caseating Carcinoma of the Corpus Uteri; Dr. Macnaughton-Jones, Pyosalpinx Complicating a Myomatous Uterus; Dr. Eardley Holland, A Melanotic Tumour of the Vulva; Dr. Amand Routh, Placenta Diffusa et Praevia. Short communication by Dr. Russell Andrews and Dr. Drummond Maxwell: A Case of Difficult Labour, with Remarks on the Specimen of the Frozen Section of the Uterus. Paper: An Ovarian Dermoid with Secondary Cysts connected with the Omentum, by Martin Randall, M.D., with Pathological Report and Remarks by T. W. P. Lawrence, F.R.C.S.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Dr. Pembrey: The Physiological Principles of Physical Training.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Mr. L. S. Dudgeon, M.R.C.P.: Infection of the Urinary Tract due to *Bacillus coli*.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Exhibition of Cases by Dr. L. Guthrie and Mr. S. Mayou, Mr. J. P. Roughton, Dr. Herbert French, Mr. R. J. Godlee, Dr. Seymour Taylor, Dr. Arthur Latham, and Dr. J. Graham Forbes. Paper by Dr. F. E. Batten and Dr. J. Graham Forbes: Note on a Case of Gaertner Infection in an Infant. The patients will be in attendance at 8 p.m.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Treatment of Acne; 4 p.m., Surgical Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, Monday, Tuesday, Wednesday, and Thursday, 2.30 p.m.; Friday, 3.30 p.m., Clinical Lecture, Urethral stricture.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Cases from the Wards.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Pityriasis Alba, P. Rosea, P. Rubra, P. Rubra Pilaris; Friday, 4 p.m., Drug and Fictitious Eruptions, Traumatic Dermatitis.

HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Clinical Lecture: Friday, 3.30 p.m., Hereditary Ataxy.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Injuries and Diseases of the Epiphyses.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Wednesday, 3.30 p.m., The Diagnosis of Errors of Refraction. Thursday, 2.15 p.m., Neurasthenia: Its Etiology and Treatment.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be delivered as follow: Monday, Thalamic Hemiplegia. Tuesday, Swedish Medical Gymnastics: Their Application in the Treatment of Diseases of the Circulatory and Respiratory Systems. Wednesday, Carcinoma of the Breast: Its Early Recognition and Treatment. Thursday, Pneumo-thorax.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Thursday, 5 p.m., Demonstrations of Methods of Treatment of Chest Diseases in the Wards.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient; 4.30 p.m., Demonstration of Selected Eye Cases.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological. Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday, Clinical; Tuesday, Gynaecological Cases; Wednesday, Cystitis; Thursday, Practical Surgery. At 3 p.m., Friday, at the London County Asylum, Claybury, Woodford Bridge, Essex, Types of Insanity.

BOOKS, ETC., RECEIVED.

Oxford Medical Publications. Fevers in the Tropics. By L. Rogers, M.D., F.R.C.P., F.R.C.S., B.S., I.M.S. 1908. 30s. Life Insurance and General Practice. By E. M. Brockbank, M.D., F.R.C.P. London: H. Frowde, and Hodder and Stoughton. 1908. 7s. 6d.

Die Augenheilkunde in der Römerzeit. Von Dr. B. del Castillo y Quartiellers. Übersetzung aus dem Spanischen von Dr. M. Neuburger. Leipzig and Wien: F. Deuticke. 1907.

London: Baillière, Tindall, and Cox:

Aids to Surgery. By J. Cunning, M.B., B.S., F.R.C.S.Eng. Second edition. 1908. 4s.

The Pocket Anatomy. Sixth edition. By C. H. Fagge, M.B., M.S., F.R.C.S. 1908. 3s. 6d.

The Spectroscope. By T. T. Baker, F.C.S., F.R.P.S. 1907. 5s.

London: H. Kimpton. 1908:

A Practical Treatise on Fractures and Dislocations. By L. A. Stimson, B.A., M.D., LL.D. Fifth edition. 25s.

The Principles and Practice of Modern Surgery. By R. Park, A.M., M.D., LL.D. Vol. I: General Surgery. Vol. II: Regional Surgery. 36s.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
9 Sunday ...	
10 MONDAY ...	
11 TUESDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Hampstead Conservatoire (Room No. 11), Swiss Cottage, N.W., 8.30 p.m.
12 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Meeting of Branch Council, Medical Institution, Liverpool, 4.30 p.m. LEICESTER AND RUTLAND DIVISION, *Midland Branch*, Leicester Infirmary, 4.15 p.m.
13 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m.
14 FRIDAY ...	
15 SATURDAY ...	
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	
19 WEDNESDAY	SOUTH WALES AND MONMOUTHSHIRE BRANCH, Cardiff.

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
20 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, General Meeting, Brooklands Hotel, Sale, 5 p.m.; Dinner, 7 p.m. CITY DIVISION, *Metropolitan Counties Branch*, Metropolitan Hospital, 4 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, 8.30 p.m. WESTMINSTER DIVISION, *Metropolitan Counties Branch*, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m. WORCESTERSHIRE AND HEREFORDSHIRE BRANCH. (Not February 13th as previously announced.)
21 FRIDAY ...	EDINBURGH BRANCH, Annual Meeting, Royal Infirmary, 4 p.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.
22 SATURDAY...	
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 15TH, 1908.

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council, held, by kind permission of the Metropolitan Asylums Board, London, in their Board Room, on Wednesday, January 29th, at 2 o'clock in the afternoon,

Present:

Mr. EDMUND OWEN, LL.D., London, Chairman of Council, in the Chair.

Dr. HENRY DAVY, Exeter, President.

Dr. J. A. MACDONALD, Taunton, Chairman of Representative Meetings.

Dr. EDWIN RAYNER, Stockport, Treasurer.

Dr. JOHN FORD ANDERSON, London
Mr. H. A. BALLANCE, Norwich
Dr. EDGAR G. BARNES, Eye
Fleet Surgeon E. J. BIDEN, R.N., Fareham
Dr. T. R. BRADSHAW, Liverpool
Dr. J. BRASSEY BRIERLEY, Manchester
Dr. W. A. CARLINE, Lincoln
Mr. ANDREW CLARK, D.Sc., London
Dr. W. COLLIER, Oxford
Mr. C. F. CUTHBERT, Gloucester
Mr. E. J. DOMVILLE, Exeter
Mr. A. J. DREW, Oxford
Dr. GEORGE EASTES, London
Mr. C. H. S. FLEMMING, Bradford-on-Avon
Mr. GEORGE COOPER FRANKLIN, LL.D., Leicester
Dr. J. H. GALTON, Upper Norwood, S.E.
Dr. JOSEPH J. GIUSANI, Cork
Dr. ALFRED GODSON, Cheadle
Dr. BRUCE GOFF, Bothwell
Dr. DAVID GOYDER, Bradford
Dr. JAMES HAMILTON, Glasgow
Dr. G. E. HASLIP, London
Colonel C. H. JOUBERT DE LA FERTÉ, I.M.S. ret., Weybridge
Mr. HUGH R. KER, London
Mr. R. H. KINSEY, Bedford
Mr. F. C. LARKIN, Liverpool
Dr. J. MUNRO MOIR, Inverness
Professor J. T. J. MORRISON, Birmingham
Dr. T. G. NASMYTH, Edinburgh
Professor WM. OSLER, F.R.S., Oxford
Mr. C. H. WATTS PARKINSON, Wimborne
Dr. FRANK M. POPE, Leicester
Dr. H. JONES ROBERTS, Penygroes
Dr. J. MAXWELL ROSS, Dumfries
Dr. CECIL E. SHAW, Belfast
Dr. LAURISTON E. SHAW, London
Lieut.-Col. R. J. S. SIMPSON, C.M.G., London (Natal, Griqualand West Branches)
Dr. HENRY SMURTHWAITE, Newcastle-on-Tyne
Mr. W. D. SPANTON, Hanley
Mr. CHARLES R. STRATON, Salisbury
Mr. JOHN LYNN THOMAS, C.B., Cardiff
Dr. G. E. TWYNAM, London (Sydney and New South Wales Branch)
Mr. T. JENNER VERRALL, Brighton
Dr. ARTHUR T. WEAR, Newcastle-on-Tyne
Mr. F. E. A. WEBB, Cambridge
Dr. SINCLAIR WHITE, Sheffield
Mr. D. J. WILLIAMS, Llanelly
Lieutenant-Colonel E. M. WILSON, C.B., C.M.G., Farnborough

Minutes.

The minutes of the October meeting having been printed and circulated were taken as read and signed as correct.

Apologies.

Read letters of apology for non-attendance from the President elect, Sir James Barr, LL.D., Dr. R. C. Buist, Mr. J. Ward Cousins, Dr. James Craig, Dr. George Edmond, Dr. R. McKenzie Johnston, Dr. H. L. McKisack, Dr. C. G. D. Morier, and Dr. W. J. Tyson.

Dr. Galton.

The CHAIRMAN, on behalf of the Council, cordially welcomed Dr. Galton on his return to the Council after his long illness.

Death of Former Member of Council.

Resolved: That the Council learns with sincere regret of the death of Thomas Michael Dolan, M.D., F.R.C.S.Edin., Representative of the Yorkshire Branch on the Central Council from 1896 to 1902; and would request the Chairman to convey to his family the expression of the sincere sympathy of the Council.

Bristol Royal Infirmary.

The CHAIRMAN reported in reference to the Resolution of the last meeting of Council, supporting the Bath and Bristol Branch in resisting a new Rule of the Bristol Royal Infirmary, that the following votes of thanks had been received:

That the hearty thanks of the Bristol Division be conveyed to the Central Council and the Hospitals Committee of the British Medical Association for their most valuable support in this dispute.

That the thanks of the meeting be accorded to the BRITISH MEDICAL JOURNAL and the *Lancet* for the support which they gave to the local medical profession.

Resolutions also had been received from a meeting of the general practitioners of Bristol and district, thanking the Association and the BRITISH MEDICAL JOURNAL for its support in the dispute.

Medical Treatment of School Children.

The CHAIRMAN reported the following communication from the London County Council, under date December 14th last:

Special Subcommittee on Medical Treatment.

Sir,—Adverting to your letter of the 16th ultimo, I am now directed to inform you that the Education Committee of the

Council have appointed Sir Victor Horsley, the representative of the British Medical Association, a member of the Special Subcommittee constituted to inquire into the whole question of the medical treatment of children attending public elementary schools.

I shall be obliged if you will be so good as to inform Sir Victor Horsley accordingly. The date of the first meeting of the subcommittee will be notified to him in due course, but this date will not be fixed until after Christmas.—I am, etc.,

H. J. Mordaunt,
Assistant Clerk of the Council.

The Secretary,
British Medical Association.

Stockport Division.

The Chairman reported that arising out of a question put by Dr. Godson at the last meeting of the Council relative to a matter in dispute in the Stockport Division, he was glad to be able to report that the matter had been brought to a happy conclusion.

British Association.

Read the following communication from the British Association:

Burlington House, Nov. 22nd, 1907.

Dear Sir,—We are in receipt of your letter of yesterday's date, calling our attention to the mischance that our Annual Meeting clashed with the meeting of the British Medical Association this year. We take note of the fact that the British Medical Association endeavours to hold its Annual Meeting during the last week in July. The first week in August is not a good time for us to meet; but it sometimes happens, as in the last two cases, that the towns have found it necessary to recommend that period, chiefly on account of offers of hospitality. I think you may take it that, in future, we shall endeavour to avoid the Bank Holiday week in August, and to meet, as next year at Dublin, in the first week of September.—I am, etc.,

A. Silva White, Assistant Secretary.

Guy Elliston, Esq.

Yorkshire Branch.

The following communication from the Yorkshire Branch was referred to the Organization Committee:

Bradford, November 7th, 1907.

Dear Mr. Owen,—At a meeting of the Yorkshire Branch held at Sheffield yesterday, when sixty-three members were present, the following resolution was passed with only three dissentients. I was asked to forward a copy of the resolution to you.—Yours very truly,

Adolph Bronner, Honorary Secretary.

That this meeting of the Yorkshire Branch of the British Medical Association deprecates the recent attempts to disorganize the constitution of the Council, and strongly protests against the proposals of the Representative Body to deprive the Branches of their right of electing members of the Council. Further, this Branch considers that the Branches have done important and progressive work in the Association, and that no adequate reason has been given for making the radical changes proposed.

Southern Branch.

The following resolution from the Southern Branch was referred to the Medico-Political Committee:

The Council of the Southern Branch would urge upon the Central Council the desirability of inquiring into the whole question of medical law—into the practice of the medical profession by unqualified pretenders, and into the traffic in quack medicines and apparatus. The Branch Council believes that the exposure which would result would show that reform is called for, not so much for the advantage of the medical profession as for the protection of the public; that the attention of the Legislature would be called to the question, and would lead to the speedy construction of laws for the abatement of existing evils.

St. Pancras and Islington Division.

The following communication, dated November 2nd, 1907, from the St. Pancras and Islington Division, was referred to the Chairmen of the Ethical and Medico-Political Committees:

Dear Sir,—I am instructed by my Division to send to the Council of the Association the following resolution, carried unanimously at a meeting of this Division on November 1st:

That this Division desires to draw the attention of the Council to the fact that the reports of the Medico-Political and Ethical Committees for the last year were not distributed in time to enable the Divisions to consider them before the Annual Representative Meeting, and that this Division earnestly hopes that in future the Council will arrange to distribute the reports of all standing committees in time to enable the Divisions to instruct their Representatives concerning them before the Annual Representative Meeting.

William Griffith, Honorary Secretary.

The General Secretary.

Dental Surgery Section.

Moved by Mr. Andrew Clark, seconded by Dr Collier, and

Resolved: That there be a Dental Surgery Section held in connexion with the Sheffield Meeting.

Resolved: That the following be nominated officers of the Section: *President*, Mr. Frank Harrison, M.R.C.S., L.D.S., Sheffield. *Vice-Presidents*, Mr. A. S. Underwood, M.R.C.S., L.D.S., London; Mr. J. H. Gibbs, F.R.C.S., L.D.S., Edinburgh. *Secretaries*, Mr. H. Watson Turner, M.R.C.S., L.D.S., London; Mr. Ralph Lamb, M.R.C.S., L.D.S., Liverpool.

Royal Sanitary Institute.

Considered communication from the Royal Sanitary Institute asking the Council to appoint delegates to their Conference to be held in Cardiff, July 13th to 18th, 1908.

Moved by the Chairman of Representative Meetings, seconded by Mr Hugh Ker, and

Resolved: That it be referred to the Chairman of Council and the Chairman of the Public Health Committee to nominate delegates, and that Members of Council who may be willing to act be requested to send their names to the General Secretary for the purpose.

Candidates for Membership of the Association.

The fourteen candidates whose names appeared on the circular convening the meeting were elected members of the British Medical Association.

Buda-Pesth Congress.

Resolved: That Mr. O. H. Fowler, Cirencester, Dr. F. J. McCann, London, and Mr. J. Lynn Thomas, C.B., Cardiff, be appointed delegates of the Association to the Sixteenth International Medical Congress to be held at Buda-Pesth, August 29th to September 4th, 1909.

Journal and Finance Committee.

Moved by the Treasurer, seconded by Dr. Edgar Barnes, and

Resolved: That the accounts for the quarter ending December 31st last, amounting to £18,074 15s. 10d., be received and approved, and the Treasurer be empowered to pay those remaining unpaid, amounting to £3,240 1s. 9d.

Moved by the Treasurer, seconded by Dr. Edgar Barnes, and

Resolved: That the General Secretary be instructed to communicate with the Council of the Incorporated Society of Medical Officers of Health, and express regret that any article published in the British Medical Journal has been interpreted by them as seriously reflecting upon the efficiency and public spirit of medical officers of health.

The Lancet.

Resolved: That the Council, recognizing the injury done to the public by the uncontrolled sale of secret remedies, desires to place on record its entire sympathy with the proprietors of the *Lancet* on the result of the recent action, Tucker *v.* Wakley.

Organization Committee.

Resolved That a supplementary grant of £150 be voted to assist the work of the Contract Practice Committee of the South Wales and Monmouthshire Branch, in accordance with By-law 18.

Moved by Mr. Andrew Clark, seconded by Mr. Hugh Ker, and

Resolved: That it be reported to the Metropolitan Counties Branch that the proposal of the Branch as to the taking effect of resignations would involve an alteration of the articles of association, and, even if the articles were so altered, could not be carried out in all districts.

Resolved: That the General Secretary be instructed immediately upon receipt of an intimation of resignation of membership to notify the Honorary Secretary of the Division and Branch to which the member belongs.

Resolved: That the votes reported by the Divisions as having been given at their meetings in connexion with the Referendum be counted on March 2nd.

Resolved: That the Chairman of Council be authorized to communicate to the Organization Committee as soon as ascertained the result of the voting in connexion with the Referendum.

With reference to the two foregoing resolutions, the Chairman undertook to authorize the publication in the Journal of the numbers voting "For" and "Against" the Referendum.

Resolved: That each Colonial Division which has an Honorary Secretary and necessary organization be provisionally granted separate representation in Representative Meetings for the year 1908-9:

Resolved: That the Colonial Branches be provisionally grouped for representation on the Council for the year 1908-9 in the same manner as for the year 1907-8, subject to recognition of the right of each Branch, or group of Branches, having at least 400 members, to elect two Members of Council.

Resolved: That the Council authorize the Organization Committee finally to determine the grouping of the Colonial Divisions and Branches for representative purposes as soon as possible after allowing a reasonable interval for the receipt of replies from those Divisions and Branches to which the Committee has addressed inquiries on the subject.

Moved by Mr. Andrew Clark, seconded by Mr. Verrall, and

Resolved: That, subject to the verbal amendments indicated by the Chairman of the Organization Committee, the Rules submitted by the Cape of Good Hope, Eastern Province, Branch, be approved, with the exception of Rule 4, paragraph (8), as to proxy voting.

Moved by Mr. Andrew Clark, seconded by Mr. Verrall, and

Resolved: That the Council approve the rules submitted by the Cape of Good Hope, Border Branch, subject to verbal amendments.

Resolved: That the Council instruct the Organization Committee to prepare for the consideration of the Council such amendments of By-law 41 as are necessary to give effect to the proposals of the Committee, as well as to the instructions already received by the Committee from the Council.

Science Committee.

Resolved: That a Special Committee be appointed to report on the resolution passed in the Section of Obstetrics and Gynaecology on the early recognition of uterine cancer.

Moved by Dr. Cecil Shaw, seconded by Dr. Pope, and

Resolved: That Dr. F. J. McCann be requested to act as Convener, and the Committee consist of the following: The President, the Chairman of Representative Meetings, the Chairman of Council, the Treasurer, *ex officio*; Dr. Archibald Donald, Manchester; Dr. Ranken Lyle, Newcastle-on-Tyne; Dr F. J. McCann, London; Dr. W. A. Milligan, London; Mrs. Mary Scharlieb, London; Dr. Thomas Wilson, Birmingham; Dr. R C. Buist, Scotland; and Dr. Hastings Tweedy, Ireland.

Resolved: That the Stewart Prize for 1908 be awarded at the forthcoming meeting at Sheffield.

Resolved: That the Middlemore Prize be awarded to the President-elect, Mr. Simeon Snell, F.R.C.S.Edin., for his contributions to the Science of Ophthalmology, at the forthcoming meeting at Sheffield.

Irish Committee.

Resolved: That the Local Government Board for Ireland be asked whether any steps are being taken to obtain powers to make compulsory a satisfactory scale of salaries for Poor-law Medical Officers in Ireland where Poor-law Unions have failed or refused to adopt a scale.

Resolved: That a letter and memorandum of points to be included in the Irish Public Health Bill be forwarded to the Irish Divisions and Branches.

Public Health Committee.

Moved by Mr. Parkinson, seconded by Mr. Straton and

Resolved: That, with respect to the following resolution of the Section of State Medicine, referred by the Council to the Public Health Committee for consideration and report, namely:

That the attention of the Local Government Board be drawn to the inadequacy of the minimum fee laid down in the Vaccination Order of 1907; moreover, that it is desirable that all expenses connected with the carrying out of the Vaccination Acts should be borne by the Imperial Exchequer.

it be represented to the Local Government Board that the minimum fee has been adopted in many districts in which it is, having regard to the local circumstances, inadequate, and also that the expenses of vaccination should be borne by the Imperial Exchequer.

Medico-Political Committee.

Moved by the Chairman of Representative Meetings, seconded by Dr. Haslip, and

Resolved: That the Medico-Political Committee be authorized to prepare evidence to lay before the proposed Departmental Committee of the Home Office as to the treatment of inebriety and narcomania, the preparation of evidence to include analyses of drugs used in the treatment of inebriety, and that the Committee be authorized to incur the necessary expenditure.

Moved by the Treasurer, seconded by the Chairman of Representative Meetings, and

Resolved: That with reference to the preparation of evidence and the analysis of drugs in the treatment of inebriety and narcomania, the Medico-Political Committee be authorized to incur expenditure not exceeding £25 for analyses, and not exceeding £25 for tabulating evidence, with authority to the Chairman of Council and Treasurer to sanction additional expenditure not exceeding £25 if in their judgement necessary.

Moved by the Chairman of Representative Meetings, seconded by Mr. Franklin, and

Resolved: That the Medico-Political Committee be authorized to incur special expenditure, if necessary, for analysing information, to be collected through the Divisions, as to the cause of the increase of inebriety and narcomania among women, such expenditure not to exceed £10.

Resolved: That the Council authorize the Irish Committee to instruct legal advisers to attend an inquiry or inquiries by the Inspectors of the Irish Local Government Board, in reference to the conduct of medical officers, and to report to the Committee upon the procedure in such cases, such report to be subsequently furnished to the Medico-Political Committee, and that the cost of such inquiry be limited to twenty guineas, except with the consent of the Treasurer.

Moved by the Chairman of Representative Meetings, seconded by Dr. Pope, and

Resolved: That, with respect to the employment of Honorary Medical Referees by the National Association for the Establishment of Sanatoria for Workers suffering from Tuberculosis, the Council expresses the following opinions, namely:

(*a*) That the appointment of any special medical referees is unnecessary.

(*b*) That the requirements of the case could best be met by drawing up suitable forms of certificate for signature by the ordinary medical attendants of the patients whose admission to the sanatorium is proposed, with provision for taking a second opinion in cases of need at the discretion of the medical attendant; the fee of the person called in to be paid by the Sanatorium Association, and such fee to be 1 guinea.

(*c*) That medical referees, if appointed, should be paid.

In reference to the following minute of the Medico-Political Committee:

Resolved: That the Council of the Glasgow Branch be requested to make careful inquiry into all the circumstances, and inform the Committee of the result as soon as possible, and that the Joint Committee of the Association and the Ophthalmological Society be requested to consider the matter and report.

An amendment was moved by Dr. Hamilton, seconded by Professor Morrison:

That all the words after "as soon as possible" be deleted.

After discussion, and upon the assurance of the Chairman that he would see that the matter was first remitted to the Glasgow Branch and subsequently considered by the Joint Committee, the amendment was withdrawn.

Dr. Maxwell Ross asked if, by passing the following minute of the Medico-Political Committee, it conveyed the assent of the Council to the same:

Medical Inspection of School Children Subcommittee.
Received: Minutes of the Medical Inspection of School Children Subcommittee of November 6th, November 25th, and December 4th, 1907.

The Chairman replied that this minute was only reported, and did not necessarily express the approval of the Council.

Hospitals Committee.

On consideration of the minutes relating to a proposed General Hospital at Putney an amendment was moved by Mr. Hugh Ker, seconded by Dr. Ford Anderson:

That with regard to the minutes, dealing with the question of the proposed General Hospital at Putney, the matter be referred back to the Hospitals Committee, asking them to again confer with the South-West London Hospital Committee.

This was subsequently withdrawn on the Chairman giving Mr. Ker an assurance that the matter could be brought before the Council again.

Ethical Committee.

Moved by Mr. Kinsey, seconded by the Chairman of Representative Meetings, and

Resolved: That the adoption of the model rules of procedure by the Liverpool (Western) Division (Lancashire and Cheshire Branch) be approved.

Resolved: That the adoption of the "Bradford" Rules and Rule "Z" by the Blyth Division (North of England Branch), the Sheffield Division (Yorkshire Branch), and the South-West Wales Division (South Wales and Monmouthshire Branch), be approved.

Resolved: That the adoption by the Manchester (North) Division (Lancashire and Cheshire Branch) of the "Bradford" Rules, as modified by the Division, be approved.

Resolved: That the adoption of the "Bradford" Rules (A), (B), (C), (D), (E), and (H) by the Hartlepools Division (North of England Branch) be approved.

The Council considered and dealt with two cases of members recommended for expulsion.

The Council also considered and dealt with the case of a member who was recommended to be given an opportunity to resign on or before a certain date.

Premises Committee.

Resolved: That the architect be instructed to provide in the new premises an electrically-driven type lift from the composing room to the ground floor.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

UNITED KINGDOM HOSPITALS CONFERENCE.

The following letter has been addressed to Secretaries of Hospitals in Great Britain and Ireland by the Committee of the United Kingdom Hospitals Conference:

February 6th, 1908.

Dear Sir,

Report of Committee.

The Committee appointed by the United Kingdom Hospitals Conference, held in London on December 6th, 1906, submits for the information of the Board of Management of the ..... Hospital:

1. A report of the proceedings of the last Conference.
2. A report of the subsequent proceedings of the Committee appointed by the Conference to give effect to the resolutions there arrived at.
3. A copy of the "Principles" which were before the last Conference, showing also certain amendments suggested by the Committee as the result of its consideration of criticisms by Hospitals of these "Principles" in their original form.
4. Suggestions as to the Agenda for a Conference to be held in March, 1908.

These reports show that, in spite of the differing circumstances in which hospital work is carried on in various localities, it is possible to formulate principles which are applicable to the majority of cases, and there is already proof that the two Conferences which have so far been held have been attended by substantial advantages.

The Committee is, however, of opinion that future Conferences will be attended with greater advantage if a longer time is afforded for discussing the subjects dealt with, and if those attending the Conference are given some opportunity of comparing their separate experiences.

To meet these points it is suggested:

That the next Conference should extend over two days, and

That the representatives should dine together on the first day of the Conference.

The Principles of Hospital Administration, of which the last Conference stated that it welcomed the further consideration, have met with such general acceptance that it is not anticipated that they need occupy any considerable time at the next, and it is suggested that any discussion with regard to them should be confined to those matters which may be made the subject of a definite motion by the representatives of any hospital, and of which formal notice shall have been given in order that such motions may be placed on the agenda.

Suggestions as to the Agenda for the next Conference appear on a separate sheet (document "4"), but the Committee proposes to add to or otherwise revise the programme, as may appear expedient, after having received the various suggestions which the Hospitals may have to make with regard to it.

The Committee will meet again to consider the replies to this letter and to draw up the final Agenda for the Conference, which Agenda will then be circulated to the secretary and representatives of each hospital which indicates its intention of taking part.

We are instructed to ask if you will be good enough to bring the matter to the notice of your Board and to acquaint us as soon as possible:

(*a*) As to whether your Board proposes to appoint a representative or representatives to attend the Conference.

(*b*) As to whether your Board would desire to give notice of any motion arising out of the principles circulated in August, 1906 (see document marked "3").

(*c*) Whether your Board approves of the discussion of any or all of the subjects suggested by the Com-

mittee (see No. "4" herewith), and desires to suggest any other subjects for discussion.

(*d*) Whether your Board desires to make any other suggestions with regard to the arrangements for the next Conference.

The Committee has also to appeal for financial support to meet the necessary clerical and other expenses of its work. It is considered that a subscription of 10s. 6d. from or on behalf of each hospital represented would be sufficient to meet such expenses as can at present be foreseen.

We are,
Yours faithfully,
Charles Lupton, Chairman of Committee.
J. Smith Whitaker, Secretary.

PROCEEDINGS OF CONFERENCE, DECEMBER, 1906.

Attendance.

The Conference of December 6th, 1906, was attended by Delegates from 116 Hospitals in England and Wales, 2 in Scotland and 2 in Ireland; 72 General Hospitals, 36 Special Hospitals, and 12 Cottage Hospitals were represented.

Procedure.

The proposals of the Committee, circulated in August, 1906, were considered *en bloc*, but the time at the disposal of the Conference did not permit of detailed discussion.

Decisions.

The following Resolutions were carried:—

(*a*) "That this Conference of representatives and supporters of hospitals, medical practitioners, and others interested in hospital administration in Great Britain and Ireland, welcomes the further consideration of the principles contained in the proposals drawn up by the Joint Hospitals Committee, and circulated to Hospitals in August, 1906."

(*b*) "That it is advisable that an Annual Conference should be held."

(*c*) "That a Committee be appointed, not exceeding fifteen in number, to act in conjunction with the Hospitals Committee of the British Medical Association, with instructions to communicate to all hospitals the resolutions of the present Conference, to arrange for the holding of a Conference in 1907, and in the interval to exhort hospitals and kindred institutions carefully to consider the suggestions laid before this meeting, together with the reports received from the various hospitals."

(*d*) "That the following representatives of hospitals be appointed by the Conference:—
Walter Baily, Esq.
Sir Henry Burdett, K.C.B.
W. G. Carnt, Esq.
Neville Chamberlain, Esq.
A. W. Davis, Esq.
W. A. Dinwiddie, Esq.
Sir Charles Gilman.
The Hon. Sydney Holland.
The Rt. Hon. the Earl of Kilmorey, K.P.
Sir Riley Lord.
Charles Lupton, Esq.
H. Manfield, Esq., M.P.
Herbert W. Mason, Esq.
Col. Montefiore.
A. A. Napper, Esq.,"
to act with the Hospitals Committee of the British Medical Association as stated in resolution (*c*). The present composition of the Committee, including the members of the Hospitals Committee of the British Medical Association, is stated below.

(*e*) "That an appeal be made to hospitals to contribute towards the expenses of carrying on the work."

COMMITTEE.

Charles Lupton, Esq., 34, Albion Street, Leeds (Chairman, General Infirmary, Leeds), *Chairman of the Committee.*

Dr. J. Ford Anderson, 41, Belsize Park, N.W. (Chairman, Medical Charities Committee, Metropolitan Counties Branch, and Member of Central Council, British Medical Association).

Walter Baily, Esq., 4, Rosslyn Hill, N.W. (Vice-Chairman, University College Hospital, W.C.).

Sir Henry Burdett, K.C.B., The Lodge, Porchester Square, W. (Editor of the "Hospital" and "Burdett's Hospitals and Charities").

W. G. Carnt, Esq., Royal Infirmary, Manchester (Secretary, Royal Infirmary, Manchester).

Neville Chamberlain, Esq., Highbury, Moor Green, Birmingham (Governor, General Hospital, Birmingham).

C. F. Cuthbert, Esq., 2, Barton Street, Gloucester (Surg., Gloucester Hospital for Children; Member of Central Council, British Medical Association).

A. W. Davis, Esq., 54, Gray's Inn Road, W.C. (Secretary, Hospital Saturday Fund).

Dr. Henry Davy, Southernhay House, Exeter (Cons. Phys., Exeter Disp.; Phys., Devon and Exeter Hospital; President, British Medical Association).

W. A. Dinwiddie, Esq., J.P., Bridgebank, Dumfries (Chairman, Dumfries-shire and Galloway Royal Infirmary).

Dr. E. L. Fox, 9, Osborne Place, Plymouth (Phys., Royal Eye Infirmary, Plymouth; Phys., South Devon and East Cornwall Hospital, Plymouth).

Dr. A. Godson, Cheadle House, Cheadle (Member of Central Council, British Medical Association).

Dr. James Hamilton, 1, Royal Crescent, Crosshill, Glasgow (Asst. Phys., Victoria Infirmary, Glasgow; Member of Central Council, British Medical Association).

Dr. J. Rogerson Hamilton, Elm House, Hawick, N.B.

The Hon. Sydney Holland, Kneesworth Hall, Royston, Herts (Chairman, London Hospital, E.; Poplar Hospital, E.; and Tilbury Cottage Hospital).

T. Garrett Horder, Esq., M.R.C.S., Windsor Place, Cardiff.

Col. C. H. Joubert de la Ferté, I.M.S. (retd.), The Ferns, Weybridge, Surrey (Member of Central Council, British Medical Association).

The Rt. Hon. The Earl of Kilmorey, K.P., 5, Alford Street, Park Lane, W. (Chairman, Charing Cross Hospital, W.C.).

Sir Riley Lord, Prudential Buildings, Newcastle-on-Tyne (Governor, Newcastle-on-Tyne Infirmary).

Dr. J. A. Macdonald, 19, East Street, Taunton (Phys., Taunton and Somerset Hospital; Chairman of Representative Meetings, British Medical Association).

H. Manfield, Esq., M.P., Moulton Grange, Northampton (Governor, Northampton General Hospital).

Herbert W. Mason, Esq., Manor House, Sproughton, Ipswich (Chairman, East Suffolk and Ipswich Hospital).

Lt.-Col. E. Montefiore, Charity Organisation Society, Denison House, Vauxhall Bridge Road, S.W.

Dr. A. A. Napper, Broad Oak, Cranleigh, Surrey (Surg., Cranleigh Village Hospital).

Edmund Owen, Esq., LL.D., F.R.C.S. 64, Gt. Cumberland Place, W. (Cons. Surg., St. Mary's Hospital, Paddington, W.; Chairman of Council, British Medical Association).

Dr. Frank M. Pope, 4, Prebend Street, Leicester (Phys., Leicester Infirmary; Chairman, Hospitals Committee, and Member of Central Council, British Medical Association).

Dr. E. Rayner, 19, Tiviot Dale, Stockport (Surgeon, Stockport Infirmary; Treasurer of the British Medical Association).

Dr. Lauriston E. Shaw, 64, Harley Street, W. (Phys., Guy's Hospital, S.E.; Member of Central Council, British Medical Association).

E. F. White, Esq., F.R.C.S., 388, Upper Richmond Road Putney, S.W.

REPORT OF PROCEEDINGS OF COMMITTEE APPOINTED BY CONFERENCE, 1906, TO GIVE EFFECT TO ITS RESOLUTIONS.

The instructions of the Conference involved, essentially, two references to the Committee appointed by that Conference, namely, first, to secure the further consideration by Hospitals generally of the proposals laid before the Conference, in conjunction with the information derived from the replies of Hospitals in reference thereto; and, secondly, to make arrangements for the next Conference.

Analysis of Replies of Hospitals as to "Proposals" Placed Before Last Conference.

For the purpose of giving effect to the first of these references the Committee has caused the opinions expressed in reference to the proposals that were laid before the last Conference to be carefully analysed and reports the result of the analysis as follows:—

Number of Replies Received.

Of the **810** Hospitals in the United Kingdom communicated with, **238** Hospitals have forwarded in reply statements of their views upon some or all of the matters submitted for their consideration. Among those so replying are a majority of the principal General Hospitals in London, and in England and Wales generally. Replies have been received also from **54** Special Hospitals in England and Wales.

In Scotland, of **64** Hospitals, **17** replied.

From Ireland the replies were very few, as the connection of the majority of Hospitals in that country with the Poor Law Administration differentiates their circumstances essentially from those prevailing in Great Britain.

Of **218** Cottage Hospitals addressed, **69** have expressed their opinions on the proposals especially affecting them.

Summary of Opinions Expressed.

General Hospital Administration.

With regard to the 19 Principles of Hospital Administration (*see* Document "3"), the Committee is glad to be able to report that the replies show general agreement among Hospitals with all except Nos. 2, 9, 12, and 15.

Concerning proposal No. 2, as to *Subscribers' Letters*, there appears to be a general disposition to cease making subscribers' letters compulsory, but the majority of provincial Hospitals are averse from discontinuing entirely the issue of such letters.

With reference to No. 9, as to *Limitation of Work of Medical Officers*, there is agreement in principle, but Hospitals do not appear to see their way to carry it out.

Concerning Nos. 12 and 15, as to *Co-operation of Hospitals*, and *Reference elsewhere of Unsuitable Cases*, respectively, the Committee considers that the difficulties indicated can be overcome by modifications of wording.

Cottage Hospitals.

In the proposals as to Cottage Hospitals the Committee also finds general concurrence among those which have replied, such dissent as exists chiefly affecting proposal No. 4, as to *Certificate of Suitability for Admission.*

Public Nursing Homes.

Little interest seems to have been taken in the proposals as to Self-Supporting Public Nursing Homes, and the matter is apparently not ripe for general action.

Modifications Proposed.

Upon consideration of the general opinions indicated in the foregoing statement the Committee has thought it well, in again submitting the proposals for the consideration of Hospitals, to modify the wording of paragraphs 12 and 15 as shown in the accompanying print (Document "3"), and would add the following explanatory statement:—

Subscribers' Letters.

With regard to Principle 2, as to which, as mentioned in the Report, there has been the greatest measure of disagreement, the Committee desires to suggest for the consideration of those Hospitals which are not prepared to give up the system of Subscribers' Letters that it is highly desirable that the wording of the form of Subscriber's Letter or Certificate used should be such as to secure the object of excluding unsuitable cases. Copies of forms which have been especially adopted by certain Hospitals with this object are in the possession of the Committee, and will be forwarded for the assistance of any Hospital which may desire to revise the wording of its present letters or certificates.

Importance of Uniform Regulations.

Whereas the conditions of Hospitals differ so widely in different places, the information in the possession of the Committee shows clearly the importance of the adoption of uniform regulations by those Hospitals which carry on their work in the same district, and Principle 12 has been modified in wording with the object of making this suggestion clear.

Further Duties of the Committee with Respect to the "Proposals."

Part of the duty of the Committee under its instruction is to endeavour to remove difficulties which may be experienced by individual Boards of Management of Hospitals in applying the principles generally agreed upon to their local circumstances.

Many valuable suggestions, based on actual experience, are contained in the information now in the possession of the Committee, derived from the replies of Hospitals, and the Committee will be glad to put this information at the disposal of Hospitals which may desire it.

The Committee will also be glad to receive, at the convenience of the Board of any Hospital, notes of any expression of opinion at which the Board may arrive, as the result of further consideration of the subject and to answer any inquiries.

January, 1908.

HOSPITAL REFORM.

PROPOSALS AS TO THE ADMINISTRATION AND MANAGEMENT OF HOSPITALS AND KINDRED INSTITUTIONS, DRAWN UP IN 1906 BY A JOINT MEDICAL AND NON-MEDICAL COMMITTEE, WITH A NOTE AND PROPOSED AMENDMENTS BY THE COMMITTEE APPOINTED BY THE UNITED KINGDOM HOSPITALS CONFERENCE OF DECEMBER, 1906.

I.—Suggested Model Principles of Hospital Management.

1. *Suitability of Patients for Admission.*—That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment. This shall not apply to Poor-law cases.

2. *Subscribers' Letters.*—That the production of subscribers' letters shall cease to be compulsory, and that, where possible, the system shall be abolished.

(NOTE.—*Though the first part of this Principle is generally approved, many Hospitals consider the abolition of Subscribers' Letters impracticable, having regard to local*

conditions. Where this is the case the Committee recommends that the wording of such Letters should be revised so as to secure the object of facilitating the exclusion of unsuitable cases.)

3. *Investigations as to Suitability.*—That some means of investigation into the circumstances of the applicants for relief, by means of an almoner or other agent, shall be employed in all medical charities.

4. *Recommendations* 1, 2, 3, *to apply to all Patients.*—That the foregoing recommendations apply to both in-patients and out-patients.

5. *Evidence of Suitability.*—That except in emergencies, sufficient evidence shall be obtained on two points: (*a*) That the patient is not in a position to pay for adequate treatment; (*b*) that the case is, from a hospital point of view, suitable for treatment.

6. *Urgent Cases.*—That all cases of serious accident and severe sudden illness shall be attended to on their first application, and, if deemed eligible for further treatment, shall be referred to the appropriate department of the hospital, but, if ineligible, shall then be referred for treatment elsewhere.

7. *Trivial Cases.*—That all cases of trivial accident or illness deemed ineligible for the casualty department shall, after having been seen, be referred for treatment elsewhere.

8. *Medical Inspection of all cases.*—That, on the first visit, no patient be permitted to leave a hospital without having been seen by a registered medical practitioner.

9. *Limitation of Work of Medical Officers.*—That, where possible, the number of new cases to be seen on any one day by an honorary medical officer shall be limited.

10. *Scope of Special Hospitals.*—That special hospitals shall treat only those cases that come strictly within the scope of their work.

11. *Age limit for Retirement.*—That in all hospitals there shall be an age limit for the retirement of the medical officers.

12. *Co-operation of Hospitals.*—That no scheme for the reform of out-patient departments can be successful without co-operation and co-ordination between hospitals themselves, especially those which operate in the same area.

(**Amendment.**—"*That hospitals operating in the same area should confer with the object of securing approximately uniform regulations for the prevention of abuse.*")

13. *Pay Wards.*—That there is no objection to pay wards being connected with voluntary hospitals, provided that they are open to every member of the medical profession, who shall be paid any fee to be arranged by him and his patient.

14. *Scope of Out-patient Departments.*—That consultations shall, as far as possible, be encouraged in out-patient departments.

15. *Reference elsewhere of Unsuitable Cases.*—That all cases shall be seen by an almoner, and those not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service,* an approved provident dispensary, or to the relieving officer under the Poor Law.

(**Amendment.**—*That the words "shall be seen by an almoner, and those" be deleted, the Principle to read accordingly:—*

"*That all cases not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service, an approved provident dispensary, or to the relieving officer under the Poor Law.*")

16. *Co-ordination of Hospitals with Public Medical Services and Provident Dispensaries.*—That there shall be a system of co-ordination between hospitals, on the one hand, and public medical services and provident dispensaries on the other, so that the hospitals shall refer to the public medical services and provident dispensaries cases unsuitable for hospital treatment (see paragraph 15 foregoing), and the public medical services and provident dispensaries shall refer to the hospitals cases for consultation, as well as those requiring hospital treatment and nursing, or specially suitable for purposes of clinical instruction.

17. *Notices to Facilitate Co-operation.*—That notices be posted in out-patient and casualty departments of hospitals calling attention to public medical services or approved provident dispensaries in the neighbourhood.

18. *Reference of Cases for Special Advice.*—That a member of a public medical service or provident dispensary, or other patient referred to a hospital for consultation, with a private note or personally, by a general practitioner in attendance, should be referred back to such medical attendant with a statement of the opinion of the hospital physician or surgeon on the condition of the patient.

19. *Relation of Hospitals to the Poor-law Medical Service.*—That cases of obvious destitution, or cases already in receipt of Poor-law relief, shall, after they have been once seen in the casualty or out-patient department, be referred to the Poor-law relieving officer, unless they should be retained for hospital treatment, and Poor-law patients may be referred to hospitals for consultation, as in the case of public medical service and provident dispensary patients. In these cases payment might be required from the Poor-law Guardians if deemed advisable.

II.—Cottage Hospitals.

1. *Medical Attendance.*—That, as far as possible, every patient in a cottage hospital have the right to be attended by his usual medical attendant.

2. *Scope of Cottage Hospitals.*—That, except in cases of emergency, cottage hospitals be only open to those who are unable to secure adequate treatment at home.

3. *Contributions by Patients.*—That all persons admitted to cottage hospitals contribute, where possible, towards their maintenance.

4. *Certificate of Suitability for Admission.*—That a certificate signed by a medical practitioner within the area be a sufficient recommendation for admission.

III. Self-supporting Public Nursing Homes.

1. *Definition and Desirability.*—That it is desirable that self-supporting public nursing homes should be established for patients who, being ineligible for the voluntary hospitals, are yet unable to pay the customary professional fees as well as the charges usually made in private nursing homes.

2. *Management.*—That the management should be vested in a committee on which the medical profession is adequately represented.

3. *Certificates of Suitability for Admission.*—That no patient should be admitted without first producing a certificate of suitability for admission from a medical practitioner, who should whenever possible be the patient's usual medical attendant. If the signatory be not the patient's usual medical attendant, an explanation of the fact should be appended to the certificate.

4. *Choice of Medical Attendant.*—That it shall be open to a patient to select any registered medical practitioner as his attendant.

5. *Assistance to Patients unable to Pay Entire Cost.*—That when the payment made by a patient is insufficient to cover the entire cost of maintenance, or when any question arises as to reduction or remission of fees for professional services, a statement of the financial circumstances necessitating such consideration shall be signed by the patient or near relative, countersigned by the usual medical attendant or some other responsible householder, and submitted to the Committee.

January, 1908.

UNITED KINGDOM HOSPITALS CONFERENCE, 1908.

Provisional Agenda.

(In Addition to further Consideration, so far as required, of "Proposals" Considered at last Conference.)

(*a*) What provision should hospitals make with regard to cases of accident which are provided for under the Workmen's Compensation Act, 1906?

(*b*) Methods of co-operation by hospitals with provident dispensaries and analogous institutions.

* The term "public medical service" has been applied in certain districts to organizations for providing medical attendance and medicine for certain sections of the community, in which the service is under the entire control of the medical profession. In other districts services of exactly the same general type have been established under the title of "provident medical associations"; but the generic designation of "public medical service" is preferable, as avoiding confusion with organizations under non-medical control.

(c) The operations of the "League of Mercy" as affecting the funds of provincial hospitals.

(d) Whether the system of uniform accounts, as recommended by the King's Fund, should be used by all provincial hospitals.

(e) Whether all hospital patients who can afford it should be compelled to pay for food and medicines supplied to them.

(f) Pay wards.

(g) The mode of election of honorary staffs of hospitals.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

BATH AND BRISTOL BRANCH.

A clinical evening was held in the Medical School, University College, Bristol, on January 29th. There was a large collection of medical cases of interest shown by Dr. J. Michell Clarke, Dr. D. A. Alexander, Dr. J. M. Fortescue-Brickdale, Dr. J. O. Symes, Dr. J. A. Nixon, Dr. Charles, Dr. Carey Coombs, Dr. George Parker, Dr. Bertram Rogers, and Dr. Newman Neild. Surgical cases of interest were shown by Mr. T. Carwardine, Mr. R. G. P. Lansdown, and Mr. E. W. Hey Groves. Dr. J. A. Nixon and Dr. Kenneth Wills showed rare skin cases. Dr. J. A. Nixon and Mr. C. H. Walker showed eye cases. Mr. J. Ellington Jones showed a large number of skiagrams.

METROPOLITAN COUNTIES BRANCH:

Ealing Division.

The fourth sessional meeting of this Division was held on Tuesday, February 4th, Dr. Ruck in the chair.

The late Dr. A. L. Scott.—The Chairman referred to the sudden and sad death of the Chairman of the Division, Dr. A. L. Scott, who leaves a widow and six children. Dr. Lyle followed, and it was resolved to write a letter of condolence to Mrs. Scott. A memorial fund having been inaugurated by lay friends, members are invited to associate themselves with it.

Profuse Lochia.—Dr. W. S. A. Griffith read a paper of great practical interest on the importance of profuse lochia as a sign of imperfect involution of the uterus. Lochia might be a true or a deceptive index. Lochia should not last into the third week. After three to four days blood should cease to be an essential part, and after other three to four days should cease to stain the mucus. The two conditions which maintained excess were: (1) Retained pieces of membrane or placenta; (2) the continuance of a cavity instead of the walls of the uterus coming into apposition. Dr. Griffith classed excessive lochia under three heads—slight, moderate, and severe. He gave directions for recognition of the shrinking of the uterus and of any tenderness of it, either local or general, and showed that the treatment practically resolved itself into: (1) Ensuring complete evacuation of bladder and rectum; (2) washing out the uterus with a douche of some non-mercurial antiseptic at a temperature of about 117° F., and if that failed, then (3) exploration of the uterus, preferably with a finger, the curette being reserved for very special cases. He pointed out that irrigation of the uterus could be effectively carried out without the patient knowing that more than a simple vaginal douche was being administered. He urged the early use of the douche in the so-called "slight" cases of excessive lochia, for if shrinking of the uterus were not secured in the first ten days, later treatment was of much less value, and because these "slight" cases so very often led to chronic subinvolution and retroversion of the uterus with menorrhagia. Dr. Griffith expressed his disbelief in ergot in these cases, in that its use was only to increase, not to initiate, contractions. A discussion followed, and a cordial vote of thanks to Dr. Griffith closed the proceedings.

Lambeth Division.

A meeting of the Lambeth Division was held in the Lambeth Infirmary, Brook Street, S.E., on Friday, January 24th, at 4 p.m. Dr. Maurice Craig, President of the Division, was in the chair.

Election of Representative of Division.—Dr. W. Alexander Atkinson was elected Representative of the Division upon the South London Hospitals Committee, vice Dr. W. H. B. Stoddart, who resigned.

Notification of Births Act.—The Executive Committee reported that a deputation from the Division had been courteously received by the Camberwell Borough Council on January 7th. The deputation urged that the Notification of Births Act should not be adopted in its present form by that borough, Dr. Esler being their spokesman. No official information was yet available as to what action the Camberwell Council would decide to take, but there was some reason to hope that the objects of the deputation had been attained. Similar action was being taken in regard to Southwark and to Lambeth.

Address.—Dr. Herbert L. Eason delivered an address upon the Differential Diagnosis and Treatment of the Commoner Inflammations of the Eye. He restricted his remarks chiefly to the various forms of conjunctivitis, iritis, and glaucoma, and illustrated them by diagrams, charts, and coloured pictures. It was an excellent and helpful address.

Visit to Infirmary Wards.—The wards of the Lambeth Infirmary, and cases of special interest in them, were visited by kind permission of the Medical Superintendent, Dr. Quarry, and the meeting adjourned at 6 p.m.

St. Pancras and Islington Division.

Dr. W. Wynn Westcott, J.P., presided at a meeting of this Division on February 4th at the Great Northern Central Hospital.

List of Members of Association.—It was moved by Dr. Buckell and resolved unanimously that the following resolution be submitted to the Representative Meeting at Sheffield on behalf of this Division:

> That it be an instruction to the Council of the Association to publish the annual list of members of the Association (By-law 6) in such a way that a copy may be obtainable by every member who desires to possess the same.

Medical Inspection of School Children.—The questions concerning the medical inspection of school children submitted to the Division by the Branch Council were considered. The proposal that the Branch Council should act for all Divisions within the area of the London County Council was approved. It was agreed that home inspection should not be carried out, that every registered medical practitioner should be eligible for the posts of medical inspectors, that school surgeries should not be formed, and that the holders of the posts should have security of tenure. The recommendations of the Central Council were approved. On the other points the Division was of opinion that it was not as yet in possession of sufficient data to come to definite conclusions.

Sudden Deaths.—The Chairman read a paper on sudden deaths, many of the members present taking part in the discussion which followed. Dr. Wynn Westcott was cordially thanked for his very interesting contribution, and the Secretary was directed to send the paper to the Journal for publication.

Stratford Division.

A special meeting of the Division was held on Thursday, January 30th, at the Alexandra Hotel, High Street, Stratford, Dr. Spurrell presiding.

Medical Inspection of Schools.—The meeting was convened to consider the memorandum of the Council of the Metropolitan Branch submitted to its Divisions on the medical inspection of school children, and the following were the findings of the meeting:

A. That the Branch Council act for that part of the Division within the area of the L.C.C., but do not act for that part of the Division within the area of the Borough of West Ham; that the areas of East Ham and Barking, etc., be left in the hands of the Branch Council.

B. Postponed. Considered that home inspection be left till school inspection be thoroughly organized.

C. As a result of resolution B, C falls to the ground.
D. No answer at present *re* 5 (*a*) or 5 (*b*).
E. 6 (*a*). Approved. It was not considered undesirable that the medical inspector should practise in the area in which he inspects if he confines his work to inspection within the schools and does not carry out treatment.
F. Qualifications not considered essential.
G. Postponed.
H. No finding.
I. Left to the discretion of the medical inspector.
J. Not at present.
K. In all cases children should be referred to their own medical attendant.
L. That the medical inspectors be not the medical officers of health, but that it be in the power of the M.O.H. to undertake inspection if he so wishes. No salary for specialists was decided upon.
M. Yes. Suggested that medical inspectors should attend a course of instruction in the subjects for which they inspect.
N. Security of tenure was approved of.
O. No further suggestions were made.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The annual winter meeting will be held in the Royal Infirmary on Friday, February 21st. Members of the different Scottish Branches are cordially invited. The clinical meeting will take place at 4 o'clock. Dinner in the Royal British Hotel, Princes Street, at 6.30 p.m. (morning dress).—A. LOGAN TURNER, M.D., and FRANCIS D. BOYD, M.D., Honorary Secretaries.

GLOUCESTERSHIRE BRANCH.—A general meeting of the Branch will be held at the General Hospital, Cheltenham, on Thursday, February 20th, 1908 at 7 p.m. There will be a supper afterwards at the Cosy Corner, Promenade. Tickets 3s. 6d. each, exclusive of wine. Agenda:—Papers—Dr. Collins: 1 Microscopical specimens—(*a*) Cammidge's reaction in pancreatic disease; (*b*) *Spirochaeta pallida* from a hard chancre; (*c*) Meningococcus of cerebro-spinal fever (*Diplococcus intracellularis meningitidis* of Weichselbaum); (*d*) Malarial parasite. 2. Dr. H. Bramwell: Pathological specimens—(*a*) Tumour of kidney; (*b*) Chronic ulcer of stomach. 3. Dr. Wilfred Glegg: Remarks on sources, symptoms, and diagnosis in cases of purulent nasal discharge. 4. Mr. G. Arthur Cardew: Two cases of tetanus. The Secretary will be pleased to hear from any member who will show cases or pathological specimens at future meetings during this session.—D. E. FINLAY, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at 5 p.m. on Thursday, February 20th, at the Brooklands Hotel, Sale, when, in addition to the usual business, a paper will be read on puerperal fever by Dr. Knyvett Gordon, Resident Medical Superintendent of the Monsall Hospital, Manchester. Dinner will follow at 7 p.m. for those who give notice to the Honorary Secretary beforehand.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting of the members of the Division will be held at the Co-operative Rooms, Ellesmere Street, on Thursday, February 20th, at 8.30 p.m.—J. SACKVILLE MARTIN, M.D., Honorary Secretary.

LEINSTER BRANCH.—The annual meeting of the Branch will be held in the Royal College of Physicians, Kildare Street, Dublin, on Saturday, February 29th, at 4.30 p.m.—ARTHUR H. WHITE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Division will be held on Thursday, February 27th, at 4 p.m., in the Court Room at Guy's Hospital. A paper will be read by A. E. Boycott, M.D., upon the intestinal parasites of man; illustrated cases and pathological specimens will be exhibited by members of the staff of Guy's Hospital.—HERBERT FRENCH Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—A meeting (medico-political) will be held at 27, St. John's Hill, S.W., on Thursday, February 27th, at 8.45 p.m.—C. J. MARTIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The next ordinary meeting of the Division will be held on Thursday, March 19th (not on February 20th as previously announced), at 5 p.m., at St. James's Vestry Hall, Piccadilly (First Floor). Special business: The question of medical inspection of school children. R. H. Jocelyn Swan, M.S., F.R.C.S., will read a paper on Some Points in the Diagnosis of Urinary Diseases, illustrated by models.—HARVEY HILLIARD, Honorary Secretary.

NORTH WALES BRANCH: SOUTH CARNARVON AND MERIONETH DIVISION.—A meeting of the Division will be held at the George Hotel, Criccieth, on Thursday, February 20th, at 2 p.m.—HENRY GLADSTONE JONES, Honorary Secretary, Plas Gwilym, Criccieth.

STAFFORDSHIRE BRANCH.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 27th. The President will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper—Dr. Ernest Mackenzie: The Midwives Act in reference to 1910. (5) Paper—Dr. Geoghegan: Notes of a Case of Lichen Ruber Planus and Pellosis Rheumatica. (6) Exhibition of pathological specimens, etc. Dinner at 7.15 p.m.; charge 5s. Gentlemen wishing to be present at the dinner are requested to intimate their intention not later than Monday, February 24th, to G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—*Alteration of Date of Meeting.*—The date of meeting of this Branch, of which a preliminary notice has been sent to members, is altered to take place from February 13th to February 20th. Members will oblige by taking note of this alteration.—C. S. MORRISON, Honorary Secretary.

ANNUAL MEETING, SHEFFIELD, 1908.

PATHOLOGICAL MUSEUM.

THE following are the members of the Committee:

President: Professor J. M. BEATTIE, M.D.

Honorary Secretaries: A. E. BARNES, M.R.C.P.; M. H. PHILLIPS, F.R.C.S.

MEMBERS OF COMMITTEE:

W. T. COOKING, M.D.	C. J. PATTEN, M.D.
A. M. CONNELL, F.R.C.S.E.	H. SOURFIELD, M.D.
A. H. FIRTH, M.B.	G. S. SIMPSON, F.R.C.S.
A. J. HALL, M.D.	E. SKINNER, M.R.C.S.
J. S. MACDONALD, L.R.C.P.	J. W. STOKES, M.R.C.S.
W. H. NUTT, M.D.	G. WILKINSON, F.R.C.S.

EX-OFFICIO MEMBERS:

The President-elect: SIMEON SNELL, F.R.C.S.E.

The Local Honorary Treasurers: D. BURGESS, F.R.C.P.; W. DYSON, M.D.

The Local Honorary Secretaries: SINCLAIR WHITE, F.R.C.S.; W. T. D. MART, M.R.C.S.; R. W. I. SMITH, M.D.; A. C. TURNER, M.R.C.S.

The following circular has been sent out by the Subcommittee of the Pathological Museum to gentlemen interested in pathology and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Sheffield, 1908, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.
II. Specimens and illustrations relating to any recent research work.
III. Instruments relating to clinical diagnosis and pathological investigation.
IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Diseases of the spleen.
(*b*) Diseases of the heart and vessels.
(*c*) Diseases due to dust, tuberculosis, actinomycosis, syphilis and allied causes.
(*d*) The urinary system.
(*e*) Diseases of the breast.
(*f*) X rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position, and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,
A. E. Barnes,
M. H. Phillips,
Honorary Secretaries.

342, Glossop Road, Sheffield, January, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 9,240 births and 5,692 deaths were registered during the week ending Saturday last, February 8th. The annual rate of mortality in these towns, which had been 20 0, 13.5, and 18 2 per 1,000 respectively in the three preceding weeks, rose again last week to 18.3 per 1,000. The rates in the several towns ranged from 6 2 in Hornsey, 9 9 in Willesden and in Leyton, 10 3 in York, 10 8 in Great Yarmouth, and 10.9 in Barrow-in-Furness to 23.9 in West Bromwich, 24.4 in South Shields, 24 5 in Stockport, 25 3 in Liverpool, 27.0 in Birkenhead and in Merthyr Tydfil, and 29 8 in Grimsby. In London the rate of mortality was 17.7 per 1,000, while it averaged 18 5 in the seventy-five other large towns The death-rate from the principal infectious diseases averaged 1 4 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.3 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 3 0 in Birkenhead and in Burnley, 3 6 in South Shields, 3.7 in Warrington, and 5.4 in Salford. Measles caused a death-rate of 1.3 in Preston, 1.4 in South Shields, and 1 5 in Burnley; scarlet fever of 1.5 in Smethwick and 1.6 in Walsall; diphtheria of 1.1 in East Ham and 2.0 in Salford; whooping-cough of 1.8 in South Shields, 1.9 in Burton-on-Trent and in Newcastle-on-Tyne, 2.1 in Sheffield, 2.2 in Birkenhead, 2.5 in Aston Manor, 2.9 in Warrington, and 3.4 in Gateshead; and diarrhoea of 1.3 in Reading. The mortality from "fever" showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 4 325, 4 044, and 3,913 at the end of the three preceding weeks, had further fallen to 3,867 at the end of last week; 433 new cases were admitted during the week, against 469, 380, and 405 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday, February 8th, 917 births and 827 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 22.2 and 22.3 per 1,000 in the two preceding weeks, further rose to 23.5 per 1,000 last week, and was 5.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 16.3 in Perth and 21 4 in Aberdeen to 27.7 in Paisley and 31 4 in Leith. The death-rate from the principal infectious diseases in these towns averaged 3.7 per 1,000, the highest rates being recorded in Glasgow and Leith. The 380 deaths registered in Glasgow included 55 which were referred to measles, 2 to scarlet fever, 3 to diphtheria, 9 to whooping-cough, 3 to enteric fever, 4 to cerebro-spinal meningitis, and 7 to diarrhoea. Eight fatal cases of whooping-cough were recorded in Edinburgh; 2 of measles, 3 of whooping-cough, 2 of enteric fever, 2 of cerebro-spinal meningitis, and 3 of diarrhoea in Dundee; 2 of whooping-cough and 2 of diarrhoea in Aberdeen; 2 of small-pox, 6 of whooping-cough and 1 of cerebro-spinal meningitis in Leith; 3 of measles and 2 of whooping-cough in Greenock; and 2 of whooping-cough in Perth.

HEALTH OF IRISH TOWNS.

During the week ending February 1st, 570 births and 436 deaths were registered in six of the principal Irish towns, as against 476 births and 505 deaths in the preceding period. The annual death-rate in these towns, which had been 25.9, 24.9, and 24.1 per 1,000 in the three preceding weeks, fell to 22.8 per 1,000 in the week under notice, this figure being 4.6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period The figures ranged from 17.0 in Londonderry and 22.2 in Belfast to 25.5 in Dublin and 30.1 in Limerick. The zymotic death-rate in the same six Irish towns averaged 1 2 per 1,000, or 1.0 per 1,000 higher than during the preceding period, the highest figures—2 9 and 2.4—being recorded in Belfast and Londonderry, while Cork and Waterford registered no deaths under this heading. The principal causes of deaths in this class of diseases were again measles and whooping-cough.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Leonard H. Kellett, M.D., Deputy Inspector-General, to the Royal Naval Hospital, Chatham, February 17th; Oswald Mills, Surgeon, to the *Redbreast*, additional, and on recommissioning, undated; Richard Miller, M.B., Fleet Surgeon, to the *President*, additional, temporarily, to be lent to Deptford Yard, February 10th.

ROYAL ARMY MEDICAL COLLEGE.

Colonel D. Waldrop, M.B., to be Commandant and Director of Studies, vice Lieutenant-Colonel H. E. R. James, R.A.M.C., February 4th. Colonel Wardrop was appointed Surgeon, March 6th, 1880; Surgeon-Major, March 6th, 1892; Lieutenant-Colonel, March 6th, 1900; and Colonel, August 14th, 1907. In 1878-9 he served as a Civil Surgeon in the operations against Sekukuni and in the Zulu campaign, receiving the South African medal with clasp. He was also with the Nile expedition in 1898, and was at the battle of Khartoum; he was mentioned in dispatches, and received the Khedive's medal with clasp and the British medal.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Captains are promoted to be Majors, January 29th: A. H. Waring, W. A. Ward, E. W. W. Cochrane M.B., A. H. Morris, S. A. Archer, and R. W. Clements, M.B. The previous commissions of Majors Waring and Ward are dated—Surgeon-Lieutenant, January 29th, 1895; Captain, January 29th, 1899. Those of Majors Cochrane, Morris, Archer, and Clements are dated—Surgeon-Lieutenant, July 29th, 1898; Captain, July 29th, 1899. Major Ward served in Natal during the South African war of 1899-1902, including the actions at Reitfontein and Lombard's Kop and the defence of Ladysmith; he was afterwards in operations in the Transvaal, Orange River Colony and Cape Colony; he was mentioned in dispatches, and received the Queen's medal with four clasps and the King's medal with two clasps. Major Archer was with the Nile Expedition in 1898, receiving the British and Egyptian medals. The other officers cited have no war record in the Army Lists.

The undermentioned Lieutenants are confirmed in that rank: W. K. Beaman, G. F. Dawson, M.B., T. McC. Phillips, M.B., H. V. B. Byatt, H. S. Dickson, G. Petit, F. J. Stuart, M.B., J. B. Hanafin, H. Gibson, W. R. O'Farrell, J. A. Renshaw, R. de V. King, C. T. Conyngham, M.B., D. B. M'Grigor, M.B., R. G. S. Gregg, M.B., W. A. Spong, M.B., H. W. Carson, M.B., H. P. Hart, M.B., F. T. Dowling, M.B., R. F. O'T. Dickinson, H. T. Treves, A. E. B. Jones, M.D., B. A. Odlum, A. Hendry, M.B. Lieutenant Beaman was appointed on probation, January 28th, 1907; all the other officers cited, July 29th, 1907.

The following is the list of successful candidates for commissions in the Royal Army Medical Corps at the recent examination in London, for which 64 candidates entered:

Name.	Medical School.	Qualifications.	Marks.
J. James	King's College	M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond.	614
H. H. Blake ..	St. George's Hospital	M.B., B.S.Durh.	583
A. C. H. Suhr ..	St. Thomas's Hospital	M.B., Ch.B., B.A. Camb., M.R.C.S. Eng., L.R.C.P.Lond	577
W. J. Dunn ..	Trinity College, Dublin	M.B., Ch.B., B.A.O.Dub.	576
J. E. Ellcombe	St. Thomas's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	575
B. Varvill .	London Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	565
F. B. Dagleish ...	St. Thomas's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	560
A. G. Wells ..	St. Mary's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	559
G. J. Keene ...	Liverpool University	M.D., Ch.B., D.P.H., D.T.M.Liverp.	554
F. H. Bradley ...	Edinburgh University	M.B., Ch.B.Edin.	553
R. M. Dickson ..	University College, Dundee	M.B., Ch.B.St. And.	553
F. Worthington	Glasgow University	B.S., B.A.Camb.	548
C. M. Rigby ..	London Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	545
A. L. Stevenson	Queen's College, Belfast	M.B., Ch.B., B.A.O.(R.U.I.)	545
M. Leckie ..	Guy's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	535
S. G. Walker ..	Birmingham University	M.B., Ch.B.Birm.	534
C. E. L. Harding	Queen's College, Belfast	M.B., Ch.B.(R.U.I.)	533
A. Shepherd ..	Aberdeen University	M.B., Ch.B.Aberd.	526
W. J. Tobin ..	Queen's College, Cork	L.R.C.P. and S.Irel.	522
L. Murphy ...	Queen's College, Cork	L.R.C.P.andS.Edin., L.F.P.and S.Glas.	516
A. H. T. Davis ..	St. George's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	515
W. H. S. Burnley	Guy's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	512
A. L. Foster ..	Guy's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	512
J. W. Houston ..	Dublin University	M.B., B.Ch., B.A.O., B.A.(R.U.I.)	510
T. S. Eves ..	Dublin University	M.B., Ch.B., B.A.O.Dub.	507
R. O'Kelly ..	Catholic University, Dublin	L.R.C.P. and S.Irel.	505
F. M. Hewson ...	Royal College of Surgeons, Ireland	L.R.C.P. and S.Irel.	503
C. McQueen ..	Queen's College, Cork	L.R.C.P. and S.Irel.	496
A. E. G. Fraser..	St. Mary's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	495
J. S. McCombe..	Queen's College, Belfast	M.B., Ch.B.(R.U.I.)	495

INDIAN MEDICAL SERVICE.

Captain V. E. H. Lindesay, M.B., is promoted to be Major, from July 29th, 1907. He was appointed Surgeon Lieutenant January 29th, 1896, and made Captain January 29th, 1899. He was in the China war in 1900, receiving a medal.

The retirement from the service of Lieutenant-Colonels L. A. Waddell, M.B., C.B., C.I.E., and C. S. Rundle, M.B., which has been already announced in the British Medical Journal, has received the approval of the King.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain C. G. Maclagan, M.B., to be Surgeon-Major January 29th.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BATH: ROYAL UNITED HOSPITAL.—(1) House-Physician, (2) House-Surgeon. Salary, £80 per annum each.

BEDFORDSHIRE COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £250 per annum, rising to £300.

BENENDEN SANATORIUM.—Medical Superintendent. Salary to commence, £252 per annum.

BIRKENHEAD: BOROUGH HOSPITAL.—Senior and Junior Resident House-Surgeons; males. Salaries, £100 and £80 per annum respectively and fees.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Physician, (2) Surgical Casualty Officer, (3) Assistant House-Surgeon. Salary at the rate of £50 per annum for (1) and (2) and £40 per annum for (3).

BOLINGBROKE HOSPITAL, S.W.—House-Surgeon. Salary, £75 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Senior and Junior House-Surgeons. Salary, £130 and £100 per annum respectively.

BRADFORD EDUCATION COMMITTEE. — Two Assistants to the Medical Superintendent, one male and one female. Salary, £350 per annum each.

BRIGHTON COUNTY BOROUGH.—Medical Officer of Health. Salary, £600 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL. — House-Physician. Salary, £70 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer; (2) Resident Junior House-Surgeon; (3) Resident Casualty Officer. Salary, for (1) £75 per annum, and for (2) and (3) at the rate of £50 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160 per annum, increasing to £180.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary at the rate of £90 per annum first six months and £100 per annum after.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £60 per annum.

EDINBURGH: ROYAL EDINBURGH HOSPITAL.—Four Resident Medical Officers.

HAMMERSMITH PARISH.—Assistant Medical Superintendent of Infirmary and Assistant Medical Officer of Workhouse. Salary combined, £120 per annum, rising to £150.

HOSPITAL FOR WOMEN, Soho, W.—Clinical Assistant to the Gynaecologists in the Out-patient Department.

ISLE OF MAN LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £120 per annum.

LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.

LINDSEY COUNTY COUNCIL, Lincolnshire. — County Medical Officer of Health and Chief Medical Inspector of School Children. Salary, £400 per annum, rising to £500.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL. — (1) House-Surgeon, (2) House-Physican. Salary, £60 per annum each.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) Medical Registrar. (2) Surgical Registrar. (3) Pathologist and Bacteriologist. (4) Anaesthetist. (5) Radiographer. Honorarium at the rate of 40 guineas per annum for (1) and (2), 50 guineas for (3), 20 guineas for (4), and 10 guineas for (5).

MAIDSTONE: KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer (male). Salary, £175 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) Casualty Officer, (2) Resident Anaesthetist. Salary at the rate of £150 and £40 per annum respectively.

MIDDLESEX HOSPITAL.—(1) Registrar to the Cancer Wards, (2) Scholar in the Cancer Research Laboratories. Salary, £40 and £60 per annum respectively.

MONMOUTHSHIRE COUNTY COUNCIL.—County Medical Officer. Salary, £600 per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Pathologist. Honorarium, 50 guineas per annum.

NEWCASTLE EYE INFIRMARY.—Non-Resident House-Surgeon. Salary, £80 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Medical Officer. Salary, £100 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL — Male Assistant House-Surgeon. Honorarium, £20 for six months.

NORWICH: NORFOLK COUNTY COUNCIL.—Medical Officer of Health. Salary, £500 per annum, rising to £600.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer (male). Salary, £150 per annum.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon. Salary, £160 per annum.

NOTTINGHAMSHIRE EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

PLYMOUTH: ROYAL EYE INFIRMARY.—Honorary Surgeon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.—Examiner in Dental Surgery.

ST. GEORGE IN THE EAST PARISH.—Male Assistant Medical Officer for the Infirmary and Workhouse and Casual Wards. Salary, £120 per annum and 2s. 6d. weekly in place of beer.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Salary at the rate of £80 per annum.

ST. PETER'S HOSPITAL FOR STONE, etc., Henrietta Street, W.C. —Junior House-Surgeon. Salary at the rate of £50 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOW DISPENSARY.—Junior House-Surgeon, male. Salary, £90 per annum.

WARRINGTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £80 per annum.

APPOINTMENTS.

COLLIER, James, M.D., F.R.C.P., Physician in Charge of Wards to St George's Hospital.

DENNISON, A., M.D Edin., District Medical Officer of the Leeds Union.

EVANS, E. D., L.R.C.P.Edin., M.R.C.S., Medical Referee under the Workmen's Compensation Act, 1906, for the Courts at Wrexham and Llangollen.

FELL, A. N., M.D.Edin., District Medical Officer of the Colchester Union.

HALL, George, M.D.Lond., B.Sc.Dunelm., M.R.C.P.Lond., Honorary Pathologist to the Royal Victoria Infirmary, Newcastle-on-Tyne.

HALL, H. S., L.R.C.P., M.R.C.S.Eng., District Medical Officer of the Leigh Union.

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HODGKINSON, Alexander, M.B., Ch.B.Vict., non-resident Medical Officer of the Warrington Union Workhouse.

HOLLAND, E. T., M.R.C.S., L.R.C.P., First Assistant Medical Officer, Chelsea Parish Infirmary.

INGRAM, P. C. P., M.B., B.S.Lond., Resident Assistant Medical Officer of the Shoreditch Parish Workhouse and Infirmary.

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MCCANDLESS, R., M.B., B.Ch.R.U.I., Certifying Factory Surgeon for the Rathfrilan District, co. Down.

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MORGAN, David James, M.A., M.D., B.C.Cantab., D.P.H., R.C.P.S., L.S.A., F.C.S., Medical Officer of Health for the County Borough of Swansea.

MUDGE, Z. S., L.R.C.P.Lond., M.R.C.S.Eng., Certifying Factory Surgeon for the Hayle District, co. Cornwall; Medical Officer of Health of the Hayle Urban District and Hayle Division of the Penzance Port Sanitary Authority.

ROBSON, F. W. H., M.D.Edin., District Medical Officer of the South Stoneham Union.

TOWERS, H., L.R.C.P. and S.Edin., District Medical Officer of the Leeds Union.

WEBB, Gilbert L., B.A., M.B., B.C.Cantab., Resident Medical Officer at the British Lying-in Hospital, Endell Street, W.C.

WETHERALL, P. S. B., M.R.C.S., L.R.C.P., Medical Officer of the Workhouse of the Weymouth Union.

WILMOT, Robert Eardley Eyam, M.R.C.S., L.R.C.P.Lond., Medical Officer and Public Vaccinator to the Burnham District, Eton Union, vice Alfred E. Wilmot, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

PETTY.—On February 12th, at 148, Stamford Hill, the wife of David Petty, M.B., of a son.

DEATH.

GOODCHILD.—On February 2nd, at 154, Queen's Road, N.E., Jane Rountree Goodchild, wife of Thomas A. Goodchild, L.R.C.P., L.R.C.S.Irel., in her 65th year.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Second Lettsomian Lecture: Tuberculosis of the Kidney, by Mr. Charters J. Symonds, M.S., F.R.C.S.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Victor Bonney: A Study of the Connective Tissues in Carcinoma, etc.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Communications: Mr. Crisp English: The Quiescent Appendix. Dr. T. W. Parkinson: Contrast of Symptoms in two Cases of Cancer of the Pancreas.

ROYAL SOCIETY OF MEDICINE:
PATHOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m. —Discussion: Acidosis in Pregnancy, to be opened by J. B. Leathes; Mrs. Spriggs and Bainbridge will follow. The Obstetric Section of the Royal Society of Medicine is especially invited.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Victor Bonney: A Study of the Connective Tissues in Carcinoma, etc.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Victor Bonney: A Study of the Connective Tissues in Carcinoma, etc.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, W., 5 p.m.—Paper by H. S. Clogg: A Case of Intestinal Obstruction: Resection of a Foot of Gangrenous Intestine: Recovery. Cases will be shown by Drs. G. Carpenter, Cautley, Whipham, Porter Parkinson, Messrs. Geo. Pernet, Macleod Yearsley, Sydney Stephenson, and others.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30 p.m.—Fleet Surgeon F. W. Bassett-Smith: Kala-azar in the Royal Navy, with illustrative cases. Sir Patrick Manson: A Case of Kala-azar ending in Recovery. Dr. Cropper: Phenomenal Abundance of Malarial Parasites in the Peripheral Circulation, from a Case of Pernicious Malaria in the Jordan Valley.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Skin Diseases due to Animal Parasites. 4 p.m., Electrical Treatment and Diagnosis.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, 2.30 p.m., Monday, Tuesday, Wednesday, and Thursday; Clinical Lecture, Friday, 3.30 p.m., Subjective Noises in the Head.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Cases from the Wards.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday and Friday, 4 p.m., Pyogenic Infections.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Dyspepsia in Children past the Period of Infancy.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Tuesday, 2.15 p.m., Some Bacteriological Methods of Diagnosis. Friday, 3.15 p.m., Cancer of the Oesophagus.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Lupus Erythematosus. Tuesday, Swedish Medical Gymnastics: Their Application in the Treatment of Diseases of the Nervous System. Wednesday, The Nature of the Symptoms in Heart Failure. Thursday, The Examination of Pregnant Women before Labour.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Thursday, 5 p.m., Demonstrations of Cases of Chest Diseases in the Wards.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Hysteria; Friday, 3.30 p.m., Myasthenia Gravis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Lecture: Surgical Aneurysm. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological. Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday, Clinical: Tuesday, Gynaecological Cases; Wednesday, On the Vaccination Treatment of Infective Diseases; Thursday, Clinical; Friday, Cases of Skin Diseases.

BOOKS, ETC., RECEIVED.

Essentials of Physiology for Veterinary Students. By D. N. Paton, M.D., B.Sc., F.R.C.P.Edin. Second edition. Edinburgh and London: W. Green and Sons. 1908. 12s.

The Chemical Basis of Pharmacology. By F. Francis, D.Sc., Ph.D., and J. M. Fortescue-Brickdale, M.A., M.D. London: E. Arnold. 1908. 14s.

Comparative Anatomy of Vertebrates. Adapted from the German of Dr. R. Wiedersheim. By W. N. Parker, Ph.D. Third edition. London: Macmillan and Co. 1907. 16s.

Two Oxford Physiologists: Richard Lower, 1631-1691; John Mayow, 1643-1679. By F. Gotch, M.A., D.Sc., F.R.S. (Oxford University Extension Summer Meeting, 1907). Oxford: The Clarendon Press. 1908. 1s.

Our British Trees and How to Know Them. By F. G. Heath. London: The Country Press. 1907. 10s.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	
19 WEDNESDAY	LONDON: Medico-Political Contract Practice Subcommittee, 2.30 p.m. SOUTH WALES AND MONMOUTHSHIRE BRANCH, Cardiff.
20 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, General Meeting, Brooklands Hotel, Sale, 5 p.m.; Dinner, 7 p.m. CITY DIVISION, *Metropolitan Counties Branch*, Metropolitan Hospital, 4 p.m. GLOUCESTERSHIRE BRANCH, General Meeting, General Hospital, Cheltenham, 7 p.m.; Supper, afterwards, at the Cosy Corner, Promenade. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, 8.30 p.m. SOUTH CARNARVON AND MERIONETH DIVISION, *North Wales Branch*, George Hotel, Criccieth, 2 p.m. WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
21 FRIDAY ...	EDINBURGH BRANCH. Annual Meeting, Royal Infirmary, 4 p.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.
22 SATURDAY...	
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	
26 WEDNESDAY	LONDON: Medico-Political Parliamentary Subcommittee 3.15 p.m. BATH AND BRISTOL BRANCH, Bath.
27 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, 4 p.m. STAFFORDSHIRE BRANCH, General Meeting, North-Western Hotel, Stafford, 5.15 p.m.; Dinner, 7.15 p.m.
28 FRIDAY ...	
29 SATURDAY...	LEINSTER BRANCH. Annual Meeting, Royal College of Physicians, Kildare Street, 4.30 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 22ND, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

(1.)

CENTRAL ETHICAL COMMITTEE.

DEFINITION OF THE TERM "HOSPITAL."

(For Consideration by Divisions, and Instruction accordingly of Representatives in Representative Meeting.)

STATEMENT by Central Ethical Committee of Proposed Definition of the Term "Hospital" and Memorandum of Reasons for which such a Definition is desirable, issued to Divisions and Branches pursuant to an Instruction of the Annual Representative Meeting, 1907.

MEMORANDUM.

The experience of the Central Ethical Committee has shown that the term "Hospital" is sometimes applied to institutions for the treatment of disease under such conditions as to be misleading to the public and injurious to the profession. Moreover, it appears that in certain instances medical practitioners have been responsible for such improper use of the term, or have been connected with institutions to which the term was being improperly applied.

Difficulty has been experienced in dealing with individual cases owing to the non-existence of any authoritative definition of the term "Hospital" which would discriminate between its proper and improper use.

It appeared, therefore, to the Central Ethical Committee that it would be in the public interest for a definition to be framed with the authority of the British Medical Association.

For this purpose the following definition has been drawn up by the Committee for the consideration of the Divisions before being submitted to the Representative Meeting.

Divisions are requested to consider the definition with strict reference to the purpose to which it is intended to be applied, namely, for the assistance of the Central Ethical Committee, and the Ethical Committees of Divisions and Branches, in advising members of the Association as to their relations with institutions concerning which there may be any doubt, and in dealing with complaints against medical practitioners of being concerned in any misleading use of the term "Hospital." The definition deals with existing conditions, and is not put forward as representing the essential characters of an ideal hospital.

PROPOSED DEFINITION OF THE TERM "HOSPITAL."

The term "Hospital" should not be applied to an institution for the treatment of disease which does not possess all the following characters:

(*a*) That the institution in question receives necessitous patients, and is maintained wholly or partially by public funds or charitable contributions;

(*b*) That the control, including the appointment of the staff, is in the hands of medical or lay persons appointed by, or responsible to, those who provide the funds;

(*c*) That the institution is not established or conducted for the pecuniary profit or personal gain of the body or persons who control it.

Divisions are requested to consider the above proposed definition, and to instruct their Representatives thereon, with a view to a pronouncement by the Annual Representative Meeting, 1908, at Sheffield.

(2.)

MEDICO-POLITICAL COMMITTEE.

MEDICAL EXAMINATIONS FOR LIFE INSURANCE.

REPORT AND QUESTIONS TO DIVISIONS.

(For Consideration by the Divisions with a View to Report by them to the Medico-Political Committee.)

REPORT.

Action Initiated by Norwich Division.

The Norwich Division initiated in 1904 the consideration by the Association of the fees which are and should be paid by Life Insurance Companies for Medical Examinations.

The Division made a valuable preliminary inquiry into the subject, the results of which were communicated to the Medico-Political Committee and the Representative Meeting. (For copy of Report of Norwich Division, see British Medical Journal Supplement of March 19th, 1904, p. 33.)

Report of Medico-Political Committee, 1905.

The Medico-Political Committee, 1905, reported that it concurred in the general principle laid down by the Norwich Division, that for every full and complete report required of a medical examiner no fee less than one guinea should be paid by an insurance company, and recommended the Representative Meeting to call upon the Divisions to consider the subject and, in due course, to adopt rules for the guidance of their own members.

Resolution of Annual Representative Meeting, 1905.

The Annual Representative Meeting at Leicester in 1905 (Minute 115) approved this recommendation and directed the Medico-Political Committee to collect information on the subject for the assistance of the Divisions in considering it. Owing to the many important matters which have required the attention of the Committee during the last two years, action in this matter has been inevitably postponed.

Inquiries from Insurance Companies.

The Committee communicated early in 1907 with 86 Life Insurance Companies operating in the United Kingdom and has received information from 64. (The names of the Companies which have refused information are stated below.)

Analysis of Replies.

The replies have been fully analysed, and give the following results:

Of the 86 Companies to which the inquiries of the Committee were addressed, replies have been received from 73; 13 have taken no notice of the inquiries twice addressed to them. Of the 73 which have replied, 3 have explained that from the nature of their operations they do not come within the scope of the inquiry of the Committee, and 6 have refused to give the information desired by the Association.

64 Companies have supplied, in varying fullness, the information desired by the Committee, and the following is a summary of the information received from them as to fees paid for Medical Examinations:

21 Companies pay at least £1 1s. irrespective of the amount of the proposed policy.

43 pay in some cases fees less than £1 1s., the fee varying according to the amount proposed to be insured for. In 3 of these cases, however, a fee of less than one guinea is paid only when the amount of policy is below £100.

Fees paid on Policies of over £100 by Companies which in some cases pay less than One Guinea.

Amount of Policy.	Fee Paid.	Number of Companies.
Under £200 ..	Varying amounts of 17s. 6d., 15s., 12s 6d., and 10s.	1
,, £200 ..	10s. 6d.	5
,, £200 ..	10s.	1
,, £250 ..	10s 6d	5
,, £250 ..	10s.	1
.. £300 ..	10s. 6d	3
,, £200 ..	10s. 6d and 7s. 6d. (under £200)	1
,, £300 ..	10s.	9
,, £350 ..	10s. 6d.	1
,, £500 ..	10s. 6d.	11
,, £500 ..	10s.	1

And one Company pays a fee of 10s. 6d. on "Children's Deferred" policies.

The fees above the superior limits stated are usually £1 1s., but two offices pay 20s.

Special Fees.

Special fees, ranging up to £3 3s., are mentioned as paid by eight Companies.

Policies of £100 and Under.

Only 14 Companies specifically mention policies of £100 and under.

These pay as follows:

Fee Paid.	Number of Companies.
10s. 6d	3
7s. 6d., 5s., and 2s. 6d.	1
5s , 3s 6d , and 2s. 6d.	1
5s. and 2s. 6d.	1
5s.	4
10s. 6d. (on £50 and under £100)	1
5s. (on £50 and under £100)	1
5s. (on £50 and under)	1

And one Company merely states that in the case of these policies the fee is paid by the proposer.

Companies which have taken no notice of Inquiries.
(Two Applications.)

Atlas.
Britannic.
British.
British Natural Premium.
Liverpool and London and Globe.
North British and Mercantile.
Provident Clerks and General Guarantee.
Royal.
Sceptre.
Scottish Union and National.
Union.
Yorkshire.
Yorkshire Provident.

Companies which have refused Information.

British Legal.
London and Manchester.
London, Edinburgh, and Glasgow.
Marine and General Mutual.
Pearl.
Scottish Equitable.

Objects of Reference to Divisions.

Having obtained the above information, the Medico-Political Committee considers that the matter has reached the stage at which the Divisions should be consulted for

two purposes—namely, first to obtain through them such information as to the actual working of the present systems of payment of medical examiners for Life Insurance as Members of the Association may be able to give; and, secondly, to obtain a preliminary indication of the opinion of Members, for the assistance of the Committee, in subsequently formulating definite proposals on the subject. Such proposals when formulated will be the subject of a further reference to the Divisions, prior to bringing the matter before the Representative Meeting for decision.

QUESTIONS TO DIVISIONS.

The Division is requested to answer the following questions:

A. Questions of Fact.

1. What Life Insurance Companies:
   - (*a*) employ Members of your Division to act regularly as their Medical Examiners?
   - (*b*) have, apart from such regular employment, employed Members of the Division to examine individual cases?

2. Do any such Companies pay less than one guinea for examination?

3. In the case of Companies paying less than one guinea, please state whether (*a*) a "full" report or (*b*) a "short" report is required. (An example of what the Committee regards as a "full" report is given in Schedule "A," and an example of a "short" report in Schedule "B.")

4. Do any Companies pay less than 10s. 6d.?

If so, what is the extent of the examination required in each such case? (Information will be particularly acceptable as regards the Companies which, as stated in the above Report of the Medico-Political Committee, have not answered the inquiries of the Association.)

B. Questions of Opinion.

5. Does your Division consider that a fee of less than one guinea should be accepted for *any* Life Insurance Examination?

6. Does your Division consider that a fee of less than one guinea should be accepted for any examination in which a full report on the patient's condition is required? If so, what is the minimum fee which in the opinion of your Division should be required for a *full* report?

7. Does your Division consider that a fee of less than one guinea would be adequate remuneration for making the examination necessary to fill up satisfactorily the form contained in Schedule A?

8. If the Division considers that, for a simpler form of report than that contained in Schedule A, a reduced fee could be accepted, is the form shown in Schedule B suitable, and would a fee (*a*) of half a guinea or (*b*) of 5s. afford adequate remuneration for the work involved?

9. What, in the opinion of the Division, is the lowest fee that could be accepted for the simplest possible form of certificate to the effect that a candidate for Life Insurance may be accepted as a healthy life or should not be so accepted, such as that given in Schedule C?

SCHEDULE A.

FORM OF "FULL" REPORT.

CONFIDENTIAL MEDICAL REPORT TO THE DIRECTORS OF THE.....LIFE INSURANCE COMPANY.

I. CONFORMATION AND APPEARANCE.

1. (*a*) Is the Proposer well formed? ... (*a*)
   (*b*) Does he appear to be healthy? ... (*b*)

2. (*a*) Is there anything injurious to health in the Proposer's occupation, or ordinary manner of life? (*a*)
   (*b*) Or any reason to suspect past or present intemperance? ... ... (*b*)

3. What is the height and weight? ... Height..... Weight.....

II. RESPIRATION.

1. Is the chest well developed? ... ...

2. After examination of the chest by percussion and auscultation, (*a*) state if the resonance on percussion and the movements of the walls of the chest are normal? ... (*a*) (*b*)
   (*b*) Are the breath sounds healthy, particularly in the subclavian region? and (*c*) state if there are any, and, if so what abnormal pulmonary sounds? (*c*)

3. What is the actual number of respirations per minute? ... ...

4. Is there a tendency to cough, spitting of blood or bronchitis? ... ...

5. Does anything lead you to suspect any disposition to disease in the lungs? ... ...
   (NOTE.—As phthisis is the chief cause of loss in Life Assurance, this is important.)

III. CIRCULATION.

1. (*a*) What is the number of the pulse per minute? and (*b*) What is its character? ... ... (*a*) (*b*)

2. Are the impulse and sounds of the heart distinct and normal?
   If not, describe the abnormal signs ...

3. Is there, or has there been, palpitation or syncope? ... ...

4. Are the large blood vessels in a healthy condition?

5. Do you suspect any disposition to cardiac disease?

IV. DIGESTIVE SYSTEM.

1. Are the stomach, liver, and bowels sound, and their functions normally performed? ... ...

2. Is there, or has there been, tumour or swelling of any kind? ...
   If hernia, (*a*) of what kind? and (*b*) is a truss worn? ... ... (*a*) (*b*)

V. URINO-GENITAL SYSTEM.

1. (*a*) What is the specific gravity of the urine? (*a*)
   (*b*) Is it healthy in quantity and quality? (*b*)

2. Does it contain albumen or sugar? ...

3. Is there any difficulty or pain in passing it?

VI. NERVOUS SYSTEM.

1. Are the brain, spinal cord, and organs of sense normal?

2. Is there any tendency to apoplexy, paralysis, insanity, or other nervous disease?

VII.—APPLICABLE TO FEMALES.

1. Whether married? ... ...

2. (*a*) Whether had any children or miscarriages? (*a*)
   (*b*) If now pregnant? ... . (*b*)

3. Is there any indication of uterine or ovarian disease, and if so, what?

GENERAL SUMMARY.

1. As the result of your personal examination, do you consider the Proposer eligible as a first-class life?

2. Do any of the facts connected with the Proposer's habits of life, occupation or family history mentioned in the "Personal Statement" or otherwise known to you, render any, and what, increased assessment advisable?

Signature of Medical Examiner .....

Address .....

Qualifications ..... *Date*.....

SCHEDULE B.

FORM OF "SHORT" REPORT.
MEDICAL EXAMINER'S CERTIFICATE.

Questions to be answered by the Medical Examiner.

1. Have you personally made a Medical Examination of the Proposer? ...

2. What is the height and weight? ... Height ..... Weight.....

3. Is there hernia, and if so, of what kind, and is a truss worn? .. ...

4. Is there any disposition to phthisis? ..

5. As the result of your personal examination, and taking into consideration the general state of health, the condition of the several organs, the constitution and habits, do you consider the Proposer eligible as a first-class life? .. ..
(If a female, state whether married or single, and any circumstances as to pregnancy, or otherwise, which you consider the officers of the Company ought to know.)

6. Are there any facts connected with Proposer's habits of life, occupation, antecedents, or family history, on account of which you consider any extra premium should be charged?

Signature of Medical Examiner .....

Address..... *Qualifications*.....

SCHEDULE C.

FORM OF CERTIFICATE.

I, ..., hereby certify that I have this day examined A. B., and find him to be in good health and fit to be accepted for life assurance upon ordinary terms.

(3.)

CENTRAL ETHICAL COMMITTEE.

PREVENTION OF CORRUPTION ACT, 1906.

MEMORANDUM ON THE "PREVENTION OF CORRUPTION ACT, 1906," AS AFFECTING MEDICAL PRACTITIONERS.

(*Issued, by Instruction of the Annual Representative Meeting at Exeter, for the Information of Divisions and of the Profession Generally*)

The Central Ethical Committee was requested by a Branch of the Association to consider and advise upon both the ethical and legal aspects of certain arrangements stated to prevail in one district of the Branch area, under which members of the profession have been accustomed to receive from chemists commissions in respect of patients recommended by them to have their prescriptions dispensed by such chemists.

The position of the matter is by this Memorandum dealt with only in its legal aspects, and with special reference to the "Prevention of Corruption Act, 1906," which came into operation at the commencement of the year 1907. The Committee having consulted the Solicitor of the Association upon the subject, deems it desirable that Members of the Association and of the profession generally should receive some guidance as to their legal position, not only as regards the particular incident mentioned by the Branch, but also as regards other matters to which the Act may be held to apply.

The effect of the Act in question may be stated shortly as making it an offence punishable by fine or imprisonment for any person who acts as the agent of another to receive corruptly any consideration from any third party in respect of any act which he may do or refrain from doing as such agent. The Committee is advised that in cases under the Act the principal questions arising for consideration will probably be:—

(*a*) As to the existence of the relationship of Principal and Agent, and

(*b*) As to the corruptness of any acts on the part of the Agent which may form the subject of legal inquiry.

The Solicitor is of opinion that the courts will in their interpretation of the Act give special consideration to the question of "secrecy," and that if it be shown that an agent receives a commission, gift, or other emolument unknown to his principal, for doing or refraining from doing any particular act, then the secrecy of the transaction may be held to afford *prima facie* evidence that it was "corrupt."

Cases in which members of the medical profession may be concerned are especially those in which they undertake to procure drugs or instruments for patients, and a distinction has to be carefully drawn between those in which a medical practitioner acts as a principal in selling such things direct to his patient, and those in which he acts merely as the agent of his patient in procuring such articles for him from third parties. In cases of the latter kind he could not, without incurring legal risk, accept any commission or other valuable consideration from such third parties without the knowledge of the patient.

It appears to the Committee that attention to these distinctions may assist medical practitioners in avoiding infringement of the law, but, for their further guidance, it is thought well to state the following specific circumstances of common occurrence in which no commission, gift, or emolument should be accepted from third parties without the knowledge of the patient:

1. Cases in which medical practitioners recommend their patients to deal with third parties, such as chemists, makers of instruments and appliances, etc. If any consideration is to be received from such third parties in respect of such recommendations, then the fact must be made known to the patient. For instance, there would probably be no legal objection to a medical practitioner recommending a patient to insure with a specified life insurance company and accepting from the company a commission in respect of the introduction, provided that he informed the patient that he acted as agent for the company concerned and would receive a commission from them.

2. Cases in which medical practitioners undertake to procure articles such as drugs or instruments for patients. The medical practitioner is entitled to act as buyer of such articles from the makers or other dealers, and as seller of them to his own patients, but in such cases he must make it clear that he is acting in this capacity and not as agent.

The Committee would point out in conclusion that the legal position set forth in this Memorandum arises from the confidential relationship in which a medical practitioner stands towards his patient, which makes it his duty to forego profits to himself of which the patient is unaware, and which consequently might be open to be regarded as of an illicit nature.

Meetings of Branches & Divisions.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Tuesday, February 11th, at the Hampstead Conservatoire, Swiss Cottage, at 8 30 p.m., Dr. PIDCOCK in the chair.

Confirmation of Minutes.—The minutes of the meeting of January 9th were read and approved.

Hampstead Hospital Business.

The report of the Joint Hampstead Hospital Committee of the Division, which had been printed and issued to all members with the agenda, was then presented. The following is the text of the report:

Since the special meeting of the Hampstead Division to which the members of the local profession were invited, and which was held on July 3rd, 1907, your Committee has the following to report.

Following out your instructions, a letter was sent to the local press informing the public of the resolution which you passed at your meeting of July 3rd, and a circular containing this resolution was issued to individual subscribers to the hospital.

On July 29th, at the invitation of the Secretary of the Hampstead Hospital, a deputation was appointed to lay your views before a committee of the subscribers to the hospital. This deputation consisted of Drs. Pidcock, Ford Anderson, and Yeld, and attended a meeting on August 1st, at the hospital, at which the views of the profession were expressed and special stress was laid on the necessity of retaining the services of the local practitioners on the staff.

A detailed scheme for the management of the Hospital on these lines was drawn up by the Committee on September 25th, and this was forwarded to the Secretary of the Hospital, for the use of the Special Committee of Subscribers.

Your Committee considered on November 30th the report of the Special Committee of Subscribers, and requested Dr. Pidcock to attend the meeting of Subscribers on December 2nd, and to attempt to influence that meeting in favour of the views held by the local profession.

On December 11th the Committee considered what steps should be taken in response to the decision of the Hospital to adopt the report of the Special Committee of Subscribers. A circular was therefore issued to all the members of the local profession, requesting them to confirm the resolution passed on July 3rd. It was found on December 17th that 191 members of the profession received the circular, and of these, 132 signed the paper unconditionally. Acting on this result, your Committee caused a warning notice to be inserted into the JOURNAL and this was copied in the *Lancet*. It was further decided that any intending applicant for a post on the Staff of the Hospital should be informed by the Honorary Secretaries that "the local profession has expressed an emphatic opinion that no medical man ought to accept any appointment on the Staff of the Hampstead Hospital so long as it is intended for the future to exclude local practitioners therefrom."

On January 4th it was intimated to your Committee that the members of the acting staff of the Hospital and the anaesthetists had tendered their resignations to the Hospital Council.

The attention of your Committee was drawn on January 28th, 1908, to the fact that the *Lancet* had withdrawn the warning notice and had advertised vacant offices on the staff of the Hospital. A few members of the profession had communicated with the Honorary Secretary with respect to the warning notice. The Secretary replied to these gentlemen in the sense indicated by the Committee.

Your Committee then determined to submit a final report to the Division and to recommend that their reference be discharged.

R. A. YELD, } Honorary
H. W. ARMIT, } Secretaries.

The report was adopted, and the Honorary Secretary was authorized to send it to the Branch Council, to supplement the report already sent.

The following resolution was passed by 11 votes to 7:

That the Hampstead Hospital question be referred to the Divisional Committee with full powers to carry out the policy of the Division.

After some discussion the following resolution was passed by 10 votes to 8:

That the Executive Committee consider what ethical rules may be necessary for the situation, and report to the Division.

The following resolution was also passed:

That it be an instruction to the Committee to inquire what ethical rules existing are applicable to the present situation.

The HONORARY SECRETARY then read a letter which had been sent to certain medical men who had applied to him for information with respect to the warning notice, and also a further clause which had been suggested. The letter, with the additional clause, was approved (see BRITISH MEDICAL JOURNAL, February 15th, 1908, p. 418) with a vote of thanks to the drafters (the Honorary Secretaries and Chairman).

Medical Inspection of School Children.

The HONORARY SECRETARY read a report of a Subcommittee appointed by the Committee on January 28th, which met on February 1st. The Subcommittee had considered the memorandum of the Branch Council (BRITISH MEDICAL JOURNAL SUPPLEMENT, January 25th, 1908) and the Medico-Political Committee's report (BRITISH MEDICAL JOURNAL SUPPLEMENT, December 21st, 1907).

After prolonged discussion, the Subcommittee's report was adopted, with certain modifications, so as to read as follows:

A. That this Division approves of the Branch Council acting for all Divisions within the area of the L.C.C.

B. That home inspection cannot be carried out without unjustifiable interference.

C. That the rate of £50 per annum for an attendance of two hours once a week is a reasonable rate of pay for the Medical Inspector.

D. That the Subsidiary Medical Officers (or Organizing Medical Officers of the Education Committee) should be medical officers of health.

E. That the Medical Inspectors should be private practitioners, who may practise in the area in which they inspect.

F. That it is essential that subsidiary officers (*a*) should be either (i) versed in State medicine; (ii) holding a diploma in public health; (iii) experienced in hygiene; (iv) or have made a thorough study of disease in children. (*b*) That it is desirable that the Medical Inspectors should have made a study of disease in children.

G. That the School Visitor may assist by visiting at children's homes, etc. (see paragraph 9 of the Branch Council's Memorandum), provided that she is supervised by the Medical Officer.

H. That this Division disapproves of "systematic home inspection" (see paragraph 10 (*d*) of the Branch Council's Memorandum) as being quite impracticable.

I. That paragraph 11 (*d*) be approved, with the proviso that the communication of the diagnosis to the parents be left to the discretion of the Medical Inspector.

J. That school surgeries and clinics be not approved.

K. That hospital abuse in connexion with this Act can be best met by well-equipped provident dispensaries, on which all medical men who so desire may serve.

L. That the recommendations of the Central Council (paragraph 14, (*a*), (*b*), (*c*), (*d*), (*e*), BRITISH MEDICAL JOURNAL SUPPLEMENT, January 25th, 1908, p. 26) be all approved.

M. That the ordinary Medical Inspector is competent to deal with every item in the schedule of examination appearing in the BRITISH MEDICAL JOURNAL SUPPLEMENT of December 21st, 1907.

N. That ordinary and special Medical Inspectors should be appointed only for a fixed period, with possibility of re-election.

O. No further suggestions made.

NORTH WALES BRANCH:

SOUTH CARNARVON AND MERIONETH DIVISION.

Medical Inspection of Schools.—At a special meeting of the Division held at Barmouth on Monday, February 3rd, the following resolution was carried:

That this meeting is of opinion that medical inspectors of school children should not carry on private practice while holding the appointment of school medical officer, and that the county councils within the area of the Division be pressed to appoint without delay a whole-time medical officer of health, who would also take up the work of medical inspection of school children.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

Grants.

The Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research.

Applications for sums to be granted should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing:

(*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached.

(*b*) A general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers.

(*c*) And references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

Research Scholarships.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council provided the whole term of office shall not exceed three years.

The Scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

Ernest Hart Memorial Scholarship.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year but subject to renewal by the Council provided the whole term of office shall not exceed three years. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Forms of application for Scholarships and Grants can be had on application to the General Secretary.

Guy Elliston, *General Secretary.*

6, Catherine Street, Strand,
February, 1908.

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Leinster Branch.—The annual meeting of the Branch will be held in the Royal College of Physicians, Kildare Street, Dublin, on Saturday, February 29th, at 4.30 p.m.—Arthur H. White, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The next meeting of the Division will be held on Thursday, February 27th, at 4 p.m., in the Court Room at Guy's Hospital. A paper will be read by A. E. Boycott, M.D., upon the intestinal parasites of man; illustrated cases and pathological specimens will be exhibited by members of the staff of Guy's Hospital.—Herbert French, Honorary Secretary.

Metropolitan Counties Branch: Richmond Division.—Meetings of this Division will be held on Wednesday, March 11th, at 8.30, at the Sun Hotel, Kingston, when Dr. R. W. Wilson will read a paper entitled. Remarks on Intestinal Sepsis and its Treatment; and on Wednesday, April 8th, at 8.30, at the Royal Hospital Richmond, when Mr. W. T. Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6.30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—Charles Blair, F.R.C.S., Matson Lodge, Richmond. A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: Wandsworth Division.—A meeting (medico-political) will be held at 27, St. John's Hill, S.W., on Thursday, February 27th, at 8.45 p.m.—C. J. Martin, Honorary Secretary.

Metropolitan Counties Branch: Westminster Division.—The next ordinary meeting of the Division will be held on Thursday, March 19th (not on February 20th as previously announced), at 5 p.m., at St. James's Vestry Hall, Piccadilly (First Floor). Special business: The question of medical inspection of school children. R. H. Jocelyn Swan, M.S., F.R.C.S., will read a paper on Some Points in the Diagnosis of Urinary Diseases, illustrated by models.—Harvey Hilliard, Honorary Secretary.

Staffordshire Branch.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 27th. The President will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper—Dr. Ernest Mackenzie: The Midwives Act in reference to 1910. (5) Paper—Dr. Geoghegan: Notes of a Case of Lichen Ruber Planus and Pellosis Rheumatica. (6) Exhibition of pathological specimens, etc. Dinner at 7.15 p.m.; charge 5s. Gentlemen wishing to be present at the dinner are requested to intimate their intention not later than Monday, February 24th, to G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held at Caxton House, Westminster, on February 13th, with Dr. F. H. Champneys in the chair.

Tension between Doctors and Midwives.

The Standing Committee reported that a letter from the Clerk of the Council, transmitting a copy of a letter from the Local Government Board, enclosing a letter from the Executive Committee of the Rural Midwives' Association in regard to the question of the training of midwives, and the possibility of the grant of State aid in respect thereof, had been further considered. A letter from the Clerk of the Council transmitting a copy of a Memorandum addressed to the Secretary of State for the Home Department by Canon Dobell on the subject of the supply of midwives in rural districts, was further considered at the same time. The Committee reported that they had considered and settled a reply drafted by the Chairman, and recommended that the same be sent to the Privy Council.

The Board considered the letter, which was discussed without being read *in extenso*.

Dr. Champneys, in the course of his remarks, observed that there had been tension between medical practitioners and midwives in many parts of the country for some years. That condition of things must be recognized and a remedy must be found. If doctors liked to co operate with midwives more than they did there would be a *modus vivendi* found. Dr. Champneys also said he was not proud of the attitude of a large number of the members of the medical profession in the matter, and quoted from a nursing journal some most brutal remarks alleged to have been made by a medical practitioner, whose name Miss R. Paget said she could produce.

Mr. Parker Young stoutly maintained that it should be widely known that the Midwives Act was

unworkable. The medical profession had on all sides and by all manner of means shown that the Act was unworkable. The remedy was to pay doctors an adequate sum when they were called in on the advice of midwives. The Government must be put in full possession of all the facts of the case. If the Government were going to do any good they must take action in the matter. The Government were greatly to blame for not grappling with the difficulty.

The Board decided to send the following letter to the Privy Council, a copy of which has been kindly supplied for publication by the Board:

CENTRAL MIDWIVES BOARD.
Caxton House,
Westminster, London, S.W.,
February 15th, 1908

Sir,—I am directed to advert to your letter of the 12th December, 1907, transmitting a copy of a letter from the Local Government Board enclosing a letter from the Executive Committee of the Rural Midwives Association in regard to the question of the training of midwives, and the possibility of the grant of State aid towards the cost of such training.

These matters have now received the careful consideration of the Board, and I am to forward to you for the information of the Lord President the observations of the Board on the questions raised in your letter.

With regard to "the number of midwives likely to be available on 1st April, 1910, their distribution in urban and rural districts, to what extent the supply will probably fall short of the requirements, and how the deficiency is to be made good," the Central Midwives Board has not hitherto considered that these questions fall within the scope of the Act, "to secure the better training of midwives and to regulate their practice," although many of its members who are interested in the larger question of the care of the poor mothers of England, and their infants, have taken part in movements with that object.

The Board is, however, glad to do what it can towards the solution of the difficulties, and is earnestly considering the subject with a view to making recommendations at an early date.

The returns of the Local Supervising Authorities under Section 3 (5) of the Midwives Act, 1902, are the only data from which the Board can ascertain the approximate number of practising midwives and their distribution in the urban and rural districts. These returns are now coming in, and it is hoped that by March the Board will be in possession of tolerably complete information as to the number of midwives practising in England and Wales at the present time. But in taking these figures as the basis of an estimate of the number likely to be available on April 1st, 1910, it must be remembered that undoubtedly a large number of uncertified women still practice as midwives. There are no means available of ascertaining to what extent the total number of practising midwives will be affected by the fact that these uncertified women will be debarred from legitimate practice after March 31st, 1910.

As regards the opinion of Mrs. Hobhouse quoted in your letter, but not otherwise within the knowledge of the Board, it may be well to inform the Lord President that that lady no doubt refers to the action of the Board in removing the Cottage Nurses' Home, Kingswood, Bristol, from the list of recognized training schools. This institution has neither a visiting nor a resident medical staff, and its work is purely extern. It is situated about three miles from Bristol, in which city the Board recognizes two training schools, the Royal Infirmary and the General Hospital. Mrs. Hobhouse was interested in the Kingswood Nurses' Home, and warmly supported its application for approval as a training school. After considerable discussion the Board granted its approval in March, 1905. Dr. James McMurray was appointed Lecturer to the pupil midwives, and training was carried on under these conditions until June, 1906. Dr. McMurray then resigned his post, and the pupil midwives received their theoretical training from Dr. W. C. Swayne, Professor of Midwifery at University College, Bristol. This course met with the approval of the Board, but, as Dr. Swayne was a recognized teacher, there was no longer any necessity for the recognition of the Kingswood Nurses' Home in order to enable training to be carried on there. The Board accordingly, on the revision of the list of training schools in April, 1907, removed the name of Kingswood Nurses' Home. This in no way interferes with the training at the home, which continues under precisely the same conditions as before the name was removed from the list. Twenty-one candidates were sent up from the home while it was a recognized training school. Of these, 13 passed and 8 failed. Since the change was made the number of candidates has been 13, with 11 successes and 2 failures, the percentage of failure falling from 38 to 15.

The opinion as quoted alleges that the Board (*a*) has "raised the standard of examination"; (*b*) has "lengthened the syllabus"; (*c*) has "refused to recognize several old-established training schools."

As regards the first (*a*), the standard aimed at by the Board has always been strictly limited to such knowledge as it would be dangerous for a midwife to lack.

It must be remembered that imperfect instruction is one of the objections alleged against midwives, especially by members of the medical profession.

The Board has always endeavoured to restrict the scope of its examinations to this standard, and these are visited by many members of the Board, including the Chairman, who makes a rule of being present, if possible, at every examination. To require less than is now required would not, in the opinion of the Board, be safe.

As regards the second (*b*), "lengthening the syllabus," the Board does not quite understand the meaning of the phrase, as there has been no "syllabus" in existence to lengthen.

But possibly it may mean much the same as (*a*), and, in such case, the answer of the Board would be practically the same.

As regards the third (*c*), "refusing to recognize several old-established training schools," the Board has, of course, to exercise its discrimination in this matter, and to refuse to recognize institutions which are in its opinion unsuited for this purpose.

But, as there appears to be much misunderstanding on this question, it would point out that recognizing an institution is not the only way in which an institution can be utilized for training midwives. The practice of the Board has been to approve an institution as a recognized school of training only when its status is such that it may be taken for granted that none but competent officers of all kinds would be appointed to it.

In the case of an institution such as one of the great lying-in hospitals, for instance, the Board has taken it for granted that it would be properly officered, and its officials are recognized *as such* for the purpose of signing Forms III and IV.

Thus, although officials change, the officials for the time being are recognized; when their connexion with the institution ceases, their recognition lapses.

On the other hand, in the case of an institution less fully equipped, the Board has frequently refused to accept it as a "recognized institution," but has approved its medical officer and midwife for the purposes of training midwives and signing Forms III and IV.

Such an institution, though it lacks the prestige of a "recognised institution," has exactly the same opportunities of training midwives as if its request had been granted.

In this case the approval of the medical practitioner and midwife are personal.

The Board has not received any explanation of the statement that its policy as regards (*a*), (*b*), and (*c*) "has resulted in an increase in the training fees, and a consequential difficulty in obtaining suitable candidates."

It is far from its wish to produce any such result, but it feels that the standard on which it has so far insisted cannot be lowered with safety to the community.

It must be remembered that nothing but the three months' course of training, with the attendance on twenty labours and puerperia, stands between what may be absolute ignorance and responsibility of the very gravest and most vital character. Only those who have had on the one hand to deal with the raw material, and on the other hand with the same material after training and in face of one of the grave complications of childbirth, can fully appreciate the extreme importance of making such training, though strictly limited in scope, as thorough and practical as it can possibly be made.

To place upon the Roll women whose training had in any way been scamped would be to produce a state of things far worse than that which the Act was framed to abolish; for whereas before the passing of the Act the name of midwife carried no official weight, since the passing of the Act the name "certified midwife" carries with it the authority of Parliament, and implies that its holder has either been adequately trained, or (in the case of a bona fide midwife) has at least avoided conviction for malpraxis and removal from the Roll.

The Board therefore feels that its present requirements cannot be safely reduced.

The question of subsidising midwives is one of extreme difficulty.

It is certain that in some districts midwives are a necessity; yet it is in these very localities that it is difficult for them to earn a living. It is obviously a matter of great delicacy to subsidise a class of persons who are alleged to be in competition with medical practitioners.

The Board considers that it must necessarily take some time before an antagonistic attitude can be expected to disappear. In the meanwhile it is of the utmost importance that amicable relations should be encouraged by every possible means, and the Board thinks that this difficulty would be greatly reduced by a scheme by which medical practitioners summoned on the advice of midwives, according to the rules of the Board, could be adequately remunerated.

The relations of medical practitioners to midwives vary in different districts; in some they are frankly hostile, the medical practitioners stating that they intend to make it impossible for midwives to practise in their neighbourhood.

The Board is not aware of any district in which medical practitioners and midwives co-operate amicably; such districts may, however, exist. It must be remembered that the Board does not receive reports officially on these subjects, and is not in a position to speak with authority.

It is possible that a conference could be held with advantage on the subject; if such a conference were held, it would be

necessary that it should be thoroughly representative of all interests, and that the medical (and especially the rural medical) practitioners should be represented by persons having full authority to speak in their name.

The hope of a better understanding must necessarily be preceded by a conviction that "midwives are a necessity" (Report of Select Committee of House of Commons, 1893), and also that midwives, under proper regulation, would act as co-operators and not as opponents.

No good would result from such a conference if such delegates were only authorized to demand the abolition of midwives—which might quite possibly be the case.

I am,
Sir,
Your obedient servant,
(Signed) G. W. DUNCAN,
Secretary.

The Clerk of the Council,
Privy Council Offices,
Whitehall, S.W.

Board's Examiners.

A letter was received informing the Board of the death of Mr. C. J. Wright, one of the Board's examiners for the Newcastle-on-Tyne Centre; and a letter from Dr. Archibald Donald of Manchester, resigning his post as examiner at that Centre. A letter was read from Dr. J. B. Hellier, and he was appointed examiner at Newcastle. At the request of the Board the Chairman undertook to write a letter of condolence to the family of the late Mr. Wright.

Drunkenness in Midwives.

The charges against a certain midwife having been considered, the Board decided that the County Medical Officer for Lancashire be informed that the Board was extremely anxious to deal with drunkenness and other serious offences in midwives, but in the present case the local supervising authority had not found a prima facie case, nor produced any direct evidence. The Board, however, would deal with the case when the local supervising authority was able to produce direct evidence.

Midwives' Plates.

A letter from Miss B. M. Worrall, Honorary Secretary of the Midwives' Defence Association, as to the action of the local supervising authority for the County of London in regard to Rule E 26, was further considered. This rule is as follows:

The proper designation of a certified midwife is "Certified Midwife," thus, for example, Mary Smith, Certified Midwife. No abbreviation in the form of initial letters is permitted, nor any other description of the qualification.

Memorials on the same subject from the Midwives Institute, and from the Committee of the British Lying-in Hospital, the City of London Lying-in Hospital, the General Lying-in Hospital, and Queen Charlotte's Lying-in Hospital, were considered at the same time. A letter on the same subject from Dr. H. Scurfield, Medical Officer of Health for Sheffield, was also considered.

The Board decided that the Privy Council be asked to approve the addition of the following words to Rule E. 26:

Provided that a midwife whose name has been admitted to the Roll in virtue of having passed the Examination of the Central Midwives Board, or in virtue of a qualification under Section 2 of the Midwives Act, 1902, acquired by passing an Examination in midwifery, may add the words "by examination" after the words "certified midwife."

Coombe Hospital.

Letters were considered from the Master and the Honorary Secretary of the Coombe Hospital, Dublin, submitting for the observations of the Board certain rules and regulations adopted by the Board of the Hospital with respect to the training of pupil-midwives. The Board decided that the Board of the Coombe Hospital be referred to the public press for the results of the Board's examinations, and that subject to the foregoing the Board express general approval of the rules.

A Midwife's Conduct.

A letter was considered from a registered medical practitioner complaining of the conduct of a certified midwife. A letter from the midwife on the same subject was also considered. It was decided that the reply of the Board be that the midwife did not appear to have infringed any of the rules.

Disciplinary Meeting.

Special penal meetings of the Board were fixed for March 26th and 27th to deal with the cases of about thirty midwives reported for various offences

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the fourth, or autumn, quarter of 1907, and to the marriages during the three months ending September last. The marriage-rate during that period was equal to 17·9 per 1,000 of the total population, or 0·7 per 1,000 more than the average rate for the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending December last numbered 218,855, and were equal to an annual rate of 24·8 per 1,000 of the population, estimated at 34,945,600 persons in the middle of last year; this rate is 2·5 per 1,000 below the average rate in the fourth quarters of the ten preceding years, and is lower than the rate in the corresponding period of any year since civil registration was established. The birth-rates in the several counties last quarter ranged from 18·6 in Carnarvonshire, 19·1 in Sussex, 19·7 in Northamptonshire, 20·0 in Herefordshire, and 20·2 in Devonshire and in Somersetshire, to 27·7 in Northumberland, 27·8 in Carmarthenshire, 28·3 in Staffordshire, 29·3 in Nottinghamshire, 31·2 in Durham, 31·6 in Glamorganshire, and 33·9 in Monmouthshire. In seventy-six of the largest towns, including London, the birth-rate averaged 25·5 per 1,000; in London the rate was 24·4 per 1,000, while it averaged 25·9 per 1,000 in the seventy-five other large towns, and ranged from 15·2 in Bournemouth, 15·4 in Hastings, 15·5 in Hornsey, 16·2 in Halifax, 18·1 in Bradford, and 19·1 in Brighton, to 31·1 in Warrington and in Middlesborough, 31·7 in St. Helens, 32·2 in Sunderland, 32·6 in Bootle, 33·8 in Merthyr Tydfil, and 34·8 in Rhondda.

The births registered during the quarter under notice were 39,094 in excess of the deaths; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance outward of 49,666 persons. There was a balance outward of 27,030 English passengers, of 3,474 Scottish, of 7,899 Irish, and of 11,314 foreigners; and an inward balance of 61 among persons whose nationality was not stated.

During the fourth quarter of the year the deaths of 129,761 persons were registered, equal to an annual rate of 14·7 per 1,000 living, or 1·7 per 1,000 below the mean rate in the ten preceding fourth quarters. The lowest county death-rates last quarter were 11·6 in Kent, 11·7 in Northamptonshire, 11·8 in Sussex and in Essex, and 12·1 in Surrey and in Berkshire; the highest rates were 16·3 in Monmouthshire, 16·4 in the North Riding of Yorkshire, 16·5 in Northumberland, 17·2 in Lancashire, 18·0 in Glamorganshire, and 18·2 in Durham. In seventy-six of the largest English towns, with an aggregate population estimated at upwards of 16 millions, the death-rate averaged 15·4 per 1,000; in 142 smaller towns, containing a total population of nearly five millions, the mean rate was 14·2 per 1,000, and was equal to the rate in the remainder of the country. In London the death-rate was 14·3 per 1,000, while it averaged 15·8 per 1,000 in the seventy-five large provincial towns, and ranged from 9·5 in Hornsey, 10·1 in East Ham and in Bournemouth, 10·6 in King's Norton, 11·1 in Leyton, 11·2 in Hastings, and 11·3 in Croydon and in Handsworth (Staffs.), to 19·4 in Bootle and in Oldham, 19·8 in Stockton-on-Tees, 20·1 in Preston and in Rhondda, 20·7 in Liverpool and in Wigan, and 23·6 in Merthyr Tydfil.

The 129,761 deaths from all causes in England and Wales last quarter included 12,138 which were referred to the principal infectious diseases: of these, 4,396 were attributed to diarrhœa, 2,527 to measles, 1,942 to whooping-cough, 1,601 to diphtheria, 933 to scarlet fever, and 739 to "fever" (principally enteric), but not any to small-pox. The aggregate mortality from these diseases was equal to 1·38 per 1,000, or 0·19 below the average rate in the corresponding periods of the ten preceding years. The death-rates from whooping-cough and from diarrhœa were slightly above the average, while those from all the other diseases were below the respective averages.

The rate of infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 136 per 1,000, against an average rate of 142 in the ten preceding fourth quarters. Among the several counties the rates of infant mortality ranged from 68 in Hertfordshire, 74 in Wiltshire, 75 in Berkshire and in Dorsetshire, 81 in Cambridgeshire, 82 in Sussex, and 83 in Surrey, to 163 in Nottinghamshire, 166 in the West Riding of Yorkshire, 173 in Durham, 176 in Lancashire, and 180 in Glamorganshire. In seventy-six of the largest towns the mean rate was 154 per 1,000: in London the rate was 131 per 1,000; while it averaged 163 in the seventy-five other large towns, and ranged from 69 in Bournemouth, 77 in Hastings, 83 in Hornsey, 86 in Reading, and 87 in Birkenhead, to 210 in Merthyr Tydfil, 212 in Stockport, 213 in Burnley, 233 in York, and 234 in Rhondda.

The mortality in England and Wales during the three months under notice among persons aged between 1 and 60 years was at the annual rate of 7·3 per 1,000 of the estimated population at this group of ages, the average rate in the ten preceding fourth quarters being 6·3 per 1,000. In the seventy-six large towns the death-rates in this age-group averaged 7·9 per 1,000, being 7·3 in London, and ranging from 4·4 in Hastings, 4·5 in King's Norton, 4·8 in Handsworth (Staffs), and 6·9 in Leyton, to 11·1 in Wigan and in Oldham, 11·2 in Bootle, 11·3 in Liverpool, and 13·3 in Merthyr Tydfil.

Among persons aged 60 years and upwards the death-rate last quarter was 64·9 per 1,000 of the population estimated to be living at this age-period, the average rate in the ten preceding fourth quarters having been 68·0 per 1,000. In the seventy-six large towns the death-rate at this age-group averaged 68·6 per 1,000: in London the rate was 67·0 per 1,000, while among the seventy-five large provincial towns the rates ranged from 48·9 in Northampton, 50·2 in Bournemouth, 51·4 in Great Yarmouth, and 51·9 in Barrow-in-Furness, to 85·7 in Wallasey, 86·3 in Stockport, 91·5 in Wigan, and 100·1 in Stockton-on-Tees.

The mean temperature of the air during the quarter was above the average, the excess amounting to more than 2° in the London district, and to 2½° in the south of England. The rainfall exceeded the average in all districts, the amount in the London district being 23 per cent. more than the normal. The duration of bright sunshine in London amounted to 153 hours, or 9 hours more than the average.

VITAL STATISTICS OF METROPOLITAN BOROUGHS DURING 1907.

IN the accompanying table will be found summarized the vital statistics of the City of London and of each of the metropolitan boroughs, based upon the Registrar-General's quarterly returns for the year 1907. The mortality figures relate to persons actually belonging to the various boroughs, and are the result of a complete system of distribution of the deaths occurring in institutions among the various boroughs in which the deceased persons had previously resided.

The 122,205 births registered in London during 1907 were equal to an annual rate of 25.8 per 1,000 of the population, estimated at 4,758,218 persons in the middle of that year; this rate was lower than that recorded in any previous year, and was 2.8 per 1,000 below the average for the ten years 1897-1906. The birth rates last year ranged from 13.2 in the City of London, 14.6 in Hampstead, 15.9 in the City of Westminster, 18.1 in Kensington, 19.2 in Chelsea, and 19.5 in Stoke Newington, to 31.0 in St. Marylebone, 31.3 in Bermondsey, 31.4 in Bethnal Green, 31.5 in Shoreditch, 34.1 in Stepney, and 34.9 in Finsbury.

The deaths of London residents registered during the year numbered 69,268, and were in the proportion of 14.6 per 1,000 persons living, against 16.1, 15.1, and 15.1 in the three preceding years, the average annual rate for the ten years 1897-1906 being 17.0 per 1,000. The lowest death-rates last year were 9.0 in Hampstead, 11.6 in Stoke Newington and in Lewisham, 12.3 in Wandsworth, 12.5 in Woolwich, and 12.7 in Greenwich; the highest rates were 17.4 in Holborn, 17.5 in Bethnal Green, 18.0 in Southwark, 18.3 in Bermondsey, 18.7 in Finsbury, and 20.5 in Shoreditch.

During the year under notice 6,720 deaths were referred to the principal infectious diseases: of these, 1,801 resulted from measles, 644 from scarlet fever, 781 from diphtheria, 1,786 from whooping-cough, 194 from enteric fever, 4 from pyrexia of uncertain origin, and 1,510 from diarrhœa. These 6,720 deaths were equal to an annual rate of 1.42 per 1,000, the corresponding rates in the three preceding years having been 2.14, 1.70, and 1.93 per 1,000 respectively, and the average rate for the ten years 1897-1906, 2.21 per 1,000. Among the several boroughs the death-rates last year from the principal infectious diseases ranged from 0.51 in Hampstead, 0.72 in the City of Westminster, 0.85 in the City of London and in Lewisham, and 0.97 in St. Marylebone, to 1.71 in Bermondsey, 1.73 in Fulham, 1.83 in Finsbury, 1.90 in Southwark, 1.96 in Bethnal Green, 1.97 in Stepney, 2.11 in Poplar, and 3.01 in Shoreditch. Compared with the respective averages for the five preceding years, the mortality from scarlet fever and from whooping-cough was in excess; the mortality from diphtheria was equal to the average; and that from measles, from "fever," and from diarrhœa showed a decline. No fatal case of small-pox was registered during the year, against an annual average of 279 deaths in the previous five years; no cases of small-pox remained under treatment at the end of December in the Metropolitan Asylums Hospitals, and only 2 persons reported to be suffering from that disease were admitted into these hospitals during the year.

The greatest proportional mortality from measles was recorded last year in Chelsea, Shoreditch, Bethnal Green, Poplar, Southwark, Greenwich, and Woolwich. Scarlet fever was proportionally most fatal in Stoke Newington, Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, and Bermondsey; 25.9 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals during the year, against 11,629, 17,592, and 18,622 in the three preceding years; 4,956 cases remained under treatment at the end of the year, against 2,349, 3,410, and 5,787 at the end of the three preceding years. The highest death-rates from diphtheria last year were recorded in Fulham, the City of London, Stepney, Poplar, Battersea, and Deptford; the number of cases of this disease admitted into the Metropolitan Asylums Hospitals amounted to 7,305, against 5,783, 5,380, and 6,478 in the three preceding years; 1,168 cases remained under treatment at the end of the year, against 801, 701, and 995 at the end of the three preceding years. Whooping-cough was proportionally most fatal in Holborn, Finsbury, Shoreditch, Bethnal Green, Poplar, and Southwark. The greatest proportional mortality from "fever" occurred in Stoke Newington, Hackney, the City of London, Stepney, Poplar, and Deptford; the number of enteric fever patients admitted into the Metropolitan Asylums Hospitals, which had been 1,078, 831, and 934 in the three preceding years, declined again to 788 last year; 119 cases remained under treatment at the end of last year, against 169, 78, and 134 at the end of the three preceding years. Diarrhœa showed the greatest proportional fatality in Fulham, Shoreditch, Stepney, Bethnal Green, Poplar, and Southwark.

The 6,654 deaths from phthisis registered during the year were equal to a rate of 1.40 per 1,000, the rates in the three preceding years having been 1.62, 1.42, and 1.44 per 1,000 respectively. The phthisis death-rates last year ranged from 0.70 in Hampstead, 0.93 in Lewisham, 0.94 in Stoke Newington, 0.95 in Wandsworth, 1.03 in Kensington, 1.08 in Greenwich, and 1.09 in Paddington, to 1.88 in Bermondsey, 1.90 in Bethnal Green, 2.02 in the City of London, 2.03 in Southwark, 2.10 in Shoreditch, 2.33 in Finsbury, and 2.58 in Holborn. The central and eastern groups of boroughs again show excessive mortality from this disease, the mortality in these two groups being 2.38 and 1.65 per 1,000 respectively, against 1.36 in the southern group, 1.31 in the northern group, and 1.20 in the western group.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 115 per 1,000, or 52 per 1,000 less than the average. The lowest rates of infant mortality were 68 in St. Marylebone, 72 in Hampstead, 89 in Holborn, 90 in Lewisham, and 97 in the City of London; the highest rates were 124 in Bermondsey, 125 in Fulham, 126 in Poplar, 129 in Chelsea, 134 in Kensington, 140 in Bethnal Green, 142 in Southwark, and 157 in Shoreditch.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,648 births and 5,798 deaths were registered during the week ending Saturday last, February 16th. The annual rate of mortality in these towns, which had been 18.2 and 18.3 per 1,000 in the two preceding weeks, further rose last week to 18.6 per 1,000. The rates in the several towns ranged from 6.0 in King's Norton, 6.9 in Hastings, 7.9 in Hornsey, 10.2 in Grimsby, and 10.9 in Willesden, to 24.1 in Warrington, 24.4 in South Shields, 24.5 in Sunderland, 25.3 in Huddersfield, 25.5 in Stockton-on-Tees, 25.8 in Rochdale, 26.3 in Merthyr Tydfil, and 31.4 in Great Yarmouth. In London the rate of mortality was 19.0 per 1,000, while it averaged 18.4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.1 per 1,000, while among the seventy-five large provincial towns the death-rates from the principal infectious diseases ranged upwards to 2.7 in Newport (Mon.), 2.8 in Tynemouth, 2.9 in Oldham, 3.1 in Hanley, 3.3 in Sunderland, and 4.7 in Merthyr Tydfil. Measles caused a death-rate of 1.1 in Salford and in Swansea, 1.5 in Hanley, and 2.7 in Merthyr Tydfil; whooping-cough of 1.6 in Warrington and in Sheffield, 1.6 in Birmingham, 1.8 in Oldham, 1.9 in Aston Manor, 2.1 in Ipswich, 2.5 in Rotherham, and 3.0 in Sunderland; and "fever" of 1.7 in Norwich. The mortality from scarlet fever, from diphtheria, and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The deaths in London attributed directly to influenza numbered 84 last week, against 85, 32, and 34 in the three preceding weeks. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,044, 3,913, and 3,857 at the end

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during 1907.

BOROUGHS.	Estimated Population middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhœa.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
COUNTY OF LONDON ...	4,758,218	122,205	69,268	25.8	14.6	1.42	6,720	—	1,801	644	781	1,786	—	194	4	1,510	6,654	115
Paddington	149,909	3,073	2,023	20.6	13.5	1.13	170	—	38	13	20	52	—	5	—	42	163	116
Kensington	181,842	3,286	2,482	18.1	13.7	1.04	189	—	31	9	24	81	—	6	—	38	187	134
Hammersmith ..	122,337	3,006	1,744	24.6	14.3	1.16	142	—	54	10	18	33	—	6	—	21	146	120
Fulham	166,749	4,508	2,195	27.1	13.2	1.73	288	—	70	14	38	75	—	8	—	83	198	125
Chelsea ...	74,857	1,431	1,117	19.2	15.0	1.44	108	—	42	2	7	25	—	3	—	29	112	129
City of Westminster	172,219	2,734	2,240	15.9	13.0	0.72	122	—	19	12	17	25	—	8	—	41	235	111
St. Marylebone ...	127,718	3,952	1,912	31.0	15.0	0.97	123	—	18	19	16	44	—	2	—	24	188	68
Hampstead	91,137	1,325	820	14.6	9.0	0.51	46	—	12	5	7	12	—	2	—	8	64	72
St. Pancras	236,753	5,484	3,645	23.2	15.0	1.17	275	—	88	26	30	78	—	4	—	49	392	115
Islington	347,017	8,334	5,081	24.1	14.7	1.25	434	—	131	22	41	124	—	13	1	102	456	120
Stoke Newington ...	53,613	1,042	614	19.5	11.5	1.02	54	—	7	10	7	19	—	3	—	[illegible]	50	103
Hackney	232,993	5,784	3,168	24.9	13.6	1.37	319	—	60	43	47	68	—	21	—	80	272	110
Holborn	55,134	1,569	956	28.5	17.4	1.28	70	—	12	2	10	28	—	2	—	16	142	89
Finsbury	96,732	3,352	1,808	34.9	18.7	1.83	178	—	49	17	16	52	—	2	—	40	226	111
City of London ..	20,310	268	341	13.2	16.8	0.85	17	—	1	1	5	7	—	2	—	1	41	97
Shoreditch	115,662	3,633	2,360	31.5	20.5	3.01	348	—	119	28	20	101	—	6	—	74	242	157
Bethnal Green ..	130,831	4,097	2,281	31.4	17.5	1.96	256	—	71	43	18	60	—	7	—	57	248	140
Stepney	398,923	10,510	4,897	34.1	18.9	1.97	788	—	155	83	93	102	—	21	1	153	482	116
Poplar	171,086	5,184	2,878	30.4	16.9	2.11	361	—	96	44	50	82	—	11	—	78	227	126
Southwark	209,781	6,985	3,771	33.8	18.0	1.90	398	—	112	35	36	103	—	11	—	101	425	142
Bermondsey	123,263	4,066	2,338	31.3	18.3	1.71	210	—	82	36	21	55	—	7	—	48	241	124
Lambeth	318,538	8,650	4,650	27.2	14.6	1.28	402	—	107	40	47	111	—	5	—	92	487	109
Battersea	181,736	4,496	2,404	24.8	13.3	1.34	245	—	69	19	38	68	—	4	—	45	227	117
Wandsworth	281,419	7,037	3,449	25.1	12.3	1.16	326	—	65	24	40	112	—	11	—	74	268	101
Camberwell	277,069	6,605	3,830	23.9	13.9	1.45	396	—	122	37	39	118	—	8	—	72	362	117
Deptford	116,510	3,274	1,639	28.2	14.1	1.47	171	—	54	14	25	37	—	6	1	34	156	103
Greenwich	107,322	2,580	1,362	24.2	12.7	1.44	154	—	58	19	[illegible]	26	—	5	—	37	116	100
Lewisham	152,532	3,622	1,747	23.8	11.5	0.85	128	—	17	12	18	61	—	1	—	29	141	90
Woolwich	129,336	3,321	1,616	25.7	12.5	1.38	177	—	72	14	15	37	—	4	1	34	161	112

of the three preceding weeks, had further declined to 3,806 at the end of last week; 475 new cases were admitted during the week, against 580, 405, and 433 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 15th, 377 births and 755 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 22.2, 22 3, and 23.5 per 1 000 in the three preceding weeks, declined again last week to 21 4 per 1,000, but was 2.8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14 3 in Aberdeen and 17 4 in Greenock to 22 9 in Glasgow and 29 6 in Perth. The death-rate from the principal infectious diseases averaged 3 2 per 1,000, the highest rates being recorded in Glasgow and Perth. The 377 deaths registered in Glasgow included 47 which were referred to measles 3 to scarlet fever, 5 to diphtheria, 11 to whooping-cough, 4 to cerebro-spinal meningitis, and 11 to diarrhoea. Three fatal cases of measles and 2 of whooping-cough were recorded in Edinburgh; 2 of diarrhoea in Dundee; 3 of measles in Aberdeen; 2 of scarlet fever and 2 of cerebro-spinal meningitis in Paisley; and 2 of whooping-cough and 2 of diarrhoea in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 8th, 538 births and 453 deaths were registered in six of the principal Irish towns, as against 570 births and 436 deaths in the preceding period. The annual death-rate in these towns, which had been 24 9, 24 1, and 22 8 per 1,000 in the three preceding weeks, rose to 23.1 per 1,000 in the week under notice, this figure being 4 8 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 14 6 in Londonderry and 22 3 in Dublin to 27 4 and 27.8 in Cork and Belfast respectively. The zymotic death-rate in the same six Irish towns averaged 1.6 per 1,000, or 0.4 per 1,000 higher than during the preceding period, the highest figures—4.1 and 3 7—being recorded in Limerick and Belfast respectively, while Londonderry and Waterford registered no deaths under this heading; the principal causes of death in this class of disease being again measles and whooping-cough.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

SURGEON F. E. M'CUNE, M.B., has been placed on the retired list, January 23rd. He was appointed Surgeon, May 23rd, 1904.

The following appointments have been made at the Admiralty: FREDERICK J. A. DALTON, Fleet Surgeon, ERNEST S. REID, M.B., Staff Surgeon, and CHARLES T. BAXTER, Surgeon, to the *President*, additional, for the *Maine*, February 10th.

ROYAL ARMY MEDICAL CORPS.

COLONEL O. E. P. LLOYD, V.C., Principal Medical Officer, Jubbulpore and Jhansi Brigades, has been transferred to the Bareilly and Garhwal Brigades.

Lieutenant-Colonel D. O'SULLIVAN, who is serving in India, has been appointed Principal Medical Officer, Jubbulpore and Jhansi Brigades, vice Colonel Lloyd, V.C.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-CAPTAIN A. H. VERNON to be Surgeon-Major, February 1st.

INDIAN MEDICAL SERVICE.

COLONEL W. G. H. HENDERSON, Bombay, Principal Medical Officer, Aden Brigade, has been appointed Principal Medical Officer, Mhow Division, vice Colonel J. F. Williamson, C.B., C.M.G., M.B.

Lieutenant-Colonel C. J. BAMBER, Bengal, Sanitary Commissioner, Punjab, is appointed to officiate as Sanitary Commissioner with the Government of India, vice Lieutenant-Colonel J. T. W. Leslie, M.B., who has been granted leave for ten months from January 28th.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT J. T. NISBET, M.D., Lancashire Hussars, to be Surgeon-Captain, January 24th.

ARMY MEDICAL SERVICE.

COLONEL J. F. WILLIAMSON, C.B., C.M.G., M.B., is placed on retired pay, February 6th. His commission bear date—Surgeon, February 4th, 1877; Surgeon-Major, February 4th, 1889; Surgeon-Lieutenant-Colonel, February 4th, 1897; Colonel, November 20th, 1903. His war record is as follows: Afghan war, 1878-9, battle of Charasiah, action on the heights of Kabul, defence of Sherpur cantonments, and march from Kabul to relief of Kandahar and battle of September 1st (mentioned in dispatches, medal with three clasps, bronze star). Egyptian expedition, 1882, battle of Tel-el-Kebir (medal with clasp, Khedive's bronze star). Burmese expedition, 1887-8. N.W. Frontier of India campaign, 1897-9, including operations of the Mohmand Field and Tirah Expeditionary Forces (mentioned in dispatches, medal with two clasps). South African war, 1899-1902, in charge of a General Hospital, and in operations in Cape Colony (mentioned in dispatches, Queen's medal with clasp, King's medal with two clasps, C.M.G.) Principal Medical Officer during the operations in Somaliland, 1903-4 (mentioned in dispatches, medal with clasp, C.B.).

Lieutenant-Colonel F. B. MACLEAN, from the Royal Army Medical Corps, to be Colonel, vice J. F. Williamson, C.B., C.M.G., M.B., retired, February 6th. Colonel Maclean entered the service as Surgeon, March 6th, 1880; became Surgeon-Major, March 6th, 1892; and Lieutenant-Colonel, March 6th, 1900. He has no war record in the Army Lists.

MILITIA.

SURGEON-LIEUTENANT-COLONEL H. B. SPURGIN, 3rd Battalion the Northamptonshire Regiment, is retired under the conditions of paragraph 55, Militia Regulations, retaining his rank and uniform, December 29th, 1907.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

GEORGE D. KETTLEWELL to be Surgeon-Lieutenant in the 2nd Devonshire Regiment, January 1st.

Surgeon-Lieutenant F. G. THOMAS, 1st Glamorganshire, to be Surgeon-Captain, January 9th.

IRVINE K. HERMON, M.D., to be Surgeon-Lieutenant in the 1st Devonshire Regiment, January 17th.

WILLIAM G. THOMPSON, M.D., and FRANK W. BUHN, M.B., are appointed Surgeon-Lieutenants in the 1st Durham Regiment, the former dated January 1st, the latter January 3rd.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN A. B. CHAMBERS, M.D., 1st Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), resigns his commission, December 20th, 1907.

Surgeon-Lieutenant A. H. PALMER, 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment), resigns his commission, January 1st.

Supernumerary Surgeon-Lieutenant-Colonel J. B. RONALDSON, 7th Volunteer Battalion the Royal Scots (Lothian Regiment), Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, 2nd Lothian Volunteer Infantry Brigade, is granted the honorary rank of Surgeon-Colonel, January 20th.

RICHARD A. FEGAN (late Captain) is appointed Surgeon-Captain 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), January 20th.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Q. CHALMERS, 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry, resigns his commission, January 21st; he retains his rank and uniform.

ARTHUR N. HAIG, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion Prince Albert's (Somersetshire Light Infantry), January 14th.

Surgeon-Major J. A. JONES, M.D., 2nd Volunteer Battalion the Welsh Regiment to be Surgeon-Lieutenant-Colonel, January 29th.

Surgeon-Major and Honorary Lieutenant-Colonel P. P. WHITCOMBE, M.B., 13th Middlesex (Queen's Westminster) Volunteer Rifle Corps, to be Surgeon-Lieutenant-Colonel, August 7th, 1907.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Western Command, Manchester Companies.—Honorary Lieutenant in the Army J. W. SMITH, M.D. (late Captain, Royal Army Medical Corps, Volunteers), to be Captain, November 21st, 1907. JOHN O'SULLIVAN to be Lieutenant, December 19th, 1907. Captain A. T. LAKIN, M.B., and Lieutenant W. E. ROTHWELL, M.B., resign their commissions, January 9th. THOMAS CARNWATH, M.B., to be Lieutenant, January 28th.

Lieutenant W. C. MURRAY, M.B., Argyll and Sutherland Bearer Company, to be Captain, December 25th, 1907.

Surgeon-Captain H. DODGSON, from the 3rd (Cumberland) Volunteer Battalion the Border Regiment, to be Captain, Lancaster and Border Bearer Company, January 1st.

Lieutenant-Colonel and Honorary Colonel J. TURTON, Sussex and Kent Bearer Company, is borne as supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer Sussex and Kent Volunteer Infantry Brigade, December 17th, 1907.

HENRY A. C. HARRIS to be Lieutenant in the Sussex and Kent Bearer Company, December 17th, 1907.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BARNSLEY HALL ASYLUM, Bromsgrove.—Second Assistant Medical Officer. Salary, £150 per annum.

BEDFORDSHIRE COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £260 per annum, rising to £300.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas per annum.

BOLINGBROKE HOSPITAL, S.W.—House-Surgeon. Salary, £75 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Senior and Junior House-Surgeons. Salary, £130 and £100 per annum respectively.

BRADFORD EDUCATION COMMITTEE.—Two Assistants to the Medical Superintendent, one male and one female. Salary, £350 per annum each.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician. Salary, £70 per annum.

BRITISH LYING-IN HOSPITAL, Endell Street, W.C.—Physician to Out patients.

CARDIFF CITY MENTAL HOSPITAL.—(1) Senior Assistant Medical Officer: (2) Junior Assistant Medical Officer. Salary, £200, rising to £250, and £150, rising to £180, per annum respectively.

CARDIFF INFIRMARY GENERAL HOSPITAL.—House Physician. Honorarium, £30 for six months.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary at the rate of £90 per annum first six months and £100 per annum after.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £60 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Honorarium, £25 for six months.

EASTERN DISPENSARY, Leman Street, E.—(1) Resident Medical Officer. Salary, £120 per annum. (2) Physician Accoucheur.

EDINBURGH: ROYAL EDINBURGH HOSPITAL.—Four Resident Medical Officers.

HOSPITAL FOR WOMEN, Soho, W.—Clinical Assistant to the Gynaecologists in the Out-patient Department.

ISLE OF WIGHT COUNTY EDUCATION COMMITTEE.—School Medical Officer. Salary, £400 per annum.

LANARK COUNTY COUNCIL.—Bacteriologist. Salary, £250 per annum.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—(1) House-Surgeon, (2) House-Physician. Salary, £60 per annum each.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary at the rate of £80 per annum.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Junior Resident Medical Officer (male) for six months, but eligible for election as Senior. Salary at the rate of £80 and £100 per annum respectively.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Casualty Officer. Salary at the rate of £150 per annum.

MIDDLESBROUGH COUNTY BOROUGH EDUCATION AUTHORITY.—Assistant to the Medical Inspector of School Children. Salary, £300 per annum.

MIDDLESEX HOSPITAL.—(1) Registrar to the Cancer Wards, (2) Scholar in the Cancer Research Laboratories. Salary, £40 and £60 per annum respectively.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Pathologist. Honorarium, 50 guineas per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

NOTTINGHAMSHIRE EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOW DISPENSARY.—Junior House-Surgeon, male. Salary, £30 per annum.

SUNDERLAND INFIRMARY.—House-Physician (male). Salary, £50 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) Three House-Surgeons.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Foyers, co. Inverness; St. Germans, co. Cornwall; Dulais Valley, co. Glamorgan; Llandrindod Wells, co. Radnor; Newcastle, co. Limerick; and Ovoca, co. Wicklow.

APPOINTMENTS.

BASSANO, T. M., M.B., C.M.Edin., District Medical Officer of the Colchester Union.

BLACKBURN, E. W., M.B., B.Ch.Oxford, District Medical Officer of the Barnsley Union.

BLACKBURN, V. K., M.R.C.S., L.R.C.P., District Medical Officer of the Barnsley Union.

BRICKWELL, F., M.B., District Medical Officer of the Hartismere Union.

CORKER, J., M.B., B.Ch., R.U.I., Deputy Resident Medical Officer of the Warrington Union Workhouse.

DAW, S.W., M.B., B.S.Lond., Resident Assistant Medical Officer of the Bermondsey Parish Infirmary.

TURTLE, Godfrey de Bec, M.D., B.S.Durh., M.R.C.P.Lond., Physician to the Public Dispensary, Drury Lane, W.C.

WELCH, T. A., L.R.C.P. and S.Edin., Medical Officer of Health, Yeardsley-cum-Whaley Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

HEDLEY.—On February 13th, at 66, Hans Place, S.W., to Dr. and Mrs. Edward Hedley, a daughter.

DEATH.

HARVEY.—On February 12th, at Westbury-on-Trym, Bristol, Alice Mary, wife of Alfred Harvey, M.B., and daughter of the late John Bassett, M.D., of Birmingham.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: (1) Importance and Significance of the Chemical Examination of the Gastric Contents after a Test Meal, by Dr. W. H. Willcox: (2) The Experimental Production of Gastric Ulceration by Infection of Gastrotoxin, by Dr. C. Bolton.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Donald Armour: The Surgery of the Spinal Cord and its Membranes.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION, 20, Hanover Square, W., 8 p.m.—Communications:—Mr. J. E. Spiller: The Dental Uses of Gutta-percha. Paper:—Mr. W. J. Law: Some Investigations of the Nerves in the Teeth of Mammalia: illustrated by Microscopes and Epidiascope. Discussion continued on Mr. J. F. Colyer's paper, The Treatment of Children from a Dental Aspect.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION, 20, Hanover Square, W., at 5.30 p.m.—Papers:—T. West: Acute Suffocative Catarrh: Dr. Sidney Phillips: A Case of Acute Ulcerative Colitis with some unusual Symptoms.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION, 4.30 p.m.—A Conversazione (to which ladies are invited) at the Apothecaries' Hall, Blackfriars, E.C.—An address by Dr. Harry Campbell, The Therapeutics of Diet. Demonstrations of electrical apparatus, colour photography, and an exhibition of instruments, drugs, and foods. Admission by signature or card of Fellow of the Society or member of Section.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Donald Armour: The Surgery of the Spinal Cord and its Membranes.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Donald Armour: The Surgery of the Spinal Cord and its Membranes.

ROYAL SOCIETY OF MEDICINE:

ELECTRO-THERAPEUTICAL SECTION, 8.30 p.m.—Paper: Dr. Lewis Jones: The Principles and Practice of Ionic Medication.

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Mendelism in Relation to Disease, by R. C. Punnett.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Skin Diseases due to "Mould" Fungi. 4 p.m., Medical Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, 2.30 p.m., Monday, Tuesday, Wednesday, and Thursday: Clinical Lecture, Friday, 3.30 p.m., Ulcerative Endocarditis or Cases of Interest in the Medical Wards.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., The Myogenic Theory in Relation to Cardiac Arrhythmia.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Eczema: Friday, 4 p.m., Psoriasis, Lichen Planus.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Surgical Treatment of Paralyses.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday: Radiography, 4 p.m. Thursday. Special Lectures:—Tuesday 3.15 p.m., and Friday, 2.15 p.m., Diabetes.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin: Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Differential Diagnosis of Obstructive Jaundice. Tuesday, Syphilis in General Medicine. Wednesday, The Retina in Albuminuria. Thursday, Leukaemia.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Out-patient Department, Fitzroy Square, W.—Thursday, 5 p.m., Lecture Demonstration: The Early Diagnosis of Pulmonary Tuberculosis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cerebellar Disease: Friday, 3.30 p.m., Surgery of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray: 3 p.m., Medical In-patient; 4.30 p.m., Lecture: Asthma, its Pathology and Treatment. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m. Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Lectures: At 12 noon, Monday, Pathological Demonstration: Tuesday and Thursday, 2 p.m., Practical Medicine: at 5 p.m., Monday, Some Acute Inflammations of the Eyes; Tuesday, Plague: Wednesday, Practical Medicine: Thursday, Clinical; Friday, Surgical—(*a*) The Significance of Urates, (*b*) The Significance of a Trace of Albumen.

BOOKS, ETC., RECEIVED.

An Introduction to the Study of the Infant's Stool. By P. Selter, M.D. Translated from the German by H. M. Rich, B.L., M.D. Detroit: The Medical Journal Co. 1907. 30 cents.

The Functional Inertia of Living Matter. By D. F. Harris, M.D., C.M., B.Sc., F.R.S.E. London: J. and A. Churchill. 1908. 5s.

"First Aid" to the Injured and Sick. An Advanced Ambulance Handbook. By F. J. Warwick, B.A., M.B., M.R.C.S., L.S.A., and A. C. Tunstall, M.D., F.R.C.S. Fifth edition. Bristol: J. Wright and Co.; and London: Simpkin, Marshall. 1908. 1s.

Tumours of the Cerebellum. By J. Wyllie, M.D. London: H. K. Lewis. 1908. 4s.

Die Krankheiten des Ohres und deren Behandlung. Von Professor Dr. A. Hartmann. Achte Auflage. Berlin: H. Kornfeld. 1908. M.7.50.

"*" In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	
26 WEDNESDAY	London: Medico-Political Parliamentary Subcommittee 3.15 p.m. Bath and Bristol Branch, Bath.
27 THURSDAY...	Lambeth Division, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, 4 p.m. Staffordshire Branch, General Meeting, North-Western Hotel, Stafford, 5.15 p.m.; Dinner, 7.15 p.m. Wandsworth Division, *Metropolitan Counties Branch*, 27, St. John's Hill, S.W., 8.45 p.m.
28 FRIDAY ...	London: Colonial Committee, 3 p.m.
29 SATURDAY...	Leinster Branch Annual Meeting, Royal College of Physicians, Kildare Street, 4.30 p.m.
MARCH.	
1 Sunday ...	
2 MONDAY ...	
3 TUESDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
4 WEDNESDAY	London: South-Eastern Branch Council, 3.15 p.m.
5 THURSDAY...	Tottenham Division, *Metropolitan Counties Branch*, Conjoint Meeting with North-East London Medical Society, Prince of Wales Hospital, Tottenham, 4.15 p.m.
6 FRIDAY ...	
7 SATURDAY...	

Date.	Meetings to be Held.
MARCH *(Continued).*	
8 Sunday ...	
9 MONDAY ...	
10 TUESDAY ...	London: Organization Committee, 11 a.m. City Division, *Metropolitan Counties Branch*, Conjoint Meeting with the Walthamstow Division, Walthamstow Hospital, 4 p.m.
11 WEDNESDAY	Richmond Division, *Metropolitan Counties Branch*, Sun Hotel, Kingston, 8.30 p.m.
12 THURSDAY...	London: Metropolitan Counties Branch Council, 5 p.m. Hampstead Division, *Metropolitan Counties Branch.*
13 FRIDAY ...	
14 SATURDAY...	
15 Sunday ...	
16 MONDAY ...	
17 TUESDAY ...	
18 WEDNESDAY	Cardiff Division, *South Wales and Monmouthshire Branch*, Cardiff.
19 THURSDAY...	Westminster Division, *Metropolitan Counties Branch*, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m.
20 FRIDAY ...	
21 SATURDAY...	
22 Sunday ...	
23 MONDAY ...	
24 TUESDAY ...	
25 WEDNESDAY.	Bath and Bristol Branch, Bristol.
26 THURSDAY...	
27 FRIDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 29TH, 1908.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

Clinical Meeting.

A CLINICAL meeting was held on Thursday, February 20th, at the Metropolitan Hospital. The following members of the staff showed and explained the following cases:—Dr. CAUTLEY: (*a*) A case of ruptured œsophageal varix, (*b*) a case of hemiplegia due to syphilis. Dr. LANGDON BROWN: (*a*) A case of melanotic sarcoma of lung, (*b*) a case of congenital heart disease. Mr. GASK: (*a*) Two cases of syringomyelia, (*b*) a case of interstitial hernia. Mr. FINZI: Two cases of rodent ulcer treated by zinc electrolytic method. Mr. SHAW: A femur from a case of acute infective osteo-myelitis in a child.

Tea and refreshments were kindly provided by the staff. A hearty vote of thanks was accorded to them for their demonstration and hospitality.

Medical Inspection of School Children.

The general meeting which followed, and which was presided over by Dr. SOUTHCOMBE, after receiving and confirming the minutes of the last general meeting, received the report of the Executive Committee on the questions *re* the medical inspection of school children, and which was as follows:

A. Yes.
B. That the inspection be limited to the sanitary surroundings of the child.
C. Should not be performed by general practitioners.
D. Approve of 5 (*a*).
E. Approve of 6 (*a*), 6 (*b*), and 6 (*c*). Not undesirable to practise in locality.
F. Both to be thrown open to any practitioner.
G. Yes.
H. We can make no suggestion.
I. We approve.
J. We approve of school clinics, provided that a strict inquiry be made, into the ability or not of the parents to pay for treatment by a private practitioner, by an inquiry officer.
K. By rigid inquiry by an inquiry officer.
L. Yes. We cannot make any suggestion.
M. We leave this to the Branch Council.
N. We approve of the last clause.
O. No.

STRATFORD DIVISION.

A MEETING of the Stratford Division was held on Thursday, February 13th, at the Alexandra Hotel, Dr. SPURRELL presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Address.—Dr. HADLEY, of the London Hospital, gave an address on the Prognosis of Heart Affections. The lecture was of a most useful and interesting nature, and Dr. Hadley was accorded a very hearty vote of thanks.

Clinical Demonstration.—An interesting clinical demonstration was given at the West Ham Hospital, on the afternoon of Friday, February 21st, by Mr. A. J. COUZENS, F.R.C.S., to the members of the Stratford Division. Mr. Couzens showed several surgical cases which greatly interested those members present.

TOTTENHAM DIVISION.

A MEETING of this Division was held at the Athenæum, Muswell Hill, on Thursday, February 6th, at 4.30 p.m., Dr. LEONARD GRANT presiding.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Address.—Dr. ROBERT HUTCHISON gave an address on chronic diarrhœa and its treatment, and a vote of thanks was passed to him for a highly interesting and practical address.

Medical Inspection of School Children.—Read circular from the Secretary, Metropolitan Counties Branch, regarding the Education Act. After discussion, the following answers to the questions in the circular were passed unanimously:

A. This Division lies mainly outside the area of the London County Council.
B. Home inspection is not a duty. It is suggested in the memorandum but not imposed by the Act. The Board of Education has no power to enforce it, and it should be excluded from the duties of the school medical officer altogether, until (as would be the case in some towns, but not in all) experience has shown that there is a sufficient residuum of neglectful parents to justify it; even then it should not be allowed in houses which have a medical attendant. When the medical inspector shows that defects arise through insanitary or improper conditions in the home, it is within the power of the medical officer of health, under the Public Health Acts, to enter any such home with a view to remedying the conditions.
C. It should *not* be undertaken by medical practitioners.
D. 5 (*a*).
E. 6 (*a*). Yes.
F. None essential, but all desirable.
G. See B above.

H. Treatment is not a duty under the Act or the memorandum. If a local authority undertake it, it should be done mainly through the interest taken by the master in the child outside school, and through the master's intercourse with the parents; no medical officer or school visitor should be allowed to interfere in a house where there is a medical attendant, except at his direct request.

I. Yes; but register should be card register only.

J. No, not under any circumstances.

K. It cannot, except by the hospital authorities making inquiries.

L. No; (*a*) and (*b*) are particularly objectionable, especially in urban localities; (*c*), (*d*), (*e*), yes. Specialists not necessary, as treatment is not required.

M. Yes.

N. If a whole-term appointment, there should be security of tenure.

O. Board of Education law should not be accepted. Medical inspection is now a duty, and should be done with thorough efficiency by properly-qualified and experienced whole-time officers, who should preferentially also be associated with the other work of the public health and education authorities. But treatment (including home visitation and advice given with regard to life outside the school) is permissive, not obligatory, and should never be allowed, except where experience demonstrated that the conditions of a district are so bad as to be beyond the reach of existing agencies for treatment, namely: (*a*) medical practitioners; (*b*) hospitals, dispensaries, and other forms of charitable agency; (*c*) the Poor-law medical machinery. This does not mean that the medical inspection would be without beneficial effect, for immense good would be brought about in four ways at least:

(i) Parents who had their attention drawn to a defect in the child would, in most cases, have it attended to by their medical man or by some other agency mentioned above.

(ii) Teachers would, under the direction of the school medical officer, see that the school conditions were suited as far as possible to individual cases where defect was discovered.

(iii) The attention of the medical officer of health would be directed to houses in which insanitary or undesirable conditions existed.

(iv) Statistical results would be gathered which might eventually lead to the adoption of remedial measures of widespread or even universal application.

WANDSWORTH DIVISION.

A MEETING of the Division was held on January 30th at the head quarters 4th Volunteer Battalion East Surrey Regiment, 27, St. John's Hill, S.W., Dr. GILBERT RICHARDSON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Correspondence.—A letter was read from the Medical Secretary respecting the Notification of Births Act.

Prevention of Unqualified Practice.—The meeting decided to ask their representatives on the Branch Council to place the following resolution upon the agenda for the next meeting:

That the Branch Council do request the Special Committee of the General Medical Council now sitting to collect evidence with regard to prevention of medical practice by other than legally qualified persons, to receive a deputation and offer evidence.

Notification of Births Act.—The following resolutions were carried:

(*a*) That this Division, while cordially approving the objects in view in the Notification of Births Act, considers that the onus of notification should not have been placed on the shoulders of registered medical practitioners, and resents this having been done with a penalty for non-compliance.

(*b*) That Dr. Biggs, Dr. Gyton, and the Honorary Secretary be appointed a deputation to take immediate steps in conference with the medical officer of health in Battersea, to have the procedure adopted at Bradford instituted in the Battersea Borough area.

(*c*) That a request be addressed to the Borough Councils of Wandsworth and Wimbledon, asking them to receive deputations with reference to the Notification of Births Act, should any communication be received by them from the Local Government Board, stating the Act will be enforced at a date before the Council deals with such communication.

Medical Inspection of Schools.—The memorandum from the Branch Council was considered, and the following replies ordered to be sent to them:

A. Yes.

B. As suggested in reply to H.

C. No scale of fees would be required if suggestion H were carried out, since patients would be attended by their own doctor, or, if unable to afford one, would be seen by the Poor-law medical officer, or would attend hospital.

D. 5 (*a*).

E. 1. 6 (*a*).

2. There is no reason why he should not practise in the area in which he inspects.

6 (*d*) approved, with the proviso that the specialist sees only those children which have been referred to him by the medical inspectors.

F. Yes.

7 (*b*) for (*a*).

(*b*) No, provided that he is a general practitioner who has been in active practice for a period of not less than five years.

G. Yes, with same proviso as in H.

H. For simple cases, where no medical skill is required, the school nurse should be instructed to visit. Cases requiring medical skill should be referred to their own doctor.

I. Yes, and if treatment is considered necessary, the parents be advised to consult a medical man.

J. No, it is considered unnecessary and undesirable in view of the great facilities that already exist

K. The hospital authorities should co-operate by not treating patients unless their cards are countersigned by a medical man with whom the patients are acquainted.

L. Yes.

M. Yes, as he can always refer cases of exceptional difficulty to the particular specialist in whose province it lies.

N. The medical inspectors be appointed for a period of three years, after which they shall be ineligible for the appointment so long as there are any practitioners in the district who are willing to serve and have not already done so.

NORTH OF ENGLAND BRANCH:

DURHAM COMMITTEE.

THE fifteenth meeting of this Committee was held at Sunderland on Friday, February 14th. Dr. E. H. DAVIS (West Hartlepool) was in the chair, and the following were present: Drs. Habbersty, Todd, and Beveridge (Sunderland), Arthur (Wingate), Jaques (Washington), Taylor (Chester-le-Street), Smith (Whickham), and W. H. Davis (Low Fell), and Messrs. A. T. and R. A Shepherd, Secretaries.

Confirmation of Minutes.—The minutes of the meeting held on December 13th, 1907, were read and confirmed.

Apologies for Non-attendance.—Letters regretting inability to attend were read from Drs. Jepson (Durham), Cox (Gateshead), Galloway (Low Fell), and Armstrong (South Shields).

Medical Certificates for School Children.—The SECRETARY read certain letters received from Secretaries of Divisions in reference to the question of fees for certificates of school children; and, Dr. TODD having stated that at Newcastle 1s. per child was paid, and at Hartlepool and South Shields 1s 6d., it was resolved that the information be communicated to Secretaries of Divisions.

Fees for Examinations and Reports in Compensation Claims.—A MEMBER having inquired as to the propriety of a charge he had made against a county council of a guinea for an examination and report on their behalf in connexion with a claim for compensation, a resolution was passed approving of the charge and recommending that the fee in all such cases be one guinea.

Case of Alleged Covering.—The case of a member charged with permitting his wife to act as his

qualified assistant again came up on a complaint that the offence was being still continued. A message from the President of the Branch (Dr. Cox) having been received stating that the offending member had written to him denying the charge, and that he had engaged a qualified assistant who would begin his duties on March 1st, it was resolved that the matter be allowed to stand over until the date named, after which, if it was still reported that the offence was continued, the matter was to be brought before the General Medical Council.

Medical Inspection of Schools.—The question of medical inspection of schools was discussed, and it was the unanimous opinion that the matter required very careful consideration; but as at present there was a lack of information on the subject, it was decided that it should be brought up again at the next meeting.

Ethical Procedure.—The SECRETARIES reported that they were still in communication with the Medical Secretary of the Association in reference to a suggested amendment of the Branch and Division rules, for the purpose of giving this Committee the right of dealing with "blacklegging" cases independently of the Divisions.

SOUTH MIDLAND BRANCH:
NORTHAMPTONSHIRE DIVISION.

A MEETING of the Division was held in the Board Room of the General Hospital, Northampton, on January 28th, under the chairmanship of Mr. G. H. PERCIVAL. In addition to the Chairman there were present Drs. Chamberlain, Burt, Grindon, Terry, Robson, Darby, Maguire, Odgers, McCrindle, Evans, Hichens, Harries Jones, Wickham, Hollis, Cooke, and Stone—in all seventeen.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Medical Inspection of School Children.—The CHAIRMAN explained that the meeting had been called somewhat hurriedly, as the Medical Officer of Health for the county, Mr. C. E. Paget, wished to know the views of the Division on the question of the medical inspection of school children. An animated discussion on the subject then ensued, some members advocating the carrying out of the work by local practitioners, and others by special whole-time officers. The latter view, however, prevailed with the Division, and the following motion was carried, on the proposition of Dr. MAGUIRE, seconded by Dr. BURT:

> That special whole-time officers should be appointed for carrying out this Act.

Ayes 8, Noes 3, not voting 6. Mr. PERCIVAL, seconded by Mr. TERRY, proposed the additional words:

> throughout the town and county.

This was carried—Ayes 8, Noes 4, not voting 5. The question of remuneration for the work, supposing that whole-time officers were not appointed, was then discussed. On the proposal of Dr. WICKHAM, seconded by Dr. STONE, the following motion was carried:

> That in the case of part-time officers the rate of pay proposed—that is, £50 per annum for an attendance of one half a school day per week during the school term—is sufficient, but that mileage fees and other out-of-pocket expenses should be allowed, and all extra reports should be paid for as extra.

Ayes 7, Noes 1, not voting 5. On the motion of Dr. HICHENS, seconded by Dr. ROBSON, the following proposition was carried:

> The Division is strongly of opinion that the medical inspection of school children should not lead to medical treatment out of the rates except in Poor-law cases.

Ayes 11, Noes 0, not voting 1.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.
NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LEINSTER BRANCH.—The annual meeting of the Branch will be held in the Royal College of Physicians, Kildare Street, Dublin, on Saturday, February 29th, at 4 30 p.m.—ARTHUR H. WHITE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—Meetings of this Division will be held on Wednesday, March 11th, at 8 30, at the Sun Hotel, Kingston, when Dr. R. W. Wilson will read a paper entitled Remarks on Intestinal Sepsis and its Treatment; and on Wednesday, April 8th, at 8 30, at the Royal Hospital, Richmond, when Mr. W. T. Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6 30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—CHARLES BLAIR, F.R.C.S., Matson Lodge, Richmond. A. E. EVANS, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

GLOUCESTERSHIRE BRANCH.—A special meeting of this Branch will be held at the Infirmary, Gloucester, on Thursday, March 5th, at 7 p.m., to consider the medical inspection of school children, and to discuss the questions asked by the Medico Political Committee in reference to medical examination for life insurance. All members are earnestly requested to attend.—D. E. FINLAY, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A scientific and clinical meeting of this Branch will be held in Liverpool early in March. Members wishing to make communications will kindly notify at once to F. CHARLES LARKIN, 54, Rodney Street, Liverpool, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The next ordinary meeting of the Division will be held on Thursday, March 19th (not on February 20th as previously announced), at 5 p.m., at St. James's Vestry Hall, Piccadilly (First Floor). Special business: The question of medical inspection of school children.—HARVEY HILLIARD, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch will be held at Club House, Carlow, on Wednesday, March 4th, at 5.30 p.m. Agenda: (1) Minutes. (2) Reconsideration of ethical rules, with a view of urging the necessity of appointing Ethical Committees for each Division. (3) Any other business.—J. QUIRKE, Piltown, Honorary Secretary.

SOUTHERN BRANCH: HAMPSHIRE DIVISIONS.—A meeting of the members of the Hampshire Divisions will be held at the Royal South Hants and Southampton Hospital, Southampton, on Friday, March 13th, at 4 p.m., to elect a member on the Board of Governors of the Hartley University College, Southampton.—G. H. COWEN, 4, College Terrace, Southampton, Honorary Secretary.

YORKSHIRE BRANCH.—The next meeting of this Branch will be held at the General Infirmary, Leeds, on Wednesday, March 18th, at 4 15 p.m. Members intending to read papers, show specimens or cases, or propose new members, are requested to communicate at once with Dr. ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH: BRADFORD DIVISION.—An ordinary general meeting of this Division will be held at the Great Northern Victoria Hotel, Bradford, on Tuesday, March 10th. The following amongst other questions will be considered: (1) Report of the Special Committee appointed by the Division to consider the question of the medical inspection of school children, especially as it affects Bradford. (2) The payment to Poor-law medical officers of fees for evidence in the coroner's court on persons dying in the workhouse. (3) Report as to proposed definition of the term "hospital" (Central Ethical Committee). (4) Report on Life Insurance Examinations (Medico-Political Committee). (5) Report on Prevention of Corruption Act (Central Ethical Committee). For information regarding the three latter reports see the SUPPLEMENT for February 22nd, 1908. As the questions to be considered are of the greatest importance to the medical profession, it is hoped that a large attendance of members will take place.—JAMES METCALFE, Frizinghall, Bradford, and J. WHERRY WILLSON, Barkerend Road, Bradford, Honorary Secretaries.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Walter G Axford, Fleet Surgeon, to the *President*, additional, for Queensferry Hospital, March 2nd; Henry B. Beatty, Fleet Surgeon, to the *Magnificent*, February 22nd; Walter G Edwards, Surgeon, to the *Vivid*, additional, to be lent to Plymouth Hospital, February 25th: Shirley H. Birt, Staff Surgeon, to the *President*, additional, for survey of stores at Yarmouth Hospital, temporary, March 11th.

C. R. Wood, M.D., civil practitioner, has been appointed Surgeon and Agent at Kingston-on-Sea and Southwick, February 19th; W. H. Dodd to be Surgeon and Agent at Cromane, February 19th.

ARMY MEDICAL SERVICE.

Colonel W. L. Chester, M.B., is placed on retired pay, February 17th. He was appointed Surgeon, March 31st, 1875; Surgeon-Major, March 31st, 1887; granted the rank of Lieutenant-Colonel, March 31st, 1895; selected for increased pay, August 5th, 1898; and made Colonel, August 19th, 1903. He was in the Boer war in 1881 and with the Nile Expedition in 1884-5, for which latter he received a medal with clasp and the Khedive's bronze star.

Colonel G. D. Bourke, C.B., Administrative Medical Officer at Plymouth, on promotion to Surgeon-General, has been appointed Principal Medical Officer, Irish Command, to succeed Surgeon-General J. D. Edge, C.B., M.D., from March 9th.

Lieutenant-Colonel D. O'Sullivan, from the Royal Army Medical Corps, to be Colonel, vice W. L. Chester, M.B., retired, February 17th. He was appointed Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; and Lieutenant-Colonel, July 31st, 1900. He has no war record in the Army Lists.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel R. L. Love, M.D., is placed on retired pay, February 19th. His commissions were thus dated: Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; Lieutenant-Colonel, July 31st, 1900. He served in the South African war in 1899-1902, and was present in operations in Natal, including the action at Lombard's Kop, the defence of Ladysmith, and the action at Laing's Nek. He was also in operations in the Transvaal, including the actions at Belfast and Lydenberg; he was several times mentioned in dispatches, and received the Queen's medal with four clasps, and the King's medal with two clasps.

Lieutenant A. D. Fraser, M.B., is seconded for service under the Colonial Office, February 6th.

Lieutenant-Colonel J. C Culling has been appointed Senior Medical Officer, Bermuda, vice Colonel W. J. R. Rainsford, C.I.E.

Colonel H. R. Whitehead, who is serving in India, is appointed Principal Medical Officer, Peshawur Division, vice Colonel W. L. Chester, M.B.

CHANGES OF STATION.

The following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during January, 1908:

		FROM		TO
Colonel	H. J. W. Barrow	Dalhousie	...	Lahore.
,,	W. L. Chester, M.B.	Cherat	...	Peshawar.
,,	W. J. R Rainsford, C.I.E., F.R.C.S.I.	Bermuda	...	Tidworth.
,,	H. R. Whitehead, F.R.C.S. Eng.	Kasauli	...	Ambala.
,,	J. G. Harwood, F.R.C.S.Edin.	Darjeeling	...	Calcutta.
Lieut.-Col.	W. J. Baker	Dublin	...	Egypt
,,	A. S. Rose, M.D.	Meerut	...	Allahabad.
,,	F. H Treherne, F.R.C.S. Edin.	Sialkot	...	Ambala.
,,	A. E. Tate	Simla	...	London Dist.
,,	J. S Green, M.B.	Dublin	...	India
,,	T. Daly	Warley	...	Perozepore.
,,	M. T Yarr, F.R.C.S I.	Colaba	,,	Poona
,,	T. G. Lavie	Thayetmyo	...	Meiktila.
,,	H H Brown, M.B.	Preston	...	Nowshera.
,,	J. Fallon	Multan	...	Ambala.
Major	O. R. A. Julian, C.M.G.	Cherat	...	Peshawar.
,,	A. Burnside	Jullundur	...	Multan.
,,	A. W. Bewley	Newbridge	...	India.
,,	L. Way	Landour	...	Portsmouth.
,,	J. W. Jennings, D.S.O.	Lucknow	...	Shwebo
,,	A Pearse	Chester	...	West Africa.
,,	T. W. Gibbard, M.B.	Simla	...	Ambala.
,,	F. McDowell	Nowshera	...	Peshawar.
,,	H. N. Dunn, M.B.	Ghurial	...	Ambala.
,,	N. Tyacke	Dalhousie	...	Lahore.
,,	H. A. Bray	Tidworth	...	R.A.M. Coll
,,	F. G. Faichnie	Aden	...	London Dist.
,,	H. W. K. Read	Meiktila	...	Thayetmyo.
,,	F. M Maugin	Jamaica	...	Aldershot
,,	E. S Clark, M.B.	Peshawar	...	Nowshera.
,,	G St. C Thom, M.B.	Solon	...	Lahore
,,	E. B Steel, M.B.	"C" Co. Dépôt		Nasirabad.
,,	H. E. Stadden	Mauritius	...	Dublin.
Captain	J McD. McCarthy, M.B.	Pembroke D'k.		Chester.
,,	S. de C. O'Grady, M.B.	Aldershot	...	Egypt
,,	J. E Hodgson	Southern Com.		Crownhill.
,,	G. H Goddard	R.A.M. Coll.	...	Aldershot.
,,	J. W. H Houghton, M.B.	Millbank	...	W. Africa.
,,	L. Humphry	Dover	...	Poona.
,,	L. F F Winslow	Devonport	...	Bodmin.
,,	H. H Norman	Queenstown	...	Rangoon.
,,	R. L Argles	Khyra-Gali	...	Multan
,,	W. S. Crosthwait	Southern Com.		Devonport.
,,	J. J. Jones	Ceylon	...	Southern Com.
,,	M. W Falkner	Lucknow	...	Tidworth.
,,	A. J. Hull	Nowgong	...	Jutogh.
,,	A. H. McN. Mitchell	Newport	...	Bury.
,,	M. F Bodilly	Aden	...	Southern Com.
,,	A McMunn	Jutogh	...	Ambala.
,,	W. Davis	Bareilly	...	Dublin.
,,	C. G. Thomson	Lahore	...	Jullundur.
,,	L. Cotterill	Maymyo	...	Mandalay.
,,	W. F. Ellis	Dalhousie	...	Lahore.
Captain	A. H. Hayes	Kasauli	...	Ambala.
,,	M. G. Winder	Pretoria	...	Eastern Com.
,,	T E. Harty	Darjeeling	...	Calcutta.
,,	B. G. Patch	Dagshai	...	Ambala.
,,	G. A. Kempthorne	Dalhousie	...	Lahore.
,,	F. J. Turner	Kamptee	...	Mhow
,,	J. A. Turnbull	Sara-Gali	...	Peshawar.
,,	F. J. Garland, M.B.	Poona	...	Ahmednagar.
,,	A. S Arthur, M.B.	Cherat	...	Mhow.
Lieutenant	G. A. D. Harvey	Straits Settlements	...	Egypt
,,	H. O. M. Beadnell	Subathu	...	Ambala.
,,	J. P. Lynch	Kamikhet	...	Thayetmyo.
,,	W. S Nealor	Leborg	...	Calcutta.
,,	C W. O'Brien	Peshawar	...	Nowshera.
,,	R E Humfrey, M.B.	Belgaum	...	Poona
,,	W. G. Maydon	Calcutta	...	Dinapore.
,,	W. J. Weston	Aldershot	...	Gibraltar.
,,	R S Smyth, M.D.	Lucknow	...	Ambala.
,,	F. A. McCammon, M.B.	Belfast	...	India.
,,	G. de la Cour, M.B.	Millbank	...	,,
,,	W. Egan, M.B.	Hilsea	...	Multan.
,,	A. S. Williams	Dover	...	India.
,,	V. C. Honeybourne	,,	...	,,
,,	F. D. G. Howell	Gosport	...	Lucknow.
,,	W. H. Gillatt, M.B.	Aldershot	...	Egypt. Army.
,,	A. H. Bond	Gosport	...	Mayinyo.
,,	T. T. H Robinson, M.D.	Aldershot	...	India.
,,	L G Gibson	,,	...	,,
,,	G. H. Stevenson, M.B.	Hounslow	...	Ambala.
,,	R. W. D Leslie	Dover	...	Aldershot.
,,	W. F M. Loughnan	Portsmouth	...	Parkhurst
,,	J. L. Wood	Edinburgh	...	R. A. M. Coll.
,,	O R. McEwen	Bury	...	Chester.
,,	H. W. Farebrother	Ashton	...	Warrington

The undermentioned officers, on retired pay, have been placed in medical charge of troops at the stations named: Lieutenant-Colonel A. Hosie, Sandown; Major J. D. Moir, Fort Efford and Mutley District; Captain S. G. McAllum, M.D., R.A.M.C (Militia), Berwick.

Vital Statistics.

ENGLISH URBAN MORTALITY DURING 1907.

In the accompanying table will be found summarized the vital statistics of the seventy-six large English towns dealt with in the Registrar-General's weekly returns. During the fifty-two weeks ending December 28th last, 431,726 births were registered in these towns, equal to an annual rate of 27.0 per 1,000 of the population, estimated at 16,024,428 persons in the middle of 1907; in the three preceding years the rates were 29.1, 28.2, and 27.9 per 1,000 respectively. In London the rate was 25.8 per 1,000, while it averaged 27.5 in the seventy-five other large towns, and ranged from 16.6 in Hastings, 17.0 in Tornsey, 17.4 in Halifax, 17.6 in Bournemouth, 20.0 in Bradford, and 20.6 in Northampton, to 32.9 in Tynemouth, 33.0 in Coventry, 33.6 in Warrington, 34.2 in St Helens and in Middlesbrough, 34.3 in Sunderland, 35.9 in Merthyr Tydfil, and 37.1 in Rhondda.

During the period under notice 245,822 deaths were registered in these large towns, equal to a rate of 15.4 per 1,000 living, against 17.2, 15.7, and 15.9 per 1,000 in the three preceding years. In London the rate of mortality was 14.6 per 1,000, while in the seventy-five other large towns it averaged 15.7 per 1,000, and ranged from 8.6 in Hornsey, 10.2 in King's Norton, 10.5 in Handsworth (Staffs), 11.2 in East Ham and in Leyton, and 11.5 in Willesden, to 19.0 in Liverpool, 19.1 in Preston, 19.2 in Sunderland, 19.4 in Oldham, 19.5 in Merthyr Tydfil, and 20.3 in Middlesbrough.

The 245,822 deaths from all causes in these towns last year included 24,695 which were referred to the principal infectious diseases; of these, 6 resulted from small-pox, 6,838 from measles, 1,953 from scarlet fever, 2,786 from diphtheria, 5,641 from whooping cough, 1,093 from "fever" (principally enteric), and 6,377 from diarrhœa. The death-rate from these diseases in the aggregate was 1.54 per 1,000, the corresponding rates in the three previous years having been 2.49, 1.85, and 2.24 per 1,000 respectively. In London the principal infectious diseases caused a death-rate equal to 1.41 per 1,000; the mean rate in the seventy-five other large towns was 1.60 per 1,000, the lowest rates being 0.33 in Bournemouth, 0.48 in Hastings, 0.55 in Hornsey, 0.68 in Halifax, 0.76 in King's Norton, 0.77 in Huddersfield, 0.78 in Wallasey, and 0.79 in Bristol; and the highest rates 2.40 in Hanley, 2.49 in Bolton, 2.60 in Wigan, 2.64 in Sheffield, 2.85 in Middlesbrough, and 2.99 in St. Helens. The 6,838 fatal cases of measles corresponded to an annual rate of 0.43 per 1,000; in London the death-rate from this disease was 0.38 per 1,000; the highest rates in the seventy-five other large towns were recorded in Hanley, West Bromwich, Birkenhead, St. Helens, Bolton, Middlesbrough, and Cardiff. The 1,953 deaths from scarlet fever were equal to an annual rate of 0.12 per 1,000; in London the mortality from scarlet fever was equal to 0.13 per 1,000; among the seventy-five other large towns this disease was proportionally most fatal in Leyton, Hanley, Wolverhampton, West Bromwich, Salford, Sheffield, and Newport (Mon.). The 2,786 fatal cases of diphtheria were equal to a death-rate of 0.17 per 1,000; in London this disease caused a death rate of 0.16 per 1,000, while among the seventy-five large provincial towns the highest rates were recorded in Leyton, Reading, Norwich, Derby, Salford, and Middlesbrough. The 5,641 deaths from whooping-cough corresponded to an annual rate of 0.35 per 1,000; the death-rate in London from this disease was 0.38 per 1,000; among the seventy-five other large towns the greatest proportional mortality was recorded in West Ham, Walthamstow, St. Helens, Wigan, Salford, Preston, and Middlesbrough. The deaths referred to different forms of "fever" numbered 1,093, and were equal to a rate of 0.07 per 1,000; in London the "fever" death-rate was only 0.04 per 1,000; among the seventy-five other large towns "fever" was proportionally most fatal in Grimsby, Nottingham, Bootle, Wigan, Preston, Middlesbrough, Stockton-on-Tees, and Rhondda. The 6,377 fatal cases of diarrhœa corresponded to a rate of 0.40 per 1,000; in London the rate of mortality from this cause was 0.32 per 1,000, the highest rates among the other large towns being recorded in Walsall, Liverpool, Bootle, Wigan, Burnley, Sheffield, Rotherham, Middlesbrough and Rhondda. Of the 6 deaths from small-pox, 2 belonged to Southampton, 2 to Cardiff, 1 to Bristol and 1 to Hull.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 127

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during 1907.

Towns.	Estimated Population middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
76 Towns	16,024,458	431,726	245,822	27.0	15.4	1.54	24,699	6	6,838	1,958	2,786	5,641	1,093	6,377	127	0.9
75 Provincial Towns	11,286,240	309,521	176,654	27.5	15.7	1.60	17,979	6	5,037	1,314	2,005	3,856	895	4,867	131	1.3
London	4,758,218	122,205	69,268	25.8	14.6	1.41	6,720	—	1,801	644	781	1,786	198	1,510	115	0.1
Croydon	154,342	3,955	1,809	25.7	12.4	0.89	135	—	8	12	41	25	1	38	94	—
Willesden	149,192	4,161	1,715	28.0	11.5	1.29	190	—	43	19	18	73	4	32	110	0.6
Hornsey	89,816	1,619	771	17.0	8.6	0.55	49	—	5	5	9	19	4	7	77	—
Tottenham	122,793	3,703	1,644	30.2	13.4	1.31	160	—	45	11	13	63	4	24	103	—
West Ham	308,284	8,779	4,498	28.6	14.6	2.18	668	—	157	55	74	165	15	202	131	0.0
East Ham	136,421	3,580	1,621	26.3	11.2	1.82	248	—	70	23	39	65	2	49	108	0.2
Leyton	122,040	3,169	1,395	26.0	11.2	1.66	202	—	33	24	53	60	3	29	92	0.3
Walthamstow	126,397	3,589	1,611	28.5	12.0	1.82	231	—	33	22	38	76	5	57	113	0.1
Hastings	67,477	1,120	858	16.6	12.8	0.48	33	—	3	3	4	15	—	8	79	0.5
Brighton	129,023	2,710	1,895	21.1	14.7	0.84	108	—	13	—	16	35	3	42	113	0.1
Portsmouth	208,291	5,796	3,332	27.9	16.0	1.82	381	—	169	4	61	67	20	60	123	1.4
Bournemouth	69,246	1,197	729	17.6	12.0	0.73	16	—	—	1	4	—	2	9	83	0.1
Southampton	119,745	2,757	1,586	23.1	13.0	0.83	98	2	6	2	21	19	5	43	108	—
Reading	80,311	1,875	954	22.5	12.4	1.05	85	—	15	1	38	14	4	13	90	2.2
Northampton	85,070	1,956	1,149	20.6	12.3	0.90	85	—	29	7	5	11	2	31	122	2.1
Ipswich	72,825	1,848	1,086	25.4	15.0	1.15	84	—	35	—	8	27	3	11	106	—
Great Yarmouth	52,879	1,338	786	25.4	14.9	1.03	55	—	1	5	5	20	5	19	128	—
Norwich	119,191	2,968	1,735	25.0	14.6	1.33	157	—	3	2	46	40	12	55	125	0.6
Plymouth	120,063	2,776	1,760	23.2	14.7	0.86	103	—	25	4	15	11	7	41	110	0.1
Devonport	79,959	2,175	1,000	27.3	13.2	1.17	93	—	28	3	11	9	6	36	107	—
Bristol	367,979	8,924	4,833	24.3	13.2	0.79	293	1	33	26	64	35	15	119	100	0.2
Hanley	67,174	2,168	1,248	32.4	18.6	2.40	161	—	72	14	18	15	9	33	160	1.2
Burton-on-Trent	53,425	1,297	665	24.3	12.5	1.17	63	—	34	6	5	5	7	6	97	2.9
Wolverhampton	102,016	2,684	1,441	26.4	15.2	1.44	145	—	22	24	26	16	7	50	120	0.3
Walsall	96,171	2,332	1,424	29.5	15.5	2.30	220	—	73	14	5	40	13	75	154	0.9
Handsworth	65,929	1,509	628	23.0	10.6	0.90	69	—	18	3	11	11	4	12	101	1.3
West Bromwich	69,123	2,130	1,141	30.9	16.7	2.33	161	—	95	29	8	1	7	21	145	2.1
Birmingham	553,156	15,623	8,925	28.3	16.2	1.78	950	—	317	92	102	186	47	226	147	3.4
King's Norton	75,600	1,886	772	24.5	10.2	0.76	57	—	17	12	7	12	5	4	103	2.1
Smethwick	66,467	1,598	859	28.3	13.0	1.14	76	—	26	12	8	13	5	11	117	2.0
Aston Manor	83,266	2,110	1,075	25.4	13.0	1.48	124	—	39	7	16	20	6	36	125	0.4
Coventry	77,626	2,557	1,146	33.0	14.8	1.02	79	—	20	4	10	4	3	38	104	2.2
Leicester	236,124	6,458	2,983	24.2	12.7	0.90	212	—	63	46	16	14	5	74	131	0.7
Grimsby	70,574	2,104	1,128	29.9	16.2	2.23	157	—	50	11	12	36	15	33	163	1.6
Nottingham	257,489	6,859	4,497	26.8	17.5	2.25	578	—	199	6	40	132	39	163	165	0.6
Derby	125,774	3,182	1,798	25.1	14.3	1.60	202	—	79	4	53	23	18	25	121	0.1
Stockport	100,986	2,707	1,586	26.9	17.7	1.53	153	—	22	12	18	47	8	46	159	0.1
Birkenhead	118,653	3,694	1,817	31.2	15.4	1.95	232	—	120	12	24	18	11	37	110	0.1
Wallasey	66,707	1,760	889	26.5	13.4	0.78	51	—	5	4	8	13	3	18	89	2.0
Liverpool	746,144	23,654	14,138	31.8	19.0	2.01	1,491	—	287	136	108	322	98	640	144	2.7
Bootle	67,114	2,171	1,123	32.4	16.8	1.90	127	—	16	[illegible]	12	28	10	53	123	2.7
St. Helens	92,476	3,155	1,704	34.2	18.5	2.99	276	—	150	10	11	52	13	40	188	3.5
Wigan	88,606	2,730	1,649	30.9	18.7	2.60	229	—	74	[illegible]	13	50	23	60	163	—
Warrington	70,269	2,356	1,127	33.6	16.1	2.01	141	—	55	12	14	11	6	45	121	4.5
Bolton	182,917	4,455	3,064	24.4	16.8	2.49	463	—	235	32	21	64	26	75	146	0.6
Bury	58,901	1,337	938	22.8	16.0	1.15	67	—	10	1	10	27	4	15	138	1.3
Manchester	643,148	18,434	11,693	28.7	18.1	1.72	1,110	—	232	105	102	314	35	328	146	0.9
Salford	236,670	6,892	4,173	29.2	17.7	2.14	505	—	104	62	72	144	20	103	140	0.4
Oldham	141,730	3,745	2,735	26.5	19.4	1.52	214	—	34	17	18	66	4	76	144	0.3
Rochdale	87,999	2,041	1,515	23.6	17.2	1.12	98	—	24	4	23	29	5	13	122	2.4
Burnley	103,947	2,953	1,823	28.5	17.6	1.42	146	—	7	13	14	29	11	72	158	1.3
Blackburn	134,980	3,336	2,277	24.8	16.9	1.34	182	—	49	9	17	45	14	28	153	1.6
Preston	117,093	3,129	2,226	26.8	19.1	1.66	194	—	25	7	12	70	17	63	168	2.9
Barrow-in-Furness	61,635	1,791	849	29.1	13.7	1.55	95	—	36	—	13	25	6	15	115	2.5
Huddersfield	94,814	2,189	1,602	23.2	16.9	0.77	73	—	10	6	8	17	11	21	97	1.1
Halifax	110,138	1,913	1,574	17.4	14.3	0.68	75	—	5	2	29	11	8	20	103	1.0
Bradford	290,323	5,777	4,271	20.0	14.8	0.89	259	—	49	13	43	80	24	66	124	0.9
Leeds	470,268	11,677	7,173	24.9	15.3	1.26	587	—	103	54	64	161	26	179	130	0.1
Sheffield	456,653	14,046	7,750	30.9	17.1	2.64	1,206	—	392	105	56	160	42	441	145	2.2
Rotherham	62,412	2,014	1,002	32.4	16.1	2.00	124	—	31	2	10	23	6	52	148	3.0
York	84,730	2,181	1,275	25.8	15.1	1.21	102	—	21	3	11	18	9	40	125	0.1
Hull	266,762	7,666	4,289	28.8	16.1	1.77	470	1	175	16	67	99	15	98	127	1.9
Middlesbrough	101,733	3,470	2,057	34.2	20.3	2.35	289	—	101	9	35	64	16	74	168	1.0
Stockton-on-Tees	52,909	1,658	963	31.4	18.1	1.78	94	—	32	—	10	25	8	19	114	1.8
West Hartlepool	75,473	2,046	1,049	27.7	13.5	1.03	77	—	26	3	9	24	2	13	127	0.8
Sunderland	156,029	5,340	2,983	34.3	19.2	1.84	287	—	100	22	42	42	11	70	130	2.8
South Shields	113,460	3,276	1,891	29.0	16.7	1.36	154	—	50	11	17	53	6	17	133	5.1
Gateshead	125,783	3,851	1,936	30.7	15.4	1.57	197	—	68	6	31	45	10	47	136	4.4
Newcastle-on-Tyne	272,969	8,089	4,345	29.7	16.9	1.37	372	—	120	22	51	130	10	39	123	0.2
Tynemouth	54,688	1,794	947	32.9	17.4	1.35	73	—	22	5	9	27	1	9	122	1.3
Newport (Mon.)	75,585	2,416	1,163	32.1	15.4	1.74	130	—	46	21	14	12	5	33	122	0.8
Cardiff	187,620	4,866	2,804	26.0	15.0	1.90	365	2	177	21	23	66	13	65	131	0.0
Rhondda	130,400	4,823	2,117	37.1	16.3	1.91	247	—	70	9	19	26	22	101	162	0.9
Merthyr Tydfil	76,085	2,727	1,483	35.9	19.5	2.27	173	—	62	11	17	22	10	61	154	1.1
Swansea	97,324	3,157	1,737	32.5	17.9	1.27	124	—	14	5	12	39	4	10	132	0.3

per 1,000 last year, against 160, 140, and 145 in the three preceding years. In London the rate was 115 per 1,000, while it averaged 131 in the seventy-five other large towns, and ranged from 77 in Hornsey, 79 in Hastings, 83 in Bournemouth, 90 in Reading, 92 in Leyton, 94 in Croydon, 97 in Burton-on-Trent and in Huddersfield, and 99 in Wallasey to 158 in Burnley, in Preston and in Middlesbrough, 159 in Stockport, 160 in Hanley, 162 in Rhondda, 163 in Wigan, and 165 in Nottingham.

The causes of 2,322, or 0·9 per cent., of the deaths registered in the seventy-six towns last year were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Hornsey, Tottenham, Southampton, Ipswich, Great Yarmouth, Devonport, and Wigan; the highest proportions of uncertified deaths were 3·0 in Rotherham, 3·4 in Birmingham, 3·5 in St. Helens, 4·4 in Gateshead, 4·5 in Warrington, and 5·1 in South Shields.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,022 births and 5,726 deaths were registered during the week ending Saturday last, February 22nd. The annual rate of mortality in these towns, which had been 18·2, 18·3, and 18·6 per 1,000 in the three preceding weeks, declined again to 18·4 per 1,000 last week. The rates in the several towns ranged from 8·4 in Hornsey, 11·5 in Hastings, 11·6 in Willesden, 12·3 in Cardiff, and 12·7 in Ipswich, to 24·5 in Swansea, 24·7 in Rhondda, 24·9 in Devonport, 25·1 in Sunderland and in Newport (Mon.), 27·0 in Merthyr Tydfil, 28·8 in Burnley, and 29·4 in Great Yarmouth. In London the rate of mortality was 18·5 per 1,000, while it averaged 18·4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 0·9 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2·5 in Sheffield, 2·7 in Preston and in Newport (Mon.), 2·9 in Warrington, 3·0 in Burnley, 3·7 in Swansea, 3·8 in Hanley, 3·9 in Rhondda, 4·1 in Merthyr Tydfil, and 4·6 in Sunderland. Measles caused a death-rate of 1·1 in Hornsey, 1·2 in York, 1·7 in Croydon, 1·8 in Preston, 2·0 in Stockton-on-Tees, and 2·7 in Rhondda; diphtheria of 1·1 in Hornsey and in East Ham; whooping-cough of 2·0 in Sheffield, in Gateshead and in Newport (Mon.), 2·1 in Swansea, 2·9 in Warrington, 3·4 in Merthyr Tydfil, and 4·3 in Sunderland; and "fever" of 1·5 in Hanley. The mortality from scarlet fever and from diarrhœa showed no marked excess in any of the seventy-six towns and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,913, 3,867 and 3,806 at the end of the three preceding weeks, had further declined to 3,733 at the end of last week; 420 new cases were admitted during the week, against 405, 433, and 473 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, February 22nd, 920 births and 767 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 22·3, 23·5, and 21·4 per 1,000 in the three preceding weeks, rose again to 21·8 per 1,000 last week, and was 5·4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 16·0 in Greenock and 17·3 in Paisley to 29·6 in Leith and 44·4 in Perth. The death-rate from the principal infectious diseases averaged 2·6 per 1,000, the highest rates being recorded in Glasgow and Leith. The 354 deaths registered in Glasgow included 34 which were referred to measles, 3 to scarlet fever, 13 to whooping-cough, 5 to cerebro-spinal meningitis, and 3 to diarrhœa. Two fatal cases of diphtheria, 2 of whooping-cough, and 3 of cerebro-spinal meningitis were recorded in Edinburgh. Five deaths from whooping-cough were registered in Dundee, 5 in Leith, and 2 in Greenock; and 1 fatal case of small-pox in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 15th, 573 births and 461 deaths were registered in six of the principal Irish towns, as against 538 births and 453 deaths in the preceding period. The annual death-rate in these towns, which had been 24·1, 22·8, and 23·1 per 1,000 in the three preceding weeks, fell to 20·3 per 1,000 in the week under notice, this figure being 1·7 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 7·8 in Waterford and 13·4 in Londonderry, to 24·7 in Dublin and Cork and 28·2 in Belfast. The zymotic death-rate in the same six Irish towns averaged 1·2 per 1,000, or 0·4 per 1,000 less than during the preceding period, the highest figures—2·1 and 2·2—being recorded in Cork and Belfast respectively, while Waterford registered no deaths under this heading; measles and whooping-cough were the principal causes of death in this class of disease.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £140 per annum.

BERMONDSEY PARISH INFIRMARY.—Second Assistant Medical Officer (male). Salary, £100 per annum.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary, £100 per annum.

CARDIFF CITY MENTAL HOSPITAL.—(1) Senior Assistant Medical Officer; (2) Junior Assistant Medical Officer. Salary, £200, rising to £250, and £150, rising to £180, per annum respectively.

CARDIFF: COUNTY BOROUGH ASYLUM.—(1) Senior Assistant Medical Officer. (2) Junior Assistant Medical Officer. Salary, £200, rising to £250; and £150, rising to £180 respectively.

CARDIFF INFIRMARY GENERAL HOSPITAL.—House-Physician. Honorarium, £30 for six months.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary at the rate of £90 per annum first six months and £100 per annum after.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—Physician to Out patients.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £120 per annum.

GLAMORGAN COUNTY COUNCIL.—Three Medical Officers for the Medical Inspection of School Children (two males and one female). Salary for males £300 per annum, and for the female £250.

GOLD COAST.—Six Medical Officers for Plague Duty. Pay, £50 per month.

GUY'S HOSPITAL.—Two additional Honorary Anæsthetists.

HAMPSHIRE COUNTY COUNCIL.—Medical Officer of Health. Salary, £700 net.

LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer. Salary, £150 per annum, increasing to £350.

LEYTON, WALTHAMSTOW, AND WANSTEAD CHILDREN'S AND GENERAL HOSPITAL.—Resident House-Surgeon. Salary, £120 per annum.

LIVERPOOL DISPENSARY.—Assistant Surgeon. Salary, £100 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Salary, £30 for six months.

LONDON COUNTY ASYLUM, Colney Hatch, N.—Junior Assistant Medical Officer. Salary, £150 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant to the Resident Medical Officer. Salary, £120 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) Assistant Resident Medical Officer. (2) Assistant House-Surgeon. Honorarium at the rate of 50 guineas and £75 per annum respectively.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Junior Resident Medical Officer (male) for six months, and then eligible for election as Senior. Salary at the rate of £80 and £100 per annum respectively.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £30 per annum.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Fourth House-Surgeon. Honorarium, £25 for six months.

METROPOLITAN ASYLUMS BOARD.—Assistant Bacteriologist. Salary, £300 per annum, rising to £350.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician. (2) House-Surgeon. (3) Assistant House-Physician. (4) Assistant House-Surgeon. Salary for (1) and (2) at the rate of £40 per annum, and for (3) and (4) £20 per annum.

MIDDLESEX HOSPITAL.—(1) Registrar to the Cancer Wards. (2) Scholar in the Cancer Research Laboratories. Salary, £40 and £60 per annum respectively.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE EYE INFIRMARY.—Non-resident House-Surgeon. Salary, £50 per annum.

NEWPORT COUNTY BOROUGH.—Assistant Medical Officer of Health and Medical Inspector of Schools. Salary, £235 per annum, rising to £275.

NORFOLK COUNTY ASYLUM, Thorpe.—Junior Assistant Medical Officer (male). Salary, £150 per annum.

NORWICH CITY AND COUNTY.—School Medical Officer and Assistant Medical Officer of Health. Salary, £250 per annum, rising to £300.

PAISLEY ROYAL ALEXANDRA INFIRMARY.—House-Surgeon. Salary, £40 per annum.

PONTYPRIDD EDUCATION COMMITTEE.—Medical Officer. Salary, £200 per annum, rising to £250.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Demonstrator of Physiology. Salary at the rate of £150 per annum.

SALFORD ROYAL HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary at the rate of £60 and £20 per annum respectively.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

STAFFORDSHIRE EDUCATION COMMITTEE.—Three Assistant School Medical Officers. Salary, £250 per annum, rising to £300.

SUNDERLAND INFIRMARY.—House-Physician (male). Salary, £50 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary, £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) Three House-Surgeons.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Junior House-Surgeon. Salary at the rate of £30 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Hawes, co. York; Waterford, co. Waterford; Killough, co. Down; and Clonmel, co. Tipperary.

APPOINTMENTS.

ANNAN, John L., M.B., Ch.B.Edin., Demonstrator in Anatomy, University of Sheffield.

BARNES, A. E., M.B.Lond., M.R.C.P., Clinical Tutor in Medicine, University of Sheffield.

BATES, T., M.B., B.S., District Medical Officer of the Martley Union.

CRESWELL, A. H., L.S.A., Certifying Factory Surgeon for the Cinderford District, co. Gloucester.

CURTIS, Henry, B.S. and M.D.Lond., F.R.C.S.Eng., Assistant Surgeon at the Branch Seamen's Hospital, Royal Albert Dock, E.

GLENN, C. H., M.B., B.C.Cantab., District Medical Officer of the Cuckfield Union.

HUGHES, R. T., M.R.C.S., L.R.C.P., District Medical Officer of the Birkenhead Union.

JOHNSON, Alfred E., M.B., Ch.B.Vict., F.R.C.S.Eng., Resident Medical Officer of the Middlesex Hospital.

KEITH, Arthur, F.R.C.S., Conservator of the Museum of the Royal College of Surgeons of England.

MACFARLANE, Wm. D., jun., M.B., C.M.Glasg., Dispensary Gynaecologist to Glasgow Royal Infirmary.

MARSHALL, G. Balfour, M.D.Edin., F.F.P. and S.Glasg., Senior Gynaecologist in Charge of Ward to Glasgow Royal Infirmary, vice Dr. J. K. Kelly, resigned.

PHILLIPS, Miles H., M.B.Lond., F.R.C.S., Clinical Tutor in Obstetrics and Gynaecology, University of Sheffield.

REVIE, A., M.B., C.M.Glasg., Certifying Factory Surgeon for the works of Messrs. Grant, Ritchie and Co., Limited, at Kilmarnock, co. Ayr.

SHANNON, David, M.B., Ch.B.Glasg., Extra-Dispensary Gynaecologist to Glasgow Royal Infirmary.

SIMPSON, Graham, F.R.C.S., Clinical Tutor in Surgery, University of Sheffield.

SMITH, E. Archibald, M.B., F.R.C.S.Eng., Honorary Surgeon, Western General Dispensary, Marylebone Road, N.W.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FAIRWEATHER.—On February 18th, at Trafford Road, Salford, Manchester, the wife of W. E. Fairweather, L.R.C.P., M.R.C.S., a daughter.

PARSONS.—On February 9th, at 65, Deering's Road, Reigate, the wife of Allan C. Parsons, West African Medical Staff, of a son.

MARRIAGE.

JENKINS—LOVERIDGE.—On February 16th, at the Cathedral, Shanghai, Herbert Stanley Jenkins, M.D.Lond., F.R.C.S.Eng., of Siaofu, Shensi, North China, and Clifton, Bristol, England, to M. L. (Daisy), eldest daughter of Thomas Loveridge, Llandaff, Cardiff.

DEATHS.

BARNES.—On 20th inst., at Sunningdale, West Worthing, Robert Sydenham Fancourt Barnes, M.D., F.R.S.E., of No. 15, Chester Terrace, Regent's Park, aged 59 years.

SILVESTER.—On February 26th, at 28, Clapham Common, S.W., Henry Robert Silvester, M.D., in his 80th year. (Inventor of Silvester Method of Artificial Respiration.)

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Third Lettsomian Lecture by Mr. Charters J. Symonds: Malignant Disease of the Caecum and Ascending Colon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor F. C. Shrubsall: The Physical Anthropology of the Pigmy and Negro Races of Africa.

TUESDAY.

ROYAL SOCIETY OF MEDICINE, 20, Hanover Square, W., 5 p.m.—Annual Meeting of Fellows of the Society.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, Royal Army Medical College, Millbank, 8.30 p.m.—Papers and Communications: (1) Colonel David Bruce, C.B., F.R.S., and Captain Bateman: Demonstration of the Effects of Drugs on Trypanosomes. (2) Lieutenant-Colonel Birt, R.A.M.C.: Demonstration of Bang's Method of Estimating Glucose in Urine. (3) Brevet-Lieutenant-Colonel W. B. Leishman, R.A.M.C.: Observations on the Parasites of Malaria, with Demonstration. (4) Captain J. C. Kennedy, R.A.M.C.: A Nodular Disease occurring in the Intestines of Monkeys.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor F. C. Shrubsall: The Physical Anthropology of the Pigmy and Negro Races of Africa.

THURSDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 5.30 p.m.—Business: Minutes. Nomination and Election of Candidates. Paper by Dr. George Carpenter: Seaside Treatment for Sick Children.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 p.m.—Discussion: The Treatment of Pneumonia, to be opened by Dr. Samuel West.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Agenda: Clinical Cases. Election of members.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Milroy Lecture by Dr. J. W. H. Eyre: Melitensis septicaemia.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor F. C. Shrubsall: The Physical Anthropology of the Pigmy and Negro Races of Africa.

SOCIETY OF ANAESTHETISTS, 20, Hanover Square, 8.30 p.m.—Mr. H. Percy Dean: Spinal Anaesthesia. To be followed by the Annual Meeting.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith, W., 8.30 p.m.—Papers: Dr. Andrew Wylie: Foul Breath, Its Causes and Treatment. Mr. Bowen: Pneumococcal Otitis Media.

ROYAL SOCIETY OF MEDICINE:

LARYNGOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Cases and Specimens. Dr. G. K. Grimmer: Partial Occlusion of Both Anterior Nares by Cutaneous Web (Congenital). Dr. E. B. Waggett: Multiple Telangiectasis giving Thirty-five Years' History of Epistaxis. Mr. A. R. Tweedy: One of a Pair of Tonsils which is Apparently Composed of a Mass of Papillomata. Dr. H. Betham Robinson: (1) Syphilitic Disease of the Pharynx and Larynx; (2) Endothelioma from Upper Part of Oesophagus and Trachea. Mr. F. J. Steward: Mucocele of the Left Frontal Sinus.

SATURDAY.

ROYAL SOCIETY OF MEDICINE

OTOLOGICAL SECTION, 20, Hanover Square, W., 10 a.m.—Paper:—Mr. Sydney Scott and Mr. C. E. West: The Operative Surgery of the Labyrinth. Cases and Specimens:—Mr Sydney Scott: Histological Preparations of the Human Labyrinth. Mr C. E. West: Specimens of Temporal Bone Illustrating Operations on the Labyrinth. Mr H. H. B. Cunningham: Deafness Resulting from Epidemic Cerebro-spinal Meningitis. Dr. Adolph Bronner: Purulent Otitis Media with Deep Ulceration of External Meatus in a Case of Secondary Syphilis. Mr. Macleod Yearsley: Right Labyrinthine Suppuration: Operation. Dr. D. R. Paterson: Crossed Abducens Paralysis in a Case of Cerebellar Abscess.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Skin Diseases of the Nails. 4 p.m., Orthopaedic Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, 2.30 p.m., Monday, Tuesday, Wednesday, and Thursday; Clinical Lecture, Friday, 3.30 p.m., The Diagnosis and Treatment of Certain Fractures.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Pulmonary Oedema.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Keratosis Follicularis, Lichen Pilaris, Ichthyosis; Friday, 4 p.m., Verruca Vulgaris, Cornu Cutaneum, Clavus, Angiokeratoma, Condyloma Acuminatum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Intestinal Worms and their Treatment.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 4 p.m., Stenosis of Larynx and Trachea, and Wednesday, 2.15 p.m., Congenital Heart Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows: Tuesday, The Use of the Curette. Wednesday, The Action of Tobacco Smoke. Thursday, Acute Inflammation of the Middle Ear.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Out-patient Department, Fitzroy Square, W.—Wednesday, 5 p.m.: Recent Advances in the Surgery of the Chest.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Surgery of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological Demonstration; Tuesday and Thursday, 2 p.m., Practical Medicine; at 5 p.m., Monday, Cases of Diseases of Eye; Tuesday, Chlorosis and Gastric Ulcer; Wednesday and Friday, Clinical; Thursday, Practical Medicine.

BOOKS, ETC., RECEIVED.

Atlas der gynäkologischen Cystoskopie. Von Professor Dr. W. Stoeckel. Berlin: A. Hirschwald. 1908. M. 12.

Nouveau Traité de Chirurgie. Publié en fascicules sous la direction de A. le Dentu et P. Delbet. VI. Lésions Traumatiques des Articulations. Par L. Cahier. Paris: Baillière et Fils. 1908. Fr. 7·50.

Diseases of the Nose and Throat. By H. Tilley, B.S., F.R.C.S. London: H. K. Lewis. 1908. 14s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
29 SATURDAY...	LEINSTER BRANCH. Annual Meeting, Royal College of Physicians, Kildare Street, 4.30 p.m.
MARCH.	
1 Sunday ...	
2 MONDAY ...	
3 TUESDAY ...	LONDON: Standing Ethical Sub-committee, 2 p.m.
4 WEDNESDAY	LONDON: Medico-Political Midwives Subcommittee. 2.30 p.m. LONDON: South-Eastern Branch Council, 3.15 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Club House, Carlow, 5.30 p.m.
5 THURSDAY...	LONDON: Joint Hospitals Subcommittee, 2.45 p.m. GLOUCESTERSHIRE BRANCH. Special Meeting, Infirmary, Gloucester, 7 p.m. TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with North-East London Medical Society, Prince of Wales Hospital, Tottenham, 4.15 p.m.
6 FRIDAY ...	
7 SATURDAY...	
8 Sunday ...	
9 MONDAY ...	
10 TUESDAY ...	LONDON: Organization Committee, 11 a.m. BRADFORD DIVISION, *Yorkshire Branch*, General Meeting, Great Northern Victoria Hotel, Bradford. CITY DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with the Walthamstow Division, Walthamstow Hospital, 4 p.m.
11 WEDNESDAY	RICHMOND DIVISION, *Metropolitan Counties Branch*, Sun Hotel, Kingston, 8.30 p.m.
12 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
13 FRIDAY ...	HAMPSHIRE DIVISIONS, *Southern Branch*, Royal South Hants and Southampton Hospital, 4 p.m.
14 SATURDAY...	
15 Sunday ...	
16 MONDAY ...	
17 TUESDAY ...	
18 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Cardiff. YORKSHIRE BRANCH, General Infirmary, Leeds, 4.15 p.m.
19 THURSDAY...	WESTMINSTER DIVISION, *Metropolitan Counties Branch*, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m.
20 FRIDAY ...	
21 SATURDAY...	
22 Sunday ...	
23 MONDAY ...	
24 TUESDAY ...	
25 WEDNESDAY.	BATH AND BRISTOL BRANCH, Bristol.
26 THURSDAY...	
27 FRIDAY ...	
28 SATURDAY...	
29 Sunday ...	
30 MONDAY ...	
31 TUESDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 7TH, 1908.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session was held at Bath on February 26th. There were present Dr. E. J CAVE, President, in the chair, and thirty-six members and visitors.

New Members.—The following candidates were elected members of the Association: Mr. H. E. B. Dickson (Bath), Mr. H. P. Costobadie (Midsomer Norton), Dr. A. Lewthwaite (Winsley), Mr. T. A. Collinson (Bristol) and Dr. C. B. Goulden (Bristol), Dr. G. F. C. Wallis (Bristol), and Dr. J. D. Thomas (Winterbourne).

Discussion.—A discussion on fever of uncertain origin was opened by Dr. G. NEWTON PITT, and continued by Dr. WILSON SMITH, Dr. J. ODERY SYMES, Dr. MICHELL CLARKE, Dr. NEILD Dr. CHARLES, Dr. WATERHOUSE, Dr. RATTRAY, Dr. EVERY-CLAYTON, Dr KENNEDY, Dr. THOMSON, and the PRESIDENT; Dr. NEWTON PITT replied.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (NORTH) DIVISION.

A MEETING of this Division was held at Monsall Hospital, Newton Heath, by the invitation of Dr. Gordon, the Superintendent, on Thursday, February 27th, Dr. HARGREAVES in the chair. Dr. Gordon kindly entertained the members to tea before the meeting.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Discussion.—Dr. GORDON then opened a discussion on The Functions of a Modern Isolation Hospital, drawing attention to the following points: (1) The number of diphtheria cases sent to hospital without antitoxin having been given. It was mentioned that antitoxin could always be obtained free at the hospital, and could in its concentrated form be used with an ordinary hypodermic syringe; also its harmlessness, and the advisability, or practically the duty, of using it in every doubtful case, were emphasized. (2) The great assistance it would be to the hospital staff if a short account of the previous history could be sent with cases. (3) The number of moribund cases sent into hospital, which damaged its reputation with the public, and possibly prevented other more suitable cases being sent in. (4) The advisability of letting practitioners know when any operation affecting their cases was to occur, and inviting their presence. (5) The fact the hospital staff would at any time welcome members of the profession to visit the hospital to see their cases, or in the way of friendly intercourse. A full discussion followed, in which some difficulties attending the early use of antitoxin were mentioned. The late stage at which cases were often brought to the medical attendant, the difficulty of diagnosis in many cases, and the trouble of getting the antitoxin in time, all tend to make the medical attendant trust to rapid removal to hospital. It was pointed out that antitoxin could now be obtained free from (1) the Manchester Town Hall, (2) Monsall Hospital, (3) by application at a police station. It was suggested that the detective department should have a supply that would be available at any time night or day; also that a supply might be kept at the local town halls, or even at all the police stations. The Secretary was instructed to forward these suggestions to Dr. Niven, M.O.H. for Manchester, for his consideration. Dr. GORDON kindly promised to give his suggestion of notifying operations for practitioners a trial.

Vote of Thanks.—A hearty vote of thanks to Dr. Gordon and the staff for their hospitality and valuable suggestions was proposed by Dr. HARGREAVES, seconded by Dr. SKINNER, and accorded with enthusiasm.

Visit to Hospital.—The members present were shown round the operating theatre and puerperal fever ward; some interesting cases were shown and explained, and a visit paid to the pathological laboratory terminated a most pleasant and instructive meeting.

SOUTHPORT DIVISION.

Medical Inspection of School Children.—A meeting of this Division was held on February 14th at the Temperance Institute to consider the question of the medical inspection of school children. The matter was fully discussed, but as only eight members were present the meeting was adjourned until February 21st in order to obtain a larger attendance and a more authoritative expression of opinion.

At the adjourned meeting on February 21st there were present: Dr. ANDERSON (in the chair) Drs. Ashworth, Baildon, Woolmer, Davies, Corkhill, Dall, Hare, Holt, Littler, Maccall, Martin, A. W. Popert, Pridie, Roberts, Russel, Schofield, Sykes, Storrs, Wilshaw, and Harris; Dr. Weaver, M.O.H., attended by invitation. Apologies for non attendance were received from Drs. Walker, Campbell, and Voigt. After considerable discussion, in which the general and local conditions were fully considered, those of Southport as a county borough, and of Birkdale, Freshfield, Formby, and other localities in the Division as portions of the area administered by the Lancashire County Council, the following resolutions were passed unanimously:

That in Southport it is desired that the whole-time medical officer should be appointed as assistant to the medical officer of health.

That the remuneration should be at a rate not lower than half a crown per examination of each child, which, on a

basis of 2,400 examinations a year, would be a salary of £300 per annum.

That all cases requiring treatment should be referred to the family medical attendant.

Respecting the county area outside the borough, it was unanimously resolved:

That this Division would approve of a whole-time medical officer being appointed for the county, with submedical officers for localities, who should, as far as possible, be whole-time officers.

That the remuneration should be at a rate not lower than half a crown per examination for each child.

That all cases requiring treatment should be referred to the family medical attendant.

That parents should not be encouraged to have the medical examination forms filled up by their own medical attendant at their own expense.

That where local practitioners are appointed as part-time officers the appointments should, as in other cases, be advertised, so that all practitioners wishing for the appointments may have the opportunity of applying.

It was further resolved:

That these resolutions be communicated respectively to the Secretary of the Education Committee of the Southport Corporation, and to the Chairman of the Education Committee of the Lancashire County Council.

That Dr. Anderson (President) and Dr. Harris (Secretary) be authorized to interview the authorities if called upon.

METROPOLITAN COUNTIES BRANCH:

Kensington Division.

A meeting was held at the Kensington Town Hall on Thursday, February 27th, at 4.45 p.m., Dr. A. J. Rice Oxley in the chair.

The Referendum.—After Dr. George Fastes had made some remarks on the position of the Council with regard to the Referendum, Dr. Crichton moved that:

This meeting declines to vote upon the Referendum.

He urged the advantages of a round-table conference, so as to place before the Divisions a form of Charter capable of receiving the approval of the whole Association. This amendment being lost, a vote was taken on each minute of the Representative Meeting, with the following result:

Minute	123	rejected by	9	votes to	3.
,,	283	,,	9	,,	1.
,,	287	,,	8	,,	2.
,,	293	,,	11	,,	3.
,,	298	,,	10	,,	2.
,,	299	,,	9	,,	1.
,,	303	not voted upon.			
,,	328	rejected by	11	votes to	0.
,,	330	,,	7	,,	1.

Minutes 342 and 346 rejected by 12 votes to 0.

Medical Inspection of School Children.—The Memorandum of Metropolitan Counties Branch Council on the medical inspection of school children was discussed, and the Secretary was instructed to send certain replies to the Branch Secretary. Dr. Crichton explained certain points in the Memorandum of the Branch on the situation created by the Workmen's Compensation Acts. It was agreed that sufficient time had not been allowed for the consideration of the questions asked, and it was decided to postpone the matter until a later meeting.

Lambeth Division.

A general meeting of the Lambeth Division was held on Thursday, February 27th, in the Governors' Court-room at Guy's Hospital, at 4 p.m. Dr. Maurice Craig occupied the chair, and 34 members and visitors were present.

Notification of Births Act.—It was announced that as the result of a deputation from the Division which was received at the Town Hall, Camberwell, in January last, it had finally been decided by the Camberwell authorities not to adopt the Notification of Births Act in Camberwell. It was also announced that although the Act had been recommended for adoption by the authorities in Lambeth and in Southwark, the recommendation had not yet received the sanction of the Local Government Board; that a letter urging reconsideration by the Lambeth Council of its recommendation in favour of the adoption of the Act had been received by the Town Clerk from the Division, and had been promised full consideration; and that similar action was being taken by the Division in regard to Southwark.

Medical Inspection of School Children.—The following replies were made by the Lambeth Division to the series of questions (vide Supplement of January 25th, p. 26) submitted to the Divisions by the Branch:

A. Yes.

B. That the duty of home inspection be carried out by the usual family attendant when required by the local authority; but if it is desired by the local authority that one of their inspectors should visit and report on any matter regarding any home, this inspection shall only take place in conjunction with the usual medical attendant, who should receive a suitable fee for such a consultation.

C. That the fee to the usual medical attendant, if acting and reporting alone, should be not less than 5s. per visit, but in the event of a consultation taking place with an inspector the fee should be 10s. 6d.

D. 5 (*b*). That all general practitioners be eligible for election, and that they be subject to re-election every three years.

E. 6 (*c*). If the suggestion made in Section B be accepted, then the answer is "it is not undesirable."

F. No.

G. Yes, if strictly carried out.

H. This should be left to the individual inspector.

I. Entered in a register; and wherever possible an official report should be sent to the patient's medical attendant.

J. No.

K. By every person applying for hospital treatment bringing to the hospital a certificate signed by a medical man stating that the case in question is suitable for hospital treatment, and that he is unable to pay.

L. Yes.

M. Yes.

N. A fixed period of three years and re-election.

Proposed Provident Dispensary in Bermondsey.—Correspondence from the Medical Secretary was read regarding a proposal of the Charity Organization Society to institute a Provident Dispensary in Bermondsey. The Lambeth Division expressed no opinion as to whether or not it was in favour of such dispensary, but it unanimously agreed that if such a dispensary were instituted it should at least be strictly upon the lines of Memorandum C *re* Contract Medical Practice. Further, the Lambeth Division expressed the opinion that the Norwood Division, in which Rotherhithe lay, should be fully consulted in the matter; and the meeting elected four representatives—Dr. Jaynes, Dr. Capes, Dr. Peers, and Dr French—with authority to meet representatives of the Norwood Division, of the Central Office, and of the Charity Organization Society, in order to ensure that the Lambeth Division should be kept fully informed of all action that might be taken by the Charity Organization Society in regard to the said proposal of instituting a Provident Dispensary in Bermondsey.

Exhibits and Demonstration.—Dr. A. N. Leeming gave a short address upon Calmette's tuberculo-ophthalmic reaction, illustrating it by cases of positive reaction. Dr. G. N. Nicholson demonstrated microscopical preparations of tapeworm ova from the faeces. Dr. H. C. Mann exhibited some pathological specimens of special interest. The meeting then adjourned.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

A meeting of the Branch was held at the General Infirmary, Worcester, on February 20th, the President, Dr. C. H. East (Malvern) in the chair.

Paper.—Professor Gilbert Barling read a paper entitled Prostatic Enlargement, illustrated by lantern slides, and an interesting series of histological specimens, with remarks on the selection of cases for operation, and the final results. The paper was discussed by Mr. Bates and Dr. Crowe, and a cordial vote of thanks was given to Professor Barling for his eminently practical and instructive paper.

Ethical Committee.—On the motion of the President, the Branch unanimously adopted the recommendation of the Council to form an Ethical Committee of the Branch distinct from the Branch Council, and agreed to the mode suggested for its constitution.

Proposed Malvern Division.—The application of the Medical Society of Malvern to form a separate Division was deferred for twelve months by a mutual arrangement come to with the Worcester Division.

METROPOLITAN COUNTIES BRANCH.

MEMORANDUM

Submitted by the Metropolitan Counties Branch Council to the Divisions of the Branch on the Situation Created by the Workmen's Compensation Acts.

THE Metropolitan Counties Branch Council passed on November 14th last the following resolution:

That it be referred to the Medical Charities Committee to investigate and report as to what steps should be taken by the Branch Council either in conjunction with (1) the Divisions, (2) the Medical Staffs of Hospitals, or otherwise, in order to deal with the question of Hospital Treatment of Accidents in its relation to Workmen's Compensation Acts, so as to prevent—

(*a*) Imposition on the staffs and funds of hospitals,
(*b*) Further pauperizing of the well-to-do laity,
(*c*) Loss of fees to medical profession, and
(*d*) The transference of liability incurred by insurance companies owing to the present lax system of hospital relief.

Acting on this resolution, the Medical Charities Committee desire to be fortified by the expressed opinions of the Divisions of the Branch before they present their report to the Branch Council, and append hereto a short explanatory memorandum, together with questions which the Divisions are requested to answer as fully as possible and report the result to their Hon. Secretary, Atwood Thorne, 148, Harley Street, W., before March 14th next.

February 10th, 1908.

EXPLANATORY MEMORANDUM.

The Acts of Parliament dealing with compensation which might affect the medical profession have been:

(1) Acts giving right of Action at Common Law.
(2) The Employers' Liability Acts, 1880, 1893.
(3) The Workmen's Compensation Acts of 1897, 1900, and 1906.

1. The last of these Acts, from the extension of its benefits to nearly every kind of employment, especially calls for the attention of the medical profession.

The pecuniary disabilities resulting from accidental injuries and industrial diseases affecting workmen are by these Acts transferred to their employers, and, by the increasing use of the system of insurance, the responsibility is transferred from the employers to insurance companies. As a result a considerable proportion of persons meeting with accidents, whether they be employés legally entitled to compensation or independent individuals, are at the present time covered by insurance.

2. There are some points with regard to compensation in the Act of 1906 which it is important to keep in view.

(1) No compensation is payable if the incapacity lasts less than a week. If it lasts more than a week but less than two weeks, no compensation is payable in respect of the first week, but if it lasts a fortnight or more, compensation is payable from the date of the accident.

(2) In cases of death, the award may reach £300.

(3) The only payment for medical attendance specifically provided for in the Act is when the patient dies as a result of the accident, and in this case the County Court decides on the amount, which, combined with the expenses of the funeral, may not exceed £10.

(4) The compensation which is strictly limited in the Workmen's Compensation Act of 1906 is very considerable under the Employers' Liability Act, and almost unlimited in action at common law.

3. The continuance of the gratuitous treatment of disabling injury and industrial disease affecting wage-earners, hitherto provided by means of Hospitals and other Medical Charities, will permanently maintain a heavy burden on the medical profession.

4. Such continuance of charitable treatment would be financially advantageous only to the employers liable to pay compensation, or to Insurance Companies, and would tend to diminish self-reliance among workmen and others who may be injured or may suffer from industrial diseases.

5. By concerted and uniform action on the part of all branches of the profession, medical interests can be safeguarded without bearing unfairly on any party concerned.

6. In a certain number of cases, persons who, as the result of serious accidents, are admitted to the wards of hospitals, are from private sources or become, as a result of compensation, able to pay normal fees for medical attendance and nursing. But for the suddenness of the injury and the proximity of the hospital, such a patient would have been treated in his own residence or in a private Nursing Home. In these cases, both in the interest of the hospitals and of private practitioners, some reform is urgently needed.

7. Some of the Insurance Companies are issuing policies to employers of domestic servants, providing not only for the payment of part wages during disablement, but also for reimbursement of limited expenditure on medical attendance, and an extension of this system appears to the Medical Charities Committee to be desirable.

8. Although the employer and the insurance company are in most cases not responsible for the costs of medical attendance on accidents to workmen, they are nevertheless mainly dependent on the medical profession for the information as to the character of the disablement, without which the amount of compensation cannot be justly calculated.

9. Some of the insurance companies endeavour to obtain from the hospitals the information referred to gratuitously, and if any fee is claimed, they suggest that the injured workman should pay for the certificate.

QUESTIONS.

I. Are you opposed to the continuance of the treatment in Hospitals and other Medical Charities of Disabling Injury and Industrial Disease affecting those who are entitled to substantial compensation?

II. Would you please reply to the following questions with regard to such persons applying for treatment to Hospitals?

A. *Casualty and Out-Patients.*

(1) Should the elimination of unsuitable cases after receiving first aid be secured by a Certificate by a *Local* Medical Practitioner that the case is suitable for Hospital treatment or

(2) Signed declaration presented at second attendance giving details of income, rent, dependents, and possible sources of compensation and asserting recognition that any misstatement is tantamount to obtaining charitable assistance by false pretences?

B *In-Patients.*

(1) (*a*) Should the thorough investigation of the economic condition, and especially of the possibility of compensation, be secured in all accidents admitted? (*b*) Should the investigation be initiated by obtaining from relatives a signed declaration similar to A (1) and (2) above?

(2) Should patients whose surgical condition permits safe removal, and who are found to be suitable economically, be transferred:

(*a*) To their own homes?
(*b*) To private nursing institutions?
(*c*) To paying department in connexion with that or any other hospital where payment shall be made for professional treatment as well as for maintenance, and where the patient may be treated by his own medical attendant?

(3) In cases which are surgically unfit to be removed, what arrangements can be made for securing adequate payment?

C. *Reports and Certificates.*—Would you approve of the following suggestions?

(1) That nothing beyond a simple CERTIFICATE of the duration of a patient's attendance at the Hospital, in which no diagnosis or prognosis is included, be issued except by a qualified medical man who has actually taken part in the treatment of the case.

(2) That the CERTIFICATES of the nature of the ailment which are obvious y to be used solely to obtain sick pay from clubs, be given by the medical man in attendance, with or without charge, at his discretion.

(3) That nothing of the character of a REPORT which might be used for the purpose of obtaining compensation should be given without a fee of at least one guinea. (This can always be obtained from Solicitors or Insurance Companies if insisted upon.)

III. Would you please express your opinion on the following questions which bear upon the foregoing subjects:

(1) Are you in favour of extending the present system of insurance of the cost of medical attendance upon domestic servants to other persons subject to compensation? and, if so, which of the following methods of regulating the cost would you prefer, namely, (*a*) a maximum allowance per case, according to the arrangement at present in vogue for servants; (*b*) a scale according to nature of injury; (*c*) a

scale for attendance varying with wages; or (*d*) a scale varying with the maximum sum assured?

(2) (*a*) Are members of clubs and of provident dispensaries in your district charged extra for injuries and diseases for which they may claim compensation; (*b*) are they charged for certificates and reports?

If the answer is in the negative, do you suggest a change?

(3) Should the medical practitioner selected by an injured workman be entitled to receive notice enabling him to attend any medical examination, to meet either the medical man appointed by the employer, or the medical referee? In case of death, should the friends of the deceased workman be medically represented at the *post mortem* examination?

IV Are there any other points to which you desire to draw attention?

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD

Border Counties Branch: English Division.—There will be a meeting of the Division at the County Hotel, Carlisle, on Friday afternoon, March 27th, when Sir James Barr will deliver an address entitled Some Observations on Bronchitis and Emphysema.—Norman Maclaren, Honorary Secretary, 23, Portland Square, Carlisle.

Border Counties Branch: Scottish Division.—A meeting of this Division will be held on Thursday, March 12th, in the Board Room, Dumfries and Galloway Royal Infirmary, at 3 p.m. Matters referred to Divisions will be considered. Members desirous of reading papers, showing cases, etc., should intimate same to the Secretary.—George R. Livingston, Secretary.

Lancashire and Cheshire Branch.—A meeting of the Branch will be held at the University of Liverpool on Wednesday afternoon, March 18th. Business: Scientific and clinical communications.—F. Charles Larkin, Honorary Secretary.

Lancashire and Cheshire Branch: Altrincham Division.—A special meeting of this Division will be held at Altrincham on Wednesday, March 18th, at 5 p.m.—T. W. H. Garstang, Honorary Secretary.

Lancashire and Cheshire Branch: Leigh Division.—A meeting of the members of the above Division will be held on Thursday, March 19th, at 8 30 p.m., at Co-operative Rooms, Ellesmere Street. Agenda: Consideration of insurance policies.—J. Sackville Martin, M.D., Honorary Secretary of the Division.

Metropolitan Counties Branch: Lambeth Division.—The next general meeting of the Lambeth Division will be held on Thursday, March 26th, in the Evelina Hospital for Sick Children, Southwark Bridge Road S.E., at 4 p.m. C. H. Fagge Esq., M.S Lond., F.R.C.S. will read a paper upon The Pathology and Treatment of Hernia in Children. Cases will be exhibited. There will also be important business to transact in connexion with matters referred to the Divisions by the Branch Council.—Herbert French, Honorary Secretary, Lambeth Division.

Metropolitan Counties Branch: Richmond Division.—Meetings of this Division will be held on Wednesday, March 11th, at 8 30, at the Sun Hotel, Kingston, when Dr. R. W. Wilson will read a paper entitled Remarks on Intestinal Sepsis and its Treatment; and on Wednesday, April 8th, at 8 30, at the Royal Hospital, Richmond, when Mr. W. T. Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6 30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—Charles Blair, F.R.C.S., Matson Lodge, Richmond. A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: Walthamstow Division.—The next meeting of this Division will be held at the Walthamstow Hospital on Tuesday, March 10th, at 4 p.m., and will be a conjoint meeting of this and the City Division. Agenda: Paper by Dr. Lauriston Shaw: Some puzzling Physical Signs in Healthy and Diseased Lungs. At the conclusion of this meeting the members of the Walthamstow Division will meet separately to transact the following business: Agenda: (1) Minutes. (2) Letter received from Hampstead Division. (3) To discuss Memorandum on The Situation created by Workmen's Compensation Act, issued by Metropolitan Counties Branch to the Division.—A. Pottinger Eldred, Honorary Secretary.

Metropolitan Counties Branch: Westminster Division.—The next ordinary meeting of the Division will be held on Thursday, March 19th (not on February 20th as previously announced), at 5 p.m., at St. James's Vestry Hall, Piccadilly (First Floor). Special business: The question of medical inspection of school children.—Harvey Hilliard, Honorary Secretary.

North Wales Branch: North Carnarvonshire and Anglesey Division.—A meeting of this Division will be held at the British Hotel, Bangor, on Tuesday, March 10th, at 2 45 p.m. Agenda: (1) To read the minutes of the meeting of the Division held at Bangor on October 8th, 1907. (2) Dr. Grey Edwards, Bangor, will demonstrate Ivar Bang's quantitative test for glycosuria, and will read a short note on the treatment of diabetes. (3) R. H. Mills-Roberts, C.M.G., F.R.C.S.E., Llanberis, will read a paper on Some Cases of Head Injury. (4) C. T. Matthews, M.B., Ch.B., Colwyn Bay, will read notes upon (*a*) Recent Experiences of the Use of Theocin Sodium Acetate; (*b*) Bier's Treatment by Passive Congestion in Acute Septic Conditions. (5) To consider whether any action should be taken by the Division with a view to the suppression of medical practice, within the area of the Division, by unqualified persons. (6) To consider and report upon, if necessary, the following matters referred to the Division: (*a*) Medical Inspection of School Children (vide Supplement to British Medical Journal, December 21st, 1907, and February 8th, 1908); (*b*) Notification of Births Act, 1907 (vide British Medical Journal, November 2nd, 1907); (*c*) Report on Life Insurance Examinations (vide British Medical Journal, Supplement, February 22nd, 1908). (*d*) Report on Prevention of Corruption Act (vide Supplement, February 22nd, 1908). (*e*) Report of United Kingdom Hospitals Conference (vide Supplement, February 22nd, 1908). (7) To read a letter with reference to The Training of School Teachers in Hygiene.—John Evans, Honorary Secretary, Carnarvon.

Southern Branch: Hampshire Divisions.—A meeting of the members of the Hampshire Divisions will be held at the Royal South Hants and Southampton Hospital, Southampton, on Friday, March 13th, at 4 p.m., to elect a member on the Board of Governors of the Hartley University College, Southampton.—G. H. Cowen, 4, College Terrace, Southampton, Honorary Secretary.

South Eastern Branch: Canterbury and Faversham Division.—A meeting of this Division will be held at the Town Hall, Sittingbourne, on Wednesday, March 25th, at 3 p.m. Dr. R. M. Boodle will preside. A lecture will be given with lantern demonstrations by Wm. McAdam Eccles, M.S., F.R.C.S., on The Treatment of Inguinal Hernia by Trusses. All medical men are invited to attend.—T. Barrett Heggs, Honorary Secretary, Sittingbourne.

Yorkshire Branch.—The next meeting of this Branch will be held at the General Infirmary, Leeds, on Wednesday, March 18th, at 4 15 p.m. Members intending to read papers, show specimens or cases, or propose new members, are requested to communicate at once with Dr. Adolph Bronner, 33, Manor Row, Bradford, Honorary Secretary.

Yorkshire Branch: Bradford Division.—An ordinary general meeting of this Division will be held at the Great Northern Victoria Hotel, Bradford, on Tuesday, March 10th. The following amongst other questions will be considered: (1) Report of the Special Committee appointed by the Division to consider the question of the medical inspection of school children, especially as it affects Bradford. (2) The payment to Poor-law medical officers of fees for evidence in the coroner's court on persons dying in the workhouse. (3) Report as to proposed definition of the term "hospital" (Central Ethical Committee). (4) Report on Life Insurance Examinations (Medico-Political Committee). (5) Report on Prevention of Corruption Act (Central Ethical Committee). For information regarding the three latter reports see the Supplement for February 22nd 1908. As the questions to be considered are of the greatest importance to the medical profession, it is hoped that a large attendance of members will take place.—James Metcalfe, Frizinghall, Bradford, and J. Wherry Willson, Barkerend Road, Bradford, Honorary Secretaries.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Surgeons R. W. G. Stewart, M.B., W. P. Walker, M.B., J. G. Wallis, M.B., H. R. H. Denny, R. R. Fasson, M.B., J. K. Muir, M.B., J. O'Hea, J. St. J. Murphy, A. F. Fraser, M.B., and G. M. Eastment are promoted to be staff Surgeons, February 26th. Their first commissions bear date February 26th, 1900.

Fleet Surgeon W. Bowden, D.S.O., has been placed on the retired list at his own request, with the rank of Deputy Inspector-General, February 27th. He was appointed Surgeon, February 28th, 1887, and became Fleet Surgeon, February 28th, 1902. Whilst Surgeon of the *Raleigh* he served in the Naval Brigade at Bathurst, on the river Gambia, West Coast of Africa, in February, 1894, in co-operation with two companies of the 1st West India Regiment, for the punishment of Fodi Silah, a rebellious slave-trading chief; was in medical charge of the Royal Marines, volunteered to take charge of the ammunition, especially recommended and mentioned in dispatches; was present in medical charge at the bombardment and occupation of Gunjur in 1894; he was appointed D.S.O., and granted a medal with clasp.

The following appointments have been made at the Admiralty: Lawrence Bidwell, Fleet Surgeon, and Harry M. Langdale, Surgeon, to the *Shannon*, on commissioning, March 10th; Horace B. Marriott, Fleet Surgeon, and Walter T. Haydon, Surgeon, to the *Leviathan*, March 10th; Walter G. Axford, Fleet Surgeon, to the *Pembroke*, additional, for Queensferry Hospital, March 2nd (appointment to the *President* cancelled).

H. J. Edwards, M.D., civil practitioner, has been appointed Surgeon and Agent at Lynmouth, February 28th.

ROYAL ARMY MEDICAL CORPS.

Captains A. Chopping and H. G. S. Webb, who are serving in India, are appointed specialists in Electrical Science, with effect from January 1st, the former in the 1st (Peshawur) Division, the latter in the 3rd (Lahore) Division.

Major F. Kiddle, M.B., serving in India, specialist in Ophthalmology, 5th (Mhow) Division, is transferred to the 9th (Secunderabad) Division in the same capacity.

Lieutenant-Colonel D. O'Sullivan, who is serving in India, is appointed Principal Medical Officer, Jubbulpore and Jhansi Brigades.

The undermentioned Lieutenants, whose first appointment dates from July 30th, 1904, are promoted to be Captains, dated January 30th, 1908: W. Byam, C. Ryley, P. Dwyer, M.B., P. C. T. Davy, M.B., J. F. C. Mackenzie, M.B., H. T. Wilson, R. C. Hallowes, M.B., J. H. Campbell, M.B., G. A. D. Harvey, H. C. Winckworth, H. W. Russell, M.D., E. J. H. Luxmoore, H. C. Sidgwick, M.B., M. Sinclair, M.B., G. R. Painton, N. Low, A. N. Fraser, M.B., R. H. L. Cordner, H. St. M. Carter, M.D., A. T. Frost, M.B., K. A. C. Doig, P. A. Lloyd Jones, M.B., H. O. M. Beadnell, C. R. Millar, G. H. Richard, J. St. A. Maughan, L. V. Thurston, A. W. Gater, J. P. Lynch.

The undermentioned are appointed Lieutenants on probation, dated February 4th, 1908: John James, M.B., Harold Henry Blake, M.B., Alfred Christopher Hermann Suhr, M.B., Wilfred J. Dunn, M.B., John E. Ellcome, Bernard Varvill, Frank B. Dalgliesh, Alan G. Wells, Gerald J. Keane, M.D., Fredrick H. Bradley, M.B., Robert M. Dickson, M.B., Frank Worthington, Claude M. Rigby, Alexander L. Stevenson, M.B., Malcolm Leckie, Spencer G. Walker, M.B., Charles E. L. Harding, M.B., Arthur Shepherd, M.B., William J. Tobin, Leo Murphy, Arthur H. T. Davis, Walter H. S. Burney, Arthur L. Foster, Joseph W. Houston, M.B., Thomas S. Eyes, M.B., Robert O'Kelly, Falkiner M. Hewson, Campbell McQueen, Alexander E. G. Fraser, John S. McCombie, M.B.

Lieutenant S. G. Walker, M.B., is seconded under the provisions of Article 300, Royal Warrant, dated February 4th, 1908.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain David Smart, M.B., to be Surgeon-Major, February 19th.

The undermentioned, having relinquished their commissions in the Auxiliary Forces, will cease to belong to the Army Medical Reserve of Officers: Surgeon-Lieutenant-Colonels Walter D. Aubin, M.B., Francis L. Stephenson, M.B., William C. Cowan; Surgeon-Major John W. Moir, M.D.; Surgeon-Captains Arthur Y. Pringle, Leonard L. Hanham, Samuel M. Sloan, M.D.

INDIAN MEDICAL SERVICE.

The following Captains are promoted to be Majors from January 28th: H. Ainsworth, M.B., F. A. Smith, M.B., J. W. Cornwall, M.D., A. Miller, M.B., F. A. L. Hammond, S. P. James M.D., P. Dee, M.B., R. P. Wilson, C. D. Dawes, C. B. Harrison, M.B., N. P. O'G. Lalor, M.B., T. H. Symons, E. R. Rost. The previous commissions of Majors Ainsworth, Smith, Cornwall, Miller, Hammond, James, and Dee are dated: Surgeon-Lieutenants, July 29th, 1896; Captains, July 29th, 1899. Those of Majors Wilson, Daws, Harrison, Lalor, Symons, and Rostare: Surgeon-Lieutenants, January 28th, 1896; Captains, January 29th, 1899. The following have war records in the Army Lists: Major Ainsworth, North-West Frontier of India campaign, 1897-8, with the Tirah Expeditionary Force, including the actions of Chagru Kotal and Dargai, the capture of the Sampagha and Arhanga Passes, and operations in and around Divatoi and in the Bara Valley (medal with two clasps). Major Miller—North West Frontier of India Campaign, 1897-8, with the Malakand Force, including operations in Bajaur and the Mamund country, Utman Khel, Buner, and the capture of the Tanga Pass (medal with clasp); China war, 1900 (medal with clasp). Majors Hammond and James, China war, 1900 (medal). Major Dawes North West Frontier of India Campaign, 1897-8, with the Mohmand force (medal with clasp) and with the Tirah Expeditionary Force (clasp); China war, 1900 (medal). Major Harrison—North West Frontier of India Campaign, 1897-8, with the Malakand Force (medal with clasp), and with the Tirah Expeditionary Force including the capture of the Sampagha and Arhanga Passes (clasp). Major Lalor—North West Frontier of India Campaign in 1897-8, with the Mohmand Force (medal with clasp); China war, 1900 (medal).

Colonel P. H. Benson, M.B., has been appointed to officiate as Principal Medical Officer, Secunderabad Division, from February 1st, vice Colonel T. J. H. Wilkins, proceeding on leave.

The undermentioned Lieutenants, who were appointed such February 1st, 1905, are promoted to be Captains, February 1st: A. F. Hamilton, M.B., A. D. White, M.B., M. F. Reaney, M.B., R. K. White, N. M. Wilson, J. S. O'Neill, M.B., M. R. C. MacWatters, M.B., W. H. Boalth, G. A. Soltau, J. Cunningham, M.B., H. Falk, M.B., C. J. Coppinger, M.B.

Surgeon-General W. R. Browne, C.I.E., M.D., Surgeon-General with the Government of Madras, retires from the service, from April 1st. He entered as Assistant-Surgeon, April 1st, 1873, and became Surgeon-General, October 11th, 1901. His war experience appears to have been confined to the Rumpa rebellion in 1879-80.

Lieutenant-Colonel J. S. Gibbons also retires, from February 17th. He joined the Bengal Medical Department as Surgeon, October 1st, 1881, and was made Lieutenant-Colonel, October 1st, 1901. He has no war record in the Army Lists.

The retirement from the service is also announced of Lieutenant-Colonel W. F. Thomas, M.D., Madras. He was appointed Assistant-Surgeon, March 31st, 1879, and became Lieutenant-Colonel, March 31st, 1899. He served in the Rumpa rebellion in 1879-80, and with the Burmese expedition in 1886-8, for which latter he received a medal with two clasps.

Lieutenant-Colonel F. Wyville Thomson, M.B., Bengal, likewise retires, from February 28th. He entered the department as Surgeon, September 30th, 1886, and was promoted to be Major, September 30th, 1898. According to *Hart's Army List*, he served with the Waziristan expedition in 1894-5, receiving a medal with clasp; in the China war in 1900, including the relief of Pekin (medal with clasp); and again in Waziristan in 1901-2 (medal with clasp).

Colonel W. G. H. Henderson, Bombay Establishment, is appointed Principal Medical Officer, 5th (Mhow) Division.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Lieutenant-Colonel J. S. Riddell, M.V.O., M.B., Aberdeen Companies, has been appointed Principal Medical Officer of the Highland Division of the Territorial Force; and Colonel Sir G. T. Beatson, K.C.B., M.D., V.D., Glasgow Companies, Principal Medical Officer of the Lowland Division.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Hugh Richardson, M.D. (formerly Lieutenant, R.A.M.C.), to be Surgeon-Lieutenant in the 1st Fifeshire Regiment, December 12th, 1907.

Surgeon-Lieutenant G. G. Wilson, 2nd Kent Regiment, resigns his commission, January 28th.

VOLUNTEER RIFLES.

Surgeon-Lieutenant C. P. Allen, 1st Volunteer Battalion the Dorsetshire Regiment, resigns his commission, January 18th.

William D. Sturrock, M.B., to be Surgeon-Lieutenant in the 1st (Oxford University) Volunteer Battalion the Oxfordshire Light Infantry, February 1st.

VOLUNTEER OFFICERS' DECORATION.

The Volunteers Officers' Decoration has been conferred upon the following officers: Surgeon-Captain H. T. Challis, 4th Volunteer Battalion the Essex Regiment (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer Essex Volunteer Infantry Brigade); Lieutenant-Colonel de B. Birch, M.D., Leeds Companies, Northern Command, R.A.M.C. (Volunteers); Surgeon-Lieutenant-Colonel J. W. Moir, M.D. (retired), 1st Fifeshire Regiment, Royal Garrison Artillery (Volunteers); Surgeon-Major C. N. Lee, M.B., 6th (Fifeshire) Volunteer Battalion the Black Watch (Royal Highlanders); Surgeon-Lieutenant-Colonel J. M. Harper, 1st Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry), Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer Cornwall and Somerset Volunteer Infantry Brigade; Major C. Downing, Welsh Bearer Company, R.A.M.C. (Volunteers).

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,157 births and 5,374 deaths were registered during the week ending Saturday last, February 29th. The annual rate of mortality in these towns, which had been 18·3, 18·6, and 18·4 per 1,000 in the three preceding weeks, further declined to 17·3 per 1,000 last week. The rates in the several towns ranged from 9·2 in Northampton, 9·6 in Hornsey, 9·8 in Stockton-on-Tees, 10·7 in Tottenham, and 11·1 in Aston Manor, to 23·5 in Great Yarmouth, 23·8 in Sunderland, 24·2 in Blackburn, 25·1 in Newport (Mon.), 28·7 in Oldham, and 27·3 in Brighton. In London the rate of mortality was 16·8 per 1,000, while it averaged 17·5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·2 per 1,000 in the seventy-six towns; in London the rate from these diseases was equal to 0·9, while among the seventy-five other towns they caused rates ranging upwards to 2·7 in South Shields, 2·9 in Burton-on-Trent, in Warrington, in Oldham, and in Stockton-on-Tees, 3·2 in Devonport, 3·3 in Sunderland, 4·7 in Newport (Mon.), and 6·1 in Reading. Measles caused a death-rate of 1·2 in Manchester, 1·3 in Birkenhead, 1·6 in Rhondda, 1·8 in South Shields, 1·9 in Reading, and 2·9 in Stockton-on-Tees; scarlet fever of 1·2 in Leyton and 1·3 in King's Norton; diphtheria of 1·2 in Gateshead, 1·3 in Norwich, and 1·5 in West Bromwich; whooping-cough of 1·2 in Birmingham, 1·3 in Birkenhead, 1·4 in Bolton and in Sheffield, 1·9 in Reading, 2·2 in Warrington, 2·3 in Sunderland, 2·6 in Devonport, and 4·1 in Newport (Mon.); and diarrhœa of 1·7 in Barrow-in-Furness. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet-fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,837, 3,806, and 3,733 at the end of the three preceding weeks, had further declined to 3,674 at the end of last week; 384 new cases were admitted during the week, against 433, 473, and 420 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, February 29th, 931 births and 677 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 23·5, 21·4, and 21·8 per 1,000 in the three preceding weeks, declined again to 19·2 per 1,000 in the week under notice, but was 1·9 per 1,000 above the mean rate last week in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14·6 in Aberdeen and 16·6 in Leith to 22·5 in Greenock and 27·2 in Dundee. The death-rate from the principal infectious diseases averaged 2·8 per 1,000 in these

towns, the highest rates being recorded in Glasgow, Aberdeen, and Greenock. The 314 deaths registered in Glasgow included 36 which were referred to measles, 3 to scarlet fever, 5 to diphtheria, 8 to whooping-cough, 4 to "fever," 7 to cerebro-spinal meningitis, and 6 to diarrhoea. Three fatal cases of whooping-cough were recorded in Edinburgh; 4 of diarrhoea in Dundee; 2 of measles, 2 of diphtheria, 4 of whooping-cough, and 2 of diarrhoea in Aberdeen; and 2 of measles and 1 of cerebro-spinal meningitis in Paisley.

HEALTH OF IRISH TOWNS

DURING the week ending Saturday, February 22nd, 489 births and 490 deaths were registered in six of the principal Irish towns, as against 573 births and 461 deaths in the preceding period. The annual death-rate in these towns, which had been 22·8, 23·1, and 20·3 per 1,000 in the three preceding weeks, rose to 23·5 per 1,000 in the week under notice, this figure being 5·1 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 12·2 in Londonderry and 25·5 in Dublin to 27·3 in Waterford and 30·7 in Belfast. The zymotic death-rate in the same six Irish towns averaged 0·9 per 1,000, or 0·3 per 1,000 less than during the preceding period, the highest figures—1·2 and 3·5—being recorded in Londonderry and Belfast, while Cork, Limerick, and Waterford registered no deaths under this heading; measles and whooping-cough continue to be the principal causes of death in this class of disease.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BEDFORD COUNTY HOSPITAL.—House-Physician. Salary, £60 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASE.—Clinical Assistant. Honorarium at the rate of 52 guineas per annum.

BRADFORD ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary, £80 per annum.

BROMLEY EDUCATION COMMITTEE.—School Medical Officer. Salary, £200 per annum, increasing to £300.

BUCKS COUNTY EDUCATION COMMITTEE.—Medical Officer. Salary, £300 per annum.

BUCKS COUNTY LUNATIC ASYLUM, Stone, near Aylesbury.—Assistant Medical Officer. Salary, £150 per annum.

CARDIFF INFIRMARY.—House-Physician. Honorarium, £30 for six months.

CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer (male) to act as House-Physician and House-Surgeon for six months each. Salary at the rate of £80 and £100 per annum respectively.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary at the rate of £90 per annum first six months and £100 per annum after.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—Physician to Out-patients.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Resident Medical Officer. Salary at the rate of £50 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

DERBYSHIRE EDUCATION COMMITTEE.—Two Assistant County Medical Officers. Salary, £300, rising to £400, and £250, rising to £300 per annum respectively.

GLAMORGAN COUNTY COUNCIL.—Three Medical Officers for the Medical Inspection of School Children (two males and one female). Salary for males £300 per annum, and for the female £250.

HAMPSHIRE COUNTY COUNCIL.—Medical Officer of Health. Salary, £700 net.

LEAMINGTON: WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

LEYTON, WALTHAMSTOW, AND WANSTEAD CHILDREN'S AND GENERAL HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Salary, £30 for six months.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant to the Resident Medical Officer. Salary, £120 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) Assistant Resident Medical Officer. (2) Assistant House-Surgeon. Honorarium at the rate of 50 guineas and £75 per annum respectively.

LOWESTOFT HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

MERTHYR TYDFIL EDUCATION COMMITTEE.—Medical Inspector. Salary, £200 per annum, increasing to £300.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician. (2) House-Surgeon. (3) Assistant House-Physician. (4) Assistant House-Surgeon. (5) Resident Anaesthetist. (6) Pathologist. Salary for (1) and (2) at the rate of £40, for (3) and (4) £20, for (5) £90, and (6) £100 per annum.

NORFOLK COUNTY ASYLUM, Thorpe.—Junior Assistant Medical Officer (male). Salary, £150 per annum.

NORWICH CITY AND COUNTY.—School Medical Officer and Assistant Medical Officer of Health. Salary, £250 per annum, rising to £300.

ONGAR UNION.—Medical Officer and Public Vaccinator for No. 1 District. Salary, £105 per annum and fees.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary, £100 per annum.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—House-Physician. Salary, £110 per annum.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, Great Portland Street, W.—House-Surgeon. Salary at the rate of £250 per annum.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Demonstrator of Physiology. Salary at the rate of £150 per annum.

SALFORD ROYAL HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary at the rate of £60 and £50 per annum respectively.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) Three House-Surgeons.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Resident Medical Officer. Salary at the rate of £150 per annum.

WORCESTER COUNTY COUNCIL.—Assistant Bacteriologist. Salary, £160 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Stoneyford and Inistioge, co. Kilkenny; Elmley, co. Kent; Bridlington, co. York; and Shoreham, co. Sussex.

APPOINTMENTS.

AUSTIN, J. S., M.B., B.S., Second Resident Assistant Medical Officer, St. George's Union Infirmary.

BARWICK, R. L., Second Resident Assistant Medical Officer, Islington Parish Infirmary.

BERKELEY, Comyns, B.A., M.B., Physician to In-patients, City of London Lying-in Hospital, E.C.

BREAKELL, Frederick Jas., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S. Glasg., Second Assistant Medical Officer to the Suffolk District Asylum.

BRISCOE, J. Charlton, M.D.Lond., M.R.C.P.Lond., Assistant Physician to King's College Hospital.

DAW, S. W., M.B., B.S.Lond., Resident Assistant Medical Officer of the Bermondsey Parish Infirmary.

EDWARDS, W. Lloyd, L.R.C.P., M.R.C.S., D.P.H., Medical Inspector of Schools, Barry Education Authority.

ELDER, G. T. D., M.R.C.S., L.R.C.P.Lond., Surgeon to the Mansfield and District Hospital.

FABRIES, John Stothart, L.R.C.P., L.R.C.S.Ed., etc., Medical Superintendent of the Sandwell Hall Asylum for the Feeble-minded, Banesworth, Staffs.

JOHNSON, Thos., M.R.C.S., L.R.C.P., Medical Inspector to the Coseley Education Authorities.

MCVITTIE, John, M.B., Ch.B.Glasg., Medical Officer and Public Vaccinator for the Parish of Dailby, Ayrshire.

MANSON, R. H., M.B., Ch.B.Glasg., District Medical Officer of the St. Austell Union.

OBERDOFER, Miss A., M.B., Ch.B.Vict., Assistant Medical Officer of Health to the Borough of Eastbourne.

OWEN, L. Rhys, M.B., B.Ch., Medical Officer in Charge of Electric Department, Cardiff Infirmary.

PHILLIPS, J. G., M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Assistant Physician to Bethlem and Bridewell Royal Hospitals, and Assistant Medical Officer to King Edward Schools, London and Witley.

PRIESTLEY, John, M.R.C.S., Medical Inspector of Schools, Staffordshire Education Committee.

ROBERTSON, George M., M.B., C.M.Edin., Physician-Superintendent, Morningside Asylum, Edinburgh, vice T. S. Clouston, M.D., F.R.C.P.Edin.

RUSHTON, C. C., M.B., B.S.Lond., Medical Officer of Health, Macclesfield Rural District.

THOMSON, G. Ritchie, M.B., C.M., F.R.S.Edin., Honorary Surgeon, Johannesburg Hospital, vice Sir Kendal Franks, C.B., appointed Consulting Surgeon.

WATKINS, J. G., M.R.C.S., L.R.C.P., District Medical Officer of the Taunton Union.

WELLS, A. E., M.D.Lond., District Medical Officer of the Cuckfield Union.

WHITE, Clifford, M.D., B.S., M.R.C.P.Lond., Surgical Registrar to the Samaritan Hospital for Women.

WILKINSON, S., M.R.C.S., L.R.C.P., District Medical Officer of the Birkenhead Union.

WILLIAMS, L. H., M.D.Durh., M.R.C.S., District and Workhouse Medical Officer of the Thornbury Union.

WILLIAMSON, Herbert, M.A., M.B., etc., Physician to In-patients, City of London Lying-in Hospital, E.C.

ST. THOMAS'S HOSPITAL.—The following House Officers have been appointed:

Casualty Officers and Resident Anaesthetists: R. G. Bingham, M.R.C.S., L.R.C.P.; A. S. Burgess, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; G. M. Huggins, M.R.C.S., L.R.C.P.; A. L. Loughborough, M.R.C.S., L.R.C.P.; F. M. Neild, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; J. F. Windsor, B.A.Cantab., M.R.C.S., L.R.C.P.

Resident House-Physicians: S. Churchill, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; B. T. Parsons-Smith, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; A. J. S. Pinchin, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; W. H. R. Sutton, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; H. B. Weir, B.A.Cantab., M.R.C.S., L.R.C.P.

House Physicians to Out-patients: W. A. M. Jack, M.R.C.S., L.R.C.P.; N. W. Jenkin, B.A.Cantab., M.R.C.S., L.R.C.P.; E. E. T. Nuthall, M.R.C.S., L.R.C.P.; R. W. Rix, M.R.C.S., L.R.C.P.

Resident House-Surgeons: H. H. Carleton, B.A., M.B., B.Ch.Oxon., R. E. Todd, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; W. R. Bristow, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; H. E. T. Dawes, B.A.Cantab., M.R.C.S., L.R.C.P.

House-Surgeons to Out-patients: J. A. Clark, M.R.C.S., L.R.C.P.; G. R. Girdlestone, B.A.Oxon, M.R.C.S., L.R.C.P.; J. L. Graham-Jones, B.A.Cantab., M.R.C.S., L.R.C.P.; H. T. Rossiter, M.R.C.S., L.R.C.P.

Obstetric House-Physicians: (Senior) T. G. Starkey-Smith, M.R.C.S., L.R.C.P.; (Junior) H. J. Nightingale, M.B., B.S.Lond., M.R.C.S., L.R.C.P.

Ophthalmic House-Surgeon: A. I. Cooke, B.A., B.C.Cantab.

Clinical Assistants: (Eye) A. N. Wheeler, B.A.Cantab., M.R.C.S., L.R.C.P.; (Skin) H. B. Billups, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.; (Children's Medical) E. M. Parsons-Smith, M.R.C.S., L.R.C.P.

Other gentlemen received extension of their appointments.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS

LE FLEMING.—On February 26th, at Wimborne, to Dr. and Mrs. E. K. Le Fleming, a son.

SHAW.—On Feb. 28th, at 41, King Street, Great Yarmouth, the wife of Raymond Henry Shaw, M.S., M.B., of a son.

STRATFORD.—On February 20th, at 210, Worple Road, Wimbledon, the wife of Howard M. Stratford, M.R.C.S., L.R.C.P., of a son.

DEATHS.

AYRE.—On February 29th, after influenza, John Joseph Ayre, M.R.C.S., of Colne, Lancashire, in his 97th year.

BISS.—On February 27th, at Hampstead, Janet, wife of Cecil Yates Biss, M.D., F.R.C.P., aged 57.

WATTS.—On March 1st suddenly of pneumonia at Heaton House, Sandforth, Cheshire, Isaac Watts, L.S.A., Medical Officer of Health, Sandforth, aged 35, third son of the late J. T. Watts, J.P., of Hyde, Cheshire.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion on the Diagnosis and Treatment of Fractures of the Long Bones, to be introduced by Mr. A. Pearce Gould.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Ralph Thompson: The Anatomy of the Long Bones relative to certain Fractures.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Mr. A. E. Barker: The Use of Lumbar Puncture in the Treatment of Otitic Meningitis.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Annual Clinical Debate on Gonorrhœa in the Male, with Special Reference to Treatment, to be opened by Messrs. J. G. Pardoe and Astlett Baldwin.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Milroy Lecture by Dr. J. W. H. Eyre: Melitensis Septicaemia.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor Ralph Thompson: The Anatomy of the Long Bones relative to certain Fractures.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

NEUROLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Clinical Meeting. Cases will be shown by Drs. Harris, Weber, E. Jones, P. Stuart, Collier, etc.

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—Exhibition of Specimens and Cases. Papers:—Dr. Andrews and Dr. Maxwell: A Case of Difficult Labour, with remarks on the Frozen Sections of the Uterus. Dr. W. C. Swayne: Myomectomy during Pregnancy. Dr. J. H. Dauber: Large Retroperitoneal and Subligamental Fibroid complicating Pregnancy.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Card Cases, etc. 8.30 p.m. Papers:—Mr. Paton: Optic Neuritis in Cerebral Tumours (adjourned discussion). Dr. Thomson Henderson: Lantern Demonstration of the Venous Connexions of Schlemm's Canal. Dr. Freeland Fergus: Ptosis Operations. Mr. H. H. B. Cunningham: A Case of Microphthalmia.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Milroy Lecture by Dr. J. W. H. Eyre: Melitensis Septicaemia.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Fleet Surgeon E. B. Pickthorn, R.N.: Hospital Ships.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 20, Hanover Square, W., 10 a.m.—Papers:—Mr. T. H. Kellock: A Case of Hermaphroditism, in which the Uterus occupied the Sac of an Inguinal Hernia. Dr. F. Parkes Weber: A Case of Angina Pectoris with Aortitis. Dr. S. W. Carruthers: A Case of Purpura Haemorrhagica with Fatal Result from Cerebral Haemorrhage. Dr. J. Porter Parkinson and Mr. J. Stroud Hosford: A Case of Cerebellar Tumour with Proptosis.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH, 1, Upper Montague Street, Russell Square, W.C., 7.30 p.m.—Paper by Dr. E. W. Hope, M.O.H., Liverpool: The Results of the Methods adopted in Liverpool in the direction of Removing Insanitary Property and Providing Dwellings for the Dispossessed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 p.m.—Hunterian Lecture by Professor W. Sampson Handley: The Natural Cure of Cancer.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 3 p.m., Alopecia and Diseases of the Hair; 4 p.m., Medical Cases.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, 2.30 p.m., Monday, Tuesday, Wednesday, and Thursday: Clinical Lecture, Friday, 3.30 p.m., A Few Points in Preventive Dentistry and the Care of the Teeth.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Demonstration of Cases from the Throat Department.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Syphilis; Friday, 4 p.m., Tubercle.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Fractures in Children.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 3.15 p.m., Alveolar Abscess; Wednesday, 3.30, Paralytic Squint.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Contusions of the Eyeball; Tuesday, Some Modern Methods of Infant Feeding; Wednesday, Surgical Diseases of Children; Thursday, Functional Disease and its Treatment.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead Road, N.W.—Thursday, 5 p.m., Demonstration: Case of Laryngeal Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Subacute Combined Degeneration of Spinal Cord; Friday, 3.30 p.m., Ocular Paralysis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Lecture, Angioneurotic Oedema as a Familiar Cause of Sudden Death. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; Tuesday and Friday, 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological; Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday and Wednesday, Clinical; Tuesday, On the Vaccination Treatment of Infective Diseases; Thursday, Practical Surgery; Friday, Anaesthetics.

BOOKS, ETC., RECEIVED.

London: H. Frowde (Oxford University Press). The World's Classics. 1s.:

CXIII and CXIV. The Works of the Rt. Hon. Edmund Burke. Vols. v and vi.

CXXIX. Emma. By Jane Austen.

CXXXVII. The Poetical Works of Robert Browning. Vol. ii.

CXXXVIII. William Cowper's Letters. Edited by E. V. Lucas.

CXLIX. The Discourses of Sir Joshua Reynolds; to which are added his Letters to "The Idler."

Die Pathologie der Nebennieren und der Morbus Addisonii. Von Dr. A. Bittorf. Jena: G. Fischer. 1908. M. 4.

Bibliothek v. Coler. Herausgegeben von O. Schjerning. Band 25. Der Gang des Menschen und die Fussgeschwulst. Von Dr. Momburg. Berlin: A. Hirschwald. 1908. Mk. 5.

Optimism: A Real Remedy. By H. Fletcher. London: B. F. Stevens and Brown. 1908. 2s. 6d.

Looking Back. 1907-1860. Second edition. January, 1908.

London: A. Constable and Co., Ltd. 1907. 6s.:

Dairy Laboratory Guide. By C. W. Melick, B.S.A., M.S.

Detection of the Common Food Adulterants. By E. M. Bruce.

Die Fehlergrösse bei den Histologischen Methoden. Von Priv. Dr. med. W. Berg. Berlin: A. Hirschwald. 1908. M. 1.20.

Protozoa and Disease, comprising Sections on the Causation of Small-pox, Syphilis, and Cancer. By J. J. Clarke. Part I. London: Bailliere, Tindall, and Cox. 1908. 7s. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
8 Sunday ...	
9 MONDAY ...	
10 TUESDAY ...	LONDON: Organization Committee, 11 a.m. BRALE RD DIVISION, *Yorkshire Branch*, General Meeting, Great Northern Victoria Hotel, Bradford. CITY AND WALTHAMSTOW DIVISIONS, *Metropolitan Counties Branch*, Conjoint Meeting, Walthamstow Hospital, 4 p.m. NORTH CARNARVONSHIRE AND ANGLESEY DIVISION, *North Wales Branch*, British Hotel, Bangor, 2.45 p.m.
11 WEDNESDAY	RICHMOND DIVISION, *Metropolitan Counties Branch*, Sun Hotel, Kingston, 8.30 p.m.
12 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*. SCOTTISH DIVISION, *Border Counties Branch*, Board Room, Dumfries and Galloway Royal Infirmary, 3 p.m.
13 FRIDAY ...	HAMPSHIRE DIVISIONS, *Southern Branch*, Royal South Hants and Southampton Hospital, 4 p.m.
14 SATURDAY...	
15 Sunday ...	
16 MONDAY ...	
17 TUESDAY ...	
18 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Cardiff. LANCASHIRE AND CHESHIRE BRANCH, Scientific and Clinical Meeting, University of Liverpool. YORKSHIRE BRANCH, General Infirmary, Leeds, 4.15 p.m.
19 THURSDAY...	LEEDS DIVISION, *Lancashire and Cheshire Branch* Co-operative Rooms, Ellesmere Street, 8.30 p.m. WESTMINSTER DIVISION, *Metropolitan Counties Branch*, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m.
20 FRIDAY ...	
21 SATURDAY...	
22 Sunday ...	
23 MONDAY ...	
24 TUESDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
25 WEDNESDAY	BATH AND BRISTOL BRANCH, Bristol. CANTERBURY AND FAVERSHAM DIVISION, *South-Eastern Branch*, Town Hall, Sittingbourne, 3 p.m.
26 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4 p.m.
27 FRIDAY ...	ENGLISH DIVISION, *Border Counties Branch*, County Hotel, Carlisle.
28 SATURDAY ...	
29 Sunday ...	
30 MONDAY ...	
31 TUESDAY ...	
APRIL.	
1 WEDNESDAY	
2 THURSDAY...	
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 14TH, 1908.

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British Medical Association.

THE REFERENDUM.

THE returns of the voting by the Divisions are being tabulated, and the figures will be ready for publication in the next issue of the SUPPLEMENT.

EDMUND OWEN,

March 12th. *Chairman of Council.*

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

LANCASHIRE AND CHESHIRE BRANCH:

ASHTON UNDER-LYNE DIVISION.

A MEETING of this Division was held at the George and Dragon, Ashton-under-Lyne, on March 5th.

Notification of Births.—The following resolution was passed unanimously:

That the Division uphold the Stalybridge members in their resolution to refuse to act as informants under the Notification of Births Act to the Stalybridge Corporation.

Medical Inspection of School Children.—The following resolution was passed unanimously:

That the Division agrees with the suggestions of the Medico-Political Committee contained in their supplementary report *re* medical inspection of school children.

Medical Practitioners and Midwives.—The following resolution was passed unanimously:

That the Secretary write to the Board of Guardians drawing their attention to a circular letter from the Local Government Board recommending the payment of medical men called in to assist the midwife in urgent cases where the mother is too poor to pay for such services, and asking the Board to adopt this suggestion.

BLACKBURN DIVISION.

A MEETING of this Division was held at the Old Bull Hotel, Blackburn, on Friday, March 6th, Dr. AITKEN (President) in the chair. The following were present: Drs. Henry, Lees, Prebble, Jones, Payne, Scott-Heyliger, Stephenson, Barker, Bannister, Cunliffe, Rigby, Moir, Taylor, Macklin, Armistead, Townley, John Patchett, and Greenwood.

Medical Inspection of School Children.—Dr. CUNLIFFE opened a discussion on the medical inspection of school children in an interesting and instructive manner. The following members took part in the discussion: Drs. Henry, Scott-Heyliger, Barker, Macklin, Moir, Bannister, and Greenwood. Finally the following resolutions were proposed, seconded, and carried unanimously:

1. That in all large towns of 100 000 population and upwards the supervision of the work of medical inspection of school children should be under the medical officer of health, and that he should be provided with one or more full-time medical assistants.
2. That in boroughs of less than 100,000 population, which are declared by section of the Education Act, 1902, to be Local Education Authorities for the purposes of Part 3 of that Act, the supervision of the work of medical inspection of school children should be under the medical officer of health, and wherever possible he should be a whole-time official—that is, not engaged in general practice.
3. That the county medical officer of health should be the supervising medical officer for the medical inspection of school children, and that he should be provided with full-time assistance wherever possible.
4. That in the case of rural and urban district authorities the duties of the education officer should be dealt with by whole-time medical men whenever possible, and whenever not possible, owing to certain local circumstances, that he may be a part-time officer.

During the discussion all the speakers dwelt very strongly upon the undesirability of anything in the way of treatment of disease being undertaken by the local education authorities. Attention was also drawn to the fact that no provision had been made in the recent schedule issued by the Board of Education for stating whether or not any child had been vaccinated. It was, however, pointed out that this could easily be added.

Vote of Thanks.—A cordial vote of thanks was proposed, seconded, and carried unanimously, to Dr. Cunliffe for the trouble he had taken in bringing this matter forward.

LIVERPOOL AND BIRKENHEAD COMBINED DIVISIONS.

A MEETING was held on February 28th at 4.30 p.m. at the Liverpool Medical Institution. In the unavoidable absence of the Chairman (Sir James Barr), the late VICE-CHAIRMAN (Mr. F. C. Larkin) was voted into the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Visitor.—Dr. Weaver, Medical Officer of Health for Stockport, was present as a visitor.

Notification of Births Act.—A letter was read from the Liverpool Town Clerk, dated January 11th, asking what would be considered to be a reasonable remuneration for notification of a birth under the Act; and a similar letter was read from the Medical Officer of Health (Dr. Hope),

dated January 17th. The Secretary's reply was also read. A letter from the Town Clerk, dated February 6th, was read, stating that the Secretary's letter had been submitted to the Health Committee, but that the Committee did not pass any resolution thereon. A discussion followed, and Dr. Parkinson proposed and Dr. E. T. Davies seconded that the local members of the Association refuse to notify births without remuneration. The Chairman pointed out that if it was proposed to strike, a *plébiscite* of the members should first be taken. Dr. Parkinson and Dr. Davies accepted this as follows:

> That a postal vote be taken of all members of the British Medical Association belonging to the Birkenhead and Liverpool Divisions as to whether they will agree to refuse to notify births without remuneration.

Whereupon an amendment was moved by Dr. Donnelly, seconded by Dr. Given:

> That a small deputation wait upon the Medical Officer of Health and the Town Clerk to ascertain the attitude of the City Council on the question of remuneration of medical men for services rendered under the Act.

The amendment was lost. Whereupon Dr. Gullan proposed and Dr. A. E Davis seconded an amendment in the same words, substituting the Health Committee for the Medical Officer of Health and the Town Clerk. The amendment was carried *nem. con*, and was then proposed as a substantive motion and carried *nem. con.*:

> That a small deputation wait upon the Health Committee to ascertain the attitude of the City Council on the question of remuneration of medical men for services under the Notification of Births Act.

A discussion followed on the personnel of the deputation, and, on the suggestion of the Chairman, it was decided to leave the selection to the officers.

Medical Inspection of School Children.—The Secretary read a letter from the Chairman of the Lancashire Elementary Education Subcommittee, dated January 4th, 1908, and the reply to it. The Schedule of Medical Inspection issued by the Board of Education was considered, and it was unanimously decided that the examination necessary to properly carry out such inspection would take at least fifteen to twenty minutes on an average for each child. The Secretary was instructed to write to the Chairman of the Lancashire Elementary Education Subcommittee (Mr. J. J. Cockshott) to that effect, correcting the estimate in his previous reply, which had been made before the schedule was published. In connexion with this, the matters referred to Divisions in the Supplement of February 8th, p. 52 were then considered, and the second, third, and fourth suggestions of the Medico-Political Committee were approved. The first resolution was modified as follows, namely:

> That in place of the words "and distinct from" the following be substituted, namely, "under supervision of," so that the Suggestion 1 reads:
>
> "That in all large towns of 100,000 population and upwards there should be a supervisory medical officer who should be a whole-time education officer *under the supervision of* the medical officer of health of the town."

The third item of the agenda—medical fees at inquests—was postponed on account of the lateness of the hour, but it was unanimously agreed to send a vote of thanks to Mr. J. Brighouse (County Coroner) for his action in the matter. Mr Larkin stated that the matter was also under the consideration of the Branch Council.

Stockport Division.

A meeting of this Division was held on February 27th.

Notification of Births Act.—On consideration of the Notification of Births Act, it was resolved (15 present, 63 absent):

> That this Division approves of the Act, and suggests the settlement of the difficulties encountered by the adoption of Dr Brennan's scheme, as reported in the British Medical Journal, January 11th, 1908, p. 115, as has been done in Stockport.

Carried unanimously.

Medical Inspection of School Children.—On consideration of the recommendations of the Medico-Political Committee on the medical inspection of school children, it was resolved (14 present, 64 absent):

> That the recommendations of the Medico-Political Committee be approved.

Carried unanimously.

Metropolitan Counties Branch: Kensington Division.

A meeting was held at the Kensington Town Hall on Thursday, February 6th, at 5 p.m. Twenty-eight members were present.

Election of Chairman.—Dr. A. J. Rice Oxley was elected Chairman in place of Sir John Tyler, resigned.

Paper.—A paper was read by Mr. G. L. Eastes on Certain Infections of the Urinary Tract, with special reference to Tubercle, Gonococcus, and *Bacillus coli communis*.

Vote of Thanks.—Dr. Culver James proposed, and Miss Agatha Porter seconded, a hearty vote of thanks to Mr. Eastes for his paper.

ANNUAL MEETING, SHEFFIELD, 1908.

PATHOLOGICAL MUSEUM.

The following are the members of the Committee:

President: Professor J. M Beattie, M.D.

Honorary Secretaries: A. E. Barnes, M.R.C.P.; M. H. Phillips, F.R.C.S.

Members of Committee:

W T. Cooking, M D.	C. J. Patten, M.D.
A M Connell F R.C.S.E.	H. Scurfield, M D.
A. H. Firth, M.B.	G S. Simpson, F R.C.S.
A J. Hall, M D.	E. Skinner. M.R C.S.
J. S. Macdonald, L.R.C.P.	J. W. Stokes, M R C.S.
W. H. Nutt, M D.	G. Wilkinson, F.R.C.S.

Ex-Officio Members:

The President-elect: Simeon Snell, F.R.C.S.E.

The Local Honorary Treasurers: D. Burgess, F.R.C.P.; W. Dyson, M.D.

The Local Honorary Secretaries: Sinclair White, F.R.C.S., W. T. D. Mart, M.R C S; R. W. I. Smith, M.D.; A. C. Turner, M.R.C.S.

The following circular has been sent out by the Subcommittee of the Pathological Museum to gentlemen interested in pathology and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Sheffield, 1908, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.
II. Specimens and illustrations relating to any recent research work.
III. Instruments relating to clinical diagnosis and pathological investigation.
IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Diseases of the spleen.
(*b*) Diseases of the heart and vessels.
(*c*) Diseases due to dust, tuberculosis, actinomycosis, syphilis and allied causes.
(*d*) The urinary system.
(*e*) Diseases of the breast.
(*f*) X rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position, and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,

A. E Barnes,
M. H Phillips,
Honorary Secretaries.

342, Glossop Road, Sheffield, January, 1908.

MEMBERS ELECTED DURING THE DECEMBER QUARTER.

UNDER BY-LAWS 2 AND 3.

BY THE COUNCIL.

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Inness, William Deacon, M.R.C.S.Eng., L.R.C.P.Lond., Lokoja, N. Nigeria
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Said, Ahmed, Diplome of Physicians, Surgeons and Obstetricians, Kasr-el-Ainy Hospital, Cairo, Egypt
Shorbage, Ibrahim, Diplome of Physicians, Surgeons and Obstetricians, Kasr-el-Ainy Hospital, Cairo, Egypt
Smith, Frederick, Major R.A.M.C., L.R.C.P. and S.I., D.P.H.
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Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch: English Division.—There will be a meeting of the Division at the County Hotel, Carlisle, on Friday afternoon, March 27th, when Sir James Barr will deliver an address entitled Some Observations on Bronchitis and Emphysema.—Norman Maclaren, Honorary Secretary, 23, Portland Square, Carlisle.

Edinburgh Branch: Southern Division.—A meeting of this Division will be held in the Oddfellows' Hall, Forrest Road (Room 6), on Friday, March 20th, at 8.15 p.m. Agenda: (1) Minutes. (2) Matters referred to Divisions: (*a*) Medical Inspection of School Children (see Supplement, February 8th); (*b*) Definition of the term "Hospital" (see Supplement, February 22nd); (*c*) Medical Examination for Life Insurance (see Supplement, February 22nd); (*d*) Prevention of Corruption Act, 1906 (see Supplement, February 22nd). (3) Hospitals Conference Report—Infirmary Managers' reply. (4) Motions by Dr. A. Walker regarding Charter, etc. (5) Motion by Dr. Cullen regarding "Deaths Registration." (6) Report on Black List Scheme. (7) Any other competent business.—Michael Dewar, Honorary Secretary.

Lancashire and Cheshire Branch.—A meeting of the Branch will be held at the University of Liverpool on Wednesday afternoon, March 18th. Business: Scientific and clinical communications.—F. Charles Larkin, Honorary Secretary.

Lancashire and Cheshire Branch: Altrincham Division.—A special meeting of this Division will be held at Altrincham on Wednesday, March 18th, at 5 p.m.—T. W. H. Garstang, Honorary Secretary.

Lancashire and Cheshire Branch: Leigh Division.—A meeting of the members of the above Division will be held on Thursday, March 19th, at 8.30 p.m., at Co-operative Rooms, Ellesmere Street. Agenda: Consideration of insurance policies.—J. Sackville Martin, M.D., Honorary Secretary of the Division.

Metropolitan Counties Branch: Lambeth Division.—The next general meeting of the Lambeth Division will be held on Thursday, March 26th, in the Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., at 4 p.m. C. H. Fagge, Esq., M.S. Lond., F.R.C.S. will read a paper upon The Pathology and Treatment of Hernia in Children. Cases will be exhibited. There will also be important business to transact in connexion with matters referred to the Divisions by the Branch Council.—Herbert French, Honorary Secretary, Lambeth Division.

Metropolitan Counties Branch: Richmond Division.—A meeting of this Division will be held on Wednesday, April 8th, at 8.30, at the Royal Hospital, Richmond, when Mr. W. T. Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6.30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: Wandsworth Division.—A meeting of this Division will be held on Thursday, March 26th, at the Headquarters, 4th V.B. East Surrey Regiment, 27, St. Johns Hill, S.W. Dr. Campbell Thomson will give a lecture on Some Cases of Nervous Diseases, illustrated by the cinematograph.—C. J. Martin, Honorary Secretary.

Metropolitan Counties Branch: Westminster Division.—The next meeting of the Division will be held on Thursday, March 19th, at St. James's Vestry Hall, Piccadilly (First Floor) at 5 p.m., the President, Dr. Knowsley Sibley, in the chair. Agenda:—(1) Minutes of last meeting. (2) Letters. (3) Annual report. (4) The question of the medical inspection of school children. (5) The medical situation created by the Workmen's Compensation Act and its relation to hospital abuse. The fees which should be asked by medical men acting as referees for insurance companies. (6) The question of the Hampstead Hospital and the local Branch of the Association in reference to the warning notices which have appeared in the Journal. (7) Reference from the Medico-Political Committee *re* fees for the medical examination for life insurance, a report on which appeared in the Supplement to the Journal

of February 22nd. (8) Reference from Representative Meeting *re* definition of the term "hospital." (9) Such other business as may arise.—HARVEY HILLIARD, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A meeting of this Division will be held at the Town Hall, Sittingbourne, on Wednesday, March 25th, at 3 p.m. Dr. R. M. Boodle will preside. A lecture will be given with lantern demonstrations by Wm. McAdam Eccles, M.S., F.R.C.S., on The Treatment of Inguinal Hernia by Trusses. All medical men are invited to attend.—T. BARRETT HEGGS, Honorary Secretary, Sittingbourne.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The next meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Friday, March 27th, at 4.30 p.m. Agenda: (1) Minutes. (2) Dr. A. B. Hudson (Cobham) will move the following resolution: "That this Division having adopted Ethical Rules as drafted by the Medical Secretary, agrees to fix the minimum rate for contract practice (clubs, etc.) in the Division at 4s. per head per annum for either sex, such rate to refer to junior as well as senior members of clubs." (3) Matters referred to Divisions (see SUPPLEMENT, February 22nd). (*a*) Report as to proposed definition of the word "hospital." (*b*) Report on Life Insurance Examination. (*c*) Report on Prevention of Corruption Act. (4) Mr. G. B. Mower White will read a paper on Some Points in the Surgery of Mammary Cancer, to be followed by a discussion. (5) Cases will be shown by members of the hospital staff if time permits. Tea will be provided at 4.15 p.m.; dinner at 6.30 p.m., Lion Hotel. Charge, 6s. (exclusive of wine). Members wishing to show cases or specimens are invited to communicate with the Honorary Secretary, E. J. SMYTH, "Maythorne," Epsom Road, Guildford.

SOUTH-MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held at the Hospital, Hitchin, on Thursday, March 26th, at 3 p.m. Members willing to read papers, show cases, or exhibit specimens are requested to communicate with me as soon as possible.—E. H. COBB, "Belmont," Stevenage, Honorary Secretary.

WEST SOMERSET BRANCH.—The spring meeting of the Branch will be held at the Taunton and Somerset Hospital, on Friday, March 27th, at 3.30 p.m., when Dr. G. W. Harvey Bird will preside. The Council is anxious to make this, as far as possible, a clinical meeting, and members wishing to bring forward any cases or show specimens are asked to communicate with the Honorary Secretary. Tea will be provided after the meeting.—W. B. WINCKWORTH, Honorary Secretary.

YORKSHIRE BRANCH.—The next meeting of this Branch will be held at the General Infirmary, Leeds, on Wednesday, March 18th, at 4.15 p.m. Members intending to read papers, show specimens or cases, or propose new members, are requested to communicate at once with Dr. ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research.

Applications for sums to be granted should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing:

(*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached.

(*b*) A general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers.

(*c*) And references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council provided the whole term of office shall not exceed three years.

The Scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

ERNEST HART MEMORIAL SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum tenable for one year but subject to renewal by the Council provided the whole term of office shall not exceed three years. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes work, setting out the fitness of the candidate to carry such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Forms of application for Scholarships and Grants can be had on application to the General Secretary.

GUY ELLISTON, *General Secretary*.

6, Catherine Street, Strand,
February, 1908.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: HERBERT STONE, M.B., Surgeon, to the *Excellent*, temporary, March 2nd; JOHN C. FERGUSON, M.B., Fleet Surgeon, to the *Victory*, additional, for disposal, March 2nd; RICHARD R. HORLEY, Surgeon, to the *Duke of Edinburgh*, on recommissioning, March 10th; LANCELOT KILROY, Surgeon, to the *Vernon*, additional, for the *Furious*, March 10th; LANCELOT KILROY, Surgeon, to the *Sappho*, on recommissioning, undated; EDWARD B. CARBERY, M.B., Staff Surgeon, to the *Brilliant*, on recommissioning, undated; ALEXANDER S. MARSH, Surgeon, lent to the *Hebe*, temporary, March 6th; ALEXANDER C. KENWICK, M.B., Surgeon, to the *Pembroke*, additional, to be lent to the *Jason*, temporary, March 6th; HARRY M. LANGDALE, Surgeon, to the *Spanker*, temporary, March 6th (appointment to the *Shannon* cancelled); WALTER H. O. GALE, Staff Surgeon, to the *Victory*, additional, to be lent to Haslar Hospital, March 7th; HAROLD G. T. MAJOR, Surgeon, to the *Donegal*, March 5th; GEOFFREY PRICE, Surgeon, to the *Vivid*, additional, lent to the *Fierce*, temporary, March 6th; THOMAS A. SMYTH, Surgeon, to the *Firth*, March 23rd; AUGUST J. WERNET, Surgeon, to the *Canopus*, March 23rd; G. EDWARDS, M.B., Surgeon, to Plymouth Hospital, March 23rd.

B. FOLEY, civil practitioner, has been appointed Surgeon and Agent at Bonmahon, March 3rd.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL H. E. R. JAMES retires on retired pay, March 7th. He was appointed Surgeon, February 4th, 1882; Surgeon-Major, February 4th, 1894; and Lieutenant-Colonel, February 4th, 1902. He was attached to the Chinese Army during the war between China and Japan in 1894–6.

Major E. C. FREEMAN, M.D., late R.A.M.C., has been appointed Staff Officer to the Principal Medical Officer, East Anglian Division, Territorial Force.

INDIAN MEDICAL SERVICE.

THE following officers are appointed to the Bacteriological Department of the Home Department of the Government of India: Lieutenant-Colonel D. SEMPLE, M.D., R.A.M.C. (retired), Director of Central Research Institute, Kasauli; Lieutenant-Colonel W. B. BANNERMAN, M.D., Madras, Director, Bombay Bacteriological Laboratory; Major G. LAMB, M.B., Bengal, Director, Pasteur Institute, Kasauli; Major J. W. CORNWALL, M.D., Madras, Director, Southern India Pasteur Institute, Coonoor; Major S. P. JAMES, M.D., Madras, Statistical Officer to the Government of India in the Sanitary and Medical Departments; Captain W. G. LYON, M.B.; Captain E. D. W. GREIG, M.B., Bengal; Captain W. F. HARVEY, M.B.; Captain S. R. CHRISTOPHERS, M.B., Director of the Imperial Institute of Preventive Medicine, Madras.

IMPERIAL YEOMANRY.

AMBROSE H. PALMER (late Surgeon-Lieutenant, 2nd Volunteer Battalion the Prince of Wales's North Staffordshire Regiment) to be Surgeon-Lieutenant in the Staffordshire (Queen's Own Royal) Regiment, February 1st.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON CAPTAIN P. J. S. BIRD, M.D., 1st West Riding of Yorkshire Regiment, resigns his commission, January 28th.

Surgeon-Lieutenant C. W. OWEN, 1st Carnarvonshire, resigns his commission, February 17th. He is appointed Second Lieutenant in the same corps from the same date.

Surgeon-Captain W. T. BLACKLEDGE, M.B., 6th Lancashire, resigns his commission, February 18th. He is appointed Captain in the same corps from the same date.

ROYAL ENGINEERS (VOLUNTEERS)

SURGEON-CAPTAIN E. C. ROBERTS, 1st London, resigns his commission, February 20th.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT-COLONEL D. HEPBURN, M.D., 2nd Volunteer Battalion the Welsh Regiment, is granted the honorary rank of Surgeon-Colonel, February 12th.

Surgeon-Captain C. GRAHAM GRANT, 24th Middlesex Volunteer Rifle Corps, to be Surgeon-Major, January 31st.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT-COLONEL AND HONORARY COLONEL V. MATTHEWS, London Companies, resigns his commission, retaining his rank and uniform, February 17th.

Major J. HARPER, M.D., London Companies, to be Lieutenant-Colonel, and is appointed to command the Companies under the conditions of paragraph 47 of the Volunteer Regulations, February 17th.

Captain J. R. WHAIT, M.B., London Companies, to be Major, January 17th.

Lieutenant J. O'SULLIVAN, from the Manchester Companies, to be Captain in the South Wales Border Bearer Company, December 4th, 1907.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The examination held in London on January 21st for promotion to the rank of surgeon-major, 21 candidates from the Volunteer Medical Service School of Instruction presented themselves for examination, of whom 17 passed, of whom 8 obtained special mention as follows (London District Orders, No. 41, 1908):

Surgeon-Captain H. Stedman, M.D., 1st City of London R.G.A. (Vols.).
" J. Wreford, 1st Northumberland R.G.A. (Vols.) Special mention.
" A. C. Hartley, M.D., 1st Bedford R.E. (Vols.).
" E. Gray, 2nd Cheshire R.E. (Vols.).
" J. A. Masters, M.D., M.R.C.P., London Division Electrical Engineers (Vols.). Special mention.
" J. J. O'Hagan, M.B., F.R.C.S.I., 5th V.B. the King's (Liverpool Regiment). Special mention.
" E. P. A. Mariette, M.B., 2nd V.B. Devonshire Regiment. Special mention.
" C. J. Martin, M.B., 4th V.B. East Surrey Regiment.
" T. M. Morton, 4th V.B. East Surrey Regiment.
" F. J. Warwick, M.B., 3rd V.B. Essex Regiment. Special mention.
" L. T. F. Bryant, M.D., 3rd V.B. Royal West Kent Regiment. Special mention.
" F. R. Miller, 4th Middlesex V.R.C.
" C. S. de Segundo, M.B., 20th Middlesex V.R.C.
" W. A. Malcolm, M.B., 21st Middlesex V.R.C.
" C. Graham Grant, 24th Middlesex V.R.C.
" H. K. Ramsden, 2nd London V.R.C. Special mention.
" W. G. Macfee, 4th London Volunteer Infantry Border Bearer Company. Special mention.

The subject of the examination were organization and discipline.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,820 births and 5,495 deaths were registered during the week ending Saturday last, March 7th. The annual rate of mortality in these towns, which had been 18.4 and 17.3 per 1,000 in the three preceding weeks, rose again to 16 per 1,000 last week. The rates in the several towns ranged from 6.5 in Leyton, 8.0 in East Ham, 8.4 in Barrow-in-Furness, 9.5 in Walthamstow, and 9.6 in Willesden, to 22.4 in Reading, 23.5 in Great Yarmouth, 24.3 in Rhondda, 26.1 in Hanley and in Swansea, and 28.4 in Stockton-on-Tees. In London the rate of mortality was 17.2 per 1,000, while it averaged 17.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.2 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 3.0 in Croydon, in West Bromwich, and York, 3.1 in Rhondda, 3.7 in Salford, 3.8 in Reading, and 5.9 in Stockton-on-Tees. Measles caused a death-rate of 1.3 in Reading, in Ipswich, in Halifax, and in Merthyr Tydfil, 1.6 in Rhondda, in York, 2.3 in Croydon, and 3.9 in Stockton-on-Tees; diphtheria of in York and 1.5 in West Bromwich and in Salford; whooping-cough 1.1 in Birmingham, 1.2 in Sheffield and in Gateshead, 1.3 in Reading and in Plymouth 1.4 in Bolton, in Newport (Mon.), and in Merthyr Tydfil, 1.5 in Handsworth (Staffs), and in Smethwick, 1.5 in Walsall, 2.0 in Sunderland, and 2.2 in Northampton; and diarrhoea of 2.0 in Great Yarmouth and in Stockton-on-Tees. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases remaining under treatment at the end of last week in the Metropolitan Asylums Hospitals and the London Fever Hospital was 3,567, against 3,606 3,733, and 3,74 at the end of the three preceding weeks; 345 new cases were admitted during the week, against 473, 420, and 383 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 7th, 926 births and 681 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 21.4, 21.8, and 19.2 per 1,000 in the three preceding weeks, rose again last week to 19.3 per 1,000, and was 1.7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 15.9 in Edinburgh and 16.7 in Greenock to 20.7 in Perth and 22.0 in Dundee. The death-rate from the principal infectious diseases averaged 2.7 per 1,000, the highest rates being recorded in Paisley and Leith. The 340 deaths registered in Glasgow included 31 which were referred to measles, 3 to scarlet fever, 3 to diphtheria, 9 to whooping-cough, 5 to cerebro-spinal meningitis, and 2 to diarrhoea. Five fatal cases of measles, 2 of scarlet fever, and 2 of whooping-cough were recorded in Edinburgh; 3 of whooping-cough and 3 of diarrhoea in Dundee; 5 of measles and 2 of scarlet fever in Aberdeen; 3 of measles in Paisley; 3 of whooping-cough in Leith; and 2 of measles in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 29th, 544 births and 405 deaths were registered in six of the principal Irish towns as against 489 births and 450 deaths in the preceding period. The annual death-rate in these towns, which had been 23.1, 20.3, and 23.5 per 1,000 in the three preceding weeks, fell to 22.4 per 1,000 in the week under notice, this figure being 5.1 per 1,000 higher than the mean annual rate in the seventy-six English towns for the corresponding period. The figures ranged from 17.0 in Londonderry and 21.0 in Dublin to 24.7 in Cork and 27.3 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.5 per 1,000 or 0.6 per 1,000 higher than during the preceding period, the highest figure—2.9—being recorded in Belfast, while Limerick registered no deaths under this heading at all. The principle zymotic causes of death were measles and whooping-cough.

During the week ending Saturday, March 7th, 570 births and 509 deaths were registered in six of the principal Irish towns, as against 544 births and 405 deaths in the preceding period. The annual death-rate in these towns, which had been 20.3, 23.5, and 22.4 per 1,000 in the three preceding weeks, rose to 29.8 per 1,000 in the week under notice, this figure being 12.2 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 24.1 in Dublin and 29.2 in Waterford to 31.5 in Cork and 35.5 in Limerick. The zymotic death-rate in the same six Irish towns averaged 2.7 per 1,000, or 1.2 per 1,000 higher than during the preceding period, the highest figure—9.6—being recorded in Limerick, while Londonderry registered no deaths under this heading at all. Measles and whooping-cough were still the leading zymotic causes of death.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House Surgeon. (3) Resident Medical and Surgical Officer at the Jaffray Branch. Salary at the rate of £50 per annum for (1), £40 for (2), and £150 for (3).

BOURNEMOUTH: ROYAL NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Medical Officer. Salary, £10 per month.

BRADFORD ROYAL INFIRMARY.—(1) House-Physician; (2) House-Surgeon. Salary, £100 per annum each.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BUCKS COUNTY COUNCIL.—County Medical Officer of Health. Fee, 50 guineas per annum for specified duties and fees at rate of 5 guineas a day for other duties.

BUCKS COUNTY EDUCATION COMMITTEE.—Medical Officer. Salary, £300 per annum.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary to commence, £140 per annum.

CARDIFF INFIRMARY.—House-Physician. Honorarium, £30 for six months.

CARLISLE, CITY OF.—Medical Officer of Health. Salary, £500 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—(1) House-Physician (male). Salary at the rate of £60 per annum. (2) Physician to Out-patients.

DUNFERMLINE: CARNEGIE DUNFERMLINE TRUSTEES.—Assistant Medical Officer (female). Salary, £200 per annum.

FINCHLEY URBAN DISTRICT.—Medical Officer of Health and Medical Superintendent of the Council's Hospital. Salary, £300 per annum, increasing to £400.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £50 per annum.

LEAMINGTON: WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

LISCARD: VICTORIA CENTRAL HOSPITAL.—Assistant Anaesthetist.

LOWESTOFT HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

MANCHESTER: CHORLTON-UPON-MEDLOCK DISPENSARY.—Honorary Medical Officer.

MANCHESTER UNIVERSITY.—Demonstrator in Physiology. Stipend, £150, rising to £200 per annum.

MERTHYR TYDFIL EDUCATION COMMITTEE.—Medical Inspector. Salary, £200 per annum, increasing to £300.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—House Surgeon. Salary, £100 per annum.

MOUNTAIN ASH URBAN DISTRICT.—School Medical Inspector. Salary, £250 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 per annum, increasing to £275.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary, £100 per annum.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, Great Portland Street, W.—House-Surgeon. Salary at the rate of £250 per annum.

ST MARY'S HOSPITAL, PADDINGTON.—Medical Officer in Charge of X-Ray Department. Salary at the rate of £100 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) House-Surgeon. (2) House-Physician. Salary, £100 per annum each.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon (male). Salary, £90 per annum

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum

STOCKTON-ON-TEES EDUCATION COMMITTEE.—Assistant to the Medical Inspector of School Children Salary, £200 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Clinical Assistants.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Resident Medical Officer. Salary at the rate of £150 per annum

WORCESTER COUNTY COUNCIL.—Assistant Bacteriologist. Salary, £160 per annum.

WORCESTER EDUCATION COMMITTEE.—Inspector of School Children and Midwives. Salary, £ 00 per annum.

WORTHING BOROUGH AND RURAL DISTRICT OF EAST PRESTON.—Medical Officer of Health. Salary, £500 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Hoxne, co Suffolk; Castletown, co. Caithness; Drumcollogher, co. Limerick; Kingscliffe, co Northampton; Ederney, co. Fermanagh; Carrickmacross, co. Monaghan; Killane, co. Wexford; Haddenham, co. Cambridge; and Week St. Mary, co. Cornwall.

APPOINTMENTS.

BEALE, Peyton T. B., F.R.C.S., Surgeon to the City Dispensary, E.C.

BUTCHER, W., M.F.C.S., L.R.C.P.Lond., D.P.H.Vict., Medical Officer of Health, Westhoughton Urban District

DILLON, M., L.R.C.S.I., L.A.H.Dub., Certifying Factory Surgeon for the Rathmore District, co. Kerry

EAGER, Richard, M.B.Aber., Senior Assistant Medical Officer to the Devon County Asylum, Exminster

EDINGTON, D.C., M.D.Edin., Certifying Factory Surgeon for the Penrith Disirict, co Cumberland.

HALL, George, M.D.Lond., B.Sc.Dunelm., M.R.C.P.Lond., Honorary Assistant Physician, Royal Victoria Infirmary, Newcastle-on-Tyne.

HARMAN, G. R., L.M.I.S.Dub., Certifying Factory Surgeon for the St. German's District, co. Cornwall.

HINE, T. G. Macaulay, M.D., B.C.Cantab., Honorary Physician to the St. Pancras and Northern Dispensary.

HUDSON, Bernard, M.D., M.R.C.P., Assistant Physician to the Royal Hospital for Diseases of the Chest, City Road, E.C.

JAQUES, Robert, F.R.C.S., Honorary Surgeon to the Plymouth Royal Eye Infirmary.

JEWESBURY, Reginald C., M.A., M.B.Oxon., M.R.C.P.Lond., Assistant Physician to Charing Cross Hospital.

MARSH, E. H., M.R.C.S., L.R.C.P., District Medical Officer of the Settle Union.

MONTESOLE, M. Herschel, L.R.C.P.Lond., M.R.C.S., Junior House-Surgeon to the Western General Dispensary, Marylebone Road, N.W.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue

DEATHS.

BICKERSTETH.—On the 7th March, at 2, Rodney Street, Liverpool, Edward Robert Bickersteth, F.R.C.S., in his 80th year.

COOKSON.—On March 1st, at Avenham Cottage, Preston, John Fowler Cookson, M.D.Edin., M.R.C.S.Eng., and L.S.A.Lond., aged 81 years.

DOWSON.—On March 9th, at the residence of her son, Dry Street Farm, Langdon Hills, Essex, Elizabeth Martha, widow of the late Edward Dowson, M.D., of 117, Park Street, Grosvenor Square, aged 75. Funeral at Mickleham on Thursday at 3.30 p.m.

MONCKTON.—At Ladysmith, Natal, on the 11th of February, of pneumonia, Frank Parr Monckton Surgeon, the beloved son of William Monckton, Portishead, Somerset

WALLACE.—On February 27th, at Turriff, Aberdeenshire, Andrew Wallace, M.D., in his 75th year.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m. Arris and Gale Lecture by Dr. F. A. Bainbridge: The Pathology of Acid Intoxication.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Discussion on the Relations of Endothelioma to other forms of New Growths, to be opened by Dr. W. S. Lazarus-Barlow.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Goulstonian Lecture by Dr Herbert French: The Influence of Pregnancy on certain Medical Diseases, and the Influence of certain Medical Diseases on Pregnancy

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Arris and Gale Lecture by Mr. M. Greenwood, jun.: The Physiological and Pathological Effects which follow Exposure to Compressed Air.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Goulstonian Lecture by Dr. Herbert French: The Influence of Pregnancy on certain Medical Diseases and the Influence of certain Medical Diseases on Pregnancy.

ROYAL SOCIETY OF MEDICINE:

DERMATOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Exhibition of Cases.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Arris and Gale Lecture by Mr. M. Greenwood, jun. The Physiological and Pathological Effects which follow Exposure to Compressed Air.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, W., 5 p.m.—Exhibition of Cases by Drs F. Langmead, Parkes Weber, C. Chapman, G. Carpenter, Porter Parkinson, Mr. Sydney Stephenson, and others.

POST-GRADUATE COURSES AND LECTURES.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Demonstrations, 2.30 p.m., Monday, Tuesday, Wednesday, and Thursday; Clinical Lecture, Friday, 3.30 p.m. Cardio-pulmonary Murmurs, their Diagnosis and Significance

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Demonstration of X-Ray Examination of Cases of Diseases of the Chest.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Leprosy, Rhinoscleroma, Mycosis Fungoides; Friday, 4 p.m., Blastomycosis, Actinomycosis, Glanders.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Rheumatism in Children under 5 years.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lecture:—Thursday, 2.15 p.m., Chorea.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Bilharziasis; Tuesday, Experiences and Observations in the Surgery of Some Non-malignant Affections of the Stomach; Wednesday Post Basal Meningitis; Thursday, Precocious Development.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C. Tuesday, 3.30 p.m., Torticollis and the Tics; Friday, 3.30 p.m., Acute Infection of Brain and Membranes.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, X Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient. X Ray; 3 p.m., Medical In-patient; 4.30 p.m., Lecture-Demonstration: Congenital Dislocation of the Hip joint. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m. Surgical Operations, Medical Out-patient. Eye; 3 p.m., Medical In patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; X Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.). Diseases of Throat, Nose, and Ear; Tuesday and Friday, 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 12 noon, Monday, Pathological Demonstration; Tuesday and Thursday, Practical Medicine; at 5 p.m., Monday and Tuesday Diseases of Tonsils (illustrated by lantern slides); Wednesday, Practical Medicine; Thursday, Practical Surgery; Friday, Arterio-sclerosis.

BOOKS, ETC., RECEIVED.

Transactions of the American Ophthalmological Society. Forty-third annual meeting, Washington, D.C. 1907. Vol. xi. Part II. Hartford: American Ophthalmological Society 1907

Les Luxations des Grandes Articulations, leur Traitement Pratique. Par les Drs. J. Hennequin et R. Loewy. Paris: F. Alcan. 1908. Fr. 16.

A Proposal for a Simplified Calendar. By A. Philip, LL.B. London: Kegan Paul, Trench, Trübner, and Co., Ltd. 1907. 6d.

Verhandlungen der Deutschen Laryngologischen Gesellschaft auf der II Versammlung zu Dresden vom 15-18 September 1907. Herausgegeben im Auftrage des Vorstandes vom Schriftführer Dr. med. G. Avellis. Wurzburg: C. Kabitzsch (A. Stuber). 1908. Mk. 5.

The Gardening Year-Book and Garden Oracle. 1908. By G. Gordon, V.M.H. Fiftieth year. London: The "Gardeners' Magazine" Office. 1s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
15 Sunday ...	
16 MONDAY ...	
17 TUESDAY ...	
18 WEDNESDAY	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Special Meeting, Altrincham, 5 p.m. CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Cardiff. LANCASHIRE AND CHESHIRE BRANCH Scientific and Clinical Meeting, University of Liverpool. YORKSHIRE BRANCH, General Infirmary, Leeds, 4.15 p.m.
19 THURSDAY...	LEIGH DIVISION, *Lancashire and Cheshire Branch* Co-operative Rooms, Ellesmere Street, 8.30 p.m. WESTMINSTER DIVISION, *Metropolitan Counties Branch*, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m.
20 FRIDAY ...	SOUTHERN DIVISION, *Edinburgh Branch*, Oddfellows' Hall (Room 6), Forrest Road, 8.15 p.m.
21 SATURDAY...	
22 Sunday ...	
23 MONDAY ...	
24 TUESDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
25 WEDNESDAY	BATH AND BRISTOL BRANCH, Bristol. CANTERBURY AND FAVERSHAM DIVISION, *South-Eastern Branch*, Town Hall, Sittingbourne, 3 p.m.
26 THURSDAY...	BEDFORD AND HERTS DIVISION, *South Midland Branch*, Hospital, Hitchin, 3 p.m. LAMBETH DIVISION, *Metropolitan Counties Branch*, Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, 27, St. John's Hill, S.W., 8.45 p.m.
MARCH *(Continued).*	
27 FRIDAY ...	ENGLISH DIVISION, *Border Counties Branch*, County Hotel, Carlisle. GUILDFORD DIVISION, *South-Eastern Branch*, Royal Surrey County Hospital, Guildford, 4.30 p.m; Tea, 4.15 p.m.; Dinner, Lion Hotel, 6.30 p.m.
28 SATURDAY ..	
29 Sunday ...	
30 MONDAY ...	
31 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m.
APRIL.	
1 WEDNESDAY	UNITED KINGDOM HOSPITALS CONFERENCE, Botanical Theatre, University College, London W.C., 2 p.m. UNITED KINGDOM HOSPITALS CONFERENCE DINNER, Waldorf Hotel, Aldwych, W.C., 7.45 p.m.
2 THURSDAY...	UNITED KINGDOM HOSPITALS CONFERENCE, Botanical Theatre, University College, London, W.C.; Morning Session 10.30; Afternoon Session, 2 o'clock.
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	LONDON: Naval and Military Committee, 2.30 p.m.
7 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
8 WEDNESDAY	LONDON: Medico-Political Committee, 2.30 p.m. LANCASHIRE AND CHESHIRE BRANCH, Meeting of Branch Council, Manchester Royal Infirmary, 4.30 p.m. RICHMOND DIVISION, *Metropolitan Counties Branch*, Royal Hospital, Richmond, 8.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 21ST, 1908.

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REFERENDUM.

RESULT OF THE VOTING THROUGHOUT THE DIVISIONS.

MEMBERS will recollect that certain Resolutions for the final adjustment of the proposed Charter passed by the Special Representative Meeting held in London on May 29th, 1907, were considered by the Council not properly to represent the wishes of the Association. In consequence, the Council decided to exercise its power of Referendum under Article XXII upon the following principles:

The Proviso as to the Referendum (Minute No. 123).

The Composition of the Council (Minutes Nos. 283, 287, 293, and 298).

The Grouping of Branches (Minute No. 299).

The Mode of Election by Groups of Branches (Minute No. 303).

The Business of the Annual Representative Meeting (Minutes Nos. 328 and 330), and

The Division of the Journal and Finance Committee into two separate Committees (Minutes Nos. 342 and 346).

Accordingly, in September, 1907, Voting Papers were issued to every Division throughout the Association, with a request that a direct vote might be taken on each Resolution of the Representative Meeting on which the Council had decided to exercise a Referendum, as until Resolutions are so approved by a majority of the aggregate votes given throughout the Association they are not valid and binding as a decision of the Association.

Voting Papers were issued to 222 Divisions—190 in and 32 outside the United Kingdom.

The Council decided that the poll should be closed on March 2nd, when 149 Divisions in the United Kingdom and 10 Divisions outside the United Kingdom had replied, and the membership of the Association was 20,673.

The aggregate attending the meetings convened to consider the Referendum was 1,978. In the United Kingdom 1,831 members attended. Outside the United Kingdom 147 attended.

As will be seen from the official figures appended, of the 1,978 members who attended the Division Meetings throughout the Association, approximately two to one have voted in favour of the Resolutions of the Representative Meeting. It will be noted on examination of the detailed returns that in the case of Divisions outside the United Kingdom approximately three to one have voted against the resolutions of the Representative Meeting.

Minutes of Representative Meeting.	Total of Votes.		Majority.	
	For the Representative Meeting.	Against the Representative Meeting.	For.	Against.
123	1,219	604	615	
283	1,127	711	416	
287	1,118	700	418	
293	1,128	706	422	
298	1,120	711	409	
299	1,104	670	434	
303	1,146	609	537	
328	1,153	658	495	
330	1,167	635	532	
342	1,146	667	479	
346	1,146	665	481	

On behalf of the Council,

EDMUND OWEN,
Chairman of Council.

GUY ELLISTON,
General Secretary.

March 2nd, 1908.

THE REFERENDUM.

Analysis of the Voting of the HOME DIVISIONS, grouped under their respective Branches.

DIVISION.	Total Membership	Members who Attended.	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.
ABERDEEN:																								
Aberdeen	153	—			—	—	—	—				—	—	—	—	—	—	—	—	—	—	—	—	—
Orkney	11	—			—	—						—	—	—	—	—	—	—	—	—	—	—	—	—
Shetland	10	—	—	—		—						—	—	—	—	—	—	—	—	—	—	—	—	—
BATH AND BRISTOL:																								
Bath	115	15	7	4	3	9	3	9	3	9	3	9	3	9	3	9	3	9	5	6	6	5	6	5
Bristol	222	46	—	30		31		31		31		31	—	34	—	34	—	29	21	—	7	19	7	19
Trowbridge	35	11	11	—	11	—	11	—	11	—	9	2	10	—	11	—	11	—	11	—	11	—	11	
BIRMINGHAM:																								
Bromsgrove	24	—	—	—	—	—		—	—	—	—	—		—		—	—	—	—			—	—	—
Central	302	20	2	13	1	16	1	16	1	16	1	16	1	14	2	13	1	13	1	13	1	13	1	13
Coventry	44	19	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
Dudley	35	7	5	1	6	1	7	—	7	—	7	—	7	—	7	—	7	—	7	—	7	—	7	—
Nuneaton and Tamworth ..	17	8	8	—	7	1	7	1	7	1	7	1	8	—	8	—	8	—	8	—	8	—	8	—
Warwick and Leamington ..	50	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5
West Bromwich	43	7	7	—	7	—	7	—	7	—	7		7	—	7	—	7	—	7	—	7	—	7	—
BORDER COUNTIES:																								
Scottish Part	63	11	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8
English Division	91	13	8	1	2	6	2	6	2	6	2	7	3	7	2	5	2	6	1	3	9	1	10	1
CAMBRIDGE AND HUNTS ..	140	14	—	14	—	14	—	14		14	—	4	—	14	—	14	—	14	—	14	—	14	—	14

CONNAUGHT:																									
North Connaught	9	--				—		—					—												
South Connaught	16			—			—						—												
DORSET AND WEST HANTS:																									
Bournemouth	131	21	-	21	1	15	1	15	1	15	1	15		16	--	16	---	16	—	16	—	16	—	16	
West Dorset	84	9	5	3	1	8	1	8	1	8	1	8	1	8	1	8	—	9	--	9	—	9		9	
DUNDEE	105	10	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9	1	9		9	—	
EAST ANGLIAN:																									
North-East Essex	55	8	8	—	8	—	8	—	8	—	8	—	8	—	8	—	8	—	8	—	8	—	8	—	
Mid-Essex	29		—	--	—	—	—	--	—	—	—	-	—	--	—	—	--	—	—	--	—	—	—	—	
South Essex	45	12	12	---	12	--	12	--	12	--	12	—	12	--	12	—	12	—	12	-	12		12		
Norwich	45	20	20	-	19	—	19	---	19	—	19	—	20	--	20		20	—	20		20		20		
Mid-Norfolk	49	5	5		5	--	5	—	5	—	5	—	5	—	5		5	—	5		5		5	—	
West Norfolk	32	9	9	—	9	--	9	--	9	---	9	---	9	--	9	—	9	—	9		9		9	--	
East Norfolk	28	9	9	—	9	--	9	-	9	—	9	-	9	--	9	--	9	-	9	-	9		9	—	
North Suffolk	30	7	7	—	7	—	7	--	7	—	7	--	7	--	7		7	—	7	-	7		7	—	
West Suffolk	36	--	—	—	—	-	—	-	-	-	-	-	-	-	-	-	—	-	-	—	—	-		-	
South Suffolk	71	5	5	—	5		-	4	4	—	4		N	Von	4	—	4	—	4	-	4		4	—	
EAST YORK AND NORTH LINCOLN:																									
East York	118	15	12	1	11	--	11	—	12	—	12	--	13	—	13	—	12	—	10	--	10	4	9	3	
North Lincoln	37	12	10	—	10	--	10	--	10	—	10	-	10	—	10		10	—	10	—	10	—	10	-	
EDINBURGH:																									
The Lothians	56	6	—	6	6	—	6	—	6	—	6	--	6	—	6	—	6	—	6	—	6		6	—	
North-East Edinburgh ..	72	10	—	10	—	10	—	10	-	10	—	10	-	10	--	10	—	10	—	10	—	10	-	10	
North-West Edinburgh ..	117	31	1	28	1	28	1	28	1	28	1	28	—	28	—	28	--	28	--	29	—	29		29	
South-Eastern Counties ..	58	7	4	3	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	
South Edinburgh	119	16	3	12	--	13	—	13	—	13	—	13	—	13	--	13	--	13	—	13	—	13		13	

DIVISION.	Total Membership.	Members who Attended.	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.
FIFE	75	11	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10
GLASGOW AND WEST OF SCOTLAND:																								
Ayrshire	67	15	14		14		14		14		14		14		14		14		14		14		14	
Dumbartonshire, etc.	55	4		4		4		4		4		4		4		4		4		4		4		4
Glasgow, Central	125	10	10		1	9	1	9	1	9	1	9			10		10		10		10		10	
Glasgow, Eastern	75	13	13		13		13		13		13		13		13		13		13		8	2	8	2
Glasgow, North-Western	118	9	1	7	2	7	1	5	2	7	2	7	2	7	2	7	2	7	2	7	3	6	3	6
Glasgow, Southern	93	14	14		2	11	2	11	2	11	2	11		12		12		12		12	2	9	2	9
Lanarkshire	79	6		6		6		6		6		6		6		6		6		6		6		6
Renfrewshire	84																							
GLOUCESTERSHIRE	138	20		20		20		20		20		20		20		20		20		20		20		20
LANCASHIRE & CHESHIRE:																								
Altrincham	67	29	29		29		29		29		29		29		29		29		29		29		29	
Ashton-under-Lyne	50	16	16		16		16		16		16		16		16		16		16		16		16	
Birkenhead	82	9	7		8		8		8		8		8		9		9		9		9		9	
Blackburn	76	15	1	11	1	14	1	14	1	14	1	14		15		15		15		15	15		15	
Blackpool	56	10	10		10		10		10		10		10		10		10		10		10		10	
Bolton	57	8	7		6	1	6	1	6	1	6	1	8		7		7	1	7	1	8		8	
Burnley	42	7	7		2	5	2	5	2	5	2	5	7		7		7		7			7		7
*Bury	79	10	10		5	4	5	4	5	4	5	4	5		7		4	3	4	3	4	3	4	3
Chester and Crewe	67	6	6		6		6		6		6		6		6		6		6		6		6	
Glossop	8																							
Leigh	31	11	11		11		11		11		11		11		11		11		11		11		11	

Liverpool (Bootle)	64	7	7		2	4	2	4	2	4	2	4	7		7		7		7		7		7			
„ (Central)	66	9	4	3	6	2	6	2	6	2	6	2	3	2	5		4	2	5	1	5	1	5	1		
„ (Northern)	55	5	5		5		5		5		5		5			5	5			5	—	5		5		
„ (Southern)	64	3	3		3		3		3		3				3		3		3		3		3			
„ (Western)	60	8	7		7		7		6	2	6	2		8		8	6	2	8		8		8			
Manchester (Central)	75	4	—	4	—	4		4	—	4		4		4		4	—	4		4	—	4		4		
„ (North)	65	9	9		9		9		9		9		9		9		9		9		9		9			
„ (Salford)	69	7	5	1	6		6		6		6		6		6		6		7		6	1	6	1		
„ (South)	83	10	10		10		10		10		10		10		10		10		10		10		10			
„ (West)	71																									
Oldham	53	8	7		7		7		7		7	—	8		8		8		7		7		7			
Preston	53		—		—				—				—													
Rochdale (see Bury)	—	—			—				—				—								—					
St. Helens	28																									
Southport	61	10	9	1	10		10		10		10		10		10	—	10		10	—	9		9			
Stockport, Macclesfield, etc ..	79	10	2	4	2	5	2	5	2	5	2	5	2	5	4		—	10		10	5	4	5	4		
Warrington	27	6	6		6	—	6		6		6		6		6	—	6		6	—	6		6			
Wigan	37	9	9		9	—	9	—	9	—	9		9	—	9	—	9	—	9	—	8	1	8	1		
LEINSTER:																										
Dublin	156	—		—					—				—													
East Leinster	120								—																	
Mid Leinster	12			—					—																	
North-West Leinster	13																									
METROPOLITAN COUNTIES:																										
Chelsea	112												—													
City	163	15	8	2	12	2	8		12		10		13		13	—	10	—	10	1	10	1	10	—		
Ealing	111	10	8		7	1	7	1	7	1	7	1	7	1	8	—	10		10		10		10	—		

* Bury and Rochdale held a joint meeting. Votes recorded under Bury.

DIVISION.	Total Membership.	Members who Attended.	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 283.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.
Hampstead	190	12	7	4	6	4	6	4	6	4	6	4	7	3	10	—	8	1	8	1	9	—	9	—
Kensington	333	16	3	9	1	9	2	8	3	11	2	10	1	9	—	—	—	11	1	7		12	—	12
Lambeth	138	19	19	—	19		19	—	19	—	19		19	—	19	—	19	—	19	—	19	—	19	—
Marylebone	589	12	6	4	6	3	7	3	7	4	9	2	7	3	11	—	8	2	9	—	9	—	10	—
Richmond	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Pancras and Islington	153	6	6	—	6		6		6	—	6	—	6	—	6	—	6		6	—	4	2	4	2
Stratford	134	19	19	—	16	—	16	—	16	—	16	—	18	—	18		10	4	10	4	17	1	17	1
Tottenham	123	10	10		10		10		10		10	—	10		10	—	10		10	—	10		10	
Walthamstow	63	7	7		1	6	1	6	1	6	1	6	7	—	7	—	1	6		7		7	—	7
Wandsworth	184	20	20		20		20		20		20		20		20	—	20	—	20		20		20	—
Watford	55	8	7		8		8		8		8		8		8	—	8	—	8	—	6		6	—
Westminster	263	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MIDLAND:																								
Boston and Spalding	37	10	10		10	—	10	—	10	—	10		10		10		10	—	10	—	10	—	10	
Derby	142	25	—	24		24	—	24	—	24	—	24		24		24		24	—	24	—	24	—	24
Leicester and Rutland	156	21	8	11	11	9	13	7	11	8	11	9	9	10	10	10	10	10	8	10	13	8	13	8
Lincoln	64	10	—	10	—	10		10		10	—	10	—	10		10	—	10	—	10	—	10	—	10
Nottingham	137	9	2	6	2	6	2	6	2	6	2	6	2	6	1	6	1	6	1	6	1	8	1	8
NORTH OF ENGLAND:																								
Bishop Auckland	34	—	—	—		—		—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blyth	15	6	4	1	6	—	6	—	6		6		6	—	6	—	6		6		6	—	6	—
Cleveland	57	13	13		13	—	13		13		13	—	13		13	—	13		13		13		13	—
Consett	14	4	4		4		4		4		4		4	—	4		4		4	—	4	—	4	
Darlington	43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Durham	32																								
Gateshead	51	18	18		18		18		18		18		18		18		18		18		18		18		
Hartlepools	28	11	9	1	11		11	–	11		11		11		11		11		11			10		10	
Hexham	20	–				–		–		–		–		–		–		–		–		–		–	
Morpeth (see footnote) ..	20			–	–	–	–	–	–	–	–	–				–		–	–	–			–		
Newcastle-on-Tyne	158	17	8	–	13	1	13	1	13	1	13	1	13	1	13	1	13	1	13	1	11		11	–	
North Northumberland ..	24	7	7		7	–	7	–	7	–	7	–	7	–	7		7		7		7		7		
South Shields	37	9	9	–	9	–	9	–	9	–	9	–	9	–	9		9	–	9		9		9		
Stockton	26	7	7	–	7	–	7	–	7	–	7	–	7	–	7	–	7	–	7	–	7	–	7	–	
Sunderland	77	–		–	–		–	–	–	–	–	–					–	–	–	–		–		–	
Tyneside	39	11	10		11		11	–	11	–	11		11		11	–	11	–	11		11		11		
NORTHERN COUNTIES OF SCOTLAND:	106	14		14		14		14		14	–	14		14		14	–	14	–	14	–	14		14	
NORTH LANCASHIRE AND SOUTH WESTMORLAND:																									
Furness	46																								
Kendal	30			–					–																
Lancaster	55	12	12	–	2	7	2	7	2	7	2	7	2	7	–		12	–	12		12		12	–	
NORTH WALES:																									
Denbigh and Flint	59	10	9	1	2	8	2	8	2	8	2	8	–	10	–	10	10		10	–	10		10	–	
North Carnarvon	93	15		15	–	15	–	15	–	15	–	15	–	15	–	15	–	15	–	15	–	15	–	15	
South Carnarvon	52	–	–	–		–	–	–	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–	
OXFORD and READING:																									
Oxford	133	9	6		3	5	3	5	3	5	3	5	3	5	3	5	3	5	3	5	4	3	4	3	
Reading	88	15	3	8	3	8	3	8	3	8	3	8	–	7	No	Vote	–	10	–	10		15	–	15	
PERTH	52	11	11		11	–	11		11	–	11		11		11	–	11	–	11		11	–	11		
SHROPSHIRE AND MID-WALES	135	33	31		31	–	31	–	31	–	31		31	–	31		31	–	31		31	–	31		

DIVISION.	Total Membership.	Members who Attended	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 3 6.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For	Agnst.	For.	Agnst.	For	Agnst.	For	Agnst.	For	Agnst.
SOUTH-EASTERN:																								
Ashford	20	—						—									—	—					—	
Brighton	139	8	8		8		8		8		8		8		8		8		8		8		8	
Canterbury and Faversham	41	9	9		9		9		9		9	—		9	9		9		9			9		9
Chichester and Worthing	49			—																				
Croydon	137	17	15		16	—	16		16		16		16		16		16		16		17		17	
Dartford	63	9	5	2	7	1	7	1	7	1	7	1	7		7		7		7		2	6	2	6
Dover	33	8	7	—	8	—	8		8		8		8	—	8		8		8			8		8
Eastbourne	54	15	11	1	14	—	14		14		14		14		14		15		15		14		14	
Folkestone	28	20	2	10	2	13	2	13	2	13	2	13	4	12	2	13	3	12	2	13	2	13	2	14
Guildford	61	12	12		12		12		12		12		12		12		12		12		12		12	
Hastings	69	—																						
Horsham	17	—	—																					
Isle of Thanet	43	12	12		12		12	—	12		12		12		12		12		12		12		12	
Maidstone	40	8	8		8	—	8	—	8		8		8		8	—	8		8	—	8	—	8	
Norwood	228	13	9	2	11		10	—	10		10		9		8	—	10		9		10	—	9	—
Reigate	56	13	11	1	10		10		10		10	1	10		10		10		10		10	2	10	2
Sevenoaks	34	16	14		16		16		16		16		16		16		14		16		16		16	
Tunbridge Wells	65	12	6	2	12		10		10		7	3	6	2	9		9		9		9		9	
SOUTH-EASTERN OF IRELAND:																								
Carlow	11	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kilkenny	14	5	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
Waterford	33	—																						

SOUTHERN:																								
Guernsey and Alderney	24	9	9		9		9		9		9		9		9		9		9		9		9	
Isle of Wight	54	13	5	8	7	6	10		12		12		11		13		13		13			12		11
Jersey	20	6	6		6		6		6		6		6		6		6		6			6		6
Portsmouth	113	10		5		7		7		7		7		7		10		10		10	1	6	1	6
Salisbury	59	17		17		17		17		17		17		17		17		17		17		17		17
Southampton	81	12	8	2	8	2	3	3	3	2	5	3	3	7	4		3	3	3	3		5		5
Winchester	78	13	7	5	3	8	2	8	2	8	3	8	3	8	3	8	3	8	3	8	5	6	5	6
SOUTH MIDLAND:																								
Bedford and Herts	93	10	10		10		10		10		10		10		10		10		10		10		10	
Northamptonshire	103	20	11	6	12	3	12	3	12	3	12	3	10	1	12		17		17		12	1	12	1
SOUTH WALES AND MONMOUTHSHIRE:																								
Cardiff	138	28	28		28		28		28		28		28		28		28		28		28		28	
Monmouthshire	120	24	21		22		22		22		22		22		22		22		22		24		24	
North Glamorgan	94	11	11		11		11		11		11		11		11		11		11		11		11	
South-West Wales	81	19	18		18		18		18		18		18		18		18		17	1	18	1	18	1
Swansea	83	13	3	10		13		13		13		13		13		13		13		13		13		13
SOUTH-WESTERN:																								
Barnstaple	49	15	15		15		15		15		15		15		15		15		15		15		15	
Devonport	74	—			—																			—
Exeter	116	22		22		22		22		22		22		22		22		22		22		22		22
Plymouth	72	9	9		3	6	3	6	3	6	3	6	4	4	6	2	6	2		9	3	5	3	5
Torquay	87	8	2	6	1	7	1	7	1	7	1	7	1	7			1	6	1	6	1	5	1	5
Truro	76	13	13		13		13		13		13		13		13		13		13		13		13	
STAFFORDSHIRE:																								
Mid-Staffs	60	16	16		16		16		16		16		16		16		16		16		16		16	
North Staffs	92	11	5	6	8		8		8		8		8		10		7		6	3	3	8	3	8
South Staffs	54	6	6		6		6		6		6		6		6		6		6		6		6	

DIVISION.	Total Membership.	Members who Attended	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.
STIRLING	72	10	9	1	10	—	10	—	10	—	10	—	10	—	10	—	9	—	9	—	7	—	7	—
ULSTER:																								
Ballymoney, etc.	24	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5
Belfast	190	29	3	19	2	19	4	16	4	18	1	15	1	16	—	19	3	12	2	17	—	13	—	14
Derry	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Monaghan	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Portadown	70	13	13	—	13	—	13	—	13	—	13	—	13	—	13	—	13	—	13	—	13	—	13	—
WEST SOMERSET	76	23	21	1	22	—	22	—	22	—	22	—	22	—	22	—	22	—	22	—	22	—	22	—
WORCESTER & HEREFORD:																								
Hereford	53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worcester	73	12	11	1	11	—	11	—	11	—	11	—	11	—	12	—	11	—	11	—	12	—	12	—
YORKSHIRE:																								
Barnsley	50	5	5	—	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5	—	5
Bradford	155	20	4	12	2	14	2	14	2	14	2	14	1	13	1	14	—	11	2	12	2	9	2	9
Halifax	55	16	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—
Harrogate	52	6	2	3	—	6	—	6	—	6	—	6	—	6	—	6	—	6	—	6	—	6	—	6
Huddersfield	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leeds	161	12	2	7	2	10	2	10	2	10	—	12	—	10	1	10	1	10	5	5	5	5	5	5
Scarborough	47	8	—	7	—	7	—	7	—	7	—	7	—	6	—	—	—	7	—	7	—	7	—	7
Sheffield	162	21	—	21	—	21	—	21	—	21	—	21	—	21	—	21	—	21	—	21	—	21	—	21
York	69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	14790	1831	1151	526	1092	602	1083	590	1093	596	1085	601	1069	582	1111	521	1117	552	1131	529	1086	581	1086	580

Analysis of the Voting of the COLONIAL BRANCHES and DIVISIONS.

DIVISION.	Total Membership.	Members who Attended	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst.	For.	Agnst.	For	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For.	Agnst.	For	Agnst.	For.	Agnst.
BARBADOS	34	-																						
BERMUDA	16	-																						
BOMBAY	82	-															—							
BRISBANE & QUEENSLAND	155	-															—							
BRITISH GUIANA	38	-																						
BURMAH	43	—																						
CAPE OF GOOD HOPE (EASTERN PROVINCE):																								
Grahamstown	70	5	5			5		5		5		5		5		5		5		5		5		5
East London	42	8		8		8		8		8		8		8		8		8		8		8		8
CAPE OF GOOD HOPE (WESTERN PROVINCE)	158									—														
COLOMBO, CEYLON	151	12		12		12		12		12		12					1	11	1	11		12		12
GIBRALTAR	32	4	4		4		4		4	—	4		4		4		4		4		4		4	
GRIQUALAND WEST	41	7	7			7		7		7	—	7					—	7		7	7		7	
HALIFAX, NOVA SCOTIA ..	92	—									—						—							
HONG KONG	109	12		12		11		11		11		11		8		8		8		8		12		11
JAMAICA	48																							
MALAYA	98					—								—										
MALTA & MEDITERRANEAN	40	—				—																—		
MELBOURNE & VICTORIA ..	350	30	30		30		30		30		30		30		30		30		30		30		30	

DIVISION.	Total Membership.	Members who Attended	Resolution 123.		Resolution 283.		Resolution 287.		Resolution 293.		Resolution 298.		Resolution 299.		Resolution 303.		Resolution 328.		Resolution 330.		Resolution 342.		Resolution 346.	
			For.	Agnst.	For.	Agnst	For.	Agnst.	For.	Agnst	For.	Agnst	For.	Agnst.	For.	Agnst	For.	Agnst.	For.	Agnst	For.	Agnst.	For.	Agnst
MONTREAL	63		—																					
NATAL	99	—	—																					
NEW ZEALAND:																								
Auckland..	64		—																					
Hawkes Bay	22		—																					
Wellington	115		—																					
ST. JOHN, NEW BRUNSWICK	49		—																					
SASKATCHEWAN	39	..	—																					
SOUTH AUSTRALIAN ..	151	26	1	25		26		26		26		26		26		26		26		26		26		26
SOUTH INDIAN & MADRAS	141							—																
SYDNEY AND N.S.W	631	33	12	20	1	31	1	32	1	32	1	32	1	32	1	32	1	32	1	32	14	19	14	19
TORONTO	495																							
TRANSVAAL	102	10	9	1		9		9		9		9		9		9		9		9	5	4	5	4
TRINIDAD, TOBAGO ..	25																							
WEST AUSTALIAN	73	..	—	..				—													—			
Totals	3698	147	68	78	35	109	35	110	35	110	35	110	35	88	35	88	36	106	36	106	60	86	60	85

Morpeth Division, a widely scattered and rural district, held two meetings. At the first, 3 members were present, at the second, 4. Owing to the smallness of the attendances it was decided to express no opinion either way.

The Aberdeen Division summoned a special meeting, but no quorum assembled.

At Wellington, New Zealand, a meeting was summoned, but only 4 members attended, and nothing was done. The papers relating to the Referendum, however, were sent to every member of that Division, with a request that they should be returned in time for the Special Meeting. Only 5 members sent in their papers, so the executive decided to proceed no further in the matter.

British Guiana decided, in view of the doubt as to whether the Referendum was constitutional or not, that the voting be not proceeded with.

Natal declined to express any opinion on the points at issue.

ANNUAL MEETING, SHEFFIELD, 1908.

The seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University, and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

The following are the general arrangements for the meeting, so far as they are as yet complete:

President: Henry Davy, M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

President-elect: Simeon Snell, F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

Past-President: Richard Andrews Reeve, B.A., M.D., LL.D., Dean of the Medical Faculty of the University of Toronto.

Chairman of Representative Meetings: James Alexander Macdonald, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council: Edmund Owen, LL.D., F.R.C.S.Eng., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer: Edwin Rayner, M.D.Lond., F.R.C.S.Eng., Surgeon, Stockport Infirmary, Stockport.

The Address in Medicine will be delivered by James Kingston Fowler, M.D., F.R.C.P.

The Address in Surgery will be delivered by Rutherfoord John Pye-Smith, F.R.C.S.

The Popular Lecture on "Dust and Disease," will be delivered by Edmund Owen, LL.D., F.R.C.S.

THE SECTIONS.

The scientific business of the meeting will be conducted in seventeen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes. Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the British Medical Journal without special permission.

The following is a list of the Sections, with the names of the officers. The subjects selected for discussion in the various Sections will be published as soon as the arrangements of the committee of reference are completed.

Anatomy.

President: Christopher Addison, M.D., Anatomy Department, St. Bartholomew's Hospital, London.

Vice-Presidents: Edward Skinner, M.R.C.S., 124, Devonshire Street, Sheffield; Thomas Hastie Bryce, M.D., 2, Granby Terrace, Glasgow; Arthur Keith, M.D., London Hospital Medical College, London.

Honorary Secretaries: Professor Charles Joseph Patten, M.D., University, Sheffield; Henry Mulrea Johnston, M.B., Anatomical Department, Trinity College, Dublin.

Pathology.

President: Charles James Martin, M.B., D.Sc., F.R.S., Lister Institute of Preventive Medicine, Chelsea Gardens, London, S.W.

Vice-Presidents: Charles Workman, M.D., 5, Woodside Terrace, Glasgow; Alexander Grant Russell Foulerton, F.R.C.S., Middlesex Hospital, London; Professor James Martin Beattie, M.D., Pathological Department, University, Sheffield.

Honorary Secretaries: Douglas Stanley, M.D., 21, Broad Street, Birmingham; Ralph Davies Smedley, M.B., School of Medicine, University, Sheffield.

Physiology.

President: Professor Ernest Henry Starling, M.D., F.R.S., 40, West End Lane, London.

Vice-President: Gustav Mann, M.D., 25, Beechcroft Road, Oxford.

Honorary Secretaries: Professor John Smyth Macdonald, L.R.C.P., University, Sheffield; Charles Frederick Myers-Ward, M.R.C.S., Kelvin House, Green Lane, Northwood.

Medicine.

President: William Dyson, M.D., Brooke House, Gell Street, Sheffield.

Vice-Presidents: Duncan Burgess, M.B., 442, Glossop Road, Sheffield; William Smith Porter, M.D., 283, Glossop Road, Sheffield; James Craig, M.D., 18, Merrion Square, Dublin; Frederick John Smith, M.D., 138, Harley Street, London.

Honorary Secretaries: Arthur John Hall, M.D., 342, Glossop Road, Sheffield; Sir John Francis Harpin Broadbent, Bart., M.D., 35, Seymour Street, Portman Square, London; Alexander Dingwall Fordyce, M.D., 19, Coates Crescent, Edinburgh.

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PROVISIONAL TIME TABLE.

FRIDAY, JULY 24TH.*

2 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

SATURDAY, JULY 25TH.*

9.30 a.m.—Representative Meeting.

MONDAY, JULY 27TH.

9.30 a.m.—Representative Meeting.

TUESDAY, JULY 28TH.

9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon.—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
8.30 p.m.—President's Address.
Presentation of Middlemore Prize.

WEDNESDAY, JULY 29TH.

10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Medicine.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception.

THURSDAY, JULY 30TH.

8 a.m.—National Temperance League Breakfast.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Surgery.
7.30 p.m.—Annual Dinner.

FRIDAY, JULY 31ST.

10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.

SATURDAY, AUGUST 1ST

Excursions.

* It is left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council to decide if the business to come before the Representatives will necessitate a meeting on the Friday.

Honorary Local Secretary—

SINCLAIR WHITE, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—

W. T. D. MART, M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.

R. W. INNES SMITH, M.D., C.M., M.R.C.S., L.R.C.P.
Don House, Brightside, Sheffield.

A. C. TURNER, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

DUNDEE BRANCH.

Conference on Medical Education.

AT a meeting of this Branch held on Thursday, January 30th, Professor MARSHALL, President of the Branch, in the chair, a conference took place on medical education.

Professor MARSHALL, in introducing the discussion, said: At a recent meeting of the Branch Council it was suggested that the Branch might discuss subjects of interest to the profession other than those of a political or ethical nature. It was felt that this might be done without in any way intruding upon the work of the sister association, the Forfarshire Medical Association, and as this question of medical education is of some importance at the present time it was decided that it might form a subject for profitable discussion. What we want in a discussion of this kind is an expression of opinion, and I trust that this will be forthcoming from all quarters. To those of us who are more or less concerned with teaching, this question is practically an everyday topic, and perhaps we get to look at it in a somewhat one-sided manner. It would, therefore, be an advantage to us to have the views of those who are in general practice, especially of those who have had recently qualified men to help them, and also the views of senior students themselves. Perhaps it is well to start at the very beginning and ask what is the primary object of medical education? Briefly put, one may say that it is to turn out a good general practitioner—a man able to diagnose and treat upon correct and rational lines all the common ailments which afflict humanity. He should, of course, possess an intimate knowledge of principles, and should know where to get what knowledge he wants when in difficulty. As you know, we cannot consider specialism in medical education; that must come afterwards. The question is, How can we turn out a good general practitioner? Well, gentlemen, I have been connected at various times with most of the universities of England, and I have learned a good deal about Scottish medical education during the nine years I have been here, and I must confess it is a very difficult matter to decide which is the best way. Personally I think there is little difficulty in drawing up a scientific medical education; the difficulty is in carrying it out. And this applies especially to the work of the later years. A good many years ago the cry for more clinical work became so acute that the General Medical Council introduced into the curriculum a fifth year, with the proviso that it should be limited to purely clinical work. This has not proved a complete success, as you all know, and the reasons for that are not very far to seek. In part it is due to the system of examinations which prevails in practically all British universities and Examination Boards. As a result, the cry is still with us, and I must confess that I feel some sympathy with it. I feel that we are turning out men with a large amount of book learning, but without that practical acquaintance with disease which is so necessary in actual practice. And it is very difficult indeed, I think, to get over this unfortunate tendency of students to book-work, partly because students are mainly concerned with the immediate object of their lives—examination and qualification. I have been interested of late in the German system of medical education. This has been so fully described by Sir Felix Semon in an address before the University of Manchester that I need not do more than refer you to it.[1] One of the most interesting points is that after passing his final examination, which may last three months or more, the German student must take another year in a recognized hospital. This may be liable to abuse, but it is a step in the right direction. I am not, however, greatly in favour of a six years' course for this country, but I do think that we ought to endeavour to turn out students more fully acquainted with the needs of our profession than we do. This, I think, might be accomplished by giving students more clinical work, under supervision, to do for themselves. I think that in the last three years of the curriculum a student should spend at least three hours a day in the hospital, that he should not at that time be attending any systematic lectures, and that during half of that time at least he should have charge, under supervision, of patients. In this way a student would get a more practical acquaintance with the methods of dealing with the patients than he gets or can get from lectures only, however good they may be.

Principal MACKAY said: I have come here not to give my views, but to get information on the subject. I hoped specially that we should have some students here, because it is very important that we should know the students' point of view of the curriculum. With most of us it is long since we were students; times have changed, and we are hardly in a position to gauge his point of view. The problems that present themselves to me are not quite the same although in some respects they do touch upon the points Professor Marshall has spoken about. The first and, perhaps, the most important point in the whole question refers to the methods of study adopted by the students. I feel with every teacher in the college that the student depends far too much on book learning—in fact, upon what is commonly called "grinding"—and for this I think there are two or three reasons. And first, in the preliminary examination the student comes up to be examined in four subjects out of his whole school curriculum; four special subjects are selected, and he is forced to attain special excellence in these, so that as a matter of fact his school work is disorganized. He is put under special teachers, makes a special effort, and is practically taught that the way to pass an examination is to sit down with a textbook and to try to remember by heart what is stated there. A new programme has just been instituted by the Scottish Education Department for what they call the intermediate certificate. This certificate is got by one examination, and one only, and is not confined to four subjects, but deals with all the subjects of the student's career. Excellence in one subject will compensate for deficiencies in another. It is not specially prepared for, but is simply taken on the lines of his school career—a natural examination. I am very glad to say that this certificate has been accepted by the Joint Board of the Scottish Universities, and also by the General Medical Council, as equal to the preliminary examination, and I have reason to hope that the leaving certificate will within a year be put on the same footing; so that in Scotland at least we will have students coming up to the college who have not begun preparing for college by grinding. The second thing is that when a student does come to his first year's work he is introduced to two great subjects—botany and zoology—examined in them by experts, examined in the details of them, and the whole thing has to be done in three months. Well, it is an absolute physical and mental impossibility that any student can have anything like a scientific knowledge or real knowledge of botany or zoology in that time, so he then devotes himself to what he found so easy before—to grinding up his textbook for these examinations—and by the time he comes further forward in his curriculum he has got it into his head that that is the only way to prepare for an examination. There is a third element—the examination in each subject is divorced by some five or six months from the most of the teaching, and he has had other subjects to deal with in the interval. He says to himself, while the teaching is going on, "I will have six months to work it up later on." When he comes to work it up, he is away from all specimens, etc., to help him, so he sits down with his textbook once more and grinds up the subject, and again falls into the same bad habit. I think it would be well if we could get all these things put right and have our students properly trained. We must not forget that we ourselves are very largely to blame. The system of examinations that we carry on is of the kind that almost forces the student to bookwork. Written examinations demand much that is easily prepared for by textbooks. To remember screeds of his textbook by heart serves the student admirably. I think if we could abolish, or almost abolish, the written and substitute a system of oral examination, we should do very much better. Dissatisfaction with things as they are has arisen in the General Medical Council from the complaints of the

[1] BRITISH MEDICAL JOURNAL, November 2nd, 1907, p. 1197.

clinical teachers that the students are not getting enough time for clinical studies, owing to preparation work for other examinations, and the results are most disappointing. Although not a clinical teacher, I feel these complaints to be thoroughly well grounded. I have had an immense amount of statistics through my hands; I hope to have in a few months the whole of the details of every one of the licensing bodies. We took all the men graduated in 1906, got the whole curriculum gone through, and the time spent upon each examination. As regards the Scottish Universities I may say that something less than two years are spent on undivided study for the subjects after the second examination. Under the Joint Board in England something like three years are spent on the same subjects, so that you can easily see that the London student is devoting more time and attention to clinical work than our men in Scotland. How, then, are we to remedy matters in Scotland? The question has arisen whether we shall have a six years' curriculum or not. My own feeling is that if we were to attempt to force a six years' curriculum we should find so many objections that we would have to drop it for the present, and that the proper way is to make such an arrangement as will permit the men who are qualified to compete in five years, and keep back those who are not qualified by a judicious system of blocks, so that no man will be allowed to get up for any later examination until after a sufficient period of undivided study has intervened since the earlier—opinions may differ as to what that period should be, we shall have to deal with a minimum. Taking our own course I have thought that we might simplify matters in this way. First of all botany and zoology as separate sciences should be departed from, and we should have one subject of biology, and that biology should be taught in a very different way from that in which we at present go about it. First of all the principles of life exhibited in the simplest animals and plants should be taught, and then the main divisions of the two kingdoms should be briefly dealt with. A man should know something about the three or four main groups of invertebrates and the general principle on which the vertebrate animal is built up; zoology might be taught from the point of view of general morphology; and the course I have indicated should be followed by a few lectures on the biological problems of the day, including such questions as evolution and heredity. I think we should get an intelligent result out of that, and needless detail being omitted, a three months' course of one hour's lecture and two hours' daily practical work would be adequate. The student should not think he is getting up the sciences at all, but making a general acquaintance with the principles of life. On the other hand, I think that chemistry should receive more attention than at present, especially organic chemistry, which is becoming of immense importance to-day. As for physics, nearly every well-educated schoolboy knows something of physics, but I do not think we are quite in a position yet to be able to give up the subject in the curriculum for the student of medicine. The suggestion, then, is that the first year should be devoted as follows: nine months to chemistry at the rate of two hours a day, six months to physics one hour, and a one term summer session, three months should be devoted to biology three or four hours a day, and anatomy should be commenced in the first year—say two hours a day. The result would be that with the next year devoted entirely to anatomy and physiology, you would get men to finish these subjects in their second year. This would give three years to what I would call professional studies. If a man failed to pass the anatomy and physiology at the end of the second year, I would give him another opportunity three months after he had begun his third winter; this would only interfere to a slight extent with his other work. Failing to pass then, he should have to wait for another year and return to his anatomical studies. I would incline to say that the man who had taken first class certificates should be freed from the examination entirely or from anything but an oral examination. I think I might leave to my colleague the dealing with the later years. What he has said has interested me very much. With regard to pharmacy, one unfortunate feature in our present arrangement may be noted. The Commissioners who drew up the regulations knew we had little enough time for the final work, and the result was that they put pharmacy in the examination along with anatomy and physiology, and, as a result, before the students know anything of the diseases they are taught the drugs to cure them. One little suggestion I have made is that toxicology should be taken in the third year along with pharmacology. I divide the session into three three-months; each three months should have its own curriculum and syllabus, so that if a student who has taken two three-months in one year comes back in another year, he knows exactly at which term to pick up the work he needs. In the third year, with pathology for the first three months, surgery should not begin till the second three months, in order that the student should get his general pathology from the pathologists and not from the surgeon or physician or anybody else. In the curricula of British medical schools, there are really three types. The type of the Scottish universities, which puts the anatomy examination at the end of the third year; that is followed by London, Manchester, Liverpool, and Leeds Universities. There is the type of the Joint Board, which allows its students to take biology, physics, and chemistry at school, and anatomy for one year only after that, and puts all the rest into clinical work. The third is that adopted by the University of Birmingham, in which the first two years are devoted to the preliminary sciences and anatomy and physiology, and the three years following are given to the professional subjects; that is the plan which I would propose to follow.

Dr. HALLEY said: What has fallen from the Principal in the last two or three sentences is, I think, of very great importance. There is so much surgery to teach nowadays that the pathological part should be left to the pathologist. The fault of the present is, I think, the lack of any system by which the material of a hospital may be utilized by the student, and especially in the surgical out-patient room. I used to be very sorry to find students leave that place after two or three days. I used to do my best to try to attract them, and when a new man appeared asked him if he was to continue attendance, because I would give him one or two cases which he could practically, under my supervision, treat himself, and in that way learn to apply the dressings, see the progress of the case, and an endless amount of detail which would be absolutely invaluable to him in his practice afterwards. The student does not know this and disappears. I was struck by the necessity of making use of this material, which to my mind is running to waste because the student is not being guided aright in his surgical course. Then the other point which the Chairman has endeavoured to bring to the notice of the staff of the Infirmary is a debatable one—whether in the teaching of clinical surgery a student should take out one man and stick to that man. In that way a student gets into his head a method which to the man who teaches may be very good, but the student may be bad and not the one for him. And he gets no opportunity of finding out the method that appeals to him and brings out the most of what is in him. I think there is a good deal to be said for distributing the clinical surgery among more teachers. Too little attention is paid to the clinical teaching, which, as has been pointed out, is strongly marked in the German schools, but after the student is through his final; I do not see why it should be after that; it should be before the student finishes his course.

Principal MACKAY said he thought that students should all be educated in a way in the rudiments of specialism, and should know, for instance, what is wrong with the eye, ear, etc., sufficient to demand a specialist.

Dr BUIST said he ought to be able to make a practical diagnosis and include so much knowledge of treatment as to decide whether he ought to treat a case or consult a surgeon.

Dr. MACKIE WHYTE: Looking at the men that we get from our medical schools, there is too frequently a great want of general culture. Even the spelling is often deficient. I know that that is often a congenital fault that runs in families, but more often it is due to their defective preliminary education. The student should not only have a very good course in biology, in physics, and in chemistry, but he should have a thorough course in English literature such as we get in a university. The great majority who go through the preliminary examination in French or German never try to read anything afterwards in these languages. Now it is of great importance that the student should have a good working knowledge not only

of his own language but of at least one other. Again, I do not think we are asking too much if we desire that medical students should have a grounding in some purely philosophical subject—metaphysics, moral philosophy, psychology, most important subjects for men who have to read the minds of others with whom they come in contact. They should have some scientific knowledge of the working of the human mind. If they had a preliminary training in these ways, then they might perhaps with some fair degree of correctness claim to belong to a learned profession, the term "learned" implying a certain minimum of culture. As regards their professional education, although the system by which it is got up is, perhaps, a little wanting, still I think that on the whole the results are not bad, and with the increased prominence given in the examinations to specialities it will be better in the future. The men have the opportunities here to get up the specialities, and I think they should be encouraged in every way to give a little more attention to them, with the object of being able to deal with all sorts of cases that come to them. In regard to the practical work in the infirmary, I very fully agree, of course, with what the President has said about the importance of at least three hours a day being given to hospital work for the last three years; I do not think it is too much to expect. I should like to know, in regard to examinations, whether they have these irritating professional examinations all through the course in Germany.

Professor MARSHALL: Just two—one at the end of the two and a half years and the final.

Dr. WHYTE: I do not know that it is right to be always bothering the men with examinations.

Principal MACKAY: I may say that I tried to get the principle recognized of certain subjects being taught without examinations, but had very strong opposition, and, although some of the best men supported me, it was impossible to convince the Council; I think that in biology and pharmacology and various other things in the medical course, it should be sufficient if a man attended a course and duly performed the work of the class, but in this country at present the public mind is so thoroughly set upon an examination that we must carry it out, although I think we might modify it. Might I say a word in answer to Dr. Mackie Whyte's statement in regard to these preliminary subjects and general education. The General Medical Council has for a long time been trying to raise the standard of the preliminary examination, and we have got elaborate statistics which showed us that we should simply deplete the medical schools altogether. We are trying to steadily go forward from the present preliminary, which is admittedly a junior, to a senior examination. The Carnegie Trust has, however, taken a step in refusing to pay the fees of any medical student unless he has passed the higher standard. The examination in Ireland is a great drag upon us, but the education of that country is not sufficient. Then you must remember the commercial point of view. We have to deal with a minimum; even the universities cannot live if we are to drive students from their doors to the joint Boards where they get a lower standard, so that we would not be helping matters by hastening in this matter.

Dr. KERR: What provision is made in the medical school for the teaching of clinical methods apart from the instruction in the wards?

Dr. WHYTE: Dr. Foggie gives a very good course in clinical diagnosis. He cannot get through quite as much as he would like, but finds a little difficulty about hours. I know that the students prize his course very highly.

Dr. BUIST: Is there any reason why a language examination should not be an oral examination?

Principal MACKAY: It will be introduced now—a French examination not an examination on French. In the intermediate certificate the pupil's whole school record is before the examiners; if they require an oral examination they will take it in addition. In the present state of matters it is quite hopeless to expect men to come up with a knowledge of English literature on the university standard. If we could see our way to get them all M.A.s beforehand, so much the better.

Dr. WHYTE: I think that a man is quite young enough to begin medicine when 18 or 19.

Dr. BUIST: As a student I had occasion some twenty years ago, in view of the proposed Universities Commission, to write a systematic review of the whole situation, and there is very little I should have to add to that discussion even now. Some of my points involved mechanical rearrangement—such as the three clear hospital hours, the division of the medical year into three terms, with the breaking up of the systematic lecture course, an abandonment of the hundred-lecture course altogether. It seems to me that in training the student to be a general practitioner we have to begin by training his faculties. He comes from school in a condition which I hope will be amended by-and-by, with his fingers and his eyes untrained as well as his mind; he comes from school with "knowledge" which we do not want, and he has no "faculty," and it is the faculty we do want when he starts medicine. Hitherto the justification for preliminary sciences in the course has been that with botany and zoology you trained his fingers to act, his eyes to see, and his mind to collect and arrange impressions. Really we do begin his general education on these. We want, as the result of the course, not knowledge, but this training along with general views on biology which interpret for him the phenomena of human life. In physiology, I had the experiment made on me in the schools of Cambridge and Edinburgh, and I was particularly struck by the difference in the arrangement. In Cambridge Professor Foster took an elementary course in physiology—seventy-five lectures, each lecture followed by two hours in the laboratory. The detailed physiology was dealt with by younger lecturers, who each took a particular group and went into it completely. In Edinburgh one came to a professor who was the ideal of the students of that time—an extremely clear lecturer, whose course in physiology consisted in dictating an encyclopaedia to the student. Students knew his views on physiological theories, but the power of reasoning through a physiological problem was hardly possible to them. I need hardly say that you want your students to be able to reason through a case and not to know all the details. I should much welcome a division of subjects into two parts—an elementary one, on such lines as the Principal has sketched, and an advanced course, to which we might admit men on conditions akin to those of the science course now, where you have examinations in two grades and give honours in physiology. Then, with regard to the practical subjects, we must have a certain amount of knowledge, so that a man is able to deal with any emergency that turns up, and in any other case with a reasonable time to think over it, knows where to go for his information. If he has not his books by heart, then he knows where to find in them the material he requires. For that reason it seems to me we want a separation of both surgery and medicine again into elementary and advanced courses, the elementary course being essentially compulsory, the advanced leading to special honours in surgery or medicine. It would mean, of course, an extra year if a man was willing to do that in surgery or in medicine, but in that way we should be subserving the purpose of the specialized as well as the general practitioner.

Principal MACKAY: How would you do with the teachers?

Dr. BUIST: If you get rid of the course of 100 lectures you would get through the elementary part in very much less, say half of that, and devote the rest to an advanced group each year, covering the whole every two or three years. Your Professor of Medicine could in two terms deal with his ordinary systematic course more on the lines of a textbook, like Carter's, for example, instead of Osler's; during the third term take a special system in advanced lectures; and, with regard to the specialities, it seems to me that the utmost we can regularly do is to make the student familiar with the methods of examination. Every one should be able to examine the ear. It is by no means unnecessary to state this; it is only a week or two since I met a practitioner who had just left one of our prominent schools, and practically he never had had an opportunity of making a vaginal examination. That seems to me a discredit to any school. We must make them absolutely familiar with these things. All diagnostic methods ought to be taught. Then with regard to examinations I think he should be liable to have any case whatever, and you should expect him to make a complete examination report. He should also be able to say as to what line of treatment he would carry out himself and whether the case ought to be remitted

to a specialist, and he ought to be able to discuss his case with you, to reason his way through it. I think if you had a final examination arranged in that way it would simplify matters very much. Such points of emergency as every man must know, certain knowledge he must carry about, could be asked quite well in a written examination, but the rest must be dealt with clinically and orally.

Dr. PIRIE: I was glad to hear what Principal Mackay said about grinding. Under present conditions it could not be omitted for examination purposes; in zoology I was asked about all the different forms of placenta in animals, and something was shown me in a dish which turned out to be a sheep's placenta, but I had not even seen such a thing, I did not know it practically. That kind of knowledge is of no use whatever in after-life.

Dr. KERR: I look back on the deficiencies of my own teaching. I never saw a sick child all the time I was at College except when doing dispensary work, and then I had to prescribe for a disease I had never seen. Of course in those days you did not look at it in a serious way. You were glad to get through the work.

Dr. MARTIN SMITH: With regard to the preliminary science, I quite agree with the Principal that botany and zoology ought to be combined into a class of biology, for certainly a great deal of what I learned in these subjects is really of very little use to me now. I was asked about all the various kinds of birds' beaks, which I do not think is of any great advantage to me now. If there was one or one and a half years given to general literature, it would be of great advantage, for a great many men start their medical course young enough. I started when 17, and could have done very well with a year or eighteen months on these subjects. The students here have a great advantage in that they get up their special subjects better than we did. During the whole of my five years I only looked into an eye once, and left the University only having seen or tried to see the fundus, and the same with vaginal examinations, or in examining the larynx or the ear. Here in the Eye Institution and in the out-patient clinics, as there are not a great many students, the Dundee men have every opportunity of getting a very thorough education, especially in special subjects.

Dr. MALCOLM: I have nothing to say except to add to the importance of practical work. Until, after qualifying, I was a resident in the Infirmary I had never even given chloroform, never seen the fundus, examined an ear, or seen a larynx, or done special work, except in the case of a special class of gynaecology,

Dr. BUIST: In Edinburgh there was no systematic eye-work when I was there, and I got the Students' Council to move in the matter, as the result of which Dr. Argyll Robertson agreed to give a series of limited clinics. The fever clinic was on Saturday morning, and nobody went, so we did the same thing there. With gynaecology this winter in Dundee the students have been divided into groups of four. Dr. Kynoch takes four, and I take four for a certain number of weeks, and then we exchange. The student has to examine the case after me, and to report what he finds, and discuss the provisional diagnosis and treatment. I have supplemented that in the clinical lectures by cases examined under anaesthesia. The results we get are good.

Dr. KERR: Of course, in Edinburgh, gynaecology was one of the subjects you might get in your clinical examination, consequenely every man knew something of it.

Dr. HALLEY: By missing the surgical out-patients they miss a very important branch of surgery—recent fractures. They never see fractures except in the wards, and even those they do not see put up unless specially kept for them. None of the students turn up at the surgical out-patients, one great difficulty being the hour.

Professor MARSHALL: The difficulty is that lectures are going on at the College when students ought to be at the hospital. When is it advisable to go to the surgical out-patients? We are trying to get it arranged so that they will have to go to the medical and gynaecological out-patients before they can enter their final examination.

Dr. HALLEY: I said that I thought junior students would be the men to have at the surgical out-patient. If postponed beyond the second year, you ask a man to come when he knows so much about major surgery that this looks like trifling. He has passed the time when he sees the importance of out-patient work.

Professor MARSHALL: The men ought to attend the surgical out-patients before they attend surgery.

Dr. LOW: Each resident in charge of the surgical wards might have a small tutorial class for teaching bandaging, and thus before you attended a surgical class you learn the practical points.

Dr WHYTE: In Edinburgh the residents felt far more the responsibility for the students than they do here. The students do not seem to attach themselves to them much. I have had residents who really treated the patients themselves, but generally they have no confidence in themselves, and you can hardly get them to order any treatment. I have known of sisters in despair giving patients a mixture of phosphates because they were grumbling and they could not get the residents to do anything.

Dr. BUIST: I often tell my resident that he is personally responsible for the cases as general practitioner; I am only a consultant whom he has the advantage of meeting each day.

BERMUDA BRANCH.

A SPECIAL meeting was called to elect a President in the place of Dr. C. H Butterfield, retired on account of age.

Election of President—Dr. Dudley C. Trott, M.B., F.R.C S., was proposed and elected *nem. con.* Five members were present, namely, Dr. C. H. Butterfield, Dr. J B. Dickinson, Dr. D. C. Trott, Colonel Weston, R.A.M.C., and Dr. Eldon Harvey, the Honorary Secretary.

Proposed Grouping of Branches.—An opinion was expressed that this Branch would prefer to be grouped with the Montreal, Halifax, Nova Scotia, and St. John's Branches.

The Charter.—The proposed Charter was discussed, but very little interest was taken in the correspondence on the question.

Local Matters.—After a short discussion on local matters the meeting adjourned.

BORDER COUNTIES BRANCH:
SCOTTISH DIVISION.

A MEETING of this Division was held in the Board Room of the Dumfries and Galloway Royal Infirmary on Thursday, March 12th; Dr. MURDOCH of Annan was in the chair.

Medical Inspection of School Children.—After some discussion on this subject, the following motion, proposed by Dr. MAXWELL ROSS, was carried:

> That this meeting is of opinion that medical inspectors of school children should not carry on private practice while holding the appointment of school medical officer, and that the work of medical inspector of school children ought to form part of the duties of medical officers of health, who should be provided with adequate assistance for the purpose.

Reports.—The reports contained in the SUPPLEMENT of February 22nd were then discussed.

Cases—Dr. CLARKE afterwards exhibited some medical cases. Dr. LIVINGSTON (for Dr. KERR) showed surgical specimens and cases.

GIBRALTAR BRANCH.

THE annual meeting of this Branch was held at the Grand Hotel, Gibraltar, on Tuesday, March 3rd, at 7.45 p.m. Dr. JAMES was in the chair. There were also present: Dr Oman, Majors Keble and Howell, Drs. Abrines, Baca, and Vasquez, Surgeons Daw and Fairbank, R.N., and Drs. Lyons, Gill, and Parsons.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Annual Report.—The annual report was read.

Election of Officers—The office-bearers for the year were elected as follows: *President*, Dr. N. Oman; *Vice-President*, Major A. E. Keble; *Secretary and Treasurer*, Dr. L. D. Parsons; *Members of Council*, Deputy-Inspector C. James, R.N, Staff-Surgeon C. B. Fairbank, R.N., Major H. A. L. Howell, R.A.M.C, and Drs. Abrines and Lyons.

Admission of Spaniards to Register.—The SECRETARY read correspondence *re* the admission of Spaniards to the *Register*, and informed the meeting of the action taken. The following letter to the Governor was read:

> May it please Your Excellency,—
>
> We, the undersigned members of the medical profession in Gibraltar, beg to bring to Your Excellency's notice that the

granting of licences to practise medicine in Gibraltar to Spanish or other foreign medical men constitutes a veritable grievance to subjects of His Majesty resident in Gibraltar who possess British qualifications, and is also a source of some danger to the public health of Gibraltar, as will be shown hereinafter.

1. The medical profession in Gibraltar is already overcrowded, and the medical needs of the place are more than supplied by nine (9) British qualified medical men who are engaged in private practice and four (4) foreign qualified men, three (3) of whom are Spaniards holding Spanish qualifications and one (1) a British subject holding a French degree.

2. No foreigner is now permitted to carry on any business or trade in his own name in Gibraltar, yet foreigners are permitted to exercise one of the learned professions, such as medicine or dentistry.

3 It is clearly laid down that no foreigners are to be permitted to be apprenticed as chemists or druggists, nor may they, under the recently-passed Midwives Ordinance, be registered as midwives.

4. The legal profession is entirely confined to British subjects duly qualified in Great Britain; and yet medicine, a profession which yields to none in dignity or importance both to the individual and the State, is permitted to be practised by foreigners holding foreign licences.

There are at present three natives of this Colony studying medicine in England with a view of returning to this Colony to practise. Also three (3) medical men, all holding British qualifications, have had at one time or another to leave the place because of the overcrowding—namely, Drs. Wheeler, Canilla, and Francia. Dr Canilla has since returned but does not live solely by his profession.

5 There is no reciprocity with Spain in the matter of being licensed for practice. *Theoretically* it is possible to be licensed on payment of a fee of about £50, but the experience of Dr. Dowding, a well-qualified British practitioner, and now at Algeciras, may be cited It took him nearly four years and cost considerably over £100 before he got permission to practise in Spain, and he possessed influential friends at Madrid to help him.

Further, there is no guarantee of the standard of a foreign qualification, and not always of its genuineness. Dr. Oman had a dresser here in Gibraltar named Martos, who went to Cadiz and obtained a diploma, the certificates attached to the diploma of Spain certified to Martos having attended various courses of instruction at Cadiz, which was absolutely false.

The holders of these foreign licences are further not amenable to medical discipline and do not conform to our standard of ethics and professional conduct; in fact, they may and do things which if done actually by one of us would render the person liable to have his name removed from the *Register*, and all this they may do with impunity, thus lowering our professional standards and bringing discredit on a noble profession.

Already one of the recently-licensed Spanish practitioners (Dr. Mona) has begun to advertise in the local papers, for which, if he held a British qualification, he might have his name struck off the *Register*, but being a foreigner, he may do this with impunity; Major Horrocks, the medical officer of health, will testify that from a sanitary point of view it is not desirable to have these men practising here.

We are aware that Drs Mona and Campry have no licence to reside in Gibraltar, but we would point out to Your Excellency that Drs. Quero, Bojar, and Rodriguez Lopez first came to Gibraltar on the pretext of learning English, and they are now both established here with permission to reside and practise medicine.

The attention of the Council of this Branch of our Association was drawn to this matter by letters from three (3) members, one of whom (Dr. Gill), a native of Gibraltar, and holding a British qualification, says he has just started in practice, but finds it exceedingly difficult to get work.

From the above observations we trust your Excellency will take this matter into consideration, and we beg that it may be possible to reconsider the two licences recently granted with a view to their being revoked

(Signed) C. JAMES, R.N.,
Deputy Inspector-General.
W. H. HORROCKS, R.A.M.C.
N. OMAN.
J. V. ABRINES.
L. D. PARSONS.

The official representatives of the Branch subsequently had a personal interview with the Governor, and obtained an assurance that no more Spanish qualified men would be admitted.

Delegates to Annual Meeting.—Two delegates were elected for the forthcoming annual meeting at Sheffield, namely, Major O. L. Robinson, R.A.M.C., and Dr. L. D. Parsons.

Dinner.—After the meeting, members and their guests dined at the Grand Hotel, twenty persons sitting down to dinner. Dr. Lambert Lack was present as the guest of Dr. Abrines. The meeting and dinner were both very successful.

GLOUCESTERSHIRE BRANCH.

A SPECIAL meeting of the Branch was held at the Infirmary, Gloucester, on March 5th, the PRESIDENT being in the chair, and twenty-six members present.

Medical Inspection of Schools.—The meeting was held to discuss the medical inspection of school children. Dr. ANCRUM opened the discussion by reading a paper giving a clear account of the work expected, the fees suggested, and the proposals as to who should carry out the work. This was followed by a lengthy discussion by Miss CARGILL, and Messrs. MARTIN, MACARTNEY, BOND, BLAKENEY, POWELL, PEAKE, BOWER and COODE. It was finally proposed by Dr. BLAKENEY, seconded by Dr. HIGGINS, and carried:

That the matter be referred to a committee who should report on the questions raised to a general meeting.

LEINSTER BRANCH.

AT the annual meeting held on February 29th the following were elected officers for 1908 9:—*President:* J. Wallace Boyce, M.D., Blackrock co Dublin. *President-elect:* F. W. Kidd, M.D. *Vice-Presidents:* Sir William J. Smyly, M.D.; Sir Arthur Chance, F.R.C.S. *Country Representative of Branch on Irish Committee:* J. M. M. Kenny, M.B., Granard. *Honorary Secretary and Treasurer:* Professor White.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Thursday, March 12th, at 8.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. PIDCOCK in the chair.

Confirmation of Minutes.—The minutes of the last meeting (February 11th) were approved after an omission, pointed out by Mr. HUMPHREYS, had been made good.

Paper.—Mr. TREACHER COLLINS read a most interesting paper on two subjects—(1) congenital word blindness; (2) myopia. A discussion followed, and the best thanks of the meeting were accorded to Mr. Collins.

Memorandum of the Branch Council on the Workmen's Compensation Act (BRITISH MEDICAL JOURNAL, SUPPLEMENT, *March 7th*).—A Subcommittee reported to the Division the answers which they advised to the questions. As amended by the meeting the answers are as follows:

I. Yes, if *continued* treatment is meant.

It appears, however, to this Division that it is difficult for hospital authorities to determine beforehand whether the patient is or is not entitled to substantial compensation.

II. A. (1) Yes, when practicable.
(2) "A signed declaration at second attendance giving details of income, rent, dependents, and possible sources of compensation" would be valuable. (Omit sentence following the word "compensation" in question A (2).)

II. B. (1) *a.* Yes. *b.* Not necessarily.
(2) (Omit word "surgical" from the question) *a*, *b*, *c*. Yes, according to circumstances.
(3) (Omit word "surgically" from the question.) A written promise should, if possible, be obtained from the patient.

C. (1), (2), (3) approved.

III. (1) Insurance for medical attendance is, in cases of domestic servants, still the exception rather than the rule. The medical profession ought to use its influence to induce householders to insure for medical attendance on their servants, preferably on lines which would cover infectious diseases (for example, under Scheme D of many of the companies).

(2) *a.* No case has arisen as far as the meeting could determine.
b. At the Kilburn Provident Medical Institute one certificate is given free for clubs, but a second is charged for. At the Hampstead Provident Dispensary it appears to be the custom not to charge.

In the opinion of this Division it is desirable both under (*a*) and (*b*) to charge extra in *suitable* compensation cases.

(3) It is desirable that the medical man of the employer or the medical referee should give notice to the medical practitioner of the time of intended visit. (Omit last paragraph in Question (3).)

IV. It is desirable that a supplementary Act be passed providing for damages in respect of medical attendance, in addition to compensation recoverable either at common law or under any of the Acts, and that the medical attendant should be given a lien on the amount of such damages.

Hampstead General Hospital.—A somewhat lengthy discussion took place on this subject. The Honorary Secretary reported that at the meeting of the Branch Council that afternoon the discussion of the reports of the Division of January 9th and February 11th had been ruled out of order by the Chairman. The reports were received only.

OXFORD AND READING BRANCH:
READING DIVISION.

Remuneration of Public Vaccinators.

Sir,—At a meeting of the Reading Division held on March 12th at the Royal Berkshire Hospital, the following resolution was unanimously carried:

That the Reading Division of the British Medical Association pledges itself to support in every possible way the public vaccinators of the Henley Union in their endeavour to obtain adequate remuneration for their services.

Twelve members interested in the subject were present, and there was a free discussion.—I am, etc.,

W. T Freeman,
Honorary Secretary and Treasurer.

Reading, March 12th.

SOUTH-EASTERN OF IRELAND BRANCH.

The first meeting of the Branch for the session 1908 was held at the Club House, Carlow, on Wednesday, March 4th, at 5.30 p.m., the President (Dr. Joseph P. Ryan) in the chair. Six other members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed, and signed by the Chairman.

Apologies for Non-attendance.—Letters of apology for absence were read from Drs. Laffan and Hourigan.

Ethical Investigations.—A letter from Dr. W. J. Shee was read, in conjunction with a letter from Dr. J. Smith Whitaker, Medical Secretary, which latter sets forth that the Central Ethical Committee has laid down the principle that ethical investigations should in the first instance be conducted by Divisions, and subsequently, if such investigations, in more important cases, do not prove satisfactory, they can be referred to the Council of the Branch, as court of appeal, with a further appeal to the Central Committee if necessary. Dr Shee's letter advocates adhering to the principle that the Branch Council should in all cases be the Ethical Committee for the Branch. After some discussion, the further consideration of the matter was adjourned to the Waterford meeting next month.

Grouping of Divisions.—It was decided that no change in the grouping of the Divisions of this Branch is thought desirable. The meeting then separated.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:
SWANSEA DIVISION.

A meeting of this Division was held on February 27th.

Early Notification of Births Act.—It was resolved:

That this meeting of the Division, whilst approving the principle of the Act, considers that the obligation of notification should not be thrown on the medical attendant, and that in this respect we urge the amendment of the Act.

Medical Inspection of School Children.—The supplementary report of the Medico-Political Committee was then considered, and after discussion the four suggestions in that report were put seriatim to the meeting and in each instance approved.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch: English Division.—There will be a meeting of the Division at the County Hotel, Carlisle, on Friday afternoon, March 27th, when Sir James Barr will deliver an address entitled Some Observations on Bronchitis and Emphysema.—Norman Maclaren, Honorary Secretary, 23, Portland Square, Carlisle.

East Anglian Branch.—The spring meeting of this Branch will be held at Beccles on Thursday, April 9th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich (Secretary for Suffolk).—B. A. Nicholson, General Secretary of Branch.

Edinburgh Branch: South-Eastern Counties Division.—The spring meeting will be held in the King's Arms Hotel, Melrose, on the afternoon of Thursday, April 2nd, at 3.30 o'clock.—W. Hall Calvert, Honorary Secretary.

Lancashire and Cheshire Branch.—A meeting of the Standing Committee on Division and Branch Organization and Finance will be held on Wednesday, April 1st, at 4 30 p.m., at the Liverpool Medical Institution.—F. Charles Larkin, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The next general meeting of the Lambeth Division will be held on Thursday, March 26th, in the Evelina Hospital for Sick Children, Southwark Bridge Road S.E., at 4 p.m. C. H. Fagge, Esq., M.S Lond., F.R.C.S. will read a paper upon The Pathology and Treatment of Hernia in Children. Cases will be exhibited. There will also be important business to transact in connexion with matters referred to the Divisions by the Branch Council. — Herbert French, Honorary Secretary, Lambeth Division.

Metropolitan Counties Branch: Richmond Division.—A meeting of this Division will be held on Wednesday, April 8th, at 8 30, at the Royal Hospital, Richmond, when Mr. W. T Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6 30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: Wandsworth Division.—A meeting of this Division will be held on Thursday, March 26th, at the Headquarters, 4th V.B. East Surrey Regiment, 27, St. Johns Hill, S.W. Dr. Campbell Thomson will give a lecture on Some Cases of Nervous Diseases, illustrated by the cinematograph.—C. J. Martin, Honorary Secretary.

South-Eastern Branch: Canterbury and Faversham Division.—A meeting of this Division will be held at the Town Hall, Sittingbourne, on Wednesday, March 25th, at 3 p.m. Dr. R. M. Boodle will preside. A lecture will be given with lantern demonstrations by Wm. McAdam Eccles, M.S., F.R.C.S., on The Treatment of Inguinal Hernia by Trusses. All medical men are invited to attend.—T. Barrett Heggs, Honorary Secretary, Sittingbourne.

South-Eastern Branch: Guildford Division.—The next meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Friday, March 27th, at 4 30 p.m. Agenda: (1) Minutes. (2) Dr. A. B. Hudson (Cobham) will move the following resolution: "That this Division having adopted Ethical Rules as drafted by the Medical Secretary,

agrees to fix the minimum rate for contract practice (clubs, etc.) in the Division at 4s. per head per annum for either sex, such rate to refer to junior as well as senior members of clubs" (3) Matters referred to Divisions (see SUPPLEMENT, February 22nd). (*a*) Report as to proposed definition of the word "hospital" (*b*) Report on Life Insurance Examination. (*c*) Report on Prevention of Corruption Act. (4) Mr. G. B Mower White will read a paper on Some Points in the Surgery of Mammary Cancer, to be followed by a discussion. (5) Cases will be shown by members of the hospital staff if time permits. Tea will be provided at 4.15 p.m.; dinner at 6.30 p.m., Lion Hotel. Charge, 6s. (exclusive of wine). Members wishing to show cases or specimens are invited to communicate with the Honorary Secretary, E. J. SMYTH, "Maythorne," Epsom Road, Guildford.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch will be held at the Adelphi Hotel, Waterford, on April 1st, at 3 o'clock. Agenda: 1. Minutes. 2. Letters. 3. Correspondence. 4. Adjourned consideration of procedure in ethical cases. 5. Nomination of officers of Branch for ensuing year. 6. Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held at the Hospital, Hitchin, on Thursday, March 26th, at 3 p.m. Members willing to read papers, show cases, or exhibit specimens are requested to communicate with me as soon as possible.—E. H. COBB, "Belmont," Stevenage, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: SWANSEA DIVISION.—A meeting will be held on Thursday, March 26th, at 4 p.m., at Swansea Hospital. An address on the Indications for Operative Treatment of Diseases of the Stomach will be delivered by Bertrand Dawson, M.D., F.R.C.P. The annual Dinner will take place the same evening at 7.30 at the Hotel Metropole.—DANIEL E. EVANS, Honorary Secretary.

WEST SOMERSET BRANCH.—The spring meeting of the Branch will be held at the Taunton and Somerset Hospital, on Friday, March 27th, at 3.30 p.m., when Dr. G. W. Harvey Bird will preside. The Council is anxious to make this, as far as possible, a clinical meeting, and members wishing to bring forward any cases or show specimens are asked to communicate with the Honorary Secretary. The following agenda has so far been promised, but is necessarily incomplete at this date: Mr. C Farrant will show a case of extrauterine fetation with specimen. Mr. A. R Iles: (i) A case of chronic oedema of legs with scrotal complications; (ii) unusual deformity following extensive burns. Mr. W. J. Jago: (i) A case of syphilitic choroiditis; (ii) congenital dislocation of both lenses. Mr. A E Joscelyne: Cases of rodent ulcer treated by *x* rays. Dr. J. A. Macdonald: (i) A case of acute diabetes following exophthalmic goitre: (ii) a case of gonorrhoeal arthritis. Dr. W. F. Macdonald will read notes on cases of dysentery occurring in lunatic asylums. Dr. H. T. Rutherfoord will show a case of (i) nephrolithotomy with skiagram and specimen; (ii) cholecystotomy with specimen; (iii) extrauterine fetation with specimen; (iv) vaginal hysterectomy with specimen. Tea will be provided after the meeting.—W. B. WINCKWORTH, Honorary Secretary.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,059 births and 5,350 deaths were registered during the week ending Saturday last, March 14th. The annual rate of mortality in these towns, which had been 18.4, 17.3, and 17.6 per 1,000 in the three preceding weeks, declined again last week to 17.2 per 1,000. The rates in the several towns ranged from 10.9 in East Ham, 11.6 in Willesden, 11.7 in Cardiff, 11.8 in Hornsey, and 11.9 in Southampton, to 22.8 in Bournemouth, 22.9 in Stockport, 23.1 in Sunderland, 23.7 in Middlesbrough, 25.0 in Merthyr Tydfil, 25.1 in Burton-on-Trent, and 32.4 in Stockton-on-Tees. In London the rate of mortality was 16.7 per 1,000, whilst it averaged 17.4 per 1,000 in the seventy five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.1 per 1,000, while among the seventy five other towns these diseases caused death-rates ranging upwards to 3.0 in West Bromwich and in Middlesbrough, 3.1 in Bootle, 3.3 in Halifax, 3.4 in Merthyr Tydfil, 3.5 in Salford, 4.0 in Burnley, and 4.9 in Stockton-on-Tees. Measles caused a death-rate of 1.1 in Hornsey, 1.2 in Gateshead, 1.3 in Salford, 1.4 in Halifax, 1.6 in Swansea, 1.7 in Croydon, 1.8 in Preston, 2.0 in Burnley, 2.7 in Rhondda and in Merthyr Tydfil, and 4.9 in Stockton-on-Tees; diphtheria of 1.5 in West Bromwich; whooping-cough of 1.1 in Bolton 1.2 in Birmingham, in Sheffield and in Gateshead, 1.3 in Devonport and in Birkenhead, 1.4 in Newport (Mon.), 1.5 in Handsworth (Staffs) and in Wallasey, 1.6 in Walsall, 1.7 in Sunderland, 2.2 in Warrington, and 3.1 in Bootle; and diarrhoea of 1.5 in Middlesbrough. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,733, 3,674, and 3,567 at the end of the three preceding weeks, had further declined to 3,429 at the end of last week; 312 new cases were admitted during the week, against 420, 383, and 345 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 14th, 975 births and 714 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.2 and 19.5 per 1,000 in the two preceding weeks, further rose last week to 20.5 per 1,000, and was 3.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 17.3 in Edinburgh and in Leith and 20.3 in Glasgow to 22.5 in Paisley and 31.1 in Perth. The death-rate from the principal infectious diseases averaged 2.8 per 1,000, the highest rates being recorded in Glasgow and Leith. The 354 deaths registered in Glasgow included 35 which were referred to measles, 2 to scarlet fever, 6 to whooping-cough, 5 to cerebro-spinal meningitis, and 12 to diarrhoea. Six fatal cases of measles and 4 of whooping-cough were recorded in Edinburgh; 2 of whooping cough and 3 of diarrhoea in Dundee; 2 of measles and 2 of scarlet fever in Aberdeen; 6 of whooping-cough in Leith; and 2 of measles in Greenock.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: ARTHUR LA T DARLEY, Surgeon, to Hong Kong Hospital, March 9th; ROBERT H. M'GIFFIN, M.B., Surgeon, to the *Bulwark*, March 18th; THOMAS C MEIKLE, M.B., Fleet Surgeon, and FRED C. B. GITTINGS, M.B., Staff Surgeon, to the *Natal*, on recommissioning, April 7th; CHARLES S. FACEY, M.B., Fleet Surgeon, and WILLIAM HUTCHESON, M.B., Surgeon, to the *Black Prince*, on recommissioning, March 31st; EVAN ST. M. NEPEAN, Fleet Surgeon, and GEORGE C. C. ROSS, M.D., Surgeon, to the *Leviathan*, undated; HORACE B MARRIOTT, Fleet Surgeon, and WALTER T. HAYDON, Surgeon, to the *Niobe*, undated; ARTHUR E. KELSEY, M.B., Fleet Surgeon, and JOHN S. DUDDING, Surgeon, to the *Lancaster*, on recommissioning, April 7th; JOHN P. H. GREENHALGH, M.B., Staff Surgeon, to the *Vernon*, April 7th; HENRY C. ADAMS, Surgeon, to Haslar Hospital, to assist in the instruction of surgeons on entry, April 7th; JOHN MACDONALD, M.D., Surgeon, to the *Pembroke*, additional, for Queensferry Hospital, March 16th; ARTHUR R. SCHOFIELD, M.B., Surgeon, to the *Ringdove*, March 16th; HARRY M. LANGDALE, Surgeon, to the *Victory*, March 16th, and to the *Victory*, temporarily, March 16th; FRANCIS BOLSTER, M.B., Staff Surgeon, to the *Pembroke*, March 14th; JOHN STODDART, M.B., Staff Surgeon, to the *President*, for three months' course at the University of Edinburgh Hospital, March 17th; ALEXANDER B. MARSH, Surgeon, to the *Virid*, additional, to be lent to the *Hebe*, temporary, March 10th; WILLIAM W. D. CHILCOTT, Surgeon, to the *Teal*, March 14th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL J. D EDGE, C.B., M.D., is placed on retired pay, March 9th. He was appointed Assistant Surgeon, September 30th, 1871; Surgeon, March 1st, 1873; Surgeon-Major, August 20th, 1873; granted the rank of Lieutenant-Colonel, September 30th, 1891; made Brigade Surgeon-Lieutenant-Colonel, January 8th, 1896; Colonel, June 1st, 1901; and Surgeon-General, November 11th, 1903. His war record includes—The engagement at Orange Walk, British Honduras, 1872 (Pro. Staff Surgeon); the Zulu war in 1879, including the battle of Ginginhlovo and relief of Eshowe (medal with clasp); Afghan war, 1879-80, including the battle of Maiwand in charge of field hospital, and defence of Kandahar (thanked by Government of India, medal with clasp); Egyptian expedition, 1882, with the Indian Contingent, in charge of field hospital at battle of Tel-el-Kebir, and in forced march to and occupation of Zagazig (medal with clasp, bronze star, fourth class Osmanieh); Burmese expedition, 1887-9 (medal with two clasps); South African war, 1899-1902, Principal Medical Officer, Infantry Division, afterwards Principal Medical Officer, Section, Lines of Communication, and Johannesburg District, and present at operations in the Orange Free State, the Transvaal, and Cape Colony (mentioned in dispatches, Queen's medal with three clasps, King's medal with two clasps, and C.B.).

Colonel G. D BOURKE, C.B., is promoted to be Surgeon-General, vice J. D. Edge, C.B., M.D., March 9th. He entered the service as Surgeon, September 30th, 1874; was made Surgeon-Major, September 30th, 1876; granted the rank of Lieutenant-Colonel, September 30th, 1894; appointed Brigade Surgeon-Lieutenant-Colonel, April 1st, 1898; and promoted to be Colonel, April 1st, 1903. He served with the Nile Expedition in 1884-5 (medal with clasp, and Khedive's star); with the Soudan Frontier Field Force in 1885, including the engagement at Giniss; with the Burmese Expedition in 1887-9 (medal with clasp); with the Chin-Lushai Expedition in 1889-90 (mentioned in dispatches, clasp); and in the campaign on the North-West Frontier of India in 1897-8 with the Tirah Expeditionary Force (mentioned in dispatches, medal with two clasps).

Lieutenant-Colonel H. W. MURRAY, M.B., from the Royal Army Medical Corps, to be Colonel, vice G. D Bourke, C.B., March 9th. Colonel Murray's previous commissions are dated: Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; and Lieutenant-Colonel, July 31st, 1900. He was in the South African war in 1899-1902, and was in the advance on Kimberley and action at Magersfontein, the operations at Paardeberg, the actions at Poplar Grove and Driefontein, and in operations in the Orange River Colony, including actions at Wittebergen and Witpoort; he has received the Queen's medal with four clasps and the King's medal with two clasps.

Colonel W. J. R. RAINSFORD, C.I.E., has taken over the duties of Administrative Medical Officer and Officer Commanding Royal Army Medical Corps, Tidworth District, with effect from February 19th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL S. F. LOUGHEED, M.D., C.M.G., retires on retired pay, March 14th. He was appointed Surgeon, February 4th, 1882; Surgeon-Major, February 4th, 1894; and Lieutenant-Colonel, February 4th, 1902. He served in the South African war in 1899-1902, was mentioned in dispatches, made C.M.G., and granted the Queen's medal with three clasps and the King's medal with two clasps.

Major E. B. STEEL, M.B., who is serving in India, is appointed Specialist in Mental Science, 5th (Mhow) Division.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-CAPTAIN W. RICHARDSON, M.D., to be Surgeon-Major, March 3rd.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL J C LAMONT, M.B., Bengal, is permitted to retire from the service, from April 10th. He joined the Bengal Medical Department as Surgeon-Captain, October 1st, 1887, and became Major, October 1st, 1899. He was with the Chin-Lushai Expedition in 1889-90, receiving a medal with clasp, and with the Manipore Expedition in 1891, receiving an additional clasp.

CHANGES OF STATION.

THE following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during February, 1908:

		FROM.	TO.
Colonel	F. B. Maclean	Pretoria	India.
Lieut.-Col.	R. D Hodson	Chatham	London.
,,	H W. Murray, M.B.	Shorncliffe	Gibraltar.
,,	A. Peterkin, M.B	Mauritius	South Africa.
,,	H. J. R. Moberly	Aldershot	India.
,,	W. G. Birrell, M.B	Edinburgh	Mauritius.
,,	S. F. Lougheed, C.M.G., M.D.	Warley	Colchester.
,,	B. M. Skinner, M.V.O.	Nowshera	Sialkot.
,,	J. Maher	R. M. College, Sandhurst	South Africa.
,,	S. F. Freyer, C.M.G., M.D.	Bangalore	Secunderabad.
,,	J. Fallon	Ambala	Aden.
,,	D. M. O'Callaghan	Kuldana	Rawal Pindi.
,,	F. R. Newland, M.B.	Mhow	,,
,,	J. J. Russell, M.B.	Sialkot	,,
Major	B. H. Scott	Murree	Rawal Pindi.
,,	R. J. Copeland, M.B.	Portsmouth	India.
,,	N. Faichnie, M.B.	York	Campbellpore.
,,	H. A. Hinge	Poona	Ootacamund
,,	L. P. More, M.B.	Murree	Rawal Pindi.
,,	K. B. Barnett, M.B.	North China	Dover.
,,	A. H. Waring	Lahore	Secunderabad.
,,	R. W Clements, M.B.	Manchester	,,
Captain	A. W. N. Bowen	Warrington	Jersey.
,,	A. E Thorp	Tregantle	Worcester.
,,	G. J. A. Ormsby, M.D.	Dublin	India.
,,	F. S Irvine, M.B.	Pretoria	Johannesburg.
,,	C. C. Cumming, M.B.	Nowshera	Colchester
,,	James M. Buist, M.B.	Aldershot	London Dist
,,	G. Carroll	Limerick	Templemore.
,,	A. F Weston	R.A.M.Coll.	West Africa.
,,	FitzG. G. FitzGerald	—	Dover.
,,	F. P. Lauder	R A M Coll.	W. Africa
,,	W. S. Crosthwait	Devonport	Bull Point
,,	H A Bransbury	Tidworth	London Dist.
,,	M W. Falkner	,,	Winchester.
,,	J. H Barbour, M.B.	Mullingar	Londonderry.
,,	H W. Long, M.B.	Dalhousie	Cork
,,	H. H. Kiddle	India	Aldershot
,,	J. M. H Conway	Kalabagh	Aden
,,	R. H. Bridges	Madras	Bangalore.
,,	B. H V Dunbar, M.D.	Jubbulpore	Aden.
,,	C Bramhall	Quetta	Karachi.
,,	F M M. Ommanney	Upper Topa	Sialkot
,,	M. C Wetherell, M.D.	Campellpore	Rawal Pindi.
,,	J. H. Douglass, M.D.	Wellington	Secunderabad.
,,	W. F. H. Vaughan	Bangalore	Malapuram
,,	R. B. Hole, M.B.	Colaba	Karachi.
Lieutenant	P C. T Davy, M.B.	Colchester	India.
,,	H. T. Wilson	Sialkot	Rawal Pindi.
,,	M. Sinclair, M.B.	Khanapur	Sialkot.
,,	R. H. L. Corduer	Campbellpore	Attock.
,,	E. G. R. Lithgow	Pretoria	Rawal Pindi.
,,	C. G. Browne	—	Sialkot.
,,	W. Benson, M.B.	Murree	Rawal Pindi.
,,	M. B. H Ritchie	Ghora Dakka	,, ,,
,,	A. D. O'Carroll, M.B.	Malta	India.
,,	H. Stewart, M.B.	Queenstown	,,
,,	R G. H. Tate, M.D.	Dublin	,,
,,	A. Dawson, M.B.	London Dist	,,
,,	F. Forrest	Norwich	Rawal Pindi.
,,	E. M. W. Paine	Bulford	Bangalore.
,,	J. W. L Scott	Devonport	Quetta.
,,	D. De C. O'Grady	Dublin	Rawal Rindi.
,,	T. W O. Sexton	Keadean Camp	South Africa.
,,	R W. O. Leslie	Aldershot	Crete.
,,	C. Kelly, M.B.	Netley	Portland.
,,	D. T. MacCarthy, M.B.	,,	Devonport.
,,	F. H. M Chapman	,,	Tidworth.
,,	H. M. J. Perry	Kilworth C'p.	Queenstown.
,,	D. F. Mackenzie, M.B.	Netley	Tidworth.

The following Lieutenants, appointed on probation July 29th, 1907, have been stationed as follows: G. F Dawson, M.B., Warley; T McC Phillips, M.B., Dundalk; H. V. B. Byatt, H. S. Dickson, G Petit F T. Dowling, M.B., and B. A Odlum, Netley; F. J. Stuart, M.B., Chatham; J. B. Hanafin and R DeV. King, Aldershot; H. Gibson, Devonport; W. R. O'Farrell and H T. Treves, Millbank; C. A. T. Conyngham, M.B., Curragh; J. A. Renshaw, D. B. McGrigor, M.B., and A. E. B. Jones, M.D., Dover; R G. S. Gregg, M.B., Dublin; W. A. Spong, M.B., York; H W. Carson, M.B., Cardiff; H. P. Hart, M.B., Shoeburyness; R. F. O'T. Dickinson, Cork; A Hendry, M.B., Bulford

Major J W F. Long, retired pay, has been transferred from Dover Military Prison to Strensall.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERDARE EDUCATION COMMITTEE.—School Medical Officer. Salary, £220, rising to £250 per annum.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer; (2) Resident Surgical Officer. Salary, £80 per annum each.

BIRMINGHAM: QUEEN'S HOSPITAL.—Two House-Surgeons. Salary, at the rate of £50 per annum each.

BRIGHTON EDUCATION COMMITTEE.—School Doctor. Salary, £300 per annum.

BROMSGROVE: BARNSLEY HALL ASYLUM.—Second Assistant Medical Officer. Salary £150 per annum.

BUCKS COUNTY COUNCIL.—County Medical Officer of Health. Fee, 50 guineas per annum for specified duties and fees at rate of 5 guineas a day for other duties.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum.

CAMBRIDGESHIRE AND COUNTY ASYLUM, Fulbourn.—Second Assistant Medical Officer. Salary, £120 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £60 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary £70 per annum.

CHESTERFIELD BOROUGH.—Female Assistant to Medical Officer of Health Salary, £150 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—(1) House-Physician (male). Salary at the rate of £50 per annum. (2) Clinical Assistant.

DUBLIN: ST. VINCENT'S HOSPITAL.—Throat Specialist

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Eight Clinical Assistants in Out-patient Department

GROCERS' COMPANY.—Two Scholarships of £300 a year each.

HOLBORN UNION.—Public Vaccinator for the St. Luke's District.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician; (2) House-Surgeon; (3) Assistant Casualty Medical Officer. Salary, £20 each for six months, and washing allowed.

INFANTS' HOSPITAL, Vincent Square, S.W.—Assistant Physician.

ISLE OF MAN LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £120 per annum.

LEAMINGTON: WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: KENT COUNTY COUNCIL.—Medical Officer of Health. Salary, £800 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

MANCHESTER UNIVERSITY.—Demonstrator in Physiology. Stipend, £150, rising to £200 per annum.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—House-Surgeon Salary, £100 per annum.

MIDDLESEX HOSPITAL.—Second and Third Assistants to the Director of the Cancer Research Laboratories. Salary, £150 and £100 per annum respectively.

MOUNTAIN ASH URBAN DISTRICT.—School Medical Inspector. Salary, £250 per annum.

NATIONAL HOSPITAL FOR THE PARALYTIC AND EPILEPTIC, Queen Square, W.C.—Registrar. Salary, £110.

NEWCASTLE-UPON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 per annum, increasing to £275.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Medical Officer for charge of Light Department. Honorarium, £50 per annum.

SHREWSBURY: SALOP INFIRMARY.—(1) House Surgeon; (2) House Physician. Salary at the rate of £100 and £50 per annum respectively.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) House-Surgeon. (2) House-Physician. Salary, £100 per annum each.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon (male). Salary, £90 per annum

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

STOCKTON-ON-TEES EDUCATION COMMITTEE.—Assistant to the Medical Inspector of School Children Salary, £200 per annum.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WALSALL COUNTY BOROUGH.—School Medical Officer. Salary, £200 per annum.

WEST HAM COUNTY BOROUGH.—Two Medical Inspectors of School Children. Salary, £250, rising to £300 per annum each.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Clinical Assistants.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum

WORTHING BOROUGH AND RURAL DISTRICT OF EAST PRESTON.—Medical Officer of Health. Salary, £500 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Lynton, co. Down; and South Burnley, co. Lancaster.

APPOINTMENTS.

CROSS, F. G., F.R.C.S.Eng., Certifying Factory Surgeon for the Kingston District, co. Surrey.

EDWARDS, W. R., M.B., C.M.Glasg., Certifying Factory Surgeon for the Dulais Valley District, co. Glamorgan.

EVANS, T., M.B.Lond., Medical Inspector of School Children under the Glamorgan County Council.

FRANCIS, T. E., M.D.Lond., Medical Inspector of School Children under the Glamorgan County Council.

GOODWIN, A. C., M.A., M.B., M.Ch.Oxon., F.R.C.S.Eng., Surgeon to the West Bromwich and District Hospital.

HALL, Octavius, D.P.H., M.O.H., Chief Medical Inspector under the Administrative Provisions (Education) Act under the Devonport Borough Council.

JACKSON, H. H., M.R.C.S., L.R.C.P., Medical Officer of Health for the Newbiggin-by-the-Sea Urban District.

JONES, Miss Edith, M.B., B.S.Lond., Medical Inspector of School Children under the Glamorgan County Council.

MOORE, P. M., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Stranford District, co. Down.

PARKIN, Alfred, M.D.Durh., F.R.C.S.Eng., Honorary Assistant Physician to the Royal Victoria Infirmary, Newcastle-on-Tyne.

REUTZSCH, Sigismund H., L.R.C.P., M.R.C.S., Clinical Assistant to the Birmingham and Midland Hospital for Skin Diseases.

RIGGALL, Robert Marmaduke, L.R.C.P., etc., Second Assistant Medical Officer to the Devon County Asylum, Exminster.

ROWNTREE, Cecil, M.B., B.S., F.R.C.S., Registrar to the Cancer Wards of the Middlesex Hospital.

STALLARD, H., B.A.Cantab., L.R.C.P., M.R.C.S., Honorary Physician and Referee for Newark to the Royal Midland Counties Home for Incurables.

STEVENS, Andrew Norris, L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.Camb., Assistant Medical Officer of Health to the County Borough of Great Yarmouth.

THOMSON, H. Hyslop, M.D., Resident Medical Officer of the Liverpool Sanatorium at Kingswood, Delamere Forest.

WEBB, Samuel G., M.B., B.S.Dunelm., Surgical Casualty Officer to the General Hospital, Birmingham.

WHARTON, John, M.A., M.D., B.C.Camb., Honorary Assistant Surgeon to the Manchester Royal Eye Hospital.

WICKHAM, G. H., M.B., B.C.Cantab., Medical Officer of Health for the Fleet Urban District.

WILMOT, R. E. B., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Eton Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BARENDT.—On March 14th, at 65, Rodney Street, Liverpool, W., the wife of Frank H. Barendt, M.D.Lond., F.R.C.S.Eng., of a daughter.

JOHNSON.—On March 9th, at 428, Liverpool Road, Holloway, London, N., to Dr. and Mrs. J. Anderton-Johnson, a son.

MERRICK.—On March 15th, at 124, Edith Road, West Kensington, W., the wife of R. Warren Merrick, M.D., of a son.

PRINGLE.—On March 14th, at 195, Croydon Road, Anerley, S.E., to Dr. and Mrs. E. G. Pringle, a son.

STUART.—On March 15th, at Hanley, Staffordshire, the wife of Hackworth Stuart, F.R.C.S.Eng., M.D.Lond., of a daughter, Audrey Mildred.

DEATHS.

GRANGER.—At 2, Grosvenor Terrace, Glasgow, on March 8th, Maria Sophia Carmichael, widow of the late Dr. John Ross Granger, in her 60th year.

WILSON.—At Allanton House, Newmains, on the 12th inst., of pneumonia, George R. Wilson, M.D., aged 41 years.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion on The Prognosis and Treatment of Acute Anterior Poliomyelitis, to be introduced by Dr. J. S. Risien Russell.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION, 20, Hanover Square, W., 8 p.m.—(1) Exhibition of Cases and Specimens; (2) Adjourned discussion on The Treatment of Children from a Dental Aspect.

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.15 p.m.—Adjourned discussion on Dr. Freyberger's paper. Mr. Henslowe Wellington will open with The Legal Liability of the Anaesthetist.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Goulstonian Lecture by Dr. Herbert French: The Influence of Pregnancy on certain Medical Diseases and the Influence of certain Medical Diseases on Pregnancy.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Mr. S. G. Shattock and Dr. L. S. Dudgeon: Observations on Phagocytosis carried out by Means of Melanin, more Particularly with reference to the Leucocytes in Infective Diseases; Drs. Arthur Latham, H. D. Spitta, and A. C. Inman: Preliminary Note on the Administration of Tuberculin (T.R.) and other Vaccines by the Mouth with (*a*) Normal Saline Solution, (*b*) Fresh Horse Serum.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION, Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m.—Paper: Dr. J. M. Bramwell, Hypnotism.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Harveian Lecture by Sir Almroth Wright: Some Points in Connexion with Therapeutic Immunization.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Lumleian Lecture by Sir James Sawyer, M.D.: Points of Practice in Maladies of the Heart.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, 8 p.m. (not at 8.30 as usual).—Discussion on the Etiology of Typhoid Fever.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Selected Cases.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Molluscum Contagiosum, Paget's Disease, Darier's Disease. Friday, 4 p.m., Lupus Erythematosus, Sclerodermia, Vitiligo, Alopecia Areata, Akrodermatitis Atrophicans.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Leukaemia in Children.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures:—Monday, 2.15 p.m., The Employment of Aperient Remedies; Thursday, 3.15 p.m., Clinical Aspects of the Disappearance of Pain.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows: Monday, Sprains; Tuesday, Infantile Marasmus; Wednesday, Compression Paraplegia; Thursday, Pericolic Inflammation.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cerebral Tumours.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4 p.m., Demonstration of Cases of Chest Disease (at the Royal Hospital for Diseases of the Chest, City Road, E.C.) Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient; 4.30 p.m., Lecture-Demonstration: Recent Advances in Anaesthetic Technique. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations. Medical Out-patient, Eye; 3 p.m., Medical In-patient.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; *X* Rays; 2.30 p.m., Operations. Monday and Thursday, and Wednesday and Saturday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; Tuesday and Friday, 2.30 p.m., Diseases of the Skin. Lectures: At 12 noon, Monday, Pathological Demonstration; Tuesday and Thursday, Practical Medicine; at 5 p.m., Tuesday, The Legal Aspects of Insanity in so far as these Affect the Medical Man; Friday, Clinical.

BOOKS, ETC., RECEIVED.

The Old Riddle and the Newest Answer. By J. Gerard, S.J., F.L.S. Fifth edition. London: Longmans, Green, and Co. 1908. 6d.

Confessio Medici. By the Writer of "The Young People." London: Macmillan and Co., Limited. 1908. 3s. 6d.

Lectures on Medical Jurisprudence and Toxicology. By F. J. Smith, M.A., M.D., F.R.C.P., F.R.C.S. Second edition. London: J. and A. Churchill. 1908. 8s. 6d.

The Principles of the Treatment of Gout. By A. W. Sikes, M.D., D.Sc. London: Ballantyne and Co., Limited. 1907.

The Black Death of 1348 and 1349. By F. A. Gasquet, D.D. Second edition. London: G. Bell and Sons. 1908. 6s.

Klinische Semiotik. Von Dr. A. Pick und Dr. A. Hecht. Wien und Leipzig: A. Hölder. 1908. M.21.

Beitrage zur Kenntnis die Heine-Medischen Krankheit. (Poliomyelitis acuta und verwandter Erkrankungen.) Von Dr. I. Wickman. Berlin: S. Karger. 1907. M.8.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. (New Series.) No. 29. *Piroplasma canis* and its Life-Cycle in the Tick. By Captain S. R. Christophers, M.B., I.M.S. No. 30. The Theory and Practice of Antirabic Immunization. By Captain W. F. Harvey, M.B., I.M.S., and Captain A. McKendrick, M.B., I.M.S. Calcutta: Superintendent of Government Printing, India. 1907. No. 29, 2 rupees, or 3s.: No. 30, 12 annas, or 1s. 2d.

Das Gedächtnis. Festrede gehalten am Stiftungstage der Kaiser Wilhelms-akademie für das Militärärztliche Bildungswesen, 2 Dezember, 1907. Von Th. Ziehen. Berlin: A. Hirschwald. 1908. M.1.

Traité Pratique de Thérapeutique Infantile Médico-Chirurgicale. Par les Drs. P. le Gendre et A. Broca. Deuxième édition. Paris: G. Steinheil. 1908. Fr.15.

Matriculation Directory. No. XLVIII, January, 1908. Cambridge: University Tutorial Press. 1s.

The Official Handbook to Newmarket: its History and Advantages as a Residential and a Health Resort. Newmarket: Town Development Committee. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
22 Sunday ...	
23 MONDAY ...	
24 TUESDAY ...	
25 WEDNESDAY	London: Medico-Political Parliamentary Subcommittee, 2 p.m. Bath and Bristol Branch, Bristol. Canterbury and Faversham Division, *South-Eastern Branch*, Town Hall, Sittingbourne, 3 p.m.
26 THURSDAY...	Bedford and Herts Division, *South Midland Branch*, Hospital, Hitchin, 3 p.m. Lambeth Division, *Metropolitan Counties Branch*, Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4 p.m. Swansea Division, *South Wales and Monmouthshire Branch* Swansea Hospital, 4 p.m.; Annual Dinner, Hotel Metropole 7.30 p.m. Wandsworth Division, *Metropolitan Counties Branch*, 27, St. John's Hill, S.W., 8.45 p.m.
27 FRIDAY ...	London: Standing Ethical Subcommittee, 2 p.m English Division, *Border Counties Branch*, County Hotel, Carlisle. Guildford Division, *South-Eastern Branch*, Royal Surrey County Hospital, Guildford 4.30 p.m.; Tea, 4.15 p.m.; Dinner, Lion Hotel, 6.30 p.m. West Somerset Branch, Taunton and Somerset Hospital 3.30 p.m.
28 SATURDAY ...	
29 Sunday ...	
30 MONDAY ...	
31 TUESDAY ...	London: Public Health Committee, 3.15 p.m.

Date.	Meetings to be Held.
APRIL.	
1 WEDNESDAY	London: Medico-Political Contract Practice Subcommittee 10.30 a.m. United Kingdom Hospitals Conference, Botanical Theatre, University College, London W.C., 2 p.m. United Kingdom Hospitals Conference Dinner, Waldorf Hotel, Aldwych, W.C., 7.45 p.m. Lancashire and Cheshire Branch, Standing Committee on Division and Branch Organization and Finance, Liverpool Medical Institution, 4.30 p.m. South-Eastern of Ireland Branch, Adelphi Hotel, Waterford, 3 p.m.
2 THURSDAY...	United Kingdom Hospitals Conference, Botanical Theatre, University College, London, W.C.; Morning Session 10.30; Afternoon Session, 2 o'clock. South-Eastern Counties Division, *Edinburgh Branch*, King's Arms Hotel, 3.30 p.m.
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	London: Naval and Military Committee, 2.30 p.m.
7 TUESDAY ...	London: Organization Committee, 11 a.m.
8 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. Lancashire and Cheshire Branch, Meeting of Branch Council, Manchester Royal Infirmary 4.30 p.m. Richmond Division, *Metropolitan Counties Branch*, Royal Hospital, Richmond, 8.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 28TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPRESENTATIVE MEETING AT SHEFFIELD.

FRIDAY, JULY 24TH, OR SATURDAY, JULY 25TH, AND FOLLOWING DAYS.

NOTICES OF MOTION.

THE following Notices of Motion have been received for discussion by the Annual Representative Meeting of the Association, to be held at Sheffield, July 24th (or 25th), 1908, and following days.

NOTICES AFFECTING THE PROPOSED CHARTER.

Federations of the Branches.

By the Wandsworth Division (Metropolitan Counties Branch):

That should Counsel consider it necessary, in order to allow of the formation and recognition of Federations of Branches at Home and in the Colonies as part of the constitution of the Association, a clause be inserted in the Charter or Ordinances.

Voting in the Representative Meeting.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That Ordinances 15, 16, and 17 of Draft Charter be so amended as to include the following:

That in order to make any resolution effective under Ordinances 15, 16, and 17, (*a*) An attendance of at least two-thirds of the accredited Representatives should be necessary. (*b*) A majority of two-thirds of the votes taken on a vote by card should be necessary. (*c*) An attendance of at least two-thirds of the members of the Central Council should be necessary at any meeting called to consider any such question; with (*d*) a majority of two-thirds of the votes taken on a vote by card of such meeting of the Council. (*e*) The Central Council should hold such meeting within twenty-four hours of the resolution being passed by the Representative Body, and must then decide whether they will refer the subject for reconsideration, which must be done within twenty-four hours of coming to such a decision, or whether they will accept it as a decision of the Association. (*f*) If the question is referred, and the subject matter of such referred resolution has been duly published not less than two months previously, it should only be necessary, in order that the resolution be carried and become a decision of the Association, for conditions (*a*) and (*b*) to have been again fulfilled at the subsequent Representative Meeting. (*g*) If the subject-matter of such referred resolution has *not* been duly published not less than two months previously, and on reference to the Representative Body it is again carried, conditions (*a*) and (*b*) being fulfilled, then the Central Council should meet again within seven days and decide if they will take a Referendum or allow the resolution to become a decision of the Association, conditions (*c*) and (*d*) having to be fulfilled by the Central Council if they decide on a Referendum. (*h*) If a Referendum is taken, the report from Divisions outside the United Kingdom should be by cablegram duly certified by the President of the meeting at which the vote is taken.

By-law 24 (1).—Eligibility as Representative.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

By-law 24 (1): Add at end, "No person shall be eligible for election as a Representative who is not a

member of the Association at the date of his nomination."

By-law 36.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

(i) That the members elected to represent the Royal Navy, Army, and Indian Medical Services should be elected by the Representative Body on the recommendation of the Central Council and for such period not exceeding three years as the Central Council may decide.

(ii) That the Central Council should consist of the following sets of members: (*a*) Six *Ex-officio* members, (*b*) Three Service members, (*c*) Twenty-four Home members elected by Grouped Branches, (*d*) Twelve Home members elected by Grouped Representatives, and (*e*) Eight Colonial members.

(iii) That there should be the following Grouping of Branches, with the accompanying Representation on the Central Council (See Appendix).

NOTICES AFFECTING THE REGULATIONS OF THE ASSOCIATION.

Standing Orders of the Representative Meeting.

By the WESTMINSTER DIVISION (Metropolitan Counties Branch):

In connexion with the revised Standing Orders which the Organization Committee has been instructed to prepare for the consideration of the meeting with regard to the reception and consideration of the reports of Committees,

To move: That the Division notes with satisfaction that the Representative Meeting has decided to revise its Standing Orders as to the reception and consideration of the Reports of Committees, and has referred to the Organization Committee the duty of preparing suitable Standing Orders for the purpose, as they feel that no business should be discussed, nor vote taken upon important questions by the Representative Meetings, unless such business and questions and the agenda of all Representative Meetings shall have been submitted to the Divisions at least one month prior to the assembly of a Representative Meeting.

NOTICES AFFECTING THE ADMINISTRATION OF THE ASSOCIATION.

Annual List of Members.

By the ST. PANCRAS AND ISLINGTON DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Council of the Association to publish the Annual List of Members of the Association (By-law 6), in such a way that a copy may be obtainable by every member who desires to possess the same.

NOTICES AFFECTING THE POLICY OF THE ASSOCIATION.

Putney Hospital.

By the RICHMOND DIVISION (Metropolitan Counties Branch):

That the Representative Body of the British Medical Association, having been informed that after a canvass of the members of the medical profession practising within the near neighbourhood of the proposed Putney Hospital site, as to their acceptance of the subjoined resolutions,* the result was a unanimous approval in Fulham (51 signatures) as also in Barnes, Mortlake and East Sheen (16 signatures) and in Southfields (11 signatures), and that in Putney 38 approved out of 45, cordially approves of these resolutions, as also of the declaration signed, and considers that any registered medical practitioner who acts otherwise than therein indicated will be doing so in a manner injurious to the interest of the medical profession.

* See page 131.

APPENDIX.

(Schedule referred to in Notice of Motion by Wandsworth Division.)

Group.	Number of Members.	Branches Included. No.	Branches Included. Names.	Number of Divisions included.	Number of Representatives Returned.	Central Council. Present Seats.	Central Council. To be Returned by Grouped Branches.	Central Council. To be Returned by Grouped Representatives.
Scottish	1,885	9	Aberdeen, Border Counties, Dundee, Edinburgh, Fife, Glasgow, Northern Counties, Perth, Stirling	24	21	8	4	1
Irish	908	5	Connaught, Leinster, Munster, South-Eastern, Ulster	22	10	5	4	1
Welsh	838	3	North, Mid-Wales, South	9	9	4	*1	1
Northern ...	802	2	North of England, North Lancashire	19	11	2	1	1
Lancashire and Cheshire	1,627	1	—	30	23	4	2	1
Yorkshire ...	792	1	—	10	8	2	1	1
Eastern	716	3	Cambridge, East Anglia, East York	13	8	2	1	1
Midland	1,490	4	Birmingham, Midland, South Midland, Staffordshire	19	14	5	2	1
Metropolitan ...	2,634	1	—	15	14	5	4	1
South-Eastern ...	1,258	1	—	20	12	3	1	1
Southern... ...	717	2	Southern, Oxford	10	7	3	1	1
Western	713	4	Bath, Gloucester, W. Somerset, Worcester	7	6	3	1	1
South-Western..	662	2	South-Western, Dorset	8	6	3	1	
Australian ...	1,327	5	S. Australia, W. Australia, Sydney, Melbourne, Brisbane	—	1	2	1	—
Canadian ...	1,339	5	Halifax, Montreal, St. John, Saskatchewan, Toronto	—	—	1	1	—
Indian	401	4	Bombay, Colombo, South Indian and Madras, Burmah	—	—	2	1	—
Mediterranean ..	199	3	Egyptian, Gibraltar, Malta and Mediterranean	—	—	1	1	—
New Zealand ...	325	1	—	6	—	—	1	—
South African ..	480	6	Cape of Good Hope (Eastern Prov.), Border, Griqualand West, Cape of Good Hope (Western Prov.), Natal, Transvaal	—	1	1	1	—
East Indian ..	185	2	Hong-Kong (with China), Malaya	—	—	1	1	—
West Indian ..	163	6	Barbados, Bermuda, British Guiana, Jamaica, Leeward Isles, Trinidad (with Tobago)	—	—	—	1	—

* If considered desirable Wales to have 2, when Western and South-Western will be grouped to elect One member.

By direction of the Chairman of Representative Meetings,

J. SMITH WHITAKER, *Medical Secretary.*

March 26th, 1908.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

EAST ANGLIAN BRANCH:

NORTH SUFFOLK DIVISION.

A MEETING of this Division was held at the Lowestoft Hospital on Friday, March 6th, at 3.30 p.m., Dr. BERRY in the chair. Eleven members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Code of Etiquette, etc.—The following resolution was proposed by Dr. BELL, seconded by Dr. EVANS, and carried *nem. con.*:

> That Draft Rules 14 and 16—the Code of Etiquette and Scale of Fees—shall be adopted as resolutions to apply throughout the area of the Lowestoft Section.

At a previous special meeting, held on February 6th, it was proposed that these resolutions should be adopted to apply throughout the Division area. Letters were read from members resident in Beccles and Bungay, which showed the impossibility of adopting these resolutions to apply throughout the Division area; hence, in accordance with Rule C. of the Bradford Division notice of the above resolution was sent to every member of the Division more than seven days before the meeting, and more than five-sixths of the members signified in writing their approval of the resolution.

Discussion.—Dr. WORTHINGTON introduced a discussion on the treatment of *ante-partum* haemorrhage, in which the majority of the members present took part. Cases and specimens were shown by Drs. BELL and EVANS.

LANCASHIRE AND CHESHIRE BRANCH:

NORTH MANCHESTER DIVISION.

A MEETING of this Division was held on Thursday, March 19th, at the Palatine Hotel, Manchester, Dr. LEE in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed, after the names of those taking part in the last meeting were added, at the suggestion of Dr. BROADBENT.

Confirmation of Rules.—The SECRETARY reported the confirmation of the Bradford Rules as modified by the Division, with the exception of the proposed addition to Rule Z.

Contract Practice Difficulty.—A member of the Division reported that a club was pressing him to accept the wives and families of members at the same rate as the men. The following resolution was proposed by Dr. BROADBENT, seconded by Dr. PALANQUE, and carried unanimously:

> This Division considers that Contract Practice for women and children is derogatory to the profession, and that no arrangement for such should be made by any member of the Division.

A copy of this resolution to be sent to the club secretary.

Medical Inspection of School Children.—The suggestions of the Medico-Political Committee were agreed to without addition.

The Term "Hospital."—The following addition to the suggested definition was proposed by Dr. BROADBENT, seconded by Dr. LEE, and carried unanimously:

> That it has the approval of the local medical men.

Life Insurance.—The questions on life insurance referred to the Division were answered as follows:

1. Too numerous to specify.
2. Yes.
3. Some full, some short.
4. Yes; industrial policies for examining the chest and for hernia, with very short certificate.
5. Yes.
6. No.
7. No.
8. Schedule B at 10s. 6d.
9. For purely industrial insurances 2s. 6d. might be accepted for Schedule C if so altered as to make it clear that only a short modified examination is required.

METROPOLITAN COUNTIES BRANCH:

CITY AND WALTHAMSTOW DIVISIONS.

A CONJOINT meeting of the City and Walthamstow Divisions was held on Tuesday, March 10th, at the Walthamstow Hospital at 4 p.m. Dr. FOWLER was in the chair; two members of the City Division, twelve of the Walthamstow Division, and two visitors attended.

Physical Signs in Healthy and Diseased Lungs.—A paper on some puzzling physical signs in healthy and diseased lungs was delivered by Dr. LAURISTON SHAW. The paper held the closest attention of those present all through, and aroused considerable discussion. Dr. Shaw took the signs in healthy lungs first under three divisions:—(1) The vast difference in different subjects of the normal breath sounds; (2) difference in the same subject between the auscultatory sounds in right and left apices; (3) lung bruit in heart sounds. In diseased lungs he also gave examples under three headings:—(1) Persistence of physical signs in lung after pneumonia: (*a*) Empyema, (*b*) pre-existing lesions; (2) exploratory anomalies; (3) fallacious cavity signs. A discussion followed, in which Drs. BODILLY, WISE, SHADWELL, PRICE and BERRILL took part. Dr. SHAW replied.

Vote of Thanks.—A vote of thanks, proposed by Dr. FOWLER and seconded by Dr. SOUTHCOMBE (City Division), was unanimously voted to Dr. Shaw. This terminated the conjoint meeting.

WALTHAMSTOW DIVISION.

The Walthamstow members then held a separate meeting for business purposes.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Hampstead General Hospital.—A letter from the Hampstead Division was next considered, and the following resolution, proposed by Dr. BERRILL and seconded by Dr. SHADWELL, was unanimously passed:

> That the sympathy and support of this Division be accorded to the Hampstead Division in their struggle with the Hampstead Hospital authorities, that the Secretary write to the Hampstead Division to this effect, and that the Representatives be instructed to support the Hampstead Division by vote in the Branch Council.

Workmen's Compensation Act and Hospital Patients.—The memorandum issued by the Branch Council on the situation created by the Workmen's Compensation Act with regard to hospital patients was then considered, and answers given to the questions as desired, and the meeting terminated.

RICHMOND DIVISION.

South-West London Medical Hospital Committee.

AT a meeting of this Division held on March 11th the following resolutions were passed:

"*Resolution A.*—That this Division approves of the interim report of the South-West London Medical Hospital Committee and of the steps taken to organize professional opinion, and considers:

(i) That the conditions Nos. 1, 2, 3, and 4 enumerated below should be fundamental to the constitution of the proposed hospital.

(ii) That condition No. 5 states the only satisfactory manner in which representation of the medical profession's interest can be obtained.

(iii) That any registered medical practitioner who countenances or aids the erection of any hospital, or acts on the staff of or uses any hospital when erected, before the South-West London Medical Hospital Committee reports that the negotiations have had a definite and satisfactory result will act in a manner injurious to the interests of the medical profession.

And authorizes the South-West London Medical Hospital Committee to take such steps as it may consider desirable to organize lay opinion in the matter, and to continue its present endeavours in behalf of those members of the medical profession who are members of this Division.

"*Conditions*—(1) That there is no necessity in Putney for a large general hospital on the lines of the West London Hospital, nor ever will be. (2) That a small general hospital on the cottage hospital lines would meet the needs of the parish of Putney. (3) That at such a hospital there should be no arrangements made for the treatment of out-patients. (4) That

there should be recognition of the principle that the number of non-paying beds should not be greater than the needs of the district or the resources of endowment. (5) That there should be adequate directly-elected representation of the medical profession on the present and any future Committee formed to deal with the question of conduct of a hospital in Putney."

"*Resolution A2.*—That a copy of the above resolution be sent to the proposed Putney Hospital Committee, the South-West London Medical Hospital Committee, the Central Council of the Association, the Central Hospitals Committee of the Association, as also to the British Medical Journal and the *Lancet*."

NORTH OF ENGLAND BRANCH.

A special meeting of this Branch was held in the Board Room of the Royal Victoria Infirmary, Newcastle-on-Tyne, on Thursday, March 12th. There were between fifty and sixty of the members present. Dr. Cox, President, occupied the chair.

Medical Inspection of School Children.—The purpose of the meeting was to consider the question of the medical inspection of school children. The President, at the outset, wished it to be thoroughly understood by the meeting that they were assembled there merely to ventilate the subject, and whatever resolution they should pass that afternoon the same would not, and could not, be in any way binding on the Divisions. Dr. C. R. Stewart (Gateshead), in opening the discussion, moved:

That, in the opinion of this meeting of the North of England Branch of the British Medical Association, the proposed system of medical inspection of school children, if carried out by general practitioners, will be a great danger to the status of the majority of practitioners, for the following reasons:

1. It would establish a few as specialists in diseases of children to the detriment of the many.
2. It would tend to cause endless friction between the holders of these posts and the general practitioners.
3. That the order clearly points to the fact that the education authority shall in time undertake treatment.

The existence of these dangers renders it essential, first, that this inspection should be carried out by men holding whole-time appointments, and, secondly, that no man appointed to one of these posts should at any time undertake treatment.

Dr. Robson of Alnwick seconded the resolution. Dr. Todd (Sunderland) then moved the following amendment to the first part of the resolution:

That where possible the appointment of medical inspection of school children should be given to general practitioners.

In proposing this amendment, Dr. Todd said if the whole-time appointments were made it was only the thin end of the wedge, and they would soon all become State-paid servants. Dr Modlin (Sunderland), in seconding the amendment, said his Division in Sunderland had stood to a man against the education authorities who, some year or more ago, wished to appoint a whole-time limit, and, what was more, had defeated them. Dr. Campbell (Newcastle) thought it would be a stepping-stone to making specialists in diseases of children. Dr. Farquharson (Newcastle) said that if they adopted the resolution they were taking a retrograde step. The ratepayers should have a say in the matter, and it was only fair that their interest should be looked after. Dr Hill (Medical Officer, Durham County), in supporting the motion, said they must consider that there was a vast difference between the town and country districts. If full-time inspectors were not appointed the work would devolve on the local medical officer of health in country districts, for the medical practitioner in the country would not take such appointment. This would be very serious for the health officer, who would find it quite impossible to do the work efficiently. Dr. Dickie, speaking for his own Division (Hartlepool), could say they were entirely in favour of whole-time appointment. The question was then put. For amendment 7 against 15. The latter half of the resolution was then discussed, namely, that no man appointed to one of these posts should at any time undertake treatment. The voting was as follows: For resolution 16 against 3. Owing to the prolongation of the discussion a number of the members had to leave the meeting for their trains before the question was put, hence the small proportion of those originally present voting.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

March 26th, 1908.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

East Anglian Branch.—The spring meeting of this Branch will be held at Beccles on Thursday, April 9th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich (Secretary for Suffolk).—B. A. Nicholson, General Secretary of Branch.

Edinburgh Branch: South-Eastern Counties Division.—The spring meeting will be held in the King's Arms Hotel, Melrose, on the afternoon of Thursday, April 2nd, at 3.30 o'clock.—W. Hall Calvert, Honorary Secretary.

Lancashire and Cheshire Branch: Altrincham Division.—The next general meeting of this Division will be held at the Greenbank Hotel, near Northwich, on Thursday, April 9th, at 4 50 p.m.

Lancashire and Cheshire Branch.—A meeting of the Standing Committee on Division and Branch Organization and Finance will be held on Wednesday, April 1st, at 4 30 p.m., at 3, St. Peter's Square, Manchester.—F. Charles Larkin, Honorary Secretary.

Metropolitan Counties Branch: Richmond Division.—A meeting of this Division will be held on Wednesday, April 8th, at 8 30, at the Royal Hospital, Richmond, when Mr. W. T Lister, B A, F R C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6.30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: St. Pancras and Islington Division.—A meeting of this Division will be held in the Board Room, University College Hospital, W C., at 4 o'clock, on Tuesday, April 7th. Sir Victor Horsley, F.R S., will read a paper on Caries of the Spine and Allied Conditions. Visitors cordially welcomed.—William Griffith, Honorary Secretary, 1, Chester Gate, Regent's Park, N.W.

South-Eastern Branch: Folkestone Division.—A meeting of this Division will be held at the house of the Honorary Secretary 14 Manor Road, Folkestone, on Thursday, April 2nd, at 8.30 p.m. Agenda: Minutes. Matters referred to Divisions (see Supplement, February 22nd): (*a*) Report as to proposed definition of the word "hospital"; (*b*) report on life insurance examination.—P. Vernon Dodd, Honorary Secretary.

South-Eastern of Ireland Branch.—A meeting of this Branch will be held at the Adelphi Hotel, Waterford, on April 1st, at 3 o'clock. Agenda: 1. Minutes. 2. Letters. 3. Correspondence. 4. Adjourned consideration of procedure in ethical cases. 5. Nomination of officers of Branch for ensuing year. 6. Any other business.—J. Quirke, Honorary Secretary, Piltown.

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held at Caxton House, Westminster, on March 19th, with Dr. F. H. Champneys in the chair.

Payment to Medical Men Called in by Midwives.

Mr. J. Ward Cousins moved:

That as no arrangement for the payment of fees to medical men summoned to assist certified midwives has been made satisfactory to the medical practitioners of the country, the time has arrived for the Board to reconsider the question, with special reference to the efficient operation of the Midwives Act, 1902.

He said that the Central Midwives Board should reconsider the question of payment to medical men summoned to assist certified midwives. All the great medical colleges and corporations, and the British Medical Association, were of opinion that the Board should reconsider the question. Certain places like Liverpool, Manchester, and Birmingham had arranged for the payment of fees to medical men summoned to assist certified midwives, but no method of dealing with the question would be sufficient unless it applied to the whole of the area under the control of the Board. Medical men would never be satisfied with the partial suggestions contained in the circular of the Local Government Board dated the 29th July, 1907, addressed to all Boards of Guardians. In that circular the Local Government Board intimated that if the guardians would only be kind and liberal, and pay medical men called in by midwives if the guardians thought fit, then there would be an end to the difficulty, and the doctors would have nothing to complain about. But there was no evidence that those directions to the guardians had produced results in any way satisfactory to the medical profession. His own feeling was that if anything was done it must be done by the Central Midwives Board. By the third section of the Midwives Act it was provided that the duties and powers of the Board shall be to do any act or duty which might be necessary for the due and proper carrying out of the provisions of the Act, and he maintained that it was impossible for the Act to be successfully carried out unless the difficulty in regard to the payment of medical men summoned by midwives was fairly met. If the Act was not carried out it was the poor women and children of this country that would suffer. In 1910 all the old Sairey Gamps would be cut off from the practice of midwifery, and unless provision was made for the payment of medical men the certified midwives would be left without assistance, for it was absurd to expect doctors to attend cases for nothing. The suggestion that the difficulty could be met by an amendment of the Midwives Act was useless, because there was not the slightest prospect of that coming about. It seemed to him therefore that the Central Midwives Board must find a solution of the difficulty, and must arrange for another interview with the Local Government Board. To leave the question of the payment of medical men to the Boards of Guardians was futile, for Boards of Guardians would not think fit to pay the fees. From his experience of guardians, if the question of a fee to a doctor was before them it would be discussed for hours and nothing would be done. The whole matter would assume a different aspect if the Local Government Board ordered Boards of Guardians to pay the fees of medical men directing that the applications for such payments should be made to the guardians through the local supervising authorities. The important point was that the Central Midwives Board should draw up a fair scale of fees for medical men called in by certified midwives and then interview the Local Government Board and explain the difficulties attending the working of the Midwives Act. In that way a great deal of good would be produced, and he hoped by that means the breach between medical men and midwives would be healed.

Mr. Parker Young, in seconding the motion, said that the Government ought to take the matter up. The Act ought to run smoothly instead of being, as it was at present, unworkable. The Government ought to make proper provision for the payment of medical men, and the matter ought not to be left to the decision of the guardians whether they thought fit to pay or not. If the motion was carried they could go to Mr. John Burns, who was a fair man, and discuss it with him.

Dr. Atkinson suggested that the words, "and certified midwives," should be added after the word "practitioners," and this was accepted by the mover and seconder of the motion.

The Chairman said that they had reason to be grateful to the Local Government Board for issuing the circular of July 29th, 1907. The circular did not solve the whole question, but it was, at any rate, a recognition that something ought to be done. More was required than had been done, but it was not in accordance with facts to state that the Central Midwives Board had not done anything in regard to this question of payment of medical men. The following record, taken by the Secretary, Mr. Duncan, from the minutes of the Board, showed how much attention and care the Board had expended on that important subject. The Chairman then read out the following:

On February 25th, 1904, it was moved by Mr. Parker Young, seconded by Mr Ward Cousins, and unanimously resolved, that inasmuch as no provision is made in the Midwives Act, 1902, for the payment of legally-qualified medical practitioners, the Government be requested to take the necessary steps for amending the Act by introducing a section or otherwise to provide for the payment of legally-qualified medical practitioners when called in by midwives in difficult cases. Resolved further that a copy of this resolution be sent to the Privy Council. Resolved also that the Secretary do include this resolution in the summary of the proceedings of the Board as supplied by him to the press.

On November 24th, 1904, a letter was read from the Honorary Secretary of the Metropolitan Counties Branch of the British Medical Association, enclosing a copy of a letter addressed by the Branch to the London County Council, with accompanying pamphlet, and asking for the co-operation of the Board with the London County Council in obtaining powers from Parliament to pay registered medical practitioners when called in by midwives in emergencies. It was moved by Mr. Parker Young, seconded by Mr. Ward Cousins, and unanimously resolved, that the Honorary Secretary of the Metropolitan Counties Branch of the British Medical Association be informed (1) that this Board agrees that statutory provision should be made for the payment of the services of a registered medical practitioner when called in by a midwife in accordance with the Rules of the Board; (2) that the Board has already forwarded a resolution to this effect to the Privy Council.

On July 26th, 1906, a letter was read from the Clerk of the London County Council enclosing copy of a letter from a certified midwife as to the payment of fees to medical practitioners when summoned in cases of emergency. Resolved, that the London County Council be informed that the Board has repeatedly urged the amendment of the Midwives Act so as to provide for the payment of such fees, and that in some cases Boards of Guardians pay such fees, where the poverty of the patient appears to justify such a course, without insisting on the order of the relieving officer being obtained beforehand.

On June 27th, 1907, the adjourned consideration of the report of the Midwives Act Amendment Committee was then proceeded with. Resolved, that provision should be made for the payment out of public funds of reasonable fees to medical practitioners sent for in emergencies in accordance with the Rules of the Board, with power to recover such fees from the patient or other person responsible, in suitable cases.

On November 28th, 1907, a letter was read from Dr. W. P. T. Daniel, of 273 Cable Street, London, E., forwarding a copy of a resolution adopted at a meeting of medical men residing in the parish of St. George's-in-the-East and neighbourhood, declaring their intention, after November 30th, not to proceed to any case of parturition, etc., occurring in the parish on the requisition of a midwife, unless a minimum fee on one guinea is guaranteed either by the guardians or by the Central Midwives Board. Resolved: (*a*) That a copy of the correspondence be sent to the Privy Council, pointing out the difficulties and dangers of the situation, and suggesting that a copy of the Local Government Board's circular on the subject, dated July 29th, 1907, should be forwarded to every medical practitioner in England and Wales. (*b*) That the Board's action in the matter be communicated to Dr. Daniel, and that he be informed that the Board has no power to pay fees in such cases.

The Privy Council had adopted the Board's suggestion that a copy of the Local Government Board's circular should be forwarded to every medical practitioner in England and Wales in a modified form. They had omitted the names of those medical practitioners residing in certain streets in the large towns, where only consultants could be reasonably expected to be found. In addition to this, the matter had been the subject of continual conversation between the officials of the Privy Council on the one side, and the Chairman and the Secretary of the Board on the other. The point that ought to be understood was that the omission in the Act could

only be cured by fresh legislation, and although that had been repeatedly urged upon the Privy Council it had not hitherto seen its way to undertake it. The Board, therefore, had not neglected its duties in regard to the subject. Mr. Parker Young took a gloomy view about the Midwives Act being unworkable; in a sense it was so, but in spite of certain clogs on its wheels the Act had been worked, though they all agreed it was not working as it ought. Midwives must be supplemented, and medical men must be paid, and when that was done it would not be a long time before it would be a profitable expenditure, and would put money in the pockets of the country by securing the health of the women and the children. The Central Midwives Board must indicate to the proper authorities in what way the Act should be amended. A step in the right direction had been made by the issue of the circular of the Local Government Board, and it was of great importance because a great principle was thus accepted.

Mr. WARD COUSINS said the Board had not done enough, and the difficulty had not been overcome which rendered the working of the Act impossible.

The CHAIRMAN here explained that it must not be understood that he was in any way opposed to the motion proposed by Mr. Ward Cousins.

Mr. WARD COUSINS, resuming, said that if the Board voted for the motion then the Board must interview Mr. John Burns.

The motion was then put with the addition mentioned above, and carried unanimously.

The question of formulating definite proposals to be submitted to the Privy Council and the Local Government Board was referred to the Standing Committee.

Convictions of Midwives.

A letter was received from the Under Secretary of State for the Home Department, informing the Board that the chief constables of counties and boroughs, and the Commissioners of Police of the Metropolis and of the City of London, had been requested to report convictions of midwives direct to the Board.

Midwives Roll.

A letter was received from the Clerk of the Privy Council, stating that the Treasury had authorized the Controller of His Majesty's Stationery Office to arrange with the Board for the supply of copies of the Midwives Roll of 1908, and to distribute the same to the coroners of England and Wales.

Examinations.

A letter was considered from the Devon and Cornwall Training School for Nurses, asking the Board to hold an examination at Plymouth. It was decided that the request be refused, the probable number of candidates being at present insufficient to warrant the holding of an examination at Plymouth, but when the attendance of twenty candidates could be guaranteed the Board would reconsider the matter.

Midwives' Name Plates.

A letter was considered from the Clerk of the London County Council as to the construction of Rule E 26, and it was decided that the London County Council be informed that the amendment of Rule E 26 having been dealt with, the Board does not propose to reopen the question at present.

Coombe Hospital.

A letter was received from the Registrar of the Coombe Hospital Dublin, forwarding a copy of a resolution passed by the Board of Governors of the hospital, requesting the Central Midwives Board to reinstate the Coombe Hospital as an approved training school, and it was decided that the request be granted, and that the name of the Coombe Hospital, Dublin, be replaced in the list of approved training schools. The Chairman also stated that the Central Midwives Board had reason to be satisfied with the straightforward way in which the authorities of Coombe Hospital had met the Board in regard to their representations.

Infection.

A letter was considered from Dr. H. Handford, County Medical Officer for Notts, as to the construction of Rules E 1 and 5, which deal with directions to midwives concerning their duties to patient and child and their obligations with regard to disinfection, etc. It was decided that Dr. Handford be informed that the case of a midwife suffering from septic ulcers or kindred complaints appeared to fall within the terms of Rules E 1 and 5, or might be dealt with by the local sanitary authority under the Public Health Acts.

The Training and Supply of Midwives.

The Board affirmed the following propositions, and decided to forward a copy of them to the Privy Council.

1. That midwives (who are "a necessity") will be unable to make a living in many localities without extraneous aid.
2. That such localities are very often exactly those in which their presence is most necessary from the poverty and (in some cases) the sparseness of the population.
3. That voluntary contributions cannot be relied upon to supply the whole of the necessary financial aid.
4. That for this purpose a Government grant is a necessity.
5. That if such a grant were provided, a representative Council of competent persons should be appointed to administer the fund thus constituted.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

SURGEON H. L. GEOGHEGAN, M.D., is promoted to be Staff Surgeon, from May 15th, 1907. He was appointed Surgeon, May 15th, 1899.

Surgeon HARRY M. LANGDALE has been appointed to the *Triton*, on recommissioning, March 23rd; and Surgeon ALFRED W. TREDELL, to the *Victory*, undated.

ARMY MEDICAL SERVICE.

COLONEL F. B. MACLEAN, who is serving in India, has been appointed Principal Medical Officer Aden Brigade.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL C. W. THIELE, M.B., retires on retired pay, March 21st. He was appointed Surgeon, July 30th, 1881; Surgeon-Major, July 30th, 1893; and Lieutenant-Colonel, July 30th, 1901. He served in the South African war in 1899-1902, and was present at the relief of Ladysmith and the action at Colenso; he was also in the operations on the Tugela Heights, in the action at Pieters Hill, and in operations in the Transvaal and Orange River Colony; he has received the Queen's medal with five clasps and the King's medal with two clasps.

Major W. H. HOBROCKS, M.B., returned from Gibraltar, has been appointed Sanitary Officer in London, in place of Major J. C. Weir, M.B., appointed for duty at Newcastle-on-Tyne.

Major A. PEARSE has been appointed Senior Medical Officer, Sierra Leone, vice Major J. Girvin.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-CAPTAIN E. W. LIVESEY to be Surgeon-Major, March 14th.

IMPERIAL YEOMANRY.

CAMPBELL T. FOX to be Surgeon-Lieutenant in the Royal East Kent (the Duke of Connaught's Own) Regiment, February 26th.

Surgeon-Lieutenant E. M. KNOTT, Northamptonshire Regiment, resigns his commission, February 24th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-MAJOR J. M. MOIR, M.D., the Highland Regiment, to be Surgeon-Lieutenant-Colonel, February 10th.

Surgeon-Captain T. STEVENSON, M.B., 2nd Lancashire Regiment, to be Surgeon-Major, March 3rd.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN W. RICHARDSON, M.D., 7th (Isle of Man) Volunteer Battalion the King's (Liverpool Regiment), to be Surgeon-Major, February 13th.

Surgeon-Captain E. P. A. MARIETTE, M.B., 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, to be Surgeon-Major, February 18th.

ALFRED ALEXANDER to be Surgeon-Lieutenant in the 1st Cinque Ports Volunteer Rifle Corps, February 24th.

The undermentioned gentlemen to be Surgeon-Lieutenants in the 1st Volunteer Battalion the Durham Light Infantry, from the dates specified: DOUGLAS V. HAIG, M.D., January 30th: DAVID L. FISHER, M.B., January 31st; GEORGE G. FARQUHAR, M.B., February 1st.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

THE following announcement is substituted for that which appeared in the *London Gazette* of September 3rd, 1907: GEORGE L. L. LAWSON (late Surgeon-Captain, 6th Regiment Imperial Bushmen, New South Wales), to be Lieutenant in the London Companies, June 1st, 1907.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy six of the largest English towns, including London, 8,663 births and 5,257 deaths were registered during the week ending Saturday last, March 21st. The annual rate of mortality in these towns, which had been 17.3, 17.6, and 17.2 per 1,000 in the three preceding weeks, further declined to 16.9 per 1,000 last week. The rates in the several towns ranged from 8.8 in Great Yarmouth, 9.0 in Hornsey, 10.3 in York, 10.5 in Aston Manor, 10.6 in East Ham and in Wolverhampton, and 10.9 in Reading, to 22.7 in Tynemouth, 23.3 in Norwich, 24.9 in Oldham, 25.0 in St. Helens and in Wigan, 25.2 in Bootle, 25.7 in Middlesbrough, and 27.6 in Hanley. In London the rate of mortality was 15.8 per 1,000, while it averaged 17.3 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six large

towns; in London this death-rate was equal to 1.1 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2.9 in Stockton-on-Tees, 3.0 in Smethwick and in Wallasey, 4.0 in Burnley, 4.3 in Rhondda, 4.8 in Salford, and 6.6 in Warrington. Measles caused a death-rate of 1.1 in Swansea, 1.4 in Halifax and in South Shields, 1.7 in Croydon, 2.0 in Burnley, 2.2 in Preston, 2.4 in Salford, 2.9 in Stockton-on-Tees, and 3.1 in Rhondda; diphtheria of 1.5 in Bournemouth, in Smethwick, and in Warrington; and whooping-cough of 1.1 in Walsall, 1.4 in Merthyr Tydfil, 1.5 in Hanley, in Birmingham, and in Bootle, 1.9 in Reading, 2.0 in Newport (Mon.), 2.3 in Sunderland, 3.0 in Wallasey, and 5.1 in Warrington. The mortality from scarlet fever, from enteric fever, and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,674, 3,567, and 3,429 at the end of the three preceding weeks, had further declined to 3,356 at the end of last week; 378 new cases were admitted during the week, against 383, 345, and 312 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, 949 births and 652 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.2, 19.3, and 20.3 per 1,000 in the three preceding weeks, further declined last week to 18.5 per 1,000, but was 1.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14.6 in Edinburgh and 16.2 in Aberdeen to 21.3 in Dundee and 22.2 in Perth. The death-rate from the principal infectious diseases averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Leith. The 342 deaths registered in Glasgow included 30 which were referred to measles, 3 to scarlet fever, 13 to whooping-cough, and 6 to diarrhœa. Five fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh: 3 of whooping-cough and 4 of diarrhœa in Dundee; 2 of diarrhœa in Aberdeen; and 3 of whooping-cough in Leith and 2 in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 14th, 523 births and 487 deaths were registered in six of the principal Irish towns, as against 570 births and 509 deaths in the preceding period. The annual death-rate in these towns, which had been 23.5, 22.4, and 29.8 per 1,000 in the three preceding weeks, fell to 29.1 per 1,000 in the week under notice, this figure being 11.9 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 19.5 in Londonderry and 24.8 in Dublin to 35.5 in Limerick and 37.6 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.8 per 1,000, or 0.9 per 1,000 lower than during the preceding period, the highest figure, 3.9, being recorded in Waterford. In Dublin there were 7 deaths from influenza, the records for the previous three weeks being 10, 9, and 7.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERDARE EDUCATION COMMITTEE.—School Medical Officer. Salary, £220, rising to £250 per annum.

AYR DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum.

BEDFORD COUNTY HOSPITAL.—House-Physician. Salary, £60 per annum.

BRISTOL ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

BROMSGROVE: BARNSLEY HALL ASYLUM.—Second Assistant Medical Officer. Salary, £150 per annum.

CAMBRIDGE BOROUGH.—Medical Officer of Health. Salary, £500 per annum.

CAMBRIDGESHIRE, ETC., ASYLUM, Fulbourn.—Second Assistant Medical Officer. Salary, £120 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary, £70 per annum.

CHESHIRE COUNTY COUNCIL EDUCATION COMMITTEE.—Two Assistants to the Medical Officer of Health. Salary, £360 per annum each.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—(1) House-Physician (male). Salary at the rate of £50 per annum. (2) Clinical Assistant. (3) Physician to Out-patients.

EDINBURGH DISTRICT ASYLUM.—Second Assistant Physician. Salary, £120 per annum.

EGYPTIAN GOVERNMENT.—Resident Surgical Officer at the Kasr-el-Ainy Hospital. Salary, £250 per annum.

HASTINGS, ST. LEONARDS AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. Honorarium, £20 for six months.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House Physicians. Honorarium, £25 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician; (2) House-Surgeon; (3) Assistant Casualty Medical Officer. Salary, £20 each for six months, and washing allowance.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary, £100 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL.—Resident Medical Officer. Remuneration at the rate of £50 per annum.

MIDDLESEX HOSPITAL.—Second and Third Assistants to the Director of the Cancer Research Laboratories. Salary, £150 and £100 per annum respectively.

NATIONAL HOSPITAL FOR THE PARALYTIC AND EPILEPTIC, Queen Square, W.C.—Registrar. Salary, £100.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ST. GEORGE'S UNION.—Medical Officer for No. 2 District. Salary, £100 per annum.

SALFORD ROYAL HOSPITAL.—Honorary Surgeon for the Pendleton Branch Dispensary.

SEAMEN'S HOSPITAL, GREENWICH, S.E.—(1) Two House-Physicians. (2) Two House-Surgeons. Salary, £50 per annum each.

SHREWSBURY: SALOP INFIRMARY.—(1) House-Surgeon; (2) House-Physician. Salary at the rate of £100 and £50 per annum respectively.

SOUTHPORT INFIRMARY.—(1) Resident Senior House-Surgeon. (2) Junior House and Visiting Surgeon. Salary at the rate of £90 and £70 per annum respectively.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon (male). Salary, £90 per annum.

SOUTHWARK UNION INFIRMARY.—Assistant Male Medical Officer. Salary, £100 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

SURREY COUNTY COUNCIL EDUCATION COMMITTEE.—Four Assistant Medical Officers. Salary, £250 per annum each.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

WALSALL COUNTY BOROUGH.—School Medical Officer. Salary, £200 per annum.

WARRINGTON COUNTY BOROUGH.—(1) Assistant Medical Officer of Health. Salary, £125 per annum. (2) Locum Tenens to act temporarily as Assistant Medical Officer of Health. Salary at the rate of £125 per annum.

WEST HAM COUNTY BOROUGH.—Two Medical Inspectors of School Children. Salary, £250, rising to £300 per annum each.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Salary, £80 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Doneraile, co. Cork; Turriff, co. Aberdeen; Erith, co. Kent; Lynton, co. Devon; Worthen, co. Salop; Loftus, co. York.

APPOINTMENTS.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:

James Young, M.B., Ch.B., clinical tutor to Mr. Cathcart.

Resident House-Physicians: C. A. Thelander, M.B., Ch.B., to Professor Greenfield; A. P. Mitchell, M.B., Ch.B., to Professor Wyllie; S. Forrest, M.A., M.B., Ch.B., to Dr. Bramwell; G. Henderson, M.B., Ch.B., to Dr. Gibson; W. K. Macdonald, M.B., Ch.B., to Dr. Bruce; F. L. Scott, M.B., Ch.B., L.R.C.P. and S.Edin., to Dr. Philip; D. M. Barcroft, M.B., Ch.B., to Dr. Russell.

Resident House-Surgeons: J. Fraser, M.B., Ch.B., to Mr. Dowden, Wards 7, 8, and 9; A. F. Hewat, M.B., Ch.B., to Professor Chiene, C.B.; A. E. Chisholm, M.B., Ch.B., to Mr. Cotterill; H. B. Thomson, M.B., Ch.B., to Mr. Cathcart: W. L. Gordon, M.B., Ch.B., to Mr. Caird; J. E. Murray, M.B., Ch.B., to Mr. Hodsdon; A. I. Shepheard-Walwyn, M.B., Ch.B.; W. S. Robertson, M.B., Ch.B.; and A. G. H. Smart, M.B., Ch.B., to the surgical out-patient department.

Non-Resident House-Physician: L. F. Bianchi, M.R.C.P.Edin., D.P.H., to Dr. Lovell Gulland.

Non-Resident House-Surgeons: C. H. Derksen, M.B., Ch.B., to Dr. G. Mackay; W. B. Hendry, L.R.C.P. and S.Edin., to Dr. Logan Turner; A. M'Kendrick, F.R.C.S.Edin., to Mr. Miles.

Clinical Assistants: L. H. F. Thatcher, M.B., Ch.B., to Professor Wyllie; W. G. Cobb, M.B., Ch.B., to Dr. Bramwell; D. K. Henderson, M.B., Ch.B., to Dr. Bruce; S. Jackson, M.B., Ch.B., to Dr. Philip; A. Fleming, M.B., Ch.B., to Dr. Lovell Gulland (M.W.R.); W. D. Osler, M.B., C.M., to Dr. Fleming (M.W.R.); S. T. Champtaloup, M.B., Ch.B., to Dr. H. Rainy (M.W.R.); A. E. Turnbull, M.B., Ch.B., to Mr. Dowden, Wards 7, 8, and 9; J. A. Jamieson, M.B., Ch.B., to Professor Chiene, C.B.; G. J. Luyt, M.B., Ch.B., to Mr. Hodsdon; J. D. Bowie, M.B., Ch.B.; and R. O. Godsall, M.B., Ch.M., to Dr. Logan Turner.

Resident Medical Officer at the Convalescent House: R. St. C. Steuart, M.B., Ch.B.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—The following have been appointed Resident Medical Officers:

Alan Macdonald Dick, M.B., Ch.B.; Sydney Buxton Legge, M.B., Ch.B.; Charles McNeill, M.A., M.B., Ch.B., and W. A. Welsh, M.B., Ch.B.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

BENNETT-JONES.—On March 22nd, at 73, Sheil Road, Liverpool, the wife of W. J. Bennett-Jones, M.D., of a daughter.

DEATHS.

ARCHIBALD.—On March 23rd, John Archibald, M.D., of 89, Wimborne Road, Bournemouth, in his 63rd year. Funeral from Biggar Station on Thursday, March 26th, at 12.20 p.m. This is the only intimation and invitation.

ATTFIELD.—On March 23rd, at San Remo, Italy, in his 42nd year, after suffering for five years from consumption and recently influenza, Donald Harvey Attfield, M.A., M.B., formerly Medical Officer of Health at Watford, and afterwards for several years Chief Maritime Medical Officer of Health for the Egyptian Government at Suez, son of Professor Attfield, F.R.S., of Watford. Friends please accept this, the only, intimation.

DIARY FOR THE WEEK.

TUESDAY.

Royal College of Physicians of London, Pall Mall East, S.W., 5 p.m.—Second Lumleian Lecture by Sir James Sawyer: Points of Practice in Maladies of the Heart.

THURSDAY.

North-East London Clinical Society, Prince of Wales' Hospital, Tottenham, 4.15 p.m.—Discussion on Anaesthetics in General Practice.

Royal College of Physicians of London, Pall Mall East, S.W., 5 p.m.—Third Lumleian Lecture by Sir James Sawyer: Points of Practice in Maladies of the Heart.

FRIDAY.

Royal Society of Medicine:

Laryngological Section, 20, Hanover Square, W., 5 p.m. —Cases and Specimens.

West London Medico-Chirurgical Society, West London Hospital, 8 p.m.—Clinical meeting.

POST-GRADUATE COURSES AND LECTURES.

Hospital for Diseases of the Skin, Blackfriars, S.E.—Tuesday, 4 p.m., Senile Degeneration, Ephelis, Chloasma, Xeroderma Pigmentosum, Hydroa Vacciniforme. Friday, 4 p.m., Acanthosis Nigricans.

London School of Clinical Medicine.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m., Thursday Special Lecture:—Tuesday, 2.15 p.m. Infections of the Digestive Tract and their Significance.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following Clinical Demonstrations have been arranged for next week at 4 p.m. each day: Monday Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follow: Monday, The Clinical Anatomy and Physiology of the Nervous System; Tuesday, Some Interesting Cases of Cranial Surgery; Wednesday, The Clinical Anatomy and Physiology of the Nervous System; Thursday, The Diagnosis and Treatment of Renal Mobility.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynaecological; 4.30 p.m., Lecture: Pelvic Displacements Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye Thursday, 2.30 p.m., Gynaecological Operations Medical and Surgical Out-patient, *X* Ray; 3 p.m., Medical In-patient. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

BOOKS, Etc., RECEIVED.

Library of Philosophy. Edited by J. H. Muirhead, LL.D. Attention. By W. B. Pillsbury. London: Swan Sonnenschein and Co., Limited. 1908 10s 6d.

Studien und Mikrophotogramme zur Kenntnis der Pathogenen Protozoen. Herausgegeben von Th. von Wasielewski. Zweites Heft. Leipzig: A. Barth. 1908. M.12.

The Case for the Goat, with the Practical Experience of Twenty-four Experts. By "Home Counties." London: G. Routledge and Sons, Limited; New York: E. P. Dutton and Co. 1908. 3s 6d.

Transactions of the American Gynaecological Society. Vol. 32. 1907. Philadelphia: W. J. Dornan. 1907

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
27 FRIDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
28 SATURDAY ...	
29 Sunday ...	
30 MONDAY ...	
31 TUESDAY ...	London: Public Health Committee, 3.15 p.m.
APRIL.	
1 WEDNESDAY	United Kingdom Hospitals Conference, Botanical Theatre, University College, London W.C., 2 p.m. United Kingdom Hospitals Conference Dinner, Waldorf Hotel, Aldwych, W.C., 7.45 p.m. Lancashire and Cheshire Branch, Standing Committee on Division and Branch Organization and Finance, 3, St. Peter's Square, Manchester, 4.30 p.m. South-Eastern of Ireland Branch, Adelphi Hotel, Waterford, 3 p.m.
2 THURSDAY...	United Kingdom Hospitals Conference, Botanical Theatre, University College, London, W.C.; Morning Session 10.30; Afternoon Session, 2 o'clock. Folkestone Division, *South-Eastern Branch*, 14, Manor Road, Folkestone, 8.30 p.m. South-Eastern Counties Division, *Edinburgh Branch*, King's Arms Hotel, 3.30 p.m.
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	London: Naval and Military Committee, 2.30 p.m.

Date.	Meetings to be Held.
APRIL *(Continued).*	
7 TUESDAY ...	London: Organization Committee, 11 a.m. St. Pancras and Islington Division, *Metropolitan Counties Branch*, Board Room, University College Hospital, 4 p.m.
8 WEDNESDAY	London: Medico-Political Contract Practice Subcommittee. London: Medico-Political Committee, 2.30 p.m. Lancashire and Cheshire Branch, Meeting of Branch Council, Manchester Royal Infirmary 4.30 p.m. Richmond Division, *Metropolitan Counties Branch*, Royal Hospital, Richmond, 8.30 p.m.
9 THURSDAY...	London: Hospitals Committee, 2.30 p.m. London: Metropolitan Counties Branch Council, 5 p.m. Altrincham Division, *Lancashire and Cheshire Branch*, Greenbank Hotel, near Northwich, 4.50 p.m. East Anglian Branch, Beccles. Hampstead Division, *Metropolitan Counties Branch*, Business Meeting.
10 FRIDAY ...	London: Central Ethical Committee, 1.30 p.m. Tottenham Division, *Metropolitan Counties Branch* Rooms of the Hornsey Conservative Association (opposite Finsbury Park Station), 9.15 p.m.
11 SATURDAY...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	
15 WEDNESDAY	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 4TH, 1908.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

EDINBURGH BRANCH:
SOUTHERN DIVISION.

A MEETING of the Division was held in the Oddfellows' Hall, Forest Road, on Friday, March 20th, at 8.15 p.m., Dr. MATHESON in the chair. There were present: Drs. Cumming, H. Jamieson, Johnston, Lundie, Mackenzie, Mowat, E. Price, Aitchison Robertson, Scott, Lauder Thomson, Oliphant Walker, Webster, and the Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Apologies for Non-attendance.—Apologies for unavoidable absence were received from Drs. Proudfoot and A. Walker.

Medical Inspection of School Children.—The general question was discussed on March 28th, 1907, and reported. The suggestions of the Medico-Political Committee (SUPPLEMENT, February 8th, 1908) were then considered and generally approved of.

Definition of the Term "Hospital."—The proposed definition (SUPPLEMENT, February 22nd, 1908) was approved of.

Medical Examination for Life Insurance.

A. 1 (*a*) Several of those present at the meeting act regularly as medical examiners for the Prudential, Phoenix, Temperance, and Britannic Offices.

(*b*) Several members are employed to examine individual cases, when they are the family attendants, by the Scottish Widows' Fund.

2. Yes.

3. Fees depend on the amount insured. Short reports similar to Schedule B are usually paid for with fees less than 10s. 6d.

4. Yes. In cases with a fee less than 10s. 6d., the report demanded at present is in rather more detail than Schedule B. The members do not think that a form such as Schedule C would be accepted by any office here.

B. 5. A motion that less than one guinea should be accepted for *any* life insurance examination was carried by 6 to 5. Three did not vote.

6. It was unanimously agreed that one guinea should be the minimum fee for a *full* report.

7. No.

8. First portion answered by B 5. As to whether Schedule B is a suitable one, the vote was 5 to 5, four not voting. Certainly not less than 10s. 6d.

9. See answer in A 4; 10s. 6d. should be the minimum fee, however simple the report.

Corruption Act.—As the members have no experience of anything coming under this Act, it was not discussed.

Hospitals Conference Report.—After discussion, it was the unanimous opinion of the meeting that each hospital should send a delegate to the conference.

Postponement of Motion.—The motion standing in the names of Drs. A. Walker and Cullen was, owing to their unavoidable absence, postponed to the next meeting. The final decision as to the carrying out of a black list scheme was postponed till after the solicitor's opinion was reported to the Organization Committee at its next meeting on April 7th.

Medical Officership of Edinburgh.—This subject was discussed and the Secretary instructed to make certain representations to the Town Council.

Vote of Thanks.—A vote of thanks to the Chairman closed the meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH:
GLASGOW NORTH-WESTERN DIVISION.

A WELL-ATTENDED meeting of the Division was held in the dispensary buildings of the Western Infirmary on March 18th at 8.30 p.m., Dr. D. J. MACKINTOSH, M.V.O., in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

The late Sir T. McCall Anderson.—The CHAIRMAN alluded in feeling terms to the death of Sir Thomas McCall Anderson, a member of this Division, and expressed for himself and his fellow members the deep regret felt at his loss.

Payment of Representative's Expenses.—The SECRETARY read a letter from Dr. Hamilton, Secretary of the Branch Council, in which the application for a grant of money for payment of the Representative's expenses at the annual meeting, in accordance with the resolution of the previous meeting on a motion by Dr. Caskie, was refused, on the ground that it was *ultra vires*. The opinion of the solicitor to the Association had been obtained, and he was convinced that such payment could not be granted.

Notification of Births Act.—The SECRETARY reported on the action adopted by the joint committee formed after a public meeting of the profession in the district with regard to the adoption of the Notification of Births Act, and explained that a reasoned protest had been presented, and it was understood that the local authorities were prepared to carry out the Act as much as possible in accordance with the wishes of the medical profession.

United Hospitals Conference.—A communication was read about the United Hospitals Conference, in which an appeal was made to members possessing influence to exert it in inducing members of hospital Boards to support the movement.

Prevention of Corruption Act.—The report of the Central Ethical Committee on the Prevention of Corruption Act, 1906, was read and briefly discussed.

Definition of the Term "Hospital."—The report of the Central Ethical Committee on the definition of the term "hospital" was read and discussed, and it was unanimously resolved to adopt the definition proposed and to instruct their Representative at the annual meeting to that effect.

Life Insurance Examinations.—The report of the Medico-Political Committee on medical examinations for life insurance was presented. The Secretary explained what was asked for, and reminded the members that intimation had been made in the billet calling the meeting that he was prepared to receive answers in writing from those who were unable to be present at the meeting. After some discussion it was resolved to refer the matter further to the next meeting.

Cases, etc.—Dr. W. F. Somerville showed a new couch for use in *x* ray work, and demonstrated its use in a practical manner. Dr. A. G. Hay showed a number of patients under electric treatment for various ailments. These included several cases of paralysis following dislocation of the shoulder, lead palsy, and other interesting conditions. Dr. G. B. Buchanan demonstrated the use of Bier's bandaging and various forms of cupping glasses for producing hyperaemia for the treatment of acute inflammatory diseases, and gave a report of the results obtained recently in 60 or 70 cases by these methods.

Votes of Thanks.—A vote of thanks was given to Dr. Mackintosh for his kindness in offering accommodation for the meeting and providing tea for the members; and also to the members of the staff of the hospital for the clinical demonstrations.

LANCASHIRE AND CHESHIRE BRANCH.

By the kind invitation of the Council, Senate, and Faculty of Medicine, a highly successful scientific and clinical meeting of the Branch was held at the University of Liverpool on the afternoon of Wednesday, March 18th. The President (Dr. Helme) presided, and 110 members were present. The members of the North Wales Branch were invited to the meeting, and many attended.

Visit to Laboratories, Museums, and Classrooms.

The laboratories, museums, and other buildings were open to the inspection of members.

In the pathological department of the Thompson-Yates Laboratories, Professor Sir Rubert Boyce and Dr. E. E. Glynn exhibited a series of microscopical specimens illustrating phagocytosis and a series of recent additions to the pathological museum.

In the research laboratory of the School of Physiology, Miss Sowton and Professor Sherrington showed the action of chloroform on the isolated mammalian heart.

In the physiology theatre, Professor R. Magnus of Heidelberg demonstrated his method of studying the movements of the large and small intestines on the isolated intestines of the rabbit immersed in Ringer's fluid.

In the chemical physiology classroom, Dr. Roaf demonstrated the Seliwanoff reaction in urine.

It consists in heating a mixture of equal parts of strong hydrochloric acid and of the solution to be tested with a small quantity of resorcinol. If ketoses (laevulose or cane-sugar) are present a red colour develops. In applying the test to urine the colour is sometimes developed, sometimes not, and the research was to find the substance causing the reaction and the reason for its presence or absence.

It is found that pure solutions of urea, uric acid, kreatinin, and other substances normally present in the urine give no reaction.

The presence or absence of the reaction in the urine was next studied in relation to diet. It was found that after feeding with cane-sugar, sometimes even in small quantities, the reaction in the urine become positive in one and a half to two and a half hours, but again became negative in eleven or twelve hours.

So far the actual body present has not been determined, and the research is proceeding.

If as small a quantity as 0.1 per cent. of cane-sugar is added to urine that gives a negative reaction, a positive reaction is obtained.

Dr. Roaf also demonstrated a new colour method of estimating the rate of proteid digestion.

Fibrin stained with Congo-red is used, and the colour is found to be so fixed that it is only liberated when the fibrin is dissolved. The depth of colour that the fluid becomes is the index of the rate of digestion.

In the laboratory of experimental medicine of the Johnston Laboratories, Professor Salvin Moore explained some of the methods at present being employed in the cancer research department.

In the biochemical laboratory, Professor Benjamin Moore dealt with trypanosomiasis and its treatment.

In the anatomical department of the Medical School, Professor Paterson exhibited a series of new anatomical preparations and models.

In the practical surgery classroom, Dr. Stopford Taylor and Dr. Mackenna demonstrated (1) Bier's apparatus for use in dermatology; (2) a series of interesting cases of skin disease; (3) 40 beautiful coloured wax casts illustrating various conditions of the skin. Dr. Oram exhibited a patient under treatment for rodent ulcer by *x* rays, and a photograph taken before treatment was commenced.

In the surgery theatre, Dr. David Morgan showed a stereoscope for *x*-ray plates, a new *x*-ray diaphragm, a series of radiographs of kidney stones, etc., and plastic radiographs.

In the ophthalmology classroom, Dr. Grossmann demonstrated a case of commencing cataract. In it the opaque deposit was so distributed as to show in a very remarkable manner the radiating arrangement of the lens fibres, and demonstrated clearly its segmentary architecture. Mr. Bark and Mr. Sanderson demonstrated a series of cases the results of Heath's and of the complete mastoid operation. They also showed several cases in which submucous resection of the nasal septum had been done.

Salt-free Diet.

Dr. J. Hill Abram read a paper on salt free diet in nephritis, and showed a boy in apparently perfect health who two years ago was dying of renal ascites and anasarca. All remedies had failed until the "salt free" diet was tried. On it he made a rapid recovery. In the discussion which followed, Dr. Colin Campbell urged the value of such diet in obesity, and the President considered it in relation to the treatment of puerperal eclampsia by saline injections.

Bilharzia Disease.

Dr. Macalister read a note on bilharzia disease, and emphasized the importance of considering it as a possible cause in obscure cases of rectal or vesical haemorrhage, it being much more common in this country since the Boer war.

Bone Marrow as a Haematinic.

Dr. A. Gordon Gullan read a note on bone marrow as a haematinic. He had used it with excellent results in pernicious anaemia, chlorosis, myelosplenic leucocythaemia, etc. He showed charts indicating the changes occurring in the blood of these cases before and after use of the marrow. The marrow is the white marrow of the shin bone of the ox, and is given fresh and raw in sandwiches. As much as 9 oz. a day had been given. He argued that the marrow acted in two ways: (1) by stimulating the patient's marrow, and (2) by supplying some internal secretion normally secreted by healthy marrow, which has an antitoxic effect on intestinal toxins. Dr. Colin Campbell supported Dr. Gullan, and described his method of preparing a red and white bone-marrow butter. Dr. Buchanan discussed the mode of action of marrow, and argued that bone marrow is the most important protective organ we possess.

Cases.

Dr. Buchanan read notes of two cases: (1) Tuberculous meningitis treated by tuberculin: recovery. (2) Chloroma in a boy. He dealt with the pathology of the latter disease, especially with the blood changes and the alteration in the bone marrow. He illustrated his cases by microscopic specimens and lantern transparencies.

Development of Radiography.

Dr. David Morgan read a paper dealing with certain developments of radiography. He described the method of examining the knee-joint, the bladder, etc., by skiagraphy after inflation with oxygen. He also described

how radiographs can be prepared with the appearance of being in relief—plastic Roentgenography. Dr. Morgan illustrated his paper by numerous lantern slides and prints.

Pictures by Lumière Process.

Dr. Oram showed an excellent series of clinical pictures prepared by the Lumière process. He also described the process. Dr. Grossmann showed a series of photomicrographs, comparing ordinary photography with the three-colour and Lumière processes.

Mr. Newstead's paper on "The House-fly as a Carrier of Disease," and Dr. Bradshaw's paper on "The Physical Causes of Organic Heart Murmurs" were not read, on account of the authors being absent from illness. Mr. Larkin's case of Spermatocele was taken as read on account of the lateness of the hour.

MALAYA BRANCH.

The annual meeting of this Branch was held in Penang on February 4th.

Election of Officers.—The following office-bearers were elected for 1908: *President*, Dr. Avetoom, Penang. *President-elect*, Dr. G. D. Freer, Singapore. *Vice-Presidents*—Singapore, Dr. Murray Robertson, Singapore; Penang, Dr. G. W. Park, Penang; Native States, Dr. Henry Fraser, Kuala Lumpur. *Secretary*, Dr. G. A. Finlayson. *Treasurer*, Dr. R. D. Keith. *Representatives on Straits and Federated Malay States Medical Council*—Singapore, Dr. D. J. Galloway, Dr. W. R. C. Middleton; Penang, Dr. Avetoom, Dr. J. Kirk. *Representative on Medical School*, Dr. Lim Boom Keng. *Representative on General Council of British Medical Association*, Dr. W. C. Brown. *Members of Council*—Singapore, Lieutenant-Colonel Johnston, R.A.M.C., Dr. Galloway, Dr. Glennie; Penang, Dr. Skae; Native States, No return.

Report of Council.

The report of Council for 1907 stated that the number of members now stood at the high figure of 98, there having been a material increase in the membership during the past year.

Singapore Division.

Only three meetings were held during the latter half of the year, with an average attendance of twelve. The following papers were read:

June 29th.—Lobar Pneumonia, by Dr. Finlayson.

August 10th.—Dysentery, by Dr. Keith.

September 28th.—Sarcoma of Pancreas and Abscess of Liver rupturing into Pericardial Sac, by Dr. Barker; also some clinical cases.

A meeting called to discuss the draft Charter was postponed, as it was found impossible for many of the members to attend.

Penang.

The Division was active during the past year, there having been ten meetings, with an average attendance of seven. The following papers were read:

1. A Discussion on Opium Smoking, introduced by Dr. Mugliston.
2. A paper on Dysentery, by Dr. D. M. Ford.
3. Notes on a case of Pleuritic Effusion, by Dr. Bright.
4. Paper on the Difficulties met with in Private Practice among Asiatics, by Dr. Avetoom.
5. Notes on a Peculiar Case of Liver Abscess, by Dr. D. M. Ford.
6. A Case of Acute Glossitis and one of General Tuberculous Enlargement of Glands, shown by Dr. Keun.
7. Paper on Difficulties in Diagnosis, by Dr. Bright.
8. Paper on Insanity amongst Natives, by Dr. Skae.

Cases were also shown and specimens exhibited at the various meetings by Drs. Rose, J. C. Ford, and others.

With the introduction of the Medical Registration Ordinance, 1907, the Division has now two representatives on the Straits and Federated Malay States Medical Council.

The Division has a credit balance of 45.80 dols.

Native States.

The annual general meeting was held at Kuala Lumpur on March 28th and 30th, when the members of the other Divisions who were able to be present enjoyed the hospitality of the Federated Malay States members. The presidential address was delivered by Dr. E. A. O. Travers, on Hospitals for Estate Coolies, which was followed by a discussion in which Drs. Watson, Cooper, and Brown took part. Dr. Park gave a paper on the Medical Registration Ordinance, Dr. Ford on Pseudo-Tetanus, Dr. Cooper on the Medico-legal Aspects of Shock, and Dr. Gerard on Ankylostomiasis Toxaemia. A demonstration on specimens was also given by Dr. Gerrard and others. No other meeting was held during the year.

Treasurer's Statement.—The Honorary Treasurer's statement, January 1st to December 31st, 1907, showed a credit balance from 1906 of 211.40 dols.

Draft Charter.—No return was received from the Divisions regarding the draft Charter.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

A meeting of this Division was held on Tuesday, March 24th, at 5.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Pidcock in the chair.

Hampstead Hospital Business.—The Honorary Secretaries referred to the events of the last meeting (March 12th) in this connexion. The Honorary Secretary (Dr. Yeld) read a letter from the Westminster Division and stated that he had received letters of support and sympathy in the struggle from the Walthamstow, Lambeth and City Divisions also. The Watford Division had sent a resolution of sympathy with Hampstead to the Branch. The Wandsworth Division would also be likely to lend its support. The Honorary Secretary then submitted resolutions on behalf of the Committee to the meeting. The first was passed *nem. con.*, the second by 15 votes to 4, and the third unanimously, after prolonged discussion. The third resolution was as follows:

> That the Hampstead Division requests the Branch Council to support the endeavours of the local profession to retain at least a substantial portion of the Hampstead General Hospital as a purely local institution.

Report to the Branch.—A report to the Branch containing the above recommendation was approved. The Honorary Secretary was directed to send it to the Branch Secretary to be placed on the agenda for the next meeting.

Lambeth Division.

A meeting of the Lambeth Division was held at the Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., on Thursday, March 26th, at 4 p.m. Dr. Maurice Craig, Chairman of the Division, was in the chair, and twenty members and visitors were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Notification of Births Act.—It was announced that the Notification of Births Act had been adopted in Lambeth and in Southwark, notwithstanding the petition of the members of the Division that its adoption might be postponed.

Medical Examinations for Life Insurance.—The following answers to the questions referred to the Divisions *re* medical examinations for life assurance (vide Supplement, February 22nd, pp. 70, 71, and 72) were unanimously agreed to:

1. It is impossible to answer these questions without circularizing each individual member of the Division.
2. Yes.
3. Both *a* and *b* occur; more *a* than *b*.
4. Yes.
5. Yes, but not less than 10s. 6d., and this only for short report.
6. No. Full reports not less than one guinea.
7. No.
8. 10s. 6d. for either *b* or *c*.
9. 10s. 6d.

Friendly Societies.—Some details as to the practices of the Royal Liver Friendly Society and of the Prudential Assurance Company were brought forward and reported to the Honorary Secretary of the Medico-Political Committee.

Workmen's Compensation Act.—The action of the Executive Committee in regard to the questions referred to the Divisions *re* the situation created by the Workmen's Compensation Act was approved.

Lynn Thomas and Skyrme Fund.—The appeal from Mr. William Sheen *re* the Lynn Thomas and Skyrme Fund

was read, and it was decided that the Division should not take any collective action in the matter.

Hernia in Children.—Mr. C. H. Fagge read a paper upon the pathology and treatment of hernia in children, basing his remarks upon his experience of 72 consecutive cases at the Evelina Hospital. He laid stress upon the belief that all inguinal herniae in children were due to partial or complete persistence of a patent funicular process. He deprecated the use of any sort of truss; and, although he allowed that the hernia sometimes ceased to come down spontaneously, he believed that even such cases were potential herniae—that is, that the funicular process was still patent and ready to receive a knuckle of bowel whenever, in later life, the mesentery should elongate sufficiently to allow a loop of intestine to reach the inguinal canal. He strongly advocated radical cure of all herniae in infants by operation; he gave details of the operation he employed, and no truss was required. Recurrence did not take place if no part of the funicular process was left. Messrs. Norton, Hickley, Jeynes, Capes, Craig, and the Honorary Secretary took part in the discussion of the paper, and the wool truss had its supporters.

Exhibits.—Cases were afterwards exhibited by Dr. Mann, Dr. Jones, and Dr. Torrence.

Stratford Division.

A meeting of this Division was held at the Alexandra Hotel, High Street, on Thursday, March 12th, Dr. Spurrell in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Address.—Dr. Thomas G. Stevens read a paper on prolapse of the uterus, illustrating his subject by means of a series of excellent diagrams. A general discussion ensued, and at its conclusion the lecturer was accorded a very hearty vote of thanks.

Hampstead Hospital.—The meeting then considered a communication from the Honorary Secretary of the Hampstead Division *re* the Hampstead Hospital, and a resolution was unanimously carried to the effect—

> That the Division hoped that the interests of the general practitioner would be duly safeguarded.

The Term "Hospital."—In regard to the proposed definition of the term "hospital," Dr. Rose proposed, and Dr. Bosan seconded, the following resolution, which was carried unanimously:

> That a hospital, using the word in its medical sense, is an institution for the treatment of patients which is not established or conducted for the pecuniary profit or personal gain of the body or persons who control it.

Medical Examination for Life Insurance.—This subject was next considered, and the questions submitted were answered as follows:

1. A complete list of life insurance companies employing members of the Division to act regularly as their medical examiners could not be obtained.
2. Yes.
3. Some require a long report, some a short.
4. Yes; some require a full report.
5. No.
6. No.
7. No.
8. Yes.
9. Half a guinea.

Medical Inspection of School Children.—In regard to the supplemental report on the medical inspection of school children, it was decided that the matter be left for the present.

Workmen's Compensation Act.—Consideration of the memorandum submitted to the Divisions *re* the situation created by the Workmen's Compensation Act was postponed.

Westminster Division.

An ordinary meeting of the Division was held on March 19th, at 5 p.m., the President, Dr. Knowsley Sibley, in the Chair.

Confirmation of Minutes.—The minutes of the last meeting having been read and confirmed were signed by the President.

Hampstead General Hospital.—The Honorary Secretary read letters from the Honorary Secretary of the Hampstead Division, and the question was discussed by the members.

Lynn Thomas and Skyrme Fund.—A letter was also read from the Secretary of the Lynn Thomas and Skyrme Fund appealing for donations for this fund. It was unanimously decided to issue a special appeal to all the members of the Division and to debit the funds resulting therefrom with the cost of the appeal.

Annual Report.—The annual report was also read and approved by the meeting.

Medical Inspection of School Children.—The question of the medical inspection of school children was then discussed, and it was decided to support the Branch Council in the matter, the only debatable point being the question of proposed fees to be paid to the medical inspectors. It was moved by Dr. Ewart and seconded by Mr. Hilliard that this meeting considered a remuneration of £50 inadequate for the duties to be performed and derogatory to the profession of medicine, and if accepted it would inevitably lead to a general reduction of fees, as private fees were assessed more or less upon those that the profession accepted for public work. Drs. Freemantle and Haslip opposed this on the ground that it was a fair and reasonable remuneration for the two hours' work per week required, and, being put the vote, the motion was declared lost.

Workmen's Compensation Act.—The medical situation created by the Workmen's Compensation Act was then considered, and it was agreed that a minimum fee of £1 1s. per case should be asked by medical men acting as medical referees for insurance companies and furnishing a report. A further question of the relation of the Act to hospital abuse was left to the Executive Committee to deal with, as were also the other items on the agenda.

OXFORD AND READING BRANCH:

Oxford Division.

A general meeting of the Division was held on Friday, March 20th, at the Radcliffe Infirmary, Oxford, at 3.15 p.m. Dr. R. E. Yelf was in the chair, and twenty-six members attended the meeting.

Confirmation of Minutes.—The minutes were read and confirmed, a vote in favour of the permission of smoking at this meeting was carried, 25—1.

Medical Inspection of School Children.—The Secretary read the report and memorandum of the Medico-Political Committee, *re* the medical inspection of school children; this was duly accepted.

SOUTH MIDLAND BRANCH:

Bedford and Herts Division.

A meeting of this Division was held at the Hospital, Hitchin, on Thursday, March 26th, Dr. A. Conning Hartley in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Treasurer's Report.—The Treasurer's report was read and adopted.

Report of Ethical Committee.—A point of disagreement between two members of the medical profession having been referred to the Ethical Committee of the Division, that body reported to the meeting the results of its investigations, and the Division requested one member to apologize to the other. This was agreed to, and the matter ended. The Chairman drew the attention of members to Rule I of the ethical rules, which says "Any member having a complaint against another shall, in the first instance, communicate with him, either personally or by letter, or by the intermediary of some suitable person, in order to afford him an opportunity for explanation," remarking that much time and subsequent trouble would be saved by observing this rule when any cause of complaint arose.

Notification of Births Act.—This matter was very fully discussed. Most members were opposed to the adoption of the Act by the various local authorities. Mr. W. Gifford Nash, of Bedford, spoke in favour of its adoption, in so far as it is an attempt by means of legislation to diminish the infantile mortality, which, even in small towns, is enormous. Finally the following resolution was proposed by Dr. R. H. Coombs, of Bedford, and seconded by Dr. Winckworth, of Shefford:

That it is not desirable that information to public authorities under the Early Notification of Births Act, 1907, be given by medical men without fee.

This was put to the meeting and carried.

Medical Inspection of School Children.—The meeting was of opinion that the suggestions printed on page 52 of the Supplement of the British Medical Journal of February 8th, 1908, should be adopted as they stand.

The Term "Hospital."—The attention of the meeting having been drawn to the proposed definition of the term "hospital" as formulated by the Central Ethical Committee, the members present considered there was no objection to its being adopted as it stands.

Papers.—A paper was read by Dr. J. H. Gilbertson of Hitchin, entitled, An Account of the Recent Outbreak of Diphtheria at Offley. This was followed by a long discussion, in which many members took part. Mr. W. Gifford Nash, of Bedford, then read a paper on the Results of Operations for Cancer, and this led to a discussion, after which the meeting was brought to an end, the members withdrawing to another room where tea was provided by the kind invitation of the Hitchin members.

YORKSHIRE BRANCH.

A meeting of the Yorkshire Branch was held at the General Infirmary, Leeds, on Wednesday, March 18th. In the absence of the President (Dr. Lee), Dr. Turner, the President-elect, occupied the chair. There were thirty-five members present.

Apologies for Non-attendance.—Letters of apology were read from Drs. Lee, Swanson, Pye-Smith, Sinclair-White, and Martin.

Reports of Branch and Divisions.—The report of the Branch was read and adopted. The reports of the Divisions were also read.

The late Professor Wright.—A vote of condolence with the family of the late Professor Wright, a Past President of the Branch, was proposed by Dr. Churton, seconded by Dr. Mossop, and carried unanimously.

Dinner.—After the meeting twelve members dined together at the Queen's Hotel.

Bradford Division.

An ordinary general meeting of the Division was held at the Great Northern Victoria Hotel, Bradford, on Tuesday, March 10th, at 8.30 p.m., Dr. Campbell, Chairman, presiding.

Confirmation of Minutes.—The minutes of the last Divisional meeting were read and adopted.

Fees for Examinations under Workmen's Compensation Act.—The Honorary Secretary brought before the meeting the question of fees paid to medical men for examinations and reports under the Workmen's Compensation Act. Dr. Bampton proposed, and Dr. Shackleton seconded, that it was desirable that the ordinary fees for these reports should be one guinea. Carried *nem. con.*

A Hygienic Company.—A letter was read from the Secretary, Northumberland Committee, British Medical Association, in reference to Hall's Hygiene Company. It was regretted that no certain or useful information was known that could be forwarded to the Committee.

Medical Inspection of School Children.—The report of the Special Committee appointed by the Division on the medical inspection of school children was read and adopted.

Fees of Medical Witnesses in Coroners' Courts.—A letter was read from the Medical Secretary to Dr. Metcalfe, Honorary Secretary of the Division, on the question of the payment of fees for evidence given before the coroner's court by medical officers to the workhouse on persons dying in that institution. It was suggested that as the Bradford coroner did not feel justified in paying such fees, an appeal should be made by the Bradford Division to the City Council for payment. Dr. Metcalfe stated that he had brought the matter before the coroner and the town clerk. The town clerk brought the question before a committee of the City Council, and in a letter to the Honorary Secretary stated that the coroner had been informed that in future he should pay for evidence in the case of all persons on whom inquests were held who died in the workhouse proper as distinguished from the workhouse infirmary and imbecile wards. It was considered that this was all that the Division could do in the matter, and the Secretary's action was approved.

Definition of "Hospital."—The definition of the term "hospital" as submitted by the Central Ethical Committee was approved (Supplement, February 22nd, 1908) *nem. con.*

Life Insurance Examinations.—The report on life insurance examinations (Medico-Political Committee) was considered. The following replies were adopted:

1. Practically all companies.
2. Yes.
3. Both required.
4. Yes; some pay 10s. 6d. for full reports.
5. Yes.
6. Should be a guinea.
7. No.
8. To first part, answer "Yes"; second part, "No"; third part, "Yes," in a short report, if approved of by this Division.
9. Five shillings should be the lowest fee for industrial cases, and 10s. 6d. for a short ordinary report.

Prevention of Corruption Act.—The conclusions of the Central Ethical Committee were generally approved of. The meeting then terminated.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

March 26th, 1908.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

East Anglian Branch.—The spring meeting of this Branch will be held at Beccles on Thursday, April 9th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich (Secretary for Suffolk).—B. A. Nicholson, General Secretary of Branch.

Lancashire and Cheshire Branch: Altrincham Division.—The next general meeting of this Division will be held at the Greenbank Hotel, near Northwich, on Thursday, April 9th, at 4.50 p.m.

Metropolitan Counties Branch: Kensington Division.—A meeting of the Division will be held in the Hammersmith Infirmary, Ducane Road, Shepherd's Bush, on Friday, April 10th, 1908, at 5 p.m. The infirmary will be open to the inspection of members. Clinical cases will be shown by the Medical Superintendent, Mr. John Jenkins, and the assistant medical officers. The report of the Medical Charities Committee of the Metropolitan Counties Branch will be discussed.—Charles Buttar, Honorary Secretary, 10, Kensington Gardens Square, W.

Metropolitan Counties Branch: Lambeth Division.—The annual general meeting of this Division will be held in Bethlem Royal Hospital, Lambeth Road, S.E., on Thursday, May 7th, 1908, at 4 p.m. The following names are proposed by the committee as office-bearers during the session 1908-9:—*Chairman*, W. A. Atkinson, M.D.; *Vice-Chairman*, A. M. Hickley, M.R.C.S.; *Representative at Representative Meeting*, R. Esler, M.D.; *Representatives on the Branch Council*, G. Sangster, M.R.C.S., and the Honorary Secretary (*ex-officio*); *Honorary Secretary*, Herbert French, M.D.; *Executive Committee*, R. Capes, M.R.C.S., E. A. Edelsten, M.B.,

J. W. J. Oswald, M.D., H. J. Spon, M.R.C.S., W. E. Sturges-Jones, M.R.C.S., Herbert Taylor, M.B. Any member of the Division who may wish to propose any other candidate or candidates for any of the above offices should send the name of such candidate or candidates, duly seconded, together with the written consent of each nominee, to the Honorary Secretary, 26, St. Thomas's Street, London Bridge, S.E., on or before Monday, May 4th, 1908. Dr. Hyslop will deliver an address upon the Borderland of Insanity, and several eminent alienists have been invited to take part in the discussion.—HERBERT FRENCH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.—A general meeting of the Division will be held at the Rooms of the Medical Society, 11, Chandos Street, W., on Friday, April 3rd, 1908, at 5 p.m. Agenda: (1) Minutes. (2) Letters. (3) Discussion upon the Hampstead Hospital question: (*a*) appointment of general practitioners as members of the staff; (*b*) the formation of an out-patient department. (4) Medical inspection of school children (Supplementary Report, SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 8th). (5) Report as to proposed definition of the term "hospital" (SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd). (6) Report on life insurance examinations (SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd). (7) Any other business.—DONALD ARMOUR, Honorary Secretary, 89, Harley Street, W.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—A meeting of this Division will be held on Wednesday, April 8th, at 8.30, at the Royal Hospital, Richmond, when Mr. W. T. Lister, B.A., F.R.C.S., will present a communication on Glaucoma and Iritis, with lantern illustrations and cases. On Wednesday, May 13th, the annual meeting and dinner will be held at 6.30 at the Sun Hotel, Kingston. In order to add to the interest and clinical character of these meetings, members are asked to show cases or report on them at any of the meetings with or without notice.—CHARLES BLAIR, F.R.C.S., Matson Lodge, Richmond; A. E. EVANS, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—A meeting of this Division will be held in the Board Room, University College Hospital, W.C., at 4 o'clock, on Tuesday, April 7th. Sir Victor Horsley, F.R.S., will read a paper on Caries of the Spine and Allied Conditions. Visitors cordially welcomed.—WILLIAM GRIFFITH, Honorary Secretary, 1, Chester Gate, Regent's Park, N.W.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—An ordinary meeting of this Division will be held on Tuesday, April 14th, at the White Hart Hotel, Boston, at 2.30 p.m. Tea will be provided at each member's expense for those desiring it. Agenda: (1) Notification of Births Act. (2) Medical inspection of school children (SUPPLEMENT, December 21st, 1907). (3) Medical examinations for life assurance, etc. (SUPPLEMENT, February 22nd, 1908). (4) Lynn Thomas and Skyrme Fund. (5) Cases, etc. (6) Any other business.—A. E. WILSON, Honorary Secretary.

NORTH WALES BRANCH.—The spring intermediate meeting of the Branch will be held at Denbigh on Tuesday, April 21st, 1908. Members having papers to read, cases or specimens to show, are requested to notify the Honorary Secretary before April 9th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes, S.O.

SOUTH-EASTERN BRANCH: ISLE OF THANET DIVISION.—The next meeting of this Division will be held at the Royal Sea-Bathing Hospital, Margate, on Tuesday, April 7th, at 4 p.m., J. L. Sawers, M.D., in the chair. Agenda: To receive a report of the Executive Committee on the question of examination of club candidates. To consider the report of the Medico-Political Committee on Life Insurance Examinations (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, 1908). To receive the recommendation of the Executive Committee as to the definition of the term "hospital" (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, 1908) Dr. Warwick Brown: A Note on the Treatment of Lupus Erythematosus. Cases of interest will be shown. The attention of members is drawn to the Report of the Central Ethical Committee of the Association on the Prevention of Corruption Act, 1906. (vide SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, 1908).—HUGH M. RAVEN, Honorary Divisional Secretary, Broadstairs.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: RICHARD MILLER, M.B., Fleet Surgeon, to the *President*, additional, temporary, March 20th; EDWARD A. G. WILKINSON, Surgeon, to the *Boxer*, for Osborne College, March 23rd; GEORGE HOLYOAKE, Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, March 30th; EDWARD C. CRIDLAND, M.B., Fleet Surgeon, and THOMAS F. O'KEEFE, M.B., Surgeon, to the *Minotaur*, on commissioning, April 1st; JOHN D. HUGHES, Fleet Surgeon, to the *Egmont*, for Malta Dockyard, March 27th; HERBERT H. GILL, M.B., Staff Surgeon, to the *Terror*, additional, for Bermuda Yard and Ireland Island, April 16th; WALTER H. O. GARDE, Staff Surgeon, to the *Emerald*, April 16th; JOHN A. L. CAMPBELL, Staff Surgeon, to the *Donegal*, March 27th; ARTHUR E. DAVIDSON, M.B., Surgeon, to the *Actaeon*, April 8th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL SIR R. H. CHARLES, M.D., Bengal, is permitted to retire from the service, from March 20th. He was appointed Surgeon April 1st, 1882, and became Lieutenant-Colonel April 1st, 1902. He has no war record in the Army Lists.

Surgeon-General J. P. GREANY, M.D., Bombay, is granted, from the date of relief, such privilege leave of absence as may be due to him on that date in combination with furlough under military rules for such period as may bring the combined period of absence up to six months. Colonel J. M'CLOGHRY is appointed to act as Surgeon-General with the Government of Bombay.

The promotion of Major R. P. WILSON, Bengal, is antedated from January 29th, 1908, to July 29th, 1907.

IMPERIAL YEOMANRY.

SURGEON-MAJOR T. H. OPENSHAW, C.M.G., M.B., F.R.C.S., the Lincolnshire Regiment, to be Surgeon-Lieutenant-Colonel, February 22nd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,583 births and 5,405 deaths were registered during the week ending Saturday last, March 28th. The annual rate of mortality in these towns, which had been 17.6, 17.2, and 16.9 per 1,000 in the three preceding weeks, rose again last week to 17.4 per 1,000. The rates in the several towns ranged from 9.5 in East Ham, 9.6 in Hornsey, 10.3 in Tottenham, 10.8 in Leyton, 11.9 in Walthamstow, and 12.1 in West Ham, to 22.5 in Sunderland, 22.6 in Manchester and in Stockton-on-Tees, 24.3 in Devonport and in Rhondda, 24.7 in Middlesbrough, 25.0 in Merthyr Tydfil, and 25.6 in Oldham. In London the rate of mortality was 17.2 per 1,000, while it averaged 17.4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.7 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 3.0 in Birkenhead and in Burnley, 3.1 in Bootle, 3.9 in Stockton-on-Tees and in Rhondda, 4.0 in Sunderland, 4.3 in Croydon, 5.2 in Salford and 6.1 in Merthyr Tydfil. Measles caused a death-rate of 2.0 in Burnley, 2.4 in Salford, 2.6 in Croyden, 2.7 in Preston, and 2.9 in Stockton-on-Tees; scarlet fever of 1.4 in Newport (Mon.); diphtheria of 1.1 in Hornsey and 1.4 in Merthyr Tydfil; and whooping-cough of 2.0 in Sheffield and in Rhondda, 2.5 in Aston Manor, 3.3 in Sunderland, and 3.4 in Merthyr Tydfil. The mortality from enteric fever and from diarrhoea showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. One small-pox patient was admitted into the Metropolitan Asylums Hospitals, and remained under treatment at the end of the week. The number of scarlet fever cases in these hospitals and the London Fever Hospital, which had been 3,567, 3,429, and 3,353 at the end of the three preceding weeks, had further declined to 3,229 at the end of last week; 355 new cases were admitted during the week, against 345, 312, and 378 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 28th, 902 births and 683 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.3, 20.3, and 18.5 per 1,000 in the three preceding weeks, rose again last week to 19.4 per 1,000. Among these Scottish towns the death-rates ranged from 12.6 in Aberdeen and 13.8 in Greenock to 21.7 in Glasgow and 26.9 in Dundee. The death-rate from the principal infectious diseases averaged 3.2 per 1,000 in these towns, the highest rates being recorded in Glasgow, Paisley, and Greenock. The 357 deaths registered in Glasgow included 45 which were referred to measles, 13 to whooping-cough, 3 to cerebro-spinal meningitis, and 12 to diarrhoea. Four fatal cases of measles and 4 of whooping-cough were recorded in Edinburgh; 2 of diphtheria and 3 of diarrhoea in Dundee; 6 of measles in Aberdeen; 2 of diarrhoea in Paisley; and 2 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 21st, 459 births and 455 deaths were registered in six of the principal Irish towns, as against 523 births and 487 deaths in the preceding period. The annual death-rate in these towns, which had been 22.4, 29.8, and 29.1 per 1,000 in the three preceding weeks, fell to 23.0 per 1,000 in the week under notice, this figure being 6.1 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17.0 in Londonderry and 20.5 in Limerick to 25.3 in Waterford and 26.9 in Belfast. The zymotic death-rate in the same six Irish towns averaged 1.0 per 1,000, or 0.8 per 1,000 lower than during the preceding period, the highest figure—2.6—being recorded in Belfast, while Cork and Limerick registered no deaths under this heading at all. There were 8 deaths from influenza in Dublin, the number for the preceding three weeks being 9, 7, and 7.

During the week ending Saturday, March 28th, 486 births and 482 deaths were registered in six of the principal Irish towns, as against 459 births and 455 deaths in the preceding period. The annual death-rate in these towns, which had been 29.8, 29.1 and 23.0 per 1,000 in the three preceding weeks, rose to 31.4 per 1,000 in the week under notice, this figure being 14.0 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 21.8 in Belfast and 26.0 in Limerick to 35.3 in Londonderry and 48.7 in Waterford. The zymotic death-rate in the same six Irish towns averaged 4.5 per 1,000, or 3.5 per 1,000 higher than during the preceding period, the highest figure—17.5—being recorded in Waterford, while Limerick registered no deaths under this heading at all. The high rate in Waterford was due to measles.

Vacancies and Appointments.

VACANCIES.

AYR DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum.

BELFAST: FORSTER GREEN HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Physician. Salary at the rate of £150 per annum.

BIRMINGHAM PARISH INFIRMARY.—Assistant Resident Medical Officer. Salary, £104 per annum.

BOLTON COUNTY BOROUGH.—Health Visitor and Inspector of Midwives. Salary, £170, rising to £200 per annum.

BRISTOL ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

CAMBRIDGESHIRE, Etc., ASYLUM, Fulbourn.—Second Assistant Medical Officer. Salary, £120 per annum.

CARLISLE: CUMBERLAND COUNTY COUNCIL.—Medical Officer of Health. Salary, £700 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160, increasing to £180 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary, £70 per annum.

CHESHIRE COUNTY COUNCIL EDUCATION COMMITTEE.—Two Assistants to the Medical Officer of Health. Salary, £350 per annum each.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, N.E.—Physician to Out patients.

EDINBURGH DISTRICT ASYLUM.—Second Assistant Physician. Salary, £120 per annum.

EGYPTIAN GOVERNMENT.—Resident Surgical Officer at the Kasr-el-Ainy Hospital. Salary, £250 per annum.

EXETER CITY AND COUNTY.—School Medical Officer. Salary, £250, rising to £300 per annum.

GLASGOW: ROYAL SAMARITAN HOSPITAL FOR WOMEN.—Visiting Surgeon.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W. Resident Medical Officer. Salary at the rate of £50 per annum.

HOPITAL FRANÇAIS, Shaftesbury Avenue, W.C.—(1) Second Médecin Résident. Salaire, £50 per annum. (2) Troisieme Médecin.

KING'S COLLEGE HOSPITAL, W.C.—Senior Medical Registrar and Tutor.

LANARK COUNTY.—Resident Physician for the Middle Ward Isolation Hospital. Salary, £150 per annum.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Superintendent. Salary, £500, rising to £600 per annum.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary at the rate of £50 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer at Convalescent Home, Cheadle. Remuneration, £150 per annum.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—Assistant Medical Officer. Salary, £100 per annum.

MANCHESTER UNIVERSITY.—Senior Demonstrator in Physiology. Stipend, £150, rising to £200 per annum.

MEDICAL MISSION HOSPITAL, Canning Town.—Assistant Doctor for Dispensary.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Physician. Salary, £100 per annum.

NORTHAMPTON COUNTY COUNCIL EDUCATION COMMITTEE.—School Medical Officer. Salary, £400 per annum.

NOTTINGHAM GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Salary, £60 per annum each.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

SHEFFIELD EDUCATION COMMITTEE.—Assistant Medical Officer for Elementary Schools. Salary, £250, rising to £300 per annum.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary at the rate of £100 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

STIRLING DISTRICT ASYLUM, Larbert.—Medical Superintendent. Salary, £700 per annum.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Salary, £40 per annum.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £60 per annum.

TOXTETH PARK TOWNSHIP.—Assistant Resident Male Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Surgeon. Salary, £30 for six months.

WARRINGTON COUNTY BOROUGH.—(1) Assistant Medical Officer of Health. Salary, £125 per annum. (2) Locum Tenens to act temporarily as Assistant Medical Officer of Health. Salary at the rate of £125 per annum.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Salary, £30 per annum.

YORK DISPENSARY.—Resident Medical Officer; male. Salary, £120 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at Manchester (East).

APPOINTMENTS.

BAIRD, Harvey, M.D., M.Ch.Edin., Assistant Medical Officer of the Cardiff Mental Hospital.

BROWNE, F. J., M.B., Ch.B.Aber., Surgeon to the Powells Tillery Collieries, Abertillery, and to the Arral Griffin Collieries, Six Bells, vice Dr. Rocyn Jones, resigned.

CALDWELL, M. F., M.B., B.Ch., R.U.I., Junior Assistant Medical Officer of the Cardiff Mental Hospital.

COPE, V. Zachary, B.A., M.D., B.S.Lond., Surgical Registrar to the London Temperance Hospital, Hampstead Road.

FERGUSON, R. L., M.B., B.S.Vict., Junior Resident Assistant Medical Officer at the Crumpsall Workhouse of Manchester.

FORBES, Duncan, M.D.Edin., D.P.H.Camb., Medical Officer of Health for the County Borough of Brighton.

GILKS, J. L., M.R.C.S., L.R.C.P., Resident Assistant Medical Officer, Camberwell Parish Infirmary.

JAMES, Gwilym G., M.B., B.S.Lond., Second Assistant Medical Officer to the St. Marylebone Infirmary, Notting Hill, vice Dr. Burt, resigned.

JONES, D. Rocyn, M.B., C.M.Edin., D.P.H.Oxon., County Medical Officer of Health and Superintendent Medical Inspector of Schools for the County of Monmouth.

LYALL, W. Leslie, M.B., C.M.Edin., reappointed Non-resident Clinical Assistant to Out-patient Department, Royal Victoria Hospital for Consumption, Craigleith, Edinburgh.

MACKENZIE, A., M.B., B.C.Camb., Certifying Factory Surgeon for the North Leeds District, co. York.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ALDREN.—On March 26th, at 42, Bristol Road, Edgbaston, the wife of Bertram C. R. Aldren, M.B., Ch.B., L.R.C.P., M.R.C.S., of a daughter.

HOWLETT.—On March 10th, at 28, Springfield Road, Kingston-on-Thames, the wife of Bernard F. Howlett, M.R.C.S., L.R.C.P., of a daughter.

JOY.—On March 29th, at "Darholm," Market Place, Brentford, Middlesex, the wife of G. Percy Joy, M.A., M.B., of a son.

PARSONS.—On March 19th, at Market Overton, the wife of J. A. Parsons, M.D., of a daughter.

WALKER.—On March 27th, at 8, Oakfield Road, Clifton, Bristol, the wife of Cyril H. Walker, M.B., of twins (boy and girl).

MARRIAGES.

BYTHELL—PRESTWICH.—On March 26th, at Kersal Church, William J. S. Bythell, M.D., younger son of J. K. Bythell, of Prestwich, Manchester, to Theodora, eldest daughter of R. H. Prestwich, of Holmleigh, Higher Broughton.

DICKSON—MCLAGGAN.—On March 25th, at St. John's Church, Buxton, by the Rev. C. G. Nation, M.A., R.D., Vicar, Francis Henry Dickson, M.B., Ch.B.Edin., of 37, Holywell Street, Oxford, youngest son of the late Francis Kennedy Dickson, F.R.C.P., F.R.C.S., J.P., to Margaret Sophia McLaggan, eldest daughter of the late Alexander McLaggan, of Bombay, and of Mrs. McLaggan, of Lake Chrissie, Transvaal.

TAYLOR—HENDEBSON.—At the Church of St. Edward, Lugano, on March 27th, by the Rev. Owen Ll. Williams, B.A.Oxon., Chaplain, William Macrae Taylor, M.B., C.M., F.R.C.S.E., 12, Melville Street, Edinburgh, elder son of William Taylor, M.D., F.R.C.P.E., to Hermina Janet, only daughter of Robert Charles Henderson, Gentilino, Lugano, formerly of Leghorn, Italy.

DEATHS.

FORBES.—At Whitworth, Rochdale, Lancashire, on March 30th, Agnes Lawson Forbes, in her 32nd year.

LECKY.—On March 31st, at the Sussex County Hospital, Brighton, Henry Collier Lecky, M.A., B.M., D.P.H.Oxon., aged 29, second son of John Lecky, of Putney. Kindly, no flowers.

LORIMER.—On March 25th, George Lorimer, M.A., M.D.Edin., of Buxton, son of the late Rev. Archibald Lorimer, of Cockenzie, N.B. Deeply regretted. Friends please accept this the only intimation.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Oliver Sharpey Lecture by Professor E. A. Schäfer, F.R.S.: The Present Position of our Knowledge Regarding the Suprarenal Capsules.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION.—Laboratory meeting at the National Hospital for the Paralysed and Epileptic, Queen Square, 8.30 p.m.

WEDNESDAY.

HUNTERIAN SOCIETY, London Institute, Finsbury Circus, E.C., 8.30 p.m.—The Annual Discussion on Rheumatism, to be opened by Dr. Frederick Taylor, who will be followed by Drs. Poynton, Horder, and Luff.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Oliver Sharpey Lecture by Professor E. A. Schäfer, F.R.S.: The Present Position of our Knowledge Regarding the Suprarenal Capsules.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—Exhibition of Specimens and Description of Cases. Papers: Dr. Nepean Longridge, Creatinin Excretion in Lying-in Women; Drs. H. Williamson and H. Holland, A Case of Intrauterine Death of the Fetus in Six Consecutive Pregnancies, with Observations on the Importance of the Examination of the Fetal Tissues for the Presence of the *Spirochaeta pallida*.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—(1) Paper: Mr. L. B. Rawling, The Surgical Treatment of the Incompletely Descended Testis. (2) Exhibition of cases.

United Services Medical Society, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Captain W. Salisbury-Sharpe, R.A.M.C. (Vol.): Diseases Likely to Occur on Mobilization of a Territorial Army.

FRIDAY.

Society for the Study of Disease in Children, 11, Chandos Street, W., 5 p.m.—(1) Papers: Mr. Hugh Lett, Intussusception Associated with Severe Purpura; Dr. Porter Parkinson, Tetanus Neonatorum. (2) Exhibition of cases.

Royal Society of Medicine:

Clinical Section, 20, Hanover Square.—8 p.m., Exhibition of Cases. 8.30 p.m., Papers: Drs. J. Graham Forbes and F. Langmead, Fatal Lymphocythaemia in Early Life; Dr. Francis Hawkins, Multiple Rheumatic Nodules in Adult.

POST-GRADUATE COURSES AND LECTURES.

Hospital for Diseases of the Skin, Blackfriars, S.E.—Tuesday, 4 p.m., Hyphomycetic Infections, Animal Parasites. Friday, 4 p.m., Tumours, Innocent.

London School of Clinical Medicine.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m., Thursday.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following Clinical Demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follow: Monday, The *X* Rays in the Diagnosis of Diseases of the Chest. Tuesday, The Clinical Anatomy and Physiology of the Nervous System. Wednesday, The Clinical Anatomy and Physiology of the Nervous System. Thursday, Recent Studies in Arterio-sclerosis.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear. *X* Ray; 4.0 p.m., Medical In-patient. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations. Surgical Out-patient, Gynaecological: 3 p.m., Demonstration on Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.). Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye; 3 p.m., Demonstration on Cancer of the Breast (at the Cancer Hospital, Fulham Road, S.W.) Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Ray; 3 p.m., Demonstration on Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.). Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

West London Post-Graduate College, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, *X* Rays: 2.30 p.m., Operations. Monday and Thursday, 2 p.m., Diseases of the Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (also Wednesday and Saturday, 10 a.m.), Diseases of the Throat, Nose, and Ear: 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2 p.m., Diseases of the Eyes; 2.30 p.m., Diseases of Women.

BOOKS, Etc., RECEIVED.

The Edinburgh Stereoscopic Atlas of Obstetrics. Edited by G. F. B. Simpson, M.D., F.R.C.P.E., F.R.C.S.E., and E. Burnet, B.A., M.B., Ch.B. In four sections. Section I. London: The Caxton Publishing Co. 1908. Four Sections, 84s.

Transactions of the Association of American Physicians. 22nd Session. Washington, D.C. May 7th-9th, 1907. Vol. xxii. Philadelphia: The Association. 1907.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
3 FRIDAY ...	Marylebone Division, *Metropolitan Counties Branch*. Rooms of the Medical Society, 11, Chandos Street, W., 5 p.m.
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	London: Naval and Military Committee, 2.30 p.m.
7 TUESDAY ...	London: Organization Committee, 11 a.m. London: Hospitals Committee, 3 p.m. Isle of Thanet Division, *South-Eastern Branch*, Royal Sea-bathing Hospital, Margate, 4 p.m. St. Pancras and Islington Division, *Metropolitan Counties Branch*, Board Room, University College Hospital, 4 p.m.
8 WEDNESDAY ...	London: Medico Political Contract Practice Subcommittee, 10.30 p.m. London: Medico-Political Committee, 2.30 p.m. Lancashire and Cheshire Branch, Meeting of Branch Council, Manchester Royal Infirmary, 4.30 p.m. Richmond Division, *Metropolitan Counties Branch*, Royal Hospital, Richmond, 8.30 p.m.
9 THURSDAY ...	London: Metropolitan Counties Branch Council, 5 p.m. Altrincham Division, *Lancashire and Cheshire Branch*, Greenbank Hotel, near Northwich, 4.50 p.m. East Anglian Branch, Beccles. Hampstead Division, *Metropolitan Counties Branch*, Business Meeting.
APRIL (*Continued*).	
10 FRIDAY ...	London: Central Ethical Committee, 1.30 p.m. Kensington Division, *Metropolitan Counties Branch*, Hammersmith Infirmary, Ducane Road, Shepherd's Bush, 5 p.m. Tottenham Division, *Metropolitan Counties Branch*. Rooms of the Hornsey Conservative Association, (opposite Finsbury Park Station), 9.15 p.m.
11 SATURDAY ...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	Boston and Spalding Division, *Midland Branch*, White Hart Hotel, Boston, 2.30 p.m.
15 WEDNESDAY	
16 THURSDAY ...	City Division, *Metropolitan Counties Branch*, Brooke House, Upper Clapton, 8.30 p.m.
17 FRIDAY ...	*Good Friday.*
18 SATURDAY ...	
19 Sunday ...	
20 MONDAY ...	*Bank Holiday.*
21 TUESDAY ...	North Wales Branch, Denbigh.
22 WEDNESDAY	London: Journal and Finance Committee, 2.30 p.m.
23 THURSDAY ...	
24 FRIDAY ...	
25 SATURDAY ...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	
29 WEDNESDAY	Central Council, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Bath and Bristol Branch, Bath.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 11TH, 1908.

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UNITED KINGDOM HOSPITALS CONFERENCE.

THE second United Kingdom Hospitals Conference was held at University College, London, on Wednesday, April 1st, and Thursday, April 2nd.

The proceedings commenced at 2 p.m., when, on the motion of Dr. FRANK POPE (Physician, Leicester Infirmary, Chairman of the Hospitals Committee, and a member of Council of the British Medical Association, and member of Conference Committee), seconded by Dr. J. A. MACDONALD (Physician, Taunton and Somerset Hospital, Chairman of the Representative Meetings, British Medical Association, and member of Conference Committee), Mr. Charles Lupton (Chairman, Leeds General Infirmary, and Chairman of Conference Committee) was unanimously elected Chairman of the Conference.

Mr. CHARLES LUPTON, having taken the chair, moved that the return of the members of the Conference should be taken as read. The motion was carried.

APOLOGIES.

The SECRETARY read the following list of apologies for absence:

Dr. S. W. Allworthy, Belfast and Ulster Hospital for Diseases of the Skin; Mr. W. Pollexfen Bastard, late Chairman, South Devon and East Cornwall Hospital; Fleet-Surgeon E. J. Biden, R.N., Member of Council, British Medical Association; Mr. H. Cosmo O. Bonsor, Treasurer, Guy's Hospital; Dr. R. C. Buist, Dundee Royal Infirmary, Member of Council, British Medical Association; the Misses Colman, Norwich; the Right Hon. Earl Cadogan, K.G., Member of Select Committee of the House of Lords; Major-General the Right Hon. Lord Cheylesmore, C.V.O., Middlesex Hospital; Captain J. Cundy, Sir Donald Currie, Mr. E. P. Dugan, Bradford Royal Eye and Ear Hospital; Mr. H. G. Evered, Victoria Hospital for Children, Chelsea, S.W.; Dr. James Hamilton, Assistant Physician, Victoria Infirmary, Glasgow, Member of Council, British Medical Association, Member of Conference Committee; Mr. H. A. Heywood, Dr. T. Garrett Horder, Member of Conference Committee; Mr. J. T. Horder, Great Northern Central Hospital; Mr. T. Fielding Johnson, jun., Leicester Infirmary; the Right Hon. the Earl Kilmorey, K.P., Charing Cross Hospital, Member of Conference Committee; The Right Hon. Lord Lamington, G.C.M.G., G.C.I.E., Member of Select Committee of the House of Lords; Dr. H. W. Langley-Browne, Consulting Surgeon, West Bromwich District Hospital, late Chairman of Council, British Medical Association; Mrs. Scharlieb, M.D., Senior Physician for Diseases of Women, Royal Free Hospital; Mr. William Sheen, M.S., F.R.C.S., Surgeon, Cardiff Infirmary; Mr. Simeon Snell, F.R.C.S., Ophthalmic Surgeon, Sheffield Royal Infirmary, President-elect, British Medical Association; Mr. J. Lynn Thomas, C.B., F.R.C.S., Surgeon, Cardiff Infirmary, Member of Council, British Medical Association; Major Thoyts, Royal Berkshire Hospital, Reading; Mr. T. Jenner Verrall, Surgeon, Sussex County Hospital, Brighton, Member of Council, British Medical Association; Dr. David Walsh, Physician, Western Skin Hospital, London, W.

ADOPTION OF STANDING ORDERS AND REPORT.

On the motion of the CHAIRMAN, the adoption of the Standing Orders was carried, and also the reception of the report of the proceedings of the last Conference.

REPORT OF CONFERENCE COMMITTEE.

The Chairman then asked the Conference to receive and approve the following report of the Committee appointed by the last Conference:

REPORT OF PROCEEDINGS OF COMMITTEE APPOINTED BY CONFERENCE OF 1906 TO GIVE EFFECT TO ITS RESOLUTIONS.

Members of Committee.

Mr. Charles Lupton (Chairman, General Infirmary, Leeds), *Chairman of the Committee.*

Dr. J. Ford Anderson (Chairman, Medical Charities Committee, Metropolitan Counties Branch, and Member of Council, British Medical Association).

Mr. Walter Baily (Vice-Chairman, University College Hospital, W.C.).

Sir Henry Burdett, K.C.B. (Editor of the "Hospital" and "Burdett's Hospitals and Charities").

Mr. W. G. Carnt (Secretary, Royal Infirmary, Manchester).

Mr. Neville Chamberlain, (Governor, General Hospital, Birmingham).

Mr. C. F. Cuthbert (Surg., Gloucester Hospital for Children Member of Council, British Medical Association).

Mr. A. W. Davis (Secretary, Hospital Saturday Fund).

Dr. Henry Davy, Exeter (Phys., Devon and Exeter Hospital; President, British Medical Association).

Mr. W. A. Dinwiddie, J.P. (Chairman, Dumfries-shire and Galloway Royal Infirmary).
Dr. E. L. Fox, (Phys., Royal Eye Infirmary, Plymouth; Phys., South Devon and East Cornwall Hospital, Plymouth).
Dr. A. Godson, Cheadle (Member of Council, British Medical Association).
Dr. James Hamilton (Asst. Phys., Victoria Infirmary, Glasgow; Member of Council, British Medical Association).
Dr. J. Rogerson Hamilton, Hawick (Member of Hospitals Committee, British Medical Association).
The Hon. Sydney Holland (Chairman, London Hospital, E.; Poplar Hospital, E.; and Tilbury Cottage Hospital).
Dr. T. Garrett Horder, Cardiff (Member of Hospitals Committee, British Medical Association).
Col. C. H. Joubert de la Ferté, I.M.S.(retd.) (Member of Council, British Medical Association).
The Rt. Hon. The Earl of Kilmorey, K.P. (Chairman, Charing Cross Hospital, W.C.)
Sir Riley Lord (Governor, Newcastle-on-Tyne Infirmary).
Dr. J. A. Macdonald (Phys., Taunton and Somerset Hospital; Chairman of Representative Meetings, British Medical Association).
Mr. H. Manfield, M.P. (Governor, Northampton General Hospital)
Mr. Herbert M. Mason (Chairman, East Suffolk and Ipswich Hospital).
Lt.-Col. E. Montefiore, Charity Organization Society, London.
Dr. A. A. Napper (Surg., Cranleigh Village Hospital).
Mr. Edmund Owen, LL.D., F.R.C.S. (Cons. Surg., St. Mary's Hospital, Paddington; Chairman of Council, British Medical Association).
Dr. Frank M. Pope (Phys., Leicester Infirmary; Chairman, Hospitals Committee, and Member of Council, British Medical Association).
Dr. E. Rayner (Surgeon, Stockport Infirmary; Treasurer of the British Medical Association).
Dr. Lauriston E. Shaw (Phys., Guy's Hospital; Member of Council, British Medical Association).
Mr. E. F. White, F.R.C.S., Member of Hospitals Committee.

The instructions of the Conference involved, essentially, two references to the Committee appointed by that Conference, namely, first, to secure the further consideration by Hospitals generally of the proposals laid before the Conference, in conjunction with the information derived from the replies of Hospitals in reference thereto; and, secondly, to make arrangements for the next Conference.

Analysis of Replies of Hospitals as to "Proposals" Placed Before Last Conference.

For the purpose of giving effect to the first of these references the Committee has caused the opinions expressed in reference to the proposals that were laid before the last Conference to be carefully analysed and reports the result of the analysis as follows:—

Number of Replies Received.

Of the 810 Hospitals in the United Kingdom communicated with, 238 Hospitals have forwarded in reply statements of their views upon some or all of the matters submitted for their consideration. Among those so replying are a majority of the principal General Hospitals in London, and in England and Wales generally. Replies have been received also from 54 Special Hospitals in England and Wales.

In Scotland, of 64 Hospitals, 17 replied.

From Ireland the replies were very few, as the connection of the majority of Hospitals in that country with the Poor Law Administration differentiates their circumstances essentially from those prevailing in Great Britain.

Of 218 Cottage Hospitals addressed, 69 have expressed their opinions on the proposals especially affecting them.

Summary of Opinions Expressed.

General Hospital Administration.

With regard to the 19 Principles of Hospital Administration (*see* Document "3"), the Committee is glad to be able to report that the replies show general agreement among Hospitals with all except Nos. 2, 9, 12, and 15.

Concerning proposal No. 2, as to *Subscribers' Letters*, there appears to be a general disposition to cease making subscribers' letters compulsory, but the majority of provincial Hospitals are averse from discontinuing entirely the issue of such letters.

With reference to No. 9, as to *Limitation of Work of Medical Officers*, there is agreement in principle, but Hospitals do not appear to see their way to carry it out.

Concerning Nos. 12 and 15, as to *Co-operation of Hospitals*, and *Reference elsewhere of Unsuitable Cases*, respectively, the Committee considers that the difficulties indicated can be overcome by modifications of wording.

Cottage Hospitals.

In the proposals as to Cottage Hospitals the Committee also finds general concurrence among those which have replied, such dissent as exists chiefly affecting proposal No. 4, as to *Certificate of Suitability for Admission.*

Public Nursing Homes.

Little interest seems to have been taken in the proposals as to Self-Supporting Public Nursing Homes, and the matter is apparently not ripe for general action.

Modifications Proposed.

Upon consideration of the general opinions indicated in the foregoing statement the Committee has thought it well, in again submitting the proposals for the consideration of Hospitals, to modify the wording of paragraphs 12 and 15 as shown in the accompanying print (Document "3"), and would add the following explanatory statement:—

Subscribers' Letters.

With regard to Principle 2, as to which, as mentioned in the Report, there has been the greatest measure of disagreement, the Committee desires to suggest for the consideration of those Hospitals which are not prepared to give up the system of Subscribers' Letters that it is highly desirable that the wording of the form of Subscriber's Letter or Certificate used should be such as to secure the object of excluding unsuitable cases. Copies of forms which have been especially adopted by certain Hospitals with this object are in the possession of the Committee, and will be forwarded for the assistance of any Hospital which may desire to revise the wording of its present letters or certificates.

Importance of Uniform Regulations.

Whereas the conditions of Hospitals differ so widely in different places, the information in the possession of the Committee shows clearly the importance of the adoption of uniform regulations by those Hospitals which carry on their work in the same district, and Principle 12 has been modified in wording with the object of making this suggestion clear.

Further Duties of the Committee with Respect to the "Proposals."

Part of the duty of the Committee under its instruction is to endeavour to remove difficulties which may be experienced by individual Boards of Management of Hospitals in applying the principles generally agreed upon to their local circumstances.

Many valuable suggestions, based on actual experience, are contained in the information now in the possession of the Committee, derived from the replies of Hospitals, and the Committee will be glad to put this information at the disposal of Hospitals which may desire it.

The Committee will also be glad to receive, at the convenience of the Board of any Hospital, notes of any expression of opinion at which the Board may arrive, as the result of further consideration of the subject and to answer any inquiries.

January, 1908.

The report was adopted unanimously.

Proposals before Conference of 1906, with Suggested Amendments.

The next business on the agenda was to consider motions, if any, for amendment of the following proposals which were before the last Conference:

I.—Suggested Model Principles of Hospital Management.

1. *Suitability of Patients for Admission.*—That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment. This shall not apply to Poor-law cases.

2. *Subscribers' Letters.*—That the production of subscribers' letters shall cease to be compulsory, and that, where possible, the system shall be abolished.

(NOTE.—*Though the first part of this Principle is generally approved, many Hospitals consider the abolition of Subscribers' Letters impracticable, having regard to local conditions. Where this is the case the Committee recommends that the wording of such Letters should be revised so as to secure the object of facilitating the exclusion of unsuitable cases.*)

3. *Investigations as to Suitability.*—That some means of investigation into the circumstances of the applicants for relief, by means of an almoner or other agent, shall be employed in all medical charities.

4. *Recommendations* 1, 2, 3, *to apply to all Patients.*—That the foregoing recommendations apply to both in-patients and out-patients.

5. *Evidence of Suitability.*—That except in emergencies, sufficient evidence shall be obtained on two points: (*a*) That the patient is not in a position to pay for adequate treatment; (*b*) that the case is, from a hospital point of view, suitable for treatment.

6. *Urgent Cases.*—That all cases of serious accident and severe sudden illness shall be attended to on their first application, and, if deemed eligible for further treatment, shall be referred to the appropriate department of the hospital, but, if ineligible, shall then be referred for treatment elsewhere.

7. *Trivial Cases.*—That all cases of trivial accident or illness deemed ineligible for the casualty department shall, after having been seen, be referred for treatment elsewhere.

8. *Medical Inspection of all Cases.*—That, on the first visit, no patient be permitted to leave a hospital without having been seen by a registered medical practitioner.

9. *Limitation of Work of Medical Officers.*—That, where possible, the number of new cases to be seen on any one day by an honorary medical officer shall be limited.

10. *Scope of Special Hospitals.*—That special hospitals shall treat only those cases that come strictly within the scope of their work.

11. *Age Limit for Retirement.*—That in all hospitals there shall be an age limit for the retirement of the medical officers.

12. *Co-operation of Hospitals.*—That no scheme for the reform of out-patient departments can be successful without co-operation and co-ordination between hospitals themselves, especially those which operate in the same area.

(Amendment.—"*That hospitals operating in the same area should confer with the object of securing approximately uniform regulations for the prevention of abuse.*")

13. *Pay Wards.*—That there is no objection to pay wards being connected with voluntary hospitals, provided that they are open to every member of the medical profession, who shall be paid any fee to be arranged by him and his patient.

14. *Scope of Out-patient Departments.*—That consultations shall, as far as possible, be encouraged in out-patient departments.

15. *Reference elsewhere of Unsuitable Cases.*—That all cases shall be seen by an almoner, and those not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service,* an approved provident dispensary, or to the relieving officer under the Poor Law.

(Amendment.—*That the words "shall be seen by an almoner, and those" be deleted, the Principle to read accordingly:—*

"*That all cases not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service, an approved provident dispensary or to the relieving officer under the Poor Law.*")

16. *Co-ordination of Hospitals with Public Medical Service and Provident Dispensaries.*—That there shall be a system of co-ordination between hospitals, on the one hand, and public medical services and provident dispensaries on the other, so that the hospitals shall refer to the public medical services and provident dispensaries cases unsuitable for hospital treatment (see paragraph 15 foregoing), and the public medical services and provident dispensaries shall refer to the hospitals cases for consultation, as well as those requiring hospital treatment and nursing, or specially suitable for purposes of clinical instruction.

17. *Notices to Facilitate Co-operation.*—That notices be posted in out-patient and casualty departments of hospitals calling attention to public medical services or approved provident dispensaries in the neighbourhood.

18. *Reference of Cases for Special Advice.*—That a member of a public medical service or provident dispensary, or other patient referred to a hospital for consultation, with a private note or personally, by a general practitioner in attendance, should be referred back to such medical attendant with a statement of the opinion of the hospital physician or surgeon on the condition of the patient.

19. *Relation of Hospitals to the Poor-law Medical Service.*—That cases of obvious destitution, or cases already in receipt of Poor-law relief, shall, after they have been once seen in the casualty or out-patient department, be referred to the Poor-law relieving officer, unless they should be retained for hospital treatment, and Poor-law patients may be referred to hospitals for consultation, as in the case of public medical service and provident dispensary patients. In these cases payment might be required from the Poor-law Guardians if deemed advisable.

II.—Cottage Hospitals.

1. *Medical Attendance.*—That, as far as possible, every patient in a cottage hospital have the right to be attended by his usual medical attendant.

2. *Scope of Cottage Hospitals.*—That, except in cases of emergency, cottage hospitals be only open to those who are unable to secure adequate treatment at home.

3. *Contributions by Patients.*—That all persons admitted to cottage hospitals contribute, where possible, towards their maintenance.

4. *Certificate of Suitability for Admission.*—That a certificate signed by a medical practitioner within the area be a sufficient recommendation for admission.

III. Self-supporting Public Nursing Homes.

1. *Definition and Desirability.*—That it is desirable that self-supporting public nursing homes should be established for patients who, being ineligible for the voluntary hospitals, are yet unable to pay the customary professional fees as well as the charges usually made in private nursing homes.

2. *Management.*—That the management should be vested in a committee on which the medical profession is adequately represented.

3. *Certificates of Suitability for Admission.*—That no patient should be admitted without first producing a certificate of suitability for admission from a medical practitioner, who should whenever possible be the patient's usual medical attendant. If the signatory be not the patient's usual medical attendant, an explanation of the fact should be appended to the certificate.

4. *Choice of Medical Attendant.*—That it shall be open to a patient to select any registered medical practitioner as his attendant.

* The term "public medical service" has been applied in certain districts to organizations for providing medical attendance and medicine for certain sections of the community, in which the service is under the entire control of the medical profession. In other districts services of exactly the same general type have been established under the title of "provident medical associations"; but the generic designation of "public medical service" is preferable, as avoiding confusion with organizations under non-medical control.

5. *Assistance to Patients unable to Pay Entire Cost.*—That when the payment made by a patient is insufficient to cover the entire cost of maintenance, or when any question arises as to reduction or remission of fees for professional services, a statement of the financial circumstances necessitating such consideration shall be signed by the patient or near relative, countersigned by the usual medical attendant or some other responsible householder, and submitted to the Committee.

January, 1908.

The Chairman said the Conference would see in the circular which was sent out when the Conference was convened that it was stated that only motions with regard to the matter formally sent in before the meeting would be considered. None having been received, he proposed to pass on to the next business.

Definition of Eligibility for Hospital Treatment.

Mr. H. Clifford Gosnell (City of London Lying-in Hospital) obtained the permission of the Conference, on the ground that he had not received the notice stating that all motions must be placed upon the Agenda, to move the following amendment:

> That in determining the suitability of patients for admission into hospitals, particularly with reference to their inability to pay for adequate treatment, poverty, or want of means, should not be deemed the only test of a patient's eligibility for admission, but persons should be deemed eligible whether they belong to what are termed the working classes or not if, owing to their obligations being disproportionate to their means, they are unable to pay for the professional services of a medical attendant.

His sole object in bringing the matter forward was to raise the very important question dealt with by the Committee's proposal, namely, what was to be considered by hospital authorities inability to pay. He had no desire to say anything that might hurt the feelings of any one who might represent what he termed the industrial and working classes; but he felt, and he hoped many of those present would feel, that there were amongst the middle classes, and particularly among the lower middle classes, a very large number of persons who wore black coats, as they themselves did, who frequently were not regarded as unable to pay by ministers of religion and by hospital authorities, because they had not the outside evidence of poverty. On the other hand, many of those persons in his judgement were equally deserving of the benefits of charitable institutions, and hospital institutions in particular, by reason of the fact that their obligations very frequently exceeded their means. He ventured to ask for an expression of opinion from the Conference that all hospitals should, in considering inability to pay, and in determining what was inability to pay, have regard to a man's means and his obligations. They were living in an age when a man who wore labouring attire was at a manifest advantage over, for instance, the clerk. Why the labouring man in that attire should derive that advantage he personally had never been able to understand, but their statesmen and their politicians and their clergy, and he was afraid he must add sometimes the committees of their hospitals, seemed to view with suspicion any man who applied for relief or aid if he wore a respectable dress. He took the view that poverty was relative, and that there were many men and women too, particularly in the middle classes, at the present time who were fit subjects to receive hospital aid, but they were not poor in the present-day acceptation of the term; that was to say, they did not go about in the same garb as the working classes. There might be said to underlie his motion the very important question, Who was poor and who were to have hospital benefits gratuitously given? If the hospitals were to be confined only to those who came within the definition of mechanics, labourers, or other forms of working classes, then it seemed to him that a very great injustice was likely to be inflicted upon even a more deserving body of poorer persons belonging to the lower middle classes. He asked the Conference to consider that matter, and, if possible, to express some opinion on the lines of the motion that he had ventured to submit—namely, that a man, say a clerk in receipt of £2 or £3 a week, with a large family to bring up, who was doing his duty as a good citizen, ought to be as worthy a recipient of the benefits of hospitals as those belonging to the industrial or working classes. If they went into the question of ways and means, he ventured to say they would find that there were a very large number of mechanics wearing working clothes who were earning far more money than people like clerks, and, therefore, far more able to pay for medical aid than a very large class in this city. If he were right in that suggestion, he thought the time had come when they ought to define what was inability to pay, because there appeared to be at the present day a disposition to accept as poor and unable to pay those who looked from their attire to be unable to pay. He suggested that was not a reliable basis upon which to work. He was aware that there were resolutions to come before the Conference to deal with the important subject of the appointment of almoners to ascertain and inquire into deserving cases, but he asked the Conference to emphasize the point that it ought not to go abroad, as it had too long in his judgement, and be accepted, that hospitals existed only for the working classes. There were an enormous number of small traders, clerks, and others of the classes to which many of them belonged who, if they were to go into the facts and determine the question of inability to pay, could show a stronger claim than many of those who were now accepted with little or no inquiry. For that reason, he ventured to ask for some enlargement of the recommendation of the Committee on that important question as to what was inability to pay, or such inability to pay as would entitle an applicant to receive gratuitous hospital aid.

Mr. R. Ball Dodson (Hospital for Women, Brighton), in seconding the amendment, agreed that the ordinary clerk was just as much entitled to consideration as the ordinary labourer and the ordinary mechanic. In a large watering place like Brighton there was an enormous number of lodginghouse keepers. Sometimes those lodginghouse keepers were in very great straits. He remembered some eight or ten years ago, when the unemployed first began to parade about the streets in Brighton, it was found that the so-called labouring classes scarcely ever applied to the soup kitchen. Many of the lodginghouse keepers, through not having lodgers during the year, made their principal meals at the soup kitchens. Those women were very often very nicely dressed, but the hospital authority took into consideration their actual circumstances and received them. As to the actual wording of Mr. Gosnell's resolution, however, although he seconded it rather as a matter of principle, he did not see that the motion on the agenda failed to cover the matter. It struck him that the point would be met if it were expressly stated that they took into consideration the circumstances in which a man was placed.

Dr. M. Beverley (late Chairman, Hospitals Committee, British Medical Association) rose to a point of order. It seemed to him that the matter under discussion was met by the recommendation of the Hospitals Committee. It was inability to pay, and it did not matter whether a man or woman wore a black coat or a sealskin jacket. He remembered some years ago, in a hospital to which he belonged, the case of a clergyman who came under the category of "passing rich on £40 a year," who was admitted to the hospital for treatment of stone in the bladder. It was proposed by the Committee to make some charge; but, when the matter was discussed, all recognized that the man was not so much able to pay for treatment in the hospital as the team-man of the principal farmer in his parish. He submitted that the discussion they were engaged in was scarcely in order, because in the resolution inability to pay was distinctly dealt with.

The Chairman then put the amendment to the meeting, and, on a show of hands, he declared it lost.

The Constitution of the Conference.

Mr. A. F. Graves (Sussex Eye Hospital, Brighton) said his Committee were perfectly willing to support the Conference, but they had noticed in the press some reflections upon the character of the Conference and the *raison d'être* of its being called together. A paragraph in one paper stated that the Conference was called together by a body of medical gentlemen who were anxious in some way to stop the abuse of hospitals, and evidently suggested that the Conference was convened for some such purpose by certain members of the medical profession. He was

instructed by his Committee to inquire early in the proceedings if that were the fact, and why the Conference was called. If the allegations were correct, he was simply to report to his Committee, when they would consider what steps they would take in future in the matter. The paper to which he referred was the *Hospital Gazette*.

The Chairman said his attention had been called to the paragraph which had been mentioned. He thought the names of the gentlemen who served upon the Committee during the past year, and also the names of the gentlemen who had been sent to the Conference, were quite sufficient refutation of the statement which appeared in the *Hospital Gazette*. Further than that, he thought they might refer to the statement of the matters which were to be brought before the Conference. There was only one out of the whole number which in his judgement dealt with the question raised by the last speaker, and he hardly thought the point needed refutation. Every Conference or movement must begin in some way or another, and undoubtedly it was the interest which the British Medical Association took in regard to hospital matters that started the Conference some three years previously. If the Conference were as successful as he hoped it would be, they would reap a rich reward for what they had done. He entirely failed to see any indication in the resolutions which had been passed that they were passed in the interests of the medical profession alone, and not in the interests of the patients who went to hospitals.

Workmen's Compensation Act.

Mr. Harry Johnson (Leicester Infirmary) then moved:

That it is desirable to supply gratuitous hospital treatment to those who are provided for by the Workmen's Compensation Act.

After summarizing the provisions of the Act, he said that while they were generous in so far as they provided what hitherto had not been afforded in the way of adequate compensation, he did not think the compensation could be regarded as unduly benefiting the workpeople concerned. In the event of death, even if the maximum sum of £300 were awarded, the money had to be invested and the income applied for the dependants; £300 invested in that way could not produce more than £10 or £20 a year. Where death did not result the maximum sum was £1 for incapacity. He thought that if hospitals attempted to ask for payment by patients who came under the Act they would meet with very serious opposition. The primary objection, perhaps, was contained in the Act itself, which provided that no payment under the Act should be capable of being assigned or charged or vested in any other person by operation of law, nor should any charge be made against the workman. This clause seemed absolutely to prevent hospitals from charging or obtaining payment for treatment provided. He thought the matter should be most carefully considered, or hospitals might be doing something which was not only harsh, but illegal. Further, the bearing of the payment suggested upon the hospital administration should be very carefully considered, or a blow would be struck at the present voluntary system, even if it did not anticipate the payment of medical officers themselves. It would be harmful and injurious to hospitals to have patients paying perhaps 5s. or some small sum a week lying alongside patients who were contributing nothing. Again, it was not the workmen themselves who would be called upon to bear the suggested cost, but their dependants, and it seemed to him instead of being progressive it would be retrogressive to expect the dependants of workpeople to provide treatment for the head of the family in illness. He had before him a return of patients treated under the Act or reported under the Act during the year 1907 in the district covered by the hospital he had the honour to represent. He found that 4 fatal cases were reported, 1,233 non-fatal cases, and 14 dangerous occurrences. He found on reference to the books of the hospital that not more than 80 of the in-patients were in receipt of compensation under the Act. The hospital treated some 3,000 patients in the course of the year, and he had excluded children under 10 years of age. If a small charge of 5s. a week towards the cost of treatment were made, the amount receivable by the hospitals would not be more than £120. During the past fortnight he had very carefully surveyed the casualty department of his hospital, and there he found a rather different state of things. In 13,000 casual cases treated in a year he estimated that 15 per cent. were in receipt of compensation under the Act. If payment were to be required of such patients in the casualty department there would be a risk of getting into direct conflict with the medical profession. The average cost of treatment in the casualty department was, roughly, 2s., so that altogether, if a charge of 5s. a week were made for in-patients and of 2s. for casualty patients, a sum of between £200 and £300 would be received—an amount not to be considered when compared with the £8,000 received by the hospital in contributions during the time. Unless an alternative scheme were put forward, he would suggest the better way to provide for the payment of workpeople was to ask the working classes to contribute regularly and systematically to the hospitals during time of health. Such a course would be much more just than to make a charge which would deprive the dependants of workpeople of part of the privileges which the Act conferred. Nothing should be done in any way to alienate the sympathies of the working classes, and where organized effort was so strong as it was in the district of the hospital which he represented they would be doing more harm than good if, for the sake of £300, an attempt was made to make the charge suggested.

Dr. Beverley asked whether patients had been charged in the hospital quoted, and whether Mr. Harry Johnson could tell the Conference of any hospital where charges were made for patients under the Workmen's Compensation Act.

Mr. Harry Johnson replied that in the hospital he represented no charge was made, nor did he know of a hospital where under the Workmen's Compensation Act payments were made.

Mr. H. Clifford Gosnell asked if Mr. Harry Johnson would consider a man in receipt of compensation a person who fell within the definition the Conference had been discussing—namely, unable to pay.

The Chairman thought the resolution simply referred to those who were provided for by the Workmen's Compensation Act.

Mr. Gosnell assented, but desired to ask Mr. Harry Johnson whether, if a man were provided for by the Workmen's Compensation Act, he could be said to be unable to pay.

Dr. Pope said that, before the Workmen's Compensation Act was passed, when a workman was injured his means of livelihood stopped altogether, and there could be no doubt that he was a proper person for hospital treatment. But, as compensation was awarded him as a matter of right from his employers, the matter seemed to be one which ought at least to be discussed. He did not know that he disagreed with Mr. Harry Johnson, and he thought that if compensation were on a moderately good scale a hospital might decline to see an injured workman without payment. A man might get 40s. or 50s. a week under the Workmen's Compensation Act, so that it rather became a question of degree. He certainly would not agree it was a proper thing to charge a man who got compensation 5s. a week, and he should not agree to turning a man away from the casualty department when he came with a bleeding finger while they inquired whether he got compensation.

Dr. J. A. Macdonald (Chairman of Representative Meetings, British Medical Association) thought that if the Conference carried the motion on the agenda with regard to almoners, cases under the Workmen's Compensation Act would be inquired into by the almoners on their merits. He pointed out that in addition to compensation derived under the Act the majority of working men belonged to one or two benefit clubs, from which they might get 30s. a week sick pay, as he had known in one case. Although this, of course, was an extreme case, he knew of many in which men got 24s. a week from their friendly clubs. Whether such cases were suitable for treatment at a hospital, which was a charitable institution, should be considered. Whether the hospital would accept payment was another matter. He thought if every case were taken upon its merits and almoners were appointed, that would meet the point better than a hard and fast rule.

Mr. Leonard D. Rea (Cardiff Infirmary) was in sympathy with Mr. Harry Johnson. In his experience it was better to get contributions from workpeople during a

period of health and not to worry them when they were ill, when they had so many calls upon them. In nearly all compensation cases the matter was met by insurance, and if a man were treated in hospital and his eyes saved, that saved the insurance company perhaps £200 or £300, but the hospital did not get a penny piece from the insurance company. The same obtained in cases where arms or legs were saved from amputation; the insurance companies were saved considerable sums of money, but the hospitals received nothing from them.

Dr. Henry Davy (President of the British Medical Association; Royal Devon and Exeter Hospital) thought most of the difficulties which had been mentioned would be met if the Committees of the various hospitals adopted the plan of the hospital which he represented. There all cases came before the medical staff to consider whether they were suitable. There was a rule that no one was to be admitted who possessed more than 25s. a week. There was also a rule that all cases which required medical or surgical treatment where there was inability to pay were recommended by the medical officer to the Committee, who discussed the matter on its merits and decided whether the case should be admitted or not. Casualties received immediate attention, and the patient was then referred to his own medical man if there was ability to pay.

Dr. Herbert Jones (Herefordshire General Hospital), on a point of order, said the Conference had already decided that inability to pay was the consideration, and was now asked to say that something else should be taken into consideration so that in a sense the resolution was antagonistic to the one already passed.

The Chairman ruled that the discussion and the resolution were in order.

Dr. Pope desired to propose an amendment, but the Chairman ruled that having already spoken he was out of order.

Mr. J. H. Shaw (Southport Infirmary) said his hospital had been rather hard hit owing to motor accidents, and he thought the following rule, which had been adopted at the annual Court of Governors on February 16th, 1907, might be of service to the Conference:

> Any person meeting with an accident or requiring immediate medical or surgical assistance, whether a resident in the district or not, may receive treatment at the infirmary at any hour of the day or night without recommendation. Should such a patient after admission or treatment be found able to pay, or should the accident be caused by the negligence or default of another, the Board may regard the case as that of a paying patient and claim such payment as circumstances may warrant.

The rule had been found to work admirably and he recommended the Conference to adopt it.

Dr. Frank Fowler (Royal Victoria Hospital, Bournemouth) moved as an amendment to the resolution the addition of the words after the words "Workmen's Compensation Act,"

> Whom the Hospital Board shall consider unable to pay for medical attendance.

He would not take up time by addressing the Conference, because he thought the meaning of his amendment was quite obvious.

Mr. W. C. Lewis (West Kent General Hospital) seconded.

Without further discussion the amendment was put and carried, and then carried as a substantive resolution.

Payments by Patients.

Mr. Sydney Holland (Chairman of the London Hospital) introducing the motion on the agenda proposed by him:

> That where they can afford to do so, hospital patients ought to be asked to pay for the food, medicines, and bandages supplied to them.

It was very seldom one approached a subject of discussion and felt absolutely certain of the ground upon which one stood. One generally felt that those who were going to argue on the other side might possibly have something worth listening to, but he had been through the matter often, and he had never yet heard argument against the resolution which could not be immediately answered. Hospitals all over England, and certainly in London, were in a very serious condition. It was almost impossible to get sufficient money to keep them up properly. Some men were good beggars, and some men were bad beggars. If a hospital were fortunate enough to have a fool who would devote his time to begging money for the hospital it might for a time flourish, but they were in a very serious position in London, and he thought there was no hope for the hospitals in London unless they could call upon the State to help. One of the ways in which he thought hospitals were making a serious mistake was that, whether the patients were able to afford it or not, they were never asked to contribute anything towards the help they got from the hospitals. He wished to state all the arguments as shortly as possible in favour of payment by patients. As a preliminary, he asked the Conference to accept as an axiom, "It is economically unsound to give everybody everything for nothing, whether they can afford to pay for it or not." [Hear, hear.] He was glad to hear the axiom accepted. He also asked them to accept the following axiom: "That it is to pauperize our nation to teach them that they need make no provision against old age and against times when they are out of work." [Applause.] If they admitted, as they had by their welcome cheers, that it pauperized the nation to let charity and the rates support persons when they were out of work or on a rainy day, then those who advocated the right to give them free treatment in sickness must show him there was some reason for differentiating between the rainy day of sickness and the rainy day of being out of work. Those who advocated free treatment of patients were in this further difficulty—they were teaching the people that even if they did save, and even if they did provide money for days of sickness, nevertheless when they came to the hospital they would not be asked to pay for anything at all; and although it was wrong, in every one's opinion, to provide through the public for all the rainy days that come to the poor, yet the hospitals would not take any money from them when they were ill. That was the position the Conference was driven to if it voted against the resolution. Then he was told it was against the spirit of charity to charge anything to a man who was ill. He had been asked the other day if it was not against the teaching of the parable of the Good Samaritan, who gave everything, to suggest that patients should be charged, and whether the Good Samaritan ought to have charged. His reply was, No, because the robbers had taken from their victim all that he had. But if the poor man who had been despoiled had had money left in his pocket, he thought the Good Samaritan would have been perfectly justified in asking him to contribute something towards the cost of what he did for him. The question of charity was a very difficult one to answer, because it mingled sentiment with common sense. People who argued in that way said, "Where is there any charity if you are going to charge a fellow when he is ill for what you do for him?" But what was the proper definition of charity? Charity meant to live with their fellow men, to deny themselves and to help a fellow brother or sister. As applied to hospitals, he thought it meant they ought to deny themselves, in order to give to their brothers and sisters what they could not afford to get for themselves. Supposing out of a feeling of charity he said, "My dear friend, you cannot afford, I see, to educate your children. It is very important for the State that they should be educated, but you tell me that you cannot afford to do so. I will help you." Was it against the spirit of charity for him to say, "I will educate them free, but you really must provide them with food or with boots, because I know you can afford to do that"? If he helped the man to get education for his children, which he could not otherwise get, was it against the spirit of charity that he should ask a man to go so far as to keep his children in bread and butter and boots? If that were right, why was it wicked, and against the spirit of charity and unreasonable, to say to poor people: "We will get you the opinion for which you would have to pay 2 guineas outside, and we will keep you in a building which costs a vast sum to keep up, but, if you can afford to do so, we think you ought to pay for the medicines you are provided with"? Why was that wicked? Dealing with the in-patient, he said to him: "We will get you an operation which would cost 100 guineas. We will get you 4 guineas a week in nursing, washing, and bandaging, and all the medicine free, but if you can afford to do so"—and no one suggested that hospitals should charge those who

could not afford to pay, because it was not very useful doing that—"surely it is reasonable you should pay the cost of your food while in hospital." He happened to be a large employer of labour, being Deputy Chairman of the London and East India Docks Company in London, and during the whole time their labourers were ill they were receiving full pay from his company. Therefore, the labourer's family were actually relieved of the cost of keeping the breadwinner, yet the hospitals were not allowed to ask, and it was thought to be very wrong to ask him to pay for the cost of his food. Again the case might be taken of a policeman or a postman or of a clerk, many of whom were in the hospital to-day, and many of whom were receiving full pay; yet the hospitals of London took nothing from them. It was very necessary, of course, to have certain precautions to prevent hardship, and he desired to state that precautions had been taken at the London Hospital for some years past with complete success. No charge was made for treatment or advice, but only for medicine and bandages supplied, and only those persons were charged who could afford to pay something. Other cases were free. Any patient might refuse payment on the ground of poverty, in which case an inspector inquired into his circumstances. The medical staff were at liberty to mark as free such cases as were likely to be deterred from coming again, such as mental cases and others they thought ought to be treated free. No charge was made for medicine supplied to children under school age, because the hospital authorities were particularly anxious not to prevent parents sending children to school, which might happen if a charge were made. No charge was made to a patient coming with a letter from a medical practitioner. He said that 157,000 people had paid last year without any grumbling or undue pressure; 11,000 were let off because they came for advice only; 23,000 claimed to be let off on the ground of poverty—that was one in seven—and the result of investigation was that 4,500 were compelled to pay subsequently; 115 children were let off because they were under age, and 3,000 patients were let off because they came from medical practitioners. The result to the London Hospital was that it got £2,000 in its coffers in a year. Though at the London Hospital one out of seven were excused, at the Poplar Hospital, of which he also happened to be Chairman, only one out of ninety patients who claimed to be let off were let off, but at Poplar a woman collected the money, and perhaps that was why there was less grumbling as to payment. It had been asked whether working men would not oppose the plan. He answered that they did not oppose it. They grumbled a little at first, but any one who took the trouble to go to their meetings and explain the enormous benefit of the hospitals to them and what the hospitals were to their wives and children, and what condition they would be in if the hospitals were not there, would be able to convince any meeting of working men that they ought to pay. He himself had attended several of those meetings. The Hospital Saturday Fund, composed wholly of working men, was in favour of the working men making the payment suggested. At the Poplar Hospital there was a majority of working men on the Committee who were also in favour of that payment. He warned any lay gentlemen present that they would have to be very careful in dealing with the staff of their hospitals. The arguments of the staff of a hospital might be put in the following way: "We give our services without payment, and we are therefore entitled to dictate upon what terms we will give them. We do not agree to give our services to increase the funds of the hospital. This reduces us to the prestige of the sixpenny doctor, because people will never understand that they are paying for treatment." But nobody, he ventured to suggest, would say that the staff of a hospital gave their services to the hospital for nothing. They were long past the day of thinking that it was not to the advantage of a medical man to be on the staff of a big hospital. Medical men belonged to a big hospital because they got a *quid pro quo* for their services; any man who belonged to the staff of a hospital knew that it was an advertisement for him in his profession, that it was a step up in his profession, and that it enabled him to get patients. He quite admitted that the staff of hospitals did a great deal more than they need for the poor people. They were extremely kind to patients, and there was no trouble they would not take to try and serve them in any possible way, but he asked the Conference to abolish any nonsense and hypocrisy in saying medical men gave their services for nothing to the hospital, because they did not. The second argument was that some patients might think they were paying for treatment. He thought it a ridiculous argument, if every possible precaution were taken that the patient should think he was not paying for treatment. If patients were only charged when they had medicines and bandages, surely Committees of hospitals were not going to be such idiots as to manage hospitals in a different way because some people were so stupid as to believe they were paying for treatment. Were people so stupid as that to tell them how hospitals were to be managed? Were they to manage the hospitals differently because some of the people might make a mistake as to the reasons for which a charge was made for food and medicine and bandages? At the London Hospital money was constantly returned to the poor people if they had not had any medicine or bandages; the poor people went to the desk and took their 3d. away if they had had advice only. There was no doubt some of the poor who paid a small sum considered they were paying for what they received and did not look upon it as charity, but he thought it would be ridiculous to run hospitals upon the misrepresentations of poor people, some of whom thought the Chairman of the London Hospital was in receipt of a large salary and had told him so; but that was no reason for his giving up the chairmanship because some donkey said that. He next dealt with the objection of the general practitioner. He thought very great care should be taken not to interfere with general practitioners, honourable men who worked under circumstances of very great difficulty. Their objection might be put as follows: "By introducing a system of payments the hospital competes unfairly with outside practitioners for patients, who could afford to pay to the general practitioners moderate sums." He admitted at once that every hospital must compete with medical practitioners; he thought that was inevitable. All the management of the hospital had to do was to see that there was no more competition than could be possibly helped. How could the payment for medicines affect the general practitioner? If the hospital charged every patient 7s. or 10s. it would not be competing, and surely charging something must be competing less with the general practitioner than if the hospital were to give the patients everything for nothing. He suggested that that proposition was obvious. If it were not so there must be something about medicine different to every other business. Further, the general practitioner used as an argument that, if a charge were made to out-patients, the well-to-do would attend the hospitals who would not attend when medicines were free and it was all charity. Every one suffered very much from what did not happen, like the man who sent for his boys when dying, and said he had had a lot of trouble in life, and half of it had never happened. The grievance was one which had never been proved to be a true one, and it was, in fact, contrary to the experience of every hospital where patients were charged. The idea that because a 3d. charge was made for bandages and medicine the better-class person would attend was founded on fear and not on fact; 44,000 people had attended at the Poplar Hospital the previous year, and they were exactly the same class of people as attended in 1895 before the charge was made; 157,000 paid at the London Hospital, and they were exactly the same class as attended before the charge was made. At Guy's Hospital, too, exactly the same people attended as before. When these facts were discussed with the medical practitioners, they said to him, "Oh, but then well-to-do people will dress up in old clothes and come to the out patient department, and so you do not know them." That was hardly an argument to put before reasonable people, because the medical practitioners first of all said a man was so honourable that he would not accept charity, and would not accept the medicines for nothing, but directly he had the privilege of paying 3d. for them he would go to a pawnshop, buy old clothes, and come to the out-patient department for the privilege of paying 3d. At the London Hospital they made the in-patients pay for their tea, sugar, and butter, which was considered heresy. In conclusion, he thought it unfair to use money extracted with great labour from charitable people to supply goods

free to people who could perfectly well afford to pay something for them. He said that the charitable work at the hospitals should be restricted to providing for the sick poor that help which they could not possibly afford to provide for themselves.

Lieutenant-Colonel E. Montefiore (Metropolitan Hospital, Metropolitan Provident Medical Association, Conference Committee) eulogized the work which Mr. Sydney Holland had done at the London Hospital, but thought his proposal rather contrary to the first motion on the agenda. He thought Mr. Sydney Holland's remarks most plausible, but he considered the 3d. for medicine or bandages or both should go to the general practitioner; and if a patient could not pay 3d. to the general practitioner, he should pay him through the sick club or provident dispensary, and all cases the medical practitioner thought advisable to send to the hospital for consultation he would send. To repeat an expression which had been used, donkeys as they might be, poor people did think they were receiving advice as well as bandages and medicine for the small sum of 3d. Mr. Holland had said that only those were charged who could afford to pay, but he himself did not think the inquiry was what it might be at the London Hospital. He was loth to say that, because the gentleman who for many years had conducted the inquiry in the most able way was lately dead. He thought hospitals ought to give to every body a true charity, and he did not think it was right to require payment whether for bandages or otherwise.

Mr. J. Dyson (Crewkerne Hospital) inquired whether Mr. Sydney Holland's argument applied to cottage hospitals as well as large hospitals.

Mr. Sydney Holland replied that most cottage hospitals charged so much a week, and what was thought wrong for the big hospitals was thought quite right with cottage hospitals. A charge was also made in convalescent homes.

Mr. Walter G. Carnt (Manchester Royal Infirmary, Conference Committee) said that at the Manchester Infirmary patients were expected to pay some small sum towards the cost of their maintenance if they could afford to do so. A hospital clerk visited the patients or interviewed the friends on visiting day, and put it plainly that the Board expected the patient to contribute something if it could be afforded. The result was that a very large number of patients paid sums ranging from 2s. 6d. to 7s. 6d., and sometimes 10s., a week; thus between £1,100 and £1,200 had been added to the funds of the hospital every year. In the out-patient department no charge was made except under exceptional circumstances. There was a wage limit of 21s., and inquiries were made into the circumstances of all patients in the out patient department. A small charge was made in certain cases in the out-patient department, when cases were sent by a general practitioner, where payment could be made, and they found that a certain class of patients, sent by doctors, who required special treatment which they could not get from the ordinary medical practitioner generally were quite prepared to pay something. He thought an out-patient department run on those lines was well managed, and also considered that some of the patients could pay for medicine and bandages.

The Rev. W. Blizzard (Kent and Canterbury Hospital) desired to consider the question from the point of view of the small provincial hospital with about one hundred beds, such as he represented. He thought there were two difficulties in the way of Mr. Sydney Holland's proposal. How were they going to differentiate in country hospitals between those who could afford to pay and those who could not? Further, the adoption of the proposal would increase the number of those willing to take hospital treatment because they were paying for their board, and would not that injure the medical profession? They also had to consider, if a charge were made for food and maintenance, what would be the effect upon the supporters of the country hospitals, with regard to whom a strong motive for subscribing was the wish to help their poorer neighbours, either in the provision of hospital treatment or the provision of food and medicine. Before passing the proposed resolution he thought the matter should be considered from these points of view, and that they ought to remember that it might have very far-reaching effects, first with regard to the general practitioners and then with regard to the voluntary supporters of hospitals.

Mr. Robert Capes did not agree with the mover of the resolution in doling out charity at 3d. a time. He himself looked at the matter from three points of view—first, the patient; secondly, the hospital; and, thirdly, the much-abused and long-suffering general practitioner. Considered from those points of view, it was bad to bring payment into hospital administration. Directly there was payment it ceased to be charity; it became a right, and people would assert their rights. People would go to the out-patient department as of right, and those departments were already so overcrowded that the staff could not get through their work. In the in-patient department, if people were asked to pay for their food there would at once be grumbling. A man was not going to pay for his food when he was on a milk diet when the man next to him got a mutton chop. He would grumble and say, "Why should I pay the same as the other man?" The passing of the resolution would be a direct challenge to the medical profession. They had tried to educate their patients that they charged for their advice and not for their medicine; and if it were going to the public that by going to a hospital patients could receive advice and medicine for a small sum, it would lead to the springing up of cheap dispensaries close to the hospitals where would be written up "Advice gratis," and the patients would pay for their medicine. He quoted what one of the physicians at St. Thomas's Hospital had written as long ago as 1897: "Charging out-patients a fee for medicine is a plan which, to my mind, combines every possible evil, and carries with it only the dearly-bought advantage of bringing money into the hospital coffers." He advised the mover of the resolution to reduce the crowd of out-patients at the hospitals. If the small accidents and trifling cases were sent back to the general practitioner it would have that effect, and there would be sufficient funds to deal with other cases.

Dr. Beverley (late Chairman, Hospitals Committee, British Medical Association) said that it was with diffidence he ventured to express an opinion at variance with that of one recognized by all to have done so much, but the recommendation which the Conference was asked to adopt was absolutely bad in principle. He agreed with a previous speaker who said that the right time to get money from hospital patients was when they were well, and instanced the workpeople in Sunderland and Newcastle, who contributed between £7,000 and £8,000 a year by penny subscriptions. He asked what the contributions to the London Hospital would be if all the workpeople in the docks subscribed regularly their penny a week. That would be far better than the threepenny pieces of Mr. Holland, which produced £2,000. The grave objection to the scheme was that the hospital was taking the money at the wrong time. Out-patient departments were abused by those people who ought to belong to public dispensaries and public medical services. The effect of the appointment of almoners was to reduce the number of out-patients and increase the number of those who belonged to provident medical societies, and that benefited the struggling medical practitioner, who by that means got a fair competence. The Conference had already adopted the principle that only those who were unable to pay should be treated at the hospitals, and yet in spite of that the mover of the resolution wanted to ask them to pay for food, for medicine, and for bandages. The Conference would be going in the wrong direction if it supported Mr. Sydney Holland's proposal, and he, for one ventured, to offer it his very sincere opposition.

Dr. Henry Davy (President, British Medical Association) said the resolution raised the whole question of the charitable voluntary system in the country. Personally he preferred the German system. Workmen and servants there paid into an insurance company or its equivalent. The employer did the same, and the hospitals were splendidly kept up by municipal and Government grants. Every workman and servant had the right to claim six weeks' treatment in hospital, and the medical men were paid as well as everybody else. He contrasted that system with the voluntary system in England by which charitable people were supposed to give money for food and hospital expenditure, and medical men were supposed to give their services. If payment were introduced for this, that, and the other, the only charitable

people would be the medical men. He hoped the day would come when the German system would be adopted. He would be very sorry to see such things as charges of 3d. for medicine, 1d. for a bandage, and ½d. for an egg.

Surgeon-General Sir CHARLES CUFFE (Kensington General Hospital) agreed with Mr. Sydney Holland that some form of payment should be made by people attending hospitals for food and medicine. When patients found they had to make payment for their daily board they did all they could to discharge themselves as quickly as possible. At the hospital in Kensington since the introduction of a charge to the patient there had been a most astonishing diminution in the number of out-patients. In Germany a portion of the money of the insurance went to the hospital. In France it was not considered right that a man should go into hospital at the expense of his fellows, and they insisted upon his paying a certain amount of the cost of his treatment while in hospital. He himself had tried an experiment in Kensington workhouse. He found a great number who drifted into the workhouse infirmary from the various hospitals with ulcerated legs and the like. Such patients had been sent to the workhouse in order to see if they could not do a little work. As soon as that was done it was found the people left the workhouse saying, "I am not going to stand this—I am going out." If there was some charge for maintenance of patients in hospitals there would, he believed, be a considerable diminution in their number.

Dr. MORGAN DOCKRELL (St. John's Hospital for Diseases of the Skin) supported Mr. Sydney Holland's proposition.

Dr. HERON (City of London Hospital for Diseases of the Chest) deeply regretted the statement that hospitals when they made charges such as it was advocated they should make must come into competition with the general practitioner.

The Hon. SYDNEY HOLLAND pointed out that his statement was that whether they made the charge or not hospitals must inevitably compete with the medical practitioners, but the hospitals competed less with medical practitioners when they made a charge than when they gave something for nothing.

Dr. HERON entirely disagreed with that view. There was no one present who would not accept it as true that hospitals were regarded by those who had most to do with them as being institutions which were intended to help the necessitous poor. The moment they stepped outside the class rightly represented by that phrase, they came immediately to the troublesome question of sifting out those who were necessitous and those who were not. There were people who were not of the class of necessitous poor with whom, as one who had been associated with hospitals since 1863 as a student and a physician, he had the deepest sympathy. A clerk with £50 or £60 a year had far more claims on their sympathy when he was ill than a good many of those who belonged to the labouring classes, who, when they were ill, were at once accorded all the privileges that were to be obtained by hospital treatment. In the City of London there were a number of men who earned £250—and he would go to an extreme limit with what he happened to know was true—to £500 a year, who went to hospitals, and who looked upon it as the right thing to do, and paid nothing. A great many people believed that by a system of almoners this sort of thing could be stopped, but the almoner was one of the greatest delusions of the present day. It was physically impossible for any one almoner to do the work in connexion with a large hospital. The system of payment was simply the thin end of the wedge, and meant the destruction of the great reputation which voluntary hospitals deserved so long as they remained aids to the necessitous sick poor. He would deeply deplore if the time ever came when the strict definition which obtained in hospitals of former days were altered, and paying patients recognized. As to the suggestion that competition on the part of hospitals with general practitioners was inevitable, he held that that was not the case if hospitals were properly administered. No man who could pay a general practitioner should be permitted to go into a hospital. To mention a curious fact which was within his own knowledge, there was a hospital in London which by means of the payments received from its patients received two-thirds of its total income. Did any sensible man believe that that was a charity, and that that was an institution which should be supported by the King's Fund? That sort of thing was an iniquity, and although he knew Mr. Sydney Holland did not mean to go that length, he hoped he would come to see that the suggestion of payment, small as it seemed to be, struck at the root of all true charity.

Mr. R. G. PATERSON (Glasgow Eye Infirmary) observed that many of the hospitals of Glasgow received some two-thirds of the upkeep from money received from work-people. Many contributed their penny a week, which was taken regularly by the pay clerks from the workpeople and paid over to the infirmary every year. Working people who thus supported these institutions looked upon it as a right thing to do; and it was a matter of expediency with the institutions that they should not make a charge unless they were ready to shut out a large portion of their income. If the resolution were carried it probably would not be without a protest from the hospitals and infirmaries which were to a considerable extent self-supporting.

Dr. E. L. Fox (Plymouth Royal Eye Infirmary; Conference Committee) said his views were very much in accordance with Mr. Sydney Holland's, but in one or two particulars he differed from him. It had been said that medical practitioners must not agree to give their services for pay received by hospitals; with that he entirely disagreed; he also thought a uniform charge was absolutely wrong, as it must ultimately press on poor people. He was associated with two hospitals which worked mostly on the lines of the resolution, but had not a uniform charge. It depended on the efficiency of the investigation official and how it was done. It had been suggested that no person who could pay a general practitioner should be admitted to a hospital; in these times that was absurd. How could a general practitioner perform some of the difficult operations which had to be performed in hospitals? It was impossible. Why should not patients who were in a position to pay something have them done? It had been said that patients would grumble if asked to pay. He was associated with a hospital where they were invited to pay, and he had never heard anything of the sort.

Mr. HENRY PETERKIN (Aberdeen Royal Infirmary) thought it very clear that whether hospitals excluded those who could pay or made charges on those who could pay, they must, at any rate, find out those who could pay; he would very much like to know whether anything in the shape of inquiry or investigation had aroused any public feeling against hospitals where that system had been tried. They had been exercised to some extent in Aberdeen as to that question. They endeavoured to draw the attention of patients to the fact that they wanted them to pay where they could; but they never attempted anything like investigation as to the circumstances of individual patients. He would like to know what effect, if any, such investigation had had.

In reply to a question as to the effect the institution of these charges had had on the general income of the hospitals with which he was associated, Mr. SYDNEY HOLLAND said that when he went to the Poplar Hospital its income was £3 000 a year. Its income at the present time was £15,000 a year, and £70,000 had been spent on the building, trebling its size. With regard to losing supporters, speaking with the responsibility of really knowing what he was saying, he had never lost one single farthingsworth of support from anybody in consequence of making a charge. When the Poplar Hospital first made a charge, some working men's clubs did leave off their subscriptions; but the largest subscriptions to the hospital were the working men's subscriptions, and they were larger than they had ever been. It had been suggested that the best way was to invite the patients to subscribe. His hospital invited all its patients to subscribe. Many a patient would promise to pay something, but when he got outside the institution it was strange how short his memory was. As to the suggestion that the proper test for admission to a hospital was inability to pay, he entirely agreed, with the addition of the words "for adequate treatment." That had nothing to do with his proposal. Then it had been said that the money hospitals got in this way ought to go to the general practitioner. The system which obtained in Edinburgh of giving prescriptions to the patients for them to get made up outside, London hospitals were perfectly entitled to adopt if it was wise; but the opinion at the London Hospital was that the patients would not get

anything like as good medicine outside as was made up by the institution. He had been asked how to differentiate between those who could pay and those who could not. That was a matter in which hospitals might employ the assistance of the Charity Organization Society or of some skilled almoner who knew the poor and the circumstances of the poor. Every day, when asked to help people, the charitably disposed had to differentiate and decide whether they ought to do it or ought not. Making a charge did not increase the numbers. Speaking from personal experience, he could say with perfect certainty that it had no effect one way or the other, but if there was any tendency at all any way, it would be certainly to decrease rather than increase. He had already dealt with its effect on supporters of hospitals. A hospital had a much better case when asking persons to help if it could say, "This is charity because it is to give these poor people what they cannot afford to buy themselves, and we are asking them to contribute to what they cannot afford to pay for themselves." He thought that a far better plea. He received a number of letters in answer to begging appeals which he sent out, and one of the commonest answers he got was, "I think you are doing too much for these people." He contended that as to the supporter there was a complete and very satisfactory answer. It had been said it would lead to crowding. It would not, because the payment by patients would not lead to any increased numbers. The greatest trouble to hospitals was the increase of numbers, and one means of doing away with that would be to charge more than was charged at present. The men employed by the Great Eastern Railway works at Stratford gave up a Bank Holiday every year and worked during the whole of that day, and the pay they received for that they gave to the London Hospital. When the charge for out-patients was first instituted he was asked to explain it to the men and he did so, and they continued to do the same thing and were doing it now. Therefore subscribers would not diminish their subscriptions if they were asked to pay for a small part of what they were getting. They were told that the money was taken at the wrong time, that it ought to be taken when the men were well. Working men had to subscribe to provident dispensaries and make provision for themselves in illness, but when they were ill they ought in addition to pay something for the care they were getting. Therefore hospitals ought to get the subscriptions at both times. It was not the driving in of the thin edge of the wedge. It was far easier to pull out the wedge than to push it in. As to the necessitous poor, they were the one class of people who ought not to be treated at the hospitals, because the State had already provided Poor law dispensaries for necessitous poor. It was not practicable, he was aware, but the class which hospitals existed for was the class just above the necessitous poor. As to a clerk with a salary of £250 a year using a hospital, that was the very class who ought to use them. He contended that a clerk who received such a salary, not as the result of invested capital but from his labour, was a proper subject for hospital treatment. That was the only course open to them until pay hospitals were started in London. A man in receipt of £800 a year should not be admitted to a hospital. The suggestion that his idea struck at the whole root of charity he could not answer; but if one's whole life was given up to hospital work it did not look as if one was trying to do anything which struck at the root of charity. Why did one work at hospitals? At any rate, one did it in the vain hope, perhaps, of helping his fellow man. He thought it was a taunt that ought not to be thrown in the face of any one who was working for a charity that a proposal was at all likely to strike at the root of charity. [Applause.]

The resolution was then put and carried.

Hospital Almoners.

Lieutenant-Colonel E. Montefiore (Metropolitan Hospital, Metropolitan Provident Medical Association, Conference Committee) moved:

> That in the opinion of this Conference the appointment of trained hospital almoners constitutes one of the best methods for checking the misuse of hospitals and for rendering more effective the economic value of an out-patient department.

Among the suggested model principles which had been passed for hospital management were some dealing with the suitability of patients for admission, the investigations as to suitability, the evidence of suitability, and the scope of out-patient departments. The best means of carrying out these principles was by the employment of trained almoners. The Charity Organization Society had watched with considerable interest for many years the attempts which had been made to introduce measures for the better organization of the out-patient departments. It was most certainly desirable that in the interests of the whole community the out-patient departments should be reserved for those who were unable to pay a general medical practitioner, either directly or through provident dispensaries or sick clubs; and also that those who were suffering from quite trivial complaints should not be treated unless at the desire of their medical advisers. It had often been said that the out-patient department should be considered as the consulting room of the poor. It was also essential in the best interests of the patient that some system should be in force to provide that the advice of the hospital physician and surgeon should be carried out, and this could be done only by the co-operation of charitable associations outside the hospital. The charitable world was large and lacked cohesion—its methods were not clearly understood by those who had not a personal knowledge and experience of the machinery of charitable institutions. It occurred to the Charity Organization Society that the establishment of trained almoners would, to a large extent, become efficacious in attaining the desired results, and, at its instigation, the Royal Free Hospital had definitely decided about twelve years ago to take this step. Since that time the expediency of the principle had gradually been gaining ground, and it had been adopted by some nine or ten of the best hospitals in London, and many others he believed were on the verge of following their example; there were also some hospitals in the provinces which employed trained almoners. About six months ago it was decided to invest a specially constituted body with the administrative details connected with its general promotion, whereon the almoners at present at work might have direct representation. Accordingly the Almoners Council had been constituted. Considerable divergence of opinion existed as to the work which hospital almoners should be called upon to perform. It was impossible that a single almoner could interview all the cases which were now accustomed to apply for treatment in a large out-patient department, and while she was always prepared to advise on such cases specially referred to her by medical men, she must work upon the principle of selection in the cases with which she was prepared to deal. It should be a distinctive feature in the appointment that an almoner should interview patients after they had been seen by the medical men, as the exercise of her power of discrimination was only really possible when the medical report was in her possession. An almoner's duties might be summarized as follows:

1. To interview all new patients to the hospital after such patients had been seen by a member of the staff, and to investigate thoroughly each case by means of different trained visitors and societies.
2. To report to the authorities all cases not suitable for further medical treatment.
3. To provide from the funds of the hospital Samaritan fund, in co-operation with outside charities, by surgical instruments, convalescent aid, etc., recommended by the medical staff.
4. To ensure that the home conditions of the patient should, so far as possible, be suitable, and that the treatment of the physicians or surgeons as to diet, fresh air, exercise, or rest should be carried out.

It was important that considerable care should be exercised in the selection of almoners, and that they should possess tact, common sense, patience, and devotion—qualities essential to conscientious performance of their duties. The training should be of two kinds: she must be thoroughly acquainted with the lives of the poor and the methods which existed to strengthen their independence and promote their welfare. With this object a candidate should work for some months in a local office of the Charity Organization Society, where she would come into contact with the social life of the poor in all its widespread variety, and a similar period should be spent working under a qualified almoner in a hospital. The appointment of an almoner with such a training must prove a real source of strength to a hospital, and where such

precautions had been taken her general utility had been recognized both by the hospital authorities and the medical staff. In conclusion, he read extracts from reports from hospitals in connexion with which lady almoners were at present working, to the effect that the work of the almoner had assisted in reducing the abuses of the out-patient departments to a minimum, and had formed a most useful link between the medical and general charity.

Sir Bampfylde Fuller (Royal Hants County Hospital) said the great distinction, which had not always been recognized, was the vital one between in-patient and out patient. He was convinced that a large number of the cases which filled hospital wards derived no benefit from being there and ought not to be there. There was no object in appointing an almoner unless they were agreed to the principle on which the almoner was to act, and they were not agreed upon the principle as to who were the people to come into a hospital and who were not. Until they arrived at some sort of decision as to who were the right persons to receive treatment and who were not, he did not see how the almoner could exercise his or her functions.

The Hon. Sydney Holland thought that the fact that there ought to be an almoner's department was a matter of common agreement. People talked much too easily about the abuse of hospitals. The Central Hospitals Council, on which sixteen London general and other hospitals were represented, had expressed the opinion in its report that there was no abuse of those hospitals; the Metropolitan Hospital Sunday Fund had investigated the matter, and come to the same conclusion. Only about 2 per cent. of the people attending the out-patient department were people who ought not to be there.

Dr. Dookrell was of opinion that the investigations of the Charity Organization Society went too far in many cases. The duties of an almoner should be very carefully carried out, assuming they were all agreed that almoners were of importance, and that they did an immense amount of good. He believed it was possible to have almoners but not almoners associated with the Charity Organization Society if they were to have sympathy with the individuals and also proper sympathy with the particular conditions under which they suffered.

Mr. Richard Jewson (Norfolk and Norwich Hospital) said his hospital had adopted the system of having an almoner, and after twelve months' experience he was able to speak in very favourable terms of the result of the experiment. The lines on which the investigation should be carried on were dealt with in the *Suggested Model Principles of Hospital Management.*

(3) "Investigations as to suitability.—That some means of investigation into the circumstances of the applicants for relief, by means of an almoner or other agent, shall be employed in all medical charities." (5) "Evidence of suitability.—That, except in emergencies, sufficient evidence shall be obtained on two points: (*a*) That the patient is not in a position to pay for adequate treatment; (*b*) that the case is, from a hospital point of view, suitable for treatment."

His hospital had adopted the suggestions of a previous conference and in its report for this year stated that—

"Cases considered unsuitable are those in which the necessity for treatment not being such as to require the special appliances of a hospital the circumstances of the patients enable them to provide for themselves either by consulting their usual medical adviser, or by obtaining treatment from the provident institutions of which they are members."

If the investigations of the almoner were restricted to those lines which were very wisely laid down by the previous conference nothing but good could result from their appointment. As the result of the almoner's efforts in the case of the Norfolk and Norwich Hospital abuse of the out-patient department was very largely moderated. He strongly recommended the Conference to support the resolution.

Mr. G. Acton Davis (St. Bartholomew's Hospital, London) supposed there was no large hospital which did not pursue some method of investigation. St. Bartholomew's employed trained men who investigated cases which were thought most suspicious, and he was bound to say that the proportion of cases found to be unsuitable was satisfactorily small. Therefore the abuse of hospitals which was spoken of a great deal in newspapers did not exist—at any rate, to the extent stated in those newspapers. He thought the duty of the almoners should be restricted to ascertaining the pecuniary conditions of the patients; for them to see that the physicians' directions were carried out was practically an impossibility. There was one point in connexion with almoners which he did not think had been mentioned—that was the opportunity, after investigation, of assisting cases of distress, either from the Samaritan fund or from the funds of the hospital. That was one of the most valuable points about almoners' work. He had had practical experience of it himself, and that portion of the work of the Charity Organization Society was the one which showed the best results in connexion with it.

Dr. Beverley agreed with the previous speaker and also with what Mr. Sydney Holland had said with regard to the small percentage of patients who attended the out-patient department who were able to pay medical men. In Norwich, after careful investigation, it was found that the percentage was very small indeed; but there was a very large percentage who ought to belong to clubs, and who came to the out-patient department rather than pay a certain small sum to belong to the provident dispensary societies. It was not so much in the interests of encouraging thrift that the almoner was most useful, but indirectly the almoner was useful, not only to the individuals concerned, but to the medical profession. At Norwich they had found that this work had been done excellently by a lady, and he was told in London in this particular department women were unquestionably better than men

Mr. R. Ball Dodson had had some experience as Chairman of the Almoners Committee of the Sussex County Hospital during the last seven years, and on the whole the system had worked well. But in working it would be necessary to have not merely two classes, but three classes. There were very poor people who could not afford to pay for ordinary treatment; there was a certain class which could afford to pay for ordinary treatment but not for special treatment; and there was another class which the almoner brought before the surgeon-in-charge, and said: "This person is able to pay for ordinary treatment and able to pay for special treatment, but does he require treatment that can only be got at a hospital?" In the first year 15 patients were refused treatment as being well able to pay, last year there were 10, and indirectly the system had had a most beneficial effect It had practically prevented an enormous class coming to the hospital, because they knew that they would have to meet this investigation, who would otherwise have applied although well able to pay for treatment.

Lieutenant-Colonel Montefiore in reply, agreed with Mr. Sydney Holland with regard to the abuse of hospitals; it was much more a misuse. As to the almoner seeing the doctor's orders carried out, there were very many things in which she might do a great deal of good. The out-patient physician, there was no doubt, could not know the home surroundings of the patient. The almoner was able to find out as to the conditions under which the patient was living, and in that way render a good deal of useful information to the physician at the hospital. Farther, the physician frequently wanted some sort of supervision over the patients after they left his care, and that could be done by the almoners obtaining the services of district nurses. In that way extremely useful work could be done. The almoner was of great importance on the question of thrift. If people once began to be thrifty, they would prefer thrift to charity.

The motion was then put, and carried by a large majority.

Co operation between Hospitals, Provident Dispensaries, and Practitioners.

Mr. H. A. Harben (Chairman, St. Mary's Hospital) moved:

> That the use of the out-patient department of hospitals by persons able to pay for their own treatment can be most effectually prevented by a close co-operation between hospitals, on the one hand, and provident dispensaries and similar institutions and local medical practitioners, on the other.

This motion, he said, hung very closely with that which had just been carried, for it was obvious that it was no use having an almoner or an inquiry official unless there was some other institution besides the hospital to which the patients could be referred; and it was quite impos-

sible to refer patients to provident dispensaries unless they had some officer like an almoner whose function it was to send them there. A good deal of difference of opinion existed as to the abuse of hospitals by out-patients, and there was some difference of opinion as to what was meant by the term "abuse." They had been told that there was only about 2 per cent. of abuse. He did not know how those figures were arrived at. He had inquired closely into the matter, and found it was one which could not be reduced to statistics. From inquiries made of the largest hospitals in London he found a very great difference of opinion among the authorities on the subject, but the abuse was said to be largest in those hospitals which employed the most skilful and highly trained almoners; in other words, those hospitals which did not make efficient inquiries were under the impression that no abuse existed because they did not inquire into it. One of the best of London almoners had stated it as her opinion that 10 per cent. of the patients who came to the out-patient department were able to pay for the treatment, while another 10 per cent. were not able to pay at the moment they sought relief, but were able to subscribe to dispensaries, and need not have gone to the hospital at all. There was no question that the number of patients was on the increase. In 1894 the attendances at the London hospitals were 870,000, and in 1906, 1,148,000. That was an increase out of proportion to the increase of the population; in other words, reducing those figures to the percentage of the population of London for those two years, the percentage of out-patients was in 1894 20 per cent., and in 1906, 24.3 per cent. At the same time the percentage of paupers in London advanced only from 2.3 to 2.48, and therefore the increase in the out-patient departments had been much greater than the increase of paupers. He only mentioned this as one of a number of facts tending to show that there was something approaching an abuse of hospitals. Any statistics on this subject had to be received with the greatest caution, because no efficient or uniform system existed of registering out-patients, and until that was established trustworthy figures could not be obtained. Though no positive conclusion could be based on figures for any one year, some conclusion could be reached by comparing one year with another. It was desirable in the interests of patients themselves, in the interests of thrift, and in order to relieve local practitioners and undue pressure on the hospitals, to endeavour to send those patients elsewhere who could be so sent. Some years ago the metropolitan hospitals drew up a valuable report urging the hospitals of London to co-operate with the provident dispensaries. Such co-operation could only be effected by giving some kind of preferential treatment to patients coming from provident dispensaries, by accepting them without inquiry as to means, by receiving them for consultative purposes, and treating them as favourably as possible. That recommendation fell flat, and there was no enthusiasm on the part of the hospitals to fall in with the views expressed in that report. He stated emphatically that it was essential, if this matter was to be dealt with, that the hospitals should enter into close co-operation with provident dispensaries, and every effort should be made by those connected with hospitals to encourage the formation of such dispensaries.

Mr. F. W. Buxton (Metropolitan Provident Medical Association) said that during the two or three years he had been Chairman of the Association it had affiliated twenty-one dispensaries and clubs throughout London, which were doing good work in support of thrift, and in attempting to relieve the London hospitals' out-patient departments of a good many patients. Instead of finding, as one would expect, the support from the hospitals in that direction, they had received the cold shoulder. Every provident dispensary in London should encourage thrift, and ought to discourage pauperism. His belief was that the big London hospitals, with their almost entirely free reception of out-patients, pauperized the population of London. His Association, on the other hand, was endeavouring to make the workman, with a wage limit up to 30s. a week, thrifty, encouraging him to look forward, and, remembering that illness was bound to come sooner or later, to make provision for it by paying the 6d. a month, or whatever it might be. It had been a great disappointment to himself and to his committee that they had not had the support of the London Hospital. He was glad to hear Mr. Sydney Holland say it was almost necessary for the London Hospital to charge something to its patients, because it showed that hospitals would have to be on their last legs before they would take what assistance they could get from provident dispensaries and refer a very large number of these people who came to the out-patient department to the local dispensary.

The motion was then put and carried *nem. con.*

The Conference then adjourned until the following day.

Thursday, April 2nd, 1908.

Mr. Charles Lupton (Leeds General Infirmary and Chairman of Conference Committee) took the chair at 10.30 a.m.

Cottage Hospitals.

Colonel J. G. Curtis (Deal and Walmer Victoria Hospital) moved:

> That some definite steps should be taken to ascertain the ability or contrary of each patient at a cottage hospital to pay for his maintenance.

From an examination he had recently made of the rules and admission forms of about fifty cottage hospitals his impression was that all cottage hospitals endeavoured to carry into effect, to a greater or less degree, the principle arrived at by the last Conference—that all persons admitted to cottage hospitals should contribute, where possible, towards their maintenance. Some few, however, left the amount to be contributed to the gratitude of the patient and his friends, but by the great majority the amount paid was fixed weekly by the House Committee or visitor aided in some cases by a scale of maximum payments embodied in the rules and printed on the form of admission. Prior to the admission of a patient the person responsible was usually required to sign a statement on the admission form that he was willing to pay weekly whatever sum the committee might consider equitable. In a few cases the scale of maximum payments was graduated from the rent of the house occupied by the patient, and very frequently by the occupation or earnings of the patient. The maximum varied from 14s. to 5s. a week, while the average cost of the patient was less than 30s. a week. In some cases the servants of large subscribers and subscribers of small amounts, when patients, were admitted at reduced rates, and a like privilege, in one instance, was granted to members of provident dispensaries. On the other hand, at several cottage hospitals, bachelors and members of provident clubs were charged a fixed proportion of the pay they received, and subscribers were requested to state on the admission form what sum they considered the patient could afford to pay. The rate for a child was sometimes less than that for an adult, but if the adult was a parent, his or her illness obviously affected the income of the family. To carry out the model principle in its entirety his experience led him to think that it was necessary to ascertain the ability to pay of each patient admitted, and unless this was done the revenue of the hospital would suffer and the patients be pauperized. Information was required on the following points amongst others: The occupation, earnings, the number of children, the age of the eldest child, if a member of a friendly society, and if the patient's place was being kept open. In one hospital this information was collected by the matron from the patient or friend, and the medical officer wrote it on a slip, which was placed before the House Committee at its weekly meeting; the admission form of another hospital contained places for these particulars. The person best able to judge of the circumstances of a patient was the medical officer who had, as was frequently the case in the country, attended the patient in his own home prior to admission.

Mr. Cardross Grant said that the Beckenham Cottage Hospital had one rule—namely, the payment of 3s. 6d. a week by every patient that came in. The hospital consisted of thirty-two beds, it was up to date in many ways, and had had the advantage of receiving from the Hospital Saturday Fund and the Hospital Sunday Fund an increased grant during the last year or two. He defended the system of payment by patients because it prevented their pauperization. The payments were cheerfully and regularly made, and were generally paid in advance. Subscribers' letters were really part of the

system of payment by patients. The Beckenham Hospital had subscribers' letters which cost 10s. 6d. each, which admitted patients for three weeks; after that the patient must get another letter. He did not defend subscribers' letters, as he did not think they were necessary, because the chances were that 90 per cent. of the patients came to the hospital through the doctors without really presenting subscribers' letters. Until 1900 there were no subscribers' letters, but it was thought subscribers' letters might be the means of increasing subscriptions. He had been honorary secretary and treasurer of the hospital for several years, and after inspecting the books he could not see that there was any real evidence of an increase of the subscriptions by the institution of subscribers' letters. Recently he had sent out a circular to 480 subscribers to ascertain if they were in favour of subscribers' letters, and enclosed a prepaid postcard for the purpose of getting their answers. Up to the present moment he had had about 240 answers, which was a very fair proportion when the apathy generally shown by subscribers in these matters was remembered. Out of the 240 answers, 200 were in favour of doing away with subscribers' letters, 32 preferred their retention, 8 gave other answers. This was a percentage of something like 15 per cent. in favour of subscribers' letters. Though he did not think that under the circumstances it was desirable to change the system at once, he submitted that the facts adduced were fair evidence that subscribers' letters might possibly be done away with. The Beckenham Hospital also received dental cases, with very great advantage to the poor people; during last year 488 separate cases had been treated, requiring something like 1,613 minor operations, mainly extractions, and as the department had proved so useful it was hoped to appoint two additional dental surgeons in order to take up stopping, and for these attendances it was proposed to make a charge of 1s. each.

Mr. JOHN DYSON thought the experience of Crewkerne Cottage Hospital might be of some use. It contained fifteen beds and three cots. He understood from the motion before the meeting, and by the manner in which it was introduced, that really the question as to whether there should be payment or not had been practically set aside; it seemed to be assumed that payment by patients to cottage hospitals was generally to be commended, and he did not object to it. All that had been so strenuously said in regard to this matter did not concern people who lived in the country, because most hospitals began with a minimum which really represented the actual cost of food which the patient would have to pay. At Crewkerne Cottage Hospital the maximum at present was 8s. The secretary now urged that the maximum should be a guinea. From what the mover of the resolution had said, that had been very often exceeded; it had gone up as far as even 2 guineas, but that would not apply to small hospitals where there was no separate room for well-to-do patients, and he thought the maximum of 8s. was sufficient. The sum thus obtained was found to be absolutely necessary, and without it there would be an annual recurring deficit. Every surgeon in Crewkerne was a member of the Committee, and took his turn at the hospital; their services, of course, were all honorary. It was from these surgeons, who rendered such good help, that the hospital got a good many of its cases.

Dr. DUNBAR DICKSON (Marlow Cottage Hospital) said that that hospital received payments from patients, but also received a considerable number who were quite unable to pay, many of whom were sent in by the Poor-law medical officer; the hospital received from the guardians the small contribution of 3 guineas a year. His Committee considered that altogether inadequate; but if those patients were not received they could not be treated at their own homes, and they would have to be sent to the Poor-law infirmary. He took it that the cottage hospitals ought not to be run on the hard and fast rules of the larger county hospitals or hospitals in large cities. The payments never exceeded 5s. a week, and he and his colleagues knew pretty well the circumstances of the persons who were admitted into the hospital; and, while he did not think it well that it should be left altogether to the medical man to fix what the patient should pay, still he thought their advice should be taken upon the matter.

Dr. POPE thought, with regard to the larger hospitals, a line of distinction ought to be drawn between hospital accommodation and facilities and hospital treatment. In his opinion, many were puzzled as to which way to vote on Mr. Sydney Holland's motion on the previous day, inasmuch as while many had great objection to the idea of a hospital taking money from its patients for treatment, they had not the same objection to taking money for accommodation and food. He took it that cottage hospitals did not or should not supply treatment. What it supplied was accommodation and facilities—food for the patient and facilities to the doctor to do his work. As to those hospitals there was not the same objection. But when a cottage hospital went out of its way to start an out-patient department, providing treatment, and then accepting pay, it was acting very unfairly to the practitioners in the district. The practitioners of Beckenham must be a long-suffering race if they put up with the cottage hospital outselling them and starting an out-patient department, and he hoped the representative of Beckenham would seriously consider whether that was doing good to the patient and not doing considerable harm to the practitioners of the neighbourhood.

Mr. CARDROSS GRANT (Beckenham) observed that with regard to the charge of 1s. it simply covered the cost of gas and so forth, and the practitioners in the neighbourhood themselves came forward and offered to do the work, knowing what a great benefit it had been to the sick poor of the neighbourhood in teaching them hygiene.

Dr. POPE, in view of this explanation, would modify his observations, but on the face of it it seemed that that was not quite the function of a cottage hospital; it would be praiseworthy in a provident dispensary where the patient paid so much a week. The cottage hospital admitted every medical man in the district on its staff, and whatever was done there was done with the knowledge and consent of all the medical practitioners in the district, and no injustice was done, and the system worked well. That being the case the objections to payment for maintenance did not apply in the same way as to the payment for treatment. Further, he contended there should be no rule in a cottage hospital forbidding payment by a patient to his doctor for attending him there.

Colonel J. G. CURTIS said the service of the medical officer was gratuitous; in most cottage hospitals no charge was made.

Dr. POPE took it that a cottage hospital would not object to a man in receipt of £200 or £300 a year paying his doctor after he had come out of the hospital.

Dr. A. A. NAPPER (Cranleigh Village Hospital; Conference Committee) said his father started the Cranleigh Village Hospital in 1859; the payment at that time varied from 3s. 6d. to 7s. 6d. a week, and that had held good ever since, except that occasionally, in the case of a motor accident or anything of that sort, a guinea a week was charged. This had always been paid with readiness, and amounted to about a third of the expenses of the hospital. The only other payments made to the hospital outside those by Boards of Guardians were payments for extras, and there was no trouble in getting payments from the patients. Subscribers' letters had only just been started, and he was unable to give the Conference any experience with regard to them. He considered that dentistry in connexion with a cottage hospital was absolutely wrong, and that there was no occasion for out patient departments in connexion with them; if one was started in connexion with the hospital which he represented he would send in his resignation at once.

Mr. CARDROSS GRANT stated that, as a member of a Board of Guardians, he had induced the Board to subscribe 10 guineas a year to the cottage hospital. This they did because they felt that the saving to the Board of Guardians caused by it was very great.

Mr. G. ACTON DAVIS (St. Bartholomew's and Harrow Cottage Hospital) was of opinion that the cottage hospitals were run for the benefit of well-to-do people, who, when their servants fell ill sent them to the hospital and thus got rid of all trouble and difficulty by a small payment of 5s. 3d. a week, which was the maximum sum charged by the Harrow Cottage Hospital, and which practically 90 per cent. of the patients paid. A different attitude was adopted with regard to servants; the payments of a servant were made according to the rateable value of the house from which the servant came, with a maximum

payment of a guinea a week. There were objections to the system, because if a servant had only been in a house for a month or so it was hard to have to pay a guinea a week for a servant in whom one practically had no interest; whereas if the servant was well established the moral duty of the employer was undertaken for the sum asked. The payment of fees was a difficulty, and had been a difficulty on both sides, and he would like to know whether that difficulty had been met in any way.

Mr. Basil W. Peile (Inwood Cottage Hospital) said the institution with which he was connected admitted servants on payment of 10s. 6d., but found great difficulty in getting even that amount. The minimum for ordinary patients was 2s. 6d. and the maximum a guinea, and it was left to him and the honorary treasurer to settle the amount that patients should pay. If a little trouble were taken in pointing out to those who had to pay what it cost to run a hospital, they would take a totally different view with regard to the payment of the sum charged than they did now.

Dr. J. Rogerson Hamilton (Conference Committee) considered, from the course which the discussion had taken, that in regard to cottage hospitals things were managed better in Scotland than in England. In Scotland 3s. 6d. a week was generally charged, and after six weeks, 7s. Domestic servants were charged 7s. from the commencement and after six weeks 10s. There were also patients who were charged 1 guinea or 2 guineas, which entitled the medical man to charge the same fee for attending the patient as if he were attending him at his own house. Further, the payments of patients were all guaranteed before they came in. If cottage hospitals would adopt some general scheme to charge 7s. 6d. a week it would be much more satisfactory both to the medical men and to the patients themselves. In connexion with the Hawick Cottage Hospital there was no out-patient department, but there was a free dispensary where patients got their medicine for nothing. A medical man gave a prescription, which was brought to the hospital where the medicine was obtained free, and this system had been found to work very successfully.

Colonel J. G. Curtis, in reply, said that a provident dispensary in connexion with a cottage hospital was not a very convenient arrangement as compared with doctors' clubs. A sick person, a member of a doctor's club, got advice and medicine at the doctor's house, but at a dispensary attached to a cottage hospital he had first of all to go to the doctor's house for advice, and then to go later for his medicine to the dispensary.

The motion was then put and carried *nem. con.*

Uniform System of Hospital Accounts.

Dr. E. L. Fox (Plymouth Royal Eye Infirmary) moved:

> That in the opinion of this Conference the uniform system of accounts recommended by the King Edward's Hospital Fund should as far as possible be adopted by all hospitals.

A good system of accounts tended towards economy, and one of the strongest arguments in favour of the resolution was that it must tend to put down waste and extravagance. Assuming its acceptance by all hospitals certain averages would have to be worked out as to the cost per bed per year. This would be of the greatest possible use to committees for purposes of comparison. The King Edward's Hospital Fund had marked the scheme private and confidential, apparently because it was thought it might be used for invidious comparisons, but this need not be feared, for the scheme should be carried out in a friendly spirit.

Colonel Curtis-Hayward (Gloucester General Infirmary) thought that this system of accounts ought to be adopted in all hospitals, as it would be a means of readily ascertaining the cost per bed, which was not now easy to arrive at. At present there was a great lack of uniformity, one hospital deducting, say, 1s. for their out-patients, another deducting nothing. The hospital with which he was connected had established the system of hospital accounts adopted by the King Edward's Fund with very beneficial results, and this system ought to be adopted, with an understanding as to the amount to be deducted for each out patient.

Mr. C. R. Scrase Dickens (Sussex County Hospital, Brighton) pointed out that under the uniform system of accounts adopted by the King Edward's Fund complete provision was made for the total cost of each out-patient.

Mr. W. C. Lewis (West Kent General Hospital) said, as the secretary of a small hospital of sixty-five beds, he had found that the keeping of accounts in which the in-patients and out patients were separated was quite impossible. If they had a reasoned figure for the cost of an out patient they could give the cost per bed per day with reasonable accuracy. He proposed an amendment to add the following words:

> That in the opinion of this Conference the uniform system of accounts recommended by the King Edward's Hospital Fund should, as far as possible, be adopted by all hospitals; but the Conference instruct the Committee to prepare a reasoned estimate of expenditure in the out-patient departments

Mr. Cardross Grant submitted that the amendment stultified the original motion.

Mr A. F. Graves (Sussex Eye Hospital, Brighton) did not think it desirable that the scheme adopted by the King Edward's Fund should be acted upon in its entirety. All that was required was the principle for dissection of the in-patient and out-patient departments, which was laid down clearly in the scheme, and which he had found perfectly easy to work.

Dr. Fox, with the consent of the Conference, altered his resolution to read:

> That the Conference instruct the Committee to consider how the uniform system of accounts as recommended by the King Edward Hospital Fund Committee can be made applicable to the requirements of provincial hospitals and to make recommendations to the next Conference.

Mr. Leonard Rea (Cardiff Infirmary) cordially supported the adoption of the uniform system of accounts, because there was nothing complicated in it. The system of accounts which now obtained was complex and bewildering. A complicated system of accounts led to economy only in appearance and not in practice. There should be no servile following of any system. It should be a system comparable to the chapters and syllabus of chapters of a book, which were an expression of what the book meant; so, in a system of economy of management, the account should be merely the expression. The management should not be moulded entirely on the system, but the system should be rather the expression of the management.

Mr. Jewson (Norfolk and Norwich Hospital) was sorry that the resolution had been modified. The hospital he represented had adopted this system of accounts, and if the resolution now before the Conference were passed it would lead to some modification in the uniformity of accounts, so that they might in a month or a year have to alter the system of arrangement as recommended by the King Edward's Fund. If that were so it would spoil comparison.

The Rev. W. Blissard did not see how the Conference could accept particular forms of accounts, as many of the members were entirely ignorant of it. He agreed with the resolution as he understood it really meant that the question should be deferred for further consideration.

Dr. Fox, in reply, accepted as satisfactory as regards the treatment of out-patients that each 200 patients should be accepted as a unit. He did not think the modified resolution hung the matter up in the least. It was only for a year, and it was in the hope of getting uniformity that he accepted the modification.

The motion as modified was then put and declared carried.

County Guilds

Mr. R. H. Kinsey (Bedford County Hospital) moved:

> That this Conference approves of the scheme of the Bedfordshire Hospital Guild as a means of increasing local interest in the County Hospital, and extending its usefulness by promoting more intelligent efforts for the prevention of disease and for the better after-care of convalescents.

In Bedford a hospital of ninety beds had recently been built. It was popular, well equipped, had a good staff, but was indebted to the extent of about £5,000. Therefore it was desirable that the hospital should be brought into closer communication with the people whose wants it supplied and by whom the hospital's own wants would be supplied, and that its work and needs, and the benefits which accrued to the poor of the neighbourhood, should be brought home to the intimate knowledge of all the inhabitants of Bedford and the surrounding country. The scheme was devised for that purpose. Many people were capable of doing good work, who had generous instincts, were sympathetic and willing to help a

good cause, but who had not the initiative to work out a method by which they could carry out those good principles. He hoped it would be admitted that this scheme afforded the opportunity to a very large number of people, some of whom complained of tedium vitae, to appreciate how much good they could do to their neighbours, and if they could see how much happiness the persistent effort in doing that good would bring to themselves they would be persuaded to undertake work of this character. He did not propose to go through the scheme seriatim, but would direct their attention to the chief reason for founding the Guild. This scheme had now become an absolute necessity if the efficiency of country hospitals was to be maintained, because an organization had been set at work which would sap the sources of their income, and, by centralizing everything in the metropolis, would endanger, if not their existence, at least their efficiency. What would be the effect of depleting the county of the resources which it was capable of devoting to its own hospital? The hospital, getting year by year more gradually into debt, would cease to be a well-equipped hospital, the staff would be discouraged; and the character of the medical work of the neighbourhood was very much determined by the character and capacity of the staff of the local hospital. If that depreciated, the work in the neighbourhood would necessarily, or almost necessarily, be depreciated also; that meant that both rich and poor would suffer; they would not have, as near as possible to their own doors, the best medical and surgical help without undue expense; they should not have for every operation to go up to London; they should be able to have surgeons in their own neighbourhood, nursing homes and all the appliances that might be necessary for major operations on rich and poor alike. This could only be if the county hospital—which was the leading hospital in the district—was kept well staffed and thoroughly equipped. The poor lost much by leaving their own neighbourhood; all who were acquainted with the feelings and habits of the poor knew how much they clung to their own relatives. In the local hospitals they felt at home. Their friends could constantly visit them without expense; they had not to scour the neighbourhood in order to provide the means for taking a long journey; they were not separated from their old associations; they had the country air, excellent sanitary arrangements, and they got—and they ought to get—as good medical and surgical attendance as was necessary for them. The chief reasons for founding the Guild were to increase the annual income of the hospital by obtaining a large number of small subscriptions; to increase the utility of the hospitals by doing supplementary charitable work, and to utilize the assistance of very large numbers of ladies and gentlemen who were capable of and willing to do charitable work. The work to be done was: "(1) To collect money throughout the year, in addition to arranging the house collections which up till now had been made in connexion with the Hospital Saturday Fund." For about fifteen years they had had a Hospital Saturday Fund in which energetic ladies collected from house to house. They also collected in the town and in many neighbouring villages and in the streets. It increased year by year until it reached the sum of £1,000, which, of course, was a very valuable addition, as it amounted to nearly one-fifth of the annual expenditure of the Bedford Hospital; but, as in other places, it was found that the street collections became unpopular for reasons which he need not explain. That had been given up, but they were anxious that in every town and village throughout North Bedfordshire there should be an active representative of the hospital, somebody who would be constantly bringing its claims before his or her neighbours, somebody who would explain what the hospital was doing, what it was capable of doing and what it should do. "(2) To obtain new subscribers and make known the needs of the hospital." Every newcomer to the district would be canvassed by the local representative of the Guild, and literature setting forth the needs and work of the hospital would be supplied. "(3) To organize bazaars, sales of work, and other entertainments in different towns and villages in aid of the hospital." There were many and various things which could be devised. For instance, £90 was obtained for the hospital in a little village by a fête, which showed that there was plenty of money for the purpose. The thing was to get the people interested, to induce them to look upon it as their own work, and to feel responsible for the well-being of the institution. "(4) To make garments for the hospital and to supply linen." There is a Needlework Guild in existence which might be absorbed or worked in connexion with the new Guild. '(5) To have an agent or representative in every village or parish who would help to prevent abuse or misuse of the hospital by patients who are not fit and proper persons for gratuitous treatment." If this scheme could be thoroughly worked out in this particular, it would answer many of the questions which had been raised as regards almoners, as people in towns would not like to be reflected upon by their immediate neighbours for taking advantage of a charity to which they were not entitled. "(6) To collect and manage a Samaritan Fund for supplying the very poor with such things as crutches, trusses, abdominal belts, special splints, and surgical and nursing apparatus." A Samaritan Fund added very much to the efficiency of a hospital, although these things did not come within the list of those which a voluntary hospital had so far been called upon to supply. The patients generally paid for them by getting up collections in their own neighbourhoods. "(7) To arrange for sending patients to convalescent homes. (8) To keep a friendly eye on and assist hospital patients requiring help after returning to their homes," and "(9) To look after and help persons suffering from consumption and other forms of tuberculous disease, and requiring open-air treatment." That was very important indeed. Dr. Kingston Fowler has said: "It has been shown that the visitation of the homes of consumptives who apply for treatment at hospitals, and the distribution of leaflets giving information of use to them and to their families, are measures of prevention of the greatest value." The more people could be instructed, the better would be the health of the community. Consumptive domestic servants, if careless and not properly instructed, become a source of danger to the community. They need not, in the early stages, be a source of danger if they were properly instructed and were careful. The whole community should be better instructed as regards prophylactic measures.

Lord Ampthill (Chairman of the Bedford County Hospital) seconded. He would have preferred to have reserved himself in case there was opposition to the proposal, as was indicated by the fact that a so-called amendment stood upon the paper. He would submit, if the amendment was proposed later on, it was out of order. It seemed to him, strictly, not to be an amendment, nor in any way relevant to the motion, but rather an entirely different motion on another subject. He hoped, therefore, that it would not be pressed. He need not add much to what Mr. Kinsey had said in regard to matters of detail. What he would like to point out was that there was absolutely nothing new in this proposal. It was simply a measure for co-ordinating and systematizing existing efforts so as to prevent overlapping, and to secure that there should be an equal distribution over the whole area in question of all the public-spirited and philanthropic efforts which were already made. It was, in fact, the decentralization of effort and the concentration of control. It gave to the smaller organizations all the additional strength which naturally resulted from united effort and from having a larger organization at its back; and it ensured that the efforts of those smaller existing institutions, such, for instance, as the Samaritan Fund and the Needlework Guild, and so forth, should not be concentrated in particular localities, but should be spread evenly over the whole area of the north of the county. The effort consisted of the division of the area into convenient districts with responsible officials in each, people who would make sure that an interest was taken in the work of the hospital, and who, armed with their local knowledge, would see that abuse did not take place, and that anybody who might fairly be called upon to assist in the work of prevention of disease and the improvement of public health should be called upon to do so. It only remained to him to explain, in a few words, the object which his Board had in troubling the Conference with this motion. It was merely to obtain the encouragement which they would naturally derive from the approval of a great representative body, and also to carry out what they conceived to be the object of the Conference by communicating to it the results of their own experience. For

the sake of information there was one more word of explanation he would like to add. They would see in the original agenda that there was some suggestion that their scheme was antagonistic to the League of Mercy. That was not nearly the correct view. It was true that they had to meet the competition of the League of Mercy, but to prepare themselves to meet the competition was quite a different thing to assuming an attitude of antagonism and hostility; and he could assure the Conference that it was far from the intention of Bedford Hospital Guild to assume any hostile or antagonistic attitude towards the League of Mercy. All they wished to do—and he thought it would be granted it was within their rights—was to meet this new competition, and to resort to similar methods in order not to be at a disadvantage in safeguarding the interests of their own local concerns.

The Rev. W. Blissard gave a hearty general support to the proposal, with the proviso that all counties would not be in the same position as Bedfordshire appeared to be in in having only one institution of that kind. The county of Kent had a number of such institutions, and there was no unity in that county such as seemed to be essential towards the efficient carrying out of such a scheme. In most hospitals there were left at present untapped a large number of persons who were willing to give sums of 2s. 6d. to 5s. as a subscription. He wished to see ladies interest themselves in the collection of funds for the Boards of Management, and would heartily support any scheme for co-ordination of effort.

Dr. Fox moved an amendment:

> That the Committee be instructed to take such action in the matter as they thought fit and to bring forward a report on the subject at the next Conference.

In his opinion the amendment tended towards exactly the same end to which they had been told the resolution was directed. His idea was to draw their opponents in and elicit their help and get them to work with them.

Lord Ampthill submitted that this was not an amendment, and was totally irrelevant to the matter in issue.

The Chairman ruled that it was not an amendment to the proposition before the meeting.

Dr. Macdonald cordially supported the proposition to approve the Bedford Guild scheme. It was one that had been wanted in connexion with county hospitals for some time. He was very grateful to Mr. Kinsey for having brought this matter before the Conference, because it was thoroughly well worked out, and practical. It contained every point that was worth considering in connexion with such a scheme, and was one which he hoped the Conference would approve without a single dissentient.

Mr. Jewson did not know quite the object of the resolution. He asked if it was desired that a recommendation should go forth from the Conference to all the hospitals in England that they should adopt a similar scheme or was it only a suggestion of Mr. Kinsey that the Conference should pass a resolution which in effect congratulated the Board of the Bedford Hospital on having such a scheme. He could not support the resolution if it was suggested that the Conference should recommend to all hospitals that they should adopt the scheme.

Lord Ampthill said the first suggestion was correct: they wanted the approval of the Conference in order that they might tell people in their own county that they had done well and were working on right lines. They did not suggest that their scheme should be adopted by other counties.

The Chairman intimated that the resolution would probably be directed to be sent round to all the hospitals which took an interest in the movement. About 800 hospitals were interested in the Conference, and it would appear as part of the proceedings of the meetings.

Dr. Pope said the report of the proceedings of the Conference would be sent to a Committee and that Committee would send the report round to the hospitals and the resolutions would appear there—a bare statement that such a resolution was passed. The resolution would not impose any obligation on other hospitals, or put any pressure on them, to adopt the scheme.

Dr. Fox thought it a very excellent scheme, but he did not understand whether the Guild was actually in force now. If it was working, he should like to hear some of the results.

Mr. Kinsey observed that it had only recently been brought into operation, and he could not give any results at present.

Mr. Dobson (Hospital for Women, Brighton) moved that the word "approves" be deleted in the first line, and the words "has heard with interest" be substituted therefor.

Mr. Jewson seconded the amendment.

The amendment was then put to the meeting and carried.

The Chairman then put the resolution as amended and it was carried:

> That this Conference has heard with interest of the scheme of the Bedfordshire Hospital Guild as a means of increasing local interest in the County Hospital, and extending its usefulness by promoting more intelligent efforts for the prevention of disease and for the better after-care of convalescents.

Tuberculosis in General Hospitals.

The Rev. W. Blissard (Kent and Canterbury Hospital) moved the following resolution, which, he stated, emanated from the Kent and Canterbury Hospital:

> That tuberculosis should be included among notifiable diseases, with a view to the isolation of such patients in publicly provided hospitals.

The secretary of the hospital which he was representing had written to twenty-four hospitals, asking them to let him know what their practice was. Answers had been received from nineteen. Summarizing those answers, it might be said that six stated that they did not undertake to deal with pulmonary tuberculosis at all. With regard to the other fourteen hospitals, including the Kent and Canterbury Hospital, the answers were that they undertook to deal with it partially, that they dealt with mild cases and cases in the earlier stages, and that cases were treated for a short time. That indicated absolutely inadequate hospital treatment for the disease. Of course, there were sanatoriums open in various parts of the country, and in that connexion he noticed that the War Office was rather disposed to lay its hands on some 400 beds in those sanatoriums. The proposal that found most favour was that discharged tuberculous soldiers should be paid for by the State when in those private sanatoriums. If that proposal was carried out it would diminish to that extent such provision as already existed. All persons who had any interest in the management of hospitals would do well to look ahead and to note the signs of the times, and to take such steps in their hospital management as would harmonize with the impalpable but most powerful movement which was going on for the fundamental transformation of the philanthropic system. It was here that he wished to put forward what he should consider his principal argument. With regard to tuberculosis, he supposed that heredity had only an effect in a limited sense, and that the children of deceased tuberculous people would not necessarily be affected themselves, but would be more liable to succumb to such infection as might afterwards befall them. If that was the case, it must be held responsible for the present great tendency to the increase of tuberculous disease. Let them consider how much there was in the poorer section in modern life which was directly manufacturing liability to the inroads of the disease—excessive labour, the number of women who by their condition in life were compelled to work for a considerable time before child-bearing and afterwards, the many unhealthy trades, and, above all, the home life of so many. He believed that in England and Wales three-quarters of a million people were habitually living in something less than 70,000 single rooms; 8 per cent. of the population of England and Wales was living under the condition that there were more than two people in a room.

Dr. Henry Davy (Royal Devon and Exeter Hospital; President, British Medical Association) moved as an amendment:

> That the consideration of the propriety of the notification of tuberculosis be postponed, and that the Government be asked to appoint a commission to recommend the best way to deal with tuberculosis.

He sympathized very much indeed with a great deal that had fallen from the mover of the proposition as regards the provision of hospital accommodation for tuberculous patients, but that did not, strictly speaking,

come into the motion which had been put before the Conference. The important part of the motion was the proposal that tuberculosis should be included amongst the notifiable diseases. That raised one of the most thorny and complicated propositions which the Committee could possibly discuss. It was not a simple matter at all. It was quite impossible to put a case of tuberculosis, which might linger on for several years, into the same category as scarlatina or typhoid, which were infectious only for a few weeks. Nor would notification alone be of any use, for, unless some uniform system of treatment of cases of tuberculosis was enforced by all the sanitary authorities throughout the United Kingdom, notification would be of no good whatever. There would be a difficulty in inducing the Government to appoint a commission, because so many inquiries had already been made upon the subject, and there would be another difficulty because of the fact that Dr. Bulstrode had quite lately published the result of his long inquiry into tuberculosis, in which he seemed to have gathered up all the knowledge which it was possible to obtain upon the subject. Dr. Bulstrode's opinion—and it was the opinion apparently of the Government of the day—seemed to be that tuberculosis was dying out, and that it would die out as sanitation improved, and that it was not necessary to do anything further in the matter. Whilst he acknowledged the immense amount of information which Dr. Bulstrode had accumulated with regard to tuberculosis, he was not at all satisfied with leaving things as they were. As he had pointed out in his presidential address, roughly speaking about 60,000 persons died of tuberculosis each year in the United Kingdom. That fact had been calculated to mean that there were some 600 000 people every year suffering from tuberculosis in the United Kingdom. How were persons like himself to be willing to leave the question alone when they believed that more than half those cases could be prevented by carefully-considered measures? But those measures were not to be carried by a Conference like the present merely passing a resolution that the disease should be notified. The subject was far too complicated for any such treatment. He did not believe in any one man's opinion upon this large question. It was a question that affected every part of national life. The Government should consider it in their treatment of the cases of tuberculosis in the navy and the army. The question affected every large employer of labour who did not want healthy workmen to be infected by consumptives, and it affected every household which might, and which very often did, employ a servant affected with tuberculosis. He contended that this was a matter which demanded most careful attention, and that it was a matter which could not be dealt with as if it was merely a question of notification of disease. It ought to be dealt with by an influential and unbiassed body in which men of the greatest knowledge should be brought together to consider the question. Such a body could only be called together by a Royal Commission. He hoped that the Conference would agree with him, and accept the amendment which he had brought before it.

Dr. G. A. Heron (City of London Hospital for Diseases of the Chest) seconded the amendment. With the truths which the mover of the resolution had impressed upon the Conference every one who had spent much time in the study of the disease would heartily concur, but there was a great deal to be said from the point of view of the seriousness of the question of making tuberculosis a notifiable disease. For instance, if they said to a man, "You must be notified as the victim of an infectious disease," they must also say to him, "While you lie under the consequences of the notification the country will take care of you, because it will not allow you to work lest you should infect your healthy neighbours; and not only that, but, as you are the head of a family, the country will take care of your wife and your children, and will educate your children and bear all that expense which would have fallen on you had you been able to work." It would be most unjust to say to a man who was consumptive, "You have this disease; it is for the benefit of the community that you should be isolated; we shall isolate you; you may be isolated for years to come for aught we can tell you, and meanwhile your wife and children will look to charity, or will look to some accident, to prevent them from the dire consequences of having no one to support them." To make proper provision would involve a tremendous expenditure, because tuberculosis was pre-eminently a disease of the poor. That was one of the most remarkable things in connexion with the disease. It was far too common still among the well-to-do; but the number of well-to-do people who suffered from consumption and died of it had very rapidly diminished. There were probably somewhere between 300,000 and 500,000 consumptives in the United Kingdom; and if his supposition was correct that the nation would be bound to take care of those who would become helpless because the head of the family was isolated and compelled not to work, he did not know how many millions of money it would cost to meet what he thought would be the just demands of those who would suffer from the notification of the disease. For this reason he most heartily seconded the amendment which Dr. Davy had brought forward. He felt convinced that there ought to be notification of tuberculosis; he admitted it freely; and he would urge it strongly if he was able to come to a satisfactory conclusion upon the grave question of how the country was to face the heavy expenditure which would be involved. He thought that there was but one means by which that knowledge could be obtained, and that was through the appointment of such a Commission as Dr. Davy had sketched out in his very clear statement. He hoped that nothing would go forth from the Conference which would seem even to indicate that the Conference doubted the advisability of making tuberculosis notifiable compulsorily. They all desired that it should be made a notifiable disease; but the consequences were so tremendous, and the duties and the responsibilities that would be thrown upon the people were so tremendous, that they could not, he thought, take the step suggested without taking the precaution of having their knowledge made as perfect as human knowledge could be made by such a Commission as Dr. Davy had suggested.

Dr. J. D. Dickson (Marlow Cottage Hospital) supported the amendment, not as surgeon to a cottage hospital, but rather as medical officer of health to a large rural district. The question had been brought up at different times before his council, and on each occasion he had advised that it would be impossible, even if phthisis were notified, to carry out any proper disinfection or any proper supervision of the cases notified. If cases of phthisis were to be notified, the disinfection of the rooms ought to be periodical, and other means ought to be adopted to deal with the disease. The plan that he adopted in his district was to have a number of plain and simple directions printed, and those he had handed over not only to the inspectors in the district but also to the clergy and to district visitors. He thought that in all probability in the near future medical officers of health would be kept more closely in touch with cases of consumption, especially under the new Act which came into force at the beginning of the present year for the compulsory inspection of school children. He felt sure that that Act would be a more beneficial Act when it came fully into working order, and that it would be possible to keep more in touch with the houses that were infected and to deal more fully with this matter.

Mr. Herbert Jones (Herefordshire General Hospital) entirely agreed with what Dr. Davy said when he stated that the question was very grave. It bristled with difficulties. One of the first difficulties was that if tuberculosis were made compulsorily notifiable, then at once it came under certain sections of the Public Health Act, which would throw very grave disabilities upon the persons suffering from tuberculosis. A tuberculous person would not be able to go into a public street without taking certain precautions, and he would not be able to travel by train or to take a public vehicle without notifying the owner of the vehicle that he was suffering from an infectious disease. At present there were two districts in the country, one of which was Sheffield, which had a system of compulsory notification; but when that power of compulsory notification was given to the Sheffield Borough Council it was distinctly understood that those sections of the Public Health Act should not be enforced. Means of isolating cases of tuberculosis already existed in many disused or partially-used isolation hospitals. In the cases of Brighton and Newport (Monmouthshire) a large number of cases of tuberculosis were

already isolated in unoccupied parts of these buildings. It would be a very grave step for the Conference to say that tuberculosis should be made compulsorily notifiable, and to say that tuberculous patients should be isolated at the public expense.

The amendment was put to the meeting and carried.

The Rev. W. Blissard said that he not only accepted but he heartily welcomed the amendment which had been passed. It secured the only object which he had in bringing forward the subject—namely, that it should be well ventilated, and that an expression of opinion such as was contained in the proposal by Dr. Davy should go forth from the Conference.

The amendment was then put as a substantive resolution and carried.

General Medical Representation on Hospital Boards.

Dr. J. Ford Anderson (Member of Council, British Medical Association) moved the following resolution:

> That, in the interests of hospitals and their work, it is desirable that medical practitioners should nominate representatives for election to Boards of Management of hospitals in their respective localities, and that such nominations should be carried out by an organized professional body, such as a Division of the British Medical Association.

He thought it would be admitted by all that hospitals should be run in the interests of the community generally so far as that was possible; but there was one class which appeared to be neglected, and that fact was the more surprising as that class was one which, more than any other, aided the interests of hospitals. He referred to medical practitioners who treated patients in their homes, in dispensaries, and elsewhere—to that great unrepresented class which had no place on the staffs of the hospitals. To them the management of hospitals was a matter of supreme concern, as it was their patients who at one time or other formed the patients of the hospitals. Nevertheless, the local members of the profession were seldom consulted by the managers of hospitals. The first notice which they had that some new pernicious rule had been passed was that the conditions of their practice were affected. He should like to refer to an example brought before the Conference on the previous day. He regretted that Mr. Sydney Holland was not present at the meeting, for, in his opinion, the resolution for which Mr. Holland had obtained a majority was an example of a pernicious rule. He felt sure that when that rule came to be a governing rule of the London Hospital, very strong objections would be raised by the practitioners in the neighbourhood. The present state of things produces in some cases a feeling towards the hospital which is very regrettable; it may be a feeling of antagonism, or it may be suspicion, or at least indifference. He believed that the attitude of the practitioners comes to be one of indifference. Finding that their protests are in vain, and that they are only injuring themselves and doing no good, they end by devoting themselves to their immediate work and try to forget the matter. They leave the hospital to go on its relentless way, and for the sake of peace come to regard the hospital as no business of theirs, and as the "show" of the staff, who, after all, are only a very small part of the profession in the locality. To meet that state of things he submitted the resolution which had been read. If the proposal were carried out it would be of infinite advantage to the hospitals in their financial aspect, it would be good for the work of the hospital, that is to say, for the patients; it would be good for the medical practitioners themselves, and would ultimately help to advance medical science and art. The financial position of the hospitals would be improved by the direct help of the practitioners. In looking over the subscription lists of hospitals in London, and to some extent elsewhere, he was struck by the absence of the local profession from these lists. If the hospital appealed to them they would at least be able to subscribe a guinea or two a year, but they stood aloof. Further, the hospitals would gain the social influence of practitioners moving about amongst the better classes, because they acquired a certain influence over them, and their patients did not, as a rule, subscribe seriously to a hospital without consulting the medical attendant of the family. It was contrary to the habits of the average man in this premillennial age to exert himself actively in the interests of any institution which competed with him, and yet that was what the medical practitioner was expected to do. If the sympathies of the local medical practitioners were enlisted, there would be created a link between the hospital and the potential subscribers outside which would help the hospital in several ways. Not only would it help to bring funds to the hospitals, but it would help by enabling them to check abuse. He believed that if the medical practitioner were included in the management of the hospital by direct representation, there would be much less heard of the poverty of the hospital, and there would be less seen of the undignified advertisements for funds in the daily journals. It occurred to him that one reason for the popularity of cottage hospitals throughout the country amongst medical practitioners was simply the feeling that the hospitals on the old pattern did not meet their wants. In cottage hospitals they had a voice in the management. As to the work of the hospitals, he asked those present to consider for a moment the want of continuity—he might say the incoherence—of treatment in connexion with the working of the hospital. In private practice every patient had his own medical attendant, and if any special case of difficulty arose the medical attendant sent the patient to some specialist, or he called in some specialist who he thought was conversant with the disease. Perhaps all that was wanted was an opinion, or perhaps he might think it right, if special operative skill was wanted, to put the patient for a time in the hands of the specialist, and in any case he explained the case fully to the gentleman whom he consulted. When the consultation was over or the treatment was finished, the patient returned to his original attendant, with a letter describing what had been done. That was continuity of treatment, co-operation or co ordination in the treatment. It was because that continuity of treatment was found to be so beneficial to every one concerned that it had become, outside the hospitals, the established usage of the medical profession. Could such a thing be expected in the hospitals as constituted at present? He did not think that it could. It was much more the custom in the hospital for the patient to go on his own initiative, or by a subscriber's letter, and he was annexed by the hospital, and his medical attendant saw him no more. When the patient left the hospital he was not referred back to any medical attendant, although from the necessities of his case he might require to call in a doctor the next day, who knew nothing about what had happened in the hospital. Two blacks did not make a white; but he would like to remind the Conference that the same want of continuity, the same want of co-ordination between the home treatment and the institutional treatment, existed under the Poor Law; he was glad to think from what he heard that there was a prospect of that state of things being amended. At all events the matter had been brought before the Royal Commission on the Poor Law by several witnesses. It might be asked, What good will be done towards fulfilling the object of the resolution by appointing local representatives of the medical profession? He did not think that it would directly produce the conditions which existed in private practice, but he thought that it would tend that way. The representatives would be a channel of communication between the outside profession and the hospital, pointing out abuses that occurred inside the hospital and outside the hospital, so far as patients were concerned. With regard to the medical profession, there would be advantages in being able to check abuse which would help them financially, and they would also see to the clinical fitness of patients for the hospitals. As the Chairman had reminded him that his time was up, he would simply say that there was a difference between outside practice and inside practice with regard to ethics. The hospital did not think that it should be concerned with ethics apparently; but he would remind the Conference that the hospital was not a sanctuary where members of the profession could be immune from their duties to their fellow men. He believed that if the resolution was passed it would be of great advantage to the hospitals and that it would bring hope and opportunity to many practitioners who were struggling in isolation and whose lives were unproductive.

Mr. H Manfield, M.P (General Hospital, Northampton; Conference Committee), hoped that the Conference would not accept the motion. They would all agree that Dr.

Anderson had put the matter in a very clear and very temperate light; but there were several reasons why the Conference should pause before it accepted such a motion. First, the proposal was not one which would commend itself to governors and subscribers, and, secondly, it would hardly be received with much enthusiasm by the members of the honorary medical staff. It must not be forgotten that the members of the honorary medical staffs rendered great services to hospitals. There were some who considered that they received their *quid pro quo*; but at the same time the services which they rendered must be very thankfully recognized. Was it fair to the honorary medical staff of the hospitals that an outside body of gentlemen however distinguished and honourable, should claim to have representation upon the Boards of the hospitals, which after all, however the matter might be looked at, were practically private concerns, managed by private persons and supported by private money? He thought that there was a very strong case, for the reasons which he had indicated, for refusing to pass the motion. He inclined at one time to the view that medical men were better outside the hospital Boards, for the reason that after all there was an administrative side to the hospital and a medical side, and that those two sides were separate and distinct; but he had modified his views on this point, because he found that there was no objection to having members of the honorary medical staff upon the Boards of Management. He had listened very attentively to the speech of the proposer of the motion, and he gathered that his chief argument was that the proposition would prevent those abuses with which the Conference was largely concerned; but he ventured to think that Dr. Anderson had hardly made out his case with regard to that. Again, he had said that medical men outside the Boards of Management would form a channel of communication between the public and the governing body of the hospital; but he (Mr. Manfield) failed to see how that would be brought about; those medical men who were connected with hospitals and who rendered great services to hospitals were invariably chosen because of their ability and medical attainments, and they were quite able to convey any information which might not be ordinarily known to the members of the governing bodies of the hospitals. He agreed with the proposal that the hospitals should not be a sanctuary where the medical profession were immune from their duties to their fellow men, but he did think that such an expression coming from a medical man was somewhat wide of the mark. As a layman he bore testimony to the way in which the honorary medical staffs of the hospitals discharged their duty to their fellow men. He really could not see that any case had been made out for the proposal that medical men who were not selected by the governing bodies of the hospitals, which, after all, were in a sense private bodies, should be brought in from outside.

Mr. H. Clifford Gosnell (City of London Lying in Hospital) said that he was surprised that such a motion should ever have been brought forward. He hoped that the mover of the motion would not consider that he meant that remark in any offensive sense; but, as he understood it, it amounted to this, that laymen on the Boards of Management of hospitals were to be told that certain medical gentlemen in a district considered that the hospital could not be properly managed unless they were on the Board themselves, or unless they nominated and selected medical men to come and tell the Boards of Management, so to speak, how to do their business. He thought that it was an objectionable form of management. There was another very strong objection to the proposal. He always understood that it was a primary duty of a professional man not to offer his services but to wait until they were asked for. If the medical men were going to break that rule by suggesting that they should have the power to force their services where they might or might not be wanted, the medical profession would be doing injury to itself.

Dr. J. Ford Anderson, in reply, said that the opposition, as far as he could see, was chiefly a direct negative. One gentleman had spoken as though he (the speaker) were casting doubt upon the treatment of patients, but when he spoke about the hospital doctors being immune from duties to their fellow men he meant to other medical men. His argument was that in private practice a doctor who saw a patient for consultation sent the patient back, describing all about the case. That was not the practice of the hospitals. It was sometimes done and he would have said so if he had had time to develop his argument; but he had been cut short. He certainly did not mean to cast any reflection on the good intentions of the management of the hospitals, but he simply said that the doctors attached to the hospital were by usage immune, and that the usual rule of ethics seemed to be in abeyance when one came to deal with a hospital.

The motion was put to the meeting.

The Chairman: It is defeated by a considerable majority.

Hospital Provision for Patients of Unsound Mind.

Dr T. Wardrop Griffith (Leeds General Infirmary) moved:

> That it is desirable that temporary accommodation be provided in hospitals for certain cases of unsoundness of mind for purposes of observation.

He said that there were one or two qualifications in the motion. One was that the accommodation was temporary, another was that it was only for certain cases of unsoundness of mind, and a third was that it was for purposes of observation. There might possibly be a fourth qualification, for he had it in mind that it was only in certain hospitals that it would be desirable that the accommodation should be provided. He had no desire to convert the general hospitals into lunatic asylums. He was not an alienist himself, but a physician. He would be able to convey to the meeting why he would like to see accommodation provided if he mentioned one or two examples of the kind of position in which he had found himself. A little time ago he was in consultation with a medical man in Leeds as to a patient who, in the opinion of both of them, was undoubtedly of unsound mind, and who, according to his wife, had threatened her life, and in other ways, according to her information, which they had no reason to doubt, had manifested distinct signs of mental disease, but who persistently and cleverly declined to give himself away, so that he could not be certified. The people were in poor circumstances, and it was useless to say that they ought to get a male nurse; but they were not quite the kind of people to be referred to the relieving officer. They were of that large intermediate and deserving class who were able to meet their ordinary expenses, but who were entirely on their beam-ends when they had to do anything exceptional. Dr. Griffith said he was unable to help in any way; he could only express his sympathy. Another case was that of a young medical man who on one or two occasions had expressed a sort of pessimistic intention to commit suicide. Everybody thought that it was bluff, as it were, but he committed suicide shortly afterwards, to the great distress of his friends. If temporary accommodation could have been found for those two cases, the patient would in some measure have given himself away, so that he might be certified and properly looked after. He had another case in his mind of a totally different character, which came before him something like twenty years ago. There came to him a very big, strong man, who had been a soldier, who said to him, "For goodness sake put me under restraint, or I shall kill someone." The man told him that many years before he had been in India, and that he had been punished by a certain major in the army for breach of discipline, a punishment which he said was perfectly proper and perfectly just, and for which he did not bear the slightest resentment either at the time of the punishment or at the time of the interview. "But," he said, "the man is now in Leeds, and I have been stalking him and I will kill him." He (Dr. Griffith) said, "You are not angry." "Not a bit," the man said. "but I have come down to my work day after day, and I have avoided the place, because if he is there I will kill him. For goodness sake do put me under restraint." He could not certify the man on that, but he broke the rules of the infirmary and put the man under restraint and fastened him down, and the man gave a sigh of relief. It was found out afterwards that he undoubtedly was insane and he was transferred to an asylum, where in the course of a very short time he developed definite signs of insanity, and shortly afterwards died. No

doubt a man of greater experience would have known how to deal with the man better. Some might smile and think that in the circumstances there ought to have been no difficulty in his certifying the man; but after all he had only the statement of the man, and it was difficult to convey to a jury the manner of a man. Then there were cases which could be certified. In his opinion the overwhelming majority of those should be sent to asylums, but there was a certain class in which, while the patient might be certified, yet it was very desirable to avoid the stigma of insanity. He should like to see in some hospitals in large centres accommodation found for the temporary occupation of patients who could not be certified. It would save a good deal of suffering, and it would not cause any very great deal of inconvenience. A special nurse might be required, and in some cases a commissionaire, but there would be a very considerable amount of benefit and comfort derived from it.

Dr. Lauriston E. Shaw (Conference Committee) supported the motion. He thought that it would be not only desirable in the interests of the community and in the interests of the individual, but in the interests of medical education, that if possible in a certain number of institutions wards for the observation of cases could be established. It would do more for the advancement of the knowledge of insanity, perhaps, than the establishment of one single institution in which the work would be as isolated as it was at the present time.

Mr. Leonard D. Rea (Cardiff Infirmary) said that in his experience it was with the greatest difficulty that such patients were induced to submit to treatment. The case of the soldier who voluntarily asked for treatment was very exceptional He should like to ask the mover of the resolution whether he thought that any considerable percentage of people would voluntarily submit themselves to treatment in hospitals.

Dr. A. A. Napper (Cranleigh Village Hospital; Conference Committee) said that it was most important that some temporary place should be found for such cases as had been mentioned, especially as a great responsibility was thrown upon the medical man in those cases. In nine cases out of ten an application might be made to the relieving officer, who would send the case into the Union for three days' observation, and then if necessary it was passed on to the asylum.

Dr. Frank M. Pope (Conference Committee; Chairman, Hospitals Committee) said that he did not know whether previous speakers had thought of the great difficulties in connexion with managing lunatics in an ordinary hospital. An out-patient department where advice could be got was about all that could be managed. He thought that the difficulties in admitting would be too great to be overcome in an ordinary hospital.

Dr. T. Wardrop Griffith, in reply, said that it was a very exceptional thing for a man who was disordered in his mind to come and say, "I am disordered in my mind; look after me." The case which he had mentioned was most exceptional. The kind of case he had in his mind more especially was the case where a man was manifestly unsound, but did not admit it, and certainly did not assert it, and who came into the infirmary, not because he was unsound, but for some other reason. There were many patients who were ill after confinement and patients who were temporarily under the influence of drugs, who were quite suitable cases for admission into hospital apart from their mental condition.

The motion was put to the meeting and carried.

Appointment of Committee.

Dr. T. Wardrop Griffith moved the following resolutions:

That a Committee be appointed, composed of sixteen non-medical members, appointed by this Conference, and sixteen medical members, appointed by the British Medical Association, to continue the work of the Conference in accordance with its resolutions, and to organize a Conference in 1909;

That a report of the proceedings of the Conference be forwarded to all hospitals in the United Kingdom, and that those hospitals which had not taken part in this Conference be urged to associate themselves with the movement; and

That hospitals be requested to make such contributions to the expenses of the movement as the Committee may find necessary.

He thought there was no doubt that the Conference had been successful. It had been said that a Conference such as the present had no legislative powers, and that it was concerned purely in the enunciation of pious opinions. But pious opinions were extremely useful. He was quite sure that all who were interested in the working of hospitals welcomed the opportunity of comparing notes with those who were working in hospitals elsewhere. Even if effect was not given to the resolutions, they certainly had an inductive action on the brains of those who had to look after hospitals. The success of the Conference had been very largely due, he thought, to two things: one, the excellent judgement of the Chairman, and the other to the fact that the Conference had had the combined wisdom of laymen and medical men, a state of things which he should like to see in all the hospitals in the country. The affairs of the Leeds Infirmary were managed by the weekly Board, including laymen and members of the honorary staff. He was accustomed, therefore, to meetings such as the present, where laymen and medical men met on common ground, to discuss what was for the welfare of hospitals.

Mr. W. C. Lewis (West Kent General Hospital) seconded the resolution. He said that they must all feel that it was good that they should have these various subjects discussed between laymen and medical men, all on the same footing.

The motions were put to the meeting and carried unanimously.

Dr. Pope proposed the following sixteen gentlemen to be members of the Committee:

Mr. Walter Baily (University College Hospital).
Mr. Walter G. Carnt (Manchester Royal Infirmary).
Mr. W. A. Dinwiddie (Dumfries and Galloway Royal Infirmary).
Sir Henry Burdett, K.C.B.
The Hon. Sydney Holland (London Hospital).
Sir Riley Lord (Newcastle-on-Tyne Infirmary).
Mr. Charles Lupton (Leeds General Infirmary).
Mr. H. Manfield, M.P. (General Hospital, Northampton).
Mr. Richard Jewson (Norfolk and Norwich Hospital).
Lieutenant-Colonel E. Montefiore (Metropolitan Hospital; Metropolitan Provident Medical Association).
Mr. H. A. Harben (Chairman, St. Mary's Hospital).
Mr. Herbert W. Mason (East Suffolk and Ipswich Hospital).
Mr. R. Ball Dodson (Hospital for Women, Brighton).
Colonel J. G. Curtis (Deal and Walmer Victoria Hospital).
Mr. Leonard D. Rea (Cardiff Infirmary).
Mr. H. Clifford Gosnell (City of London Lying-in Hospital).

He said that certain members of the old Committee had never attended, most of them, he thought, not for want of willingness, but because they had not been able to be present. Some of those had expressed their wish to retire. He thought that, perhaps, it was not any good putting on certain other members who they knew could not attend.

Mr. Edmund Forster (Derbyshire Royal Infirmary) seconded the motion, which was put to the meeting and carried.

Vote of Thanks.

Dr. Pope proposed a vote of thanks to the Chairman for the excellent manner in which he had performed the duties of the chair. He had not been harsh on anybody, but he had been firm with everybody.

The motion was seconded by Mr. H. Manfield, M.P., who said that those who had served on the Committee, and had had the benefit of the labours of Mr. Lupton on that Committee, might all agree that the successful issue of the Conference was to be largely attributed to him.

The motion was carried by acclamation.

The Chairman thanked the members of the Conference for the kind way in which they had carried the motion. It had been a great pleasure to him to help in the movement, which he thought could not but do good to all hospitals throughout the country. Nothing, he felt sure, could be better than that laymen and medical men from different parts of the country should have the opportunity of discussing the management of the hospitals and similar institutions with which they were concerned.

The proceedings then terminated.

Conference Dinner.

A dinner of members of the Conference was held at the Waldorf Hotel on Wednesday evening, the chair being taken by Mr. Cosmo Bonsor, Treasurer of Guy's Hospital.

The Chairman having proposed the toast of "The King,"

Dr. Henry Davy (President of the British Medical Association) proposed the toast of "The United Kingdom Hospitals Conference." He said the British Medical Association had done many useful things for medical men, but nothing more useful than the inauguration in 1903 of the Committee which had brought about that Conference. He could conceive nothing more useful and valuable to the profession than that medical men should meet those who were running the hospitals and doing such good work for them—such splendid work, for instance, as their Chairman had done for Guy's. As a rule, laymen understood little of the life of a medical man, and hence it was highly important to discuss with them problems affecting medical men, the public, and the hospitals. He contrasted the case of an eminent surgeon who performed an operation at Exeter, pocketed his 125 guineas, and complained that he had had no sleeping-car, and said, "Whatever rank we attain in our profession, it's a dog's life," with the case of medical men struggling in the slums of the large cities, who were in active competition with the hospitals for their living. For the latter such conferences were most useful, because it was most necessary to prevent such unfortunate men being swamped. The public did not appreciate how difficult medical work was becoming in these scientific days. How could the clerk on £150 or £200 a year pay the fees for an ordinary operation, the money for nurses and the necessary antiseptic surroundings? More and more such cases would go to the hospital, and it was for the Conference to find out how best such matters could be dealt with. It was no charity for people to subscribe to hospitals and then ask the patients to pay 3d. for a bottle of medicine and something for their food. The only charitable people in such cases, pure and simple, were the medical men. He did not agree with Mr. Sydney Holland's remark at the Conference that afternoon as to the intense value of hospital appointments to medical men. A medical man who was a first-class man with grit in him would succeed in life whether he was attached to a hospital or not, and the men who had achieved fame and eminence in their profession, and very often made the fame and eminence of the hospital to which they belonged, would have risen and succeeded just as well whether they had been attached to a hospital or not. Medical men get nothing like an adequate return for their staff work at hospitals, and it was well for laymen to appreciate that fact. Such facts were brought out at conferences where laymen met medical men. In conclusion, he coupled with the toast the name of Mr. Charles Lupton of the Leeds General Infirmary, the Chairman of the Conference, who had done so much work in connexion therewith.

Mr. Charles Lupton, in response, said the afternoon's discussion had convinced him of the value of the Conference, and the good work it could and did do was becoming more and more evident. To provincial hospitals in particular the information as to hospital management to be derived from such conferences was most valuable. He anticipated very great results in the future from the proceedings of such conferences.

Dr. Frank M. Pope proposed the toast of "The Chairman," which was received with loud applause.

Mr. H. Cosmo Bonsor, in reply, regretted his unavoidable absence that afternoon from the Conference, the object of which had his cordial sympathy. He could not help feeling it a remarkable thing that the hospitals which trained their medical men should be the cause of undue competition with them when they had educated them. He hoped and trusted the Conferences would lead to some solution of one of the most difficult problems that existed. While a good deal had been heard about hospital abuses and of patients with means seeking hospital treatment, he was bound to say that in his experience at Guy's there was very little such abuse. Every case was investigated, and an inquiry was made into the state of life of all out patients. More often than not, he regretted to say, in the latter case they found great distress instead of affluence or means to pay any fees at all. He could not, however, say the same with regard to the special departments, such as those for ears, eyes, or teeth. He was sorry to say that there were continuous attempts by people to get false teeth or eyes at a lower price than they ought to pay, and those cases they had to deal with as best they could by refusing them a second attendance. Hospitals in London were very much under the public eye. The King Edward's Fund sent visitors, and the Hospital Sunday Fund. They had Mr. Stephen Coleridge and Mr. Sydney Holland, who argued as to the way in which they should keep their accounts; and there was also the Hospital Saturday Fund, which demanded a large number of letters for patients. The more hospitals were under the public eye the better, and the more they were under the medical and professional eye the better. They were doing great work in relieving distress and training medical men, and if they could do their duty without treading upon anybody's toes or interfering with anybody's business, so much the better. In conclusion, he could only hope that the Conferences would continue, and that he might have the privilege and honour of attending them next year.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

Grants.

The Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research.

Applications for sums to be granted should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing:

(*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached.

(*b*) A general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers.

(*c*) And references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

Research Scholarships.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council provided the whole term of office shall not exceed three years.

The Scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

Ernest Hart Memorial Scholarship.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council provided the whole term of office shall not exceed three years. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Forms of application for Scholarships and Grants can be had on application to the General Secretary.

Guy Elliston, *General Secretary.*

6, Catherine Street, Strand,
February, 1908.

The Seventy-Sixth Annual Meeting

of the

BRITISH MEDICAL ASSOCIATION,

SHEFFIELD,

JULY 24th to JULY 31st, 1908.

President:
Henry Davy, M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital.

President-elect:
Simeon Snell, F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

Past-President:
Richard Andrews Reeve, B.A., M.D., LL.D., Dean of the Medical Faculty, University of Toronto.

Chairman of Representative Meetings:
James Alexander Macdonald, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:
Edmund Owen, LL.D., F.R.C.S.Eng., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:
Edwin Rayner, M.D.Lond., F.R.C.S.Eng., Surgeon, Stockport Infirmary, Stockport.

The seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July, 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University, and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by James Kingston Fowler, M.D., F.R.C.P.Lond.
The Address in Surgery will be delivered by Rutherfoord John Pye-Smith, F.R.C.S.Eng.
The Popular Lecture, on "Dust and Disease," will be delivered by Edmund Owen, LL.D., F.R.C.S Eng.

THE SECTIONS.

The scientific business of the meeting will be conducted in seventeen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the British Medical Journal *without special permission.*

The following is a list of the Sections with the names of the officers and a preliminary list of subjects selected for discussion:

Anatomy.

President: Christopher Addison, M.D., F.R.C.S., Anatomy Department, St. Bartholomew's Hospital, London.

Vice-Presidents: Edward Skinner, M.R.C.S., 124, Devonshire Street, Sheffield; Thomas Hastie Bryce, M.D., F.F.P.S.Glasg., 2, Granby Terrace, Glasgow; Arthur Keith, M.D., F.R.C.S., London Hospital Medical College, London.

Honorary Secretaries: Professor Charles Joseph Patten, M.D., D.Sc., University, Sheffield; Henry Mulrea Johnston, M.B., Anatomical Department, Trinity College, Dublin.

The Section will meet on Wednesday and Thursday, July 29th and 30th, at 10 a.m., adjourning at 1 p.m. each day. A meeting, if considered necessary, will be held on Friday.

On Wednesday, July 29th, Dr. Addison, President of the Section, will deliver the opening address. A discussion on the Mechanism of Respiration in Health and Disease will opened by Dr Keith.

Thursday, July 30th, will be devoted to reading of papers and the exhibition of specimens.

Pathology.

President: Charles James Martin, M.B., D.Sc., F.R.S., Lister Institute of Preventive Medicine, Chelsea Gardens, London, S.W.

Vice-Presidents: Charles Workman, M.D., F.F.P.S.Glasg., 5, Woodside Terrace, Glasgow; Alexander Grant Russell Foulerton, F.R.C.S., Middlesex Hospital, London; Professor James Martin Beattie, M.D., Pathological Department, University, Sheffield.

Honorary Secretaries: Douglas Stanley, M.D., 21, Broad Street, Birmingham; Ralph Davies Smedley, M.B., School of Medicine, University, Sheffield.

The following is the provisional programme:

Wednesday, July 29th.—A discussion on Cerebro-Spinal Meningitis, to be opened by Dr. W. St. Clair Symmers. Drs. R. M. Buchanan, Gardiner Robb, F. E. Batten, J. A. Arkwright, R. C. Rankin, T. Houston, C. B. Ker, A. G. R. Foulerton, T. G. Horder, Ivy Mackenzie, W. T. Ritchie, Martin, and others will take part.

Thursday, July 30th.—A discussion on Regenerative and Compensatory Changes in the liver, to be opened by

Dr. Craven Moore. Professor R. Muir, Drs. H. D. Rolleston, Worthington, James Miller, Lindsay Milne, and others will take part.

Arrangements will be made for the exhibition in the Pathological Museum of specimens illustrating the work of the Section.

PHYSIOLOGY.

President: Professor ERNEST HENRY STARLING, M.D. F.R.C.P., F.R.S., 40, West End Lane, London.

Vice-Presidents: GUSTAV MANN, M.D., 25, Beechcroft Road, Oxford; FREDK. GOWLAND HOPKINS, M.B., F.R.S., Wordsworth Grove, Cambridge.

Honorary Secretaries: Professor JOHN SMYTH MACDONALD, L.R.C.P., University, Sheffield; CHARLES FREDERICK MYERS WARD, M.R.C.S., Kelvin House, Green Lane, Northwood.

The arrangements made up to the present are as follows:

Wednesday, July 29th, 10 a.m.: Discussion upon Purin Metabolism, to be opened by J. B. Leathes, M.D.Oxon., F.R.C.S., followed by Professor Cushny, F.R.S.; Professor Walker Hall, M.D., F. G. Hopkins, F.R.S., A. P. Luff, M.D., Gustav Mann, M.D., Professor T. Milroy, M.D., Professor Benjamin Moore, E. I. Spriggs, M.D., Chalmers Watson, M.D.

Thursday, July 30th, 10 a.m.: Dr. J. S. Haldane, F.R.S., will open a discussion upon the Causes of Dyspnoea, in which the following propose to take part: A. E. Boycott, M.A., M.D., Professor Cushny, F.R.S., Leonard Hill, F.R.S., James Mackenzie, M.D., M. S. Pembrey, M.A., M.D., F. H. Scott, M.D.

Friday, July 31st, 10 a.m., in the Firth Hall: Discussion upon the Scientific Education of the Medical Student. Opener, the President, Professor E. H. Starling, F.R.S., to be followed by Professor H. E. Armstrong, F.R.S.; Professor A. R. Cushny, F.R.S., Leonard Hill, F.R.S., Professor William Osler, F.R.S., Sir Felix Semon, M.D., Professor C. S. Sherrington, F.R.S.

On each of these days papers will be read at the close of the discussions.

MEDICINE.

President: WILLIAM DYSON, M.D., Brooke House, Gell Street, Sheffield.

Vice-Presidents: DUNCAN BURGESS, M.B., F.R.C.P., 442, Glossop Road, Sheffield; WILLIAM SMITH PORTER, M.D., 283, Glossop Road, Sheffield; JAMES CRAIG, M.D., F.R.C.P.I., 18, Merrion Square, Dublin; FREDERICK JOHN SMITH, M.D., F.R.C.P., 138, Harley Street, London.

Honorary Secretaries: ARTHUR JOHN HALL, M.D., F.R.C.P., 342, Glossop Road, Sheffield; Sir JOHN FRANCIS HARPIN BROADBENT, Bart., M.D., F.R.C.P., 35, Seymour Street, Portman Square, London; ALEXANDER DINGWALL FORDYCE, M.D., F.R.C.P.Edin., 19, Coates Crescent, Edinburgh.

The following subjects have been chosen for discussion:

Wednesday, July 29th.—Splenic Enlargements other than Leukaemic. To be introduced by Professor Osler.

Thursday, July 30th.—The Etiology of Degenerative Changes of the Aorta. To be introduced by G. Newton Pitt, M.D., F.R.C.P.

DISEASES OF CHILDREN.

President: CHARLES HENRY WILLEY, M.D., D.Sc., Wostenholme Road, Sheffield.

Vice-Presidents: JOHN BURDSALL LYTH, M.R.C.S., Fern Bank, Doncaster Road, Rotherham; JOHN MCCAW, M.D., 74, Dublin Road, Belfast; ROBERT GORDON, M.D., 26, Wostenholme Road, Sheffield.

Honorary Secretaries: JOSEPH HENRY WILKS, M.B., 43, Montgomery Road, Sheffield; SIDNEY MAYNARD SMITH, M.B., F.R.C.S., 1, Spanish Place, Manchester Square, London; HAROLD LEADER, M.B., 279, Glossop Road, Sheffield.

Some portion of two of the days on which the Section meets will be devoted to the discussion of the following subjects:

Wednesday, July 29th.—I. Fatty Acid Intoxication. To be opened by Dr. Leonard Guthrie.

Thursday, July 30th.—II. Surgical Treatment of Infantile Paralysis. To be opened by Mr. A. H. Tubby.

On the third day a clinical meeting will be held at the Children's Hospital which adjoins the University Buildings.

PSYCHOLOGICAL MEDICINE.

President: WALTER SMITH KAY, M.D., S. Yorks. Co. Lunatic Asylum, Wadsley, Sheffield.

Vice-Presidents: HENRY TALBOT SIDNEY AVELINE, M.D., Somerset and Bath Asylum, Cotford, Norton Fitzwarren, near Taunton; MAURICE CRAIG, M.D., F.R.C.P., Bethlem Royal Hospital, London; GILBERT EDWARD MOULD, M.R.C.S., Thunderclife Grange, near Rotherham, Sheffield.

Honorary Secretaries: WILLIAM JAMES NATHANIEL VINCENT, M.B., South Yorks Asylum, Wadsley, Sheffield; GEORGE ARTHUR RORIE, M.D., County Asylum, Dorchester.

The following subjects have been selected for special discussion in this Section:

Wednesday, July 29th.—The Question of the Treatment of the Habitual Drunkard (Legislative and Otherwise). To be opened by T. Claye Shaw, M.D.

Thursday, July 30th.—The Early Treatment of Mental Disorders in General Hospitals and Private Practice. To be opened by Bedford Pierce, M.D.

Friday, July 31st.—School Life viewed from the Standpoint of Psychological Medicine. To be opened by Francis Warner, M.D.

INDUSTRIAL DISEASES.

President: THOMAS OLIVER, M.D., LL.D., F.R.C.P., 7, Ellison Place, Newcastle-on-Tyne.

Vice-Presidents: WILLIAM FRANCIS DEARDEN, M.R.C.S., Normanhurst, Urmston Lane, Stretford, Manchester; ALEXANDER FORBES, M.B., Hillsboro' Lodge, Sheffield; SAMUEL KING ALCOCK, M.B., Portland House, Burslem, Staffs.

Honorary Secretaries: ALEXANDER GARRICK WILSON, M.C., F.R.C.S., 56, Riverdale Road, Ranmoor, Sheffield; WILLIAM HENRY FRANCIS OXLEY, M.R.C.S., 119, East India Dock Road, London.

The following subjects have been suggested, and it is proposed that the proceedings shall be opened each day by the discussion of one of them, followed by papers:

Wednesday, July 29th.—Granting of Certificates of Fitness. To be opened by Dr. King Alcock, of Burslem.

Thursday, July 30th.—Diseases of the Lungs caused by Dust. To be opened by Dr. Arthur Hall, of Sheffield.

Friday, July 31st.—Notification of Industrial Diseases. To be opened by Dr. Alexander Scott, of Glasgow.

ELECTRICAL.

President: EDWARD REGINALD MORTON, M.D., 22, Queen Anne Street, London.

Vice-Presidents: WILLIAM LONGBOTTOM, M.R.C.S., 139, Burngreave Road, Sheffield; DAWSON FYERS DUCKWORTH TURNER, M.D., 37, George Square, Edinburgh; WILLIAM HARWOOD NUTT, M.D., 280, Western Bank, Sheffield.

Honorary Secretaries: WILLIAM JONES GREER, F.R.C.S.I., 19, Gold Tops, Newport, Mon.; ARTHUR RUPERT HALLAM, M.D., 325, Fulwood Road, Sheffield.

It is proposed that on the first day there shall be papers and discussions relating to Roentgen Rays and Electrical Diagnosis.

On Thursday, July 30th, papers and discussions concerning Electrical Treatment.

On Friday, July 31st, the subject will be Roentgen Ray Therapeutics.

The Committee hope that it will be possible for them to set aside a convenient room for the exhibition and demonstration of new forms of apparatus.

The Pathological Museum Committee will be glad to take charge of, and place in the Museum for exhibition, any specimens, photographs, radiographs, diagrams, or microscopic slides during the time they are not required by those reading the papers or taking part in the discussions.

TROPICAL DISEASES.

President: Lieutenant-Colonel Sir R. HAVELOCK CHARLES, K.C.V.O., M.D., I.M.S., 9, Manchester Square, London.

Vice-Presidents: LOUIS WESTENRA SAMBON, M.D.Naples, 1, Palace Gardens Mansions, London; CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

Honorary Secretaries: FREDERICK AUGUSTUS HADLEY, F.R.C.S., Highfield House, Sheffield; ROBERT THOMSON

Leiper, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

The following subjects have been selected for discussion:

Wednesday, July 29th, 10 a.m.—Tropical Abscess of the Liver. To be opened by the President.

Thursday, July 30th, 10 a.m.—Ankylostomiasis. To be opened by Sir Patrick Manson, K.C.M.G., F.R.S.

Friday, July 31st, 10 a.m.—Diseases of the Lymphatics and Lymphatic Glands Peculiar to the Tropics. To be opened by Dr. C. W. Daniels, M.R.C.P.

Pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in tropical medicine will be welcomed.

Surgery.

President: Sinclair White, M.Ch., F.R.C.S., Ranmoor, Sheffield.

Vice-Presidents: William Hamerton Jalland, F.R.C.S., St. Leonard's House, York; John Hammond Morgan, C.V.O., F.R.C.S., 68, Grosvenor Street, London; Charles Atkin, F.R.C.S., Endcliffe Croft, Sheffield; Russell Coombe, F.R.C.S., 5, Barnfield Crescent, Exeter; Archibald William Cuff, B.C., F.R.C.S., 285, Glossop Road Sheffield.

Honorary Secretaries: Arthur Mayers Connell, F.R.C.S.E., 79, Hanover Street, Sheffield; Graham Scales Simpson, F.R.C.S., 342, Glossop Road, Sheffield; Donald John Armour, F.R.C.S., 89, Harley Street, London.

Arrangements have been made for special discussions on the following subjects to be held on Wednesday, July 29th, and Thursday, July 30th:

1. The Diagnosis and Treatment of Malignant Disease of the Breast. Introduced by (1) Mr. W. Watson Cheyne, C.B., F.R.C.S.; (2) Mr. Harold J. Stiles, F.R.C.S.E.

2. The Indications for the Performance of Nephrotomy and Nephrectomy. Introduced by (1) Mr. Henry Morris, F.R.C.S.; (2) David Newman, M.D.

The third day (Friday, July 31st) will be devoted to the reading of papers on subjects other than the above.

The Pathological Museum Committee will gladly welcome and take charge of any specimens bearing on the subjects of discussion in this Section.

Ophthalmology.

President: Sir Henry Rosborough Swanzy, M.D., P.R.C.S.I., 23, Merrion Square, Dublin.

Vice-Presidents: Sydney Stephenson, M.B., F.R.C.S.Ed., 33, Welbeck Street, London; Charles Devereux Marshall, F.R.C.S., 112, Harley Street, London; Stanley Riseley, M.D., 387, Glossop Road, Sheffield.

Honorary Secretaries: Michael Aubrey Teale, M.R.C.S., L.R.C.P., 4, Park Square, Leeds; Leonard Robert Tosswill, M.R.C.S., 34, West Southernhay, Exeter.

The subjects chosen for discussion are:

The Relation of Disease of the Nasal Accessory Sinuses to Disease of the Eye. To be introduced by Dr. George Mackay and Mr. Logan Turner.

Serum-Therapy in Diseases of the Eye. To be introduced by Professor Axenfeld, Freiburg.

Colour Vision and its Anomalies. To be introduced by Dr. F. W. Edridge-Green.

Laryngology, Otology, and Rhinology.

President: George Wilkinson, B.C., F.R.C.S., 350, Glossop Road, Sheffield.

Vice-Presidents: Harry Lockwood, M.R.C.S., 122, Cowlishaw Road, Sheffield; Walter Jobson Horne, M.D., 23, Weymouth Street, London; Duncan Gray Newton, M.B., F.R.C.S.Edin., 14, Favell Road, Brook Hill, Sheffield.

Honorary Secretaries: William Smith Kerr, M.B., F.R.C.S.Edin., 281, Glossop Road, Sheffield; Hunter Tod, F.R.C.S., 111, Harley Street, London.

The subjects selected for special discussion are:

Wednesday, July 29th.—Chronic Inflammation of the Pharynx. To be opened by Drs. James Barry Ball and Peter McBride.

Thursday, July 30th.—The Diagnosis of the Intracranial Complications of Middle-ear Suppuration. To be opened by Mr. Charles A. Ballance, M.V.O., and Mr. Arthur L. Whitehead.

Friday, July 31st.—The Methods of Dealing with Suppuration in the Maxillary Antrum. To be opened by Drs. StClair Thomson and Arthur Logan Turner.

Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Dermatology.

President: Ernest Gordon Graham Little, M.D., F.R.C.P., 61, Wimpole Street, London.

Vice-Presidents: Alfred Reckless, M.R.C.S., 2, Broomgrove Road, Sheffield; George Thomson, M.B., Bridge-House, Retford, Notts; Edward Stainer, M.B., 60, Wimpole Street, London.

Honorary Secretaries: George Pernet, M.R.C.S., 94, Harley Street, London; Archibald Young, M.B., 43, Collegiate Crescent, Sheffield.

The following is a provisional programme of proceedings:

Wednesday, July 29th, 10 a.m.—The Vaccine Treatment of Skin Diseases. Discussion to be opened by Sir A. E. Wright, followed by Dr. Norman Walker and Dr. Winkelried Williams.

Papers.—(1) Dr. Lewis Jones: The Treatment of Skin Diseases by Electrolysis (Ions). (2) Dr. Sequeira: The Calmette Reaction in Tuberculosis.

Thursday, July 30th, 9 a.m.—Discourse by Professor Neisser of Breslau: On Syphilis, with special reference to experimental work on the subject. 10 a.m.—Discussion on Syphilis in the Light of Recent Discoveries of its Etiology.

Papers.—(1) Professor Gilchrist: Experimental Urticaria. (2) Dr. Garceau: Etiology of Alopecia Areata.

Friday, July 31st, 10 a.m.—The Diseases of the Skin in Animals communicable to Man. Introduced by Dr. Sabouraud of Paris, followed by Dr. Leslie Roberts and others.

Cases will probably be shown on Wednesday and Friday mornings at 9.30 a.m., before the session of the Section.

Obstetrics and Gynaecology.

President: Richard Favell, M.R.C.S., Brunswick House, Glossop Road, Sheffield.

Vice-Presidents: William Dunnet Spanton, F.R.C.S., Chatterley House, Hanley; John Wise Martin, M.D., Claremont, Glossop Road, Sheffield; John Hy. Brown, M.D., Somerville House, 14, Burngreave Road, Sheffield; Robert Cochrane Buist, M.D., 166, Nethergate, Dundee.

Honorary Secretaries: Percival Ellison Barber, M.R.C.S., L.R.C.P., Broombank, 3, Clarkehouse Road, Sheffield; Charles Hubert Roberts, M.D., 21, Welbeck Street, London.

The following subjects have been selected for special discussion:

(*a*) Caesarean Section *versus* Other Methods of Delivery in Contracted Pelvis (Symphysiotomy, Pubiotomy, Craniotomy, and Induction of Labour).

(*b*) The Treatment of Displacements of the Uterus.

In the Pathological Part of this Section Ectopic Gestation has been chosen as one affording a wide scope for the exhibition of specimens, photographs, microscopic slides, etc.

Public Health and Forensic Medicine.

President: Professor Hy. Harvey Littlejohn, M.B., F.R.S.E., 11, Rutland Street, Edinburgh.

Vice-Presidents: Charles Robert Straton, F.R.C.S.E., West Lodge, Wilton; Edmund Hargreaves, M.D., 2, Eyre Street, Sheffield; Harold Scurfield, M.D., D.P.H., Edenthorpe, Sheffield.

Honorary Secretaries: Alfred Robinson, M.D., L.S.Sc., Town Hall, Rotherham; Alex. Anderson, M.B., D.P.H., Wadsley Lane, Wadsley, Sheffield; William Arthur Bond, M.D., D.P.H., Municipal Offices, 197, High Holborn, London.

The following subjects have been selected for special discussion:

1. Smoke Abatement. To be opened by Dr. Des Voeux.
2. Industrial Diseases of the Lung (in conjunction with the Industrial Diseases Section).
3. The Notification of Pulmonary Tuberculosis.
4. The Notification of Births in Relation to the Reduction of Infantile Mortality.

Navy, Army and Ambulance.

President: Lieutenant-Colonel Edmond Monkhouse Wilson, C.B., C.M.G., D.S.O., R.A.M.C.(retired), Belmont, Osborne Road, S. Farnborough.

Vice-Presidents: Surgeon-Lieutenant-Colonel E. M. Wrench, M.V.O., V.D., Baslow: Lieutenant Colonel Richard Hugh Penton, D.S.O., R.A.M.C., 3, Wenlock Terrace, York; Colonel Charles Joseph Trimble, C.M.G., Preston; Fleet Surgeon Edward James Biden, R.N. (ret.), Laylands, Catisfield, Fareham; Fleet Surgeon Arthur Gaskell, F.R.C.S., R.N., H.M.S. *Hague* c.o. Admiralty, S.W.

Honorary Secretaries: Surgeon-Captain Sidney Fredk. Barber, H.V.B., 11, St. Barnabas Road, Highfield, Sheffield; Surgeon-Captain Alan Charles Turner, W.R.R.E.V., 287, Glossop Road, Sheffield; and a Representative from the Royal Navy.

The following have been suggested as subjects for discussion:

1. Hygiene of Training Ships.
2. Influence on Health through Service in Submarine and Torpedo Boats.
3. Oral Sepsis in Services.
4. Organization of Medical Department of Territorial Army.
5. The Position of the St. John Ambulance Brigade and St. Andrew's Ambulance Corps with Regard to Medical Organization for Active Service on Mobilization.
6. Influence of Alcohol in Services.
7. Importance of Training in Special Trades whilst in Services.
8. Physical Exercises for Recruits as a means of Recreation.
9. First Aid and Transport of Sick and Injured in Civil Life in Large Towns.
10. Improvements in Equipment, Medical and Personal, either for Service or for Civil life.
11. Conditions of Service under the Colonial Office.

Dental Surgery.

President: Frank Harrison, M.R.C.S., L.D.S., 289, Glossop Road, Sheffield.

Vice-Presidents: Arthur Swayne Underwood, M.R.C.S., L.D.S., 26. Wimpole Street, London; John Herbert Gibbs, F.R.C.S., L.D.S., 7, Coates Place, Edinburgh; George Henry Lodge, L.R.C.S., L.D.S., Osborne House, Moorgate Road, Rotherham.

Honorary Secretaries: Henry Watson Turner, M.R.C.S., L.D.S., 59, Wimpole Street, London; Ralph Lamb, M.R.C.S., L.D.S., 51A, Rodney Street, Liverpool.

The following subjects have been selected for special discussion:

Wednesday, July 29th.—Antral Diseases in Relation to General and Special Surgery. The following will open or take part in the discussion: Herbert Tilley, F.R.C.S.; Arthur Underwood, M.R.C.S., L.D.S.; F. Marsh, F.R.C.S.; Urban Pritchard, M.D.Edin., F.R.C.S.Eng.; K. Goadby, M.R.C.S., D.P.H.

Thursday, July 30th.—Teething and its Alleged Troubles. Openers: Leonard Guthrie, M.D., F.R.C.P.; H. A. T. Fairbank, M.S., F.R.C.S.; J. G. Turner, F.R.C.S., L.D.S., followed by Evelyn Milestone, M.D.; R. Denison Pedley, F.R.C.S., L.D.S., and others.

PROVISIONAL TIME TABLE.

Friday, July 24th.*
2 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

Saturday, July 25th.*
9.30 a.m.—Representative Meeting.

Monday, July 27th.
9.30 a.m.—Representative Meeting.

Tuesday, July 28th.
9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon.—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
8.30 p.m.—President's Address.
Presentation of Middlemore Prize.

Wednesday, July 29th.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Meeting of Convocation for conferring Honorary Degrees.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception.

Thursday, July 30th.
8 a.m.—National Temperance League Breakfast.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—Address in Medicine.
7.30 p.m.—Annual Dinner.

Friday, July 31st.
—Address in Surgery.
10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.

Saturday, August 1st.
Excursions.

* It is left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council to decide if the business to come before the Representatives will necessitate a meeting on the Friday.

Honorary Local Secretary—
Sinclair White, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—
W. T. D. Mart, M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.
R. W. Innes Smith, M.D., C.M., M.R.C.S., L.R.C.P.
Don House, Brightside, Sheffield.
A. C. Turner, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

PATHOLOGICAL MUSEUM.

The following are the members of the Committee:

President: Professor J. M. Beattie, M.D.

Honorary Secretaries: A. E. Barnes, M.R.C.P.; M. H. Phillips, F.R.C.S.

Members of Committee:

W. T. Cocking, M.D.	C. J. Patten, M.D.
A. M. Connell, F.R.C.S.E.	H. Scurfield, M.D.
A. H. Firth, M.B.	G. S. Simpson, F.R.C.S.
A. J. Hall, M.D.	E. Skinner, M.R.C.S.
J. S. Macdonald, L.R.C.P.	J. W. Stokes, M.R.C.S.
W. H. Nutt, M.D.	G. Wilkinson, F.R.C.S.

Ex-Officio Members:

The President-elect: Simeon Snell, F.R.C.S.E.

The Local Honorary Treasurers: D. Burgess, F.R.C.P.; W. Dyson, M.D.

The Local Honorary Secretaries: Sinclair White, F.R.C.S.; W. T. D. Mart, M.R.C.S.; R. W. I. Smith, M.D.; A. C. Turner, M.R.C.S.

The following circular has been sent out by the Subcommittee of the Pathological Museum to gentlemen interested in pathology and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Sheffield, 1908, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.
II. Specimens and illustrations relating to any recent research work.
III. Instruments relating to clinical diagnosis and pathological investigation.
IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Diseases of the spleen.
(*b*) Diseases of the heart and vessels.
(*c*) Diseases due to dust, tuberculosis, actinomycosis, syphilis and allied causes.
(*d*) The urinary system.
(*e*) Diseases of the breast.
(*f*) *X* rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position, and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,

A. E. Barnes,
M. H. Phillips,
Honorary Secretaries.

342, Glossop Road, Sheffield, January, 1908.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

LANCASHIRE AND CHESHIRE BRANCH:

Manchester (West) Division.

A general meeting of this Division was held at the Hulme Dispensary on Thursday, March 26th.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted as correct.

Club Practice.—As arising out of the minutes, the Honorary Secretary referred to the fact that a meeting of medical men of the Rusholme, Fallowfield, and Moss Side Districts had been held during the previous week to consider certain occurrences in connexion with club practice. A resolution had been passed binding those present to accept in the future only those clubs which would agree to pay their medical officer at the rate of 6s. per head per annum. A committee had been appointed to deal with this and other matters connected with club practice. The Division was pledged to support the above resolution, and the meeting decided to await the report of the Committee before taking any further step.

Annual Divisional Reports.—A letter from the Honorary Secretary of the Lancashire and Cheshire Branch in regard to the annual Divisional reports was read.

The Term "Hospital."—The Central Ethical Committee's communication referring to the definition of the term "hospital" was next considered. The definition submitted was agreed to and instructions were given to the Representative to support the same at the annual meeting in July next. In regard to the Medico Political Committee's report on examinations for life insurance, the meeting formulated answers to the various queries, and instructed the honorary secretaries to forward the replies to the Medical Secretary. The Central Ethical Committee's circular dealing with the Prevention of Corruption Act was read, and it was resolved that the communication be placed on the table.

Medical Inspection of School Children.—The following resolutions, which have been adopted by the Joint Committee of the Manchester and Salford Divisions, were unanimously agreed to:

1. That where the medical officers for the medical inspection of school children are not whole-time officers, the duty of medical inspection should, as far as is practicable, be entrusted to general practitioners who do not reside or practise in the vicinity of the school which they may have to inspect.
2. That indiscriminate medical treatment of school children at the expense of the ratepayers is not advisable; and that when a medical inspector considers that medical treatment is necessary for any school child, the parents should be advised to consult their own family medical attendant, as far as this is possible.
3. That in order to prevent unjust imposition on public charities, no children should be referred to any hospital, general or special, until it has been ascertained that the parents are unable to pay ordinary medical fees.

United Hospitals Conference.—The notice from the Medical Secretary in regard to the approaching United Hospitals Conference was placed on the table

Functions of Isolation Hospitals.—A communication from the Joint Committee of the Manchester and Salford Divisions concerning the functions of modern isolation hospitals was considered, and certain suggestions made were thought fair, and were agreed to.

Lynn Thomas and Skyrme Fund.—It was agreed that the Lynn Thomas and Skyrme Fund was well worthy of support by members of the Division.

Fees for First Aid, etc.—Other matters concerning the payment of fees for "first aid" in tramway accidents and the free treatment of Crimean veterans were discussed, and resolutions adopted.

METROPOLITAN COUNTIES BRANCH:

Marylebone Division.

A general meeting of the Division was held on Friday, April 3rd, at 5 p.m., at 11, Chandos Street, W.; Mr. A. Pearce Gould, Chairman of the Division, in the chair.

Hampstead Hospital.—A discussion upon the Hampstead Hospital question took place, when it was moved by Mr. Bishop Harman, seconded by Dr. Havilland Hall, and carried *nem. con.*:

That the sympathy of the Marylebone Division be expressed with the Hampstead Division in regard to their negotiations with the authorities of the Hampstead Hospital, particularly in their objection to the continuance of an out-patient department in Hampstead.

Medical Inspection of School Children.—Sir Victor Horsley moved, Dr. Comyns Berkeley seconded, and it was carried *nem. con.*:

That the Division approves of the suggestions as laid down in the Supplementary Report on the Medical Inspection of School Children.

Sir Victor Horsley moved, Mr. Bishop Harman seconded, and it was carried *nem. con.*:

That the Division approves of the schedule as laid down for the medical inspection of school children.

The Term "Hospital."—Dr. Lauriston Shaw moved, Dr. Havilland Hall seconded, and it was carried with two dissentients, "that the proposed definition of the term 'hospital' be approved."

SOUTH-EASTERN BRANCH:

Guildford Division

A meeting of this Division was held at the Royal Surrey County Hospital, Guildford, on Friday, March 27th, at 4.30 p.m. Dr. Anderson Morshead, Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of the two previous meetings were read and confirmed.

Paper.—Mr. G. B. Mower White read an instructive and interesting paper on some points in the surgery of mammary cancer, embodying the latest views as to the dissemination of the disease both locally and generally, and describing the most recent methods for the operative treatment of cancer of the breast. Several members asked questions at the close of the paper, and a short discussion followed.

Rates for Contract Practice.—Dr. A. B. Hudson moved the following resolution:

That this Division of the Association, having adopted the Ethical Rules as drafted by the Medical Secretary, agrees to fix the minimum rate for contract practice in the Division at 4s. per head per annum, such rate to apply to either sex, and to junior as well as senior members of clubs.

This was seconded by Dr. Mingin. Dr. Pearse moved an amendment to add to the resolution the following words—

and that, where possible, existing contracts be not interfered with.

This was seconded by Dr. Weaver and lost, 4 voting for

the amendment and 5 against. The original resolution was then put to the meeting and carried, 9 to 1, two members not voting. It was then proposed by Dr. MINCHIN, and seconded by Dr HUDSON, that the Honorary Secretary be requested to send a notice of the resolution to every member in the Division. This was carried *nem. con.*

The Term "Hospital."—It was agreed that the proposed definition of the word "hospital" be approved by the Division.

Life Insurance Examinations.—The questions submitted to Divisions in regard to this subject were then considered and answered as follows:

1. No complete list could be obtained.
2. Yes.
3. Full report often required.
4. Yes; short report as a rule.
5. Yes.
6. No.
7. No.
8. Yes; for a minimum fee of 10s. 6d.
9. 10s. 6d.

Report on Prevention of Corruption Act.—A short discussion on the application of this Act to the profession took place.

Lynn Thomas and Skyrme Fund.—The HONORARY SECRETARY reported that he had been requested to call the attention of members to this fund. No collective action was taken by the Division.

Votes of Thanks.—A hearty vote of thanks was accorded to Mr. Mower White for his paper, and to the Committee of the hospital for the use of the Board room and for kindly providing tea.

Dinner.—Several members afterwards dined together.

SOUTH-EASTERN OF IRELAND BRANCH.

A MEETING of this Branch was held at the Adelphi Hotel, Waterford, on April 1st, at 3 30 p.m. Dr. MACKESY presided.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Apology for Non attendance.—A letter of apology was read from Dr. Russell (Cashel).

Ethical Committee.—A letter dated November 26th, 1907, from the Central Ethical Committee, signed by the Medical Secretary, in reply to a letter from the Honorary Secretary of the Branch, submitting alteration of model draft rules adopted by this Branch, and requesting that the Council of the Branch would be sanctioned as the Ethical Committee thereof, was read, whereupon the following resolution, proposed by Dr. WALSHE and seconded by Dr. LAFFAN, was passed:

> As it is very difficult with us to get a Divisional meeting, and as all our Divisions are fully represented on the Branch Council, we think that the Branch Council should be the Ethical Committee thereof, and that the Rules we have already submitted be approved.

Representative on Central Council.—It was proposed by Dr. WALSHE, seconded by Dr. JELLETT, and passed unanimously:

> That in view of certain changes on the Council of the Association the consideration of the nomination of the Representative on the Central Council be referred to the next meeting.

Representative Meeting.—Dr. Laffan was renominated Representative at the Representative Meeting.

Irish Committee.—Drs. Carey and Quirke were renominated as Representatives on the Irish Committee of the Association.

Division and Council Meetings.—Dr. WALSHE moved and Dr. CAREY seconded:

> That meetings of Divisions be summoned when the Branch meeting is held at their respective centres.

This was passed *nem con.*

Lynn Thomas and Skyrme Case.—It was proposed by Dr. MARY STRANGMAN and seconded by Dr. CAREY:

> That the verdict in the case Southern *v.* Lynn Thomas and Skyrme is a gross miscarriage of justice.

Whereupon it was proposed by Dr. WALSHE and seconded by Dr. CAREY:

> That 5 guineas be allocated to the Skyrme-Lynn Thomas Fund out of the surplus funds of this Branch.

Passed *nem con.*

The late Dr. Staunton.—Dr. WALSHE moved and Dr. CAREY seconded a vote of condolence with the friends and relatives of the late Dr. Staunton. Dr. MACKESY, in putting the resolution, said: "Gentlemen, you have heard the resolution moved by Dr. Walshe and seconded by Dr. Carey. It is a very proper resolution for us to propose, and I much regret the necessity for it. The resolution was passed unanimously."

Annual Meeting.—The annual meeting will be held in Kilkenny on May 6th next, at 5 30 p.m.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

THE spring clinical meeting of this Division was held on March 25th, Dr. HACKMAN, Chairman, presiding. Fourteen other members were present.

Cases.—The following clinical cases were exhibited:—By J. WARD COUSINS, F.R.C.S.: A case of hare-lip and cleft palate operated upon successfully and with improvements in the articulation. By J. COSTINE, F.R.C.S.I.: A case of spontaneous castration due to syphilis. By C. P. CHILDE F.R.C.S.; A case of successful double enterectomy for malignant tumour of the large and small bowel. By T. ARCHER COLT: A case of hydatid of the lung. By J. T. LEON, M.D.: A case of elephantiasis of the arm of specific origin.

Specimens.—The following specimens were shown:—By T HOLMES, M.D.: A specimen of early tubal haematocele successfully removed. By L. MAYBURY, M.D.: A specimen of malignant disease of the descending colon in which colotomy was performed, and a fortnight later excision with end-to-end anastomosis. Dr. MULVANY exhibited photographs showing the improvement in children suffering from chronic malnutrition under the exhibition of virol. Dr. L. MAYBURY showed a specimen of the calvaria and ribs of an old lady suffering from osteoporosis.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
General Secretary.

March 26th, 1908.

BRANCH AND DIVISION MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH: WEST DORSET DIVISION.—The annual meeting of the Division will be held on Wednesday, April 15th, at the County Hospital, Dorchester, at 3 p.m. Agenda: (1) Minutes. (2) To elect officers—namely, Chairman, Vice Chairman, and Honorary Secretary. (3) To elect the Executive Committee of the Division. (4) To elect Representatives of the Division on Branch Council. (5) To elect the Representative of the Division at the Representative Meetings of the Association. (6) To consider matters referred to Division (vide SUPPLEMENT, December 21st, 1907, and February 22nd, 1908). (7) The County Council proposals for the remuneration to be given to medical inspectors of school children. (8) The result of the Referendum. (9) Any other business. It is hoped that as many members as possible will attend, so that the meeting may be thoroughly representative.—J. F. L. WHITTINGDALE, Honorary Secretary, Grosvenor Lodge, Sherborne.

GLOUCESTERSHIRE BRANCH.—A general meeting of the Branch will be held at the General Hospital Cheltenham, on Thursday, April 16th, at 7 p.m. Agenda:—1. Dr. Collins: Some Observations on Opsonins and Vaccine Therapy (based on 1 700 observations of the Opsonic Index). Lantern and microscopic slides will be exhibited. Some of the cases treated will be shown. 2. Dr. R. C. Affleck: (*a*) Case of Appendicitis with Unusual Symptoms (specimen); (*b*) Note on a Case of Induction of Labour with Bossi's Dilator. There will be a supper afterwards at the Cosy Corner, Promenade. Tickets 3s. 6d. each, exclusive of wine.—D. E. FINLAY, Honorary Secretary, Southville, Park Road, Gloucester.

LANCASHIRE AND CHESHIRE BRANCH.—*Election of Members of the Council of the Association.*—Nominations of candidates for the representation of the members of this Branch on the Council of the Association must be sent to me in writing on or before May 1st next (vide Branch Law 5, and Association By-law 25).—F. CHARLES LARKIN, Secretary of the Branch, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting of the members of the above Division will be held at Co-operative Rooms, Ellesmere Street, at 8.30 p.m. on Thursday, April 16th.—J. SACKVILLE MARTIN, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: PRESTON DIVISION.—The annual meeting of the Preston Division will be held in the White Horse Restaurant, Friargate, on Thursday, April 16th, at 8 30. One of the subjects for consideration is the action of the Lancashire County Council in limiting the fee for inquests to medical men to 1 guinea, however long the inquest may last.—F. B. MACDONALD, Honorary Secretary, 1, Stanley Place, Preston.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—A meeting of the Division will be held in the Hammersmith Infirmary, Ducane Road, Shepherd's Bush, on Friday, April 10th, 1908, at 5 p.m. The infirmary will be open to the inspection of members. Clinical cases will be shown by the Medical Superintendent, Mr. John Jenkins, and the assistant medical officers. The report of the Medical Charities Committee of the Metropolitan Counties Branch will be discussed.—CHARLES BUTTAR, Honorary Secretary, 10, Kensington Gardens Square, W.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The annual general meeting of this Division will be held in Bethlem Royal Hospital, Lambeth Road, S.E., on Thursday, May 7th, 1908, at 4 p m. The following names are proposed by the committee as office-bearers during the session 1908-9:—*Chairman*, W. A. Atkinson, M.D.; *Vice-Chairman*, A. M. Hickley, M.R.C.S.; *Representative at Representative Meeting*, R. Esler, M.D.; *Representatives on the Branch Council*, C. Sangster, M.R.C.S., and the Honorary Secretary (*ex-officio*); *Honorary Secretary*, Herbert French, M D.; *Executive Committee*, R. Capes, M.R.C.S., E. A. Edelsten, M.B., J. W. J. Oswald, M.D., H. J. Spon, M.R.C.S., W. E. Sturges-Jones, M.R C.S., Herbert Taylor, M.B. Any member of the Division who may wish to propose any other candidate or candidates for any of the above offices should send the name of such candidate or candidates, duly seconded, together with the written consent of each nominee, to the Honorary Secretary, 26, St. Thomas's Street, London Bridge, S.E , on or before Monday, May 4th, 1908. Dr. Hyslop will deliver an address upon the Borderland of Insanity, and several eminent alienists have been invited to take part in the discussion.—HERBERT FRENCH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—The annual meeting and dinner of this Division will take place on Wednesday, May 13th, at the Sun Hotel, Kingston, at 6.30 p.m.—CHARLES BLAIR, F.R.C.S., Matson Lodge, Richmond; A. E. EVANS, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: WALTHAMSTOW DIVISION.—The next meeting of this Division will be held at the Woodford Hospital on Tuesday, April 14th, at 4 p.m. Agenda: (1) Minutes. (2) Letters. (3) Paper by Herbert French, M.D., M.R.C P.: Pregnancy in relation to Certain Medical Diseases in the Mother.—A. POTTINGER ELDRED, Honorary Secretary.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—An ordinary meeting of this Division will be held on Tuesday, April 14th, at the White Hart Hotel, Boston, at 2.30 p.m. Tea will be provided at each member's expense for those desiring it. Agenda: (1) Notification of Births Act. (2) Medical Inspection of school children (SUPPLEMENT, December 21st, 1907). (3) Medical examinations for life assurance, etc. (SUPPLEMENT, February 22nd, 1908). (4) Lynn Thomas and Skyrme Fund. (5) Cases, etc. (6) Any other business.—A. E. WILSON, Honorary Secretary.

NORTH WALES BRANCH.—The spring intermediate meeting of the Branch will be held at Denbigh on Tuesday, April 21st, 1908.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes, S.O.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on May 6th at 5 30 p.m. Agenda: (1) Minutes. (2) Letters of apology. (3) Correspondence. (4) Election of office-bearers. (5) Dinner at 6.30, towards which members of the local Division are expected to contribute 5s. each. (6) Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH-WESTERN BRANCH.—An intermediate meeting of the Branch will be held at the Museum, Babbacombe Road, Torquay, on Wednesday, April 15th, at 3.30 p.m. Agenda: (1) Read and confirm minutes of last intermediate meeting. (2) Consider communications (if any). (3) Exhibition of clinical Cases—Dr. Makeig Jones: A case of erythromelalgia in a woman. (4) Papers—Mr. Hamilton Whiteford: Plastic Resection of the Breast. Dr. Gordon: The Diagnosis of Cerebral Abscess. Mr. Gilbert Arnold: A Brief Report on a Case of Cancer of the First Part of the Rectum—Excision and End-to-end Anastomosis. (5) Exhibition of pathological specimens, etc. (if any). Tea will be provided after the meeting.—RUSSELL COOMBE, Honorary Secretary, Barnfield Crescent, Exeter.

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 30th. The President, Mr. J. T. Hartill, will take the chair at 5 25 p.m. Business: Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper by E. Deanesly, F.R C.S.: Cases Illustrating the Use of the Cystoscope, the Ureteral Catheter, and the Urinary Separator. (5) Paper by Dr. Edge: Gynaecological Surgery. (6) Exhibition of pathological specimens, etc. Dinner at 7 p.m.; charge, 5s. Gentlemen intending to be present at the dinner are requested to intimate their intention not later than April 27th to the Honorary Secretary. A meeting of the Council will be held immediately before the general meeting to fix the date of the annual Council meeting.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 2nd. Members having communications to make to the meeting are requested to send particulars before April 21st to CECIL SHAW, M.D., Honorary Secretary, 29, University Square, Belfast.

CENTRAL MIDWIVES BOARD.

SPECIAL meetings of the Central Midwives Board were held on March 26th and 27th at Caxton House, Westminster, with Dr. F. H. CHAMPNEYS in the chair.

MIDWIVES STRUCK OFF THE ROLL.

The Board considered the following charges amongst others against the midwives whose names are given below, and ordered the names to be struck off the Roll.

Maria Westwood, that having been duly suspended from practice for the period of one month on account of her attendance on a fatal case of puerperal fever, she nevertheless attended as a midwife at six confinements during the period of suspension; that when in attendance as a midwife at a confinement she prepared the patient for delivery in her dirty clothes, lying upon a dirty piece of carpet, placed on a wire mattress; and that when in attendance as a midwife as aforesaid her nails were very dirty, and she had not with her the appliances and antiseptics required by Rule E. 2.

Ellen Cashmore, that being in attendance as a midwife at a confinement, the patient being ill, suffering from headache, rigor with raised temperature, sweatings, and pains and tenderness in the abdomen, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, as required by Rules E. 18 and 19.

Mary Devey, that being in attendance as a midwife at a confinement, the child at its birth suffering from dangerous feebleness, being a seven months child and one of twins, of whom the other was stillborn, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Charlotte Lane, that being in attendance as a midwife at a confinement, the patient being ill, suffering from headache and raised temperature, she declined to send for a medical practitioner, though requested to do so by the patient. At another confinement the perineum being seriously ruptured, and at another the lochia being persistently offensive for a week, she did not explain that the cases required the attendance of a registered medical practitioner.

Rebecca Matthews, that being in attendance as a midwife at a confinement, the patient suffering from excessive bleeding at and after the time of the confinement, she did not explain that the case was one in which the attendance of a registered medical practitioner was necessary.

Catherine Mist, that being in attendance as a midwife at a confinement, the patient being ill, suffering from headache with rise of temperature above 100.4° F. and quickening of the pulse for more than twenty-four hours, with persistently offensive lochia and abdominal tenderness, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Rosina Scott, that being in attendance as a midwife at a confinement, the perineum being seriously ruptured, she did not explain that the attendance of a registered medical practitioner was required.

Elizabeth Neal, that being in attendance as a midwife at a confinement, the child suffering from severe inflammation of the eyes, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Ellen Thomas, that being in attendance as a midwife at a confinement, the placenta and membranes not having been completely expelled two hours after the birth of the child, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Rose Williams, that being in attendance as a midwife at a confinement, the child having developed severe inflammation of both eyes during the period of her attendance, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Ann Laseby, that being in attendance as a midwife at a confinement, a rigor with raised temperature occurring, she did not explain that the case was one in which the attendance of a registered medical practitioner was required.

Ann Kimberley, *Sarah Payne*, *Ellen Pratt*, *Sarah Lee*, *Jane Ward*, and *Harriet Williams*, that they were uncleanly and did not take with them to confinements the appliances and antiseptics required by Rule E. 2.

Myriah Sarah Jones and *Jane Baker Rimmer* for drunkenness.

MIDWIVES CENSURED.

The following midwives were censured after charges alleged against them had been considered: Sarah Bates, Mary Alice Leese, Martha Short, Isabella Dowdy, Ellen Locker, Elizabeth Townsend, and Eliza Woolley.

MIDWIVES CAUTIONED.

Jane Gray and Alice Filmer were cautioned after charges alleged against them had been considered.

APPLICATION FOR RESTORATION TO ROLL.

The application of Helena Zwirn for the restoration of her name to the Roll—removed by the Board, December 12th, 1907—was refused.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON A. L. CHRISTIE, M.B., has been placed on the retired list at his own request, with the rank of Deputy Inspector-General, March 27th. He was appointed Surgeon, March 31st, 1877; Staff Surgeon, March 31st, 1889; and Fleet Surgeon, February 20th, 1894. Whilst Staff Surgeon of the *Cossack* he served with the expedition against the Sultan of Vitu, in East Africa, in 1890; he was mentioned in dispatches and received a medal with clasp.

Civil Practitioner J. R. DEE has been appointed Surgeon and Agent at Walton-on-the-Naze and Walton Creek, March 31st, and Civil Practitioner L. B. MUDGE to be Surgeon and Agent at Gwythian Detachment, April 2nd.

ROYAL NAVAL VOLUNTEER RESERVE.

CHARLES D. MARSHALL has been appointed Surgeon, March 31st.

ARMY MEDICAL SERVICE.

COLONEL J. MCNAMARA, M.D., is placed on retired pay, March 29th. He was appointed Assistant-Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; granted the rank of Lieutenant-Colonel, April 1st, 1891; made Brigade Surgeon-Lieutenant-Colonel, July 9th, 1895; and promoted to be Colonel, July 4th, 1900. He took part with the Perak Expedition in 1874, being present at the capture of the Kopayang stockades (medal with clasp); in the Afghan war of 1878-80, including the retreat from Maiwand, the siege of Kandahar, and the battle on September 1st (mentioned in dispatches, medal with clasp); and with the Soudan Expedition in 1884, including the battles of El Teb and Tamai (mentioned in dispatches, medal with clasp, and Khedive's bronze star).

Lieutenant-Colonel A. E. TATE, R.A.M.C., is appointed a Deputy Assistant-Director-General at Head Quarters, vice Lieutenant-Colonel M. W. Russell, R.A.M.C., April 1st. Lieutenant-Colonel Tate entered the service as Surgeon, August 4th, 1883; was made Surgeon-Major, August 4th, 1895; and Lieutenant-Colonel, August 4th, 1903. His war record includes: The Burmese expedition, 1886-9 (medal with two clasps); the Chitral Relief Force, 1895 (medal with clasp); and the South African war, 1899-1901, during which he was at the relief of Kimberley, in actions at Paardeberg, Poplar Grove, Karee Siding, and Zand River, in operations in the Transvaal, including actions near Johannesburg, Pretoria, and Diamond Hill, and in various operations in Orange River and Cape Colonies, including actions at Wittebergen and Colesberg (Queen's medal with six clasps).

ROYAL ARMY MEDICAL CORPS.

COLONEL H. R. WHITEHEAD, who is serving in India as Principal Medical Officer, Sirhind and Jullundur Brigades, is appointed Principal Medical Officer, 1st (Peshawur) Division.

Colonel O. E. P. LLOYD, V.C., who is serving in India as Principal Medical Officer, Jubbulpore and Jhansi Brigades, is appointed Medical Officer, Bareilly and Garhwal Brigades.

Colonel D. O'SULLIVAN, who is serving in India, is appointed Principal Medical Officer, Jubbulpore and Jhansi Brigades.

Captain E. BRODRIBB, from the Royal Army Medical College, has been appointed to Shorncliffe as Specialist in Ophthalmology, April 11th.

The undermentioned Captains, R.A.M.C., serving in India, are appointed Specialists in Electrical Science, from January 1st: A. CHOPPING, 1st (Peshawur) Division; H. G. S. WEBB, 3rd (Lahore) Division.

Major F. KIDDLE, M.B., who is serving in India as Specialist in Ophthalmology, 5th (Mhow) Division, is transferred to the 9th (Secunderabad) Division, in the same capacity, from March 10th.

INDIAN MEDICAL SERVICE.

COLONEL G. J. KELLIE, Bengal, Principal Medical Officer Bareilly and Garhwal Brigades, is appointed Principal Medical Officer Sirhind and Jullundur Brigades.

Colonel W. G. H. HENDERSON, Bombay, Principal Medical Officer Aden Brigade, is appointed Principal Medical Officer 5th (Mhow) Division.

HONOURABLE ARTILLERY COMPANY OF LONDON.

SURGEON-LIEUTENANT J. F. TAYLOR to be Surgeon-Captain, March 10th.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT J. J. MACGREGOR, M.D., Essex Regiment, is removed from the Imperial Yeomanry for absence without leave, March 13th.

Surgeon-Lieutenant C. C. M'CALL, Glamorganshire Regiment, resigns his commission, March 1st.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

PERCY J. S. BIRD, late Surgeon-Captain, 1st West Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Second Lieutenant in the 2nd Hampshire Regiment, February 22nd.

Surgeon-Captain (Hon. Captain in the Army) JOHN WREFORD, 1st Northumberland Regiment, to be Surgeon-Major, January 21st.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT H. M. JAMIESON, M.B., 3rd Volunteer Battalion the Northumberland Fusiliers, resigns his commission, February 29th.

The undermentioned Surgeon-Captains are promoted to be Surgeon-Majors from the dates specified: J. J. O'HAGAN, M.B., F.R.C.S.I., 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment), February 25th; F. J. WARWICK, M.B., 3rd Volunteer Battalion the Essex Regiment, February 26th; L. T. F. BRYETT, M.D., 3rd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), January 21st.

Surgeon-Lieutenant H. J. GODWIN, 1st Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain, remaining supernumerary, February 22nd.

Surgeon-Lieutenant R. E. LAUDER, 2nd Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain, February 7th.

Surgeon-Lieutenant J. M. AHERN, 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment), to be Surgeon-Captain, March 7th.

Surgeon-Captain A. K. STODDART, M.B., 1st Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), to be Surgeon-Major, January 31st.

Surgeon-Lieutenant D. SKINNER, 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers, is retired, under the conditions of paragraph 103 of the Volunteer Regulations, March 21st.

Surgeon-Captain R. T. BELL LORAINE, M.B., Galloway Volunteer Rifle Corps, resigns his commission, retaining his rank and uniform, March 6th.

PETER M. WAUGH, M.B., to be Surgeon-Lieutenant in the 1st Cinque Ports Volunteer Rifle Corps, March 9th.

Surgeon-Captain A. D. DUCAT, M.B., 1st London Volunteer Rifle Corps, to be Surgeon-Major, March 31st.

Surgeon-Major A. NICOL, M.D., 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders, to be Surgeon-Lieutenant-Colonel, March 10th.

Surgeon-Major J. R. F. CULLEN, M.B., 1st Dumbartonshire Volunteer Rifle Corps, to be Surgeon-Lieutenant-Colonel, March 4th. He resigns his commission, retaining his rank and uniform, March 5th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

CAPTAIN S. H. HOUSE, M.B., Liverpool Bearer Company, resigns his commission, March 31st.

Major C. DOWNING, Welsh Bearer Company (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Welsh Volunteer Infantry Brigade), to be Lieutenant-Colonel, remaining supernumerary, March 2nd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,574 births and 5,222 deaths were registered during the week ending Saturday last, April 4th. The annual rate of mortality in these towns, which had been 17.2, 16.9, and 17.4 per 1,000 in the three preceding weeks, declined again to 16.8 per 1,000 last week. The rates in the several towns ranged from 9.1 in Leyton, 9.4 in Grimsby, 10.3 in York, 11.1 in Wigan and in Blackburn, 11.2 in Croydon, 11.3 in East Ham and 11.4 in Smethwick, to 22.6 in Preston, 23.8 in Oldham, 24.1 in Warrington, 24.7 in Ipswich, 25.5 in Stockton-on-Tees, 26.1 in Burton-on-Trent, and 26.3 in Merthyr Tydfil. In London the rate of mortality was 16.6 per 1,000, while it averaged 16.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in the seventy-six large towns; in London also the death-rate from these diseases was 1.4, while among the seventy-five other large towns the rates ranged upwards to 3.3 in Sunderland, 3.7 in Warrington, 3.8 in Hanley, 3.9 in Birkenhead, 4.1 in Newport (Mon.), and 5.9 in Stockton-on-Tees. Measles caused a death-rate of 1.3 in Birkenhead, 1.7 in Croydon, 2.3 in Hanley, 2.5 in Burnley, and 4.9 in Stockton-on-Tees; diphtheria of 1.9 in Tynemouth; whooping-cough of 1.9 in Birmingham and in Aston Manor, 2.1 in Walsall, 2.2 in Birkenhead, 2.3 in Handsworth (Staffs.), 3.0 in Sunderland, and 4.1 in Newport (Mon.); and diarrhoea of 2.9 in Warrington. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,429, 3,356, and 3,229 at the end of the three preceding weeks, had further fallen to 3,121 at the end of last week; 315 new cases were admitted during the week, against 312, 378, and 366 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, April 4th, 1,001 births and 694 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.5 and 19 4 per 1,000 in the two preceding weeks, further rose to 19.7 per 1,000 last week, and was 2 9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13 9 in Paisley and 17.1 in Edinburgh to 21.0 in Dundee and 21 8 in Glasgow. The death-rate from the principal infectious diseases averaged 2 8 per 1,000, the highest rates being recorded in Paisley and Greenock. The 3.0 deaths registered in Glasgow included 23 which were referred to measles, 3 to diphtheria, 11 to whooping-cough, 5 to cerebro-spinal meningitis, and 11 to diarrhoea. Four fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh; 2 of scarlet fever, 2 of whooping-cough, and 6 of diarrhoea were recorded in Dundee; 6 of measles and 4 of whooping-cough in Aberdeen; 2 of measles and 2 of whooping-cough in Paisley; and 3 of measles in Greenock.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 4th, 689 births and 473 deaths were registered in six of the principal Irish towns, as against 86 births and 482 deaths in the preceding period. The annual death-rate in these towns, which had been 29 1, 23 0, and 31.4 per 1,000 in the three preceding weeks, fell to 19 4 per 1,000 in the week under notice, this figure being 2 6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 20 7 in Londonderry and 23.9 in Belfast to 28 8 in Cork and 39 6 in Limerick. The zymotic death-rate in the same six Irish towns averaged 3.6 per 1,000, or 0.9 per 1,000 lower than the preceding period, the highest figure—13 6—being recorded in Waterford, while Limerick registered no deaths under this heading at all. The high rate in Waterford was due to measles.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM GENERAL HOSPITAL.—(1) Two House-Surgeons. (2) Resident Pathologist. Salary at the rate of £50 per annum each.

BIRMINGHAM: QUEEN'S HOSPITAL.—Third Surgeon to Out-patients. Honorarium, £50 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence, £70 per annum.

BRIDGEND: GLAMORGAN COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary to commence, £150 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Honorary Dental Surgeon.

CAPE TOWN: SOMERSET HOSPITAL.—(1) Junior House-Physician. (2) Two Junior House-surgeons. Salary, £200 per annum each.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160, increasing to £180 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary, £70 per annum.

EDMONTON URBAN DISTRICT COUNCIL.—School Medical Officer. Salary, £250 per annum, rising to £300.

EGYPTIAN GOVERNMENT.—Resident Surgical Officer at the Kasr-el-Ainy Hospital. Salary, £250 per annum.

HOPITAL FRANÇAIS, Shaftesbury Avenue, W.C.—(1) Second Médecin Résident. Salaire, £50 per annum. (2) Troisieme Médecin.

HORNSEY, BOROUGH OF.—Assistant Medical Officer of Health. Salary, £225 per annum.

HOSPITAL FOR WOMEN, Soho.—Clinical Assistants.

ISLE OF WIGHT COUNTY ASYLUM, near Newport.—Assistant Medical Officer. Salary, commencing £150 per annum.

LAMBETH PARISH INFIRMARY, Brook Street, S.E.—Fourth Assistant Medical Officer. Salary at the rate of £100 per annum.

LANARK COUNTY.—Resident Physician for the Middle Ward Isolation Hospital. Salary, £160 per annum.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Superintendent. Salary, £500, rising to £650 per annum.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary at the rate of £50 per annum.

LONDON THROAT HOSPITAL, Great Portland Street, W.—House-Surgeon, non-resident. Honorarium at the rate of £50 per annum.

LOWESTOFT HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—Assistant Medical Officer. Salary, £100 per annum.

MANCHESTER UNIVERSITY.—Senior Demonstrator in Physiology. Stipend, £150, rising to £200 per annum.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon, to act as junior and senior for six months each. Salary at the rate of £80 and £120 per annum respectively.

MIDDLESEX HOSPITAL, W.—Second Assistant to the Director of the Cancer Research Laboratories. Salary commencing at £200 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Resident Medical Officer. Salary, £80 per annum.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Physician. Salary, £100 per annum.

NORTHAMPTON COUNTY COUNCIL EDUCATION COMMITTEE.—School Medical Officer. Salary, £400 per annum.

NOTTINGHAM GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Salary, £60 per annum each.

PORTSMOUTH BOROUGH.—Medical Officer for the Inspection of School Children. Salary, £400, rising to £500 per annum.

PRESTON COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon, male. Salary, £100 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SINGAPORE MUNICIPALITY.—Assistant Municipal Health Officer. Salary, $4,200, rising to $4,800 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Honorary Assistant Physician.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £150, rising to £200 per annum.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

TYNEMOUTH INFIRMARY.—Two House-Surgeons. Salary, £50 per annum each.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck Street, W.—Honorary Registrar and Pathologist.

WESTMORLAND COUNTY AND KENDAL BOROUGH EDUCATION COMMITTEES.—Medical Officer. Salary, £280 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at Bellshill, co. Lanark.

APPOINTMENTS.

ADAMS, D. V. Maxwell, M.B., Ch.B.Edin., Joint Surgeon, Lockhart Hospital, Lanark.

BALY, A. L., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Lambeth Parish Infirmary.

BARRIS, J. D., B.A Cantab., M.R.C.S., L.R.C.P.Eng., Resident Medical Officer to the City of London Lying-in Hospital, City Road, E.C.

DOMINY, G. H., M.R.C.S., L.R.C.P., District Medical Officer of the Blandford Union.

DOWNES, Harold, M.B Edin., L.R.C.P.E., Medical Superintendent to Benenden Sanatorium.

GARMAN, J. M., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Elham Union.

HEBBLETHWAITE, Alfred G., M.R.C.S Eng., L.R.C.P.Lond., Honorary Physician to the Keighley Victoria Hospital.

MARGAREY, Rupert E., M.B., B.S.Adel., Clinical Assistant to the Chelsea Hospital for Women.

MALINS, Herbert, B.A Oxon., M.B., C.M., F.R.C.S.Edin., Surgeon, Warwick Cottage Hospital and Dispensary.

MILL, G. Robertson, M.D.Edin., Honorary Anaesthetist to the Liverpool Dental Hospital.

MOORHEAD, R. L., M.B., District Medical Officer of the Godstone Union.

NASH, George, L.R.C.P.S.E., L.F.P.S.G., House-Physician, Salford Royal Hospital.

NEIL, Reginald C., M.R.C.S., L.R.C.P., District Medical Officer and Public Vaccinator, Brentford.

NORMAN, J. C. A., M.R.C.S., L.R.C.P., District Medical Officer of the Poole Union.

O'KEEFE, Martin, L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Ovoca District, co. Wicklow.

ORTON, G. Harrison, M.A., M.D., B.C Cantab., Medical Officer in charge of the X-ray Department at St. Mary's Hospital, Paddington, W.

PATTERSON, Joseph Hume, L.R.C.P.and S.Edin., Bacteriologist to the Lanark County Council.

PEACOCK, W. E., M.D., B.Hy., B.S Durh., D.P.H., Medical Inspector of Schools under the Felling Education Committee.

PEARCE, J. L., M.B., B.S.Edin., District Medical Officer, Saffron Walden Union.

PIRIE, William Rattray, M.B., C.M., M.A., Assistant Physician in the Aberdeen Royal Infirmary, vice John Gordon, M.D., resigned.

POTTS, M. B., M.B., B.S.Vict., Medical Officer of Health, Greetland Urban District.

RANDLE, A., M.R.C.S., L.R.C.P., Assistant Medical Officer, Lambeth Parish Infirmary.

RHYS, Owen L., Medical Officer in Charge of Electrical Department, Cardiff Infirmary.

RIDOUT, C. A. Scott, M.S.Lond., F.R.C.S., Assistant Surgeon, Royal Portsmouth Hospital.

RUNDLE, Henry, F.R.C.S.Eng., Consulting Surgeon to the Royal Portsmouth Hospital.

SAVAGE, James C., M., M.D.Aberd., District Medical Officer and Public Vaccinator, Sculcoates (Hull) Board of Guardians, vice F. W. Fullerton, M.D.Durh., resigned.

SHAND, John G. B., M.B., Ch.B., Resident Physician to the Royal Victoria Hospital for Consumption, Craigleith, Edinburgh.

SMITH, G. F. Darwall, F.R.C.S., etc., Physician to Out-patients at the British Lying-in Hospital, Endell Street, W.C.

STEPHENS, H. M., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Epsom Union.

THOMAS, F. L., M.B.Lond., District and Workhouse Medical Officer of the Barnstaple Union.

THOMSON, Alexander, M.D.Aber., Medical Officer to the Gosport and Alverstoke Education Committee.

TROUP, Arthur G., M.B., Ch.B., D.P.H.Aberd., Assistant Pathologist at the Sussex County Hospital, Brighton.

WHITEHEAD, A. E., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Bridlington District, co. York

WICKHAM, G. H., M.B., B.C.Camb., District Medical Officer of the Hartley Witney Union.

EDINBURGH ROYAL INFIRMARY. The following appointments have been made:

Resident House-Physician: R. H. Jamieson, M.B., Ch.B., to Professor Sir T. R. Fraser.

Resident House-Surgeon: J. M. Christie, M.B., Ch.B., to Mr. Brewis.

Non-resident House-Surgeon: A. Macdonald, M.B., to Dr. W. G. Sym.

Clinical Assistants: T. A. Johnston, M.B., Ch.B., to Professor Sir T. R. Fraser; J. H. D. Webster, M.D., etc., to Dr Graham Brown (medical waiting room); D. H. Croom, M.D., etc., to Dr. Boyd (medical waiting room); J. Macdonald, L.R.C.P. and S.Edin., to Mr. Caird; J. Stoddart, M.B., C.M., to Dr. W. G. Sym.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BEATTON.—On March 31st, at The Cliffe, Bradford, the wife of Dr. Gilbert T. Beatton, of a son.

BURNET.—At Beechknowe, Crieff, N.B., on March 30th, the wife of Morton Burnet, M.D. Edin., of a son.

WOOLLATT.—On February 28th, at Shiraz, Persia, to Dr. and Mrs. Percy Woollatt, a son.

MARRIAGES.

JOHNSTON–STEVENS.—On April 7th, at St. Andrew's, Wells Street, by the Rev. J. R. Parkyn, Gerald Herbert, son of the late Thos. Johnston, of Beech Lawn, Belper, to Lucie, daughter of Henry Stevens, of Great Milton, Oxford.

HAMMAND FRASER—MCMULLEN.—On the 2nd inst., at Brixton Independent Church, by the Rev. Bernard Snell, M.A., B.Sc., David Hammand Fraser, M.A., M.B., B.C., eldest son of Roderick Fraser, of Herne Hill, to Annie Isabel, second daughter of William McMullen, L.R.C.S.I., etc., of Brixton Road, S.W.

PATON—WARREN.—On February 8th, at Adelaide, New South Wales, J. Scott Paton, M.R.C.S., L.R.C.P., of Dudley, Australia, son of the late Rev. John G. Paton, D.D., to Mabel K. Warren, second daughter of Dr. and Mrs. Warren, Gillingham, Kent.

VAN DEN BERGH—MACDONALD BROWN.—At Hampstead, on the 7th inst., Enid, only daughter of J. Macdonald Brown, J.P., M.D., F.R.C.S., of 2, Frognal, Hampstead, to Henry Edward, third son of J. Van den Bergh, Esq., of 26, Lyndhurst Road, Hampstead.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical meeting. Cases, etc., will be exhibited by Dr. Parkes Weber, Dr. O. R. Williamson, Dr. F. S. Palmer, Dr. W. H. Willcox, Dr. StClair Thomson, Dr. C. W. Chapman, Dr. Symes-Thompson, and others.

WEDNESDAY.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30 p.m.—(1) Adjourned discussion on Dr. Prout's paper on the Rôle of Filaria in the Production of Disease. (2) Papers:—Dr. Prout: An Unusual Cause of Dysenteric Diarrhœa in the Tropics. Dr. T. P. Macdonald (North Queensland): Tropical Lands and White Races.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E.—Tuesday, 4 p.m., Tumours, Malignant.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following Clinical Demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient, Throat, Nose, and Ear, *X* Ray; 4.30 p.m., Lecture Demonstration: Treatment of Tuberculous Conditions by *X* Rays. Tuesday, 10.30 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient, Gynæcological; Wednesday, 2.30 p.m., Medical Out-patient, Skin, Eye; 3 p.m., Demonstration on Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.).

BOOKS, ETC., RECEIVED.

A Textbook of Treatment (alphabetically arranged). By W. Calwell, M.A., M.D., J. Campbell, M.A., M.D., F.R.C.S.Eng., R. Campbell, B.A., M.B., F.R.C.S.Eng. Edited by R. J. Ferguson, M.D., F.R.C.S.Eng. Part I., Obstetrics and Gynæcology. By J. Campbell, M.A., M.D., etc. London: S. Appleton. 1908. 10s. Complete work (3 parts), 30s.

London: The Suburban and Provincial Development Association (Free on application to Town Clerk):

Booklets published for District Councils of Beckenham, Croydon, Finchley and Ealing.

Die Lehre Darwins in ihren letzten Folgen. Von M. Steiner. Berlin: E. Hofmann and Co. 1908. M.3.

Philadelphia and London: W. B. Saunders and Co. 1907:

A Reference Handbook of Obstetric Nursing. By W. R. Wilson, M.D. 6s.

Hospital Training-School Methods and the Head Nurse. By C. A. Aikens. 6s. 6d.

Diseases of Children for Nurses. By R. S. McCombs, M.D. 10s.

A Textbook of Diseases of the Nose and Throat. By D. B. Kyle, A.M., M.D. Fourth edition. 18s.

Principles and Practice of Modern Otology. By J. F. Barnhill, M.D., and E. de W. Wales, B.S., M.D. 24s.

A Textbook of the Practice of Medicine. By J. M. Anders, M.D., Ph.D., LL.D. Eighth edition. 24s.

Treatise on Diseases of the Skin for the Use of Advanced Students and Practitioners. By H. W. Stelwagon, M.D., Ph.D. Fifth edition. 25s.

Rummage. By H. C. P. Pattin. London: S. Appleton. 1908. 2s.

Royal Society of Arts. Cantor Lectures on the Theory of the Microscope. By C. Beck, F.R.M.S. London: R. and J. Beck, Limited. 1908. 1s.

Medizinal-Berichte über die Deutschen Schutzgebiete für das Jahr 1905-6. Herausgegeben vom Reichskolonialamt. Berlin: E. S. Mittler und Sohn. 1907. M.7.50.

The Oxford Medical Publications. A System of Medicine. Edited by W. Osler, M.D., F.R.S., and T. McCrae, M.D., F.R.C.P., Vol. III. Infectious Diseases (continued): Diseases of the Respiratory Tract. London: H. Frowde, and Hodder and Stoughton. 1908. 30s. (Subscribers, 24s.).

Hypnotic Therapeutics in Theory and Practice. By J. D. Quackenbos, A.M., M.D. London and New York: Harper and Bros. 1908. 7s. 6d.

The Truth and Error of Christian Science. By M. C. Sturge. Second edition. London: J. Murray. 1908. 2s. 6d.

Elementi di Röntgenologia Clinica (Tecnica-Diagnostica-Terapia). Per el Dott. I. Valobra. Torino: S. Lattes and Co. 1908. L.10.

Veröffentlichungen aus dem Gebeite des Militär-Sanitätswesens. Herausgegeben von der Medizinal Abteilung des Königlich Preussischen Kreigsminsiteriums. Heft 37. Ueber die Anwendung von Hiel and Schutzserls im Heere. Berlin: A. Hirschwald. 1908. M.1.20.

Vorträge und Aufsätze über Entwickelungsmechanik der Organismen. Herau-gegeben von Prof. W. Roux. Heft II. Über den chemischen charakter des befruchtungsvorgangs und seine Bedeutung für die Theorie der Lebenserschimungen. Von J. Loeb. Leipzig: W. Engelmann. 1908. M.0.80.

Medical Officers of Schools Association. The Care of the Teeth in Elementary Schools. With special reference to What is being done in Germany. By C. E. Wallis, M.R.C.S., L.R.C.P., L.D.S. London: J. and A. Churchill. 1908. 1s.

School Hygiene. By R. A. Lyster, M.B., Ch.B., B.Sc. London: W. B. Clive (University Tutorial Press, Limited). 1908. 3s. 6d.

London: S. Appleton. 1908:

The Sexual Instinct, its Use and Dangers as affecting Heredity and Morals. By J. F. Scott, B.A., M.D., C.M. Second edition. 7s. 6d.

Gonorrhœa, its Diagnosis and Treatment. By F. Baumann, Ph.D., M.D. 6s.

Leçons sur les Troubles Fonctionnels du Coeur (insuffisance cardiaque-asystolie). Par P. Merklen. Publié par J. Heitz. Paris: Masson et Cie. 1908. Fr.10.

The Experimental Prophylaxis of Syphilis. By Dr. P. Maisonneuve. Translated by F. L. de Verteuil. Bristol: J. Wright and Co. 1908. 4s.

Transactions of the Glasgow Obstetrical and Gynæcological Society. Vol. v. Sessions 1904-5, 1905-6. 1908. Glasgow: A. Macdougall.

Kemp and Co.'s Prescribers' Pharmacopœia. Sixth edition. Compiled and edited by A. Pell, F.C.S. Bombay: Kemp and Co., Limited. 1908.

The Practitioner's Handbook. A Short Practice of Aural Surgery. By J. A. Jones, M.B., Ch.B., F.R.C.S. London: J. Lane. 1908. 6s.

The Bacteriology of Diphtheria. Edited by G. H. F. Nuttall, M.D., Ph.D., Sc.D., F.R.S., and G. S. Graham-Smith, M.A., M.D. Cambridge: University Press. 1908. 25s.

Functional Nerve Diseases. By A. T. Schofield, M.D. London: Methuen and Co. 1908. 7s. 6d.

The History of the Study of Medicine in the British Isles. The Fitz-Patrick Lectures for 1905-6 before the Royal College of Physicians of London. By N. Moore, M.D. Oxford: The Clarendon Press. 1908. 10s. 6d.

Marlborough's Self-Taught Series. No. 9. Dutch. By Captain C. J. Thimm. Second Edition, revised by C. Thieme. London: E. Marlborough and Co. 1907. 2s. 6d.

Exposé des Titres et Travaux Scientifiques du Dr. P. Marie. Paris: Masson and Cie.

Oxford Medical Publications. Rotunda Midwifery for Nurses and Midwives. By G. T. Wrench, M.D. London: H. Frowde, and Hodder and Stoughton. 1908. 6s.

Manuali Hoepli. Manuale di Medicina Legale Militaire. Par Dr. A. Trombetta. Milano: U. Hoepli. 1908. L.4.

London: Rebman Limited, 1908:—

The Irony of Marriage. By B. Tozer. 1s.

Morag the Seal. By J. W. Brodie-Innes. 6s.

Oxford Medical Publications. Diets in Tuberculosis, Principles and Economics. By N. D. Bardswell, M.D., M.R.C.P., F.R.S.Edin., and J. E. Chapman, M.R.C.S., L.R.C.P. London: H. Frowde, and Hodder and Stoughton. 1908. 6s.

Heredity. By J. A. Thomson, M.A. (The Progressive Science Series). London: J. Murray. 1908. 9s.

Berlin: S. Karger. 1908:

Sprachstörungen und Sprachheilkunde. Beiträge zur Kenntnis der Physiologie, Pathologie und Therapie der Sprache. Von Dr. med. H. Gutzmann. M.5.

Vorlesungen über Diätbehandlung innerer Krankheiten. Von Professor Dr. H. Strauss. M.7.80.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
10 FRIDAY ...	LONDON: Central Ethical Committee, 1.30 p.m. KENSINGTON DIVISION, *Metropolitan Counties Branch*, Hammersmith Infirmary, Ducane Road, Shepherd's Bush, 5 p.m. TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Rooms of the Hornsey Conservative Association, (opposite Finsbury Park Station), 9.15 p.m.
11 SATURDAY ...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	BOSTON AND SPALDING DIVISION, *Midland Branch*, White Hart Hotel, Boston, 2.30 p.m. WALTHAMSTOW DIVISION, *Metropolitan Counties Branch*, Woodford Hospital, 4 p.m.
15 WEDNESDAY	SOUTH-WESTERN BRANCH, Museum, Babbacombe Road, Torquay, 3.30 p.m. WEST DORSET DIVISION, *Dorset and West Hants Branch*, County Hospital, Dorchester, 3 p.m.
16 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Brooke House, Upper Clapton, 8.30 p.m. GLOUCESTERSHIRE BRANCH, General Hospital, Cheltenham, 7 p.m.: Supper, afterwards, Cosy Corner, Promenade. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Rooms, Ellesmere Street, 8.30 p.m. PRESTON DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, White Horse Restaurant, Friargate, 8.30 p.m.
17 FRIDAY ...	*Good Friday.*
18 SATURDAY ...	[illegible]
19 Sunday ...	
20 MONDAY ...	*Bank Holiday.*
21 TUESDAY ...	NORTH WALES BRANCH, Denbigh.
22 WEDNESDAY	LONDON: Journal and Finance Committee, 2.30 p.m.
23 THURSDAY...	
24 FRIDAY ...	
25 SATURDAY ...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	
29 WEDNESDAY	CENTRAL COUNCIL, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. BATH AND BRISTOL BRANCH, Bath.
30 THURSDAY...	STAFFORDSHIRE BRANCH, General Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m.: Council Meeting, immediately before General Meeting; Dinner, 7 p.m.
MAY.	
1 FRIDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, Bethnal Green Infirmary, 4 p.m.
2 SATURDAY ...	ULSTER BRANCH, Londonderry.
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also Meeting of Branch Council, Victoria Hotel, Kilkenny, 5.30 p.m.; Dinner, 6.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 18TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPRESENTATIVE MEETING AT SHEFFIELD.

FRIDAY, JULY 24TH, OR SATURDAY, JULY 25TH, AND FOLLOWING DAYS.

NOTICE OF MOTION.

THE following Notice of Motion has been received for discussion by the Annual Representative Meeting of the Association, to be held at Sheffield, July 24th (or 25th), 1908, and following days.

(Notices previously received were published in the SUPPLEMENT *of March 28th, pages 129 and 130.)*

NOTICES AFFECTING THE REGULATIONS OF THE ASSOCIATION.

PROPOSED AMENDMENT OF BY-LAWS.

By-laws 23 to 29 and 31 and 32.

Composition and Mode of Election of the Council.

By the GATESHEAD DIVISION (North of England Branch):

That having regard to the repeated decisions of the Representative Meeting now confirmed by a large majority upon the Referendum, that the mode of election of the Council should be altered so as to provide for the reduction of the total membership of, and some representation of the Representative Meeting on, the Council, this Division proposes that the present By-laws of the Association as to the composition and mode of election to the Council be amended so as to conform with those on the same subject appended to the Draft Charter, as settled by resolutions of the Representative Meeting in May, 1907, and since confirmed on Referendum.

By direction of the Chairman of Representative Meetings,

J. SMITH WHITAKER, *Medical Secretary.*

April 14th, 1908.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

METROPOLITAN COUNTIES BRANCH:

ST. PANCRAS AND ISLINGTON DIVISION.

AN ordinary meeting was held at University College Hospital on Tuesday, April 7th. Sir VICTOR HORSLEY, F.R.S., read a paper on Caries of the spine and allied conditions, illustrating his remarks with museum preparations and lantern pictures. There was a good muster of members and visitors, and the lecturer on the motion of the CHAIRMAN, Dr. W. Wynn Westcott, J.P., was most cordially thanked for his original and interesting address.

Workmen's Compensation Act, Etc.—The action of the Executive Committee with reference to communications from the Central Office concerning the Workmen's Compensation Acts, the Medical Inspection of Schools, the United Kingdom Hospitals Conference, Life Assurance, and the Prevention of Corruption Act was approved and confirmed.

The Term "Hospital."—The Representative was instructed concerning the definition of the term "hospital."

Nomination of President-elect and Representative on Central Council.—Dr. W. Wynn Westcott was nominated as President-elect of the Metropolitan Branch, and Dr. Walter Smith as a Representative of the Branch on the Council of the Association.

Death from Tetanus in Infants.—Dr. Wynn Westcott drew attention to the comparative frequency of death from tetanus in infants. In every case that had come under his notice he found that the child had been dusted with fuller's earth; he thought that the association of fuller's earth and tetanus in these cases suggested cause and effect. The price at which fuller's earth was sold suggested that it had not undergone any purification before being placed on the market. He thought it would tend to prevent these cases if mothers and nurses used as dusting powder some safer substances, such as starch and boric acid.

Annual Meeting.—It was decided that the annual meeting should be held on Tuesday, June 2nd, at the Midland Hotel, King's Cross.

Tottenham Division.

A special general meeting of the Division was held at Dr. Fuller's house, Crouch End, on Friday, March 27th, Dr. A. F. Shoyer presiding.

Report of Hospital Committee.

Dr. Fuller, Chairman of the Hospital Committee, read the following report on the Hornsey Cottage Hospital:

I have the honour to present to you, on behalf of the Subcommittee, the result of the negotiations with the Hornsey Cottage Hospital authorities, which have been carried on by your Subcommittee during the past three years.

This hospital, as most of you know, was founded to commemorate the coronation of His Majesty King Edward VII.

1903. It was at first proposed that the Committee should be formed from the Corporation of the town. This being strenuously opposed, a Committee was formed from the subscribers, which drew up rules, taking as its guide the rules of various cottage hospitals in and around London, but without consulting the medical profession.

1904. Many practitioners in Hornsey did not consider a hospital to be necessary, and this feeling became more acute when the rules were published, and it was seen that many objectionable features were included in them.

1905. In 1905 a bazaar in aid of the hospital was held, the circulars of which stated that "this movement has the cordial co-operation of the medical men of Hornsey." At a meeting of the Medical Union held that week it was resolved to contradict this, and I was instructed to write to the local papers and do so. A somewhat bitter newspaper controversy ensued, culminating in a meeting of the practitioners of Hornsey, which was very largely attended. A circular letter requesting a reply was sent to all the medical men and women in the district, asking their opinion on the following points, which had been passed unanimously by the meeting.

The purport of the circular was that the meeting disapproved of:

1. An out patient department.
2. A limited staff.
3. Election of staff by subscribers.
4. Admission by subscribers' letters, without medical recommendation.
5. Of the hospital accepting all patients, it being thought desirable to exclude those in receipt of parish relief.
6. Of a hospital being established which might be allowed to grow into an ordinary general hospital.
7. Of appeal being made to the existing hospital charity funds for support.

This circular was issued to 110 practitioners; 99 answered agreeing with the meeting, and 1 disagreed.

1906. The Tottenham Division of the Association were asked to come to the help of the profession in Hornsey. Two meetings were held, a subcommittee being formed to deal with the matter; the members of the subcommittee were Drs. Brackenbury, Bryce, Fuller, Harper, B. Harris, Dr. Ford Anderson kindly assisting. Letters were written asking for an interview with the Hospital Committee, and, after several delays, this was granted. The reply of the Hospital Committee was practically a definite refusal to concede anything.

1907. The concluding paragraph of the letter, dated June 25th, 1907, is as follows:

The Committee passed the following resolution: "That the Committee of Contributors to the Hornsey Cottage Hospital, having duly considered the resolutions numbered 1 to 7 submitted by the deputation of medical men at the last meeting, regret that they cannot accept their proposals in full, believing that the duty of the Committee to the public would be unduly curtailed thereby, and that a difficulty would arise in obtaining that efficient help necessary to the promotion and future maintenance of the proposed institution. That the Committee quite recognize that the interests of the medical men of the district should be conserved, and would ask them to join heartily with the Committee and take their part in the government of the hospital in the interests of humanity."

July, 1907. A very largely attended meeting was held to consider this reply. It was unanimously resolved that the letter should be answered as follows:

Dear Sir,—A meeting of the medical profession was held in Crouch End to consider the reply of the Hospital Committee to the deputation appointed to wait on them.

The meeting unanimously resolved that the answer of the Committee was quite unsatisfactory, and they instructed me to write to you to this effect; at the same time I am to ask if your Committee will consent to appoint three of their number to meet three appointed by the profession, which joint committee should draw up draft rules to be submitted to both bodies, regard being had to the fact that the medical profession refuse to move from the position they have taken up in the matter of "out-patients." In the matter of no limited staff and in the matter of medical men and subscribers' letters, I am to say that in the event of the refusal of the Committee to agree to this the medical profession will feel compelled to make public their view of the situation, in accordance with the enclosed printed statement, to which I may mention ninety-one signatures have been attached during the last five days, and that only one medical man has refused to co-operate with the rest of the profession.

I am further to say that the medical profession of Hornsey will be obliged if you can give them an answer by the morning of the 8th of August, 1907.—I am, youre faithfully,

J. R. Fuller,
6, Crescent Road,
Crouch End.

July 31st, 1907.

F. D. Askey, Esq.,
Hon. Sec., Hornsey Cottage Hospital.

The ultimatum mentioned in this letter asked the public not to subscribe until the medical profession was satisfied that the hospital was going to be conducted as a hospital should be, and containing the signatures of 141 medical men and women practising in Hornsey, the fact being also published, that only one medical man had definitely refused to co-operate. The Hospital Committee agreed to meet a subcommittee again, but refused the scheme of a joint Committee to revise the rules.

In October, 1907, the Tottenham Division relieved the Subcommittee, and appointed another consisting of Drs. Shoyer (Chairman of the Division), Brackenbury, B. Harris, and Fuller. Dr. Shoyer was objected to as not residing in Hornsey; the Committee therefore consisted of Drs. Brackenbury, B. Harris, and myself. This Committee immediately recommenced the negotiations; after much correspondence the hospital authorities agreed to appoint a subcommittee of their own to consider the matter with your subcommittee. Your Subcommittee revised certain rules, so that they should include the demands of the medical profession. They presented these revised rules to the Subcommittee of the hospital. After a long discussion it was agreed that they should be put before the Committee of the hospital together with the report of the Hospital Subcommittee, which was done at the meeting held in March, when the following points were finally agreed upon (1908):

Not Paupers.—I. That the hospital is intended for the treatment of persons . . . not being in receipt of parish relief, . . . etc.

Paying Patients.—The council shall have the power of receiving patients for whose maintenance special payments shall be made.

Doctors may Charge Fees.—It being understood that the medical practitioner in attendance may charge fees.

No Out patients.—There shall be no out patient department, except that provision may be made for the treatment of emergency cases which are not detained as in-patients.

II. That each medical practitioner who has gratuitously attended patients at the hospital shall be entitled to a vote at each meeting of subscribers during the current year.

Five out of Fifteen Members of House Committee.—XXII. The House Committee to consist of the President, the Treasurer, the Secretary, *five members of the Medical Committee*, and seven others.

Admission of Patients.—XXVII. Any medical practitioner may recommend cases, provided his or her signature is countersigned by a person entitled to do so within twenty-four hours of the patient's admission; no patient to be admitted except on the written recommendation of a medical practitioner.

No Limited Staff.—The medical staff shall consist of consulting physicians and surgeons, to be appointed by the Council, and of other medical officers willing to give their services gratuitously. Each medical officer shall be a legally qualified and registered medical practitioner resident or practising in the Borough of Hornsey.

Medical Committee to deal with the Treatment of Patients.—There shall be a Medical Committee, consisting of not less than ten and not more than fifteen medical practitioners, elected annually in January from among their own number by the registered practitioners of Hornsey, subject to approval by the Council. The Medical Committee shall formulate rules for regulating their own department. They shall prepare a rota of practitioners who will be prepared to give their services in case of accident and sudden emergency, and to take charge of patients admitted to the hospital who have not previously been under medical care.

Appointment of Matron and Nurses.—XXIX. The matron and nurses shall be appointed by the House Committee. . . . acting after consultation with the Medical Committee

Two-thirds Majority to Alter Rules.—XXXVI. No rule shall be altered and no new rule made . . . except by a majority of two-thirds of those present, and voting, at general meetings.

Let me run over the main points once more, so that you may fully appreciate the successful issue of your negotiations.

Shortly, then, the hospital is for those above the Poor Law.

It may take patients who will pay medical fees.

No out-patients.

Five medical members of House Committee out of a total of fifteen.

No limited staff.

A Medical Committee to deal with the whole question of patients and their treatment.

The appointment of matron and nurses to be on the recommendation of the profession.

And finally, none of these rules can be altered, save by a two-thirds majority of those present and voting.

Ladies and Gentlemen, it gives us—your Committee—the very greatest gratification to be able to announce to you this successful result of more than three years' controversy.

Practically the whole of the demands of the medical profession have been conceded; and I am glad to admit that the Hospital Committee, when they finally met us, quite perceived that the institution would be better conducted under these revised rules than under the former ones.

The one point on which the Committee would not give way altogether was the question of the countersignature of subscriber, but we obtained the concession that the signature might be obtained within twenty-four hours, so, once the patient is in hospital, the doctor need trouble no more in the matter.

It now only remains for me to say that you have a hospital to be conducted upon the identical lines laid down by the British Medical Association as ideal.

I believe it to be the first one under these ideal rules, and it rests with you, and all of us, to make the Hornsey Cottage Hospital a model of all a cottage hospital ought to be; and we hope the successful result of these negotiations may be an encouragement and an example to those of our profession who are engaged in similar disputes.

We feel that your thanks are especially due to Dr. Brackenbury, who for some time alone opposed the scheme, and to Dr. Ford Anderson, Chairman of the Medical Charities Committee of the Metropolitan Counties Branch, for kindly assisting us in the preliminary stages of the controversy, as well as to Drs. Bryce and Harper, original members of the Subcommittee.

It was unanimously resolved:

That the report of the Hospital Committee be received, and that the Division approves of all that the Committee have done with regard to the Hornsey Cottage Hospital. That the Secretary procure extra copies of the Supplement containing this report, to be sent to non-members practising in Hornsey.

Votes of Thanks.—A hearty vote of thanks was passed to Drs. Fuller, Brackenbury, Harris, Bryce, and Harper for the labour undertaken and the tact and patience displayed during the long negotiations with the Cottage Hospital.

Hampstead Hospital.—A resolution of sympathy was passed with the Hampstead Division in their struggle with the hospital.

Lynn Thomas and Skyrme Fund.—A collection was made on behalf of the Lynn Thomas and Skyrme Fund.

NORTH OF ENGLAND BRANCH:

North Northumberland Division.

A meeting was held at Belford on March 19th. Dr. Coldstream having been voted into the chair, it was mentioned that the prevailing influenza epidemic was responsible for the small attendance of members.

Apologies for Non-attendance.—Apologies for absence were received from Drs. Main, Dey, McKay, Macaskie, and Purves.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Inspection of School Children.—Dr. Robson proposed and Dr. Macdonald seconded the following resolution:

That it is advisable to appoint whole-time officers who are not under any circumstances to undertake treatment.

Carried unanimously.

The Term "Hospital."—The definition of the term "hospital" as submitted by the Central Ethical Committee was approved *nem. con.*

Examination for Life Insurance.—The report from the Medico-Political Committee on examinations for life insurance was considered, and the questions answered as follows:

1. Unable to answer owing to small attendance of members.
2. Yes.
3. Both required.
4. Yes. North British and Mercantile; Refuge; both forms are not considered "short."
5. Yes in some cases.
6. Twenty-one shillings.
7. No.
8. To first part, Yes. To second part, No. 5s. to 10s. 6d., according to amount insured.
9. Five shillings for sums up to £50, 10s. 6d. for £100 with a "short" report.

Prevention of Corruption Act.—The conclusions of the Central Ethical Committee on the Prevention of Corruption Act were discussed and generally approved.

Attendance on Nurses.—A communication from a member regarding attendance upon nurses when not engaged on duty was read, and the Secretary was requested to forward him a copy of the minute on this subject dated November 14th, 1905.

Grouping of Divisions.—It was agreed that no change in the existing grouping of Divisions for representation in Representative Meetings, 1908-9, was necessary.

Lynn Thomas and Skyrme Fund.—A letter from the Secretary of the Lynn Thomas and Skyrme Fund was laid before the meeting.

SOUTH-EASTERN BRANCH:

Canterbury and Faversham Division.

A meeting of this Division was held at the Town Hall, Sittingbourne, on Wednesday, March 25th. Dr. Robert Maxwell Boodle (Sittingbourne) presided.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Next Meeting.—It was decided to hold an extraordinary meeting on May 7th at Faversham Cottage Hospital to discuss various matters referred to the Division, including the medical inspection of school children, Dr. S. R. Alexander to be invited to preside.

Lecture.—Wm. McAdam Eccles, M.S., F.R.C.S., gave a most instructive and lucid address upon the treatment of inguinal hernia by trusses. The lecture was accompanied by lantern-slide demonstrations. The subject was most thoroughly dealt with, from the description of a dissection of the parts to the latest mechanical adjustments of the most efficient types of truss. A most cordial vote of thanks was accorded the lecturer on the proposition of Dr. Whitehead Reid (Canterbury), supported by Dr. Gosse (Sittingbourne).

Luncheon.—Members were entertained at luncheon prior to the meeting and to tea after the meeting by the Chairman.

Vote of Thanks.—A hearty vote of thanks was passed to Dr. Boodle for presiding.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

March 26th, 1908.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Cambridge and Huntingdon Branch.—*Election of Member of the Central Council.*—Nominations of candidates for election to the Central Council should be forwarded to the Honorary Secretary not later than Monday, May 4th. The Branch is entitled to elect one member.—J. E. Apthorpe Webb, Honorary Secretary, Grafton House, Cambridge.

Dundee, Perth, and Stirling Branches.—*Election of Representative Member of the Central Council.*—Nominations, which must be made by a Division or by three members, must be sent in writing on or before May 9th to R. C. Buist, M.D., 166, Nethergate, Dundee. The present Representative is ineligible for re-election.—R. C. Buist, Dundee; W. A. Taylor, Perth; J. E. Moorhouse, Stirling.

East Anglian Branch.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. Nicholson, Honorary Secretary.

Gloucestershire Branch.—In accordance with By-law 22, the Secretary requests that members wishing to nominate any candidate for members of this Branch to the Central Council of the Association will send the candidate's name to him before May 2nd. Mr. C. F. Cuthbert, the present member, is eligible for re-election.—D. E. Finlay, Southville, Park Road, Gloucester, Honorary Secretary.

Lancashire and Cheshire Branch.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. Garstang, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

Lancashire and Cheshire Branch.—*Election of Members of the Council of the Association.*—Nominations of candidates for the representation of the members of this Branch on the Council of the Association must be sent to me in writing on or before May 1st next (vide Branch Law 5, and Association By-law 25).—F. Charles Larkin, Secretary of the Branch, 54, Rodney Street, Liverpool.

Lancashire and Cheshire Branch: Altrincham Division.—The annual meeting of this Division will be held at Altrincham on Thursday, June 4th, at 4.50 p.m.—T. W. H. Garstang, Honorary Secretary.

Metropolitan Counties Branch.—The annual dinner of the Branch Council will be held on Friday, May 22nd, at the Imperial Restaurant, Regent Street, W., at 7.30 p.m., Dr. Frederick Taylor, President, in the chair. Tickets, price 7s. 6d. (not including wines), may be obtained from the Honorary Secretary, Dr. Frederick J. McCann, 5, Curzon Street, Mayfair, W.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. McCann, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The annual general meeting of this Division will be held in Bethlem Royal Hospital, Lambeth Road, S.E., on Thursday, May 7th, 1908, at 4 p.m. The following names are proposed by the committee as office-bearers during the session 1908-9:—*Chairman*, W. A. Atkinson, M.D.; *Vice-Chairman*, A. M. Hickley, M.R.C.S.; *Representative at Representative Meeting*, R. Esler, M.D.; *Representatives on the Branch Council*, C. Sangster, M.R.C.S., and the Honorary Secretary (*ex-officio*); *Honorary Secretary*, Herbert French, M.D.; *Executive Committee*, R. Capes, M.R.C.S., E. A. Edelsten, M.B., J. W. J. Oswald, M.D., H. J. Spon, M.R.C.S., W. E. Sturges-Jones, M.R.C.S., Herbert Taylor, M.B. Any member of the Division who may wish to propose any other candidate or candidates for any of the above offices should send the name of such candidate or candidates, duly seconded, together with the written consent of each nominee, to the Honorary Secretary, 26, St. Thomas's Street, London Bridge, S.E., on or before Monday, May 4th, 1908. Dr. Hyslop will deliver an address upon the Borderland of Insanity, and several eminent alienists have been invited to take part in the discussion.—Herbert French, Honorary Secretary.

Metropolitan Counties Branch: Richmond Division.—The annual meeting and dinner of this Division will take place on Wednesday, May 13th, at the Sun Hotel, Kingston, at 6.30 p.m.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: Wandsworth Division.—A meeting of this Division will be held on Thursday, April 23rd, at 4 p.m., at the Bolingbroke Hospital, Wandsworth Common, S.W., when Mr. W. J. Hancock, F.R.C.S., will give a clinical demonstration on External Diseases of the Eye.—C. J. Martin, Honorary Secretary.

North Wales Branch.—The spring intermediate meeting of the Branch will be held at Denbigh on Tuesday, April 21st, 1908.—H. Jones Roberts, Honorary Secretary, Llywenarth, Penygroes, S.O.

South-Eastern of Ireland Branch.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on May 6th at 5.30 p.m. Agenda: (1) Minutes. (2) Letters of apology. (3) Correspondence. (4) Election of office-bearers. (5) Dinner at 6.30, towards which members of the local Division are expected to contribute 5s. each. (6) Any other business.—J. Quirke, Honorary Secretary, Piltown.

South Midland Branch.—Nominations for the office of Representative on the Central Council should be sent to me not later than May 18th, in accordance with By-law 25.—E. Harries Jones, Honorary Secretary.

Staffordshire Branch.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 30th. The President, Mr. J. T. Hartill, will take the chair at 5.25 p.m. Business: Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper by E. Deanesly, F.R.C.S.: Cases Illustrating the Use of the Cystoscope, the Ureteral Catheter, and the Urinary Separator. (5) Paper by Dr. Edge: Gynaecological Surgery. (6) Exhibition of pathological specimens, etc. Dinner at 7 p.m.; charge, 5s. Gentlemen intending to be present at the dinner are requested to intimate their intention not later than April 27th to the Honorary Secretary. A meeting of the Council will be held immediately before the general meeting to fix the date of the annual Council meeting.—G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

Ulster Branch.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 2nd. Members having communications to make to the meeting are requested to send particulars before April 21st to Cecil Shaw, M.D., Honorary Secretary, 29, University Square, Belfast.

INFANT LIFE PROTECTION.

The Select Committee of the House of Commons appointed on February 11th last to inquire into and report as to the desirability of extending the provision of the Infant Life Protection Act, 1897, to homes in which not more than one infant is kept in consideration of periodical payment, and of altering the limit of age prescribed by Section 2 of the Act, has presented its report.[1] The Committee—which consisted of Mr. Ellis (Chairman), Mr. Arthur Allan, Mr. Bright, Lord Robert Cecil, Mr. Gulland, Mr. John Taylor, and Mr. Power—held nine meetings, and heard nineteen witnesses from various parts of England, Scotland, and Ireland; the minutes of evidence are appended to the report. The report is as follows:

"A large amount of evidence has been laid before them, from witnesses speaking more or less in a representative capacity, showing the existence of many evils arising from the one-child homes being outside the provisions of the Infant Life Protection Act, 1897. Illustrative cases were given of carelessness, neglect, bad treatment, and cruelty.

"On the other hand, a number of witnesses appeared who objected to the extension of the Act, 1897. It was stated by them that this would arouse great repugnance on the part of those who provide the best kind of homes, to continue to take in children, and that the difficulty of finding such homes would therefore become very great. It was suggested that in consequence of the rise in standard of living following on official inspection, increased cost must necessarily follow extension of the Act to those one-child homes. It was also urged that the effect on the parents of these children would be harmful.

"In the opinion of your Committee, the body of facts laid before them by those who urge the extension of the Act was not displaced by any contrary evidence. Having regard to the serious amount of evil thus brought under their notice, they recommend that the provisions of the Infant Life Protection Act, 1897, *should* be extended to homes in which not more than one infant is kept in consideration of periodical payment.

"They are, however, of opinion that some of the objections urged by the witnesses against extension deserve serious consideration. Your Committee believe there are a large number of these one-child cases, where the infant is received from motives of a real affection for children in general, or for some child or parent in particular. Where this element of a home atmosphere exists, it is of vital importance that nothing should be done by Act of Parliament, or what would flow therefrom, to chill or impair it. On a careful review of this aspect of the case, your Committee are of opinion that some power should be given to the local authority to exempt, on such terms and conditions as it may think fit, any particular home in their district from inspection, or to make arrangements for any such inspection to be made by a properly constituted benevolent society if the local authority are satisfied that the interests of the child will be safeguarded.

"Your Committee also attach the very greatest importance to the kind of inspection under the Infant Life Protection Act, 1897, especially when extended as now recommended. So far as possible, it should be deprived of any rigid, or formal, official character, and certainly carried out by women possessing special qualifications for the work.

"Your Committee are in favour of raising the age to 7 years."

[1] Report from the Select Committee on Infant Life Protection, together with the proceedings of the Committee, Minutes of Evidence, and Appendix. (London: Eyre and Spottiswoode. 1908. 10½d.)

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held at Caxton House, Westminster, on April 9th, with Dr. F. H. Champneys in the chair.

Election of Chairman.

Dr. F. H. Champneys was re-elected Chairman, and received the thanks of the Board, expressed by Mr. E. Parker Young, who said that though the Board was unable to confer honours or awards, the members wished to recognize their appreciation of Dr. Champneys's work by re-electing him to the office of Chairman.

Payment to Medical Men called in by Midwives.

The action to be taken on the Board's resolution of March 19th as to the payment of fees of medical practitioners summoned to assist midwives in emergencies was considered, and the Board decided:

1. That the Privy Council be asked to furnish the Board with a return showing the Boards of Guardians which have adopted the suggestions of the Local Government Board as to the payment of medical fees contained in the circular of July 29th, 1907.
2. That it be referred to a meeting of the Standing Committee to frame a statement on the subject to be submitted to the Privy Council.
3. That when the return has been furnished the Privy Council be asked to receive a deputation of the Board (*a*) on the subject of the payment of the fees of medical practitioners summoned to assist midwives in emergencies, and (*b*) concerning the following propositions affirmed by the Board on March 19th: (1) That Midwives (who are "a necessity") will be unable to make a living in many localities without extraneous aid. (2) That such localities are very often exactly those in which their presence is most necessary from the poverty and (in some cases) the sparseness of the population. (3) That voluntary contributions cannot be relied upon to supply the whole of the necessary financial aid. (4) That for this purpose a Government grant is a necessity.

Hostility between the Medical Profession and Midwives.

Letters were considered from the Medical Secretary of the British Medical Association as to the statement in the Board's letter to the Privy Council of February 15th referring to the hostility existing in some districts between the medical profession and midwives.

The Board decided that the reply be to the effect that the statement referred to was founded on communications to the Board, on communications which have appeared in the British Medical Journal and Supplement, and in the medical press in general and in the nursing press, and on facts within the knowledge of members of the Board.

At the request of Mr. Parker Young the report of Miss F. M. Bernard-Boyce, Inspector and Superintendent of Midwives for the County of Norfolk, was read from the issue of the *Eastern Daily Press* dated April 2nd, in which it was stated that she understood "that the medical men in the county of Essex have refused to attend any emergency summons from a midwife. Also in the East End of London the medical men have issued their refusals, and from correspondence" she had received she fears that "the same movement is unfortunately spreading in Norfolk."

Midwives and Cancer of the Uterus.

A letter was considered from Dr. C. Nepean Longridge suggesting that midwives should possess some knowledge of the warning symptoms of cancer of the uterus. At the request of the Board the Chairman undertook to draft a leaflet on the subject for distribution to midwives, teachers, and local supervising authorities.

Inspection of Maternity Wards.

A letter was considered from the Clerk of the London County Council as to the proposed inspection of the maternity wards of the Poplar Workhouse. The Board decided that the Local Government Board be requested to reply to the questions comprised in the instructions to the Board's Inspector, so far as applicable.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Frederick J. Burns, M.D., Fleet Surgeon, to the *President*, additional, for three months' course at Meath Hospital, Dublin, April 1st; Albert X. Lavertine, Staff Surgeon, and Reginald Thompson, Surgeon, to the *Suffolk*, on recommissioning, April 28th; Henry C. Whiteside, Staff Surgeon, and Alexander B. Marsh, Surgeon, to the *Vivid*, April 28th; Arthur R. Schofield, M.B., Surgeon, to the *Ringdove*, on recommissioning, May 2nd; John Menary, M.D., Fleet Surgeon, and Hugh B. Geeman, Surgeon, to the *Vengeance*, on recommissioning, May 5th; Horace B. Marriott, Fleet Surgeon, to the *Doris*, April 28th; Richard W. Stanistreet, Staff Surgeon, to the *Pandora*, April 28th, and to the *Perseus*, on recommissioning, undated; Charles J. E. Cock, Staff Surgeon, to the *Pandora*, undated; Edgar F. Mortimer, Staff Surgeon, to the *Vindictive*, on recommissioning, April 28th.

Inspector-General JAMES PORTER, C.B., M.A., M.D., has been appointed Director-General of the Medical Department of the Royal Navy, in succession to Sir Herbert M. Ellis, K.C.B., K.H.P., F.R.C.S., I.L.D.[3] who has resigned. Director-General Porter's commissions are thus dated: Surgeon, September 29th, 1877: Staff Surgeon, September 29th, 1889; Fleet Surgeon, March 4th, 1898; Deputy-Inspector-General, October 21st, 1900; and Inspector-General, October 10th, 1906. The following is his war record as given in the *Royal Navy List*: Surgeon of *Orontes* during Egyptian war, 1882 (Egyptian medal, Khedive's bronze star); served on shore with the Royal Marine Battalion defending Suakin, from May, 1884, till the battalion was recalled in May, 1885, and was engaged in the operations in the Eastern Soudan, 1884-5; present at the actions at Hasheen, March 20th, 1885; attack on Sir J. McNeil's zareba, Tuluñk, March 22nd; the attack on the square of Guards and marines, March 24th, and at the taking and burning of Tamaai, April 3rd (Suakin, 1885, To Frek clasps); landed from the *Doris* during the Boer war, 1899-1900, and was in medical charge between October 20th, 1899, and October 12th, 1900, of the naval forces employed—(1) In defence of Stormberg: (2) in Lord Methuen's advance from Belmont to Magersfontein; (3) in Lord Roberts's advance from Enslin to Belfast via Klip Drift, Paardeberg, Pretoria, etc.; (4) with General French's column from Belfast to Barberton via Carolina: medal with eight clasps inscribed "Belmont, Modder River, Relief of Kimberley, Paardeberg, Driefontein, Johannesburg, Diamond Hill, Belfast;" present at Graspan (with the assault), Magersfontein, Poplar Grove, Capture of Pretoria; twice mentioned in dispatches; promoted to Deputy-Inspector of Hospitals, November, 1900, for above services; C.B., June 26th, 1902.

Inspector-General T. D. GIMLETTE is appointed to Haslar Hospital, dated May 1st. He was appointed Surgeon, October 1st, 1879; Staff Surgeon, April 1st, 1885; Fleet Surgeon, August 13th, 1893; Deputy Inspector-General, May 2nd, 1901; and Inspector-General, July 1st, 1907. He was Surgeon of the *Seahorse* during the Egyptian war in 1882 (medal, and Khedive's bronze star). Whilst Surgeon of the *Euryalus*, served with the Naval Brigade in the Soudan expedition in 1884, being present at the battles at El Teb and Tamai (mentioned in dispatches, promoted to be Staff Surgeon, and granted two clasps). He accompanied Admiral Sir W. Hewett as Medical Officer on the mission to King John of Abyssinia in 1884.

Civil Practitioner H. H. JACKSON has been appointed Surgeon and Agent at Newbiggin, May 11th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL D. L. IRVINE is placed on retired pay, March 28th. His commissions bear date: Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; Lieutenant-Colonel, July 31st, 1900. He served with the Nile expedition in 1884-5, being present in the action of Kirbekan, and receiving a medal with two clasps and the Khedive's bronze star. He was also in the South African war in 1899-1900, being at the relief of Kimberley, in the operations at Paardeberg in February, 1900, including the actions at Poplar Grove and Driefontein; he was also in operations in the Transvaal, including actions near Johannesburg, Pretoria, and Diamond Hill, and in Cape Colony, including the actions at Colesberg. He has received the Queen's medal with five clasps.

ARMY MEDICAL SERVICE.

LIEUTENANT-COLONEL M. W. KERIN, from the Royal Army Medical Corps, is promoted to be Colonel, vice J. McNamara, M.D., March 29th. Colonel Kerin's previous commissions are dated: Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; and Lieutenant-Colonel, July 31st, 1900. He served with the Burmese expedition in 1885-6 (medal with clasp); and in the South African war in 1899-1900, being present in operations in Natal, including the action at Talana and the defence of Ladysmith (mentioned in dispatches, Queen's medal with two clasps).

INDIAN MEDICAL SERVICE.

CAPTAIN V. E. H. LINDESAY, Bengal, is promoted to be Major, from July 29th, 1907. He was appointed Surgeon-Lieutenant, January 29th, 1896, and Captain, January 29th, 1899. He served with the Hazara Expedition in 1888, receiving a medal with clasp.

Captains C. R. BAKHALE and K. V. KUKDAY, Bombay, are also promoted to be Majors from January 29th, 1908. Their previous commissions are simultaneous with those of Major Lindesay. Major Kukday took part with the expedition against the Ogaden Somalis, in British East Africa, in 1898, receiving a medal with clasp. Major Bakhle has no war record.

Lieutenant-Colonel F. G. MAIDMENT, Madras, retires from the service, from March 31st. He joined the department as Assistant Surgeon, September 30th, 1886, and became Lieutenant-Colonel, September 30th, 1906. He was in the China war, 1900 (medal), and in the Burmese Expedition in 1887-9 (medal with clasp).

The retirement from the service of the undermentioned officers, which has been a ready announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King: Surgeon-General W. R. BROWNE, C.I.E., M.D.; Lieutenant-Colonels W. F. THOMAS, M.D., Sir R. H. CHARLES, K.C.V.O., M.D., A. W. ALCOCK, C.I.E., M.D., F. WYVILLE THOMSON, M.B., J. C. LAMONT, M.B.

The promotion of the undermentioned Captains to be Majors, which has been already announced in the BRITISH MEDICAL JOURNAL, has been sanctioned by the King: R. P. WILSON, C. D. DAWES, C. B. HARRISON, M.B., N. P. O'G. LALOR, M.B., T. H. SYMONS, E. R. ROST, H. AINSWORTH, M.B., F. A. SMITH, M.D., J. W. CORNWALL, M.D., A. MILLER, M.B., F. A. L. HAMMOND, S. P. JAMES, M.D., P. DEE, M.B.

The King has also approved of the promotion of the following Lieutenants to be Captains, which has been already noted in the BRITISH MEDICAL JOURNAL: A. F. HAMILTON, M.B., A. D. WHITE, M.B., M. F. REANEY, M.B., R. K. WHITE, N. M. WILSON, J. S. O'NEILL, M.B., M. R. C. MACWATTERS, M.B., W. H. BOALTH, G. A. SOLTAU, J. CUNNINGHAM, M.B., H. FALK, M.B., C. J. COPPINGER, M.B.

The undermentioned gentlemen are appointed Lieutenants, dated July 27th, 1907: HUGH W. ACTON, VIVIAN B. GREEN-ARMYTAGE, ARTHUR N. DICKSON, M.B., ALEXANDER G. COULLIE, M.B., ALEXANDER J. H. RUSSELL, M.B., ROBERT E. WRIGHT, M.B., DEWAN H. RAI, M.B., WILLIAM H. RIDDELL, M.B., ARTHUR B. ZORAB, M.B., ARNOLD T. DENSHAM, FREDERIC A. BARKER, ARTHUR W. HOWLETT, M.B., ARNOLD N. THOMAS, FRANCIS S. SMITH.

The promotion of Major R. F. STANDAGE, notified in the *London Gazette* of October 4th, 1907, is antedated to January 29th, 1907.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANT J. H. STEPHEN, 1st Banff Regiment, to be Surgeon-Captain, March 13th.

Surgeon-Captain F. W. BAILEY, 6th Lancashire Regiment, resigns his commission, March 9th; he is appointed Captain in the same Corps from the same date.

VOLUNTEER RIFLES.

SURGEON-MAJOR J. PIRIE, M.B., the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), resigns his commission, March 16th.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel A. WILSON, 2nd Volunteer Battalion the Northumberland Fusiliers (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer Tyne Volunteer Infantry Brigade), resigns his commission, March 4th; he retains his rank and uniform.

Surgeon-Major C. G. GRANT, 24th Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant-Colonel, March 16th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,675 births and 4,784 deaths were registered during the week ending Saturday last, April 11th. The annual rate of mortality in these towns, which had been 16.9, 17.4, and 16.8 per 1,000 in the three preceding weeks, further declined last week to 15.4 per 1,000. The rates in the several towns ranged from 6.1 in Handsworth (Staffs.), 9.2 in Barrow-in-Furness, 9.5 in Tottenham and in Leyton, 9.9 in Walthamstow, 10.1 in Portsmouth, and 10.2 in Devonport, to 21.7 in Middlesbrough, 22.3 in Rhondda, 22.9 in Smethwick and in Rochdale, 23.3 in Norwich, and 27.6 in Hanley. In London the rate of mortality was 14.7 per 1,000, while it averaged 15.7 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000, the highest rates being 3.2 in Walsall, 3.7 in Warrington, 3.8 in Hastings, 4.1 in Merthyr Tydfil, 4.3 in Rhondda, and 4.9 in Stockton-on-Tees; in London the death-rate from these diseases was equal to the average rate in the seventy-six towns. Measles caused a death-rate of 1.5 in Salford and in Burnley, 1.7 in Birkenhead, 1.8 in Preston, 2.0 in Stockton-on-Tees, and 2.7 in Rhondda; scarlet fever of 1.1 in Walsall, 1.5 in West Bromwich, and 2.3 in Hastings; and whooping-cough of 1.6 in Walsall, 2.0 in Stockton-on-Tees, 2.7 in Northampton, 3.7 in Warrington, and 4.1 in Merthyr Tydfil. The mortality from diphtheria, from enteric fever, and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,357, 3,229, and 3,121 at the end of the three preceding weeks, had further declined to 2,972 at the end of last week; 597 new cases were admitted during the week, against 378, 355, and 315 in the three preceding weeks.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80, increasing to £100 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence, £70 per annum.

BOOTLE BOROUGH.—Resident Medical Officer to the Hospital for Infectious Diseases. Salary, £120 per annum.

BRISTOL GENERAL HOSPITAL.—Assistant House-Physician. Salary at the rate of £60 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—(1) Honorary Physician. (2) Honorary Dental Surgeon.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160, increasing to £180 per annum.

EGYPTIAN GOVERNMENT.—Resident Surgical Officer at the Kasr-el-Ainy Hospital. Salary, £250 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—(1) Honorary Anæsthetist. (2) House-Physician. (3) House-Surgeon. Salary for (2) and (3) at the rate of £60 per annum.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer. Salary, £150 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant Casualty Medical Officer. (2) House-Surgeon. (3) House-Physician. Salary, £20 each for six months and washing allowance.

HOSPITAL FOR WOMEN, Soho.—Clinical Assistants.

ISLE OF WIGHT COUNTY ASYLUM, near Newport.—Assistant Medical Officer. Salary, commencing £150 per annum.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Superintendent. Salary, £500, rising to £650 per annum.

LONDON HOSPITAL, Whitechapel, E.—One Medical and two Surgical Registrars. Salary, £100 per annum each.

MANCHESTER UNIVERSITY.—Senior Demonstrator in Physiology. Stipend, £150, rising to £200 per annum.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Resident Medical Officer. Remuneration at the rate of £80 per annum.

MANOR VALLEY SANATORIUM, Peebles-shire.—Resident Physician (male).

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon, to act as junior and senior for six months each. Salary at the rate of £80 and £120 per annum respectively.

MEDICAL MISSION HOSPITAL, Canning Town.—Assistant Doctor for Dispensary.

MIDDLESEX HOSPITAL, W.—Second Assistant to the Director of the Cancer Research Laboratories. Salary commencing at £200 per annum.

MONMOUTHSHIRE EDUCATION COMMITTEE, Newport.—Two Assistant Medical Officers (male and female). Salary, £250, rising to £300 per annum each.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary, £150 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician (2) House-Surgeon. Salary at the rate of 50 guineas a year each.

PRESTON COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Physician to Out-patients.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—Morning House Anaesthetist. Honorarium, £50 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon, male. Salary, £100 per annum.

SHREWSBURY BOROUGH.—Medical Officer of Health. Salary, £400 per annum.

SINGAPORE MUNICIPALITY.—Assistant Municipal Health Officer. Salary, $4,200, rising to $4,800 per annum.

SOUTHAMPTON: FREE EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum.

SOUTHEND-ON-SEA BOROUGH.—Medical Officer of Health. Salary, £550 per annum.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Salary, £40 per annum.

SUNDERLAND INFIRMARY.—Male House-Surgeon. Salary at the rate of £80 per annum.

TYNEMOUTH INFIRMARY.—Two House-Surgeons. Salary, £50 per annum each.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck Street, W.—Honorary Registrar and Pathologist.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum.

APPOINTMENTS.

ANGLIM, James H., L.R.C.S.I., L.A.H.Dub., Certifying Factory Surgeon for the Rossiare District, co. Wexford.

BIRD, W. S. D., L.R.C.P. and S.Irel., Medical Officer and Public Vaccinator for the Third District of the Stow Union.

CLEMENTS, Ernest, M.B., B.Ch., R.U.I., District Medical Officer to the Beverley Union.

DE BLAQUIERE, J. H., M.B., B.Ch., R.U.I., District Medical Officer of the Cleobury Mortimer Union.

DONEGAN, John O'Conor, L.R.C.P. and S.Irel., Resident Medical Superintendent, Richmond Lunatic Asylum, Dublin, vice Conolly Norman, F.R.C.P.I., deceased.

ELDER, Elizabeth F., M.B., Ch.B.St.And., Assistant Medical Inspector, Cardiff Education Committee.

FERGUSON, R. L., M.B., Ch.B.Vict., Junior Assistant Medical Officer of the Crumpsall Workhouse, Manchester.

GARMAN, J. M., M.R.C.S., L.R.C.P., District Medical Officer of the East Ashford Union.

GEORGE, William, M.B., Ch.B.Vict., House-Surgeon to the St. Mary's Hospital, Manchester.

HODGKINSON, A., M.B., Ch.B.Vict., District Medical Officer of the Warrington Union.

HOWE, C. W., M.B., District Medical Officer of the Ely Union.

JAMES, A. M. A., M.D.Brux., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Kingscliffe District, co. Northampton.

NIVEN, Stephen, M.B., Ch.B.Aberd., Medical Officer and Vaccinator for the parish of Forglen.

OGLESBY, H. N., L.R.C.P.Edin., M.R.C.S.Eng., District Medical Officer of the Rochford Union.

PHILLIPS, G. R., M.R.C.S., L.R.C.P., Resident Assistant Medical Officer, Bermondsey Parish Infirmary.

PIERSE, Thomas, L.R.C.P. and S.I., Certifying Factory Surgeon for the Wexford District, co. Wexford.

SAVEGE, J., M.D.Aberd., District Medical Officer of the Sculcoates Union.

STEPHEN, W. A., M.D.Edin., District Medical Officer of the Guisborough Union.

THOMAS, E. F., M.R.C.S., L.R.C.P.Lond., Assistant Medical Inspector, Cardiff Education Committee.

WOOD, C. R., M.D., Certifying Factory Surgeon for the Shoreham District, co. Sussex.

WRIGHT, William Henry, Barrister-at-Law, M.D., M.R.C.S., L.R.C.P., L.M., L.S.A.L., M.O.H., one of His Majesty's Medical Inspectors of Schools for the Urban District of Alvaston and Boulton, Derbyshire; also an approved Teacher of Midwifery by the Central Midwives Board (London).

DIARY FOR THE WEEK.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

ELECTRO-THERAPEUTICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Paper: Dr. Reginald Morton: The Electrical Treatment of Atonic Conditions of the Digestive System.

POST-GRADUATE COURSES AND LECTURES.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Tuesday, 3 p.m., Demonstration on Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.). Wednesday, 2.30 p.m., Skin, Eye. Thursday, 2.30 p.m., Medical Out-patient, X Ray; 3 p.m., Medical In-patient. Friday, 2.30 p.m., Surgical Operation, Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday, 2 p.m. (also Wednesday and Saturday, 2 p.m.), Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, Diseases of Children, 10 a.m.; 2.30 p.m., Diseases of Women.

BOOKS, ETC., RECEIVED.

How to Nurse the Patient. By J. C. Wilson, M.B., C.M., D.P.H. Glasgow and Edinburgh: W. Hodge and Co. 3s. 6d.

Biological Studies and Addresses. Vol. I. Evolution of Mammalian Molar Teeth to and from the Triangular Type. By H. F. Osborn, Sc.D., LL.D., D.Sc. Edited by W. K. Gregory, M.A. New York and London: Macmillan and Co., Limited. 1907. 8s. 6d.

A Mind that Found Itself. An Autobiography. By C. W. Beers. London: Longmans, Green and Co. 1908. 7s. 6d.

Truth. Experimental Researches about the Descent of Man. By H. M. E. Moens. London: A. Owen and Co. 1908. 1s.

Atlas chirurgisch-pathologischer Röntgenbilder. Von Privat-dozent Dr. R. Grashey. Lehmann's med. Atlanten. Band VI. München: J. F. Lehmann. 1908. M. 22.

Travail du Laboratoire de Bactériologie de la Faculté de Médecine de Paris. Les Pseudo bacilles Acido-résistants. Critique des Methodes de Coloration du Bacille Tuberculeux. Révision du Groupe de Bacilles dits Acido-Résistants. Par le Dr. A. Philibert. Paris: G. Steinheil. 1908. Fr. 4.

Würzburg: C. Kabitzsch. 1908:—

Heilende Strahlen. Arbeiten über die Grundlagen und die praktische Ausübung der Straelentherapie (X-Strahlung, Lichtstrahlung und Radioaktivität). Von Ing. F. Dessauer. Band II. M. 2·50.

Die Krankheiten der Nasenscheidewand und ihre Behandlung. Von Dr. L. Katz. M. 6·80.

A Manual of the Practice and Theory of Medicine. By Sir W. Whitla, M.A., M.D., LL.D. In two volumes. London: H. Renshaw. 1908. £1 12s.

The Townsman's Farm. By "Home Counties." London: Cassell and Co., Limited. 1908. 6s.

Handbuch der Allgemeinen Pathologie. Herausgegeben von L. Krehl und F. Marchand. Erster Band: Allgemeine ätiologie. Leipzig: S. Hirzel. 1908. M. 18.

London: S. Appleton. 1908:

Manual of Diseases of the Ear, Nose, and Throat. By J. J. Kyle, B.S., M.D. Second edition. 12s. 6d.

Anatomy of the Brain and Spinal Cord, with Special Reference to Mechanism and Function. By H. E. Santee, M.D., Ph.D. Fourth edition. 16s.

Modern Clinical Medicine, Diseases of the Nervous System. Edited by A. Church, M.D. Authorized translation from "Die deutsche Klinik," edited by J. L. Salinger, M.D. 28s.

Von Bergmann und Roch's Anleitende Vorlesungen für den Operations-Kursus an der Leiche. Bearbeitet von Dr. A. Bier und Dr. H. Rochs. Fünfte Auflage. Berlin: A. Hirschwald. 1908. M. 8.

The Birds of the British Islands. By C. Stonham, C.M.G., F.R.C.S., F.Z.S. (In twenty parts.) Part IX. London: G. Richards. March, 1908. 7s. 6d.

Textbook of Ophthalmology. By Dr. E. Fuchs. Translated from eleventh German edition by A. Duane, M.D. Third edition. Philadelphia and London: J. B. Lippincott Company. 25s.

The Wife: Her Book. By H. Brown, L.R.C.P. Ed. etc. Popular edition. London: Sisleys, Limited. 2s.

An Elementary Course of Practical Zoology. By the late T. J. Parker, D.Sc., F.R.S., and W. N. Parker, Ph.D. Second edition. London: Macmillan and Co., Limited. 1908. 10s. 6d.

A Textbook of Pathology. By F. Delafield, M.D., LL.D., and T. M. Prudden, M.D., LL.D. Eighth edition. London: Bailliere, Tindall and Cox. 1908. 25s.

The Medical Annual: A Year Book of Treatment and Practitioner's Index. 1908. Twenty-sixth year. Bristol: J. Wright and Co., and London: Simpkin Marshall. 8s. 6d.

Meat and Food Inspection. By W. Robertson, M.D., D.P.H. London: Bailliere, Tindall and Cox. 1908. 10s. 6d.

The Labyrinth of Animals, including Mammals, Birds, Reptiles, and Amphibians. By A. A. Gray, M.D. (Glas.), F.R.S.E. Vol. ii. London: J. and A. Churchill. 1908. 25s.

Green's Encyclopaedia and Dictionary of Medicine and Surgery. Vol. vii. Nerlin-Physiology (Tissues). Edinburgh and London: W. Green and Sons. 1908. 15s.

Publications du *Progrès Médical*. Recherches cliniques et thérapeutiques sur l'Épilepsie, l'Hystérie et l'Idiotie. Par Bourneville. Vol. xxvi. Paris: Aux Bureaux du *Progrès Médical*; et F. Alcan. 1907.

A Guide to Nursing in the Tropics. By A. Duncan, M.D., B.S.(Lond.), F.R.C.P., F.R.C.S. London: The Scientific Press, Limited. 1908. 2s. 6d.

Garcia the Centenarian and his Times. By M. S. Mackinlay. Edinburgh and London: W. Blackwood and Sons. 1908. 15s.

Wastage of Child Life: as Exemplified by Conditions in Lancashire. By J. Johnston, M.D.Edin. Manchester: J. Heywood, Ltd. 1908. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
19 Sunday ...	
20 MONDAY ...	*Bank Holiday.*
21 TUESDAY ...	North Wales Branch, Denbigh.
22 WEDNESDAY	London: *Subcommittee of the Journal and Finance Committee*, 2 *p.m.* London: Journal and Finance Committee, 2.30 p.m.
23 THURSDAY...	Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
24 FRIDAY ...	
25 SATURDAY...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	
29 WEDNESDAY	London: Committee on Ophthalmia Neonatorum, 12 noon. Central Council, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Bath and Bristol Branch, Bath.
30 THURSDAY...	Staffordshire Branch, General Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m.; Council Meeting, immediately before General Meeting; Dinner, 7 p.m.
MAY.	
1 FRIDAY ...	City Division. *Metropolitan Counties Branch*, Bethnal Green Infirmary, 4 p.m.
2 SATURDAY ...	Ulster Branch, Londonderry.
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
MAY (*Continued*).	
6 WEDNESDAY	South-Eastern of Ireland Branch, Annual Meeting, also Meeting of Branch Council, Victoria Hotel, Kilkenny, 5.30 p.m.; Dinner, 6.30 p.m.
7 THURSDAY...	Lambeth Division, *Metropolitan Counties Branch*, Annual General Meeting, Bethlem Royal Hospital, Lambeth Road, S.E., 4 p.m.
8 FRIDAY ...	
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	London: Organization Committee, 11 a.m.
13 WEDNESDAY	Richmond Division. *Metropolitan Counties Branch*, Annual Meeting and Dinner, Sun Hotel, Kingston, 6.30 p.m.
14 THURSDAY...	London: Hospitals Committee, 1.15 p.m. London: Joint Hospitals Committee, 3 p.m. London: Metropolitan Counties Branch Council, 5 p.m. Hampstead Division, *Metropolitan Counties Branch.*
15 FRIDAY ...	
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	
20 WEDNESDAY	Cardiff Division. *South Wales and Monmouthshire Branch*, Annual Meeting, Cardiff.
21 THURSDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

Printed and Published by the British Medical Association at their Office, No. 6, Catherine Street, Strand, in the Parish of St. Paul, Covent Garden, in the County of Middlesex.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 25TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS

ANNUAL REPRESENTATIVE MEETING AT SHEFFIELD.

FRIDAY, JULY 24TH, OR SATURDAY, JULY 25TH, AND FOLLOWING DAYS.

ORGANIZATION COMMITTEE.

REPORT OF THE ORGANIZATION COMMITTEE TO THE ANNUAL REPRESENTATIVE MEETING, 1908, ON THE SUBJECT OF CAPITATION GRANTS, PURSUANT TO INSTRUCTIONS OF THE ANNUAL REPRESENTATIVE MEETING AT EXETER.

The Annual Representative Meeting at London 1906, referred for consideration and report by the Organization Committee certain motions on the Agenda from the Wandsworth and Bournemouth Divisions, as follows, namely:

CAPITATION GRANTS.

Motions by the Wandsworth Division:

1. That in view of the greater activity and organization now apparent in various Divisions of the Association, the time has come for reconsideration of By-laws 16 and 17, whereby fixed capitation grants are made to the Branches and through them to the Divisions.

2. That it be an instruction to the Central Council to consider the following among other subjects, and report to the Divisions by March 31st, 1907, what changes in the By-laws they suggest:

(*a*) That it is not desirable that there be gradually accumulating funds lying idle in the hands of various Branches, which, as such (at all events for the present), seem to have no need of them.

(*b*) In view of the expenses of local scientific medical societies, it is not unreasonable to suppose that some Divisions should require grants up to even 7s. 6d. a head per annum, which might be given in instalments in accordance with work done, and made direct from the Central Office.

(*c*) That there should also be made direct to Branches, for Branch expenses, from the Central Office, capitation grants up to 2s. 6d. per annum in accordance with work done, which could be increased by grants from Divisions for special purposes made by special Division resolutions.

(*d*) That a basis for the necessary first instalment in each year to a Branch or Division could be arrived at by consideration of the average of expenses incurred during the past three years.

Motion by the Bournemouth Division:

That the capitation grant to Branches should be absolutely at the disposal of the Branches and Divisions, and to be allocated to the Divisions as agreed on.

Report of Committee to Annual Representative Meeting at Exeter

The Organization Committee reported to the Annual Representative Meeting at Exeter as follows, namely:

1 That, in the opinion of the Committee, it was not desirable that there should be gradually accumulating funds lying idle in the hands of various Branches, which, as such (at all events for the present), seem to have no need of them.

2 That it was desirable that a limit should be fixed to the accumulation of surplus funds in the hands of various Branches.

3. That the Treasurer of each Branch should refund to the Treasurer of the Association on March 15th of each year such sum, if any, as might be in excess of half the amount of the previous year's capitation grant.

4. That the Committee could not concur in the principle of direct grants to Divisions not themselves Branches, except in the case of special supplementary grants as provided for under the By-law (By-law 18) adopted on the recommendation of the Council by the Annual Representative Meeting 1906

5. (*a*) That the principle of Variable Capitation Grants should be adopted

(*b*) That the ordinary Grant to each Branch for its expenses should not exceed 4s. per Member per annum, the actual sum to be given to be decided by the Council.

6 That the principle of Proposition 2 (*d*) Wandsworth Division, should be approved, namely, that a basis for a grant to a Branch could be arrived at by consideration of the average expenses of the three previous years.

(With reference to the proposal of the Bournemouth Division),

7. (*a*) That the opinion frequently expressed by the legal advisers of the Association showed that such a proposal could not be given effect to under the existing Regulations of the Association; (*b*) that the expenditure of Branches must always be confined within the limits of the objects of the Association; and (*c*) that the proposal was inconsistent with the principle of Variable Capitation Grants recommended by the Committee.

Resolutions and Instructions of Annual Representative Meeting at Exeter.

The Annual Representative Meeting at Exeter approved Recommendations of the Committee 1, 2, 4, 5, and 7; 6 was approved in the following amended form, namely:

That a basis for a Grant to a Branch should be arrived at by consideration of the average expenses of the three previous years and of the merits of the work done.

Recommendation 3 was referred back to the Committee for further consideration.

The Meeting also gave direction that there should be prepared, for the consideration of the Representative Meeting, the alterations in the By-laws necessary to give effect to its resolutions concerning the adoption of the system of Variable Capitation Grants.

Alteration of By-laws to give effect to Principle of Variable Capitation Grants.

The Organization Committee now reports to the Representative Meeting as follows:

1. That on careful consideration, the Committee finds only one alteration of the By-laws to be necessary to give effect to the instructions of the Representative Meeting as to the adoption of the system of Variable Capitation Grants, namely, that for By-law 16, *Grants to Branches*, of the present Regulations, there be substituted a By-law in the following terms, similar to that already approved under the draft Charter by the Council and Representative Meeting, namely:

Draft Amended By-law 16.

Grants to Branches: Ordinary.

(1) The Treasurer of the Association shall annually pay, or allow out of the funds of the Association, to the Treasurer of each Branch such sum, not exceeding four shillings, as the Council shall order to be paid, for each Member of the said Branch who has paid to the Association the full current annual subscription for that year, and such sum, not exceeding two shillings, as the Council shall order to be paid, for each Member elected after the 1st July, who has paid to the Association half the current annual subscription.

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies, and within the limits of the objects of the Association as defined in the Memorandum of Association.

(3) For the purpose of this By-law, those named in the Annual List for the time being in force as Members of any Branch, shall be deemed to be Members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for that year.

2. That the method of determining the amount of the grants to be given by the Council to each Branch, as proposed in Recommendation 6 of the Committee of 1907, amended and approved by the Representative Meeting at Exeter, is, in the opinion of the Committee, a matter for regulation by Standing Orders of the Council, or by standing instructions of the Council to such Committee as may be entrusted with the duty of making recommendations to the Council as to the amounts of the grants to be made to the various Branches.

Fixing of a Limit to the Accumulation of Funds in the hands of Branches and Divisions.

3. That, concerning the question of fixing a limit to the accumulation of funds, derived from Capitation Grants, in the hands of Branches (the principle of which the Representative Meeting approved, while referring for further consideration the question of the method of effecting it), the prevention of the accumulation of excessive surpluses in the hands of Branches can be sufficiently secured by the Council through its exercise of the power to be given to that body of varying the Annual Capitation Grants.

4. The Committee therefore deems it unnecessary and undesirable to recommend any system of repayments by Branches to the Central Funds.

January 14th, 1908.

ANNUAL REPRESENTATIVE MEETING.

NOTICES OF MOTION.

The following Notices of Motion have been received for discussion by the Annual Representative Meeting of the Association, to be held at Sheffield, July 24th (or 25th), 1908, and following days.

(*Notices previously received were published in the* Supplement *of March 28th, pp. 129, 130, and of April 18th, p. 177.*)

Notices affecting the Regulations of the Association.

By-law 41.

Standing Committees.

By the Council of the Association:

That By-law 41 be amended to read as follows:

41.—Standing Committees.

Nevertheless, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Schedule to these By-laws. Any (elected or appointed) Member of a Standing Committee who shall fail to attend three successive meetings without satisfactory explanation to the Chairman of the Committee shall be deemed to have resigned his Membership of such Committee, and the Committee shall fill the vacancy thus created. All Standing Committees shall report to, and shall act under the instruction of, the Council.

SCHEDULE OF STANDING COMMITTEES REFERRED TO IN THE FOREGOING BY-LAWS.

Name of Committee.	Appointed Members.			Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8
(1) Journal and Finance	..	Not exceeding 11.	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To examine into the general working of the office and of the Journal, and to certify the quarterly accounts prior to their being presented to the Council.

SCHEDULE OF STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members. Appointed by Representative Meeting.	Appointed by Council.	Otherwise Appointed.	Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
1.	2.	3.	4.	5.	6.	7.	8.
(2) Premises ..	..	Not exceeding 5.	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	3	To consider and report to the Council upon the management of the house property of the Association.
(3) Public Health..	..	Not exceeding 7.	..	Ditto.	..	3	To consider questions relating to Public Health and the Poor Law Medical Service.
(4) Colonial ..	..	Not exceeding 2.	5 appointed by Representatives of Colonial Branches on Council.	Ditto.	..	3	To consider questions specially relating to the Branches not in the United Kingdom.
(5) Naval and Military.	..	Not exceeding 7.	..	Ditto.	..	3	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Territorial Medical Corps.
(6) Medico-Political	6	6	..	Ditto.	..	7	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
(7) Ethical (otherwise designated Central Ethical)	5	5	..	Ditto.	..	5	To advise the Council upon all questions connected with Rules of Divisions and Branches relating to professional conduct; to investigate and report to the Council upon the cases of members whose conduct is to be considered by the Council on the representation of Branches, pursuant to Article XLIV; and, generally, to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between members of the Association or members of the profession, or, at its discretion, to refer any question or questions arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation, or for adjudication, subject to an appeal to the Central Ethical Committee. Any member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Central Ethical Committee and the findings of that Committee, subject to such appeal, and the findings of the Council upon an appeal, shall be binding upon the parties and upon all members of the Association.
(8) Hospitals		Not exceeding 11.	..	Ditto.	..	5	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities.

SCHEDULE OF STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members. Appointed by Representative Meeting.	Appointed Members. Appointed by Council.	Appointed Members. Otherwise appointed.	Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
1.	2.	3.	4.	5.	6.	7.	8.
(9) Science.. ..	..	10	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To advise, and, where so directed, act for the Council in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions and matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
(10) Organisation ..	..	7	..	Ditto.	..	3	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions of the boundaries and area, the grouping for electoral purposes, and the Rules, other than those relating to ethical matters, of Divisions and Branches and combinations thereof, and the Ordinary and Supplementary Grants made to such bodies by the Council pursuant to the By-laws, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organisation. The Committee shall have power to add to its number for special purposes, a limited number of Members specially qualified to assist in its work.
(11) Scottish ..	..	..	..	Ditto	One Secretary of each Scottish Branch. All the Members of Council who represent Scotland.	5	To consider matters specially concerning Scotland. It shall have an Honorary Secretary resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
(12) Irish	..	..	By each Irish Branch 1 Member, or if Secretary of Branch is a Member of Council 2 Members, any such Member appointed by the Leinster or Ulster Branch to be a practitioner not resident in Dublin or Belfast.	Ditto	One Secretary of each Irish Branch. All the Members of Council who represent Ireland.	5	To consider matters specially concerning Ireland. It shall have an Honorary Secretary resident in Ireland, and shall meet at such place and time as the Committee may itself direct. The Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

Standing Committees.

By-laws 39, 40, 41, and 43.

By the Dundee Branch:

That the By-laws relating to Standing Committees, namely, 39, 40, 41, and 43, be amended in accordance with the provisions of the Draft Charter, Ordinances, and By-laws, as approved by the Association on Referendum.

By direction of the Chairman of Representative Meetings,

J. Smith Whitaker, *Medical Secretary.*

April 23rd, 1908.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

EAST ANGLIAN BRANCH.

The spring meeting of this Branch was held at Dr. Crowfoot's, Beccles, on Thursday, April 9th, at 2.30 p.m., Dr Brogden, President of the Branch, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Lynn Thomas and Skyrme Fund.—It was announced by the President that the sum of five guineas had been subscribed to the Lynn Thomas and Skyrme Fund.

Papers.—Dr. Brogden read a paper on the trypsin treatment in a case of cancer. Dr. Havell (Felixstowe) read a paper on herpes zoster. The President and Dr. Thorpe discussed the paper, and Dr. Havell replied. Dr. Muir Evans (Lowestoft) read a paper on certain diseases peculiar to North Sea fishermen. The paper was discussed by the President, Dr. Havell, and Dr. Crowfoot; and Dr. Muir-Evans replied.

Dr. Crowfoot's Museum.—Dr. Crowfoot very kindly showed his museum to the members, which was much appreciated, and at 4 p.m. tea was provided by the kind invitation of Dr. and Mrs. Crowfoot.

Exhibits.—Drugs were shown by Messrs. Burroughs, Wellcome and Co. (London); surgical instruments by Messrs. Maw, Sons, and Thompson; and electric appliances by Messrs. Schall.

Luncheon.—There were twenty-five members present, and luncheon was partaken of at the King's Head Hotel.

EDINBURGH BRANCH:

South-Eastern Counties Division.

A meeting was held at the Hermitage on the afternoon of Thursday, April 3rd, at 3 30 o'clock. Present: Drs. Carlyle Johnstone, Blair, Somerville, Tyrrell, and Calvert. Dr. Johnstone was moved to the chair.

Confirmation of Minutes.—The minutes of the autumn meeting and of the annual dinner were then read and approved, and signed by the Chairman.

Notification of Births Act.—The Notification of Births Act was considered. The Secretary read letters from the members of Parliament representing constituencies in the district in answer to representations he had been asked to make to them by the Medical Secretary. Dr. Carlyle Johnstone then proposed the following resolution:

That this meeting of the South-Eastern Counties Division of the Edinburgh Branch of the British Medical Association is of opinion that, while it is desirable that early notification of the birth of infants should be provided for, the provision of the Notification of Births Act, 1907, as applied to medical men, are objectionable, inasmuch as they interfere with the relationship of professional confidence between medical man and patient, and impose duties upon members of the profession under penalty without providing for payment for their services; it is further of opinion that this Act should not be adopted by the local authority.

This was unanimously agreed to and the Secretary instructed to send a copy to the medical officers of health within the area of the Division, and to request them to place the resolution before their respective local authorities if necessary.

Central Emergency Fund.—Dr. Carlyle Johnstone proposed that it be minuted that the Secretary drew the attention of the meeting to this and pointed out its advantages, stating some reasons why members should contribute, and left it to them to subscribe if they thought fit.

The Term "Hospital."—Dr. Johnstone moved that the Division express its approval of the definition of the Central Ethical Committee and instruct its representative accordingly.

Report on Life Assurance.—The replies to questions addressed to Divisions were as follows:

1. Too numerous to mention.
2. Yes, many pay less.
3. A full report is frequently required.
4. Yes, many; short report.
5. No; not less than a guinea.
6. No; do.
7. No; do.
8. No; do.
9. One guinea, as without a full examination a certificate of real value cannot be given.

Prevention of Corruption Act.—The Central Ethical Committee's communication was read and received consideration.

Lynn Thomas and Skyrme Fund.—The Secretary intimated he was ready to receive subscriptions on behalf of the Lynn Thomas and Skyrme Fund.

Unqualified Practice.—A local matter in which the question of unqualified practice was dealt with, and the Secretary instructed to advise the Journal as to the advertising of a certain establishment where such unqualified practice was carried on.

Burial in Cases of Sudden Death.—The Secretary called attention to the action of the Procurator-Fiscal in allowing burial in cases of sudden death in which there had been no previous medical attendance, without even a report or a precognition of the medical man employed, or without even inquiring as to whether the ordinary medical certificate would be given. Such action was unanimously condemned, and it was agreed that no death certificate should be signed where there had been no previous medical attendance.

Annual Report.—The Secretary presented the annual report for 1907, showing a balance in hand of 14s 3d. The accounts were found correct.

GLOUCESTERSHIRE BRANCH.

A general meeting of the Branch was held at the Gloucester Infirmary on March 19th; the President was in the chair and thirty-one members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Inspection of School Children.—The report of the Subcommittee appointed to consider the proposed medical inspection of school children was read and the following resolutions were carried:

That the best solution for the smooth working of the Act would be to appoint whole-time officers. If medical practitioners are called upon to do the work, either a fee of 2s. 6d. for examination of each child, with 1s. per mile travelling expenses to each school for each visit; or that the fee should be 10s. per hour, with same travelling expenses as mentioned above.

That copies of the resolution should be sent to all medical practitioners in the area of the Branch, whether members or non-members of the Association.

Paper.—Dr. F. J. Johns read a paper on Notes of Some Cases of Dilatation of Stomach. He insisted on the importance of careful and accurate estimation of the constituents of the gastric contents in all cases of continued disturbance of gastric digestion. Such tests as were easy of performance in the ordinary course of consulting-room practice were demonstrated and their importance explained. The simplest methods of obtaining accurate data by stomach evacuation were detailed. A number of cases were described in series beginning with a case of simple atonic dilatation with normal stomach contents and no retention. (2) Continued atonic dilatation with retention and hyperchlorhydria, but with no pyloric obstruction. (3) Cases of presumably long-continued dilatation with hyperchlorhydria with resultant ulceration or hypertrophy of the pylorus, and finally cases where with a history of long-continued gastric irritation dilatation was found with

malignant disease either with or without obstruction at the pylorus. The suggestion of the paper was that simple dilatation was frequently overlooked until such time when the results of fermentation and irritation produced hyperchlorhydria with its associated symptoms, and that hypertrophy of the pylorus might be secondary to the hyperacidity. The continuance of irritation and production of inflammatory conditions were important factors in the determination locally of malignant disease. The paper was discussed by the PRESIDENT, Dr. CONDER, Mr. CUTHBERT, and Mr. BUCKELL.

GRIQUALAND WEST BRANCH.

Election of Officers.—At the first meeting held this year on March 6th the following office-bearers were elected for the current year: *President*, Dr. Symonds; *Vice-President*, Dr Westerfield; *Honorary Librarian*, Dr. Stoney; *Honorary Secretary and Treasurer*, Dr. S. Wicks (Central Road, Beaconsfield).

LANCASHIRE AND CHESHIRE BRANCH:

ASHTON-UNDER-LYNE DIVISION.

A MEETING of this Division was held at the George and Dragon, Ashton-under-Lyne, on April 10th.

Cases.—Dr. PARK showed: (1) Cases of gastro-enterostomy, thyroidectomy, and amputation of the breast. (2) A case of general ptosis of the abdominal viscera. On operation the liver was found to be markedly displaced, and was successfully slung up by falciform ligament being included in the sutures used to close the abdominal incision. Dr. JUDSON showed cases of gastro-enterostomy, thyroidectomy, oesophagotomy, ovariotomy, and suprapubic cystostomy for villous tumour. Dr. CHEETHAM showed a uterine polypus removed per vaginam, which had caused menorrhagia for some years. Dr. BISHOP showed a case of psoriasis and anomalous nervous symptoms following a severe injury to the head. Dr. MAMOURIAN exhibited a number of interesting radiograms.

Lynn Thomas and Skyrme Fund.—The SECRETARY read a letter *re* the Lynn Thomas and Skyrme Fund, and it was resolved to leave the matter to each individual member.

PRESTON DIVISION.

THE annual general meeting of this Division was held on Thursday, April 16th. Dr. R. C. BROWN (President) occupied the chair.

Election of Officers.—The officers were elected for the ensuing year.

Medical Fees at Inquests.—After discussion a unanimous protest was entered against the iniquitous action of the Lancashire County Council in limiting medical fees at inquests to one guinea per inquest, no matter how many days the medical witness might have to attend.

The Term "Hospital."—The definition of the term "hospital" was unanimously acquiesced to.

Fees for Medical Examination for Life Insurance.—There was a lengthy discussion on the questions relating to life assurance fees. A motion to let the matter stand over was defeated.

Answers to Questions.

A.—Of Fact.

1. (*a*) (*b*) Members present refused to answer.
2. Yes.
3. Full.
4. Yes. (Minor Reports and Industrial.)

B.—Of Opinion.

5. Yes.
6. Yes.
7. Yes.
8. Yes.
9. Half a crown. A sum which is a very common fee for industrial and other small insurances that take very little time for examination.

The feeling of many members was that more harm than good was likely to accrue to the general practitioner from any strong action for the increase of fees that, though small, were safe.

Dr. Garstang's Candidature for Central Council.—Dr. Garstang of Altrincham, was accorded the official support of the Division, and the Secretary was instructed to hand in a nomination of Dr. Garstang as a candidate for the Central Council of the Association.

SALFORD DIVISION.

A GENERAL meeting of the Salford Division was held on March 31st, the CHAIRMAN (Dr. Bruce Bell) presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Medical Inspection of School Children.—Letters were read from the Director of Education and the Medical Officer of Health of Salford, acknowledging the resolution of the Division on the medical inspection of school children.

Report of Annual Representative Meeting.—Dr. Wolstenholme's report of the last Annual Representative Meeting was ordered to be entered on the minutes.

Branch Council.—Dr. TAYLOR gave a short account of the work of the Branch Council, especially drawing attention to the valuable work of the new Standing Committee on Organization and Finance. At the suggestion of this Committee the Council had already made alterations in the grants to the Divisions, and a careful scrutiny of the annual Divisional reports was made.

Central Council Election.—On the motion of the CHAIRMAN, seconded by Dr. HAMILL, it was unanimously resolved:

> That the Salford Division nominate its Honorary Secretary, Dr. Taylor, as a candidate for the election of Branch Representative on the Central Council of the Association.

It was further unanimously resolved that the Joint Committee of the Manchester and Salford Divisions be asked to further the candidature of Dr. Taylor. In thanking the meeting, Dr. TAYLOR said that it had been arranged that Dr. Larkin, the Secretary of the Branch, Dr Macfie (Bolton), Dr. Garstang (Altrincham), and himself should stand together as joint candidates. He was sorry that Dr. Brassey Brierley, who had done such splendid work on the Council, was unable to stand owing to the time limit; and the President of the Branch (Dr. Helme), to the great regret of the whole Branch, had declined to allow himself to be nominated. If Dr. Helme could have seen his way to stand, he (Dr. Taylor) would certainly have withdrawn. The four candidates were resolved, if elected, to do all they possibly could to further some satisfactory compromise on the subjects of the recent Referendum.

Guardians and Midwives Act.—The SECRETARY drew attention to a circular sent round to all Salford practitioners by the Board of Guardians, offering under certain conditions, to pay a fee to medical men summoned to the assistance of midwives. The meeting was unanimously of opinion that the conditions were most unsatisfactory. It would be necessary in every case to prove to the satisfaction of the guardians that the husband relative, or friend was unable to pay, that the case was abnormal and urgent, that it was impossible to obtain the services of the district medical officer. The patient or her husband or friends would have to be induced to apply to the guardians and satisfy them on all these points. With such conditions, it would rarely happen that medical men would be paid at all by the guardians. Further, to fix a maximum fee of 21s.—"this fee to include medicine, etc., and attendance during the whole period"—was most unjust, as in certain cases attendance might have to extend over weeks or even months. The Poor-law Board fees allowed to district medical officers are 10s. and 20s. for ordinary midwifery and £2 for instrumental midwifery, and it was impossible to understand why a less fee should be offered to general practitioners than the district officers have a right to demand. It was resolved to take steps to lay these objections before the Board of Guardians at an early date. (For fuller reference to this matter see the JOURNAL for March 28th p. 777.)

Definition of the Term "Hospital."—The Division agreed to the proposed definition, except that it would substitute the word "mainly" for the word "partially," so that Paragraph A would read:

> That it receives necessitous patients and is maintained wholly or mainly by public funds or charitable contributions.

Insurance Examination Fees.—It was stated that several companies do pay less than a guinea to members of the Division even when a "full report" is required. Some companies pay less than 10s. 6d. for a "moderately full report." Opinions of the Division:

(*a*) Less than a guinea may be accepted in some cases.

(*b*) Half a guinea minimum may be accepted for a "full report" when the sum insured is under £100.

(c) Five shillings may be accepted for the "short report" of Schedule B.

(*d*) Five shillings should be the minimum fee for even the "shortest report"

Payment for Medical Inspection of School Children.—The Division agreed with the recommendation of the Medico-Political Committee:

That the school medical officer be paid at the rate of £50 per annum for an attendance of one-half a school day per week, half a school day being defined to be two hours.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Wednesday, April 15th, at 5.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. PIDCOCK in the chair.

Confirmation of Minutes.—The minutes of the meeting of March 24th were read and approved.

Correspondence.—The HONORARY SECRETARY referred to the Lynn Thomas and Skyrme Fund, and read a letter from the Medical Secretary with regard to a form to be filled in by members on "The alleged increase of female inebriety."

Hampstead Hospital Dispute.—The HONORARY SECRETARY reported the action taken by the Branch Council at a meeting held on April 9th. The Council had supported the Division as to the desirability of discontinuing the out-patient department in Hampstead and of obtaining direct representation on the Hospital Council, but had declined to express an opinion on the question of retaining a visiting staff of local practitioners, some members being of opinion that if a portion of the hospital were reserved as a cottage hospital for local medical men it would be better to have no staff. Members of the Branch Council complained that the Division had not explained its position on this point with sufficient clearness. The Marylebone Division had considered the question on April 3rd and had expressed views similar to those of the Branch Council. Mr. ARMIT then proposed, and Dr. ANDERSON seconded, the following resolution for the Representative Meeting:

That the Hampstead Division wishes to report to the Representative Meeting that in Hampstead a local hospital has recently been transformed into a large metropolitan hospital in spite of the opinion freely held that this change is not in the interests of the population of the district, and also in spite of the opposition of the local profession and the repeated representations of the Division that the change is not advantageous to the profession. The Division therefore asks for the sympathy and support of the Representative Meeting in its endeavours to retain at least a substantial portion of the hospital as a purely local institution.

This resolution was carried unanimously (11 votes to *nil*). A proposal to proceed to the next business having been lost by the casting vote of the Chairman, a further discussion took place on various aspects of the dispute. Dr. STOCKER pointed out that the Division should oppose the continuance of an out-patient department especially strongly, as this was a test case for fighting the out-patient abuse all over London. It was important to insist on the expense which an out-patient department involved.

The Term "Hospital."—Mr. ARMIT moved and Dr. YELD seconded a resolution:

That the Hampstead Division agrees with the definition of the term "hospital" laid down by the Central Ethical Committee (see BRITISH MEDICAL JOURNAL, SUPPLEMENT, February 22nd, 1908).

Dr. OPPENHEIMER proposed and Mr. PARSONS seconded an amendment:

That the Hampstead Division expresses no opinion on the subject.

The amendment was lost. Dr. STOCKER proposed another amendment, seconded by Miss SCOTT DICKSON:

That the subject be postponed till the next meeting.

This was carried, and again as substantive resolution.

Medical Examination for Life Insurance.—The discussion on medical examination for life insurance was also postponed.

NATAL BRANCH.

THE annual general meeting of this Branch was held at the Marine Hotel, Durban, on January 29th, Dr. WATKINS PITCHFORD presiding. There were also present: Drs. Currie, Freer, Hill, Porritt, Pringle, and Wright, of Pietermaritzburg Division, and Drs. Addison, Balfe, Birtwell, Bonnar, Bray, Burnand, Campbell, Copley, Crozier, Dumat, Edwards, Elliot, Francois, Murray-Gray, Haydon, Hira-Maneck, Howden, Mackay, McCord, McKenzie, Murison, Nicol, Pearson, Peverley, Ross, Smyth, Staunton, and Tritton, of the Durban Division. Dr. Rose, ship's surgeon, was present as a visitor.

Annual Dinner.—Previous to the Branch meeting the annual dinner of the Durban Division of the Branch was held, to which the President (Dr. Bonnar) kindly invited as guests the members of the Pietermaritzburg Division. The thanks of the Pietermaritzburg Division was conveyed to Dr. Bonnar for his hospitality.

Reports.—The annual general report was read and confirmed. The treasurer's report and balance-sheet was read and adopted. Previous to the meeting both these reports had been printed and circularized.

Report of Parliamentary Committee.—The report of the Parliamentary Committee was read by Dr. Wright on behalf of Dr. Currie. The Committee consists of Dr. Pitchford (Convener), Dr. Currie (Secretary), Drs. Booth-Clarkson, Campbell, Pearson, and Wright.

As the members of the Committee reside in parts of the Colony widely apart, and would be unable to attend frequent meetings, the system of consultation by correspondence has been adopted in carrying on the business. A circular letter is sent round as often as necessary, and the members of the Committee record their remarks and observations thereon. Two meetings of the Committee only were held during the year, one on May 17th, 1907, and one on January 29th, 1908.

The following subjects have been dealt with and discussed:

1. Proposed amendments of the Medical and Pharmacy Acts, namely: Act No. 35, 1896; No. 30, 1896; and Act No. 21, 1899. These Acts were carefully gone through and amendments suggested. These amendments were brought before the Medical Council, and approved of by that body. They were submitted to the meeting of the British Medical Association held in Durban on May 17th, 1907 and carried.

2. The Public Health and Vaccination Acts were dealt with in a similar manner, namely: Acts No. 24, 1906; 44, 1901; 1, 1902; 43, 1903; and 8, 1905. The suggested amendments of these Acts were brought before the meeting, and with slight modifications were carried.

3. The question of club practice was dealt with, and it was proposed that a minimum fee of 12s. a year should be charged for each club patient—this ruling not to be retrospective. This proposal was presented and approved at a meeting of the Branch on May 17th, 1907.

4. The question of the appointment of a principal medical officer was discussed, but at the meeting held on May 17th it was decided not to bring this forward at the general meeting of the British Medical Association.

5. The compulsory registration of midwifery nurses was next dealt with and brought before the meeting. The general feeling of the members of the Parliamentary Committee is that measures in this direction should be taken, and that this should be included in the amendments to the Medical Acts.

6. The question of enforcing the decisions of the British Medical Association on its members, more particularly the ruling with reference to fees for club patients.

7. Medical supervision of schools and colleges. This is a very important question, and has been fully discussed by the members of the Parliamentary Committee, who recommend that the papers be handed to the Branch Council to take the necessary action.

8. Notification of phthisis.

9. Various suggestions and complaints from practitioners have been received and dealt with.

This concludes the work dealt with by the Committee during the year. Unfortunately, the work has been largely academic. Although many suggestions have been made, no active steps so far have been taken to carry out these suggestions, but we trust that the mere fact of drawing attention to necessary reforms will prove the first step, and that means will later on be found for carrying those amendments into effect.

The Parliamentary Committee wish to urge on the Council of the Branch the desirability of enforcing respect, as far as they are able, to the resolutions passed by the Branch. The Parliamentary Committee recommend that the Council of the British Medical Association take steps to have the amendments specified in Sections 1 and 2 of this report carried into effect.

In connexion with Section 4, having in view the recent report of the Civil Service Commissioners and the possibility of the Government acting on this report, and appointing a principal medical officer for the Colony, the Parliamentary Committee urge upon this meeting to authorize the Council to approach the Government with a view to having the recom-

mendations of the Medical Council to the Civil Service Commission carried out. These recommendations were given by special request to a deputation of the Civil Service Commissioners, but were not inserted in the report of the Civil Service Commission, and were as follows:

"That the Medical Council should be reconstituted by the addition of two Public Health experts nominated by the Government, and should then take over the duties of the Board of Health, the latter body be abolished, which would mean a reduction of expenses. The Chairman or Secretary to be executive officer, and to advise the Minister of Health in the interval between the monthly meetings of the new Medical Council, being paid a small salary to compensate him for time and trouble, but not to be debarred from practising. This would avoid the necessity of incurring the unnecessary expense and multiplying of officials which would be the result of appointing a Colonial Medical Officer, and would place the Medical Council in its proper place as the Medical Authority of the Colony and adviser of the Minister of Health."

Dr. Birtwell proposed, and Dr. Howden seconded, that the report as read be adopted. An amendment to delay consideration of the report and meantime circularize the members was lost by a majority of 12 votes to 3 votes. The report as read was adopted.

Minimum Fee and Wage Limit.—The report of Committee on Minimum Fee and Club Wage Limit was then considered. It was unanimously agreed that this report be printed and circularized to every practitioner in the Colony. Members to vote on each clause, and suggestions to be invited on any of the points raised.

Alteration of Rules.—The proposed alteration in the rules were sanctioned except proxy voting. The consideration of again approaching the head quarters of the British Medical Association regarding proxy voting was brought before the meeting by Dr. Elliott, but on an explanation by the President further discussion was deferred. Dr. Pearson moved, and Dr. Porritt seconded, and it was unanimously carried:

> That the Council of the British Medical Association be requested to consider the method of election, more particularly as regards President and Vice-President.

Election of Office-Bearers and Committees.—The following were elected for the ensuing year: *President*, A. McKenzie, M.D.; *Vice-President*, O. J. Currie; *Council*, S. G. Campbell, Drs. Watkins Pitchford, M. S. Pearson, S. Copley; *Honorary Secretary*, P. Murison; *Honorary Treasurer*, A. D. Pringle.

Installation of the Chairman.—Dr. Pitchford thereupon vacated the chair, which was taken by Dr. McKenzie. The Chairman briefly returned thanks for the honour conferred upon him, and that with such a Council as had been elected the outlook for some real practical work was assured. He outlined some of the more prominent questions which would engage their attention during the incoming year, and hoped that all would work for what was best for the profession and the public.

Vote of Thanks to Retiring President.—A vote of thanks to the retiring President was proposed by Dr Wright and seconded by Dr. Nicol, and was heartily accorded by all present. The Ex-President shortly thanked the Branch.

Election of Honorary Secretary.—Dr. Campbell Watt was unanimously reappointed secretary, but on Dr. Pitchford explaining that it was impossible for him to accept the post, Mr. Murison was elected. Dr. Campbell referred in very feeling terms to the work Dr. Campbell Watt had carried on as Honorary Secretary of the Branch, and suggested that some tangible expression of esteem should be awarded to him. It was suggested finally that an illumination address be prepared and signed by the President. This resolution was carried out with acclamation.

Parliamentary Committee.—The following were elected members of the Parliamentary Committee for 1908: President (*ex officio*), Dr. Campbell, Dr. Currie, Dr. Pearson, Dr. Campbell Watt, Dr. Wright, Dr. Watkins Pitchford.

President's Address.—The President then delivered his address. He referred to the untiring zeal in the work of the Branch of the Honorary Secretary, Dr. Campbell Watt, during not only the past year but previous years. In 1907 (January) the membership was 96; now, in January, 1908, it was 120. Six members died or resigned during the year. References were made to what some were pleased to liken to "trades unionism" functions, which it was thought the British Medical Association had been of late years gradually assuming. He showed that owing to organizations for exploitation of medical men, it became necessary also to organize in defence of its legitimate interests. The advance towards the establishment of a South African Committee of the British Medical Association, of which the scheme was drawn up by Dr. Campbell Watt and adopted at a conference at Pretoria almost without any modification, was alluded to in the address. An important suggestion in the address was for the new Council to take up the idea of the formation at such centres as Ladysmith, Greytown, Newcastle, etc.. of having "District Secretaries," whose functions would be to arrange for small friendly meetings of the practitioners of the District to discuss professional and technical subjects, and to act as a correspondent in representing the views of his neighbours when authorized by them to do so. The closing paragraph was as follows:

> The ideal towards which the medical profession in Natal must steadily set its course is that of a close professional brotherhood; it must strive to complete an Association the entire abilities and resources of which shall be available for the defence and relief of the individual member, and in which also the abilities and resources of every member shall be placed ungrudgingly at the disposal of the Association. The British Medical Association seems likely to become, and I believe will come, this ideal Association.

Dr. Watkins Pitchford was heartily thanked for his address on a motion proposed by Dr. Dumat and seconded by Dr. Bonnar.

Reply of Health Board re Indian Vaccination.—The following resolution was proposed by Dr. Currie, seconded by Dr. Pearson, and carried *nem. con.* Drs. Elliott, Nicol, and Currie spoke as to the general dissatisfaction caused by the law as framed by the Government advisers.

> That this meeting of the Natal Branch of the British Medical Association expresses its regret that the recent changes in the system of vaccination of Indians has caused a great deal of ill-feeling and opposition among medical men, and asks the Board of Health to make representations to the proper quarter representing the desirability of reverting to the former officers to vaccinate Indians as before.

Charter and Referendum.—The meeting was of opinion that in connexion with the Referendum it was a matter of no importance to this Branch how Committees were to be formed at home so long as they were allowed to manage their own affairs in such a way as would conduce to greatest efficiency, taking into full consideration the local conditions obtaining in South Africa.

Amended South African Committee Regulations.—These were approved as printed, and it was unanimously resolved that Dr. Campbell Watt should carry on the South African Committee work, and call the Committee to its labours as and when required.

Next Annual Meeting.—On the proposal of Dr. Currie, seconded by Dr. Nicol, Pietermaritzburg was unanimously agreed to.

South African Medical Congress.—A letter was read from the South African Congress, asking if Natal had any intention of issuing an invitation to hold their next Congress in Natal. No proposal was made.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 29th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,

March 26th, 1908. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Cambridge and Huntingdon Branch.—*Election of Member of the Central Council.*—Nominations of candidates for election to the Central Council should be forwarded to the Honorary Secretary not later than Monday, May 4th. The Branch is entitled to elect one member.—J. E. Apthorpe Webb, Honorary Secretary, Grafton House, Cambridge.

Dorset and West Hants Branch.—The spring meeting of this Branch will be held in the Hotel Mont Dore, Bournemouth, on Wednesday, May 27th. Members desirous of reading papers, showing cases, or exhibiting specimens are requested to communicate, not later than Friday, May 15th, with James Davison, Honorary Secretary, Streateplace, Bath Road, Bournemouth.

Dorset and West Hants Branch and West Somerset Branch.—Nominations for the office of a Representative on the Central Council should be sent to me on or before May 9th next, in accordance with By-law 25.—James Davison, Streateplace, Bath Road, Bournemouth.

Dundee, Perth, and Stirling Branches.—*Election of Representative Member of the Central Council.*—Nominations, which must be made by a Division or by three members, must be sent in writing on or before May 9th to R. C. Buist, M.D., 166, Nethergate, Dundee. The present Representative is ineligible for re-election.—R. C. Buist, Dundee; W. A. Taylor, Perth; J. E. Moorhouse, Stirling.

East Anglian Branch.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. Nicholson, Honorary Secretary.

Gloucestershire Branch.—In accordance with By-law 22, the Secretary requests that members wishing to nominate any candidate for members of this Branch to the Central Council of the Association will send the candidate's name to him before May 2nd. Mr. C. F. Cuthbert, the present member, is eligible for re-election.—D. E. Finlay, Southville, Park Road, Gloucester, Honorary Secretary.

Lancashire and Cheshire Branch.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. Garstang, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

Lancashire and Cheshire Branch.—*Election of Members of the Council of the Association.*—Nominations of candidates for the representation of the members of this Branch on the Council of the Association must be sent to me in writing on or before May 1st next (vide Branch Law 5, and Association By-law 25).—F. Charles Larkin, Secretary of the Branch, 54, Rodney Street, Liverpool.

Lancashire and Cheshire Branch: Altrincham Division.—The annual meeting of this Division will be held at Altrincham on Thursday, June 4th, at 4.50 p.m.—T. W. H. Garstang, Honorary Secretary.

Metropolitan Counties Branch.—The annual dinner of the Branch Council will be held on Friday, May 22nd, at the Imperial Restaurant, Regent Street, W., at 7.30 p.m., Dr. Frederick Taylor, President, in the chair. Tickets, price 7s. 6d. (not including wines), may be obtained from the Honorary Secretary, Dr. Frederick J. McCann, 5, Curzon Street, Mayfair, W.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. McCann, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The annual general meeting of this Division will be held in Bethlem Royal Hospital, Lambeth Road, S.E., on Thursday, May 7th, 1908, at 4 p.m. The following names are proposed by the committee as office-bearers during the session 1908-9:—*Chairman*, W. A. Atkinson, M.D.; *Vice-Chairman*, A. M. Hickley, M.R.C.S.; *Representative at Representative Meeting*, R. Esler, M.D.; *Representatives on the Branch Council*, C. Sangster, M.R.C.S., and the Honorary Secretary (*ex-officio*); *Honorary Secretary*, Herbert French, M.D.; *Executive Committee*, R. Capes, M.R.C.S., E. A. Edelsten, M.B., J. W. J. Oswald, M.D., H. J. Spon, M.R.C.S., W. E. Sturges-Jones, M.R.C.S., Herbert Taylor, M.B. Any member of the Division who may wish to propose any other candidate or candidates for any of the above offices should send the name of such candidate or candidates, duly seconded, together with the written consent of each nominee, to the Honorary Secretary, 26, St. Thomas's Street, London Bridge, S.E., on or before Monday, May 4th, 1908. Dr. Hyslop will deliver an address upon the Borderland of Insanity, and several eminent alienists have been invited to take part in the discussion.—Herbert French, Honorary Secretary.

Metropolitan Counties Branch: Marylebone Division.—A general meeting of the Division will be held at the rooms of the Royal Society of Medicine, 20, Hanover Square, W., on Thursday, April 30th, at 5 o'clock, p.m. Agenda: (1) Minutes. (2) Letters. (3) To receive the report of the Executive Committee with reference to complaints received from the Hampstead Division and the Westminster Division and a complaint referred from the Central Ethical Committee in regard to the conduct of certain members of the Marylebone Division. (4) Any other business.—Donald Armour, Honorary Secretary, 89, Harley Street, W.

Metropolitan Counties Branch: Richmond Division.—The annual meeting and dinner of this Division will take place on Wednesday, May 13th, at the Sun Hotel, Kingston, at 6.30 p.m.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Midland Branch: Leicester and Rutland Division.—A meeting of the Division will be held at the Leicester Infirmary on Wednesday, April 29th, at 4.15 p.m. Agenda: Minutes of previous meeting. Clinical cases (medical) to be shown in the wards of the infirmary. Any other business.—Wilfred E. Gibbons, Honorary Secretary, 1, Charles Street, Leicester.

South-Eastern Branch.—The annual meeting of this Branch will be held at Dover on Thursday, June 18th, Dr. M. Kirkby Robinson, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch). Nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary may be sent to the Honorary Secretary on or before May 17th. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by any ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 17th.—H. M. Stewart, Dyffryn, Dulwich, Honorary Secretary.

South-Eastern of Ireland Branch.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on May 6th at 5.30 p.m. Agenda: (1) Minutes. (2) Letters of apology. (3) Correspondence. (4) Election of office-bearers. (5) Dinner at 6.30, towards which members of the local Division are expected to contribute 5s. each. (6) Any other business.—J. Quirke, Honorary Secretary, Piltown.

South Midland Branch.—Nominations for the office of Representative on the Central Council should be sent to me not later than May 18th, in accordance with By-law 25.—E. Harries Jones, Honorary Secretary.

Southern Branch: Winchester Division.—The spring meeting of this Division will be held at the Royal Hants County Hospital, Winchester, at 3.30 p.m. on Tuesday, April 28th. Agenda: (1) Lieutenant-Colonel Firth, R.A.M.C. (Chairman), will make remarks on Some Practical Points in Disinfection by Formaldehyde, and open up a discussion as to whether disinfection of a room is necessary or consistent with modern views as to etiology of infectious diseases. (2) Dr. Bodington will show cases. (3) Mr. Godwin will show cases and pathological specimens. (4) The Chairman will move that the recommendations of the Executive Committee on matters referred to the Division (see Supplement, February 22nd, 1908) be adopted. (5) Dr. Harman will propose (*a*): "That the election of officers to the Division be assimilated to that of the Branch—namely, with the notice of the summer meeting a voting paper, containing the names of candidates proposed by

the Executive Committee, be sent to each member, who can nominate any others or vote for those proposed," and, if the above be approved, (*b*) "That the by-laws be altered accordingly." (6) Dr. Hoyle will make remarks on the recent circular letter of the Hants County Council respecting the Midwives Act, 1902 and the suspension of midwives in cases of infection, and solicit an expression of opinion with regard to the propriety of acceding to the council's request. (7) The minutes of the Executive Committee will be read and confirmed.—H J. Godwin, Honorary Secretary and Treasurer, 35, Southgate Street, Winchester.

Staffordshire Branch.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 30th. The President, Mr. J. T. Hartill, will take the chair at 5 25 p.m. Business: Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper by E. Deanesly, F.R.C.S.: Cases Illustrating the Use of the Cystoscope, the Ureteral Catheter, and the Urinary Separator. (5) Paper by Dr. Edge: Gynaecological Surgery. (6) Exhibition of pathological specimens, etc. Dinner at 7 p.m.; charge, 5s. Gentlemen intending to be present at the dinner are requested to intimate their intention not later than April 27th to the Honorary Secretary. A meeting of the Council will be held immediately before the general meeting to fix the date of the annual Council meeting. —G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

Ulster Branch.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 2nd. Members having communications to make to the meeting are requested to send particulars before April 21st to Cecil Shaw, M.D., Honorary Secretary 29, University Square, Belfast.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Geoffrey Price, Surgeon, to the *King Alfred*, April 13th; Harold G. T. Major, Surgeon, to the *Donegal*, April 15th.

Civil Practitioner G. O. Barff has been appointed Surgeon and Agent at Rhosneiger, April 15th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel H. K. Allport, M.D., is placed on temporary half-pay, on account of ill-health, April 22nd; he retires on retired pay from the same date. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He has no war record in the Army Lists.

Lieutenant-Colonel D. F. Franklin retires on retired pay, April 22nd. His commissions are dated:—Surgeon, July 31st, 1880; Surgeon-Major, July 31st 1892; and Lieutenant-Colonel, July 31st, 1900. He served in the South African war in 1899-1900 and was present in operations in the Orange Free State (including actions at Paardeberg and Poplar Grove), and at various times in the Transvaal (including actions near Johannesburg and Pretoria, and at Rhenoster); he has the Queen's medal with three clasps.

ARMY MEDICAL SERVICE.

Surgeon-General W. J. Charlton is placed on retired pay, April 11th. He entered the service as an Assistant Surgeon, April 1st, 1871; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; was granted the rank of Lieutenant-Colonel, April 1st, 1891; was made Brigade Surgeon-Lieutenant-Colonel, May 2nd, 1895; Colonel, July 1st, 1899; and Surgeon-General, August 11th, 1903. He has no war record in the Army Lists.

Colonel C. Seymour, M.B., is placed on retired pay, April 12th. He was appointed Surgeon, August 4th, 1878; Surgeon-Major, August 4th, 1890; granted the rank of Lieutenant-Colonel, August 4th, 1898; and made Surgeon-Colonel, June 21st, 1905. He served with the Soudan expedition in 1885 (medal with clasp and Khedive's bronze star), and with the Soudan Frontier Field Force in 1885-6, including the action at Giniss. He was appointed Physician and Surgeon at Chelsea Hospital, June 3rd, 1904.

Colonel J. C. Dorman, C.M.G., M.B., is promoted to be Surgeon-General, vice W. J. Charlton, April 11th. His commissions are thus dated: Surgeon, March 31st, 1875; Surgeon-Major, March 31st, 1887; Surgeon-Lieutenant-Colonel, March 31st, 1895; and Colonel, August 11th, 1903. He served in the Afghan war in 1878-9, being present at the actions of Ali Khel and Shutargardan (medal); in the Egyptian war in 1882 (medal and Khedive's bronze star); and in the South African war in 1899-1902, when he had charge of a general hospital, and was Principal Medical Officer of a Division and Sections on the lines of communication; he was present in operations in the Orange Free State (including actions at Paardeberg, Poplar Grove, and Driefontein), in the Transvaal (including the action at Zilikats Nek), and again in the Orange River Colony and the Transvaal; he was mentioned in dispatches, granted the Queen's medal with four clasps and the King's medal with two clasps, and made C.M.G.

Lieutenant-Colonel A. Peterkin, M.B., from the Royal Army Medical Corps, to be Colonel, vice J. C. Dorman, C.M.G., M.B., April 11th. He was appointed Surgeon, July 31st, 1880; Surgeon-Major, July 31st, 1892; and Lieutenant-Colonel, July 31st, 1900. He was in the Boer war in 1881, and in the South African war in 1902, when he took part in operations in the Transvaal, the Orange River Colony, and Cape Colony, and received the Queen's medal with four clasps.

ARMY MEDICAL RESERVE OF OFFICERS.

The notification in the *Gazette* of March 3rd, 1908 that Surgeon-Captain S. M. Sloan, M.D., ceased to belong to the Army Medical Reserve of officers, is cancelled.

Surgeon Lieutenant-Colonel F. H. Appleby, having reached the age for retirement, ceases to belong to the Army Medical Reserve of Officers, April 2nd.

Surgeon-Captains G. Melville, M.B., and L. W. Puckett to be Surgeon-Majors, April 4th.

INDIAN MEDICAL SERVICE.

Colonel P. H. Benson, M.B., has been appointed Surgeon-General with the Government of Madras, in the room of Surgeon-General W. R. Browne, M.D., C.I.E., who has retired. Surgeon-General Benson entered the Madras Medical Department as an assistant Surgeon, March 31st, 1874, and became Colonel, October 11th, 1904. He has no war record in the Army Lists.

The undermentioned Majors are promoted to be Lieutenant-Colonels from March 31st: J. R. Roberts, M.B., J. G. Hogel, M.B., F. W. Gee, K. Prasad, P. W. O'Gorman, W. H. Gray, H. C. L. Arnim, G. S. Thomson, M.B., F. C. Pereira, M.B. Their previous commissions are dated: Surgeon-Captain, March 31st, 1888; Major, March 31st, 1900. Their war records are as follows: Lieutenant-Colonel Roberts—Chin-Lushai expedition, 1889-90 (medal with clasp); Hunza-Nagar expedition, 1891-2, as Principal Medical Officer, including the capture of Nilt Fort (mentioned in dispatches, clasp). Lieutenant-Colonel Gee—Chitral Relief Force, 1895 (medal with clasp); North-West Frontier of India campaign, 1897-8 (clasp); China war, 1900 (medal); East Africa 1903-4, as Medical Officer at the base (mentioned in dispatches, medal with clasp). Lieutenant-Colonel Prasad—Manipore expedition, 1891 (medal with clasp); Isazai expedition, 1892; North-West Frontier of India campaign, 1897-8 (medal with clasp); Tirah expedition (clasp). Lieutenant-Colonel O'Gorman—The two Miranzai expeditions in 1891 (medal with clasp). Lieutenant-Colonel Gray—North-West Frontier of India campaign, 1897-8 (medal with clasp). Lieutenant-Colonel Thomson—With the Reserve Brigade of the Chitral Relief Force, 1895; China war, 1900 (medal).

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns including London, 7,955 births and 4,748 deaths were registered during the week ending Saturday last, April 18th. The annual rate of mortality in these towns, which had been 17 4, 16 8 and 15.4 per 1,000 in the three preceding weeks, further declined last week to 15.2 per 1,000. The rates in the several towns ranged from 7 3 in Willesden, 7.7 in Burton-on-Trent, 8 4 in Handsworth (Staffs), 8 7 in Walthamstow and in Grimsby, and 9 8 in East Ham, to 20 4 in Liverpool, 20 6 in Stockton-on-Tees, 20.9 in Oldham, 21 7 in Preston, 21 9 in Rhondda, 22 5 in Coventry, 22 7 in Tynemouth, and 24.2 in Huddersfield. In London the rate of mortality was 14.7 per 1,000, while it averaged 15.4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1 2 per 1,000 in the seventy-six towns; in London this death rate was equal to 1 3 per 1,000, while among the other large towns the death-rates from the principal infectious diseases ranged upwards to 3.0 in Norwich, 3 1 in Preston, 3 3 in Barrow-in-Furness, 3 8 in Reading, 3 9 in Birkenhead, and 6 9 in Stockton-on-Tees. Measles caused a death-rate of 1.1 in Hornsey, 1 3 in Reading, 2 0 in Salford, 2.6 in Birkenhead, 2 7 in Preston, and 6.9 in Stockton-on-Tees; scarlet fever of 1 1 in Walsall; diphtheria of 1 5 in West Bromwich; and whooping-cough of 1 1 in Hornsey, 1.2 in Aston Manor, 1.3 in Sunderland, 1 5 in Bootle and in Sheffield, 1 9 in Reading, and 2 5 in Barrow-in-Furness. The mortality from enteric fever and from diarrhoea showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet-fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital which had been 3,229, 3,121, and 2 972 at the end of the three preceding weeks, had further declined to 2 837 at the end of last week; 328 new cases were admitted during the week, against 355, 315, and 297 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday, April 11th, 1 927 births and 663 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.5, 19.4, and 19.7 per 1,000 in the three preceding weeks, declined again to 18.8 per 1,000, but was 3 4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14 2 in Leith and 14 8 in Perth to 19 5 in Dundee and 21.1 in Glasgow. The death-rate from the principal infectious diseases averaged 2 5 per 1,000 in these towns, the highest rates being recorded in Glasgow and Aberdeen. The 347 deaths registered in Glasgow included 32 which were referred to measles, 2 to scarlet fever, 6 to diphtheria, 7 to whooping-cough, 5 to cerebro-spinal meningitis, and 4 to diarrhoea. Five fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh; 5 of scarlet fever in Dundee; 2 of measles in Paisley; and 2 of cerebro-spinal meningitis in Leith.

During the week ending Saturday, April 18th, 955 births and 578 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19 4, 19 7, and 18 8 per 1,000 in the three preceding weeks, further declined last week to 16 4 per 1,000, but was 1.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12 9 in Leith and 13 8 in Edinburgh to 16.7 in Greenock and 18 0 in Glasgow. The death-rate from the principal infectious diseases averaged 2 2 per 1,000 in these towns, the highest being recorded in Glasgow and Paisley. The 296 deaths registered in Glasgow included 23 which were referred to measles, 2 to scarlet fever, 13 to whooping-cough, 4 to cerebro-spinal meningitis, and 6 to diarrhoea. Six fatal cases of measles were recorded in Edinburgh; 2 of diarrhoea in Dundee; 2 of measles in Aberdeen; and 5 of measles in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 11th, 572 births and 424 deaths were registered in six of the principal Irish towns, as against 689 births and 473 deaths in the preceding period. The annual death-rate in these towns, which had been 23 0, 31 4, and 19 4 per 1,000 in the three preceding weeks, rose to 26 8 per 1,000 in the week under notice, this figure being 11 4 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 21 4 in Belfast and 22 5 in Dublin to 31.6 in Londonderry and 37 0 in Waterford. The zymotic death-rate in the same six Irish towns averaged 3.2 per 1,000, or 0.4 per 1,000 lower than the preceding period, the highest figure—1 7—being recorded in Waterford, while Cork and Limerick registered no deaths under this heading at all. The mortality in Dublin included 5 deaths from influenza, the figures for the preceding three weeks being 8, 14, 7.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80, increasing to £100 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence, £70 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £ 00 per annum.

BRISTOL GENERAL HOSPITAL.—Assistant House-Physician. Salary at the rate of £60 per annum.

CARDIFF INFIRMARY GENERAL HOSPITAL.—House-Physician. Honorarium, £30 for six months.

CLINICAL RESEARCH ASSOCIATION, Watergate House, Adelphi, W.C.—Assistant Director of the Laboratory. Initial salary, £250 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—(1) Honorary Anaesthetist. (2) House-Physician. (3) House-Surgeon Salary for (2) and (3) at the rate of £60 per annum.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant Casualty Medical Officer. (2) House-Surgeon. (3) House-Physician. Salary, £20 each for six months and washing allowance.

KING EDWARD VII SANATORIUM, Midhurst.—Senior Assistant Medical Officer. Salary, £150 per annum.

LAMBETH WORKHOUSE, S.E.—Assistant Medical Officer. Salary, £125 per annum.

LANCASTER: COUNTY LUNATIC ASYLUM.—Assistant Medical Officer for summer months. Salary, 3 guineas per week.

LEEDS GENERAL INFIRMARY.—(1) House-Physician. (2) Ophthalmic House-Surgeon.

LINCOLN COUNTY HOSPITAL.—Junior Male House-Surgeon. Honorarium, £3 for six months.

LONDON HOSPITAL, Whitechapel, E.—One Medical and two Surgical Registrars. Salary, £100 per annum each.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Surgeon.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MANOR VALLEY SANATORIUM, Peebles-shire.—Resident Physician (male).

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Anaesthetist.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary, £150 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary at the rate of £50 per annum.

PRESTON COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—(1) Physician to Out-patients. (2) Assistant Resident Medical Officer for four months and then to Senior Resident. Salary at the rate of £50 and £60 per annum respectively.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—Morning House Anaesthetist. Honorarium, £50 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon (male). Salary, £100 per annum.

SEAMEN'S HOSPITAL, Greenwich.—(1) Assistant Physician. (2) Assistant Physician or Surgeon for Diseases of the Throat, Nose, and Ear.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £50 per annum.

SINGAPORE MUNICIPALITY.—Assistant Municipal Health Officer. Salary, $4,200, rising to $4,800 per annum.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £150, rising to £200 per annum.

SUNDERLAND INFIRMARY.—Male House-Surgeon. Salary at the rate of £80 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Insch, co. Aberdeen; Birr, King's County; Tintern, co. Monmouth; and Barnoldswick, co. York.

APPOINTMENTS.

BRIDE, T. M., M.B., Ch.B.Vict., Junior House-Surgeon to the Royal Eye Hospital, Manchester.

CLEMENTS, Ernest, M.B., B.Ch., R.U.I., District Medical Officer and Public Vaccinator to the Driffield Union.

DUNN, Arthur Gibson, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Resident Medical Officer to the Newcastle-upon-Tyne Dispensary.

EDWARDS, H. J., M.D.Durh., D.P.H., Certifying Factory Surgeon for the Lynton District, co. Devon.

FERGUSON, J. M., L.R.C.P. and S., D.P.H., Certifying Factory Surgeon for South Burnley, vice Thos. Dean, M.D., deceased.

FOTHERGILL, W. E., M.A., B.Sc., M.D., Honorary Assistant Gynaecological Surgeon to the Manchester Royal Infirmary.

FULLERTON, A. H., M.B.Durh., District Medical Officer of the Glanford Brigg Union.

GREENWOOD, W. O., M.B., B.S.Lond., District Medical Officer of the Great Ouseburn Union.

HARRIS, D. R., M.R.C.S., L.R.C.P., District and Workhouse Medical Officer of the Falmouth Union.

HARRISON, T. S., M.R.C.S., L.R.C.P., Senior House-Surgeon to the Royal Eye Hospital, Manchester.

HAWKYARD, A., M.D.Durh., District Medical Officer of the Hunslet Union.

HOWE, C. W., M.B., Certifying Factory Surgeon for the Haddenham District, co. Cambs.

LAWSON, T. C., M.R.C.S., Medical Officer of Health to the Marlborough Rural District.

MCCOMISKEY, A., M.B., B.Ch., R.U.I., Certifying Factory Surgeon for the Killough District, co. Down.

ROBERTS, W. R. S., M.B., B.S.Birm., District Medical Officer of the Ongar Union.

SKINNER, Alex. H., M.B., Ch.B.Aberd., House Surgeon at the Great Northern Central Hospital, London.

SWEET, G. Bruton, M.B., C.M.Syd., Physician to Auckland Hospital, N.Z.

VALENTINE, William, L.R.C.P. and S., Police-Surgeon for Bushy Wood, Earlestown, and Newton Sections, Lancashire Constabulary.

WILLIAMS, Chisholm, F.R.C.S.Edin., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., Medical Officer to the *X*-Ray Department at St. John's Hospital for Diseases of the Skin, Leicester Square.

WYNNE, J. D., M.B., B.Ch.Dub., Certifying Factory Surgeon for the Clonmel District, co. Tipperary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

COWIE—BAIRD.—At Invercargill, N.Z., on January 10th, 1908, by Rev. James Baird (father of the bride), James Alexander Cowie, B.Sc., M.B., M.R.C.S.Eng., etc., of Masterton, to Helen Stephen Baird, B.A., M.B., L.R.C.P.Edin., etc., of Invercargill.

SILVER WEDDING.

BRAND—FERGUSON.—On April 24th, 1883, at Fetteresso Parish Church, Stonehaven, Kincardineshire, N.B., by the Rev. John Watt, Alexander Theodore Brand, M.B. and C.M., Invery, Great Driffield, East Yorks, to Amelia, third daughter of the late Colonel W. B. Ferguson, Aberdeen, N.B.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: Colonel David Bruce, C.B.: Malta Fever. Mr. Thomas H. Kellock: Appendicitis a Cause of Pyosalpinx.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Papers: Dr. David Arthur: The Diagnosis of Chest Diseases by *X* Rays. Dr. Redmond Roche: Notes on two recent Cases of Extra-uterine Fetation.

ROYAL SOCIETY OF MEDICINE:
THERAPEUTICAL AND PHARMACOLOGICAL SECTION, Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m.—Paper: Dr. Leonard Guthrie: Remarks on Rheumatism and Chorea in Children.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8.30 p.m.—Papers: Dr. Herbert Spencer: The Advantage of Abdominal and Pelvic Examination in Pregnancy. Dr. Seymour Taylor: Some Neglected Remedies.

BOOKS, ETC., RECEIVED.

Hermaphroditismus beim Menschen. Von F. L. von Neugebauer. Leipzig: Dr. W. Klinkhardt. 1908. M. 40.

Insanity: its Causes and Prevention. A Popular Treatise. By C. Williams, L.R.C.P., L.R.C.S., L.S.A. London: The Ambrose Co., Ltd. 1908. 2s. 6d.

Ueber die klinische Bedeutung der Opsonine. Von E. C. Morland, M.B., B.Sc.Lond. Samaden: Engadin Press Co. 1908.

Health at its Best *v.* Cancer. By R. Bell, M.D., F.F.P.S. London and Leipzig: T. Fisher Unwin. 1908. 5s. Also No. 12 New Series. M.A.B. 1d.

Nerven und Seele. Von Dr. P. Kronthal. Jena: G. Fischer. 1908. M. 10.

Knaves or Fools? By C. E. Wheeler, M.D., B.A., B.Sc. London: J. Hogg. 1908. 2s. 6d.

Injuries of Nerves and their Treatment. By J. Sherren, F.R.C.S.Eng. London: J. Nisbet and Co., Ltd. 1908. 5s.

The Diagnosis and Treatment of Pulmonary Tuberculosis. By F. M. Pottenger, A.M., M.D. London: Baillière, Tindall, and Cox. 1908. 15s.

The Influence of Alcohol and Other Drugs on Fatigue. The Croonian Lectures delivered at the Royal College of Physicians. 1906. By W. H. R. Rivers, M.D., F.R.C.P. London: E. Arnold. 1908. 6s.

Notable Scottish Trials. A. J. Monson. Edited by J. W. More, B.A.Oxon., Advocate. Glasgow and Edinburgh: W. Hodge and Co.; and London: Sweet and Maxwell. 5s.

A Handbook of Clinical Microscopy. By M. Kesava Pai, M.B., C.M., and P. S. Ramachandrier. Bombay: The *Times* Press; and Bangalore: Moni and Co. 1907. Rs. 5.8.

The Soul of Spain. By H. Ellis. London: A. Constable and Co., Ltd. 1908. 7s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	WINCHESTER DIVISION, *Southern Branch*, Royal Hants County Hospital, Winchester, 3.30 p.m.
29 WEDNESDAY	LONDON: Committee on Ophthalmia Neonatorum, 12 noon. CENTRAL COUNCIL, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. BATH AND BRISTOL BRANCH, Bath. LEICESTER AND RUTLAND DIVISION, *Midland Branch*, Leicester Infirmary, 4.15 p.m.
30 THURSDAY...	MARYLEBONE DIVISION, *Metropolitan Counties Branch*, Rooms of the Royal Society of Medicine, 20, Hanover Square, W., 5 p.m. STAFFORDSHIRE BRANCH, General Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m.: Council Meeting, immediately before General Meeting; Dinner, 7 p.m.
MAY.	
1 FRIDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, Bethnal Green Infirmary, 4 p.m.
2 SATURDAY ...	ULSTER BRANCH, Londonderry.
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Organization and Finance Committee, Liverpool Medical Institution, 4.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also Meeting of Branch Council, Victoria Hotel, Kilkenny, 5.30 p.m.; Dinner, 6.30 p.m.
7 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Annual General Meeting, Bethlem Royal Hospital, Lambeth Road, S.E., 4 p.m.
8 FRIDAY ...	
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
13 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Branch Council, Liverpool Medical Institution, 4.30 p.m. RICHMOND DIVISION, *Metropolitan Counties Branch*, Annual Meeting and Dinner, Sun Hotel, Kingston, 6.30 p.m.
14 THURSDAY...	LONDON: Hospitals Committee, 1.15 p.m. LONDON: Joint Hospitals Committee, 3 p.m. LONDON: Metropolitan Counties Branch Council, 5 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch.*
15 FRIDAY ...	
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	
20 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Annual Meeting, Cardiff.
21 THURSDAY...	
22 FRIDAY ...	METROPOLITAN COUNTIES BRANCH, Annual Dinner, Imperial Restaurant, Regent Street, W., 7.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d for abroad

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 2ND, 1908.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting of the Branch was held at Cheltenham Hospital on April 16th. In the unavoidable absence of the President through illness, Dr. H. BRAMWELL took the chair, and thirty-three members were present.

Minutes.—In passing the minutes of the last meeting the CHAIRMAN alluded to the fact that of 219 medical men resident in the area of the Branch, 139 were members of the Association.

Vaccine Therapy.—Dr. COLLINS read a most interesting paper on some observations on opsonins and vaccine therapy (based on 1,700 observations of the opsonic index), illustrated by cases, charts, microscopic and lantern slides. He finally drew three conclusions: (1) That the restoration to health is dependent on at least two variable factors—the natural resources of the patient and the virulence of the infective microbe, and that in consequence the issue must be always to some extent problematical; (2) that the opsonic index admits of being accurately determined by Wright's method; (3) that vaccine therapy, when properly applied, places each individual in the best possible condition for a cure. The paper was discussed by Dr. H. BRAMWELL, Mr. CUTHBERT, Mr. BLAKENEY, and Mr. AFFLECK; and Dr. COLLINS replied.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

AN ordinary meeting was held at the White Hart Hotel, Boston, on Tuesday, April 14th, at 2.30 p.m., Dr. MILLER in the chair. There were also present: Drs. Allan (Skegness), Crofton (Sutton Bridge), Mann (Revesby), Moxham (Stickney), Pilcher, Slocock (Spilsby), South, and Wilson. Apologies for non-attendance from Drs. Mason, Steil, White, Witham, and Wrinch.

Confirmation of Minutes.—The minutes were read and confirmed.

Branch Expenditure.—Arising out of the minutes, the question of the payment of patients was discussed. The SECRETARY reported that he had received from Mr. Smith Whitaker a copy of the resolution of the Organization Committee in respect to Division and Branch expenditure. This included payments to patients for (1) travelling expenses, (2) refreshment, (3) honorarium for attending.

School Certificates in Case of Illness.—Proposed by Dr. SOUTH and seconded by Dr. ALLAN: That the Secretary write to the Educational Authorties asking them to pay for the certificates required in the case of children not attending through ill-health. Carried unanimously.

Notification of Births Act.—After considerable discussion the following resolution was unanimously adopted:

> That while agreeing with the principle of the earlier notification of births, we are unanimously of opinion that it should be the duty of the father or relations or housekeeper to be responsible for the notification, and not of the medical man to be responsible.

The Secretary was asked to forward this to the local authorities.

Medical Inspection of School Children.—After discussion it was agreed unanimously:

> That the school medical officers be the general practitioners of the district.

General Regulations for School Medical Officers.—These (see SUPPLEMENT, December 21st, 1907) were thoroughly discussed and unanimously adopted.

Medical Examination for Life Insurance.—This was partly discussed, but owing to want of time was adjourned to a subsequent meeting.

Lynn Thomas and Skyrme Fund.—It was realized that this was a personal matter, and best left to the wishes of individual members. A general feeling of sympathy was expressed at the hardships of the two medical men concerned.

Case.—Dr. WILSON showed a radiogram of a fracture dislocation of the left humerus occurring in a man of 58 years, who was thrown out of a trap. It clearly demonstrated a fracture of the surgical neck, with abduction of the upper fragment. A curious fact was the apparent lengthening of the arm. Under an anaesthetic the dislocation was reduced and a definite crepitus felt after the reduction.

Central Emergency Fund.—The SECRETARY called attention to the Central Emergency Fund, especially appealing to those who were members of any medical defence society.

Tea.—Nine members had tea in the hotel afterwards.

LANCASHIRE AND CHESHIRE BRANCH.

Central Council of the Association.

DR. G. H. BROADENT (Manchester) writes: As you have given publicity to the fact that there are four candidates for the above through the report of the Salford Division, perhaps you will allow me to say that I intend offering myself as a candidate.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Cambridge and Huntingdon Branch.—*Election of Member of the Central Council.*—Nominations of candidates for election to the Central Council should be forwarded to the Honorary Secretary not later than Monday, May 4th. The Branch is entitled to elect one member.—J. E. Apthorpe Webb, Honorary Secretary, Grafton House, Cambridge.

Dorset and West Hants Branch.—The spring meeting of this Branch will be held in the Hotel Mont Dore, Bournemouth, on Wednesday, May 27th. Members desirous of reading papers, showing cases, or exhibiting specimens are requested to communicate, not later than Friday, May 15th, with James Davison, Honorary Secretary, Streateplace, Bath Road, Bournemouth.

Dorset and West Hants Branch and West Somerset Branch.—Nominations for the office of a Representative on the Central Council should be sent to me on or before May 9th next, in accordance with By-law 25.—James Davison, Streateplace, Bath Road, Bournemouth.

Dundee, Perth, and Stirling Branches.—*Election of Representative Member of the Central Council.*—Nominations, which must be made by a Division or by three members, must be sent in writing on or before May 9th to R. C. Buist, M.D., 166, Nethergate, Dundee. The present Representative is ineligible for re-election.—R. C. Buist, Dundee; W. A. Taylor, Perth; J. E. Moorhouse, Stirling.

East Anglian Branch.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. Nicholson, Honorary Secretary.

Gloucestershire Branch.—In accordance with By-law 22, the Secretary requests that members wishing to nominate any candidate for members of this Branch to the Central Council of the Association will send the candidate's name to him before May 2nd. Mr. C. F. Cuthbert, the present member, is eligible for re-election.—D. E. Finlay, Southville, Park Road, Gloucester, Honorary Secretary.

Lancashire and Cheshire Branch: Leigh Division.—The annual meeting of the members of this Division will be held at the Co-operative Rooms, Ellesmere Street, at 8.30 p.m., on Thursday, May 21st. Agenda: The annual report; election of officers for the ensuing year (the Honorary Secretary does not seek re-election); consideration of Hospital and Insurance Questions.—J. Sackville Martin, Honorary Secretary.

Lancashire and Cheshire Branch: Warrington Division.—The annual general meeting of this Division will be held at the Warrington Infirmary on Tuesday, May 5th, at 4 p.m. Agenda: Election of officers, Committee, Branch Council Representative; and other business.—T. A. Murray, Honorary Secretary.

Metropolitan Counties Branch.—The annual dinner of the Branch Council will be held on Friday, May 22nd, at the Imperial Restaurant, Regent Street, W., at 7 30 p.m., Dr. Frederick Taylor, President, in the chair. Tickets, price 7s. 6d. (not including wines), may be obtained from the Honorary Secretary, Dr. Frederick J. McCann, 5, Curzon Street, Mayfair, W.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. McCann, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The annual general meeting of this Division will be held in Bethlem Royal Hospital, Lambeth Road, S.E., on Thursday, May 7th, 1908, at 4 p.m. The following names are proposed by the committee as office-bearers during the session 1908-9:—*Chairman*, W. A. Atkinson, M.D.; *Vice-Chairman*, A. M. Hickley, M.R.C.S.; *Representative at Representative Meeting*, R. Esler, M.D.; *Representatives on the Branch Council*, C. Sangster, M.R.C.S., and the Honorary Secretary (*ex-officio*); *Honorary Secretary*, Herbert French, M.D.; *Executive Committee*, R. Capes, M.R.C.S., E. A. Edelsten, M.B., J. W. J. Oswald, M.D., H. J. Spon, M.R.C.S., W. E. Sturges-Jones, M.R.C.S., Herbert Taylor, M.B. Any member of the Division who may wish to propose any other candidate or candidates for any of the above offices should send the name of such candidate or candidates, duly seconded, together with the written consent of each nominee, to the Honorary Secretary, 26, St. Thomas's Street, London Bridge, S.E., on or before Monday, May 4th, 1908. Dr. Hyslop will deliver an address upon the Borderland of Insanity, and several eminent alienists have been invited to take part in the discussion.—Herbert French, Honorary Secretary.

Metropolitan Counties Branch: Richmond Division.—The annual meeting and dinner of this Division will take place on Wednesday, May 13th, at the Sun Hotel, Kingston, at 6.30 p.m.—Charles Blair, F.R.C.S., Matson Lodge, Richmond; A. E. Evans, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

Metropolitan Counties Branch: St. Pancras and Islington Division.—An ordinary meeting will be held at 4 o'clock on Tuesday, May 5th, at St. Mary's (Islington) Infirmary, Highgate Hill, N. Dr. Arthur Robinson will give a demonstration of Clinical Cases.—W. Griffith, Honorary Secretary.

South-Eastern Branch.—The annual meeting of this Branch will be held at Dover on Thursday, June 18th, Dr. M. Kirkby Robinson, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch). Nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary may be sent to the Honorary Secretary on or before May 17th. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by any ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 17th.—H. M. Stewart, Dyffryn, Dulwich, Honorary Secretary.

South-Eastern Branch: Reigate Division.—The annual meeting of the Reigate Division will be held at the White Hart Hotel, Reigate, on Thursday, May 14th, at 5 30 p.m., Dr. Bromley in the chair. Preceded at 5 p.m. by the annual meeting of the Reigate and District Medical Society. The two Societies will dine together after the meeting. Agenda: (1) The minutes of last meeting. (2) The Chairman's report (Medical Law Reform, Referendum, etc.). (3) To elect the officers of the Division for the ensuing year. (4) To discuss reports on matters referred to the Division by the Central Committees, viz: (*a*) On the definition of the term "hospital"; (*b*) on Medical Examinations for Life Insurance; (*c*) on the Prevention of Corruption Act, 1906, as affecting Medical Practitioners. These three reports will be found in the Supplement to the British Medical Journal for February 22nd, and members are requested to read them up beforehand. In particular, members are requested to bring with them to the meeting, or to send to the Secretary, answers to the questions of fact asked for by the Medico-Political Committee *re* life insurance companies and the fees paid by them for medical examinations. The Committee regrets that the discussion on these reports, which are of much importance to the profession, will not allow time for papers on medical or surgical subjects. All members of the South-Eastern Branch are invited to attend and to introduce professional friends. Dinner, 7 p.m.; charge, 7s., exclusive of wine. The Honorary Secretary will be glad if members will inform him if they will be able to attend the meeting, and whether they will stay to the dinner.—John G. Ogle, Honorary Secretary, Tower House, Reigate.

South-Eastern of Ireland Branch.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on May 6th at 5 30 p.m. Agenda: (1) Minutes. (2) Letters of apology. (3) Correspondence. (4) Election of office-bearers. (5) Dinner at 6.30, towards which members of the local Division are expected to contribute 5s. each. (6) Any other business.—J. Quirke, Honorary Secretary, Piltown.

South Midland Branch.—Nominations for the office of Representative on the Central Council should be sent to me not later than May 18th, in accordance with By-law 25.—E. Harries Jones, Honorary Secretary.

South Wales and Monmouthshire Branch.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 11th at the annual meeting at Newport. Nominations in writing, signed by not less than three members, must be sent not later than May 21st to the Branch Secretary, 21, St. Andrew's Crescent, Cardiff.—W. Mitchell Stevens, Cardiff.

Ulster Branch.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 2nd.—Cecil Shaw M.D., Honorary Secretary, 29, University Square, Belfast.

British Medical Association.

REPORT

OF THE

SPECIAL FINANCE INQUIRY COMMITTEE.

Showing also the Resolutions of the Annual Representative Meeting, 1907, *with reference to the Conclusions and Recommendations of the Committee, and Report of subsequent action by the Council with reference to certain Recommendations.*

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PREFATORY NOTE.

CONSIDERATION OF REPORT OF FINANCE INQUIRY COMMITTEE BY THE ANNUAL REPRESENTATIVE MEETING AT EXETER, AND CONSEQUENT

REVISION OF THE REPORT.

THE Finance Inquiry Committee having been unable to issue its Report to the Representatives and to the Divisions until a few days before the Annual Representative Meeting at Exeter, in July, 1907, that Meeting decided that it was not in a position to arrive at definite conclusions.

The Meeting considered a full discussion by the Representatives advantageous, however, both for their own assistance in subsequently placing the matter before their Divisions, and also in order that, upon details of administration dealt with in the Recommendations, the Council, without awaiting the results of the deliberations of the Divisions, should be in possession of the opinion of the Representative Meeting, and enabled to act at once at its discretion.

The Meeting reappointed the Committee for the purpose of revising the Report and issuing it to the Divisions.

In this revision the following changes have been made:

(1) For convenience the Conclusions and Recommendations are placed at the commencement of the Report.

The Meeting considered the Recommendations under three heads—namely:

(*a*) Those which embodied important declarations of general policy governing the finances and administration of the Association.

Upon these the Meeting expressed its approval or otherwise, and directed that they be specially referred for the consideration of the Divisions.

(*b*) Those which were found to be in accordance with previous pronouncements of the

Representative Meeting made after reference of matters to Divisions.

Concerning these it was deemed sufficient to reaffirm the former pronouncements.

(*c*) Those which, in the opinion of the Meeting, were matters of administration purely and could with propriety be referred at once to the Council, as the chief executive body of the Association, without awaiting any pronouncement by the Divisions.

Upon these the Meeting gave its opinion for the information of the Council, and referred the matter to the Council for consideration and such action as that body deemed expedient.

(*In printing the Recommendations for the purpose of the present Report the decision of the Meeting as to each is inserted after the Recommendation.*)

(2) The text of the Report has been completed by the addition, in Part VI (page 221), of paragraphs explaining the reasons for which the Committee made certain Recommendations relative to the Secretarial Departments.

(3) Dr. Wolstenholme's Minority Report has been incorporated (see page 221).

(4) The Council having in the interval since the Representative Meeting taken into its consideration those Recommendations which were referred to it as above stated, a note is appended to each of the Recommendations in question showing the decisions of the Council with reference thereto.

It will be seen that these Recommendations were approved by the Council, except that certain amendments were made in Recommendations 13, 15, and 16, and that the consideration of Recommendation 21 has been postponed until the information contained in the Balance Sheet for the year 1907 should be available.

(5) The Committee finds that a resolution adopted at the Meeting held on June 11th, 1907, was, through an oversight, omitted when the Recommendations were collated. While considering it inconvenient to insert another Recommendation at this stage among those which were discussed by the Annual Representative Meeting, the Committee is of opinion that the additional Recommendation in question is of such importance that it ought not to be lost sight of.

It is therefore appended here, as follows:

Additional Recommendation.

That the control of advertisements in the JOURNAL in all matters of professional import be vested in the Medical Secretary's department, and that the Medical Secretary should keep in touch with the General Secretary in this matter.

J. A. MACDONALD,
Chairman,
Finance Inquiry Committee.

April 28th, 1908.

CONCLUSIONS AND RECOMMENDATIONS.

The references to the Committee comprised two subjects for inquiry and report, namely:—

(A) As to the Finances of the Association.
(B) As to the Duties, Staffs, etc., of the General and Medical Secretaries.

The Conclusions and Recommendations of the Committee are stated separately under these two heads.

(A) FINANCES OF THE ASSOCIATION.

I.—CONCLUSIONS.

Causes of Reduction of Surplus partly Temporary, partly Permanent.

1. That the great reduction in the surplus of income over expenditure, shown by comparison of the Balance Sheet for 1905 with those of previous years, was due to the combination of certain accidental circumstances, peculiar to the year, with causes of increase of expenditure of a permanent character, arising from the development of the work of the Association initiated in 1902, which first took full effect in that year.

Chief Factors in Reduction.

2. That the principal factors contributing to reduce the surplus were:—

(*a*) The charging, for the first time in the history of the Association, as an item of "expenditure," the depreciation of £781 in the market value of the investments of the Association.
(*b*) Decreased income from advertisements.
(*c*) Increased expenditure upon Central Meetings of the Association, Council and Committees, Central printing, stationery, etc., and Central secretarial staff.

Charge for Writing Down Investments.

3. That the depreciation of investments was due to the general fall in the market value of first-class securities which occurred during the year, and that, inasmuch as the Association is not likely to be called upon to realise the investments in question in the immediate future, the writing off of this amount is, as affecting the financial position of the Association, a matter of book-keeping purely, and not an item of "expenditure" in the ordinary sense of the term.

4. That this depreciation of the assets of the Association does not affect the question the Committee has under consideration, *i.e.*, whether the resources of the Association were in 1905, or in the future are likely to be, overstrained by the expenditure required for "maintaining and developing the work of the Association for the profession." Omitting the item of £780, the surplus in 1905 would have been £1,640, and the Committee has adopted this as the basis on which to consider the future prospects.

Advertisements.

5. That the decrease in the income from advertisements was due to bad trade and other temporary causes; that there must naturally always be fluctua-

tions from year to year in this item (*e.g.*, in 1905 there were only 52 Journals issued as against 53 in 1904), and that there is every reason to believe that the average annual income from advertisements will in the future exceed that shown by the accounts for 1905.

Expenditure.

6. That the Committee, having closely scrutinised full details of the expenditure of the Association which have been placed before it, finds no evidence of extravagance in administration, the increased charges being directly due to decisions of the Representative Meeting and Council, and the work of the Committees in carrying out those decisions.

7. That, with certain exceptions, to be subsequently mentioned (see Paragraph 9), such decisions, and the consequent increase of expenditure, must be regarded as simply the consistent carrying out of the determination of the Association in 1902 to develop more fully its work for the maintenance of the honour and interests of the profession, and this has been done by applying to these objects a portion of the income which had previously been accumulated in surpluses of about £5,000 per annum.

8. That a large proportion of this increased expenditure must be expected to be permanent in character so long as the Association desires the work in question to be carried out efficiently.

9. That there was expenditure during 1905, due to special circumstances, which ought not to be required in future. These circumstances were:—(1) The unusually great number of Meetings (with requisite printing, etc.) of the Central Executive (Council and Committees) necessary to bring up the arrears of Medico-Political and Ethical work arising from neglect of the work before the adoption of the new constitution. (2) The inevitable difficulty and costliness of carrying on the work during the transition period through which the Central Executive and administrative arrangements were passing.

10. That, on the other hand, the expenditure of the year 1905, as regards Central Staff, particularly in the Medical Secretary's department, was less than, in the opinion of the Committee, will be required in future for the proper development and efficient execution of the work of the Association for the medical profession.

Rebuilding of Premises.

11. That as regards the rebuilding of new premises, the Committee considers that, in view of the charges for central premises which have already been borne by the present generation of the Association, it is not justifiable to request them to defray the cost of the present rebuilding out of the current income of the Association, and that, therefore, this cost (including that of the temporary housing of the Association) should be met by a charge on the assets of the Association in the form of debentures or mortgage and not out of current revenue, and that no provision should be made for repayment out of ordinary funds within the next 25 years

12. That judging by the experience of similar societies the entire cost of rebuilding, including the cost of the temporary housing of the Association, could be raised by debentures issued to Members of the Association at a rate of interest not exceeding 4 per cent.

13. That in the opinion of the Committee the rebuilding of the premises is a satisfactory financial undertaking, apart from the great advantage to the work of the Association, and the economies which may be expected to result from the possession of central premises properly adapted to the work.

Grants to Branches.

14. That under the present system of capitation grants to Branches considerable sums are being locked up in the hands of Branches and withdrawn from the funds available for developing the work of the Association for the profession.

Development of Work as affecting Membership and Income.

15. That the development and efficient execution of the work of the Association for the profession, including all kinds of collective defence, parliamentary work, and ethical work, is calculated, if and when properly brought under the notice of the Association and the profession, to attract new Members and so increase the income.

16. That, taking the Accounts for 1905 as a basis, and making due allowance for the foregoing considerations, it should be practicable for the Association to maintain and develop its work for the benefit of the profession, and to add annually a sum of between £1,000 and £1,500 to its reserve funds.

17. That any additional income that may be derived from subscriptions or other present sources of revenue, should be applied to the maintenance and development of the work of the Association for the honour and interests of the medical profession, until this work is being carried out to the full satisfaction of Members.

Improved Financial Control.

18. That, inasmuch as the increased expenditure has been, as above stated, the direct consequence of decisions of the Association and of the Council and Committees, one of the most important elements in promoting the combination of economy with efficiency must be the improvement of the system of financial control, in order that bodies which are about to decide questions of the policy and administration of the Association may be sufficiently familiar with the financial bearings of such questions.

19. That, from this point of view, the present organisation of the Association is defective in the following respects:—

(*a*) The Representative Meeting has in the past had no organised method of obtaining information on the financial aspects of questions before it;

(*b*) The Balance Sheet, while presented in detail, has not been so arranged as to give the Representative Meeting and Members generally a clear view of the distribution of expenditure in different channels;

(*c*) The Journal and Finance Committee, upon which the Council must rely for advice as to the financial aspects of questions before it, is not so constituted as to secure a broad view of the co-ordination of the work and the consequent best distribution of expenditure in

various directions, the defects in the composition of the Committee being:—

(i) That it is charged with the special supervision of one portion of the work of the Association, namely, the Journal, as well as with the general financial affairs of the Association;

(ii) That there is no provision for the presence on the Committee of the Chairmen of the principal Committees whose work affects income or expenditure;

(*d*) Whereas, for the expeditious transaction of business, it is necessary that Committees should be authorised to give certain instructions, involving expenditure, as a matter of routine, without waiting for explicit sanction from the Council, the "ordinary" expenditure which may thus be incurred has not been defined;

(*e*) Similarly, the necessary authority of the Treasurer to sanction special expenditure in emergency has not been defined, though it has been repeatedly recognised in practice;

(*f*) Whereas, with the development of the executive work, the supervision of detail must, to a great extent, be left to Committees, the Chairmen of Committees, upon whom the Association must rely to assist in checking expenditure, have not had systematically placed before them the necessary financial information.

General Conclusion as to Financial Position and Prospects.

20. Taking a full review of the financial position of the Association, the Committee is of opinion that in the condition of affairs in 1905 there was no ground for "anxiety," and that the prospect for the future is satisfactory.

(A) FINANCES OF THE ASSOCIATION (*continued*).

II.—RECOMMENDATIONS.

Relation of Expenditure to Income.

1. That an annual balance of income over expenditure of between £1,000 and £1,500 should, as far as possible, be maintained, and that a larger sum than this should not be added annually to the reserve funds until the work of the Association for the maintenance of the honour and interests of the profession has been more fully developed and is being carried out to the satisfaction of its Members.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it specially for the consideration of the Divisions.

Financial Provision for Rebuilding.

2. That the cost of rebuilding the central premises, including the cost of temporary housing of the Association pending such rebuilding, should be defrayed by borrowing the necessary capital, preferably by the issue of debentures to Members of the Association.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it specially for the consideration of the Divisions.

3. That it be accepted as a principle that no charge in respect of such loan be made upon the ordinary funds of the Association during the next 25 years.

The Meeting adopted as an Amendment—

3. That the loan for rebuilding be redeemed within 30 years by a sinking fund, or otherwise, coming into operation one year after the issue of the loan.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing amendment of the Recommendation, and approving the same, decided to refer it specially for the consideration of the Divisions.

Improvements in System of Financial Control.

4. That to enable the Representative Meeting duly to consider the financial aspects of questions of policy and administration:—

(*a*) There be placed before it a Report from the Finance Committee on the financial aspects of any proposals involving considerable new expenditure;

(*b*) The form of the Balance Sheet be amended as shown in the Appendix to the Recommendations.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

5. That the Finance Committee of the Association be not charged with the special supervision of the Journal. That the Finance Committee include the Chairmen of the Organisation, Science, Medico-Political, Ethical, Premises and Journal Committees, and two additional Members of the Journal Committee.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, accepted the same as re-affirming the opinion already expressed by the Representative Meeting on the subject.

6. That the "ordinary" expenditure which Committees are authorised to incur without special sanction of the Council, and the power of the

Treasurer to provisionally authorise extra expenditure in cases of emergency, be defined by standing orders of the Council.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

7. That the Chairman of each Committee be furnished quarterly with a statement of all expenses charged in the accounts of the Association as arising out of the work of that Committee during the previous quarter.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

Grants to Branches.

8. That in place of the present system of fixed annual capitation grants to Branches, the amounts granted be at the discretion of the Central Council, but not exceeding 4s. per head per annum, except where Supplementary Grants are given under By-law.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, accepted the same as re-affirming the opinion already expressed by the Representative Meeting.

Economies.

9. That with a view to economy in administration:—

(*a*) The attention of the Council and Committees be drawn to the importance of keeping down the number of Committee Meetings to the minimum consistent with efficient work, and that, to contribute to this end, the work of investigation and action in suitable matters be referred to small Sub-Committees, and the opinions of Members of Committees, on matters of a simple character not requiring discussion, be ascertained when possible by correspondence;

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

(*b*) That the number of Members of the Central Council should be reduced, that the Science Committee be reduced to eight elected and four co-opted Members, and that, after the completion of rebuilding of the premises, the Premises Committee consist of the Honorary Officers of the Association only;

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it specially for the consideration of the Divisions.

(*c*) That the expenses allowed to Members for attendance at the Representative Meeting, Council, and Committees be confined to first-class travelling expenses, at present;

(*d*) That for all documents printed for Committees, Journal type and measure be used, in order to save cost in subsequent reprinting in the Journal.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

9. That as much as possible of the printing be done by the Association.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

10. That, the Annual Exhibition being a central undertaking of the Association, the profit, if any, of the Exhibition go to the funds of the Association; and that a definite grant from the funds of the Association be made to the local Committee, as a contribution to the expenses of the Annual Meeting.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, and approving the same, decided to refer it specially for the consideration of the Divisions.

(B) DUTIES, STAFFS, &c., OF THE GENERAL AND MEDICAL SECRETARIES.

I.—CONCLUSIONS.

Inter-Communication between the Departments.

21. That there is not a sufficiently full and prompt inter-communication between the Departments.

Medical Secretary's Department.

22. That the Medical Secretary's Department is undermanned, and the Medical Secretary is being overworked. The Committee is of opinion that if this is not promptly remedied, there will be a breakdown in the Department.

23. That the staff is being worked at high pressure and yet the Department cannot keep pace with the necessary work, and thus desirable development is hampered.

Work of the Departments.

24. That there has been a want of proper definition of the work of the Departments, rendering difficult an easy distinction in the duties in matters of detail, *e.g.*, the arrangements for the Representative Meeting; the business of the Central Council, as affecting the Committees of which the Medical Secretary is Secretary; the keeping of a list of Members by the Organisation Committee.

25. That owing to the development of the work of the Medical Secretary's Department which has taken place, and in view of the inevitable future extension, it is time that the work of the two Departments should be rearranged.

(B) DUTIES, STAFFS, &c., OF THE GENERAL AND MEDICAL SECRETARIES—(*continued*).

II.—RECOMMENDATIONS.

General Arrangement of the Work of the Central Staff.

11. That the whole work of the Association be arranged in three co-ordinate Departments:—(*a*) Financial; (*b*) Editorial; and (*c*) Medical and Professional.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it specially for the consideration of the Divisions.

Heads of Departments.

12. That these Departments be respectively under the following officers:—(*a*) Financial Secretary; (*b*) Editor; and (*c*) Medical Secretary, who shall hold equal official position in the Association.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it specially for the consideration of the Divisions.

Work of the Financial Department.

13. That to the Financial Department be assigned the business work of the Association, and the Secretaryship of the Annual General Meeting, of the Central Council and of the following Committees:—

Journal and Finance;
Premises;
Arrangements;
Election Returns;

and any other Committee that may be appointed dealing with the Financial Department of the Association.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered the Recommendation and has adopted it, subject to the addition of the Science Committee to the list of Committees stated.

Work of the Editorial Department.

14. That to the Editorial Department be assigned the editorial work of the Journal.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation, approved the same.

Work of the Medical Department.

15. That to the Medical Department be assigned all the work pertaining to the professional side of the work of the Association and the Secretaryship of the Representative Meeting, and of the following Committees:—

Organisation;
Ethical;
Hospitals;
Medico Political;
Public Health;
Science;
Colonial;
Naval and Military;

and any other Committee that may be appointed dealing with the professional work of the Association.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered the Recommendation and has adopted it, subject to the omission of the Science Committee from the list of Committees stated.

Attendance of both Secretaries at certain Meetings; Minutes and Agenda of these Meetings.

16. That both Secretaries be required to attend General Meetings, Representative Meetings, Central Council, and Meetings of the following Committees:—

Organisation;
Journal and Finance;
Election Returns.

That at these Meetings the Secretaries be seated one on either side of the Chairman for convenience of reference. That the Minutes and Agenda of the above Meetings be submitted to both Secretaries before being finally printed.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council having considered this Recommendation, adopted it, with the exception of the statement as to the position of the Secretaries.

Attendance of each Head of Department in certain other Cases at Meetings of which he is not Secretary.

With reference to the following Recommendation of the Committee, namely:—

17. That each Secretary should, where it appears to him that the interests of the Association may be advanced by his presence, attend Meetings of Committees other than those of which he is the Secretary.

the Annual Representative Meeting considered the Recommendation and approved the same in the following amended form:—

Resolution of Representative Meeting.

That each Head of Department should, when it appears to him that the interests of the Association may be advanced by his presence, or at the request of the Chairman of Committee, attend Meetings of Committees other than those of which he is Secretary.

and decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

Supply of Official Documents to Heads of Departments.

The Annual Representative Meeting having considered the following Recommendation of the Committee, namely:—

18. That each Secretary be supplied with a copy of all official documents at the time of issue.

approved the same in the following amended form:—

18. That the Head of each Department be supplied with a copy of all official documents at the time of issue.

and decided to refer the Recommendation, as approved, to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

Clerks of Departments.

19. That the Head of each Department nominate the clerks for his Department: that the appointment be made by the Chairman of Council and Treasurer: that the Head of each Department have the power of suspension of the clerks in his Department: that the power of dismissal be in the hands of the Chairman of Council.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

Card Register of the Association and of the Profession.

20. That the Medical Secretary be empowered to keep a card register of Members of the Association and of the Medical Profession; and that information for this purpose should be sent to him as soon as received.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has considered and adopted the Recommendation.

Staff of Medical Secretary's Department.

21. That an Assistant Medical Secretary be appointed at a suitable salary (not exceeding £600

per annum), who is capable of undertaking any part of the Medical Secretary's work which may be delegated to him.

Resolution of Representative Meeting.

The Annual Representative Meeting, having considered the foregoing Recommendation and approving the same, decided to refer it to the Council of the Association for consideration with a view to action.

The Council has postponed consideration of this Recommendation until the information contained in the Balance Sheet shall be available.

With reference to the following Recommendation of the Committee, namely:—

22. That the staff of the Medical Secretary's Department be strengthened as soon possible, on the following lines, viz.: that his department be furnished with four senior and five junior clerks and one office boy, in addition to his Assistant. The seniors should receive from £2 to £4 weekly, the juniors from 18*s.* to 35*s.* weekly, and the office boy 10*s.* weekly.

the Annual Representative Meeting, having considered the Recommendation, approved the same in the following amended form:—

Resolution of Representative Meeting.

22. That the staff of the Medical Secretary's Department be constituted as follows:

(*a*) One Assistant Medical Secretary.
(*b*) Four Senior Clerks.
(*c*) Five Junior Clerks.
(*d*) One Office Boy.

All of whom shall receive suitable salaries, and that the staff may be increased as the occasion arises.

and decided to refer it to the Council of the Association for consideration with a view to action.

Financial Part of the Work of the Association.

With reference to the following Recommendation of the Committee, namely:

23. The Committee desires to place on record its appreciation of the excellent way in which the financial part of the work of the Association is carried on, and the only recommendations it has made with regard to this Department are for the sake of more orderly arrangement and clearer definition of the work of the two Departments.

the Annual Representative Meeting, having considered the Recommendation, approved the same.

SPECIAL FINANCE INQUIRY COMMITTEE.

REPORT.

Introduction.

Appointment of Committee.

The Special Finance Inquiry Committee was appointed and its reference defined by the following resolutions of the Annual Representative Meeting, held at the Caxton Hall, Westminster, on July 24th to July 27th, 1906.

Minute 30*a*.—That the Annual Representative Meeting appoint a Committee to inquire into the financial position of the Association, with a view to such economies of administration as are consistent with maintaining and developing the valuable work now being done for the profession.

Minute 32.—That the Committee be formed of the following:—The Chairman of Representative Meetings, the Chairman of Council, the Treasurer (*ex officio*), and of seven Representatives of Divisions, elected by and from the Representative Meeting (five Members to form a quorum), and that these be selected in the manner provided for election of the Medico-Political and Ethical Committees.

Minute 42.—That the Committee of Inquiry send its Report as soon as completed to the Divisions and to the Representatives. (An amendment that the Report be published in the Supplement was put to the Meeting and lost (Minute 40).)

Minute 189.—That it be an instruction to the Finance Committee of Inquiry, in their deliberations upon the expenditure required for the maintenance and development of the present work of the Association, to consider what should be the duties of the General and Medical Secretaries in relation to that work, and the staff required in each department, and report to a Special Representative Meeting, or at the earliest opportunity.

Seven Members having been elected by the Meeting, pursuant to Minute 32, the Committee was thereby constituted as follows:—

Dr. J. A. Macdonald, Chairman of Representative Meetings.

Dr. H. Langley Browne, *afterwards* Mr. Edmund Owen } Chairman of Council.

Dr. H. Radcliffe Crocker, Treasurer.

Mr. H. W. Armit.	Dr. R. L. Langdon-Down.
Mr. H. A. Ballance.	Dr. L. S. McManus.
Dr. Alfred Cox.	Dr. R. H. Wolstenholme.
Sir Victor Horsley.	

Meetings.

The Committee has held nine Meetings, the attendances at which are stated at the end of the Report.

Reference.

The substance of the reference to the Committee is contained in Minutes 30 (*a*) and 189 above stated, and consists of two parts, namely:—

(1) To inquire into the financial position of the Association;
(2) In deliberating upon the expenditure required for the maintenance and development of the present work of the Association, to consider what should be the duties of the General and Medical Secretaries in relation to that work, and the staff required in each department.

Scope of Reference.

Upon considering the scope of its reference, it has appeared to the Committee that regard must be had not only to the actual terms of the resolutions of the Representative Meeting, but also to the circumstances in which those resolutions were adopted.

Circumstances of Adoption of Resolutions.

The resolutions were adopted as amendments to motions placed on the Agenda by Divisions, namely, Minute 30*a*, as an amendment to the following resolution placed on the Agenda by the Rochdale and Bury Divisions:—

That the Annual Representative Meeting appoint a Committee of Inquiry into the financial position of the Association, with a view to a considerable reduction in the expenditure,

and Minute 189 as an amendment to the following resolution placed on the Agenda by the North Manchester Division :—

> That a Committee be appointed to inquire into the duties of the General and Medical Secretaries, with a view to their better regulation and co-ordination.

Report of Lancashire and Cheshire Branch Council.

It further appeared that the resolution of the Rochdale and Bury Divisions arose from their consideration of a memorandum relating to the finances of the Association and the present assignment of duties of the General and Medical Secretaries, which was issued by the Council of the Lancashire and Cheshire Branch, first to the Divisions of that Branch, and afterwards to all Divisions of the Association.

In that report, the attention of the Association was drawn to the great reduction of the surplus of income over expenditure, as indicated by the Balance Sheet for the year 1905; the general increase of expenditure, which largely accounted for this reduction of the surplus, was pointed out, and attention was particularly directed to the increased expenses of the Medical Secretary's department, which it was suggested were partly due to unnecessary expenditure consequent upon the performance by the Medical Secretary, not only of organising, but also of clerical or secretarial duties which it was thought pertained more properly to the office of the General Secretary.

Reception of Lancashire and Cheshire Branch Report as affecting reference to Committee.

The Committee has drawn attention to the connection of the issue of this report with the appointment of the Committee, not only on account of the importance which must in any case be attached to the circulation of a document of this character by the Council of one of the largest Branches of the Association, but also because the mode in which the report was received by the Divisions and Representative Meeting and, particularly, the direction in which the Representative Meeting amended the motions submitted to it, appear to the Committee to indicate clearly the general conception of the finances and administration of the Association, by which it was desired that the investigations of the Committee should be guided.

Primary regard to be given to Development of Work, not Accumulation of Surplus Funds.

This conception the Committee understands to be that the British Medical Association does not exist primarily for the making of profits (being, indeed, explicitly constituted and registered as a Company "formed not for profit"), but for the objects stated in the Memorandum of Association, namely, to promote the medical and allied sciences and maintain the honour and interests of the medical profession, and that, therefore, the present investigation of its finances and administration must have primary regard, not to the accumulation of surplus funds, but to the efficiency and development of the work of the Association for the profession.

While the Representative Meeting has made clear its desire that every regard should be paid to business-like methods of administration and all economies practised which are consistent with the due discharge of the objects of the Association, the final end of such economies and of such methods is not the accumulation of surplus funds, but the provision and preservation of those resources whereby the work of the Association for the medical profession can be more fully developed.

Re-organisation of the Association as affecting the Subjects of Reference.

This conception of the nature of its reference leads the Committee to commence its report by a brief review of the recent history of the re-organisation of the Association, which has very important bearings upon the evolution of the present financial position and administrative arrangements.

History prior to Re-organisation.

To place these recent events in a clear perspective, it is necessary also to allude very briefly to the earlier history of the Association.

From the origin of the Association, its declared objects have been essentially the same as those which it still has before it, and throughout its history may be traced three main results of its activity, namely :—

1. Scientific and social work, developed through the Annual Meetings of the Association and through the Meetings of its Branches and now its Divisions.

2. Work for the advancement of the honour and interests of the profession, carried out through its central Executive, with the co-operation of the Branches, and greatly developed, as a result of the new organisation, through the creation of Divisions and through certain readjustments of central Executive machinery.

3. The work of the BRITISH MEDICAL JOURNAL, which, beginning as a publication of simple "Transactions," has gradually developed into one of the first organs of the medical profession, and the finances of which have become a factor of such importance in the finances of the Association.

From the time of the appointment of Mr. Fowke as General Secretary, in 1873, the finances of the Association were more carefully husbanded, and the business side of the Journal diligently nursed and developed. At the same time, Meetings of Branches and the Annual Meeting of the Association provided increasingly for social intercourse and for the development of medical science.

Causes of Re-organisation.

Concurrently, however, with this development of the scientific and social work of the Association and with the rapid growth of the Journal, and consistently with the most ample recognition of the invaluable work accomplished in these respects, there arose an opinion in the profession, both within and without the Association, that the Association was not adequately carrying out the second part of the objects stated in the Memorandum, *i.e.*, to maintain the honour and interests of the medical profession. The appointment of the Constitution Committee, in 1900, and the re-organisation in 1902, were the result of this growth of opinion.

General Nature of Re-organisation.

The new constitution, through the institution of Divisions and Representative Meetings, made it possible for every Member, who so wishes, to participate, at a meeting readily accessible to him, in considering, and influencing the decision of the Association upon, questions affecting the honour and interests of the profession.

To provide the necessary executive machinery the Central Committees were, some at once and some subsequently, re-organised, new Committees were created, and a new officer (first termed "Organising" and afterwards "Medical" Secretary) was appointed, for the purpose of giving special attention to those aspects of the work of the Association which the re-organisation was intended to promote.

Financial and Administrative Consequences.

As affecting the subjects of reference to the Finance Inquiry Committee, the present consequences of the development initiated in 1902 are seen, financially, in the increased expenditure caused by the more numerous meetings of Executive bodies, charges for printing and analogous items, and additional staff required, and, administratively, in the development of central Committees and the gradual building up of a new office department, that of the Medical Secretary.

Carrying Re-organisation into Effect: Transition Period.

In considering the effects of the re-organisation of the Association upon its finances and administration, the Committee considers it important to bear in mind the far-reaching character of the constitutional changes adopted in the years 1900–1902, which made it inevitable that a certain number of years should be occupied in bringing the new machinery into working order and in familiarising Members of the Association with its mode of operation.

In so complex an organism it was not possible for the framers of the constitution to foresee the directions in which development would chiefly proceed, and the changes, as regards details of regulations and administration, thereby necessitated.

It has also taken considerable time for the rank and file of the profession to become familiar with their opportunities of influencing medical policy through the working of the new constitution.

Many arrears of medico-political and ethical work have had to be cleared up, specially in utilising the new representative machinery of the Association for the purpose of ascertaining the mind of the profession on broad questions of policy.

Lastly, the work of re-organisation and development has been attended by the difficulty that the office department necessary for the purpose had to be created and organised concurrently with the execution of the work.

Review of Finance and Administration necessary at this Stage of Development.

In these circumstances it was inevitable that, so soon as the earlier stages of carrying into effect the new constitution of the Association should have been accomplished, questions such as were discussed in the Memorandum of the Lancashire and Cheshire Branch should require attention, of which attention the circulation of that Memorandum must be regarded, therefore, rather as the immediate occasion than the cause.

Questions for Consideration.

It results that the Finance Inquiry Committee has now to report upon two closely allied questions which, in view of the foregoing considerations, may conveniently be stated as follows, namely :—

1. How the financial resources of the Association can best be applied to carrying out the work which the Association, under its new constitution, has undertaken to perform.

2. How the staff of the Central Office can best be organised for carrying on the work.

In response to this reference, the Committee places before the Divisions a complete review of the present administrative arrangements of the Association, thus enabling Members to familiarise themselves with the machinery by which the work of the Association is done, and indicating the broad grounds of policy, as well as the considerations of detail, which underlie the recommendations of the Committee.

Part I of the report presents a general review of the bodies concerned in the government and administration of the Association.

Part II consists of a detailed examination of the duties of each of these bodies, with special reference to administration and finance, and their relations to one another, and to the executive officers of the Association. Affecting finance, there arise for consideration both the expenditure involved in the work of each body, and its duties, if any, of supervision or control of the general finances of the Association.

In Part III, certain departments of general administration are specially examined.

Part IV contains a review of the local organisation of the Association, so far as this falls within the scope of the reference to the Committee.

In Part V, the conclusions of the Committee, as to the financial position of the Association, and as to the possibility of economy, based on the previous review, are stated, and the recommendations on the financial side of the reference are presented.

In Part VI, the Committee reports as to the present distribution of duties of the General and Medical Secretaries, and as to the changes which it recommends in such distribution, and in the general organisation of the Central Office.

Part I.—General Review of the Present System of Administration and Financial Control of the Association.

General and Representative Meetings.

The ultimate control of the affairs of the British Medical Association rests with its individual Members, and this control is exercised (under the present Articles) through the medium of General Meetings and Representative Meetings.

The fact that General Meetings of the British Medical Association were attended by an exceedingly small proportion of Members led the Association, on the recommendation of the Constitution Committee, to transfer to Representative Meetings all those powers, previously exercised by General Meetings, which it was considered at that time that a body incorporated as a Limited Company under the Companies Acts could so transfer.

The decision of the Association to apply for a Charter, in order to escape from the trammels of the Companies Acts, has opened the way to dispense entirely with General Meetings as part of the government of the Association. In accordance with decisions of the Representative Meeting, it is provided in the Draft Charter that all powers at present exercised by General Meetings shall be transferred to the Representative body.

Representative Meetings are composed of Members elected by local units of the Association—the Divisions, or by groups of Divisions—for the purpose of giving effect to the wishes of the Members, as defined in Meetings of such bodies. Subject to the retention of certain powers at present by General Meetings, pursuant to the Companies Acts or to the Articles of the Association, and subject to powers of referendum reserved to the Council, Representative Meetings exercise complete control over the general policy and administration of the Association.

Council.

The Council is composed in the main of Members elected by the Branches, to these being added certain Officers of the Association and Members co-opted by the Council, some as representing certain services of the Crown, and others simply at the discretion of the Council. The present membership of the Council is 73.

The Council acts as the executive of the Association and is entrusted with the power of referendum already mentioned.

Committees.

The Council carries out its executive duties to a great extent through Committees, some of which are constituted as Standing Committees by the By-Laws of the Association, while others are appointed regularly by the Council, and others again are appointed from time to time for special purposes by the Representative Meeting or the Council.

Honorary Officers.

The Honorary Officers of the Association, especially the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer, and the Chairmen of the several Committees, act each in suitable matters as Executive Officers, the Chairmen as regards the general business of the bodies over which they preside, and the Treasurer as regards the finances of the Association.

Salaried Staff.

Under the instruction of the Council and Committees, and the supervision of the honorary Officers and Chairmen of Committees, the administrative work of the Association is carried out by a salaried staff, at the head of which are the General and Medical Secretaries, and the Editor of the British Medical Journal.

Part II.—Detailed Examination of the Work of the Bodies and Officers Engaged in the Central Control and Management of the Affairs of the Association.

(A) General Meetings.

General Meetings of the Association may be held for two purposes defined in Articles XVIII and XXI :—

(*a*) To deal with the internal business of the Association.
(*b*) To discuss subjects pertaining to the medical and allied sciences.

(a) *Administrative Duties and Powers of General Meetings.*

As regards section (*a*), pursuant to the Articles of Association, a General Meeting, called the Annual General Meeting, is held every year for electing the President, and the Treasurer, when there is a vacancy in that office ; fixing the place at which the next General Meeting shall be held ; considering the Balance Sheet submitted by the Council ; appointing an Auditor and fixing his remuneration.

The Annual General Meeting cannot, under the Articles, deal with any other business of the Association than that stated, but the consideration of the Balance Sheet places it within the power of the Meeting to raise almost any question affecting the policy and administration of the Association. In practice, however, the Annual General Meeting has refrained from so intervening in the decision of policy and administration, and the Annual General Meeting of 1906 declined, by resolution, to do so on the ground that such matters were better left to the Representative Meeting.

General Meetings, other than Annual Meetings, are called Extraordinary Meetings, and may be convened by the Council or upon requisition. The business of such Meetings is confined to that which, for the time being, may be specifically prescribed under the Regulations, and this at present includes only such business as under the Companies

Acts could not otherwise be transacted, such as alteration of the Articles of Association.

Expenses of General Business Meetings.

Inasmuch as the notice of an Annual General Meeting is published in the BRITISH MEDICAL JOURNAL, and the Meeting-room is usually placed at the disposal of the Meeting, through the local Executive Committee of the place at which the Meeting is held, the expense of such Meetings is usually very small. When the scientific part of the business of the Annual Meeting is transacted abroad, as in the year 1906 at Toronto, the Business Meeting has been held in London, and the Meeting-room has to be specially engaged at the expense of the central funds.

The expenses of such Meetings cannot, however, be separated from those of the Annual Representative Meeting, as it is the practice to hold one immediately after the other. The notice being published in the BRITISH MEDICAL JOURNAL, the expenses are little more than those of the hire of a meeting-room.

(b) *Annual Scientific Meetings.*

An important part of the scientific work of the Association is that transacted in the Annual General Meeting, when in addition to the reading of addresses by distinguished members of the profession on subjects pertaining to medicine and the allied sciences, papers are read and discussions take place in Meetings of Sections devoted each to some special branch of medical science.

The selection of the readers of addresses and the arrangement of the Sections rest with the Council, who are advised upon some matters by the Arrangements Committee, and on others by the Science Committee.

Expenses of Meetings of Sections.

The rooms for the purposes of the Sections are provided through the local Executive Committee of the district in which the Meeting is held, and all expenses in connection therewith are defrayed by the local Committee, except the cost of printing the daily Journal, and certain expenses of Sections included in a special item in the Balance Sheet.

(c) *Exhibitions.*

In connection with the Annual General Meeting, an Exhibition of Foods, Drugs, Instruments, etc., is held, which has, since 1904, been organised by, and placed under the entire control of, the General Secretary. The profits from this Annual Exhibition are given to the local Committee, and contribute to defray the expenses of the Annual Meeting.

(B) REPRESENTATIVE MEETINGS.

Representative Meetings may be Annual or Special, the Annual Representative Meeting having certain routine duties as regards the election of Chairman, election of Committees, and reception of reports.

Alteration of By-laws can be effected by either Annual or Special Representative Meetings.

Apart from these specific powers, general powers are assigned by the Articles of Association to Representative Meetings, and confer upon them a control over the policy and administration of the Association, which is subject only to the following limitations :—

(*a*) The power of General Meetings to pass conflicting resolutions arising out of the consideration of the Balance Sheet ;

(*b*) The power of the Council to refer any finding of the Representative Meeting to the Divisions before it becomes binding.

It is, however, requisite that three months' notice shall have been given of any alteration of the By-laws, and of any motion brought before the Annual Representative Meeting which does not arise out of the consideration of the report of the Council or of a Committee, or as an orderly amendment of any motion of which three months' notice has been given ; it is also requisite that any resolution affecting the By-laws or finances of the Association, or its policy in matters affecting the honour and interests of the profession, should be carried by a two-thirds majority, to be binding upon the Executive.

Under the head of motions arising out of reports, or amendments to motions already placed on the Agenda, resolutions of considerable importance affecting the administration, finances, or policy of the Association, may be carried by the Representative Meeting in a form of which the Divisions have not had previous notice, though the subject matter must have been brought before them.

Experience of the working of such bodies shows this possibility to be inevitable unless the transaction of business is to be retarded to an injurious degree. As a safeguard, however, in matters of finance, the Annual Representative Meeting of 1906 adopted a Standing Order, whereby every resolution involving special expenditure shall, before final adoption by the Representative Meeting, be remitted to the Finance Committee for report to a later Session.

The Meeting takes part at present in the appointment of the central Executive to the following limited extent, namely, that the Chairman of Representative Meetings is *ex-officio* a Member of Council, and that the Meeting, under the By-laws, appoints half the elected Members of the Medico-Political Committee and half the elected Members of the Ethical Committee. The Meeting has also power to appoint Committees at its discretion, and has exercised this power on two occasions.

The Annual Representative Meeting met for two days at Swansea and Oxford in 1903 and 1904 respectively, for three days at Leicester in 1905, and for four full days in London in 1906.

A special Representative Meeting was held in May, 1907, for the consideration of the draft Charter, and sat for two days.

Staff.

The secretarial work of the Representative Meeting was discharged by the General Secretary at the Swansea and Oxford Meetings, but in February, 1905, the Council directed the Medical Secretary to take over the duties. The reporting and other clerks in attendance are furnished from both the General and Medical Secretaries' departments.

Owing to the requirement that the minutes of each day's proceedings shall be printed and placed in the hands of the Members at the beginning of the next daily Session, a relatively large staff is needed for the minutes.

Expenses.

The cost of Representative Meetings is made up of the following items :—

Railway fares of Representatives ;
Printing and Circulation of Agenda and Minutes ;
Cost of attendance of Staff at place of meeting ;
Cost of Meeting-room ;

the last being usually included in the general expenses of the Annual Meeting, defrayed through the local Executive Committee.

The railway fares for 1905 were £177 0*s.* 7*d.*

(C) CENTRAL COUNCIL.

To the Council is entrusted the general control and direction of the affairs of the Association, subject to the duty of carrying into execution resolutions of General and Representative Meetings, on which resolutions it is within the power of the Council to take a Referendum. The Council carries on the business of the Association in the interval between Annual Meetings, and takes action at its discretion on such matters arising in the course of the year as have not been the subject of special resolutions of the Representative Meeting.

The Council regularly receives reports from, and considers the recommendations of, all Committees, and delegates to them such duties as it may deem advisable, consistently with the regulations of the Association.

The Council presents to the Annual General Meeting the Balance Sheet, and to the Annual Representative Meeting an Estimate of the probable expenses for the coming year, and a Report of its proceedings during the past year.

The Council holds four ordinary Quarterly Meetings during the year, these usually taking place on the third Wednesday of October, January, and April, and the first or second Wednesday in July. It has also been the practice of the Council to meet daily at the time of the Annual Meeting. During the year 1905 two Special Meetings of Council were held.

Staff.

The secretarial work of the Council as regards preparation of the Agenda and Minutes, arrangements of Meetings, and general correspondence, is carried out by the General Secretary.

With regard to the execution of the instructions of the

Council, however, since the appointment of the Medical Secretary, it has been found necessary, as a matter of practical expediency, that each instruction should be carried out by the Secretary of the Committee out of whose report the matter arose, or to whose work it pertained.

Expenses.

Railway fares were paid for seven Meetings, the average cost per Meeting being approximately £113. The average attendance at Meetings of Council for the year was 54; thus the average cost per Member per Meeting was approximately £2 2*s*.

(D) COMMITTEES.

General Powers and Duties.

The powers and duties of Committees are defined usually in general terms in the By-law, resolution of the Representative body, or resolution of Council (as the case may be), under which each is constituted.

References; Powers of Action; Spending Powers.

In the case of the Standing Committees constituted under the By-laws, the references are stated in general language, and in many cases it is specially provided that the duties shall be subject to the direction of the Council. The powers of Committees, as regards directing action to be taken on behalf of the Association, and as regards incurring expenditure in connection with special action, are in some respects defined in special instructions, but more usually are deemed to be implied in the general powers of the Committees. The Standing Orders of the Council would prevent that body from proceeding to adopt a recommendation of a Committee involving special expenditure which had not previously been considered by the Journal and Finance Committee, but the distinction between ordinary and special expenditure has not received any formal definition by Standing Orders or otherwise, nor have the general spending powers of Committees been defined.

Sub-Committees.

The power of appointing Sub-Committees is deemed to be a general power of the Committees, and certain Committees make considerable use of this power, either in order to save the time of full Committees and reduce expense, by referring the detailed investigation of subjects to smaller bodies, composed of those who can attend at the least expense, or, in other cases, in order to obtain the assistance of experts in the consideration of special subjects without adding such experts to the Committee, for which addition there is no authority. Examples of Sub-Committees of the former type are the standing Ethical Emergency Sub-Committee, and the standing Parliamentary Sub-Committee of the Medico-Political Committee, which was appointed by instruction of the Representative Meeting. Examples of the latter type are the Therapeutic Sub-Committee of the Science Committee, and the Contract Practice and Lunacy Sub-Committees of the Medico-Political Committee.

Executive Arrangements and Staff.

The Chairman of each Committee acts as its Chief Executive Officer, directing the Secretary in the intervals between Committee Meetings.

The secretarial work of the Committees is, for the most part, divided between the General and Medical Secretaries, certain special Committees and Sub-Committees, however, being served by Honorary Secretaries, with the assistance of the permanent Staff when required.

Expenses.

Certain expenses are common to all Committees, namely, the railway fares of those attending Meetings, the preparation and circulation of the Agenda and Minutes, and of all documents prepared for the consideration of the Committees and reports and other documents issued by them.

Special Work of Committees.

The duties of Committees, as has already been explained, are, as a rule, defined in the references in general terms only. The Committee, therefore, thinks it necessary to set forth a statement of the work of each Committee, not only as stated in the reference, but as actually carried out in practice.

(1) STANDING COMMITTEES SO CONSTITUTED BY BY-LAW.

JOURNAL AND FINANCE COMMITTEE.

The Journal and Finance Committee has been in existence longer than any other Committee, its records going back into the sixties. For many years it acted as practically the Executive Committee of the Council, considering matters not only affecting finance, but also the general policy of the Association.

Under the present constitution the reference to the Committee as defined in By-law 41, (1) is as follows:—

(1) *Journal and Finance.*

A Journal and Finance Committee not exceeding fifteen in number (five to form a quorum) shall be appointed by the Council, which shall, *inter alia*, examine into the general working of the Office and of the Journal, and certify the quarterly accounts prior to their being presented to the Council.

The Committee considers, *inter alia*:—

(*a*) The accounts of the Association and the Journal;
(*b*) The Annual Balance Sheet;
(*c*) The Periodical Reports of the Auditors;
(*d*) The Treasurer's financial remarks addressed periodically to the Council and General Meeting;
(*e*) Increase and decreases of expenditure under the various heads;
(*f*) Recommendations of Committees to the Council involving expenditure;
(*g*) Questions of Central Staff;
(*h*) Editorial matters as to the policy of the Journal;
(*i*) Managerial matters as to the policy of the Journal.

Meetings.

Meetings are held quarterly and oftener if required. The number of meetings for 1905 was five.

Staff.

The secretarial work of this Committee is conducted under the supervision of the Chairman and the Treasurer by the General Secretary, assisted by one clerk. In addition, for the preparation of the figures and accounts generally, the General Secretary has the assistance of another clerk.

Expenses of Meetings.

The average cost of a Meeting of the Committee for 1905 was £15 7*s*. 7*d*.

PREMISES AND LIBRARY COMMITTEE.

The Premises and Library Committee (converted by a recent alteration of By-laws into Premises Committee only) was in existence before the adoption of the new constitution.

Its present reference is defined under By-law 41 (2), as follows:—

(2) *Premises.*

A Premises Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters connected with the management of the House Property of the Association.

The duties of the Committee have been exceptionally heavy during the last three years in connection with the question of rebuilding the premises of the Association involving delicate and protracted negotiations with the Civil Service Supply Association, as to the exchange of 1 and 3, Harvey's Buildings, and with tenants to ensure simultaneous vacation of premises in readiness for rebuilding: also the finding, arranging, and equipping of suitable temporary premises.

Meetings.

It has been the practice of the Committee to meet quarterly and oftener if required. In 1905 six meetings were held.

Staff.

The work of this Committee is carried out under the supervision of the Chairman by the General Secretary and one clerk.

Expenses of Meetings.

The average cost of a Meeting of the Premises and Library Committee for 1905 was £14 0s. 8d.

SCIENCE COMMITTEE.

The Science Committee, as at present existing, carries on the work of the Scientific Grants Committee, which had previously been appointed annually by the Council since 1874 and that of the Annual Meetings Sections Committee constituted in 1903 and the Science Co-ordination Committee appointed in 1904. To the Committee has also been recently transferred the care of the Library.

At the Annual Meeting of 1906, the Committee was constituted a Standing Committee under the By-laws (By-law 41, para. 9) and its reference was defined as follows :—

(9) *Science Committee.*

A Science Committee, consisting of 14 members, shall be appointed by the Council, who shall advise, and where so directed act for, the Council in all matters, not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants, or Medals given by the Association, or under trusts undertaken by the Association, the assistance of the officers of the Sections at the Annual Meeting, the arrangement of Committees for special scientific work, the encouragement and assistance of the scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt, for the consideration of the award of Scholarships, Grants, and Medals, members, not exceeding four in number, specially qualified to assist in its work.

The Committee allots Scientific Grants and recommends Research Scholars for appointment, inspecting the work carried out by Grantees and Scholars and supervising and reviewing the work for presentation to the Council.

The Committee also deals with the settlement of the programmes of sections, and considers, by direction of the Council, references from sections on scientific matters.

The Committee administers certain funds held in trust by the Association, namely, those of the Middlemore and Stewart Prizes.

Meetings.

The Committee usually holds two Meetings per annum. In 1905 meetings were held as follows :—

Scientific Grants Committee	1	Meeting
Annual Meetings Sections Committee	1	,,
Science Co-ordination Committee	1	,,
Science Committee	1	,,

Staff.

The clerical work of this Committee is carried out under the supervision of the Chairman, by the General Secretary, and one clerk.

Cost of Meetings.

The cost of the only meeting of the Scientific Grants Committee was £13 19s. 11d. and of the Science Committee, £24 19s. 3d.

MEDICO-POLITICAL COMMITTEE.

The Medico-Political Committee is constituted by the By-laws to deal with all questions affecting the public relations of the profession which are not specially referred to the other Committees (*vide* Public Health, Hospitals, Naval and Military and Colonial Committees).

The work of the Medico-Political Committee may be classified as follows :—

All questions of Bills before Parliament affecting the medical profession, including the consideration of Bills affecting public health, so far as the question of Parliamentary action arises, it being found most convenient that all Parliamentary action should be supervised by the Parliamentary Sub-Committee.

Action by the Association in Parliamentary Elections.

Representations to Government Departments concerning the administration of the Law in matters affecting the medical profession, so far as these do not fall within the province of the Special Committees above mentioned.

All questions affecting the employment and remuneration of medical practitioners, under contracts or otherwise.

All questions affecting the legal position of medical practitioners which are not purely of personal concern and do not relate to ethical matters or to the work of the Hospitals or other special Committees mentioned.

Action for the protection of the profession in matters such as unqualified practice.

Sub-Committees.

The Medico-Political Committee has found it convenient to carry out its work largely by means of Sub-Committees, those appointed during the last year being the Parliamentary Sub-Committee, the Contract Practice Sub-Committee, the Lunacy Sub-Committee, the Midwives Sub-Committee, the Medical Witnesses Sub-Committee and the Income Tax Sub-Committee. The Parliamentary and Contract Practice Sub-Committees will probably be standing Sub-Committees of this Committee ; the other Sub-Committees have more or less temporary references.

Meetings.

During the last three years it has been necessary to hold numerous meetings of the Medico-Political Committee, the number for the year 1905–6 being seven. This number of meetings, however, has been partly due to the arrears of Medico-Political work which were found to require attention after the adoption of the new constitution.

The work of the Committee during the last four years has resulted in ascertaining the opinion of the Association on many questions of great importance affecting the interests of the medical profession upon which the views of the profession had not previously been satisfactorily ascertained. The work of the Committee in future will be concerned more with the application of principles now approved to individual cases, and meeting new developments in the relation of the profession to the community. For these purposes it may be anticipated that it will not be necessary, as a rule, for the Committee to meet oftener than quarterly, but that the administrative work of the Committee must be expected to increase rather than decrease, in proportion as practitioners become more fully conscious of the protection which can be afforded to individual interests, and to the interests of the profession generally, by medical organisation.

Staff.

The Medical Secretary acts as Secretary to the Medico-Political Committee, and has for the work of this Committee, together with that of the Public Health Committee, and special Committees and Sub-Committees dealing with Medico-Political, Public Health, or Poor Law questions, and for the preparation of the Agenda of the Representative Meeting, a staff of two clerks, assisted by copyists in emergency.

Expenses of Meetings.

The average cost, in railway fares, of a Meeting of the Committee for 1905 was £15.

PUBLIC HEALTH COMMITTEE.

The Public Health Committee was originally appointed to deal with questions affecting the public health and poor law medical services, but the By-law defining its reference was subsequently extended to include all questions of public health, not merely those concerning medical officers.

The work of the Committee has developed considerably with the increasing recognition, not only by the profession, but also by bodies representing the public, of the value of the work which is being done by the Association through this Committee, in formulating the opinion of the profession on important questions affecting the health of the community.

In all questions requiring Parliamentary action, the Committee usually co-operates with the Medico-Political Committee, for reasons explained in the part of the report dealing with the work of that Committee.

Meetings.

The Committee meets quarterly, and additional Meetings have been found necessary in order to deal promptly with questions of public interest.

Staff.

The secretarial work of the Public Health Committee was transferred by the Council to the Medical Secretary in January, 1904. The Committee is served by the same clerical staff as the Medico-Political Committee.

Expenses of Meetings.

The average cost, in railway fares, of a Meeting of the Public Health Committee for 1905 was £22.

Hospitals Committee.

The Hospitals Committee was originally appointed by the Council in July, 1903, as a special Committee to inquire how the abuses of medical charities could best be removed. The Annual Representative Meeting in London made it a Standing Committee of the Association, but without defining its reference, which has been defined by the Council, as follows:—

> "It shall be the duty of the Hospitals Committee to consider and report to the Council upon all questions concerning Hospitals and other Medical Charities."

Up to the present, the Committee has been chiefly engaged in the organisation of co-operation between the medical profession and the governing bodies of Hospitals, with a view to preventing the existing abuses of Hospitals. In the future it may be anticipated that the Committee, under its standing reference, will be called upon to take action, as regards Hospitals, similar to that which the Medico-Political Committee takes in such questions, for instance, as contract practice, assisting the Divisions in their local difficulties. Like the Medico-Political Committee, the Hospitals Committee has passed, during the last four years, through a period of formulating the policy of the Association. This work it is hoped may be completed by the Annual Representative Meeting of the present year, after which the work of the Committee, though less onerous as regards the discussion of general principles, may be expected to increase administratively.

Meetings.

The Hospitals Committee has, prior to the present year, met only as occasion required, but has now decided to hold quarterly Meetings.

Staff.

The Medical Secretary was appointed Secretary of the Committee in February, 1905. The clerical work of the Committee is carried out by the same clerks as that of the Central Ethical Committee.

Special assistance was obtained for the very heavy work, carried out in the summer and autumn of 1906, of circulating to Hospitals in the United Kingdom the proposals formulated by the Joint Hospitals Committee, preparing for the United Kingdom Hospitals Conference, held in December, 1906, and analysing the information obtainable from the replies of Hospitals, with regard to the proposals of the Joint Committee.

Expenses of Meetings.

The average cost, in railway fares, of a Meeting of the Hospitals Committee in 1905 was £15.

Naval and Military Committee.

The reference, under the By-laws, to the Naval and Military Committee is to deal with all questions relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Medical Organisation of the Auxiliary Forces.

In practice, the work of the Committee is found to fall under two general heads, namely, (*a*) that of framing representations on behalf of the Association to the Government, in questions of general principle affecting the organisation of the medical services of the Army and Navy and Auxiliary Forces, and affecting the terms of employment of the medical officers; and (*b*) that of taking action in cases of alleged hardship, affecting individuals, in which the interests of the profession are involved.

Meetings.

In the year 1906 only two Meetings of the Naval and Military Committee were held, but the work of the Committee shows a distinct tendency to increase, with the increasing recognition by the profession of the fact of its existence and, as in the case of all other Committees dealing with medico-political subjects, it may be anticipated that this increase of work will be particularly marked on the administrative side, as regards dealing with complaints of individuals.

Staff.

The secretarial work of this Committee was transferred to the Medical Secretary in 1905, and it is served by the same clerical staff as the Organisation Committee.

Expenses of Meetings.

The average cost of a Meeting of the Naval and Military Committee in 1905 was £1 15*s.*

Colonial Committee

The Colonial Committee came into existence in 1902, and its constitution and reference are defined in By-law 41 (4), as follows:—

> (4) *Colonial*
>
> A Colonial Committee not exceeding nine in number (three to form a quorum) shall be appointed, to which shall be referred all questions specially relating to the Branches not in the United Kingdom. Of such Committee five members shall be appointed by the Representatives of these Branches on the Council, and two by the Council.

The attention of the Committee has chiefly been given to Acts and Ordinances from the Colonies (received through the Colonial Office and the Colonial Branches of the Association) affecting questions of medical registration and reciprocity. The work involves much correspondence with the Colonial Office and the Branches, the perusal of official despatches from Governors of Colonial States, relative to medical legislation and comparison with existing Acts and Ordinances.

Meetings.

The Committee held one meeting in 1905.

Staff.

The work of this Committee is carried out, under the supervision of the Chairman, by the General Secretary and one Clerk.

Expenses of Meetings.

The cost of the only meeting of the Colonial Committee for 1905 was £5 15*s.* 6*d.*

Central Ethical Committee.

The work of the Central Ethical Committee includes (*a*) adjudicating in cases referred to it by Members of the Association or of the medical profession; (*b*) formulating opinions upon questions of principle which, when approved by the Council and the Representative Meeting, become findings of the Association; (*c*) investigating and reporting to the Council upon cases in which the expulsion of Members of the Association is proposed; (*d*) advising the Council as to Rules of Divisions and Branches which affect professional conduct; (*e*) acting for the Association in bringing before the General Medical Council cases of unprofessional conduct which are thought to require the consideration of that Council.

The work of the Committee up to the year 1906 had shown a marked annual increase, due to the increasing appreciation by the Association and the profession of the fact that, for the first time in the history of the profession, there existed a central representative authority for the decision of ethical questions.

The Committee is now engaged, by instruction of the Representative Meeting, in collecting the results of its work in the form of an index, which may in some degree serve the purpose of an ethical code and which will, it is hoped, reduce

the labours of the Committee itself by enabling it to deal more readily with a large number of cases.

Much of the work of the Central Ethical Committee has always been carried out by the Chairman, who is authorised by the Committee to advise in all matters which he is able to deal with in the light of previous decisions.

Meetings.

The Committee has always held regular quarterly meetings, but in the year 1906 it was found necessary to hold two special meetings. It is anticipated that in future quarterly meetings will suffice.

Sub-Committee.

The time of the full Committee has been saved during the last 12 months by the appointment of a standing Sub-Committee, authorised to deal, in the intervals of Committee Meetings, with those matters which, in the opinion of the Chairman of the Committee, would suffer through delay, and for which no new declaration of principle is necessary.

Staff.

The Medical Secretary has acted as Secretary of the Central Ethical Committee, and the clerical work is carried out by a staff of two clerks, who carry on also the work of the Hospitals Committee and the preparation of minutes of the Representative Meeting.

Expenses of Meetings.

The average cost of a Meeting of the Central Ethical Committee in 1905 was £13.

ORGANISATION COMMITTEE.

The Organisation Committee was originally appointed to deal with questions of boundaries of Divisions and Branches and the Rules of these Bodies other than those relating to professional conduct, and, subject to the directions of the Council, to advise and assist Divisions and Branches in the strengthening of their local organisation. Various questions of interpretation of the Regulations of the Association have from time to time been referred to the Committee, and the Council, in 1905, extended its reference by a standing instruction that the Committee should deal with all questions affecting the interpretation or alteration of the Regulations of the Association, and the Standing Orders of the Council and Representative Meeting. Questions of Branch and Division Finance have also been referred to this Committee.

The onerous duties of the Organisation Committee have necessitated frequent meetings. In the first instance, the Committee was engaged in the adjustment of the boundaries and the Rules of Local Bodies under the new constitution. In the last year and a half, much of the time of the Committee has been taken up in the preparation of the draft Charter. As the effects of the adoption of the new constitution have become more fully realised, questions of organisation of the Colonial Branches have increasingly required consideration by the Committee. The instructions of the Annual Representative Meeting, that Divisions should be urged to develop their local organisation in order more adequately to deal with questions of contract practice, have required the attention of the Organisation Committee, and indicate a direction in which further developments of the work done under the supervision of the Committee will be necessary in order that the Association may be properly equipped for the maintenance of the interests of the profession, not only as regards contract practice, but all other matters in which local professional union and organisation are the first conditions of success.

The routine administrative work of this Committee includes keeping files of the original rules of all Divisions and Branches submitted for the approval of the Council; keeping maps and documents showing the boundaries of all Divisions and Branches throughout the Association; preparing lists of non-members in the areas of Divisions and Branches when desired by Honorary Secretaries; preparing the forms of Annual Reports of Divisions and Branches and analysing the reports sent in; preparing documents for the consideration of the Solicitor in connection with questions of interpretation or alteration of the Regulations of the Association dealt with by the Committee.

Meetings.

The Committee holds six ordinary Meetings in the year, and additional Meetings have always been found necessary.

Staff.

The Medical Secretary has acted as Secretary of the Organisation Committee from the time of its first appointment, and the present clerical staff consists of two clerks, who attend also to the work of the Naval and Military Committee, and to all office stores and supplies of the Medical Secretary's Department.

Expenses of Meetings.

The average cost of a Meeting of the Organisation Committee for 1905 was £10.

SCOTTISH COMMITTEE.

The Scottish Committee was created by the adoption of the new By-law in 1904 as follows:—

By-law 41. (11) *Scottish Committee.*

A Scottish Committee, consisting of one Secretary from each Scottish Branch and the Scottish Members of the Central Council. It shall have a Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Scotland.

The Committee has considered all matters affecting Scotland in which the peculiarity of the local conditions appear to render separate consideration of the specially Scottish aspects desirable.

Meetings.

The Committee meets when occasion requires at such place as may be found convenient, Meetings having usually been held in Edinburgh. In 1905 three Meetings were held.

Expenses of Meetings.

The average cost of a Meeting of the Committee for 1905 was £9 6*s.* 11*d.*

Staff.

The Committee has an Honorary Secretary who attends to the preparation of Agenda and Minutes and the correspondence of the Committee, the printing being carried out at the Central Office.

IRISH COMMITTEE.

The By-law creating the Irish Commitee was adopted at the Annual Representative Meeting in 1905.

The constitution and reference to the Committee and the nature of the subjects considered are practically the same as in the case of the Scottish Commitee.

Meetings.

The Committee meets as occasion requires at such place as may be found convenient, and Meetings have been held in various principal towns of Ireland. In 1905 one Meeting of the Committee was held.

Staff.

The arrangements as to the secretarial work are the same as for the Scottish Committee.

Cost of Meetings.

The cost of the only Meeting held in 1905 was £14 0*s.* 9*d.*

(2) OTHER COMMITTEES.

ARRANGEMENTS COMMITTEE.

The Arrangements Committee has been annually appointed for many years, although not provided for under By-law 41, and, as its title implies, it was primarily appointed to carry out various arrangements in connection with the Annual Meeting.

Meetings.

It generally holds three Meetings per annum. First the Council members and the local members each hold separate Meetings. Finally the local members meet jointly with the Council representatives. The local and the Council members each submit certain specific nominations for the Officers of Sections. At the joint Meeting the complete programme is practically settled, subject to confirmation by the Council. This includes the nomination of all Officers of Sections, the Readers of Addresses, and the general local arrangements. After the nominations have been sanctioned by the Council, invitations are sent out in the name of the Chairman of Council. When Office is declined, the Chairman of Council, in consultation with the President-elect, selects substitutes.

For the guidance of this Committee, an alphabetical list of those who have held Office in the Sections, and a classified list showing those who have held Office under the respective Sections, is prepared and maintained from year to year.

Staff.

The clerical work of this Committee is undertaken by the General Secretary with the assistance of one clerk.

Expenses of Meetings.

The cost of the only Meeting of the Committee held in 1905 was £14 2*s.* 7*d.*

ELECTION RETURNS COMMITTEE.

The Election Returns Committee is appointed under the following Standing Orders of the Council adopted in May, 1905, and came into operation in July of that year.

ELECTION RETURNS COMMITTEE.

26. The Chairmen of the Standing Committees, together with the Chairman of the Representative Meetings and the Treasurer, shall form a Standing Committee to be called the Election Returns Committee, which shall hold office from October 1st. Each member of the Committee shall hold office until his successor is appointed.

27. This Committee shall receive the election returns of Members of the incoming Council, and shall report to the Council upon any infringement of the regulations relative thereto.

28. It shall prepare a "Return of Committees" showing for each Committee (1) the Members, (2) the years of their service on the Committee, (3) their possible and actual attendances, including Sub-committees, (4) those who are ineligible under the Standing Orders or otherwise.

29. The "Return of Committees" shall be issued to each Member of the incoming Council at least fourteen days before the first day of the Annual Meeting.

30. A preliminary return, showing for each member of the Central Council his possible and actual attendances at Council, Committee, and Sub-committee Meetings, shall be prepared annually and printed in the SUPPLEMENT of the JOURNAL not later than the last week in April.

31. After the first Meeting of the new Council this Committee shall prepare a list of names for the vacancies on each Committee.

32. In this list it shall place first the Members eligible for reappointment and then as many other names as are requisite to complete the Committee.

33. In preparing this list regard shall be had to (1) the distribution of the work among all Members of Council; (2) geographical representation on Committees where this is important; (3) the declarations of Members as to the Committee on which they would be prepared to serve; (4) the previous attendance of members on Committees.

The work of the Committee is fully defined in the reference, and involves the preparation by the staff and consideration by the Committee of many returns of attendances, nominations and other documents involving much clerical labour and careful attention to insure accuracy.

For this Committee must be prepared the attendances of Committees, Sub-Committees, and Joint Committees in tabular form showing—(*a*) Dates of election of the respective Members, (*b*) the composition of the Committee, (*c*) attendances, and (*d*) those ineligible for election under the Standing Orders or otherwise. This information is forwarded to the New Council, together with a Nomination Form for nominations to Committees, a list of Members of the New Council, and a Form of Declaration asking the Members on which Committees they are willing to serve.

Upon receipt of the Declarations and Nominations the information is classified and presented to the first Meeting of the Committee. At this Meeting the Voting Paper is prepared, showing (*a*) those recommended for reappointment *ad hoc*, and (*b*) the nominations of the Members of Council. The Voting Papers are settled at the second Meeting of the Committee, and handed to the Council the following morning, and on the Friday the results of the election are reported to the Council.

The preparation of the Returns for this Committee involves considerable labour and very careful attention to ensure their accuracy.

From a purely clerical point of view this work entails more labour than any other Committee.

Staff.

The work of this Committee is carried out by the General Secretary, assisted by one clerk.

Meetings.

The Committee holds two meetings per annum as required by its reference.

Owing to the position of the Committee and the fact that its second Meeting is held at the time of the Annual Meeting of the Association, the expense for railway fares is usually that of the first Meeting only, and for 1905 was £5 10*s.* 3*d.*

PART III.—SPECIAL DEPARTMENTS OF ADMINISTRATION.

1. CENTRAL PREMISES.

The Association requires Central Premises for the following purposes:—

A. Central Administrative Offices, including:
   - (*a*) Meeting rooms for various bodies engaged in the central government and administration;
   - (*b*) Offices for the Central Staff;
   - (*c*) Printing Offices for such Association printing as can conveniently be carried out on the Central Premises.

B. Offices of the BRITISH MEDICAL JOURNAL, including:
   - (*a*) Editorial Offices;
   - (*b*) Manager's Offices and Staff;
   - (*c*) Printing Offices for all printing except actual machining of the Journal.

C. The Central Library of the Association.

D. A convenient Central Meeting Place for Members.

Until March, 1907, accommodation for these purposes was found as far as practicable in the freehold premises of the

Association at 429, Strand, 1 to 5, Agar Street, and 1 and 3, Harvey's Buildings, purchased in 1898. Only part of the premises could be used for the work of the Association, the remainder being let.

The Council decided, in the spring of 1906, to rebuild on the old site, and this decision was approved by the Annual Representative Meeting of that year. During the rebuilding, temporary premises have been obtained at No. 6, Catherine Street, Strand.

Rebuiling had become necessary on account of the inadequacy of the premises for the requirements of the Association. As regards Meeting rooms, the only available room for Meetings of the Central Council was the Library, which was inconvenient for the purpose, and such use interfered with the utility of the Library. Recently, therefore, the Council has met at the offices of the Metropolitan Asylums Board, lent for the purpose.

As regards Staff accommodation, the General Office had to be reconstructed in 1903 at a cost of £1,900, in order to meet the needs of the General Office Staff. The rooms available for the Medical Secretary's Staff were entirely inadequate, and in the Printing Department insufficiency of accommodation made it necessary to put out Association printing, thus increasing the cost. The Library suffered not only from interference when it was necessary to hold Meetings there, but also because of the insufficient space for storage of books. As regards head D of the requirements stated at the commencement of this Section, there was in the old premises no provision for private Members to meet. In all these respects, the plans for the new buildings show accommodation adequate not only for the present requirements of the Association, but probably also sufficient to meet all prospective developments for many years.

Cost of Premises.

The charge to capital account for premises, as shown in the Balance-Sheet for December, 1905, was £86,000.

It is estimated that the rebuilding of the premises and fittings will cost not more than £44,000, thus bringing up the total capital charges to premises account to £130,000.

Notwithstanding this increased capital charge, however, the new premises are arranged so that the ground floor can be entirely let off for shops or offices, thus bringing in a considerably increased revenue from rents. The net effect of the change is conveniently shown by regarding the matter as one of rental, charging the Association in each case with interest at the average rate yielded by its other investments, on the capital expenditure, and adding in the case of the old premises the actual average expenditure in repairs and alterations, and as regards the new premises an estimated amount for this purpose. Such a statement is appended.

STATEMENTS SHOWING FINANCIAL ASPECTS OF QUESTION OF CENTRAL PREMISES.

(i) *On Basis of Estimated Rental.*

Old Premises.

Capital expenditure on premises to December 31st, 1905, £86,020

	£
Invested at 3 per cent., the average rate of the other investments of the Association would have yielded an income of	2,580
Average annual cost of upkeep of the premises for years 1896–1905	250
Gross rental cost	2,830
Less rents received on the part of premises not used for Association purposes	860
Estimated net rental of premises used for the work of the Association	1,970

New Premises.

Estimated total capital outlay when complete, £130,000.

Invested at 3 per cent. would yield an income of	3,900
Estimated annual cost of upkeep of premises	250
	4,150
Estimated return from Ground Floor and Basements, to be let as shops and offices	3,250
Estimated net rental of the new premises to be used for the work of the Association	900

Thus showing £1,000 saving as regards estimated rental

(ii) *On Basis of Cash Receipts and Payments.*

The same facts may be presented in another form, namely, that, the cost of rebuilding being taken at £44,000, the interest on this amount, if borrowed, would be, at say, 4 per cent., £1,760; deducting this sum from the estimated amount to be received from rents, namely, £3,250, the Association will derive from the property a net income of £1,490. This sum annually applied to the repayment of the money borrowed for building purposes would, allowing for interest on the instalments repaid, expunge the debt in less than 21 years.

Thus, assuming no contributions from the other funds of the Association to be made to the expenses of building, the Association may be expected, at the end of 21 years, to be not only free from expenditure upon rent or interest on debt, but deriving a considerable income from its property.

(iii) *On Basis of Estimated Return on Capital Invested.*

A third view of the position as regards premises may be presented showing the return to the Association of income in respect of capital expenses, (*a*) from the old premises, and (*b*) from the new premises.

The capital expended on the old premises was £86,020; the return in rent from the part not used by the Association was £860, being 1 per cent. on the outlay. The total capital to be expended on the new premises is estimated at £130,000, and the return to be expected in rents from the part not used by the Association at £3,250, being 2½ per cent. on the outlay. This means that the Association, by rebuilding its premises, realises the rental value of its freehold site, as regards the ground floor and basement, as well as having the advantage of new and commodious premises for its own work.

2. CENTRAL STAFF (IN SECRETARIAL DEPARTMENTS).

For the year 1905 the staff in the two departments was as follows:—

General Secretary's Department.

	£	s.	d.
General Secretary and Manager	800	0	0
Assistant Secretary	275	0	0
Clerical Staff	2,491	19	8
	3,566	19	8

Medical Secretary's Department.

	£	s.	d.
Medical Secretary	700	0	0
Assistant Secretary	203	3	0
Clerical Staff	321	0	0
	1,224	3	0

3. CENTRAL ASSOCIATION PRINTING, ETC.

The printing work of the Association, apart from the Journal and Supplement, has included printing of Agenda and Minutes and other documents in connection with the work of various central bodies, including the Representative Meeting, Council, and Committees, printing all central official notices, printing undertaken for Divisions, and a large amount of jobbing printing required in connection with the work of the Association.

Owing to the cramped accommodation, it has been necessary in the past to put out a certain amount of such printing.

The cost to the Association of putting out printing, as compared with doing it on the premises, may be taken in general as an additional 25 or 30 per cent. When the new premises are completed, the amount of printing put out can be greatly reduced. On the basis of the printing of 1905, a saving of about £100 might have been effected in this way.

Cost.

Costs of the printing (Minutes, Agenda, &c.), for the governing bodies are stated separately under their respective heads in the appended accounts. Other printing is included under the head of "Miscellaneous Printing." (See Appendix.)

4. Library.

The Library has been established since 1888. The average annual number of attendances is 5,560, a considerable proportion of which is by provincial Members.

Assistance to Local Libraries.

The Council has from time to time made grants of books to local libraries and, since the formation of the Divisions preference has been given to these bodies. Up to the present the Committee in charge of the Library has not been in a position to meet all the demands in this direction, nor to establish a circulating medical library such as has been suggested.

Staff.

The Library is conducted by the Librarian, Mr. Honeyman, under the supervision of the General Secretary and the Science Committee.

Cost.

The grants made to the Library for the purchase of books, and including also subscriptions to periodicals and binding, during the last five years have been as follows :—

1902.	1903.	1904.	1905.	1906.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
114 3 1	111 13 4	130 5 8	138 13 11	121 11 7

The amounts stated do not, it must be explained, represent more than half the value of the annual additions to the Library, as a large number of books are received every year as gifts presented by authors and other private donors, or are received through the Editor of the British Medical Journal.

Adding the salary of the Librarian and incidental expenses, the total cost of the Library to the Association for the same period has been £1,693, giving an average cost of £339 per annum.

5. British Medical Journal.

The British Medical Journal occupies a peculiar position in being, on the one hand, a leading medical periodical competing with other medical journals and, on the other hand, in being owned by, and acting as the official organ of, a large professional organisation.

This dual aspect of the work of the Journal demands careful attention both as affecting the principles of management of the Journal and as affecting the finances of the Association.

The Journal as a Business Enterprise.

Viewing the Journal purely as a business enterprise, the fact that it is owned by an association of medical men presents certain advantages and disadvantages :

Advantages.—The position of the Journal as the official organ of the British Medical Association gives it :—

1. A large guaranteed circulation, which is of great advantage to it as an advertising medium.
2. Prestige and influence arising from its connection with the Association.

Disadvantages.—1. Cost of putting into type, printing, paper, and, in the case of the colonial and foreign issue, extra postage, for Association notices and business which have little or no value as news ;

2. The obligation to refuse certain classes of advertisements regarded as contrary to the principles of the Association ;

3. The impression which exists in some quarters that editorial comments are not free expressions of opinion, but are limited by the official position of the Journal. (It is particularly during the period before the official opinion of the Association has been formulated that the Journal is of value to the Association, so there is, therefore, little real justification for this impression.)

Effect on the Association of its Ownership of the Journal.

The value of the British Medical Journal as an instrument in the work of the Association cannot be over-estimated. The value of the Journal to the Association lies mainly—

(1) in the dissemination of knowledge with regard to the progress of medicine and the allied sciences (*i.e.*, post-graduate work) ;

(2) in the opportunity afforded for the discussion of moot points of practice or policy upon which opinion is unsettled ;

(3) in the facilities it provides for bringing promptly to notice acts or proposals of public bodies inimical to the interests of the profession or of its individual Members.

Financial Relationship.

The connection of the Association with the Journal produces an element of great difficulty in estimating the exact financial position, this being due to the fact that the subscription to the Association is inclusive of the subscription to the Journal, and it has always been found impracticable to separate the Accounts of the Journal, as a business undertaking, from the general Accounts of the Association. This fact has led to much misapprehension on both sides. On the one hand, critics of the finances have overlooked the fact that the subscription to the Association includes the subscription to the Journal, and, by taking only the receipts of the Journal from advertisements, sales, and similar sources, and setting against these the expenses of the Journal, have given the impression that the Journal was conducted at a "loss." Others have disregarded the fact that the subscription is not to the Journal only, but to the Association as a whole. Treating the income from the subscriptions as purely Journal income, adding to this the income from advertisements and similar sources, and deducting only the cost of the production of the Journal, the balance has been spoken of as "profits" of the Journal, out of which the expenses of the Association work were stated to be defrayed.

In the opinion of the Committee, each of these views is erroneous, and it appears to the Committee to be part of its province in discharging its present reference, to draw special attention to the confusion thus resulting.

A clear grasp of the finances of the British Medical Association cannot be obtained unless it is constantly recognised that the subscription is a subscription to the Association as a professional organisation and as owner of the Journal.

The Committee has considered the possibility of framing the Balance-Sheet so as to keep the Journal accounts entirely separate from those of the Association. Apart from the practical difficulties, on which it is unnecessary to dwell, this course would be open to the grave objection that it is impossible to assess the proportion of subscriptions which should be accredited to the Journal, and the proportion which should be accredited for other purposes of the Association. There can be no doubt that many Members of the Association are primarily subscribers to the Journal and have only recently, if at all, realised their position as Members of a professional organisation, while others again who had hitherto refused to become "subscribers," as they

said, "to the Journal," have recently joined the Association, because of the development of its work as a professional organisation.

In the opinion of the Committee, it is impossible to form any correct estimate of the proportion of these groups, but to facilitate a grasp of the position, the Committee presents a statement (*see Abstract G, p.*) showing, for the year 1905, on the one side all amounts which can reasonably be charged to the Journal, and on the other side all items of income which are derived from the Journal solely. The difference between these represents the present cost to the individual Members of receiving the BRITISH MEDICAL JOURNAL, assuming that the rest of their subscription, so far as expended, is devoted entirely to Association purposes. From this account it will be seen that, after deducting all receipts from purely Journal sources, including subscriptions of non-Members, the amount of the cost of the Journal remaining to be defrayed from the subscriptions of Members for 1905 was £6,628, being approximately 6*s.* 6*d.* per Member per annum.

Management of Journal.

Under the Articles of Association it is required that the Journal shall be conducted by a paid Editor, who shall be responsible for all that appears therein, except such matters as are inserted by direction of the Council.

The business conduct of the Journal is in the hands of the General Secretary of the Association, as Manager.

The control of the Council over the Journal is exercised through the Journal and Finance Committee, under whose instruction the Editor and Manager act, and to whom they report quarterly, the Journal and Finance Committee in turn reporting quarterly to the Council.

Staff of Journal.

The staff of the Journal, in addition to the Editor and Manager, consists of :—

(*a*) The Editorial Staff;
(*b*) The Manager's Clerical Staff;
(*c*) The Printing Staff.

The Editorial Staff consists of the Editor Assistant Editor, the Sub-Editor, and five clerks and a messenger boy, as well as the outside contributors, whose number, of course, varies, but averages about 120. These are apart from the writers of signed articles, who, as a rule, are not paid. The exceptions to this rule are very few, on the average not more than two or three a year, if so many; the authority of the Council, through the Journal and Finance Committee, is always obtained for such exceptional payments.

The Staff in the Manager's Office includes the Manager, the Assistant General Secretary, and clerks, some of whom divide their time between the work of the Journal and work for the Association. The present printing staff consists of a foreman printer, two readers, two copyholders, and 34 compositors and other employees, whose number varies according to requirements, the minimum being about 30; for some part of the time the printing staff is employed on work for the Association.

PART IV.—LOCAL ORGANISATION OF THE ASSOCIATION IN ITS RELATION TO CENTRAL ADMINISTRATION AND FINANCE.

The local organisation of the Association consists of Divisions and Branches, each of which has a defined area and is composed of all the Members of the Association for the time being resident within that area.

The Divisions were brought into existence under that designation by the new constitution adopted in 1902, though in some cases bodies of the same character existed before under the title of Branches, or as districts or divisions of Branches.

The object of the formation of Divisions was to create local bodies, the Meetings of which Members could attend without undue loss of time, and which could accordingly act on the one hand, as local Medical Societies, serving all purposes of local organisation of the profession, both socially, medico-politically and, if so desired, in scientific matters, and, on the other hand, as local units of the Association, to ascertain professional opinion to act as the medium through which individual Members could take part in the government of the Association by the election of Representatives in Representative Meetings, and to act as the instrument for carrying out the policy of the Association locally.

Most Branches in the United Kingdom consist of groups of the Divisions, and act as agencies for co-ordinating the work of the Divisions for their areas, distributing the capitation grants to Divisions, according to their requirements and conducting the election of Members. Branches or groups of Branches are also the electoral areas for the election of Members of the Central Council.

Finances of Divisions and Branches.

At the time of the adoption of the new constitution, concurrently with the requirement that every Member should be a Member of the Division and Branch in whose area he resided, it was decided that there should be a uniform subscription for Membership of the Association. It was also decided that, of the total subscription of 25*s.*, 21*s.* should be devoted to central purposes and 4*s.* to the expenses of the local organisation.

The proportion devoted to local purposes is designated a "Capitation Grant," and is paid in the first instance to the Branches. In the case of Branches having several Divisions, it rests in the discretion of the Branch Council to decide what proportion of the capitation grant shall be paid to the Divisions. The amounts so granted vary from 5*s.* 6*d.* to 1*s.* per Division Member.

In this connection it must not be overlooked that 12 Divisions in the United Kingdom are themselves Branches, and, therefore, the whole capitation grant of 4*s.* is devoted to what in other cases would be designated as Divisional purposes. Several Branches also have only two or three Divisions.

Expenditure of Divisions.

The ordinary expenditure of Divisions includes cost of meeting rooms, printing and postage of Division notices, other ordinary secretarial expenses, and expenditure on special work. Part of such expenditure arises in connection with the work of the Division as a local medical society dealing with matters of purely local concern, part from its functions as a unit of the Association, electing a Representative in the Representative Meeting, considering questions of Association administration, and of Association policy referred to the Divisions by the Central Governing and Executive bodies, and assisting in other ways in the general work of the Association. Thus there is a portion of the work of the Divisions which is carried out in the general interest of the Association, and this fact requires consideration in estimating the proportion of the subscription which should be devoted to central and local purposes respectively. On the other hand, it must also be recognised that in some cases it has been thought expedient that certain expenses of Divisions should be borne from central funds, particularly certain costs of printing.

Expenditure of Branches.

The expenditure of those Branches which consist of only one Division has already been sufficiently considered. In the case of Branches composed of several Divisions, the expenses to be met are those of General Meetings of the Branch (which are usually only for scientific and social purposes, and for election of officers of the Branch and adoption of Rules), Meetings of the Branch Council, and Secretarial expenses. The functions of Branch Councils in the case of Branches of several Divisions, are of great importance in the administration of the Association, as these bodies deal with the election of new Members, the control of the finances of the Division, questions of expulsion, and act as a court of appeal in ethical matters. They also exercise a general supervision over the Divisions within their area, being largely composed of representatives of these bodies.

In the Appendix are tables and analyses of Branch and Division grants for the year 1905, which exhibit certain facts deserving special attention in this Report, specially the inequality in expenditure in different districts, and the

expenditure in some instances on objects which are *ultra vires*.

The Committee understands that a Report on Branch and Division Finance is being prepared by the Organisation Committee, and that the Committee recommends a change in the system of Capitation Grants, whereby in future these should be variable, instead of being fixed, as at present.

Part V.—Conclusions as to Financial Position, Possibilities of Economy, and Recommendations.

(1) Review of Expenditure under the Following Heads.

Cost of:—Central Meetings, Central Premises, Central Staff, Central Printing, Stationery, &c., Library, other Central Association Expenses, Journal, Grants to Branches.

Central Meetings Expenses.

The Committee has very carefully considered the possibilities of economy in connection with Central Meetings in each of the following respects:—number of Members of each body, expenses allowed to Members attending, number of Meetings held, printings in connection with Meetings, and Secretarial Staff.

Number of Members and Expenses Allowed.

The travelling expenses allowed to Members attending Central Meetings constitute about one-sixth of the total expenses of Association work, and the Committee has naturally carefully considered the possibilities of economy in this direction.

The Committee is of opinion that the present system of paying first-class railway fares to those who attend Meetings of the Representative Body, Council, or Committees should be continued, but that for the present the Association cannot afford to pay other expenses of Members attending.

As regards the Membership of the various bodies, the Committee cannot recommend any decrease in the number of Members of the Representative Body, but considers that the number of Members of the Central Council could be reduced at least one-third without any sacrifice of executive efficiency.

As regards the Committees, the only cases in which the Committee can recommend reductions are those of the Science Committee, which might be reduced to eight elected Members, retaining its present power of co-opting four, and the Premises Committee, which, after the completion of the new premises, might consist of the *ex-officio* Members only.

Number of Meetings.

The number of Meetings of Council and Committees has a very considerable effect on the annual expenditure. An additional Meeting of Council may cost over £100, and an additional Meeting of a Committee of average size may cost from £15 to £20.

In recent years the number of Meetings, both of Council and Committees, has been, in the opinion of the Committee, larger than should ordinarily be necessary. The Committee recognises that this has been due in part to special circumstances of the time, namely, the fact that the Association has been engaged in work of development, and the fact that arrears of work have had to be overtaken. As these temporary causes pass away a reduction in the number of Council and Committee Meetings, and consequent saving may be anticipated, and should be definitely aimed at.

An important factor needing consideration is the relation between efficiency of the clerical staff and the number of Meetings required. In the part of the Report dealing with the staffs of the General and Medical Secretaries, the opinion is expressed that the staff of the Medical Secretary's department has throughout been inadequate for the work which it has been called upon to discharge. Adequacy of the staff properly to prepare the matters which require consideration by Committees materially reduces the work of the Committees, the time spent in the transaction of business, and the number of Meetings, and thus saves expense.

Reference has been made in the description of the work of Committees to the system of Sub-Committees as having, in some instances, reduced the number of Meetings of the full Committees necessary, and having thus effected economy.

Another method by which unnecessary Meetings of Committees have been avoided has been by ascertaining the views of Members of Committees by correspondence as regards matters which were not considered to require discussion.

In all these ways the Committee considers that the expenditure due to Meetings may be curtailed.

Committee Printings.

Inasmuch as part of the printing required in connection with Council and Committee Meetings is naturally directly proportional in amount to the number of Meetings held, a reduction in the number of Meetings will effect a saving as regards printing also, and other possible economies as regards Committee printings are dealt with in the section of the Report which relates to central Association printing generally.

Secretarial Staff of Committees.

The conclusions of the Committee on this subject are contained in Part VI. dealing with the general question of the Secretarial Staff of the Association.

Expenses of Committees Generally: Supervision by Chairmen.

Having regard to the development of the central executive work, both in amount and complexity, the Committee has come to the conclusion that the Association must, in the future, look more than in the past to the Chairmen of Committees to assist in keeping a check upon expenditure, and that for this purpose it is necessary that they should be kept adequately informed as to the particulars of expenses arising in connection with their respective Committees. The Committee has, therefore, made a special recommendation on this subject.

Central Premises Expenses.

Current Account.

The fact that the inquiry by the Committee has coincided in time with the commencement of the rebuilding of the central premises of the Association makes it difficult to present any reliable estimate of the future current expenditure of the Association under this head. The analysis of the past charges for rates, cleaning, lighting, heating, and similar items can obviously only afford a rough approximation to the future cost in these respects. Generally, it may be considered that there will be a tendency to increase in each of these items, and a definite increase in rates, owing to the much larger size of the new premises than of the old.

On the other hand, in respect of repairs, in particular, and to a less extent in respect of heating, lighting, and cleaning, there may be a relative saving for some years to come owing to the newness of the building and the use of more modern systems of heating and lighting. On the whole an increase in the current expenses on premises account must be anticipated.

Central Printing and Stationery Expenses.

For convenience the Committee considers under this head not only the item of miscellaneous printing included in the Balance Sheet for 1905 among the General Association expenses, but also the items of printings in connection with the work of the Representative Meeting, Council, and Committees included in Abstract E. Full details of the printings included in these items have been placed before the Committee. The Committee has come to the conclusion that there has been no extravagance in the matter of

printing, though it is considered that economies can be effected in the future.

References have been made in an earlier part of the Report to the saving that may be effected by doing as much printing as possible on the Association premises when the necessary accommodation is available in the new building.

Inasmuch as many prints are required, both for Committee purposes and afterwards for publication in the Journal, a saving is possible by setting such documents, in the first instance, in Journal measure and type. The objection to this has been that documents so printed are not so convenient for use in Meetings, but, on the whole, the Committee is of opinion that the economy should be effected.

The Committee has carefully considered whether the expenses involved in officially supplying by post to each Honorary Secretary of a Division or Branch, copies of documents referred to Divisions which are published in the Journal is justified. The Committee considers that Honorary Secretaries are entitled to such assistance in their voluntary work for the Association, and that the expense ought to be incurred.

The question of printing at the head office documents required by Divisions and Branches for their own purposes has also been considered. The Committee is of opinion that no definite recommendation on the subject can be made with advantage at present, but the possibility of such extension of the central printing department in the future is a matter for consideration as occasion arises.

(2) PRESENT FINANCIAL POSITION AND PROSPECTS.

1. *Balance Sheet for* 1905.

Having regard to the fact that the shrinkage in the annual surplus of income over expenditure shown in the Balance Sheet for 1905 was the immediate cause of the appointment of the Committee, the position as disclosed by that Balance Sheet has received very careful attention from the Committee.

The really important question for consideration is whether the present or the prospective resources of the Association, assuming the subscription to remain as at present, will suffice for the efficient performance and development of the work now undertaken by the Association for the profession, or could be made so by improvements in administration, resulting in *economy*. "Economy" is of two kinds: (i) simple curtailment of expenditure; (ii) obtaining greater value for money spent.

In the report of the Lancashire and Cheshire Branch, and in other criticisms of the Balance Sheet in question, it has been pointed out that the expenditure of the Association has increased in a greater ratio than the income, and that if this tendency continue an adverse balance must be the result.

To estimate accurately the justice of such criticisms, it is necessary carefully to examine the actual causes of the diminution of the surplus as shown by the Balance Sheet for 1905, and to consider with reference to each item: (i) whether it bears any direct relation to the expenditure necessitated by the work of the Association; and (ii) whether any increase of expenditure or diminution of income shown is likely to be of a permanent or temporary character.

For example, the surplus was diminished by £780 in consequence of the necessity of writing this amount off investments owing to the general market shrinkage of securities. This is obviously, so far as the Association is concerned, a purely accidental circumstance (so long as there is no question as to the prudence of the investments actually made), and one which does not really affect the capacity of the Association to carry on its work so long as there is no likelihood of the Association being compelled to realise its investments at a sacrifice.

Secondly, there was a shrinkage in the advertisement income, which the Committee has ascertained was due partly to bad trade and partly to the fact that the year was compared with 1904 in which there were 53 issues. There must obviously always be fluctuation in the advertisement income arising from causes over which the Association has no control, and so long as there is no reason to anticipate, as in the opinion of Committee there is no reason to anticipate, any permanent shrinkage in the income derived from this source, this need not be taken into account in considering whether there is or is not necessity for permanent curtailment of the work done. It is sufficient that the Association should from year to year "cut its coat according to its cloth" and live well within its actual income.

Considering next, the causes of the diminution of surplus in the 1905 Balance Sheet, which have sprung directly from the increased expenditure on work done, and regarding merely the work of the year, it is seen that, apart from the amount written off for depreciation of investments, the actual revenue of the Association exceeded its expenditure by £1,600. In the opinion of the Committee, provided that an adequate return was obtained in work for this expenditure, such a position would not call for curtailment.

The Committee considers that the Association, so long as it gets value for its money, is entirely justified in carrying out work which is paid for by the year's income and leaves £1,600 to be added to the reserves.

Therefore, it would appear that taking the year 1905 as standing alone, the position shown by the Balance Sheet would give no cause for alarm, and if the relationship of actual income to actual expenditure (apart from fluctuations in the value of invested capital which it is not proposed to realise) were to remain permanently as in that year, the financial position of the Association would, in the opinion of the Committee, be entirely satisfactory.

The Committee next proceeds to consider the question whether the tendencies shown by a comparison of that Balance Sheet with those of previous years, especially the increase of the ratio of expenditure as compared with income, are such as to justify alarm or to call for curtailment in expenditure.

In considering this question, it is first to be noted that the reorganisation of the Association was due to a definite desire that a larger proportion of its resources than in the past should be devoted to work for the benefit of the profession, and the Committee sees no reason to believe that the Members of the Association desire sums, as at one time, of £5,000 per annum, that is, one-fourth of the subscription income, to be regularly added to its reserve funds.

If the work which the Association is required to do could be done for so much less than its actual income, the question would, in the opinion of the Committee, arise as to whether the Association was justified in charging its Members so high a subscription—whether, that is, it would be justified in calling upon a Member to pay 25*s.* per annum if, in fact, 20*s.* were the sum actually sufficient to meet all requirements of the work, and 21*s.* would provide a surplus of £1,000 a year to the central funds, in addition to the surplus of, approximately, £1,000 which is also being saved by the Branches.

In accordance with the view taken by the Committee of the intention of the Representative Meeting, as expressed in the reference to the Committee, the Committee believes it to be the desire of the Association that its resources should be applied as fully as possible from year to year to the development of the work, only such annual surplus being maintained as will guarantee the Association against an actual deficiency on any year's working, and will slowly increase the reserves.

If the Committee has correctly interpreted the opinion of the Association, a rapid increase of expenditure for the development of the work in the years 1902–5 was necessary and proper. Therefore, the argument from ratio is fallacious, inasmuch as what has taken place has been a change, desired by the Association, in the permanent relation of expenditure to income.

Looking at the actual causes of expenditure, the Committee sees no reason to anticipate that the maintenance of the work on the present scale will demand in the immediate future annual increases of expenditure proportional to those which have recently taken place. Large increases in the number, and consequent expenses of Committees and other central Executive Meetings and in the Permanent Staff, have been necessitated by the rapid development of the work.

As regards expenses due to Meetings of Committees and other executive bodies, the Committee has explained in the portions of the Report descriptive of the work of the various Committees the grounds for which it is believed that in the future the number of Meetings required and expenses con-

sequent, such as printing, will be rather less than more than in recent years. Much of the expenditure in recent years has been due to the fact that arrears of work have had to be made up.

As regards the Permanent Staff, increased expenditure may, in the opinion of the Committee, be required, but not in the ratio of recent years, and, for reasons explained, if increased expenditure on Staff is accompanied by increased efficiency, this will effect actual saving in other directions, as well as securing a better return of work for amount spent.

Thus, in estimating the financial prospect in the immediate future from the expenditure side only, the Committee anticipates that a moderate increase in expenditure in certain respects may be necessary to provide for the normal development of the work, but that this may be in part, at least, counterbalanced by savings in other directions.

3. FINANCIAL CONTROL.

JOURNAL AND FINANCE COMMITTEE CONSTITUTION.

The Committee has very carefully considered the question of the advisability of having a separate Finance Committee and Journal Committee, or a combined Journal and Finance Committee as at present. The question has an important bearing on the reference to the Committee both as affecting the efficiency of the supervision exercised by the Finance Committee over the finances of the Association, and also as affecting the management of the Journal.

Considering the matter first as affecting the Journal, the peculiarity of the BRITISH MEDICAL JOURNAL as compared with competing Journals, is that in some way there should be control by the Association through the Council over the editorial conduct and business management of the Journal. It is true that no periodical can be "managed" by a Committee. The immediate and detailed control must necessarily be left to an editor and a manager, to whom wide discretion must be given. But there must be representatives of the proprietors, to whom the editor and manager can apply for instructions on the larger issues of policy, which could not be left entirely to their individual decision.

The question is, what body can most conveniently represent the Association for this purpose. The possible courses would be: (*a*) that the Editor and Manager should actdirectly under the Council, or (*b*) that they should act under a Committee reporting to the Council, and in the latter case the Committee may be—(i) a Committee charged with other functions, like the present Journal and Finance Committee, or (ii) a separate Committee.

The system of direct control by a large body, such as the Council, appears entirely unworkable, as it would be impossible for the Editor and the Manager to discuss matters with the Council as a whole with the same freedom with which they could be discussed in a Committee, and there are many details with which it is unnecessary to trouble the Council.

Assuming that the control of the Association over the Journal should be exercised through a Committee, the obvious arrangement, were the matter being considered now *de novo*, would be that this should be a small separate Committee.

The existing system of placing the supervision of finance and the control of the Journal into the hands of the same Committee, naturally grew up at a time when the actual work done by the Association, apart from the publication of the Journal, was of relatively small importance, and when, in particular, the finances of the Association were to a great extent identical with the finances of the Journal. The Committee recognises that an arrangement which is in existence, even though not such as would be adopted were the matter being considered for the first time, may yet deserve to be continued if no positive disadvantages can be shown to exist.

It appears to the Committee, however, that in view of the greatly changed circumstances of the Association, a change of the existing system is now called for by the following considerations:—

(*a*) The work of supervising the finances of the Association is of such importance, not only as regards preventing excessive expenditure, but also as regards co-ordination with a view to efficient application of money spent, as to be quite sufficient for the work of one Committee.

(*b*) It is of great importance that the finances of the Association should be supervised by a Committee capable of taking a comprehensive view of the requirements of its work in all departments. In the opinion of the Committee this requirement is not satisfied by the constitution of the Journal and Finance Committee as at present existing. There is no assurance that it will contain Members familiar with the detail of the work supervised by such important Committees as the Medico-Political, the Science or the Ethical Committees, in connection with whose work considerable expenditure must take place, nor of the Organisation Committee, which is in close touch with the work of the Divisions and Branches. It is not sufficient that the Finance Committee should merely check excessive expenditure in any one direction. Increased expenditure judiciously incurred may be economical in the long run, and the Committee should contain Members who can speak and vote from their own knowledge of the work of the different departments. It is necessary also that there should be an adjustment of the proportion of expenditure allotted in different directions, according to the varying requirements of the time.

(*c*) It is not conducive to the due co-ordination by the Committee of all departments that it shall be specially charged with the supervision of one special department.

(*d*) The Journal requires management as a business undertaking on the one hand, and on the other hand has to be considered as a department of the work of the Association and in relation to the finance of the Association.

Proper regard to both aspects will best be given if the Journal is represented in administration by a distinct Committee and not distinguished from other departments by being placed under the special care of the Finance Committee, which should maintain due co-ordination among all the departments. Due consideration for the financial aspects of the work of the Journal would be attained by providing that the Chairman of the Journal Committee should be *ex officio* a Member of the Finance Committee, and by the provision, which would, in any case, presumably exist, that the principal officers of the Association, including the Chairman of Council and Treasurer, should be *ex officio* Members of the Journal Committee.

(*e*) By such a separation, due specialisation in the work of Committees would be provided for, Members being specially chosen for the Finance Committee and for the Journal Committee respectively, according to their special qualifications for the work of the one Committee or the other.

It has been objected that the creation of a separate Journal Committee would be in effect a revival of the "Reference" Committee which previously existed. This, however, is not the intention of the proposal to establish a separate Journal Committee. The work of the Journal Committee would be the same as is now discharged with reference to the Journal, by Journal and Finance Committee, and there is no reason to expect more interference with the discretion which should properly be left to the Editor and Manager in the one case than in the other.

PART VI.—CENTRAL STAFF: DUTIES OF GENERAL AND MEDICAL SECRETARIES.

With regard to the reference relating to the duties of the General and Medical Secretaries and the organization of the Central Staff for carrying out the work of the Association, the Committee has considered the position of the Departments of the two Secretaries, and has ascertained the views of each Secretary on all aspects of the matter.

Statements by the General and Medical Secretaries, descriptive of the work of their respective Departments, are contained in the Appendix to the Report.

The recommendations of the Committee upon this part of its report are contained in the recommendations numbered 11 to 23 inclusive. In the case of most of these recommendations the Committee is of opinion that the reasons for which they are made will be sufficiently obvious upon consideration of the matters stated in the earlier portions of this report and of the statements of the two Secretaries, and therefore that any further explanation here is unnecessary.

With regard to the first two recommendations, the Committee thinks it desirable briefly to explain the grounds upon which they are put forward. Upon consideration of the development and of the present nature of the work of the Association, it is clear to the Committee that the secretarial work falls naturally into two general departments—namely, that of business management and that which has to do with the professional work of the Association—that these departments are of equal importance, and that they should have at their head officers of co-ordinate rank. This recommendation not only expresses what is desirable in the interests of efficient administration, but is also in accordance, practically if not formally, with the actual existing position of the General and Medical Secretaries respectively, which has been arrived at as the result of the successive decisions of the Council stated in the memorandum of the Medical Secretary appended to this report.

The term "General" Secretary, however, as applied to the officer who deals with the business side of the secretarial work of the Association is in the opinion of the Committee, inappropriate, inasmuch as it implies a general supervision of the work of the Association, which does not in fact exist, and which under present conditions would be impracticable. The Committee recommends, therefore, that this title should be altered, and suggests the designation "Financial Secretary" as corresponding more closely with the nature of the duties of the office.

ATTENDANCES OF MEMBERS OF THE SPECIAL FINANCE INQUIRY COMMITTEE.

October 9th, 1906, *to July 17th*, 1907.

(Nine Meetings held.)

	Attendances.
Dr. J. A. Macdonald (Chairman of Representative Meetings), *Chairman*	8
Dr. H. Langley Browne (Chairman of Council—resigned June 7th)	1
Mr. Edmund Owen (Chairman of Council—elected July 3rd)	1
Dr. H. Radcliffe Crocker (*Treasurer*)	6
Mr. H. W. Armit	9
Mr. H. A. Ballance	7
Dr. A. Cox	8
Sir Victor Horsley	7
Dr. R. L. Langdon Down	9
Dr. L. S. McManus	7
Dr. R. H. Wolstenholme	5

(Signed) J. A. MACDONALD,
Chairman,
Finance Inquiry Committee.

MINORITY REPORT

Presented by

Dr. R. H. WOLSTENHOLME, Member of the Committee.

SPECIAL FINANCE INQUIRY.

In dealing with the Finances of the Association with a view of effecting economies without loss of efficiency, it appears desirable to consider the question of the higher officials separately. The list for 1905 is as follows:—

	£
Assistant Editor	1,180
Editor	1,137
General Secretary	800
Medical ,,	700
Pension, late General Secretary	600
Sub-Editor	450
Assistant Secretary	275
,, Medical Secretary	203

The present salary of the Medical Secretary is £750.

The present salary of the Assistant Medical Secretary is £250.

The present salary of the Assistant General Secretary is £300.

If it is intended to set up a retiring pension scheme on apparently a three-fifths salary (as seems probable from the above list), this ought to be borne in mind when considering the question of the adequacy of the salaries.

It would not be possible to interfere with these salaries without causing a feeling of injustice, but in my opinion they are quite adequate.

With regard to the Departments:—

In the Editorial Department there is an increase of nearly £800 over the year 1901, whilst the figures for 1902-3-4-5 are nearly the same. The Journal is filled with two classes of contributions: (*a*) those which are signed and not paid for, (*b*) those which are unsigned and paid for. In the July 20th edition the proportion of the two sorts was 24 unpaid pages to 36 paid. The average cost of the contributions per week is between £55 and £58. Obviously, if the proportion of signed articles was increased there would be some economy effected. This might be done by increasing the number of "Clinical Lectures," "Hospital Reports," and also by encouraging the general practitioners to record more "memoranda." If, at the same time, the fixed portion of the salaries of the Editor and Assistant Editor was decreased, and the present amount of their salaries kept up by increased contributions, there would be further economy. How far this would be possible is a question for further enquiry. The annual cost of contributions is £2,962, of which £780 goes to the Editorial Staff.

With regard to the General Secretary's Department, the ways in which it might improve the financial condition of the Association are (1) by increasing the revenue from advertisements; (2) by devising some means of increasing the sundry sales of the Journal; (3) by constant care in the control of the printing. With regard to the advertisements the question ought to be settled, whether it is desirable for the funds of the Association to be used for the payment of analyses of foods and beverages and other articles of which it is desired to give a "Trade" notice. The annual amount is not large; in 1905 it was £10 10*s.* 0*d.*, and in 1906 £37 14*s.* 6*d.*

With regard to the Medical Secretary's Department I agree that it has not been efficiently staffed until recently and probably a slight increase might further be made. I do not agree with the large increase suggested by the Committee, nor with the suggestion to appoint another Medical Secretary at a salary which would soon rival that of the present one. The Medical Secretary has at the present time a Medical Assistant. The proposed increase of staff would entail a minimum increase of £1,000 a year. Much of the over-pressure of this department has been caused by taking up too many questions at the same time.

The question of the postage of the Journal is a matter of some moment. The cost is £2,163 for the 3,009 Colonial Members and £1,738 for the 15,673 Home Members. The annual amount is 2*s.* 2*d.* for each Home Member and 11*s.* 1*d.* for each Colonial.

(Signed) R. H. WOLSTENHOLME.

APPENDICES.

I.

PROFIT AND LOSS ACCOUNT, 1896 TO 1905.

EXPENDITURE.

	1896.	1897.	1898.	1899.	1900.	1901.	1902	1903.	1904.	1905.
	£	£	£	£	£	£	£	£	£	£
Editorial	6,245	6,308	5,552	5,324	5,828	5,343	5,902	6,099	6,028	6,102
Expenses of Printing JOURNAL ..	18,492	19,810	21,665	21,214	21,281	21,914	21,933	20,897	21,924	22,060
General Association Expenses ..	5,749	4,911	5,203	4,502	4,592	4,490	6,356	5,348	6,421	7,517
Office Salaries and Wages	2,676	2,714	2,764	2,847	3,114	3,236	3,010	3,893	4,349	4,791
Plant—Written off towards Depreciation	350	350	500	500	500	500	500	500	500	250
Subscriptions — Written off for Deaths, Arrears, etc.	507	593	550	645	1,437	650	998	610	710	743
Redemption of Expenditure on Leases, etc.	1,251	1,239	—	—	—	—	—	—	—	—
Interest on Mortgage	—	—	855	995	715	428	189	—	—	—
Furniture and Fittings—Written off	—	—	—	—	200	—	—	—	—	—
Library	191	205	204	205	206	456	247	258	257	257
Cost of Purchase of Reversion of Lease	—	—	—	—	—	250	—	—	—	—
Representative Meeting — Council and Committees	687	844	896	749	1,070	1,500	1,390	1,806	2,186	2,886
Library, Written off towards Depreciation	—	—	—	—	—	—	—	250	250	100
*Capitation Grants to Branches ..	—	—	—	—	—	—	—	2,956	3,390	3,460
Cost of Alteration to General Office —Less Amount carried to Balance Sheet	—	—	—	—	—	—	—	619	—	—
Amount written off for Investments	—	—	—	—	—	—	—	—	—	781
Office Staff Superannuation	—	—	—	—	—	—	—	—	—	300
Total Expenditure	36,148	36,974	38,189	36,981	38,943	38,767	40,525	43,236	46,015	49,246
*(or, deducting Grants to Branches)	—	—	—	—	—	—	—	41,280	42,625	45,786
Surplus	1,861	3,460	4,736	6,273	4,477	4,963	4,499	5,572	5,076	862
£	38,009	40,434	42,925	43,254	43,420	43,730	45,024	48,808	51,091	50,108

*** In order to avoid an excess of figures, the shillings and pence are omitted.**

APPENDICES.

I.

PROFIT AND LOSS ACCOUNT, 1896 TO 1905.

RECEIPTS.

	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
	£	£	£	£	£	£	£	£	£	£
Subscriptions	17,789	18,600	19,430	19,872	20,019	20,071	20,451	23,722*	24,584	24,756
Ditto (former years)	168	134	169	141	162	508	315	443	301	286
Advertisements	15,663	17,354	19,326	19,328	19,508	19,538	20,355	20,480	21,465	20,440
Sundry Sales of JOURNAL	1,718	1,722	1,733	1,728	1,699	1,762	1,816	1,870	2,263	2,204
Sundries—Reading and Binding Covers	112	90	130	125	85	119	119	183	136	168
Reprints	112	108	117	89	110	91	133	119	108	118
Interest on Investments and Rents	1,487	1,568	929	946	827	617	811	1,042	1,120	1,138
Unexpended Grants to Committee ..	91	—	77	73	25	20	—	—	—	—
Scientific Grants unused and returned	108	96	62	96	88	73	63	66	50	47
Sale of Waste, etc.	19	24	17	19	22	18	18	33	22	36
Discount on Printing, Paper, etc. ..	742	738	935	812	875	913	943	850	914	915
Wood Fund (Credited Revenue) ..	—	—	—	25	—	—	—	—	—	—
Amount unexpended on Alterations as estimated for in 1903 Accounts	—	—	—	—	—	—	—	—	128	—
£	38,009	40,434	42,925	43,254	43,420	43,730	45,024	48,808	51,091	50,108

*From this year on, the full 25s. is included, as against 21s. in previous years.

*** In order to avoid an excess of figures, the shillings and pence are omitted.

II.

BALANCE SHEET.

Alterations Proposed in Arrangement of the Annual Accounts.

1. That the Abstracts shown in the Profit and Loss Account be as follows:—

(*a*) General Association expenses.
(*b*) Central Meetings expenses.
(*c*) Central Premises expenses.
(*d*) Printing, Stationery, and Postage expenses.
(*e*) Central Staff expenses.
(*f*) Library.
(*g*) Journal Account (expenses and revenue).

2. That the items given in each Abstract be as follows (the items of the Profit and Loss Account for 1905 being utilised for the purpose of illustration):—

(a) *General Association Expenses.*

Auditors' fee.
Bank charges.
Legal expenses.
Research scholarships.
Scientific grants.
Office petty cash.
Sundries.

(b) *Central Meetings Expenses.*

Annual Meeting: cost of daily Journal, etc.
Annual Meeting: expenses of sections.
Representative Meeting, Council, and Committees (railway fares, printing, and special reporting).

(Railway fares to be shown separately from printing and reporting in each case. No other charges to be included in this account.)

(c) *Central Premises Expenses.*

Cleaning offices.
Coals and coke.
General repairs (painting and general upkeep).
Rates and taxes, insurance, gas, and electric light.

(d) *Central Printing, Stationery, and Postage Expenses.*

Miscellaneous printing.
[Year Book printing and postage (discontinued).]
Office general postage.
Reprints.
Stationery.

(e) *Central Staff Expenses.*

Office salaries and wages.

(The full salaries of the Staff of the General Secretary's Department to be shown in this account, and an estimated proportion of the aggregate, representing the Staff expenses connected with the management of the Journal, to be shown as deducted and transferred to the Journal Account.)

Donation to Charing Cross Hospital.
Pension of late General Secretary.
Travelling expenses.
Office Staff Superannuation Fund.

(f) *Library (as at present).*

(g) *Journal Account.*

To show on the expenditure side the items included under Abstract (A) and Abstract (B) of the Profit and Loss Account for 1905, as well as the proportion of Staff charges of the General Secretary's Department charged to Journal Account, and the item "Compositors' Sick Fund" (formerly included in General Association Expenses) and to show on the income side receipts from advertisements as well as sale of waste and discounts on printing and paper.

The balance of this account to be stated as being the amount of the subscription income expended in the production of the Journal.

3. That in the "Revenue or Profit and Loss Account" the totals of the expenses shown in the several abstracts be shown on the expenditure side (as at present), and on the income side the total (not the items) of the receipts shown on the income side of abstract (G): that the amount voted to Office Superannuation Fund do not appear as a separate item in the Profit and Loss Account, but appear, as already stated, as an item in the Abstract "Central Staff Expenses": that the amount, if any, written off investments be not included among general items of expenditure, but be separately added after adding up the items of expenditure proper.

(For copy of Balance Sheet showing alterations above suggested, see page 227.)

Balance Sheet 31st December, 1905.

Dr. Cr.

LIABILITIES.

	£	s.	d.
To Subscriptions paid in advance	379	10	7
„ Advertisements ditto	724	2	8
„ Contributions	717	8	6
„ Reporting	51	19	6
„ Engraving	71	11	8
„ Printing Journal	496	2	0
„ Paper for Journal	630	19	9
„ Miscellaneous Printing	444	16	1
„ Stationery	102	1	0
„ Repairs	30	6	4
„ Legal Charges	218	10	10
„ Rates and Taxes, Insurance and Electricity... ...	447	19	10
„ Plant and Type	58	15	5
„ Editorial Expenses	29	16	9
„ Sundries	43	5	4
„ Library, Books, etc.	34	17	8
„ Overdraft from Bankers	3,624	10	9
„ Subscriptions due to Branches on December, 31st, 1905	219	3	4
Total liabilities	8,325	18	0
„ **Surplus Account**—			
Balance on January 1st, 1905 ... 101,397 2 0			
Balance of Income over Expenditure for 1905 brought from Revenue Account 862 1 5			
„ **Balance, being total of excess of Assets over Liabilities**	102,259	3	5
	£110,585	1	5

ASSETS.

	£	s.	d.
By Subscriptions—Amount due	1,740	19	0
„ Advertisements—Amount due	3,043	12	11
„ Sundry Sales—Amount due	150	10	11
„ Furniture and Fixtures	1,359	10	11
„ Library	2,237	5	3
„ Plant and Type...	1,247	17	6
„ Accrued Rents	69	4	6
„ Freehold, 2 & 3, Harvey's Buildings, bought at Public Auction, 1894	4,640	0	0
„ Freehold of 429, Strand, 2, 3, 4 & 5, Agar Street, at price paid 1898 ... £79,000 0 0			
„ Redemption of Land Tax 880 0 0			
„ Improvements by Alterations of General Office, 1903 ... ... 1,500 0 0			
	81,380	0	0
INVESTMENTS—			
„ £3,200 Bank of England Stock at 295	9,452	17	6
„ £6,400 Midland Railway 2½ per cent. Perpetual Guaranteed Preferential Stock at 77¾ bought February, 1905	5,026	1	6
	14,478	19	0
„ Cash at Office	17	18	1
„ Cash at Bank, being Branch Subscriptions in hand Dec. 31st, 1905	219	3	4
	£110,585	1	5

(The above assets do not include the unexpended balances of Capitation Grants held by the various Branches.)

Revenue or Profit and Loss Account for Year ending 31st December, 1905.

		1904. £	s.	d.	1905. £	s.	d.
Editorial	See *Abstract A*	6,027	19	4	6,101	3	1
Expenses of Printing Journal	„ *B*	21,923	15	8	22,059	17	7
General Association Expenses	„ *C*	6,421	8	1	7,516	11	9
Office Salaries and Wages	„ *D*	4,349	5	5	4,791	2	8
Representative Meeting, Council and Committee Expenses	„ *E*	2,185	7	6	2,885	14	8
Library	„ *F*	257	4	4	257	7	10
„ Written off towards Depreciation		250	0	0	100	0	0
Plant and Type—Written off towards Depreciation		500	0	0	250	0	0
Capitation Grants to Branches... ...		3,389	11	9	3,459	14	8
Amount written off Investments ...			—		781	0	0
„ voted to Office Staff Superannuation Fund			—		300	0	0
Subscriptions—Written off for Deaths, Arrears, etc.		710	6	3	742	18	4
		46,014	18	4	49,245	10	7
Balance of Income over Expenditure carried to Balance Sheet		5,075	14	6	862	1	5
		£51,090	12	10	50,107	12	0

	1904. £	s.	d.	1905. £	s.	d.
Subscriptions	24,584	6	4	24,755	0	10
do. arrears of former years	300	17	3	285	12	11
Advertisements	21,465	5	2	20,440	9	11
Sundry Sales—Journal	2,262	16	11	2,204	8	5
„ „ Reading and Binding Covers, &c. ...	135	14	2	168	0	3
„ „ Reprints	103	1	6	118	6	0
Interest on Investments and Rents ...	1,120	2	9	1,138	6	10
Returned Scientific Grants	50	4	0	46	10	3
Sale of Waste, &c.	21	10	0	35	10	4
Discounts on Printing, Paper, &c. ...	913	12	4	915	6	3
Amount unexpended on alterations as estimated for in accounts for 1903	128	2	5			
	£51,090	12	10	£50,107	12	0

Abstract A.]

EDITORIAL.

	1904. £	s.	d.	1905. £	s.	d.
Salaries—Editor	1,000	0	0	1,000	0	0
„ Assistant Editor	750	0	0	750	0	0
„ Sub-Editor	200	0	0	250	0	0
„ Clerical Staff	391	13	6	390	4	6
Contributions	2,920	0	5	2,962	17	9
Reporting	245	3	10	231	7	9
Engraving	287	16	5	239	2	0
Legal Expenses	27	11	2	12	17	8
Postage	78	11	3	78	12	6
Analyses	8	0	4	10	10	0
Travelling Expenses, Papers, etc. ...	114	5	9	170	16	11
Cost of Journal Slips circulated to the Press	4	16	8	4	14	0
	£6,027	19	4	6,101	3	1

Abstract B.]

EXPENSES OF PRINTING JOURNAL.

	1904. £	s.	d.	1905. £	s.	d.
Compositors' Wages and Machining Journal	8,797	13	7	8,808	17	1
Paper for Journal	8,861	13	3	8,985	14	3
Postage for Dispatch of Journal ...	3,931	19	0	3,902	8	10
Address Bands for issuing Journal ...	332	9	10	362	17	5
	£21,923	15	8	£22,059	17	7

Abstract C.] General Association Expenses.

	1904. £ s. d.	1905. £ s. d.
Annual Meeting—Cost of *Daily Journal*, etc.	189 13 0	200 19 0
Annual Meeting—Expenses of Sections	4 9 2	27 1 2
Auditors' Fee	105 0 0	105 0 0
Bank Charges	39 11 4	73 10 2
Cleaning Offices	161 4 6	167 16 6
Coals and Coke	53 0 6	58 16 0
Compositors' Sick Fund	10 10 0	10 10 0
Donation to Charing Cross Hospital	10 10 0	10 10 0
General Repairs—Painting and General upkeep	207 15 4	406 14 8
Legal Expenses	394 13 2	583 14 8
Miscellaneous Printing	559 2 5	678 5 11
Year Book—Printing, etc.	342 18 0	724 2 9
„ Postage	155 13 6	255 5 2
Reports of Poor Law System Ireland (4,000)	50 16 0	—
Office—General Postage	551 19 0	632 8 4
Office Petty Cash	125 16 5	151 5 7
Pension, late General Secretary	600 0 0	600 0 0
Rates and Taxes, Insurance, Gas and Electric Light	821 18 6	789 19 0
Reporting Council and Finance Committee Meetings	101 6 6	142 5 6
Reprints	75 2 11	103 6 6
Research Scholarships	650 0 0	600 0 0
Scientific Grants	350 0 0	353 0 0
„ „ Special Grant Chloroform Committee	130 0 0	—
Stationery	453 2 7	486 17 1
Sundries	122 9 1	187 13 0
Travelling Expenses	184 16 2	217 10 9
	£6,421 8 1	£7,516 11 9

Abstract D.] Office Salaries and Wages.

	1904. £ s. d.	1905. £ s. d.
General Secretary	800 0 0	800 0 0
Assistant Secretary	250 0 0	275 0 0
Medical Secretary	650 0 0	700 0 0
Assistant Medical Secretary	12 12 0	203 3 0
Clerical Staff	2,636 13 5	2,812 19 8
	£4,349 5 5	£4,791 2 8

Abstract E.] Representative Meeting, Council and Committee Expenses.

	1904. £ s. d.	1905. £ s. d.
Annual Representative Meeting—Railway Fares	244 7 5	177 0 7
Agenda and Minutes for Representative Meeting	88 12 9	110 11 3
Council—Railway Fares	678 15 7	791 13 6
Committees—Railway Fares, Printing, etc.—		
Annual Meeting Committee	22 11 2	22 7 0
Arrangement Committee	8 12 0	14 2 7
Chloroform Committee	10 19 0	10 11 0
Coat of Arms Committee	4 2 3	2 2 0
Colonial Committee	20 9 2	16 5 0
Committee on Alteration of Memorandum	—	5 4 10
Committee *re* Dental Section	0 18 6	—
Committee of Secretaries of Branches and Divisions	—	23 13 5
Committee on Standing Orders	—	23 5 0
Committee of Chairmen	33 9 2	82 17 9
Co-ordination Committee	—	16 3 1
Election Returns Committee	—	5 10 3
Ethical Committee	76 19 4	119 0 1
Hospitals Committee	125 7 6	197 3 1
Irish Committee	—	14 10 9
Journal and Finance Committee	5 9 2	90 5 9
Medical Defence Committee	116 19 10	46 13 0
Medical Secretary's Committee	19 0 1	—
Medico-Political Committee	351 9 8	555 4 1
Organization Committee	173 3 0	217 9 2
Premises and Library Committee	21 1 10	123 2 2
Public Health Committee	76 11 5	96 11 8
Royal Naval and Military Committee	53 13 2	5 6 1
Science Committee	—	30 8 3
Scientific Grants Committee	35 12 2	32 15 11
Scottish Committee	17 3 4	30 10 11
Superannuation Committee	—	0 18 6
Therapeutic Committee	—	24 7 11
	£2,185 7 6	2,885 14 8

Abstract F.] Library.

	£ s. d.		£ s. d.	£ s. d.
To Balance	2,198 6 3	By Librarian's Salary	250 0 0	
„ Purchase of Books	109 16 0	„ Printing and Posting of Circulars and Insurance	7 7 10	
„ Binding Books	29 3 0			257 7 10
„ Librarian's Salary	250 0 0	„ Amount written off for Depreciation		100 0 0
„ Printing and Postage of Circulars and Insurance of Books	7 7 10	„ Balance carried to Balance Sheet		2,237 5 3
	£2,594 13 1			£2,594 13 1

TRUST FUNDS.

Stewart Fund.

Investment of £579 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1905.	£ s. d.	1905.	£ s. d.
Jan. 1. To Balance brought over from 1904	34 11 1	July 25. By Award—William Henry Power, C.B., F.R.C.S., F.R.S.	42 0 0
„ Interest	22 3 3	„ Mr. Stanley—Engrossing Certificate	1 17 6
		Dec. 31. „ Balance	12 16 10
	£56 14 4		£56 14 4

Middlemore Fund.

Investment of £666 13s. 4d. 3 per cent. North British Railway Debenture Stock, in the name of the British Medical Association.

1905.	£ s. d.	1905.	£ s. d.
Jan. 1. To Balance brought over from 1904	75 19 5	Dec. 31. By Balance carried down, being cash at Bank	94 19 5
„ Interest	19 0 0		
	£94 19 5		£94 19 5

Office Staff Superannuation Fund.

1905.		£	s.	d.	1905.	£	s.	d.
Jan. 1.	To Balance brought over from 1904	1,220	3	7	Dec. 31. By Balance carried down—			
	„ Amount Voted from General Fund ...	300	0	0	By Investments at cost—£600 Cape of Good Hope 3 per cent. Stock, bought at 92¾, Dec., 1902 ...	558	1	0
	„ Interest	36	0	0	„ £100 Bank of England Stock, bought Dec., 1903	318	19	4
					„ £110 Bank of England Stock, bought at 299½, Dec., 1904	330	10	3
					„ Cash at Bank	348	13	0
		£1,556	3	7		£1,556	3	7

We certify, in accordance with the provisions of the Companies Act, 1900, that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet, dated 31st December, 1905, with the books and vouchers of the Association, and having inspected the Deeds of the properties, 429, Strand, 2, 3, 4 and 5, Agar Street, and 2 and 3, Harvey's Buildings deposited with your Bankers, and having verified the investments held on account of the Association and of the above Trust Funds, we report that the Balance Sheet is in our opinion properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs as shown by the books of the Association.

3, Frederick's Place, Old Jewry, E.C.,
March 24th, 1906.

PRICE, WATERHOUSE & CO.

Balance Sheet 31st December, 1905.

(Suggested Amended Form.)

Dr. *Cr.*

LIABILITIES.	£	s.	d.	ASSETS.	£	s.	d.
To Subscriptions paid in advance	379	10	7	By Subscriptions—Amount due	1,740	19	0
„ Advertisements ditto	724	2	8	„ Advertisements—Amount due	3,043	12	11
„ Contributions	717	8	6	„ Sundry Sales—Amount due	150	10	11
„ Reporting	81	19	6	„ Furniture and Fixtures	1,359	10	11
„ Engraving	71	11	8	„ Library	2,237	5	3
„ Printing Journal	496	2	0	„ Plant and Type	1,247	17	6
„ Paper for Journal	630	19	9	„ Accrued Rents	69	4	6
„ Miscellaneous Printing	444	16	1	„ Freehold, 2 & 3, Harvey's Buildings, bought at Public Auction 1894	4,640	0	0
„ Stationery	102	1	0	„ Freehold of 429, Strand, 2, 3, 4 & 5, Agar Street at price paid 1898 ... ... £79,000 0 0			
„ Repairs	30	6	4	„ Redemption of Land Tax 880 0 0			
„ Legal Charges	218	10	10	„ Improvements by Alterations of General Office, 1903 ... ... 1,500 0 0			
„ Rates and Taxes, Insurance and Electricity	447	19	10		81,380	0	0
„ Plant and Type	58	15	5	INVESTMENTS—			
„ Editorial Expenses	29	16	9	„ £3,200 Bank of England Stock @ £295 ... ... 9,452 17 6			
„ Sundries	43	5	4	„ £6,400 Midland Railway 2½ per cent. Perpetual Guaranteed Preferential Stock @ 77¼ bought February, 1905 ... ... 5,026 1 6			
„ Library, Books, &c.	34	17	8		14,478	19	0
„ Overdraft from Bankers	3,624	10	9	„ Cash at Office	17	18	1
„ Subscriptions due to Branches on December 31st, 1905 ...	219	3	4	„ Cash at Bank, being Branch Subscriptions in hand Dec. 31st, 1905	219	3	4
TOTAL LIABILITIES	8,325	18	9				
„ Surplus Account—				(The above assets do not include the unexpended balances of Capitation Grants held by the various Branches, amounting at December 31st, 1905, to over £3,000.)			
Balance on January 1st, 1905 ... ... 101,397 2 0							
Balance of Income over Expenditure for 1905 brought from Revenue Account ... 862 1 5							
„ Balance, being total of excess of Assets over Liabilities 102,259 8 5							
	£110,585	1	5		£110,585	1	5

Revenue or Profit and Loss Account for Year ending 31st December, 1905.

		£	s.	d.		£	s.	d.
General Association Expenses	*See Abstract A.*	1,971	13	5	Subscriptions	24,755	0	10
Central Meetings Expenses	„ „ *B.*	2,437	15	4	„ Arrears of former years	285	12	11
Central Premises Expenses	„ „ *C.*	1,423	6	2	Journal Account, Total Receipts ... ... *See Abstract G.*	23,882	1	2
Printing, Stationery, and Postage Expenses	„ „ *D.*	2,182	5	8	Interest on Investments and Rents	1,138	6	10
Central Staff Expenses	„ „ *E.*	4,150	0	10	Returned Scientific Grants	46	10	3
Library Account		227	7	10				
Journal Account—Expenses		2,340	8	4				
Library.—Written off towards Depreciation		100	0	0				
Plant and Type „ „ „		250	0	0				
Capitation Grants to Branches		3,459	14	8				
Subscriptions—Written off for Deaths, Arrears, &c. ...		742	18	4				
		48,464	10	7				
Amount written off Investments		781	0	0				
		49,245	10	7				
Balance of Income over Expenditure carried to Balance Sheet...		862	1	5				
		£50,107	12	0		£50,107	12	0

NOTE.—The above shows 1905 figures only, but in practice the figures of the previous year would also be shown for comparison.

Abstract A.]

GENERAL ASSOCIATION EXPENSES.

	£ s. d.
Auditors' Fee	105 0 0
Bank Charges	73 10 2
Legal Expenses	533 14 8
Research Scholarships	600 0 0
Scientific Grants	353 0 0
Office—Petty Cash	151 5 7
Sundries	155 3 0
	£1,971 13 5

Abstract B.]

CENTRAL MEETINGS EXPENSES.

(*Railway Fares, Printing and Reporting.**)

	£ s. d.	£ s. d.
Annual Meeting ... ... Cost of *Daily Journal*, &c.	200 19 0	
,, ,, ... Expenses of Sections	27 1 2	228 0 2
Annual Representative Meeting ... Railway Fares	177 0 7	
,, ,, ... Printing, &c.	123 1 3	300 1 10
Council ... ... Railway Fares	791 13 6	
,, ... Printing, &c.	152 18 6	944 12 0
COMMITTEES.		
Annual Meeting Committee ... ... Railway Fares	7 5 0	
,, ,, ... Printing, &c.	15 2 0	22 7 0
Arrangements Committee ... ... Railway Fares	14 2 7	
,, ... Printing, &c.	—	14 2 7
Chloroform Committee ... ... Railway Fares	10 11 0	
,, ,, ... Printing, &c.	—	10 11 0
Coat of Arms Committee ... ... Railway Fares	2 2 0	
,, ,, ... Printing, &c.	—	2 2 0
Colonial Committee ... ... Railway Fares	5 15 6	
,, ,, ... Printing, &c.	10 9 [illegible]	16 5 0
Committee on Alteration of Memorandum ... ... Railway Fares / Printing, &c.	5 4 10 / —	5 4 10
Committee of Secretaries of Branches and Divisions ... ... Railway Fares / Printing, &c.	23 13 5 / —	23 13 5
Committee on Standing Orders ... Railway Fares	23 5 0	
,, ,, ,, Printing, &c.	—	23 5 0
Committee of Chairmen ... ... Railway Fares	33 2 3	
,, ,, ... Printing, &c.	49 15 6	82 17 9
Co-ordination Committee ... ... Railway Fares	16 3 1	
,, ,, ... Printing, &c.	—	16 3 1
Election Returns Committee ... Railway Fares	5 10 3	
,, ,, ,, ... Printing, &c.	13 8 6	18 18 9
Ethical Committee ... ... Railway Fares	89 2 7	
,, ,, ... Printing, &c.	29 17 6	119 0 1
Hospitals Committee ... ... Railway Fares	156 12 4	
,, ,, ... Printing, &c.	40 10 9	197 3 1
Irish Committee ... ... Railway Fares	14 0 9	
,, ,, ... Printing, &c.	0 10 0	14 10 9
Journal and Finance Committee ... Railway Fares	76 17 9	
,, ,, ,, ... Printing, &c,	52 5 0	129 2 9
Medical Defence Committee ... ... Railway Fares	36 2 7	
,, ,, ,, ... Printing, &c.	10 10 6	46 13 1
Medico-Political Committee ... ... Railway Fares	355 19 2	
,, ,, ,, ... Printing, &c.	221 11 5	577 10 7
Organisation Committee ... ... Railway Fares	77 3 [illegible]	
,, ,, ... Printing, &c.	164 5 6	241 9 2
Premises and Library Committee ... Railway Fares	84 4 2	
,, ,, ,, ... Printing, &c.	38 18 0	123 2 2
Public Health Committee ... ... Railway Fares	75 6 2	
,, ,, ... Printing, &c.	21 5 6	96 11 8
Royal Naval and Military Committee Railway Fares	3 17 1	
,, ,, ,, ... Printing, &c.	1 9 0	5 6 1
Science Committee ... ... Railway Fares	24 19 3	
,, ,, ... Printing, &c.	5 6 0	30 8 3
Scientific Grants Committee ... ... Railway Fares	13 19 11	
,, ,, ,, ... Printing, &c.	18 16 0	32 15 11
Scottish Committee ... ... Railway Fares	28 0 9	
,, ,, ... Printing, &c.	2 10 2	30 10 11
Superannuation Committee ... ... Railway Fares	—	
,, ,, ,, ... Printing, &c.	0 18 6	0 18 6
Therapeutic Committee ... ... Railway Fares	24 7 11	
,, ,, ... Printing, &c.	—	24 7 11
Paper for Miscellaneous Printing in connection with Committees		60 0 0
		£3,437 15 4

* The amounts stated above as for "Printing, &c." include in some instances charges for other matters than those (namely printing, stationery and reporting), which it is proposed should in future be alone included. (See details of expenses of Medico-Political and Organization Committees, page 230.)

Abstract C.]

CENTRAL PREMISES EXPENSES.

	£ s. d.
Cleaning Offices	167 15 6
Coals and Coke	58 16 0
General Repairs and Upkeep	406 14 8
Rates and Taxes, Insurance, Gas, and Electric Light	789 19 0
	£1,423 6 2

Abstract D.]

CENTRAL PRINTING, STATIONERY AND POSTAGE EXPENSES.

	£ s. d.
Miscellaneous Printing	282 12 4
Year Book—Printing, &c.	724 2 9
,, Postage	255 5 2
Office—General Postage:—	
General Secretary's Department	372 6 3
Medical ,, ,,	160 1 3
Stationery	386 17 1
	£2,181 5 8

Abstract E.]

CENTRAL STAFF EXPENSES.

	£ s. d.	£ s. d.
General Secretary	800 0 0	
Assistant Secretary	275 0 0	
Clerical Staff (General Secretary's Dept.)	2,491 19 8	
		3,566 19 8
Medical Secretary	700 0 0	
Assistant Medical Secretary	203 3 0	
Clerical Staff (Medical Secretary's Dept.)	321 0 0	
		1,224 3 0
Donation to Charing Cross Hospital		10 10 0
Pension—late General Secretary		600 0 0
Travelling Expenses:—		
General Secretary's Department	65 2 9	
Medical ,, ,,	133 5 5	
		198 8
Amount voted to Office Staff Superannuation Fund		300 0 0
		£5,900 0 10
Less Proportion of Salaries debited to Journal Account		1,770 0 0
		£4,130 0 10

Abstract F.]

LIBRARY ACCOUNT.

	£ s. d.		£ s. d.	£ s. d.
To Balance	2,198 6 3	By Librarian's Salary	240 0 0	
,, Purchase of Books	109 16 0	,, Printing and Posting of Circulars and Insurance	7 7 10	
,, Binding Books	29 3 0			257 7 10
,, Librarian's Salary	250 0 0	,, Amount written off for Depreciation		100 0 0
,, Printing and Postage of Circulars and Insurance of Books	7 7 10	,, Balance carried to Balance Sheet		2,237 5 3
	£2,594 13 1			£2,594 13 1

Abstract G.]

JOURNAL ACCOUNT.

Income and Expenditure Account for the Year ending 31st December, 1905.

EDITORIAL.

	£ s. d.	£ s. d.
Salaries:—Editor	1,000 0 0	
,, Assistant Editor	750 0 0	
,, Sub-Editor	250 0 0	
,, Clerical Staff	390 4 6	
Contributions	2,962 17 9	
Reporting	231 7 9	
Engraving	239 2 0	
Legal Expenses	12 17 8	
Postage	78 12 6	
Analyses	10 10 0	
Travelling Expenses, Papers, &c.	170 16 11	
Cost of Journal Slips circulated to the Press	4 14 0	
	6,101 3 1	
Journal—Compositors' Wages, Machining, &c.	7,612 6 0	
,, Paper	8,129 14 3	
Supplement—Compositors' Wages, Machining, &c.	1,196 11 1	
,, Paper	856 0 0	
Postage for Dispatch of Journal	3,902 8 10	
Address Bands for Issuing Journal	565 6 0	
Proportion of Manager's and Clerks' Salaries	1,770 0 0	
General Postage	100 0 0	
Miscellaneous Printing	24 0 0	
Reprints	103 6 6	
Stationery (Ledgers, Letter Books, &c.)	100 0 0	
Travelling Expenses	19 2 7	
Compositors' Sick Fund	10 10 0	
Sundries	20 0 0	
	24,409 5 3	
	£30,510 8 4	

	£ s. d.	£ s. d.
Advertisements	20,440 9 11	
Sundry Sales—Journals	2,204 8 5	
,, ,, —Reading and Binding Covers, &c.	168 0 3	
,, ,, —Reprints	118 6 0	
Sale of Waste, &c.	35 10 4	
Discount on Printing, Paper, &c.	915 6 3	
	23,882 1 2	
Balance, being amount of Subscription Income expended in production and issue of Journal	6,628 7 2	
	£30,510 8 4	

III.

Total of Excess of Assets over Liabilities.

1896 to 1905.

	£	s.	d.
1896	65,736	7	11
1897	69,196	12	10
1898	69,721	14	0
1899	75,994	2	9
1900	82,464	11	2
1901	87,427	11	2
1902	91,926	17	9
1903	96,621	7	6
1904	101,397	2	0
1905	102,259	3	5

	£	s.	d.
Increase 1905 over 1896	36,522	15	6
	or 55 per cent.		

IV.

Details showing how the item of £555 4s. 1d. debited against the Medico Political Committee in the 1905 Balance Sheet is made up :—

Medico-Political Committee.

	£	s.	d.
Railway fares to Members of Committee	355	19	2
Sundry printings, agenda, minutes, reports, &c.	144	10	0
Contract practice, Dr. Youatt's remuneration	40	3	0
Reporting Troutbeck inquests, R. J. Marks, and "Wandsworth News"	11	6	11
Parliamentary papers, Lords and Commons	2	12	6
Bailliere Tindall and Co., German book	0	12	6
	£555	4	1

V.

Details showing how the item of £217 9s. 2d., debited against the Organisation Committee in the 1905 Balance Sheet, is made up :—

Organisation Committee.

	£	s.	d.
Railway fares to Members of Committee	73	6	11
Sundry Printings, Agenda, Minutes, Reports, etc.	59	8	6
Remington Typewriters (3 machines)	57	13	0
Telephone, Medical Secretary's Office	14	0	0
Travelling expenses, Medical Secretary	6	0	0
Sundries	5	8	3
Stanford and Son, Maps	1	12	6
	£217	9	2

VI.

Items Included in Miscellaneous Printing under Abstract "C" in 1905 Balance Sheet.

	£	s.	d.
List of Members issued to Division Secretaries monthly	49	0	0
Royal Charter	16	0	0
Balance Sheets, &c.	6	0	0
Index to Minutes	4	10	0
Programmes of Annual Meetings and various sectional matter	11	0	0
Model Rules for Divisions	6	0	0
Labels for changes of address of Journal	18	0	0
Membership Application Forms, Home and Colonial	12	0	0
Sundry circulars *re* subscriptions, advertisements, Year Book, Special Numbers, &c.	48	0	0
Reorganisation of the Local Government Board Bills	10	9	6
Reprint vaccination literature	15	8	6
Standing Orders and Articles and By-laws	20	15	6
Division and Branch matter, *i.e.*, financial statements, &c.	8	0	0
Register showing Divisions and Branches in the United Kingdom	69	0	0
Journal wrappers	184	8	7
Return of attendances (Council)	13	8	6
20,000 subscription applications	4	18	6
Council agenda and minutes	39	0	0
Recruiting circulars for about 20 Divisions	5	0	0
8,000 memoranda Asylum workers	1	12	6
4,000 questions to M.P.'s	10	4	6
Paper for executing miscellaneous printings	98	0	0
	£650	16	1

VII.

Home and Colonial Membership of British Medical Association, 1897–1906.

Year.	No. of Home Members.		No. of Colonial Members.		Total.
1897	13,591		3,404		16,995
		206		545	
1898	13,797		3,949		17,746
		522		−83	
1899	14,319		3,866		18,185
		280		−83	
1900	14,599		3,783		18,382
		−20		40	
1901	14,579		3,823		18,402
		242		114	
1902	14,821		3,937		18,758
		−399		−170	
1903	14,422		3,767		18,189
		492		43	
1904	14,914		3,810		18,724
		759		99	
—	—		3,909		19,582
		262		1,004	
—	—		4,913		20,848

VIII.

Circulation of the "British Medical Journal" for the last issues of the Years 1903, 1904, & 1905.

	1903. Dec. 26th.	1904. Dec. 31st.	1905. Dec. 30th.
Members	18,893	19,281	19,575
Non Members	320	326	290
Sundry Sales	1,817	1,898	1,841
Free & Exchange	460	445	340
Vouchers (Advertisements)	240	250	210
Office use	65	65	55
Extra to Colonial Branches	40	40	40
Stock	366	245	249
	22,201	22,550	22,600

IX.

Amount of Postage Expended in the Distribution of the "British Medical Journal" from 1901 to 1905.

Year.	Home.	Colonial.	Total.
	£	£	£
1901	1,648	2,120	3,768
1902	1,676	2,138	3,815
1903	1,684	2,059	3,743
1904	1,758	2,172	3,931
1905	1,738	2,163	3,902

Home, £105 per 1,000 copies.
Colonial, £532 „

X.

Amount for Contributions to "British Medical Journal" paid to Members of Staff during the year 1905.

	£	s.	d.
Williams, Dr. Dawson, Editor	137	8	0
Taylor, C. Louis, Assistant Editor	430	4	0
Stephen, Guy, Sub-Editor	200	6	6
Whitaker, J. Smith, Medical Secretary	0	14	6
Morrey, Stephen, Editor's Clerk	21	0	0
	£789	13	0

XI.

Information obtained as to Cost of Machining Journal by the Association.

Harrison & Sons' Printing Office,
45, 46 & 47, St. Martin's Lane, London, W.C.,
January 19th, 1907.

Guy Elliston, Esq.,
British Medical Association.
429, Strand, W.C.

Dear Sir,—Enclosed we beg to hand you a rough calculation of the outlay required and the cost per annum for printing the British Medical Journal.

We have taken an average paper of 160 pp. There are naturally one or two methods of printing this in which the machines would vary somewhat, but the total expenses would approximate the same.

We have made no calculation for overtime which in the ordinary course would considerably increase the wages; but considering that your men would only have a short portion of the week occupied there should be no difficulty in making a compromise with them to work one full night without charging overtime in exchange for some holidays during the week.

The estimate of annual expenses does not include postage or paper.

Any further details or particulars we shall be glad to furnish on hearing from you.

Yours faithfully, Harrison & Sons.

"BRITISH MEDICAL JOURNAL."

(Size 12 in. × 8⅝ in., trimmed. 25,000 copies.)

About 10 sheets of 16 pages to go to press 5 p.m. Thursdays. To be all banded for post by 5 p.m. Friday.

		£	£
PRINTING—			
10 sheets of 16 pages would require—	10 No. 1 Miehles @ 600		6,000
	10 5-h.p. Motors @ 55		550
Wrapper, &c.	1 No. 2 Miehle ...		500
	1 3-h.p. Motor ...		45
Spare 1 No. 1 and 1 No. 2 Miehle			1,100
Motors			100
FOLDING—			
250 M. sheets, 900 per hour = 280 hours' work to be done in 15 hours = 18 machines and 2 spare = 20 machines @ £140			2,800
10-h.p. Motor on line shaft, say...			100
WIRE-STITCHING—			
25,000 @ 800 per hour (2 girls or men per machine) = 32 hours' work, say 3 double-stitch machines and 2 spare ditto = 5 @ £40...			200
TRIMMERS—			
25,000 @ 600 per hour = 42 hours = 4 machines (Kampe's 3-sided Trimmer) @ £90			360
BANDING MACHINES—2 @ £150			300
Guards, belting, pulleys, &c., switch boards, distributing boards, cables, lifts and fittings generally			1,000
Total			£13,055

HANDS REQUIRED, WITH WAGES—			
10 Machine minders @ £2 5 0	£22 10 0		
1 Machine overseer @ £3 10 0	3 10 0		
14 Layers-on who will also carry paper to and from machines @ £1 2 6 ...	15 15 0		
		41	15 0
FOLDING—			
20 Feeders @ £1 2 6	22 10 0		
4 Carriers @ 0 18 0	3 12 0		
1 Machinist	1 10 0		
Inserting about 200 M. sections divided over 17 hours = 12,000 per hour, average 800 per hour = 16 hands @ £1 0 0	£16 0 0		
Wrappering ... ... 2 ,, @ 1 0 0	2 0 0		
Stitching ... ... 6 ,, @ 1 0 0	6 0 0		
Trimming ... ... 3 ,, @ 1 10 0	4 10 0		
Banding and tying up ... ... 5 ,, @ 1 0 0	5 0 0		
Foreman	2 15 0		
Porters ... ... 3 hands @ 0 18 0	2 14 0		
		66	11 0
Total per Week		£108	6 0

SUMMARY OF COSTS (PER ANNUM).

Wages £108 6 0 × 52	£5,631 0 0
*Trade Expenses	4,221 0 0
Interest on Capital (£13,000)	650 0 0
Ink	400 0 0
Total ...	£10,902 0 0

On consideration of the above Statement the Committee concluded that the present system of having the Journal machining done by outside printers was the more economical.

* To include lighting, heating, power, wear and tear of machines, rent, rates, insurance, counting house and management, oils, wire, and all sundries except ink.

XII.

MEMORANDUM BY THE GENERAL SECRETARY

On the Duties and Work of the General Secretary and Manager and his Office.

Synopsis.

The duties and work of the General Secretary and Manager and his Office are recited as follows:—

1. The Association, Council, and Committees involve the carrying out of the instructions of the Council, the instructions of the Chairman of Council, the Treasurer, the Chairmen of the Journal and Finance, the Science, the Colonial, the Premises, the Election Returns, the Superannuation, the Arrangements, Insurance Agency, and the Volunteer Medical Service Committees.

2. The attending to the property of the Association. Negotiating with tenants as to conditions of tenancy, rent, insurance, rates, etc.

3. The purchase of paper, plant, and type for the Journal, and the arrangement of all contracts for printing, etc. The management of the printing department, paying of wages, checking of compositors' time sheets, fixing the size of each week's Journal, arrangements for blocks and plates for illustrations. Machining of Journal and Supplement. Printing of reprints.

4. The securing of suitable advertisements, the keeping of the advertisement accounts, deciding discounts for series, when credit shall be given, corresponding with and interviewing advertisers and advertisement agents, searching newspapers and periodicals for likely advertisements. Canvassing personally and by letter for advertisements.

5. The printing and preparation of the labels for despatch of the Journal.

6. The printing of every printed document issued from the Office.

7. The keeping of the general accounts of the Association.

8. Receipt of all monies on behalf of the Association, Charitable Funds, Office Superannuation, etc. Accounting for same to the Treasurer. Preparation of all cheques and monies received for payment into the Bank.

9. The checking of all accounts and the preparation of cheques for the Treasurer in payment of such accounts, Branch subscriptions, contributions to the Journal, etc. The collection and custody of monies on behalf of the charitable funds.

10. The preparation and issue to Branch and Division Secretaries of lists of membership.

11. The keeping of the Subscription ledgers, with its 20,800 separate accounts; the collection of subscriptions, posting to the right account, dealing with Branch monies, correspondence and settling of queries with Colonial Branches where Subscriptions are collected by the Branch Secretary.

12. The dealing with all correspondence involved in the foregoing. Interviewing callers in connection with the work of the Association and Journal.

13. Classification and filing of documents. Custody of archives of the Association.

14. The keeping of the back numbers of the Journal, Supplements, Minutes, Reprints, and other documents.

15. Annual Exhibition of Foods and Drugs.

16. The arrangement of the rooms, printing of the Daily Journal, reduced railway fares, signing railway vouchers, and other matters arising in connection with an Annual Meeting.

For the information of the Finance Enquiry Committee, the General Secretary submits fuller information as to what the above outline of the work of his office represents.

1. Council.

In connection with the Council there is the preparation of Agenda involving the receipt of instructions from the Chairman of Council as to what shall or shall not be included; the preparation of the official minutes and proceedings of Council and Committees for publication in the Journal, and the carrying out of the instructions of Council and the various correspondence arising therefrom. In regard to the immediate work under the direction of the Chairman of Council this involves keeping the Chairman informed by letter and by word of mouth of the various matters connected with the work of the Association, also dealing with matters which in the opinion of the Chairman need not be referred to any particular Committee.

In regard to the work and instructions which are transacted direct with the Treasurer, it should be noted that it is necessary to keep the Treasurer advised from week to week of all monies received, the state of the balance at the Bank, and generally to furnish full information as to the financial matters of the Association.

Journal and Finance Committee.

The work of this Committee involves the preparation of Agenda, Minutes, Quarterly Returns, showing all heads of expenditure and comparisons for three years, the increase and decrease for the corresponding periods of the previous year, and generally full information as to details to enable the Treasurer to answer any question which may arise either in Committee or Council.

Science Committee.

Though this Committee does not meet often, the amount of work in connection with the June Meeting is considerable. All medical schools and professors throughout the United Kingdom have to be circularised as to the disposal of grants and scholarships. Reports of all the grantees and research scholars have to be gone through and broken down for the consideration of the Committee, and accounts adjusted and checked against the grant voted. The printing of the programmes of the sections and section circulars, and the correspondence involved in arranging the work of the various sections for the Annual Meeting. Also the work arising out of the Middlemore and Stewart Trust Funds.

Arrangement Committee.

The Minutes of this Committee require special care in checking the names of the various officers recommended for the respective sections. The sending out of invitations, correspondence when office refused, printing of lists of officers of sections, keeping all lists—alphabetical and sectional—of Members who have held office at any time at the Annual Meeting. Paying expenses incurred by officers of sections. Printing and issue of stationery, envelopes, etc.

Colonial Committee.

Although this Committee does not meet so often as some other Committees, the work is extensive and involves a great deal of time. For some years an extensive correspondence has been carried on with the Colonial Office and the Colonial Branches with a view to the establishment of a uniform system of medical registration and reciprocity throughout the British Empire. Arising out of this, the Colonial Office has, and is frequently forwarding, copies of official despatches from the various Governors of Colonial States accompanied with copies of Ordinances and Acts of Parliament controlling legislation in these different parts. All despatches, etc., have to be carefully read and compared with Acts and Ordinances which the Association has agreed upon as a standard system. When any disparity is noted, the fact is communicated to the Colonial Office and the Branches concerned, accompanied by notes as to suggested amendments. The work necessarily moves slowly, owing to the time occupied in the exchange of communications with distant parts of the world. Secretarily, no Committee occupies more of the time of the General Secretary.

Premises Committee.

During the last five years, owing to the working out of the plans for the rebuilding, the work has been very heavy. The negotiations with the various tenants also take up considerable time, no agent being employed or commission paid. Further, the question of looking for temporary premises has been a serious matter, involving the personal inspection of innumerable buildings, and the interviewing of agents as to rents, and the general conditions of tenancies.

In addition, all the legal aspects of the various negotiations as to the rebuilding have to be gone into with the solicitor and the architect, as well as innumerable points of detail which continually arise for settlement.

Election Returns Committee.

Meets twice a year, but involves a large amount of clerical time and printing, both before and after the election of Committee, in the direction of the compilation of the annual attendances of the Council, Committees, and Sub-Committees, marking those ineligible under the Standing Orders, and the issuing and receiving nominations and voting papers. Apart from this two other separate lists of all attendances at Committees have to be prepared: (*a*) for publication in the Journal annually, in April, and (*b*) a perennial list for the official record in the office.

Volunteer Medical Service Committee.

Has not met during the last six months, but previous to that the Committee held long and frequent Meetings at which it prepared a scheme submitted to the Secretary of State for War. This scheme Mr. Haldane practically adopted in his new Administrative scheme of the Army, recently presented in the House of Commons.

Superannuation Committee.

Collect the payments from the individual Members of the staff each month and enter up in their respective pass books, and pay all monies into the bank. A balance sheet has also to be prepared for this fund as well as the investment of monies arranged.

Medical Insurance Agency Committee.

It is difficult to say what the work of this Committee will entail, but already in the collection of information from various insurance companies has necessitated considerable work.

2. HOUSE PROPERTY.

Attending to the property of the Association, arranging all repairs to the fabric and furniture, insurance, rates, taxes, etc.

3. JOURNAL REQUIREMENTS.

Under this head is included the examination of sample and the purchase of paper, which means constant watching to see that the quality is maintained at the standard agreed upon. Care, also, has to be taken as to the ink used in connection with the printing of the Journal, as if certain kinds are used, chemical action is set up, and an objectionable smell is given off when the Journal is opened. The purchase of plant and type, and arrangement of all contracts for printing, etc., is no small matter. The management of the printing department, the upkeep of the plant, paying wages, and checking all the compositors' time sheets. The General Secretary also confers and settles with the Editor week by week as to the most economical size for the "make up" of the Journal. He confers with the Editor and contributors, and makes the necessary arrangements for all blocks and plates for illustrations in the Journal. Arranges the machining of the Journal and Supplements, so as to ensure publication to time: while all reprints of papers from the BRITISH MEDICAL JOURNAL are dealt with by the General Secretary's Office.

4. ADVERTISEMENTS.

To secure suitable advertisements, it is necessary to peruse the daily papers and periodicals to discover what firms are advertising, and to canvas them personally and by letter. The last two or three years this canvassing has been specially pushed to secure expansion of advertisements. Bad trade, however, has made it difficult to insure a sustained revenue, as the tendency has been to reduce the amount spent in this direction. One large advertiser, whose account was worth £500 per annum, has reduced the amount spent by one-half To make such a loss up through fresh channels involves considerable additional work.

The keeping of the various advertisement accounts, prepayments, credits, cash with order. The interviewing of advertisers and advertisements agents, the deciding of discounts, and the settlement of all disputes which may arise from time to time.

5. LABELS, ETC.

The printing of the labels for the dispatch of the Journal means the preparation of an aggregate of 1,100,000 per annum. The percentage of changes is considerable each week when preparing the 21,000 labels, but the system adopted is such that the number of complaints as to the failure to receive the Journal does not average two a week. All changes arising through death, change of address, stoppage, new members, suspension for arrears, and various other causes, have to be checked, recorded, and provided for each week.

6. COMMITTEE AND OTHER PRINTINGS.

The printing of all printed documents issued from the office during the last five years has grown, and appears to be still growing. At the end of September, 1906, the General Secretary took out the printings for comparison's sake with the same period in 1905. Taking Agenda, Minutes, Year Books, Committee Reports, Circulars of all descriptions and sizes, Pamphlets, and every kind of printing, stitched and unstitched, there were in 1906, 185,435; in 1905, 107,152. To these figures must be added the thousands of proofs. In the case of the printings of the Medical Secretary's department, six proofs are always supplied, while often as many as twenty are required.

To avoid confusion in the many printings, a careful Register has to be kept, showing the date of the original order, the department from whence the order comes, the date the author receives the proof, the date the proof is returned, and the date the order is finally completed. Without particular care being exercised in this direction, endless confusion would arise, and extra expense be involved.

7. ASSOCIATION ACCOUNTS AND RETURNS.

The keeping of the Association Accounts involves additional work year by year, as is evidenced by the fact that, since 1901, the total revenue has expanded by £8,270, while the expenditure has gone up by £12,423.

The preparation of the Annual Balance Sheet, which, on the face of it, appears to be a simple document to produce, cannot be got ready except after many weeks of labour and much careful consideration Financial Reports called for from time to time depend largely for their value when compared with other years and similar conditions. Consequently, careful search has to be made into previous records, so that fair comparisons can be presented. The preparation of the information called for by the Finance Enquiry Committee has been no small matter. Auditors have to be supplied with all the accounts, vouchers, and full information for the quarterly and annual audits, while the queries to be settled in a business with such ramifications are innumerable.

8. BANKING AND ACCOUNTANCY.

All monies collected on behalf of the Association, subscriptions, advertisements, publishing, rents, dividends, charitable funds, office staff superannuation, etc., pass through the General Secretary's Office, and have to be duly acknowledged. These monies in turn are accounted for to the Treasurer week by week. Further, all cheques must be endorsed and prepared for payment into the Bank.

During the first month of the year it is as much as two people can do (working till 8 o'clock at night) to prepare and endorse the cheques for the bank.

9. CHECKING ACCOUNTS.

Every account for the whole of the work of the Association has to be checked, and, in turn, cheques drawn and submitted to the Treasurer for his signature. Payments can only be made over the signature of the Treasurer, as all monies received by the Association are banked. During 1906 the payment of Association accounts, contributions to the Journal, Branch subscriptions, railway fares, etc., involved the drawing and signing of over two thousand cheques. The receipt and issuing of all receipts, and the transference of monies received on behalf of the charitable funds involves additional labour each year, as mistakes are often made by the sender failing to state to what Fund the money is to be credited, necessitating additional correspondence.

10. ISSUE OF RETURNS TO DIVISIONS.

Each month Division lists of the whole Association have to be corrected to date, embodying deaths, resignations, changes of address, transfers, etc. These lists are issued to

Branch and Division Secretaries. That these should be correctly issued is of much importance to the Secretaries.

11. Subscription Accounts.

The keeping of the Subscription Ledgers, and dealing with correspondence arising under the head of subscriptions, involves the undivided attention of two senior and two junior clerks. During 1906 the Subscription Ledgers represented nearly 21,000 separate accounts, and accuracy in the collection of the various subscriptions and posting to the right account is essential. Great care has to be exercised owing to similarity of names, and even initials of Members resident in the same town. All Branch monies are dealt with, and transmitted from time to time to Branch Secretaries, while the correspondence relating to all arrears of subscription, etc., is heavy, and the search to settle these queries takes a lot of time. The correspondence with the Colonial Branches is heavy, as so many queries have to be settled where the Colonial Branches are themselves collecting the subscriptions through their Branch Secretary. Collecting the Canadian subscriptions involved the signing of some thirteen hundred bank drafts.

12. Correspondence.

The general correspondence involved in the various departments of the Association has expanded considerably, notably in the Advertisement Department, and generally in connection with the work of the Association, the Council, Committees, etc. Considerable time is occupied in the interviewing of callers.

13. Returns.

In accordance with By-law 9 the General Secretary's Office has now to send out annually to all Branch Secretaries and Treasurers, a Form on which they are requested to write the particulars of their Branch work during the past year. This involves much clerical work as the reports have to be analysed in tabular fashion, showing (*a*) financial details, (*b*) membership, and (*c*) aspects of their medico-political and medico-ethical work. The membership and figures of the branches with those recorded in the official books of the Association have to be adjusted. This Report for 1905 represented six full pages of the Supplement, set in small type, tabular style.

14. Classification and Filing of Documents.

All documents, records, letter books, ledgers, etc., are kept in strict order. Letters for seven years, and innumerable prints, extending back for many years. These have multiplied of late years so as to make it increasingly difficult to keep classified all the documents and printings of the Council and Committee in the same style as the records of the last 30 years.

15. Journal Publications.

Back numbers of the Journal are kept for seven years, while back numbers of the Supplement are also kept, as well as other reprints, reports and pamphlets published from time to time.

16. Annual Exhibition.

The Annual Exhibition of Foods and Drugs which, since 1904, has been under the sole management of the General Secretary, is a large business. The labour and details involved in connection with this are never seen by the Council or any Committee.

17. Annual Meeting.

In addition to the whole of the arrangements for the Exhibition of Foods and Drugs during the Annual Meeting, the General Secretary arranges all the rooms for the Meeting of the Sections, Council, General and Representative Meetings, the printing of the Daily Journal, personally signing some 3,4,000 vouchers for the reduced railway fares, and various other matters that arise from time to time in connection with the Annual Meeting.

Concluding Remarks.

Having regard to the recital of the varied and peculiar work that has to be carried through by the General Secretary and his office, and having regard to the fact that much of the work, especially in connection with the Journal, can never be put aside, however great the pressure of business, the General Secretary trusts it will be appreciated that to properly carry out the administrative work of the office, considerable pressure is involved, and it is only by the loyal and intelligent co-operation of the Staff that the complicated machinery of the office is kept going, and the work of the Association prevented from falling into arrears.

(Signed) GUY ELLISTON,
General Secretary.

429, Strand,
12*th March*, 1907.

XIII.

STATEMENT BY THE MEDICAL SECRETARY

as to the Work of his Department.

Constitution of the Office.

The description of the work of the Medical Secretary's Office, as at present constituted, is conveniently prefaced by a short statement of the circumstances in which the Office originated, and of the steps by which the present position has been arrived at.

Under the new constitution adopted in 1902, the by-law defining the composition and duties of the Committees provided that the Ethical, Medico-Political, and Organisation Committees should each have the services of a salaried officer.

The Council decided that the work of the three Committees should be placed in the hands of a single executive officer, who was appointed under the designation of Organising Secretary (October, 1902), the title being subsequently changed to Medical Secretary (January, 1904).

The Council afterwards added to the duties of the Office the work of the Public Health Committee (January, 1904), the Hospitals Committee and Naval and Military Committee, and the secretarial work of the Representative Meeting (February, 1905). To these have naturally been added the work of certain special Committees from time to time appointed.

A certain unity of the Department has thus been developed, so that now it deals with the greater part of what may be called the "professional" work of the Association, as distinct from matters purely of business and finance, and as distinct, of course, from the Journal, excluding the Supplement. The chief exceptions to the general principle are, as regards the work of the Association, dealt with by the Colonial and Science Committees.

Considerations of practical convenience have led to the assignment to the Medical Secretary of certain duties which do not spring directly from the Secretaryship of the Committees named, but form part of the general secretarial work of the Association concerning subjects coming within the general purview of those Committees. Such duties are carrying out instructions of the Council in relation to these subjects, and drafting Reports and other documents required for other than Committee purposes.

Work of the Medical Secretary's Office as at Present Constituted.

General Scope of Matters dealt with.

The Medical Secretary acts as Secretary and executive officer of the Association in respect of matters which come within the scope of the references to the Standing Organisation, Ethical, Medico-Political, Public Health, Hospitals, and Naval and Military Committees, including acting as Secretary of these Committees and their Sub-Committees and allied Special Committees; he also acts as Secretary of the Representative Meeting.

Through the Medical Secretary's office are carried out the instructions of the Representative Meeting, Council, and Committees, and the preparation for consideration by those

bodies of questions arising, in respect of the following matters :—

(*a*) Preparation and promotion of legislative proposals ; watching the progress of Parliamentary business affecting the public health or the medical profession, and organising support or opposition, as the case may be ; making representations by memorials, deputations, or otherwise to Government departments and other public authorities, and submitting evidence before Parliamentary and other public Committees and Commissions ; organising action through the Divisions during Parliamentary elections.

(*b*) Central Association action, in co-operation with Divisions and Branches when required, as regards terms of medical employment under appointments of all kinds, including the military services of the Crown, civil employments under the Crown, Public Health, Poor Law, and other municipal appointments, appointments to hospitals and dispensaries, and under all forms of contract medical practice.

(*c*) Other action in individual cases in which the interests of the profession are concerned, including advising upon and assisting in maintaining the legal rights of practitioners (when involving general professional interests), and taking action, with a view to the suppression of unqualified medical practice.

(*d*) The ethical work of the Association, including adjudications in cases affecting individuals, investigation of cases of proposed expulsion, formulation of general principles of medical ethics, and organisation of the machinery of the Association for dealing with such matters centrally and locally.

(*e*) Questions of interpretation of the Regulations of the Association, and of proposed changes of the Regulations ; Rules of Divisions and Branches ; changes of boundaries ; grouping of Divisions and Branches for electoral purposes ; collection and analysis of information as to the working of the local organisation ; advising and assisting Divisions and Branches when required in all matters of organisation.

Administrative Duties.

The duties of such a department naturally fall under the following heads :—

1. Preparation and issue of Agenda and Minutes of, and attendance at, Meetings of the various bodies of which the Medical Secretary is Secretary, and attendance at Meetings of the Council and other Committees when required.
2. Preparation and issue of Abstracts, Analyses, Memorandums, Reports, Inquiries, &c.
3. Other duties supplementary to the foregoing.
4. Correspondence.
5. Filing and indexing of documents.
6. Keeping necessary Registers, Records, Accounts, &c.
7. Interviewing callers.
8. Attendances to give evidence before public bodies, or with Deputations ; other attendances outside the Office on Association business.
9. Personal attendance when necessary for the assistance of Divisions and Branches.

The detailed account which follows of the duties of the Office is conveniently set forth under the heads of the foregoing summary, supplementary paragraphs being added with respect to certain departments of the work which call for special explanation.

1. Work Directly Connected with Meetings.

The preparation of Agenda and Minutes of various bodies forms a considerable part of the work of the Office. The number of Meetings for whose work the Medical Secretary was responsible from October, 1905, to July, 1906, for example, was 65.

Owing to the nature of the work of many of the Committees it would be impossible, without unduly delaying the business, to require that every resolution should be set out formally in writing. The work of the preparation of the Minutes, therefore, is in many cases not merely that of compilation, but of drafting, subject, of course, to the approval of the Chairman and to confirmation in due course by the Committee.

The preparation of the Agenda and Minutes of the Representative Meeting presents special difficulties. As regards the Agenda, in some instances Notices of Motion intended by Divisions for consideration by the Representative Meeting are not formally transmitted to the Medical Secretary as such Notices, but have to be noted in the Reports sent in for publication in the Journal.

As regards the Minutes of the Representative Meeting, it is necessary that the Meeting should confirm, at the commencement of its business each morning, the Minutes of the previous day's proceedings, and should confirm at the close of the last day's sitting the Minutes of that day. Thus the Minutes have to be prepared while the Meeting is proceeding. On the earlier days, the proofs are passed for printing the same evening, while for the last day the Minutes are revised immediately after the conclusion of business and read to the Meeting within half an hour. This system of preparation has been followed since the Medical Secretary was made responsible for the work of the Representative Meeting at Leicester, 1905.

The Medical Secretary attends, in addition to Meetings of Committees and Sub-committees connected with his Department, Meetings of Council, and Meetings of Committees of which he is not Secretary, but with whose work it is necessary that he should be conversant.

2. Preparation and Issue of Abstracts, Analyses, Memorandums, Reports, Inquiries, &c.

An important part of the duties of such an office as that of the Medical Secretary is to reduce to convenient form for consideration by Committees and other bodies, the material on which their decisions are to be based, and to prepare, as a basis of discussion, drafts of reports for adoption. It is also a necessary part of professional organisation to collect, classify, and record facts in such a shape as to be readily available for reference when required.

Owing to the large number of important questions of principle which have required consideration during the last four years, and owing also to the building up of the politico-ethical machinery of the Association which has claimed attention in that period, the work of analysis and of drafting documents has been very heavy, and the difficulty of coping with the latter satisfactorily has been increased by the fact that up to the present the Medical Secretary has been unable to delegate any considerable part of it to subordinates.

The relationship of work of the kind described in this section to the general work of the Association is perhaps only fully realised by those who have had personal experience of the work of the Committees or of other work of a similar nature. It has been said that without proper previous preparation of the matters for discussion a Meeting of a Committee may be merely an elaborate device for wasting the time of Committee Members, and the work of Committees of the Association has at times been delayed by the inability of the Medical Secretary's Department, under the conditions under which it has worked during the past four years, to cope satisfactorily with the preparation for Committees, and at the same time give sufficient attention to the other work of the department.

Some indication of the amount of the work in question is afforded by the Annual Reports of the Medico-Political, Ethical, and Organisation Committees.

3. Other Duties Supplementary to the Foregoing.

It has been the practice in recent years to publish in the British Medical Journal, as soon as possible after each Quarterly Meeting of Council, Reports of the Proceedings of Committees since the previous Quarterly Meeting. As the object of such Reports is to give all Members such information as to the work of the Association as will be of assistance to them, and can be published without injury to the interests of the Association, and as it is desirable that the Reports shall be as readable as such matter can be made, it has not been thought sufficient simply to reprint a slightly modified version of the Minutes, but a statement in narrative form is prepared under the supervision of the respective Chairmen.

As regards the Minutes of Council and the Journal Reports of the Proceedings of Council, it has been found necessary that the Medical Secretary, being conversant with the details of the matters which come before the Council on the Minutes of the Committee of which he is Secretary, should revise the drafts in order to avoid inaccuracies which might otherwise occur.

The duties stated in the foregoing part of this paragraph must be carried out by the Medical Secretary personally.

It will be understood that the work referred to in this and the two previous paragraphs involves the preparation for the Press, and the passing of the proofs, of all printed documents issued through the Department, including Reports supplied to the Supplement of the British Medical Journal.

4. Correspondence.

From the definition of the scope of the Department already stated, it results that the following official correspondence of the Association goes through the Medical Secretary's Office.

Correspondence on the business of the Representative Meeting (except as regards the returns of election), and on the current business of the six Commitees named; correspondence on questions of Association policy or action in matters affecting the honour and interests of the profession (except matters dealt with by the Colonial Committee, the chief of these being that of reciprocity in Medical Registration); correspondence on Division and Branch work (except their scientific work and libraries); and correspondence on the interpretation or proposed alterations of the Regulations, and on the organisation of the Association (except in certain matters of membership and finance).

The proportion of formal or routine correspondence is relatively small, and, therefore, in this case, as in that of drafting, the Medical Secretary can delegate but little to clerks, nor can many of the inquiries received be dealt with by him without careful consideration and reference to documents or other sources of information.

5. Filing and Indexing of Documents.

All letters received and issued are duly entered in special Registers, and originals received are filed with copies of replies, indexed under names of correspondents. The very wide range of subjects with which medical organisation is concerned makes it necessary to keep also files of correspondence and other documents indexed according to subject matter, in order that all information that may have been received on any particular subject may be quickly available when occasion arises.

6. Registers, Records, Accounts, &c.

It is also necessary to keep careful Registers of information received both upon certain standing matters, and, from time to time upon special subjects. Of over 20 standing registers kept by the Department, the principal relate to (1) Rules submitted by Divisions and Branches for the approval of the Council (the original copies submitted being also duly filed); (2) ethical cases, showing concisely the history of the consideration of each case; (3) Bills before Parliament, showing the day to day progress of all Bills affecting the profession.

Special registers are kept in cases of Reports circulated by the Representative Meeting and Committees to the Divisions, to show the general tenor of the replies received, and similarly in cases of inquiries issued to bodies or persons outside the Association, as in the Contract Practice, Special Poor Law, and Hospitals Inquiries.

The duties referred to in this and the previous section, namely, the filing and registration of documents, are obviously the foundation of an expeditious and generally satisfactory discharge of the work of the Office, and for their successful performance are dependent more than any others upon the efficiency of the clerical staff. The want of previous training of many of the clerks during the past four years and the constant inadequacy of the Staff, in point of numbers, to the work to be done have made it impossible to carry out this part of the work satisfactorily and thus other parts have been impeded.

7. Interviewing Callers.

The number of callers upon the Medical Secretary upon Association business increases, chiefly through the increase, already referred to under the head of Correspondence, in the number of those who appear to regard the Department as a bureau of information and advice.

The duties of the Medical Secretary in respect of interviewing callers naturally increase as the work of the Department develops. Members of the Association apply for information and advice on medico-political, ethical, and kindred matters, and as the position of the Association as an organised body representative of the medical profession becomes more fully appreciated by the community generally, the number steadily increases of members of the general public who apply for information. These duties are naturally of a responsible character, and cannot usually be delegated.

8. Attendances on Deputations and other Association Business outside the Office.

The Medical Secretary has on several occasions been instructed to give evidence on behalf of the Association before Royal Commissions, Parliamentary Committees, and similar bodies. It is not infrequently his duty to attend with deputations to wait upon public bodies, Ministers of the Crown, and other persons to whom representations are made on behalf of the Association. A certain amount of time is naturally also occupied in other calls upon Association business.

9. Attendance for the Assistance of Divisions and Branches.

Visits to Divisions and Branches are made under the authority of the Committees specially concerned in the matters in connection with which such visits are made, all visits being also reported to the Organisation Committee.

The objects of such visits have been to give addresses at Meetings on the work of the Association, to confer with Divisions for their assistance in improving local organisation, to advise and assist the local profession in contract practice, disputes, and similar matters, and to assist in the investigation of ethical cases.

In the period immediately following the adoption of the new constitution, visits were chiefly desired by the Divisions for assistance in organisation and in obtaining new Members. More recently assistance has been required rather in connection with medico-political and ethical work.

There has been definite evidence of the utility of this part of the work of the Office both in satisfying Members of the benefits derived from membership, and in attracting new Members to the Association. On the other hand the time occupied in this way has been a matter for serious consideration as regards its effect in delaying the general work of the Office.

(Signed) J. SMITH WHITAKER,
Medical Secretary.

July, 1907.

XIV.

ANALYSIS OF BRANCH FINANCE.

TABLE 1.—BRANCH EXPENDITURE PER MEMBER, 1905.

Branch.	Assumed Membership.*	Average Expenditure per Member for		Average Balance at end of 1905.	
		Branch Purposes.	Division Purposes.	Average Savings (per Member).	Average Deficit (per Member).
		s. d.	s. d.	s. d.	d.
Birmingham	486	2 4	1 5½	0 2½	—
Dorset and West Hants	158	2 5	1 1	0 6	—
East Anglian	417	1 3	1 10	0 11	—
East York and North Lincoln	142	1 7¾	2 11½	—	7¼
Lancashire and Cheshire	1,618	1 1½	1 1½	1 9¼	—
Metropolitan Counties	2,562	0 10	1 11	1 3	—
North of England	629	2 10½	1 4½	—	2¼
North Lancashire and South Westmoreland	132	0 6¾	0 5	3 0¼	—
Oxford and Reading	286	1 5	1 0½	1 6½	—
South Eastern	1,215	0 3¼	1 5¾	2 3	—
South Midland	220	1 0	1 9¼	1 2¾	—
South Wales and Monmouthshire	478	0 11½	2 11¾	0 0¾	—
South Western	416	2 5¾	1 2	0 4¼	—
Staffordshire	192	0 9½	1 1	2 1¼	—
Worcestershire and Herefordshire	118	1 5	0 10	1 9	—
Yorkshire	739	0 6¼	1 7	1 10¾	—
Border Counties	147	2 1¾	1 11	—	¾
Edinburgh	424	2 0	1 0	1 0	—
Glasgow and West Scotland	667	1 1½	0 11½	1 11	—
Leinster	327	2 10½	0 11¼	0 2¼	—
Munster	110	1 11	1 4¼	0 8¾	—
Ulster	366	2 2½	1 5	0 4½	—

* Having regard to the fluctuation of membership of Branches in the course of a year, it has been found most convenient for the purpose of these calculations to assume as the membership such a number as to make the income received in capitation grants from Central funds equivalent to exactly 4s. per head.

TABLE 2.—DETAILS OF EXPENDITURE FOR BRANCH PURPOSES IN 1905.

Branch.	Assumed Membership.*	Average Expenditure in 1905.							
		Working Expenditure.				Special Expenses.			
		Total Secretarial Expenses.	Travelling Expenses.	Hire of Meeting-rooms.	Total Working Expenses.	Scientific Work.	Medico-Political Work.	Sundries, e.g., Charity Grants.	Total Special Expenses.
		s. d.	s. d.	d.	s. d.	d.	d.	s. d.	s. d.
Birmingham	486	1 7½	—	8½	2 4	—	—	—	Nil
Dorset and West Hants	158	0 9¼	—	4	1 1¼	—	—	1 3¾	1 3¾
East Anglian	417	1 0	0 2	1	1 3	—	—	—	Nil
East York and North Lincoln	142	0 4½	—	Nil	0 4½	3½	—	1 0	1 3½
Lancashire and Cheshire	1,618	0 11	0 0¾	0¼	1 0½	—	1	—	0 1
Metropolitan Counties	2,562	0 8½	—	1½	0 10	—	—	—	Nil
North of England	629	1 3½	0 8¼	1	2 0¾	—	9½	—	0 9½
North Lancashire and South Westmoreland	132	0 5	—	1¾	0 6¾	—	—	—	Nil
Oxford and Reading	286	0 7½	—	Nil	0 7½	—	—	0 9½	0 9½
South Eastern	1,215	0 2¾	0 0¼	0¼	0 3¼	—	—	—	Nil
South Midland	220	0 5¼	—	Nil	0 5¼	—	—	0 6¾	0 6¾
South Wales and Monmouth	478	0 10½	—	0¾	0 11½	—	—	—	Nil
South Western	416	1 8¼	0 2	7½	2 5¾	—	—	—	Nil
Staffordshire	192	0 8½	—	0½	0 8¾	—	—	0 0½	0 0½
Worcester and Hereford	118	1 4	—	1	1 5½	—	—	—	Nil
Yorkshire	739	0 6	—	0¼	0 6¼	—	—	—	Nil
Border Counties	147	2 0	—	1¾	2 1¾	—	—	—	Nil
Edinburgh	424	1 2	0 2	8	2 0	—	—	—	Nil
Glasgow and West of Scotland	667	0 4¼	0 8½	0¼	1 1½	—	—	—	Nil
Leinster	327	1 5	1 3½	2	2 10½	—	—	—	Nil
Munster	110	1 2	—	6¼	1 8¼	—	—	0 2¼	0 2¼
Ulster	366	1 4¼	0 3	3¼	1 11¾	—	—	0 3¼	0 3¼

* See Note at foot of Table 1.

Table 3.—Accumulated Savings.

Gross Amount at end of 1905 and Average per Head.

Office Reference No.	Branch.	Assumed Membership.*	Gross Amount Accumulated.	Average per Head.
			£ s. d.	s. d.
2	Birmingham	486	106 10 1	4 4½
4	Dorset and West Hants	158	36 12 9	4 7½
5	East Anglian	417	43 7 7	2 1
6	East York and North Lincoln	142	22 8 0	3 1¾
8	Lancashire and Cheshire	1,618	441 11 1	5 5½
9	Metropolitan Counties	2,562	730 13 11	5 8½
11	North of England	629	87 16 0	2 9½
12	North Lancashire and South Westmoreland	132	38 19 8	5 11
14	Oxford and Reading	286	88 9 3	6 2½
16	South Eastern	1,215	394 18 0½	6 6
18	South Midland	220	48 18 0	4 6¾
19	South Wales and Monmouth	478	129 4 5	5 5
20	South Western	416	85 4 6	4 1
21	Staffordshire	192	57 9 7	6 0
23	Worcester and Hereford	118	34 11 9	5 10½
24	Yorkshire	739	177 18 0	4 9½
25	Border Counties	147	10 9 10	1 5
28	Edinburgh	424	96 8 11	4 6½
30	Glasgow and West of Scotland	667	189 12 7	5 8
35	Leinster	327	24 3 8½	0 10½
36	Munster	110	35 8 2	6 5½
38	Ulster	366	72 7 11	3 11½
	Totals and averages	11,849	2,955 3 9	4 9¼

* See Note at foot of Table 1.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,013 births and 4,780 deaths were registered during the week ending Saturday last, April 25th. The annual rate of mortality in these towns, which had been 15.4 and 16.2 per 1,000 in the two preceding weeks, rose again last week to 15 4 per 1,000. The rates in the several towns ranged from 6 7 in Hornsey, 7 3 in Willesden, 8 1 in Southampton, 9.3 in King's Norton, and 9 6 in Reading, to 19 6 in Rotherham, 19 7 in Brighton, 19 8 in Liverpool, 20.1 in Middlesbrough, 20.5 in Devonport, 20.9 in Oldham, 22 9 in Rochdale, and 23 5 in Stockton-on-Tees. In London the rate of mortality was 15 4 per 1,000, being equal to the average rate in the seventy-five other large towns The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.3 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 2.6 in Reading, in Devonport and in Salford, 2 8 in Huddersfield, 3.0 in Smethwick and in Birkenhead, and 3 5 in Rochdale. Measles caused a death-rate of 1.1 in Salford and in Swansea, 1.3 in Birkenhead, and 1.8 in Rochdale and in Preston; scarlet fever of 1.2 in Leyton and 1.5 in Wallasey; diphtheria of 1.1 in Walsall; whooping-cough of 1.7 in Birkenhead and in Barrow-in-Furness, 1.9 in Reading, 2.0 in Sunderland and in Newport (Mon.), 2.3 in Smethwick, and 2 6 in Devonport; and "fever" of 1 7 in Huddersfield. No fatal case of small-pox was registered last week in any of the seventy-six towns. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,121, 2,972, and 2,839 at the end of the three preceding weeks, had risen again to 2,861 at the end of last week; 332 new cases were admitted during the week, against 315, 297, and 328 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, April 25th, 1,072 births and 663 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.7, 18.8, and 16.4 per 1,000 in the three preceding weeks, had risen again to 18 8 per 1,000 last week, and was 3.4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 11.4 in Aberdeen and 12 3 in Leith to 20 7 in Perth and 21.4 in Paisley. The death-rate from the principal infectious diseases averaged 2 2 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 340 deaths registered in Glasgow included 25 which were referred to measles, 3 to scarlet fever, 3 to diphtheria, 4 to whooping cough, 2 to "fever," 5 to cerebro-spinal meningitis, and 8 to diarrhœa. Seven fatal cases of measles and 4 of whooping-cough were recorded in Edinburgh; 2 of diphtheria, 2 of whooping cough and 3 of diarrhœa in Dundee; and 2 of measles and 2 of diarrhœa in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 18th, 462 births and 396 deaths were registered in six of the principal Irish towns, as against 572 births and 424 deaths in the preceding period. The annual death-rate in these towns, which had been 31.4, 19 4, and 25 8 per 1,000 in the three preceding weeks, fell to 21 2 per 1,000 in the week under notice, this figure being 6 0 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 13 7 in Limerick and 19 2 in Cork to 24.3 in Londonderry and 37 0 in Waterford. The zymotic death-rate in the same six Irish towns averaged 3.7 per 1,000, or 0 5 per 1,000 higher than during the preceding period, the highest figure—15.6—being recorded in Waterford, while Cork and Limerick registered no deaths under this heading at all. The high rate in Waterford was due to measles.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—HENRY B. BEATTY, Fleet Surgeon, to the Royal Marine Division, Chatham, May 1st; RICHARD MILLER, M.B., Fleet Surgeon, to the *Magnificent*, May 1st; NELSON J. ROCHE, Staff Surgeon, to the *Victory*, additional, for Portsmouth Dockyard, May 5th; WALTER K. HOPKINS, Staff Surgeon, to the *Edgar*, temporary, May 5th; GEORGE E. HAMILTON, M B., Surgeon, to the *Hannibal*, May 5th; JAMES L. SMITH, M.B., Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, May 4th; SIDNEY ROACH, Staff Surgeon, to the *President*, additional, for three months' course at West London Hospital, April 23rd; CORNELIUS BRADLEY, M.D., Fleet Surgeon, to the *Cæsar*, on recommissioning, May 12th; ELYSTAN G. E. O'LEARY, Staff Surgeon, and WILLIAM N. BLATCHFORD, Surgeon, to the *Sutlej*, on commissioning, May 12th; EDWIN S. MILLER, M B., Staff Surgeon, and CHARLES K. BUSHE, M.D., Surgeon, to the *Cornwallis*, on recommissioning, May 12th; PALMER D. RAMSAY, Surgeon, to the *Vivid*, May 12th; WALTER T. HAYDON, Surgeon, to the *Vivid*, additional, April 28th, and to the *Cæsar*, on recommissioning, May 12th.

Civil Practitioner A. MARSHALL, to be Surgeon and Agent at Lowestoft, Corton, and Kessingland, April 22nd.

INDIAN MEDICAL SERVICE

LIEUTENANT-COLONEL A. E. ROBERTS, M.B., Bengal, retires from the service, from April 21st. He was appointed Surgeon-Captain, October 1st, 1887, and became Major, October 1st. 1899. He served in the Hazara Campaign in 1888, receiving a medal with clasp.

Lieutenant-Colonel W. A. LEE also retires from the service, from April 7th. He joined the Madras Medical Department as Assistant-Surgeon, September 30th, 1879, and became Surgeon-Lieutenant-Colonel, September 30th, 1896.

The retirement from the service is also announced of Lieutenant-Colonel K. H. MISTRI, who was appointed Assistant-Surgeon, Bombay Medical Department, October 2nd, 1880, and became Lieutenant-Colonel, October 2nd, 1903. He was in the Burmese Expedition, 1886-8 (medal with clasp.)

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BRIDGEND: GLAMORGAN COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum.

BUCKS COUNTY LUNATIC ASYLUM, Stone, near Aylesbury.—Assistant Medical Officer. Salary, £160 per annum

CARDIFF INFIRMARY GENERAL HOSPITAL.—House-Physician. Honorarium, £30 for six months.

CARLOW DISTRICT ASYLUM.—Resident Medical Superintendent. Salary, £350 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Physician to Out-patients. (2) Clinical Assistant.

CLINICAL RESEARCH ASSOCIATION, Watergate House, Adelphi, W.C.—Assistant Director of the Laboratory. Initial salary, £250 per annum.

DERBYSHIRE ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

DUMFRIES: CRICHTON ROYAL INSTITUTION.—Two Resident Clinical Physicians. Honorarium at the rate of 50 guineas per annum each.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House Physicians. Honorarium, £25 each for six months.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £80 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Senior Assistant Medical Officer. Salary, £150 per annum.

LINCOLN GENERAL DISPENSARY.—Resident Male Junior House-Surgeon. Salary, £175 per annum.

LONDON COUNTY ASYLUM, Horton Asylum. Assistant Medical Officer. Salary, £150 per annum, increasing to £160.

LONDON HOSPITAL, Whitechapel, E.—One Medical and two Surgical Registrars. Salary, £100 per annum each.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MANCHESTER CORPORATION TRAMWAYS.—Medical Man to examine employees.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—Assistant Honorary Surgeon.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—(1) House-Surgeon. Salary, £80 per annum. (2) Male Assistant House-Surgeon. Honorarium, £20 for six months.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary, £150 per annum.

NOTTINGHAM GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Salary, £60 per annum each.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary at the rate of £75 per annum.

ROYAL EAR HOSPITAL, Dean Street, Soho, W.—House-Surgeon. Honorarium, £40 per annum.

ST. GEORGE'S HOSPITAL, S.W.—Resident Anæsthetist. Salary, £50 a year.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants.

SEAMEN'S HOSPITAL, Greenwich.—(1) Assistant Physician. (2) Assistant Physician or Surgeon for Diseases of the Throat, Nose, and Ear.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £100 per annum.

SUNDERLAND INFIRMARY.—Male House-Surgeon. Salary at the rate of £80 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—(1) House-Surgeon. (2) House-Physician. Salary, £75 per annum each.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Second House-Physician. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces a vacancy at Rosscarbery, co. Cork.

APPOINTMENTS.

BARRY, J. P., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Inistioge District, co. Kilkenny.

BOYD, Thomas C., M.A., M.B., Ch.B.Aberd., Resident Medical Officer to the Aberdeen Maternity Hospital.

CORKER, J., M.B., B.Ch, R.U.I., Resident Assistant Medical Officer of the Warrington Union Workhouse.

EWAN, W. J. S., M.B., C.M.Aberd., District Medical Officer of the Edmonton Union.

GILKS, J. L., M.R.C.S., L.R.C.P.Lond., Assistant Medical Superintendent, Camberwell Parish Infirmary.

GRAY, Theodore, M.B., Ch.B.Aberd., Assistant Medical Officer to Kingseat Asylum.

HARDIE, J., M.B., C.M.Edin., District Medical Officer of the Huddersfield Union.

KELLY, M. W., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Killane District, co. Wexford.

MILL, G. Robertson, M.D.Edin., Honorary Medical Officer to the Birkenhead Maternity Hospital.

PHILLIPS, G. R., M.R.C.S., L.R.C.P., Assistant Medical Officer, Bermondsey Parish Infirmary.

PRIOR, J. R., M.B., B.S. Durh., Medical Officer of Health, Finchley Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

DICKSON.—On April 25th, at Nelson Place, Newcastle, Staffordshire, the wife of Robert H. Dickson, F.R.C.S.I.—a daughter.

TRIST.—April 22nd, at Crest House, Putney Bridge Road, S.W., the wife of John Ronald Rigden Trist, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

COLE—TOWNSEND.—On April 21st, at East Hill Baptist Church, Wandsworth, by the father of the bride, Horace Godden Cole, Assistant Medical Officer, Liverpool Medical Mission, to Gertrude Annie Townsend, daughter of the Rev. W. Townsend, President of the London Baptist Association.

HUTCHISON—HAYNES.—On April 25th, at St. Patrick's, Hove, by the Rev. H. L. Haynes, brother of the bride, assisted by the Rev. Walter Marshall, Vicar of the parish, and the Rev. Felix Asher, of Holy Trinity, Brighton, Arthur Jaffrey Hutchison, M.A., M.B., 34, Lansdowne Place, Hove, to Eve Muriel Lankester, elder daughter of Mr. and Mrs. Horace Eyre Haynes, 32, Brunswick Terrace, Hove.

OWLES—OWLES.—On April 23rd, at St. Stephen's, Clapham Park, by the Rev. Digby Gritten, Chaplain to the Royal Hospital for Incurables, Putney, Oscar Wm. Owles, M.R.C.S.Eng., L.R.C.P. Lond., of Beccles, Suffolk, to Ethel, second daughter of the late F. J. Owles, Norfolk House, Balham, and of Mrs. Owles, 291, Trinity Road, Wandsworth Common, S.W.

SIBLEY—VICKERS.—On April 25th, at St. Augustine's, South Kensington, by the Rev. R. R. Chope (Vicar), Osbert Carden Sibley, of Abercorn, Hanger Lane, Ealing, son of the late S. W. Sibley, of Harley Street, to Arabella Rosa Bertles (Araby) Vickers, daughter of the late William Vickers, of Westmorland, Jamaica, and of Mrs. Vickers, of "Cabaritta," Tring Avenue, Ealing. Jamaica papers, please copy.

DEATH.

BOWEN-DAVIES.—On April 24th, at Gorphwysfa, Exmouth, William Bowen-Davies, L.R.C.P., M.R.C.S., L.S.A., J.P., late of Brynarlais, Llandrindod Wells, aged 60.

DIARY FOR THE WEEK.

WEDNESDAY.

ROYAL SOCIETY OF MEDICINE:
NEUROLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Papers:—Sir William Gowers, F.R.S.: The Mechanism of Nystagmus. Dr. E. Farquhar Buzzard: A Note on the Occurrence of Muscular Spindles in Ocular Muscles.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Paddington Green Children's Hospital, 8.30 p.m.—Clinical Evening.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Meeting.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W., 8 p.m.—Card Specimens; 8.30 p.m., Papers:—Dr. Freeland Fergus: Ptosis Operations. Mr. E. Clarke and Sir A. Wright: Tubercle of the Choroid Cured by Tuberculin. Messrs. E. Clarke and S. Mayou: Tubercle of the Iris Cured by Tuberculin. Mr. P. E. H. Adams: An Epidemic of Contagious Conjunctivitis due to the Pneumococcus. Dr. George Mackay: (1) A Case of Arterio-venous Aneurysm Treated by Ligature of the Common Carotid; (2) A Case of Phlyctenular Keratitis and Pustular Episcleritis Treated by Antistaphylococcic Injections.

FRIDAY.

SOCIETY FOR THE STUDY OF DISEASES IN CHILDREN, 11, Chandos Street, 5 p.m.—Paper:—Dr. W. Ewart: The Empty Bronchus Treatment by Posture in the Bronchiectasis of Children. Cases and Specimens by Drs. O. K. Williamson, Carpenter, Porter Parkinson, and Messrs. Lett, Russell Howard, and others.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Monday, 2.15 p.m., Haematemesis; Thursday, 3.15 p.m.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures, at 5.15 p.m. each day, will be delivered as follows: Monday, Some Tendencies in Modern Medicine; Tuesday, Jacksonian Epilepsy; Wednesday, Convergent Strabismus; Thursday, Pruritus Ani.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
2 SATURDAY ...	ULSTER BRANCH, Londonderry.
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, St. Mary's (Islington) Infirmary, Highgate Hill, N., 4 p.m. WARRINGTON DIVISION, *Lancashire and Cheshire Branch*, Annual General Meeting, Warrington Infirmary, 4 p.m.
6 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Organization and Finance Committee, Liverpool Medical Institution, 4.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also Meeting of Branch Council, Victoria Hotel, Kilkenny, 5.30 p.m.; Dinner, 6.30 p.m.
7 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Annual General Meeting, Bethlem Royal Hospital, Lambeth Road, S.E., 4 p.m.
8 FRIDAY ...	
9 SATURDAY ...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m.

Date.	Meetings to be Held.
MAY (*Continued*).	
13 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Branch Council, Liverpool Medical Institution, 4.30 p.m. RICHMOND DIVISION, *Metropolitan Counties Branch*, Annual Meeting and Dinner, Sun Hotel, Kingston, 6.30 p.m.
14 THURSDAY...	LONDON: Hospitals Committee, 1.15 p.m. LONDON: Joint Hospitals Committee, 3 p.m. LONDON: Metropolitan Counties Branch Council, 5 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch.* REIGATE DIVISION, *South-Eastern Branch*, Annual Meeting, White Hart Hotel, 5.30 p.m.; Dinner, 7 p.m.
15 FRIDAY ...	
16 SATURDAY ...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
20 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Annual Meeting, Cardiff.
21 THURSDAY...	LEIGH DIVISION, *Lancashire and Cheshire Branch*. Annual Meeting, Co-operative Rooms, Ellesmere Street, 8.30 p.m.

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SUPPLEMENT

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

(1.)

CENTRAL ETHICAL COMMITTEE.

ETHICS OF MEDICAL CONSULTATION.

REPORT.

Revised, pursuant to instructions of Annual Representative Meeting, 1907, and issued for consideration by Divisions, and instruction accordingly of Representatives in the Annual Representative Meeting, 1908.)

A. INTRODUCTION.

The Annual Representative Meeting of the Association at Leicester, in 1905, gave the following instruction to the Central Ethical Committee:—

"That the Ethical Committee be requested to consider the relative ethical position of consultants and the medical practitioner in attendance, to each other and to the patients, and report."

The Committee presented accordingly to the Annual Representative Meeting of the following year a Report, which was afterwards circulated by direction of the Meeting to the Divisions, and was considered by them during the Session 1906-7.

The Report and various motions thereon by Divisions came before the Annual Representative Meeting of 1907 at Exeter, and after a short discussion were referred to the Central Ethical Committee with instructions to revise the Report, incorporating therein such of the suggestions contained in the resolutions of Divisions as might appear to the Committee advisable, and to bring the matter again before the Representative Meeting.

The following Report has been prepared accordingly, and in view of the consideration which the subject has received and of the fact that few Divisions suggested material alterations in the original Report, has been drafted as a Report of the Association, not simply of the Committee.

B. REPORT.

1. MEMORANDUM.

In a consideration of the relative ethical position of consultants and medical practitioners to each other and to their patients, the interpretation to be placed upon the term "Consultant" must first be decided. Any practitioner who is called upon to give a second opinion respecting a case already under the care of another practitioner is for the purpose of that case a "Consultant." The term is frequently used, also, as the designation of a special class of medical practitioner, distinguished from others by the fact that a large proportion of the patients attended by him are seen in consultation with, or are ordinarily under the care of, other practitioners.

To restrict the present Report to the consideration of those consultations in which members of an exceptional class take part would greatly diminish its usefulness. Throughout the Report, therefore, the term "Consultant" is to be understood as meaning any practitioner who is called upon to advise in special circumstances with regard to a patient who is already under the care of another practitioner, that other being referred to as the "Attending Practitioner."

In adopting the definitions stated, it is recognised that the rules governing the relations which should subsist between a consultant who adhered strictly to the practice of not seeing any patient except in co-operation with another medical man, and an attending practitioner, would be less complicated than those here laid down. Many of the difficulties that have now to be met and overcome would not exist if the consultant could not in any circumstances become the competitor of the attending practitioner. However desirable the growth of such a class of pure consultants may be, it must be recognised that at present the number of practitioners regulating their work on these lines is exceedingly small. It appears wiser, therefore, that any proposal for endeavouring to extend this system of practice which there is evidence that many Divisions approve, or for formulating rules for the guidance of those who desire to adopt it, should be made the subject of a subsequent report.

The following Rules are put forth as a statement of the customs generally observed by members of the profession, conversant with its best traditions, as governing the relations of "Consultants" and "Attending Practitioners," to one another and to their patients. Their observance on all occasions would do much to maintain cordial relations between members of the profession. It seems well, therefore, that they should be issued authoritatively and should be readily available for reference at all times. They should also

be brought systematically to the notice of those recently qualified.

These Rules rest upon certain general considerations which it is thought well to state in view of the misconceptions which exist as to the principles of medical ethics :—

(*a*) It is to the public interest that the procedure in obtaining a second opinion upon a case of illness shall be such as to facilitate consultations between medical colleagues.

(*b*) To facilitate the arrangement of such consultations, it is necessary to protect the interests of the attending practitioner.

(*c*) From the point of view of the consultant, the procedure must be governed by the recognition of the attending practitioner as the person primarily and continuously responsible for the patient's medical care, the consultant himself having relatively a temporary responsibility.

(*d*) It is to the patient's interest that his confidence in the attending practitioner should be unimpaired so long as he remains responsible for the patient's medical care.

(*e*) In the procedure leading to consultation, the advantage of facilitating communication between the attending practitioner and the consultant is obvious when it is recognised that in the large majority of instances the attending practitioner has a fuller knowledge of the previous medical history of the patient.

(*f*) The relation of a consultant to the attending practitioner and the patient is one of trust which considerations of his own honour and of the interests of the profession and public should preclude him from perverting to his own professional advantage, to the detriment of the attending practitioner.

2.—RULES.

1. *Duty of Consultation.*

In the interests alike of the public and of the medical profession, it is the duty of a medical practitioner to accept the opportunity of consultation, especially upon obscure and difficult cases, or where the patient or his friends desire it.

2. *Cases in which Consultation is Especially Required.*

In the following cases it is especially the duty of the practitioner in attendance to endeavour if practicable to obtain the assistance of another opinion :

(*a*) When a question arises of the propriety of performing an operation or adopting some course of treatment which may be dangerous to life or permanently injure the condition of the patient, especially if the condition which it is sought to relieve by this treatment be not itself dangerous to life.

(*b*) When a question arises of destruction of a fetus or unborn child in the interest of the mother, especially if she is not in labour.

(*c*) When the practitioner in attendance is in doubt either as to the diagnosis or as to the treatment to be followed and delay in arriving at a decision might be dangerous

(*d*) When there is evidence of anxiety on the part of the patient or his friends as to the correctness of a diagnosis or of the treatment pursued.

(*e*) When the attending practitioner has reason to suspect :

(i) Performance of an illegal operation.
(ii) Administration of poison.
(iii) Commission of any other criminal offence.

3. *Choice of Consultant.*

It is expedient, in the interests of the patient, that the choice of consultant should usually be left to the practitioner in attendance. Nevertheless, a practitioner is not justified in refusing to meet a consultant selected by the patient, or the patient's friends, unless he is satisfied that the proposed consultant is not qualified by knowledge or special experience to advise upon the case, or that he is one whom he is debarred from meeting on the grounds stated in Recommendation 4.

4. *Refusal to Meet.*

It is the duty of a practitioner to refuse to meet in consultation :—

(*a*) An unregistered person.

(*b*) A practitioner whose exclusive profession of any peculiar system of treatment would render consultation futile.

(*c*) Any practitioner whose conduct has, after due inquiry, been declared by some recognised body of the medical profession to be detrimental to the honour and interests of the profession, such declaration not having been made inoperative by any subsequent pronouncement of the body in question or of any superior ethical tribunal.

5. *Procedure in Arranging and Conducting Consultations.*

The arrangements for consultation should be made by the attending practitioner.

If a practitioner receives an application to act as consultant from any person other than the attending practitioner of the patient, he shall not see the patient without the consent of the attending practitioner.

6. *Etiquette of Consultation.*

The following Rules of medical etiquette are generally recognised by the profession, with respect to arranging and conducting consultations. They should be observed, unless there is substantial reason in any particular case for departing therefrom.

(*a*) If the consultation is not held at the patient's house, it generally takes place at the house of the practitioner consulted, who also fixes the hour of meeting, unless otherwise amicably arranged.

(*b*) All parties to a consultation should be punctual. If the attending practitioner does not keep the appointment, the other or others may, after a reasonable time, see the patient, and leave his, or their, conclusions in writing, in a closed envelope addressed to the attending practitioner.

(*c*) Before seeing the patient, the attending practitioner should, as a rule, give the consultant a brief history of the case.

(*d*) On entering the room of the patient, the attending practitioner should precede the consultant, and should, if necessary, introduce him to the patient, and the attending practitioner should be the last to leave the room. The diagnosis, prognosis, and treatment should be discussed in private.

(*e*) The opinion on a case, and the treatment, should be communicated to the patient or the patient's friends by the medical man consulted, in the presence of the attending practitioner.

(*f*) If it is found necessary that the patient or his friends should be made aware of a difference of opinion among the practitioners taking part in a consultation, it is the duty of the consultant, jointly with the attending practitioner, to communicate this information.

(*g*) The practitioner in attendance should ascertain previously, and inform the patient or his friends, as to the amount of the fee, which should be paid to the consultant at the time.

(*h*) If for some reason a personal consultation is impossible, the attending practitioner should write a letter introducing the case, and should courteously and punctually reply to any communication from the consultant, and the latter should write and forward his opinion, along with any prescription he may advise, in a closed letter addressed to the attending practitioner.

(*i*) Arrangements for a future consultation should be left to the initiative of the practitioner in attendance.

7. *Communications to Patients in the Course of Consultation.*

Great care should be exercised in making any observations in the presence of the patient on the nature of the malady, its probable issue, or treatment pursued, and all criticisms or reflections on the practitioner in attendance must be avoided. Differences of opinion, so long as there is final agreement among the parties to the consultation, are not to be revealed, but if agreement as to diagnosis and treatment should not be possible, and the consultant is convinced that the future well-being of the patient is concerned in his so doing, he should inform the patient in the manner prescribed in Recommendation G (*f*).

8. *After-care of Patients.*

It is the duty of the practitioner in attendance loyally to carry out the measures agreed upon at the consultation, and he should refrain from making any radical alteration in such measures except upon urgent grounds or after adequate trial.

9. *Consultant not to Injure Position of attending Practitioner.*

In recognition of the position of trust in which he is placed towards the attending practitioner, the consultant must not, by unduly ingratiating himself or otherwise, attempt to secure for himself a patient, or the relatives of a patient, whom he has seen in consultation, and must exercise scrupulous care to avoid disturbing the confidence of the patient in the attending practitioner.

If the consultant wishes to make any communication with regard to any case which he has seen in consultation, he should only do so through the attending practitioner, and should not discuss the case with the patient or any of the patient's friends, in the absence, or without the consent, of the attending practitioner.

10. *Consultant not to Supersede attending Practitioner.*

A practitioner who has seen a case in consultation should not supersede the attending practitioner during the illness with regard to which the consultation is held, and, if he be asked to attend or prescribe in any future illness, he should only do so after explanation with the attending practitioner, unless circumstances make this impracticable.

(2.)

MEDICAL INSPECTION OF SCHOOL CHILDREN.

REMUNERATION OF WHOLE-TIME INSPECTORS.

THE Council has carefully considered what, having regard to the special character of the work, should be the salaries paid to whole-time medical inspectors of school children—that is, the officers who actually examine the children.

In approaching this subject, a distinction must be drawn according to the conception which Local Authorities have of the nature of the work to be done.

Salaries of Experienced Officers.

If it is desired that the work indicated in the Memorandum of the Board of Education as the minimum required should be conscientiously and thoroughly discharged, certain special qualifications will be required, demanding special training and experience, and the salary must be fixed accordingly.

These qualifications include:

(*a*) Familiarity with the diseases of children.

(*b*) Particular training in general hygiene.

(*c*) The faculty of rapid diagnosis, depending on special practice in this art.

The ordinary experience of a general practitioner in the course of years gives him this training, and for cases where the work is undertaken by part-time medical officers the scale of payment already suggested has been framed with regard to this fact. (See SUPPLEMENT, December 21st, 1907.)

If the duties are to be discharged by whole-time practitioners, these must either be practitioners who have spent some years in general practice, and who, if efficient, would require a relatively high rate of payment to induce them to give up such practice, or, on the other hand, must be practitioners who have qualified themselves by special study to become specialists in this department. In either case the Committee considers that such competent officers will not be attracted by a salary of less than £500 per annum.

Salaries of Inexperienced Officers.

If, however, a Local Authority merely desires to comply with the formal requirements of the Act at the least possible expense and without regard to the question whether its intentions are being properly carried out, it is true, no doubt, that certain statistics can be compiled by newly qualified practitioners who would otherwise have been holding posts as House Surgeons or as junior assistants to general practitioners. In such cases regard must be had to the fact that the time spent in the work of medical inspection of school children can, in the majority of cases, lead to no future in this special department; that the majority of those engaged must ultimately revert to other departments of medical practice, and that the time spent in the medical inspection of school children will afford very little useful experience for future practice.

Consequently practitioners who at the commencement of their career undertake this whole-time work will be justified in requiring a higher rate of remuneration than that they would receive in posts affording valuable experience, such as those of Assistants to general practitioners or of House Surgeons, and the minimum whole-time salary should be from £250 to £300 per annum.

Appointments of Medical Women.

In conclusion, the Council, in dealing with this matter, thinks it well to draw attention to the principle of the Association, originally formulated by the Public Health Committee with the approval of the Council, and subsequently confirmed by the Annual Representative Meeting at Exeter—namely, that the salaries paid to medical women must not be less than those paid to medical men in respect of the same work.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session was held at Bath on April 29th, Dr. E. J. CAVE, President, in the chair, and there were thirty members and visitors present.

Communications and Cases.—Mr. E. W. HEY GROVES read notes of a successful case of removal of the Gasserian ganglion, and it was discussed by Dr. SHINGLETON SMITH, Dr. EDGEWORTH, Dr. NEILD, Mr. GOULDEN, Dr. MICHELL CLARKE, and the PRESIDENT. Dr. FREDERICK G. THOMSON showed a patient suffering from syphilis of the central nervous system, and read notes of the case. In the discussion which ensued Dr. CAVE, Dr. WILSON SMITH, and Dr. RUPERT WATERHOUSE took part. Dr. THOMSON also showed a patient suffering from visual sensory aphasia following gas poisoning. Dr. WILSON-SMITH, Dr. MICHELL CLARKE, and Dr. NEILD joined in the discussion. Dr. R. WATERHOUSE read notes of a patient, whom he showed, suffering from subcutaneous fibrous nodules in an adult. Mr. J. M. H. MUNRO read a paper entitled, "Is Opsonic Treatment Useful in Phthisis?" and comments were made upon it by Dr. KENNEDY.

Proposed University at Bristol.—The following resolution was passed *nem. con.*:

That the Bath and Bristol Branch of the British Medical Association, representing the medical profession in Bath, Bristol, and the surrounding districts, is strongly in favour of the proposed university at Bristol, believing it to be urgently required. The Branch considers that a

well-endowed and thoroughly equipped university would be of the greatest value in the interests of higher medical education and of the prevention of disease.

New Member.—At a council meeting held on the same day Mr. Francis Shingleton Smith, M.B., B.C., M.R.C.S., of Bristol, was elected a member of the Association; also Mr. Alex. H. Finch, M.R.C.S., L.R.C.P., of Shepton Mallet.

BIRMINGHAM BRANCH:

CENTRAL DIVISION.

AN ordinary and special meeting of this Division was held on April 30th at the Medical Institute, Birmingham. Dr. JAMES NEAL occupied the chair, and there were sixteen other members present

Confirmation of Minutes.—The circular convening the meeting was read and the minutes of the last ordinary meeting and the last special meeting were read, confirmed, and signed.

Doctors and Midwives.—The following report on the payment by the guardians of fees to medical practitioners called in to the assistance of midwives was read by the CHAIRMAN:

The Midwives Act of 1902 imposed a statutory duty upon midwives to call in a medical practitioner under certain circumstances, but no arrangement for the payment of practitioners so called in.

At a general meeting of this Division in March, 1905, this subject was discussed, and a scale of fees drawn up by your Executive Committee was accepted by this Division, which also expressed the opinion that the fees should be paid by some public authority in cases where the patient cannot pay, and that the local supervising authority should make the payments rather than the guardians.

It was impossible to go further than this until it was decided through what authority payment would be made; but when the Local Government Board issued a circular letter to the clerks to the guardians in July, 1907, urging payment through the Poor Law, your committee entered into communication with the Birmingham Board of Guardians, and we are now able to report that they have agreed to the scale of fees which you adopted in March, 1905.

For this satisfactory result your committee is much indebted to Dr. Kirby, who personally conducted the negotiations, to Dr. Trout, and Mr. Fletcher (clerk to the guardians).

Scale of Fees.

Clause A.—Five shillings for first visit and 2s. 6d. for subsequent visits.

Clause B.—1. Two guineas, which should include five subsequent visits.

" " 2 }
" " 3 } One guinea, to include five subsequent
" " 4 } visits.
" " 5 }

Clauses C and D.—Five shillings for first visit, and 2s. 6d. for subsequent ones; but if the case be one of puerperal septicaemia, the fee for the first visit should be 10s. 6d.

It was originally suggested by the guardians that a list of men willing to attend midwives' calls should be drawn up; but your executive felt themselves unable to assist them in this matter, and it was eventually decided that in all cases the midwife should send for the nearest medical man. We understand that instructions to this effect are printed upon the cards furnished to all registered midwives in the city.

It is only necessary to add that statements of services rendered and fees claimed should be sent direct to the clerk to the guardians.

It was decided unanimously to print and circulate this report among members of the Division.

The Term "Hospital".—The following alteration was proposed, seconded, and carried unanimously:

In the first line, for "not" read "only"; and in the second line omit "does not," and for "possess" read "possesses"—the lines to then read: "The term 'hospital' should only be applied to an institution for the treatment of disease which possesses the following features."

The rest of the proposed definition was agreed to.

Medical Examinations for Life Insurance.—The questions upon this subject were answered as follows:

1, 2, 3, and 4. It is impossible for the Division, as a Division, to answer these questions.

5. Certainly in the case of small amounts.

6. For "full report" when amount is over £100, 1 guinea; if "full report" required upon less amount, 10s. 6d.

7. The answer to this question is the same as to 6.

8. Form B was considered suitable. Fees should be: Up to £50, 5s.; between £50 and £200, 10s. 6d.

9. Five shillings.

Lynn Thomas and Skyrme Fund.—The HONORARY SECRETARY read a letter from Mr. William Sheen appealing on behalf of the Lynn Thomas and Skyrme fund, and it was unanimously resolved that the Branch be recommended to make a donation to this fund.

New Ethical Rule.—The CHAIRMAN then declared the meeting special, and proposed that the following proviso be added to the new ethical rule passed by the Division on May 10th, 1907:

Always provided that the action contemplated shall only be taken on the formal application of the Division in the area of which the practitioner referred to as the "holder of the appointment" resides.

This was seconded by the HONORARY SECRETARY, and after discussion, in which Dr. KIRBY, Dr. OAKES, Dr. WHICHELLO, Mr. J. F. JORDAN, and others took part, was carried *nem. con.*

COVENTRY DIVISION.

A SPECIAL meeting was held at Coventry and Warwickshire Hospital on Tuesday, April 14th, at 8.30 p.m., Dr. HARMAN BROWN, Vice-Chairman, in the chair. Present: Drs. Moore, Snell, Phillips, Fenton, Collington, Pendred, Rice, Lynes, Ballantyne, Hadley, Soden, Lowman, Hawley, Kendrick, Butler, Webster, Heal, Davidson, Bennett, Richards, Lieutenant-Colonel Ward, and Secretary (23); visitors: Dr. Cropper and M. Moore, jun.

Cases and Specimens.—Cases were shown by Dr. LOWMAN of hydrocephalus, perineal testicle, and double anus. Dr. LOWMAN described the condition present in the cases, and in the subsequent discussion Drs. HAWLEY, BALLANTYNE, and PENDRED took part. Dr. LOWMAN replied. Dr. MILNER MOORE showed a specimen of uterine polypus which had been passed by a girl aged 21. Dr. HARRISON BUTLER showed a case of exophthalmos goître. The patient was a woman the peculiarity of whose condition was the much more marked exophthalmos upon the left side, where also von Graefe's sign was more pronounced. The case was discussed by Drs. DAVIDSON and MOORE.

Proposed Alteration of Rule.—Dr. FENTON moved a resolution standing in his name for alteration of Rule 11, so that "any other business" might appear upon the agenda paper of each meeting. Dr. PHILLIPS seconded. Dr. RICE moved as an amendment that instead of "any other business," the words "any questions to be asked" be substituted. Dr. FENTON, with the consent of Dr. PHILLIPS, withdrew his resolution in favour of the amendment, which he then proposed. Dr. PHILLIPS seconded, Dr. SNELL, the SECRETARY, and Dr. DAVIDSON opposed the resolution, which was put to the meeting, and on a show of hands declared lost by the CHAIRMAN.

Lynn Thomas and Skyrme Fund.—Dr. M. MOORE brought forward the matter of the Lynn Thomas and Skyrme Fund, and suggested that members of the Division be asked to contribute 5s. each towards a collective donation from the Division. This course was adopted. Dr. Davidson subscribed one guinea, and Drs. Butler, Hawley, Phillips, Snell, Moore, Ballantyne, Soden, Lowman, Pendred, Collington, Lynes, Kendrick, Webster, Lieutenant-Colonel Ward, and Orton brought the total subscription to £5. Drs. Harman Brown and Wm. Bennett had previously subscribed one guinea each to the fund directly.

Paper.—Dr. CROPPER of Chepstow then read his paper upon malaria, illustrating the same by diagrams and photomicrographs of slides, and also under the microscope an excellent specimen of the pigmented granules in red blood corpuscles. Drs. DAVIDSON, BUTLER, WEBSTER, ORTON, LOWMAN, HEAL, and PENDRED entered upon the discussion of the paper, and Dr. CROPPER replied to the various questions asked.

Vote of Thanks.—The CHAIRMAN proposed that a very hearty vote of thanks be accorded Dr. Cropper for his interesting paper, which was passed with acclamation.

Medical Examination for Life Insurance.—Dr. MILNER MOORE then brought forward the matter of life assurance examinations. Questions *re* SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, were answered as below:

A. 1. (*a*) Pearl and Prudential Assurance Companies.
(*b*) Refuge Assurance Company.
2. Yes.
3. Yes.
4. Yes.
B. 5. Yes.

6. Yes.
7. No.
8. Yes; 5s.
9. Five shillings; if sum be over £1,000, fee should be increased.

Medical Inspection of School Children.—The SECRETARY brought forward the matter of medical inspection of children, and proposed as a resolution the recommendation of the committee:

That the Division adheres to the opinion expressed last year, that if a medical inspector be appointed, he be a whole-time man.

This was seconded by Dr. HAWLEY and carried unanimously.

DORSET AND WEST HANTS BRANCH:
WEST DORSET DIVISION.

THE annual meeting was held on Wednesday, April 15th, at the County Hospital, Dorchester. Seventeen members attended.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, P. W. Macdonald, M.D. *Vice-Chairman*: Dr. W. Rendall. *Hon. Secretary*, J. F. L. Whittingdale, M.B. *Representatives on the Branch Council*, Drs. Cosens, Flower, Marsh, Rendale, Spooner. *Executive Committee*, Drs. Cosens, Flower, Marsh, Rendall, Spooner, Morrice, Hawkins, Kingston, Du Boulay, Alexander. *Representative at Representative Meetings*, Surgeon-Lieutenant-Colonel D. Curme.

Medical Inspection of School Children.—After an animated discussion on the remuneration to be given by the County Council for the medical inspection of school children the following committee was appointed to consider the matter and formulate terms for presentation to the County Council: Drs. Laurie, Macdonald, Cosens, Manning, Rendall, Day, Rickett, and Whittingdale.

The Term "Hospital."—All agreed to the recommendation of the Ethical Committee as to the definition of the term "hospital."

Medical Examination for Life Insurance.—All were of the opinion that no fee of less than a guinea should be accepted for a medical examination for life insurance, except in the case of industrial policies under £25.

The Referendum.—The CHAIRMAN made some remarks on the result of the Referendum, drawing attention to the small number of votes recorded by the different Divisions on such an important question.

Annual Representative Meeting.—Mr. Carrie's report of the proceedings at the Representative Meetings was taken as read, and a vote of thanks was accorded him for his services.

Votes of Thanks.—A vote of thanks to the Committee of the hospital, for the use of their board room, and to the presiding Chairman concluded the proceedings.

GIBRALTAR BRANCH.

AT a meeting of this Branch held on April 22nd at the Colonial Hospital, Dr. C. JAMES took the chair in the absence of the President and Vice-President. The following were present:—Drs. Austen, R.N.; Fairbank, R.N.; Miller, R.N.; Boyden, R.N.; Whaite, R.A.M.C.; Howell, R.A.M.C.; Baca Lyons, Gill, Abrines, Haver, Dowding, Vasquez, and Oliva (honorary member), with Dr. L. D. Parsons, Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Representative at the Representative Meetings.—Dr. LYONS proposed and Major HOWELL seconded that Dr. Parsons be elected a Representative of the Branch in Representative Meetings for 1908-9. Carried unanimously.

Lynn Thomas and Skyrme Fund.—The SECRETARY read a letter from Mr. William Sheen *re* the Lynn Thomas and Skyrme fund. The following subscribed to the fund a sum of 2s. 6d. each, and it was decided to convey to Drs. Lynn Thomas and Skyrme the hearty sympathy of their professional brethren in Gibraltar—Drs. James, Howell, Abrines, Fairbank, Austen, Haver, Gill, Vasquez, Oman, and Parsons. It was the unanimous opinion of those present that justice had miscarried.

Papers, etc.—Lieutenant-Colonel WHAITE was then called upon to read his paper on a case of multiple injuries. He also showed *x*-ray photographs of a case of Bennett's fracture.

Staff Surgeon E. S. MILLER read a paper on a case of traumatic aneurysm in a man (seaman) in the Royal Navy. About eighteen months ago the man fell heavily against a block while working at a torpedo net, and received the full force of the blow in the right groin. A short time after a pulsating swelling was felt there, and he was operated on for aneurysm, the external iliac being tied. The man apparently completely recovered and returned to duty, but a pulsating tumour has again appeared in the region of Scarpa's triangle. The man was shown at the meeting, and those present had an opportunity of examining him. It was the opinion of all present that he should submit again to operation, and he will probably be operated upon in the naval hospital here shortly.

Major HOWELL read a paper which had already appeared in the *Journal of the Royal Army Medical Corps*, written by himself and Major Horrocks, entitled *X* Bodies in Human Beings and Animals. The paper was one of considerable interest, and the very clear drawings shown made it easier to follow. These curious bodies were found in the blood of patients suffering from fever, and are unlike anything hitherto described. One case may be cited, that of Captain G. This patient was an officer in the Royal Garrison Artillery, and was ill from February 14th to 23rd, 1907, with ill-defined fever and splenic enlargement, which was painful. Blood films prepared and stained showed numerous *x* bodies, and 1 c.cm. of blood added to sodium citrate solution was incubated at 22° C. After seventy-two hours a few *x* bodies were found in smears taken from fluid at the bottom of the tube, and similar bodies were found three days later in the fluid, but subsequent examinations of the citrated blood gave negative results. Those interested in the subject are referred to the April number of the *R.A.M.C. Journal*, pages 351 to 355. The paper was listened to with considerable interest, and several members present promised to send the author smears of the blood in obscure fever cases such as one sees in Gibraltar.

Dr. PARSONS showed a specimen of haematoma of the tunica vaginalis removed from a male aged 60 years. The chief points of interest were (1) the size of the tumour, which was nearly spherical, and measured 6 in. in diameter, and (2) the fact that attached to it was a small secondary sac, about the size of a Tangerine orange, which contained hydrocele fluid. Both tumour and testical seemed to be in a third sac, which was adherent to the scrotal wall. The patient made an uninterrupted recovery.

Votes of Thanks.—Votes of thanks were passed to Colonel Whaite, Major Howell, and Staff Surgeon E. S. Miller for their interesting papers, and the meeting came to a close.

LANCASHIRE AND CHESHIRE BRANCH:
BLACKBURN DIVISION.

A MEETING of this Division was held at the Old Bull Hotel, Blackburn, on Friday, April 24th, Dr. CUNLIFFE in the chair in the absence of the President. There were also present: Drs. Baxter, Miller, Arnold, Alcock, and Henry.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Lynn Thomas and Skyrme Fund.—The question of the Lynn Thomas and Skyrme Fund was brought up, and it was resolved:

That an appeal to the members for subscriptions to this Fund be put on the agenda form calling the next meeting.

Medical Fees at Inquests.—A resolution was passed:

That the Association be asked to take steps for the alteration of the law for securing the payments to medical men for attendance at inquests should be per day instead of per inquest.

The Referendum.—A resolution was proposed by Dr. HENRY:

That the Referendum should be taken by a postal vote of the members of the Association, instead of Division meetings.

This resolution was not carried.

Notice of Motion.—It was unanimously resolved that the following notice of motion be sent to head quarters for the Annual Representative Meeting at Sheffield in 1908:

That By-law 16 be so amended that the Council will be able to allow the Branches sufficient grants to enable the

Branch Councils to pay the active Divisions such grants as will enable them to pay all their ordinary expenses, without voluntary extra subscriptions, namely, up to 7s. 6d. per annum per member where necessary.

Liverpool and Birkenhead Combined Divisions.

A meeting of the Liverpool and Birkenhead combined Divisions was held on April 10th at 4 p.m. at the Liverpool Medical Institution. Sir James Barr (Chairman) presided, and fifty members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Lynn Thomas and Skyrme Fund.—The Chairman drew attention to the Lynn Thomas and Skyrme Fund. Members desiring to contribute were referred to the subscription list in the library of the institution.

British Medical Insurance Committee.—The Chairman also drew attention to the British Medical Insurance Committee.

Notification of Births Act.—The Secretary stated that, in accordance with the resolution of the last meeting, he wrote to the chairman of the Liverpool Health Committee, and was informed that the proper authority was the Infant Life Preservation Subcommittee. Accordingly a deputation—consisting of Sir James Barr, and Drs. A. E. Davis, Donnelly, Given, Grossmann, Gallan, and Larkin—waited on that committee on March 19th. A letter was received on March 21st containing the committee's reply, stating its inability to recommend any payment for the notification of births. Whereupon Dr. Parkinson proposed and Dr. Heald seconded:

> That a postal vote of all the members of the medical profession of the district be taken as to whether they will agree to refuse to notify births without remuneration.

Mr. Larkin pointed out that when the deputation waited on the Life Preservation Subcommittee, the Chairman (Mr. Shelmerdine) drew attention that in Clause 1 of the Act the medical man is not mentioned, and that he is merely one of perhaps many who may be about the mother at the time of birth, and that the Chairman of the Health Committee (Alderman Menlove) stated that the City Council would not have adopted the Act had they not understood that the notification would cost nothing. Mr. Larkin recommended the profession to take up the position suggested by Mr. Shelmerdine, and that the practitioner should not consider himself to be the person chiefly responsible for the notification, and only notify when there was no one else to do so. He therefore recommended the following course: that when in attendance at a birth the medical man should inform the father, nurse, or other person present that they must notify the birth, and at his next visit he should ask whether such has been done. He further recommended that in no case the forms should be used or any details of information given. He moved, and Dr. G. S. Taylor seconded, as an amendment to Dr. Parkinson's motion:

> That a circular letter should be sent to each member of the profession of the district, advising them to adopt the above course.

A long discussion followed, and a vote being taken the amendment was carried, only 3 voting against it, Dr. Parkinson voting for it, and withdrawing his proposition. The Secretary and Mr. Larkin were instructed to draw up the circular letter.

Dr. Garstang's Candidature for the Central Council.—The Chairman then introduced Dr. Garstang, of Altrincham, who addressed the meeting and asked for support in his candidature for the Central Council of the Association.

Medical Examination of School Children.—The Secretary read the correspondence which had taken place between himself and Mr. Cockshott, the Chairman of the Lancashire Elementary Education Subcommittee. The meeting approved of the Secretary's letters, and ordered them to be sent to the British Medical Journal for publication, Mr. Cockshott's letters also to be published if his permission is obtained.

Fees to Medical Witnesses at Coroners' Inquests.—The Secretary read a correspondence between himself and Mr. Coroner Brighouse. The Secretary of the Branch (Mr. Larkin) read the Opinion of the Solicitor of the Association on the matter, which stated that the position taken up by the county councils was strictly legal, and according to the Coroners Act; nothing, therefore, he feared, could be done unless fresh legislation could be obtained. Dr. Heald suggested that medical men should refuse to make *post mortem* examinations except on their own terms; but others thought that the coroner had power to compel any medical man to make a *post mortem* examination. The meeting was informed that a committee of the Branch Council was inquiring into the legal position, and it was decided to await the result of this inquiry. The meeting then adjourned till Thursday, April 23rd.

Adjourned Meeting.

The adjourned meeting of the Liverpool and Birkenhead combined Divisions was held on April 23rd at 4 p.m. Mr. Larkin was voted to the chair, which was taken later by Sir James Barr; thirty members were present.

Confirmation of Minutes.—The minutes of the meeting of April 10th were, at the wish of the members present, read and confirmed.

The Term "Hospital."—The definition of the term "hospital" (see Supplement" of February 22nd, 1908) was considered. A discussion followed, in which Mr. Larkin strongly urged the rejection of the definition. Dr. G. Stopford Taylor advocated a direct negative, on the following grounds—namely: (1) That it would confer a "trade mark" on existing institutions, and enable lay committees of hospitals to tyrannize over the members of their medical staff; (2) that it would acknowledge and perpetuate lay control, from which they were "rightly struggling to be free," but subsequently withdrew to support cordially Mr. Larkin's proposal as follows—namely:

> That this meeting absolutely disagrees with the proposed definition of the term "hospital," as being in itself useless and an inadequate method of dealing with an important subject.

Dr. Nathan Raw seconded, and Sir James Barr supported the motion, which was carried unanimously. Dr. Turner proposed, and it was unanimously resolved, that Mr. Larkin be asked to allow his address to be printed and to be published in the Journal.

Medical Examination for Life Insurance.—The questions relative to fees for medical examination for insurance were, on the motion of Dr. German, referred to the individual Divisions.

Proposals of Wandsworth Division.—The proposals of the Wandsworth Division (see Supplement, March 28th) were considered: (1) That *re* federation of Branches was considered superfluous. (2) That *re* voting in the Representative Meeting was not considered practicable. (3) That *re* addition to By-law 24 was considered right but of doubtful necessity. (4) That *re* By-law 36 was rejected.

Proposal of Westminster Division.—The proposal of the Westminster Division *re* Standing Orders of the Representative Meeting was agreed to.

Proposal of St. Pancras and Islington Division.—The proposal of the St. Pancras and Islington Division *re* annual list of members was agreed to.

Proposal of Richmond Division.—It was decided that the proposal of the Richmond Division *re* Putney Hospital should be left to the Representative Meeting.

Proposal of Gateshead Division.—The proposal of the Gateshead Division (Supplement, April 18th) *re* composition and mode of election of Council was thought undesirable, as it was hoped the Charter would soon be obtained.

Rochdale Division.

The annual meeting was held in the Wellington Hotel, Rochdale, on April 21st, the Chairman (Dr. Brown, of Bacup) in the chair.

Confirmation of Minutes.—The minutes of last annual meeting were read and passed.

Election of Officers.—The following officers were unanimously elected for the ensuing year: *Chairman*, Dr. Hitchin (Heywood); *Vice-Chairman*, Dr. Wallace (Rochdale); *Secretary*, James Melvin (Rochdale); *Representative on Branch Council*, Dr. John Brown (Bacup); *Representative to Annual Meeting*, Dr. John Brown (Bacup); *Deputy Representative*, Dr. Walker (Rochdale). It was moved by Dr. Brown, and seconded by the Secretary, that the following, along with the officers, form the

Executive Committee; Drs. Chapman, Kerr, Menzies, and Walker, all of Rochdale.

Annual Report.—The SECRETARY read the annual report as follows: Membership on December 31st, 1906, 49; new members, 2; increase through change of address, 3; total, 54. Losses: Through death, 1; through change of address, 3; resignation, 1; arrears, 1; total losses, 6. Net membership on December 31st, 1907, 48.

Balance Sheet.—The balance sheet showed a balance to the good of £5 10s. 7d.

Grouping of Division.—Dr. BROWN moved, and Dr. WALKER seconded:

That we ask to be joined with Bury Division.

Carried.

SOUTHPORT DIVISION.

A MEETING of this Division was held at the Temperance Institute, Southport, on April 15th, 1908. There were present: Dr. ANDERSON (in the chair) Drs. Ashworth, Baildon, Brown, Campbell, Pridie, Woolmer-Davies, Russel, Walker, and Harris.

Fees to Medical Witnesses at Inquests.—A letter was read from the Branch Secretary drawing attention to a pronouncement by Coroner Brighouse respecting an intimation he had received from the clerk to the Lancashire County Council to the effect that, under Section 22 of the Coroners Act, 1887, the Council will, after March 31st, pay only one guinea per inquest to medical witnesses, although the inquest may last several days. A resolution was carried unanimously:

That this Division requests the Medico-Political Committee to take such action as may seem desirable, by getting an alteration of the law, if necessary, to secure to medical practitioners the payment of one guinea for each daily attendance or adjourned inquests.

The Term "Hospital."—The meeting agreed unanimously with the definition of the term "hospital" contained in the SUPPLEMENT to the JOURNAL of February 22nd.

Medical Examination for Life Insurance.—The questions respecting medical examinations for life insurance submitted to Divisions were then considered, and the following decisions were arrived at unanimously: (1) That the information asked for could only be obtained by circularizing the members, and that the result would then probably be unsatisfactory. (2) Yes. (3) Full reports are required by all companies paying a guinea or half a guinea. (4) Industrial class companies pay less than half a guinea. (5) Yes. (6) No. (7) No. (8) Yes—10s. 6d. (9) Five shillings for such a form of certificate as that given in Schedule C, but the word "examined" in the form should be qualified so as to show that a complete examination had not been required or made.

Lynn Thomas and Skyrme Fund.—Letters from Mr. Sheen addressed to the secretary appealing to members of the Division for subscriptions to the Lynn Thomas and Skyrme Fund were read, and copies of the appeal were distributed amongst the members present.

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

A MEETING of this Division was held at Brooke House, Clapton, by the kind invitation of Dr. J. O Adams, on April 16th, at 8.30 p.m. Dr. SOUTHCOMBE (Chairman) presided, and there were eighteen members and visitors present.

Confirmation of Minutes.—The minutes of the previous general meeting were read and confirmed.

Cases.—The following interesting cases were then demonstrated by Dr. J. H. SEQUEIRA: (1) Extensive gummatous ulceration of the face in a girl; (2) unilateral perspiration of face, demonstrated by eating pickles; (3) eczema of the hairy face (not sycosis); (4) sycosis commencing at age 11; (5) rodent ulcer remaining healed for three years in a patient aged 71; (6) hairy mole of side of face cured by *x* rays.

Votes of Thanks.—A cordial vote of thanks to Dr. Sequeira, and to Dr. Adams for his hospitality, brought the meeting to a close.

STRATFORD DIVISION.

A MEETING of the Stratford Division was held in the Alexandra Hotel, High Street, Stratford, on Thursday, April 16th, Dr. SPURRELL presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Address on Nasal Obstruction.—Mr. WALTER G. SPENCER, M.S., Surgeon to the Westminster Hospital, read a very interesting paper on the various surgical measures for establishing nasal respiration in mouth-breathing. The address was very highly appreciated by the members, and Mr. Spencer was accorded a hearty vote of thanks.

Workmen's Compensation Acts.—The meeting thereafter considered the memorandum submitted by the Metropolitan Counties Branch Council to the Divisions of the Branch on the situation created by the Workmen's Compensation Acts, and answers were given to the various questions contained in the communication.

WALTHAMSTOW DIVISION.

AN ordinary meeting was held at the Wilfrid Lawson Temperance Hotel, Woodford, on Tuesday, April 14th, at 4 p.m. Eight members and two visitors attended. Dr. Fowler, the Chairman, was unable to be present on account of illness, and in his absence the chair was taken by Dr. H. V. HICKMAN, Vice-Chairman.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Papers.—A paper was read by Dr. HERBERT FRENCH, entitled, "Pregnancy in Relation to certain Medical Diseases in the Mother." Dr. French dealt with only two diseases in his paper—namely, dermatitis herpetiformis gestationis and pyelonephritis. He described numerous forms of the skin affection, and suggested suitable treatment. Dealing with pyelonephritis (most cases of which, he stated, were due to an invasion of the kidney and ureter by the *Bacillus coli communis*), he emphasized the necessity for microscopical examination of the urine in suspicious cases, exhibited two temperature charts, illustrating the course of the disease, and showed that the prognosis, under suitable treatment, was distinctly hopeful even in the worst types. A discussion followed, in which the following members took part: Drs. HICKMAN, SHADWELL, WARNER, and NORMAN. Dr. FRENCH replied.

Vote of Thanks.—A vote of thanks to Dr. French, proposed by Dr. SHADWELL and seconded by Dr. BRICKWELL, was carried.

Letter from Hampstead Division.—A letter from the Hampstead Division was read, in which the Hampstead Division thanked this Division for its resolution of sympathy and support passed at the meeting held in March.

Lynn Thomas and Skyrme Fund.—A letter from Mr. Sheen relating to the Lynn Thomas and Skyrme Fund was read, and after discussion it was decided that no collective action be taken by the Division.

Election of President-elect.—A letter from Dr. Fothergill *re* the election of President-elect of the Branch *vice* Mr. Edward Owen (withdrawn) was then put before the meeting, and the following resolution was proposed by Dr. NORMAN and seconded by Dr. WARNER:

That it be left to the discretion of the Representatives on the Branch Council to support whomsoever they thought the most suitable man nominated for the position.

Carried *nem. con.*

Notices of Motion.—Two notices of motion, intended to come before the Representative Meeting and last year introduced by Dr. C. H. Wise, but in his absence proposed by Dr. SHADWELL, were then submitted to the meeting:

(1) That all notices of motion intended for reference to the Divisions shall be sent in the first place to the Branch Councils, who shall decide what matters are of sufficient importance to be referred to the Divisions, and the remainder shall be decided upon by the Branch Councils themselves.

(2) That each Representative of Division when voting in Representative Meeting, after discussion on any matter, shall be allowed to use his own judgement and not be bound, as a mere delegate, to record the previous decision of his Division; but when he votes contrary to that decision, he shall subsequently justify to his Division his reasons for so voting.

These were seconded by Dr Warner and carried unanimously, and the meeting ended.

SOUTH-WESTERN BRANCH.

AN intermediate meeting of the Branch was held at Torquay on April 15th.

Cases and Papers.—Dr. MAKEIG JONES showed a case of erythromelalgia in a woman. Drs. GORDON and SOLTAU spoke thereon. Dr. GORDON read a paper on cerebral

abscess. Mr. Domville, Mr. Russell Coombe, and Dr. Soltau spoke thereon. Mr. Arnold read a brief report of a case of cancer in the first part of the rectum treated by excision and end-to-end anastomosis; there was no recurrence after three years. Mr. Russell Coombe alluded to a similar case on which he had operated, with no recurrence for nearly five years. Mr. Hamilton Whiteford read a paper on plastic resection of the breast. Mr. Russell Coombe and Mr. Arnold spoke thereon.

LANCASHIRE AND CHESHIRE BRANCH.

Nominations for Election to Central Council.

The following is the list of candidates nominated for the coming Central Council election, with the names of the nominators:

Bradshaw, Thomas Robert, M.D., F.R.C.P., 51, Rodney Street, Liverpool.

Nominated by: The Liverpool (Western) Division, the Manchester Central Division, Sir James Barr, D. Douglas Crawford, W. F. Prout, W. E. Livsey, F. Ivens, R. W. Murray, J. E. Gemmell, J. Hill Abram, A. T. H. Waters, T. R. Glynn, Hubert Armstrong, Francis W. Bailey, W. Blair Bell, Harold B. Woodcock, Oswald H. Woodcock, James Brassey Brierley, William C. Anderson, A. Robertson Wilson, D. Malcolm Smith, Seymour H. Lewis, Frank T. Paul, Charles S. Brewer, T. C. Littler Jones, A. Nimmo Walker, Geo. E. Walker, Rushton Parker, J. W. Logan, Frank H. Barendt, Alexander Stookes, J. E. Macdougall, T. H. Bickerton, W. Thelwall Thomas, Robt. J. Hamilton, Nathan Raw.

Broadbent, George Harry, M.R.C.S., L.R.C.P., 8, Ardwick Green, Manchester.

Nominated by: Professor G. A. Wright, Manchester; Professor F. Southam, Manchester; Samuel Buckly, Manchester; G. Apthomas, Manchester; H. W. Boddy, Manchester; Alexander Fraser, Manchester; Edmund Lee, Manchester; J. Howson Ray, Manchester; S. Crawshaw, Ashton-under-Lyne; A. Hamilton, Ashton-under-Lyne; J. M. Ferguson, Burnley; H. H. Hitchon, Heywood; R. G. McGowan, Cheetham Hill; W. Scowcroft, Cheadle; A. W. Senior, Levensholme; R. B. Sidebottom, Glossop.

Garstang, Thomas Walter Harropp, M.A., M.R.C.S., D.P.H., Altrincham.

Nominated by: The Warrington Division; the Preston Division; the Leigh Division; the Wigan Division; the Altrincham Division; James R. Kerr, St. Helens; John J. Buchan, St. Helens; H. Foster Jeffrey, Heywood; A. J. Young, Whitfield; James W. Cook, Bury; F. B. E. Holmes, Bury; J. Cameron Turnbull, Bury; J. A. Johnson, Bury; Handel Greenhalgh, Bury; A. E. Bridley, Bury; Samuel Crawshaw, Ashton-under-Lyne; John Dunn, Waterloo; Robert Turner, Bootle; Joseph Walker, Bootle; W. Clemmey, Bootle; Henry Walters, Bootle; James Gardner, Burnley; F. W. Marsden, Burnley; A. E. Bird, Burnley; J. H. Stephens, Burnley; John H. Watson, Burnley; F. Rees, Wigan; William Berry, Wigan; William Latham, Ashton-in-Makerfield; J. Blair, Wigan; R. Girdwood, Wigan; E. C. Williams, Wigan; M. H. Enright, Wigan; E. Hodgkinson Monks, Wigan; W. Benson, Wigan; A. E. Hodder, Wigan; A. E. Bridley, Bury; G. A. Jelly, Bury; F. Schofield Rhodes, Thornton-le-Fylde; F. J. H. Coutts, Blackpool; R. H. W. Dunderdale, Blackpool; Louis M. McIntosh, Blackpool; James Johnson, Blackpool; H. Stuart Jefrey, Blackpool; George Forbes, Blackpool; Allen Iredale, Blackpool; F. Booth, St. Anne's-on-Sea; G. W. Joseph, Warrington; Reginald Smith, Warrington; Ernest E. Bowden, Warrington; A. Anderson, Warrington; W. J. Peacocke, Warrington; J. Hutchinson, Widnes; C. S. Brebner, Widnes; J. A. Estock, Widnes; T. U. Mercer, Widnes; O. H. Edwards, Widnes; H. Langdale, Warrington; J. A. Murray, Warrington; C. Challinor, Leigh; J. Sackville Martin, Leigh; A. K. Jones, Leigh; Joseph Jones, Leigh; G. N. Shaw, Leigh; T. Gray, Tyldesley; B. Blakemore, Tyldesley; W. G. Gray, Leigh; F. E. Wynne, Leigh; R. C. Brown, Preston; W. H. Pimblett, Preston; J. E. Dunn, Preston; W. H. Irvin Sellers, Preston; T. Eldridge Healey, Preston; M. W. Talbot, Preston; F. B. Macdonald, Preston; Charles Peddie, Chorley; T. F. Southam, Bowdon.

Godson, Alfred, B.A., M.B., Cheadle House, Cheadle, Cheshire.

Nominated by the Manchester (Central) Division and by T. Arthur Helme, Harold B. Woodcock, Stephen Nesfield, James Brassey Brierley.

Larkin, Frederic Charles, F.R.C.S., 54, Rodney Street, Liverpool.

Nominated by the Liverpool (Western) Division, the Manchester (Central) Division, the Altrincham Division, Sir James Barr, Karl Grossmann, A. Gordan Gullan, G. S. Stopford Taylor, Samuel Mathews, O. Bowen, S. J. Palmer, C. L. Williams, Nathan Raw, Frank H. Barendt, Arthur W. German, E. Malcolm Stockdale, Charles S. Brewer, H. A. Clarke, I. Holmes, R. Ross Smith, G. M. Arkle, John J. Tisdall, D. Henry, Thomas Lee Pennington, W. I. Bennett Jones, H. Adcock, W. T. Clegg, Arthur Dowling, James S. Fox, G. W. Joseph, Reginald Smith, Ernest E. Bowden, A. Anderson, W. J. Peacocke, C. S. Brebner, J. A. Estock, Thomas U. Mercer, Oswald H. Edwards, H. Langdale, T. A. Murray, James Taylor, Alfred Mann, H. W. King, R. C. Brown, F. B. Macdonald, J. E. Dunn, D. Turnbull Smith, John E. Garner, Maurice H. Enright, John Blair, A. E. Hodder, E. H. Monks, M. Benson.

Macfie, Charles, M.D., 240, St. George's Road, Bolton.

Nominated by the Manchester (Central) Division; the Altrincham Division.

Taylor, James Henry, M.A.Cantab., M.B., Ch.B.Vict., 299, Eccles New Road, Salford, Manchester.

Nominated by the Manchester (Salford) Division; the Altrincham Division; T. Arthur Helme, Manchester; F. H. Worswick, Manchester; J. Wilson Hamill, Manchester; R. H. Wolstenholme, Salford; Charles L. Skinner, Manchester; W. G. Booth, Manchester; W. H. Henshaw, Manchester; O. H. Woodcock, Manchester; E. W. Floyd, Manchester; T. H. Morrison, Manchester; L. E. Scanlon, Manchester; J. Skardon Prowse, Manchester; Alex. Fraser, Manchester; J. S. Dick, Manchester; J. Knight Coutts, Manchester; J. E. Nichol, Manchester; W. J. Heslop, Manchester; J. J. Kent Fairclough, Manchester; David Owen, Manchester; J. G. Carr, Manchester; H. Kennedy Birley, Manchester; J. Price Williams, Swinton; W. F. O'Grady, Swinton.

T. W. H. Garstang, F. Charles Larkin, Charles Macfie, and J. H. Taylor are together nominated by:

The Altrincham Division; Frederic Cox, Hale; William Turner, Hale; D. A. Ogilvie, Hale; J. R. Wilson, Hale; W. N. Tattersall, Timperley; John M. Hassall, Northwich; R. I. Browne, Hartford; P. L. Armstrong, Northwich; Herbert Terry, Northwich; Frederic Barker, Northwich; R. Mainwaring White, Northwich; T. A. C. Doonan, Northwich; W. Horton Smith, Northwich; Gilbert Love, Great Budworth; Henry Edward Gough, Northwich; G. H. Smith, Knutsford; C. Smallborn, Knutsford; T. L. Fennell, Knutsford; T. A. Fennell, Knutsford; W. Clark Alexander, Bowdon; Herbert F. Ransome, Bowdon; C. S. O'Neil, Hale; L. W. Crowe, Hale; T. Basil Rhodes, Timperley; H. M. Williamson, Northenden; D. Morrow, Bowdon; G. Selwyn Taylor, Partington; Hector Leak, Winsford; B. H. Woodyatt, Over; L. S. Melville, Middlewich; G. Okell, Winsford; T. A. Rothwell, Hale; T. Evans Flitcroft, Bolton; Horace Jeffries, Bolton; Alfred Higginson, Bolton; R. D. Mothersole, Bolton; Jas. Wood, Bolton; Jean M. F. Marshall, Bolton; R. M. Gilchrist, Bolton; N. J. Taylor, Bolton; Ben. Darham, Bolton; Lewis Brown, Bolton; D. Gray, Bolton; A. G. Park, Bolton; W. H. Brazil, Bolton; W. H. Bryce, Bolton; J. H. Thompson, Bolton; J. E. Gould, Bolton; H. G. Parker, Bolton; J. Thornley, Bolton; G. H. Whitaker, Horwich; J. S. Sewell, Horwich; I. Mandell Coutier, Horwich; J. S. Hall, Bolton; T. W. Pattinson, Bolton; Thomas Boulton, Bolton; F. Robinson, Astley Bridge; J. Robinson, Dunscar; J. A. Swainson, Bolton; E. Monks, Bolton; F. R. Mallett, Bolton; T. G. Laslett, Farnworth; J. Johnston, Farnworth; Alfred Kershaw, Farnworth; J. Fletcher Smith, Farnworth; C. Challinor, Leigh; A. K. Jones, Leigh; Joseph Jones, Leigh; J. Sackville Martin, Leigh; Andrew T. Ross, Leigh; W. G. Gray, Leigh; J. C. Beckill, Leigh; G. H. Staw, Leigh; H. S. Hall, Leigh; M. J. Halton, Leigh; Samuel Mathews, Liverpool; S. J. Palmer, Liverpool; A. W. German, Liverpool; E. Malcolm Stockdale, Liverpool; Charles S. Brewer, Birkenhead; H. A. Clarke, Liverpool; I. Holmes, Liverpool; R. Ross Smith, Liverpool; G. M. Arkle, Liverpool; John J. Tisdall, Liverpool; D. Henry, Liverpool; J. L. Pennington, Liverpool; Harry Adcock, Liverpool; W. T. Clegg, Liverpool; Thos. F. Southam, Bowdon; Wallace Eales, Manchester; J. Gray, Salford; J. Skardon Prowse, Manchester; W. Cris. Brown, Salford; J. C. Nichol, Hulme; J. J. K. Fairclough, Hulme; David Owen, Manchester; J. G. Carr, Manchester; H. Kennedy Birley, Manchester; J. Price Williams, Swinton; W. T. O'Grady, Swinton; C. J. Renshaw, Ashton-on-Mersey; J. A. K. Renshaw, Ashton-on-Mersey; C. A. Renshaw, Sale; H. C. W. Clarke, Ashton-on-Mersey; Wm. Scott, Ashton-on-Mersey; Graham Renshaw, Sale; O. Withers, Sale; C. S. Ashe, Sale; A. Riley, Sale; W. O. Jones, Bowdon; P. R. Cooper, Bowdon; John Lyon, Bowdon; Brian Mellard, Bowdon; H. R. Hutton, Bowdon; H. G. Cooper, Altrincham; Ed. Ll. Luckman, Altrincham; W. A. Renshaw, Altrincham; A. Golland, Altrincham; W. F. Kay, Altrincham; J. C. Smyth, Altrincham; Walter Hickey, Altrincham.

British Medical Association.—*Annual Reports of Branches, 1907-8.*

[By-law 9: ". . . . every Branch shall furnish to the Council of the Association not later than March 15th, a report of its proceedings during the previous year, a statement of its numbers, and a financial statement in such form as the Council may from time to time prescribe."]

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.						REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1906.	On December 31st, 1907.	Balance from 1906.	Deficit (if any) from 1906.	Receipts for 1907.	Expenditure, 1907.	Balance to 1908.	Deficit (if any) to 1908.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
ABERDEEN	182	176	71 11 10	—	35 8 6	15 12 11½	91 7 4½	—	2	—	—	2	16.5	6	—
BATH AND BRISTOL ...	382	377	133 13 2	—	74 6 0	57 9 0	150 10 2	—	—	—	—	—	—	—	—
BIRMINGHAM	525	516	28 3 10	—	94 14 0	108 10 9	14 7 1	—	8	6	3	1	23	6	The Branch Council, in response to a demand from the Coventry Division, and in view of previous resolutions by this Branch, and after considering all the facts of the case, asked the Central Ethical Committee to take steps to expel from the Association two Coventry members who still persisted in holding appointments on the Coventry Provident Dispensary. As a result, one of these members was expelled from the Association, and the other was given the opportunity of resigning, in default of which resignation expulsion would have taken place.
BORDER COUNTIES ...	153	148	32 9 4	—	31 17 6	20 9 0	43 17 10	—	3	2	1	2	25	5	1. Alteration of Divisional boundaries, Divisions 2 instead of 3, English and Scottish. 2. Adoption of Bradford Rules by English Division. 3. Contract Practice discussed by Branch.
CAMBRIDGE AND HUNTINGDON	147	149	32 8 7	—	28 12 0	14 5 0	46 15 7	—	—	—	—	—	—	—	Several meetings were held both of the Council and of the Branch, and more interest was taken in medico-political matters than for some time past.
DORSET AND WEST HANTS	217	229	79 1 4	—	42 18 0	38 11 10	83 7 6	—	3	3	—	—	44	3	The Branch is in an active, progressive, and healthy condition.
DUNDEE	107	108	21 11 11	—	20 18 0	14 0 10	28 9 1	—	5	1	5	1	13	6	—
EAST ANGLIAN	423	430	56 4 6	—	83 15 6	72 5 11	67 14 1	—	3	3	—	3	40	4	Three meetings were held during the year and excellent papers were read at all of them. The annual meeting at Ipswich was principally a clinical one. Everything has gone on most smoothly and no troubles of any kind. All the Divisions except the Mid-Essex have done excellent work. Would it not be feasible for the Medical Secretary to try and instil some interest into the members.
EAST YORK AND NORTH LINCOLN	—	—	14 15 5	—	29 16 0	35 13 2	8 18 3	—	1	—	—	1	—	2	—
EDINBURGH	435	422	131 14 5	—	84 2 0	62 11 5	153 5 0	—	2	1	—	1	140	4	Change of boundaries of North-Western and North-Eastern Divisions.
FIFE	79	76	31 4 8	—	15 9 5	9 13 1	27 1 0	—	3	—	3	—	15	4	A question of unprofessional conduct by a practitioner in the Branch, not a member of British Medical Association, was before the Branch Council on more than one occasion, and was subsequently reported to the General Medical Council. The Central Ethical Committee then took the matter up, but, owing to the unsatisfactory position the Association was in at the time regarding these cases, much delay has ensued. It is hoped, however, that the case may now be commenced afresh and reported to the General Medical Council. The Branch considered the Ebbw Vale difficulty, and subscriptions have been collected within the area of the Branch, and have been sent to headquarters to help in the case.

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.					REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1906.	On December 31st, 1907.	Balance from 1906.	Deficit (if any) from 1906.	Receipts for 1907.	Expenditure, 1907.	Balance to 1908.	Deficit (if any) to 1908.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average Attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
GLASGOW AND WEST OF SCOTLAND	687	657	241 4 11	—	165 18 2	101 8 6	305 14 7	—	2		1	1	60	8	—
GLOUCESTERSHIRE ...	138	140	14 0 7	—	36 4 7	42 17 0	7 8 2	—	10	8	2	8	30	10	Special general meetings were held in January and November to consider points to which attention should be drawn in the evidence given on behalf of the British Medical Association before the Royal Commission on the Poor Law and to consider the Referendum respectively. The case of Dr. MacMahon, M.O.H. for Northleach, which was taken up by the Association, was successful, and he was reappointed to that post The attendance at the meetings has been good, except in the case of the two meetings for non-scientific matter, which has lowered the average attendance. The number of members has increased.
LANCASHIRE & CHESHIRE	1,627	1,643	516 14 8	—	323 15 0	275 12 11	564 16 9	—	3	3	1	2	107	8	Ethical rules have been adopted. A standing Committee on Division and Branch Organization and Finance has been appointed, and local organization is very seriously considered.
LEINSTER	341	324	34 2 7½	—	64 10 0	61 0 7½	37 12 0	—	1	—	—	1	39	5	—
METROPOLITAN COUNTIES	2,684	2,737	826 19 0	—	651 2 10	501 10 11½	879 10 10½	—	2	—	1	1	—	10	The laws were again revised, and also the ethical rules, both of which have not yet received the sanction of the Central Council. A special meeting of the Branch was held at the request of the Westminster Division to consider the desirability of establishing a central hospital authority for London. A special Committee has been appointed to consider and report.
MIDLAND	641	639	96 3 10	—	107 11 6	67 10 2	138 5 2	—	2	2	1	1	21½	2	At the meeting of the Branch at Grantham on February 7th, 1907, the rearrangement of Division areas was considered and resolutions were sent to the Organizing Committee for the Stamford Branch to be done away with and its members to be distributed among the Leicester, Lincoln, Boston, and Spalding Divisions.
MUNSTER	104	99	50 17 2	—	19 6 0	13 9 0	56 14 2	—	1	—	4	—	9	3	The question of University Education in Munster and an ethical case have been considered. Elections to Representative Meeting, Irish Committee, and Council also took place. The Royal Charter and Reports from the Hospitals Committee were discussed.
NORTHERN COUNTIES OF SCOTLAND	121	105	20 16 10	—	22 8 0	16 5 0	26 19 10	—	4	2	2	2	15	4	—
NORTH LANCASHIRE AND SOUTH WESTMORLAND	130	128	40 13 2	—	32 8 3	20 5 11	52 15 6	—	2	2	0	0	21	2	—
NORTH WALES	211	203	9 18 4	—	45 14 0	30 8 4	25 4 0	—	2	2	1	1	20	3	A very successful joint clinical meeting with the Lancashire and Cheshire Branch was held at Chester in April and well attended. The Divisions have held regular meetings for the consideration of matters referred to them. The Divisions have given very valuable help in arriving at amicable settlements between Public Vaccinators and Boards of Guardians with respect to the proposed reduction in fees. The Denbigh and Flint Division has held several meetings for the consideration of Contract Practice and the formation of rules for the better conduct of it.
OXFORD AND READING ...	289	288	95 15 11	—	56 8 0	46 13 10	105 10 1	—	1	1	1	1	—	1	—

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.						REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1906.	On December 31st, 1907.	Balance from 1906.	Deficit (if any) from 1906.	Receipts for 1907.	Expenditure, 1907.	Balance to 1908.	Deficit (if any) to 1908.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average Attendance.	Branch Council.	
PERTH	66	67	£ s. d. 60 7 9	£ s. d. —	£ s. d. 11 8 9	£ s. d. 6 14 6	£ s. d. 35 2 0	£ s. d. —	5	2	—	1	10	2	——
SHROPSHIRE & MID-WALES	132	138	9 19 4	—	26 1 0	24 15 7	11 4 9	—	4	4	—	1	33	4	——
SOUTHERN	418	401	105 3 9	—	82 0	81 9 2	105 14 7	—	2	2	—	2	45	5	——
SOUTH-EASTERN	1,258	1,252	518 4 6½	—	262 6 4	152 11 1	627 19 9½	—	1	—	1	1	64	4	The question of fees for school certificates was considered. The Kent Education Authority stated that no doctor was asked to give certificates unless he had previously signified his willingness to do so; and, further, that doctors were not asked to visit cases. The Council decided accordingly to take no further steps. The question of fees for emergency police calls in Kent is still under the consideration of the Branch Council.
SOUTH-EASTERN OF IRELAND	63	60	1 5 0	—	12 9 0	10 14 7	2 19 5	—	7	7	3	6	11.5	4	——
SOUTH MIDLAND	218	215	53 15 3	—	45 1 0	66 19 4	31 16 11	—	2	2	1	2	32½	3	——
SOUTH WALES AND MONMOUTHSHIRE	495	522	130 9 1	—	100 11 0	143 6 3	87 13 10	—	3	2	—	1	40	7	——
SOUTH-WESTERN	445	465	64 11 1	—	93 13 0	74 5 3	84 3 10	—	4	3	3	1	26	8	The Branch has been much occupied by the arrangements for and the occurrence of the Annual Meeting of the Association within its area. The question of the fees of Public Vaccinators has received much attention, and two meetings of all Public Vaccinators in Devon and Cornwall have been held under the auspices of the Branch. Generally speaking, satisfactory settlements of this question have been obtained. The Medical Inspection of School Children has been and still is occupying the attention of the Branch; under its auspices meetings of all practitioners in Devon and Cornwall have been held and recommendations have been submitted to the various Education Authorities. A difficulty arising out of the non-representation of the profession on the Central Committee of the Cornwall County Nursing Association is at present receiving attention. The Notification of Births Bill has also been the subject of communication with the various local authorities.
STAFFORDSHIRE	202	203	83 4 7	—	41 19 0	18 14 1	107 19 6	—	4	4	—	4	25	5	——
STIRLING	67	71	20 17 2	—	13 14 0	4 19 7	29 11 7	—	2	—	—	—	11	1	——
ULSTER	260	358	55 12 10	—	72 4 0	68 1 3	59 15 7	—	4	—	—	3	40	6	——
WEST SOMERSET	76	76	39 16 2	—	14 3 0	13 15 1	40 4 1	—	3	2	3	2	23	4	——
WORCESTERSHIRE AND HEREFORDSHIRE	123	126	50 14 3	—	19 12 0	9 11 3	59 15 0	—	2	1	2	1	16	1	A presentation of plate was made to Dr. George W. Crowe, subscribed for by the members of the Branch as a token of their esteem and personal regard and as a small acknowledgement of the twenty-six years of ungrudging time and ability devoted by him to the work of the Branch as its honorary Secretary. An application received from the Kidderminster Medical Society for affiliation with the British Medical Association dropped from the want of further initiative by Kidderminster. An application received from the Malvern Medical Society to constitute a separate Division of the Branch to include the Malvern and Colwall was *sub judice*.

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YORKSHIRE	783	810	£ s. d. 276 1 8	£ s. d. —	£ s. d. 165 16 8	£ s. d. 309 7 4	£ s. d. 132 11 0	£ s. d. —	3	—	—	3	40	4	There has been a large increase of members during the year, partly owing to the formation of a new Division at Barnsley, and partly due to the fact that the Annual Meeting is to be held at Sheffield this year, which has induced a number of local men to join the Association. The reports from the various Divisions show in most cases increased activity and interest. Several Divisions have taken strong action to prevent the reduction of vaccination fees, and in the matter of public appointments. The Wakefield and Doncaster Division is still inactive. The finances of the Branch are in a satisfactory condition.
COLONIAL BRANCHES.															
BERMUDA	16	14	6 15 0	—	2 12 0	0 0 6	9 6 6	—	—	—	—	—	—	—	—
BORDER (SOUTH AFRICA) ..	—	46	—	—	—	—	—	—	—	—	—	—	—	—	This is a newly constituted Branch, though office bearers and a Branch Council have been elected.
BRISBANE & QUEENSLAND	156	157	146 13 3*	—	298 8 7	294 11 9	150 10 1	—	11	—	—	—	13	12	* This contains other subscriptions in excess of capitation grant.
BRITISH GUIANA	36	36	20 18 8	—	5 16 0	11 18 7	14 16 1	—	4	4	—	—	13	4	A Society for the Prevention and Treatment of Tuberculosis was originated at the first quarterly meeting, and has since become well founded, and has now opened a dispensary in Georgetown.
BURMAH	42	45	74 14 2 (Rupees 1,120)	—	59 8 10 (Rupees 878)	85 9 4 (Rupees 1,282)	48 13 4 (Rupees 730)	—	12	—	—	—	14	—	A conversazione to all Indian qualified medical practitioners in Rangoon was held for the purpose of trying to form an associateship for those general practitioners who only hold an Indian qualification and not a European one, with the view that such associateship would tend to better the etiquette of this branch of the profession here and bring us in touch with a class of the profession from whom we could ascertain conditions of health, etc., of a large class of the population who never come near our hospitals, and improve their etiquette as well. A public meeting was held at the Victoria Hall to consider the establishing of a Pasteur Institute in Burmah. Dr. Pedley and Captain Whitmore, I.M.S., officially represented the Branch at the meeting.
CAPE OF GOOD HOPE (EASTERN PROVINCE)	91	73	2 1 10	—	6 1 6	7 0 3	1 3 1	—	6	6	2	1	—	4	—
COLOMBO AND CEYLON ...	136	145	11 18 9	—	192 1 3	183 14 6	20 5 6	—	—	—	—	—	—	—	—
GIBRALTAR	31	24	5 19 3	—	3 16 0	1 9 7	8 5 8	—	4	1	3	1	8	8	Two matters of great local interest were dealt with: (1) Through the action of the Branch reports sent by practitioners relative to infectious disease are now kept private, and are forwarded to the M.O.H. instead of to the Secretary of the local sanitary authority as formerly. (2) The Branch was instrumental in promoting the Midwives Ordinance for Gibraltar, drafted on the lines of the Ordinance at home, and modified to suit local requirements. A copy of this Ordinance has already been sent to you. (3) Through the courtesy of the authorities of the Colonial Hospital the meetings of the Branch are held in the Board Room of the Hospital, and the Council wish to take this opportunity of expressing the thanks of the members for the privilege accorded them.

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			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
GRIQUALAND WEST ...	103	41	55 17 3	—	22 7 0	13 0 3	65 4 0	—	8	8	—	—	7.5	—	The balance is larger in appearance than it actually is. £15 is now being spent on books, and £25 has been specially earmarked for the next Congress to be held in Kimberley.
HALIFAX & NOVA SCOTIA ..	106	94	51 2 5	—	19 3 11½	18 9 9½	51 16 7	—	11	9	4	2	14.5	6	The Branch has been endeavouring to urge the local Government to a right recognition of its share of responsibility in the case of the tuberculous portion of the population. Some success has resulted from the efforts, and it is hoped more will follow. The necessity for the establishment of a "Vital Statistics" bureau has been recognized by the Branch, and the matter dealt with in various meetings. The Government is being interviewed in this connexion also. No definite results yet. The matter of insurance work and contract practice has been before the Branch at different times and in different lights, but no definite action has been taken. Changes are hard to make. The subject will doubtless crop up again for discussion, as difficulties exist in this regard here, in common with nearly every other place.
HONG KONG	108	115	$547.96/100	—	$226.60/100	$33.40/100	$741.06/100	—	5	5	—	—	20	—	
JAMAICA	63	51	—	—	—	—	—	—							We have not been able to hold any meetings since the earthquake, no building being available.
MALTA & MEDITERRANEAN	49	39	32 5 0	—	4 8 0	2 8 8½	34 4 3½	—	—	—	—	—	—	—	
MELBOURNE & VICTORIA	178	178	291 3 6*	—	862 4 6	927 2 9	226 5 3	—	13	12	—	—	41	14	*This contains other subscriptions in excess of capitation grant.
NATAL	—	—	132 15 7	—	23 13 0	25 10 6	130 18 1	—	5	—	5	—	14	9	1. Alteration of rules. 2. A South African Committee and its power and constitution. Minimum fee to private patients and wage limit in clubs were discussed. Resolutions passed condemning tendering for appointments. Increase of annual licence successfully opposed. Newspapers notified that publication of practitioners' names is unethical.
SOUTH AUSTRALIAN... ...	152	157	234 2 2	—	312 2 7	279 4 11	268 19 10	—	10	—	—	1	29	10	A special general meeting was also held to consider the Referendum.
SOUTH INDIAN & MADRAS	148	150	4 16 0 (Rupees 72)	—	153 9 4	121 12 0	36 13 4 (Rupees 550)	—	5	5	1	—	—	1	
SYDNEY AND NEW SOUTH WALES	537	599	623 10 4*	—	1200 9 4	1141 8 10	682 10 10	—	14	12	6	—	44	13	The following matters of local interest engaged attention: (1) Fees and allowances to medical witnesses in courts of civil and criminal jurisdiction. (2) Fees to medical practitioners for reports to coroners where inquest dispensed with. (3) The admission of paying patients in hospitals not being private hospitals. (4) A Parliamentary Bill for the regulation and inspection of private hospitals; and for the registration of nurses. (5) A form of agreement between medical officer and friendly society approved for the use of members engaged in friendly society practice. (6) The establishment of a medical practitioners' emergency fund on the lines of that instituted in connexion with the British Medical Association in the United Kingdom. (7) The prohibition under the (Commonwealth of Australia) Post and Telegraph Act of delivery of postal matter, etc., to institutes, firms, and others advertising that they treat disease. (8) A proposal by a firm of wholesale druggists to establish a laboratory for clinical diagnosis. (9) Medical legislation amendment. * This contains other subscriptions in excess of capitation grant.

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NEW ZEALAND	328	362	£ s. d. 119 19 9*	£ s. d. —	£ s. d. 717 2 6	£ s. d. 767 9 8	£ s. d. 69 12 7	£ s. d. —	3	1	2	1	33	4	It is with the deepest regret that your Council is called upon to record the death of Sir James Hector, who has been an honorary member of the Branch since its inception; and of Dr. W. A. Logan, one of our most active members. The late Sir James Hector's work in the field of science is well known to every member of the Branch, and it is gratifying to note that steps are being taken to establish a fitting memorial. Dr. Logan has for several years represented the Otago Division on the Council, and the Branch as a whole has profited by the keen interest he has always shown in its welfare. By his death the profession in New Zealand sustains a severe loss. *Friendly Societies.*—On June 18th last a Conference was held between your Council and delegates representing the Friendly Societies of New Zealand, a full report of which has already been circulated in the Supplement to the *New Zealand Medical Journal* of July, 1907. The resolutions arrived at by the Conference have since been submitted to the several Divisions of the Branch, and are in the main approved. The Divisions, however, agree that an income limit should be insisted on, and that decision has been conveyed to the Colonial Executive of the Friendly Societies. The reply of the Colonial Executive has not yet come to hand. *Registration.*—The annual general meeting in March last decided by a large majority against the proposal to register under the Unclassified Societies Registration Act, the feeling of the meeting being that the proposed Royal Charter would give to the Branch and its Divisions the liberty they desired in the management of their own affairs. *Branch Rules.*—The new Branch Rules as passed by the special general meeting held in November, 1906, and adopted by your Council, have in the main been approved by the Central Council. The rule "annual subscription" is held over pending application for Royal Charter. A capitation of 7s. per member on subscriptions for 1907 has been paid to the several Divisions, and, as the expenses of the annual meeting are now defrayed by the Branch, the position of the Divisions financially has been considerably strengthened. *New Zealand Medical Journal.*—The *Journal* has been published regularly each quarter, and, though the Editor has still to regret a good many misprints, the number of these is steadily decreasing; the printer has had considerable difficulty in getting efficient typesetters at times. There has been no lack of papers for publication during the past year, but, the usual annual meeting not being held this year, the Editor anticipates some lack of material for the coming numbers, and earnestly hopes that members will send for publication the papers which they would have read had there been the usual meeting. The financial position of the *Journal* continues satisfactory. * This contains other subscriptions in excess of capitation grant.
TORONTO	104	489	107 4 0	—	91 1 9	—	198 5 9	—	—	—	—	—	—	—	—
TRANSVAAL	68	89	—	—	23 0 9	4 16 0	18 4 9	—	3	—	—	—	—	4	No business of importance has yet been undertaken except that in relation to the forming of the Branch, drafting by-laws, and a meeting to consider the Referendum.
WEST AUSTRALIAN	68	78	64 0 4	—	140 18 0	136 3 0	68 15 4	—	9	8	1	11	14	3	—

ATTENDANCES OF COUNCIL, COMMITTEES, AND SUBCOMMITTEES FOR 1907-8.

COUNCIL.

Members of Council.	July 30, 1907.	July 31, 1907.	August 1, 1907	Oct. 30, 1907	Jan. 29, 1908.	April 29, 1908	Total.
Owen, Mr. Edmund, LL.D., F.R.C.S. (Chairman of Council)	1	1	1	1	1	1	6
Davy, Dr. Henry, Exeter (President)	1	–	–	1	1	1	4
Snell, Mr. Simeon, F.R.C.S., Sheffield (President-elect)	–	1	–	1	–	–	2
Reeve, Professor R. A., M.D., Toronto (Past-President)	1	–	–	–	–	–	1
Macdonald, Dr. J. A., Taunton (Chairman of Representative Meetings)	1	1	1	1	1	1	6
Rayner, Dr. Edwin, Stockport (Treasurer)	–	1	1	1	1	1	5
Anderson, Dr. J. Ford, London	–	–	–	1	1	1	3
Ballance, Mr. H. A., M.S., Norwich	1	1	1	1	1	1	6
Barnes, Dr. E. G., Eye	1	1	1	1	1	1	6
*Barr, Sir James, M.D., Liverpool	–	–	–	1	–	1	2
Biden, Fleet-Surgeon E. J., R.N., Fareham (Representative of the Royal Navy Medical Service)	–	–	–	1	1	1	3
Bradshaw, Dr. T. R., Liverpool	1	–	–	1	1	1	4
Brierley, Dr. J. Brassey, Old Trafford	1	1	1	1	1	–	5
Bruce, Colonel David, C.B., F.R.S., London	–	–	–	1	–	1	2
Buist, Dr. R. C., Dundee	–	–	–	1	–	1	2
Carline, Dr. W. A., Lincoln	1	1	1	1	1	1	6
*Clark, Mr. Andrew, F.R.C.S., London	1	–	–	1	1	1	4
Colbeck, Dr. E. H., London	–	–	–	–	–	–	–
*Collier, Dr. Wm., Oxford	–	–	–	1	1	1	3
Cousins, Mr. J. Ward, F.R.C.S., Portsmouth	–	–	–	1	–	1	2
Craig, Dr. James, Dublin	1	1	1	1	–	1	5
Cuthbert, Mr. C. F., Gloucester	1	1	1	1	1	1	6
De Silva, Dr. W. H., London	1	1	1	–	–	–	3
Domville, Mr. E. J., Exeter	–	1	1	1	1	1	5
Drew, Mr. A. J., F.R.C.S., Oxford	–	1	1	1	1	1	5
Eales, Mr. G. Young, Torquay	1	–	–	1	–	1	3
Eastes, Mr. George, M.B., London	1	1	1	1	1	1	6
Edmond, Dr. George, Aberdeen	–	–	–	–	–	1	1
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	1	1	6
Francis, Dr. H. A., London	–	–	–	–	–	–	–
*Franklin, Mr. G. C., LL.D., F.R.C.S., Leicester	1	1	1	1	1	1	6
Galton, Dr. J. H., Norwood (dead)	–	–	–	–	–	–	–
Giusani, Dr. Joseph J., Cork	–	–	–	–	1	1	2
Godson, Dr. Alfred, Cheadle	–	–	–	–	1	1	2
Goff, Dr. Bruce, Bothwell	1	1	1	1	1	1	6
Goyder, Dr. D., Bradford	1	1	1	1	1	1	6
Hamilton, Dr. James, Glasgow	1	1	1	1	1	–	5
Haslip, Dr. G. E., London	1	1	1	1	1	1	6
Johnston, Dr. R. McKenzie, Edinburgh	1	–	1	1	–	1	5
Joubert de la Ferté, Colonel C. H., I.M.S. (retired), Weybridge (Representative of the Indian Medical Service)	–	1	–	–	1	1	4
Ker, Mr. Hugh R., Balham	1	1	1	1	1	1	6
Kinsey, Mr. R. H., Bedford	1	1	1	1	1	1	6
Larkin, Mr. F. C., F.R.C.S., Liverpool	–	1	1	1	1	1	6
McKisack, Dr. H. L., Belfast	1	1	1	1	–	1	5
Martin, Professor C. J., F.R.S., London	–	–	–	–	–	–	–
Messiter, Mr. M. A., Dudley	–	–	–	–	1	1	2
Moir, Dr. J. Munro, Inverness	1	1	1	1	1	–	5
Morier, Dr. C. G. D., London	–	–	–	–	–	1	1
Morrison, Professor J. T. J., M.B., Birmingham	1	1	1	–	1	1	5
Nasmyth, Dr. T. G., Edinburgh	–	–	–	–	–	1	1
*Osler, Professor Wm., F.R.S., Oxford	–	–	–	–	1	1	2
Parkinson, Mr. C. H. W., Wimborne	1	1	1	1	1	1	6
Pope, Dr. F. M., Leicester	1	1	1	1	1	1	6
Roberts, Dr. H. Jones, Pen-y-groes, R.S.O.	–	–	–	–	1	1	3
Ross, Dr. J. Maxwell, Dumfries	–	–	–	–	–	1	1
Shaw, Dr. Cecil E., Belfast	1	1	1	–	1	–	4
Shaw, Dr. Lauriston E., London	1	1	1	1	1	1	6
Simpson, Lieut.-Col. R. J. S., C.M.G., London	–	–	–	–	1	1	3
Smurthwaite, Dr. Henry, Newcastle-on-Tyne	1	1	1	1	1	1	6
Spanton, Mr. W. D., F.R.C.S., Hanley	–	–	–	–	1	1	2
Straton, Mr. C. E., F.R.C.S., Wilton	1	1	1	1	1	1	6
Thomas, Mr. J. Lynn, C.B., F.R.C.S., Cardiff	–	1	1	1	1	1	5
Twynam, Dr. G. E., London	–	–	–	–	–	1	1
Tyson, Dr. W. J., Folkestone	1	1	1	1	–	–	4
Verrall, Mr. T. Jenner, Brighton	1	1	1	1	1	1	6
Walshe, Dr. Denis, Craigue	–	–	–	–	1	–	1
Wear, Dr. Arthur T., Newcastle-on-Tyne	1	1	1	1	1	–	5
Webb, Mr. F. E. Apthorpe, Cambridge	–	–	–	1	1	1	3
White, Dr. Sinclair, Sheffield	1	1	1	1	1	1	6
Williams, Mr. D. J., F.R.C.S., Llanelly	–	–	–	1	1	1	3
Wilson, Lieutenant-Colonel E. M., C.B., C.M.G., S. Farnborough (representative of the Army Medical Service)	1	1	1	1	1	1	6

Dr. Radcliffe Crocker attended the meeting on July 30th, 1907.
* Co-opted members.

ARRANGEMENTS COMMITTEE.

Members of Committee.	Oct. 2, 1907.	Oct. 16, 1907.	Total
Chairman of Council (Chairman) (*ex officio*)	1	1	2
President (*ex officio*)	–	–	–
Chairman of Representative Meetings (*ex officio*)	1	1	2
Treasurer (*ex officio*)	1	1	2
Crocker, Dr. H. Radcliffe, London	–	1	1
Eastes, Mr. George, M.B., London	1	1	2
Galton, Dr. J. H., Norwood (dead)	–	–	–
Johnston, Dr. R. McKenzie, Edinburgh	–	–	–
McKisack, Dr. H. L., Belfast	1	–	1
Parkinson, Mr. C. H. W., Wimborne	1	1	2
Members Elected by the Sheffield Executive.			
Burgess, Dr. Duncan, Sheffield	–	1	1
Dyson, Dr. William	–	1	1
Fye-Smith, Mr. R. J., F.R.C.S.	–	1	1
Snell, Mr. Simeon, F.R.C.S.E.	–	1	1
Thomas, Mr. George, Retford	–	1	1
White, Dr. Sinclair, Sheffield	–	1	1

CHLOROFORM COMMITTEE.

Members of Committee.	Feb 18, 1908	Total.
Crocker, Dr. H. Radcliffe, London (Chairman)	1	1
President (*ex officio*)	–	–
Chairman of Representative Meetings (*ex officio*)	–	–
Chairman of Council (*ex officio*)	–	–
Treasurer (*ex officio*)	–	–
Barr, Sir James, M.D., Liverpool	1	1
Brodie, Dr. T. G., F.R.S., London	–	–
Buxton, Dr. Dudley, London (Honorary Secretary)	1	1
Dunstan, Professor, F.R.S. (London)	–	–
Harcourt, Professor Vernon, F.R.S., Ryde, I. of W.	–	–
Horsley, Sir Victor, LL.D., F.R.S., London	–	–
McCardie, Dr. W. J., Birmingham	–	–
Martin, Dr. C. J., F.R.S., London	1	1
Rowell, Mr. George, F.R.S., London	–	–
Sherrington, Professor C. S., F.R.S., Liverpool	1	1

COLONIAL COMMITTEE.

Members of Committee.	Feb. 28, 1908.	Total.
Morier, Dr. C. G. D., London (Chairman)	1	1
President	–	–
Chairman of Representative Meetings (*ex officio*)	–	–
Chairman of Council (*ex officio*)	–	–
Treasurer (*ex officio*)	1	1
Armour, Mr. Donald, F.R.C.S., London	–	–
Colbeck, Dr. E. H., London	1	1
Francis, Dr. H. A., London	1	1
Simpson, Lt.-Col. R. J. S., C.M.G., London	1	1
Twynam, Dr. G. E., London	–	–
Wilson, Lt.-Col. E. M., C.B., C.M.G., S. Farnborough	1	1

ETHICAL COMMITTEE.

Members of Committee.	Oct. 11, 1907.	Jan. 10, 1908.	April 10, 1908.	Total.
Kinsey, Mr. R. H., Bedford (Chairman)	1	1	1	3
President (*ex officio*)	—	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—	—	—
Chairman of Council (*ex officio*)	1	—	—	1
Treasurer (*ex officio*)	—	1	—	1
Bateman, Dr. A. G., London	1	—	1	2
Craig, Dr. James, Dublin	—	—	—	—
Goff, Dr. Bruce, Bothwell	1	1	1	3
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	3
Lee, Dr. Philip G., Cork	1	1	1	3
Maclean, Dr. E. J., Cardiff	1	1	1	3
Shaw, Dr. Lauriston E., London	1	1	1	3
Spanton, Mr. W. D., F.R.C.S., Hanley	1	—	1	2
Straton, Mr. C. R., F.R.C.S., Wilton	1	1	1	3

ETHICAL SUBCOMMITTEE.

Members of Committee.	Nov. 8, 1907.	Dec. 6, 1907.	Jan. 4, 1908.	Feb. 11, 1908.	Mar. 3, 1908.	Mar. 27, 1908.	Total.
Kinsey, Mr. R. H., Bedford (Chairman)	1	1	1	1	1	1	6
Chairman of Council	—	1	—	1	1	—	3
Bateman, Dr. A. G., London	1	1	—	1	1	1	5
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	1	1	—	5
Shaw, Dr. Lauriston E., London	1	1	1	1	1	1	6
(For consideration of "Report on Ethics of Consultation.")							
Anderson, Dr. J. Ford, London	1	1	—	1	1	1	5

HOSPITALS COMMITTEE.

Members of Committee.	Oct. 10, 1907.	Jan. 9, 1908.	April 7, 1908.	Total.
Pope, Dr. F. M., Leicester (Chairman)	1	1	1	3
President (*ex officio*)	—	—	1	1
Chairman of Representative Meetings (*ex officio*) ...	—	—	—	—
Chairman of Council (*ex officio*)	—	—	—	—
Treasurer (*ex officio*)	—	—	1	1
Anderson, Dr. J. Ford, London	1	1	1	3
Cuthbert, Mr. C. F., Gloucester	1	1	1	3
Fox, Dr. E. L., Plymouth	1	1	1	3
Godson, Dr. A., Cheadle	1	1	—	2
Hamilton, Dr. James, Glasgow	1	—	1	2
Hamilton, Dr. J. Rogerson, Hawick	1	—	1	2
Horder, Mr. T. Garrett, Cardiff	1	—	—	1
Joubert de la Ferté, Colonel C. H., I.M.S. (ret.), Weybridge	1	1	1	3
Shaw, Dr. Lauriston, E., London	1	—	1	2
White, Mr. E. F., F.R.C.S., London	1	1	1	3

IRISH COMMITTEE.

Members of Committee.	Sept. 28, 1907.	April 4, 1908.	Total.
Walshe, Dr. Denis, Graigue (Chairman)	1	1	2
President (*ex officio*)	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—	—
Chairman of Council (*ex officio*)	—	—	—
Treasurer (*ex officio*)	—	—	—
Carey, Dr. R. B., Borris	1	1	2
Cooke, Dr. J. G., Londonderry	1	1	2
Craig, Dr. James, Dublin	1	1	2
Darling, Dr. J. S., Lurgan	1	1	2
Giusani, Dr. Joseph J., Cork	—	—	—
Kenny, Dr. J. M., Granard	1	1	2
Lee, Dr. Philip G., Cork	—	1	1
McKisack, Dr. H. L., Belfast	1	1	2
Mahon, Dr. R. B., Ballinrobe	1	—	1
Mills, Dr. John, Ballinasloe	1	—	1
O'Connor, Dr. D. J., Cork	1	1	2
Quirke, Dr. James, Piltown	—	—	—
Shaw, Dr. Cecil E., Belfast	1	1	2
White Professor A. H., Dublin (Honorary Secretary)	—	1	1

JOURNAL AND FINANCE COMMITTEE.

Members of Committee.	Oct. 23, 1907.	Jan. 22, 1908.	April 22, 1908.	Total.
Treasurer (Chairman) (*ex officio*)	1	1	1	3
President	—	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	1	1	1	3
Chairman of Council (*ex officio*)	1	1	1	3
Bradshaw, Dr. T. R., Liverpool	1	1	1	3
Carline, Dr. W. A., Lincoln	1	1	1	3
Eastes, Mr. George, M.B., London	1	1	1	3
Galton, Dr. J. H., Norwood (dead)	1	—	—	1
Goyder, Dr. David, Bradford	1	1	1	3
Johnston, Dr. R. McKenzie, Edinburgh	1	1	1	3
Kinsey, Mr. R. H., Bedford	1	1	1	3
Parkinson, Mr. C. H. W., Wimborne	1	1	1	3
Spanton, Mr. W. D., F.R.C.S., Hanley	1	1	1	3
Tyson, Dr. W. J., Folkestone	—	1	—	1
Verrall, Mr. T. Jenner, Brighton	1	—	—	1

SUBCOMMITTEE OF THE JOURNAL AND FINANCE COMMITTEE ON SECRET REMEDIES.

Members of Committee.	April 22, 1908.	Total.
Treasurer (Chairman)	1	1
Chairman of Representative Meetings	—	—
Eastes, Mr. George, London	1	1
Johnston, Dr. R. McKenzie, Edinburgh	1	1
Kinsey, Mr. R. H., Bedford	1	1

MEDICO-POLITICAL COMMITTEE.

Members of Committee.	Oct. 9, 1907.	Jan. 8, 1908.	April 8, 1908.	Total.
Chairman of Representative Meetings (Chairman) (*ex officio*)	1	1	1	3
President (*ex officio*)	—	—	—	—
Chairman of Council (*ex officio*)	1	—	1	2
Treasurer (*ex officio*)	1	1	—	2
Armit, Mr. H. W., Wembley	1	1	1	3
Cox, Dr. Alfred, Gateshead	1	1	1	3
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	3
Haslip, Dr. G. E., London	1	—	1	2
Horsley, Sir Victor, F.R.S., London	1	1	1	3
Martley, Dr. F. C., Dublin	1	1	1	3
Muir, Dr. W. L., Glasgow	1	1	1	3
Nash, Mr. E. H. T., London	1	1	1	3
Parkinson, C. H. W., Wimborne	1	1	1	3
Shaw, Dr. Cecil E., Belfast	1	—	1	2
Straton, Mr. C. R., F.R.C.S., Wilton	1	1	1	3
Webb, Mr. F. E. Apthorpe, Cambridge	1	1	—	2

CONTRACT PRACTICE SUBCOMMITTEE.

Members of Committee.	Oct. 24, 1907.	Dec. 13, 1907.	Feb. 19, 1908.	April 8, 1908.	Total.
Chairman of Representative Meetings (Chairman) ...	—	1	—	1	2
Chairman of Council	1	—	1	—	2
Cox, Dr. Alfred, Gateshead	—	—	1	1	2
Flemming, Mr. C. E. S., Bradford-on-Avon	1	—	—	1	2
Nash, Mr. E. H. T., London	1	1	1	1	4
Straton, Mr. C. R., F.R.C.S., Wilton	1	1	1	1	4
Webb, Mr. F. E. Apthorpe, Cambridge	1	—	—	—	1
Ballance, Mr. H. A., M.S., Norwich	1	1	1	—	3
Broadbent, Mr. G. H., Manchester	1	1	1	1	4
Greer, Mr. W. J., Newport, Mon.	1	1	1	—	3
Housman, Mr. Basil W., Bromsgrove	1	1	1	1	4
Jackson, Mr. George, F.R.C.S., Plymouth	1	1	1	—	3
With (Representatives of the Ethical Committee)—					
Kinsey, Mr. R. H., Bedford	—	1	1	1	3
Maclean, Dr. E. J., Cardiff	1	—	1	1	3

CONFERENCE OF CHAIRMEN OF COMMITTEES AS TO THE WARNING NOTICE.

Members of Committee.	April 22, 1908.	Total.
Joubert de la Ferté, Colonel C. H., I.M.S. (ret.), Weybridge ...	1	1
Kinsey, Mr. R. H., Bedford	1	1
Macdonald, Dr. J. A., Taunton	1	1
Owen, Mr. Edmund, London...	1	1
Parkinson, Mr. C. H. W., Wimborne	1	1
Pope, Dr. F. M., Leicester	1	1

LIFE INSURANCE EXAMINATIONS SUBCOMMITTEE.

Members of Committee.	Oct. 24, 1907.	Nov. 12, 1907.	Dec. 10, 1907.	Total.
Haslip, Dr. G. E., London (Chairman)	1	1	1	3
Armit, Mr. H. W., Wembley ... ... With—	1	1	1	3
Ballance, Mr. H. A., M.S., Norwich	1	1	1	3

MEDICAL INSPECTION OF SCHOOL CHILDREN SUBCOMMITTEE.

Members of Committee.	Nov. 6, 1907.	Nov. 25, 1907.	Dec. 4, 1907.	Jan. 24, 1908.	Total.
Horsley, Sir Victor, F.R.S., London (Chairman) ...	1	1	1	1	4
Treasurer	1	—	1	—	2
Flemming, Mr. C. E. S., Bradford-on-Avon	1	—	1	1	3
Nash, Mr. E. H. T., London	1	1	1	1	4
Parkinson, Mr. C. H. W., Wimborne	—	—	1	1	2
Webb, Mr. F. E. Apthorpe, Cambridge With—	1	—	—	—	1
Greenwood, Dr. Alfred, Blackburn	1	1	1	1	4
Ker, Mr. Hugh R., London	1	1	1	1	4
Kerr, Dr. James, London	—	—	1	1	2
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	1	4
Morison, Dr. A. E., West Hartlepool...	1	1	1	1	4
Rhodes, Dr. M. Russen, Didsbury ... ... With—	1	—	—	—	1
Brewer, Mr. Charles S., Birkenhead	1	—	1	—	2

N.B.—The meeting held on November 25th, 1907, was a Subcommittee of this Subcommittee.

PARLIAMENTARY SUBCOMMITTEE.

Members of Committee.	Feb. 26, 1908.	March 25, 1908.	Total.
Straton, Mr. C. R., F.R.C.S., Wilton (Chairman) ...	1	1	2
Chairman of Representative Meetings ...	1	—	1
Armit, Mr. H. W., Wembley	1	1	2
Haslip, Dr. G. E., London	1	1	2
Horsley, Sir Victor, F.R.S., London	1	—	1
Muir, Dr. W. L., Glasgow	1	1	2
Parkinson, Mr. C. H. W., Wimborne	1	1	2
Shaw, Dr. Cecil E., Belfast ... ... With—	—	1	1
Buist, Dr. R. C., Dundee	1	1	2
Franklin, Mr. G. C., F.R.C.S., Leicester	1	1	2
Larkin, Mr. F. C., F.R.C.S., Liverpool	1	—	1
Smith, Dr. Walter, London	1	—	1

MIDWIVES SUBCOMMITTEE.

Members of Committee.	March 4, 1908.	March 18, 1908.	Total.
Armit, Mr. H. W., Wembley (Chairman)	1	1	2
Chairman of Representative Meetings	1	—	1
Flemming, Mr. C. E. S., Bradford-on-Avon ...	1	1	2
Nash, Mr. E. H. T., London ... ... With—	1	1	2
Fothergill, Dr. E. Rowland, Southfields	1	1	2
Jones, Mr. Herbert, Hereford	1	—	1
Maclean, Dr. E. J., Cardiff	1	1	2

PROPRIETARY MEDICINES SUBCOMMITTEE.

Members of Committee.	March 26, 1908.	Total.
Nash, Mr. E. H. T., London (Chairman)	1	1
Armit, Mr. H. W., Wembley	1	1
Martley, Dr. F. C., Dublin	1	1
Straton, Mr. C. R., F.R.C.S., Wilton ... ... With	1	1
Buist, Dr. R. C., Dundee	1	1
Sewill, Mr. Henry, L.D.S., London	1	1

NAVAL AND MILITARY COMMITTEE.

Members of Committee.	Oct. 18, 1907.	April 6, 1908.	Total.
Joubert de la Ferté, Colonel C. H., I.M.S. (ret.), Weybridge (Chairman)	1	1	2
President (*ex officio*)	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—	—
Chairman of Council (*ex officio*)	1	1	2
Treasurer (*ex officio*)	—	—	—
Biden, Fleet Surgeon E. J., R.N., Fareham	1	1	2
Cuffe, Sir Charles, C.B., London	1	1	2
Curme, Surgeon-Lieut.-Colonel Decimus, Blandford	1	1	2
Elliston, Surgeon-Lieut.-Col. G. S., V.D., Felixstowe	1	1	2
Evatt, Surgeon-General G. J. H., C.B., London ...	1	1	2

ORGANISATION COMMITTEE.

Members of Committee.	Oct. 8, 1907.	Nov. 12, 1907.	Dec. 10, 1907.	Jan. 14, 1908.	March 10, 1908.	April 7, 1908.	Total.
Clark, Mr. Andrew, F.R.C.S., London (Chairman) ...	1	1	1	1	1	1	6
President (*ex officio*)	—	—	—	—	1	1	2
Chairman of Representative Meetings (*ex officio*) ...	—	—	—	—	1	—	1
Chairman of Council (*ex officio*)	—	—	—	—	1	—	1
Treasurer (*ex officio*)	1	1	—	1	1	1	5
Ballance, Mr. H. A., M.S., Norwich	1	1	1	—	1	1	6
*Gairdner, Dr. E. D., Ayr	—	—	1	1	1	1	4
*Horsley, Sir Victor, F.R.S., London	—	—	1	—	1	1	3
Kirby, Dr. E. D., Edgbaston	1	1	1	1	1	1	6
*Larkin, Mr. F. C., F.R.C.S., Liverpool	—	1	1	—	1	1	4
Morrison, Professor J. T. J., M.B., Birmingham ...	1	—	—	1	1	1	4
*Verrall, Mr. T. Jenner, Brighton	—	1	1	1	—	1	4
*Webb, Mr. F. E. Apthorpe, Cambridge	—	1	—	1	—	—	2
White, Professor A. H., Dublin	1	1	1	1	1	1	6

* Co-opted by Committee on October 8th, 1907.

BRANCH REORGANISATION SUBCOMMITTEE.

Members of Committee.	Dec. 4, 1907.	Total.
Clark, Mr. Andrew, F.R.C.S., London (Chairman) ...	1	1
Horsley, Sir Victor, F.R.S., London	1	1
Worrall, Mr. T. Jenner, Brighton	1	1

SUBCOMMITTEE AS TO THE STANDING ORDERS OF COUNCIL.

Members of Committee.	Feb. 12, 1908.	March 4, 1908.	March 17, 1908.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1	1	3
Chairman of Council	1	—	1	2
Treasurer	1	1	—	2
Clark, Mr. Andrew, F.R.C.S., London	—	1	1	2

PREMISES COMMITTEE.

Members of Committee	Jan. 10, 1908.	April 2, 1908.	Total.
Clark, Mr. Andrew, F.R.C.S., London (Chairman) ...	1	1	2
President (*ex officio*)	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	1	1
Chairman of Council (*ex officio*)	—	1	1
Treasurer (*ex officio*)	1	1	2
Barnes, Dr. Edgar, Eye	1	1	2
Galton, Dr. J. H., Norwood (dead)	—	—	—
Johnston, Dr. R. McKenzie, Edinburgh	1	—	1
Pope, Dr. F. M., Leicester	—	1	1

PUBLIC HEALTH COMMITTEE.

Members of Committee.	Oct. 8, 1907.	Jan. 7, 1908.	March 31, 1908.	Total.
Parkinson, Mr. C. H. W., Wimborne (Chairman) ...	1	1	1	3
President (*ex officio*)	—	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—	—	—
Chairman of Council (*ex officio*)	1	—	—	1
Treasurer (*ex officio*)	1	—	—	1
Bonville, Mr. E. J., Exeter	1	1	1	3
Jones, Mr. Herbert, Hereford	1	1	1	3
Martley, Dr. F. C., Dublin	1	1	—	2
Nasmyth, Dr. T. G., Edinburgh	1	1	—	2

SCIENCE COMMITTEE.

Members of Committee.	Dec. 28, 1907.	Total.
Dr. C. J. Martin, F.R.S., London (Chairman)	—	—
President (*ex officio*)	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—
Chairman of Council (*ex officio*)	—	—
Treasurer (*ex officio*)	—	—
Bruce, Colonel D., C.B., F.R.S., London	1	1
†Buist, Dr. R. C., Dundee	—	—
Heime, Dr. T. A., Manchester	—	—
Nuttall, Professor G. H. F., M.D., F.R.S., Cambridge ...	—	—
Paton, Professor Noel, M.D., Glasgow	—	—
Pope, Dr. F. M., Leicester	1	1
*Shaw, Dr. Cecil E., Belfast	1	1
White, Professor A. H., Dublin	1	1
*White, Dr. Sinclair, Sheffield	1	1

* Attended Opsonic Subcommittee same day.
† Attended Ophthalmia Neonatorum Subcommittee on April 29th, 1908, in addition to Mr. Sydney Stephenson.

SCOTTISH COMMITTEE.

Members of Committee.	March 28, 1908.	Total.
Goff, Dr. Bruce, Bothwell (Chairman)	1	1
President (*ex officio*)	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—
Chairman of Council (*ex officio*)	—	—
Treasurer (*ex officio*)	—	—
Andrew, Dr. J. Grant, Glasgow	—	—
Boyd, Dr. F. D., Edinburgh	—	—
Buist, Dr. R. C., Dundee	1	1
Christie, Dr. J. F., Aberdeen	—	—
Edmond, Dr. George, Aberdeen	—	—
Fraser, Dr. T., Aberdeen	—	—
Graham, Dr. R. Balfour, Fife	—	—
Hamilton, Dr. James, Glasgow	—	—
Johnston, Dr. R. McKenzie, Edinburgh	—	—
Livingston, Dr. G. R., Dumfries	1	1
Low, Dr. A. P., Dundee	—	—
Moir, Dr. J. Munro, Inverness	1	1
Moorhouse, Dr. J. E., Stirling (Honorary Secretary)	1	1
Nasmyth, Dr. T. G., Edinburgh	—	—
Ross, Dr. J. Maxwell, Dumfries	—	—
Stewart, Dr. G. Clark, Falkirk	—	—
Taylor, Dr. W. A., Perth	1	1
Trotter, Dr. A., Perth	1	1
Turner, Dr. A. Logan, Edinburgh	—	—

THERAPEUTIC COMMITTEE.

Members of Committee.	Oct. 12, 1907.	Feb. 1, 1908.	Total.
Tirard, Dr. Nestor, London (Chairman)	1	1	2
President (*ex officio*)	—	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—	—
Chairman of Council (*ex officio*)	—	—	—
Treasurer (*ex officio*)	—	—	—
Bradbury, Dr. J. B., Cambridge	1	—	1
Brown, Dr. T. E. B., London	1	1	2
Crawfurd, Dr. Raymond, London	1	—	1
Cushny, Professor A. R., M.D., F.R.S., London ...	1	1	2
Dixon, Professor W. E., M.D., London	1	—	1
Marshall, Professor C. R., M.D., Dundee (Hon. Sec.)	1	1	2
Stockman, Professor Ralph, M.D., Glasgow	1	—	1
White, Dr. W. Hale, London	—	—	—
Wild, Professor Robert B., M.D., Manchester ...	1	1	2

PHARMACOPOEIAL SUBCOMMITTEE.

Members of Committee.	Oct. 12, 1907.	Total.
Tirard, Dr. Nestor, London (Chairman)	1	1
Crawfurd, Dr. Raymond, London	—	—
Cushny, Professor A. R., M.D., F.R.S., London ...	—	—
Dixon, Professor W. E., M.D., London	—	—
Marshall, Professor C. R., M.D., Dundee	—	—
Stockman, Professor Ralph, M.D., Glasgow	—	—
Wild, Professor Robert B., M.D.	—	—

UTERINE CANCER COMMITTEE.

Members of Committee.	March 27, 1908.	Total.
McCann, Dr. F. J., London (Chairman)	1	1
President (*ex officio*)	—	—
Chairman of Representative Meetings (*ex officio*) ...	—	—
Chairman of Council (*ex officio*)	1	1
Treasurer (*ex officio*)	—	—
Buist, Dr. R. C., Dundee	—	—
Donald, Dr. Archibald, Manchester	—	—
Fyle, Dr. Ranken, Newcastle-on-Tyne	1	1
Milligan, Dr. W. A., London	1	1
Scharlieb, Mrs. Mary, M.D., London	—	—
Tweedy, Dr. Hastings, Dublin	1	1
Wilson, Dr. Thomas, Birmingham	—	—
Co-opted—		
Fairbairn, Dr. J. S., London	—	—
Tate, Dr. W. W. H., London	—	—

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

NOTICE OF THE FORMATION OF A NEW BRANCH OF THE ASSOCIATION.

ASSAM BRANCH.

NOTICE is hereby given of the following resolution adopted on April 29th by the Central Council:

That a Branch of the Association be formed, designated the Assam Branch, and composed of the members of the Association resident within the area defined by the Assam Medical Society, namely, that bounded on the north by the Himalayas, on the south by the North Cachar, Naga, and Garo Hills, and extending from Dibrugarh on the east to Ganhati on the west.

BRANCH AND DIVISION MEETINGS TO BE HELD

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Notice is hereby given that nominations for the offices mentioned above must be sent to the undersigned by May 23rd. Each nomination must be signed by three members of the Branch. Two representatives on the Council to be elected.—P. J. KAUFFMANN, Honorary Secretary, 22, Broad Street, Birmingham.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in the Hotel Mont Dore, Bournemouth, on Wednesday, May 27th. Members desirous of reading papers, showing cases, or exhibiting specimens are requested to communicate, not later than Friday, May 15th, with JAMES DAVISON, Honorary Secretary, Streateplace, Bath Road, Bournemouth.

DORSET AND WEST HANTS BRANCH AND WEST SOMERSET BRANCH.—Nominations for the office of a Representative on the Central Council should be sent to me on or before May 9th next, in accordance with By-law 25.—JAMES DAVISON, Streateplace, Bath Road, Bournemouth.

DUNDEE, PERTH, AND STIRLING BRANCHES.—*Election of Representative Member of the Central Council.*—Nominations, which must be made by a Division or by three members, must be sent in writing on or before May 9th to R. C. Buist, M.D., 166, Nethergate, Dundee. The present Representative is ineligible for re-election.—R. C. BUIST, Dundee; W. A. TAYLOR, Perth; J. E. MOORHOUSE, Stirling.

EAST ANGLIAN BRANCH.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. NICHOLSON, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. GARSTANG, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The Executive Committee will meet at Dr. Golland's on Friday, May 15th, at 8.0 p.m. The annual meeting of the Division will be held at Altrincham (Board Room of Hospital), on Thursday, June 4th, at 4.50 p.m. Afternoon tea, 4.30 p.m. Dinner at Brooklands Hotel, 7.0 p.m. Nominations for any office for 1908-9 will be received by the Honorary Secretary, if duly signed by proposer and seconder.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—The annual meeting of the members of this Division will be held at the Co-operative Rooms, Ellesmere Street, at 8.30 p.m., on Thursday, May 21st. Agenda: The annual report; election of officers for the ensuing year (the Honorary Secretary does not seek re-election); consideration of Hospital and Insurance Questions.—J. SACKVILLE MARTIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—The annual dinner of the Branch Council will be held on Friday, May 22nd, at the Imperial Restaurant, Regent Street, W., at 7.30 p.m., Dr. Frederick Taylor, President, in the chair. Tickets, price 7s. 6d. (not including wines), may be obtained from the Honorary Secretary, Dr. FREDERICK J. MCCANN, 5, Curzon Street, Mayfair, W.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. MCCANN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—The annual meeting and dinner of this Division will take place on Wednesday, May 13th, at the Sun Hotel, Kingston, at 6.30 p.m.—CHARLES BLAIR, F.R.C.S., Matson Lodge, Richmond; A. E. EVANS, D.P.H., Eastcroft, Kingston Hill, Honorary Secretaries.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—The annual meeting of the Division will be held on Wednesday, May 27th, at 4 p.m., at the Leicester Infirmary. Agenda: Minutes of previous meeting. Nomination of Vice-President of the Branch for 1908-9. Election of Representatives of the Division on the Branch Council, and of officers and members of the Executive Committee of the Division. Election of a Representative of the Division at Representative Meetings. Annual report of the Executive Committee. Discussion of matters referred to Divisions (vide SUPPLEMENTS of the JOURNAL). Any other business.—WILFRED E. GIBBONS, Honorary Secretary, 1, Charles Street, Leicester.

MIDLAND BRANCH: LINCOLN DIVISION.—On Thursday, May 28th, 1908, at 3.30 p.m., will be held the annual meeting of the above Division, in the Guildhall, Lincoln. Agenda: To elect a Vice-President of the Midland Branch. To elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee. To elect the Representative of the Division in Representative Meetings of the Association. To consider, by request of the Representative Meeting, the proposed definition of the term "Hospital" (see BRITISH MEDICAL JOURNAL SUPPLEMENT, February 22nd, 1908). To give replies to certain questions asked by the Medico-Political Committee relative to medical examinations for life insurance (see BRITISH MEDICAL JOURNAL SUPPLEMENT, February 22nd, 1908). To communicate to the Division the interim report of the Subcommittee of the Medico-Political Committee on the Medical Inspection of School Children. To decide whether an Ethical Committee shall be appointed by the Division, and if so, what rules it shall be guided by. Other business. Members desiring to read papers or show cases or specimens are requested to communicate with the Honorary Secretary, J. S. CHATER.

NORTH WALES BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for all the officers of the Branch and Representative on the Central Council must be sent to the Honorary Secretary not later than May 30th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Dover on Thursday, June 18th, Dr. M. Kirkby Robinson, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch). Nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary may be sent to the Honorary Secretary on or before May 17th. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by any ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 17th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH EASTERN BRANCH: REIGATE DIVISION.—The annual meeting of the Reigate Division will be held at the White Hart Hotel, Reigate, on Thursday, May 14th, at 5.30 p.m., Dr. Bromley in the chair. Preceded at 5 p.m. by the annual meeting of the Reigate and District Medical Society. The two Societies will dine together after the meeting. Agenda: (1) The minutes of last meeting. (2) The Chairman's report (Medical Law Reform, Referendum, etc.). (3) To elect the officers of the Division for the ensuing year. (4) To discuss reports on matters referred to the Division by the Central Committees, viz.: (*a*) On the definition of the term "hospital"; (*b*) on Medical Examinations for Life Insurance; (*c*) on the Prevention of Corruption Act, 1906, as affecting Medical Practitioners. These three reports will be found in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for

February 22nd, and members are requested to read them up beforehand. In particular, members are requested to bring with them to the meeting, or to send to the Secretary, answers to the questions of fact asked for by the Medico-Political Committee *re* life insurance companies and the fees paid by them for medical examinations. The Committee regrets that the discussion on these reports, which are of much importance to the profession, will not allow time for papers on medical or surgical subjects. All members of the South-Eastern Branch are invited to attend and to introduce professional friends. Dinner, 7 p.m.; charge, 7s., exclusive of wine. The Honorary Secretary will be glad if members will inform him if they will be able to attend the meeting, and whether they will stay to the dinner.—JOHN G. OGLE, Honorary Secretary, Tower House, Reigate.

SOUTHERN BRANCH: SALISBURY DIVISION.—The annual meeting of this Division will be held at the Infirmary, Salisbury, on Wednesday, May 13th, at 8.15 p.m. The meeting will be preceded by dinner at the County Hotel at 7 o'clock (morning dress).—J. E. GORDON, Honorary Secretary.

SOUTH MIDLAND BRANCH.—Nominations for the office of Representative on the Central Council should be sent to me not later than May 18th, in accordance with By-law 25.—E. HARRIES JONES, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 11th at the annual meeting at Newport. Nominations in writing, signed by not less than three members, must be sent not later than May 21st to the Branch Secretary, W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff.

SOUTH-WESTERN BRANCH.—*Election to Council of the Association*.—In accordance with the rules of the Association I hereby give notice that nominations (each to be signed by three electors) for the office of Representative of the Branch on the Council of the Association, are to be sent to me not later than May 25th.—RUSSELL COOMBE, Branch Secretary.

Naval and Military Appointments.

ROYAL ARMY MEDICAL CORPS.

EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

EXCHANGE required, to remain at home, by a Captain R.A.M.C., who expects to go abroad next December. State position on foreign service roster, and amount of premium required, which must be small. Replies to "Exchange," 11, Anglesea Road, Dublin.

VOLUNTEER RIFLES.

SURGEON-MAJOR B. H. MUMBY, M.D., 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, to be Surgeon-Major, March 17th.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel C. KNOTT, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, resigns his commission, retaining his rank and uniform, March 20th.

JAMES A. GIBSON, M.B., to be Surgeon-Lieutenant in the 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment, March 1st.

ARCHIBALD K. PATERSON, M.B., to be Surgeon-Lieutenant in the 1st Volunteer Battalion the Dorsetshire Regiment, February 28th.

KENNETH S. STORRS, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Essex Regiment, March 6th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

SUPERNUMERARY CAPTAIN E. F. BINDLOSS, Bedford Bearer Company (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer Bedford Volunteer Infantry Brigade), to be Major, remaining supernumerary, February 1st.

ARMY MEDICAL SERVICE.

SURGEON GENERAL G. D. BOURKE, C.B., has been transferred from Plymouth to be Principal Medical Officer, Irish Command.

CHANGES OF STATION.

THE following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during March, 1908.

		FROM.	TO.
Lieut.-Col.	W. Rowney, M.D.	Lucknow	Aldershot.
,,	A. S. Rose, M.D.	Allahabad	Cawnpore.
,,	W. Dick, M.B., F.R.C.S. Edin.	Edinburgh	Woolwich.
,,	H. J. Barratt	Agra	Shorncliffe.
,,	W. B. Thomson	Portsmouth	Calcutta
,,	A. E. Tate	London Dist.	War Office.
,,	W. T. Swan, M.B.	Ambala	Chakrata.
,,	R. L. R. Macleod, M.B.	Quetta	Karachi
	M. O'Halloran	Middelberg, Transvaal	Standerton.
Lieut.-Col.	M. J. Sexton, M.D.	Chakrata	Agra.
,,	F. W. G. Gordon-Hall, M.B.	Landour	Meerut.
,,	C. J. MacDonald, M.D.	Cork	Fermoy.
Major	W. H. Horrocks, M.B.	Gibraltar	London Dist.
,,	B. J. Inniss	Cawnpore	Benares.
,,	A. J. Luther	Bhamo	Rangoon.
,,	W. T. Mould	Sitapur	Agra.
,,	F. Smith, D.S.O.	Benares	Rawal Pindi.
,,	J. W. Jennings, D.S.O.	Shwebo	Mandalay.
,,	E. M. Morphew	Kailana	Delhi.
,,	L. A. Mitchell, M.B.	Jubbulpore	Jhansi.
,,	G. J. Buchanan, M.B.	Glasgow	Bareilly.
,,	K. M. Cameron, M.B.	Kasauli	Simla.
,,	M. Boyle, M.B.	Ranikhet	Lucknow.
,,	A. E. Milner	Ootacamund	St. Thomas's Mount.
,,	St. J. B. Killery	Mandalay	Bhamo.
Captain	F. S. Penny, M.B.	R.A.M. Coll.	Shoeburyness.
,,	G. B. Crisp	Netley	Shahjehanpore.
,,	E. Brodribb	R.A.M. Coll.	Edinburgh.
,,	J. Cowan, M.B.	Woolwich	R.A.M. Coll.
,,	A. R. O'Flaherty	Chatham	,,
,,	J. E. Hodgson	Crownhill	Devonport.
,,	M. H. G. Fell	Fleetwood	Warrington.
,,	L. Wood	R.A.M. Coll.	Fleetwood.
,,	E. B. Knox, M.D.	Simla	Meerut.
,,	A. H. Safford	Aldershot	London Dist.
,,	A. F. Carlyon	R.A.M. Coll.	,,
,,	W. L. Baker	,,	Aldershot.
,,	L. M. Purser, M.B.	,,	Colchester.
,,	F. P. Sewell, M.B.	,,	Aldershot.
,,	D. O. Hyde, M.B.	Khandalla	Colaba.
,,	J. M. Cuthbert, M.B.	R.A.M. Coll.	Edinburgh.
,,	C. H. Furnivall	Shoeburyness	R.A.M. Coll.
,,	J. Tobin	R.A.M. Coll.	Lincoln.
,,	R. T. Brown, M.D.	Colchester	R.A.M. Coll.
,,	P. H. Henderson, M.B.	Weedon	,,
,,	W. M. H. Spiller, M.B.	Allahabad	Belfast.
,,	W. B. Fry	Canterbury	R.A.M. Coll.
,,	L. L. G. Thorpe	Jubbulpore	Warley.
,,	R. F. Ellery	Bodmin	R.A.M. Coll.
,,	W. J. Waters	Jersey	,,
,,	J. T. Johnson, M.D.	Bradford	,,
,,	R. E. J. A. Howley	Belfast	,,
,,	R. F. M. Fawcett	—	Aldershot.
,,	J. W. West, M.B.	R.A.M. Coll.	Ballykinder Camp.
,,	W. Riach, M.D.	Lincoln	R.A.M. Coll.
,,	A. R. C. Parsons	R.A.M. Coll.	Mill Hill.
,,	J. B. Cautley	Woolwich	Cawnpore.
,,	W. M. B. Sparkes	Winchester	R.A.M. Coll.
,,	J. L. Jones	Southern Cmd.	Devonport.
,,	E. S. Worthington	Agra	Dublin.
,,	R. McK. Skinner	—	Scottish Cmd.
,,	G. F. Sheehan	R.A.M. Coll.	Dublin.
,,	R. N. Woodley	R.A.M. Coll.	Cork.
,,	R. V. Cowey	Mill Hill	R.A.M. Coll.
,,	F. E. Rowan-Robinson, M.B.	Colaba	Woolwich.
,,	J. H. R. Winder, M.D.	Malta	Ireland.
,,	E. G. Ffrench, M.D.	Chatham	R.A.M. Coll.
,,	F. W. Lambelle, M.B.	R.A.M. Coll.	Bradford.
,,	T. J. Potter	Aldershot	R.A.M. Coll.
,,	A. J. Williamson, M.B.	Aden	Bulford.
,,	E. V. Aylen	R.A.M. Coll.	Chatham.
,,	H. Rogers, M.B.	Dublin	Limerick.
,,	W. Davis	,,	Tipperary.
,,	A. W. A. Irwin	R.A.M. Coll.	Kildare.
,,	S. M. Adye-Curran	,,	Clogheen.
,,	B. A. Craig	,,	Dublin.
,,	H. W. Long, M.B.	Cork	Kinsale.
,,	A. B. Smallman, M.B.	Secunderabad	Quetta.
,,	F. A. H. Clarke	Meerut	Ranikhet.
,,	J. M. H. Conway, F.R.C.S.I.	Aden	Ambala.
,,	H. G. S. Webb	Lahore	,,
,,	W. W. Browne	Meiktila	Shwebo.
,,	R. Rutherford, M.B.	Poona	Purandhur.
,,	M. G. Winder	Eastern Comd.	Dover.
,,	T. S. Coates, M.B.	Nasirabad	Mhow.
,,	J. A. W. Webster	Purandhur	Poona.
,,	J. M. M. Crawford	Dalhousie	Lahore.
,,	H. C. Hildreth, F.R.C.S. Edin.	Wellington	Maymyo.
,,	A. C. Osburn	Agra	Rangoon.
,,	G. S. C. Hayes	Devonport	London Dist.
,,	J. H. Campbell, M.B.	Lucknow	Allahabad.
,,	N. Low	St. Thomas's Mount	Madras.
,,	K. A. C. Doig	Chaubuttia	Bareilly.
,,	A. W. Gater	Peshawar	Nowshera.
Lieutenant	G. B. F. Churchill	Chakrata	Meerut.
,,	C. D. M. Holbrooke	Poona	Khandalla.
,,	C. W. O'Brien	Nowshera	Peshawar.
,,	R. E. Humfrey, M.B.	Poona	Mhow.
,,	T. Scatchard	Agra	Fatehgarh.
,,	M. I. Cromie	Mhow	Jubbulpore.
,,	M. Keane	Shahjahanpur.	Meerut.
,,	C. R. M. Morris, M.B.	Queenstown	Rawal Pindi.
,,	R. E. U. Newman, M.B.	,,	,,
,,	F. D. G. Howell	Lucknow	Meerut.
,,	P. Sampson	Longmoor	Hamptee.
,,	E. M. O'Neill, M.B.	Bulford	Jhansi.
,,	W. C. Smales	—	Poona.
,,	T. T. H. Robinson, M.B.	Aldershot	Lucknow.
,,	A. M. Benett	Bulford	Jubbulpore.
,,	W. F. M. Loughnan	Parkhurst	Portsmouth.
,,	C. Kelly, M.B.	Portland	,,
,,	A. H. Jacob	London Dist.	India.
,,	H. G. Gibson	Woolwich	Kingston-on-Thames.
,,	F. H. M. Chapman	Tidworth	Birmingham.
,,	O. R. McEwen	Chester	Lancaster.
,,	H. W. Farebrother	Warrington	Manchester.
,,	H. W. Carson, M.B.	Cardiff	Penally.
,,	R. F. O'T. Dickinson	Cork	Kilworth Camp.

Lieutenant-Colonel G. Coutts, M.B., retired pay, has been placed in medical charge of troops at Chichester.

Lieutenant W. K. Beaman, who was appointed on probation, January 28th, 1907, is stationed at Woolwich.

Lieutenant-Colonel J. M. Nicolls, M.B., retired pay, has been transferred from Birr to Cork Detention Barracks; and Lieutenant-Colonel W. S. Dowman, retired pay, from Cork Detention Barracks to Northampton.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING THE FIRST QUARTER OF 1908.

IN the accompanying table will be found summarized the vital statistics of the City of London and of each of the metropolitan boroughs based upon the Registrar-General's returns for the first, or winter, quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the several boroughs, and are obtained by distributing the deaths occurring in institutions among the several boroughs in which the deceased persons had previously resided. The 32,151 births registered in London during the three months under notice were equal to an annual rate of 26·9 per 1,000 of the population, estimated at 4,795,757 persons in the middle of the year; in the corresponding quarters of the three preceding years the rates were 23·5, 27·8, and 26·7 per 1,000, the average rate in the first quarter of the ten years 1898-1907 being 29·5 per 1,000. The lowest birth-rates last quarter were 15·6 in Hampstead, 16·8 in the City of Westminster, 17·1 in the City of London, 18·7 in Stoke Newington, and 19·0 in Kensington; the highest rates were 34·1 in Bermondsey, 34·5 in Poplar, 34·7 in Bethnal Green, 35·0 in Shoreditch, 35·8 in Stepney, and 38·5 in Finsbury.

The 20,334 deaths of London residents registered last quarter were equal to an annual rate of 17·0 per 1,000 against 16·2, 16·0, and 18·5 in the corresponding period of the three preceding years; in the first quarter of the ten years 1898-1907 the death-rate averaged 19·0 per 1,000. The death-rates last quarter ranged from 11·2 in Hampstead, 13·8 in Woolwich, 14·1 in Fulham, 14·2 in Wandsworth, and 14·3 in Lewisham, to 20·3 in Bethnal Green, 20·7 in Shoreditch, 21·4 in Holborn, 22·0 in Finsbury, 22·1 in Bermondsey, and 26·3 in the City of London.

During the quarter under notice, 1,402 deaths were referred to the principal infectious diseases; of these 342 resulted from measles, 188 from scarlet fever, 238 from diphtheria, 400 from whooping-cough, 36 from enteric fever, 2 from ill-defined pyrexia, and 198 from diarrhœa. These 1,402 deaths were equal to an annual rate of 1·18 per 1,000, which was 0·58 per 1,000 below the average rate in the corresponding periods of the ten years 1898-1907. The lowest death-rates last quarter from these principal infectious diseases were 0·39 in Hampstead, 0·45 in Stoke Newington, 0·59 in the City of Westminster, 0·70 in Kensington, and 0·71 in Hammersmith; the highest rates were 1·42 in Hackney, 1·67 in Finsbury, 1·87 in Bethnal Green, 2·15 in Poplar, and 2·16 in Stepney. Measles showed the greatest proportional fatality in Paddington, Fulham, Shoreditch, Bethnal Green, Stepney, and Lewisham; scarlet fever in Hackney, Shoreditch, Bethnal Green, Southwark, Bermondsey, and Battersea; diphtheria in Hackney, Holborn, Finsbury, the City of London, Bethnal Green, and Lewisham; whooping-cough in Chelsea, St. Pancras, Stepney, Poplar, Greenwich, and Woolwich; "fever" in Hammersmith, Fulham, the City of Westminster, Holborn, Finsbury, Bethnal Green, and Greenwich; and diarrhœa in Hackney, Finsbury, Shoreditch, Poplar, Southwark, and Bermondsey.

During the three months ending March last the deaths from phthisis of London residents numbered 1,870, being equal to an annual rate of 1·56 per 1,000, against 1·55, 1·51, and 1·73 in the first quarters of the three preceding years. The death-rates from this disease last quarter ranged from 0·91 in Chelsea, 1·05 in Wandsworth, 1·08 in Lewisham, and 1·09 in Paddington to 2·23 in Bermondsey, 2·27 in Southwark, 2·34 in Finsbury, 2·61 in Shoreditch, and 2·80 in Holborn.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 110 per 1,000 last quarter, against 114, 115, and 132 in the corresponding periods of the three preceding years; in the first quarter of the ten years 1898-1907 the rate of infant mortality averaged 129 per 1,000. The lowest rates last quarter were recorded in St. Marylebone, Hampstead, Holborn, Lambeth, Wandsworth, and Lewisham; and the highest rates in Paddington, St. Pancras, Stoke Newington, Bethnal Green, Poplar, and Bermondsey.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,225 births and 4,896 deaths were registered during the week ending Saturday last, May 2nd. The annual rate of mortality in these towns, which had been 15·2 and 15·4 per 1,000 in the two preceding weeks, rose again last week to 15·7 per 1,000. The rates in the several towns ranged from 7·4 in Aston Manor, 7·5 in Leyton, 8·0 in King's Norton, 9·1 in Walthamstow, 9·3 in Willesden, 9·7 in York, and 9·8 in Rotherham, to 21·3 in Burnley, 21·8 in Salford, 22·6 in Birkenhead, 23·0 in Bury and in Merthyr Tydfil, 23·8 in Hanley, and 25·6 in Swansea. In London the rate of mortality was 16·0 per 1,000, while it averaged 15·6 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1·4 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·3 in West Bromwich, 3·5 in Preston, 3·7 in Salford, 4·3 in Croydon, and 4·9 in Stockton-on-Tees. Measles caused a death-rate of 1·2 in Rochdale, 1·3 in Salford, 1·5 in Hanley and in Wallasey, 1·7 in Birkenhead, 2·0 in Burnley, 2·3 in South Shields, 2·6 in Croydon, 2·9 in Stockton-on-Tees, and 3·6 in Preston; scarlet fever of 1·5 in West Bromwich; and whooping-cough of 1·2 in Gateshead, 1·3 in Devonport and in Salford, 1·5 in Bootle and in Warrington, 1·6 in Rotherham, and 2·0 in Sunderland. The mortality from diphtheria, from enteric fever, and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,972, 2,839, and 2,851 at the end of the three preceding weeks, had risen again to 2,928 at the end of last week; 368 new cases were admitted during the week, against 237, 323, and 332 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 2nd, 1,107 births and 654 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 16·4 and 18·8 per 1,000 in the two preceding weeks, fell again to 18·7 per 1,000 last week, but was 3·0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14·4 in Paisley and 14·8 in Leith to 20·9 in Glasgow and 23·7 in Perth. The death-rate from the principal infectious diseases averaged 1·9 per 1,000 in these towns, the highest rates being recorded in Glasgow and Paisley. The 344 deaths registered in Glasgow included 15 which were referred to measles, 4 to diphtheria, 11 to whooping-cough, 5 to cerebro-spinal meningitis, and

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1908.

BOROUGHS.	Estimated Population middle of 1908.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhœa.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
COUNTY OF LONDON ..	4,795,757	32,151	20,334	26·9	17·0	1·18	1,402	—	342	186	233	400	—	36	2	198	1,870	110
Paddington	150,923	831	608	22·1	16·2	0·98	37	—	21	3	8	2	—	—	—	3	41	130
Kensington	182,752	864	757	19·0	16·6	0·70	32	—	18	—	7	1	—	—	—	6	61	119
Hammersmith ...	124,012	796	624	25·8	14·9	0·71	22	—	9	2	3	2	—	3	—	3	52	117
Fulham	171,562	1,150	601	26·9	14·1	1·31	56	—	26	7	6	9	—	3	—	5	56	102
Chelsea	76,049	402	341	21·5	17·2	1·16	22	—	4	3	1	10	—	—	—	4	17	114
City of Westminster	170,345	713	665	16·8	15·7	0·59	25	—	5	2	4	2	—	3	—	9	58	116
St. Marylebone ...	126,867	1,051	551	33·2	17·4	0·73	23	—	3	4	4	6	—	1	—	6	41	71
Hampstead	92,654	361	259	15·6	11·2	0·39	9	—	2	3	2	1	—	—	—	1	32	78
St. Pancras	237,005	1,398	1,121	23·7	19·0	1·25	74	—	25	6	7	30	—	1	—	5	107	129
Islington	349,091	2,473	1,388	25·0	15·9	0·84	72	—	19	12	15	11	—	4	—	11	115	104
Stoke Newington ...	54,015	252	244	18·7	17·4	0·45	6	—	2	—	—	2	—	—	—	2	21	151
Hackney	235,253	1,516	980	25·9	16·7	1·42	83	—	20	13	25	10	—	—	—	15	85	111
Holborn	84,466	701	240	29·5	21·4	1·17	16	—	5	1	5	4	—	1	—	—	38	70
Finsbury	96,007	922	576	33·5	22·0	1·67	40	—	6	4	8	12	—	3	—	7	58	104
City of London ..	19,232	82	126	17·1	26·3	0·84	4	—	1	—	2	1	—	—	—	—	6	122
Shoreditch	115,927	1,005	844	35·0	29·7	1·29	37	—	16	10	2	2	—	—	—	7	72	122
Bethnal Green ..	131,096	1,132	662	34·7	20·3	1·87	61	—	16	12	12	11	—	4	—	6	59	125
Stepney	310,706	2,740	1,462	35·8	18·9	2·16	168	—	48	15	13	67	—	1	1	17	152	105
Poplar	171,516	1,473	826	34·5	19·3	2·13	91	—	18	6	11	40	—	2	—	13	84	127
Southwark	210,442	1,567	1,040	29·9	19·8	1·33	68	—	6	11	12	22	—	—	—	17	119	113
Bermondsey	127,910	1,036	705	34·1	23·1	1·35	43	—	2	13	4	15	—	2	1	8	71	132
Lambeth	321,344	2,273	1,281	28·4	16·0	0·86	69	—	18	13	9	15	—	—	—	14	134	91
Battersea	183,873	1,149	714	25·1	15·6	1·21	55	—	14	9	7	14	—	2	—	9	63	103
Wandsworth ...	289,706	1,912	1,025	26·5	14·2	1·01	73	—	6	12	15	29	—	1	—	12	76	96
Camberwell	280,022	1,674	1,103	24·0	15·8	0·92	64	—	10	11	16	20	—	1	—	6	93	110
Deptford	117,539	796	512	27·2	17·5	0·96	28	—	3	4	5	12	—	—	—	4	54	111
Greenwich	109,110	646	449	23·2	16·5	1·35	37	—	—	4	6	21	—	3	—	3	40	124
Lewisham	156,627	934	568	24·9	14·3	1·36	53	—	17	4	13	12	—	—	—	2	42	94
Woolwich	131,345	812	461	24·8	13·8	1·03	34	—	2	2	7	18	—	1	—	4	44	105

9 to diarrhœa. Five fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh, 2 of whooping-cough in Dundee, 2 of measles and 3 of whooping-cough in Aberdeen, and 3 of measles in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 25th, 478 births and 431 deaths were registered in six of the principal Irish towns, as against 482 births and 395 deaths in the preceding period. The annual death-rate in these towns which had been 19.4, 26.8, and 21.2 per 1,000 in the three preceding weeks, rose to 28.5 per 1,000 in the week under notice, this figure being 13.1 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 18.5 in Cork and 21.1 in Dublin to 30.4 in Londonderry and 48.7 in Waterford. The zymotic death-rate in the same six Irish towns averaged 3.7 per 1,000, or the same as during the preceding period, the highest figure—15.6—being recorded in Waterford. The chief causes of death under this heading were measles and whooping-cough. In Belfast 5 and in Dublin 2 deaths were ascribed to cerebro-spinal fever.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary £80 per annum, increasing to £100.

BIRMINGHAM: EAR AND THROAT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locum. Terms, £4 4s. a week.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Physician; (2) House-Surgeon; (3) Assistant House-Surgeon. Salary, for (1) and (2) at the rate of £50 per annum, and (3) at the rate of £40 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence, £80 per annum.

BRISTOL GENERAL HOSPITAL. — Assistant House-Physician. Salary, £50 per annum.

BUCKS COUNTY LUNATIC ASYLUM, Stone, near Aylesbury.—Assistant Medical Officer. Salary, £150 per annum

CARDIFF INFIRMARY.—Senior Resident Medical Officer. Salary, £120 per annum.

CARLOW DISTRICT ASYLUM.—Resident Medical Superintendent. Salary, £200 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Physician to Out-patients. (2) Clinical Assistant.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Two Assistant Physicians

CLINICAL RESEARCH ASSOCIATION, Watergate House, Adelphi, W.C.—Assistant Director of the Laboratory. Initial salary, £250 per annum.

DERBYSHIRE ROYAL INFIRMARY. — House-Surgeon. Salary, £100 per annum.

DERBYSHIRE ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

DUMFRIES: CRICHTON ROYAL INSTITUTION.—Two Resident Clinical Physicians. Honorarium at the rate of £0 guineas per annum each.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Physician. Salary £60 per annum.

GREENWICH UNION INFIRMARY. — Junior Assistant Medical Officer of the Infirmary and Workhouse. Salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £20 for six months, and £2 10s. washing allowance.

HUDDERSFIELD EDUCATION AUTHORITY. — School Medical Officer. Salary at the rate of £300 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Senior Assistant Medical Officer. Salary, £150 per annum.

LEEDS: GENERAL INFIRMARY.—(1) Resident Medical Officer: (2) Resident Ophthalmic Officer. Salary, £150 and £100 per annum respectively.

LEEDS TUBERCULOSIS ASSOCIATION.—Resident Medical Officer for Sanatorium at Gateforth. Salary at the rate of £100 per annum.

LEICESTER INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

LONDON THROAT HOSPITAL, Great Portland Street, W.—House-Surgeon. Honorarium, £50 per annum.

NORTHAMPTON GENERAL HOSPITAL.—Two Honorary Anæsthetists.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—(1) House-Surgeon. Salary, £80 per annum. (2) Male Assistant House-Surgeon. Honorarium, £20 for six months.

NATIONAL ASSOCIATION FOR THE ESTABLISHMENT AND MAINTENANCE OF SANATORIUMS FOR WORKERS SUFFERING FROM TUBERCULOSIS.—Medical Superintendent for the Benenden Sanatorium. Salary, £250

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary, £150 per annum

NOTTINGHAM GENERAL HOSPITAL.—Locumtenent for 3½ months. Salary, £45.

PLAISTOW FEVER HOSPITAL, E. — Second Assistant Medical Officer. Salary at the rate of £100 per annum.

ROYAL EAR HOSPITAL, Dean Street, Soho, W.—House-Surgeon. Honorarium, £30 per annum.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

SOCIETY OF APOTHECARIES OF LONDON.—Examiners in Medicine and Surgery.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—(1) House-Surgeon. (2) House-Physician. Salary, £75 per annum each.

TEIGNMOUTH HOSPITAL. — House-Surgeon. Salary, £70 per annum.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Etc.—Assistant Resident Medical Officer. Salary at the rate of £100 per annum.

WAKEFIELD: CLAYTON HOSPITAL. — Junior House-Surgeon. Salary, £80 per annum.

WANDSWORTH UNION INFIRMARY.—Male Junior Assistant Medical Officer. Salary at the rate of £120 per annum.

WEST BROMWICH DISTRICT HOSPITAL. — Resident Assistant House-Surgeon. Salary, £75 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Junior House-Surgeon. Salary at the rate of £80 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—House-Physician for six months.

WEST WALES SANATORIUM, Alltymynydd, Carmarthen.—Medical Superintendent. Salary, £200 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum.

WORCESTER, CITY OF.—Assistant Medical Officer. Salary, £200 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories gives notice of vacancies at Ongar, co. Essex, and Queensbury, co. York.

APPOINTMENTS.

DUDLEY, P. H., M.R.C.S., L.R.C.P., District Medical Officer of the Caxton and Arrington Union.

HAWTHORN, Frank, M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Honorary Surgeon to the Fleming Memorial Hospital for Sick Children, Newcastle-on-Tyne, vice S. S. Whillis, M.D., B.S., resigned.

LEIGH, W. H., M.R.C.S., L.R.C.P., Medical Officer of Health, Westhoughton Urban District.

MATHESON, Morley, M.A., M.B., Ch.B., D.P.H., School Medical Officer and Assistant Medical Officer of Health to the City and County of Norwich.

NEIL, R. C., M.R.C.S., L.R.C.P., District Medical Officer of the Brentford Union.

RYAN, P., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Kilmeaden District, co. Waterford.

SHEAHAN, W., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Doneraile District, co. Cork.

SHEE, W. J., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Duncannon District, co. Wexford.

STEPHEN, W. A., M.D.Edin., Certifying Factory Surgeon for the Loftus District, co. York.

TWINING, V. W., M.B., C.M.Aberd., Medical Officer of Health, Salcombe Urban District.

WALLACE, H. K., M.D.Glasg., District Medical Officer of the Sunderland Union.

WARD, Bernard J., F.R.C.S., Surgeon to Out-patients, Queen's Hospital, Birmingham.

WILSON, A. S., M.B., District Medical Officer of the Henley Union.

WOOD, C. R., M.D., Medical Officer of Health, New Shoreham Urban District.

WRIGHT, O. Kentish, M.R.C.S. and L.R.C.P., Resident Medical Officer to the City of Nottingham Isolation Hospital.

ABERDEEN ROYAL INFIRMARY.—The following appointments have been made:

Darsons, Jas. G., M.B., Ch.B.Aberd., House-Physician, attached to Professor Finlay's wards.

Gilchrist, Adam, M.B., Ch.B.Aberd., House-Surgeon, attached to Mr. Gray's wards.

MacKay, Jas. D., M.B., Ch.B.Aberd., House-Surgeon, attached to Mr. J. Scott Riddell's wards.

Smith, Fredk., M.A., Ch.B.Aberd., Assistant Anæsthetist.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8 p.m.—General Meeting. 8.30 p.m.—Paper: Mr. D'Arcy Power: Recent Advances in the Surgical Treatment of Syphilis.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNÆCOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—Discussion on Dr. B. H. Paramore's paper, The Supports of the Female Pelvic Viscera. The paper, which will be taken as read, has been printed, and can be obtained from the Secretaries.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Lieutenant-Colonel Andrew Duncan, I.M.S. (Ret.): On the Effects of Heat in the Tropics, and their Treatment.

FRIDAY.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30 p.m.—(1) Adjourned discussion on Dr. Prout's paper on the Rôle of Filaria in the Production of Disease. (2) A paper on the Use of Quinine during Pregnancy, Labour, and the Puerperium will be read on behalf of Dr. J. Preston Maxwell of Amoy.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Monday, 4 p.m., Otitis media; Tuesday, 3.15 p.m., the Treatment of Spinal Caries; Friday, 2.15 p.m., Ascites.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be delivered as follows: Monday, Haemoptysis: Its Significance and Treatment; Tuesday, Infantile Marasmus; Wednesday, Abdominal Injuries; Thursday, the Diagnosis of Functional Nervous Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Syphilis of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Special Demonstration of Selected Surgical Cases. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of the Throat, Nose, and Ear: 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 12 noon: Monday, Pathological: Wednesday and Friday, Practical Medicine. At 5 p.m.: Monday, Diseases of the Pharynx; Tuesday, Stricture of the the Urethra: Wednesday, Medicine: Thursday, Eustachian Obstruction and its Results; Friday, Clinical Pathology as an Aid to Diagnosis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BROMHALL.—On May 2nd, at Glencoe, Rawtenstall, Lancs., the wife of Ernest Bromhall, M.R.C.S., L.R.C.P., of a daughter.

LEAKEY.—On May 4th, at Elm House, Pine Road, Cricklewood, to E. Gwladys, wife of A. B. Leakey, M.B., a son.

STUMBLES.—At Amble House, Amble, Northumberland, on April 30th, to Dr. and Mrs. Henry Stumbles, a daughter.

MARRIAGES.

BROWN—MILNE.—At Cape Town, on March 31st, Harry Egerton Brown, M.B., Ch.B., M.D., Royal Asylum, Pretoria, son of the late William Brown, Beaconsfield, Langbank, to Jean Lyle Milne, fourth daughter of the late Andrew Milne, Calcutta and Montrose.—By cable.

DUNLOP-BALFOUR.—At the Douglas Hotel, Bath Street, Glasgow, on April 30th, by the Rev. William Dunlop, South-Side Congregational Church, Nelson Street (father of the bridegroom), assisted by the Rev. William Arnott, Dennistoun Congregational Church, Reginald Nairn Dunlop, M.D., to Mary Campbell, younger daughter of the late Thomas Balfour.

MORE—DRYLAND.—On April 29th, at the Parish Church, Kettering, by the Rev. P. M. Smythe, Rector, assisted by the Rev. J. Arthur M. Morley, Vicar of Rothwell, and the Rev. Ambrose Lethbridge, Chaplain of Guy's Hospital, London, John More, eldest son of the late Dr. James More, Rothwell, to Mabel Winter, second daughter of the late Dr. John Winter Dryland, Kettering.

ROWLEY—RAMSDEN.—On April 30th, at the Parish Church, Wolstanton, Staffs., by the Rev. E. W. Bridgewood, Oswald Francis Rowley, M.R.C.S., L.R.C.P. Lond., second son of Charles Octavius Rowley, of Barnsley, M.R.C.S. Eng., L.S.A., to Mary, widow of Joseph Ramsden, Suffolk Lodge, Clapham Park, S.W., and second daughter of the late William Bristol, of Seabridge, Newcastle-under-Lyne.

THOMAS—PRICE.—On April 29th, at St. Peter's Church, Carmarthen, by the Lord Bishop of Swansea, assisted by the Rev. D. T. Alban, B.A., Frank G. Thomas, B.A., M.B., Cantab., to Florence M. S. Price, M.B., Ch.B., elder daughter of Dr. and Mrs. Price, Carmarthen.

DEATHS.

LLOYD.—On May 3rd, suddenly, of heart failure, at Chatham, Brigade-Surgeon Edward Harford Lloyd (retired), of The Ferns, Tivoli Road, Cheltenham, aged 72.

TINKER.—May 3rd, Frederick Howard Tinker, Surgeon, J.P., of Talbot House, Hyde, aged 51. Was interred at the Mottram Parish Church on Wednesday at 12 o'clock.

BOOKS, ETC., RECEIVED.

Kimpton's Essential Series. Essentials of Surgery. By A. T. Compton, F.R.C.S. London: H. Kimpton. 1908. 4s.

Leitfaden zur klinischen Untersuchung des Blutes. Von Dr. Med. C. S. Engel. Dritte Auflage. Berlin: A. Hirschwald. 1908. M.5.

Juristisch-psychiatrische Grenzfragen. Zwanglose Abhandlungen. Herausgegeben von A. Finger, A. Hoche, and J. Bresler. VI Band, Heft 1. Über den Einfluss der Geschlechtsfunktionen auf die weibliche Kriminalität. Von Dr. jur. S. Weinberg. Halle a.S.: C. Marhold. 1907. M.1.

Sur la Technique de la Réduction des Luxations Congénitales de la Hanche par la Méthode non Sanglante. Par le Dr. P.-V. Badin. Paris: H. Paulin et Cie. 1908.

A Simple Method of Water Analysis, especially designed for the Use of Medical Officers of Health. By J. C. Thresh, M.D., D.Sc., D.P.H. Sixth edition. London: J. and A. Churchill. 1908. 2s. 6d.

Anleitung zur Beurteilung und Bewertung der wichtigsten neuren Arzneimittel. Von Dr. I. Lipowski. Berlin: J. Springer. 1908. M.2.60.

Manual of Ophthalmic Operations. By F. P. Maynard, M.B., D.P.H., F.R.C.S., Lieutenant I.M.S. Calcutta: Thacker, Spink, and Co. 1908: and London: W. Thacker and Co. 1908. 9s.

Textbook of Otology for Physicians and Students. In thirty-two lectures. By Fr. Bezold, M.D., and Fr. Siebenmann, M.D. Translated by J. Holinger, M.D. Chicago: E. H. Colegrove Co. 1908. $5.50.

The Duality of Man (Chairman's Address in Section on Ophthalmology at fifty-eighth Annual Session, American Medical Association, Atlantic City, New Jersey, June, 1907). By C. G. Savage, M.D. Chicago: Press of the American Medical Association. 1907.

Le Cancer: Prophylaxie-étiologie, traitement. Par le Dr. C. Sobrecasas. Paris: G. Steinheil. 1908. Fr. 3.50.

Nervous and Mental Disease Monograph Series. No. 1. Outlines of Psychiatry. By Henry William A. White, M.D. New York: The Journal of Nervous and Mental Disease Publishing Co. 1907. $2.00.

The Pocket Osteology. By P. Turner, B.Sc., M.B., M.S.Lond., F.R.C.S. London: Baillière, Tindall, and Cox. 3s.

London: J. and A. Churchill, 1908:

Abdominal Tuberculosis. By A. E. Maylard, M.B., B.S.Lond. 12s. 6d.

Practical Pharmacy. By E. W. Lucas, F.I.C., F.C.S. Second edition. 12s. 6d.

Atlas Chirurgischer Krankheitsbilder in ihrer Verwertung für Diagnose und Therapie. Von Dr. Ph. Bockenheimer. Berlin and Wien: Urban and Schwarzenberg. 1908. M.36.

L'Aphasie de Broca. Par Dr. F. Moutier. Paris: G. Steinheil. 1908. Fr. 25.

Shaw's Manual of the Vaccination Law, containing the Vaccination Acts 1867, 1871, 1874, 1898, and 1907; the Vaccination Orders 1898, 1899, 1905, and 1907, etc. By J. Lithiby, C.B., LL.B. Eighth edition. London: Butterworth and Co., and Shaw and Sons. 1908. 7s. 6d.

Life of Richard Wagner. Volume VI. By W. A. Ellis. London: Kegan Paul, Trench, Trübner and Co., Limited. 1908. 16s.

Heredity, Variation, and Genius. With Essay on Shakespeare: "Testimonied in his own Bringingsforth." And Address on Medicine, Present and Prospective. By H. Maudsley, M.D. London: J. Bale, Sons and Danielsson, Limited. 1908. 5s.

Lehrbuch der Chirurgie in Vorlesungen. Von Professor Dr. E. Leser. I Teil, Allgemeine Chirurgie in 50 Vorlesungen. Zweite Auflage. Jena: G. Fischer. 1908. M.18.

Hernia, its Cause and Treatment. By R. W. Murray, F.R.C.S. London: J. and A. Churchill. 1908. 4s. 6d.

Die Grundlaute der menschlichen Sprache. Ein Universal-alphabet. Von L. Morochowetz. Berlin: A. Hirschwald. 1908. M.2.

Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens. Herausgegeben von de Medizinal-Abteilung des Königlich Preussischen Kriegsministeriums. Heft 38. Arbeiten aus dem hygienisch chemischen Untersuchungsstellen. II Teil. Berlin: A. Hirschwald. 1908. M.2.80.

Movable Kidney, its Pathology, Symptoms, and Treatment. By H. W. Wilson, M.B., B.S., F.R.C.S., and C. M. H. Howell, M.A., M.B., B.Ch., M.R.C.P. London: E. Arnold. 1908. 4s. 6d.

Aids to Ophthalmology. By N. B. Harman, M.A., M.B., F.R.C.S.Eng., Fourth edition. London: Baillière, Tindall and Cox. 1908. 2s. 6d.

London: A. and C. Black, 1908:

Home Nursing and Hygiene. By F. Hufton-Windust. 1s.

Cancer, Relief of Pain and Possible Cure. By S. Keith, M.B., F.R.C.S.Ed., and G. E. Keith, M.B., C.M.

Cosmetic Surgery: The Correction of Featural Imperfections. By C. C. Miller, M.D. Second edition. Chicago: C. C. Miller. 1908. $1.50.

London: C. Griffin and Co., Limited. 1908:—

Tropical Medicine, Hygiene, and Parasitology. By G. E. Brooke, M.A., F.R.C.P., D.P.H. 12s. 6d.

Infancy and Infant Rearing: An Introductory Manual. By J. B. Hellier, M.D., M.R.C.S. Second edition. 3s. 6d.

Treatment of Internal Diseases. By Dr. N. Ortner. Edited by N. B. Potter, M.D. Translated by F. H. Bartlett, M.D. Philadelphia and London: J. B. Lippincott Co. 21s.

The Vermiform Appendix and its Diseases. By D. Macartney, M.A., M.D. Glasgow: J. Maclehose and Sons. 1908. 3s. 6d.

Gynäkologie und Geburtshilfe in ihren Beziehungen zur Ophthalmologie. Von Dr. E. Runge. Leipzig: J. A. Barth. 1908. M.4.25.

Careers for our Sons: A Practical Handbook for the Professions and Commercial Life. By Rev. G. H. Williams, M.A. Oxon. Second edition. Carlisle: C. Thurnam and Sons; and London: Simpkin, Marshall. 1908. 4s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
13 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Branch Council, Liverpool Medical Institution, 4.30 p.m. RICHMOND DIVISION, *Metropolitan Counties Branch*, Annual Meeting and Dinner, Sun Hotel, Kingston, 6.30 p.m. SALISBURY DIVISION, *Southern Branch*, Annual Meeting, Infirmary, Salisbury, 8.15 p.m.; Dinner, County Hotel, 7 p.m.
14 THURSDAY...	LONDON: Hospitals Committee, 1.15 p.m. LONDON: Joint Hospitals Committee, 3 p.m. LONDON: Metropolitan Counties Branch Council, 5 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch.* REIGATE DIVISION, *South-Eastern Branch*, Annual Meeting, White Hart Hotel, 5.30 p.m.; Dinner, 7 p.m.
15 FRIDAY ...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Executive Committee, 8 p.m.
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
20 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Annual Meeting, Cardiff.
21 THURSDAY...	LEIGH DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Co-operative Rooms, Ellesmere Street, 8.30 p.m.
22 FRIDAY ...	METROPOLITAN COUNTIES BRANCH, Annual Dinner, Imperial Restaurant, Regent Street, W., 7.30 p.m.
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	
27 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Hotel Mont Dore, Bournemouth. LEICESTER AND RUTLAND DIVISION, *Midland Branch*, Annual Meeting, Leicester Infirmary, 4 p.m.
28 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Annual General Meeting, followed by Supper, Great Eastern Hotel, 9 p.m. LINCOLN DIVISION, *Midland Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.
29 FRIDAY ...	TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Prince of Wales Hospital, Tottenham, 4.30 p.m.
30 SATURDAY...	
31 Sunday ...	
JUNE.	
1 MONDAY ...	
2 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m.
3 WEDNESDAY	
4 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of Hospital, Altrincham, 4.50 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7 p.m.
5 FRIDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m.
6 SATURDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 16TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

PROVISIONAL AGENDA

FOR

Annual Representative Meeting

TO BE HELD IN

SHEFFIELD

ON

JULY 24th, 1908, and following days (as may be necessary).

The Annual General Meeting is fixed for July 24th, 1908, at 3.0 p.m., to be immediately followed by the Annual Representative Meeting.

ORDER OF BUSINESS.

1.

A. Receive the return of the election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives, under Article XXX and By-law 19.

2.

B. Adopt Standing Orders.

The Standing Orders as adopted at Exeter will be found appended (see p. 273).

Notice has been given of the following motions for amendment:

AMENDMENTS TO STANDING ORDERS.

3.

Receive Report of the Organization Committee pursuant to the following instruction of the Representative Meeting at Exeter:

Minute 324.—That the Organization Committee be requested to prepare for the consideration of the Meeting amendments of the Standing Orders, to facilitate the reception and consideration of the Reports of Committees.

REPORT OF ORGANIZATION COMMITTEE ON STANDING ORDERS OF REPRESENTATIVE MEETING.

THE Organization Committee has considered the following instruction of the Annual Representative Meeting at Exeter, namely:

> 324. That the Organization Committee be requested to prepare for the consideration of the Meeting amendments of the Standing Orders, to facilitate the reception and consideration of the Reports of Committees.

The Committee recommends that the present Standing Order III, 4, of the Representative Meeting, "Procedure as to Presentation of Reports," be deleted, and the following Standing Orders adopted:

STANDING ORDERS AS TO RECEPTION OF REPORTS.

Previous Notice.

Subject as hereinafter provided, no Report by the Council or by a Committee to the Representative Meeting shall be considered by the Meeting unless it shall have been sent to the Divisions and published in the JOURNAL at least one month before such Meeting. The exceptions to this rule shall be:

(*a*) That the Council, and such Standing Committees, if any, as report direct to the Representative Meeting, shall submit, in addition to their Annual Report, a Supplementary Report dealing with those matters of importance, arising subsequent to the issue of the Annual Report of the Council, or of such Committee, to the Representative Meeting, in which action has been taken, or action by the Representative Meeting is recommended.

(*b*) That any special Committee appointed by the Representative Meeting shall report in accordance with the terms of the instruction given to such Committee by the Meeting.

Form of Reports.

Reports of Council and Reports, if any, of Standing Committees, to the Representative Meeting shall comprise the following:

(*a*) Reports with specific recommendations upon all matters in which the Council or Committee considers that action should be taken involving a new declaration of policy or expenditure not already authorized.

(*b*) A short Report of all action taken by the Council or Committee in accordance with instructions of the Meeting.

(*c*) A list of matters under consideration but not completed.

Presentation of Reports.

The Report of the Council or of a Committee shall be presented by the Chairman, or, in his absence, by a member, of the body submitting such Report, who shall move

(1) That the Report be received.

(2) That the Recommendations, if any, be adopted.

(3) That the rest of the Report be approved.

The adoption of each Recommendation shall be the subject of a separate motion. The approval of the rest of the Report shall be moved as a whole, unless the Chairman rule or the Meeting resolve that the approval of each paragraph, or of any specified paragraph, be the subject of a separate motion.

Amendments and Riders.

1. To a motion that a Report be received, no amendment shall be moved.

2. To a motion that a Recommendation be adopted, amendments may be moved.

3. To a motion that a Report, or a specified paragraph of a Report, be approved, an amendment may be moved to the effect that the Meeting do disagree with, or do refer back to the Committee, any specified portion thereof, or that with reference thereto the Meeting do express an opinion in terms stated.

NEW STANDING ORDER.

The Committee also recommends the addition of a Standing Order as follows:

References to Central Executive.

Each motion or amendment which is of the nature of an instruction or reference to any central executive body, other than a Committee specially appointed by the Representative Meeting, shall be moved in the form of an instruction or a reference to the Council.

4.

By the Westminster Division (Metropolitan Counties Branch):

That no business shall be discussed by the Representative Meeting nor votes taken upon important questions unless they appear upon the Agenda of such meeting. The Agenda of all Representative Meetings shall be submitted to the Divisions at least one month prior to the assembling of a Representative Meeting.

(*Supplement*, March 28th.)

5.

C. Receive the Annual Report of the Council, presented under By-law 35, and consider motions relating thereto.

ANNUAL REPORT OF COUNCIL, 1907-8.

6

D. Receive the Financial Estimate presented by the Council under By-law 35, and consider motions relating thereto.

7.

E. Receive Special Report of Council on the revision of the draft Charter prepared pursuant to Minute 368 of the Special Representative Meeting of May 30th, 1907, as follows—namely:

That the draft Charter, Ordinances, and By-laws, as drafted by the Organization Committee and amended by the Meeting, subject to such alterations, if any, as may be required as the result of a Referendum, if such be taken by the Council, and subject to such changes, if any, as the Council may make in order to meet the special requirements of the Colonial Branches, be referred to Counsel for final revision and placed before a Representative Meeting for final confirmation at the earliest possible date.

SPECIAL REPORT OF COUNCIL ON REVISION OF DRAFT CHARTER.

(The report will be published in the *Supplement* of May 23rd.)

8.

F. Consider draft Charter, Ordinances, and By-laws submitted by the Council in accordance with Special Report.

G. Consider Notices of Motion arising out of the draft Charter, Ordinances, and By-laws.

9.

Federations of the Branches.

By the Wandsworth Division (Metropolitan Counties Branch):

That should Counsel consider it necessary, in order to allow of the formation and recognition of Federations of Branches at Home and in the Colonies as part of the constitution of the Association, a clause be inserted in the Charter or Ordinances.

(*Supplement*, March 28th.)

10.

Voting in the Representative Meeting.

By the Wandsworth Division (Metropolitan Counties Branch):

That Ordinances 15, 16, and 17 of Draft Charter be so amended as to include the following:

That in order to make any resolution effective under Ordinances 15, 16, and 17, (*a*) An attendance of at least two-thirds of the accredited Representatives should be necessary. (*b*) A majority of two-thirds of the votes taken on a vote by card should be necessary. (*c*) An attendance of at least two-thirds of the members of the Central Council should be necessary at any meeting called to consider any such question; with (*d*) a majority of two-thirds of the votes taken on a vote by card of such meeting of the Council. (*e*) The Central Council should hold such meeting within twenty-four hours of the resolution being passed by the Representative Body, and must then decide whether they will refer the subject for reconsideration, which must be done within twenty-four hours of coming to such a decision, or whether they will accept it as a decision of the Association. (*f*) If the question is referred, and the subject-matter of such referred resolution has been duly published not less than two months previously, it should only be necessary, in order that the resolution be carried and become a decision of the Association, for conditions (*a*) and (*b*) to have been again fulfilled at the subsequent Representative Meeting. (*g*) If the subject-matter of such referred resolution has *not* been duly published not less than two months previously, and on reference to the Representative Body it is again carried, conditions (*a*) and (*b*) being fulfilled, then the Central Council should meet again within seven days and decide if they will take a Referendum or allow the resolution to become a decision of the Association, conditions (*c*) and (*d*) having to be fulfilled by the Central Council if they decide on a Referendum. (*h*) If a Referendum is taken, the report from Divisions outside the United Kingdom should be by cablegram duly certified by the President of the meeting at which the vote is taken.

(*Supplement*, March 28th.)

11.

By-law 38.

By the Wandsworth Division (Metropolitan Counties Branch):

(1) That the members elected to represent the Royal Navy, Army, and Indian Medical Services should be elected by the Representative Body on the recommendation of the Central Council and for such period not exceeding three years as the Central Council may decide.

(ii) That the Central Council should consist of the following sets of members: (*a*) Six *Ex-officio* members, (*b*) Three Service members, (c) Twenty-four Home members elected by Grouped Branches, (*d*) Twelve Home members elected by Grouped Representatives, and (*e*) Eight Colonial members.

(iii) That there should be the following Grouping of Branches, with the accompanying Representation on the Central Council.

Group.	Number of Members.	Branches Included. No.	Branches Included. Names.	Number of Divisions Included.	Number of Representatives Returned.	Central Council. Present Seats.	Central Council. To be Returned by Grouped Branches.	Central Council. To be Returned by Grouped Representatives.
Scottish	1,885	9	Aberdeen, Border Counties, Dundee, Edinburgh, Fife, Glasgow, Northern Counties, Perth, Stirling	24	21	8	4	1
Irish	908	5	Connaught, Leinster, Munster, South-Eastern, Ulster	22	10	5	4	1
Welsh	838	3	North, Mid-Wales, South	9	9	4	*1	1
Northern ...	802	2	North of England, North Lancashire	19	11	2	1	1
Lancashire and Cheshire	1,627	1	—	30	23	4	2	1
Yorkshire ...	792	1	—	10	8	2	1	1
Eastern	716	3	Cambridge, East Anglia, East York	13	8	2	1	1
Midland	1,490	4	Birmingham, Midland, South Midland, Staffordshire	19	14	5	2	1
Metropolitan ...	2,684	1	—	15	14	5	4	1
South-Eastern ...	1,258	1	—	20	12	3	1	1
Southern... ...	717	2	Southern, Oxford	10	7	3	1	1
Western	713	4	Bath, Gloucester, W. Somerset, Worcester	7	6	3	1	1
South-Western...	662	2	South-Western, Dorset	8	6	3	1	
Australian ...	1,327	5	S. Australia, W. Australia, Sydney, Melbourne, Brisbane	—	1	2	1	—
Canadian ...	1,339	6	Halifax, Montreal, St. John, Saskatchewan, Toronto	—	—	1	1	—
Indian	401	4	Bombay, Colombo, South Indian and Madras, Burmah	—	—	2	1	—
Mediterranean...	199	3	Egyptian, Gibraltar, Malta and Mediterranean	—	—	1	1	—
New Zealand ...	325	1	—	6	—	—	1	—
South African ...	450	6	Cape of Good Hope (Eastern Prov.), Border, Griqualand West, Cape of Good Hope (Western Prov.), Natal, Transvaal	—	1	1	1	—
East Indian ...	185	2	Hong-Kong (with China), Malaya	—	—	1	1	—
West Indian ...	163	6	Barbados, Bermuda, British Guiana, Jamaica, Leeward Isles, Trinidad (with Tobago)	—	—	—	1	—

* It considered desirable Wales to have 2, when Western and South-Western will be grouped to elect One member.

(*Supplement*, March 28th.)

H. Receive additional Reports of the Council (if any) in the Order in which the Council shall submit them for consideration, and consider motions relating thereto.

I. Receive Reports of Committees of the Association.

I.—REPORTS SUBMITTED PURSUANT TO SPECIAL INSTRUCTIONS OF THE REPRESENTATIVE MEETING.

12.

Receive Report of the Special Finance Inquiry Committee submitted pursuant to the following instructions of the Annual Representative Meeting, 1906.

Minute 30*a*.—That the Annual Representative Meeting appoint a Committee to inquire into the financial position of the Association, with a view to such economies of administration as are consistent with maintaining and developing the valuable work now being done for the profession.

Minute 32.—That the Committee be formed of the following:—The Chairman of Representative Meetings, the Chairman of Council, the Treasurer (*ex officio*), and of seven Representatives of Divisions, elected by and from the Representative Meeting (five Members to form a quorum), and that these be selected in the manner provided for election of the Medico-Political and Ethical Committees.

Minute 42.—That the Committee of Inquiry send its Report as soon as completed to the Divisions and to the Representatives. (An amendment that the Report be published in the SUPPLEMENT was put to the Meeting and lost (Minute 40).)

Minute 189.—That it be an instruction to the Finance Committee of Inquiry, in their deliberations upon the expenditure required for the maintenance and development of the present work of the Association, to consider what should be the duties of the General and Medical Secretaries in relation to that work, and the staff required in each department, and report to a Special Representative Meeting, or at the earliest opportunity.

and of the following instructions of the Annual Representative Meeting held at Exeter, 1907:

248. That the Finance Inquiry Committee be reappointed for the purpose of amending the Report, in accordance with the decisions of the Meeting, incorporating the Minority Report, and transmitting the Recommendations to the Divisions and the Council respectively.

249. That the question of what, if any, parts of the Finance Inquiry Report be not published in the JOURNAL, be left to the Finance Inquiry Committee.

ANNUAL EXHIBITION.

250. That the proposal with regard to the Annual Exhibition contained in Minute 209 do not take effect until after the Annual Meeting at Sheffield.

Minute 209. That the Annual Exhibition being a central undertaking of the Association, the profit, if any, of the Exhibition go to the funds of the Association; and that a definite grant from the funds of the Association be made to the local Committee, as a contribution to the expenses of the Annual Meeting.

REPORT OF THE SPECIAL FINANCE INQUIRY COMMITTEE.

(The Report was published in the *Supplement* of May 2nd.)

13.

Receive Report of the Organization Committee on the subject of Capitation Grants.

REPORT OF THE ORGANIZATION COMMITTEE TO THE ANNUAL REPRESENTATIVE MEETING, 1908,

ON THE SUBJECT OF CAPITATION GRANTS, PURSUANT TO INSTRUCTIONS OF THE ANNUAL REPRESENTATIVE MEETING AT EXETER.

(The Report was published in the *Supplement* of April 25th.)

14.
Receive Report of the Central Ethical Committee on the Ethics of Medical Consultation.

REPORT OF CENTRAL ETHICAL COMMITTEE ON THE ETHICS OF MEDICAL CONSULTATION.

(The Report was published in the *Supplement* of May 9th.)

15.
Receive Report of the Central Ethical Committee on the definition of the term "Hospital."

REPORT OF THE ETHICAL COMMITTEE ON THE DEFINITION OF THE TERM "HOSPITAL."

(The Report was published in the *Supplement* of February 22nd.)

II.—REPORTS UNDER STANDING INSTRUCTIONS.

16.
J. Receive Annual Report of Medico-Political Committee, and consider motions relating thereto.

MEDICO-POLITICAL COMMITTEE.

ANNUAL REPORT TO THE REPRESENTATIVE MEETING FOR THE YEAR 1907-8.*

17.
K. Receive Annual Report of the Ethical Committee, and consider motions relating thereto.

ETHICAL COMMITTEE.

ANNUAL REPORT TO THE REPRESENTATIVE MEETING FOR THE YEAR 1907-8.*

L. Consider any motions placed upon the Agenda of the Meeting by which it is proposed to make By-laws or to alter or repeal existing By-laws.

AMENDMENTS OF BY-LAWS.

18.

By-laws 23 to 29 and 31 and 32.

Composition and Mode of Election of the Council.

By the GATESHEAD DIVISION (North of England Branch):

That having regard to the repeated decisions of the Representative Meeting, now confirmed by a large majority upon the Referendum, that the mode of election of the Council should be altered so as to provide for the reduction of the total membership of, and some representation of the Representative Meeting on, the Council, this Division proposes that the present By-laws of the Association as to the composition and mode of election to the Council be amended so as to conform with those on the same subject appended to the Draft Charter, as settled by resolutions of the Representative Meeting in May, 1907, and since confirmed on Referendum.

(*Supplement*, April 18th.)

19.

By-law 24 (1).—Eligibility as Representative.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

By-law 24 (1): Add at end, "No person shall be eligible for election as a Representative who is not a member of the Association at the date of his nomination."

(*Supplement*, March 28th.)

Existing By-laws 23 to 29, 31 and 32.

COUNCIL.

23. *Composition.*

The Council shall come into office on the first day of the Annual Meeting, and shall be composed of the Officers and ex Officer named as Members of the Council, *ex officio*, in Article XXXVIII of the foregoing Regulations, together with the Members duly elected or appointed by the Branches and other bodies authorized by the By-laws to elect or appoint Members of the Council, and of Members annually co-opted by the Council in manner hereinafter provided. The Council may also elect, if it think fit, at any of its meetings all or any one of the following, namely: One medical officer on the active or retired list of each of the following services: The Royal Navy Medical Service, the Royal Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

24. *Branch Representation.*

Any Branch, or group of Branches, having an aggregate membership of not less than 200 may elect one Member of Council, and any Branch or group of Branches having an aggregate membership of not less than 400 may elect two Members of Council, and an additional member for each complete 600 Members in excess of 400. Branches in the United Kingdom having less than 200 Members shall be grouped for this purpose with neighbouring Branches, unless in the opinion of the Council the special conditions of any such Branch justify the grant of separate representation. The grouping of Branches not within the United Kingdom for the purpose of electing Members of Council shall be determined by the Council, provided that the total number of Members of Council whom such Branches are entitled to elect shall not be less in proportion to the total membership thereof than those elected by the Branches in the United Kingdom.

25. *Election of Representative Members of Council by Branches.*

The elective Members of Council shall be elected by voting papers sent to each elector by post. Candidates may be nominated by any Division of a Branch, or by such number of Members of the Branch as the Rules of the Branch may prescribe. Nominations shall be sent, in writing, to the Secretary of the Branch on or before an appointed day, of which not less than fourteen days' notice shall have been given by him in the BRITISH MEDICAL JOURNAL. The names of all candidates so nominated shall be placed in a list which it shall be the duty of the Secretary to circulate to every Member of the Branch.

In any case in which Branches are grouped for representation on the Council the above provisions shall be carried out as though the Branches so grouped formed one Branch, and it shall be the duty of the Secretary of the Branch having the largest membership to carry out the requirements of the By-law.

26. *Term of Office of Branch Representatives (United Kingdom).*

Each Member of Council elected by a Branch in the United Kingdom shall be elected for one year, and at the end of that time shall be eligible for re-election unless he

* The Annual Reports of the Medico-Political and Ethical Committees will be published as soon as possible after the next Quarterly Meetings of the Committees to be held on June 10th and 12th respectively, probably in the *Supplement* for June 20th.

have served as such Member of Council for six years successively, in which case he shall for one year be ineligible for election as such Member of Council.

27. *Term of Office of Members elected by Branches, not within the United Kingdom, or by the Services.*

Each Member of Council elected by a Branch not in the United Kingdom, or by the Royal Navy Medical Service, the Army Medical Service, or the Indian Medical Service, shall be elected for such period, not exceeding three years, as the electing Branch or Body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as a representative Member of Council exceed eight years.

28. *Qualification.*

No person shall be eligible for election as a Member of Council by a Branch in the United Kingdom unless at the time of his election he shall be a Member of such Branch. The eligibility for election as a Member of Council by a Branch not in the United Kingdon, shall be such as may be determined by the Rules of the said Branch, and if no such Rule shall be adopted the regulations as to eligibility shall be the same as for the Branches in the United Kingdom.

29. *Election Return.*

The return of the election of each elective Member of Council shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch by which he is elected not less than twenty-eight days prior to the Annual General Meeting of the Association.

* * * * * * *

31. *Vacancies.*

Any casual vacancy occurring in the Council, not less than four months before the Annual General Meeting, may be filled up by any Branch or Body the representation of which may have become vacant, and such election shall be conducted in the same manner as the Annual election, or in respect of election by a Branch, in such other manner as may be prescribed by the Rules of the said Branch. Any person so chosen shall retain his office so long only as the member in respect of whom such casual vacancy may have occurred would have retained the same.

32. *Co-opted Members.*

The Council shall have power each year to add to its own number Members in the proportion of one for every complete ten representative Members elected to serve on the Council for that year. Each such co-opted Member shall vacate such office at the close of the last meeting of the Council for the year, but shall be eligible for re-appointment, unless he shall have been appointed in each of the last five years, in which case he shall be ineligible for the ensuing twelve months.

20.

Standing Committees.

By-laws 39, 40, 41, and 43.

By the DUNDEE BRANCH:

That the By-laws relating to Standing Committees, namely, 39, 40, 41, and 43, be amended in accordance with the provisions of the Draft Charter, Ordinances, and By-laws, as approved by the Association on Referendum.

(*Supplement*, April 25th.)

21.

By-law 41.

Standing Committees.

By the COUNCIL OF THE ASSOCIATION:

That By-law 41 be amended to read as follows:

41.—STANDING COMMITTEES.

Nevertheless, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Schedule to these By-laws (*for proposed Schedule see pp. 270, 271*). Any (elected or appointed) Member of a Standing Committee who shall fail to attend three successive meetings without satisfactory explanation to the Chairman of the Committee shall be deemed to have resigned his Membership of such Committee, and the Committee shall fill the vacancy thus created. All Standing Committees shall report to, and shall act under the instruction of, the Council.

(*Supplement*, April 25th.)

Existing By-laws.

39. *Vice-Presidents.*

The Council shall have power to nominate for election by the Annual General Meeting those Members who by their services to the Association are in the opinion of the Council worthy of election as Vice-Presidents. Such election shall be for life, unless any appointment shall be subsequently cancelled by a vote of the Association in General Meeting assembled on a motion brought forward by the Council. No special privilege shall attach to the office of Vice-President.

COMMITTEES.

40. *Appointment.*

Subject to the Regulations and By-laws of the Association, the Council and the Representative Meeting shall respectively have power to appoint Committees with such powers as may to them seem necessary or convenient, and to fix the quorum thereof, and lay down rules for regulating the proceedings of such Committees.

41. *Standing Committees.*

Nevertheless, there shall be Standing Committees as follow:

(1) *Journal and Finance.*

A Journal and Finance Committee not exceeding fifteen in number (five to form a quorum) shall be appointed by the Council, which shall, *inter alia*, examine into the general working of the Office and of the JOURNAL, and certify the quarterly accounts prior to their being presented to the Council.

(2) *Premises.*

A Premises Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters connected with the management of the House Property of the Association.

(3) *Public Health.*

A Public Health Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall specially be referred all questions relating to Public Health and the Poor-law Medical Service.

(4) *Colonial.*

A Colonial Committee not exceeding nine in number (three to form a quorum) shall be appointed, to which shall be referred all questions specially relating to the Branches not in the United Kingdom. Of such Committee five members shall be appointed by the Representatives of these Branches on the Council, and two by the Council.

(5) *Naval and Military.*

A Royal Naval and Military Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Medical Organization of the Auxiliary Forces.

(6) *Medico-Political.*

A Medico-Political Committee shall be appointed consisting of sixteen members (seven to form a quorum) which shall deal with all matters involving the public relations of the Profession not specially referred to other Committees, and shall be composed of the Chairman of Representative Meetings, the Treasurer, *ex officio*, and twelve other Members, all of whom shall be appointed by the Council, until the first Representative Meeting, and thereafter six of such Members shall be appointed by the Council and six by the Representative Meeting. Such Committee to report to the Council and to the Representative Meeting, to act under the Council, and to have the services of a salaried officer.

(7) *Ethical.*

An Ethical Committee (otherwise designated the Central Ethical Committee) shall be appointed consisting of twelve members (five to form a quorum) which shall advise the Council on proposed Rules of Divisions and

SCHEDULE OF STANDING COMMITTEES REFERRED TO IN THE PROPOSED AMENDED BY-LAW 4.

Name of Committee.	Appointed Members.			Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8
(1) Journal and Finance	..	Not exceeding 11.	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To examine into the general working of the office and of the JOURNAL, and to certify the quarterly accounts prior to their being presented to the Council.
(2) Premises ..	..	Not exceeding 5.	..	Ditto.	..	3	To consider and report to the Council upon the management of the house property of the Association.
(3) Public Health..	..	Not exceeding 7.	..	Ditto.	..	3	To consider questions relating to Public Health and the Poor Law Medical Service.
(4) Colonial ..	..	Not exceeding 2.	5 appointed by Representatives of Colonial Branches on Council.	Ditto.	..	3	To consider questions specially relating to the Branches not in the United Kingdom.
(5) Naval and Military.	..	Not exceeding 7.	..	Ditto.	..	3	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Territorial Medical Corps.
(6) Medico-Political	6	6	..	Ditto.	..	7	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
(7) Ethical (otherwise designated Central Ethical)	5	5	..	Ditto.	..	5	To advise the Council upon all questions connected with Rules of Divisions and Branches relating to professional conduct; to investigate and report to the Council upon the cases of members whose conduct is to be considered by the Council on the representation of Branches, pursuant to Article XLIV; and, generally, to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between members of the Association or members of the profession, or, at its discretion, to refer any question or questions arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation, or for adjudication, subject to an appeal to the Central Ethical Committee. Any member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Central Ethical Committee and the findings of that Committee, subject to such appeal, and the findings of the Council upon an appeal, shall be binding upon the parties and upon all members of the Association.
(8) Hospitals ..	..	Not exceeding 11.	..	Ditto.	..	5	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities.

SCHEDULE OF STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members. Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.	Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
1.	2.	3.	4.	5.	6.	7.	8.
(9) Science.. ..	..	10	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To advise, and, where so directed, act for the Council in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions and matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
(10) Organisation ..	..	7	..	Ditto.	..	3	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions of the boundaries and area, the grouping for electoral purposes, and the Rules, other than those relating to ethical matters, of Divisions and Branches and combinations thereof, and the Ordinary and Supplementary Grants made to such bodies by the Council pursuant to the By-laws, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organisation. The Committee shall have power to add to its number for special purposes, a limited number of Members specially qualified to assist in its work.
(11) Scottish ..	..	..	..	Ditto	One Secretary of each Scottish Branch. All the Members of Council who represent Scotland.	5	To consider matters specially concerning Scotland. It shall have an Honorary Secretary resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
(12) Irish	..	..	By each Irish Branch 1 Member, or if Secretary of Branch is a Member of Council 2 Members, any such Member appointed by the Leinster or Ulster Branch to be a practitioner not resident in Dublin or Belfast.	Ditto	One Secretary of each Irish Branch. All the Members of Council who represent Ireland.	5	To consider matters specially concerning Ireland. It shall have an Honorary Secretary resident in Ireland, and shall meet at such place and time as the Committee may itself direct. The Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

Branches relating to professional conduct, shall investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council, shall adjudicate in cases of disputes on ethical questions referred to it by Members of the Association, and generally shall advise, and, where so directed, act for the Council, on all questions of Professional conduct. Until the first Representative Meeting such Committee shall be appointed by the Council, and thereafter five members of such Committee shall be appointed by the Council and five by the Representative Meeting. The Committee shall have the services of a salaried officer.

(8) *Hospitals Committee.*

A Hospitals Committee shall be appointed by the Council to carry out such duties as the Council shall prescribe or direct.

(9) *Science Committee.*

A Science Committee, consisting of fourteen members, shall be appointed by the Council, who shall advise, and where so directed act for, the Council in all matters, not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants, or Medals given by the Association, or under trusts undertaken by the Association, the assistance of the officers of the Sections at the Annual Meeting, the arrangement of Committees for special scientific work, the encouragement and assistance of the scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt, for the consideration of the award of Scholarships, Grants, and Medals, members, not exceeding four in number, specially qualified to assist in its work.

(10) *Organization.*

An Organization Committee shall be appointed by the Council, not exceeding nine in number (three to form a quorum), which, subject to the directions of the Council, shall deal with all questions of the boundaries or area of Divisions and Branches, and the Rules thereof other than those relating to ethical matters, and advise the Council thereon, and shall exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions or Branches in the strengthening of their organization. This Committee shall have power to add to its number, for special purposes, a limited number of Members specially qualified to assist in its work. This Committee shall have the services of a salaried officer.

(11) *Scottish Committee.*

A Scottish Committee, consisting of one Secretary from each Scottish Branch and the Scottish Members of the Central Council. It shall have a Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Scotland.

(12) *Irish Committee.*

An Irish Committee, consisting of the Irish Members of the Central Council, one Secretary from each Irish Branch, one Member elected by each Branch, who in the case of the Leinster and Ulster Branches, shall be a Member not resident in Dublin or Belfast and not more than three Members co-opted by the Committee to represent districts which are not otherwise represented thereon. If the Secretary of any Branch be also a Member of the Central Council, the said Branch shall have power to elect an additional Member of the Committee. It shall have an Honorary Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Ireland.

(13) *Attendances at Committees.*

Any member of a Standing Committee of the Association failing to attend three successive meetings without satisfactory explanation of the Council shall be deemed to have resigned, and the Committee shall forthwith fill the vacancy.

* * * * *

43. *Salaried Officers.*

All salaried officers shall be appointed by the Council, and, subject to the Articles and By-laws, shall hold office for such period and perform such duties and receive such remuneration as the Council may from time to time determine.

M. Consider motions placed upon the Agenda of the Meeting by Divisions or Branches, relating to the honour and interests of the Medical Profession or of the Association.

I.—NOTICE AFFECTING THE ADMINISTRATION OF THE ASSOCIATION.

22.

Annual List of Members.

By the ST. PANCRAS AND ISLINGTON Division (Metropolitan Counties Branch):

That it be an instruction to the Council of the Association to publish the Annual List of Members of the Association (By-law 6) in such a way that a copy who desires to possess the same. may be obtainable by every member

(*Supplement*, March 28th.)

II.—NOTICE AFFECTING THE WORK OF THE ASSOCIATION.

23. HOSPITALS.

Putney Hospital.

By the RICHMOND DIVISION (Metropolitan Counties Branch):

That the Representative Body of the British Medical Association, having been informed that after a canvass of the members of the medical profession practising within the near neighbourhood of the proposed Putney Hospital site, as to their acceptance of the subjoined resolutions,* the result was a unanimous approval in Fulham (51 signatures), as also in Barnes, Mortlake and East Sheen (16 signatures) and in Southfields (11 signatures), and that in Putney 38 approved out of 45, cordially approves of these resolutions, as also of the declaration signed, and considers that any registered medical practitioner who acts otherwise than therein indicated will be doing so in a manner injurious to the interest of the medical profession.

(*Supplement*, March 28th.)

24.

N. Elect Chairman of Representative Meetings for 1908-9.

25.

O. Elect Deputy Chairman of Representative Meetings for 1908-9.

ELECTION OF COMMITTEES.

26.

P. Elect six Members of the Association in accordance with By-law 41 (6) to serve on the Medico-Political Committee for the ensuing year.

[*By-law* 41.

(6) *Medico-Political Committee.*

A Medico-Political Committee shall be appointed consisting of sixteen members (seven to form a quorum) which shall deal with all matters involving the public relations of the Profession not specially referred to other Committees, and shall be composed of the Chairman of Representative Meetings, the Treasurer, *ex officio*, and twelve other Members, all of

* See *Supplement*, March 28th, page 131.

whom shall be appointed by the Council, until the first Representative Meeting, and thereafter six of such Members shall be appointed by the Council, and six by the Representative Meeting. Such Committee to report to the Council and to the Representative Meeting, to act under the Council, and to have the services of a salaried officer.]

27.

Q. Elect five members of the Association in accordance with By-law 41 (7) to serve on the Ethical Committee for the ensuing year.

[*By-law 41.*

(7) *Ethical.*

An Ethical Committee (otherwise designated the Central Ethical Committee) shall be appointed consisting of twelve members (five to form a quorum) which shall advise the Council on proposed Rules of Divisions and Branches relating to professional conduct, shall investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council, shall adjudicate in cases of disputes on ethical questions referred to it by Members of the Association, and generally shall advise, and, where so directed, act for the Council, on all questions of Professional conduct. Until the first Representative Meeting such Committee shall be appointed by the Council, and thereafter five members of such Committee shall be appointed by the Council and five by the Representative Meeting. This Committee shall have the services of a salaried officer.]

28.

R. Elect other Committees (if any).

29.

S. Any other business.

30.

T. Confirm Minutes.

By Order, J. SMITH WHITAKER,
Medical Secretary.

STANDING ORDERS

RELATIVE TO

BUSINESS AT REPRESENTATIVE MEETINGS

(As adopted at Exeter, 1907.)

I.—ORDER OF BUSINESS.

(A) *Annual Representative Meeting.*

Except as may be otherwise determined in the manner prescribed by the Standing Orders, the order of business shall be as follows:

1. Election Returns.—Receive the return of the Election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives under Article XXX.

2. Standing Orders.—Adopt Standing Orders.

3. Annual Report of Council.—Receive the Annual Report of the Council, presented under By-law 35, and consider motions relating to the adoption thereof in whole or in part.

4. Financial Estimate.—Receive the Financial Estimate presented by the Council under By-law 35, and consider motions relating to the adoption thereof in whole or in part.

5. Special Reports of Council.—Receive Special Reports of the Council, if any, in the order in which the Council shall submit them for consideration, and consider motions for the adoption thereof in whole or in part.

6. Report of Medico-Political Committee.—Receive the Report of the Medico-Political Committee, and consider motions for the adoption of the same in whole or in part.

7. Report of Ethical Committee.—Receive the Report of the Ethical Committee, and consider motions for the adoption of the same in whole or in part.

8. Reports of other Committees (if any).—Receive Reports of other Committees, if any, and consider motions for the adoption of the same in whole or in part.

9. Consider By-laws.—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by which it is proposed to make By-laws or to alter or repeal existing By-laws.

10. Consider other Motions by Divisions or Branches.—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by Divisions or Branches, relating to the honour and interests of the Medical Profession or of the Association.

11. Election of Officers.—Elect a Chairman of Representative Meetings and a Deputy-Chairman of Representative Meetings for the year.

12. Election of Members of Medico-Political and Ethical Committees.—Elect at such time, before the conclusion of the third day's proceedings, as the Chairman may, pursuant to Standing Order III 10, prescribe:

(*a*) Six Members of the Association to serve on the Medico-Political Committee for the ensuing year.

(*b*) Five Members of the Association to serve on the Ethical Committee for the ensuing year.

(*c*) Such members of other Committees, if any, as it falls to the Representative Meeting to elect.

13. Amendment of Standing Orders.—Consider proposed amendments of Standing Orders, other than those relating to the order of business.

14. General Order of Daily Sessions: Confirmation of Minutes.—The matters described in the foregoing Clauses shall be considered in the order therein prescribed, or as otherwise duly determined, from day to day until the completion thereof or until the expiration of four days from the first day of the Meeting, whichever shall first occur; provided that at each daily session after the first, the Meeting shall, before proceeding to the consideration of the matters aforesaid, (*a*) confirm the Minutes of the Proceedings of the previous daily session; (*b*) consider motions, if any, relating to the order of business of the day. At the conclusion of the business of the last daily session the Meeting shall confirm the Minutes thereof for presentation to the Council.

15. Hours of Daily Sessions.—All Representative Meetings not concluded by 6.30 p.m. shall stand adjourned either to 8 p.m. of the same day, or to the next day, as may be decided by a show of hands. All such Meetings shall stand adjourned at 10 p.m.

16. Varying Order of Business.—The order of business may be varied, either at the commencement or after the expiration of two hours from the commencement of any daily session, by the vote of two-thirds of those present and voting.

17. Precedence of Motions of which Notice Given.—Motions and amendments of which notice shall have been given to the Secretary of the Meeting in time for them to be circulated with the Minutes of the previous day's proceedings, shall have precedence, in the order in which such notice shall have been given, over those relating to the same

subject, or otherwise having a like claim to precedence in the order of business, of which such notice has not been given.

18. Motions on the Same Subject.—If two or more of the motions placed on the Agenda of the meeting by the Council and by Divisions and Branches shall appear to the Chairman to relate to the same subject he shall ascertain the will of the meeting in respect of the consideration of one of such motions as an original motion, and of the others as amendments thereto, in such order as the meeting may determine.

19. Motions on Subjects dealt with in Reports.—If a recommendation of the Council or of a Committee, or an amendment moved that a specified portion of a report of the Council or of a Committee be not approved, shall appear to the Chairman to relate to the same subject as a motion placed upon the Agenda by the Council or by a Division or Branch, the Chairman shall ascertain the will of the meeting as to the consideration of the said motion as an amendment to the adoption of the said recommendation, or to the approval of the said report.

20. Resolutions Involving Special Expenditure.—Every Resolution involving special expenditure shall, before final adoption by the Representative Meeting, be remitted to the Finance Committee for report to a later Session.

(B).—*Special Representative Meetings.*

1. Read Authority for Convening Meeting.—Read the Resolution of Council, or the requisition from Divisions, in pursuance of which the Meeting is convened.

2. Notice of Substitutes.—Receive notices, if any, of the appointment of substitutes for Representatives.

3. Order of Business.—If the Meeting is convened to consider more than one matter, determine the order in which such matters shall be considered.

4. Special Business.—Consider the matters which the Meeting is specifically convened to consider, in order determined by the Meeting.

5. Minutes.—Confirm the minutes of the Meeting for presentation to the Council.

II.—COMPOSITION AND ARRANGEMENT OF THE MEETING.

1. Composition.—The persons constituting the Meeting, hereinafter called members of the Meeting, shall be those duly elected Representatives of Divisions, or substitutes duly appointed under Article XXX and By-law 19, of whose election or appointment the General Secretary shall have received due notice, together with Members of Council for the time being.

2. Arrangement.—Distinctive seats shall be provided for the following groups of persons respectively, namely:

(*a*) Representatives of Divisions.

(*b*) Members of Council who are not Representatives of Divisions or Officers of the Association.

(*c*) Officers of the Association, present in virtue of their office, or at the request of the Meeting, for the assistance thereof.

(*d*) Members of the Association who are not Representatives of Divisions or Members of Council.

(*e*) Reporters representing such journals as may be authorized by the Chairman, subject to the approval of the Meeting.

Withdrawal of Strangers.—It shall be competent at any time for a member of the Meeting to move that persons who are not members of the Meeting be requested to withdraw, or that persons who are not members of the Association be requested to withdraw, but it shall rest in the discretion of the Chairman to submit or not to submit such motion to the Meeting.

III.—PROCEDURE.

1. Temporary Chairman.—In the absence of the Chairman of Representative Meetings, the Deputy-Chairman shall preside; or, if he be also absent, the Chairman of Council or the Treasurer, if present, shall take the chair, and call upon the meeting to appoint a temporary Chairman.

2. Minutes.—Minutes shall be taken of the proceedings of the Meeting, and the same shall be duly entered in a book provided for the purpose. The Minutes of each daily session of the Annual Representative Meeting shall be printed and circulated to the members of the Meeting. Minutes (if) (when) printed in the Daily Journal of the Annual Meeting shall be deemed thereby to have been circulated as required by this order.

3. Attendance.—No Representative shall leave the Meeting without permission obtained personally from the Chairman at the time of leaving. If during any daily session of a Representative Meeting it shall at any time appear to the Chairman that a quorum is not present, the roll shall be called of Representatives appointed to attend the meeting, and those Representatives who are found to be then absent, not having previously obtained leave from the Chairman, shall be deemed to have been absent from the said session. A list of members reported as absent from any daily session or sessions of a Representative Meeting shall be supplied at the close of such meeting to the Chairman and shall by him be transmitted to the Council, together with such explanations of the cause of absence as any members so reported may have furnished to him in writing.

4. Procedure as to Presentation of Reports.—A Report of the Council or of a Committee shall be brought before the Meeting by a motion or motions that the Report be received and approved, and that the recommendations to the Meeting (if any) therein contained be adopted, each such recommendation being made the subject of a separate motion. The Chairman of the body submitting a Report shall if present move the reception and adoption thereof, and of the recommendations contained therein.

5. Procedure as to Other Motions.—Motions placed on the Agenda of the Meeting by the Council shall be brought before the Meeting by the Chairman of Council if present, motions so placed by a Branch shall be introduced by a member of Council elected by the Branch, and motions so placed by a Division shall be introduced by the Representative thereof.

6. Absence of Authorized Mover of Adoption of Report or Other Motion.—In the absence of any member authorized to make any motion referred to in the two last preceding orders, any other member deputed by such member may make such motion on his behalf, and if no member shall have been so deputed, such motion shall be made formally by the Chairman.

7. Seconding Motions.—No seconder shall be required for any of the motions referred to in Sections 4 and 5. All other motions and all amendments shall be required to be moved and seconded.

8. Time Limits of Speeches.—(*a*) A member of the Meeting shall be allowed to speak for fifteen minutes in moving a resolution which does not require seconding, and for ten minutes in moving any other resolution, or any amendment. Except as aforesaid, no speech shall exceed five minutes.

Reducing Time Limit.—(*b*) The Meeting may at any period of any session reduce the time to be allowed to

speakers, whether in moving resolutions or otherwise, during the remainder of such session.

9. Mode of Voting Show of Hands. Only Representatives of Divisions shall vote on any question before the Meeting.

Voting shall be by show of hands, except in the cases following, namely:

Vote by Card.—(*a*) If upon the Chairman proceeding to take the vote of the meeting upon any motion or amendment, any Representative of a Division shall move that the said vote be taken by card, and twenty Representatives rise in their places in support of such motion, the vote shall be taken by card.

Division.—(*b*) If the Chairman, after taking a vote by show of hands upon any motion or amendment, shall be of opinion that the numbers of members voting for and against such motion or amendment are not thereby ascertained with sufficient accuracy, he shall have power to direct that the meeting shall divide upon the said motion or amendment.

10. Election of Committees.—Nominations for election by the Representative Meeting of members of Standing Committees shall be handed in writing to the Secretary of the meeting not later than the termination of the second day's proceedings. Each nomination shall be signed by the nominator and shall contain a declaration that the candidate nominated has agreed to serve. No member shall be eligible for nomination who having been a member of a Standing Committee during the previous year shall have failed to attend at least half the meetings of the Committee for that year. The names of all candidates duly nominated shall be included in a voting paper issued to each voter, and shall be arranged in three lists, one of those residing in England and Wales, one of those residing in Scotland, and one of those residing in Ireland. Each voter shall be entitled to vote for not more candidates than there are members to be elected, and of these not more than two-thirds of the total number shall be those of candidates in the English list, not more than one-fourth in the Scottish list, and not more than one-fourth in the Irish list. In counting the votes the candidates on the English list who have obtained the highest number of votes, being not more than one-half of the total number of members to be elected, the candidates on the Scottish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, and the candidates on the Irish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, shall be deemed to be elected. If any place on the Committee be still vacant, that candidate or those candidates shall be deemed to be elected who shall have obtained the highest number of votes, irrespective of the list in which the name of any such candidate appears. Scrutineers to conduct the election shall be nominated by the Chairman, and the details of the voting shall be placed before and verified by the Chairman before being declared to the Meeting.

IV.—RULES OF DEBATE.

1. Every member shall be seated except the one who may be addressing the Meeting, and when the Chairman rises no one shall continue standing, nor shall any one rise until the Chair is resumed.

2. A member of the Meeting shall stand when speaking, and shall address the Chair.

3. A member who speaks shall direct his speech strictly to the motion under discussion, or to a motion or amendment to be proposed by himself, or to a question of order.

4. A member shall not address the Meeting more than once on any motion or amendment, but the mover of an original resolution may reply, and in his reply shall strictly confine himself to answering previous speakers, and shall not introduce any new matter into the debate; provided always that a Member may speak to a point of order, or, by consent of the Meeting, in explanation of some material part of a speech made by him, which he believes to have been misunderstood.

5. A motion or amendment once made and seconded shall not be altered or withdrawn without the consent of the Meeting.

6. An amendment shall be either—

To leave out words;

To leave out words and insert or add others;

To insert or add words;

or in such form as shall be approved of by the Chairman, provided always that the amendment be relevant to the motion on which it is moved, and be not equivalent to the direct negative thereof.

7. No notice of motion, or amendment to any motion before the Meeting, not already published, shall be considered by the Meeting until a copy of the same with the name of the proposer has been handed in in writing to the Chairman.

8. Whenever an amendment upon an original motion has been moved and seconded no second or subsequent amendment shall be moved until the first amendment shall have been disposed of, but notice of any number of amendments may be given.

9. If any amendment be rejected, other amendments may be moved on the original motion. If an amendment be carried, the amendment or motion as amended shall take the place of the original motion, and shall become the question upon which any further amendment may be moved.

10. If it be proposed and seconded that the Meeting do now adjourn, or that the debate be adjourned, or that the Meeting do proceed to the next business, or that the question be now put, such resolution shall immediately be put to the vote without discussion, except as to the time of adjournment, provided always that the Chairman shall have power to decline to put to the Meeting the motions that the Meeting do proceed to the next business, or that the question be now put.

11. A motion that the Meeting do now adjourn, or that the Meeting do now proceed to the next business, or that the debate be now adjourned, or that the question be now put, shall not be made within a period of one hour after a previous motion to the like effect, unless, in the opinion of the Chairman, the circumstances are materially altered.

12. Smoking shall not be allowed during such time as the Chairman is in the Chair.

V.—SUSPENSION OF STANDING ORDERS.

Any one or more of the Standing Orders, in any case of urgency, or upon motion made on notice given through the Daily Journal, may be suspended at any meeting, so far as regards any business of such Meeting, provided that three-fourths of those present and voting shall so decide.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

At a Meeting of the Council, held, by kind permission of the Metropolitan Asylums Board, London, in their Board Room, on Wednesday, April 29th, 1908, at 2 o'clock in the afternoon,

Present:

Mr. Edmund Owen, LL.D., London, Chairman of Council, in the Chair.

Dr. Henry Davy, Exeter, President.

Dr. J. A. Macdonald, Taunton, Chairman of Representative Meetings.

Dr. Edwin Rayner, Stockport, Treasurer.

Dr. John Ford Anderson, London
Mr. H. A. Ballance, Norwich
Dr. Edgar G. Barnes, Eye
Sir James Barr, M.D., Liverpool
Fleet Surgeon E. J. Biden, R.N., Fareham
Dr. T. R. Bradshaw, Liverpool
Colonel David Bruce, C.B., F.R.S., London (Cape of Good Hope, Eastern Province and Western Province Branches)
Dr. R. C. Buist, Dundee
Dr. W. A. Carline, Lincoln
Mr. Andrew Clark, D.Sc., London
Dr. W. Collier, Oxford
Mr. J. Ward Cousins, Portsmouth
Dr. James Craig, Dublin
Mr. C. F. Cuthbert, Gloucester
Mr. E. J. Domville, Exeter
Mr. A. J. Drew, Oxford
Mr. G. Young Eales, Torquay
Dr. George Eastes, London
Dr. George Edmond, Aberdeen
Mr. C. E. S. Flemming, Bradford-on-Avon
Mr. George Cooper Franklin, LL.D., Leicester
Dr. Joseph J. Giusani, Cork
Dr. Alfred Godson, Cheadle
Dr. Bruce Goff, Bothwell
Dr. David Goyder, Bradford
Dr. G. E. Haslip, London
Dr. Robert McKenzie Johnston, Edinburgh
Colonel C. H. Joubert de la Ferté, I.M.S. ret., Weybridge
Mr. Hugh R. Ker, London
Mr. R. H. Kinsey, Bedford
Mr. F. C. Larkin, Liverpool
Dr. H. L. McKisack, Belfast
Mr. M. A. Messiter, Dudley
Professor J. T. J. Morrison, Birmingham
Dr. T. G. Nasmyth, Edinburgh
Mr. C. H. Watts Parkinson, Wimborne
Dr. Frank M. Pope, Leicester
Dr. H. Jones Roberts, Penygroes
Dr. Lauriston E. Shaw, London
Lieut.-Col. R. J. S. Simpson, C.M.G., London (Natal, Griqualand West Branches)
Dr. Henry Smurthwaite, Newcastle-on-Tyne
Mr. W. D. Spanton, Hanley
Mr. Charles R. Straton, Salisbury
Mr. John Lynn Thomas, C.B., Cardiff
Mr. T. Jenner Verrall, Brighton
Mr. F. E. A. Webb, Cambridge
Dr. Sinclair White, Sheffield
Mr. D. J. Williams, Llanelly
Lieutenant-Colonel E. M. Wilson, C.B., C.M.G., Farnborough

Minutes.

The Minutes of the last Meeting (January 29th, 1908) having been printed and circulated were taken as read and signed as correct.

Resolved: That the same be confirmed.

Apologies.

Read letters of apology for non-attendance from the President-elect, Dr. Brassey Brierley, Dr. James Hamilton, Dr. Munro Moir, Dr. C. G. D. Morier, Professor Osler, F.R.S., Dr. W. J. Tyson, Dr. Walshe, and Dr. A. T. Wear.

Resolutions of Condolence.

Resolved: That this Meeting of the Council of the British Medical Association desires to place on record its sense of the loss it has sustained in the death of John Henry Galton, M.D., a member of the Council since 1887, and requests the Chairman to convey to the family its sympathy and its deep sense of the valued services rendered by Dr. Galton to the British Medical Association.

Read acknowledgement to the Resolution of condolence passed by the Council on the death of Dr. Dolan which was ordered to be entered on the Minutes.

New Member.

Dr. George Edmond, the Representative of the Aberdeen Branch, was introduced to the Council on attending for the first time, and was welcomed by the Chairman.

The "Lancet"

Read acknowledgement from the proprietors of the *Lancet* to the Resolution of Council passed at the last meeting, which was ordered to be entered on the Minutes

Contract Practice.

Read acknowledgement from the Contract Practice Committee of the South Wales and Monmouthshire Branch for the special grant voted by the Council under By-law 18:

12, Park Place, Cardiff.
February 21st, 1908.

Dear Sir,—On behalf of my Committee I beg to thank the Council for the supplementary grant of £150 which has been forwarded to me by the Branch Treasurer. It is very encouraging to have this recognition of the fact that the fight we are making for the status and bargaining power of the Association is not merely local but is in the interest of the profession as a whole.

I am, dear Sir, yours faithfully,
Ewen J. Maclean, Hon. Sec.

Guy Elliston, Esq.,
General Secretary, British Medical Association.

Resolved: That the same be received and entered on the minutes.

Local Government Board for Ireland.

Read reply from the Local Government Board for Ireland to the request of the Council as to whether any steps are being taken to obtain powers to make compulsory a satisfactory *scale* of salaries for Poor-law Medical Officers in Ireland where Poor-law Unions have failed or refused to adopt a scale:

Local Government Board, Dublin,
February 21st, 1908.

Sir,—I am directed by the Local Government Board for Ireland to acknowledge the receipt of your letter of the 17th instant, and, in reply, to state that the answer to the question contained therein is in the negative.

By order of the Board.
The General Secretary. J. E. Devlin.

Resolved: That the communication from the Local Government Board for Ireland be entered on the Minutes, it having been referred to the Irish Committee.

Sheffield Meeting.

Read communication from the Lord Mayor of Sheffield, welcoming the Association to the city of Sheffield.

Resolved: That the Chairman be authorized to convey to the Lord Mayor of Sheffield the Council's appreciation of the assured hearty welcome awaiting the members of the Association on the occasion of the Annual Meeting.

University of Wales.

Read communication from the University of Wales asking the President of the Council of the British Medical Association to appoint a Representative on the Medical Board in connexion with the establishment of a Faculty of Medicine and Surgery.

The President reported that he would nominate in due course a Representative as requested, while the Chairman undertook to convey to the University of Wales the appreciation of the Association at its President being permitted to appoint a Representative on the Medical Board.

Journal and Finance Committee.

The Treasurer presented the Minutes of the Journal and Finance Committee of April 22nd, 1908.

Resolved: That a sum of 25 guineas be voted to the Research Defence Society.

Resolved: That an expenditure of £76 be sanctioned for connecting the new premises with Chandos Street Water Main.

Resolved: That an electric passenger lift be provided at a cost of £70.

Resolved: That the seating fixtures in Council Room to cost approximately £500 be approved.

Resolved: That the sum of £25 be voted to the United Kingdom Hospitals Conference towards the expenses incurred up to the time of the Conference on April 2nd, 1908.

Resolved: That a sum of £5 be voted for circulation of a leaflet to Members of both Houses of Parliament with reference to experiments upon dogs.

Resolved: That a sum of £10 be voted for preparing a specialized list of coroners' inquests within the last five or ten years.

Moved by the Chairman of Representative Meetings, seconded by Mr. Kinsey,

That a Permanent Assistant Medical Secretary be appointed.

Whereupon an Amendment was moved by Dr. MCKENZIE JOHNSTON, seconded by Dr. BRADSHAW,

That in view of the large expenses being incurred in rebuilding our premises, and in connexion with the early occupation of our new offices, and, further, as no rents will be received for at least a year, the Council is of opinion that it would be prudent to delay the appointment of a Permanent Assistant Medical Secretary.

The Amendment having been put from the Chair was declared to be lost.

The Motion having been put was declared to be carried.

Moved by Mr. BALLANCE, seconded by the CHAIRMAN OF REPRESENTATIVE MEETINGS, and

Resolved: That a Committee consisting of the Chairmen of the Committees of which the Medical Secretary acts as Secretary, together with the Officers of the Association, be appointed to consider the terms of the appointment of the Permanent Assistant Medical Secretary and report to the Council at its next meeting.

Resolved: That the accounts for the quarter ending March 31st, amounting to £10 854 4s. 6d, be approved, and the Treasurer be empowered to pay those remaining unpaid, amounting to £3 256 5s. 9d.

Resolved: That the Financial Statement for the year ending December 31st, 1907, as certified by the Auditors, be received and approved, and, in accordance with By-law 35, presented to the Annual General Meeting and the Annual Representative Meeting together with the Financial Estimate for 1908, and a copy circulated to the Secretary of each Branch and Division, and published in the JOURNAL. (This will be published in a subsequent issue.)

Colonial Committee.

Colonel SIMPSON presented the Report of the Colonial Committee of February 28th, 1908.

Resolved: That the Report be approved.

Organization Committee.

Mr. ANDREW CLARK presented the Report of the meetings of the Organization Committee held on March 10th and April 7th, 1908.

Resolved: That the Council approve, subject to revision by the Organization Committee as to the matters reserved for Counsel's further opinion, the draft Charter, Ordinances, and By-laws, drafted by the Organization Committee in conference with Counsel, as giving effect to the instructions of the Special Representative Meeting of May, 1907: that the Organization Committee be authorized to complete the draft upon consideration of Counsel's opinion upon the points referred to him; and that the draft Charter, Ordinances and By-laws, as so revised, be circulated to the Divisions, published in the JOURNAL, and submitted to the Annual Representative Meeting at Sheffield.

Resolved: That the Council adopt the Report submitted by the Organization Committee, with reference to the revision of the draft Charter, as the Report of the Council to the Representative Meeting thereon, and that the Report be circulated to the Divisions and Branches, and published in the JOURNAL at the same time as the revised draft Charter, Ordinances, and By-laws. (This will be published in a subsequent issue.)

Resolved: That the Council report specially to the Representative Meeting that, while submitting in the By-laws appended to the draft Charter, a scheme for the election of Members of Council by Branches in the United Kingdom, framed in accordance with the instructions of the Special Representative Meeting of May, 1907, as interpreted by Counsel, the Council would also submit, for the consideration of the Divisions and of the Representative Meeting, the alternative scheme, based upon the principle of single-member constituencies, which is appended to the Council's Report.

Resolved: That the Council approve the Rules submitted by the Cape of Good Hope (Western Province), New Zealand, and Transvaal Branches, and Tottenham and Warrington Divisions, with the exception of Rule 13 of the Transvaal Branch as to proxy voting, and subject to the verbal amendments which the Organization Committee considers necessary in the title of the Rules and in Rules 6 and 10*b* submitted by that Branch.

Resolved: That a Branch of the Association be formed, designated the Assam Branch, and composed of the members of the Association resident within the area defined by the Assam Medical Society, namely, that bounded on the north by the Himalayas, on the south by the North Cachar, Naga and Garo Hills, and extending from Dibrugarh on the east to Ganhati on the west.

Resolved: That the Council approve the holding of a Conference of Honorary Secretaries of Divisions and Branches during the Annual Meeting at Sheffield and instruct the Organization Committee to make the necessary arrangements.

Resolved: That the Council grant independent representation to the Watford and Harrow Division, the Blackburn Division, the Burnley Division, and the Ealing Division.

Resolved: That the Council provisionally group the other Divisions in the United Kingdom for representation in Representative Meetings for 1908–9 in the same manner as for the year 1907–8.

Resolved: That the Council authorize the Organization Committee finally to determine the grouping of Divisions in the United Kingdom for representation as soon as possible after the information contained in the Annual List of Members is available.

Resolved: That the Branches in the United Kingdom be provisionally grouped for representation on the Central Council for the year 1908–9 in the same manner as for the year 1907–8.

Resolved: That the Council authorize the Organization Committee, as in previous years, finally to determine the grouping of Branches in the United Kingdom as soon as possible after the information contained in the Annual List of Members is available.

Resolved: That the Council approve for presentation to the Representative Meeting the draft amended By-law 41 of the present Regulations, as to the Standing Committees.

Resolved: That the remainder of the Report be approved.

Scottish Committee.

Dr. BRUCE GOFF presented the Report of the Scottish Committee of March 28th, 1908.

Resolved: That action be taken to secure necessary reforms of the Scottish Lunacy Law, especially in view of the need of protection of the Medical Practitioner against vexatious litigation.

Resolved: That the report of the Scottish Poor-law Subcommittee be approved, and published in the JOURNAL.

Resolved: That the remainder of the Report be approved.

Public Health Committee.

Mr. PARKINSON presented the Report of the Public Health Committee of March 31st, 1908.

Resolved: That the Report be approved.

Premises Committee.

Mr. ANDREW CLARK presented the Report of the Premises Committee of April 2nd, 1908.

Resolved: That the Report be approved.

Irish Committee.

Dr. CRAIG (in the absence of Dr. WALSHE) presented the Report of the Irish Committee of April 4th, 1908.

Resolved: That as now in about fifty Unions the respective Boards of Guardians have fixed a scale of salaries for their Poor-law Medical Officers on a more or less satisfactory basis, the time has come for the Local Government Board for Ireland to fix a scale of salaries which must be adopted by those Unions which up to the present have failed to adopt a scale. It is manifestly unfair to the Poor-law Medical Officers who happen to be working in Unions where the salaries have not been increased that the Local Government Board should not come to their assistance in the matter, and accordingly the Local Government Board for Ireland be now urged to take effective action, even if such action should call for fresh legislation.

Resolved: That the remainder of the Report be approved.

Naval and Military Committee.

Colonel Joubert de la Ferte presented the Report of the Naval and Military Committee of April 1st, 1908.

Resolved: That the Report be approved.

Hospitals Committee.

Dr. Pope presented the Report of the Hospitals Committee of April 7th, 1908.

Resolved: That the Association continue to co-operate in the United Kingdom Hospitals Conference.

Resolved: That the sixteen medical members of the Conference Committee, whom the Association has been invited to appoint, be the members of the Hospitals Committee of the Association for the time being, together with Dr. A. A. Napper, and that if through resignations or from other cause the number so appointed fall at any time below sixteen, the Hospitals Committee of the Association be authorized to make appointments to fill the vacancies.

Resolved: That the Medical Secretary be authorized to continue to act as Secretary to the Conference, and to carry on the secretarial work through the staff of his department.

Resolved: That the remainder of the Report be approved

Medico-Political Committee.

The Chairman of Representative Meetings presented the Report of the Medico-Political Committee of April 8th, 1908.

Resolved: That the necessary steps be taken in due course to obtain an amendment of the Coroners Act which will provide for the payment of reasonable fees to medical men giving evidence at inquests, when attendance for more than one day is necessary.

Resolved: That the Council adopt the report prepared by the Medico-Political Committee on the subject of salaries of whole-time medical inspectors of school children, and that it be issued forthwith to the Divisions.

Resolved: That the leaflet drawn up by the Medico-Political Committee with reference to experiments upon dogs be circulated by the Association to all members of both Houses of Parliament.

Resolved: That, before the Second Reading of the Official Directory of Nurses Bill, Lord Ampthill, who, as the Association is informed, has undertaken to move the rejection of that Bill, be requested to receive a Deputation from the Association setting forth the objections of the Association to it; that it be suggested to Lord Ampthill that other Peers interested in the subject be invited to be present when he receives the Deputation, and that the Chairman of the Medico-Political Committee be authorized to nominate the members of the Deputation, and to make the arrangements in connexion therewith.

Resolved: That the Representative Meeting be advised to approve of an application from the Association to the Government to appoint a Royal Commission to inquire into the whole question of medical law, including practice by unqualified persons, and the traffic in quack medicines and apparatus.

Resolved: That, preparatory to the application for the appointment of a Royal Commission, information be collected as recommended by the Medico-Political Committee.

Resolved: That the remainder of the Report be approved.

Ethical Committee.

Mr. Kinsey presented the Report of the Ethical Committee of April 10th, 1908.

Resolved: That the Report be approved.

Report of Council.

Moved by the Chairman and

Resolved: That the Report of Council be approved and, in accordance with By law 35, presented to the Annual Representative Meeting, and to the Secretary of each Branch and Division, and that it be published in the Journal. (This will be published in a subsequent issue.)

Candidates.

The twenty-seven candidates whose names appeared on the circular convening the Meeting were elected Members of the British Medical Association.

Therapeutic Committee.

The General Secretary reported that at the request of the Therapeutic Committee, on the instruction of the Chairman of Council, he had transmitted a copy of a Report relating to the revision of the *Pharmacopœia* to the General Medical Council.

Putney Hospital.

Moved by Mr. Hugh Kerr, seconded by Dr. Laurison Shaw,

That the Central Council of the Association approves of Nos. 1, 2, 3, and 4 of the Resolutions (as shown below) adopted by the local medical profession with reference to the proposed Putney Hospital, with the exception of the last four words in Resolution No. 1, namely, "nor ever will be"; and while reserving its opinion on the general principle involved, approves of No. 5 in the case of this Hospital in view of the fact that the laity has already nominated members of the medical profession on to the proposed Putney Hospital Committee.

1. That there is no necessity in Putney for a large General Hospital on the lines of the West London Hospital, nor ever will be.
2. That a small General Hospital on Cottage Hospital lines would meet the needs of the Parish of Putney.
3. That at such a Hospital there should be no arrangements made for the treatment of out-patients.
4. That there should be recognition of the principle that the number of non-paying beds should not be greater than the needs of the district or the resources of endowment.
5. That there should be adequate directly-elected representation of the medical profession on the present and any future Committee formed to deal with the question or conduct of a hospital in Putney.

Whereupon an Amendment was moved by Mr. Cuthbert, seconded by Mr. Domville,

That while agreeing as to the desirability of direct medical representation on Committees of such Hospitals as the Putney Hospital the Council is not prepared to say that such representation should be made a condition of medical support.

The Amendment having been put from the Chair was declared to be carried and also as a substantive motion

Staffordshire Branch.

Read Resolution from the Staffordshire Branch, which was referred to the Medico-Political Committee.

Cape of Good Hope Branch.

The General Secretary reported the case of expulsion of a member considered and dealt with by a special meeting of the Cape of Good Hope (Western Province) Branch, in terms of Articles XLIII and XLIV (*b*).

Appointment of Solicitor.

Resolved: That Mr. W. E. Hempson be reappointed Solicitor to the Association for the ensuing twelve months.

Reports of Branches.

The Annual Reports of Branches for 1907-8, furnished in accordance with By-law 9, were considered and ordered to be printed in the Supplement. (These were published in the Supplement of May 9th, pp. 249)

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH:

WARRINGTON DIVISION.

THE annual general meeting of this Division was held at the Warrington Infirmary on Tuesday, May 5th.

Election of Officers.—The following officers were appointed: *Chairman*, Dr. Brebner; *Vice-Chairman*, Dr. Naden; *Honorary Secretary and Treasurer*, T. A. Murray; *Representative on Branch Council*, Dr. Burrowes; *Executive Committee*, Drs. Brebner, Naden, Burrowes, Bowden Bennett, Anderson, and Murray.

Ethical Rules.—Ethical rules of procedure were adopted.

Representative Meeting.—Matters relating to the Representative Meeting were adjourned for the joint meeting with St. Helens (at which the Representative is elected).

Quarterly Meetings.—It was arranged that quarterly meetings should be held at Warrington on the first Tuesday in June, September, December, and March.

Candidature of Mr. Larkin for Central Council.—A resolution was passed supporting the candidature of Mr. Larkin, F.R.C.S. (who was present), for the Central Council.

Votes of Thanks.—Votes of thanks were passed to the retiring officers.

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

A CLINICAL meeting was held at the Bethnal Green Infirmary, on the kind invitation of Dr. Potts, Medical Superintendent, on Friday, May 1st.

Cases.—Dr. POTTS showed the following interesting cases in the wards, amongst others: (1) A brother and sister, both suffering from Friedreich's disease. In the same family another brother had died from the same disease. The parents were first cousins. (2) Three cases of old people with extremely slow pulses, who were subject to epileptiform attacks, supposed to be examples of Stokes-Adams disease of the heart. (3) A woman with enormous congenital enlargement of the phalanges of the first and second toes of one foot.

Tea.—The members were then entertained to tea by Dr. Potts.

ST. PANCRAS AND ISLINGTON DIVISION.

ON Tuesday, May 5th, by the kind invitation of Dr. Arthur Robinson, a meeting was held at the St. Mary's Islington Infirmary, Highgate, N.; Dr. THEOBALDS presided.

Annual Representative Meeting.—The notices of motion for the Annual Representative Meeting, as set forth in the SUPPLEMENTS of March 28th, April 18th, and April 25th, were read and discussed, and instructions were formulated for the guidance of the Representative of the Division at the Annual Meeting.

Demonstration.—Dr. ARTHUR ROBINSON gave a demonstration of some clinical cases of unusual interest, which were examined and discussed by the members; the cases included an assegai wound of the larynx, a rare syphilodermia, a sarcoma of the sterno-mastoid, an unusual type of bronchocele, a large hernia cerebri, and a case of periodic gastric crisis of obscure etiology.

Vote of Thanks.—At the conclusion of the meeting a cordial vote of thanks was accorded to Dr. Robinson for his interesting demonstration and kind hospitality.

NORTH WALES BRANCH.

THE intermediate meeting of the Branch was held at the Infirmary, Denbigh, at 2.15 p.m. on Tuesday, April 21st. In the unavoidable absence of the President, Dr. E. D. Evans (Wrexham), the ex-President, Dr. RICHARD JONES (Blaenau Festiniog) was voted to the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, confirmed, and signed.

Financial Statement.—The financial statement for the year 1907, which showed a balance credit of £25 4s., was read and adopted.

Jones Morris Memorial Fund.—The HONORARY SECRETARY read the report of the Subcommittee *re* the Jones Morris Memorial Fund. The report was adopted subject to certain modifications.

Election of Representatives on the Court of Governors of the University College of North Wales.—Dr. E. D. Evans (Wrexham) and Dr. John Evans (Carnarvon) were elected Representatives of the Branch on the Court of Governors of the University College of North Wales to fill the vacancies caused by the death of Dr. John Roberts (Chester) and the resignation of Dr. A. Eyton Lloyd (Rhyl).

Papers.—The following papers were read: Mr. K. W. MONSARRAT, on cholecystitis, its diagnosis and treatment; Dr. W. BLAIR BELL, on retrodeviations of the uterus and their treatment; Dr. W. PERMEWAN, on submucous resection of the nasal septum, illustrated by lantern slides; Dr. H. DRINKWATER, on brachydactyly, a study in heredity, illustrated by numerous and highly interesting lantern slides; Mr. J. HOWELL EVANS, on auricular and periauricular cysts and tumours, illustrated by lantern slides; Mr. RUSHTON PARKER, on an unusual case of appendicitis. The contributions of Drs. J. Hill Abram, Warrington, Bradshaw, Briggs, and of Messrs. Newbolt, and Craig Dun were, for want of time, not read.

Vote of Thanks.—On the proposal of Dr. A. EYTON LLOYD (Rhyl), seconded by Dr. HUGH JONES (Dolgelly), a hearty vote of thanks was accorded to the readers of the papers; the Governors of the Infirmary for the use of the room; Drs. Herbert, R. James Hughes, and Cooper (House Surgeon), for making the necessary preparations for the meeting; and to Dr. Cox, the Medical Superintendent of the North Wales Counties Asylum, for inviting the members to visit the institution and conducting them round.

Luncheon.—Before the meeting the members lunched together at the Crown Hotel.

ULSTER BRANCH.

THE spring meeting of this Branch was held in the Harbour Office, Londonderry, on Saturday, May 2nd, the President, Dr. WARNOCK (Donegal), in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Report of Council.—The Council report was read by the Honorary Secretary, Dr. CECIL SHAW. It stated that three members had been elected: Drs. George Clarke, and H. McMaster, Belfast; and H. J. Williams, Rostrevor. Payments amounting to £11 13s. 5d. had been sanctioned.

Annual Meeting of Branch.—It was decided that the annual meeting of the Branch should be held in Belfast on Wednesday, June 24th.

Hospital Abuse.—It was arranged that the resolutions of the Committee on Hospital Abuse, drawn up by the committee appointed at the conjoint meeting of the Branch and of the Ulster Medical Society on February 20th, should be circulated with the agenda paper, and discussed at that meeting.

Vote of Thanks.—A vote of thanks to the Londonderry Harbour Commissioners for the use of their board room was passed unanimously.

Luncheon.—At the conclusion of the meeting the members present were entertained to luncheon by the President.

SOUTH-EASTERN BRANCH.

WE are asked to publish the following letter addressed to members of the South-Eastern Branch by Miss Agnes Williamson, M.B.Lond., who is a candidate for election as a Representative of the Branch on the Central Council of the British Medical Association:

2, Park Avenue, Dover,
May 12th, 1908.

Dear Sir, or Madam,—At the request of some of the members of the South-Eastern Branch of the British Medical Association I have consented to stand as a candidate for election on the Central Council of the Association.

The following are some of the chief points which have made me decide to accept this invitation.

1. There is a feeling in general that a woman should be on the Central Council in order to promote the best interests of the profession as a whole.

2. I consider it most important that the following resolution, passed at the last annual meeting of the

British Medical Association, held at Exeter, should be rigidly adhered to.

That the principle that no distinction be made on the ground of sex as regards the amount of emoluments to be paid to lady practitioners be affirmed.

It might, therefore, be of use to the Association to have a woman on the Central Council in order to know the opinions of medical women on this and similar points, and to help to check any tendency, should such exist, of underselling the men of the profession.

3. I am very willing and, fortunately, able to devote the necessary time to further the interests of the Association.

Under these circumstances, therefore, I ask you to give me one of the three votes to which you are entitled.

Should I have the great honour to be elected, I am most anxious to devote the required time and the best of my abilities in helping to advance the excellent work of the Association.

I am,
Yours truly,
AGNES WILLIAMSON, M.B.Lond.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of the Division will be held at the Royal United Hospital on Tuesday, May 26th, at 6 p.m. Business: To elect officers; to receive annual report; to consider business of Annual Representative Meeting; to consider matters referred to Divisions (see BRITISH MEDICAL JOURNAL, February 22nd); any other business.—D. LESLIE BEATH, Honorary Secretary.

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Notice is hereby given that nominations for the offices mentioned above must be sent to the undersigned by May 23rd. Each nomination must be signed by three members of the Branch. Two representatives on the Council to be elected.—P. J. KAUFFMANN, Honorary Secretary, 22, Broad Street, Birmingham.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in the Hotel Mont Dore, Bournemouth, on Wednesday, May 27th.—JAMES DAVISON, Honorary Secretary, Streateplace, Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. NICHOLSON, Honorary Secretary.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Hull Royal Infirmary on June 11th, at 12.30 p.m. Nominations for the offices of President-elect, Vice-President, Honorary Secretary, and Treasurer must be received by the Honorary Secretary by May 21st.—EDWARD TURTON, 1, Albion Street, Hull, Honorary Secretary.

GLASGOW AND WEST OF SCOTLAND BRANCH.—1. Election of Members of Central Council.—In accordance with Branch Rule v and Association By-law xxv, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to me on or before Monday, June 1st. The Branch is entitled to return two Representatives. Dr. Goff is this year ineligible for re-election, and Dr. Hamilton does not seek re-election. 2. Annual Meeting.—It has been decided to hold the annual meeting and dinner on the afternoon of Friday, June 5th, particulars of which will be announced later.—JAMES HAMILTON, 1, Royal Crescent, Crosshill, Glasgow, Honorary Secretary.

GLOUCESTERSHIRE BRANCH.—The annual meeting of the Branch will be held at the Infirmary, Gloucester, on Thursday, May 21st, at 6 p.m. Agenda: (1) Election of officers and ordinary members of the Branch Council. (2) To receive the annual report of the Branch Council. (3) To consider the business of the Annual Representative Meeting. Any member having any matter which he would like brought by the Branch Representative before the Annual Representative Meeting of the Association is requested to immediately send me notice of same for discussion at the annual meeting of the Branch. 4. To make new rules, or alter or repeal existing rules. Any member desiring any alteration, etc., of rules, or new rule made, is requested to send me immediate notice of same. 5. Mr. Bland-Sutton, Surgeon to Middlesex Hospital and Chelsea Hospital for Women, will read a paper on the Present Position of Abdominal Hysterectomy for Fibroids in London. There will be a dinner at 8 p.m. at the Bell Hotel, Gloucester; tickets 5s. each (inclusive of wine).—D. E. FINLAY, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. GARSTANG, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—The annual meeting of the members of this Division will be held at the Co-operative Rooms, Ellesmere Street, at 8.30 p.m., on Thursday, May 21st. Agenda: The annual report; election of officers for the ensuing year (the Honorary Secretary does not seek re-election); consideration of Hospital and Insurance Questions.—J. SACKVILLE MARTIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—The annual dinner of the Branch Council will be held on Friday, May 22nd, at the Imperial Restaurant, Regent Street, W., at 7.30 p.m., Dr. Frederick Taylor, President, in the chair. Tickets, price 7s. 6d. (not including wines), may be obtained from the Honorary Secretary, Dr. FREDERICK J. MCCANN, 5, Curzon Street, Mayfair, W.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. MCCANN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—Notice of Annual Meeting.—The annual meeting of this Division will be held at the Midland Hotel, King's Cross, W.C., on Tuesday, June 2nd, at 4 o'clock.—W. GRIFFITH, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of the Branch will be held at the Exchange, Nottingham, on Thursday, June 11th, at 2.30 p.m. Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with the by-laws.—R. SEVESTRE, London Road, Leicester, Honorary Secretary, Midland Branch.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—The annual meeting of the Division will be held on Wednesday, May 27th, at 4 p.m., at the Leicester Infirmary. Agenda: Minutes of previous meeting. Nomination of Vice-President of the Branch for 1908-9. Election of Representatives of the Division on the Branch Council, and of officers and members of the Executive Committee of the Division. Election of a Representative of the Division at Representative Meetings. Annual report of the Executive Committee. Discussion of matters referred to Divisions (vide SUPPLEMENTS of the JOURNAL). Any other business. — WILFRED E. GIBBONS, Honorary Secretary, 1, Charles Street, Leicester.

MIDLAND BRANCH: LINCOLN DIVISION.—On Thursday, May 28th, 1908, at 3.30 p.m., will be held the annual meeting of the above Division, in the Guildhall, Lincoln. Agenda: To elect a Vice-President of the Midland Branch. To elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee. To elect the Representative of the Division in Representative Meetings of the Association. To consider, by request of the Representative Meeting, the proposed definition of the term "Hospital" (see BRITISH MEDICAL JOURNAL SUPPLEMENT, February 22nd, 1908). To give replies to certain questions asked by the Medico-Political Committee relative to medical examinations for life insurance (see BRITISH MEDICAL JOURNAL SUPPLEMENT, February 22nd, 1908). To communicate to the Division the interim report of the Subcommittee of the Medico-Political Committee on the Medical Inspection of School Children. To decide whether an Ethical Committee shall be appointed by the Division, and if so, what rules it shall be guided by. Other

business. Members desiring to read papers or show cases or specimens are requested to communicate with the Honorary Secretary, J. S. CHATER.

MUNSTER BRANCH.—Nominations for a Representative of the Branch on the Central Council (in accordance with By-law 24) will be received by the Honorary Secretary up to June 1st.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

MUNSTER BRANCH.—The annual general meeting of the Branch will be held on Saturday, June 6th, at 4.30 p.m., in the rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and Council for 1908-9 will be elected, and any other necessary business transacted.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

NORTH WALES BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for all the officers of the Branch and Representative on the Central Council must be sent to the Honorary Secretary not later than May 30th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

NORTH WALES BRANCH: NORTH CARNARVON AND ANGLESEY DIVISION.—The annual meeting of this Division will be held at the British Hotel, Bangor, on Wednesday, May 27th, at 3 p.m. Any member desiring to read or exhibit a case, or to discuss any subject of interest, is requested to communicate, on or before Saturday, the 16th inst., with the Secretary.—JOHN EVANS, 2, Church Street, Carnarvon, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the office of Representative on the Central Council from this Branch must be sent to me in writing on or before June 6th. Each nomination must be signed by three members of the Branch. The annual meeting of the Branch will be held at Kingussie on Saturday, June 13th. Further particulars will be sent to each member by circular.—J. MUNRO MOIR, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Dover on Thursday, June 18th, Dr. M. Kirkby Robinson, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch). Nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary may be sent to the Honorary Secretary on or before May 17th. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by any ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 17th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—Preliminary Notice.—The annual meeting of the Folkestone Division will be held on Thursday, May 28th. Agenda: (*a*) Minutes of last annual meeting; (*b*) to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (*c*) to elect the Representative of the Division in the Representative meetings of the Association; (*d*) to receive the annual report of the Executive Committee; (*e*) to consider any business of the Annual Representative Meeting; (*f*) to transact any business that may be transacted at an ordinary meeting.—P. VERNON DODD, M.D., Honorary Secretary.

SOUTH MIDLAND BRANCH.—Nominations for the office of Representative on the Central Council should be sent to me not later than May 18th, in accordance with By-law 25.—E. HARRIES JONES, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 11th at the annual meeting at Newport. Nominations in writing, signed by not less than three members, must be sent not later than May 21st to the Branch Secretary, W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting of this Branch will be held at the Infirmary, Newport, on June 11th, at 4.30 p.m.—W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff, Branch Secretary.

SOUTH-WESTERN BRANCH.—*Election to Council of the Association.*—In accordance with the rules of the Association I hereby give notice that nominations (each to be signed by three electors) for the office of Representative of the Branch on the Council of the Association, are to be sent to me not later than May 25th.—RUSSELL COOMBE, Branch Secretary.

ULSTER BRANCH.—Nominations for the offices of President, Treasurer, and Secretary, each signed by two members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary.

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary, Ulster Branch.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of the above Branch will take place at the Hereford General Hospital on Thursday, June 18th, at 1.45 p.m. Business: To elect officers and transact such other business as are prescribed by rule for the annual meeting.—C. S. MORRISON, Honorary Secretary.

MEMBERS ELECTED DURING THE MARCH QUARTER.

UNDER BY-LAWS 2 AND 3.

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Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Inspector-General Sir Herbert M. Ellis, K.C.B., K.H.P., F.R.C.S., LL.D., Director-General of the Medical Department of the Navy, has been placed on the retired list at his own request, May 11th. He entered the service as Surgeon, September 30th, 1875; became Staff Surgeon, November 18th, 1882; Fleet Surgeon, January 27th, 1891; Deputy Inspector-General, August 23rd, 1899; Inspector-General, February 18th, 1904; and Director-General, September 12th, 1904. He served with the battalion of Royal Marine Artillery throughout the campaign in Egypt in 1882, being present at the two engagements at Kassassin on August 28th and September 9th, and at the battle of Tel el-Kebir (mentioned in dispatches, and promoted to Staff Surgeon; Egyptian medal, Tel-el-Kebir clasp, Khedive's bronze star). Fleet Surgeon, wrecked in *Victoria*, flagship of Vice-Admiral Sir George Tryon, K.C.B., Commander-in-Chief of the Mediterranean Fleet, which was sunk off Tripoli, on the Syrian coast in collision with *Camperdown*, when the Admiral, 21 officers, and 350 men were drowned, June 22nd, 1893; K.C.B., June 30th, 1907.

The following appointments have been made at the Admiralty: Robert D. Jameson, Staff Surgeon, to the *President*, additional, for three months' course at the Dreadnought Hospital, Greenwich, April 27th; John H. Stenhouse, M.B., Fleet Surgeon, to the *President*, additional, for Greenwich Hospital School and the Royal Naval College, May 8th; W. Bett, Fleet Surgeon, to the *Leviathan*, May 8th; Evan St. M. Nepean, Fleet Surgeon, to the *Victory*, additional, for Portsmouth Dockyard, May 8th; Jonathan Shand, M.B., Fleet Surgeon, to the *Africa*, May 5th; George H. Foott, M.D., Fleet Surgeon, to the *Hogue*, May 11th; Frank H. Nimmo, Staff Surgeon, to the *Alexandra*, on commissioning, May 7th; Reginald H. St. B. E. Hughes, Surgeon, to Malta Hospital, May 11th; William C. B. Smith, Surgeon, to the *Vernon*, additional, for the *Niger*, May 11th; Fairman R. Mann, Fleet Surgeon, to the *Excellent*, May 7th; Henry W. M. Rees, Fleet Surgeon, to the *Orion*, May 7th; Arthur D. C. Cummins, Surgeon, to the *Dreadnought*, May 7th; Robert W. B. Hall, Surgeon, to the *Enchantress*, May 7th; George G. Borrett, Fleet Surgeon, to the *Royal Arthur*, undated; Walter K. Hopkins, Staff Surgeon, to the *Royal Arthur*, temporary, undated; Oswald Rees, M.D., Staff Surgeon, to the *Fox*, on commissioning, May 19th; Frederick A. Capps, Staff Surgeon, to the *Mercury*, May 19th; Reginald Waterfield, Staff Surgeon, to the *Challenger*, May 8th; Charles A. G. Phipps, Surgeon, to the *Psyche*, May 8th; Richard Willan, Surgeon, to the *Donegal*, May 9th; Robert H. Nicholson, Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, May 13th; Shirley H. Birt, Staff Surgeon, to the *Crescent*, May 8th.

The appointment of Fleet Surgeon G. H. Foott, M.D., to the *Hogue* has been cancelled.

ARMY MEDICAL SERVICE.

Colonel H. W. Murray, M.B., has been appointed Principal Medical Officer, Gibraltar, vice Colonel J. McNamara, M.D.

Colonel H. R. Whitehead, Principal Medical Officer, 1st (Peshawur) Division, is granted leave on private affairs for six months and nineteen days, out of India.

Colonel F. B. Maclean, on being relieved of his appointment as Principal Medical Officer, Aden Brigade, takes up the appointment of Principal Medical Officer, Secunderabad Brigade.

A new edition of the King's Regulations and Orders for the Army has been issued. Pending the reorganization consequent on the Territorial and Reserve Forces Act, 1907, it has not been possible to include the changes in the regulations which will thus be rendered necessary.

ROYAL ARMY MEDICAL CORPS.

Lieutenant A. Dawson, M.B., who is serving in India, is appointed Specialist in Dermatology, 5th (Mhow) Division.

Major G. Dansey-Browning, from the Seconded List, to be Major, April 5th. He was seconded for service with the Egyptian Army, March 31st, 1904.

Captains A. J. MacDougall, M.B., and Maurice Swabey are promoted to be Majors, April 29th. They were appointed Surgeon-Lieutenant, July 29th, 1896; and Captain, July 29th, 1899.

TERRITORIAL FORCE.

Royal Army Medical Corps.

The undermentioned officers to be Colonels, and are appointed Administrative Medical Officers of Divisions, all dated April 1st, 1908:—Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Peter B. Giles, from the 1st Herefordshire Volunteer Rifle Corps; Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Andrew Clark (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, 2nd London Volunteer Infantry Brigade), from the 4th Middlesex (Kensington) Volunteer Rifle Corps; Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Philip E. Hill (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, South Wales Border Volunteer Infantry Brigade), from the 1st Volunteer Battalion, The South Wales Borderers; Lieutenant-Colonel and Honorary Colonel William Coates, C.B., from the Manchester Companies, Royal Army Medical Corps (Volunteers); Lieutenant-Colonel and Honorary Colonel Sir George T. Beatson, K.C.B., M.D., from the Glasgow Companies, Royal Army Medical Corps (Volunteers); Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Joseph W. Blandford (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Tees Volunteer Infantry Brigade), from the 1st Volunteer Battalion, The Durham Light Infantry; Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel John R. Thomas (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Devonshire Volunteer Infantry Brigade), from the 4th Volunteer Battalion, The Devonshire Regiment; Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel George S. Elliston (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Suffolk Volunteer Infantry Brigade), from the 1st Volunteer Battalion, The Suffolk Regiment; Lieutenant-Colonel and Honorary Colonel James Turton (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Sussex and Kent Volunteer Infantry Brigade), from the Sussex and Kent Bearer Company, Royal Army Medical Corps (Volunteers); Surgeon-Lieutenant-Colonel Charles A. Macmunn, M.D. (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Staffordshire Volunteer Infantry Brigade), from the 3rd Volunteer Battalion, the South Staffordshire Regiment; Lieutenant-Colonel de Burgh Birch, M.D., from the Leeds Companies, Royal Army Medical Corps (Volunteers); Lieutenant-Colonel John S. Riddell, M.V.O., M.B., from the Aberdeen Companies, Royal Army Medical Corps (Volunteers); Major William P. Whitcombe (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Worcester and Warwick Volunteer Infantry Brigade), from the Worcester and Warwick Bearer Company, Royal Army Medical Corps (Volunteers); Surgeon-Lieutenant-Colonel Damer Harrisson (late of the Lancashire Hussars Imperial Yeomanry), from the retired list.

Imperial Yeomanry.

Surgeon-Lieutenant D. M. Macdonald, M.B., Scottish Horse, to be Surgeon-Captain, March 31st.

Royal Garrison Artillery (Volunteers).

Surgeon-Lieutenant S. Mellor, 1st Kent Regiment, resigns his commission, March 31st.

Royal Army Medical Corps (Volunteers).

Captain M. J. Robson, Leeds Companies, Northern Command, resigns his commission, March 31st.

William F. Munro, M.B., to be Lieutenant, in the North-East Lancashire Bearer Company, March 23rd.

COLONIAL MEDICAL SERVICE.

The following gentlemen have been appointed to the West African Medical Staff since January:

Name.	Colony.
A. E. Oakeley, M.R.C.S.Eng., L.R.C.P. Lond.	Northern Nigeria.
R. P. Cockin, M.B., B.C.Camb.	Southern Nigeria.
J. H. McKay, L.R.C.S., L.R.C.P.Edin., M.O., C.M.Toronto	Southern Nigeria.
H. R. Morehead, L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glasg.	Southern Nigeria.
J. S. Fearson, M.R.C.S.Eng., L.R.C.P. Lond.	Sierra Leone.

Transfers.

M. Cameron Blair, M.D., C.M.Glasg., Senior Medical Officer in Southern Nigeria, is transferred to Northern Nigeria, vice C. R. Chichester, from March 28th.

C. R. Chichester, M.B., L.R.C.S., L.R.C.P.Irel., D.P.H., Senior Medical Officer in Northern Nigeria, is transferred to Southern Nigeria, vice M. Cameron Blair, from March 28th.

J. B. H. Dawson, M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer in Sierra Leone, is promoted Senior Medical Officer, vice D. H. R. Waldron, retired, and transferred to the Gold Coast, from April 15th.

THE AFRICA GENERAL SERVICE MEDAL.

The King has been graciously pleased to approve of the Africa General Service Medal, with clasps, being granted to the forces employed in the undermentioned military operations, provided that the claims of the officers and men are approved by the Army Council: The medal, with clasp, "East Africa 1902," to all officers and men under the command of Lieutenant F. W. O. Maycock, D.S.O., Suffolk Regiment, composing the Maruka Patrol, which reached the Maruka District on September 4th, 1902, and operated in the district until October 25th, 1902, both dates inclusive. The medal, with clasp, "East Africa, 1904," to all officers and men under the command of Captain F. A. Dickinson, Duke of Cornwall's Light Infantry, composing the Iraini Patrol, which entered the Iraini Country on February 13th, 1904, and patrolled it between that date and March 17th, 1904, both dates inclusive. The medal, with clasp, "East Africa, 1905," to all officers and men under the command of Captain and Brevet Major L. H. R. Pope-Hennessy, D.S.O., Oxfordshire Light Infantry, who took part in the operations in and near Sotik, from May 31st to July 12th, 1905, both dates inclusive; also to all officers and men under the command of Captain E. V. Jenkins, D.S.O., Duke of Wellington's (West Riding Regiment), composing the Kisii patrol, which entered the Kisii country on September 1st, 1905, and patrolled it until October 9th, 1905, both dates inclusive. The medal, with clasp, "East Africa, 1906," to all officers and men under the command of Lieutenant F. W. O. Maycock, D.S.O., Suffolk Regiment, composing the Embo patrol, which entered the Embo country on June 18th, 1906, and operated there until July 19th, 1906, both dates inclusive. The medal, with clasp, "West Africa, 1906," to all officers and men under the command of Captain W. C. E. Rudkin, D.S.O., R.F.A., composing the Owa column, which left Asaba on June 9th, 1906, and operated under his orders against the people of Owa until the restoration of peace and the breaking up of the column on August 3rd, 1906, both dates inclusive; also to all reinforcements which reached that officer and operated under his orders against the people of Owa between the above dates. The medal, with clasp, "West Africa, 1906," to all officers and men who operated in the Chibuk country under the command of Lieutenant P. Chapman, D.S.O., Royal Fusiliers (City of London Regiment), between November 12th and December 4th, 1906, both dates inclusive; and to all officers and men who operated in the same district under the command of Lieutenant E. J. Wolseley, East Lancashire Regiment, between December 22nd, 1906, and February 17th, 1907, both dates inclusive. Those already in possession of the Africa General Service Medal will receive the clasp only. The grant will be confined to those who had official sanction to be present.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1908.

In the accompanying table will be found summarized the vital statistics for seventy-six of the largest English towns, based upon the Registrar-General's weekly returns for the first quarter of the year. The 114,379 births registered in these towns during the quarter under notice were equal to an annual rate of 28·3 per 1,000 of the population, estimated at 16,234,952 persons in the middle of the year; in the corresponding quarters of the three preceding years the rates had been 29·4, 28·7, and 28·0 per 1,000. In London the birth-rate last quarter was equal to 26·9 per 1,000; in the seventy-five other towns it averaged 28·8, and ranged from 16·1 in Hornsey and in Hastings, 17·7 in Bournemouth, 19·8 in Northampton, 20·6 in Bradford, and 21·1 in Halifax, to 34·9 in Merthyr Tydfil, 35·0 in Hanley, 35·2 in Swansea, 35·7 in West Bromwich, 38·4 in Newport (Mon.), 37·3 in St. Helens, 37·4 in Middlesbrough, and 41·7 in Rhondda.

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the First Quarter of 1908.

Towns.	Estimated Population middle of 1908.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Infectious Diseases.										
76 Towns	16,234,952	114,379	72,542	28.3	17.9	1.37	5,469	—	1,360	475	793	2,021	280	560	124	1.0
75 Provincial Towns	11,429,195	82,168	52,208	28.9	18.3	1.44	4,087	—	1,018	289	656	1,621	242	362	129	1.4
London	4,795,757	32,151	20,334	26.9	17.0	1.18	1,402	—	342	185	278	400	38	198	110	0.1
Croydon	157,698	1,067	621	27.1	16.8	1.89	62	—	58	1	10	9	1	3	96	—
Willesden	154,792	1,118	529	29.0	13.7	1.58	61	—	47	4	3	2	2	3	102	0.8
Hornsey	92,713	371	227	16.1	9.8	0.60	14	—	8	—	4	—	1	1	84	—
Tottenham	126,146	969	418	30.8	13.3	0.64	20	—	—	3	10	5	1	1	84	0.2
West Ham	316,000	2,395	1,229	30.5	16.6	1.62	128	—	45	16	25	31	2	9	113	0.1
East Ham	142,976	940	422	26.6	11.8	1.01	36	—	6	6	19	4	1	—	102	—
Leyton	125,815	833	401	26.6	12.8	0.61	19	—	—	6	4	6	3	—	67	0.2
Walthamstow	131,486	909	414	27.7	12.6	0.67	19	—	4	2	9	2	1	—	112	—
Hastings	67,817	272	252	16.1	14.9	0.95	16	—	3	—	2	9	2	—	143	—
Brighton	129,967	731	628	22.6	19.4	0.65	21	—	8	—	2	7	—	4	122	0.2
Portsmouth	211,493	1,640	939	29.2	17.8	0.83	44	—	7	3	17	7	6	4	112	0.6
Bournemouth	70,201	312	317	17.7	18.0	0.78	14	—	3	3	5	3	1	1	96	—
Southampton	122,198	745	521	24.5	17.2	1.22	37	—	18	—	2	9	1	7	102	—
Reading	81,647	465	317	22.8	15.6	2.35	48	—	12	—	7	19	3	7	118	1.9
Northampton	96,405	475	338	19.8	13.6	0.80	19	—	—	2	—	14	2	1	114	2.1
Ipswich	75,852	469	347	25.5	18.8	1.47	27	—	16	2	3	6	—	—	128	—
Great Yarmouth	53,102	363	240	27.4	18.1	0.46	6	—	—	—	2	1	1	2	124	—
Norwich	122,841	834	530	27.2	17.3	0.92	28	—	—	1	7	6	8	6	115	0.8
Plymouth	122,113	710	591	23.3	19.4	0.72	22	—	—	—	3	15	3	1	104	—
Devonport	81,525	550	364	27.1	17.9	1.04	21	—	—	—	2	16	1	3	144	—
Bristol	372,765	2,246	1,656	24.2	17.8	0.98	92	—	31	3	14	37	2	6	148	0.1
Hanley	67,998	595	382	35.0	22.5	1.60	27	—	13	—	1	8	4	1	182	0.3
Burton-on-Trent	53,926	302	230	22.5	17.1	1.11	15	—	—	2	1	10	—	—	136	1.7
Wolverhampton	103,318	733	419	28.5	16.3	0.79	20	—	—	2	11	2	2	3	109	0.2
Walsall	97,778	718	379	29.5	15.5	1.40	34	—	—	6	2	19	2	5	120	0.5
Handsworth	68,031	406	260	23.9	15.3	1.13	19	—	1	1	4	12	—	1	104	1.9
West Bromwich	69,786	621	364	35.7	20.9	1.60	26	—	1	7	8	5	1	4	124	1.1
Birmingham	568,357	4,321	2,761	31.0	19.8	1.86	259	—	7	23	26	102	18	17	131	4.3
King's Norton	78,608	530	251	27.0	12.8	0.35	7	—	—	3	—	2	—	2	91	3.2
Smethwick	68,416	545	258	32.0	15.7	1.41	24	—	—	6	2	13	1	2	127	1.9
Aston Manor	84,256	591	318	28.1	15.0	1.86	39	—	—	1	3	25	—	—	110	0.6
Coventry	78,889	662	320	33.7	16.3	0.45	9	—	—	2	4	1	—	2	73	1.9
Leicester	240,172	1,514	878	25.3	14.7	0.65	39	—	—	6	2	25	2	4	116	1.8
Grimsby	71,800	587	391	32.8	16.8	0.84	15	—	—	3	5	2	3	2	114	1.3
Nottingham	260,449	1,765	1,189	27.2	18.3	0.81	53	—	5	—	10	21	12	5	141	0.6
Derby	127,583	830	484	26.1	15.2	0.65	21	—	1	—	9	8	1	2	108	—
Stockport	102,339	721	476	28.3	18.7	1.15	29	—	1	2	5	17	—	4	105	0.2
Birkenhead	119,830	971	542	32.5	18.1	1.68	50	—	11	3	5	27	2	2	129	0.9
Wallasey	68,849	414	279	24.1	16.3	1.80	31	—	9	4	1	15	—	2	123	0.7
Liverpool	753,203	6,025	4,437	32.1	24.2	2.06	387	—	83	49	31	164	19	60	149	3.9
Bootle	68,248	578	368	34.0	23.4	1.77	30	—	5	1	4	20	—	—	154	3.8
St. Helens	96,512	673	4[illegible]	37.3	17.9	0.69	16	—	—	3	4	5	2	2	87	4.1
Wigan	89,636	763	428	33.7	19.2	0.79	18	—	—	5	5	3	3	2	130	—
Warrington	71,268	580	368	32.6	20.7	3.04	54	—	—	5	4	41	2	2	179	3.6
Bolton	185,358	1,245	839	26.9	18.2	1.55	72	—	—	5	8	44	7	8	108	0.2
Bury	59,064	332	271	22.5	18.4	0.69	10	—	—	1	5	1	1	2	114	1.5
Manchester	649,251	4,764	3,413	29.4	21.1	1.80	291	—	117	13	20	78	19	34	136	0.5
Salford	239,294	1,914	1,225	32.1	20.7	3.37	202	—	74	17	18	30	17	16	120	0.4
Oldham	142,507	1,008	833	28.4	23.4	1.92	68	—	2	12	7	30	2	15	164	—
Rochdale	88,821	552	449	24.9	20.3	1.09	24	—	—	3	8	8	4	1	141	2.2
Burnley	105,100	840	517	32.1	19.7	2.30	60	—	25	7	6	13	1	8	164	1.9
Blackburn	135,961	859	583	25.3	17.2	0.63	21	—	1	3	3	9	4	1	113	1.5
Preston	117,799	837	593	28.5	20.2	1.97	58	—	40	—	2	8	8	3	121	2.9
Barrow-in-Furness	62,312	496	230	31.9	14.8	0.90	14	—	6	—	1	3	—	4	109	2.2
Huddersfield	94,778	581	452	24.7	19.1	0.64	13	—	1	1	4	4	1	2	84	1.3
Halifax	111,018	585	506	21.1	18.3	1.63	45	—	19	2	7	9	3	5	99	1.4
Bradford	292,136	1,498	1,223	20.6	16.8	0.73	64	—	22	4	8	10	6	4	134	0.2
Leeds	477,107	3,686	2,681	26.0	17.5	1.39	164	—	74	8	16	55	9	3	116	0.0
Sheffield	463,222	3,791	2,182	32.8	19.0	1.74	200	—	9	10	11	152	15	12	138	2.8
Rotherham	63,736	516	271	32.5	17.1	0.64	10	—	—	—	2	6	2	—	122	3.3
York	85,851	528	312	24.7	16.0	1.54	33	—	24	1	3	2	1	2	100	—
Hull	271,137	2,147	1,167	31.8	17.3	0.86	68	—	6	—	16	27	3	6	124	0.8
Middlesbrough	104,511	966	520	37.4	20.1	1.54	40	—	—	4	13	[illegible]	7	14	135	1.2
Stockton-on-Tees	53,160	446	266	33.7	21.5	2.95	39	—	29	—	1	4	1	4	140	1.8
West Hartlepool	77,573	484	267	25.0	13.8	0.62	12	—	—	—	5	6	1	—	114	0.7
Sunderland	157,693	1,349	854	34.3	22.0	2.23	90	—	2	—	7	73	5	2	175	3.7
South Shields	115,525	909	586	31.6	19.6	2.25	65	—	22	1	6	29	3	4	145	5.8
Gateshead	128,383	970	662	30.3	17.6	1.98	64	—	12	2	11	26	—	3	116	4.4
Newcastle-on-Tyne	277,257	2,198	1,261	31.8	18.3	1.33	92	—	17	3	13	16	1	2	129	0.6
Tynemouth	55,244	468	284	34.0	19.2	1.74	24	—	17	2	—	3	1	1	130	2.7
Newport (Mon.)	76,555	698	408	36.4	21.3	1.98	38	—	3	2	2	26	2	3	115	—
Cardiff	191,446	1,288	723	27.0	15.1	0.79	38	—	5	4	7	10	2	10	126	—
Rhondda	133,137	1,383	781	41.7	23.6	3.19	105	—	62	1	[illegible]74	23	6	10	179	0.3
Merthyr Tydfil	77,219	672	447	34.9	23.2	3.23	62	—	21	—	4	30	3	4	204	0.4
Swansea	97,810	858	548	35.2	22.5	1.80	44	—	23	—	1	13	—	7	136	0.2

The 72 542 deaths registered in these towns last quarter were equal to an annual rate of 17 9 per 1,000, against 17 2, 16.5, and 19.0 per 1,000 in the first quarters of the three preceding years. The rate of mortality in London was 17 0 per 1,000, while it averaged 18.3 in the seventy-five other large towns, among which the lowest death-rates were 9.8 in Hornsey, 11 8 in East Ham, 12 6 in Walthamstow, 12 8 in Leyton and in King's Norton, and 13 3 in Tottenham, and the highest rates 22.0 in Sunderland, 22 5 in Hanley and in Swansea, 22 6 in Rhondda, 23 2 in Merthyr Tydfil, 23.4 in Bootle and in Oldham, and 24.2 in Liverpool.

The deaths included 5,489 which were referred to the principal infectious diseases: of these, 1,360 resulted from measles, 475 from scarlet fever, 793 from diphtheria, 2,021 from whooping-cough, 280 from "fever" (principally enteric), and 560 from diarrhoea. These 5,489 deaths corresponded to an annual rate of 1.37 per 1,000, the death-rates from these infectious diseases in the first quarters of the three preceding years having been 1.39, 1 38, and 1.46 per 1 000 respectively. In London the rate of mortality last quarter from these diseases was 1.18 per 1,000; among the seventy five other large towns it averaged 1 44 per 1,000, and ranged from 0.26 in King's Norton, 0.45 in Coventry, 0 46 in Great Yarmouth, 0 54 in Huddersfield, 0.57 in Walthamstow, 0.60 in Hornsey, and 0 61 in Leyton, to 2.25 in South Shields, 2.29 in Sunderland, 2 30 in Burnley, 2.35 in Reading, 2.95 in Stockton-on-Tees, 3 04 in Warrington, 3 19 in Rhondda, 3.23 in Merthyr Tydfil, and 3 37 in Salford.

The 1,360 deaths from measles were equal to an annual rate of 0.34 per 1,000; in London the death-rate from this disease was 0 29 per 1,000, while it averaged 0.36 in the seventy five other large towns, and was highest in Willesden, Salford, Preston, York, Stockton-on-Tees, Tynemouth, Rhondda, and Merthyr Tydfil. The 475 fatal cases of scarlet fever corresponded to an annual rate of 0 12 per 1,000; the rate in London was 0.16 per 1,000, or 0 06 more than the average rate in the seventy-five other large towns; the greatest proportional mortality from this cause was recorded in Walsall, West Bromwich, Smethwick, Warrington, Salford, Oldham, and Burnley. The 793 deaths from diphtheria were equal to an annual rate of 0 20 per 1,000, which was also the rate in London; among the seventy-five other large towns diphtheria was proportionally most fatal in East Ham, Reading, Wolverhampton, West Bromwich, Bury, Salford, Rochdale, Middlesbrough, and Gateshead. The 2,021 fatal cases of whooping-cough corresponded to an annual rate of 0 50 per 1,000: in London the rate of mortality from this disease was only 0 33 per 1 000, while it averaged 0 57 in the seventy-five other large towns, and was highest in Birmingham, Aston Manor, Bootle, Warrington, Sheffield, Sunderland, Gateshead, Newport (Mon.), and Merthyr Tydfil. The 280 deaths referred to "fever" were equal to an annual rate of 0 07 per 1,000; in London the "fever" death-rate was 0 03 per 1 000, while it averaged 0 08 in the seventy-five other large towns, and was highest in Norwich, Hanley, Grimsby, Nottingham, Salford, Preston, Middlesbrough, Rhondda, and Merthyr Tydfil. The 560 fatal cases of diarrhoea corresponded to an annual rate of 0 14 per 1,000; in London the rate was 0.17 per 1,000, while among the seventy-five other large towns diarrhoea was proportionally most fatal in Reading, Liverpool, Salford, Oldham, Burnley, Middlesbrough, Stockton-on-Tees, Rhondda, and Swansea.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 124 per 1,000 last quarter, against 127, 128, and 136 in the first quarters of the three preceding years. In London the rate of infant mortality was 110 in the quarter under notice, while it averaged 129 in the seventy-five other large towns, and ranged from 67 in Leyton, 73 in Coventry, 84 in Hornsey in Tottenham, and in Huddersfield, 87 in St. Helens and 91 in King's Norton to 155 in Newport (Mon.), 156 in Swansea, 164 in Burnley, 175 in Sunderland, 176 in Gateshead, 179 in Warrington and in Rhondda, and 194 in Merthyr Tydfil.

The causes of 723, or 1 0 per cent., of the deaths registered in the seventy-six towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, East Ham, Walthamstow, Southampton, Plymouth, Derby, Oldham, Cardiff, and in nine other smaller towns; the highest proportions of uncertified deaths were 3 0 in Liverpool, 3.2 in King's Norton, 3.3 in Rotherham, 3 5 in Warrington, 3.7 in Sunderland, 3.8 in Bootle, 4 1 in St Helens, 4.3 in Birmingham, 4.4 in Gateshead, and 5 8 in South Shields.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,977 births and 4,443 deaths were registered during the week ending Saturday last, May 9th. The annual rate of mortality in these towns, which had been 16.2, 15.4 and 15.7 per 1 000 in the three preceding weeks, declined again last week to 14.2 per 1,000. The rates in the several towns ranged from 6.6 in King's Norton, 7 9 in Willesden, 8.0 in Walsall, 8.4 in East Ham, 8 7 in Walthamstow, and 9.0 in West Bromwich, to 19.0 in Oldham, 19.1 in Gateshead, 19.6 in Stockton-on-Tees and in Merthyr Tydfil, 19 8 in Tynemouth, 20.1 in Liverpool, 23 0 in Preston, and 23 1 in Huddersfield. In London the rate of mortality was 13.8 per 1,000, while it averaged 14 3 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.1 per 1,000 in the seventy-six towns; in London the death-rate from these diseases was 1 0 per 1,000, while among the other large towns it ranged upwards to 2 5 in Barrow-in-Furness, 2 7 in Merthyr Tydfil, 3 0 in Wallasey, 3.1 in Rhondda, 3 9 in Salford, and 4.6 in Bootle. Measles caused a death-rate of 1 0 in West Ham, 1.1 in Swansea, 1 5 in Bootle, 2 0 in Stockton-on-Tees and in Rhondda, 2 3 in Wallasey and 2 8 in Salford; whooping-cough of 1.0 in Bristol, 1.1 in Northampton, 1.5 in Bootle, 1.7 in Barrow-in-Furness, and 2 0 in Merthyr Tydfil; and diarrhoea of 1 0 in Sunderland and 1 2 in Rochdale. The mortality from scarlet fever, from diphtheria, and from enteric fever showed no marked excess in any of the large towns and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,839, 2,861, and 2,925, at the end of the three preceding weeks, had declined again to 2,870 at the end of last week; 353 new cases were admitted during the week, against 328, 332, and 368 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 9th, 1,114 births and 629 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.8 and 13.7 per 1,000 in the two preceding weeks, declined to 17.8 per 1,000 last week, but was 3.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14 2 in Leith and 15 0 in Paisley to 22.2 in Perth and 22 3 in Dundee. The death-rate from the principal infectious diseases averaged 2 2 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 307 deaths registered in Glasgow included 16 which were referred to measles, 3 to scarlet fever, 5 to diphtheria, 7 to whooping-cough, 5 to cerebro-spinal meningitis, and 4 to diarrhoea. Four fatal cases of measles, 4 of whooping-cough, 2 of cerebro-spinal meningitis, and 3 of diarrhoea were recorded in Edinburgh; 2 of whooping-cough and 2 of diarrhoea in Dundee; 4 of measles, 2 of whooping-cough, and 3 of diarrhoea in Aberdeen; 2 of whooping-cough in Paisley; 2 of scarlet fever in Leith; and 3 of measles in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 2nd, 653 births and 334 deaths were registered in six of the principal Irish towns as against 473 births and 431 deaths in the preceding period. The annual death-rate in these towns, which had been 28.8, 21.2, and 28 6 per 1,000 in the three preceding weeks, fell to 25.9 per 1,000 in the week under notice, this figure being 10.2 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17.1 in Belfast and 20.7 in Londonderry to 27 3 in Limerick and 46.7 in Waterford. The zymotic death-rate in the same six Irish towns averaged 4 0 per 1,000, or 0.3 per 1,000 higher than during the preceding period, the highest figure—17.5—being recorded in Waterford, while Limerick registered no deaths under this heading at all. The high rate in Waterford was due to measles.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary £80 per annum, increasing to £100.

BIRMINGHAM: EAR AND THROAT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

BIRMINGHAM EDUCATION COMMITTEE.—(1) Medical Superintendent; salary, £500 per annum. (2) Three Medical Officers: salary, £250 per annum each.

BIRMINGHAM: ROYAL ORTHOPAEDIC AND SPINAL HOSPITAL.—Honorary Surgeon.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence, £80 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Assistant Resident Medical Officer: honorarium, 25 guineas for three months. (2) Second Honorary Anaesthetist.

CARDIFF INFIRMARY.—(1) House-Surgeon; (2) House-Surgeon for Ophthalmic and Ear and Throat Departments; honorarium, £30 for six months each.

CARDIFF INFIRMARY.—Senior Resident Medical Officer. Salary, £120 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160, increasing to £180 per annum.

CHELSEA HOSPITAL FOR WOMEN, S.W.—Clinical Assistant.

COLCHESTER: ESSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DERBYSHIRE ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

DURHAM COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £300 per annum, increasing to £400.

EDINBURGH CITY.—Medical Officer of Health. Salary not less than £800 per annum.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Physician. Salary £60 per annum.

HAMMERSMITH UNION.—Second Assistant Medical Officer (Male), for the Infirmary and Workhouse, Lucane Road. Salary, £50 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £20 for six months, and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho.—Clinical Assistants to the Gynaecologists in Out-patient Department.

HULL AND SCULCOATS DISPENSARY.—Medical Officer. Salary, £210 per annum.

LEEDS: GENERAL INFIRMARY.—(1) Resident Medical Officer; (2) Resident Ophthalmic Officer. Salary, £150 and £100, per annum respectively.

LEEDS UNIVERSITY: SCHOOL OF MEDICINE.—Professor of Therapeutics.

LEICESTER INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

LONDON COUNTY COUNCIL.—Two District Medical Officers for employés.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton Street, W.—Two Senior Clinical Assistants.

MIDDLESEX HOSPITAL MEDICAL SCHOOL, W.—Lectureship in Anatomy.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Northwood.—Assistant Resident Medical Officer. Honorarium, £50 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Third Resident Medical Officer. Salary, £30 per annum.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill. Junior House-Surgeon. Salary, £50 per annum.

NORTHAMPTON GENERAL HOSPITAL.—Two Honorary Anaesthetists.

ROYAL EAR HOSPITAL, Dean Street, Soho, W.—House-Surgeon. Honorarium, £40 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician for Diseases of Women.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—(1) House-Surgeon: salary, £25 for six months. (2) Clinical Assistants.

ST. GEORGE'S UNION.—Second Assistant Medical Officer at the Infirmary, Fulham Road. Remuneration, £120 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

WAKEFIELD: WEST RIDING OF YORKSHIRE COUNTY COUNCIL.—Ten Medical Inspectors. Salary, £300 per annum.

WALSALL AND DISTRICT HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.

WARRINGTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary, £150 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Junior House-Surgeon. Salary at the rate of £80 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—House-Physician for six months.

WIGAN INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer; (2) Assistant House-Surgeon; salary, £100 and £80 per annum respectively.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories notifies vacancies at Leatherhead, co. Surrey; Dumbarton, co. Dumbarton, and Nottingham (East), co. Nottingham.

APPOINTMENTS.

BALL, J. A., M.B.Lond., Certifying Factory Surgeon for the Hoxne District, co. Suffolk.

BEARD, J., F.R.C.S.Eng., D.P.H.Camb., Medical Officer of Health for the City of Carlisle.

BUTLER-SMYTHE, A. C., F.R.C.S., Surgeon to In-patients to the Samaritan Free Hospital for Women, Marylebone Road, N.W.

CARLYLE, Oliver, L.R.C.P.and S.E., House Surgeon, Salford Royal Hospital.

CARSTAIRS, J. Lindlev, M.A., M.B., C.M.Glasg., an Assistant Obstetric Physician to the Maternity Hospital, Glasgow.

CHAPMAN, J. S., M.B., Ch.B.Aberd., Certifying Factory Surgeon for the Turriff District, co. Aberdeen.

COUTTS, J. A., M.B., C.M.Edin., District Medical Officer of the Haslingden Union.

CRAIG, C. McK., M.D.Vict., Junior Assistant Resident Medical Officer, Chorlton Union Workhouse Infirmary.

DYER, C. Harold, M.D.Aberd., D.P.H.Vict., Assistant Medical Officer for School Inspection to the Borough Education Committee, Tunbridge Wells.

EDWARDS, H. J., M.D.Durh., D.P.H., District Medical Officer of the Barnstaple Union.

FEATHERSTONE, J., L.R.C.P.and S.Edin., District Medical Officer of the Chorlton Union.

FENNINGS, A. A., M.D.Durh., District Medical Officer of the Eastbourne Union.

GRAYSON, F. D., M.R.C.S.Eng., L.S.A., Medical Officer of the Children's Home of the Rochford Union.

HAMILTON, Robert J., F.R.C.S.Edin., M.R.C.S.Eng., Honorary Consulting Ophthalmic Surgeon to the Royal Southern Hospital, Liverpool, vice Mr. Richard Williams, resigned.

KEEP, A. Corrie, M.D., M.C., Surgeon to In-patients to the Samaritan Free Hospital for Women, Marylebone Road, N.W.

PELL-ILDERTON, H., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Manchester (East) District, co. Lancaster.

SALE, J. C., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Spilsby Union.

WALLS, E. G., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Spilsby Union.

WOOD, C. R., M.D.Durh., District Medical Officer of the Steyning Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MITCHELL.—On Tuesday, May 12th, the wife of Charles Martin Mitchell, M.R.C.S., L.R.C.P., of a daughter.

MURIEL.—On May 9th, at 109, Scotch Street, Whitehaven, the wife of G. Bertram Muriel, B.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

OSBORN.—On May 5th, at Ennismore Lodge, Park Avenue, Dover, the wife of Francis Arthur Osborn, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

WISE.—On May 6th, at 290, Ivydale Road, Nunhead, London, the wife of Robert Wise, M.D., of a son (John Arthur).

DEATHS.

HOETS.—On May 7th, at Sydney, N.S.W., Alton Kingsley Hoets, M.R.C.S.Eng., L.S.A., elder son of the late Rev. J. W. Van Rees Hoets, of 150, Adelaide Road, N.W., aged 51, of pneumonia. (By cable.)

MASTERMAN.—On April 27th, at Jerusalem, Lucy Nazarina, the beloved wife of Ernest W. G. Masterman, F.R.C.S., F.R.G.S., aged 35 years.

ROBERTSON.—At Benview, Dumbarton, on May 6th, John Robertson, M.D., J.P., in his 72nd year. Only intimation.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Conversazione; Presentation of the Fothergillian Medal to Sir A. E. Wright, M.D.; and the Annual Oration by Mr. Clinton Dent on the After-Results of Injuries.

TUESDAY.

MEDICO-PSYCHOLOGICAL ASSOCIATION, 11, Chandos Street, Cavendish Square, 3 p.m.—(1) Drs. David Orr and R. G. Rows: A Paper and Lantern Demonstration on Some Points in the Histology of Lymphogenous and Haematogenous Toxic Lesions of the Spinal Cord. (2) Discussion, introduced by Dr. D. G. Thomson, The Teaching of Psychiatry.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Paper: Sir Frederick Treves, Preventive Medicine in Panama.

SOCIETY FOR THE STUDY OF DISEASES IN CHILDREN, 11, Chandos Street, 5 p.m.—Mr. Watson Cheyne: The Wightman Lecture, on the Defensive Arrangements of the Body as illustrated by the Incidence of Disease in Children and Adults.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C., Thursday, 4 p.m.—Pyopericarditis.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography 4 p.m. Thursday. Special Lectures: Wednesday, 2.15 p.m., Emphysema of the Lungs; Friday, 3.15 p.m., Acute Inflammation in Long Bones.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Modern Views on Rheumatoid Arthritis (with lantern slides); Tuesday, Fistula in Ano; Wednesday, Surgical Diseases of Children; Thursday, Syphilitic Affections of the Spinal Cord.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cerebral Abscess; Friday, 3.30 p.m., Sclerotic Disease of the Cord.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, *X* Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Special Demonstration of Selected Medical Cases. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; 4.30 p.m., Throat Operations. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient; 4.30 p.m., Special Demonstration of Selected Eye Cases.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, *X* Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 12 noon: Monday, Pathological Demonstration. At 12.15 p.m., Wednesday and Friday, Practical Medicine. At 5 p.m.: Monday, Gynaecology; Tuesday, Insects as Carriers of Disease; Wednesday, Medicine; Thursday, Practical Surgery; Friday, Emergency Operations in Eye Affections.

BOOKS, ETC., RECEIVED.

Paris: J. B. Baillière et Fils. 1908:—

Nouveau Traité de Chirurgie. Publié sous la direction de A. le Dentu et P. Delbet. XXV. Hernies. Par M. Jaboulay et M. Patel. Fr.8.

Nouveau Traité de Médecine et de Thérapeutique. Publié sous la direction de A. Gilbert et L. Thoinot. XX. Maladies des Glands Salivaires et du Pancréas. Par P. Carnot. Fr.7.

Beitrage zur Pathologie des Stoffwechsels bei Psychosen. Erster Teil. Die progressive Paralyse. Von Dr. M. Kauffmann. Jena: G. Fischer. 1908. M.6.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. (New Series.) No. 31.

The Development of the Leishman-Donovan Parasite in Cimex Rotundatus. Second Report. By Captain W. S. Patton, M.B., I.M.S. Calcutta: Superintendent of Government Printing, India. 1908. Rs.1=1s. 6d.

"*" In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	LONDON: Standing Ethical Sub-committee, 1.30 p.m. LONDON: Central Ethical Committee, 3 p.m.
20 WEDNESDAY	CARDIFF DIVISION, *South Wales and Monmouthshire Branch*, Annual Meeting, Cardiff.
21 THURSDAY...	GLOUCESTERSHIRE BRANCH. Annual Meeting. Infirmary. Gloucester, 6 p.m.; Dinner, Bell Hotel, Gloucester, 8 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Co-operative Rooms, Ellesmere Street, 8.30 p.m.
22 FRIDAY ...	METROPOLITAN COUNTIES BRANCH, Annual Dinner, Imperial Restaurant, Regent Street, W., 7.30 p.m.
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	KENSINGTON DIVISION, *Metropolitan Counties Branch*, Kensington Town Hall, 5 p.m.
26 TUESDAY ...	BATH DIVISION, *Bath and Bristol Branch*, Royal United Hospital, 6 p.m.
27 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Hotel Mont Dore, Bournemouth. LEICESTER AND RUTLAND DIVISION, *Midland Branch*, Annual Meeting, Leicester Infirmary, 4 p.m. NORTH CARNARVONSHIRE AND ANGLESEY DIVISION, *North Wales Branch*, Annual Meeting, British Hotel, Bangor, 3 p.m.
28 THURSDAY...	BATH AND BRISTOL BRANCH, Annual Meeting, Bristol CITY DIVISION, *Metropolitan Counties Branch*, Annual General Meeting, followed by Supper, Great Eastern Hotel, 9 p.m. FOLKESTONE DIVISION, *South-Eastern Branch*, Annual Meeting. LINCOLN DIVISION, *Midland Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.
29 FRIDAY ...	TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Prince of Wales Hospital, Tottenham, 4.30 p.m.
30 SATURDAY...	
31 Sunday ...	
JUNE.	
1 MONDAY ...	
2 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Midland Hotel, King's Cross, W.C., 4 p.m.
3 WEDNESDAY	
4 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of Hospital, Altrincham, 4.50 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7 p.m.
5 FRIDAY ...	LONDON: Standing Ethical Sub-committee, 2 p.m. GLASGOW AND WEST OF SCOTLAND BRANCH, Annual Meeting and Dinner.
6 SATURDAY...	MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork, 4.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 23RD, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

REPORT OF COUNCIL, 1907-8.

TO BE PRESENTED TO THE

Annual Representative Meeting

AT

SHEFFIELD.

(1) THE Council in presenting its Report for the past year would congratulate the Association on its choice of Sheffield as the place of meeting for the Seventy-sixth Annual Meeting. Twice before in the history of the Association has the Meeting taken place in this City. First in 1845, when its membership was barely two thousand; secondly in 1876, when the numbers had increased to seven thousand. At the present time the figures of 1876 have been more than trebled, as the Association has a membership well over twenty-one thousand.

The Association is sure of a warm welcome from the practitioners in Sheffield and District. The Lord Mayor, the Master Cutler, and the Citizens also have promised to use their best endeavours to promote the comfort and enjoyment of members.

The Council has reason to believe that the arrangements for the business of the Meeting have been thoroughly well considered. The Reception Rooms, the Meeting Rooms of all the seventeen Sections, and the Pathological Museum will be under one roof, that of the magnificent University Buildings of which Sheffield is so justly proud, while, within a few minutes' walk, the Representative Meeting will be held in the Hall of the Education Department.

THE EXETER MEETING.

(2) The Meeting at Exeter in July last proved to be, as was anticipated, an unqualified success, both in its scientific and social aspects. Hearty votes of thanks were, at the close of the Meeting, accorded by those present to Dr. Henry Davy, the President, and to all others who in various degrees had contributed to that success; but the Council feels that the review of the work of the past year would be incomplete unless it alluded once more to the subject.

THE CHAIRMANSHIP OF COUNCIL.

(3) Dr. Langley Browne, who had served as Chairman of Council since the Meeting at Leicester in 1905, owing to his election as a Direct Representative on the General Medical Council, in common with other members similarly placed, has felt compelled to resign his Membership of the Association. The Council took the opportunity of recording on its Minutes its high appreciation of the

valuable services which he had rendered to the Council, and the expression of its belief that as a Member of the General Medical Council he would continue to use his sound judgement to advance the best interests of the Profession. As his successor in the Chair, the Council elected Mr. Edmund Owen, LL.D, Consulting Surgeon to St. Mary's Hospital.

THE TREASURERSHIP.

(4) After two years' service Dr. H. Radcliffe Crocker found that he could no longer devote the necessary time to carry out the growing responsibilities of the Treasurership of the Association. This decision was received and accepted by the Council with profound regret. Dr. Radcliffe Crocker has been succeeded in the Treasurership by Dr. Edwin Rayner, Surgeon to the Stockport Infirmary.

TERM OF OFFICE OF BRANCH REPRESENTATIVES.

(5) Under By-Law 26 the term of office of Branch Representatives in the United Kingdom is limited to six continuous years of service on the Council. This means that the Council must lose some of its most active and valued members, who, at no small personal sacrifice, have found time during many years to discharge, to the advantage of the Association, the various duties incidental to Membership of the Council. The severance of these ties is a matter of extreme regret to their colleagues.

DEATHS OF MEMBERS OF COUNCIL.

(6) Each year the Council has the melancholy duty of reporting the loss by death of one or more of its members. The year now under review is no exception to this rule, Death having claimed—Dr. Markham Skerritt, a late Treasurer of the Association, Dr. Joseph Groves, and Dr. John H. Galton.

Each of these gentlemen exercised a marked influence in the deliberations of the Council as well as of the Branches that they had so worthily represented during a great number of years.

The Council also has regretfully to record the loss of two former Members of Council, namely, Sir William Gairdner, K.C.B., F.R.S., who presided over the Association at its Annual Meeting in Glasgow in 1888, and Dr. Thomas M. Dolan of Halifax, who had represented the Yorkshire Branch.

DEATHS OF MEMBERS OF THE ASSOCIATION.

(7) The Council also regrets to report the deaths of the following Members of the Association: Mr. William Allingham, Mr. Richard Ambler, Sir Thomas McCall Anderson, Professor Thomas Annandale, Dr. Edmund Antrobus, Mr. Robert Samuel Areher, Mr. Robert Fitzroy Benham, Dr. Edward Hallaran Bennett, Mr. Edward Robert Bickersteth, Dr. George Henry Biden, Dr. Ernest Bramwell, Dr. Mark A. Brennan, Sir Wm. Henry Broadbent, Bt., K.C.V.O., F.R.S., Mr. George Brown, Mr. David Browne, at one time President of the Southern Branch; Mr. Wm. Seymour Burrows, Mr. Alfred Square Cooke, a past President of the Gloucestershire Branch; Sir Alfred Cooper, Dr. James Fraser Davidson, Dr. William Henry Day, Mr. Walter Arnold Densham, Lieut.-Col. Robert D. Donaldson, R.A.M.C., Capt. James Allen Dredge, I.M.S., Professor Julius Dreschfeld, Dr. Lionel Druitt, Dr. William H. Drummond, Dr. Charles Robert Drysdale, Dr. James Dunsmure, Dr. George Grigson Ellett, from surgical inoculation; Dr. George Frederick Elliott, Sir Joseph Fayrer, Bt., K.C.S.I., F.R.S., Major Fullarton, I.M.S., Sir Alfred Baring Garrod, F.R.S., Dr. George Herbert Graham, Dr. David Grant, Surg.-Col. Wm. Graves, Dr. Vernon John Greenhough, Lieut.-Col. William Edwin Griffiths, I.M.S., Mr. R. W. Harley, Mr. Reginald Harrison, Dr. Francis J. Holden, Dr. Robert Hughes, a former President of the North Wales Branch; Dr. W. Edward Humble, Dr. Alfred Ernest Jefferson, Dr. W. H. Johnson, Dr. Boyd Burnet Joll, Mr. William Ross Jordan, Lieut.-Col. James Bennett Kelly, R.A.M.C., Mr. Thomas Atherstone Kennard, Surg.-Gen. C. E. Kilkelly, Dr. John Comyns Leach, a former President of the Dorset and West Hants Branch; Mr. Alfred Alex. de Lessert, Dr. Thomas White Lewis, Dr. John Parker Lightfoot, Dr. R. E. Little, Mr. Samuel Lodge, Dr. William Archibald Logan, Dr. Thomas Logan, Mr. Richard Luscombe, Dr. Donald J. Macdonald, Mr. Jonathan F. C. H. Macready, Lieut.-Col. John Maitland, I.M.S.; Dr. Edward Dillon Mapother, formerly President of the Dublin Branch; Dr. William Maule, Lieut.-Col. Gerald Macklin Eccles McKee, Dr. John Ruddle Milsom, Lieut.-Col. Edwin Oswald Milward, Dr. James More, Mr. Frank E. Murray, Dr. Hubert Montague Murray, Dr. Emilius Rowley Nicholson, Dr. Conolly Norman, Dr. Alfred Lloyd Owen, a past President of the Portsmouth Division; Mr. John Pardoe, Mr. John Latimer Parke, Dr. Walter Hugh Paterson, Dr. Robt. John Paton, of septicaemia; Mr. Francis James Pearse, Mr. Arthur D. Peill, Dr. George Armstrong Peters, Professor of Surgery in the University of Toronto; Dr. Lawrence Willmer Kingslake Phillips, Capt. Michael Biddulph Pinchard, I.M.S.; Dr. John Pirie, Dr. C. E. Preston, Mr. Edwin Price, Dr. Ferdinand A. Purcell, Mr. Thomas Holmes Ravenill, Mr. William Swanston Spence Reid, Dr. John Roberts, Mr. Thomas Roberts, Dr. Alfred Langston Scott, Dr. George John Sealey, Dr. James Tracey Simpson, Dr. William Slater, Dr. William Spalding, Dr. W. James Spence, Dr. Robert Sterling, Dr. Henry Stolterforth, Mr. Frederick William Storry, a Past-President of the Gloucestershire Branch; Dr. William Heath Strange, Dr. Adolphe Wahltuch, Dr. Andrew Wallace, Sir Patrick Heron Watson, Dr. William George Weaver, Mr. Charles Hayden White, Mr. Charles Williams, Dr. J. Llewelyn Williams, Dr. George R. Wilson, Mr. Charles James Wright, formerly President of the Yorkshire Branch.

THE MEMBERSHIP.

(8) The steady growth of the Association continues uninterrupted. For comparison the figures of 1906 and 1907 are given:

	1906.	1907.
New members	2,171	1,527
Resigned	485	1,050
Deaths	225	227
Removed under Article VIII...	192	116
" " " XLIII	2	2
" " " XLII...	1	1
Total membership	20,993	21,124

After deducting all losses, the net increase in the membership of the Association for 1907 is one hundred and thirty. This is below the average, but it will be within the recollection of members that in 1906 the recruiting was exceptionally heavy when the Association met in Toronto.

THE REFERENDUM.

(9) As a result of the Special Representative Meeting held in May, 1907, certain resolutions for the proposed Charter were passed, but some of them were considered by the Council not to properly represent the wishes of the Association. Consequently an instruction was issued to every Division throughout the Association that a direct vote should be taken on each resolution of the Representative Meeting on which the Council had decided to exercise the Referendum.

The Resolutions referred under Article XXII were as follows:

The Proviso as to the Referendum (Minute No. 123).
The Composition and Mode of Election of the Council (Minutes Nos. 283, 287, 293 and 298).
The Grouping of Branches (Minute No. 299)
The Mode of Election by Groups of Branches (Minute No. 303).
The Business of the Annual Representative Meeting (Minutes Nos. 328 and 330), and
The Division of the Journal and Finance Committee into two separate Committees (Minutes No. 342 and 346).

Voting papers were issued to 222 Divisions—190 in and 32 outside the United Kingdom.

The Poll was closed on March 2nd, when the membership of the Association was 20,675.

By this date 149 Divisions in the United Kingdom

and 10 Divisions outside the United Kingdom had replied.

The aggregate attendances at the meetings convened for the purpose of considering the Referendum was 1 978, 1 831 members attending in the United Kingdom and 147 outside it.

The largest Meeting that considered the Referendum numbered 46, the smallest 2.

Thus less than 10 per cent. of the Members have expressed a definite opinion on these questions, and, having regard to the important principles involved, the Council regrets that the Division meetings were not more largely attended.

The actual votes recorded for and against each referred Resolution of the Representative Meeting are as follows:

Minutes of Representative Meeting.	Total of Votes.		Majority.	
	For the Representative Meeting.	Against the Representative Meeting.	For.	Against.
123	1,219	604	615	
283	1,127	711	416	
287	1,118	700	418	
293	1,128	706	422	
298	1,120	711	409	
299	1,104	670	434	
303	1,146	609	537	
328	1,153	658	495	
330	1,167	635	532	
342	1,146	667	479	
346	1,146	665	481	

MEDICAL BENEVOLENT INSTITUTIONS.

(10) In its report last year the Council expressed the hope that Members would assist more generally in the efforts to relieve those who, from sickness or other misfortune, had failed to provide for those dependent on them, and the Council sincerely regrets that this appeal has not produced better results. The total amount received by the General Secretary during the year 1907 on behalf of the British Medical Benevolent, the Epsom College, and the Irish Benevolent Funds amounted to £945, five pounds less than in the previous year.

THE METROPOLITAN ASYLUMS BOARD.

(11) Once more the Council has to express its cordial thanks to the Chairman and Members of the Metropolitan Asylums Board for kindly placing their Board Room at the disposal of the Council. While fully appreciating this courtesy whereby the Association has been relieved of the difficulty of finding a suitable meeting room during the process of rebuilding, the Council is now able to look forward to the early completion of the new buildings in the Strand, and the feasibility of once more meeting under their own roof.

OFFICE STAFF.

(12) Since the Council last reported, there has been no diminution in the amount of work of the Head Office, and the thanks of the Association are due to the Editor, the General Secretary and Manager, the Medical Secretary, and the whole of the Clerical Staff for their untiring efforts to advance the prosperity and influence of the Association.

THE FINANCE ENQUIRY COMMITTEE.

(13) The Special Finance Inquiry Committee appointed by the Annual Representative Meeting at the Caxton Hall, Westminster, completed its investigation of the finances and administrative arrangements of the Association.

This report was placed before the Representatives at Exeter, and certain of the Recommendations were referred to the Council for consideration and for action at its discretion. The Recommendations so referred have, with certain exceptions, been adopted by the Council upon the advice of the Journal and Finance Committee, and have been carried into effect.

The Recommendations so adopted by the Council were as follows:

Improvements in System of Financial Control.

That to enable the Representative Meeting duly to consider the financial aspects of questions of policy and administration:

There be placed before it a Report from the Finance Committee on the financial aspects of any proposals involving considerable new expenditure;

The form of the Balance Sheet be amended as shown in the Appendix to the Recommendations.

That the "ordinary" expenditure which Committees are authorized to incur without special sanction of the Council, and the power of the Treasurer to provisionally authorize extra expenditure in cases of emergency, be defined by standing orders of the Council.

That the Chairman of each Committee be furnished quarterly with a statement of all expenses charged in the accounts of the Association as arising out of the work of that Committee during the previous quarter.

Economies in Administration.

That with a view to economy in administration:

The attention of the Council and Committees be drawn to the importance of keeping down the number of Committee Meetings to the minimum consistent with efficient work, and that, to contribute to this end, the work of investigation and action in suitable matters be referred to small Subcommittees, and the opinions of Members of Committees, on matters of a simple character not requiring discussion, be ascertained when possible by correspondence;

That for all documents printed for Committees, Journal type and measure be used, in order to save cost in subsequent reprinting in the Journal.

That as much as possible of the printing be done by the Association.

Secretarial Departments.

Work of the Financial Department.

That to the Financial Department be assigned the business work of the Association, and the Secretaryship of the Annual General Meeting, of the Central Council, and of the following Committees:

Journal and Finance;
Premises;
Arrangements;
Election Returns;
Science;

and any other Committee that may be appointed dealing with the Financial Department of the Association.

Work of the Medical Department.

That to the Medical Department be assigned all the work pertaining to the professional side of the work of the Association and the Secretaryship of the Representative Meeting, and of the following Committees:

Organization;
Ethical;
Hospitals;
Medico-Political;
Public Health;
Colonial;
Naval and Military;

and any other Committee that may be appointed dealing with the professional work of the Association.

Attendance of both Secretaries at certain Meetings; Minutes and Agenda of these Meetings.

That both Secretaries be required to attend General Meetings, Representative Meetings, Central Council, and Meetings of the following Committees:

Organization;
Journal and Finance;
Election Returns.

That the Minutes and Agenda of the above Meetings be submitted to both Secretaries before being finally printed.

That each Head of Department should, when it appears to him that the interests of the Association may be advanced by his presence, or at the request of the Chairman of Committee, attend Meetings of Committees other than those of which he is Secretary.

That the Head of each Department be supplied with a copy of all official documents at the time of issue.

Clerks of Departments.

That the Head of each Department nominate the clerks for his Department; that the appointment be made by the Chairman of Council and Treasurer; that the Head of each Department have the power of suspension of the clerks in his Department; that the power of dismissal be in the hands of the Chairman of Council.

Card Register of the Association and of the Profession.

That the Medical Secretary be empowered to keep a card register of Members of the Association and of the medical profession; and that information for this purpose should be sent to him as soon as received.

That the staff of the Medical Secretary's Department be constituted as follows:

One Assistant Medical Secretary.
Four Senior Clerks.
Five Junior Clerks.
One Office Boy.

All of whom shall receive suitable salaries, and that the staff may be increased as the occasion arises.

With reference to the following Recommendation:

Assistant Medical Secretary.

That an Assistant Medical Secretary be appointed at a suitable salary (not exceeding £600 per annum), who is capable of undertaking any part of the Medical Secretary's work which may be delegated to him;

the Council thought it expedient to take no action until it had before it the Balance Sheet for the year 1907.

Upon consideration of the Balance Sheet on April 29th, the Council decided to appoint a Permanent Assistant Medical Secretary, and referred to a Special Committee, composed of the Chairmen of those Committees of which the Medical Secretary acts as Secretary, together with the Officers of the Association, the duty of making recommendations as to the terms of appointment.

Financial Part of the Work of the Association.

The Finance Inquiry Committee also passed the following resolution on the financial part of the work of the Association:

The Committee desires to place on record its appreciation of the excellent way in which the financial part of the work of the Association is carried on, and the only recommendations it has made with regard to this Department are for the sake of more orderly arrangement and clearer definition of the work of the two Departments.

1907 BALANCE-SHEET AND FINANCIAL STATEMENT.

(14) In presenting the Financial Statement for the year ending 31st December last, it will be observed that the form of submitting the accounts is somewhat altered. By this alteration it is hoped that the interest of members may be stimulated further as to whence the revenues of the Association are derived, and how they are applied.

Each year the tendency is for greater financial demands on the resources of the Association, and such demands can only be met by carefully handling the revenues and by constantly watching the many ramifications of a large business enterprise.

General Association Expenses.

Taking the Revenue or Profit and Loss Account, the General Association Expenses, which are fully recited under Abstract A, show a small increase. The Bank Charges were £40 heavier, consequent upon the high bank rate which prevailed at a time when it is often necessary to temporarily overdraw the general working account. Legal Expenses show an increase of £150 owing to work in connexion with the Charter, and Counsel's fees for drafting the proposed Medical Acts Amendment Bill. But for these two items there is little call for comment under this heading.

Central Meeting Expenses (Abstract B).

Here there is a decrease of about £250 on the year. The cost of producing the Daily Journal at Exeter was less by nearly £100 than at Toronto, but the expenses of the Sections were £50 more.

Representative Meetings.

Under the head of Railway Fares there is an increase of £340, and in printings £85; these increases were due to the Special Representative Meeting held in London in May. The expense was heavy, but the large attendance of Representatives bore witness to the increasing interest of the members in the work of the Association. Under the heading Hire of Hall, etc., there is a decreased expenditure of £56. It will be remembered that the Representatives occupied Caxton Hall for about a week prior to the Toronto meeting.

The Council Railway Fares were some £70 less, but the printings were £60 more owing to the longer meetings and the issue of the Referendum documents to the Divisions.

While the total cost of the Annual Repesentative and Council Meetings in 1907 was £1 830, £300 more than in the previous year, the expenditure of the Committees was £550 less.

Compared with 1906, the Ethical Committee cost £20 more, the Irish Committee spent £30 less, and the decrease in the expenditure of the Medico-Political Committee was nearly £460.

The Organization Committee, owing to the large amount of work it has had to undertake, more especially in connexion with the work of the Charter, had an increased expenditure of £80.

The Premises Committee spent £55 and the Public Health Committee £20 less, while the disappearance of the Volunteer Medical Committee effected a saving of £77.

Central Premises Expenses (Abstract C).

Under this head the additional expenditure of over £200 is due to the renting of temporary offices while the new premises are in course of construction. It is interesting to note that owing to the lower rateable value of 6, Catherine Street, as compared with the Strand, the saving in rates and taxes has relieved the charge for rent of the temporary Catherine Street premises by over 50 per cent.

Central Printing, Stationery, and Postal Expenses (Abstract D).

Here there is a saving of nearly £1,000.

Miscellaneous Printing is less by £170, as it has not been necessary to circulate so many printings. This is reflected in the amount expended on Postages in the General Secretary's Department and in that of the Medical Secretary. The principal item to disappear from this account is the Year Book, which in 1906 involved an outlay of £744.

Central Staff Expenses (Abstract E)

The item which will arrest attention here is the decrease of some £200 in the travelling expenses of the General Secretary's Department. This expenditure was above the average in 1906 owing to the Toronto Meeting.

British Medical Association.

Balance Sheet 31st December, 1907.

Dr. Cr.

LIABILITIES.

	£ s. d.	£ s. d.
To Subscriptions paid in advance	390 1 1	
,, Advertisements ditto	704 18 4	
,, Contributions	794 8 9	
		1,889 8 2
,, Reporting	36 4 6	
,, Engraving	95 5 5	
,, Printing Journal	418 8 8	
,, Paper for Journal	841 9 5	
,, Miscellaneous Printing	289 1 10	
,, Stationery	111 13 6	
,, Repairs	23 5 6	
,, Legal Charges	104 11 0	
,, Rates and Taxes, Insurance, Electricity and Rent	533 19 5	
,, Plant and Type	42 11 8	
,, Editorial Expenses	32 13 11	
,, Sundries	33 3 3	
,, Library Books, &c.	21 18 8	
		2,590 9 9
,, London and Westminster Bank—Amount of Loan at December 31st, on Account of New Building in Course of Construction, secured by Deposit of Deeds of Freehold Property		12,228 3 6
,, Overdraft from Bankers		618 4 0
,, Subscriptions due to Branches, December 31st, 1907		222 14 9
TOTAL LIABILITIES		17,549 0 2
,, **Surplus Account**—		
Balance on January 1st, 1907	103,644 11 11	
Balance of Income over Expenditure for 1907 brought from Revenue Account	1,319 3 9	
	104,963 15 8	
Less amount incurred in removing from 429, Strand, fitting up Temporary Offices, and cost of Warehousing Books and Furniture...	873 10 10	
Balance being total of Excess of Assets over Liabilities ...		104,090 4 10
		£121,639 5 0

ASSETS.

	£ s. d.	£ s. d.
By Subscriptions in arrears	2,011 16 10	
,, Advertisements ,, ...	3,004 15 3	
,, Sundry Sales ,, ...	145 19 10	
,, Furniture and Fixtures	1,137 6 8	
,, Library	2,176 8 6	
,, Plant and Type	1,788 3 9	
,, Stock of Paper in hand for printing Journal	149 7 11	
,, Cash at Office	59 18 10	
,, Cash at Bank (being Branch Subscriptions in hand December 31st, 1907)	222 14 9	
,, INVESTMENTS—		
,, Freehold Site, 429, Strand, Agar Street, and Harvey's Buildings, as at 31st December, 1907, including the original cost to the Association of the Buildings now demolished	86,020 0 0	
,, New Premises in Course of Construction—Amounts Expended to December 31st, 1907 ...	11,354 12 8	
,, £3,200 Bank of England Stock @ 280	8,960 0 0	
,, £6,400 Midland Railway 2½% Perpetual Guaranteed Preferential Stock @ 72	4,608 0 0	
		£121,639 5 0

(The above Assets do not include the unexpended balances of Capitation Grants held by the various Branches.)

Revenue or Profit and Loss Account for the Year ending 31st December, 1907.

		1906.		1907.	
		£ s. d.	£ s. d.	£ s. d.	
General Association Expenses	*Abstract A* ...	2,172 3 1		2,219 11 6	
Central Meeting Expenses	,, *B* ...	3,696 9 4		3,448 1 8	
Central Premises Expenses	,, *C* ...	1,213 7 7		1,440 10 11	
Printing, Stationery and Postage Expenses ...	,, *D* ...	2,149 4 10		1,183 19 3	
Central Staff Expenses	,, *E* ...	4,701 8 9		4,525 10 6	
Library Account	,, *F* ...	257 14 1		255 10 7	
Journal Account Expenses	,, *G* ...	31,418 4 8		32,037 13 1	
Capitation Grants to Branches	... ...	3,665 15 6		3,552 18 6	
Subscriptions Written off for Deaths, Arrears, &c.	... ...	755 9 1		913 15 4	
		£50,029 16 11		£49,577 11 4	
Library—Written off towards Depreciation ...	100 0 0		200 0 0		
Plant and Type—Ditto	250 0 0		500 0 0		
Furniture and Fittings—Ditto	—		250 0 0		
Investments—Ditto	236 17 6		674 1 6		
		586 17 6		1,624 1 6	
		£50,616 14 5		£51,201 12 10	
Balance of Income over Expenditure carried to Balance Sheet...		1,385 8 6		1,319 3 9	
		£52,002 2 11		£52,520 16 7	

	1906.	1907.
	£ s. d.	£ s. d.
Subscriptions	25,562 3 6	26,313 6 6
,, Arrears of former years	522 17 1	318 12 11
Journal Account, Total Receipts ... ... See *Abstract G* ...	24,912 8 11	25,259 11 0
Interest on Investments and Rents	947 13 7	570 5 0
Returned Scientific Grants	56 19 10	59 1 2
	£52,002 2 11	£52,520 16 7

Abstract A.]

General Association Expenses.

	1906. £ s. d.	1907. £ s. d.
Auditors' Fee	105 0 0	105 0 0
Bank Charges	51 16 6	94 3 8
Legal Expenses	552 0 7	703 3 1
Research Scholarships	612 10 9	650 0 0
Scientific Grants	341 0 0	350 0 0
Chloroform Committee Special Grant	100 0 0	—
Royal Commission on Vivisection Special Grant	25 0 0	—
Office—Petty Cash	190 12 0	148 3 10
Sundries	194 4 0	169 0 11
	£2,172 3 1	£2,219 11 6

Abstract B.]

Central Meetings Expenses.

Railway Fares, Printing and Reporting.

	1906. £ s. d.	£ s. d.	1907. £ s. d.	£ s. d.
Annual Meeting—Cost of *Daily Journal*, &c.	196 17 4		101 17 3	
" " Expenses of Sections	7 2 4		56 13 7	
		203 19 8		158 10 10
Representative Meetings—				
Railway Fares	237 2 1		577 13 4	
Printing, &c.	161 11 11		247 6 7	
Hire of Hall, Furniture, &c.	99 17 4		43 13 1	
		498 11 4		868 13 0
Council—				
Railway Fares	704 3 7		633 18 11	
Printings	40 0 0		100 5 6	
Reporting	77 3 6		69 6 0	
		821 7 1		803 10 5

Committees.

Arrangements Committee—				
Railway Fares	32 1 10		24 11 2	
Miscellaneous Printings	3 17 0		6 7 0	
		35 18 10		30 18 2
Chloroform Committee—				
Railway Fares		7 0 4		1 4 3
Colonial Committee—				
Railway Fares	1 5 0			
Miscellaneous Printings	10 8 0			4 19 6
		11 13 0		
Chairmen of Committees—				
Miscellaneous Printings		4 14 6		—
Election Returns Committee—				
Railway Fares			3 6 0	
		12 16 8	11 8 6	
				14 14 6
Ethical Committee—				
Railway Fares	100 4 10		103 1 1	
Miscellaneous Printings	43 18 0		61 11 5	
		144 2 10		164 12 6
Hospitals Committee—				
Railway Fares	58 19 0		85 11 6	
Miscellaneous Printings, &c.	31 19 6		18 3 6	
Reporting	7 17 6		—	
		98 16 0		103 15 0
Irish Committee—				
Railway Fares	84 7 3		79 0 0	
Miscellaneous Printings, &c.	31 14 6		4 2 3	
		116 1 9		83 2 3
Joint Hospitals Committee—				
Railway Fares	—		13 15 11	
Miscellaneous Printings	—		4 11 0	
				18 6 11
Carried forward		1,965 2 0		2,252 7 9

Committees—*continued.*

	1906. s. d.	£ s. d.	1907. £ s. d.	£ s. d.
Brought forward		1,955 2 0		2,252 7 9
Journal and Finance Committee—				
Railway Fares	77 8 2		67 15 10	
Miscellaneous Printings	17 17 5		32 0 6	
Reporting	27 16 6		36 4 6	
		123 2 1		136 0 10
Medico-Political Committee—				
Railway Fares	521 6 5		210 14 7	
Miscellaneous Printings	176 13 11		53 0 6	
General Election Circulars and Despatch	56 10 4		—	
		754 10 8		263 15 1
Naval and Military Committee—				
Railway Fares	10 3 6		13 5 3	
Miscellaneous Printings	2 13 6		9 5 0	
		12 17 0		22 10 3
Organisation Committee—				
Railway Fares	94 0 0		149 9 4	
Miscellaneous Printings	79 16 8		105 19 3	
		173 16 8		255 8 7
Poor Law Inquiry Committee—				
Railway Fares	25 13 4		43 16 11	
Miscellaneous Printings, &c.	13 17 1		6 1 0	
		39 10 5		49 17 11
Premises Committee—				
Railway Fares	78 10 2		28 18 9	
Printings	10 1 6		4 7 8	
		88 11 8		33 6 5
Proprietary Drugs Committee—				
Railway Fares		13 2		—
Public Health Committee—				
Railway Fares	86 8 4		73 4 6	
Miscellaneous Printings	20 3 0		12 7 9	
		106 11 4		85 12 3
Puerperal Morbidity Committee—				
Railway Fares		62 5 0		—
Referendum Committee—				
Railway Fares				16 18 8
Science Committee—				
Railway Fares	42 2 7		69 19 1	
Miscellaneous Printings	50 0 0		25 16 6	
		92 2 7		95 15 7
Scottish Committee—				
Railway Fares	48 1 11		49 2 6	
Miscellaneous Printings	5 0 0		1 10 6	
		53 1 11		50 13 0
Special Finance Enquiry Committee—				
Railway Fares	5 3 6		15 4 6	
Miscellaneous Printings	7 9 7		22 19 9	
		12 13 1		38 4 3
Superannuation Committee—				
Mr. Ackland's Fee (Actuary)		26 5 0		—
Therapeutic Committee—				
Railway Fares		47 10 5		52 11 1
Volunteer Medical Committee—				
Railway Fares	64 9 4			
Miscellaneous Printings	3 18 0			
Reporting	9 9 0			
		77 16 4		—
Paper for Miscellaneous Printing in connection with Committees		70 0 0		60 0 0
		£3,696 9 4		£3,448 1 8

Abstract C.]

Central Premises Expenses.

	1906.	1907.
	£ s. d.	£ s. d.
Cleaning Offices	173 8 6	196 17 6
Coals and Coke	61 7 0	44 4 11
General Repairs and Upkeep	73 4 7	57 9 3
Rates and Taxes, Insurance, Gas and Electric Light, and Rent	905 8 0	1,141 19 3
	£1,213 7 7	£1,440 10 11

Abstract D.]

Central Printing, Stationery and Postage Expenses.

	1906.	1907.
Miscellaneous Printing	370 17 3	206 14 7
Office—General Postage :—		
General Secretary's Department	412 1 0	419 18 8
Medical Secretary's Department	127 17 7	100 17 8
Stationery	454 4 0	456 8 4
Year Book, Printing, Postage, &c.	744 10 0	—
	£2,119 4 10	£1,183 19 3

Abstract E.]

Central Staff Expenses.

	1906.		1907.	
General Secretary	800 0 0		800 0 0	
Assistant Secretary	275 0 0		300 0 0	
Clerical Staff, General Office, Journal, Subscription and Advertisement Departments	2,671 13 7		2,666 11 6	
		3,746 13 7		3,766 11 6
Less Proportion of Salaries debited to Journal Account		1,906 12 0		1,932 2 0
		1,840 1 7		1,834 9 6
Medical Secretary	737 10 0		750 0 0	
Assistant Medical Secretary	250 0 0		250 0 0	
Clerical Staff (Medical Secretary's Department) ...	537 18 0		575 6 0	
		1,525 8 0		1,575 6 0
Donation to Charing Cross Hospital		10 10 0		10 10 0
Pension—Late General Secretary		600 0 0		600 0 0
TRAVELLING EXPENSES :—				
General Secretary's Department		274 16 4		73 4 11
Medical Secretary's Department		150 12 10		132 0 1
Amount Voted to Office Staff Superannuation Fund		300 0 0		300 0 0
		£4,701 8 9		£4,525 10 6

Abstract F.]

Library Account.

	£ s. d.
To Balance	2,259 18 0
,, Purchase of Books	84 6 6
,, Binding Books	32 4 0
,, Librarian's Salary	250 0 0
,, Printing and Postage of Circulars	5 10 7
	£2,631 19 1

	£ s. d.	£ s. d.
By Librarian's Salary	250 0 0	
,, Printing and Posting of Circulars	5 10 7	
		255 10 7
Amount written off for Depreciation		200 0 0
Balance carried to Balance Sheet		2,176 8 6
		£2,631 19 1

Abstract G.]

JOURNAL ACCOUNT.

Income and Expenditure Account for the year ending 31st December, 1907.

	1906. £ s. d.	1907. £ s. d.
EDITORIAL.		
Salaries—Editor	1,000 0 0	1,000 0 0
,, Assistant Editor	750 0 0	750 0 0
,, Sub-Editor	250 0 0	262 10 0
,, Clerical Staff	418 19 10	431 8 0
Contributions and Reporting	3,329 4 0	3,300 8 3
Engraving	395 14 0	225 15 6
Legal Expenses	18 3 0	7 6 10
Postage	73 11 5	69 0 0
Analyses	37 14 6	69 2 0
Travelling Expenses, Papers, &c.	187 1 11	150 18 7
Advance Slips circulated to the Press	27 18 9	23 7 0
	6,488 7 5	6,289 16 2
JOURNAL Compositors' Wages, Machining, &c.	8,000 9 10	8,142 8 11
,, Paper	8,195 19 0	8,406 14 0
SUPPLEMENT—Compositors' Wages, Machining, &c.	871 0 0	970 3 8
,, Paper	873 7 4	962 16 8
Postage for dispatch of JOURNAL	4,222 0 0	4,426 11 5
Address Bands for Issuing JOURNAL	458 5 3	483 5 3
Proportion of Manager's and Clerks' Salaries	1,906 12 0	1,932 2 0
General Postage	100 0 0	115 0 0
Miscellaneous Printing	25 0 0	26 0 0
Reprints	126 8 7	142 15 10
Stationery (Ledgers, Letter Books, &c.)	100 0 0	100 0 0
Travelling Expenses	17 5 3	14 9 2
Compositors' Sick Fund	10 10 0	10 10 0
Sundries	20 0 0	15 0 0
	£31,418 4 8	£32,037 13 1

	1906. £ s. d.	1907. £ s. d.
Advertisements	21,281 4 10	21,666 10 11
Sundry Sales—Journals	2,280 0 6	2,321 18 11
,, Reading and Binding Covers, &c.	120 18 8	87 17 11
,, Reprints	151 4 4	199 7 5
Sale of Waste, &c.	35 13 9	40 4 0
Discounts on Machining, Paper, &c.	1,040 6 10	943 11 10
	24,912 8 11	25,259 11 0
Balance, expended in cost of production and issue of the Journal out of the Revenue of £29,631 19s. 5d. derived from Subscriptions to the Association...	6,505 15 9	6,778 2 1
	£31,418 4 8	£32,037 13 1

New Premises Account.

1907.		£ s. d.	1907.		£ s. d.
Dec. 31.	To Balance, being amount of Loan	11,354 12 8	Jan. 1.	By Balance	154 0 0
				,, Amount paid Builders	10,000 0 0
				,, Fees to Messrs. Glasier & Bircham	131 6 0
				,, Compensation to owners of adjacent property	214 6 8
				,, Fees to Mr. Percy Adams (architect)	700 0 0
				,, Clerk of Work's Salary...	155 0 0
		£11,354 12 8			£11,354 12 8

TRUST FUNDS.

Stewart Fund.

Interest of £579 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1907.		£ s. d.	1907.		£ s. d.
Jan. 1.	To Balance brought over from 1906	34 16 10	Dec. 31.	By Cash at Bank	56 16 10
	,, Interest	22 0 0			
		£56 16 10			£56 16 10

Middlemore Fund.

Interest of £666 13s. 4d. 3 per cent. North British Railway Debenture Stock, in the name of the British Medical Association.

1907.		£ s. d.	1907.		£ s. d.
Jan. 1.	To Balance brought over from 1906	112 16 5	Dec. 31.	By Advertising	4 17 10
	,, Interest	22 5 6		,, Engrossing	1 17 6
				,, Fee to Adjudicator	5 5 0
				,, Award to Sydney Stephenson, M.B., C.M., F.R.C.S.	50 0 0
				,, Cash at Bank	73 1 7
		£135 1 11			£135 1 11

We certify, in accordance with the provisions of the Companies Act, 1900, that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet, dated 31st December, 1907, with the books and vouchers of the Association, and having verified the investments held by the Bank on account of the Association and of the above Trust Funds, and having verified the possession by the Bankers of the Association of the Deeds of the Properties, 429, Strand, 2, 3, 4 and 5, Agar Street, and 2 and 3, Harvey's Buildings, we report that the Balance Sheet is in our opinion properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs as shown by the books of the Association.

EDWIN RAYNER,
Honorary Treasurer.

GUY ELLISTON,
General Secretary and Manager.

PRICE, WATERHOUSE, & CO.,
3, Frederick's Place, Old Jewry, E.C.,
14th April, 1908.

British Medical Association.

OFFICE STAFF SUPERANNUATION FUND.

Balance Sheet 31st December, 1907.

Dr. **Cr.**

Office Staff Superannuation Fund.

1907.		£ s. d.	£ s. d.	1907.		£ s. d.
Jan. 1.	To Balance brought over from 1906	1,994 10 3			By Balance carried down—	
	,, Less amount written off Investment	60 5 4			,, Cash at Bank	45 9 4
			1,934 4 11		INVESTMENTS—	
	,, Payments by Members of Staff Refunded Mr. Hunnex	93 15 4			,, £600 Cape of Good Hope 3 per cent. Stock bought @ 92¾	558 1 0
	,, Exors. Mr. Hanchet	2 8 9			,, £100 Bristol Corporation 3½ per cent. Redeemable Stock, bought 1906	100 0 0
	,, Miss Higginson	1 6 0			,, £400 Midland Railway 2½ per cent. Consolidated Perpetual Guaranteed Stock, bought 1906	313 9 6
		2 10 7			,, £140 New Zealand 4 per cent. 1929 Stock, bought 1906	151 5 0
		6 5 4			,, £200 Furness Railway Consolidated 4 per cent. Preferential Stock, 1981, bought 1906	214 7 6
	,, Vote from General Funds	87 10 0			,, £250 Bank of England Stock @ 280	700 0 0
	,, Interest on Investments	300 0 0			,, £350 India Stock 3 per cent.	297 19 9
		58 17 2				
			£2,380 12 1			£2,380 12 1

We have examined the above Balance Sheet, with the Books and Vouchers of the Fund, and find it to be correct. We have examined the investments held on account of the Fund.

EDWIN RAYNER,
Honorary Treasurer.

GUY ELLISTON,
General Secretary and Manager.

PRICE, WATERHOUSE, & CO.,
3, Frederick's Place, Old Jewry, E.C.,
14th April, 1908.

LIBRARY ACCOUNT (ABSTRACT F.).

The expenses occurring in connexion with the Library remain normal.

THE JOURNAL ACCOUNT EXPENSES (ABSTRACT G.).

Editorial.

On the Editorial side there is little variation to comment on. The Engraving is £170 less than in 1906. It will be in the recollection of members that in that year the number of special plates issued was considerable.

Machining and Paper.

The mechanical production of the JOURNAL and SUPPLEMENT and the Compositors' Wages each show an increase, due to a larger amount of matter having to be set. In the JOURNAL itself there were 20 pages less, but in the SUPPLEMENT there were 100 pages more, and 20 pages increase in the Advertisement Sheets. Further, in 1906, 1,219,346 copies of the JOURNAL had to be produced, while in the period under review this number increased to 1,247,463, or an average of 540 extra copies a week.

Consequent upon the additional pages and the increased circulation owing to the growth of membership, the paper required has been more. At one time it was feared, owing to the increased cost of raw material, that the JOURNAL might have to pay higher prices for the paper, but fortunately these fears were not realized.

"Journal" Postage.

The postage for the dispatch of the JOURNAL has increased by £200. Here, again, additional pages exercise an influence on the expenditure under this head, especially in the case of those JOURNALS going outside the United Kingdom.

Subscriptions.

It has been necessary to write off the amount due for subscriptions to the Association by £150 more than in 1906 owing to deaths, arrears, and other causes.

After taking all the foregoing heads of expenditure into account, the outgoings for 1907 have been less than 1906 by about £400. It has been thought prudent to write down in your books the value of the Library, Plant and Type, and furniture and fittings by some £600 more than in 1906.

As to the Investments, one of the most noteworthy features of the year under review has been the continuance of that depreciation in Stock Exchange Securities so marked in the year 1906. This has necessitated the still further writing down of the stocks held by the Association.

After making allowances for all these contingencies, there is a sum of just over £1,300 to be carried to the reserve, which now stands at £104,090.

THE SOURCES OF REVENUE.

Members' Subscriptions to the Association.

Turning to the sources of Revenue, it is gratifying to see that again the receipts from subscriptions have steadily expanded, and mark the uninterrupted progress of the Association.

Revenue from Advertisements in the "Journal."

Examining the revenue from Advertisements in the JOURNAL, it is recognized that during the year 1907 trade was bad. Many causes were at work to create such conditions. The high prices prevailing for raw material caused manufacturers to hesitate in their commitments, and the tendency with advertising firms was to limit themselves to less space. There must have been a marked shrinkage in the receipts had it not been for the extensive development in new directions. Thus, in spite of adverse conditions, the receipts from advertisements show an increase of £400.

When it is borne in mind that in the receipts for 1906 the amount derived from advertisements in the Year Book was also included, strict comparison would show an increase of £700 over 1906. It is only during the year under review that the full benefit of the increased advertising charges has been realized, such a result fully justifying the improved form of the JOURNAL introduced in 1906 on the representations of the Editor and General Secretary. It is satisfactory to mention the remarkable immunity from bad debts, notwithstanding the increase in the number of advertisers, and the pushing of business wider afield. Out of the Revenue of £21,666 a sum of £40 had to be written off. Just on £30 of this amount was due from one advertiser who had done considerable business with the JOURNAL for some years. A further proof, if necessary, of the great care exercised in carrying on the business of the JOURNAL.

Other items of Revenue under the Journal Account show little variation.

INVESTMENTS AND RENTS.

With reference to the interest from investments the Revenue has been fully maintained; it is the absence of rents owing to the rebuilding of the Strand property which has caused the shrinkage.

THE BALANCE SHEET.

In the Balance Sheet the liabilities of December 31st are not so large as at the end of 1906, and it is satisfactory that the overdraft on the General account at the Bankers was less by some £2,000.

Of the Assets, the furniture and fittings stand at £250 less, the Library at £100 less and the Plant and Type at £250 less. The necessity for writing down the Type to this extent being due to the fact that it has been in use for nearly its full life.

The amount of £11,354 expended on the new premises in course of construction represents the sums paid over to the Builders and others up to December 31st last.

The Bank of England Stock and the Midland Railway Preferential Stock appear at the prices they stood at at the end of the year, which represents practically their value at the time of drafting this Report.

In conclusion, a careful study of the accounts, which are now submitted in considerable detail, should satisfy members that the finances of the Association are on a thoroughly sound footing.

ESTIMATE OF INCOME AND EXPENDITURE FOR 1908.

(15) In submitting an estimate of Receipts and Expenditure for the current year, the expenses arising out of the rebuilding of the Strand and Agar Street Properties are not brought into this schedule, as these are dealt with in the New Premises Account.

RECEIPTS.

	£
Subscriptions	27,000
Advertisements	21,750
Sundry Sales of Journals, etc.	2,600
Interest from Investments, etc.	400
Discounts on Paper	1,000
	£52,750

EXPENDITURE.

	£
General Association Expenses	2,500
Central Meeting Expenses	3,050
Central Premises Expenses	1,850
Central Printing, Stationery, and Postages ...	1,300
Central Staff Expenses	4,500
Library	250
JOURNAL Account	32,600
Capitation Grants to Branches	3,750
Arrears of Subscriptions	750
Depreciation of Furniture, Plant, and Type ...	900
	£51,450
ESTIMATED BALANCE TO CARRY TO SURPLUS FUNDS OF THE ASSOCIATION	1,300
	£52,750

APPORTIONMENT OF MEMBER'S SUBSCRIPTION.

(16) The following shows how the subscription of 25s. has been apportioned for defraying the expenses of the Association for the year ending December 31st, 1907. Details of expenditure under each head are given in the

various schedules of the Financial Statement for the year.

	£	s. d.
General Association Expenses	2,819	2 1
Central Meeting Expenses	3,448	3 1
Central Premises	1,440	1 2
Printing, Stationery, and Postage	1,183	1 1
Library	255	0 2
Central Staff Expenses	4,525	4 1
JOURNAL and SUPPLEMENT (Advertisements, etc., £25,259)	6,778	6 3
Written off Subscriptions	913	0 8
Written off for Depreciation of Investments, Plant and Type, Library, Furniture, and Fittings	1,624	1 3
Carried to Surplus...	1,319	1 11
	£3,704	21 0
Capitation Grants to Branches		4 0
		25 0

THE BRITISH MEDICAL JOURNAL.

(17) The diversity of interests among members engaged in different departments and kinds of practice, and in all parts of the British Empire, is reflected in the pages of the BRITISH MEDICAL JOURNAL, but special attention is continuously given to clinical medicine, the practice of which is the daily occupation of the majority. During nine months of the year scarcely a number of the JOURNAL is issued without one or more careful clinical studies, in the form of lectures or addresses on medical and surgical subjects of special interest to the profession either because new lines of treatment are being advocated or because a disease has become specially prevalent; as examples may be mentioned addresses and articles on the treatment of fractures and on epidemic cerebro-spinal meningitis.

In the spring of 1907 an opportunity was afforded of publishing two remarkable tributes, which by a coincidence appeared in the same number, to the achievements in surgery and medicine respectively of two of the most illustrious representatives of the British profession—Sir Hector Cameron's lectures on Lord Lister and the evolution of wound treatment, and Sir Victor Horsley's foundation lecture on Dr. Hughlings Jackson's views of the functions of the cerebellum as illustrated by recent research. During two or three months in the autumn the JOURNAL had, as is customary, the advantage of publishing full reports of the debates in the Sections of the Annual Meeting on subjects chosen by the officers of the Sections, who are in the best position to form a correct judgement as to the topics which have become ripe for discussion. The publication of the reports of the successful meeting in Exeter was concluded on November 23rd, and it will be a matter of satisfaction both to members in general and to those who take an active part in the work of the Sections that through its JOURNAL the Association is able to publish the proceedings so rapidly, and to ensure to them so wide a circulation.

In addition to these sources of information the publication of the reports of the scientific proceedings of Divisions and Branches of the Association, of the meetings of many of the principal societies in the three Kingdoms, and of numerous short papers and memoranda contributed mainly by general practitioners, places before members week by week a large mass of clinical material, from which useful practical hints may be gathered. Through the EPITOME of current medical literature, and through the special correspondence, readers are given the opportunity of following the development of ideas in the chief foreign centres of medical activity, and in this very necessary task they are, your Council believe, materially aided by the reviews of foreign books, all the most important of which are now received by the JOURNAL.

The reports of the Royal Commission on Tuberculosis contained so much matter of the highest scientific and practical value that it was deemed proper to publish full analyses, while an impartial report of the evidence given before the Royal Commission on Vivisection has been published at an early date after the minutes became available. The evidence was very voluminous, but the Council believes that the interest which every member must take in the subject fully justifies the expenditure of space which even in a much condensed form this publication has required.

Many matters affecting the social and material interests of the profession were dealt with during the year, and elucidated by special articles and by correspondence. As instances, reference may be made to the discussion of the policy of the University of London especially in relation to education and medical science; to the analysis of the Workmen's Compensation Act as it affects members of the medical profession, whether as experts, employers, or employed; and to the series of articles on motor cars for medical men, which have been highly commended by members possessing practical experience, and have, your Council understands, been a useful guide to others who have found it advisable to consider the adoption for professional purposes of this speedy and convenient means of locomotion.

The publication of the weekly SUPPLEMENT containing reports of those parts of the work of the Association which may be included under the general term medico-political, of Bills, Acts, and Government documents affecting medical interests, and some other official matter, has been continued, the number of pages required being a little in excess of that found necessary in the preceding year.

COMMITTEES.

(18) The number of Committee Meetings has been rather less than in the previous year, though the sittings have been longer. The bulk of work undertaken and accomplished has been very great, and has involved the sacrifice of much time on the part of the Members. The Council realizes that the Association owes a deep debt of gratitude to the Members of the various Committees, who, by their regular and devoted attendance, have done so much to advance the interests of the Association and of the Medical Profession.

CENTRAL ETHICAL COMMITTEE.

(19) The Central Ethical Committee has held three meetings since the Annual Representative Meeting.

The work devolving upon the Committee shows no sign of decrease, either in respect of cases affecting individual practitioners (both members of the Association and non-members) referred to it for adjudication, or in respect of the general questions of ethical principle upon which it assists in defining the policy of the Association.

The present report is confined to those matters which have been the subject of definite resolutions of the Council.

The following minutes of the Annual Representative Meeting were duly considered by the Central Ethical Committee and by the Council in October:

> Upon consideration of the paragraph in the Annual Report of the Central Ethical Committee as to the Association acting as prosecutors before the General Medical Council,
>
> 70. Resolved, by 91 votes to 2:
> That this Meeting approve the action of the Ethical Committee, and express the opinion that, so long as action by the Association as Complainant before the General Medical Council is desirable on other grounds, it should not be discontinued only on the ground of the position of Members of the Association who are Members of the General Medical Council.
>
> 71. Proposed by Dr. James Hamilton (Council), seconded by Dr. A. Walker (South Edinburgh):
> That in view of the letter of the President of the General Medical Council, and in view of Counsel's opinion, placed before the Central Council at the meeting of June 5th last, this Representative Meeting do hereby rescind for the present the Resolution (Minute 312) passed at the Annual Representative Meeting of 1906, in the following terms, viz.:
> That it is absolutely necessary, in the interests of the Medical Profession, that the Association should take up cases of a penal nature before the General Medical Council, as Complainants.
> The motion was lost by 98 votes to 1.

Upon the recommendation of the Committee, the Council passed the following resolutions:

That the Council instruct the Central Ethical Committee to act on behalf of the Association in giving effect to the instructions of the Representative Meeting.

That the Central Ethical Committee be authorized to incur an expenditure not exceeding £25 in the pre-

sentation of any single case to the General Medical Council.

That the Central Ethical Committee be authorized to depute to its Standing Subcommittee the duty of dealing with such cases on behalf of the Committee in emergency.

Rules submitted by Divisions and Branches have been approved by the Council in accordance with general principles previously laid down. The Central Ethical Committee is engaged in the revision of the Model Rules which relate to ethical matters, and, pending the completion of such revision, the Council has not sanctioned any Rules involving material departures of policy.

The painful duty has again devolved upon the Council of expelling two members of the Association, the offences in the case of one member having consisted in his having made an unjustifiable and unprofessional public attack upon the character and status of another member, and having issued advertisements which were considered by the General Medical Council to be infamous in a professional respect, while in the other case the member had accepted an appointment in defiance of the Rules of the Division of which he was a member.

In a third case of proposed expulsion, on the ground of the acceptance of an appointment, the Council, having had regard to the special circumstances of the case, considered that, though the action of the member in question had been unprofessional, he should be afforded an opportunity of resigning his membership, which he accordingly did.

In connexion with the revision of By-law 41, relating to the position and duties of Standing Committees, which has been carried out by the Organization Committee, pursuant to instructions of the Council, as stated in the section of this report dealing with the work of that Committee, opportunity has been taken to revise the reference to the Central Ethical Committee, in order to remove certain difficulties which have been found to arise, through ambiguities in the reference as previously stated. The new reference will make clear the authority of the Committee, subject to appeal to the Council, to adjudicate in any question of professional conduct in which a member of the Association is concerned, and also to adjudicate in cases affecting non-members. The new form of reference also makes clear the position, which it is thought desirable that the Council should occupy, as a court of appeal from the decisions of the Committee.

Up to the present the Council has technically exercised a supervision over all the work of the Central Ethical Committee, as of other Committees, through the system of presentation of quarterly reports in which reference is made to all work done. In view, however, of the large amount of work requiring the attention of the Council at its quarterly meetings, the supervision that can in this way be exercised over the detail of the work of one Committee is necessarily small. Under the By-law in its proposed amended form, the Council would be called upon to investigate fully any case in which a member formally appealed from a decision of the Ethical Committee. Such cases would be completely retried, while in all other cases the decision of the Committee would be final.

CHLOROFORM COMMITTEE.

(20) The *Chloroform Committee* has decided to wind up the work of the Committee by a critical review of the work done under its direction, as well as of all such work bearing upon the subject of its reference and done outside its immediate control. And further to set forth in a compendious form the results arrived at and the conclusions which the Committee considers may be justly drawn from the work done. The main point in its reference the Committee considers is that of safe dosage by chloroform, and it is felt that if it presents a full report upon this, with the evidence upon which its conclusions are founded, and embodies it in a form which will be accessible to all the members of the Profession, the Committee will be carrying out the wishes of the Council and will render practical aid to the members of the Association.

It is suggested that the report shall be issued as a small volume and so be available for general reference.

COLONIAL COMMITTEE.

(21) The Colonial Committee has held one meeting since the Annual Representative Meeting.

The question of medical legislation in Australasia is still under consideration, and, in continuance of previous correspondence with the New South Wales Branch, that Branch has been requested to take up again certain action with a view to bringing about uniformity of legislation among the Austral an States, which the Branch postponed in the spring of 1907 owing to certain special political conditions of the time.

Ordinances, to provide for the registration of medical practitioners and dentists, in the Crown Colonies in West Africa, forwarded by the Colonial Office for the consideration of the Association, have been examined and found to be satisfactory, except as regards the provisions relating to the recognition of foreign diplomas. The terms of such recognition do not appear entirely equitable to British and Colonial practitioners. Since, however, it has been pointed out by the Colonial Office that the provisions in question are uniform with those of the Medical Acts of the United Kingdom, the question has been referred to the Medico-Political Committee in order that it may be considered in connexion with the Medical Acts Consolidation Bill.

At the request of the Gibraltar Branch the question is under consideration of supporting that Branch in the effort to obtain amendment of the medical ordinances now in force in Gibraltar, specially the incorporation of a provision for penalizing unprofessional conduct of registered practitioners.

HOSPITALS COMMITTEE.

(22) The Hospitals Committee has met three times since the Annual Representative Meeting of 1907.

The Committee has taken note of Minutes 115, 118, and 119 of the Annual Representative Meeting at Exeter as constituting Standing Instructions which will govern the future policy of the Association in the matters referred to, namely:

Minute 115. "That compulsory payments by patients to hospitals, other than cottage hospitals, should cease."

Minute 118. "That the production of subscribers' letters should cease to be compulsory."

Minute 119. "That inquiry into a patient's circumstances should invariably take place."

Upon the following question submitted to the Divisions, namely, "Should a certificate be required from the medical attendants of all persons attending out-patient departments?" the opinion of the Divisions was almost equally balanced, and the Representative Meeting referred it to the Committee for further consideration. Having regard to the voting of the Divisions, the Committee does not recommend further consideration of the subject.

Pursuant to the instruction of the Annual Representative Meeting at Exeter (Minutes 121 to 124) the Committee has considered the resolutions of Divisions, and the suggestions made in the Annual Representative Meeting, with respect to the Proposals on Hospital Administration which were circulated to the Divisions with the Report of the Committee in March, 1907.

The Committee has also considered, in conjunction with the Committee of the United Kingdom Hospitals Conference, the replies of Hospitals throughout the country on the same proposals. Certain emendations have been made, and the proposals, as amended, are submitted with this Report for the consideration of the Representative Meeting.

The Council has approved of the continued co-operation of the Association, through the Hospitals Committee, in the work of the United Kingdom Hospitals Conference during the past year, and a very successful Conference was held on April 1st and 2nd. In accordance with the instructions of the Annual Representative Meeting (Minutes 126 and 127), a *précis* Report of the proceedings is being circulated to the Divisions. A full Report appeared in the JOURNAL of April 11th, 1908.

The Council thinks it desirable that the Association should continue to co operate in this movement, which, by promoting a good understanding between representatives of hospitals and of the medical profession, must be advantageous alike to the public and the profession.

The Committee has been appealed to for advice and support in disputes at three important hospitals as to staffing. The first was in connexion with the Bristol

Royal Infirmary. The Governors of this institution endeavoured to introduce a new rule restraining members of the honorary staff from holding any other appointments. The dispute was ultimately settled to the satisfaction of the staff and the settlement approved by the local profession. The other two disputes are still in progress.

The Hospitals Committee has recommended the issue of a number of the JOURNAL to be devoted largely, but not exclusively, to Hospitals questions and the Council has adopted the recommendation. This special Number of the JOURNAL will appear in June.

A Friendly Societies' Organization, under the name of the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis, applied to the Association for support in its endeavours to obtain gratuitous services of physicians as medical referees. Representatives of the Hospitals Committee and of the Medico-Political Committee received a deputation of the Association in question, and those Committees made the following recommendations, which were approved by the Council:

(*a*) That the appointment of any special medical referee is, in the opinion of the Subcommittee, unnecessary.

(*b*) That the requirements of the case could best be met by drawing up suitable forms of certificate for signature by the ordinary medical attendants of the patients whose admission to the Sanatorium is proposed, with provision for taking a second opinion in cases of need, at the discretion of the medical attendant. The fee of the person called in to be paid by the Sanatorium Association; such fee to be one guinea.

(*c*) That medical referees, if appointed, be paid.

IRISH COMMITTEE.

(23) The Irish Committee met four times during 1907—twice in Dublin, once in Galway, and once in Cork.

The direct result of the Galway meeting was the organization of the Connaught Branch, and the consequent strengthening of the Committee by the two representatives of that Branch.

In response to a request from the Royal Commission on the Poor Laws asking for the views of the medical profession on the Viceregal Commission report, a resolution was adopted and forwarded through the Council praying the Royal Commission to accept and approve the Viceregal report. A favourable reply was subsequently received.

The Committee drew up a memorandum of points to be included in a Public Health Bill for Ireland. This has been submitted to the Irish Branches and Divisions for consideration.

The question of the medical inspection of school children in Ireland has occupied much of the Committee's time. The Local Government Board for Ireland and the Commissioners for National Education have been successively approached, but without effect. A circular letter on the subject sent to all Irish members of Parliament has, however, elicited a large number of sympathetic replies.

The attention of the Local Government Board for Ireland has been directed to the necessity of making compulsory a satisfactory scale of salaries for Poor-law medical officers.

Other matters considered by the Committee during the year include: The Midwives (Ireland) Bill, Memorandum of Irish Branch of Medico-Psychological Association, the Local Government Board list of medical appliances, questions to Irish parliamentary candidates, etc.

MEDICO-POLITICAL COMMITTEE.

(24) The Medico-Political Committee has held three meetings since the Annual Representative Meeting, and its labours have been facilitated by the assistance of Subcommittees, which have held numerous meetings. Attention is confined in the present Report to matters which have formed the subject of Resolutions of the Council.

Pursuant to instructions of the Representative Meeting the Committee has considered the question of the medical inspection of school children, which required prompt attention in the autumn of 1907, owing to the fact that Local Authorities were obliged, pursuant to the provisions of the Education (Administrative Provisions) Act, 1907, to make arrangements for the carrying out of this duty forthwith. It thus became necessary for the Committee to issue, with the Council's approval, a Report for the consideration of the Divisions which the Council had not the opportunity of previously considering. The Council has approved a further Report, to be issued immediately, as to the salaries which should be paid to whole-time Medical Inspectors of School Children.

The Council, on the recommendation of the Medico-Political Committee, has given directions for the preparation of evidence to be laid by the Association before the Departmental Committee which the Home Secretary has announced his intention of appointing, to investigate the methods of treatment of Inebriety and Drug habits at present adopted in this country. With reference to the same subject, of Inebriety and Drug habits, the Council has also acceded to an application by the Church of England Temperance Society that the assistance of the Association should be given in an investigation into the alleged increased prevalence of such infirmities among women. The Association has helped in the drafting of the forms of inquiry, and Honorary Secretaries of Divisions have been requested to assist in the circulation of the forms to Members of their respective Divisions. The analysis of the replies will be carried out in the Medical Secretary's Office under the direction of the Medico-Political Committee.

The question of the employment of honorary medical referees by the National Association for the Establishment of Sanatoria for Workers Suffering from Tuberculosis has been investigated by the Hospitals and Medico-Political Committees, and, on the recommendation of these Committees, the Council has expressed certain opinions which are stated in the Section of this Report relative to the work of the Hospitals Committee.

At the instance of the Lancashire and Cheshire Branch the question has been considered of recent action by the Lancashire County Council restricting Coroners from paying additional fees to medical men who give evidence at inquests when through adjournment, attendance for more than one day is necessary. The Association is legally advised that the action of the Lancashire County Council is in accordance with the present law, and the Council has given directions for steps to be taken with a view to such amendment of the law as will remedy this injustice to medical practitioners.

The attention of the Council has been specially drawn, by resolutions of several Divisions and Branches, to the necessity for some action by the Association for the reform of medical law, particularly as regards unqualified practice, it being suggested that a Royal Commission should be appointed. The Council, while approving the principle of an application being made in due course to the Government for the appointment of a Royal Commission, considers that certain preparatory work is necessary in the collection of evidence to illustrate the abuses in question, and has given directions for the preparation of such evidence. The Council has also approved of the British Medical Association becoming a member of the International Society for the Suppression of Quackery.

The revision, pursuant to instructions of the Representative Meeting, and the introduction in due course into Parliament of the Medical and Dentists Acts Consolidation and Amendment Bill, which is undergoing final revision by the Medico-Political Committee and Counsel, will also assist in drawing the attention of the Government to the various abuses which require remedy.

In view of the introduction again into Parliament of the Dogs Protection Bill, having for its object the prohibition of experiments upon dogs, the Council has directed the circulation to Members of both Houses of Parliament of a leaflet, drawn up by the Medico-Political Committee, explaining the necessity for such experiments.

Various Bills introduced into Parliament upon the question of the State Registration of Nurses have received due attention, and the Council has directed that action should be taken on behalf of the Association in accordance with the policy already laid down by the Annual Representative Meeting, namely, that the Association should support, in principle, the State Registration of Nurses, whilst scrutinizing the details of any Bill having this object. On the other hand the Council has considered it to be its duty to oppose on behalf of the

Association a Bill introduced into the House of Lords for the establishment of an "Official Directory of Nurses."

NAVAL AND MILITARY COMMITTEE.

(25) The Naval and Military Committee has held two meetings since the Annual Representative Meeting.

The Council has pleasure in reporting that the action taken in the Session 1906-7 with regard to the payment of passages of the families of officers of the Army Medical Corps proceeding to foreign Stations on duty has been completely successful, such grants being now made, not only by the War Office in the case of officers proceeding to Stations other than India, but also by the Government of India in the case of officers proceeding to that country.

The question of the position of the Director-General of the Army Medical Service has again received consideration. The Council regrets to report that the Association has not yet been successful in securing the recognition by the War Office of the importance of hygienic considerations in military administration which the appointment of the Director-General as a member of the Army Council would afford.

A final reply has been received from the Colonial Office with regard to a case which has been for some time under consideration, of a member of the Association, a former Surgeon-Captain in the British South Africa Police, who was removed from his appointment by the action of the Local Administration of the British South Africa Company, in circumstances which appeared to the Naval and Military Committee to constitute serious injustice. The Secretary of State for the Colonies states that he is unable to consider the matter further, owing to the refusal of the British South Africa Company to give such compensation as the British Medical Association considers equitable. The question is under consideration of the steps which should be taken, in view of this result, to advise members of the profession who may contemplate taking appointments under the British South Africa Company.

A member of the Association who is a Surgeon of the Royal Navy has brought under notice a recent Order of the Admiralty prohibiting Naval Surgeons from accepting fees from Coroners for evidence given at inquests, while leaving such officers under the Statutory obligation to give such evidence and make *post-mortem* examinations when so ordered by a Coroner. The question of making suitable representations to the Admiralty is under consideration.

The Naval and Military Committee and the Council have also under consideration a recent Order of the Government of India restricting practice by officers of the Indian Medical Service among natives of high social position.

ORGANISATION COMMITTEE.

(26) The duties of the Organisation Committee, since the last Annual Representative Meeting, have again been such as necessitate meetings almost every month.

Draft Charter.

An important part of the duties of the Committee has been in connexion with the revision of the draft Charter, the Council having delegated to that Committee the work of carrying out, in conference with Counsel (Mr. T. R. Colquhoun Dill), the amendments of the draft Charter, Ordinances, and By-laws which were required to give effect to the Resolutions of the Special Representative Meeting of May, 1907. The action taken in reference to this matter, and the recommendations made, form the subject of a Special Report.

By-law 16: Capitation Grants.

Pursuant to the instruction of the Annual Representative Meeting at Exeter, the Committee has drafted a By-law to give effect to the principle of Variable Capitation Grants, which is submitted for the approval of the Representative Meeting as follows:

Draft Amended By-Law 16.

Grants to Branches: Ordinary.

(1) The Treasurer of the Association shall annually pay, or allow out of the funds of the Association, to the Treasurer of each Branch such sum, not exceeding four shillings, as the Council shall order to be paid, for each Member of the said Branch who has paid to the Association the full current annual subscription for that year, and such sum, not exceeding two shillings, as the Council shall order to be paid, for each Member elected after July 1st, who has paid to the Association half the current annual subscription.

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies, and within the limits of the objects of the Association as defined in the Memorandum of Association.

(3) For the purpose of this By-law, those named in the Annual List for the time being in force as Members of any Branch, shall be deemed to be Members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for that year.

A Special Report on this subject and on the subject of the accumulation of Funds of Branches resulting from Capitation Grants has been prepared by the Committee, pursuant to the instructions of the Representative Meeting, and was published in the Supplement for April 25th.

Standing Committees: By-law 41.

Attention having been drawn by the Naval and Military, Organisation, and Public Health Committees to the fact that, owing to certain alterations of the Articles of Association, effected in December, 1906, whereby the Chairman of Representative Meetings and Treasurer became members, *ex officio*, of all Committees, the number of members of the Committees named appointed by the Council was automatically reduced, the Council has prepared an amended form of By-law 41, which will have the effect of restoring the number of appointed members of each Committee to that originally fixed.

It has been thought desirable, at the same time, (*a*) to delete certain provisions now obsolete, such as those relative to the mode of election of the Medico-Political Committee and the Central Ethical Committee prior to the first Representative Meeting; (*b*) to make the references to the Standing Committees correspond with the duties which the Council has from time to time found it desirable to entrust to them; and (*c*) to provide that the Standing Committees shall report to, and shall act under the instructions of, the Council.

In the opinion of the Council it is desirable that the position of the Council as the general executive body of the Association should be definitely recognized, both by the above-mentioned amendment (*c*) of the By-law, and also by the Representative Meeting framing its instructions to the central executive bodies in all cases as instructions to the Council, and not as direct instructions to Standing Committees.

Notification to Honorary Secretaries of Resignations Tendered by Members.

A proposal by a Branch that provision should be made for resignations of members not to take effect until they had been considered by the Divisions, has been found to be impracticable. Directions have, however, been given that Honorary Secretaries of Divisions and Branches shall at once be notified of resignations tendered by the members of those bodies.

Supplementary Grant under By-law 18.

It has fallen to the duty of the Organisation Committee for the first time to advise the Council under By-law 18 upon an application for a "Supplementary Grant." The application in question was from the South Wales Branch for a grant in aid of administrative expenses incurred in connexion with the work of the Contract Practice Committee of that Branch. The circumstances taken into consideration by the Committee in advising the Council to make the grant were (*a*) the large amount (£1,400) voluntarily subscribed in the Branch area for the purpose; (*b*) a report from the Medico-Political Committee as to the value of the work in question; and (*c*) the

nature of the expenses to which the grant was to be applied, which were found to be such as could lawfully be defrayed from the funds of the Association.

AREAS AND BOUNDARIES.

The only important change in boundaries of Divisions and Branches has been the formation of an Assam Branch. Certain minor changes have also been carried out at the instance of those locally concerned. The formation of a West African Branch is under consideration.

GROUPING FOR REPRESENTATIVE PURPOSES.

Representative Meeting.

The Council has continued the grouping of Divisions for representation in the Representative Meeting, adopted for the year 1907-8, as the grouping for 1908-9, with the exception that the Ealing Division and the Watford and Harrow Division have been made independent constituencies.

Council.

The grouping of Branches for the election of Members of Council for the year 1907-8 has been continued for the year 1908-9 except as regards certain Colonial Branches, namely, the Victoria Branch, and the group of West Canadian Branches, each of which constituencies, having over 400 members, is now entitled to elect 2 members of Council.

RULES OF DIVISIONS AND BRANCHES.

Organisation Rules submitted by five Branches and four Divisions have been approved.

The Council has been unable to approve Rules submitted by the Natal Branch, Transvaal Branch, and Cape of Good Hope Western Province Branch, providing for proxy voting at General Meetings or Branch Council Meetings, as, upon legal advice, such Rules were deemed to be *ultra vires*.

The Malta and Mediterranean Branch, having submitted a Rule as follows:

> It shall be open to the Malta and Mediterranean Branch to elect any Member of the British Medical Association as their Representative on the Central Council,

has been requested to consider the advisability of adopting instead a Rule to the following general effect:

> The representative on the Central Council elected by the Malta and Mediterranean Branch (alone or in conjunction with other Branches, as may from time to time be determined by the Central Council of the Association) shall be a Member of the Association who is or has been a Member of the Branch, or of any of the Branches composing the same group.

TITLES OF DIVISION OFFICERS.

The instruction of the Representative Meeting that the titles of Division Officers should be uniform throughout the Association has been noted for attention when Rules dealing with the matter are submitted for the Council's approval, and those Divisions which had already adopted Rules in conflict therewith have been requested to make the necessary changes.

ANNUAL REPORTS OF DIVISIONS AND BRANCHES.

The forms of Annual Reports of Divisions to the Branches and of Branches to the Council have been revised with a view to increasing their utility and to facilitating the work of Honorary Secretaries in preparing them.

MEDICAL SECRETARY'S VISITS TO DIVISIONS AND BRANCHES.

The Organisation Committee has received monthly reports from the Medical Secretary of his visits to Divisions and Branches, including the following places:

Blackburn,	Newcastle,
Bradford,	Norwich,
Bristol,	Preston,
Burnley,	St. Albans,
Ebbw Vale,	

INSTRUCTIONS OF ANNUAL REPRESENTATIVE MEETING.

The following matters arising under instructions of the Annual Representative Meeting at Exeter are still under consideration, and Supplementary Reports will be presented in reference thereto:

(*a*) A report upon the organisation of the Branches with special reference to the scientific work of the Association.

(*b*) The preparation of a circular to members of the profession who are not members of the Association, drawing attention to the work which is being done by the Association for the profession, and including a copy of the Statement, furnished by the Council to the Representative Meeting herewith, as to the apportionment of a member's annual subscription.

PREMISES COMMITTEE.

(27) In 1906 the Council submitted plans for the rebuilding of the Premises of the Association in the Strand, and the Representative Meeting passed a Resolution of confidence in the Council to deal with the matter in the best interests of the Association at large. This Vote of Confidence will shortly, it is hoped, be found to be fully justified, for the new Premises are rapidly nearing completion. It is difficult in a brief Report to emphasize the many difficulties that have had to be overcome. The question of avoiding litigation owing to infringement of neighbours' lights necessitated considerable care. The arrangements of the rooms, the lighting, the heating, the sanitary fittings, and all other questions relating to the new home of the Association have received the careful attention of the Premises Committee, and every endeavour has been made to insure the erection of a Building well equipped in every detail. And it is confidently believed that the new Premises will prove in every respect to be well worthy of the British Medical Association.

PUBLIC HEALTH COMMITTEE.

(28) The Public Health Committee has held three Meetings since the last Annual Representative Meeting.

The Committee has noted the following resolution (Minute 131) of the Annual Representative Meeting at Exeter:

> That the special report of the Public Health Committee on Vaccination by general practitioners be referred back to the Committee for consideration.

The Committee has duly considered the report accordingly, and is again submitting a special report upon this matter.

The following resolutions of the Section of State Medicine at Exeter were referred by the Council to the Public Health Committee—namely:

1. That the attention of the Local Government Board be drawn to the inadequacy of the minimum fee laid down in the Vaccination Order of 1907; moreover, that it is desirable that all expenses connected with the carrying out of the Vaccination Acts should be borne by the Imperial Exchequer.
2. That it is necessary for an efficient and proper inspection of rural milk supplies that such inspection should be made by officers not subject to periodical reappointment.

With reference to the first of these resolutions, the Council has represented to the Local Government Board that the minimum fee has been adopted in many districts in which it is, having regard to the local circumstances, inadequate, and also that the expenses of vaccination should be borne by the Imperial Exchequer.

The second resolution of the Section of State Medicine, above mentioned, has been approved by the Council on the recommendation of the Public Health Committee and forwarded to the President of the Local Government Board.

The question of the Security of Tenure of health officers has again received the close attention of the Public Health Committee, and the Public Health Officers Bill of the Association has again been introduced into Parliament by Sir Walter Foster, to whom the thanks of the Association are due for his services in this matter. Several Bills dealing with Public Health and the Housing of the Working Classes have been introduced into Parliament in the present Session, and the question is under consideration of drawing the attention of the Government once again to the importance in the public interest of reasonable Security of Tenure for Health Officers.

Provisions for the protection of the public health, contained in certain of the Bills referred to, depend, as have so many of the provisions of former Public Health Acts, upon the activity of the Medical Officer of Health, and the new provisions may be expected to remain as much a dead

letter in many districts as former provisions have done, if the Medical Officers of Health and Sanitary Inspectors are kept in the same position as at present, of being removable by the Local Authority, without notice, at the end of any year. The essence of the reform necessary is that Health Officers shall not be appointed for limited periods only, and that when it is desired to discharge such an Officer it shall be necessary for a member of the Local Authority, not merely, as at present, to move, without previous notice, that the officer in question be "not reappointed," but, to give notice of motion that he be "dismissed."

The Council has noted with satisfaction that in the "Children's Bill" now before Parliament the Government has introduced the provisions for the prevention of Overlying and Burning of Children which were proposed by the British Medical Association in conjunction with the Coroners' Society and the National Society for the Prevention of Cruelty to Children, in a Bill introduced in 1907.

The new Local Government Board Order, issued in the summer of 1907, with regard to fees to Public Vaccinators, has resulted in Boards of Guardians offering, in some cases, inadequate fees to the Public Vaccinators. In response to an application from the Association of Public Vaccinators, the Association, through the Public Health Committee and the Divisions concerned, has co-operated with that Association in supporting Officers threatened with inequitable treatment.

The following is a list of cases in which action has been taken with respect to Public Health and Poor Law appointments, including Public Vaccinatorships, with, in many instances, successful results, namely: Northleach, Gloucestershire (Medical Officer of Health), Winterton, North Lincoln (Medical Officer of Health), Worthing (Medical Officer of Health), Southend (Medical Officer of Health), Oldham (Public Vaccinatorship), North Bierley, near Bradford (Public Vaccinatorship), Cefn Hirgoed, Glamorgan (Hospital appointment), Castleford (Public Vaccinatorship), Wisbech (Public Vaccinatorship), Wells, Norfolk (Medical Officer of Health), and Launceston (Public Vaccinatorship) Attention may be particularly drawn to the case of the Medical Officer of Health for Southend, who, after being dismissed without previous notice, was reinstated, largely in consequence of the support which he received from the Association.

SCIENCE COMMITTEE.

(29) At the Exeter Meeting a Resolution was passed by the Obstetrical Section urging the Association to take steps towards securing the early recognition of Uterine Cancer, on which the Science Committee recommended the appointment of a Special Committee for the purpose. This Committee is now sitting. And as the result of a Resolution passed in the Section of Diseases of Children, a Committee has been appointed to consider the question of the Prevention of Ophthalmia Neonatorum. At the time of drafting this Report neither Committee is yet in a position to report the results of its investigations.

Another question considered by the Science Committee has been the advisability of investigating the value of the Opsonic Index for the treatment of disease. With this end in view it was suggested that it might be in the interests of Members for the Association to make some contribution towards the cost of a Statistical Enquiry now being carried out at the London Hospital.

Of the £1,000 annually voted in the form of Scholarships and Grants in aid of Research Work the Ernest Hart Memorial Scholarship, value £200, set aside for some subject in the department of State Medicine, was awarded to John Paul McGowan, M.B., of Edinburgh, for his researches in connexion with Immunity Aggressins. Farther, three Scholarships of the value of £150 each were awarded respectively to Drs. Thomas Shirley Hele, Willoughby Henry Harvey, and Alfred Edward Barnes. Dr. Hele has been working at St. Bartholomew's Hospital on Chemical Pathology; Dr. Harvey in the Pharmacological Laboratory at Cambridge on Arterio-sclerosis and the Glycogenic Functions of the Liver; and Dr. Barnes of the Royal Infirmary, Sheffield, is prosecuting a research in connexion with the changes of metabolism connected with variations of the Opsonic Index.

The Grants in aid of Research Work amounted to £350, and were made to thirty-two applicants, in sums ranging from £2 to £33.

The work of Scholars and Grantees is subject to inspection, and the Council takes this opportunity of expressing its thanks to those gentlemen who have assisted the Science Committee by acting as Inspectors.

The Middlemore Prize, endowed by the late Mr. Richard Middlemore, of Birmingham, has been awarded to the President-elect of the Association, Mr. Simeon Snell, for his valuable and important contributions in the practical science of Ophthalmology.

The Stewart Prize, endowed by the late Dr. Alexander Patrick Stewart of London, to be awarded in "recognition of important work already done, or of Researches instituted and promising good results regarding the origin, spread, and prevention of Epidemic Disease," will be awarded at the Sheffield Meeting, but at the time of drafting its Report the Council has not decided on the choice of the recipient.

SCOTTISH COMMITTEE.

(30) The work of the Scottish Committee during the year has been chiefly in connexion with the collection and preparation of evidence regarding the administration of the Poor Law. This evidence was submitted to the Royal Commissioner on the Poor Laws and Relief of Distress by three members of the Poor-law Subcommittee.

In addition a report has been prepared containing an analysis of the information obtained.

THERAPEUTIC COMMITTEE.

(31) The Committee during the past year has had under consideration the relative value of the local anaesthetics suggested as substitutes for cocaine, and the alterations it is desirable to make in a revision of the *British Pharmacopoeia*. The researches on the first point are not yet completed, and the Committee consequently desires to postpone its Report on this question.

Much time of the Committee has been spent in discussing the alterations it is desirable to make in the *British Pharmacopoeia*. The deliberations of the Therapeutic Committee have been confined mainly to the substances and preparations which it is desirable to omit from, and those which it is desirable to add to, the *Pharmacopoeia*. Improvements in existing Formulae, methods of identification, tests for the determination of purity, and kindred subjects have been regarded as beyond the scope of the Council's requirements.

In considering the substances and preparations which might be added to or omitted from the *Pharmacopoeia*, it is desirable to state some of the principles which have guided the Committee in its selection: Crude drugs which contain an active ingredient possessing all the desirable actions of the crude drug might be replaced by this active ingredient if it can be obtained commercially and its identification and purity ensured. If such an active principle is official, the crude drug might be deleted; thus, jaborandi leaves, coca leaves, elaterium, and many crude drugs yielding only volatile oils, might be omitted.

Drugs and their preparations possessing no obvious or serviceable action should be deleted—for example, arnica rhizome, cusparia bark, hemidesmus root, lupulin, mezereon bark, serpentary rhizome.

Unnecessary duplication of the preparations of a drug should be avoided. Thus, one 1 per cent. solution of a morphine salt, or one solid extract of belladonna, is sufficient.

Purely diluent preparations of a drug should, as far as possible, be avoided—for example, solution of potassium permanganate, almond mixture.

Substances which do not require to be defined officially for the protection of the practitioner, or the vendor or purchaser—for example, prunes, figs, brandy, sherry—ought to be omitted.

Substances of no therapeutic importance which are used only in the making of preparations, and are not contained in the final products, should be deleted or transferred to an appendix—for example, benzol, solution of iron persulphate.

A list containing the drugs and preparations which the Committee thinks might with advantage be omitted from or added to the *Pharmacopoeia* has been transmitted to the General Medical Council.

Signed, on behalf of the Council,

EDMUND OWEN,

London, April 29th, 1908. *Chairman.*

SPECIAL REPORT OF COUNCIL

TO THE

Annual Representative Meeting

ON THE

DRAFT CHARTER, ORDINANCES AND BY-LAWS.

THE Council has caused the Draft Charter, Ordinances, and By-laws to be revised in accordance with the following general instruction of the Special Representative Meeting of May 29th and 30th, 1907:

That the Draft Charter, Ordinances, and By-laws, as drafted by the Organization Committee and amended by the Meeting, subject to such alterations, if any, as may be required as the result of a Referendum, if such be taken by the Council, and subject to such changes, if any, as the Council may make in order to meet the special requirements of the Colonial Branches, be referred to Counsel for final revision and placed before a Representative Meeting for final confirmation at the earliest possible date.

The Council concurred in all the Resolutions of the Special Representative Meeting with regard to the draft Charter except Minutes 123, 283, 287, 293, 298, 299, 303, 328, 330, 342, and 346. Upon these the Council considered it to be its duty to take the sense of the Association by a Referendum pursuant to Articles XXII and XXXV.

The result of the Referendum having been to confirm the Resolutions in question, the revised draft Charter, Ordinances and By-laws now submitted have been prepared in accordance with the Resolutions of the Meeting, subject to certain verbal and other minor changes which have been made under the advice of Counsel, and to certain changes which the Council has thought it desirable to make in order more fully to comply with the wishes of the Colonial Branches in matters specially concerning them.

All resolutions of the Special Representative Meeting which contain instructions for amendment of the Draft before that Meeting are appended to this Report for convenience of reference (see Appendix A). It has not been thought necessary to reprint Resolutions of simple approval of the Draft as then considered.

The following is a list of all the material points in respect of which the instructions of the Special Representative Meeting have been departed from, under Counsel's advice, in preparing the present Draft

(1) Charter, Clause 6, Sub-clauses (2) and (3), the words "or By-laws" have been inserted in order to enable a provision to be made in the By-laws which is desired by the Colonial Branches, namely, that those Branches should have power to define the boundaries of their Divisions without reference to the Central Council. (See By-law 17 (2))

(2) Charter, Clause 7. Attention has been drawn to the fact that the Regulations as previously drafted contained no explicit reference to the means by which a decision should be arrived at to adopt, for the carrying out of the objects of the Association, any of the means specified in Clause 2 of the Charter which had not previously been adopted. It is recognized that this is a matter upon which many members of the Association desire that every opportunity shall be afforded for careful deliberation before new kinds of work are undertaken. A provision has, therefore, been inserted that such work shall only be taken up, or work already taken up abandoned, by virtue of a decision of the Representative Body upon which it will be possible for the Council to exercise its power of taking a Referendum.

(3) Ordinance 11. The words "Subject . . . By-laws," at the commencement have been inserted as a consequential amendment which is necessary to enable the power, already mentioned, to be given to the Colonial Branches to determine the boundaries of their Divisions. (See By-law 17 (2))

(4) Ordinance 14. The words "or elected to take office" have been inserted after the words "in office," in order to enable all Members both of the outgoing and of the incoming Council to take part in the Representative Meeting.

(5) Ordinance 20. A drafting change has been made upon the advice of Counsel, namely, that the provision for the election of the Chairman of Council has been transferred to the By-laws, which already contain the provisions as to the mode of election of other Honorary Officers. (See By-law 55.)

(6) By-laws 16, 17, 18 and 19. The former By-laws 16 and 17 have been redrafted (forming now four By-laws), partly in order to give effect to the instruction of the Representative Meeting contained in Minute 115, and partly in order to give effect to the wish expressed by certain Colonial Branches that they should be able to carry out for the benefit of their own members any means for the fulfilment of the objects of the Association provided for by the Charter—such, for example, as Medical Defence—even though the Association as a whole should not have taken up such means for the benefit of the members generally. Certain consequential drafting changes have been required.

(7) By-law 16 (*b*). Provision has been made, as directed by the Representative Meeting, that a Representative of a Division shall be a member *ex officio* of the Council of the Branch to which that Division belongs. Inasmuch, however, as the term of office of a Representative in Representative Meetings begins with the commencement of the Annual Representative Meeting, it has been thought more convenient that the Representative to act on the Branch Council during the year shall be the one elected to take part in the next Representative Meeting, in order that he may be in touch with the work of the Branch during the year prior to the Annual Meeting in which he takes part.

(8) By-law 17 (1). Having regard to the important effect which the power conferred upon Colonial Branches by the new By-law 17 (1) might have, if not duly safeguarded, upon the financial position of the Association, it has been thought well to take Counsel's opinion upon the question of the liabilities which might be incurred thereby. Counsel's opinion is as follows:

> I am clearly of opinion that the general funds of the Association could not be made liable for the debts or engagements of a Colonial Branch incurred or made in exercising the powers proposed to be given to such Branches by draft By-law 17 (1).
>
> A person entering into a contract with a Colonial Branch (or with trustees or others authorized to contract on behalf of such Branch) would not be entitled to assume that the contract was made on behalf of the Association. He would be bound to inquire whether the Branch has power to bind the Association as to the matter in question. And such inquiry would bring to light the position of the Branches in relation to the Association as defined by Clause 6 (5) of the draft Charter, Ordinance 13 and By-law 17 (1). These provisions make it clear that the Branch cannot impose any liability on the Funds of the Association.
>
> The question seems to me to fall within the principle of the authorities as to the necessity for inquiry into the powers of corporations established under special Acts or under the Companies Acts (see Royal British Bank *v.* Twignand 6 E and B 327 *v.* East Holyford Co. L. R. H.L 869, per Lord Hatherley at p. 893).

(9) By-law 26 (3). It has been thought well for clearness to insert the words, "and instructing the Representative thereon."

(10) By-law 28 A restriction is inserted, namely, that a substitute for a Representative shall not be a Representative of any other Constituency. It is considered that a substitute appointed to act for more than one Constituency might be in a position of difficulty owing to conflict in the instructions received by him from the different Constituencies.

(11) By-law 39 and the First Schedule (taking the place of former By-law 37) have been drafted under Counsel's advice to give effect to the instruction of the Representative Meeting contained in Minute 299. The question has been considered of the construction to be placed upon that Resolution, namely, as to whether the Constituencies to be created are to consist of groups each electing four Members, as shown in Appendix E to the Report of the

Organization Committee of March, 1907, or whether the Resolution could be so interpreted as to provide for the creation of single member constituencies except where Branches otherwise specially desire. Counsel has advised that the former is the correct construction to be placed upon the Resolution of the Representative Meeting, and the By-law and the First Schedule to the Charter have been drafted accordingly in this form.

The Council considers, however, that it may be convenient to Divisions and to the Representative Meeting to have placed before them for their consideration a Schedule drafted in the alternative form to provide for the creation, in most districts of the United Kingdom, of Constituencies each electing one Member, and a Scheme for such election is appended accordingly to this Report. (See Appendix B.) The only exception to the single-member constituency system, proposed in this Scheme, will be seen to be that of the Lancashire and Cheshire Branch, the Council of that Branch having expressed a unanimous opinion in favour of the area of the whole Branch constituting one Constituency to elect two Members of Council, instead of being divided into two single-member constituencies. The Scheme of the Constituencies in Scotland and Ireland has been framed on the recommendation of the Scottish and Irish Committees.

(12) By-laws 41 and 42. The Minutes of the Special Representative Meeting contain no specific instructions as to the mode of election, to be prescribed in the By-laws, of the seven Members of Council to be elected by the Colonial Branches, or of the twelve to be elected by the Representative Body. The new By-laws 41 and 42 have been drafted by Counsel for this purpose in accordance with the general spirit of the resolutions of the Meeting.

(13) By-law 54. In accordance with the expression of opinion of the Representative Meeting at the Caxton Hall in 1906, provision has been made in By-law 54 (formerly 51) that the Chairman of Representative Meetings shall not act as a Representative of a Division while holding office as Chairman.

(14) Schedule 2, as to Standing Committees. In Schedule 2 (formerly Schedule 1) certain changes which the experience of the Council has shown to be desirable have been made in the details of the references to Committees.

Owing to the necessity of waiting to complete the revision of the draft Charter until the results were known of the voting upon the Referendum, the Organization Committee and Counsel have found it impossible to complete the revision in every detail in time for the consideration of the document by the Council on April 29th. In order not to delay the issue of the Draft to the Divisions, the Council has, therefore, decided to delegate to the Organization Committee the duty of finally completing the Draft in those matters which are still under the consideration of Counsel. The Committee has also been authorized to issue to the Divisions the Charter, Ordinances, and By-laws when so completed, and to issue also a supplementary Report upon any points of detail to which it may be found desirable, as the result of Counsel's further consideration, to draw the attention of the Divisions and of the Representative Meeting.

April 29th, 1908.

SUPPLEMENTARY REPORT BY THE ORGANIZATION COMMITTEE.

Counsel has drawn attention to the fact that in several places in the draft Ordinances and By-laws an Officer of the Association was specifically referred to under the title of "The Secretary" or "The General Secretary," and that, if such references were desired, provision should be specifically made for the appointment of such an Officer.

Counsel was thereupon requested to consider certain Resolutions of the Representative Meeting bearing upon this subject, namely, (*a*) Resolutions of the Representative Meeting, adopted upon the Recommendation of the Council at Leicester, in 1905, pursuant to which the provision for the appointment of certain specified salaried officers was subsequently deleted from the existing Articles of Association and a general By-law added to the effect that all salaried officers should be appointed by the Council, and (*b*) the following resolutions of the Annual Representative Meeting at the Caxton Hall in 1906:—

With reference to the following motion:

225. Proposed by the Chairman of Council:

That a new Ordinance be inserted after Ordinance 21, and numbered Ordinance 22, to read as follows:

"There shall be an Editor, a General Secretary and Manager, a Medical Secretary, and such other officers as the Council may from time to time appoint."

An amendment was moved:

225*a*. That the provision, if any, as to the principal paid officials be not in the Ordinances but in the By-laws, in order that it may be modified by the Representative Body, when required, without reference to the Privy Council, and that no decision as to the designation of these Officers in the Regulations be arrived at until the Committee of Inquiry has reported.

The amendment was carried.

226. Upon the amendment being put as the substantive motion, it was moved, as a further amendment:

That all the words after "Privy Council" be deleted.

The amendment was lost.

227. The Motion 225*a* was put and carried.

Regard having been had to these Resolutions, the references in question have been amended accordingly throughout the Regulations, and, on the advice of Counsel, a new By-law 68 has been added.

ANDREW CLARK,
Chairman.

May 15th, 1908.

APPENDIX A. TO SPECIAL REPORT OF COUNCIL.

Minutes of the Special Representative Meeting, May, 1907, requiring Amendment of the Draft Charter, Ordinances, and By-laws.

Charter, Clause 2.

43 That in Subclause 2 (2) (ix) there be inserted after the word "Association" (3rd line) the words "at home or abroad."

Charter, Clause 5.

57 That it is desirable that Branches and Divisions within the United Kingdom do have the power to elect to certain privileges of Membership those *not* eligible for election as Ordinary Members of the Association, and that, therefore, in Subclause 5 (2), lines 5 and 6 the words "not in the United Kingdom" be omitted.

Ordinance 9.

98 That provision be made, in Ordinance 9 (*c*), for the termination of Membership of the Association *ipso facto* upon erasure from the Medical Register of any British Colony for professional misconduct, as from the Register of the United Kingdom.

Ordinance 13.

113 That Ordinance 13 (*b*) be amended by the insertion, after the words "Provided that" (3rd line), of the words "except in the cases specified in By-law —."

New By-law as to certain Rules of Colonial Branches and Divisions.

115 That it be an instruction to the Council to insert a By-law to the following effect:—

That a Branch or Division not in the United Kingdom shall have power to adopt, without reference to the Central Council, Rules dealing with all or any of the following matters, which Rules shall be binding upon the Members to whom they relate. (A list of the matters to be so specified to be drawn up and inserted by the Council in the draft By-law)

Ordinance 17.

130 That in Ordinance 17 (*e*) for the words "If . . . period," inclusive, in the first four lines of the Clause, there be substituted the following words:

If the said Meeting of the Council shall not be held within the said period of three months, or if the requisition prescribed by paragraph (*o*) of this Ordinance shall not have been issued within the period therein prescribed, then the resolution shall come into operation immediately upon the expiration of such respective periods.

Ordinance 15.

135 That, in Ordinance 15, lines 5 and 6, the words "votes given thereon in the manner prescribed by the Regulations," be substituted for the words "members present and voting thereon."

Ordinance 23.

143 That in Ordinance 23, lines 1 and 8, the words "The first-class travelling" be omitted; and that there be inserted in line 1, after the word "Expenses," the words "as defined in the By-laws."

144 That the word "Travelling" be omitted from the title Ordinance 23.

145 That Ordinance 23 as amended be approved, as follows:—

Expenses.

23. Expenses, as defined in the By-laws, within the United Kingdom of Members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association. Attendance of Representatives of Divisions for this purpose shall be construed to mean attendance at each Session of the Representative Meeting, unless the Council shall be satisfied that good cause existed for absence from any particular Session or Sessions. The expenses, defined as aforesaid, within the United Kingdom of all Members attending Meetings of Council or of Committees, and of all Members authorized by the Representative Body or by the Council to attend, and attending any Conference shall be defrayed in like manner. The Council shall (subject as hereinbefore provided) determine what shall be considered an attendance for the purpose of this clause.

By-law 5.

That By-law 5 be amended by the insertion of the following words at the beginning of the By-law:

"In the case of a Branch in the United Kingdom the mode of election of new Members shall be as follows:—"

155 That in By-law 5, 3rd line from the end, the words "or of the Division in which he resides" be added after the words "or of the Branch."

New By-law (*to be* 6).

158 That a new By-law be inserted between the present By-laws 5 and 6 as follows:—

In the case of a Branch not in the United Kingdom the mode of election shall be such as may be prescribed by the Rules of the Branch, with the consent of the Central Council.

By-law 9.

164 That By-law 9 be amended by the deletion, in the 4th line, of the words "not in the United Kingdom."

By law 20.

184 That all the words after the word "profession," in the 5th line of By law 20, be omitted.

By-law 24.

212 That the wording of By-law 24 (1) be transposed to read as follows:

"The Representative shall be elected not more than nine months nor less than four weeks before the Annual Representative Meeting at which he takes office by a General Meeting," etc.

223 That the words "provided that, in case of doubt, the matter be referred to the Chairman of Representative Meetings" be added to the end of By-law 24 (4).

By-law 27.

235 That there be added, at the end of By-law 27, the following words: "All those who have been elected to take office at the close of an Annual Representative Meeting as Members of Council, shall be entitled to take part in such Meeting."

By-law 31.

247 That By-law 31 (1) be amended to read as follows:

"In any Representative Meeting only Representatives of Divisions, and Members of Council representing the Naval, Army, and Indian Medical Services, shall be entitled to vote."

250 That By-law 31 (2) be amended as follows:

At end of Section (2) add "Power to vote by card shall not apply to Members of Council representing the Naval, Army, and Indian Medical Services."

New By-law (*to be* 53).

272 That the following new By-law, to be By-law 53, be inserted between the draft By-laws 52 and 53:—

In the event of the death during his term of office, or the resignation, of the President, the President-Elect, the Chairman of Representative Meetings, or the Treasurer, the vacancy thus created shall be filled, until the next Annual Representative Meeting, in the manner following, namely:—

In the case of the President, the Past President shall discharge the duties of the office.

In the case of the President-Elect, the Council shall appoint a President-Elect in his stead.

In the case of the Chairman of Representative Meetings, the Deputy Chairman shall discharge the duties of the office.

In the case of the Treasurer, the Council shall appoint a Treasurer in his stead.

In the event of a vacancy occurring in any of the executive offices above mentioned through circumstances not provided for in this By-law, it shall rest with the Council to make such appointment or other provision as it may deem expedient for the discharge of the duties of the said office until the next Annual Representative Meeting.

By law 36.

283 That the principle of the election of the Council be that the Council be elected partly by the Branches and partly by the Representative Body.

284 Proposed—

That the ratio of Members elected by the Branches to the Members elected by the Representative Body be 2 to 1, for the United Kingdom only.

287 Resolved, with 1 dissentient: That the ratio be 2 to 1.

289 That the number of Colonial Members of the Council be not exceeding 7.

293 That the Council include 24 Members elected by the Branches in the United Kingdom; Members, not exceeding 7 in number, elected by the Branches not in the United Kingdom; 12 Members elected by the Representative Body; 6 *ex-officio* Members; and 3 Members representing the Navy, Army, and Indian Medical Services.

294 That in By-law 36, last line, there be substituted for the word "three" the word "five."

296 That in By-law 38, line 7, after the word Council, there be added the words "from lists of nominations made by Branch Councils, by Divisions, or by at least 10 Members of the district.

297 That the Scottish and Irish Committees be allowed to nominate.

298 That By-law 36, as amended, be approved, as follows:—

The Council shall be composed of the *ex officio* Members mentioned in the Ordinances, and of Members duly elected by the following bodies, namely: (*a*) By the Branches of the Association in the United Kingdom which shall be grouped for the purpose of electing 24 Members of the Council in the manner prescribed by By-law 37; (*b*) by the Branches of the Association not in the United Kingdom which shall be grouped for the purpose of electing Members of the Council not exceeding 7 in number; (*c*) by

the Representative Body, which shall elect annually 12 Members of the Council from lists of candidates nominated by (i) Branch Councils, (ii) by Divisions, (iii) by the Scottish Committee, (iv) by the Irish Committee, or (v) by at least 10 Members resident in the district of the United Kingdom to which the candidate nominated belongs; and (*d*) by the Council itself, which shall have power to add to its numbers at any of its meetings all or any one or more of the following, namely:—One medical officer on the active or retired list of each of the following services:—The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

By-law 37.

299 That By-law 37 be re-drafted to provide that the grouping of the Branches in the United Kingdom for the election of the Council be generally as shown in Appendix E to the Committee's Report; that each such group elect four Members of Council; that the Members elected by the Representative Body be topographically distributed among the same districts, and in the same proportion; and that for this purpose By-law 37 be referred back to the Organization Committee, with the instruction that they reconsider also the details of the grouping, and circulate the re-drafted By-law to the Divisions.

By-law 38.

301 That the election in the United Kingdom be conducted by the Head Office out of central funds, and the By-law be amended accordingly.

303 That By-law 38, subject to amendment as directed, be approved.

By-law 42.

314 That By-law 42 be deleted as being unnecessary.

By-law 44.

316 That By-law 44 be amended by the substitution of the following words, for the first sentence, from "Any" to "election" inclusive:

Any casual vacancy occurring in the Council not less than four months before the Annual Representative Meeting amongst the Members of Council elected by the Representative Meeting shall be filled up by the Chairman of Representative Meetings. Any other vacancy which may so occur shall be filled up by the body which appointed the Member of Council whose place shall have so become vacant, and the election to fill such last-mentioned vacancy shall be conducted in the same manner as the annual election.

By-law 16.

324 That after the word "Branch," in the 3rd line, the words "and the Members who, for the time being, represent, on the Representative Body, the Divisions composing the Branch" be inserted.

325 That, in the 3rd line, for the word "Branch," there be substituted the words, "group to which the Branch belongs:"

326 That By-law 16, as amended, be approved, as follows:

The management of the affairs of each Branch shall be vested in the Branch Council, of which the Members of the Council of the Association elected by the group to which the Branch belongs and the Members who, for the time being, represent on the Representative Body the Divisions composing the Branch shall be Members *ex officio*. In the case of a Branch comprising more than one Division, each Division shall be entitled to elect a Member or Members of the Branch Council, and the number of Members to be elected by each Division shall be, as nearly as possible, proportional to the membership of such Division. In addition to the Members so elected, the Branch Council may have, as *ex-officio* Members thereof, such Officers of the Branch, as the Branch may think desirable.

By-law 29.

328 That By-law 29 be amended by substituting for the word "ten," in the fourth line, the word "twelve."

330 That By-law 29, as amended, be approved, as follows:

29. The business of the Annual Representative Meeting shall be to elect a Representative of a Division as the Chairman of Representative Meetings, and also a Representative of a Division as Deputy Chairman; to elect a President of the Association; to elect 12 Members of the Council, and such other Officers and such Members of Committees as by the Ordinances or By-laws be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to appoint an Auditor or Auditors (who shall be a professional Accountant or professional Accountants) and fix his or their remuneration; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting, and Reports of Branches and motions relating to the adoption of such reports in whole or in part; to make new Ordinances or By-laws and alter and repeal existing Ordinances or By-laws and to consider any resolution relating to the honour and interests of the medical profession or of the Association which shall have been adopted by any Division or Branch, provided that any such resolution proposing material alteration of the constitution or policy of the Association shall have been submitted through the Journal for the consideration of all the Divisions not less than three months previously.

New By-law as to Expenses.

331 That to give effect to the amendment approved by the Meeting in Ordinance 23 a new By-law be inserted to provide that the first class travelling expenses within the United Kingdom of Members of Council and Representatives of Divisions attending any Representative meeting, and other Members the payment of whose expenses is provided for in Ordinance 23, shall be defrayed out of the whole of the funds of the Association.

By-law 57.

335 That By-law 57 be approved subject to any adjustment or alteration of the Schedule, decided upon by this Meeting.

Science Committee.

350 That all Members of the Science Committee be elected by the Council.

Ethical Committee.

353 That the number of the Members of the Ethical Committee be increased to six elected by the Representative Body and six by the Council, respectively.

Hospitals Committee.

358 That the number of Members elected by the Representative Body and the Council, respectively, be increased to 6.

Scottish Committee.

363 That the word "Honorary" be inserted before the word "Secretary."

Irish Committee.

365 That the composition, duties, and powers of the Irish Committee, as stated in the Schedule to the By-laws, be approved, subject to the same amendment as in the case of the Scottish Committee.

Sub Committees.

366 That a provision be made in the By-laws to give power to all Standing Committees to form Sub-Committees from their own Members or from other Members of the Association.

Committees Representative of Colonial Branches.

367 That the Council be authorized to provide for the formation of Committees representative of Colonial Branches which are geographically associated.

APPENDIX B. TO SPECIAL REPORT OF COUNCIL.

ELECTION OF MEMBERS OF COUNCIL BY BRANCHES IN THE UNITED KINGDOM ON THE BASIS OF SINGLE MEMBER CONSTITUENCIES (EXCEPT AS REGARDS LANCASHIRE AND CHESHIRE).

Branches and Divisions comprised in Group.	Membership of Branches or Divisions.	Membership of Group.	No. of Members of Council to be Elected by Group.
England and Wales:			
North of England Branch	676		
North Lancashire and South Westmorland Branch	127	803	1
Yorkshire Branch	884	884	1
Lancashire and Cheshire Branch	1,646	1,646	2
East York and North Lincoln Branch	150		
Midland Branch	531	681	1
Cambridge and Huntingdon Branch	147		
East Anglian Branch	436		
South Midland Branch	219	802	1
Birmingham Branch	499		
Staffordshire Branch	209	708	1
North Wales Branch	205		
Shropshire and Mid-Wales Branch	132		
South Wales and Monmouthshire Branch	517	854	1
Metropolitan Counties Branch:			
Northern and Eastern Metropolitan Group:			
City Division	156		
Stratford Division	125		
Walthamstow Division	65		
Tottenham Division	117	784	1
St. Pancras and Islington Division	137		
Hampstead Division	184		
Central Metropolitan Group:			
Marylebone Division	597		
Westminster Division	271	868	1
Western Metropolitan Group:			
Richmond Division	118		
Ealing Division	111		
Chelsea Division	119		
Kensington Division	323	727	1
Watford and Harrow Division	56		
Southern Metropolitan Group:			
Lambeth Division	136		
Wandsworth Division	173		
South-Eastern Branch			
Bromley Division	42		
Croydon Division	139	714	1
Norwood Division	224		
Bath and Bristol Branch	382		
Gloucester Branch	140		
West Somerset Branch	74		
Worcester and Hereford Branch	124	720	1
Dorset and West Hants Branch	218		
South-Western Branch	457	675	1
Oxford and Reading Branch	274		
Southern Branch	407	681	1
South-Eastern Branch (excluding Bromley, Croydon, and Norwood Divisions)	845	845	1
Scotland.			
Aberdeen Branch	173		
Northern Counties Branch	108		
Dundee Branch	110		
Perth Branch	53	444	1
Edinburgh Branch	413		
Fife Branch	75	488	1
Glasgow and West of Scotland Branch (4 City Divisions)	412	412	1
Glasgow and West of Scotland Branch (4 County Divisions)	265		
Border Counties Branch	146		
Stirling Branch	70	481	1
Ireland.			
Connaught Branch	37		
South-Eastern of Ireland Branch	60	97	1
Leinster Branch	310	310	1
Munster Branch	96	96	1
Ulster Branch	359	359	1

[Submitted, May, 1908, as revised pursuant to the Instructions of the Special Representative Meeting of May, 1907.]

DRAFT CHARTER, ORDINANCES, AND BY-LAWS.

CHARTER.

British Medical Association.

EDWARD VII. by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, King, Defender of the Faith—TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING.

WHEREAS

(a)

have presented to Us their humble Petition setting forth (amongst other things), to the effect following:—

(b)

AND WHEREAS We are minded to comply with the said prayer and to grant a charter containing the provisions hereinafter set forth.

NOW KNOW YE that We having taken the premises into Our Royal consideration of Our special Grace certain knowledge and mere motion, do will, ordain, constitute, declare, appoint, and grant as follows, that is to say:—

1. For the purposes hereinafter set forth and all other purposes of this Our Charter the above-named Petitioners and all other persons who shall pursuant to this Our Charter and the Ordinances made thereunder be members of the Corporation hereby constituted are hereby created and henceforth for ever shall be one body politic and corporate by the name of the "British Medical Association" (hereinafter called "the Association"), and by the name aforesaid shall have perpetual succession and a common seal with full power and authority to alter, vary, break, renew the same at their

(a) Here insert the names and descriptions of a few representative members of the existing Association as Petitioners.

The number of them is immaterial, but it is not desirable to make the document unnecessarily bulky, and I suggest that the number should not exceed twelve.—T.R.C.D.

(b) Here will be inserted a statement of the substance of the Petition which is not yet drafted, but will contain a short history of the Association and the reasons for desiring a Charter.—T.R.C.D.

discretion, and by the same name may sue and be sued, in every court of Us, Our heirs and successors, and We do hereby grant to the Association full licence, right, authority, power and capacity (notwithstanding the statutes of Mortmain), First to take and hold all such lands, tenements, hereditaments and property as are now vested in or held by the existing Association hereinbefore referred to, or any trustees or trustee for that Association, and, secondly, to take, acquire, purchase and hold in perpetuity or otherwise any lands, tenements, hereditaments and property whatsoever, situate within Our United Kingdom of Great Britain and Ireland or in any part of Our dominions; And (subject to such consent if any as may be required by law) to grant, demise, alien, mortgage, charge or otherwise dispose of all or any of the lands, tenements, hereditaments and property for the time being of the Association, and also to do all other matters incidental or appertaining to a body corporate.

2.—(1) We do hereby declare the objects of the Association to be the promotion of the medical and allied sciences, the maintenance of the honour and interests of the medical profession and of the members thereof collectively and individually, and the co-operation of the members of the Association for their mutual assistance and support in all matters affecting them in their professional capacity, including the encouragement, promotion or provision of means for protecting Members and their families against the exigencies of age, sickness, death or misfortune.

(2) Without prejudice to the generality of the foregoing objects and to the other powers conferred by these presents and so that the said objects and powers shall be in no wise restricted by the powers next hereinafter specified We do hereby expressly declare that for the attainment of the aforesaid objects the Association may adopt any or all of the following means, that is to say:—

(i) May hold meetings and conferences at any place in the United Kingdom or in any part of Our dominions or elsewhere for the discussion of the affairs, interests and duties of the medical profession and for promoting personal and friendly intercourse between Members of the Association and between members of the medical profession in general.

(ii) May provide, equip, manage, and carry on circulating and other libraries and rooms and buildings for social intercourse for the benefit of Members of the Association and of the medical profession in general.

(iii) May compile, revise, publish and distribute or sell lists and registers of medical practitioners, and records of events, transactions and proceedings of interest to the Members of the medical profession.

(iv) May publish periodically and sell the *British Medical Journal* or any other journal of a character specially adapted to the needs of the Medical Profession.

(v) May encourage research in the medical and allied sciences by grants from the funds of the Association, by the establishment of scholarships, prizes or rewards and in such other manner as the Association may determine upon.

(vi) May originate, support, promote, and oppose alterations in the law of the United Kingdom or any British Colony or Dependency affecting the Public Health or the Medical Profession and may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly.

(vii) May take or defend and assist persons in taking or defending any legal proceedings civil or criminal (including proceedings before the General Medical Council) in which in the opinion of the Association the honour or interests of the Medical Profession or of any Member of the Association in his professional capacity or any question of professional principle is or are involved, and may establish, contribute to, organise, and manage a fund or funds for the purposes aforesaid.

(viii) May provide facilities for sales or transfers of medical practices, for the arrangement of medical partnerships and for the engagement of qualified assistants and temporary substitutes for medical practitioners being Members of the Association.

(ix) May establish, endow, contribute to, organise and manage provident or benevolent funds for the benefit or assistance of Members of the Association at home or abroad or of the Medical Profession and their families or dependents, and of the staff employed by the Association.

(x) May undertake and carry out the execution of any trusts which the Association may deem to be directly or indirectly conducive to the interests of the Association or of the Medical Profession or any branch thereof.

(xi) May take such other means (whether of the same nature as the means hereinbefore stated or not) as may seem to the Association incidental or conducive to the promotion or carrying out of the foregoing objects or any of them.

3. The Association shall not carry on any trade or business (except so far as the same may be involved in the exercise of their powers with respect to any of the matters mentioned in paragraphs (ii), (iii), (iv) and (viii) of the last preceding clause) nor engage in any transaction with a view to the pecuniary profit or gain of the individual Members thereof, provided that this shall not preclude the Association from applying its funds in any manner within the contemplation and intention of the last preceding clause of these Presents, or in the remuneration of Members of the Association for services actually rendered.

4. The first Members of the Association shall be the persons named in the Register of the Members of the existing Association which has been certified by (a Secretary of the existing Association) as complete and correct and bears even date with the Order in Council for the preparation of the Warrant for passing this Our Charter under the Great Seal of the United Kingdom. Ordinary Members of the Association shall hereafter be elected in such manner as may be from time to time prescribed by the Ordinances and By-laws of the Association.

5.—(1) The Association shall have power to elect as Honorary Members such persons, and in such manner as the By-laws of the Association may provide, and to admit members so elected to such privileges other than that of voting as Members of the Association, as may from time to time be conferred on them by or under the By-laws.

(2) Each Division or Branch hereinafter mentioned of the Association shall have power to admit to certain of the privileges of membership of such Division or Branch, other than that of voting (*a*) Members of the Association who are not entitled to be Ordinary Members of such Division or Branch, and (*b*) Members of the Medical Profession, or

persons distinguished in other sciences, who are not eligible for election as Ordinary Members of the Association. The By-laws of the Association may prescribe the designation under which persons shall be admitted to such privileges, the nature of the privileges to be conferred upon them, and the conditions of admission thereto.

6.—(1) For the better attainment of the objects of the Association the Members thereof shall be formed into separate local bodies styled Divisions and Branches.

(2) A Division shall comprise such body of Members as shall in the manner prescribed by the Ordinances or By-laws of the Association be declared to be a Division, and a Branch shall be such Division, or such group of Divisions, as shall in like manner be declared to be a Branch.

(3) Each Division shall have a local area to be fixed from time to time by or in accordance with the provisions contained in the Ordinances or By-laws.

(4) Every Member whose address as registered for the time being in the books of the Association is at a place situate within the area of any Division shall *ipso facto* be an Ordinary Member of that Division and of no other, and every Ordinary Member of a Division shall *ipso facto* be an Ordinary Member of the Branch which comprises that Division and of no other.

(5) In all other respects the Divisions and Branches shall be so constituted, managed, and governed, and shall have such powers, rights, and privileges and shall be under such obligations, as shall be prescribed by or under the Ordinances and By-laws for the time being, and the By-laws may provide for contributions, grants and subscriptions out of the general funds of the Association to Divisions or Branches, and may impose on the Members of any Division or Branch such obligations towards the Association, and the Division and Branch respectively, as may seem to the Association to be expedient, and may empower any Division or Branch to make (subject or not subject to the approval of the Association) any rules in relation to the affairs thereof and to vary and repeal any such rules.

7. The general control and direction of the policy and affairs of the Association (including the power to determine any question as to the adoption, continuation, or abandonment by the Association of any of the means specified in Clause 2 (2) of this our Charter for the attainment of the objects of the Association) shall be vested in a body of Representatives (hereinafter called the "Representative Body") elected by the Divisions in accordance with the provisions of the Ordinances and the By-laws. The Representative Body shall hold an annual meeting (hereinafter called the "Annual Representative Meeting") and may hold other meetings (hereinafter called "Special Representative Meetings").

8. There shall be a Central Council (hereinafter called "the Council") which shall, save as otherwise provided by the Ordinances, carry into execution resolutions passed by the Representative Body, and administer the affairs of the Association in accordance with this Our Charter and the Ordinances and the By-laws and shall exercise such powers and do such acts and things as may be exercised or done by the Association and are not by the Provisions of this Our Charter or the Ordinances or By-laws directed to be exercised or done by the Representative Body.

9.—(1) The Ordinances of the Association may (subject to the provisions of this Our Charter)

(*a*) Prescribe the qualifications for membership of the Association and the other terms of such membership and prescribe or limit the amount of the subscriptions to be paid by members.

(*b*) Provide for the resignation of membership and for the removal from or other modes of termination of membership of the Association.

(*c*) Provide for the formation of Divisions and Branches and other local bodies.

(*d*) Provide for and prescribe the constitution and powers of the Representative Body and the Council and the mode of election of the members thereof respectively.

(*e*) Provide for the holding of meetings of the Association and of the Representative Body and of the Council.

(*f*) Provide for the appointment of Officers of the Association.

(*g*) Provide for the payment of the personal expenses incurred by members in connection with their attendance at meetings of the Representative Body or of the Council or of any Committee of either of the said bodies or at any Conference authorised by the Representative Body or by the Council.

(*h*) Provide for the audit of the accounts of the Association.

(*i*) Empower the Representative Body (subject or not subject to the consent of the Council or other restrictions) to make and from time to time to add to, amend, alter or repeal By-laws for regulating (subject to this Our Charter and the Ordinances of the Association) the proceedings of the Representative Body and the Council and any committee thereof respectively and the conduct of the business and affairs of the Association and any other matters which require to be so regulated.

(*j*) Provide for the government of the Association in all respects not otherwise provided for by this Our Charter.

(2) The first Ordinances of the Association shall be those set forth in the 1st Schedule hereto and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever. The Ordinances (including the first Ordinances) may be added to, amended, altered or repealed and new Ordinances made from time to time by the Representative Body subject to such restrictions (if any) as may be prescribed by the Ordinances. Provided that no such addition, amendment, alteration, repeal or new Ordinance shall have any force or effect until allowed by The Lords of Our Privy Council, of which allowance a certificate under the hand of the Clerk of Our Privy Council shall be conclusive evidence. Any addition, amendment, alteration, repeal or new Ordinance so allowed shall be conclusively deemed to have been in all respects duly made and to be valid and effectual for all purposes.

10. The first By-laws shall be those set forth in the 2nd Schedule hereto, and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever until the same shall be amended, altered or repealed in pursuance of the powers conferred by the Ordinances.

11. The Representatives of Divisions of the existing Association, who shall be holding office as such at the date when this Our Charter comes into operation, shall be deemed to be the first Representatives of the Divisions of the Association, and shall continue to hold office as such until their successors are appointed in pursuance of this Our Charte

and Members of the Council of the existing Association holding office at the date when this Our Charter comes into operation shall be deemed to be the Members of and to form the first Council of the Association, and shall continue to act as such until the new Council is elected in pursuance of this Our Charter and the several Officers and Committees of the existing Association shall continue to hold their respective offices and discharge their respective duties and receive such emoluments, if any, as pertain to the offices which they fill until it shall be otherwise determined in pursuance of this Our Charter, and the Divisions and Branches of the existing Association, with their Officers, Councils and Committees existing and holding office respectively at the date of the grant of this Charter shall be deemed to be Divisions and Branches, Officers, Councils and Committees constituted or appointed in pursuance of this Our Charter, and shall continue until otherwise determined in pursuance of this Our Charter.

12. It shall be lawful for Us, Our Heirs and Successors by supplemental Charter to add to, amend or repeal the provisions of this Our Charter or any of them. Provided that a resolution to accept and approve such supplemental Charter shall have been passed by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws for the time being at a Representative Meeting specially summoned for the purpose. Any such resolution shall have effect subject to such approval or confirmation (if any) as may from time to time be required by the Ordinances with respect to the amendment of an Ordinance.

13. It shall be lawful for the Association by a resolution of the Representative Body passed at a representative meeting specially summoned for the purpose by such majority as mentioned in the last preceding clause hereof and subject to such approval or confirmation as therein mentioned to surrender this Our Charter and to wind up the affairs of the Association, but if on the winding up or dissolution of the Association there shall remain after the satisfaction of all its debts and liabilities any property whatsoever, the same shall not be paid to or distributed among the Members of the Association or any of them, but shall, subject to any special trusts affecting the same, be given and transferred to some other institution or institutions having objects similar to the objects of the Association to be determined by the Representative Body at or before the time of dissolution or in default thereof by a judge of the Chancery Division of Our High Court of Justice.

14. Lastly, We do hereby for Us, Our Heirs and Successors grant that these Our Letters Patent shall be in and by all things good, firm, valid, sufficient and effectual in law notwithstanding any omission, imperfection, defect, matter, cause, or thing whatsoever to the contrary thereof in these Our Letters Patent contained and shall be taken, construed and adjudged in the most favourable and beneficial sense and to the best advantage of and for the Association as well in Our Courts of Record as elsewhere notwithstanding any recital, mis-recital, uncertainty, or imperfection in these Our Letters Patent.

In Witness whereof We have caused these Our Letters to be made Patent.

Witness Ourselves at Our Palace of this day of in the year of Our Reign.

By warrant under the King's Sign Manual.

THE FIRST SCHEDULE.

ORDINANCES OF THE BRITISH MEDICAL ASSOCIATION.

SECTION I.

PRELIMINARY.

1.—(1) In these Ordinances (where not repugnant to the Context)

(*a*) "The Charter" means and includes the Royal Charter granted in the year , and incorporating the British Medical Association and any amendment thereof, and any supplemental Charter for the time being held by that Association.

(*b*) "The Ordinances" means the Ordinances for the time being of the Association.

(*c*) "The By-laws" means the By-laws for the time being of the Association.

(*d*) "The Journal" means the *British Medical Journal* or other the professional journal for the time being published by the Association.

(2) Words occurring in these Ordinances and also occurring in the Charter shall bear the same respective meanings in these Ordinances as they bear in the Charter.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these Ordinances as it applies for the interpretation of an Act of Parliament.

3. These Ordinances shall be construed so as not to conflict with the Charter.

SECTION II.

MEMBERSHIP.

Eligibility.

4. Any Medical Practitioner registered in the United Kingdom under the Medical Acts, and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualification as shall, subject to the By-laws, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. Subject as aforesaid the mode and conditions of election to membership shall from time to time be determined by or in accordance with the By-laws.

Subscriptions.

5. Every Member shall pay to the Association a subscription of such amount as may for the time being be prescribed by the By-laws. The said subscription shall be considered due in advance on the first of January of each year, or in the case of Members elected during the year at the time of election.

6. Each year's subscription shall entitle the Member to all privileges of membership of the Association, including that of receiving the *Journal* for the current year, and to the ordinary privileges of membership of that Division and of that Branch of which he is an ordinary Member.

Re-Eligibility.

7. No person who shall have been a Member of the Association and ceased to be such shall be eligible for re-election until he shall have paid all arrears of subscription (if any) due from him to the Association at the date when his former membership ceased, and no person whose former membership shall have been terminated by reason of his conviction or expulsion as hereinafter provided shall, without the previous sanction of the Council, be eligible for re-election by any Branch Council.

Duration of Membership.

8. Every Member whether one of the first members or a subsequently elected Member shall remain a member until his membership is terminated in accordance with the provisions hereinafter contained.

Termination of Membership.

9. Membership of the Association may be terminated in any of the following ways, namely:—

(*a*) By resignation subject to such notice as may be provided for by the By-laws and subject to the provisions of the next succeeding Ordinance.

(*b*) *Ipso facto* by default in the payment of subscriptions to the Association for such period as may be prescribed by the By-laws.

(*c*) *Ipso facto* (i) upon sentence (after conviction in a Court of Justice of any crime) to imprisonment with hard labour without the option of a fine or to any greater punishment, or (ii) upon erasure from the Medical Register under Section 29 of the Medical Act of 1858, or (iii) upon erasure from the Medical Register of any British Colony or Dependency on the ground of professional misconduct, or (iv) upon forfeiture through misconduct of the medical qualification by virtue of which the Member shall have been eligible for membership.

(*d*) By expulsion (after the enquiry and in the manner prescribed in the next succeeding Ordinance) on the ground that the conduct of the Member is detrimental to the honour and interests of the Medical Profession or Association or calculated to bring the Profession into disrepute, or on the ground that the member has wilfully and persistently refused to comply with the regulations of the Association or the rules of any Division or Branch of which he may be a member.

Expulsion.

10. (*a*) The Council shall have power on the representation of any Division or Branch and after due enquiry, of which not less than fourteen days' notice specifying a time and place at which he may be heard in his defence shall have been served on the Member in the manner prescribed by the By-laws, finally to expel from membership of the Association any Member of such Division or Branch whose conduct shall be held by the Council to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*b*) The Council of each Branch not in the United Kingdom having a membership of not less than thirty shall have power, on the representation of any two Members of such Branch and at a Special Meeting convened at not less than one month's notice, and after due enquiry of which not less than twenty-eight days' notice in writing specifying a time and place at which he may be heard in his defence shall have been given to the Member, to expel from membership of the Association any Member of such Branch whose conduct shall be held by the Council of the Branch to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*c*) A majority of two-thirds of those present and voting at a meeting whether of the Council or of a Branch Council shall be required for the purpose of exercising the powers conferred by the last two preceding clauses.

(*d*) An expelled member shall, notwithstanding that he has ceased to be a member, be liable to pay all sums due from him to the Association, or any Division or Branch thereof, at the time of his expulsion.

(*e*) No member in regard to whom a representation as aforesaid has been made or whose conduct is under investigation, or is the subject of enquiry by the Council, or by a Branch Council, or by any Council or Committee of a Division, or by any Committee authorised in that behalf by any such Council as aforesaid, shall be capable of effectively resigning his membership of the Association until the investigation or enquiry is completed and the decision thereunder is made known. An enquiry or investigation shall, for the purpose of this clause, be deemed to commence at the time when the matter of such investigation or enquiry is first brought officially under the notice of the body authorised by or in pursuance of this Ordinance to make such investigation or enquiry.

SECTION III.

Divisions and Branches.

Formation.

11. Subject in the case of Divisions and Branches not in the United Kingdom to the provisions of the By-laws, it shall rest with the Council from time to time to determine, recognise, and declare by resolution published in the Journal, what bodies of Members shall be Divisions, and what Divisions and groups of Divisions shall be Branches of the Association, and what shall be the local area of each Division, and accordingly the Council shall have full power from time to time to amalgamate, subdivide and modify Divisions and Branches and the local areas thereof. Nevertheless, not less than one calendar month's notice in all cases shall be given (in the manner prescribed by the By-laws) to any existing Division or Branch in whose boundaries or area any change is proposed.

Boundaries.

12. In determining the boundaries or areas of Divisions and Branches, the Council shall have regard to the expressed wishes of the existing local bodies concerned, and to the facilities of communication by railway and otherwise, and the opportunities thus afforded to Members of local bodies for meeting to transact the business thereof, and to the expediency of making such boundaries coincide

with those of Parliamentary constituencies, counties, or other public administrative divisions of the country.

Autonomy.

13. (*a*) Subject to the Charter and the Ordinances and By-laws each Division and each Branch shall be free to govern itself in such manner as it shall think fit, and for that purpose to make from time to time such Rules as it may think fit, and to repeal or alter the same as and when it shall consider it expedient.

(*b*) The Rules so made, and for the time being in force, shall be binding on the Members constituting the Division or Branch in reference to which they are made. Provided that, except in the cases specified in the By-laws, such Rules shall be submitted for approval to the Council and shall not come into operation unless and until they are approved by the Council.

SECTION IV.

Representative Body.

Composition.

14. The Representative Body shall be composed of the Representatives elected by the Divisions in the manner prescribed by the By-laws and of the members of the Council for the time being in office or elected to take office. No Member of the Association who is not a Member of the Representative Body, shall be entitled to take part in any Representative Meeting.

Resolutions.

15. Subject as hereinafter provided a Resolution of the Representative Body which affects the funds of the Association, or relates to the Ordinances or By-laws or to the policy of the Association in matters affecting the honour or interests of the medical profession, and is carried by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws, or which relates to any other business within the powers of the Representative Body, and is carried by a simple majority, shall be deemed to be a decision of the Association.

Proviso as to Notice.

16. Provided that no resolution to make any addition to or any amendment, alteration or repeal of any Ordinance or By-law, or to make any new Ordinance or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body either by the Council, or by a Branch, or by a Division, and shall have been published in the Journal, not less than two months before the Annual Representative Meeting or one month before the Special Representative Meeting at which such resolution is passed.

Proviso as to Referendum.

17. Provided also that in respect of every resolution of the Representative Body the following provisions shall have effect:—

(*a*) Within three months after the date on which the resolution was passed the Council shall hold a meeting for the purpose of considering the resolution. Such meeting may be convened by a notice given either before or after or during the progress of the Representative Meeting at which the resolution was passed.

(*b*) The Council at their said meeting may either approve the resolution or determine on a Referendum and they shall determine on a Referendum if in their opinion the resolution does not truly represent the wishes of the Association.

(*c*) If the Council at their said meeting determine on a Referendum then an officer of the Association to whom such duty shall be assigned by the Council shall as soon as may be after the said meeting, but within eight weeks from the date thereof, send by post to the Secretary of each Division of the Association a requisition requiring him within four weeks to convene a meeting of the members of his Division (hereinafter called "the Division Meeting") for the purpose of considering the resolution and shall with such requisition transmit such observations on the subject of the resolution as the Council may direct, and the Secretary of each Division shall immediately after the holding of the Division meeting (if any) certify in writing to the Council the number of the votes given at the Division meeting for and against the resolution.

(*d*) If the aggregate number of votes given for the resolution at all the Division meetings shall exceed the aggregate number of votes given against the resolution at all the Division meetings or if no vote shall be given at any Division meeting against the resolution the same shall be deemed to have been approved on a Referendum. Provided that for the purpose of this provision no votes shall be reckoned unless the same shall be included in such certificate as aforesaid and such certificate shall have been received at the Head Office of the Association within four months after the date of the said meeting of the Council.

(*e*) If the said meeting of the Council shall not be held within the said period of three months, or if the requisition prescribed by paragraph (*c*) of this Ordinance shall not have been issued within the said period of eight weeks, then the resolution shall come into operation immediately upon the expiration of the said period of three months or of the said period of eight weeks (as the case may be). But save as aforesaid the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

(*f*) The fact of the resolution having been so approved shall be forthwith published in the Journal.

SECTION V.

Annual Scientific Meetings.

18. The Council shall at least once a year arrange Meetings or Conferences, alone or in conjunction with other bodies, which it shall be open to every Member of the Association to attend, for the purpose of receiving addresses or other communications relating to the Medical or allied sciences, and discussing such subjects pertaining thereto as the Council may think proper, and the Council may arrange to hold such Meetings or Conferences in the United Kingdom or abroad.

When held in the United Kingdom, one such Meeting shall be convened at the same place as the Annual Representative Meeting and in connection, but so as not to conflict, therewith. For the more convenient consideration of the matters to be discussed, the Council may provide that they shall be considered in Sectional Meetings, and the Council shall appoint a President and other Officers of such Sections as well as readers of any addresses that may be given.

SECTION VI.

COUNCIL.

19. The Council shall be composed of the President of the Association, the President Elect, the Past President, the Chairman of Representative Meetings, the Chairman of Council, the Past Chairman of Council, and Treasurer *ex officio* and of Members elected by the bodies, and in the manner prescribed in that behalf by the By-laws.

SECTION VII.

OFFICERS.

20. There shall be the following executive officers of the Association, namely, a President, a President Elect, a Past President, a Chairman of Representative Meetings, a Chairman of Council, and a Treasurer. The Officers aforesaid shall hold office for such term, and shall have and enjoy such duties, powers and privileges as shall be determined from time to time by the By-laws.

21. The Council may from time to time appoint and dismiss such salaried and other officers and servants as it may think fit.

SECTION VIII.

COMMITTEES.

22. Committees may be appointed in such manner and having such powers as may be prescribed by the By-laws, or as the Representative Body or the Council, subject to the provisions of the By-laws, may think proper.

SECTION IX.

EXPENSES.

23. The expenses, as defined in the By-laws, within the United Kingdom of Members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association. Attendance of Representatives of Divisions for this purpose shall be construed to mean attendance at each Session of the Representative Meeting, unless the Council shall be satisfied that good cause existed for absence from any particular Session or Sessions. The expenses, defined as aforesaid, within the United Kingdom of all Members attending Meetings of Council or of Committees and of all Members authorised by the Representative Body or by the Council to attend, and attending, any Conference shall be defrayed in like manner.

The Council shall (subject as hereinbefore provided) determine what shall be considered an attendance for the purpose of this clause.

SECTION X.

Financial and other Reports and Audit.

24. The Council shall annually prepare a Balance Sheet and Financial Statement of the Association for the past year, an Estimate of the probable income and expenditure of the Association for the coming year, and a Report of the general state and proceedings of the Association for the past year to be presented to the Annual Representative Meeting. Such Balance Sheet and Statement shall be audited by a professional Accountant and a copy of the same as audited and also a copy of such Estimate and Report shall be sent to the Secretary of every Branch and Division, and published in the Journal not less than two months before the said Meeting.

25. In addition to the above-mentioned Report, the Council shall have power to present to any Representative Meeting such further report or reports as it may deem advisable, and the same shall be published in the Journal if time permits.

SECTION XI.

By-laws.

26. Save so far as determined by the Charter, or by the Ordinances, the constitution and mode of government of the Association, the rights and obligations of every Member and separate body of Members thereof, the duties, powers, and privileges of all Officers, and of all Councils, Committees and governing [and administrative bodies, both of the Association and of every Division and Branch, shall be such as may from time to time be prescribed and determined by or in accordance with the By-laws, and the By-laws (including the first By-laws) may from time to time be added to, amended, altered, or repealed by the Representative Body, subject to the provisions hereinbefore contained with respect to a resolution of that Body for the purposes aforesaid.

THE SECOND SCHEDULE.

BY-LAWS OF THE BRITISH MEDICAL ASSOCIATION.

SECTION I.

PRELIMINARY.

1.—(1) In these By-laws (where not repugnant to the context) the expression "The Ordinances" means and includes the Ordinances of the British Medical Association contained in the First Schedule to the Royal Charter granted in the year , and incorporating that Association and any amendment of those Ordinances.

(2) Words occurring in these By-laws and also occurring in the Ordinances shall bear the same respective meanings in these By-laws as they bear in the Ordinances.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these By-laws, as it applies for the interpretation of an Act of Parliament.

3. These By-laws shall be construed so as not to conflict with the Charter or the Ordinances.

SECTION II.

MEMBERSHIP.

Application.

4. Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Ordinances and By-laws, and the Rules of the Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

Election by Branches.

5.—(1) In the case of a Branch in the United Kingdom, the mode of election of new members shall be as follows:—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the Association at the Head Office, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its rules prescribe) after the date of the said notice. A Branch may require that each candidate for election shall furnish a certificate signed by two Members (either of the Association, or of the Branch, or of the Division in which he resides, as the Rules of the Branch may prescribe), stating that from personal knowledge they consider him a suitable person for election.

(2) In the case of a Branch not in the United Kingdom the mode of election shall be such as may, with the consent of the Council, be prescribed by the Rules of the Branch.

Election by the Council.

6. Every candidate who does not reside within the area of any Branch shall forward his application to the Association at the Head Office, together with a certificate signed by three Members of the Association stating that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the Association from the Head Office to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

Election of Officers of Services.

7. Notwithstanding anything contained in either of the two last preceding By-laws, officers of the Navy, Army, and Indian Medical Service on the Active List, are eligible for election through the Council or a Branch without any such certificate as therein mentioned.

Honorary Members.

8. The election of Honorary Members shall be by the Representative Body, on the recommendation of the Council. Honorary Members shall have none of the liabilities of Members as regards subscriptions, and shall not be entitled to any vote, but shall have such privileges as may be conferred upon them by resolution of the Representative Body. Every Honorary Member shall cease to be such Member upon a resolution of the Council to that effect passed by a majority of not less than two-thirds of those present and voting, and confirmed by the Representative Body.

Extraordinary Members—"Associate," "Complimentary."

9. Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect as an Associate Member any Ordinary Member of any other Division or Branch and may elect as a Complimentary Member any qualified Medical Practitioner or person distinguished in Science resident within the area of the Division or Branch, but not eligible for ordinary membership of the Association. Divisions or Branches may by their local Rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council.

Annual List of Members.

10. In the month of May in each year a List of Members of the Association shall be prepared and published stating the names and addresses of the Ordinary Members of each Division and Branch as shown by the Register (to be kept by the Association at the Head Office) of Members of the Association on April 30th of that year, and those named in the said List as Members of any Division or Branch and no others shall be deemed to be the Ordinary Members of such Division and Branch at the date of the publication of such list for all the purposes of the Ordinances and the By-laws. Such list is hereinafter referred to as the "Annual List."

SECTION III.

Subscriptions.

Amount.

11. Except in the case of Members elected on or after the first of July in any year, the subscription to the Association shall be twenty-five shillings. A Member admitted on or after the first of July in any year shall pay half the current subscription for that year.

To whom Paid.

12. Subscriptions shall be paid by all Members to the Treasurer or to such persons (if any) as the Treasurer may authorise to receive subscriptions on his behalf of which authorisation notice shall be given to all Members concerned.

Arrears of Subscription, Cessation of Membership.

13.—(1) Any Member whose subscription shall not have been paid on or before the 31st December of the current year shall, without prejudice to his liability to the Association, be suspended from all privileges of membership, and at the end of the succeeding year, if the arrears be still unpaid, he shall, *ipso facto*, cease to be a Member.

(2) No Member shall (except in case of his expulsion, or of his ceasing to be a Member under the provisions of Ordinance 9 (*c*) or under the previous provision of this By-law) cease to be a Member without having given one month's previous notice, in writing, of his intention in that behalf to the Association at the Head Office, and having paid all arrears of subscription (if any) due from him.

Special Subscription to Divisions and Branches.

14. It shall be competent for any Division or Branch offering special privileges to its Members to require a special subscription from those Members who desire to avail themselves of such special privileges, and it shall likewise be competent for any Division or Branch to charge such special subscription as it may think proper to its Extraordinary Members; but no Ordinary Member of any Division or Branch in the United Kingdom shall be called upon to pay any further subscription than that paid to the Association as a condition of enjoying any ordinary privilege of membership of such Division or Branch.

Special Subscriptions to Branches not in the United Kingdom.

15. (1) It shall also be competent for any Branch not in the United Kingdom by Rule (approved as hereinafter mentioned) to require each member of such Branch to pay (in addition to his Subscription to the Association and to any such special subscription) an annual subscription of such amount as may be deemed by such Branch to be necessary for defraying expenses occasioned by the special circumstances of such Branch, and not capable of being defrayed out of any grant from the funds of the Association made in pursuance of the By-laws.

(2) No such Rule shall have effect unless and until it shall have been approved by the Branch and by the Council in accordance with the following provisions.

(3) Approval by the Branch may be given either (*a*) by a majority of not less than three-fourths of the Members of the Branch, voting by means of voting papers sent to all such Members (in such manner as the Rules of the Branch may prescribe) not less than two months

before the result of such voting is ascertained, or (*b*) by a majority of not less than three-fourths of the Members present and voting at a General Meeting of the Branch specially convened to consider the proposed Rule, of which Meeting not less than 21 days' notice shall have been given to all the Members of the Branch.

(4) In the event of such Rule being approved at a General Meeting of the Branch under paragraph (3) (*b*) hereof, a copy of such Rule, together with a copy of this By-law, shall be sent to every Member of the Branch, and the Secretary or other responsible officer of the Branch shall certify to the Council that such copies have been so sent, and such Rule shall not be approved by the Council (*a*) until the expiration of six months from the date of such Certificate or (*b*) if the Council shall, within the said period of six months, have received a representation in writing purporting to be signed by not less than one-eighth of the total number of Members of the Branch (as appearing in the annual list for the time being in force), praying that the said Rule be not approved.

SECTION IV.

Divisions and Branches.

Local Management: Branches.

16. The management of the affairs of each Branch shall be vested in a Branch Council, composed of the following members:—

(*a*) Those members of the Council who are elected by the Group of Branches to which the Branch belongs.

(*b*) The members elected to represent on the Representative Body the Divisions comprised in the Branch.

(*c*) Such officers of the Branch as the Branch shall declare to be members *ex-officio* of the Branch Council.

(*d*) In the case of a Branch comprising more Divisions than one, members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the membership of such Division.

Branches not in the United Kingdom: Special Powers.

17.—(1) A Branch not in the United Kingdom shall have power, from time to time, to adopt and use, at the expense of its own Members, and for their benefit, or for the benefit of the local profession, any means authorised by the Charter for the attainment of any of the objects of the Association, notwithstanding that such means shall not have been adopted, or shall not for the time being be used, by the Association generally, but without power to impose any liability upon, or to pledge the credit of, the Association in connection with any act, matter, or thing done in pursuance of, or arising out of such adoption or user. Any such adoption shall forthwith be notified to the Council by the Secretary of the Branch.

(2) A Branch not in the United Kingdom shall have power to adopt without the approval of the Council, rules dealing with all or any of the following matters, which rules shall be binding upon the Members of the Branches to which they relate:—

(i.) The number and area of the Divisions of the Branch.

(ii.) The number, duties, and designation of office bearers of the Branch, provided that the Branch shall at all times have an Honorary Secretary, who shall be the official medium of communication with the Association and with other Branches and Divisions.

(iii.) The holding of Meetings of the Branch and the business to be considered thereat, but so as not to conflict with the Regulations of the Association, as to the autonomy of Divisions.

(iv.) The eligibility of practitioners not registered in the United Kingdom for election by the Branch as Members of the Association.

(v.) The privileges of ordinary membership of the Branch, other than the right to attend Meetings convened for the consideration of Association business.

(vi.) Any other matter as to which the Council may, from time to time, authorise the Branches, not in the United Kingdom, to make Rules without the approval of the Council.

Local Management: Divisions.

18. The management of the affairs of each Division shall be vested in an Executive Committee composed of the following members:—

(*a*) The member representing the Division on the Representative Body;

(*b*) The member or members representing the Division on the Branch Council;

(*c*) Such other members elected by the Division as the Division may determine.

Divisions not in the United Kingdom: Special Powers.

19. A Division not in the United Kingdom shall have power to adopt, without the approval of the Council, Rules dealing with all or any of the following matters, which Rules shall be binding upon the Members of the Division to which they relate:—

(i.) The number, duties, and designation of office bearers of the Division, provided that the Division shall at all times have an Honorary Secretary who shall be the official medium of communication with the Association, and with other Divisions and Branches.

(ii.) The holding of Meetings of the Division and the business to be considered thereat, but so as not to conflict with the Regulations of the Association as to the holding of Meetings of constituencies for the election of, and, if necessary, for the instruction of, Representatives, and for considering the Agenda of Representative Meetings, and for considering resolutions of the Representative Body in cases in which the Council has determined on a Referendum.

(iii.) Any other matter as to which the Council may from time to time authorise the Divisions not in the United Kingdom to make Rules without the approval of the Council.

Grants to Branches: Ordinary.

20.—(1) The Treasurer of the Association shall annually pay, or allow out of the funds of the Association, to the Treasurer of each Branch such sum, not exceeding four shillings, as the Council shall order to be paid, for each Member of the said Branch who has paid to the Association the full current annual subscription for that year, and

such sum, not exceeding two shillings, as the Council shall order to be paid, for each Member elected after the 1st July, who has paid to the Association half the current annual subscription.

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies and within the limits of the objects of the Association as defined in the Charter.

(3) For the purposes of this By-law, those named in the Annual List for the time being in force, as Members of any Branch, shall be deemed to be Members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half-year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for that year.

Supplementary Grants.

21. In addition to the grants made in pursuance of the last preceding By-law, the Council, on the application of any Division or Branch, shall have power to make a supplementary grant of such amount as the Council may deem proper. Every application by a Division, not itself a Branch, shall be forwarded through the Branch Council, whose duty it shall be to transmit the same to the Council, with such comment (if any), as the Branch Council may deem expedient.

22. All applications for supplementary grants shall be referred by the Council to the Organisation Committee for report thereon, and, in considering the same, the said Committee and Council shall have regard to the evidence of work done by or through the agency of such Division or Branch for the Association or the medical profession.

Application of Grants.

23. Out of the moneys received by way of grant from the Association as aforesaid each Branch shall (so far as possible) defray all its expenses, and shall also pay to each Division of the Branch such sum as the Branch Council may consider necessary to enable the Division to defray its expenses.

Annual Reports.

24. Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council not later than March 15th in every year, a report of its proceedings during the previous year, a statement of its numbers and a financial statement in such form as the Council may from time to time prescribe.

SECTION V.

Representative Body.

Formation of Constituencies.

25.—(1) Representatives of Divisions shall be elected by Constituencies formed as follows, each such Constituency being entitled to elect one Representative.

(2) Any Division having not less than fifty members may form one Constituency, and except as hereinafter provided every Division having less than fifty members shall be grouped by the Council with another Division, or with other Divisions, to form a Constituency having not less than fifty members.

(3) Provided that the Council shall have power to give separate representation to Divisions having fewer than fifty members in those cases in which it appears to the Council that special difficulties exist as to the holding of joint meetings with neighbouring Divisions.

(4) In no case shall the total number of Constituencies formed throughout the Association exceed 300.

(5) Subject as aforesaid the Constituencies shall be formed and may be from time to time altered by the Council, and the Council shall publish lists of the Constituencies as and when they may think expedient.

Election of Representatives.

26.—(1) The Representative shall be elected, not more than nine months nor less than four weeks, before the Annual Representative Meeting at which he takes office, by a General Meeting, or by Voting Papers sent to each Member, of the Constituency, as the said Constituency may decide.

(2) The said meeting shall be convened (or where the election is by voting papers, the voting papers shall be despatched) by the Secretary of the Division forming the constituency, or in the case of a constituency comprising more Divisions than one, by the Secretary of one of those Divisions to be chosen by the Secretaries of those Divisions, and if they cannot agree, by the Council.

(3) Where the election is by voting papers, a Meeting of the Members of the constituency (convened as aforesaid) shall be held after the election, and not less than 21 days before the date of the Annual Representative Meeting, for the purpose of considering the Agenda of that Representative Meeting and instructing the Representative thereon, and if such Meeting of the Members of the constituency shall not be held, the Representative of the Constituency shall not be entitled to attend the Representative Meeting.

(4) The person acting under Clause (2) of this By-law shall, not less than fourteen days before the Annual Representative Meeting, give notice to the Association at the Head Office of the name and address and mode of election of the Representative elected by the constituency, and if the election was by voting papers, shall submit satisfactory evidence as to the holding of the subsequent Meeting of the Members of the constituency, and the Chairman of Representative Meetings, or any person authorised by him in that behalf, shall, on being satisfied as to the matters aforesaid, cause a ticket of admission to the Meeting to be issued to such Representative.

Term of Office.

27. The Representative of a constituency shall come into office at the commencement of the Annual Representative Meeting next

succeeding the date of his election, and shall continue in office until the commencement of the Annual Representative Meeting in the following year, and shall be re-eligible.

Substitutes for Representatives.

28. In the event of a Representative of any constituency being unable or unwilling to attend a Representative Meeting, the said constituency shall have power to select a Representative (not being the Representative, whether original or substituted, of any other constituency), to act at the said Meeting in his stead, and such selection may be made by the constituency in General Meeting or by such Officer or Member of the Division or Divisions composing the constituency as may have been authorised by the Rules of the Division or Divisions or by a Resolution of the constituency to make such selection.

Convening of Annual Representative Meetings.

29. The Annual Representative Meeting shall be convened in every year by the Council, and shall be held at such time and place as shall have been prescribed by the Association in the previous Annual Representative Meeting, and if no time or place shall have been so prescribed, the same shall be determined by the Council. All persons who have been elected to take office as Members of Council at the close of an Annual Representative Meeting shall be entitled to take part in such Meeting.

Special Representative Meetings.

30.—(1) Representative Meetings, other than the Annual Representative Meeting, shall be styled Special Representative Meetings, and shall be convened at any time by the Chairman of Representative Meetings on the requisition of the Council or on the requisition of not less than seven Constituencies.

(2) At least 14 days' notice of such Meeting shall be given in the Journal, and such notice shall indicate the object for which such meeting is convened.

(3) No business shall be dealt with by a Special Representative Meeting other than that for which it is specifically convened.

Business of Annual Representative Meeting.

31. The business of the Annual Representative Meeting shall be to elect a Representative of a Division as the Chairman of Representative Meetings, and also a Representative of a Division as Deputy-Chairman; to elect a President of the Association; to elect twelve Members of the Council, and such other Officers and such Members of Committees as by the Ordinances or By-laws may be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance

Sheet presented by the Council; to appoint an Auditor or Auditors (who shall be a professional Accountant or professional Accountants) and fix his or their remuneration; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting and Reports of Branches and motions relating to the adoption of such reports in whole or in part; to make new Ordinances or By-laws and alter and repeal existing Ordinances or By-laws and to consider any Resolution relating to the honour and interests of the Medical Profession or of the Association which shall have been adopted by any Division or Branch, provided that any such Resolution proposing material alteration of the Constitution or policy of the Association shall have been submitted through the Journal for the consideration of all the Divisions not less than three months previously.

Chairman.

32. At every Representative Meeting the Chairman of Representative Meetings, when present, and in his absence the Deputy Chairman of Representative Meetings, when present, shall preside. In the absence of both the said Officers the Meeting shall appoint a Chairman from its own number.

Voting.

33.—(1) In any Representative Meeting only Representatives of Divisions and Members of Council representing the Naval, Army, and Indian Medical Services, shall be entitled to vote.

(2) Voting shall be by show of hands, unless before such vote is taken twenty Representatives present request that the vote shall be taken by card, in which case every Representative of a Division shall record as many votes as there are Members in the constituency which he represents according to the annual list then in force. Members of Council representing the Naval, Army, and Indian Medical Services shall not take part in a vote taken by card.

(3) In voting upon any matter upon which a constituency has passed a Resolution within the three months immediately preceding such Meeting, the Representative of that constituency shall be under obligation to vote in accordance with such resolution.

(4) The Chairman shall in the case of an equality of votes have a second or casting vote.

Quorum.

34. No business shall be transacted at any Representative Meeting unless there be present at least one-half of the number of Representatives appointed to attend such Meeting.

Adjournment.

35. Any Representative Meeting may be adjourned from day to day until the completion of its business.

Minutes.

36. The Minutes of every Representative Meeting shall, after confirmation, be transmitted by the Chairman thereof to the Council for presentation to its next meeting.

SECTION VI.

Council.

Commencement of Office.

37. The Council shall come into office at the close of the Annual Representative Meeting of each year.

Composition.

38. The Council shall be composed of the *ex-officio* Members mentioned in the ordinances, and of Members duly elected by the following bodies, namely :—

(*a*) By the Branches of the Association, in the United Kingdom which shall be grouped for the purpose of electing 24 members of the Council ;

(*b*) By the Branches of the Association not in the United Kingdom which shall be grouped for the purpose of electing members of the Council not exceeding 7 in number ;

(*c*) By the Representative Body, which shall elect annually 12 members of the Council from lists of candidates nominated by (i) Branch Councils, (ii) by Divisions, (iii) by the Scottish Committee, (iv) by the Irish Committee, or (v) by at least 10 members resident in the area of the group of Branches to which the candidate nominated belongs ; and

(*d*) By the Council itself which shall have power to add to its numbers at any of its meetings all or any one or more of the following, namely :—One Medical Officer on the active or retired list of each of the following Services :—The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

Grouping of Branches.

39. The grouping of the Branches for the purpose of the election of Members of the Council shall be in accordance with the Grouping Scheme set forth in the First Schedule to these By-laws.

Mode of Election by Groups in the United Kingdom.

40.—(1) The election of Members of Council by the Groups of Branches in the United Kingdom shall be by means of voting papers sent by post by the Association from the Head Office to each member of every Branch comprised in the group.

(2) The said voting papers shall contain the names of those candidates who have been nominated, either (*a*) by a Division, or (*b*) in writing, signed by not less than three Members of any such Branch, and sent to the Association at the Head Office on or before an appointed day of which not less than fourteen days' notice has been given in the *Journal*.

(3) The said voting papers shall contain such other particulars (if any) and shall be sent to the Association at the Head Office within such time as the Council may from time to time prescribe by notice given as aforesaid.

(4) The expenses of the said election shall be borne by the Association.

Mode of Election by Groups not in the United Kingdom.

41.—(1) The election of Members of Council by the Groups of Branches not in the United Kingdom shall be by voting papers sent by post by the Secretary of each Branch comprised in the Group to each member of that Branch.

(2) The said voting papers shall contain the names of those candidates who have been nominated either (*a*) by a Division, or (*b*) in writing signed by not less than three members of any such Branch on or before an appointed day of which such notice shall have been given in the *Journal* as the Rules of the Branch may prescribe.

(3) The said voting papers shall contain such other particulars (if any) and shall be sent to such one of the said Honorary Secretaries (hereinafter called "the Returning Officer") within such time as the Council may from time to time prescribe by notice given as aforesaid.

(4) It shall be the duty of the Returning Officer to count the votes given for each candidate and to make a return of the result of the election to the Association at the Head Office.

(5) The expenses incurred by each Branch in respect of the election shall be defrayed out of the funds of the Association.

Mode of Election by Representative Body.

42. The Members of Council elected by the Representative Body shall (so far as the nominations of candidates will allow) be selected from the Members of Branches in the United Kingdom in such manner as to preserve the proportion in which such Branches are represented on the Council according to the Grouping Scheme for the time being in force.

Term of Office of Members of Council elected by Branches.

43.—(1) Each Member of Council elected by a group of Branches in the United Kingdom shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as the representative on the Council of one and the same Branch or group for six years successively, in which case he shall for one year be incapable of being elected as such representative.

(2) Each Member of Council elected by a Branch or group not in the United Kingdom, or elected by the Council to represent the Royal Navy Medical Service, the Army Medical Service, or the Indian Medical Service, shall hold office for such period, not exceeding three years, as the electing body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as the Representative on the Council of one and the same group exceed six years.

Term of Office of Members elected by the Representative Body.

44. Each Member of Council elected by the Representative Body shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as a Member of Council elected by the Representative Body for six years successively, in which case he shall for one year be incapable of being so elected.

Qualification.

45.—(1) No person shall be eligible for election as a Member of Council by a group of Branches in the United Kingdom unless at the time of his election he shall be a Member of a Branch comprised in such group.

(2) The eligibility for election as a Member of Council by a group of Branches not in the United Kingdom, shall be such as may be agreed upon by the Branches forming the said group, and if no such agreement shall be made, the regulations as to eligibility shall be the same as for the groups in the United Kingdom.

Powers of incomplete Council.

46. In default of and until election of a Member or Members by any body authorised to elect, or so far as such election shall not be complete, all the powers conferred on the Council shall belong to and be exercised by the *ex officio* Members thereof alone and such other Members (if any) of the Council as may have been duly elected by bodies authorised to elect.

Casual Vacancies.

47. Any casual vacancy occurring in the Council not less than four months before the Annual Representative Meeting amongst the Members of Council elected by the Representative Meeting shall be filled up by the Chairman of Representative Meetings. Any other vacancy which may so occur shall be filled up by the body which appointed the Member of Council whose place shall have so become vacant, and the election to fill such last-mentioned vacancy shall be conducted in the same manner as the annual election. Any person so chosen shall retain his office so long only as the Member in whose office such casual vacancy shall have occurred would have retained the same if such vacancy had not occurred. The provisions of this clause shall apply as well to the members forming the first Council of the Association in pursuance of Clause 11 of the Charter as to members subsequently taking office.

Proceedings.

48. The Council shall meet not less than four times a year, and shall be presided over by the Chairman of the Council, or in his absence by a Chairman to be appointed by the Meeting from its own number.

49. Meetings of the Council shall be held at such time and place, and upon such notice as the Council shall appoint.

50. No business shall be transacted at any Meeting of the Council unless at least 15 Members be present.

51. The Chairman of Council may, if he think fit, and shall, upon receiving a requisition signed by not less than fifteen Members of the Council, and specifying the business for which a Special Meeting is required, call together a Special Meeting thereof. No business shall be transacted at a Special Meeting other than that for which such Meeting is called.

SECTION VII.

Journal.

52. The *Journal* shall be conducted by a paid Editor, who shall be responsible for all that appears therein except such matters as are inserted therein in accordance with the Ordinances or By-laws, or by the direction of the Council.

SECTION VIII.

OFFICERS.

53. The President of the Association shall be elected annually at the Annual Representative Meeting and shall enter upon the duties of his office at the next Annual Representative Meeting, and until then shall bear the title of President-Elect. At the expiration of his year of office as President he shall be designated Past President, and shall hold office as such for one year.

54. The Chairman of Representative Meetings shall be elected annually at the Annual Representative Meeting. He shall enter upon the duties of his office at the close of the Meeting, and shall not during his term of office act as the Representative of any constituency. Any constituency of which at the time of his election he was a Representative shall be entitled to elect another in his stead.

55. The Chairman of Council shall be elected by the Council from its own number, and shall hold office for such term and discharge such duties as shall be determined by the Council. During his term of office and for one year thereafter he shall be a member of the Council *ex officio*, and for that period any group of Branches which at the time of his election he represented on the Council shall be entitled to elect another member of Council in his stead.

56. The Treasurer shall be elected at an Annual Representative Meeting and shall hold office for three years. He shall receive all moneys payable to the Association, and discharge all accounts which have been ordered by the Council to be paid.

57.—(1) In the event of the death during his term of office, or the resignation, of the President, the President-Elect, the Chairman of Representative Meetings, or the Treasurer, the vacancy thus created shall be filled, until the next Annual Representative Meeting, in the manner, following, namely:—

(*a*) In the case of the President, the Past-President shall discharge the duties of the office.

(*b*) In the case of the President-Elect, the Council shall appoint a President-Elect in his stead.

(*c*) In the case of the Chairman of Representative Meetings, the Deputy Chairman shall discharge the duties of the office.

(*d*) In the case of the Treasurer, the Council shall appoint a Treasurer in his stead.

(2) In the event of a vacancy occurring in any of the executive offices above mentioned through circumstances not provided for in this By-law, it shall rest with the Council to make such appointment or other provision as it may deem expedient for the discharge of the duties of the said office until the next Annual Representative Meeting.

58. The Council shall have power to nominate for election at the Annual Representative Meeting those members who by their services to the Association are in the opinion of the Council worthy of election as Vice-Presidents. No special privilege shall attach to the office of Vice-President and such office shall be held for life unless terminated

by resignation, or by a vote of the Association in Representative Meeting assembled on a motion brought forward by the Council.

59. All salaried officers shall be appointed and may be dismissed by the Council and shall hold office for such period and perform such duties and receive such remuneration as the Council may from time to time determine.

SECTION IX.

Committees.

60. The Representative Body and the Council shall respectively have power to appoint Committees, with such powers as may to them seem necessary or convenient, and to fix the quorum thereof, and lay down Rules for regulating the proceedings of such Committees.

61. The President of the Association, the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer shall be *ex-officio* Members of all Committees.

62. Without prejudice to the foregoing By-laws, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Second Schedule to these By-laws.

Chairman.

63. Each Standing Committee shall appoint from its own number a Member of Council as Chairman.

64. Every Standing Committee shall have power to appoint Sub-Committees for the purposes of any of their powers or duties and any such Sub-committee may include persons who are not members of the Association.

SECTION X.

Expenses.

65. The expenses of any person, which in pursuance of the Ordinances are to be defrayed out of the general funds of the Association, are the first-class travelling expenses within the United Kingdom of that person.

SECTION XI.

Seal.

66. The Council shall provide for the safe custody of the seal of the Association, and the seal shall not be used except in pursuance of a resolution of the Council and in the presence of at least one member of the Council and of a Secretary of the Association who shall sign every instrument to which the seal is affixed.

SECTION XII.

General.

Notices.

67.—(1) A notice may be served by the Association upon any member either personally or by sending it through the post, in a prepaid letter, addressed to such member at his last known address or by publication of such notice in the *Journal* and sending a copy of the *Journal* containing such notice to such member, prepaid and addressed as above mentioned.

(2) A notice may be served on any Division or Branch, by serving the same as aforesaid on the Secretary of such Division or Branch, and if there be none, then on any two members of such Division or Branch.

(3) Any notice, if served by post, shall be deemed to have been served on the day following that on which the letter, or a copy of the *Journal* containing the same is posted, and in proving such service it shall be sufficient to prove that the letter, or a copy of the *Journal* containing the notice, was properly addressed and put into the Post Office.

68. Where by these By-laws any act or thing is required to be done by the Association the same may be done by such officer of the Association as the Council may appoint for the purpose.

Validity of Proceedings.

69. The proceedings of the Representative Body or of the Council or of any Branch Council or Committee or other Body acting under the Charter or the Ordinances or the By-laws shall not be invalidated by any accidental omission to give any notice required by the By-laws or by any vacancy among their members or by any defect in the election or qualification of any of their members.

THE FIRST SCHEDULE TO THE BY-LAWS.

Grouping Scheme (for the Election of Members of Council by Groups of Branches).

PART I.—BRANCHES IN THE UNITED KINGDOM.

Names of Groups.	Branches comprised in Group.	No. of Members of Council to be elected by Group.
	England and Wales.	
Northern Group	North of England North Lancashire and South Westmorland Yorkshire Lancashire and Cheshire	4
Midland Group	East York and North Lincoln Midland Cambridge and Huntingdon East Anglian South Midland Birmingham Staffordshire North Wales Shropshire and Mid Wales South Wales and Monmouthshire	4
Metropolitan Group	Metropolitan Counties Branch South Eastern Branch Bromley Division Croydon Division Norwood Division	4
Southern and South Western Group	Bath and Bristol Gloucester West Somerset Worcester and Hereford Dorset and West Hants South Western Oxford and Reading Southern South Eastern (excluding Bromley, Croydon and Norwood Divisions)	4
	Scotland.	
	Aberdeen Border Counties Dundee Edinburgh Fife Glasgow and West of Scotland Northern Counties of Scotland Perth Stirling	4
	Ireland.	
	Connaught Leinster Munster South Eastern, Ireland Ulster	4

PART II.—BRANCHES NOT IN THE UNITED KINGDOM.

Names of Groups.	Branches comprised in Group.	No. of Members of Council to be elected by Group.
Australia and New Zealand	Adelaide and South Australia Western Australia Sydney and New South Wales Melbourne and Victoria Brisbane and Queensland New Zealand	1
Canada	Ottawa Quebec Montreal Halifax and Novia Scotia Bermuda St. John, New Brunswick Saskatchewan Toronto Manitoba British Columbia	1
West Indies	Barbadoes Jamaica Trinidad Leeward Islands British Guiana	1
India	Bombay Punjab Bengal (no Branch) Burmah South India and Madras Colombo and Ceylon	1
The Far East	Malaya Hong Kong and China	1
South Africa	Cape of Good Hope (Western) Cape of Good Hope (Eastern) Griqualand West (including Orange River Colony) Transvaal Natal	1
Mediterranean and Continental	Egypt Malta Gibraltar Members on Continent of Europe (no Branches)	1

THE SECOND SCHEDULE TO THE BY-LAWS.

STANDING COMMITTEES.

Name of Committee.	Additional *ex officio* Members.	Appointed Members.			Total.	Duties, Powers, &c.
		Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.		
Finance	The Chairman of each of the following Committees :— Organization, Journal, Science, Medico-Political, and Premises.	4	4	..	13	To certify the accounts prior to their presentation to the Council; to advise the Council on the administration of any funds held in trust by the Association, and of the Superannuation Fund. When necessary, the appointment of administrators for any such funds; to report to the Council on the financial bearings of any proposals involving special expenditure; to supervise and report to the Council on the general working and organization of the Central Office.
Organization ..	..	3	3	..	6 (with power to add to its number as mentioned in the last column of this Schedule.)	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions as to the boundaries or area, the grouping for electoral purposes and the Rules (other than those relating to ethical matters) of Divisions and Branches and combinations thereof, and the ordinary and supplementary grants to Branches and Divisions, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organization. This Committee shall have power to add to its number for special purposes a limited number of Members specially qualified to assist in its work.
Journal	..	3	3	..	6	To consider and report to the Council upon any matters connected with the Journal or other publications of the Association.
Premises .. .	..	3	3	..	6	To consider and report to the Council upon the management of the land and house property of the Association.
Science	..	..	10	..	10 (with power to add to its number as mentioned in the last	To advise, and when so directed, act for the Council, in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including

STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members.				Total.	Duties, Powers, &c.
	Additional *ex officio* Members.	Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.		
Science—*contd.*..	..	..	..	..	column of this Schedule.)	the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association, or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
Ethical	..	6	6	..	12	To advise the Council on questions connected with Rules of Divisions and Branches relating to professional conduct, to investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council on the representation of Divisions or Branches pursuant to Ordinance 10, and generally to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between Members of the Association or Members of the Profession or at the discretion of the Committee to refer any question arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation or for adjudication subject to an appeal to the Committee; and so that any Member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Committee and that the decision of the Committee subject to such appeal, and the decision of the Council upon any such appeal shall be binding upon the parties and upon all Members of the Association.
Medico-Political..	..	6	6	..	12	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.

Standing Committees—*continued.*

Name of Committee.	Additional *ex officio* Members.	Appointed Members.			Total.	Duties, Powers, &c.
		Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.		
Public Health ..	..	3	3	..	6	To consider questions relating to Public Health and the Poor Law Medical Service.
Hospitals.. ..	..	6	6	..	12	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities.
Naval and Military	The Representatives on the Council of the Royal Navy Medical Service, the Army Medical Service and the Indian Medical Service	2	2	..	..	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Army Medical Corps (Territorial).
Colonial	All the members of the Council who represent Colonial Branches.	2	2	..	..	To consider questions specially relating to the Branches not in the United Kingdom.
Scottish	The Secretary of each Scottish Branch. All the members of the Council who represent Scottish Branches.	..	..	..	..	To consider all matters specially concerning Scotland. It shall have an Honorary Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
Irish	The Secretary of each Irish Branch. All the members of the Council who represent Irish Branches.	..	..	1 member or, if the Secretary of the Branch is a member of the Council, 2 members—any such member appointed by the Leinster Branch or by the Ulster Branch to be a practitioner not resident in Dublin or Belfast.	..	To consider all matters specially concerning Ireland. It shall have an Honorary Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct. This Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

LANCASHIRE AND CHESHIRE BRANCH:

SOUTHPORT DIVISION.

THE annual meeting of this Division was held at the Temperance Institute, Southport, on May 13th, Dr. G. R. ANDERSON in the chair. There were present: Drs. Ashworth, Baildon, Mewburn Brown, Colin Campbell, Woolmer-Davies, Horn, Littler, Popert, Reid, Russell, Schofield, Sykes, Walker, and Harris.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Report of Executive Committee.—The annual report of the Executive Committee was read. In consequence of a suggestion from the Organization Committee of the Association, the SECRETARY moved, on behalf of the Executive Committee of the Division:

> That the titles "President" and "Vice-President" be altered to "Chairman" and "Vice-Chairman" respectively.

This resolution was carried unanimously.

Election of Officers.—The following officers were elected: *Chairman*, Stanley A. Gill, M.D.; *Vice-Chairman*, W. Barwise, Esq.; *Honorary Secretary and Treasurer*, Robert Harris, M.B.; *Representative for Representative Meeting*, Stanley A. Gill, M.D.; *Deputy*, Robert Harris, M.B.; *Representative on Branch Council*, Percy Ashworth, M.D.; *Executive Committee*, G. R. Anderson, Esq., J. C. Russel, M.D., J. H. Sykes, M.D., and C. R. Schofield, M.B.

Report of Representative on Branch Council.—The Representative on the Branch Council reported business done by the Council in respect to its issue of reports of Divisions and its action respecting medical fees at coroners' inquests.

Members and Divisions.—Mr. COLIN CAMPBELL moved, and Dr. REID seconded:

> (1) That, inasmuch as all the members of the British Medical Association, who are also members of Divisions, contribute equally to the funds of the Association, free intercourse between the Divisions should not be discouraged.
>
> (2) Therefore, that, on introduction by a member of any Division, a member or members of any other Division or Divisions has (or should have) the right to take part in, or initiate, any subject or question concerning the conduct or government of the Association, but without the privilege of voting thereon.

Dr. BAILDON moved as an amendment, seconded by Dr. SYKES:

> That, after the word discouraged, the following words should be inserted: "Except for purposes of canvassing or advocating special views."

Three voted for the amendment, 9 against. Dr. RUSSEL moved an amendment empowering the Executive Committee to invite any member of the medical profession to attend meetings of the Division, but withdrew it in favour of a similar amendment moved by Dr. HARRIS, seconded by Dr. MEWBURN BROWN:

> That this meeting approves of the occasional attendance at meetings of the Division of any member of the profession not a member of the Division, but only on the invitation or with the consent of the Executive Committee.

This amendment was carried by 9 votes to 4, and by the same numbers on being submitted as a substantive resolution. An invitation was read from the Honorary Secretary of the Preston Division to members to attend a complimentary dinner to Dr. Brown of Preston, to take place on May 28th.

Scientific Meeting with Southport Medical Society.—A suggestion made by Dr. BAILDON that the Executive Committee should consider the promotion of a scientific meeting jointly with the Southport Medical Society was accepted.

Doctors and Midwives.—The following note was appended to the notices convening the meeting: The attention of medical practitioners is called by the Executive Committee to the circular letter of the Local Government Board, addressed to boards of guardians, dated July 29th, 1907, a copy of which was sent to all medical practitioners, in which it is pointed out that it is competent for boards of guardians to pay the fee of any medical man called in, on the advice of a midwife, to attend upon a poor person in case of difficulty, and advising the payment of such fee where the guardians are satisfied that the woman is too poor to pay. The Executive Committee advises the members of the Division, if such cases occur in their practice, to make application for payment to the Ormskirk Board of Guardians, and to communicate the result to the secretary of the Division.

WIGAN DIVISION.

THE annual general meeting of this Division was held at Wigan on May 14th.

Confirmation of Minutes.—The minutes of the last general meeting were read and, with slight alteration, confirmed.

Reports.—The Honorary Secretary's report was read and adopted. The report of the representative on the Branch Council was read.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. W. Latham; *Vice-Chairman*, Dr. M. Benson; *Representative on Branch Council*, Dr. M. G. McElligott; *Honorary Secretary*, Dr. A. E. Hodder; *Committee*, Drs. Berry, Blair, Chronnell, Cooke, Monks, Rees, Wolstenholme, F. L. Anglor.

Medical Examination for Life Insurance.—The meeting then discussed the questions relating to insurance submitted by the Medico-Political Committee of the Central Council, and answered questions as follows;

1. The following companies work in this Division and employ members as examiners regularly or occasionally: Royal, Prudential, Britannic, London and Manchester, London, Edinburgh, and Glasgow, Refuge, Pearl, Royal Liver, Wesleyan and General, Pioneer, several Scottish offices and New York Life, and various friendly societies.
2. Yes; for example—Royal pays 10s. 6d. for sums under £500.
3. Many companies pay 10s. 6d. only for a full report if the sum insured is below a certain standard. The practice varies a good deal.
4. Many companies pay less than 10s. 6d., but in such cases do not require a full report. In the Royal a full report is required, but the fee is only 10s. 6d. up to £500.
5. Yes, in cases where the amount assured is under £100.
6. No.
7. No.
8. The form shown in Schedule B. would be suitable, and 10s. 6d. would be adequate remuneration, but would not be obtainable on small policies—for example, £50.
9. Five shillings; but most industrial work is paid at rate of 2s. 6d. or 3s. 6d. per examination, and industrial (speculative) insurance plays a very big part in the district. Companies like Prudential, Pearl, Refuge, Britannic, Wesleyan and General do a large industrial insurance business.

Medical Politics.—The meeting then heard an address on medical politics by Mr. F. C. LARKIN, in which he stated and explained the policy maintained by himself and his colleagues, Messrs. Garstang, Macfie, and Taylor, in candidature for seats on the Central Council. At the conclusion, Mr. Larkin was thanked for his address, and the following resolution was submitted and carried without dissent:

> That this Division approves thoroughly the policy advocated by Messrs. Larkin, Garstang, Macfie and Taylor, and will do all it can to advance that policy by supporting the candidature of those gentlemen at the forthcoming election to the Central Council.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Thursday, May 14th, at 8 30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. PIDCOCK in the chair.

Confirmation of Minutes.—The minutes of the last meeting were taken as read.

Election of Branch Officers.—Dr. Ford Anderson was unanimously nominated for the post of President-elect of the Metropolitan Counties Branch. Mr. H. W. Armit was nominated for one of the posts of Vice-President.

Resolution for Representative Meeting.—The following resolution was passed, after some discussion, by 9 votes to 3. Proposed by Mr. PARSONS and seconded by Dr. JAMES STEWART:

> That the Hampstead Division recommends: "That in the interests of hospitals and their work it is desirable that medical practitioners should nominate representatives for

election to boards of management of hospitals in their respective localities, and that such nominations should be carried out by an organized professional body such as a Division of the British Medical Association."

Paper.—A paper on some new points in urethral and prostatic surgery was read by Dr. J. MACMUNN, and the lecturer showed a number of new and ingenious instruments of his own invention. A discussion followed, and a very hearty vote of thanks was accorded to Dr. MacMunn for his most interesting address.

Hampstead General Hospital.—The HONORARY SECRETARY and Mr. NELSON HARDY reported matters in this connexion which had come up before the Branch Council that afternoon. The HONORARY SECRETARY reported that he had received no official information as to the result of the meeting of the Marylebone Division on April 30th.

The Term "Hospital."—The consideration of this matter was postponed *sine die*.

Medical Examination for Life Assurance.—The consideration of this matter was postponed.

SOUTH-EASTERN BRANCH:

CANTERBURY AND FAVERSHAM DIVISION.

AN extraordinary meeting of this Division was held the Cottage Hospital, Faversham, on Thursday, May 7th Dr. SIDNEY R ALEXANDER presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Next Meeting.—The details of the combined annual meeting, to be held at the County Hotel, Canterbury, on June 18th, was considered. Dr. S. R. Alexander was invited to preside.

Medical Inspection of School Children in Kent.—This subject was fully discussed, and the following resolution, passed unanimously, was ordered to be forwarded to the Kent Education Committee:

> That in the case of rural and urban district authorities the duties of education officer should be dealt with by part-time local medical men appointed according to local circumstances.

The Term "Hospital"—The Division unanimously approved the definition as proposed by the Central Ethical Committee.

Life Insurance Examinations.—The answers to the questions of the Medico-Political Committee were as follows:

1. Complete list impossible.
2. Yes, large number 10s. 6d.
3. Often full.
4. Yes, and short.
5. Yes, for short report.
6. No.
7. No.
8. Half a guinea.
9. Five shillings.

Lynn Thomas and Skyrme Fund Appeal.—The matter was recommended for the individual action of members.

Amendments to the Housing Bill.—It was resolved unanimously to request the members of Parliament representing areas in the Division to support the amendments to the above Bill, which have for their object the abolishing of the practice of electing medical officers of health for limited periods.

SHROPSHIRE AND MID-WALES BRANCH.

THE thirty-second spring meeting was held at the Salop Infirmary on May 12th, at 3 o'clock. The PRESIDENT (Dr Woodward Riley) was in the chair, and thirty-two members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and signed.

Report of Council and Financial Statement.—The Council's report and financial statement for the past year was adopted.

Election of Officers.—On the proposition of Dr. ACKERLEY and seconded by Dr. SPRIGGS, the following members were appointed to the various offices for the session 1908-9: *President*, J. Lytle, M.D.; *Vice-President*, Woodward Riley; *Chairman of the Clinical and Pathological Section*, T. Law Webb, M.D.; *Representative on the Council of the Association*, Ed. Cureton, M.D.; *Representative at the Representative Meeting*, G. W. Sidebotham; *Council*, E. Cureton, M.D., H. W. Gardner, M.D., C. H. Gwynn, M.D., A. Jackson, Geo. Keyworth, M.B., John Lloyd, J. Macarthy, M.D., Harold Macleod, W. H. Packer, M.D., F. K. Pigott, Alan Rigden, M.D., T. Law Webb, M.D.; *Honorary Secretary and Treasurer*, C. G Russ Wood; *Assistant Honorary Secretary*, Reg. Urwick, M.D.

Papers.—Dr. SAUNDBY, of Birmingham, then read an exhaustive paper on cerebral influenza, which will be published. On the proposition of Dr. MACARTHY, seconded by Dr. LYTLE, and supported by the PRESIDENT, a hearty vote of thanks was accorded to Dr. Saundby for his address. Dr. SPRIGGS read a paper on some cases of congenital intestinal obstruction.

Tea.—At the conclusion of the meeting the President entertained the members at tea.

LANCASHIRE AND CHESHIRE BRANCH.

WE are requested to publish the following circular letter addressed to the members of the Lancashire and Cheshire Branch:

CENTRAL COUNCIL ELECTION, 1908.

Dear Sir,—The members of the Branch will shortly be called upon to elect four representatives on the Central Council of the Association, and as candidates we ask for your vote and support.

1. *United Aims.*—We issue this joint address because we all four represent the same policy, the policy of progress, the policy that is attempting to make the British Medical Association into a living and active bond of scientific, social and political union between medical men, which may enable them to offer an organized resistance to all encroachments on their rights, and may raise the position of the profession to one more in harmony with its importance.

2. *The Charter.*—Among the chief means for attaining these ends must be mentioned the Royal Charter. The application for a Charter has been so repeatedly approved by large majorities of successive Representative Meetings that we deprecate any attempts to frustrate or unduly delay it. At the same time we recognize that there is a minority of members whose opinions are deserving of the highest respect, and, though we strongly support the main principles of the Charter, we are prepared to accept any reasonable compromise so that it may go forward without opposition. We cannot, however, support any ill considered or over-rapid expansion of the work of the Association, and shall oppose acting upon any new powers conferred by the Charter until ample opportunity has been given to every member to express his opinion thereon.

3 *The Representative Meeting.*—We are supporters of the Representative Meeting as the supreme legislative body of the Association and the final authority, subject only to a Referendum, on all matters of policy and finance. We are prepared to accept any alteration in the manner of taking the Referendum that will facilitate the obtaining of a plain "Yes" or "No" with the least possible delay from the great body of members.

4. *The Central Council.*—We support the Central Council as the Executive of the Association, and, as such, are prepared even to strengthen its hands, but we cannot support any dual or rival authorities in the Association.

5. *Organization.*—We are strong supporters of the Divisional organization which was initiated to adapt the Association everywhere to local conditions. We believe that where the Divisions have not succeeded, it has been largely owing to the pre-existence of local medical societies, and we should like to offer some greater inducements to such societies to unite with the Association. For obtaining better co-ordination of the Divisions, we regard the Branch organization as most important, and as members of the new Standing Committee of the Branch Council on Organization and Finance, we have taken an active interest in this work of co-ordination. We recognize that the Joint Committees of the Divisions in Liverpool and Manchester are doing good work, but they are hampered by the fact that they have no legal status in the Association; we hope to find a remedy for this and shall always support any suggestions that will further the adaptation of Divisions to local conditions.

6 *Medical Politics.*—Among matters of general medical politics, we advocate vigorous action to obtain amendment of the Midwives Act and the Early Notification of Births Act. We are strongly opposed to all movements

for the medical treatment of school children by inspectors of schools. We regard Hospital Reform and improvements in Contract Practice as two of the most important questions to all practitioners, and shall lose no opportunity of pressing them forward. To procure these ends, our chief aim will be the attainment of closer union between medical men. The interests of every branch of the profession we regard as the interests of the whole, and unity of interests ought to result in unity of action. Only by this can we expect to defeat any attempts by public bodies to exploit the profession. To attain a more complete unity of action than exists at present, we shall do all in our power to make the Association more fully representative of the whole body of the profession.

7. *The "British Medical Journal."*—We recognize that a certain number of members have joined the Association mainly for the sake of the JOURNAL as a scientific magazine, and while we would urge every member to take an active interest in all matters affecting his brother practitioners we can never advocate making the JOURNAL into a mere trade magazine. The scientific part of it must remain paramount. At the same time it must devote due attention to local and general professional affairs and must be maintained as the organ of the whole profession in all matters scientific, social, and medico-political.

Such is our policy, and, if you approve of it, we ask you to return us to the Central Council, so that on essential principles there may be none of that cross-voting which would partially disfranchise the Branch.

8. *Personal.*—We further ask your support on the ground of our personal experience in the work of the Association.

Dr. Garstang has been enthusiastic as a divisional organizer. He has been Secretary of the Altrincham Division since its formation, has been a member of several Representative Meetings, and is an old member of the Branch Council.

Mr Larkin has been Chairman of his Division and a member of the Branch Council for many years. He is now Secretary of the Branch, and a member of the Central Council, and of the Organization Committee and the Parliamentary Sub-committee. He is thoroughly conversant with the work of every part of the Association.

Dr. Macfie has filled the important position of President of the Branch. He has long been a member of the Branch Council and is now Chairman of the Organization and Finance Committee and Chairman of the Bolton Division, which he has represented at the Representative Meeting.

D Taylor has for some years taken an official part in medical politics in the Manchester district He has been Secretary of the Salford Division since its formation and a member of the Branch Council for some years. He has also taken an active share in the formation and working of the Joint Committee of the Manchester and Salford Divisions, through which it is hoped to bring about the unification of the profession in the district.

In conclusion, we ask you to affirm by your votes that our policy, our active interest, and our experience in the work of the Association all combine to fit us to represent you in the Central Council. We would add that we shall always be ready to answer any question you may care to put to us, and we should feel it an honour to be allowed to address your Division.

Yours faithfully,

T. W. H. GARSTANG, M.A., M.R.C.S., D.P.H.,
Edge Mount, Altrincham.

F. C. LARKIN, F.R.C.S.,
54, Rodney Street, Liverpool.

C. MACFIE, M.D.,
240, St. George's Road, Bolton.

J. H. TAYLOR, M.A., M.B., Ch.B.,
299, Eccles New Road, Salford.

May 1st, 1908.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

Association Notices.

PROCEEDINGS OF COUNCIL.

IN the SUPPLEMENT of May 16th, p. 278, under the heading Putney Hospital, it should have appeared that Mr. Cuthbert's amendment related only to paragraph 5, paragraphs 1, 2, 3, and 4 having been accepted by the Council subject to the omission of the last four words of paragraph 1.

EDMUND OWEN,
May 19th, 1908. *Chairman of Council.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of the Division will be held at the Royal United Hospital on Tuesday, May 26th, at 8 p.m. Business: To elect officers; to receive annual report; to consider business of Annual Representative Meeting; to consider matters referred to Divisions (see BRITISH MEDICAL JOURNAL, February 22nd); any other business.—D. LESLIE BEATH, Honorary Secretary.

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Notice is hereby given that nominations for the offices mentioned above must be sent to the undersigned by May 23rd. Each nomination must be signed by three members of the Branch. Two representatives on the Council to be elected.—P. J. KAUFFMANN, Honorary Secretary, 22, Broad Street, Birmingham.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—An ordinary general meeting will be held at the Medical Institute on May 28th, at 4 p.m. Business: To instruct the Representative on matters referred to the Divisions.—The annual meeting will be held at the Medical Institute on June 18th, at 4 p.m. Nominations for offices must reach the Honorary Secretaries on or before May 28th.—A. W. NUTHALL and W. T. LYDALL, Honorary Secretaries, Medical Institute, Birmingham.

BORDER COUNTIES BRANCH.—Notice is hereby given that nominations for the post of Representative on the Central Council of the Association for this Branch and the North Lancashire and South Westmorland Branch jointly must reach the Honorary Secretary not later than June 8th, and must be signed by at least three members of either Branch in accordance with By-law 25.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

BORDER COUNTIES BRANCH: ENGLISH DIVISION.—The annual general meeting of this Division will be held in the County Hotel, Carlisle, on Friday, May 29th, at 3.30 p.m.—NORMAN MACLAREN, Carlisle.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in the Hotel Mont Dore, Bournemouth, on Wednesday, May 27th, at 3.30 p.m., the president, J. Macpherson Lawrie, Esq., M.D., D.L., J.P., in the chair. Agenda:—(1) The minutes of the last meeting. (2) Letters and apologies for non-attendance. (3) The President will vacate the chair and introduce his successor, J. Atkinson Hosker, Esq., M.R.C.S.Eng., J.P., etc. (4) The Honorary Treasurer will present his financial statement for 1907. (5) Reports from the Branch Divisions for 1907. (6) Report of the Branch Council for 1907. (7) Report of the return of a representative of the combined Dorset and West Hants Branch and the West Somerset Branch on the Central Council of the Association. (8) The date and place for the summer meeting. (9) The President will deliver his Presidential address. (10) Dr. Whittingdale will show (*a*) a specimen of Gangrene of Meckel's Diverticulum and give a brief outline of the case; (*b*) a Gall Stone removed from the small intestine where it had caused obstruction. (11) Dr. E. Kaye Le Fleming will show a case of Furunculosis. (12) Dr. J. Macpherson Lawrie will relate a Case of Tuberculous Peritonitis Cured after the Removal of the Uterus for Fibroid Disease. (13) Dr. H. D McCulloch will read a paper entitled, On the Analogy between Spontaneous Recoveries from Cancer and the Specific Immunity induced by *X*-ray Irradiations of the Lymphatic Glands involved. (14) Messrs. Meyer and Meltzer, 71 Great Portland Street, London, W., will attend the meeting and exhibit an assortment of the most modern medical appliances and surgical instruments. There will be an official Branch dinner in the Hotel Mont Dore at 6.30 p.m. Price 6s., exclusive of wines, etc. Members intending to be present at the meeting and dinner will please communicate with Dr. Davison not later than Monday evening, the 25th inst. —JAMES DAVISON, Honorary Secretary, "Streateplace," Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with By-law 25.—B. H. NICHOLSON, Honorary Secretary.

East Anglian Branch.—The annual meeting of this Branch will be held at Norwich on Friday, June 19th.—B. H. Nicholson, Honorary Secretary.

East York and North Lincoln Branch.—The annual meeting of this Branch will be held at the Hull Royal Infirmary on June 11th, at 12.30 p.m.—Edward Turton, 1, Albion Street, Hull, Honorary Secretary.

Edinburgh and Fife Branches.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than Wednesday, June 10th.—A. Logan Turner, 27, Walker Street, Edinburgh; Francis D. Boyd, 22, Manor Place, Edinburgh; Balfour Graham, Leven, Fife, Honorary Secretaries.

Glasgow and West of Scotland Branch.—Election of Members of Central Council.—In accordance with Branch Rule v and Association By-law 25, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to the undersigned Honorary Secretary on or before Monday, June 1st. The Branch is entitled to return two Representatives, but if more than two nominations are sent in an election will take place by voting papers. Dr. Goff is this year ineligible for re-election, and Dr. Hamilton does not seek re-election.—James Hamilton, 1, Royal Crescent, Crosshill, Glasgow.

Glasgow and West of Scotland Branch.—The annual meeting of the Branch will be held at the New Maternity Hospital on the afternoon of Friday, June 5th. Professor Murdoch Cameron and Dr. Jardine have kindly consented to show cases. A dinner will be held in the evening, but further particulars of this, along with the detailed programme of the afternoon's proceedings, will be announced next week.—James Hamilton and J. Grant Andrew, Honorary Secretaries.

Glasgow and West of Scotland Branch: Glasgow North-Western Division.—The annual meeting of the Division will be held on Friday, May 29th, at 8.30 p.m., in the Burgh Hall, Hillhead. Business: 1. Minutes of last meeting. 2. Annual Report of Division. 3 Election of office-bearers. 4. Election of Representatives to the Branch Council, and to the Representative Meeting. 5. Consideration of Report on Medical Examinations for Life Insurance. The Division is requested to give (*a*) information as to the practice obtaining in their district, and (*b*) their opinion on the questions asked in the Supplement of February 22nd. 6. Appeal for contributions to the Lynn Thomas and Skyrme Fund. 7. Inquiry as to female inebriates. 8 Consideration of the Report of the Finance Inquiry Committee, and votes on the questions referred to the Divisions. 9. Consideration of the ethics of medical consultation, and instructions thereon to the Representative (see Supplement, May 9th). 10. Consideration of the remuneration of inspectors of school children, and instructions thereon to the Representative (see Supplement, May 9th). 11. Any other competent business. Nominations for office-bearers may be made at the meeting, or in writing beforehand.—G. Burnside Buchanan, Honorary Secretary, Glasgow.

Lancashire and Cheshire Branch.—Election of Representatives on Central Council, 1908-9.—Voting papers will be sent out on or before Saturday, May 23rd, and must be returned on or before Wednesday, June 3rd. Should any member not receive a voting paper he should apply at once to F. Charles Larkin, Honorary Secretary, 54, Rodney Street, Liverpool.

Lancashire and Cheshire Branch.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. Garstang, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

Lancashire and Cheshire Branch: Altrincham Division.—The annual meeting of the Division will be held at Altrincham (Board Room of Hospital) on Thursday, June 4th, at 4.50 p.m. Afternoon tea, 4 30 p.m. Dinner at Brooklands Hotel, 7 p.m. Nominations for any office for 1908-9 will be received by the Honorary Secretary, if duly signed by proposer and seconder.—T. W. H Garstang, Honorary Secretary.

Lancashire and Cheshire Branch: Liverpool (Northern) Division.—The annual meeting of the members of this Division will be held at the Liverpool Medical Institution on Wednesday, May 27th, at 3 45 p.m. Agenda: Confirmation of minutes. Election of officers and committees. Matters referred to Divisions (see Supplements, February 8 h and 22nd, March 14th and 28th, April 18.h and 25th, May 9th and 16th). Medical fees at inquests. Lynn Thomas and Skyrme Fund. Report of Representative on Branch Council. Any other business.—A. W. German, Honorary Secretary.

Lancashire and Cheshire Branch: Manchester (South) Division.—The annual general meeting of this Division will be held at the house of the Chairman, Dr. Vipont Brown, Surrey Lodge, 2, Birch Lane, Longsight, at 3.30 p.m., on Friday, May 29th. Agenda: 1. Minutes. 2. Election of office-bearers for 1908-9 3. Annual report of the Executive Committee. 4. Consideration of business for the Annual Representative Meeting. 5. Proposed new rule *re* contract work: "That this Division is of opinion that no new medical appointments to clubs shall be undertaken at a less remuneration than 6s. per member per annum." 6. Withington ethical case. 7. Correspondence. 8. Any other business.—G. H. Grant Davie, Honorary Secretary.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. McCann, Honorary Secretary.

Metropolitan Counties Branch: Kensington Division.—A meeting will be held at the Kensington Town Hall on Monday, May 25th, at 5 p.m. Agenda: Nominations for office on the Metropolitan Counties Branch. Definition of the term "Hospital," proposed by the Central Ethical Committee (vide Supplement to the British Medical Journal of February 22nd). Fees paid by Life Insurance Offices for Medical Examinations: Questions by Medico-Political Committee (vide Supplement to the British Medical Journal of February 22nd). Motion proposed by Mr. H. H. Sturge: "That it is desirable that no fresh institution for the gratuitous treatment of patients should be opened without previous consultation with the Committee of the Division or of the Branch of the British Medical Association in which it is proposed to establish such new centre." Any other business.—Charles Buttar, Honorary Secretary, Kensington.

Metropolitan Counties Branch: St. Pancras and Islington Division.—Notice of Annual Meeting.—The annual meeting of this Division will be held at the Midland Hotel, King's Cross, W.C., on Tuesday, June 2nd, at 4 o'clock.—W. Griffith, Honorary Secretary.

Midland Branch.—The annual meeting of the Branch will be held at the Exchange, Nottingham, on Thursday, June 11th, at 2 30 p.m. Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with the by-laws.—R. Sevestre, London Road, Leicester, Honorary Secretary, Midland Branch.

Midland Branch: Leicester and Rutland Division.—The annual meeting of the Division will be held on Wednesday, May 27th, at 4 p.m., at the Leicester Infirmary. Agenda: Minutes of previous meeting. Nomination of Vice-President of the Branch for 1908 9. Election of Representatives of the Division on the Branch Council, and of officers and members of the Executive Committee of the Division. Election of a Representative of the Division at Representative Meetings. Annual report of the Executive Committee. Discussion of matters referred to Divisions (vide Supplements of the Journal). Any other business. — Wilfred E. Gibbons, Honorary Secretary, 1, Charles Street, Leicester.

Midland Branch: Lincoln Division.—On Thursday, May 28th, 1908, at 3 30 p.m., will be held the annual meeting of the above Division, in the Guildhall, Lincoln. Agenda: To elect a Vice-President of the Midland Branch. To elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee. To elect the Representative of the Division in Representative Meetings of the Association. To consider, by request of the Representative Meeting, the proposed definition of the term "Hospital" (see British Medical Journal Supplement, February 22nd, 1908). To give replies to certain questions asked by the Medico-Political Committee relative to medical examinations for life insurance (see British Medical Journal Supplement, February 22nd, 1908). To communicate to the Division the interim report of the Subcommittee of the Medico-Political Committee on the Medical Inspection of School Children. To decide whether an Ethical Committee shall be appointed by the Division, and if so, what rules it shall be guided by. Other business. Members desiring to read papers or show cases or specimens are requested to communicate with the Honorary Secretary, J. S. Chater.

Munster Branch.—Nominations for a Representative of the Branch on the Central Council (in accordance with By-law 24) will be received by the Honorary Secretary up to June 1st.—Philip G. Lee, 26, St. Patrick's Hill, Cork, Honorary Secretary.

Munster Branch.—The annual general meeting of the Branch will be held on Saturday, June 6th, at 4.30 p.m., in the rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and Council for 1908-9 will be elected, and any other necessary business transacted.—Philip G. Lee, 26, St. Patrick's Hill, Cork, Honorary Secretary.

NORTH WALES BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for all the officers of the Branch and Representative on the Central Council must be sent to the Honorary Secretary not later than May 30th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

NORTH WALES BRANCH: NORTH CARNARVON AND ANGLESEY DIVISION.—The annual meeting of this Division will be held at the British Hotel, Bangor, on Wednesday, May 27th, at 3 p.m. Agenda: (1) To read the minutes of the last regular meeting. (2) To read correspondence. (3) To receive the annual report of the Executive Committee. (4) To elect the following offices, Representatives, etc., for 1908 9:—Chairman, Vice-Chairman, Honorary Secretary, Representative to Annual Representative Meeting, Representative on Branch Council, Members of Executive Committee of Division. (5) To nominate a Representative of the North Wales Branch on the Central Council of the Association. (6) To consider the following matters referred to Divisions, and to report thereon, if necessary: (*a*) Report on life insurance examinations (vide SUPPLEMENT, February 22nd, 1908). (*b*) The business of the Annual Representative Meeting (vide SUPPLEMENTS, March 28th, April 18th, April 25th, and May 16th, 1908). A meeting of the Executive Committee will be held prior to the general meeting, at 2.30 p.m., to consider the usual business. Members: Chairman, Vice-Chairman, Honorary Secretary North Wales Branch, Honorary Secretary of Division, Representative to Representative Meeting, Representatives of Division on Branch Council, together with Drs. Carruthers, R. Lumley Roberts, Corbet Owen, and J. R. Williams (Penmaenmawr).—JOHN EVANS, Honorary Secretary.

NORTH WALES BRANCH: SOUTH CARNARVON AND MERIONEITH DIVISION.—The annual meeting of the Division will be held at the Queen's Hotel, Portmadoc, on Thursday, May 28th, at 2 p.m. Members having papers to read, cases to show, or any other business to bring before the meeting are requested to communicate with the Honorary Secretary, H. GLADSTONE JONES, Plas Gwilym, Criccieth.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the office of Representative on the Central Council from this Branch must be sent to me in writing on or before June 6th. Each nomination must be signed by three members of the Branch. The annual meeting of the Branch will be held at Kingussie on Saturday, June 13th. Further particulars will be sent to each member by circular.—J. MUNRO MOIR Honorary Secretary.

SOUTH-EASTERN BRANCH.—The sixty-fourth annual meeting of the Branch will be held in the Council Chamber, Town Hall, Dover, by the kind permission of the Right Worshipful the Mayor of Dover, on Thursday, June 18th, at 2.15 p.m. Dr. M. K. Robinson, President-elect, kindly invites members to lunch at the Grand Hotel, Dover, from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting—(1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. The following expeditions have been arranged to take place afterwards: Visit to Dover Castle and precincts; visit to the National Harbour Works in course of construction; visit to the ruins of the ancient Priory, now used by Dover College; and visit to Pageant House. Dinner at the Grand Hotel, Dover, at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Dover Division. Those who propose being present at lunch or dinner, or both, are requested to signify their intention to Dr. Osborn, Ennismore Lodge, Dover, not later than Thursday, June 11th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—Preliminary Notice.—The annual meeting of the Folkestone Division will be held on Thursday, May 28th. Agenda: (*a*) Minutes of last annual meeting; (*b*) to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (*c*) to elect the Representative of the Division in the Representative meetings of the Association; (*d*) to receive the annual report of the Executive Committee; (*e*) to consider any business of the Annual Representative Meeting; (*f*) to transact any business that may be transacted at an ordinary meeting.—P. VERNON DODD, M.D., Honorary Secretary.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—The annual meeting of the Division will be held on Tuesday, June 9th, at 2.30 p.m., in the Board Room of the General Hospital, Northampton. For the purpose of electing a Divisional Representative the meeting will resolve itself into a joint meeting of the Northamptonshire and Aylesbury Divisions. The meeting will be preceded by luncheon at Franklin's Restaurant, Guildhall Road, at 1.30 p.m. The Secretary will be much obliged if any member wishing to attend the luncheon will notify him at least two days before the meeting. Business: Minutes. Election of Officers. Annual Report of Division. Matters referred to Division: Questions on the matter of Life Assurance Fees; Definition of the term "Hospital"; the ethics of Medical Consultation. The Lynn Thomas and Skyrme Fund. Letter from the Coventry Division. Dr. Robson will propose that there be a special Clinical Section of the Division. Mr. Harries-Jones will read a paper entitled Remarks on the Differential Diagnosis of Glaucoma. Any other business.—P. S. HICHENS, Honorary Secretary, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting of this Branch will be held at the Infirmary, Newport, on June 11th, at 4.30 p.m., when the Representatives of the Branch on the Central Council will be elected.—W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff, Branch Secretary.

SOUTH-WESTERN BRANCH.—*Election to Council of the Association.*—In accordance with the rules of the Association I hereby give notice that nominations (each to be signed by three electors) for the office of Representative of the Branch on the Council of the Association, are to be sent to me not later than May 25th.—RUSSELL COOMBE, Branch Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—Nominations for the office of Representative on the Central Council should be sent to either of the undersigned not later than June 8th, in accordance with By-law 25.—G. PETGRAVE JOHNSON, Honorary Secretary, Staffordshire Branch, Stoke-on-Trent; C. G. RUSS WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

ULSTER BRANCH.—Nominations for the offices of President, Treasurer, and Secretary, each signed by two members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary.

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary, Ulster Branch.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of the above Branch will take place at the Hereford General Hospital on Thursday, June 18th, at 1.45 p.m. Business: To elect officers and transact such other business as are prescribed by rule for the annual meeting.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—Election of Representatives of the Branch on the Council of the Association.—Notice is hereby given that nominations for the above must be sent to the undersigned by June 13th. Each nomination must be signed by three members of the Branch. Two Representatives on the Council to be elected.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH: BRADFORD DIVISION.—A meeting of this Division will be held at the Great Northern Victoria Hotel, Bradford, on Tuesday, May 26th, at 8.30 p.m. The following amongst other matters will be considered: (1) The question of fees for medical attendance to accidents in connexion with the tramways. (2) Communications received *re* the Lynn Thomas and Skyrme Fund. (3) Certificates required by accident insurance companies without payment. (4) Nomination of officers for the next year. (5) Various notices of motion contained in recent SUPPLEMENTS.—JAMES METCALFE and J. WHERRY WILLSON, Honorary Secretaries.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal epidemic diseases during the first, or winter, quarter of the year. The fluctuations of each disease and its relative fatality, compared with that in the corresponding periods of recent years, can thus be readily seen.

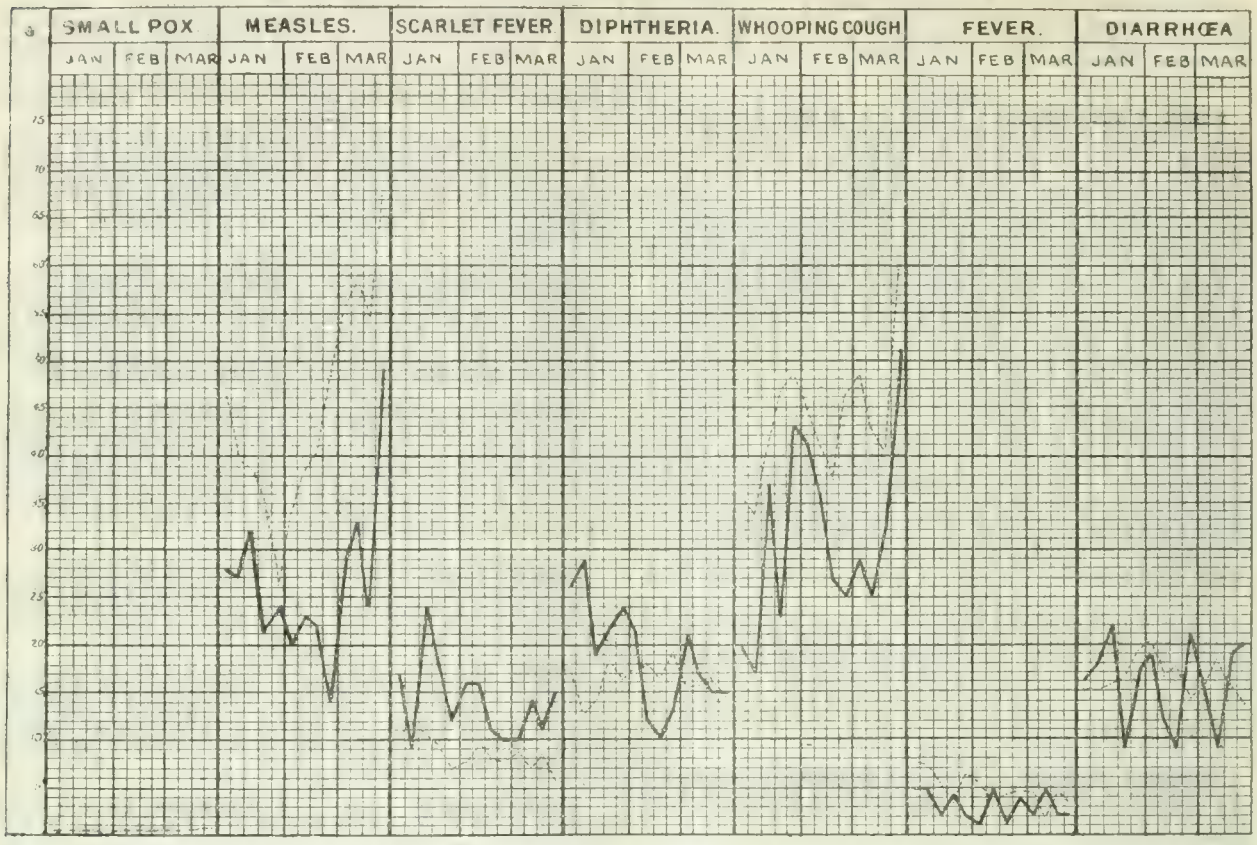
Small-pox.—No fatal case of small-pox was registered in London last quarter, and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals.

Measles.—The deaths from measles, which had been 661, 405, and 279 in the three preceding quarters, rose again last quarter to 346, but were 242 below the average number in the first quarter of the five preceding years. The greatest proportional mortality from measles last quarter was recorded in Paddington, Fulham, Shoreditch, Bethnal Green, Stepney, and Lewisham.

Scarlet Fever.—The fatal cases of this disease, which had been 141, 168, and 232 in the three preceding quarters, declined again to 186 in the three months under notice, but were 74 in excess of the corrected average number. Among the various metropolitan boroughs this disease was proportionally most fatal in Hackney, Shoreditch, Bethnal Green, Southwark, Bermondsey, and Battersea. The number of scarlet-fever cases under treatment in the Metropolitan Asylums Hospitals, which had been 2,975, 4,295, and 4,936 at the end of the three preceding quarters, had declined again to 3,150 at the end of last quarter; 5,101 new cases were admitted during the quarter against 4,723, 6,989, and 8,205 in the three preceding quarters.

Diphtheria.—The deaths referred to diphtheria, which had been 159, 163, and 214 in the three preceding quarters, were again 244 last

Deaths from Epidemic Diseases in London during the First Quarter of 1908.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the five preceding years, 1903–7.

quarter, and were 32 in excess of the average number in the corresponding periods of the five preceding years. This disease showed the highest proportional mortality last quarter in Hackney, Holborn, Finsbury, the City of London, Bethnal Green, and Lewisham. The number of diphtheria patients in the Metropolitan Asylums Hospitals, which had been 805, 964, and 1,168 at the end of the three preceding quarters, had declined again to 1,081 at the end of last quarter; 1,872 new cases were admitted during the quarter, against 1,507, 1,804, and 2 327 in the three preceding quarters

Whooping-cough.—The fatal cases of this disease, which had been 677, 370, and 217 in the three preceding quarters, rose again last quarter to 405, but were 166 below the corrected average number. The highest death-rates from whooping-cough last quarter were recorded in Chelsea, St. Pancras, Stepney, Poplar, Greenwich, and Woolwich.

"*Fever.*"—Under this heading are included deaths from typhus, from enteric fever, and from ill-defined pyrexia. The deaths referred to these different forms of "fever," which had been 36, 42, and 69 in the three preceding quarters, declined again last quarter to 40, and were 22 below the average in the corresponding period of the five preceding years. Two deaths were attributed to ill-defined pyrexia during the quarter, but not any to typhus. Among the various metropolitan boroughs "fever" was proportionally most fatal in Hammersmith, Fulham, the City of Westminster, Holborn, Finsbury, Bethnal Green, and Greenwich. The Metropolitan Asylums Hospitals contained 73 enteric fever patients at the end of last quarter, against 57, 99, and 119 at the end of the three preceding quarters; 135 cases were admitted during the quarter, against 146, 191 and 245, in the three preceding quarters

Diarrhoea.—The 207 deaths from diarrhoea in London last quarter were slightly below the corrected average number for the first quarter of the five preceding years. The greatest proportional mortality from this disease was recorded last quarter in Hackney, Finsbury, Shoreditch, Poplar, Southwark and Bermondsey.

In conclusion it may be stated that the 1,429 deaths in London referred to the principal infectious diseases last quarter were nearly 19 per cent. below the corrected average number. The lowest death-rates from these diseases last quarter were recorded in Kensington, Hammersmith, the City of Westminster, Hampstead, and Stoke Newington; and the highest rates in Hackney, Finsbury, Bethnal Green, Stepney, Poplar, Greenwich, and Lewisham.

HEALTH OF ENGLISH TOWNS

In seventy-six of the largest English towns, including London, 8,818 births and 4,124 deaths were registered during the week ending Saturday last, May 16th. The annual rate of mortality in these towns, which had been 15 4, 15 7, and 14 2 per 1 000 in the three preceding weeks, further declined last week to 13 2 per 1,000. The rates in the several towns ranged from 6 7 in Hornsey and in Walthamstow, 7 3 in York, 7 5 in Leyton, 7 9 in Bury, 8 0 in East Ham, 8 3 in Tottenham, and 8 5 in Hastings, to 18 3 in Warrington, 19 2 in Wigan, 19 8 in Burnley, 21 9 in Ipswich, 22 2 in Middlesbrough, and 23 8 in Hanley In London the rate of mortality was 13 0 per 1,000, while it averaged 13.3 in the seventy-six other large towns. The death-rate from the principal infectious diseases averaged 1.1 per 1 000 in the seventy-six towns, and ranged upwards to 2 3 in Rochdale and in Rhondda, 2 5 in Rotherham, 3 7 in Warrington, 3.8 in Wallasey, and 3.9 in Stockton-on-Tees; in London the rate was 1 1 per 1,000. Measles caused a death-rate of 1 3 in West Ham and in Preston, 2 3 in Wallasey, and 3 9 in Stockton-on-Tees; and whooping-cough of 1.1 in Newcastle on-Tyne, 1.2 in Portsmouth, 1 3 in Birkenhead, 1.4 in Newport (Mon.) and in Merthyr Tydfil, 2 5 in Rotherham, and 2 9 in Warrington. The mortality from scarlet fever, from diphtheria, from enteric fever, and from diarrhoea showed no marked excess in any of the seventy-six towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2 861, 2,925, and 2,870 at the end of the three preceding weeks, had declined again to 2,833 at the end of last week; 380 new cases were admitted during the week, against 332, 368, and 353 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 9th, 618 births and 441 deaths were registered in six of the principal Irish towns, as against 653 births and 384 deaths in the preceding period. The annual death-rate in these towns, which had been 21 2, 28 6 and 25.9 per 1,000 in the three preceding weeks, fell to 23 3 per 1,000 in the week under notice, this figure being 9 1 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period The figures ranged from 21 9 in Limerick and 23.1 in Londonderry to 23 4 in Waterford and Belfast and 26 0 in Dublin. The zymotic death-rate in the same six Irish towns averaged 2.6 per 1,000, or 1.4 per 1 000 lower than the preceding period, the highest figure—11.7—being recorded in Waterford, while Limerick registered no deaths under this heading at all.

Naval and Military Appointments.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel G A. Emerson, M.B., Bengal, is permitted to retire from the service, from April 2nd He joined the Bengal Medical Department as Surgeon, October 1st 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. He was in the Afghan war in 1878–80 (medal with clasp), and in the Soudan campaign in 1885 (medal with clasp and Khedive's bronze star).

Lieutenant C. M. Roberts, M B., is permitted to resign the service, from April 13th His commission was dated September 1st, 1906

Major H. M. Earle has been appointed Specialist in Midwifery and Diseases of Women and Children, and has been posted to the 3rd (Lahore) Division Major A. E. Berry, M.B., has been appointed a Specialist in Ophthalmology, and has been posted to the 5th (Mhow) Division). Captain C. H. Barber, M B., has been appointed Specialist in Advanced Operative Surgery in the 1st (Peshawur) Division

Lieutenant-Colonel A E. Roberts, M B, Bengal, is permitted to retire from the service from April 21st. Appointed Surgeon-Captain, October 1st, 1887, he became Lieutenant-Colonel, October 1st, 1897. He was in the Hazara campaign in 1888, receiving a medal with clasp.

Lieutenant-Colonel W. A. Lee, Madras, retires from the service, from April 7th He was appointed Assistant Surgeon in the Madras Medical Department, September 30th, 1876, and became Surgeon-Lieutenant-Colonel, September 30th, 1896.

Lieutenant-Colonel J. FRENCH-MULLEN, M.D., Bengal, also retires from the service, from May 29th. He joined the department as Surgeon, March 30th, 1878, and was made Lieutenant-Colonel, March 30th, 1898.

The retirement is also announced of Lieutenant-Colonel F. G. MAIDMENT, Madras, from March 21st. His first appointment bears date September 30th, 1886; his commission as Lieutenant-Colonel, September 30th, 1906. He served with the Burmese expedition in 1887-9 (medal with clasp), and in the China war in 1900 (medal).

Lieutenant-Colonel R. SHORE, M.D., Bengal, is posted as Residency Surgeon at Hyderabad.

Colonel C. H. BEATSON, C.B., Bengal, Principal Medical Officer, Kohat Brigade, is granted six months' combined leave, from April 21st.

Colonel W. A. QUAYLE, M.D., Madras, has taken over duty as Principal Medical Officer, Aden Brigade, from Colonel F. B. Maclean, Army Medical Service.

1st East Lancashire Field Ambulance: Major JOHN BENTLY MANN, from the Manchester Companies, Royal Army Medical Corps (Volunteers), to be Lieutenant-Colonel, and is appointed to command the unit, April 1st, 1908.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM EDUCATION COMMITTEE.—(1) Medical Superintendent; salary, £500 per annum. (2) Three Medical Officers (Men or Women); salary, £230 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-surgeon. Salary to commence, £80 per annum.

BOURNEMOUTH EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Third House-Surgeon; salary, £60 per annum. (2) Assistant Resident Medical Officer; honorarium, 25 guineas for three months. (3) Second Honorary Anaesthetist.

BRISTOL GENERAL HOSPITAL.—Assistant House Physician. Salary at the rate of £80 per annum.

BURNLEY UNION.—Resident Medical Officer of the Workhouse. Salary, £120 per annum.

CAMBERWELL WORKHOUSE.—Locumtenent for Medical Officer for four weeks. Remuneration at the rate of four guineas a week.

CARDIFF INFIRMARY.—(1) House-Surgeon; (2) House-Surgeon for Ophthalmic and Ear and Throat Departments. Honorarium, £30 for six months each.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £160, increasing to £180 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DURHAM COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £400 per annum, increasing to £450.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Clinical Assistant.

EVELINA HOSPITAL FOR CHILDREN, Southwark Bridge Road, S.E.—Physician in charge of Skin Department.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

GLOUCESTER EDUCATION COMMITTEE.—School Medical Inspector. Salary, £200 per annum, rising to £300.

GORDON HOSPITAL, Vauxhall Bridge Road, S.W.—Resident House-Surgeon.

GREENWICH UNION INFIRMARY.—Junior Assistant Medical Officer. Salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £20 for six months, and £2 10s. washing allowance.

HULL AND SCULCOATS DISPENSARY.—Medical Officer. Salary, £210 per annum.

HUNGERFORD AND RAMSBURY UNION.—Public Vaccinators for (1) Redwyn District and (2) Hungerford District and Workhouse.

LANCASTER ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

LIVERPOOL EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

MANCHESTER CHILDREN'S HOSPITAL.—Assistant Medical Officer (non-resident). Salary, £100 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Assistant Surgeon.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton Street, W.—Two Senior Clinical Assistants.

MIDDLESEX HOSPITAL MEDICAL SCHOOL, W.—Lectureship in Anatomy.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Northwood.—Assistant Resident Medical Officer. Honorarium £50 per annum.

NATIONAL ASSOCIATION FOR THE ESTABLISHMENT AND MAINTENANCE OF SANATORIUMS FOR WORKERS SUFFERING FROM TUBERCULOSIS.—Assistant Medical Superintendent or Sanatorium at Benenden. Salary, £280 per annum.

NEWCASTLE-ON-TYNE: NORTHUMBERLAND EDUCATION AUTHORITY.—Two Medical Inspectors. Salary, £250 per annum each.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill. Junior House-Surgeon. Salary, £50 per annum.

NORWICH CITY ASYLUM.—Assistant Medical Officer. Salary, £130 per annum.

ROYAL EAR HOSPITAL, Dean Street, Soho, W.—House-Surgeon. Honorarium, £40 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician for Diseases of Women.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary, £25 for six months.

ST. ANDREWS UNIVERSITY: CHANDOS CHAIR OF PHYSIOLOGY.—Applications to the Secretary, University Court.

ST. MARY'S HOSPITAL, Paddington, W.—Honorary Anaesthetist.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SEAMEN'S HOSPITAL SOCIETY: ALBERT DOCK HOSPITAL.—(1) Senior House-Surgeon; salary, £75 per annum, and £25 for acting as Registrar. (2) House Surgeon. Salary, £50 per annum.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £75 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £80 per annum.

STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

TOXTETH PARK TOWNSHIP.—Assistant Resident Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum.

UNIVERSITY COLLEGE, Gower Street.—Sharpey Scholarship in Physiology.

WAKEFIELD: CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident Medical Officer. Salary at the rate of 50 guineas per annum.

WEST HAM AND EAST LONDON HOSPITAL, Stratford, E.—Junior House-Surgeon for six months and then as Senior. Salary at the rate of £75 and £100 per annum respectively.

WEST LONDON HOSPITAL, Hammersmith, W.—House-Physician for six months.

WIGAN INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer; (2) House-Surgeon. Salary, £100 and £80 per annum respectively.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces a vacancy at Mildenhall, co. Suffolk.

APPOINTMENTS.

BELL, W., M.B., Ch.B.Edin., District Medical Officer of the Huddersfield Union.

BIGGS, G. L., M.B., B.S.Durh., Honorary Assistant Surgeon to the Ear, Nose, and Throat Department of the Dreadnought Hospital, Greenwich.

BREMRIDGE, R. H., M.B.Oxon., B.Sc.Lond., Assistant County Medical Officer, Derbyshire County Council.

BROWNE, H. S. D., M.B.Camb., M.R.C.S., Medical Officer of the Workhouse of the Winchester Union.

CAMPBELL, Robert B., M.B., C.M.Edin., Medical Superintendent, Stirling District Asylum, Larbert.

CARRUTHERS, D. A., M.B., C.M.Edin., Medical Officer, Bucks Education Committee.

CHATER, J. S., M.D.Lond., District Medical Officer of the Lincoln Union.

LEEDS GENERAL INFIRMARY.—The following appointments have been made:

House Physician to Dr. Churton, P. D. Pickles.

House-Physician to Dr. Barrs, H. B. Scargill, M.B., B.S.Lond.

House-Surgeon to Mr. Littlewood, J. P. Bibby, M.B., Ch.B.Leeds.

Ophthalmic House Surgeon, W. Williamson.

Resident Medical Officer at the Convalescent Homes, W. L. Dibb, M.B., Ch.B.Leeds.

Resident Obstetric Officer, T. E. Lister, M.B., Ch.B.Vict.

SAMARITAN FREE HOSPITAL.—The following gentlemen have been appointed:

Clinical Assistants: A. Barber, M.B., B.S.Lond.; Reginald Jamison, M.B., F.R.C.S.Eng.; W. D. Keyworth, B.A., B.C.Camb., A. B. Leuker, M.B., Ch.B.Edin.; Alexander Manuel, M.R.C.S., L.R.C.P.; Vernon Mockton, M.D., B.S., M.R.C.S.; H. Beckett Overy, F.R.C.S.Eng.; John Proctor, M.D., Ch.B.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGE.

COOPER—BRENNAN.—On May 14th, at Wimbledon Parish Church, by the Rev. G. Chamberlain, M.A., cousin of the bridegroom, assisted by the Rev. J. Allen Bell, M.A., Vicar of the Parish, Edward Cooper, Fleet Surgeon, Royal Navy, H.M.S. *Swiftsure*, youngest son of the late Alfred Cooper, Esq., of Southampton Villa, Southsea, to Margaret Wilhelmina, daughter of the late Rev. William Brennan, M.A., sometime Rector of Ballysadare, co. Sligo, and Mrs. Brennan, of Moate, co. Westmeath, Ireland.

DEATH.

FOWKE.—On May 19th, at Wensley Arkwright Road, South Hampstead, aged 68, Francis Fowke, for thirty years secretary to the British Medical Association, youngest son of the late John Fowke, F.R.C.S., and Sophia Fowke, of Wolverhampton. Funeral at Albrighton, Wolverhampton, on Friday.

DIARY FOR THE WEEK.

MONDAY.

ROYAL SOCIETY OF MEDICINE:
ODONTOLOGICAL SECTION, 20, Hanover Square, W., 8 p.m.—Paper: Mr. Stanley Mummery, Heredity and Dental Disease. Papers: Mr. Wm. Rushton, Notes on the Extraction of an Upper Wisdom Tooth; Mr. J. G. Turner: Some Clinical Notes on Pyorrhoea Alveolaris.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, S.W., 8.30 p.m.—Paper: Dr. Eric Pritchard, Regulation of the Manufacture and Sale of Proprietary Medicines and Foods.

ROYAL SOCIETY OF MEDICINE:
MEDICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Discussion on Dr. Latham's paper on the Administration of Tuberculin and other Vaccines by the Mouth.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 5.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Tuesday, Haemorrhoids and their Treatment; Wednesday, The Treatment of Corneal Ulcers; Thursday, Exophthalmic Goitre.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Myasthenia Gravis and Amyotonia Congenita (with cases); Tuesday, Modern Views on Rheumatoid Arthritis (with lantern slides); Wednesday, Lesions of the Optic Chiasma; Thursday, Seborrhoea of the Scalp.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, *X* Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Special Demonstration of Selected Skin Cases. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; 4.30 p.m., Demonstration on Clinical Methods of Estimating Blood Pressure. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations. Medical Out-patient and Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics and *X* Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 12 noon, Monday, Pathological. At 12.15 p.m., Wednesday and Friday, Practical Medicine. At 5 p.m.: Monday, Gynaecology; Tuesday, Typhoid Fever Relapses; Wednesday, Dental; Thursday, Practical Surgery; Friday, Cases of Skin Diseases.

BOOKS, ETC., RECEIVED.

Macedonia and the Reforms. By Dravanof. Translated from the French. London: A. Southey and Co. 1908.

Lehrbuch der allgemeinen Pathologie und der pathologischen Anatomie. Von Professor Dr. H. Ribbert. 3 Auflage. Leipzig: F. C. W. Vogel. 1908. M.16.

Vitality, Fasting, and Nutrition. By H. Carrington. London: Rebman, Ltd. 21s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
24 Sunday ...	
25 MONDAY ...	KENSINGTON DIVISION, *Metropolitan Counties Branch*, Kensington Town Hall, 5 p.m.
26 TUESDAY ...	BATH DIVISION, *Bath and Bristol Branch*, Royal United Hospital, 6 p.m. BRADFORD DIVISION, *Yorkshire Branch*, Great Northern Victoria Hotel, Bradford, 8.30 p.m.
27 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Hotel Mont Dore, Bournemouth, 3.30. Dinner in Hotel, 6.30 p.m. LEICESTER AND RUTLAND DIVISION, *Midland Branch*, Annual Meeting, Leicester Infirmary, 4 p.m. LIVERPOOL (NORTHERN) DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Liverpool Medical Institution, 3.45 p.m. NORTH CARNARVONSHIRE AND ANGLESEY DIVISION, *North Wales Branch*, Annual Meeting, British Hotel, Bangor, 3 p.m.
28 THURSDAY...	BATH AND BRISTOL BRANCH, Annual Meeting, Bristol CENTRAL DIVISION, *Birmingham Branch*, Medical Institute, 4 p.m. CITY DIVISION, *Metropolitan Counties Branch*, Annual General Meeting, followed by Supper, Great Eastern Hotel, 9 p.m. FOLKESTONE DIVISION, *South-Eastern Branch*, Annual Meeting. LINCOLN DIVISION, *Mid and Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m. SOUTH CARNARVON AND MERIONETH DIVISION, *North Wales Branch*. Annual Meeting, Queen's Hotel, Portmadoc, 2 p.m.
29 FRIDAY ...	ENGLISH DIVISION, *Border Counties Branch*, Annual Meeting, County Hotel, Carlisle, 3.30 p.m. GLASGOW NORTH-WESTERN DIVISION, *Glasgow and West of Scotland Branch*, Annual Meeting, Burgh Hall, Hillhead, 8.30 p.m. MANCHESTER (SOUTH) DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Surrey Lodge, 2, Birch Lane, Longsight, 3.30 p.m. TOTTENHAM DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Prince of Wales Hospital, Tottenham, 4.30 p.m.
30 SATURDAY...	
31 Sunday ...	
JUNE.	
1 MONDAY ...	LONDON Public Health Committee, 3.15 p.m.
2 TUESDAY ...	ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Midland Hotel, King's Cross, W.C., 4 p.m.
3 WEDNESDAY	
4 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of Hospital, Altrincham, 4.50 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7 p.m.
5 FRIDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m. GLASGOW AND WEST OF SCOTLAND BRANCH, Annual Meeting, New Maternity Hospital; Dinner in the evening.
6 SATURDAY...	MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork, 4.30 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 30TH, 1908.

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THE SEVENTY-SIXTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

SHEFFIELD,

JULY 24TH TO JULY 31ST, 1908.

President:

HENRY DAVY, M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital.

President-elect:

SIMEON SNELL, F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

Past-President:

RICHARD ANDREWS REEVE, B.A., M.D., LL.D., Dean of the Medical Faculty, University of Toronto.

Chairman of Representative Meetings:

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:

EDMUND OWEN, LL.D., F.R.C.S.Eng., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:

EDWIN RAYNER, M.D.Lond., F.R.C.S.Eng., Surgeon, Stockport Infirmary, Stockport.

THE seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by JAMES KINGSTON FOWLER, M.D., F.R.C.P.Lond.

The Address in Surgery will be delivered by RUTHERFOORD JOHN PYE-SMITH, F.R.C.S.Eng.

The Popular Lecture, on "Dust and Disease," will be delivered by EDMUND OWEN, LL.D., F.R.C.S.Eng.

THE SECTIONS.

The scientific business of the meeting will be conducted in seventeen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL *without special permission.*

The following is a list of the Sections with the names of the officers and a preliminary list of subjects selected for discussion:

Anatomy.

President: Christopher Addison, M.D., F.R.C.S., Anatomy Department, St. Bartholomew's Hospital, London.

Vice-Presidents: Edward Skinner, M.R.C.S., 124, Devonshire Street, Sheffield; Thomas Hastie Bryce, M.D., F.F.P.S.Glasg., 2, Granby Terrace, Glasgow; Arthur Keith, M.D., F.R.C.S., London Hospital Medical College, London.

Honorary Secretaries: Professor Charles Joseph Patten, M.D., D.Sc., University, Sheffield; Henry Mulrea Johnston, M.B., Anatomical Department, Trinity College, Dublin.

The Section will meet on Wednesday and Thursday, July 29th and 30th, at 10 a.m., adjourning at 1 p.m. each day. A meeting, if considered necessary, will be held on Friday.

On Wednesday, July 29th, Dr. Addison, President of the Section, will deliver the opening address. A discussion on the Mechanism of Respiration in Health and Disease will opened by Dr. Keith.

Thursday, July 30th, will be devoted to reading of papers and the exhibition of specimens.

Pathology.

President: Charles James Martin, M.B., D.Sc., F.R.S., Lister Institute of Preventive Medicine, Chelsea Gardens, London, S.W.

Vice-Presidents: Charles Workman, M.D., F.F.P.S.Glasg., 5, Woodside Terrace, Glasgow; Alexander Grant Russell Foulerton, F.R.C.S., Middlesex Hospital, London; Professor James Martin Beattie, M.D., Pathological Department, University, Sheffield.

Honorary Secretaries: Douglas Stanley, M.D., 21, Broad Street, Birmingham; Ralph Davies Smedley, M.B., School of Medicine, University, Sheffield.

The following is the provisional programme:

Wednesday, July 29th.—A discussion on Cerebro-Spinal Meningitis, to be opened by Dr. W. St. Clair Symmers. Drs. R. M. Buchanan, Gardiner Robb, F. E. Batten, J. A. Arkwright, R. C. Rankin, T. Houston, C. B. Ker, A. G. R. Foulerton, T. G. Horder, Ivy Mackenzie, W. T. Ritchie, Martin, and others will take part.

Thursday, July 30th.—A discussion on Regenerative and Compensatory Changes in the liver, to be opened by Dr. Craven Moore. Professor R. Muir, Drs. H. D. Rolleston, Worthington, James Miller, Lindsay Milne, and others will take part.

Arrangements will be made for the exhibition in the Pathological Museum of specimens illustrating the work of the Section.

Physiology.

President: Professor Ernest Henry Starling, M.D., F.R.C.P., F.R.S., 40, West End Lane, London.

Vice-Presidents: Gustav Mann, M.D., 25, Beechcroft Road, Oxford; Fredk. Gowland Hopkins, M.B., F.R.S., Wordsworth Grove, Cambridge.

Honorary Secretaries: Professor John Smyth Macdonald, L.R.C.P., University, Sheffield; Charles Frederick Myers-Ward, M.R.C.S., Kelvin House, Green Lane, Northwood.

The arrangements made up to the present are as follows:

Wednesday, July 29th, 10 a.m.: Discussion upon Purin Metabolism, to be opened by J. B. Leathes, M.D.Oxon., F.R.C.S., followed by Professor Cushny, F.R.S.; Professor Walker Hall, M.D., F. G. Hopkins, F.R.S., A. P. Luff, M.D., Gustav Mann, M.D., Professor T. Milroy, M.D., Professor Benjamin Moore, E. I. Spriggs, M.D., Chalmers Watson, M.D.

Thursday, July 30th, 10 a.m.: Dr. J. S. Haldane, F.R.S., will open a discussion upon the Causes of Dyspnoea, in which the following propose to take part: A. E. Boycott, M.A., M.D., Professor Cushny, F.R.S., Leonard Hill, F.R.S., James Mackenzie, M.D., M. S. Pembrey, M.A., M.D., F. H. Scott, M.D.

Friday, July 31st, 10 a.m., in the Firth Hall: Discussion upon the Scientific Education of the Medical Student. Opener, the President, Professor E. H. Starling, F.R.S., to be followed by Professor H. E. Armstrong, F.R.S.; Professor A. R. Cushny, F.R.S., Leonard Hill, F.R.S., Professor William Osler, F.R.S., Sir Felix Semon, M.D., Professor C. S. Sherrington, F.R.S.

On each of these days papers will be read at the close of the discussions.

Medicine.

President: William Dyson, M.D., Brooke House, Gell Street, Sheffield.

Vice-Presidents: Duncan Burgess, M.B., F.R.C.P., 442, Glossop Road, Sheffield; William Smith Porter, M.D., 283, Glossop Road, Sheffield; James Craig, M.D., F.R.C.P.I., 18, Merrion Square, Dublin; Frederick John Smith, M.D., F.R.C.P., 138, Harley Street, London.

Honorary Secretaries: Arthur John Hall, M.D., F.R.C.P., 342, Glossop Road, Sheffield; Sir John Francis Harpin Broadbent, Bart., M.D., F.R.C.P., 35, Seymour Street, Portman Square, London; Alexander Dingwall Fordyce, M.D., F.R.C.P.Edin., 19, Coates Crescent, Edinburgh.

The following subjects have been chosen for discussion:

Wednesday, July 29th.—Splenic Enlargements, other than Leukaemic. To be introduced by Professor Osler.

Thursday, July 30th.—The Etiology of Degenerative Changes of the Aorta. To be introduced by G. Newton Pitt, M.D., F.R.C.P.

Diseases of Children.

President: Charles Henry Willey, M.D., D.Sc., Wostenholme Road, Sheffield.

Vice-Presidents: John Burdsall Lyth, M.R.C.S., Fern Bank, Doncaster Road, Rotherham; John McCaw, M.D., 74, Dublin Road, Belfast; Robert Gordon, M.D., 26, Wostenholme Road, Sheffield.

Honorary Secretaries: Joseph Henry Wilks, M.B., 43, Montgomery Road, Sheffield; Sidney Maynard Smith, M.B., F.R.C.S., 1, Spanish Place, Manchester Square, London; Harold Leader, M.B., 279, Glossop Road, Sheffield.

Some portion of two of the days on which the Section meets will be devoted to the discussion of the following subjects:

Wednesday, July 29th.—I. Fatty Acid Intoxication. To be opened by Dr. Leonard Guthrie.

Thursday, July 30th.—II. Surgical Treatment of Infantile Paralysis. To be opened by Mr. A. H. Tubby.

On the third day a clinical meeting will be held at the Children's Hospital which adjoins the University Buildings.

Psychological Medicine.

President: Walter Smith Kay, M.D., S. Yorks. Co. Lunatic Asylum, Wadsley, Sheffield.

Vice-Presidents: Henry Talbot Sidney Aveline, M.D., Somerset and Bath Asylum, Cotford, Norton Fitzwarren, near Taunton; Maurice Craig, M.D., F.R.C.P., Bethlem Royal Hospital, London; Gilbert Edward Mould, M.R.C.S., Thundercliffe Grange, near Rotherham, Sheffield.

Honorary Secretaries: William James Nathaniel Vincent, M.B., South Yorks Asylum, Wadsley, Sheffield; George Arthur Rorie, M.D., County Asylum, Dorchester.

The following subjects have been selected for special discussion in this Section:

Wednesday, July 29th.—The Question of the Treatment of the Habitual Drunkard (Legislative and Otherwise). To be opened by T. Claye Shaw, M.D.

Thursday, July 30th.—The Early Treatment of Mental Disorders in General Hospitals and Private Practice. To be opened by Bedford Pierce, M.D.

Friday, July 31st.—School Life viewed from the Standpoint of Psychological Medicine. To be opened by Francis Warner, M.D.

INDUSTRIAL DISEASES.

President : THOMAS OLIVER, M.D., LL.D., F.R.C.P., 7, Ellison Place, Newcastle-on-Tyne.

Vice-Presidents : WILLIAM FRANCIS DEARDEN, M.R.C.S. Normanhurst, Urmston Lane, Stretford, Manchester; ALEXANDER FORBES, M.B., Hillsboro' Lodge, Sheffield; SAMUEL KING ALCOCK, M.B., Portland House, Burslem, Staffs.

Honorary Secretaries : ALEXANDER GARRICK WILSON, M.C., F.R.C.S., 56, Riverdale Road, Ranmoor, Sheffield; WILLIAM HENRY FRANCIS OXLEY, M.R.C.S., 119, East India Dock Road, London.

The following subjects have been suggested, and it is proposed that the proceedings shall be opened each day by the discussion of one of them, followed by papers:

Wednesday, July 29th.—Granting of Certificates of Fitness. To be opened by Dr. King Alcock, of Burslem.

Thursday, July 30th.—Diseases of the Lungs caused by Dust. To be opened by Dr. Arthur Hall, of Sheffield.

Friday, July 31st.—Notification of Industrial Diseases. To be opened by Dr. Alexander Scott, of Glasgow.

ELECTRICAL.

President: EDWARD REGINALD MORTON, M.D., 22, Queen Anne Street, London.

Vice-Presidents: WILLIAM LONGBOTTOM, L.R.C.S.Ed., 139, Burngreave Road, Sheffield; DAWSON FYERS DUCKWORTH TURNER, M.D., 37, George Square, Edinburgh; WILLIAM HARWOOD NUTT, M.D., 280, Western Bank, Sheffield.

Honorary Secretaries: WILLIAM JONES GREER, F.R.C.S.I., 19, Gold Tops, Newport, Mon.; ARTHUR RUPERT HALLAM, M.D., 325, Fulwood Road, Sheffield.

It is proposed that on the first day there shall be papers and discussions relating to Roentgen Rays and Electrical Diagnosis.

On Thursday, July 30th, papers and discussions concerning Electrical Treatment.

On Friday, July 31st, the subject will be Roentgen-Ray Therapeutics.

The Committee hope that it will be possible for them to set aside a convenient room for the exhibition and demonstration of new forms of apparatus.

The Pathological Museum Committee will be glad to take charge of, and place in the Museum for exhibition, any specimens, photographs, radiographs, diagrams, or microscopic slides during the time they are not required by those reading the papers or taking part in the discussions.

TROPICAL DISEASES.

President: Lieutenant-Colonel Sir R. HAVELOCK CHARLES, K.C.V.O., M.D., I.M.S., 9, Manchester Square, London.

Vice-Presidents : LOUIS WESTENRA SAMBON, M.D.Naples, 1, Palace Gardens Mansions, London; CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

Honorary Secretaries: FREDERICK AUGUSTUS HADLEY, F.R.C.S., Highfield House, Sheffield; ROBERT THOMSON LEIPER, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

The following subjects have been selected for discussion:

Wednesday, July 29th, 10 a.m.—Tropical Abscess of the Liver. To be opened by the President.

Thursday, July 30th, 10 a.m.—Ankylostomiasis. To be opened by Sir Patrick Manson, K.C.M.G., F.R.S.

Friday, July 31st, 10 a.m.—Diseases of the Lymphatics and Lymphatic Glands Peculiar to the Tropics. To be opened by Dr. C. W. Daniels, M.R.C.P.

Pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in tropical medicine will be welcomed.

SURGERY.

President: SINCLAIR WHITE, M.Ch., F.R.C.S., Ranmoor, Sheffield.

Vice-Presidents: WILLIAM HAMERTON JALLAND, F.R.C.S., St. Leonard's House, York; JOHN HAMMOND MORGAN, C.V.O., F.R.C.S., 68, Grosvenor Street, London; CHARLES ATKIN, F.R.C.S., Endcliffe Croft, Sheffield; RUSSELL COOMBE, F.R.C.S., 5, Barnfield Crescent, Exeter; ARCHIBALD WILLIAM CUFF, B.C., F.R.C.S., 285, Glossop Road Sheffield.

Honorary Secretaries: ARTHUR MAYERS CONNELL, F.R.C.S.E., 79, Hanover Street, Sheffield; GRAHAM SCALES SIMPSON, F.R.C.S., 342, Glossop Road, Sheffield; DONALD JOHN ARMOUR, F.R.C.S., 89, Harley Street, London.

Arrangements have been made for special discussions on the following subjects to be held on Wednesday, July 29th, and Thursday, July 30th:

1. The Diagnosis and Treatment of Malignant Disease of the Breast. Introduced by (1) Mr. W. Watson Cheyne, C.B., F.R.C.S.; (2) Mr. Harold J. Stiles, F.R.C.S.E.

2. The Indications for the Performance of Nephrotomy and Nephrectomy. Introduced by David Newman, M.D.

The third day (Friday, July 31st) will be devoted to the reading of papers on subjects other than the above.

The Pathological Museum Committee will gladly welcome and take charge of any specimens bearing on the subjects of discussion in this Section.

OPHTHALMOLOGY.

President : Sir HENRY ROSBOROUGH SWANZY, M.D., P.R.C.S.I., 23, Merrion Square, Dublin.

Vice-Presidents: SYDNEY STEPHENSON, M.B., F.R.C.S.Ed., 33, Welbeck Street, London; CHARLES DEVEREUX MARSHALL, F.R.C.S., 112, Harley Street, London; STANLEY RISELEY, M.D., 387, Glossop Road, Sheffield.

Honorary Secretaries: MICHAEL AUBREY TEALE, M.R.C.S., L.R.C.P., 4, Park Square, Leeds; LEONARD ROBERT TOSSWILL, M.R.C.S., 34, West Southernhay, Exeter.

The subjects chosen for discussion are:

The Relation of Disease of the Nasal Accessory Sinuses to Disease of the Eye. To be introduced by Dr. George Mackay and Mr. Logan Turner.

Serum-Therapy in Diseases of the Eye. To be introduced by Professor Axenfeld, Freiburg.

Colour Vision and its Anomalies. To be introduced by Dr. F. W. Edridge-Green.

LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

President: GEORGE WILKINSON, B.C., F.R.C.S., 350, Glossop Road, Sheffield.

Vice-Presidents: HARRY LOCKWOOD, M.R.C.S., 122, Cowlishaw Road, Sheffield; WALTER JOBSON HORNE, M.D., 23, Weymouth Street, London; DUNCAN GRAY NEWTON, M.B., F.R.C.S.Edin., 14, Favell Road, Brook Hill, Sheffield.

Honorary Secretaries : WILLIAM SMITH KERR, M.B., F.R.C.S.Edin., 281, Glossop Road, Sheffield; HUNTER TOD, F.R.C.S., 111, Harley Street, London.

The subjects selected for special discussion are:

Wednesday, July 29th.—Chronic Inflammation of the Pharynx. To be opened by Drs. James Barry Ball and Peter McBride.

Thursday, July 30th.—The Diagnosis of the Intracranial Complications of Middle-ear Suppuration. To be opened by Mr. Charles A. Ballance, M.V.O., and Mr. Arthur L. Whitehead.

Friday, July 31st.—The Methods of Dealing with Suppuration in the Maxillary Antrum. To be opened by Drs. StClair Thomson and Arthur Logan Turner.

Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Dermatology.

President: Ernest Gordon Graham Little, M.D., F.R.C.P., 61, Wimpole Street, London.

Vice-Presidents: Alfred Reckless, M.R.C.S., 2, Broomgrove Road, Sheffield; George Thomson, M.B., Bridge House, Retford, Notts; Edward Stainer, M.B., 60, Wimpole Street, London.

Honorary Secretaries: George Pernet, M.R.C.S., 94, Harley Street, London; Archibald Young, M.B., 43, Collegiate Crescent, Sheffield.

The following is a provisional programme of proceedings:

Wednesday, July 29th, 10 a.m.—The Vaccine Treatment of Skin Diseases. Discussion to be opened by Sir A. E. Wright, followed by Dr. Norman Walker and Dr. Winkelried Williams.

Papers.—(1) Dr. Lewis Jones: The Treatment of Skin Diseases by Electrolysis (Ions). (2) Dr. Sequeira: The Calmette Reaction in Tuberculosis.

Thursday, July 30th, 9 a.m.—Discourse by Professor Neisser of Breslau: On Syphilis, with special reference to experimental work on the subject. 10 a.m.—Discussion on Syphilis in the Light of Recent Discoveries of its Etiology.

Papers.—(1) Professor Gilchrist: Experimental Urticaria. (2) Dr. Garceau: Etiology of Alopecia Areata.

Friday, July 31st, 10 a.m.—The Diseases of the Skin in Animals communicable to Man. Introduced by Dr. Sabouraud of Paris, followed by Dr. Leslie Roberts and others.

Cases will probably be shown on Wednesday and Friday mornings at 9.30 a.m., before the session of the Section.

Obstetrics and Gynaecology.

President: Richard Favell, M.R.C.S., Brunswick House, Glossop Road, Sheffield.

Vice Presidents: William Dunnet Spanton, F.R.C.S., Chatterley House, Hanley; John Wise Martin, M.D., Claremont, Glossop Road, Sheffield; John Hy. Brown, M.D., Somerville House, 14, Burngreave Road, Sheffield; Robert Cochrane Buist, M.D., 166, Nethergate, Dundee.

Honorary Secretaries: Percival Ellison Barber, M.R.C.S., L.R.C.P., Broombank, 3, Clarkehouse Road, Sheffield; Charles Hubert Roberts, M.D., 21, Welbeck Street, London.

The following subjects have been selected for special discussion:

(*a*) Caesarean Section *versus* Other Methods of Delivery in Contracted Pelvis (Symphysiotomy, Pubiotomy, Craniotomy and Induction of Labour).

(*b*) The Treatment of Displacements of the Uterus.

In the Pathological Part of this Section Ectopic Gestation has been chosen as one affording a wide scope for the exhibition of specimens, photographs, microscopic slides, etc.

Public Health and Forensic Medicine.

President: Professor Hy. Harvey Littlejohn, M.B., F.R.S.E., 11, Rutland Street, Edinburgh.

Vice-Presidents: Charles Robert Straton, F.R.C.S.E., West Lodge, Wilton; Edmund Hargreaves, M.D., 2, Eyre Street, Sheffield; Harold Sourfield, M.D., D.P.H., Edenthorpe, Sheffield.

Honorary Secretaries: Alfred Robinson, M.D., L.S.Sc., Town Hall, Rotherham; Alex. Anderson, M.B., D.P.H., Wadsley Lane, Wadsley, Sheffield; William Arthur Bond, M.D., D.P.H., Municipal Offices, 197, High Holborn, London.

The following subjects have been selected for special discussion:

1. Smoke Abatement. To be opened by Dr. Des Voeux.

2. Industrial Diseases of the Lung (in conjunction with the Industrial Diseases Section).

3. The Notification of Pulmonary Tuberculosis.

4. The Notification of Births in Relation to the Reduction of Infantile Mortality.

Navy, Army and Ambulance.

President: Lieutenant-Colonel Edmond Monkhouse Wilson, C.B., C.M.G., D.S.O., R.A.M.C.(retired), Belmont, Osborne Road, S. Farnborough.

Vice-Presidents: Surgeon-Lieutenant-Colonel E. M. Wrench, M.V.O., V.D., Baslow: Lieutenant-Colonel Richard Hugh Penton, D.S.O., R.A.M.C., 3, Wenlock Terrace, York; Colonel Charles Joseph Trimble, C.M.G., Preston; Fleet Surgeon Edward James Biden, R.N. (ret.), Laylands, Catisfield, Fareham; Fleet Surgeon Arthur Gaskell, F.R.C.S., R.N., H.M.S. *Hague*, c.o. Admiralty, S.W.

Honorary Secretaries: Surgeon-Captain Sidney Fredk. Barber, H.V.B., 11, St. Barnabas Road, Highfield, Sheffield; Surgeon-Captain Alan Charles Turner, W.R.R.E.V., 287, Glossop Road, Sheffield.

The following have been suggested as subjects for discussion:

1. Hygiene of Training Ships.

2. Influence on Health through Service in Submarine and Torpedo Boats.

3. Oral Sepsis in Services.

4. Organization of Medical Department of Territorial Army.

5. The Position of the St. John Ambulance Brigade and St. Andrew's Ambulance Corps with Regard to Medical Organization for Active Service on Mobilization.

6. Influence of Alcohol in Services.

7. Importance of Training in Special Trades whilst in Services.

8. Physical Exercises for Recruits as a means of Recreation.

9. First Aid and Transport of Sick and Injured in Civil Life in Large Towns.

10. Improvements in Equipment, Medical and Personal, either for Service or for Civil life.

11. Conditions of Service under the Colonial Office.

Dental Surgery.

President: Frank Harrison, M.R.C.S., L.D.S., 289, Glossop Road, Sheffield.

Vice-Presidents: Arthur Swayne Underwood, M.R.C.S., L.D.S., 26 Wimpole Street, London; John Herbert Gibbs, F.R.C.S., L.D.S., 7, Coates Place, Edinburgh; George Henry Lodge, L.R.C.S., L.D.S., Osborne House, Moorgate Road, Rotherham.

Honorary Secretaries; Henry Watson Turner, M.R.C.S., L.D.S., 59, Wimpole Street, London; Ralph Lamb, M.R.C.S., L.D.S., 51A, Rodney Street, Liverpool.

The following subjects have been selected for special discussion:

Wednesday, July 29th.—Antral Diseases in Relation to General and Special Surgery. The following will open or take part in the discussion: Herbert Tilley, F.R.C.S.; Arthur Underwood, M.R.C.S., L.D.S.; F. Marsh, F.R.C.S.; Urban Pritchard, M.D.Edin., F.R.C.S.Eng.; K. Goadby, M.R.C.S., D.P.H.

Thursday, July 30th.—Teething and its Alleged Troubles. Openers: Leonard Guthrie, M.D., F.R.C.P.; H. A. T. Fairbank, M.S., F.R.C.S.; J. G. Turner, F.R.C.S., L.D.S., followed by Evelyn Milestone, M.D.; R. Denison Pedley, F.R.C.S., L.D.S., and others.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 24TH.*

2 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

SATURDAY, JULY 25TH.*

9.30 a.m.—Representative Meeting.

MONDAY, JULY 27TH.

9.30 a.m.—Representative Meeting.
.30 p.m.—Reception by the Lord Mayor in the Town Hall.

TUESDAY, JULY 28TH.

9 a.m.—Foods and Drugs Exhibition.
9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon.—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
8.30 p.m.—President's Address.
Presentation of Prizes.

WEDNESDAY, JULY 29TH.

9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Medicine.†
2.30 p.m.—Meeting of Convocation for conferring Honorary Degrees.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception by the Lord Mayor, Master Cutler, and the Citizens.

THURSDAY, JULY 30TH.

8 a.m.—National Temperance League Breakfast.
9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Surgery.‡
7.30 p.m.—Annual Dinner.
8 p.m.—Theatrical Performance in the Lyceum Theatre for Ladies.

FRIDAY, JULY 31ST.

9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.
8.30 p.m.—Reception in the Cutlers' Hall by the President and Local Members of the British Medical Association.

SATURDAY, AUGUST 1ST.

Excursions.

* It is left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council to decide if the business to come before the Representatives will necessitate a meeting on the Friday.

† The Section of Medicine will adjourn at 12.30 p.m. on this day.

‡ The Section of Surgery will adjourn at 12.30 p.m. on this day.

Honorary Local Secretary—

SINCLAIR WHITE, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—

W. T. D. MART, M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.

R. W. INNES SMITH, M.D., C.M., M.R.C.S., L.R.C.P.,
Don House, Brightside, Sheffield.

A. C. TURNER, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

PATHOLOGICAL MUSEUM.

THE following are the members of the Committee:

President: Professor J. M. BEATTIE, M.D.

Honorary Secretaries: M. H. PHILLIPS, F.R.C.S.; A. E. BARNES, M.R.C.P.

MEMBERS OF COMMITTEE:

E. W. ADAMS, M.D.	W. H. NUTT, M.D.
W. BRANDER, M.B.	C. J. PATTEN, M.D.
W. T. COOKING, M.D.	H. SOURFIELD, M.D.
A. M. CONNELL, F.R.C.S.E.	G. S. SIMPSON, F.R.C.S.
A. H. FIRTH, M.B.	E. SKINNER, M.R.C.S.
A. J. HALL, M.D.	J. W. STOKES, M.R.C.S.
J. S. MACDONALD, L.R.C.P.	G. WILKINSON, F.R.C.S.

EX-OFFICIO MEMBERS:

The President-elect: SIMEON SNELL, F.R.C.S.E.

The Local Honorary Treasurers: W. DYSON, M.D.; D. BURGESS, F.R.C.P.

The Local Honorary Secretaries: SINCLAIR WHITE, F.R.C.S., W. T. D. MART, M.R.C.S.; R. W. I. SMITH, M.D.; A. C. TURNER, M.R.C.S.

The following circular has been sent out by the Sub-committee of the Pathological Museum to gentlemen interested in pathology and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Sheffield, 1908, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.

II. Specimens and illustrations relating to any recent research work.

III. Instruments relating to clinical diagnosis and pathological investigation.

IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Diseases of the spleen.
(*b*) Diseases of the heart and vessels.
(*c*) Diseases due to dust, tuberculosis, actinomycosis, syphilis and allied causes.
(*d*) The urinary system.
(*e*) Diseases of the breast.
(*f*) *X* rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position, and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,
A. E. BARNES,
M. H. PHILLIPS,
Honorary Secretaries.

242, Glossop Road, Sheffield, January, 1908.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

British Medical Association.

POOR-LAW MEDICAL SERVICE IN SCOTLAND.

REPORT ON THE WORK OF THE POOR-LAW SUBCOMMITTEE OF THE SCOTTISH COMMITTEE.

The Subcommittee was appointed to prepare evidence to be submitted to the Royal Commission on the Poor Laws and Relief of Distress. Schedules (Appendices A, B, C) of inquiry, dealing with (A) Parochial Medical Officers, (B) Poorhouse Medical Officers, (C) Poor-law questions in general, were issued to all the Poor-law Medical Officers in Scotland, and, in addition, inquiries (Appendix D) were addressed to the twenty-two Divisions of the Association in Scotland.

Reports from Medical Officers.

Of the 1,200 (3,600) sets of the first schedules a large number were returned carefully filled up, the total numbers available for analysis being A 420, B 60, C 352, and the Subcommittee think that the thanks of the Association are due to those who took so much trouble in putting this large amount of detailed information at their disposal. A numerical analysis of the replies was prepared by Mr. E. A. Taylor, of the Central Office, and the Subcommittee appreciate the care with which this part of the work was handled. Mr. Taylor's summaries of the individual answers so far as they seem to afford useful results are appended to this report. The returns deal with a number of parishes somewhat larger than is represented by the figures, inasmuch as several officers report in one schedule their replies for a series of appointments.

Reports from Divisions.

Of the ten reports sent in, eight dealt with large city districts in Glasgow, Edinburgh, and Dundee. The reports state that detailed information as to the various agencies for the relief of the sick were being supplied to the Commission from other sources. They were unanimous in affirming the existence of overlapping between the Poor Law and Charitable agencies and the lack of co-ordination, and also its necessity, but all except one thought that it would be impossible to hand all the work over to one authority.

After consideration of the information received, including the statement of the Scottish Poor-law Medical Officers' Association (Appendix E) the Subcommittee submitted a statement (Appendix F) to the Royal Commission and asked to be allowed to lead evidence in its support. Mr. W. Core, Dr. J. E. Moorhouse, and Dr. W. L. Muir were invited to give evidence on behalf of the Subcommittee and were heard together. Dr. R. C. Buist was invited to give evidence as a local witness, and was examined on matters other than those appearing in the statement of the Subcommittee.

Schedule A.—Parochial Medical Officers.

The Subcommittee wish to present an accurate picture of the parochial medical service, and consider that the information afforded by the returns is fairly representative. The matters with which they propose to deal in detail are the remuneration in relation to the work performed, the condition of tenure, practical as well as theoretical, and general conditions influencing the life and efficiency of the medical officer.

Remuneration.

In Scotland the parochial medical officer is, as a rule, also public vaccinator and certifier in lunacy, and he may also have to attend midwifery cases on an order from the inspector of poor. For these separate services separate payment is supposed to be made. To his salary for attendance on the sick poor a grant in aid is made from Government funds. The cost of his work under other heads is borne by the rates. In many cases a system of contracting out has been admitted for these special services, and this is usually more to the advantage of the rates than of the medical officer. The detailed salaries are set out in tabular form in the appendix.

As mere tabulation of the salaries paid affords no evidence as to the adequacy of the remuneration, a further examination of the schedules was made to discover the relation to the work actually performed. For this purpose those schedules were first selected which dealt with districts of over 5,000 population, and these were separated into those over and those under 10,000, there being 61 in the former group, and 46 in the latter. As even in these groups the conditions were found to vary greatly, it was necessary to subdivide them according as they were over or under an area of ten square miles. This gave 44 densely populated districts with over 10,000 people in an area under ten square miles, and 17 districts over 10,000 and an area over ten square miles. Between 10,000 and 5,000 population there were 13 and 33 districts respectively with an area under and over ten square miles.

(1) *Districts over 10,000 Population: Area under Ten Square Miles.*—As already stated, owing to the regulations of the grant in aid, the salary of the medical officer is technically divided into two parts, of which that nominally set apart for attendance on the sick is made as large a share of the whole as possible, with the result that the payment assigned for special services is ludicrously inaccurate. Thus in one large city lunatics are certified at the rate of 33 for £1. No salary at all is assigned for the duty of examining applicants for relief. If we take each item of the parochial medical officer's work in examining applicants, attending the sick, certifying lunatics, and vaccinating as of equal value in one grand total, we find that in four large districts he performs from 37 to 53 such professional services for each £1 he receives, the remuneration thus varying from 6½d. to 4½d. for each attendance. In the case of the unique whole-time appointment the return is 1s. 3d., and this figure is also reached in Edinburgh.

(2) *Population over 10,000; Area over Ten Square Miles.*—The districts in this group are usually those with a large town nucleus and a wide landward area, such as Ayr, Brechin, Campbelltown, Inverness. The average rate of return is much like that of the large city districts, but the range is wider, the rate in one case sinking to 3½d. per attendance.

(3) *Medium Districts: Population 5,000 to 10,000.*—In this group the conditions vary from those with a small town nucleus to widely-spread island areas. In these latter the rate of payment may apparently rise to £1 per attendance; but, so far as any estimate can be formed, even such payments bear to those of private practice a relation similar to that in the first set of districts—that is, from a quarter to a half of the rates for the poorest paying class in the district.

(4) *Less Populous Districts. Population under 5,000.*—These were divided into groups per 1,000 population, but a detailed examination gave no indication of any marked difference from the rule prevailing in more populous areas. In some of the remote islands the cost of each attendance may rise to £2. As in some of these parishes the poor-rate rises to 2s., 3s., 4s., or even 5s. per £1, and as in some cases private practice is of the scantiest, it is evident that special arrangements and special grants are called for to make possible a medical service that will be at once adequate for the needs of the district and reasonably remunerative for the medical officer. The sacrifice of the medical officer to the public is perhaps best illustrated by a Zetland district with a population of 686, and a valuation of £1,173, which pays the medical officer 34s. a year including drugs. The medical officer makes thirty visits a year, sees twenty cases at his own house, and has held office for fifteen years.

Holidays.—Superannuation.

As regards such supplementary remuneration as is included under these heads, there is no augmentation of the return to the medical officer. In three instances only the parish council makes provision for holiday by a grant of £10, by paying a locumtenant or by paying an equivalent to the salary. There is no provision for superannuation, and it may be noted that eleven officers have held office over forty, and four over fifty years.

Tenure of Office.

Many of the replies indicate that the medical officers are in happy ignorance that there is such a question. Legally, any parish council in Scotland can dismiss its medical officer at any time, and without assigning any reason. The medical officers have long demanded such protection as is afforded by requiring the consent of the Local Government Board. As a rule in populous districts there is no difficulty, although only a year ago one large council solemnly considered a proposal to dismiss all its medical officers each year. Of the present medical officers reporting, 187 have held office under ten years, and in that same period vacancies have arisen by dismissal twenty-six times, by resignation 213 times, and by death fifty-three times. In the Highlands and Islands the conditions are best appreciated by the following three reports:

Illustrative Cases.

I.

A medical officer to a very large parish in Sutherlandshire (33 miles long and 20 broad) desires the attention of the Poor law Committee directed to the following notes concerning his parish:

One medical officer—the first appointed—was of independent means, and charged little or nothing for his medical services on account of the poverty of the parish, and left after a stay of a few months. The second medical officer stayed twelve years. He was a Gaelic-speaking Highlander, very energetic, steady, and admittedly skilful. The parish council bound him down to charge for a first visit 5s. within a radius of twelve miles, and 2s. 6d. for every subsequent visit within the same district. After his dismissal this was stopped by the Local Government Board. He gave very great satisfaction in the district until he became a member of the School Board. An influential parish councillor had a daughter a candidate for a position as assistant mistress under the board. The medical officer voted against her appointment, and thus gave offence to her father and a powerful clique. Shortly afterwards the parish councillor refused to meet the medical officer and threatened him with dismissal. For four years the fight went on. At each meeting of the parish council the great "doctor question" came up. Not contented with verbal warfare, members would adjourn outside and fight the matter out. The local policeman had to be present at the meetings in order to preserve order. In time a parish council election became due, and as a result five members were returned favourable to the doctor and five against him. The chairman—the eleventh member—who was the parish minister, adopted a neutral attitude, and refused to vote. Eventually the latter left the parish, and it became necessary to elect a new chairman and afterwards a new member. Not being able to agree, two chairmen with two casting votes were elected. Thus matters stood for several meetings, at each of which the question of the doctor's dismissal came up and was shelved. Eventually at one meeting, when the vexed question came up and was shelved as usual, a member friendly to the doctor withdrew. Whereupon the motion was reintroduced straightway, a new member was elected in the place of the retired parish minister, and, being opposed to the doctor, he was sent for there and then, and with his aid a motion was passed requesting the doctor's resignation. Obtaining a post of parochial medical officer, he left the parish, to the general regret of all except a clique actuated by reasons of revenge.

The third medical officer stayed one year. An attempt was at once made to enforce the ridiculous scale of fees which the council illegally enforced in the time of the first medical officer, but the Local Government Board interfered and nominally stopped this; at the same time the people boycotted the doctor when he attempted to charge more. This doctor lived in rooms, refusing to put a millstone of debt round his neck by furnishing the house provided. He did not keep a horse, and his disinclination to pay for expensive hires in doubtful cases, *plus* an equal aversion on the part of the majority of the public to paying any fees at all quickly led to his dismissal. He was a man of sensitive nature, and this, coupled with the fact that he was in a low state of health, caused his death a fortnight after he left the parish.

The fourth medical officer stayed a year and a quarter. Again the question of fees arose, and there is no doubt the determination of the larger part of the population not to pay any fees at all, and to get rid of any man who insisted on being paid, was the predominating factor in his dismissal. At the same time his conduct gave the council a handle.

The fifth medical officer stayed under three months. Again the same manœuvre was practised, and led to the doctor drawing his salary and leaving the place at a day's notice in disgust. He was an exceedingly steady and skilful man.

The sixth medical officer was appointed in March, 1906, and still holds office, and is the writer of these notes. His experiences are:—"An attempt was made to limit my charges to 5s. per visit, and 2s. 6d. afterwards for distances up to twelve miles. As the doctor resides at a point midway between the two chief villages, each of which is seven miles distant from his house, there is little intervening population, consequently it practically means a fee of 5s. and 2s. 6d. for journeys of seven to twelve miles. On my refusing to do this I was threatened with dismissal. I declined to give way, and am at present left alone; but whenever I make an attempt to get my fees I am threatened. As I am a total abstainer, my chief opponents are the three local publicans, and these will probably make an attempt at the next parish council election to capture that body with a view to turning me out. I am convinced that doctors will never get reasonable fees so long as they have no security of tenure. I have sounded the principal members of the parish council, and believe they would be willing to enter into an agreement not to dismiss their medical officer except with the consent of the Local Government Board, but they need to be approached by some such body as the British Medical Association."

II.

The following illustrates a parish in Shetland:

There are between forty and fifty paupers, who give little trouble. Salary £50 per annum exclusive of lunacy fees and medicines. Medicines are supplied by the doctor to paupers, and charged to the parish council. No suitable house available. The doctor resides in the next parish, but only a few yards over the border, and at a very convenient spot, that is, at the junction of the roads to the two chief villages in the district. Parish includes islands, which are very difficult to work. For years the doctors here have been badly treated. The factor and others are strong supporters of the Congregational Church. The chief elder of this church is a notorious quack, who, I may mention, is also the local undertaker. On my refusal to help this man with his cases, and cover him by coming to his serious cases at the last moment, and signing the death certificates, an attempt was made to boycott me. The chief leaders in the opposition were the proprietor and factor, who made an attempt at the election to capture the parish council with a view to turning me out. Every attempt was made to intimidate the crofters. But my supporters secured the whole of the seats except one, which fell to the factor. A few years previously another doctor incurred the displeasure of the same parties, the proprietor and the factor (both quite uneducated men), and as a result was glad to resign and leave the parish. He was a most efficient and steady man.

On receiving the offer of another appointment as medical officer I resigned.

III.

The following refers to a parish in Inverness-shire:

This consists of three small islands. Population 550. Acted as medical officer seven months. Salary from parish council £100 per annum. Found little or no private practice. Was very well treated by parish council as a body. One member—the present factor—attempted to interfere with the medical officer, and on several occasions ordered medical officer to visit private patients. The medical officer refused to take any notice of the factor, but the writer imagines that future doctors will have a good deal of trouble with him.

Housing, Conveyance.

As a rule, the medical officer makes his own arrangements for both. In the outlying districts the accommodation is not satisfactory. In a few instances the parish council has outrun the law and provided a house, but even this does not escape complaint.

Drugs, Medical Comforts.

As to other conditions of work than those implied in the questions of remuneration, tenure, housing, the most important one affecting both the medical officer and the service is the supply of drugs. In 122 instances these are supplied by the medical officer under his salary, and in thirty-two other cases for a fixed sum. There seems to be no general difficulty in providing either drugs or medical comforts, though these technically require an order from the inspector of poor.

Nursing, Ambulance.

There is no parish council nursing, but in some instances the Council may contribute to the fund for a district nurse. There seems no general complaint as to the conveyance of the sick, which is usually accepted as the best practicable in the district.

Consultations, Operations, Anæsthetics, Fractures.

As a rule no special provision is made. In a few cases a special fee is allowed. In most cases operations and fractures are provided for in local hospitals when these exist, the parish council at times contributing to the funds.

Summary and Recommendations.

The evidence before the Subcommittee with regard to the Highland and Island districts seemed to show a condition of affairs similar to that for which in Ireland the recent Viceregal Commission recommended the establishment of a National Medical Service, and this seems to the Subcommittee to be the only satisfactory solution of the difficulties of these districts.

In the towns the remuneration seems to be more on the scale of a retaining fee than an adequate payment for the work performed, and there is a just claim for a reconsideration of the scale of salaries.

With regard to the whole service, there is a consensus of opinion that the absence of any security of tenure is a serious impediment to the satisfactory performance of the work of the medical officer, while the need of provision for reasonable holiday and for superannuation is also urgent.

Schedule B.—Poorhouse Medical Officers.

From the 67 poorhouses 60 schedules were returned. The evidence seemed to the Subcommittee to prove that the time has arrived when the differences between the large houses with a resident staff and smaller houses with only visiting medical officers should be recognized by the redrafting of the regulations so as to adapt them definitely to these different conditions. It is also highly desirable that in the larger Poor-law hospitals now springing up the conditions of medical service should be made more like those afforded in the general hospitals. Where it is available, the poor should have such advantage of special medical assistance as is at the disposal of those who now receive it from charity.

As in the case of the outdoor medical officers, there is need for revision of the scale of salaries, provision for holidays, and for superannuation.

The following are instances of poorhouses with no resident medical staff:

1. Poorhouse contains 212 sick, infirm, and lunatic patients; 974 inmates admitted each year. Medical officer visits twice daily. Inclusive salary, £80.

2. Poorhouse contains 60 sick and infirm patients; 800 inmates admitted each year; 4 confinements attended and 9 inmates certified insane during the year. Medical officer visits daily. Inclusive salary, £60.

4. Poorhouse contains 38 sick and infirm patients; 150 inmates admitted each year. Medical officer visits daily. Salary, £28 *plus* lunacy fee £1 1s.

5. Poorhouse contains 10 sick and infirm patients; 18 inmates admitted each year. Medical officer visits twice a week. Inclusive salary, £12.

Schedule C.—Public Aspects of the Poor-law Medical Service.

Copies of this schedule to the number of 352 were returned, and the following short account of the evidence may be given.

Boarding Out.—There was a great preponderance of opinion in favour of this system in the case of children and of chronic inoffensive lunatics.

Aged Persons.—There was a marked preponderance of opinion in favour of their being relieved outside of the poorhouse, except in cases requiring nursing.

Deserted Wives.—The evidence was in favour of outdoor relief, and of the need which existed for the parish council directing them to the agencies by which they might get relief against their husbands.

Able-bodied Unemployed.—The evidence was against the giving of any parochial relief except to their sick dependants, but that it is also desirable that the parish council should direct them to the agencies by which they may be assisted to employment.

Compulsory Powers.—The medical officers are strongly of opinion that an increase of the compulsory powers of the parish council should be given, so that they may in suitable cases remove and detain in hospital sick paupers, detain in-and out paupers in the poorhouse, and separate children from vagrant or vicious parents.

Nursing.—The opinion of the medical officers is against any system of outdoor pauper nursing, and in favour of parish councils making contributions to the ordinary funds for district nursing.

R. C. Buist,
Chairman of the Subcommittee.

APPENDIX "A."

SCHEDULE "A."

ANALYSES AND TABULATION.

NUMBER OF REPLIES TABULATED, **420.**

PAYMENT.

Q. What are you paid:
(*a*) As outdoor medical officer.
(*b*) As public vaccinator.
(*c*) As certifier in lunacy.
(*d*) In midwifery cases.

SALARIES.

Replies to (*a*):

		£	
4	receive salaries	under 5	per annum.
56	"	between 5-10	"
86	"	" 10-20	"
75	"	" 20-30	"
85	"	" 30-50	"
38	"	" 50-70	"
45	"	" 70-100	"
9	"	" 100-130	"
5	"	" 130-150	"
3	"	" 150-170	"
3	"	" 170-200	"

1 (whole-time appointment) of £400.

Replies to (*b*), (*c*), and (*d*) grouped as follows:

Numbers paid inclusive sums for (*b*), (*c*), (*d*).

	No.
(*b*) As public vaccinator	209.
(*c*) As certifier in lunacy	106.
(*d*) In midwifery cases	113.

Fees Received.

As Public Vaccinator.		As Certifier in Lunacy.		For Midwifery.	
No.	Fee.	No.	Fee.	No.	Fee.
	s. d.		s. d.		s. d.
72	1 6	1	10 0	1	10 0
10	2 0	23	10 6	9	10 6
95	2 6	4	20 0	1	15 0
2	3 6	209	21 0	5	20 0
1	5 0	1	30 0	7	21 0
		1	40 0		
		1	50 0		

The majority do not answer the question as to midwifery fees in the way desired, but state that they have nothing to do with midwifery.

Q. Are you paid separately for cases from other parishes, and if so how much under each class of work, (*b*), (*c*) and (*d*)?

A. To (*b*)—Vaccination:

No.		Fees.
27	receive	1s. 6d.
2	"	2s. 0d.
38	"	2s. 6d.
1	receives	5s. 0d.

(The majority do not answer this question.)

A. To (*c*)—Lunacy:

No.		Fees.
3	receive	5s. 0d.
1	receives	7s. 6d.
9	receive	10s. 6d.
4	"	20s. 0d.
145	"	21s. 0d.
2	"	50s. 0d.

(A few get 2s. 6d. and 3s. 6d. for visiting a boarded-out lunatic.)

A. To (*d*)—Midwifery.*

No.		Fees.
1 receives	... ...	10s. 6d.
3 receive	... ...	20s. 0d.
3 „	... ...	21s. 0d.
1 receives	... ...	50s. 0d.

(* The majority reply that they have no midwifery.)

Q. If not so paid, how are the fees for other parish cases dealt with?

A. The medical officers appear to either receive no extra fees, or their work is done in reciprocal relation to other parishes.

WORK.

Q. How many applicants do you examine yearly?

A. Grand total, 52,946.

Q. How many cases of alleged insanity do you examine yearly?

A. Grand total, 2,723. (N.B. Sometimes each case is examined by two medical officers.)

Q. How many cases of vaccination do you deal with yearly? (*a*) Defaulters; (*b*) Paupers.

A. Total number of defaulters... ... ... 3,466.
„ „ paupers ... ... 2,074.

Q. How many visits do you pay yearly?

A. Grand total, 129,180.

Q. How many cases do you see at your own home yearly?

A. Grand total, 48,689.

Q. How many major operations do you perform yearly?

A. Grand total, 156. (The reason of this small figure is that nearly all are stated to be removed to hospital.)

Q. How many minor operations do you perform yearly?

A. Grand total, 1,685.

Q. How many confinements do you attend yearly?

A. Grand total, 612. (Very few answer this; those that do, state they only attend a few emergency cases.)

DRUGS, STIMULANTS, INVALID DIET.

Q. (1) How are drugs provided?

(2) What rules (if any) have you with regard to the supply of stimulants?

(3) What rules (if any) have you with regard to the ordering of invalid diet?

(4) Have you any difficulty in getting orders for drugs, stimulants, or invalid diet carried out?

The four foregoing questions are grouped, and the answers under different heads are as follows:

A. (1) Number of instances in which drugs are supplied either from the parish council's dispensaries or through local druggists, 200; by medical officer and charged for separately, 42; by medical officer, included in his salary, 122; by medical officer for fixed sum, 32.

(2) (3) (4) There seem to be no serious difficulty and no general rules.

Q. Is there any provision for nursing?

A. The majority answer "No," or None," but qualify their replies by stating something to the following effect:

(*a*) Nurses can easily be obtained locally in the parish from a district nursing association, to which in most cases the parish council subscribes.
(*b*) Some state they do not require nurses, as the serious cases are sent to the local hospital or infirmary.
(*c*) A few say they can hire a trained nurse if necessary.
(*d*) A few state they are only wanted in cases of infectious diseases.
(*e*) Many state they can easily get nurses by application to inspector of poor.

Generally the answers convey contentment under this heading rather than the contrary. A few answers imply that they would like facilities for having provision made for good nurses, as all they are able to fall back upon are the "handy woman" class, and untrained help generally, whilst a few state all they require is "unskilled help."

Q. Is there any special provision for removal of sick paupers to hospital—for example, ambulance?

A. Whilst a few answer "No," or "None," the majority appear satisfied, as they state that they are able to hire or borrow ambulances from local hospitals, and that the sick are generally removed by ambulance, wagon, boat, and steamer. In most cases the ambulance is obtained free, but the horse hire has to be paid for.

Q. Is suitable house accommodation to be had in the district?

A. 224 state "Yes," 110 "No."*

Q. Is any provision for a house made by the parish council?

A. 19 say "Yes," 364 "No."

Q. If not resident within the district have you an office there and who provides it? and

Is a conveyance necessary for your parochial work, and if so who pays for it?

A. The majority have no office and live miles out of the parish, unless they have a room at the offices of the inspector of poor. Very few state that it is necessary to keep a conveyance for parochial work. They cannot answer definitely because the conveyance is primarily kept for private practice though worked in for parochial work.

HOLIDAY.

Q. (1) Is any provision made for your getting an annual holiday? and

(2) Does the parish council bear part or the whole of the expense? If so, how much?

A. (1) 362 reply "No" or "None"; 6 "Yes."

(2) 257 state definitely "No" and 3 "Yes." In regard to the 6 "Yes," one states "that the parish council allows him £10"; another "is allowed £4 4s. per week"; while a third is allowed an "amount equivalent to his salary whilst on his holiday." 18 state that before they can take a holiday they have to find and pay a locum out of their own pocket. This is really implied in the above replies of "No" or "None," but in these 18 instances stress is laid on the question of finding and paying the locum.

SUPERANNUATION.

Q. Have you any superannuation arrangement?

A. The 409 answers are all in the negative.

TENURE.

Q. How long have you held office?

A. Tabulated as follows:

No.		No. of Years.
94	have held office between ...	... 0-5
93	„ „ „ „ ...	... 5-10
70	„ „ „ „ ...	... 10-15
60	„ „ „ „ ...	... 15-20
49	„ „ „ „ ...	... 20-30
21	„ „ „ „ ...	... 30-40
11	„ „ „ over	... 40
4	„ „ „ „	... 50
402		

Q. What are the terms of agreement with your parish council, especially in regard to terminating your appointment?

A. 127 state that they have "no agreement." Under this head is included "no agreement except notice of appointment," "hold office by 'tacit relocation,'" and "regulated by the rules of the Local Government Board, Scotland"; 52 state that they hold office "during the pleasure of the parish council"; 6 state that they hold their appointments "*ad vitam aut culpam*," but this is undoubtedly erroneous.

The following state that their appointments are terminable under the respective heads:

No.		Period of Time.
25	... ...	1 month's notice.
15	... ...	2 months' „
96	... ...	3 „ „
4	... ...	6 „ „
42	... ...	12 „ „
4	... ...	6 weeks' notice.

*Included in the 224 "Yes" are a few who state that "the parish council compels them to reside in the house and pay rent, despite the insanitary state of the houses in question."

Q. How often during the last ten years has the appointment of medical officer been vacant in your district (*a*) by dismissal, (*b*) by resignation?

A. Number of times vacant by dismissal, 26; by resignation, 213; by death, 53; Total, 292.

CONSULTATIONS, ANAESTHETICS, ETC.

Q. What provision is made for consultations and for professional assistance?

A. 312 state definitely "No" or "None." 50 state that though there is actually no provision, yet they are of opinion that the parish council would be willing to grant them assistance and pay for it. About 25 state that they have to rely upon a neighbouring practitioner or the services of their partner or assistant. Many point out the difficulty of obtaining assistance on account of some of the parishes being so isolated. A few (about 10) state that the parish council pays the consultant a fee of 21s., though they seldom have need of one.

Q. What provision is made for the administration of anaesthetics?

A. Over 400, or virtually all, answer "No" or "None," though a few qualify their answers in the same manner as the previous question, "Consultations." They have to principally fall back upon their neighbours, colleagues, etc.

FRACTURES, OPERATIONS, ETC.

Q. Is any provision made for the treatment of such cases?

A. 291 state definitely "No" or "None"; 14 answer "Yes"; 130 answer by stating that all such cases are removed to hospital; while a few state that they are supposed to reduce a dislocation and do what is necessary themselves.

Q. Is any fee paid by the parish council for such cases?

A. 321 answer "No" or "None"; 30 answer "Yes," of which a few state that the parish council contributes an annual sum to the local hospital, where the operation is sometimes performed. This sum is not stated except in two cases, where the parish council contributed £10 per annum in one case, £2 2s. in the other.

VACCINATION.

Q. Are you a public vaccinator?

A. "Yes," 383; "No," 16.

Q. Has the salary attached to the appointment of Poor-law medical officer been affected by the association of the two appointments?

A. "Yes," 18; "No," 319.

MEDICAL RELIEF.

Q. To what extent are you required to attend persons not in receipt of outdoor relief? and is such relief granted for dependants where the father is able-bodied?

A. The answers to both these questions are in the main "No." To the former question the majority state that they "have to attend all cases if requested by the inspector of poor." To the latter question by far the majority answer "No."

APPENDIX "B."

SCHEDULE "B."

NUMBER OF REPLIES TABULATED, 60.

Q. Are you a resident or a visiting medical officer?

A. 8 are "resident," 44 are "visiting."

PAYMENT.

Q. What is your salary?

A. These are grouped as follows:

No.	Salaries. £
4 receive	0–5
3 „	10–15
4 „	15–20
4 „	20–25
9 „	25–30
9 „	30–40
3 „	40–50
3 receive	50–60
2 „	60–70
2 „	70–80
7 „	80–100
3 „	120–130
1 „	130–140
1 „	140–160
1 „	380
2 „	550

Q. How are you paid for (*a*) Vaccinations; (*b*) lunacy certificates; (*c*) confinements; (*d*) treatment of fractures, dislocations; (*e*) operations?

A. The answers have been divided under two heads: one showing the number paid an inclusive sum; the other showing the number and fees under each head.

Inclusive Sum.

48 are paid an inclusive sum. Many get 21s. for each lunacy certificate. One getting an inclusive salary of £65 states that "to-day I did a double amputation. Anaesthetist and assistant get 21s. each, myself nothing." About 5 get £5 per annum for lunacy.

Special Fees.

Vaccinations: 8 receive 1s. 6d., 4 receive 2s. 6d.
Lunacy certificates: 1 receives 10s. 6d.; 31 receive 21s.
Confinements: 1 receives 10s. 6d.; 1 receives 21s.
Operations: 1 receives 10s. 6d.

WORK.

Q. If non-resident, how often do you visit the poor-house, and at what hour?

A.
27 visit daily.
2 visit twice daily.
3 visit twice weekly.
9 visit thrice weekly.
2 visit once a week.
1 visits once a fortnight.
2 visit "as required."

DRUGS, SURGICAL INSTRUMENTS, AND MEDICAL APPLIANCES.

Q. How are drugs provided?

A. The nature of the replies is somewhat diverse, but they have been interpreted under the following heads:

By chemist in the ordinary way and by contract with parish council	29
Provided either by the Board of Management or the House Committee on order of medical officer	10
Provided by medical officer for certain sum...	2
Provided by medical officer and paid for separately	6
Provided by parish dispensary	4

Q. Is there a dispenser?

A. Forty-two answer "No"; 6, "Yes"; and 2 state, "Two dispensers kept." One states, "It is part of my duty"; another, "No, matron administers medicine"; another, "By the house physician"; and a fourth, "Not required."

Q. How are surgical instruments and medical appliances provided?

A.

Ordered by medical officer as required, chiefly from druggists, but in a few cases from surgical instrument makers	28
Ordered by House Committee, board, or parish council, or by requisition to medical superintendent...	13
Ordered per requisition through governor of combination	2

Four state that they provide and use their own instruments; 2 that they borrow from hospital; about 10 do not answer the question.

HOLIDAY.

Q. Is any provision made for your getting an annual holiday?

A. 42 state "No" or "None." 8 answer in the affirmative, of which the following are some of the qualifications:

"Allowed £8 6s. for providing a locum."
"Relieved by a colleague."
"Allowed £9 9s. towards his locum."
"Senior assistant takes charge."

SUPERANNUATION.

Q. Have you any superannuation arrangement?

A. The answers are all in the negative.

Q. How long have you held office?

A. The answers are grouped in decades and periods of 5 years.

19	have held	office	for	...	...	0–5	years
4	,,	,,	,,	...	...	5–10	,,
8	,,	,,	,,	...	...	10–15	,,
8	,,	,,	,,	...	...	15–20	,,
3	,,	,,	,,	...	...	20–25	,,
5	,,	,,	,,	...	...	25–35	,,
4	,,	,,	,,	...	...	35–45	,,
2	,,	,,	,,	...	...	46	,,

CONSULTATIONS, ANAESTHETICS.

Q. What provision is made for consultations and for professional assistance?

A. Provision is made in 7 cases by implication as they do not definitely answer "Yes." The following illustrate some of the replies:

"I have two assistants in each hospital."
"Two medical officers consult with each other."
"Paid for when necessary."
"Both medical officers assist one another."
"House Committee pays consultant's fee when necessary."
"There is a substitute appointed to act in absence of medical officer, and his services are available; no fee exigible."
"Staff considered sufficient."
"No difficulty in obtaining fee for consultations."
"Left to myself to call in any one."
"Get assistance from colleagues."
"Ample."
"I get my deputy."
"My assistant is all I require."
"Outdoor and myself exchange, charging nothing extra."
"Consult with visiting medical officer."

Thirty-four state that "no provision" is made. The following illustrate the manner in which some of the answers are qualified:

"None required."
"No definite rules yet."
"Not required; three medical officers in charge."

Q. What provision is made for the administration of anaesthetics?

A. Eight state that provision is made.

One is paid a fee of 21s.
One is paid a fee of 10s. 6d.
"Board pays for anaesthetist."
"House Committee pays anaesthetist."

Twenty-nine state that no provision is made.

The following are a few answers, not included, for or against:

"Depends on friendly relations with the doctors."
"Have two assistants."
"Medical officers consult each other."
"Provide an anaesthetist myself."
"I arrange that."
"Resident medical officer gives anaesthetics."
"We help one another."
"Administered by one of assistants."
"Always given in presence of three medical officers."
"House-physician."
"My assistant gives chloroform."
"Favour of outdoor medical officer; no fee."

CLASSIFICATION.

Q. Is any system of classification apart from "Healthy," "Sick," and "Infirm," carried out in the poorhouse?

A. 41 answer "No"; 8 "Yes, as far as possible."

The following illustrate some of the replies not included in the foregoing:

"There are 3 classes, 'Infirm,' 'Ordinary' and 'Test,' the last having no privileges, e.g., 'visitors, permission to smoke, etc.' The children are, of course, separate."
"Sick and infirm requiring nursing are included under sick."
"Healthy subdivided into ordinary and test."
"Respectable class separated as far as possible."
"We have 8 classes of diet."
"The infirm are subdivided into ordinary infirm and privileged infirm—the latter being of good character and behaviour."
"Only sick inmates, healthy and infirm being sent to other institutions."
"Recently observation wards for four of each sex have been opened for suspected lunatics."
"Surgical, septic cases, aseptic cases, general cases, medical, maternity, and phthisis."

SURGICAL AND SPECIAL CASES.

Q Is there any arrangement by which surgical and special cases can be sent to a general hospital?

A. 33 state "Yes, sent to hospital or infirmary;" 19 answered "No"; 3 state "Surgery done in hospital"; 1 states "Not required."

APPENDIX "C."

SCHEDULE "C."

NUMBER OF REPLIES TABULATED, **352.**

PAUPER CHILDREN.

Q. Have you any experience of the comparative effects of boarding out and keeping children in the poorhouse? (*a*) Physical. (*b*) Moral.

A. (*a*) Physical: 105 consider "boarding out" more satisfactory; 19 prefer "poorhouse."
(*b*) Moral: 107 consider "boarding out" more satisfactory; 16 prefer "poorhouse"; while 143 state they have "no experience."

CHRONIC INOFFENSIVE LUNATICS.

Q. Have you any experience as to the results when (*a*) boarded out with relatives; (*b*) boarded out with strangers; (*c*) kept in lunacy wards?

A. These replies have had to be grouped under (*a*), (*b*), (*c*), "satisfactory," "unsatisfactory," and "no experience" respectively. (*a*) 165 consider boarding out with relatives "satisfactory," 22 "unsatisfactory." (*b*) 165 consider boarding out with strangers "satisfactory," 8 "unsatisfactory." (*c*) 37 consider maintenance in lunacy wards "satisfactory, 25 "unsatisfactory," while 187 state that they have had "no experience"; this figure 187 includes (*a*), (*b*), and (*c*), though the majority replying "no experience" answered in connexion with (*c*).

AGED PERSONS.

Q. Should these be relieved (*a*) by getting outdoor relief? (*b*) in special almshouses? (*c*) in special wards of the poorhouse?

A. The answers give the numbers who "prefer" under (*a*), (*b*), and (*c*) respectively: 233 approve (*a*), 66 (*b*), 141 (*c*).

"INS AND OUTS."

Q. Have you any suggestions to make as to the management of this class? (*a*) Physical defect, (*b*) mental defect short of certifiable lunacy, (*c*) alcoholism, (*d*) mere laziness.

The answers under this head are respectively as follows:

The majority answer that "Alcoholism," is held responsible. Next in order of frequency comes "Mere laziness" as responsible; while "Physical defect" and "Mental defect" are held responsible in about the same proportion.

The following are relative figures: 50 per cent. alcoholism, 20 per cent. mere laziness, 15 per cent. physical defect, 15 per cent. mental defect.

A great many are in favour of compulsory detention, that is, the parish council should have more control over them; or "firmly convinced that they should be more strictly dealt with, and their liberty of action curtailed." Also "the Governor or parish council should have power to detain for a definite period in case they come out to get liquor, and then apply for readmission," and "well known individuals should be confined in an asylum."

ABLE-BODIED APPLICANTS UNEMPLOYED.

Q. How are able-bodied applicants dealt with (*a*) when they acknowledge that they are able-bodied, (*b*) when they deny they are able-bodied?

A. With regard to (*a*): The majority state "that relief is refused"; they are "offered poorhouse"; they are "made to work," etc.

With regard to (*b*): Nearly all reply, "they are medically examined." The remainder of the replies are non-classifiable.

Q. Should relief be granted to able-bodied applicants, and, if so, of what nature?

A. The majority indicate the nature of relief as "Offer of poorhouse" and "Shelter for night in extreme weather." A few state "No relief should be granted in cases of laziness and drink."

Q. Have you any suggestion as to the relation of the Poor Law and unemployment in your district?

A. Nearly every answer is "No" or "No experience." The following are some of the suggestions of others than those who are included under "No" or "No experience":

"In deserving cases would suggest a very generous interpretation of the Poor Law."
"The attitude of the Poor Law to unemployed is too rigid."
"Work for unemployed should be municipal and not parochial."
"Official should report on circumstances of applicants, and report to Local Government Board alone, and relief granted on such report."
"Parish council should be in close touch with distress or other committees of the town council."
"Poor-law officials are best qualified to deal with these cases."
"In cases and times of exceptional distress parish relief might be granted by law under proper restrictions—the granting of relief for work done."
"All cases should be transferred to the parish authorities."
"These who come under the Poor Law are generally unfit to be employed; the question of unemployed should be dealt with outside Poor Law."
"Council should have power to start relief work under certain circumstances."
"Assistance should be given to starving unemployed to go where work is obtainable."
"Parish council and municipal authorities should co-operate in providing employment for those who are willing to work but cannot get it."
"Suggest that for a stated time—say, seven days—aliment be allowed to wife and children to allow honest endeavour to obtain work."
"Parish councils should co-operate on behalf of unemployed."
"Free hand to parish councils to relieve necessitous cases."
"Should be the duty of parish councils to establish labour colonies, or at least to provide labour in the poorhouses."

WOMEN COHABITING.

Q. (1) Should these be required to apply in the joint names of the pair?

A. 118 state "Yes"; 113 state "No."

Q. (2) Should the application be dealt with as if marriage subsisted?

A. 69 state "Yes"; 154 state "No."

WIVES DESERTED.

Q. In what manner should relief be granted in these cases?

A. 122 indicate "Outdoor relief"; 64 indicate "Poorhouse relief."

Q. Is any assistance given them in securing aliment from the husband?

A. 163 state "Yes"; 27 state "No"; while a few state "No experience," and a few do not answer at all. (N.B.—They usually get no assistance unless they are destitute and require relief, and frequently the poorhouse is the only form in which this is afforded.—R. C. B.)

CHILDREN OF VAGRANT OR VICIOUS PERSONS.

Q. Should these be separated from their parents, and, if so, how should they be relieved?

A. 235 answer "Yes, boarded out"; 120, "Yes, poorhouse."

POORHOUSE HOSPITALS.

Q. Should these be assimilated to the conditions in general hospitals?

A. 139 state "Yes"; 133, "No."

Q. Should Poor-law and general hospitals be brought under common management, municipal or otherwise?

A. 75 state "Yes"; 99, "No."

Q. Have you any suggestions to make with regard to general poorhouse administration?

A. The majority answer, "No suggestions to offer." The remainder make a few suggestions which come under one or other of the following:

"Power of governor and matron is too absolute. A general superintendent should visit these institutions frequently."
"Should be open to public inspection."
"Classification is very necessary, and married people should live as such in quarters set apart."
"Greater classification of inmates."
"Medical officer should have more authority, especially in the selection of assistants and nurses."
"More power should be given to governor to deal with refractories."
"Parish councils pay too much money for combination poorhouses."
"Occasional use of cottage hospital for Poor-law patients answers very well."
"All poorhouses should have trained nursing under control of medical officer."
"There are too many poorhouses."

NURSING.

Q. Should special Poor-law district nursing be provided throughout the country, or is it advisable that the parish council should subscribe to the nursing societies?

A. 270 state "that the parish councils should subscribe to nursing societies," 70 consider "that Poor-law district nurses should be provided."

OUT-PATIENT DEPARTMENTS.

Q. To what extent are persons for whom provision should be made under the Poor Law permitted or encouraged to make use of the out-patient departments of hospitals?

A. By far the majority definitely state that "persons are not permitted or encouraged."

COMPULSORY REMOVAL AND DETENTION.

Q. Should powers be granted for the compulsory removal of sick paupers to poorhouse hospitals?

A. 237 answer "Yes," 5 "No."

Q. Should powers be granted for the compulsory detention of sick or destitute persons in the poorhouse?

A. 222 answer "Yes," 10 "No."

Q. Should powers be granted for the compulsory detention of "ins and outs"?

A. 210 answer "Yes," 7 "No."

Q. Whether willing to give evidence before the Royal Commission?

A. 107 are willing, 72 are unwilling.

APPENDIX "D."

6, Melville Terrace, Stirling,
March 9th, 1907.

Dear Sir,—In preparing to lay before the Royal Commission evidence on behalf of the British Medical Association on the medical assistance of the poor in Scotland, the Subcommittee has had the advantage of much detailed information furnished by the individual medical officers, and the Subcommittee feel greatly indebted to them for the very great trouble they have taken. On some of the more general questions it is necessary that the Subcommittee should be able to give the opinion of the whole profession, and they request your Division to consider the subject at an early meeting, and to furnish such information as seems fit relating to the subjoined questions, and any other comments which the Division thinks fit to make. As the Commission is to begin taking evidence in Scotland in June, it will not be possible for the Subcommittee to make use of any information which is not furnished on or before April 30th.

Yours faithfully,
J. Ernest Moorhouse,
Secretary.

1. What local organizations have you for medical assistance of the poor (*a*) in hospital, (*b*) as out-patients, (*c*) at home?

It is desirable that distinction should be made of the various classes assisted and also of the various organizations under:

(*a*) *Official.*—Town Council, Sanitary Authority, Poor Law, etc.

(*b*) *Voluntary.*—Charities, Hospitals, Dispensaries, Nursing Societies, Provident Societies, Clubs, etc.

2. Is there any section of the poor unprovided for by your local organizations, and does the public health suffer from insufficiency in the quantity or in the quality of the assistance provided?

3. Is there any co-operation between your local organizations, or any overlapping, and is it possible and desirable to provide or extend such co-operation?

4. Would it be possible or desirable to hand over to one authority the whole work and duty of the medical assistance of the poor?

APPENDIX "E."

To the SECRETARY *of the* ROYAL COMMISSION ON POOR LAW.

STATEMENT OF THE SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION, IN SO FAR AS, IN THEIR OPINION, THE LAW OF SCOTLAND OUGHT TO BE ALTERED, IN THE INTERESTS OF THE PUBLIC AND THE MEDICAL SERVICE.

(1) *Tenure of Office.*—According to Section 66 of the Poor-law Act of 1845, medical officers of poorhouses can only be dismissed from their appointments by the Local Government Board, if it shall appear to the Board that such medical men are unfit or incompetent, or neglect their duties. Outdoor medical officers, not being specifically mentioned in the Act, have always been considered to have a different tenure of office, and may be dismissed by their parish councils, with or without cause being given; and even if appealed to, the Local Government Board declare that they have no power to prevent dismissal. This arbitrary power on the part of parish councils has been used, in many instances, in a very unjust manner, and medical officers have been dismissed from causes other than "incompetence or neglect of duty." As a result of the departmental inquiry of the Local Government Board, it has been recommended that outdoor medical officers should be made "statutory officers, and only dismissable by or with the consent of the Local Government Board."

(2) *Drugs, etc*, should not be included in the salary or compounded for by a slump sum, but, where practicable, dispensed by a druggist. In places where there is not a druggist within a reasonable distance, the medical officer should dispense the drugs, and be paid for the same by the parish council, at the same rate as if the drugs had been dispensed by a druggist. The Local Government Departmental Inquiry agreed that this claim should be granted.

(3) *Official Residence.*—In many country districts no suitable house can be got for the medical officer to live in. The result is that parish councils have great difficulty in getting a suitable medical officer, and changes in the medical officer occur at frequent intervals. This state of matters is highly detrimental to the interests of the public at large. The Local Government Departmental Inquiry recommended that parish councils be authorized to use the rates in building a suitable residence for the medical officer.

(4) *Medical Extras, Diet, Stimulants, etc.*—The medical officer, at present, has the power of recommending medical extras, but this is subject to the veto of the inspector of poor—a veto which has been exercised frequently. The Local Government Departmental Inquiry recommended that inspectors still retain the power of veto, but, when that power is exercised, he must give his reasons, in writing, to the medical officer.

(5) *Fractures, Midwifery, etc.*—At present the attendance on all such extra cases is included in the salary, *no extra fees being paid.* This is an undoubted grievance, because in a country district a medical officer might require to pay a very large proportion of his official salary in attending to such a case in a remote part of his district. We think we ought to be paid extra fees for such cases, the same as medical officers in England.

(6) *Vaccination.*—In the Vaccination (Scotland) Act a minimum fee of only 1s. 6d. is allowed, no provision being made for any extra fee, according to mileage. Some parish councils compound for vaccination fees by a slump sum; others give nothing, but include vaccination in the salary. This is manifestly wrong, because a medical officer might require to drive many miles to perform his vaccination duties, for the minimum fee of 1s. 6d. We think we ought to be put on the same footing as vaccination medical officers in England.

(7) *Lunacy.*—In Scotland the certification of lunatics is in a chaotic state. The Scottish Lunacy Act makes no provision for any fee being paid. Some parish councils pay their medical officers 21s. for each certificate. Others pay 10s. 6d., while others pay nothing, but include the duties in the official salary. In cases of lunatics who belong to other parishes, parish councils, in rendering their accounts against each other, always charge 21s. for each certificate, and by so doing, in the latter instances, make a profit out of the work of their medical officers. We think we ought to be paid a minimum fee of 21s. in every case, and in country districts a mileage fee in addition, according to distance.

(8) *Holidays, Sickness, etc.*—No provision is made in Scotland for the medical officer being allowed a holiday, or for his duties being attended to during sickness. This in some parts of Scotland is felt to be a great grievance. We think parish councils ought to pay the cost of a locumtenent during holidays or sickness.

(9) *Superannuation.*—No provision is made in Scotland for the medical officer being superannuated when from ill-health, age, or otherwise he is unable to perform his professional duties. This is felt to be a very great grievance. We think we ought to be put into the same position as regards superannuation as medical officers are in England.

My Committee do not consider it necessary to lead evidence on matters outside of what affects themselves as outdoor medical officers, for the reason that a most elaborate statement on all the points affecting the medical relief of the poor in Scotland will be presented to the Royal Commission on behalf of the British Medical Association.

Glasgow, March 28th, 1907.

APPENDIX "F."

STATEMENT SUBMITTED TO THE ROYAL COMMISSION ON THE POOR LAWS AND RELIEF OF DISTRESS, MAY 6TH, 1907.

A.—OUTDOOR MEDICAL SERVICE.

The Committee has received returns from 420 outdoor medical officers, the total number of districts dealt with being somewhat larger.

The condition of the medical service varies greatly, that in the populous towns being quite different from that in the Highland and Island districts.

RECOMMENDATIONS.

1. *Highlands and Islands.*

In many districts it is impossible to supplement the medical officer's salary by private practice.

In many districts there is no suitable house for the medical officer, and the rates cannot be used for building one.

The Committee would suggest that in these districts there is need for a national service, such as has been recommended for Ireland by the Viceregal Commission.

2. *Payment of Medical Officers.*

In the towns the medical officer is paid at a very low rate per attendance, and his salary is more like a retaining fee than a payment for work done.

The salary should be fixed in consideration of medical attendance only. Drugs and other materials should be provided under a separate contract.

There is no fixed method of remuneration for:
1. Vaccinations;
2. Lunacy certificates; and
3. Confinements;
and fees are not paid at all for:
4. The treatment of fractures and dislocations; and
5. Operations.
Special fees should be paid for these services.

3. *Consultations and Administration of Anaesthetics.*
Provision should be made for consultations and the administration of anaesthetics.

4. *Tenure of Office.*
The want of such security of tenure of office as would be conferred by requiring the sanction of the Local Government Board to the dismissal of a medical officer is keenly felt.

5. *Holidays of Medical Officers.*
Medical officers should be allowed a definite holiday every year, during which the parish council should defray the expense of a substitute.

6. *Superannuation.*
Some scheme of superannuation is desirable.

B.—Indoor Medical Service.
The committee has received returns from 60 poorhouse medical officers.

Recommendations.
1. *Management of Poorhouses.*
In drafting rules for the management of poorhouses, a distinction should be made between the larger and smaller poorhouses. Special rules should be drafted for poorhouses having a resident medical staff.

2. *Poorhouse Hospitals.*
Whatever medical or surgical treatment is attempted in poorhouse hospitals should be assimilated to that in general hospitals, especially as to the standard of nursing, food, and drugs. In smaller poorhouses arrangements should be made for the transference of cases requiring operations to other institutions.

3. *Payment of Medical Officers.*
The salary of the poorhouse medical officer should be fixed in consideration of medical attendance only. Drugs and other materials should be provided under a separate contract.
In addition to the salary, special fees should be paid for:
1. Vaccinations;
2. Lunacy certificates;
3. Confinements;
4. The treatment of fractures and dislocations; and
5. Operations.

4. *Consultations and Administration of Anaesthetics.*
Provision should be made for consultations and the administration of anaesthetics in smaller poorhouses.

5. *Tenure of Office.*
From the Poor-law Act of 1845 it is assumed that poorhouse medical officers can only be dismissed by the Local Government Board. This point has never been tested, but the matter should be put beyond question.

6. *Holidays of Medical Officers.*
Medical officers should be allowed a definite holiday every year, during which the Poorhouse Committee should defray the expense of a substitute.

7. *Superannuation.*
Some scheme of superannuation is desirable.

C.—Public Aspects of Poor-law Medical Service.
The Committee has received returns from 352 medical officers.

Recommendations.
1. *Pauper Children.*
The replies show a large preponderance of opinion in favour of the system of boarding-out, both in its physical and moral effects.

2. *Chronic Inoffensive Lunatics.*
The replies show a large preponderance of opinion in favour of boarding-out with relatives or with strangers, in preference to treatment in lunacy wards.

3. *Aged Persons.*
One-half of the replies are in favour of outdoor relief, one-sixth of special almshouses, one-third of special poorhouse wards, giving a preponderance of 2 to 1 in favour of relief outside poorhouses.
The committee is of opinion that aged persons who require nursing are best relieved in the poorhouse.

4. *Deserted Wives.*
The replies show a preponderance of 2 to 1 in favour of outdoor relief. In all cases it is desirable that the parish council should give a direct reference to some agency, such as the legal agent for the poor, to assist the wife in securing aliment from the husband.

5. *Able-bodied Unemployed.*
Upon consideration of the information collected, the Committee is of opinion that in all cases of application for relief the parish council should give a direct reference to some agency for relief of the unemployed, and that Poor-law relief should only be granted to the sick dependants of able-bodied unemployed persons.

6. *Compulsory Powers.*
The replies show a large preponderance of opinion in favour of compulsory powers being granted for:
(*a*) The removal of sick paupers to poorhouse hospitals;
(*b*) The detention of sick paupers in poorhouse hospitals;
(*c*) The detention of "ins and outs" in poorhouses.
(*d*) The separation of children from vagrant or vicious parents.

7. *Outdoor Nursing.*
The replies show a preponderance of 4 to 1 in favour of parish councils subscribing to district nursing associations for the poor in preference to the institution of special Poor-law district nurses.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

DORSET AND WEST HANTS BRANCH:
Bournemouth Division.

The annual general meeting of this Division was held at the Medical Society's Rooms on May 20th.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Johnson Smyth; *Vice-Chairman*, Dr. Eleanor Bond; *Representative*, Dr. Parkinson; *Honorary Secretary*, Dr. E. Kaye Le Fleming. *Members of Branch Council*, Drs. Parkinson, Le Fleming, Bond, Bushman, Ramsay, Ross, Snow; *Executive Committee*, Drs. Fowler, Marriner, Alexander.

The Term "Hospital."—The proposed definition of the term "hospital," recommended by the Central Ethical Committee, was adopted.

Medical Examination for Life Insurance.—A. The Scottish Equitable Insurance Company was reported by one member as always paying one guinea.
B. 5. Yes.
6. No.
7. No.
8. Ten shillings and sixpence.
9. Five shillings.

Mode of Election to Central Council.—A discussion on the proposed method of election of members of the Council of the British Medical Association followed. The following resolution, proposed by Dr. Parkinson and seconded by Dr. Snow, was passed unanimously, and the honorary

secretary instructed to forward the resolution to be placed on the agenda of the Annual Representative Meeting:

That single constituencies be formed of one or more Branches and the member of the Council be elected by the Representatives of the Divisions comprised in the area thereof from the members of the British Medical Association resident therein.

LANCASHIRE AND CHESHIRE BRANCH:

ASHTON UNDER LYNE DIVISION.

A MEETING of this Division was held at the George and Dragon, Ashton-under-Lyne, on Friday, May 22nd, Dr. HILTON in the chair. Sixteen members were present.

Election to Central Council.—Messrs. GARSTANG, LARKIN, MACFIE, and TAYLOR addressed the meeting in support of their candidature for election to the Central Council. At the close it was unanimously decided:

That this meeting thanks the candidates for their addresses, heartily endorses their candidature, and will use every endeavour to secure their election.

BLACKBURN DIVISION.

THE annual meeting of this Division was held at the Old Bull, Blackburn, on May 15th, Dr. R. Y. AITKEN in the chair. There were also present Drs. Cunliffe, Macklin, Barr, Alcock, Arnold, Miller, Prebble, Jones, Ballantyne, Taylor, Bannister, Scott Heyliger, A. B. Craig, Moir, Rigby, Henry.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Election of Officers.—The following officers were elected: *Chairman*, Dr. Macklin; *Vice-Chairman*, Dr. Bannister; *Honorary Secretary and Treasurer*, Dr. Alfred Greenwood; *Representative for Representative Meetings*, Dr. Alfred Greenwood; *Representatives to Branch Council*, Drs. P. Prebble and H. Henry; *Executive Committee*, Drs. Cunliffe, A. B. Craig, Ballantyne, and Moir.

Lynn Thomas and Skyrme Fund.—It was resolved that another circular be sent to members asking for subscriptions to be sent by the Blackburn Division to the Lynn Thomas and Skyrme Fund before May 25th.

Epsom College.—It was resolved that at a future meeting the question of subscriptions to the Epsom College should be considered.

Medical Examinations for Life Insurance.—The question of life insurance fees as included in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of February 22nd, 1908, p. 71, was then considered, and the following decisions were arrived at:

1. (*a*), (*b*), (*c*). Not answered.
2. Yes.
3. Full.
4. Yes (industrial and shorter reports).
5. No.
6. No.
7. No.
8. Yes.
9. Five shillings.

Vote of Thanks.—A vote of thanks to Dr. Aitken for the able way in which he had filled the presidential chair during the past twelve months was passed unanimously.

LEIGH DIVISION.

THE annual general meeting of this Division was held in the Co-operative Rooms, Leigh, on May 21st, Dr. C. CHALLINOR in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Secretary's Report.—The Honorary Secretary's report was read and adopted.

Election of Officers.—The following were elected:—*Chairman*, Dr. H. S. Hall; *Vice-Chairman*, Dr. C. Challinor; *Representative on Branch Council*, Dr. F. E. Wynne; *Honorary Secretary*, Dr. G. H. Shaw; *Executive Committee*, Drs. R. J. Martin, M. J. Halton, J. S. Martin, T. Gray.

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

A SPECIAL general meeting of this Division was held at the Great Eastern Hotel, Liverpool Street, E.C., on Tuesday, May 19th, at 9.30 p.m. Dr. SOUTHCOMBE (Chairman) presided.

Confirmation of Minutes.—The minutes of the last general meeting were read, confirmed, and signed by the Chairman.

The Term "Hospital."—After discussion, it was proposed by the HONORARY SECRETARY (Mr. Salisbury), and seconded by Dr. GREENWOOD, that in the opinion of those present, the word "hospital" cannot be rigidly defined. This was carried unanimously.

Prevention of Corruption Act.—It was resolved that this should be brought before the notice of members of the Division.

Medical Examination for Life Insurance.—In answer to the questions requested by the Medico-Political Committee, the following answers were agreed upon:

1. Many of them.
2. Yes, many of them.
3. Only require a short report.
4. Yes, but they only require a shorter report, such as example B.
5. Yes, for small amounts under £100.
6. No. Minimum fee 21s.
7. No.
8. Yes.
9. 2s. 6d. for amounts under £25, if patient is examined at the surgery of examiner.

Medical Inspection of School Children.—The whole of the suggestions of the Medico-Political Committee *re* conditions of appointment of education officers were agreed to.

Election of Office-Bearers.—The following were the nominations of this Division for the respective offices on the Branch Council: *President-elect*, Dr. Wynn Westcott; *Vice-President*, Dr. A. G. Southcombe; *Representative on Central Council*, Dr. Shadwell; *Honorary Secretary*, Dr. Goodall. Dr. Goodall was elected as Representative of the Division at the annual meeting, and Mr. F. Wallace was appointed his deputy. The meeting then terminated.

KENSINGTON DIVISION.

A MEETING of the Division was held at the Kensington Town Hall at 5 p.m., on Monday, May 25th, Dr. A. J. RICE OXLEY in the chair.

Nominations.—The following nominations were made for office on the Council of the Metropolitan Counties Branch: *President elect*, Dr. Wm. Wynn Westcott; *Vice-President*, Dr. W. H. Lamb; *Honorary Treasurer*, Mr. Betham Robinson; *Honorary Secretaries*, Mr. Atwood Thorne, Dr. E. W. Goodall; *Representative on Central Council*, Dr. Crawford Thomson.

Vote of Thanks to Mr. Eastes.—A hearty vote of thanks was accorded to Mr. George Eastes for his services to the Association and the Division while a member of the Central Council.

The Term "Hospital."—Dr. CRAWFORD THOMSON moved, and Dr. LAMB seconded:

That it is inadvisable to define the word "hospital"; as such a definition can be of little use, and might lead to grave mistakes.

This was carried by 5 votes to 2.

Medical Fees for Life Insurance Examinations.—Answers were given to the questions asked by the Medico-Political Committee on the subject of the fees paid by life insurance offices for medical examinations.

Establishment of Institutions for Gratuitous Treatment.—Mr. STURGE moved:

That it is desirable that no fresh institution for the gratuitous treatment of patients should be opened without previous consultation with the committee of the Division or of the Branch of the British Medical Association in which it is proposed to establish such new institution.

The resolution was seconded by Dr. CRAWFORD THOMSON and carried unanimously. It was then decided to instruct the Representative of the Division to move the same resolution at the Representative Meeting at Sheffield.

RICHMOND DIVISION.

THE annual meeting of this Division was held at the Sun Hotel, Kingston, on Wednesday, May 13th, Dr. J. R. JOHNSON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. Charles Flair; *Vice-Chairman*, Dr. J. R. Johnson; *Representative at Representative Meeting*, Dr. R. Langdon Down; *Representative on Branch Council*, Dr. F. G. Crookshank; *Honorary Secretary and Treasurer*, Dr. G. Cardno Still; *Honorary Assistant Secretary*, Dr. A. E. Evans; *Other Members of the Executive Committee*, Dr. M. O. Coleman, Dr. J. H. Crocker, Dr. H. E. Crook, Dr. H. L. Cumming, Dr. G. J. Maguire, Oliver Richards, Esq., Dr. G. E. Shuttleworth, Dr. R. W. Wilson, Dr. A. Senior.

Annual Representative Meeting.—The Representative of the Richmond Division asked for the authority of the Division to support at the Representative Meeting certain proposals which had been made by the President of the Association with reference to the proposed new Charter. After a discussion on these proposals it was unanimously agreed that Dr. R. Langdon-Down should support these proposals or act with regard to them as he considered best.

NORTH OF ENGLAND BRANCH:
DURHAM COMMITTEE.

THE sixteenth meeting of this Committee was held at Sunderland on Friday, May 8th, Dr. JEPSON in the chair, and the following were present: Drs. Adamson (Hetton-le-Hole), Todd (Sunderland), Arthur (Wingate) Cox (Gateshead), Galloway (Low Fell), and Jaques (Washington), and Messrs. A. T. and R. A. Shepherd, Secretaries.

Confirmation of Minutes.—The minutes of the previous meeting held on February 14th were read and confirmed.

Miners and Colliery Doctor: Workmen's Compensation Cases.—The SECRETARIES read a letter they had received from the secretary of a miners' lodge, in which he asked for replies to certain questions which affected the miners and their doctor in connexion with cases arising out of the Compensation Acts, and alleging *inter alia* that as their doctor also acted for the employers in accident cases he could not conscientiously act and do justice for both parties. The member referred to by the miners, at the request of the meeting, explained how the matter had arisen, and quoted specific cases which he thought the miners evidently referred to, and discussed the merits of same. A discussion afterwards took place, the general feeling of the meeting being that the principle of acting for both sides was a wrong one, especially having regard to the change brought about by the working of the Compensation Acts. It was ultimately resolved, on the motion of Mr. TODD, seconded by Dr COX (the President of the Branch) that as the miners' letter had opened out a very important question, it was very desirable to call a special meeting of all the colliery doctors in the county in order that the matter might be thoroughly discussed, and a decision arrived at as to the best steps to be taken under the peculiar circumstances to put an end to the unsatisfactory position in which colliery doctors were placed at the present time in their relations with their patients, and their obligations to the colliery owners in regard to cases arising under the Compensation Acts.

SOUTH-EASTERN BRANCH:
REIGATE DIVISION.

THE annual meeting was held at the White Hart Hotel, Reigate, at 5.30 p.m., on May 14th, Dr. BROMET in the chair. There were present: Drs. Berridge, Blackler, Caldecott, Dempster, Gayner, Ogle, Pegg, Price, Prince, Rawlings, Sewill, Walters, and Watson.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Matters Discussed during the Past Year.—The CHAIRMAN reported on the subsequent history of matters discussed during the past year, namely, medical law reform, the referendum, medical inspection of school children, Notification of Births Bill, etc.

Election of Officers.—The officers of the Division for the ensuing year were elected as follows: *Chairman*, Dr. John Walters, J.P.; *Vice-Chairman*, Dr. Rawlings; *Representative on the South-Eastern Branch Council*, Dr. Caldecott; *Representative at the Annual Meeting*, Dr. Berridge; *Committee*, Drs. Berridge, Blackler, Bromet, Porter, Prince, and A. R. Walters; *Honorary Secretary and Treasurer*, Dr. John G. Ogle.

The Term "Hospital."—It was proposed by Dr. BROMET and seconded by Dr. WALTERS, that the definition suggested by the Central Ethical Committee should be accepted with the addition of the word "only" after "necessitous patients." An amendment was proposed by Dr. CALDECOTT, and seconded by Dr. BERRIDGE, that the original definition be approved. This was negatived by two votes to ten and the resolution was carried with two dissentients.

Medical Examinations for Life Insurance.

A. *Questions of Fact*.—Mr. SEWILL proposed and Dr. RAWLINGS seconded:

> That the Honorary Secretary prepare and send to all members of the Division a circular requesting answers to the questions of fact submitted to the Division by the Medico-Political Committee.

This was carried, the Honorary Secretary alone protesting.

B. *Questions of Opinion*.—Proposed by Dr. BROMET and seconded by Dr. WALTERS:

> Q. 5. That a fee of less than one guinea be accepted only when the insurance is for less than £50.
> Q. 6. That a fee of less than one guinea be accepted for no report, full or otherwise, except when the insurance is for less than £50.
> Q. 7. That a fee of less than one guinea would be adequate remuneration for filling up Schedule A, *only* when the insurance is for less than £50.
> Q. 8. That Schedule B is inadequate, and that 10s. 6d. should be the lowest fee for examination for life insurance.
> Q. 9. That 10s. 6d. should be the lowest fee, and that a form such as Schedule C. should not be allowed for life insurance.

These resolutions were carried unanimously (fourteen voting).

Prevention of Corruption Act.—The Memorandum of the Central Ethical Committee on the Prevention of Corruption Act, 1906, was read and discussed. No resolution was submitted, but a strong feeling was pretty generally expressed against the opinion of the solicitor of the Association as set forth in the Memorandum.

Medical Law Reform and Quackery.—Mr. SEWILL made an important statement as to the progress of the agitation re medical law reform and quackery, and proposed the following resolution:

> In view of the fact that, since their resolution of July 11th was sent in, the Australian Commission has proved the practicability of such a method of repairing the defects in medical law and the evils of the traffic in quack medicines and apparatus, the Reigate Division would once more urge the Council to press forward the movement for a Royal Commission in this country.

This was seconded by Dr. BLACKLER and carried unanimously.

Dinner.—After the meeting fifteen members of the Reigate Division and the Reigate District Medical Society dined together.

SOUTH-EASTERN OF IRELAND BRANCH.

THE annual meeting of this Branch was held at the Victoria Hotel, Kilkenny, on May 6th, at 5.30 p.m.

Installation of President.—P. J. MURPHY F.R.C.S.I., took the chair. The other members present were ten in number.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed by the Chairman.

Apologies for Non-Attendance.—Letters of apology were read from two members and telegrams from two also.

Model Rules.—A letter was read from the Medical Secretary to state that pending the revision of the model rules, on which the Ethical Committee had been engaged for some time, no rules differing materially in principle from rules already approved should be sanctioned and that the special circumstances of the Branch would be carefully considered, both as affecting the general question of the framing of the rules and also as to whether the Branch should be made an exception from any general principle laid down.

Letters.—Letters in acknowledgement of resolution of condolence were received from Mrs. F. Wm. Staunton and the Rev. E. J. Staunton.

Resolutions.—It was proposed by Dr. MACKESY and seconded by Dr. JAMES:

> That a vote of regret for his recent accident be forwarded to Dr. Walshe.

It was proposed by Dr. FARMER, and seconded by Dr. CAREY:

That a vote of congratulation be sent to Dr. Wm. Morris on the occasion of his appointment to H.M. Prison, Waterford.

Notice of Motion.—Dr. WYNNE gave notice that at the next meeting to be held in Clonmel, 3rd prox., he would propose:

That it is advisable to fix a minimum rate at which contract practice should be undertaken.

Representation on Central Council.—On the motion of Dr. CAREY, seconded by Dr. J. N. SHEE, Geo. J. Mackesy, M.B. (Waterford), was unanimously elected Representative on the Council of the Association in lieu of Dr. Walshe, who had completed the limited number of years, namely, six in succession.

Office-Bearers.—The other office-bearers were re elected.

Paper.—Dr. JELLETT read a most able and interesting paper on a case of mastoid disease with operation, which was highly applauded.

Dinner.—The members dined together.

SOUTHERN BRANCH:
SALISBURY DIVISION.

THE annual meeting of this Division was held on Wednesday, May 13th, at the Infirmary, Salisbury. Mr. R. T. RICHMOND, Chairman, presided, and there were present: Drs L. S. Luckham, Partridge, Manning, Genge, Lockyer, Hall, March, C. R. Straton, and J. E. Gordon (Honorary Secretary).

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Officers.—The following office-bearers were elected: *Chairman*, R. T. Richmond (Wilton); *Vice-Chairman*, C. A. Ensor (Fisbury); *Honorary Secretary and Treasurer*, J. E. Gordon; *Representatives on Branch Council*, L. S. Luckham (Salisbury), J. O. March (Amesbury); *Executive Committee*, H. P. Blackmore, M.D., G. Kempe, M.D., R. L. Willcox, H. L. E. Wilks; *Representative at Representative Meeting of the Association*, C. R. Straton.

Vote of Thanks to Representative.—A unanimous vote of thanks was accorded to Mr. Straton for his past services to the Division.

Report of Executive Committee.—The SECRETARY read the report of the Executive Committee. The total number of members on December 31st, 1907, was 59. The number of meetings held during the year was three, the average attendance of members being 18. The Executive Committee had met three times.

Central Emergency Fund.—As the result of an appeal to the members on behalf of the Central Emergency Fund (Ebbw Vale dispute) the sum of £7 4s. 3d. was collected and forwarded to the Medical Secretary of the Association.

Treasurer's Report.—The Treasurer's report and balance sheet, showing a balance in hand of £14 8s. 9½d. was submitted and passed.

Donation to the Infirmary.—It was resolved to give a donation of £2 2s. to the infirmary.

Vote of Thanks to Infirmary Committee.—It was proposed, and unanimously carried, that a vote of thanks be given to the committee of the infirmary for allowing the Division to use their room for meetings held at the infirmary.

The Term "Hospital." The question submitted was approved of, with the substitution of the word *and* instead of *or* in Q. 2 after the words "in the hands of medical."

Medical Examination for Life Assurance.—The following resolution of the previous meeting—

That the fee for examinations in cases of ordinary life assurance should be at least 10s. 6d. up to and including £100 policies, and £1 1s. for policies over £100

was carried unanimously.

The Referendum.—It was proposed by Dr. MANNING, and seconded by Dr. MARCH:

That in case of any Referendum under the new Charter, every member of a Division shall have an opportunity of recording his vote by ballot paper.

Carried unanimously as an instruction to the Division Representative.

Vote of Thanks to Retiring Chairman.—A unanimous vote of thanks was accorded to Dr. E. A. Farr (Andover), the retiring Chairman of the Division.

Note.—With regard to Dr. Manning's resolution, it was the wish of the Division that this resolution should appear in the Agenda of the Representative Meeting.

SOUTH MIDLAND BRANCH:
BEDFORD AND HERTS DIVISION.

A MEETING of the Division was held at the Bedford Arms, Woburn, on Thursday, May 14th, Dr. HARTLEY of Bedford in the chair.

Luncheon.—Members having most kindly been invited to luncheon by Dr. A. Lucas of Woburn, about twenty-five accepted.

Confirmation of Minutes.—The meeting commenced at 2.45 p.m. The CHAIRMAN called upon the Secretary to read the minutes of the last meeting. These were read and confirmed.

Apologies for Non-attendance.—Telegrams of regret at being unable to be present at this meeting were received from Drs. Shillitoe of Hitchin, and Wickham of Newport Pagnell.

Papers.—Dr. A. LUCAS read a paper entitled Notes of Four Cases of Cranial Tumours. This was followed by a discussion in which several members took part. Dr. S. J. Ross read a paper on Bacteriology in General Practice; this led to a discussion.

Vote of Thanks.—Dr. A. C. HARTLEY proposed a vote of thanks to Dr. A. Lucas for his kindness in entertaining the members. This was seconded by Dr. WINCKWORTH, and carried unanimously.

Visit to Woburn Park.—After the meeting, by kind permission of the Duke of Bedford, members were driven round the park in carriages placed at their disposal by the Duke. Halts were made at various places in order that the zoological collection might be inspected, and the members were driven back to the Bedford Arms, where tea was provided for them by the generosity of Dr. A. Lucas.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:
CARDIFF DIVISION.

A MEETING of the Cardiff Division was held at the Cardiff Infirmary on May 25th. Sixteen members were present.

Revision of Draft Charter.—The following resolutions with reference to the revision of the Draft Charter were considered and carried unanimously:

1. That a decision of the Representative Meeting to adopt for the furtherance of the objects of the Association, any of the means specified in Clause 2 (2) of the Charter not previously adopted shall require confirmation by another Representative Meeting. If so confirmed the proposal will then come before the Council, who may take a referendum.
2. That the referendum, whenever taken, shall be by means of voting papers sent to every individual member of the Association.

Election of Representatives.—It was also resolved:

That nominations should be received by a certain date, and, in case of a contest, that the election shall be by voting papers sent to each member of the Division.

Standing Committees.—The following resolution was passed:

That such committees shall receive instruction from and report to the Council.

It was also decided unanimously at the meeting:

That the Chairman, the two Secretaries, and the Representative be empowered to present these resolutions in such altered form (if any), without altering their sense, as may be recommended from head quarters.

STIRLING BRANCH.

THE annual general meeting for 1908 was held in the Station Hotel, Larbert, on Thursday, May 14th, at 4.30 p.m. Dr. MACGOWAN, President, was in the chair. There were also present: Drs. Alexander, Clarkson, Gardner, Griffiths, McCracken, MacGowan, Mackenzie, Mitchell, Shanks, Stewart, and Farquahar Macrae (Glasgow).

Confirmation of Minutes.—The minutes of the autumn general meeting were signed by the President.

Election of Office-bearers.—The following office-bearers were elected for the ensuing year: *President*, Dr. James Robertson (Clackmannan); *Vice-President*, Dr. Dugald

Mitchell (Camelon); *Representative*, Dr. George Gardner (2A, George Street, Falkirk); *Secretaries*, Dr. Moorhouse and Dr. Stewart; *Council*, Dr. MacGowan, Dr. Wilson (Allon), Dr. Wood (Grangemouth), Dr. Hunter (Falkirk).

Report of Council.—The Council reported that two meetings of the Branch were held during 1907. The average attendance was 11. The membership of the Branch was 69. The balance of funds at the end of 1906 was £20 17s. 2d.; at the end of 1907 £29 11s. 7d.

Vote of Sympathy.—On the motion of Dr. MacGowan, seconded by Dr. Mitchell, the Secretary was instructed to convey to Dr. Moorhouse the sympathy of the members of the Branch with him in his recent illness, and their congratulations on his recovery and prospect of speedy resumption of work.

Address.—Dr. Farquhar Macrae (Glasgow) gave an address on the surgical abdominal complications of typhoid fever. The lecturer confined his remarks to cases of peritonitis occurring during the course of the fever. He enumerated the causes of peritonitis, and gave an account of the symptoms and differential diagnosis. The operative treatment of perforation was fully described, and details given of the after-care of the patient. On the motion of the President, the lecturer was awarded the hearty thanks of the members, for an address which had proved of the greatest interest to all present.

TRANSVAAL BRANCH.

The annual meeting of the Branch was held in Johannesburg on April 25th.

President's Address.—The President delivered his Presidential address.

Election of Officers.—The following were elected office-bearers for the ensuing year: *President*, Dr. Temple Mursell, Johannesburg; *Vice-President*, Major J. Buist, R.A.M.C.; *Treasurer*, J. McD. Troup; *Secretary*, G. D. Maynard; *Members of Council*, Sir Kendal Franks, Drs. J. J. Boyd, H. A. Spencer, C. Porter; *Representative*, G. Michie, Johannesburg.

South Africa Committee.—The regulations for the South Africa Committee were approved by the Branch.

New Members.—The following were elected members: J. H. Rousseau, M.B., Middleburg, Transvaal; G. H. W. Ellacombe, Livingstone, Rhodesia; R. J. C. Thompson, Lieutenant, R.A.M.C., Roberts's Heights; J. C. Neillie, M.B., P.O. Box 91, Boxburg; W. H. Maxwell, F.R.C.S., P.O. Box 473, Johannesburg.

Annual Banquet.—The annual banquet was held in the Athenæum Club in the evening.

YORKSHIRE BRANCH:

Harrogate Division.

A meeting of the Harrogate Division was held at the Prospect Hotel, Harrogate, on Thursday, April 30th, at 5.30 p.m., Dr. Edgecombe in the chair. There were present: Drs. Green, Mouillot, Boyd, Lever, Garrad, Wilson, Black, Mantle, Nixon, Atkinson, Gibson, and Williams, visitor.

Confirmation of Minutes.—The minutes were read and confirmed.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. G. R. Green; *Vice-Chairman*, Dr. W. Bain; *Honorary Secretary*, Dr. C. Gibson; *Representative for Representative Meeting*, Dr. C. Gibson; *Representative for Branch Council*, Dr. E. Solly; *Executive Committee*, Drs. Chamberlain, Collier, Daggett, Garrad, Holroyd, Lever, Mackay, Rutherford, Solly, W. B. Watson, and W. M. C. Watson.

Female Inebriety.—The circular of inquiry as to female inebriety from the Church of England Temperance Society had been sent to members. Grocers' licences and low-class clubs with affiliated members were looked upon as powerful causes of inebriety and demoralization.

The Term "Hospital."—The definition of the term "hospital" as proposed by the Central Ethical Committee was agreed to.

Life Insurance.—After a long discussion, in which Drs. Edgecombe, Lever, Black, Mouillot, Garrad, Mantle, and Gibson took part, it was agreed that one guinea be the fee in ordinary cases of life insurence, but when a shorter report was required on insurance, say, for £100, that a fee of half a guinea be accepted, and that for a simple certificate as to the health, for industrial societies, 5s. might be accepted.

Prevention of Corruption Act.—With regard to the Prevention of Corruption Act, 1906, it was agreed that as the relationship of doctor to patient is of a confidential character, it is the duty of the doctor to forego profits to himself of which the patient is unaware, and which consequently might be open to be regarded as of an illicit nature.

Medical Inspection of School Children.—The report as to the medical inspection of school children was briefly considered.

Lynn Thomas and Skyrme Fund.—The motion as to the Lynn Thomas and Skyrme Fund was read, and it was thought that as some of the members had subscribed, it should be left to individual action.

Dinner.—At 7 p.m. the members dined together in conjunction with the annual dinner of the Harrogate Medical Society, twenty-nine being present.

LANCASHIRE AND CHESHIRE BRANCH.

We are requested to publish the following circular letters addressed to the members of the Lancashire and Cheshire Branch:

Central Council Election.

Candidature of Dr. Godson and Dr. Bradshaw.

Committee Rooms, 64, Deansgate Arcade.

Dear Sir,—A Committee has been formed of members of this Branch representing every shade of thought upon the present position and future prospects of the British Medical Association, determined to secure the return to the Council of Dr. Godson and Dr. T. R. Bradshaw, two of the retiring members (Dr. Jas. Brassey Brierley is not eligible), and thus secure continuity of service essential to the existence of the Association at this critical period.

Dr. Bradshaw has done good service on the Council, and especially on the Journal and Finance Committee. He has made himself master of the financial condition of the Association, and has all along endeavoured to check the extravagant office expenses of the Central Authority—notably of the Organizing Secretary's Department (now called Medical Secretary). The whole Branch is weary of contemplating the huge output of useless printed matter from this office, and we are determined that some effective check shall be placed upon such waste. Look at our present financial position. Before the reconstitution we were saving £5,000 to £6,000 a year, and when we determined to rebuild the premises had the prospect of "cash in hand" to pay for the work as it proceeded. Our savings, owing chiefly to the enormous cost of the Medical Secretary's Department, have dwindled down to a few hundreds a year. We have had to borrow all the money to pay the builders, and the only asset the Association has, after seventy-five years' existence and with an enormous membership, is the value of the site of the old premises, namely, £80,000—less than a year and half's income! and a small invested capital. Yet these gentlemen into whose hands the government of the Association has passed have determined to engage the services of another Medical Secretary, and it is whispered at a commencing salary of £600 a year.

Hospital Reform.—We must have something done to remove the mischievous competition of our medical charities. This Branch has again and again discussed the monstrous abuse by the continuous treatment of industrial accidents, and passed resolutions urging the Central Council to take prompt action in the matter, and that continuous treatment of ordinary industrial accidents shall be discontinued. This abuse affects largely younger members of the medical staff of all hospitals. Enormous numbers of patients are operated upon yearly, free of all cost, who could afford to pay a moderate fee for the work to be done at home, and the loss of minor surgery to the general practitioner is simply incalculable.

You doubtless have received the circular soliciting your vote—signed by the Honorary Secretary and three others. The members of this Branch are quite capable of properly appreciating this action on the part of the Honorary Secretary, and we are confident that such tactics will be resented, and the whole Branch—to whom we address

ourselves—will support us in our efforts to retain the services of the men who have served us so well.

The four gentlemen referred to have addressed several Division Meetings, but these have been poorly attended. At the Annual Meeting at Southport eight members were present, and Mr. Larkin placed before them his views. In Chester the four candidates presented themselves before an audience of three!

Dr. Godson has not addressed any meetings, Dr. Bradshaw one or two. They object to putting the Divisions to the trouble and expense, especially in view of the very meagre attendances always noticeable. We agree with them. Besides, their views are well known and are in accord with those of a large majority of the electors.

We trust you will return your polling paper at once, and we shall more effectively secure the return of Dr. Godson and Dr. Bradshaw by voting for them alone. They are pledged to carry out, if possible, reform in the two great questions of vital interest to the Association and the profession—finance and hospital abuse.

We have the honour to remain, yours faithfully,

JAS. BRASSEY BRIERLEY,
Chairman of Election Committee.
H. G. SMEETH,
Honorary Secretary of Election Committee.

Candidature of Alfred Godson, Esq., J.P., C.C., M.A., M.B., M.C.Cantab.

We the undersigned, members of the Election Committee formed to promote Dr. Godson's re election, desire to bring to your notice his claims to again represent the members of the Lancashire and Cheshire Branch of the British Medical Association on the Central Council.

The claims which we last year placed before you caused you to place Dr. Godson at the head of the Poll. We again urge his candidature on the same programme, with the following additional facts:

1. Dr. Godson's Attendances. Dr. Godson has attended every meeting of the Central Council since his election, and he has received the thanks of the Branch Council and of his Division for Special Services rendered. Dr. Godson has also served on the Hospitals Committee, and has attended 2 out of 3 meetings, and here he has also done useful work.
2. Dr. Godson is a tried and experienced member of the Central Council. The coming year being probably the winding-up of the old régime and the inauguration of the new Charter it is absolutely essential, in the interests of the Association, to have the benefit of experienced Representatives.
3. We beg to point out that there are four vacancies and seven candidates for them. We also wish to state that there are no official candidates—that is to say, the Branch Council has not nominated any Candidate or group of Candidates.

On these Grounds then, and because Dr. Godson, as a General Practitioner, is acquainted with every phase of medical practice, together with his wide experience of public work and the ample time at his disposal, we ask you, with every confidence, to re-elect him, so that he may continue the valuable work he has hitherto done, safeguard the interests of General Practitioners, and watch over the welfare of the British Medical Association.

Signed on behalf of the Committee,

J. H. O. GOULDEN, J.P.,
Chairman, Stockport, Macclesfield, and East Cheshire District.

E. A. GOULDEN. J. T. ROGERSON.
HYDE MARRIOTT, J.P. J. T. BAILEY.
F. HOYLE. J. B. CHADWICK.
J. R. BRENNAN.

J. BRASSEY BRIERLEY.
Chairman of Election Committee.
H. G. SMEETH,
Honorary Secretary, Election Committee.

Candidature of Dr. G. H. Broadbent.

DR. G. H. BROADBENT (Manchester) requests us on behalf of his Committee to insert the following card:

Mr. G. H. Broadbent (8, Ardwick Green, Manchester) respectfully requests the honour of your vote.

Was a member of the Central Ethical Committee four years, elected by the Representative Meeting annually.

Has been a member of the Contract Practice Subcommittee of the B.M.A. three years.

Is Vice-President of the Manchester Medico-Ethical Association; Vice Chairman of the Medical Guild, and has been a member of the Council from its inauguration; and has taken an active part in the organization of the profession, both locally and generally, upwards of twenty years.

Has been the Representative of the North Manchester Division since the reorganization of the B.M.A.

Is and has long been deeply concerned in the new building and arrangement of the central premises in the Strand, which, with the site, will cost upwards of £120,000.

Please keep this before you until your vote is given.

Proposers—Professor G. A. Wright, Manchester; Samuel Buckley, F.R.C.S., Manchester; J. Howson Ray, F.R.C.S., Manchester.—Dr. G. Apthomas, Manchester; Dr. H. W. Boddy, Manchester; Edmund Lee, Manchester; S. Crawshaw, Ashton-under-Lyne; A. Hamilton, Ashton-under-Lyne; J. M. Ferguson, Burnley; H. H. Hitchon, Heywood; R. G. McGowan, Cheetham Hill; W. Snowcroft, Cheadle; A. W. Senior, Levenshulme; R. B. Sidebottom, Glossop.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—Election of Representative of the Branch on the Council of the Association. Notice is hereby given that nominations for the office above mentioned must be sent to the undersigned by June 14th. Each nomination must be signed by three members of the Branch.—J. F. CHRISTIE, Honorary Secretary, 7, Alford Place, Aberdeen.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—The annual meeting of this Division will be held at the Coventry and Warwickshire Hospital upon Thursday, June 4th, at 8.30 p.m. Agenda: 1. To elect officers and Executive Committee for the year. (These include Chairman, Vice-Chairman, Secretary Representative on the Branch Council, and on the Committees of Management of the Public Medical Service, and the new Dispensary Service.) 2. To receive the report of the Executive Committee. 3. Matters referred to the Division: (*a*) Definition of term "Hospital." (*b*) Prevention of Corruption Act, 1906 (vide SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, 1908). 4. The question of application to Central Emergency Fund. 5. To thank the Committee of the Coventry and Warwickshire Hospital for the continued use of their Board Room for the meetings of this Division.—JOHN ORTON, Honorary Secretary.

BIRMINGHAM BRANCH.—TAMWORTH AND NUNEATON AND COVENTRY DIVISIONS.—A combined meeting of the Tamworth and Nuneaton Division with the Coventry Division will be held at the Coventry and Warwickshire Hospital on Friday, June 5th, at 4 p.m., for the purpose of electing a Joint Representative to represent them at the Annual Representative Meeting.—JOHN ORTON, Secretary to the Constituency.

BORDER COUNTIES BRANCH.—Notice is hereby given that nominations for the post of Representative on the Central Council of the Association for this Branch and the North Lancashire and South Westmorland Branch jointly must reach the Honorary Secretary not later than June 8th, and must be signed by at least three members of either Branch in accordance with By-law 25.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

BORDER COUNTIES BRANCH.—The annual general meeting of the Border Counties Branch will be held in the County Hotel, Carlisle, on Friday, June 26th. Dr. James Macdonald of Carlisle will deliver his Presidential address. Further particulars later.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Branch will be held on Thursday, July 2nd, at Alconbury Hill, Huntingdon. Members having any communications to make or specimens to show are requested to inform the Honorary Secretary, F. E. APTHORPE WEBB, Grafton House, Cambridge.

EAST ANGLIAN BRANCH.—Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in

accordance with By-law 25.—B. H. NICHOLSON, Honorary Secretary.

EAST ANGLIAN BRANCH.—The annual meeting of this Branch will be held at Norwich on Friday, June 19th.—B. H. NICHOLSON, Honorary Secretary.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Hull Royal Infirmary on June 11th, at 12.30 p.m.—EDWARD TURTON, 1, Albion Street, Hull, Honorary Secretary.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than Wednesday, June 10th.—A. LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS D. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—Annual meeting.—The statutory annual meeting of the Branch will be held at the New Maternity Hospital, Rotten Row (between North Portland and Montrose Streets), on the afternoon of Friday, June 5th, at 3 o'clock. The entire hospital will be open for inspection, and Professor Murdoch Cameron and Dr. Jardine will give a clinical demonstration. There will also be an exhibition of instruments from the various Glasgow firms. A dinner will be held in the evening (6 15 prompt) at St. Enoch Station Hotel, at which Dr. Bruce Goff will be entertained and receive a presentation. Agenda of business meeting at 3 p.m.: 1. Minutes. 2. Secretaries' annual report. 3. Treasurer's annual report. 4. Medico-Ethical Committee's annual report. 5. Election of office bearers.—JAMES HAMILTON and J. GRANT ANDREW, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—Election of Members of Central Council.—In accordance with Branch Rule v and Association By-law 25, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to the undersigned Honorary Secretary on or before Monday, June 1st. The Branch is entitled to return two Representatives, but if more than two nominations are sent in an election will take place by voting papers. Dr. Goff is this year ineligible for re-election, and Dr. Hamilton does not seek re-election.—JAMES HAMILTON, 1, Royal Crescent, Crosshill, Glasgow.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting of the Division will be held at Altrincham (Board Room of Hospital) on Thursday, June 4th, at 4.50 p.m. Afternoon tea, 4 30 p.m. Dinner at Brooklands Hotel, 7 p.m. Nominations for any office for 1908-9 will be received by the Honorary Secretary, if duly signed by proposer and seconder.—T. W. H GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—Election of Representatives on Central Council, 1908-9.—Voting papers will be sent out on or before Saturday, May 23rd, and must be returned on or before Wednesday, June 3rd. Should any member not receive a voting paper he should apply at once to F. CHARLES LARKIN, Honorary Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. GARSTANG, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION.—A quarterly meeting of the members of the above Division will be held at the Warrington Infirmary on Tuesday, June 2nd, at 4.30 p.m. Agenda: Minutes of last meeting. To transact the routine business of the Division.—T. A. MURRAY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that Nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 10th.—F. J. MCCANN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—Notice of Annual Meeting.—The annual meeting of this Division will be held at the Midland Hotel, King's Cross, W.C., on Tuesday, June 2nd, at 4 o'clock.—W. GRIFFITH, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of the Branch will be held at the Exchange, Nottingham, on Thursday, June 11th, at 2.30 p.m. Nominations for the election of two Representatives of the Branch on the Central Council should be sent to me on or before Monday, June 1st, in accordance with the by-laws.—R. SEVESTRE, London Road, Leicester, Honorary Secretary, Midland Branch.

MUNSTER BRANCH.—Nominations for a Representative of the Branch on the Central Council (in accordance with By-law 24) will be received by the Honorary Secretary up to June 1st.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

MUNSTER BRANCH.—The annual general meeting of the Branch will be held on Saturday, June 6th, at 4.30 p.m., in the rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and Council for 1908-9 will be elected, and any other necessary business transacted.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the office of Representative on the Central Council from this Branch must be sent to me in writing on or before June 6th. Each nomination must be signed by three members of the Branch. The annual meeting of the Branch will be held at Kingussie on Saturday, June 13th. Further particulars will be sent to each member by circular.—J. MUNRO MOIR Honorary Secretary.

NORTH OF ENGLAND BRANCH.—Election of members of Central Council. Nominations of candidates for membership of Central Council (two required) must be sent to me in writing on or before Saturday, June 13th.—HENRY SMURTHWAITE, 8, St. Mary's Place, Newcastle-on-Tyne.

NORTH OF ENGLAND BRANCH: NORTH NORTHUMBERLAND DIVISION.—The annual meeting will be held at the Infirmary, Berwick-upon-Tweed, on Thursday, June 4th, at 2 30 p.m., for the purpose of electing officers and Representatives for the ensuing year.—C. CLARK BURMAN, Secretary.

NORTH WALES BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for all the officers of the Branch and Representative on the Central Council must be sent to the Honorary Secretary not later than May 30th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

PERTHSHIRE BRANCH.—The summer meeting will be held in the Golf Club House, Moncrieffe Island, Perth, on Friday, June 5th, at 1 p.m. prompt. Business: 1. Read minutes. 2. Election of Council. 3. Election of Branch Representative. 4. Consider Report of Medical Officer of Health for Perth to Perth Town Council on the prevention of consumption. 5. Consider letter from Aberdeen Medico-Chirurgical Society *re* the examination of employees in the marine and railway services. 6. Any other business. (P.S.—Nos. 4 and 5 on business agenda to be considered only if time permits.) Council meeting at 12.45. Lunch in the Club House will be served at 2 p.m., on the arrival of golfing members from Dundee. Members intending to play and lunch are requested to notify Dr. Taylor as soon as possible.—W. A. TAYLOR and ALEXANDER TROTTER, Joint Honorary Secretaries.

SOUTH-EASTERN BRANCH: CHICHESTER AND WORTHING DIVISION.—The annual meeting of this Division will be held at the Infirmary, Worthing, on Wednesday, June 10th, at 3 30 p.m. Mr. W. S Simpson (Chairman of the Division) will preside. Agenda: 1. Minutes of the last meeting. 2. To appoint the place of next meeting. 3. Election of officers: Chairman, Vice-Chairman, Secretary, Representative on Branch Council, Representative at Representative Meeting, and Members of the Executive Meeting. 4. Report of the Honorary Secretary. 5. Matters referred to the Division: (*a*) Report as to the proposed definition of the term "Hospital"; (*b*) report on life insurance examination; (*c*) report on Prevention of Corruption Act; (*d*) the business of the Annual Representative Meeting; (*e*) medical inspection of school children. 6. Lynn Thomas and Skyrme Fund.—H. C. L. MORRIS, Honorary Secretary, Bognor.

SOUTH-EASTERN BRANCH.—The sixty-fourth annual meeting of the Branch will be held in the Council Chamber, Town Hall, Dover, by the kind permission of the Right Worshipful the Mayor of Dover, on Thursday, June 18th, at 2.15 p.m. Dr. M. K. Robinson, President-elect, kindly invites members to lunch at the Grand Hotel, Dover, from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting—(1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. The following expeditions have been arranged to take place afterwards: Visit to Dover Castle and precincts

visit to the National Harbour Works in course of construction; visit to the ruins of the ancient Priory, now used by Dover College; and visit to Pageant House. Dinner at the Grand Hotel, Dover, at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Dover Division. Those who propose being present at lunch or dinner, or both, are requested to signify their intention to Dr. Osborn, Ennismore Lodge, Dover, not later than Thursday, June 11th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held in the Town Hall, Clonmel, on Wednesday, June 3rd, at 12 noon. Agenda: 1. Minutes. 2 Apologies. 3 Correspondence. 4. Ethics of medical consultation (see SUPPLEMENT, May 9th). 5. Dr. Wynne's notice of motion: That it is advisable to fix a minimum rate at which contract practice should be undertaken. 6. To take into consideration whether the time has not come to found a luncheon fund by instituting an annual Branch subscription as a nucleus thereof. 7. Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—The annual meeting of the Division will be held on Tuesday, June 9th, at 2.30 p.m., in the Board Room of the General Hospital, Northampton. For the purpose of electing a Divisional Representative the meeting will resolve itself into a joint meeting of the Northamptonshire and Aylesbury Divisions. The meeting will be preceded by luncheon at Franklin's Restaurant, Guildhall Road, at 1.30 p.m. The Secretary will be much obliged if any member wishing to attend the luncheon will notify him at least two days before the meeting. Business: Minutes. Election of Officers. Annual Report of Division. Matters referred to Division: Questions on the matter of Life Assurance Fees; Definition of the term "Hospital"; the ethics of Medical Consultation. The Lynn Thomas and Skyrme Fund. Letter from the Coventry Division. Dr. Robson will propose that there be a special Clinical Section of the Division. Mr. Harries-Jones will read a paper entitled Remarks on the Differential Diagnosis of Glaucoma. Any other business.—P. S. HICHENS, Honorary Secretary, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting of this Branch will be held at the Infirmary, Newport, on June 11th, at 4.30 p.m., when the Representatives of the Branch on the Central Council will be elected.—W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff, Branch Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—Nominations for the office of Representative on the Central Council should be sent to either of the undersigned not later than June 8th, in accordance with By-law 25.—G. PETGRAVE JOHNSON, Honorary Secretary, Staffordshire Branch, Stoke-on-Trent; C. G. RUSS WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary, Ulster Branch.

ULSTER BRANCH.—Nominations for the offices of President, Treasurer, and Secretary, each signed by two members, must be sent to me not later than June 3rd.—CECIL SHAW, M.D., 29, University Square, Belfast, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of the above Branch will take place at the Hereford General Hospital on Thursday, June 18th, at 1.45 p.m. Business: To elect officers and transact such other business as are prescribed by rule for the annual meeting.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—Election of Representatives of the Branch on the Council of the Association.—Notice is hereby given that nominations for the above must be sent to the undersigned by June 13th. Each nomination must be signed by three members of the Branch. Two Representatives on the Council to be elected.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on May 21st, with Dr. F. H. CHAMPNEYS in the chair.

The late Dr. Cullingworth.

The CHAIRMAN made a sympathetic reference to the loss sustained by the Board by the death of Dr. Cullingworth. Sir WILLIAM SINCLAIR, Mr. PARKER YOUNG, and Mr. ATKINSON also paid eloquent tributes to his memory. It was agreed that a letter be written by the Chairman to Mrs. Cullingworth expressing the sympathy of the Board.

Princess Christian's Maternity Home.

On the request of Princess Christian her Maternity Home at Windsor was officially recognized as a training school for midwives.

Midwife Practising without Notifying Local Supervising Authority.

A letter was considered from the Town Clerk of Salford, reporting that the midwife Sarah Shawcross had been convicted and fined 10s. and costs for practising without notifying the local supervising authority. The Secretary reported that Sarah Shawcross had applied for the removal of her name from the roll on the ground of inability to comply with the rules. The Board decided that the application be granted, and that the Secretary be directed to remove the name of the midwife from the roll.

Amendments of Rules.

A letter was considered from the Clerk of the West Sussex County Council suggesting an amendment of Rule E 11. It was decided that the suggestion be placed before the Board when the next revision of the rules takes place.

Training of Pupil Midwives.

A letter was considered from Dr. F. Rees of Wigan as to the training of pupil midwives, and it was decided that Dr. Rees be thanked for his letter, and that he be informed that his suggestions will be borne in mind on the next revision of the rules.

Uterine Cancer.

A letter was considered from the General Secretary of the British Medical Association as to the question of bringing to the notice of midwives the importance of the earlier recognition of uterine cancer. The Board decided that the General Secretary of the British Medical Association be thanked for his letter, and that he be informed that the Board had already had the subject under its consideration, and proposed to send a leaflet on the subject, prepared by Dr. Champneys, as Chairman of the Board, to midwives, teachers, and local supervising authorities.

Deaths of Infants from Pemphigus.

A letter was considered from the Clerk of the Worcestershire County Council as to deaths of infants from pemphigus. It was decided that the Clerk of the Worcestershire County Council be thanked for his letter, and that he be informed that the Board approves of the action of the County Council, and considers that the sanitary officers should be encouraged to prosecute further inquiries into this interesting and important epidemic, should the opportunity occur.

Irish Midwives.

A letter was considered from the Under Secretary for Ireland as to providing facilities for the examination in Ireland of candidates for the Central Midwives Board certificate. It was decided that the Under Secretary be referred to the following resolution passed by the Board on January 31st, 1907:

> That the Board realizes the difficulties of an extension of the Midwives Act, 1902, to Ireland, but would look with favour on a new Act for Ireland framed on the lines of the present Act.

Annual Report of the Board.

Mr. FORDHAM moved, and it was duly seconded:

1. That it is desirable that an annual report of the proceedings of the board should in future be prepared and presented to the Privy Council, with a view to its issue as a public document.
2. That, in the meantime, a summary of the proceedings of the board for the five years ending March 31st last be prepared.
3. That the Privy Council be approached in order to obtain their assent to these arrangements.

The CHAIRMAN pointed out that the annual report proposed would clear up many misunderstandings about the board, which existed for the benefit of the public; the more the work of the board was known the more it would be appreciated. The resolution was then put and carried.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION 1908.

Tuesday, May 26th.

DR. DONALD MACALISTER, President, in the Chair.

THE eighty-seventh session of the General Council of Medical Education and Registration was opened on Tuesday, May 26th, 1908, at 2 p.m., by the President.

PRESIDENT'S ADDRESS.

The PRESIDENT delivered the following address:

Death of Sir Thomas McCall Anderson.

GENTLEMEN,—By the sudden death of our colleague and friend, Sir Thomas McCall Anderson, Regius Professor of Medicine in the University of Glasgow, a vacancy has been caused in the membership of the Council. Sir Thomas had been of our number since the year 1903. He succeeded, both in the university and in this chamber, to the place previously occupied by Sir William Tennant Gairdner. That wise and good physician has also passed away, in the fullness of years and of public esteem. The medical faculty in Scotland has lost much in losing two such leaders. Each in his own way, by virtue of his character no less than of his attainments, enriched our professional life and enhanced our professional influence in the nation. Death has this year removed two other Scottish representatives of past times. Sir Patrick Heron Watson and Dr. James Bell Pettigrew sat for a quarter of a century at our table; to many of us they were known as familiar friends, and to all of us they were known as veterans in the service of medicine.

The Presidency.

The University of Glasgow has done me the honour of appointing me, as from May 27th, to be its representative on the Council. I propose, accordingly, to resign to-morrow the seat to which, some nineteen years ago, I was elected by my fellow-graduates of the University of Cambridge. In doing so I gratefully acknowledge the forbearance of the Senate in allowing me to sit as its representative after I had ceased to be engaged in the active service of the university. Though my resignation of one seat and my appointment to another are simultaneous, our legal advisers are of opinion that the resignation of my Cambridge seat *ipso facto* vacates the President's chair. To-morrow, therefore, I shall have to restore to your hands the trust you were so good as to confide to me three and a half years ago. To fulfil to your satisfaction that most honourable trust has been my dearest ambition; if I have come short it has not been for the want of loyal support or of generous consideration on the part of the members and officers of the Council. To all who have thus helped to make good my deficiencies, and to forward the business of the Council as it has been forwarded, I offer my hearty thanks. I shall vacate the chair with the assurance that none of my predecessors, during the half-century of our history, has been more cordially assisted by his colleagues. Certainly none can have observed a greater degree of willingness on the part of members to devote themselves to the Council's work, or seen that work carried out with a keener desire for efficiency or a more careful economy of time and means. The unforeseen interruption of my tenure gives me a welcome opportunity of expressing in public my sense of the zealous and yet harmonious spirit with which the Council is animated. Its zeal and harmony have made the tasks that have fallen to me both easy and pleasant, notwithstanding the misgivings I felt as to my own power to perform them well.

Financial Retrospect.

It is not my intention to trouble you with a retrospect of the Council's various activities during the last few years. The general facts are familiar to you all, and comments from me might be out of place. But in one direction we may well look back with satisfaction: I mean the direction of finance. For the year 1903 the excess of the Council's expenditure over its income was £2,165. For the seven years' period then completed the average annual deficit was £1,645. In 1904 the deficit fell to £218, though the income also declined. In 1905, for the first time in ten years, there was a surplus, amounting to £807. In 1906 there was again a surplus, which, but for the extraordinary expenditure due to the general election of Direct Representatives would have amounted to £910. In 1907, the year on whose accounts the Finance Committee will report at this session, the surplus is £1,095, after paying £415 towards the expense of enlarging the council chamber. Our income is practically stationary; the improvement in our position is due to economy, perhaps I might say parsimony, on the side of expenditure. But we have still some £800 or £900 of debt to pay off for the structural additions to this room, and our treasurers cannot yet afford to relax their vigilant supervision of our outgoings.

Press Gallery.

During the recess they have sanctioned an improvement which, in view of the faulty acoustics of the chamber, had become practically a necessity. The representatives of the press, to whose skill and discretion we are so often indebted, complained with reason that the difficulty of following our debates had been increased by the enlargement and rearrangement of the building. By the erection of a light gallery, specially reserved for press purposes, and placed within the chamber itself, we hope that the work of the reporters will be lightened while the accommodation for the public will be increased. The cost of the improvement will not be serious. I may add that a number of suggestions for varying the present position of the chair and of the members' seats, with a view to improving the general comfort in the matter of hearing, have been considered, but none has yet been found to be free from serious practical disadvantages.

Fees for Registration.

As regards income, the recent Act of Parliament obtained by the Society of Apothecaries of London, in consultation with the Council, has led to some advance in our receipts. The new diploma in medicine and surgery, conferred by the society on its former licentiates under the conditions of the Medical Act of 1886, has been admitted to registration as a qualification, in addition to or in place of the title L.S.A. Up to the present about a hundred licentiates have paid the statutory fee for the entry of the new diploma in the *Register*. The registration of recognized degrees in the Colonial List continues to advance, with the like result of augmenting our receipts from fees.

Reciprocity with the Province of Quebec.

In my last address I indicated that the existing difficulties in the way of medical reciprocity with the Province of Quebec had been removed by the spontaneous action of the local authorities. The modification of the provincial regulations which they proposed has proved to be satisfactory to His Majesty in Council. Accordingly an Order was issued by the Privy Council on February 29th recognizing the Province as a separate British possession, and applying to it the provisions of Part II of the Medical Act, 1886. In pursuance of the Order in Council, two universities, namely, the McGill University of Montreal and the Laval University of Quebec, have submitted to the Executive Committee particulars of their medical curricula and examinations, with a view to the recognition of their degrees for the purpose of registration. The Committee has satisfied itself that the degree of Doctor of Medicine granted by these important bodies furnishes a sufficient guarantee of the proficiency of their graduates, and in accordance with the Council's Standing Order has agreed that they should be recognized under the conditions prescribed in the Medical Act. The Province possesses other medical authorities, who will doubtless soon make application for the recognition of their diplomas. The Executive Committee will deal with all such applications as speedily as possible after their receipt. I learn that the War Office authorities are prepared to offer to Quebec graduates, registered in this country, the same facilities in respect of commissions in the Army Medical Service as are enjoyed by registered graduates from Nova Scotia. It is to be hoped that the

recognition accorded to these two Provinces may have the effect of inducing the other Provinces of the Dominion to reconsider the question of reciprocity from a national rather than a local point of view. To myself personally it is a matter of encouragement that the journey I made to Quebec in the summer of 1906, in the interest of this question, has borne satisfactory fruit.

Unqualified Practice in the British Empire and Foreign Countries.

The Committee appointed in November to consider the question of restraining medical practice by unqualified persons was instructed to ascertain the present state of the law respecting such practice in the various portions of the British Empire and in foreign countries. I sought the help of the Lord President of the Privy Council to enable me to procure authoritative information on the subject, and owing to his lordship's friendly interest extensive inquiries have been made through the India Office, the Colonial Office, and the Foreign Office, which have resulted in the accumulation of a large amount of valuable information. The data obtained and the lessons to be derived therefrom will doubtless be presented to you in due time by Dr. Langley Browne's Committee.

The Medical Companies Bill.

The difficulty of obtaining remedial legislation, even for admitted evils affecting the practice of medicine, is illustrated by the slow progress of the Medical Companies Bill in the House of Commons. Sir John Batty Tuke has repeatedly put down the bill for second reading, as a measure unopposed in the House of Lords, but it has hitherto been as persistently "blocked." Unless special facilities are afforded by the Government, little progress with the bill can be looked for in this session. The existing state of public business almost precludes the expectation that such facilities will be granted.

Rules for Midwives.

A slight alteration in the rules framed under the Midwives Act has been submitted by the Privy Council for our consideration. It will be brought before the English Branch, which in such cases is empowered to act for the General Council.

The University of Wales.

The statute regulating the proceedings of the Medical Faculty of the University of Wales, established by the university under a recent supplemental charter, provides for the constitution of a standing committee of advice, to be called the Medical Board. One member of the board is to be appointed by the President for the time being of the General Medical Council. I have been formally requested to make an appointment, but in view of the circumstances affecting my tenure of office, to which I have already referred, it has seemed to me inexpedient that I should do so at present. We may, however, expect that before long Wales, and perhaps Belfast and Bristol also, will contribute new units to the already large group of British licensing bodies.

The Actual Length of the Curriculum.

The Chairman and members of the Education Committee have been busily engaged in collecting and analysing for your information the statistics, courteously furnished by these licensing bodies, regarding the curriculum actually pursued by students who attained a qualification in 1906. The diversities of regulation and practice met with in the inquiry render the analysis far from easy: but the statistics have the advantage of illustrating, as it were by actual experiment, the direct and indirect effects of the several methods of control which are from time to time pressed upon the Council for universal adoption. The report of Dr. Mackay's Committee will enable the Council, in revising its recommendations, to proceed, if proceed it must, on the basis of a wide induction from observed facts.

The British Pharmacopœia.

The Pharmacopœia Committee will also be occupied for some time to come with the analysis of a large body of suggestions for the improvement of the *Pharmacopœia*, which on my invitation have been made by committees appointed by the various medical authorities of the kingdom. Here again an interesting and instructive diversity characterizes the proposals offered for the Committee's consideration; but there is a body of concordant opinion in favour of certain changes, sufficient to guide us in the task of revision, to which we are now addressing ourselves. The Pharmaceutical Societies of Great Britain and of Ireland, through the Committee of Reference in Pharmacy nominated by them, continue to assist us materially, in regard to the aspects of the subject with which they are specially conversant, by the preparation of valuable reports, which will be published in due course.

It has been found necessary, with the advice and help of our legal advisers, to take steps to safeguard the Council's property in the "copyright" of the present and of future *Pharmacopœias*. The revenue derived from the sale of the official volume is not large, in view of the heavy cost of preparing and publishing the successive issues. This revenue contributes nothing to the general income of the Council, but is applied solely to the special work, in the public interest, with which the Pharmacopœia Committee are charged. It cannot be diminished without risk of impairing their work. There is reason to believe that the steps taken to defend the Council's statutory rights in the *Pharmacopœia* have proved effective; and that the nature, extent, and object of these rights have become better understood and respected by authors and publishers.

Procedure in Penal Cases.

The Executive Committee has had its attention called to certain verbal discrepancies and ambiguities in the Standing Orders governing the Council's procedure in penal cases. These Orders have been framed at various times and by different hands, with the result that, though their tenor is plain, the language employed is not always consistent, and it is sometimes deficient in clearness. The Committee have thought it well to request our Solicitor and Counsel to revise the text throughout, with the object of removing these defects and bringing out more definitely the meaning intended by the Council. The Orders as revised will be submitted for your approval. It will be understood that it is the form only, not the substance, which has been subjected to verbal emendation. In particular, pains have been taken to express the questions put in succession from the chair in a manner that will obviate misunderstanding of the exact issue to be decided by the Council at each stage of an inquiry.

Disciplinary Inquiries.

A considerable part of this session must be devoted to the hearing and determining of charges brought against registered practitioners. Some of these charges are serious, and all are regrettable. One of the cases, partially heard and then adjourned last November, comes up for further hearing now. During the interval an application was made to another court, the object of which was to inhibit the Council from continuing the inquiry. Our legal representatives appeared to show cause against such an inhibition, but the rule *nisi* calling upon them to do so was discharged before they had an opportunity of addressing the court. The Council will accordingly ignore this episode, and continue its inquiry without reference to anything but the evidence produced before it.

Jubilee of the Council.

In conclusion I would remind the Council that its first meeting was held on November 23rd, 1858, pursuant to a summons by the Secretary of State, at the Royal College of Physicians of London, and under the presidency of Sir Benjamin Brodie. Our next session, in the ordinary course, will begin on November 24th, 1908, when the Council will just have completed the first fifty years of its existence. I suggest that we should celebrate our jubilee by a friendly reunion, to which all who survive of the past members of the Council should be invited. If the suggestion meets with your approval it will be convenient to appoint a small committee to co-operate with your officers in making the necessary arrangements.

VOTE OF THANKS.

DR. LITTLE, in moving a vote of thanks to the President for his address, requested him to allow it to be printed on the minutes, said that he could not agree with the opinion that it was necessary for the President even

temporarily to vacate his office, because no legal question could arise unless some one raised it, and he was sure that no member who had seen Dr. MacAllister perform his duties would dream for a moment of raising any question as to the propriety of his continuing in office. Dr. MacAlister's devotion to duty, the vigour with which he carried on the business, the courtesy which he extended to all the members, and the way in which he had placed his services at their disposal, had endeared him to them, and the Council could not, he thought, have a more brilliant President than Dr. MacAlister.

Dr. Norman Moore seconded, and the resolution was carried.

Results of Professional Examinations.

On the motion of Dr. Norman Moore, seconded by Sir John Moore, it was resolved that the following tables should be received and entered on the minutes:

(*a*) I and II Tables showing results of professional medical examinations during 1907.
(*b*) Table showing results of professional examinations for qualifications in sanitary science, public health, or State medicine during 1907.
(*c*) Table showing results of professional dental examinations during 1907.
(*d*) Table showing results of preliminary examinations during 1907.
(*e*) Answers sent by the medical authorities as to the exemptions granted by them in any part of their examinations during the year 1907.
(*f*) Table showing results of competition held on May 4th, 1908, for commissions in the medical staff of the Royal Navy.
(*g*) Table showing results of competition held in January, 1908, for commissions in the Indian Medical Service.

Dr. McVail moved, Sir Christopher Nixon seconded, and it was agreed:

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, and the Under Secretary of State for India respectively, for the returns which they have again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

Publication of Regulations as to Professional Conduct.

Dr. Saundby then moved:

That in future such regulations of the General Medical Council as have been passed from time to time relating to the conduct of members of the medical profession shall be included in the matter published in the *Medical Register*.

If this were done, every medical practitioner who had the *Register* could find out exactly what the Council had said on a particular matter.

Sir Christopher Nixon seconded. He thought every medical practitioner should have immediate access to the regulations laid down by the Council governing the conduct of members of the profession; and he saw no reason why that information should not be afforded in the *Medical Register*.

Dr. Latimer thought it was a desirable resolution.

The President pointed out that the *Medical Register* was used not only by the medical profession, but by the public. It was not desirable that the resolutions which were meant for the profession should be submitted to the public.

Dr. Norman Walker did not think there was any particular reason why the Council or the medical profession should have any disinclination to let the public know that it disapproved of canvassing and other things. It seemed to him the more the public knew the standard which the profession set up the better.

The resolution was then put and carried unanimously.

Dr. Saundby said that what applied to the *Medical Register* applied *mutatis mutandis* to the *Dentists' Register* also, and he moved the same resolution modified so as to apply to the *Dentists' Register*.

Sir Christopher Nixon seconded, and it was agreed.

The Apothecaries' Society of London.

Sir Hugh Beevor moved, Mr. Morris seconded, and it was resolved:

That Mr. Peyton Todd Bowman Beale, F.R.C.S.Eng., L.S.A., be appointed Assistant Examiner in Surgery to the Apothecaries' Society of London, vice Mr. Stonham, who retires by rotation.

Reciprocity with Quebec.

The President moved the adoption of the following report of the Executive Committee:

Report.

The Executive Committee report that Part II of the Medical Act (1866) having been extended by an Order in Council to the Province of Quebec, they have considered the conditions under which certain medical qualifications granted in the Province shall be recognized for registration in the *Colonial List* of the *Medical Register* of the United Kingdom, and on May 25th, 1908, adopted the following resolution:

That any person who holds—
(1) The degrees of Doctor of Medicine and Master of Surgery of McGill University, Montreal, together with the Licence to practise in the Province of Quebec; or
(2) The degree of Doctor of Medicine of Laval University, Quebec, together with the aforesaid Licence to practise,
shall be entitled to be registered in the *Colonial List* of the *Medical Register*, provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886.

It was hoped and desired that similar relations might soon be established with other provinces of the Dominion of Canada. The movement the Council had initiated was making progress, and perhaps the expression of its good will would accelerate it.

Sir John Moore seconded, and it was agreed.

The Apothecaries' Hall, Dublin.

The President moved that the following report of the Executive Committee in regard to the duties of the Assistant Examiners of the Apothecaries' Hall, Dublin, be received and entered on the Minutes.

Report.

At its meeting on February 24th, 1908, the Executive Committee considered the question of the duties of the Assistant Examiners of the Apothecaries' Hall, Dublin, referred to them on November 29th, 1907, in the following resolution:

That the question of the duties of the Assistant Examiners be referred to the Executive Committee for consideration and report.

Whereupon they resolved:

That the following recommendations be submitted to the General Council for its approval:
1. That the Examiners appointed by the Council to assist at the qualifying examinations held by the Apothecaries' Hall, Dublin, be instructed to conduct the surgical portion of these examinations; and, in addition, to supervise the medical and obstetrical portions, with the object of securing that at each qualifying examination the required standard of proficiency is maintained.
2. That the Examiners be instructed to report fully, for the information of the Council, as to the methods and standards actually adopted at each qualifying examination, and as to the steps they have taken in fulfilment of the duties imposed upon them by Section 5 of the Medical Act, 1886.

It had been made clear to the Council that the reports of the examiners were of a confidential character, not coming under the Standing Orders with reference to inspection or visitation. They were for the information of the Council, that it might know from time to time whether or not the duty imposed upon it by the Privy Council was suitably performed. Such a report was not required to be submitted to the public, and it was not required to be sent to the Privy Council as was the case with the report of the inspectors. The Executive Committee presented its report as an account of the special work which the examiners had to perform to put them in the position intended by the Act of 1886.

Dr. Saundby seconded. He hoped that the report of the Committee would not be taken in any way in an invidious sense as applying only to the Apothecaries' Hall, Dublin. The rules and regulations applied to examiners appointed under the section of the Act in any circumstances, and there was nothing invidious in this reference to the examiners of the Apothecaries' Hall, Dublin.

Dr. Adye-Curran said that with reference to the point of law involved in these reports, he would be glad to have a definite ruling from the Council's legal assessor as to whether or not it was lawful and in accordance with the

statute for those gentlemen appointed to act as assistant examiners by the Council under paragraph 2, section v of the Medical Act of 1886, to have reported as "inspectors," and for such reports to have been forwarded to the Privy Council. It was, he thought, quite evident from the fact that the words "acting also as your inspectors" had been omitted from the last reports submitted by the assistant examiners that the Council admitted the illegality of the action. This was a matter of very grave importance, affecting not only the reputation of the Council for justice and fair play, but also the very existence of the body which he represented. He maintained that for a number of years past the Council has lost no opportunity of penalizing the Apothecaries' Hall, Dublin, and by imposing perpetual inspections and reports had materially injured it, both in reputation and, what is of more importance, financially. He therefore most respectfully asked the Council what reparation it was disposed to make in the future for the injury inflicted by its illegal action in the past. The Executive Committee, apparently not yet satisfied, now recommended that even still more elaborate reports should be furnished in the future, but was careful not to recommend that a like duty should be performed by the assistant examiners appointed under precisely similar terms to the Society of Apothecaries of London. Why was there this exemption for London? The Board of the Apothecaries' Hall, Dublin, felt very keenly the action taken by the Council, for which there did not seem to have been any just cause; it was taken, he alleged, more or less at the instigation of a rival and jealous body. He asked the Council to discontinue, at least for the present all reports, and pass a resolution causing those already illegally made to be rescinded, notifying the Privy Council accordingly, and thus in some small way atone for the errors of the past. If this were not done, his Board might be obliged to seek a remedy elsewhere.

Mr. MORRIS moved, Dr. LINDSAY STEVEN seconded, and it was resolved, that the consideration of the report be postponed for the attendance of the Council's legal adviser.

WITHDRAWAL OF NAME FROM MEDICAL REGISTER.

The Council then went into *camerâ* to consider an application referred to the Council by the Executive Committee.

Strangers were ordered to withdraw; on readmission,

The PRESIDENT announced that at his own request the name of Dr. John Shaw had been removed from the *Register*.

The Council then adjourned.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEONS H. E. HULL, M.B., H. W. GORDON GREEN, G. T. BISHOP, E. F. MORTIMER, B. F. PARISH, and F. A. CAPPS are promoted to be Fleet Surgeons, May 11th. Their previous commissions are dated—Surgeon, May 11th, 1892; Staff Surgeon, May 11th, 1900. None of these officers has any war record.

The following is a list of successful candidates for Surgeon in the Royal Navy (May, 1908), with their total marks:

	Marks.		Marks.
Rivers, A. T. ...	... 1,836	Hayes, J. M. ...	... 1,286
Custance, G. W. M. ...	... 1,729	Atkinson, E. L. ...	... 1,225
Austin, J. S., M.B. ...	... 1,660	Stephens, F. H. ...	... 1,198
Robinson, A. L., M.B., M.A.	1,470	Bradshaw, G. W. ...	... 1 188
Edgar W. B., M.B. ...	... 1,466	Bradbury, S., M.B. ...	... 1,155
Fisher, A. R. ...	... 1,380	Egan, P. B., M.D., B.A.	... 1,137
Given, D. H. C., M.B.	... 1,320	Riggall, R. M. ...	... 1,128
Aveling, C. J. ...	... 1,325		

The following appointments have been made at the Admiralty: FREDERICK FEDARB, M.B., Fleet Surgeon, and GEORGE E. HAMILTON, M.B., Surgeon, to the *Ocean*, on recommissioning, June 2nd (the appointment of Surgeon Hamilton to the *Ocean* has since been cancelled, and he has been appointed to the *Dominion*, on recommissioning, June 2nd); GEORGE H. FOOTE, M.D., Fleet Surgeon, to the *Dreadnought*, June 2nd; PERCIVAL M. MAY, Staff Surgeon, to the *Hannibal*, May 30th; SHIRLEY H. BIRT, Staff Surgeon, to the *President*, additional, for London Recruiting Head Quarters, temporary, May 25th; PERCY M. RIVAZ, M.B., Surgeon, to the *Hannibal*, temporary, May 30th; G. CARLISLE, Surgeon, to the *Barfleur*, June 16th; THOMAS CREASER, M.B., Surgeon, to the *Canopus*, May 22nd; G. B. SCOTT, Surgeon, to the *Warrior*, June 16th; ERNEST J. FINCH, Fleet Surgeon, to the *Dominion*, on recommissioning, June 2nd; EDWARD M. W. HEARNE, Surgeon, to the *Ocean*, on recommissioning, June 2nd; HENRY F. ILIEWICZ, Fleet Surgeon, to the *Crescent*, May 13th; HAROLD G. T. MAJOR, Surgeon, to the *President*, additional, for three months' course at West London Hospital, May 18th; B. S. ROBSON, M.B., Surgeon, to the *Victory*, additional, to be lent to the *Spanker*, May 16th; JOHN K. RAYMOND, M.B., Staff Surgeon, to the *Latona*, on recommissioning, June 1st; JAMES MCCUTCHEON, M.B., Surgeon, to the *Hecla*, June 1st; HENRY HUNT, Surgeon, to the *President*, additional, for three months' course at West London Hospital, May 25th; H. H. BABINGTON, Surgeon, to the *Blake*, May 25th.

The appointments of Staff Surgeon S. H. BIRT to the *Crescent*, and of Surgeon R. W. B. HALL to the *Orion*, have been cancelled.

A. W. SCOTT, medical practitioner, has been appointed Surgeon and Agent for Hull, Hessle, and Marfleet, May 25th; and Medical Practitioner W. J. O'KEEFFE has been appointed Surgeon and Agent for Boyne and Clogher, May 25th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL W. J. FAWCETT, C.B., M.B., is placed on retired pay, May 13th. He was appointed Assistant Surgeon, April 1st, 1871; made Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1885; Surgeon-Lieutenant-Colonel, April 1st, 1891; Colonel, May 10th, 1899; and Surgeon-General, April 1st, 1905. He has been Principal Medical Officer in Egypt, Principal Medical Officer 3rd Army Corps, Principal Medical Officer Irish Command, and Deputy Director-General of the Army Medical Service. He was in the Soudan campaign in 1885 (medal with clasp, and Khedive's bronze star); and in the Hazara expedition in 1888 (mentioned in dispatches, medal with clasp).

Colonel A. T. SLOGGETT, C.M.G., is promoted to be Surgeon-General, vice W. J. Fawcett, C.B., M.B., May 13th. He entered the service as Surgeon, February 5th, 1881; was made Surgeon-Major, February 5th, 1893; granted the rank of Lieutenant-Colonel, November 19th, 1895; selected for increased pay, October 16th, 1898; and promoted to be Colonel, September 9th, 1903. His war record is as follows: Expedition to Dongola, 1896, as Senior Medical Officer, British Troops (mentioned in dispatches, promoted Surgeon-Lieutenant-Colonel, Egyptian medal with clasp, 4th class Osmanieh); Nile expedition, 1898, as Senior Medical Officer 1st Brigade British Division, including the battle of Khartoum—dangerously wounded, horse shot (mentioned in dispatches, granted next higher rate of pay of rank, 3rd class of the Medjidie, clasp to Egyptian medal, and British medal); South African War, 1899-1902, in charge of an Imperial Yeomanry Hospital; afterwards Principal Medical Officer of a general hospital and Commandant Dreifontein District, and present in operations in the Orange Free State, the Transvaal, Orange River Colony, and Cape Colony, south of Orange River (mentioned in dispatches, Queen's medal with three clasps, King's medal with two clasps and C.M.G.).

Surgeon-General J. C. DORMAN, C.M.G., M.B., has left Capetown and taken over his duties as Principal Medical Officer, Eastern Command.

Colonel H. E. R. JAMES, F.R.C.S., retired pay, has been appointed General Staff Officer, Second Grade (attached), to the Director of Military Training at the War Office.

Colonel G. D. N. LEAKE is placed on retired pay, May 17th. He entered the service as Assistant-Surgeon, April 1st, 1871; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; was granted the rank of Lieutenant-Colonel, April 1st, 1891; made Brigade-Surgeon-Lieutenant-Colonel, October 3rd, 1895; and Colonel, November 8th, 1900. He was in the South African war, 1879 (medal); and with the Burmese expedition in 1885-7 (medal with clasp).

Lieutenant-Colonel and Brevet-Colonel D. BRUCE, C.B., M.B., from the Royal Army Medical Corps, to be Colonel, vice G. D. N. Leake, May 17th. Colonel Bruce was appointed Surgeon, August 4th, 1886; Surgeon-Major, August 4th, 1895; Lieutenant-Colonel, November 29th, 1900; and Brevet-Colonel, December 10th, 1903. He was in the South African war in 1899-1901, and was present at the defence of Ladysmith; he was mentioned in dispatches, promoted to be Lieutenant-Colonel, and granted the Queen's medal with six clasps.

Colonel W. BABTIE, V.C., C.M.G., M.B., from Supernumerary to the Establishment, to be Colonel, vice A. T. Sloggett, C.M.G., promoted April 13th.

INDIAN MEDICAL SERVICE.

MAJOR B. G. SETON, Bengal, is confirmed in the appointment of Secretary to the Director-General, Indian Medical Service, and is granted three months' privilege leave, combined with three months' leave out of India on private affairs.

Lieutenant-Colonel A. T. BOWN, Bengal, is appointed to officiate as Secretary to the Director-General, Indian Medical Service.

Lieutenant-Colonel C. H. BENNETT, M.B., Madras, is permitted to retire from the service from February 11th. He joined the department as Assistant Surgeon, October 1st, 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. The *Official Army List* says he was in the Afghan war in 1879, but does not credit him with a medal for that campaign.

Captain G. BROWSE, M.R.C.S., will hold charge of the Medical Division, Kohat Brigade Office, during the absence on leave of the Principal Medical Officer, Kohat Brigade.

Colonel P. H. BENSON, M.B., Madras, is promoted to be Surgeon-General from April 1st. He was appointed Assistant-Surgeon, March 31st, 1874, and became Colonel, October 11th, 1904. He has no war record on the Army Lists.

Colonel MCCLOGHRY, Bombay, Principal Medical Officer, Abbottabad and Sialkot Brigades, has been appointed to officiate as Surgeon-General with the Government of Bombay, vice Surgeon-General J. P. Greany, M.D., who has been granted six months' furlough.

Lieutenant-Colonel W. A. LEE, Madras, is permitted to retire from the service, from April 7th. He joined the Madras Medical Department as Assistant-Surgeon, September 30th, 1876; and was made Surgeon-Lieutenant-Colonel, September [illegible].

The retirement from the service of Lieutenant-Colonel G. A. EMERSON, M.B., Bengal, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

His Majesty has also approved the promotion of the undermentioned Majors to be Lieutenant-Colonels, which also has been already announced in the BRITISH MEDICAL JOURNAL: J. R. ROBERTS, M.B., F.R.C.S.; J. G. HOJEL, M.B., F. W. GEE, M.B., K. PRASAD, M.B., P. W. O'GORMAN, W. H. GRAY, H. C. L. ARNIM, G. S. THOMSON, M.B., F. C. PEREIRA, M.B.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-MAJOR C. L. FRASER to be Surgeon-Lieutenant-Colonel, May 5th.

Surgeon-Captain J. CAMERON, to be Surgeon-Major, May 13th.

VOLUNTEER RIFLES.

SUPERNUMERARY SURGEON-MAJOR A. D. WEBSTER, M.D., the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment). (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer 1st Lothian Volunteer Infantry Brigade), to be Surgeon-Lieutenant-Colonel, remaining supernumerary, March 28th.

Surgeon-Lieutenant L. W. POLE, M.B., the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), resigns his commission, March 31st.

Surgeon-Captain J. A. JAMES, 1st Volunteer Battalion the Hampshire Regiment, resigns his commission, March 20th.

Surgeon-Lieutenant W. B. MILBANKE, M.B., 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry, to be Surgeon-Captain, March 10th.

Surgeon-Captain A. LEITCH, M.B., 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders), to be Surgeon-Major, March 23rd.

Surgeon-Lieutenant G. E. ST. C. STOCKWELL, M.D., 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), resigns his commission, March 31st. He is appointed Lieutenant in the same corps from the same date.

Surgeon-Lieutenant H. SHIPTON, 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiments), resigns his commission, March 31st.

Surgeon-Captain W. M. PARHAM, M.D., 1st Volunteer Battalion Princess Charlotte of Wales's (Royal Berkshire Regiment), resigns his commission, March 28th.

CHANGES OF STATION.

THE following changes of station among the officers of the Army Medical Service have been officially notified as having taken place during April:

		FROM	TO
Surgeon-General	J. C. Dorman, C.M.G., M.B.	Capetown	Eastern Comd.
Colonel	H. R. Whitchead F.R.C.S Eng.	Ambala	Peshawar.
,,	O. E. P. Lloyd, V.C.	Jubbulpore	Bareilly.
,,	D. O'Sullivan, F.R.C.S.I.	Rawal Pindi	Jubbulpore.
,,	M. W. Kerin	Peshawar	Tidworth.
,,	A. Peterkin, M.B.	South Africa	Mauritius.
Lieut.-Col.	E. L. Maunsell	Bloemfontein	Colchester.
,,	H. J. R. Moberly	Aldershot	Maymyo.
,,	M. W. O'Keeffe, M.D.	Karachi	Rawal Pindi.
,,	R. E. R. Morse	Cawnpore	Lucknow.
,,	T. E. Noding	Capetown	Harrismith.
,,	R. I. D. Hackett, M.D.	Bulford	Bordon.
,,	W. A. Morris	Murree	Edinburgh.
,,	E. H. L. Lynden-Bell, M.B.	Fyzabad	Allahabad.
,,	G. Wilson, M.B.	Ferozepore	Multan.
,,	H. A. Haines, M.D.	Ambala	Fyzabad.
,,	S. Hickson, M.B.	Harrismith	Wynberg.
,,	J. S. Green, M.B.	Dublin	Hyderabad.
,,	H. H. Brown, M.B.	Nowshera	Peshawar.
Major	B. H. Scott	Rawal Pindi	Edinburgh.
,,	A. W. Bewley	Newbridge	Agra.
,,	W. A. S. J. Graham	Chatnam	Jubbulpore.
,,	O. L. Robinson	Gibraltar	Netley.
,,	J. F. M. Kelly, M.B.	Cork	Queenstown.
,,	R. C. Lewis	Devonport	Pembroke Dk.
,,	C. E. P. Fowler, F.R.C.S.	Mauritius	Gibraltar.
,,	K. M. Cameron, M.B.	Simla	Calcutta.
,,	A. C. Fox	—	Tidworth.
,,	W. Tibbits, M.B.	Meerut	Peshawar.
Captain	G. B. Crisp	Shahjehanpore	Meerut.
,,	E. Brodribb	Edinburgh	Shorncliffe.
,,	D. Harvey, M.B.	—	Lucknow.
,,	E. P. Connolly	Belfast	Aldershot.
,,	L. W. Harrison, M.B.	Murree	,,
,,	H. H. Norman	Rangoon	Shwebo.
,,	J. Powell, M.B.	R.A.M. Coll.	Tidworth.
,,	J. G. Foster, M.B.	Londonderry	R.A.M. Coll.
,,	J. Dorgan, M.B.	Fermoy	,, ,,
,,	J. H. Robinson	Alderney	,, ,,
,,	E. Bennett	Gosport	W'verhampton
,,	C. R. L. Ronayne, M.B.	Strensall	R.A.M. Coll.
,,	R. L. Popham	Dublin	,, ,,
,,	C. E. Fleming, M.B.	Templemore	,, ,,
,,	F. A. Stephens	Edinburgh	Birmingham.
,,	A. C. Duffey, M.D.	Dublin	R.A.M. Coll.
,,	A. W. Gibson	Chatham	Landguard Ft.
,,	R. N. Hunt, M.B.	Holywood	R.A.M. Coll.
,,	J. L. Jones	Devonport	Taunton.
,,	E. S. Worthington	Dublin	Birr.
,,	R. McK. Skinner	Scottish Comd.	Edinburgh.
,,	A. J. W. Wells	—	Rangoon.
,,	W. Davis	Tipperary	Fermoy.
,,	H. W. Long, M.B.	Kinsale	Fethard.
,,	R. Storrs	Ambala	Peshawar.
,,	J. M. H. Conway, F.R.C.S.I.	,,	Aden.
,,	J. H. Duguid, M.B.	Straits Settlements.	Glasgow.
,,	F. M. M. Ommanney	Sialkot	Lahore.
,,	S. L. Pallant	Jubbulpore	Mhow.
,,	C. R. Sylvester Bradley	Poona	Belgaum.
,,	F. J. Turner	Mhow	Jubbulpore.
,,	G. F. Rugg	Norwich	Colchester.
,,	H. T. Wilson	Rawal Pindi	Nowshera.
,,	H. St. M. Carter, M.D.	Crete	Malta.
,,	J. P. Lynch	Thayetmyo	Rangoon.
Lieutenant	G. B. F. Churchill	Meerut	Peshawar.
,,	W. S. Nealor	Calcutta	Thayetmyo.
,,	R. G. Meredith, M.B.	Malta	Crete.
,,	E. B. Booth, M.D.	Jhansi	Kamptee.
,,	R. I. C. Thompson	—	Pretoria.
,,	F. A. McCammon, M.B.	Belfast	Quetta
,,	G. De la Cour, M.B.	Millbank	Rawal Pindi.
,,	A. Dawson, M.B.	London Dist.	Mhow.
,,	F. Forrest	Rawal Pindi	Multan.
,,	A. S. Williams	Dover	Lucknow.
,,	V. C. Honeybourne	,,	Rawal Pindi.
,,	C. T. Edmunds	Bordon	,, ,,
,,	V. G. Johnson	Woolwich	,, ,,
,,	R. E. U. Newman, M.B.	Rawal Pindi	Sialkot.
,,	P. Sampson	Kamptee	Jhansi.
,,	T. T. H. Robinson, M.B.	Lucknow	Mhow.
,,	D. De C. O'Grady	Rawal Pindi	Nowshera.
,,	L. G. Gibson	Aldershot	Rawal Pindi.
,,	P. S. Stewart, M.B.	Clogheen	Malta
,,	D. Coutts, M.B.	Tidworth	Oxford.
,,	J. A. Bennett, M.B.	Reading	Winchester.
,,	E. J. Kavanagh, M.B.	Colchester	Lucknow.
,,	F. H. M. Chapman	Birmingham	Larkhill C'mp.
,,	R. D. O'Connor	Tidworth	Bulford.
,,	O. R. McEwen	Lancaster	Pembroke Dk.
,,	T. McC. Phillips, M.B.	Dundalk	Belfast.
,,	H. W. Carson, M.B.	Penally	Newport.
,,	A. E. B. Jones, M.B.	Dover	Canterbury.

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths in the first, or winter, quarter of 1908, and to the marriages in the three months ending December last. The marriage-rate during that period was equal to 16.9 per 1,000 of the total population, or 0.5 per 1,000 less than the average rate in the corresponding quarter of the ten preceding years.

The births registered in England and Wales during the three months under notice numbered 240,411, and were equal to an annual rate of 27.3 per 1,000 of the population, estimated at 35,348,780 persons in the middle of the year; this is the lowest rate recorded in the first three months of any year since civil registration was established, and is 1.3 per 1,000 below the average for the corresponding quarter of the ten years 1898-1907. The birth-rates in the several counties last quarter ranged from 19.9 in Carnarvonshire, 20.1 in Sussex, 21.6 in Northamptonshire, 21.7 in Cornwall, 22.1 in Dorsetshire, 22.2 in Herefordshire, 22.4 in Somersetshire, and 22.6 in Devonshire, to 31.3 in Staffordshire, 31.4 in Northumberland, 31.6 in Nottinghamshire, 35.1 in Durham, 35.4 in Glamorganshire, and 38.6 in Monmouthshire. In seventy-six of the largest English towns, including London, the birth-rate averaged 28.3 per 1,000; in London the rate was 26.9 per 1,000, while it averaged 28.8 in the seventy-five other large towns, and ranged from 15.1 in Hornsey and in Hastings, 17.7 in Bournemouth, 19.8 in Northampton, 20.6 in Bradford, and 21.1 in Halifax, to 44.9 in Merthyr Tydfil, 35.0 in Hanley, 35.2 in Swansea, 35.7 in West Bromwich, 36.4 in Newport (Mon.), 37.3 in St. Helens, 37.4 in Middlesbrough, and 41.7 in Rhondda.

The excess of births over deaths during the quarter under notice was 84,052; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance inward of 2,893 persons. There was an outward balance of 17,797 English passengers, of 3,127 Scottish, and of 1,721 Irish, and an inward balance of 24,660 among persons of foreign origin.

During the first quarter of the year the deaths of 156,359 persons were registered, equal to an annual rate of 17.7 per 1,000 living, or 0.8 per 1,000 less than the mean rate in the ten preceding first quarters. The lowest county death-rates last quarter were 14.0 in Middlesex, 14.2 in Essex, 14.7 in Kent, 15.3 in Leicestershire, 15.4 in Northamptonshire, 15.7 in Sussex, and 15.9 in Dorsetshire; the highest rates were 19.6 in Denbighshire, 19.8 in Lancashire, 20.0 in Glamorganshire, 20.3 in Cumberland, 22.0 in Carmarthenshire, and 22.8 in Monmouthshire. In seventy-six of the largest towns, with an aggregate population estimated at upwards of sixteen millions, the mean death-rate was 17.9 per 1,000; in 142 smaller towns, containing a total population of nearly five millions, the rate averaged 16.9 per 1,000, while in the remainder of the country the rate was 17.8 per 1,000. In London the rate of mortality was 17.0 per 1,000, while it averaged 18.3 in the seventy-five other large towns, and ranged from 9.8 in Hornsey, 11.8 in East Ham, 12.6 in Walthamstow, 12.8 in Leyton and in King's Norton, and 13.3 in Tottenham to 22.5 in Hanley and in Swansea, 22.6 in Rhondda, 23.2 in Merthyr Tydfil, 23.4 in Bootle and in Oldham, and 24.2 in Liverpool.

The 156,359 deaths from all causes in England and Wales last quarter included 10,299 which were referred to the principal infectious diseases; of these, 3,804 were attributed to whooping-cough, 2,460 to measles, 1,642 to diphtheria, 1,011 to diarrhœa, 792 to scarlet fever, and 590 to "fever" (principally enteric), but not any to small-pox. The aggregate mortality from these diseases was equal to 1.17 per 1,000, being 0.21 per 1,000 below the average proportion in the corresponding quarters of the ten preceding years. The death-rate from whooping-cough was above the average, while the rates from each of the other specified diseases showed a decline.

The rate of infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births was equal to 123 per 1,000, the average rate in the ten preceding first quarters having been 137 per 1,000. Among the several counties the rates of infant mortality ranged from 83 in Dorsetshire, 87 in Herefordshire, 91 in Middlesex and in Somersetshire, 92 in Oxfordshire and in Bedfordshire, and 93 in Surrey and in Hertfordshire, to 147 in Cumberland, 150 in Denbighshire, 151 in Durham, 155 in Monmouthshire, 159 in Glamorganshire, and 169 in Carmarthenshire. In seventy-six of the largest towns the mean rate of infantile mortality was 124 per 1,000, being slightly above the average rate for the whole country; in London the rate was 110, while it averaged 129 in the seventy-five other large towns, and ranged from 67 in Leyton, 73 in Coventry, 84 in Hornsey, in Tottenham, and in Huddersfield, 87 in St. Helens, and 91 in King's Norton, to 164 in Burnley, 175 in Sunderland, 176 in Gateshead, 179 in Warrington and in Rhondda, and 204 in Merthyr Tydfil.

The mortality in England and Wales during the three months under notice among persons aged between 1 and 60 years was at the annual rate of 8.5 per 1,000 of the estimated population at this group of ages, the average rate in the ten preceding first quarters having been 9.1 per 1,000. In the seventy-six large towns the death-rate of this age-group averaged 9.2 per 1,000, being 8.4 in London, and ranging from 4.6 in Hornsey, 5.2 in King's Norton, 5.3 in Hastings, and 5.9 in Reading, to 12.2 in Rhondda, 12.4 in Manchester and in Salford, 12.6 in Bootle, 12.9 in Oldham, and 13.6 in Liverpool.

Among persons aged 60 years and upwards the death-rate last quarter was 91.3 per 1,000 of the population estimated to be living at this age-period, being 4.7 per 1,000 above the average age for the corresponding periods of the ten preceding years. In the seventy-six large towns the death-rate at this age-group averaged 97.8 per 1,000; in London the rate was 95.7 per 1,000, while it ranged from 63.9 in Hornsey, 77.6 in Croydon, 79.4 in Hastings, and 80.2 in Newcastle-on-Tyne, to 121.4 in Oldham, 121.5 in Rochdale, 129.7 in St. Helens, 131.0 in Bootle, and 134.6 in Henley.

The mean temperature of the air last quarter was below the average, the deficit being greatest in the southern districts. The rainfall during the quarter differed but little from the average in London and the eastern districts, but showed a considerable deficiency in most other districts. The duration of bright sunshine amounted to 197 hours, or 7 hours less than the average in London: in the north-west of England there was a substantial excess, but in the eastern and midland counties there was rather a large deficiency.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,190 births and 4,098 deaths were registered during the week ending Saturday last, May 23rd. The annual rate of mortality in these towns,

which had been 15.7, 14 2 and 13 2 per 1,000 in the three preceding weeks, was again 13.2 per 1,000 last week. The rates in the several towns ranged from 2.9 in Burton-on-Trent, 3.7 in Aston Manor, 5.4 in Handsworth (Staffs), 6.2 in Hornsey, 6 6 in Bournemouth, and 7 9 in Croydon and in Walthamstow, to 17.6 in Rochdale, 17 7 in Liverpool, 17 9 in Tynemouth, 18.2 in Merthyr Tydfil, 18 6 in Middlesbrough, 18 7 in Swansea, 19.4 in Stockport, and 20.3 in Burnley. In London the rate of mortality was 12.5 per 1,000, while it averaged 13.4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.1 per 1,000 in the seventy-six towns; in London this death-rate was equal to 0.9 per 1,000, while among the other large towns it ranged upwards to 2 2 in Salford and in Oldham, 2.3 in Liverpool, 2 5 in Wolverhampton, 2.8 in Tynemouth, 3.1 in Stockport, and 3.3 in Rotherham. Measles caused a death-rate of 1 1 in Salford and 1 3 in West Ham and in Preston; scarlet fever of 1 1 in Walsall and in St. Helens; diphtheria of 1.2 in Derby; whooping-cough of 1.1 in Cardiff, 1.2 in Rochdale, 1.4 in Merthyr Tydfil, 1.5 in Stockport, 1 6 in Rotherham, and 1 9 in Tynemouth; and diarrhœa of 1 2 in Blackburn and in York. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,925, 2,870, and 2,833 at the end of the three preceding weeks, had further declined to 2,802 at the end of last week; 330 new cases were admitted during the week, against 368, 353, and 340 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday, May 16th, 956 births and 541 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18 8, 18 7, and 17 8 per 1,000 in the three preceding weeks, further declined to 15 3 per 1,000, but was 2 1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10.4 in Perth and 12 7 in Paisley to 16 6 in Leith and 16 9 in Glasgow. The death-rate from the principal infectious diseases averaged 1 4 per 1,000, the highest rates being recorded in Glasgow and in Perth. The 279 deaths registered in Glasgow included 14 which were referred to measles, 9 to whooping-cough, and 7 to diarrhœa. Two fatal cases of measles were recorded in Aberdeen, and 2 of diarrhœa in Edinburgh, in Dundee, and in Greenock.

During the week ending Saturday last, May 23rd, 948 births and 542 deaths were registered in these Scottish towns. The annual rate of mortality, which had been 18 7, 17 8, and 15.3 per 1,000 in the three preceding weeks, rose again last week to 15.4, and was 2 2 per 1,000 above the mean rate during the same week in the seventy-six large English towns. The rates in the eight Scottish towns ranged from 12.1 in Paisley and 13 1 in Greenock, to 15 9 in Edinburgh and 19 5 in Dundee. The death-rate from the principal infectious diseases averaged 1.4 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 247 deaths registered last week in Glasgow included 7 which were referred to measles, 3 to scarlet fever, 4 to whooping-cough, 2 to enteric fever, 5 to cerebro-spinal meningitis, and 6 to diarrhœa. Two fatal cases of scarlet fever and 3 of whooping-cough were recorded in Edinburgh; 2 of whooping-cough and 3 of diarrhœa in Dundee; and 2 of diarrhœa in Aberdeen.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 16th, 553 births and 368 deaths were registered in six of the principal Irish towns, as against 616 births and 441 deaths in the preceding period. The mean of the annual death-rates in these towns, which had been 28.6, 25.9, and 23 3 per 1,000 in the three preceding weeks, rose to 23 8 per 1,000 in the week under notice, this figure being 10 6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 18.5 in Belfast and 19 0 in Dublin to 28.0 in Londonderry and 35.1 in Waterford. The zymotic death-rate in the same six Irish towns averaged 2.7 per 1,000, or 0.1 per 1,000 higher, than during the preceding period, the highest figure—9.7—being recorded in Waterford.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ALTON: LORD MAYOR TRELOAR CRIPPLES' HOME AND COLLEGE.—Resident Medical Officer. Salary, £150 per annum.

BANGOR: CARNARVON AND ANGLESEY INFIRMARY. House-Surgeon. Salary, £80 per annum, increasing to £100.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BATLEY BOROUGH.—Medical Officer of Health. Salary, £150 per annum, increasing to £200; will be appointed Medical Inspector of Schools at £150 per annum.

BETHLEM HOSPITAL.—Two Resident House-Physicians for six months. Terms, £25 each per quarter.

BERKSHIRE COUNTY COUNCIL.—Lady Inspector of Midwives.

BERKSHIRE EDUCATION COMMITTEE.—Two Assistant Medical Inspectors of Schools. Salary, £300 per annum each.

BIRMINGHAM PARISH INFIRMARY.—Assistant Resident Medical Officer. Salary, £104 per annum.

BLACKBURN BOROUGH.—Assistant to Medical Officer of Health. Salary commencing at £50 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.

BURNTWOOD: COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £120 per annum.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer. Salary, £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST. Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

CITY OF LONDON UNION.—Assistant Medical Superintendent at the Infirmary. Salary, £150 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DARENTH ASYLUM.—Male and Third Assistant Medical Officer. Salary, £150 per annum, rising to £170.

DURHAM COUNTY COUNCIL.—(1) Three School Medical Inspectors. Salary, £300 per annum each.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Clinical Assistant.

EVELINA HOSPITAL FOR CHILDREN, Southwark Bridge Road, S.E.—Physician in charge of Skin Department.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

FOLKESTONE: ROYAL VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum.

GLOUCESTER EDUCATION COMMITTEE.—School Medical Inspector. Salary, £250 per annum, rising to £300.

HAMMERSMITH INFIRMARY.—Second Assistant Medical Officer (male) for six months. Salary, £50.

HULL ROYAL INFIRMARY.—Honorary Assistant-Surgeon.

LAMBETH WORKHOUSE: Assistant Medical Officer. Salary, £125 per annum.

LANCASTER ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Medical Officer. Salary, £130 per annum, increasing to £160.

LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.

LINCOLN GENERAL DISPENSARY.—Resident Junior Male Medical Officer. Salary, £175 per annum.

LIVERPOOL EDUCATION COMMITTEE.—School Medical Officer. Salary, £300 per annum.

LIVERPOOL STANLEY HOSPITAL.—Honorary Ophthalmic Surgeon.

MANCHESTER CHILDREN'S HOSPITAL.—Assistant Medical Officer (non-resident). Salary, £100 per annum.

MIDDLESEX HOSPITAL.—Dental Surgeon.

MIDDLESEX HOSPITAL MEDICAL SCHOOL, W.—Lectureship in Anatomy.

NATIONAL ASSOCIATION FOR THE ESTABLISHMENT AND MAINTENANCE OF SANATORIUMS FOR WORKERS SUFFERING FROM TUBERCULOSIS.—Assistant Medical Superintendent for Sanatorium at Benenden. Salary, £80 per annum.

NORWICH CITY ASYLUM.—Assistant Medical Officer. Salary, £130 per annum.

PORT ELIZABETH: PROVINCIAL HOSPITAL.—Assistant House-Surgeon. Salary £225 per annum, rising to £300.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Physician. Salary at the rate of £60 per annum.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—(1) Morning House Anæsthetist. Honorarium, £25 per annum. (2) Honorary Radiographer.

ROYAL EAR HOSPITAL, Dean Street, Soho, W.—House-Surgeon. Honorarium, £40 per annum.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Manchester.—Third and Fourth House-Surgeons. Honorarium, £25 for six months.

SEAMEN'S HOSPITAL SOCIETY: ALBERT DOCK HOSPITAL.—(1) Senior House-Surgeon; salary, £75 per annum, and £25 for acting as Registrar. (2) House-Surgeon. Salary, £50 per annum.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £150 per annum, rising to £200.

STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

UNIVERSITY COLLEGE, Gower Street.—Sharpey Scholarship in Physiology.

WARWICKSHIRE COUNTY COUNCIL.—Two Assistant County Medical Officers of Health. Salary, £250 per annum each.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident Medical Officer. Salary at the rate of 50 guineas per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Anæsthetist.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon.—Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Terms, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Horsmonden, co. Kent; Youlgreave, co. Derby; and Stourbridge, co. Worcester.

APPOINTMENTS.

COLLIS, Edgar Leigh, M.B., B.Ch., Medical Inspector of Factories.

DOMINY, G. H., M.R.C.S., L.R.C.P., District Medical Officer of the Cerne Union.

FINZI, N. S., M.B. Lond., Honorary Radiographer to the Hospital for Epilepsy and Paralysis, Maida Vale.

HILL, L., M.R.C.S., L.R.C.P., District Medical Officer of the Halt-whistle Union.

HOGARTH, A. H., M.B., B.Ch.Oxon., D.P.H., Medical Officer of Health to the Bucks County Council, Buckinghamshire.

JERMAN, A. E., M.B.Lond., Certifying Factory Surgeon for the Erith District, co. Kent.

LACEY, Frank K., M.B., Ch.B.Vict., House-Surgeon, General Infirmary, Worcester.

MCCALL, B., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Carrickmacross District, co. Monaghan.

MCFARLANE, A. R., M.R.C.S., L.R.C.P., District Medical Officer of the Parish of Chelsea.

MAXWELL, R. D., M.D.Lond., F.R.C.S.Eng., Out-patients' Surgeon to the Samaritan Free Hospital for Women, London.

MUIR, J., M.D.Glasg., Certifying Factory Surgeon for the Bellshill District, co. Lanark.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

ADDISON.—On May 26th, at Coddenham, Suffolk, the wife of Eldred A. Addison, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

MARRIAGE.

STEAVENSON—MAY.—On May 26th, at Croft-on-Tees, by Rev. J. Marshall, M.A., and Rev. R. Downie, M.A., Arthur Paget Steavenson, M.D., of Harworth-on-Tees, third son of the late F. T. Steavenson, Town Clerk of Darlington, to Helen Maud May, elder daughter of George May, Clervaux Castle, Croft and Simonside Hall, South Shields.

DIARY FOR THE WEEK.

TUESDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Paper: Colonel F. J. Lambkin, R.A.M.C., Syphilis in the Uganda Protectorate.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Exhibition of Clinical Cases.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Monday, 3.15 p.m., Whitlows; Tuesday, 2.15 p.m., Disinfection and the use of Disinfecting Agents.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Practical Hints on the Examination of the Nose; Tuesday, Some Surgical Affections of the Colon; Wednesday, How to Diagnose Cancer of the Womb (with lantern slides); Thursday, The Treatment of Stricture of the Urethra.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Hysteria; Friday, 3.30 p.m., Optic Atrophy.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, *X* Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Demonstration of Selected Surgical Cases. Wednesday, 2.30 p.m., Medical Out-patient Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 3 p.m., Medical and Surgical Clinics and *X* Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin, Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Wednesday and Friday, Practical Medicine. At 5 p.m.: Monday, Cases of Disease; Tuesday, Plague; Wednesday, Epilepsy and Insanity; Thursday, Clinical (Surgical); Friday, Results after Gastro-enterostomy.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
1 MONDAY ...	
2 TUESDAY ...	ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Midland Hotel, King's Cross, W.C., 4 p.m. WARRINGTON DIVISION, *Lancashire and Cheshire Branch*, Warrington Infirmary, 4.30 p.m.
3 WEDNESDAY	LONDON: Medico-Political Parliamentary Subcommittee, 2 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Town Hall, Clonmel, 12 noon; also meeting of Branch Council and Local Division.
4 THURSDAY...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of Hospital, Altrincham, 4.50 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7 p.m. COVENTRY DIVISION, *Birmingham Branch*, Annual Meeting, Coventry and Warwickshire Hospital, 8.30 p.m. NORTH NORTHUMBERLAND DIVISION, *North of England Branch*, Annual Meeting, Infirmary, Berwick-upon-Tweed, 2.30 p.m.
5 FRIDAY ...	LONDON: Standing Ethical Subcommittee, 2 p.m. GLASGOW AND WEST OF SCOTLAND BRANCH, Annual Meeting, New Maternity Hospital, Rotten Row, 3 p.m.: Dinner, St. Enoch Station Hotel, 6.15 p.m. NUNEATON AND TAMWORTH AND COVENTRY DIVISIONS, *Birmingham Branch*, Combined Meeting, Coventry and Warwickshire Hospital, 4 p.m. PERTHSHIRE BRANCH, Golf Club House, Moncreiffe Island, Perth, 1 p.m.; Council Meeting, 12.45 p.m.; Lunch, 2 p.m.
6 SATURDAY ...	MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork, 4.30 p.m.
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	NORTHAMPTONSHIRE DIVISION, Annual Meeting, Board Room, General Hospital, Northampton, 2.30 p.m.; Luncheon, Franklin's Restaurant, 1.30 p.m.
10 WEDNESDAY	LONDON: Medico-Political Contract Practice Subcommittee, 10.30 a.m. LONDON: Medico-Political Committee, 2.30 p.m. CHICHESTER AND WORTHING DIVISION, *South-Eastern Branch*, Infirmary, Worthing, 3.30 p.m. LONDON: Metropolitan Counties Branch Council, 5 p.m. EAST YORK AND NORTH LINCOLN BRANCH, Annual Meeting, Hull Royal Infirmary, 12.30 p.m.
11 THURSDAY...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Annual Meeting. MIDLAND BRANCH, Annual Meeting, The Exchange, Nottingham, 2.30 p.m. SOUTH WALES AND MONMOUTHSHIRE BRANCH, Annual Meeting, Infirmary, Newport, 4.30 p.m.
12 FRIDAY ...	
13 SATURDAY ...	NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Kingussie.
14 Sunday ...	
15 MONDAY ...	
16 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. BOSTON AND SPALDING DIVISION, *Midland Branch*, Annual Meeting, White Hart Hotel, Boston, 12.45 p.m.; Luncheon, 2 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 6TH, 1908.

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MATTERS REFERRED TO DIVISIONS.

PROVISIONAL AGENDA

FOR

Annual Representative Meeting

TO BE HELD IN

SHEFFIELD

ON

JULY 24th, 1908, and following days (as may be necessary).

The Annual General Meeting is fixed for July 24th, 1908, at 3.0 p.m., to be immediately followed by the Annual Representative Meeting.

ORDER OF BUSINESS.

1.

A. Receive the return of the election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives, under Article XXX and By-law 19.

2.

B. Adopt Standing Orders.

The Standing Orders as adopted at Exeter will be found appended (see p. 390).

Notice has been given of the following motions for amendment:

PROPOSED AMENDMENTS TO STANDING ORDERS.

3.

Receive Report of the Organization Committee pursuant to the following instruction of the Representative Meeting at Exeter:

Minute 324.—**That the Organization Committee be requested to prepare for the consideration of the Meeting amendments of the Standing Orders, to facilitate the reception and consideration of the Reports of Committees.**

REPORT OF ORGANIZATION COMMITTEE ON STANDING ORDERS OF REPRESENTATIVE MEETING.

THE Organization Committee has considered the following instruction of the Annual Representative Meeting at Exeter, namely:

324. That the Organization Committee be requested to prepare for the consideration of the Meeting amendments of the Standing Orders, to facilitate the reception and consideration of the Reports of Committees.

The Committee recommends that the present Standing Order III, 4, of the Representative Meeting, "Procedure as to Presentation of Reports," be deleted, and the following Standing Orders adopted:

A. STANDING ORDERS AS TO RECEPTION OF REPORTS.

Previous Notice.

Subject as hereinafter provided, no Report by the Council or by a Committee to the Representative Meeting shall be considered by the Meeting unless it shall have been sent to the Divisions and published in the JOURNAL at least one month before such Meeting. The exceptions to this rule shall be:

(*a*) That the Council, and such Standing Committees, if any, as report direct to the Representative Meeting, shall submit, in addition to their Annual Report, a Supplementary Report dealing with those matters of importance, arising subsequent to the issue of the Annual Report of the Council, or of such Committee, to the Representative Meeting, in which action has been taken, or action by the Representative Meeting is recommended.

(*b*) That any special Committee appointed by the Representative Meeting shall report in accordance with the terms of the instruction given to such Committee by the Meeting.

Form of Reports.

Reports of Council and Reports, if any, of Standing Committees, to the Representative Meeting shall comprise the following:

(*a*) Reports with specific recommendations upon all matters in which the Council or Committee considers that action should be taken involving

a new declaration of policy or expenditure not already authorized.

(*b*) A short Report of all action taken by the Council or Committee in accordance with instructions of the Meeting.

(*c*) A list of matters under consideration but not completed.

Presentation of Reports.

The Report of the Council or of a Committee shall be presented by the Chairman, or, in his absence, by a member, of the body submitting such Report, who shall move

(1) That the Report be received.

(2) That the Recommendations, if any, be adopted.

(3) That the rest of the Report be approved.

The adoption of each Recommendation shall be the subject of a separate motion. The approval of the rest of the Report shall be moved as a whole, unless the Chairman rule or the Meeting resolve that the approval of each paragraph, or of any specified paragraph, be the subject of a separate motion.

Amendments and Riders.

(1) To a motion that a Report be received, no amendment shall be moved.

(2) To a motion that a Recommendation be adopted, amendments may be moved.

(3) To a motion that a Report, or a specified paragraph of a Report, be approved, an amendment may be moved to the effect that the Meeting do disagree with, or do refer back to the Committee, any specified portion thereof, or that with reference thereto the Meeting do express an opinion in terms stated.

B. NEW STANDING ORDER.

The Committee also recommends the addition of a Standing Order as follows:

References to Central Executive.

Each motion or amendment which is of the nature of an instruction or reference to any central executive body, other than a Committee specially appointed by the Representative Meeting, shall be moved in the form of an instruction or a reference to the Council.

4.

By the WESTMINSTER DIVISION (Metropolitan Counties Branch):

That no business shall be discussed by the Representative Meeting nor votes taken upon important questions unless they appear upon the Agenda of such meeting. The Agenda of all Representative Meetings shall be submitted to the Divisions at least one month prior to the assembling of a Representative Meeting.

(*Supplement*, March 28th.)

5.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That, when a resolution which has been submitted to the Representative Body is referred to the Central Council or elsewhere for investigation and report, it be accompanied by an instruction to consult the Division or other body submitting the resolution, with a view to a satisfactory elucidation of the principles considered to be involved.

6.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That no motion to rescind any resolution of a Representatives' Meeting, arrived at after due consideration of the Divisions, shall be in order at any subsequent Representatives' Meeting, without at least two months' notice of such proposed motion shall have been given to the Divisions through the SUPPLEMENT to the JOURNAL.

7.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

Standing Order III, 9.—Add, "In the case of either a Vote by Card or a Division, the names for, or against, the motion or amendment, as also of those not voting, together with the constituencies they represent, shall be taken down in writing and entered on the minutes.

REPORTS OF COUNCIL.

8

C. Receive the Annual Report of the Council, presented under By-law 35, and consider motions relating thereto.

ANNUAL REPORT OF COUNCIL, 1907-8.

(The Annual Report of Council appeared in the *Supplement*, May 23rd, 1908.)

9.

D. Receive the Financial Estimate presented by the Council under By-law 35, and consider motions relating thereto.

10.

E. Receive Special Report of Council on the revision of the draft Charter prepared pursuant to Minute 368 of the Special Representative Meeting of May 30th, 1907, as follows—namely:

That the draft Charter, Ordinances, and By-laws, as drafted by the Organization Committee and amended by the Meeting, subject to such alterations, if any, as may be required as the result of a Referendum, if such be taken by the Council, and subject to such changes, if any, as the Council may make in order to meet the special requirements of the Colonial Branches, be referred to Counsel for final revision and placed before a Representative Meeting for final confirmation at the earliest possible date.

SPECIAL REPORT OF COUNCIL ON REVISION OF DRAFT CHARTER.

(The Special Report of Council, with a Supplementary Report by the Organization Committee pursuant to instruction of Council, and the Draft Charter, Ordinances, and By-laws were published in the *Supplement* of May 23rd.)

11.

F. Consider draft Charter, Ordinances, and By-laws submitted by the Council in accordance with Special Report.

G. Consider Notices of Motion arising out of the draft Charter, Ordinances, and By-laws:

CHARTER.

12.

Charter, Clause 6.—Federations of the Branches.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That should Counsel consider it necessary, in order to allow of the formation and recognition of Federations of Branches at Home and in the Colonies as part of the constitution of the Association, a clause be inserted in the Charter or Ordinances.

(*Supplement*, March 28th.)

13.

Charter, Clause 7.—Extension of Objects of Association.

By the CARDIFF DIVISION (South Wales and Monmouthshire Branch):

That a decision of the Representative Meeting to adopt, for the furtherance of the objects of the Association, any of the means specified in Clause 2 (2) of the Charter not previously adopted shall require confirmation by another Representative Meeting. If so confirmed the proposal will then come before the Council, who may take a referendum.

ORDINANCES.

14.

Ordinances 15, 16, and 17.—Voting in the Representative Meeting.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That Ordinances 15, 16, and 17 of Draft Charter be so amended as to include the following:

That in order to make any resolution effective under Ordinances 15, 16, and 17, (*a*) An attendance of at least two-thirds of the accredited Representatives should be necessary. (*b*) A majority of two-thirds of the votes taken on a vote by card should be necessary. (*c*) An attendance of at least two-thirds of the members of the Central Council should be necessary at any meeting called to consider any such question; with (*d*) a majority of two-thirds of the votes taken on a vote by card of such meeting of the Council. (*e*) The Central Council should hold such meeting within twenty-four hours of the resolution being passed by the Representative Body, and must then decide whether they will refer the subject for reconsideration, which must be done within twenty-four hours of coming to such a decision, or whether they will accept it as a decision of the Association. (*f*) If the question is referred, and the subject-matter of such referred resolution has been duly published not less than two months previously, it should only be necessary, in order that the resolution be carried and become a decision of the Association, for conditions (*a*) and (*b*) to have been again fulfilled at the subsequent Representative Meeting. (*g*) If the subject-matter of such referred resolution has *not* been duly published not less than two months previously, and on reference to the Representative Body it is again carried, conditions (*a*) and (*b*) being fulfilled, then the Central Council should meet again within seven days and decide if they will take a Referendum or allow the resolution to become a decision of the Association, conditions (*c*) and (*d*) having to be fulfilled by the Central Council if they decide on a Referendum. (*h*) If a Referendum is taken, the report from Divisions outside the United Kingdom should be by cablegram duly certified by the President of the meeting at which the vote is taken.

(*Supplement*, March 28th.)

15.

Ordinance 17.—Referendum.

By the CARDIFF DIVISION (South Wales and Monmouthshire Branch):

That the Referendum, whenever taken, shall be by means of voting papers sent to every individual member of the Association.

BY-LAWS.

16.

By-law 20.—Grants to Branches: Ordinary.

By the BLACKBURN DIVISION (Lancashire and Cheshire Branch):

That By-law 20 be so amended that the Council will be able to allow the Branches sufficient grants to enable the Branch Councils to pay the active Divisions such grants as will enable them to pay all their ordinary expenses without voluntary extra subscriptions—namely, up to 7s. 6d. per annum per member where necessary.

17.

By-law 25.—Representative Body: Formation of Constituencies.

By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (1) the words "each such Constituency being entitled to elect one Representative," be deleted.

18.

By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (2), for the first word of line 2, "one," substitute "a," and after the word "Constituency" insert the words "to elect one member"; at the end add the words "Any Division having more than 50 members may elect another additional Representative for every complete 50 (75, 100, or other number) additional members."

19.

By-law 26.—Election of Representatives: Nominations.

By the CARDIFF DIVISION (South Wales and Monmouthshire Branch):

That nominations for the office of Representative should be received by a certain date, and, in case of a contest, that the election shall be by voting papers sent to each member of the Division.

20.

By-law 26.—Election of Representatives: Eligibility.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

By-law 26 (1): Add at end, "No person shall be eligible for election as a Representative who is not a member of the Association at the date of his nomination."*

(*Supplement*, March 28th.)

21.

By-law 31.—Business of Annual Representative Meeting: Consideration by Divisions.

By the WALTHAMSTOW DIVISION (Metropolitan Counties Branch):

That all notices of motion, intended for reference to the Divisions, shall be sent in the first place to the Branch Councils, who shall decide what matters are of sufficient importance to be referred to the Divisions, and the remainder shall be decided upon by the Branch Councils themselves.

22.

By-law 33.—Voting.

By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 33 (2), after line 5, insert: "except in the case of a Constituency represented by more than one member, in which case the number of votes shall be divided equally among the Representatives."

23.

By-law 33 (3).—Voting under Instructions.

By the WALTHAMSTOW DIVISION (Metropolitan Counties Branch):

That each Representative of a Division, when voting in Representative Meetings after discussion on any matter, shall be allowed to use his own judgement and not be bound as a mere delegate to record the previous decision of his Division, but when he votes contrary to that decision he shall subsequently justify to his Division his reasons for so voting.

24.

By-law 38.—Election of Council.

By the BOURNEMOUTH DIVISION (Dorset and West Hants Branch):

That single-member constituencies be formed of one or more Branches, and the member of the Council be elected by the Representatives of the Divisions comprised in the area thereof from the members of the British Medical Association resident therein.

25.

By-law 38.—Composition of Council.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

(1) That the members elected to represent the Royal Navy, Army, and Indian Medical Services should be elected by the Representative Body on the recommendation of the Central Council and for such period not exceeding three years as the Central Council may decide.

* In the Provisional Agenda published in the SUPPLEMENT of May 16th this item was included in error among the Proposed Amendments of Existing By-laws.

(II) That the Central Council should consist of the following sets of members: (*a*) Six *Ex-officio* members, (*b*) Three Service members, (*c*) Twenty-four Home members elected by Grouped Branches, (*d*) Twelve Home members elected by Grouped Representatives, and (*e*) Eight Colonial members.

(III) That there should be the following Grouping of Branches, with the accompanying Representation on the Central Council:

Group.	Number of Members.	Branches Included. No.	Branches Included. Names.	Number of Divisions Included.	Number of Representatives Returned.	Central Council. Present Seats.	Central Council. To be Returned by Grouped Branches.	Central Council. To be Returned by Grouped Representatives.
Scottish	1,885	9	Aberdeen, Border Counties, Dundee, Edinburgh, Fife, Glasgow, Northern Counties, Perth, Stirling	24	21	8	4	1
Irish	908	5	Connaught, Leinster, Munster, South-Eastern, Ulster	22	10	5	4	1
Welsh	838	3	North, Mid-Wales, South	9	9	4	*1	1
Northern ...	802	2	North of England, North Lancashire	19	11	2	1	1
Lancashire and Cheshire	1,627	1	—	30	23	4	2	1
Yorkshire ...	792	1	—	10	8	2	1	1
Eastern	716	3	Cambridge, East Anglia, East York	13	8	2	1	1
Midland	1,490	4	Birmingham, Midland, South Midland, Staffordshire	19	14	5	2	1
Metropolitan ...	2,684	1	—	15	14	5	4	1
South-Eastern ...	1,258	1	—	20	12	3	1	1
Southern... ...	717	2	Southern, Oxford	10	7	3	1	1
Western	713	4	Bath, Gloucester, W. Somerset, Worcester	7	6	3	1	1
South-Western...	662	2	South-Western, Dorset	8	6	3	1	
Australian ...	1,327	5	S. Australia, W. Australia, Sydney, Melbourne, Brisbane	—	1	2	1	—
Canadian ...	1,339	5	Halifax, Montreal, St. John, Saskatchewan, Toronto	—	—	1	1	—
Indian	401	4	Bombay, Colombo, South Indian and Madras, Burmah	—	—	2	1	—
Mediterranean ...	199	3	Egyptian, Gibraltar, Malta and Mediterranean	—	—	1	1	—
New Zealand ...	325	1	—	6	—	—	1	—
South African ...	450	6	Cape of Good Hope (Eastern Prov.), Border, Griqualand West, Cape of Good Hope (Western Prov.), Natal, Transvaal	—	1	1	1	—
East Indian ...	185	2	Hong-Kong (with China), Malaya	—	—	1	1	—
West Indian ...	163	6	Barbados, Bermuda, British Guiana, Jamaica, Leeward Isles, Trinidad (with Tobago)	—	—	—	1	—

*If considered desirable Wales to have 2, when Western and South-Western will be grouped to elect One member.

(*Supplement*, March 28th.)

26.

By-law 62.—Standing Committees.

By the CARDIFF DIVISION (South Wales and Monmouthshire Branch):

That Standing Committees shall receive instruction from and report to the Council.

27.

Application for Royal Charter.

By the MONMOUTHSHIRE DIVISION (South Wales and Monmouthshire Branch):

That this Representative Meeting approve, subject to the amendments adopted by the meeting, the draft Charter, Ordinances, By-laws, and Schedules thereto, submitted by the Council; and that it be an instruction to the Council to take forthwith all necessary steps, (1) to carry out in the draft Charter, Ordinances, By-laws and Schedules, the amendments approved by the meeting, and (2) to present on behalf of the Association a Petition to His Majesty the King to grant to the Association a Royal Charter of Incorporation in the form approved by this meeting.

H. Receive additional Reports of the Council (if any) in the Order in which the Council shall submit them for consideration, and consider motions relating thereto.

REPORTS OF COMMITTEES.

I. Receive Reports of Committees of the Association:

I.—REPORTS SUBMITTED PURSUANT TO SPECIAL INSTRUCTIONS OF THE REPRESENTATIVE MEETING.

28.

Receive Report of the Special Finance Inquiry Committee submitted pursuant to the following instructions of the Annual Representative Meeting, 1906:

Minute 30*a*.—That the Annual Representative Meeting appoint a Committee to inquire into the financial position of the Association, with a view to such economies of administration as are consistent with maintaining and developing the valuable work now being done for the profession.

Minute 32.—That the Committee be formed of the following:—The Chairman of Council, the Treasurer (*ex officio*), and of seven Representatives of Divisions, elected by and from the Representative Meeting (five Members to form a quorum), and that these be selected in the manner provided for election of the Medico-Political and Ethical Committees.

Minute 42.—That the Committee of Inquiry send its Report as soon as completed to the Divisions and to the Representatives. (An amendment that the Report be published in the SUPPLEMENT was put to the Meeting and lost (Minute 40).)

Minute 189.—That it be an instruction to the Finance Committee of Inquiry, in their deliberations upon the expenditure required for the maintenance and development of the present work of the Association, to consider what should be the duties of the General and Medical Secretaries in relation to that work, and the staff required in each department, and report to a Special Representative Meeting, or at the earliest opportunity.

and of the following instructions of the Annual Representative Meeting held at Exeter, 1907:

248. That the Finance Inquiry Committee be reappointed for the purpose of amending the Report, in accordance with the decisions of the Meeting, incorporating the Minority Report, and transmitting

the Recommendations to the Divisions and the Council respectively.

249. That the question of what, if any, parts of the Finance Inquiry Report be not published in the JOURNAL, be left to the Finance Inquiry Committee.

ANNUAL EXHIBITION.

250. That the proposal with regard to the Annual Exhibition contained in Minute 209 do not take effect until after the Annual Meeting at Sheffield.

***Minute* 209. That the Annual Exhibition being a central undertaking of the Association, the profit, if any, of the Exhibition go to the funds of the Association; and that a definite grant from the funds of the Association be made to the local Committee, as a contribution to the expenses of the Annual Meeting.**

REPORT OF THE SPECIAL FINANCE INQUIRY COMMITTEE.

(The Report was published in the *Supplement* of May 2nd, 1908).

29.

Receive Report of the Organization Committee on the subject of Capitation Grants.

REPORT OF THE ORGANIZATION COMMITTEE TO THE ANNUAL REPRESENTATIVE MEETING, 1908,

ON THE SUBJECT OF CAPITATION GRANTS PURSUANT TO INSTRUCTIONS OF THE ANNUAL REPRESENTATIVE MEETING AT EXETER.

(The Report was published in the *Supplement* of April 25th.)

30.

Receive Report of the Central Ethical Committee on the Ethics of Medical Consultation.

REPORT OF CENTRAL ETHICAL COMMITTEE ON THE ETHICS OF MEDICAL CONSULTATION.

(The Report was published in the *Supplement* of May 9th.)

31.

Receive Report of the Central Ethical Committee on the definition of the term "Hospital."

REPORT OF THE ETHICAL COMMITTEE ON THE DEFINITION OF THE TERM "HOSPITAL."

(The Report was published in the *Supplement* of February 22nd.)

II.—REPORTS UNDER STANDING INSTRUCTIONS.

32.

J. Receive Annual Report of Medico-Political Committee, and consider motions relating thereto.

MEDICO-POLITICAL COMMITTEE.

ANNUAL REPORT TO THE REPRESENTATIVE MEETING FOR THE YEAR 1907-8.*

33.

K. Receive Annual Report of the Ethical Committee, and consider motions relating thereto.

ETHICAL COMMITTEE.

ANNUAL REPORT TO THE REPRESENTATIVE MEETING FOR THE YEAR 1907-8.*

L. Consider motions placed upon the Agenda of the Meeting by which it is proposed to make By-laws or to alter or repeal existing By-laws:

PROPOSED AMENDMENTS OF EXISTING BY-LAWS.†

34.

By-laws 23 to 29, 31 and 32.

Composition and Mode of Election of the Council.

By the GATESHEAD DIVISION (North of England Branch):

That having regard to the repeated decisions of the Representative Meeting, now confirmed by a large majority upon the Referendum, that the mode of election of the Council should be altered so as to provide for the reduction of the total membership of, and some representation of the Representative Meeting on, the Council, this Division proposes that the present By-laws of the Association as to the composition and mode of election of the Council be amended so as to conform with those on the same subject appended to the Draft Charter, as settled by resolutions of the Representative Meeting in May, 1907, and since confirmed on Referendum.

(*Supplement*, April 18th.)

[*Existing By-laws 23 to 29, 31 and 32.*

COUNCIL.

23. *Composition.*

The Council shall come into office on the first day of the Annual Meeting, and shall be composed of the Officers and ex-Officer named as Members of the Council, *ex officio*, in Article XXXVIII of the foregoing Regulations, together with the Members duly elected or appointed by the Branches and other bodies authorized by the By-laws to elect or appoint Members of the Council, and of Members annually co-opted by the Council in manner hereinafter provided. The Council may also elect, if it think fit, at any of its meetings all or any one of the following, namely: One medical officer on the active or retired list of each of the following services: The Royal Navy Medical Service, the Royal Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

24. *Branch Representation.*

Any Branch, or group of Branches, having an aggregate membership of not less than 200 may elect one Member of Council, and any Branch or group of Branches having an aggregate membership of not less than 400 may elect two Members of Council, and an additional member for each complete 600 Members in excess of 400. Branches in the United Kingdom having less than 200 Members shall be grouped for this purpose with neighbouring Branches, unless in the opinion of the Council the special conditions of any such Branch justify the grant of separate representation. The grouping of Branches not within the United Kingdom for the purpose of electing Members of Council shall be determined by the Council, provided that the total number of Members of Council

* The Annual Reports of the Medico-Political and Ethical Committees will be published as soon as possible after the next Quarterly Meetings of the Committees, to be held on June 10th and 12th respectively, probably in the *Supplement* for June 20th.

† See footnote on page 383.

whom such Branches are entitled to elect shall not be less in proportion to the total membership thereof than those elected by the Branches in the United Kingdom.

25. *Election of Representative Members of Council by Branches.*

The elective Members of Council shall be elected by voting papers sent to each elector by post. Candidates may be nominated by any Division of a Branch, or by such number of Members of the Branch as the Rules of the Branch may prescribe. Nominations shall be sent, in writing, to the Secretary of the Branch on or before an appointed day, of which not less than fourteen days' notice shall have been given by him in the BRITISH MEDICAL JOURNAL. The names of all candidates so nominated shall be placed in a list which it shall be the duty of the Secretary to circulate to every Member of the Branch.

In any case in which Branches are grouped for representation on the Council the above provisions shall be carried out as though the Branches so grouped formed one Branch, and it shall be the duty of the Secretary of the Branch having the largest membership to carry out the requirements of the By-law.

26. *Term of Office of Branch Representatives (United Kingdom).*

Each Member of Council elected by a Branch in the United Kingdom shall be elected for one year, and at the end of that time shall be eligible for re-election unless he have served as such Member of Council for six years successively, in which case he shall for one year be ineligible for election as such Member of Council.

27. *Term of Office of Members elected by Branches, not within the United Kingdom, or by the Services.*

Each Member of Council elected by a Branch not in the United Kingdom, or by the Royal Navy Medical Service, the Army Medical Service, or the Indian Medical Service, shall be elected for such period, not exceeding three years, as the electing Branch or Body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as a representative Member of Council exceed eight years.

28. *Qualification.*

No person shall be eligible for election as a Member of Council by a Branch in the United Kingdom unless at the time of his election he shall be a Member of such Branch. The eligibility for election as a Member of Council by a Branch not in the United Kingdom, shall be such as may be determined by the Rules of the said Branch, and if no such Rule shall be adopted the regulations as to eligibility shall be the same as for the Branches in the United Kingdom.

29. *Election Return.*

The return of the election of each elective Member of Council shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch by which he is elected not less than twenty-eight days prior to the Annual General Meeting of the Association.

* * * * * * *

31. *Vacancies.*

Any casual vacancy occurring in the Council, not less than four months before the Annual General Meeting, may be filled up by any Branch or Body the representation of which may have become vacant, and such election shall be conducted in the same manner as the Annual election, or in respect of election by a Branch, in such other manner as may be prescribed by the Rules of the said Branch. Any person so chosen shall retain his office so long only as the member in respect of whom such casual vacancy may have occurred would have retained the same.

32. *Co-opted Members.*

The Council shall have power each year to add to its own number Members in the proportion of one for every complete ten representative Members elected to serve on the Council for that year. Each such co-opted Member shall vacate such office at the close of the last meeting of the Council for the year, but shall be eligible for re-appointment, unless he shall have been appointed in each of the last five years, in which case he shall be ineligible for the ensuing twelve months.]

35.

By-laws 40, 41, 42, and 44.*

Standing Committees.

By the DUNDEE BRANCH:

That the By-laws relating to Standing Committees, namely, 40, 41, 42, and 44, be amended in accordance with the provisions of the Draft Charter, Ordinances, and By-laws, as approved by the Association on Referendum.

(*Supplement*, April 25th.)

36.

By-law 41.

Standing Committees.

By the COUNCIL OF THE ASSOCIATION:

That By-law 41 be amended to read as follows:

41.—STANDING COMMITTEES.

Nevertheless, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Schedule to these By-laws (*for proposed Schedule see pp 387, 388*). Any (elected or appointed) Member of a Standing Committee who shall fail to attend three successive meetings without satisfactory explanation to the Chairman of the Committee shall be deemed to have resigned his Membership of such Committee, and the Committee shall fill the vacancy thus created. All Standing Committees shall report to, and shall act under the instruction of, the Council.

(*Supplement*, April 25th.)

[*Existing By-laws 40, 41, 42, and 44.*

COMMITTEES.

40. *Appointment.*

Subject to the Regulations and By-laws of the Association, the Council and the Representative Meeting shall respectively have power to appoint Committees with such powers as may to them seem necessary or convenient, and to fix the quorum thereof, and lay down Rules for regulating the proceedings of such Committees.

41. *Standing Committees.*

Nevertheless, there shall be Standing Committees as follow:

(1) *Journal and Finance.*

A Journal and Finance Committee not exceeding fifteen in number (five to form a quorum) shall be appointed by the Council, which shall, *inter alia*, examine into the general working of the Office and of the JOURNAL, and certify the quarterly accounts prior to their being presented to the Council.

(2) *Premises.*

A Premises Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters connected with the management of the House Property of the Association.

(3) *Public Health.*

A Public Health Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall specially be referred all questions relating to Public Health and the Poor-law Medical Service.

(4) *Colonial.*

A Colonial Committee not exceeding nine in number (three to form a quorum) shall be appointed, to which shall be referred all questions specially relating to the Branches not in the United Kingdom. Of such Com-

* In this motion as previously printed the By-laws affected were referred to by the numbers which they bore prior to the last revision of the By-laws

SCHEDULE OF STANDING COMMITTEES REFERRED TO IN THE PROPOSED AMENDED BY-LAW 41.

Name of Committee.	Appointed Members.			Members, *ex officio*.	Additional Members, *ex officio*.	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8
(1) Journal and Finance	..	Not exceeding 11.	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To examine into the general working of the office and of the JOURNAL, and to certify the quarterly accounts prior to their being presented to the Council.
(2) Premises ..	..	Not exceeding 5.	..	Ditto.	..	3	To consider and report to the Council upon the management of the house property of the Association.
(3) Public Health..	..	Not exceeding 7.	..	Ditto.	..	3	To consider questions relating to Public Health and the Poor Law Medical Service.
(4) Colonial ..	..	Not exceeding 2.	5 appointed by Representatives of Colonial Branches on Council.	Ditto.	..	3	To consider questions specially relating to the Branches not in the United Kingdom.
(5) Naval and Military.	..	Not exceeding 7.	..	Ditto.	..	3	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Territorial Medical Corps.
(6) Medico-Political	6	6	..	Ditto.	..	7	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
(7) Ethical (otherwise designated Central Ethical)	5	5	..	Ditto.	..	5	To advise the Council upon all questions connected with Rules of Divisions and Branches relating to professional conduct; to investigate and report to the Council upon the cases of members whose conduct is to be considered by the Council on the representation of Branches, pursuant to Article XLIV; and, generally, to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between members of the Association or members of the profession, or, at its discretion, to refer any question or questions arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation, or for adjudication, subject to an appeal to the Central Ethical Committee. Any member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Central Ethical Committee and the findings of that Committee, subject to such appeal, and the findings of the Council upon an appeal, shall be binding upon the parties and upon all members of the Association.
(8) Hospitals ..	..	Not exceeding 11.	..	Ditto.	..	5	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities.

SCHEDULE OF STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members.			Members, *ex officio.*	Additional Members, *ex officio.*	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8.
(9) Science.. ..	..	10	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To advise, and, where so directed, act for the Council in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions and matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
(10) Organisation ..	..	7	..	Ditto.	..	8	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions of the boundaries and area, the grouping for electoral purposes, and the Rules, other than those relating to ethical matters, of Divisions and Branches and combinations thereof, and the Ordinary and Supplementary Grants made to such bodies by the Council pursuant to the By-laws, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organisation. The Committee shall have power to add to its number for special purposes, a limited number of Members specially qualified to assist in its work.
(11) Scottish ..	..	..	..	Ditto	One Secretary of each Scottish Branch. All the Members of Council who represent Scotland.	5	To consider matters specially concerning Scotland. It shall have an Honorary Secretary resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
(12) Irish	..	..	By each Irish Branch 1 Member, or if Secretary of Branch is a Member of Council 2 Members, any such Member appointed by the Leinster or Ulster Branch to be a practitioner not resident in Dublin or Belfast.	Ditto	One Secretary of each Irish Branch. All the Members of Council who represent Ireland.	5	To consider matters specially concerning Ireland. It shall have an Honorary Secretary resident in Ireland, and shall meet at such place and time as the Committee may itself direct. The Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

mittee five members shall be appointed by the Representatives of these Branches on the Council, and two by the Council.

(5) *Naval and Military.*

A Royal Naval and Military Committee not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Medical Organization of the Auxiliary Forces.

(6) *Medico-Political.*

A Medico-Political Committee shall be appointed consisting of sixteen members (seven to form a quorum) which shall deal with all matters involving the public relations of the Profession not specially referred to other Committees, and shall be composed of the Chairman of Representative Meetings, the Treasurer, *ex officio*, and twelve other Members, all of whom shall be appointed by the Council, until the first Representative Meeting, and thereafter six of such Members shall be appointed by the Council and six by the Representative Meeting. Such Committee to report to the Council and to the Representative Meeting, to act under the Council, and to have the services of a salaried officer.

(7) *Ethical.*

An Ethical Committee (otherwise designated the Central Ethical Committee) shall be appointed consisting of twelve members (five to form a quorum) which shall advise the Council on proposed Rules of Divisions and Branches relating to professional conduct, shall investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council, shall adjudicate in cases of disputes on ethical questions referred to it by Members of the Association, and generally shall advise, and, where so directed, act for the Council, on all questions of Professional conduct. Until the first Representative Meeting such Committee shall be appointed by the Council, and thereafter five members of such Committee shall be appointed by the Council and five by the Representative Meeting. This Committee shall have the services of a salaried officer.

(8) *Hospitals Committee.*

A Hospitals Committee shall be appointed by the Council to carry out such duties as the Council shall prescribe or direct.

(9) *Science Committee.*

A Science Committee, consisting of fourteen members, shall be appointed by the Council, who shall advise, and where so directed act for, the Council in all matters, not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants, or Medals given by the Association, or under trusts undertaken by the Association, the assistance of the officers of the Sections at the Annual Meeting, the arrangement of Committees for special scientific work, the encouragement and assistance of the scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt, for the consideration of the award of Scholarships, Grants, and Medals, members, not exceeding four in number, specially qualified to assist in its work.

(10) *Organization.*

An Organization Committee shall be appointed by the Council, not exceeding nine in number (three to form a quorum), which, subject to the directions of the Council, shall deal with all questions of the boundaries or area of Divisions and Branches, and the Rules thereof other than those relating to ethical matters, and advise the Council thereon, and shall exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions or Branches in the strengthening of their organization. This Committee shall have power to add to its number, for special purposes, a limited number of Members specially qualified to assist in its work. This Committee shall have the services of a salaried officer.

(11) *Scottish Committee.*

A Scottish Committee, consisting of one Secretary from each Scottish Branch and the Scottish Members of the Central Council. It shall have a Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Scotland.

(12) *Irish Committee.*

An Irish Committee, consisting of the Irish Members of the Central Council, one Secretary from each Irish Branch, one Member elected by each Branch, who in the case of the Leinster and Ulster Branches, shall be a Member not resident in Dublin or Belfast and not more than three Members co-opted by the Committee to represent districts which are not otherwise represented thereon. If the Secretary of any Branch be also a Member of the Central Council, the said Branch shall have power to elect an additional Member of the Committee. It shall have an Honorary Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Ireland.

(13) *Attendances at Committees.*

Any member of a Standing Committee of the Association failing to attend three successive meetings without satisfactory explanation to the Council shall be deemed to have resigned, and the Committee shall forthwith fill the vacancy.

42. *Chairmen of Committees.*

Each Standing Committee shall appoint from its own number a Member of Council as Chairman.

* * * * *

44 *Rules of Committees.*

Every Committee is to conform to such rules, whether general or special, as the body appointing it may make in regard thereto.]

M. Consider motions placed upon the Agenda of the Meeting by Divisions or Branches, relating to the honour and interests of the Medical Profession or of the Association.

I.—NOTICE AFFECTING THE ADMINISTRATION OF THE ASSOCIATION.

37.

Annual List of Members.

By the ST. PANCRAS AND ISLINGTON DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Council of the Association to publish the Annual List of Members of the Association (By-law 6) in such a way that a copy may be obtainable by every member who desires to possess the same.

(*Supplement*, March 28th.)

II.—NOTICE AFFECTING THE WORK OF THE ASSOCIATION.

HOSPITALS.

38.

Putney Hospital.

By the RICHMOND DIVISION (Metropolitan Counties Branch):

That the Representative Body of the British Medical Association, having been informed that after a canvass of the members of the medical profession practising within the near neighbourhood of the proposed Putney Hospital site, as to their acceptance of the subjoined resolutions, the result was a unanimous approval in Fulham (51 signatures) as also in Barnes, Mortlake and East Sheen (16 signatures) and in Southfields (11 signatures), and that in Putney 38 approved out of 45, cordially approves of these resolutions, as also of the

declaration signed, and considers that any registered medical practitioner who acts otherwise than therein indicated will be doing so in a manner injurious to the interest of the medical profession.

Declaration and Resolutions.

We, the undersigned Registered Medical Practitioners, having read the Memorandum issued by the South-West London Medical Hospital Committee, reporting the negotiations which have taken place since June, 1905, with reference to the proposed Hospital in the Parish of Putney, *approve* of the five recommendations formulated by that Committee on behalf of the Medical Profession, which are contained in that Memorandum, and are stated below, and hereby *agree* that we will in no way countenance or aid the erection of any Hospital, or act on the Staff of, or use any Hospital when erected, before the South-West London Medical Hospital Committee reports that the negotiations have had a definite and satisfactory result.

1. That there is no necessity in Putney for a large General Hospital on the lines of the West London Hospital, nor ever will be.
2. That a small General Hospital on Cottage Hospital lines would meet the needs of the Parish of Putney.
3. That at such a Hospital there should be no arrangements made for the treatment of Out-patients.
4. That there should be recognition of the principle that the number of non-paying beds should not be greater than the needs of the district or the resources of endowment.
5. That there should be adequate directly-elected representation of the medical profession on the present and any future Committee formed to deal with the question or conduct of a Hospital in Putney.

(*Supplement*, March 28th.)

39.

N. Elect Chairman of Representative Meetings for 1908-9.

40.

O. Elect Deputy Chairman of Representative Meetings for 1908-9.

ELECTION OF COMMITTEES.

41.

P. Elect six Members of the Association in accordance with By-law 41 (6) to serve on the Medico-Political Committee for the ensuing year.

[*By-law* 41.

(6) *Medico-Political Committee.*

A Medico-Political Committee shall be appointed consisting of sixteen members (seven to form a quorum) which shall deal with all matters involving the public relations of the Profession not specially referred to other Committees, and shall be composed of the Chairman of Representative Meeting, the Treasurer, *ex officio*, and twelve other Members, all of whom shall be appointed by the Council, until the first Representative Meeting, and thereafter six of such Members shall be appointed by the Council, and six by the Representative Meeting. Such Committee to report to the Council and to the Representative Meeting, to act under the Council, and to have the services of a salaried officer.]

42.

Q. Elect five members of the Association in accordance with By-law 41 (7) to serve on the Ethical Committee for the ensuing year.

[*By-law 41.*

(7) *Ethical.*

An Ethical Committee (otherwise designated the Central Ethical Committee) shall be appointed consisting of twelve members (five to form a quorum) which shall advise the Council on proposed Rules of Divisions and Branches relating to professional conduct, shall investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council, shall adjudicate in cases of disputes on ethical questions referred to it by Members of the Association, and generally shall advise, and, where so directed, act for the Council, on all questions of Professional conduct. Until the first Representative Meeting such Committee shall be appointed by the Council, and thereafter five members of such Committee shall be appointed by the Council and five by the Representative Meeting. This Committee shall have the services of a salaried officer.]

43.

R. Elect other Committees (if any).

44.

S. Any other business.

45.

T. Confirm Minutes.

By Order, J. SMITH WHITAKER,
Medical Secretary.

STANDING ORDERS

RELATIVE TO

BUSINESS AT REPRESENTATIVE MEETINGS

(As adopted at Exeter, 1907).

I.—ORDER OF BUSINESS.

(A) *Annual Representative Meeting.*

Except as may be otherwise determined in the manner prescribed by the Standing Orders, the order of business shall be as follows:

1. Election Returns.—Receive the return of the Election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives under Article XXX.

2. Standing Orders.—Adopt Standing Orders.

3. Annual Report of Council.—Receive the Annual Report of the Council, presented under By-law 35, and consider motions relating to the adoption thereof in whole or in part.

4. Financial Estimate.—Receive the Financial Estimate presented by the Council under By-law 35, and consider motions relating to the adoption thereof in whole or in part.

5. Special Reports of Council.—Receive Special Reports of the Council, if any, in the order in which the Council shall submit them for consideration, and consider motions for the adoption thereof in whole or in part.

6. Report of Medico-Political Committee.—Receive the Report of the Medico-Political Committee, and consider motions for the adoption of the same in whole or in part.

7. Report of Ethical Committee.—Receive the Report of the Ethical Committee, and consider motions for the adoption of the same in whole or in part.

8. Reports of other Committees (if any).—Receive Reports of other Committees, if any, and consider motions for the adoption of the same in whole or in part.

9. Consider By-laws.—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by which it is proposed to make By-laws or to alter or repeal existing By-laws.

10. Consider other Motions by Divisions or Branches.—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by Divisions or Branches, relating to the honour and interests of the Medical Profession or of the Association.

11. Election of Officers.—Elect a Chairman of Representative Meetings and a Deputy-Chairman of Representative Meetings for the year.

12. Election of Members of Medico-Political and Ethical Committees.—Elect at such time, before the conclusion of the third day's proceedings, as the Chairman may, pursuant to Standing Order III 10, prescribe:

(*a*) Six Members of the Association to serve on the Medico-Political Committee for the ensuing year.

(*b*) Five Members of the Association to serve on the Ethical Committee for the ensuing year.

(*c*) Such members of other Committees, if any, as it falls to the Representative Meeting to elect.

13. Amendment of Standing Orders.—Consider proposed amendments of Standing Orders, other than those relating to the order of business.

14. General Order of Daily Sessions: Confirmation of Minutes.—The matters described in the foregoing Clauses shall be considered in the order therein prescribed, or as otherwise duly determined, from day to day until the completion thereof or until the expiration of four days from the first day of the Meeting, whichever shall first occur: provided that at each daily session after the first, the Meeting shall, before proceeding to the consideration of the matters aforesaid, (*a*) confirm the Minutes of the Proceedings of the previous daily session; (*b*) consider motions, if any, relating to the order of business of the day. At the conclusion of the business of the last daily session the Meeting shall confirm the Minutes thereof for presentation to the Council.

15. Hours of Daily Sessions.—All Representative Meetings not concluded by 6.30 p.m. shall stand adjourned either to 8 p.m. of the same day, or to the next day, as may be decided by a show of hands. All such Meetings shall stand adjourned at 10 p.m.

16. Varying Order of Business.—The order of business may be varied, either at the commencement or after the expiration of two hours from the commencement of any daily session, by the vote of two-thirds of those present and voting.

17. Precedence of Motions of which Notice Given.—Motions and amendments of which notice shall have been given to the Secretary of the Meeting in time for them to be circulated with the Minutes of the previous day's proceedings, shall have precedence, in the order in which such notice shall have been given, over those relating to the same subject, or otherwise having a like claim to precedence in the order of business, of which such notice has not been given.

18. Motions on the Same Subject.—If two or more of the motions placed on the Agenda of the meeting by the Council and by Divisions and Branches shall appear to the Chairman to relate to the same subject he shall ascertain the will of the meeting in respect of the consideration of one of such motions as an original motion, and of the others as amendments thereto, in such order as the meeting may determine.

19. Motions on Subjects dealt with in Reports.—If a recommendation of the Council or of a Committee, or an amendment moved that a specified portion of a report of the Council or of a Committee be not approved, shall appear to the Chairman to relate to the same subject as a motion placed upon the Agenda by the Council or by a Division or Branch, the Chairman shall ascertain the will of the meeting as to the consideration of the said motion as an amendment to the adoption of the said recommendation, or to the approval of the said report.

20. Resolutions Involving Special Expenditure.—Every Resolution involving special expenditure shall, before final adoption by the Representative Meeting, be remitted to the Finance Committee for report to a later Session.

(B).—*Special Representative Meetings.*

1. Read Authority for Convening Meeting.—Read the Resolution of Council, or the requisition from Divisions, in pursuance of which the Meeting is convened.

2. Notice of Substitutes. Receive notices, if any, of the appointment of substitutes for Representatives.

3. Order of Business.—If the Meeting is convened to consider more than one matter, determine the order in which such matters shall be considered.

4. Special Business.—Consider the matters which the Meeting is specifically convened to consider, in order determined by the Meeting.

5. Minutes.—Confirm the minutes of the Meeting for presentation to the Council.

II.—COMPOSITION AND ARRANGEMENT OF THE MEETING.

1. Composition.—The persons constituting the Meeting, hereinafter called members of the Meeting, shall be those duly elected Representatives of Divisions, or substitutes duly appointed under Article XXX and By-law 19, of whose election or appointment the General Secretary shall have received due notice, together with Members of Council for the time being.

2. Arrangement.—Distinctive seats shall be provided for the following groups of persons respectively, namely:

(*a*) Representatives of Divisions.
(*b*) Members of Council who are not Representatives of Divisions or Officers of the Association.
(*c*) Officers of the Association, present in virtue of their office, or at the request of the Meeting, for the assistance thereof.
(*d*) Members of the Association who are not Representatives of Divisions or Members of Council.
(*e*) Reporters representing such journals as may be authorized by the Chairman, subject to the approval of the Meeting.

Withdrawal of Strangers.—It shall be competent at any time for a member of the Meeting to move that persons who are not members of the Meeting be requested to withdraw, or that persons who are not members of the Association be requested to withdraw, but it shall rest in the discretion of the Chairman to submit or not to submit such motion to the Meeting.

III.—PROCEDURE.

1. Temporary Chairman.—In the absence of the Chairman of Representative Meetings, the Deputy-Chairman shall preside; or, if he be also absent, the Chairman of Council or the Treasurer, if present, shall take the chair, and call upon the meeting to appoint a temporary Chairman.

2. Minutes.—Minutes shall be taken of the proceedings of the Meeting, and the same shall be duly entered in a book provided for the purpose. The Minutes of each daily session of the Annual Representative Meeting shall be printed and circulated to the members of the Meeting. Minutes (if) (when) printed in the Daily Journal of the Annual Meeting shall be deemed thereby to have been circulated as required by this order.

3. Attendance.—No Representative shall leave the Meeting without permission obtained personally from the Chairman at the time of leaving. If during any daily session of a Representative Meeting it shall at any time appear to the Chairman that a quorum is not present, the roll shall be called of Representatives appointed to attend the meeting, and those Representatives who are found to be then absent, not having previously obtained leave from the Chairman, shall be deemed to have been absent from the said session. A list of members reported as absent from any daily session or sessions of a Representative Meeting shall be supplied at the close of such meeting to the Chairman and shall by him be transmitted to the Council, together with such explanations of the cause of absence as any members so reported may have furnished to him in writing.

4. Procedure as to Presentation of Reports.—A Report of the Council or of a Committee shall be brought before the Meeting by a motion or motions that the Report be received and approved, and that the recommendations to the Meeting (if any) therein contained be adopted, each such recommendation being made the subject of a separate motion. The Chairman of the body submitting a Report shall if present move the reception and adoption thereof, and of the recommendations contained therein.

5. Procedure as to Other Motions.—Motions placed on the Agenda of the Meeting by the Council shall be brought before the Meeting by the Chairman of Council if present, motions so placed by a Branch shall be introduced by a member of Council elected by the Branch, and motions so placed by a Division shall be introduced by the Representative thereof.

6. Absence of Authorized Mover of Adoption of Report or Other Motion.—In the absence of any member authorized to make any motion referred to in the two last preceding orders, any other member deputed by such member may make such motion on his behalf, and if no member shall have been so deputed, such motion shall be made formally by the Chairman.

7. Seconding Motions.—No seconder shall be required for any of the motions referred to in Sections 4 and 5. All other motions and all amendments shall be required to be moved and seconded.

8. Time Limits of Speeches.—(*a*) A member of the Meeting shall be allowed to speak for fifteen minutes in moving a resolution which does not require seconding, and for ten minutes in moving any other resolution, or any amendment. Except as aforesaid, no speech shall exceed five minutes.

Reducing Time Limit.—(*b*) The Meeting may at any period of any session reduce the time to be allowed to speakers, whether in moving resolutions or otherwise, during the remainder of such session.

9. Mode of Voting—Show of Hands.—Only Representatives of Divisions shall vote on any question before the Meeting.

Voting shall be by show of hands, except in the cases following, namely:

Vote by Card.—(*a*) If upon the Chairman proceeding to take the vote of the meeting upon any motion or amendment, any Representative of a Division shall move that the said vote be taken by card, and twenty Representatives rise in their places in support of such motion, the vote shall be taken by card.

Division.—(*b*) If the Chairman, after taking a vote by show of hands upon any motion or amendment, shall be of opinion that the numbers of members voting for and against such motion or amendment are not thereby ascertained with sufficient accuracy, he shall have power to direct that the meeting shall divide upon the said motion or amendment.

10. Election of Committees.—Nominations for election by the Representative Meeting of members of Standing Committees shall be handed in writing to the Secretary of the meeting not later than the termination of the second day's proceedings. Each nomination shall be signed by the nominator and shall contain a declaration that the candidate nominated has agreed to serve. No member shall be eligible for nomination who having been a member of a Standing Committee during the previous year shall have failed to attend at least half the meetings of the Committee for that year. The names of all candidates duly nominated shall be included in a voting paper issued to each voter, and shall be arranged in three lists, one of those residing in England and Wales, one of those residing in Scotland, and one of those residing in Ireland. Each voter shall be entitled to vote for not more candidates than there are members to be elected, and of these not more than two-thirds of the total number shall be those of candidates in the English list, not more than one-fourth in the Scottish list, and not more than one-fourth in the Irish list. In counting the votes the candidates on the English list who have obtained the highest number of votes, being not more than one-half of the total number of members to be elected, the candidates on the Scottish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, and the candidates on the Irish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, shall be deemed to be elected. If any place on the Committee be still vacant, that candidate or those candidates shall be deemed to be elected who shall have obtained the highest number of votes, irrespective of the list in which the name of any such candidate appears. Scrutineers to conduct the election shall be nominated by the Chairman, and the details of the voting shall be placed before and verified by the Chairman before being declared to the Meeting.

IV.—RULES OF DEBATE.

1. Every member shall be seated except the one who may be addressing the Meeting, and when the Chairman rises no one shall continue standing, nor shall any one rise until the Chair is resumed.

2. A member of the Meeting shall stand when speaking, and shall address the Chair.

3. A member who speaks shall direct his speech strictly to the motion under discussion, or to a motion or amendment to be proposed by himself, or to a question of order.

4. A member shall not address the Meeting more than once on any motion or amendment, but the mover of an original resolution may reply, and in his reply shall strictly confine himself to answering previous speakers, and shall not introduce any new matter into the debate; provided always that a Member may speak to a point of order, or, by consent of the Meeting, in explanation of some material part of a speech made by him, which he believes to have been misunderstood.

5. A motion or amendment once made and seconded shall not be altered or withdrawn without the consent of the Meeting.

6. An amendment shall be either—

To leave out words;
To leave out words and insert or add others;
To insert or add words;

or in such form as shall be approved of by the Chairman, provided always that the amendment be relevant to the motion on which it is moved, and be not equivalent to the direct negative thereof.

7. No notice of motion, or amendment to any motion before the Meeting, not already published, shall be considered by the Meeting until a copy of the same with the name of the proposer has been handed in in writing to the Chairman.

8. Whenever an amendment upon an original motion has been moved and seconded no second or subsequent amendment shall be moved until the first amendment shall have been disposed of, but notice of any number of amendments may be given.

9. If any amendment be rejected, other amendments may be moved on the original motion. If an amendment be carried, the amendment or motion as amended shall take the place of the original motion, and shall become the question upon which any further amendment may be moved.

10. If it be proposed and seconded that the Meeting do now adjourn, or that the debate be adjourned, or that the Meeting do proceed to the next business, or that the question be now put, such resolution shall immediately be put to the vote without discussion, except as to the time of adjournment, provided always that the Chairman shall have power to decline to put to the Meeting the motions that the Meeting do proceed to the next business, or that the question be now put.

11. A motion that the Meeting do now adjourn, or that the Meeting do now proceed to the next business, or that the debate be now adjourned, or that the question be now put, shall not be made within a period of one hour after a previous motion to the like effect, unless, in the opinion of the Chairman, the circumstances are materially altered.

12. Smoking shall not be allowed during such time as the Chairman is in the Chair.

V.—SUSPENSION OF STANDING ORDERS.

Any one or more of the Standing Orders, in any case of urgency, or upon motion made on notice given through the Daily Journal, may be suspended at any meeting, so far as regards any business of such Meeting, provided that three-fourths of those present and voting shall so decide.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW EASTERN DIVISION.

THE annual meeting of the Division was held in the Hall of Sydney Place United Free Church, Duke Street, Glasgow, on the evening of May 13th, at 8.30 p.m. In the absence of the Chairman, Dr. W. L. MUIR presided.

Confirmation of Minutes.—The minutes of the last meeting, October 30th, 1907, were read and approved.

Medical Inspection of School Children.—The medical inspection of school children was then discussed and some points explained by Dr. Muir as having come before the Medico-Political Committee, and approved by it. The Division agreed with the recommendation of the Executive Committee that the medical inspection of school children should be in the hands of local practitioners only (provided that the duty be limited to inspection only), and that a remuneration of £50 per annum for work not demanding more than two hours weekly was sufficient. The other recommendation as to the salary of supervisory medical inspectors of experience being not less than £500 per annum, and that of inspectors (whole-time officers) in smaller boroughs of less than 100,000 population be not less than £200 per annum, were agreed to.

The Term "Hospital."—The definition of the term "hospital," given in the SUPPLEMENT of February 22nd, was also accepted.

Life Insurance Examinations.—The questions of life insurance examinations were next considered as follows:

A.—*Questions of Fact.*

1. What life insurance companies:

(*a*) Employ members of your Division to act regularly as their medical examiners?

(*b*) Have, apart from such regular employment, employed members of the Division to examine individual cases?

A. 1. (*a*) Pearl, Salvation Army, Prudential, Sun, and Marine and General.

(*b*) Norwich Union, Scottish Equitable, Gresham, Law Union and Crown, Royal, Law and Equity, Scottish Union and National, Scottish Temperance, and Pelican.

2. Do any such companies pay less than one guinea for examination?

A. Yes; all except Norwich Union and Scottish Equitable.

3. In the case of companies paying less than one guinea, please state whether (*a*) a "full" report or (*b*) a "short" report is required.

A. The same report is asked for in all cases.

4. Do any companies pay less than 10s. 6d.?

A. Yes.

B.—*Questions of Opinion.*

5. Does your Division consider that a fee of less than one guinea should be accepted for any life insurance examination?

A. Yes.

6. Does your Division consider that a fee of less than one guinea should be accepted for any examination in which a full report on the patient's condition is required? If so, what is the minimum fee which, in the opinion of your Division, should be required for a full report?

A. No; the minimum should be 21s.

7. Does your Division consider that a fee of less than one guinea would be adequate remuneration for making the examination necessary to fill up satisfactorily the form contained in Schedule A?

A. No.

8. If the Division considers that, for a simpler form of report than that contained in Schedule A, a reduced fee could be accepted, is the form shown in Schedule B suitable, and would a fee (*a*) of half a guinea or (*b*) of 5s. afford adequate remuneration for the work involved?

A. Schedule B is suitable, and 10s. 6d. would be sufficient remuneration.

9. What, in the opinion of the Division, is the lowest fee that could be accepted for the simplest possible form of certificate to the effect that a candidate for life insurance may be accepted as a healthy life or should not be so accepted, such as that given in Schedule C?

A. 2s. 6d.

Prevention of Corruption Act, 1906.—The attention of members was next drawn to the provisions of the Prevention of Corruption Act, 1906.

Increase in Female Inebriety.—On consideration of the inquiry as to the alleged increase in female inebriety, Dr. SERVICE moved and Dr. HUGH MCLEAN seconded that the Division protests against the issue of the circular of inquiry. Dr. BRYCE moved the previous question, and Dr. DUNLOP seconded. The previous question was carried by 7 to 3.

Lynn Thomas and Skyrme Fund.—Dr. BRYCE moved and Dr. SCANLON seconded that the Branch Council be asked to send a subscription to this fund. Dr. PATRICK moved that in addition each member of the Division be asked for a subscription to this fund not exceeding 5s. This was agreed to *nem. con.*

Office bearers for 1908-9.—The office-bearers for 1908-9 were elected as follows: *Chairman*, Miller Semple, M.B.; *Vice-Chairman*, Joseph Scanlan, M.B.; *Secretary and Treasurer*, John Patrick, M.B., 23, Westercraigs, Dennistoun; *Representative to Representative Meeting*, W. L. Muir, 1, Seton Terrace, Dennistoun; *Representatives on Branch Council*, John Patrick, M.B., William Bryce, M.D.; *Executive Committee*, M. Black, M.D., P. S. Buchanan, M.B., James Dunlop, M.B., D. McKail, M.B., Hugh McLean, M.B., Alexander Munro, M.B., T. Russell, M.B., Robert Scott, M.B., R. McC. Service, M.B.

Ruchill Hospital Disputes.

The following motion was put by Dr. MUIR, and after some discussion agreed to, namely:

That the Secretary be instructed to communicate with the Council of the Glasgow and West of Scotland Branch, and request that a meeting of the Branch be called at an early date to consider the Ruchill Hospital disputes, when the following resolutions will be brought forward by the Eastern Division—namely:

(1) That the Branch express its disapproval of the decisions of the City of Glasgow Corporation in the Ruchill investigation.

(2) That the Branch express its strong sympathy with the dismissed Resident Assistant Physicians.

(3) That the Branch grant a sum to any fund which may be subscribed to assist in paying the expenses incurred by the Resident Medical Officers.

(4) That the Branch request the Medical Secretary of the British Medical Association to put hospital medical appointments under the Corporation of Glasgow in their Warning List.

Dr. MUIR moved that the Secretary be instructed to send a notice of the resolution on the Ruchill Hospital investigation, etc., to the newspaper press. This was agreed to.

GLOUCESTERSHIRE BRANCH.

THE annual meeting for the session 1907-8 was held at the Gloucester Infirmary on May 21st. Dr. WAYLAND ANCRUM was in the chair and thirty-five members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Office bearers.—The following officers were declared elected for the session 1908-9: *President*, E. O. Carter; *Council*, C. Braine Hartnell, H. Bramwell, W. R. Buckell, O. W. Clarke, W. Cox, F. C. Cripps, C. F. Cuthbert, T. S. Ellis, J. Howell, R. Kirkland, S. T. Pruen, J. G. Soutar, with R. Macartney and P. Buchanan from Forest of Dean Section; *Auditors*, C. Braine-Hartnell and G. A. Peake; *Scrutineers*, G. Wayland Ancrum and T. S. Ellis; *Ethical Committee*, R. W. Batten, T. S. Ellis, O. H. Fowler, J. G. Soutar, and E. T. Wilson; *Representative at Annual Meeting*, H. Bramwell; *Representative on Council* (with Worcestershire and Herefordshire Branch), C. F. Cuthbert; *Secretary*, D. E. Finlay.

Financial Statement and Report.—The financial statement and report for 1907 was taken as read, and passed.

Lynn Thomas and Skyrme Fund.—Mr. CUTHBERT spoke on the need of supporting the Lynn Thomas and Skyrme Fund, and it was resolved that members should be invited

to send subscriptions to the Secretary, and that the sum collected should be sent as a subscription from the Branch.

Research Defence Society.—Dr. E. T. Wilson brought forward the subject of the Research Defence Society, and pressed that members should support it. Mr. Bland-Sutton suggested that it would aid the society more if a local branch was formed. It was finally proposed by Dr. H. Bramwell, seconded by Dr. Wilson, and carried, that the matter be referred to the next general meeting.

Address.—Mr. Bland-Sutton, surgeon to the Middlesex Hospital, then gave a most interesting address on the present position of abdominal hysterectomy for fibroids in London.

Vote of Thanks.—The President proposed a hearty vote of thanks to Mr. Bland-Sutton, which was seconded by Mr. Buckell and Mr. Cuthbert, and Mr. Bland-Sutton replied.

Dinner.—Thirty afterwards sat down to dinner at the Bell Hotel, where a most pleasant evening was spent, speeches and music adding considerably to its enjoyment.

LANCASHIRE AND CHESHIRE BRANCH:

South Manchester Division.

The fifth annual general meeting of the Division was held at the house of the Chairman, Dr. Vipont Brown, 2, Birch Lane, Longsight, at 3.30 p.m., on Friday, May 29th. Besides the Chairman, there were present Drs. Cotterill, Grant Davie, Edlin, Godson, Jordan, Russen Rhodes, Sawers Scott, Stocks, Egbert Williams, and Willis (11).

Apologies for Non-attendance.—Apologies for absence were received from Drs. Carnwath, Hopkinson, Percy Macdougall, and Milson Rhodes.

Confirmation of Minutes.—The minutes of the last two meetings were read and confirmed, the second being the special meeting held in conjunction with the West Division to afford the candidates for the approaching Central Council election an opportunity of addressing the members, and at which no minutes were read.

Election of Officers.—The following officers for 1908–9 were elected: *Chairman*, Percy Macdougall, M.B.; *Vice-Chairman*, M. Russen Rhodes, L.R.C.P.; *Honorary Secretary and Treasurer*, G. H. Grant Davie, M.B.; *Representatives on Branch Council*, Albert Hopkinson, M.B., W. Sawers Scott, M.D.; *Representative for Representative Meeting*, The Secretary; *Committee*, J. W. Boyd, M.B. (Fallowfield), Thomas Carnwath, M.B. (West Didsbury), H. E. Edlin, M.R.C.S. (Levenshulme), F. W. Jordan, M.D. (Heaton Chapel), F. J. Webb, M.B. (Gorton); *Ex-officio Member of Committee*, the Past Chairman, E. Vipont Brown, M.D., in accordance with a resolution adopted at the last annual meeting.

Vote of Thanks to Retiring Officers.—A vote of thanks was accorded to the retiring officers.

Report of Executive Committee.

The annual report of the Executive Committee 1907–8 was read and adopted. The Secretary was instructed to obtain reprints of the report, after publication in the Journal, for circulation among the members. The report was as follows:

Number of Meetings.—Your Executive Committee have to report that during the year two special and three ordinary meetings of the Division were held, at which there was an average attendance of thirteen. The Committee itself met eight times.

Social Character of Meetings.—Your Committee would again draw your attention to the success of the social character of the meetings which have been held at the houses of members of the Committee. The average number of members present has shown an increase of *one* on the previous year, the greatest number present at one meeting being seventeen, and the least ten. By thus holding the meetings in private houses, it is found that members derive much benefit by getting to know one another intimately through the informal chat "over the teacup," and by this means views are informally expressed, fostered, and later fulfilled, that are of the greatest service to the Division.

On October 9th, our Chairman and Mrs. Vipont Brown kindly invited the members and friends of the Division to a social evening at their house. This proved an enjoyable change from the usual more serious business of the Division, resulting in the most sociable and friendly evening the Division ever had.

Conjoint Committee.—Your Committee wishes to direct your attention to the excellent work done in combination with the Conjoint Committee of the Manchester Divisions. This has been of great service to the Division in discussing with the officers of other Divisions the manifold subjects that are submitted for consideration from head quarters.

In previous years, when important matters were to be discussed, a number of representative members from other Divisions were invited to our meetings. This year the formation of the Conjoint Committee has rendered such action unnecessary, and it enables the Divisions, by the united action of their whole membership, to effectually carry out any policy that may be desired.

Notification of Births Act, 1907.—At its own meetings, at the conjoint meetings and at the last Annual Representative Meeting, the Division has taken an active part in supporting the opposition of the Births Notification Act, 1907. This Division's chief reason for its action was that the Act involved a serious breach of professional confidence.

Referendum.—The policy of this Division in the recent controversy between the Council and Representative Meeting with regard to the proposed Charter, was to support—in every instance—the actions and resolutions of the Representative Meeting.

Ethical Rules.—After much serious consideration by your Committee and by the Division, the so-called "Bradford" Code of Ethical Rules, together with Rule Z, has been adopted by the Division. Rule Z provides, after due inquiry, for the submission of a report of the whole facts of each particular case to the Central Ethical Committee, and, subject to the approval of the said Committee, or, if its opinion be adverse, subject to the approval of a three-fourths majority of those members present and voting in a special meeting of the Division convened to consider the comments of the Central Ethical Committee, to cause the resolution of the Committee to be brought directly to the knowledge of every member of the Division by means of a special notice which the honorary secretary of the Division authenticates by his signature.

The Manchester and District Warehousemen and Clerks' Association.—The unsatisfactory nature of the medical arrangements of this association were thoroughly investigated by means of a report, and, after discussion by the Division, resulting in the following resolution:

> That the report be adopted and be forwarded to the Committee of the Combined Divisions, with a strong recommendation that they should do their utmost to obtain the resignation of the medical staff, including the consultants.

This work is still engaging the attention of the Conjoint Committee.

Resignation of Dr. M. Russen Rhodes.—It was with great regret your Committee received a letter dated March 29th from Dr. M. Russen Rhodes tendering his resignation as Secretary and Representative at the Representative Meeting. Owing to overwork, and an unfortunate attack of septicaemia which incapacitated him from all work for several weeks, he felt, in the interests of the Division, he could not retain office which he had been unable to adequately fill for the past few months. He desired that his wishes in the matter, though reluctantly taken, should be respected, and that he be permitted to resign. Your Committee had no alternative but to accept Dr. Rhodes's resignation, and placed on record their appreciation of the efficient manner in which Dr. Rhodes had carried out the duties of his offices. Dr. Grant Davie, who had been carrying on the secretarial work *pro tem.*, was appointed Honorary Secretary until the end of May in order to relieve Dr. Rhodes.

Chair of Practice of Medicine, Victoria University.—The Division having heard of Dr. G. R. Murray's appointment to the Chair of Medicine in the Victoria University passed a resolution of welcome, which was forwarded to him.

Ethical Cases.—Your Committee and the Division have considered two ethical cases, which are, however, *sub judice.*

Capitation Grant.—This grant has been reduced from 1s. 6d. to 9d. per member, thus reducing our working funds by half, though if sufficient cause be shown the Branch Council will increase this sum when required.

Scientific Discussions.—Your Committee hope that next year the scientific element will be largely introduced into our Divisional meetings, which will, if possible, still more help to foster the friendly feelings present among our members.

E. VIPONT BROWN, *Chairman.*
G. H. GRANT DAVIE, *Honorary Secretary.*

Treasurer's Report.—The Treasurer's statement for the year 1907-8 was read and adopted. In connexion with the Treasurer's report, the Secretary was instructed to write to the Secretary of the Branch, asking for the same capitation grant as received last year, as the present grant of £3 2s. 3d. only meets one quarter of the expenses.

Annual Representative Meeting.—It was proposed by Dr. RUSSEN RHODES, and seconded by the CHAIRMAN, that a meeting be held in the beginning of July to give instructions to the Representative on Business for the Annual Representative Meeting.

It was proposed by Dr. SAWERS SCOTT, and seconded by the CHAIRMAN, that the following resolution be considered at the July meeting:

> That the Representative be instructed to bring forward at the Annual Representative Meeting a resolution in favour of the reasonable expenses of Representatives on the Branch Council and to the Representative Meeting being met by each Division from the funds of the Association.

Club Appointments.—The following resolution proposed by the CHAIRMAN was unanimously adopted:

> That the Division is of opinion that no new appointment to the medical officership of a club shall be undertaken at a less remuneration than *six shillings* per member per annum.

Ethical Case.—The correspondence with the Medical Secretary relating to the Willington ethical case was read, and the matter was referred to the committee for consideration and action.

Bradford Ethical Rules.—A letter from the Medical Secretary was read pointing out that though the Central Council have approved generally of the so-called "Bradford" Ethical Rules and Rule Z, nevertheless it is at present necessary that formal sanction must be obtained from the Council by any specific Division before they become binding upon its members. The Secretary was instructed to write to the Conjoint Committee giving this information, as it is believed it is still under misapprehension of the need for such formal sanction.

Votes of Thanks to Dr. and Mrs. Vipont Brown.—It was proposed by Dr. RUSSEN RHODES and adopted with acclamation, that a special vote of thanks be given to the retiring Chairman and Mrs. Vipont Brown, for the manner in which they have so successfully introduced the social element into our meetings during the past year.

MIDLAND BRANCH:

LEICESTER AND RUTLAND DIVISION.

THE annual meeting of this Division was held on May 27th, twelve members being present.

Representative at Representative Meetings.—Dr. F. M. Pope was unanimously elected as Representative for Representative Meetings.

The Term "Hospital."—The following resolution was passed:

> That the definition of the term "hospital" proposed by the Central Ethical Committee be approved.

Medical Inspection of School Children.—The following resolutions were passed:

> That this meeting of the Leicester and Rutland Division of the British Medical Association, while approving of medical inspection of school children, is strongly opposed to any system of treatment (whether provided from the rates or from the Imperial Exchequer) of those children who may be found defective, and urges the Council to take such steps as would be likely to prevent such a system being adopted.
>
> That a copy of this resolution be sent to the General Secretary, to be forwarded to the Council and to the Representative Meeting.

LANCASHIRE AND CHESHIRE BRANCH.

WE are requested to publish the following extract from a communication which has been addressed to members of the Lancashire and Cheshire Branch.

A telegram making the correction was received from Dr. Brassey Brierley on Thursday evening, May 28th, after the JOURNAL had gone to press.

CENTRAL COUNCIL ELECTION.

Dr. Godson and Dr. Bradshaw's Candidature.

Dear Sir,—We hasten on behalf of the Election Committee to correct an error in our address. At the annual meeting of the Southport Division, Dr. Harris points out that there were fifteen members present, not eight as we stated, and not only did Mr. Larkin not address them, but the Division declined to hear the candidates.

The Committee wish at once to express regret to the Southport Division for the error, and also to Mr. Larkin and his three colleagues. The mistake arose through counting the "officials" elected at the Southport meeting and "reading in" the footnote of the report of the Wigan meeting—namely, "Medical Politics"—on the same page. According to this note, Mr. Larkin addressed the meeting, and a resolution in favour of his "policy" was passed.

. . . . . .

We have the honour to remain,
Yours faithfully,
JAS. BRASSEY BRIERLEY,
Chairman.
H. G. SMEETH,
Honorary Secretary.

Manchester, July 29th.

ATTENDANCES OF THE CHLOROFORM COMMITTEE *(Corrected).*

Members of Committee.	Feb. 18, 1908			Total.
Crocker, Dr. H. Radcliffe, London (Chairman) ...	1			1
President (*ex officio*)	—			—
Chairman of Representative Meetings (*ex officio*) ...	—			—
Chairman of Council (*ex officio*)	—			—
Treasurer (*ex officio*)	—			—
Barr, Sir James, M.D., Liverpool	1			1
Brodie, Dr. T. G., F.R.S., London				
Buxton, Dr. Dudley, London (Honorary Secretary) ...	1			
Dunstan, Professor, F.R.S. (London)	—			—
Harcourt, Professor Vernon, F.R.S., Ryde, I. of W. ...	1			1
Horsley, Sir Victor, LL.D., F.R.S., London	1			1
McCardie, Dr. W. J., Birmingham	1			1
Martin, Dr. C. J., F.R.S., London	1			
Rowell, Mr. George, F.R.C.S., London	1			1
Sherrington, Professor C. S., F.R.S., Liverpool ...	1			

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—Election of Representative of the Branch on the Council of the Association. Notice is hereby given that nominations for the office above mentioned must be sent to the undersigned by June 14th. Each nomination must be signed by three members of the Branch.—J. F. CHRISTIE, Honorary Secretary, 7, Alford Place, Aberdeen.

Border Counties Branch.—Notice is hereby given that nominations for the post of Representative on the Central Council of the Association for this Branch and the North Lancashire and South Westmorland Branch jointly must reach the Honorary Secretary not later than June 8th, and must be signed by at least three members of either Branch in accordance with By-law 25.—Francis R. Hill, Honorary Secretary, Carlisle.

Border Counties Branch.—The annual general meeting of the Border Counties Branch will be held in the County Hotel, Carlisle, on Friday, June 26th. Dr. James Macdonald of Carlisle will deliver his Presidential address. Further particulars later.—Francis R. Hill, Honorary Secretory, Carlisle.

Cambridge and Huntingdon Branch.—The annual meeting of the Branch will be held on Thursday, July 2nd, at Alconbury Hill, Huntingdon. Members having any communications to make or specimens to show are requested to inform the Honorary Secretary, F. E. Apthorpe Webb, Grafton House, Cambridge.

Dorset and West Hants Branch.—The summer meeting of this Branch will be held in Yeovil on Wednesday, July 8th. Members wishing to read papers, show cases, or exhibit specimens, must communicate with the undersigned not later than Friday, June 26th.—James Davison, Honorary Secretary, "Streateplace," Bournemouth.

East Anglian Branch.—The annual meeting of this Branch will be held at Norwich on Friday, June 19th.—B. H. Nicholson, Honorary Secretary.

East York and North Lincoln Branch.—The annual meeting of this Branch will be held at the Hull Royal Infirmary on June 11th, at 12.30 p.m.—Edward Turton, 1, Albion Street, Hull, Honorary Secretary.

Edinburgh and Fife Branches.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than Wednesday, June 10th.—A. Logan Turner, 27, Walker Street, Edinburgh; Francis D. Boyd, 22, Manor Place, Edinburgh; Balfour Graham, Leven, Fife, Honorary Secretaries.

Lancashire and Cheshire Branch.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. Garstang, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

Lancashire and Cheshire Branch: Warrington Division.—A meeting of the members of the above Division will be held at the Warrington Infirmary on Tuesday, June 9th, at 4 p.m. Agenda: This is the joint meeting with the St. Helens Division to elect a Representative to the Representative Meeting, and to discuss any business of the above meeting.—T. A. Murray, Honorary Secretary.

Leinster and South-Eastern of Ireland Branches.—Nominations of candidates for membership of Central Council should reach the Honorary Secretary on or before Monday, June 29th.—Arthur H. White, Malvern, Teremure Road, Dublin.

Metropolitan Counties Branch: Hampstead Division.—The sixth annual meeting of this Division will be held at the Hampstead Conservatoire, Swiss Cottage, N.W (Room No. 11), on Thursday, June 11th, at 8.30 p.m., Dr. Pidcock in the chair. Agenda: 1 Minutes. 2. Correspondence. 3. Questions. 4. To receive the fifth annual report of the Committee. 5. To elect officers and members of committee for the session 1908-9. The Committee met on May 25th and nominated the following officers and members:—Officers (seven): Chairman, Dr. Oppenheimer: Vice-Chairman, Mr. Nelson Hardy; Representative to the Representative Meeting, Mr. H. W. Armit; Hon. Secretaries, Dr. R. A. Yeld and Mr. C. W. Cunnington; Representatives to the Branch Council, Dr. Clark Wilson and Mr. W. B. Parsons. Executive Committee (eleven permissible): Dr. Ford Anderson, Miss Dobbie, Mr. F. R. Humpreys, Mr. Coram James, Mr. Jessop, Dr. Macevoy, Mr. Vincent Moxey, Dr. Pidcock, Dr. Sharman. 6. To instruct the Representative to the Representative Meeting. 7. To adopt ethical rules (copy following), which have been adapted from the so-called "Bradford Rules" by a Subcommittee and by the Committee. (The Subcommittee met on May 12th and May 18th; the Committee met on May 25th). 8 The Honorary Secretary will read a letter from Mr. Edmund Owen to the Marylebone Division, and a letter of comment thereon from the Committee o the Hampstead Division to the Marylebone Division.—R. A. Yeld, Honorary Secretary, Hampstead, N.W.

Metropolitan Counties Branch: Marylebone Division.—A general meeting of the Marylebone Division will be held on Friday, June 12th, at the rooms of the Medical Society of London, Chandos Street, W.. at 5 p.m. Agenda: 1. Minutes. 2. Letters 3 Election of a Representative for the Representative Meeting. 4. Matters arising out of the Hampstead Hospital question. 5. Dr. Hawthorne will move: That the Council of the Association be requested to appoint an independent and authoritative committee to inquire into and report upon (*a*) the circumstances which have led to the amalgamation of the North-West London and Hampstead Hospitals; (*b*) the position of the members of the staffs of these hospitals; (*c*) the election of the staff of the new institution. That this resolution be sent by the Division to the Representative Meeting, and that the Representative of the Division be instructed to support it.—Donald Armour, Honorary Secretary.

Metropolitan Counties Branch: Walthamstow Division.—The annual meeting will be held at the Great Eastern Railway Hotel, Liverpool Street, on Tuesday, June 16th, at 6 p.m., and will be followed by the annual dinner at 7.30 p.m. Tickets for dinner, 6s. Evening dress optional. Agenda: 1 Minutes. 2. Letters. 3 Presentation of report. 4. Instructions to Representative *re* Charter. 5. Election of officers. 6 Arrange programme for coming session.—A. Pottinger Eldred, Honorary Secretary.

Midland Branch.—The annual meeting of the Branch will be held at the Exchange, Nottingham, on Thursday, June 11th, at 2.30 p.m.—R. Sevestre, London Road, Leicester, Honorary Secretary, Midland Branch.

Midland Branch: Boston and Spalding Division.—The annual meeting of the above Division will be held on Tuesday, June 16th, at the White Hart Hotel, Boston, at 12.45 p.m. Luncheon will be provided at 2 p.m.; tickets, 3s. 6d. each (exclusive of wine). Members are requested to reply not later than June 13th if they intend to be present at the luncheon, as those accepting will be held responsible for the value of their tickets. Members may bring guests to the luncheon. Agenda: 1. Election of officers, including the President-elect of the Branch. 2. Programme for the year. 3. Matters referred to Divisions—medical life assurance. 4. Annual report. 5. Alteration of Rule 11. 6. Invitation to Midland Branch to meet in the Division. 7. Any other business.—A. E. Wilson, Honorary Secretary.

Munster Branch.—The annual general meeting of the Branch will be held on Saturday, June 6th, at 4.30 p.m., in the rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and Council for 1908-9 will be elected, and any other necessary business transacted.—Philip G. Lee, 26, St. Patrick's Hill, Cork, Honorary Secretary.

Northern Counties of Scotland Branch.—In accordance with By-law 25, notice is hereby given that nominations for the office of Representative on the Central Council from this Branch must be sent to me in writing on or before June 6th. Each nomination must be signed by three members of the Branch. The annual meeting of the Branch will be held at Kingussie on Saturday, June 13th. Further particulars will be sent to each member by circular.—J. Munro Moir Honorary Secretary.

North of England Branch.—Election of members of Central Council. Nominations of candidates for membership of Central Council (two required) must be sent to me in writing on or before Saturday, June 13th.—Henry Smurthwaite, 8, St. Mary's Place, Newcastle-on-Tyne.

South-Eastern Branch: Chichester and Worthing Division.—The annual meeting of this Division will be held at the Infirmary, Worthing, on Wednesday, June 10th, at 3.30 p.m. Mr. W. S. Simpson (Chairman of the Division) will preside. Agenda: 1. Minutes of the last meeting. 2. To appoint the place of next meeting. 3. Election of officers: Chairman, Vice-Chairman, Secretary, Representative on Branch Council, Representative at Representative Meeting, and Members of the Executive Meeting. 4. Report of the Honorary Secretary. 5 Matters referred to the Division: (*a*) Report as to the proposed definition of the term "Hospital"; (*b*) report on life insurance examination; (*c*) report on Prevention of Corruption Act; (*d*) the business of the Annual Representative Meeting; (*e*) medical inspection of school children. 6. Lynn Thomas and Skyrme Fund.—H. C. L. Morris, Honorary Secretary, Bognor.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The annual meeting of the Division will be held at the Royal Surrey County Hospital, Guildford, on Friday, June 26th, at 4.30 p.m. Dr. Anderson Morshead, Chairman of the Division, will preside. Agenda: 1. Minutes of last meeting. 2. Election of officers—Representatives on Branch Council and in Representative Meetings, and members of the Executive Committee. 3. To receive the annual report of the Division. 4. Matters referred to Divisions (see SUPPLEMENTS to the JOURNAL, April 18th and 20th, and May 9th, 16th, and 23rd). 5. Notes of cases will be read as follows: Dr. Morshead—(*a*) Acute Nephritis in a child; (*b*) Sarcoma of the Kidney. Specimens will be shown. Mr. Harold Butler: A Case of Abdominal Tumour of Unusual Interest. Mr. Eric Sheaf: Two Cases of Mistaken Diagnosis. Mr. E. J. Symth: Foreign Body in the Orbit 1¾ in. in length. 6. Any other business. Tea will be provided at 4.15 p.m. Any other members willing to show cases or specimens are requested to communicate with the Honorary Secretary, E. J. SMYTH, Mayshorne, Guildford.

SOUTH-EASTERN BRANCH.—The sixty-fourth annual meeting of the Branch will be held in the Council Chamber, Town Hall, Dover, by the kind permission of the Right Worshipful the Mayor of Dover, on Thursday, June 18th, at 2.15 p.m. Dr. M. K. Robinson, President-elect, kindly invites members to lunch at the Grand Hotel, Dover, from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting—(1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. The following expeditions have been arranged to take place afterwards: Visit to Dover Castle and precincts visit to the National Harbour Works in course of construction; visit to the ruins of the ancient Priory, now used by Dover College; and visit to Pageant House. Dinner at the Grand Hotel, Dover, at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Dover Division. Those who propose being present at lunch or dinner, or both, are requested to signify their intention to Dr. Osborn, Eanismore Lodge, Dover, not later than Thursday, June 11th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—The annual meeting of the Division will be held on Tuesday, June 9th, at 2.30 p.m., in the Board Room of the General Hospital, Northampton. For the purpose of electing a Divisional Representative the meeting will resolve itself into a joint meeting of the Northamptonshire and Aylesbury Divisions. The meeting will be preceded by luncheon at Franklin's Restaurant, Guildhall Road, at 1.30 p.m. The Secretary will be much obliged if any member wishing to attend the luncheon will notify him at least two days before the meeting. Business: Minutes. Election of Officers. Annual Report of Division. Matters referred to Division: Questions on the matter of Life Assurance Fees; Definition of the term "Hospital"; the ethics of Medical Consultation. The Lynn Thomas and Skyrme Fund Letter from the Coventry Division. Dr. Robson will propose that there be a special Clinical Section of the Division. Mr. Harries-Jones will read a paper entitled Remarks on the Differential Diagnosis of Glaucoma. Any other business.—P. S. HICHENS, Honorary Secretary, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting of this Branch will be held at the Infirmary, Newport, on June 11th, at 4.30 p.m., when the Representatives of the Branch on the Central Council will be elected.—W. MITCHELL STEVENS, 21, St. Andrew's Crescent, Cardiff, Branch Secretary.

STAFFORDSHIRE BRANCH.—The thirty-fifth annual meeting of the Branch will be held at the North Stafford Hotel, Stoke-upon-Trent, on Thursday, June 25th, at 5.30 p.m., when an address will be delivered by the President-elect, S. King Alcock, M.D. Agenda: 1. Introduction of the new President. 2. Minutes of the last annual meeting. 3. Correspondence. 4. Address by the President. 5. Report of the Council. 6. The financial statement. 7. To decide the place of holding the next annual meeting. 8. Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. 9. Report on the election of the Representative of the Branch on the Council of the Association. Nominations for offices: The following gentlemen are nominated for the under-mentioned offices—President-elect, W. G. Lowe, Esq., M.D., Burton-on-Trent; General Secretary, Dr. Petgrave Johnson, Stoke; Treasurer, Mr. J. Clare, Hanley. Gentlemen intending to be present at the dinner are requested to send an intimation of their intention not later than Monday, June 22nd. Members have the privilege of introducing friends. Dinner at 7 p.m. Charge, 5s. The first general meeting of the session will be held at Stoke, on Thursday, November 26th. Members wishing to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PETGRAVE JOHNSON, Honorary General Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—Nominations for the office of Representative on the Central Council should be sent to either of the undersigned not later than June 8th, in accordance with By-law 25.—G. PETGRAVE JOHNSON, Honorary Secretary, Staffordshire Branch, Stoke-on-Trent; C. G. RUSS WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of the above Branch will take place at the Hereford General Hospital on Thursday, June 18th, at 1.45 p.m. Business: To elect officers and transact such other business as are prescribed by rule for the annual meeting.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—Election of Representatives of the Branch on the Council of the Association.—Notice is hereby given that nominations for the above must be sent to the undersigned by June 13th. Each nomination must be signed by three members of the Branch. Two Representatives on the Council to be elected.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,915 births and 3,917 deaths were registered during the week ending Saturday last, May 30th. The annual rate of mortality in these towns, which had been 13·2 per 1,000 in each of the two preceding weeks, declined last week to 12·6 per 1,000. The rates in the several towns ranged from 4·5 in Hornsey, 4·9 in Ipswich, 5·6 in Willesden, 5·8 in East Ham, and 6·6 in Warrington, in Leyton, and in Halifax to 18·4 in Barrow-in-Furness, 18·6 in Stockton-on-Tees, 19·6 in Great Yarmouth, 20·1 in Oldham, 20·3 in Burnley, 20·4 in Stockport, 20·9 in Merthyr Tydfil, and 21·5 in Wigan. In London the rate of mortality was 11·7 per 1,000, while it averaged 12·9 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 0·9 per 1,000 in the seventy-six towns; in London this death-rate was equal to 0·7 per 1,000, while among the seventy-five other large towns it ranged upwards to 2·2 in Preston, 2·4 in Salford, 2·5 in West Ham and in Burnley, 2·7 in Merthyr Tydfil, 3·0 in Middlesbrough, and 3·1 in Aston Manor. Measles caused a death-rate of 1·3 in Stockport and in Wallasey, 1·7 in West Ham, and 1·8 in Preston; scarlet fever of 1·3 in Reading; diphtheria of 1·2 in Aston Manor; whooping-cough of 1·5 in Burnley, 1·6 in Rotherham, and 2·7 in Merthyr Tydfil; and from diarrhœa of 1·1 in St. Helens and 2·5 in Middlesbrough. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,870, 2,833, and 2,802 at the end of the three preceding weeks, had further fallen to 2,753 at the end of last week; 334 new cases were admitted during the week, against 353, 380, and 320 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 30th, 942 births and 546 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 15·3 and 15·4 per 1,000 in the two preceding weeks, rose to 15·5 per 1,000 last week, and was 2·9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12·3 in Aberdeen and 12·7 in Dundee to 17·8 in Perth and 17·9 in Leith. The death-rate from the principal infectious diseases averaged 1·5 per 1,000, the highest rates being recorded in Paisley and Leith. The 271 deaths registered in Glasgow included 7 which were referred to measles, 3 to diphtheria, 8 to whooping-cough, 2 to cerebro-spinal meningitis, and 8 to diarrhœa. Five fatal cases of measles were recorded in Edinburgh; 3 of diarrhœa in Dundee; 2 of whooping-cough and 3 of diarrhœa in Aberdeen; 2 of measles and 2 of whooping-cough in Paisley; and 2 of measles, 2 of diphtheria, and 2 of diarrhœa in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 23rd, 535 births and 357 deaths were registered in six of the principal Irish towns, as against 553 births and 368 deaths in the preceding period. The mean of the annual death-rates in these towns, which had been 25·9, 23·3, and 23·8 per 1,000 in the three preceding weeks, fell to 19·7 per 1,000 in the week under notice, this figure being 6·5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 8·5 in Londonderry and 15·8 in Cork, to 23·2 in Limerick and 31·2 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1·7 per 1,000, or 1·0 per 1,000 lower than during the preceding period, the highest figure—7·8—being recorded in Waterford, while Londonderry and Limerick registered no deaths under this heading at all.

During the week ending Saturday, May 30th, 614 births and 306 deaths were registered in six of the principal Irish towns, as against 535 births and 357 deaths in the preceding period. The mean of the annual death-rates in these towns, which had been 23·3, 23·8, and 19·7 per 1,000 in the three preceding weeks, fell to 16·5 per 1,000 in the week under notice, this figure being 3·9 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 10·9 in Limerick and 11·7 in Waterford to 19·5 in Londonderry and 23·3 in Cork. The zymotic death-rate in the same six Irish towns averaged 0·4 per 1,000, or 1·3 per 1,000 lower than during the preceding period, the highest figure—0·8 being recorded in Dublin, while Londonderry, Limerick, and Waterford registered no deaths under this heading at all.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JAMES BRADLEY, M.D., Fleet Surgeon, to the *Ocean*, on recommissioning, June 2nd; BRITON S. ROBSON, Surgeon, to the *Spanker*, on completing, undated; MONTAGUE L. B RODD, Fleet Surgeon, and MAURICE T. MALE, M.B., Surgeon, to the *Mars*, on recommissioning, June 22rd; THOMAS W. PHILIP, M.B., Staff Surgeon, and FREDERICK COCK, Surgeon, to the *Russell*, on recommissioning, June 23rd.

The appointment of Fleet Surgeon F. FEDARB, M.B., to the *Ocean* is cancelled.

ARMY MEDICAL SERVICE.

THE transfer from the Supernumerary List of Colonel W. BABTIE, V.C., C.M.G., bears date May 13th, 1908, instead of as notified in the *Gazette* of May 22nd, 1908.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT J. C. L. HINGSTON is confirmed in that rank. He was appointed on probation, July 29th, 1907.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-LIEUTENANT J. S. WARRACK, M.D., to be Surgeon-Captain, May 19th.

INDIAN MEDICAL SERVICE

MAJOR H. M. EARLE, Bengal, is appointed Specialist in Midwifery and Diseases of Women and Children, 3rd (Lahore) Division.

Major A. E. BERRY, Madras, is appointed Specialist in Ophthalmology, 5th (Mhow) Division.

The retirement from the service of Lieutenant C. M. ROBERTS, M.B., which has been already reported in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

In reference to a paragraph which appeared in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of May 30th in connexion with the retirement of Lieutenant-Colonel C. H. BENNETT, M.D., we are asked to say that he served in the Afghan war in 1879, receiving a medal, and with the Wimtho expedition, Burmah, in 1891, receiving a medal with clasp. He was also on field service at Suakin in 1885-6, and in the Tochi Valley, Waziristan, in 1898.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN K. MACK. DOUGLAS, M.D., 9th Volunteer Battalion (Highlanders) the Royal Scots (Lothian Regiment), resigns his commission, March 31st.

Surgeon Lieutenant-Colonel W. FREW, M.D., 1st Volunteer Battalion the Royal Scots Fusiliers, is granted the honorary rank of Surgeon-Colonel, March 30th; he resigns his commission, retaining his rank and uniform, March 31st.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel H. W. ROBERTS, 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), resigns his commission, retaining his rank and uniform, March 31st.

Surgeon-Captain D. MAYER, M.B., 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders, resigns his commission, March 25th; he retains his rank and uniform.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ALTON: LORD MAYOR TRELOAR CRIPPLES' HOME AND COLLEGE.—Resident Medical Officer. Salary, £150 per annum.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House-Surgeon. Salary at the rate of £50 per annum.

BUCKS COUNTY LUNATIC ASYLUM, Stone.—Senior Assistant Medical Officer. Salary, £175 per annum.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £120 per annum.

CHESTER CITY.—Assistant Medical Officer of Health. Salary, £250 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Honorary General Physician.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon Salary at the rate of £60 per annum.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—Assistant House Surgeon. Salary, at the rate of £60 per annum.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—(1) Junior Visiting Physician. (2) Second Dispensary Medical Officer. Must be qualified women.

FULHAM INFIRMARY, St. Dunstan's Road, W.—(1) Second Assistant Medical Officer. Salary at the rate of £100 per annum. (2) Locum Tenens for medical staff for two months. Remuneration, £4 4s. per week.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Salary, £100 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL. Assistant Resident Medical Officer. Salary, £120 per annum.

LIVERPOOL STANLEY HOSPITAL.—(1) Honorary Ophthalmic Surgeon. (2) Junior House Surgeon. Salary for (2), £50 per annum.

LIVERPOOL UNIVERSITY.—Chair of Therapeutics.

LONDON COUNTY ASYLUM, Bexley.—Junior Assistant Medical Officer. Salary, £160 per annum.

MAIDSTONE: KENT COUNTY ASYLUM.—Male Fourth Assistant Medical Officer. Salary, £175 per annum.

MANCHESTER EYE AND EAR HOSPITAL.—Medical Officers for the Examination of School Children.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to the Convalescent Home, Cheadle. Salary at the rate of £80 per annum.

MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Resident Surgical Officer. Salary, £100 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Surgeon for Diseases of Women.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—(1) Physician to In-patients. (2) Surgeon to In-patients.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Third Resident Medical Officer. Salary, £60 per annum.

NORTHAMPTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary, £200 per annum, rising to £250.

NORWICH CITY ASYLUM, Hellesdon-next-Norwich.—Assistant Medical Officer. Salary, £130 per annum.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Officer. Salary, £100 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Physician. Salary at the rate of £60 per annum.

RANGOON MUNICIPALITY.—Health Officer. Salary, Rs. 1,000 per mensem, rising to Rs. 1,500.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Junior Obstetric Assistant. (2) Clinical Assistants.

SALFORD: COUNTY BOROUGH EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £350 per annum, increasing to £500.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

SYRIA: LEBANON HOSPITAL FOR THE INSANE, Asfuriyeh.—Medical Superintendent. Salary, £300 per annum.

WARWICKSHIRE COUNTY COUNCIL.—Two Assistant County Medical Officers of Health. Salary, £250 per annum each.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident Medical Officer. Salary at the rate of 50 guineas per annum.

WESTERN AUSTRALIA: HOSPITAL FOR THE INSANE.—(1) Senior Medical Officer. Salary, £380 per annum, rising to £405 (2) Junior Assistant Medical Officer. Salary, £285, rising to £315.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Junior House-Surgeon. Salary, at the rate of £80 per annum.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon.—Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Terms, £80 per annum.

APPOINTMENTS.

ALDERTON, H. C., L.R.C.P., M.R.C.S., Certifying Factory Surgeon for the Barnoldswick District, County York.

BOYES, Auguste, M.B., Ch.B Glasg., School Medical Inspector to the Education Committee of Shropshire.

CHATE, Herbert S., L.S.A., Assistant Medical Officer, Lambeth Infirmary.

DAVIS, H. J., M.A., M.B.Cantab., M.R.C.P., Physician in Charge of Throat and Ear Department, West London Hospital.

EMRYS-JONES, F., L.M.S.S.A., B.A.Cantab., Resident Pathologist to the Birmingham General Hospital.

ENGLISH, Samuel, M.B., Ch.B.Glas., Honorary Surgeon to the Pendleton Branch Dispensary of the Salford Royal Hospital, vice Dr. W. J. Sprott, resigned.

FISHER, T. J., M.D., R.U.I., M.Ch., Medical Officer of No. 4 District of the Hackney Union.

FOTHERGILL, W. E., M.A., B.Sc., M.D., Lecturer on Clinical Obstetrics and Gynaecology in the University of Manchester.

FRANCIS, A. E., M.R.C.S., L.R.C.P., Resident Assistant Medical Superintendent, Hammersmith Parish Infirmary.

GUNN, R. McK., M.B., B.S.Aberd., Junior Resident Assistant Medical Officer, North Infirmary of the Parish of St. Pancras.

HILL, William, M.D.Lond., Surgeon in charge of the New Department for Diseases of the Ear, Nose, and Throat, at St. Mary's Hospital, Paddington.

HOWARTH, W. J., M.D., D.P.H.Vict., Medical Officer of Health for the County of Kent.

KELLY, M. Fitzmaurice, M.B., B.S., F.R.C.S., Surgical Registrar to St. Mary's Hospital, Paddington.

KENWOOD, Henry Richard, M.B., C.M.Edin., D.P.H., Medical Officer, Bedfordshire County Council.

LYSTER, R. A., M.B., B.Ch.Birm., D.P.H., Medical Officer to the Hants County Council.

MURRAY, J., M.B., C.M.Glasg., Certifying Factory Surgeon for the Llandrindod Wells District, co. Radnor.

MURPHY, Edward E. A., L.R.C.P.Edin., L.M., L.R.C.S.Edin., L.F.S.Glasg., Assistant Medical Officer to the Devon County Asylum, Exeter.

O'DONOVAN, T. J., L.R.C.P. and S.Edin., Medical Officer and Medical Officer of Health, Dunmanway Dispensary District.

POSTLETHWAITE, Joseph M., B.A.Cantab, M.R.C.S., L.R.C.P.Lond., Senior House-Surgeon at the Blackburn and East Lancashire Infirmary.

PROSSER-EVANS, J., M.R.C.S., L.R.C.P., District Medical Officer of the Romford Union.

PUGH, Charles Grant, M.D.Lond, D.P.H.Camb., Medical Officer of Health, Southend Town Council.

RIPPON, C. S. U., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Tintern District, co. Monmouth.

ROBERTS, E. B., L.R.C.P., and S.Edin., Medical Officer of Health, Hawarden Rural District.

ROCK, F. E., M.D.Lond., Medical Inspector of Schools, Edmonton Education Committee.

SHINNIE, A. M., M.B.Aberd., Resident Medical Officer, Royal Aberdeen Hospital for Sick Children.

SINCLAIR, N. J., M.B.Aberd., Medical Officer of Health for Forfarshire.

THOMSON, W. L., M.D.Glasg., D.P.H.Camb., Assistant County Medical Officer, Derbyshire County Council.

CHELSEA HOSPITAL FOR WOMEN.—The following appointments have been made:

Clinical Assistants: F. J. Alexander, M.B., C.M.; S. Glendinning, M.B., B.S.; S. J. Rowntree, M.R.C.S., L.R.C.P.; J. J. Mason, B.A., M.D.; J. A. Wright, M.D.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

SOWRY.—On May 28th, at 4, King Street, Newcastle, Staffs, to Dr. and Mrs. Sowry, a son.

DIARY FOR THE WEEK.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY, 11, Chandos Street, W., 8 p.m.—Card specimens: 8.30 p.m., Papers: Mr. P. E. H. Adams, An Epidemic of Contagious Conjunctivitis due to the Pneumococcus. Mr. E. Nettleship: 1. Senile Cataract in Husband and Wife—Condition of the Lenses in Children and Grandchildren. 2. Lamellar Cataract. Discoid ("Coppock") Cataract and Retinitis Pigmentosa in the Same Family. 3. A Colour-Blind Family. Lieutenant-Colonel H. Herbert: 1. Lower Corneal Plaques. 2. A Factor in the Production of Parenchymatous Xerosis.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Paper: Lieutenant-Colonel H. E. Deane (ret.), R.A.M.C., A Plea for a more Detailed Study of the Soldier's Heart.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, 7.45 p.m.—Papers: Dr. J. H. Teacher, The Embedding and Development of a Very Young Human Ovum. Dr. J. W. Munro Kerr, Clinical History and Microscopical Description of an Early Ovarian Pregnancy. Short Communication: Dr. Kedarnath Das, Gastroschisis.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

LARYNGOLOGICAL SECTION, 20, Hanover Square, 4 p.m.—Election of Officers; 5 p.m., Exhibition of Cases and Specimens.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Wednesday, 2.15 p.m., Jaundice; Friday, 3.15 p.m., Radical Cure of Complete Procidentia Uteri.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Tuesday, The Treatment of Neuritis; Wednesday, Points in Connexion with Intercurrent Medical Illnesses during Pregnancy; Thursday, The Diagnosis of Syphilis, etc., by the Antigen Method.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Friday, 3.30 p.m., Multiple Neuritis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, *X* Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Demonstration of Selected Medical Cases. Wednesday, 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Special Demonstration of Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION

SUMMER SESSION 1908.

Wednesday, May 27th, 1908.

Dr. DONALD MACALISTER, President, in the Chair.

THE minutes of the previous day's proceedings, as amended, were approved.

THE PRESIDENCY.

The REGISTRAR announced the official notification of the appointment of Dr. Donald MacAlister to be representative of the University of Glasgow for five years from May 27th, 1908.

The PRESIDENT stated that, in accordance with the statute he had handed in his resignation as representative of the University of Cambridge in order to take his seat as member for the University of Glasgow. In doing so, he vacated the chair.

Dr. NORMAN MOORE, acting upon precedent, moved that the Senior Treasurer should take the chair. Mr. THOMSON seconded, and

Mr. TOMES thereupon took the chair, and stated that there appeared to be no direction in the Standing Order, and nothing to be found in the minutes prescribing any particular method of electing a President; he thought the course which had been followed on a previous occasion was the proper one, namely, that a name or names should be proposed and seconded and put to the meeting.

Dr. LITTLE thought that before that course was adopted the new member for Glasgow University should be introduced to the Council. Dr. MACKAY proposed, Sir CHRISTOPHER NIXON seconded, and it was agreed, that the new member for Glasgow University should be introduced, and Dr. MacAlister was introduced by Sir John Batty Tuke.

Dr. LITTLE said that as the matter was now in order he had much pleasure in moving that Dr. Donald MacAlister be elected President of the General Medical Council. It was not often—in fact, he did not think it had ever occurred before—that the Council had the opportunity of electing a man of whose powers as President they were already aware. The members of the Council must all have admired the way in which the business of the Council had been conducted by Dr. Donald MacAlister. His many-sided qualities had been most valuable to the Council; his uniform courtesy had pleased them all; his power of negotiating with Governmental departments was well known; his financial ability had asserted itself in retrieving their shattered finances; and they had every reason to be pleased with the way he had discharged his duties. He was quite sure he was only echoing the wishes of the members in proposing that Dr. Donald MacAlister be elected President of the General Medical Council.

Dr. MCVAIL said, as one of the electors of the University of Glasgow, he had very great pleasure in seconding the proposal of one of the representatives of Ireland. The University of Glasgow would be very proud that their representative had been elected as President. They all knew the work Dr. MacAlister had already done, and the Council would prosper under his guidance.

Mr. TOMES said as no other name had been proposed he would put the resolution. The resolution was carried with acclamation. He then vacated the chair, which was taken by

Dr. DONALD MACALISTER, who expressed his most cordial thanks not only for the all too flattering words which had been spoken by Dr. Little and Dr. McVail, but for the cordiality with which they had been received. It had been very gratifying to him to have been entrusted with the position of President for three years and a half; he was doubly grateful and doubly proud to receive the renewed confidence of the Council. He would endeavour to the best of his power to preserve that confidence still more completely. He also thanked the members most heartily for the friendly and brotherly support which he had always received.

The Council's Jubilee.

The President moved, and it was agreed, that the President, the Treasurers, and the Chairman of the Business Committee be appointed a Committee to make arrangements for the celebration of the Council's jubilee in November, 1908.

Disciplinary Cases.

Mr. Lushington attended as Legal Assessor and Mr. Winterbotham as Solicitor to the Council during the consideration of these cases.

The Council proceeded first with the case adjourned from November 27th, 1907, of Duncan Shaw Morrison, registered as of Invergowrie, Perthshire, M.B, Mast.Surg, 1891, Univ. Edin.

Mr. Morrison did not appear.

Mr. Winterbotham read the charge, which was as follows:

That you were on September 24th, 1906, convicted of the following crime or offence at Lochgilphead Police Court, namely, of breach of the peace, and on February 11th, 1907, at the same court, of the same crime or offence, and on September, 1907, at the same court, of the following crime or offence, namely, of a contravention of Section 70 of the Licensing (Scotland) Act, 1903.

He said that Mr. Morrison did not appear on the last occasion, but sent a letter to the Council. The case was completed and proved then, but it was adjourned in order to give him an opportunity of being present in case he desired to offer any explanation.

Strangers were directed to withdraw. On their readmission,

The President announced that the Registrar had been directed to erase from the *Register* the name of Duncan Shaw Morrison.

The next case was that of William Henry Roberts, registered as of 63, Lower Mount Street, Dublin, L.R.C.P.Ed., 1885; L.R.C.S Ed., 1885. The charge was:

That you have knowingly assisted certain persons who are not registered as dentists—namely, Mr. Keogh, of No. 4, Lower Mount Street, Dublin, and Mr. John Blake Dillon, Messrs. William-Steyn and Mr. M. William-Steyn, all of 23, Rathmines Road, Dublin, in performing operations in dental surgery by administering and offering to administer anaesthetics, and have so enabled these persons to treat patients and to engage in dental practice as if they were duly qualified in dentistry and dental surgery; and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The case was heard on November 29th, 1907, and at the conclusion of the proceedings the President informed Mr. Roberts that the Council had found the facts alleged against him proved to its satisfaction, and that the further consideration of the facts proved had been adjourned till the May session, when he would be expected to be present.

Mr. J. R. Hart, instructed by Messrs. Bowman and Curtis Heywood, represented the complainants, the Irish Branch of the British Dental Association.

Mr. Roberts appeared in person, and in answer to the President stated that since the case was under the consideration of the Council he had strictly adhered to the undertaking given on his behalf by his counsel, and it was not his intention in any way to offend again.

Mr. Hart said he had nothing further to lay before the Council.

The parties and strangers were directed to withdraw. On their readmission,

The President said: "Mr. William Henry Roberts, the Council having further considered the facts proved against you, does not judge you guilty of infamous conduct in a professional respect."

Mr. Roberts expressed his sincere regret that he should have broken the regulations of the Council.

The next case was that of Morgan Watkin Williams, registered as of Trewernen, Llantwitfardre, Pontypridd, South Wales, M.B., Bac. Surg., 1900, Univ. Glasg., adjourned from November 29th, 1907. The charge was:

1. That you, being a duly qualified and registered medical practitioner, while acting as assistant to Mr. John Bernard Gabe, also a duly qualified and registered medical practitioner, by your countenance, assistance, and co-operation knowingly enabled an unqualified and unregistered person—namely, Mr. Frank Hannah—who was also acting as assistant to the said J. B. Gabe, to attend and treat patients and engage in medical practice as if the said F. Hannah were duly qualified and registered;

2. That you signed a certificate of death—namely, of Alice Mary Jenkins—which stated that you had attended the said Alice Mary Jenkins in her last illness, and that you last saw her alive on May 4th, 1907, whereas in fact you had not so attended her or seen her, but the said Frank Hannah had alone attended and seen her;

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

At the conclusion of the proceedings in November the President informed Mr. Williams that the Council had come to the decision that the facts alleged against him had been proved to its satisfaction, and had adjourned the further consideration of the facts proved until the May session, when he would be required to be present and to furnish evidence as to conduct in the interval, especially in relation to the giving of certificates, and association with unqualified assistants.

The complainant did not appear.

Mr. Williams appeared in person, and in answer to the President said he was very sorry for what had occurred. He had no intention of deriving any pecuniary benefit from what he did, and he had not been associated with any unqualified assistants since. As to the future, he need not say that such a thing should never occur again.

Mr. Winterbotham stated that he had not become aware of anything more against Mr. Watkin Williams.

Strangers and parties were directed to withdraw. On their readmission,

The President, addressing Mr. Watkin Williams, said that the Council, having further considered the facts proved against him, did not judge him guilty of infamous conduct in a professional respect.

The Council then proceeded to consider the case of James Brookes, registered as of 88, St. Paul's Road, Sparkbrook, Birmingham, but who had also a surgery at 105, Ladypool Road, Birmingham, L.R.C.P.Edin., 1871, L.F.P.S.Glas., 1871.

Mr. J. J. Pritchard (of Walthall and Pritchard, solicitors, of Birmingham), appeared for Mr. Brookes.

Mr. Winterbotham read the charge, which was as follows:

That you have knowingly authorized or allowed an unqualified and unregistered person, namely, one J. W. Austin Brookes, to attend and prescribe for patients in your name and on your behalf, and to sign in your name documents purporting to be medical certificates of the unfitness of children to attend school, without having yourself attended the children, and thereby have enabled the said J. W. Austin Brookes to act in relation to these cases as if he were a person duly qualified and registered. In particular the said J. W. Austin Brookes has attended and prescribed for the following persons, namely, Minnie Fisher, Elsie Preece, and Lilian Meadows; and the said J. W. Austin Brookes has signed such certificates in the following cases, namely, Minnie Fisher, Elsie Preece, and Lilian Meadows.

He stated that the case was brought before the Council on information supplied by the Education Committee of the City of Birmingham at the request of the magistrates at Birmingham. He then read the Statutory Declarations and called evidence in support of the charge, and the witnesses were cross-examined by Mr. Pritchard, who afterwards addressed the Council.

Mr. Brookes gave evidence on his own behalf, and J. W. Austin Brookes also gave evidence.

Mr. Winterbotham addressed the Council in reply.

Thursday, May 28th, 1908.

Dr. Donald MacAlister, President, in the Chair.

The minutes of the previous day's proceedings were confirmed.

Disciplinary Cases.

Mr. Lushington and Mr. Winterbotham were in attendance.

The Council then proceeded to discuss *in camerâ* the case of Mr. James Brookes, the hearing of which had been concluded on the previous day. Strangers were directed to withdraw. On their readmission,

The President said: Mr James Brookes, I have to announce to you that the Council, having carefully considered the facts proved against you, has decided to direct the Registrar to erase your name from the *Medical Register*.

The Council next considered the case of John P. Rafter, registered as of 338, Stanley Road, Bootle, Liverpool; L.A.H.Dubl., 1882; L.K.Q.C.P.Irel., 1886; L.L.M., 1892,

R.C.S.Irel.; who had been summoned to appear before the Council on the following charge:

That you have systematically sought to attract patients in Great Crosby and Waterloo, Lancashire, by the distribution of cards from house to house and in the street;

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

On the last occasion the President informed Mr. Rafter that the Council had found the facts alleged against him proved to its satisfaction, and that it had adjourned the further consideration of the case to the May session of the Council, and that he would then be expected to be present to produce evidence as to his conduct in the interval.

Dr. Bateman appeared on behalf of the Medical Defence Union.

Mr. Rafter appeared in person, and produced several testimonials as to his character and position, which were read by the Solicitor.

Dr. BATEMAN referred to a statutory declaration which had been made since the last hearing.

Mr. RAFTER, in reply, stated that he had never authorized the cards to be distributed in the manner in which they had been distributed, and that the cards were only intended to be given by his dispenser to his own patients who came to his place. He was very sorry that the cards had been distributed broadcast, and it had occasioned him no end of worry.

Strangers were directed to withdraw. On their readmission,

The PRESIDENT stated that the Council had further considered the facts proved against Mr. Rafter, and did not judge him guilty of infamous conduct in a professional respect.

Mr. RAFTER said he was extremely thankful to the Council.

The next case that came before the Council for consideration was that of Frederick Aubin Monks, registered as of Woodcliffe House, Burgess Hill, Hampstead, N.W., L.S.A.Lond. 1871; M.R.C.S.Eng. 1871; L.R.C.P.Edin. 1873, who had been summoned to appear before the Council on the following charge:

That you abused your position as a medical man by having sexual intercourse with a patient—namely, Annie Rose Le Farre (or Ely)—whom you were attending professionally at your surgery and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. Bateman appeared on behalf the Medical Defence Union.

Mr. Gill, K.C., appeared on behalf of Dr. Monks, instructed by Mr. Freke Palmer.

Dr. BATEMAN said he desired to lay before the Council the circumstances under which he appeared to bring forward the charge. He had been requested in February last by the Treasury to attend at the Highgate Police Court when a charge was preferred against Dr. Monks for having in January and previous days, with intent to procure the miscarriage of Annie Ely, unlawfully and feloniously used certain instruments. Mr. Muir, who appeared for the Treasury, informed the magistrates that, in his opinion, the charge could not be supported, inasmuch as it rested on the uncorroborated story of Annie Ely. The magistrates, however, heard the case, and committed Dr. Monks for trial. He (Dr. Bateman) was requested to attend at the Central Criminal Court, and Mr. Muir, in opening the case, again pointed out the want of corroboration of the woman's statement, and the learned judge ruled that there was not sufficient evidence to go to the jury; but in dismissing the case he said to the jury that although the charge was dismissed, yet that, no doubt, more would be heard of the case, and that the General Medical Council would deal with it later on. Dr. Bateman then proceeded to refer to the depositions before the magistrates, from which it appeared that the girl went to Dr. Monks on May 7th, 1903, and the doctor gave her some ointment for ringworm. She alleged that the doctor then attempted to take liberties with her, which she resented. The next day she again visited the doctor, and she alleged that improprieties then took place. This was repeated on many occasions subsequently. Dr. Bateman concluded by saying that the first point was whether the seduction took place as the girl said, and that it had been brought about by the doctor, and the second point was whether he was acting as a medical man at the time.

Mr. GILL (on behalf of Dr. Monks) said he did not complain of the manner in which the case had been presented, except that no one had suggested before that there was any seduction. He thought Dr. Bateman meant to use the word "connexion." The sole question for the Council to consider was whether the doctor had sexual intercourse with this girl, who at the time was in the relation to him of a patient, and whether there was that abuse of the confidence which should exist between a doctor and a patient, and which should always be regarded seriously by members of the profession. The facts, he thought, overwhelmingly showed that the relation of doctor and patient did not exist between these two people. Mr. Gill then dealt fully with the evidence, and gave a history of the girl's character as the result of inquiries which had been made. He contended that the charge was made by the girl out of revenge because Dr. Monks had married another woman. Dr. Monks did not deny that he had been guilty of immorality, which he very much regretted, and he threw himself on the mercy of the Council, and asked them not to look at the matter too harshly. He, in conclusion, pointed out that the first intercourse occurred five years ago.

Mr. WINTERBOTHAM then read a letter which the accused practitioner had written in answer to the charge, in which he stated that the relationship of doctor and patient never existed between them.

Mr. GILL, in conclusion, submitted that the sole question which the Council had to decide was whether the girl was a patient at the time sexual intercourse took place. He did not ask Dr. Monks any question, but tendered him for cross-examination.

Dr. BATEMAN, in cross-examining, read letters couched in affectionate language which Dr. Monks admitted receiving from the girl.

In reply to Mr. LUSHINGTON, Dr. MONKS said he first attended the girl for ringworm, and gave her some ointment, and told her to call again in a week; but she returned the next day, said she had been fond of him for some time, wished to make his acquaintance, and that then, at her invitation, sexual intercourse took place between them.

Strangers and the parties were directed to withdraw. On readmission,

The PRESIDENT said: Mr. Monks, I have to inform you that the Council have come to the conclusion that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council.

The Council then proceeded to the consideration of the case of Stanley Southam, registered as of 512, Rochdale Road, Manchester, L.S.A.Lond., 1900, who had been summoned to appear before the Council on the following charge:

That you acted as "cover" to an unregistered dentist, namely, Mr. Sydney Smith, of 163, Conran Street, Harpurhey, Manchester, by systematically acting for him in your own surgery in respect of the treatment of patients sent to you by him for dental operations requiring an anaesthetic, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. Hamilton (Solicitor) appeared for Mr. Stanley Southam.

Dr. Bateman appeared for the Medical Defence Union.

Dr. BATEMAN said that Mr. Smith was an unqualified dentist living at No. 163, Conran Street, Harpurhey, Manchester; and it was a notorious fact among medical men that he was unqualified and therefore unregistered as a dentist. In cases of dental operations requiring an anaesthetic he gave the patients a card, telling them to go to Dr. Southam, who would perform the operation; and this had been done in many cases. He then read statutory declarations by a number of persons, which he submitted substantiated his statement.

Mr. HAMILTON read a declaration by Mr. Southam that he had performed the operation of extraction on four or five different persons who had been sent to him by Mr. Smith, whom he believed at the time to be a qualified dentist. In November of last year it was brought to his knowledge by a medical man in Manchester that this was not so, and he sent for Mr. Smith and told him what he had heard, and that he could do no further work for him. On these facts, Mr. Hamilton submitted that no case of knowingly covering an unqualified practitioner had been made out.

Mr. Southam, cross-examined by Dr. Bateman, said that until the regulations of the Council with regard to unqualified assistants were brought to his knowledge he was unaware of them; that the cards bearing his name which had been given to patients by Mr. Smith were supplied by his wife in the autumn of last year to a man whom she was unable to identify. He could not say whether the man suggested that patients should be sent to him by Mr. Smith.

In reply to Mr. Lushington, he said that some of the patients sent by Mr. Smith were his own patients, to whom he rendered bills for the services he had rendered, which were paid at the end of the year. To the other people sent by Mr. Smith he did not send bills, and had received no money for his services. He was first told in the month of November last, by a brother medical practitioner, that Mr. Smith was unqualified, and he at once sent for him and told him that their relations must cease.

In reply to the President, he said Mr. Smith had never paid him a penny for his services, but, until he found out that he was an unqualified man, he expected him to do so. There had been no arrangement between him and Mr. Smith with regard to payment of fees.

Mr. Hamilton said he would withhold any further observations and leave the case in the hands of the Council, and Dr. Bateman said that he did not desire to address the Council further.

Strangers and the parties were directed to withdraw. On readmission,

The President said: Mr. Southam, I have to inform you that the Council, having considered the facts alleged against you, have come to the following conclusion, namely, That the facts have not been proved to their satisfaction. The case is closed.

Dental Cases.

The Council then proceeded to consider the report of the Dental Committee on the charge against Arthur Ward, in regard to whom the Committee had found the following facts:

That Arthur Ward registered in the *Dentists' Register* on February 26th, 1883, as in practice before July 22nd, 1878, whose address in the *Register* for the current year was 61, Bull Street, Birmingham, had issued and circulated a pamphlet containing statements of an objectionable character, laudatory of his own skill and methods, depreciatory of the work of other practitioners, and claiming superiority over other practitioners. That after receiving notice of the charge in this case, he withdrew the pamphlet and issued another omitting certain depreciatory statements but containing certain laudatory statements of his own skill and methods. That he had expressed his willingnees to undertake to withdraw the pamphlet altogether and not to issue any similar advertisements in future.

Mr. W. Coley (Solicitor) appeared for Mr. Ward; Mr. Hart (instructed by Messrs. Bowman and Curtis-Hayward) appeared for the British Dental Association.

Mr. Hart pointed out that, although before the Committee and by correspondence Mr. Ward had expressed his willingness to withdraw the pamphlet complained of and not to issue similar ones, there was no undertaking that he would not indulge in any other advertising campaign in the future. He submitted that if men who gained an unfair advantage over fellow-practitioners who acted up to the traditions of their profession were to exculpate themselves by simply promising withdrawal when found out, the British Dental Association felt it would be extremely difficult to keep the profession free from this sort of conduct.

Mr. Coley, on Mr. Ward's behalf, was perfectly willing to give an undertaking in the fullest terms desired by the Council, not only not to issue pamphlets of a similar character to those which had been issued, but not to issue pamphlets or advertisements of any kind at all with regard to his practice; and he also undertook to destroy any of the pamphlets complained of that might be in existence at the present time.

Strangers and the parties were directed to withdraw. On readmission,

The President said: Mr. Ward, I have to inform you that the Council have carefully considered the report of the Dental Committee, and have adjourned the further consideration of your case till November, when you will require to be present, and to give evidence as to your conduct in the interval, and especially in regard to the performance of your undertaking not to issue advertisements of any description in the future.

Mr. Ward expressed his extreme regret for having offended against the regulations, and thanked the Council for its consideration.

The Council then proceeded to the consideration of the report of the Dental Committee on the charge against William John Watson, in regard to whom the Committee had found the following facts:

That William John Watson, registered in the *Dentists' Register* on December 31st, 1878, as in practice before July 22nd, 1878, whose address in the *Register* for the current year was 8, New Street Birmingham, had in 1891 the qualification of L.D.S., R.C.S Edin., added to his name in the *Dentists' Register*, but that he was deprived of that diploma by the College in 1891 for advertising contrary to the declaration signed by him on admission. That in 1901 he caused a pamphlet to be circulated containing statements of an objectionable character, laudatory of his own skill and methods, depreciatory of the work of other practitioners, and claiming superiority over other practitioners. The pamphlet contained a statement that he had obtained the above-mentioned diploma by examination, and testimonials stating that he possessed the diploma. These testimonials were not dated, but were given before 1891 to assist him in obtaining an appointment. That at a subsequent date Mr. Watson instructed his printer to destroy the remaining stock of these pamphlets, but that one parcel was not destroyed, and that some of them had recently been distributed, but Mr. Watson stated that the copies had been accidentally discovered, that they were distributed inadvertently, and the remainder destroyed, and undertook in future not to issue the same or any other pamphlet, and to discontinue all advertisements.

Mr. Hayes appeared for Mr. Watson.

Mr. Hart appeared for the British Dental Association.

Mr. Hayes explained that Mr. Watson had been deprived of his diploma by the Royal College of Surgeons, Edinburgh, by reason of his having exhibited a show-case outside his residence; but he argued that that was not advertising in the general sense of that term, and that Mr. Watson had already suffered the penalty. His client had no desire to contravene the regulations of the Council, and it was owing entirely to illness and a mistake on the part of his wife that the irregularities now complained of had occurred.

Strangers and the parties were directed to withdraw. On readmission,

The President said: Mr. Watson, the Council has given careful consideration to the report of the Dental Committee, and have deferred further consideration of your case to November, when you will be required to be present and produce satisfactory evidence as to your conduct in the interval, with particular reference to your undertaking to discontinue the issue of all advertisements.

Friday, May 29th, 1908.

Dr. Donald MacAlister, President, in the Chair.

The minutes of the previous day's proceedings were read and confirmed.

Disciplinary Case.

The Council proceeded with the consideration adjourned from November 29th, 1907, of the case of John Papa Nicolas, registered as of 87, Dowanhill Road, Catford, S.E., M.R.C.S.Eng., L.R.C.P.Lond., 1904. (See p. 405.)

Saturday, May 30th, 1908.

Dr. Donald MacAlister, President, in the Chair.

The minutes of yesterday's proceedings were read, and, as amended, confirmed.

The Council resumed the consideration of the case of John Papa Nicolas. (See p. 406).

Monday, June 1st, 1908.

Dr. Donald MacAlister, President, in the Chair.

The minutes of proceedings on May 30th, as amended were confirmed.

The Council resumed the consideration of the case of John Papa Nicolas. (See p. 407).

Tuesday, June 2nd, 1908.

Dr. DONALD MACALISTER, President, in the Chair.

PROPOSED ADDITIONAL DIRECT REPRESENTATIVE.

Dr. NORMAN MOORE, Chairman of the Business Committee, said that in view of the fact that the time at the disposal of the Council was limited, Dr. Langley Browne had for the present withdrawn his motion, but would bring it forward at the next meeting of the Council. His motion was:

That representations be made to the Privy Council that it is expedient to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council.

A matter of some urgency had arisen with regard to the property of the Council, and he moved:

That a Committee of the Office Sites Committee, consisting of the President, the two Treasurers, and the Chairman of the Business Committee, be empowered, in consultation with the Solicitor, to deal with any application for a licence to assign or underlet the existing lease of No. 16, Hanover Square; and, if necessary, to affix the Corporate Seal to any Licence.

Mr. THOMSON seconded; and this was agreed to.

EXAMINATION COMMITTEE.

On the motion of Dr. MCVAIL (Chairman) two reports of the Examination Committee were received and entered on the minutes. There were no recommendations.

The first report was on the final examination held by the Apothecaries' Hall, Dublin, in January and April, 1908. The assistant examiners had reported that they were satisfied with the manner in which these examinations were conducted.

The second report consisted of an analysis of the returns as to examinations for the services received since the last session of the Council.

PHARMACOPOEIA COMMITTEE.

The report of the Pharmacopoeia Committee was received and entered on the minutes.

The report contained the following paragraphs:

The Committee of Reference in Pharmacy have presented two Reports, one containing suggestions for the revision of certain monographs of the *Pharmacopoeia* (1898), the other containing the results of an analysis of 48 000 prescriptions actually dispensed by pharmacists in England, Scotland, and Ireland during the last year or so. Information has also been furnished by wholesale druggists and manufacturers regarding the unofficial drugs and preparations for which there is a large demand, and regarding the official articles for which the demand has become very small. The details thus supplied by the Committee of Reference, at the cost of much labour, will be of material assistance to the Committee in deciding on the inclusion in or omission from the next *Pharmacopoeia* of particular articles.

In order that they might ascertain the views of the Medical Authorities regarding such inclusions or omissions, inquiries have been addressed by the President to the several Licensing Bodies in the United Kingdom. In response to these inquiries the Committee have received a large number of careful reports, prepared by Special Committees appointed by the Bodies and sanctioned by their authority. The suggestions for the improvement of the *Pharmacopoeia* therein contained will now be analysed and tabulated, and will be considered by the Committee in due course.

THE APOTHECARIES' HALL AND THE APOTHECARIES' SOCIETY.

After some discussion as to procedure, the PRESIDENT moved the following recommendation of the Executive Committee:

That the Examiners appointed by the Council to assist at the qualifying examinations held by the Apothecaries' Hall, Dublin, be instructed to conduct the Surgical portion of these examinations; and, in addition, to supervise the Medical and Obstetrical portions, with the object of securing that, at each qualifying examination, the required standard of proficiency is maintained.

Sir THOS. MYLES moved that the words "by the Apothecaries' Hall, London, and" be inserted before the words "by the Apothecaries' Hall, Dublin."

Dr. SAUNDBY seconded.

Sir HUGH BEEVOR said that the custom of the Council for many years had been that there should not be a report from the Apothecaries' Society of London, and he saw no reason for a change in that custom.

Sir CHRISTOPHER NIXON thought that the consideration of this matter should be postponed for the present.

Dr. ADYE-CURRAN agreed that if the Council were going to decide the matter at once it would be better not to deal with it in two parts, but that if it were not going to decide it at once nothing further should be done at the moment.

DISCIPLINARY CASE.

The consideration of the case of Mr. Nicolas was resumed. (See p. 408.)

DENTAL EDUCATION AND EXAMINATION COMMITTEE.

A report of this Committee was received, entered on the minutes, and adopted.

(1) The Committee recommended that the application of a lady for registration as a foreign dentist should be refused, on the ground that the licenses or certificates presented by the applicant did not furnish sufficient guarantee of the possession of the requisite knowledge and skill.

(2) The Committee recommended that the application for reciprocity from the Dominion Dental Council of Canada could not be entertained, as that body did not appear to have obtained any legislative recognition.

REPORT ON UNQUALIFIED PRACTICE.

The Unqualified Practice Prevention Committee, consisting of Dr. Langley Browne (Chairman), the President, Mr. Morris, Dr. Saundby, Sir John Moore, Dr. McManus, Dr. Latimer, Dr. Norman Walker, and Dr. Kidd, presented the following report:

On November 26th, 1907, it was resolved, on the motion of Dr. Langley Browne, seconded by Dr. McManus:

That a Committee be appointed to ascertain what legal provisions exist in the Colonies and Dependencies of the Empire and in foreign countries for the prevention of medical practice by other than legally qualified persons, and to consider what steps should be taken to procure effective legislation for the same purpose in the United Kingdom of Great Britain and Ireland.

On December 12th, 1907, the Registrar, by direction of the President, forwarded a communication to the Privy Council requesting that the Lord President would be so good as to communicate on behalf of the Council with the Secretary of State for Foreign Affairs, the Secretary of State for India, and the Secretary of State for the Colonies, in order that through the proper channels the information desired by the Council might be obtained. This the Lord President kindly undertook to do, and the information which he has obtained has from time to time been forwarded by him to the Council.

Most countries make some attempt to regulate the existence of medical practice, to check unlicensed practitioners, and to confine the exercise of the healing art to members of their own nationality, or at any rate to those who have passed some medical examination in the country.

These regulations vary very considerably, and seem to depend upon two main considerations:—

I. The more enlightened countries consider the question from the point of view of protecting the public from the dangers of unqualified practice by regulating the sale of poisons, dangerous drugs, etc., and put in the background the necessity of the practitioner being qualified according to their own colleges or universities.

II. Other countries seem to regard it more as a means of exacting a fee for the privilege of practising, and to attach more importance to registration or licensing than to the qualification of the practitioner.

Germany alone leaves the practice of the healing art perfectly free so long as the practitioner does not assume certain titles and does not seek recognition by the municipal or police authorities.

Should he desire to be recognized as a medical man or even as a veterinary surgeon he must obtain an "Approbation," which is equivalent to a licence to practise and to assume such title to designate his speciality as he pleases.

Italy is distinguished by the grant of a general permit to the properly qualified foreign practitioner to attend to his own countrymen, but this is a concession to the foreign population rather than to the medical profession, and practice among Italians is permitted only on obtaining an Italian diploma.

With regard to the Colonies, returns have been received

from the Dominion of Canada and her ten provinces and from the three districts of South Africa.

In Canada the disposition has been to acknowledge all good foreign degrees and especially to recognize the English *Register*, but it is evident that with the growth of Canadian schools of medicine there is an increasing tendency to require a local examination, and as increased facilities for medical study extend westward this tendency is likely to increase.

At the present time the ambition of the Canadian practitioner is to come to England and obtain an English diploma in addition to his Colonial degree, but that is because so far the Universities of Canada do not seem to have been fully recognized; for instance, they are not named among the other Colonial schools whose diplomas are recognized in the schedule to the Act in South Africa.

With regard to the general question of penalty, the recognized offences are as follow:

Unqualified practice.
Unregistered or unlicensed practice.
The illegal assumption of titles.
The administration of poisons or other potent drugs.
Want of proper skill in either qualified or unqualified practitioners.

The conditions which prevail in Egypt are somewhat exceptional, and special permission is given to the Barbers to continue their practices, which are historical, and which include the rite of circumcision, bleeding, cupping, leeching, and vaccination.

The Egyptian Government appears to recognize any genuine diploma, and there seems reason to believe that great notice is taken of the administration of drugs and poisons; there is also a strong medico-legal department in Egypt which deals with unqualified administration of drugs, etc.

It is not possible to attach much importance to the law in South America, as it would appear that, with the exception of Brazil, the question is regarded by the smaller States as rather fiscal than for public protection, and in such unsettled countries as Uruguay and Panama the methods adopted can hardly be seriously considered.

The recognition of Charity and Religion as a cloak for unqualified practice prevails in Russia, and although no returns are here given, it also exists among the protectorates of the northern littoral of Africa west of Egypt. Several countries appear, from the details given, to be in favour of reciprocity in admitting degrees of equivalent value, but no general consensus can be discovered. It may also be remarked that the most exacting country is Switzerland, which requires a complete examination from all who seek to practise even among foreign visitors.

The returns received from the Foreign Office and from the Colonial Office comprise the reports of thirty-four countries and six of our own Colonies. Other returns have been received during the present week.

Of these Persia, Morocco, Zanzibar, and Abyssinia possess no regulations for medical practice, nor does the Empire of India. The conditions prevailing in the German Empire are exceptional. It would appear that so long as the would-be practitioner does not assume any title—for example, Physician, Surgeon, Oculist, Dentist, Obstetrician, etc., he may practise as much as he pleases. Some of the component States of the German Empire have made local regulations, but while returns are shown from Baden, Bavaria, Hesse, and Würtemburg, the conditions prevailing generally are set out in the despatch from the Foreign Office at Berlin.

The Committee propose to continue their investigations, and to report further at the next session of the Council.

APPLICATION FOR REMOVAL OF NAMES FROM THE "REGISTERS."

Dr. LATIMER moved, Dr. SAUNDBY seconded, and it was resolved:

That the Executive Committee be requested to consider and report on the course to be followed in the case of practitioners who apply to be removed from the *Medical* or *Dentists' Registers*.

STUDENTS' REGISTRATION COMMITTEE.

The report of the Students' Registration Committee was received and entered on the minutes.

The report gave particulars of the manner in which certain special applications for registration as students had been dealt with, and stated that the Municipal Technical Institute, West Ham, recognized by the English Conjoint Board, should be added to the list of recognized institutions approved by the Council.

FINANCE COMMITTEE.

On the motion of Mr. TOMES, seconded by Dr. LITTLE, the report of the Finance Committee on income and expenditure for the year 1907 was received and adopted.

It appeared that the income of the General and Branch Councils for the year ending December 31st, 1907, was £8,465 17s. 11d., and the expenditure £7,370 17s. 9d., leaving a surplus of £1,095 0s. 2d.

The receipts from fees had been almost identical with those in 1906. The English Branch Council showed the large decrease of £265 under this head, but it was nearly wiped out by increase in the receipts of the Scottish Branch—£195, and the Irish Branch—£39.

The fees paid to the members of the Council were about £300 less than in 1906 owing to the shortness of the session.

The Dental Fund showed an excess of £72 12s. of income over expenditure.

With regard to the current year, the Irish Branch would, it was hoped, be able to meet its expenses out of its income.

COMMITTEES.

The following Committees were appointed:

The Examination Committee.—Dr. Pye-Smith, Mr. Young, and Dr. Caton (nominated by the English Branch Council), Sir Thomas Fraser, Dr. Finlay, and Dr. McVail (nominated by the Scottish Branch Council), Sir John Moore, Sir Charles Ball, and Dr. Kidd (nominated by the Irish Branch Council).

The Education Committee.—Dr. Norman Moore, Sir George Philipson, and Sir John Williams (nominated by the English Branch Council), Dr. Mackay, Sir John Tuke, and Dr. Lindsay Steven (nominated by the Scottish Branch Council), Sir Thomas Myles, Sir C. Nixon, and Dr. Little (nominated by the Irish Branch Council).

The Public Health Committee.—Dr. Cocking, Mr. Power, and Dr. Langley Browne (nominated by the English Branch Council); Dr. Norman Walker, Dr. Lindsay Steven, and Dr. McVail (nominated by the Scottish Branch Council); Sir John Moore, Dr. Adye-Curran, and Dr. Kidd (nominated by the Irish Branch Council).

The Pharmacopœia Committee.—The President (Chairman), Dr. Norman Moore, Dr. Barrs, Sir John Moore, Sir Geo. Philipson, Sir Thos. Fraser, Dr. Little, Dr. Caton, and Dr. McVail.

The Finance Committee.—Mr. Tomes (Chairman), Mr. Morris, Sir John Tuke, and Dr. Little.

The Dental Committee.—The President (Chairman), Mr. Morris, Mr. Tomes, Mr. Hodsdon, and Sir Thos. Myles.

The Dental Education and Examination Committee.—Mr. Tomes, (Chairman), Mr. Morris, Dr. Lindsay Steven, Dr. Finlay, Sir Thos. Myles, and Sir Chas. Ball.

The Students' Registration Committee.—Sir Hugh Beevor (Chairman), Dr. Norman Moore, Sir John Tuke, Sir Christopher Nixon, Dr. Mackay, and Dr. Adye-Curran.

The PRESIDENT announced that the Executive and Penal Cases Committees were re-elected without change.

The Council then adjourned, having arranged to meet at 10.30 a.m. on the following day.

Wednesday, June 3rd, 1908.

Dr. DONALD MACALISTER, President, in the Chair.

The minutes of the previous day's proceedings were read and confirmed.

The further consideration of the case against Mr. Papa Nicolas was continued. The same parties appeared. (See p. 410.)

PUBLIC HEALTH COMMITTEE.

Dr. LINDSAY STEVEN, in the absence of Mr. Power, moved:

That the report of the Public Health Committee be received and entered on the minutes.

Dr. NORMAN WALKER seconded, and it was agreed.

Dr. LINDSAY STEVEN moved:

That the Council recognize the Diploma in Public Health of the University of Sheffield conditionally on its being brought into accord with Rule IV of the Council; and that the President be authorized to give effect to the resolution on being satisfied that this condition has been fulfilled.

The Public Health Committee, in considering this matter, was quite satisfied that the University of Sheffield fully intended to conform in all respects with the requirements of the General Medical Council on this head; but the university had framed its regulations before Rule IV of the General Medical Council was made in 1905; if the university would agree to alter its regulations so as to make it clear that it demanded an education and exami-

nation in methods of public administration, then the power should lie in the hands of the President to grant to the University of Sheffield full recognition of its diploma. Several other universities, notably those of Liverpool and Leeds and the Victoria University, had a similar regulation to that of the University of Sheffield; and it might be within the province of the President to communicate with those universities also.

Dr. NORMAN MOORE seconded the motion, and it was agreed to.

READING OF MINUTES.

Mr. MORRIS moved:

That the minutes, which had been printed and circulated, be taken as read, instead of being read *in extenso* by the Registrar.

He pointed out that nearly £1 a minute was spent by the Council, and, in working out the sum on the principle of the payment for a day's work, the reading of the minutes cost the Council between £11 10s. and £13 10s. every time; and during this session it had therefore spent £108 in that respect. He thought that was a cogent reason why the Council should depart from such a course and should adopt that which had found favour with other bodies and take the minutes as read.

Mr. TOMES seconded.

Dr. MCVAIL thought the best course would be to remit the matter to the Executive Committee to report how time could best be economized with regard to the minutes. He thought that to abolish the reading of the minutes was too great a change to introduce at this late period of the session.

Dr. NORMAN MOORE thought the method proposed was one by which the Council could save money; and, if it did not answer, it could easily be altered.

Dr. NORMAN WALKER supported Dr. McVail. He thought it a most sensible suggestion to refer the matter to the Executive Committee, and he accordingly moved that as an amendment.

Dr. MACKAY seconded.

The PRESIDENT then put the amendment, which was carried, and it was then put as a substantive resolution and agreed to.

REPORTS OF EDUCATION COMMITTEE.

Dr. MACKAY moved, Dr. NORMAN MOORE seconded, and it was resolved:

That the Chairman of the Education Committee be authorized to communicate to the licensing bodies, for consideration of the statistics therein contained, an interim report of the Education Committee on various proposals submitted to them referring to the curriculum in medicine.

Dr. MCVAIL thought the Council should thank Dr. Mackay most heartily for the enormous amount of work he had done.

The PRESIDENT observed that that would come up at a later stage, when he was sure the Council would convey to Dr. Mackay its cordial thanks.

Dr. MACKAY moved, Dr. LINDSAY STEVEN seconded, and it was resolved:

That the report of the Education Committee in regard to a communication from the Privy Council on the subject of the administration of anæsthetics and the recommendation of the Committee be adopted.

DENTAL BUSINESS.

Mr. TOMES moved, Dr. MCVAIL seconded, and it was resolved:

That, together with the reports of the Dental Committee, the prints of the documents and evidence placed before the committee be circulated to the members of the Council.

REAPPOINTMENT OF REGISTRAR.

Dr. NORMAN MOORE moved, and it was resolved:

That the Registrar be reappointed until the close of the summer session, 1909.

VOTE OF THANKS.

Dr. MACKAY moved, Dr. NORMAN MOORE seconded, and it was resolved:

That the best thanks of the Council be given to the President for his able services in the chair.

The PRESIDENT thanked the Council.

The minutes were then read over, confirmed, and the proceedings terminated.

DISCIPLINARY CASE RESUMED.

Friday, May 29th, 1908.

Dr. DONALD MACALISTER, President, in the Chair.

THE consideration of the case of John Papa Nicolas, adjourned from November 29th, 1907, occupied the attention of the Council on May 29th, 30th, June 1st, 2nd, and 3rd. The following is a consecutive report of the proceedings. Mr. Nicolas was summoned to appear before the Council on the following charge:

That you have systematically canvassed in Catford for patients, by personal visits to patients of Mr. Thomas William Atkinson and to others, both while you were in the employment of the said Thomas William Atkinson and subsequently, and that in the course of such canvass you disparaged the qualifications and skill of the said Thomas William Atkinson and extolled your own;

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. Lushington appeared as legal assessor and Mr. Winterbotham as solicitor to the Council. Mr. Neilson appeared for the London and Counties Medical Protection Society, the complainants. Mr. Hemming appeared for Mr. Nicolas.

The PRESIDENT pointed out that the case was part heard, the opening statement of the complainants had been made, the examination, cross examination, and re-cross-examination of Mr. Atkinson, one of the witnesses, had been completed, and he called on the complainant to call the next witness.

Mr. HEMMING asked leave to make an application. In consequence of his difficulty on the last occasion in hearing what the witness said, he asked that he might have a place nearer the witness-box, or have the witness nearer him.

The PRESIDENT replied that Mr. Hemming should be put nearer the witness.

Mr. HEMMING next raised an objection to the present proceeding, and desired to question whether the Council had legal authority to entertain them. Mr. Nicolas did not derive his professional or scientific qualifications from the Council; the Council only registered them. He urged that the Council had no jurisdiction under the 29th Section of the Act of 1858 to try Mr. Nicolas for infamous conduct so as to deprive him of his status as a medical practitioner.

The LEGAL ASSESSOR having directed Mr. Hemming to hand in his objection, stated that the Council entertained no doubt whatever with reference to its jurisdiction. The objection could not be entertained.

Mr. HEMMING then raised an objection that the proceedings were irregular and void, on the ground of prejudicial and oppressive irregularities, in consequence of the Standing Order, Chapter XIV, 3 (c), not having been carried out, in that the accused practitioner was not heard at the preliminary inquiry.

The LEGAL ASSESSOR said the Council could not do more than receive the objection, and advised that the objection was not well founded.

The PRESIDENT directed Mr. Hemming to hand in the objection.

Mr. HEMMING protested that he had not been allowed to put forward his objection.

The LEGAL ASSESSOR replied that Mr. Hemming had the Council's decision. There was an overruling power over the Council constituted by the law, to which he must appeal.

Mr. HEMMING next took a further objection to the President presiding at the hearing, on the ground that he had already presided over the Penal Cases Committee, and had formed a judgement in regard to the case.

Mr. Hemming was requested to hand in his objection.

The LEGAL ASSESSOR advised the Council there was nothing in the objection, and advised the President to continue the sitting.

Mr. HEMMING then raised the same objection with regard to those members present who were members of the Penal Cases Committee.

The LEGAL ASSESSOR said he understood that Mr. Hemming's objection applied to both. It was not well founded.

Mr. HEMMING next claimed that by the rules the complainant was bound to make a statutory declaration of the facts of the complaint. The real complainant in these proceedings was Mr. Atkinson. Rule 3, Order xiii, said: "No complaint can be considered by the Penal Cases Committee until a statutory declaration as to the facts of

the case has been supplied by the complainant." There was no statutory declaration, and there could not be any such made by the London and Counties Medical Protection Society, who were called the "complainants," but there was by Mr. Atkinson.

The Legal Assessor said he understood the point was that there was no statutory declaration as to the facts supplied by the complainant.

Mr. Hemming replied in the affirmative.

The Legal Assessor said that could be overruled at once; there were thirty.

Mr. Hemming stated that not one of those was as to the facts supplied by the complainant.

The Legal Assessor said that that was an objection which could be taken when the evidence was given; the Council was not trying the case on the declarations alone, but on the evidence.

Mr. Hemming referred to the words of the section again.

The Legal Assessor said that they related to the Penal Cases Committee. The Council was now in full session with the complaint before them.

Mr. Hemming replied that if the Penal Cases Committee had erred, the proceedings were wrong *ab initio*.

The Legal Assessor said the Council would not decide that. There was a higher court that could decide any objection of that sort.

Mr. Hemming then said that the Council decided on the previous occasion that because legal proceedings were pending in the King's Bench Division, the Council could not allow him to cross-examine Mr. Atkinson on the points of this case. That was a remarkable decision he thought.

The Legal Assessor thought not. Mr. Nicolas had started an action for libel founded on two particular letters, and it became his duty in the High Court to put an innuendo by his pleadings upon those letters, and to prove it, and the onus of doing so rested upon him. All that he (the Legal Assessor) had ruled was that Mr. Hemming should not cross-examine Mr. Atkinson as to the meaning of any phrase in the letters, with the object of furnishing Mr. Nicolas with an innuendo to put in, and the means of proving that innuendo. With the justice and correctness of that ruling he was perfectly satisfied. On the other hand, if any question was put in cross-examination to Mr. Nicolas that was improper, he (the Legal Assessor) could at once take the part of the person who was in the box.

Mr. Hemming then asked to have Mr. Atkinson in the box to continue his cross-examination.

The Legal Assessor replied that unless the complainant wished to recall Mr. Atkinson his evidence was completed, and he would not again go into the box.

Mr. Hemming said he had not closed his cross-examination.

The Legal Assessor said he must rule against Mr. Hemming.

Mr. Hemming raised another objection that under Rule 12, Order XIV, the Council's Solicitor should first state the charge against the accused.

The Legal Assessor replied that that only applied where there was no prosecutor.

Mr. Hemming next brought forward an objection that a printed pamphlet had been circulated among members of the Council before the hearing, and that his client only got it after it had been in the possession of members for some time.

The Legal Assessor said that what had been done was in accordance with the usual custom of the Council during the last forty years. Mr. Hemming need not think that his client would be prejudiced in the slightest degree by any member of the Council having read the declarations.

Mr. Hemming submitted that the charge ought to be made sufficiently clear to enable his client to meet it. He was accused of canvassing by personal visits to patients of Dr. Atkinson "and to others," and as the Council never informed an accused practitioner of the precise point on which its decision turned, it would be impossible for him to know how far the words "and to others" entered into the judgement of the Council, and the proper material could not be placed before the Court of Queen's Bench in order that the decision might be efficiently revised if it was ultimately desired to take it there. He desired to have the words "and to others" struck out.

The Legal Assessor ruled, as no evidence would be tendered, Mr. Papa Nicolas was entitled to an acquittal so far as the charge that he had systematically canvassed in Catford for patients other than patients of Mr. Thomas Atkinson.

Mr. Hemming requested that Dr. Hugh Woods should be the next witness, on the ground that he had undertaken to present himself for examination at the last session.

The Legal Assessor pointed out that this was when Dr. Woods was conducting his own case, and that Mr. Neilson must be allowed to conduct his case in his own way.

Mrs. Murphy, examined by Mr. Neilson, said before September, 1906, she had been a patient of Mr. Atkinson; at that time Dr. Nicolas was assistant to him. In May, 1907, Dr. Nicolas called upon her, and said he was at Downhill Road, Catford; he had opened a surgery, and was trying to work up a practice, and would be pleased to attend her family, and would supply better drugs than Mr. Atkinson.

Cross-examined by Mr. Hemming, she fixed the interview with Dr. Nicolas in May, 1907. She could not say how it came to be put at April 16th, 1907, in her declaration.

Mrs. Rednall, examined by Mr. Neilson, said she lived at Catford, and Mr. Atkinson was her medical attendant. While he was away on his holiday at the end of 1906, Dr. Nicolas attended her for a miscarriage. While doing so, he said he was going "to set up on his own if Dr. Atkinson and me do not come to better terms when he comes back; and as I have saved your life, you will come to me. My terms will be less than Mr. Atkinson—confinement 15s., visit 1s. 6d., and medicine 1s." As a rule, Mr. Atkinson charged a guinea, 2s. 6d., and 1s. 6d. Dr. Nicolas said: "We young doctors come fresh from the hospitals with all the new ideas, but these old doctors know nothing."

Cross-examined by Mr. Hemming: She had not spoken to Dr. Nicolas since he came back to practise at Catford. She could not say he meant partnership terms when he used the expression "better terms"; neither did he say he was going to set up practice in partnership with anybody else.

Miss Ross, a nurse (examined by Mr. Neilson) said that at the time she made her statutory declaration she resided at 124, Bromley Road, Catford, and knew Dr. Atkinson and his assistant, Dr. Nicolas. In the summer of 1906 she was nursing a case for Dr. Atkinson, which was often attended in the evening by Dr. Nicolas, who always changed the treatment prescribed by Dr. Atkinson in the morning and criticized it unfavourably. From the fact of his doing so she concluded that Dr. Nicolas was working against Mr. Atkinson.

Cross-examined by Mr. Hemming: She first went to Catford in September, 1905, and did not know Mr. Atkinson before going there. She received about half her cases through him. In her opinion Mr. Atkinson's treatment was changed simply because it was his treatment. The witness was cross-examined in such minute detail as to the respective treatments as to elicit from the Legal Assessor the observation that this did not concern the Council; it had only to decide whether Dr. Nicolas had canvassed.

Mrs. Robinson, examined by Mr. Neilson, said in August, 1906, she sent for Dr. Atkinson to attend her child and Dr. Nicolas attended. While so doing he told her that Dr. Atkinson had lost five or six cases the same as hers, while he, Dr. Nicolas, had not lost any.

Cross-examined by Mr. Hemming: Dr. Nicolas attended her sister before the latter's death. She had not complained to a Miss Cullen bitterly of him and said he was the cause of her sister's death; neither had she told a Miss Cummings that "Dr. Nicolas was a butcher, she would never forgive him for the death of her sister and would help Dr. Atkinson to ruin him," or anything like it.

On the motion of Dr. Norman Moore, it was resolved that the Standing Orders be suspended and that the Council meet on Saturday at 11 a.m., and sit till 4 p.m., with an interval from 1 to 2 p.m.

The Council then adjourned.

Saturday, May 30th, 1908.

Dr. Donald MacAlister, President, in the Chair.

Mr. Neilson called Mrs. Edney as a witness, and examined her. She was cross-examined by Mr. Hemming. Mr. Neilson re-examined her as to a declaration dated April 9th, 1908, which he put in. Mr. Hemming applied

for permission to cross-examine Mrs. Edney in regard to this supplementary declaration. The LEGAL ASSESSOR advised that this application should not be acceded to on the ground that the declaration had been elicited by Mr. Hemming himself in the course of his cross examination. Mr. HEMMING desired that his application should be recorded.

Mr. NEILSON called Mrs Susan Hart as a witness and examined her. She was cross examined by Mr. HEMMING and re-examined by Mr. NEILSON as to a supplementary declaration made by her, dated April 3rd, 1908, which he put in.

Dr. HEMMANS, examined by Mr. NEILSON, said he practised at 9, Lewisham Park, and in the latter part of 1905 was on friendly terms with both Dr. Atkinson and Dr. Nicolas. On one occasion, in discussing the question of partnership, the latter stated that Dr. Atkinson was not likely to have a partner for many years. Later he said Dr. Atkinson wanted him to sign a bond barring him from practising within two miles, and he had written to the BRITISH MEDICAL JOURNAL to ask if a mile was not the usual distance, but had not received an answer. On June 30th. 1906, the following appeared in the BRITISH MEDICAL JOURNAL: "Assistant wants to know whether half a mile radius is not the recognized limit in signing a bond in a London practice"; but he thought a mile was mentioned.*

Cross-examined by Mr. HEMMING: At one time he was on very friendly terms with Dr. Nicolas, of whom he then had a high opinion, but from what subsequently transpired he had altered his opinion.

Mrs. EMILY BOWLES, examined by Mr. NEILSON, said she met Dr. Nicolas on May 23rd, 1906, when he said that Dr. Atkinson was trying to kill him, and if at any time she needed a doctor and went to him he would only charge 1s., and for a visit to the house 2s, but as she was an old patient it would be 1s. 6d.

Cross-examined by Mr. HEMMING, she made a mental note of the conversation as she thought it most improper for an assistant to make such a proposal.

Mrs. SHEPHERD examined by Mr. NEILSON, said in the summer of 1906 Dr. Nicolas told her he was very fortunate with children as Dr. Atkinson had lost five while he had only lost one; he accounted for it by the fact that he had newer methods, as young doctors coming fresh from the hospital had newer ideas than old doctors. He asked her if he started a practice in Catford would she go to him, and she replied that Dr. Atkinson had been her doctor ever since she had been at Catford and she did not care to make a change.

Cross-examined by Mr. HEMMING: At the present time she owed Dr. Atkinson a bill for professional attendance.

By the LEGAL ASSESSOR: She had had no promise from Dr. Atkinson to reduce her bill, and she did not expect any free attendance.

Dr. GEORGE LAURENCE, examined by Mr. NEILSON, said he had been in partnership with Dr. Atkinson since July, 1907. He had assisted in obtaining statutory declarations in support of the charge. The document was read through to the witness in every case, and, as far as he could judge, they well understood what they were asked to sign.

Cross-examined by Mr. HEMMING: He had canvassed patients on behalf of Dr. Atkinson in support of this charge. Dr. Nicolas issued a writ against him after November, 1907, for libel.

Re-examined by Mr. NEILSON: When he obtained the declarations he had no idea he was going to be made a defendant in an action.

Mr. POUTER, examined by Mr. NEILSON, said he was a solicitor practising in the City and Catford. At the request of Dr. Atkinson, he attended at various residences, and took the declarations, and everything was done in proper form.

Cross-examined by Mr. HEMMING: He did not prepare the declarations himself. He would not have taken a declaration unless he was confident the proposed declarant understood what he was doing at the time.

Mrs. TACON, examined by Mr. NEILSON, said Dr. Nicolas called at her house on April 4th, 1907, saw her daughter, and prescribed for her, and again on April 16th, when he sent some medicine. She never asked him to call on either occasion.

Mrs. RUTH WICKS, examined by Mr. NEILSON, said in 1906 Dr. Atkinson was attending her child, which subsequently died. She went to the surgery and saw Dr. Nicolas, who said, "I'm sorry to hear you have lost your baby. If you had brought her to me I would have saved her. Dr. Atkinson has lost all his babies; I have not lost one."

Mr. NEILSON observed that he had called 13 witnesses of the 30 declarations which were before the Council. He had 24 more witnesses in addition to those he had called, but in the interest of everybody concerned he declined to do so, as it was only repetition. As Dr. Woods, in the conduct of the case last November, undertook to go into the box, he tendered him as a witness, not because he could give any evidence relevant to the matters in issue, but for the purpose of cross-examination.

The LEGAL ASSESSOR remarked that this was a proper course to take.

Dr. HUGH WOODS, cross-examined by Mr. HEMMING, said he had been to Catford and seen a number of persons who had made declarations in favour of Dr. Atkinson. He went especially to those as to whose declaration there was some doubt expressed at the last hearing to see whether there had been any possible mistake, and to ascertain of his own knowledge if the declarant acquiesced in it or not.

This concluded the case for the complainant.

Mr. HEMMING opened his case for Mr. Papa Nicolas. He proceeded to argue that he had no case to meet. The Legal Assessor ruled that he had not to meet a charge of disparaging the medical qualifications of Mr. Atkinson, but that there was a prima-facie case to be met of systematic canvassing in Catford for patients. He objected that the charge was not in accordance with the rules of the Council. This objection was overruled. He then urged that the Council's resolution in regard to advertising and canvassing did not apply to this case. The Legal Assessor replied that he should advise the Council to the contrary.

Mr. HEMMING called Mrs. LILY PLUMFLEET as a witness and examined her. Mr. NEILSON did not cross-examine her.

Mr. BELLMAN, examined by Mr. HEMMING, said he saw Dr. Laurence, who complained of the witness having sent Mr. Atkinson's patients to Dr. Nicolas, who was trying to get Mr. Atkinson's patients away.

Mr. HEMMING then gave evidence that he had examined Dr. Atkinson's books, and found midwifery charges of 10s., 12s., and 15s.

Dr. NICOLAS was then called, and a testimonial from Mr. Frederic Eve was put to him, but, it being 4 o'clock,

The Council adjourned.

Monday, June 1st, 1908.

Dr. DONALD MACALISTER, President, in the Chair.

Mr. Lushington and Mr. Winterbotham were again present.

Mr. HEMMING desired to hand in an objection which he had drawn up. He did not propose to argue it with the Legal Assessor. (The document was handed in.)

The LEGAL ASSESSOR (after perusing the document) said it was a matter personal to himself. He thought the document had better be handed to the President. It was a protest against the attitude that he (the Legal Assessor) had taken up. (The document was then handed to the President.)

The PRESIDENT said the document was not an objection, but a protest against the action of the Legal Assessor, and it suggested that the interruptions had been with an object not favourable to Mr. Nicolas, and very strong language was used. The protest had been handed in, and the Council would have an opportunity of placing it on record, if it thought fit.

Several witnesses were then called with the object of contradicting the witnesses called on behalf of Mr. Atkinson and to say that Mr. Nicolas had never canvassed them.

Mr. HEMMING called Mrs. CATHERINE DALBIN, who said she did not know Mr. Atkinson. Mr. Hemming examined her as to a statutory declaration he proposed to put in, annexing a statement signed by about eighty people in the neighbourhood, all of them being patients of Mr.

*As may be seen by reference to the BRITISH MEDICAL JOURNAL of June 30th, 1905, p. 1567, the answer to the question which appears to be that referred to was: "There is no recognized limit of half a mile. In many cases such a limit would be altogether valueless for what is required."

Nicolas, saying that he had not canvassed them. These signatures had been obtained by the witness and others.

Mr. Neilson said he did not know how far the Council went in admitting such petitions; he objected that such documents were not evidence.

Mr. Hemming replied that his client was charged with systematic canvassing. He proposed to put in the document to show that a large number of people living in the neighbourhood stated that their doctor was Mr. Nicolas, and that he did not canvass them. How else could Mr. Nicolas meet the charge? He could not subpœna these people, neither could the Council, and it had no power to compel their attendance.

The Legal Assessor, addressing Mr. Neilson, said that the Council, as far as possible regulated its procedure by that which obtained in courts of law, but the Council had no power, as Mr. Hemming had said, to compel the attendance of witnesses nor to punish them if they did not speak the truth. He was inclined to advise the Council to admit the document for what it was worth. He would, however, like to point out that the evidence which Mr. Neilson had laid before the Council was that of witnesses who positively swore that they, being patients of Mr. Atkinson's, were canvassed by Mr. Nicolas, and that disparaging remarks were made by Mr. Nicolas about Mr. Atkinson. Mr. Hemming, on the other hand, had called a certain number of witnesses who said they had been patients of Mr. Atkinson, that they left him for certain reasons, and they were never canvassed by Mr. Nicolas, and never heard any disparaging remarks. That was the position of matters.

Mr. Neilson pointed out that the statutory declaration of the witness was obtained some time ago, and had not been filed before the hearing, nor was any copy supplied to his clients in order that they might see if the signatories were reliable.

The Legal Assessor replied that this was true, but the penalties of perjury attached to the person who signed it.

Mr. Hemming then read the document which had been signed by eighty-two persons over 20 years of age, with one exception, and the effect of the document was that Mr. Nicolas had never canvassed them, and they had never heard him say anything against Mr. Atkinson.

In reply to Mr. Neilson, the witness said she did not know what made her obtain the signatures; she had never done such a thing before, and had never done it since. Nobody asked her to obtain them; it came into her own head. She did not know if any of the persons signing were patients of Mr. Atkinson; she did not ask them.

In answer to the Legal Assessor, the witness said she went to everybody who she thought knew Mr. Nicolas. She knew they were Mr. Nicolas's patients, because she heard them talking about it. She certainly had no list supplied to her before she went round to the people who signed. She could not remember who it was put the words into the petition, "We the undersigned do most emphatically state." The Legal Assessor then put the document in the witness's hands, and asked her a question about it, when she replied that she could not read. She said she had something read over to her before she put her mark against it; she suggested no alteration in what was read over to her. She was by occupation a charwoman. She had no written draft read over to her before it was put before her in typewriting. When she took the paper round to be signed she knew what was in the paper; her son, aged 10, read it to her. She was quite sure that Mr. Hemming never came to her and asked her to get the signatures, nor any one from him.

Mr. Hemming asked leave to re-examine upon this cross examination, but this was refused. He was allowed, however, through the Legal Assessor, to ask the witness if he had ever been to her house on any occasion, and she replied in the negative.

Mr. Hemming then went into the witness-box, and stated that Mrs. Dalbin came to him and said she had heard Mr. Atkinson was proceeding against Dr. Nicolas, and suggested a petition. Mr. Hemming prepared it, and to that extent it was his document. He had prepared it just as if anyone had asked him to write a letter.

Miss Lily Cullen, examined by Mr. Hemming, spoke to a conversation with Mrs. Robinson, who accused Dr. Nicolas of causing the death of her mother and sister, and said he ought to be pole-axed, and she would do all she possibly could for Mr. Atkinson to try and bring him out all right.

Cross-examined by Mr. Neilson, she was first spoken to about the matter by Mrs. Hemming, who asked her if she had been canvassed by Dr. Nicolas.

Henry Edward Lavallin, examined by Mr. Hemming, said his wife had made a statutory declaration with reference to the matter in question, but had not been asked to give evidence. Dr. Hugh Woods saw his wife in May last, when she denied that Dr. Nicolas had canvassed or had asked her to go to him as he was going to be cheaper than Mr. Atkinson.

Cross-examined, he understood that Dr. Hugh Woods saw his wife to ascertain if her declaration was true. He read it to her to the effect that Dr. Nicolas said he was coming to Catford to practise, and gave the declarant his address, saying it was not far away, and he was going to be a little cheaper, and she assented to its accuracy, except as to his "going to be a little cheaper."

Re-examined by Mr. Hemming: Dr. Nicolas had never canvassed him, neither had the witness's wife told him that he had canvassed her.

In reply to Mr. Neilson the witness said he had recently moved, and it transpired that the notice to attend the inquiry had been sent to Mrs. Lavallin and returned through the Dead Letter Office.

Miss Kate Cullen, examined by Mr. Hemming, said she was attended by Dr. Nicolas who never canvassed her in any way or disparaged Mr. Atkinson.

Dr. Nicolas's examination was then continued by Mr. Hemming, and a number of testimonials from members of the profession under whom Dr. Nicolas had studied were put in. He denied having canvassed for patients, or that he had ever disparaged Mr. Atkinson. He first met him while in the service of his brother, Mr. Hugh Latimer Atkinson. After leaving the latter a proposal was made that he should enter the service of Mr. T. W. Atkinson. After some negotiation, he agreed to do so at a salary of £180 a year. Nothing was said about signing any bond or agreement, and he would not have signed one. Some nine or ten months after Mr. Atkinson inquired what he intended to do, as time was getting on, and he replied that he wanted a partnership or an increase of salary. Mr. Atkinson said he was perfectly satisfied with him, and if he would stay on another three months at an increased salary of £300, Mr. Atkinson would give him a partnership. Shortly after the witness was requested to sign a bond, and about the end of July he wrote declining to do so, and enclosed notice to leave. They parted on perfectly friendly terms, but it was understood he was to return as assistant for two or three months, and that then there was to be a partnership. He was exceedingly surprised to receive Mr. Atkinson's letters of complaint, and wrote demanding an explanation; and in reply he received a letter from Dr. Hugh Woods, whom he went and saw, and at once assured him he (the witness) did not intend to go back to Catford.

The Council then adjourned, having arranged to meet at 11 a.m. on the following day.

Tuesday, June 2nd, 1908.

Dr. Donald MacAlister, President, in the Chair.

In answer to Mr. Hemming, Mr. Nicolas said that he had always been willing to answer any complaints made against him, and he had been also very anxious to know who the complainants were. Questioned as to the statements in Mr. Atkinson's declaration, Mr. Nicolas said there was no ground for the assumption that he would sign a bond; it had never been mentioned until a discussion arose as to his being taken into partnership or his leaving Mr. Atkinson. Mr. Atkinson had offered him an increase of salary after he had given notice to leave. He always did his best in Mr. Atkinson's interests. He got no holidays whilst he was with Mr. Atkinson. He worked very hard for him, so hard that his health broke down. He used to work at both of the surgeries, which he was not bound to do under his agreement. It was not true that he had told a Mrs. Noble that he would give her his address when he came back to

Catford. He did give her his card, and that card was produced. The address given on the card, which was in his writing, was the address of Mr. Atkinson's surgery. He had no intention of taking that surgery at the time he gave the card, and he certainly did not give the card to Mrs. Noble with the intention of taking her away from Mr. Atkinson. There was no ground for the suggestion in the declaration that he endeavoured to injure Mr. Atkinson's reputation; it was the other way; he had no interest at that time to do so. He had tried his level best to promote Mr. Atkinson's interests. In view of his possible partnership, it would have been to his interest to promote Mr. Atkinson's character rather than to disparage it. He had never to any patient made a comparison between Mr. Atkinson's methods and his own; and he had never made a comparison between their two treatments. He had certainly never made disparaging remarks about the medicine which Mr. Atkinson prescribed. He fully admitted that he had changed the medicine which had been prescribed by Mr. Atkinson; and that he had also changed the medicine that he had himself prescribed; and he had made no secret about it, because he used to note in the book whenever any change was made in either the medicine of Mr. Atkinson or his own; and whenever he had changed the medicine it was for the benefit of the patient. Until these allegations were made there was not the slightest complaint made to him about having changed the medicine. Mr. Atkinson approved of his using his own discretion when he attended a patient; and, whenever he changed the medicine, he did it honestly and to the best of his judgement. The greater part of his present practice consisted of people who were new to that neighbourhood, and who had never been attended by Mr. Atkinson. It was untrue to say that he ever systematically canvassed.

Mr. HEMMING then took the witness through the declarations and the evidence of the various witnesses called on behalf of Mr. Atkinson.

The witness gave as a reason for his going to live at Catford that it was a growing place, and that there was plenty of room for doctors; and he was very much annoyed at Mr. Atkinson's letters to the effect that he was not to go to Catford. Mr. Atkinson had said that if he (Mr. Nicolas) went there, he would receive the surprise of his life. He knew of no reason why he should not go to Catford. Since he had been at Catford some patients of Mr. Atkinson's had come to him; but he would not accept any patient unless he was assured that that patient had severed his connexion with Mr. Atkinson.

In cross-examination by Mr. NEILSON, the witness said that he commenced to act as assistant to Mr. Atkinson in September, 1905, and upon the usual terms. He was a bachelor; and he was to give all his time. The question of the bond was never mentioned in the spring of 1906; and it was not mentioned on any occasion when Mrs. Atkinson was present. He did not recollect one occasion when he was taking tea with Mr. and Mrs. Atkinson telling them of certain kind things which had been said about him (Mr. Nicolas) by patients, nor Mr. Atkinson saying, "I think we had better get the bond signed at once." It was an invention to say that he replied, "Very well—any time you like." In July a bond was produced, and that was the bond which his predecessor had signed when he was an assistant. At the end of July Mr. Atkinson asked him to sign a similar bond to that; and he took the bond home with him and kept it for a day or two. He, however, only looked at it once, and declined to sign it. After that he wrote, giving a month's notice. In discussing the proposed partnership, nothing was settled as to what he was to pay Mr. Atkinson for the benefit of the partnership; no figure was named, but he did not think he was going to get it for nothing. Upon his return from abroad, he was to act as his assistant for three months, and he was then to be made a partner, but the money terms were not entered into. It was his impression that Mr. Atkinson agreed to give him one-fifth share. He told his solicitor, Mr. Hemming, that fact, but it was not put to Mr. Atkinson in cross-examination. That was Mr. Hemming's mistaken omission. The practice was doing £1,500 a year. Two years' purchase was the price agreed upon, and that figure was named after his notice was given in. It was wrong to say that nothing was named in the shape of terms on which he was to purchase his share. He remembered now that something was said as he had just stated. About that time he caused a letter to be sent to the BRITISH MEDICAL JOURNAL asking whether an assistant might practise within half a mile after he had left a medical man without a bond. His story was that it was definitely and finally arranged before he left that he was to pay two years' purchase for the practice and to get one-fifth share; that he was to come back in two or three months; that he was then to remain two or three months as an assistant, and then to join Mr. Atkinson as partner. That was the specific verbal agreement for the partnership. He had told his solicitor about the specific agreement as to the price. He had told his solicitor that he was coming back in a few months as an assistant at the rate of £200 a year, and then to join Mr. Atkinson as a partner. He did not tell his solicitor about the one-fifth share, or about the two years' purchase price; he did not do so because the solicitor never asked him. He went abroad, and returned on December 19th with the intention of joining Mr. Atkinson as a partner. He then learnt of the letters complaining of his conduct; they were so insulting that he would not reply to them. He first thought of returning to Catford to practise after acting as a locumtenent in Wales in February or March. His brother took a house in Downhill Road, Catford, and he joined him there on April 8th, 1907. He wrote to Mrs. Russell, who had charge of Mr. Atkinson's surgery, telling her he was coming to Catford, and saying: "Give my regards to all my friends and tell them." He had read the statutory declarations filed in support of the charge, and was acquainted with the declarants, many of whom he had seen and attended while acting as assistant to Mr. Atkinson, and gave a categorical denial to the statements contained in them. Mrs. Rednall had said she got 5s. to come and give evidence.

Mr. NEILSON: Do you suggest that the London and County Protection Society had paid Mrs. Rednall 5s. to come and give false evidence?

The WITNESS: She said she got 5s.

Mr. NEILSON: Do you suggest, standing in the witness-box and giving evidence before the Council, that that woman was paid 5s. to come here and give false evidence by the London and County Protection Society?

The WITNESS: Very likely she has, from that society or some other society.

The LEGAL ASSESSOR: You suggest that the society has paid her to come here and give false evidence?

The WITNESS: I cannot say positively the society paid her. I withdraw that. She said she was paid 5s.

Mr. NEILSON then proceeded to put the statements of a number of persons who alleged that Dr. Nicolas had canvassed them.

The WITNESS: It is no good your trying to make me say I called on them because I will not.

Mr. NEILSON: You will say you did not?

The WITNESS: Yes, because I did not.

Mr. NEILSON: If that is the position I will not trouble with the rest.

WITNESS considered he had been jilted by Mr. Atkinson.

Re-examined by Mr. HEMMING: He left Mr. Atkinson on such friendly terms that he thought whatever the partnership was it would be on the usual terms. He did not know who paid Mrs. Rednall the 5s.

By the LEGAL ASSESSOR: I do not suggest that the 5s. was given to corrupt her, or impute any motive to the London and Counties Medical Protection Society, but it would naturally influence her, as she could not afford to lose the time to come and give evidence.

Mr. EDWARD WOOD, examined by Mr. HEMMING, said he had spoken to Mrs. Robinson several times, and he gathered she was very hostile to Dr. Nicolas.

Cross-examined by Mr. NEILSON, he was very sympathetic towards Dr. Nicolas, but had no reason to believe that Mrs. Robinson had come to say what was not true.

Mrs. MARY ANNE RICHARDSON, examined by Mr. HEMMING, said Dr. Nicolas had never canvassed her.

Cross examined by Mr. NEILSON: She first spoke to Mr. Hemming about the case; she had not been asked by Mr. Atkinson for a statement.

Mr. HEMMING applied for leave to read an affidavit of a witness who was too ill to attend, and also an affidavit of a Mr. Gibson, who had had to go away.

The Legal Assessor said he did not think Mr. Gibson's affidavit could be used; but with regard to the other, he suggested that it be handed to Mr. Neilson, who perhaps would admit its contents, and a medical certificate should be produced to-morrow.

The affidavit was perused by Mr. Neilson, who said he did not object to it, except the last paragraph, if the Legal Assessor thought it should go in.

The Legal Assessor said he would give his decision to-morrow morning.

Wednesday, June 3rd, 1908.

Dr. Donald Macalister, President, in the Chair.

Mr. Hemming said it would be remembered that on Monday last he handed in a protest against the action taken by the Legal Assessor. He had requested the Legal Assessor to refer the matter to his (Mr. Lushington's) own Bar Counsel, but he had received no reply.

The President said he could not allow Mr. Hemming to make such a statement.

Mr. Hemming remarked that it was true. He then called three witnesses, who said that Mr. Nicolas had not canvassed them.

The Legal Assessor pointed out that the Council had already a large body of this class of evidence before it.

Mr. Hemming replied that under those circumstances he would call no more evidence. He then stated that during the course of the inquiry the Legal Assessor had said that he "should advise the Council" so and so. Would that advice be given in the hearing of the accused?

The Legal Assessor replied in the negative. He said at the conclusion of the hearing the Council would deliberate *in camerâ*. If he was then called upon by members of the Council to advise them on any points, he was there for that purpose.

Mr. Hemming inquired whether any such statement would be volunteered to the Council, or would it only be made in answer to a specific request? A judge only directed a jury in his summing up in the presence of the accused. He (Mr. Hemming) protested against the Legal Assessor saying anything to the members of the Council except in the hearing of his client.

The Legal Assessor remarked that he was not there as a judge.

Mr. Hemming then proceeded to address the Council on behalf of Mr. Nicolas. He said he (Mr. Hemming) had been subjected to a good deal of criticism during the hearing of the case. He had been criticized by the Solicitor because he had asked for assistance in the case, and he had been criticized by the Legal Assessor when he was putting questions. The first observation he had to make was that his client was no more responsible for the conduct of this case than a patient who was insensible under the hands of a doctor would be responsible for his treatment. He (Mr. Hemming) took the full responsibility for it. He had written no word or said no word that he was prepared to take back. The present inquiry involved the professional status of his client, and was one of a most serious nature. He wished the Council to consider the position and character of his client. He was a young man of exceptional ability and exceptional popularity. He was willing to take Mr. Atkinson's opinion of his client as given by him in the witness-box. Mr. Atkinson had said he thought he was a young man of considerable ability in his profession. As showing the opinion which his fellow practitioners had of his client, Mr. Hemming referred to the fact that they had given him an exceedingly high character. He (Mr. Hemming) fully believed that if the full facts had been before the Penal Cases Committee the case would never have come before the Council. He had heard it said that the Penal Cases Committee stood as a buffer between frivolous complaints and the Council. He could only say that the Committee had not served its purpose in this case. He then proceeded to refer to the actions pending in the High Court, and said the issues there would be precisely similar to those involved in the present inquiry. In those proceedings the witnesses would be examined on oath and the judge could compel witnesses to answer questions which the Council had no power to do, but Mr. Atkinson insisted upon going on with the present case. Mr. Hemming then commented upon the non-production of the original complaint, and stated that it was in consequence of this that he had applied to the King's Bench for a mandamus.

Dr. Little said he was unwilling to interrupt, but he did not think the Council was now called upon to decide whether its mode of procedure was right or wrong. He was under the impression that the members of the Council were there to consider the conduct of Mr. Nicolas. Mr. Hemming had not said a word about the case up to that moment; and, with all due deference, he (Dr. Little) did not think it was right to keep the Council listening to arguments as to its mode of procedure.

Sir Christopher Nixon said he protested against the observation of the last speaker. He thought that after the great expenditure of time on the case, no attempt should be made to restrict the rights of the advocate who was defending his client.

Professor Saundby desired to support Dr. Little because it was a question of procedure. Mr. Hemming had simply been impugning for some time the procedure of the Council. If its procedure was wrong it could be dealt with at another time. The Council had now to decide the question of the conduct of the accused practitioner. The members of the Council were all present at the first hearing of the case, and knew what happened as well as Mr. Hemming. No good could come of his going over all the matters that then took place, for they were well known to all the members. Whether the mode of procedure was right or wrong was not a thing that could be argued now. Mr. Hemming had lodged his protest; let him get on with his case.

Mr. Hemming said that, seeing that the burden which was upon his shoulders, he did not want to irritate any member of the Council, but his reason for going into the matter as he had done was to show that his client had been driven into opposition to the Council, and he (Mr. Hemming) was showing that he was not wrong in the steps he took. It was owing to the original wrongful withholding of the document that had led to the position, that Mr. Atkinson had been in the box, and that he (Mr. Hemming) had only partly cross-examined him. Mr. Hemming then proceeded to review the evidence. The original complaint had been enlarged and altered, and now appeared before the Council dressed up in quite a different form from what it was in when Dr. Nicolas was first called upon to meet it. The duty of the solicitor to the Council was to frame the charge on the material placed before the Council, and not introduce fresh matter into it; but he would show that there were very serious additions to the charge, and on that ground he submitted that the proceedings before the Council were wholly irregular. He had followed the evidence which had been placed before it, and submitted that it only went to show that Dr. Nicolas's conduct was nothing more than boyish indiscretion. The question for the Council to decide was, Was it infamous conduct? "Infamous" was to be used in its ordinary sense, and must be qualified by the words "in a professional respect," and it could not not be applied to such trivial acts as were complained of in this case. It was not infamous conduct. Further, he contended that the similarity of the language in the declarations pointed to the fact that they all emanated from the mind of one person who had a particular object to gain. He then proceeded to criticize the declarations, and referred to the fact that four of them had been admitted to be untrue. With regard to all the witnesses called in support of the charge, his case was that they had come to the Council to tell a tale which they had learnt. The London and Counties Medical Protection Society might writhe as it liked, but it was disgraceful that such evidence should be placed before the Council. If the society did not know the character of it, Dr. Hugh Woods did, and it was extremely regrettable that cases should be brought before this tribunal on such evidence. If it had been analysed by the Penal Cases Committee as he (Mr. Hemming) had analysed it, he doubted if any member of the Committee would have said that Dr. Nicolas ought to have been put on his trial. He submitted on Mr. Atkinson's own evidence it was clear the question of partnership was discussed, and if that was so the charge of canvassing before the end of August, 1906, failed, and he asked the Council to come to that conclusion. He left the task of pronouncing judgement on his client in the hands of the Council, knowing perfectly well

that each member would decide as he thought right on the evidence.

Mr. NEILSON said it had been urged by Mr. Hemming that this case was being tried while there was pending in the High Court an action for libel by Dr. Nicolas against Mr. Atkinson in respect of the two letters written to Dr. Simpson. The complaint against Dr. Nicolas was made to the Council by the London and County Medical Protection Society so far back as June, 1907, and on that complaint the charge was based; the writ on which the action for libel was based was not issued until November 15th, 1907. A comparison of those two dates would show with what eagerness Dr. Nicolas pursued his case. It had been suggested that the matters complained of here were not infamous in a professional respect. He reminded the Council of a definition of "infamous conduct" which had been given in the High Court by a very distinguished judge in the year 1892 in the case of Allinson. Lord Esher said:

Was there, then, any evidence which justified the Council in finding the plaintiff guilty of infamous conduct in a professional respect? I adopt a definition which my brother Lopes has drawn up of at any rate one kind of conduct amounting to infamous conduct in a professional respect—namely, "If it is shown that a medical man in the pursuit of his profession has done something with regard to it which will be reasonably regarded as disgraceful or dishonourable by his professional brethren of good repute and competency," then it is open to the General Medical Council to say that he has been guilty of "infamous conduct in a professional respect." The question is not whether merely what the medical man has done would be an infamous thing for any one else to do, but whether it is infamous for a medical man to do. An act done by a medical man may be "infamous," though the act done by any one else would not be infamous; but, on the other hand, an act which is not done "in a professional respect" does not come within this section. There may be some acts which, although they would not be infamous in any other person, yet if they are done by a medical man in relation to his profession—that is, with regard either to his patients or to his professional brethren—may be fairly considered "infamous conduct in a professional respect," and such acts would, I think, come within Section 29.

He submitted that if the charges which were laid against Dr. Nicolas and supported by evidence were true, no more complete example of infamous conduct in a professional respect could be found as applicable to the medical profession, or indeed any other profession. It was difficult to imagine a more gravely improper proceeding than that which Dr. Nicolas had consistently adopted; and if the Council found that was true, it would have no difficulty in saying his conduct was infamous within the meaning of that definition. The learned counsel then proceeded to review the evidence, and characterized the evidence of Dr. Nicolas, that he was to have a fifth share in the partnership and give two years' purchase, as an invention. He referred to the shorthand notes of what took place at the first hearing to show that no mention was then made of it, and that being so, it entirely disappeared. If he was instructed rightly, all that occurred as to a partnership was that Dr. Nicolas asked if there was any chance of being a partner, and Mr. Atkinson replied, No, not for years. With regard to the witnesses he had called, it was Mr. Hemming's case that all these people had conspired to raise a grossly dishonest case for the purpose of misleading the General Medical Council—that or nothing. Mr. Neilson suggested that there was no reason why all the witnesses he had called should give evidence which was not true. They had given their evidence without fear or favour as to what happened exactly, and in their cross-examination they were absolutely untouched. The only true explanation of this matter was that Dr. Nicolas had not signed the bond, and when he found that as a condition for his remaining it was necessary that he should sign a bond he thereupon gave notice, and made the most of his time between the notice and his leaving. He had his plans ready before he went, and pursued those plans after he came back. Dr. Nicolas had denied it, and he (Mr. Neilson) expected him to deny it. The ultimate question which must be dealt with frankly, and without blinking, was which side did the Council believe—Dr. Nicolas or the witnesses called for Mr. Atkinson? Either this was an invention on the part of Mr. Atkinson's witnesses, or else Dr. Nicolas was deceiving. Leaving out Mr. Atkinson, none of the witnesses on the one side had any purpose in deceiving the Council. On the other hand, what happened? Dr. Nicolas had not signed the bond, and had got into a position where he could take advantage of that slip on the part of his employer, and had taken advantage of it and acquired a practice, and notoriously had got a number of Mr. Atkinson's patients. Beyond Dr. Nicolas, what evidence was there at all which was material? None whatever. The case of Mr. Atkinson was either true, or it was fraud or conspiracy. If the Council found there was neither fraud nor conspiracy, there was only one conclusion to come to, and that was that Dr. Nicolas had committed these misdeeds which were laid to his account in the charge. If the Council believed his (Mr. Neilson's) story, supported by the facts which he had proved as to the alleged partnership, this was a scheme concocted from the beginning. He had endeavoured to show step by step how that fitted in with every fact and every admission made by Mr. Nicolas in this case; and he submitted that that was the truth. Therefore he asked the Council to find that the charges which were laid to the account of Mr. Nicolas of canvassing the patients of his late principal, Mr. Atkinson, and of making disparaging statements about him to those patients both while he was in the employment of Mr. Atkinson and after he had left his employment, had been proved up to the hilt. Then, if the Council found that, he asked them to find further that it had been established beyond all doubt that Mr. Nicolas had been guilty of infamous conduct in respect of his profession. And, if the Council found that, he asked them to apply the punishment—drastic it might be—to which he thought every medical man ought to be subjected if he were found guilty of such misconduct.

The PRESIDENT said the Legal Assessor would make a statement.

The LEGAL ASSESSOR: In public it is necessary for me to say a very few words. Every preliminary step before the Notice of Inquiry was issued, and every preliminary step up to the first hearing of this case was taken with the advice of your legal advisers; and in their humble opinion is in strict accordance with the Standing Orders of this Council. Since the first day of the hearing of this case every single step has been taken on their advice after consultation as to every point. If there has been any slip in the procedure which has caused substantial injustice to the accused person, there is a remedy open to him by law. I shall not say a word more about the practice and procedure points in this case; but I must say this also in public, because it is an important matter: It has come out in this case that one witness has made two declarations and given one to the one side and one to the other. The solicitor for the Council and I felt it our duty that I should ask leave to say that in all such cases as that we must always look carefully at both declarations, and consider whether we shall advise the Council to send them to the Public Prosecutor. We must say, further, that we advised the Council that—I do not say it has been done in this case—it is extremely improper that any solicitor should accept from a person whom he knows to have made a declaration on one side a declaration on the other, and put him, after this warning, in that very dangerous position, without telling him what I have made public here to-day. I do not for a moment say that Mr. Hemming has done that, and I do not mean this as any reflection upon him. I do not know how the second declaration was obtained, whether it was volunteered or whether it was asked for—I am not referring to that—but this is for the future; and I hope my words will be taken notice of.

The PRESIDENT: The case is now closed; and the parties will withdraw in order that the Council may deliberate on the matter.

Strangers were directed to withdraw. On readmission,

The PRESIDENT (addressing Mr. Nicolas): I have to announce to you the decision of the Council. The Council have judged you to have been guilty of infamous conduct in a professional respect, and they have directed the Registrar to erase from the *Register* the name of John Papa Nicolas.

Mr. HEMMING asked the Council to postpone the erasure for a month, in order that he might apply for a writ of *certiorari*.

The PRESIDENT said that if that application was made to the office in the usual way it would be answered.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
6 SATURDAY...	MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork, 4.30 p.m.
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	NORTHAMPTONSHIRE DIVISION, Annual Meeting, Board Room, General Hospital, Northampton, 2.30 p.m.; Luncheon, Franklin's Restaurant, 1.30 p.m. WARRINGTON DIVISION, *Lancashire and Cheshire Branch*. Joint Meeting with St. Helens Division, Infirmary, Warrington, 4 p.m.
10 WEDNESDAY	LONDON: Medico-Political Contract Practice Subcommittee, 10.30 a.m. LONDON: Medico Political Midwives Subcommittee, 12.30 p.m. LONDON: Medico-Political Committee, 2.30 p.m. CHICHESTER AND WORTHING DIVISION, *South-Eastern Branch*, Infirmary, Worthing, 3.30 p.m.
THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m. EAST YORK AND NORTH LINCOLN BRANCH, Annual Meeting, Hull Royal Infirmary. 12.30 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Hampstead Conservatoire (Room 11), Swiss Cottage, N.W., 8.30 p.m. MIDLAND BRANCH, Annual Meeting, The Exchange, Nottingham, 2.30 p.m. SOUTH WALES AND MONMOUTHSHIRE BRANCH, Annual Meeting, Infirmary, Newport, 4.30 p.m.

Date.	Meetings to be Held.
JUNE (*Continued*).	
12 FRIDAY ...	LONDON: Central Ethical Committee, 1.30 p.m. MARYLEBONE DIVISION, *Metropolitan Counties Branch*, Rooms of the Medical Society, 20, Chandos Street, W., 5 p.m.
13 SATURDAY ...	BUXTON: Science Committee, Empire Hotel, 3.30 p.m. NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Kingussie.
14 Sunday ...	
15 MONDAY ...	LONDON: Naval and Military Committee, 2.30 p.m.
16 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. BOSTON AND SPALDING DIVISION, *Midland Branch*, Annual Meeting, White Hart Hotel, Boston, 12.45 p.m.; Luncheon, 2 p.m. WALTHAMSTOW DIVISION, *Metropolitan Counties Branch*, Great Eastern Hotel, Liverpool Street, 6 p.m.; Dinner, 7.30 p.m.
17 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Brooklands Hotel, Sale, Cheshire, 2 p.m.; Dinner, Queen's Hotel, Manchester, 7 p.m.
18 THURSDAY...	CENTRAL DIVISION, *Birmingham Branch*, Annual Meeting, Medical Institute, 4 p.m. SOUTH-EASTERN BRANCH, Annual Meeting, Council Chamber, Town Hall, Dover, 2.15 p.m.; Lunch, Grand Hotel, 1 to 2 p.m.; Dinner, Grand Hotel, 6.15 p.m. WORCESTERSHIRE AND HEREFORDSHIRE BRANCH, Annual Meeting, Hereford General Hospital. 1.45 p.m.
19 FRIDAY ...	LONDON: Uterine Cancer Committee, 4.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

DORSET AND WEST HANTS BRANCH.

THE spring meeting of this Branch was held on Wednesday, May 27th, at the Hôtel Mont Doré, Bournemouth, the President, J. MACPHERSON LAWRIE, M.D., D.L., J.P., etc., in the chair. There were present: J. A. Hosker, J.P., President-elect; Drs. Davison, Ransome, F.R.S., Eleanor Bond, Le Fleming, MacDonald, Fielding, Spooner, Flower, Whittingdale, Ross, McCulloch, Reid, Clift, Davy, Bacot, Snow, Manning, Purkiss, Grey-Edwards, Weatherley, Crallan, Richardson, Bottomley, Johnson Smyth, Auld, and Tuthill; and Messrs. Blake, Parkinson, Belben, Newbolt, Curme, Rendall, Vernon, Burdwood, Yeareley, Montgomery, J.P., De Castro, Simmons, MacGillycuddy, and Maddox.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apology for Non-Attendance.—A letter of apology for non-attendance was read from Dr. E. Hyla Greves.

Installation of New President.—The PRESIDENT vacated the chair and introduced his successor, Mr. J. A. Hosker, M.R.C.S., J.P., Consulting Surgeon, Royal Boscombe and West Hants Hospital.

Financial Statement.—The HONORARY TREASURER presented his financial statement for 1907.

Reports.—Reports from the Council of the Branch and from the Branch Divisions were read. It was also reported that the only nomination for the post of representative of this and the West Somerset Branch on the Council of the Association sent in was that of Dr. William Johnson Smyth, of Bournemouth, and that that gentleman was consequently elected.

New Members.—The following candidates were elected by the Branch Council members of the British Medical Association, namely: George Gordon Stuart, M.D.Durh., etc.; Kenneth Mayoh Gibbins, M.B., B.S.Lond., etc.; Joseph Clement Arthur Norman, M.R.C.S. and L.R.C.P., etc.; Edward How White, M.B., B.Ch.Oxon.; James Denniston Macfie, M.B., Ch.B., Univ. Glasgow.

It was unanimously agreed, on the motion of the PRESIDENT, seconded by Dr. J. MACPHERSON LAWRIE, and supported by Dr. FOWLER, Dr. WHITTINGDALE, and Mr. CURME, that the summer meeting of the Branch be held in Yeovil on Wednesday, July 8th next.

President's Address.—The PRESIDENT delivered his presidential address. After thanking the members for electing him as president, he said he envied those who went into the realms of science and the fascination attached to it, but he thought that those who, like himself, did not do so, got a lot of compensating advantage, because they thought themselves ten times as clever as they were. With regard to science, the surgeons 2,000 years B.C. were doing some of the best modern operations. The question was whether they might not have too much science. Medicine was not an exact science, and they had to be thoroughly practical, and realize that science was no use unless it was built up upon a substratum of common sense. If they went in for science too much they might forget to consider the individual while they were treating the disease. He understood a change had taken place in the constitution of the Association, and that they had become a trade union. Personally he hoped that was not so. It had always been said to the credit of their profession that they did not put £ s. d. in the forefront of their ways, and if they were to become a trade-union they would have to give up that idea. He knew it was easy to be prodigal with other people's feelings and with their pockets, but in the long run he thought they would find it would be better if they kept entirely away from any principle of trade-unionism. As a profession they would, he believed, be brought more and more into contact with the governing bodies of the State, and in this connexion there was one subject which at present should command their earnest attention, both in their relation to the State, to the health of the country, and in the interests of their profession; he referred to Section 13 of the Education (Administrative Provisions) Act, 1907. He was sure they were all convinced that the medical inspection of schools had been far too tardily adopted. Personally he was not one of those who held that because the State had enforced compulsory education, therefore the State should feed, clothe, and medically treat the children. It was rather that inasmuch as it was their duty to see that their children were mentally fit to enter into the world's competition, so it was their duty to see that this money was well spent, and further that the children were bodily fit, while at the same time they pointed out to the parents their responsibility where physical defects occurred in their children. Compulsory education ought to imply, first, that the child was physically and mentally fit to be educated; and, secondly, that after his education was finished he would be fitted for the duties of civil life, and so able to repay the State for the expense incurred. Most nations had for some time adopted a system of medical inspection, and he mentioned as instances the

United States of America, Japan, Prussia, and Germany. In the case of the latter an example of what could be done by a municipality was to be seen in the case of Charlottenburg, where a "forest school" had been established, and had greatly improved the health of the 95 ailing children sent there from the elementary schools. They in England, who depended so largely upon the *mens sana in corpore sano* not only for their position as a nation but for Colonial progress, were the last to adopt this medical inspection. Shortly, the organization proposed was that every local education authority must appoint a medical officer to carry out the duties of medical inspection. The policy of the Board of Education was to work the inspection through the medical officers of health's department. When the circumstances were such that the medical officer of health was able to undertake the duties himself he might become responsible to the local education authority, but where he needed an assistant to carry out the inspection the latter would be appointed by, and become the executive officer of, the local education authority, at the same time being responsible to, and acting under the direction of, the executive officer of the local sanitary authority. In this case it was not stated whether he would be responsible to the Board of Education or to the Local Government Board. This was the scheme as originally sent out, but lately a notable qualification had been introduced. When it was pointed out to the Board of Education that the fees offered were totally inadequate, it was actually stated that it was only "inspection" that was required, not a clinical or medical examination. Was there ever such a farce? The children, he supposed, were to be inspected and labelled "healthy" or "weakly," etc., in appearance. Surely they ought to insist that the nation's money was not to be spent in such a futile manner. Any inspection to be of use must be a thorough examination embracing family and previous history, and deal with general soundness of body, limbs, the senses, and, he thought, teeth. It should take place periodically, and certainly on leaving school as well as on admission, and on such further occasions as the original report might suggest. It could not be pointed out too strongly that school age was development age, and that a too constant supervision could not be exercised. As to who should carry out the duties of medical inspector, it seemed that the Board of Education presupposed that, if possible, the medical officer of health should do so; but he thought, generally speaking, it would be admitted that the medical officer of health was not the person to take up these duties, since a course of work in public health would in all probability have deadened his powers for effective appreciation of the divergences from physical soundness of the children brought before him. He therefore hoped that they would not adopt a procedure which had been abandoned by those countries which originally placed medical inspection under the Public Health Department. The alternative suggested by the Board of Education, the appointment of an assistant by the local education authority, but who would be answerable to, and acting under the direction of, the medical officer of health, did not appeal to him as a satisfactory arrangement. Rather, he thought, the appointment should be made by, and the officer responsible to, the local education authority, with directions that he should confer with and report to the medical officer of health on all questions affecting the sanitary condition of schools or the outbreaks of infectious diseases. There was another course which had its advantages, specially for some districts, and that was that the work should be done by the local practitioner. By so doing valuable information as to family history and tendencies would be obtained first hand, and if this was combined with the appointment of medical officers to special departments, such as eyes, noses, throats, and teeth, he thought very efficient medical inspection might be obtained. But the aftermath! Let them suppose inspection had taken place, reports sent in, and these, with useful advice and warning, forwarded to the parent; what if it were not carried out? for they all had had abundance of experience of parental indifference and neglect. Here was "the" difficulty, and a state of affairs that warranted the greatest circumspection on the part of all concerned. He saw the danger of socialistic legislation of a very far-reaching nature. What chance was there of bringing in a bill giving the Board of Education power to order that the recommendations be carried out, and in the event of this not being done, being empowered to carry it out and recover the cost from the parent? Very little, in fact none at all. He feared they would soon be face to face with the distinctly expressed opinion of a large portion of the electorate that inasmuch as efficient education could not be obtained without certain recommendations being carried out, it would be the duty of the State, which had ordered universal education, to find the means for carrying this out, as they had said in the case of those children who were sent to school without meals. In the event of the State taking this responsibility who was to carry on the treatment? If it was handed over to the local hospitals, as suggested in one quarter, they would have to be subsidized, and then surely would the founts of charity be to an extent stopped. These were contingencies that he was sure they all felt must arise in the near future, and it behoved them to give the subject thought, so that they might be able to advise both individually and collectively. Strong as was one's objections to, and he hoped their determination to oppose, the medical treatment generally of school children being carried out at the expense of the rates, he was sure most would agree that exceptions should be made—in other words, provision provided for those who were crippled, and those who were mentally defective, in which he would include blind and deaf childen. For the sake of the normal children as well as themselves, special education and classes should be provided. In concluding his address Dr. Hosker thanked those present for their attentive hearing, again expressing his gratitude for election, and promising on his part faithful attention to his duties, and an active interest in the Branch.

Vote of Thanks.—In proposing a hearty vote of thanks to the President, Dr. MacDonald referred to the inadequacy of the proposed fees, and said that if during his year of office Dr. Hosker could bestir the district and influence public opinion on the question he would have done much. He was pleased he had begun his year of office so well. Dr. Johnson Smyth seconded. He remarked that when the Legislature embarked on the medical inspection of school children it little thought where it was going to lead them. If the inspection was to be in any way complete it would involve considerable outlay. With regard to Dr. Hosker's statement that something had been done to bring about a feeling analogous to trade-unionism, the intention was to select the better features of trade-unionism and reject those which were incompatible with their ideas as gentlemen. In view of the inadequate fees suggested it was advisable that the Association should organize on lines which would enable them to compel adequate payment to those who carried out these laborious duties. The resolution was carried, and Dr. Hosker briefly replied.

Papers, etc.—Dr. Whittingdale showed (1) a specimen of gangrene of Meckel's diverticulum, and gave a brief outline of the case; (2) a gall stone removed from the small intestine, where it had caused obstruction. Dr. E. Kaye Le Fleming showed a very interesting and in some respects a unique case of furunculosis. Dr. J. Macpherson Lawrie related a case of tuberculous peritonitis cured after the removal of the uterus for fibroid disease. Dr. McCulloch read an erudite and highly suggestive paper entitled, On the Analogy between Spontaneous Recoveries from Cancer and the Specific Immunity induced by *x* ray Irradiations of the Lymphatic Glands involved. This paper was freely discussed by Dr. Ransome, Mr. MacGillycuddy, Mr. Blake, Dr. Lawrie, Dr. Fielding, and the President. A specimen of very large nasal polypus was exhibited by the President for Mr. Marriner. The subject was an out-patient of the special department for diseases of the nose, throat, and ear, Royal Victoria Hospital, Bournemouth. The tumour blocked the whole of the naso-pharynx, completely preventing breathing by the nose. The growth was recently enucleated by Mr Marriner with the cold écraseur, and the patient is making excellent progress.

Exhibit.—Messrs. Mayer and Meltzer, of 71, Great Portland Street, London, held in an adjoining room during the meeting an exhibition of the most recent medical appliances and surgical instruments, which was much appreciated by the members.

Tea.—During the meeting tea was kindly provided by the President.

Dinner.—In the evening the members and their friends dined together in the Hôtel Mont Doré the catering being done by Mr. W. Kneese in his usual excellent and accomplished style.

LANCASHIRE AND CHESHIRE BRANCH:

SALFORD DIVISION.

THE annual meeting of the Salford Division was held at the Palatine Hotel, Manchester, on Friday, May 29th, Dr. BRUCE BELL, Chairman, presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Lynn Thomas and Skyrme Fund.—The SECRETARY called attention to the Lynn Thomas and Skyrme Fund, and it was agreed that though the funds of the Division were not available for the purpose, the object was eminently one for members' private liberality.

Female Inebriety.—Forms of inquiry on the subject of female inebriety were distributed at the request of the Association.

Annual Report.—The SECRETARY then read the annual report for the year past, which was adopted. There has been an increase of two in the membership, and there is a balance in hand of £4 19s 8d.

Election of Officers.—The following officers were elected for the year 1908–9: *Chairman*, W. F. O'Grady; *Vice-Chairman*, W. C. Brown; *Honorary Secretary and Treasurer*, J. H. Taylor; *Representative to Annual Representative Meeting*, J. H. Taylor; *Representatives to the Branch Council*, J. H. Taylor and R. H. Wolstenholme; *Executive Committee*, Drs. Bell, English, Hamill, Owen, and Price Williams.

Midwives Act.—A report was then given of the deputation to the Salford Board of Guardians on the subject of the Midwives Act. (See Manchester Correspondence in the BRITISH MEDICAL JOURNAL for May 16th.) The SECRETARY stated that the action of the guardians was regarded as a strong proof of the necessity for an early amendment of the Midwives Act.

Minimum Fee Standard.—The question of fixing a minimum fee standard for Salford was discussed, but it was considered to be impracticable to fix a standard for the whole area.

Annual Representative Meeting.—The provisional agenda paper of the Representative Meeting was then considered, and instructions given to the Representative. It was resolved to seek an opportunity for proposing a resolution which would enable the Branch Council to pay the travelling expenses of the Division Representatives incurred in attending meetings of the Branch Council or its committees.

METROPOLITAN COUNTIES BRANCH:

STRATFORD DIVISION.

A MEETING of the Stratford Division was held in the Alexandra Hotel, Stratford, on Wednesday, May 27th, at 9.15 p.m.; Dr. SPURRELL presiding.

Proposed Conjoint Meeting with Walthamstow Division.—The invitation of the Walthamstow Division to a conjoint meeting to be held in December next was accepted.

Medical Inspection of School Children.—The report of the Medical Inspection of School Children's Committee was read and approved.

Council and Standing Committees.—The notice of motion by the Gateshead Division (SUPPLEMENT, April 18th) relating to the composition and mode of election of the Council was approved, as was also that by the Dundee Branch *re* Standing Committees (SUPPLEMENT, April 25th) The conclusions and recommendations of the Finance Inquiry Committee were approved in general. The meeting considered, however, that (*re* Recommendation 1):

> The annual balance of income over expenditure should be £2 000, and (*re* Recommendation 9) that it is desirable in the interests of economy for the Medico-Political Committee to endeavour to restrict themselves to questions of more immediate interest and importance to members of the Association, and thus to relieve the already overworked department of the Medical Secretary.

Nomination of Branch Officers.—The meeting unanimously nominated Dr. E. W. Goodall, North-Eastern Fever Hospital, N.E., as Branch Secretary.

Date of Annual Meeting.—The date of the annual meeting was fixed for June 11th.

WALTHAMSTOW DIVISION.

THE business meeting of this Division was held on Tuesday, May 19th, at the Walthamstow Hospital, at 4 p.m. Dr. FOWLER presided. Eight members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Letter from Medical Secretary.—A letter from the Medical Secretary was mentioned.

Matters Referred to Divisions.—The various matters referred to Divisions were then discussed, and in most instances it was decided to leave the matter in the hands of the Representative, that he might exercise his discretion.

Finance Inquiry Committee's Report.—An amendment to Resolution B 12 (*a*) of the Finance Inquiry Committee's report was adopted—namely:

> That there should be a General Business Department, the secretary of which shall be termed the General Business Secretary.

Nominations.—The following nominations were made: As *Representative on Central Council*, Dr. St. Clair B. Shadwell; as *Branch Secretary* Dr. E. W. Goodall, of City Division; as *President-elect of Branch Council*, Dr. W. Wynn Westcott.

Date of Annual Dinner.—The date of the annual dinner was then arranged, and June 16th, at the Great Eastern Hotel, Liverpool Street, decided upon.

Election of Officers.—The following officers were nominated for the ensuing year: *Vice-Chairman*, Dr. C. F. Harford; *Representative for Representative Meetings*, Dr. Shadwell; *Representative on Branch Council*, Dr. C. H. Wise; *Executive Committee*, C. J. Horner, M.D., H. T. Brickwell, Esq., F. J. Coutts, M.D., J. J. Clarke, Esq., and T. Fowler, Esq.; *Honorary Secretary and Treasurer*, A. Pottinger Eldred.

Proposed Conjoint Meeting with Stratford Division.—The Secretary was instructed to write to the Stratford Division inviting that Division to a conjoint meeting with this Division.

The meeting then closed.

MIDLAND BRANCH.

LINCOLN DIVISION.

THE annual meeting of this Division was held on May 28th.

Election of Officers.—The following elections were made: *Vice President of Midland Branch*, Dr. Denny; *Chairman*, Dr. Penney; *Vice-Chairman*, Dr. Levinson; *Honorary Secretary and Treasurer*, Dr. Chater; *Representative on Branch Council*, Dr. Carline; *Divisional Council*, Dr. Vincent Smith, Dr. Carline, Dr. Farrar; *Representative at Representative Meetings*—It was left for Stamford and Boston and Spalding to decide.

The Term "Hospital"—The definition of the term "hospital," as stated in the BRITISH MEDICAL JOURNAL SUPPLEMENT for February 22nd, 1908, was unanimously agreed to.

Medical Examination for Life Insurance.—The questions asked by the Medico-Political Committee relative to the medical examinations for life insurance were next read, but not answered. Some discussion on them, however, took place, and Dr. FARRAR read a paper bearing on the subject, entitled, The Medical Profession and some Life Insurance Companies.

Medical Inspection of School Children.—The interim report of the Subcommittee of the Medico-Political Committee on the medical inspection of school children was then brought before the meeting.

Proposed Ethical Committee.—The suggestion that an Ethical Committee should be appointed was made, but not approved of, not being considered necessary.

Vote of Thanks.—The proceedings then terminated with a vote of thanks to the Chairman.

SOUTH-EASTERN BRANCH:

FOLKESTONE, DOVER, AND ASHFORD CONSTITUENCY.

THE annual meeting of the Folkestone, Dover, and Ashford Constituency was held at Hotel Wampach Folkestone, on Thursday, May 28th, at 8 p.m., Dr. BARRETT being in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Report of Executive Committee.—The annual report of the Executive Committee was read and adopted.

Election of Officers.—The following officers were elected: *Chairman*, Dr. E. D. Fitzgerald; *Vice Chairman*, Dr. W. F. Chambers; *Representative on Branch Council*, Dr. T. Eastes; *Representative for Representative Meeting*, Dr. P. Vernon Dodd; *Executive Committee*, Drs. W. P. Barrett, J. A. Menzies, and E. G. Sworder; *Honorary Secretary*, Dr. P. Vernon Dodd.

Medical Examination for Life Insurance.—At a previous meeting the questions relating to insurance submitted by the Medico Political Committee of the Central Council were discussed, with the following results:

Questions of opinion—

5. Yes.
6 No.
7. No.
8 First part, Yes; second part, 10s. 6d.
9 5s.

The Term "Hospital."—Report as to the proposed definition of the word "hospital": (*a*) and (*b*) were accepted; (*c*) was not accepted, as it was uncertain how it might affect hospital surgeons who attended patients in private wards.

SOUTHERN BRANCH:

Guernsey and Alderney Division.

The annual meeting and dinner of this Division took place on May 28th.

Election of Officers.—The following officers were appointed: *President*, Dr. E. L. Robinson; *Vice-President*, Dr. E. K. Corbin; *President elect*, Major Myles, R.A.M.C.; *Representative on Branch Council*, Dr. Carruthers; *Treasurer and Secretary* Dr. Bulteel.

Representative at Representative Meeting.—At a meeting of the members of this and of the Jersey Division subsequently held, Dr. Carruthers, St. George, Guernsey, was appointed to represent these Divisions at the Representative Meeting at Sheffield.

"*President*" *or* "*Chairman*."—As to this matter, the Honorary Secretary writes to the General Secretary as follows:

With reference to the circular regarding the proposed change of titles from "President" to "Chairman," I am directed to explain local matters to you for the information of the Central Council, that this Division has no arbitrary wish to run counter to them, but there is a local difficulty. We are quite isolated, and under a purely local legislature; and matters which concern public health, medical men, and such like things, cause us to have dealings with our local legislature, as you know has already been done. All the chief officials here are styled "Presidents" of their various departments, and it is important that our chief officer's title should be of equal rank with those with whom he has to deal.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

Cardiff Division.

The annual meeting of the Cardiff Division was held at the Cardiff Infirmary on Monday, May 25th, at 3.30 p.m. The chair was taken by Dr. W. B. Crawford Treasure, J.P., and sixteen members were present.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Election of Officers.—The Chairman said the next business on the agenda was to appoint a chairman for the next twelve months. In the ordinary course of events Dr. T. Garrett Horder, who had been Vice-Chairman for the past year, and had always taken the keenest interest in the work of the Association, would be nominated for the office, but unfortunately his health was such that he (Dr. Horder) did not feel equal to undertaking the responsible duties it involved. The Chairman said he felt sure he was only voicing the feelings of all the members present when he proposed that a cordial vote of sympathy be sent to Dr. Horder with hopes for his speedy recovery. This was seconded by Mr. Russell Thomas and carried unanimously. The following officers were elected: *Chairman*, Dr. W. W. Leigh, Treharris; *Vice-Chairman*, Dr. J. Powell, Barry; *Secretaries*, Dr. R. Russell Thomas, Dr. Cyril Lewis; *Representative for Representative Meetings*, Dr. Ewen Maclean; *Representatives to Branch Council*, Drs. Leigh, Mitchell Stevens, Treasure, Brierley, and Lloyd Edwards; *Executive Committee*, Drs. Fred. Davies, Paterson, Goodall, and Herbert Vachell; *Representatives on Branch Contract Practice Committee*, Drs. Leigh, Kirkby, Courtenay Milward; *Assessor of the Division on the Maternity Department of the Queen's Nurses Institute*, Dr. Eric Evans.

Annual Report.—The following report of the Executive was read and adopted: The number of elected members is at present 143, being 5 more than last year. There have been 2 resignations. During the year there have been 7 general meetings of the Division (3 special and 4 ordinary), with an average attendance of 17.3. There have been 14 meetings of the Executive Committee, with an average attendance of 5.7. The following subjects referred to Divisions by head quarters have been considered: (1) Referendum report of Council; (2) employment of medical men by the Shipping Federation; (3) Notification of Births Bill; (4) medical inspection of school children; (5) definition of the term "hospital"; (6) fees paid for medical examinations for life assurance.

Papers.—Papers were read by Drs. Treasure, Wm. Sheen, E. J. Maclean, and Cornelius Griffiths.

Annual Address.—The annual address was delivered by Dr. F. W. Mott, F.R.S.

Financial Statement.—The Committee have to report that the finances of the Division continue in a satisfactory state, there being a balance in hand on December 31st, 1907, of 10s. 9d.

Remarks.—The following matters were also considered and dealt with by the Executive and the Division: (1) Fees for ambulance lectures, examinations, and judging in competitions (which was discussed by the Division in April, 1905). (2) The National Union of Teachers and specialists' fees. (3) Proposed changes in the outdoor medical service by the Cardiff Board of Guardians. A letter on this matter was sent to the Local Government Board. (4) Payment of fees to medical men called out by midwives. (5) Salary of medical woman appointed as medical inspector of school children.

Monmouthshire Division.

The annual general meeting of this Division was held in the Newport and Monmouthshire Hospital on May 29th; Dr. W. D. Steel in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The following officers were elected: *Chairman*, Dr. W. F. Nellis; *Vice-Chairman*, Dr. O. E. B. Marsh; *Honorary Secretaries*, Mr. R. J. Coulter and Dr. W. Basset; *Representative at Representative Meeting*, Mr. W. J. Greer; *Representatives on Branch Council*, Drs. G. A. Brown, C. B. Gratte, W. D. Steel, and T. Morrell Thomas; *Executive Committee* Drs. S. Hamilton, D. J. Jones, O. W. Morgan, and J. O'Keefe. *Representatives on Branch Contract Practice Committee*, Mr. W. J. Greer, Drs. J. W. Mulligan, and D. T. Richards.

Report of Executive Committee.—The report of the Executive Committee was read and unanimously adopted.

The Term "Hospital."—After discussion it was unanimously resolved that the proposed definition of the word "hospital" be accepted.

Ethics of Consultation.—It was resolved that the meeting approved of the principles and rules laid down in the memorandum.

Medical Examination of School Children.—It was resolved that the meeting approved of the proposals of the memorandum with regard to the remuneration of medical men.

Prevention of Corruption Act.—The memorandum on the prevention of corruption was read to the meeting and considered.

Votes of Thanks.—Votes of thanks were unanimously passed to the retiring Chairman, Dr. W. D. Steel, and the retiring Honorary Secretary, Mr. W. J. Greer, for their services to the Division, and to the Directors of the Newport and Monmouthshire Hospital for allowing meetings of the Division to be held in their board-room.

Congratulations to Dr. Marsh.—The Honorary Secretaries were unanimously instructed to convey to the Vice-Chairman, Dr. O. E. B. Marsh, the congratulations of the meeting on his recovery from a recent illness.

ULSTER BRANCH:

Portadown and West Down Division.

The spring meeting of this Division was held at the "Anchor" Café Portadown, on April 15th, Dr. J. M. Moore in the chair; and ten members were present.

Apology for Non-attendance.—An apology was received from Dr. Beamish.

Representative at Representative Meeting.—Dr. J. Singleton Darling was re-elected Representative for Representative Meeting.

The Term "Hospital."—The report from the Ethical Committee on the definition of the term "hospital" was considered and approved.

Medico-Political Committee.—The report from the Medico-Political Committee was deferred to next meeting.

Papers.—Dr. W. E. HADDEN read an interesting and suggestive paper on treatment of congenital phimosis, which led to a discussion in which most present took part. Dr. M. DEENY gave an account of a case of carcinoma of rectum, in which the bowel, including the lower part of the sigmoid flexure, was removed by Dr. Darling by the combined method, and the sigmoid brought down to the anus, the patient recovering. Dr. DARLING gave notes of treatment of six cases of cerebro-spinal fever with Flexner's serum, of which five recovered.

Meeting in June.—Dr. BEAMISH kindly invited the members to meet in June in Newry. This was agreed to.

YORKSHIRE BRANCH:

SHEFFIELD DIVISION.

THE annual meeting was held at Sheffield on May 20th. The number of members present was fifty-five.

Confirmation of Minutes.—The minutes of the last general meeting were read and confirmed.

Secretary's Report.—The Secretary's report was read and adopted.

Election of Officers.—The following officers were elected for the ensuing year: *President*, Sinclair White, M.D.; *Vice-President*, Dr. W. Longbottom; *Representatives on Branch Council*, Dr. V. G. S. Dearden, Dr. Sinclair White, Dr. R. J. Pye-Smith, Dr. Cheeswright; *Representative at Representative Meeting*, Dr. J. W. Stokes; *Honorary Secretary*, Dr. A. W. Forrest, Dun Edin, Attercliffe Common, Sheffield; *Executive Committee*, Drs J. R. Hill, Mackinnon, Mylan, Husband, Gordon, Willey, Wiseman, Nutt, S. Barber, O. H. Hudson, France, Reckless, Connell, Adams, Kilham, Riseley, Branson, Sheahan, Innes Smith, Anderson, Forbes, Natch Carter, Cuff.

Division into Sections.—It was decided to divide the Division into eight sections.

Notice in Cases of Unprofessional Conduct.—The suggested form of notice to be sent out in cases of unprofessional conduct was considered, and was left over for further discussion in the future.

Lynn Thomas and Skyrme Fund.—A collection was made in the room on behalf of the Lynn Thomas and Skyrme Fund.

LANCASHIRE AND CHESHIRE BRANCH.

THE following is the result of the election of Representatives on the Council of the Association:

Larkin, F. C.	687
Garstang, T. W. H.	557
Macfie, C.	424
Bradshaw, T. R.	409
Taylor, J. H.	405
Godson, A.	386
Broadbent, G. H.	240

The first four are elected.

METROPOLITAN COUNTIES BRANCH.

As we go to press we have received the results of the voting for the election of officers of this Branch for 1908-9, which are as follows:

President-elect.

Anderson, J. Ford	298

Vice-Presidents.

McCann, Frederick J.	232
Armit, H. W.	96
Lamb, W. H.	73
Richardson, Gilbert	54

Council.—J. Ford Anderson, G. E. Haslip, Hugh R. Ker, L. E. Shaw, G. J. Crawford Thomson.

Association Notices.

1908 ANNUAL GENERAL MEETING.

The Annual General Meeting of the British Medical Association will be held in the Hall of the Education Department of Sheffield, on Friday, July 24th, at 3 o'clock in the afternoon.

[*This Meeting will be merely formal, to comply with Article XII, and will adjourn forthwith until Tuesday, July 28th, at 2.30 o'clock.*]

ANNUAL REPRESENTATIVE MEETING.

The Annual Representative Meeting will take place in the Hall of the Education Department of Sheffield on Friday, July 24th (and following days as required), immediately after the Annual General Meeting, which will be held at 3 o'clock in the afternoon, on Friday, July 24th.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

June 11th, 1908.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 1st, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

June 11th, 1908. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—Election of Representative of the Branch on the Council of the Association. Notice is hereby given that nominations for the office above mentioned must be sent to the undersigned by June 14th. Each nomination must be signed by three members of the Branch.—J. F. CHRISTIE, Honorary Secretary, 7, Alford Place, Aberdeen.

BORDER COUNTIES BRANCH.—The annual general meeting of the Border Counties Branch will be held in the County Hotel, Carlisle, on Friday, June 26th. Dr. James Macdonald of Carlisle will deliver his Presidential address. Further particulars later.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.—The annual general meeting of this Division will be held in the Dumfries Royal Infirmary, on Thursday, June 18th, at 3 p.m.—G. R. LIVINGSTON, Honorary Secretary.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Branch will be held on Thursday, July 2nd, at Alconbury Hill, Huntingdon. Members having any communications to make or specimens to show are requested to inform the Honorary Secretary, F. E. APTHORPE WEBB, Grafton House, Cambridge.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Yeovil on Wednesday, July 8th. Members wishing to read papers, show cases, or exhibit specimens, must communicate with the undersigned not later than Friday, June 26th.—JAMES DAVISON, Honorary Secretary, "Streateplace," Bournemouth.

EAST ANGLIAN BRANCH.—The annual meeting of this Branch will be held at Norwich on Friday, June 19th.—B. H. NICHOLSON, Honorary Secretary.

EDINBURGH BRANCH.—The annual business meeting of the Branch will be held in the Hall of the Royal College of Physicians, Queen Street, on Friday, June 26th, at 4.15 p.m.—A. LOGAN TURNER and FRANCIS D BOYD, Honorary Secretaries.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.—The annual meeting will be held in the King's Arms Hotel, Melrose, on Thursday, June 18th, at 3.30 p.m. Agenda: 1. Reading of Minutes. 2 Election of office bearers and Representative to meeting at Sheffield. The Secretary desires to intimate that he will be unable to accept re-election to the office.—W. HALL CALVERT, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held at Brooklands Hotel, Sale, Cheshire, on Wednesday, June 17th, at 2 p.m. Dinner at Queen's Hotel, Manchester, 7 p.m.—T. W. H. GARSTANG, Honorary Secretary, Altrincham Division, and Honorary Local Secretary for Branch Annual Meeting.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—Nominations of candidates for membership of Central Council should reach the Honorary Secretary on or before Friday, June 19th.—ARTHUR H. WHITE, Malvern, Teremure Road, Dublin.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will be held at 6, Catherine Street, Strand, W.C., on Thursday, July 9th, at 5 p.m., when the incoming President, Sir Victor Horsley, F.R.S., will give an address.

METROPOLITAN COUNTIES BRANCH: WALTHAMSTOW DIVISION.—The annual meeting will be held at the Great Eastern Railway Hotel, Liverpool Street, on Tuesday, June 16th, at 6 p.m., and will be followed by the annual dinner at 7.30 p.m. Tickets for dinner, 6s. Evening dress optional. Agenda: 1 Minutes. 2. Letters. 3 Presentation of report. 4 Instructions to Representative *re* Charter. 5. Election of officers. 6 Arrange programme for coming session.—A POTTINGER ELDRED, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The annual meeting of this Division will be held on Tuesday, June 16th, at 5 p.m., at St James's Vestry Hall, Piccadilly, first floor. Agenda: 1. Ordinary business. 2. Special business: (*a*) To consider the agenda of the Annual Representative Meeting and instruct the Representative. (*b*) Mr. Waggett to move a resolution urging the appointment of medical assessors in all legal cases where medical questions are involved. (*c*) To consider the question of medical fees for examination for life assurance; Dr. Haslip will move, "That for insurance under £100, where only a short certificate is required of the medical examiner, a smaller fee than one guinea may honourably be accepted for such certificate." (*d*) To consider the medical aspects of the Prevention of Corruption Act. (*e*) To elect officers for the ensuing year; the Executive Committee have nominated the following, who have agreed to serve: President, Dr. Ewart; Vice-President Dr. Dauber; Honorary Secretary, Mr. Harvey Hilliard; Representatives on Branch Council, Dr. Allan, Sir William Bennett, Dr. McCann, Mr. Hilliard, and Dr. Knowsley Sibley; Executive Committee, Drs Baynes, Cautley, Durham, Finucane, Inglis-Parsons, Sinclair, and O'Connor. (*f*) Vote of thanks to Dr. Knowsley Sibley, the retiring President.—HARVEY HILLIARD, Honorary Secretary.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The annual meeting of the above Division will be held on Tuesday, June 16th, at the White Hart Hotel, Boston, at 12.45 p.m. Luncheon will be provided at 2 p.m.; tickets, 3s. 6d. each (exclusive of wine). Members are requested to reply not later than June 13th if they intend to be present at the luncheon, as those accepting will be held responsible for the value of their tickets. Members may bring guests to the luncheon. Agenda: 1. Election of officers, including the President-elect of the Branch. 2. Programme for the year. 3. Matters referred to Divisions—medical life assurance. 4. Annual report. 5. Alteration of Rule 11. 6. Invitation to Midland Branch to meet in the Division. 7. Any other business.—A. E. WILSON, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Kingussie on Saturday, June 13th.—J. MUNRO MOIR, Honorary Secretary.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Kendal on Wednesday, June 24th. An address will be delivered by the new President, Mr. C. H. Hough. The new hospital will be described by Drs. Taylor and Sturridge. Messrs. Arnold and Son have kindly consented to send down a large selection of instruments. Members wishful to show cases or specimens are requested to be good enough to communicate with A. S. BARLING, Lancaster, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—Election of members of Central Council. Nominations of candidates for membership of Central Council (two required) must be sent to me in writing on or before Saturday, June 13th.—HENRY SMURTHWAITE, 8, St. Mary's Place, Newcastle-on-Tyne.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The annual meeting of the Division will be held at the Royal Surrey County Hospital, Guildford, on Friday, June 26th, at 4.30 p.m. Dr. Anderson Morshead, Chairman of the Division, will preside. Agenda: 1. Minutes of last meeting. 2. Election of officers—Representatives on Branch Council and in Representative Meetings, and members of the Executive Committee. 3. To receive the annual report of the Division. 4. Matters referred to Divisions (see SUPPLEMENTS to the JOURNAL, April 18th and 20th, and May 9th, 16th, and 23rd). 5. Notes of cases will be read as follows: Dr. Morshead—(*a*) Acute Nephritis in a child; (*b*) Sarcoma of the Kidney. Specimens will be shown. Mr. Harold Butler: A Case of Abdominal Tumour of Unusual Interest. Mr. Eric Sheaf: Two Cases of Mistaken Diagnosis. Mr. E J. Symth: Foreign Body in the Orbit 1¾ in. in length. 6. Any other business. Tea will be provided at 4.15 p.m. Any other members willing to show cases or specimens are requested to communicate with the Honorary Secretary, E. J. SMYTH, Maythorne, Guildford.

SOUTH-EASTERN BRANCH.—The sixty-fourth annual meeting of the Branch will be held in the Council Chamber, Town Hall, Dover, by the kind permission of the Right Worshipful the Mayor of Dover, on Thursday, June 18th, at 2.15 p.m. Dr. M. K. Robinson, President-elect, kindly invites members to lunch at the Grand Hotel, Dover, from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting—(1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. The following expeditions have been arranged to take place afterwards: Visit to Dover Castle and precincts; visit to the National Harbour Works in course of construction; visit to the ruins of the ancient Priory, now used by Dover College; and visit to Pageant House. Dinner at the Grand Hotel, Dover, at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Dover Division. Those who propose being present at lunch or dinner, or both, are requested to signify their intention to Dr. Osborn, Eonismore Lodge, Dover, not later than Thursday, June 11th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The thirty-fifth annual meeting of the Branch will be held at the North Stafford Hotel, Stoke-upon-Trent, on Thursday, June 25th, at 5.30 p.m., when an address will be delivered by the President-elect, S. King Alcock, M.D. Agenda: 1 Introduction of the new President. 2. Minutes of the last annual meeting. 3. Correspondence. 4. Address by the President. 5. Report of the Council. 6 The financial statement. 7 To decide the place of holding the next annual meeting. 8. Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. 9. Report on the election of the Representative of the Branch on the Council of the Association. Nominations for offices: The following gentlemen are nominated for the under-mentioned offices—President-elect, W. G Lowe, Esq., M.D., Burton-on-Trent; General Secretary, Dr. Petgrave Johnson, Stoke; Treasurer, Mr. J. Clare, Hanley. Gentlemen intending to be present at the dinner are requested to send an intimation of their intention not later than Monday, June 22nd. Members have the privilege of introducing friends. Dinner at 7 p.m. Charge, 5s. The first general meeting of the session will be held at Stoke, on Thursday, November 26th. Members wishing to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PETGRAVE JOHNSON, Honorary General Secretary.

WEST SOMERSET BRANCH.—The sixty-sixth annual meeting of this Branch will be held at Cotford Asylum, about four miles from Taunton, on Tuesday, June 30th, at 12.30, when the chair will be taken by the incoming President, Dr. H. T. S. Aveline. Agenda: Minutes of last meeting. Annual report of Council. Treasurer's report for 1907. Election of officers, etc. President's Address: Incidence of Lunacy in West Somerset, with some Remarks on Certification. Other business, if any. Lunch will be served at 1.30. This will be paid for out of the Branch funds; but members wishing to introduce guests can do so at 3s. per head, exclusive of wine, etc., in all cases. After lunch a cricket match will be played between sides representing the Branch and the Cotford Asylum. Those willing to play are requested to communicate with the Hon. Secretary. Tennis

and croquet lawns will also be at the disposal of members, to whom opportunity will be given to view the asylum. During the afternoon Dr. and Mrs. Aveline will give an "At Home," and will entertain those present to tea. If those members who intend to be present will let the Honorary Secretary know by June 27th, he will endeavour to arrange for conveyances to meet them at Taunton or Norton Fitzwarren Stations.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of the above Branch will take place at the Hereford General Hospital on Thursday, June 18th, at 1.45 p.m. Business: To elect officers and transact such other business as are prescribed by rule for the annual meeting.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at the Station Hotel, York, on Wednesday afternoon, July 1st. The officers will be elected. Candidates to represent the Branch on the Council of the Association must be nominated by at least three members of the Branch, and such nominations must be sent to me on or before Saturday, June 13th. The present Representatives of the Branch are Drs. Goyder and Sinclair White. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate with me at once. The annual dinner will take at the Station Hotel, York, at 6.30 p.m.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of this Division will be held at the Great Northern Victoria Hotel, Bradford, on Tuesday, June 23rd. The following will be the order of business: (*a*) The officers, Representatives of the Division on the Branch Council, and the members of the Executive and Ethical Committees, nominated at the last Divisional meeting, will be elected. (*b*) The re-election of the Representative of the Division in Representative Meetings of the Association, and nominated at the last meeting, will take place. (*c*) The annual report of the Executive Committee will be read, and, if approved of, adopted. (*d*) Any questions that have not been considered, and which form part of the business of the Annual Representative Meeting, will be discussed. Members who have any subjects which they wish to bring before the meeting are asked kindly to communicate at once with Dr. Metcalfe—JAMES METCALFE, Frizinghall, Bradford, and J. WHERRY WILLSON, Barkerend Road, Bradford, Honorary Secretaries.

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL R. H. QUILL, M.B., is placed on retired pay, June 8th. He was appointed Assistant Surgeon, March 30th, 1874; Surgeon, March 1st, 1873; Surgeon-Major, March 30th, 1884; granted the rank of Lieutenant-Colonel, March 30th, 1892; made Brigade-Surgeon-Lieutenant-Colonel, June 30th, 1895; Colonel, March 16th, 1902; and Surgeon-General, April 22nd, 1905. He served with the Royal Artillery in the Kuram Valley during the Afghan war of 1878-80, and had medical charge of the dépôt field hospital in the Zaimusht expedition, receiving a medal for the campaign.

THE TERRITORIAL FORCE.

IT is announced in Army Orders that the units of Imperial Yeomanry which have been transferred to the Territorial Force will be designated "Yeomanry."

Other Orders announce the grant of a "Long-service and Good conduct Medal," on certain conditions, to non-commissioned officers and men of the Special Reserve and the Irish Imperial Yeomanry; a "Long-service Medal" to certain militiamen who do not elect to join the Special Reserve; and an "Efficiency Medal" to members of the Territorial Force.

To mark the occasion of the transfer of the Militia, Imperial Yeomanry, and Volunteers to the Special Reserve and Territorial Force, and in recognition of the service voluntarily rendered by all in the defensive forces of the country, the Army Council has decided to present an illuminated certificate to the members of the corps so transferred.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—House-Surgeon, male. Salary £100 per annum, rising to £120.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £80 per annum.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BIRMINGHAM GENERAL HOSPITAL.—(1) Assistant House-Surgeon, (2) Two House-Physicians and House-Surgeon to Special Departments. (3) Resident Medical Officer. Salary for (1) at the rate of £40 per annum, (2) £50 per annum, and (3) £70 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locum. Terms £4 4s. per week.

BRIDGWATER HOSPITAL.—House-Surgeon, for six months. Salary at the rate of £80 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £80 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House-Surgeon. Salary at the rate of £50 per annum.

BUCKS COUNTY LUNATIC ASYLUM, Stone.—Senior Assistant Medical Officer. Salary, £175 per annum.

BUENOS AIRES BRITISH HOSPITAL.—Assistant Resident Medical Officer. Salary £200 for first year, rising to £300.

BURNTWOOD: COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, increasing to £200.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

DERBY COUNTY BOROUGH.—Medical Officer of Health. Salary, £800 per annum.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—Assistant House Surgeon. Salary, at the rate of £60 per annum.

DUBLIN: ST. VINCENT'S HOSPITAL.—(1) Physician. (2) Surgeon.

DUNDEE COMBINATION POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

FARRINGDON GENERAL DISPENSARY, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £ 0 per annum.

GLENELG PARISH.—Medical Officer for Southern Division. Salary, £140 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

KINGSTON-UPON-HULL CITY AND COUNTY.—Assistant to Medical Officer of Health. Salary £200 per annum.

LEICESTER INFIRMARY.—(1) Assistant House-Physician. Salary at the rate of £50 per annum. (2) House-Surgeon, to act as Junior for six months and then as Senior. Salary at the rate of £100 and £120 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Salary, £100 per annum.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Resident Pathologist and Registrar. Salary, £100 per annum.

LIVERPOOL UNIVERSITY.—Chair of Therapeutics.

LONDON COUNTY ASYLUM, Horton.—Assistant Medical Officer. Salary, £160 per annum.

MAIDSTONE: KENT COUNTY ASYLUM.—Male Fourth Assistant Medical Officer. Salary, £175 per annum.

MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Resident Surgical Officer. Salary, £100 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Surgeon.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—(1) Physician to In-patients. (2) Surgeon to In-patients.

MOUNTAIN ASH URBAN DISTRICT EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum.

NORTHAMPTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary, £200 per annum, rising to £250.

PORT ELIZABETH PROVINCIAL HOSPITAL.—Assistant House-Surgeon. Salary £225 for first year, rising to £300.

RANGOON MUNICIPALITY.—Health Officer. Salary, Rs. 1,000 per mensem, rising to Rs. 1,500.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £50 per annum.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum.

SYRIA: LEBANON HOSPITAL FOR THE INSANE, Asfuriyeh.—Medical Superintendent. Salary, £300 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Clinical Assistants. (2) Three Casualty Officers.

WESTERN AUSTRALIA: HOSPITAL FOR THE INSANE.—(1) Senior Medical Officer. Salary, £380 per annum, rising to £405. (2) Junior Assistant Medical Officer. Salary, £285, rising to £315.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Terms, £80 per annum.

APPOINTMENTS.

ARDAGH, V. E. R., L.R.C.P. and S.Edin., District Medical Officer of the Wellingborough Union.

BERKELEY, Comyns, M.B., B.C.Camb., Obstetric Physician to the Middlesex Hospital.

BLAKE, Victor, M.B., B.S., Medical Inspector of Schools, Portsmouth Education Committee.

BONNEY, Victor, M.D., M.S.Lond., Assistant Obstetric Physician to the Middlesex Hospital.

DRINKWATER, Katherine R., M.B., B.S., B.Sc.Lond., Assistant to the Medical Officer of Health for the Medical Inspection of School Children in the Borough of Wrexham.

FAIRCLOUGH, W. A., M.B., Ch.B.N.Z., M.R.C.S., L.R.C.P., House-Physician at the Evelina Hospital for Sick Children, Southwark, S.E.

HOLLAND, Hardley Lancelot, M.D.Lond., F.R.C.S.Eng., M.R.C.P. Lond., Assistant Physician to the City of London Lying-in Hospital.

LEIGHTON, G. R., M.D.Edin., F.R.S.E., Professor of Pathology and Bacteriology at the Royal Veterinary College, Edinburgh.

PIRIE, Howard, M.D.Edin., Assistant in the X-ray Department at St. Bartholomew's Hospital.

RAMSAY, Jeffrey, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Junior House-Surgeon of the Blackburn and East Lancashire Infirmary.

WILLETT, J. Abernethy, M.D.Oxon., M.R.C.P., M.R.C.S.Lond., Assistant Physician to the City of London Lying-in Hospital.

YEARSLEY, Macleod, F.R.C.S., Lecturer on Anatomy and Physiology to the Ealing Training College for Teachers of the Deaf.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FRENCH.—On June 7th, at 23, Porchester Gardens, Hyde Park, W., the wife of J. Gay French, M.B., M.S.Lond., F.R.C.S.Eng., of a son.

HICKS.—On June 7th, at Park House, East Finchley, the wife of Thomas W. Hicks, M.D.Lond., of a daughter.

WASHBOURN.—On March 1st, at Collingwood, New Zealand, the wife of H. E. A. Washbourn, M.B., of a daughter.

MARRIAGE.

HARTLEY—TATTERSALL.—On June 3rd, at St. Luke's Church, Heywood, by the Rev. Rathbone Hartley, M.A., Vicar of All Souls, Heywood, assisted by the Rev. E. B. A. Hughes, M.A., Rector of the Parish, Francis William Hartley, M.R.C.S.Eng., L.R.C.P. Lond., younger son of the late William Hartley, of 129, Manchester Street, Heywood, to Mary Elizabeth, only daughter of the late John Tattersall, Holly Bank, Heywood.

DEATH.

OVERTON.—On May 31st, suddenly, at Bradford Road North, Huddersfield, Arthur Overton, M.R.C.S., L.R.C.P., aged 46.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION, 20, Hanover Square, 5.30 p.m.—Mr. Walter G. Spencer: Reduction of Old Subcoracoid Dislocation of the Humerus by Excavating the Glenoid Cavity through a Posterior Intermuscular Incision. Mr. Alban Doran: Cystic Tumour of the Suprarenal Body Successfully Removed by Operation. Mr. Rushton Parker: (1) Cases of Non-union Treated by Implantation of Bone Fragments; (2) Case of very Severe Compound Fracture of Arm.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, Cavendish Square, W., 4 p.m.—Discussion on Alcoholism and Cruelty to Children, to be opened by Robert J. Parr, Esq. (Director of the National Society for the Prevention of Cruelty to Children).

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

DERMATOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Exhibition of Cases and Specimens.

NEUROLOGICAL SECTION, 4.30 p.m.—Clinical meeting at the Hospital for Epilepsy and Paralysis, Maida Vale.

FRIDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 5.30.—Election of officers. Address: Dr. James Goodhart, "Let there be Light." At 7.30 p.m. the annual dinner will take place at the Trocadero Restaurant.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30.—Paper: Dr. C. F. Harford, the Tick Fever of Africa, with Special Reference to its Clinical Manifestations, and its Relation to the Relapsing Fever of India and other parts of the World.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2.30 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lecture: Friday, 2.15 p.m., Peripheral Neuritis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, The Diagnosis of Syphilis, etc., by the Antigen Method; Tuesday, Injuries to the Head of the Newborn (with lantern slides); Wednesday, Affections of the Toes, Feet, and Ankles; Thursday, Diseases Associated with Cyanosis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Amyotonia Congenita. Friday, 3.30 p.m., Caisson Disease.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, *X* Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Demonstration of Cases at the Northwood Sanatorium. Wednesday, 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; 4.30 p.m., Demonstration of Selected Medical Cases. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics and *X* Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2.15 p.m., Diseases of the Throat, Nose, and Ear (and Wednesday and Saturday, 10 a.m.); 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Wednesday and Friday, Practical Medicine. At 6 p.m.: Monday, Plaster of Paris Splints; Tuesday and Wednesday, Enlargement of Lymphatic and Thyroid Glands; Thursday, Practical Surgery; Friday, Medico-legal Relations of Insanity.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
13 SATURDAY ...	BUXTON: Science Committee, Empire Hotel, 3.30 p.m. NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Kingussie.
14 Sunday ...	
15 MONDAY ...	LONDON: Naval and Military Committee, 2.30 p.m.
16 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. BOSTON AND SPALDING DIVISION, *Midland Branch*, Annual Meeting, White Hart Hotel, Boston, 12.45 p.m.; Luncheon, 2 p.m. WALTHAMSTOW DIVISION, *Metropolitan Counties Branch*, Great Eastern Hotel, Liverpool Street, 6 p.m.; Dinner, 7.30 p.m. WESTMINSTER DIVISION, *Metropolitan Counties Branch*, Annual Meeting, St. James's Vestry Hall (first floor), Piccadilly, 5 p.m.
17 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Brooklands Hotel, Sale, Cheshire, 2 p.m.; Dinner, Queen's Hotel, Manchester, 7 p.m.

Date.	Meetings to be Held.
JUNE (*Continued*).	
18 THURSDAY...	LONDON: Hospitals Committee, 2.30 p.m. CENTRAL DIVISION, *Birmingham Branch*, Annual Meeting, Medical Institute, 4 p.m. SCOTTISH DIVISION, *Border Counties Branch*, Annual Meeting, Dumfries Royal Infirmary, 3 p.m. SOUTH-EASTERN BRANCH, Annual Meeting, Council Chamber, Town Hall, Dover, 2.15 p.m.; Lunch, Grand Hotel, 1 to 2 p.m.; Dinner, Grand Hotel, 6.15 p.m. SOUTH-EASTERN COUNTIES DIVISION, *Edinburgh Branch*, Annual Meeting, King's Arms Hotel, Melrose, 3.30 p.m. WORCESTERSHIRE AND HEREFORDSHIRE BRANCH, Annual Meeting, Hereford General Hospital, 1.45 p.m.
19 FRIDAY ...	LONDON: Uterine Cancer Committee, 4.30 p.m.
20 SATURDAY...	
21 Sunday ...	
22 MONDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 20TH, 1908.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

MEDICO-POLITICAL COMMITTEE.

ANNUAL REPORT TO REPRESENTATIVE MEETING, 1908.

1. The Medico-Political Committee has held four meetings during the year. Numerous meetings have also been held of Subcommittees appointed to deal with (1) Contract Practice, (2) Parliamentary matters, (3) Life Insurance, (4) the Midwives Act as affecting the profession, (5) the trade in Proprietary Medicines, (6) Medical Inspection of School Children.

2. A list of the members of the Subcommittees is appended. (See Appendix A.) A table showing the attendance at meetings of the Committee and Subcommittees during the year will be issued with the Agenda of the Representative Meeting.

I. MATTERS ARISING OUT OF INSTRUCTIONS OF THE REPRESENTATIVE MEETING.

3. The Committee reports first as to those matters in which action has been taken pursuant to instructions of the Annual Representative Meeting, 1907.

Contract Practice.

General Action.

4. The Committee has continued to take action in contract practice disputes, in conformity with the decisions of the Representative Meeting on the subject. The following cases have received consideration during the year, and details of the action taken will be given to the Representatives in the Representative Meeting.

Alfreton (Friendly Societies).
Basingstoke (Medical Club).
Bradford (Police Surgeons).
Chirk (Colliery appointment).
Cross Keys (Mon.) (Colliery appointment).
Doncaster (Colliery appointment).
Eastwood, Langley Mill, Heanor and Kimberley (Friendly Societies).
East London, Cape Colony (Friendly Societies).
Ebbw Vale (Colliery appointment).
Eccles (Medical Aid Society).
Haydock (Colliery appointments).
Hull (Works appointment).
Norwich (Friendly Societies' Alliance).
Petworth.
Portobello, Edinburgh (Police Surgeon).
St. Helens (Colliery appointment).
Southend (Medical Officer of Health).
Teignmouth (Friendly Society).
Wellington (Oddfellows Society).
Weymouth (Medical Club).
Wisbech (Friendly Societies).

5. The Committee has prepared a pamphlet, explaining the action taken in various contract practice disputes, which it is proposed to circulate for the confidential information and assistance of Honorary Secretaries of Divisions and Branches and others to whom it may be of special value.

Central Emergency Fund.

6. A Memorandum was duly prepared, pursuant to Minute 267 of the Representative Meeting, 1907, by the Contract Practice Subcommittee, and forwarded to all members with the application for subscription to the Association.

In response to this appeal subscriptions to the amount of £339 3s. 6d. have been received from individual members up to June 17th, 1908.

The sum of £93 2s. 9d. was received in subscriptions to the Central Emergency Fund between the date of the Annual Representative Meeting, 1907, and December 31st of that year.

The sum of £98 19s. 6d. has also been received up to June 17th, 1908, through collections by Divisions and Branches of the Association from their own members.

Pursuant to Minute 268 of the Representative Meeting a form of circular has been drafted for use by

Honorary Secretaries of Divisions and Branches in collecting subscriptions from the members of those bodies, and will shortly be issued. The Committee has advisedly allowed a considerable interval to elapse after the issue of the circular in December last before suggesting the issue of another circular on the same subject.

Truck Act.

7. Pursuant to Minute 269 of the Representative Meeting, 1907, evidence was given before the Departmental Committee on the Truck Act by the Medical Secretary on behalf of the Association, with regard to the conditions of medical employment under that Act in various parts of the country. A copy is appended to this report of the Memorandum which was forwarded to the Committee and which served as the basis of the oral evidence given. (See Appendix B.)

Sanatoria for Workers Suffering from Tuberculosis.
(Minute 271 of the Representative Meeting.)

8. The information obtained by a Joint Subcommittee of the Medico-Political and Hospitals Committees as to the organization and methods of the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis, having been duly considered by both Committees, the following conclusions were arrived at and have been communicated to the Association in question:

(*a*) That the appointment of any special medical referee is, in the opinion of the British Medical Association, unnecessary.

(*b*) That the requirements of the case could best be met by drawing up suitable forms of certificate for signature by the ordinary medical attendants of the patients whose admission to the Sanatorium is proposed, with provision for taking a second opinion in cases of need at the discretion of the medical attendant. The fee of the person called in to be paid by the Sanatorium Association, such fee to be 1 guinea.

(*c*) That medical referees, if appointed, should be paid.

9. The Committee has received information which shows that the appointment of Honorary Referee is at present held by leading members of the profession in various districts, and it is a question for consideration by the Representative Meeting as to whether any pronouncement should be made concerning the advisability of members of the Association in future (*a*) accepting, or (*b*) continuing to hold, such appointments.

Gratuitous Medical Treatment of Rate maintained Patients.

10. The Ulster Branch has requested the advice of the Committee upon the matter of the treatment in Hospitals having Honorary Medical Staffs, of patients who would otherwise be provided for in municipal institutions, and in respect of whom a contribution to the funds of the Hospital is made from the rates. The Committee recommends that a pronouncement be made to the effect that the services of the medical profession should not be given gratuitously to patients who are maintained by public funds.

Payment of Doctors' Fees by Insurance and Friendly Societies.

11. The Committee has been requested to consider schemes put forward by certain Insurance Companies for insuring individuals or families against expenses of medical attendance.

As was pointed out in the Report of the Medico-Political Committee on Contract Practice, submitted to the Annual Representative Meeting, 1905, such proposals are to be regarded as alternatives to Contract Practice. Certain possible dangers to the profession from the general adoption of such schemes were then indicated, namely, that the incorporation of fixed scales of medical fees in the contracts of such companies with their policy-holders might lead to attempts, direct or indirect, to compel medical practitioners to accept such scales.

The Committee is giving careful attention to the possibility of the actual schemes now submitted having this or any other injurious effect upon the position of medical practitioners, and a Report upon the subject will be issued to the Divisions in due course.

Parliamentary.

12. The Parliamentary Subcommittee has continued to watch Bills affecting the medical profession which have from time to time come before Parliament. The following paragraphs (13 to 30) relate to those matters which have received the special consideration of the Parliamentary Subcommittee.

Medical Acts Consolidation Bill.

13. The Medical Acts Consolidation Bill has been carefully revised, in respect of drafting and details, by the Committee in conference with Counsel, Mr. J. Fischer Williams, the principles which have been approved by the Representative Meeting being duly maintained. At the time of the preparation of the present report the Committee is in conference with the British Dental Association as to those matters in the Bill which specially affect the Dental profession, and a supplementary report will be presented to the Representative Meeting in which the Committee hopes to be able to state that the Bill is finally ready for introduction into Parliament.

The Committee has decided, when the revision of the Bill is complete, to prepare a form of Petition, to which the Divisions will be requested to obtain the signatures, as far as possible, of all members of the profession in the area of each, for presentation in due course to the Privy Council.

Proposed Royal Commission on Medical Law.

14. Attention has been drawn by several Divisions and Branches to the advisability of petitioning for the appointment of a Royal Commission to consider the whole subject of unqualified practice and amendment of the laws affecting the medical profession. The Committee considers it highly desirable that such action should be taken, and has put in hand the collection of the preliminary evidence which it will be necessary to be able to place before the Government when approaching them on the subject.

15. Immediately prior to the issue of this report the Committee has received information that a Committee appointed by the General Medical Council to investigate certain questions of amendment of the laws affecting the medical profession has favourably received a deputation from the Metropolitan Counties Branch upon the subject, and the possibility of co-operation between the Association and the General Medical Council in the matter is under consideration.

Notification of Births Act.

16. The Committee has given much attention to the effect of the Notification of Births Act upon members of the medical profession. Expressions of opinion by Divisions and Branches upon the subject have been duly considered and the opinion of the Solicitor of the Association obtained thereon. In view of the doubts which appear to prevail as to the exact legal effect of the Act upon medical practitioners, the Committee has undertaken the preparation of a Memorandum for the information of members, which will be issued to the Divisions as soon as possible.

17. The Parliamentary Subcommittee has under consideration the question of seeking an amendment of the Act to provide for the payment of medical practitioners and midwives for notifying.

State Registration of Nurses.

18. Pursuant to the decisions of the Representative Meeting, the Committee has continued to support, on occasion, proposals for establishing a State Register of Nurses, and has opposed projects which would have the effect of obstructing State Registration.

19. A Bill called the Official Directory of Nurses Bill having been introduced into the House of Lords, by Lord Balfour of Burleigh, on behalf of the Central Hospital Council of London, the Council, on the recommendation of the Medico-Political Committee, appointed a deputation to Lord Ampthill, who had given notice of objection to the Bill. The views of the medical profession on the general subject of the State Registration of Nurses and its objections to the Official Directory of Nurses Bill were duly laid before Lord Ampthill, whose opposition, the Committee is glad to report, was successful.

20. Subsequently a request was received through Mr. Tennant, M.P. (formerly Chairman of the Select

Committee of the House of Commons on the State Registration of Nurses), for the Association to take part in a deputation from various bodies to the Lord President of the Privy Council, in favour of the State Registration of Nurses. This request was acceded to, and the Lord President has consented to receive a deputation, but a date for the purpose has not yet been fixed.

Vivisection.

21. The Committee has considered various Bills affecting vivisection, including the Dogs Exemption Bill and a Bill for the abolition of all experiments upon living animals. Concerning the Dogs Exemption Bill, a Memorandum, of which a copy is appended to this Report, has been circulated to all Members of the House of Commons. (See Appendix C.)

22. It is being represented to the Home Office that any legislation upon the subject should be opposed by the Government until the Royal Commission has reported.

Prohibition of Medical Practice by Companies.

23. Bills for the prohibition of medical practice by Companies, introduced into Parliament at the instance of the General Medical Council, have again been considered. These were found to be practically the same as were introduced into Parliament in the Session of 1907, when the Committee (after a conference with representatives of the Medical Defence Union and the London and Counties Medical Protection Society) concluded that no appreciable benefit would result to the profession or to the public from enactments of such limited scope. It has, therefore, not been thought necessary to take any action in the matter in the present Session.

Public Health Bills.

24. The Committee has received a Report from the Public Health Committee upon various Bills affecting public health and the position of Health Officers. The most important of these are the Government Housing, Town Planning, etc., Bill, the Public Health (Officers) Bill, introduced into the House of Commons by Sir Walter Foster on behalf of the Association, and the Public Health Bill, introduced by Dr. Cooper. In reference to all these the Committee, in concert with the Public Health Committee, is taking steps to urge upon the Government and upon Members of Parliament the importance of adequate security of tenure of Health Officers as a condition of their ability adequately to discharge, not only the responsibilities already laid upon them by the Public Health Acts, but also the additional responsibilities which the adoption of the Government's Housing, Town Planning, etc., Bill would entail.

25. The question has arisen whether the Association could, on behalf of the profession, accept provisions which would give such security to whole-time Health Officers but not to Officers engaged in private practice.

The Medico-Political and Public Health Committees consider that such a distinction could not be made officially by the Association without the sanction of the Representative Meeting, but it is considered to be desirable that the Council should have the authority of the Representative Meeting for assenting, on behalf of the Association, to such a decision of the matter as would be most conducive, in the opinion of the Council, to the interests of the profession and the public.

Infant Life Protection.

26. A Bill termed "The Infant Life Protection Bill" has been introduced by Lord Robert Cecil, its objects being stated in the following Memorandum:—

> It is a felony punishable by penal servitude for life to procure a miscarriage. It is murder to kill a fully born child. To destroy a child while it is being born and before it is fully born is no offence whatever. The object of this Bill is to put an end to this anomaly.

27. The Committee is legally advised that the Bill, if enacted in the form in which it has been introduced into Parliament, would apply equally to medical practitioners as to other persons, there being no saving clause. Though the Committee is also advised that probably proceedings would not be taken against medical practitioners, yet it is considered that they ought not to be exposed to the danger of such proceedings when compelled, in the discharge of their professional duty, to destroy the life of an unborn child. Action is being taken, therefore, to secure due consideration of this point.

Amendment of the Indecent Advertisements Act.

28. A Joint Committee of the House of Commons and House of Lords having been appointed to consider the question of advertisements, including advertisements of an objectionable character not at present prohibited by the Indecent Advertisements Act, the Committee has decided to tender evidence in accordance with the principles already approved of by the Association and embodied in the Memorandum addressed by the Association, in co-operation with the London Council for the Promotion of Public Morality, to the Home Secretary in November, 1905, a copy of which Memorandum is appended to this report. (See Appendix D.)

Proprietary Medicines.

29. A Subcommittee having been appointed to give effect to the instructions of the Representative Meeting as to proprietary medicines, namely:

> (*a*) That for medicines which are supplied otherwise than upon medical, dental, or veterinarian prescriptions, no condition of sale, short of the publication on each packet of medicine of the name and quantity of each of its constituents, should be permitted;
>
> (*b*) That the label should be made to constitute a warranty, and that false description, whether on the label or in an advertisement, should be made an offence;
>
> (*c*) That the provisions of the Food and Drugs Acts should be applied to proprietary medicines,

has carefully considered the whole subject in conjunction with the recommendations of various Divisions and Branches as to the appointment of a Royal Commission on the subject of medical law. In view of these recommendations, the Committee has postponed making representations to the Government pending the collection of the requisite materials for submission to the Royal Commission. The sanction of the Council has been obtained for the collection of evidence in certain directions in which the co-operation of the Divisions will, in due course, be requested.

Coroners' Law.

30. The Committee has considered several questions arising out of the administration of the Coroners Act.

(i.) *Payment of Inquest Fees to Poor-law Medical Officers.*

Communications received from the Local Government Board Auditor for the County of London and from a medical practitioner in another part of the country have drawn attention to the question whether medical officers of Poor-law Infirmaries are entitled to receive fees for giving evidence at inquests and making *post-mortem* examinations, by direction of Coroners, in cases of patients who have died in such institutions. The judgement of the Local Government Board upon an appeal by a ratepayer for the County of London against the decision of the Local Government Board Auditor is appended. From this it will be seen that the ruling of the Local Government Board, confirming the decision of the Auditor, is in favour of the payment of such fees. (See Appendix E.)

The Division in which the medical practitioner referred to above resides has still under consideration the question of the most advisable action to be taken with regard to bringing the matter suitably under the notice of the local Town Council, who have refused such payments.

(ii.) *Extra Fees for Adjourned Inquests.*

At the instance of the Lancashire and Cheshire Branch the question has been considered of the recent action of the Lancashire County Council in refusing to allow Coroners to make any payment of additional fees to medical practitioners in respect of attendance at inquests which last more than one day. It appears that an amendment of the Coroners Act would be necessary to make such payments obligatory, and the point is noted for attention when an amendment of the Coroners Act is being brought forward.

(iii.) *Riders by Coroners' Juries.*

At the instance of the South Manchester Division the question has been considered of the riders which are frequently added by Coroners' Juries to their verdicts and the addition and publication of which not infrequently

constitutes a serious injustice to medical practitioners and others concerned in cases.

The opinion of the Solicitor of the Association has been obtained on the various points raised and is appended to this report. (See Appendix I.)

(iv) *Coroner for South-West London.*

The report in the *Times* of an inquest held by the Coroner for South West London on June 3rd, 1908, upon a patient who had died four days after an operation, and the cause of whose death had been duly certified by a registered medical practitioner, led to correspondence in the *Times*, and attracted general public attention. Renewed representations to the Government upon the subject are under consideration.

Fees of Medical Witnesses.

31. The Committee during the past year has not received evidence of the necessity of any immediate action in the matter of fees of Medical Witnesses or fees of medical practitioners called in by the Police in Emergency Cases. It is desirable, however, that, as soon as circumstances permit, systematic inquiry should be made through the Divisions as to the present working of the Home Office Regulations affecting medical witnesses and the police arrangements for calling in practitioners in emergency cases. The Committee recommends the Representative Meeting to continue the instruction that the subject be watched.

Medical Inspection of School Children.

32. A special Subcommittee has considered the subject of medical inspection of school children and has prepared three Reports which have been adopted by the Committee, and in the case of the third Report, by the Council, and circulated to the Divisions. Owing to the urgency of the matter, the Committee was obliged to circulate the first two Reports without awaiting the approval of the Council. The three Reports prepared by the Committee appeared in the SUPPLEMENTS of the BRITISH MEDICAL JOURNAL of December 21st, 1907, February 8th, 1908, and May 9th, 1908, respectively.

Treatment of School Children.

33. Recent communications received from the Sheffield Division have brought specially under notice the question of proposals made for the treatment of school children either by Medical Officers paid out of public funds or through Hospitals and other authorities. The matter had previously been the subject of representations received from Divisions, which, however, did not deal, as did the communication from the Sheffield Division, with any definite proposals, but referred to the general principles upon which the Committee had already made a pronouncement in a Report to the Divisions. The question having now become one of practical politics, the Committee is issuing at once a circular stating shortly the points which will require the consideration of the Divisions, and a fuller Report upon the subject is being prepared.

Life Insurance.

34. A Special Subcommittee, appointed to consider the subject of life insurance examination, pursuant to the instructions of the Representative Meeting, has investigated the information which had been already collected from Life Insurance Companies in the United Kingdom.

Upon the recommendation of the Subcommittee the Committee issued a Report to the Divisions, which appeared in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL dated February 22nd, 1908.

The replies received from Divisions will be duly considered, and when sufficient information has been collected a final report will be issued containing definite proposals for consideration by the Divisions and for adoption, if approved, by the Annual Representative Meeting, 1909.

Midwives Act.

35. The Committee has considered the instruction of the Representative Meeting to approach the Privy Council with regard to the amendment of the Midwives Act. Since that instruction was given an important Memorandum has been issued by the Local Government Board to Boards of Guardians throughout the country, and copies of that Memorandum have been forwarded by the Privy Council to medical practitioners.

This Government action so affects the position that the Committee has not considered it desirable to approach the Privy Council until information has been collected as to the extent to which Boards of Guardians are carrying out the suggestions made to them by the Local Government Board, and the nature of the provisions that are being made by those Boards which have adopted the suggestions.

36. The Committee has considered also a communication addressed by the Midwives Board to the Privy Council (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 22nd, 1908), and has been in correspondence with the Board concerning certain statements reflecting upon the action of members of the medical profession.

The Committee has pointed out that it is unaware of the existence of evidence justifying the statements in question, and up to the present the Central Midwives Board has not furnished the particulars upon which those statements were based.

Communications received from the Board have made clear, however, that the allegations of "hostility" of the medical profession to midwives were not based upon any official action of any organized body, such as the British Medical Association, representative of the medical profession. The Committee, on behalf of the Association, has expressed the hope that the Central Midwives Board will co-operate with the Association in attempting to remove the causes of such strained relations as may in fact exist between medical practitioners and midwives.

Supply of Midwives in Rural and Urban Districts.

37. The following resolution of the Staffordshire Branch has been referred to the Committee for consideration:

> That the Staffordshire Branch desires to represent to the Council of the British Medical Association the expediency of approaching the Central Midwives Board with a view to some modifications of the present regulations for the qualifications of midwives in order to provide for those districts, both urban and rural, where maternity nurses will be much needed after 1910.

The Committee is of opinion that any lowering of the standard of registration of midwives would defeat the objects of public protection which the Midwives Act was adopted to carry out.

Lunacy Acts.

38. Pending the publication of the Report of the Royal Commission on the Feeble Minded, to which was referred the whole question of the constitution and duties of the Lunacy Commission, no further action has been taken in the matter of the recommendations of the Association as to changes in the composition of the Lunacy Commission or as to the law affecting cases of unconfirmed mental disease.

Inebriates Acts.

39. The Home Office having appointed a Departmental Committee to investigate the changes required in the Inebriates Acts, the Association has undertaken to give evidence before the Committee, which evidence will be based upon the principles formulated by the Medico-Political Committee, and approved by the Annual Representative Meeting in 1906.

It is understood that after the Departmental Committee has dealt with this reference it will be reconstituted for the purpose of considering certain methods of treating inebriety by drugs, and the Council of the Association has authorized the expenditure necessary to collect evidence upon this subject.

Alleged Increase of Inebriety and Drug Habits among Women.

40. In compliance with a request received from the Church of England Temperance Society, the Council has authorized assistance being given by the Association in the preparation and distribution to Members of the Association of forms of inquiry, printed by that Society, as to the alleged increase of inebriety and drug habits among women, and the causation of such increase, if any. The returns, which the Committee has already reason to believe will be of considerable value, will be collated under the supervision of the Committee.

GENERAL REFERENCE TO THE COMMITTEE.

Nursing Association.

41. The Committee has considered communications from a Division and from a Branch respectively as to the action of Nurses employed, in the one case by a District, and in the other case by a County Nursing Association, the former case affecting an individual nurse, the latter affecting the general policy and rules of the County Nursing Association. The difficulty between the Division and the individual nurse was settled to the satisfaction of the Division through the intervention of the Council of the Queen Victoria Jubilee Nursing Association, to which the District Nursing Association is affiliated. The second case is still under the consideration of the Committee.

Organizations for Obtaining Specialists' Services at Reduced Fees.

42. A communication from the South Wales Branch brought to the notice of the Committee a scheme under which the National Union of Teachers was seeking to obtain the services of Specialists at reduced fees for attendance upon teachers. The Committee considered it undesirable that Specialists should enter into engagements of this kind with lay organizations systematically to attend their members at reduced fees, and has asked the Divisions to consider the matter as affecting their own members.

43. A somewhat analogous case to the foregoing is that of an organization of Societies connected with the Printing Trades, who applied to the British Medical Association for advice as to a scheme whereby their members should be able to obtain the services of Consultants at reduced fees. The Committee has advised the Society that any arrangements for obtaining specialist advice should only be made through a practitioner in attendance, who will advise the Specialist as to the cases in which reduced fees can properly be accepted, and that the co-operation of such a Society can best be given by creating a provident fund out of which Consultants' fees can be paid.

Employment of Medical Women.

44. In connexion particularly with the creation of posts of Medical Inspectors of School Children, but affecting also other appointments, such as those of Inspectors of Midwives, the question has repeatedly required consideration during the past twelve months of the conditions of appointment of Registered Medical Women, and the Committee on behalf of the Association has maintained to the utmost of its ability the principle framed by the Annual Representative Meeting at Exeter that no distinction should be made, on the ground of sex merely, between the salaries paid to Registered Medical Women and Registered Medical Men discharging the same duties. Having regard to the increase in the number of public appointments for which the services of medical women are sought, the Committee has appointed a special Subcommittee to consider such appointments and to take action in individual cases.

Taxation of Motor Cars as affecting the Medical Profession.

45. A communication received from the Royal Automobile Club has again drawn attention to the possibility of taxation of motor cars as affecting the medical profession. The Committee has appointed a Subcommittee to consider the matter, and confer with representatives of the Royal Automobile Club, in order that suitable representations may be made to the Government in due course.

Adoption of Metric System of Weights and Measures by the Medical Profession in Prescribing and Dispensing.

46. The Decimal Association has requested the opinion of the Association as to the most convenient method of approaching medical practitioners with a view to obtaining their co-operation either in selected districts or in the country generally in bringing about the adoption of the Metric System for prescribing and dispensing.

47. The Committee recommends that a pronouncement be made by the Representative Meeting on behalf of the Association in favour of the principle of the adoption of the Metric System, and that it be an instruction to the Committee to consider and report to the Divisions as to a procedure whereby this system could be introduced for prescribing and dispensing with the least inconvenience to medical practitioners.

Fees for Medical Examination of Territorial Army Recruits.

48. The Committee has been called upon to consider the, in the opinion of the Committee, inadequate fees paid by the War Office to medical practitioners for the examination of recruits for the Territorial Army. The matter is one which, in the opinion of the Committee, should receive the attention of the Divisions, and the Committee suggests that a suitable fee for the purpose would be at least 2s. 6d.

J. A. MACDONALD,
Chairman of the Medico-Political Committee.

June 18th, 1908.

APPENDICES.

APPENDIX A.

LIST OF MEMBERS OF SUBCOMMITTEES.

I.—*Contract Practice Subcommittee.*

Owen, Mr. Edmund, F.R.C.S., Chairman of Council.
Cox, Dr. Alfred.
Flemming, Mr. C. E. S.
Nash, Mr. E. H. T.
Straton, Mr. C. R.
Webb, Mr. F. E. Apthorpe.

With

Ballance, Mr. H. A.
Broadbent, Mr. G. H.
Greer, Mr. W. J.
Housman, Mr. B. W.
Jackson, Mr. G.

II.—*Parliamentary Subcommittee.*

Armit, Mr. H. W.
Haslip, Dr. G. E.
Horsley, Sir Victor, F.R.S.
Muir, Dr. W. L.
Parkinson, Mr. C. H. Watts.
Shaw, Dr. Cecil E.
Straton, Mr. C. R.

With

Buist, Dr. R. C.
Franklin, Mr. G. C.
Larkin, Mr. F. C.
Smith, Dr. Walter.

III.—*Life Insurance Examinations Subcommittee.*

Armit, Mr. H. W.
Haslip, Dr. G. E.

With

Ballance, Mr. H. A.

IV.—*Lunacy and Inebriates Acts Subcommittee.*

Haslip, Dr. G. E.
Muir, Dr. W. L.
Straton, Mr. C. R.

With

Dawson, Dr. W. R.
Douglas, Dr. W.
Langdon-Down, Dr. R. L.

V.—*Medical Inspection of School Children Subcommittee.*

Rayner, Dr. Edwin, Treasurer.
Flemming, Mr. C. E. S.
Horsley, Sir Victor, F.R.S.
Nash, Mr. E. H. T.
Parkinson, Mr. C. H. Watts.
Webb, Mr. F. E. Apthorpe.

With

Brewer, Mr. C. S.
Greenwood, Dr. Alfred.
Ker, Mr. Hugh R.
Kerr, Dr. James.
Langdon-Down, Dr. R. L.
Morison, Dr. A. E.

VI.—*Midwives Subcommittee.*

Armit, Mr. H. W.
Flemming, Mr. C. E. S.
Nash, Mr. E. H. T.

With

Fothergill, Dr. E. R.
Jones, Mr. Herbert.
Maclean, Dr. E. J.

VII.—*Patent Medicines Subcommittee.*

Armit, Mr. H. W.
Martley, Dr. F. C.
Nash, Mr. E. H. T.
Straton, Mr. C. R.

With

Bulst, Dr. R. C.
Sewill, Mr. H.

VIII.—*Medical Acts Amendment (Consolidation) Subcommittee (Joint).*

Owen, Mr. Edmund, F.R.C.S., Chairman of Council.
Armit, Mr. H. W.
Haslip, Dr. G. E.
Horsley, Sir Victor, F.R.S.

APPENDIX B.

WORKING OF THE TRUCK ACTS AS REGARDS MEDICAL ATTENDANCE.

MEMORANDUM.

General Principle of the Present Law.

1. Contracts between employers and workmen for the provision of medical attendance and medicine are among the matters in respect of which an exception was made in the Truck Acts to the general principle of payment in money and not in kind, and in respect of which deductions from wages are accordingly permitted.

2. According to legal advice which has been obtained by the British Medical Association, the position of employer and workman, respectively, in arrangements for the provision of medical attendance in accordance with the Truck Acts, is that the employer, in consideration of the sums which the workman, by a signed agreement, authorises him to deduct from wages, is under a contract to supply medical attendance and medicine, but is not under an obligation to expend the whole amount deducted from wages in the provision of such attendance. He may make a profit for himself or incur a loss, or he may devote part of the money to other objects for the welfare of the workmen. He is a contractor. So long as he fulfils his contract by supplying medical attendance and medicine, his obligation is discharged.

Existing Arrangements under the Acts.

3. The arrangements for providing medical attendance under the Truck Acts differ widely in different districts. Those which have been brought to the notice of the Association may be classified as follows :—

(*a*) Where the employer deals with the whole matter directly, himself appointing and paying the doctor. As a rule in such cases the full amount deducted from wages is paid by the employer to the doctor, who thus becomes virtually a sub-contractor, his contract being with the employer, while the employer's contract is with the workmen.

(*b*) The employer arranges for each workman to select his own doctor from among the practitioners practising in the district, and the deductions from each workman's wages are paid periodically to the doctor of his selection. In some cases a Committee of the workmen is formed to look after their interests in the matter.

(*c*) A single doctor is employed to attend to all the workmen of a particular colliery, steel works, or other establishment, the selection of the doctor being left to the workmen voting in a mass meeting or by ballot.

(*d*) The deductions from wages are paid in the aggregate to a Committee of workmen who make the arrangements for medical attendance, in some instances employing doctors at fixed salaries and sometimes applying part of the funds to other purposes, such as the establishment and upkeep of hospitals, and the payment of fees to Members of the Committee.

Difficulties which have arisen.

4. With regard to the system (*d*), in particular, the following questions have been raised :—

(i) As to the legality of applying money deducted from wages, ostensibly for the provision of medical attendance, to the purchase and upkeep of hospitals o even to objects having no relation whatever to the relief of sickness.

The Association has been advised that inasmuch as the employer, regarded as a contractor, can keep back a part of the money for any purpose that he thinks proper, so long as he fulfils his obligation to provide medical attendance, it is competent for him to hand the money over to another body and to allow them to apply a part, for example, for the provision of a hospital, so long as the same obligation is fulfilled.

Different views, however, appear to be taken by eminent lawyers as to the legality of this arrangement.

(ii) As to the question whether it is lawful for the employer to hand the money over to a Committee of workmen or to other persons, or to allow them to distribute it at their discretion.

Some authorities have taken the view that the employer cannot divest himself of his personal responsibility to the individual workmen from whose wages the money is deducted, and that it is therefore his duty to see that proper medical attendance is provided, that is to say, that the money is paid to medical practitioners who give that attendance.

(iii) As to the right of workmen to refuse to allow such deduction from their wages.

At Ebbw Vale about 1,000 workmen gave notice to the Company that they objected to the money deducted from their wages being paid any longer to a Committee of workmen who had dismissed the doctor formerly employed in that district. The workmen in the district in question preferred to retain their old doctor, and demanded that the sums deducted from their wages be paid to him direct. The Manager of the Company, however, has stated that it is a *condition of employment* that the deductions from the wages should be made, and should be paid into the fund controlled by the Workmen's Committee.

Making Agreements under the Truck Acts a Condition of Employment.

5. Of the foregoing questions, the most important, perhaps, is that as to whether it should be made a condition of employment that workmen should agree to permit deductions from their wages for the provision of medical attendance, and should agree that that medical attendance should be provided in a specified manner, thus compelling them to permit a portion of their wages to be devoted to paying for medical attendance under a system, or by a medical practitioner, of which or of whom they may possibly not approve.

It will be seen that two distinct questions are involved, namely, first, whether the workman ought to be compelled, as a condition of employment, to enter into a contract to permit deductions from his wages for medical attendance, and secondly, whether he should be compelled to accept such attendance from a medical practitioner whom he might personally not wish to employ, under penalty of losing the benefit of the money deducted from his wages.

Each of these questions may be regarded from the standpoints both of whether such compulsion is legal under the Truck Acts, and whether it is according to public policy that there should be such compulsion.

Compulsion to Contribute.

6. Considering the matter, not in its legal aspects under the present Truck Acts, but on broad grounds of public policy, and dealing first with the question whether a *consent to deduction from wages for medical attendance* should be made a *condition of employment*, it is contended in favour of compulsion that it is to the interests of the general body of workmen, and to the interest of the average individual workman, regarding his life as a whole, that such an obligation should be imposed. In the absence of compulsion, there is a temptation for young unmarried men, who personally need little medical attendance, to refuse to contribute to funds for the provision of medical attendance, disregarding the fact that in the natural course of events the majority of them will become married men with families, needing assistance from their fellows in order that adequate medical attendance may be provided. In the medical profession it appears to be generally felt among those who have considered the subject, that compulsion is justified on this ground, and could be justified on no other.

Choice of Doctor by Individual Workman.

7. As to the second question, namely, whether the contributing workman should be compelled to employ a doctor chosen by the employer, or by ballot of the body of workmen, or by a Committee appointed by the workmen, there are some differences of opinion in the medical profession.

The conclusion arrived at by the British Medical Association, as the result of enquiries and deliberations extending over three years, has been that, generally speaking, medical attendance under contracts of any kind will be most satisfactorily given when the individual patient is allowed, so far as the circumstances of the district permit, to choose his own doctor. It is considered that such an arrangement affords the best incentive to the individual practitioner to do the best he can for his patient. It must, however, be stated that, with reference to the special class of contracts now under consideration, there is an opinion among members of the profession in some districts that the employment of one or two doctors to attend all the workmen in a colliery or works will secure better medical attendance, as affording greater security to the medical practitioner, and better prospects of a permanent career, and therefore a greater inducement to men of ability to devote themselves to such work.

Differences between Systems which Exclude Individual Choice.

8. A distinction must be made between the three systems under which an individual doctor or a small number of doctors are employed to attend the whole body of workmen, the individual workman being allowed no personal choice. The three systems as above described (paragraph 3, page 1) are (*a*) appointment by the employer, (*c*) appointment by direct vote of the general body of workmen, (*d*) appointment by a workmen's Committee. Of these three systems, the system (*c*) is probably regarded with the greatest favour by the medical profession generally, and the greatest difficulties have arisen with regard to the system (*d*). The objections to the system (*d*) apply particularly to those cases in which doctors are employed at fixed salaries, the balance of the funds after payment of such salaries being devoted to the purchase of drugs, payment of fees to Committee men, and other purposes. The objections are based not upon theoretical grounds, but upon grounds of experience of the results.

January 8th, 1908.

APPENDIX C.

DOGS PROTECTION BILL.

MEMORANDUM.

1. Regard for the special qualities of dogs, combined with certain erroneous assumptions prevalent as to the degree of suffering caused by experiments upon living animals, has naturally led to inquiry whether the use of dogs for scientific investigations is necessary. Bills for the prohibition of such researches are before the House of Commons.

2. The British Medical Association has therefore drawn up, for the information of members of both Houses of Parliament, a concise statement of (i) the facts that show that such prohibition would seriously impede the advancement of knowledge, and (ii) the truth as to the amount of suffering inflicted upon dogs by experiments under modern conditions.

3. The distinction which it is proposed to make between dogs and other animals implies recognition of the necessity for experiments upon some living animals.

4. For many experiments some animals cannot be used because of their low type of organisation or small size. The organs of the dog, on the contrary, resemble in many respects those of the human being, and for many experiments the ease with which dogs may be procured and the suitability of their tissues for observation, make them the only kind of animal available for the purpose.

5. The following are examples of researches of essential importance which could not have been carried out had experiments upon dogs been prohibited, namely:—

(i) Research as to the mechanism of the production of lymph in the body.

(ii) Investigation of the causation and interpretation of the condition of the heart sounds (necessary for the purpose of diagnosis of the condition of the heart in human beings); investigation of the pulse of the work of the heart, and of relations between the blood pressures in the heart and in the blood vessels respectively.

(iii) Researches which have given the clue to the interpretation of the laws governing intestinal movements.

(iv) Investigation of the best methods of carrying on artificial respiration for the resuscitation of partly drowned persons.

(v) Researches on the physiology of digestion which have revolutionised the conception of this process and must determine the whole treatment of disorders of digestion.

6. Most of the researches referred to in the preceding paragraph involved little or no pain. By the introduction of anæsthetics, narcotics and antiseptics the vast majority of such physiological experiments have been rendered painless.

The avoidance of the infliction of pain is not only imposed primarily by motives of humanity, but is also essential for accuracy of experimentation.

7. It is necessary to point out that the lives of dogs are regularly taken from motives of humanity without serving any useful purpose. At the Dogs Home, Battersea, mainly kept up by charitable contributions, 20,000 dogs are destroyed annually in the lethal chamber. In experiments in the physiological laboratory painless death is usually attained as completely as in the Dogs Home, and at the same time the death is utilized for the relief of suffering in mankind and in the lower animals.

8. In conclusion, the use of the dog is indispensable for the furtherance of our knowledge of many functions of the body. Any legal prohibition of the use of dogs for experimental purposes would, therefore, deal an irremediable blow to the advance of Physiology and medical science in this country; while the only practical result to the dog would be that a few more would be killed in the lethal chamber at the Battersea Dogs Home.

May, 1908.

APPENDIX D.

AMENDMENT OF THE INDECENT ADVERTISEMENTS ACT.

MEMORIAL TO THE RIGHT HONOURABLE A. AKERS DOUGLAS, M.P.,

His Majesty's Secretary of State for Home Affairs.

THE British Medical Association would most respectfully call the attention of the Home Secretary to the necessity of amending the Indecent Advertisements Acts of 1889, by adding provisions which shall bring within its scope advertisements of an indecent nature that appear in the public press, and also certain advertisements, objectionable as regards subject matter, and the exposure to public view of certain appliances, to which the Act at present appears not to apply.

As the law stands advertisements can be printed with impunity in the public press, which, if contained in handbills generally distributed, or if exhibited by posters, would render their authors liable to the penalties named in the Act, and there is apparently no provision against the injury to public morals which results from advertisements relating to means for the prevention of conception or the interruption of pregnancy, nor from the exposure in shop windows of appliances devised for these purposes.

In the course of their professional duties medical men become familiar with the evils which arise through advertisements of the character alluded to in this Memorandum, and on their behalf the Association has to express the opinion that as much harm is done to the community by such advertisements as by those which the Act at present prohibits.

If the Home Secretary shall be of opinion that the law should be altered in the directions proposed by the Association, the Association recognizes that the Home Office would be the most competent to decide the exact form in which such alterations should be made, but it appears convenient to suggest the following specific amendments of the present Act in order to indicate the precise nature of the reforms which the Association thinks desirable:

(*a*) **In Clause 3, in line 9 of the Clause, after the word "shop" insert the words "or whosoever shall print**

or cause to be printed or shall publish or cause to be published in any newspaper or printed publication:"

(*b*) In clause 3, line 9, after the word "matter," insert the words "or exhibit to public view in the window of any house or shop any appliance for improper purposes such as procuring abortion or promoting miscarriage or preventing conception, or relating to the sale of drugs, medicines, or appliances for such purposes as aforesaid:"

(*c*) In Clause 5, line 3 of the Clause, after the word "intercourse" insert "or relating to the sale of drugs, medicines, or appliances for improper purposes, such as procuring abortion or promoting miscarriage or preventing conception, or which by suggestion shall imply that such drugs, medicines, or appliances can be used for such purposes."

November, 1905.

APPENDIX E.

Local Government Board,
Whitehall, S.W.,
18th February, 1908.

Sir,—I am directed by the Local Government Board to inform you that they have considered your appeal against the decision of Mr. Cockerton, District Auditor, in allowing as lawful certain items of expenditure charged in the accounts of the London County Council for the year ended the 31st March, 1906, together with the reasons assigned by him for his decision.

The Auditor stated his reasons for his decision in the following terms:—

"In the account for the year ended at 31st March, 1906, of the Council of the Administrative County of London, the following amounts were entered and charged as paid to George Percival Wyatt, one of the Coroners of the said County, in respect of fees paid by him to the Medical Superintendent of the Infirmary of the Parish of Saint Giles, Camberwell, for giving evidence respecting the death of certain persons who died in the said Infirmary:—

Date of Inquest.	Name of Deceased.	Amount of Fee.
		£ s. d.
11th December, 1905	Albert A. Dean ...	1 1 0
15th ditto	Charles Summersby	1 1 0
28th ditto	Mary Calman ...	1 1 0

The sum of £2 2s. was also paid by the said Coroner to the said Medical Superintendent for making a *post-mortem* examination of the body and for giving evidence respecting the death of Edward Gibbs, who died in the said Infirmary.

Dr. A. R. Rudd, a ratepayer in the said county, attended before me and objected to the allowance of the said amounts in the accounts of the said County Council.

I allowed the whole of the said amounts as a charge in the said accounts for the following reasons:

1. Because the Infirmary of the said parish is not a "Public Hospital Infirmary or other medical institution" within the meaning of Clause 2 of Section 22 of the Coroners Act, 1837.

2. Because the District Auditor has no power to disallow payments made by Coroners to Medical Practitioners for giving evidence at inquests held by such Coroners.

3. Because the Medical Superintendent of the said Infirmary is legally entitled to be paid the said fees.

4 Because the Local Authority are compelled by law to repay to the said Coroner actual disbursements made by him as fees to Medical Witnesses after the termination of the inquest, whether it was proper that such inquest should be held or not (R *v.* Gloucestershire J.J. 7E. and B 805, 27 L.J.M.C. 15).

5. Because the said County Council had full and sufficient authority in law to make the said payments and to charge the same to their accounts as aforesaid."

It does not appear to the Board that the effect of Section 22 (2) of the Coroners Act, 1887, is to prohibit the payment of such fees as those in question to the medical officers of Poor-law infirmaries. In their opinion the auditor's decision is supported by the first, third, and fifth reasons assigned by him, and accordingly they confirm the allowance as lawful.

The copy of the statute which accompanied your letter of the 2nd July last is herewith returned.

I am, Sir,
Your obedient servant,
(Signed) THOMAS PITTS,
Assistant Secretary.

A. Rudd, Esq.
February 26th, 1908.

APPENDIX F.

RIDERS TO VERDICTS RETURNED BY CORONERS' JURIES.

Questions Submitted by South Manchester Division, and Replies of Solicitor.

Question 1. "What is the legal power of a jury to add a rider?"

A Coroner's Jury is empanelled for the purpose of inquiring into the cause of the death of the person upon whose body the inquest is being held. Their duty, therefore, ends in finding and recording their verdict as to the cause of death, and it is to be regarded as a gratuitous proceeding on their part and outside their duties as a jury to add to their verdict an expression of their own personal opinion in the form of a Rider upon any matter which has arisen in the course of the inquiry.

To this general rule, however, there is the following exception, namely:

In the cases of accidents in mines or in connexion with explosives, where the inquest is not attended by any person on behalf of the Secretary of State, the Coroner is, by Statute, directed to send notice to the Inspector of the District of any neglect contributing to the accident, or of any defect appearing to require a remedy.

Question 2. "What is the legal position of the Press in circulating it?"

A Coroner's Court is one to which the Press are always admitted. The Legislature accords to the Press protection in reporting the proceedings of such a Court provided that the account of them is bona fide fair and accurate. I am of opinion that if the Jury, after recording their Verdict, add a Rider, and this is expressed in open Court, the Press would not incur legal liability in giving publicity to it.

Question 3. "Can you suggest any scheme that the Association might adopt to prevent the occurrence of these frequently undeserved censures?"

A Coroner enjoys the widest possible powers in his own Court, and has, according to his individual personality, varying degree of control over his Jury. Some Coroners refuse to allow Riders to Verdicts to be given at all, whilst others encourage them. It is to be understood, however, that no Rider which is given forms any part of the Verdict itself and the Coroner should not, in the due and proper discharge of his duties accept it or record it as such. It will, therefore, be appreciated that the remedy for the practices which exist lies with the Coroners themselves in a uniform course being adopted by them.

The position in this respect would perhaps be most effectively dealt with through the medium of the controlling authority of the Lord Chancellor, and if an official pronouncement on the subject were obtained from such source and were circulated to all Coroners within the Lord Chancellor's jurisdiction it might be the means of preventing so frequent a recurrence of that which is complained of.

CENTRAL ETHICAL COMMITTEE.

ANNUAL REPORT TO REPRESENTATIVE MEETING, 1908.

1. The Committee has held 5 meetings since the Annual Representative Meeting.

2. The labours of the Committee have been greatly assisted by the work of the Standing Sub-Committee, composed of the Chairman and the London members of the Committee, who have met every month.

I.—MATTERS ARISING OUT OF RESOLUTIONS OF ANNUAL REPRESENTATIVE MEETING, 1907.

3. The Committee has duly considered the following Minutes of the Annual Representative Meeting at Exeter:—

A.—*Presentation of Cases to General Medical Council.*

70. Resolved, by 91 votes to 2: That this Meeting approve the action of the Ethical Committee, and express the opinion that, so long as action by the Association as complainant before the General Medical Council is desirable on other grounds, it should not be discontinued only on the ground of the position of Members of the Association who are Members of the General Medical Council.

71. That in view of the letter of the President of the General Medical Council, and in view of Counsel's opinion, placed before the Central Council at the Meeting of June 5th last, this Representative Meeting do hereby rescind for the present the Resolution (Minute 312) passed at the Annual Representative Meeting of 1906, in the following terms, viz.:—

> That it is absolutely necessary, in the interests of the Medical Profession, that the Association should take up cases of a penal nature before the General Medical Council, as Complainants.

The motion was lost by 98 votes to 1.

B.—*Ethics of Medical Consultation.*

73. That the Report on the Ethics of Medical Consultation be referred again to the Central Ethical Committee with instructions to take into consideration such matters as the meeting may direct and sent again to the Divisions.

76. That all the recommendations by Divisions relative to the Report on Consultation be referred to the Ethical Committee, with instructions to take into consideration all the matters contained in the recommendations.

C.—*Prevention of Corruption Act.*

78. That the paragraph in the Annual Report of the Committee with reference to the Prevention of Corruption Act be approved.

79. That a copy of the Memorandum be sent to the Honorary Secretary of every Branch and Division, with instructions to draw the attention of members to it, and that the Memorandum be published in the JOURNAL.

D.—*Definition of the term "Hospital."*

82. Upon consideration of the paragraph in the Report as to the definition of the term "Hospital,"

Resolved: That the definition of the term "Hospital" be referred to the Divisions and Branches, with a statement by the Ethical Committee of the reasons for which such a definition is desirable.

E.—*Ethical Rules of Divisions and Branches.*

84. That the attention of the Divisions and Branches be drawn to the great importance of the adoption by them of proper Ethical Rules, including the "Bradford" Rules.

F.—*Extension of Rule "Z."*

86. That the amended Rule "Z" be circulated to the Honorary Secretaries of Divisions and Branches.

A.—*Presentation of Cases to General Medical Council.*

4. The decision of the Representative Meeting of 1906, as to the necessity of the British Medical Association acting in suitable cases as complainant before the General Medical Council, having been confirmed by the Resolutions 70 and 71, above cited, the Committee submitted in due course for the consideration of the Council recommendations to give practical effect thereto.

These were adopted by the Council as follows:—

> "That the Council authorises the Central Ethical Committee to act as complainant before the General Medical Council in suitable cases."
>
> "That the Council instruct the Central Ethical Committee to act on behalf of the Association in giving effect to the instructions of the Representative Meeting."
>
> "That the Central Ethical Committee be authorised to incur an expenditure not exceeding £25 in the presentation of any single case to the General Medical Council."
>
> "That the Central Ethical Committee be authorised to depute to its Standing Sub-Committee the duty of dealing with such cases on behalf of the Committee in emergency."

The Committee pursuant to these instructions has investigated two cases of complaints against medical practitioners, submitted with the view of their being brought before the General Medical Council. In each case, after full enquiry the Committee found that the evidence available was insufficient to justify the Association in acting as complainant.

B.—*Ethics of Medical Consultation.*

5. The Report on the Ethics of Consultation has been completely revised, attention being duly given to the several recommendations by Divisions which were before the Representative Meeting at Exeter, and were referred to the Committee.

The Committee has considered it advisable to separate from the Report as now submitted, the suggestions contained in the first draft as to the recognition of a class of members of the profession, to be specially designated "Consultants."

The discussions in the Divisions upon the Report in its earlier form showed that the inclusion of this section gave rise to misapprehension as to the general objects of the Report, and the effects which might be anticipated from its adoption. The Committee recommends, however, that after the Report, as now submitted or as amended, has been officially approved by the Representative Meeting, the Representative Meeting should give instructions for a special Report to be prepared upon the desirability of the recognition of a special class of medical practitioners under the title of "Consultants," distinguished by the fact that they confine their practice to the treatment of patients in co-operation with other practitioners, and upon the best means to be taken to bring about such recognition, if considered desirable.

C.—*Prevention of Corruption Act.*

6. The Report on the Prevention of Corruption Act has been circulated to the Divisions for their information, and the Committee trusts that it may be found of assistance in enabling practitioners to avoid dangers which might not otherwise have been realised.

The Committee has under consideration the advisability of taking proceedings in a case in which a tradesman has, through a circular widely distributed, offered an illicit commission to medical practitioners as an inducement to promote the sale of an article of food prepared by him.

D.—*Definition of the term "Hospital."*

7. The Report on the definition of the term "Hospital" has been issued to the Divisions, as directed by the Representative Meeting, together with an explanatory statement by the Committee of the reasons why the adoption of such a definition is desirable. They will come before the Representative Meeting in due course.

E.—*Ethical Rules of Divisions and Branches.*

8. Upon consideration of the instruction of the Representative Meeting, Minutes 84 and 86, it has appeared to the Committee desirable, before circulating the Rules to Divisions and Branches as directed, to revise the various model rules which have from time to time been drawn up. Some of these were drafted immediately after the adoption of the

new constitution, when the ethical procedure of Divisions and Branches could be considered in anticipation only. The Association has now had almost six years experience of the kind of work which a body so organised can do to promote the observance of correct principles of professional conduct. It has been thought advisable that this experience should now be applied to the revision of the Model Rules and the development of a code suitable to the circumstances of a large majority of the Divisions and Branches.

The experience of the past year has again illustrated repeatedly the disadvantage caused to Divisions and Branches, when dealing with ethical cases, through not having previously adopted suitable Rules.

Cases have been brought to the notice of the Committee in which the action of a Division has been practically paralysed, either through Rules not having been adopted, or through the fact of the Division having adopted Rules of a peculiar kind, ignoring the considerations based upon experience which have led the Central Ethical Committee to draft the Model Rules in the form in which they have been issued.

The Committee is not, however, prepared to advise at present that the adoption of the revised Model Rules should be made actually obligatory upon every Division and Branch. Local circumstances differ so widely that it is desirable to retain, at all events for a time, the power of making exceptions. But the Committee, subject to such special instructions as it may receive, will feel it to be its duty in future to advise the Council not to sanction Rules differing from the Model Rules, except upon the clearest evidence of special local circumstances necessitating the proposed departure.

Owing to the numerous demands upon the time of the Committee in the past year and the large amount of work entailed in a thorough revision of the Rules the Committee think it well to hold over their Report embodying a complete code until a future date.

II. Matters Arising under the General Reference to the Committee.

Cases of Proposed Expulsion.

9. It has been the duty of the Committee again to report to the Council upon three cases of proposed expulsion of members.

Two of these were cases of members, one of whom had accepted, and the other had continued to hold, appointments that had been condemned by resolution duly passed in accordance with the Rules of the Division, of which they were members.

In one of these cases the member was expelled by the Council on the recommendation of the Committee. In the other case the Committee recommended and the Council approved that the member should be afforded the opportunity of resigning.

The third case was that of a member, who was found by the Division to which he belonged, by the Branch Council, and by the Central Ethical Committee, to have acted unprofessionally in making, in public, remarks to the detriment of a fellow practitioner, and was also proved to have acted unprofessionally in respect of the circulation of certain handbills. He was expelled from membership.

Proposed Alterations of By-laws affecting the Reference to the Committee.

10. In connexion with the revision of By-law 41, relating to the position and duties of Standing Committees, which has been carried out by the Organization Committee pursuant to instructions of the Council, opportunity has been taken to revise the reference to the Central Ethical Committee, in order to remove certain difficulties which have been found to arise, through ambiguities in the reference as previously stated. The new reference will make clear the authority of the Committee, subject to appeal to the Council, to adjudicate in any question of professional conduct in which a member of the Association is concerned, and also to adjudicate in cases affecting non-members. The new form of reference also makes clear the position, which it is thought desirable that the Council should occupy, as a court of appeal from the decisions of the Committee.

Up to the present the Council has technically exercised a supervision over all the work of the Central Ethical Committee, as of other Committees, through the system of presentation of quarterly reports in which reference is made to all work done. In view, however, of the large amount of work requiring the attention of the Council at its quarterly meetings, the supervision that can in this way be exercised over the detail of the work of one Committee is necessarily small. Under the By-law in its proposed amended form the Council would be called upon to investigate fully any case in which a member formally appealed from a decision of the Ethical Committee. Such cases would be completely retried, while in all other cases the decision of the Committee would be final.

Resolutions of the International Association of the Medical Press.

11. At the request of the Editor of the British Medical Journal the Central Ethical Committee has expressed its opinion upon the following resolutions of the International Association of the Medical Press:—

1. "The International Association of the Medical Press, taking into consideration the articles written by medical men in favour of medicinal products, urges the national associations to exchange with one another information on the character of these articles and of their authors."

2. "The International Association of the Medical Press urges all the national associations of the medical press to come to an agreement in regard to the medical advertisements that should be refused."

3. "The Committee of the International Association of the Medical Press, taking into consideration the question of the rights of authors, is of opinion that the author of an article published in a medical journal has not the right to authorise commercial firms to reproduce his article without having previously obtained the sanction of the editor or publisher."

The Committee, recognising the necessity in the public interest of the observance of Rules 1 and 2 by medical journals, and of Rule 3 by members of the profession generally, has expressed its cordial approval of the resolutions in question, and recommends that the Annual Representative Meeting should give to these resolutions the weight of its approval.

Cases Illustrating Questions of Principle.

12. The Committee has dealt with . . . . cases in which advice was desired by individual members of the Association or of the profession, or in which complaints were made respecting the professional conduct of individual members. Many of these it has been possible to deal with in accordance with precedents already laid down, and for this or for other reasons they do not need special mention.

The following cases are selected for such mention as illustrating points which it is thought desirable to bring into prominence.

Operation without Consultation with Ordinary Attendant.

13. After arrangements had been made between a general practitioner and an operating surgeon for operation upon a patient of the former, the patient, having apparently taken offence at certain suggestions made to him by the general practitioner, gave the surgeon to understand that he had ceased to be under the care of the general practitioner, and the surgeon operated without further communication with the practitioner. The general practitioner having been subsequently informed by the surgeon of the result of the operation, complained of having been ignored in the manner stated, and the case was ultimately referred to the Central Ethical Committee. Certain questions of fact having been decided by the Division of which the surgeon is a member, the Central Ethical Committee expressed the opinion that the surgeon ought not to have accepted the patient's statement as to his having ceased to be under the care of his ordinary medical attendant without communicating directly with the latter. This opinion was duly communicated to the parties, but regard being had to all the circumstances of the case, it was not considered necessary to take any further action.

Consultation with Homœopaths.

14. The Committee has considered an application for advice from a member who stated that having been requested to act as medical attendant of a patient in co-operation with a homœopathic practitioner and declined, believing such co-operation to be generally regarded as unethical, he had been informed that the homœopathic practitioner in question had been met in consultation by leading members of the profession, and another local practitioner had taken charge of the case upon the terms which he had declined. He desired to be informed as to the Rules, if any, which had been laid down by the Association with regard to the matter.

The Committee has advised that up to the present no Rule has been laid down by the Association as regards professional recognition of practitioners practising homœopathy, that professional opinion both within and without the Association differs so widely on the subject, that some Branches of the Association refuse to elect homœopathic practitioners as members, while others elect them, and that the only definite Rule that has been suggested is that proposed in the Report on the Ethics of Consultation to the effect, namely : That it is the duty of a practitioner to refuse to meet in consultation a practitioner whose exclusive profession of any peculiar system of treatment would render consultation futile.

Procedure in cases of Supersession.

15. The Committee has approved resolutions adopted by a Division for the guidance of its own members regulating the procedure in cases of supersession of one medical practitioner by another. The principle laid down in the resolutions so approved is that a medical practitioner before superseding another in the care of a patient must satisfy himself that such other practitioner has been duly informed by those responsible for the patient of the fact that his services will no longer be required.

Setting up in Opposition after Negotiations for Partnership.

16. A medical practitioner applied to the Committee for advice as to whether he would be justified in commencing practice on his own account in the same district as a practitioner with whom he had been in negotiation with a view to partnership, and for whom he had acted as locum tenens for one week.

The Committee considered that in such a case it was for the practitioner already established to show by evidence that the other practitioner had during the negotiations obtained either such information of a confidential character, or such introductions, as would give him an unfair advantage in commencing practice in opposition. The Committee having duly considered full statements of facts by both parties, held that the facts submitted did not show such information or introductions to have been given, and that locum tenency for one week should not in itself preclude commencing in practice.

The Committee, therefore, advised that upon the facts submitted there was nothing to debar the applicant from commencing practice in the same district as the practitioner with whom he had been in negotiation.

Private Institutions for Medical Treatment under Lay Control.

17. The relationship of members of the medical profession to institutions for medical treatment, owned or managed by laymen, is one of great difficulty. In a case referred to the Committee in which a member of the Association had received a request to act as medical officer of such an institution, the advice given was as follows :—

(*a*) That as a condition of acting as medical officer he should obtain an undertaking that he should have complete control over the treatment of all patients ; that the conditions of admission of patients should be subject to his approval, especially as regards the correspondence with the previous medical advisers of such patients and that no advertisements of the Institution should be issued without his knowledge and consent.

(*b*) That he should take action to secure the support of the local profession and Division in case the above conditions were refused.

Medical Practice and Chemist's Business carried on in the same House.

18. The Committee has advised that there would be no objection to the practice of a medical man being carried on in the same house as a chemist's business, provided that the parts of the house used for these purposes were entirely separate, and that the business was not used to advertise the practice.

Signed Newspaper Articles by Medical Men.

19. In a case to which the attention of the Committee was drawn, of the publication in a lay newspaper of an article dealing with medical subjects bearing the signature of the writer, a medical practitioner, the Committee considered that the principal issue was that of such undue advantage, if any, as the writer, if engaged in actual practice, might have obtained over his fellow practitioners through the advertisement thus obtained. It having been ascertained by a reference to the Division of which he was a member that he could not be considered to be engaged in practice the Committee acquitted him of blame.

Publication of Lists of "Consultants."

20. The attention of the Committee has again been drawn to publications containing so-called "Lists of Consultants," issued by trading firms. The Committee has advised that there would be no objection to the publication of a simple directory containing the names of *all* those who hold some definite official position, as for example, honorary medical officers of hospitals in the country generally, or in any specified district, but that there should be no selection in the preparation of such lists which should give one practitioner an undue preference over another, nor should ambiguous titles such as that of "consultant" be employed ; also that it is not desirable to include in such limited lists references to published works, nor in fact any information beyond names, addresses and appointments held. The publisher of one such list has revised it in accordance with the opinion of the Committee. In another case the publisher has shown an unwillingness to meet the views of the Committee, and the question of the most effective action in this and other similar cases is still under consideration.

Testimonials by Medical Practitioners to Proprietary Articles.

21. Several cases have been brought to the notice of the Committee in which members of the Association or other members of the profession have unguardedly written letters in commendation of proprietary articles, which letters have subsequently been utilised by the manufacturers for publication as testimonials.

The Committee recommends that members of the Association should refuse to write such commendatory letters or to express any opinion as to the merits of proprietary articles unless under a guarantee enforcible at law that their statements will not be published for purposes of advertisement.

Contract Practice—Prizes to Club Members.

22. At the request of the Contract Practice Sub-Committee the Committee has advised upon the general question of principle involved in the offer by medical officers of clubs of prizes to those members who bring in the largest number of new members in a given period. The Committee has expressed the opinion, that it is unprofessional for the medical officer of a club to hold out to the members any kind of reward or inducement for obtaining new members.

Contract Practice—Appointments for fixed Periods.

23. The Committee has been called upon to consider a case of some interest affecting the right of medical practitioners to become candidates for an appointment which becomes automatically vacant at fixed periods. The appointment in question was that of local surgeon to the Great Western Railway Provident Society. Such surgeons are appointed under the Rules for five years, the holder being notified six months prior to the expiration of this period that a new election will then take place. In the case submitted the holder, Dr. "A." had for a time been in partnership with Dr. "B," and both after the dissolution continued to practice in the same town. One of the provisions of the dissolution of partnership was that Dr. "A" should retain the Great Western Railway Provident Club, while Dr. "B" took over certain other club appointments. A section of the members of the Club had become dissatisfied with Dr. "A," and determined to endeavour to obtain another medical officer, approaching Dr. "B" for the purpose. Dr. "B," having been much pressed to stand for the appointment, refused to do so as being prohibited by the deed of dissolution. From his statement it appeared that a third practitioner, Dr. "C," had also been approached, and that a ballot had been taken of the men, which gave Dr. "C" a decided majority over Dr. "A," but Dr. "C" considering the support given to him insufficient had declined to take the appointment, whereupon Dr. "B" was again approached ; in these circumstances he applied to the Central Ethical Committee for advice. Statements having been obtained from all the practitioners concerned, the Committee advised that Dr. "B" could not take the appointment unless Dr. "A" would agree for some suitable consideration to waive his right of veto. The Committee further advised that the facts before them did not indicate any grounds which should debar any member of the profession in the district, other than Dr. "B," from becoming a candidate for the appointment. It will be seen that this decision implies that in the opinion of the Committee an appointment which becomes by its terms automatically vacant at the expiration of a fixed period, suitable notice of

the proposed new election being given, must be considered to be open for competition to any member of the profession, unless there are special circumstances preventing an individual practitioner, or members of the profession generally, from becoming candidates. Examples of such special circumstances would be agreements between individuals as in the present case, general agreements among the local profession, or the adoption by the local Division of special resolutions under its Rules.

Procedure: Support from Members of other Divisions in respect of Disputes as to Appointment.

24. The Honorary Secretary of a Division applied to the Committee for advice as to the procedure which it would be necessary to carry out in order to deter consultants, who were members of neighbouring Divisions, from meeting medical officers of a Friendly Society's organisation to which exception had been taken by a resolution of a local Medical Society, the Society including most members of the local profession. The Committee advised that any action of the kind desired, to be effective under the Regulations of the Association, must be taken through the local Division in accordance with the Rules which have been approved by the Council for the purpose. Attention was drawn to the advantage of dealing with such matters through the Division from the beginning, rather than through separate local Medical Societies which could not afford the same facilities for combined action in matters in which the support of medical men in different parts of the country was required.

Procedure: Disclosure of Name of Informant.

25. The question was raised of the right of a member against whom any complaint is made to be informed of the name of the person or persons through whose instrumentality the matter was brought to the notice of the Committee. The Committee held, that it was not desirable that the name of the informant should be given unless the case rested in some degree upon his testimony.

Cases affecting Non-Members.

26. Several cases dealt with during the year have afforded illustrations of the principles underlying the investigation by the Association of ethical cases affecting non-members, and the procedure that should be adopted in reference thereto.

(i.) *Undertaking by Non-Members.*

At the commencement of the year the Committee was called upon to deal with a case in which an assistant, not a member of the Association, had commenced practice in opposition to his former principal (not having signed a bond), and was alleged to have employed unprofessional methods to attract to himself patients of his former principal. At the suggestion of the Central Ethical Committee the case was investigated by the Committee of the Division. A suitable form was drawn up, under legal advice, for the signature of the non-member, whereby he undertook to abide by the decision of the Division, who were then able to settle the case to the satisfaction of both parties.

(ii.) *Difficulties as to Rules of Procedure.*

Several Divisions have submitted difficulties which they conceived to exist owing to the fact that the Model Rules of Procedure contained no provision for dealing with cases affecting non-members. The reason for such omission is that at the time the Rules were drafted the question of the possibility or advisability of the Association undertaking to investigate, or adjudicate in, cases affecting non-members had not been considered. The Committee, in its revision of the Model Rules, is making provision for such investigation. In the meantime it has been pointed out to the Divisions that the fact that the rules contain no explicit reference to cases affecting non-members does not in itself debar the Association from dealing with such cases, but merely means that in such investigations the procedure has not up to the present been formulated by rule. Divisions have been advised to follow the same procedure as in dealing with cases affecting members with the exception that where non-members are concerned a written undertaking must be obtained from such non-members to abide by the decision of the Division, subject to an appeal by either party to the Branch or the Central Ethical Committee together with an undertaking not to make any use of the information obtained in the course of the enquiry for the purpose of any legal proceedings.

(iii.) *Refusal to accept Adjudication by Association.*

In a case in which a non-member declined to be a party to the investigation of a case affecting himself by the local Division, the practitioner in question was informed that the request to him to be a party to the investigation was made in his own interest in order that there might be no danger of his being condemned unheard, and that his refusal to give such assistance would not preclude the Division from proceeding with an investigation for the purpose of arriving at its own conclusions as to his conduct and advising the members of the profession accordingly as to their attitude towards him.

Appeal from the Committee to the Representative Meeting.

27. Two members have expressed dissatisfaction with findings of the Central Ethical Committee, which had been reported to the Council, and are referred to in this Report. They were advised that it would be open to them to bring before their respective Divisions the question of giving notice of motion to the Annual Representative Meeting to disagree with the finding of the Central Ethical Committee.

R. H. KINSEY,
Chairman of the Central Ethical Committee.

June 16th, 1908.

UNITED KINGDOM HOSPITALS CONFERENCE.

DECISIONS OF THE UNITED KINGDOM HOSPITALS CONFERENCE HELD AT UNIVERSITY COLLEGE, LONDON, ON APRIL 1ST AND 2ND, 1908.

1. THAT the report of the proceedings of the Committee since the last Conference be approved.

2. That it is desirable to supply gratuitous hospital treatment to those who are provided for by the Workmen's Compensation Act whom the Hospital Board shall consider unable to pay for medical attendance.

3. That where they can afford to do so, hospital patients ought to be asked to pay for the food, medicine, and bandages supplied to them.

4. That in the opinion of this Conference the appointment of trained hospital almoners constitutes one of the best methods for checking the misuse of hospitals and for rendering more effective the economic value of an out-patient department.

5 That the use of the out-patient department of hospitals by persons able to pay for their own treatment can be most effectually prevented by a close co-operation between hospitals, on the one hand, and provident dispensaries and similar institutions and local medical practitioners on the other.

6. That some definite steps should be taken to ascertain the ability or contrary of each patient at a cottage hospital to pay for his maintenance.

7. That the Conference instruct the Committee to consider how the uniform system of accounts as recommended by the King Edward's Hospital Fund Committee can be made applicable to the requirements of provincial hospitals, and to make recommendations to the next Conference.

8. That this Conference has heard with interest of the scheme of the Bedfordshire Hospital Guild as a means of increasing local interest in the County Hospital, and extending its usefulness by promoting more intelligent efforts for the prevention of disease, and for the better after-care of convalescents.

9. That the consideration of the propriety of the notification of tuberculosis be postponed, and that the Government be asked to appoint a commission to recommend the best way to deal with tuberculosis.

10. That it is desirable that temporary accommodation be provided in hospitals for certain cases of unsoundness of mind for purposes of observation.

11. That a Committee be appointed, composed of 16 non-medical members appointed by this Conference and 16 medical members appointed by the British Medical Association, to continue the work of the Conference in accordance with its resolutions and to organize a Conference in 1909

12. That a Report of the proceedings of the Conference be forwarded to all hospitals in the United Kingdom, and

that those hospitals which had not taken part in this Conference be urged to associate themselves with the movement.

13. That hospitals be requested to make such contributions to the expenses of the movement as the Committee may find necessary.

14. That the members of the Committee appointed by the Conference be as follows:

Mr. Walter Baily, Sir Henry Burdett, K.C.B., Mr. Walter G. Carnt, Lieutenant-Colonel J. G. C. Curtis, Mr. W. A. Dinwiddie, Mr. R. Ball Dodson, Mr. H. Clifford Gosnell, Mr. H. A. Harben, the Hon. Sydney Holland, Mr. Richard Jewson, Sir Riley Lord, Mr. Charles Lupton, Mr. H. Manfield, M.P., Mr. Herbert W. Mason, Lieutenant-Colonel E. Montefiore, and Mr. Leonard D. Rea.

PROPOSALS AS TO THE ADMINISTRATION AND MANAGEMENT OF HOSPITALS AND KINDRED INSTITUTIONS, DRAWN UP BY A JOINT COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION AND OF NON-MEDICAL REPRESENTATIVES OF BOARDS OF MANAGEMENT OF HOSPITALS AND AMENDED BY THE UNITED KINGDOM HOSPITALS CONFERENCE, 1908.

I.—SUGGESTED MODEL PRINCIPLES OF HOSPITAL MANAGEMENT.

1. *Suitability of Patients for Admission.*—That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment. This shall not apply to Poor-law cases.

2. *Subscribers' Letters.*—That the production of subscribers' letters shall cease to be compulsory, and that, where possible, the system shall be abolished.

(**NOTE.**—*Though the first part of this Principle is generally approved, many Hospitals consider the abolition of Subscribers' Letters impracticable, having regard to local conditions. Where this is the case the Committee recommends that the wording of such Letters should be revised so as to secure the object of facilitating the exclusion of unsuitable cases.*)

3. *Investigations as to Suitability.*—That some means of investigation into the circumstances of the applicants for relief, by means of an almoner or other agent, shall be employed in all medical charities.

4. *Recommendations* 1, 2, 3, *to apply to all Patients.*—That the foregoing recommendations apply to both in-patients and out-patients.

5. *Evidence of Suitability.*—That except in emergencies, sufficient evidence shall be obtained on two points: (*a*) That the patient is not in a position to pay for adequate treatment; (*b*) that the case is, from a hospital point of view, suitable for treatment.

6. *Urgent Cases.*—That all cases of serious accident and severe sudden illness shall be attended to on their first application, and, if deemed eligible for further treatment, shall be referred to the appropriate department of the hospital, but, if ineligible, shall then be referred for treatment elsewhere.

7. *Trivial Cases.*—That all cases of trivial accident or illness deemed ineligible for the casualty department shall, after having been seen, be referred for treatment elsewhere.

8. *Medical Inspection of all Cases.*—That, on the first visit, no patient be permitted to leave a hospital without having been seen by a registered medical practitioner.

9. *Limitation of Work of Medical Officers.*—That, where possible, the number of new cases to be seen on any one day by an honorary medical officer shall be limited.

10. *Scope of Special Hospitals.*—That special hospitals shall treat only those cases that come strictly within the scope of their work.

11. *Age Limit for Retirement.*—That in all hospitals there shall be an age limit for the retirement of the medical officers.

12. *Co-operation of Hospitals.*—That hospitals operating in the same area should confer with the object of securing approximately uniform regulations for the prevention of abuse.

13. *Pay Wards.*—That there is no objection to pay wards being connected with voluntary hospitals, provided that they are open to every member of the medical profession, who shall be paid any fee to be arranged by him and his patient.

14. *Scope of Out-patient Departments.*—That consultations shall, as far as possible, be encouraged in out-patient departments.

15. *Reference elsewhere of Unsuitable Cases.*—That all cases not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service,* an approved provident dispensary, or to the relieving officer under the Poor Law.

16. *Co-ordination of Hospitals with Public Medical Services and Provident Dispensaries.*—That there shall be a system of co-ordination between hospitals, on the one hand, and public medical services and provident dispensaries on the other, so that the hospitals shall refer to the public medical services and provident dispensaries cases unsuitable for hospital treatment (see paragraph 15 foregoing), and the public medical services and provident dispensaries shall refer to the hospitals cases for consultation, as well as those requiring hospital treatment and nursing, or specially suitable for purposes of clinical instruction.

17. *Notices to Facilitate Co-operation.*—That notices be posted in out-patient and casualty departments of hospitals calling attention to public medical services or approved provident dispensaries in the neighbourhood.

18. *Reference of Cases for Special Advice.*—That a member of a public medical service or provident dispensary, or other patient referred to a hospital for consultation, with a private note or personally, by a general practitioner in attendance, should be referred back to such medical attendant with a statement of the opinion of the hospital physician or surgeon on the condition of the patient.

19. *Relation of Hospitals to the Poor-law Medical Service.*—That cases of obvious destitution, or cases already in receipt of Poor-law relief, shall, after they have been once seen in the casualty or out-patient department, be referred to the Poor-law relieving officer, unless they should be retained for hospital treatment, and Poor-law patients may be referred to hospitals for consultation, as in the case of public medical service and provident dispensary patients. In these cases payment might be required from the Poor-law Guardians if deemed advisable.

II.—COTTAGE HOSPITALS.

1. *Medical Attendance.*—That, as far as possible, every patient in a cottage hospital have the right to be attended by his usual medical attendant.

2. *Scope of Cottage Hospitals.*—That, except in cases of emergency, cottage hospitals be only open to those who are unable to secure adequate treatment at home.

3. *Contributions by Patients.*—That all persons admitted to cottage hospitals contribute, where possible, towards their maintenance.

4. *Certificate of Suitability for Admission.*—That a certificate signed by a medical practitioner within the area be a sufficient recommendation for admission.

III. SELF-SUPPORTING PUBLIC NURSING HOMES.

1. *Definition and Desirability.*—That it is desirable that self-supporting public nursing homes should be established for patients who, being ineligible for the voluntary hospitals, are yet unable to pay the customary professional fees as well as the charges usually made in private nursing homes.

2. *Management.*—That the management should be vested in a committee on which the medical profession is adequately represented.

3. *Certificates of Suitability for Admission.*—That no patient should be admitted without first producing a certificate of suitability for admission from a medical practitioner, who should whenever possible be the patient's usual medical attendant. If the signatory be not the patient's usual medical attendant, an explanation of the fact should be appended to the certificate.

4. *Choice of Medical Attendant.*—That it shall be open to a patient to select any registered medical practitioner as his attendant.

5. *Assistance to Patients unable to Pay Entire Cost.*—That when the payment made by a patient is insufficient to cover the entire cost of maintenance, or when any question arises as to reduction or remission of fees for professional services, a statement of the financial circumstances necessitating such consideration shall be signed by the patient or near relative, countersigned by the usual medical attendant or some other responsible householder, and submitted to the Committee.

January, 1908.

* The term "public medical service" has been applied in certain districts to organizations for providing medical attendance and medicine for certain sections of the community, in which the service is under the entire control of the medical profession. In other districts services of exactly the same general type have been established under the title of "provident medical associations"; but the generic designation of "public medical service" is preferable, as avoiding confusion with organizations under non-medical control.

The Seventy-Sixth Annual Meeting

of the

BRITISH MEDICAL ASSOCIATION,

SHEFFIELD,

JULY 24th to JULY 31st, 1908.

President:
Henry Davy, M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital.

President-elect:
Simeon Snell, F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

Past-President:
Richard Andrews Reeve, B.A., M.D., LL.D., Dean of the Medical Faculty, University of Toronto.

Chairman of Representative Meetings:
James Alexander Macdonald, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:
Edmund Owen, LL.D., F.R.C.S.Eng., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:
Edwin Rayner, M.D.Lond., F.R.C.S.Eng., Surgeon, Stockport Infirmary, Stockport.

The seventy-sixth Annual Meeting of the British Medical Association will be held at Sheffield in July, 1908. The President's address will be delivered on Tuesday, July 28th, in the Firth Hall of the University, and the Sections will meet on the three following days. The Annual Representative Meeting will begin at the close of the previous week, probably on Friday, July 24th.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by James Kingston Fowler, M.D., F.R.C.P.Lond.
The Address in Surgery will be delivered by Rutherfoord John Pye-Smith, F.R.C.S.Eng.
The Popular Lecture, on "Dust and Disease," will be delivered by Edmund Owen, LL.D., F.R.C.S.Eng.

THE SECTIONS.

The scientific business of the meeting will be conducted in seventeen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the British Medical Journal *without special permission.*

The following is a list of the Sections with the names of the officers and a preliminary list of subjects selected for discussion:

Anatomy.

President: Christopher Addison, M.D., F.R.C.S., Anatomy Department, St. Bartholomew's Hospital, London.

Vice-Presidents: Edward Skinner, M.R.C.S., 124, Devonshire Street, Sheffield; Thomas Hastie Bryce, M.D., F.F.P.S.Glasg., 2, Granby Terrace, Glasgow; Arthur Keith, M.D., F.R.C.S., London Hospital Medical College, London.

Honorary Secretaries: Professor Charles Joseph Patten, M.D., D.Sc., University, Sheffield; Henry Mulrea Johnston, M.B., Anatomical Department, Trinity College, Dublin.

The Section will meet on Wednesday and Thursday, July 29th and 30th, at 10 a.m., adjourning at 1 p.m. each day. A meeting, if considered necessary, will be held on Friday.

On Wednesday, July 29th, Dr. Addison, President of the Section, will deliver the opening address. A discussion on the Mechanism of Respiration in Health and Disease will opened by Dr. Keith.

Thursday, July 30th, will be devoted to reading of papers and the exhibition of specimens.

Pathology.

President: Charles James Martin, M.B., D.Sc., F.R.S., Lister Institute of Preventive Medicine, Chelsea Gardens, London, S.W.

Vice-Presidents: Charles Workman, M.D., F.F.P.S.Glasg. 5, Woodside Terrace, Glasgow; Alexander Grant Russell Foulerton, F.R.C.S., Middlesex Hospital, London; Professor James Martin Beattie, M.D., Pathological Department, University, Sheffield.

Honorary Secretaries: Douglas Stanley, M.D., 21, Broad Street, Birmingham; Ralph Davies Smedley, M.B., School of Medicine, University, Sheffield.

The following is the provisional programme:

Wednesday, July 29th.—A discussion on Cerebro-Spinal Meningitis, to be opened by Dr. W. St. Clair Symmers. Drs. R. M. Buchanan, Gardiner Robb, F. E. Batten, J. A. Arkwright, R. C. Rankin, T. Houston, C. B. Ker, A. G. R. Foulerton, T. G. Horder, Ivy Mackenzie, W. T. Ritchie, Martin, L. Emmett Holt, Stuart McDonald, Professor Kolle, and others will take part.

Thursday, July 30th.—A discussion on Regenerative and Compensatory Changes in the liver, to be opened by Dr. Craven Moore. Professor R. Muir, Drs. H. D. Rolleston, Worthington, James Miller, Lindsay Milne, Stuart McDonald, Charles Workman, David Orr, Wm. Bain, F. G. Bushnell, and others will take part.

Arrangements will be made for the exhibition in the Pathological Museum of specimens illustrating the work of the Section.

PHYSIOLOGY.

President: Professor ERNEST HENRY STARLING, M.D., F.R.C.P., F.R.S., 40, West End Lane, London.

Vice-Presidents: GUSTAV MANN, M.D., 25, Beechcroft Road, Oxford; FREDK. GOWLAND HOPKINS, M.B., F.R.S., Wordsworth Grove, Cambridge.

Honorary Secretaries: Professor JOHN SMYTH MACDONALD, L.R.C.P., University, Sheffield; CHARLES FREDERICK MYERS-WARD, M.R.C.S., Kelvin House, Green Lane, Northwood.

The arrangements made up to the present are as follows:

Wednesday, July 29th, 10 a.m.: Discussion upon Purin Metabolism, to be opened by J. B. Leathes, M.D.Oxon., F.R.C.S., followed by Professor Cushny, F.R.S.; Professor Walker Hall, M.D., F. G. Hopkins, F.R.S., A. P. Luff, M.D., Gustav Mann, M.D., Professor T. Milroy, M.D., Professor Benjamin Moore, E. I. Spriggs, M.D., Chalmers Watson, M.D.

Thursday, July 30th, 10 a.m.: Dr. J. S. Haldane, F.R.S., will open a discussion upon the Causes of Dyspnoea, in which the following propose to take part: A. E. Boycott, M.A., M.D., Professor Cushny, F.R.S., Leonard Hill, F.R.S., James Mackenzie, M.D., M. S. Pembrey, M.A., M.D., F. H. Scott, M.D.

Friday, July 31st, 10 a.m., in the Firth Hall: Discussion upon the Scientific Education of the Medical Student. Opener, the President, Professor E. H. Starling, F.R.S., to be followed by Professor H. E. Armstrong, F.R.S.; Professor A. R. Cushny, F.R.S., Leonard Hill, F.R.S., Professor William Osler, F.R.S., Sir Felix Semon, M.D., Professor C. S. Sherrington, F.R.S.

On each of these days papers will be read at the close of the discussions.

MEDICINE.

President: WILLIAM DYSON, M.D., Brooke House, Gell Street, Sheffield.

Vice-Presidents: DUNCAN BURGESS, M.B., F.R.C.P., 442, Glossop Road, Sheffield; WILLIAM SMITH PORTER, M.D., 283, Glossop Road, Sheffield; JAMES CRAIG, M.D., F.R.C.P.I., 18, Merrion Square, Dublin; FREDERICK JOHN SMITH, M.D., F.R.C.P., 138, Harley Street, London.

Honorary Secretaries: ARTHUR JOHN HALL, M.D., F.R.C.P., 342, Glossop Road, Sheffield; Sir JOHN FRANCIS HARPIN BROADBENT, Bart., M.D., F.R.C.P., 35, Seymour Street, Portman Square, London; ALEXANDER DINGWALL FORDYCE, M.D., F.R.C.P.Edin., 19, Coates Crescent, Edinburgh.

The following subjects have been chosen for discussion:

Wednesday, July 29th.—Splenic Enlargements, other than Leukaemic. To be introduced by Professor Osler.

Thursday, July 30th.—The Etiology of Degenerative Changes of the Aorta. To be introduced by G. Newton Pitt, M.D., F.R.C.P.

DISEASES OF CHILDREN.

President: CHARLES HENRY WILLEY, M.D., D.Sc., Wostenholme Road, Sheffield.

Vice-Presidents: JOHN BURDSALL LYTH, M.R.C.S., Fern Bank, Doncaster Road, Rotherham; JOHN MCCAW, M.D., 74, Dublin Road, Belfast; ROBERT GORDON, M.D., 26, Wostenholme Road, Sheffield.

Honorary Secretaries: JOSEPH HENRY WILKS, M.B., 43, Montgomery Road, Sheffield; SIDNEY MAYNARD SMITH, M.B., F.R.C.S., 1, Spanish Place, Manchester Square, London; HAROLD LEADER, M.B., 279, Glossop Road, Sheffield.

Some portion of two of the days on which the Section meets will be devoted to the discussion of the following subjects:

Wednesday, July 29th.—I. Fatty Acid Intoxication. To be opened by Dr. Leonard Guthrie.

Thursday, July 30th.—II. Surgical Treatment of Infantile Paralysis. To be opened by Mr. A. H. Tubby.

On the third day a clinical meeting will be held at the Children's Hospital which adjoins the University Buildings.

PSYCHOLOGICAL MEDICINE.

President: WALTER SMITH KAY, M.D., S. Yorks. Co. Lunatic Asylum, Wadsley, Sheffield.

Vice-Presidents: HENRY TALBOT SIDNEY AVELINE, M.D., Somerset and Bath Asylum, Cotford, Norton Fitzwarren, near Taunton; MAURICE CRAIG, M.D., F.R.C.P., Bethlem Royal Hospital, London; GILBERT EDWARD MOULD, M.R.C.S., Thunderclife Grange, near Rotherham, Sheffield.

Honorary Secretaries: WILLIAM JAMES NATHANIEL VINCENT, M.B., South Yorks Asylum, Wadsley, Sheffield; GEORGE ARTHUR RORIE, M.D., County Asylum, Dorchester.

The following subjects have been selected for special discussion in this Section:

Wednesday, July 29th.—The Question of the Treatment of the Habitual Drunkard (Legislative and Otherwise). To be opened by T. Claye Shaw, M.D.

Thursday, July 30th.—The Early Treatment of Mental Disorders in General Hospitals and Private Practice. To be opened by Bedford Pierce, M.D.

Friday, July 31st.—School Life viewed from the Standpoint of Psychological Medicine. To be opened by Francis Warner, M.D.

The following papers have been accepted:

BAUGH, Dr. Leonard D. H. Vera and Praesenilis Melancholia at the Female Climacteric.
BOYCOTT, Dr. A. E. Asylum Dysentery.
SCHOFIELD, Dr. A. T. The Psychology of Neurasthenia and Hysteria.
SCOTT, Commander Chas. (Chief Constable of Sheffield). On the Inebriate Acts, 1879-1900
WILLIAMS, Dr. Ralph P. Feeble-minded Children.

INDUSTRIAL DISEASES.

President: THOMAS OLIVER, M.D., LL.D., F.R.C.P., 7, Ellison Place, Newcastle-on-Tyne.

Vice-Presidents: WILLIAM FRANCIS DEARDEN, M.R.C.S. Normanhurst, Urmston Lane, Stretford, Manchester; ALEXANDER FORBES, M.B., Hillsboro' Lodge, Sheffield; SAMUEL KING ALCOCK, M.B., Portland House, Burslem, Staffs.

Honorary Secretaries: ALEXANDER GARRICK WILSON, M.C., F.R.C.S., 56, Riverdale Road, Ranmoor, Sheffield; WILLIAM HENRY FRANCIS OXLEY, M.R.C.S., 119, East India Dock Road, London.

The following subjects have been suggested, and it is proposed that the proceedings shall be opened each day by the discussion of one of them, followed by papers:

Wednesday, July 29th.—Granting of Certificates of Fitness. To be opened by Dr. King Alcock, of Burslem.

Thursday, July 30th.—Diseases of the Lungs caused by Dust. To be opened by Dr. Arthur Hall, of Sheffield.

Friday, July 31st.—Notification of Industrial Diseases. To be opened by Dr. Alexander Scott, of Glasgow.

ELECTRICAL.

President: EDWARD REGINALD MORTON, M.D., 22, Queen Anne Street, London.

Vice-Presidents: WILLIAM LONGBOTTOM, L.R.C.S.Ed., 139, Burngreave Road, Sheffield; DAWSON FYERS DUCKWORTH TURNER, M.D., 37, George Square, Edinburgh; WILLIAM HARWOOD NUTT, M.D., 280, Western Bank, Sheffield.

Honorary Secretaries: WILLIAM JONES GREER, F.R.C.S.I., 19, Gold Tops, Newport, Mon.; ARTHUR RUPERT HALLAM, M.D., 436, Glossop Road, Sheffield.

It is proposed that on the first day there shall be a discussion opened by Dr. Thurston Holland on the Uses of Bismuth in Diagnosis of Conditions of the Oesophagus and Stomach. Also papers relating to Roentgen Rays and Electrical Diagnosis.

On Thursday, July 30th, papers and discussions concerning Electrical Treatment.

On Friday, July 31st, Dr. Lester Leonard, of Philadelphia, will open a discussion on the Diagnosis of Pulmonary Tuberculosis by Means of the Roentgen Rays.

The Secretaries will be glad to receive papers on electrotherapeutics, to which it is proposed to devote one sitting of the Section.

The Committee hope that it will be possible for them to set aside a convenient room for the exhibition and demonstration of new forms of apparatus.

The Pathological Museum Committee will be glad to take charge of, and place in the Museum for exhibition, any specimens, photographs, radiographs, diagrams, or microscopic slides during the time they are not required by those reading the papers or taking part in the discussions.

Tropical Diseases.

President: Lieutenant-Colonel Sir R. Havelock Charles, K.C.V.O., M.D., I.M.S., 9, Manchester Square, London.

Vice-Presidents: Louis Westenra Sambon, M.D.Naples, 1, Palace Gardens Mansions, London; Charles Wilberforce Daniels, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

Honorary Secretaries: Frederick Augustus Hadley, F.R.C.S., Highfield House, Sheffield; Robert Thomson Leiper, M.B., London School of Tropical Medicine, Royal Albert Docks, London.

The following subjects have been selected for discussion:

Wednesday, July 29th, 10 a.m.—Tropical Abscess of the Liver. To be opened by the President.

Thursday, July 30th, 10 a.m.—Ankylostomiasis. To be opened by Sir Patrick Manson, K.C.M.G., F.R.S.

Friday, July 31st, 10 a.m.—Diseases of the Lymphatics and Lymphatic Glands Peculiar to the Tropics. To be opened by Dr. C. W. Daniels, M.R.C.P.

Pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in tropical medicine will be welcomed.

Surgery.

President: Sinclair White, M.Ch., F.R.C.S., Ranmoor, Sheffield.

Vice-Presidents: William Hamerton Jalland, F.R.C.S., St. Leonard's House, York; John Hammond Morgan, C.V.O., F.R.C.S., 68, Grosvenor Street, London; Charles Atkin, F.R.C.S., Endcliffe Croft, Sheffield; Russell Coombe, F.R.C.S., 5, Barnfield Crescent, Exeter; Archibald William Cuff, B.C., F.R.C.S., 285, Glossop Road Sheffield.

Honorary Secretaries: Arthur Mayers Connell, F.R.C.S.E., 79, Hanover Street, Sheffield; Graham Scales Simpson, F.R.C.S., 342, Glossop Road, Sheffield; Donald John Armour, F.R.C.S., 89, Harley Street, London.

Arrangements have been made for special discussions on the following subjects to be held on Wednesday, July 29th, and Thursday, July 30th:

1. The Diagnosis and Treatment of Malignant Disease of the Breast. Introduced by (1) Mr. W. Watson Cheyne, C.B., F.R.C.S.; (2) Mr. Harold J. Stiles, F.R.C.S.E.

2. The Indications for the Performance of Nephrotomy and Nephrectomy. Introduced by David Newman, M.D.

The third day (Friday, July 31st) will be devoted to the reading of papers on subjects other than the above.

The Pathological Museum Committee will gladly welcome and take charge of any specimens bearing on the subjects of discussion in this Section.

Ophthalmology.

President: Sir Henry Rosborough Swanzy, M.D., P.R.C.S.I., 23, Merrion Square, Dublin.

Vice-Presidents: Sydney Stephenson, M.B., F.R.C.S.Ed., 33, Welbeck Street, London; Charles Devereux Marshall, F.R.C.S., 112, Harley Street, London; Stanley Riseley, M.D., 387, Glossop Road, Sheffield.

Honorary Secretaries: Michael Aubrey Teale, M.R.C.S., L.R.C.P., 4, Park Square, Leeds; Leonard Robert Tosswill, M.R.C.S., 34, West Southernhay, Exeter.

The subjects chosen for discussion are:

The Relation of Disease of the Nasal Accessory Sinuses to Disease of the Eye. To be introduced by Dr. George Mackay and Mr. Logan Turner.

Serum-Therapy in Diseases of the Eye. To be introduced by Professor Axenfeld, Freiburg.

Colour Vision and its Anomalies. To be introduced by Dr. F. W. Edridge-Green.

Laryngology, Otology, and Rhinology.

President: George Wilkinson, B.C., F.R.C.S., 350, Glossop Road, Sheffield.

Vice-Presidents: Harry Lockwood, M.R.C.S., 122, Cowlishaw Road, Sheffield; Walter Jobson Horne, M.D., 23, Weymouth Street, London; Duncan Gray Newton, M.B., F.R.C.S.Edin., 14, Favell Road, Brook Hill, Sheffield.

Honorary Secretaries: William Smith Kerr, M.B., F.R.C.S.Edin., 281, Glossop Road, Sheffield; Hunter Tod, F.R.C.S., 111, Harley Street, London.

The subjects selected for special discussion are:

Wednesday, July 29th.—Chronic Inflammation of the Pharynx. To be opened by Drs. James Barry Ball and Peter McBride.

Thursday, July 30th.—The Diagnosis of the Intracranial Complications of Middle-ear Suppuration. To be opened by Mr. Charles A. Ballance, M.V.O., and Mr. Arthur L. Whitehead.

Friday, July 31st.—The Methods of Dealing with Suppuration in the Maxillary Antrum. To be opened by Drs. StClair Thomson and Arthur Logan Turner.

Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Dermatology.

President: Ernest Gordon Graham Little, M.D., F.R.C.P., 61, Wimpole Street, London.

Vice-Presidents: Alfred Reckless, M.R.C.S., 2, Broomgrove Road, Sheffield; George Thomson, M.B., Bridge House, Retford, Notts; Edward Stainer, M.B., 60, Wimpole Street, London.

Honorary Secretaries: George Pernet, M.R.C.S., 94, Harley Street, London; Archibald Young, M.B., 43, Collegiate Crescent, Sheffield.

The following is a provisional programme of proceedings:

Wednesday, July 29th, 10 a.m.—The Vaccine Treatment of Skin Diseases. Discussion to be opened by Sir A. E. Wright, followed by Dr. Norman Walker and Dr. Winkelried Williams.

Papers.—(1) Dr. Lewis Jones: The Treatment of Skin Diseases by Electrolysis (Ions). (2) Dr. Sequeira: The Calmette Reaction in Tuberculosis.

Thursday, July 30th, 9 a.m.—Discourse by Professor Neisser of Breslau: On Syphilis, with special reference to experimental work on the subject. 10 a.m.—Discussion on Syphilis in the Light of Recent Discoveries of its Etiology.

Papers.—(1) Professor Gilchrist: Experimental Urticaria. (2) Dr. Garceau: Etiology of Alopecia Areata.

Friday, July 31st, 10 a.m.—The Diseases of the Skin in Animals communicable to Man. Introduced by Dr. Sabouraud of Paris, followed by Dr. Leslie Roberts and others.

Cases will probably be shown on Wednesday and Friday mornings at 9.30 a.m., before the session of the Section.

Obstetrics and Gynaecology.

President: Richard Favell, M.R.C.S., Brunswick House, Glossop Road, Sheffield.

Vice-Presidents: William Dunnet Spanton, F.R.C.S., Chatterley House, Hanley; John Wise Martin, M.D., Claremont, Glossop Road, Sheffield; John Hy. Brown, M.D., Somerville House, 14, Burngreave Road, Sheffield; Robert Cochrane Buist, M.D., 166, Nethergate, Dundee.

Honorary Secretaries: Percival Ellison Barber, M.R.C.S., L.R.C.P., Broombank, 3, Clarkehouse Road, Sheffield; Charles Hubert Roberts, M.D., 21, Welbeck Street, London.

The following subjects have been selected for special discussion:

(*a*) Caesarean Section *versus* Other Methods of Delivery in Contracted Pelvis (Symphysiotomy, Pubiotomy, Craniotomy, and Induction of Labour).

(*b*) The Treatment of Displacements of the Uterus.

In the Pathological Part of this Section Ectopic Gestation has been chosen as one affording a wide scope for the exhibition of specimens, photographs, microscopic slides, etc.

Public Health and Forensic Medicine.

President: Professor Hy. Harvey Littlejohn, M.B., F.R.S.E., 11, Rutland Street, Edinburgh.

Vice-Presidents: CHARLES ROBERT STRATON, F.R.C.S.E., West Lodge, Wilton; EDMUND HARGREAVES, M.D., 2, Eyre Street, Sheffield; HAROLD SCURFIELD, M.D., D.P.H., Edenthorpe, Sheffield.

Honorary Secretaries: ALFRED ROBINSON, M.D., L.S Sc., Town Hall, Rotherham; ALEX. ANDERSON, M.B., D.P.H., Wadsley Lane, Wadsley, Sheffield; WILLIAM ARTHUR BOND, M.D., D.P.H., Municipal Offices, 197, High Holborn, London.

The following subjects have been selected for special discussion:

1. Smoke Abatement. To be opened by Dr. Des Voeux.
2. Industrial Diseases of the Lung (in conjunction with the Industrial Diseases Section).
3. The Notification of Pulmonary Tuberculosis.
4. The Notification of Births in Relation to the Reduction of Infantile Mortality.

NAVY, ARMY AND AMBULANCE.

President: Lieutenant-Colonel EDMOND MONKHOUSE WILSON, C.B., C.M.G., D.S.O., R.A.M.C.(retired), Belmont, Osborne Road, S. Farnborough.

Vice-Presidents: Surgeon-Lieutenant-Colonel E. M. WRENCH, M.V.O., V.D., Baslow: Lieutenant-Colonel RICHARD HUGH PENTON, D.S.O., R.A.M.C., 3, Wenlock Terrace, York; Colonel CHARLES JOSEPH TRIMBLE, C.M.G., Preston; Fleet Surgeon EDWARD JAMES BIDEN, R.N. (ret.), Laylands, Catisfield, Fareham; Fleet Surgeon ARTHUR GASKELL, F.R.C.S., R.N., H.M.S. *Hague*, c.o. Admiralty, S.W.

Honorary Secretaries: Surgeon-Captain SIDNEY FREDK. BARBER, H.V.B., 11, St. Barnabas Road, Highfield, Sheffield; Surgeon-Captain ALAN CHARLES TURNER, W.R.R.E.V., 287, Glossop Road, Sheffield.

The following have been suggested as subjects for discussion:

1. Hygiene of Training Ships.
2. Influence on Health through Service in Submarine and Torpedo Boats.
3. Oral Sepsis in Services.
4. Organization of Medical Department of Territorial Army.
5. The Position of the St. John Ambulance Brigade and St. Andrew's Ambulance Corps with Regard to Medical Organization for Active Service on Mobilization.
6. Influence of Alcohol in Services.
7. Importance of Training in Special Trades whilst in Services.
8. Physical Exercises for Recruits as a means of Recreation.
9. First Aid and Transport of Sick and Injured in Civil Life in Large Towns.
10. Improvements in Equipment, Medical and Personal, either for Service or for Civil life.
11. Conditions of Service under the Colonial Office.

DENTAL SURGERY.

President: FRANK HARRISON, M.R.C.S., L.D.S., 289, Glossop Road, Sheffield.

Vice-Presidents: ARTHUR SWAYNE UNDERWOOD, M.R.C.S., L.D.S., 26. Wimpole Street, London; JOHN HERBERT GIBBS, F.R.C.S., L.D.S., 7, Coates Place, Edinburgh; GEORGE HENRY LODGE, L.R.C.S., L.D.S., Osborne House, Moorgate Road, Rotherham.

Honorary Secretaries: HENRY WATSON TURNER, M.R.C.S., L.D.S., 59, Wimpole Street, London; RALPH LAMB, M.R.C.S., L.D.S., 51A, Rodney Street, Liverpool.

The following subjects have been selected for special discussion:

Wednesday, July 29th.—Antral Diseases in Relation to General and Special Surgery. The following will open or take part in the discussion: Herbert Tilley, F.R.C.S.; Arthur Underwood, M.R.C.S., L.D.S.; F. Marsh, F.R.C.S.; Urban Pritchard, M.D.Edin., F.R.C.S.Eng.; K. Goadby, M.R.C.S., D.P.H.; StClair Thomson, M.D.; W. A. Milligan, M.D.; C. E. Wallis, M.R.C.S., L.D.S.; J. F. Colyer, M.R.C.S., L.D.S.; E. B. Waggett, M.B., B.C.; G. H. Lodge, L.R.C.P. and S.Edin., L.D.S.; F. J. Bennett, M.R.C.S., L.D.S.

Mr. TILLEY, B.S., has supplied the following account of his opening remarks:

General surgery is chiefly concerned with those diseases which cause obvious external swelling or deformity of the upper jaw or adjacent soft parts, such as large alveolar abscesses, dental cysts, necrosis of upper jaw, and malignant disease of antrum. Special surgery, including the practice of the nasal and dental surgeon, will be largely concerned with acute and chronic inflammatory diseases of the antrum, and in dealing with this subject reference will be made to the following amongst other points. The anatomical features of the antrum are of practical importance. *Acute Antral Inflammation* may be due to intranasal as well as to dental infection, and the symptoms, prognosis and treatment vary accordingly. *Chronic Antral Suppuration*, its etiology and the wide range of symptoms to which it may give rise: The diagnosis made by intranasal inspection, transillumination and intranasal puncture. The value as well as the fallacies of transillumination will be dwelt upon. The prognosis depends on the etiological factors as well as upon the methods of treatment adopted. *Treatment:* The relative advantages of alveolar and intranasal drainage will be dwelt upon, and a plea made for a more careful selection of the method of treatment. An attempt will be made to show that intranasal drainage is, generally speaking, the best method of treatment, and should be more universally adopted. (The paper will be illustrated by diagrams, stereoscopic slides, specimens and instruments used in the treatment of antral suppuration).

Mr. UNDERWOOD will deal with the following points:

The anatomical relations of the upper teeth with the antrum of Highmore in uncivilized and civilized races, especially with regard to the third molar. The results of pathological conditions of the upper teeth affecting the antrum. Abnormal condition of the antrum. Treatment of antral disease having a dental origin, the removal of roots, the opening of the cavity through the sockets; the use of tubes for keeping the opening patent.

Thursday, July 30th.—Teething and its Alleged Troubles. Openers: Leonard Guthrie, M.D., F.R.C.P.; H. A. T. Fairbank, M.S., F.R.C.S.; J. G. Turner, F.R.C.S., L.D.S., followed by Evelyn Milestone, M.D.; R. Denison Pedley, F.R.C.S., L.D.S.; Edmund Cautley, M.D.; J. F. Colyer, M.R.C.S., L.D.S.; Sydney Spokes, M.R.C.S., L.D.S.; C. E. Wallis, M.R.C.S., L.D.S.; J. Sim Wallace, M.D., L.D.S.; C. C. Heywood, M.B.; A. E. Naish, M.B.; and Charles Mactie, M.D.

Dr. LEONARD GUTHRIE has supplied the following abstract of his opening paper:

Historical: Hippocrates observed that "teething children suffer from itching of the gums, fevers, convulsions, diarrhœa, especally when they cut their eye teeth, and when they are very fat and costive." Aristotle attributed convulsions not to dentition, but to overfeeding fat and constipated infants. Gradual growth of the doctrine that most infantile complaints were not merely associated with teething, but caused by hardness of the gums, which rendered egress of teeth difficult. Hence, introduction of gum lancing to liberate the teeth by Ambroise Paré in the sixteenth century. Hitherto treatment had aimed at softening the gums, supposed to be hard, by emollients. Other methods of treatment were by counter-irritation, blistering, the actual cautery, venesection, spells, and incantations. *Vicissitudes of the Gum Lancet:* Its dispute in the seventeenth century; indications for its use according to T. Willis and W. Harris in seventeenth century. Teaching of Arbuthnot (1732). Revival of gum lancing in all conditions by Harlock (1742). Exposure of fallacy that dentition is made difficult by resistance of the gums by West (1842) and Clendon (1862). Clendon's view that all disorders associated with dentition are due to trigeminal irritation arising from closely-packed teeth striving to reach the surface all at once and causing reflex disturbance of the medullary centres and nerves. *Modern Views:* Pyrexial theory that dentition causes fever, and hence chill which results in catarrh and inflammation of the pulmonary or alimentary systems. That difficult dentition is an idiosyncrasy or a sign of general nervous instability. Writer's conclusions are that teething is only painful when the gums are unhealthy and inflamed; that they may become so in consequence of "common colds," or gastro-intestinal disorders from over-feeding or improper feeding, or from bruising the gum over an erupting tooth by biting on hard and unclean objects. Importance of oral hygiene in infants' swollen and inflamed gums may be scarified, not to liberate the tooth, but blood. But the operation is very rarely necessary. Convulsions are more frequently due to colic than to teeth. *Statistics:* The Registrar-General's reports show a steady reduction in the number of death returns from

"teething." In 1886, 4,899 cases were certified, or 178 per million; in 1906 there were 2,175, or 63 per million. At this rate one may hope that in about thirty years teething will no longer be regarded as a cause of infant mortality. The physiology of dentition is a mystery.

The following abstract of his opening remarks has been supplied by Mr. FAIRBANK:

Fallacy of attributing fits and other nervous phenomena to irritation arising from erupting teeth. Convulsions during teething always toxic, the toxins coming from the alimentary canal. Stomatitis arising during teething due to sepsis, and only occasionally commencing as a localized traumatic gingivitis over a prominent erupting tooth. Trismus the only phenomenon which may be regarded as reflex; due to suppuration over and around an erupting tooth from traumatism and sepsis; usually seen in connexion with wisdom tooth, and therefore very rare in children. Report of case of trismus in a child. Earache, with or without middle-ear disease, secondary to adenoids; no connexion with teething. Some duskiness of gum over erupting tooth of no importance unless other signs suggest scurvy. Cysts over erupting teeth very rare. The term "traumatic dentigerous cyst" indicates their mode of origin. Section of wall of such a cyst (bilateral) to be shown.

Mr. TURNER has sent the following notes on the contents of his paper:

Physiology of teething and the "force of eruption." A normal process—comparison with animals; correlation with general growth; analysis of so-called teething troubles; their relation to bottle-feeding and possibly summer-diarrhoea; difficult eruption of wisdom teeth comparable to early teething troubles; more detailed consideration of "tumid gums."

Friday, July 31st.—Paper on Acute Pyorrhoea and its Treatment by K. Goadby, M.R.C.S., L.D.S., D.P.H.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 24TH.
1 p.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

SATURDAY, JULY 25TH.
9.30 a.m.—Representative Meeting.

MONDAY, JULY 27TH.
9.30 a.m.—Representative Meeting.
4.30 p.m.—Reception by the Lord Mayor in the Town Hall.

TUESDAY, JULY 28TH.
9 a.m.—Foods and Drugs Exhibition.
9.30 a.m.—Representative Meeting, if necessary.
9.30 a.m.—Council Meeting.
12 noon.—Service at the Parish Church.
2.30 p.m.—Adjourned General Meeting.
Induction of President.
Representative Meeting, if necessary.
6.30 p.m.—President's Address.
Presentation of Prizes.

WEDNESDAY, JULY 29TH.
9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Medicine.*
2.30 p.m.—Meeting of Convocation for conferring Honorary Degrees.
3.15 p.m.—Representative Meeting, if necessary.
8.30 p.m.—Reception by the Lord Mayor, Master Cutler, and the Citizens.

THURSDAY, JULY 30TH.
8 a.m.—National Temperance League Breakfast.
9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Surgery.†
7.30 p.m.—Annual Dinner.
8 p.m.—Theatrical Performance in the Lyceum Theatre for Ladies.

FRIDAY, JULY 31ST.
9 a.m.—Foods and Drugs Exhibition.
10 a.m. to 1 p.m.—Sectional Meetings.
8 p.m.—Popular Lecture.
8.30 p.m.—Reception in the Cutlers' Hall by the President and Local Members of the British Medical Association.

SATURDAY, AUGUST 1ST.
Excursions.

* The Section of Medicine will adjourn at 12.30 p.m. on this day.
† The Section of Surgery will adjourn at 12.30 p.m. on this day.

Honorary Local Secretary—
SINCLAIR WHITE, M.Ch., F.R.C.S.,
Ranmoor, Sheffield.

Honorary Assistant Secretaries—
W. T. D. MART, M.R.C.S., L.R.C.P.,
Rock Rise, Rock Street, Pitsmoor, Sheffield.
R. W. INNES SMITH, M.D., C.M., M.R.C.S., L.R.C.P.,
Don House, Brightside, Sheffield.
A. C. TURNER, M.R.C.S., L.R.C.P.,
287, Glossop Road, Sheffield.

PATHOLOGICAL MUSEUM.

THE following are the members of the Committee:

President: Professor J. M. BEATTIE, M.D.

Honorary Secretaries: M. H. PHILLIPS, F.R.C.S.; A. E. BARNES, M.R.C.P.

MEMBERS OF COMMITTEE:

E. W. ADAMS, M.D.	W. H. NUTT, M.D.
W. BRANDER, M.B.	C. J. PATTEN, M.D.
W. T. COOKING, M.D.	H. SOURFIELD, M.D.
A. M. CONNELL, F.R.C.S.E.	G. S. SIMPSON, F.R.C.S.
A. H. FIRTH, M.B.	E. SKINNER, M.R.C.S.
A. J. HALL, M.D.	J. W. STOKES, M.R.C.S.
J. S. MACDONALD, L.R.C.P.	G. WILKINSON, F.R.C.S.

EX-OFFICIO MEMBERS:
The President-elect: SIMEON SNELL, F.R.C.S.E.

The Local Honorary Treasurers: W. DYSON, M.D.; D. BURGESS, F.R.C.P.

The Local Honorary Secretaries: SINCLAIR WHITE, F.R.C.S.; W. T. D. MART, M.R.C.S.; R. W. I. SMITH, M.D.; A. C. TURNER, M.R.C.S.

The following circular has been sent out by the Subcommittee of the Pathological Museum to gentlemen interested in pathology and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Sheffield, 1908, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.

II. Specimens and illustrations relating to any recent research work.

III. Instruments relating to clinical diagnosis and pathological investigation.

IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Diseases of the spleen.
(*b*) Diseases of the heart and vessels.
(*c*) Diseases due to dust, tuberculosis, actinomycosis, syphilis and allied causes.
(*d*) The urinary system.
(*e*) Diseases of the breast.
(*f*) *X* rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position, and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,
A. E. BARNES,
M. H. PHILLIPS,
Honorary Secretaries.

342, Glossop Road, Sheffield, January, 1908.

To be Stamped with a Penny Stamp and Posted.

BRITISH MEDICAL ASSOCIATION.

SEVENTY-SIXTH ANNUAL MEETING.

JULY 28th, 29th, 30th, and 31st, 1908.

Members of the British Medical Association who intend to visit SHEFFIELD during the Annual Meeting will greatly facilitate the labours of the Local Committee if they will fill up the following form and forward it by post as addressed on the other side This will eventually be sent to the General Secretary of the Association, who will then send a certificate to enable members to obtain Railway Tickets at reduced fares.

MEMBERS DESIRING ACCOMMODATION ARE REFERRED TO NEXT PAGES.

The Forms are intended for the use of Members of the British Medical Association exclusively.

It is my intention to be present at the ANNUAL MEETING in SHEFFIELD

and I expect to be accompanied by.....

Name.....

Address.....

* Here indicate whether accompanied by a lady, as separate vouchers are required to enable Members to obtain Railway Tickets at reduced fares.

It is my intention to be present at the ANNUAL DINNER of the Association on Thursday Evening,** July 30th, **and I herewith enclose Cheque (or P.O.O.).†

Signature.....

† DINNER TICKET, with Wine inclusive, £1 1s. DINNER TICKET without Wine, but inclusive of Aerated Waters, 15s.

Cheques and Postal Orders should be made payable to the Secretary of the Dinner Committee, ARTHUR M. CONNELL, Esq., F.R.C.S.Ed., and enclosed in an envelope, together with this form, directed as on the reverse.

Early application for Tickets is requested by the Committee, to enable them to provide accommodation and allot seats.

SEVENTY-SIXTH ANNUAL MEETING, SHEFFIELD, July 28th, 29th, 30th and 31st, 1908.

LIST OF LODGING HOUSES WITH SCALE OF CHARGES.

Address.	Rooms.	Tariff—Bed and Breakfast.	Distance from University.
SHEFFIELD.			
Broomgrove Road.			
31 Mrs. Dodson	3 double	5/- to 7/- each	10 mins. walk.
Mooroaks Road.			
23 Mrs. Baxter	1	3/6	5 ,, ,,
Elmore Road.			
40 Mrs. Widdowson	2	6/	6 ,, ,,
Rossington Road, Brocco Bank.			
7 Mrs. Cadman	3 single	6/-	15 ,, ,,
10 Mrs. Smith	3 beds	3/6	15 ,, ,,
Mrs. Calver	A few	5/6	15 ,, ,,
Newington Road, Brocco Bank.			
11 Mrs. Walker		4/-	15 ,, ,,
13 Mrs. Cotchett		4/-	15 ,, ,,
Everton Road.			
34 Mrs. Stacey	1 double	3/6 each	15 ,, ,,
Wiseton Road.			
13 Mrs. Miller	2	4/6	15 ,, ,,
Endcliffe Rise Road.			
58 & 60 Mrs. E. Meare	7	5/-	15 ,, ,,
Ecclesall Road.			
480 Mrs. E. Jackson	2	6/-	20 ,, ,,
504 Mrs. Willey	2	4/-	20 ,, ,,
538 Mrs. Wilson	3	5/-	20 ,, ,,
623 Mrs. Clewhouse	2	5/6	20 ,, ,,

Address.	Rooms.	Tariff—Bed and Breakfast.	Distance from University.
Wadborough Road.			
43 Mrs. Henshall	2	5/-	20 mins. walk.
60 Mrs. Robinson...	2 (1 double)	7/6 a day	20 ,, ,,
62 Nurse Phillips...	1 double	7/6 for two	20 ,, ,,
Hoole Road, Broomhill.			
33 Mrs. Klingberg	4	6/- a day	20 ,, ,,
"Woodleigh," Sandygate.			
Mrs. Giddings	2	6/-	20 mins. walk and tram.
Ranmoor Crescent.			
23 Mrs. Thorold Clowes ..	2	5/-	15 mins. walk and tram.
Graham Road.			
234 Mrs. Broughton	3 (1 double)	6/-	15 mins. tram.
Crimicar Lane, Fulwood.			
4 Mrs. Ragg	1	6/-	½ hr. walk and tram.
84 Mrs. Ibbotson	1 double	3/- (5/- for 2)	½ hr. walk and tram.
Cliff Cottage, Crabtree, Pitsmoor.			
Mrs. Macgregor	1 double, 1 single	6/6	½ hr. walk and tram.
Pitsmoor Road.			
290 Mrs. Rodgers	2 (both double)	5/-	20 mins. tram.
555 Mrs. Cocker	2	6/6	20 ,, ,,
Minna Road, Pitsmoor.			
13 Mrs. Stringer	1	6/6	20 ,, ,,

Penny Stamp.

ARTHUR M. CONNELL, Esq., F.R.C.S.Ed.,
79, Hanover Street,
SHEFFIELD.

LIST OF LODGING HOUSES WITH SCALE OF CHARGES—*Continued.*

Address.	Rooms.	Tariff—Bed and Breakfast.	Distance from University.
Coupe Road, Burngreave Road.			
1 Mrs. Healey	1 double	5/-	20 mins. tram.
Idsworth Road, Pitsmoor.			
40 Mrs. Mayes	1 double	4/- each	20 ,, ,,
Cannon Hall Road, Pitsmoor.			
56 Mrs. McHugh	1 double	4/6 each	20 ,, ,,
Sturton Road, Pitsmoor.			
86 Mrs. Howells	2	5/-	20 ,, ,,
Abbey Lane, Norton Woodseats.			
2 Mrs. Sampson	2	5/-	½ hour tram.
Chesterfield Road.			
102 Mrs. Hawksworth	2	4/-	25 mins. tram.
Brook Road, Meersbrook.			
1 Mrs. Woolhouse	1	4/6	20 ,, ,,
Beeton Road, Meersbrook.			
1 Mrs. Smith	1	4/6	20 ,, ,,
Westbrook Bank, Sharrow.			
47 Mrs. Beddie	1 double	4/- for one, 7/- for two	20 mins.
Albany Road.			
34 Mrs. Cook	3	4/6	20 ,,
Wostenholm Road.			
43 Mrs. Peace	1 double	5/- for one, 9/- for two	20 ,,
Adelaide Road, Netheredge.			
24 Mrs. Hobman	2 double	5/- for one, 9/- for two	20 ,,
Barker's Road, Netheredge.			
23 Mrs. Deacon	2	5/-	20 ,,
27 Mrs. Rodgers	2 double	5/- for one, 9/- for two	20 ,,
Machon Bank, Netheredge.			
44 Mrs. Rodgers	2 double	5/- for one, 8/- for two	20 ,,
149 Mrs. Smith	1	4/6	20 ,,
Sheddon Road, Netheredge.			
32 Mrs. Watson	1	6/-	20 ,,
Glen Road, Netheredge.			
62 Mrs. Hart	1	5/-	20 ,,
80 Mrs. Briddon	1	5/-	20 ,,
Abbeydale Road.			
532 Mrs. Westlake	2	4/-	20 ,,
Cowlishaw Road, Sharrow.			
37 Mrs. Wright	2 (1 double)	3/6	20 ,,
110 Mrs. Watts	2 double	5/- for one, 9/- for two	20 ,,
Wayland Road, Sharrow.			
116 Mrs. South	1 double	6/- for one, 10/- for two	20 ,,
Psalter Lane.			
190 Mrs. Burton	3	6/6	20 ,,
Carter Knowle Road.			
24 Mrs. Maud	2	5/-	25 ,,
Meersbrook Park Road.			
81 Mrs. Walling	2	8/- per day	25 ,,
Cemetery Road.			
247 Mrs. Carr	2 (1 double)	6/-	20 ,,
293 Mrs. Taylor	1	5/-	20 ,,
Kenwood Road, Sharrow.			
15 Mrs. Richards	2	4/6	20 ,,

Address.	Rooms.	Tariff—Bed and Breakfast.	Distance from University.
Manor Grange, City Road, Intake.			
Mrs. Brown	3	5/-	25 mins.
Glencoe Road, Norfolk Park.			
62 Mrs. Greaves	1 double	5/-	25 ,,
Granville Road.			
287 Mrs. Judge	1	4/6	25 ,,
319 Mrs. Frith	1	6/-	25 ,,
Harcourt Road.			
139 Mrs. Lockwood	3 (2 double)	4/-	10 mins. walk.
82 Mrs. Bartlett	2 double 1 single	6/-	10 ,, ,,
97 Mrs. Miller	3 (2 double)	6/- double 4/6 single	10 ,, ,,
Glossop Road.			
390 Mrs. Woodhouse	2 double	5/-	5 ,, ,,
392 Mrs. Murray	3 (1 double)	4/-	5 ,, ,,
437 Mrs. Carr	3	5/-	5 ,, ,,
443 Mrs. Storer	2 (1 double)	5/-	5 ,, ,,
Adelaide Place, Glossop Road.			
10 Mrs. Scholfield	1 double	6/6	5 ,, ,,
12 Mrs. Dickenson	2 double	4/-	5 ,, ,,
Broomhall Place.			
23 Mrs. Beaumont	3 (2 double)	4/-	5 ,, ,,
31 Miss Green	2 (1 double)	5/-	5 ,, ,,
35 Mrs. Osbaldiston	—	—	5 ,, ,,
37 Mrs. Norris	2 (1 double)	5/-	5 ,, ,,
Durham Road.			
8 & 10 Mrs. Heeley	4 double 1 single	13/- 9/-	2 ,, ,,
12 Mrs. Stewartson	3 2 double	6/6 7/6	2 ,, ,,
Damer Street.			
14 Mrs. Mitchell	3 1 double	13/- 9/-	2 ,, ,,
16 Mrs. Pearce	3 (2 double)	5/-	,, ,,
Havelock Street.			
34 Mrs. Youle	1 double	5/6	4 ,, ,,
Wilkinson Street.			
67 Mrs. Bottom	4 (3 double)	5/6	,, ,,
Hanover Square.			
5 Mrs. Appleby	2 double	10/-	3 ,, ,,
Carr Road, Walkley.			
155 Mrs. Hall	1 ,,	5/-	10 ,, car.
South Road Walkley.			
285 Mrs. Hall	1 ,,	5/-	10 ,, ,,
School Road, Crookes.			
255 Mrs. Singleton	2 ,,	4/6	10 ,, ,,
Crofton Avenue, Hillsboro'.			
15 Mrs. Sugden	1 ,,	3/6	2 ,, ,,
21 Mrs. Webster	1 ,,	5/-	25 ,, ,,
23 Mrs. Hanner	2	5/-	20 ,, ,,
Dorothy Road, Hillsboro'.			
77 Mrs. Mount	1 double	5/-	20 ,, ,,
Marlcliffe Road, Hillsboro'.			
60 Mrs. Humphries	3 (2 double)	4/-	20 ,, ,,
Westbourne Far Lane, Hillsboro'.			
Mrs. Plant	1 double	3/6	25 ,, ,,
Leppings Lane, Wadsley Bridge.			
82 Mrs. Goodacre	1 ,,	5/-	25 ,,
Marlcliffe Avenue, Hillsboro'.			
Mrs. Whiteley	2 ,,	4/-	25 ,, ,,

HOTELS.

	Rooms.	Tariff—Bed and Breakfast.
At SHEFFIELD.		
Royal Victoria	20 double	16/6 to 18/6 for two, 10/6 to 12/6 if occupied by one person.
	15 rooms with 2 beds 9 single rooms	15/- to 18/6 for two. 8/6 to 9/6

	Rooms.	Tariff—Bed and Breakfast.
King's Head	10 single rooms available only from Friday, July 24th, to Monday, July 27th	7/6
	11 double rooms	13/6 to 16/-
	2 rooms with 2 beds	18/- to 14/-
Albany (Temperance)	4 double	10/-
	8 single	5/-

LIST OF HOTELS WITH SCALE OF CHARGES—*Continued.*

	Rooms.	Tariff—Bed and Breakfast.
South Sea (Broomhill)	2 double 2 single	7/-
Park (Hillsboro')	4 rooms	About 5/-
Abbeydale (Beauchief)... ...	3 singles	5/-
At GRINDLEFORD. (Near Sheffield—9 miles from Sheffield.)		
Maynard Arms...	A few	5/6 single room, 7/6 double room.
Commercial	3 double 2 single	6/6
At BAMFORD. (Near Sheffield—13 miles from Sheffield.)		
Marquis of Granby	3 double 2 single	8/- 5/6
At EDALE. (Near Sheffield—20 miles from Sheffield.)		
Church Inn	2 double 4 single	5/6 4/-
Nag's Head	A few	5/6 double, 4/- single.

These places are on the Midland Railway between Sheffield and Buxton, and special morning and evening trains will be run.

At ROTHERHAM.		
The Crown	1 double 1 single	8/6 5/6

Frequent trains from Rotherham to Sheffield and *vice versâ*. Fares, 1*s*., 1st class; 6*d*., 3rd class. Midland and Great Central Railways.

	Rooms.	Tariff—Bed and Breakfast.
At RETFORD.		
White Hart	5 double 5 single	7/6 5/6
Criterion	2 double 3 single.	6/- 4/-
Pheasant	4 beds	4/6–5/6
Queens	2 double 3 single	5/- 4/-

Distance from station to Sheffield University about 1 hour by train and tram. Fare, 3.10 return, 3rd class.

At CHESTERFIELD.		
Portland ... ... and **Angel**	10 double 30 single	5/- each
Station	6 beds.	6/- ,,
Park	1 double 4 single	8/- 4/6

Distance to Sheffield University from Chesterfield Station is about ½ hour by train and tram. Fare, 2/- return, 3rd Class.

At WORKSOP.		
Royal...	9 double 6 single	8/- for 2 5/- ,, 1
The Lion	2 double 8 single	6/6
The Station	2 double	5/6

Distance from Worksop to Sheffield University by train and tram about 35 mins. Fares, 2/7 return, 3rd Class. Good train service.

At BUXTON.

Name of Hotel.	Bedroom, attendance, and breakfast.	Bedroom, board, and attendance per day.	Approximate distance from station.	Number of Rooms.
Crescent	6/6	10/6 (single persons) 20/- (two persons in room)	Less than 5 mins.	25
George	6/6	10/6 (single persons) 20/- (two persons in room)	,, 5 ,,	25
St. Ann's	8/-	40/- (week end—from Friday evening to Monday morning, exclusive of lunch on Saturday)	,, 5 ,,	30
Palace	6/6	12/6	,, 5 ,,	30
Empire	9/6	37/6 (week end—from Friday evening to Monday luncheon, Two persons in room)	,, 15 ,, 'Bus	100
Grove	6/-	9/6	,, 5 ,,	15
Royal	7/-	10/6 to 12/-	,, 5 ,,	20
Shakespeare...	6/-	9/6	,, 5 ,,	20
Devonshire	6/-	9/6	,, 10 ,,	20
Buxton Hydro	7/6	9/-	,, 8 ,,	25
Peak Hydro	7/6	7/6 (if 30 or more)		50
Hadden Hall	5/-	7/- ('Bus to and from station)	,, 15 ,, 'Bus	12
Haddon Grove	5/-	7/6	,, 15 ,, 'Bus	—
BOARDING HOUSES.				
Clarendon House	5/-	—	,, 6 ,,	12
Balmoral and Pension Pendennis ...	5/-	7/6	,, 6 ,,	30
Brunswick	6/-	25/- (week end)	,, 7 ,,	20
Holker	4/6	7/-	,, 6 ,,	9
Egerton and Queens	4/6	7/6	,, 6 ,,	15
Southgate	5/-	6/-	,, 7 ,,	12
Limehurst	4/6 to 7/-	7/6 to 12/-	,, 6 ,,	12

Free admission to the Buxton Gardens and Concert Hall will be given to members by the Buxton Gardens Company.
Members will be invited to make free use of the Thermal Mineral Baths. A Writing Room will be provided at the Baths.
There will be special attractions at the Gardens and Opera House.
In addition to the ordinary excellent train service between Buxton and Sheffield, special trains will be run if a sufficient number of members stay in Buxton.
Special trains will be run by the Midland Railway from Buxton to Sheffield in the morning and Sheffield to Buxton in the evening, provided 90 or more travel to and fro. Fare, 3*s*. 6*d*. return journey. 12*s*. 6*d*. for 4 days.
Any further information may be obtained from Mr. John Hatton, General Manager of the Thermal Baths, who is acting as Hon. Sec. for the Buxton Committee

HOSTELS.

		Tariff—Bed and Breakfast	Distance from University
Collegiate Hall (Collegiate Crescent)	70 Beds	5/- or (8/- per day)	15 minutes walk.

This is a Hostel under the supervision of the Sheffield Education Committee who have kindly placed it at the disposal of the British Medical Association for the Annual Meeting in July.
The bedrooms are arranged in cubicle fashion and the public rooms are large and airy. Both are comfortably furnished. The beds are 6 feet in length. Electric light. Baths included in above tariff. This Hall can be strongly recommended for single men.

	Rooms.	Tariff.	Distance.
University Hostel (Ashgate Road, Broomhill) ...	11 single	5/6	5 minutes by tram.

This is situated in a nice part of the city and has a good garden

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT, 1907-8.

THE Science Committee begs to report that during the past year, 1907-8, the sum of £1,000 allotted by the Council for the promotion of scientific investigation by means of scholarships and separate grants has been distributed in the manner indicated below, namely: Three scholarships of the annual value of £150, and one—the Ernest Hart Memorial Scholarship—of the annual value of £200, together with £350 in small grants. An award is for one year only, but a scholar is eligible for re-election by the Council on the recommendation of the Science Committee, provided that the scholar's whole term of office shall not in any case exceed three years.

REPORTS FROM THE RESEARCH SCHOLARS.

A. E. BARNES, M.B., M.R.C.P.

A Contribution to the Clinical Study of Opsonins.

THE original intention to study the opsonic index in its relation to changes in metabolism, and especially in rheumatic fever, had to be abandoned. Apparently consistent results were, after considerable experience, obtained by Wright's method, and a typical curve had been worked out in a case of rheumatic fever, and also one in a case of tuberculosis after inoculation with tuberculin T.R.

After reading of the results obtained by Strangeways at Cambridge, the precaution was taken of having all the slides renumbered, before counting, by an independent person. When this was done the results were very discordant and evidently valueless nor were further attempts to obtain accuracy of any avail, so the method was finally abandoned.

Some experiments on specificity were next performed. Normal human serum was treated with varying quantities of tubercle bacilli, and the serum after centrifugalization tested against both tubercle and staphylococcus. These results showed clearly that the normal opsonin was non-specific for the opsonin, for both organisms disappeared at about the same rate.

Some experiments with finely-powdered charcoal gave some support to the view that normal opsonin influences the phagocytosis of indifferent matter.

Other methods of determining the opsonic index were tried. Both of Simon's methods were tried and gave unsatisfactory results, but a modification of Wright's method based on Simon's work was devised, and has given consistent results. This method is as follows: Three preparations are made:

1. The sample of serum is *diluted to* $\frac{1}{10}$ with *1·2 per cent.* NaCl solution.
2. The emulsion of tubercle bacilli is made in *1·2 per cent.* NaCl (and is *thicker* than used for Wright's method).
3. An emulsion of leucocytes is prepared in *1·2 per cent.* saline.

Equal volumes of these are incubated in the usual manner for *thirty minutes*. The films are spread and counted in the usual way, the bacillary content of 50 or 100 cells being taken.

This method throws into bolder relief the differences in the opsonic power of the serums. It is not unusual to obtain differences ranging from 0·4 to 4·0, whilst indices of 0·2 and of 15 have been obtained. It has given consistent results, but extreme accuracy is not claimed, as the normal varies between 1 and 2. The counts have been performed in ignorance of the source of each sample of serum. With the aid of this method cases of phthisis were investigated at the Sheffield Union Hospital, and some surgical cases at the Royal Infirmary. The results are very difficult to reconcile with Wright's dicta. For instance, the serum of 15 phthisical cases was examined on the same day against one control (four specimens of this control being used). For the 7 early cases the indices were 0·3, 0·5, 1·2, 1·2, 1·2, 3·2, and 7·2; for 8 advanced cases 0·6, 1 (3 cases), 2, 2·3, 2·8, and 2·9. These advanced cases were followed for fourteen days; one moribund case fluctuated very much, but the others remained high or normal. The early cases have been followed for over three months without tuberculin treatment. One of them, an early case doing very well, had an index of 7 at the first observation, and for six weeks his index was always above normal. Another early case doing apparently quite as well had an index almost always subnormal. Two attacks of acute pleurisy in 2 other cases were accompanied by a marked depression of the index for two days. This "negative phase" occurred twenty-four hours *after* the onset of symptoms, and was not followed by a positive phase. Tuberculin has been used, but no definite results obtained. T.R. in doses up to $\frac{1}{1000}$ mg. gave neither positive nor negative phase. The "new tuberculin" (bacillary emulsion) apparently produced a negative phase after a dose of $\frac{1}{5000}$ mg. in a girl of 14. The clinical improvement continued during this phase just as it had done before. The experiments with "new tuberculin" are being continued, 4 cases of phthisis being followed and 2 of tuberculous peritonitis. Other cases of phthisis are being followed without tuberculin.

Marshall's paper on the influence of dilution on normal and immune opsonin published after this method had been evolved seems to supply a rational explanation of its results.

W. HENWOOD HARVEY, M.B.

The Causation of Arterio-sclerosis.

Dr. W. Henwood Harvey submits a report on his work during the past year, as one of the British Medical Association Research Scholars. During this period he has investigated (1) the influence of a transient increase in blood pressure upon the production of arterial degeneration, (2) the difference in action of certain drugs in the *diseased* and in the normal body, (3) hepatic metabolism, especially in relation to glycogenesis, and (4) changes in the arterial wall resulting from a constant high blood pressure.

The Causation of Arterio-sclerosis.

This research was commenced last year. It has since been completed and the MS. has been forwarded to the Royal Society for publication. The method of experimentation adopted consisted in digital compression of the abdominal portion of the aorta in rabbits, for a period of three minutes daily. In all, thirteen experiments were performed, which varied in duration from five to a hundred and one days. Ten of this number showed typical calcareous degeneration of the aorta; this change was strictly limited to the medial tunic, and resembled in every way the so-called "Mönckeberg" variety of arterio-sclerosis occurring in man. One of the remaining three experiments (nine days) showed some signs of degeneration at the muscle-cells in the middle coat, but the other two experiments were negative; they were of five and six days duration respectively. In all the positive experiments the lesions occurred above the point of compression, thus pointing to the increased blood pressure as the cause. Since the increase in pressure obtained by this means amounts to about 42 mm. of mercury, his results clearly determine the important rôle played by the blood pressure in the development of sclerosis in arteries.

Action of Drugs in Disease.

This work he is prosecuting conjointly with Dr. W. E. Dixon. It consists in injecting animals with potent bacterial toxins, and, twenty-four hours later, anæsthetizing the animals and then testing the action of various drugs and antitoxins. So far they have confined themselves to diphtheria and drugs acting upon the circulatory and respiratory systems. They have found diphtheria antitoxin useless when once pathological changes are produced; many powerful drugs, such as nicotine and adrenine, produce but little, if any, of their normal action as seen in the healthy animal. If, however, physiological saline solution be injected at this period, the tone of the circulatory system at once improves, and the drugs show a more normal effect; antitoxin is, however, without action. The work is most encouraging from the point of view of experimental therapeutics.

Hepatic Metabolism.

This subject he started last year, but has met with considerable difficulty in the method of estimating sugar and glycogen from such small portions for control purposes as can be removed from the living organ with safety. The work has, consequently, consisted in acquiring a more suitable technique. In all, twenty-two experiments have been performed.

He has just commenced a further series of experiments to investigate changes in the circulatory system due to a constant high blood pressure in contradistinction to a transient increase, such as follows digital compression. The results will be, he believes, of quite a different nature from those he has already described. The method consists in feeding rabbits with lead acetate, since this substance raises the blood pressure and is but slowly excreted from the body. Thus a constant high blood pressure is obtained over a considerable period.

During the current year he has published three short papers upon methods.

T. SHIRLEY HELE, M.B., B.C.

On Metabolism in Cystinuria.

Cases of cystinuria differ widely from one another. In some subjects diamines, cadaverin, and putrescin, have been occasionally demonstrated in the urine and faeces. In a few instances tyrosin and leucin have been obtained from the urine. Cystin, tyrosin, or arginin administered by the mouth, with one remarkable exception, have been completely destroyed. On the other hand, although very different methods of estimation have been employed, the output of cystin has generally been very constant, about 0.3 gram to 0 5 gram in the twenty-four hours.

The present work was undertaken to investigate these points, and for this purpose the daily output of the chief urinary constituents was determined. Cystinurics are rare, and it was only possible to obtain material from three subjects. Mr. Hele is indebted to Mr. Southam, of Manchester, and to Dr. T. Armstrong Bowes, of Herne Bay, for the opportunity of examining these cases.

The average daily excretion of cystin was 0.36 gram, 0.44 gram, 0 50 gram respectively for the three patients. The amount varied slightly with the diet, being higher on a high protein diet. The increase, however, did not correspond to the rise in the output of sulphate and urea. The excretion of neutral sulphur for a given patient exhibited the same constant features.

	Total N.	Cystin.	Cystin × 100 / N.	Total Sulphur as gm. SO_3.	Total Sulphate as gm. SO_3.	Neutral Sulphur as gm. SO_3.
C. W., female, aged 22.	gm.	gm.				
Average excretion:						
Series (1)	5 13	0.235*	5.6	1.084	0 560	0 524
Series (2)	9.49	0.409*	4 3	1.792	1 275	0 517
T. N., male, aged 63.						
Average excretion:						
Series (1)	11.08	0.460	4 2	2.388	1 243	1.145
Series (2)	16.47	0.384	2.3	3 067	1.969	1.098

* These figures are due to Mr. Gaskell.

This is in accordance with the observations of Thiele, Abderhalden, and Schittenhelm. Alsberg and Folin, however, concluded from indirect evidence that in their case the excretion of cystin on a protein-rich food was about double of that on a protein-free food. The experiments are not, however, quite parallel, as in no other instance has a diet completely devoid of protein been employed. Hence, it appears that those body processes, of which the excreted cystin is the last stage, require only a limited supply of food protein. This supply is early provided, and only fails when the food protein is cut down to a very low figure.

In one subject observations were made on the daily variation in the excretion of cystin, neutral sulphur, etc. The average figures were—day cystin 0.23 gram, night cystin 0.27 gram. The sulphate output was always higher at night than in the day, whereas the neutral sulphur output maintained a constant value.

Thus, for example: Urine passed February 9th and 10th, 1908:

	Sulphate	Neutral Sulphur.	Sulphate.	Neutral Sulphur.
W. S., male, aged 22.	gm. SO_3	gm SO_3	Rate per hour.	Rate per hour.
7 30 a.m. to 11 30 a.m.	0 1810	0.1786	0 0452	0 0446
11.30 a.m. to 3 30 p.m.	0 1326	0.1721	0.0181	0 0430
3 30 p.m to 7 30 p.m.	0 2603	0 1774	0 0651	0 0443
7.30 p.m. to 6 30 a.m.	0 7749	0 4864	0 0701	0.0442

As stated in a previous report, cystin given by the mouth to one patient was eliminated in a fully oxidized form.

The benzoylation process of Baumann and Udransky was frequently used to detect the presence of diamines in the urine of all three cases. In one subject the faeces were similarly examined. Cadaverin was only encountered once—in the urine—and then in large quantities. As the urine had been kept for some weeks under toluene during hot weather, it was thought that decomposition might account for the presence of this body; but control experiments with urine kept under various conditions did not yield any benzoyl cadaverin. On the other hand, in the process of making total sulphur determinations the smell of cadaverin was frequently noticed in this case, though never in the other two cases. This suggests that traces of diamines were constantly present, but only once in sufficient amount to yield a benzoyl derivative.

In the same case the long and tedious process of Wohlgemuth has been employed for the isolation of diamino-acids, lysin and arginin, from the urine, but so far with negative results. These investigations are not quite complete.

In one case diamines could not be demonstrated in the urine after the administration of arginin carbonate.

The urine of each subject was examined on many occasions for tyrosin and leucin, but with no success. Tyrosin was not detected in the urine after its administration by the mouth. Glycocoll was found in small quantity, but in no greater amount than occurs in normal urine.

It thus appears that the presence of protein fractions other than cystin is most inconstant, so that, until further information is obtained, it is impossible to offer an explanation of their occurrence.

JOHN POOL MCGOWAN, M.A., M.B., Ernest Hart Memorial Research Scholar.

During the summer of 1907 Dr. McGowan worked on the subject of aggressins, but, owing to the impossibility of keeping up the virulence of the typhoid bacillus with which he was working and other difficulties, he obtained no definite result.

While he was working on aggressins, to fill up times of waiting on experiments, he was at the same time working on certain aspects of the immunity developed in rabbits when injected with ox blood corpuscles. Finding that he was getting good results in this line of research, he devoted himself entirely to it and has been working on it since. Some of the results of this work are published in the *Journal of Pathology* under the heading—In Two Experiments with Complement. He published a paper in the BRITISH MEDICAL JOURNAL of November, 1907, on a clinical method for estimating the coagulation time of the blood, this method being worked out while working on immunity in rabbits and ox blood corpuscles. He has further completed a piece of work on the source of immune body in rabbits immunized with ox blood corpuscles, and just now is working on the phenomena of anaphylaxis in rabbits immunized with ox blood corpuscles. He respectfully requests a renewal of the scholarship for another term, in which, in addition to continuing the above work, he intends to test the effect of anticoagulant substances on the formation of complement and immune body; and to test the effect of various treatments of the antigen (ox blood corpuscles), such as treatment with alkali, acid, immune body, digestion, etc., on the formation of a specific immune body. He also intends to work at any important side-issue that may arise in the course of the work. Reprints of published papers accompany.

REPORTS OF GRANTEES.

F. A. BAINBRIDGE, M.D.

In the absence of carbohydrate food, the combustion of fat becomes incomplete, and β oxybutyric acid and its products appear in the urine. Under most circumstances the addition of carbohydrate suffices to abolish the acidosis, but in diabetes carbohydrate is ineffective, since the tissues cannot make use of it. In conjunction with Dr. Hurtley he has attempted to lessen the acidosis of diabetes by means of other substances, namely, citric and glutaric acid. In one patient the daily administration by the mouth of 20 grams citric acid or 10 grams of glutaric acid reduced the output of β oxybutyric acid to less than half its previous amount; at the same time the excretion of sugar and of nitrogen in the urine fell considerably. The effect lasted for some days after the cessation of the treatment.

These investigations are being continued, and it is hoped that the employment in diabetes of these substances may not only throw light on the manner in which carbohydrate modifies the metabolism of fat, but also prolongs life by lessening the risk of coma, and abolishing one of the most serious complications of diabetes.

W. BLAIR BELL, M.D.

Dr. Blair Bell hopes shortly to publish in the BRITISH MEDICAL JOURNAL four papers dealing with the whole of his work.

The enumeration of these papers will give a good idea of the work carried out, the whole aim and ultimate object being to throw some light on the physiology of the female genital processes: (1) This paper will deal with work done on the general calcium metabolism (ready for publication); (2) will contain an account of experiments carried out with reference to the connexion between the calcium metabolism and menstruation (nearly ready for publication); (3) will consist of a series of experiments in regard to the correlation of the ovarian and uterine functions (work nearly completed); (4) will give an account of experiments performed with a view to finding out the factors that cause uterine contraction, with special reference to pregnancy and abortion (work being carried out).

C. H. BENHAM, M.D., M.R.C.P.

Dr. Benham has conducted a research into the bacteriology of common colds. In his application for a grant twelve months ago he set forth as his objects:

1. The examination of a further series of cases of "common cold."

2. The examination of a series of normal noses and throats.

3. The determination of the opsonic index of infected persons and normal individuals with respect to the organisms isolated.

The first of these three objects has been attained. The media purchased lasted him some three weeks, and the investigation of cases of common cold, which had been done very thoroughly, lasted five months. During the remainder of the time he made his own media.

He has examined very minutely 14 cases of common cold, 5 cases of diphtheria, 2 of pneumonia, and 3 of scarlatina, the latter all occurring in his practice, and being useful for purposes of comparison. As a result of these investigations he has noted:

1. The extreme frequency of an organism hitherto not recorded as occurring in common colds by any English observer so far as he can ascertain. It is a coccus, occurring in tetrads and large masses, having peculiar staining reactions. It differs from *M. tetragenus* in several important particulars, and is probably identical with the organism described by Bezançon and de Jong of Paris as the *Paratetragene zoogleique*. He has isolated it in 8 out of 14 of his cases, and seen it in 11 out of 14. He has worked out its biochemical reactions with respect to the following carbohydrate media—glucose, lactose, saccharose, and maltose, and also litmus milk and gelatine; he finds it to give acid in all the media, but it does not liquefy gelatine.

2. The *Micrococcus catarrhalis* was isolated and found to give its typical biochemical reactions in 1 case only, but Gram— cocci resembling it were seen in 11 out of the 14 cases.

3. Diphtheroid bacilli were seen in 10 of the 14 cases. They were less vigorous in growth than in his former series of cases (BRITISH MEDICAL JOURNAL, May 5th, 1906). They were isolated in 5 cases, and in 1 case of pneumonia and 1 of diphtheria. Some of the strains isolated gave the typical reactions of *B. septus* with carbohydrate media, but others were probably *B. xerosis* or Hoffmann's bacillus.

TABLE I.—*Organisms Seen in Swabs in 14 Cases of Mild Catarrh.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Per Cent.
Diplococci, Gram −	+		+	+	+		+	+	+		+		+	+	10	71 5
Tetrads, etc., Gram ±					+		+						+	+	4	29.5
Cocci, Gram + ...	+		+	+				+	+				+	+	7	50.0
Streptococci			+												1	7.0
Staphylococci										+					1	7 0
Pneumococci					+										3	21 0
Bacilli, Gram + ...			+	+	+		+					+			1	36 0
Diphtheroid bacilli				+			+	+			+		+		5	36 0
Pfeiffer (?)...							+							+	2	14.0
Gram − bacilli				+	+	+						+			4	28 5

TABLE II.—*Organisms Seen in Cultures in 14 Cases of Mild Catarrh.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Per Cent.
Diplococci, Gram −	+		+	+	+	+		+	+	+	+	+	+	+	11	78 5
Tetrads, etc., Gram + ...	+	+		+	+	+	+		+	+	+	+	+		11	78 5
Cocci, Gram + ...				+				+	+		+	+	+	+	7	50
Streptococci		+	+						+					+	4	28.5
Staphylococci	+		+			+	+	+		+		+			7	50
Pneumococci															0	
Bacilli, Gram + ...	+	+	−							+			+	+	6	36
Diphtheroids		+			+	+	+	+	+	+	+	+	+	+	10	71 5
Pfeiffer (?)...					+						+		+		3	21
Bacilli, Gram −								+	+	+		+			4	28.5
Bacilli with spores										+	+				2	14
Mycelium														+	1	7

TABLE III.—*Percentage Numbers of Prevailing Organisms.*

	21 Cases of Common Cold (C. H. B., 1906).	14 Cases of Common Cold (C. H. B., 1908).	Normal Noses (Lewis and Logan Turner).	Normal Noses (Hesslauer).
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Staphylococci	48	50	50	25
Streptococci	24	28.5	23	17
Diphtheroids	95	71 5	8	13
Cocci, Gram − ..	71.4	78.5	—	—
Tetrads	21 4	78 5	—	—

Note that staphylococci and streptococci remain constant in both my series, and are almost identical with Lewis and Logan Turner's figures for normal noses.

In addition to the results briefly summarized in the accompanying tables, he has begun to examine a series of normal noses and throats. It will be much easier to continue this series during the summer months. He has found it very difficult to find persons who have *not* recently had a cold this winter.

Opsonic Index.

The opsonic indices to Friedländer's bacillus, *B. septus*, and *Micrococcus catarrhalis* have been worked out by Dr. R. W. Allen, whose results will be published shortly. The

Table IV.—*Reactions of Cocci Isolated.*

Number of Case.	Morphology.	Glucose.		Lactose.		Saccharose.		Maltose.		Litmus Milk.				Liquefaction of Gelatin.
										Acid.		Clot.		
		3	7	3	7	3	7	3	7	3	7	3	7	
3	Cocci, Gram –	+	+	+	+	+	+	+	+	+	+	+	+	–
1	Tetrads	+	+	+	+	+	+	+	+	+	+	+	+	–
5	Tetrads...	+	+	+	+	+	+	+	+	+	+	+	+	
2	Cocci, Gram –	0	+	+	+	+	+	+	+	+	+	+	+	
10	Tetrads	+	+	+	+	+	+	+	+	+	+	+	+	
13	Tetrads...	+	+	–	–	+	+	+	+	0	0	–	–	
12	Tetrads...	+	+	–	–	+	+	–	–	–	–	–	–	
12	Tetrads...	+	+	+	–	+	+	+	+	0	0	+	+	
12	Tetrads...	+	+	–	+	0	0	+	+	+	+	–	–	
Pneumonia	Cocci, Gram –	0	+	0	+	0	+	0	+	–	+	–	+	
Pneumonia	Tetrads...	+	+	+	+	+	+	+	+	–	–	+	+	
16	Tetrads...	+	+	0	+	+	+	+	+	–	+	–	+	
16	Tetrads...	0	+	0	+	0	+	0	+	+	+	+	+	
20	Cocci, Gram –	+	+	+	0	+	+	+	+	+	+	+	+	
14	Cocci, Gram –	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Staphylococci	+	+	+	+	+	+	+	+	+	+	–	+	
9	Staphylococci	0	+	0	–	0	–	0	+	0	0	–	–	
13	Staphylococci	+	+	+	+	+	+	+	+	+	+	+	+	
Pneumonia	Staphylococci	+	+	+	+	+	+	+	+	+	+	–	–	
Sinus in leg	*Staphylococcus aureus* ..	+	+	+	+	+	+	+	+	+	+	+	+	+

Table V.—*Reactions of Bacilli Isolated.*

Case No.	Morphology.	Glucose.		Lactose.		Saccharose.		Maltose.		Litmus Milk.			
										Acid.		Clot.	
		3	7	3	7	3	7	3		3	7	3	7
12	Diphtheroids (septus)	+	+	+	+	+	+	+	+	+	+	+	+
2	Small diphtheroid	+	+	+	+	+	+	+	+	–	+	–	–
12	Diphtheroids	0	+	0	+	0	+	0	+	–	+	–	+
12	Diphtheroids	+	+	+	+	+	+	+	+	+	+	+	+
13	Diphtheroids	0	0	0	0	0	0	0	0	0	0	–	–
13	Diphtheroids	0	0	0	0	0	0	0	0	0	0	–	–
14	Diphtheroids	0	0	0	0	0	0	0	0	0	+	–	–
Pneumonia	Oval bacillus, Gram + ...	0	0	0	+	+	+	0	+	+	+	+	+
16	Diphtheroids	0	–	0	+	+	+	0	+	–	+	–	+
11	Klebs-Loeffler	0	0	0	0	0	0	0	0	0	0	–	–

opsonic index to *Micrococcus paratetragenes* has not yet been worked at. Dr. Benham hopes to work at this branch of the subject during the next year, with a view to comparing his results with those of Dr. Allen, and trying the vaccine treatment in suitable cases. Dr. Benham is prepared to equip his small laboratory with everything necessary for opsonic work, and to spend some months in perfecting himself in this branch of investigation, and is not applying for any grant for this purpose. But it would be absolutely impossible to devote the requisite time to opsonic work if he has to spend some hours every week in the manufacture of media as in the past.

L. N. Hesketh Biggs, M.D.

The grant voted to Dr. Biggs was for expenses of experiments already completed, the results of which were embodied in a thesis submitted to the Faculty of Edinburgh University in April, 1907, the subject being Perfusion of the Mammalian Heart with Locke's Fluid and Investigation of the Bundle of His. A gold medal was awarded him for this thesis. A short extract of the same was published in the Journal of June 13th. He endeavoured to put the perfusion of the mammalian heart on a sound basis by investigating the chief difficulties—chiefly the purity of the distilled water used and the temperature and pressure questions. He went on to investigate the bundle of His, cutting it across in different places and in different ways, and studying the effects produced, such as partial or total heart-block, the length of the As–Vs interval under different circumstances, and the question of reversed conduction. His paper and tracings are now with Professor Brodie, and are likely to be published in the *Journal of Physiology*.

E. P. Cathcart, M.D.

Dr. E. P. Cathcart and Professor Noël Paton have investigated the nitrogenous constituents of the amniotic and allantoic fluids. A large number of analyses have been carried out, but unfortunately they cannot yet give any very definite results, as they found that the method for estimating allantoin in the presence of urea was not accurate. Further investigation of the fluids was stopped, and attention was turned to the elaboration of a new and more accurate method for estimating allantoin under the

conditions in which it is found in the above fluids. In this attempt they were confronted with many difficulties, but at length a method was devised which gives practically a complete separation. The work has been interrupted for the present, but will be continued in the autumn. In addition, Professor Noël Paton has extended his observations on the presence of laevulose in the fetal fluids of different species. He has also made some further analyses of the inorganic constituents in connexion with the question of the exchanges between the two fluids discussed on p. 98 of *Transactions of the Royal Society of Edinburgh*, vol. xlvi, Part I (No. 3).

Miss WINIFRED CULLIS.

Miss Winifred Cullis has conducted a research into measurement of the gaseous exchanges of surviving organs, mainly mammalian heart and amphibian kidney, when perfused with saline solutions. The kidney was perfused from both artery and vein with saline solutions containing known and varying quantities of oxygen, and the whole of the fluid coming from the kidneys was collected and the gases of this solution analysed, this giving the amount of oxygen used. The results obtained were briefly as follows:—Increased work by the kidney was always accompanied by increase of oxygen intake, this increase of oxygen absorption being particularly noticed after the administration of diuretics, such as caffeine and phloridzin. Conversely, diminution in the oxygen supply to the kidney (by perfusing with solutions from which the gas had been partially removed) led to a falling off in the amount of urine secreted. Similar experiments with the perfused mammalian heart, in which the content of the saline in oxygen and carbonic acid before and after perfusion was estimated, gave very satisfactory results, the numbers so obtained for the respiration of the heart agreeing very closely with those obtained by Barcroft and Dixon in their experiments upon the heart perfused with blood. It is hoped that the results of these experiments will be published during the present year.

H. H. B. CUNNINGHAM, M.D.

Dr. H. H. B. Cunningham has carried out a research on the anatomy of the middle ear with a view to ascertain the size and regularity of the folds of mucous membrane situated on the inner aspect of the outer wall of the tympanum and of the pouches formed by these folds; but with special reference to those in connexion with the tympanic membrane. A number of dissections have been made on formol-hardened specimens kindly supplied to him by Professor Symington; these, though admirably adapted for naked-eye preparations, have not hitherto lent themselves readily to microscopic work. Several specimens have been prepared which show variations in the arrangement of the folds of mucous membrane forming the walls of the external attic, as, for example, in some specimens there is a complete floor, whilst in others it is incomplete. At present one cannot say whether the hiati found in these specimens are anatomical or pathological; further investigation on this point is necessary. The same remarks apply to Prussak's space, and especially to its external wall; in one or two specimens a bristle was easily passed from the attic through the membrana flaccida into the external auditory meatus, but here again one cannot be certain that these hiati are not accidental. To clearly demonstrate the arrangement of these folds of mucous membrane, it is necessary to cut serial sections for examination under the microscope; several attempts have been made, but, in common with other investigators, great difficulty has been experienced in preparing and cutting serial sections of such hard material as these specimens consist of. However, it is hoped that the preparation of these sections will now be made more satisfactorily, and so the investigation into the anatomy of these pouches conducted with more conclusive results.

Professor A. R. CUSHNY, M.D., F.R.S.

Professor A. R. Cushny, M.D., F.R.S., has investigated the action of oxidizing salts. The object of this research was to determine how far the effects of the oxidizing salts were in accord with their capacity for oxidizing ordinary organic materials, such as pyrogallol or guaiaconic acid. It was hoped that in this way the action of nascent oxygen *per se* could be estimated more satisfactorily. The general results were that such bodies as the chlorates, bromates, iodates, permanganates, bichromates, and ferricyanides own their toxicity in simple living tissues to their oxidation power, but that in relation to the haemoglobin of the blood and to the blood cells other factors are involved, which disturb this simple relation and often oppose it, so that the characteristic oxidation effect may disappear altogether.

LEONARD FINDLAY, M.D.

Dr. Leonard Findlay has during the past year continued his research on rickets with special reference to the cause of the disease, and to the condition of the blood changes while the disease is in progress. He has sent a paper entitled The Etiology of Rickets to the Editor of the JOURNAL for publication. This paper comprises his work on the etiology, and in it are detailed all the experiments up to date. At the commencement of the research he attempted to produce the condition by improper feeding, but invariably failed—his animals always developing marasmus and dying. But by confinement in cages, and that although their diet was ample and of the usual variety—milk and porridge—the young animals became markedly rachitic. These experimental findings he has correlated with the conditions under which rachitic children are reared, and finds that in their case also confinement and want of exercise are almost constant factors.

Regarding the portion of the work on the condition of the blood, he does not at present feel inclined to say much, but hopes in the near future to have some results ready for publication. He intends during the coming months continuing that part of the work dealing with the blood changes.

DAVID FORSYTH, M.D.

During the past year Dr. Forsyth has continued his investigations into the subject of the parathyroid glands and their relation to the thyroid gland, and has now completed them. He has shown that the parathyroids possess active functional powers, and has described the histological changes associated therewith. On account of the facts collected in the course of a comparative anatomical study he has concluded that the function of the parathyroids is intimately connected with that of the thyroid, and that parathyroid tissue represents portions of thyroid tissue in an incompletely developed state.

The results of his research have been published during the past year in the following papers:

1. The Parathyroid Glands in Man (*Trans. Path. Soc.*).
2. The Comparative Anatomy, Gross and Minute, of the Thyroid and Parathyroid Glands in Mammals and Birds (*Journ. Anat. Physiol.*).
3. The Function of the Parathyroid Glands and their Relation to the Thyroid Gland (*Quar. Journ. Med.*).
4. The Pathology of the Parathyroid Glands (ibid.).
5. A Fatal Case of Myxoedema with Changes in the Parathyroid Glands (*Trans. Clin. Soc.*).
6. Effects of Prolonged Protein Feeding (*Trans. Roy. Med. Chir. Soc.*).
7. Preliminary communication in BRITISH MEDICAL JOURNAL, November, 1907.

J. C. W. GRAHAM, M.A., M.R.C.S., L.R.C.P.

Mr. Graham has investigated the pharmacology of apocynum cannabinum. In the previous report forty-four experiments had been performed illustrating the action of the drug on the various tissues and viscera of the body. Some confirmatory experiments have since been undertaken. The work on this subject has now been completed, but owing to recent pressure of private work it has not been possible to complete the arrangement of material for publication. It is hoped that this will be accomplished very soon.

K. GROSSMANN, M.D.

Dr. Grossmann states that the purpose of the investigation was to examine the change of form which takes place in the lens during accommodation. The methods employed were those he used for the eye of the cat[1]—namely, the production of the two extreme stages in the range of accommodation (for short and for long range respectively). The one eye of the animals examined was atropinized, the other simultaneously eserinized. After waiting for the full effect of the alkaloids the eyes were enucleated under

[1] BRITISH MEDICAL JOURNAL, September 24th, 1904.

chloroform, at once fixed and hardened, and bisected in various meridians.

The best method of fixation proved to be that which he introduced for the examination of the cat—namely, by freezing, whereby the topography not only becomes fixed, but also differentiated in appearance, by blanching the lens to a hard chalky white. It was found that freezing need not be done by liquid carbonic acid; the ordinary freezing mixtures of ice and salt are sufficient, if carried out with care and with objects not too large. The temperatures obtained between — 12° and — 18° C. were quite satisfactory.

In the eye of the dog and the rabbit accommodation for the near point is produced by altering the spherical posterior lens surface into a posterior lenticonus. The apex of this lenticonus is placed excentrically, towards the nose, both in the dog and in the rabbit. The eye of the guinea-pig shows very little change in eserinization. The mode of producing this excentric lenticonus appears to be the following:

The central portion of the lens (nucleus) is spherical in shape and of a denser consistency than the cortex, which more readily gives way to outward pressure. The nucleus itself is not placed quite centrically, but somewhat excentrically, the surrounding layer of softer cortex forming a zone of greater thickness in the temporal than in the nasal region. This is shown by the differentiation of the layers obtained by freezing, and also sometimes by hardening in chromic solutions.

By the relaxation of the zonula in accommodation the lens capsule becomes less taut and allows the elasticity of the nucleus more free play. It appears from the excentric movement of the apex of the posterior lens surface, that the relaxation of the zonula and lens capsule is greater in the temporal than in the nasal portion. The reason for this is explained by the anatomical asymmetry of the ciliary muscle and the whole anterior portion of the uveal tract. The ciliary body is wider in the temporal than in the nasal quadrant, while in the upper and lower quadrants it is of the same size. The relaxation of the zonula is thereby widest in its temporal part, and as that of the upper and lower quadrant is equal, the elasticity of the lens nucleus has freer play in the direction from temple towards nose with the resulting posterior lenticonus moving in that direction.

Concomitant with this movement is the displacement of the pupil which takes place in the same direction and from the same cause, namely, the uneven development of the iris, which also is wider in the temporal than in the nasal half.

This concomitant lateral movement of the pupil is evidently a corrective of the astigmatism resulting from the lenticonus, and is probably as effective for this end as the stenopoeic slit of the feline pupil. Ophthalmoscopic examinations were made on iridectomized eyes, after instillation of atropine and eserine respectively. But these examinations did not prove as easy as might have been wished. The difficulties consist, first, in the circumstance that a locality answering to our macula lutea cannot be easily fixed for consecutive examinations, and, secondly, that the extravasations which are associated with iridectomy in dogs and rabbits are apt to become organized and to interfere with the transparency of the optic media.

Corroboration in this direction is therefore up to the present not very perfect. The observations are going on at present.

Professor W. D. Halliburton, M.D., F.R.S.

Professor Halliburton has carried out a research on the localization of function on the lemur's brain with Dr. Mott, F.R.S. Their full paper has been published in the *Proceedings of the Royal Society*, B. vol. 80, pp. 136 to 147, 1908, with three figures in the text and three plates. It relates in the main to the excitable areas of the brain, and the chief conclusions are as follow:

1. The lemur's brain has a simple convolutional pattern, and the fissures are few and for the most part shallow.

2. The motor areas are limited to the central region of the cortex, and details of the localization by the method of stimulation are given in one of the plates. Speaking roughly, the order of the areas from above down, that is, leg, arm, head, is the inverse order to the spinal arrangement.

3. Extirpation of the excitable areas is followed by transitory paralysis of the corresponding regions on the opposite side of the body, and by degeneration of the tracts which pass to the bulbar or spinal grey matter which controls these movements. Degeneration also occurs in commissural, association, and collateral tracts in the cerebrum.

4. The motor areas are characterized by the presence of Betz cells. Localization by histological study is therefore possible, and the close correspondence of the results so obtained with those obtained experimentally is well seen by comparing the figures which are given.

5. There are, however, two types of motor cortex. The larger type of Betz cell is found in the greater part of the motor cortex, particularly where limb and body movements are represented. A smaller type of Betz cell is found in the area governing face, tongue, ear, and eye movements, and in this excitable area there is a well-marked layer of granules also—a sure sign of sensory function.

6. Histological examination of the occipital (and especially calcarine) region shows it to possess the structural characters of the visual cortex in other animals. Certain difficulties alluded to in the full paper prevented a thorough exploration of this region with electrodes, and no eye movements could be elicited by its faradic stimulation.

A. F. Hertz, M.D.

Dr. Hertz has carried out a research by means of auscultation and *x* rays on the movements of the human alimentary canal. Publications: 1. (*a*) The Passage of Food along the Human Alimentary Canal (*Guy's Hospital Reports*, 1907); (*b*) The Passage of Food through the Human Alimentary Canal (British Medical Journal, January 18th and 25th, 1908); (*c*) The Pathology and Treatment of Constipation (*Proceedings of the Royal Society of Medicine*, 1908). 2. Research on Gastric Sensibility (unpublished). 3. Research on Coagulation of the Blood (incomplete).

R. T. Hewlett, M.D.

Dr. R. T. Hewlett has been carrying out work to ascertain whether the intracellular juices of bacteria have a "vaccine" effect, like the killed cultures, on the opsonic action of the blood serum. The intracellular juices were obtained by a slight modification of the MacFadyen method, namely, by grinding up the cultures, cooling being effected with solid CO_2 and ether, centrifugalizing to get rid of deposit, and filtering through a Berkefeld filter so as to obtain a sterile filtrate.

In the first place typhoid cell juice was tested. A dose of 0·1 c.cm. given intravenously to a rabbit produces a typical and marked "vaccine" effect; the day after injection the opsonic index has fallen very low, in some cases almost to zero. This is followed by a rise, until at the end of a week or ten days the opsonic index may have reached 2·0 or over. A second injection similarly produces a "negative" phase, followed by a still further rise in the index. Similar results have been obtained in the case of the *Staphylococcus pyogenes aureus* and the tubercle bacillus. The results suggest that the intracellular juices of bacteria obtained by the MacFadyen method are more active in raising the opsonic index than the corresponding killed cultures. The work has been somewhat laborious, entailing some hundreds of blood counts. The results will be shortly published in full.

Basil Kilvington, M.D.

Dr. Basil Kilvington of Victoria, Australia, has carried out an investigation on the regeneration of nerves, and his report was published in the British Medical Journal of June 13th. The subject was the regeneration across an interval in a nerve which had been bridged over by various methods. The experiments were divided into three groups: (1) Hetero-transplantation, where a piece of tissue from another species of animal was made use of. Under this are two classes according as nervous or non-nervous tissue were tried; ordinary catgut was made use of for the latter, and for the former pieces of nerves of cats and rabbits were fixed in a gap in a dog's nerve. (2) Homo-transplantation, where tissues from another animal of the same species were used. In this group only nervous tissue was taken, as non-nervous tissue bridges are of no practical importance. Dogs were the animals made use of. (3) Auto-transplantation, where tissues of

the same animal were used. Of the non-nervous tissues fascia and muscle were taken. When a nerve from the same animal was used, it did not make any difference whether the corresponding nerve from the opposite side or another nerve was utilized. When a mixed nerve was to be bridged over, this could be done with a purely sensory nerve, and it made no difference if the nerve bridge were inserted in its normal or in the reversed position. A sufficient time was given for regeneration, and then the animal was anaesthetized and the nerve bridge exposed. Several tests were applied: (*a*) Excitability and sensitiveness to the faradic current; (*b*) definition of the nerve bridge from the surrounding structures; (*c*) microscopic examination. *Results:* Nerve auto-transplantation came through these tests very successfully, and in no instance (in which healing occurred by first intention) was a failure noted. With regard to the other groups there was little to choose. More or less success occurred in all of them, but this could not be depended upon. *Surgical application:* In nerve bridging in the human subject it is suggested that a nerve from the patient be used. As a purely afferent nerve suffices as well as a mixed one, and as the former causes less ill effect if it be interfered with, the internal saphenous in the leg was suggested. In some cases where this would be too small for the purpose, as in extensive brachial paralyses where excision of the whole plexus is necessary, the median below the elbow could be made use of. Dr. Kilvington desires to thank the committee for the grants given him (an Australian) for the last three years.

C. NEPEAN LONGRIDGE, M.D.

Dr. C. Nepean Longridge has carried out a research on creatinin excretion in lying-in women. The urine of ten lying-in women at Queen Charlotte's Hospital was examined. All the urine was collected for nine days after delivery, and the creatinin and total nitrogen contents were determined. The idea was to find out if creatinin was excreted in larger quantities than normal during the most active period of involution of the uterus. Ninety creatinin estimations and 180 total nitrogen estimations were made. The result shows that there is no increase of endogenous creatinin in the urine of lying-in women, which remained about 2 per cent. of the total nitrogen with more or less constancy. The result of the research was communicated to the Obstetrical Section of the Royal Society of Medicine in April, and an abstract of the paper appeared in the BRITISH MEDICAL JOURNAL.

R. CRANSTON LOW, M.B.

Dr. Low has made cultures from numerous cases of different kinds of ringworm and from favus of the scalp. He has also endeavoured to produce immunity in animals against the diseases. The following is a short summary of the experiments performed: *Rat 1:* Inoculated with ringworm, February 14th; inoculated with favus, July 30th; inoculated with favus, August 20th. Died, November 1st. Result, negative. *Rat 2:* Inoculated with ringworm, February 4th, 1907; inoculated with favus, May 30th. Died, June. Result, negative. *Calf:* Inoculated with hairs from *Tinea barbae*, July 25th; inoculated with hairs from kerion (ringworm), August 27th; inoculated from cultures of ringworm, September 3rd; inoculated from cultures of ringworm, September 10th. Killed November 18th, as it showed symptoms of intestinal obstruction. At no time was there any evidence of successful inoculation with ringworm. *Mouse 1:* Inoculated (favus scutula) October 25th. Died, November 13th. Result, negative. *Mouse 2:* Inoculated (favus scutula), October 25th. Died, November 18th. No signs of favus. *Mouse 3:* Inoculated with favus, March 26th. Died, April 30th. Result, negative. *Mouse 4:* Inoculated with favus, March 26th. Result, negative. *Mouse 5:* Inoculated with favus, March 26th. Result, negative. *Mouse 6:* Inoculated with favus, March 26th. Result, negative. *Mouse 7:* Inoculated with favus, March 26th. Died, April 16th. Result, negative.

As the above experiments show, the results so far have been absolutely negative. In no case has he succeeded in producing either ringworm or favus in the animals tried. This he attributes to using the human fungus for inoculation. So far he has not been able to get cultures of any of the animal ringworms, but hopes to be able soon to procure some cattle with the disease and continue the experiments on them.

ANNIE LOUISE MCILROY, M.D.

Dr. McIlroy has investigated the origin of the surface epithelium of the ovary and the origin of the follicle cells.

The work has been carried out during the past year in the Physiological Laboratory of Glasgow University under the supervision of Professor Noël Paton. The investigation is not quite complete, but will be ready for publication in the early autumn, as some further specimens of the human ovary at or just before birth are to be examined, some in early infant life having been already sectioned.

Comparisons of epithelial growth from the earliest germinal epithelium have been procured by the incubation of the chick and examination of the embryo at each day of growth. The later stages of development have been obtained by the examination of serial sections of the fetal ovary of the kitten, pig, and bitch. The ovary of the rabbit has been useful for investigating the surface epithelium but not for the follicle cells.

M. NIERENSTEIN, PH.D.

Dr. M. Nierenstein has continued a research, started by Professors Moore and Todd, in connexion with atoxyl and mercury in trypanosomiasis. One part of the work has been already published in the *Annals of Tropical Medicine* for 1907. The second part is to appear shortly, and deals with the aspect of the treatment in bigger animals, such as donkeys.

DAVID ORR, M.D.

Dr. Orr and Dr. Rows have continued their experiments on the action of toxins upon the central nervous system. The research has been extended to the study of the spinal cord lesions following the introduction of toxins into the abdominal cavity. The resulting lesions, only observed so far in acute toxaemia, consist in oedema of the cord, dilatation of the perivascular spaces and central canal, swelling and disintegration of the myelin sheath throughout the cord generally. The changes are due to a general blood infection, and differ materially from those obtained from the introduction of toxins into the perineural sheath of the sciatic and other peripheral nerves (see report, June 22nd, 1907). The work is still incomplete, but they hope to publish in the course of this year.

HERBERT J. PATERSON, M.B., F.R.C.S.

Mr. Herbert J. Paterson has been engaged in further observations on the effect of the operation of gastro-jejunostomy on the metabolism of the human body. His previous observations have been made on patients on whom the anterior operation had been performed. His later observations have been made on patients upon whom he has performed the posterior no-loop operation. In this series the average diminution of nitrogen absorption was 1.9 per cent., and the average diminution of fat absorption 1.5 per cent. Therefore one is justified in saying that both after anterior and after posterior gastro-jejunostomy the diminution of absorption both of nitrogen and of fat is so small as to be of no practical importance, and the average diminution is within the limits found in persons who are in good health. These observations will be published in full shortly. At present he is engaged in investigating the effect of gastro jejunostomy on the functions of the stomach. Observations have been made on 29 patients before and after operation. This research is as yet incomplete, and he does not propose publishing the results until he has records of 50 cases.

M. S. PEMBREY, M.A., M.D.

Dr. M. S. Pembrey has made two communications upon the subject of his research, one by himself and Mr. F. Cook on the causes of dyspnoea during muscular work (Physiological Society, December 14th, 1907), and another by himself and Dr. A. P. Beddard on the causes of dyspnoea in disease (Pathological Society of Great Britain and Ireland, January, 1908). Dr. Pembrey proposes to communicate further results to the Physiological Section during the annual meeting of the Association.

CECIL PRICE-JONES, M.B.

Dr. Cecil Price-Jones reports that he has continued his investigations on comparative cytology of the blood.

during the past year, confirming and amplifying his previous observations. He has entered on the pathological section of the research, and has made a number of experiments in the production of anaemia from haemorrhage and certain drugs. Owing to the interdependence of the several parts of the investigation, it is at the moment inadvisable to present anything in the nature of a detailed report.

F. H. Scott, M.B.

Dr. F. H. Scott has investigated the nervous and chemical factors in the regulation of respiration. It was conducted along with Professor Starling. Part of the results are being written up, and others will be given at the British Medical Association meeting at Sheffield. They have shown that while the adaptation of respiration to the needs of the organism is probably due to the gaseous condition of the blood, yet in the carrying out of the respiratory movements the vagi undoubtedly play a great part. They have shown that even at the height of dyspnoea impulses reaching the centre along the vagi will cause apnoea. The respiratory movements of an animal in which the vagi are severed are very ataxic. Afferent impulses in the vagi thus affect the centre, and lead to the proper carrying out of the respiratory acts.

S. G. Shattock, F.R.C.S.

Mr. S. G. Shattock reports that the calf, for the keep of which the grant has been paid out, was spayed two years ago, and is now fully grown. The animal will be killed in June, and the observation will then be made as to what influence the removal of the ovaries has had on the growth of the pelvis.

E. J. Spriggs, M.D.

Dr. Spriggs has been engaged in completing and publishing work upon the excretion of creatinin in some diseases involving the muscles. The account of this research has been published in the *Quarterly Journal of Medicine*. He has also investigated the effect of meat diets, with and without lime, upon the nutrition of rats. A series of groups of rats has been fed (1) upon a diet consisting of meat only, without bone, and distilled water, (2) upon the same diet with the addition of calcium phosphate, (3) upon the same diet with the addition of bone dust, and (4) upon a milk diet. At the end of some months the animals have been killed with chloroform, and preserved for histological and chemical examination. This research is still in progress. A preliminary note upon one point of the research was brought before the Physiological Society, and a record was published in the *Proceedings* of the Society.

Helen E. Stewart, M.B., Ch.B.

Mrs. Helen E. Stewart (from the laboratories of the London County Asylums, Claybury) has conducted some experiments in new methods of fixing and staining tissues. The results of the first part of these investigations were given in a paper read by Dr. Mott at the Exeter meeting of the British Medical Association, 1907. Briefly, these were that, by using a mordant in the manner described below, a small cell form could be shown in the tissues of dogs which had been inoculated with *Trypanosoma equiperdum* and of human beings suffering from sleeping sickness. The occurrence of the small cell forms within plasma cells was so suggestive of the inclusions seen in cancer tissues that investigations were made by the same methods on new growths.

The method of staining was as follows for tissues fixed in Müller's fluid or a 4 per cent. formalin in normal salt solution:

Cut thin sections in paraffin and remove the paraffin in the usual way.
Mordant the sections by placing in a 2 per cent. solution of iodine in potassium iodide until deep yellow in colour.
Blot.
Stain in a 10 per cent. aqueous solution of Giemsa's fluid at 37° C. for from four to twenty-four hours. (The staining is often improved by using a 1 in 5,000 acid solution instead of distilled water.)
Wash in warm distilled water.
Dehydrate quickly in alcohol or acetone.
Mount in Canada balsam.

Different tissues vary considerably in their reaction to this stain, but when successfully applied the method differentiates the inclusions from the surrounding tissues, showing them as cells with a dark blue-black nucleus and a clear pink protoplasm. Cells giving this reaction could be seen also lying free in the tissues and lymph spaces, and varied in size from 1 μ to 20 μ or more (the outline of the protoplasm being irregular in form). Thirty-six cases of tumour have been examined by this method, and 25 of them showed cells giving the above reaction. In addition, 6 cases of syphilis and 10 cases of tuberculosis were examined by the same method, and no cells were seen giving a similar reaction.

It was noticed that these "cell inclusions," although present in hanging-drop preparations made from malignant growths, could rarely be satisfactorily demonstrated in films, and experiments were made with many methods of fixation. A method which has given good results where others have failed is as follows: Films are made on a coverslip from a freshly-cut surface of the growth. The coverslip is placed, film downwards, for 30 seconds over a tube or bottle containing a saturated solution of thorium nitrate. The film is then treated with the iodine mordanting solution, stained by Giemsa's method for films, and washed and dehydrated in acetone, passed through xylol, and mounted in Canada balsam.

This method preserves the size and shape of the cancer cells, and also shows the cells of the "cell-inclusion" type when present, the colour being the same as in sections. A full account of the above research will, it is hoped, be published shortly, including a discussion of the origin of the cell inclusions and the possibility that they may be due to nucleolytic or cytolytic changes.

W. Legge Symes, M.R.C.S.

Mr. W. Legge Symes (with Mr. Lockhart Mummery) reports that the main object of the work was to test the action of some of the drugs which raise blood pressure with the view of gauging their value for the treatment of shock. Experiments have been made on decapitated and pithed animals, and on others in which shock had been produced by operation, both under complete anaesthesia. The report will include observations on the specific gravity of the blood in shock, the manipulations which produce shock, and the effect of some drugs on the condition. A report on the work, to date, is now in course of preparation, and will shortly be forwarded for publication.

Frank E. Taylor, M.D.

Dr. Taylor states that his material was obtained from operation cases at Chelsea Hospital for Women; research conducted in the bacteriological laboratory of King's College. Where pus was present films were made and stained and it was injected into guinea-pigs; cultures were also made on gelatine agar and blood agar aërobically and agar anaërobically. In all cases portions of the sac wall were placed beneath the skin of guinea-pigs.

Results.

1 case of bilateral hydrosalpinx = sterile.
2 cases of acute non-purulent salpingitis = sterile.
2 ,, ,, purulent salpingitis = gonococcus.
1 case of bilateral pyosalpinx = gonococcus.
1 ,, ,, ,, ,, = tubercle bacilli.
1 ,, ,, ,, ,, = sterile.
1 case of bilateral tubo ovarian abscess = results not yet obtained.

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William H. Wynne, F.R.C.S.

Mr. Wynne has investigated the volume of the blood. The object of the investigation was to estimate the volume of the blood in persons suffering from various diseases, and to attempt to discover the factors by which the volume of the blood is regulated. Much preliminary work has been done in perfecting the technique for determining the adequacy of the renal excretion, the albumen and salt content of the blood plasma, and the tissue-lymph circulation. These methods will now be applied to the study of patients in whom the volume of the blood is estimated by Haldane's carbonic oxide method. The research is at present very incomplete, and some time must elapse before a full report can be given.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BORDER COUNTIES BRANCH:
ENGLISH DIVISION.

THE first annual general meeting of the Division was held at the County Hotel, Carlisle, on Friday, May 29th, at 3.45 p.m., Dr. GRAHAM (Carlisle) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Unprofessional Conduct.—A resolution under Rule Z, following on the adoption of the Executive Committee's report on a case of unprofessional conduct, at the general meeting of the Division held on March 13th last, was passed.

Ambulance Lectures.—The following amendment, referred from the Maryport meeting held on December 13th, 1907:

> That no member of this Division of the Border Counties Branch of the British Medical Association shall give lectures on ambulance at the request of the Technical Education Committee of the county council at a less fee than 1 guinea per lecture, such lecture to be not more than two hours,

was proposed by Dr. CREBAR (Maryport), seconded by Dr. DUDGEON (Workington), and carried.

Executive Committee's Report.—The Executive Committee's report for the past year was read. The following is the text of the report: Your Committee have much pleasure in presenting their first annual report. Since the inaugural meeting of the Division held on June 21st, 1907, three general meetings and one special meeting of the Division have been held. At the special meeting held in Carlisle on October 16th, 1907, the Division adopted ethical rules, which were subsequently approved by the Central Council of the Association. The Division are now in a much better position to deal with the various matters for which these rules are framed than previously. The autumn meeting was held at Maryport on December 13th, 1907, when a number of interesting papers were read by members of the Division, one of which—Dr. Mitchell's Ambulance Classes as Opportunities for Erecting the Best Bulwark against Quackery—was printed in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for January 18th, 1908. The spring meeting was held in Carlisle on March 27th, 1908, when Sir James Barr delivered an address on bronchitis and emphysema, which was printed in the BRITISH MEDICAL JOURNAL for April 18th, 1908. At a meeting held in Carlisle on March 13th, your Committee submitted a report on a case of alleged unprofessional conduct of a non-member. This report the Division approved of. Your Committee are unanimously of opinion that the amalgamation of the North and West Cumberland Division has proved a success, and materially increased the interest and scope of the work of the Association in this district. The membership of the Division is 89. The expenses of the Division have been defrayed by the Branch Council. The report was adopted.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, J. H. Dudgeon (Workington); *Vice-Chairman*, W. F. Farquharson, (Garlands); *Honorary Secretary*, Norman Maclaren, F.R.C.S. (23, Portland Square, Carlisle; *Representative for Representative Meeting*, Harrison Mitchell, M.D. (Cockermouth); *Representatives on Branch Council*, J. E. Bowser, M.B., D. C. Edington, M.D., C. W. Graham, John Penny, M.B.; *Executive Committee*, Henry Barnes, M.D., J. R. Burnet, M.D., J. E. Bowser, M.B, J. W. Crerar, M.B., D. S. Doughty, M.D, and G. B. Muriell, M.B.

Cumberland Infirmary.—Plans of the proposed extensions and improvements of the Cumberland Infirmary were submitted, and a vote of thanks was passed to the architect, Mr. J. G. Burnet.

EAST ANGLIAN BRANCH:
NORTH SUFFOLK DIVISION.

THE annual meeting of the Division was held at the Lowestoft Hospital on Thursday, June 4th.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Helsham; *Vice-Chairman*, Dr. Berry; *Secretary and Treasurer*, Dr. Tyson; *Executive Committee*, Drs. Bell, Shann, Evans and Ransome; *Representative at the Annual Representative Meeting*, Dr. E. H. T. Nash; *Representative on Branch Council*, Dr. E. H. T. Nash,

Lynn Thomas and Skyrme Fund.—The SECRETARY stated that a sum of £3 5s. 6d. had been contributed in small sums by members of the Division for the Lynn Thomas and Skyrme Fund.

Cases and Specimens.—Cases and specimens were then shown.

NORTH SUFFOLK DIVISION (LOWESTOFT SECTION).

Election of Officers.—The following officers were elected for the ensuing year at a meeting held on June 4th: *Chairman*, Dr. Berry; *Secretary*, Dr. Tyson; *Committee*, Drs. Shann, Bell and Evans.

Subscription.—It was agreed that a subscription of 2s. 6d. per annum should be paid by members of the Section to defray the necessary working expenses of the Section.

EDINBURGH BRANCH:
NORTH-WEST EDINBURGH DIVISION.

THE annual meeting of the Division was held on May 19th, in the Hall of the Royal College of Physicians, Dr. JAMES RITCHIE in the chair.

Election of Officers.—The meeting elected the following officers for 1908-9: *Chairman*, Dr. James Ritchie; *Vice-Chairman*, Dr. Alexander James; *Honorary Secretary and Treasurer*, Dr. F. D. Simpson; *Representatives on Branch Council*, Dr. Ballantyne, Dr. F. D. Simpson. *Members of Executive Committee*, Dr. G. A. Gibson, Dr. W. N. Elder, Dr. J. Lamond Lackie, Dr. E. Scott Carmichael, Dr. Haig Ferguson, Dr. W. T. Ritchie.

Representative at Representative Meeting.—The meeting deputed the Chairman and Secretary to appoint a Representative for Representative Meetings.

Annual Report.—The HONORARY SECRETARY presented the annual report of the Executive Committee.

Matters Referred to Divisions.—The meeting passed to the consideration of the various matters referred to Divisions. On the CHAIRMAN asking for any further business, the following motion was proposed by Dr. MCKENZIE JOHNSTON and seconded by Dr. CAMPBELL:

> That this Division strongly disapproves of the Association taking up medical prosecution before the General Medical Council, questions the legality of any such proceeding under our Constitution, and deeply regrets the loss sustained by the Division by the resignation of several members as a result of such prosecution being undertaken.

After discussion this motion was unanimously agreed to.

Vote of Thanks.—Dr. BALLANTYNE then proposed, and Dr. FRASER seconded, a vote of thanks to the Chairman.

GLASGOW AND WEST OF SCOTLAND BRANCH.
SPECIAL MEETING.

Ruchill Hospital.—In compliance with a requisition from the Eastern Division, the Branch held a special meeting on May 29th to consider the Ruchill Hospital disputes, more especially with reference to the position of the dismissed resident physicians. Dr. JAS. H. NICOLL, the President of the Branch, presided, and there was a very large attendance of members. The Chairman at the outset referred to certain resolutions which the Eastern Division had accompanied their requisition with, and requested that the meeting should confine itself in the first instance to an expression of sympathy with the dismissed resident physicians. Dr. MILLER SEMPLE accordingly moved that the Branch express its strong sympathy with the dismissed resident physicians. The resolution was put to the meeting and unanimously carried. It was also resolved after considerable discussion:

> That a subscription list be opened for the receipt of contributions towards defraying the expenses of Drs. Goldie Smith, MacPhee, and Robertson in defending themselves, and as a tangible recognition of the fact that the result of the recent inquiry has been to vindicate them from any reflection upon their personal or professional reputation, and that the Secretaries of the Branch be invited to receive contributions from the profession.

Further motions were proposed respecting the attitude

the profession should adopt towards the Corporation of Glasgow, but after discussion were negatived. On the suggestion of Dr. Muir, a subscription list was opened at the close of the meeting, and largely subscribed to; and, on the motion of Dr. Whitelaw, a hearty vote of thanks was given to the Chairman, which concluded the business.

Annual Meeting.

The statutory annual meeting of the Branch was held at the new Maternity Hospital, Glasgow, on Friday, June 5th. Over 100 members were present. The President (Dr. Jas. H. Nicoll) occupied the chair.

Confirmation of Minutes.—The minutes of the previous meetings were read and adopted.

Report of Branch Council.—The Secretary (Dr. Jas. Hamilton) then read the annual report, which showed that all the Divisions were active and in a satisfactory condition. In addition to several local matters which have, at the request of members, engaged the attention of the Council throughout the year, the larger and more general questions of school certificates, Births Notification Act, Ruchill Hospital dispute, have come under the purview of the Council, and, as far as possible, been satisfactorily dealt with. In addition to a large number of subcommittee meetings, the Council has held nine ordinary meetings throughout the year; 36 new members have been elected by the Council, but when deaths, resignations, changes of address, are taken into consideration, the total number of the whole Branch shows an increase only of 10, namely, 697, as against 687 last year. The report was adopted.

Treasurer's Report.—The Treasurer (Mr. Grant Andrew) read his annual report, which showed an actual balance at the end of the financial year of £303 14s. 7*d*.

Medico-Ethical Committee's Report.—This was held over.

Election of Office-bearers.—The following office-bearers were elected for the ensuing year, namely: *President*, Dr. A. Campbell Munro, Paisley; *President elect*, Professor Ralph Stockman; *Vice-Presidents*, Dr. Jas. H. Nicoll, Dr. J. Lindsay, Kirkmuirhill; *Secretaries*, Mr. Jas. Grant Andrew, Dr. Wm. D. Maclarlane, jun.

Tea.—By the kindness of the directors of the Maternity Hospital tea was thereafter served, after which the members were shown over the new hospital by Professor Murdoch Cameron and Dr. Jardine.

Votes of Thanks.—Votes of thanks were heartily given to the retiring president, Dr. Jas. H. Nicoll, and secretary, Dr. Jas. Hamilton, each of whom has so willingly and so efficiently carried out the duties of his respective office, and also to the directors, staff, and matron of the Maternity Hospital, for their kindness and hospitality.

Dinner.—In the evening the members dined at the St. Enoch Hotel. Dr. J. Campbell Munro presided, and the croupiers were Dr. James H Nicoll, Dr. John Macintyre, Dr. James Hamilton, and Dr. James Grant Andrew. The guest of the evening was Dr. Bruce Goff, who for twenty-five years has represented the Branch on the Council of the Association. The company was large and representative. Dr. Nicoll, on behalf of the Branch, presented Dr. Goff with a Warwick vase and four fruit dishes, all in silver. He said that if the General Medical Council stood to the medical profession as its law court, the British Medical Association was its parliament and executive. The attainment of that position had been slow and arduous, and it had been inspired by some of the wisest heads in the profession. Among those who had borne a leading part in the work was Dr. Bruce Goff, who for twenty-five years had represented the Glasgow and West of Scotland Branch on the General Council of the Association. Again and again they had returned him as their Representative. His indefatigable and able services were known to the profession, and the value placed on these services was indicated by the fact that Dr. Goff had acted as a member of all the important committees in London. Dr. Goff, in acknowledging the gifts, gave an interesting retrospect of the Association during the time he had represented the Branch on the Council, a position from which, owing to circumstances over which he had no control, he had now to retire. The Association, he reminded them, had been founded in 1832 by the late Sir Charles Hastings, with a membership of 140, and for twenty years, under the name of the Provincial Medical and Surgical Association, it went on steadily increasing in numbers and influence. During that period the Association approached Parliament on the importance of the consideration of questions of public health, registration, and medical reform, all of which had since, though tardily, been made, till in 1853 the number of members exactly corresponded with the year—namely, 1853. At this time, having just graduated, he began to note the doings of the Association. In 1854 the constitution was reformed, and the title was changed to "the British Medical Association." During the next twenty years the Association made rapid strides. At that time the Council was elected by the Branches, which were then comparatively few in number, one member for every twenty, the honorary secretaries of each Branch being sent to the Central Council. The Council elected a small body called the "Committee of Council," and upon this Committee devolved the management of the Association. This went on until the year 1874, when the Association was incorporated under the Companies Acts, and the whole of the United Kingdom and some of the colonies were divided into Branches, a certain area assigned to each Branch, and each Branch sent one, two, or three members, according to their numbers, to the Central Council. It was at this time he began to take an active interest in the Association, and in 1880 they did him the honour of electing him president of their Branch in succession to the late Sir William Gairdner. From that time forward he took a deeper interest in the affairs of the Association, and was rarely absent from any of the annual meetings. In 1882 the Committee of Council was abolished, and the government of the Association was vested entirely in the hands of the Council, assisted by its committees. In 1884 they again honoured him by electing him representative on the Central Council in succession to his able friend, Dr. D. C. M'Vail, who had held the post for some time with great acceptance. The governing body was at this time the Council assisted by its committees, and the principal committee was called the Journal and Finance Committee, a committee which had hitherto been composed of members south of the Tweed; but not very long after his return to the Council he had the good fortune to be elected a member of this committee, thus removing what might be considered an injustice to Scotland, and since that time it had never been without a representative from Scotland upon it. During the next few years the membership of the Association went on steadily increasing, till in 1900 the membership was 18,382. The finances of the Association also continued to prosper, for at this time the excess of income over expenditure was £4 476, so that a considerable sum had accumulated, which enabled them, besides giving large sums for scholarships and original research, and various other objects, to purchase buildings on one of the finest freehold sites in the business part of the City of London. This building two years ago became too small for their requirements, and at this moment was being erected on the site they acquired, and was now near completion, one of the finest buildings in the Strand, which would be the future home of the Association. In 1900 there arose a feeling among many that the Association was neither representative of the great body of its members nor was it doing as much work for the benefit of the profession as was expected of it, so a committee was appointed to consider and report on the changes required in the constitution to give more power to the individual practitioner. The outcome of this was a complete revolution in the management of the Association, which took place in 1902. A new constitution was adopted, new articles and by-laws framed, and the United Kingdom and Colonies formed into Divisions, to which every member of the Association was bound to belong. These Divisions each chose a Representative, who became a member of what was now called the "Representative Body," which body now directed the policy of the Association, and the Council simply carried out their wishes and managed the Association on the lines indicated by that body. This was done in the hope that each individual member of the Association would take an interest in its affairs, and that thus the Representative Body might be looked upon as the voice of the profession. That, he feared, had not been the result, as in many Divisions not more than from 10 to 20 per cent. seemed to attend the meetings or take any interest in its affairs. The consequence was that the guidance of the Representative Body was in the hands of a few active and energetic members. It was to be hoped as time

went on that this might be improved. The newly-constituted Representative Body made considerable alterations in the by-laws of the Association, one being to appoint a "Medical Secretary" to take charge of all matters purely medical and to act as Secretary to all committees of a medical nature, and to undertake work of a purely professional character. This no doubt was a move in the right direction; but he feared that the result had been that far too much work had been undertaken and far too much money expended without obtaining a corresponding benefit. This might be seen from the fact that in 1904 the balance was £5,070, whereas in 1907 it was £1,319, far too small a sum to be carried forward by a concern whose receipts were £52,520, and little to show for the increased expenditure. Another by-law that was passed at this time was that no member of Council should hold office more than eight years, and this was subsequently reduced to six years; hence the reason he had to resign the post he had so long had the honour of occupying in this Branch, and it was with deep regret he did so. Still, considering his age, he thought that they would be better served by a younger, more energetic, and enthusiastic man. ("No, no.") He had no doubt there would be plenty of wise heads to guide the Association, nor did he doubt that it would influence not only medical, but public opinion. Dr. D. C. M'VAIL proposed "The Universities and Medical Schools of Scotland." He reminded them that the first medical school in Scotland was established in 1505 as the College of Surgeons, which long afterwards became the Royal College of Surgeons in Edinburgh. But it was not until something like one hundred and sixteen years ago that medical work in Scotland really began, and it began in Glasgow under Dr. Joseph Black and Dr. William Cullen. He went on to pay tribute to the work of Redfern of Belfast, Simpson in Edinburgh, and Lister, the great master, who began in Edinburgh. The discovery of the antiseptic treatment by Lister was the greatest event in the history of the profession in Glasgow. As regards antiseptic surgery, the honour was Scotland's and Glasgow's. It was the greatest event that ever took place in the world of surgery, and it had extended itself to medicine. Professor Stockman, in reply, said there was one thing that always struck him in regard to medical education, and that was the powerful effect it had upon any young lad that was bred in a medical school. There was no body on whom the impress of education was so strongly marked as on medical men, except, perhaps, naval men. It was wonderful how a raw lad of 16 or 17, after four or five years in a medical school, was turned out with the aspirations and sympathies of a finished medical practitioner. He no longer regarded a corpse as a thing to be abhorred, and he took a great interest in *post-mortem* examinations. In a short time he was converted from an ordinary citizen into quite a passable medical man. He thought that any system of education which could attain that must have a very powerful influence. Dr. J. CRAWFORD RENTON gave "The British Medical Association," which the CHAIRMAN acknowledged. "The Chairman," proposed by Dr. JAMES HAMILTON, concluded the toast list.

CENTRAL COUNCIL ELECTION.

An election for the Representatives of the Branch on the Central Council took place the week before last. There were five nominations sent in for the two vacant seats. Close on 350 voting papers were returned, the counting of which resulted in a decisive vote in favour of Donald J. Mackintosh, M.B., M.V.O., Western Infirmary, and James Grant Andrew, M.B., 12, Woodside Terrace, Glasgow.

GLASGOW NORTH-WESTERN DIVISION.

THE annual meeting of the Division was held in the Burgh Hall, Hillhead, on May 29th, at 8.30 p.m. Dr. D. J. MACKINTOSH, M.V.O. was in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Officers.—The following office bearers were elected: *Chairman*, Dr. J. Galbraith Connal; *Vice-Chairman*, Dr. John Morton: *Secretary and Treasurer*, Dr. G. Burnside Buchanan; *Executive Committee*, Drs. Robert Bruce, A. T. Campbell, W. Caskie, J. Edmiston, A. G. Hay, D. McNicol, T. Richmond, Henry Whitehouse; *Representatives to the Branch Council*, Drs. D. J. Mackintosh and Buchanan; *Representatives to Representative Meeting*, Dr. D. J. Mackintosh, M.V.O.

Medical Examinations for Life Insurance.—The report on life insurance fees was considered, and information was requested about the conditions obtaining in the district. Opinions on the questions asked (in SUPPLEMENT, February 22nd, 1908) were given as follows: No. 5. It was decided that a fee of less than a guinea might be accepted under certain conditions. No. 6. Half a guinea might be accepted only if the sum insured for was not over £100. No. 7. The same answer as that to No. 6. No. 8. Five shillings might be accepted for short reports if the sum insured for was not over £50. No. 9. This form of certificate was strongly condemned.

Lynn Thomas and Skyrme Fund.—An appeal was made to individual members for support of the Lynn Thomas and Skyrme fund, the Division having no funds available for expenditure on this object

Inebriety of Females.—The members were requested to fill up and return the schedules with information as to inebriety of females.

Special Finance Inquiry Report.—The finance inquiry report afforded matter for ample discussion, and the following resolutions were voted upon (SUPPLEMENT, May 2nd): No 1 (p. 202), Yes; No. 2, Yes; No. 3, The time for redeeming the loan for rebuilding should be more than thirty years; No. 9 (*c*), That *ordinary* first-class return fares should be paid; No. 9 (*d*), Agreed; No. 10, Yes; No. 11, Agreed; No. 12, Agreed; all unanimously.

Ethics of Medical Consultation.—The ethics of medical consultation were discussed, and after some debate the report of the Central Ethical Committee was adopted in general terms.

Medical Inspection of School Children.—The report on the remuneration of inspectors of school children was read and debated. It was considered on the whole that the minimum salaries quoted (SUPPLEMENT, December 21st, 1907, p. 341) were higher than were likely to be generally offered. A strong feeling was expressed that such inspection of children should be reserved as much as possible for the general practitioners rather than for whole-time officials.

Annual Representative Meeting.—The provisional agenda for the Representative Meeting at Sheffield was considered. Amongst other items the amendment to the Standing Orders, proposed by the Westminster Division (No. 4, p. 266 of SUPPLEMENT, May 16th) was warmly approved of, and the Representative was asked to support this. The amendment to the by-laws proposed by the Gateshead Division (No. 18, p. 263) was also approved of.

Draft Charter.—The draft Charter was presented, but was received without discussion.

GLASGOW SOUTHERN DIVISION.

Election of Officers.—The following officers were elected at the general meeting on June 9th: *Chairman*, Dr. W. J. Richard; *Vice-Chairman*, John Stewart; *Secretary*, John P. Duncan; *Representative to Annual Representative Meeting*, Alex. Miller, 1, Royal Terrace, Crosshill, Glasgow; *Representatives on Branch Council*, James Hamilton, John P. Duncan; *Fourteen Members of Committee*, A. Wauchope, C. E. Robertson, W. Lawson, R. J. Carroll, J. T. Kilpatrick Thomson, Reg. Dunlop, R. Yuill-Anderson, John Paton, W. Hansen, McLeod Watson, James Weir, H. L. G. Leash, A. McCrorie, J. W. Leitch.

LANCASHIRE AND CHESHIRE BRANCH:

ALTRINCHAM DIVISION.

THE annual meeting of this Division was held on June 4th.

Representative at Representative Meeting.—Dr. Garstang was appointed Representative for Representative Meetings for 1908-9 (with Dr. C. J. Renshaw as substitute if required).

Election of Officers.—The other officers and committee were elected as follows: *Chairman*, F. Cox; *Vice-Chairman*, A. Golland; *Honorary Secretary*, T. W. H. Garstang; *Honorary Assistant Secretary*, T. Ll. Fennell; *Branch Council*, T. W. H. Garstang, E. L. Luckman; *Committee*, G. H. Smith, T. B. Rhodes, J. C. Smyth, B. Melland, H. F. Ransome, H. G. Cooper, and Dr. C. J. Renshaw

ex officio whilst President of Branch. *Associate Members:* Professor G. A. Wright, Manchester; F. C. Larkin, Liverpool; C. Macfie, Bolton; J. H. Taylor, Salford; A. E. Hodder, Wigan; J. R. Bishop, Stalybridge; A. McDougall, Stockport Division.

BOOTLE DIVISION.

THE general meeting of this Division was held at the Masonic Hall, Merton Road, Bootle, on Thursday, June 4th; Dr. DUNN presided.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Office-bearers.—The following were appointed as office-bearers for the year 1908-9: *Chairman*, Robert Turner, M.D., F.R.C.S.E.; *Vice-Chairman*, Joseph Walker, M.R.C.S., L.R.C.P.; *Honorary Secretary and Treasurer*, Henry Waters, M.B., C.M.Edin., 59, Trinity Road, Bootle; *Representative for Representative Meeting*, Henry Waters, M.B., C.M.; *Representatives on Branch Council*, J. Dunn, F.R.C.S.E., T. M. Wills, F.R.C.S.I., J.P. *Executive Committee*, W. Daley, Esq., J. Dunn, Esq., W. J. Fleetwood, M.D., B. Sumner, M.D., R. Stevenson, M.D., Robert Turner, M.D., H. Waters, M.B., C.M., Joseph Walker, Esq., T. M. Wills, F.R.C.S.I., J.P.

LIVERPOOL (NORTHERN) DIVISION.

THE adjourned meeting of this Division was held at the Medical Institution on June 3rd, Dr. A. IVOR THOMAS (Chairman) in the chair. There were also present: Drs. Blackledge, Bowen, Cooke, Davies, Mathews, Tisdall, and A. W. German (Honorary Secretary). Forty-four members were absent.

Confirmation of Minutes.—The minutes of the last annual meeting were taken as read. The minutes of the last ordinary meeting were read and confirmed.

Election of Officers.—The following members were elected office-bearers for the ensuing year: *Chairman*, A. Ivor Thomas; *Vice-Chairman*, S. Mathews, M.D.; *Secretary and Treasurer*, A. W. German; *Representative at Representative Meeting*, E. T. Davies, M.D., or if unable to attend, J. J. Tisdall; *Representative on Branch Council*, A. W. German; *Executive Committee*, O. Bowen, W. T. Blackledge, M.B., J. A. Cooke, J. J. Tisdall; *Representatives on Joint Committee for Local Divisions*, E. T. Davies, M.D., A. W. German, A. Ivor Thomas, S. Mathews, M.D., J. J. Tisdall.

Medical Inspection of School Children.—The resolutions of the Liverpool and Birkenhead combined Divisions, which appeared in the SUPPLEMENT of March 14th last, were unanimously approved of and confirmed.

The Term "Hospital."—The resolution which appeared in the SUPPLEMENT of May 9th last was adopted.

Medical Examinations for Life Insurance.—

Question 5. Yes.
Question 6. No; one guinea.
Question 7. No.

No opinion was expressed on the remaining questions owing to the small number present.

Notices of Motion (See SUPPLEMENT, March 28th and April 18th).—The resolutions of the combined Divisions, which appeared in the SUPPLEMENT of May 9th last, were unanimously approved of and confirmed.

Annual Representative Meeting.—It was unanimously decided that the remainder of the business for the Annual Representative Meeting should be left to the discretion of the Representative.

Lynn Thomas and Skyrme Fund.—It was decided to leave this fund to the members individually, those present agreeing to draw attention to it as opportunity arose.

Report of Representative on Branch Council.—Dr. A. W. GERMAN gave an account of the last two meetings of the Branch Council, briefly drawing attention to the principal items which had been discussed.

Vote of Thanks to Honorary Secretary.—On the proposition of the CHAIRMAN, a hearty vote of thanks was accorded to the honorary secretary for his services during the past year.

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

THE annual general meeting was held at the Great Eastern Hotel, Liverpool Street, E.C., on May 28th, at 9 p.m. Dr. SOUTHCOMBE (Chairman) presided.

Confirmation of Minutes.—The minutes of the special general meeting held on May 19th were read, confirmed, and signed by the Chairman.

Annual Report.—The annual report was discussed and was passed unanimously. It stated that since the date of the last annual report of May 16th, 1907, ten meetings of the Division had been held, one of them conjointly with the Walthamstow Division at Walthamstow, but only two members of this Division were present. The average attendance had been fourteen, including visitors. The average attendance at the purely business meetings, of which there were six, was thirteen. After the annual general meeting, on May 30th, 1907, a supper was held at the Great Eastern Hotel, and was a success, twenty-four members and two friends being present. The following were the most important matters that had been considered at the business meetings:

1. The Referendum of the Central Council *re* the minutes of the Representative Meeting. This Division supported the action of the Representatives.

2. *Re* the Notification of Births Bill. This Division expressed an adverse opinion to the Bill.

3. *Re* the medical inspection of school children.

The Division was much indebted to Dr. H. Rayner for his paper on Incipient Insanity, to Dr. J. H. Sequeira for his Demonstration of Cases of Skin Diseases, to the staffs of St. Bartholomew's and the Metropolitan Hospitals, and to Dr. Potts, of the Bethnal Green Infirmary, for their Clinical Demonstrations. The following is a statement of the expenses of the Division for 1907:

	£	s.	d.
Hire of rooms	5	5	1
Printing, postage, stationery	12	7	3½
Gratuities to patients	0	19	0
Expenses *re* Central Council Election ...	0	10	0½
Hire of lantern	0	8	0
	£19	9	5

As against £20 5s. last year. There were at present 157 members and one associate member. The Executive Committee had held six meetings, and the average attendance had been eight. At one meeting there was not a quorum. The representatives of the Division on the Branch Council had been summoned to seven meetings. Dr. J. W. Hunt and Mr. F. Wallace had attended six of these, and the Honorary Secretary three. Dr. J. W. Hunt had attended two meetings of the Ethical Committee of the Branch. Dr. Goodall, as a Vice-President of the Branch Council and as a member of the Emergency Committee, had attended several meetings. It had not been necessary to summon a meeting of the Ethical Committee of the Division.

Election of Officers.—The officers of the Division were then elected for the ensuing year as follows: *Chairman*, E. W. Goodall, M.D.: *Vice-Chairman*, A. Withers Green; *Representatives on Branch Council*, J. W. Hunt, M.D., F. Wallace; *Representative at Annual Meeting*, E. W. Goodall, M.D.; *Deputy*, F. Wallace; *Honorary Secretary and Treasurer*, C. R. Salisbury; *Assistant Honorary Secretary*, F. H. Wallace; *Executive Committee*, F. B. Bremner, M.B., T. L. Brown, F. J. P. Daly, W. Fee, G. E. Gask, F.R.C.S., Major Greenwood, M.D., G. H. Johnston, E. A. Lermitte, M.B., J. Oliver, M.D., J. H. Porter, H. E. Powell, Montague Smith, A. G. Southcombe, M.D., and J. King Warry, M.D.

Supper.—The members and their friends to the number of seventeen then adjourned to the annual supper.

SOUTH-EASTERN BRANCH:

EASTBOURNE DIVISION.

THE annual general meeting of this Division was held at the Grand Hotel, Eastbourne, on Friday, May 29th.

Election of Officers.—The following were appointed officers for the ensuing year: *Chairman*, W. J. C. Merry, M.D. (Eastbourne); *Vice-Chairman*, H. D. Furnell, F.R.C.S., J.P. (Eastbourne); *Honorary Secretary and Treasurer*, Wm. Muir Smith, M.B. (Eastbourne); *Representative for Representative Meeting*, J. A. Ewart, M.R.C.S. (Eastbourne); *Representative on Branch Council*, W. J. C. Merry, M.D. (Eastbourne); *Executive Committee*, J. H. Ewart, Esq., Kenneth Frazer, M.D., F. C. Goodwin, M.D., C. O'Brien Harding, A. D. Williams.

SOUTH-WESTERN BRANCH:

EXETER DIVISION.

THE annual meeting was held at the Royal Devon and Exeter Hospital on June 12th. Dr. DAVY presided.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Dr. Henry Davy; *Honorary Secretary*, Mr. Leonard R. Tosswill; *Representative for Representative Meeting*, Mr. Russell Coombe; *Representatives on the Branch Council and Members of the Executive Committee*, Dr. Beesley (Exmouth), Dr. Colclough (Sidmouth), Mr. E. J. Domville (Exeter), Mr. Leonard R. Tosswill (Exeter).

Annual Report.—The annual report showed that the membership had increased to 116, and that various matters of importance had been discussed during the year.

PLYMOUTH DIVISION.

THE annual meeting (1908) of the Division was held on May 22nd at the rooms of the Plymouth Medical Society at 4.30 p.m., Dr. E. L. Fox in the chair. There were present: Drs. Donbavand, Pethybridge, Crowther, G. Jackson, Soltau, Jaques, and the Honorary Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following were elected officers: *Chairman*, Dr. E. L. Fox; *Honorary Secretary and Treasurer*, Dr. E. J. Donbavand (Plymstock); *Representatives on Branch Council*, Drs. Webber, Soltau, and Pethybridge; *Representative at Annual Representative Meeting*, Mr. G. Jackson (10, Portland Villas, Plymouth).

The Term "Hospital."—The meeting agreed with the definition proposed by the Central Ethical Committee of the Association.

Medical Examination for Life Insurance.—The questions of the Medico-Political Committee *re* medical examinations for life insurance were considered and answered as follows:

1. (*a*) No special information.
   (*b*) Nearly all insurance companies.
2. Yes.
3. A "full" report except in the case of industrial offices.
4. Only in the case of a "short" report.
5. No, except in the case of a "short" report.
6. No. One guinea.
7. No.
8. Should be 10s. 6d.
9. 10s. 6d.

N.B.—The Division considers that these fees should apply only to examination at the doctor's house.

Lynn Thomas and Skyrme Fund.—A communication was read by the HONORARY SECRETARY from Mr. William Sheen of Cardiff, requesting the meeting to consider the question of making a donation to the Lynn Thomas and Skyrme Fund. It was proposed by Dr. SOLTAU, seconded by the HONORARY SECRETARY, and carried unanimously:

> That the Branch Council be asked to make a donation of 10 guineas from the funds of the Branch.

Votes of Thanks.—A vote of thanks to the late Honorary Secretary for his five years' service was proposed by Dr. Fox and carried unanimously.

[Owing to the unusual pressure on our space this week we are compelled to hold over a number of other reports of meetings of Branches and Divisions. They will appear in later issues.]

LANCASHIRE AND CHESHIRE BRANCH.

CENTRAL COUNCIL ELECTION.

WE received the following letter too late for publication in last week's issue:

SIR,—Two communications appeared in the JOURNAL of May 30th which seem to call for some reply. The first, on p. 370 of the SUPPLEMENT, signed by Dr. Brassey Brierley and Dr. Smeeth, the second on p. 1333 of the JOURNAL over the signature of Dr. Shadwell.

With regard to the former of these, what are we to think of critics who would prefer, instead of devoting our resources to the arduous work of promoting the honour and interests of the profession, that we should continue to pile up balances at the bank, like the talents in a napkin? Their presentation of the financial position of the Association is disingenuous if not misleading. Who would gather from it that the value of the site in the Strand was actually increased by pulling down the old buildings, and is modestly valued in the balance sheet[1] for December 31st, 1907, at £86,000; that there is every prospect of the Association[2] deriving from its new building a net yearly income of £1,490; or that on December 31st, 1907, the total excess of assets over liabilities was £104,000, an increase during two years of strenuous work of £1,831, in spite of £910 having been written off our investments?

As to being obliged to borrow to pay the builders, would the writers have realized these securities at a great loss during a period of low prices? Or would they have saddled the present generation with the entire burden of this permanent improvement by paying for it out of current income? To do so would be to cripple the very work on behalf of the profession for which the buildings are mainly needed.

In so far as the letter is an onslaught on the professional policy of the Association it is indefinite and unsupported by serious argument; if, however, it is a covert attack on the way in which the work is carried out in one of the central departments, then it must be replied that an election address is not the proper medium for such criticism, which should be reserved for the council chamber, where it can be estimated at its true value and dealt with as it deserves. Do the writers really mean that Dr. Godson and Dr. Bradshaw have taken over the government of the Association and determined to engage another Medical Secretary? This would doubtless be a *coup d'état* after Dr. Brassey Brierley's heart; but perhaps the words "these gentlemen" are merely an airy phrase of his to indicate the majority of the Representative Meeting, whose expressed wishes in regard to the policy of the Association the Council, as in duty bound, is loyally carrying out.

Turning to the other letter, it is satisfactory to note that Dr. Shadwell finds himself in hearty agreement with the recommendation of the Special Finance Inquiry Committee:

> That the whole of the work of the Association be arranged in three co-ordinate departments.

The arrangement of these, he considers, should be: (*a*) General Business, (*b*) Editorial, and (*c*) Medical and Professional. The recommendation of the Committee (SUPPLEMENT, May 2nd, p. 204) is:

> That the whole work of the Association be arranged in three co-ordinate departments: (*a*) Financial; (*b*) Editorial; and (*c*) Medical and Professional.

It is clear, then, that there is no question as to the way in which the work of the Association is to be divided, but only as to the name to be given to one of the departments.

Recommendation 13 proposes "that to the Financial Department be assigned the business work of the Association and" other specified duties. The general principle underlying this recommendation is that to this department is to be allotted all the work which deals with the receiving and paying of moneys and with those bodies in the Association which exercise control and supervision over such matters. To such work the term "Financial" seems appropriate. The reasons which specially commended it to the Committee were:

1. That it is desirable to have the same description for the department and for the secretary at the head of the department, and, if possible, conveyed by a single epithet of similar style in each case.

2. That in the titles selected the principle should be observed that the departments are of equal importance and should have at their head officers of co-ordinate rank.

The term "Business Secretary," in addition to not corresponding well with the other titles, did not seem to be adequate to the varied and important duties assigned to this department. On the other hand, the term "General"[3] Secretary, as applied to the officer who deals with the business side of the secretarial work of the Association, is, in the opinion of the Committee, "inappropriate, inasmuch as it implies a general supervision of the work of the Association which does not in fact exist, and which under present conditions would be impracticable.

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[1] SUPPLEMENT, May 23rd, p. 293.
[2] Ibid., May 2nd, p. 215.
[3] Ibid., May 2nd, p. 221.

The Committee recommends, therefore, that this title should be altered, and suggests the designation 'Financial Secretary' as corresponding more closely with the nature of the duties of the office." This extract from the report seems to answer clearly the last paragraph in Dr. Shadwell's letter.—I am, etc.,

Hampton Wick, June 9th. R. LANGDON-DOWN.

SIR,—Please allow me space in the JOURNAL to express my gratitude to the members of the Lancashire and Cheshire Branch who have elected me to the Central Council of the British Medical Association.

Yours faithfully,

June 13th. CHAS. MACFIE

Association Notices.

1908 ANNUAL GENERAL MEETING.

The Annual General Meeting of the British Medical Association will be held in the Hall of the Education Department of Sheffield, on Friday, July 24th, at 3 o'clock in the afternoon.

[*This Meeting will be merely formal, to comply with Article XII, and will adjourn forthwith until Tuesday, July 28th, at 2.30 o'clock*]

ANNUAL REPRESENTATIVE MEETING.

The Annual Representative Meeting will take place in the Hall of the Education Department of Sheffield on Friday, July 24th (and following days as required), immediately after the Annual General Meeting, which will be held at 3 o'clock in the afternoon, on Friday, July 24th.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

June 11th, 1908.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 1st, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

June 11th, 1908. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND TROWBRIDGE DIVISIONS.—A combined meeting of the Bath and Trowbridge Divisions will be held at the Royal United Hospital on Thursday, July 2nd, at 5 p.m. Business: To elect Representative for the Bath and Trowbridge Divisions.—J. TUBB THOMAS, Honorary Secretary, Trowbridge Division; D. LESLIE BEATH, Honorary Secretary, Bath Division.

BORDER COUNTIES BRANCH.—The annual general meeting of the Border Counties Branch will be held in the County Hotel, Carlisle, on Friday, June 26th. Dr. James Macdonald of Carlisle will deliver his Presidential address. Further particulars later.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Branch will be held on Thursday, July 2nd, at Alconbury Hill, Huntingdon. Members having any communications to make or specimens to show are requested to inform the Honorary Secretary, F. E. APTHORPE WEBB Grafton House, Cambridge.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Yeovil on Wednesday, July 8th. Members wishing to read papers, show cases, or exhibit specimens, must communicate with the undersigned not later than Friday, June 26th.—JAMES DAVISON, Honorary Secretary, "Streateplace," Bournemouth.

EDINBURGH BRANCH.—The annual business meeting of the Branch will be held in the Hall of the Royal College of Physicians, Queen Street, on Friday, June 26th, at 4.15 p.m.—A. LOGAN TURNER and FRANCIS D BOYD, Honorary Secretaries.

EDINBURGH BRANCH: SOUTHERN DIVISION.—The annual meeting of the Division will be held in the Oddfellows' Hall (Room 6), Forrest Road, on Tuesday, June 23rd, at 8.15 p.m. Business: 1. Minutes of last meeting. 2. Letters. 3. Annual report of Executive Committee. 4 Financial statement and Secretary's report. 5. Election of officers and Executive Committee. 6. Matters referred to Divisions (see SUPPLEMENTS, May 23rd and June 6th). 7 Instructions to Representative at Representative Meeting. 8. Motion by Dr. A. Walker *re* Charter. 9. Motion by Dr. Cullen *re* Deaths Registration. 10. Any other competent business.—MICHAEL DEWAR, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will be held at 6, Catherine Street, Strand, W.C., on Thursday, July 9th, at 5 p.m., when the incoming President, Sir Victor Horsley, F.R.S., will give an address.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The annual general meeting of the Division will be held at the Kensington Town Hall on Thursday, June 25th, at 5 p.m. Agenda: 1. Annual report of the Executive Committee. 2. Consideration of matters referred to the Divisions. 3. Election of officers for 1908-9. The following nominations have been made by the Committee: Chairman, A. J. Rice Oxley, M.D.; Vice-Chairman, Sir Chas. Cuffe, K.C.B.; Secretary and Treasurer, H. Beckett Overy, F.R.C.S.; Representative, Sir Chas. Cuffe; elected members on the Branch Council, G. C. Crichton, M.D., A. J. Rice Oxley, M.D., and C. Buttar, M.D.; Honorary Secretary; ordinary members of the Executive Committee, E. C. Barnes, G. Eastes, M.B., A. B. Lyon, M.D., J. Moorhead, M.D., M. F. Squire, M.D., H. H. Sturge, and G. J. Crawford Thomson, M.D.—CHAS. BUTTAR, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.—The annual meeting of this Division will be held at the Rooms of the Medical Society of London, Chandos Street, W., on Tuesday, June 23rd, at 4.30 p.m. Agenda: 1. Minutes. 2. Letters. 3 Election of a Representative in Representative Meetings for the year 1908-9 4. Election of officers—namely, Chairman, Vice-Chairman, Honorary Treasurer, Honorary Secretary. 5. Election of Representatives of the Division on the Branch Council. 6 To receive the annual report of the Executive Committee. 7. Any other business. The adjourned general meeting of the Division will be held at the Rooms of the Medical Society of London, Chandos Street, W., on Tuesday, June 23rd, at 5 p.m. Agenda: 1. Further discussion of the report of the Executive Committee. (This report has already been circulated to the members of the Division.) 2. Dr. C. O. Hawthorne gives notice that he will propose the following resolution: "That the Marylebone Division request the Council of the Association to conduct an inquiry into (i) the circumstances which have led to the amalgamation of the North-West London and Hampstead Hospitals, (ii) the position of the members of the staffs of these hospitals, (iii) the appointment of the staff of the new institution; and that this resolution be sent to the Representative Meeting with instructions to the Marylebone Representative to support it.'—DONALD ARMOUR, 89, Harley Street, W., Honorary Secretary

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Kendal on Wednesday, June 24th. An address will be delivered by the new President, Mr. C. H. Hough, on Some Requirements of the Modern Surgeon. The new hospital will be described by Drs. Taylor and Sturridge. Messrs. Arnold and Son have kindly consented to send down a large selection of instruments. Members wishful to show cases or specimens are requested to be good enough to communicate with A. S. BARLING, Lancaster, Honorary Secretary.

NORTH WALES BRANCH.—The annual meeting of the Branch will be held at Holyhead on Tuesday, July 7th.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A combined meeting of the Divisions comprised in the Old East Kent District (namely, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet) will be held at the County Hotel, Canterbury, on Thursday, June 25th, at 3 p.m., Dr. Sidney Robert Alexander in the chair. Agenda

An address will be given by Dr. Robert Hutchison, Physician London Hospital, Assistant Physician at Hospital for Sick Children, Great Ormond Street, on Relation of the Carbohydrates to Various Diseases. A discussion will also be opened on Therapeutic Hypnotic Suggestion, by George Ezra Halstead, M.D., of Ramsgate. Preliminary meetings will be held as follows: 2.30.—Canterbury and Faversham Division. Agenda: 1. Minutes. 2. Annual report. 3. Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, and Committee. 4. Any other business. 2.50.—Canterbury and Faversham with Thanet Divisions. Agenda: To elect a Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock, at the County Hotel, Canterbury. Charge, 5s., exclusive of wines. Those intending to stay to dinner are requested to notify Dr. Heggs, Sittingbourne, not later than the 24th.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The annual meeting of the Division will be held at the Royal Surrey County Hospital, Guildford, on Friday, June 26th, at 4.30 p.m. Dr. Anderson Morshead, Chairman of the Division, will preside. Agenda: 1. Minutes of last meeting. 2. Election of officers—Representatives on Branch Council and in Representative Meetings, and members of the Executive Committee. 3. To receive the annual report of the Division. 4. Matters referred to Divisions (see SUPPLEMENTS to the JOURNAL, April 18th and 20th, and May 9th, 16th, and 23rd). 5. Notes of cases will be read as follows: Dr. Morshead—(*a*) Acute Nephritis in a child; (*b*) Sarcoma of the Kidney. Specimens will be shown. Mr. Harold Butler: A Case of Abdominal Tumour of Unusual Interest. Mr. Eric Sheaf: Two Cases of Mistaken Diagnosis. Mr. E. J. Symth: Foreign Body in the Orbit 1¾ in. in length. 6. Any other business. Tea will be provided at 4.15 p.m. Any other members willing to show cases or specimens are requested to communicate with the Honorary Secretary, E. J. SMYTH, Maythorne, Guildford.

SOUTH-EASTERN BRANCH: HASTINGS DIVISION.—The annual meeting of this Division will be held at the Eversfield Hotel, St. Leonards-on-Sea, on Thursday, June 25th, at 5 p.m. The chair will be taken by Mr. E. R. Mansell, who will entertain the members to tea.—G. VICKERMAN HEWLAND, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The sixty-ninth annual meeting will be held on Tuesday, June 30th, at the new Council Chamber, Falmouth, at 3.15 p.m., when Dr. Deas will resign the chair to Dr. Banks, who will deliver his inaugural address. The report of the Branch Council for the year 1907–8 and annual financial statement for the year 1907 will be presented to the meeting, and the officers of the Branch will be elected for the year 1908–9. The accounts of the annual meeting of the Association at Exeter in 1907 will be presented by the Treasurers thereof. Luncheon, by the kind invitation of the President-elect, will take place from 12.30 to 2.30 p.m. at the Green Bank Hotel, Falmouth. The annual dinner will be held at 6.45 for 7 p.m. at the Green Bank Hotel. Tickets (exclusive of wine), 5s. each, can be had from Dr. W. Banks, 10, Green Bank, Falmouth. It is particularly requested that members requiring tickets will send their names to him before June 25th. In the afternoon there will be (weather permitting) a steamer excursion on the River Fal. Members desiring to be accommodated with bed and breakfast are requested to send their names to Dr. Banks, Falmouth, who will endeavour to arrange for them.—RUSSELL COOMBE, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The thirty-fifth annual meeting of the Branch will be held at the North Stafford Hotel, Stoke-upon-Trent, on Thursday, June 25th, at 5.30 p.m., when an address will be delivered by the President-elect, S. King Alcock, M.D. Agenda: 1. Introduction of the new President. 2. Minutes of the last annual meeting. 3. Correspondence. 4. Address by the President. 5. Report of the Council. 6. The financial statement. 7. To decide the place of holding the next annual meeting. 8. Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. 9. Report on the election of the Representative of the Branch on the Council of the Association. Nominations for offices: The following gentlemen are nominated for the under-mentioned offices—President-elect, W. G. Lowe, Esq., M.D., Burton-on-Trent; General Secretary, Dr. Petgrave Johnson, Stoke; Treasurer, Mr. J. Clare, Hanley. Gentlemen intending to be present at the dinner are requested to send an intimation of their intention not later than Monday, June 22nd. Members have the privilege of introducing friends. Dinner at 7 p.m. Charge, 5s. The first general meeting of the session will be held at Stoke, on Thursday, November 26th. Members wishing to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PETGRAVE JOHNSON, Honorary General Secretary.

WEST SOMERSET BRANCH.—The sixty-sixth annual meeting of this Branch will be held at Cotford Asylum, about four miles from Taunton, on Tuesday, June 30th, at 12.30, when the chair will be taken by the incoming President, Dr. H. T. S. Aveline. Agenda: Minutes of last meeting. Annual report of Council. Treasurer's report for 1907. Election of officers, etc. President's Address: Incidence of Lunacy in West Somerset, with some Remarks on Certification. Other business, if any. Lunch will be served at 1.30. This will be paid for out of the Branch funds; but members wishing to introduce guests can do so at 3s. per head, exclusive of wine, etc., in all cases. After lunch a cricket match will be played between sides representing the Branch and the Cotford Asylum. Those willing to play are requested to communicate with the Hon. Secretary. Tennis and croquet lawns will also be at the disposal of members, to whom opportunity will be given to view the asylum. During the afternoon Dr. and Mrs. Aveline will give an "At Home," and will entertain those present to tea. If those members who intend to be present will let the Honorary Secretary know by June 27th, he will endeavour to arrange for conveyances to meet them at Taunton or Norton Fitzwarren Stations.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at the Station Hotel, York, on Wednesday afternoon, July 1st. The officers will be elected. Candidates to represent the Branch on the Council of the Association must be nominated by at least three members of the Branch, and such nominations must be sent to me on or before Saturday, June 13th. The present Representatives of the Branch are Drs. Goyder and Sinclair White. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate with me at once. The annual dinner will take at the Station Hotel, York, at 6.30 p.m.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of this Division will be held at the Great Northern Victoria Hotel, Bradford, on Tuesday, June 23rd. The following will be the order of business: (*a*) The officers, Representatives of the Division on the Branch Council, and the members of the Executive and Ethical Committees, nominated at the last Divisional meeting, will be elected. (*b*) The re-election of the Representative of the Division in Representative Meetings of the Association, and nominated at the last meeting, will take place. (*c*) The annual report of the Executive Committee will be read, and, if approved of, adopted. (*d*) Any questions that have not been considered, and which form part of the business of the Annual Representative Meeting, will be discussed. Members who have any subjects which they wish to bring before the meeting are asked kindly to communicate at once with Dr. Metcalfe.—JAMES METCALFE, Frizinghall, Bradford, and J. WHERRY WILLSON, Barkerend Road, Bradford, Honorary Secretaries.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON J. BRADLEY, M.D., has been placed on the retired list at his own request, June 13th. He was appointed Surgeon, August 17th, 1887, and Fleet Surgeon, August 17th, 1903.

The following appointments have been made at the Admiralty: ALFRED M. PAGE, Fleet Surgeon, to the *London*, June 2nd; JAMES W. W. STANTON, Staff Surgeon, and DAVID H. VICKERY, Surgeon, to the *Illustrious*, June 2nd; HARRY SPICER, M.B., Surgeon, to the *Repulse*, June 2nd; HORACE B. MARRIOTT, Fleet Surgeon, to the *Doris*, on recommissioning, June 20th; THOMAS D. HALAHAN, Staff Surgeon, to the *Isis*, on recommissioning, June 20th; GEORGE E. MACLEOD, Staff Surgeon, to the *Pembroke*, additional, for Deptford Victualling Yard, temporary, June 4th; PALMER D. RAMSAY, Surgeon, to Gibraltar Hospital, June 8th; ALOYSIUS F. FLEMING, Surgeon, to the *Vivid*, for the Royal Naval Barracks, June 8th; ALEXANDER MACLEAN, M.B., Fleet Surgeon, to the *Ocean*, June 10th; JOHNSTON H. ACHESON, M.B., Fleet Surgeon, and CECIL R. M. BAKER, M.B., Surgeon, to the *Agamemnon*, on commissioning, undated; ALEXANDER F. HARPER, Fleet Surgeon, and AUGUST J. WERNET, M.B., Surgeon, to the *Majestic*, undated; WILLIAM R. CENTER, M.B., Staff Surgeon, to the *Ganges*, additional, for the *Ganges II.*, June 11th; ROBERT W. B. HALL, Surgeon, to the *Cormorant*, additional, for Gibraltar Dockyard, June 11th; GEORGE E. MACLEOD, Staff Surgeon, to the *Skirmisher*, June 13th.

H. E. EARDLEY, medical practitioner, to be Surgeon and Agent for Burton Port and Arranmore Island, June 5th. G. R. HARMEN, medical practitioner, to be Surgeon and Agent at Port Wrinkle, June 6th.

Inspector-General W. E. BRETON, M.D., has been placed on the retired list at his own request, May 30th. His commissions are thus dated: Surgeon, September 30th, 1875; Staff Surgeon, September 30th, 1886; Fleet Surgeon, February 24th, 1895; Deputy Inspector-General, August 12th, 1902; and Inspector-General, December 31st, 1907. He has no war record.

Surgeon A. C. RENWICK, M.B., has been allowed to withdraw from the service with a gratuity, June 4th. He was appointed Surgeon, February 26th, 1900.

Surgeon J. SHIPSEY, M.B., has also been allowed to withdraw with a gratuity, June 8th. His commission bears date November 23rd, 1903.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN H. S. ROCH, from Cork, has been appointed Adjutant of the Royal Army Medical Corps Training School, Northumbrian and West Riding Divisions, at Leeds.

Captain E. P. CONNOLLY, from Aldershot, has been appointed Adjutant of the Royal Army Medical Corps Training School, Welsh Territorial Division, at Cardiff.

Lieutenant-Colonel B. L. MILLS, M.D., retires on retired pay, June

17th. His commissions are thus dated: Surgeon, January 30th, 1886; Surgeon-Major, January 30th, 1898; Lieutenant-Colonel, January 30th, 1906. He was in the North-Western Frontier of India campaign in 1847-8, receiving a medal with clasp; and in the South African war of 1899-1901, for which he received the Queen's medal with five clasps.

Colonel O. E. P. LLOYD, V.C., is appointed Honorary Surgeon to the Viceroy of India, vice Colonel J. F. WILLIAMSON, C.B., C.M.G., M.B., retired.

INDIAN MEDICAL SERVICE.

THE retirement from the service of Lieutenant-Colonel F. W. THOMSON, M.B., Bengal, which has already been announced in the BRITISH MEDICAL JOURNAL, is dated March 14th.

Captain C. H. BARBER, M.B., 1st (Peshawur) Division and Captain J. H. BURGESS, M.B., 9th (Secunderabad) Division, are appointed specialists in Advanced Operative Surgery, from April 1st.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT C. W. EDWARDS, Dorset (Queen's Own) Regiment, resigns his commission, March 31st.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,731 births and 3,958 deaths were registered during the week ending Saturday, June 6th. The annual rate of mortality in these towns, which had been 13.2 and 12.6 per 1,000 in the two preceding weeks, rose last week to 12.7 per 1,000. The rates in the several towns ranged from 6.4 in Walsall, 6.9 in Handsworth (Staffs), 7.4 in Aston Manor, 7.9 in Bury, 8.5 in Tynemouth, 8.9 in Reading, and 9.0 in Hornsey, to 17.4 in Grimsby, 17.7 in Stockton-on-Tees, 19.4 in Stockport, 19.9 in Hanley, 20.9 in Merthyr Tydfil, and 24.5 in Swansea. In London the rate of mortality was 11.6 per 1,000, while it averaged 13.2 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.1 per 1,000 in the seventy-six towns; in London this death-rate was equal to 0.9 per 1,000, while among the seventy-five other large towns it ranged upwards to 2.5 in Burnley, in Bradford, and in Rotherham, 2.6 in Reading, 2.7 in Preston, 3.4 in Norwich and in Merthyr Tydfil, and 3.9 in Stockton-on-Tees. Measles caused a death-rate of 1.2 in Rochdale and in Bradford, 1.3 in Preston, 1.6 in Rhondda, and 2.9 in Stockton-on-Tees; scarlet fever of 1.3 in Reading and 1.5 in Grimsby; diphtheria of 1.1 in Hornsey; whooping-cough of 1.5 in Smethwick and in Burnley, 1.7 in Barrow-in-Furness, and 2.2 in Warrington; enteric fever of 1.3 in Norwich; and from diarrhoea 1.5 in Hanley and in Middlesbrough, and 2.0 in Merthyr Tydfil. No fatal case of small-pox was registered during the week in any of the seventy-six towns. The number of scarlet-fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,833, 2,802, and 2,763 at the end of three preceding weeks, had further fallen to 2,648 at the end of last week; 291 new cases were admitted during the week, against 380, 330, and 334 in the three preceding weeks.

In seventy-six of the largest English towns, including London, 7,802 births and 3,671 deaths were registered during the week ending Saturday last, June 13th. The annual rate of mortality in these towns, which had been 13.2, 12.6, and 12.7 per 1,000 in the three preceding weeks, declined again to 11.8 per 1,000 last week. The rates in the several towns ranged from 3.9 in Hornsey, 5.4 in Northampton, 6.0 in King's Norton, 6.6 in Willesden and in East Ham, 6.7 in Walthamstow, and 6.8 in Burton-on-Trent, to 16.1 in Oldham, 16.5 in Swansea, 16.8 in Salford, 17.1 in Middlesbrough, 19.4 in Bury, 20.5 in Rochdale, 20.8 in Tynemouth, and 23.5 in Stockton-on-Tees. In London the rate of mortality was 11.0 per 1,000, while it averaged 12.1 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.0 per 1,000 in the seventy-six towns. In London, also, this death-rate was equal to 1.0 per 1,000, while among the seventy-five other towns it ranged upwards to 2.3 in Wigan, 2.4 in Liverpool, 2.5 in Aston Manor and in Rotherham, 2.6 in Croydon, 2.9 in Rochdale, and 4.9 in Stockton-on-Tees. Measles caused a death-rate of 1.2 in West Ham, 1.3 in Croydon and in Birkenhead, 1.8 in Rochdale, and 3.9 in Stockton-on-Tees; whooping-cough of 1.3 in Coventry, 1.6 in Rotherham, and 1.7 in Wigan; and diarrhoea of 1.2 in Aston Manor. The mortality from scarlet fever, from diphtheria, and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,802, 2,753, and 2,648 at the end of the three preceding weeks, had further declined to 2,600 at the end of last week; 289 new cases were admitted during the week, against 330, 334, and 291 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday, June 6th, 1,018 births and 563 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 15.4 and 15.5 per 1,000 in the two preceding weeks, fell to 14.3 per 1,000 last week, and was 1.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12.3 in Leith and 13.3 in Paisley to 16.0 in Greenock and 16.7 in Dundee. The 232 deaths registered in Glasgow included 4 which were referred to measles, 1 to scarlet fever, 5 to diphtheria, 1 to whooping-cough, 1 to enteric fever, 1 to cerebro-spinal meningitis, and 1 to diarrhoea. Five fatal cases of whooping-cough were recorded in Edinburgh; 3 of whooping-cough and 2 of diarrhoea in Dundee. No deaths from the principal infectious diseases were registered in Leith, Greenock, or Perth.

During the week ending Saturday last, June 13th, 978 births and 464 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 15.4, 15.5, and 14.3 per 1,000 in the three preceding weeks, further declined to 13.2 per 1,000 last week, but was 1.4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10.5 in Dundee and 10.8 in Aberdeen to 14.0 in Glasgow and 16.2 in Paisley. The death-rate from the principal infectious diseases averaged 1.2 per 1,000, in these towns the highest rates being recorded in Aberdeen and Paisley. The 230 deaths registered in Glasgow included 2 which were referred to measles, 3 to diphtheria, 5 to whooping-cough, and 3 to diarrhoea. Four fatal cases of measles and 2 of whooping-cough were recorded in Edinburgh; 3 of diarrhoea in Dundee; 2 of measles, 3 of whooping-cough, and 2 of diarrhoea in Aberdeen; and 2 of measles, 2 of diphtheria, and 3 of diarrhoea in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, June 6th, 621 births and 388 deaths were registered in the twenty-two principal urban districts of Ireland, as against 703 births and 365 deaths in the preceding period. The annual death-rate in these districts, which had been 20.1, 18.4, and 16.8 per 1,000 in the preceding weeks, rose to 17.8 per 1,000 in the week under notice, this figure being 6.1 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures for Dublin and Belfast were 16.5 and 17.8 respectively, those in the other districts ranging from 4.0 in Dundalk and 8.4 in Newry to 31.0 in Lurgan, and 42.3 in Tralee, while Cork stood at 16.4, Londonderry at 28.0, Limerick at 17.8, and Waterford at 25.3. The zymotic death-rate in the same twenty-two districts averaged 1.1 per 1,000, against 0.6 per 1,000 in the preceding period. Deaths belonging to this class were registered only in Dublin, 1.0 per 1,000, and in Belfast, Cork, and Sligo.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERDEEN UNIVERSITY.—Additional Examiners in Materia Medica, Pathology, and Surgery.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £80 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR CHILDREN. (1) Honorary Surgeon. (2) Surgeon for Out-patients; salary, £40 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary, at the rate of £80 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £80 per annum.

BRITISH LYING-IN HOSPITAL, Endell Street, W.C.—Resident Medical Officer. Salary, at the rate of £50 per annum.

BUENOS AIRES BRITISH HOSPITAL.—Assistant Resident Medical Officer. Salary £200 for first year, rising to £300.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer. Salary, £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary, at the rate of £50 per annum.

CITY OF LONDON MENTAL HOSPITAL, near Dartford.—Locum Tenens. Terms, 3 guineas a week.

CLAPHAM MATERNITY HOSPITAL.—Junior Resident Medical Officer for Battersea District.

COVENTRY CORPORATION.—Assistant Medical Officer to the Education Committee. Salary, £250 per annum.

DERBY AND DERBYSHIRE CHILDREN'S HOSPITAL.—Lady Resident Medical Officer. Salary, at the rate of £60 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Honorarium, £25 for six months.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road.—(1) Honorary Anaesthetist; (2) Eight Clinical Assistants.

FARRINGDON GENERAL DISPENSARY, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £100 per annum.

FLINT COUNTY EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum.

GLENELG PARISH.—Medical Officer for Southern Division. Salary, £140 per annum.

HANDSWORTH URBAN DISTRICT.—Medical Officer of Health. Salary, £500 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

KINGSTON-UPON-HULL CITY AND COUNTY.—Assistant to Medical Officer of Health. Salary £200 per annum.

LEEDS MATERNITY HOSPITAL.—Honorary Medical Officer.

LEICESTERSHIRE AND RUTLAND LUNATIC ASYLUM.—Junior Assistant Medical Officer (male). Salary, £150 per annum, rising to £180.

LEICESTER INFIRMARY.—House-Surgeon, to act as Junior for six months and then as Senior. Salary, at the rate of £100 and £120 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Resident Pathologist and Registrar. Salary, £100 per annum.

LIVERPOOL: WEST DERBY UNION.—Assistant Resident Medical Officer. Salary, £100 per annum.

LONDON COUNTY ASYLUM, Bexley.—Junior Assistant Medical Officer. Salary, £160 per annum.

LONDON THROAT HOSPITAL, Great Portland Street, W.—(1) House-Surgeon. Honorarium at the rate of £50 per annum. (2) Anaesthetist.

MANCHESTER ROYAL INFIRMARY.—Honorary Assistant Surgeon.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Third and Fourth House-Surgeons. Honorarium, £25 for six months each.

MEDICAL MISSION HOSPITAL.—Senior Resident Medical Officer (female). Salary, £100 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Surgeon.

MILE END INFIRMARY AND WORKHOUSE.—Assistant Medical Officer. Salary, £150 per annum, increasing to £170.

MOUNTAIN ASH URBAN DISTRICT EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum.

NEWCASTLE-UPON-TYNE: EYE INFIRMARY.—Non-resident House-Surgeon. Salary, £100 per annum.

NEW SOUTH WALES: QUEEN VICTORIA HOMES FOR CONSUMPTIVES.—Resident Medical Officers at King's Table Land Sanatorium and the Thirlmere Sanatorium. Salary, £250 per annum, increasing to £300, each.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Junior House-Surgeon. Salary, £50 per annum.

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary, at the rate of £60 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Two House-Surgeons. Salary, at the rate of £60 per annum each.

RANGOON MUNICIPALITY.—Health Officer. Salary, Rs. 1,000 per mensem, rising to Rs. 1,500.

ROYAL GENERAL DISPENSARY, St. Bartholomew Close, E.C.—Physician. Honorarium, £40 per annum.

ST. GEORGE'S UNION INFIRMARY, Fulham Road, S.W.—Second Assistant Medical Officer. Salary, £120 per annum.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Ullapool, co. Ross and Cromarty; and Chesterfield, co. Derby.

APPOINTMENTS.

BROWN, D. W., M.D.Edin., District Medical Officer of the Preston Union.

BRUCE, G., M.B., C.M.Aberd., District Medical Officer of the Shardlow Union.

BURGESS, G., M.B., C.M.Aberd., District Medical Officer of the Driffield Union.

BUSH, W. H., L.S.A., District Medical Officer, Flaxton (Out relief) Union.

BUTTERWORTH, J. J., M.D.Vict, D.P.H., Schools Medical Superintendent for County of Lancashire.

CARTER, G. R., M.R.C.P.I., L.R.C.S.I., Medical Officer of Health, Penge Urban District.

DAVIDSON, J. A., M.B., Ch.B., Clinical Assistant, Chelsea Hospital for Women.

ENGLISH, Samuel, M.B., Ch.B.Glas., Honorary Surgeon to the Pendleton Branch Dispensary of the Salford Royal Hospital, vice W. J. Sprott, M.D., R.U.I., resigned.

FARQUHARSON, D. A., M.B., F.F.P. and S Glasg., Professor of Physiology, Royal (Dick) Veterinary College, Edinburgh.

GLASSE, J. M., M.B., Ch.B.Edin., Medical Officer of Heath, Haltwhistle Rural District.

GREENFIELD, G. D., M.D.Lond, District Medical Officer of the Wellingborough Union.

HANNIGAN, T. H., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Drumcollogher District, co. Limerick.

JOBSON, F. C., M.R.C.S., L.R.C.P., Assistant Medical Officer, St. George-in-the-East Parish Infirmary.

LYSTER, R. A., M.B., Ch.B., D.P.H., County Medical Officer for Hampshire.

MCILROY, A. Louise, M.D., District Physician to the Western District of the Glasgow Maternity Hospital.

MCKEE, W. A., M.B., B.S.R.U.I., Assistant Resident Medical Officer, Toxteth Park Infirmary.

MACKENZIE, Theodore Charles, M.B., F.R.C.P.Edin., Medical Superintent of the Inverness District Asylum.

MILLS, Bernard Langley, M.D., C.M.Edin., M.R.C.S.Lond., F.R.C.S.E., Assistant Medical Officer, Education Committee, Sheffield.

MILWARD, F. Victor, B.A., M.B., B.C Cantab., F.R.C.S.Eng., Honorary Surgeon to the Royal Orthopaedic and Spinal Hospital, Birmingham.

MONTESOLE, M. Herschel, L.R.C.P.Lond., M.R.C.S., Junior Obstetric House-Physician to St. Thomas's Hospital.

OVERSBY, Edith, M.B., Medical Inspector of Schools under the Worcester County Council.

PRITCHARD, Eric, M.A., M.D., M.R.C.P., Physician to Out-patients, City of London Hospital for Diseases of the Chest.

RENTON, John W., M.B., Ch.B., Anaesthetist to the Western Infirmary, Glasgow.

ROBB, W., M.B., District Medical Officer of the Wellingborough Union.

SKERRETT, Frank, E., M.B., B.Sc.Lond., M.R.C.S., L.R.C.P., B.Sc. Vict., D.P.H., School Medical Inspector for the County Borough of West Ham.

STEWART, A. H., M.B., C.M Glasg., Certifying Factory Surgeon for the Queensbury District, co. York.

WOODS, F. W., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Birr District, King's County.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:

Laurence Gibson, M.B., Ch.B., and E. Drybrough Smith, M.B., Ch.B., Non-resident House-Surgeon and Clinical Assistant respectively to Dr. Malcolm Farquharson (Ear and Throat Department).

John P. Comrie, M.B., Ch.B.Edin., Assistant Pathologist, vice Henry Wade, M.D.Edin., resigned.

ROYAL DENTAL HOSPITAL OF LONDON.—The following have been appointed House-Surgeons:

F. R. Smyth, L.D.S.; A. Dinnis, L.D.S., L.R.C.P., M.R.C.S.; L. A. Harwood, L.D.S.; W. C. Ovey, L.D.S.; and E. G. Fletcher, L.D.S., to the Appliance Department.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

DE ZILWA.—On May 8th, at 10, Rosmead Place, Cinnamon Gardens, Colombo, Ceylon, the wife of Lucian A. E. de Zilwa, M.D., B.Sc.Lond., of a daughter.

MARRIAGES.

BROWN—BELL.—On June 17th, at Henley-in-Arden, Warwickshire, by the Rev. Dr. Dickins, Vicar of Emscote, Warwick, and Rural Dean, assisted by the Rev. Michael S. Bell, brother of the bride, Alfred Brown, M.D.Edin., to Gabrielle Stella, fourth daughter of the Rev. G. E. Bell, the Vicarage, Henley-in-Arden.

CLARKE—HIDDINGH.—At Amesbury, June 18th, 1908, John Stephenson Clarke, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., of Magor, Mon., to Grace Annie Hiddingh, of Bognor, Sussex.

EMANUEL—WOLFF.—On the 16th inst., Joseph George Emanuel, B.Sc., M.D., M.R.C.P.Lond., of 18, Harborne Road, Edgbaston, Birmingham, to Ethel, only daughter of Dr. Alfred A. Wolff, of 6, Hanover Terrace, W.

PATTINSON—CURME.—On the 10th inst., at St. Nicholas Church, Childe Okeford, Dorset, by the Rev. J. G. Brymer, Rector, assisted by Archdeacon George Helbers, Dr. T. W. Pattinson, of Bolton, to Louisa Elizabeth Curme, eldest daughter of Surgeon-Lieutenant-Colonel Curme, of Childe Okeford.

DEATHS.

DUNLOP.—On June 5th, at 15, Spring Bank Place, Bradford, John Dunlop, M.D.Aberd., in his sixty-eighth year.

HORDER.—On the 15th inst., at 32, Windsor Place, Cardiff, Thomas Garrett Horder, M.R.C.S.Lond., L.R.C.P.Edin., in his sixty-fifth year. Funeral will leave 32, Windsor Place, at 11.30 a.m., Thursday.

DIARY FOR THE WEEK.

MONDAY.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION, 20, Hanover Square, 8 p.m.—Casual Communications:—Dr. A. W. W. Baker: A Difficult Extraction. Dr. Sim Wallace: A Classification of Dento-facial Irregularities. Dr. W. F. Mellersh: An Amalgamator—a Mechanical Device for Amalgamating Alloys.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION, 20, Hanover Square, 5.30 p.m.—Paper: Dr. A. M. Gossage: The Tone of Cardiac Muscle.

SATURDAY.

ROYAL SOCIETY MEDICINE:

OTOLOGICAL SECTION, 20, Hanover Square, 10 a.m.—Cases and Specimens.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lectures: Monday, 3.15 p.m., Surgical Conditions of the Gall Bladder; Wednesday, 3.30 p.m., Optic Nerve Atrophy.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Acute Abdominal Attacks in Children; Tuesday, Cancer of the Face (with lantern slides); Wednesday, The Treatment of Acute Pneumonia; Thursday, Lumbar Puncture.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Bulbar Paralysis. Friday, 3.30 p.m., Aphasia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear. *X* Rays; 4.30 p.m., Demonstration of Selected Cases of Children's Disease. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, *X* Rays; 3 p.m., Medical In-patient; 4.30 p.m., Demonstration of Selected Medical Cases. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye; 3 p.m., Medical In-patient.

POST GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics and *X* Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations: Wednesday and Saturday, 10 a.m., Diseases of Children; Tuesday and Friday, 2 p.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Lectures: At 12 noon, Monday, Pathological. At 12.15 p.m., Wednesday and Friday, Practical Medicine. At 5 p.m.: Monday, Results after Gastro-enterostomy; Tuesday, Ankylostomiasis; Wednesday, Medicine; Thursday, Surgical; Friday, Practical Ophthalmology.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
22 MONDAY ...	
21 Sunday ...	
23 TUESDAY ...	(Bradford Division, *Yorkshire Branch*, Annual Meeting, Great Northern Victoria Hotel, Bradford. Marylebone Division, *Metropolitan Counties Branch*, Annual Meeting, Rooms of Medical Society, Chandos Street, W., 4.30 p.m.; Adjourned General Meeting, 5 p.m. Southern Division, *Edinburgh Branch*, Annual Meeting, Oddfellows' Hall (Room 6), Forrest Road, 8.15 p.m.
24 WEDNESDAY	(London: Journal and Finance Committee, 2.30 p.m. North Lancashire and South Westmorland Branch, Annual Meeting. Kendal.
25 THURSDAY...	(Canterbury and Faversham Division, *South-Eastern Branch*, Combined Meeting of Divisions comprised in Old East Kent District, County Hotel, Canterbury, 3 p.m.; Dinner, 5.45 for 6 p.m. Hastings Division, *South-Eastern Branch*, Annual Meeting, Eversfield Hotel, St. Leonards-on-Sea, 5 p.m. Kensington Division, *Metropolitan Counties Branch*, Annual Meeting, Kensington Town Hall, 5 p.m. Staffordshire Branch, Annual Meeting, North Stafford Hotel, Stoke-upon-Trent, 5.30 p.m.; Dinner, 7 p.m.
26 FRIDAY ...	(Border Counties Branch, Annual Meeting, County Hotel, Carlisle Edinburgh Branch, Annual Meeting, Hall of the Royal College of Physicians, Queen Street, 4.15 p.m. Guildford Division, *South-Eastern Branch*, Annual Meeting, Royal Surrey County Hospital, Guildford, 4.30 p.m.; Tea, 4.15 p.m.
27 SATURDAY ...	
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	(South-Western Branch, Annual Meeting, New Council Chamber, Falmouth, 3.15 p.m.; Luncheon, Greenbank Hotel, 12.30; Dinner, 6.45 for 7 p.m. West Somerset Branch, Annual Meeting, Cotford Asylum, Taunton, 12.30 p.m.; Lunch, 1.30 p.m.
JULY.	
1 WEDNESDAY	(Central Council, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Yorkshire Branch, Annual Meeting, Station Hotel, York; Annual Dinner, 6.30 p.m.
2 THURSDAY...	(Bath and Trowbridge Divisions, *Bath and Bristol Branch*, Combined Meeting, Royal United Hospital, 5 p.m Cambridge and Huntingdon Branch, Annual Meeting, Alconbury Hill, Huntingdon.
3 FRIDAY ...	
4 SATURDAY...	
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	(North Wales Branch, Annual Meeting, Holyhead.
8 WEDNESDAY	(Dorset and West Hants Branch, Yeovil.
9 THURSDAY...	(Hampstead Division, *Metropolitan Counties Branch*, Business Meeting. Metropolitan Counties Branch, Annual Meeting, 6, Catherine Street, Strand, W.C., 5 p.m.
10 FRIDAY ...	
11 SATURDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 16s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 27TH, 1908.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BATH AND BRISTOL BRANCH.

THE annual meeting of this Branch was held at University College, Bristol, on May 27th. Dr. E. J. CAVE the President, was in the chair, and forty-five members were present.

Report of Council.—The Council of the Branch reported that the ordinary meetings of the Branch had been well attended throughout the session. Of these a meeting devoted to the demonstration of clinical cases in January had proved a great attraction to the members, nearly 50 cases being shown as well as an exhibition of skiagrams and lantern slides, and the Council strongly recommended a clinical meeting as an annual fixture. The February meeting at Bath was devoted to a discussion on fevers of doubtful origin. The subject was ably introduced by Dr. A. Newton Pitt, and led to an interesting discussion. The Branch had held an open meeting in support of the members of the staff of the Bristol Royal Infirmary in their dispute with the lay committee of that institution. The efforts of the Branch were greatly assisted by the Central Council and the Medical Secretary of the Association, the latter attending the open meeting. A large number of medical men, both members and non-members, attended and accorded their enthusiastic support to the staff. As a consequence of this dispute the Bristol Division have adopted certain ethical rules for the regulation of procedure in disputes and it was hoped that the other Divisions would also adopt similar rules at an early date, since the full strength of a Division cannot be used effectively unless it is supported by the effective powers supplied by these rules. The total membership of the Branch had been increased.

Finances.—It was stated in the report that the finances of the Branch showed a balance of £150 10s. 2d.

Installation of New President.—Dr. E. J. Cave resigned the chair to Mr. J. Paul Bush, C.M.G., and a vote of thanks was accorded to the retiring president for his able and courteous conduct of the chair during the past session.

Election of Officers.—Mr. G. Munro Smith was unanimously elected President-elect, and the Secretaries of the Branch were requested to continue in office. Mr. C. E. S. Flemming was again asked to represent the Branch on the Central Council.

President's Address.—Mr. J. PAUL BUSH delivered an address upon some distinguished members of the staff of the Bristol Royal Infirmary in the eighteenth and early nineteenth century.

Vote of Thanks.—A vote of thanks was accorded to the President for his able and interesting address.

BIRMINGHAM BRANCH:
CENTRAL DIVISION.

AN ordinary general meeting was held at the Medical Institute on Thursday, May 28th. Dr. NEAL occupied the chair. There were 17 other members present.

Confirmation of Minutes.—The circular convening the meeting and the minutes of the last meeting were read, confirmed, and signed.

Doctors and Midwives.—Attention was called to the report on the payment by guardians of fees to medical practitioners called in to assist midwives, which had been circulated to members of the Division. It was considered that the report would have been of greater value if the schedule had accompanied it showing the different occasions and circumstances under which the midwives are bound to send for help and to which the scale of fees in the report refers. It was resolved to print and circulate the schedule among the members of the Division.

Lynn Thomas and Skyrme Fund.—The SECRETARY reported that in answer to the resolution of the Division recommending the Branch to make a donation towards the Lynn Thomas and Skyrme Fund, the Branch found itself

unable to do this, and considered it a matter best left to individual members.

Special Finance Inquiry Report.—The special finance inquiry report (British Medical Journal Supplement, May 2nd) was next considered, and the five resolutions, 1, 2, 3, 9 (*b*), and 10, were all approved. The two resolutions referring to the duties, staffs, etc., of the General and Medical Secretaries, 11 and 12, also received unanimous approval.

Ethics of Medical Consultation.—On the report of the Association, Ethics of Medical Consultation (Supplement, May 9th), some discussion arose. Dr. W. R. Jordan proposed:

> That the Representative of the Division be instructed to oppose the report of the Association, on the ground that no such code on the ethics of medical consultation is desirable.

Dr. Lydall seconded this; but Mr. Nuthall proposed, and Dr. Kirby seconded, as an amendment:

> That, in view of the very slight alterations made from the original report, which was rejected by this Division last year, the Representative be instructed to oppose the report.

The amendment was carried, and, on being put as a substantive resolution, was carried *nem. con.*

On all the other matters submitted to the Divisions the recommendations of the Executive Committee were agreed to.

Notices of Motion at Representative Meeting.—Notices of motion (British Medical Journal, Supplement, March 28th, 1908): Federation of Branches (Wandsworth), Representative to support. Voting in Representative Meetings (Wandsworth), Representative to support. Alteration of By-law 24 (Wandsworth) and of By-law 36 (Wandsworth), Representative to support; the latter, 36, as far as is compatible with the Referendum result. Standing Orders of the Representative Meeting (Wandsworth), Representative to support. Annual List of Members (St. Pancras and Islington), Representative to support. Putney Hospital (Richmond), Representative to vote at his own discretion. Notice of Motion (British Medical Journal, Supplement, April 18th, 1908): Composition and mode of election of the Council (Gateshead), Representative to support. (British Medical Journal, Supplement, April 25th, 1908): The Representative was instructed to support the amendments proposed by the Organization Committee in its report on the subject of capitation grants, and to approve of the report. Notices of motion (also Supplement, April 25th, 1908): Standing Committees (Council of Association), the Representative was instructed to vote in accordance with the Referendum result. Standing Committees (Dundee), Representative to support. (British Medical Journal, Supplement, May 9th, 1908): Report 2, Medical Inspection of School Children, remuneration of whole time inspectors. This report was approved of.

Matters Referred to Divisions by Exeter Meeting.—The Chairman moved the following resolution, which was seconded by Dr. Hallwright and carried unanimously:

> This Division desires to draw the attention of the Central Council to the fact that many months elapsed before the matters referred to the Divisions, by the Annual Representative Meeting at Exeter, were submitted to the Divisions, thus rendering it almost impossible to consider adequately the business in the short time before the next Representative Meeting.

The meeting then terminated.

Coventry Division.

Annual Meeting.

The annual meeting of this Division was held at the Coventry and Warwickshire Hospital on Thursday evening, June 4th, at 8 30 Present—Dr. Pickup in the chair; Drs. Moore, Snell, Phillips, Butler, Brown, Langye, Ballantyne, Rice, Hawley. Bennett, Fowler, Collington, and Orton; visitors, Drs. Palmer and Aitchison.

Election of Officers.—The officers for the year 1908 9 were elected as follows: *Chairman*, Dr. Harman Brown; *Vice-Chairman*, Dr. Richardson Rice; *Secretary*, Dr. John Orton; *Representative on Branch Council*. Dr. Milner Moore; *Representative of Division on Public Medical Service*, Dr. Pickup; *Representative of Division on New Dispensary Service*, Dr. Callaghan; *Executive Committee*, Drs. Callaghan, Hawley, Butler, Pickup, Snell, and Phillips.

Annual Report—The annual report, upon the proposition of Dr. Moore, seconded by Dr. Fowler, was taken as read and received. Carried unanimously. It was to the following effect: The committee reported that in January last they presented a report of the Division's proceedings during 1907, which included the following financial statement:

Dr.	£ s. d.	Cr.	£ s. d.
Grant received from Branch Council, 1s. per head	2 2 0	Deficit, December 31st, 1906	1 11 11
Special Grant	1 11 11	Hire of rooms	nil
Deficit, December 31st, 1907	3 17 9	Secretarial expenses:	
		Printing	3 3 9
		Stationery	0 1 0
		Postage	2 15 0
		Clerical aid	nil
	£7 11 8		£7 11 8

A special grant from the Branch Council had since been received to cover deficit for last year. The Division had held five ordinary meetings during the year, namely, in the months of October, November, February, and March, and the committee had called two special meetings in the months of September and April. The average attendance at the Division meetings had been 21. The Division had, in addition, met once in committee. The committee had held 14 meetings. The attendances of members of the committee were:—Elected members: Dr. Snell 14, Dr. Hawley 13, Dr. Callaghan 11, Dr. Rice 4, Dr. White 3, Dr. Hird 3, Dr. Phillips 3 (Dr. Phillips was elected to fill Dr. Hird's vacancy, and was only summoned to five meetings); *Ex-officio* members: Dr. Pickup 12, Dr. Brown 12, Dr. Moore 11, Dr. Orton 14. As was reported last year (1906) the most important matter affecting the Division had been the resignation of five members of the staff of the Coventry Provident Dispensary and the appointments of three other practitioners to the vacancies. As soon as these appointments were made a warning letter was addressed to them by the chairman of the Division, and individual members called upon them officially to beg them seriously to consider their position before taking up the appointments. All this, however, was of no avail, and the Division had to go through the procedure of causing the case to be investigated by the Divisional Executive Committee, the Birmingham Branch Council, and the Central Ethical Committee. The annual dinner held in October was a great success, the Chairman of the Council of the Association and the President of the Branch being present. Various papers on medical and surgical subjects had been read during the year and specimens and cases shown at the meetings.

The Term "Hospital"—It was proposed by Dr. Pickup, and seconded by Dr. Snell, that the definition as proposed be approved, with the addition that under the heading B. the word "or" be changed to "and," so as to read, "The control is in the hands of medical and lay persons." This was carried.

Prevention of Corruption Act 1906—The memorandum on this subject was brought forward by the Secretary and read and was discussed by several members.

Application to Central Emergency Fund.—Upon the proposition of Dr. Moore, seconded by Mr. Bennett, the following resolution was passed after some discussion:

> That application be made to the Branch to procure financial assistance from the Central Emergency Fund of the British Medical Association for certain members of the dispensary staff who resigned their appointments who suffered financial loss, and for the widow of the late Dr. Hird.

Vote of Thanks.—A vote of thanks to the Committee of the Coventry and Warwickshire Hospital for the continued use of their Board Room for meetings concluded the proceedings.

Coventry Division and Nuneaton and Tamworth Division.

The annual meeting of the constituency formed by the Coventry Division and Nuneaton and Tamworth Division was held on June 5th, at 4 p.m. Present—Drs. Moore, Snell, Hawley, and Orton. On the proposition of Dr.

SNELL, seconded by Dr. ORTON, Dr. HAWLEY was voted to the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Representatives at Representative Meetings.—Dr. ORTON proposed that Dr. MOORE be requested to again allow himself to be appointed Representative for Representative Meetings. Dr. SNELL seconded, and this was carried. Dr. MOORE expressed his pleasure at taking office for another year, and brought forward the question of holding a meeting of the Constituency at a later date, before the annual meeting of the Association at Sheffield, to instruct the Representative in regard to their wishes in voting for the various resolutions on the agenda for the Representative Meeting. It was agreed to hold such a meeting on July 14th at the Coventry and Warwickshire Hospital at 4 p.m.

CAPE OF GOOD HOPE—EASTERN PROVINCE BRANCH.

A REGULAR meeting of the Branch was held at 8 p.m. on May 29th at the Government Veterinary Laboratory, Grahamstown, Dr R. C MULLINS in the chair. There were also present: Drs. Bruce-Bays, Dru Drury, FitzGerald, Jones-Phillipson, Lea, and Purvis; also, as visitors, Drs. G. T. Harrison, C. F. Lillie, and Messrs. William Robertson, M.R.C.V.S., and Lyons, of the Veterinary Laboratory.

Confirmation of Minutes.—The minutes of the meeting of February 21st were read and confirmed.

Votes of Thanks.—It was resolved that Mr. J. Y. W. Macalister, of the Royal Society of Medicine, be thanked for his kind efforts on behalf of the Branch library; Mr. H. K. Lewis, of 136, Gower Street, for his generous gift of books; and Dr. W. Darley Hartley for his offer of periodicals and books for the Branch. It was also resolved that Dr. G. T. Harrison be thanked for his kind offer of copies of the *Lancet* for six months of the current year.

Representatives of Branch at South African Medical Congress.—It was resolved that Drs. J. Bruce-Bays and C. E. Jones-Phillipson be appointed with power to represent the Branch in the matter of the South African Committee of the British Medical Association at the Medical Congress at East London.

Papers.—Dr. DRURY read a memorandum on tuberculosis in animals in relation to human food. Mr. WILLIAM ROBERTSON read a paper on meat inspection, and demonstrated a series of nine excellent specimens of tuberculous disease in the monkey, dog, fowl and ox. A discussion followed, and votes of thanks were passed to the authors of the papers.

Proposed Public Abattoir.—It was resolved:

That a recommendation be forwarded to the Municipal Council praying for the consideration and adoption of a scheme for the construction of a public abattoir in place of the existing private slaughter-houses.

Tuberculin Testing of Milch Cows.—It was resolved:

That the attention of the heads of residential colleges and schools and of the superintendents of the three public institutions in Grahamstown be called to the fact that tuberculous milch cows exist in this district, that complete security from the risk of tuberculous infection can be secured by means of testing herds of milch cows with tuberculin, and that whenever possible preference should be given to a contractor who has submitted his herd to such a test.

CAPE OF GOOD HOPE—WESTERN PROVINCE BRANCH.

AN ordinary meeting was held on April 24th. Dr. ELLIOTT (President) was in the chair, and about fifteen members were present.

Case.—Dr. GURNEY showed a case of myositis ossificans in a white boy 3½ years old. There were many bony deposits in the muscles of the neck and back, the biceps of both arms, and in the abdominal muscles. The first swellings had been noticed in the posterior belly of the occipito-frontalis muscle. There had been deformity of both great toes; its exact nature was not known, as operations to correct it had been performed before the case came to Dr. Gurney.

Cremation.—Dr. BOYD read a paper on cremation. He strongly urged the practice of cremation.

DUNDEE BRANCH.

THE annual meeting of this Branch was held in the Students' Union, Dundee, on June 5th, at 4 o'clock, Dr. PETERKIN, Forfar, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Treasurer's Statement.—The Treasurer's statement, having been printed on the notice calling the meeting, was received and approved of.

Election of Officers.—The following office-bearers were elected: *President*, George Peterkin, Forfar: *President-elect*, J. A. C. Kynoch, Dundee; *Past-President*, C. R. Marshall, Dundee; *Vice-Presidents*, M. F. Anderson, Dundee; D. Laing, Arbroath; *Honorary Treasurer*, D. M. Greig, Dundee; *Council*—(elected 1906): J. Broom, Kirriemuir; A. J. Duncan, Dundee; (elected 1907): H. C. Colman, Broughty Ferry; G. Halley, Dundee; W. S. Malcolm, Dundee; also J. G. S. Jamieson, Brechin; *Honorary Secretaries*, R. C. Buist, Dundee; A. P. Low, Dundee.

Report of Representative Member of Council.—Dr. BUIST reported briefly on the work of the Central Council during the past year, and compared the organization of the Association when he became a member of Council with its present state. On the motion of the CHAIRMAN he was awarded a vote of thanks for his services to the Branch as representative on the Central Council.

Annual Representative Meeting.—Dr. R. C. Buist was elected Representative to the Representative Meeting to be held at Sheffield. The business to be considered at the Annual Representative Meeting was considered, and the Representative instructed thereon.

Ethics of Medical Consultation.—It was resolved:

That the substance of the report on the ethics of medical consultation be embodied with an application for membership, and issued to all medical practitioners on registration.

The Representative was instructed to submit this resolution to the Annual Representative Meeting.

EAST YORKSHIRE AND NORTH LINCOLNSHIRE BRANCH.

THE annual meeting was held at the Hull Royal Infirmary, on June 11th. Twenty-four members were present. Dr. HOLDER presided.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Annual Report.—The annual report as published was taken and read, and its adoption moved and carried.

Treasurer's Financial Statement.—This was adopted and showed a balance in hand of £8 18s. 3d.

Election of Officers.—The following were elected as office-bearers for the year 1908-9: *President*, Dr. W. Holder; *President-elect*, Dr. J. Bruce; *Vice-Presidents*, Dr. E. M. Hainworth and Miss M. C. Murdoch; *Honorary Secretary and Treasurer*, Dr. E. Turton; *Branch Council*, T. Cameron, A. G. Francis, W. J. L. Firench, G. A. Grierson, R. Grieve, C. H. Milburn, R. H. B. Nicholson, W. Wallace, J. M. Wilson.

East and North Yorkshire Medical Benevolent Society.—The HONORARY SECRETARY reported that this Society had now been definitely inaugurated, and that over a hundred members had promised to join.

Grant to Epsom College.—Three guineas having been voted to Epsom College, some discussion took place as to the legality of such a vote, and it was resolved that such a grant be made if it should be found legally possible.

President's Address.—The PRESIDENT (Dr. W. Holder) then delivered his presidential address, on the termination of which he was accorded a hearty vote of thanks from the members present.

Dinner.—After the meeting a large number of members lunched together, and in the afternoon over 200 members and other guests were entertained by the President and Mrs. Holder at a garden party in Jalland Park, which, favoured by brilliant weather, was greatly enjoyed by all present.

EDINBURGH BRANCH:

SOUTH-EASTERN COUNTIES DIVISION.

THE annual meeting of this Division was held at Melrose on Thursday, June 18th, at 3.30 p.m.

Confirmation of Minutes.—The minutes of the previous

meeting were read, passed, and signed by the Chairman, Dr. Bannerman.

Election of Officers.—The office-bearers for the ensuing year were elected as follows: *Chairman*, Dr. Rutherford. *Vice-Chairman*, Dr Tyrell; *Honorary Secretary and Treasurer*—Dr. Calvert after holding the office of Secretary for ten years, demitted office and received the cordial thanks of the meeting for his services, which had been so ungrudgingly given to the Division; his resignation was accepted with great regret. Dr. Jeffrey was elected to fill the office. *Representative at the Representative Meetings*, Dr. Blair; *Representative on Branch Council*, Dr. Carlyle Johnston; *Executive Committee*, Drs. Henderson, Bannerman, Murray, Calvert, Tyrell, and Somerville.

The Draft Charter—The Representative was instructed by the members present regarding the proposals for amending the draft Charter.

Notes.—Dr. Jeffrey read notes of a case of volvulus occurring in one of the limbs of a hernial loop.

Vote of Thanks—Dr. Bannerman received a unanimous and cordial vote of thanks for the able manner in which he had filled the chair during the last year, to which he made a suitable reply.

GLASGOW AND WEST OF SCOTLAND BRANCH: Ayrshire Division.

A meeting of this Division was held at the Station Hotel, Ayr, on Friday, June 19th.

Election of Office-Bearers—The following were elected officers for the ensuing year: *Chairman*, J. Ross Watt, M.B., C.M.; *Vice-Chairman*, Walter F. Brown, M.B., D.P.H.; *Honorary Secretary and Treasurer*, Eric D. Gairdner, M.B., Ch.B; *Representative for Representative Meeting*, W. F. Brown, M.B., D.P.H.

HONG KONG AND CHINA BRANCH.

The fifth and last meeting of the Hong Kong and China Branch was held in the Government Sanitary Department Board Room on Thursday, April 16th, at 9 p.m., the President (Dr. G. M. Harston) presiding, eighteen members being present.

Confirmation of Minutes.—The minutes of the previous meeting (March 9th) were read and confirmed.

Room and Library for Members.—The Honorary Secretary (Dr. Sanders) stated that the Council had rented a room, and it was now open for the use of members; also any travelling members of the Association would be welcome to the use of it as visitors; it was situated in the centre of Hong Kong at 17A, Queen's Road, Central. Notepaper, etc., were provided, and a good reference library of the best and most recent works would be secured as soon as possible. The list of proposed books was submitted to the meeting and approved.

Cases.—Only one was shown—a case of hystero-epilepsy—and discussed.

Papers—Staff-Surgeon Gilmour read a most helpful paper on the agglutinins in typhoid and allied diseases, which provoked some discussion. Captain Ryley, R.A.M.C., then read a paper on notes on the Manila Medical Congress, showing what efforts are being made to unite and bring in touch all the different medical men and their work. It is hoped that a biennial congress will be the result.

Specimens—Dr. C. M. Heanley, the Government Bacteriologist, showed some very interesting specimens of (1) Two specimens of rupture of the stomach with general peritonitis in infants due to eating dried persimmons; (2) a local fruit King Tez (dried persimmon); (3) a specimen of congenital diaphragmatic hernia; (4) a specimen of anencephaly; (5) a full-term child showing absence of eyes and nose, with the frontal bone developing from one centre; (6) a large fluke that was vomited from a child; (7) some specimens of *Fasciolopsis buski* found in man and pigs; (8) some cases of aneurysm and intussusception. The above aroused very great interest among those fortunate to be present.

New Members of Council.—Deputy-Inspector-General W. Tait M.B., and Captain P. H. Collingwood were elected Members of the Council vice Drs. Gilmour and Rankin, who have resigned.

Votes of Thanks—The meeting closed with hearty votes of thanks to those who had read the papers (Dr. Gilmour and Ryley) and to Dr. Heanley.

LANCASHIRE AND CHESHIRE BRANCH: Bolton Division.

The annual meeting of this Division was held on Tuesday, June 9th, at 8.30 p.m., in the library at the Infirmary, Dr. O'Neill presiding.

Confirmation of Minutes—The minutes of the last meeting were read and approved.

Election of Officers—The following were elected as officers for the coming year: Dr. Brazil, *Chairman*; Dr. Flitcroft, *Vice-Chairman*; Dr. Wood, *Hon. Secretary and Treasurer*; Dr. Jefferies, *Representative on Branch Council*; Dr. Pattinson, *Representative for Representative Meeting*; and Drs. Macfie, Mothersole, Mallett, Young, O'Neill, and Laslett as *Executive Committee*.

Annual Report of Executive Committee.

The annual report of the Executive Committee was read and adopted. The following are the chief points in the report: The number of members at the beginning of the year was 56, 1 member has removed out of the Division, and 2 members have been lost by death; 4 new members have joined the Association, a net increase of 1. During the year three general meetings and six committee meetings have been held and the following matters of interest have been dealt with:

Ebbw Vale Defence Fund.—As a result of an appeal issued on behalf of this fund a donation of £5 10s. was forwarded to Dr. Ewen J. Maclean.

Notification of Births Act.—A special meeting of the medical men of Bolton was called to consider this measure, and as a result a deputation, consisting of Drs. Macfie, Pattinson, and Wood, was appointed to wait on the Sanitary Committee and lay the views of the meeting before them. This was done, and, as a result, the adoption of the measure was delayed for a short time, though later the Act was adopted and came into operation on March 7th.

Proposed Appointment of Lady Medical Inspector of Midwives—It was brought to the notice of the committee that the Sanitary Committee of the Bolton Corporation were advertising for a fully qualified lady medical practitioner as inspector of midwives at a salary of £120 per annum; this was considered totally inadequate, and the committee wrote a letter of protest to the Sanitary Committee and also issued a notice in the British Medical Journal warning intending applicants not to apply until they had communicated with the Secretary of this Division. As a result of this protest the Sanitary Committee are now advertising the appointment at a commencing salary of £170 per annum, rising by £10 per year to £200; but even this the committee consider insufficient for the duties expected for such a post, and consequently are still issuing the warning notice in the Journal.

Increase in Female Inebriety.—Circulars asking for particulars of this matter have been sent out to the members of the Division. These circulars have been issued at the instance of the Church of England Temperance Society in connexion with the Pan-Anglican Congress.

Referendum.—A general meeting was called to consider certain resolutions concerning the Referendum which had been referred to the Divisions by the Annual Representative Meeting for discussion and to be voted on by the members of the Division. The meeting was well attended, and there was a full discussion, the result being that the actions and resolutions of the Representative Meeting were supported in every instance.

Other Matters—Among other matters of interest dealt with during the year were medical inspection of school children and medical certificates and local education authority. At another of the general meetings Drs. Larkin, Taylor, Garstang and Macfie gave addresses in connexion with their candidature for the Central Council of the Association.

Report of Representative on Branch Council.

The report of the Representative on the Branch Council was read and approved.

Business of Annual Representative Meeting.

The provisional agenda paper of the Annual Representative Meeting was considered, and instructions given to the Representative.

Finance.

The total expenses of the Division for the year for printing, stationery, hire of room, and postages are

£3 0s. 10d. The capitation grant has been reduced from 1s. 6d. per head to 9d. per head, thus reducing working expenses by one half, though, if this is insufficient, the Branch Council is prepared to allow a further sum to cover the deficiency.

BURNLEY DIVISION.

THE annual meeting of the Burnley Division was held at the Bull Hotel, Burnley, on May 25th, at 8.30 p.m., Dr. GARDNER, Chairman, presiding.

Annual Report.—The SECRETARY read the annual report, in which it was pointed out that during the past year the membership had increased from 37 to 54; that Burnley and District was now a Division apart from Blackburn, having the right of its own Representative at the annual meeting. The report was adopted.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Dr. James Ferguson; *Vice-Chairman*, Dr. J. Gardner; *Honorary Secretary*, John H. Watson; *Representative at Representative Meeting*, Dr. Ferguson; *Representative on Branch Council*, J. H. Watson; *Committee*, Drs. A. E Bird (Burnley), F. E. Crossley (Burnley), J. Haworth (Burnley), A. M Sinclair (Burnley), Findlay (Nelson), W. S. Wilson (Brierfield), Lovell (Colne), W. J. D Bromley (Padiham).

Clinical Section.—It was proposed by Dr. FERGUSON, and seconded by Dr. SCOTT:

> That in accordance with the suggestion of the Branch Secretary such members of the Lancashire and Cheshire Branch as may be willing to read papers or show specimens be cordially invited to Burnley.

CHESTER AND CREWE DIVISION.

THE annual meeting of this Division was held in the Chester Infirmary Board Room on May 29th, Dr. MANN in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Annual Report.—The annual report of the Executive Committee was read and approved.

Apologies for Non-attendance.—Letters, telegrams, etc., regretting absence were received from Drs. Hodgson, Brierley, and Robinson.

Election of Officers.—The following were elected officers: —*Chairman*, Dr. Mann re elected for the second year; *Vice Chairman*, Dr. Parry; *Honorary Secretary* and *Treasurer*, Dr. King; *Representative at Representative Meetings*, Dr. Mann; *Representatives on Branch Council*, Dr. Mann and Dr J. G. Taylor; *Executive Committee* (additional members), Drs. Blagden Gray, Hodgson, and J. G Taylor.

Letters.—Letters from the Honorary Secretary of the Branch and from Mr. Sheen of Cardiff were read.

Annual Meeting of Lancashire and Cheshire Branch, 1909.—It was unanimously decided to cordially invite the Lancashire and Cheshire Branch to hold its annual meeting in 1909 in the area of the Chester and Crewe Division, either in Chester or in Crewe.

Contract Practice.—The rules of the Division for contract practice were then considered and adopted.

Motor-car Taxation.—The following resolution was moved by Mr. TAYLOR, seconded by the CHAIRMAN, and carried unanimously, and directed to be sent to the thirteen members of Parliament in the county of Cheshire:

> That the members of the Chester and Crewe Division of the British Medical Association view with apprehension any attempt to increase the taxation on the use of motor cars; they would desire to point out that at the present time the use of a motor car is almost a necessity for medical men; they feel that the annual revenue licence, the driving licence, and the original registration fee are a great strain on their earnings, quite apart from the taxation they bear along with other members of the public.

GLOSSOP DIVISION.

Election of Officers.—At the general meeting on June 16th the following officers were elected: *Chairman*, D. J. Mackenzie, M.D., Glossop; *Vice-Chairman*, R. W. Bollans, M.B., Hadfield; *Secretary*, Arthur Walker, M R.C S.Eng., L.R.C.P.Lond., Glossop; *Representative on Branch Council*, Dr. Mackenzie; *Representative at Representative Meeting*, Dr. Clarke, Dukinfield.

LIVERPOOL SOUTHERN DIVISION.

THE annual meeting of this Division was held at the Liverpool Medical Institution on June 10th at 4 30 p.m. Dr. HARVEY in the chair. There were present: Drs., Westby, Sharpe, Parkinson, Gardiner, and Given.

Confirmation of Minutes.—The minutes of the last annual meeting were read. The minutes of the last ordinary meeting were read and confirmed.

Election of Office-bearers.—Dr. Westby was elected the Representative at the coming Representative Meeting. Drs. Westby and Given were elected Representatives on the Branch Council. The Executive Committee was elected as follows: Drs. Bennett, Sharpe, Westby, Miss Mary Lee, Miss Mary Davies, with officers. Dr. Given was re elected Honorary Secretary and Treasurer.

Accounts.—The accounts for 1907 were then produced and passed.

Annual Report.—The annual report of the Division was read and adopted.

Liverpool Combined Divisions.—The proceedings of the Liverpool combined Divisional meetings were discussed.

Annual Representative Meeting.—Instructions were given to the Divisional Representative as to his attitude at the forthcoming meeting at Sheffield on various subjects, particularly the hospital abuse inquiry, the life insurance inquiry, the finance inquiry report, and the Charter.

NORTH MANCHESTER DIVISION.

THE annual meeting of this Division was held on Thursday, June 18th, Dr. HARGREAVES in the Chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Correspondence.—Letters to and from the Medical Officer of Health were read, and it was reported that certain suggestions offered by this Division concerning the free supply of antitoxin have recently been acted upon by the Health Committee.

Lynn Thomas and Skyrme Fund.—Letters *re* the Lynn Thomas and Skyrme Fund were read, and it was decided that, as the members of this Division have already been fully canvassed, no further action is advisable.

Annual Report.—The annual report was read and adopted. The following is a summary: The total membership had decreased by three, including two deaths, those of Dr. Lawson of Openshaw and Dr. Mackay of Oldham Road. Five meetings had been held during the year and one Executive meeting. A Division supper, held at the end of the year, proved a great success. Considerable work was done early in the year in connexion with the Joint Committee of the Manchester and Salford Divisions, its organization and work. The assistance of the Division was given to a member harshly treated by the Local Government Board; and also, with other Divisions, to Dr. Bagley in his now historical dispute with the police. The Division strongly opposed the inclusion of women and children in a proposed new club at Bradford, organizing a local meeting and approaching the club authorities; but information had been received that the club had found a medical officer, who was not, however, a member of the British Medical Association. The establishment of a new eye and ear hospital was considered "totally unnecessary"; the Early Notification of Births Act was strongly opposed, and the Central Emergency Fund recommended for support. The Bradford Ethical Rules were adopted with some amendments, and have been duly confirmed. The Division considered it quite time the boundaries of local Divisions were accurately determined and mapped out.

Election of Officers.—The following were elected for the ensuing year: *Chairman*, Dr. Lee; *Vice-Chairman*, Dr. Skinner; *Secretary and Treasurer*, Dr. McGowan; *Representative*, Dr. Broadbent; *Representatives on Branch Council*, Drs. Broadbent and McGowan; *Executive Committee on Branch Council*, Drs. Boddy, Frazer, Hargreaves, Jackson, and Palanque; *Representatives to Joint Committee*, Drs. Lee, McGowan, Broadbent, Boddy, Palanque.

Annual Representative Meeting.—The business of the Annual Representative Meeting was considered, and instructions given to the Representative.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

The sixth annual meeting of this Division was held on Thursday, June 11th, at 8 30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Pidcock in the chair.

Confirmation of Minutes.—The minutes of the last meeting were taken as read.

Annual Report.—The Honorary Secretary (Dr. Yeld) then read the annual report for the 1907-8 session—the fifth report of the Division. There had been 10 meetings of the Division held, with an average attendance of 18. Less than a third of the members actually attended the meetings. The membership of the Division had increased from 182 to 184 The committee had met 19 times, with an average attendance of 9 out of 17 members. Owing to the great pressure of work in connexion with the Hampstead Hospital dispute a great deal of material had been dealt with by subcommittees. The Division had opposed the Notification of Births Bill, and had reported to the Branch on the Medical Inspection of School Children. The Branch had substantially agreed with this report. The Division had considered and reported upon the medical aspects of the Workmen's Compensation Act. As regards the Referendum, the Division's report was in favour of the Representative Meeting. Reports of the Hampstead Hospital Dispute had been submitted to the Branch Council, by whom the subject had been discussed at some length. The subject was still *sub judice*. The Division had held four scientific meetings. The Annual Report was then adopted unanimously.

Election of Officers and Members of Committee—Letters of regret for inability to be present were read from Drs. Sharman, Nelson Hardy, and Humphreys. Drs. Macevoy and Sharman wrote asking to be excused from joining the committee for the ensuing session. (Dr. Macevoy subsequently agreed to serve again, on condition that he was not called upon to attend subcommittees.) Dr Yeld then proposed and Dr. Macevoy seconded, the election of Dr. Oppenheimer as *Chairman* for the ensuing session. This was carried unanimously. Dr. Pidcock having vacated the chair, Dr. Oppenheimer thanked the meeting for their cordial reception and proposed a hearty vote of thanks to Dr. Pidcock for his unfailing courtesy and tact in the conduct of meetings during an arduous and exciting session. This was carried with acclamation. The rest of the officers were then elected. *Vice-Chairman*, Mr. Nelson Hardy. *Representative to the Representative Meeting*, Mr. H. W. Armit (elected unanimously, 20 members being present at the time). *Honorary Secretaries*, Dr. R A. Yeld, Mr. C. W. Cunnington. (Dr. Oppenheimer moved and Dr. Pidcock seconded a formal vote of thanks from the Division to Dr. Yeld for his valuable services to the Division, especially during the last session) *Representatives to the Branch Council*, Dr. Clark Wilson, Mr. W. B. Parsons. *Executive Committee* (11 permissible), Dr. Ford Anderson, Miss Dobbie, Mr. F. R. Humphreys, Mr. Coram James, Mr. Jesson, Dr. Macevoy, Mr. Vincent Moxey, Dr. Pidcock, and Dr. James Stewart.

Congratulations.—Dr. Ford Anderson and Mr. H. W. Armit were congratulated on their election, the former as President elect, the latter as Vice-President, of the Branch.

Annual Representative Meeting.—Mr. Armit brought forward various questions which would come before the Representative Meeting. Dr. Macevoy moved, and Mr. Cunnington seconded:

That there should be a Representative for every 100 members.

Carried.

Ethical Rules.—The ethical rules which had been modified from the Bradford Rules and Model Rule Z were then considered. The rules had been previously circulated to all members, and having been very carefully drawn up by a subcommittee and approved by the committee, were passed by the Division without further amendment by 20 votes to 2.

Hampstead Hospital Business—The Honorary Secretary then read a letter from Mr. Edmund Owen to the Marylebone Division, dated April 24th, with addendum dated April 30th. The Division had been requested to comment on this. The committee had considered Mr. Owen's letter in detail, and a reply to it had been drawn up at two meetings of a subcommittee, and had been sent on June 2nd to the Honorary Secretary of the Marylebone Division. The letter of comment was then read to the meeting and unanimously approved. Mr. Parsons then read a *précis* of a report from the Central Ethical Committee to the Marylebone Division in this connexion.

Representation of the Local Profession on the Hospital Council.—The Honorary Secretary read a letter from the Hospital Secretary dated March 27th and the Committee's reply dated March 28th. Dr. Claude Taylor asked what medical men were to do if approached as individuals by the Hospital Council, and asked to come on the Council as representatives of the local profession. Mr. Cunnington spoke in favour of accepting the suggestion of the Council contained in their letter of March 27th, 1908. Dr. Ware pointed out that in future the representation of the medical staff was to be reduced, so that medical representation would not be numerically increased by the Council's proposal. After much discussion it was resolved by 14 votes to 2 (in reply to Dr. Taylor's question):

That such an offer, if made, be not accepted at present.

Warning Notice.—It was unanimously resolved to continue the insertion of the warning notice with regard to the Hampstead Hospital, and the Honorary Secretary was directed to write to the Medical Secretary to that effect.

Special Finance Inquiry Committee's Report.—Dr. Oakley brought forward a resolution objecting to the small balance which this Committee recommended on p. 202 of the British Medical Journal Supplement of May 2nd, 1908. It was resolved to postpone consideration of the question till the next meeting.

St. Pancras and Islington Division.

The annual meeting of this Division was held on Tuesday, June 2nd, at the Midland Grand Hotel, King's Cross. Dr. W. Wynn Westcott, J.P., presided.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, John F. J. Sykes, D.Sc., M.D., Medical Officer of Health for St. Pancras; *Vice-Chairman*, O. L. M. Theobalds; *Secretary*, William Griffith; *Representative at Representative Meetings*, Dr. Walter Smith; *Representatives on Branch Council* Dr. Wynn Westcott, Dr. Walter Smith, Dr. William Griffith. The following members were elected on the Executive Committee: Dr. Wynn Westcott, Dr. Walter Smith, Dr. Campbell Hearne, Dr. Berton, Dr. Crabb, Dr. Willoughby Blackstone, Dr. Rees Gabe.

Stratford Division.

The annual meeting of the Stratford Division was held on Thursday, June 11th, at the Alexandra Hotel, Dr. Spurrell presiding.

Communication from the Medical Secretary.—A communication from the Medical Secretary was read intimating that the Stratford Division was, as formerly, to form an independent constituency for the election of a Representative at the Representative Meeting for the year 1908-9.

Matters Referred to Divisions.—The meeting discussed various matters referred to Divisions, as contained in the Supplement of May 16th, and the Representative received suggestions as to the attitude he should adopt when those matters were brought before the Representative Meeting.

Election of Officers.—The following office bearers of the Division were elected for the ensuing year: *Chairman*, Dr. John Biernacki; *Vice-Chairman*, Dr. W. A. Grogono; *Representative at Annual Representative Meeting*, Dr. Percy Rose; *Representative on Branch Council*, Dr. Charles Spurrell; *Honorary Secretary*, Dr. P. J. S. Nicoll; *Honorary Assistant Secretary*, Dr. G. A Troup; *Executive Committee*, Drs. Beadles, Black, Couzens, Dale, Dayus, Frederick, Hay, and Randall.

Vote of Thanks.—The meeting terminated with a cordial vote of thanks to the retiring Chairman, Dr. Spurrell, for the able way in which he had carried out his duties.

Tottenham Division.

The annual general meeting of the Tottenham Division was held on May 29th at the Prince of Wales's Hospital, Tottenham. Dr. Leonard Grant presiding.

Paper.—Dr. Wilfred Harris read an instructive paper

on headaches (which will appear in the JOURNAL), and was accorded a hearty vote of thanks.

Election of Officers.—The following officers were elected: *Chairman*, John Richmond Bryce, M.D.; *Vice-Chairman*, A. F. Shoyer, M.D. *Representative at Representative Meeting*, J. R. Fuller, M.D.; *Honorary Secretary and Treasurer*, H. F. Staunton, M.B.; *Committee*, G. Chappel, M.D., L. Grant, M.D., Mr. A. Greenwood, J. Smith, M.B., F. Tresilian, M.D., W. B. Winston, M.D.

It was proposed by Dr. FULLER, seconded by Dr. SMITH, and carried:

> That the Tottenham Division of the British Medical Association disapproves of the action of the Council in allying themselves with any extreme party for the purpose of obtaining statistics as to inebriety in women.

MUNSTER BRANCH.

THE annual general meeting of this Branch was held on Saturday, June 6th, D. J. O'CONNOR, M.D., F.R.C.P.Ire., in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed. The minutes of the council meetings since held were read.

Representative on Central Council, Dr. J. Giusani, having been duly nominated in accordance with By-law 27 was elected Representative on the Council of the Association for 1908-9.

Representative to Representative Meeting.—Professor H. Corby (Patrick's Place, Cork) was elected Representative. Deputy (if unable to attend the meeting), Dr. John J. Fitzgerald (Eglinton Asylum, Cork).

Representative on Irish Committee.—Dr. D. J. O'Connor, F.R.C.P.Ire., was unanimously re-elected.

Election of Officers and Council of the Branch for 1908-9.—The following were elected officers: *President*, Lucy Smith, M.D.; *Vice-President*, Dr. John J. Fitzgerald; *Retiring President*, Dr. J. Cotter, F.R.C.S.Ire.; *Council*, Drs. Corby, Cummins, H. R. Townsend, P. J. Cremen, D. J. O'Connor, O. McCarthy, Moriarty, E. I. Coffey, P. J. Macnamara, F.R.C.S.Ire., H. N. Hobart, T. J. O'Meara, and M. Cagney; *Honorary Secretary and Treasurer*, Philip G. Lee.

New Members.—The following were elected members of the Association: Edward Philip Punch, L.and L.M.R.C.P. and S.Ire. (Ballyhindon House, Fermoy), and William K. Heffernan, L.R.C.P. and L.R.C.S.Ire. (Riversdale, Killenaule, Thurles, co. Tipperary).

Balance Sheet.—The balance sheet for 1907 having been submitted, and some formal business transacted, the meeting adjourned.

NORTH OF ENGLAND BRANCH:

NORTH NORTHUMBERLAND DIVISION.

THE annual meeting was held at the Infirmary, Berwick-on-Tweed, on June 4th. Present: Drs. Main, McKay, Robson, Paxton, Crawford, and Burman. Dr. MAIN occupied the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The officers for the ensuing year were appointed as follows: *Chairman*, Dr. McKay (Berwick-on-Tweed); *Vice Chairman*, Dr. Dey (Wooler); *Secretary*, Dr. Burman (Alnwick); *Representatives on Branch Council*, Drs. Maclagan and Robson; *Executive Committee*, Drs. Forrest, Paxton and Macaskie.

Annual Social Meeting.—It was decided to hold the annual social meeting at Norham towards the end of August.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE annual meeting of this Branch was held at the Grampian Sanatorium, Kingussie, on Saturday, June 13th, fifteen members being present. In the absence of the President (Dr. Miller, Fortwilliam), Dr. DE WATTEVILLE, the President-elect, took the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Apologies for Non-attendance.—The HONORARY SECRETARY read apologies for inability to attend from Drs. Miller (Fortwilliam), Cameron (Nairn), Cruickshank (Nairn), Pender Smith (Dingwall), and others.

Election of Officers.—The following office-bearers were elected for 1908-9: *President*, Dr. de Watteville (Kingussie); *President-elect*, Dr. Pender Smith (Dingwall); *Vice-Presidents*, Dr. Kennedy (Tain), Dr. Miller (Fortwilliam); *Representative in Representative Meeting*, Dr. Murray; *Representative on Central Council*, Dr. J. Munro Moir; *Honorary Secretary and Treasurer*, Dr. J. Munro Moir; *Members of Council*, Dr. Wilson (Nairn), Dr. Campbell (Elgin), Dr. Johnston (Fort Augustus), Dr. John Mackenzie (Inverness), Dr. Kaye (Strathpeffer), Dr. John MacDonald (Inverness).

Autumn Meeting.—It was arranged that the autumn meeting should be held at Dingwall, and as Dr. Bruce enters on the fiftieth year of his professional work, it was resolved that the occasion be celebrated by the Branch, and that a public dinner be arranged, details of which are to be arranged by the council. Elgin was selected for the next annual meeting place.

Exchequer Scale of Fees.—The question of the Exchequer scale of fees payable to medical men was brought up by the SECRETARY; he mentioned what had been done by the medical practitioners resident in Inverness at a meeting held there recently. The following resolution was adopted unanimously:

> That the fees paid by the Crown Office to medical men for attending to give evidence at circuit or sheriff court are quite inadequate; they consider that a fee of at least two guineas per diem should be the minimum rate of remuneration, and that they will decline to give expert evidence except at these terms. When the court is held out of Inverness, a sum of at least one guinea per diem to be allowed for travelling expenses.
>
> With reference to cases requiring a medical report to the Crown authorities, it was resolved that the scale of remuneration should be one guinea within a radius of two miles, and two guineas beyond that distance, along with travelling expenses.

The resolution was approved of by the meeting, and the Honorary Secretary was instructed to communicate with the medical men in the towns within the area of the Branch and request them to consider the resolution and if possible agree to it, it being pointed out that it was only by being unanimous in this matter that the medical profession could compel the Crown Office to agree to the terms proposed.

Visit to Grampian Sanatorium.—After the meeting the members visited the Grampian Sanatorium under the guidance of Dr. de Watteville, and they expressed themselves as highly pleased with the arrangements of the institution, the buildings being planned and everything carried out according to the latest form of sanatorium treatment.

PERTHSHIRE BRANCH.

THE summer meeting of this Branch was held in the Golf Club House, Moncrieffe Island Perth, on Friday June 5th. A council meeting was held before the general meeting. Drs. McEwan (President), D. H. Stirling, Govan, Trotter, and Taylor were present.

New Member.—Dr. Stewart Carlisle Howard, Murthly, was duly elected a member of the Association and Branch.

At the general meeting Dr. MCEWAN, President, was in the chair, and Drs. D. H. Stirling, Govan, Trotter, Bruce, C. Stuart, P. Stewart, Mitchell, Burnett, and Taylor were present.

Apologies for Non-attendance.—Apologies were intimated from Colonel Moffett and Drs. Haig, Borrowman, J. Hume, and Maitland Hume.

Confirmation of Minutes.—The minutes of former meetings were read, approved, and signed by the President.

Election of Council.—The following were elected officers for the ensuing year: *President*, Dr. D. H. Stirling, on the motion of Dr. MCEWAN, seconded by Dr. P. STEWART; *Vice-President*, Dr. L. C. Bruce, Murthly, on the motion of Dr. TAYLOR, seconded by Dr. TROTTER; *Treasurer*, Dr. J. Hume; *Secretaries*, Dr. W. A. Taylor, Dr. Alexander Trotter; *Council*, Drs. Govan, Urquhart, Haig, McEwan, Burnett; *Branch Representative*, Dr. D. H. Stirling, moved by Dr. MCEWAN, seconded by Dr. BRUCE.

The retiring PRESIDENT then asked Dr. STIRLING to take the chair.

Resignation of Member.—A letter was read from Dr. Borrowman, Crieff, regretting he would no longer be a member of the Branch, as he was leaving the district.

The Secretaries were instructed to write him accepting his resignation, and tendering their wishes for his better health and prosperity in the future.

Postponement of Further Business.—Further business on the agenda was deferred to a meeting to be called a month hence.

Annual Golf Match.—The Branch thereafter entertained ten golfing members from the Dundee Branch to lunch in the clubhouse, and later held the annual golf match. Dundee won by 5 matches to 3.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

THE annual meeting of this Division was held at 5, Pembroke Road, Portsmouth, on Tuesday, May 26th.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Dr. Carling; *Vice-Chairman*, Dr. Cott; *Representative in Representative Meetings of Association*, Dr. J. Ward Cousins; *Clinical Secretary*, Mr. C. P. Childe; *Medico-Political Secretary*, Dr. B. H. Mumby.

Alteration of Rule.—Rule 5 was altered to allow two secretaries to be appointed, one for the clinical work and the other for the medico-political work of the Division.

Correspondence.—Some correspondence was read between Dr. Lockhart Stephens and the representative of an insurance company. It was resolved to forward it to the Ethical Committee of the Branch.

The Charter.—Dr. J. WARD COUSINS made some remarks on the proposed Charter of the Association, after which it was resolved that a special meeting of the Division should be held on June 16th to further consider the draft Charter.

Lynn Thomas and Skyrme Fund.—A collection was made on behalf of the Lynn Thomas and Skyrme Fund, resulting in £3 3s. 6d., after which a cheque for £1 1s. was received for the fund from Dr. Baker, of Waterlooville.

SOUTH MIDLAND BRANCH:

NORTHAMPTONSHIRE DIVISION.

THE annual meeting of the Division was held in the Board Room of the General Hospital, Northampton, on Tuesday, June 9th. Dr. BUSZARD took the chair, in the absence of Mr. G. H. Percival. Present: Drs. Buszard, Larking, Darley, Terry, Milligan, Odgers, Powell, Robson, Baxter, Harries-Jones, Evans, Stone, and Hichens (13).

Confirmation of Minutes.—The minutes of the preceding meeting were read and confirmed.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Mr. C. Y. Evans; *Vice-Chairman*, Dr. Maguire; *Honorary Secretary and Treasurer*, Dr. Hichens; *Divisional Representative on Branch Council*, Dr. Larking, in addition to Dr. Maguire, and Dr. Robson, who remain in office. *Representative for Northamptonshire and Aylesbury Divisions*, Dr. Baxter; *Deputy Representative* Dr. Linnell.

Annual Report.—Dr. HICHENS then presented the following annual report: Membership on December 31st, 1906, 107. Increases: New members, 3; through change of address, 4; through change of boundaries, 0; total additions, 7; aggregate, 114. Losses: Deaths, 2; resignations, 3; through change of address, 5; through change of boundaries 0; total deductions, 10; net membership on December 31st, 1907, 104. Accounts: Balance in hand December 31st, 1906 £5 5s. 4d.; grant received from Branch Council, £10 14s.; total, £15 19s. 4d. Secretarial expenses, £4 10s.; balance in hand, December 31st, 1907, £11 9s. 4d. Division meetings held during the year, 5; meetings at which scientific matters were discussed, 2; meetings at which medico-political, ethical, or kindred matters were discussed, 5; occasions on which members lunched together, 3; average attendance at meetings, 15½; Divisional Executive Committee meetings, 0. The report proceeds: During the past year the Division has certainly exhibited rather unusual activity, especially in the direction of thoroughly discussing matters sent down to it from head quarters. The chief subjects were as follows:

1. *The Medical Inspection of School Children.*—Two discussions were held on this, both before and after the passage of the bill through Parliament. The majority of the members desired that special whole-time officers should be appointed for this purpose, and it is to be noted that this arrangement has been carried out by the town and county councils.

2. *The Ethical Aspects of Medical Consultations.*—The majority of the members desired that the report should be referred back to the Ethical Committee for further consideration. It is to be noted that the Ethical Committee have since made modifications in their suggestions.

3. *Questions submitted to the Divisions as regards Hospital Administration.*

4. *The Referendum on the Draft Charter.*—The majority of the members supported the Representative Meeting and not the Council.

5. *The Notification of Births Bill.*—Annoyance was expressed at the action of Parliament in enforcing the notification on medical men not only without fee but under penalty, and also at the violation of professional confidence that would ensue. The majority therefore voted:

> That papers should be laid on the table and that no action should be taken.

Papers.—A paper was read by Mr. N. B. ODGERS on some points about adenoids and their treatment; one by Dr. GREENFIELD on the treatment of fractures by rubbing and early movements; and one by Mr. HARRIES-JONES on the differential diagnosis of glaucoma, laying special stress on the diagnosis between glaucoma, iritis, iridocyclitis, and conjunctivitis. The last paper was discussed by several members, and the meeting then adjourned.

Matters Referred to Divisions.—The questions referred to Divisions were then discussed:

Life Assurance Fees.—

1 (*a*) and (*b*). Too numerous to mention.
2. The majority.
3. In most cases a full report.
4. Yes, several, including Prudential. Report very much like Schedule B.
5. Yes; but not for insurances over £100, when a full report is required.
6. Cf. answers to Question 5.
7. Cf. answers to Question 5.
8. Forms in Schedule B suitable. Fees of 10s. 6d and 5s. suitable.
9. Five shillings enough and not less.

Definition of the Term "Hospital".—The definition was approved, with the exception of hospitals devoted to mental diseases, in which case the term has a statutory application other than that mentioned in the definition (unanimously).

Ethics of Medical Consultations.—The report was approved and adopted (unanimously).

Lynn Thomas and Skyrme Fund.—It was decided that the members of the Division should be asked to give a joint contribution to the Lynn Thomas and Skyrme Fund.

Coventry Dispensary.—A letter was read from the Coventry Division asking for support from the Northants Division in their struggle with the doctors who have accepted posts at the Coventry Dispensary. It was agreed that the Division would give their support to the Coventry Division.

Proposed Clinical Section.—Dr. ROBSON proposed that there should be a Clinical Section of the Division. This was carried, and referred to the Divisional Committee to report upon.

Proposed Circulation of Report.—Dr. LARKING proposed that the annual report of the Division be printed and circulated amongst the members. The motion was lost—Ayes, 2; Noes, 5.

STAFFORDSHIRE BRANCH:

NORTH STAFFORDSHIRE DIVISION.

Election of Officers.—The officers appointed by this Division for the ensuing year are as follows: *Chairman*, Dr. W. F. Menzies; *Vice-Chairman*, Dr. C. H. Phillips; *Honorary Secretary*, R. Alcock; *Representative for Representative Meeting* J. Russell, M.B.; *Representatives on Branch Council*, Dr. G. S. Hatton, Dr. W. F. Menzies, Mr. J. P. Massingham; *Executive Committee*, W. D. Spanton, G. Petgrave Johnson, A. Parkes, J. W. Dawes, and G. A. Carter.

YORKSHIRE BRANCH:

BRADFORD DIVISION.

A SPECIAL meeting of this Division was held at the Great Northern Victoria Hotel, Bradford, on Tuesday, May 26th, at 8 30 p m, Dr. HORROCKS, Vice-Chairman, presiding.

Lynn Thomas and Skyrme Fund.—The HONORARY SECRETARY read communications received asking for support from the Division to the Lynn Thomas and Skyrme Fund. Dr. EURICH proposed and Dr. GOYDER seconded that the attention of members should be drawn to the matter on the agenda of the annual meeting, but that the Division as such could not take any further action. Carried.

Fees for Attendance on Tramway Accidents.—Dr. METCALFE gave an outline of the interview which Dr. Willson and he had had with the Chairman, Vice-Chairman, and Manager of the Bradford Tramways in connexion with the question of fees for medical attendance on tramway accidents. The Executive Committee had also considered the question, and were of opinion that for first aid a fee of 7s. 6d. should be paid between the hours of 9 a m. and 9 p.m, and 10s. 6d. from 9 p.m. to 9 a.m. It was thought that the Tramway Committee should pay in all cases, whoever called in the services of the doctor. Sudden illness in the cars should be classed as accidents. If the doctor did anything more than give first aid, performed any surgical operation, or had a long attendance in his surgery, he should be paid extra. If after attendance was required, this should be paid for according to the medical man's usual charges. On the proposition of Dr. GOYDER, seconded by Dr. J. J. BELL, these conditions were approved of, and the secretaries were asked to communicate the Division's decision to the authorities concerned.

Nomination of Officers and Committees.—The nomination of officers and members of committees for the year 1908-9 was then proceeded with.

Medical Certificates and Accident Insurance Companies.—Dr. METCALFE brought before the meeting the action of some accident insurance companies in demanding medical certificates directly from the doctor but refusing all payment. The doctor was referred to the injured person for payment. The London Guarantee and Accident Company, Ltd., was given as a company carrying on these methods. It was agreed that appeals for certificates of this character should be refused, and that certificates should never be given to any company without payment. If injured persons required them, and the company concerned refused to pay, the certificate should only be given directly to the applicant and charged to him. But as the companies required these certificates for their own information and in order to assess the payment to be made as far as possible in their own interests it was unanimously felt that they ought under all circumstances be prepared to pay for them. On the proposition of Dr. METCALFE, seconded by Dr. GOYDER, it was agreed to refer the matter to the Medico-Political Committee and see if some concerted action could not be taken to protect the profession against companies who carried on these methods. In connexion with this subject Dr. WILLSON raised the subject of life assurance companies who ask the medical men for duplicate certificates but refuse payment. It was agreed to also refer this question to the Medico-Political Committee.

Annual Representative Meeting.—It was agreed that the Representative should vote as he thought advisable on any questions considered at the Representative Meeting, but which the Division had not been able to discuss. The meeting then terminated.

HUDDERSFIELD DIVISION.

THE annual meeting of this Division was held at the Infirmary on Friday, June 5th. Dr. HALL occupied the chair.

Vote of Thanks.—A vote of thanks, proposed by Mr. PORRITT, seconded by Mr. MACLEAN, was passed to Dr. Hall for having occupied the chair at the meetings for the last two years.

Annual Report.—The annual report was read by the SECRETARY.

Election of Officers.—The following were elected office-bearers for the ensuing year: *Representative in Representative Meeting*, Dr. Draper; *Representative at Branch Meetings*, Mr. F. Knaggs; *Chairman*, Dr. Walker; *Vice-Chairman*, Dr. Hall; *Executive Committee*, Mr. Porritt, Dr. McCully, Dr. Irving, Dr. Edwards, Dr. Bell, Dr. Rattray, Dr. David Wilson; *Honorary Secretary*, Mr. Rowell.

Association Notices.

1908 ANNUAL GENERAL MEETING.

The Annual General Meeting of the British Medical Association will be held in the Hall of the Education Department of Sheffield, on Friday, July 24th, at 3 o'clock in the afternoon.

[*This Meeting will be merely formal, to comply with Article XII, and will adjourn forthwith until Tuesday, July 28th, at 2.30 o'clock*]

ANNUAL REPRESENTATIVE MEETING.

The Annual Representative Meeting will take place in the Hall of the Education Department of Sheffield on Friday, July 24th (and following days as required), immediately after the Annual General Meeting, which will be held at 3 o'clock in the afternoon, on Friday, July 24th.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

June 11th, 1908.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 1st, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

June 11th, 1908. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND TROWBRIDGE DIVISIONS.—A combined meeting of the Bath and Trowbridge Divisions will be held at the Royal United Hospital on Thursday, July 2nd, at 5 p.m. Business: To elect Representative for the Bath and Trowbridge Divisions.—J. TUBB THOMAS, Honorary Secretary, Trowbridge Division; D. LESLIE BEATH, Honorary Secretary, Bath Division.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Branch will be held on Thursday, July 2nd, at Alconbury Hill, Huntingdon. Members having any com-

munications to make or specimens to show are requested to inform the Honorary Secretary, F. E. Apthorpe Webb, Grafton House, Cambridge.

Dorset and West Hants Branch.—The summer meeting of this Branch will be held in Yeovil on Wednesday, July 8th.—James Davison, Honorary Secretary, "Streateplace," Bournemouth.

Metropolitan Counties Branch.—Notice is hereby given that the annual meeting of the Branch will be held at 6, Catherine Street, Strand, W.C., on Thursday, July 9th, at 5 p.m., when the incoming President, Sir Victor Horsley, F.R.S., will give an address.

North Wales Branch.—The annual meeting of the Branch will be held at Holyhead on Tuesday, July 7th.—H. Jones Roberts, Honorary Secretary, Llywenarth, Penygroes.

Oxford and Reading Branch.—The annual meeting will be held at 4.30 p.m., on Monday, July 6th, in the library of the Royal Berkshire Hospital, Reading. Tea will be provided at 4 to 4 30 p.m., during which time cases and specimens may be inspected. The annual dinner will be held at 6.45 p.m. sharp, in the coffee room of the Caversham Bridge Hotel. This room with adjoining balconies and gardens overlooks the river and Caversham heights. Price of dinner, with coffee, dessert, and cigar, 6s. 6d. Members intending to dine are requested to communicate with the Hon. Secretary. Morning dress. Hotel five minutes from station. Agenda, general meeting: The President, Dr. Price, will take the chair at 4.30 p.m. (1) Minutes of last meeting. (2) Election of officers, 1908 9; H. Anglin Whitelocke, M.D., is proposed as President-elect. (3) The President will make a few remarks concerning the profession and public appointments. (4) The Regius Professor of Medicine at Oxford, Dr. W. Osler, will read a short paper on Transient Paralysis in Arterio-Sclerosis of the Brain. (5) W Collier, M.D., F.R.C.P., Physician Radcliffe Infirmary, will open a discussion on What are Reasonable Precautions in dealing with Diphtheria? (6) H Anglin Whitelocke, M.D., F.R.C.S., Surgeon, Radcliffe Infirmary, will give Short Notes on a Case of Ectopic Gestation. Dr. W. J. Maurice, Dr. C. W. Marriott, Mr. R P. Brooks, The House-Physician Royal Berkshire Hospital, and others will show cases and specimens. The cases, etc., will be discussed if time permits.—W. F. Freeman Honorary Secretary, 30, Portland Place, London Road, Reading.

South-Eastern of Ireland Branch.—A meeting of this Branch will be held at the Club House, Carlow, on July 1st, at 5 30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) any other business.—J. Quirke, Honorary Secretary, Piltown.

South-Western Branch.—The sixty-ninth annual meeting will be held on Tuesday, June 30th, at the new Council Chamber, Falmouth, at 3 15 p.m., when Dr Deas will resign the chair to Dr. Banks, who will deliver his inaugural address. The report of the Branch Council for the year 1907–8 and annual financial statement for the year 1907 will be presented to the meeting, and the officers of the Branch will be elected for the year 1908–9. The accounts of the annual meeting of the Association at Exeter in 1907 will be presented by the Treasurers thereof. Luncheon by the kind invitation of the President-elect, will take place from 12 30 to 2 30 p.m at the Green Bank Hotel, Falmouth. The annual dinner will be held at 6.45 for 7 p.m. at the Green Bank Hotel. Tickets (exclusive of wine), 5s. each, can be had from Dr. W. Banks, 10, Green Bank, Falmouth. In the afternoon there will be (weather permitting) a steamer excursion on the River Fal. Members desiring to be accommodated with bed and breakfast are requested to send their names to Dr. Banks, Falmouth, who will endeavour to arrange for them.—Russell Coombe, Honorary Secretary.

West Somerset Branch.—The sixty-sixth annual meeting of this Branch will be held at Cotford Asylum, about four miles from Taunton, on Tuesday, June 30th, at 12.30, when the chair will be taken by the incoming President, Dr. H. T. S. Aveline. Agenda: Minutes of last meeting. Annual report of Council. Treasurer's report for 1907. Election of officers, etc. President's Address: Incidence of Lunacy in West Somerset, with some Remarks on Certification. Other business, if any. Lunch will be served at 1 30. This will be paid for out of the Branch funds; but members wishing to introduce guests can do so at 3s. per head, exclusive of wine, etc., in all cases. After lunch a cricket match will be played between sides representing the Branch and the Cotford Asylum. Those willing to play are requested to communicate with the Hon. Secretary. Tennis and croquet lawns will also be at the disposal of members, to whom opportunity will be given to view the asylum. During the afternoon Dr. and Mrs. Aveline will give an "At Home," and will entertain those present to tea. If those members who intend to be present will let the Honorary Secretary know by June 27th, he will endeavour to arrange for conveyances to meet them at Taunton or Norton Fitzwarren Stations.—W. B. Winckworth, Taunton, Honorary Secretary.

Yorkshire Branch.—The annual meeting of this Branch will be held at the Station Hotel, York, on Wednesday afternoon, July 1st. The officers will be elected. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate with me at once. The annual dinner will take place at the Station Hotel, York, at 6.30 p.m.—Adolph Bronner, 33, Manor Row, Bradford, Honorary Secretary.

THE METROPOLITAN COUNTIES BRANCH ELECTIONS.

The successful experiment of last year has again induced the Metropolitan Counties Branch to adopt the single transfer vote system for the elections of vice-presidents and members of the Central Council of the Association this year. This method is, as has been reported in the Journal, not a new one, and has proved itself to be one which ensures proportional representation of the electorate. A brief analysis of the voting will show that the election was an interesting example of how smoothly this method works, even if the electors individually cannot be expected either to have mastered the intricacies of the distribution of votes, or to have taken any actual interest in the development of the system. Under the auspices of the Proportional Representation Society, the report was carefully compiled and analysed.

Taking the election of four vice-presidents first, it must be remarked that there were but five candidates. Each voting paper required the choice of a first preference, as well as a second, third, and possibly fourth preference. Dr. McCann secured 232 votes as the first preference; Mr. Armit came next with 96 votes, Dr. Lamb followed with 73, while Drs. Richardson and Southcombe received 54 and 55 respectively. It appears that the total number of votes thus registered was 510. From this it will be seen that any candidate who has secured over one-fifth of this total number (there being four vacancies) must be elected. The "quota" ensuring election was therefore 510 divided by 5 (*plus* 1)—that is, 103. Dr. McCann thus was found to have 129 votes over and above the number required to return him, and these votes were therefore transferred to the second choices. Mr. Armit received 39 of these, which brought his total up to 135, ensuring his election and leaving some 32 votes to be transferred to others on the third count. Dr. Lamb received 28 votes, which brought his total up to 101; Dr. Richardson received 36 of the votes, increasing his total to 90; and Dr. Southcombe 19, making his total 74. Mr. Armit's surplus was then distributed between the three remaining candidates, and Dr. Lamb obtained 20, Dr. Richardson 8, and Dr. Southcombe 2. Dr. Lamb had thus passed the quota and was therefore elected. It was then found that even if the whole of Dr. Lamb's surplus were to go to Dr. Southcombe he would still have less votes than Dr. Richardson, and therefore that the latter must be elected. The position is summarized in the following tables of the counts:

First Count.

McCann	232
Armit	96
Lamb	73
Southcombe	55
Richardson	54
Total	510

The quota was found to be $\frac{510}{5} + 1 = 103$.

Second Count.

Transfer of 129 surplus votes of McCann.

Armit	received	...	...	39	transfer votes	= 135
Lamb	,,	...	...	28	,, ,,	= 101
Richardson	,,	...	...	36	,, ,,	= 90
Southcombe	,,	...	...	19	,, ,,	= 74

Third Count.

Transfer of 32 surplus votes of Armit.

McCann had already 103 votes and was elected.
Armit „ „ 103 „ „ „
Lamb received 20 transfer votes = 121 and was elected.
Richardson „ 8 „ „ = 90 „ „
Southcombe „ 2 „ „ = 74 and was not elected.

The election of the five members of the Central Council proceeded with seven candidates On the votes of first choice Dr. Ford Anderson topped the poll with 213. Dr L. Shaw came next with 100 then followed Dr. Thomson with 58, Dr. Ker with 51, Drs. Haslip and Shadwell with 50 apiece, and Dr. Walter Smith with 31.

The total number of votes was 553, and as there were five vacancies, this number divided by 6 (*plus* 1) gave a quota of 93. Drs. Ford Anderson and Shaw were therefore elected. The transfer of Dr. Ford Anderson's surplus gave Dr. Haslip 57, and brought his total up to 107, electing him and giving 14 surplus votes. Dr Ker obtained 22 transferred votes, making a total of 73; Dr. Shadwell got an addition of 15, making a total of 68 votes; Dr. W. Smith got 16, making 47; and Dr. Thomson got 10, making a total of 68.

The transfer of Dr. Shaw's surplus was so small that it was neglected, as it was found that it could not influence the election. Dr. Haslip's surplus of 14 went to Dr. Ker as the second choice, and brought his total up to 87. It was then found that Dr. Walter Smith could not, under the most favourable conditions gain a sufficient number of transfers to render his election possible, and his votes were therefore transferred forthwith; 14 went to Dr. Ker and secured his election with a surplus of 8; 5 went to Dr. Shadwell, bringing his total to 70; and 13 went to Dr. Thomson, bringing his total to 81. The transfer of Dr. Ker's surplus of 8 was distributed to Drs. Shadwell and Thomson at 4 apiece, and left the latter the winner for the last seat.

The position was as follows:

First Count.

Anderson...	213
Shaw	100
Thomson	58
Ker	51
Haslip	50
Shadwell	50
Smith	31
Total	553

The quota was $\frac{553}{6} + 1 = 93$.

Second Count.

Transfer of 120 surplus votes of Ford Anderson.

Haslip	received	57 = 107
Ker	„	22 = 73
Smith	„	16 = 47
Shadwell	„	15 = 65
Thomson	„	10 = 68

Third Count.

Transfer of 14 surplus votes of Haslip.

Ker ... ... received 14 votes = 87

Fourth Count.

Transfer of W. Smith's votes (47).

Ker	received	14 = 101
Thomson	„	13 = 81
Shadwell	„	5 = 70

The remaining 15 could not be employed as the preferences were exhausted.

Fifth Count.

Transfer of 8 surplus votes of Ker.

Anderson had 93 votes and was elected.
Shaw „ 93 „ „ „
Haslip „ 93 „ „ „
Ker „ 93 „ „ „
Thomson received 4 votes = 85 and was elected.
Shadwell „ 4 „ = 74 and was not elected.

It appears that this second attempt of the Metropolitan Counties Branch has secured a satisfactory result for proportional representation, and all who have been concerned in the counting of the votes and the distribution of the votes at the successive transfers agree that the system has worked smoothly and well.

LANCASHIRE AND CHESHIRE BRANCH.

CENTRAL COUNCIL ELECTION.

SIR,—I am requested by my colleagues in the recent election to undertake the pleasant, if difficult, task of thanking the members of the Lancashire and Cheshire Branch for the decisive and significant result published in the SUPPLEMENT of June 13th, page 417.

It is pleasant to be successful. We heartily and gratefully thank all those who worked for us, and we promise again to do our best to serve the Association and the Branch faithfully, according to our opportunities. Three of the "quartette" (as we were called) have succeeded; the fourth has failed by so small a number of votes that the moral effect of the general result cannot be affected. We desire to stand together in our expression of thanks, as we stood loyally together in our candidature.

It is difficult to condense all one would like to say into the space allowable for a letter. I will therefore only add that we emphatically reassert our belief that every Representative ought to be personally known (as far as possible) to the electors; and our intention to maintain personal intercourse with the Divisions during the coming year, by arranging for one or more of our number to visit and address upon current topics any Division in this area which may care to send us an invitation, only suggesting that such invitations should be spread through the winter of 1908-9, and not crowded into May, 1909.

Messrs. Larkin, Macfie, and Taylor are equally associated in this expression of thanks with the writer; but the latter is alone responsible for any epistolary imperfections.—I am, etc.,

Altrincham, June 20th. T. W. H. GARSTANG.

SIR,—I shall be glad if you will permit me to thank the 240 stalwarts who took the trouble to vote for me in this election, and to point out to them that they have assisted very materially in frustrating the success of the quartette, and that by being a candidate I have at last succeeded in causing the voting papers to be sent in sealed envelopes. The scrutineers would not allow me to be present at the counting of the votes, but another year I expect this fair and reasonable request, as in parliamentary and municipal elections, will be granted.—I am, etc.,

Manchester, June 22nd. G. H. BROALBENT.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on June 18th, with Dr. F. H. CHAMPNEYS in the chair.

Rules of the Board.

A letter from the Privy Council was received approving the Board's suggested addition of the words "by examination" to Rule E. 26 in the following terms:

Provided that a midwife whose name has been admitted to the roll in virtue of having passed the examination of the Central Midwives Board, or in virtue of a qualification under Section 2 of the Midwives Act, 1902, acquired by passing an examination in midwifery, may add the words "by examination" after the words "certified midwife."

A letter was read from Dr. Gibson, Master of the Coombe Hospital, Dublin, inquiring whether two probationers, working together and helping each other to conduct the delivery, can each obtain credit for a conduction. It was recommended that Dr. Gibson be informed that the Board will not tolerate any relaxation of its rules relating to attendance on cases.

Notification of Births Act.

Letters were considered from the Town Clerk of Rotherham as to the conviction of a midwife under Section 1 (1) of the Notification of Births Act, 1907, and the Board decided that inquiries be made (1) as to who were present at the birth in respect of which the midwife was convicted of failing to notify, (2) as to whether the local supervising authority find a primâ facie case within the meaning of Section 8 (2) of the Midwives Act, 1902.

Examination in Ireland.

A letter was read from the Secretary of the Queen Victoria Jubilee Institute for Nurses as to providing

facilities for the written examination in Ireland of candidates for the Central Midwives Board certificate. It was decided that the Queen Victoria Jubilee Institute for Nurses be informed that the Board regretted that it could not accede to the request.

Payment of Fees to Medical Practitioners.

The statement to be submitted to the Privy Council as to the payment of fees of medical practitioners summoned to assist midwives in emergencies was further considered and approved.

Uterine Cancer.

The Chairman reported that he had drawn up a leaflet on cancer of the womb for distribution to midwives and others. This leaflet will be supplied to any one applying and paying postage.

Cancer of the Womb.

This disease is probably the greatest dread of women.

Unless treated early by removal it always ends in death.

At first it is only in the part attacked, and is not "in the system."

If removed early it can frequently be cured.

Every day, and even every minute, is of importance, and no time at all should be lost.

The earliest symptom is generally a red discharge which does not occur at the proper time for the monthly period. This may be quite slight.

If the womb bleeds on touch this generally means cancer.

The discharge does not generally smell bad, nor is there pain at first.

A bad-smelling discharge should always be attended to at once.

Any discharge, either red or offensive, in a woman in whom the monthly periods have ceased for some time should be attended to at once.

It is not true that "the change of life" is properly marked by floodings, or by irregular bleedings, or by special discharge of any kind.

It often happens that a woman who has floodings or irregular bleedings or marked discharge about the time of "the change of life" is told by her friends that it means no harm and is "only the change of life."

Instead of going to a doctor she does nothing until the disease is so far advanced that no operation will save her and she throws away her life.

All women who have floodings, or irregular bleedings, or marked discharge of any kind (especially if offensive, but also even if not offensive), should go at once to a properly qualified medical practitioner, and ask to be examined thoroughly. If women did this many lives could be saved.

All women (such as nurses and midwives, but not only they) who are especially liable to be consulted on this matter, should avoid expressing any opinion of their own, but should advise the inquirer to go at once to a properly qualified medical practitioner and insist on being examined.

F H Champneys, M.D., F.R.C.P.,
Chairman of the Central Midwives Board.

June, 1908.

This leaflet was drawn up and issued at the request of the Board.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Shirley H. Birt, Staff Surgeon, and William E Gribbell, Surgeon, to the *Vivid*, additional, for the *Indomitable*, June 15th, and to the *Indomitable*, on commissioning, undated; Arthur R. Davidson, M.B., Surgeon, to Haslar Hospital, June 15th; Samuel H. Vickery, M.B., Surgeon, to the *Actaeon*, June 15th; Richard Willan, Surgeon, to the *President*, additional, for the *Maine*, June 15th; J. H. Wright, M.B., Surgeon, to the *Donegal*, June 15th; Edward H Meaden, Fleet Surgeon, to the *President*, additional, for London Recruiting Head Quarters, temporary, June 18th.

THE ROYAL COMPANY OF ARCHERS.

William Allan Jamieson, Esq., M.D., has been appointed Surgeon, vice Thomas Annandale, Esq., F.R.C.S., deceased.

ARMY MEDICAL SERVICE.

Surgeon-General W. B. Slaughter, Principal Medical Officer, 8th (Lucknow) Division, is directed to proceed to Simla for temporary duty at Army Head Quarters, India. Lieutenant-Colonel J. Donaldson, R.A.M.C., who is serving in India, will assume charge of the office of Principal Medical Officer, 8th (Lucknow) Division, as a temporary measure.

ROYAL ARMY MEDICAL CORPS.

Colonel W. M. Kerin has been appointed Administrative Medical Officer at Tidworth, vice Colonel W. R. Rainsford, C.I.E., appointed to Plymouth.

Major O. L. Robinson has been appointed Registrar and Secretary, Royal Victoria Hospital, Netley.

Colonel O. E. P. Lloyd, V.C., who is serving in India as Principal Medical Officer, Bareilly and Garhwal Brigades, is appointed Honorary Surgeon to the Governor-General of India.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. A. Quayle, M.D., Madras, is promoted to be Colonel from April 1st. He joined as Assistant Surgeon, March 30th, 1872, and became Surgeon Lieutenant-Colonel, March 30th, 1898.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Captain W. K. Steele to be Major, April 6th.

VOLUNTEER RIFLES.

Surgeon-Captain H. J. Holman, 1st Cinque Ports Volunteer Rifle Corps, resigns his commission, March 31st.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during May, 1908:

		FROM.		TO.
Colonel	W. J. R. Rainsford, C.I.E., F.R.C.S.I.	Tidworth	...	Devonport.
,,	G. W. Robinson	Colchester	...	South Africa.
,,	F. B. Maclean	Pretoria	...	Aden
,,	A. Peterkin, M.B.	Mauritius	...	Cape Colony.
Lieut.-Col.	L. E. Anderson	Aldershot	...	India
,,	W. G. A. Bedford, C.M.G., M.B.	Portsmouth	...	Cosham.
,,	F. P. Nichols, M.B. ...	Secunderabad		Peshawar.
,,	F. J. Lambkin	Uganda	...	Rochester Row
,,	W. W. Pike, D.S.O., F.R.C.S.I.	Maymyo	...	Darjeeling.
,,	R. P. Bond	Aldershot	...	Chatham.
,,	F. S. Heuston, C.M.G., F.R.C.S.I	Curragh	...	Dublin.
,,	W. C. Beevor, C.M.G., M.B.	Sialkot	...	Dalhousie.
,,	N. Manders	Mauritius	...	Preston.
,,	R. S. F. Henderson, M.B.	Netley ...	...	India.
,,	M. W. Russell	War Office	...	London.
,,	G. E. Hale, D.S.O.	Hyderabad	...	Murree.
,,	J. Meek, M.D.	Poona ...	...	Simla.
,,	G. Cree...	Wellington	...	Madras
,,	H. Cocks, M.B.	Madras...	...	Wellington.
,,	F.W.G. Gordon-Hall, M.B.	Meerut...	...	Lansdour.
,,	J. B. W. Buchanan, M.B...	Maryhill	...	Londonderry.
,,	H. H. Brown, M.B. ...	Peshawar	...	Nowshera.
,,	G. F. H. Marks, M.D. ...	Darjeeling	...	Calcutta.
,,	H. W. Austin	Londonderry..		Glasgow.
Major	T. McCulloch, M.B.	Ferozepere	...	Lebong.
,,	J. C. Morgan	Lucknow	...	Naini Tal.
,,	C. R. Elliott, M.D.	Cork ...	...	Dublin.
,,	J. C. Weir, M.B.	London Dist...		Newcastle.
,,	G. T. Rawnsley	Aldershot	...	Bordon.
,,	R. J. Copeland, M.B.	Portsmouth	...	Meerut
,,	W. T. Mould	Agra ...	...	Mount Abu.
,,	C. A. Stone, M.D.	Bangalore	...	Bellary
,,	L. Way	Portsmouth	...	Cosham.
,,	C. E. G. Stalkartt, M.D. ...	Winchester	...	Gosport.
,,	C. W. Duggan, M.B.	Lebong ...	...	Shwebo.
,,	J. F. M. Kelly, M.B.	Queenstown	...	Cork.
,,	H. W. K. Read	Thayetmyo	...	Allahabad.
,,	F. R. Buswell	Ahmednagar	...	Aden.
,,	K. M. Cameron, M.B.	Calcutta	...	Simla.
,,	W. Tibbits, M.B.	Peshawar	...	Shahjehanpur.
,,	F. Kiddle, M.B.	Mount Abu	...	secunderabad.
,,	H. E. Staddon	Dublin	...	Curragh.
,,	E. W. Bliss	Portsmouth	...	Cosham
,,	W. A. Ward	London Dist	...	Rochester Row
,,	R. W. Clements, M.B.	Secunderabad.		Wellington.
Captain	R. S. H. Fuhr, D.S.O.	Devonport	...	Okehampton.
,,	A. E. Thorp	Worcester	...	Devonport.
,,	J. Cowan, M.B.	R.A.M. Coll.	...	Woolwich.
,,	M. H. G. Fell	Warrington	...	Trawsfynydd.
,,	T. C. Lauder, M.B.	Glencorse	...	Piershill.
,,	H. S. Taylor	Kildare	...	Glen Imaal Camp.
,,	R. H. Lloyd	Piershill	...	Edinburgh.
,,	D. Harvey, M.B.	Lucknow	...	Naini Tal.
,,	J. M. Sloan, D.S.O., M.B. ...	Fort George	...	Glasgow.
,,	G. J. A. Ormsby, M.D. ...	Dublin ...	...	Fyzabad.
,,	A. L. A. Webb	London Dist ..		R.A.M. Coll.
,,	E. P. Connolly	Aldershot	...	Holywood.
,,	E. W. Siberry	Bordon ...	...	Aldershot.
,,	P. S. O'Reilly	Portsmouth	...	Cosham
,,	J. A. Hartigan, M.B.	Dover ...	...	Shorncliffe.
,,	A. F. Carlyon	London Dist,...		Millbank.
,,	James M. Buist, M.B. ...	,, ...	...	,,
,,	B. R. Dennis, M.B.	Portsmouth	...	Cosham.
,,	H. B. Fawcus, M.B.	London Dist.		R.A.M. Coll.
,,	C. H. Stratou	R.A.M. Coll.	...	Millbank.
,,	F. McLennan, M.B.	Berwick	...	Fort George.
,,	C. H. Carr, M.D.	Quetta ...	...	Aden
,,	C. R. L. Ronayne, M.B. ...	R.A.M. Coll.	...	Bradford.
,,	G. Baillie, M.B.... ...	Dublin...	...	Newbridge
,,	J. F. Whelan, M.B.	Aden ...	...	Warrington.
,,	T. B Unwin, M.B.	Cork ...	...	Queenstown.
,,	A. W. Gibson	Landguard Frt		Chatham.
,,	C. D. Myles, M.B.	Nowgong	...	Jhansi.
,,	R. F. M. Fawcett	Aldershot	...	Bordon.
,,	H. R. Bateman	London Dist.		R.A.M. Coll.
,,	S. B. Smith, M.D.	Ambala	...	Dagshai.
,,	J. L. Jones	Taunton	...	Devonport.
,,	R. McK. Skinner	Edinburgh	...	Barry.
,,	A. J. W. Wells	Rangoon	...	Aldershot.
,,	G. F. Sheehan	Dublin...	...	Curragh.
,,	J. H. R. Winder, M.D. ...	Malta ...	...	Belfast.
,,	M. F. Foulds	S. Command...		Tidworth.

		FROM		TO
Captain	A. McMunn	Ambala	...	Omagh.
,,	F. W. Lambelle, M.B. ...	Bradford	...	York
,,	T. F. Ritchie, M.B.	Aden ...	...	Belfast.
,,	L. Cotterill	Mandalay	...	Edinburgh.
,,	H. W. Long, M.B.	Fethard	...	Bere Island.
,,	J. McKenzie, M.B.	Dinapore	...	Lucknow.
,,	R. B. Ainsworth	Bellary...	...	Poona.
,,	R. Storrs	Peshawar	...	Ambala.
,,	H. V. Bagshaw	Shwebo	...	Lebong.
,,	W. W Browne	,,	...	Landour.
,,	R. J. Franklin	Benares	...	Darjeeling.
,,	J. G. Bell, M.B....	Jhansi ...	...	Dalhousie.
,,	R. H. Bridges	Bangalore	...	Cannanore.
,,	G. S. C. Hayes	London Dist ...		Millbank.
,,	P. C T Davy, M.B.	Colchester	...	Nowgong.
,,	H. T. Wilson	Nowshera	...	Rawal Pindi.
,,	H. C Sidgwick, M.B.... ...	Jamaica	...	Edinburgh.
,,	A. N. Fraser, M.B.	Hong Kong	...	Monmouth.
,,	A. W. Gater	Nowshera	...	Lahore.
Lieutenant	G. B F. Churchill	Peshawar	...	Bareilly.
,,	G. Ormrod, M.B.	Bhamo ...	...	Rangoon.
,,	A. E. F Hastings	Fyzabad	...	Allahabad.
,,	M. J. Cromie	Jubbulpore	...	Bareilly.
,,	A. D O'Carroll, M.B. ...	Malta ...		Rawal Pindi.
,,	H. Stewart, M.B. ...	Queenstown ...		,, ,,
,,	W. R Galwey, M.B. ...	,, ...		Dublin. ,,
,,	G. De la Cour, M.B. ...	Rawal Pindi ...		Peshawar.
,,	R. G. H. Tate, M.D. ...	Dublin		Rawal Pindi.
,,	C. T. Edmunds	Rawal Pindi ...		Nowshera.
,,	V G Johnson	,, ,,		,, ,,
,,	E. M. W Paine	Bangalore ...		Malapuram.
,,	L. G. Gibson	Rawal Pindi ...		Lahore.
,,	J. H. Spencer, M.B. ...	Colchester ...		Gibraltar.
,,	A. H. Heslop, M.B. ...	Ewshot ...		Aldershot.
,,	J. A. B. Sim, M.B.	Berwick ...		Glencorse.
,,	E. D. Caddell, M.B. ...	Dublin		Kilbride Cmp.
,,	O. C. P. Cooke	Taunton ...		Plymouth.
,,	F. L. Bradish	Cork ...		Queenstown.
,,	J. A. Bennett, M.B. ...	Winchester ...		Cosham.
,,	W. J. E Bell, M.B. ...	Strensall ...		York.
,,	C. W. Bowle	Colchester ...		Warley.
,,	W. F M. Loughnan ...	Portsmouth ...		Cosham.
,,	W. I. Thomson, M.B. ...	Aldershot ...		Bordon.
,,	C. Kelly, M.B	Portsmouth ...		Biera Camp.
,,	D. T. MacCarthy, M.B. ...	Devonport ...		Tregantle.
,,	E. C. Phelan, M.B. ...	Shorncliffe ...		Colchester.
,,	E. J. Kavanagh, M.B. ...	Lucknow ...		Meerut
,,	A. H. Jacob	London Dist...		Rawal Pindi.
,,	C. H. Denyer	,, ...		Rochester Kw.
,,	H. G. Gibson	Kingston-on-T.		New Cross.
,,	J. E. M. Boyd	London ...		Caterham.
,,	R. D. O'Connor	Bulford ...		Tidworth.
,,	J. du P. Langrishe, M.B.	Bury		Preston.
,,	L. A. A. Andrews	Ashton ...		Dover.
,,	H. W. Farebrother ...	Manchester ...		Warrington.
,,	G. F. Dawson, M.B. ...	Warley ...		Colchester.
,,	R. de V. King	Aldershot ...		Ewshot.
,,	D. B McGrigor, M.B. ...	Dover ...		Chatham.
,,	H. W. Carson, M.B. ...	Newport ...		Chester.
,,	H. P. Hart, M.B.	Shoeburyness.		Chatham.
,,	H T. Treves	Millbank ...		PirbrightCmp.

Major P. G Ievers, retired pay, has relinquished the medical charge of troops at Fort Staddon.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,402 births and 3,622 deaths were registered during the week ending Saturday last, June 20th. The annual rate of mortality in these towns, which had been 12 6, 12 7, and 11 8 per 1,000 in the three preceding weeks, further declined to 11 6 per 1,000 last week. The rates in the several towns ranged from 5.0 in Barrow-in-Furness, 5 1 in Devonport 5 6 in Hornsey, 6 6 in Stockport, 6 9 in Willesden and in Stockton-on-Tees, 7 0 in Reading, and 7.7 in Burton-on-Trent and in Handsworth (Staffs.), to 15 6 in Middlesbrough, 15.7 in Birkenhead, 15 9 in Wallasey and in Bradford, 16 3 in Salford, 18 2 in Wolverhampton, 18.6 in Wigan, and 20.5 in Oldham. In London the rate of mortality was 10 8 per 1,000, while it averaged 12 0 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1 0 per 1,000 in the seventy-six towns. In London this death-rate was equal to 0.8 per 1 000, while among the seventy-five other towns it ranged upwards to 2 1 in Swansea, 2.2 in West Bromwich, 2.3 in Wallasey, 2.5 in Norwich and in Wolverhampton, 2 8 in Salford, and 3 1 in Aston Manor. Measles caused a death-rate of 1 1 in Swansea and 1 5 in West Ham; scarlet fever of 1.1 in Swansea and 1 2 in Aston Manor; diphtheria of 1 0 in Wolverhampton; enteric fever of 1.3 in Norwich; and diarrhoea of 1.0 in Burnley and in Middlesbrough. The mortality from whooping-cough showed no marked excess in any of the towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,753, 2,648, and 2 600 at the end of the three preceding weeks, had further declined to 2,565 at the end of last week; 310 new cases were admitted during the week, against 334, 291, and 289 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, June 20th, 1,055 births and 517 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 15 5, 14.3, and 13.2 per 1,000 in the three preceding weeks, rose to 14.7 per 1,000 last week, and was 3 1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10 0 in Aberdeen and 11 0 in Paisley, to 16.0 in Glasgow and 16.7 in Greenock. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in these towns, the highest rates being recorded in Glasgow and Paisley. The 264 deaths registered in Glasgow included 9 which were referred to measles, 1 to scarlet fever, 1 to diphtheria, 11 to whooping-cough, 1 to enteric fever, and 8 to diarrhoea. Four deaths from whooping-cough were recorded in Edinburgh, 3 in Dundee, and 2 in Paisley; 2 deaths from measles were registered in Leith, while no fatal case from these infectious diseases was registered in Aberdeen, Greenock, or Perth.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, June 13th, 572 births and 367 deaths were registered in the twenty-two principal urban districts of Ireland, as against 621 births and 386 deaths in the preceding period. The annual death-rate in these districts, which had been 18 4, 16 8, and 17.8 per 1,000 in the preceding weeks, fell to 16 9 per 1,000 in the week under notice, this figure being 5.1 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures for Dublin and Belfast were 19.2 and 15 4 respectively, those in the other districts ranging from 4.7 in Wexford and 4 8 in Sligo to 31.0 in Portadown and 40 1 in Newtownards, while Cork stood at 15 8, Londonderry at 10.9, Limerick at 21.6, and Waterford at 5 8. The zymotic death-rate in the same twenty-two districts averaged 0 8 per 1,000, against 1 1 per 1,000 in the preceding period, the highest figure, 4 8, being recorded in Ballymena. The deaths in Belfast included 2 ascribed to cerebro-spinal fever and 1 returned as cerebro-spinal meningitis.

During the week ending Saturday, June 20th, 650 births and 354 deaths were registered in the twenty-two principal urban districts of Ireland, as against 572 births and 367 deaths in the preceding period. The annual death-rate in these districts, which had been 16 8, 17.8, and 16.9 per 1,000 in the preceding weeks, fell to 16.3 per 1,000 in the week under notice, this figure being 4.7 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures for Dublin and Belfast were 16.5 and 17 7 respectively, those in the other districts ranging from 4.1 in Limerick and 5.1 in Clonmel to 28.6 in Newtownards and 47.9 in Ballymena, while Cork stood at 17 8, Londonderry at 14.6, and Waterford at 13 6. The zymotic death-rate in the same twenty-two districts averaged 1.1 per 1,000, as against 0.8 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERDEEN UNIVERSITY.—Additional Examiners in Materia Medica, Pathology, and Surgery.

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—Male House-Surgeon. Salary, £100 per annum, rising to £120.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £80 per annum.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BIRMINGHAM MATERNITY HOSPITAL.—House Surgeon. Salary, at the rate of £50 per annum.

BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary, at the rate of £80 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer. Salary, £100 per annum.

CENTRAL LONDON THROAT HOSPITAL, Gray's Inn Road, W.C.—Honorary Assistant Anaesthetist.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary, at the rate of £50 per annum.

COVENTRY CORPORATION.—Assistant Medical Officer to the Education Committee. Salary, £220 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary, at the rate of £80 per annum.

EDINBURGH UNIVERSITY.—Lectureship in Diseases of Tropical Climates. Salary, £300 per annum.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary at the rate of £72 per annum.

HEREFORD GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House-Physicians. Honorarium, £25 each for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Anaesthetist. Honorarium of 15 guineas. (2) Surgeon to Out-patient Department.

KING EDWARD VII SANATORIUM, Midhurst.—Junior Assistant Medical Officer. Salary, £100 per annum.

LANARK COUNTY: LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES.—Resident Physician. Salary, £140 per annum.

LEICESTERSHIRE AND RUTLAND LUNATIC ASYLUM.—Junior Assistant Medical Officer (male). Salary, £150 per annum, rising to £180.

LEICESTER INFIRMARY.—House-Surgeon, to act as Junior for six months and then as Senior. Salary, at the rate of £100 and £120 per annum.

LIVERPOOL STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.

LONDON COUNTY ASYLUM, Bexley.—Junior Assistant Medical Officer. Salary, £160 per annum.

MANCHESTER UNIVERSITY.—Senior Demonstrator in Physiology. Salary, £150 per annum.

MEDICAL MISSION HOSPITAL, Canning Town.—Senior Resident Medical Officer (female). Salary, £100 per annum.

MILE END INFIRMARY AND WORKHOUSE.—Assistant Medical Officer. Salary, £150 per annum, increasing to £170.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART.—Radiographer.

NEWCASTLE-UPON TYNE: EYE INFIRMARY.—Non-resident House-Surgeon. Salary, £100 per annum.

NEW SOUTH WALES: QUEEN VICTORIA HOMES FOR CONSUMPTIVES.—Resident Medical Officers at King's Table Land Sanatorium and the Thirlmere Sanatorium. Salary, £250 per annum, increasing to £300, each.

NORTHAMPTON COUNTY ASYLUM.—Locum. Terms, £4 4s. per week.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon (female). Salary at the rate of £40 for six months.

OXFORD: RADCLIFFE INFIRMARY AND COUNTY HOSPITAL. Junior House-Surgeon. Salary at the rate of £40 per annum.

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary, at the rate of £60 per annum.

RANGOON MUNICIPALITY.—Health Officer. Salary, Rs. 1,000 per mensem, rising to Rs. 1,500.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—Honorary Assistant Surgeon.

ST. MARY'S HOSPITAL, Paddington, W.—Resident Casualty House-Surgeon. Salary, £100 per annum

ST. PANCRAS AND NORTHERN DISPENSARY, Euston Road N.W. Resident Medical Officer. Salary, £105 per annum.

SHREWSBURY: SALOP INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum.

WESLEYAN METHODIST MISSIONARY SOCIETY.—Medical Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Physician.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon.—Salary, £100 per annum.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Assistant Surgeon. (2) Surgical Registrar. (3) Assistant Officer in charge of X-Ray Department.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Ledbury, co. Hereford; and Melton Mowbray, co. Leicester.

APPOINTMENTS.

ANDERTON, J. E., L.R.C.P.Ed., M.R.C.S.Eng., Medical Officer of Health to the New Mills Urban District.

ATKINSON, J. P., M.R.C.S., L.R.C.P., District Medical Officer of the Tottenham Union.

BARWELL, F. R., M.R.C.S., L.R.C.P., Medical Officer of Health, Mildenhall Rural District.

BROWN, D. W., M.D Edin., Medical Officer and Public Vaccinator for No. 2 District of the Preston Union.

CLARK, Charles A., L.D.S I., Honorary Radiographer to the Royal Dental Hospital of London.

CLIFFORD, HAROLD, M B Lond., F.R.C.S E., Honorary Assistant Surgeon for Women to the Manchester Northern Hospital for Women and Children.

FLETCHER, F. S., M.B., Ch.B.Vict., District Medical Officer of the Prestwich Union.

FRERE, J. E., M B., B.C.Cantab., Medical Officer of Health, Fleet Urban District.

HILL, Francis R., M B., C.M.Glasg., Surgeon in Charge of the new Eye Department of the Cumberland Infirmary, Carlisle.

HOUSTOUN, A. B., M.B., M.S.Glasg., Medical Officer of Health, Droylsden Urban District.

HUTT, C. W., M.A., M.R.C.S., L.R.C.P., Medical Officer, Prestwich Union Workhouse.

MCLAREN, Rory E., M.B., Ch B., Assistant Medical Officer of Health for Leith.

MORLEY, Arthur S., F.R.C.S.Eng., Honorary Anaesthetist to the Western General Dispensary, Marylebone Road, W.

RANKINE, J. L., M.R.C.S., L.R.C.P., Medical Officer and Public Vaccinator of the High District, Longtown Union, Medical Officer to Post Office, etc.

ROBERTS, W. R. S., M S., B S.Birm., Certifying Factory Surgeon for the Ongar District, co Essex.

SHANNON, David, M.B.Glas., L.M Rot Dublin, Assistant Obstetric Physician, the Glasgow Maternity and Women's Hospital, and Assistant Surgeon, Royal Samaritan Hospital for Women, Glasgow,

SINCLAIR, Alexander, M.D.Toronto, Clinical Assistant to the Chelsea Hospital for Women.

STEADMAN, Frank St. J., L.R.C.P., M.R.C.S., L.D.S.Eng., Joint Morning House Anaesthetist to the Royal Dental Hospital of London.

STEWART, George Irvine Thompson, M A., B.Sc., M B., C.M Aberd., F R C.S.Eng., Medical Inspector of School Children for the East Suffolk County.

STIDSTON, C. A., M.B., B S Lond., M.R C S.Eng., L.R.C.P Lond., Resident Medical Officer to the Wolverhampton and Staffordshire General Hospital at Wolverhampton.

TATE, Miss Isobel A., M.D., R.U.I., D P.H Vict., Medical Officer for the Inspection of School Children to the Shropshire County Council.

VON BERGEN, C. W., M.B., B.S Durh., Certifying Factory Surgeon for the Leatherhead District, County Surrey.

WIGNALL, T. H., M.B., Ch.B.Vict., District Medical Officer of the Prestwich Union.

WILLEY, Florence E., M.D., M S., B Sc Lond., Assistant Physician for Diseases of Women to the Royal Free Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

FURBER.—On June 22nd, at Beechcroft, Oxted, the wife of Edward P. Furber, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

MARRIAGES.

RANKINE—ALEXANDER.—At Carlisle, on June 16th, John Lawson Rankine, M.R.C.S., L.R.C.P.Lond., eldest son of Adam Rankine, late of Education Department, to Jessie Blair Alexander, second daughter of the late James Alexander.

THURSTON—MITCHELL.—At St. Paul's Cathedral, Calcutta, on June 1st, 1908, E. Owen Thurston, M.B., B.S Lond., F.R.C.S Eng., Capt. I.M.S., to Robertina Patterson, daughter of J. C. Mitchell, Esq., late E. I. Railway, and Mrs. Mitchell, Catford, London.

DEATHS.

ABRAHAMS.—On June 21st, at his residence, 14, Welbeck Street, Cavendish Square, W., Bertram Abrahams, M.B., B.Sc.Lond., F.R.C.P., aged 38, only son of Louis B. Abrahams, of The Cabin, Seaforth Road, Westcliff-on-Sea.

CARRUTHERS.—On June 7th (Whit Sunday), at Capel Curig, North Wales, Alan Eskrigge Carruthers, M.A., M.B.Cantab., aged 40 years.

DIARY FOR THE WEEK.

WEDNESDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank 8.30 p.m.—Paper: Lieutenant-Colonel W. G. Macpherson, C.M.G.: Some Practical Points in the Prevention of Disease in Panama and Cuba.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon Thursday; Skin, at noon and 4 p.m. Tuesday, and noon Friday; Eye, 11 a.m. Wednesday and Saturday; Radiography, 4 p.m. Thursday. Special Lecture: Thursday, 2.30 p.m., Myxoedema.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Acute Abdominal Attacks in Children; Tuesday, The Psychology of Failure and Success; Wednesday, Modern Treatment of Fractures—the Arm; Thursday, Modern Treatment of Fractures—the Leg.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Surgery of the Nervous System. Friday, 3.30 p.m., Treatment of Epilepsy.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the Clinics, Demonstrations, etc., for next week: Monday, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient and Throat, Nose, and Ear, X Rays. Tuesday, 10 a.m., Medical Out-patient; 2.30 p.m., Surgical Operations, Surgical Out-patient and Gynaecological; 4.30 p.m., Demonstration of Selected Surgical Cases. Wednesday, 2.30 p.m., Medical Out-patient Skin and Eye Thursday, 2.30 p.m., Gynaecological Operations, Medical and Surgical Out-patient, X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Throat Operations. Friday, 10 a.m., Surgical Out-patient; 2.30 p.m., Surgical Operations, Medical Out-patient and Eye: 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2.30 p.m., Operation and Medical and Surgical Wards. Monday, 12 noon, Pathological Demonstration; 4 p.m., Surgical Demonstration; 5 p.m., Anaesthetics. Tuesday, 3 p.m., Medical Demonstration; 5 p.m., Some Practical Points in the Surgery of the Prostate. Wednesday, 12.15 p.m., Practical Medicine; 5 p.m., Medicine. Thursday, 4 p.m., Surgical Demonstration; 5 p.m., Clinical Lecture. Friday, 12.15 p.m., Practical Medicine; 5 p.m., Malingering.

BOOKS, ETC., RECEIVED.

The Birds of the British Islands. By C. Stonham, C.M.G., F.R.C.S., F.Z.S. Part X. London: Grant Richards. 1908. 7s. 6d.

Clinical Lectures on the Surgical Diseases of the Urinary Organs. By P. J. Freyer, M.A., M.D., M.Ch. London: Baillière, Tindall, and Cox. 1908. 12s. 6d.

Surgery, its Principles and Practice. By Various Authors. Edited by W. W. Keen, M.D., LL.D. Vol. iii. London: W. B. Saunders and Co. 1908. 30s.

The International Scientific Series. Edited by F. Legge. The Evolution of Forces. By Dr. G. le Bon. London: Kegan Paul, Trench, Trübner, and Co., Ltd. 1908. 5s.

Hematological Atlas, with a description of the Technic of Blood Examination. By Priv. Doz. Dr. K. Schleip. English adaptation by F. E. Sondern, M.D. London: Rebman, Ltd. 42s.

Medical Gynaecology. By H. A. Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Edin.). London: S. Appleton. 1908. 25s.

Paris: Vigot Frères. 1908:

Les Perversions Sexuelles. XIII. Les Eunuques travers les Ages. Par le Dr. R. Millant. F. 3.50.

Journal d'un Praticien. Consultations sur la grossesse, l'accouchement, les maladies des femmes, et les soins à donner aux nourissons. Par H. Stapfer. F. 10.

Handbuch der physiologischen Methodik. Herausgegeben von R. Tigerstedt. Erster Band. 2 Abteilung. Protisten-Wirbellose Tiere-Physikalische Chemie. Leipzig: S. Hirzel. 1908. M. 7.50.

Grenfell of Labrador. By J. Johnston, A.T.S. London: S. W. Partridge and Co. 1s. 6d.

The Licensed Trade: An Independent Survey. By E. A. Pratt. Third edition. London: J. Murray. 1908. 1s.

Die Periphere Innervation. Von Dr. med. E. Villiger. Leipzig: W. Engelmann. 1908. M. 3.60.

Leipzig: Dr. W. Klinkhardt. 1908:

Untersuchungen zur Kenntnis der psychomotorischen Bewegungsstörungen bei Geisteskranken. Von Dr. K. Kleist. M. 4.50.

Dr. W. Klinkhardt's Kollegehefte. Hefte 1 and 2. Taschenbuch der Physiologie. Von Prof. Dr. med. H. Boruttau. Erster und Zweiter Teil. M. 6.

Die perkutane Entgiftung. Von Med. Dr. F. Schürer v. Waldheim. Wien and Leipzig: Spielhagen and Schurich. 1908. M. 3.50.

New Light on the Jewish Question in Russia. By C. A. London: J. Bale, Sons, and Danielsson, Limited. 4d.

Materia Medica and Pharmacy. With an Appendix on Incompatibility. By R. R. Bennett, B.Sc., A.I.C. London: H. K. Lewis. 1908. 4s. 6d.

The Senses of Insects. By A. Forel. Translated by M. Yearsley, F.R.C.S. London: Methuen and Co. 10s. 6d.

The Diagnosis and Localization of Intracranial Tumours. By C. E. Beevor, M.D., F.R.C.P. London: Harrison and Sons. 1907.

New York: J. Wiley and Sons; and London: Chapman and Hall, Ltd. 1908:

Typhoid Fever: Its Causation, Transmission, and Prevention. By G. C. Whipple. 12s. 6d.

Elements of Water Bacteriology, with Special Reference to Sanitary Water Analysis. By S. C. Prescott and C. E. A. Winslow. Second edition. 6s. 6d.

Lehrbuch der Kinderheilkunde. Von Dr. G. Boenninghaus. Berlin: S. Karger; and London: Williams and Norgate. 1908. M. 9.80.

Beitrage zur allgemeinen Kolloidchemie. Von Dr. B. Szilard. Dresden: T. Steinkopff. 1908. M. 1.50.

Ireland's Crusade against Tuberculosis. Series of Lectures delivered at the Tuberculosis Exhibition, 1907. Edited by the Countess of Aberdeen. Vol. I. Dublin: Maunsel and Co., Ltd. 1908. 1s.

The Life and Letters of Herbert Spencer. By D. Duncan, LL.D. London: Methuen and Co. 15s.

The Bradshaw Lecture on Prognosis in Relation to Treatment of Tuberculosis of the Genito-Urinary Organs. 1907. By R. J. Godlee, M.S., F.R.C.S.Eng. London: J. Bale, Sons, and Danielsson, Ltd. 2s. 6d.

Die Entwicklungsgeschichte des Talentes und Genies. Von Dr. A. Reibmayr. Zweiter Band. München: J. F. Lehmann. 1908. M. 8.

Dictionary of National Biography. Edited by L. Stephen and S. Lee. Vol. III. Brown-Chaloner. London: Smith, Elder and Co. 1908. 15s.

Quain's Elements of Anatomy. Edited by E. A. Schäfer, LL.D., Sc.D., F.R.S., J. Symington, M.D., F.R.S., and T. H. Bryce, M.A., M.D. In four vols. Vol. I. Embryology. By T. H. Bryce. Eleventh edition. London: Longmans, Green, and Co. 1908. 10s. 6d.

The Melbourne University Calendar, 1908. Melbourne: Ford and Son; and Melville and Mullen. 1907. 2s. 6d.

An Introduction to Dermatology. By N. Walker, M.D., F.R.C.P. Fourth edition. Edinburgh and London: W. Green and Sons. 1908. 9s. 6d.

Lectures on Babies. By R. Vincent, M.D., B.S., M.R.C.P. London: Baillière, Tindall and Cox. 1908. 2s. 6d.

Golden Rules of Venereal Disease. By C. F. Marshall, M.D., F.R.C.S. "Golden Rules" Series, No. xvii. Bristol: J. Wright and Co.; London: Simpkin, Marshall. 1s.

Pansies and Violets. By D. B. Crane, F.R.H.S. Edited by T. W. Sanders, F.L.S., F.R.H.S. London: W. H. and L. Collingridge. 1s.

London: Baillière, Tindall, and Cox:

Diphtheria in Practice. By W. F. Litchfield, M.B.Syd. 1908. 3s. 6d.

Manual of Medicine. By T. K. Monro, M.A., M.D. Second edition. University Series. 1906. 15s.

Grenzgebiete in der Medizin. Vierzehn Vorträge anlässlich der Eröffnung des Kaiserin Friedrich-Hauses für des ärztliche Fortbildungswesen. Herausgegeben vom Zentralkomitee für des ärztliche Fortbildungswesen in Preussen in dessen Auftrage redigiert. Von Professor Dr. R. Kutner. Jena: G. Fischer. 1908. M. 6.

The Girl's School Year Book (Public Schools), April, 1908, to April, 1909. London: Swan Sonnenschein and Co., Ltd. 2s. 6d.

Biblioteca di Scienze sociali e politiche. N. 85. Nuova classificazione dei delinquenti. Por Dott. J. Ingegnieros. Milan: R. Sandron. 1907. L. 1.50.

Public Health Laboratory Work. By H. R. Kenwood, M.B., D.P.H., F.C.S., and W. G. Savage, M.D., B.Sc., D.P.H. Fourth edition. London: H. K. Lewis. 1908. 10s.

Australia To-day. 1907. Edited by J. Davies. (Special Number of "The Australian Traveller.") Melbourne: The United Commercial Travellers' Association of Australia, Ltd. 1s. 6d.

Riedel's Berichte. Riedel's Mentor, 52 Auflage. Berlin: A. Bertinetti; and London: The J. D. Riedel Co. 1908.

Medizinisches Literatur u. Schriftsteller-Vademecum, 1907-1908. Herausgeber: H. Albert. Hamburg: Franke and Scheibe. 1908.

American Practice of Surgery. Edited by J. D. Bryant, M.D., LL.D., and A. H. Buck, M.D. In eight volumes. Vol. iv. New York: W. Wood and Co. 1908.

Concerning Lafcadio Hearn. By G. M. Gould, M.D. Philadelphia: G. W. Jacobs and Co. 1908. $1.50.

Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Professor E. von Neusser, M.D. Authorized English Translation by A. MacFarlane, M.D. Part II. Bradycardia and Tachycardia. New York: E. B. Treat and Co. 1908. $1.25.

Handbuch der Biochemie des Menschen und der Tiere Herausgegeben von Dr. Phil. et Med. C. Oppenheimer. Erste Lieferung. Jena: G. Fischer. 1908. M. 5.

Grundriss der allgemeinen Symptomatologie. Von Dr. med. R. Oestreich. Berlin: A. Hirschwald. 1908. M. 6.

The Cradle of the Deep. An Account of a Voyage to the West Indies. By Sir F. Treves, Bart., G.C.V.O., C.B., LL.D. London: Smith, Elder, and Co. 1908. 12s.

Hay-fever, Hay-asthma: Its Causes, Diagnosis, and Treatment. By W. Lloyd. Second edition. London: H. J. Glaisher. 1908. 4s. 6d.

Nervöse Angstzustände und ihre Behandlung. Von Dr. W. Stekel. Berlin and Wien: Urban and Schwarzenberg. 1908. M. 8.

The Holiday "Whitaker." London: J. Whitaker and Sons, Limited. 1s. Summer edition (1908).

Paris: G. Steinheil, 1908:—

Etude sur les Contusions, déchirures et ruptures du Rein. Par Dr. G. Lardennois. Fr. 4.50.

Travail du Service de M. le Prof. Quénu (Hôpital Cochin). Traitement Chirurgical Actuel des Kystes Hydatiques du Foie et de leurs Complications. Par le Dr. A. Cauchoix. Fr. 3.50.

Diseases of the Breast, with Special Reference to Cancer. By W. L. Rodman, M.D., LL.D. London: S. Appleton. 1908. 16s.

Bier's Hyperemic Treatment in Surgery, Medicine, and the Specialties. By W. Meyer, M.D., and Prof. Dr. V. Schmieden. Philadelphia and London: W. B. Saunders Co. 1908. 13s.

London: Health Resorts Development Association. Booklets on Weymouth, Leamington Spa, Malvern and Woodhall Spa, free on application to Town Clerks.

Nursing the Insane. By C. Barrus, M.D. New York and London: Macmillan. 1908. 8s. 6d.

A Manual for Midwives. By C. N. Longridge, M.D., F.R.C.S., M.R.C.P. London: J. and A. Churchill. 1908. 3s. 6d.

London: H. J. Lewis. 1908:—

Rough Notes on Remedies. By W. Murray, M.D., F.R.C.P. Sixth edition. 4s.

Methodus Medendi. A Sketch of the Development of Therapeutics. By Sir W. H. Allchin, M.D., F.R.C.P., F.R.S.E. (reprinted from *The Medical Magazine*). 1s.

Experimental Researches on Specific Therapeutics. By Professor P. Ehrlich, M.D., D.Sc.Oxon. The Harben Lectures. 1907. 2s. 6d.

Bonn: F. Cohen. 1908:—

Der Tod aus Altersschwäche. Von Prof. Dr. H. Ribbert. M. 1.

Beiträge zur Entstehung der Geschwülste. Dritte Ergänzung. Von Dr. H. Ribbert. M. 1.60.

London: Baillière, Tindall and Cox. 1908:—

Physical Signs of Diseases of the Thorax and Abdomen. By J. E. H. Sawyer, M.A., M.D., M.R.C.P. 5s.

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Forensic Medicine and Toxicology. By J. Dixon Mann, M.D., F.R.C.P. Fourth edition. London: C. Griffin and Co., Limited. 1908. 21s.

Philadelphia and London: J. B. Lippincott Co. 1908:—

International Clinics. A Quarterly. Edited by W. T. Longcope, M.D. Vol. i. Eighteenth series. 1908. Four quarterly vols. 35s.

Righthandedness and Lefthandedness. By G. M. Gould, M.D. 1.25 dols.

Handbook of Medicine and Therapeutics. By A. Wheeler, L.R.C.P. and S.E., and W. R. Jack, B.Sc., M.D., F.F.P.S.G. Third edition. Edinburgh: E. and S. Livingstone. 1908. 8s.

Handbuch der physiologischen Methodik. Herausgegeben von R. R. Tigerstedt. Zweiter Band, 2 Abteilung, Atmung-Verdauung. Leipzig: S. Hirzel. 1908. M. 6.

The Art of Dispensing. By P. MacEwan, F.C.S. Eighth edition. London: Offices of *The Chemist and Druggist*. 1908. 6s.

Transactions of the American Pediatric Society. Nineteenth Session. Edited by L. E. la Fétra, M.D. Vol. xix. New York: E. B. Treat Co. 1908.

The Diseases of Workmen. By T. Luson, M.D., and R. Hyde, M.R.C.S. London: Butterworth and Co. 1908. 4s.

The Origin and Nature of Man. By S. B. G. McKinney, M.A., L.R.C.P. Edin. Parts II and III. Evolution. Edinburgh and London: Oliphant, Anderson and Ferrier. 1908. 1s.

Patogenia de la Eclampsia. Por el Dr. M. Fernandez. Buenos Aires: *La Semana Medica*. 1908.

Education, Personality, and Crime. By A. Wilson, M.D. London: Greening and Co., Limited. 1908. 7s. 6d.

Oxford Medical Publications. London: H. Frowde, and Hodder and Stoughton. 1908:—

The Law in General Practice. By S. B. Atkinson, M.A., M.B., B.Sc. 7s. 6d.

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CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
29 MONDAY ...	
30 TUESDAY ...	SOUTH-WESTERN BRANCH, Annual Meeting, New Council Chamber, Falmouth, 3.15 p.m.; Luncheon, Greenbank Hotel, 12.30; Dinner, 6.45 for 7 p.m. WEST SOMERSET BRANCH, Annual Meeting, Cotford Asylum, Taunton, 12.30 p.m.; Lunch, 1.30 p.m.
JULY.	
1 WEDNESDAY	CENTRAL COUNCIL, Metropolitan Asylums Board, Victoria Embankment, 2 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Club House Carlow, 5.30 p.m. YORKSHIRE BRANCH, Annual Meeting, Station Hotel, York; Annual Dinner, 6.30 p.m.
2 THURSDAY...	BATH AND TROWBRIDGE DIVISIONS, *Bath and Bristol Branch*, Combined Meeting, Royal United Hospital, 5 p.m CAMBRIDGE AND HUNTINGDON BRANCH, Annual Meeting, Alconbury Hill, Huntingdon.
3 FRIDAY ...	
4 SATURDAY...	
5 Sunday ...	
6 MONDAY ...	OXFORD AND READING BRANCH, Annual Meeting, Royal Berkshire Hospital, Reading, 4.30 p.m.; Tea, 4 p.m.; Dinner, Caversham Bridge Hotel, 6.45 p.m.
7 TUESDAY ...	NORTH WALES BRANCH, Annual Meeting, Holyhead.
8 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Yeovil.
9 THURSDAY...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Business Meeting. METROPOLITAN COUNTIES BRANCH, Annual Meeting, 6, Catherine Street, Strand, W.C., 5 p.m.
10 FRIDAY ...	
11 SATURDAY...	
12 Sunday ...	
13 MONDAY ...	
14 TUESDAY ...	
15 WEDNESDAY	
16 THURSDAY...	LONDON: Committee *re* Appointment of Assistant Medical Secretary.
17 FRIDAY ...	
18 SATURDAY...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	
23 THURSDAY...	
24 FRIDAY ...	ANNUAL GENERAL MEETING, Hall of the Education Department of Sheffield, 3 p.m. ANNUAL REPRESENTATIVE MEETING, immediately after the Annual General Meeting.
25 SATURDAY...	ANNUAL REPRESENTATIVE MEETING, 9.30 a.m.
26 Sunday ...	
27 MONDAY ...	ANNUAL REPRESENTATIVE MEETING, 9.30 a.m.
28 TUESDAY ...	CENTRAL COUNCIL, 9.30 a.m. ANNUAL REPRESENTATIVE MEETING, 9.30 a.m., if necessary.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

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Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

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By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

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